

Balflex[®]



**HYDRAULIC
HOSE
ASSEMBLING
MACHINES**



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P16_HP

ENERPAC MANUAL PUMP CRIMPING MACHINE 1"

TECHNICAL DATA	
Crimping range (mm)	10-45
Crimping force (kN)	955
Crimping force (tons)	95
Hose size (inches)	2 Wire DN25 - 1"
Diet set	P16
Max. opening (mm)	+20
Master die D/L (mm)	39/64
Control	Manual Gauge
Operation	Enerpac Hand Pump
Length (mm)	331
Width (mm)	401
Height (mm)	271
Total Weight (kg)	33



Option model 90.P16_HPZ



PART NUMBER	P16/6.8	P16/8	P16/10	P16/12	P16/14*	P16/16*	P16/19*	P16/23*	P16/27*	P16/31*
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31
L (mm)	25	25	55	55	55	55	55	55	70	70

* Standard die sets included; other are optional



P16_AP

ENERPAC AIR PUMP CRIMPING MACHINE 1"

TECHNICAL DATA	
Crimping range (mm)	10-45
Crimping force (kN)	955
Crimping force (tons)	137
Hose size (inches)	2 Wire DN25 - 1"
Diet set	P16
Max. opening (mm)	+20
Master die D/L (mm)	39/64
Control	Manual Gauge
Operation	Enerpac Air Pump
Length (mm)	331
Width (mm)	401
Height (mm)	271
Total Weight (kg)	38



PART NUMBER	P16/6.8	P16/8	P16/10	P16/12	P16/14*	P16/16*	P16/19*	P16/23*	P16/27*	P16/31*
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31
L (mm)	25	25	55	55	55	55	55	55	70	70

* Standard die sets included; other are optional

P20_HP

ENERPAC MANUAL PUMP CRIMPING MACHINE 1.1/2"

TECHNICAL DATA	
Crimping range (mm)	10-61
Crimping force (kN)	1370
Crimping force (tons)	137
Hose size (inches)	2 Wire Braid 1.1/2" (DN38) / 4 Spirals 1.1/4" (DN31)
Diet set	P20
Max. opening (mm)	+25
Master die D/L (mm)	84/80
Control	Manual Gauge
Operation	Enerpac Hand Pump
QC tool	Included
Length (mm)	550
Width (mm)	380
Height (mm)	380
Total Weight (kg)	102



PART NUMBER	P20/6.8	P20/8	P20/10	P20/12	P20/14**	P20/16**	P20/19**	P20/23**	P20/27**	P20/31**	P20/36**	P20/41**	P20/47**	P20/54
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0	36.0-41.0	41.0-47.0	47.0-54.0	54.0-61.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31	36	41	47	54
L (mm)	25	25	55	55	55	55	55	55	70	70	75	75	85	85

* Standard die sets included; other are optional

ACESSORIES

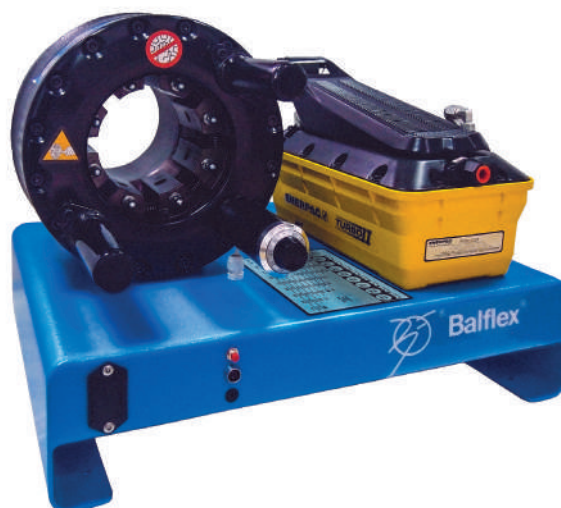




P20_AP

ENERPAC AIR PUMP CRIMPING MACHINE 1.1/2"

TECHNICAL DATA	
Crimping range (mm)	10-61
Crimping force (kN)	1370
Crimping force (tons)	137
Hose size (inches)	2 Wire Braid 1.1/2" (DN38) / 4 Spirals 1.1/4" (DN31)
Die set	P20
Max. opening (mm)	+25
Master die D/L (mm)	84/80
Control	Manual Gauge
Operation	Enerpac Air Pump
QC tool	Included
Length (mm)	550
Width (mm)	380
Height (mm)	380
Total Weight (kg)	105



PART NUMBER	P20/6.8	P20/8	P20/10	P20/12	P20/14*	P20/16*	P20/19*	P20/23*	P20/27*	P20/31*	P20/36*	P20/41*	P20/47*	P20/54
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0	36.0-41.0	41.0-47.0	47.0-54.0	54.0-61.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31	36	41	47	54
L (mm)	25	25	55	55	55	55	55	55	70	70	75	75	85	85

* Standard die sets included; other are optional

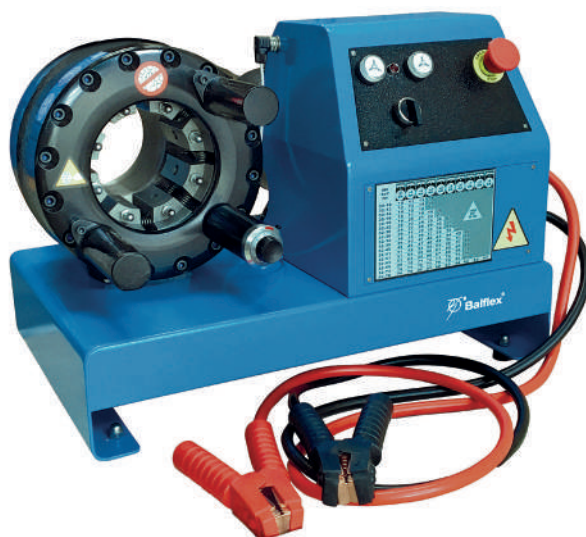
ACCESSORIES



P20_CS

12V BATTERY CRIMPING MACHINE 1.1/2"

TECHNICAL DATA	
Crimping range (mm)	10-61
Crimping force (kN)	1370
Crimping force (tons)	137
Hose size (inches)	2 Wire Braid 1.1/2" (DN38) / 4 Spirals 1.1/4" (DN31)
Diet set	P20
Max. opening (mm)	+25
Master die D/L (mm)	84/80
Control	Manual Gauge
Operation	12V / 210A Battery
QC tool	Included
Length (mm)	550
Width (mm)	380
Height (mm)	380
Total Weight (kg)	105



PART NUMBER	P20/6.8	P20/8	P20/10	P20/12	P20/14*	P20/16*	P20/19*	P20/23*	P20/27*	P20/31*	P20/36*	P20/41*	P20/47*	P20/54
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0	36.0-41.0	41.0-47.0	47.0-54.0	54.0-61.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31	36	41	47	54
L (mm)	25	25	55	55	55	55	55	55	70	70	75	75	85	85

* Standard die sets included; other are optional

ACESSORIES





P20

ELECTRIC CRIMPING MACHINE 1.1/2"

TECHNICAL DATA	
Crimping range (mm)	10-61
Crimping force (kN)	1370
Crimping force (tons)	137
Crimpings/hour	600/850
Noise Level (db(A))	71
Hose size (inches)	2 Wire Braid 1.1/2" (DN38) / 4 Spirals 1.1/4" (DN31)
Die set	P20
Max. opening (mm)	+25
Master die D/L (mm)	84/80
Control	Manual Gauge
Motor (kW)	3
Motor (HP)	4
Voltage (V)*	380 Tri-phasic
QC tool	Included
Pedal	Included
Die Set Rack	Included
Length (mm)	760
Width (mm)	560
Height (mm)	800
Total Weight (kg)	182

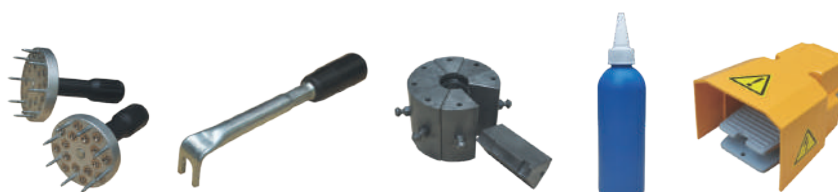


PART NUMBER	P20/6.8	P20/8	P20/10	P20/12	P20/14**	P20/16**	P20/19**	P20/23**	P20/27**	P20/31**	P20/36**	P20/41**	P20/47**	P20/54
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	23.0-27.0	27.0-31.0	31.0-36.0	36.0-41.0	41.0-47.0	47.0-54.0	54.0-61.0
D (mm)	6.8	8	10	12	14	16	19	23	27	31	36	41	47	54
L (mm)	25	25	55	55	55	55	55	55	70	70	75	75	85	85

* Other voltage on request

** Standard die sets included; other are optional

ACCESSORIES



P32

ELECTRIC CRIMPING MACHINE 2"

TECHNICAL DATA	
Crimping range (mm)	10-87
Crimping force (kN)	2000
Crimping force (tons)	200
Crimpings/hour	700/850
Noise Level (db(A))	71
Hose size (inches)	2 Wire Braid 2" (DN51) / 4 Spirals 2" (DN51)
Die set	P32
Max. opening (mm)	+33
Master die D/L (mm)	99/80
Control	Manual Gauge
Motor (kW)	4
Motor (HP)	5.3
Voltage (V)*	380 Tri-phasic
QC tool	Included
Pedal	Included
Die Set Rack	Included
Length (mm)	760
Width (mm)	560
Height (mm)	800
Total Weight (kg)	265

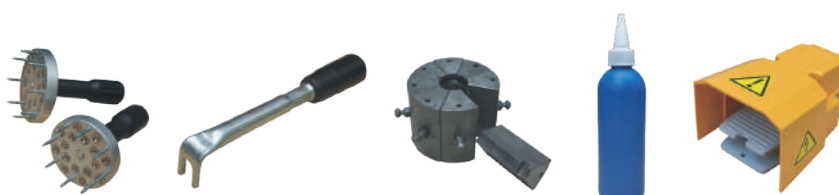


PART NUMBER	P32/6.8	P32/8	P32/10	P32/12	P32/14 **	P32/16 **	P32/19 **	P32/22 **	P32/26 **	P32/30 **	P32/34 **	P32/39 **	P32/45 **	P32/51 **	P32/57 **	P32/63 **	P32/69 **	P32/74	P32/78
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	22.0-26.0	26.0-30.0	30.0-34.0	34.0-39.0	39.0-45.0	45.0-51.0	51.0-57.0	57.0-63.0	63.0-69.0	69.0-75.0	74.0-80.0	78.0-87.0
D (mm)	6.8	8	10	12	14	16	19	22	26	30	34	39	45	51	57	63	69	74	78
L (mm)	25	25	55	55	55	55	55	70	70	70	75	75	90	90	100	110	110	110	110

* Other voltage on request

** Standard die sets included; other are optional

ACESSORIES





P32D

ELECTRIC CRIMPING MACHINE 2" with Digital Display (PLC) and Control

TECHNICAL DATA	
Crimping range (mm)	10-87
Crimping force (kN)	2000
Crimping force (tons)	200
Crimpings/hour	700/850
Noise Level (db(A))	71
Hose size (inches)	2 Wire Braid 2" (DN51) / 4 Spirals 2" (DN51)
Die set	P32
Max. opening (mm)	+33
Master die D/L (mm)	99/80
Control	PLC (Siemens) Language free - Graphic Symbols
Siemens Motor (kW)	4
Siemens Motor (HP)	5.3
Voltage (V)*	380 Tri-phasic
QC tool	Included
Pedal	Included
Die Set Rack	Included
Length (mm)	760
Width (mm)	560
Height (mm)	800
Total Weight (kg)	265

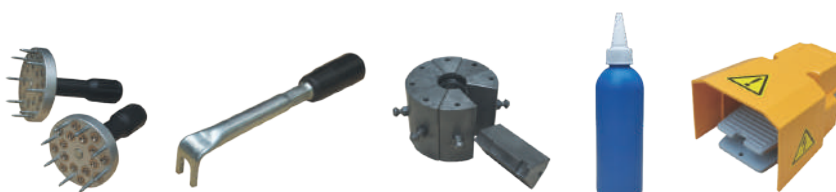


PART NUMBER	P32/6.8	P32/8	P32/10	P32/12	P32/14 **	P32/16 **	P32/19 **	P32/22 **	P32/26 **	P32/30 **	P32/34 **	P32/39 **	P32/45 **	P32/51 **	P32/57 **	P32/63 **	P32/69 **	P32/74	P32/78
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	22.0-26.0	26.0-30.0	30.0-34.0	34.0-39.0	39.0-45.0	45.0-51.0	51.0-57.0	57.0-63.0	63.0-69.0	69.0-75.0	74.0-80.0	78.0-87.0
D (mm)	6.8	8	10	12	14	16	19	22	26	30	34	39	45	51	57	63	69	74	78
L (mm)	25	25	55	55	55	55	55	70	70	70	75	75	90	90	100	110	110	110	110

* Other voltage on request

** Standard die sets included; other are optional

ACESSORIES



P120

ELECTRIC CRIMPING MACHINE up to R15 Hose - 2" with Digital Display (PLC) and Control

TECHNICAL DATA	
Crimping range (mm)	10-87
Crimping force (kN)	2800
Crimping force (tons)	280
Crimpings/hour	3000 (on 1/2")
Noise Level (db(A))	71
Hose size (inches)	2 Wire Braid 2" (DN51) / 6 Spirals 2" (DN51)
Die set	P32
Max. opening (mm)	66
Master die D/L (mm)	99/97
Control	PLC (Siemens) Language free - Graphic Symbols
Siemens Motor (kW)	5.5
Siemens Motor (HP)	7.5
Voltage (V)*	380 Tri-phasic
Quick Change (QC) tool	Included
Foot Pedal	Included
Die Set Rack	Included
Back Stop	Included
Dimensions / crimping unit (mm)	length 940 width 800 height 1635
Dimensions / hydraulic unit (mm)	length 820 width 640 height 992
Total Weight (kg) (without Oil)	1150
Oil Tank capacity (liter)	140

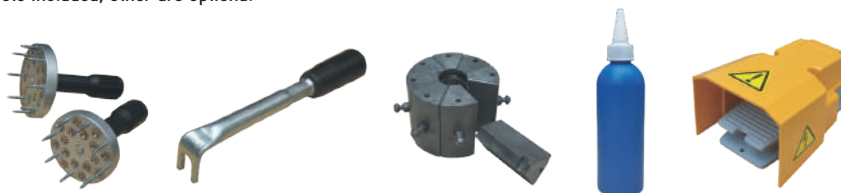


PART NUMBER	P32/6.8	P32/8	P32/10	P32/12	P32/14 **	P32/16 **	P32/19 **	P32/22 **	P32/26 **	P32/30 **	P32/34 **	P32/39 **	P32/45 **	P32/51 **	P32/57 **	P32/63 **	P32/69 **	P32/74 **	P32/78
CRIMPING RANGE (mm)	6.8-8.8	8.0-10.0	10.0-12.0	12.0-14.0	14.0-16.0	16.0-19.0	19.0-23.0	22.0-26.0	26.0-30.0	30.0-34.0	34.0-39.0	39.0-45.0	45.0-51.0	51.0-57.0	57.0-63.0	63.0-69.0	69.0-75.0	74.0-80.0	78.0-87.0
D (mm)	6.8	8	10	12	14	16	19	22	26	30	34	39	45	51	57	63	69	74	78
L (mm)	25	25	55	55	55	55	55	70	70	70	75	75	90	90	100	110	110	110	110

* Other voltage on request

** Standard die sets included; other are optional

ACESSORIES





V100

LOW PRESSURE CRIMPING MACHINE

TECHNICAL DATA	
Crimping range (mm)	9-30mm
Diet set	2 sets (DN3-8 ; DN10-16)
Operation	Manual
Length (mm)	350
Width (mm)	235
Height (mm)	760
Total Weight (kg)	17,5



SK50

ELECTRIC SKIVING MACHINE 2"

TECHNICAL DATA	
Internal Skiving Range	3/4" (DN19) – 2" (DN51)
External Skiving Range	1/4" (DN6) – 2" (DN51)
Internal Skiving tools	6
External Skiving tools	10
Speed of Tool Rotation (r/min)	145
Motor (kW)	0.4
Motor (HP)	0.53
Voltage (V)*	380 Tri-phasic
Noise Level (db(A))	55
Pedal	Included
Length (mm)	400
Width (mm)	300
Height (mm)	1050
Total Weight (kg)	57

* Other voltage on request

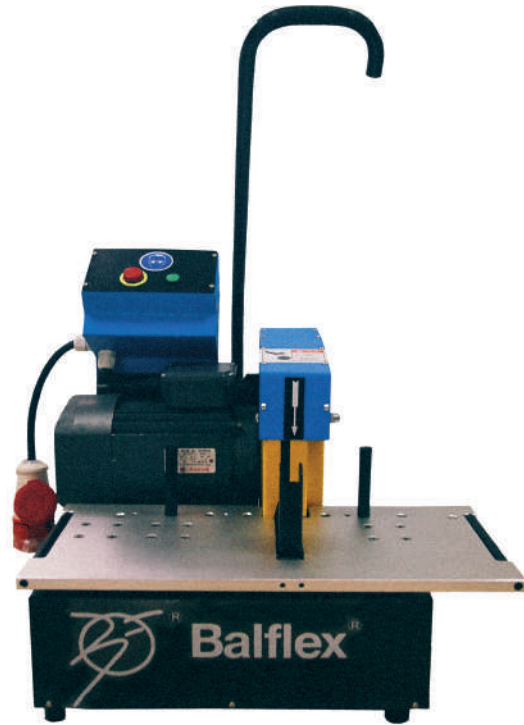


CM50

ELECTRIC CUTTING MACHINE 2"

TECHNICAL DATA	
Serrated Blade (mm)	300X4.5X32
Frequency 50Hz (rpm)	2850
Frequency 60Hz (rpm)	3370
Motor (kW)	4
Motor (HP)	5.3
Voltage (V)*	380 Tri-phasic
Noise Level (db(A))	65
Length (mm)	545
Width (mm)	550
Height (mm)	580
Total Weight (kg)	78

* Other voltage on request





CM400

ELECTRIC CUTTING MACHINE UP TO 2" SIX SPIRALS

TECHNICAL DATA	
Serrated Blade (mm)	400X4.0X50
Frequency 50Hz (rpm)	2850
Frequency 60Hz (rpm)	3370
Motor (kW)	5.5
Motor (HP)	7.5
Voltage (V)*	380 Tri-phasic
Noise Level (db(A))	65
Length (mm)	750
Width (mm)	760
Height (mm)	1200
Total Weight (kg)	195

* Other voltage on request



CM400_AP

ELECTRIC CUTTING MACHINE UP TO 2" SIX SPIRALS WITH PNEUMATIC INPUT

TECHNICAL DATA	
Serrated Blade (mm)	400X4.0X50
Frequency 50Hz (rpm)	2850
Frequency 60Hz (rpm)	3370
Pneumatic input Min. (Bar)	4
Motor (kW)	5.5
Motor (HP)	7.5
Voltage (V)*	380 Tri-phasic
Noise Level (db(A))	65
Length (mm)	1020
Width (mm)	660
Height (mm)	1380
Total Weight (kg)	197

* Other voltage on request



90.DM.6

HOSE REEL 6 PLATES

MODEL	90.DM.6
Dimensions	1850 x 1000 x 12000mm
Total Weight	117 kg
Basket Dimensions	1100 x 120mm
Total Loading Weight	600 kg

* Other design on request



PRODUCTS LIMITED WARRANTY

The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

This warranty is in lieu of and excludes all other warranties, or conditions expressed, implied, statutory or otherwise created under applicable law including, but not limited to the warranty of merchantability and the warranty of fitness for a particular purpose.

In addition, this warranty shall not apply and will be null and void to any products or portions thereof that have been subject to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by balflex or used in any other manner inconsistent with any Balflex® instructions or specifications. Balflex® disclaims any liability for any hose assemblies which have not been produced with in conformance with Balflex® assembly recommendations and parts.

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Specification subject to change without prior notice.
Errors and omission excluded.



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HOSE CATALOG

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*6 decades of know-how and expertise in this field, makes **Balflex®** the first choice for the mining, agriculture, off-shore and construction industries.*

*Today the **Balflex®** Group covers worldwide users through our own company's production facilities, branches and net of certified distributors.*

Balflex® valorizes the inside meaning of the words we use: **Excellence** the quality of being outstanding; **Innovation** the action or process of innovating; **Partnership** cooperation relationship between two or more people, having in mind a common goal; **Tradition** way of thinking or acting, inherited from previous generations.





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FORZA UNO
FORZA DUE
BALPAC 3000
BALPAC 4000
BALPAC PREMIUM
BALPAC IMPACTUS 2SC-K
FORZA LIFT
FORZA UNO - SHARK SKIN
FORZA DUE - SHARK SKIN
BALPAC 3000 - SHARK SKIN
BALPAC 3000 - SHARK SKIN
BALPAC PREMIUM - SHARK SKIN
BALPAC IMPACTUS 2SC-K - SHARK SKIN
BRAKEMASTER R5
2 - MAX JACK
3 - MAX
FIRE
BALWASH MICROLINE
BALWASH 1W
BALWASH 2W
BALWASH 1W BLUE
BALWASH 2W BLUE
BALWASH 1W - SHARK SKIN
BALWASH 2W - SHARK SKIN
BALWASH 1W BLUE - SHARK SKIN
BALWASH 2W BLUE - SHARK SKIN
FLAT HDPE SPRING GUARD
HOSESHIELD PROTECTIVE SLEEVE

8 SPIRAL HYDRAULIC HOSES

BALMASTER BESTFLEX 4SP
POWERSPIR BESTFLEX 4SH
BALMASTER BESTFLEX R12
POWERSPIR BESTFLEX R13
POWERSPIR BESTFLEX R15

WATERBLAST HOSES

WATERBLAST 1100
WATERBLAST 1250

HIGH TEMPERATURE HYDRAULIC HOSE 58

FORZA UNO TROPIC
FORZA DUE TROPIC
BALPAC PREMIUM TROPIC
BRAKEMASTER R5R HEATMASTER

PTFE HOSES

BALFLON SAE 100R14
BALFLON HEAVY WALL DOUBLE BRAID
BALFLON CONVOLUTED (CORRUGATED)
BALFLON CONVOLUTED (CORRUGATED) BLACK
CONDUCTIVE

THERMOPLASTIC HOSES

ZETAFLEX
 ZETAFLEX TWIN
 ZETAFLEX NON CONDUCTIVE
 ZETAFLEX NON CONDUCTIVE TWIN
 ZETAFLEX STEEL
 ZETAFLEX STEEL TWIN
 OMEGAFLEX PLUS
 OMEGAFLEX PLUS TWIN LINE
 OMEGAFLEX PLUS NON CONDUCTIVE
 OMEGAFLEX PLUS TWIN NON CONDUCTIVE
 OMEGAFLEX
 OMEGAFLEX TWIN
 OMEGAFLEX NON CONDUCTIVE
 OMEGAFLEX TWIN NON CONDUCTIVE
 ZETAFLEX 3000
 ZETAFLEX 3000 TWIN
 ZETAFLEX 3000 NON CONDUCTIVE
 ZETAFLEX 3000 TWIN NON CONDUCTIVE
 ULTRAFLEX
 CNG
 JETWASH MICROLINE LIGHT
 JET CLEAN
 PAINTSPRAY 1W
 PAINTSPRAY 2W
 PAINTSPRAY
 BEVERAGE
 SUPERJACK 2W
 SUPERJACK ARAMID
 MINIBORE
 MICROTEST

78 INDUSTRIAL HOSES

AIRMASTER AIR & WATER
 BALDRILL MINE AIR & WATER
 BALDRILL MINE AIR & WATER BLACK
 BALDRILL MINE STEEL UNO AIR & WATER
 BALDRILL MINE STEEL DUO AIR & WATER
 PETROTANK 50 S&D
 PETRO OILTANK 50
 AUTOTANK S&D
 OILTANK
 ACQUATANK S&D
 ACQUA
 SANDBLAST
 DRY CEMENT DELIVERY
 CONCRETE BETON LIGHT
 CONCRETE EXTRAFLEX
 MINING BULK & SLURRY
 SUPERSTEAM RED
 LPG DELIVERY HOSE
 XLPE ACID-SOLVENT & CHEMICAL S&D
 UHMWPE ACID-SOLVENT & CHEMICAL S&D
 FOOD FATTY S&D
 FUEL PUMP
 FUEL PUMP STEEL
 SINGLE WELDING
 SINGLE WELDING BLUE
 TWIN WELDING
 HYDRAULIC BRAKE SAE J1401
 FUEL HOSE
 WATERPUMP HOSE
 AUTOMOTIVE AIR CONDITIONING

100



INOX HOSES

136

BALINOX 321 UNBRAIDED
BALINOX 321 + BRAID 304
BALINOX 321 + DOUBLE BRAID 304
BALINOX 316 UNBRAIDED
BALINOX 316 + BRAID 304
BALINOX 316 + DOUBLE BRAID 304
BRAID 304
EXHAUST TUBE
WELDING RINGS

PU-PA TUBING

156

PU TUBING
PA6 TUBING

PVC HOSES

162

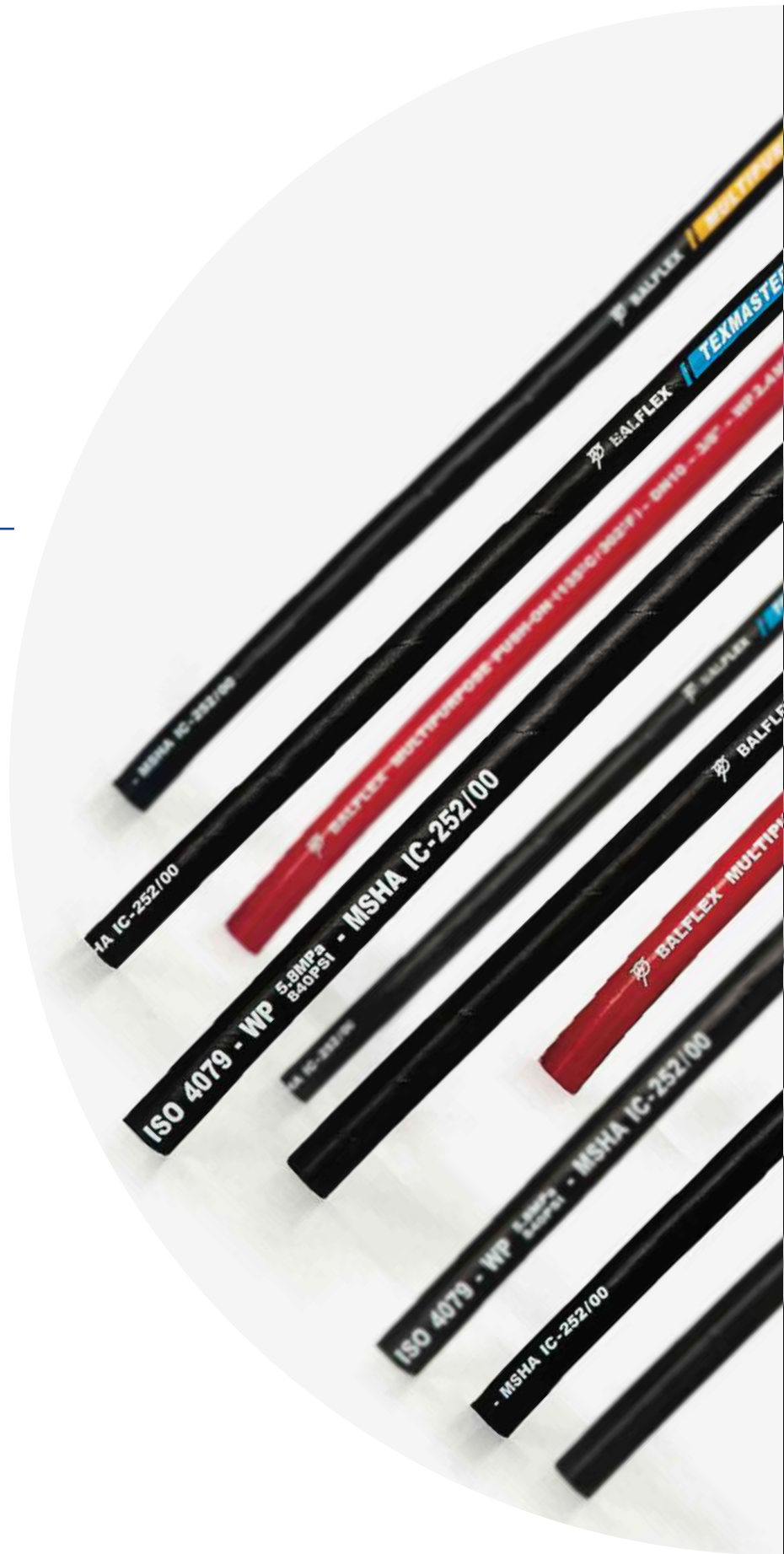
BALCRISTAL FOOD QUALITY
BALCRISTAL AIR & WATER
BALSTEEL SUCTION & DELIVERY NON-TOXIC
BALFLAT 0.4 MPA
BALFLAT 0.6 MPA
FLATDRILL 10 AIR & WATER
FLATDRILL 20 AIR & WATER
AIRPRESSOR AIR & WATER
AUTOWASH CAR WASH

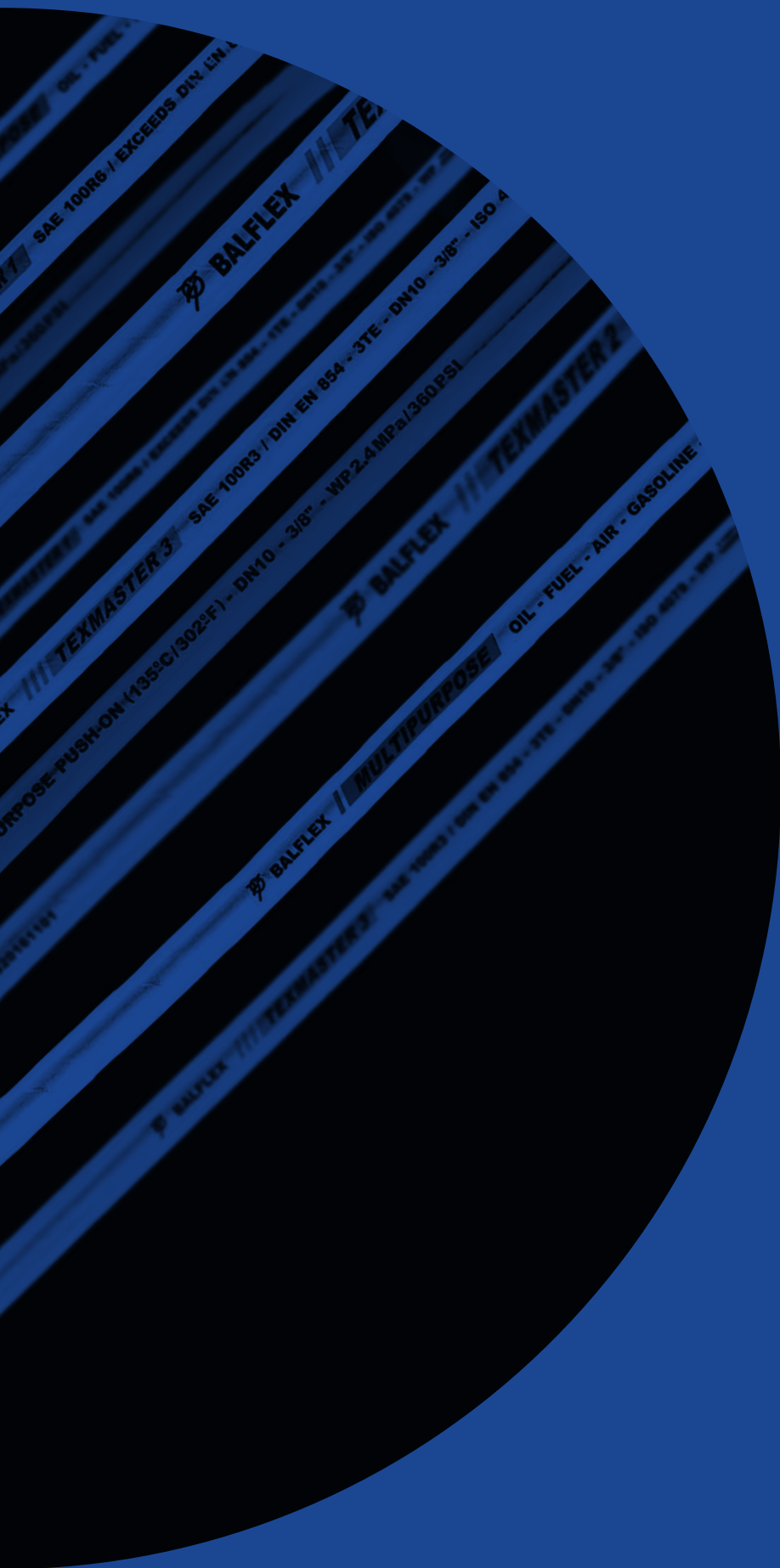
APPENDIX

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Textile Braid Hydraulic Hoses





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Textile Braid Hydraulic Hoses

Balflex® hydraulic textile braided hoses are produced to Balflex® specifications and according to ISO 4079, SAE J517 and EN 854 standards. They cover a wide variety of low and medium pressure applications, for petroleum and water base hydraulic fluids.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® hydraulic textile braid hoses are designed with a safety factor of 4:1 relating minimum burst pressure and recommended working pressure. Working pressure [W P] and nominal diameter [D N] are always branded on the hose.

Hydraulic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -40°C (-40°F) to +100°C (+212°F). Special rubber compounds and other lining materials allow to exceed these limits. Hydraulic hoses may also be used for water base hydraulic fluids if the working temperature does not exceed +70°C (+158°F). For conveyance of Hot Air working temperature should be reduced to a maximum of +60°C (+140°F).

Selection, assembly and installation of hydraulic textile braid hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards. **Hydraulic hose assemblies should always be thoroughly inspected and hydraulically tested before installation.** All hydraulics systems should be tested against

leakage and malfunction in an appropriate area after any intervention.

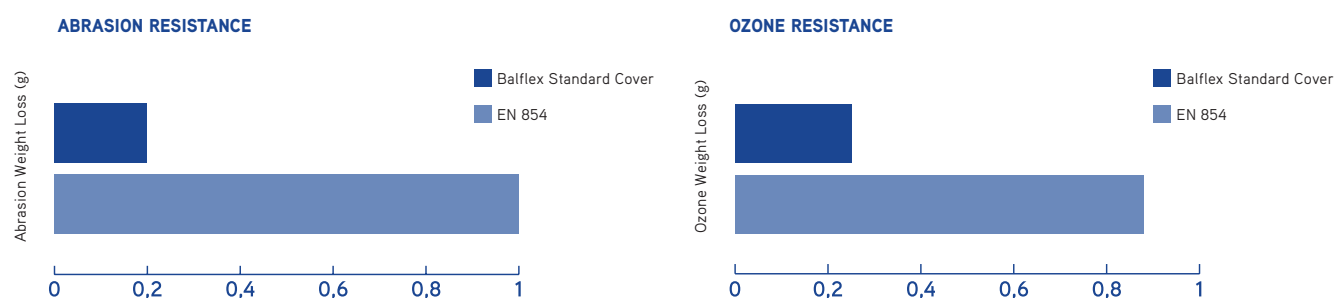
Installations that do not comply with an adequate layout geometry of the hose assembly may significantly reduce the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose and/or end fitting specifications may shorten the hose assembly life drastically.

The failure of a hydraulic textile braided hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of fittings and their parts, the whipping of unrestrained hose, spillage or combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Balflex Hoses are manufactured with a tough outer cover that increases the resistance to environmental and external application damages and present the following main features:

- ✖ Excellent abrasion resistant when tested according to modified ISO 6945 method, and according to ISO 20444 new abrasion test methods.
- ✖ High level of resistance to cracking due to Ozone exposure, resulting in 4 times superior resistance than the relevant EN ISO 7326 requirement;



- ✖ US MSHA Approved Cover (IC 252/00)

Table 1: Rated working pressure at 20°C (+68°F) of Balflex® Hydraulic Textile Braid Hoses (MPa / PSI)

Balflex	Standard	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"
		-3 DN5	-4 DN6	-5 DN8	-6 DN10	-8 DN12	-10 DN16	-12 DN19	-16 DN25	-20 DN31	-24 DN38	-32 DN51	-40 DN63	-48 DN76	-56 DN90	-64 DN100
TEXMASTER 1	DIN EN 854 1TE / ISO 4079 / SAE J517 R6	3.4 500	2.8 410	2.8 410	2.8 410	2.8 410	2.4 350	2.1 310	1.7 250							
TEXMASTER 2	DIN EN 854 2TE / ISO 4079	8.0 1200	7.5 1100	6.8 990	6.3 920	5.8 850	5.5 730	4.5 660	4.0 580							
TEXMASTER 3	DIN EN 854 1TE / ISO 4079 / SAE J517 R3	16.0 2400	14.5 2200	13.0 1900	11.0 1600											
TEXMASTER 3	SAE J517 R3 / ISO 4079					7.0 1100	6.1 950	5.2 800	3.9 600	2.6 400						
TEXMASTER 3T	DIN EN 854 1TE / ISO 4079					9.3 1400	8.0 1200	7.0 1100	5.5 800	4.5 660	4.0 580	3.3 480				
MULTIPURPOSE		2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300	2.0 300				
PUSH-ON			2.4 350	2.4 350	2.4 350	2.1 310	2.1 310	2.1 310	1.4 210							
TORNARE	SAE J517 R4							2.1 310	1.7 250	1.4 210	1.05 160	0.7 110	0.4 60	0.4 60	0.3 50	0.25 40

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H2O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H2O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1MPa = 10,0bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4mm

Example: : +100°C = +212°F



Fluid Compatibility and Resistance Chart for Balflex Textile Braid Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid		Ethyl Glycol	●	Oil of Turpentine	●
Acetic Acid (30%)	●	Ethyleneoxide	●	Oleic Acid	●
Acetone	●	Fluorine	●	Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)	●	Formaldehyde 40%	●	Phenol	●
Ammonia, Liquid	●	Fuel Oil	●	Phosphoric Acid (10%)	●
Ammoniumchloride		Gaseous Hydrogen	●	Phosphoric Acid (70%)	●
Amyl Acetate	●	Gasoline	●	Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils	●	Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene	●	Hexane	●	Silicone Oils	●
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate	●	Hydrochloric Acid 37%	●	Soda	●
Butyl Alcohol / Butanol	●	Hydroger Peroxide (Dil.)	●	Sodium Chloride Solutions	●
Calcium Chloride Solutions		Hydroger Peroxide (Conc.)	●	Sodium Hydroxide 20%	●
Carbon Dioxide	●	Isocyanates		Sodium Hypochloride 10%	●
Carbon Disulfide	●	Isopropil Alcohol	●	Sulphur	●
Carbonates	●	Kerosene	●	Sulphur Dioxide	●
Caustic Soda	●	Liquid Oxygen	●	Sulphuric Acid up to 50%	●
Chlorinated Solvents	●	LPG	●	Sulphuric Acid above 50%	●
Chlorine	●	Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol	●	Vegetable Greases	●
Compressed Air	●	Methyl Chloride (Cold)	●	Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil	●	Mineral Oils	●		
Diocetyl Phthalate		Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers	●	Natural Gas	●		
Ethyl Acetate	●	Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride	●	Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

TEXMASTER 1



DIN EN 854 1TE / SAE 100R6 – 10.1216.

Medium pressure, single textile braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
1TE-R6-03	10.1216.03	DN5	3/16"	-3	4,8	10,8	3.4	500	13.8	2000	51	0,13
1TE-R6-04	10.1216.04	DN6	1/4"	-4	6,3	12,4	2.8	410	11.0	1640	64	0,14
1TE-R6-05	10.1216.05	DN8	5/16"	-5	8,0	13,9	2.8	410	11.0	1640	76	0,18
1TE-R6-06	10.1216.06	DN10	3/8"	-6	9,5	15,4	2.8	410	11.0	1640	76	0,19
1TE-R6-08	10.1216.08	DN12	1/2"	-8	12,7	18,6	2.8	410	11.0	1640	102	0,27
1TE-R6-10	10.1216.10	DN16	5/8"	-10	16,0	22,9	2.4	350	9.7	1400	127	0,31
1TE-R6-12	10.1216.12	DN19	3/4"	-12	19,0	26,6	2.1	310	8.3	1240	152	0,43
1TE-R6-14	10.1216.14	DN22	7/8"	-14	22,0	31,3	2.2	320	8.8	1280	200	0,59
1TE-R6-16	10.1216.16	DN25	1"	-16	25,4	33,0	1.7	250	6.8	1000	203	0,59

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high resistance synthetic fiber braid
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1
TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +50°C (+122°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
APPLICATION: petroleum base hydraulic fluids

COVER: U.S. MSHA APPROVED
NOTES: Sizes -14 (DN 22) 7/8" and -16 (DN 25) 1" not included in the standards

BALFLEX // TEXMASTER 1 SAE 100R6 / EXCEEDS DIN EN 854 - 1TE - DN5 - 3/16" - ISO 4079 - WP 3.4 MPa 500 PSI - Flame Resistant - MSHA IC-252/00

TEXMASTER 2



DIN EN 854 2TE – 10.1217.

Medium pressure, single textile braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	MPa	MPa	MPa	MIN BEND RAD mm	KG kg/m
2TE-03	10.1217.03	DN5	3/16"	-3	4,8	11,8	8.0	1200	32.0	4800	25	0,12
2TE-04	10.1217.04	DN6	1/4"	-4	6,3	13,4	7.5	1100	30.0	4400	40	0,14
2TE-05	10.1217.05	DN8	5/16"	-5	8,0	14,9	6.8	990	27.2	3960	50	0,18
2TE-06	10.1217.06	DN10	3/8"	-6	9,5	16,5	6.3	920	25.2	3680	60	0,19
2TE-08	10.1217.08	DN12	1/2"	-8	12,7	19,7	5.8	850	23.2	3400	70	0,27
2TE-10	10.1217.10	DN16	5/8"	-10	16,0	23,9	5.0	730	20.0	2920	90	0,31
2TE-12	10.1217.12	DN19	3/4"	-12	19,0	27,0	4.5	660	18.0	2640	110	0,43
2TE-16	10.1217.16	DN25	1"	-16	25,4	34,4	4.0	580	16.0	2320	150	0,59

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high resistance synthetic fiber braid

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +50°C (+122°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
COVER: U.S. MSHA APPROVED

BALFLEX // TEXMASTER 2 DIN EN 854 - 2TE - DN5 - 3/16" - ISO 4079 - WP 8 MPa 1200 PSI - Flame Resistant - MSHA IC-252/00



TEXMASTER 3



SAE 100R3 – 10.1220

Medium pressure, double textile braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R3-3TE-03	10.1220.03	DN5	3/16"	-3	4,8	12,8	16.0 2400	64.0 9600	64.0 9600	40	0,13
R3-3TE-04	10.1220.04	DN6	1/4"	-4	6,3	14,4	14.5 2200	58.0 8800	58.0 8800	45	0,18
R3-3TE-05	10.1220.05	DN8	5/16"	-5	8,0	16,9	13.0 1900	52.0 7600	52.0 7600	55	0,25
R3-3TE-06	10.1220.06	DN10	3/8"	-6	9,5	18,5	11.0 1600	44.0 6400	44.0 6400	70	0,28
R3-08	10.1220.08	DN12	1/2"	-8	12,7	23,8	7.0 1100	28.0 4400	28.0 4400	125	0,44
R3-10	10.1220.10	DN16	5/8"	-10	16,0	27,0	6.1 950	24.4 3800	24.4 3800	140	0,49
R3-12	10.1220.12	DN19	3/4"	-12	19,0	31,8	5.2 800	20.8 3200	20.8 3200	150	0,70
R3-16	10.1220.16	DN25	1"	-16	25,4	38,1	3.9 600	15.6 2400	15.6 2400	205	0,79
R3-20	10.1220.20	DN31	1.1/4"	-20	32,0	44,5	2.6 400	10.4 1600	10.4 1600	250	0,88

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 2 high resistance synthetic fiber braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +50°C (+122°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
COVER: U.S. MSHA APPROVED

BALFLEX /// TEXMASTER 3 SAE 100R3 - DN12 - 1/2" - ISO 4079 - WP 7 MPa 1100 PSI - Flame Resistant - MSHA IC-252/00

TEXMASTER 3T



DIN EN 854 3TE – 10.1220 / 10.123T

Medium pressure, double textile braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R3-3TE-03	10.1220.03	DN5	3/16"	-3	4,8	12,8	16.0 2400	64.0 9600	64.0 9600	40	0,13
R3-3TE-04	10.1220.04	DN6	1/4"	-4	6,3	14,4	14.5 2200	58.0 8800	58.0 8800	45	0,18
R3-3TE-05	10.1220.05	DN8	5/16"	-5	8,0	16,9	13.0 1900	52.0 7600	52.0 7600	55	0,25
R3-3TE-06	10.1220.06	DN10	3/8"	-6	9,5	18,5	11.0 1600	44.0 6400	44.0 6400	70	0,28
3TE-08	10.123T.08	DN12	1/2"	-8	12,7	21,7	9.3 1400	37.2 5600	37.2 5600	85	0,44
3TE-10	10.123T.10	DN16	5/8"	-10	16,0	25,9	8.0 1200	32.0 4800	32.0 4800	105	0,49
3TE-12	10.123T.12	DN19	3/4"	-12	19,0	29,0	7.0 1100	28.0 4400	28.0 4400	130	0,70
3TE-16	10.123T.16	DN25	1"	-16	25,4	35,9	5.5 800	22.0 3200	22.0 3200	150	0,79
3TE-20	10.123T.20	DN31	1.1/4"	-20	32,0	42,3	4.5 660	18.0 2640	18.0 2640	190	0,88
3TE-24	10.123T.24	DN38	1.1/2"	-24	38,0	49,6	4.0 580	16.0 2320	16.0 2320	240	1,17
3TE-32	10.123T.32	DN51	2"	-32	50,8	62,3	3.3 480	13.2 1920	13.2 1920	300	1,63

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 2 high resistance synthetic fiber braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +50°C (+122°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
COVER: U.S. MSHA APPROVED

BALFLEX /// TEXMASTER 3T DIN EN 854 - 3TE - DN12 - 1/2" - ISO 4079 - WP 9.3 MPa 1400 PSI - Flame Resistant - MSHA IC-252/00

MULTIPURPOSE



2.0MPa / 300PSI (100% rubber hose) – 10.1215.

Oil, Fuel and Gasoline

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
MULTI-03	10.1215.03	3/16"	-3	4,8	11,0	2,0	300	6,0	1200	50	0,10
MULTI-04	10.1215.04	1/4"	-4	6,3	12,8	2,0	300	6,0	1200	60	0,16
MULTI-05	10.1215.05	5/16"	-5	8,0	14,9	2,0	300	6,0	1200	80	0,24
MULTI-06	10.1215.06	3/8"	-6	9,5	16,7	2,0	300	6,0	1200	100	0,29
MULTI-08	10.1215.08	1/2"	-8	12,7	21,0	2,0	300	6,0	1200	125	0,40
MULTI-10	10.1215.10	5/8"	-10	16,0	24,2	2,0	300	6,0	1200	160	0,50
MULTI-12	10.1215.12	3/4"	-12	19,0	28,0	2,0	300	6,0	1200	190	0,66
MULTI-16	10.1215.16	1"	-16	25,4	35,0	2,0	300	6,0	1200	254	0,90
MULTI-20	10.1215.20	1.1/4"	-20	32,0	42,8	2,0	300	6,0	1200	320	1,20
MULTI-24	10.1215.24	1.1/2"	-24	38,0	49,8	2,0	300	6,0	1200	380	1,42
MULTI-32	10.1215.32	2"	-32	50,8	62,2	2,0	300	6,0	1200	510	1,89

INNER TUBE: seamless oil, fuel and gasoline resistant synthetic rubber

REINFORCEMENT: 1 high resistance synthetic fiber braid

SAFETY FACTOR: 3:1

OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber

APPLICATION: oil, fuel and gasoline

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +50°C (+122°F)

COVER: U.S. MSHA APPROVED

WARNING: this hose is not according to any particular standards, so should not be used in automotive applications

BALFLEX / MULTIPURPOSE OIL - FUEL - AIR - GASOLINE - DN5 - 3/16" - WP 2 MPa 300 PSI - Flame Resistant - MSHA IC-252/00



PUSH-ON



MULTIPURPOSE - 10.PL15.- R/B

Low pressure, single textile braid, Multipurpose hose.

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
PUSH-04	10.PL15.04B (R)	1/4"	-4	6,3	12,5	2,4 350	7,2 1050	64	0,14
PUSH-05	10.PL15.05B (R)	5/16"	-5	8,0	14,3	2,4 350	7,2 1050	76	0,16
PUSH-06	10.PL15.06B (R)	3/8"	-6	9,5	15,7	2,4 350	7,2 1050	76	0,20
PUSH-08	10.PL15.08B (R)	1/2"	-8	12,7	19,6	2,1 310	6,3 930	102	0,24
PUSH-10	10.PL15.10B (R)	5/8"	-10	16,0	22,8	2,1 310	6,3 930	127	0,32
PUSH-12	10.PL15.12B (R)	3/4"	-12	19,0	26,0	2,1 310	6,3 930	152	0,38
PUSH-16	10.PL15.16B (R)	1"	-16	25,4	32,6	1,4 210	4,2 630	203	0,52

INNER TUBE: seamless oil resistant synthetic rubber resistant to high temperature

REINFORCEMENT: 1 high resistance synthetic fiber braid

SAFETY FACTOR: 3:1

OUTER TUBE: Blue or Red Smooth Cover, oil, weather and abrasion resistant synthetic rubber

APPLICATION: petroleum base hydraulic fluids, water based fluids; Injection Mould applications

TEMPERATURE RANGE: continuous service: +135°C (+257°F). Max. temperature recommended for water base hydraulic fluids: +85°C (+185°F). Max. temperature recommended for air: +70°C (+158°F)

COUPLINGS: Balflex® push-on fittings 22 serie

WARNING: This hose is a high temperature multipurpose oil / water hose but cannot be used with phosphate-ester based oils.

BALFLEX MULTIPURPOSE PUSH-ON (135°C / 302°F) - DN6 - 1/4" - WP 2.4 MPa / 350 PSI

BALFLEX MULTIPURPOSE PUSH-ON (135°C / 302°F) - DN6 - 1/4" - WP 2.4 MPa / 350 PSI

TORNARE 4



SAE 100R4 - 10.1219.

According to SAE J517 type SAE 100R4, suction & delivery hydraulic hose.

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R4-12	10.121912	3/4"	-12	19,0	30,0	2,1 310	8,4 1240	57,0	0,75
R4-16	10.121916	1"	-16	25,4	36,0	1,7 250	6,8 1000	75,0	0,93
R4-20	10.121920	1 1/4"	-20	31,8	43,0	1,4 210	5,6 840	96,0	1,25
R4-24	10.121924	1 1/2"	-24	38,1	49,0	1,05 160	4,2 640	114,0	1,54
R4-32	10.121932	2"	-32	50,8	62,0	0,7 110	2,8 440	152,0	2,00
R4-40	10.121940	2 1/2"	-40	63,5	76,0	0,4 60	1,6 240	189,0	2,50
R4-48	10.121948	3"	-48	76,2	89,0	0,4 60	1,6 240	228,0	3,20
R4-56	10.121956	3 1/2"	-56	88,9	104,0	0,3 50	1,2 200	270,0	4,03
R4-64	10.121964	4"	-64	101,6	116,0	0,25 40	1,0 160	306,0	5,04

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: textile braids and 3 high strength steel wire helix

SAFETY FACTOR: 4:1

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

APPLICATION: suction, delivery, return & discharge of petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F); Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F); Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® multicrimp fittings serie BW23

COVER: U.S. MSHA approved

BALFLEX TORNARE 4 SAE 100R4 - DN19 - 3/4" - WP 2.1 MPa 310 PSI - Flame Resistant - MSHA IC-252/00

Steel Wire Braid Hydraulic Hoses





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Steel Wire Braid Hydraulic Hoses

Balflex® hydraulic steel wire braided hoses are produced to Balflex® specifications and according to ISO 1436, ISO 11237, SAE J517 and EN 853 to EN 857 standards. They cover a wide variety of medium and high pressure applications, for petroleum and water base hydraulic fluids.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® hydraulic steel wire braided hoses are designed with a safety factor of 4:1 relating minimum burst pressure and recommended working pressure. Working pressure [W P] and nominal diameter [D N] are always branded on the hose.

Hydraulic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -40°C (-40°F) to +100°C (+212°F). Special rubber compounds and other lining materials allow to exceed these limits. Hydraulic hoses may also be used for water base hydraulic fluids if the working temperature does not exceed +70°C (+158°F). For conveyance of Hot Air working temperature should be reduced to a maximum of +60°C (+140°F).

Selection, assembly and installation of hydraulic steel wire braid hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards. **Hydraulic hose assemblies should always be thoroughly inspected and hydraulically tested before installation.** All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

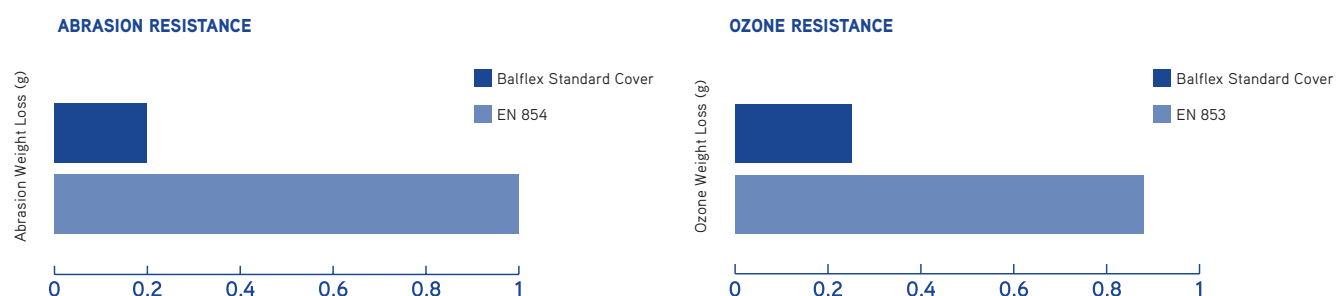
Installations that do not comply with an adequate layout geometry of the hose assembly may significantly reduce the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose and / or end fitting specifications may shorten the hose assembly life drastically.

The failure of a hydraulic steel wire braided hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of fittings and their parts, the whipping of unrestrained hose, spillage or combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Balflex Hoses are manufactured with a tough outer cover that increases the resistance to environmental and external application damages and present the following main features:

- ✕ Excellent abrasion resistant when tested according to modified ISO 6945 method, and according to ISO 20444 new abrasion test methods.
- ✕ High level of resistance to cracking due to Ozone exposure, resulting in 4 times superior resistance than the relevant EN ISO 7326 requirement;



- ✕ US MSHA Approved Cover (IC 252/00)

Table 1a: Rated working pressure at 20 °C (+68 °F) of Balflex® Hydraulic Steel Wire Braid Hoses (MPa / PSI)

Balflex	Standard	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"
		-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48
		DN5	DN6	DN8	DN10	DN12	DN16	DN19	DN25	DN31	DN38	DN51	DN63	DN76
FORZA UNO	DIN EN 853 1SN / ISO 1436 / SAE J517 R1AT	25.0	22.5	21.5	18.0	16.0	13.0	10.5	8.8	6.3	5.0	4.0	3.0	2.0
		3700	3300	3200	2700	2400	1900	1600	1300	920	730	580	440	290
FORZA DUE	DIN EN 853 2SN / ISO 1436 / SAE J517 R2AT	41.5	40.0	35.0	33.0	27.5	25.0	21.5	16.5	12.5	9.0	8.0	7.0	5.5
		6100	5800	5100	4800	4000	3700	3200	2400	1900	1400	1200	1100	800
BALPAC PREMIUM	DIN EN 857 2SC / ISO 11237 / SAE J517 R16		42.5	40.0	35.0	34.5	31.0	28.0	28.0					
			6200	5800	5100	5000	4500	4000	4000					
BALPAC 3000	DIN EN 857 1SC / ISO 11237 / SAE J517 R17		26.0	26.0	25.0	21.0								
			3800	3800	3625	3000								
BALPAC 3000	SAE J517 R17						21.0	21.0	21.0					
							3000	3000	3000					
BALPAC	DIN EN 857 1SC						13.0	10.5	8.8					
							1900	1600	1300					
2-MAX JACK			70.0		70.0	55.2								
			10000		10000	8100								
3-MAX					50.0	47.0	41.0	37.5	33.0					
					7300	6900	6100	5500	4800					

Table 1b: Rated working pressure at 20 °C (+68 °F) of Balflex® Hydraulic Hoses (MPa / PSI)

Balflex	type	3/16"	1/4"	5/16"	13/32"	1/2"	5/8"	7/8"	1.1/8"	1.3/8"	1.13/16"	23/32"	3"
		-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48
BRAKEMASTER	SAE J517 R5 / SAE J1402	20.7	20.7	15.5	13.8	12.1	10.3	5.5	4.3	3.4	2.4	2.4	1.4
		3002	3002	2248	2001	1755	1464	798	624	493	348	348	203

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H2O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H2O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100 °C = +212 °F



Fluid Compatibility and Resistance Chart for Balflex Steel Wire Braid Hydraulic Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid		Ethyl Glycol	●	Oil of Turpentine	●
Acetic Acid (30%)	●	Ethyleneoxide	●	Oleic Acid	●
Acetone	●	Fluorine	●	Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)	●	Formaldehyde 40%	●	Phenol	●
Ammonia, Liquid	●	Fuel Oil	●	Phosphoric Acid (10%)	●
Ammoniumchloride		Gaseous Hydrogen	●	Phosphoric Acid (70%)	●
Amyl Acetate	●	Gasoline	●	Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils	●	Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene	●	Hexane	●	Silicone Oils	●
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate	●	Hydrochloric Acid 37%	●	Soda	●
Butyl Alcohol / Butanol	●	Hydroger Peroxide (Dil.)	●	Sodium Chloride Solutions	●
Calcium Chloride Solutions		Hydroger Peroxide (Conc.)	●	Sodium Hydroxide 20%	●
Carbon Dioxide	●	Isocyanates		Sodium Hypochloride 10%	●
Carbon Disulfide	●	Isopropil Alcohol	●	Sulphur	●
Carbonates	●	Kerosene	●	Sulphur Dioxide	●
Caustic Soda	●	Liquid Oxygen	●	Sulphuric Acid up to 50%	●
Chlorinated Solvents	●	LPG	●	Sulphuric Acid above 50%	●
Chlorine	●	Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol	●	Vegetable Greases	●
Compressed Air	●	Methyl Chloride (Cold)	●	Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil	●	Mineral Oils	●		
Diocetyl Phthalate		Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers	●	Natural Gas	●		
Ethyl Acetate	●	Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride	●	Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

FORZA UNO



DIN EN 853 1SN / SAE 100R1AT / ISO 1436 – 10.1002.

High pressure, single steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
1SN-03	10.1002.03	DN5	3/16"	-3	4,8	11,4	25.0	3700	100.0	14800	89	0,23
1SN-04	10.1002.04	DN6	1/4"	-4	6,3	13,0	22.5	3300	90.0	13200	100	0,23
1SN-05	10.1002.05	DN8	5/16"	-5	8,0	14,7	21.5	3200	85.0	12800	114	0,23
1SN-06	10.1002.06	DN10	3/8"	-6	9,5	17,2	18.0	2700	72.0	10800	127	0,33
1SN-08	10.1002.08	DN12	1/2"	-8	12,7	20,5	16.0	2400	64.0	9600	178	0,42
1SN-10	10.1002.10	DN16	5/8"	-10	16,0	23,8	13.0	1900	52.0	7600	200	0,52
1SN-12	10.1002.12	DN19	3/4"	-12	19,0	27,8	10.5	1600	42.0	6400	240	0,65
1SN-16	10.1002.16	DN25	1"	-16	25,4	35,9	8.8	1300	35.0	5200	300	1,00
1SN-20	10.1002.20	DN31	1.1/4"	-20	32,0	44,0	6.3	920	25.0	3680	419	1,30
1SN-24	10.1002.24	DN38	1.1/2"	-24	38,0	50,8	5.0	730	20.0	2920	500	1,63
1SN-32	10.1002.32	DN51	2"	-32	50,8	64,3	4.0	580	16.0	2320	630	2,00
1SN-40	10.1002.40	DN63	2.1/2"	-40	63,5	75,0	4.5	650	18.0	2610	760	2,35
1SN-48	10.1002.48	DN76	3"	-48	76,2	88,0	3.5	510	14.0	2030	900	2,55

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

Balflex® Multicrimp fittings serie BW23/ BF21/P23

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

COVER: U.S. MSHA APPROVED

NOTES: Sizes -40 (2.1/2") and - 48 (3") not included in the standards. Balflex® hydraulic hose DIN EN 853 1SN / SAE 100R1AT has a very superior working and burst pressure compared with only SAE 100R1AT

BALFLEX / FORZA UNO 1SN - DN5 - DIN EN 853 / SAE 100R1AT / ISO 1436 - 3/16" - WP 25MPa 3700PSI - Flame Resistant - MSHA IC-252/00



FORZA DUE



DIN EN 853 2SN / SAE 100R2AT / ISO 1436 – 10.1004.

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SN-03	10.1004.03	DN5	3/16"	-3	4,8	13,4	41.5 6100	165.0 24400	89	0,32
2SN-04	10.1004.04	DN6	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200	100	0,38
2SN-05	10.1004.05	DN8	5/16"	-5	8,0	16,5	35.0 5100	140.0 20400	114	0,45
2SN-06	10.1004.06	DN10	3/8"	-6	9,5	18,7	33.0 4800	132.0 19200	127	0,53
2SN-08	10.1004.08	DN12	1/2"	-8	12,7	21,9	27.5 4000	110.0 16000	178	0,65
2SN-10	10.1004.10	DN16	5/8"	-10	16,0	25,3	25.0 3700	100.0 14800	200	0,76
2SN-12	10.1004.12	DN19	3/4"	-12	19,0	29,3	21.5 3200	86.0 12800	240	1,00
2SN-16	10.1004.16	DN25	1"	-16	25,4	37,9	16.5 2400	65.0 9600	300	1,48
2SN-20	10.1004.20	DN31	1.1/4"	-20	32,0	47,5	12.5 1900	50.0 7600	419	2,14
2SN-24	10.1004.24	DN38	1.1/2"	-24	38,0	54,6	9.0 1400	36.0 5600	500	2,55
2SN-32	10.1004.32	DN51	2"	-32	50,8	67,4	8.0 1200	32.0 4800	630	3,30
2SN-40	10.1004.40	DN63	2.1/2"	-40	63,5	78,0	7.0 1100	28.0 4400	760	3,96
2SN-48	10.1004.48	DN76	3"	-48	76,2	90,0	5.5 800	22.0 3200	900	4,96

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Arctic) / Tough Cover (Armourguard)

NOTES: - Size -48 (3") not included in the standards.

Balflex® hydraulic hose DIN EN 853 2SN / SAE 100R2AT has a very superior working and burst pressure compared with only SAE 100R2AT

BALFLEX // FORZA DUE 2SN - DN5 - DIN EN 853 / SAE 100R2AT / ISO 1436 - 3/16" - WP 41.5MPa 6100PSI - Flame Resistant - MSHA IC-252/00

BALPAC 3000



DIN EN 857 1SC / SAE 100R17 / ISO 11237 – 10.1017.

High pressure, single or double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
1 Wire Braid										
R17-04	10.1017.04	DN6	1/4"	-4	6.3	12.5	26.0 3800	104.0 15200	51	0.22
R17-05	10.1017.05	DN8	5/16"	-5	8.0	13.8	26.0 3800	104.0 15200	60	0.27
R17-06	10.1017.06	DN10	3/8"	-6	9.5	16.2	25.0 3625	100.0 14500	64	0.34
R17-08	10.1017.08	DN12	1/2"	-8	12.7	19.4	21.0 3000	84.0 12000	89	0.42
2 Wire Braid										
R17-10	10.1017.10	DN16	5/8"	-10	15.9	24.2	21.0 3000	84.0 12000	102	0.51
R17-12	10.1017.12	DN19	3/4"	-12	19.0	28.2	21.0 3000	84.0 12000	122	0.63
R17-16	10.1017.16	DN25	1"	-16	25.4	35.6	21.0 3000	84.0 12000	152	1.00

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid on sizes 1/4", 5/16", 3/8" and 1/2" and 2 braids on sizes 5/8", 3/4" and 1"
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules, Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

BALFLEX / BALPAC 3000 1SC-4K EXCEEDS SAE 100R17 / DIN EN 857 - 1SC ISO 11237 / ISO 18752 TYPE BC DN6 - 1/4" - WP 26 MPa 3800 PSI - Flame Resistant - MSHA IC-252/00

BALPAC 3000



DIN EN 857 1SC / ISO 11237 – 10.1018.

High pressure, single steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
1SC-10	10.1018.10	DN16	5/8"	-10	15.9	22.6	13.0 1900	52.0 7600	150	0.73
1SC-12	10.1018.12	DN19	3/4"	-12	19.0	26.2	10.5 1600	42.0 6400	180	0.94
1SC-16	10.1018.16	DN25	1"	-16	25.4	33.6	8.8 1300	35.2 5200	230	1.49

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules, Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

BALFLEX / BALPAC - 3000 DIN EN 857 - 1SC / ISO 11237 - DN16 - 5/8" - WP 13 MPa 1900 PSI - Flame Resistant - MSHA IC-252/00



BALPAC 4000



SAE 100R19 – 10.1020

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R19-04	10.1020.04	DN6	1/4"	-4	6,3	13,0	28,0 4000	112,0 16000	50	0,27
R19-06	10.1020.06	DN10	3/8"	-6	9,5	17,0	28,0 4000	112,0 16000	65	0,42
R19-08	10.1020.08	DN12	1/2"	-8	12,7	20,0	28,0 4000	112,0 16000	90	0,52
R19-10	10.1020.10	DN16	5/8"	-10	16,0	24,0	28,0 4000	112,0 16000	100	0,63
R19-12	10.1020.12	DN19	3/4"	-12	19,0	28,0	28,0 4000	112,0 16000	120	0,80

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braid

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

BALFLEX // BALPAC 4000 SAE 100R19 - DN6 - 1/4" - WP - 28 MPa 4000 PSI - Flame Resistant - MSHA IC-252/00

BALPAC PREMIUM



DIN EN 857 2SC / SAE 100R16 / ISO 11237 – 10.1019.

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SC-04	10.1019.04	DN6	1/4"	-4	6,3	13,2	45 6500	180 26000	50	0,27
2SC-05	10.1019.05	DN8	5/16"	-5	8,0	15,1	42 6100	168 24400	57	0,30
2SC-06	10.1019.06	DN10	3/8"	-6	9,5	17,0	40 5800	160 23200	65	0,42
2SC-08	10.1019.08	DN12	1/2"	-8	12,7	20,5	36 5250	144 21000	90	0,52
2SC-10	10.1019.10	DN16	5/8"	-10	16,0	24,2	28 4000	112 16000	100	0,63
2SC-12	10.1019.12	DN19	3/4"	-12	19,0	28,2	28 4000	112 16000	120	0,80
2SC-16	10.1019.16	DN25	1"	-16	25,4	35,6	21 3000	84 12000	150	1,22

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braid

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

NOTE: For sizes DN16(5/8"), DN19(3/4"), DN25(1"), consider Balflex Balpac Premium. Approved at 1 000 000 impulse cycles at 1.33% WP

BALFLEX // BALPAC - PREMIUM R16-7K EXCEEDS DIN EN 857 - 2SC / SAE 100R16 / SAE 100R19 ISO 11237 / ISO 18752 TYPE BC DN6 - 1/4" - WP 45 MPa 6500 PSI - Flame Resistant - MSHA IC-252/00

BALPAC IMPACTUS 2SC-K



Exceeds DIN EN 857 2SC / Exceeds SAE 100R16 – 10.1010

Extremely high pressure compact, double steel braid reinforced hydraulic hose
Balflex proprietary specification

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R16I-04	10.1010.04	DN6	1/4"	-4	6,3	13,4	50 7250	200 29000	50	0,27
R16I-05	10.1010.05	DN8	5/16"	-5	8,0	15,0	45 6500	180 26000	57	0,30
R16I-06	10.1010.06	DN10	3/8"	-6	9,5	17,2	45 6500	180 26000	65	0,42
R16I-08	10.1010.08	DN12	1/2"	-8	12,7	20,6	40 5800	160 23200	90	0,52
R16I-10	10.1010.10	DN16	5/8"	-10	16	23,9	29 4200	116 16800	100	0,63
R16I-12	10.1010.12	DN19	3/4"	-12	19	27,7	28 4100	112 16400	120	0,80
R16I-16	10.1010.16	DN25	1"	-16	25,4	35,4	20 2900	80 11600	150	1,22

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 2 high tensile steel wire braid
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules, Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: Smooth cover (Shark Skin) / High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

BALFLEX /// BALPAC - IMPACTUS 2SC-7K EXCEEDS DIN EN 857 - 2SC / SAE 100R16 / ISO 11237 - DN6 - 1/4" - WP 50 MPa 7250 PSI - Flame Resistant - MSHA IC-252/00

FORZA LIFT



Lift and Elevator complying EN 81/2 - 10.1013

High pressure, single or double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
1 Wire Braid										
LIFT-12	10.1013.12	DN19	3/4"	-12	19,0	27,8	5,0 725	40,0 5800	240	0,65
LIFT-16	10.1013.16	DN25	1"	-16	25,4	35,9	5,0 725	40,0 5800	300	1,00
LIFT-20	10.1013.20	DN31	1.1/4"	-20	32,0	44,0	5,0 725	40,0 5800	419	1,30
2 Wires Braid										
LIFT-24	10.1013.24	DN38	1.1/2"	-24	38,0	54,6	4,5 650	36,0 5250	500	2,55
LIFT-32	10.1013.32	DN51	2"	-32	50,8	67,4	4,0 580	32,0 4650	630	3,30

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid on sizes 3/4", 1", 1.1/4" and 2 braids on sizes 1.1/2" and 2"

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 8:1
TEMPERATURE RANGE: -40°C (-40°F)

APPLICATION: Hydraulic hose for Lift and Elevators
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules, Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

BALFLEX /// FORZA LIFT DN31 - EN 81/2 - 1.1/4" - WP - 5 MPa 725 PSI - Flame Resistant - MSHA IC-252/00



FORZA UNO - SHARK SKIN



DIN EN 853 1SN / SAE 100R1AT / ISO 1436 – 10.10S2.

High pressure, single steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
1SN-03	10.10S2.03	DN5	3/16"	-3	4,8	11,4	25.0 3700	100.0 14800	89	0,23
1SN-04	10.10S2.04	DN6	1/4"	-4	6,3	13,0	22.5 3300	90.0 13200	100	0,23
1SN-05	10.10S2.05	DN8	5/16"	-5	8,0	14,7	21.5 3200	85.0 12800	114	0,23
1SN-06	10.10S2.06	DN10	3/8"	-6	9,5	17,2	18.0 2700	72.0 10800	127	0,33
1SN-08	10.10S2.08	DN12	1/2"	-8	12,7	20,5	16.0 2400	64.0 9600	178	0,42
1SN-10	10.10S2.10	DN16	5/8"	-10	16,0	23,8	13.0 1900	52.0 7600	200	0,52
1SN-12	10.10S2.12	DN19	3/4"	-12	19,0	27,8	10.5 1600	42.0 6400	240	0,65
1SN-16	10.10S2.16	DN25	1"	-16	25,4	35,9	8.8 1300	35.0 5200	300	1,00

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
Balflex® Multicrimp fittings serie BW23/BF21/P23

AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

COVER: U.S. MSHA APPROVED

NOTES: Sizes -40 (2.1/2") and -48 (3") not included in the standards.
Balflex® hydraulic hose DIN EN 853 1SN / SAE 100R1AT has a very superior working and burst pressure compared with only SAE 100R1AT

BALFLEX // FORZA UNO SHARK SKIN 1SN - DN6 - DIN EN 853 / SAE 100R1AT / ISO 1436 - 1/4" - WP 22.5 MPa 3300 PSI - Flame Resistant - MSHA IC-252/00

FORZA DUE - SHARK SKIN



DIN EN 853 2SN / SAE 100R2AT / ISO 1436 – 10.10S4.

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SN-03	10.10S4.03	DN5	3/16"	-3	4,8	13,4	41.5 6100	165.0 24400	89	0,32
2SN-04	10.10S4.04	DN6	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200	100	0,38
2SN-05	10.10S4.05	DN8	5/16"	-5	8,0	16,5	35.0 5100	140.0 20400	114	0,45
2SN-06	10.10S4.06	DN10	3/8"	-6	9,5	18,7	33.0 4800	132.0 19200	127	0,53
2SN-08	10.10S4.08	DN12	1/2"	-8	12,7	21,9	27.5 4000	110.0 16000	178	0,65
2SN-10	10.10S4.10	DN16	5/8"	-10	16,0	25,3	25.0 3700	100.0 14800	200	0,76
2SN-12	10.10S4.12	DN19	3/4"	-12	19,0	29,3	21.5 3200	86.0 12800	240	1,00
2SN-16	10.10S4.16	DN25	1"	-16	25,4	37,9	16.5 2400	65.0 9600	300	1,48

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED
AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

NOTES: : Size -48 (3") not included in the standards.

Balflex® hydraulic hose DIN EN 853 2SN / SAE 100R2AT has a very superior working and burst pressure compared with only SAE 100R2AT

BALFLEX // FORZA DUE SHARK SKIN 2SN - DN16 - DIN EN 853 / SAE 100R2AT / ISO 1436 - 5/8" - WP 25 MPa 3700 PSI - Flame Resistant - MSHA IC-252/00

BALPAC 3000 - SHARK SKIN



DIN EN 857 1SC / SAE 100R17 / ISO 11237 – 10.1S17.

High pressure, single or double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
1 Wire Braid												
R17-04	10.1S17.04	DN6	1/4"	-4	6.3	12.5	26.0	3800	104.0	15200	51	0.22
R17-05	10.1S17.05	DN8	5/16"	-5	8.0	13.8	26.0	3800	104.0	15200	60	0.27
R17-06	10.1S17.06	DN10	3/8"	-6	9.5	16.2	25.0	3625	100.0	14500	64	0.34
R17-08	10.1S17.08	DN12	1/2"	-8	12.7	19.4	21.0	3000	84.0	12000	89	0.42
2 Wire Braid												
R17-10	10.1S17.10	DN16	5/8"	-10	15.9	24.2	21.0	3000	84.0	12000	102	0.51
R17-12	10.1S17.12	DN19	3/4"	-12	19.0	28.2	21.0	3000	84.0	12000	122	0.63
R17-16	10.1S17.16	DN25	1"	-16	25.4	35.6	21.0	3000	84.0	12000	152	1.00

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid on sizes 1/4", 5/16", 3/8" and 1/2" and 2 braids on sizes 5/8", 3/4" and 1"

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourgard)

BALFLEX / BALPAC 3000 1SC-4K SHARK SKIN EXCEEDS SAE 100R17 / DIN EN 857 - 1SC ISO 11237 / ISO 19752 TYPE BC DN6 - 1/4" - WP 26 MPa 3800 PSI - Flame Resistant - MSHA IC-252/00

BALPAC 3000 - SHARK SKIN



DIN EN 857 1SC / ISO 11237 – 10.1S18.

High pressure, single steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
1SC-10-SC	10.1S18.10	DN16	5/8"	-10	15.9	22.6	13.0	1900	52.0	7600	150	0.73
1SC-12-SC	10.1S18.12	DN19	3/4"	-12	19.0	26.2	10.5	1600	42.0	6400	180	0.94
1SC-16-SC	10.1S18.16	DN25	1"	-16	25.4	33.6	8.8	1300	35.2	5200	230	1.49

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourgard)

BALFLEX / BALPAC - 3000 SHARK SKIN DIN EN 857 - 1SC / ISO 11237 - DN16 - 5/8" - WP 13 MPa 1900 PSI - Flame Resistant - MSHA IC-252/00



BALPAC PREMIUM - SHARK SKIN



DIN EN 857 2SC / SAE 100R16 / ISO 11237 – 10.1S19.

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SC-04	10.1S19.04	DN6	1/4"	-4	6,3	13,2	45 6500	180 26000	50	0,27
2SC-05	10.1S19.05	DN8	5/16"	-5	8,0	15,1	42 6100	168 24400	57	0,30
2SC-06	10.1S19.06	DN10	3/8"	-6	9,5	17,0	40 5800	160 23200	65	0,42
2SC-08	10.1S19.08	DN12	1/2"	-8	12,7	20,5	36 5250	144 21000	90	0,52
2SC-10	10.1S19.10	DN16	5/8"	-10	16,0	24,2	28 4000	112 16000	100	0,63
2SC-12	10.1S19.12	DN19	3/4"	-12	19,0	28,2	28 4000	112 16000	120	0,80
2SC-16	10.1S19.16	DN25	1"	-16	25,4	35,6	21 3000	84 12000	150	1,22

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braid

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

NOTE: For sizes DN16(5/8"), DN19(3/4"), DN25(1"), consider Balflex Balpac Premium. Approved at 1 000 000 impulse cycles at 1.33% WP

BALFLEX // BALPAC - PREMIUM R16-7K SHARK SKIN EXCEEDS DIN EN 857 - 2SC / SAE 100R16 / ISO 11237 - DN6 - 1/4" - WP 45 MPa 6500 PSI - Flame Resistant - MSHA IC-252/00

BALPAC IMPACTUS 2SC-K - SHARK SKIN



Exceeds DIN EN 857 2SC / Exceeds SAE 100R16 – 10.1S10

Extremely high pressure compact, double steel braid reinforced hydraulic hose

Balflex proprietary specification

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R16I-04	10.1S10.04	DN6	1/4"	-4	6,3	13,4	50 7250	200 29000	50	0,27
R16I-05	10.1S10.05	DN8	5/16"	-5	8,0	15,0	45 6500	180 26000	57	0,30
R16I-06	10.1S10.06	DN10	3/8"	-6	9,5	17,2	45 6500	180 26000	65	0,42
R16I-08	10.1S10.08	DN12	1/2"	-8	12,7	20,6	40 5800	160 23200	90	0,52
R16I-10	10.1S10.10	DN16	5/8"	-10	16	23,9	29 4200	116 16800	100	0,63
R16I-12	10.1S10.12	DN19	3/4"	-12	19	27,7	28 4100	112 16400	120	0,80
R16I-16	10.1S10.16	DN25	1"	-16	25,4	35,4	20 2900	80 11600	150	1,22

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braid

OUTER TUBE: black smooth, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

AVAILABLE VERSIONS: High Temperature (Tropic) / Low Temperature (Artic) / Tough Cover (Armourguard)

BALFLEX // BALPAC - IMPACTUS 2SC-4K SHARK SKIN EXCEEDS DIN EN 857 - 2SC / EXCEEDS SAE 100R16 / ISO 11237 - DN19 - 3/4" - WP 28 MPa 4000 PSI - Flame Resistant - MSHA IC-252/00

BRAKEMASTER R5



SAE 100R5 / SAE J1402 AII – 10.1007.

High pressure hydraulic hose with steel and textile braids reinforcement with rubber impregnated textile cover

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R5-04	10.1007.04	3/16"	-4	4,8	13,2	20.7 3100	82.8 12400	76	0,19
R5-05	10.1007.05	1/4"	-5	6,3	14,8	20.7 3100	82.8 12400	86	0,27
R5-06	10.1007.06	5/16"	-6	8,0	17,2	15.5 2300	62.0 9200	102	0,29
R5-08	10.1007.08	13/32"	-8	10,4	19,5	13.8 2100	55.2 8400	117	0,36
R5-10	10.1007.10	1/2"	-10	12,7	23,4	12.1 1800	48.3 7200	140	0,45
R5-12	10.1007.12	5/8"	-12	16,0	27,4	10.3 1500	41.4 6100	165	0,56
R5-16	10.1007.16	7/8"	-16	22,2	31,4	5.5 800	22.1 3200	187	0,78
R5-20	10.1007.20	1 1/8"	-20	28,6	38,1	4.3 630	17.2 2520	229	1,06
R5-24	10.1007.24	1 3/8"	-24	34,9	44,5	3.4 500	13.8 2000	267	1,45
R5-32	10.1007.32	1 13/16"	-32	46,0	56,4	2.4 350	9.7 1400	337	1,70
R5-40	10.1007.40	2 3/8"	-40	60,3	73,0	2.4 350	9.7 1400	610	2,15
R5-48	10.1007.48	3"	-48	76,2	90,5	1.4 210	5.5 840	838	3,08

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 2 high resistance synthetic textile braids with an intermediate high tensile steel wire braid
OUTER TUBE: impregnation of the outer textile braid with black, oil, weather and abrasion resistant synthetic rubber

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® Multicrimp fittings serie P25

AVAILABLE VERSIONS: High Temperature (Heatmaster) / Rubber Cover (Breakmaster R)





2 – MAX JACK



700 BAR JACK HOSE and 1/2" 8000PSI – 10.1029.

High pressure, double steel braid reinforced hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
JH-04	10.1029.04	1/4"	-4	6,3	14,7	70.0 10000	160.0 23200	100	0,38
JH-06	10.1029.06	3/8"	-6	9,5	18,7	70.0 10000	140.0 20000	127	0,53
JH-08	10.1029.08	1/2"	-8	12,7	21,9	55.2 8100	110.4 16200	178	0,65

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 2.3:1 (1/4") and 2:1 (3/8" and 1/2")

APPLICATION: hydraulic jacks

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

BALFLEX /// 2 - MAX JACK DN6 - 1/4" - WP 70 MPa 10000 PSI - Flame Resistant - MSHA IC-252/00

3 – MAX



10.1005.

Very high pressure, triple steel braid reinforced hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
3M-06	10.1005.06	3/8"	-6	9,5	21,3	50.0 7300	200.0 29200	180	0,70
3M-08	10.1005.08	1/2"	-8	12,7	24,3	47.0 6900	188.0 27600	230	0,80
3M-10	10.1005.10	5/8"	-10	16,0	28,0	41,0 6100	164,0 24000	250	1,05
3M-12	10.1005.12	3/4"	-12	19,0	31,5	37,5 5500	150,0 22000	300	1,15
3M-16	10.1005.16	1"	-16	25,4	38,7	33,0 4800	132,0 19200	340	1,60

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 3 high tensile steel wire braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 24 with 20 serie ferrules

BALFLEX /// 3 - MAX DN10 - 3/8" - WP 50 MPa 7250 PSI

FIRE SUPPRESSION



MEETS PERFORMANCE DIN EN 853 1SN
/ SAE 100R1AT - 10.1011.

Medium pressure hose for fire suppression

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
FIRE-04	10.1011.04	1/4"	-4	6.3	13.0	22.5 3263	90.0 13050	100	0.23
FIRE-05	10.1011.05	5/16"	-5	8.0	14.7	21.5 3118	85.0 12325	114	0.23
FIRE-06	10.1011.06	3/8"	-6	9.5	17.2	18.0 2610	72.0 10440	127	0.33
FIRE-08	10.1011.08	1/2"	-8	12.7	20.5	16.0 2320	64.0 9280	178	0.42
FIRE-10	10.1011.10	5/8"	-10	16.0	23.8	13.0 1885	52.0 7540	200	0.52
FIRE-12	10.1011.12	3/4"	-12	19.0	27.8	10.5 1523	42.0 6090	240	0.65
FIRE-16	10.1011.16	1"	-16	25.4	35.9	8.8 1276	35.0 5075	300	1.00

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: red wrapped; oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: mining, forestry and firefighting equipment.

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® c2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED
AVAILABLE VERSIONS: Smooth Cover (Shark Skin)

BALFLEX / FIRE SUPPRESSION HOSE 1SN - DN6 - DIN EN 853 / SAE 100R1AT / ISO 1436 - 1/4" - WP 22.5 MPa 3300 PSI - Flame Resistant - MSHA IC-252/00

BALWASH MICROLINE



Balflex® Balwash MICROLINE 22.0MPa - 10.1WSK.04

High pressure, single wire braid, slim outer diameter for high flexibility, smooth cover hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1WSK.04	1/4"	-4	6,3	11,8	22,0 3200	90.0 12800	100	0,21

INNER TUBE: seamless hot water resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black, oil, weather and abrasion resistant smooth pin-pricked synthetic rubber
SAFETY FACTOR: 4:1

APPLICATION: hobby and high pressure cleaning professional equipments

TEMPERATURE RANGE: -60°C (-76°F) +70°C (+158°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX / BALWASH MICROLINE DN6 - 1/4" - WP 22 MPa 3190 PSI



BALWASH 1W

Balflex® Balwash 155°C (+311°F) 1W 22.0MPa - 10.1W00.XX

High pressure, single wire braid reinforced high temperature car wash hose



#	inch	SAE Dash	 ID mm	 OD mm	 MPa	PSI	 MPa	PSI	 MIN BEND RAD mm	 KG kg/m
10.1W00.04	1/4"	-4	6,3	13,0	22,0	3200	90.0	12800	100	0,23
10.1W00.05	5/16"	-5	8,0	14,7	22,0	3200	85.0	12800	114	0,28
10.1W00.06	3/8"	-6	9,5	17,2	22,0	3200	72.0	12800	127	0,33
10.1W00.08	1/2"	-8	12,7	20,5	22,0	3200	64.0	12800	178	0,42

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black wrapped, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX // BALWASH UNO 1W - 155°C / 311°F - DN6 - 1/4" - WP 22 MPa 3180 PSI

BALWASH 2W

Balflex® Balwash 155°C (+311°F) 2W 40.0MPa - 10.2W00.XX

High pressure, double wire braid reinforced high temperature car wash hose



#	inch	SAE Dash								
			mm	mm	MPa	PSI	MPa	PSI	mm	kg/m
10.2W00.04	1/4"	-4	6,3	14,7	40.0	5800	160.0	23200	100	0,38
10.2W00.05	5/16"	-5	8,0	16,5	40.0	5800	140.0	23200	114	0,45
10.2W00.06	3/8"	-6	9,5	18,7	40.0	5800	132.0	23200	127	0,53
10.2W00.08	1/2"	-8	12,7	21,9	40.0	5800	110.0	23200	178	0,65

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX // BALWASH DUE 2W - 155°C / 311°F - DN6 - 1/4" - WP 40 MPa 5800 PSI

BALWASH 1W BLUE

Balflex® Balwash 155°C (+311°F) 1W 22.0MPa - 10.1W00.XXB

High pressure, single wire braid reinforced high temperature car wash hose



#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1W00.04B	1/4"	-4	6,3	13,0	22,0 3200	90.0 12800	100	0,23
10.1W00.05B	5/16"	-5	8,0	14,7	22,0 3200	85.0 12800	114	0,28
10.1W00.06B	3/8"	-6	9,5	17,2	22,0 3200	72.0 12800	127	0,33
10.1W00.08B	1/2"	-8	12,7	20,5	22,0 3200	64.0 12800	178	0,42

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: blue, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23



BALWASH 2W BLUE

Balflex® Balwash 155°C (+311°F) 2W 40.0MPa - 10.2W00.XXB

High pressure, double wire braid reinforced high temperature car wash hose



#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.2W00.04B	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200	100	0,38
10.2W00.05B	5/16"	-5	8,0	16,5	40.0 5800	140.0 23200	114	0,45
10.2W00.06B	3/8"	-6	9,5	18,7	40.0 5800	132.0 23200	127	0,53
10.2W00.08B	1/2"	-8	12,7	21,9	40.0 5800	110.0 23200	178	0,65

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: blue, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
AVAILABLE VERSIONS: Smooth cover (Shark Skin)





BALWASH 1W - SHARK SKIN



Balflex® Balwash 155°C (+311°F) 1W 22.0MPa - 10.1WSK.XX

High pressure, single wire braid reinforced high temperature car wash hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1WSK.05	5/16"	-5	8,0	14,7	22,0 3200	85.0 12800		114	0,28
10.1WSK.06	3/8"	-6	9,5	17,2	22,0 3200	72.0 12800		127	0,33
10.1WSK.08	1/2"	-8	12,7	20,5	22,0 3200	64.0 12800		178	0,42

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black smooth, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX BALWASH UNO 1W - 155°C / 311°F - DN6 - 1/4" - WP 22 MPa 3180 PSI

BALWASH 2W - SHARK SKIN



Balflex® Balwash 155°C (+311°F) 2W 40.0MPa - 10.2WSK.XX

High pressure, double wire braid reinforced high temperature car wash hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.2WSK.04	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200		100	0,38
10.2WSK.05	5/16"	-5	8,0	16,5	40.0 5800	140.0 23200		114	0,45
10.2WSK.06	3/8"	-6	9,5	18,7	40.0 5800	132.0 23200		127	0,53
10.2WSK.08	1/2"	-8	12,7	21,9	40.0 5800	110.0 23200		178	0,65

INNER TUBE: seamless hot water resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: black smooth, oil, weather and abrasion resistant wrapped pin-pricked synthetic rubber

SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX BALWASH DUE 2W - 155°C / 311°F - DN6 - 1/4" - WP 40 MPa 5800 PSI

BALWASH 1W BLUE - SHARK SKIN



Balflex® Balwash 155°C (+311°F) 1W 22.0MPa - 10.1WSK.XXB

High pressure, single wire braid reinforced high temperature car wash hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1WSK.04B	1/4"	-4	6,3	13,0	22,0 3200	90.0 12800	100	0,23
10.1WSK.05B	5/16"	-5	8,0	14,7	22,0 3200	85.0 12800	114	0,28
10.1WSK.06B	3/8"	-6	9,5	17,2	22,0 3200	72.0 12800	127	0,33
10.1WSK.08B	1/2"	-8	12,7	20,5	22,0 3200	64.0 12800	178	0,42

INNER TUBE: seamless hot water resistant synthetic rubber
REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: blue, oil, weather and abrasion resistant smooth pin-pricked synthetic rubber
SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments

TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

BALFLEX BALWASH UNO 1W - 155°C / 311°F - DN6 - 1/4" - WP 22.0 MPa 3200 PSI

BALWASH 2W BLUE - SHARK SKIN



Balflex® Balwash 155°C (+311°F) 2W 40.0MPa - 10.2WSK.XXB

High pressure, double wire braid reinforced high temperature car wash hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.2WSK.04B	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200	100	0,38
10.2WSK.05B	5/16"	-5	8,0	16,5	40.0 5800	140.0 23200	114	0,45
10.2WSK.06B	3/8"	-6	9,5	18,7	40.0 5800	132.0 23200	127	0,53
10.2WSK.08B	1/2"	-8	12,7	21,9	40.0 5800	110.0 23200	178	0,65

INNER TUBE: seamless hot water resistant synthetic rubber
REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: blue, oil, weather and abrasion resistant smooth pin-pricked synthetic rubber
SAFETY FACTOR: 4:1 in 1/4"; 3.9:1 in 5/16"; 3.3:1 in 3/8"; 2.9:1 in 1/2"

APPLICATION: high temperature and high pressure cleaning professional equipments
TEMPERATURE RANGE: 0°C (+32°F) +155°C (+311°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
AVAILABLE VERSIONS: Smooth cover (Shark Skin)

BALFLEX BALWASH DUE 2W - 155°C / 311°F - DN6 - 1/4" - WP 40.0 MPa 5800 PSI



FLAT HDPE SPRING GUARD



HYDRAULIC AND INDUSTRIAL HOSE FLAT GUARD – 11.103.

Black Colour, High Density Polyethylene Protection Spring Guard

#	 mm	 mm	 mm	Pitch mm	Recommended usage range (OD of hose mm)
11.103.09-15	12,0	9,6	1,2	9.0	9-13
11.103.14-20	16,0	13,4	1,3	12.0	13-18
11.103.18-24	20,0	16,0	2,0	16.0	16-22
11.103.22-30	25,0	20,6	2,2	22.0	20-27
11.103.30-38	32,0	27,0	2,5	22.0	27-36
11.103.36-45	40,0	34,6	2,7	24.0	34-44
11.103.44-65	50,0	43,0	3,5	30.0	43-45
11.103.58-70	63,0	55,6	3,7	37.0	55-67
11.103.65-78	75,0	66,2	4,4	42.0	66-80
11.103.80-98	90,0	80,2	4,9	45.0	80-98
11.103.96-116	100,0	99,0	5,5	50.0	99-115

RAW MATERIAL: high density polyethylene
resistant to abrasion and UV rays

COLOR: black

TEMPERATURE RANGE: -20°C (-4°F)
+95°C (-203°F)

APPLICATION: protection of external rubber
layer of hydraulic and industrial hoses,
against the early wearing due to abrasion

FLAT HDPE SPRING GUARD



HYDRAULIC AND INDUSTRIAL HOSE FLAT GUARD – 11.103.Y

Yellow colour, High Density Polyethylene Protection Spring Guard

#	 mm	 mm	 mm	Pitch mm	Recommended usage range (OD of hose mm)
11.103.09-15Y	12,0	9,6	1,2	9.0	9-13
11.103.14-20Y	16,0	13,4	1,3	12.0	13-18
11.103.18-24Y	20,0	16,0	2,0	16.0	16-22
11.103.22-30Y	25,0	20,6	2,2	22.0	20-27
11.103.30-38Y	32,0	27,0	2,5	22.0	27-36
11.103.36-45Y	40,0	34,6	2,7	24.0	34-44
11.103.44-65Y	50,0	43,0	3,5	30.0	43-45
11.103.58-70Y	63,0	55,6	3,7	37.0	55-67
11.103.65-78Y	75,0	66,2	4,4	42.0	66-80
11.103.80-98Y	90,0	80,2	4,9	45.0	80-98
11.103.96-116Y	100,0	99,0	5,5	50.0	99-115

RAW MATERIAL: high density polyethylene
resistant to abrasion and UV rays

COLOR: Yellow

TEMPERATURE RANGE: -20°C (-4°F)
+95°C (-203°F)

APPLICATION: protection of external rubber
layer of hydraulic and industrial hoses,
against the early wearing due to abrasion

HOSESHIELD XT PROTECTIVE SLEEVE



Hydraulic and industrial hose protection sleeve – 11.400

Nylon black colour, US MSHA IC-252/02 approval.

#	I.D. mm	flat width mm	thickness mm	length m
11.400.017	17	30	0.8	50
11.400.020	20	36	0.8	50
11.400.023	23	40	0.8	50
11.400.025	25	43	0.8	50
11.400.027	27	45	0.8	50
11.400.031	31	52	0.8	50
11.400.033	33	55	0.8	50
11.400.036	36	60	0.8	50
11.400.040	40	66	0.8	50
11.400.044	44	74	0.8	50
11.400.047	47	77	0.8	50
11.400.053	53	86	0.8	50
11.400.055	55	90	0.8	50
11.400.060	60	98	0.8	50
11.400.066	66	106	0.8	50
11.400.073	73	118	0.8	50
11.400.078	78	126	0.8	50
11.400.085	85	136	0.8	50
11.400.093	93	150	0.8	50
11.400.112	112	178	0.8	50

CONSTRUCTION: 100% high tensile Nylon 6 Multifilament Yarn into a high tenacity braid

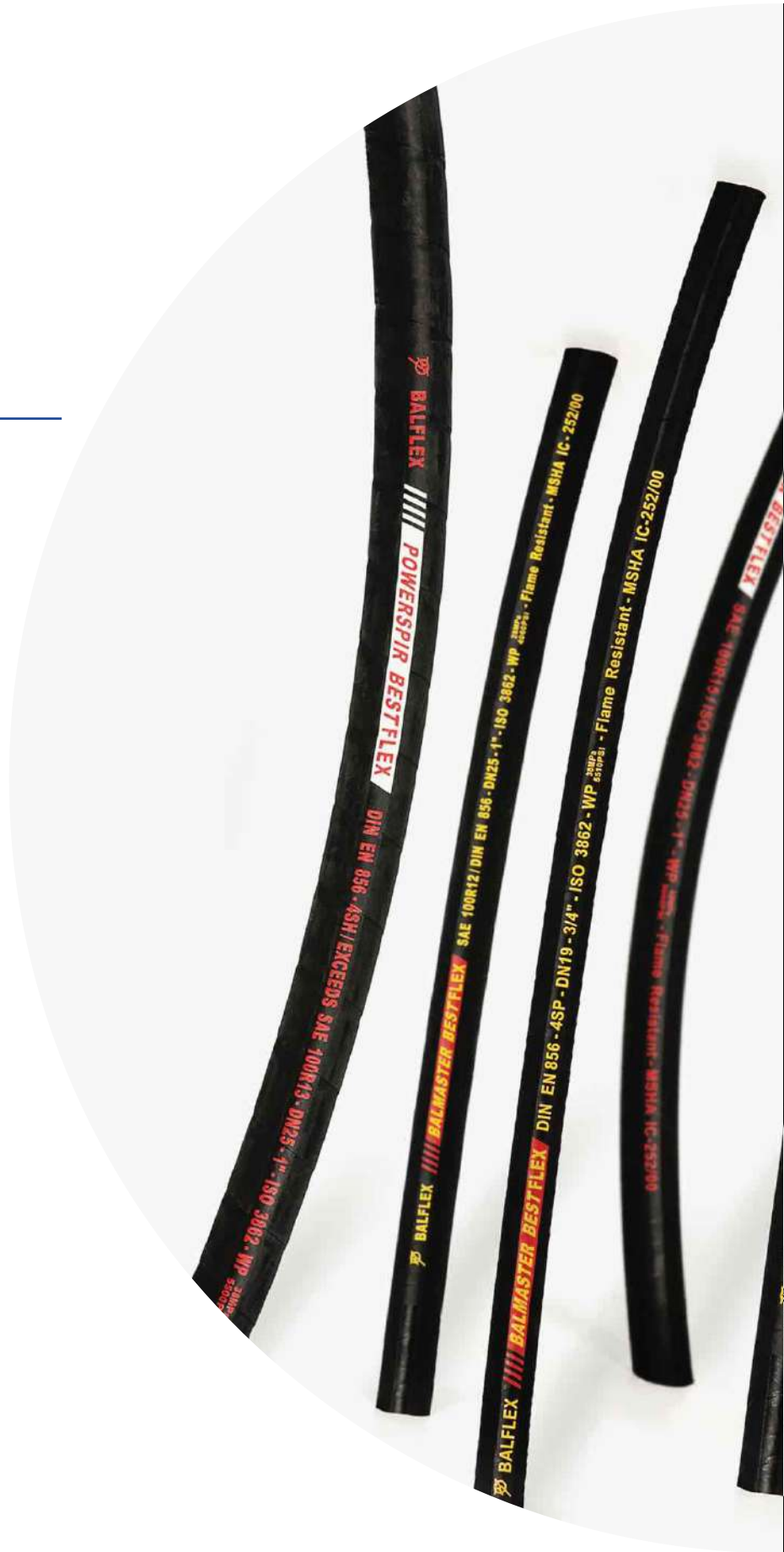
THICKNESS: 0.8mm thick overlapping layers of synthetic Nylon 6 Yarn with 840 denier yarn

ABRASION RESISTANCE: according to ISO 6945, for more than 50 000 cycles

STRETCHING BREAK: up to 33 to 43%

TEMPERATURE: -40°C (-40°F) / +120°C (+248°F)

Spiral Hydraulic Hoses





- pag. 48 **BALMASTER
BESTFLEX 4SP**
- pag. 49 **POWERSPIR
BESTFLEX 4SH**
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BESTFLEX R12**
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BESTFLEX R13**
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BESTFLEX R15**

Spiral Hydraulic Hoses

Balflex® hydraulic Steel Wire Spiral hoses are produced to Balflex® specifications and according to ISO 3862, SAE J517 and EN 856 standards. They cover a wide variety of very high pressure applications, for petroleum and water base hydraulic fluids.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® hydraulic steel wire spiral wounded hoses are designed with a safety factor of 4:1 relating minimum burst pressure and recommended working pressure. Working pressure [W P] and nominal diameter [D N] are always branded on the hose.

Hydraulic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -40°C (-40°F) to +100°C (+212°F). Special rubber compounds and other lining materials allow to exceed these limits. Hydraulic hoses may also be used for water base hydraulic fluids if the working temperature does not exceed +70°C (+158°F). For conveyance of Hot Air working temperature should be reduced to a maximum of +60°C (+140°F).

Selection, assembly and installation of hydraulic steel wire spiral wounded hoses should follow **Balflex®** recommendations and [SAE J1273](#) and [DIN 20066](#) standards. **Hydraulic hose assemblies should always be thoroughly inspected and hydraulically tested before installation.** All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

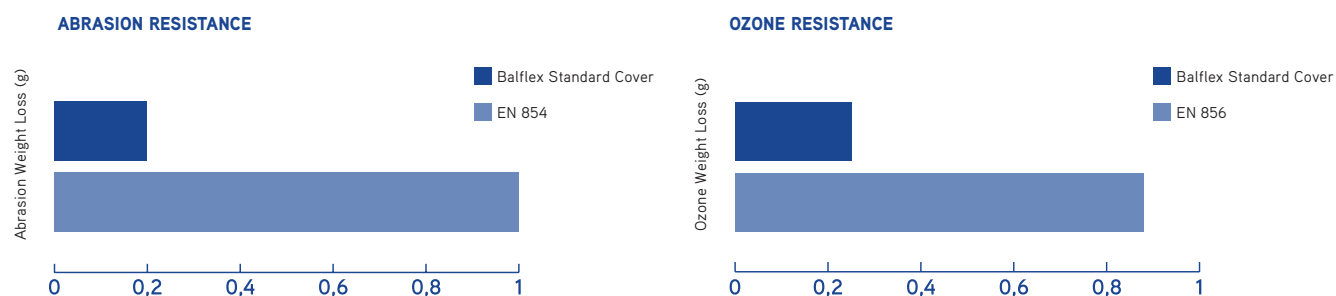
Installations that do not comply with an adequate layout geometry of the hose assembly may significantly reduce the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose and/or end fitting specifications may shorten the hose assembly life drastically.

The failure of a hydraulic steel wire spiral wounded hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of fittings and their parts, the whipping of unrestrained hose, spillage or combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Balflex Hoses are manufactured with a tough outer cover that increases the resistance to environmental and external application damages and present the following main features:

- ✕ Excellent abrasion resistant when tested according to modified ISO 6945 method, and according to ISO 20444 new abrasion test methods.
- ✕ High level of resistance to cracking due to Ozone exposure, resulting in 4 times superior resistance than the relevant EN ISO 7326 requirement;



- ✕ US MSHA Approved Cover (IC 252/00)

Table 1: Rated working pressure at 20 °C (+68 °F) of Balflex® hydraulic Spiral hoses (MPa / PSI)

Balflex	Standard	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"
		-4	-6	-8	-10	-12	-16	-20	-24	-32
		DN5	DN6	DN12	DN16	DN19	DN25	DN31	DN38	DN51
BALMASTER	DIN EN 856 R12 / ISO 3862 / SAE J517 R12		28.0 4000	28.0 4000	28.0 4000	28.0 4000	28.0 4000	21.0 3100	17.5 2600	17.5 2600
BALMASTER	DIN EN 856 4SP / ISO 3862	45.0 6600	44.5 6500	42.0 6100	42.0 6100	38.0 5600	32.0 4700	21.0 3100	21.0 3100	17.5 2600
POWERSPIR	DIN EN 856 4SH / ISO 3862					42.0 6100	42.0 6100	35.0 5100	30.0 4400	25.0 3700
POWERSPIR	DIN EN 856 R13 / ISO 3862 / SAE J517 R13					42.0 6100	42.0 6100	35.0 5100	35.0 4400	35.0 3700
POWERSPIR	ISO 3862 / SAE J517 R15		42.0 6100	42.0 6100	42.0 6100	42.0 6100	42.0 6100	42.0 6100	42.0 6100	42.0 6100

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H2O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H2O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100°C = +212°F



Fluid Compatibility and Resistance Chart for Balflex Spiral Hydraulic Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid		Ethyl Glycol	●	Oil of Turpentine	●
Acetic Acid (30%)	●	Ethyleneoxide	●	Oleic Acid	●
Acetone	●	Fluorine	●	Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)	●	Formaldehyde 40%	●	Phenol	●
Ammonia, Liquid	●	Fuel Oil	●	Phosphoric Acid (10%)	●
Ammoniumchloride		Gaseous Hydrogen	●	Phosphoric Acid (70%)	●
Amyl Acetate	●	Gasoline	●	Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils	●	Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene	●	Hexane	●	Silicone Oils	●
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate	●	Hydrochloric Acid 37%	●	Soda	●
Butyl Alcohol / Butanol	●	Hydroger Peroxide (Dil.)	●	Sodium Chloride Solutions	●
Calcium Chloride Solutions		Hydroger Peroxide (Conc.)	●	Sodium Hydroxide 20%	●
Carbon Dioxide	●	Isocyanates		Sodium Hypochloride 10%	●
Carbon Disulfide	●	Isopropil Alcohol	●	Sulphur	●
Carbonates	●	Kerosene	●	Sulphur Dioxide	●
Caustic Soda	●	Liquid Oxygen	●	Sulphuric Acid up to 50%	●
Chlorinated Solvents	●	LPG	●	Sulphuric Acid above 50%	●
Chlorine	●	Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol	●	Vegetable Greases	●
Compressed Air	●	Methyl Chloride (Cold)	●	Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil	●	Mineral Oils	●		
Diocetyl Phthalate		Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers	●	Natural Gas	●		
Ethyl Acetate	●	Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride	●	Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

BALMASTER BESTFLEX 4SP



DIN EN 856 4SP / ISO 3862 - 10.1008.-F

Very high pressure, extra flexible, four steel wire spirals reinforced hydraulic hose

REFERENCE	#	inch	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
4SP-04-F	10.1008.04F	DN6	1/4"	-4	6.5	17,4	45,0	6600	180,0	26400	150	0,70
4SP-06-F	10.1008.06F	DN10	3/8"	-6	9.6	19,9	44,5	6500	178,0	26000	180	0,80
4SP-08-F	10.1008.08F	DN12	1/2"	-8	12,9	22,8	42,0	6100	166,0	24400	230	1,15
4SP-10-F	10.1008.10F	DN16	5/8"	-10	16.0	26,4	42,0	6100	168,0	24000	250	1,26
4SP-12-F	10.1008.12F	DN19	3/4"	-12	19.2	30,6	38,0	5600	152,0	22400	300	1,44
4SP-16-F	10.1008.16F	DN25	1"	-16	25,6	37,7	32,0	4700	128,0	18800	340	2,15
4SP-20-F	10.1008.20F	DN31	1.1/4"	-20	32.1	48,6	21,0	3100	84,0	12400	460	2,75
4SP-24-F	10.1008.24F	DN38	1.1/2"	-24	38.3	55,0	21,0	3100	84,0	12400	560	3,35
4SP-32-F	10.1008.32F	DN51	2"	-32	51.0	68,1	17,5	2600	70,0	10400	660	4,60

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 4 spirals of high tensile steel wire
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids
TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23/24 with 20 serie ferrules, Balflex® Multicrimp fittings serie BW23
 *On sizes - 6 (3/8") and - 8 (1/2") the Balflex® BALMASTER DIN EN 856 4SP and Balflex® POWERSPIR SAE 100R15 hoses are the same, and they are branded Balflex® POWERSPIR.

AVAILABLE VERSIONS: tough cover / Armourguard

BALFLEX /// **BALMASTER BESTFLEX** DIN EN 856 - 4SP - DN6 - 1/4" - ISO 3862 - WP **45 MPa** 6600 PSI - Flame Resistant - MSHA IC-252/00



POWERSPIR BESTFLEX 4SH



DIN EN 856 4SH / ISO 3862 - 10.1009.-F

Very high pressure, extra flexible, four steel wire spirals reinforced hydraulic hose

REFERENCE	#	inch	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
4SH-12-R13/15-F	10.1009.12F	DN19	3/4"	-12	19.2	30.8	42,0	6100	168,0	24400	265	1,56
4SH-16-R13/15-F	10.1009.16F	DN25	1"	-16	25.6	37.6	42,0	6100	168,0	24000	330	2,09
4SH-20-F	10.1009.20F	DN31	1.1/4"	-20	32.1	44.5	35,0	5100	140,0	20400	460	2,57
4SH-24-F	10.1009.24F	DN38	1.1/2"	-24	38.3	51.7	30,0	4400	120,0	17600	560	3,44
4SH-32-F	10.1009.32F	DN51	2"	-32	51.0	66.0	25,0	3700	100,0	14800	700	4,90

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 4 spirals of very high tensile steel wire

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 24/26 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/JJ

AVAILABLE VERSIONS: tough cover / Armourguard

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

*On sizes - 12 (3/4") and - 16 (1") the Balflex® POWERSPIR DIN EN 856 4SH and SAE 100R13 and SAE 100R15 hoses are the same. The working pressure of Balflex® POWERSPIR DIN EN 856 4SH / SAE 100R13 / SAE 100R15 3/4" and 1" are higher than standard SAE 100R13.

BALFLEX **POWERSPIR BESTFLEX 6K** DIN EN 856 4SH / EXCEEDS SAE 100R13 / SAE 100R15 - DN25 - 1" - ISO 3862 - WP 42 MPa 6100 PSI - Flame Resistant - MSHA IC-252/00

BALMASTER BESTFLEX R12



SAE 100R12 / DIN EN 856 R12 / ISO 3862 - 10.1012.-F

Very high pressure, extra flexible, four steel wire spirals reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R12-06-A	10.1012.06F	DN10	3/8"	-6	9,6	19,6	28,0	4000	112,0	16000	120	0,80
R12-08-A	10.1012.08F	DN12	1/2"	-8	12,9	23,1	28,0	4000	112,0	16000	170	1,15
R12-10-A	10.1012.10F	DN16	5/8"	-10	16,0	27,0	28,0	4000	112,0	16000	190	1,26
R12-12-A	10.1012.12F	DN19	3/4"	-12	19,2	30,1	28,0	4000	112,0	16000	230	1,44
R12-16-A	10.1012.16F	DN25	1"	-16	25,6	37,3	28,0	4000	112,0	16000	290	2,15
R12-20-A	10.1012.20F	DN31	1.1/4"	-20	32,1	46,5	21,0	3100	84,0	12400	400	2,75
R12-24-A	10.1012.24F	DN38	1.1/2"	-24	38,3	53,0	17,5	2600	70,0	10400	480	3,35
R12-32-A	10.1012.32F	DN51	2"	-32	51,0	66,5	17,5	2600	70,0	10400	630	4,60

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 4 spirals of high tensile steel wire

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

COUPLINGS: Balflex® 2-piece fittings serie 23/24 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23
AVAILABLE VERSIONS: tough cover / Armourguard

BALFLEX /// BALMASTER BESTFLEX SAE 100R12 / DIN EN 856 - DN10 - 3/8" - ISO 3862 - WP 28 MPa 4000 PSI - Flame Resistant - MSHA IC-252/00

POWERSPIR BESTFLEX R13



SAE 100R13 / DIN EN 856 R13 / ISO 3862 - 10.1014.-F

Very high pressure, extra flexible, four or six steel wire spirals reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
4SH-12-R13/15-A	10.1009.12F	DN19	3/4"	-12	19,2	30,8	42,0	6100	168,0	24400	265	1,56
4SH-16-R13/15-A	10.1009.16F	DN25	1"	-16	25,6	37,6	42,0	6100	168,0	24000	330	2,09
R13-20-A	10.1014.20F	DN31	1.1/4"	-20	32,1	49,4	35,0	5100	140,0	20400	420	3,90
R13-24-A	10.1014.24F	DN38	1.1/2"	-24	38,3	56,9	35,0	5100	140,0	20400	500	4,96
R13-32-A	10.1014.32F	DN51	2"	-32	51,0	70,9	35,0	5100	140,0	20400	620	7,09

INNER TUBE: seamless oil resistant synthetic rubber
REINFORCEMENT: 4 or 6 spirals of high tensile steel wire
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)
COUPLINGS: Balflex® 2-piece fittings serie 24/26 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/JJ

AVAILABLE VERSIONS: tough cover / Armourguard
NOTES: According to ISO 3862/EN 856 type R13/SAE J517 type R13, the Balflex® POWERSPIR SAE 100R13 hose is of 4 steel wire spirals on sizes -12 (3/4") and -16 (1") and of 6 steel wire spirals on sizes -20 (1.1/4"), -24 (1.1/2") and -32 (2").

*On sizes -12 (3/4") and -16 (1") the Balflex® POWERSPIR DIN EN 856 4SH and SAE 100R13 and SAE 100R15 hoses are the same. The working pressure of Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 3/4" and Balflex® POWERSPIR DIN EN 856 4SH SAE 100R13 1" are higher than standard SAE 100R13.

BALFLEX /// POWERSPIR BESTFLEX SAE 100R13 / DIN EN 856 / ISO 3862 - DN38 - 1.1/2" - WP 35 MPa 5000 PSI - MSHA IC-252/00



POWERSPIR BESTFLEX R15



SAE 100R15 / ISO 3862 – 10.1016.-F

Very high pressure, extra flexible, four or six steel wire spirals reinforced hydraulic hose

REFERENCE	#	inch	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	kg/m
R15-06-F	10.1016.06F	DN10	3/8"	-6	9,7	22,0	42,0 6100	168,0 24000	140	0,80
R15-08-F	10.1016.08F	DN12	1/2"	-8	12,9	25,2	42,0 6100	168,0 24000	190	1,15
4SP-R15-10-F	10.1008.10F	DN16	5/8"	-10	16,0	27,2	42,0 6100	168,0 24000	250	1,26
4SH-12-R13/15-F	10.1009.12F	DN19	3/4"	-12	19,2	31,5	42,0 6100	168,0 24000	265	1,56
4SH-16-R13/15-F	10.1009.16F	DN25	1"	-16	25,6	38,4	42,0 6100	168,0 24000	330	2,10
R15-20-F	10.1016.20F	DN31	1.1/4"	-20	32,1	50,2	42,0 6100	168,0 24000	445	3,65
R15-24-F	10.1016.24F	DN38	1.1/2"	-24	38,3	56,8	42,0 6100	168,0 24000	530	4,75
R15-32-F	10.1016.32F	DN51	2"	-32	51,0	71,5	42,0 6100	168,0 24000	650	6,62

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 4 or 6 spirals of high tensile steel wire

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F); Intermittent service: 120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 24/26 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/JJ

AVAILABLE VERSIONS: tough cover / Armourguard

NOTE: On size -12 (3/4") and -16 (1") the Balflex® POWERSPIR DIN EN 856 4SH and SAE 100R13 and SAE 100R15 hoses are the same

BALFLEX POWERSPIR BESTFLEX 6K TYPE SAE 100R15 / ISO 3862 - DN51 - 2" - WP 42 MPa 6100 PSI - Flame Resistant - MSHA IC-252/00

Waterblast Hoses





pag. 57 **WATERBLAST 1100**
pag. 57 **WATERBLAST 1250**

Waterblast Hoses

Balflex® Waterblast hoses are produced to Balflex® specifications. They cover a wide variety of very high pressure applications, in rubber, steel spiral reinforcement, for waterjet cutting and waterjet cleaning equipment and not recommended for hydraulic oil applications.

*Our **Waterblast** hose range 1100 – 1250 Bar, are used for cleaning of chemical and power supply installations, cleaning and cutting of concrete construction, pavement, steel surface and steelwork, tanks, vessels, mining installations.*

*Balflex® optimized the production of these hoses and their compatibility with **Balfit Waterblast** connectors, in order to assure the highest performance in hardest conditions.*

General Guidelines

Balflex® Waterblast hoses are designed with a safety factor of 2.5:1 relating minimum burst pressure and recommended working pressure. Working pressure and nominal diameter are always branded on the hose.

Waterblast hoses are designed for waterjet applications with a temperature range of -40°C (-40°F) to +90°C (+194°F). Special rubber compounds and other lining materials allow to exceed these limits.

Selection, assembly and installation of waterblast hoses should follow Balflex recommendations and SAE J1273 and DIN 20066 standards. Waterblast hose assemblies should always be inspected and hydraulically tested before installation. All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

Installations that do not comply with an adequate geometry of the hose assembly may reduce significantly the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose specifications may shorten drastically the hose lifetime.

The failure of a **Waterblast** hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of couplings and its parts, the whipping of unrestrained hose, spillage and combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Table 1: Rated working pressure at 20 °C (+68 °F) of Balflex® Waterblast hoses (MPa / PSI)

Balflex	Standard	1/4" -4 DN6	3/8" -6 DN10	1/2" -8 DN12	5/8" -10 DN16	3/4" -12 DN19	1" -16 DN25	1.1/4" -20 DN31	1.1/2" -24 DN38	2" -32 DN51
WATERBLAST 1100			110.0	110.0		110.0				
			16000	16000		16000				
WATERBLAST 1250			125.0	125.0						
			18130	18130						

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H2O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H2O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100°C = +212°F



WATERBLAST 1100



10.1022.

Extremely high pressure hose for Waterblasting

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1022.06	3/8"	-6	9,7	20,6	110,0 16000	275,0 4000	155	0,821
10.1022.08	1/2"	-8	12,9	27	110,0 16000	275,0 4000	200	1,525
10.1022.12	3/4"	-12	19,2	32	110,0 16000	275,0 4000	310	2,068

INNER TUBE: seamless synthetic rubber resistant to water at very high pressure
REINFORCEMENT: 4 spirals of high tensile steel wire

OUTER TUBE: black, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 2.5:1

APPLICATION: very high pressure waterblasting
TEMPERATURE RANGE: - 40°C (-40°F) + 90°C (+194°F)

COUPLINGS: crimped Balflex® Waterblast coupling serie



WATERBLAST 1250



10.1023.

Extremely high pressure hose for Waterblasting

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1023.06	3/8"	-6	9,7	21,7	125,0 18130	312,5 45325	155	0,967
10.1023.08	1/2"	-8	12,3	26,4	125,0 18130	312,5 45325	230	2,048

INNER TUBE: seamless synthetic rubber resistant to water at very high pressure
REINFORCEMENT: 4 spirals of high tensile steel wire

OUTER TUBE: black, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 2.5:1

APPLICATION: very high pressure waterblasting
TEMPERATURE RANGE: - 40°C (-40°F) + 90°C (+194°F)

COUPLINGS: crimped Balflex® Waterblast coupling serie



High Temperature Hydraulic Hose





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High Temperature Hydraulic Hose

Balflex® hydraulic high temperature hoses are produced to Balflex® specifications and according to ISO 1436, ISO 11237, SAE J517 and EN 853 to EN 857 standards. They cover a wide variety of medium pressure applications, for petroleum and water base hydraulic fluids. They are however not suitable for Hot Dry Air applications.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® hydraulic high temperature hoses are designed with a safety factor of 4:1 relating minimum burst pressure and recommended working pressure. Working pressure [W P] and nominal diameter [D N] are always branded on the hose.

High Temperature Hydraulic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -40°C (-40°F) to +135°C (+275°F). Attention must be taken with conveyance of dry hot air, as premature ageing may occur.

Selection, assembly and installation of hydraulic hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards.

Hydraulic hose assemblies should always be thoroughly inspected and hydraulically tested before installation. All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

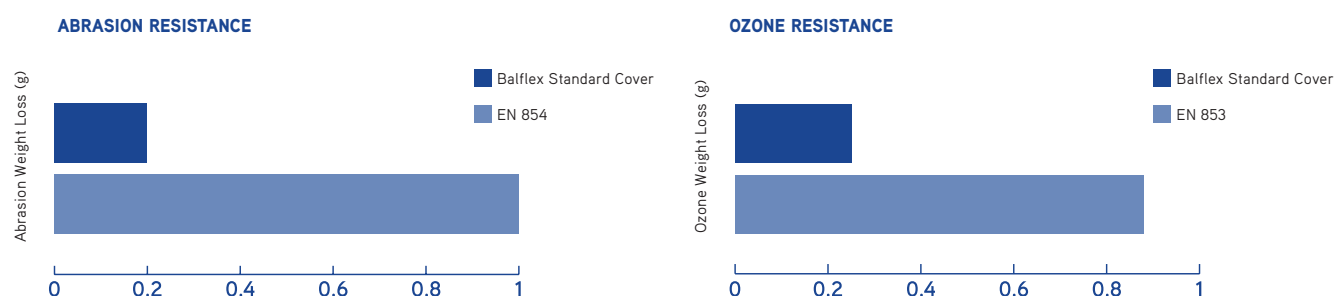
Installations that do not comply with an adequate layout geometry of the hose assembly may significantly reduce the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose and/or end fitting specifications may shorten the hose assembly life drastically.

The failure of a hydraulic steel wire braided hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of fittings and their parts, the whipping of unrestrained hose, spillage or combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Balflex Hoses are manufactured with a tough outer cover that increases the resistance to environmental and external application damages and present the following main features:

- ✖ Excellent abrasion resistant when tested according to modified ISO 6945 method, and according to ISO 20444 new abrasion test methods.
- ✖ High level of resistance to cracking due to Ozone exposure, resulting in 4 times superior resistance than the relevant EN ISO 7326 requirement;



- ✖ US MSHA Approved Cover (IC 252/00)

Table 1a: Rated working pressure at 20 °C (+68 °F) of Balflex® hydraulic high temperature hoses (MPa / PSI)

Balflex	Standard	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"
		-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
		DN5	DN6	DN8	DN10	DN12	DN16	DN19	DN25	DN31	DN38	DN51
FORZA UNO TROPIC	DIN EN 853 1SN / ISO 1436 / SAE J517 R1AT	25.0	22.5	21.5	18.0	16.0	13.0	10.5	8.8	6.3	5.0	4.0
		3700	3300	3200	2700	2400	1900	1600	1300	920	730	580
FORZA DUE TROPIC	DIN EN 853 2SN / ISO 1436 / SAE J517 R2AT	41.5	40.0	35.0	33.0	27.5	25.0	21.5	16.5	12.5	9.0	8.0
		6100	5800	5100	4800	4000	3700	3200	2400	1900	1400	1200
BALPAC PREMIUM TROPIC	DIN EN 857 2SC / ISO 11237 / SAE J517 R16		40.0	35.0	33.0	27.6	25.0	21.5	16.5			
			5800	5100	4800	4100	3700	3300	2400			

Table 1b: Rated working pressure at 20 °C (+68 °F) of Balflex® hydraulic high temperature hoses (MPa / PSI)

Balflex	type	3/16"	1/4"	5/16"	13/32"	1/2"	5/8"	7/8"	1.1/8"	1.3/8"	1.13/16"	23/32"	3"
		-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48
BRAKEMASTER	SAE J517 R5 / SAE J1402	20.7	20.7	15.5	13.8	12.1	10.3	5.5	4.3	3.4	2.4	2.4	1.4
		3002	3002	2248	2001	1755	1464	798	624	493	348	348	203

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H₂O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H₂O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100 °C = +212 °F



Fluid Compatibility and Resistance Chart for Balflex Steel Wire Braid Hydraulic Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid		Ethyl Glycol	●	Oil of Turpentine	●
Acetic Acid (30%)	●	Ethyleneoxide	●	Oleic Acid	●
Acetone	●	Fluorine	●	Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)	●	Formaldehyde 40%	●	Phenol	●
Ammonia, Liquid	●	Fuel Oil	●	Phosphoric Acid (10%)	●
Ammoniumchloride		Gaseous Hydrogen	●	Phosphoric Acid (70%)	●
Amyl Acetate	●	Gasoline	●	Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils	●	Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene	●	Hexane	●	Silicone Oils	●
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate	●	Hydrochloric Acid 37%	●	Soda	●
Butyl Alcohol / Butanol	●	Hydroger Peroxide (Dil.)	●	Sodium Chloride Solutions	●
Calcium Chloride Solutions		Hydroger Peroxide (Conc.)	●	Sodium Hydroxide 20%	●
Carbon Dioxide	●	Isocyanates		Sodium Hypochloride 10%	●
Carbon Disulfide	●	Isopropil Alcohol	●	Sulphur	●
Carbonates	●	Kerosene	●	Sulphur Dioxide	●
Caustic Soda	●	Liquid Oxygen	●	Sulphuric Acid up to 50%	●
Chlorinated Solvents	●	LPG	●	Sulphuric Acid above 50%	●
Chlorine	●	Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol	●	Vegetable Greases	●
Compressed Air	●	Methyl Chloride (Cold)	●	Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil	●	Mineral Oils	●		
Diocetyl Phthalate		Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers	●	Natural Gas	●		
Ethyl Acetate	●	Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride	●	Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

FORZA UNO TROPIC



DIN EN 853 1SN / SAE 100R1AT / ISO 1436 – 10.1002.-HT

High pressure, high temperature, single steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
1SN-03-HT	10.1002.03HT	DN5	3/16"	-3	4,8	11,4	25.0	3700	100.0	14800	89	0,23
1SN-04-HT	10.1002.04HT	DN6	1/4"	-4	6,3	13,0	22.5	3300	90.0	13200	100	0,23
1SN-05-HT	10.1002.05HT	DN8	5/16"	-5	8,0	14,7	21.5	3200	85.0	12800	114	0,23
1SN-06-HT	10.1002.06HT	DN10	3/8"	-6	9,5	17,2	18.0	2700	72.0	10800	127	0,33
1SN-08-HT	10.1002.08HT	DN12	1/2"	-8	12,7	20,5	16.0	2400	64.0	9600	178	0,42
1SN-10-HT	10.1002.10HT	DN16	5/8"	-10	16,0	23,8	13.0	1900	52.0	7600	200	0,52
1SN-12-HT	10.1002.12HT	DN19	3/4"	-12	19,0	27,8	10.5	1600	42.0	6400	240	0,65
1SN-16-HT	10.1002.16HT	DN25	1"	-16	25,4	35,9	8.8	1300	35.0	5200	300	1,00
1SN-20-HT	10.1002.20HT	DN31	1 1/4"	-20	32,0	44,0	6.3	920	25.0	3680	419	1,30
1SN-24-HT	10.1002.24HT	DN38	1 1/2"	-24	38,0	50,8	5.0	730	20.0	2920	500	1,63
1SN-32-HT	10.1002.32HT	DN51	2"	-32	50,8	64,3	4.0	580	16.0	2320	630	2,00

INNER TUBE: seamless oil resistant synthetic rubber resistant to high temperature
REINFORCEMENT: 2 high tensile steel wire braid
OUTER TUBE: blue wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 4:1

TEMPERATURE RANGE: intermittent: -40°C (-40°F) +150°C (+302°F); continuous service: +125°C (+257°F) Max. temperature recommended for water base hydraulic fluids: +120°C (+248°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23
COVER: U.S. MSHA APPROVED

NOTES: this hose is a high temperature hydraulic hose but cannot be used with phosphate-ester based oils, and cannot be used in aircrafts and compressors working with air at +60°C

BALFLEX® / FORZA UNO - TROPIC / +132°C / 275°F - 1SN - DN6 - DIN EN 853 / SAE 100R1AT / R17 / ISO 1436 - 1/4" - WP / 10.1002.04HT - Flame Resistant - MSHA IC-232590



FORZA DUE TROPIC



DIN EN 853 2SN / SAE 100R2AT / ISO 1436 – 10.1004.-HT

High pressure, high temperature, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SN-03-HT	10.1004.03HT	DN5	3/16"	-3	4,8	13,4	41.5 6100	165.0 24400	89	0,32
2SN-04-HT	10.1004.04HT	DN6	1/4"	-4	6,3	14,7	40.0 5800	160.0 23200	100	0,38
2SN-05-HT	10.1004.05HT	DN8	5/16"	-5	8,0	16,5	35.0 5100	140.0 20400	114	0,45
2SN-06-HT	10.1004.06HT	DN10	3/8"	-6	9,5	18,7	33.0 4800	132.0 19200	127	0,53
2SN-08-HT	10.1004.08HT	DN12	1/2"	-8	12,7	21,9	27.5 4000	110.0 16000	178	0,65
2SN-10-HT	10.1004.10HT	DN16	5/8"	-10	16,0	25,3	25.0 3700	100.0 14800	200	0,76
2SN-12-HT	10.1004.12HT	DN19	3/4"	-12	19,0	29,3	21.5 3200	86.0 12800	240	1,00
2SN-16-HT	10.1004.16HT	DN25	1"	-16	25,4	37,9	16.5 2400	65.0 9600	300	1,48
2SN-20-HT	10.1004.20HT	DN31	1 1/4"	-20	32,0	47,5	12.5 1900	50.0 7600	419	2,14
2SN-24-HT	10.1004.24HT	DN38	1 1/2"	-24	38,0	54,6	9.0 1400	36.0 5600	500	2,55
2SN-32-HT	10.1004.32HT	DN51	2"	-32	50,8	67,4	8.0 1200	32.0 4800	630	3,30

INNER TUBE: seamless oil resistant

synthetic rubber resistant to high temperature

REINFORCEMENT: 2 high tensile steel wire

braids

OUTER TUBE: blue wrapped, oil, weather and

abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: intermittent:

-40°C (-40°F) +150°C (+302°F); continuous

service: +125°C (+257°F) Max. temperature

recommended for water base hydraulic

fluids: +120°C (+248°F) Max. temperature

recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic

fluids

COUPLINGS: Balflex® 2-piece fittings

serie 23 with 20 serie ferrules. Balflex®

Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

NOTES: this hose is a high temperature

hydraulic hose but cannot be used with

phosphate-ester based oils, and cannot be

used in aircrafts and compressors working

with air at +60°C

BALFLEX // FORZA DUE - TROPIC <135°C / 275°F> - 2SN - UNS - DIN EN 853 / SAE 100R2AT / ISO 1436 - 3/16" - 11.1.2002 - MSHA IC-252/00

BALPAC PREMIUM TROPIC



DIN EN 857 2SC / SAE 100R16 / ISO 11237 – 10.1019.-HT

High pressure, high temperature, double steel braid reinforced hydraulic hose

REFERENCE	#	DN	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
2SC-04-HT	10.1019.04HT	DN6	1/4"	-4	6,3	13,2	40.0 5800	160.0 23200		50	0,27
2SC-05-HT	10.1019.05HT	DN8	5/16"	-5	8,0	15,1	35.0 5100	140.0 20400		57	0,30
2SC-06-HT	10.1019.06HT	DN10	3/8"	-6	9,5	17,0	33.0 4800	132.0 19200		65	0,42
2SC-08-HT	10.1019.08HT	DN12	1/2"	-8	12,7	20,5	27.6 4100	110.4 16400		90	0,52
2SC-10-HT	10.1019.10HT	DN16	5/8"	-10	16,0	24,2	25.0 3700	100.0 14800		100	0,63
2SC-12-HT	10.1019.12HT	DN19	3/4"	-12	19,0	28,2	21.5 3200	86.0 12800		120	0,80
2SC-16-HT	10.1019.16HT	DN25	1"	-16	25,4	35,6	16.5 2400	66.0 9600		150	1,22

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braid

OUTER TUBE: blue wrapped, oil, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

TEMPERATURE RANGE: intermittent:

-40°C (-40°F) +150°C (+302°F); continuous service: +125°C (+257°F) Max. temperature recommended for water base hydraulic fluids: +120°C (+248°F) Max. temperature recommended for air: +60°C (+140°F)

APPLICATION: petroleum base hydraulic fluids

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules. Balflex® Multicrimp fittings serie BW23/BF21/P23

COVER: U.S. MSHA APPROVED

NOTES: this hose is a high temperature hydraulic hose but cannot be used with phosphate-ester based oils, and cannot be used in aircrafts and compressors working with air at +60°C

© Balflex // BALPAC - PREMIUM - TROPIC // +135°C / 275°F - DIN EN 857 - 2SC / EXCEEDS SAE 100R16 / ISO 11237 - DN6 - 1/4" - WP 6.3mm - MSHA IC-252/00



BRAKEMASTER R5R HEATMASTER



SAE 100R5R – 10.1006.-HT

High pressure, high temperature hydraulic hose with steel and textile braid reinforcement with blue pin-pricked rubber cover

											
REFERENCE	#	inch	SAE Dash	mm	mm	MPa	PSI	MPa	PSI	mm	kg/m
R5R-04-HT	10.1006.04HT	3/16"	-4	4,8	13,2	20.7	3100	82.8	12400	76	0,19
R5R-05-HT	10.1006.05HT	1/4"	-5	6,3	14,8	20.7	3100	82.8	12400	86	0,27
R5R-06-HT	10.1006.06HT	5/16"	-6	8,0	17,2	15.5	2300	62.0	9200	102	0,29
R5R-08-HT	10.1006.08HT	13/32"	-8	10,4	19,5	13.8	2100	55.2	8400	117	0,36
R5R-10-HT	10.1006.10HT	1/2"	-10	12,7	23,4	12.1	1800	48.3	7200	140	0,45
R5R-12-HT	10.1006.12HT	5/8"	-12	16,0	27,4	10.3	1500	41.4	6100	165	0,56
R5R-16-HT	10.1006.16HT	7/8"	-16	22,2	31,4	5.5	800	22.1	3200	187	0,78
R5R-20-HT	10.1006.20HT	1.1/8"	-20	28,6	38,1	4.3	630	17.2	2520	229	1,06
R5R-24-HT	10.1006.24HT	1.3/8"	-24	34,9	44,5	3.4	500	13.8	2000	267	1,45
R5R-32-HT	10.1006.32HT	1.13/16"	-32	46,0	56,4	2.4	350	9.7	1400	337	1,70
R5R-40-HT	10.1006.40HT	2.3/8"	-40	60,3	73,0	2.4	350	9.7	1400	610	2,15
R5R-48-HT	10.1006.48HT	3"	-48	76,2	90,5	1.4	210	5.5	840	838	3,08

INNER TUBE: seamless oil resistant synthetic rubber

REINFORCEMENT: 2 high resistance synthetic textile braids with an intermediate high tensile steel wire braid

OUTER TUBE: blue wrapped, pin-pricked, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids and hot air in compressors

TEMPERATURE RANGE: intermittent: -40°C (-40°F) +150°C (+302°F); continuous service +125°C (+257°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F) Max. temperature recommended for air: +60°C (+140°F)

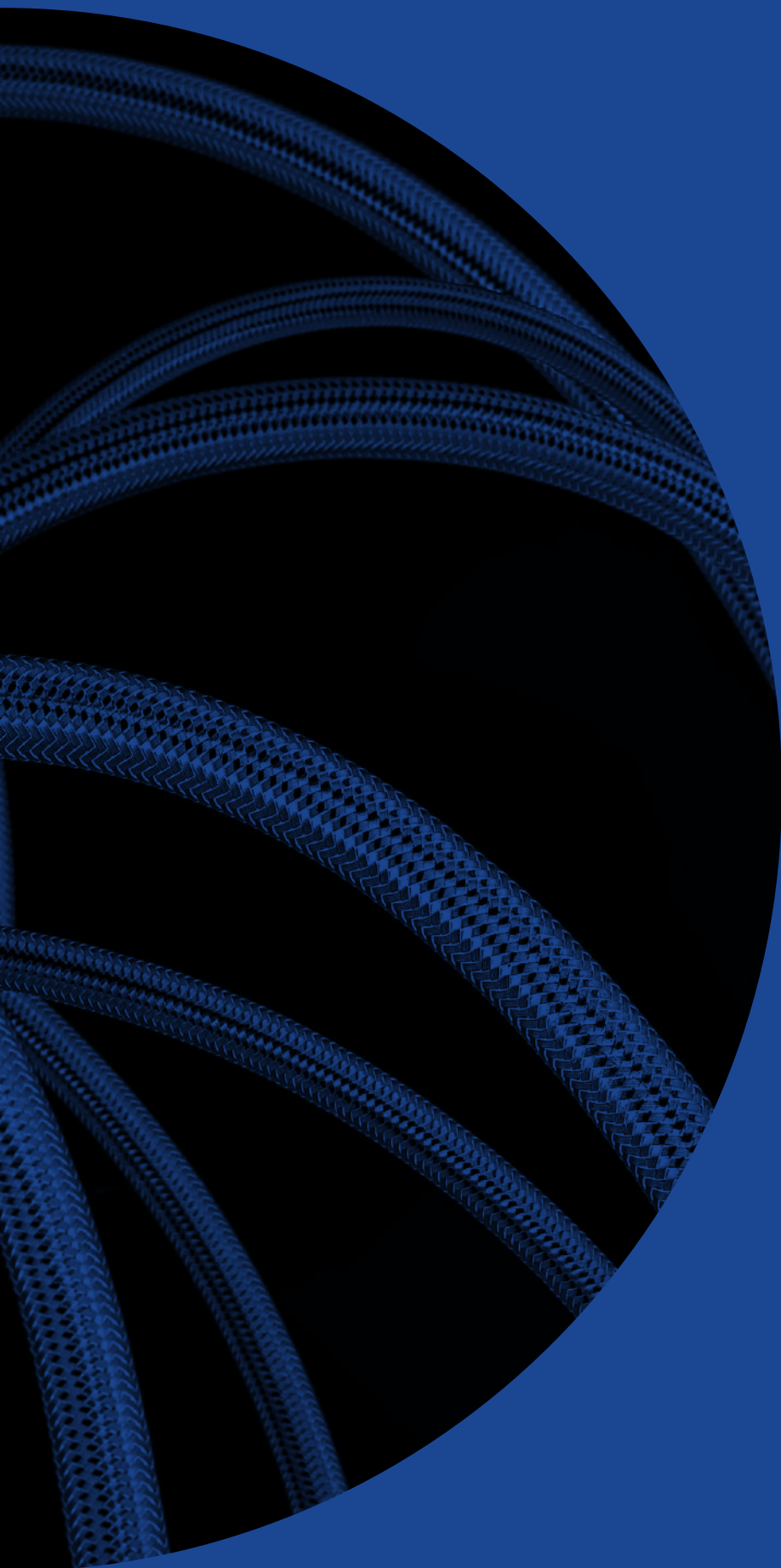
COUPLINGS: Balflex® Multicrimp fittings serie P25

NOTES: this hose is a high temperature hydraulic hose but cannot be used with phosphate-ester based oils, and cannot be used in aircrafts and compressors working with air at +60°C

BALFLEX / BRAKEMASTER R - HEATMASTER SAE 100R5R / SAE J1402 AB - DOT - 135°C / 275°F - 3/16" - WP 25.7 MPa (3700 PSI) - MSHA IC-252000

PTFE Hoses





- pag. 74 **BALFLON SAE 100R14**
- pag. 74 **BALFLON SAE 100R14**
- pag. 75 **BALFLON HEAVY WALL
DOUBLE BRAID**
- pag. 76 **BALFLON CONVOLUTED
(CORRUGATED)**
- pag. 77 **BALFLON CONVOLUTED
(CORRUGATED) BLACK
CONDUCTIVE**

PTFE Hoses

Balflex® Balflex hoses are produced to Balflex® specifications and meet and exceed SAE J517 R14 standard. They cover a wide variety of medium pressure applications, in PTFE, smooth and convoluted with stainless steel reinforcement, for a very large variety of chemical fluids, as well as traditional hydraulic fluids and steam.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® Balflex hoses are designed with different safety factors relating minimum burst pressure and recommended working pressure.

Balflex hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -70°C (-95°F) to +260°C (+500°F).

Selection, assembly and installation of thermoplastic hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards. **Balflex hose assemblies should always be inspected and hydraulically tested before installation.** All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

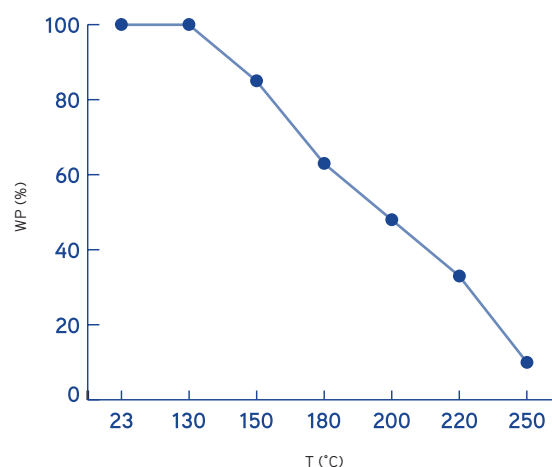
Installations that do not comply with an adequate geometry of the hose assembly may reduce significantly the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose specifications may shorten drastically the hose lifetime.

The failure of an Balflex hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of couplings and its parts, the whipping of unrestrained hose, spillage of combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



Temperature affects BALFLON smooth PTFE lining hoses pressure rating. For temperatures above 130°C (266°F) reduce the working pressure by 0.75% for each 1°C (33.8°F)

Temperature		Pressure
Up to 130°C	Up to 266°F	100%
150°C	302°F	85%
180°C	356°F	63%
200°C	392°F	48%
220°C	428°F	33%
250°C	482°F	10%



Temperature affects BALFLON convoluted PTFE hoses pressure rating. For temperatures above 130°C (266°F) reduce the working pressure by 1% for each 1°C (33.8°F)

Temperature		Pressure
Up to 130°C	Up to 266°F	100%
150°C	302°F	80%
180°C	356°F	50%
200°C	392°F	30%
220°C	428°F	10%

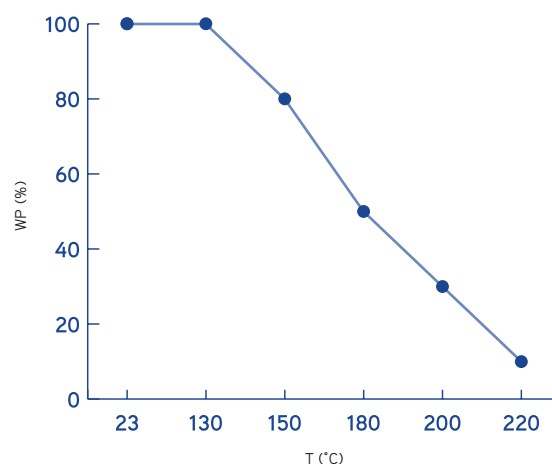


Table 1a: Rated working pressure at 20°C (+68°F) of Balflex® Balfon hoses (MPa / PSI)

Balflex	Standard	1/8"	3/16"	1/4"	5/16"	3/8"	13/32"	1/2"	5/8"	3/4"	7/8"	1"	1.1/8"	1.1/4"	1.1/2"	2"
BALFLON R14	SAE 100R14	27.5	20.0	17.5	15.0	13.5	12.0	12.0	10.0	9.0	6.5	6.5	5.5			
		4000	2900	2600	2200	2000	1800	1800	1500	1400	950	950	800			
BALFLON HEAVY WALL DOUBLE BRAID			27.5	25.0	22.5	21.0		17.5	16.0	14.0		9.5				
			4000	3700	3300	3100		2600	2400	2100		1400				
BALFLON CONVOLUTED				16.0	13.5	12.0		11.0	8.0	7.0		5.0		4.5	4.0	3.6
				2400	2000	1800		1600	1200	1100		730		660	580	530

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H₂O (20 °C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3,4
in Hg (20 °C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3,4
in H₂O (20 °C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20 °C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100°C = +212°F



Fluid Compatibility and Resistance Chart for Balflex PTFE Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid	●	Ethyl Glycol	●	Oil of Turpentine	
Acetic Acid (30%)	●	Ethyleneoxide		Oleic Acid	●
Acetone	●	Fluorine		Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)		Formaldehyde 40%		Phenol	●
Ammonia, Liquid		Fuel Oil	●	Phosphoric Acid (10%)	●
Ammoniumchloride	●	Gaseous Hydrogen		Phosphoric Acid (70%)	●
Amyl Acetate	●	Gasoline	●	Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils		Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene		Hexane		Silicone Oils	●
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate	●	Hydrochloric Acid 37%		Soda	●
Butyl Alcohol / Butanol	●	Hydroger Peroxide (Dil.)		Sodium Chloride Solutions	●
Calcium Chloride Solutions	●	Hydroger Peroxide (Conc.)		Sodium Hydroxide 20%	●
Carbon Dioxide		Isocyanates		Sodium Hypochloride 10%	●
Carbon Disulfide		Isopropil Alcohol	●	Sulphur	
Carbonates		Kerosene	●	Sulphur Dioxide	
Caustic Soda	●	Liquid Oxygen	●	Sulphuric Acid up to 50%	●
Chlorinated Solvents		LPG	●	Sulphuric Acid above 50%	●
Chlorine		Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol		Vegetable Greases	●
Compressed Air	●	Methyl Chloride (Cold)		Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil		Mineral Oils	●		
Diocetyl Phthalate		Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers		Natural Gas	●		
Ethyl Acetate	●	Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride		Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

BALFLON SAE 100R14



SAE 100R14 - 10.2003. - European size

High pressure, standard wall, single steel wire reinforced hydraulic hose with smooth PTFE lining

REFERENCE	#	inch	DN	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R14-02-TB	10.2001.02	1/8"	-2	3,2	5,9	27,5	4000	110,0	16000	40	0,06
R14-03-TB	10.2003.03	3/16"	-3	4,8	7,4	20,0	2900	80,0	11600	50	0,08
R14-04-TB	10.2003.04	1/4"	-4	6,3	9,0	17,5	2600	70,0	10400	75	0,09
R14-05-TB	10.2003.05	5/16"	-5	8,0	10,8	15,0	2200	60,0	8800	100	0,14
R14-06-TB	10.2003.06	3/8"	-6	9,5	12,4	13,5	2000	54,0	8000	125	0,16
R14-08-TB	10.2003.08	1/2"	-8	12,7	15,7	12,0	1800	48,0	7200	165	0,21
R14-10-TB	10.2003.10	5/8"	-10	16,0	19,1	10,0	1500	40,0	6100	200	0,27
R14-12-TB	10.2003.12	3/4"	-12	19,0	22,2	9,0	1400	36,0	5600	280	0,37
R14-16-TB	10.2003.16	1"	-16	25,4	29,3	6,5	950	26,0	3800	400	0,49

INNER TUBE: seamless smooth polytetrafluorethylene (PTFE)
OUTER TUBE: 1 stainless steel wire braid
SAFETY FACTOR: 4:1

APPLICATION: water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids

TEMPERATURE RANGE: -70°C (-95°F) +260°C (+500°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

AVAILABLE VERSIONS: Black Conductive
NOTE: Operating temperatures in excess of +204°C with petroleum base hydraulic fluids can materially reduce the life of the hose.

BALFLON SAE 100R14



SAE 100R14 - 10.2000. - SAE Dash Size

High pressure, standard wall, single steel wire reinforced hydraulic hose with smooth PTFE lining

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R14-03	10.2001.03	1/8"	-3	3,2	5,9	27,5	4000	110,0	16000	40	0,07
R14-04	10.2000.04	3/16"	-4	4,8	7,4	20,0	2900	80,0	11600	50	0,08
R14-05	10.2000.05	1/4"	-5	6,3	9,0	17,5	2600	70,0	10400	75	0,09
R14-06	10.2000.06	5/16"	-6	8,0	10,8	15,0	2200	60,0	8800	100	0,14
R14-08	10.2000.08	13/32"	-8	10,3	13,3	13,0	1900	54,0	7600	130	0,17
R14-10	10.2000.10	1/2"	-10	12,7	15,7	12,0	1800	48,0	7200	165	0,21
R14-12	10.2000.12	5/8"	-12	16,0	19,1	10,0	1500	40,0	6100	200	0,27
R14-16	10.2000.16	7/8"	-16	22,0	25,6	6,5	950	26,0	3800	350	0,51
R14-20	10.2000.20	1 1/8"	-20	28,6	32,5	5,5	800	22,0	3200	450	0,53

INNER TUBE: seamless smooth polytetrafluorethylene (PTFE)
OUTER TUBE: 1 stainless steel wire braid
SAFETY FACTOR: 4:1

APPLICATION: water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids

TEMPERATURE RANGE: -70°C (-95°F) +260°C (+500°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules.

AVAILABLE VERSIONS: Black Conductive
NOTE: Operating temperatures in excess of +204°C with petroleum base hydraulic fluids can materially reduce the life of the hose.



BALFLON HEAVY WALL DOUBLE BRAID



10.2002.

High pressure, heavy wall, double steel wire reinforced hydraulic hose with smooth PTFE lining

REFERENCE	#	inch	SAE Dash								
				mm	mm	MPa		MPa		mm	kg/m
R14-03-DB	10.2002.03	3/16"	-3	4,8	8,8	27,5	4000	110,0	16000	45	0,14
R14-04-DB	10.2002.04	1/4"	-4	6,3	10,4	25,0	3700	100,0	14800	50	0,17
R14-05-DB	10.2002.05	5/16"	-5	8,0	12,0	22,5	3300	90,0	13200	55	0,24
R14-06-DB	10.2002.06	3/8"	-6	9,5	13,7	21,0	3100	84,0	12400	70	0,26
R14-08-DB	10.2002.08	1/2"	-8	12,7	17,0	17,5	2600	70,0	10400	110	0,35
R14-10-DB	10.2002.10	5/8"	-10	16,0	20,5	16,0	2400	64,0	9600	150	0,50
R14-12-DB	10.2002.12	3/4"	-12	19,0	23,5	14,0	2100	56,0	8400	190	0,62
R14-16-DB	10.2002.16	1"	-16	25,4	30,8	9,5	1400	38,0	5600	270	0,77

INNER TUBE: seamless smooth polytetrafluorethylene (PTFE)

OUTER TUBE: 2 stainless steel wire braids

SAFETY FACTOR: 4:1

APPLICATION: water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids

TEMPERATURE RANGE: -70°C (-95°F) +260°C (+500°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules.

AVAILABLE VERSIONS: Black Conductive
NOTE: Operating temperatures in excess of +204°C with petroleum base hydraulic fluids can materially reduce the life of the hose

BALFLON CONVOLUTED (CORRUGATED)



10.2010.

High pressure, single Stainless Steel wire braid reinforced corrugated PTFE hose

											
REFERENCE	#	inch	SAE Dash	mm	mm	MPa	PSI	MPa	PSI	mm	kg/m
R14-04-CV	10.2010.04	1/4"	-4	6,5	11,5	16,0	2400	64,0	9600	20	0,10
R14-05-CV	10.2010.05	5/16"	-5	8,1	12,3	13,5	2000	54,0	8000	30	0,17
R14-06-CV	10.2010.06	3/8"	-6	9,7	15,6	12,0	1800	48,0	7200	30	0,20
R14-08-CV	10.2010.08	1/2"	-8	12,7	18,9	11,0	1600	44,0	6400	40	0,27
R14-10-CV	10.2010.10	5/8"	-10	16,0	22,2	8,0	1200	32,0	4800	50	0,33
R14-12-CV	10.2010.12	3/4"	-12	19,1	26,4	7,0	1100	28,0	4400	80	0,47
R14-16-CV	10.2010.16	1"	-16	25,4	33,0	5,0	730	20,0	2920	100	0,63
R14-20-CV	10.2010.20	1.1/4"	-20	32,0	40,5	4,5	660	18,0	2640	120	0,98
R14-24-CV	10.2010.24	1.1/2"	-24	39,0	47,0	4,0	580	16,0	2320	140	0,30
R14-32-CV	10.2010.32	2"	-32	51,0	61,2	3,6	530	14,4	2120	175	1,20

INNER TUBE: seamless corrugated polytetrafluorethylene (PTFE)
OUTER TUBE: 1 stainless steel wire braid
SAFETY FACTOR: 4:1

APPLICATION: water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids

TEMPERATURE RANGE: -70°C (-95°F) +260°C (+500°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules.

NOTE: Operating temperatures in excess of +204°C with petroleum base hydraulic fluids can materially reduce the life of the hose.



BALFLON CONVOLUTED (CORRUGATED) BLACK CONDUCTIVE



10.2010.B

High pressure, single Stainless Steel wire braid reinforced black conductive corrugated PTFE hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R14-04-CV-B	10.2010.04B	1/4"	-4	6,5	11,5	16,0 2400	64,0 9600	20	0,10
R14-05-CV-B	10.2010.05B	5/16"	-5	8,1	12,3	13,5 2000	54,0 8000	30	0,17
R14-06CV-B	10.2010.06B	3/8"	-6	9,7	15,6	12,0 1800	48,0 7200	30	0,20
R14-08CV-B	10.2010.08B	1/2"	-8	12,7	18,9	11,0 1600	44,0 6400	40	0,27
R14-10CV-B	10.2010.10B	5/8"	-10	16,0	22,2	8,0 1200	32,0 4800	50	0,33
R14-12CV-B	10.2010.12B	3/4"	-12	19,1	26,4	7,0 1100	28,0 4400	80	0,47
R14-16CV-B	10.2010.16B	1"	-16	25,4	33,0	5,0 730	20,0 2920	100	0,63
R14-20CV-B	10.2010.20B	1.1/4"	-20	32,0	40,5	4,5 660	18,0 2640	120	0,98
R14-24CV-B	10.2010.24B	1.1/2"	-24	39,0	47,0	4,0 580	16,0 2320	140	0,30
R14-32CV-B	10.2010.32B	2"	-32	51,0	61,2	3,6 530	14,4 2120	175	1,20

INNER TUBE: seamless black conductive corrugated polytetrafluorethylene (PTFE)
OUTER TUBE: 1 stainless steel wire braid
SAFETY FACTOR: 4:1

APPLICATION: water base, petroleum base or synthetic base hydraulic fluids, corrosive, food liquids and high temperature gases and liquids

TEMPERATURE RANGE: -70°C (-95°F) +260°C (+500°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules.

NOTE: Operating temperatures in excess of +204°C with petroleum base hydraulic fluids can materially reduce the life of the hose.

Thermoplastic Hoses





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Thermoplastic Hoses

Balflex® Thermoplastic hoses are produced to Balflex® specifications and according to ISO 3949, SAE J517 and EN 855 standards. They cover a wide variety of medium to high pressure applications, in thermoplastic, textile and steel reinforcement, for petroleum and water base hydraulic fluids.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

General Guidelines

Balflex® thermoplastic hoses are designed with different safety factors relating minimum burst pressure and recommended working pressure. Working pressure and nominal diameter are always branded on the hose.

Thermoplastic hoses are designed for petroleum base hydraulic fluids applications with a temperature range of -40°C (-40°F) to $+100^{\circ}\text{C}$ ($+100^{\circ}\text{F}$). Thermoplastic hoses may also be used for water base hydraulic fluids if the working temperature does not exceed $+65^{\circ}\text{C}$ ($+149^{\circ}\text{F}$).

Selection, assembly and installation of thermoplastic hoses should follow **Balflex®** recommendations and **SAE J1273** and **DIN 20066** standards. **Thermoplastic hose assemblies should always be inspected and hydraulically tested before installation.** All hydraulics systems should be tested against leakage and malfunction in an appropriate area after any intervention.

Installations that do not comply with an adequate geometry of the hose assembly may reduce significantly the lifetime of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system where working characteristics exceed the hose specifications may shorten drastically the hose lifetime.

The failure of a thermoplastic hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projections of hydraulic fluid, the projection of couplings and it's parts, the whipping of unrestrained hose, spillage of combustion of the fluid, electrical shocks through contact with electrical sources, immovability, fall or sudden movement of masses controlled by the hydraulic system.



**Table 1a: Rated working pressure at 20°C (+68°F)
of Balflex® Thermoplastic hoses (MPa / PSI)**

Balflex	Standard	1/8"	53/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"
		-2	-3	-4	-5	-6	-8	-10	-12	-16
		DN3	DN5	DN6	DN8	DN10	DN12	DN16	DN19	DN25
ZETAFLEX ZETAFLEX TWIN ZETAFLEX NC ZETAFLEX NC TWIN	DIN EN 855 R7 / SAE 100R7 / ANSI A92.2	28.0	21.0	19.2	19.0	16.0	15.5	10.5	9.0	7.0
		4100	3100	2800	2800	2400	2300	1600	1400	1100
ZETAFLEX STEEL ZETAFLEX STEEL TWIN		35.0	30.0	27.5	24.0	22.0	17.5	14.0	11.5	10.0
		5100	4400	4000	3500	3200	2600	2100	1700	1500
OMEGAFLEX PLUS OMEGAFLEX PLUS TWIN OMEGAFLEX PLUS NC OMEGAFLEX PLUS NC TWIN	DIN EN 855 R8 / SAE 100R8		35.0	35.0	30.	28.0	24.5	20.0	16.5	14.0
			5100	5100	4300	4100	3600	2800	2300	2100
OMEGAFLEX OMEGAFLEX TWIN OMEGAFLEX NC OMEGAFLEX NC TWIN	DIN EN 855 R8 / SAE 100R8		35.0	35.0	30.	28.0	24.5	20.0	16.5	14.0
			5100	5100	4300	4100	3600	2800	2300	2100
ZETAFLEX 3000 ZETAFLEX 3000 TWIN ZETAFLEX 3000 NC ZETAFLEX 3000 NC TWIN	SAE 100R18		21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
			3000	3000	3000	3000	3000	3000	3000	3000

Table 2: Pressure Conversion

bar	0,00134	0,0025	0,0339	0,069	0,098	1,00	1,01	10,0	100
PSI	0,0194	0,036	0,492	1,001	1,421	14,504	14,69	145,04	1450,38
MPa	-	-	0,003	0,007	0,0098	0,10	0,101	1,00	10,00
1 atm	0,001	0,0025	0,0335	0,068	0,097	0,987	1	9,87	98,69
m H ₂ O (20°C)	0,014	0,026	0,346	0,704	1	10,207	10,34	102,074	3.4
in Hg (20°C)	0,0396	0,074	1,001	2,04	2,89	29,53	29,91	295,3	3.4
in H ₂ O (20°C)	0,538	1,005	13,623	27,73	39,38	401,86	407,09	4018,65	40186,47
mm Hg (20°C)	1,005	1,88	25,43	51,75	73,51	750,06	759,81	7500,62	75006,17

Example: 1 MPa = 145,04 PSI ; 1 MPa = 10,0 bar

Table 3: Conversion Factors

Unit	Factor	Converted Unit
1 m (meter)	1000	mm (millimeter)
1 m (meter)	1,09362	yard
1 m (meter)	3,28084	foot
1 mm (millimeter)	0,001	m (meter)
1 mm (millimeter)	0,03937	Inch
1 inch	25,4	mm (millimeter)
1 inch	0,0254	m (meter)
1 foot	0,3048	m (meter)
1 yard	0,9144	m (meter)
F°	C° x 1,8 + 32	F° (Fahrenheit)
C°	(F° - 32): 1,8	C° (Celsius)

Example: : 1 m = 3,28084 feet ; 1 inch = 25,4 mm

Example: : +100°C = +212°F



Fluid Compatibility and Resistance Chart for Balflex Thermoplastic Hoses

● Recommended ● Recommended with Restrictions ● Not Recommended

Acetic Acid	●	Ethyl Glycol	●	Oil of Turpentine	●
Acetic Acid (30%)	●	Ethyleneoxide	●	Oleic Acid	●
Acetone	●	Fluorine	●	Oxalic Acid	●
Acetylene	●	Formaldehyde	●	Perchloroethylene	●
Ammonia, Gas (Hot)		Formaldehyde 40%	●	Phenol	●
Ammonia, Liquid	●	Fuel Oil	●	Phosphoric Acid (10%)	
Ammoniumchloride	●	Gaseous Hydrogen	●	Phosphoric Acid (70%)	●
Amyl Acetate		Gasoline		Phosphate Ester Base Oil	●
Aniline	●	Glycerin / Glycerol	●	Saturated Steam	●
Animal Oils	●	Glycol to 66 °C	●	Sea Water	●
Benzol / Benzene	●	Hexane	●	Silicone Oils	
Butane	●	Hydraulic Oil	●	Soap Solutions	●
Butyl Acetate		Hydrochloric Acid 37%	●	Soda	●
Butyl Alcohol / Butanol		Hydroger Peroxide (Dil.)		Sodium Chloride Solutions	●
Calcium Chloride Solutions	●	Hydroger Peroxide (Conc.)		Sodium Hydroxide 20%	
Carbon Dioxide		Isocyanates	●	Sodium Hypochloride 10%	
Carbon Disulfide		Isopropil Alcohol		Sulphur	●
Carbonates		Kerosene	●	Sulphur Dioxide	
Caustic Soda	●	Liquid Oxygen		Sulphuric Acid up to 50%	●
Chlorinated Solvents		LPG		Sulphuric Acid above 50%	●
Chlorine	●	Lubricating Oils	●	Toluene	●
Chloroform	●	Mercury	●	Trichloroethylene	●
Citric and Solutions	●	Methyl Alcohol / Methanol	●	Vegetable Greases	
Compressed Air	●	Methyl Chloride (Cold)	●	Water	●
Cyclohexane	●	Methyl Ethyl Khetone	●	Xylene	●
Crude Petroleum Oil	●	Mineral Oils	●		
Diocetyl Phthalate	●	Naphtha	●		
Diesel Fuel	●	Naphthalene	●		
Ethers		Natural Gas	●		
Ethyl Acetate		Nitric Acid (Dil.)	●		
Ethyl Alcohol	●	Nitric Acid (Conc.)	●		
Ethyl Chloride		Nitrobenzen	●		

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20 °C/70 °F unless otherwise noted.

ZETAFLEX



DIN EN 855 R7 / SAE 100R7 - 10.1030.

High pressure, synthetic polyester braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R7-02	10.1030.02	1/8"	-2	3,2	8,1	28.0	4100	112.0	16400	25	0,05
R7-03	10.1030.03	3/16"	-3	4,8	10,3	21.0	3100	84.0	12400	25	0,07
R7-04	10.1030.04	1/4"	-4	6,4	12,4	19.2	2800	76.8	11200	32	0,09
R7-05	10.1030.05	5/16"	-5	8,0	14,2	19.0	2800	76.0	11200	45	0,13
R7-06	10.1030.06	3/8"	-6	9,5	15,7	16.0	2400	64.0	9600	55	0,16
R7-08	10.1030.08	1/2"	-8	12,7	19,3	15,5	2300	62,0	9200	77	0,22
R7-10	10.1030.10	5/8"	-10	16,0	23,1	10.5	1600	42.0	6400	110	0,28
R7-12	10.1030.12	3/4"	-12	19,0	26,4	9.0	1400	36.0	5600	140	0,33
R7-16	10.1030.16	1"	-16	25,4	33,3	7.0	1100	28.0	4400	200	0,40

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile polyester braid

OUTER TUBE: black, oil and weather resistant polyurethane, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
NOTE: Size -2 (1/8") not included in the standards.

BALFLEX ZETAFLEX - DIN EN 855 / SAE 100R7 / ISO 3949 - DN3 - 1/8" - WP 28 MPa / 4100 PSI

ZETAFLEX TWIN



DIN EN 855 R7 / SAE 100R7 / ISO 3949 - 10.1034.

High pressure, synthetic polyester braid reinforced thermoplastic hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R7-03-TB	10.1034.03	3/16"	-3	4,8	10,3	21.0	3100	84.0	12400	25	0,07
R7-04-TB	10.1034.04	1/4"	-4	6,4	12,4	19.2	2800	76.8	11200	32	0,09
R7-05-TB	10.1034.05	5/16"	-5	8,0	14,2	19.0	2800	76.0	11200	45	0,13
R7-06-TB	10.1034.06	3/8"	-6	9,5	15,7	16.0	2400	64.0	9600	55	0,16
R7-08-TB	10.1034.08	1/2"	-8	12,7	19,3	15,5	2300	62,0	9200	77	0,22
R7-10-TB	10.1034.10	5/8"	-10	16,0	23,1	10.5	1600	42.0	6400	110	0,28
R7-12-TB	10.1034.12	3/4"	-12	19,0	26,4	9.0	1400	36.0	5600	140	0,33
R7-16-TB	10.1034.16	1"	-16	25,4	33,3	7.0	1100	28.0	4400	200	0,40

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile polyester braid

OUTER TUBE: black, oil and weather resistant polyurethane, pin-pricked
SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

BALFLEX ZETAFLEX - DIN EN 855 / SAE 100R7 / ISO 3949 - DN5 - 3/16" - WP 21 MPa / 3100 PSI



ZETAFLEX NON CONDUCTIVE



DIN EN 855 R7 / SAE 100R7 / ANSI A92.2 / ISO 3949 - 10.1030.L

High pressure, synthetic fiber braid reinforced thermoplastic Non Conductive hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R7-02LNC	10.1030.02L	1/8"	-2	3,2	8,1	28.0 4100	112.0 16400	25	0,05
R7-03LNC	10.1030.03L	3/16"	-3	4,8	10,3	21.0 3100	84.0 12400	25	0,07
R7-04LNC	10.1030.04L	1/4"	-4	6,4	12,4	19.2 2800	76.8 11200	32	0,09
R7-05LNC	10.1030.05L	5/16"	-5	8,0	14,2	19.0 2800	76.0 11200	45	0,13
R7-06LNC	10.1030.06L	3/8"	-6	9,5	15,7	16.0 2400	64.0 9600	55	0,16
R7-08LNC	10.1030.08L	1/2"	-8	12,7	19,3	15,5 2300	62,0 9200	77	0,22
R7-10LNC	10.1030.10L	5/8"	-10	16,0	23,1	10.5 1600	42.0 6400	110	0,28
R7-12LNC	10.1030.12L	3/4"	-12	19,0	26,4	9.0 1400	36.0 5600	140	0,33
R7-16LNC	10.1030.16L	1"	-16	25,4	33,3	7.0 1100	28.0 4400	200	0,40

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile polyester braid

OUTER TUBE: orange, oil and weather resistant polyurethane, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules
NOTE: Size -2 (1/8") not included in the standards.

BALFLEX ZETAFLEX - NON CONDUCTIVE - DIN EN 855 / SAE 100R7 - DN3 - 1/8" - WP 28 MPa / 4060 PSI - [ANSI A92.2 - WP 20.7 MPa / 3000 PSI]

ZETAFLEX NON CONDUCTIVE TWIN



DIN EN 855 R7 / SAE 100R7 / ANSI A92.2 / ISO 3949 - 10.1034.L

High pressure, synthetic fiber braid reinforced thermoplastic Non Conductive hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R7-03TNC	10.1034.03L	3/16"	-3	4,8	10,3	21.0 3100	84.0 12400	25	0,07
R7-04TNC	10.1034.04L	1/4"	-4	6,4	12,4	19.2 2800	76.8 11200	32	0,09
R7-05TNC	10.1034.05L	5/16"	-5	8,0	14,2	19.0 2800	76.0 11200	45	0,13
R7-06TNC	10.1034.06L	3/8"	-6	9,5	15,7	16.0 2400	64.0 9600	55	0,16
R7-08TNC	10.1034.08L	1/2"	-8	12,7	19,3	15,5 2300	62,0 9200	77	0,22
R7-10TNC	10.1034.10L	5/8"	-10	16,0	23,1	10.5 1600	42.0 6400	110	0,28
R7-12TNC	10.1034.12L	3/4"	-12	19,0	26,4	9.0 1400	36.0 5600	140	0,33
R7-16TNC	10.1034.16L	1"	-16	25,4	33,3	7.0 1100	28.0 4400	200	0,40

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile polyester braid

OUTER TUBE: orange, oil and weather resistant polyurethane, pin-pricked
SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

BALFLEX ZETAFLEX - NON CONDUCTIVE - DIN EN 855 / SAE 100R7 / ISO 3949 - DN5 - 3/16" - WP 21 MPa / 3100 PSI - [ANSI A92.2 - WP 20.7 MPa / 3000 PSI]

ZETAFLEX STEEL



R7 SteelFlex - 10.1031.

High pressure, steel wire braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R7-02-S	10.1031.02	1/8"	-2	3,2	7,1	35.0 5100	140.0 20400	25	0,10
R7-03-S	10.1031.03	3/16"	-3	4,8	9,7	30.0 4400	120.0 17600	30	0,13
R7-04-S	10.1031.04	1/4"	-4	6,4	11,7	27.5 4000	110.0 16000	40	0,17
R7-05-S	10.1031.05	5/16"	-5	8,0	13,6	24.0 3500	96.0 14000	50	0,22
R7-06-S	10.1031.06	3/8"	-6	9,5	15,2	22.0 3200	88.0 12800	60	0,26
R7-08-S	10.1031.08	1/2"	-8	12,7	18,4	17.5 2600	70.0 10400	75	0,39
R7-10-S	10.1031.10	5/8"	-10	16,0	22,2	14.0 2100	56.0 8400	110	0,41
R7-12-S	10.1031.12	3/4"	-12	19,0	25,9	11.5 1700	46.0 6800	150	0,45
R7-16-S	10.1031.16	1"	-16	25,4	32,4	10.0 1500	40.0 6100	230	0,62

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black, oil and weather resistant thermoplastic
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature
recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX - STEEL - EXCEEDS SAE 100R7 - DN3 - 1/8" - WP 35 MPa / 5100 PSI

ZETAFLEX STEEL TWIN



R7 SteelFlex TWIN - 10.1035.

High pressure, steel wire braid reinforced thermoplastic hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R7-03-ST	10.1035.03	3/16"	-3	4,8	9,7	30.0 4400	120.0 17600	30	0,13
R7-04-ST	10.1035.04	1/4"	-4	6,4	11,7	27.5 4000	110.0 16000	40	0,17
R7-05-ST	10.1035.05	5/16"	-5	8,0	13,6	24.0 3500	96.0 14000	50	0,22
R7-06-ST	10.1035.06	3/8"	-6	9,5	15,2	22.0 3200	88.0 12800	60	0,26
R7-08-ST	10.1035.08	1/2"	-8	12,7	18,4	17.5 2600	70.0 10400	75	0,39
R7-10-ST	10.1035.10	5/8"	-10	16,0	22,2	14.0 2100	56.0 8400	110	0,41
R7-12-ST	10.1035.12	3/4"	-12	19,0	25,9	11.5 1700	46.0 6800	150	0,45
R7-16-ST	10.1035.16	1"	-16	25,4	32,4	10.0 1500	40.0 6100	230	0,62

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: black, oil and weather resistant thermoplastic
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature
recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX - STEEL - EXCEEDS SAE 100R7 - DN5 - 3/16" - WP 30 MPa / 4400 PSI



OMEGAFLEX PLUS



DIN EN 855 R8 / SAE 100R8 / ISO 3949 - 10.1033.

High pressure, single aramid braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R8-03	10.1033.03	3/16"	-3	4,8	10,3	35.0 5100	140.0 20400	25	0,09
R8-04	10.1033.04	1/4"	-4	6,4	12,4	35.0 5100	140.0 20400	32	0,10
R8-05	10.1033.05	5/16"	-5	8,0	14,2	30.0 4300	120.0 17200	45	0,13
R8-06	10.1033.06	3/8"	-6	9,5	15,7	28.0 4100	112.0 16400	55	0,18
R8-08	10.1033.08	1/2"	-8	12,7	19,3	24.5 3600	98.0 14400	77	0,22
R8-10	10.1033.10	5/8"	-10	16,0	23,1	20.0 2800	80.0 11200	110	0,31
R8-12	10.1033.12	3/4"	-12	19,0	26,4	16.5 2300	66.0 9200	140	0,36
R8-16	10.1033.16	1"	-16	25,4	33,3	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile aramidic fiber braid

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX PLUS - DIN EN 855 / SAE 100R8 / ISO 3949 - DN5 - 3/16" - ARAMID - WP 35 MPa / 5100 PSI

OMEGAFLEX PLUS TWIN LINE



DIN EN 855 R8 / SAE 100R8 / ISO 3949 - 10.1136.

High pressure, single aramid braid reinforced thermoplastic hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R8-03-TB	10.1136.03	3/16"	-3	4,8	10,3	35.0 5100	140.0 20400	25	0,09
R8-04-TB	10.1136.04	1/4"	-4	6,4	12,4	35.0 5100	140.0 20400	32	0,10
R8-05-TB	10.1136.05	5/16"	-5	8,0	14,2	30.0 4300	120.0 17200	45	0,13
R8-06-TB	10.1136.06	3/8"	-6	9,5	15,7	28.0 4100	112.0 16400	55	0,18
R8-08-TB	10.1136.08	1/2"	-8	12,7	19,3	24.5 3600	98.0 14400	77	0,22
R8-10-TB	10.1136.10	5/8"	-10	16,0	23,1	20.0 2800	80.0 11200	110	0,31
R8-12-TB	10.1136.12	3/4"	-12	19,0	26,4	16.5 2300	66.0 9200	140	0,36
R8-16-TB	10.1136.16	1"	-16	25,4	33,3	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile aramidic fiber braid

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

BALFLEX OMEGAFLEX PLUS - DIN EN 855 / SAE 100R8 - DN6 - 1/4" - ARAMID - WP 35 MPa / 5100 PSI

OMEGAFLEX PLUS

(NON CONDUCTIVE)



DIN EN 855 R8 / SAE 100R8 / ISO 3949 - 10.1033.L

High pressure, single aramidic braid reinforced thermoplastic Non Conductive hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R8-03LNC	10.1033.03L	3/16"	-3	4,8	10,3	35.0 5100	140.0 20400	25	0,09
R8-04LNC	10.1033.04L	1/4"	-4	6,4	12,4	35.0 5100	140.0 20400	32	0,10
R8-05LNC	10.1033.05L	5/16"	-5	8,0	14,2	30.0 4300	120.0 17200	45	0,13
R8-06LNC	10.1033.06L	3/8"	-6	9,5	15,7	28.0 4100	112.0 16400	55	0,18
R8-08LNC	10.1033.08L	1/2"	-8	12,7	19,3	24.5 3600	98.0 14400	77	0,22
R8-10LNC	10.1033.10L	5/8"	-10	16,0	23,1	20.0 2800	80.0 11200	110	0,31
R8-12LNC	10.1033.12L	3/4"	-12	19,0	26,4	16.5 2300	66.0 9200	140	0,36
R8-16LNC	10.1033.16L	1"	-16	25,4	33,3	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile aramidic fiber braid

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX PLUS - NON CONDUCTIVE - ANSI A92.2 - DIN EN 855 / SAE 100R8 / ISO 3949 - DN5 - 3/16" - ARAMID - WP 35 MPa / 5100 PSI

OMEGAFLEX PLUS TWIN

(NON CONDUCTIVE)



DIN EN 855 R8 / SAE 100R8 / ISO 3949 - 10.1136.L

High pressure, single aramidic braid reinforced thermoplastic Non Conductive hydraulic twin line hoses

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R8-03TNC	10.1136.03L	3/16"	-3	4,8	10,3	35.0 5100	140.0 20400	25	0,09
R8-04TNC	10.1136.04L	1/4"	-4	6,4	12,4	35.0 5100	140.0 20400	32	0,10
R8-05TNC	10.1136.05L	5/16"	-5	8,0	14,2	30.0 4300	120.0 17200	45	0,13
R8-06TNC	10.1136.06L	3/8"	-6	9,5	15,7	28.0 4100	112.0 16400	55	0,18
R8-08TNC	10.1136.08L	1/2"	-8	12,7	19,3	24.5 3600	98.0 14400	77	0,22
R8-10TNC	10.1136.10L	5/8"	-10	16,0	23,1	20.0 2800	80.0 11200	110	0,31
R8-12TNC	10.1136.12L	3/4"	-12	19,0	26,4	16.5 2300	66.0 9200	140	0,36
R8-16TNC	10.1136.16L	1"	-16	25,4	33,3	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 high tensile aramidic fiber braid

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX PLUS - NON CONDUCTIVE - ANSI A92.2 - DIN EN 855 / SAE 100R8 / ISO 3949 - DN5 - 3/16" - ARAMID - WP 35 MPa / 5100 PSI



OMEGAFLEX



DIN EN 855 R8 / SAE 100R8 - 10.1032.

High pressure, double polyester braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R82P-03	10.1032.03	3/16"	-3	4,8	12,4	35.0 5100	140.0 20400	40	0,09
R82P-04	10.1032.04	1/4"	-4	6,4	16,1	35.0 5100	140.0 20400	45	0,10
R82P-05	10.1032.05	5/16"	-5	8,0	16,7	29.0 4300	116.0 17200	55	0,13
R82P-06	10.1032.06	3/8"	-6	9,5	18,5	28.0 4100	112.0 16400	65	0,18
R82P-08	10.1032.08	1/2"	-8	12,7	22,6	24.5 3600	98.0 14400	77	0,22
R82P-10	10.1032.10	5/8"	-10	16,0	25,6	19.0 2800	76.0 11200	100	0,31
R82P-12	10.1032.12	3/4"	-12	19,0	28,6	15.5 2300	62.0 9200	140	0,36
R82P-16	10.1032.16	1"	-16	25,4	35,8	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer

REINFORCEMENT: 2 high tensile polyester braids

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX - DIN EN 855 / SAE 100R8 - DN5 - 3/16" - POLYESTER - WP 35 MPa / 5100 PSI

OMEGAFLEX TWIN



DIN EN 855 R8 / SAE 100R8 - 10.1036.

High pressure, double polyester braid reinforced thermoplastic hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R82P-03LNC	10.1036.03	3/16"	-3	4,8	12,4	35.0 5100	140.0 20400	40	0,18
R82P-04LNC	10.1036.04	1/4"	-4	6,4	16,1	35.0 5100	140.0 20400	45	0,20
R82P-05LNC	10.1036.05	5/16"	-5	8,0	16,7	29.0 4300	116.0 17200	55	0,26
R82P-06LNC	10.1036.06	3/8"	-6	9,5	18,5	28.0 4100	112.0 16400	65	0,36
R82P-08LNC	10.1036.08	1/2"	-8	12,7	22,6	24.5 3600	98.0 14400	77	0,44
R82P-10LNC	10.1036.10	5/8"	-10	16,0	25,6	19.0 2800	76.0 11200	100	0,62
R82P-12LNC	10.1036.12	3/4"	-12	19,0	28,6	15.5 2300	62.0 9200	140	0,72
R82P-16LNC	10.1036.16	1"	-16	25,4	35,8	14.0 2100	56.0 8400	200	1,02

INNER TUBE: Polyester Elastomer

REINFORCEMENT: 2 high tensile polyester braids

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX - DIN EN 855 / SAE 100R8 - DN5 - 3/16" - POLYESTER - WP 35 MPa / 5100 PSI

OMEGAFLEX (NON CONDUCTIVE)



DIN EN 855 R8 / SAE 100R8 / ANSI A92.2 - 10.1032.L

High pressure, double polyester braid reinforced thermoplastic Non Conductive hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R82P-03-TB	10.1032.03L	3/16"	-3	4,8	12,4	35.0 5100	140.0 20400	40	0,09
R82P-04-TB	10.1032.04L	1/4"	-4	6,4	16,1	35.0 5100	140.0 20400	45	0,10
R82P-05-TB	10.1032.05L	5/16"	-5	8,0	16,7	29.0 4300	116.0 17200	55	0,13
R82P-06-TB	10.1032.06L	3/8"	-6	9,5	18,5	28.0 4100	112.0 16400	65	0,18
R82P-08-TB	10.1032.08L	1/2"	-8	12,7	22,6	24.5 3600	98.0 14400	77	0,22
R82P-10-TB	10.1032.10L	5/8"	-10	16,0	25,6	19.0 2800	76.0 11200	100	0,31
R82P-12-TB	10.1032.12L	3/4"	-12	19,0	28,6	15.5 2300	62.0 9200	140	0,36
R82P-16-TB	10.1032.16L	1"	-16	25,4	35,8	14.0 2100	56.0 8400	200	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 2 high tensile polyester braids

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX OMEGAFLEX - NON CONDUCTIVE - DIN EN 855 / SAE 100R8 - DN5 - 3/16" - POLYESTER - WP 35 MPa / 5100 PSI

OMEGAFLEX TWIN (NON CONDUCTIVE)



DIN EN 855 R8 / SAE 100R8 / ANSI A92.2 - 10.1036.L

High pressure, double polyester braid reinforced thermoplastic Non Conductive hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R82P-03TNC	10.1036.03L	3/16"	-3	4,8	12,4	35.0 5100	140.0 20400	40	0,18
R82P-04TNC	10.1036.04L	1/4"	-4	6,4	16,1	35.0 5100	140.0 20400	45	0,20
R82P-05TNC	10.1036.05L	5/16"	-5	8,0	16,7	29.0 4300	116.0 17200	55	0,26
R82P-06TNC	10.1036.06L	3/8"	-6	9,5	18,5	28.0 4100	112.0 16400	65	0,36
R82P-08TNC	10.1036.08L	1/2"	-8	12,7	22,6	24.5 3600	98.0 14400	77	0,44
R82P-10TNC	10.1036.10L	5/8"	-10	16,0	25,6	19.0 2800	76.0 11200	100	0,62
R82P-12TNC	10.1036.12L	3/4"	-12	19,0	28,6	15.5 2300	62.0 9200	140	0,72
R82P-16TNC	10.1036.16L	1"	-16	25,4	35,8	14.0 2100	56.0 8400	200	1,02

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 2 high tensile polyester braids

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

BALFLEX OMEGAFLEX - NON CONDUCTIVE - DIN EN 855 / SAE 100R8 - DN5 - 3/16" - POLYESTER - WP 35 MPa / 5100 PSI



ZETAFLEX 3000



SAE 100R18 - 10.1130.

High pressure, single or double polyester braid reinforced thermoplastic
Isobaric hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R18-03	10.1130.03	3/16"	-3	4,8	10,3	21,0 3000	84,0 12000	30	0,09
R18-04	10.1130.04	1/4"	-4	6,4	12,4	21,0 3000	84,0 12000	45	0,10
R18-05	10.1130.05	5/16"	-5	8,0	14,2	21,0 3000	84,0 12000	50	0,13
R18-06	10.1130.06	3/8"	-6	9,5	16,6	21,0 3000	84,0 12000	75	0,18
R18-08	10.1130.08	1/2"	-8	12,7	22,5	21,0 3000	84,0 12000	90	0,22
R18-10	10.1130.10	5/8"	-10	16,0	25,4	21,0 3000	84,0 12000	120	0,31
R18-12	10.1130.12	3/4"	-12	19,0	31,5	21,0 3000	84,0 12000	150	0,36
R18-16	10.1130.16	1"	-16	25,4	39,6	21,0 3000	84,0 12000	250	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 or 2 high tensile synthetic fiber braid

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX 3000 - SAE 100R18 - DN5 - 3/16" - WP 21 MPa / 3000 PSI

ZETAFLEX 3000 TWIN



SAE 100R18 - 10.1134.

High pressure, single or double polyester braid reinforced thermoplastic Isobaric
hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
R18-03-TB	10.1134.03	3/16"	-3	4,8	10,3	21,0 3000	84,0 12000	30	0,09
R18-04-TB	10.1134.04	1/4"	-4	6,4	12,4	21,0 3000	84,0 12000	45	0,10
R18-05-TB	10.1134.05	5/16"	-5	8,0	14,2	21,0 3000	84,0 12000	50	0,13
R18-06-TB	10.1134.06	3/8"	-6	9,5	16,6	21,0 3000	84,0 12000	75	0,18
R18-08-TB	10.1134.08	1/2"	-8	12,7	22,5	21,0 3000	84,0 12000	90	0,22
R18-10-TB	10.1134.10	5/8"	-10	16,0	25,4	21,0 3000	84,0 12000	120	0,31
R18-12-TB	10.1134.12	3/4"	-12	19,0	31,5	21,0 3000	84,0 12000	150	0,36
R18-16-TB	10.1134.16	1"	-16	25,4	39,6	21,0 3000	84,0 12000	250	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 or 2 high tensile synthetic fiber braid

OUTER TUBE: black, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX 3000 - SAE 100R18 - DN10 - 3/8" - WP 21 MPa / 3050 PSI

ZETAFLEX 3000 (NON CONDUCTIVE)



SAE 100R18 - 10.1130.L

High pressure, single or double polyester braid reinforced Non Conductive thermoplastic Isobaric hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R18-03NC	10.1130.03L	3/16"	-3	4,8	10,3	21,0	3000	84,0	12000	30	0,09
R18-04NC	10.1130.04L	1/4"	-4	6,4	12,4	21,0	3000	84,0	12000	45	0,10
R18-05NC	10.1130.05L	5/16"	-5	8,0	14,2	21,0	3000	84,0	12000	50	0,13
R18-06NC	10.1130.06L	3/8"	-6	9,5	16,6	21,0	3000	84,0	12000	75	0,18
R18-08NC	10.1130.08L	1/2"	-8	12,7	22,5	21,0	3000	84,0	12000	90	0,22
R18-10NC	10.1130.10L	5/8"	-10	16,0	25,4	21,0	3000	84,0	12000	120	0,31
R18-12NC	10.1130.12L	3/4"	-12	19,0	31,5	21,0	3000	84,0	12000	150	0,36
R18-16NC	10.1130.16L	1"	-16	25,4	39,6	21,0	3000	84,0	12000	250	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 or 2 high tensile synthetic fiber braid

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX 3000 - NON CONDUCTIVE - SAE 100R18 - DN5 - 3/16" - WP 21 MPa / 3000 PSI

ZETAFLEX 3000 TWIN (NON CONDUCTIVE)



SAE 100R18 - 10.1134.L

High pressure, single or double polyester braid reinforced Non Conductive thermoplastic Isobaric hydraulic twin line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa	PSI	MPa	PSI	MIN BEND RAD mm	KG kg/m
R18-03TNC	10.1134.03L	3/16"	-3	4,8	10,3	21,0	3000	84,0	12000	30	0,09
R18-04TNC	10.1134.04L	1/4"	-4	6,4	12,4	21,0	3000	84,0	12000	45	0,10
R18-05TNC	10.1134.05L	5/16"	-5	8,0	14,2	21,0	3000	84,0	12000	50	0,13
R18-06TNC	10.1134.06L	3/8"	-6	9,5	16,6	21,0	3000	84,0	12000	75	0,18
R18-08TNC	10.1134.08L	1/2"	-8	12,7	22,5	21,0	3000	84,0	12000	90	0,22
R18-10TNC	10.1134.10L	5/8"	-10	16,0	25,4	21,0	3000	84,0	12000	120	0,31
R18-12TNC	10.1134.12L	3/4"	-12	19,0	31,5	21,0	3000	84,0	12000	150	0,36
R18-16TNC	10.1134.16L	1"	-16	25,4	39,6	21,0	3000	84,0	12000	250	0,51

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 or 2 high tensile synthetic fiber braid

OUTER TUBE: orange, oil and weather resistant thermoplastic, pin-pricked
SAFETY FACTOR: 4:1
APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids:
+65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX ZETAFLEX 3000 - NON CONDUCTIVE - SAE 100R18 - DN10 - 3/8" - WP 21 MPa / 3050 PSI



ULTRAFLEX



10.1038

High pressure, single aramidic braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
ULTRA-06	10.1038.06	3/8"	-6	9,5	16,0	38.0 5600	152.0 22400	80	0,18
ULTRA-08	10.1038.08	1/2"	-8	12,7	20,3	34.5 5100	138.0 20400	95	0,22

INNER TUBE: Polyester Elastomer

REINFORCEMENT: 1 high tensile aramidic fiber braid

OUTER TUBE: black, oil and weather resistant thermoplastic

SAFETY FACTOR: 4:1

APPLICATION: petroleum base hydraulic fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) Max. temperature recommended for water base hydraulic fluids: +65°C (+149°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX R9 ULTRAFLEX - EXCEEDS DIN EN 855 - DN10 - SAE100 R8 - 3/8" - WP 38.0 MPa / 5510 PSI

CNG



10.1037.

High Pressure, single aramidic fiber and single high tensile braid Compressed Natural Gas hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
CNG-04	10.1037.04	1/4"	-4	6,4	14,0	69,0 10100	276,0 40400	40	0,24
CNG-06	10.1037.06	3/8"	-6	9,5	18,0	50,0 7300	200,0 29200	60	0,26

INNER TUBE: polyamide PA6

REINFORCEMENT: 2 high tensile steel braid and 1 aramidic fiber braid

OUTER TUBE: red color pin-pricked polyurethane

SAFETY FACTOR: 4:1

APPLICATION: CNG (compressed natural gas) dispenser at very high pressure

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX CNG - DN6 - 1/4" - ELECTRICAL CONDUCTIVE - WP 69 MPa / 10100 PSI

JETWASH MICROLINE LIGHT



12.160W.04

High pressure Thermoplastic Jet washing and lubrication hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
JETW-04	12.160W.04	1/4"	-4	6,4	12,5	16,0 2400	64,0 9600	100	0,10

INNER TUBE: thermoplastic polymer
REINFORCEMENT: 1 high tensile polyester

OUTER TUBE: black PVC compound resistant to abrasion and weather
SAFETY FACTOR: 4:1

APPLICATION: hobby type jet washing and lubricators
TEMPERATURE RANGE: -40 °C (-40 °F) +100 °C (+212 °F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX JETWASH MICRO LINE - DN6 - 1/4" - WP 16 MPa / 2320 PSI

JET CLEAN



10.1039.

High pressure, 2 aramidic braids reinforced thermoplastic sewer jet cleaning hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
JC-08	10.1039.08	1/2"	-8	12,7	22,5	24,1 3500	60,3 8750	100	0,21
JC-10	10.1039.10	5/8"	-10	16,0	25,6	20,7 3000	51,8 7500	115	0,35
JC-12	10.1039.12	3/4"	-12	19,0	29,2	20,7 3000	51,8 7500	125	0,48
JC-16	10.1039.16	1"	-16	25,4	37,5	20,7 3000	51,8 7500	160	0,58
JC-20	10.1039.20	1 1/4"	-20	31,8	46,5	20,7 3000	51,8 7500	250	0,65

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 2 high tensile aramidic fiber braids

OUTER TUBE: orange polyurethane high abrasion resistance
SAFETY FACTOR: 2.5:1

APPLICATION: sewer cleaning with high pressure water
TEMPERATURE RANGE: -40 °C (-40 °F) +65 °C (+149 °F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX JET CLEAN - DN12 - 1/2" - WP 24.1 MPa / 3500 PSI



PAINTSPRAY 1W



10.1040.

High pressure, one steel wire braid reinforced thermoplastic paintspray hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
PS1W-03	10.1040.03	3/16"	-3	4,8	9,7	35,0 5100	140,0 20400	30	0,13
PS1W-04	10.1040.04	1/4"	-4	6,4	11,7	32,0 4700	128,0 18800	40	0,17
PS1W-05	10.1040.05	5/16"	-5	8,0	13,6	27,5 4000	110,0 16000	50	0,22
PS1W-06	10.1040.06	3/8"	-6	9,5	15,2	25,0 3700	100,0 14800	60	0,26
PS1W-08	10.1040.08	1/2"	-8	12,7	18,4	19,0 2800	76,0 11200	75	0,39
PS1W-12	10.1040.12	3/4"	-12	19,0	25,7	12,0 1800	48,0 7200	150	0,45

INNER TUBE: polyamide PA6

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: blue pin-pricked polyurethane high abrasion resistance

SAFETY FACTOR: 4:1

APPLICATION: high pressure airless spray systems, chemical resistance to solvents and aggressive fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) max. temperature recommended for water base hydraulic fluids and air: +70°C (+158°C)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX PAINTSPRAY - 1W - STEEL - DN5 - 3/16" - WP 35 MPa / 5100 PSI

PAINTSPRAY 2W



10.1041.

High pressure, two steel wire braids reinforced thermoplastic paintspray hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
PS2W-04	10.1041.04	1/4"	-4	6,4	13,7	45,0 6600	180,0 26400	100	0,27
PS2W-05	10.1041.05	5/16"	-5	8,0	15,2	40,0 5800	160,0 23200	110	0,32
PS2W-06	10.1041.06	3/8"	-6	9,5	17,5	38,0 5600	152,0 22400	127	0,36
PS2W-08	10.1041.08	1/2"	-8	12,7	21,1	30,0 4400	120,0 17600	178	0,49
PS2W-12	10.1041.12	3/4"	-12	19,0	28,6	16,0 2400	64,0 9600	250	0,55

INNER TUBE: polyamide PA6

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: blue pin-pricked polyurethane high abrasion resistance

SAFETY FACTOR: 4:1

APPLICATION: high pressure airless spray systems, chemical resistance to solvents and aggressive fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) max. temperature recommended for water base hydraulic fluids and air: +70°C (+158°C)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX PAINTSPRAY - 2W - STEEL - DN6 - 1/4" - WP 45 MPa / 6600 PSI

PAINTSPRAY



10.1042.

High pressure, one or two tensile aramidic braid reinforced thermoplastic paintspray hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
PS-03	10.1042.03	3/16"	-3	4,8	10,3	35,0 5100	140,0 20400	50	0,09
PS-04	10.1042.04	1/4"	-4	6,3	12,4	35,0 5100	140,0 20400	75	0,10
PS-06	10.1042.06	3/8"	-6	9,5	15,7	30,0 4400	120,0 17600	100	0,18
PS-08	10.1042.08	1/2"	-8	12,7	19,3	24,5 3600	98,0 14400	120	0,22

INNER TUBE: polyamide PA6

REINFORCEMENT: 1 or 2 high tensile aramidic braid with antistatic polymeric braid
OUTER TUBE: blue pin-pricked polyurethane high abrasion resistance

SAFETY FACTOR: 4:1

APPLICATION: high pressure airless spray systems, chemical resistance to solvents and aggressive fluids

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F) max. temperature recommended for water base hydraulic fluids and air: +70°C (+158°F)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX PAINTSPRAY - DN5 - 3/16" - WP 35 MPa / 5100 PSI

BEVERAGE



10.1043.

High pressure, one synthetic fiber braid reinforced beverage dispensing hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
BEVIF-04	10.1043.04	1/4"	-4	6,3	12,2	21,0 3100	84,0 12400	35	0,05

INNER TUBE: Polyester Elastomer

REINFORCEMENT: 1 synthetic fiber braid

OUTER TUBE: grey color pin-pricked polyurethane

SAFETY FACTOR: 4:1

APPLICATION: designed specially for CO2 gas mixtures used in fixed and mobile beverages dispensing units. Special tube material with flavour free that eliminates contamination risks

TEMPERATURE RANGE: -40°C (-40°F)

+80°C (+176°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX BEVERAGE DISPENSING - DN6 - 1/4" - WP 21 MPa / 3000 PSI



BEVERAGE



10.1044.

High pressure, one steel wire braid reinforced beverage dispensing hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
BEV1S-03	10.1044.03	3/16"	-3	4,8	9,7	35,0 5100		140,0 20400	40	0,07
BEV1S-04	10.1044.04	1/4"	-4	6,3	11,7	32,0 4700		128,0 18800	45	0,08

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 steel wire braid

OUTER TUBE: grey color pin-pricked polyurethane
SAFETY FACTOR: 4:1

APPLICATION: designed specially for CO2 gas mixtures used in fixed and mobile beverages dispensing units. Special tube material with flavour free that eliminates contamination risks

TEMPERATURE RANGE: -40°C (-40°F) +80°C (+176°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX BEVERAGE DISPENSING - DN5 - 3/16" - WP 35 Mpa / 5000 PSI

BEVERAGE



10.1045.

High pressure, one aramidic fiber braid reinforced beverage dispensing hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
BEV1A-02	10.1045.02	1/8"	-2	3,2	8,1	42,0 6100		168,0 24400	25	0,05
BEV1A-03	10.1045.03	3/16"	-3	4,8	10,3	35,0 5100		140,0 20400	25	0,07
BEV1A-04	10.1045.04	1/4"	-4	6,3	12,4	35,0 5100		140,0 20400	32	0,09

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 aramidic fiber braid

OUTER TUBE: grey color pin-pricked polyurethane
SAFETY FACTOR: 4:1

APPLICATION: designed specially for CO2 gas mixtures used in fixed and mobile beverages dispensing units. Special tube material with flavour free that eliminates contamination risks

TEMPERATURE RANGE: -40°C (-40°F) +80°C (+176°F)
COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX BEVERAGE DISPENSING - DN3 - 1/8" - WP 42 Mpa / 6000 PSI

SUPERJACK 2W



10.1046.

High pressure, double steel wire braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
JACK2W-04	10.1046.04	1/4"	-4	6,4	14,1	70,0 10000	175,0 25000	100	0,29
JACK2W-06	10.1046.06	3/8"	-6	9,5	17,5	70,0 10000	150,0 21750	150	0,42
JACK2W-08	10.1046.08	1/2"	-8	12,7	21,1	50,0 7250	125,0 18125	200	0,68

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 2 high tensile steel wire braid
OUTER TUBE: orange, oil and weather resistant polyurethane

SAFETY FACTOR: 2.5:1 on 1/4" and 1/2" and 2.1:1 on 3/8" size
APPLICATION: high pressure hydraulic systems, hydraulic jacks, rescue equipments, safety equipments, earthmoving equipments and mining equipments.

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) max. temperature recommended for water base hydraulic fluids and air: +70°C (+158°C)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX SUPERJACK - DN6 - 1/4" - WP 70 MPa / 10000 PSI

SUPERJACK ARAMID



10.1146.

High pressure, one steel wire braid and one aramidic braid reinforced thermoplastic hydraulic hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
JACKSA-04	10.1146.04	1/4"	-4	6,4	14,1	70,0 10000	280,0 40000	70	0,29
JACKSA-06	10.1146.06	3/8"	-6	9,5	17,5	70,0 10000	280,0 40000	100	0,42
JACKSA-08	10.1146.08	1/2"	-8	12,7	22,4	70,0 10000	280,0 40000	180	0,52

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 2 high tensile steel wire braid and 2 high tensile aramidic braid
OUTER TUBE: orange, oil and weather resistant polyurethane

SAFETY FACTOR: 4:1
APPLICATION: high pressure hydraulic systems, hydraulic jacks, rescue equipments, safety equipments, earthmoving equipments and mining equipments

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F) max. temperature recommended for water base hydraulic fluids and air: +70°C (+158°C)

COUPLINGS: Balflex® 2-piece fittings serie 23 with 20 serie ferrules

BALFLEX SUPERJACK - DN6 - 1/4" - WP 70 MPa / 10000 PSI



MINIBORE



10.1147.

High pressure, single aramid braid thermoplastic hydraulic line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
MICRO-1	10.1147.03	1/8"	-	3,2	6,5	25,0 3700	100,0 14800	20	0,05

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 aramid fiber braid

OUTER TUBE: black color polyurethane
SAFETY FACTOR: 4:1

APPLICATION: designed specially for very high pressure mini hydraulic lines. Automotive and truck's cab lifting systems

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)
COUPLINGS: Balflex® 2-piece fittings serie 05

BALFLEX MINIBORE - 1/8" - WP 25 MPa / 3600 PSI

MICROTEST



05.HH01

High pressure, single aramid braid thermoplastic hydraulic line hose

REFERENCE	#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
MICRO-2	05.HH01	5/64"	-	2,0	5,0	63,0 9200	189,0 36800	20	0,06

INNER TUBE: Polyester Elastomer
REINFORCEMENT: 1 aramid fiber braid

OUTER TUBE: black color polyurethane
SAFETY FACTOR: 3:1

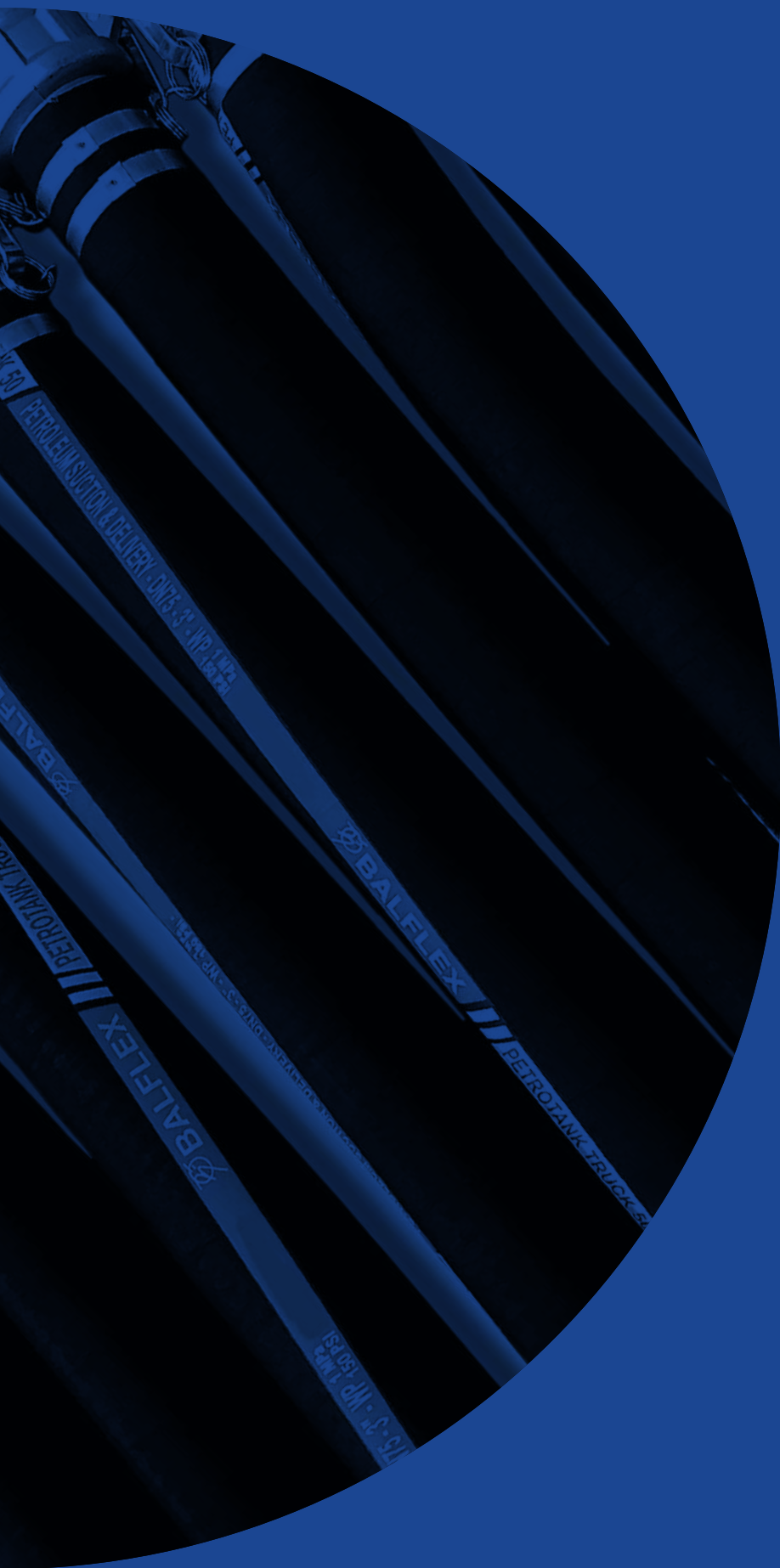
APPLICATION: designed specially for very high pressure mini hydraulic lines. Hydraulic lines pressure take-off

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)
COUPLINGS: Balflex® 2-piece fittings serie 05

BALFLEX MICROTEST - 5/64" - WP 63 MPa / 9200 PSI

Industrial Hoses





pag. 114	AIRMASTER AIR & WATER
pag. 115	BALDRILL MINE AIR & WATER
pag. 116	BALDRILL MINE AIR & WATER BLACK
pag. 117	BALDRILL MINE STEEL UNO AIR & WATER
pag. 117	BALDRILL MINE STEEL DUO AIR & WATER
pag. 118	PETROTANK 50 S&D
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Industrial Hoses

Balflex® Industrial Hoses are produced to Balflex® specifications and according to international standards, covering a wide variety of applications, with best chosen high quality grade polymers, with synthetic fibers or steel wire reinforcements, for a wide range of fluids and temperatures.

Balflex® optimized the production of these hoses and their compatibility with a wide range of connectors, in order to assure the highest performance and the most extensive range of applications.

The Balflex® industrial hose program includes:

- ✕ Long length textile Industrial Hoses
- ✕ Mandrel built Industrial Hoses
- ✕ Steel wire Industrial Hoses
- ✕ High pressure steel spiral Waterbust Hoses

General Guidelines

Balflex® industrial hoses are designed with different safety factors (the ratio relating minimum burst pressure and recommended working pressure), according to the relevant in the application field. Working pressure and nominal diameter are always branded on the hose, except on hoses with external steel braid. Industrial hoses are designed for a variety of fluids and granulates applications with different temperature ranges. Special rubber compounds and lining materials allow exceeding ambient temperatures.

The following catalogue pages list the compatibility of the hose for different applications, working and minimum burst pressure, diameters, minimum bend radius and working temperature range. For additional data please consult our technical department.

Selection, assembly and installation of industrial hoses should follow Balflex® recommendations and the applicable field standards. Industrial

hose assemblies should always be inspected and hydrostatically tested before installation. All systems where new hoses have been installed should be tested against leakage and malfunction in an appropriate area.

Installations that not comply with an adequate geometry of the hose assembly may reduce significantly the life of the hose. Likewise, the use of wrongly dimensioned hoses or application in a system whose working characteristics exceed the hose specifications may shorten drastically the hose life.

The failure of an industrial hose assembly may be dangerous and expose people and property to irreversible damage. Among other occurrences that must be prevented are the high velocity and high temperature projection of conveyed fluid or granulate, the projection of couplings and it's parts, the whipping of unrestrained hose, spillage or combustion of the fluid or granulate and electrical shocks through contact with electrical sources.



Industrial Hoses Resistance Chart

● Recommended

● Recommended with Restrictions

● Not Recommended

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Acetaldehyde	●	●	●	●	●	●	●	●	●
Acetic Acid, Glacial	●	●	●	●	●	●	●	●	●
Acetic Acid, 10%	●	●	●	●	●	●	●	●	●
Acetic Acid, 50%	●	●	●	●	●	●	●	●	●
Acetic Anhydride	●	●	●	●	●	●	●	●	●
Acetic Oxide	●	●	●	●	●	●	●	●	●
Acetone	●	●	●	●	●	●	●	●	●
Acetone Cyanohydrin	●	●	●	●	●	●	●	●	●
Acetonitrile	●	●	●	●	●	●	●	●	●
Acetophenone	●	●	●	●	●	●	●	●	●
Acetyl Acetone	●	●	●	●	●	●	●	●	●
Acetyl Chloride	●	●	●	●	●	●	●	●	●
Acetyl Oxide	●	●	●	●	●	●	●	●	●
Acetylene	●	●	●	●	●	●	●	●	●
Acetylene Dichloride	●	●	●	●	●	●	●	●	●
Acetylene Tetrachloride	●	●	●	●	●	●	●	●	●
Acrolein	●	●	●	●	●	●	●	●	●
Acrylonitrile	●	●	●	●	●	●	●	●	●
Acrylic Acid	●	●	●	●	●	●	●	●	●
Adipic Acid	●	●	●	●	●	●	●	●	●
Air, +300 °F	●	●	●	●	●	●	●	●	●
Alk-Tri	●	●	●	●	●	●	●	●	●
Allyl Alcohol	●	●	●	●	●	●	●	●	●
Allyl Bromide	●	●	●	●	●	●	●	●	●
Allyl Chloride	●	●	●	●	●	●	●	●	●
Alum	●	●	●	●	●	●	●	●	●
Aluminium Acetate	●	●	●	●	●	●	●	●	●
Aluminium Chloride	●	●	●	●	●	●	●	●	●
Aluminium Fluoride	●	●	●	●	●	●	●	●	●
Aluminium Formate	●	●	●	●	●	●	●	●	●
Aluminium Hydroxide	●	●	●	●	●	●	●	●	●
Aluminium Nitrate	●	●	●	●	●	●	●	●	●
Aluminium Sulfate	●	●	●	●	●	●	●	●	●
Amines-Mixed	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Aminobenzene	●	●	●	●	●	●	●	●	●
Aminodimethylbenzene	●	●	●	●	●	●	●	●	●
Aminoethane	●	●	●	●	●	●	●	●	●
Aminoxylene	●	●	●	●	●	●	●	●	●
Ammonium Carbonate	●	●	●	●	●	●	●	●	●
Ammonium Chloride	●	●	●	●	●	●	●	●	●
Ammonium Hydroxide	●	●	●	●	●	●	●	●	●
Ammonium Nitrate	●	●	●	●	●	●	●	●	●
Ammonium Phosphate, Dibasic	●	●	●	●	●	●	●	●	●
Ammonium Sulfate	●	●	●	●	●	●	●	●	●
Ammonium Sulfide	●	●	●	●	●	●	●	●	●
Ammonium Thiosulfate	●	●	●	●	●	●	●	●	●
Amyl Acetate	●	●	●	●	●	●	●	●	●
Amyl Acetone	●	●	●	●	●	●	●	●	●
Amyl Alcohol	●	●	●	●	●	●	●	●	●
Amyl Bromide	●	●	●	●	●	●	●	●	●
Amyl Chloride	●	●	●	●	●	●	●	●	●
Amyl Ether	●	●	●	●	●	●	●	●	●
Amylamine	●	●	●	●	●	●	●	●	●
Anethole	●	●	●	●	●	●	●	●	●
Aniline	●	●	●	●	●	●	●	●	●
Aniline Dyes	●	●	●	●	●	●	●	●	●
Aniline Oil	●	●	●	●	●	●	●	●	●
Animal Fats	●	●	●	●	●	●	●	●	●
Antimony Pentachloride	●	●	●	●	●	●	●	●	●
Aqua Regia	●	●	●	●	●	●	●	●	●
Argon	●	●	●	●	●	●	●	●	●
Arsenic Acid	●	●	●	●	●	●	●	●	●
Asphalt	●	●	●	●	●	●	●	●	●
Astm Fuel A	●	●	●	●	●	●	●	●	●
Astm Fuel B	●	●	●	●	●	●	●	●	●
Astm Fuel C	●	●	●	●	●	●	●	●	●
Astm Oil No.1	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Astm Oil No.2	●	●	●	●	●	●	●	●	●
Astm Oil No.3	●	●	●	●	●	●	●	●	●
Astm Oil No.4	●	●	●	●			●	●	●
Automatic Trasmission Fluid	●	●	●	●			●	●	●
Banana Oil	●		●	●			●	●	●
Barium Chloride	●	●	●	●	●	●	●	●	●
Barium Hydroxide	●	●	●	●	●	●	●	●	●
Barium Sulphide	●	●	●	●	●	●	●	●	●
Beer	●	●	●	●	●	●	●	●	●
Beet Sugar Liquors	●	●	●	●	●	●	●	●	●
Benzal Chloride			●				●		
Benzaldehyde	●	●	●	●	●	●	●	●	●
Benzene	●	●	●	●	●	●	●	●	●
Benzene Carboxylic Acid	●		●	●			●	●	●
Benzine		●	●	●	●	●	●	●	●
Benzoic Acid	●	●	●	●			●	●	●
Benzol	●	●	●	●	●	●	●	●	●
Benzotrichloride	●			●			●	●	●
Benzyl Acetate	●		●	●			●	●	●
Benzyl Alcohol	●	●	●	●			●	●	●
Benzyl Chloride	●	●	●	●			●	●	●
Benzyl Ether	●	●	●	●			●	●	●
Black Sulfate Liquor	●	●	●	●	●	●	●	●	●
Bleach	●	●	●	●	●	●	●	●	●
Borax Solution	●	●	●	●	●	●	●	●	●
Boric Acid	●	●	●	●	●	●	●	●	●
Brake Fluid (Hd-557)12 Days	●	●	●	●			●	●	●
Brine	●		●	●	●	●	●	●	●
Bromobenzene	●	●	●	●			●	●	●
Bromochlorometane	●		●	●	●	●	●	●	●
Bromoethane	●	●	●	●	●	●	●	●	●
Bromotoluene	●		●				●		●
Bunker Oil	●	●	●	●			●	●	●
Butadiene	●	●	●	●	●	●	●	●	●
Butane	●	●	●	●	●	●	●	●	●
Butanoic Acid	●		●	●			●	●	●
Butanol	●	●	●	●	●	●	●	●	●
Butanone	●	●	●	●	●	●	●	●	●
Butoxyethanol	●		●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Butyl Acetate	●	●	●	●	●	●	●	●	●
Butyl Acrylate	●	●	●	●	●	●	●	●	●
Butyl Alcohol	●	●	●	●	●	●	●	●	●
Butyl Aldehyde	●	●	●	●	●	●	●	●	●
Butyl Benzyl Phthalate	●		●	●	●	●	●	●	●
Butyl Carbitol	●	●	●	●			●	●	●
Butyl Cellosolve	●	●	●	●	●	●	●	●	●
Butyl Chloride	●		●	●			●	●	●
Butyl Ether	●	●	●	●	●	●	●	●	●
Butyl Ether Acetaldehyde	●		●	●			●	●	●
Butyl Ethyl Ether	●		●	●			●	●	●
Butyl Oleate	●	●	●	●			●	●	●
Butyl Phthalate	●	●	●	●	●	●	●	●	●
Butyl Stearate	●	●	●	●	●	●	●	●	●
Butylene	●	●	●	●			●	●	●
Butyraldehyde	●	●	●	●	●	●	●	●	●
Butyric Acid	●	●	●	●	●	●	●	●	●
Butyric Anhydride	●		●	●			●	●	●
Cadmium Acetate	●		●				●		●
Calcium Aluminate	●		●				●		●
Calcium Bichromate			●	●			●	●	●
Calcium Bisulfide	●	●	●	●			●	●	●
Calcium Chloride	●	●	●	●	●	●	●	●	●
Calcium Hydroxide	●	●	●	●	●	●	●	●	●
Calcium Hypochlorite	●	●	●	●	●	●	●	●	●
Calcium Nitrate	●	●	●	●			●	●	●
Calcium Sulfide	●	●	●	●			●	●	●
Calcium Acetate	●	●	●	●			●	●	●
Caprylic Acid	●		●				●		●
Carbamide	●		●	●	●	●	●	●	●
Carbitol	●	●	●	●	●	●	●	●	●
Carbolic Acid Phenol	●		●						●
Carbon Dioxide	●	●	●	●	●	●	●	●	●
Carbon Disulfide	●		●	●	●	●	●	●	●
Carbon Monoxide	●	●	●	●	●	●	●	●	●
Carbon Tetrachloride	●		●	●	●	●	●	●	●
Carbonic Acid	●	●	●	●	●	●	●	●	●
Castor Oil	●	●	●	●	●	●	●	●	●
Caustic Soda	●	●	●	●	●	●	●	●	●



Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Cellosolve Acetate	●	●	●	●	●	●	●	●	●
Celluguard	●	●	●	●	●	●	●	●	●
Cetylic Acid	●	●	●	●	●	●	●	●	●
China Wood Oil	●	●	●	●	●	●	●	●	●
Chlorinated Solvents	●	●	●	●	●	●	●	●	●
Chloro-2-Propanone	●	●	●	●	●	●	●	●	●
Chloroacetic Acid	●	●	●	●	●	●	●	●	●
Chloroacetone	●	●	●	●	●	●	●	●	●
Chlorobenzene	●	●	●	●	●	●	●	●	●
Chlorobutane	●	●	●	●	●	●	●	●	●
Chlorodane	●	●	●	●	●	●	●	●	●
Chloroethyl Benzene	●	●	●	●	●	●	●	●	●
Chloroform	●	●	●	●	●	●	●	●	●
Chloropentane	●	●	●	●	●	●	●	●	●
Chlorosulfonic Acid	●	●	●	●	●	●	●	●	●
Chlorotoluene	●	●	●	●	●	●	●	●	●
Chlorox	●	●	●	●	●	●	●	●	●
Chrome Plating Solutions	●	●	●	●	●	●	●	●	●
Chromic Acid	●	●	●	●	●	●	●	●	●
Chromium Trioxide	●	●	●	●	●	●	●	●	●
Cinnamene	●	●	●	●	●	●	●	●	●
Cis-9-Octadecenoic Acid	●	●	●	●	●	●	●	●	●
Citric Acid	●	●	●	●	●	●	●	●	●
Coal Tar Oil	●	●	●	●	●	●	●	●	●
Coal Tar	●	●	●	●	●	●	●	●	●
Coal Tar Naphtha	●	●	●	●	●	●	●	●	●
Coconut Oil	●	●	●	●	●	●	●	●	●
Coke Oven Gas	●	●	●	●	●	●	●	●	●
Coolanol	●	●	●	●	●	●	●	●	●
Copper Chloride	●	●	●	●	●	●	●	●	●
Copper Cyanide	●	●	●	●	●	●	●	●	●
Copper Hydrate	●	●	●	●	●	●	●	●	●
Copper Hydroxide	●	●	●	●	●	●	●	●	●
Copper Sulfate	●	●	●	●	●	●	●	●	●
Corn Oil	●	●	●	●	●	●	●	●	●
Cottonseed Oil	●	●	●	●	●	●	●	●	●
Creosote	●	●	●	●	●	●	●	●	●
Cresols	●	●	●	●	●	●	●	●	●
Cresylic Acid	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Crotonaldehyde	●	●	●	●	●	●	●	●	●
Crude Oil	●	●	●	●	●	●	●	●	●
Cumene	●	●	●	●	●	●	●	●	●
Cupric Hydroxide	●	●	●	●	●	●	●	●	●
Cupric Nitrate	●	●	●	●	●	●	●	●	●
Cupric Sulfate	●	●	●	●	●	●	●	●	●
Cutting Oil	●	●	●	●	●	●	●	●	●
Cyclohexane	●	●	●	●	●	●	●	●	●
Cyclohexanol	●	●	●	●	●	●	●	●	●
Cyclohexanone	●	●	●	●	●	●	●	●	●
Cyclopentane	●	●	●	●	●	●	●	●	●
Cyclopentanone	●	●	●	●	●	●	●	●	●
Cyclopentyl Alcohol	●	●	●	●	●	●	●	●	●
D-Furaldehyde	●	●	●	●	●	●	●	●	●
Ddt In Kerosene	●	●	●	●	●	●	●	●	●
Decahydronaphthalene	●	●	●	●	●	●	●	●	●
Decalin	●	●	●	●	●	●	●	●	●
Decyl Alcohol	●	●	●	●	●	●	●	●	●
Decyl Aldehyde	●	●	●	●	●	●	●	●	●
Decyl Butyl Phthalate	●	●	●	●	●	●	●	●	●
Detergent, Water Solution	●	●	●	●	●	●	●	●	●
Developing Fluid	●	●	●	●	●	●	●	●	●
Dextron	●	●	●	●	●	●	●	●	●
Di (2Ethylhexyl)Adipate	●	●	●	●	●	●	●	●	●
Di (2Ethylhexyl) Phthalate	●	●	●	●	●	●	●	●	●
Di-Iso-Butylene	●	●	●	●	●	●	●	●	●
Di-Iso-Decyl Phthalate	●	●	●	●	●	●	●	●	●
Di-Iso-Propanolamine	●	●	●	●	●	●	●	●	●
Di-Iso-Propyl Ether	●	●	●	●	●	●	●	●	●
Di-Iso-Propyl Ketone	●	●	●	●	●	●	●	●	●
Di-P-Mentha-1,8-Diene	●	●	●	●	●	●	●	●	●
Diacetone Alcohol	●	●	●	●	●	●	●	●	●
Diacetylmethane	●	●	●	●	●	●	●	●	●
Diammonium Orthophosphate	●	●	●	●	●	●	●	●	●
Diamyl Naphthalene	●	●	●	●	●	●	●	●	●
Diamylamine	●	●	●	●	●	●	●	●	●
Diamylene	●	●	●	●	●	●	●	●	●
Diamylphenol	●	●	●	●	●	●	●	●	●
Dibenzyl Ether	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Dibromobenzene	Red		Red	Red			Red	Red	Red
Dibromomethane	Red		Red	Yellow			Red	Red	Red
Dibutyl Ether	Red	Red	Yellow	Yellow	Green	Green	Red	Yellow	Red
Dibutyl Phthalate	Red	Red	Yellow	Yellow	Green	Green	Yellow	Red	Red
Dibutyl Sebacate	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Dibutylamine	Red	Red	Red	Yellow			Red	Yellow	Yellow
Dicalcium Phosphate	Green		Green	Green			Green	Green	Green
Dichloroethylene	Red		Yellow	Yellow	Yellow	Yellow	Red	Red	Red
Dichloroacetic Acid	Red	Red	Yellow	Red	Green	Green	Red	Red	Red
Dichlorobenzene	Red	Red	Red	Red			Red	Red	Red
Dichlorobutane	Red	Red	Red	Red			Yellow	Red	Red
Dichlorodifluoromethane	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Dichloroethane	Red	Red	Yellow	Red	Green	Green	Red	Red	Red
Dichloroethyl Ether	Red		Red	Red			Red	Red	Red
Dichlorohexane	Red		Red	Red			Red	Red	Red
Dichloromethane	Red	Red	Red	Red			Red	Red	Red
Dichloropentane	Red	Red	Red	Red			Red	Red	Red
Dichloropropane	Red		Red	Red	Green	Green	Yellow	Red	Red
Dichloropropene	Red		Red	Red	Green	Green	Yellow	Red	Red
Diesel Oil	Red	Red	Red	Red	Green	Green	Green	Yellow	Yellow
Diethanol Amine	Green	Red	Green	Green			Yellow	Green	Yellow
Diethylbenzene	Red	Red	Red						Red
Diethyl Ether	Red	Red	Red	Red	Green	Green	Red	Red	Red
Diethyl Ketone	Red		Green	Green	Green	Green	Red	Red	Red
Diethyl Oxalate	Yellow		Red	Red			Red	Red	Red
Diethyl Phthalate	Red		Red	Yellow	Green	Green	Red	Red	Red
Diethyl Sebacate	Red	Red	Green	Yellow			Yellow	Red	Yellow
Diethyl Sulfate	Red	Green	Yellow	Green			Red	Green	Red
Diethyl Amine	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Diethylene Glycol	Green	Green	Green	Green	Green	Green	Green	Green	Green
Diethylene Oxide	Red		Red	Green			Red	Red	Red
Diethylenetriamine	Green	Red	Green	Green			Green	Red	Yellow
Dihydroxy Succinic Acid	Green		Green	Green			Green	Green	Green
Dihydroxydiethyl Ether	Green		Green	Green	Green	Green	Green	Green	Green
Diisobutyl Ketone	Red	Red	Green	Green	Green	Green	Red	Red	Red
Diisodecyl Phthalate	Red		Green	Green	Green	Green	Red	Red	Red
Diisooctyl Adipate	Red		Green	Green			Red	Red	Red
Diisooctyl Phthalate	Red		Green	Green	Green	Green	Red	Red	Red
Dimethyl Carbinol	Green		Green	Green	Green	Green	Yellow	Green	Green

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Dimethyl Ketone	Yellow	Yellow	Green	Green	Green	Green	Red	Yellow	Red
Dimethyl Phthalate	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Dimethyl Sulfate	Red		Green	Red	Green	Green	Red	Red	Red
Dimethyl Sulfide	Red		Yellow	Red			Red	Red	Red
Dimethylamine	Green	Red	Green	Green	Green	Green	Yellow	Red	Red
Dimethylaniline	Red	Red	Green	Green			Red	Red	Red
Dimethylbenzene	Red	Red	Red	Red			Red	Red	Red
Dimethylbutane	Red		Red						Red
Dioxane	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Dipentene	Red	Red	Red	Red			Yellow	Red	Red
Dipentylamine	Green	Red	Green	Green			Green	Yellow	Yellow
Dipropylene Glycol	Green		Green	Green			Green	Green	Green
Disodium Phosphate	Green		Green	Green			Green	Green	Green
Divinyl Benzene	Red	Red	Red	Red			Red	Red	Red
Dowthermn, A And E	Red	Red	Red	Red			Red	Red	Yellow
Dry Cleaning Fluids	Red	Red	Red	Red			Yellow	Red	Red
Ethanoic Acid		Green		Yellow	Green	Green	Yellow	Yellow	
Ethanol	Green	Green	Green	Green	Green	Green	Yellow	Green	Green
Ethanolamine	Yellow	Red	Yellow	Green			Yellow	Yellow	Yellow
Ethers	Red	Red	Red	Red	Green	Green	Yellow	Red	Red
Ethyl Acetate	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Ethyl Acetoacetate	Yellow	Red	Yellow	Yellow			Red	Red	Red
Ethyl Acetone	Red		Green	Green			Red	Red	Red
Ethyl Acrylate	Red	Red	Yellow	Yellow			Red	Red	Red
Ethyl Alcohol	Green	Green	Green	Green	Green	Green	Yellow	Green	Green
Ethyl Aldehyde	Yellow		Green	Green	Green	Green	Red	Red	Yellow
Ethyl Aluminium Dichloride	Red		Red				Red		Red
Ethyl Benzene	Red	Red	Red	Red	Green	Green	Red	Red	Red
Ethyl Bromide	Yellow	Red	Red	Red	Green	Green	Yellow	Red	Red
Ethyl Butyl Acetate	Red		Green				Red		Green
Ethyl Butyl Alcohol	Green		Green						Green
Ethyl Cellulose	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Ethyl Chloride	Yellow	Green	Green	Yellow	Green	Green	Green	Red	Yellow
Ethyl Dichloride	Red	Red	Yellow	Red	Green	Green	Red	Red	Red
Ethyl Ether	Red	Red	Red	Red	Green	Green	Red	Red	Red
Ethyl Formate	Red	Red	Yellow	Yellow			Red	Yellow	Yellow
Ethyl Iodide	Red		Yellow	Yellow	Green	Green	Red	Red	Red
Ethyl Oxalate	Red	Red	Yellow	Yellow			Red	Yellow	Yellow
Ethyl Phthalate	Red		Yellow	Yellow	Green	Green	Red	Red	Red



Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Ethyl Silicate	Yellow	Green	Green	Green			Green	Green	
Ethyl-N-Butyl Ketone	Red	Green	Green				Red	Red	Red
Ethyl-1-Butanol	Green		Green	Green			Green	Green	Green
Ethylamine	Yellow	Red	Yellow	Green			Yellow	Yellow	Yellow
Ethylene Chlorohydrin	Yellow	Green	Yellow	Yellow			Red	Yellow	Yellow
Ethylene Diamine	Yellow	Green	Green	Green	Green	Green	Yellow	Green	Yellow
Ethylene Dibromide	Red	Red	Yellow	Yellow	Yellow	Yellow	Red	Red	Red
Ethylene Dichloride	Red	Red	Yellow	Red	Yellow	Yellow	Red	Red	Red
Ethylene Glycol Monobutyl Ether	Red	Red	Green	Green	Green	Green	Yellow	Red	Yellow
Ethylene Glycol Monoethyl Ether	Red		Yellow	Yellow	Green	Green	Yellow	Red	Red
Ethylene Glycol	Green	Green	Green	Green	Green	Green	Green	Green	Green
Ethylene Oxide	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Fatty Acids	Red	Red	Yellow	Red	Green	Green	Yellow	Yellow	Yellow
Ferric Bromide	Green		Green				Green		Green
Ferric Chloride	Green	Green	Green	Green		Green	Green	Yellow	Yellow
Ferric Nitrate	Green	Green	Green	Green		Green	Green	Green	Green
Ferric Sulfate	Green	Green	Green	Green		Green	Green	Green	Green
Ferrous Acetate	Red		Green	Green			Red	Red	Green
Ferrous Chloride	Green		Green	Green		Green	Green	Green	Green
Ferrous Sulfate	Green	Green	Green	Green		Green	Green	Green	Green
Fluoroboric Acid	Green	Green	Yellow	Green	Green	Green	Green	Green	Green
Fluorine	Red		Red	Green	Green	Green	Red	Red	Red
Fluorosilicic Acid	Green	Green	Green	Green	Green	Green	Green	Green	Green
Formaldehyde	Yellow	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Formalin	Yellow	Green	Yellow	Green	Green	Green	Green	Green	Yellow
Formic Acid	Yellow	Green	Green	Green	Green	Green	Yellow	Yellow	Green
Freon 113	Yellow	Green	Red	Red			Green	Green	Yellow
Freon 12	Red	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Green
Freon 22	Yellow	Green	Yellow	Yellow	Yellow	Green	Red	Green	Green
Fuel A	Red		Red	Red			Green	Yellow	Yellow
Fuel B	Red		Red	Red			Yellow	Red	Red
Fuel Oil	Red	Red	Red	Red	Green	Green	Green	Yellow	Yellow
Furan	Red	Red	Red	Red	Green	Green	Red	Red	Red
Furfural	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Yellow
Fuel A (Astm)	Red	Red	Red	Red			Green	Yellow	Red
Fuel B (Astm)	Red	Red	Red	Red			Yellow	Red	Red
Fuel Oil	Red	Red	Red	Red	Green	Green	Green	Yellow	Yellow

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Furan	Red	Red	Red	Red	Green	Green	Red	Red	Red
Furfural	Red	Red	Green	Yellow	Green	Green	Red	Red	Red
Furfuran	Red	Red	Red	Red	Green	Green	Red	Red	Red
Furfuryl Alcohol	Red	Red	Yellow	Yellow	Green	Green	Red	Red	Red
Gallic Acid	Green	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Gallotannic Acid	Green		Green	Green				Green	Green
Gasoline	Yellow	Red	Yellow	Red	Green	Green	Green	Red	Yellow
Glacial Acrylic Acid	Red		Red	Red			Red	Red	Green
Gluconic Acid	Red		Yellow	Green			Yellow	Green	Green
Glucose	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Glycerine	Green	Green	Green	Green	Green	Green	Green	Green	Green
Glycerol	Green	Green	Green	Green	Green	Green	Green	Green	Green
Glycogenic Acid	Red		Yellow	Green			Yellow	Green	Green
Glycols	Green	Green	Green	Green	Green	Green	Green	Green	Green
Glyconic Acid	Red		Yellow	Green			Yellow	Green	Green
Glyclyl Alcohol									
Grease	Red	Red	Red	Red			Yellow	Yellow	Yellow
Green Sulphate Liquor	Yellow	Green	Green	Green			Yellow	Yellow	Green
Helium	Green	Green	Green	Green			Green	Green	Green
Heptaldehyde	Red	Red	Yellow	Yellow			Green	Yellow	Red
Heptanal	Red	Red	Yellow	Yellow			Green	Yellow	Red
Heptane	Red	Red	Red	Red		Green	Green	Yellow	Yellow
Heptanoic Acid	Red		Red	Red			Green	Yellow	Yellow
Hexadecanoic Acid	Green	Green	Green	Green	Green	Green	Green	Red	Red
Hexaldehyde	Red	Red	Yellow	Yellow	Green	Green	Red	Yellow	Yellow
Hexane	Red	Red	Red	Red	Green	Green	Green	Yellow	Yellow
Hexanol	Green	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Hexene	Red	Red	Red	Red			Yellow	Yellow	Yellow
Hexyl Alcohol	Green	Green	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Hexyl Methyl Ketone	Red		Green	Green			Red	Yellow	Red
Hexylamine	Yellow		Green	Green			Yellow	Green	Yellow
Hexylene Glycol	Green		Green	Yellow			Yellow	Green	Green
Histowax	Red		Red						Yellow
Hydraulic & Motor Oil	Red	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Hydrazine	Yellow	Green	Yellow	Green			Yellow	Yellow	Green
Hydrobromic Acid	Green	Red	Green	Green	Green	Green	Red	Yellow	Green
Hydrochloric Acid	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Hydrocyanic Acid	Yellow	Green	Yellow	Green			Yellow	Yellow	Green
Hydrofluoric Acid	Yellow	Red	Yellow	Yellow	Green	Green	Yellow	Yellow	Green

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Hydrofluosilicic Acid	●	●	●	●	●	●	●	●	●
Hydrogen Chloride Anhydrous	●	●	●	●	●	●	●	●	●
Hydrogen Dioxide	●	●	●	●	●	●	●	●	●
Hydrogen Gas	●	●	●	●	●	●	●	●	●
Hydrogen Peroxide Over 10%	●	●	●	●	●	●	●	●	●
Hydrogen Peroxide 10%	●	●	●	●	●	●	●	●	●
Hydrogen Sulfide	●	●	●	●	●	●	●	●	●
Hydroxy Benzene	●	●	●	●	●	●	●	●	●
Hydroxyisobutyronirile	●	●	●	●	●	●	●	●	●
Hydroxytoluene	●	●	●	●	●	●	●	●	●
Iminodi-2-Propanol	●	●	●	●	●	●	●	●	●
I minodiethanol	●	●	●	●	●	●	●	●	●
Iodine	●	●	●	●	●	●	●	●	●
Iodine Pentafluoride	●	●	●	●	●	●	●	●	●
Iodoform	●	●	●	●	●	●	●	●	●
Iso-Butanal	●	●	●	●	●	●	●	●	●
Iso-Butylamine	●	●	●	●	●	●	●	●	●
Iso-Butylbromide	●	●	●	●	●	●	●	●	●
Iso-Butylcarbinol	●	●	●	●	●	●	●	●	●
Isocyanates	●	●	●	●	●	●	●	●	●
Isooctane	●	●	●	●	●	●	●	●	●
Isopropyl Acetate	●	●	●	●	●	●	●	●	●
Isopropyl Alcohol	●	●	●	●	●	●	●	●	●
Isopropyl Ether	●	●	●	●	●	●	●	●	●
Jet Fuels	●	●	●	●	●	●	●	●	●
Jp-4 Oil	●	●	●	●	●	●	●	●	●
Kerosene	●	●	●	●	●	●	●	●	●
Ketones	●	●	●	●	●	●	●	●	●
Lacquer Solvents	●	●	●	●	●	●	●	●	●
Lactic Acid - Cold	●	●	●	●	●	●	●	●	●
Lactic Acid - Hot	●	●	●	●	●	●	●	●	●
Lard	●	●	●	●	●	●	●	●	●
Lavender Oil	●	●	●	●	●	●	●	●	●
Lead Acetate	●	●	●	●	●	●	●	●	●
Lead Nitrate	●	●	●	●	●	●	●	●	●
Lead Sulfate	●	●	●	●	●	●	●	●	●
Lime	●	●	●	●	●	●	●	●	●
Lime Bleach	●	●	●	●	●	●	●	●	●
Lime Sulfur	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Limonene	●	●	●	●	●	●	●	●	●
Linoleic Acid	●	●	●	●	●	●	●	●	●
Linseed Oil	●	●	●	●	●	●	●	●	●
Liquid Petroleum Gas	●	●	●	●	●	●	●	●	●
Lubricating Oil	●	●	●	●	●	●	●	●	●
Lye Solutions	●	●	●	●	●	●	●	●	●
Mek	●	●	●	●	●	●	●	●	●
Magnesium Acetate	●	●	●	●	●	●	●	●	●
Magnesium Chloride	●	●	●	●	●	●	●	●	●
Magnesium Hydrate	●	●	●	●	●	●	●	●	●
Magnesium Hydroxyde	●	●	●	●	●	●	●	●	●
Magnesium Sulfate	●	●	●	●	●	●	●	●	●
Maleic Acid	●	●	●	●	●	●	●	●	●
Maleic Anhydride	●	●	●	●	●	●	●	●	●
Malic Acid	●	●	●	●	●	●	●	●	●
Manganous Sulfate	●	●	●	●	●	●	●	●	●
Mercury	●	●	●	●	●	●	●	●	●
Mercury Vapors	●	●	●	●	●	●	●	●	●
Mesityl Oxide	●	●	●	●	●	●	●	●	●
Methallyl Alcohol	●	●	●	●	●	●	●	●	●
Methallyl Chloride	●	●	●	●	●	●	●	●	●
Methane Carboxylic Acid (See Acetic Acid)	●	●	●	●	●	●	●	●	●
Methanoic Acid	●	●	●	●	●	●	●	●	●
Methanol	●	●	●	●	●	●	●	●	●
Methoxy Ethanol	●	●	●	●	●	●	●	●	●
Methyl Acetate	●	●	●	●	●	●	●	●	●
Methyl Acetoacetate	●	●	●	●	●	●	●	●	●
Methyl Acetone	●	●	●	●	●	●	●	●	●
Methyl Allyl Chloride	●	●	●	●	●	●	●	●	●
Methyl Amyl Carbinol	●	●	●	●	●	●	●	●	●
Methyl Benzene	●	●	●	●	●	●	●	●	●
Methyl Bromide	●	●	●	●	●	●	●	●	●
Methyl Butane	●	●	●	●	●	●	●	●	●
Methyl Butyl Ketone	●	●	●	●	●	●	●	●	●
Methyl Carbitol	●	●	●	●	●	●	●	●	●
Methyl Cellosolve	●	●	●	●	●	●	●	●	●
Methyl Chloride	●	●	●	●	●	●	●	●	●
Methyl Cyanide	●	●	●	●	●	●	●	●	●



Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Methyl Ethyl Ketone	●	●	●	●	●	●	●	●	●
Methyl Hexanol	●		●	●			●	●	●
Methyl Methacrilate	●	●	●	●	●	●	●	●	●
Methyl Normal Amyl Ketone	●			●			●	●	●
Methyl Propyl Ether	●		●	●			●	●	●
Methyl Salicylate	●		●	●	●	●	●	●	●
Methyl Styrene	●		●	●			●	●	●
Methyl Sulfide	●		●	●			●	●	●
Methyl-Iso-Amyl-Ketone	●		●						●
Methyl-2-Butanone	●	●	●	●			●	●	●
Methyl-2-Hexanone	●		●						●
Methyl-2-Pentanol	●		●	●			●	●	●
Methyl-2-Pentanone	●		●	●			●	●	●
Methyl-4-Isopropyl Benzene	●		●	●			●	●	●
Methyl Amyl Acetate	●								●
Methyl Amyl Alcohol	●		●	●			●	●	●
Methylcyclohexane	●		●	●			●	●	●
Methylene Bromide	●		●	●	●	●	●	●	●
Methylene Chloride	●	●	●	●	●	●	●	●	●
Methylethyl Ketone	●	●	●	●			●	●	●
Methyl Hexyl Ketone	●		●	●	●		●	●	●
Methyl Isobutyl Carbinol	●		●	●			●	●	●
Methylisobutyl Ketone	●	●	●	●	●	●	●	●	●
Methylisopropyl Ketone	●	●	●	●			●	●	●
Methylacetonitrile	●		●	●			●	●	●
Methylpropyl Carbinol	●		●				●		●
Methylpropyl Ketone	●		●	●	●	●	●	●	●
Mineral Oil	●	●	●	●	●	●	●	●	●
Mineral Spirits	●	●	●	●			●	●	●
Mobile Hf A	●	●	●	●			●	●	●
Molten Sulfur	●		●	●			●	●	●
Mono-Chloroacetic Acid	●	●	●	●	●	●	●	●	●
Monobutyl Ether	●	●	●	●			●	●	●
Monochlorobenzene	●	●	●	●	●	●	●	●	●
Monochlorodifluoromethane	●	●	●	●	●	●	●	●	●
Monoethanol Amine	●	●	●	●			●	●	●
Monoethyl Amine	●	●	●	●			●	●	●
Morpholine	●		●	●			●	●	●
Motor Oil, 40W	●		●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Mtbe			●				●	●	
Muriatic Acid	●	●	●	●			●	●	●
N-Butanal	●	●	●	●	●	●	●	●	●
N-Butylamine	●	●	●	●			●	●	●
N-Butylbenzene	●		●	●			●	●	●
N-Butylbromide	●		●	●			●	●	●
N-Butylbutyrate	●	●	●	●			●	●	●
N-Butylcarbinol	●		●	●	●	●	●	●	●
N-Nonyl Alcohol	●		●	●			●	●	●
N-Octane	●	●	●	●	●	●	●	●	●
Naphtha	●	●	●	●	●	●	●	●	●
Naphthalene	●	●	●	●	●	●	●	●	●
Naphthenic Acid	●	●	●	●			●	●	●
Natural Gas	●	●	●	●	●	●	●	●	●
Neohexane	●		●	●			●	●	●
Neon Gas	●	●	●	●			●	●	●
Neu-Tri	●		●				●		●
Nickel Acetate	●	●	●	●			●	●	●
Nickel Chloride	●	●	●	●	●	●	●	●	●
Nickel Nitrate	●		●	●	●	●	●	●	●
Nickel Sulfate	●	●	●	●	●	●	●	●	●
Nitric Acid, Conc	●		●	●			●	●	●
Nitric Acid, Red Fuming	●	●	●	●	●	●	●	●	●
Nitric Acid, 10%	●	●	●	●	●	●	●	●	●
Nitric Acid, 13N	●					●	●		
Nitric Acid, 13N +5%	●					●	●		
Nitric Acid, 20%	●	●	●	●	●	●	●	●	●
Nitric Acid, 30%	●	●	●	●	●	●	●	●	●
Nitric Acid, 30% - 70%	●	●	●	●	●	●	●	●	●
Nitritoltriethanol	●	●	●	●	●	●	●	●	●
Nitrobenzene	●	●	●	●	●	●	●	●	●
Nitroethane	●	●	●	●			●	●	●
Nitrogen	●	●	●	●	●	●	●	●	●
Nitromethane	●	●	●	●			●	●	●
Nitrous Oxide Gas				●			●	●	
Nonanoic Acid	●		●		●	●	●		●
Nonanol	●		●	●			●	●	●
Octanoic Acid	●		●				●		●
Octanol	●	●	●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Octyl Acetate	●	●	●	●	●	●	●	●	●
Octyl Alcohol	●	●	●	●			●	●	●
Octyl Aldehyde	●		●		●	●	●		●
Octyl Amine	●		●	●			●	●	●
Octyl Carbinol	●		●	●			●	●	●
Octylene Glycol	●		●	●			●	●	●
Oil-Petroleum		●			●	●			
Oleic Acid	●	●	●	●	●	●	●	●	●
Oleum	●	●	●	●	●	●	●	●	●
Olive Oil	●	●	●	●			●	●	●
Ortho-Dichlorobenzene	●	●	●	●			●	●	●
Ortho-Dichlorobenzol	●	●	●	●			●	●	●
Orthoxylene	●	●	●	●			●	●	●
Oxalic Acid	●	●	●	●	●	●	●	●	●
Ozone	●	●	●	●	●	●	●	●	●
P-Cymene	●		●	●			●	●	●
Paint Thinner	●	●	●	●			●	●	●
Palmitic Acid	●	●	●	●	●	●	●	●	●
Papermakers Alum									
Para-Dichlorobenzene	●	●	●	●			●	●	●
Paraffin Wax	●		●	●			●	●	●
Paraldehyde	●		●	●			●	●	●
Paraxylene	●		●	●			●	●	●
Pelargonic Alcohol	●		●	●	●	●	●	●	●
Pentachloroethane	●		●				●	●	●
Pentamethylene	●		●	●			●	●	●
Pentane	●	●	●	●	●	●	●	●	●
Pentanol	●		●		●	●			●
Pentanone	●		●	●			●	●	●
Pentasol	●	●	●	●	●	●	●	●	●
Pentyl Acetate	●	●	●	●	●	●	●	●	●
Pentyl Alcohol	●	●	●	●	●	●	●	●	●
Pentyl Bromide	●		●	●			●	●	●
Pentyl Chloride	●	●	●	●	●	●	●	●	●
Pentyl Ether	●		●	●			●	●	●
Pentylamine	●		●	●			●	●	●
Perchloric Acid	●	●	●	●	●	●	●	●	●
Perchloroethylene	●	●	●	●	●	●	●	●	●
Perchloromethane	●		●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Petroleum Crude	●	●	●	●	●	●	●	●	●
Petroleum Ether	●	●	●	●			●	●	●
Petroleum Oils	●	●	●	●	●	●	●	●	●
Phenol	●	●	●	●	●	●	●	●	●
Phenolsulfonic Acid	●	●	●	●			●	●	●
Phenylamine	●		●	●	●	●	●	●	●
Phenylbromide	●		●						●
Phenylmethane	●		●	●	●	●	●	●	●
Phenylmethanol	●		●	●			●	●	●
Phosphate Esters	●	●	●	●			●	●	●
Phosphoric Acid 10%	●	●	●	●	●	●	●	●	●
Phosphoric Acid 10% - 85%	●	●	●	●	●	●	●	●	●
Phosphorus Trichloride	●	●	●	●	●	●	●	●	●
Picric Acid, H2O Solution	●	●	●	●			●	●	●
Pine Oil	●	●	●	●	●	●	●	●	●
Pinene	●	●	●	●			●	●	●
Polyethylene Glycol E-400	●		●	●			●	●	●
Polyol Ester				●			●	●	
Polypropylene Glycol	●		●		●	●	●	●	●
Potassium Acetate	●	●	●	●			●	●	●
Potassium Bisulfate	●	●	●	●			●	●	●
Potassium Bisulfite	●	●	●	●			●	●	●
Potassium Carbonate	●	●	●	●	●	●	●	●	●
Potassium Chloride	●	●	●	●	●	●	●	●	●
Potassium Chromate	●	●	●	●			●	●	●
Potassium Cyanide	●	●	●	●	●	●	●	●	●
Potassium Dichromate	●	●	●	●	●	●	●	●	●
Potassium Hydrate	●	●	●		●	●			●
Potassium Hydroxyde	●	●	●	●	●	●	●	●	●
Potassium Nitrate	●	●	●	●	●	●	●	●	●
Potassium Permanganate, 5%	●	●	●	●	●	●	●	●	●
Potassium Silicate	●	●	●	●			●	●	●
Potassium Sulfate	●	●	●	●	●	●	●	●	●
Potassium Sulfide	●	●	●	●			●	●	●
Potassium Sulfite	●	●	●	●	●	●		●	●
Prestone Antifreeze	●	●	●	●			●	●	●
Producer Gas	●	●	●	●			●	●	●
Propane	●	●	●	●	●	●	●	●	●
Propanediol	●	●	●	●	●	●	●	●	●



Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Propanetriol	●	●	●	●	●	●	●	●	●
Propanol	●	●	●	●	●	●	●	●	●
Propanone	●	●	●	●	●	●	●	●	●
Propenol	●		●						●
Propanediamine	●		●			●			●
Propene Nitrile	●		●		●	●	●	●	
Propenyl Alcohol	●		●	●	●	●	●	●	●
Propenyl Anisole	●		●		●	●	●		●
Propionic Acid	●	●	●	●			●	●	●
Propionitrile	●		●	●			●	●	
Propyl Acetate	●	●	●	●	●	●	●	●	●
Propyl Alcohol	●	●	●	●	●	●	●	●	●
Propyl Aldehyde	●		●	●			●	●	●
Propyl Benzene	●		●					●	●
Propyl Chloride	●		●	●			●	●	●
Propyl Nitrate	●	●	●	●			●	●	●
Propylene	●	●	●	●			●	●	●
Propylene Diamine	●		●				●		●
Propylene Glycol	●	●	●	●	●	●	●	●	●
Pydraul, 'E' Series	●	●	●	●			●	●	●
Pydraulic 'C'	●	●	●	●			●	●	●
Red Oil	●	●	●	●	●	●	●	●	●
Refrigerant 11	●	●	●		●	●			●
Refrigerant 12	●	●	●		●	●			●
Refrigerant 22	●	●	●		●	●			●
Resorcinol	●	●	●	●			●	●	●
Sae No. 10 Oil	●	●	●	●			●	●	●
Sal Ammoniac	●	●	●	●	●	●	●	●	●
Sea Water	●	●	●	●	●	●	●	●	●
Sewage	●	●	●	●	●	●	●	●	●
Silicate Esters	●	●	●	●			●	●	●
Silicate Of Soda	●	●	●	●			●	●	●
Silicone Grease	●	●	●	●	●	●	●	●	●
Silicone Oil	●	●	●	●	●	●	●	●	●
Silver Nitrate	●	●	●	●	●	●	●	●	●
Skydrol 500 Type 2	●	●	●	●			●	●	●
Skydrol 500B	●	●	●	●			●	●	●
Skydrol 500C	●	●	●	●			●	●	●
Skydrol 7000 Type 2	●	●	●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Soap Solutions	●	●	●	●	●	●	●	●	●
Soda Ash	●	●	●	●	●	●	●	●	●
Soda Lime	●		●	●			●	●	●
Soda Niter	●	●	●	●	●	●	●	●	●
Sodium Acetate	●	●	●	●	●	●	●	●	●
Sodium Aluminate	●	●	●	●			●	●	●
Sodium Bicarbonate	●	●	●	●	●	●	●	●	●
Sodium Bisulfate	●	●	●	●	●	●	●	●	●
Sodium Bisulfite	●	●	●	●	●	●	●	●	●
Sodium Borate	●	●	●	●	●	●	●	●	●
Sodium Carbonate	●	●	●	●	●	●	●	●	●
Sodium Chloride	●	●	●	●	●	●	●	●	●
Sodium Cyanide	●	●	●	●	●	●	●	●	●
Sodium Dichromate	●	●	●	●			●	●	●
Sodium Hydrate	●	●	●	●	●	●	●	●	●
Sodium Hydrochlorite	●	●	●	●			●	●	●
Sodium Hydroxide	●	●	●	●	●	●	●	●	●
Sodium Hypochlorite	●	●	●	●	●	●	●	●	●
Sodium Metaphosphate	●	●	●	●	●	●	●	●	●
Sodium Nitrate	●	●	●	●	●	●	●	●	●
Sodium Perborate	●	●	●	●			●	●	●
Sodium Peroxide	●	●	●	●	●	●	●	●	●
Sodium Phosphate	●	●	●	●	●	●	●	●	●
Sodium Silicate	●	●	●	●	●	●	●	●	●
Sodium Sulfate	●	●	●	●	●	●	●	●	●
Sodium Sulfide	●	●	●	●	●	●	●	●	●
Sodium Sulfite	●	●	●	●	●	●	●	●	●
Sodium Thiosulfate	●		●	●	●	●	●	●	●
Soybean Oil	●	●	●	●			●	●	●
Stannic Chloride	●	●	●	●	●	●	●	●	●
Stannic Sulfide	●		●	●			●	●	●
Stannous Chloride	●	●	●	●	●	●	●	●	●
Stannous Sulfide	●		●	●			●	●	●
Steam, Below 350 Deg F	●	●	●	●	●	●	●	●	●
Stearic Acid	●	●	●	●	●	●	●	●	●
Stoddard Solvent	●	●	●	●	●	●	●	●	●
Styrene	●	●	●	●	●	●	●	●	●
Sulfamic Acid	●		●	●			●	●	●
Sulfur	●	●	●	●	●	●	●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Sulfur Chloride	●	●	●	●			●	●	
Sulfur Dioxide	●	●	●	●		●	●	●	●
Sulfur Trioxide, Dry	●	●	●	●	●	●	●	●	●
Sulfuric Acid 60%	●	●	●	●	●	●	●	●	●
Sulfuric Acid, Conc.	●	●	●	●	●	●	●	●	●
Sulfuric Acid, Fuming	●	●	●	●	●	●	●	●	●
Sulfuric Acid, 25%	●	●	●	●	●	●	●	●	●
Sulfuric Acid, 25%-50%	●	●	●	●	●	●	●	●	●
Sulfuric Acid, 50%-96%	●	●	●	●	●	●	●	●	●
Sulfurous Acid, 10%	●	●	●	●	●	●	●	●	●
Sulfurous Acid, 10%-75%	●	●	●	●	●	●	●	●	●
T-Butyl Amine	●		●	●			●	●	●
Tall Oil	●	●	●	●			●	●	●
Tallow	●	●	●	●	●	●	●	●	●
Tannic Acid	●	●	●	●	●	●	●	●	●
Tar	●	●	●	●	●	●	●	●	
Tar Bituminous	●	●	●	●			●	●	●
Tartaric Acid	●	●	●	●	●	●	●	●	●
Tellone 2	●								
Tertiary Butyl Alcohol	●	●	●	●			●	●	●
Terpineol	●	●	●						●
Tertiary Butyl Amine	●		●	●			●	●	●
Tertiary Butyl Mercaptan	●	●	●	●			●	●	●
Tetrachlorobenzene	●		●	●			●	●	●
Tetrachloroethane	●	●	●	●	●	●	●	●	●
Tetrachloroethylene	●	●	●	●	●	●	●	●	●
Tetrachloromethane	●		●	●	●	●	●	●	●
Tetrachloronaphthalene	●		●	●	●	●	●	●	●
Tetraethylene Glycol	●		●	●			●	●	●
Tetraethylorthosilicate	●		●	●			●	●	
Tetrahydrofuran	●	●	●	●			●	●	●
Tin Chloride	●		●	●	●	●	●	●	●
Titanium Tetrachloride	●	●	●	●			●	●	●
Toluene	●	●	●	●	●	●	●	●	●
Toluidine	●		●	●	●	●	●	●	●
Toluol	●	●	●	●	●	●	●	●	●
Transformer Oil	●	●	●	●	●	●	●	●	●
Transmission 'A' Oil	●		●	●			●	●	●
Tri-Amine	●		●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Tributyl Phosphate	●	●	●	●			●		●
Tributylamine	●		●				●		●
Trichloroacetic Acid	●	●	●	●			●	●	●
Trichlorobenzene	●	●	●	●	●	●	●	●	●
Trichloroethane	●	●	●	●			●	●	●
Trichloroethylene	●	●	●	●	●	●	●	●	●
Trichloromethane	●	●	●	●	●	●	●	●	●
Trichlorotoluene	●			●			●	●	●
Tricresyl Phosphate	●	●	●	●			●	●	●
Triethanolamine	●	●	●	●	●	●	●	●	●
Triethylamine	●	●	●	●			●	●	●
Triethylene Glycol	●		●	●	●	●	●	●	●
Trihydroxybenzoic Acid	●		●	●			●	●	●
Trimethyl Pentane	●	●	●	●			●	●	●
Trimethylamine	●		●	●			●	●	●
Trisodium Phosphate	●	●	●	●	●	●	●	●	●
Tritoyl Phosphate	●	●	●	●			●	●	●
Tung Oil	●	●	●	●	●	●	●	●	●
Tung Oil	●	●	●	●	●	●	●	●	●
Turpentine	●	●	●	●	●	●	●	●	●
Unsymmetrical Dimethyl Hydrazine	●	●	●	●			●	●	●
Undecyl Alcohol	●		●	●			●	●	●
Urea	●		●	●	●	●	●	●	●
Uric Acid	●		●	●			●	●	●
Varnish	●	●	●	●	●	●	●	●	●
Vegetable Oils	●	●	●	●	●	●	●	●	●
Versilube F44	●	●	●	●			●	●	●
Versilube F55	●	●	●	●			●	●	●
Vinegar	●	●	●	●	●	●	●	●	●
Vinegar Acid	●		●		●	●			●
Vinyl Acetate	●	●	●	●	●	●	●	●	●
Vinyl Benzene	●	●	●	●	●	●	●	●	●
Vinyl Chloride	●	●	●	●	●	●	●	●	●
Vinyl Cyanide	●	●	●	●	●	●	●	●	●
Vinyl Ether	●		●				●		●
Vinyl Toluene	●		●	●			●	●	●
Vinyl Trichloride	●		●	●			●	●	●
Vm & Naphtha	●	●	●	●			●	●	●



Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
Water	●	●	●	●	●	●	●	●	●
Water, Boiling	●		●	●			●	●	●
Water, Soda					●	●			
Wemco C	●	●	●	●			●	●	●
Whiskey	●	●	●	●	●	●	●	●	●
White Oil	●	●	●	●	●	●	●	●	●
White Pine Oil	●	●	●	●			●	●	●
Wines	●	●	●	●	●	●	●	●	●
Wood Alcohol	●	●	●	●	●	●	●	●	●
Wood Oil	●	●	●	●	●	●	●	●	●
Xenon	●	●	●	●			●	●	●
Xylene, Xylon	●	●	●	●	●	●	●	●	●
Xylidine	●	●	●	●			●	●	●
Zeolites	●	●	●	●			●	●	●
Zinc Acetate	●	●	●	●			●	●	
Zinc Carbonate	●		●	●			●	●	●
Zinc Chloride	●	●	●	●	●	●	●	●	●
Zinc Chromate	●		●	●			●	●	●
Zinc Sulfate	●	●	●	●	●	●	●	●	●
0-Aminotoluene	●		●	●			●	●	●
1 Undecanol	●	●	●	●	●	●	●	●	●
1-Amino-2-Propanol	●		●	●			●	●	●
1-Aminobutane	●	●	●	●			●	●	●
1-Aminopentane	●		●	●			●	●	●
1-Bromo-2-Methyl Propane	●		●	●			●	●	●
1-Bromo-3-Methyl Butane	●		●	●			●	●	●
1-Bromobutane	●		●	●			●	●	●
1-Chloro-2-Methyl Propane	●		●	●			●	●	●
1-Chloro-3-Methyl Butane	●		●	●			●	●	●
1-Decanol	●		●	●	●	●	●	●	●
1-Hendecanol	●		●	●			●	●	●
1,4-Dioxane	●		●	●	●		●	●	●
2(2Aminoethylamino) Ethanol	●		●					●	●
2(2Ethoxyethoxy) Ethanol	●	●	●	●			●	●	●
2(2Ethoxyethoxy) Ethyl Acetate	●	●	●	●			●	●	●
2-Aminoethanol	●	●	●	●			●	●	●
2-Chloro-1-Hydroxy-Benzene	●		●	●			●	●	●

Fluids	COMPOUND								
	NR	SBR	IIR	EPDM	XLPE	UHMWPE	NBR	CR	CSM
2-Chlorophenol	●	●	●	●			●	●	●
2-Chloropropane	●	●	●	●			●	●	●
2-Ethoxyethanol	●	●	●	●	●	●	●	●	●
2-Ethoxyethyl Acetate	●		●	●	●	●	●	●	●
2-Ethyl	●		●				●		●
2-Ethyl-1-Hexanol	●	●	●	●	●	●	●	●	●
2-Ethyl hexanoic Acid	●		●				●		●
2-Ethylhexyl Acetate	●		●	●	●		●		●
2-Octanone	●		●	●			●	●	
3-Bromopropene	●		●	●			●	●	●
3-Chloropropene	●	●	●	●	●	●	●	●	●
3-Coal Oil	●		●	●			●	●	●
4-Hydroxy-4-Methyl-2-Pentanone	●	●	●	●	●	●	●	●	●

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested. Note: All data based on 20°C/70°F unless otherwise noted.

AIRMASTER AIR & WATER



Exceeds ISO 2398 - Type 3 / Class B / N-T - 10.1232

Air & Water 2.0MPa / 300PSI (100% rubber hose)

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1232.04	1/4"	6,0	13,0	2,0 300	6,0 900	60
10.1232.05	5/16"	8,0	15,0	2,0 300	6,0 900	80
10.1232.06	3/8"	10,0	16,0	2,0 300	6,0 900	100
10.1232.08	1/2"	13,0	21,0	2,0 300	6,0 900	125
10.1232.10	5/8"	16,0	26,0	2,0 300	6,0 900	160
10.1232.12	3/4"	19,0	29,0	2,0 300	6,0 900	190
10.1232.16	1"	25,0	36,0	2,0 300	6,0 900	254

INNER TUBE: seamless air and water resistant synthetic rubber
REINFORCEMENT: 2 high resistance synthetic fiber braid

OUTER TUBE: black, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: heavy works on mining, construction, steel plants, quarries and air compressors

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)

BALFLEX AIRMASTER - 1/4" - 6.3 mm - WP 2 MPa / 300 PSI - ISO 2398:2015 - TYPE 3 / CLASS B / N-T



BALDRILL MINE AIR & WATER



According to BS EN ISO 2398 - Type 3 / Class B / N-T /
Rigid rubber heavy mandrel hose for delivery of Air and
Water 2.0MPa / 300PSI – 10.1233

Reinforced with several high resistance synthetic fiber braids

#	inch				PSI		PSI	
		mm	mm	MPa		MPa		mm
10.1233.04	1/4"	6,0	14,0	2,0	300	6,0	900	60
10.1233.05	5/16"	8,0	17,0	2,0	300	6,0	900	80
10.1233.06	3/8"	10,0	19,0	2,0	300	6,0	900	100
10.1233.08	1/2"	13,0	21,0	2,0	300	6,0	900	125
10.1233.10	5/8"	16,0	26,0	2,0	300	6,0	900	160
10.1233.12	3/4"	19,0	30,0	2,0	300	6,0	900	190
10.1233.16	1"	25,0	36,0	2,0	300	6,0	900	254
10.1233.20	1.1/4"	31,8	44,0	2,0	300	6,0	900	320
10.1233.24	1.1/2"	38,1	50,0	2,0	300	6,0	900	380
10.1233.32	2"	50,8	65,0	2,0	300	6,0	900	510
10.1233.40	2.1/2"	63,5	79,0	2,0	300	6,0	900	635
10.1233.48	3"	76,2	92,0	2,0	300	6,0	900	762
10.1233.64	4"	101,6	118,0	2,0	300	6,0	900	1016
10.1233.96	6"	152,4	170,0	2,0	300	6,0	900	1524

INNER TUBE: seamless air and water
resistant synthetic rubber

REINFORCEMENT: several high resistance
synthetic fiber braids

OUTER TUBE: yellow, weather and abrasion
resistant synthetic rubber

SAFETY FACTOR: 3:1

APPLICATION: heavy works on mining,
construction, steel plants, perforation and
quarries

TEMPERATURE RANGE: -35°C (-31°F)
+85°C (+185°F)

BALFLEX // BALDRILL MINE AIR & WATER - DN6 - 1/4" - ISO 2398 - TYPE 3 / CLASS B / N-T - WP **2 MPa**
300 PSI - Flame Resistant - MSHA IC-252/00

BALDRILL MINE AIR & WATER BLACK



According to BS EN ISO 2398 - Type 3 / Class B / N-T /
Rigid rubber heavy mandrel hose for delivery of Air and
Water 2.0MPa / 300PSI – 10.1233.B

Reinforced with several high resistance synthetic fiber braids

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1233.04B	1/4"	6,0	14,0	2,0 300	6,0 900	60
10.1233.05B	5/16"	8,0	17,0	2,0 300	6,0 900	80
10.1233.06B	3/8"	10,0	19,0	2,0 300	6,0 900	100
10.1233.08B	1/2"	13,0	21,0	2,0 300	6,0 900	125
10.1233.10B	5/8"	16,0	26,0	2,0 300	6,0 900	160
10.1233.12B	3/4"	19,0	29,0	2,0 300	6,0 900	190
10.1233.16B	1"	25,0	36,0	2,0 300	6,0 900	254
10.1233.20B	1.1/4"	31,8	43,0	2,0 300	6,0 900	320
10.1233.24B	1.1/2"	38,1	50,0	2,0 300	6,0 900	380
10.1233.32B	2"	50,8	64,0	2,0 300	6,0 900	510
10.1233.40B	2.1/2"	63,5	77,0	2,0 300	6,0 900	635
10.1233.48B	3"	76,2	90,0	2,0 300	6,0 900	762
10.1233.64B	4"	101,6	118,0	2,0 300	6,0 900	1016
10.1233.96B	6"	152,4	175,0	2,0 300	6,0 900	1524

INNER TUBE: seamless air and water
resistant synthetic rubber
REINFORCEMENT: several high resistance
synthetic fiber braids

OUTER TUBE: black wrapped, weather and
abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: heavy works on mining,
construction, steel plants, perforation and
quarries

TEMPERATURE RANGE: -35°C (-31°F)
+85°C (+185°F)

BALFLEX / BALDRILL MINE AIR & WATER - DN6 - 1/4" - 6.3mm - ISO 2398:2015 - TYPE 3 / CLASS B / N-T - WP 2 MPa 300 PSI - Flame Resistant - MSHA IC-252/00



BALDRILL MINE STEEL UNO AIR & WATER



Rigid rubber heavy mandrel hose for delivery of Air an Water
– 10.1242

High Pressure, single steel braid reinforced industrial hose

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1242.032	1.1/4"	32,0	44,0	4,5 650	18,0 2610	419
10.1242.040	1.1/2"	38,0	50,8	4,5 650	18,0 2610	500
10.1242.050	2"	50,8	64,3	4,5 650	18,0 2610	630
10.1242.063	2.1/2"	63,5	76,5	3,0 450	12,0 1800	760
10.1242.075	3"	76,2	88,0	2,5 375	10,0 1500	900
10.1242.100	4"	101,6	117,0	2,0 300	8,0 1200	1100

INNER TUBE: seamless oil, air and water resistant synthetic rubber

REINFORCEMENT: 1 high tensile steel wire braid

OUTER TUBE: yellow, weather and abrasion resistant pin-pricked synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: very heavy works on mining, construction, steel plants, perforation and quarries

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F); Intermittent service: +120°C (+248°F). Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max. temperature recommended for air: +60°C (+140°F)

AVAILABLE VERSION: Black cover (add "B" to code – example:10.1242.050B)

BALFLEX // BALDRILL MINE UNO STEEL AIR & WATER - DN51 - 2" - WP 4.5 MPa 650 PSI - Flame Resistant - MSHA IC-252/00

BALDRILL MINE STEEL DUO AIR & WATER



Rigid rubber heavy mandrel hose for delivery of Air an Water
– 10.1243.

High Pressure, double steel braid reinforced industrial hose.

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1243.032	1.1/4"	32,0	47,5	12,5 1810	50,0 7240	419
10.1243.040	1.1/2"	38,0	54,6	9,0 1300	36,0 5200	500
10.1243.050	2"	50,8	67,4	8,0 1160	32,0 4640	630
10.1243.063	2.1/2"	63,5	78,0	4,5 650	18,0 2610	760
10.1243.075	3"	76,2	90,0	4,5 650	18,0 2610	900
10.1242.100	4"	101,6	118,0	4,5 650	18,0 2610	1100

INNER TUBE: seamless oil, air and water resistant synthetic rubber

REINFORCEMENT: 2 high tensile steel wire braids

OUTER TUBE: yellow, weather and abrasion resistant pin-pricked synthetic rubber

SAFETY FACTOR: 4:1

APPLICATION: very heavy works on mining, construction, steel plants, perforation and quarries

TEMPERATURE RANGE: -40°C (-40°F)

+100°C (+212°F); Intermittent service: +120°C (+248°F) Max. temperature recommended for water base hydraulic fluids: +70°C (+158°F)

Max. temperature recommended for air: +60°C (+140°F)

AVAILABLE VERSION: Black cover (add "B" to code – example:10.1243.050B)

BALFLEX // BALDRILL MINE DUO STEEL AIR & WATER - DN51 - 2" - WP 8 MPa 1150 PSI - Flame Resistant - MSHA IC-252/00

PETROTANK 50 S&D



Rigid rubber mandrel PETROTANK TRUCK hose for suction and delivery of Petroleum, Gasoline, Oil and Fuel – 10.1245

Reinforced with several high resistance synthetic fiber braids with steel helix and antistatic copper line with aromatic content up to 50%

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	kg/m
10.1245.025	1"	-16	25,4	35,0	1,0 150	3,0 450	144	0,71
10.1245.032	1.1/4"	-20	31,8	42,0	1,0 150	3,0 450	178	0,96
10.1245.040	1.1/2"	-24	38,1	48,0	1,0 150	3,0 450	208	1,24
10.1245.050	2"	-32	50,8	62,0	1,0 150	3,0 450	298	1,7
10.1245.063	2.1/2"	-40	63,5	75,0	1,0 150	3,0 450	381	2,36
10.1245.075	3"	-48	76,2	90,0	1,0 150	3,0 450	477	3,11
10.1245.100	4"	-64	101,6	117,0	1,0 150	3,0 450	655	3,97
10.1245.125	5"	-80	127,0	143,0	1,0 150	3,0 450	572	7,76
10.1245.150	6"	-96	152,4	168,0	1,0 150	3,0 450	760	8,95
10.1245.200	8"	-128	203,0	225,0	1,0 150	3,0 450	1015	13,43

INNER TUBE: synthetic smooth elastomer compound resistant to mineral oil products and fuel mixtures with aromatic content up to 50%, with antistatic characteristics

REINFORCEMENT: high tensile synthetic textile cords, steel helix, one crossing antistatic wire

OUTER TUBE: black wrapped, high oil, weather, heat, abrasion and ozone resistant blend of synthetic elastomer compound

SAFETY FACTOR: 3:1

APPLICATION: tank truck hose for transport, suction & delivery, of mineral oil products and fuel mixtures with aromatic content up to 50%.

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)





PETRO OILTANK 50



PETRO OILTANK 50 DELIVERY PETROLEUM – 10.1249.

Rigid rubber mandrel OILTANK TRUCK hose for delivery of Petroleum, Gasoline, Oil and Fuel

										
#	inch	SAE Dash	mm	mm	MPa	PSI	MPa	PSI	mm	kg/m
10.1249.025	1"	-16	25,4	35,0	1,0	150	3,0	450	272	0,71
10.1249.032	1.1/4"	-20	31,8	42,0	1,0	150	3,0	450	330	0,96
10.1249.040	1.1/2"	-24	38,1	48,0	1,0	150	3,0	450	397	1,24
10.1249.050	2"	-32	50,8	62,0	1,0	150	3,0	450	510	1,7
10.1249.063	2.1/2"	-40	63,5	75,0	1,0	150	3,0	450	652	2,36
10.1249.075	3"	-48	76,2	90,0	1,0	150	3,0	450	812	3,11
10.1249.100	4"	-64	101,6	117,0	1,0	150	3,0	450	1100	3,97
10.1249.125	5"	-80	127,0	143,0	1,0	150	3,0	450	1270	7,76
10.1249.150	6"	-96	152,4	168,0	1,0	150	3,0	450	1524	8,95

INNER TUBE: synthetic smooth elastomer compound resistant to mineral oil products and fuel mixtures with aromatic content up to 50%, with antistatic characteristics

REINFORCEMENT: high tensile synthetic textile cords, one crossing antistatic wire

OUTER TUBE: black wrapped, high oil, weather, heat, abrasion and ozone resistant blend of synthetic elastomer compound

SAFETY FACTOR: 3:1

APPLICATION: tank truck hose for transport, delivery, of mineral oil products and fuel mixtures with aromatic content up to 50%.

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)



AUTOTANK S&D



Rigid rubber mandrel TANK TRUCK hose for suction and delivery of Petroleum, Gasoline, Oil and Fuel
1.0MPa / 150PSI - 10.1236

Reinforced with several high resistance synthetic fiber braids with steel helix and antistatic copper line

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1236.020	3/4"	19,0	30,0	1,0 150	3,0 450	136
10.1236.025	1"	25,4	36,0	1,0 150	3,0 450	152
10.1236.028	1.1/8"	27,8	39,0	1,0 150	3,0 450	171
10.1236.032	1.1/4"	31,8	43,0	1,0 150	3,0 450	192
10.1236.040	1.1/2"	38,1	49,0	1,0 150	3,0 450	228
10.1236.045	1.3/4"	44,9	56,0	1,0 150	3,0 450	372
10.1236.050	2"	50,8	63,0	1,0 150	3,0 450	306
10.1236.055	2.1/4"	56,0	70,0	1,0 150	3,0 450	321
10.1236.063	2.1/2"	63,5	76,0	1,0 150	3,0 450	381
10.1236.075	3"	76,2	89,0	1,0 150	3,0 450	457
10.1236.090	3.1/2"	88,9	105,0	1,0 150	3,0 450	540
10.1236.100	4"	102,0	117,0	1,0 150	3,0 450	610
10.1236.125	5"	127,0	148,0	1,0 150	3,0 450	762
10.1236.150	6"	152,0	170,0	1,0 150	3,0 450	915

INNER TUBE: synthetic rubber resistant to oil, gasoline, diesel and fuels with up to 40% aromatic content, with antistatic characteristics

REINFORCEMENT: several high resistance synthetic fiber braids with a steel helix
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber, with antistatic copper line

SAFETY FACTOR: 3:1
APPLICATION: suction and delivery of oil, gasoline, diesel and fuels

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)

BALFLEX // AUTOTANK TANK TRUCK - FUEL & OIL SUCTION & DELIVERY - DN19 - 3/4" - WP 1 MPa 150 PSI



OILTANK



Rigid rubber mandrel TANK TRUCK hose for delivery of Petroleum, Gasoline, Oil and Fuel 1.0MPa / 150PSI - 10.1238

Reinforced with several high resistance synthetic fiber braids and antistatic copper line

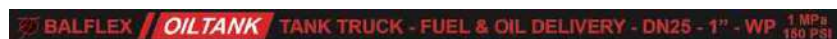
#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1238.025	1"	25,0	35,0	1,0 150	3,0 450	254
10.1238.032	1.1/4"	31,8	43,0	1,0 150	3,0 450	320
10.1238.040	1.1/2"	38,1	48,0	1,0 150	3,0 450	380
10.1238.050	2"	50,8	61,0	1,0 150	3,0 450	510
10.1238.063	2.1/2"	63,5	75,0	1,0 150	3,0 450	635
10.1238.075	3"	76,2	88,0	1,0 150	3,0 450	762
10.1238.090	3.1/2"	88,9	106,0	1,0 150	3,0 450	900
10.1238.100	4"	101,6	115,0	1,0 150	3,0 450	1016
10.1238.125	5"	127,0	140,0	1,0 150	3,0 450	1270
10.1238.150	6"	152,4	168,0	1,0 150	3,0 450	1524

INNER TUBE: synthetic rubber resistant to oil, gasoline, diesel and fuels with up to 40% aromatic content, with antistatic characteristics

REINFORCEMENT: several high resistance synthetic fiber braids
OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber, with antistatic copper line

SAFETY FACTOR: 3:1
APPLICATION: delivery of oil, gasoline, diesel and fuels

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)



ACQUATANK S&D



Rigid rubber mandrel hose for suction and delivery of Air and Water 1.0MPa /150PSI – 10.1237

Reinforced with several high resistance synthetic fiber braids and steel helix

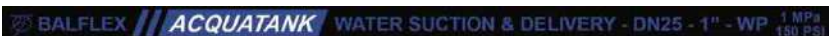
#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1237.025	1"	25,4	35,0	1,0 150	3,0 450	152
10.1237.028	1.1/8"	28,6	38,0	1,0 150	3,0 450	175
10.1237.032	1.1/4"	31,8	42,0	1,0 150	3,0 450	192
10.1237.040	1.1/2"	38,1	48,0	1,0 150	3,0 450	228
10.1237.045	1.3/4"	45,0	55,0	1,0 150	3,0 450	267
10.1237.050	2"	50,8	62,0	1,0 150	3,0 450	306
10.1237.055	2.1/4"	55,0	71,0	1,0 150	3,0 450	342
10.1237.060	2.3/8"	60,0	72,0	1,0 150	3,0 450	370
10.1237.063	2.1/2"	63,5	75,0	1,0 150	3,0 450	381
10.1237.075	3"	76,2	89,0	1,0 150	3,0 450	457
10.1237.080	3.1/8"	80,0	92,0	1,0 150	3,0 450	505
10.1237.090	3.1/2"	88,9	106,0	1,0 150	3,0 450	540
10.1237.100	4"	101,6	115,0	1,0 150	3,0 450	610
10.1237.125	5"	127,0	144,0	1,0 150	3,0 450	762
10.1237.150	6"	152,4	167,0	1,0 150	3,0 450	915
10.1237.200	8"	254,0	280,0	1,0 150	3,0 450	1000
10.1237.250	10"	305,0	334,0	1,0 150	3,0 450	1150
10.1237.300	12"	355,0	385,0	1,0 150	3,0 450	1250

INNER TUBE: seamless air and water resistant synthetic rubber
REINFORCEMENT: several high resistance synthetic fiber braids and steel helix

OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: suction and delivery of water in construction, mining, steel plants and agriculture

TEMPERATURE RANGE: -35°C (-31°F) +85°C (+185°F)





ACQUA



Rigid rubber mandrel hose for delivery of Air and Water 1.0MPa / 150PSI – 10.1235

Reinforced with several high resistance synthetic fiber braids

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1235.025	1"	25,4	34,0	1,0 150	3,0 450	254
10.1235.028	1.1/8"	28,6	38,0	1,0 150	3,0 450	300
10.1235.032	1.1/4"	31,8	42,0	1,0 150	3,0 450	320
10.1235.040	1.1/2"	38,1	48,0	1,0 150	3,0 450	380
10.1235.045	1.3/4"	45,0	54,0	1,0 150	3,0 450	445
10.1235.050	2"	50,8	60,0	1,0 150	3,0 450	510
10.1235.055	2.1/4"	55,0	71,0	1,0 150	3,0 450	590
10.1235.063	2.1/2"	63,5	75,0	1,0 150	3,0 450	635
10.1235.075	3"	76,2	88,0	1,0 150	3,0 450	762
10.1235.090	3.1/2"	88,9	106,0	1,0 150	3,0 450	900
10.1235.100	4"	101,6	115,0	1,0 150	3,0 450	1016
10.1235.125	5"	127,0	140,0	1,0 150	3,0 450	1270
10.1235.150	6"	152,4	165,0	1,0 150	3,0 450	1524

INNER TUBE: seamless air and water resistant synthetic rubber

REINFORCEMENT: several high resistance synthetic fiber braids

OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 3:1

APPLICATION: for conveying water in construction, mining, steel plants and agriculture

TEMPERATURE RANGE: -35°C (-31°F) +85°C (+185°F)



SANDBLAST



Rigid rubber mandrel hose for Sandblasting / Gravel 1.2MPa / 175PSI – 10.1240

Reinforced with several high resistance synthetic fiber braids and antistatic copper line

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1240.12	1/2"	12,7	27,0	1,2 180	3,6 540	130
10.1240.20	3/4"	19,0	33,0	1,2 180	3,6 540	230
10.1240.25	1"	25,4	39,0	1,2 180	3,6 540	254
10.1240.32	1.1/4"	31,8	48,0	1,2 180	3,6 540	320
10.1240.40	1.1/2"	38,1	56,0	1,2 180	3,6 540	380
10.1240.50	2"	51,0	69,0	1,2 180	3,6 540	510

INNER TUBE: seamless synthetic rubber high abrasion resistant to sand with antistatic characteristics; abrasion acc. DIN 53516: approx. 65 mm3

REINFORCEMENT: several high resistance synthetic fiber braids
OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber, with antistatic copper line

SAFETY FACTOR: 3:1
APPLICATION: sandblasting

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)

BALFLEX / SANDBLAST DN19 - 3/4" - WP 1.2 MPa 175 Psi

DRY CEMENT DELIVERY



According to EN ISO 3861 / ISO 4649. – 10.1241

Dry bulk materials and dry powder cement delivery hose. Reinforced with several high resistance synthetic fiber braids with antistatic copper line

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1241.050	2"	50,8	65,00	1,0 150	3 450	510
10.1241.063	2.1/2"	63,5	77,00	1,0 150	3 450	635
10.1241.075	3"	76,0	90,0	1,0 150	3 450	762
10.1241.090	3.1/2"	90,0	104,0	1,0 150	3 450	900
10.1241.100	4"	101,0	116,00	1,0 150	3 450	1016
10.1241.125	5"	127,0	144,00	1,0 150	3 450	1270
10.1241.150	6"	152,0	168,00	1,0 150	3 450	1524
10.1241.200	8"	203,0	221,00	1,0 150	3 450	2032

INNER TUBE: seamless synthetic rubber resistant to abrasion
REINFORCEMENT: high tensile textile cords

OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber with antistatic copper line
SAFETY FACTOR: 3:1

APPLICATION: discharge of dry bulk materials, sand, gravel, and dry powder cement

TEMPERATURE RANGE: -40°C (-40°F) +100°C (+212°F)

BALFLEX / DRY CEMENT DELIVERY - DN51 - 2" - WP 1.2 MPa 150 Psi



CONCRETE BETON LIGHT



4.0MPa / 580PSI / 40bar Working Pressure / Abrasion loss value: Acc DIN 53516 < 65 mm³ – 10.1246

Hose for Placement of Concrete / Beton to the Casting Locations

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1246.040	1.1/2"	38,0	54,0	4,0 580	9,2 1330	75
10.1246.050	2"	50,8	68,00	4,0 580	9,2 1330	100
10.1246.063	2.1/2"	63,5	83,50	4,0 580	9,2 1330	125
10.1246.075	3"	76,0	100,00	4,0 580	9,2 1330	150
10.1246.100	4"	101,0	126,00	4,0 580	9,2 1330	200

INNER TUBE: seamless special synthetic rubber resistant to abrasion
REINFORCEMENT: 4 plies of high tensile textile cords

OUTER TUBE: black wrapped, weather and abrasion resistant pin-pricked synthetic rubber
SAFETY FACTOR: 2.3: 1

APPLICATION: placement of concrete to the casting locations

TEMPERATURE RANGE: - 40°C (- 40°F) + 70°C (+ 158°F)

BALFLEX / CONCRETE BETON LIGHT DN38 - 1.1/2" - WP 4 MPa 580 PSI

CONCRETE EXTRAFLEX



Abrasion loss value: Acc DIN 53516 < 65 mm³ – 10.1248

Hose for Placement of Concrete / Beton to the Casting Locations

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1248.050	2"	50,8	72,00	8,5 1235	20,0 2850	100
10.1248.063	2.1/2"	63,5	86,30	8,5 1235	20,0 2850	125
10.1248.075	3"	76,0	99,60	8,5 1235	20,0 2850	150
10.1248.100	4"	101,0	126,00	8,5 1235	20,0 2850	200
10.1248.125	5"	127,0	153,30	8,5 1235	20,0 2850	250
10.1248.150	6"	152,0	184,0	8,5 1235	20,0 2850	300

INNER TUBE: seamless special synthetic rubber resistant to abrasion
REINFORCEMENT: 6 plies of high tensile textile cords

OUTER TUBE: black wrapped, weather and abrasion resistant pin-pricked synthetic rubber
SAFETY FACTOR: 2.3:1

APPLICATION: placement of concrete to the casting locations

TEMPERATURE RANGE: -40°C (-40°F) +70°C (+158°F)

BALFLEX / CONCRETE BETON EXTRAFLEX DN51 - 2" - WP 8.5 MPa 1232 PSI

MINING BULK & SLURRY



1.0MPa / 150PSI / Working Pressure / Abrasion loss value:
Acc DIN 53516 < 68 mm³ – 10.1247

Bulk material suction and delivery

#	inch	ID		OD		MPa			
		mm	inch	mm	inch	MPa	PSI	MPa	PSI
10.1247.050	2"	50.8	2.00	69.00	2.72	1.0	150	3.0	450
10.1247.063	2.1/2"	63.5	2.50	82.00	3.23	1.0	150	3.0	450
10.1247.075	3"	76.0	3.00	95.00	3.74	1.0	150	3.0	450
10.1247.100	4"	101.0	4.00	122.00	4.80	1.0	150	3.0	450
10.1247.125	5"	127.0	5.00	149.00	5.87	1.0	150	3.0	450
10.1247.150	6"	152.0	6.00	176.0	6.93	1.0	150	3.0	450
10.1247.200	8"	203.2	8.00	233.0	9.17	1.0	150	3.0	450
10.1247.250	10"	254.0	10.00	291.0	11.46	1.0	150	3.0	450
10.1247.300	12"	304.0	12.00	341.0	13.43	1.0	150	3.0	450

INNER TUBE: seamless special synthetic rubber resistant to abrasion
REINFORCEMENT: 4 plies of high tensile textile cords, with anti-static wire and 2 high strength steel wire helix

OUTER TUBE: black wrapped, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: bulk material suction and delivery, specially for mining, for mineral tailings and mineral pulps, dry cement, mud, grain

TEMPERATURE RANGE: -30°C (-22°F) + 70°C (+ 158°F)
COUPLINGS: Balflex@Aluminium Flanges

BALFLEX // MINING BULK & SLURRY S&D - DN100 - 4" - WP 10 Bar 150 PSI





SUPERSTEAM RED



EN ISO 6134 Type 2 Class A (Q) 1.8 MPa / 270 PSI WP – 10.1260.R

Saturated Steam steel braid hose +210°C (+410°F)

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1260.08R	1/2"	12,7	24,00	1,8 270	18,0 2700	150
10.1260.12R	3/4"	19,0	33,00	1,8 270	18,0 2700	230
10.1260.16R	1"	25,4	39,00	1,8 270	18,0 2700	300
10.1260.20R	1.1/4"	31,8	47,00	1,8 270	18,0 2700	375
10.1260.24R	1.1/2"	38,1	53,00	1,8 270	18,0 2700	455
10.1260.32R	2"	50,8	68,00	1,8 270	18,0 2700	600
10.1260.40R	2.1/2"	63,0	83,00	1,8 270	18,0 2700	675
10.1260.48R	3"	76,0	98,00	1,8 270	18,0 2700	725

INNER TUBE: black, heat resistance synthetic rubber
REINFORCEMENT: high tensile steel wire braids

OUTER TUBE: red, heat, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 10:1

APPLICATION: super heated steam services in chemical plants, steel mills, refineries, shipyards

TEMPERATURE RANGE: -40°C (-40°F) +210°C (+410°F)
NOTE: For longer life, drain after use

BALFLEX / SUPERSTEAM EN ISO 6134 Type 2 CLASS A (Q) - 210°C / 410°F - DN12 - 1/2" - WP 1.8 MPa 270 PSI

LPG DELIVERY HOSE



LPG 2.5MPa / 350PSI hose – 10.1214.

Liquefied Petroleum Gas delivery hose, long length.

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1214.04	1/4"	6,0	15,0	2,5 370	7,5 1100	100
10.1214.05	5/16"	8,0	16,0	2,5 370	7,5 1100	114
10.1214.06	3/8"	9,5	19,0	2,5 370	7,5 1100	127
10.1214.08	1/2"	12,7	23,00	2,5 370	7,5 1100	178
10.1214.12	3/4"	19,0	31,00	2,5 370	7,5 1100	240
10.1214.16	1"	25,4	38,00	2,5 370	7,5 1100	300
10.1214.20	1.1/4"	32,0	45,00	2,5 370	7,5 1100	419
10.1214.24	1.1/2"	38,0	52,00	2,5 370	7,5 1100	500
10.1214.32	2"	50,8	67,00	2,5 370	7,5 1100	630

INNER TUBE: seamless synthetic rubber resistant to LPG
REINFORCEMENT: 2 high resistance synthetic fiber braid

OUTER TUBE: black wrapped, smooth, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: LPG (Liquefied Petroleum Gas)

TEMPERATURE RANGE: -30°C (-22°F) +100°C (+212°F)

BALFLEX / LPG / GPL DIN EN 1762 - 1/4" - MAX WP 2.5 MPa 350 PSI

XLPE ACID-SOLVENT & CHEMICAL S&D



Corrosive Chemicals and Solvents Translucent XLPE
(Cross Linked Polyethylene) 1.7MPa / 250PSI
W.P. S&D hose – 10.1270

Reinforced with several high resistance synthetic fiber braids with steel helix
and antistatic copper line

#	ID		OD	MPa		PSI		MIN BEND RAD
	inch	mm		MPa	PSI	MPa	PSI	
10.1270.020	3/4"	19,0	32,0	1,7	250	5,1	750	136
10.1270.025	1"	25,0	38,0	1,7	250	5,1	750	152
10.1270.032	1.1/4"	31,8	46,0	1,7	250	5,1	750	192
10.1270.040	1.1/2"	38,1	52,0	1,7	250	5,1	750	228
10.1270.050	2"	50,8	65,0	1,7	250	5,1	750	306
10.1270.063	2.1/2"	63,5	78,0	1,7	250	5,1	750	381
10.1270.075	3"	76,2	92,0	1,7	250	5,1	750	457
10.1270.100	4"	101,6	119,0	1,7	250	5,1	750	610

INNER TUBE: corrosive acid-solvents and chemicals translucent XLPE (cross linked polyethylene)

REINFORCEMENT: several high resistance synthetic fiber braids with a steel helix

OUTER TUBE: green, weather and abrasion resistant synthetic rubber, with antistatic copper line

SAFETY FACTOR: 3:1

APPLICATION: suction and delivery of strong acids, corrosive chemicals, high aromatic solvents. Suitable for 90% of existing chemicals

TEMPERATURE RANGE: -30°C (-22°F) +65°C (+150°F)

BALFLEX // XLPE ACID - SOLVENT & CHEMICAL S & D - DN19 - 3/4" - WP 1.7 MPa 250 PSI



UHMWPE ACID-SOLVENT & CHEMICAL S&D



Chemicals and Acid-Solvent Translucent UHMWPE (Ultra High Molecular Weight Polyethylene) 1.7MPa / 250PSI W.P.
S&D hose – 10.1275

Reinforced with several high resistance synthetic fiber braids with steel helix and antistatic copper line

#	inch							
		ID mm	OD mm	MPa		MPa	PSI	MIN BEND RAD mm
10.1275.020	3/4"	19,0	32,0	1,7	250	5,1	750	136
10.1275.025	1"	25,0	38,0	1,7	250	5,1	750	152
10.1275.032	1.1/4"	31,8	46,0	1,7	250	5,1	750	192
10.1275.040	1.1/2"	38,1	52,0	1,7	250	5,1	750	228
10.1275.050	2"	50,8	65,0	1,7	250	5,1	750	306
10.1275.063	2.1/2"	63,5	78,0	1,7	250	5,1	750	381
10.1275.075	3"	76,2	92,0	1,7	250	5,1	750	457
10.1275.100	4"	101,6	119,0	1,7	250	5,1	750	610

INNER TUBE: corrosive acid-solvents and chemicals translucent UHMWPE (ultra high molecular weight polyethylene)
REINFORCEMENT: several high resistance synthetic fiber braids with a steel helix

OUTER TUBE: blue, weather and abrasion resistant synthetic rubber, with antistatic copper line
SAFETY FACTOR: 3:1

APPLICATION: suction and delivery of strong acids, corrosive chemicals, high aromatic solvents. Suitable for 98% of existing chemicals

TEMPERATURE RANGE: -40°C (-40°F) +80°C (+176°F)

BALFLEX UHMWPE ACID - SOLVENT & CHEMICAL S & D - DN19 - 3/4" - WP 1.7 MPa 250 PSI

FOOD FATTY S&D



Food 1.0MPa / 150PSI W.P. S&D hose – 10.1285

Reinforced with several high resistance synthetic fiber braids with steel helix.
FDA approved compounds.

#	ID		OD	MPa		PSI		MIN BEND RAD
	inch	mm		mm	MPa	PSI	mm	
10.1285.020	3/4"	19,0	32,0	1,0	150	3,0	300	136
10.1285.025	1"	25,0	38,0	1,0	150	3,0	300	152
10.1285.032	1.1/4"	31,8	46,0	1,0	150	3,0	300	192
10.1285.040	1.1/2"	38,1	52,0	1,0	150	3,0	300	228
10.1285.050	2"	50,8	66,0	1,0	150	3,0	300	306
10.1285.063	2.1/2"	63,5	80,0	1,0	150	3,0	300	381
10.1285.075	3"	76,2	93,0	1,0	150	3,0	300	457
10.1285.100	4"	101,6	120,0	1,0	150	3,0	300	610

INNER TUBE: white color, non-toxic rubber compound
REINFORCEMENT: several high resistance synthetic fiber braids with a steel helix

OUTER TUBE: blue, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: suction and delivery of foodstuff. Highly recommended for transfer milk and other high-fat dairy products.
For our fatty food hose, if the operation/ application temperature is not exceeded 90°C, basically it would be no problem to transfer for beer and wine but not okay for juices.
For juices, it's recommended to use for the non-fatty type food hose which is of EPDM blended material.

TEMPERATURE RANGE: -20°C (-4°F) +80°C (+176°F)





FUEL PUMP



EN 1360 - 1 / ISO 7840 - 1 — 10.1221

Fuel dispensing hose polyester braid

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1221.10	5/8"	16,0	26,0	1,6 240	4,8 720	80
10.1221.12	3/4"	19,0	30,0	1,6 240	4,8 720	100
10.1221.16	1"	25,4	37,0	1,6 240	4,8 720	150

INNER TUBE: petrol, gasoline and fuel seamless resistant synthetic rubber
REINFORCEMENT: high tensile polyester braid and antistatic copper line

OUTER TUBE: oil, weather, ozone, abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: dispensing of fuel, gasoline, ethanol, unleaded petrol and diesel oil

TEMPERATURE RANGE: -40°C (-40°F) +120°C (+248°F)
COUPLINGS: reusable or crimped Balflex® FUEL PUMP coupling serie

BALFLEX FUEL PUMP EN 1360 - DN16 - 5/8" - WP 1.6 MPa 232 PSI - R < 1MΩ - DATE

FUEL PUMP STEEL



According to EN 1360 - 3 / ISO 7840 - 3 — 10.1222

Fuel dispensing hose steel braid

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1222.10	5/8"	16,0	25,4	1,8 270	5,4 810	80
10.1222.12	3/4"	19,0	28,7	1,8 270	5,4 810	100
10.1222.16	1"	25,4	35,1	1,8 270	5,4 810	150

INNER TUBE: petrol, gasoline and fuel seamless resistant synthetic rubber
REINFORCEMENT: high tensile steel braid

OUTER TUBE: oil, weather, ozone, abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: dispensing of fuel, gasoline, ethanol, unleaded petrol and diesel oil

TEMPERATURE RANGE: -40°C (-40°F) +120°C (+248°F)
COUPLINGS: reusable or crimped Balflex® FUEL PUMP coupling serie

BALFLEX FUEL PUMP EN 1360 - DN16 - 5/8" - STEEL - WP 1.8 MPa 260 PSI - R < 1MΩ - DATE

SINGLE WELDING



According to ISO 3821 class B / DIN EN 559 / RMA / CGA IP-7 grade R – 10.1227.-A

Oxygen and Acetylene 2.0MPa / 300PSI (100% rubber hose)

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1227.04A	1/4"	6,4	13,8	2,0 300	6,0 900	60
10.1227.05A	5/16"	8,0	15,5	2,0 300	6,0 900	80
10.1227.06A	3/8"	9,5	17,0	2,0 300	6,0 900	100

INNER TUBE: seamless oxygen or acetylene resistant synthetic rubber

REINFORCEMENT: 2 high resistance synthetic fiber braid

OUTER TUBE: red, green or blue, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 3:1

APPLICATION: welding equipments

TEMPERATURE RANGE: -35°C (-31°F) +100°C (+212°F)

BALFLEX WELDING - DN6 - 1/4" - ISO 3821-B / EN 559 - WARNING ACETYLENE ONLY - WP 2 MPa / 300 PSI - DATE

SINGLE WELDING BLUE



According to ISO 3821 class B / DIN EN 559 / RMA / CGA IP-7 grade R – 10.1229

Oxygen and Acetylene 2.0MPa / 300PSI (100% rubber hose)

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1229.04	1/4"	6,4	13,8	2,0 300	6,0 900	60
10.1229.05	5/16"	8,0	15,5	2,0 300	6,0 900	80
10.1229.06	3/8"	9,5	17,0	2,0 300	6,0 900	100

INNER TUBE: seamless oxygen or acetylene resistant synthetic rubber

REINFORCEMENT: 2 high resistance synthetic fiber braid

OUTER TUBE: red, green or blue, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 3:1

APPLICATION: welding equipments

TEMPERATURE RANGE: -35°C (-31°F) +100°C (+212°F)

BALFLEX WELDING - DN6 - 1/4" - ISO 3821-B / EN 559 - OXYGEN - WP 2 MPa / 300 PSI - DATE



TWIN WELDING

According to ISO 3821 class B / DIN EN 559 / RMA / CGA IP-7 grade R – 10.1230

Oxygen and Acetylene 2.0MPa / 300PSI (100% rubber hose)



#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm
10.1230.04	1/4"	6,4	13,8	2,0 300	6,0 900	60
10.1230.05	5/16"	8,0	15,5	2,0 300	6,0 900	80
10.1230.06	3/8"	9,5	17,0	2,0 300	6,0 900	100

INNER TUBE: seamless oxygen or acetylene resistant synthetic rubber

REINFORCEMENT: 2 high resistance synthetic fiber braid

OUTER TUBE: red and blue, weather and abrasion resistant synthetic rubber

SAFETY FACTOR: 3:1
APPLICATION: welding equipments

TEMPERATURE RANGE: -35°C (-31°F)
+100°C (+212°F)

BALFLEX WELDING - DN6 - 1/4" - ISO 3821-B / EN 559 - WARNING ACETYLENE ONLY - WP 2 MPa / 300 PSI - DATE

BALFLEX WELDING - DN6 - 1/4" - ISO 3821-B / EN 559 - OXYGEN - WP 2 MPa / 300 PSI - DATE

HYDRAULIC BRAKE SAE J1401

According to SAE J 1401 – 10.1050

Sae J 1401 hydraulic brake hose 1/8"



#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD mm	KG kg/m
10.1050.02	1/8"	-3	3,2	10,5	20,0 2900	60,0 8700	102	0,091

INNER TUBE: seamless, brake fluid resistant special compound synthetic rubber
REINFORCEMENT: 2 high tensile synthetic textile braids

OUTER TUBE: black wrapped, oil, weather and abrasion resistant synthetic rubber
SAFETY FACTOR: 3:1

APPLICATION: hydraulic brake lines for automobiles

TEMPERATURE RANGE: -40°C (-40°F)
+100°C (+212°F)

HYDRAULIC BRAKE SAE J1401 - 1/8" - DOT - 20 MPa / 2900 PSI - DATE

FUEL HOSE



10.1211

Low pressure, steel galvanized braid fuel line hose

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD STATIC mm	MIN BEND RAD FLEXING mm	KG kg/m
10.1211.04	3/16"	5,0	10,0	2,5 375	7,5 1125	30	1.18	0,17
10.1211.06	1/4"	6,0	11,0	2,5 375	7,5 1125	30	1.18	0,22
10.1211.08	5/16"	8,0	13,0	2,5 375	7,5 1125	40	1.57	0,26
10.1211.10	3/8"	10,0	15,0	2,5 375	7,5 1125	50	1.97	0,33
10.1211.12	1/2"	13,0	19,0	2,0 300	6,0 900	65	2.56	0,50
10.1211.16	5/8"	16,0	22,0	2,0 300	6,0 900	80	3.15	0,56
10.1211.20	3/4"	20,0	25,0	1,5 225	4,5 675	95	3.74	0,62
10.1211.25	1"	25,0	33,0	1,5 225	4,5 675	125	4.92	0,71

INNER TUBE: seamless nitrile rubber, resistant to oil

OUTER TUBE: 1 external galvanized steel braid AISI 1008

SAFETY FACTOR: 3:1
APPLICATION: automobile fuel lines, oil, gasoil and oil emulsion cooling water

TEMPERATURE RANGE: -20°C (-4°F) +90°C (+194°F)

WATERPUMP HOSE



10.1212

Low pressure, steel galvanized braid water hose

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD STATIC mm	MIN BEND RAD FLEXING mm	KG kg/m
10.1212.10	3/8"	10,0	15,0	2,5 375	7,5 1125	100	3.94	0,22
10.1212.12	1/2"	13,0	19,0	2,5 375	7,5 1125	130	5.12	0,26
10.1212.16	5/8"	16,0	23,0	2,0 300	6,0 900	160	6.30	0,33
10.1212.20	3/4"	20,0	26,0	2,0 300	6,0 900	190	7.48	0,50
10.1212.25	1"	25,0	33,0	1,5 225	4,5 675	250	9.84	0,56
10.1212.32	1.1/4"	32,0	43,0	1,0 150	3,0 450	320	12.60	1.10
10.1212.40	1.1/2"	40,0	51,0	1,0 150	3,0 450	380	14.96	1.53
10.1212.50	2"	50,0	64,0	1,0 150	3,0 450	510	20.08	1.75

INNER TUBE: seamless nitrile rubber, resistant to water

OUTER TUBE: 1 external galvanized steel braid AISI 1008

SAFETY FACTOR: 3:1
APPLICATION: water pumps

TEMPERATURE RANGE: -30°C (-22°F) +100°C (+212°F)



AUTOMOTIVE AIR CONDITIONING VENEER TYPE



According to SAE J 2064 and ISO 8066 — 10.1300

Air Conditioning hose R134a

#	inch	SAE Dash	ID mm	OD mm	MIN BEND RAD mm	KG kg/m
10.1300.06	5/16"	-6	8,0	19,0	76,2	0,30
10.1300.08	13/32"	-8	10,6	22,6	88,9	0,41
10.1300.10	1/2"	-10	12,7	25,4	101,6	0,47
10.1300.12	5/8"	-12	16,2	28,1	114,3	0,55

INNER TUBE: seamless resistant synthetic rubber with PA barrier

REINFORCEMENT: high resistance synthetic fiber braid

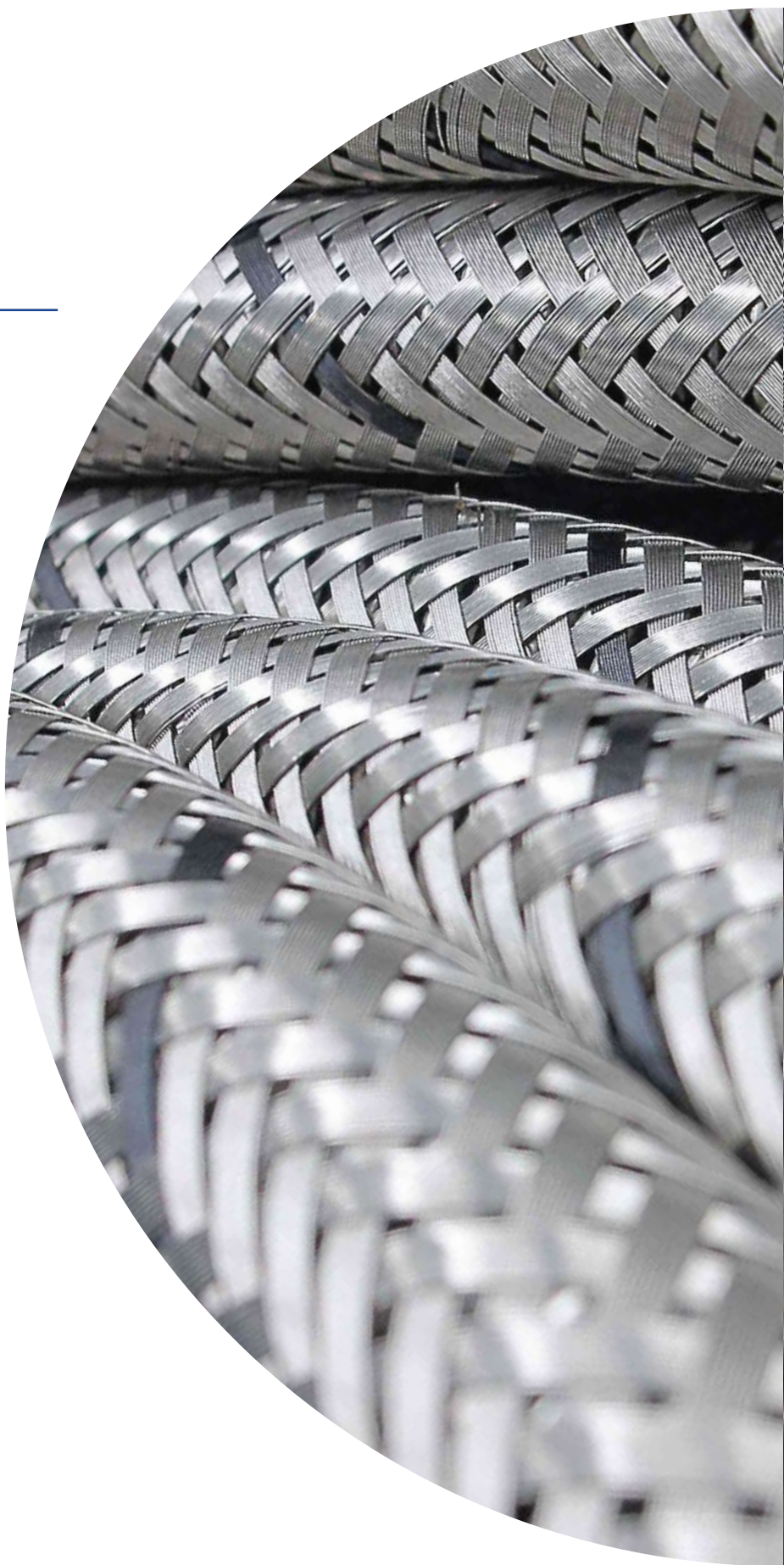
OUTER TUBE: pi-pricked black, weather and abrasion resistant synthetic rubber

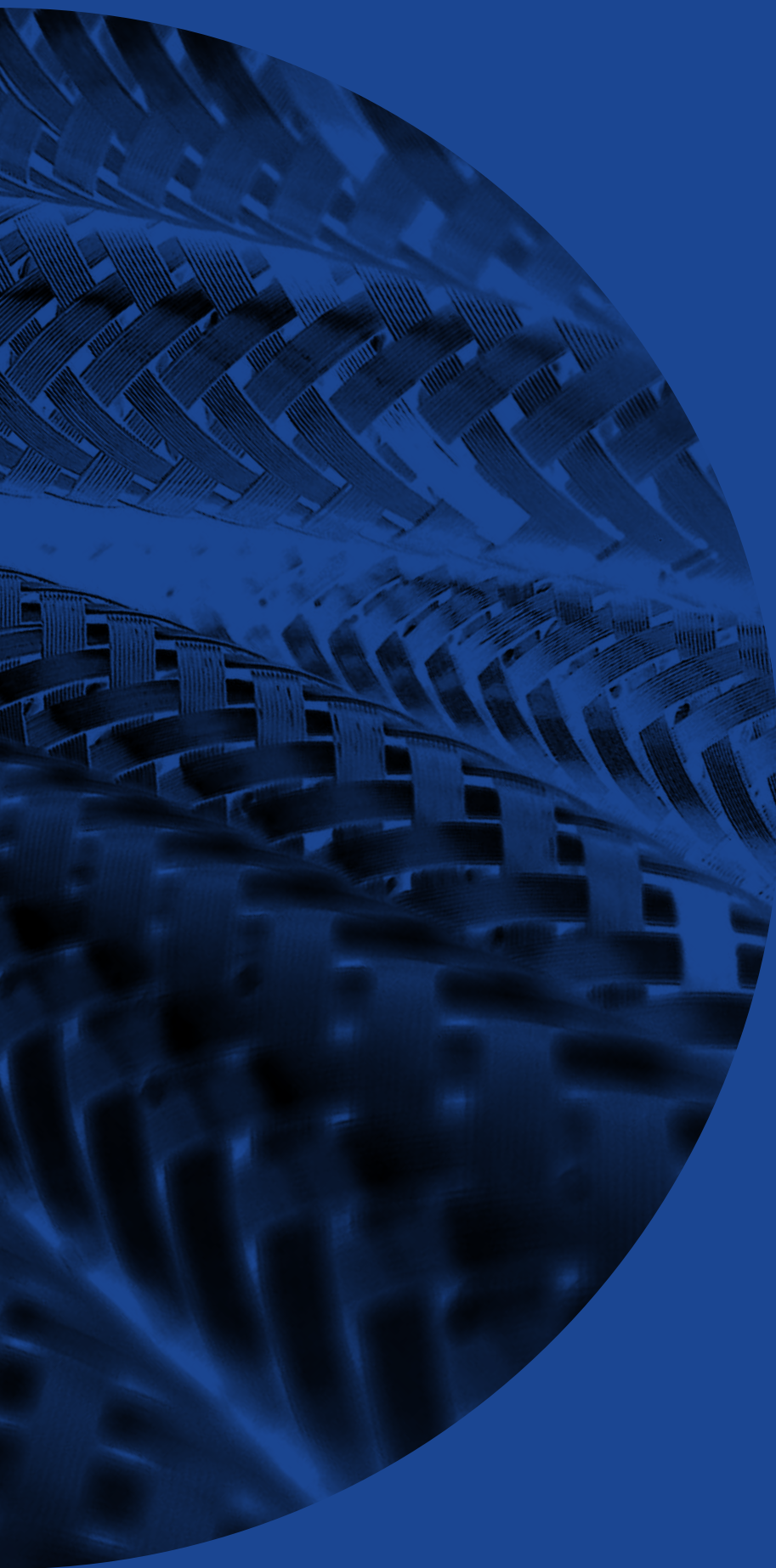
APPLICATION: air conditioning hose for mobile R12 and R134a systems; PAG, ester and mineral lubricants

TEMPERATURE RANGE: -30°C (-22°F) +125°C (+257°F)

BALFLEX ECOCLIMA A/C HOSE - R134a - 5/16" - SAE J2064 - ISO 8066

Inox Hoses





pag. 146	BALINOX 321 UNBRAIDED
pag. 147	BALINOX 321+BRAID 304
pag. 148	BALINOX 321+DOUBLE BRAID 304
pag. 149	BALINOX 316 UNBRAIDED
pag. 150	BALINOX 316+BRAID 304
pag. 151	BALINOX 316+DOUBLE BRAID 304
pag. 152	BRAID 304
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pag. 154	WELDING RINGS

Balinox

Balinox is the corrugated stainless steel hose range by Balflex®. Balinox stainless steel hoses are produced to Balflex® specifications and to ISO 10380 type 2 standards. It covers a wide variety of low to very high-pressure applications, in different grades of stainless steel, with different construction methods of the inner tube and of the reinforcement braid.

Stainless steel hoses facilitate relative movement of the parts to be connected, adapt to thermal expansion, resist to high pressure and offer good corrosion resistance to a wide range of fluids.

Balflex® optimized the production of these hoses in order to assure the highest performance and the most extensive range of applications. The Balinox range of stainless steel hoses offer a very wide variety of materials and construction solutions in order to suit the particular problems to be addressed.

The Balinox range of metal hoses in this catalogue includes:

- ✕ **Balinox 10.5211.** - Wide pitch annular corrugated stainless steel AISI 321 / EN 1.4541 hose with one braid AISI 304 / EN 1.4404
- ✕ **Balinox 10.5161.** - Wide pitch annular corrugated stainless steel AISI 316L / EN 1.4301 hose with one braid AISI 304 / EN 1.4404
- ✕ **Balinox 10.5104.** - Wide pitch annular corrugated stainless steel AISI 304 / EN 1.4404 hose with one braid AISI 304 / EN 1.4404

General Guidelines

Normally, the following aspects should be considered when choosing a stainless steel hose:

- ✕ the chemical reactivity of the product to be conveyed by the hose;
- ✕ the temperature of the product to be conveyed;
- ✕ the pressure of the product to be conveyed;
- ✕ the kind of flow of the product to be conveyed (pulsation or high velocity);
- ✕ the geometry of the parts to be connected and the degree of movement required, the bend radius and unsupported lengths;
- ✕ the environmental conditions.



1. Suitability of corrugated metal hose assemblies

Corrugated metal hose assemblies are basically suitable for the transport of critical fluids under pressure and temperature. The required flexibility of the corrugated hose generally results in a wall thickness considerably smaller than that of all other parts of the system in which they are installed. Therefore, increasing the wall thickness of the hose to prevent damages caused by corrosion is not reasonable and it becomes essential to select a suitable material for the flexible element which is sufficiently resistant against all corrosive media that may occur during the entire lifetime. In many cases, the hose has to be manufactured out of a material with even higher corrosion resistance than those of the system parts it is connected to.

In addition, possible corrosive environmental effects must be considered. The material selection must take into account all possible kinds of corrosion, especially pitting corrosion, intergranular corrosion, crevice corrosion and stress corrosion cracking (SCC).

2. Selection of a suitable material

The material for the corrugated hose is to be selected according the specific aggressiveness of the operating fluid or of the surrounding atmosphere.

Recommendations for the selection of materials are given under www.euroqualiflex.com.

3. Prevention of corrosive effects during operation of the plant

Any uncertainties concerning the exact composition of the working fluid, differing operating states, and other peripheral service conditions may additionally increase the danger of corrosion and have to be taken into account.

4. Responsibility of the hose manufacture

The responsibility of the hose manufacturer covers the functional design of the hose assembly according to the given information, as pressures, temperatures, movements, kind of application and additional loadings, and also the material concerning its formability and weldability.

In addition, BALFLEX techn staff contribute their wide scope of experience when assisting the user in selecting a suitable material for the special application. But, with regard to the influences of the actual operating situation given (see point 3) only the user can take full responsibility for the selected material. The advice of the hose manufacturer can only be given without obligation, i.e. without any liability for the material to be properly selected.

Selection of the hose

Chemical reactivity

Balinox Stainless Steel hose is supplied in the following grades:

- ✕ **AISI 321 / EN 1.4541**
- ✕ **AISI 316 / EN 1.4401**

The different grades have different chemical resistance to the fluids or gases to be conveyed. **AISI 321 / EN 1.4541** grade suits most applications; **AISI 316 / EN 1.4401** is used for more demanding applications. The Chemical Resistance Chart shows the suitability of the two grades in terms of corrosion resistance to the most common products to be conveyed.

The corrosion resistance of the end fittings should also be considered at this point. **AISI 321 / EN 1.4541** can be used with stainless steel, carbon steel and copper based alloys fittings, which offer a wide variety of corrosion and mechanical resistance. Carbon steel fittings should not be welded on **AISI 316 / EN 1.4401** hose; normally **AISI 316 / EN 1.4401** applications require also stainless steel fittings.

Pulsating and high velocity flows

Pulsating flows, such as exhaust of alternating machines or discharge controlled by fast operating valves, can force the assembly into vibration, which causes premature failure of the assembly. High velocity flows (5 m/s for liquids, 10 m/s for saturated vapor and 50 m/s for gases) can also force the corrugations into vibration.

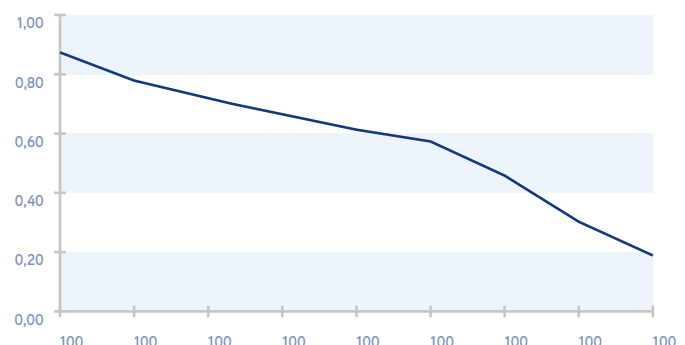
Vibrations can be avoided through the use of an adequate interlocked flexible internal liner, that smoothes the flow. Double-walled inner tube also reduces vibration hazard.

Temperature

The different grades allow different maximum working temperatures. The maximum working temperature is of 800°C (1472°F) for the **AISI 321 / EN 1.4541** and **AISI 316 / EN 1.4401** grades, and of 450°C for the **AISI 304 / EN 1.4404** grade. Brass fittings and galvanizing allow a maximum working temperature of 220°C (428°F).

High working temperatures and alternation of high and low temperatures accelerate corrosion and imply a decrease in life expectancy of the hose. Chart 1 recommends a de-rating factor for pressure rating and bend radius as a function of working temperature. Please consult for more information.

Chart 1: Temperature de-rating factor for working pressure:



NOTE: Enter the working temperature in °C (°F) in the horizontal axis and read the de-rating factor on the vertical axis. Apply this factor to the maximum working pressure of the hose rated for ambient temperature to obtain the actual working pressure at the project temperature. Likewise apply the inverse coefficient to the minimum bend radius.

Pressure

The construction type of the hose influences mainly its mechanical resistance and flexibility. The corrugated inner tube allows for flexibility and tightness. The external braid or braids allow for increased pressure resistance. **Balinox®** hoses are supplied standard with none, one or two braids of **AISI 304 / EN 1.4404**. Other braids or external sleeves may be supplied and fit into the assemblies. Double-walled hoses allow higher working pressures while maintaining high flexibility.



Installation geometry

The construction type of the hose influences mainly its mechanical resistance and flexibility. Balinox® Stainless Steel hose is supplied in the following construction variations:

- ✗ annular or helical corrugated
- ✗ narrow or wide pitch
- ✗ single or double walled
- ✗ unbraided or braided
- ✗ unlined or lined

The flexibility of the hose is limited. The minimum bend radius of the hose is a very important parameter for hose selection. Installation should always take into consideration the need to respect the minimum bend radius of the hose. The static minimum bend radius is the minimum bend radius that can be achieved once, at installation, for connection of static parts. The dynamic minimum bend radius is the minimum flexure radius that shall be considered for a constant motion.

The determination of the length of the hose should allow for thermal expansion and for the minimum bend radius necessary for the motion and offset of the assembly. Flexing must be always limited to one plane.

The catalogue pages list the minimum bend radius of the standard **Balinox®** hoses. For other construction variations please consult. Table 2 gives equations for calculation of hose lengths for different common situations.

Care should be given to fluid and hose weight on unsupported lengths of hose and its effect on bending the hose beyond the minimum bend radius. Hose support should be used in order to restrain the hose at the inferior horizontal axis level.

Environmental conditions

Abrasion can damage the external braid and thus reduce sharply the pressure resistance of the hose. External abrasion, mechanical shock or external exposure to extreme temperatures and aggressive media should be considered when choosing external braid, sleeves or other protection elements. A larger diameter metal or rubber hose may be fit on the outside, as well as insulating braided sleeves.

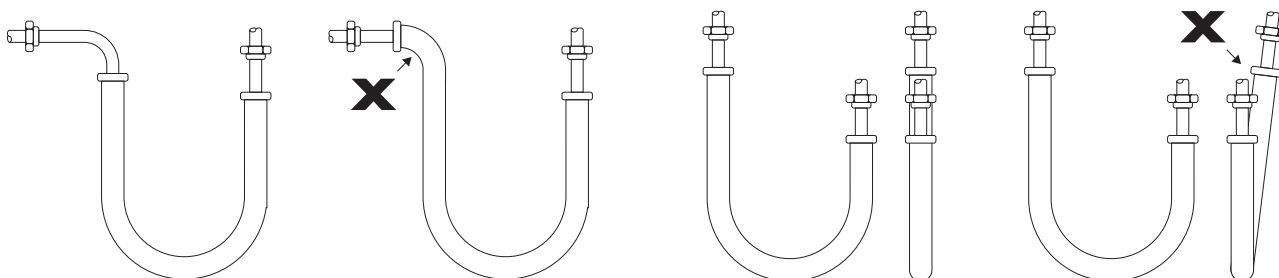
Assembly, Installation and Servicing

All hoses should be handled and installed without twisting or torsion (see examples below). The twisting of the hose causes shear stress and significantly reduces service life. To avoid the possibility of applying torsion when tightening fittings, free swiveling connections should be used at both ends.

Braid damage significantly reduces pressure resistance. Visual inspection of the outer braid should be made. Braids that show wire cuts should be proportionally pressure underrated.

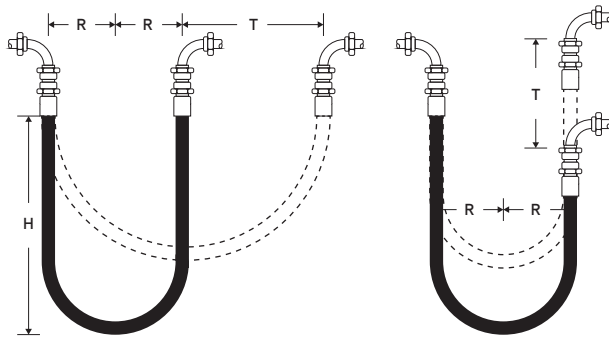
Stainless steel hoses should be hydrostatically tested before installation at 150% of working pressure for 1 minute.

Some applications require special cleaning procedures like degreasing, washing and drying. Care should be taken to use non-aggressive solvents. The same applies when servicing the equipment to which the hose were assembled.



Equations for calculation of hose lengths

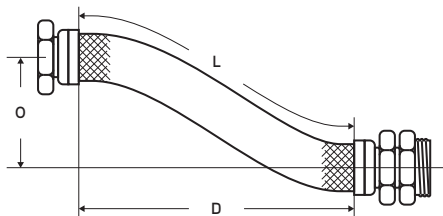
1 Equation for calculation of hose length in an installation with a 180° loop and travel length in the same plane:



$$L = X + \pi R + 1/2 T$$

$$H = 1/2 (L - \pi R) + R$$

2 Equation for calculation of hose length in an off-set static installation:



$$L = X + 2,86 R_s \arccos (1 - O / 2R_s)$$

$$D = 2,86 R_s \sin (L / 2,86 R_s)$$

3 Equation for calculation of hose length in an off-set dynamic installation:

$$L = X + 4,42 R \arccos (1 - O / 2R)$$

$$D = 4,42 R \sin (L / 4,42 R)$$

in which

L = Developed length of the hose

X = constant (see table 2.4) for the straight length needed at the end of the hose

R = radius of the half loop ($\geq$ dynamic minimum bend radius)

R_s = static minimum bend radius

T = travel distance of the moving end of the hose

O = Off-set of the two ends of the hose

D = Distance between hose ends

4 Table for determination of the straight length needed at the end of the hose:

DN	6	10	16	19	25	31	39	50
X (mm)	50	75	100	125	150	175	200	250



Stainless Steel Chemical Resistance Chart

● Recommended

● Recommended with Restrictions

● Not Recommended

Fluids	SS GRADE	
	AISI 316L	AISI 321
Acetic acid all concentrations, 20°C	●	●
Acetic acid all concentrations, boiling	●	●
Acetic anhydride	●	●
Acetone	●	●
Acetyl chloride	●	●
Acetylene	●	●
Air	●	●
Aluminium acetate	●	●
Aluminium chloride, 10%, quiescent	●	●
Aluminium chloride, 25%, quiescent	●	●
Aluminium hydroxide	●	●
Aluminium sulfate all concentrations, 20°C	●	●
Aluminium sulfate, boiling	●	●
Ammonia, anhydrous	●	●
Ammonia, anhydrous hot gas	●	●
Ammonia, liquor	●	●
Ammonium bromide	●	●
Ammonium carbonate, 1% - 5%	●	●
Ammonium chloride, 1% - 10%	●	●
Ammonium chloride, higher concentrations	●	●
Ammonium bicarbonate, hot	●	●
Ammonium hydroxide all concentrations	●	●
Ammonium monophosphate	●	●
Ammonium nitrate, boiling	●	●
Ammonium oxalate, 5%	●	●
Ammonium perchlorate 10%, boiling	●	●
Ammonium persulfate, 5%	●	●
Ammonium phosphate, 5%	●	●
Ammonium sulfate, 1% - 5%	●	●
Ammonium sulfate, 10%	●	●
Ammonium sulfite, 20°C, boiling	●	●
Amyl acetate, amyl chloride	●	●

Fluids	SS GRADE	
	AISI 316L	AISI 321
Aniline	●	●
Argon, liquid	●	●
Barium carbonate	●	●
Barium hydroxide	●	●
Barium nitrate	●	●
Barium sulfate	●	●
Barium sulfide	●	●
Benzene, 20°C or hot	●	●
Benzoic acid	●	●
Boric acid,	●	●
Borax, 5%	●	●
Butane	●	●
Butyl acetate	●	●
Butyric acid	●	●
Calcium carbonate	●	●
Calcium chlorate	●	●
Calcium chloride	●	●
Calcium hypochlorite, 2%	●	●
Calcium hydroxide, 10% - 20%	●	●
Calcium sulfate, saturated	●	●
Carbonated water	●	●
Carbonic acid, saturated solution	●	●
Carbon dioxide	●	●
Carbon disulfide	●	●
Carbon tetrachloride	●	●
Carbon tetrachloride, commercial + 1% water	●	●
Cellulose	●	●
Chloracetic acid	●	●
Chlorine gas	●	●
Chlorinated water, saturated	●	●
Chloroform	●	●
Chromium plating bath	●	●

Fluids	SS GRADE	
	AISI 316L	AISI 321
Chloroethane	●	●
Citric acid, still	●	●
Citric acid, boiling	●	●
Copper acetate	●	●
Copper carbonate	●	●
Copper cyanide	●	●
Copper nitrate	●	●
Copper sulfate	●	●
Creosote	●	●
Cyanogen gas	●	●
Cichloroethane	●	●
Diethyl ether	●	●
Ethylene glycol	●	●
Ethanol, 20°C and boiling	●	●
Ethyl acetate concentrated solution	●	●
Ethylene chloride	●	●
Fluorine, gas, moist	●	●
Formaldehyde, 40%	●	●
Formic acid	●	●
Furfural	●	●
Gglue solution (acid)	●	●
Glycerine	●	●
Hydrochloric acid	●	●
Hydrocyanic acid	●	●
Hydrofluoric acid	●	●
Hydrogen peroxide	●	●
Hydrogen sulfide, dry	●	●
Hydrogen sulfide, wet	●	●
Iodoform	●	●
Iron 2 chloride	●	●
Iron 3 chloride, 1%, 20°C	●	●
Iron 3 chloride, 1%, boiling	●	●
Iron 3 hydroxide	●	●
Iron 3 nitrate	●	●
Iron 2 sulfate	●	●
Kerosene	●	●

Fluids	SS GRADE	
	AISI 316L	AISI 321
Lactic acid, 1%	●	●
Lactic acid, 5% and more, 20°C	●	●
Lactic acid, 5% and more, boiling	●	●
Lead diacetate, 5%	●	●
Linseed oil	●	●
Magnesium chloride quiescent, 20°C	●	●
Magnesium chloride quiescent, hot	●	●
Magnesium sulfate	●	●
Mercury	●	●
Methane, liquid	●	●
Methanol, boiling	●	●
Naphtha	●	●
Naphthalene sulphonic acid	●	●
Nickel chloride solution	●	●
Nickel sulfate	●	●
Nitre cake	●	●
nitric acid 5%, 50%, 70%, boiling	●	●
nitric acid, 65%, 20°C	●	●
nitric acid, 65%, boiling	●	●
nitric acid, concentrated, 20°C	●	●
Nitric acid, concentrated, boiling	●	●
Nitrogen, liquid	●	●
Oil, crude	●	●
Oil, vegetable, mineral	●	●
Oleic acid	●	●
Oxalic acid, 20°C	●	●
Oxalic acid, boiling	●	●
Oxygen, liquid	●	●
Paraffin, hot	●	●
Petrol	●	●
Petroleum ether	●	●
Phenol	●	●
Phosphoric acid, 1%, 5%	●	●
Phosphoric acid, 10%, quiescent	●	●
Phosphoric acid, 80%	●	●
Potassium bromide	●	●



Fluids	SS GRADE	
	AISI 316L	AISI 321
Potassium carbonate	●	●
Potassium chlorate	●	●
Potassium chloride	●	●
Potassium chromium sulfate, 5%	●	●
Potassium cyanide	●	●
Potassium bichromate	●	●
Potassium ferricyanide	●	●
Potassium oxalate	●	●
Potassium hydroxide, 5%, 27%	●	●
Potassium hypochlorite	●	●
Potassium nitrate	●	●
Potassium permanganate, 5%	●	●
Potassium sulfate	●	●
Potassium sulphite	●	●
Propane	●	●
Sea water	●	●
Silver bromide	●	●
Silver nitrate	●	●
Sodium acetate	●	●
Sodium carbonate, 5%, 50%	●	●
Sodium chloride, saturated, 20°C	●	●
Sodium chloride saturated, boiling	●	●
Sodium cyanide	●	●
Sodium fluoride, 5%, solution	●	●
Sodium bicarbonate	●	●
Sodium bisulfate, solution	●	●
Sodium bisulfate saturated solution	●	●
Sodium hydroxide	●	●
Sodium hypochlorite	●	●
Sodium nitrate	●	●
Sodium perchlorate, 10%	●	●
Sodium phosphate	●	●
Sodium sulfate	●	●
Sodium sulfite	●	●
Sodium thiosulphate	●	●
Sodium thiosulphite	●	●

Fluids	SS GRADE	
	AISI 316L	AISI 321
Steam	●	●
Stearic acid	●	●
Sulfur, moist	●	●
Sulfur, molten	●	●
Sulfur chloride, dry	●	●
Sulfur dioxide gas, moist	●	●
Sulfur dioxide gas, dry	●	●
Sulfuric acid, 5%, 10%	●	●
Sulfuric acid, 50%	●	●
Sulfuric acid, concentrated, 20°C	●	●
Sulfuric acid concentrated, boiling	●	●
Sulphurous acid	●	●
Tannic acid	●	●
Tartaric acid, 20°C	●	●
Tartaric acid, boiling	●	●
Tin 2 chloride saturated	●	●
Tin 4 chloride solution	●	●
Trichloroacetic acid	●	●
Trichloroethylene, dry	●	●
Trichloroethylene, moist	●	●
Vinegar	●	●
Water, potable	●	●
Yeast	●	●
Zinc chloride, 5%, still	●	●
Zinc cyanide, moist	●	●
Zinc nitrate, solution	●	●
Zinc sulfate	●	●

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested.

Note: All data based on 20 °C/70 °F unless otherwise noted.

BALINOX 321 UNBRAIDED



ISO 10380 TYPE 2 - 10.5210.

Stainless steel annular corrugated tube AISI 321 / EN 1.4541 Unbraided.

										
#	inch	mm	mm	MPa	PSI	MPa	PSI	mm	mm	kg/m
10.5210.006	1/4"	6,0	9,6	1,0	145	4,0	580	25	85	0,08
10.5210.008	5/16"	8,0	12,1	0,8	116	3,2	464	32	125	0,09
10.5210.010	3/8"	10,0	14,3	0,8	116	3,2	464	38	140	0,11
10.5210.013	1/2"	12,0	16,7	0,6	87	2,4	348	45	140	0,12
10.5210.016	5/8"	16,0	21,6	0,6	87	2,4	348	58	160	0,19
10.5210.020	3/4"	20,0	26,8	0,5	73	2,0	290	70	170	0,25
10.5210.025	1"	25,0	32,2	0,4	58	1,6	232	85	190	0,35
10.5210.032	1.1/4"	32,0	41,1	0,4	58	1,6	232	105	260	0,44
10.5210.040	1.1/2"	40,0	49,5	0,3	44	1,2	174	130	300	0,68
10.5210.050	2"	50,0	60,3	0,3	44	1,2	174	160	320	0,88
10.5210.065	2.1/2"	65,0	81,0	0,15	22	0,6	87	180	410	1,07
10.5210.075	3"	80,0	95,0	0,15	22	0,6	87	200	450	1,10
10.5210.100	4"	100,0	117,0	0,10	15	0,4	58	290	560	1,40
10.5210.125	5"	125,0	150,0	0,10	15	0,4	58	325	710	2,67
10.5210.150	6"	150,0	175,0	0,10	15	0,4	58	380	815	3,22
10.5210.200	8"	200,0	225,0	0,10	15	0,4	58	500	1015	4,85
10.5210.250	10"	250,0	278,0	0,05	7	0,2	29	620	1270	7,15

INNER TUBE: AISI 321 / EN 1.4541 annular
corrugated stainless steel
OUTER COVER: none

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen,
thermo fluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F)
+600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31



BALINOX 321 + BRAID 304



ISO 10380 TYPE 2 - 10.5211.

Stainless steel annular corrugated tube AISI 321 / EN 1.4541 with stainless steel braid AISI 304 / EN 1.4404

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD STATIC mm	MIN BEND RAD FLEXING mm	KG kg/m
10.5211.006	1/4"	6,0	10,7	12,0 1740	48,0 6960	25	85	0,15
10.5211.008	5/16"	8,0	13,2	10,0 1450	40,0 5800	32	125	0,17
10.5211.010	3/8"	10,0	15,5	9,0 1305	36,0 5220	38	140	0,22
10.5211.013	1/2"	12,0	18,0	8,0 1160	32,0 4640	45	140	0,24
10.5211.016	5/8"	16,0	23,0	7,0 1015	28,0 4060	58	160	0,40
10.5211.020	3/4"	20,0	28,3	6,4 928	25,6 3712	70	170	0,50
10.5211.025	1"	25,0	33,5	5,0 725	20,0 2900	85	190	0,63
10.5211.032	1.1/4"	32,0	42,8	4,0 580	16,0 2320	105	260	0,85
10.5211.040	1.1/2"	40,0	51,2	3,5 508	14,0 2030	130	300	1,17
10.5211.050	2"	50,0	62,5	3,0 435	12,0 1740	160	320	1,61
10.5211.065	2.1/2"	65,0	83,0	2,4 348	9,6 1392	180	410	1,99
10.5211.075	3"	80,0	97,0	1,8 261	7,2 1044	200	450	2,20
10.5211.100	4"	100,0	119,0	1,6 232	6,4 928	290	560	3,00
10.5211.125	5"	125,0	152,5	1,4 203	5,6 812	325	710	4,90
10.5211.150	6"	150,0	177,5	1,0 145	4,0 580	380	815	5,71
10.5211.200	8"	200,0	228,0	0,8 116	3,2 464	500	1015	9,15
10.5211.250	10"	250,0	281,0	0,8 109	3,0 435	620	1270	13,75

INNER TUBE: AISI 321 / EN 1.4541 annular corrugated stainless steel
OUTER COVER: one stainless steel AISI 304 / EN 1.4404 braid

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: - 200°C (-328°F) +600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31

BALINOX 321 + DOUBLE BRAID 304



ISO 10380 TYPE 2 - 10.5212.

Stainless steel annular corrugated tube AISI 321 / EN 1.4541 with double stainless steel braid AISI 304 / EN 1.4404

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD STATIC mm	MIN BEND RAD FLEXING mm	KG kg/m
10.5212.006	1/4"	6,0	12,0	19,2 2784	76,8 11136	25	85	0,23
10.5212.008	5/16"	8,0	14,5	16,0 2320	64,0 9280	32	125	0,25
10.5212.010	3/8"	10,0	17,0	14,4 2088	57,6 8352	38	140	0,32
10.5212.013	1/2"	12,0	19,5	12,8 1856	51,2 7424	45	140	0,37
10.5212.016	5/8"	16,0	24,5	11,2 1624	44,8 6496	58	160	0,61
10.5212.020	3/4"	20,0	30,0	10,2 1479	40,8 5916	70	170	0,75
10.5212.025	1"	25,0	35,0	8,0 1160	32,0 4640	85	190	0,91
10.5212.032	1.1/4	32,0	44,5	6,4 928	25,6 3712	105	260	1,30
10.5212.040	1.1/2"	40,0	53,0	5,6 812	22,4 3248	130	300	1,66
10.5212.050	2"	50,0	64,5	4,8 696	19,2 2784	160	320	2,35
10.5212.065	2.1/2"	65,0	85,5	3,8 557	15,4 2227	180	410	2,92
10.5212.075	3"	80,0	100,0	2,9 418	11,5 1670	200	450	3,30
10.5212.100	4"	100,0	121,5	2,6 371	10,2 1485	290	560	4,75
10.5212.125	5"	125,0	155,0	2,2 325	9,0 1299	325	710	7,15
10.5212.150	6"	150,0	181,0	1,6 232	6,4 928	380	815	8,20
10.5212.200	8"	200,0	213,0	1,3 186	5,1 742	500	1015	13,50
10.5212.250	10"	250,0	285,0	1,2 174	4,8 696	620	1270	20,40

INNER TUBE: AISI 321 / EN 1.4541 annular corrugated stainless steel
OUTER COVER: two stainless steel AISI 304 / EN 1.4404 braids

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F) +600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31



BALINOX 316 UNBRAIDED



ISO 10380 TYPE 2 - 10.5160.

Stainless steel annular corrugated tube AISI 316L / EN 1.4301 UNBRAIDED

#	inch									
		mm	mm	MPa				mm	mm	kg/m
10.5160.006	1/4"	6,0	9,6	1,0	145	4,0	580	25	85	0,08
10.5160.008	5/16"	8,0	12,1	0,8	116	3,2	464	32	125	0,09
10.5160.010	3/8"	10,0	14,3	0,8	116	3,2	464	38	140	0,11
10.5160.013	1/2"	12,0	16,7	0,6	87	2,4	348	45	140	0,12
10.5160.016	5/8"	16,0	21,6	0,6	87	2,4	348	58	160	0,19
10.5160.020	3/4"	20,0	26,8	0,5	73	2,0	290	70	170	0,25
10.5160.025	1"	25,0	32,2	0,4	58	1,6	232	85	190	0,35
10.5160.032	1.1/4	32,0	41,1	0,4	58	1,6	232	105	260	0,44
10.5160.040	1.1/2"	40,0	49,5	0,3	44	1,2	174	130	300	0,68
10.5160.050	2"	50,0	60,3	0,3	44	1,2	174	160	320	0,88
10.5160.065	2.1/2"	65,0	81,0	0,15	22	0,6	87	180	410	1,07
10.5160.075	3"	80,0	95,0	0,15	22	0,6	87	200	450	1,10
10.5160.100	4"	100,0	117,0	0,10	15	0,4	58	290	560	1,40
10.5160.125	5"	125,0	150,0	0,10	15	0,4	58	325	710	2,67
10.5160.150	6"	150,0	175,0	0,10	15	0,4	58	380	815	3,22
10.5160.200	8"	200,0	225,0	0,10	15	0,4	58	500	1015	4,85
10.5160.250	10"	250,0	278,0	0,05	7	0,2	29	620	1270	7,15

INNER TUBE: AISI 316L / EN 1.4301 annular corrugated stainless steel
OUTER COVER: none

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F) +600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31

BALINOX 316 + BRAID 304



ISO 10380 TYPE 2 - 10.5161.

Stainless steel annular corrugated tube AISI 316L / EN 1.4301 with stainless steel braid AISI 304 / EN 1.4404

										
#	inch	mm	mm	MPa	PSI	MPa	PSI	mm	mm	kg/m
10.5161.006	1/4"	6,0	10,7	12,0	1740	48,0	6960	25	85	0,15
10.5161.008	5/16"	8,0	13,2	10,0	1450	40,0	5800	32	125	0,17
10.5161.010	3/8"	10,0	15,5	9,0	1305	36,0	5220	38	140	0,22
10.5161.013	1/2"	12,0	18,0	8,0	1160	32,0	4640	45	140	0,24
10.5161.016	5/8"	16,0	23,0	7,0	1015	28,0	4060	58	160	0,40
10.5161.020	3/4"	20,0	28,3	6,4	928	25,6	3712	70	170	0,50
10.5161.025	1"	25,0	33,5	5,0	725	20,0	2900	85	190	0,63
10.5161.032	1.1/4	32,0	42,8	4,0	580	16,0	2320	105	260	0,85
10.5161.040	1.1/2"	40,0	51,2	3,5	508	14,0	2030	130	300	1,17
10.5161.050	2"	50,0	62,5	3,0	435	12,0	1740	160	320	1,61
10.5161.065	2.1/2"	65,0	83,0	2,4	348	9,6	1392	180	410	1,99
10.5161.075	3"	80,0	97,0	1,8	261	7,2	1044	200	450	2,20
10.5161.100	4"	100,0	119,0	1,6	232	6,4	928	290	560	3,00
10.5161.125	5"	125,0	152,5	1,4	203	5,6	812	325	710	4,90
10.5161.150	6"	150,0	177,5	1,0	145	4,0	580	380	815	5,71
10.5161.200	8"	200,0	228,0	0,8	116	3,2	464	500	1015	9,15
10.5161.250	10"	250,0	281,0	0,8	109	3,0	435	620	1270	13,75

INNER TUBE: AISI 316L / EN 1.4301 annular corrugated stainless steel
OUTER COVER: one stainless steel AISI 304 / EN 1.4404 braid

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F) +600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31



BALINOX 316 + DOUBLE BRAID 304



ISO 10380 TYPE 2 - 10.5162.

Stainless steel annular corrugated tube AISI 316L / EN 1.4301 with double stainless steel braid AISI 304 / EN 1.4404

#	inch	ID mm	OD mm	MPa PSI	MPa PSI	MIN BEND RAD STATIC mm	MIN BEND RAD FLEXING mm	KG kg/m
10.5162.006	1/4"	6,0	12,0	19,2 2784	76,8 11136	25	85	0,23
10.5162.008	5/16"	8,0	14,5	16,0 2320	64,0 9280	32	125	0,25
10.5162.010	3/8"	10,0	17,0	14,4 2088	57,6 8352	38	140	0,32
10.5162.013	1/2"	12,0	19,5	12,8 1856	51,2 7424	45	140	0,37
10.5162.016	5/8"	16,0	24,5	11,2 1624	44,8 6496	58	160	0,61
10.5162.020	3/4"	20,0	30,0	10,2 1479	40,8 5916	70	170	0,75
10.5162.025	1"	25,0	35,0	8,0 1160	32,0 4640	85	190	0,91
10.5162.032	1.1/4"	32,0	44,5	6,4 928	25,6 3712	105	260	1,30
10.5162.040	1.1/2"	40,0	53,0	5,6 812	22,4 3248	130	300	1,66
10.5162.050	2"	50,0	64,5	4,8 696	19,2 2784	160	320	2,35
10.5162.065	2.1/2"	65,0	85,5	3,8 557	15,4 2227	180	410	2,92
10.5162.075	3"	80,0	100,0	2,9 418	11,5 1670	200	450	3,30
10.5162.100	4"	100,0	121,5	2,6 371	10,2 1485	290	560	4,75
10.5162.125	5"	125,0	155,0	2,2 325	9,0 1299	325	710	7,15
10.5162.150	6"	150,0	181,0	1,6 232	6,4 928	380	815	8,20
10.5162.200	8"	200,0	213,0	1,3 186	5,1 742	500	1015	13,50
10.5162.250	10"	250,0	285,0	1,2 174	4,8 696	620	1270	20,40

INNER TUBE: AISI 316L / EN 1.4301 annular corrugated stainless steel
OUTER COVER: two stainless steel AISI 304 / EN 1.4404 braid

SAFETY FACTOR: 4:1
APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F) +600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31

BRAID 304



10.5140.

Stainless steel braid AISI 304 / EN 1.4404

#	inch	 mm	wire diameter mm	n° of wires	carriers	braid angle	braid coverage %	 kg/m
10.5140.006	1/4"	6,0	0,25	6	24	90	97,5	0,07
10.5140.008	5/16"	8,0	0,25	7	24	90	95,1	0,08
10.5140.010	3/8"	10,0	0,25	8	24	90	94,0	0,10
10.5140.013	1/2"	12,0	0,25	10	24	90	96,3	0,12
10.5140.016	5/8"	16,0	0,30	11	24	90	95,5	0,21
10.5140.020	3/4"	20,0	0,30	9	36	90	96,6	0,25
10.5140.025	1"	25,0	0,30	10	36	90	94,6	0,27
10.5140.032	1.1/4	32,0	0,35	8	48	90	93,1	0,40
10.5140.040	1.1/2"	40,0	0,35	10	48	90	94,4	0,49
10.5140.050	2"	50,0	0,40	11	48	90	95,5	0,73
10.5140.065	2.1/2"	65,0	0,40	11	64	90	95,2	0,92
10.5140.075	3"	80,0	0,40	12	64	90	93,2	1,06
10.5140.100	4"	100,0	0,50	11	64	90	90,3	1,60
10.5140.125	5"	125,0	0,57	10	72	98	87,8	2,22
10.5140.150	6"	150,0	0,57	11	72	98	85	2,49
10.5140.200	8"	200,0	0,67	9	96	102	86,8	4,30
10.5140.250	10"	250,0	0,70	12	96	104	93,7	6,60

BRAID: 1 stainless steel wire braid

APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -200°C (-328°F)
+600°C (+1112°F)

COUPLINGS: Balflex® Welding Rings serie 31



EXHAUST TUBE



10.5001.

Polygonal stripwound galvanized steel exhaust tube, interlocked, medium pitch

#	inch	 mm	 mm	thickness of strip mm	width of strip mm	 mm	 kg/m
10.5001.032	1.1/4"	32,0	35,0	0,30	16,0	135	0,07
10.5001.035	1.3/8"	35,0	38,0	0,30	16,0	145	0,08
10.5001.040	1.1/2"	40,0	43,5	0,30	16,0	165	0,10
10.5001.045	1.3/4"	45,0	48,0	0,30	16,0	168	0,12
10.5001.050	2"	50,0	54,5	0,30	16,0	170	0,21
10.5001.055	2.3/16"	55,0	59,5	0,30	16,0	215	0,25
10.5001.060	2.3/8"	60,0	64,5	0,30	16,0	235	0,27
10.5001.065	2.1/2"	65,0	69,5	0,30	16,0	245	0,40
10.5001.070	2.3/4"	70,0	74,5	0,30	16,0	255	0,49
10.5001.075	3"	75,0	78,5	0,30	16,0	265	0,73
10.5001.080	3.3/16"	80,0	83,5	0,30	16,0	280	0,92
10.5001.085	3.3/8"	85,0	89,5	0,30	16,0	315	1,06
10.5001.090	3.5/8"	90,0	94,5	0,30	16,0	350	1,60
10.5001.095	3.3/4"	95,0	100,0	0,40	24,0	550	2,22
10.5001.100	4"	100,0	105,0	0,40	24,0	555	2,49
10.5001.110	4.3/8"	110,0	115,0	0,40	24,0	565	4,30
10.5001.115	4.5/8"	115,0	120,0	0,40	24,0	570	6,60
10.5001.120	4.3/4"	120,0	125,0	0,40	24,0	575	2,22
10.5001.125	5"	125,0	130,0	0,40	24,0	590	2,49
10.5001.130	5.3/16"	130,0	135,0	0,40	24,0	625	4,30
10.5001.150	6"	150,0	155,0	0,40	24,0	655	6,60

INNER TUBE: galvanized steel medium pitch, polygonal cross-section

APPLICATION: steam, chemicals, oxygen, thermofluid, naphta, cryogening

TEMPERATURE RANGE: -50°C to +250°C

VERSIONS: Stainless steel on demand

WELDING RINGS



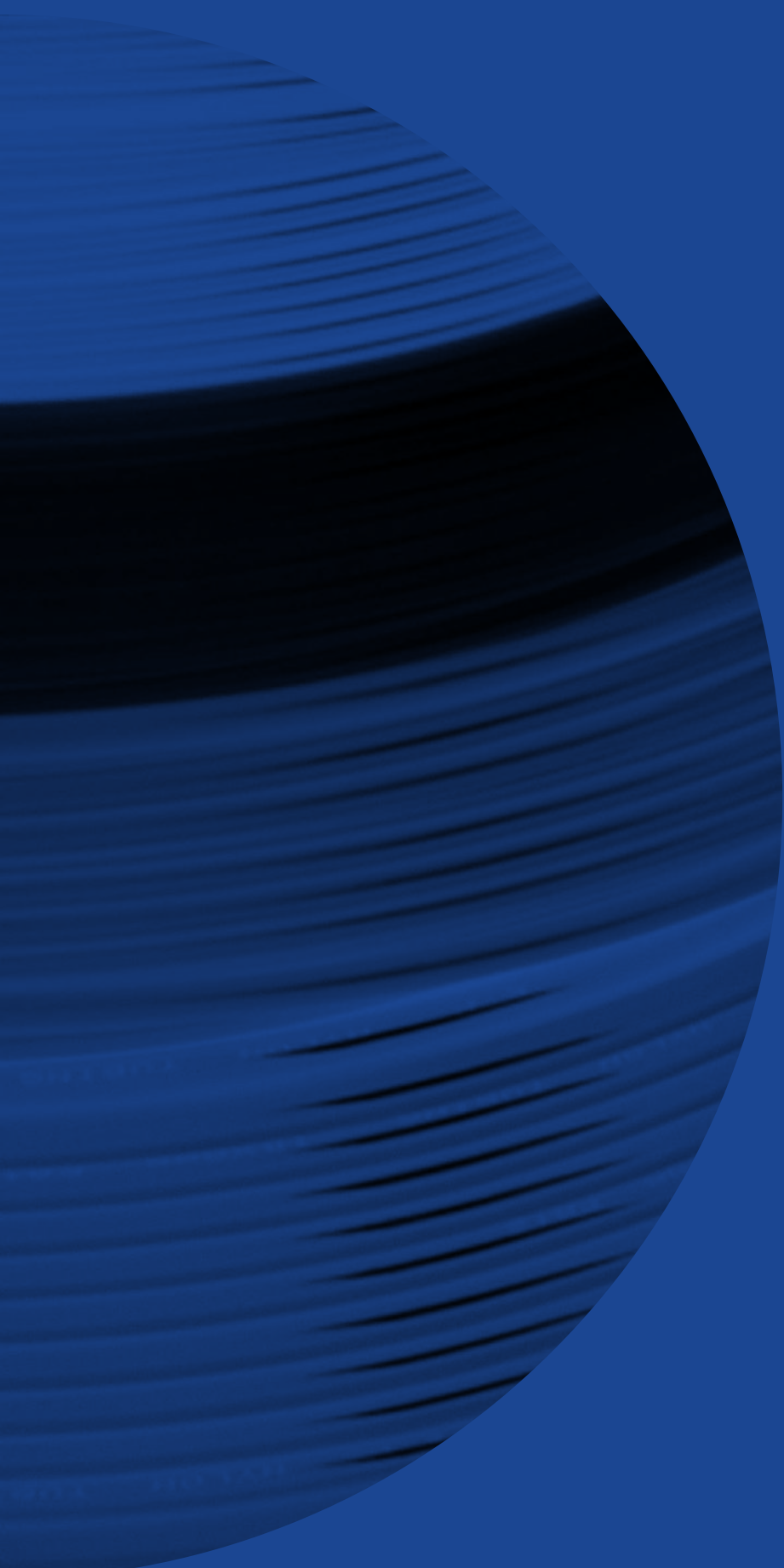
31.00.S

Stainless Steel AISI 304 / EN 1.4404 welding rings for single braided Stainless steel hose

#	inch			length
		mm	mm	
31.00.06S	1/4"	11,5	14,5	20,0
31.00.08S	5/16"	14,0	17,0	20,0
31.00.10S	3/8"	16,0	19,0	20,0
31.00.13S	1/2"	18,5	21,5	20,0
31.00.16S	5/8"	23,5	26,5	20,0
31.00.20S	3/4"	28,8	31,8	25,0
31.00.25S	1"	34,5	37,5	30,0
31.00.32S	1.1/4"	43,5	46,5	30,0
31.00.40S	1.1/2"	52,0	55,0	35,0
31.00.50S	2"	63,0	66,0	35,0
31.00.65S	2.1/2"	84,0	87,0	40,0
31.00.75S	3"	97,5	100,5	50,0
31.00.100S	4"	120,0	123,0	50,0
31.00.125S	5"	154,0	157,0	50,0
31.00.150S	6"	179,0	182,0	50,0
31.00.200S	8"	229,0	232,0	50,0
31.00.250S	10"	282,0	285,0	50,0

PU-PA Tubing





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PU-PA Tubing

Balflex® Tubing are produced to Balflex® specifications and according to international standards, covering a wide variety of applications, with best chosen high quality grade polymers, for a extensive range of applications.

The Balflex® Tubing range in this catalogue includes:

- ✕ Balflex® PU Tubing (Blue Color) - I.D. mm – 12.2020.
- ✕ Balflex® PU Tubing (Blue Color) - I.D. inch – 12.2030.
- ✕ Balflex® PA6 Tubing (Black Color) - I.D. mm – 12.2000.
- ✕ Balflex® PA6 Tubing (Black Color) - I.D. inch – 12.2010.

General Guidelines

Balflex® PU Tubing or Polyurethane Tubing is suitable for pneumatic uses where low temperatures or tight bend radius rule out the more traditional nylon tubing. Blue polyurethane tubing is capable of withstanding higher pressure than the standard version and in addition it has increased shock absorbencies capacity and does not work harden.

Balflex® PA6 Tubing is suitable for automation, tooling, instrumentation, pneumatics, lubricating and low pressure hydraulic lines.



PU TUBING



POLYURETHANE TUBING (98 Shore A) - 12.2020 / 2030

Blue Color, Pu Tubing for automation, robotics, tooling, pneumatics and low pressure hydraulic systems, working temperature: -35°C (-31°F) to +80°C (+176°F)

mm SIZE

#									Coil Length
	mm	inch	mm	inch	mm	inch	MPa	PSI	
12.2020.040	4,0	0.16	2,4	0.09	0,8	0.03	1.2	174	100
12.2020.044	4,4	0.17	2,8	0.11	0,8	0.03	1.2	174	100
12.2020.050	5,0	0.20	3,0	0.12	1,0	0.04	1.2	174	100
12.2020.060	6,0	0.24	4,4	0.17	0,8	0.03	0.6	87	100
12.2020.061	6,0	0.24	4,0	0.16	1,0	0.04	1.0	145	100
12.2020.080	8,0	0.32	6,0	0.24	1,0	0.04	0.6	87	100
12.2020.081	8,0	0.32	5,5	0.22	1,25	0.05	1.0	145	100
12.2020.082	8,0	0.32	5,0	0.20	1,5	0.06	1.2	174	100
12.2020.083	8,3	0.33	5,7	0.22	1,3	0.05	1.0	145	100
12.2020.100	10,0	0.39	7,5	0.30	1,25	0.05	0.6	87	100
12.2020.101	10,0	0.39	7,0	0.28	1,5	0.06	1.0	145	100
12.2020.120	12,0	0.47	9,0	0.35	1,5	0.06	0.6	87	50
12.2020.121	12,0	0.47	8,0	0.31	2,0	0.08	1.0	145	50
12.2020.140	14,0	0.55	11,0	0.43	1,5	0.06	0.5	73	50
12.2020.141	14,0	0.55	10,0	0.39	2,0	0.08	0.8	116	50
12.2020.160	16,0	0.63	12,0	0.47	2,0	0.08	0.8	116	50
12.2020.180	18,0	0.71	13,0	0.51	2,5	0.10	0.8	116	50

 **BALFLEX - PU - Ø4 X 0.8 mm - WP 1.2 MPa**

inch SIZE

#									Coil Length
	inch	mm	inch	mm	inch	mm	MPa	PSI	
12.2030.02	1/8"	3,20	0.063	1,60	0.031	0,8	1.2	174	100
12.2030.03	3/16"	4,75	0.124	3,15	0.031	0,8	1.0	145	100
12.2030.04	1/4"	6,35	0.171	4,35	0.039	1,0	1.0	145	100
12.2030.06	3/8"	9,52	0.257	6,52	0.059	1,5	1.0	145	100
12.2030.08	1/2"	12,70	0.382	9,70	0.059	1,5	1.0	145	50

 **BALFLEX - PU - Ø1/8" X 0.031in - WP 174 Psi**

PA6 TUBING



According to DIN 73378 - 12.2000 / 2010

Black Color, PA6 Tubing for automation, tooling, instrumentation, pneumatics, lubricating and low pressure hydraulic lines, working temperature: -40°C (-40°F) a +125°C (+257°F)

mm SIZE

#									Coil Length
	mm	inch	mm	inch	mm	inch	MPa	PSI	
12.2000.040	4,0	0.16	2,4	0.09	0,8	0.03	3.1	450	100
12.2000.060	6,0	0.24	4,0	0.16	1,0	0.04	2.7	392	100
12.2000.080	8,0	0.31	6,0	0.24	1,0	0.04	1.9	276	100
12.2000.100	10,0	0.39	7,0	0.28	1,5	0.06	2.3	334	100
12.2000.110	11,0	0.43	8,0	0.31	1,5	0.06	2.1	305	100
12.2000.120	12,0	0.47	9,0	0.35	1,5	0.06	1.9	276	100
12.2000.140	14,0	0.55	10,4	0.41	1,8	0.07	1.8	261	50
12.2000.150	15,0	0.59	11,4	0.45	1,8	0.07	1.7	247	50
12.2000.160	16,0	0.63	12,4	0.49	1,8	0.07	1.6	232	50

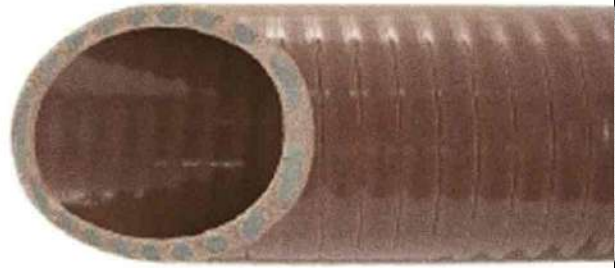
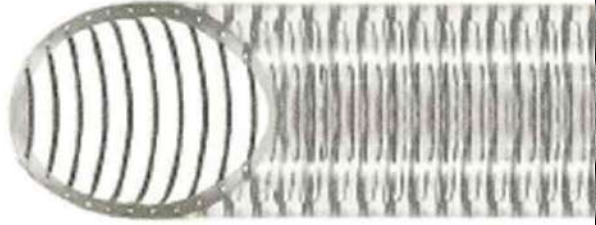
 **BALFLEX - PA6 - Ø8 X 1 mm - WP 1.9 MPa** - 

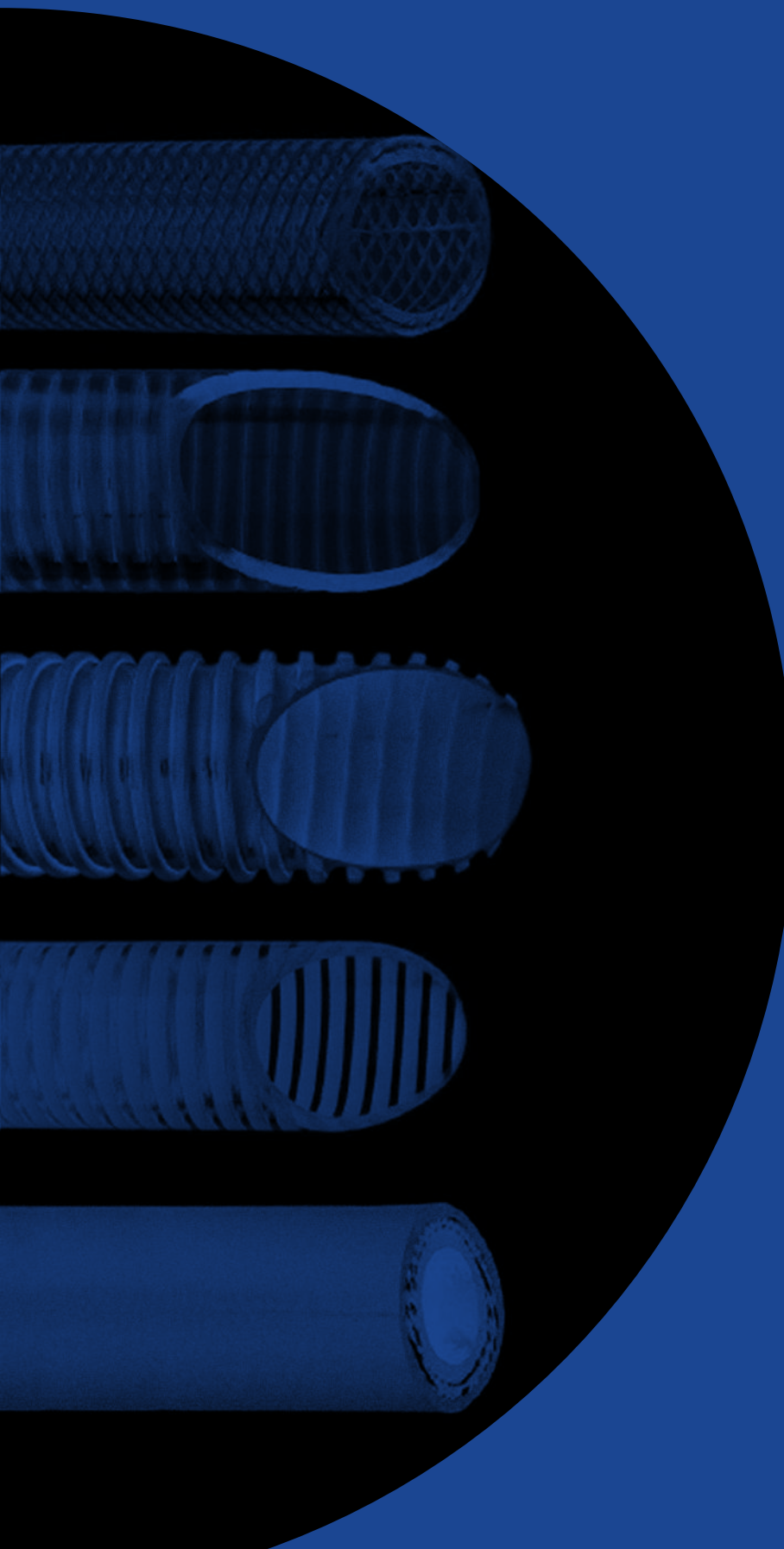
inch SIZE

#									Coil Length
	inch	mm	inch	mm	inch	mm	MPa	PSI	
12.2010.02	1/8"	3,20	0.063	1,60	0.031	0,8	5.0	725	100
12.2010.03	3/16"	4,75	0.124	3,15	0.031	0,8	2.7	392	100
12.2010.04	1/4"	6,35	0.171	4,35	0.039	1,0	2.4	348	100
12.2010.06	3/8"	9,52	0.257	6,52	0.059	1,5	2.4	348	100
12.2010.08	1/2"	12,70	0.382	9,70	0.059	1,5	1.7	247	100

 **BALFLEX - PA6 - Ø 1/8" X 0.031 in - WP 725 Psi** - 

PVC Hoses





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QUALITY**
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& WATER**
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DELIVERY NON-TOXIC**
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AIR & WATER**
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AIR & WATER**
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AIR & WATER**
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PVC Hoses

The range of Balflex® PVC Hoses, manufactured according to Balflex® specifications comprehends a wide variety of braid and spiral hoses (PVC rigid spiral wound and steel spiral wound to meet different applications).

Balflex® optimized the production of these hoses and their compatibility with a wide range of fluids so as to assure a more extensive and complete offer. All the Balflex® PVC hoses are made from the best quality compound with virgin raw material so as to assure the best performance.

The program of Balflex® PVC hoses includes :

- ✕ Braided PVC Hoses
- ✕ Spiral PVC Hoses

Generalities about PVC hoses

Fluid compatibility: It is necessary to verify the fluid compatibility with the hose. A fluid that chemically attacks the hose can lead to contamination and obstruction of the equipment elements and to an early failure of the hose. The presence of gases requires special attention. The table of chemical resistance indicates the PVC compatibility with some fluids. Refer to Balflex® for the compatibility of other fluids. In case of doubt it is recommended a previous test.

Temperature: Excessive temperature is one of the PVC considerable restrictions, which provokes its accelerated aging. The fluid temperature, either functioning or not, it must not exceed the maximum functioning temperature indicated for the PVC of + 55°C (+ 131°F). It is also necessary to pay attention to the room temperature, mainly the one that results from heat sources in the proximity of the flexible.

Generalities about PVC

The letters PVC are the initials of PolyVinylChloride or Polyvinyl Chloride, PVC has as the main raw material the sodium chloride (kitchen salt), which is present in underground mines (mineral salt) and in unlimited amounts in the sea. It corresponds to 57% of its composition. The remaining 43% come from oil derived or alternatively from other sources such as calcium carbide and sugar cane.

The chlorine is obtained from sea-salt (sodium chloride) through electrolysis process. The electrolysis is a process that separates the chemical elements of a compound through the use of electricity. In a summarized way, first the decomposition is proceeded (ionization or disassociation) of the ions compound and, after that, with the passage of a continuous current through these ions, chemical elements are obtained. In many cases, depending on the substance to be electrolyzed and the means where it occurs, besides forming elements the formation of new compounds also occurs. The electrolysis process is a reaction to oxidoreduction opposite to the one that occurs in an electrolytic cell, being, thus, a non-spontaneous physic-chemical phenomenon.

To turn PVC resin into hose, it is necessary the mixture of several additives that will give each hose the appropriate characteristics to each application. The most used additives in PVC compounds for the hose manufacturing are the plastifiers, the thermal stabilizer, the pigments, the impact modifiers, the charges and the processing auxiliaries.

PVC, which is inactive, is one of the materials that present better resistance to the sterilization methods (vaporization, oxide of ethylene or gamma rays). PVC can be manufactured in every color by the addition of pigments, which make easier the identification of the hoses according to the use they are intended for. PVC is a product that can be considered ecological because it is 100% recyclable.



PVC Chemical Resistance Chart

● Recommended ● Recommended with Restrictions ● Not Recommended ● Non Toxic ● OQ

Chemical	Concentration	TEMPERATURE	
		20o C	55o C
Acetate Solvents		●	●
Acetic Acid	10%	●	●
Acetic Acid	glacial	●	●
Acetone		●	●
Acrylonitrile		●	●
Adipic Acid		●	●
Alcohol Butyl		●	●
Alcohol Ethyl		●	●
Alcohol Isorpopyl		●	●
Alcohol Methyl		●	●
Alcohol Acetate		●	
Aluminium Chloride		●	●
Aluminium Hydroxide		●	
Aluminium Sulfate		●	●
Allyl Chloride			
Ammonia	0.88 S.G. (Aqueous)	●	●
Ammonia	dry gas	●	
Ammonia	liquid	●	●
Ammonium Chloride		●	●
Ammonium Hydroxide		●	
Animal Oils			
Amyl Acetae		●	●
Aniline Oils			
Aromatic Hydrocarbons		●	●
Asphalt		●	●
ASTM Fuel A		●	●
ASTM Fuel B		●	●
ASTM # 1 Oil			
ASTM # 3 Oil			
Barium Chloride		●	●
Barium Hydroxide		●	●
Barium Sulfide		●	●
Benzene		●	●
Benzine		●	●
Bordeaux Mixture		●	●
Borax		●	●
Boric Acid		●	●
Brine		●	●
Bromine Traces		●	●
Butyl Acetate		●	●
Calcium Hydroxide		●	●
Calcium Hypochloride		●	●
Carbonic Acid		●	●
Carbon Dioxide		●	●
Carbon Disulphite		●	●
Carbon Monoxide		●	●
Carbon Tetrachloride		●	●
Casein		●	●
Chlorine	dry gas	●	●
Chlorine	wet gas	●	●
Chlorine	water	●	●
Chlorobenzene		●	●
Chlorinated Hydrocarbons		●	●
Chloroform		●	●
Chromic Acid	10%	●	●
Citric Acid		●	●
Coal Tar		●	●
Copper Chloride		●	●
Copper Nitrate		●	●
Copper Sulphate		●	●
Cottonseed Oil			
Creosote		●	●
Cresol		●	●
Cresylic Acid		●	●

Chemical	TEMPERATURE		
	Concentration	20o C	55o C
Cyclohexane		●	●
Cyclohexanone		●	●
DDT Weed Killer		●	●
Detergent Synthetic		●	●
Developers Photographic		●	●
Dextrin		●	●
Dextrose		●	●
Dibutyl Phthalate		●	●
Dichlorobenzene		●	●
Diesel Oil		●	●
Diethylene Glycol		●	●
Diethyl Ether		●	●
Di-isodecyl Phthalate		●	●
Dicotyl Phthalate		●	●
Emulsifiers		●	●
Emulsions Photographic		●	●
Ethyl Acetate		●	●
Ethylene Dichloride		●	●
Ethylene Glycol		●	●
Fatty Acid		●	●
Ferric Chloride		●	●
Ferric Sulphate		●	●
Ferrous Chloride		●	●
Ferrous Sulphate		●	●
Fixing Solution Photografic		●	●
Fluorine		●	●
Formaldehyde	40%	●	●
Formic Acid	40%	●	●
Formic Acid	50%	●	●
Formic Acid	100%	●	●
Fuel Oil		●	●
Glacial Acetic Acid		●	●
Glucose		●	●
Glycerine		●	●
Grape Sugar		●	●
Grease			

Chemical	TEMPERATURE		
	Concentration	20o C	55o C
Heptane		●	●
Hexane		●	●
Hydrobromic Acid		●	●
Hydrochloric Acid	10%	●	●
Hydrochloric Acid	40%	●	●
Hydrofluoric Acid	10%	●	●
Hydrofluoric Acid	40%	●	●
Hydrofluoric Acid		●	●
Hydrofluosilicic Acid		●	●
Hydrogen Peroxide		●	
Hydrogen Sulphide		●	
Iso-octan		●	●
Isopropyl Acetate		●	●
Kerosene		●	●
Ketones		●	●
Lactic Acid	10%	●	
Lactic Acid	100%	●	●
Lacquer Solvents		●	●
Linseed Oils			
Magnesium Chloride		●	●
Magnesium Hydroxide		●	●
Magnesium Sulphate		●	●
Malic Acid		●	●
Methyl Acetate		●	●
Methyl Bromide		●	●
Methyl Ethyl Ketone		●	●
Methylene Chloride		●	●
Mineral Oils			
Monochlorobenzene		●	●
Naphtha		●	●
Naphthalene		●	●
Nitric Acid	70%	●	●
Nitric Acid	40%	●	●
Nitric Acid	70%	●	●
Nitrobenzene		●	●
Nitrogen Fertilizers		●	



Chemical	Concentration	TEMPERATURE	
		20o C	55o C
Oleic Acid		●	●
Oxalic Acid		●	●
Palmitic Acid		●	●
Paraffin		●	●
Pentane		●	●
Perchloroethylene		●	●
Phenol		●	●
Phosphoric Acid		●	●
Pitch		●	●
Potassium Hydroxide		●	●
Propane		●	●
Sea Water		●	●
Sodium Hydroxide (caustic soda)	10%	●	●
Sodium Hydroxide (caustic soda)	50%	●	●
Sodium Cyanide		●	●
Soybean Oil			
Stearic Acid		●	●
Styrene		●	●
Sulphur Dioxide	dry	●	●
Sulphur Dioxide	moist	●	●
Sulphur Dioxide	liquid	●	●
Sulphuric Acid	45%	●	●
Sulphuric Acid	60%	●	●
Sulphuric Acid	98%	●	●
Sulphurous Acid	30%	●	
Tannic Acid		●	●
Tartaric Acid		●	●
Tetrahydrofuran		●	●
Toluene		●	●
Trichlorethylene		●	●
Triethanolamine		●	●
Tricresyl Phosphate		●	●
Turpentine		●	●
Urea		●	●
Vinegar		●	●
Vinyl Acetate		●	●

Chemical	Concentration	TEMPERATURE	
		20o C	55o C
Vinyl Chloride		●	●
Water		●	●
Wine		●	●
Xylene		●	●
Zinc Chloride		●	●
Zinc Sulphate		●	●

The following data is based on tests and believed to be reliable; however the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc. that may be encountered in actual use. All critical applications should be tested.

Note: All data based on 20 °C/70 °F unless otherwise noted.

● Recommended the use of Balflex® Food Quality Hoses as Balsteel (12.1227) and QA (12.9050)

● Recommended Balflex® OQ (12.9010)

BALCRISTAL FOOD QUALITY



12.1010.

Low pressure, textile braid reinforced, non-toxic, odor and tasteless, food-quality PVC water hose

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	kg/m
12.1010.06	1/4"	-4	6,4	11,0	10,0 150	30,0 450	0,04
12.1010.08	5/16"	-5	7,9	13,0	10,0 150	30,0 450	0,10
12.1010.10	3/8"	-6	9,5	15,0	8,0 120	24,0 360	0,13
12.1010.12	1/2"	-8	12,7	17,0	7,0 110	20,9 330	0,15
12.1010.16	5/8"	-10	15,8	21,0	7,0 110	20,9 330	0,20
12.1010.19	3/4"	-12	19,1	25,0	6,0 90	18,0 270	0,26
12.1010.25	1"	-16	25,4	32,0	5,0 80	15,1 240	0,41
12.1010.32	1.1/4"	-20	32,0	42,0	4,0 60	12,0 180	0,70
12.1010.38	1.1/2"	-24	38,0	48,0	4,0 60	12,0 180	0,85

INNER TUBE: transparent PVC, highly flexible, resistant to abrasion, non-toxic, food quality

INTERNAL SURFACE: smooth, passage facilitator
REINFORCEMENT: 1 braid of high tensile synthetic yarn

OUTER TUBE: transparent PVC, highly flexible, resistant to ozone, UV rays and to abrasion
COLOR: transparent crystal

SAFETY FACTOR: 3:1
APPLICATION: food industry
TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)

BALFLEX BALCRISTAL NON TOXIC - 6 X 11 mm - WP 10 Bar / 145 PSI

BALCRISTAL AIR & WATER



12.1030.

PVC Flexible Hose for Air & Water

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	kg/m
12.1030.04	1/4"	-4	6,4	10,8	15,5 230	46,6 690	0,08
12.1030.05	5/16"	-5	7,9	12,8	15,5 230	46,6 690	0,10
12.1030.06	3/8"	-6	9,5	15,0	15,5 230	46,6 690	0,14
12.1030.08	1/2"	-8	12,7	18,0	15,5 230	46,6 690	0,16
12.1030.10	5/8"	-10	15,8	21,3	10,3 150	31,0 450	0,20
12.1030.12	3/4"	-12	19,1	25,0	10,3 150	31,0 450	0,26
12.1030.16	1"	-16	25,4	32,6	10,3 150	31,0 450	0,42
12.1030.20	1.1/4"	-20	32,0	45,0	10,3 150	31,0 450	0,70
12.1030.24	1.1/2"	-24	38,0	51,0	10,3 150	31,0 450	0,85
12.1030.32	2"	-32	51,0	65,0	10,3 150	31,0 450	1,00

INNER TUBE: transparent PVC, highly flexible, resistant to abrasion
INTERNAL SURFACE: smooth, passage facilitator

REINFORCEMENT: 1 braid of high tensile synthetic yarn
OUTER TUBE: transparent PVC, highly flexible, resistant to ozone, UV rays and to abrasion

COLOR: transparent crystal
COIL LENGTH: 50 / 100 meters
SAFETY FACTOR: 3:1
TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)

APPLICATION: industrial services of air and water, in compressors, pneumatic facilities, washing services and water or air conduction where it is important the visual follow-up of the operations

BALFLEX BALCRISTAL AIR & WATER - 16 X 21 mm - WP 15 Bar / 220 PSI



BALSTEEL SUCTION & DELIVERY NON-TOXIC



12.1227.

Flexible Hose of PVC Reinforced with Steel Spiral

#	inch	ID mm	OD mm	bar	PSI	KG kg/m
12.1227.012	1/2"	12,0	18,0	7,0	102	0,22
12.1227.014	9/16"	14,0	20,0	6,0	87	0,25
12.1227.016	5/8"	16,0	23,0	6,0	87	0,30
12.1227.018	11/16"	18,0	25,0	6,0	87	0,30
12.1227.020	3/4"	20,0	27,0	5,0	73	0,39
12.1227.022	7/8"	22,0	28,0	5,0	73	0,39
12.1227.025	1"	25,0	32,0	5,0	73	0,50
12.1227.030	1.3/16"	30,0	38,0	4,0	58	0,65
12.1227.032	1.1/4"	32,0	41,0	4,0	58	0,80
12.1227.035	1.3/8"	35,0	44,0	4,0	58	0,89
12.1227.038	1.1/2"	38,0	47,0	4,0	58	0,90
12.1227.040	1.9/16"	40,0	49,0	3,0	44	0,98
12.1227.045	1.3/4"	45,0	54,0	3,0	44	1,20
12.1227.050	2"	50,0	59,0	3,0	44	1,30
12.1227.060	2.3/8"	60,0	70,0	2,0	29	1,65
12.1227.065	2.1/2"	65,0	75,0	2,0	29	2,00
12.1227.070	2.3/4"	70,0	81,0	2,0	29	2,20
12.1227.075	3"	75,0	87,0	2,0	29	2,60
12.1227.080	3.1/4"	80,0	91,0	2,0	29	2,60
12.1227.090	3.1/2"	90,0	101,0	2,0	29	3,00
12.1227.100	4"	100,0	113,0	2,0	29	3,90
12.1227.125	5"	127,0	142,0	2,0	29	5,50
12.1227.150	6"	152,0	167,0	2,0	29	6,50

INNER TUBE: PVC, highly flexible, resistant to abrasion, weather and UV rays
INTERNAL SURFACE: smooth, passage facilitator

REINFORCEMENT: 1 wire helix of galvanized steel of high resistance
COLOR: transparent crystal

SAFETY FACTOR: 3:1
TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)

APPLICATION: food industry, water pumps, agriculture, fiber impulsion

BALFLEX BALSTEEL - FOOD QUALITY - S & D - 12 X 18 mm - WP 7 Bar / 100 PSI

BALFLAT 0.4 MPa



12.1040.

Flat PVC Hose for Water and Pesticides

#	inch	ID mm	OD mm	BAR PSI	BAR PSI	kg/m
12.1040.025	1"	25,0	28,0	4,0 60	12,0 175	0,15
12.1040.032	1.1/4"	32,0	35,0	4,0 60	12,0 175	0,17
12.1040.040	1.1/2"	38,0	41,0	4,0 60	12,0 175	0,20
12.1040.050	2"	51,0	54,0	4,0 60	12,0 175	0,22
12.1040.060	2.1/2"	63,0	67,5	4,0 60	12,0 175	0,30
12.1040.075	3"	76,0	80,0	4,0 60	12,0 175	0,36
12.1040.100	4"	102,0	106,0	4,0 60	12,0 175	0,56
12.1040.125	5"	127,0	132,0	4,0 60	12,0 175	0,75
12.1040.150	6"	152,0	157,0	4,0 60	12,0 175	0,90
12.1040.200	8"	204,0	209,0	4,0 60	12,0 175	1,60

INNER TUBE: PVC compound resistant to pesticides
INTERNAL SURFACE: smooth, passage facilitator

REINFORCEMENT: braid of reinforced polyester
OUTER TUBE: PVC compound, resistant to ozone, UV rays and to abrasion

COLOR: black inner tube / blue outer tube
COIL LENGTH: 100 meters
APPLICATION: construction and irrigation in the agriculture. Excellent resistance to pesticides

TEMPERATURE RANGE: -10°C (+14°F)
+55°C (+131°F)

BALFLEX BALFLAT - DN25 - 1" - WP 4 Bar / 60 PSI



BALFLAT 0.6 MPa



12.1041.

Flat PVC Hose for Water and Pesticides

#	inch				PSI		PSI	
		ID mm	OD mm	BAR		BAR		kg/m
12.1041.025	1"	0,17	270	6,0	90	18,0	265	0,17
12.1041.032	1.1/4"	0,20	270	6,0	90	18,0	265	0,20
12.1041.040	1.1/2"	0,25	270	6,0	90	18,0	265	0,25
12.1041.050	2"	0,28	270	6,0	90	18,0	265	0,28
12.1041.060	2.1/2"	0,38	270	6,0	90	18,0	265	0,38
12.1041.075	3"	0,46	270	6,0	90	18,0	265	0,46
12.1041.100	4"	0,80	260	6,0	90	18,0	265	0,80
12.1041.125	5"	1,00	260	6,0	90	18,0	265	1,00
12.1041.150	6"	1,30	250	6,0	90	18,0	265	1,30
12.1041.200	8"	1,80	240	6,0	90	18,0	265	1,80

INNER TUBE: PVC compound resistant to pesticides

INTERNAL SURFACE: smooth, passage facilitator

REINFORCEMENT: braid of reinforced polyester

OUTER TUBE: PVC compound, resistant to ozone, UV rays and to abrasion

COLOR: black inner tube / blue outer tube

COIL LENGTH: 100 meters

TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)

APPLICATION: construction and irrigation in the agriculture. Excellent resistance to pesticides

BALFLEX BALFLAT - DN25 - 1" - WP 6 Bar / 90 PSI

FLATDRILL 10 AIR & WATER



10.3030.

Very light weight – very easy to handle. FLAT Air & Water

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	kg/m
10.3030.12	3/4"	-12	19,0	23,0	2,5 350	7,5 1050	0,24
10.3030.16	1"	-16	25,0	29,0	2,5 350	7,5 1050	0,29
10.3030.20	1.1/4"	-20	32,0	36,2	2,5 350	7,5 1050	0,30
10.3030.24	1.1/2"	-24	40,0	44,0	2,2 280	6,0 840	0,30
10.3030.32	2"	-32	50,8	54,8	1,6 224	5,0 700	0,43
10.3030.40	2.1/2"	-40	65,0	69,0	1,6 224	5,0 700	0,59
10.3030.48	3"	-48	76,2	82,2	1,5 210	4,5 630	0,68
10.3030.64	4"	-64	101,6	107,6	1,3 182	4,0 560	0,93
10.3030.80	5"	-80	127,0	133,0	1,0 140	3,0 420	1,40
10.3030.96	6"	-96	152,4	160,4	1,0 140	3,0 420	1,59

INNER TUBE: yellow or black PVC / nitrile rubber compound
REINFORCEMENT: high tenacity polyester jacket

OUTER TUBE: black or yellow PVC / nitrile rubber compound
SAFETY FACTOR: 3:1

TEMPERATURE RANGE: -25°C (-13°F) +80°C (+176°F)

APPLICATION: air and water in mining and construction. Contractors for sludge / slurry injection. Resistant to hydrocarbon

BALFLEX FLATDRILL 10 - AIR & WATER - DN19 - 3/4" - WP 2.5 MPa / 350 PSI - BS 6391



FLATDRILL 20 AIR & WATER



10.3050.

Very light weight – very easy to handle. Higher level of NBR in the compound.

#	inch	SAE Dash	ID mm	OD mm	MPa PSI	MPa PSI	MPa PSI	kg/m
10.3050.12	3/4"	-12	19,0	24,0	2,0 300	6,0 900		0,17
10.3050.16	1"	-16	25,0	32,0	2,0 300	6,0 900		0,21
10.3050.20	1.1/4"	-20	32,0	36,6	2,0 300	6,0 900		0,30
10.3050.24	1.1/2"	-24	40,0	45,1	2,0 300	6,0 900		0,44
10.3050.32	2"	-32	50,8	57,8	2,0 300	6,0 900		0,65
10.3050.40	2.1/2"	-40	65,0	72,0	2,0 300	6,0 900		0,73
10.3050.48	3"	-48	76,2	83,2	2,0 300	6,0 900		0,93
10.3050.64	4"	-64	101,6	109,6	2,0 300	6,0 900		1,14
10.3050.80	5"	-80	127,0	135,0	2,0 300	6,0 900		1,57
10.3050.96	6"	-96	152,4	160,4	2,0 300	6,0 900		2,00
10.3050.128	8"	-128	208,0	216,0	2,0 300	6,0 900		2,36

INNER TUBE: yellow or black nitrile rubber compound
REINFORCEMENT: high tenacity polyester jacket

OUTER TUBE: yellow or black nitrile rubber compound
SAFETY FACTOR: 3:1

APPLICATION: air and water in mining and construction. Contractors for sludge / slurry injection. Resistant to hydrocarbon

TEMPERATURE RANGE: -25°C (-13°F)
+80°C (+176°F)

BALFLEX FLATDRILL 20 - AIR & WATER - DN19 - 3/4" - WP 2 MPa / 300 PSI - BS 6391

AIRPRESSOR AIR & WATER



10.1234.

Flexible hose of PVC compound for Air & Water 300 PSI

									
#	inch	SAE Dash	mm	mm	MPa	PSI	MPa	PSI	kg/m
10.1234.04	1/4"	-4	6,4	12,2	2,0	300	6,0	900	0,11
10.1234.05	5/16"	-5	7,9	14,0	2,0	300	6,0	900	0,13
10.1234.06	3/8"	-6	9,5	15,7	2,0	300	6,0	900	0,16
10.1234.08	1/2"	-8	12,7	18,5	2,0	300	6,0	900	0,18
10.1234.10	5/8"	-10	15,8	22,5	2,0	300	6,0	900	0,30
10.1234.12	3/4"	-12	19,1	26,0	2,0	300	6,0	900	0,29
10.1234.16	1"	-16	25,4	33	2,0	300	6,0	900	0,47

INNER TUBE: black PVC compound, highly flexible, resistant to abrasion
INTERNAL SURFACE: smooth, passage facilitator

REINFORCEMENT: 1 braid of high tensile synthetic yarn
OUTER TUBE: black PVC compound, resistant to ozone, UV rays and to abrasion

COIL LENGTH: 50 / 100 meters
SAFETY FACTOR: 3:1
TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)

APPLICATION: industrial services of air and water, in compressors, pneumatic facilities, washing services and for water and air conduction

BALFLEX AIRPRESSOR AIR & WATER - 1/4" - 6 X 12 mm - WP 2 MPa / 300 PSI

AUTOWASH CAR WASH



10.1223.

Flexible Hose of PVC compound with 2 braids Car Wash 1160PSI

#	inch	SAE Dash	 ID mm	 OD mm	 MPa	 PSI	 MPa	 PSI	 KG kg/m
10.1223.08	1/2"	- 8	12.7	24.0	8.0	1160	24.0	3480	0.5

INNER TUBE: PVC compound, highly flexible, resistant to abrasion
INTERNAL SURFACE: smooth, passage facilitator

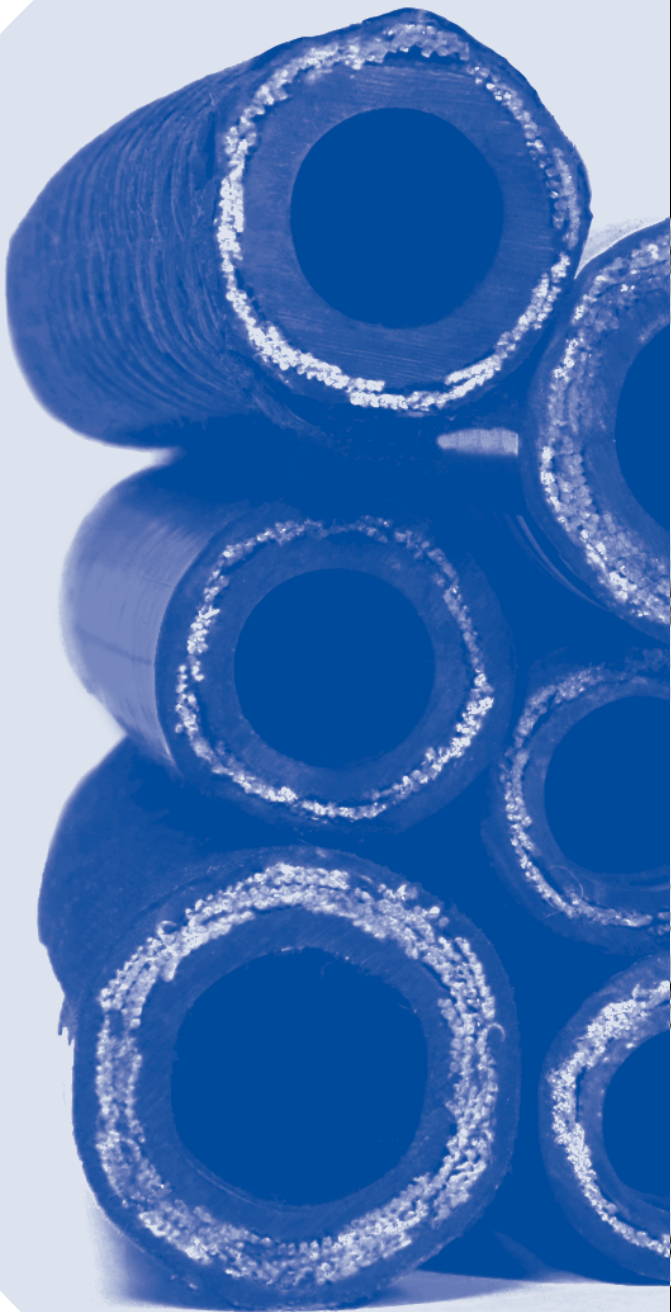
REINFORCEMENT: 2 braids of high tensile synthetic yarn
OUTER TUBE: PVC compound, highly flexible, resistant to ozone, UV rays and to abrasion

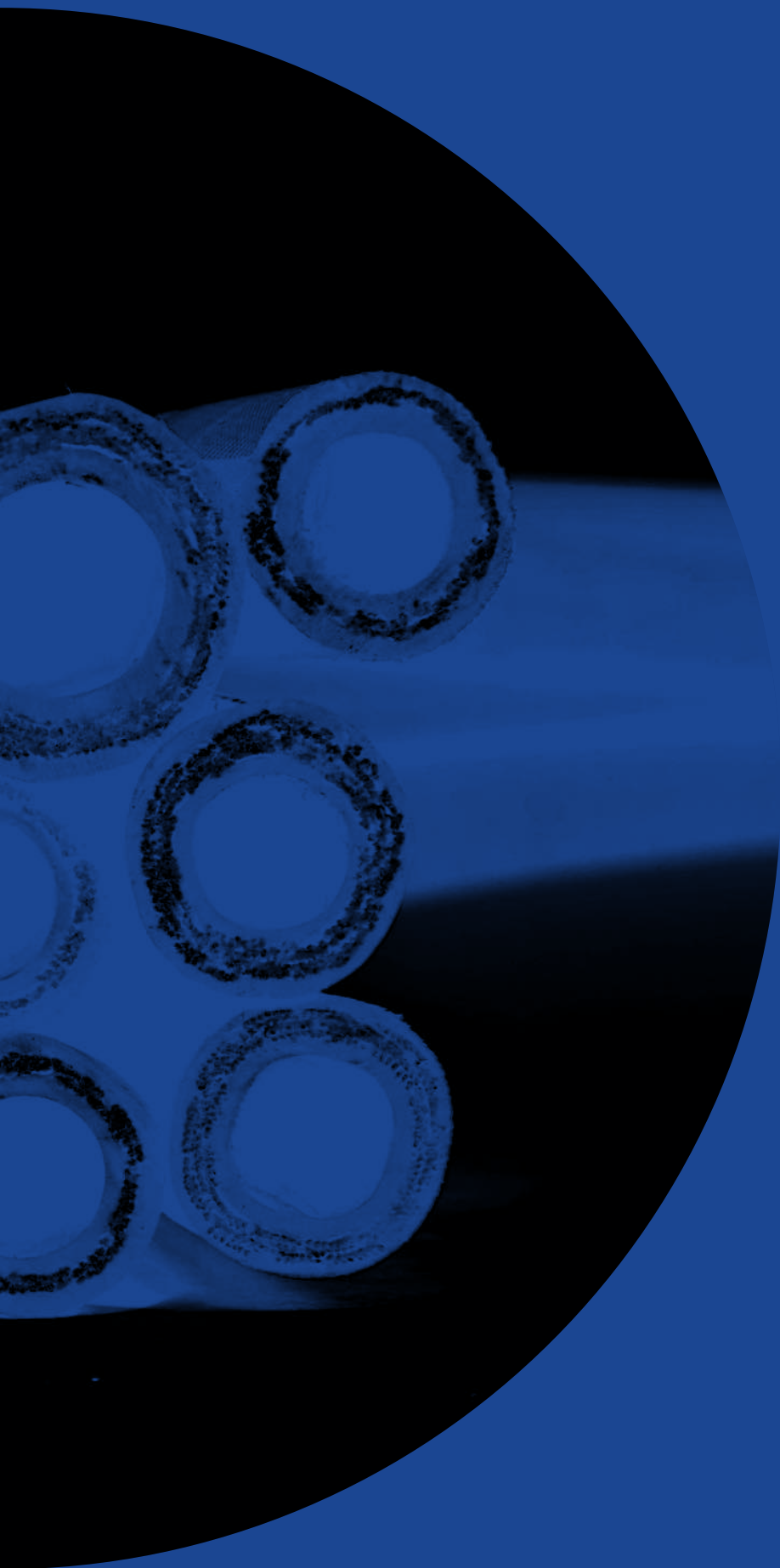
COLOR: black inner tube / blue outer tube
COIL LENGTH: 50 / 100 meters
SAFETY FACTOR: 3:1

TEMPERATURE RANGE: -10°C (+14°F) +55°C (+131°F)
APPLICATION: car washing services or industrial pressure washing

BALFLEX AUTOWASH - DN12 - 1/2" - WP 8 MPa / 1160 PSI

Appendix





Selection of hydraulic hoses

Working pressure

When selecting a hose it should be considered that it's working pressure should be higher than the maximum operating pressure of the system. For determination of the maximum operating pressure the system engineer should always consider possible pressure peaks during start up and inversion. Pressure peaks may be so short that they are only measurable with electronic devices. In suction applications, the capacity of the hose to withstand negative pressure is a decisive factor. Working pressures are given for working temperature of +20°C (+68°F). For increased temperatures a de-rating factor should be considered. The rated working pressures of Balflex® hydraulic hoses are summarized in table 1.

NOTE: Only an accurate knowledge of the pressure history of the service cycles of the equipment should lead to a sub-dimensioning of the hose by the engineer, bearing in mind the recommendations of SAE J 1927 standards.

Temperature

Excessive temperature is one of the main limitations of rubber and induces accelerated aging. Fluid temperature, either in motion or with the equipment stopped, should not exceed the maximum working temperature recommended for each hose. Likewise, surrounding temperature should be considered, specially when resulting from heat sources in the proximity of the hose assembly.

Air and Gaseous applications

Hose assemblies that are to be used in air and other gaseous applications should be pin-pricked, through the cover, prior to use.

These micro perforations allow gas that has permeated the inner tube of the hose to escape into the atmosphere. This prevents gases from accumulating and blistering the hose cover.

Fluid compatibility

Fluid compatibility with the hose and the coupling should be verified. Fluids that chemically attack the hose can lead to the contamination and obstruction of the hydraulic system and to premature failure of the hose. Handling gases requires special attention. As an orientation, the **Balflex®** Hydraulic Hose Fluid Compatibility Chart gives a classification of compatibility with some fluids. Consult **Balflex®** for compatibility of other fluids and rubber compounds. Whenever in doubt test before application.

Assembly geometry

Installation should guarantee that the minimum bend radius of the hose is respected and that bending occurs only in one plane. Hose length may suffer a variation between -4% and +2%, when submitted to pressure. The assembly length should provide enough margin for this change in length. Torsion and traction of the assembly must be avoided and protection and restraint of the assembly should be considered if there are obstacles to avoid. Mechanical loads acting on the assembly, including vibration, should be kept at a minimum. Free swivelling connectors should be used whenever torsion is present. Whenever hose failure may result in whipping (for example in gas applications) restraint through a steel cable to the connecting parts should be considered. When connecting a moving part, the free movement of the assembly without touching any surface should be assured. Positioning of the assembly should consider that risks of bodily injury and equipment damage through spillage or fluid ejection are minimized. Table 4 shows some correct and incorrect installation situations.

Permeability

All hoses present a certain degree of permeability, especially with gases and highly volatile liquids. The designer should consider the possibility that this permeability results in system or environment contamination.



Environmental compatibility

The hose and couplings compatibility with the working environment factors, as temperature, fire hazard, UV light, ozone, chemicals and electrical charges should be considered. External protection sleeves require an adequate assembly.

Dimensioning

Dimensioning of all components should guarantee that pressure loss is kept at a minimum, in order not to reduce power transmission and to avoid overheating or turbulence of the fluid that might lead to deterioration of the lining.

Electrical conductivity

To minimize the risk of Explosion or Eletrocution from electrical discharge through the assembly due to static electricity build up or non-conductivity. Whenever the hose is not unequivocally branded either non-conductive or anti-static, its electrical characteristics should always be considered as not controlled.

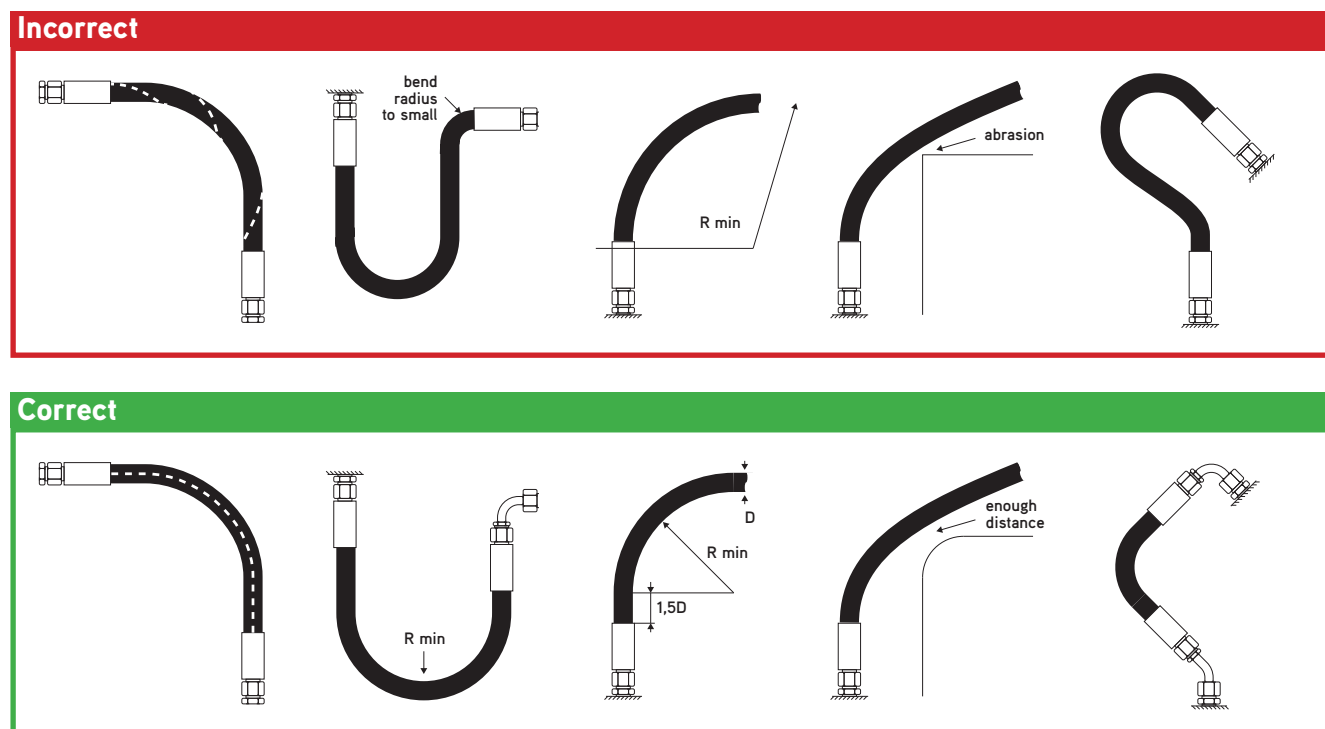
Abrasion

Accelerated external abrasion, through contact in motion or exposure to projected particles reduces drastically hose life and leads to premature failure through exposure of the reinforcement. For special applications Balflex® recommends hoses with special abrasion resistant rubber compounds or protection through adequate sleeves.

Couplings selection

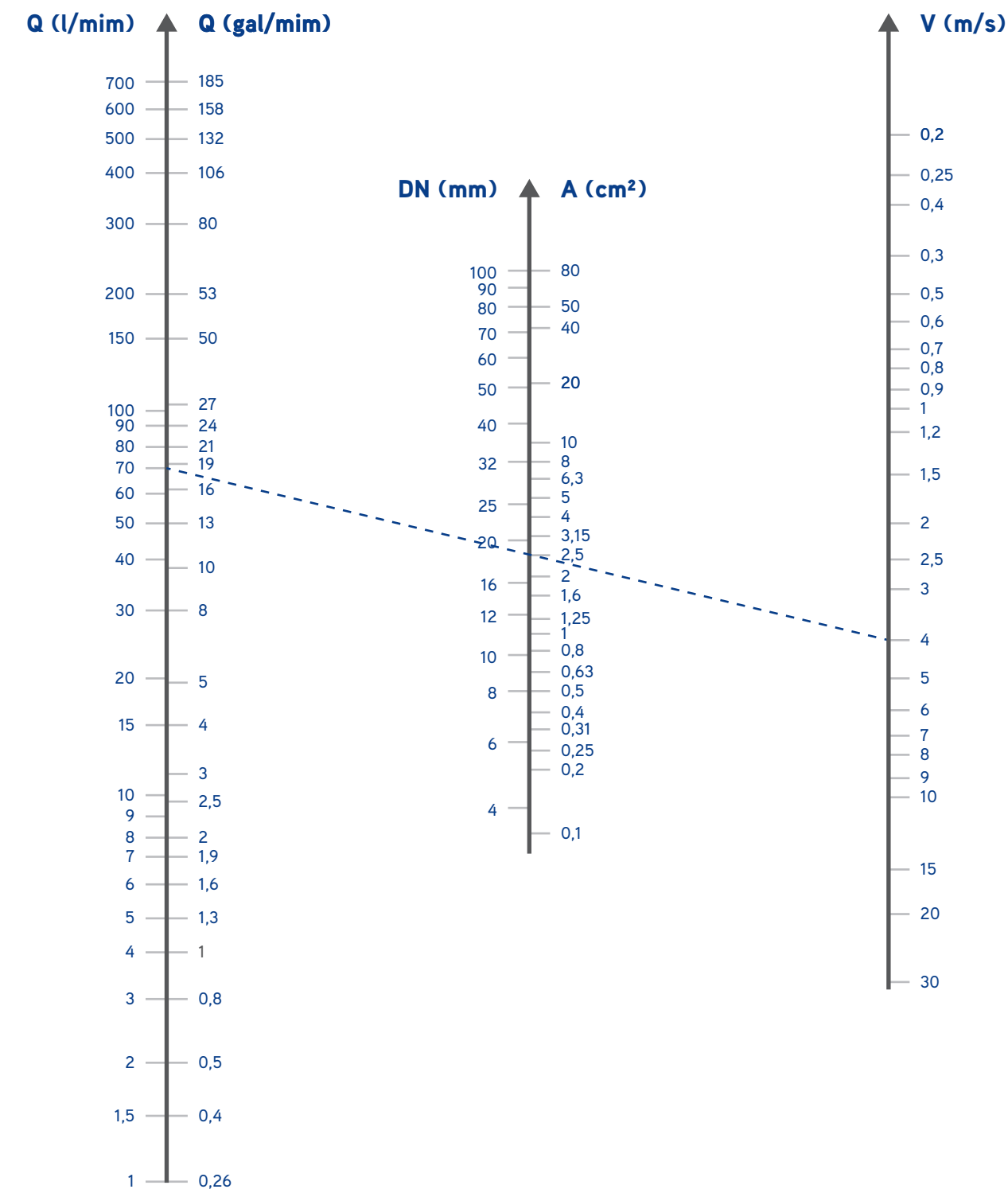
Couplings are a fundamental part of the geometry of hose assemblies. The compatibility of sealing and securement of the couplings to the system ports should be verified. The recommended coupling series for each hose should be used and the assembly instructions carefully followed. Inadequate couplings may damage the hose and lead to a premature failure.

Table 4: Examples of installation of hoses assemblies



Hose Selection Chart

This graphic helps finding the Nominal Hose Diameter-DN (mm) or the Dash Size. Firstly, one must know the Flow Rate and Fluid Velocity values that are being used. These two pieces of information must be found in the outer graphic lines. Then by linking these two values with a straight line, one should obtain the Nominal Hose Diameter-DN (mm) or the Gauge Diameter-A (cm²). The example below shows that for a fluid velocity of 4 meters per second and a flow rate of 70 liters per minute or 19 gallons per minute, one should choose a hose with DN of 19mm it means 3/4" hose or a dash hose -12.





Storage

Recommendation for correct storage

Rubber is subject, by nature, to change in physical and chemical properties. These changes, which normally occur over the course of time, according to the kind of rubber used, can be accelerated by one particular factor or by a combination of these. Reinforcement materials are also adversely affected by unsuitable conditions of storage. The following recommendations give some precautions to be taken to ensure the minimum deterioration to stored articles.

Storage life

Storage time should be reduced to the minimum through programmed warehousing rotation. When it is not possible to avoid long term storage, it is necessary that the user, as indicated in ISO 8331, carries out a complete check of the hose before its use, according to the following criteria:

- maximum two years storage for assembly;
- maximum four years storage for hoses.

Temperature and humidity

The best temperature for the storage of rubber hoses varies from 10 to 25 degrees centigrade. Hoses should not be stored at temperature above 40°C or below 0°C. When the temperature is below -15°C it is necessary to take precautions when handling. Hoses should not be stored near sources of heat nor in conditions of high or low humidity. A humidity level of a maximum of 65% is recommended.

Light

Hoses must be stored in dark places, avoiding direct sun light or strong artificial light. Should store rooms have windows or glass openings, these must be screened with suitable filters.

Oxygen and ozone

Hoses should be protected from circulating air by suitable packing or by storing in air-tight containers. Ozone has a particularly aggressive action on all rubber products, the storage area must not contain any ozone producing devices such as high voltage electrical tension wires, electric motors or other devices which can provoke sparks or electric arcs.

Contact with other materials

Hoses should not come into contact with solvents, fuels, oils, greases, volatile chemical mixtures, acids, disinfectants or other organic liquids in general. Furthermore, direct contact with some metals (for example manganese, iron, copper and its alloys) and relative mixture exercise harmful effects on some types of rubber. Contact with PVC and creosote impregnated timber or fabrics should also be avoided.

Heat sources

The temperature limits given in point dedicated to temperature and humidity must be respected. When this is impossible, it is necessary to use a thermic shield at a distance not less than one meter.

Electric or magnetic field

Variation in electric or magnetic fields must be eliminated in storage facilities as these could provoke currents in metal coupling, heating them. Similar fields could be caused by high-tension cables or high frequency generators.

Storage conditions

Hoses must be stored in a relaxed condition free from tension, compression or other deformation and not in contact with any objects that could potentially pierce or cut the hose. It is preferable to store hoses on special shelves or on dry surfaces. Coiled hoses must be stored horizontally avoiding piling. When this is not possible the height of the piles must be such to avoid permanent deformation of hoses stored underneath. The inside diameter of the coil, during the storage, must be such as to not compromise the performances of the product. In particular, this diameter must not have a value less than those indicated by the manufacturer. It is advisable to avoid storing coiled hoses on poles or hooks. Furthermore it is advisable to store hoses to be delivered straight, horizontally, without bending.

Rodents and insects

Hoses must be protected from rodents and insects. When such a risk is probable adequate precautions must be taken.

Marking or packaged items

It is advisable that hoses are always easy to identify even if packed.

Exit from storage

Prior to delivery, hoses must be checked for integrity and must correspond to the required use. After long storage if couplings are not clipped, swaged or built-in, it is necessary to check that locking collars are tight.

Return to storage

Hoses that have been used must be free from all substances prior to storage. Particular attention must be paid when abrasive or similar substances have been conveyed. After cleaning, the hose must be checked for integrity.

Handling

Hoses must be moved with care avoiding knocks, dragging over abrasive surfaces and compression. Hoses must not be pulled violently when twisted or knotted. Heavy hoses, normally delivered in a straight line, must be laid on special supports for transport. Should wood supports be used these must not be treated with creosote or painted with substances which could damage the rubber.

Bending radius

Installation underneath the minimum bending radius reduces the life of the hose considerably. Moreover it is necessary to avoid bending at fitting ends.

Torsion

Hoses are not manufactured to work in torsion, except for specific purposes.



Test Recommendations for Hydraulic Hose and Hose Assemblies

Age	Recommendations
Up to 3 years	Use without further testing.
3 to 5 years	A pressure test at 1.5x the working pressure needs to be performed on all hoses.
5 to 8 years	Selected samples should be subjected to burst tests, cold bend tests, electrical tests and impulse tests. All hoses should be tested to 1.5x working pressure.
Over 8 years	These should be destroyed.

Test Recommendations for Thermoplastic Hose and Hose Assemblies

Age	Recommendations
Up to 3 years	Use without further testing.
5 to 8 years	A pressure test at 1.5x the working pressure needs to be performed on all hoses and selected samples should be burst tested.
8 to 12 years	Selected samples should be subjected to burst tests, cold bend tests, electrical tests and impulse tests
Over 12 years	These should be destroyed.

Troubleshooting

Problem	Possible Causes	Solutions
End connector blow-off from the end of the hose	- Hose and/or fitting may be unsuitable for the application or wrong match - Hose maybe too short, twisted or that the radius of the bend is lower than the minimum bending radius	- Replace fittings and/or hose with more suitable alternatives - Increase the hose length and make sure no twisting occurs during operation
	- The hose maybe crimped to the wrong swaging dimension	- Check the assembly is being performed correctly. Make sure the crimping diameter is correct
	- Hose maybe incorrectly assembled or crimped incorrectly	- Check assembly is being performed correctly
	- Skiving of the hose maybe required or the skiving may have been performed incorrectly	- Check the specifications of the hose fittings/hose and whether skiving is required. Also find a skiving diameter and length from the manufacturer
Hose bursts on the outer surface of a bend	- It is highly likely that the hose exceeded the minimum bend radius and therefore the reinforced inner braid or spiral layer has opened, causing a weak point in the hose structure	- Increase the length of the hose assembly, use 90° or 45° fittings to remove the tight bends or alternatively use a more compact hose with a lower minimum bending radius or spiral layer has opened, causing a weak point in the hose structure
	- The pressure increased past the minimum burst pressure of the hose	- Replace the hose with one more suitable for the application or reduce the pressure within the system



Problem	Possible Causes	Solutions
Hose Liner deteriorates or swells, throughput is reduced, or leaks occur	- Hose liner is incompatible with the medium inside the hose	- Change the type of the hose to one more suitable for the medium within the hose
	- Temperature maybe outside the tolerance of the hose. This maybe the medium running through the hose or an environmental factor	- Change the type of hose to one more suitable for the temperature of the medium. If it is caused by the temperature of the surrounding environment, then a hose with a more temperature resistant cover maybe used
Hose has burst, and the wire reinforcement is rusted at the burst point	- Hose cover has been broken by trauma or abrasion	- Remove any routing issues that may cause trauma or abrasion. Possibly use a hose with a more resilient cover. Use some spiral wrap or other hose protection
	- Hose cover has been broken by extreme temperatures or chemical attack	- Choose a hose more suitable for the temperature and/or volatility of the medium
	- Hose cover has been broken by improper skiving of the hose	- Check that skiving is being performed correctly and to the right dimensions
	- Hose cover has been broken by gases trapped between the layers	- If gas is building up inside the cover, the hose may need to be perforated (pin-pricked). This lets the gas escape and prevents a pressure build up under the cover, which will eventually cause it to burst

Problem	Possible Causes	Solutions
Leaking occurs at the threaded connector	- Sealing surface or thread maybe affected by contamination	- Clean the connectors, and make sure no damage has occurred to the threads or the sealing cones
	- The connector may be loose, or conversely the connector may be over tightened	- Tighten the connectors or replace them as necessary
	- The O-ring or soft seal may have deteriorated	- Replace the seals if necessary
	- It may also be worthwhile to check that the sealing surfaces match. It could be possible that the threads match, but a sealing cone may not be present	- Change the adapters to a matching connection



Hydraulic Hose – General Safety Guidelines

Maintenance technicians, fabricators, end-users and installers need to be aware of the potential safety hazards when handling or even when in proximity to hydraulic hose assemblies. The following conditions can lead to personal injury and property damage:

1. ...—Always use hose in well-ventilated areas; some fluids may permeate the hose cover and create fume and/or fire hazards.
2. Hydraulic systems typically operate at very high pressures. Any leak of pressurized fluid can penetrate the skin, causing severe tissue damage and burns. One good approach is to use guards or shields around the hose assembly to reduce the risk of injury.
3. Whipping – under high operating pressures, the hose and/or fitting can come loose or blow, causing the end of the hose to whip with great force. Again, the hose assembly should be shielded, guarded and, whenever possible, secured to avoid injury or damage from whipping.
4. Hydraulic fluids are flammable and can explode with a source of ignition. To avoid possible injury or property damage, care should be taken to eliminate ignition sources and to properly route the hose assembly to minimize the chance of combustion.
5. Most hose is conductive. Some applications require use of non-conductive hose to avoid electrocution.
6. When hydraulic hose assemblies fail, the equipment it powers will fail, too, sometimes abruptly and without warning. Never work directly beneath hydraulically powered booms, shovels or other large, heavy pieces of equipment.
7. When air or gaseous materials are being conveyed, the correct hose should be used. A pin-perforated cover may be required. Perforations in the cover will prevent permeated gases from accumulating and blistering the cover. Check with your supplier for the correct hose specification.
8. Extreme care should be used when operating hand-held hydraulic tools where the operator is in proximity to the hydraulic hose assembly. The following steps should be taken to avoid injury:
 - a. Use strain relievers on each end of the hose to prevent kinking, excessive bending or stress on the hose at the coupling.
 - b. Never use the hose assembly to pull or carry the tool.
 - c. Exposed hose near the operator should be guarded in case hose assembly fails to prevent injury from high pressure or high temperature fluid.
 - d. Operators should be protected with the required safety clothing for the job and fluids being used.
 - e. The hose should be protected against any external damage.
9. Hose assemblies should be properly routed to avoid strain and the possibility of the hose bursting. Proper routing will also protect the assembly against flex fatigue, excessive heat or abrasion.
10. When selecting a hose style and assembly, check for hose compliance to all relevant government, industry, and safety standards or regulations.

High-Pressure Injection Hazards

High-pressure injection injuries (also known as grease gun injuries), are caused by the accidental injection of a foreign material, such as grease, oil, or solvent under pressure, through the skin and into the underlying tissue. This is analogous to medical techniques used to administer immunization shots without a needle.

A grease gun injury can cause serious delayed soft tissue damage and should be treated as a surgical emergency. Any person sustaining an injury of this sort should seek immediate medical attention, regardless of the appearance of the wound or its size.

Accidents involving injection injuries can occur when using any type of pressurized equipment. Two common cases in which petroleum products may be involved are accidents with pressurized grease guns or with hydraulic systems.

Pressurized grease guns are commonly used in service stations, garages and industrial plants. Typically, most service stations have grease guns operating at 500-1,000 kPa (90-150 psi) air pressure. Most modern industrial hydraulic systems operate in the range of 13 to 35 MPa (2,000 to 5,000 psi). A stream of oil ejected from a nozzle or leak under pressure of this magnitude has a velocity comparable to the muzzle velocity of a rifle bullet.

The most common sites of injury are the fingers or hand. However, any part of the body can be involved. With grease guns, especially, accidents usually occur when the injured person wipes the tip of the nozzle with his finger or the nozzle slips off the grease fitting while being held in place.

Grease may also be injected into the body from a leak in the grease line. In **hydraulic system accidents**, a leak in a hydraulic line can emit a high-velocity stream of oil and cause injury if it strikes a person. Workers are commonly injured when they try to stop the leak by covering it with their hand or finger.

Chemical irritation is not a major problem with most petroleum products because hydraulic oils and greases are generally non-irritating

and low toxicity to skin. However, the resulting bacterial infection can be a problem because of the damaged tissue and circulation in the wound, even though it has been surgically opened and the foreign material removed. One of the dangers from this type of injury is that it is not recognized quickly by the injured person as being serious. Often the initial wound may be very small and essentially painless. The injured person may even continue working. However, in every case in which a person receives this type of injury, he or she should stop work and get immediate medical treatment.

The following are some basic rules that must be observed:

DON'T

- ✗ Play around with or use a grease gun for practical jokes;
- ✗ Touch the end of a grease gun;
- ✗ Use any part of the body to test a grease gun for grease flow;
- ✗ Use any part of the body to stop a leak in a hydraulic line.

DO

- Routinely check all hoses for wear and possible weak spots;
- Handle a grease gun with respect for its power;
- Take special care when starting up a new hydraulic system to be sure that every part of the system can withstand the operating pressure.

IN CASE OF A GREASE GUN ACCIDENT, SEEK IMMEDIATE MEDICAL TREATMENT. Identify the grease or oil involved in the accident. Contact the supplier or the manufacturer to obtain the product's Material Safety Data Sheet (MSDS) about possible toxicity if a physician or hospital needs more information.



Hydraulic Hose and Electrocution

Although it is a mercifully infrequent occurrence, workers have been burned or electrocuted when using metal-reinforced hoses on aerial bucket trucks near energized power lines. Hydraulic hose, fluid and power lines are a deadly combination. Electrical contact between two power line phases through a metal-reinforced hydraulic hose can generate sufficient heat to rupture the hose and cause a fire. In addition, an electrocution hazard can be created if a metal-reinforced hose on the boom of a truck contacts an energized power line and allows current to flow through the truck chassis. Either scenario can quickly result in serious injury or death.

OSHA standards require that all hydraulic tools used on or near energized power lines or equipment be supplied with non-conducting hoses with sufficient strength for normal operating pressures. NIOSH recommends that the following precautions be taken to control the hazards associated with hydraulic hoses used on aerial bucket trucks:

- ✖ Employers should not install metal-reinforced hydraulic hoses on any part of the boom, aerial bucket or hydraulic attachments of aerial bucket trucks used near energized power lines;
- ✖ Employers should remove any metal-reinforced hoses currently installed on any part of the boom, aerial bucket or hydraulic attachments of aerial bucket trucks used to work near energized power lines. Before work begins, employers should require a competent person to conduct an initial and daily job site survey and inspect all equipment to identify hazards and implement appropriate controls;
- ✖ Employers should stress the importance of adherence to established safe work procedures. These include covering energized power lines in the immediate work area with insulating hoses or blankets, or de-energizing and grounding the lines before work begins. Workers should test de-energized power lines to verify that they have actually been de-energized;
- ✖ Employers should provide all workers with task-specific training that shows how each step controls the identified hazard;
- ✖ Employers should install all hydraulic hoses used in aerial buckets so that the flow of hydraulic fluid can be stopped immediately by the worker in the bucket. This objective can be achieved by incorporating a control valve into the hydraulic system in the aerial bucket. Manufacturers should continue research into the development of hydraulic fluids that are non-flammable and non-conducting.
- ✖ Employers should encourage equipment and tool manufacturers to design an independent coupling system to prevent the use of unsuitable hydraulic hoses on booms, aerial buckets or aerial bucket attachments. Labelling or colour coding hoses may also help workers who service this equipment.

These Guidelines reflect common practice procedures to be held for a Safe use of Hydraulic Fluid Power.

In no event shall Balflex® have any liability whatsoever to any person for any special, punitive, incidental or consequential damages been caused by mishandling of Hydraulic Fluid Power systems.

PRODUCTS LIMITED WARRANTY

The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

This warranty is in lieu of and excludes all other warranties, or conditions expressed, implied, statutory or otherwise created under applicable law including, but not limited to the warranty of merchantability and the warranty of fitness for a particular purpose.

In addition, this warranty shall not apply and will be null and void to any products or portions thereof that have been subject to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by balflex or used in any other manner inconsistent with any Balflex® instructions or specifications. Balflex® disclaims any liability for any hose assemblies which have not been produced with in conformance with Balflex® assembly recommendations and parts.

In no event shall balflex have any liability whatsoever to any person, including without limitation, any immediate buyer, purchaser or other third party, for any special, punitive, incidental or consequential damages, including without limitation, profit loss or customer loss, loss or damage to physical property of customer or any other person and loss of anticipated revenue, profits, goodwill, savings or other economic loss of customer or any other person.

Specification subject to change without prior notice. Errors and omission excluded.



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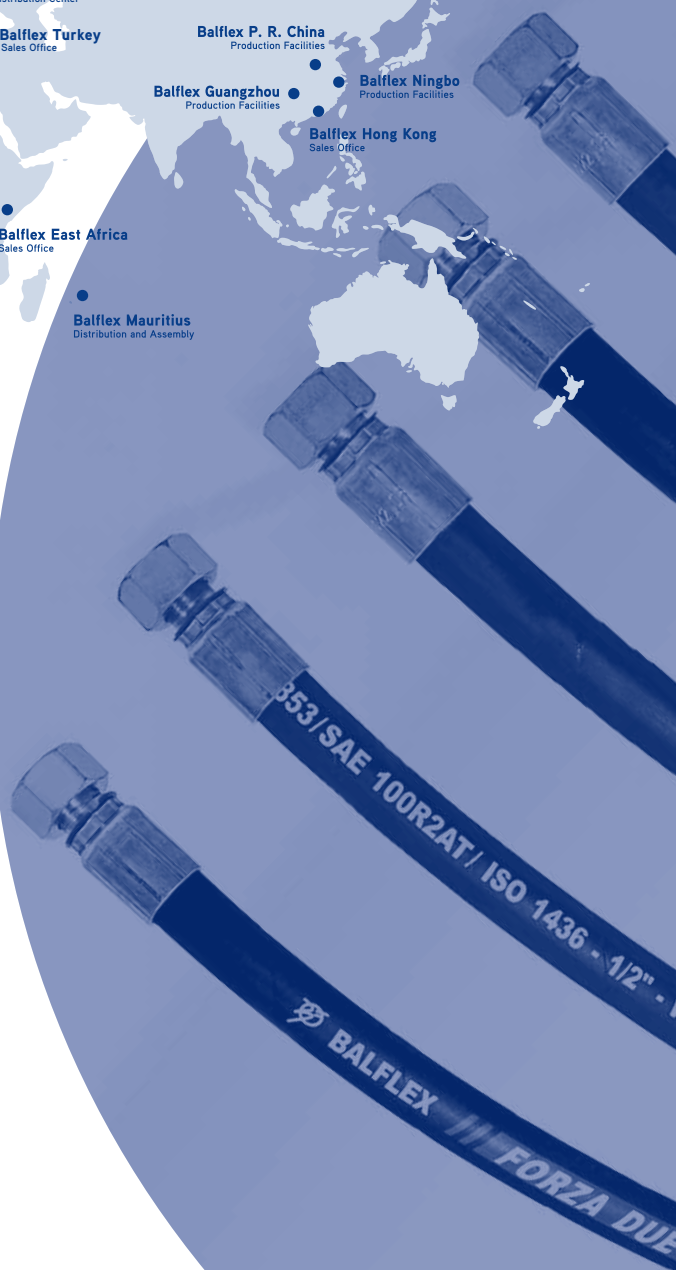
An ISO 9001:2015 Company:



Cofinanciado por:



UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional



Balflex[®]



**HYDRAULIC
FITTINGS
CATALOG**

European Technology

*Established since 1963, **Balflex®** is a European international group of companies dedicated to the design, production, assembly and distribution of all types of high-tech products for conduction of fluids, measuring of pressure and power transmission at very high quality level.*

*6 decades of know-how and expertise in this field, makes **Balflex®** the first choice for the mining, agriculture, off-shore and construction industries.*

*Today the **Balflex®** Group covers worldwide users through our own company's production facilities, branches and net of certified distributors.*

Balflex® valorizes the inside meaning of the words we use: **Excellence** the quality of being outstanding; **Innovation** the action or process of innovating; **Partnership** cooperation relationship between two or more people, having in mind a common goal; **Tradition** way of thinking or acting, inherited from previous generations.





Quality

Quality is very important for us. We have fully equipped, modern laboratories and equipment, employing the industries most experienced personnel.

Balflex® has earned various certifications for our Management Systems and Products. This reliable and consistent approach has allowed us to achieve our ISO 9001:2015 certification. At Balflex® quality and service always comes first. We are dedicated to continue the development of new products with a strong emphasis on quality.

Member of:



Certified by:



Hoses vs Ferrule Compatibility Chart

Hose vs Ferrule		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"
		- 02	- 03	- 04	- 05	- 06	- 08	- 10	- 12	- 16	- 20	- 24	- 32	- 40	- 48
Balflex®	Versions	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®	Balfit®
TEXMASTER 1			20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					
TEXMASTER 2			20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					
TEXMASTER 3				20.201	20.201	20.201	20.202	20.202	20.202	20.301	20.201	20.201	20.201		
FORZA UNO	SHARK SKIN TROPIC ARMOURGUARD		20.204 20.101	20.302 20.101	20.302 20.101	20.302 20.101	20.302 20.202	20.302 20.202	20.302 20.202	20.204 20.301	20.204 20.101	20.204 20.101	20.204 20.101	20.204	20.204
FORZA DUE	SHARK SKIN TROPIC ARMOURGUARD		20.204 20.201	20.302 20.201	20.302 20.201	20.302 20.201	20.302 20.202	20.302 20.202	20.302 20.202	20.204 20.302	20.204 20.201	20.204 20.201	20.204 20.201	20.204	20.204
BALPAC PREMIUM	SHARK SKIN TROPIC ARMOURGUARD			20.302	20.302	20.302	20.302	20.302	20.302	20.204					
IMPACTUS 5K	SHARK SKIN ARMOURGUARD			20.302	20.302	20.302	20.302	20.302	20.302	20.204					
IMPACTUS 6K	SHARK SKIN ARMOURGUARD			20.302	20.302	20.302	20.302	20.302	20.302	20.204					
BALPAC 3000	SHARK SKIN TROPIC ARMOURGUARD			20.305	20.305	20.305	20.305	20.302	20.302	20.204					
2-MAX				20.302		20.302	20.302								
3-MAX						20.200	20.200	20.200	20.200	20.200					
BALWASH 1W	SHARK SKIN			20.302 20.101	20.302 20.101	20.302 20.101	20.302 20.202								
BALWASH 2W	SHARK SKIN			20.302 20.201	20.302 20.201	20.302 20.201	20.302 20.202								
BALMASTER 4SP	ARMOURGUARD			20.200		20.200 20.NS4	20.200 20.NS4	20.200 20.NS4	20.200 20.NS4	20.200 20.NS4	20.200 20.NS4	20.200 20.NS4	20.200 20.NS4		
BALMASTER R12	ARMOURGUARD					20.NS4	20.NS4	20.NS4	20.NS4	20.NS4	20.NS4	20.NS4	20.NS4		



Hose vs Ferrule		1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"
		- 02	- 03	- 04	- 05	- 06	- 08	- 10	- 12	- 16	- 20	- 24	- 32	- 40	- 48
Balflex®	Versions	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®	Balfliit®
POWERSPIR 4SH	ARMOURGUARD								20.NS4 20.406	20.NS4 20.406	20.NS4 20.405	20.NS4 20.405	20.NS4 20.405		
POWERSPIR R13	ARMOURGUARD								20.NS4 20.406	20.NS4 20.406	20.406	20.406	20.406		
POWERSPIR R15	ARMOURGUARD								20.NS4 20.406	20.NS4 20.406	20.406	20.406	20.406		
BALFLON R14	BLACK	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					
BALFLON CONVOLUTED	BLACK			20.107	20.107	20.TFC	20.TFC	20.TFC	20.TFC	20.TFC	20.TFC	20.TFC	20.TFC		
ZETAFLEX	TWIN NON CONDUCTIVE	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					
ZETAFLEX STEEL	TWIN	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					
OMEGAFLEX PLUS	TWIN NON CONDUCTIVE	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107	20.107					

Hose Fittings Pressure Ratings

For each type of fitting there is a maximum working pressure recommended in table below. Whenever information is not available, contact the manufacturer.

Inch Fittings (size)													
Maximum Working pressure (MPa/psi) – safety factor 4:1													
Description	Part Number	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
NPTF Male	XX.0400 XX.0410 XX.0490	34.5 5000		27.6 4000		20.7 3000	20.7 3000		17.2 2500	13.8 2000	7.9 1150	6.9 1000	6.9 1000
BSP Male	XX.0100	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female	XX.3012 XX.3042 XX.3092	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female with O-ring	XX.3112 XX.3142 XX.3192			45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
JIC 37° Male	XX.2000			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
JIC 37° Swivel Female	XX.4012 XX.4042 XX.4092 XX.4H12			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
Flange 3000 PSI	XX.7013 XX.7043 XX.7093						34.5 5000	34.5 5000	34.5 5000	34.5 5000	27.6 4000	20.7 3000	17.2 2500
Flange 6000 PSI	XX.7016 XX.7046 XX.7096						41.4 6000	41.4 6000		41.4 6000	41.4 6000	41.4 6000	41.4 6000
ORFS Male	XX.4000			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	
ORFS Female	XX.4414 XX.4444 XX.4494 XX.44H4			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	

The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.

With our thick Zinc coating, Cr-VI free zinc plating process, a high corrosion resistance on all our carbon steel products is achieved, in compliance with EU and USA regulation, as well as with all relevant fitting standards, such as SAE J516 and DIN EN ISO 12151.

Due to exclusion of hexavalent chromium, we assure an environment friendly final product, without compromising the corrosion resistance.

Our zinc-plating when tested according to EN ISO 9227 guarantees minimum 240 hours, before appearance of corrosion.

(The presented values are measured before crimping operation)



Metric Tube (mm) – Light Serie “L”											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	15	18	22	28	35	42
Metric Male	XX.1000	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450
Metric Swivel Female with O-ring	XX.5013 XX.5043 XX.5093	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450

Metric Tube (mm) – Heavy Serie “S”											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	14	16	20	25	30	38
Metric Male	XX.1100	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625
Metric Swivel Female with O-ring	XX.5113 XX.5143 XX.5193	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625

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(The presented values are measured before crimping operation)

The Correct Method to Fit Female Swivel Ends

To ensure a leakproof seal between swivel female hose ends shown in this catalogue and the appropriate adaptors it is necessary to follow the procedure below which is different from hydraulic tube assembly (This instruction is not valid for ORFS fittings).

Metal-to-metal seal

Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Soft seal by O-ring

Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Ensure that in all cases the hose is correctly aligned before tightening the nut onto the corresponding adaptor.

Spanner Torque Values

Metric swivel female			
 Thread Metric	Tube O.D.	Nm	
		nominal	min. - max.
M 12x1,5	06L	16	15 - 17
M 14x1,5	08L	16	15 - 17
M 16x1,5	10L	26	25 - 28
M 18x1,5	12L	37	35 - 39
M 22x1,5	15L	47	45 - 50
M 26x1,5	18L	89	85 - 94
M 30x2	22L	116	110 - 121
M 36x2	28L	137	130 - 143
M 45x2	35L	226	215 - 237
M 52x2	42L	347	330 - 363
M 14x1,5	06S	26	25 - 28
M 16x1,5	08S	42	40 - 44
M 18x1,5	10S	53	50 - 55
M 20x1,5	12S	63	60 - 66
M 22x1,2	14S	79	75 - 83
M 24x1,5	16S	84	80 - 88
M 30x2	20S	126	120 - 132
M 36x2	25S	179	170 - 187
M 42x2	30S	263	250 - 275
M 52x2	38S	368	350 - 385

BSP swivel female			
 Thread BSPP	Size	Nm	
		style A	style B
G1/8	-2	-	10
G1/4	-4	20	20
G3/8	-6	35	35
G1/2	-8	50	60
G5/8	-10	60	70
G3/4	-12	85	115
G1	-16	115	140
G1.1/4	-20	190	210
G1.1/2	-24	240	290
G2	-32	300	400



JIC 37° Swivel Female		
		
Thread UNF	Size	Nm +10% -0%
7/16-20	-4	15
1/2-20	-5	19
9/16-18	-6	24
3/4-16	-8	49
7/8-14	-10	77
1.1/16-12	-12	107
1.5/16-12	-16	147
1.5/8-12	-20	172
1.7/8-12	-24	215
2.1/2-12	-32	332

ORFS Swivel Female		
		
Thread UNF	Size	Nm +10% -0%
9/16-18	-4	25
11/16-18	-6	40
13/16-16	-8	55
1-14	-10	60
1.3/16-12	-12	90
1.5/16-12	-14	115
1.7/16-12	-16	125
1.11/16-12	-20	170
2-12	-24	200

The torque values for other materials are as follows:

- **Brass fittings and adapters**
65% of the torque value for steel.
- **Stainless steel**
use high side of the torque range for steel.
threads to be lubricated for these materials.
- **Dissimilar metals**
use torque value designated for the lower of the two materials.
- **All fittings are dry except as noted above.**

Note

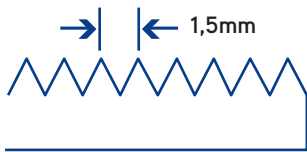
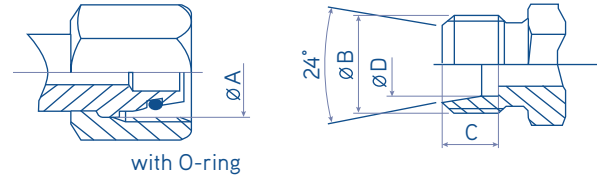
Values given in tables are typical to achieve the recommended assembly methods when fitting material is steel zinc plated. For other materials different values will be applicable.

Quick identification of hydraulic connectors

DIN 24° light (L) and heavy series (S) with O-ring

The male has a 24° sealing angle cone seat with straight metric threads.
The female has a 24° convex cone with O-ring and a swivel straight metric threaded nut.

Standard: ISO 12151-2, ISO 8434-1, ISO 8434-4



Thread

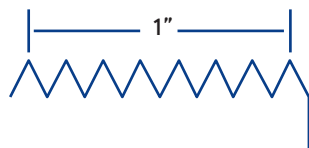
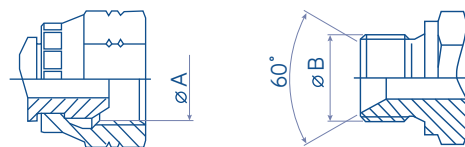
Defined by the outside diameter and the pitch
(distance between 2 crests of the thread)
example: M22x1.5 - pitch of 1.5mm.

Tube O.D. (mm)	Tube type	Thread metric	ØA (mm)	ØB (mm)	C (mm)	ØD (mm)
6.00	6L	M12x1.5	10.50	12.00	7.00	6.20
6.00	6S	M14x1.5	12.50	14.00	7.00	6.20
8.00	8L	M14x1.5	12.50	14.00	7.00	8.20
8.00	8S	M16x1.5	14.50	16.00	7.00	8.20
10.0	10L	M16x1.5	14.50	16.00	7.00	0.20
10.0	10S	M18x1.5	16.50	18.00	7.50	0.20
12.0	12L	M18x1.5	16.50	18.00	7.00	2.20
12.0	12S	M20x1.5	18.50	20.00	7.50	2.20
14.0	14S	M22x1.5	20.50	22.00	8.00	14.20
15.0	15L	M22x1.5	20.50	22.00	7.00	15.20
16.0	16S	M24x1.5	22.5	24.0	8.5	16.20
18.0	18L	M26x1.5	24.5	26.0	7.50	18.20
20.0	20S	M30x2.0	27.9	30.0	10.50	20.20
22.0	22L	M30x2.0	27.9	30.0	7.50	22.20
25.0	25S	M36x2.0	33.9	36.0	12.00	25.20
28.0	28L	M36x2.0	33.9	36.0	7.50	28.20
30.0	30S	M42x2.0	39.9	42.0	13.50	30.20
35.0	35L	M45x2.0	42.9	45.0	10.50	35.30
38.0	38S	M52x2.0	49.9	52.0	16.00	38.30
42.0	42L	M52x2.0	49.9	52.0	11.00	42.30



British Standard Pipe Parallel (BSPP)

Referred to as Whitworth threads, the BSP thread type fittings seal use metal-to-metal angled surfaces or a combination of metal-to-metal and an O-ring. The angle of the sealing surfaces is 60° for both forms. Standard: BS 5200 ISO 12151-6



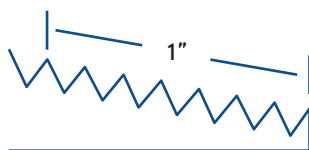
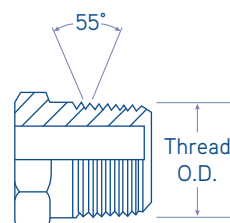
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSP	Ø A (mm)	Ø B (mm)
6	10	- 2	1/8" -28	8.60	9.70
8	13	- 4	1/4" -19	11.50	13.20
12	17	- 6	3/8" -19	14.90	16.70
15	21	- 8	1/2" -14	18.60	20.90
18	23	- 10	5/8" -14	20.60	22.90
20	27	- 12	3/4" -14	24.10	26.40
26	34	- 16	1" -11	30.3	33.20
33	42	- 20	1 1/4" -11	38.90	41.90
40	49	- 24	1 1/2" -11	44.90	47.80
50	60	- 32	2" -11	56.70	59.60

British Standard Pipe Tapered (BSPT)

Fittings seal through the thread interface mechanism. Care should be taken not to confuse the BSPT fitting with the NPTF male fitting. BSPT has a 55° thread angle.



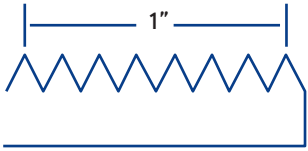
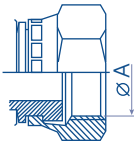
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	Ø A (mm)
5	10	- 2	1/8" -28	9.73
8	13	- 4	1/4" -19	13.16
12	17	- 6	3/8" -19	16.66
15	21	- 8	1/2" -14	20.96
20	27	- 12	3/4" -14	26.44
26	34	- 16	1" -11	33.25
33	42	- 20	1 1/4" -11	41.91
40	49	- 24	1 1/2" -11	47.80
50	60	- 32	2" -11	59.61
50	60	- 32	2" -11	56.70

BSP Flat Seal

These fittings have BSP parallel threads but the sealing surface is flat. The seal is made when the composite seal is compressed against the female flat face.

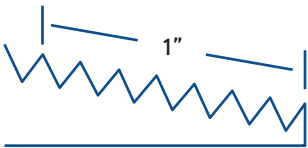
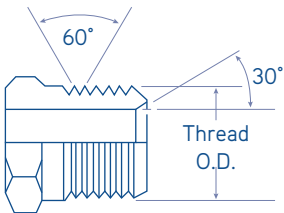


Thread
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	ØA (mm)
6	10	- 2	1/8" -28	8.60
8	13	- 4	1/4" -19	11.50
12	17	- 6	3/8" -19	14.90
15	21	- 8	1/2" -14	18.60
18	23	- 12	5/8" -14	20.60
20	27	- 16	3/4" -14	24.10
26	34	- 20	1" -11	30.30
33	42	- 20	1.1/4" -11	38.90
40	49	- 24	1.1/2" -11	44.90
50	60	- 32	2" -11	56.70

Dry Seal American Standard Taper Pipe Thread (NPTF)

This type of fitting uses the thread interface to seal and as such has a tapered thread that deforms and forms the seal. They have 30° sealing angle surfaces, forming a 60° inverted (concave) seat. Standard: SAE J476 / ANSI/ASME B1.20.1



Thread
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

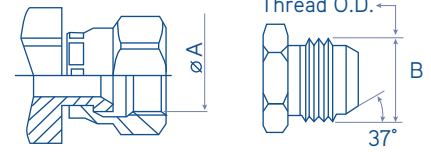
Size	Thread NPTF	ØA (mm)
- 2	1/8" -27	10.24
- 4	1/4" -18	13.61
- 6	3/8" -18	17.05
- 8	1/2" -14	21.22
- 12	3/4" -14	26.56
- 16	1" -11.5	33.22
- 20	1.1/4" -11.5	41.98
- 24	1.1/2" -11.5	48.05
- 32	2" -11.5	60.09



SAE JIC 37°

Commonly referred to as JIC fittings, these metal-to-metal sealing type fittings have a 37° flare (sealing surface angle) and straight United National Fine Threads (UNF). The original design specification for the fittings comes from the Society of Automotive Engineers (SAE).

Standard: ISO 12151-5, ISO 8434-2, SAE J516

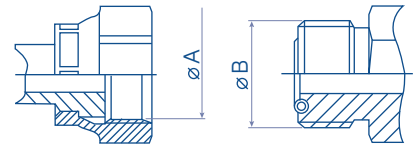


Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	7/16" -20	10.00	11.10
5/16"	- 5	1/2" -20	11.60	12.70
3/8"	- 6	9/16" -18	13.00	14.30
1/2"	- 8	3/4" -16	17.60	19.10
5/8"	- 10	7/8" -14	20.50	22.20
3/4"	- 12	1.1/16" -12	24.60	27.00
7/8"	- 14	1.3/16" -12	28.30	30.10
1"	- 16	1.5/16" -12	31.30	33.30
1.1/4"	- 20	1.5/8" -12	39.20	41.30
1.1/2"	- 24	1.7/8" -12	45.60	47.60
2"	- 32	2.1/2" -12	61.50	63.50

O-Ring Face Seal (ORFS)

This fitting type have high level of sealing and good vibration resistance. The fittings use the O-ring compression mechanism to seal. The female fittings have flat faces and straight threaded UNF swivel nuts. The male fittings have the O-ring in a groove in the flat face.

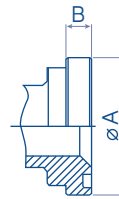
Standard: ISO 12151-1, ISO 8434-3, SAE J516



Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	9/16" -18	13.00	14.20
3/8"	- 6	11/16" -16	15.90	17.50
1/2"	- 8	13/16" -16	19.10	20.60
5/8"	- 10	1" -14	23.80	25.40
3/4"	- 12	1.3/16" -12	28.20	30.10
1"	- 16	1.7/16" -12	34.15	36.50
1.1/4"	- 20	1.11/16" -12	40.50	42.90
1.1/2"	- 24	2" -12	48.80	50.80

Flange 3000 psi and 6000 psi

The sealing mechanism is through compression of the O-ring in the face of the flange head against the surface of the port connection. The flange fittings are generally separated into two pressure classes referred to as 21.0 MPa/ 3000 psi (SFL) or 42.0 MPa/ 6000 psi (SFS). In addition to these flanges, customer-specific Komatsu and CATERPILLAR flanges can also be found in the market. Standard: ISO 6162-1, ISO 6162-2

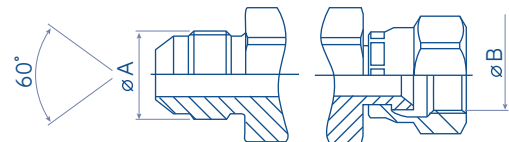


Flange (inch)	Size	3000 psi			6000 psi			SuperCat		
		ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)
1/2"	- 8	30.18	6.73	18.64x3.53	31.75	7.75	18.64x3.53	31.75	14.22	18.64x3.53
5/8"*	- 10	34.25	6.00	21.70x3.53						
3/4"	- 12	38.10	6.73	24.99x3.53	41.28	8.76	24.99x3.53	41.28	14.22	24.99x3.53
1"	- 16	44.45	8.00	32.92x3.53	47.63	9.53	32.92x3.53	47.63	14.22	32.92x3.53
1.1/4"	- 20	50.80	8.00	37.69x3.53	53.98	10.29	37.69x3.53	53.98	14.22	37.69x3.53
1.1/2"	- 24	60.33	8.00	47.22x3.53	63.50	12.57	47.22x3.53	63.50	14.22	47.22x3.53
2"	- 32	71.42	9.53	56.74x3.53	79.38	12.57	56.74x3.53	79.38	14.22	56.74x3.53
2.1/2"	- 40	84.12	9.53	69.44x3.53						
3"	- 48	101.60	9.53	85.32x3.53						

* Although not in the SAE or the ISO standard the size -10 (5/8) flange head is gaining popularity. This flange is often found on Komatsu equipment or hydrostatic drives in agricultural machines.

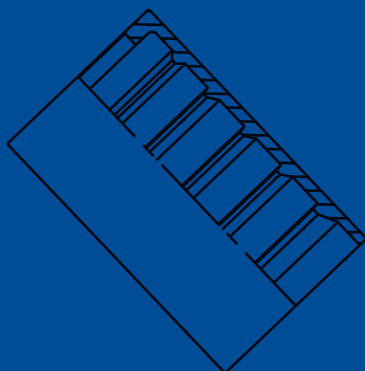
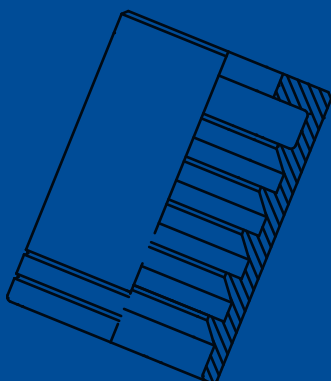
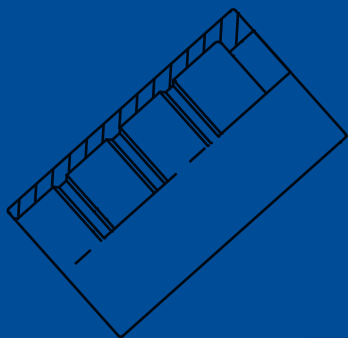
Japanese Industrial Standard (JIS)

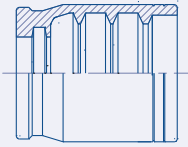
The Japanese Industrial Standard (JIS) uses a 30° sealing angle seat and either British Standard Pipe Parallel or metric threads.



Thread metric	ØA (mm)	ØB (mm)	Thread BSP	ØA (mm)	ØB (mm)
M14X1.5	12.50	14.00	1/4" -19	11.50	13.20
M18X1.5	16.50	18.00	3/8" -19	14.90	16.70
M16X1.5	14.50	16.00	1/2" -14	18.60	20.90
M18X1.5	16.50	18.00	3/4" -14	24.10	26.40
M22X1.5	20.50	22.00	1" -11	30.30	33.20
M24X1.5	22.50	24.00			
M30X1.5	28.50	30.00			
M33X2.0	31.00	33.00			
M42X2.0	40.00	42.00			

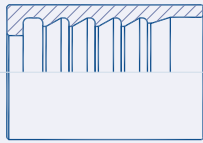






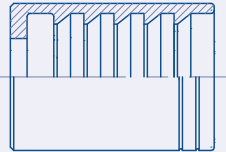
**NON SKIVE Balfit®
1 & 2 Wire Braid Ferrule**
20.204 / 20.302

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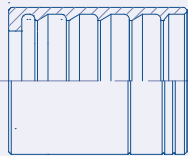
**NON SKIVE Balfit®
1 Wire Braid Ferrule**
20.101 / 20.301

pag. 20



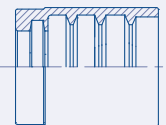
**NON SKIVE Balfit®
2 Wire Braid Ferrule**
20.201 / 20.302

pag. 20



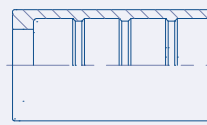
**NON SKIVE Balfit®
1 & 2 Wire Braid Ferrule**
20.202

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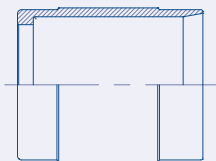
**NON SKIVE Balfit®
1 Wire Braid Ferrule**
20.305

pag. 21



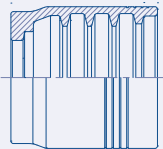
**NON SKIVE Balfit® Textile Braid,
Thermoplastic & PTFE Ferrule**
20.107

pag. 22



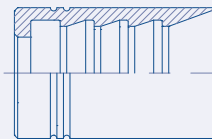
**NON SKIVE Balfit®
PTFE Convoluted Ferrule**
20.TFC

pag. 23



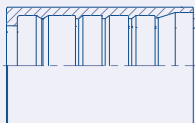
**NON SKIVE Balfit®
4 Spiral Ferrule**
20.NS4

pag. 23



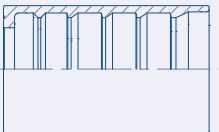
**EXTERNAL SKIVE Balfit®
2 Wire Braid & 4 Spiral Ferrule**
20.200

pag. 24



**DOUBLE SKIVE Balfit®
4 Spiral Ferrule**
20.405

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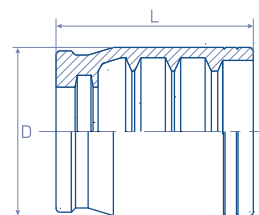
**DOUBLE SKIVE Balfit®
4 & 6 Spiral Ferrule**
20.406

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NON SKIVE Balfit® 1 & 2 Wire Braid Ferrule

20.204. / 20.302.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.204.03	- 3	4,8	3/16"	26.0	21.0
20.302.04	- 4	6,3	1/4"	25.8	22.0
20.302.05	- 5	8,0	5/16"	27.4	24.0
20.302.06	- 6	9,5	3/8"	30.0	26.0
20.302.08	- 8	12,7	1/2"	32.5	30.0
20.302.10	- 10	16,0	5/8"	35.0	34.0
20.302.12	- 12	19,0	3/4"	40.0	38.0
20.204.16	- 16	25,4	1"	47.6	46.3
20.204.20	- 20	32,0	1-1/4"	55.0	58.0
20.204.24	- 24	38,0	1-1/2"	60.3	65.0
20.204.32	- 32	50,8	2"	62.7	78.0
20.204.40	- 40	63,0	2-1/2"	72.2	95.0
20.204.48	- 48	76,0	3"	80.0	110.0

MATERIAL: Carbon Steel

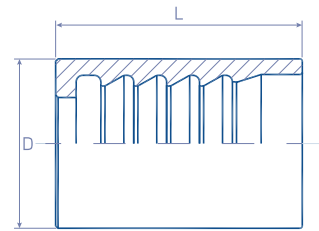
FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO; FORZA UNO "SHARK SKIN"; FORZA UNO "TROPIC"; FORZA DUE; FORZA DUE "SHARK SKIN"; FORZA DUE "TROPIC"; BALPAC PREMIUM; BALPAC PREMIUM "SHARK SKIN"; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000; BALPAC 3000 "SHARK SKIN"; 2-MAX JACK; BALWASH 1W; BALWASH 2W

NON SKIVE Balfit® 1 Wire Braid Ferrule

20.101. / 20.301.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.101.03	- 3	4,8	3/16"	26.0	19.0
20.101.04	- 4	6,3	1/4"	29.0	19.8
20.101.05	- 5	8,0	5/16"	30.0	22.0
20.101.06	- 6	9,5	3/8"	31.6	24.0
20.301.16	- 16	25,4	1"	50.0	45.0
20.101.20	- 20	32,0	1.1/4"	60.0	53.0
20.101.24	- 24	38,0	1.1/2"	73.0	58.0
20.101.32	- 32	50,8	2"	77.0	73.0

MATERIAL: Carbon Steel

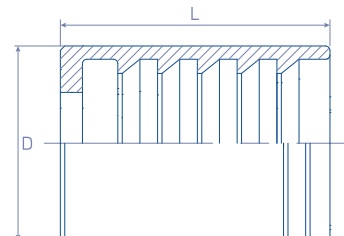
FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO; FORZA UNO "SHARK SKIN"; FORZA UNO "TROPIC"; BALWASH 1W

NON SKIVE Balfit® 2 Wire Braid Ferrule

20.201. / 20.302.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.201.04	- 4	6,3	1/4"	30.5	22.0
20.201.05	- 5	8,0	5/16"	30.5	21.0
20.201.06	- 6	9,5	3/8"	32.0	25.0
20.302.16	- 16	25,4	1"	50.0	48.0
20.201.20	- 20	32,0	1.1/4"	59.0	56.0
20.201.24	- 24	38,0	1.1/2"	70.0	65.0
20.201.32	- 32	50,8	2"	77.0	75.3

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

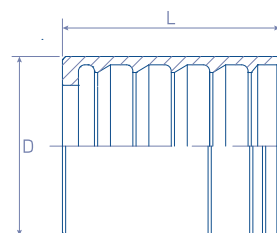
Suitable to be used on medium and high pressure braided hoses:

FORZA DUE; FORZA DUE "SHARK SKIN"; FORZA DUE "TROPIC"; TEXMASTER 3; BALWASH 2W;
IMPACTUS 5K; IMPACTUS 6K;



NON SKIVE Balfit® 1 & 2 Wire Braid Ferrule

20.202.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.202.08	- 8	12,7	1/2"	34.0	28.0
20.202.10	- 10	16,0	5/8"	37.0	32.0
20.202.12	- 12	19,0	3/4"	42.50	36.0

MATERIAL: Carbon Steel

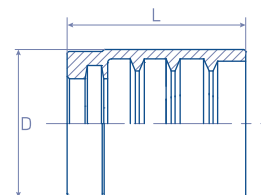
FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO; FORZA UNO "SHARK SKIN"; FORZA UNO "TROPIC"; FORZA DUE; FORZA DUE "SHARK SKIN"; FORZA DUE "TROPIC"; TEXMASTER 3; BALWASH 1W; BALWASH 2W

NON SKIVE Balfit® 1 Wire Braid Ferrule

20.305.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.305.04	- 4	6,3	1/4"	22.9	19.0
20.305.05	- 5	8,0	5/16"	27.6	20.0
20.305.06	- 6	9,5	3/8"	30.2	23.0
20.305.08	- 8	12,7	1/2"	32.0	26.5
20.305.10	- 10	16,0	5/8"	35.0	29.0
20.305.12	- 12	19,0	3/4"	40.8	33.0
20.305.16	- 16	25,4	1"	45.0	41.9

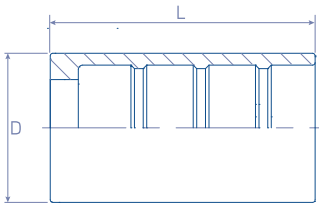
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

BALPAC 3000; BALPAC 3000 "SHARK SKIN"

NON SKIVE Balfit® Textile Braid, Thermoplastic & PTFE Ferrule



20.107.

REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.107.02	- 2	3,2	1/8"	24.1	13.0
20.107.03	- 3	4,8	3/16"	25.0	15.0
20.107.04	- 4	6,3	1/4"	29.2	17.0
20.107.05	- 5	8,0	5/16"	31.0	18.0
20.107.06	- 6	9,5	3/8"	31.0	21.0
20.107.08	- 8	12,7	1/2"	34.0	25.3
20.107.10	- 10	16,0	5/8"	37.0	29.0
20.107.12	- 12	19,0	3/4"	43.0	32.0
20.107.16	- 16	25,4	1"	50.5	40.0

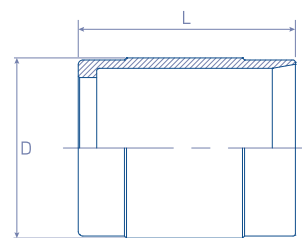
MATERIAL: Carbon Steel **FINISH:** Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on textile braid, thermoplastic and PTFE hoses:
 TEXMASTER 1, TEXMASTER 2; BALFLON SAE 100R14; BALFLON CONVOLUTED; BALFLON CONVOLUTED BLACK CONDUCTIVE; ZETAFLEX; ZETAFLEX TWIN; ZETAFLEX NON CONDUCTIVE; ZETAFLEX NON CONDUCTIVE TWIN; ZETAFLEX STEEL; ZETAFLEX STEEL TWIN; OMEGAFLEX PLUS; OMEGAFLEX PLUS TWIN LINE; OMEGAFLEX PLUS NON CONDUCTIVE; OMEGAFLEX PLUS TWIN NON CONDUCTIVE; ZETAFLEX 3000; ZETAFLEX 3000 TWIN; ZETAFLEX 3000 NON CONDUCTIVE; ZETAFLEX 3000 TWIN NON CONDUCTIVE; PAINTSPRAY



NON SKIVE Balfit® PTFE Convoluted Ferrule

20.TFC.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.TFC.08	- 8	12,7	1/2"	32.0	23.5
20.TFC.12	- 12	19,0	3/4"	43.0	32.0
20.TFC.16	- 16	25,4	1"	47.0	38.1
20.TFC.20	- 20	32,0	1-1/4"	59.0	46.0
20.TFC.24	- 24	38,0	1-1/2"	63.0	55.0
20.TFC.32	- 32	50,8	2"	70.0	69.0

MATERIAL: Carbon Steel

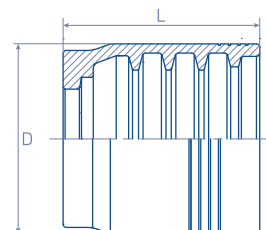
FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on PTFE hoses:

BALFLON CONVOLUTED; BALFLON CONVOLUTED BLACK CONDUCTIVE

NON SKIVE Balfit® 4 Spiral Ferrule

20.NS4.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.NS4.06	- 6	9,5	3/8"	30.0	29.0
20.NS4.08	- 8	12,7	1/2"	33.5	33.0
20.NS4.10	- 10	16,0	5/8"	35.5	37.0
20.NS4.12	- 12	19,0	3/4"	40.0	42.0
20.NS4.16	- 16	25,4	1"	54.0	48.9
20.NS4.20	- 20	32,0	1-1/4"	61.0	61.0
20.NS4.24	- 24	38,0	1-1/2"	71.0	70.0
20.NS4.32	- 32	50,8	2"	88.0	84.8

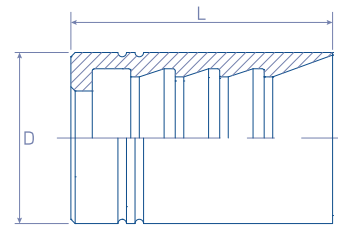
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on high pressure 4 spiral hoses:

BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; BALMASTER BESTFLEX R12
POWERSPIR BESTFLEX R13 (DN20 -3/4" & DN25 - 1"); POWERSPIR BESTFLEX R15
(DN20 -3/4" & DN25 - 1")

EXTERNAL SKIVE Balfit® 2 Wire Braid & 4 Spiral Ferrule



20.200.

REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.200.04	- 4	6,3	1/4"	20.0	30.6
20.200.05	- 5	8,0	5/16"	24.0	30.0
20.200.06	- 6	9,5	3/8"	25.0	32.0
20.200.08	- 8	12,7	1/2"	30.0	34.0
20.200.10	- 10	16,0	5/8"	34.0	37.0
20.200.12	- 12	19,0	3/4"	38.0	43.0
20.200.16	- 16	25,4	1"	36.4	50.0
20.200.20	- 20	32,0	1.1/4"	56.0	59.0
20.200.24	- 24	38,0	1.1/2"	62.0	63.1
20.200.32	- 32	50,8	2"	75.1	78.0

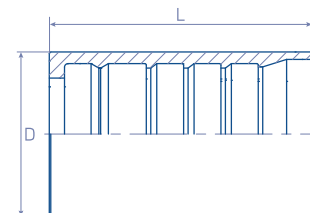
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

Suitable to be used on medium and high pressure braided and 4 spiral hoses:

FORZA DUE; FORZA DUE "SHARK SKIN"; FORZA DUE "TROPIC; BALMASTER BESTFLEX 4SP;
2-MAX; 3-MAX; BALWASH 1W; BALWASH 2W

DOUBLE SKIVE Balfit® 4 Spiral Ferrule



20.405.

REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.405.20	- 20	31,8	1.1/4"	88.0	55.0
20.405.24	- 24	38,1	1.1/2"	94.0	62.0
20.405.32	- 32	50,8	2"	99.0	78.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** stainless steel AISI 316
ROHS compliant

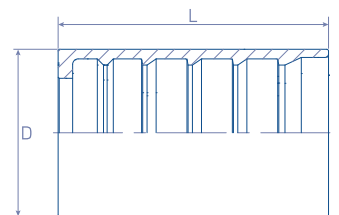
Suitable to be used on high pressure 4 spiral hoses:

POWERSPIR BESTFLEX 4SH



DOUBLE SKIVE Balfit® 4 & 6 Spiral Ferrule

20.406.



REFERENCE	hose	hose Ø		dimensions (mm)	
	dash	mm	inch	L	D
20.406.12	- 12	19,1	3/4"	60.0	38.0
20.406.16	- 16	25,4	1"	74.5	46.0
20.406.20	- 20	31,8	1 1/4"	88.0	60.0
20.406.24	- 24	38,1	1 1/2"	94.0	67.0
20.406.32	- 32	50,8	2"	99.0	84.4

MATERIAL: Carbon Steel

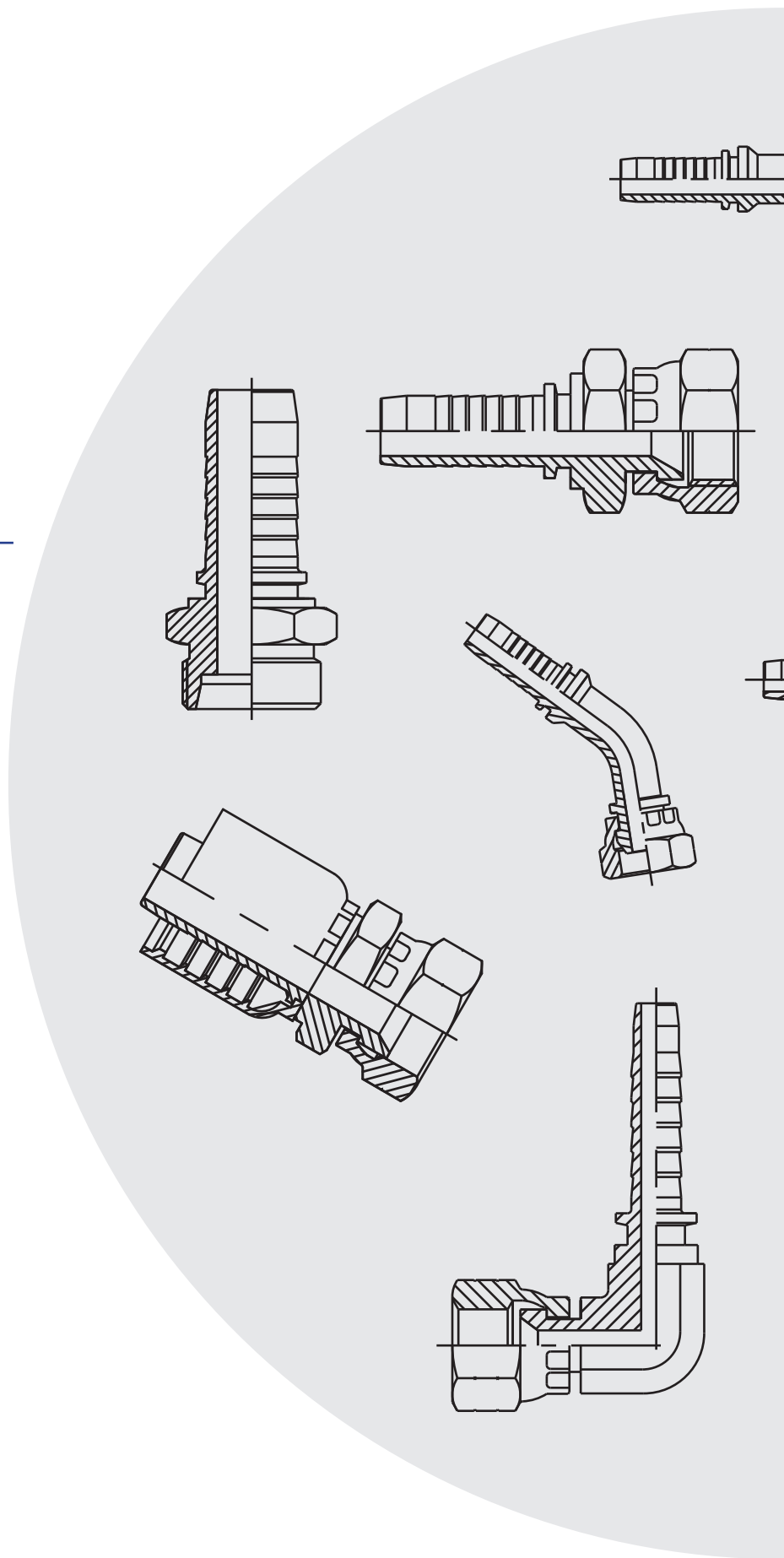
FINISH: Chromium-(VI) Free plating /
ROHS compliant

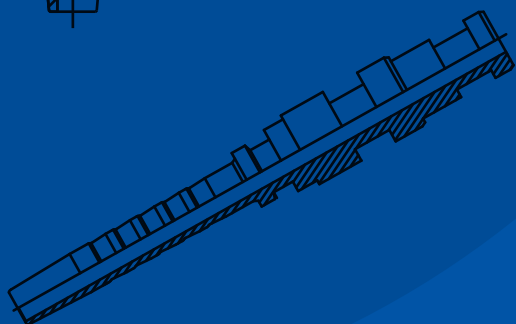
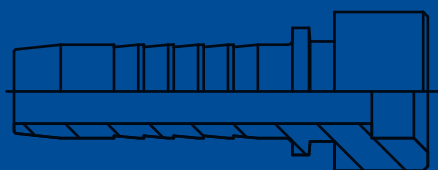
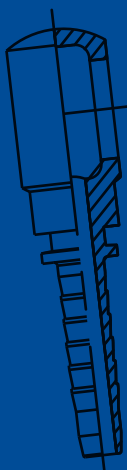
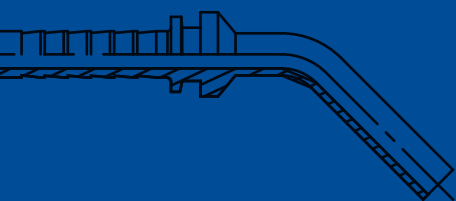
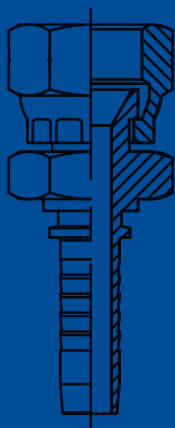
VERSIONS: stainless steel AISI 316

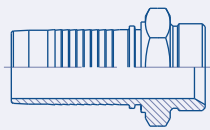
Suitable to be used on high pressure 4 & 6 spiral hoses:

POWERSPIR BESTFLEX 4SH (DN20 -3/4" & DN25 - 1"); POWERSPIR BESTFLEX R13;
POWERSPIR BESTFLEX R15

Standard Hydraulic Fittings







Male BSP Parallel Pipe (AGR)

23.0100

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Female BSP Parallel Pipe Swivel (DKR)

23.3012

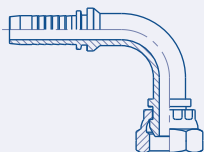
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45° Swept Female BSP Parallel Pipe Swivel (DKR 45°)

23.3042

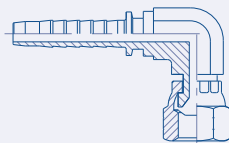
pag. 35



90° Swept Female BSP Parallel Pipe Swivel (DKR 90°)

23.3092

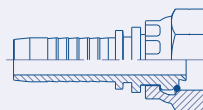
pag. 36



90° Swept Compact Female BSP Parallel Pipe Swivel

23.3082

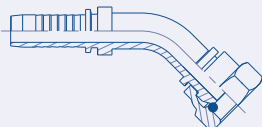
pag. 37



Female BSP Parallel Pipe with O-ring Swivel (DKOR)

23.3112

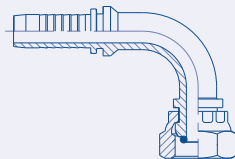
pag. 37



45° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 45°)

23.3142

pag. 38



90° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 90°)

23.3192

pag. 39



Male JIC 37° (AGJ)

23.2000

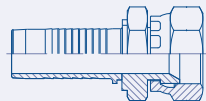
pag. 40



Female JIC 37° Swivel (DKJ)

23.4012

pag. 41



Female JIC 37° Swivel with Back Hexagon

23.4H12

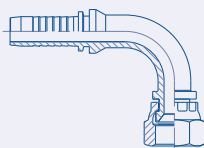
pag. 42



45° Swept Female JIC 37° Swivel (DKJ 45°)

23.4042

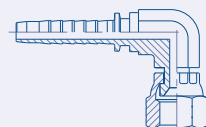
pag. 43



90° Swept Female JIC 37° Swivel (DKJ 90°)

23.4092

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90° Compact Female JIC 37° Swivel

23.4082

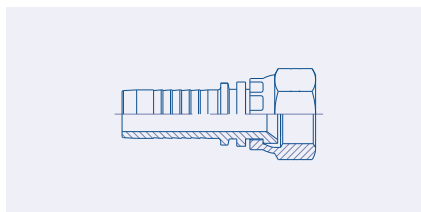
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Male SAE 45°

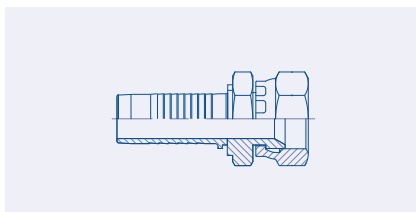
23.2S00

pag. 46



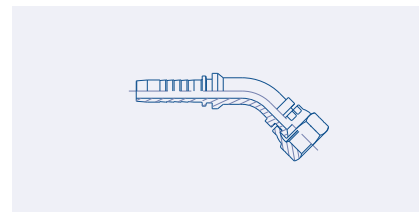
Female SAE 45° Swivel
23.4S12

pag. 46



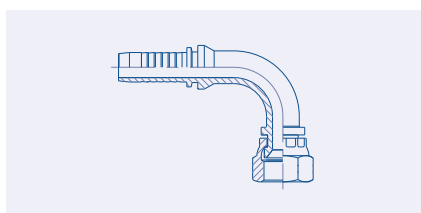
Female SAE 45° Swivel with Back Hexagon
23.SH12

pag. 47



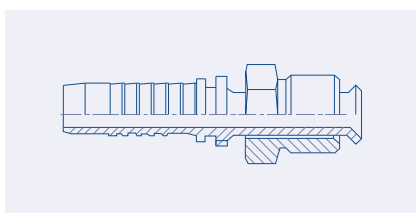
Female SAE 45° Swivel
23.4S42

pag. 47



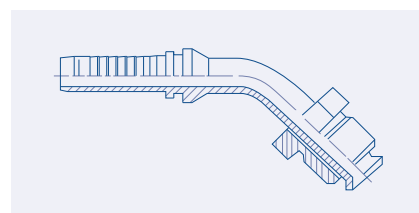
90° Swept Female SAE 45° Swivel
23.4S92

pag. 48



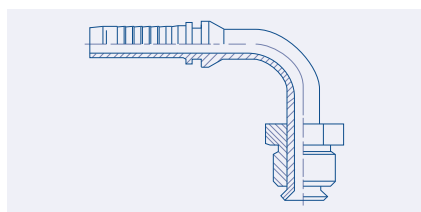
SAE Inverted 45° Flare Male
23.2210

pag. 48



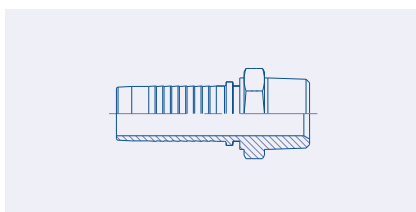
SAE Inverted 45° Flare 45° Elbow Male
23.2240

pag. 49



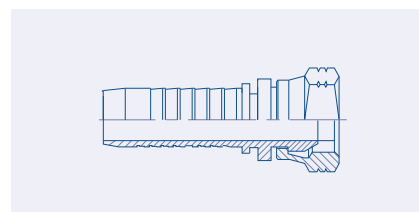
SAE Inverted 45° Flare 90° Elbow Male
23.2290

pag. 49



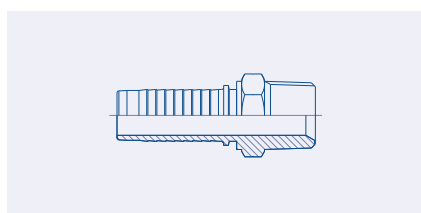
Male NPTF Pipe (AGN)
23.0400

pag. 50



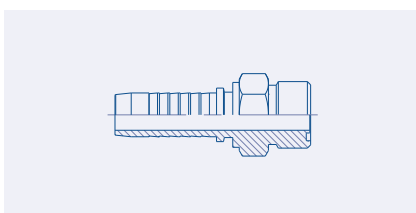
Female NPSM Pipe Swivel
23.3010

pag. 51



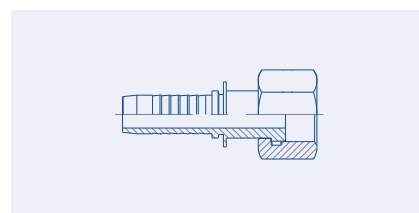
Male BSPT Taper Pipe (AGR-K)
23.0300

pag. 51



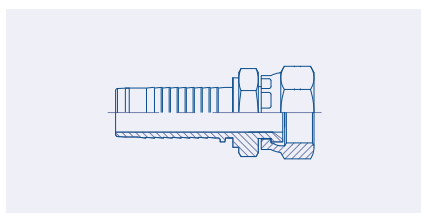
Male ORFS
23.4000

pag. 52



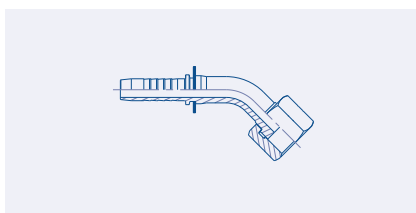
Female ORFS Swivel
23.4414

pag. 53



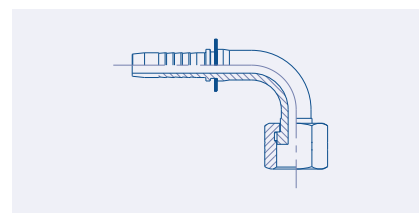
Female ORFS Swivel with Back Hexagon
23.44H4

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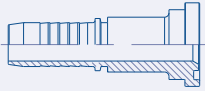
45° Swept Female ORFS Swivel
23.4444

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90° Swept Female ORFS Swivel
23.4494

pag. 56



**Straight SAE 3000 PSI
(code 61) Flange (SFL)**

23.7013

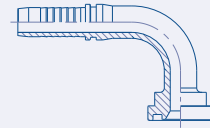
pag. 57



**45° Swept SAE 3000 PSI
(code 61) Flange (SFL 45°)**

23.7043

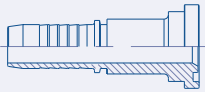
pag. 58



**90° Swept SAE 3000 PSI
(code 61) Flange (SFL 90°)**

23.7093

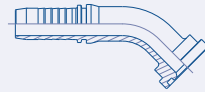
pag. 59



**Straight SAE 6000 PSI
(code 62) Flange (SFS)**

23.7016

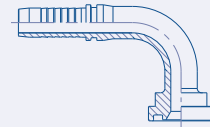
pag. 60



**45° Swept SAE 6000 PSI
(code 62) Flange (SFS 45°)**

23.7046

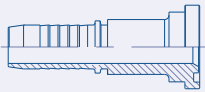
pag. 61



**90° Swept SAE 6000 PSI
(code 62) Flange (SFS 90°)**

23.7096

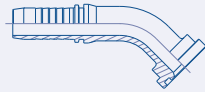
pag. 62



Straight SUPERCAT Flange

23.7116

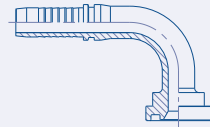
pag. 63



45° Swept SUPERCAT Flange

23.7146

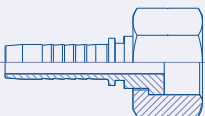
pag. 63



90° Swept SUPERCAT Flange

23.7196

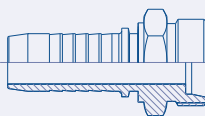
pag. 64



Female BSP Flat Face Swivel

23.3212

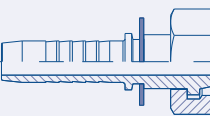
pag. 65



**Male Metric Light Serie 24°
Cone Seat (CEL)**

23.1000

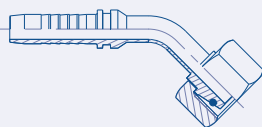
pag. 66



**Female Metric Light Serie 24°
Cone Seat Swivel (DKOL)**

23.5013

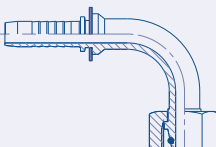
pag. 67



**45° Swept Female Metric Light
Serie 24° Cone Seat Swivel
(DKOL 45)**

23.5043

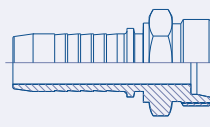
pag. 68



**90° Swept Female Metric Light
Serie 24° Cone Seat Swivel
(DKOL 90)**

23.5093

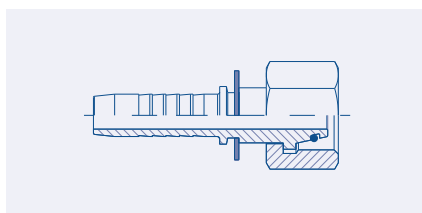
pag. 69



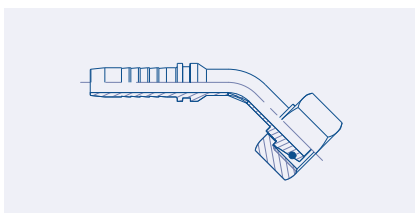
**Male Metric Heavy Serie 24°
Cone Seat (CES)**

23.1100

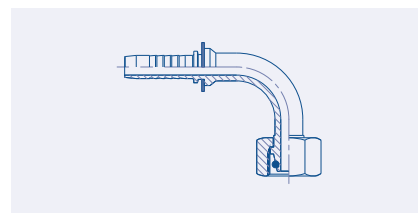
pag. 70



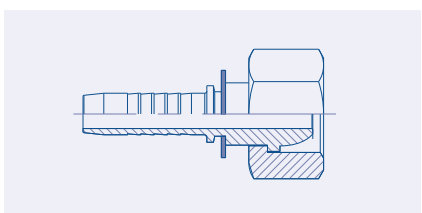
**Female Metric Heavy Serie 24°
Cone Seat Swivel (DKOS)**
23.5113 pag. 71



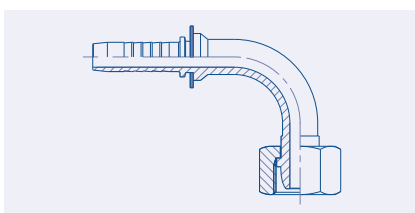
**45° Swept Female Metric Heavy
Serie 24° Cone Seat Swivel
(DKOS 45)** 23.5143 pag. 72



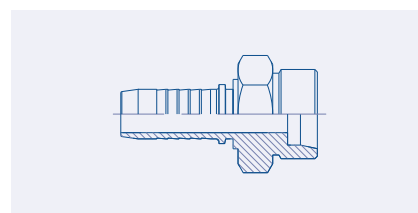
**90° Swept Female Metric Heavy
Serie 24° Cone Seat Swivel
(DKOS 90)** 23.5193 pag. 73



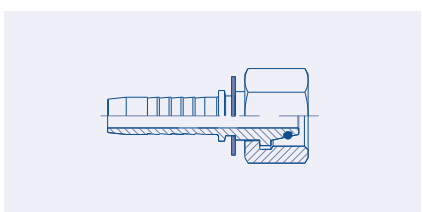
**Female Metric 24°/60°
Cone Seat Swivel (DKL)**
23.5213 pag. 74



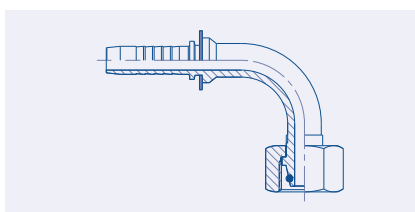
**90° Swept Female Metric 24°/60°
Cone Seat Swivel (DKL)**
23.5293 pag. 74



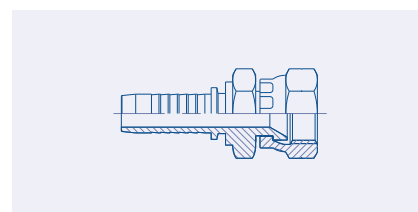
**Male Metric French Serie
24° Cone Seat (AGF)**
23.1200 pag. 75



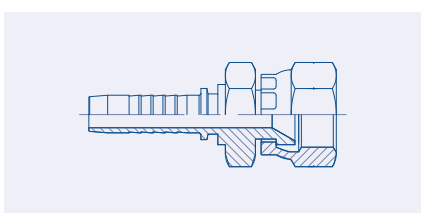
**Female Metric French Serie
24° Cone Seat Swivel (DKF)**
23.5513 pag. 75



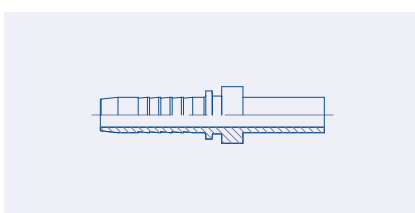
**90° Swept Female Metric French
Serie 24° Cone Seat Swivel
(DKF)** 23.5593 pag. 76



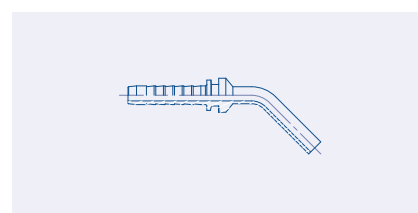
**Female JIS 60° Cone Seat Swivel
(TOYOTA)**
23.3712 pag. 76



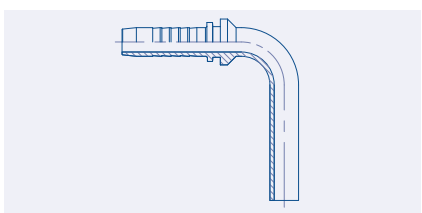
**Female JIS 60° Cone Seat Swivel
(KOMATSU)**
23.5911 pag. 77



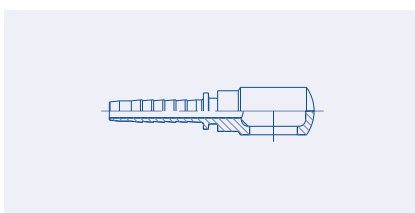
Metric Standpipe (BEL)
23.6000 pag. 78



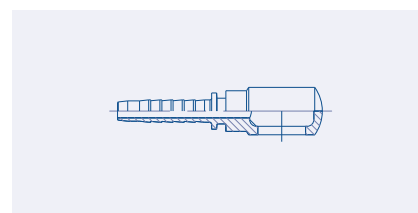
**45° Swept Metric Standpipe
(BEL 45)**
23.6040 pag. 79



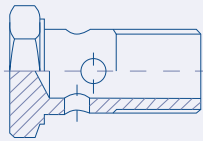
**90° Swept Metric Standpipe
(BEL 90)**
23.6090 pag. 80



Metric Banjo (RNM)
23.6400 pag. 81

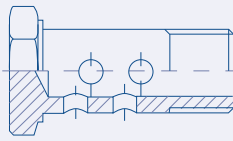


BSP Banjo (RNR)
23.6500 pag. 82



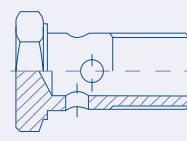
BSP Banjo Bolt
88.1600

pag. 83



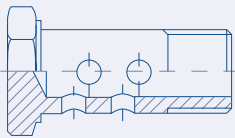
BSP Banjo Double Bolt
88.1602

pag. 83



Metric Banjo Bolt
88.1650

pag. 84



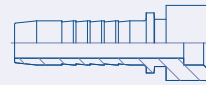
Metric Banjo Double Bolt
88.1652

pag. 84



Hose Connector
23.8100

pag. 85



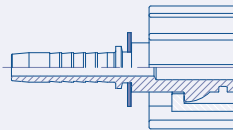
Brazing Tail
23.8150

pag. 85



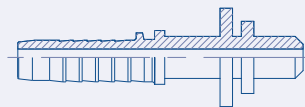
StapleLock Male
23.8300

pag. 86



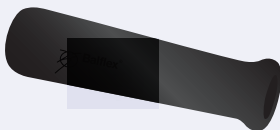
Balwash Female Swivel (Karcher)
23.6213

pag. 86



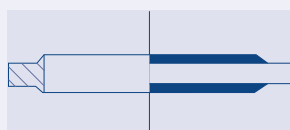
Balwash Standpipe wit O-ring (Karcher)
23.6214

pag. 87



Balwash Rubber Handle
11.800

pag. 87



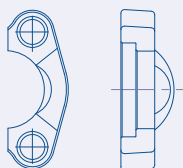
BSP Bonded Seals
88.2003

pag. 88



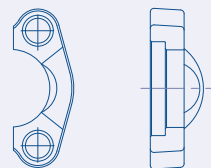
Metric Bonded Seals
88.2004

pag. 88



Split Flange 3000 PSI (code 61)
88.5300

pag. 89



Split Flange 6000 PSI (code 62)
88.5600

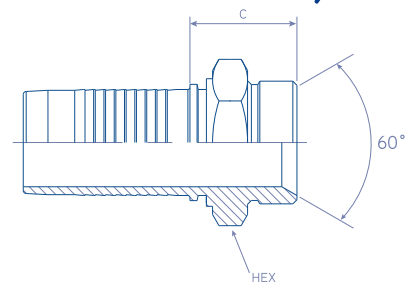
pag. 89



Male BSP Parallel Pipe (AGR)

23.0100.

ISO 12151-6 / ISO 8434-6 / BS 5200



REFERENCE	hose	hose Ø	thread	C cut off	HEX
	dash	inch	inch	mm	mm
23.0100.0302	-3	3/16"	1/8" - 28	23.0	14
23.0100.0304	-3	3/16"	1/4" - 19	27.0	19
23.0100.0402	-4	1/4"	1/8" - 28	22.2	14
23.0100.0404	-4	1/4"	1/4" - 19	26.2	19
23.0100.0406	-4	1/4"	3/8" - 19	28.7	22
23.0100.0408	-4	1/4"	1/2" - 14	33.2	27
23.0100.0504	-5	5/16"	1/4" - 19	26.5	19
23.0100.0506	-5	5/16"	3/8" - 19	29.0	22
23.0100.0508	-5	5/16"	1/2" - 14	33.5	27
23.0100.0604	-6	3/8"	1/4" - 19	26.5	19
23.0100.0606	-6	3/8"	3/8" - 19	29.0	22
23.0100.0608	-6	3/8"	1/2" - 14	33.5	27
23.0100.0806	-8	1/2"	3/8" - 19	29.5	22
23.0100.0808	-8	1/2"	1/2" - 14	33.5	27
23.0100.0810	-8	1/2"	5/8" - 14	36.5	30
23.0100.0812	-8	1/2"	3/4" - 14	39.5	32
23.0100.1008	-10	5/8"	1/2" - 14	34.5	27
23.0100.1010	-10	5/8"	5/8" - 14	36.0	30
23.0100.1012	-10	5/8"	3/4" - 14	39.5	32
23.0100.1212	-12	3/4"	3/4" - 14	39.2	32
23.0100.1216	-12	3/4"	1" - 11	44.2	41
23.0100.1616	-16	1"	1" - 11	45.0	41
23.0100.1620	-16	1"	1 1/4" - 11	48.0	50
23.0100.2020	-20	1 1/4"	1 1/4" - 11	49.5	50
23.0100.2024	-20	1 1/4"	1 1/2" - 11	52.0	55
23.0100.2424	-24	1 1/2"	1 1/2" - 11	52.0	55
23.0100.2432	-24	1 1/2"	2" - 11	57.5	70
23.0100.3232	-32	2"	2" - 11	57.5	70

MATERIAL: Carbon Steel

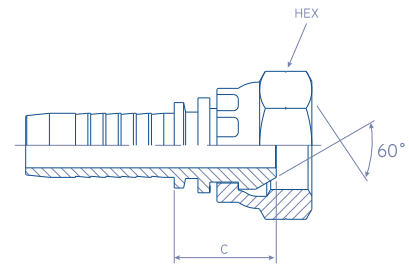
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female BSP Parallel Pipe Swivel (DKR)

23.3012.

ISO 12151-6 / ISO 8434-6 / BS 5200



REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	HEX mm
23.3012.0302	-3	3/16"	1/8" - 28	16.0	14
23.3012.0304	-3	3/16"	1/4" - 19	18.5	19
23.3012.0402	-4	1/4"	1/8" - 28	15.2	14
23.3012.0404	-4	1/4"	1/4" - 19	17.7	19
23.3012.0406	-4	1/4"	3/8" - 19	18.7	22
23.3012.0408	-4	1/4"	1/2" - 14	20.7	27
23.3012.0504	-5	5/16"	1/4" - 19	18.0	19
23.3012.0506	-5	5/16"	3/8" - 19	19.5	22
23.3012.0508	-5	5/16"	1/2" - 14	21.0	27
23.3012.0604	-6	3/8"	1/4" - 19	18.0	19
23.3012.0606	-6	3/8"	3/8" - 19	19.5	22
23.3012.0608	-6	3/8"	1/2" - 14	21.0	27
23.3012.0806	-8	1/2"	3/8" - 19	19.5	22
23.3012.0808	-8	1/2"	1/2" - 14	21.5	27
23.3012.0810	-8	1/2"	5/8" - 14	22.0	30
23.3012.0812	-8	1/2"	3/4" - 14	21.0	27
23.3012.1008	-10	5/8"	1/2" - 14	22.5	27
23.3012.1010	-10	5/8"	5/8" - 14	23.0	30
23.3012.1012	-10	5/8"	3/4" - 14	23.5	32
23.3012.1212	-12	3/4"	3/4" - 14	23.7	32
23.3012.1216	-12	3/4"	1" - 11	22.7	38
23.3012.1616	-16	1"	1" - 11	26.5	38
23.3012.1620	-16	1"	1.1/4" - 11	29.0	50
23.3012.2020	-20	1.1/4"	1.1/4" - 11	30.5	50
23.3012.2024	-20	1.1/4"	1.1/2" - 11	30.0	55
23.3012.2424	-24	1.1/2"	1.1/2" - 11	32.0	55
23.3012.2432	-24	1.1/2"	2" - 11	34.0	70
23.3012.3232	-32	2"	2" - 11	34.0	70
23.3012.4040	-40	2.1/2"	2.1/2" - 11	41.0	90
23.3012.4848	-48	3"	3" - 11	47.0	100

MATERIAL: Carbon Steel

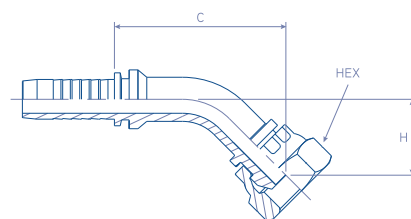
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)



45° Swept Female BSP Parallel Pipe Swivel (DKR 45°)



23.3042.

ISO 12151-6 / ISO 8434-6 / BS 5200

	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.3042.0302	-3	3/16"	1/8" - 28	30.0	12.5	14
23.3042.0304	-3	3/16"	1/4" - 19	33.5	13.0	19
23.3042.0402	-4	1/4"	1/8" - 28	29.0	12.5	14
23.3042.0404	-4	1/4"	1/4" - 19	33.5	13.0	19
23.3042.0406	-4	1/4"	3/8" - 19	34.2	14.4	22
23.3042.0408	-4	1/4"	1/2" - 14	38.0	16.0	27
23.3042.0504	-5	5/16"	1/4" - 19	33.5	13.0	19
23.3042.0506	-5	5/16"	3/8" - 19	42.5	19.0	22
23.3042.0508	-5	5/16"	1/2" - 14	42.5	19.0	27
23.3042.0604	-6	3/8"	1/4" - 19	33.5	13.0	19
23.3042.0606	-6	3/8"	3/8" - 19	40.0	14.7	22
23.3042.0608	-6	3/8"	1/2" - 14	38.6	15.8	27
23.3042.0806	-8	1/2"	3/8" - 19	34.2	15.0	22
23.3042.0808	-8	1/2"	1/2" - 14	46.0	18.0	27
23.3042.0810	-8	1/2"	5/8" - 14	55.0	23.0	27
23.3042.0812	-8	1/2"	3/4" - 14	56.0	24.0	32
23.3042.1008	-10	5/8"	1/2" - 14	46.5	18.0	27
23.3042.1010	-10	5/8"	5/8" - 14	60.5	23.3	27
23.3042.1012	-10	5/8"	3/4" - 14	64.0	26.9	32
23.3042.1212	-12	3/4"	3/4" - 14	67.5	24.5	32
23.3042.1216	-12	3/4"	1" - 11	70.0	26.0	38
23.3042.1616	-16	1"	1" - 11	83.6	33.8	38
23.3042.1620	-16	1"	1 1/4" - 11	92.3	41.7	50
23.3042.2020	-20	1 1/4"	1 1/4" - 11	97.0	37.5	50
23.3042.2024	-20	1 1/4"	1 1/2" - 11	102.0	42.0	55
23.3042.2424	-24	1 1/2"	1 1/2" - 11	119.0	49.2	55
23.3042.2432	-24	1 1/2"	2" - 11	125.0	55.0	70
23.3042.3232	-32	2"	2" - 11	149.8	60.0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

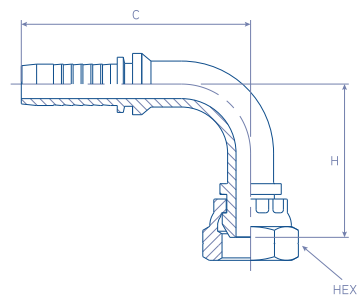
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

90° Swept Female BSP Parallel Pipe Swivel (DKR 90°)

23.3092.

ISO 12151-6 / ISO 8434-6 / BS 5200



REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	H mm	HEX mm
23.3092.0302	-3	3/16"	1/8" - 28	25.5	26.0	14
23.3092.0304	-3	3/16"	1/4" - 19	25.5	26.0	19
23.3092.0402	-4	1/4"	1/8" - 28	26.7	26.5	14
23.3092.0404	-4	1/4"	1/4" - 19	27.6	27.5	19
23.3092.0406	-4	1/4"	3/8" - 19	28.0	29.5	22
23.3092.0408	-4	1/4"	1/2" - 14	30.0	30.0	27
23.3092.0504	-5	5/16"	1/4" - 19	32.0	30.0	19
23.3092.0506	-5	5/16"	3/8" - 19	32.5	30.5	22
23.3092.0508	-5	5/16"	1/2" - 14	30.0	30.0	27
23.3092.0604	-6	3/8"	1/4" - 19	28.0	29.5	19
23.3092.0606	-6	3/8"	3/8" - 19	33.0	31.5	22
23.3092.0608	-6	3/8"	1/2" - 14	34.0	31.5	27
23.3092.0806	-8	1/2"	3/8" - 19	35.0	35.0	22
23.3092.0808	-8	1/2"	1/2" - 14	39.5	38.5	27
23.3092.0810	-8	1/2"	5/8" - 14	45.0	42.0	27
23.3092.0812	-8	1/2"	3/4" - 14	54.0	55.0	32
23.3092.1008	-10	5/8"	1/2" - 14	54.0	48.0	27
23.3092.1010	-10	5/8"	5/8" - 14	54.0	50.0	27
23.3092.1012	-10	5/8"	3/4" - 14	54.0	55.0	32
23.3092.1212	-12	3/4"	3/4" - 14	55.5	55.0	32
23.3092.1216	-12	3/4"	1" - 11	60.5	64.0	38
23.3092.1616	-16	1"	1" - 11	71.5	71.0	38
23.3092.1620	-16	1"	1 1/4" - 11	79.5	79.5	50
23.3092.2020	-20	1 1/4"	1 1/4" - 11	85.5	77.0	50
23.3092.2024	-20	1 1/4"	1 1/2" - 11	91.5	92.0	55
23.3092.2424	-24	1 1/2"	1 1/2" - 11	102.0	100.0	55
23.3092.2432	-24	1 1/2"	2" - 11	110.0	110.0	70
23.3092.3232	-32	2"	2" - 11	132.3	128.0	70

MATERIAL: Carbon Steel
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

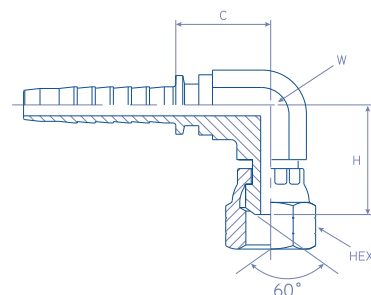
NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)



90° Swept Compact Female BSP Parallel Pipe Swivel

23.3082.

ISO 12151-6 / ISO 8434-6 / BS 5200



	hose	hose Ø	thread	C cut off	H	W	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.3082.0404	-4	1/4"	1/4" - 19	17.5	23.5	11	19
23.3082.0606	-6	3/8"	3/8" - 19	21.5	25.5	16	22
23.3082.0808	-8	1/2"	1/2" - 14	25.5	28.0	19	27
23.3082.1010	-10	5/8"	5/8" - 14	22.5	27.0	22	30
23.3082.1212	-12	3/4"	3/4" - 14	26.5	36.0	27	32
23.3082.1616	-16	1"	1" - 11	30.5	34.5	33	38

MATERIAL: Carbon Steel

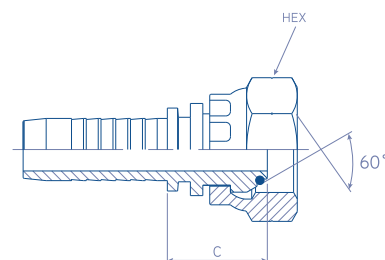
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female BSP Parallel Pipe with O-ring Swivel (DKOR)

23.3112.

ISO 12151-6 / ISO 8434-6 / BS 5200



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.3112.0404	-4	1/4"	1/4" - 19	17.7	19
23.3112.0606	-6	3/8"	3/8" - 19	19.5	22
23.3112.0808	-8	1/2"	1/2" - 14	21.5	27
23.3112.1010	-10	5/8"	5/8" - 14	23.0	30
23.3112.1212	-12	3/4"	3/4" - 14	23.7	32
23.3112.1216	-12	3/4"	1" - 11	22.7	38
23.3112.1616	-16	1"	1" - 11	26.5	38
23.3112.1620	-16	1"	1 1/4" - 11	29.0	50
23.3112.2020	-20	1 1/4"	1 1/4" - 11	30.5	50
23.3112.2024	-20	1 1/4"	1 1/2" - 11	30.0	55
23.3112.2424	-24	1 1/2"	1 1/2" - 11	32.0	55
23.3112.2432	-24	1 1/2"	2" - 11	34.0	70
23.3112.3232	-32	2"	2" - 11	34.0	70

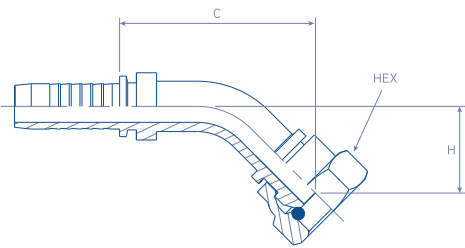
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

45° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 45°)



23.3142.

ISO 12151-6 / ISO 8434-6 / BS 5200

	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.3142.0404	-4	1/4"	1/4" – 19	33.5	13.0	19
23.3142.0606	-6	3/8"	3/8" – 19	40.0	14.7	22
23.3142.0808	-8	1/2"	1/2" – 14	46.0	18.0	27
23.3142.1010	-10	5/8"	5/8" – 14	60.5	23.3	27
23.3142.1212	-12	3/4"	3/4" – 14	67.5	24.5	32
23.3142.1216	-12	3/4"	1" – 11	70.0	26.0	38
23.3142.1616	-16	1"	1" – 11	83.6	33.8	38
23.3142.1620	-16	1"	1.1/4" – 11	92.3	41.7	50
23.3142.2020	-20	1.1/4"	1.1/4" – 11	97.0	37.5	50
23.3142.2024	-20	1.1/4"	1.1/2" – 11	102.0	42.0	55
23.3142.2424	-24	1.1/2"	1.1/2" – 11	119.0	49.2	55
23.3142.2432	-24	1.1/2"	2" – 11	125.0	55.0	70
23.3142.3232	-32	2"	2" – 11	149.8	60.0	70

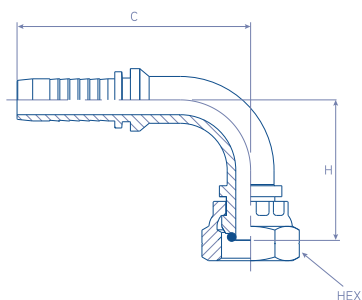
MATERIAL: Carbon Steel
FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

NOTES: On larger sizes nuts can be supplied with Trust-Wire Nut (W)



90° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 90°)



23.3192.

ISO 12151-6 / ISO 8434-6 / BS 5200

	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.3192.0404	-4	1/4"	1/4" - 19	27.6	27.5	19
23.3192.0606	-6	3/8"	3/8" - 19	33.0	31.5	22
23.3192.0808	-8	1/2"	1/2" - 14	39.5	38.5	27
23.3192.1010	-10	5/8"	5/8" - 14	54.0	50.0	27
23.3192.1212	-12	3/4"	3/4" - 14	55.5	55.0	32
23.3192.1216	-12	3/4"	1" - 11	60.5	64.0	38
23.3192.1616	-16	1"	1" - 11	71.5	71.0	38
23.3192.1620	-16	1"	1 1/4" - 11	79.5	79.5	50
23.3192.2020	-20	1 1/4"	1 1/4" - 11	85.5	77.0	50
23.3192.2024	-20	1 1/4"	1 1/2" - 11	91.5	92.0	55
23.3192.2424	-24	1 1/2"	1 1/2" - 11	102.0	100.0	55
23.3192.2432	-24	1 1/2"	2" - 11	110.0	110.0	70
23.3192.3232	-32	2"	2" - 11	132.3	128.0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

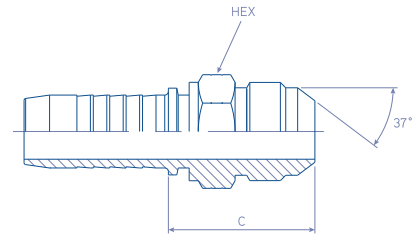
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

Male JIC 37° (AGJ)

23.2000.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.2000.0304	-3	3/16"	7/16" – 20	26.5	12
23.2000.0404	-4	1/4"	7/16" – 20	25.7	12
23.2000.0405	-4	1/4"	1/2" – 20	26.2	14
23.2000.0406	-4	1/4"	9/16" – 18	26.2	17
23.2000.0505	-5	5/16"	1/2" – 20	26.5	14
23.2000.0506	-5	5/16"	9/16" – 18	27.1	17
23.2000.0606	-6	3/8"	9/16" – 18	27.1	17
23.2000.0608	-6	3/8"	3/4" – 16	30.7	19
23.2000.0610	-6	3/8"	7/8" – 14	35.3	24
23.2000.0808	-8	1/2"	3/4" – 16	31.2	19
23.2000.0810	-8	1/2"	7/8" – 14	35.8	24
23.2000.0812	-8	1/2"	1.1/16" – 12	39.4	27
23.2000.1008	-10	5/8"	3/4" – 16	33.7	24
23.2000.1010	-10	5/8"	7/8" – 14	37.3	24
23.2000.1012	-10	5/8"	1.1/16" – 12	40.9	27
23.2000.1210	-12	3/4"	7/8" – 14	37.5	27
23.2000.1212	-12	3/4"	1.1/16" – 12	40.6	27
23.2000.1214	-12	3/4"	1.3/16" – 12	43.3	32
23.2000.1216	-12	3/4"	1.5/16" – 12	46.0	36
23.2000.1616	-16	1"	1.5/16" – 12	46.8	36
23.2000.1620	-16	1"	1.5/8" – 12	49.0	46
23.2000.2020	-20	1.1/4"	1.5/8" – 12	52.3	46
23.2000.2024	-20	1.1/4"	1.7/8" – 12	55.0	50
23.2000.2424	-24	1.1/2"	1.7/8" – 12	55.0	50
23.2000.2432	-24	1.1/2"	2.1/2" – 12	65.9	65
23.2000.3232	-32	2"	2.1/2" – 12	65.9	65

MATERIAL: Carbon Steel

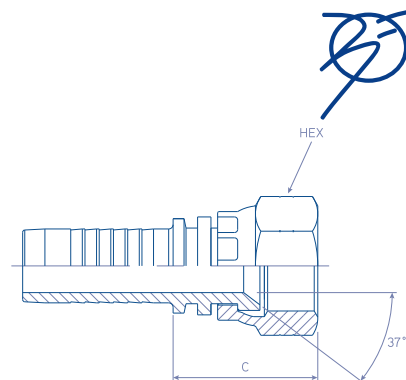
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female JIC 37° Swivel (DKJ)

23.4012.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	HEX mm
23.4012.0304	-3	3/16"	7/16" – 20	15.0	14
23.4012.0404	-4	1/4"	7/16" – 20	14.7	14
23.4012.0405	-4	1/4"	1/2" – 20	15.2	17
23.4012.0406	-4	1/4"	9/16" – 18	15.2	19
23.4012.0505	-5	5/16"	1/2" – 20	15.5	17
23.4012.0506	-5	5/16"	9/16" – 18	15.5	19
23.4012.0606	-6	3/8"	9/16" – 18	15.5	19
23.4012.0608	-6	3/8"	3/4" – 16	17.5	22
23.4012.0610	-6	3/8"	7/8" – 14	18.5	27
23.4012.0806	-8	1/2"	9/16" – 18	16.0	19
23.4012.0808	-8	1/2"	3/4" – 16	18.5	22
23.4012.0810	-8	1/2"	7/8" – 14	19.0	27
23.4012.0812	-8	1/2"	1.1/16" – 12	20.5	32
23.4012.1008	-10	5/8"	3/4" – 16	19.0	22
23.4012.1010	-10	5/8"	7/8" – 14	19.5	27
23.4012.1012	-10	5/8"	1.1/16" – 12	21.0	32
23.4012.1210	-12	3/4"	7/8" – 14	19.7	27
23.4012.1212	-12	3/4"	1.1/16" – 12	21.2	32
23.4012.1214	-12	3/4"	1.3/16" – 12	21.2	38
23.4012.1216	-12	3/4"	1.5/16" – 12	21.7	38
23.4012.1612	-16	1"	1.1/16" – 12	22.5	32
23.4012.1616	-16	1"	1.5/16" – 12	22.5	38
23.4012.1620	-16	1"	1.5/8" – 12	23.5	50
23.4012.2020	-20	1.1/4"	1.5/8" – 12	25.0	50
23.4012.2024	-20	1.1/4"	1.7/8" – 12	26.0	57
23.4012.2424	-24	1.1/2"	1.7/8" – 12	26.0	57
23.4012.2432	-24	1.1/2"	2.1/2" – 12	30.5	75
23.4012.3232	-32	2"	2.1/2" – 12	31.5	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

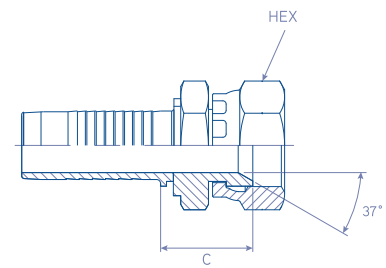
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can
be supplied with Trust-Wire Nut (W)

Female JIC 37° Swivel with Back Hexagon

23.4H12.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	W mm	HEX mm
23.4H12.0304	-3	3/16"	7/16" - 20	21.5	12	14
23.4H12.0404	-4	1/4"	7/16" - 20	20.7	14	14
23.4H12.0405	-4	1/4"	1/2" - 20	20.7	14	16
23.4H12.0406	-4	1/4"	9/16" - 18	22.7	14	19
23.4H12.0506	-5	5/16"	9/16" - 18	22.7	14	19
23.4H12.0606	-6	3/8"	9/16" - 18	21.0	17	19
23.4H12.0608	-6	3/8"	3/4" - 16	26.3	19	22
23.4H12.0610	-6	3/8"	7/8" - 14	28.0	22	27
23.4H12.0808	-8	1/2"	3/4" - 16	26.0	22	22
23.4H12.0810	-8	1/2"	7/8" - 14	29.0	22	27
23.4H12.0812	-8	1/2"	1.1/16" - 12	33.0	25	32
23.4H12.1010	-10	5/8"	7/8" - 14	28.5	22	27
23.4H12.1012	-10	5/8"	1.1/16" - 12	33.5	27	32
23.4H12.1212	-12	3/4"	1.1/16" - 12	33.7	27	32
23.4H12.1214	-12	3/4"	1.3/16" - 12	35.2	32	38
23.4H12.1216	-12	3/4"	1.5/16" - 12	35.2	32	38
23.4H12.1616	-16	1"	1.5/16" - 12	35.5	32	38
23.4H12.1620	-16	1"	1.5/8" - 12	40.5	42	50
23.4H12.2020	-20	1.1/4"	1.5/8" - 12	42.0	42	50
23.4H12.2424	-24	1.1/2"	1.7/8" - 12	45.0	50	57
23.4H12.3232	-32	2"	2.1/2" - 12	49.0	64	75

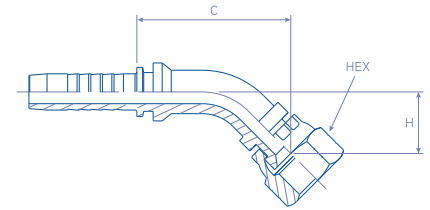
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



45° Swept Female JIC 37° Swivel (DKJ 45°)



23.4042.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.4042.0304	-3	3/16"	7/16" - 20	25.0	14.5	14
23.4042.0404	-4	1/4"	7/16" - 20	35.0	14.5	14
23.4042.0405	-4	1/4"	1/2" - 20	35.0	14.5	16
23.4042.0406	-4	1/4"	9/16" - 18	35.0	13.0	19
23.4042.0505	-5	5/16"	1/2" - 20	35.0	14.5	16
23.4042.0506	-5	5/16"	9/16" - 18	38.5	14.5	19
23.4042.0606	-6	3/8"	9/16" - 18	38.5	14.5	19
23.4042.0608	-6	3/8"	3/4" - 16	50.0	15.5	22
23.4042.0610	-6	3/8"	7/8" - 14	40.5	16.5	27
23.4042.0808	-8	1/2"	3/4" - 16	44.4	17.5	22
23.4042.0810	-8	1/2"	7/8" - 14	50.5	21.3	27
23.4042.0812	-8	1/2"	1.1/16" - 12	59.0	25.0	32
23.4042.1010	-10	5/8"	7/8" - 14	52.0	25.0	27
23.4042.1012	-10	5/8"	1.1/16" - 12	64.0	26.5	32
23.4042.1212	-12	3/4"	1.1/16" - 12	67.5	27.0	32
23.4042.1214	-12	3/4"	13/16" - 12	68.0	28.0	38
23.4042.1216	-12	3/4"	1.5/16" - 12	72.0	30.0	38
23.4042.1616	-16	1"	1.5/16" - 12	83.5	32.0	38
23.4042.1620	-16	1"	1.5/8" - 12	83.0	36.0	50
23.4042.2020	-20	1.1/4"	1.5/8" - 12	97.0	37.0	50
23.4042.2424	-24	1.1/2"	1.7/8" - 12	102.0	38.0	57
23.4042.2432	-24	1.1/2"	2.1/2" - 12	119.0	49.2	57
23.4042.3232	-32	2"	2.1/2" - 12	152.0	69.0	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

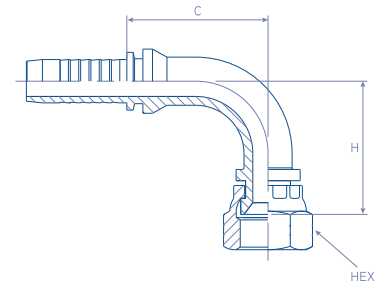
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

90° Swept Female JIC 37° Swivel (DKJ 90°)

23.4092.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.4092.0304	-3	3/16"	7/16" - 20	27.2	29.0	14
23.4092.0404	-4	1/4"	7/16" - 20	30.0	31.0	14
23.4092.0405	-4	1/4"	1/2" - 20	30.8	30.0	16
23.4092.0406	-4	1/4"	9/16" - 18	28.2	28.0	19
23.4092.0505	-5	5/16"	1/2" - 20	32.0	33.0	17
23.4092.0506	-5	5/16"	9/16" - 18	27.0	23.5	19
23.4092.0606	-6	3/8"	9/16" - 18	34.0	30.0	19
23.4092.0608	-6	3/8"	3/4" - 16	35.0	30.0	22
23.4092.0610	-6	3/8"	7/8" - 14	37.1	38.0	27
23.4092.0808	-8	1/2"	3/4" - 16	39.5	38.0	22
23.4092.0810	-8	1/2"	7/8" - 14	36.8	40.5	27
23.4092.0812	-8	1/2"	1.1/16" - 12	46.5	51.0	32
23.4092.1010	-10	5/8"	7/8" - 14	54.0	52.0	27
23.4092.1012	-10	5/8"	1.1/16" - 12	54.0	55.0	32
23.4092.1210	-12	3/4"	7/8" - 14	54.2	55.0	27
23.4092.1212	-12	3/4"	1.1/16" - 12	55.5	55.0	32
23.4092.1214	-12	3/4"	1.3/16" - 12	55.5	57.0	38
23.4092.1216	-12	3/4"	1.5/16" - 12	55.5	60.0	38
23.4092.1616	-16	1"	1.5/16" - 12	71.5	71.0	38
23.4092.1620	-16	1"	1.5/8" - 12	79.5	79.5	50
23.4092.2020	-20	1.1/4"	1.5/8" - 12	85.5	77.0	50
23.4092.2024	-20	1.1/4"	1.7/8" - 12	86.5	90.0	57
23.4092.2424	-24	1.1/2"	1.7/8" - 12	102.0	100.0	57
23.4092.2432	-24	1.1/2"	2.1/2" - 12	118.0	120.0	75
23.4092.3232	-32	2"	2.1/2" - 12	130.5	140.0	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

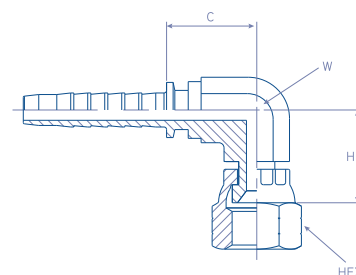
NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)



90° Compact Female JIC 37° Swivel

23.4082.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.4082.0404	-4	1/4"	7/16" - 20	18.5	19.6	14
23.4082.0405	-4	1/4"	1/2" - 20	18.5	21.5	16
23.4082.0406	-4	1/4"	9/16" - 18	18.5	21.8	19
23.4082.0606	-6	3/8"	9/16" - 18	21.5	25.5	19
23.4082.0608	-6	3/8"	3/4" - 16	21.5	26.5	22
23.4082.0808	-8	1/2"	3/4" - 16	25.5	29.5	22
23.4082.0810	-8	1/2"	7/8" - 14	25.5	28	27
23.4082.1212	-12	3/4"	1.1/16" - 12	28.5	30.7	32
23.4082.1616	-16	1"	1.5/16" - 12	30.5	33.5	38

MATERIAL: Carbon Steel

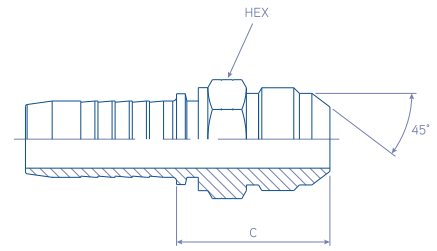
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Male SAE 45°

23.2S00.

SAE J512 / SAE J513



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch		mm	mm
23.2S00.0606	-6	3/8"	5/8" - 18 UNF	27.1	17
23.2S00.1212	-12	3/4"	1.1/16" - 14 UNS	40.6	27

MATERIAL: Carbon Steel

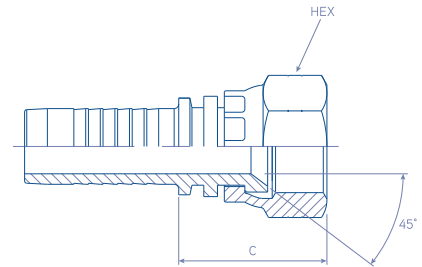
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female SAE 45° Swivel

23.4S12.

SAE J512 / SAE J513



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch		mm	mm
23.4S12.0506	-5	5/16"	5/8" - 18 UNF	17.0	22
23.4S12.0606	-6	3/8"	5/8" - 18 UNF	17.0	22
23.4S12.1212	-12	3/4"	1.1/16" - 14 UNS	21.2	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

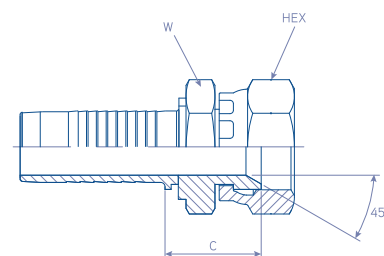
NOTES: On larger sizes nuts can
be supplied with Trust-Wire Nut (W)



Female SAE 45° Swivel with Back Hexagon

23.SH12.

SAE J512 / SAE J513



	hose	hose Ø	thread	C cut off	W	HEX
REFERENCE	dash	inch		mm	mm	mm
23.SH12.0606	-6	3/8"	5/8" - 18 UNF	26.3	19	22
23.SH12.1212	-12	3/4"	1.1/16" - 14 UNS	33.7	27	32

MATERIAL: Carbon Steel

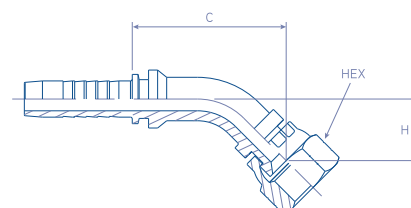
FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Female SAE 45° Swivel

23.4S42.

SAE J512 / SAE J513



	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch		mm	mm	mm
23.4S42.0606	-6	3/8"	5/8" - 18 UNF	39.5	15.5	22
23.4S42.1212	-12	3/4"	1.1/16" - 14 UNS	67.5	27.0	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

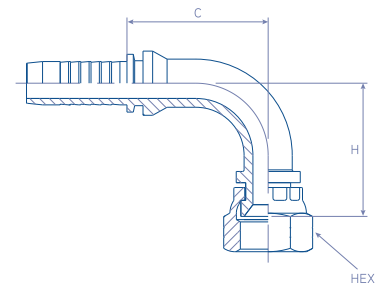
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

NOTES: On larger sizes nuts can be supplied with Trust-Wire Nut (W)

90° Swept Female SAE 45° Swivel

23.4S92.

SAE J512 / SAE J513



	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch		mm	mm	mm
23.4S92.0506	-5	5/16"	5/8" - 18 UNF	32.0	30.0	22
23.4S92.0606	-6	3/8"	5/8" - 18 UNF	34.0	30.0	22
23.4S92.1212	-12	3/4"	1 1/16" - 14 UNS	55.5	55.0	32

MATERIAL: Carbon Steel

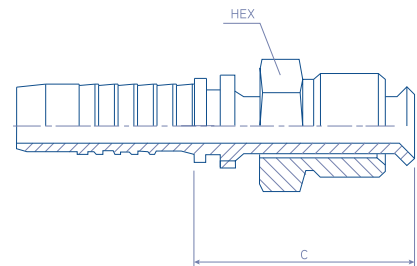
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

SAE Inverted 45° Flare Male

23.2210.



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch		mm	mm
23.2210.0404	04	1/4"	7/16" - 24UNS	42,0	11
23.2210.0405	04	1/4"	1/2" - 20UNF	47,0	13
23.2210.0406	04	1/4"	5/8" - 18UNF	46,0	16
23.2210.0604	04	3/8"	7/16" - 24UNS	42,0	11
23.2210.0605	06	3/8"	1/2" - 20UNF	44,0	13
23.2210.0606	06	3/8"	5/8" - 18UNF	46,0	16
23.2210.0808	08	1/2"	3/4" - 18UNS	47,0	19

MATERIAL: Carbon Steel

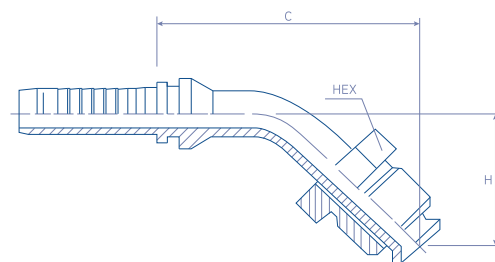
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



SAE Inverted 45° Flare 45° Elbow Male

23.2240.



REFERENCE	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
23.2240.0404	04	1/4"	7/16" - 24UNS	36,0	16,0	11
23.2240.0405	04	1/4"	1/2" - 20UNF	40,0	18,0	13
23.2240.0604	04	3/8"	7/16" - 24UNS	36,0	16,0	11
23.2240.0605	06	3/8"	1/2" - 20UNF	37,0	18,0	13
23.2240.0606	06	3/8"	5/8" - 18UNF	48,0	22,0	16
23.2240.0808	08	1/2"	3/4" - 18UNS	50,0	26,0	19

MATERIAL: Carbon Steel

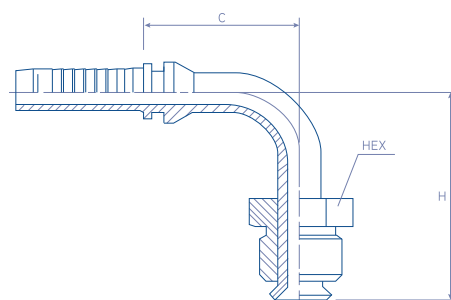
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'

at the end of the REFERENCE)

SAE Inverted 45° Flare 90° Elbow Male

23.2290.



REFERENCE	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
23.2290.0404	04	1/4"	7/16" - 24UNS	36,0	40,0	11
23.2290.0405	04	1/4"	1/2" - 20UNF	42,0	40,0	13
23.2290.0406	04	1/4"	5/8" - 18UNF	40,0	40,0	16
23.2290.0604	04	3/8"	7/16" - 24UNS	37,0	40,0	11
23.2290.0605	06	3/8"	1/2" - 20UNF	40,0	40,0	13
23.2290.0606	06	3/8"	5/8" - 18UNF	40,0	40,0	16
23.2290.0808	08	1/2"	3/4" - 18UNS	40,0	46,0	19

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

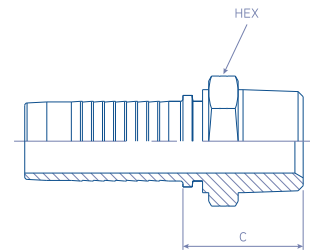
VERSIONS: Stainless Steel (add an 'S'

at the end of the REFERENCE)

Male NPTF Pipe (AGN)

23.0400.

SAE J516 / SAE J476A



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.0400.0302	-3	3/16"	1/8" – 27	22.5	12
23.0400.0304	-3	3/16"	1/4" – 18	28.0	14
23.0400.0402	-4	1/4"	1/8" – 27	21.7	12
23.0400.0404	-4	1/4"	1/4" – 18	27.7	14
23.0400.0406	-4	1/4"	3/8" – 18	28.7	17
23.0400.0408	-4	1/4"	1/2" – 14	34.2	22
23.0400.0504	-5	5/16"	1/4" – 18	28.0	17
23.0400.0506	-5	5/16"	3/8" – 18	30.5	19
23.0400.0604	-6	3/8"	1/4" – 18	28.0	17
23.0400.0606	-6	3/8"	3/8" – 18	30.5	19
23.0400.0608	-6	3/8"	1/2" – 14	34.5	22
23.0400.0806	-8	1/2"	3/8" – 18	31.0	19
23.0400.0808	-8	1/2"	1/2" – 14	35.0	22
23.0400.0812	-8	1/2"	3/4" – 14	37.5	27
23.0400.1008	-10	5/8"	1/2" – 14	36.0	24
23.0400.1012	-10	5/8"	3/4" – 14	39.0	27
23.0400.1208	-12	3/4"	1/2" – 14	38.2	27
23.0400.1212	-12	3/4"	3/4" – 14	38.7	27
23.0400.1216	-12	3/4"	1" – 11.1/2	47.2	36
23.0400.1612	-16	1"	3/4" – 14	41.5	35
23.0400.1616	-16	1"	1" – 11.1/2	48.5	36
23.0400.1620	-16	1"	1.1/4" – 11.1/2	52.0	46
23.0400.2020	-20	1.1/4"	1.1/4" – 11.1/2	53.5	46
23.0400.2024	-20	1.1/4"	1.1/2" – 11.1/2	55.5	50
23.0400.2424	-24	1.1/2"	1.1/2" – 11.1/2	53.0	50
23.0400.2432	-24	1.1/2"	2" – 11.1/2	58.5	65
23.0400.3232	-32	2"	2" – 11.1/2	58.5	65

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

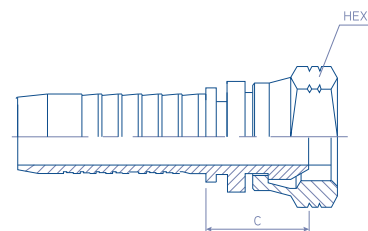
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female NPSM Pipe Swivel

23.3010.

SAE J516 / SAE J514



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch		mm	mm
23.3010.0402	04	1/4"	1/8"-27	23,7	14
23.3010.0404	04	1/4"	1/4"-18	26,7	19
23.3010.0406	04	1/4"	3/8"-18	29,1	22
23.3010.0606	06	3/8"	3/8"-18	27,2	22
23.3010.0608	06	3/8"	1/2"-14	29,0	27
23.3010.0808	08	1/2"	1/2"-14	30,7	27
23.3010.1212	12	3/4"	3/4"-14	35,3	32
23.3010.1616	16	1"	1"-11.5	38,0	41

MATERIAL: Carbon Steel

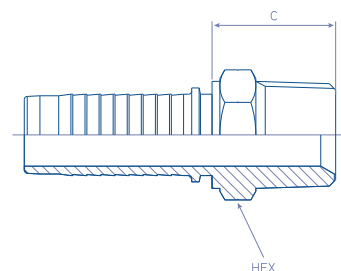
FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Male BSPT Taper Pipe (AGR-K)

23.0300.

BS 5200



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.0300.0302	-3	3/16"	1/8" - 28	22.5	12
23.0300.0304	-3	3/16"	1/4" - 19	27.5	14
23.0300.0402	-4	1/4"	1/8" - 28	21.7	12
23.0300.0404	-4	1/4"	1/4" - 19	26.7	14
23.0300.0406	-4	1/4"	3/8" - 19	27.7	17
23.0300.0606	-6	3/8"	3/8" - 19	30.5	19
23.0300.0608	-6	3/8"	1/2" - 14	34.5	22
23.0300.0808	-8	1/2"	1/2" - 14	35.0	22
23.0300.1212	-12	3/4"	3/4" - 14	38.7	27
23.0300.1616	-16	1"	1" - 14	48.0	36
23.0300.2020	-20	1.1/4"	1.1/4" - 11	53.0	46
23.0300.2424	-24	1.1/2"	1.1/2" - 11	54.5	50
23.0300.3232	-32	2"	2" - 11	61.0	65

MATERIAL: Carbon Steel

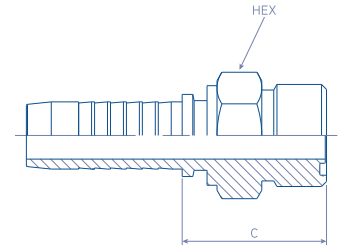
FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Male ORFS

23.4000.

ISO 12151-1 / ISO 8434-3 / SAE J516



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.4000.0404	-4	1/4"	9/16" – 18	22.5	17
23.4000.0406	-4	1/4"	11/16" – 16	24.9	19
23.4000.0506	-5	5/16"	11/16" – 16	25.2	19
23.4000.0606	-6	3/8"	11/16" – 16	25.2	19
23.4000.0608	-6	3/8"	13/16" – 16	28.0	22
23.4000.0808	-8	1/2"	13/16" – 16	28.8	22
23.4000.0810	-8	1/2"	1" – 14	33.0	27
23.4000.0812	-8	1/2"	1.3/16" – 14	37.0	32
23.4000.1010	-10	5/8"	1" – 14	34.0	27
23.4000.1012	-10	5/8"	1.3/16" – 14	37.5	32
23.4000.1212	-12	3/4"	1.3/16" – 14	37.7	32
23.4000.1216	-12	3/4"	1.7/16" – 12	40.7	41
23.4000.1616	-16	1"	1.7/16" – 12	42.5	41
23.4000.2020	-20	1.1/4"	1.11/16" – 12	44.5	46
23.4000.2424	-24	1.1/2"	2" -12	46.5	55

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

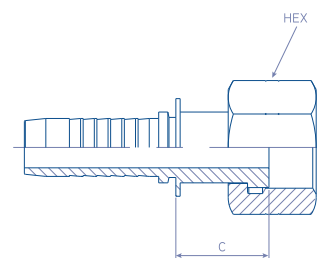
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female ORFS Swivel

23.4414.

ISO 12151-1 / ISO 8434-3 / SAE J516



REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	HEX mm
23.4414.0404	-4	1/4"	9/16" - 18	20.0	17
23.4414.0406	-4	1/4"	11/16" - 16	23.2	22
23.4414.0506	-5	5/16"	11/16" - 16	23.5	22
23.4414.0606	-6	3/8"	11/16" - 16	24.5	22
23.4414.0608	-6	3/8"	13/16" - 16	25.0	24
23.4414.0808	-8	1/2"	13/16" - 16	26.5	24
23.4414.0810	-8	1/2"	1" - 14	29.5	30
23.4414.0812	-8	1/2"	1.3/16" - 14	30.5	36
23.4414.1008	-10	5/8"	13/16" - 16	29.0	24
23.4414.1010	-10	5/8"	1" - 14	30.9	30
23.4414.1012	-10	5/8"	1.3/16" - 14	30.6	36
23.4414.1210	-12	3/4"	1" - 14	33.2	30
23.4414.1212	-12	3/4"	1.3/16" - 14	31.7	36
23.4414.1216	-12	3/4"	1.7/16" - 12	34.7	41
23.4414.1616	-16	1"	1.7/16" - 12	34.1	41
23.4414.1620	-16	1"	1.11/16" - 12	34.0	50
23.4414.2020	-20	1.1/4"	1.11/16" - 12	36.5	50
23.4414.2024	-20	1.1/4"	2" - 12	36.5	50
23.4414.2424	-24	1.1/2"	2" - 12	36.0	60

MATERIAL: Carbon Steel

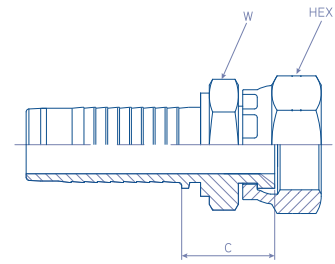
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female ORFS Swivel with Back Hexagon

23.44H4.

ISO 12151-1 / ISO 8434-3 / SAE J516



	hose	hose Ø	thread	C cut off	W	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.44H4.0404	-4	1/4"	9/16" - 18	28.2	14	17
23.44H4.0406	-4	1/4"	11/16" - 16	31.7	17	22
23.44H4.0606	-6	3/8"	11/16" - 16	32.0	17	22
23.44H4.0608	-6	3/8"	13/16" - 16	35.0	19	24
23.44H4.0808	-8	1/2"	13/16" - 16	35.5	19	24
23.44H4.0810	-8	1/2"	1" - 14	41.5	24	30
23.44H4.0812	-8	1/2"	1.3/16" - 14	44.5	30	36
23.44H4.1010	-10	5/8"	1" - 14	42.5	24	30
23.44H4.1012	-10	5/8"	1.3/16" - 14	45.0	28	36
23.44H4.1212	-12	3/4"	1.3/16" - 14	45.6	30	36
23.44H4.1216	-12	3/4"	1.7/16" - 12	50.2	35	41
23.44H4.1616	-16	1"	1.7/16" - 12	50.7	35	41
23.44H4.1620	-16	1"	1.11/16" - 12	52.0	35	50
23.44H4.2020	-20	1.1/4"	1.11/16" - 12	54.5	41	50
23.44H4.2424	-24	1.1/2"	2" - 12	57.0	50	60

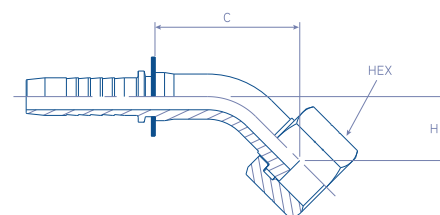
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



45° Swept Female ORFS Swivel



23.4444.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	hose dash	hose Ø inch	thread inch	C cut off mm	H mm	HEX mm
23.4444.0404	-4	1/4"	9/16" - 18	32.5	11.0	17
23.4444.0406	-4	1/4"	11/16" - 16	36.0	13.0	22
23.4444.0506	-5	5/16"	11/16" - 16	39.0	13.0	22
23.4444.0606	-6	3/8"	11/16" - 16	36.0	13.4	22
23.4444.0608	-6	3/8"	13/16" - 16	39.0	15.0	24
23.4444.0808	-8	1/2"	13/16" - 16	43.0	15.0	24
23.4444.0810	-8	1/2"	1" - 14	45.0	17.0	30
23.4444.0812	-8	1/2"	1.3/16" - 14	54.0	21.0	36
23.4444.1008	-10	5/8"	13/16" - 16	54.0	22.0	24
23.4444.1010	-10	5/8"	1" - 14	55.0	21.0	30
23.4444.1012	-10	5/8"	1.3/16" - 14	57.0	23.0	36
23.4444.1210	-12	3/4"	1" - 14	60.0	23.0	30
23.4444.1212	-12	3/4"	1.3/16" - 14	62.0	22.0	36
23.4444.1216	-12	3/4"	1.7/16" - 12	66.0	24.0	41
23.4444.1616	-16	1"	1.7/16" - 12	76.0	27.0	41
23.4444.1620	-16	1"	1.11/16" - 12	76.0	27.0	50
23.4444.2020	-20	1.1/4"	1.11/16" - 12	95.0	34.0	50
23.4444.2424	-24	1.1/2"	2" - 12	120.0	45.0	60

MATERIAL: Carbon Steel

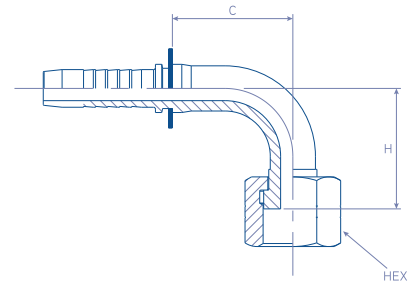
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

90° Swept Female ORFS Swivel

23.4494.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



	hose	hose Ø	thread	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.4494.0404	-4	1/4"	9/16" - 18	26.0	21.0	17
23.4494.0406	-4	1/4"	11/16" - 16	27.0	25.0	22
23.4494.0506	-5	5/16"	11/16" - 16	33.0	27.5	22
23.4494.0606	-6	3/8"	11/16" - 16	34.5	29.0	22
23.4494.0608	-6	3/8"	13/16" - 16	35.5	30.0	24
23.4494.0808	-8	1/2"	13/16" - 16	40.0	35.0	24
23.4494.0810	-8	1/2"	1" - 14	40.5	36.5	30
23.4494.0812	-8	1/2"	1.3/16" - 14	42.0	43.0	36
23.4494.1008	-10	5/8"	13/16" - 16	42.0	46.0	24
23.4494.1010	-10	5/8"	1" - 14	54.0	50.0	30
23.4494.1012	-10	5/8"	1.3/16" - 14	53.0	48.0	36
23.4494.1210	-12	3/4"	1" - 14	55.0	50.0	30
23.4494.1212	-12	3/4"	1.3/16" - 14	57.0	49.0	36
23.4494.1216	-12	3/4"	1.7/16" - 12	57.0	52.0	41
23.4494.1616	-16	1"	1.7/16" - 12	68.0	59.0	41
23.4494.1620	-16	1"	1.11/16" - 12	68.0	77.0	50
23.4494.2020	-20	1.1/4"	1.11/16" - 12	85.0	77.0	50
23.4494.2424	-24	1.1/2"	2" - 12	98.0	94.0	60

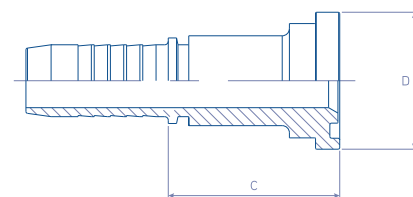
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Straight SAE 3000 PSI (code 61) Flange (SFL)



23.7013.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

REFERENCE	hose	hose Ø	D Ø Flange	C Cut Off
	dash	inch	mm	mm
23.7013.0808	-8	1/2"	30.2	40.0
23.7013.0812	-8	1/2"	38.1	42.0
23.7013.1010	-10	5/8"	34.0	37.0
23.7013.1012	-10	5/8"	38.1	45.0
23.7013.1212	-12	3/4"	38.1	45.0
23.7013.1216	-12	3/4"	44.5	48.0
23.7013.1616	-16	1"	44.5	50.0
23.7013.1620	-16	1"	50.8	54.0
23.7013.2020	-20	1 1/4"	50.8	55.0
23.7013.2024	-20	1 1/4"	60.3	60.0
23.7013.2424	-24	1 1/2"	60.3	60.0
23.7013.2432	-24	1 1/2"	71.4	65.0
23.7013.3232	-32	2"	71.4	66.0
23.7013.4040	-40	2 1/2"	84.1	90.0
23.7013.4848	-48	3"	101.6	91.0

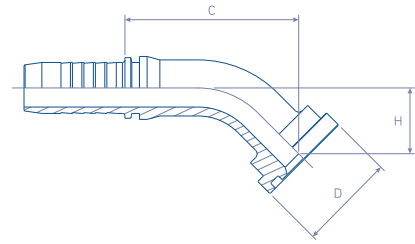
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: Although not in the SAE
or the ISO standard the size 34.0mm
(5/8) is according to JIS standard

45° Swept SAE 3000 PSI (code 61) Flange (SFL 45°)



23.7043.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

	hose	hose Ø	D Ø flange	C cut off	H
REFERENCE	dash	inch	mm	mm	mm
23.7043.0808	-8	1/2"	30.2	57.0	23.0
23.7043.0812	-8	1/2"	38.1	63.0	28.0
23.7043.1010	-10	5/8"	34.0	67.0	28.0
23.7043.1012	-10	5/8"	38.1	68.0	28.0
23.7043.1212	-12	3/4"	38.1	69.0	28.0
23.7043.1216	-12	3/4"	44.5	75.0	32.0
23.7043.1616	-16	1"	44.5	76.0	31.0
23.7043.1620	-16	1"	50.8	85.0	35.0
23.7043.2020	-20	1.1/4"	50.8	95.0	36.0
23.7043.2024	-20	1.1/4"	60.3	100.0	38.0
23.7043.2424	-24	1.1/2"	60.3	100.0	40.0
23.7043.2432	-24	1.1/2"	71.4	110.0	42.0
23.7043.3232	-32	2"	71.4	145.0	56.0
23.7043.4040	-40	2.1/2"	84.1	135.0	58.0
23.7043.4848	-48	3"	101.6	136.0	58.0

MATERIAL: Carbon Steel

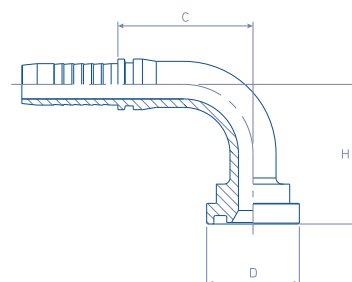
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: Although not in the SAE
or the ISO standard the size 34.0mm
(5/8) is according to JIS standard



90° Swept SAE 3000 PSI (code 61) Flange (SFL 90°)



23.7093.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

REFERENCE	hose dash	hose Ø inch	D Ø flange mm	C cut off mm	H mm
23.7093.0808	-8	1/2"	30.2	46.5	45.0
23.7093.0812	-8	1/2"	38.1	49.0	49.5
23.7093.1010	-10	5/8"	34.0	55.5	55.0
23.7093.1012	-10	5/8"	38.1	55.5	56.5
23.7093.1212	-12	3/4"	38.1	55.5	58.0
23.7093.1216	-12	3/4"	44.5	70.0	61.0
23.7093.1616	-16	1"	44.5	69.9	61.0
23.7093.1620	-16	1"	50.8	88.0	83.0
23.7093.2020	-20	1 1/4"	50.8	88.0	93.0
23.7093.2024	-20	1 1/4"	60.3	95.0	98.0
23.7093.2424	-24	1 1/2"	60.3	100.0	110.0
23.7093.2432	-24	1 1/2"	71.4	130.0	110.0
23.7093.3232	-32	2"	71.4	136.2	125.0
23.7093.4040	-40	2 1/2"	84.1	132.7	114.2
23.7093.4848	-48	3"	101.6	60.5	55.0

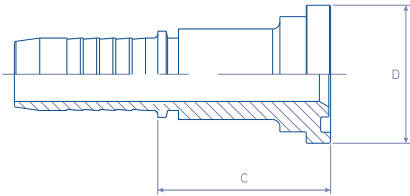
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: Although not in the SAE
or the ISO standard the size 34.0mm
(5/8) is according to JIS standard

Straight SAE 6000 PSI (code 62) Flange (SFS)



23.7016.

ISO 6162-2 / ISO 12151-3 / SAE J516 / SAE J518

	hose	hose Ø	D Ø flange	C cut off
REFERENCE	dash	inch	mm	mm
23.7016.0808	-8	1/2"	31.8	46.0
23.7016.0812	-8	1/2"	31.8	46.0
23.7016.1012	-10	5/8"	41.3	46.0
23.7016.1212	-12	3/4"	41.3	46.0
23.7016.1216	-12	3/4"	47.6	56.0
23.7016.1616	-16	1"	47.6	57.0
23.7016.1620	-16	1"	54.0	65.0
23.7016.2020	-20	1.1/4"	54.0	66.0
23.7016.2024	-20	1.1/4"	63.5	75.0
23.7016.2424	-24	1.1/2"	63.5	75.0
23.7016.2432	-24	1.1/2"	79.4	80.0
23.7016.3232	-32	2"	79.4	85.0

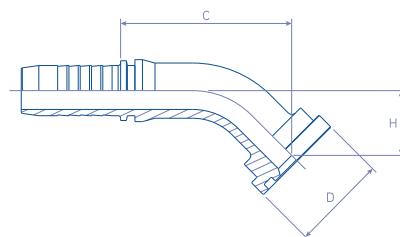
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



45° Swept SAE 6000 PSI (code 62) Flange (SFS 45°)



23.7046.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

REFERENCE	hose dash	hose Ø inch	D Ø flange mm	C cut off mm	H mm
23.7046.0808	-8	1/2"	31.8	57.0	23.0
23.7046.0812	-8	1/2"	31.8	63.0	30.0
23.7046.1012	-10	5/8"	41.3	68.0	28.0
23.7046.1212	-12	3/4"	41.3	69.0	28.0
23.7046.1216	-12	3/4"	47.6	77.0	33.0
23.7046.1616	-16	1"	47.6	79.0	32.0
23.7046.1620	-16	1"	54.0	93.0	38.0
23.7046.2020	-20	1 1/4"	54.0	110.0	44.0
23.7046.2024	-20	1 1/4"	63.5	112.0	48.0
23.7046.2424	-24	1 1/2"	63.5	110.0	46.0
23.7046.2432	-24	1 1/2"	79.4	134.0	58.0
23.7046.3232	-32	2"	79.4	155.0	64.0

MATERIAL: Carbon Steel

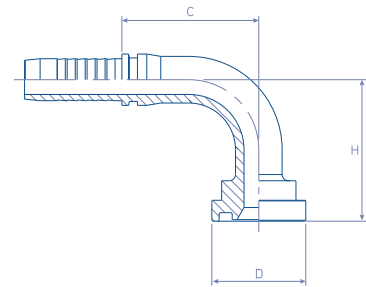
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

90° Swept SAE 6000 PSI (code 62) Flange (SFS 90°)

23.7096.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518



	hose	hose Ø	D Ø flange	C cut off	H
REFERENCE	dash	inch	mm	mm	mm
23.7096.0808	-8	1/2"	31.8	46.5	47.0
23.7096.0812	-8	1/2"	31.8	50.5	56.0
23.7096.1012	-10	5/8"	41.3	53.5	58.0
23.7096.1212	-12	3/4"	41.3	55.5	56.5
23.7096.1216	-12	3/4"	47.6	55.5	65.0
23.7096.1616	-16	1"	47.6	76.0	66.0
23.7096.1620	-16	1"	54.0	78.5	79.5
23.7096.2020	-20	1.1/4"	54.0	101.7	86.0
23.7096.2024	-20	1.1/4"	63.5	102.3	98.0
23.7096.2424	-24	1.1/2"	63.5	111.0	104.0
23.7096.2432	-24	1.1/2"	79.4	113.0	119.5
23.7096.3232	-32	2"	79.4	149.3	134.0

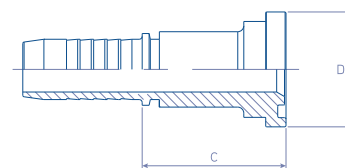
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Straight SUPERCAT Flange



23.7116.

ISO 6162-2 / ISO 12151-3 / SAE J516 / SAE J518

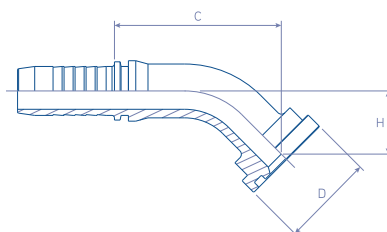
	hose	hose Ø	D Ø flange	C cut off
REFERENCE	dash	inch	mm	mm
23.7116.0808	-8	1/2"	31.8	46.0
23.7116.0812	-8	1/2"	31.8	46.0
23.7116.1012	-10	5/8"	41.3	46.0
23.7116.1212	-12	3/4"	41.3	46.0
23.7116.1216	-12	3/4"	47.6	56.0
23.7116.1616	-16	1"	47.6	57.0
23.7116.1620	-16	1"	54.0	65.0
23.7116.2020	-20	1 1/4"	54.0	66.0
23.7116.2024	-20	1 1/4"	63.5	75.0
23.7116.2424	-24	1 1/2"	63.5	75.0
23.7116.2432	-24	1 1/2"	79.4	80.0
23.7116.3232	-32	2"	79.4	85.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

45° Swept SUPERCAT Flange



23.7146.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

	hose	hose Ø	D Ø flange	C cut off	H
REFERENCE	dash	inch	mm	mm	mm
23.7146.0808	-8	1/2"	31.8	57.0	23.0
23.7146.0812	-8	1/2"	31.8	63.0	30.0
23.7146.1012	-10	5/8"	41.3	68.0	28.0
23.7146.1212	-12	3/4"	41.3	69.0	28.0
23.7146.1216	-12	3/4"	47.6	77.0	33.0
23.7146.1616	-16	1"	47.6	79.0	32.0
23.7146.1620	-16	1"	54.0	93.0	38.0
23.7146.2020	-20	1 1/4"	54.0	110.0	44.0
23.7146.2024	-20	1 1/4"	63.5	112.0	48.0
23.7146.2424	-24	1 1/2"	63.5	110.0	46.0
23.7146.2432	-24	1 1/2"	79.4	134.0	58.0
23.7146.3232	-32	2"	79.4	155.0	64.0

MATERIAL: Carbon Steel

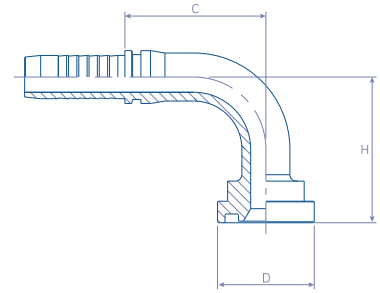
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

90° Swept SUPERCAT Flange

23.7196.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518



	hose	hose Ø	D Ø flange	C cut off	H
REFERENCE	dash	inch	mm	mm	mm
23.7196.0808	-8	1/2"	31.8	46.5	47.0
23.7196.0812	-8	1/2"	31.8	50.5	56.0
23.7196.1012	-10	5/8"	41.3	53.5	58.0
23.7196.1212	-12	3/4"	41.3	55.5	56.5
23.7196.1216	-12	3/4"	47.6	55.5	65.0
23.7196.1616	-16	1"	47.6	76.0	66.0
23.7196.1620	-16	1"	54.0	78.5	79.5
23.7196.2020	-20	1.1/4"	54.0	101.7	86.0
23.7196.2024	-20	1.1/4"	63.5	102.3	98.0
23.7196.2424	-24	1.1/2"	63.5	111.0	104.0
23.7196.2432	-24	1.1/2"	79.4	113.0	119.5
23.7196.3232	-32	2"	79.4	149.3	134.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

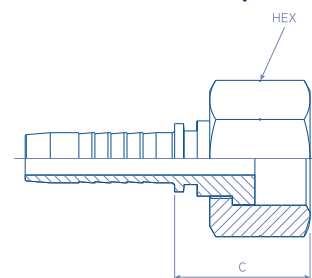
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female BSP Flat Face Swivel

23.3212.

ISO 12151-6 / ISO 8434-6 / BS 5200



	hose	hose Ø	thread	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm
23.3212.0404	-4	1/4"	1/8" - 28	15.2	19
23.3212.0508	-5	5/16"	1/2" - 14	18.0	27
23.3212.0606	-6	3/8"	3/8" - 19	16.5	22
23.3212.0608	-6	3/8"	1/2" - 14	18.0	27
23.3212.0808	-8	1/2"	1/2" - 14	18.5	27
23.3212.0812	-8	1/2"	3/4" - 14	20.5	32
23.3212.1012	-10	5/8"	3/4" - 14	21.0	32
23.3212.1212	-12	3/4"	3/4" - 14	21.2	32
23.3212.1216	-12	3/4"	1" - 11	21.7	38
23.3212.1616	-16	1"	1" - 11	22.5	38

MATERIAL: Carbon Steel

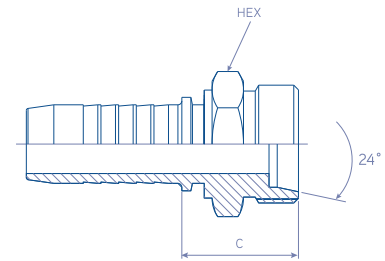
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Male Metric Light Serie 24° Cone Seat (CEL)

23.1000.

ISO 12151-2 / ISO 8434-1



	hose	hose Ø	thread	d - tube	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.1000.0312	-3	3/16"	M12 x 1.5	6	23.0	14
23.1000.0412	-4	1/4"	M12 x 1.5	6	22.2	14
23.1000.0414	-4	1/4"	M14 x 1.5	8	22.7	17
23.1000.0416	-4	1/4"	M16 x 1.5	10	23.7	17
23.1000.0418	-4	1/4"	M18 x 1.5	12	24.7	19
23.1000.0514	-5	5/16"	M14 x 1.5	8	23.0	17
23.1000.0516	-5	5/16"	M16 x 1.5	10	24.0	17
23.1000.0518	-5	5/16"	M18 x 1.5	12	25.0	19
23.1000.0616	-6	3/8"	M16 x 1.5	10	24.0	17
23.1000.0618	-6	3/8"	M18 x 1.5	12	25.0	19
23.1000.0622	-6	3/8"	M22 x 1.5	15	28.0	24
23.1000.0818	-8	1/2"	M18 x 1.5	12	25.5	19
23.1000.0822	-8	1/2"	M22 x 1.5	15	28.5	24
23.1000.0826	-8	1/2"	M26 x 1.5	18	30.0	27
23.1000.1026	-10	5/8"	M26 x 1.5	18	30.0	27
23.1000.1030	-10	5/8"	M30 x 2.0	22	34.0	32
23.1000.1230	-12	3/4"	M30 x 2.0	22	34.2	32
23.1000.1636	-16	1"	M36 x 2.0	28	38.0	41
23.1000.2045	-20	1.1/4"	M45 x 2.0	35	43.0	46
23.1000.2452	-24	1.1/2"	M52 x 2.0	42	45.0	55

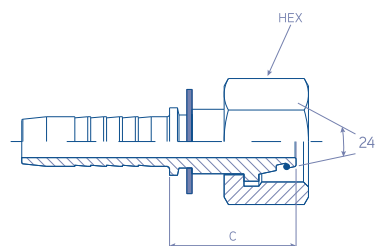
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female Metric Light Serie 24° Cone Seat Swivel (DKOL)



23.5013.

ISO 12151-2 / ISO 8434-1

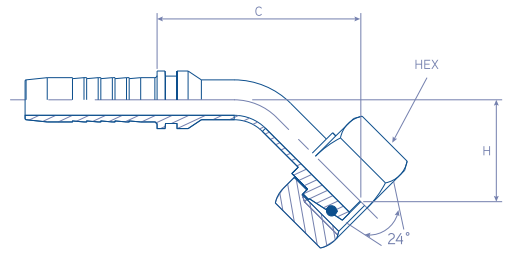
REFERENCE	hose dash	hose Ø inch	thread inch	d tube mm	C cut off mm	HEX mm
23.5013.0312	-3	3/16"	M12 x 1.5	6	22.5	14
23.5013.0412	-4	1/4"	M12 x 1.5	6	26.7	14
23.5013.0414	-4	1/4"	M14 x 1.5	8	25.7	17
23.5013.0416	-4	1/4"	M16 x 1.5	10	21.8	19
23.5013.0418	-4	1/4"	M18 x 1.5	12	25.2	22
23.5013.0514	-5	5/16"	M14 x 1.5	8	27.5	19
23.5013.0516	-5	5/16"	M16 x 1.5	10	22.1	19
23.5013.0518	-5	5/16"	M18 x 1.5	12	25.5	22
23.5013.0616	-6	3/8"	M16 x 1.5	10	28.5	19
23.5013.0618	-6	3/8"	M18 x 1.5	12	24.6	22
23.5013.0622	-6	3/8"	M22 x 1.5	15	27.5	27
23.5013.0818	-8	1/2"	M18 x 1.5	12	30.5	22
23.5013.0822	-8	1/2"	M22 x 1.5	15	28.0	27
23.5013.0826	-8	1/2"	M26 x 1.5	18	26.8	32
23.5013.1026	-10	5/8"	M26 x 1.5	18	29.0	32
23.5013.1027	-10	5/8"	M27 x 1.5	18	29.0	32
23.5013.1030	-10	5/8"	M30 x 2.0	22	32.0	36
23.5013.1230	-12	3/4"	M30 x 2.0	22	34.7	36
23.5013.1636	-16	1"	M36 x 2.0	28	33.5	41
23.5013.2045	-20	1.1/4"	M45 x 2.0	35	38.5	50
23.5013.2452	-24	1.1/2"	M52 x 2.0	42	39.5	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

45° Swept Female Metric Light Serie 24° Cone Seat Swivel (DKOL 45)



23.5043.

ISO 12151-2 / ISO 8434-1

	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5043.0312	-3	3/16"	M12 x 1.5	6	38.0	15.0	14
23.5043.0412	-4	1/4"	M12 x 1.5	6	39.0	15.0	14
23.5043.0414	-4	1/4"	M14 x 1.5	8	35.2	16.0	17
23.5043.0416	-4	1/4"	M16 x 1.5	10	36.3	17.0	19
23.5043.0418	-4	1/4"	M18 x 1.5	12	40.0	18.5	22
23.5043.0516	-5	5/16"	M16 x 1.5	10	39.0	17.0	19
23.5043.0518	-5	5/16"	M18 x 1.5	12	42.6	19.0	22
23.5043.0616	-6	3/8"	M16 x 1.5	10	54.8	20.0	19
23.5043.0618	-6	3/8"	M18 x 1.5	12	42.6	19.0	22
23.5043.0622	-6	3/8"	M22 x 1.5	15	45.0	19.0	27
23.5043.0822	-8	1/2"	M22 x 1.5	15	48.2	20.0	27
23.5043.0826	-8	1/2"	M26 x 1.5	18	49.9	21.0	32
23.5043.1026	-10	5/8"	M26 x 1.5	18	62.5	25.0	32
23.5043.1027	-10	5/8"	M27 x 1.5	18	62.5	25.0	32
23.5043.1030	-10	5/8"	M30 x 2.0	22	66.6	25.0	36
23.5043.1230	-12	3/4"	M30 x 2.0	22	78.0	30.0	36
23.5043.1636	-16	1"	M36 x 2.0	28	90.5	33.0	41
23.5043.2045	-20	1.1/4"	M45 x 2.0	35	102.5	40.0	50
23.5043.2452	-24	1.1/2"	M52 x 2.0	42	127.1	45.0	60

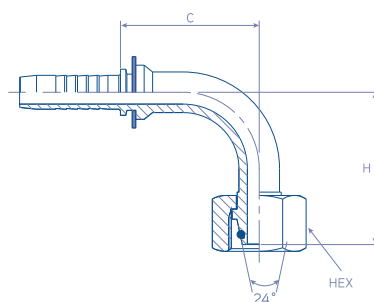
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



90° Swept Female Metric Light Serie 24° Cone Seat Swivel (DKOL 90)



23.5093.

ISO 12151-2 / ISO 8434-1

	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5093.0312	-3	3/16"	M12 x 1.5	6	30.0	30.0	14
23.5093.0412	-4	1/4"	M12 x 1.5	6	30.7	30.0	14
23.5093.0414	-4	1/4"	M14 x 1.5	8	28.0	30.5	17
23.5093.0416	-4	1/4"	M16 x 1.5	10	28.2	33.0	19
23.5093.0418	-4	1/4"	M18 x 1.5	12	35.0	36.0	22
23.5093.0516	-5	5/16"	M16 x 1.5	10	30.5	33.0	19
23.5093.0518	-5	5/16"	M18 x 1.5	12	36.0	36.0	22
23.5093.0616	-6	3/8"	M16 x 1.5	10	34.0	36.0	19
23.5093.0618	-6	3/8"	M18 x 1.5	12	36.0	36.0	22
23.5093.0622	-6	3/8"	M22 x 1.5	15	37.5	38.0	27
23.5093.0822	-8	1/2"	M22 x 1.5	15	38.2	40.5	27
23.5093.0826	-8	1/2"	M26 x 1.5	18	48.0	47.0	32
23.5093.1026	-10	5/8"	M26 x 1.5	18	54.0	52.0	32
23.5093.1027	-10	5/8"	M27 x 1.5	18	54.0	52.0	32
23.5093.1030	-10	5/8"	M30 x 2.0	22	55.5	57.0	36
23.5093.1230	-12	3/4"	M30 x 2.0	22	55.5	57.0	36
23.5093.1236	-12	3/4"	M36 x 2.0	28	55.5	57.0	41
23.5093.1636	-16	1"	M36 x 2.0	28	78.6	70.0	41
23.5093.2045	-20	1.1/4"	M45 x 2.0	35	85.5	80.0	50
23.5093.2452	-24	1.1/2"	M52 x 2.0	42	116.3	98.0	60

MATERIAL: Carbon Steel

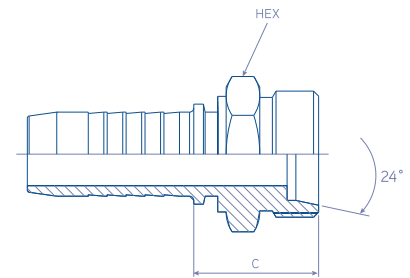
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Male Metric Heavy Serie 24° Cone Seat (CES)

23.1100.

ISO 12151-2 / ISO 8434-1



	hose	hose Ø	thread	d - tube	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.1100.0414	-4	1/4"	M14 x 1.5	6	24.7	17
23.1100.0416	-4	1/4"	M16 x 1.5	8	24.7	17
23.1100.0418	-4	1/4"	M18 x 1.5	10	25.7	19
23.1100.0516	-5	5/16"	M16 x 1.5	8	25.0	17
23.1100.0518	-5	5/16"	M18 x 1.5	10	26.0	19
23.1100.0520	-5	5/16"	M20 x 1.5	12	27.5	22
23.1100.0618	-6	3/8"	M18 x 1.5	10	26.0	19
23.1100.0620	-6	3/8"	M20 x 1.5	12	27.5	22
23.1100.0622	-6	3/8"	M22 x 1.5	14	30.0	24
23.1100.0820	-8	1/2"	M20 x 1.5	12	27.5	22
23.1100.0824	-8	1/2"	M24 x 1.5	16	32.0	27
23.1100.1024	-10	5/8"	M24 x 1.5	16	32.5	27
23.1100.1030	-10	5/8"	M30 x 2.0	20	36.0	32
23.1100.1230	-12	3/4"	M30 x 2.0	20	36.2	32
23.1100.1236	-12	3/4"	M36 x 2.0	25	41.2	41
23.1100.1636	-16	1"	M36 x 2.0	25	42.0	41
23.1100.1642	-16	1"	M42 x 2.0	30	45.5	46
23.1100.2052	-20	1 1/4"	M52 x 2.0	38	51.0	55
23.1100.2452	-24	1 1/2"	M52 x 2.0	38	51.0	55

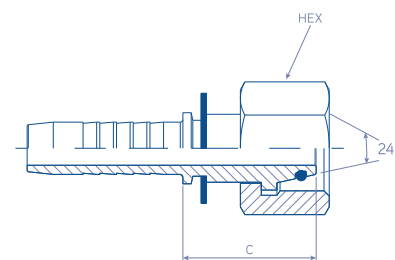
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS)



23.5113.

ISO 12151-2 / ISO 8434-1

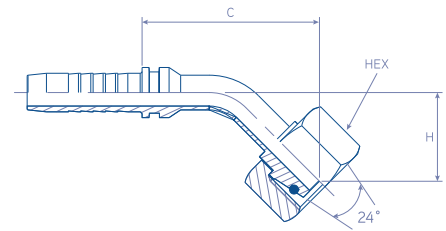
REFERENCE	hose dash	hose Ø inch	thread inch	d - tube mm	C cut off mm	HEX mm
23.5113.0414	-4	1/4"	M14 x 1.5	6	26.2	17
23.5113.0416	-4	1/4"	M16 x 1.5	8	21.7	19
23.5113.0418	-4	1/4"	M18 x 1.5	10	26.2	22
23.5113.0518	-5	5/16"	M18 x 1.5	10	26.5	22
23.5113.0520	-5	5/16"	M20 x 1.5	12	27.5	24
23.5113.0618	-5	5/16"	M18 x 1.5	10	26.5	22
23.5113.0620	-5	5/16"	M20 x 1.5	12	27.5	24
23.5113.0622	-6	3/8"	M22 x 1.5	14	28.5	27
23.5113.0820	-8	1/2"	M20 x 1.5	12	29.0	24
23.5113.0822	-8	1/2"	M22 x 1.5	14	29.0	27
23.5113.0824	-8	1/2"	M24 x 1.5	16	28.5	30
23.5113.1030	-10	5/8"	M30 x 2.0	20	34.0	36
23.5113.1230	-12	3/4"	M30 x 2.0	20	35.7	36
23.5113.1236	-12	3/4"	M36 x 2.0	25	35.7	46
23.5113.1636	-16	1"	M36 x 2.0	25	36.5	46
23.5113.1642	-16	1"	M42 x 2.0	30	39.0	50
23.5113.2052	-20	1 1/4"	M52 x 2.0	30	46.0	50
23.5113.2452	-24	1 1/2"	M52 x 2.0	38	42.5	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

45° Swept Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS 45)



23.5143.

ISO 12151-2 / ISO 8434-1

	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5143.0414	-4	1/4"	M14 x 1.5	6	35.2	16.0	17
23.5143.0416	-4	1/4"	M16 x 1.5	8	36.3	17.0	19
23.5143.0418	-4	1/4"	M18 x 1.5	10	37.7	17.0	22
23.5143.0518	-5	5/16"	M18 x 1.5	10	40.0	17.0	22
23.5143.0520	-5	5/16"	M20 x 1.5	12	41.0	18.0	24
23.5143.0618	-6	3/8"	M18 x 1.5	10	42.6	19.0	22
23.5143.0620	-6	3/8"	M20 x 1.5	12	42.0	18.0	24
23.5143.0622	-6	3/8"	M22 x 1.5	14	43.0	19.0	27
23.5143.0820	-8	1/2"	M20 x 1.5	12	48.2	20.0	24
23.5143.0824	-8	1/2"	M24 x 1.5	16	49.9	21.0	30
23.5143.1030	-10	5/8"	M30 x 2.0	20	66.6	25.0	36
23.5143.1230	-12	3/4"	M30 x 2.0	20	70.5	30.0	36
23.5143.1236	-12	3/4"	M36 x 2.0	25	84.0	30.5	46
23.5143.1636	-16	1"	M36 x 2.0	25	87.0	36.0	46
23.5143.1642	-16	1"	M42 x 2.0	30	89.0	38.0	50
23.5143.2052	-20	1 1/4"	M52 x 2.0	38	121.3	44.0	60

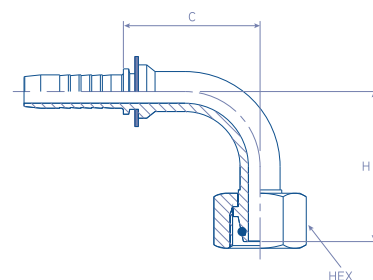
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



90° Swept Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS 90)



23.5193.

ISO 12151-2 / ISO 8434-1

	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5193.0414	-4	1/4"	M14 x 1.5	6	27.0	30.5	17
23.5193.0416	-4	1/4"	M16 x 1.5	8	28.2	32.5	19
23.5193.0418	-4	1/4"	M18 x 1.5	10	28.2	34.5	22
23.5193.0518	-5	5/16"	M18 x 1.5	10	30.5	36.0	22
23.5193.0520	-5	5/16"	M20 x 1.5	12	30.5	36.0	24
23.5193.0618	-6	3/8"	M18 x 1.5	10	40.0	44.0	22
23.5193.0620	-6	3/8"	M20 x 1.5	12	30.5	36.0	24
23.5193.0622	-6	3/8"	M22 x 1.5	14	33.0	37.0	27
23.5193.0820	-8	1/2"	M20 x 1.5	12	35.0	38.0	24
23.5193.0824	-8	1/2"	M24 x 1.5	16	41.0	42.5	30
23.5193.1024	-10	5/8"	M24 x 1.5	16	55.5	57.5	30
23.5193.1030	-10	5/8"	M30 x 2.0	20	55.5	57.5	36
23.5193.1230	-12	3/4"	M30 x 2.0	20	55.5	57.0	36
23.5193.1236	-12	3/4"	M36 x 2.0	25	55.5	60.0	46
23.5193.1636	-16	1"	M36 x 2.0	25	74.0	71.5	46
23.5193.1642	-16	1"	M42 x 2.0	30	74.0	75.0	50
23.5193.2052	-20	1.1/4"	M52 x 2.0	38	89.0	87.0	60

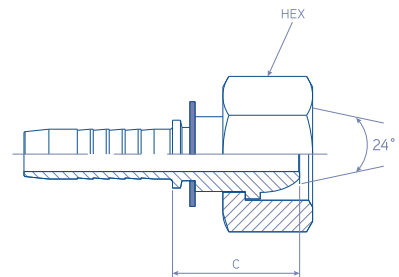
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female Metric 24°/60°C one Seat Swivel (DKL)

23.5213.
DIN 3868



	hose	hose Ø	thread	d - tube	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.5213.0414	- 4	1/4"	M14 x 1.5	8	25.7	17
23.5213.0516	- 5	5/16"	M16 x 1.5	10	22.1	19
23.5213.0518	- 5	5/16"	M18 x 1.5	12	25.5	22
23.5213.0616	- 6	3/8"	M16 x 1.5	10	28.5	19
23.5213.0618	- 6	3/8"	M18 x 1.5	12	24.6	22
23.5213.0822	- 8	1/2"	M22 x 1.5	15	28.0	27
23.5213.1026	- 10	5/8"	M26 x 1.5	18	29.0	32

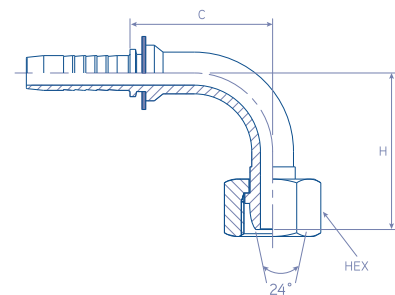
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

90° Swept Female Metric 24°/60° Cone Seat Swivel (DKL)

23.5293.
DIN 3868



	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5293.0414	- 4	1/4"	M14 x 1.5	8	28.0	30.5	17
23.5293.0516	- 5	5/16"	M16 x 1.5	10	30.5	33.0	19
23.5293.0518	- 5	5/16"	M18 x 1.5	12	36.0	36.0	22
23.5293.0616	- 6	3/8"	M16 x 1.5	10	34.0	36.0	19
23.5293.0618	- 6	3/8"	M18 x 1.5	12	36.0	36.0	22
23.5293.0822	- 8	1/2"	M22 x 1.5	15	38.2	40.5	27
23.5293.1026	- 10	5/8"	M26 x 1.5	18	54.0	52.0	32

MATERIAL: Carbon Steel

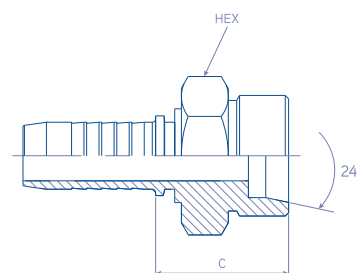
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Male Metric French Serie 24° Cone Seat (AGF)

23.1200.



	hose	hose Ø	thread	d - tube	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.1200.0520	- 5	5/16"	M20 x 1.5	13.25	27.5	22
23.1200.0620	- 6	3/8"	M20 x 1.5	13.25	27.5	22
23.1200.0824	- 8	1/2"	M24 x 1.5	16.75	32.0	24
23.1200.1030	- 10	5/8"	M30 x 1.5	21.25	32.5	30
23.1200.1230	- 12	3/4"	M30 x 1.5	21.25	36.0	30
23.1200.1236	- 12	3/4"	M36 x 1.5	26.75	36.2	36
23.1200.1645	- 16	1"	M45 x 1.5	33.50	41.2	46

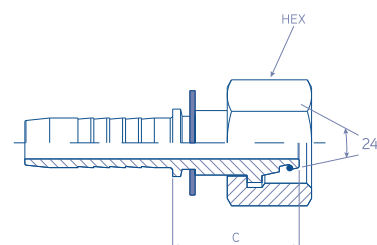
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female Metric French Serie 24° Cone Seat Swivel (DKF)

23.5513.



	hose	hose Ø	thread	d - tube	C cut off	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
23.5513.0520	- 5	5/16"	M20 x 1.5	13.25	27.5	27
23.5513.0620	- 6	3/8"	M20 x 1.5	13.25	27.5	27
23.5513.0824	- 8	1/2"	M24 x 1.5	16.75	32.0	30
23.5513.1030	- 10	5/8"	M30 x 1.5	21.25	32.5	36
23.5513.1230	- 12	3/4"	M30 x 1.5	21.25	36.0	36
23.5513.1236	- 12	3/4"	M36 x 1.5	26.75	36.2	46
23.5513.1645	- 16	1"	M45 x 1.5	33.50	41.2	55

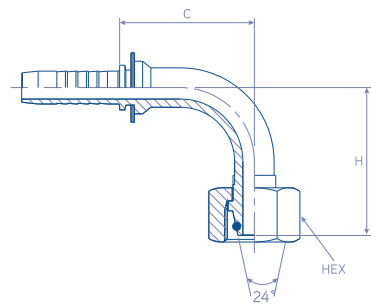
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

90° Swept Female Metric French Serie 24° Cone Seat Swivel (DKF)

23.5593.



	hose	hose Ø	thread	d tube	C cut off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.5593.0520	- 5	5/16"	M20 x 1.5	13.25	30.5	36.0	27
23.5593.0620	- 6	3/8"	M20 x 1.5	13.25	30.5	36.0	27
23.5593.0824	- 8	1/2"	M24 x 1.5	16.75	41.0	42.5	30
23.5593.1030	- 10	5/8"	M30 x 1.5	21.25	55.5	57.5	36
23.5593.1236	- 12	3/4"	M36 x 1.5	26.75	55.5	60.0	46
23.5593.1645	- 16	1"	M45 x 1.5	33.50	74.0	75.0	55

MATERIAL: Carbon Steel

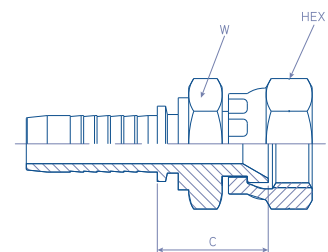
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Female JIS 60° Cone Seat Swivel (TOYOTA)

23.3712.

JIS B8363



	hose	hose Ø	thread	d - tube	C cut off	W	HEX
REFERENCE	dash	inch	inch	mm	mm	mm	mm
23.3712.0404	-4	1/4"	1/4" - 19	21	19	19	19
23.3712.0606	-6	3/8"	3/8" - 19	22	22	19	19
23.3712.0808	-8	1/2"	1/2" - 14	25	27	22	22
23.3712.1212	-12	3/4"	3/4" - 14	28	32	30	30
23.3712.1616	-16	1"	1" - 11	33	38	32	32
23.3712.2020	-20	1.1/4"	1.1/4" - 11	35	50	46	46
23.3712.2424	-24	1.1/2"	1.1/2" - 11	28	55	50	50

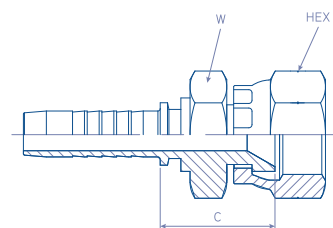
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Female JIS 60° Cone Seat Swivel (KOMATSU)



23.5911.

JIS B8363

REFERENCE	hose dash	hose Ø inch	thread inch	d tube mm	C cut off mm	W mm	HEX mm
23.5911.0414	-4	1/4"	M14 x 1.5	22.2	19	27	19
23.5911.0616	-5	5/16"	M16 x 1.5	23.5	22	27	19
23.5911.0618	-6	3/8"	M18 x 1.5	24.5	24	30	19
23.5911.0822	-8	1/2"	M22 x 1.5	27.0	27	36	22
23.5911.1024	-10	5/8"	M24 x 1.5	28.5	32	46	24
23.5911.1230	-12	3/4"	M30 x 1.5	31.7	36	55	30
23.5911.1633	-16	1"	M33 x 1.5	33.5	41	36	32
23.5911.2036	-20	1.1/4"	M36 x 1.5	37.5	46	46	41
23.5911.2442	-24	1.1/2"	M42 x 1.5	42.0	55	55	50

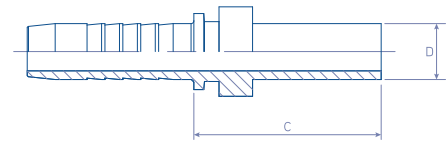
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Metric Standpipe (BEL)

23.6000.



	hose	hose Ø	d - tube	C cut off
REFERENCE	dash	inch	inch	mm
23.6000.0304	-3	3/16"	4	24.5
23.6000.0306	-3	3/16"	6	29.5
23.6000.0308	-3	3/16"	8	31.0
23.6000.0406	-4	1/4"	6	28.0
23.6000.0408	-4	1/4"	8	30.5
23.6000.0410	-4	1/4"	10	33.0
23.6000.0412	-4	1/4"	12	33.0
23.6000.0510	-5	5/16"	10	33.5
23.6000.0512	-5	5/16"	12	33.5
23.6000.0610	-6	3/8"	10	30.5
23.6000.0612	-6	3/8"	12	30.5
23.6000.0614	-6	3/8"	14	30.5
23.6000.0615	-6	3/8"	15	30.5
23.6000.0814	-8	1/2"	14	36.0
23.6000.0815	-8	1/2"	15	32.0
23.6000.0816	-8	1/2"	16	37.0
23.6000.0818	-8	1/2"	18	37.0
23.6000.1018	-10	5/8"	18	34.0
23.6000.1020	-10	5/8"	20	44.0
23.6000.1022	-10	5/8"	22	44.5
23.6000.1220	-12	3/4"	20	44.5
23.6000.1222	-12	3/4"	22	36.5
23.6000.1225	-12	3/4"	25	49.5
23.6000.1625	-16	1"	25	51.0
23.6000.1628	-16	1"	28	40.0
23.6000.1630	-16	1"	30	54.0
23.6000.1638	-16	1"	38	60.0
23.6000.2030	-20	1.1/4"	30	58.0
23.6000.2035	-20	1.1/4"	35	48.0
23.6000.2038	-20	1.1/4"	38	62.0
23.6000.2438	-24	1.1/2"	38	63.0
23.6000.2442	-24	1.1/2"	42	50.0

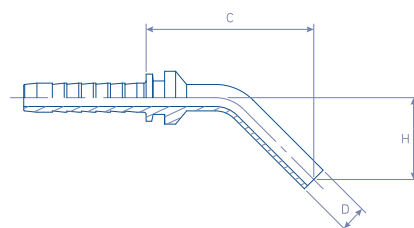
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



45° Swept Metric Standpipe (BEL 45)



23.6040.

REFERENCE	hose dash	hose Ø inch	d tube inch	C cut off mm	H mm
23.6040.0306	-3	3/16"	6	33	26
23.6040.0308	-3	3/16"	8	38	26
23.6040.0406	-4	1/4"	6	41	24
23.6040.0408	-4	1/4"	8	43	25
23.6040.0410	-4	1/4"	10	47	30
23.6040.0412	-4	1/4"	12	47	30
23.6040.0510	-5	5/16"	10	49	30
23.6040.0512	-5	5/16"	12	53	32
23.6040.0610	-6	3/8"	10	50	33
23.6040.0612	-6	3/8"	12	52	33
23.6040.0614	-6	3/8"	14	43	34
23.6040.0615	-6	3/8"	15	45	37
23.6040.0814	-8	1/2"	14	42	34
23.6040.0815	-8	1/2"	15	46	37
23.6040.0816	-8	1/2"	16	45	36
23.6040.0818	-8	1/2"	18	61	32
23.6040.1018	-10	5/8"	18	61	32
23.6040.1020	-10	5/8"	20	62	34
23.6040.1022	-10	5/8"	22	68	35
23.6040.1220	-12	3/4"	20	68	35
23.6040.1222	-12	3/4"	22	68	35
23.6040.1225	-12	3/4"	25	75	39
23.6040.1625	-16	1"	25	74	39
23.6040.1628	-16	1"	28	87	49
23.6040.1630	-16	1"	30	84	43
23.6040.2030	-20	1.1/4"	30	85	43
23.6040.2035	-20	1.1/4"	35	93	45
23.6040.2038	-20	1.1/4"	38	94	50
23.6040.2438	-24	1.1/2"	38	94	50
23.6040.2442	-24	1.1/2"	42	113	57

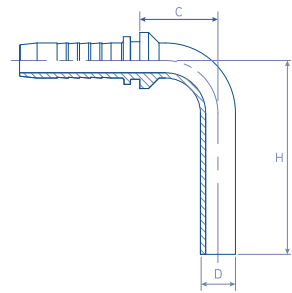
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

90° Swept Metric Standpipe (BEL 90)

23.6090.



	hose	hose Ø	d tube	C cut off	H
REFERENCE	dash	inch	inch	mm	mm
23.6090.0306	-3	3/16"	6	24	37
23.6090.0308	-3	3/16"	8	24	39
23.6090.0406	-4	1/4"	6	23	32
23.6090.0408	-4	1/4"	8	25	34
23.6090.0410	-4	1/4"	10	25	43
23.6090.0412	-4	1/4"	12	25	37
23.6090.0510	-5	5/16"	10	29	40
23.6090.0512	-5	5/16"	12	29	45
23.6090.0610	-6	3/8"	10	27	40
23.6090.0612	-6	3/8"	12	30	44
23.6090.0614	-6	3/8"	14	33	45
23.6090.0615	-6	3/8"	15	38	53
23.6090.0814	-8	1/2"	14	33	49
23.6090.0815	-8	1/2"	15	39	53
23.6090.0816	-8	1/2"	16	42	56
23.6090.0818	-8	1/2"	18	42	57
23.6090.1018	-10	5/8"	18	42	57
23.6090.1020	-10	5/8"	20	42	66
23.6090.1022	-10	5/8"	22	53	71
23.6090.1220	-12	3/4"	20	49	66
23.6090.1222	-12	3/4"	22	54	71
23.6090.1225	-12	3/4"	25	57	76
23.6090.1625	-16	1"	25	58	76
23.6090.1628	-16	1"	28	65	83
23.6090.1630	-16	1"	30	66	89
23.6090.2030	-20	1.1/4"	30	67	89
23.6090.2035	-20	1.1/4"	35	77	97
23.6090.2038	-20	1.1/4"	38	81	106
23.6090.2438	-24	1.1/2"	38	81	106
23.6090.2442	-24	1.1/2"	42	92	118

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

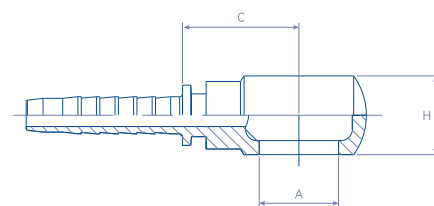
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Metric Banjo (RNM)

23.6400.

DIN 7642



	hose	hose Ø	C cut off	A	H
REFERENCE	dash	inch	inch	mm	mm
23.6400.0310	-3	3/16"	15.5	10.2	10.0
23.6400.0312	-3	3/16"	17.0	12.2	12.0
23.6400.0410	-4	1/4"	17.0	10.2	10.0
23.6400.0412	-4	1/4"	21.0	12.2	12.0
23.6400.0414	-4	1/4"	21.0	14.2	14.0
23.6400.0416	-4	1/4"	22.5	16.2	18.0
23.6400.0514	-5	5/16"	19.0	14.2	14.0
23.6400.0516	-5	5/16"	22.5	16.2	18.0
23.6400.0518	-5	5/16"	24.0	18.2	20.0
23.6400.0614	-6	3/8"	21.0	14.2	14.0
23.6400.0616	-6	3/8"	22.5	16.2	18.0
23.6400.0618	-6	3/8"	24.0	18.2	20.0
23.6400.0622	-6	3/8"	28.1	22.2	22.0
23.6400.0816	-8	1/2"	26.0	16.2	18.0
23.6400.0818	-8	1/2"	24.5	18.2	20.0
23.6400.0822	-8	1/2"	27.5	22.2	22.0
23.6400.1022	-10	5/8"	27.5	22.2	22.0
23.6400.1026	-10	5/8"	32.0	26.2	29.0
23.6400.1226	-12	3/4"	32.0	26.2	29.0
23.6400.1230	-12	3/4"	36.5	30.2	37.0
23.6400.1630	-16	1"	36.5	30.2	37.0

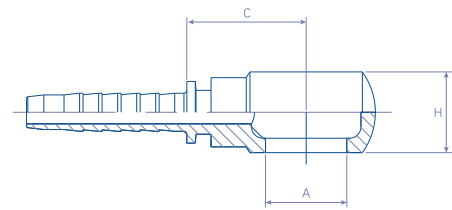
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

BSP Banjo (RNR)

23.6500.
BS 5200



	hose	hose Ø		C cut off	A	H
REFERENCE	dash	inch	inch	mm	mm	mm
23.6500.0302	-3	3/16"	1/8"	19.0	1/8"	16.0
23.6500.0304	-3	3/16"	1/4"	20.0	1/4"	15.0
23.6500.0404	-4	1/4"	1/4"	19.2	1/4"	15.0
23.6500.0406	-4	1/4"	3/8"	21.7	3/8"	18.0
23.6500.0504	-5	5/16"	1/4"	19.0	1/4"	15.0
23.6500.0506	-5	5/16"	3/8"	22.5	3/8"	20.0
23.6500.0604	-6	3/8"	1/4"	19.5	1/4"	15.0
23.6500.0606	-6	3/8"	3/8"	22.0	3/8"	20.0
23.6500.0608	-6	3/8"	1/2"	27.5	1/2"	25.0
23.6500.0806	-8	1/2"	3/8"	22.5	3/8"	20.0
23.6500.0808	-8	1/2"	1/2"	28.0	1/2"	25.0
23.6500.1018	-10	5/8"	1/2"	28.0	1/2"	25.0
23.6500.1010	-10	5/8"	5/8"	27.5	5/8"	27.0
23.6500.1012	-10	5/8"	3/4"	31.5	3/4"	31.0
23.6500.1212	-12	3/4"	3/4"	32.0	3/4"	31.0
23.6500.1216	-12	3/4"	1"	39.7	1"	42.0
23.6500.1616	-16	1"	1"	40.5	1"	42.0

MATERIAL: Carbon Steel

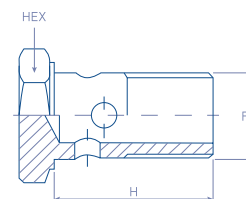
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



BSP Banjo Bolt

88.1600.



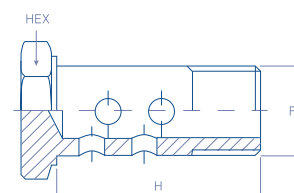
	F	H	HEX
REFERENCE	inch	mm	mm
88.1600.02	1/8"	19.0	14
88.1600.04	1/4"	25.0	19
88.1600.06	3/8"	31.0	22
88.1600.08	1/2"	38.0	27
88.1600.10	5/8"	41.0	30
88.1600.12	3/4"	46.0	32
88.1600.16	1"	58.0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

BSP Banjo Double Bolt

88.1602.



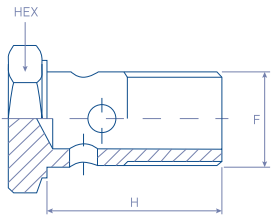
	F	H	HEX
REFERENCE	inch	mm	mm
88.1602.02	1/8"	33.0	14
88.1602.04	1/4"	43.0	19
88.1602.06	3/8"	51.0	22
88.1602.08	1/2"	63.0	27
88.1602.12	3/4"	80.0	32
88.1602.16	1"	110.0	41
88.1600.16	1"	58.0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Metric Banjo Bolt

88.1650.

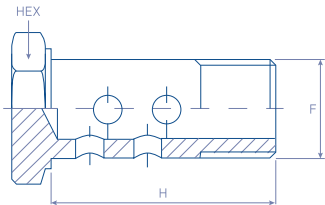


	F	H	HEX
REFERENCE	mm	mm	mm
88.1650.08	M8 x 1.0	16.0	12
88.1650.10	M10 x 1.0	19.0	14
88.1650.12	M12 x 1.5	23.0	17
88.1650.14	M14 x 1.5	25.0	19
88.1650.16	M16 x 1.5	31.0	22
88.1650.18	M18 x 1.5	36.0	24
88.1650.20	M20 x 1.5	38.0	27
88.1650.22	M22 x 1.5	38.0	27
88.1650.24	M24 x 1.5	41.0	30
88.1650.26	M26 x 1.5	46.0	32
88.1650.30	M30 x 1.5	58.0	38

MATERIAL: Carbon Steel **FINISH:** Chromium-(VI) Free plating / ROHS compliant

Metric Banjo Double Bolt

88.1652.



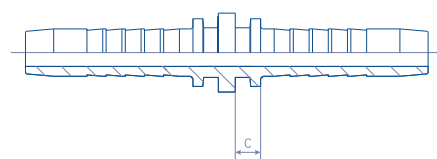
	F	H	Hex
REFERENCE	mm	mm	mm
88.1652.08	M8 x 1.0	29.0	12
88.1652.10	M10 x 1.0	33.0	14
88.1652.12	M12 x 1.5	37.0	17
88.1652.14	M14 x 1.5	43.0	19
88.1652.16	M16 x 1.5	51.0	22
88.1652.18	M18 x 1.5	57.0	24
88.1652.22	M22 x 1.5	63.0	27

MATERIAL: Carbon Steel **FINISH:** Chromium-(VI) Free plating / ROHS compliant



Hose Connector

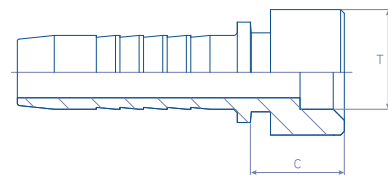
23.8100.



	hose	hose	C cut off
REFERENCE	dash	inch	mm
23.8100.03	-3	3/16"	17.0
23.8100.04	-4	1/4"	17.0
23.8100.05	-5	5/16"	17.0
23.8100.06	-6	3/8"	17.0
23.8100.08	-8	1/2"	18.0
23.8100.10	-10	5/8"	18.0
23.8100.12	-12	3/4"	19.0
23.8100.16	-16	1"	21.0

Brazing Tail

23.8150.



	hose	hose	C cut off	T
REFERENCE	dash	inch	mm	inch
23.8150.03	-3	3/16"	11.0	6.0
23.8150.04	-4	1/4"	12.5	8.0
23.8150.05	-5	5/16"	13.0	10.0
23.8150.06	-6	3/8"	14.0	12.0
23.8150.08	-8	1/2"	15.5	15.0
23.8150.10	-10	5/8"	16.5	18.0
23.8150.12	-12	3/4"	18.0	20.0
23.8150.16	-16	1"	20.5	25.0

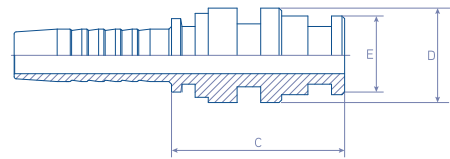
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Staple Lock Male

23.8300.



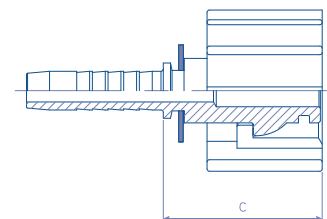
	hose	hose Ø	C cut off	D	E
REFERENCE	dash	inch	inch	mm	mm
23.8300.04	-4	1/4"	35.5	14.9	9.9
23.8300.06	-6	3/8"	34.5	19.9	13.9
23.8300.08	-8	1/2"	35.0	23.9	17.9
23.8300.10	-10	5/8"	36.0	25.9	20.9
23.8300.12	-12	3/4"	35.5	28.9	23.9
23.8300.16	-16	1"	44.0	38.9	30.9
23.8300.20	-20	1.1/4"	47.0	45.9	37.9
23.8300.24	-24	1.1/2"	51.0	54.9	46.9
23.8300.32	-32	2"	57.0	63.9	55.9

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Balwash Female Swivel (Karcher)

23.6213.



	hose	hose	thread	C cut off
REFERENCE	dash	inch		mm
23.6213.0422	-4	1/4"	M22 x 1.5	31.0
23.6213.0522	-4	5/16"	M22 x 1.5	31.0
23.6213.0622	-5	3/8"	M22 x 1.5	31.0

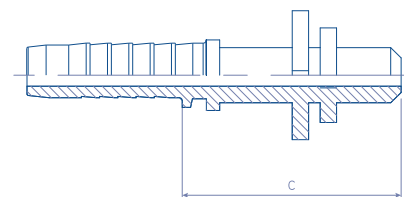
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant



Balwash Standpipe wit O-ring (Karcher)

23.6214.



	hose	hose	tube	C cut off
REFERENCE	dash	inch		mm
23.6214.04	-4	1/4"	10.0	33.0
23.6214.05	-4	5/16"	10.0	33.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Balwash Rubber Handle

11.800.



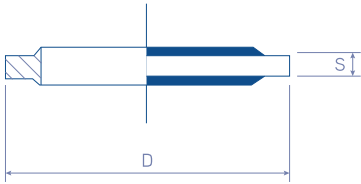
	hose	hose	I.D.
REFERENCE	dash	inch	mm
11.800.18	-5	5/16"	18.0
11.800.21	-6	3/8"	21.0

MATERIAL: Rubber

VERSIONS: Blue colour (add an 'A'
at the end of the REFERENCE)

BSP Bonded Seals

88.2003.



	I	S	D
REFERENCE	inch	mm	mm
88.2003.02	1/8"	2.1	16.0
88.2003.04	1/4"	2.1	20.5
88.2003.02	1/8"	2.1	16.0
88.2003.04	1/4"	2.1	20.5
88.2003.02	1/8"	2.1	16.0
88.2003.04	1/4"	2.1	20.5
88.2003.02	1/8"	2.1	16.0
88.2003.04	1/4"	2.1	20.5
88.2003.02	1/8"	2.1	16.0
88.2003.04	1/4"	2.1	20.5

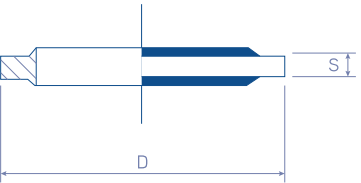
MATERIAL: Rubber Ring (NBR) and mild steel ring

FINISH: Chromium-(VI) Free plating / ROHS compliant

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Bonded Seals

88.2004.



	I	S	D
REFERENCE	inch	mm	mm
88.2004.06	6	1.3	12.0
88.2004.08	8	1.3	14.0
88.2004.10	10	2.1	16.0
88.2004.12	12	2.1	18.0
88.2004.14	14	2.1	22.0
88.2004.16	16	2.1	25.0
88.2004.18	18	2.5	25.0
88.2004.20	20	2.5	28.0
88.2004.22	22	2.5	32.0
88.2004.24	24	2.5	33.0
88.2004.26	26	2.5	35.0
88.2004.30	30	2.5	39.0

MATERIAL: Rubber Ring (NBR) and mild steel ring

FINISH: Chromium-(VI) Free plating / ROHS compliant

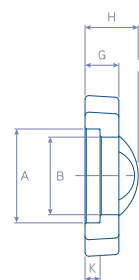
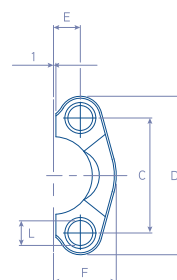
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Split Flange 3000 PSI (code 61)

88.5300.

ISO 6162-1 / SAE J518



REFERENCE	size	A	B	C	D	E	F	G	H	K	L	Bolts	
	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	M	UNC
88.5300.08	1/2"	31	24	38	54	9	23	13	19	6	9	M8	5/16"
88.5300.12	3/4"	39	32	48	65	11	26	14	22	6	11	M10	3/8"
88.5300.16	1"	45	38	52	70	13	29	16	24	7	11	M10	3/8"
88.5300.20	1.1/4"	52	44	59	79	15	36	14	22	7	12	M10	7/16"
88.5300.24	1.1/2"	61	51	70	94	18	41	16	25	7	15	M14	1/2"
88.5300.32	2"	72	63	78	102	21	48	16	26	9	14	M12	1/2"

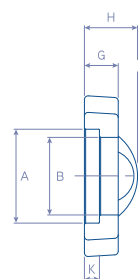
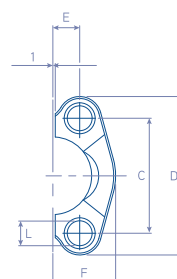
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** Uncut flange (88.5302)
ROHS compliant

Split Flange 6000 PSI (code 62)

88.5600.

ISO 6162-1 / SAE J518

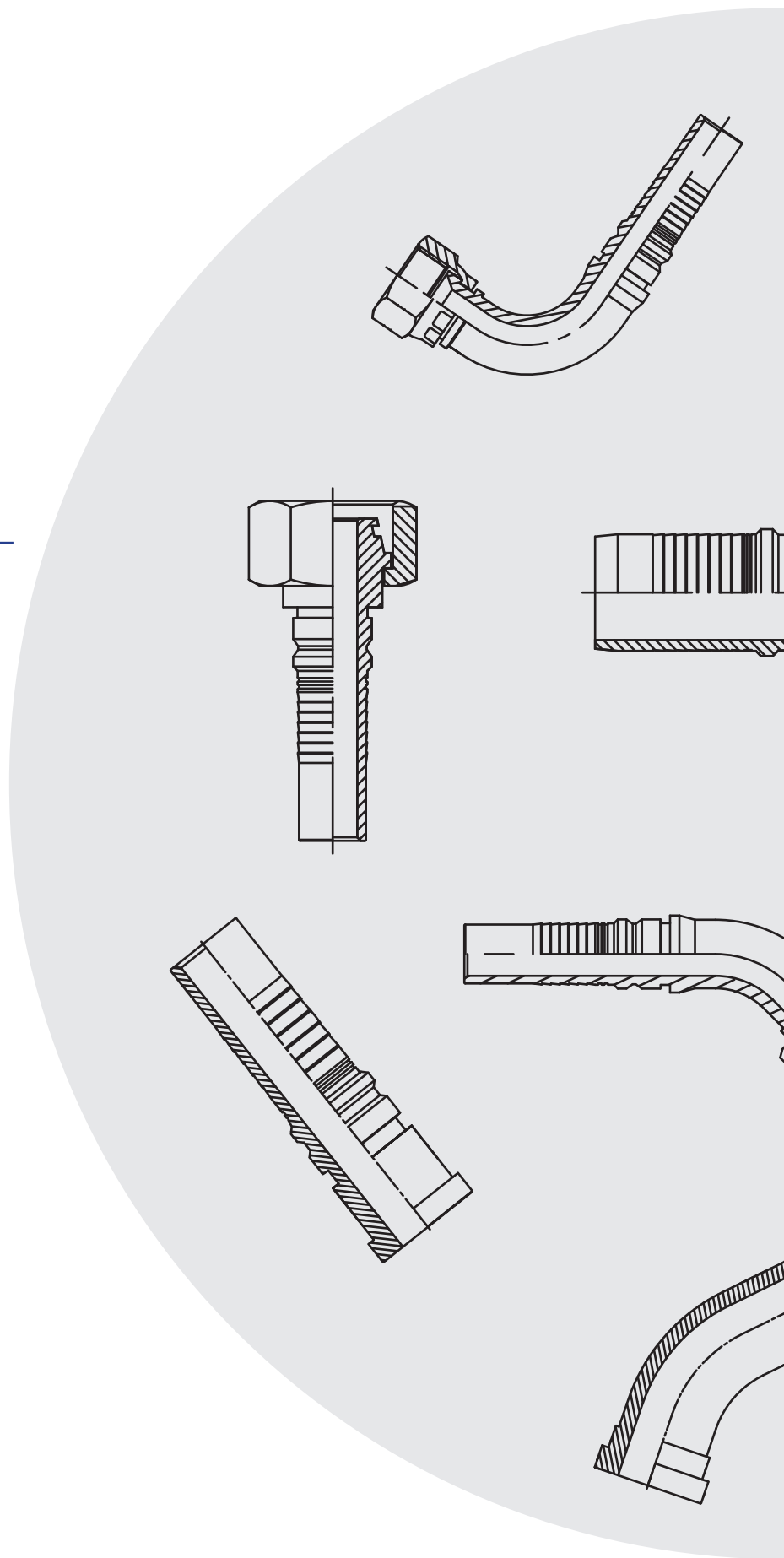


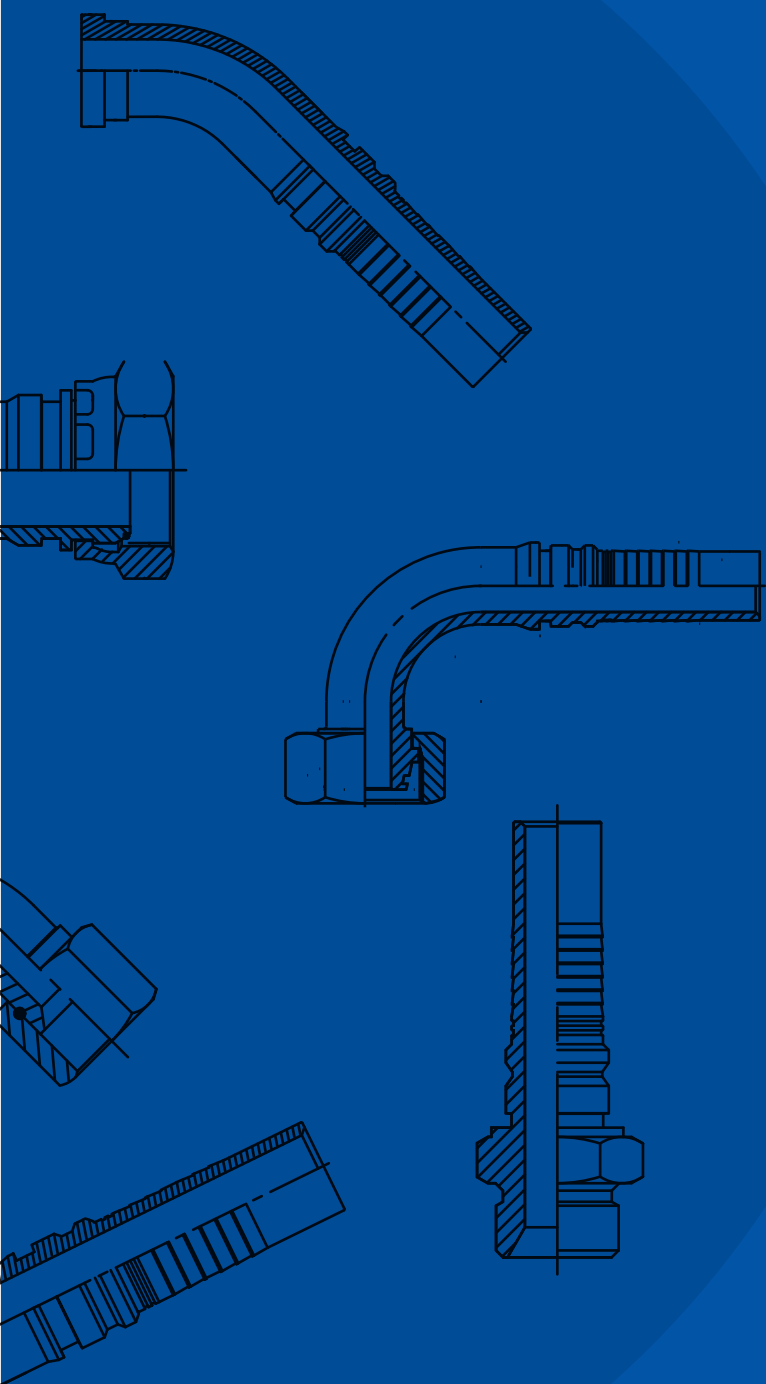
REFERENCE	size	A	B	C	D	E	F	G	H	K	L	Bolts	
	inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	M	UNC
88.5600.08	1/2"	33	25	41	56	9	24	16	22	7	9	M8	5/16"
88.5600.12	3/4"	42	33	51	71	12	30	19	28	8	11	M10	3/8"
88.5600.16	1"	48	39	57	81	14	35	24	33	9	13	M12	7/16"
88.5600.20	1.1/4"	55	44	67	95	16	39	27	38	10	15	M14	1/2"
88.5600.24	1.1/2"	64	52	79	113	18	48	30	43	12	17	M16	5/8"
88.5600.32	2"	80	68	97	133	22	57	37	52	12	21	M20	3/4"

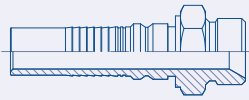
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / **VERSIONS:** Uncut flange (88.5602)
ROHS compliant

Interlock Hydraulic Fittings



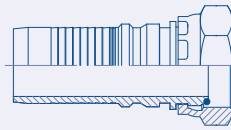




Interlock Male BSP Parallel Pipe (AGR)

26.0100

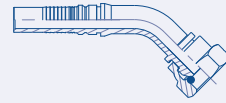
pag. 94



Interlock Female BSP Parallel Pipe with O-ring Swivel (DKOR)

26.3112

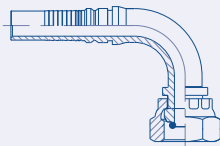
pag. 94



Interlock 45° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 45°)

26.3142

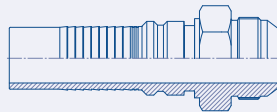
pag. 95



Interlock 90° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 90°)

26.3192

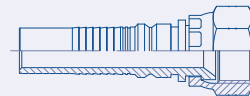
pag. 95



Interlock Male JIC 37° (AGJ)

26.2000

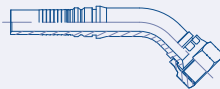
pag. 96



Interlock Female JIC 37° Swivel (DKJ)

26.4012

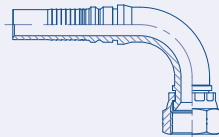
pag. 96



Interlock 45° Swept Female JIC 37° Swivel (DKJ 45°)

26.4042

pag. 97



Interlock 90° Swept Female JIC 37° Swivel (DKJ 90°)

26.4092

pag. 97



Interlock Male NPTF Pipe (AGN)

26.0400

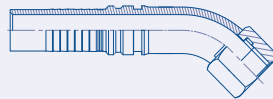
pag. 98



Interlock Female ORFS Swivel

26.4414

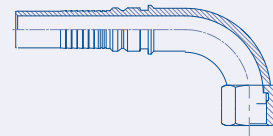
pag. 98



Interlock 45° Swept Female ORFS Swivel

26.4444

pag. 99



Interlock 90° Swept Female ORFS Swivel

26.4494

pag. 99



Interlock Straight SAE 3000 PSI (code 61) Flange (SFL)

26.7013

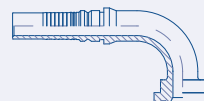
pag. 100



Interlock 45° Swept SAE 3000 PSI (code 61) Flange (SFL 45°)

26.7043

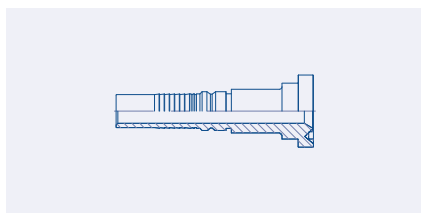
pag. 100



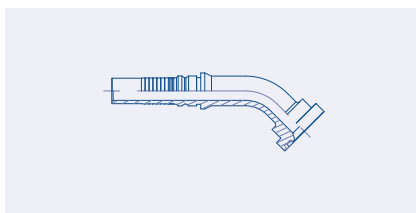
Interlock 90° Swept SAE 3000 PSI (code 61) Flange (SFL 90°)

26.7093

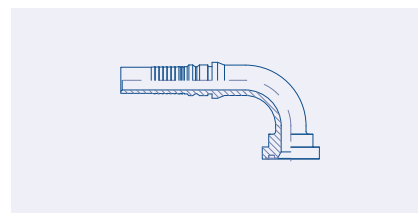
pag. 101



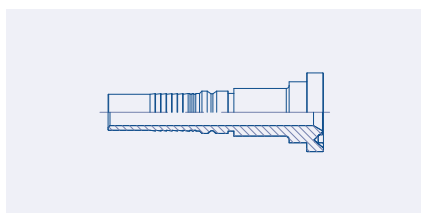
**Interlock Straight SAE 6000 PSI
(code 62) Flange (SFS)**
26.7016 pag. 101



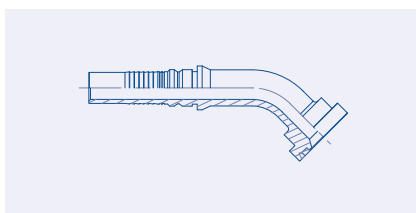
**Interlock 45° Swept SAE 6000
PSI (code 62) Flange (SFS 45°)**
26.7046 pag. 102



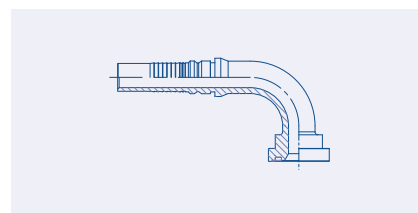
**Interlock 90° Swept SAE 6000
PSI (code 62) Flange (SFS 90°)**
26.7096 pag. 102



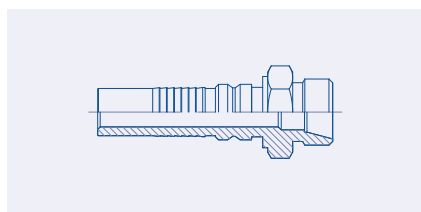
**Interlock Straight SUPERCAT
Flange**
26.7116 pag. 103



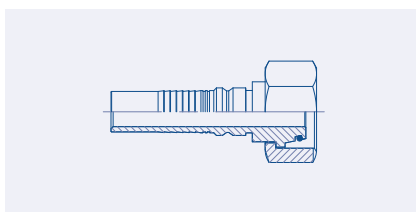
**Interlock 45° Swept SUPERCAT
Flange**
26.7146 pag. 103



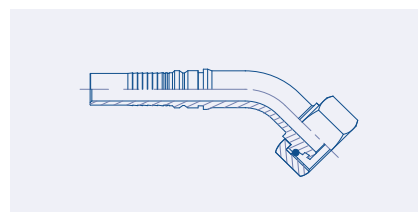
**Interlock 90° Swept SUPERCAT
Flange**
26.7196 pag. 104



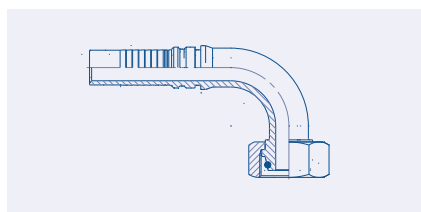
**Interlock Male Metric Heavy Serie
24° Cone Seat (CES)**
26.1100 pag. 104



**Interlock Female Metric Heavy
Serie 24° Cone Seat Swivel
(DKOS) 26.5113** pag. 105



**Interlock 45° Swept Female
Metric Heavy Serie 24° Cone
Seat Swivel (DKOS 45)**
26.5143 pag. 105

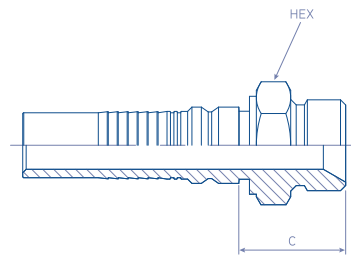


**Interlock 90° Swept Female
Metric Heavy Serie 24° Cone
Seat Swivel (DKOS 90)**
26.5193 pag. 106

Interlock Male BSP Parallel Pipe (AGR)

26.0100.

ISO 12151-6 / ISO 8434-6 / BS 5200



	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.0100.1212	-12	3/4"	3/4" - 14	36.5	32
26.0100.1616	-16	1"	1" - 11	42.5	41
26.0100.2020	-20	1.1/4"	1.1/4" - 11	46.7	50
26.0100.2424	-24	1.1/2"	1.1/2" - 11	49.5	55
26.0100.3232	-32	2"	2" - 11	56.5	70

MATERIAL: Carbon Steel

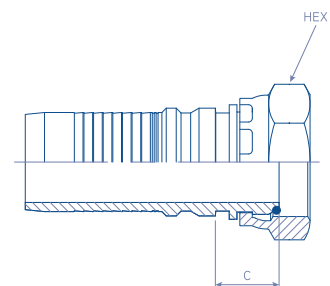
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock Female BSP Parallel Pipe with O-ring Swivel (DKOR)

26.3112.

ISO 12151-6 / ISO 8434-6 / BS 5200



	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.3112.1212	-12	3/4"	3/4" - 14	22.0	32
26.3112.1616	-16	1"	1" - 11	25.2	38
26.3112.2020	-20	1.1/4"	1.1/4" - 11	29.2	50
26.3112.2424	-24	1.1/2"	1.1/2" - 11	30.5	55
26.3112.3232	-32	2"	2" - 11	31.0	70

MATERIAL: Carbon Steel

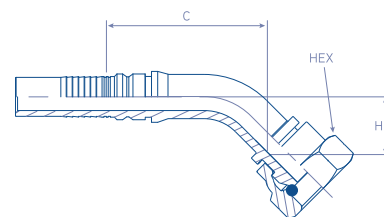
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)



Interlock 45° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 45°)



26.3142.

ISO 12151-6 / ISO 8434-6 / BS 5200

	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.3142.1212	-12	3/4"	3/4" - 14	67.6	28.3	32
26.3142.1616	-16	1"	1" - 11	80.7	33.8	38
26.3142.2020	-20	1.1/4"	1.1/4" - 11	94.5	37.5	50
26.3142.2424	-24	1.1/2"	1.1/2" - 11	116.5	49.2	55
26.3142.3232	-32	2"	2" - 11	136.5	59.6	70

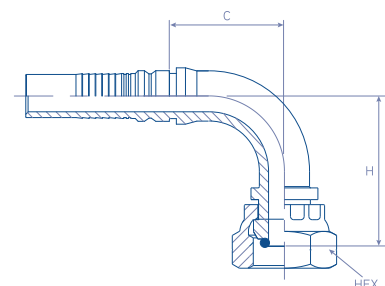
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

Interlock 90° Swept Female BSP Parallel Pipe with O-ring Swivel (DKOR 90°)



26.3192.

ISO 12151-6 / ISO 8434-6 / BS 5200

	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.3192.1212	-12	3/4"	3/4" - 14	57.0	55.0	32
26.3192.1616	-16	1"	1" - 11	73.0	71.0	38
26.3192.2020	-20	1.1/4"	1.1/4" - 11	87.0	77.0	50
26.3192.2424	-24	1.1/2"	1.1/2" - 11	105.0	100.0	55
26.3192.3232	-32	2"	2" - 11	135.0	128.0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

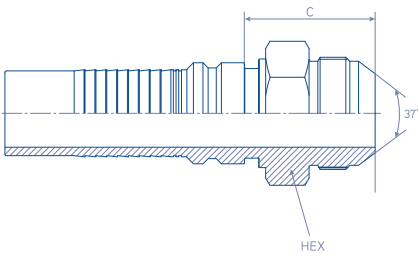
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

Interlock Male JIC 37° (AGJ)

26.2000.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



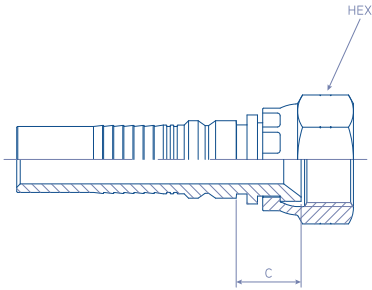
	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.2000.1212	-12	3/4"	1.1/16" - 12	38.0	27
26.2000.1616	-16	1"	1.5/16" - 12	43.1	36
26.2000.2020	-20	1.1/4"	1.5/8" - 12	48.0	46
26.2000.2424	-24	1.1/2"	1.7/8" - 12	52.5	50
26.2000.3232	-32	2"	2.1/2" - 12	64.0	65

MATERIAL: Carbon Steel **FINISH:** Chromium-(VI) Free plating / ROHS compliant **VERSIONS:** Stainless Steel (add an 'S' at the end of the REFERENCE)

Interlock Female JIC 37° Swivel (DKJ)

26.4012.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

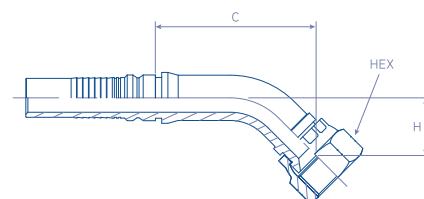


	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.4012.1212	-12	3/4"	1.1/16" - 12	20.0	32
26.4012.1616	-16	1"	1.5/16" - 12	22.3	41
26.4012.2020	-20	1.1/4"	1.5/8" - 12	22.2	50
26.4012.2424	-24	1.1/2"	1.7/8" - 12	23.5	57
26.4012.3232	-32	2"	2.1/2" - 12	30.5	75

MATERIAL: Carbon Steel **VERSIONS:** Stainless Steel (add an 'S' at the end of the REFERENCE) **NOTES:** On larger sizes nuts can be supplied with Trust-Wire Nut (W)
FINISH: Chromium-(VI) Free plating / ROHS compliant



Interlock 45° Swept Female JIC 37° Swivel (DKJ 45°)



26.4042.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.4042.1212	-12	3/4"	1.1/16" - 12	68.0	28.3	32
26.4042.1616	-16	1"	1.5/16" - 12	81.0	32.0	38
26.4042.2020	-20	1.1/4"	1.5/8" - 12	94.5	37.5	50
26.4042.2424	-24	1.1/2"	1.7/8" - 12	116.5	49.2	55
26.4042.3232	-32	2"	2.1/2" - 12	148.0	64.0	75

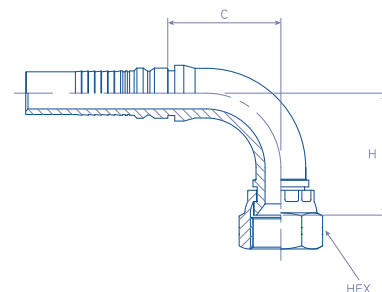
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

Interlock 90° Swept Female JIC 37° Swivel (DKJ 90°)



26.4092.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.4092.1212	-12	3/4"	1.1/16" - 12	59.0	55.0	32
26.4092.1616	-16	1"	1.5/16" - 12	75.0	71.0	38
26.4092.2020	-20	1.1/4"	1.5/8" - 12	89.0	77.0	50
26.4092.2424	-24	1.1/2"	1.7/8" - 12	107.0	100.0	57
26.4092.3232	-32	2"	2.1/2" - 12	135.0	140.0	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

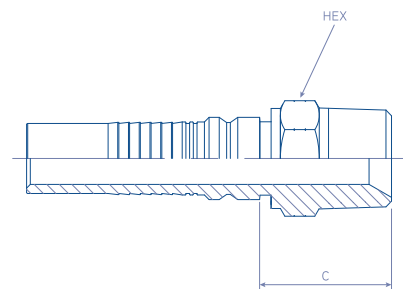
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

NOTES: On larger sizes nuts can be
supplied with Trust-Wire Nut (W)

Interlock Male NPTF Pipe (AGN)

26.0400.

SAE J516 / SAE J476A



	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.0400.1212	-12	3/4"	3/4" - 14	36.0	27
26.0400.1616	-16	1"	1" - 11.1/2	46.0	36
26.0400.2020	-20	1.1/4"	1.1/4" - 11.1/2	50.7	46
26.0400.2424	-24	1.1/2"	1.1/2" - 11.1/2	50.5	50
26.0400.3232	-32	2"	2" - 11.1/2	57.5	65

MATERIAL: Carbon Steel

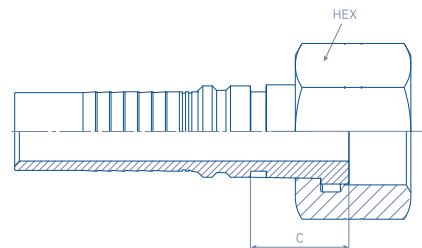
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock Female ORFS Swivel

26.4414.

ISO 12151-1 / ISO 8434-3 / SAE J516



	hose	hose Ø	thread	C Cut Off	HEX
REFERENCE	dash	inch	inch	mm	mm
26.4414.1212	-12	3/4"	1.3/16" - 14	29.0	36
26.4414.1616	-16	1"	1.7/16" - 12	31.6	41
26.4414.2020	-20	1.1/4"	1.11/16" - 12	31.5	50
26.4414.2424	-24	1.1/2"	2" - 12	33.7	50

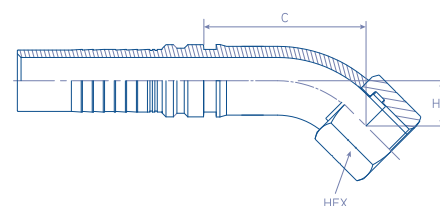
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Interlock 45° Swept Female ORFS Swivel



26.4444.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

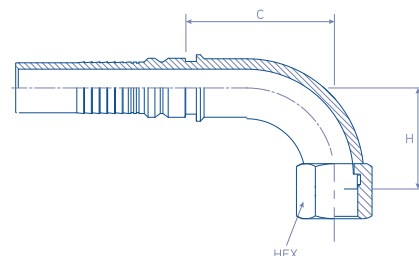
	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.4444.1212	-12	3/4"	1.3/16" - 14	60.0	23.1	36
26.4444.1616	-16	1"	1.7/16" - 12	76.0	28.5	41
26.4444.2020	-20	1.1/4"	1.11/16" - 12	95.0	37.0	50
26.4444.2424	-24	1.1/2"	2" - 12	120.0	46.0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 90° Swept Female ORFS Swivel



26.4494.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

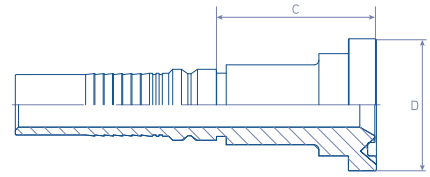
	hose	hose Ø	thread	C Cut Off	H	HEX
REFERENCE	dash	inch	inch	mm	mm	mm
26.4494.1212	-12	3/4"	1.3/16" - 14	56.0	52.0	36
26.4494.1616	-16	1"	1.7/16" - 12	72.0	62.5	41
26.4494.2020	-20	1.1/4"	1.11/16" - 12	86.0	77.0	50
26.4494.2424	-24	1.1/2"	2" - 12	98.0	94.0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock Straight SAE 3000 PSI (code 61) Flange (SFL)



26.7013.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

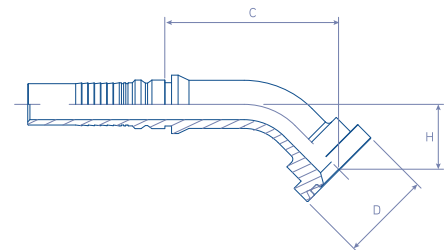
	hose	hose Ø	D Ø Flange	C Cut Off
REFERENCE	dash	inch	mm	mm
26.7013.1212	-12	3/4"	38.1	40.0
26.7013.1216	-12	3/4"	44.5	43.0
26.7013.1616	-16	1"	44.5	44.5
26.7013.1620	-16	1"	50.8	44.5
26.7013.2020	-20	1.1/4"	50.8	46.7
26.7013.2024	-20	1.1/4"	60.3	49.0
26.7013.2424	-24	1.1/2"	60.3	50.5
26.7013.2432	-24	1.1/2"	71.4	72.0
26.7013.3232	-32	2"	71.4	73.5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 45° Swept SAE 3000 PSI (code 61) Flange (SFL 45°)



26.7043.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

	hose	hose Ø	D Ø Flange	C Cut Off	H
REFERENCE	dash	inch	mm	mm	mm
26.7043.1212	-12	3/4"	38.1	68.5	26.7
26.7043.1216	-12	3/4"	44.5	68.0	30.6
26.7043.1616	-16	1"	44.5	82.5	32.5
26.7043.1620	-16	1"	50.8	83.0	34.5
26.7043.2020	-20	1.1/4"	50.8	84.3	31.0
26.7043.2024	-20	1.1/4"	60.3	87.1	31.0
26.7043.2424	-24	1.1/2"	60.3	123.0	46.5
26.7043.2432	-24	1.1/2"	71.4	123.5	50.5
26.7043.3232	-32	2"	71.4	140.0	53.2

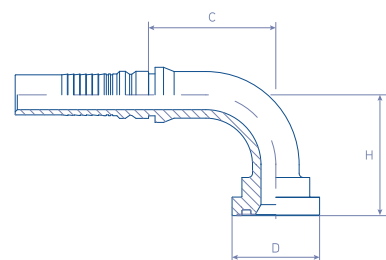
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Interlock 90° Swept SAE 3000 PSI (code 61) Flange (SFL 90°)



26.7093.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

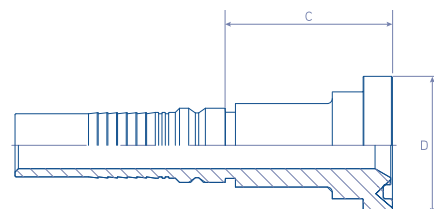
	hose	hose Ø	D Ø Flange	C Cut Off	H
REFERENCE	dash	inch	mm	mm	mm
26.7093.1212	-12	3/4"	38.1	63.0	56.5
26.7093.1216	-12	3/4"	44.5	58.0	58.0
26.7093.1616	-16	1"	44.5	75.0	65.0
26.7093.1620	-16	1"	50.8	67.5	61.0
26.7093.2020	-20	1.1/4"	50.8	83.7	69.2
26.7093.2024	-20	1.1/4"	60.3	82.3	69.2
26.7093.2424	-24	1.1/2"	60.3	109.0	90.0
26.7093.2432	-24	1.1/2"	71.4	109.0	104.0
26.7093.3232	-32	2"	71.4	145.0	123.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock Straight SAE 6000 PSI (code 62) Flange (SFS)



26.7016.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

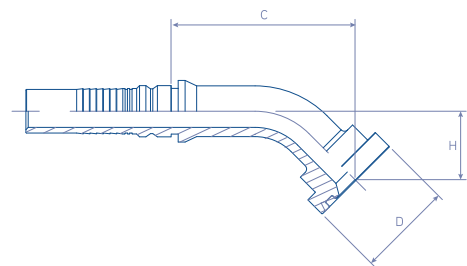
	hose	hose Ø	D Ø Flange	C Cut Off
REFERENCE	dash	inch	mm	mm
26.7016.1212	-12	3/4"	41.3	46.0
26.7016.1216	-12	3/4"	47.6	56.5
26.7016.1616	-16	1"	47.6	57.5
26.7016.1620	-16	1"	54.0	64.5
26.7016.2020	-20	1.1/4"	54.0	67.2
26.7016.2024	-20	1.1/4"	63.5	71.0
26.7016.2424	-24	1.1/2"	63.5	73.0
26.7016.2432	-24	1.1/2"	79.4	75.0
26.7016.3232	-32	2"	79.4	83.5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 45° Swept SAE 6000 PSI (code 62) Flange (SFS 45°)



26.7046.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

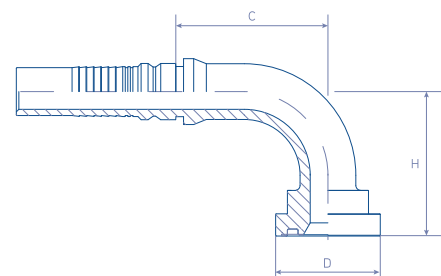
	hose	hose Ø	D Ø Flange	C Cut Off	H
REFERENCE	dash	inch	mm	mm	mm
26.7046.1212	-12	3/4"	41.3	69.0	29.5
26.7046.1216	-12	3/4"	47.6	77.0	33.0
26.7046.1616	-16	1"	47.6	79.0	31.0
26.7046.1620	-16	1"	54.0	99.0	39.0
26.7046.2020	-20	1.1/4"	54.0	110.0	44.0
26.7046.2024	-20	1.1/4"	63.5	112.7	48.0
26.7046.2424	-24	1.1/2"	63.5	115.0	47.0
26.7046.2432	-24	1.1/2"	79.4	131.3	57.0
26.7046.3232	-32	2"	79.4	154.0	64.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 90° Swept SAE 6000 PSI (code 62) Flange (SFS 90°)



26.7096.

ISO 6162-1 / ISO 12151-3 / SAE J516 / SAE J518

	hose	hose Ø	D Ø Flange	C Cut Off	H
REFERENCE	dash	inch	mm	mm	mm
26.7096.1212	-12	3/4"	41.3	55.0	58.0
26.7096.1216	-12	3/4"	47.6	58.0	65.0
26.7096.1616	-16	1"	47.6	77.0	66.0
26.7096.1620	-16	1"	54.0	76.0	80.0
26.7096.2020	-20	1.1/4"	54.0	97.2	86.0
26.7096.2024	-20	1.1/4"	63.5	99.9	100.0
26.7096.2424	-24	1.1/2"	63.5	108.5	104.0
26.7096.2432	-24	1.1/2"	79.4	107.5	119.5
26.7096.3232	-32	2"	79.4	145.0	134.0

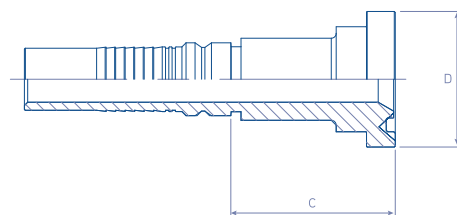
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Interlock Straight SUPERCAT Flange



26.7116.

ISO 6162-2 / ISO 12151-3 / SAE J516 / SAE J518

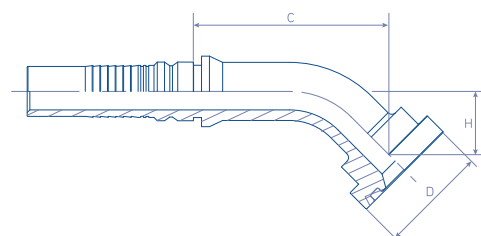
REFERENCE	hose dash	hose Ø inch	D Ø Flange mm	C Cut Off mm
26.7116.1212	-12	3/4"	41.3	50.0
26.7116.1216	-12	3/4"	47.6	64.0
26.7116.1616	-16	1"	47.6	65.0
26.7116.1620	-16	1"	54.0	71.0
26.7116.2020	-20	1.1/4"	54.0	73.0
26.7116.2024	-20	1.1/4"	63.5	84.0
26.7116.2424	-24	1.1/2"	63.5	77.0
26.7116.2432	-24	1.1/2"	79.4	82.0
26.7116.3232	-32	2"	79.4	90.0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 45° Swept SUPERCAT Flange



26.7146.

ISO 6162-2 / ISO 12151-3 / SAE J516 / SAE J518

REFERENCE	hose dash	hose Ø inch	D Ø Flange mm	C Cut Off mm	H mm
26.7146.1212	-12	3/4"	41.3	72.0	32.0
26.7146.1216	-12	3/4"	47.6	79.0	36.0
26.7146.1616	-16	1"	47.6	83.0	34.0
26.7146.1620	-16	1"	54.0	95.0	41.0
26.7146.2020	-20	1.1/4"	54.0	114.0	46.0
26.7146.2024	-20	1.1/4"	63.5	116.0	48.0
26.7146.2424	-24	1.1/2"	63.5	120.0	48.0
26.7146.2432	-24	1.1/2"	79.4	132.0	59.0
26.7146.3232	-32	2"	79.4	170.0	63.0

MATERIAL: Carbon Steel

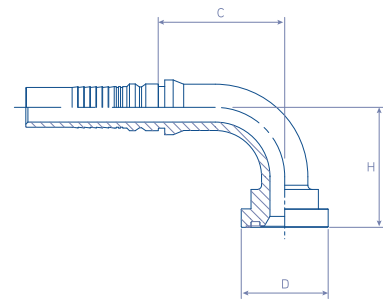
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 90° Swept SUPERCAT Flange

26.7196.

ISO 6162-2 / ISO 12151-3 / SAE J516 / SAE J518



	hose	hose Ø	D Ø Flange	C Cut Off	H
REFERENCE	dash	inch	mm	mm	mm
26.7196.1212	-12	3/4"	41.3	57.0	60.0
26.7196.1216	-12	3/4"	47.6	57.0	68.0
26.7196.1616	-16	1"	47.6	78.0	70.0
26.7196.1620	-16	1"	54.0	78.0	82.0
26.7196.2020	-20	1.1/4"	54.0	106.0	90.0
26.7196.2024	-20	1.1/4"	63.5	106.0	100.0
26.7196.2424	-24	1.1/2"	63.5	113.0	106.0
26.7196.2432	-24	1.1/2"	79.4	113.0	122.0
26.7196.3232	-32	2"	79.4	153.0	134.0

MATERIAL: Carbon Steel

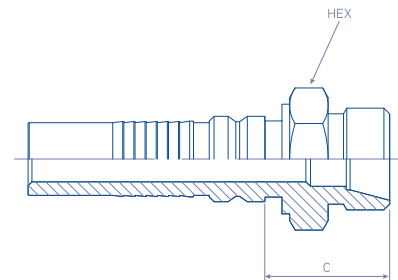
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock Male Metric Heavy Serie 24° Cone Seat (CES)

26.1100.

ISO 12151-2 / ISO 8434-1



	hose	hose Ø	thread	d Tube	C Cut Off	HEX
REFERENCE	dash	inch		mm	mm	mm
26.1100.1236	-12	3/4"	M36 x 2.0	25	44.0	41
26.1100.1642	-16	1"	M42 x 2.0	30	42.0	46
26.1100.2052	-20	1.1/4"	M52 x 2.0	38	48.2	55

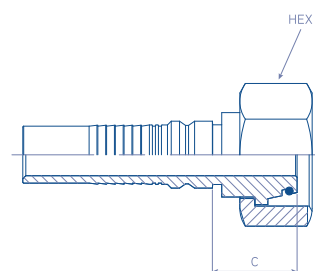
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Interlock Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS)



26.5113.

ISO 12151-2 / ISO 8434-1

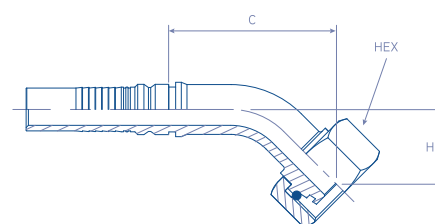
	hose	hose Ø	thread	d Tube	C Cut Off	HEX
REFERENCE	dash	inch		mm	mm	mm
26.5113.1236	-12	3/4"	M36 x 2.0	25	32.0	46
26.5113.1642	-16	1"	M42 x 2.0	30	35.5	50
26.5113.2052	-20	1.1/4"	M52 x 2.0	30	38.7	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 45° Swept Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS 45)



26.5143.

ISO 12151-2 / ISO 8434-1

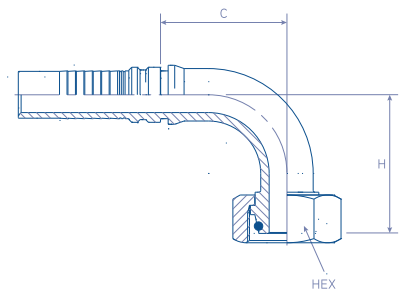
	hose	hose Ø	thread	d Tube	C Cut Off	H	HEX
REFERENCE	dash	inch		mm	mm	mm	mm
26.5143.1236	-12	3/4"	M36 x 2.0	25	88.0	31.0	46
26.5143.1642	-16	1"	M42 x 2.0	30	93.3	39.0	50
26.5143.2052	-20	1.1/4"	M52 x 2.0	38	115.1	46.5	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Interlock 90° Swept Female Metric Heavy Serie 24° Cone Seat Swivel (DKOS 90)



26.5193.

ISO 12151-2 / ISO 8434-1

	hose	hose Ø	thread	d Tube	C Cut Off	H	HEX
REFERENCE	dash	inch		mm	mm	mm	mm
26.5193.1236	-12	3/4"	M36 x 2.0	25	56.0	60.0	46
26.5193.1642	-16	1"	M42 x 2.0	30	76.0	75.0	50
26.5193.2052	-20	1.1/4"	M52 x 2.0	38	92.0	96.0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

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The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

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**BW23 -
MULTI CRIMP
SERIES ONE PIECE,
NO SKIVE HYDRAULIC
FITTINGS CATALOG**

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*Established since 1963, **Balflex®** is a European international group of companies dedicated to the design, production, assembly and distribution of all types of high-tech products for conduction of fluids, measuring of pressure and power transmission at very high quality level.*

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Quality is very important for us. We have fully equipped, modern laboratories and equipment, employing the industries most experienced personnel.

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Hose Fittings Pressure Ratings

For each type of fitting there is a maximum working pressure recommended in table below. Whenever information is not available, contact the manufacturer.

Inch Fittings (size)													
Maximum Working pressure (MPa/psi) – safety factor 4:1													
Description	Part Number	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
NPTF Male	XX.0400 XX.0410 XX.0490	34.5 5000		27.6 4000		20.7 3000	20.7 3000		17.2 2500	13.8 2000	7.9 1150	6.9 1000	6.9 1000
BSP Male	XX.0100	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female	XX.3012 XX.3042 XX.3092	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female with O-ring	XX.3112 XX.3142 XX.3192			45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
JIC 37° Male	XX.2000			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
JIC 37° Swivel Female	XX.4012 XX.4042 XX.4092 XX.4H12			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
Flange 3000 PSI	XX.7013 XX.7043 XX.7093						34.5 5000	34.5 5000	34.5 5000	34.5 5000	27.6 4000	20.7 3000	17.2 2500
Flange 6000 PSI	XX.7016 XX.7046 XX.7096						41.4 6000	41.4 6000		41.4 6000	41.4 6000	41.4 6000	41.4 6000
ORFS Male	XX.4000			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	
ORFS Female	XX.4414 XX.4444 XX.4494 XX.44H4			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	

The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.



Metric Tube (mm) – Light Serie "L"											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	15	18	22	28	35	42
Metric Male	XX.1000	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450
Metric Swivel Female with O-ring	XX.5013 XX.5043 XX.5093	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450

Metric Tube (mm) – Heavy Serie "S"											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	14	16	20	25	30	38
Metric Male	XX.1100	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625
Metric Swivel Female with O-ring	XX.5113 XX.5143 XX.5193	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625

The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.

With our thick Zinc coating, Cr-VI free zinc plating process, a high corrosion resistance on all our carbon steel products is achieved, in compliance with EU and USA regulation, as well as with all relevant fitting standards, such as SAE J516 and DIN EN ISO 12151.

Due to exclusion of hexavalent chromium, we assure an environment friendly final product, without compromising the corrosion resistance.

Our zinc-plating when tested according to EN ISO 9227 guarantees minimum 240 hours, before appearance of corrosion.

(The presented values are measured before crimping operation)

The Correct Method to Fit Female Swivel Ends

To ensure a leakproof seal between swivel female hose ends shown in this catalogue and the appropriate adaptors it is necessary to follow the procedure below which is different from hydraulic tube assembly (This instruction is not valid for ORFS fittings).

Metal-to-metal seal

Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Soft seal by O-ring

Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Ensure that in all cases the hose is correctly aligned before tightening the nut onto the corresponding adaptor.

Spanner Torque Values

Metric swivel female			
 Thread Metric	Tube O.D.	 Nm	
		nominal	min. - max.
M 12x1,5	06L	16	15 - 17
M 14x1,5	08L	16	15 - 17
M 16x1,5	10L	26	25 - 28
M 18x1,5	12L	37	35 - 39
M 22x1,5	15L	47	45 - 50
M 26x1,5	18L	89	85 - 94
M 30x2	22L	116	110 - 121
M 36x2	28L	137	130 - 143
M 45x2	35L	226	215 - 237
M 52x2	42L	347	330 - 363
M 14x1,5	06S	26	25 - 28
M 16x1,5	08S	42	40 - 44
M 18x1,5	10S	53	50 - 55
M 20x1,5	12S	63	60 - 66
M 22x1,5	14S	79	75 - 83
M 24x1,5	16S	84	80 - 88
M 30x2	20S	126	120 - 132
M 36x2	25S	179	170 - 187
M 42x2	30S	263	250 - 275
M 52x2	38S	368	350 - 385

BSP swivel female			
 Thread BSPP	Size	 Nm +10% -0%	
		style A	style B
G1/8	-2	-	10
G1/4	-4	20	20
G3/8	-6	35	35
G1/2	-8	50	60
G5/8	-10	60	70
G3/4	-12	85	115
G1	-16	115	140
G1.1/4	-20	190	210
G1.1/2	-24	240	290
G2	-32	300	400



JIC 37° Swivel Female		
 Thread UNF	Size	 Nm +10% -0%
7/16-20	-4	15
1/2-20	-5	19
9/16-18	-6	24
3/4-16	-8	49
7/8-14	-10	77
1.1/16-12	-12	107
1.5/16-12	-16	147
1.5/8-12	-20	172
1.7/8-12	-24	215
2.1/2-12	-32	332

ORFS Swivel Female		
 Thread UNF	Size	 Nm +10% -0%
9/16-18	-4	25
11/16-18	-6	40
13/16-16	-8	55
1-14	-10	60
1.3/16-12	-12	90
1.5/16-12	-14	115
1.7/16-12	-16	125
1.11/16-12	-20	170
2-12	-24	200

The torque values for other materials are as follows:

- **Brass fittings and adapters**
65% of the torque value for steel.
- **Stainless steel**
use high side of the torque range for steel.
threads to be lubricated for these materials.
- **Dissimilar metals**
use torque value designated for the lower of the two materials.
- **All fittings are dry except as noted above.**

Note

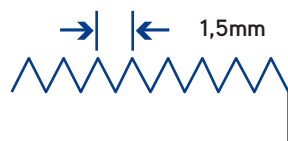
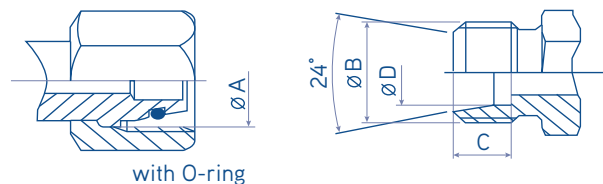
Values given in tables are typical to achieve the recommended assembly methods when fitting material is steel zinc plated. For other materials different values will be applicable.

Quick identification of hydraulic connectors

DIN 24° light (L) and heavy series (S) with O-ring

The male has a 24° sealing angle cone seat with straight metric threads.
The female has a 24° convex cone with O-ring and a swivel straight metric threaded nut.

Standard: ISO 12151-2, ISO 8434-1, ISO 8434-4



Thread

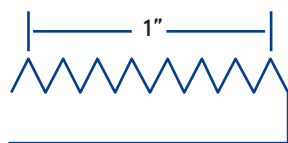
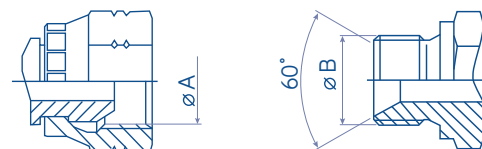
Defined by the outside diameter and the pitch
(distance between 2 crests of the thread)
example: M22x1.5 - pitch of 1.5mm.

Tube O.D. (mm)	Tube type	Thread metric	ØA (mm)	ØB (mm)	C (mm)	ØD (mm)
6.00	6L	M12X1.5	10.50	12.00	7.00	6.00
6.00	6S	M14X1.5	12.50	14.00	7.00	6.00
8.00	8L	M14x1.5	12.50	14.00	7.00	8.00
8.00	8S	M16x1.5	14.50	16.00	7.00	8.00
10.00	10L	M16x1.5	14.50	16.00	7.00	10.00
10.00	10S	M18x1.5	16.50	18.00	7.50	10.00
12.00	12L	M18x1.5	16.50	18.00	7.00	12.00
12.00	12S	M20x1.5	18.50	20.00	7.50	12.00
14.00	14S	M22x1.5	20.50	22.00	8.00	14.00
15.00	15L	M22x1.5	20.50	22.00	7.00	15.00
16.00	16S	M24x1.5	22.50	24.00	8.50	16.00
18.00	18L	M26x1.5	24.50	26.00	7.50	18.00
20.00	20S	M30x2.0	27.90	30.00	10.50	20.00
22.00	22L	M30x2.0	27.90	30.00	7.50	22.00
25.00	25S	M36x2.0	33.90	36.00	12.00	25.00
28.00	28L	M36x2.0	33.90	36.00	7.50	28.00
30.00	30S	M42x2.0	39.90	42.00	13.50	30.00
35.00	35L	M45x2.0	42.90	45.00	10.50	35.00
38.00	38S	M52x2.0	49.90	52.00	16.00	38.00
42.00	42L	M52x2.0	49.90	52.00	11.00	42.00



British Standard Pipe Parallel (BSPP)

Referred to as Whitworth threads, the BSP thread type fittings seal use metal-to-metal angled surfaces or a combination of metal-to-metal and an O-ring. The angle of the sealing surfaces is 60° for both forms. Standard: BS 5200 ISO 12151-6



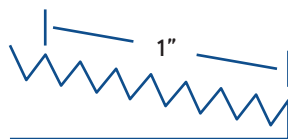
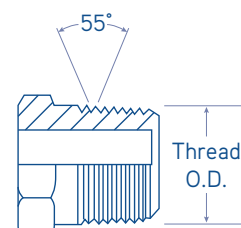
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSP	ØA (mm)	ØB (mm)
6	10	- 2	1/8" -28	8.60	9.70
8	13	- 4	1/4" -19	11.50	13.20
12	17	- 6	3/8" -19	14.90	16.70
15	21	- 8	1/2" -14	18.60	20.90
18	23	- 10	5/8" -14	20.60	22.90
20	27	- 12	3/4" -14	24.10	26.40
26	34	- 16	1" -11	30.30	33.20
33	42	- 20	1.1/4" -11	38.90	41.90
40	49	- 24	1.1/2" -11	44.90	47.80
50	60	- 32	2" -11	56.70	59.60

British Standard Pipe Tapered (BSPT)

Fittings seal through the thread interface mechanism. Care should be taken not to confuse the BSPT fitting with the NPTF male fitting. BSPT has a 55° thread angle.



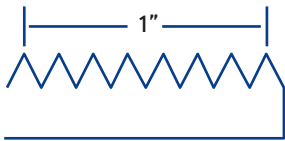
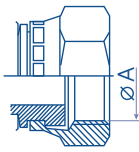
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	ØA (mm)
5	10	- 2	1/8" -28	9.73
8	13	- 4	1/4" -19	13.16
12	17	- 6	3/8" -19	16.66
15	21	- 8	1/2" -14	20.96
20	27	- 12	3/4" -14	26.44
26	34	- 16	1" -11	33.25
33	42	- 20	1.1/4" -11	41.91
40	49	- 24	1.1/2" -11	47.80
50	60	- 32	2" -11	59.61
50	60	- 32	2" -11	56.70

BSP Flat Seal

These fittings have BSP parallel threads but the sealing surface is flat. The seal is made when the composite seal is compressed against the female flat face.



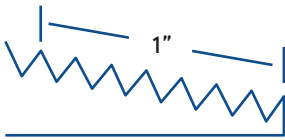
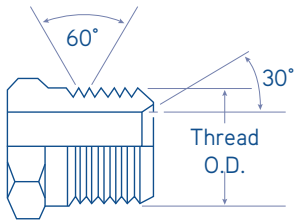
Thread
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	ØA (mm)
6	10	- 2	1/8" -28	8.60
8	13	- 4	1/4" -19	11.50
12	17	- 6	3/8" -19	14.90
15	21	- 8	1/2" -14	18.60
18	23	- 12	5/8" -14	20.60
20	27	- 16	3/4" -14	24.10
26	34	- 20	1" -11	30.30
33	42	- 20	1.1/4" -11	38.90
40	49	- 24	1.1/2" -11	44.90
50	60	- 32	2" -11	56.70

Dry Seal American Standard Taper Pipe Thread (NPTF)

This type of fitting uses the thread interface to seal and as such has a tapered thread that deforms and forms the seal. They have 30° sealing angle surfaces, forming a 60° inverted (concave) seat.

Standard: SAE J476 / ANSI/ASME B1.20.1



Thread
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

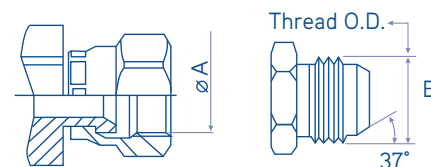
Size	Thread NPTF	ØA (mm)
- 2	1/8" -27	10.24
- 4	1/4" -18	13.61
- 6	3/8" -18	17.05
- 8	1/2" -14	21.22
- 12	3/4" -14	26.56
- 16	1" -11.5	33.22
- 20	1.1/4" -11.5	41.98
- 24	1.1/2" -11.5	48.05
- 32	2" -11.5	60.09



SAE JIC 37°

Commonly referred to as JIC fittings, these metal-to-metal sealing type fittings have a 37° flare (sealing surface angle) and straight United National Fine Threads (UNF). The original design specification for the fittings comes from the Society of Automotive Engineers (SAE).

Standard: ISO 12151-5, ISO 8434-2, SAE J516

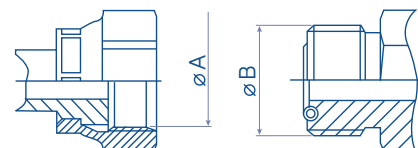


Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	7/16" -20	10.00	11.10
5/16"	- 5	1/2" -20	11.60	12.70
3/8"	- 6	9/16" -18	13.00	14.30
1/2"	- 8	3/4" -16	17.60	19.10
5/8"	- 10	7/8" -14	20.50	22.20
3/4"	- 12	1 1/16" -12	24.60	27.00
7/8"	- 14	1 3/16" -12	28.30	30.10
1"	- 16	1 5/16" -12	31.30	33.30
1 1/4"	- 20	1 5/8" -12	39.20	41.30
1 1/2"	- 24	1 7/8" -12	45.60	47.60
2"	- 32	2 1/2" -12	61.50	63.50

O-Ring Face Seal (ORFS)

This fitting type have high level of sealing and good vibration resistance.

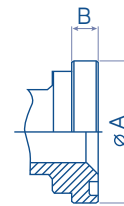
The fittings use the O-ring compression mechanism to seal. The female fittings have flat faces and straight threaded UNF swivel nuts. The male fittings have the O-ring in a groove in the flat face.



Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	9/16" -18	13.00	14.20
3/8"	- 6	11/16" -16	15.90	17.50
1/2"	- 8	13/16" -16	19.10	20.60
5/8"	- 10	1" -14	23.80	25.40
3/4"	- 12	1 3/16" -12	28.20	30.10
1"	- 16	1 7/16" -12	34.15	36.50
1 1/4"	- 20	1 11/16" -12	40.50	42.90
1 1/2"	- 24	2" -12	48.80	50.80

Flange 3000 psi and 6000 psi

The sealing mechanism is through compression of the O-ring in the face of the flange head against the surface of the port connection. The flange fittings are generally separated into two pressure classes referred to as 21.0 MPa/ 3000 psi (SFL) or 42.0 MPa/ 6000 psi (SFS). In addition to these flanges, customer-specific Komatsu and CATERPILLAR flanges can also be found in the market. Standard: ISO 6162-1,ISO 6162-2

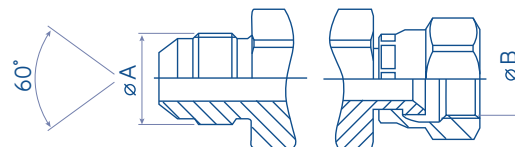


Flange (inch)	Size	3000 psi			6000 psi			SuperCat		
		ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)
1/2"	- 8	30.18	6.73	18.64x3.53	31.75	7.75	18.64x3.53	31.75	14.22	18.64x3.53
5/8"	- 10	34.20	6.73	21.70x3.53						
3/4"	- 12	38.10	6.73	24.99x3.53	41.28	8.76	24.99x3.53	41.28	14.22	24.99x3.53
1"	- 16	44.45	8.00	32.92x3.53	47.63	9.53	32.92x3.53	47.63	14.22	32.92x3.53
1.1/4"	- 20	50.80	8.00	37.69x3.53	53.98	10.29	37.69x3.53	53.98	14.22	37.69x3.53
1.1/2"	- 24	60.33	8.00	47.22x3.53	63.50	12.57	47.22x3.53	63.50	14.22	47.22x3.53
2"	- 32	71.42	9.53	56.74x3.53	79.38	12.57	56.74x3.53	79.38	14.22	56.74x3.53
2.1/2"	- 40	84.12	9.53	69.44x3.53						
3"	- 48	101.60	9.53	85.32x3.53						

* Although not in the SAE or the ISO standard the size -10 (5/8) flange head is gaining popularity. This flange is often found on Komatsu equipment or hydrostatic drives in agricultural machines.

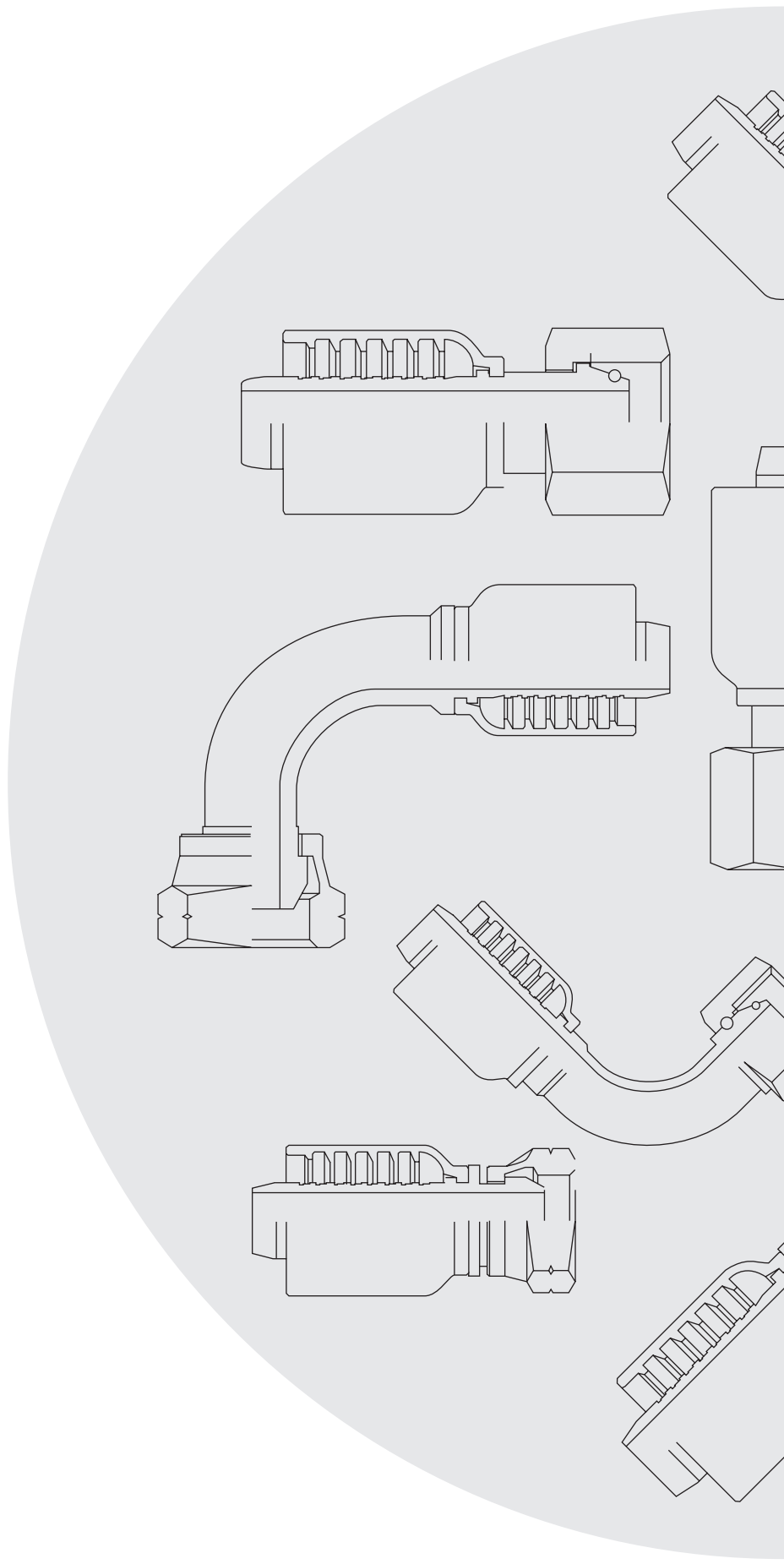
Japanese Industrial Standard (JIS)

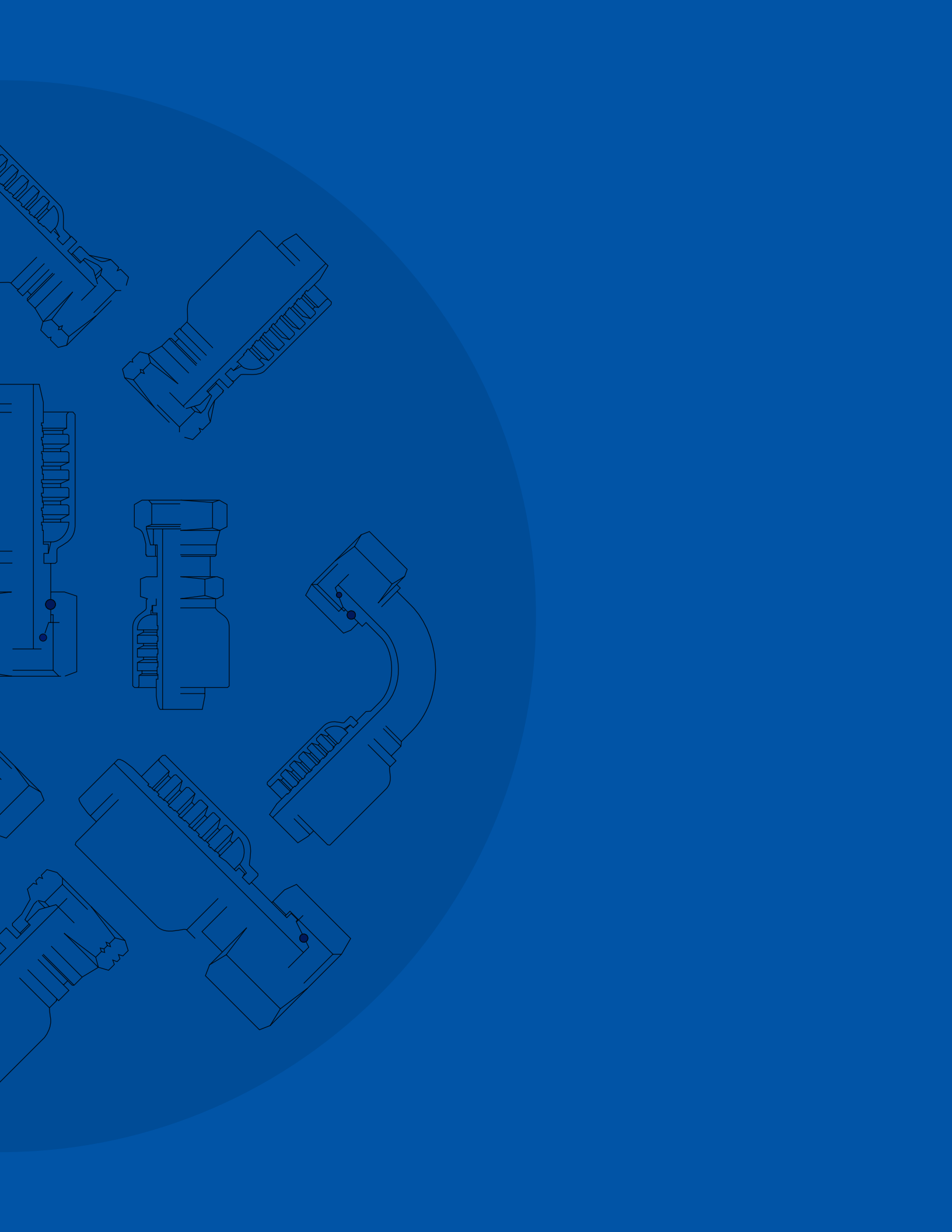
The Japanese Industrial Standard (JIS) uses a 30° sealing angle seat and either British Standard Pipe Parallel or metric threads.

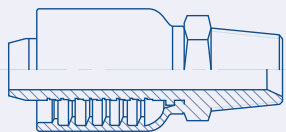


Thread metric	ØA (mm)	ØB (mm)	Thread BSP	ØA (mm)	ØB (mm)
M14X1.5	12.50	14.00	1/4" -19	11.50	13.20
M16X1.5	14.50	16.00	1/2" -14	18.60	20.90
M18X1.5	16.50	18.00	3/4" -14	24.10	26.40
M22X1.5	20.50	22.00	1" -11	30.30	33.20
M24X1.5	22.50	24.00			
M30X1.5	28.50	30.00			
M33X1.5	31.00	33.00			
M42X1.5	40.00	42.00			

BW23



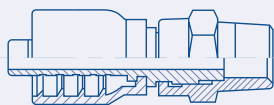




Male NPTF Pipe Rigid - MP

BW23.0400.

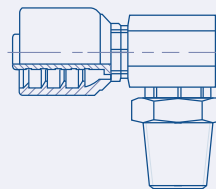
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Male NPTF Swivel - MPX

BW23.0410.

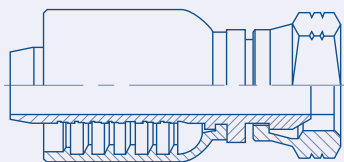
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Male NPTF Swivel 90° Elbow - MPX90

BW23.0490.

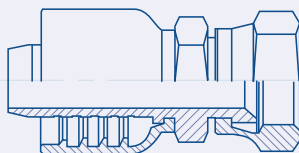
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Female NPSM Pipe Swivel - FPX

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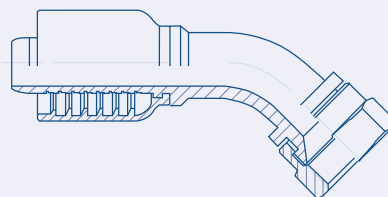
BW23.3010.



Female JIC 37° Swivel - FJ

BW23.4H12.

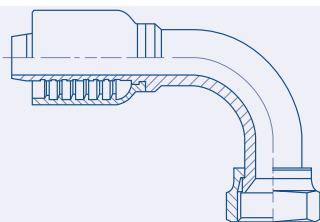
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Female JIC 37° Swivel 45° Elbow - FJ45

BW23.4042.

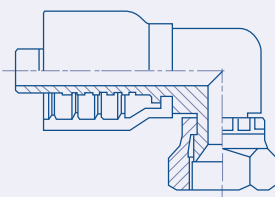
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Female JIC 37° Swivel 90° Elbow - FJ90

BW23.4092.

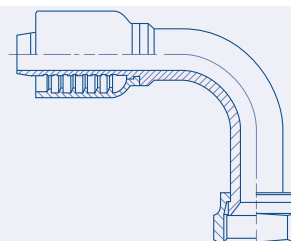
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Female JIC 37° Swivel 90° Short Elbow - FJ90S

BW23.4082.

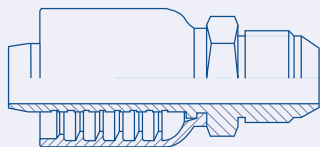
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Female JIC 37° Swivel 90° Long Elbow - FJ90L

BW23.4092L.

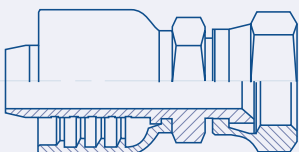
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Male JIC 37° Rigid - MJ

BW23.2000.

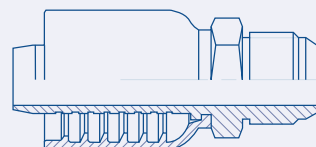
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Female SAE 45° Swivel - FX

BW23.SH12.

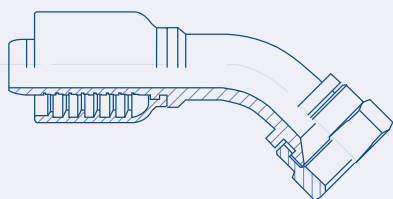
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Male SAE 45° Rigid - MX

BW23.2S00.

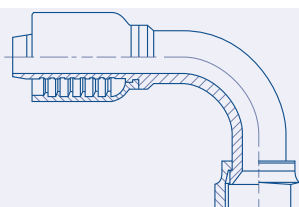
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Female SAE 45° Swivel 45° Elbow - FX45

BW23.4S42.

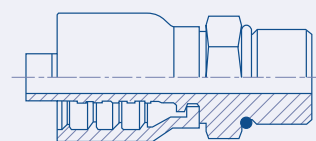
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Female SAE 45° Swivel 90° Elbow - FX90

BW23.4S92.

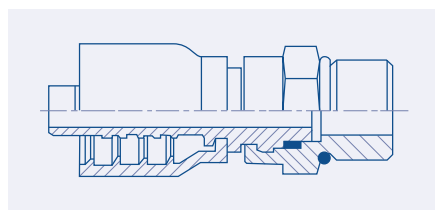
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SAE Straight O-ring Boss Male - RA

BW23.2010.

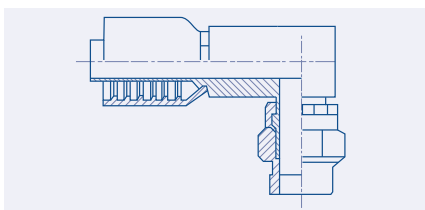
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**SAE Straight Swivel O-ring
Boss Male - RAX**

BW23.2012.

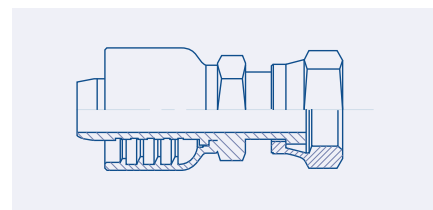
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**SAE 90° Elbow Swivel O-ring
Boss Male - RAX90**

BW23.2092.

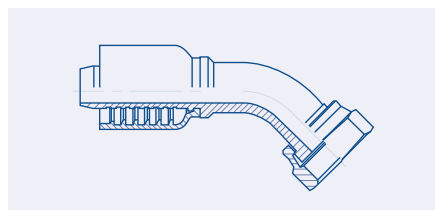
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Female ORFS Swivel - OFT

BW23.44H4.

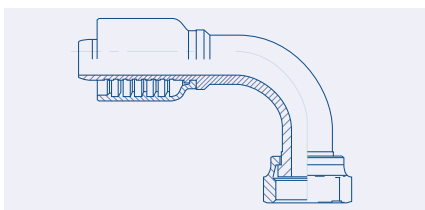
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**Female ORFS Swivel 45°
Elbow- OFT45**

BW23.4444.

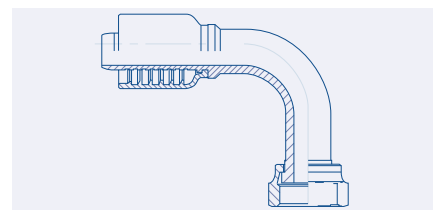
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**Female ORFS Swivel 90°
Elbow - OFT90**

BW23.4494.

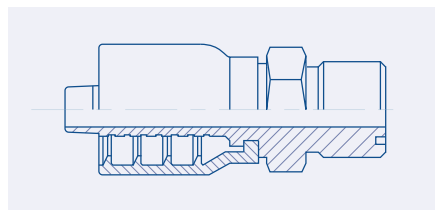
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**Female ORFS Swivel 90°
Long Elbow - OFT90**

BW23.4494L.

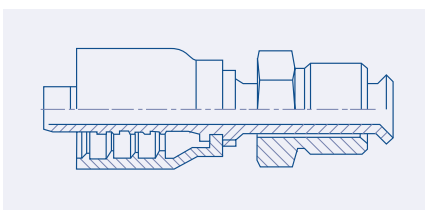
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Male ORFS - OFTM

BW23.4000.

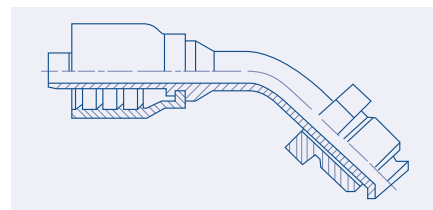
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**SAE Inverted 45° Flare
Male - MSAE**

BW23.2210.

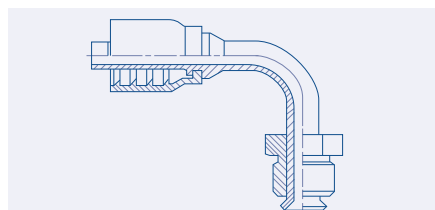
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**SAE Inverted 45° Flare 45°
Elbow Male - MSAE 45**

BW23.2240.

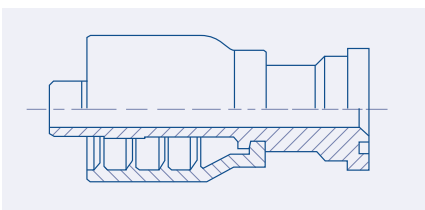
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**SAE Inverted 45° Flare 90°
Elbow Male - MSAE 90**

BW23.2290.

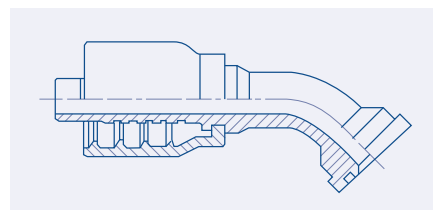
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**Straight SAE 3000 PSI
Code 61 Flange - PA**

BW23.7013.

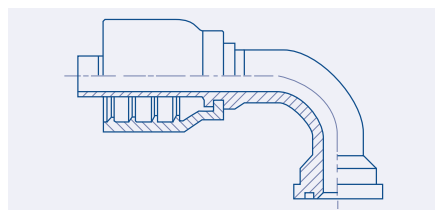
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**45° Elbow SAE 3000 PSI
Code 61 Flange - PA45**

BW23.7043.

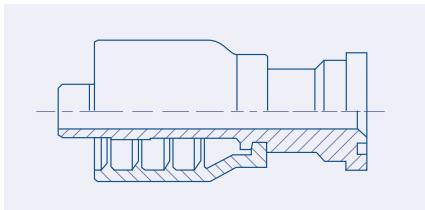
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**90° Elbow SAE 3000 PSI
Code 61 Flange - PA90**

BW23.7093.

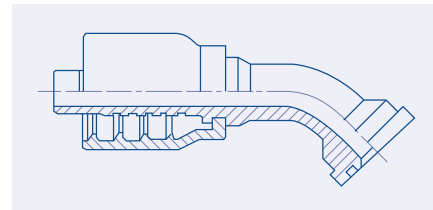
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**Straight SAE 6000 PSI
Code 62 Flange - PH**

BW23.7016.

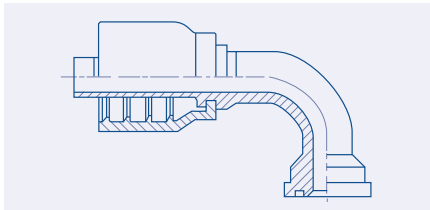
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**45° Elbow SAE 6000 PSI
Code 62 Flange - PH45**

BW23.7046.

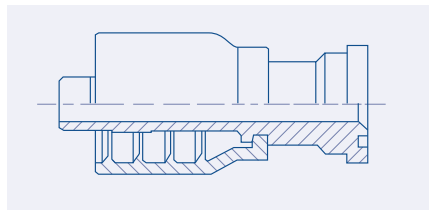
pag. 47



**90° Elbow SAE 6000 PSI
Code 62 Flange - PH90**

BW23.7096.

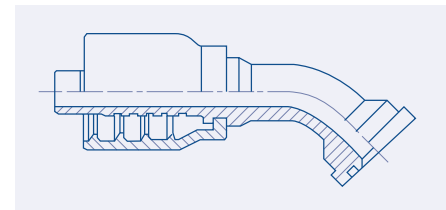
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**Straight SuperCAT
Flange - CS**

BW23.7116.

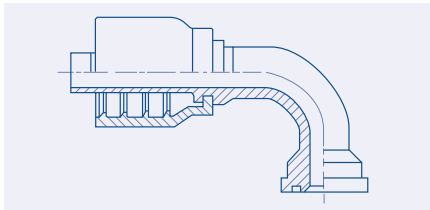
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**45° Elbow SuperCAT
Flange - CS**

BW23.7146.

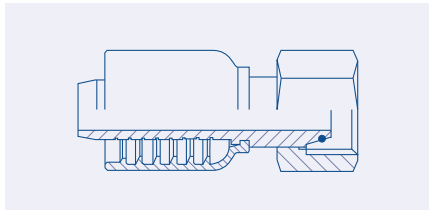
pag. 50



**90° Elbow SuperCAT
Flange - CS**

BW23.7196.

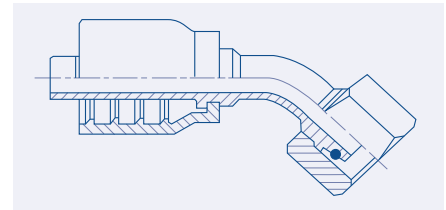
pag. 51



**Light 24° Metric Female
- DLF**

BW23.5013.

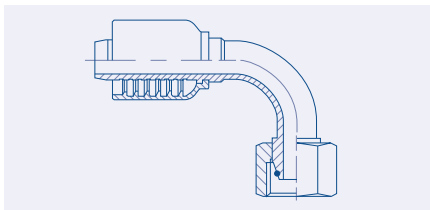
pag. 52



**Light 24° Metric 45° Elbow
Female - DLF45**

BW23.5043.

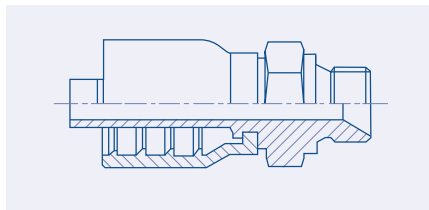
pag. 53



**Light 24° Metric 90° Elbow
Female - DLF90**

BW23.5093.

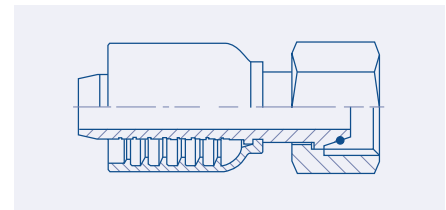
pag. 54



Light 24° Metric Male - DLM

BW23.1000.

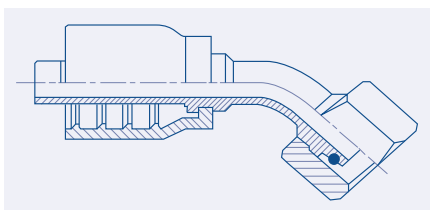
pag. 55



**Heavy 24° Metric Female
- DHF**

BW23.5113.

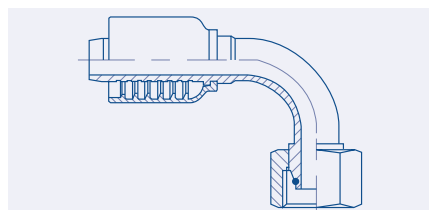
pag. 56



**Heavy 24° Metric 45° Elbow
Female - DHF45**

BW23.5143.

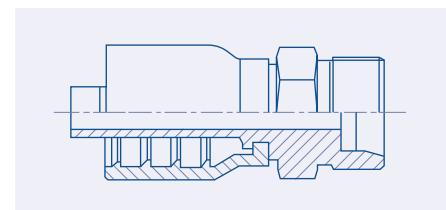
pag. 57



**Heavy 24° Metric 90° Elbow
Female - DHF90**

BW23.5193.

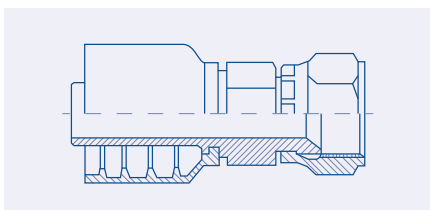
pag. 58



Heavy 24° Metric Male - DHM

BW23.1100.

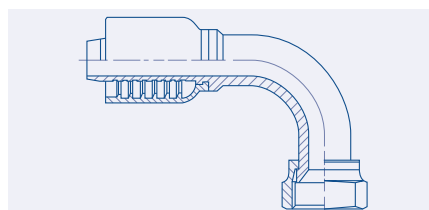
pag. 59



**JIS 30° Female Swivel
- FX-KOMA**

BW23.5911.

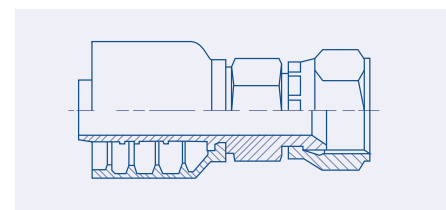
pag. 60



**Female JIS 30° Swivel 90°
Elbow - FX-KOMA90**

BW23.5991.

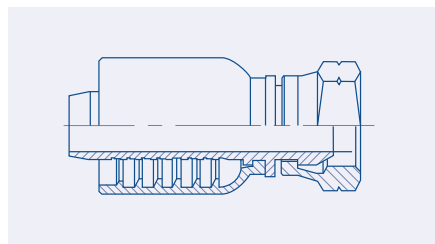
pag. 61



JIS 30° Female Swivel - JIS

BW23.3712.

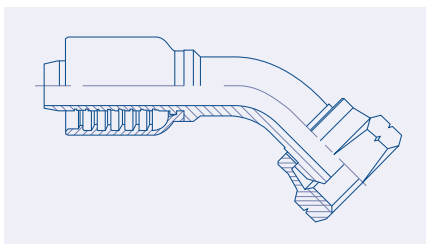
pag. 62



**BSP 60° Swivel Female
- BSPXF**

BW23.3012.

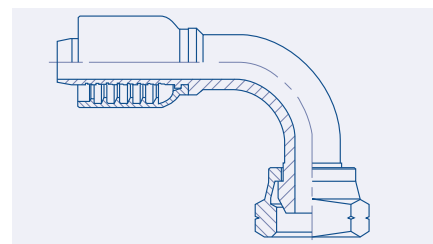
pag. 63



**BSP 60° Swivel 45° Elbow
Female - BSPXF45**

BW23.3042.

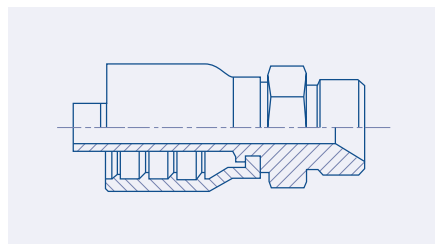
pag. 64



**BSP 60° Swivel 90° Elbow
Female - BSPXF90**

BW23.3092.

pag. 65

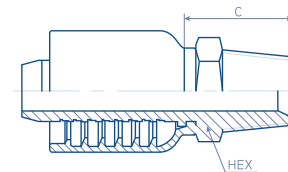


BSP 60° Male - BSPM

BW23.0100.

pag. 66

Male NPTF Pipe Rigid - MP



BW23.0400.

SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-02MP	BW23.0400.0402	04	1/4"	1/8"-27	24,2	12
BW2304-04MP	BW23.0400.0404	04	1/4"	1/4"-18	29,7	14
BW2304-06MP	BW23.0400.0406	04	1/4"	3/8"-18	30,7	17
BW2304-08MP	BW23.0400.0408	04	1/4"	1/2"-14	35,7	22
BW2306-04MP	BW23.0400.0604	06	3/8"	1/4"-18	27,2	17
BW2306-06MP	BW23.0400.0606	06	3/8"	3/8"-18	28,7	19
BW2306-08MP	BW23.0400.0608	06	3/8"	1/2"-14	33,7	22
BW2308-04MP	BW23.0400.0804	08	1/2"	1/4"-18	31,0	19
BW2308-06MP	BW23.0400.0806	08	1/2"	3/8"-18	31,5	19
BW2308-08MP	BW23.0400.0808	08	1/2"	1/2"-14	35,5	22
BW2308-12MP	BW23.0400.0812	08	1/2"	3/4"-14	38,0	27
BW2310-08MP	BW23.0400.1008	10	5/8"	1/2"-14	37,5	22
BW2310-12MP	BW23.0400.1012	10	5/8"	3/4"-14	40,0	27
BW2312-08MP	BW23.0400.1208	12	3/4"	1/2"-14	38,8	27
BW2312-12MP	BW23.0400.1212	12	3/4"	3/4"-14	39,3	27
BW2312-16MP	BW23.0400.1216	12	3/4"	1"-11.5	45,8	36
BW2316-12MP	BW23.0400.1612	16	1"	3/4"-14	40,7	32
BW2316-16MP	BW23.0400.1616	16	1"	1"-11.5	46,2	36
BW2316-20MP	BW23.0400.1620	16	1"	1.1/4" - 11.5	49,2	46
BW2320-20MP	BW23.0400.2020	20	1.1/4"	1.1/4" - 11	49,5	46
BW2320-24MP	BW23.0400.2024	20	1.1/4"	1.1/2" - 11	52,5	50
BW2324-24MP	BW23.0400.2424	24	1.1/2"	1.1/2" - 11	52,4	50
BW2324-32MP	BW23.0400.2432	24	1.1/2"	2" - 11	58,4	65
BW2332-32MP	BW23.0400.3232	32	2"	2" - 11	57,9	65

MATERIAL: Carbon Steel

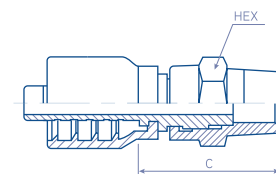
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Male NPTF Swivel - MPX



BW23.0410.

SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-02MPX	BW23.0410.0402	04	1/4"	1/8"-27	37,3	17
BW2304-04MPX	BW23.0410.0404	04	1/4"	1/4"-18	37,5	17
BW2304-06MPX	BW23.0410.0406	04	1/4"	3/8"-18	35,7	19
BW2306-04MPX	BW23.0410.0604	06	3/8"	1/4"-18	35,5	17
BW2306-06MPX	BW23.0410.0606	06	3/8"	3/8"-18	35,2	19
BW2306-08MPX	BW23.0410.0608	06	3/8"	1/2"-14	42,0	22
BW2308-06MPX	BW23.0410.0806	08	1/2"	3/8"-18	36,0	19
BW2308-08MPX	BW23.0410.0808	08	1/2"	1/2"-14	42,2	22
BW2308-12MPX	BW23.0410.0812	08	1/2"	3/4"-14	41,2	32
BW2310-08MPX	BW23.0410.1008	12	3/4"	1/2"-14	42,2	22
BW2310-12MPX	BW23.0410.1012	10	5/8"	3/4"-14	42,0	32
BW2312-08MPX	BW23.0410.1208	12	3/4"	1/2"-14	42,2	22
BW2312-12MPX	BW23.0410.1212	12	3/4"	3/4"-14	41,2	32
BW2316-16MPX	BW23.0410.1616	16	1"	1"-11.5	47,5	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

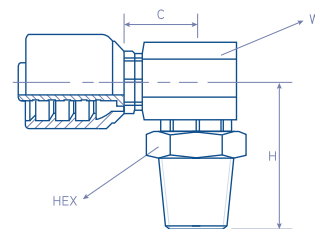
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Male NPTF Swivel 90° Elbow - MPX90

BW23.0490.

SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions			
		dash	inch		C - Cut Off	H	W	HEX
BW2304-02MPX90	BW23.0490.0402	04	1/4"	1/8"-27	22,7	40,1	17	17
BW2304-04MPX90	BW23.0490.0404	04	1/4"	1/4"-18	22,7	40,1	17	17
BW2304-06MPX90	BW23.0490.0406	04	1/4"	3/8"-18	22,7	39,3	17	19
BW2306-04MPX90	BW23.0490.0604	06	3/8"	1/4"-18	21,0	40,9	17	17
BW2306-06MPX90	BW23.0490.0606	06	3/8"	3/8"-18	21,0	38,5	17	19
BW2306-08MPX90	BW23.0490.0608	06	3/8"	1/2"-14	23,5	40,1	24	22
BW2308-06MPX90	BW23.0490.0806	08	1/2"	3/8"-18	26,5	41,0	22	19
BW2308-08MPX90	BW23.0490.0808	08	1/2"	1/2"-14	26,5	47,0	22	22
BW2312-12MPX90	BW23.0490.1212	12	3/4"	3/4"-14	28,8	49,7	27	32
BW2316-16MPX90	BW23.0490.1616	16	1"	1"-11.5	42,7	60,0	32	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

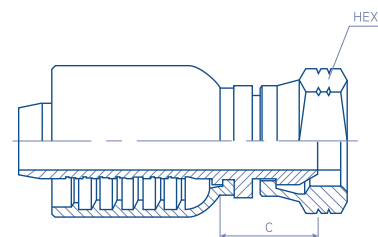
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female NPSM Pipe Swivel - FPX

BW23.3010.

SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-02FPX	BW23.3010.0402	04	1/4"	1/8"-27	23,7	14
BW2304-04FPX	BW23.3010.0404	04	1/4"	1/4"-18	26,7	19
BW2304-06FPX	BW23.3010.0406	04	1/4"	3/8"-18	29,1	22
BW2306-06FPX	BW23.3010.0606	06	3/8"	3/8"-18	27,2	22
BW2306-08FPX	BW23.3010.0608	06	3/8"	1/2"-14	29,0	27
BW2308-08FPX	BW23.3010.0808	08	1/2"	1/2"-14	30,7	27
BW2312-12FPX	BW23.3010.1212	12	3/4"	3/4"-14	35,3	32
BW2316-16FPX	BW23.3010.1616	16	1"	1"-11.5	38,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

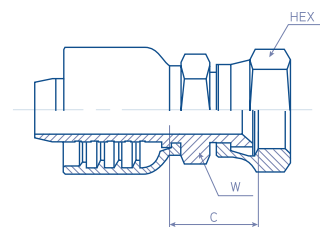
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female JIC 37° Swivel - FJ

BW23.4H12.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BW2304-04FJ	BW23.4H12.0404	04	1/4"	7/16"-20	22,7	14	14
BW2304-05FJ	BW23.4H12.0405	04	1/4"	1/2"-20	22,7	14	16
BW2304-06FJ	BW23.4H12.0406	04	3/8"	9/16"-18	24,7	14	19
BW2306-04FJ	BW23.4H12.0604	06	3/8"	7/16"-20	20,2	17	14
BW2306-06FJ	BW23.4H12.0606	06	3/8"	9/16"-18	20,7	17	19
BW2306-08FJ	BW23.4H12.0608	06	3/8"	3/4"-16	26,0	19	22
BW2306-10FJ	BW23.4H12.0610	06	3/8"	7/8"-14	28,5	22	27
BW2308-06FJ	BW23.4H12.0806	08	1/2"	9/16"-18	25,0	22	19
BW2308-08FJ	BW23.4H12.0808	08	1/2"	3/4"-16	27,0	22	22
BW2308-10FJ	BW23.4H12.0810	08	1/2"	7/8"-14	30,0	22	27
BW2308-12FJ	BW23.4H12.0812	08	1/2"	1 1/16"-12	34,0	25	32
BW2310-08FJ	BW23.4H12.1008	10	5/8"	3/4"-16	28,5	22	22
BW2310-10FJ	BW23.4H12.1010	10	5/8"	7/8"-14	30,5	22	27
BW2310-12FJ	BW23.4H12.1012	10	5/8"	1 1/16"-12	35,5	27	32
BW2312-10FJ	BW23.4H12.1210	12	3/4"	7/8"-14	33,3	27	27
BW2312-12FJ	BW23.4H12.1212	12	3/4"	1 1/16"-12	34,8	27	32
BW2312-14FJ	BW23.4H12.1214	12	3/4"	1 3/16"-12	36,3	32	38
BW2312-16FJ	BW23.4H12.1216	12	3/4"	1 5/16"-12	36,3	32	38
BW2316-12FJ	BW23.4H12.1612	16	1"	1 1/16"-12	34,2	32	32
BW2316-16FJ	BW23.4H12.1616	16	1"	1 5/16"-12	35,7	32	38
BW2316-20FJ	BW23.4H12.1620	16	1"	1 5/8"-12	40,7	42	50
BW2320-20FJ	BW23.4H12.2020	20	1 1/4"	1 5/8"-12	41,0	42	50
BW2320-24FJ	BW23.4H12.2024	20	1 1/4"	1 7/8"-12	44,0	50	57
BW2324-24FJ	BW23.4H12.2424	24	1 1/2"	1 7/8"-12	46,4	50	57
BW2324-32FJ	BW23.4H12.2432	24	1 1/2"	2 1/2"-12	50,4	64	75
BW2332-32FJ	BW23.4H12.3232	32	2"	2 1/2"-12	51,6	64	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

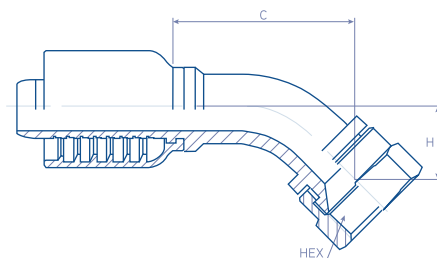
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female JIC 37° Swivel 45° Elbow - FJ45

BW23.4042.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04FJ45	BW23.4042.0404	04	1/4"	7/16"-20	35,0	10,5	14
BW2304-05FJ45	BW23.4042.0405	04	1/4"	1/2"-20	35,0	10,5	16
BW2304-06FJ45	BW23.4042.0406	04	3/8"	9/16"-18	35,0	10,5	19
BW2306-06FJ45	BW23.4042.0606	06	3/8"	9/16"-18	38,5	14,5	19
BW2306-08FJ45	BW23.4042.0608	06	3/8"	3/4"-16	41,0	16,0	22
BW2306-10FJ45	BW23.4042.0610	06	3/8"	7/8"-14	40,0	16,5	27
BW2308-08FJ45	BW23.4042.0808	08	1/2"	3/4"-16	44,5	18,0	22
BW2308-10FJ45	BW23.4042.0810	08	1/2"	7/8"-14	46,5	21,3	27
BW2308-12FJ45	BW23.4042.0812	08	1/2"	1.1/16"-12	48,0	23,0	32
BW2310-10FJ45	BW23.4042.1010	10	5/8"	7/8"-14	52,0	21,3	27
BW2310-12FJ45	BW23.4042.1012	10	5/8"	1.1/16"-12	64,0	27,0	32
BW2312-12FJ45	BW23.4042.1212	12	3/4"	1.1/16"-12	70,0	27,0	32
BW2312-16FJ45	BW23.4042.1216	12	3/4"	1.5/16"-12	72,0	30,0	38
BW2316-16FJ45	BW23.4042.1616	16	1"	1.5/16"-12	77,0	32,0	38
BW2316-20FJ45	BW23.4042.1620	16	1"	1.5/8"-12	83,0	36,0	50
BW2320-20FJ45	BW23.4042.2020	20	1.1/4"	1.5/8"-12	101,0	37,0	50
BW2320-24FJ45	BW23.4042.2024	20	1.1/4"	1.7/8"-12	102,0	38,0	57
BW2324-24FJ45	BW23.4042.2424	24	1.1/2"	1.7/8"-12	123,0	44,0	57
BW2332-32FJ45	BW23.4042.3232	32	2"	2.1/2"-12	148,0	65,0	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

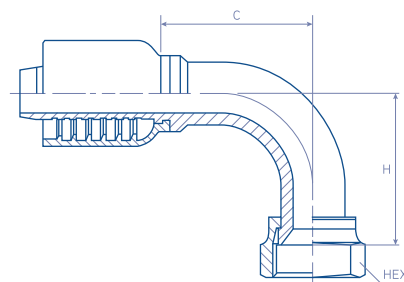
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female JIC 37° Swivel 90° Elbow - FJ90

BW23.4092.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04FJ90	BW23.4092.0404	04	1/4"	7/16"-20	26,0	24,5	14
BW2304-05FJ90	BW23.4092.0405	04	1/4"	1/2"-20	29,0	25,0	16
BW2304-06FJ90	BW23.4092.0406	04	3/8"	9/16"-18	29,0	25,0	19
BW2306-06FJ90	BW23.4092.0606	06	3/8"	9/16"-18	34,0	31,5	19
BW2306-08FJ90	BW23.4092.0608	06	3/8"	3/4"-16	35,0	30,0	22
BW2306-10FJ90	BW23.4092.0610	06	3/8"	7/8"-14	37,1	38,0	27
BW2308-08FJ90	BW23.4092.0808	08	1/2"	3/4"-16	42,5	40,0	22
BW2308-10FJ90	BW23.4092.0810	08	1/2"	7/8"-14	37,0	40,5	27
BW2308-12FJ90	BW23.4092.0812	08	1/2"	1.1/16"-12	47,0	50,0	32
BW2310-10FJ90	BW23.4092.1010	10	5/8"	7/8"-14	50,0	47,5	27
BW2310-12FJ90	BW23.4092.1012	10	5/8"	1.1/16"-12	54,0	55,0	32
BW2312-12FJ90	BW23.4092.1212	12	3/4"	1.1/16"-12	55,5	55,0	32
BW2312-16FJ90	BW23.4092.1216	12	3/4"	1.5/16"-12	55,5	65,0	38
BW2316-16FJ90	BW23.4092.1616	16	1"	1.5/16"-12	72,0	71,0	38
BW2316-20FJ90	BW23.4092.1620	16	1"	1.5/8"-12	80,0	74,0	50
BW2320-20FJ90	BW23.4092.2020	20	1.1/4"	1.5/8"-12	86,5	78,0	50
BW2320-24FJ90	BW23.4092.2024	20	1.1/4"	1.7/8"-12	86,5	90,0	57
BW2324-24FJ90	BW23.4092.2424	24	1.1/2"	1.7/8"-12	114,0	100,0	57
BW2332-32FJ90	BW23.4092.3232	32	2"	2.1/2"-12	130,5	140,0	75

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

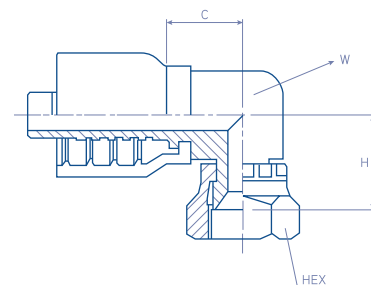
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female JIC 37° Swivel 90° Short Elbow - FJ90S

BW23.4082.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions			
		dash	inch		C - Cut Off	H	W	HEX
BW2304-04FJ90S	BW23.4082.0404	04	1/4"	7/16"-20	18,5	19,6	11	14
BW2304-05FJ90S	BW23.4082.0405	04	1/4"	1/2"-20	18,5	21,5	14	16
BW2304-06FJ90S	BW23.4082.0406	04	3/8"	9/16"-18	18,5	21,8	14	19
BW2306-06FJ90S	BW23.4082.0606	06	3/8"	9/16"-18	21,5	25,5	16	19
BW2306-08FJ90S	BW23.4082.0608	06	3/8"	3/4"-16	21,5	26,5	19	22
BW2308-08FJ90S	BW23.4082.0808	08	1/2"	3/4"-16	25,5	29,5	19	22
BW2308-10FJ90S	BW23.4082.0810	08	1/2"	7/8"-14	25,5	28,0	22	27
BW2310-10FJ90S	BW23.4082.1010	10	5/8"	7/8"-14	25,5	28,0	22	27
BW2312-12FJ90S	BW23.4082.1212	12	3/4"	1.1/16"-12	30,8	28,5	30,7	28,5
BW2312-16FJ90S	BW23.4082.1216	12	3/4"	1.5/16"-12	30,0	33,5	33	38
BW2316-16FJ90S	BW23.4082.1616	16	1"	1.5/16"-12	33,5	30,5	33,5	30,5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

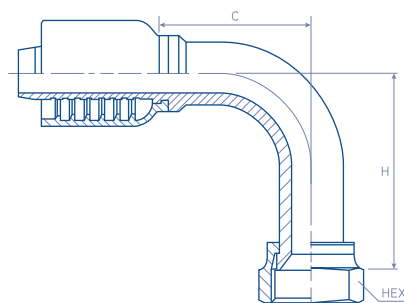
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female JIC 37° Swivel 90° Long Elbow - FJ90L

BW23.4092L.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BW2304-04FJ90L	BW23.4092.0404L	04	1/4"	7/16"-20	31,9	46,0	14
BW2304-05FJ90L	BW23.4092.0405L	04	1/4"	1/2"-20	32,0	46,0	16
BW2304-06FJ90L	BW23.4092.0406L	04	3/8"	9/16"-18	31,7	46,0	19
BW2306-06FJ90L	BW23.4092.0606L	06	3/8"	9/16"-18	33,0	54,0	19
BW2306-08FJ90L	BW23.4092.0608L	06	3/8"	3/4"-16	38,0	64,0	22
BW2308-08FJ90L	BW23.4092.0808L	08	1/2"	3/4"-16	44,0	64,0	22
BW2308-10FJ90L	BW23.4092.0810L	08	1/2"	7/8"-14	46,0	65,0	27
BW2310-10FJ90L	BW23.4092.1010L	10	5/8"	7/8"-14	55,0	70,0	27
BW2312-12FJ90L	BW23.4092.1212L	12	3/4"	1.1/16"-12	56,0	96,0	32
BW2312-16FJ90L	BW23.4092.1216L	12	3/4"	1.5/16"-12	60,0	100,0	38
BW2316-16FJ90L	BW23.4092.1616L	16	1"	1.5/16"-12	76,0	114,0	38

MATERIAL: Carbon Steel

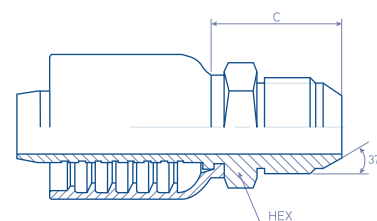
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Male JIC 37° Rigid - MJ



BW23.2000.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-04MJ	BW23.2000.0404	04	1/4"	7/16"-20	27,7	14
BW2304-05MJ	BW23.2000.0405	04	1/4"	1/2"-20	28,2	14
BW2304-06MJ	BW23.2000.0406	04	1/4"	9/16"-18	28,2	17
BW2306-06MJ	BW23.2000.0606	06	3/8"	9/16"-18	27,0	17
BW2306-08MJ	BW23.2000.0608	06	3/8"	3/4"-16	31,2	19
BW2306-10MJ	BW23.2000.0610	06	3/8"	7/8"-14	48,0	24
BW2308-06MJ	BW23.2000.0806	08	1/2"	9/16"-18	29,6	19
BW2308-08MJ	BW23.2000.0808	08	1/2"	3/4"-16	32,2	22
BW2308-10MJ	BW23.2000.0810	08	1/2"	7/8"-14	37,3	24
BW2308-12MJ	BW23.2000.0812	08	1/2"	1.1/16"-12	41,4	27
BW2310-08MJ	BW23.2000.1008	10	5/8"	3/4"-16	38,0	24
BW2310-10MJ	BW23.2000.1010	10	5/8"	7/8"-14	39,3	24
BW2310-12MJ	BW23.2000.1012	10	5/8"	1.1/16"-12	42,0	27
BW2312-10MJ	BW23.2000.1210	12	3/4"	7/8"-14	40,0	27
BW2312-12MJ	BW23.2000.1212	12	3/4"	1.1/16"-12	41,7	27
BW2312-14MJ	BW23.2000.1214	12	3/4"	1.3/16"-12	46,5	32
BW2312-16MJ	BW23.2000.1216	12	3/4"	1.5/16"-12	47,1	36
BW2316-16MJ	BW23.2000.1616	16	1"	1.5/16"-12	44,5	36
BW2316-20MJ	BW23.2000.1620	16	1"	1.5/8"-12	46,0	46
BW2320-20MJ	BW23.2000.2020	20	1.1/4"	1.5/8"-12	48,0	46
BW2324-24MJ	BW23.2000.2424	24	1.1/2"	1.7/8"-12	58,9	50
BW2332-32MJ	BW23.2000.3232	32	2"	2.1/2"-12	70,5	65

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

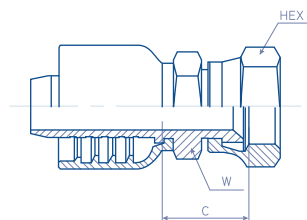
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female SAE 45° Swivel - FX

BW23.SH12.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	W mm	HEX mm
BW2306-06FX	BW23.SH12.0606	-6	3/8"	5/8" - 18 UNF	26.3	19	22
BW2312-12FX	BW23.SH12.1212	-12	3/4"	1.1/16" - 14 UNS	33.7	27	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

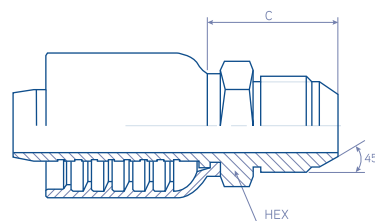
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4"); POWERSPIR BESTFLEX R15 (3/4")

Male SAE 45° Rigid - MX

BW23.2S00.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	HEX mm
BW2306-06MX	BW23.2S00.0606	-6	3/8"	5/8" - 18 UNF	27.1	22
BW2312-12MX	BW23.2S00.1212	-12	3/4"	1.1/16" - 14 UNS	40.6	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Suitable to be used on medium and high pressure braided and spiral hoses:

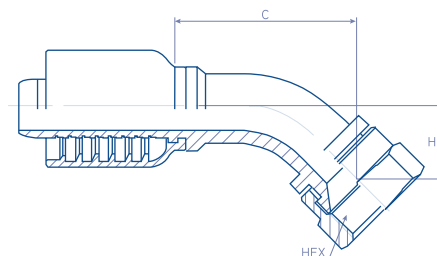
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4"); POWERSPIR BESTFLEX R15 (3/4")



Female SAE 45° Swivel 45° Elbow - FX45

BW23.4S42.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
BW2306-06FX45	BW23.4S42.0606	-6	3/8"	5/8" - 18 UNF	34.0	15.5	22
BW2312-12FX45	BW23.4S42.1212	-12	3/4"	1 1/16" - 14 UNS	55.5	27.0	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

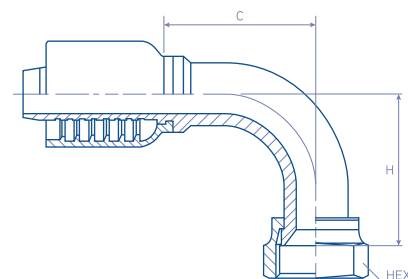
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4"); POWERSPIR BESTFLEX R15 (3/4")

Female SAE 45° Swivel 90° Elbow - FX90

BW23.4S92.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
BW2306-06FX90	BW23.4S92.0606	-6	3/8"	5/8" - 18 UNF	34.0	30	22
BW2312-12FX90	BW23.4S92.1212	-12	3/4"	1 1/16" - 14 UNS	55.5	55	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

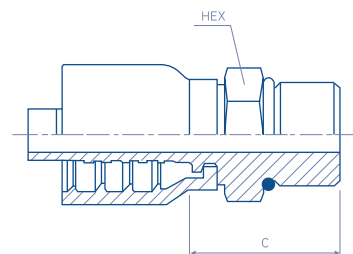
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4"); POWERSPIR BESTFLEX R15 (3/4")

SAE Straight O-ring Boss Male - RA

BW23.2010.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-04RA	BW23.2010.0404	04	1/4"	7/16"-20	23,4	14
BW2306-06RA	BW23.2010.0606	06	3/8"	9/16"-18	23	17
BW2306-08RA	BW23.2010.0608	06	3/8"	3/4"-16	26,2	22
BW2308-08RA	BW23.2010.0808	08	1/2"	3/4"-16	27,9	22
BW2308-10RA	BW23.2010.0810	08	1/2"	7/8"-14	31,9	27
BW2308-12RA	BW23.2010.0812	08	1/2"	1.1/16"-12	36	32
BW2310-10RA	BW23.2010.1010	10	5/8"	7/8"-14	33,2	27
BW2310-12RA	BW23.2010.1012	10	5/8"	1.1/16"-12	37,4	32
BW2312-12RA	BW23.2010.1212	12	3/4"	1.1/16"-12	36,5	32
BW2312-16RA	BW23.2010.1216	12	3/4"	1.5/16"-12	39	41
BW2316-16RA	BW23.2010.1616	16	1"	1.5/16"-12	35,7	38

MATERIAL: Carbon Steel

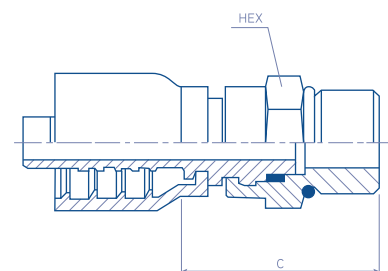
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



SAE Straight Swivel O-ring Boss Male - RAX



BW23.2012.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-04RAX	BW23.2012.0404	04	1/4"	7/16"-20	39,7	19
BW2304-06RAX	BW23.2012.0406	04	1/4"	9/16"-18	40,2	19
BW2306-06RAX	BW23.2012.0606	06	3/8"	9/16"-18	38,2	19
BW2306-08RAX	BW23.2012.0608	06	3/8"	3/4"-16	42,7	22
BW2308-08RAX	BW23.2012.0808	08	1/2"	3/4"-16	44,5	22
BW2308-10RAX	BW23.2012.0810	08	1/2"	7/8"-14	38,0	27
BW2308-12RAX	BW23.2012.0812	08	1/2"	1.1/16"-12	47,3	32
BW2310-10RAX	BW23.2012.1010	10	5/8"	7/8"-14	39,5	27
BW2312-12RAX	BW23.2012.1212	12	3/4"	1.1/16"-12	48,1	32
BW2312-16RAX	BW23.2012.1216	12	3/4"	1.5/16"-12	53,1	41
BW2316-16RAX	BW23.2012.1616	16	1"	1.5/16"-12	53,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

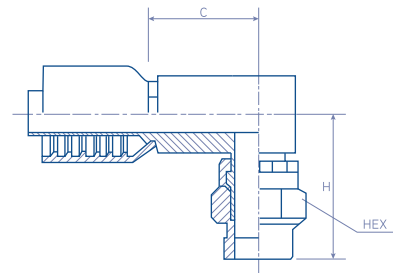
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

SAE 90° Elbow Swivel O-ring Boss Male - RAX90

BW23.2092.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2306-06RA90X	BW23.2092.0606	06	3/8"	9/16"-18	38,0	50,0	43,3
BW2306-08RA90X	BW23.2092.0608	06	3/8"	3/4"-16	40,0	47,0	45,0
BW2308-08RA90X	BW23.2092.0808	08	1/2"	3/4"-16	43,0	47,0	45,0
BW2308-10RA90X	BW23.2092.0810	08	1/2"	7/8"-14	43,0	49,0	39,5
BW2312-12RA90X	BW23.2092.1212	12	3/4"	1 1/16"-12	48,0	58,0	51,7

MATERIAL: Carbon Steel

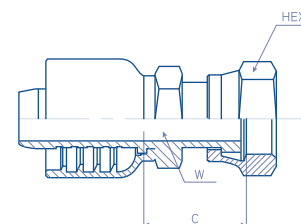
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female ORFS Swivel - OFT



BW23.44H4.

ISO 12151-1 / ISO 8434-3 / SAE J1453

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BW2304-04OFT	BW23.44H4.0404	04	1/4"	9/16"-18	30,2	14	17
BW2304-06OFT	BW23.44H4.0406	04	1/4"	11/16"-18	32,4	17	22
BW2306-04OFT	BW23.44H4.0604	06	3/8"	9/16"-18	29,3	17	17
BW2306-06OFT	BW23.44H4.0606	06	3/8"	11/16"-16	32,3	17	22
BW2306-08OFT	BW23.44H4.0608	06	3/8"	13/16"-16	35,3	19	24
BW2308-06OFT	BW23.44H4.0806	08	1/2"	11/16"-18	34,7	19	22
BW2308-08OFT	BW23.44H4.0808	08	1/2"	13/16"-16	36,7	19	24
BW2308-10OFT	BW23.44H4.0810	08	1/2"	1"-14	42,7	24	30
BW2308-12OFT	BW23.44H4.0812	08	1/2"	1.3/16"-12	45,5	30	36
BW2310-08OFT	BW23.44H4.1008	10	5/8"	13/16"-16	39,8	22	24
BW2310-10OFT	BW23.44H4.1010	10	5/8"	1"-14	43,8	24	30
BW2310-12OFT	BW23.44H4.1012	10	5/8"	1.3/16"-12	47,3	28	36
BW2312-10OFT	BW23.44H4.1210	12	3/4"	1"-14	44,8	28	30
BW2312-12OFT	BW23.44H4.1212	12	3/4"	1.3/16"-12	46,8	30	36
BW2312-16OFT	BW23.44H4.1216	12	3/4"	1.7/16"-12	51,3	35	41
BW2316-12OFT	BW23.44H4.1612	16	1"	1.3/16"-12	49,2	35	36
BW2316-16OFT	BW23.44H4.1616	16	1"	1.7/16"-12	51,3	35	41
BW2316-20OFT	BW23.44H4.1620	16	1"	1.11/16"-12	52,2	41	50
BW2320-20OFT	BW23.44H4.2020	20	1.1/4"	1.11/16"-12	52,5	41	50
BW2320-24OFT	BW23.44H4.2024	20	1.1/4"	2"-12	55,0	50	60
BW2324-24OFT	BW23.44H4.2424	24	1.1/2"	2"-12	58,4	50	60

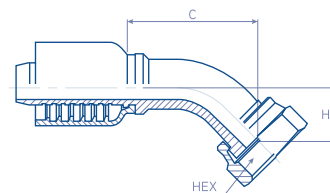
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female ORFS Swivel 45° Elbow- OFT45



BW23.4444.

ISO 12151-1 / ISO 8434-3 / SAE J1453

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04OF45	BW23.4444.0404	04	1/4"	9/16"-18	35	10	17
BW2304-06OF45	BW23.4444.0406	04	1/4"	11/16"-16	35	11	22
BW2306-04OF45	BW23.4444.0604	06	3/8"	9/16"-18	40	15	17
BW2306-06OF45	BW23.4444.0606	06	3/8"	11/16"-16	40	13,5	22
BW2306-08OF45	BW23.4444.0608	06	3/8"	13/16"-16	40	15	24
BW2308-06OF45	BW23.4444.0806	08	1/2"	11/16"-16	46	18,5	24
BW2308-08OF45	BW23.4444.0808	08	1/2"	13/16"-16	43	15	24
BW2308-10OF45	BW23.4444.0810	08	1/2"	1"-14	45	16	30
BW2308-12OF45	BW23.4444.0812	08	1/2"	1.3/16"-12	54	21	36
BW2310-10OF45	BW23.4444.1010	10	5/8"	1"-14	50	18	30
BW2310-12OF45	BW23.4444.1012	10	5/8"	1.3/16"-12	55	21	36
BW2312-12OF45	BW23.4444.1212	12	3/4"	1.3/16"-12	65	21	36
BW2312-16OF45	BW23.4444.1216	12	3/4"	1.7/16"-12	74	25	41
BW2316-12OF45	BW23.4444.1612	16	1"	1.3/16"-12	75	25	36
BW2316-16OF45	BW23.4444.1616	16	1"	1.7/16"-12	76	25	41
BW2316-20OF45	BW23.4444.1620	16	1"	1.11/16"-12	81	33	50
BW2320-20OF45	BW23.4444.2020	20	1.1/4"	1.11/16"-12	94	32	50
BW2320-24OF45	BW23.4444.2024	20	1.1/4"	2"-12	102	38	60
BW2324-24OF45	BW23.4444.2424	24	1.1/2"	2"-12	123	44	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

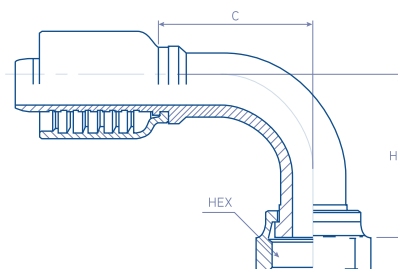
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female ORFS Swivel 90° Elbow - OFT90

BW23.4494.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04OF90	BW23.4494.0404	04	1/4"	9/16"-18	33,0	21,0	17
BW2304-06OF90	BW23.4494.0406	04	1/4"	11/16"-16	33,0	23,0	22
BW2306-04OF90	BW23.4494.0604	06	1/4"	9/16"-18	34,5	27,0	17
BW2306-06OF90	BW23.4494.0606	06	3/8"	11/16"-16	34,5	29,0	22
BW2306-08OF90	BW23.4494.0608	06	3/8"	13/16"-16	37,0	30,0	24
BW2308-06OF90	BW23.4494.0806	08	1/2"	11/16"-16	39,5	34,0	22
BW2308-08OF90	BW23.4494.0808	08	1/2"	13/16"-16	39,5	35,0	24
BW2308-10OF90	BW23.4494.0810	08	1/2"	1"-14	39,5	36,5	30
BW2308-12OF90	BW23.4494.0812	08	1/2"	1.3/16"-12	42,0	45,0	36
BW2310-08OF90	BW23.4494.1008	10	5/8"	13/16"-16	45,0	30,0	24
BW2310-10OF90	BW23.4494.1010	10	5/8"	1"-14	54,0	40,0	30
BW2310-12OF90	BW23.4494.1012	10	5/8"	1.3/16"-12	54,0	48,0	36
BW2312-12OF90	BW23.4494.1212	12	3/4"	1.3/16"-12	57,0	48,0	36
BW2312-16OF90	BW23.4494.1216	12	3/4"	1.7/16"-12	57,0	56,0	41
BW2316-12OF90	BW23.4494.1612	16	1"	1.3/16"-12	65,0	58,0	36
BW2316-16OF90	BW23.4494.1616	16	1"	1.7/16"-12	70,0	60,0	41
BW2316-20OF90	BW23.4494.1620	16	1"	1.11/16"-12	74,0	77,0	50
BW2320-20OF90	BW23.4494.2020	20	1.1/4"	1.11/16"-12	88,0	77,0	50
BW2320-24OF90	BW23.4494.2024	20	1.1/4"	2"-12	96,0	85,0	60
BW2324-24OF90	BW23.4494.2424	24	1.1/2"	2"-12	105,0	85,0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

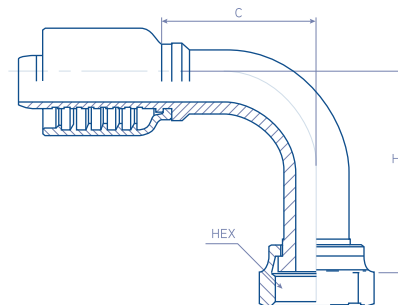
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Female ORFS Swivel 90° Long Elbow - OFT90

BW23.4494-L.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04OF90L	BW23.4494.0404L	04	1/4"	9/16"-18	21,0	46,0	17
BW2306-06OF90L	BW23.4494.0606L	06	3/8"	11/16"-16	35,5	54,0	22
BW2306-08OF90L	BW23.4494.0608L	06	3/8"	13/16"-16	37,0	64,0	24
BW2308-08OF90L	BW23.4494.0808L	08	1/2"	13/16"-16	40,0	64,0	24
BW2310-10OF90L	BW23.4494.1010L	10	5/8"	1"-14	53,5	70,0	30
BW2312-12OF90L	BW23.4494.1212L	12	3/4"	1.3/16"-12	57,0	96,0	36
BW2316-16OF90L	BW23.4494.1616L	16	1"	1.7/16"-12	70,3	114,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

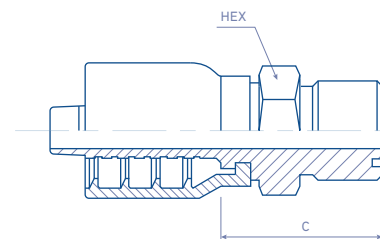
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Male ORFS - OFTM

BW23.4000.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-04OFTM	BW23.4000.0404	04	1/4"	9/16"-18	24,9	17
BW2304-06OFTM	BW23.4000.0406	04	1/4"	1.1/16"-16	26,2	19
BW2306-06OFTM	BW23.4000.0606	06	3/8"	11/16"-16	26,0	19
BW2306-08OFTM	BW23.4000.0608	06	3/8"	13/16"-16	27,5	22
BW2308-08OFTM	BW23.4000.0808	08	1/2"	13/16"-16	29,7	22
BW2308-10OFTM	BW23.4000.0810	08	1/2"	1"-14	34,0	27
BW2308-12OFTM	BW23.4000.0812	08	1/2"	1.3/16"-12	38,2	32
BW2310-10OFTM	BW23.4000.1010	10	5/8"	1"-14	36,0	27
BW2310-12OFTM	BW23.4000.1012	10	5/8"	1.3/16"-12	38,5	32
BW2312-12OFTM	BW23.4000.1212	12	3/4"	1.3/16"-12	37,7	32
BW2312-16OFTM	BW23.4000.1216	12	3/4"	1.7/16"-12	42,2	41
BW2316-16OFTM	BW23.4000.1616	16	1"	1.7/16"-12	42,7	41
BW2320-20OFTM	BW23.4000.2020	20	1.1/4"	1.11/16"-12	40,5	46
BW2324-24OFTM	BW23.4000.2424	24	1.1/2"	2"-12	41,6	55

MATERIAL: Carbon Steel

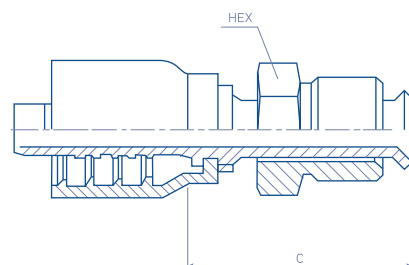
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

SAE Inverted 45° Flare Male - MSAE

BW23.2210.



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-04-M-SAE	BW23.2210.0404	04	1/4"	7/16" - 24UNS	42,0	11
BW2304-05-M-SAE	BW23.2210.0405	04	1/4"	1/2" - 20UNF	47,0	13
BW2304-06-M-SAE	BW23.2210.0406	04	1/4"	5/8" - 18UNF	46,0	16
BW2306-04-M-SAE	BW23.2210.0604	04	3/8"	7/16" - 24UNS	42,0	11
BW2306-05-M-SAE	BW23.2210.0605	06	3/8"	1/2" - 20UNF	44,0	13
BW2306-06-M-SAE	BW23.2210.0606	06	3/8"	5/8" - 18UNF	46,0	16
BW2308-08-M-SAE	BW23.2210.0808	08	1/2"	3/4" - 18UNS	47,0	19

MATERIAL: Carbon Steel

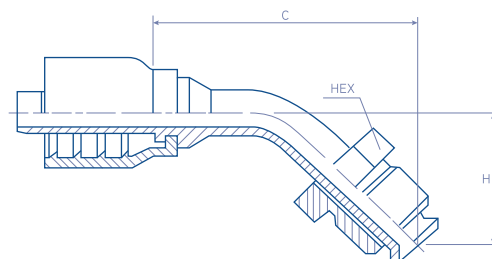
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP



SAE Inverted 45° Flare 45° Elbow Male - MSAE 45



BW23.2240.

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04-M-SAE45	BW23.2240.0404	04	1/4"	7/16" - 24UNS	36,0	16,0	11
BW2304-05-M-SAE45	BW23.2240.0405	04	1/4"	1/2" - 20UNF	40,0	18,0	13
BW2306-04-M-SAE45	BW23.2240.0604	04	3/8"	7/16" - 24UNS	36,0	16,0	11
BW2306-05-M-SAE45	BW23.2240.0605	06	3/8"	1/2" - 20UNF	37,0	18,0	13
BW2306-06-M-SAE45	BW23.2240.0606	06	3/8"	5/8" - 18UNF	48,0	22,0	16
BW2308-08-M-SAE45	BW23.2240.0808	08	1/2"	3/4" - 18UNS	50,0	26,0	19

MATERIAL: Carbon Steel

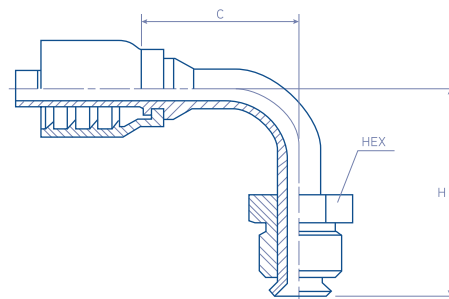
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP

SAE Inverted 45° Flare 90° Elbow Male - MSAE 90

BW23.2290.



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-04-M-SAE90	BW23.2290.0404	04	1/4"	7/16" - 24UNS	36,0	40,0	11
BW2304-05-M-SAE90	BW23.2290.0405	04	1/4"	1/2" - 20UNF	42,0	40,0	13
BW2304-06-M-SAE90	BW23.2290.0406	04	1/4"	5/8" - 18UNF	40,0	40,0	16
BW2306-04-M-SAE90	BW23.2290.0604	04	3/8"	7/16" - 24UNS	37,0	40,0	11
BW2306-05-M-SAE90	BW23.2290.0605	06	3/8"	1/2" - 20UNF	40,0	40,0	13
BW2306-06-M-SAE90	BW23.2290.0606	06	3/8"	5/8" - 18UNF	40,0	40,0	16
BW2308-08-M-SAE90	BW23.2290.0808	08	1/2"	3/4" - 18UNS	40,0	46,0	19

MATERIAL: Carbon Steel

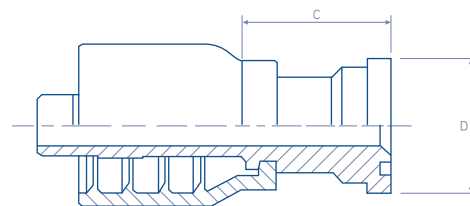
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP



Straight SAE 3000 PSI Code 61 Flange - PA



BW23.7013.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
BW2308-08PA	BW23.7013.0808	08	1/2"	1/2"	47,0	30,2
BW2308-12PA	BW23.7013.0812	08	1/2"	3/4"	48,0	38,1
BW2310-10PA	BW23.7013.1010	10	5/8"	5/8"	58,0	34,0
BW2310-12PA	BW23.7013.1012	10	5/8"	3/4"	44,0	38,1
BW2312-12PA	BW23.7013.1212	12	3/4"	3/4"	48,8	38,1
BW2312-16PA	BW23.7013.1216	12	3/4"	1"	52,0	44,5
BW2316-16PA	BW23.7013.1616	16	1"	1"	56,0	44,5
BW2316-20PA	BW23.7013.1620	16	1"	1.1/4"	60,4	50,8
BW2320-20PA	BW23.7013.2020	20	1.1/4"	1.1/4"	57,0	50,8
BW2320-24PA	BW23.7013.2024	20	1.1/4"	1.1/2"	64,0	60,3
BW2324-20PA	BW23.7013.2420	24	1.1/2"	1.1/4"	67,0	50,8
BW2324-24PA	BW23.7013.2424	24	1.1/2"	1.1/2"	69,0	60,3
BW2324-32PA	BW23.7013.2432	24	1.1/2"	2"	70,0	71,4
BW2332-32PA	BW23.7013.3232	32	2"	2"	72,0	71,4

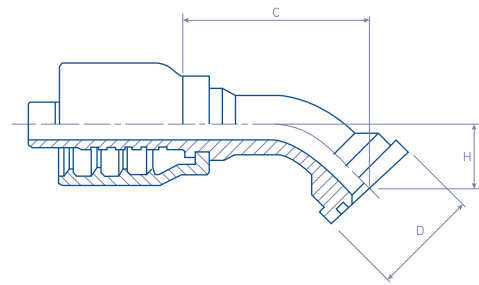
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

45° Elbow SAE 3000 PSI Code 61 Flange - PA45



BW23.7043.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08PA45	BW23.7043.0808	08	1/2"	1/2"	57,0	23,0	30,2
BW2308-12PA45	BW23.7043.0812	08	1/2"	3/4"	63,0	30,0	38,1
BW2310-10PA45	BW23.7043.1010	10	5/8"	5/8"	68,0	27,0	34,0
BW2312-12PA45	BW23.7043.1212	12	3/4"	3/4"	69,0	28,0	38,1
BW2312-16PA45	BW23.7043.1216	12	3/4"	1"	77,0	32,0	44,5
BW2316-16PA45	BW23.7043.1616	16	1"	1"	79,0	31,0	44,5
BW2316-20PA45	BW23.7043.1620	16	1"	1 1/4"	93,0	38,0	50,8
BW2320-20PA45	BW23.7043.2020	20	1 1/4"	1 1/4"	108,0	41,0	50,8
BW2320-24PA45	BW23.7043.2024	20	1 1/4"	1 1/2"	99,0	47,0	60,3
BW2324-24PA45	BW23.7043.2424	24	1 1/2"	1 1/2"	125,0	47,0	60,3
BW2324-32PA45	BW23.7043.2432	24	1 1/2"	2"	115,0	42,0	71,4
BW2332-32PA45	BW23.7043.3232	32	2"	2"	155,0	64,0	71,4

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

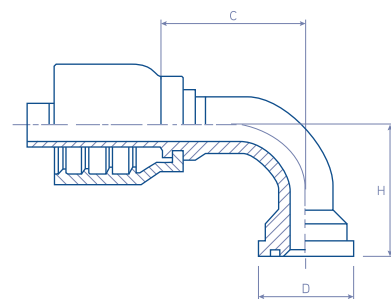
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



90° Elbow SAE 3000 PSI Code 61 Flange - PA90

BW23.7093.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08PA90	BW23.7093.0808	08	1/2"	1/2"	48,0	41,0	30,2
BW2308-12PA90	BW23.7093.0812	08	1/2"	3/4"	50,0	48,0	38,1
BW2310-12PA90	BW23.7093.1012	10	5/8"	3/4"	55,0	55,0	38,1
BW2312-12PA90	BW23.7093.1212	12	3/4"	3/4"	60,0	60,0	38,1
BW2312-16PA90	BW23.7093.1216	12	3/4"	1"	65,0	60,0	44,5
BW2316-16PA90	BW23.7093.1616	16	1"	1"	73,0	61,0	44,5
BW2316-20PA90	BW23.7093.1620	16	1"	1.1/4"	73,0	61,0	50,8
BW2320-20PA90	BW23.7093.2020	20	1.1/4"	1.1/4"	93,0	69,0	50,8
BW2320-24PA90	BW23.7093.2024	20	1.1/4"	1.1/2"	98,0	70,0	60,3
BW2324-24PA90	BW23.7093.2424	24	1.1/2"	1.1/2"	105,0	83,0	60,3
BW2324-32PA90	BW23.7093.2432	24	1.1/2"	2"	105,0	83,0	71,4
BW2332-32PA90	BW23.7093.3232	32	2"	2"	125,0	130,0	71,4

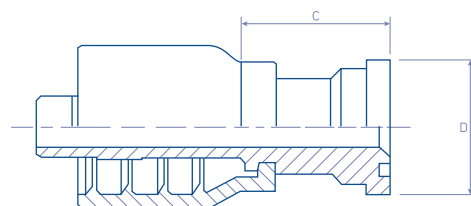
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Straight SAE 6000 PSI Code 62 Flange - PH



BW23.7016.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
BW2308-08PH	BW23.7016.0808	08	1/2"	1/2"	48,0	31,7
BW2308-12PH	BW23.7016.0812	08	1/2"	3/4"	51,0	41,3
BW2310-12PH	BW23.7016.1012	10	5/8"	3/4"	50,0	41,3
BW2312-12PH	BW23.7016.1212	12	3/4"	3/4"	52,0	41,3
BW2312-16PH	BW23.7016.1216	12	3/4"	1"	56,8	47,6
BW2316-16PH	BW23.7016.1616	16	1"	1"	56,7	47,6
BW2316-20PH	BW23.7016.1620	16	1"	1.1/4"	64,7	54
BW2320-20PH	BW23.7016.2020	20	1.1/4"	1.1/4"	65,0	54
BW2320-24PH	BW23.7016.2024	20	1.1/4"	1.1/2"	73,0	63,5
BW2324-24PH	BW23.7016.2424	24	1.1/2"	1.1/2"	75,0	63,5
BW2324-32PH	BW23.7016.2432	24	1.1/2"	2"	70,0	79,4
BW2332-32PH	BW23.7016.3232	32	2"	2"	87,6	79,4

MATERIAL: Carbon Steel

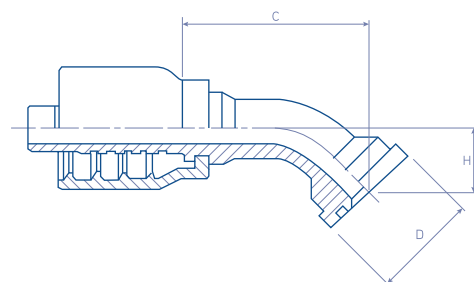
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



45° Elbow SAE 6000 PSI Code 62 Flange - PH45



BW23.7046.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08PH45	BW23.7046.0808	08	1/2"	1/2"	57,0	23,0	31,7
BW2308-12PH45	BW23.7046.0812	08	1/2"	3/4"	63,0	30,0	41,3
BW2310-12PH45	BW23.7046.1012	10	5/8"	3/4"	68,0	27,0	41,3
BW2312-12PH45	BW23.7046.1212	12	3/4"	3/4"	69,0	28,0	41,3
BW2312-16PH45	BW23.7046.1216	12	3/4"	1"	77,0	32,0	47,6
BW2316-16PH45	BW23.7046.1616	16	1"	1"	79,0	31,0	47,6
BW2316-20PH45	BW23.7046.1620	16	1"	1.1/4"	93,0	38,0	54
BW2320-20PH45	BW23.7046.2020	20	1.1/4"	1.1/4"	108,0	41,0	54
BW2320-24PH45	BW23.7046.2024	20	1.1/4"	1.1/2"	112,0	47,0	63,5
BW2324-24PH45	BW23.7046.2424	24	1.1/2"	1.1/2"	125,0	47,0	63,5
BW2324-32PH45	BW23.7046.2432	24	1.1/2"	2"	134,0	58,0	79,4
BW2332-32PH45	BW23.7046.3232	32	2"	2"	155,0	64,0	79,4

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

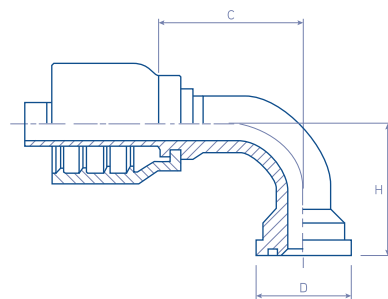
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

90° Elbow SAE 6000 PSI Code 62 Flange - PH90

BW23.7096.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08PH90	BW23.7096.0808	08	1/2"	1/2"	50,0	47,0	31,7
BW2308-12PH90	BW23.7096.0812	08	1/2"	3/4"	46,0	56,0	41,3
BW2310-12PH90	BW23.7096.1012	10	5/8"	3/4"	54,0	58,0	41,3
BW2312-12PH90	BW23.7096.1212	12	3/4"	3/4"	60,0	58,0	41,3
BW2312-16PH90	BW23.7096.1216	12	3/4"	1"	60,0	70,0	47,6
BW2316-16PH90	BW23.7096.1616	16	1"	1"	77,0	70,0	47,6
BW2316-20PH90	BW23.7096.1620	16	1"	1 1/4"	72,0	70,0	54
BW2320-20PH90	BW23.7096.2020	20	1 1/4"	1 1/4"	97,0	79,0	54
BW2320-24PH90	BW23.7096.2024	20	1 1/4"	1 1/2"	100,0	97,0	63,5
BW2324-24PH90	BW23.7096.2424	24	1 1/2"	1 1/2"	107,0	97,0	63,5
BW2324-32PH90	BW23.7096.2432	24	1 1/2"	2"	107,0	125,0	79,4
BW2332-32PH90	BW23.7096.3232	32	2"	2"	130,0	138,0	79,4

MATERIAL: Carbon Steel

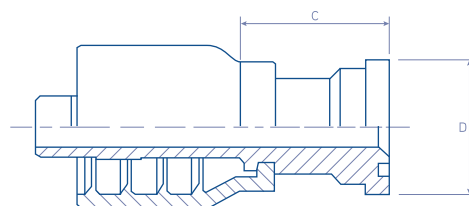
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Straight SuperCAT Flange - CS



BW23.7116.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
BW2308-08CS	BW23.7116.0808	08	1/2"	1/2"	46,0	31,7
BW2308-12CS	BW23.7116.0812	08	1/2"	3/4"	46,0	41,3
BW2310-12CS	BW23.7116.1012	10	5/8"	3/4"	46,0	41,3
BW2312-12CS	BW23.7116.1212	12	3/4"	3/4"	48,0	41,3
BW2312-16CS	BW23.7116.1216	12	3/4"	1"	62,0	47,6
BW2316-16CS	BW23.7116.1616	16	1"	1"	63,0	47,6
BW2316-20CS	BW23.7116.1620	16	1"	1 1/4"	69,0	54

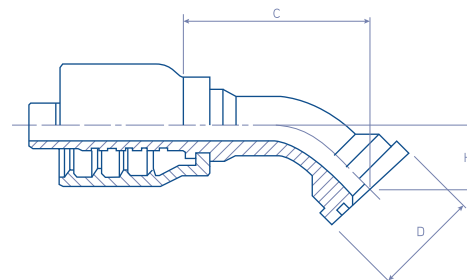
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

45° Elbow SuperCAT Flange - CS



BW23.7146.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08CS45	BW23.7146.0808	08	1/2"	1/2"	57,0	23,0	31,7
BW2308-12CS45	BW23.7146.0812	08	1/2"	3/4"	63,0	30,0	41,3
BW2310-12CS45	BW23.7146.1012	10	5/8"	3/4"	68,0	28,0	41,3
BW2312-12CS45	BW23.7146.1212	12	3/4"	3/4"	70,0	32,0	41,3
BW2312-16CS45	BW23.7146.1216	12	3/4"	1"	77,0	36,0	47,6
BW2316-16CS45	BW23.7146.1616	16	1"	1"	81,0	34,0	47,6
BW2316-20CS45	BW23.7146.1620	16	1"	1 1/4"	93,0	41,0	54,0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

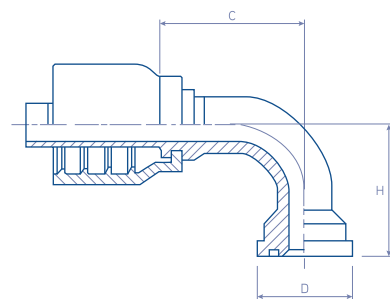
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



90° Elbow SuperCAT Flange – CS

BW23.7196.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BW2308-08CS90	BW23.7196.0808	08	1/2"	1/2"	47,0	47,0	31,7
BW2308-12CS90	BW23.7196.0812	08	1/2"	3/4"	50,5	56,0	41,3
BW2310-12CS90	BW23.7196.1012	10	5/8"	3/4"	53,5	58,0	41,3
BW2312-12CS90	BW23.7196.1212	12	3/4"	3/4"	55,0	60,0	41,3
BW2312-16CS90	BW23.7196.1216	12	3/4"	1"	55,0	68,0	47,6
BW2316-16CS90	BW23.7196.1616	16	1"	1"	76,0	70,0	47,6
BW2316-20CS90	BW23.7196.1620	16	1"	1 1/4"	76,0	82,0	54,0

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

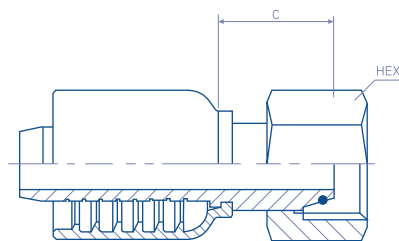
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Light 24° Metric Female - DLF

BW23.5013.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BW2304-12DLF	BW23.5013.0412	04	1/4"	M12X1.5	6	27,7	14
BW2304-14DLF	BW23.5013.0414	04	1/4"	M14X1.5	8	25,9	17
BW2304-16DLF	BW23.5013.0416	04	1/4"	M16X1.5	10	24,9	19
BW2304-18DLF	BW23.5013.0418	04	1/4"	M18X1.5	12	26,4	22
BW2306-16DLF	BW23.5013.0616	06	3/8"	M16X1.5	10	27,2	19
BW2306-18DLF	BW23.5013.0618	06	3/8"	M18X1.5	12	25,5	22
BW2306-22DLF	BW23.5013.0622	06	3/8"	M22X1.5	12	26,0	27
BW2308-22DLF	BW23.5013.0822	08	1/2"	M22X1.5	15	27,7	27
BW2308-26DLF	BW23.5013.0826	08	1/2"	M26X1.5	18	28,7	32
BW2310-26DLF	BW23.5013.1026	10	5/8"	M26X1.5	18	30,0	32
BW2312-30DLF	BW23.5013.1230	12	3/4"	M30X2.0	22	32,3	36
BW2316-36DLF	BW23.5013.1636	16	1"	M36X2.0	28	35,8	41
BW2320-45DLF	BW23.5013.2045	20	1 1/4"	M45X2.0	35	38,9	50
BW2324-52DLF	BW23.5013.2452	24	1 1/2"	M52X2.0	42	36,9	60

MATERIAL: Carbon Steel

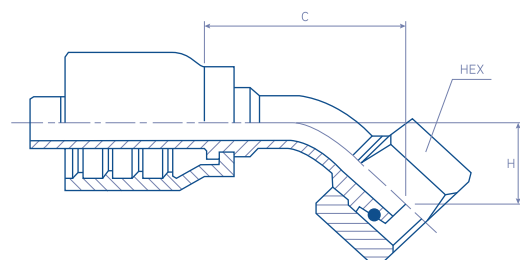
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Light 24° Metric 45° Elbow Female - DLF45



BW23.5043.

ISO 12151-2 / ISO 8434-1

REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BW2304-12DLF45	BW23.5043.0412	04	1/4"	M12X1.5	6	39	15	14
BW2304-14DLF45	BW23.5043.0414	04	1/4"	M14X1.5	8	42,7	17,7	17
BW2304-16DLF45	BW23.5043.0416	04	1/4"	M16X1.5	10	41,5	17,7	19
BW2304-18DLF45	BW23.5043.0418	04	1/4"	M18X1.5	12	42,0	18,3	22
BW2306-16DLF45	BW23.5043.0616	06	3/8"	M16X1.5	10	44,5	21	19
BW2306-18DLF45	BW23.5043.0618	06	3/8"	M18X1.5	12	42,5	19	22
BW2308-22DLF45	BW23.5043.0822	08	1/2"	M22X1.5	15	49,0	21,5	27
BW2308-26DLF45	BW23.5043.0826	08	1/2"	M26X1.5	18	60,0	25,0	32
BW2310-26DLF45	BW23.5043.1026	10	5/8"	M26X1.5	18	62,5	25	32
BW2312-30DLF45	BW23.5043.1230	12	3/4"	M30X2.0	22	76,0	29,5	36
BW2316-36DLF45	BW23.5043.1636	16	1"	M36X2.0	28	90,5	35	41
BW2320-45DLF45	BW23.5043.2045	20	1.1/4"	M45X2.0	35	104	40	50
BW2324-52DLF45	BW23.5043.2452	24	1.1/2"	M52X2.0	42	119	41	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

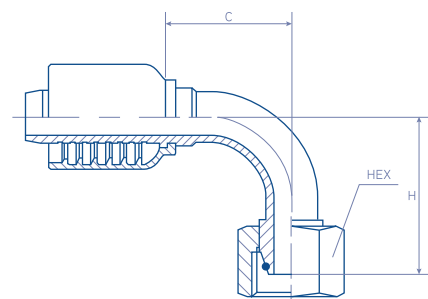
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Light 24° Metric 90° Elbow Female - DLF90

BW23.5093.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BW2304-12DLF90	BW23.5093.0412	04	1/4"	M12X1.5	6	30	30	14
BW2304-14DLF90	BW23.5093.0414	04	1/4"	M14X1.5	8	32	38	17
BW2304-16DLF90	BW23.5093.0416	04	1/4"	M16X1.5	10	31,7	38,0	19
BW2304-18DLF90	BW23.5093.0418	04	1/4"	M18X1.5	12	30,0	36,0	22
BW2306-16DLF90	BW23.5093.0616	06	3/8"	M16X1.5	10	35	36,0	19
BW2306-18DLF90	BW23.5093.0618	06	3/8"	M18X1.5	12	36	36,0	22
BW2306-22DLF90	BW23.5093.0622	06	3/8"	M22X1.5	15	34,2	36	27
BW2308-22DLF90	BW23.5093.0822	08	1/2"	M22X1.5	15	38	40,5	27
BW2308-26DLF90	BW23.5093.0826	08	1/2"	M26X1.5	18	48	51,5	32
BW2310-26DLF90	BW23.5093.1026	10	5/8"	M26X1.5	18	48	51,5	32
BW2312-30DLF90	BW23.5093.1230	12	3/4"	M30X2.0	22	54	54,5	36
BW2316-36DLF90	BW23.5093.1636	16	1"	M36X2.0	28	75	68,5	41
BW2320-45DLF90	BW23.5093.2045	20	1.1/4"	M45X2.0	35	75	81,0	50
BW2324-52DLF90	BW23.5093.2452	24	1.1/2"	M52X2.0	42	114,0	95,0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

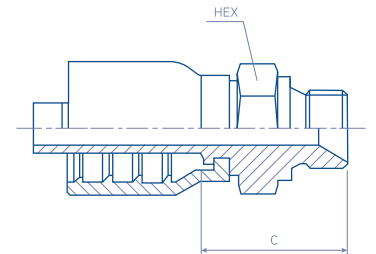
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Light 24° Metric Male - DLM

BW23.1000.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BW2304-12DLM	BW23.1000.0412	04	1/4"	M12X1.5	6	24,2	14
BW2304-14DLM	BW23.1000.0414	04	1/4"	M14X1.5	8	24,7	17
BW2304-16DLM	BW23.1000.0416	04	1/4"	M16X1.5	10	25,7	17
BW2304-18DLM	BW23.1000.0418	04	1/4"	M18X1.5	12	26,7	19
BW2306-16DLM	BW23.1000.0616	06	3/8"	M16X1.5	10	23,7	17
BW2306-18DLM	BW23.1000.0618	06	3/8"	M18X1.5	12	24,7	19
BW2306-22DLM	BW23.1000.0622	06	3/8"	M22X1.5	15	27,7	24
BW2308-18DLM	BW23.1000.0818	08	1/2"	M18X1.5	12	26,5	19
BW2308-22DLM	BW23.1000.0822	08	1/2"	M22X1.5	15	29,5	24
BW2310-26DLM	BW23.1000.1026	10	5/8"	M26X1.5	18	32,0	27
BW2310-30DLM	BW23.1000.1030	10	5/8"	M30X2.0	22	36,0	32
BW2312-30DLM	BW23.1000.1230	12	3/4"	M30X2.0	22	35,3	32
BW2316-36DLM	BW23.1000.1636	16	1"	M36X2.0	28	38,2	41
BW2320-45DLM	BW23.1000.2045	20	1.1/4"	M45X2.0	35	42,0	46
BW2324-52DLM	BW23.1000.2452	24	1.1/2"	M52X2.0	42	46,4	55

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

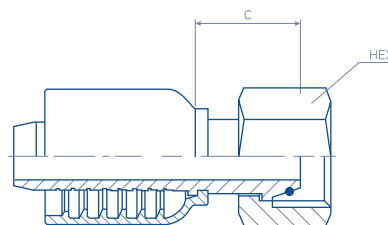
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Heavy 24° Metric Female - DHF

BW23.5113.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BW2304-16DHF	BW23.5113.0416	04	1/4"	M16X1.5	8	27,0	19
BW2304-18DHF	BW23.5113.0418	04	1/4"	M18X1.5	10	27,5	22
BW2306-18DHF	BW23.5113.0618	06	3/8"	M18X1.5	10	25,5	22
BW2306-20DHF	BW23.5113.0620	06	3/8"	M20X1.5	12	25,0	24
BW2306-22DHF	BW23.5113.0622	06	3/8"	M22X1.5	14	29,5	27
BW2308-24DHF	BW23.5113.0824	08	1/2"	M24X1.5	16	31,0	30
BW2310-30DHF	BW23.5113.1030	10	5/8"	M30X2.0	20	38,4	36
BW2312-30DHF	BW23.5113.1230	12	3/4"	M30X2.0	20	37,5	36
BW2312-36DHF	BW23.5113.1236	12	3/4"	M36X2.0	25	41,8	46
BW2316-36DHF	BW23.5113.1636	16	1"	M36X2.0	25	42,5	46
BW2316-42DHF	BW23.5113.1642	16	1"	M42X2.0	30	45,7	50
BW2320-52DHF	BW23.5113.2052	20	1.1/4"	M52X2.0	38	46,0	60

MATERIAL: Carbon Steel

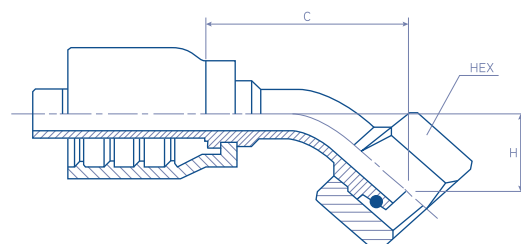
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Heavy 24° Metric 45° Elbow Female - DHF45



BW23.5143.

ISO 12151-2 / ISO 8434-1

REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BW2304-16DHF45	BW23.5143.0416	04	1/4"	M16X1.5	8	36,5	17,0	19
BW2304-18DHF45	BW23.5143.0418	04	1/4"	M18X1.5	10	40,5	16,7	22
BW2306-20DHF45	BW23.5143.0620	06	3/8"	M20X1.5	12	42,0	18,4	24
BW2306-22DHF45	BW23.5143.0622	06	3/8"	M22X1.5	14	42,4	18,7	27
BW2308-24DHF45	BW23.5143.0824	08	1/2"	M24X1.5	16	49,9	21,0	30
BW2310-30DHF45	BW23.5143.1030	10	5/8"	M30X2.0	20	59,0	25,0	36
BW2312-30DHF45	BW23.5143.1230	12	3/4"	M30X2.0	20	70,5	30,0	36
BW2312-36DHF45	BW23.5143.1236	12	3/4"	M36X2.0	25	81,5	30,5	46
BW2316-36DHF45	BW23.5143.1636	16	1"	M36X2.0	25	89,0	36,0	46
BW2316-42DHF45	BW23.5143.1642	16	1"	M42X2.0	30	89,0	38,0	50
BW2320-52DHF45	BW23.5143.2052	20	1 1/4"	M52X2.0	38	123,0	45,0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

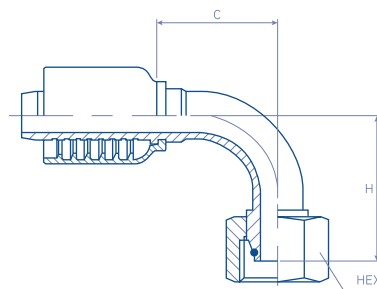
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

Heavy 24° Metric 90° Elbow Female - DHF90

BW23.5193.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BW2304-16DHF90	BW23.5193.0416	04	1/4"	M16X1.5	8	28,2	32,0	19
BW2304-18DHF90	BW23.5193.0418	04	1/4"	M18X1.5	10	31,7	32,0	22
BW2306-18DHF90	BW23.5193.0618	06	3/8"	M18X1.5	10	33,0	33,0	22
BW2306-20DHF90	BW23.5193.0620	06	3/8"	M20X1.5	12	34,2	36,5	24
BW2306-22DHF90	BW23.5193.0622	06	3/8"	M22X1.5	14	34,2	37,0	27
BW2308-24DHF90	BW23.5193.0824	08	1/2"	M24X1.5	16	41,0	43,0	30
BW2310-30DHF90	BW23.5193.1030	10	5/8"	M30X2.0	20	49,0	49,5	36
BW2312-30DHF90	BW23.5193.1230	12	3/4"	M30X2.0	20	60,5	58,0	36
BW2312-36DHF90	BW23.5193.1236	12	3/4"	M36X2.0	25	60,0	59,0	46
BW2316-36DHF90	BW23.5193.1636	16	1"	M36X2.0	25	75,0	70,0	46
BW2316-42DHF90	BW23.5193.1642	16	1"	M42X2.0	30	76,0	70,0	50
BW2320-52DHF90	BW23.5193.2052	20	1 1/4"	M52X2.0	38	87,0	87,0	60

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

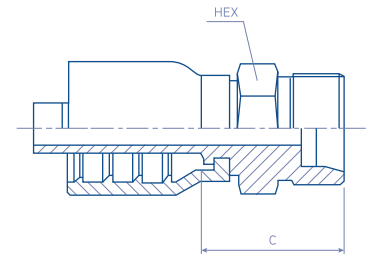
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Heavy 24° Metric Male - DHM

BW23.1100.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BW2304-14DHM	BW23.1100.0414	04	1/4"	M14X1.5	6	26,7	17
BW2304-16DHM	BW23.1100.0416	04	1/4"	M16X1.5	8	26,7	17
BW2304-18DHM	BW23.1100.0418	04	1/4"	M18X1.5	10	27,7	19
BW2304-20DHM	BW23.1100.0420	04	1/4"	M20X1.5	12	29,2	22
BW2306-18DHM	BW23.1100.0618	06	3/8"	M18X1.5	10	25,7	19
BW2306-20DHM	BW23.1100.0620	06	3/8"	M20X1.5	12	27,2	22
BW2306-22DHM	BW23.1100.0622	06	3/8"	M22X1.5	14	29,7	24
BW2306-24DHM	BW23.1100.0624	06	3/8"	M24X1.5	16	31,2	27
BW2308-24DHM	BW23.1100.0824	08	1/2"	M24X1.5	16	33,0	27
BW2310-30DHM	BW23.1100.1030	10	5/8"	M30X2.0	20	38,0	32
BW2312-30DHM	BW23.1100.1230	12	3/4"	M30X2.0	20	37,3	32
BW2312-36DHM	BW23.1100.1236	12	3/4"	M36X2.0	25	42,3	41
BW2316-36DHM	BW23.1100.1636	16	1"	M36X2.0	25	42,2	41
BW2316-42DHM	BW23.1100.1642	16	1"	M42X2.0	30	45,7	46
BW2320-52DHM	BW23.1100.2052	20	1.1/4"	M52X2.0	38	50,0	55

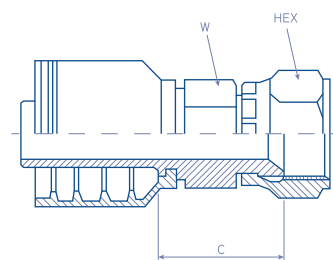
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

JIS 30° Female Swivel - FX-KOMA



BW23.5911.

JIS B 8363

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BW2304-14FX-KOMA	BW23.5911.0414	04	1/4"	M14X1.5	24,2	19	19
BW2306-16FX-KOMA	BW23.5911.0616	06	3/8"	M16X1.5	23,2	19	22
BW2306-18FX-KOMA	BW23.5911.0618	06	3/8"	M18X1.5	24,2	19	24
BW2306-20FX-KOMA	BW23.5911.0620	06	3/8"	M20X1.5	25,2	19	27
BW2308-22FX-KOMA	BW23.5911.0822	08	1/2"	M22X1.5	28,0	22	27
BW2310-24FX-KOMA	BW23.5911.1024	10	5/8"	M24X1.5	30,5	24	32
BW2312-30FX-KOMA	BW23.5911.1230	12	3/4"	M30X1.5	32,8	30	36
BW2312-33FX-KOMA	BW23.5911.1233	12	3/4"	M33X1.5	33,8	32	41
BW2312-36FX-KOMA	BW23.5911.1236	12	3/4"	M36X1.5	36,3	41	46
BW2316-33FX-KOMA	BW23.5911.1633	16	1"	M33X1.5	33,7	32	41
BW2316-36FX-KOMA	BW23.5911.1636	16	1"	M36X1.5	26,2	41	46
BW2320-36FX-KOMA	BW23.5911.2036	20	1.1/4"	M36X1.5	36,5	41	46
BW2324-42FX-KOMA	BW23.5911.2442	24	1.1/2"	M42X1.5	43,4	50	55

MATERIAL: Carbon Steel

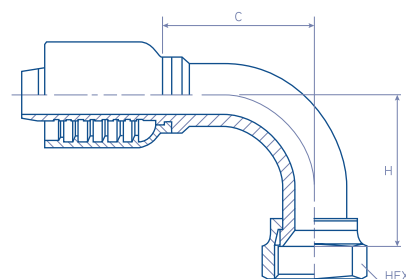
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



Female JIS 30° Swivel 90° Elbow - FX-KOMA90



BW23.5991.

JIS B 8363

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-14FX-KOMA90	BW23.5991.0414	04	1/4"	M14X1.5	25,0	28	19
BW2306-18FX-KOMA90	BW23.5991.0618	06	3/8"	M18X1.5	31,0	37	24
BW2308-22FX-KOMA90	BW23.5991.0822	08	1/2"	M22X1.5	41,0	48	27
BW2310-24FX-KOMA90	BW23.5991.1024	10	5/8"	M24X1.5	42,0	50	32
BW2312-30FX-KOMA90	BW23.5991.1230	12	3/4"	M30X1.5	48,5	57	36

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

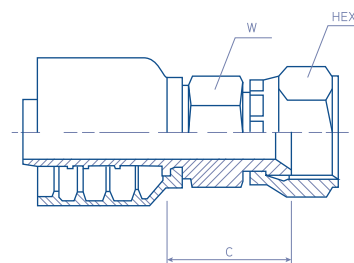
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

JIS 30° Female Swivel - JIS

BW23.3712.

JIS B 8363



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BW2304-04JIS	BW23.3712.0404	04	1/4"	1/4" - 19	23,0	19	19
BW2306-06JIS	BW23.3712.0606	06	3/8"	3/8" - 19	23,0	22	22
BW2308-08JIS	BW23.3712.0808	08	1/2"	1/2" - 14	27,7	27	27
BW2312-12JIS	BW23.3712.1212	12	3/4"	3/4" - 14	31,4	32	32
BW2316-16JIS	BW23.3712.1616	16	1"	1" - 11	32,0	41	41
BW2320-20JIS	BW23.3712.2020	20	1.1/4"	1.1/4" - 11	35,5	50	50

MATERIAL: Carbon Steel

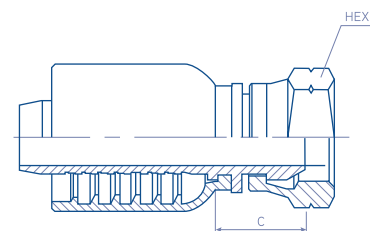
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



BSP 60° Swivel Female - BSPXF



BW23.3012.

ISO 12151-6 / ISO 8434-6

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-02BSPXF	BW23.3012.0402	04	1/4"	1/8"-28	17,7	14
BW2304-04BSPXF	BW23.3012.0404	04	1/4"	1/4"-19	19,9	19
BW2304-06BSPXF	BW23.3012.0406	04	1/4"	3/8"-19	20,7	22
BW2304-08BSPXF	BW23.3012.0408	04	1/4"	1/2"-14	22,7	27
BW2306-06BSPXF	BW23.3012.0606	06	3/8"	3/8"-19	19,5	22
BW2306-08BSPXF	BW23.3012.0608	06	3/8"	1/2"-14	20,7	27
BW2308-08BSPXF	BW23.3012.0808	08	1/2"	1/2"-14	22,7	27
BW2308-10BSPXF	BW23.3012.0810	08	1/2"	5/8"-14	23,0	30
BW2310-10BSPXF	BW23.3012.1010	10	5/8"	5/8"-14	25,0	30
BW2310-12BSPXF	BW23.3012.1012	10	5/8"	3/4"-14	25,5	32
BW2312-12BSPXF	BW23.3012.1212	12	3/4"	3/4"-14	24,9	32
BW2312-16BSPXF	BW23.3012.1216	12	3/4"	1"-11	26,8	38
BW2316-16BSPXF	BW23.3012.1616	16	1"	1"-11	26,8	38
BW2316-20BSPXF	BW23.3012.1620	16	1"	1.1/4"-11	29,2	50
BW2320-20BSPXF	BW23.3012.2020	20	1.1/4"	1.1/4"-11	29,5	50
BW2320-24BSPXF	BW23.3012.2024	20	1.1/4"	1.1/2"-11	31,0	55
BW2324-24BSPXF	BW23.3012.2424	24	1.1/2"	1.1/2"-11	33,4	55
BW2324-32BSPXF	BW23.3012.2432	24	1.1/2"	2"-11	35,4	70
BW2332-32BSPXF	BW23.3012.3232	32	2"	2"-11	36,6	70

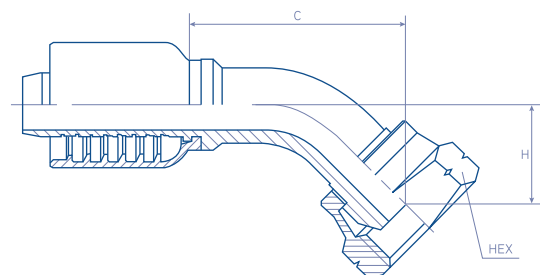
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

BSP 60° Swivel 45° Elbow Female - BSPXF45



BW23.3042.

ISO 12151-6 / ISO 8434-6

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-02BSPXF45	BW23.3042.0402	04	1/4"	1/8"-28	33,0	14,0	14
BW2304-04BSPXF45	BW23.3042.0404	04	1/4"	1/4"-19	41,1	15,0	19
BW2304-06BSPXF45	BW23.3042.0406	04	1/4"	3/8"-19	34,2	15,0	22
BW2306-06BSPXF45	BW23.3042.0606	06	3/8"	3/8"-19	40,0	17,5	22
BW2306-08BSPXF45	BW23.3042.0608	06	3/8"	1/2"-14	38,6	17,0	27
BW2308-08BSPXF45	BW23.3042.0808	08	1/2"	1/2"-14	46,0	19,0	27
BW2308-10BSPXF45	BW23.3042.0810	08	1/2"	5/8"-14	56,0	23,0	27
BW2310-10BSPXF45	BW23.3042.1010	10	5/8"	5/8"-14	60,5	23,3	27
BW2310-12BSPXF45	BW23.3042.1012	10	5/8"	3/4"-14	63,0	28,0	32
BW2312-12BSPXF45	BW23.3042.1212	12	3/4"	3/4"-14	67,8	29,0	32
BW2312-16BSPXF45	BW23.3042.1216	12	3/4"	1"-11	72,6	27,5	38
BW2316-16BSPXF45	BW23.3042.1616	16	1"	1"-11	83,7	33,8	38
BW2316-20BSPXF45	BW23.3042.1620	16	1"	1 1/4"-11	92,3	41,0	50
BW2320-20BSPXF45	BW23.3042.2020	20	1 1/4"	1 1/4"-11	97,0	40,0	50
BW2320-24BSPXF45	BW23.3042.2024	20	1 1/4"	1 1/2"-11	102,0	50,0	55
BW2324-24BSPXF45	BW23.3042.2424	24	1 1/2"	1 1/2"-11	119,0	50,0	55
BW2324-32BSPXF45	BW23.3042.2432	24	1 1/2"	2"-11	132,0	59,0	70
BW2332-32BSPXF45	BW23.3042.3232	32	2"	2"-11	149,8	70,0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

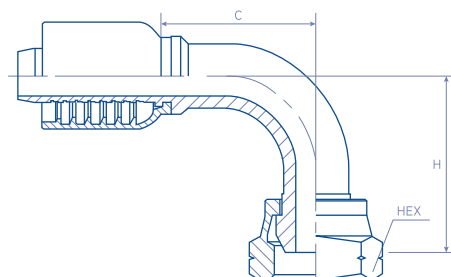
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")



BSP 60° Swivel 90° Elbow Female - BSPXF90

BW23.3092.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BW2304-02BSPXF90	BW23.3092.0402	04	1/4"	1/8"-28	27,5	27,0	14
BW2304-04BSPXF90	BW23.3092.0404	04	1/4"	1/4"-19	27,6	28,0	19
BW2304-06BSPXF90	BW23.3092.0406	04	1/4"	3/8"-19	30,0	31,0	22
BW2306-06BSPXF90	BW23.3092.0606	06	3/8"	3/8"-19	34,2	31,7	22
BW2306-08BSPXF90	BW23.3092.0608	06	3/8"	1/2"-14	32,7	36,5	27
BW2308-08BSPXF90	BW23.3092.0808	08	1/2"	1/2"-14	41,0	40,0	27
BW2308-10BSPXF90	BW23.3092.0810	08	1/2"	5/8"-14	46,5	46,0	27
BW2310-10BSPXF90	BW23.3092.1010	10	5/8"	5/8"-14	54,0	50,0	27
BW2310-12BSPXF90	BW23.3092.1012	10	5/8"	3/4"-14	54,0	54,0	32
BW2312-12BSPXF90	BW23.3092.1212	12	3/4"	3/4"-14	56,0	58,0	32
BW2312-16BSPXF90	BW23.3092.1216	12	3/4"	1"-11	60,0	62,0	38
BW2316-16BSPXF90	BW23.3092.1616	16	1"	1"-11	71,5	71,0	38
BW2316-20BSPXF90	BW23.3092.1620	16	1"	1.1/4"-11	79,5	78,0	50
BW2320-20BSPXF90	BW23.3092.2020	20	1.1/4"	1.1/4"-11	86,5	83,0	50
BW2320-24BSPXF90	BW23.3092.2024	20	1.1/4"	1.1/2"-11	91,5	92,0	55
BW2324-24BSPXF90	BW23.3092.2424	24	1.1/2"	1.1/2"-11	110,0	104,0	55
BW2324-32BSPXF90	BW23.3092.2432	24	1.1/2"	2"-11	110,0	110,0	70
BW2332-32BSPXF90	BW23.3092.3232	32	2"	2"-11	130,0	130,0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

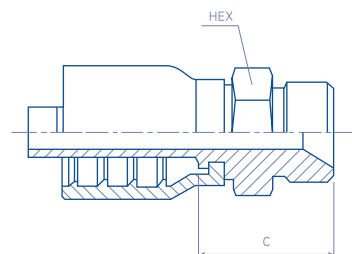
Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

BSP 60° Male - BSPM

BW23.0100.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BW2304-02BSPM	BW23.0100.0402	04	1/4"	1/8"-28	24,2	14
BW2304-04BSPM	BW23.0100.0404	04	1/4"	1/4"-19	28,2	19
BW2304-06BSPM	BW23.0100.0406	04	1/4"	3/8"-19	30,7	22
BW2304-08BSPM	BW23.0100.0408	04	1/4"	1/2"-14	35,2	27
BW2306-04BSPM	BW23.0100.0604	06	3/8"	1/4"-19	26,2	19
BW2306-06BSPM	BW23.0100.0606	06	3/8"	3/8"-19	28,7	22
BW2306-08BSPM	BW23.0100.0608	06	3/8"	1/2"-14	33,2	27
BW2308-06BSPM	BW23.0100.0806	08	1/2"	3/8"-19	30,5	22
BW2308-08BSPM	BW23.0100.0808	08	1/2"	1/2"-14	34,5	27
BW2308-10BSPM	BW23.0100.0810	08	1/2"	5/8"-14	37,5	30
BW2308-12BSPM	BW23.0100.0812	08	1/2"	3/4"-14	40,5	32
BW2310-08BSPM	BW23.0100.1008	10	5/8"	1/2"-14	36,5	27
BW2310-10BSPM	BW23.0100.1010	10	5/8"	5/8"-14	38,0	30
BW2310-12BSPM	BW23.0100.1012	10	5/8"	3/4"-14	41,5	32
BW2312-08BSPM	BW23.0100.1208	12	3/4"	1/2"-14	35,8	27
BW2312-12BSPM	BW23.0100.1212	12	3/4"	3/4"-14	40,3	32
BW2312-16BSPM	BW23.0100.1216	12	3/4"	1"-11	45,3	41
BW2316-16BSPM	BW23.0100.1616	16	1"	1"-11	45,2	41
BW2316-20BSPM	BW23.0100.1620	16	1"	1 1/4"-11	48,2	50
BW2320-20BSPM	BW23.0100.2020	20	1 1/4"	1 1/4"-11	48,5	50
BW2320-24BSPM	BW23.0100.2024	20	1 1/4"	1 1/2"-11	51,0	55
BW2324-24BSPM	BW23.0100.2424	24	1 1/2"	1 1/2"-11	53,4	55
BW2324-32BSPM	BW23.0100.2432	24	1 1/2"	2"-11	58,9	70
BW2332-32BSPM	BW23.0100.3232	32	2"	2"-11	60,1	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided and spiral hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W; BALMASTER BESTFLEX R12; BALMASTER BESTFLEX 4SP; POWERSPIR BESTFLEX 4SH; POWERSPIR BESTFLEX R13 (3/4" & 1"); POWERSPIR BESTFLEX R15 (3/4" & 1")

PRODUCTS LIMITED WARRANTY

The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

This warranty is in lieu of and excludes all other warranties, or conditions expressed, implied, statutory or otherwise created under applicable law including, but not limited to the warranty of merchantability and the warranty of fitness for a particular purpose.

In addition, this warranty shall not apply and will be null and void to any products or portions thereof that have been subject to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by balflex or used in any other manner inconsistent with any Balflex® instructions or specifications. Balflex® disclaims any liability for any hose assemblies which have not been produced with in conformance with Balflex® assembly recommendations and parts.

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**BF21 -
MULTI CRIMP
SERIES ONE PIECE,
NO SKIVE HYDRAULIC
FITTINGS CATALOG**

European Technology

*Established since 1963, **Balflex®** is a European international group of companies dedicated to the design, production, assembly and distribution of all types of high-tech products for conduction of fluids, measuring of pressure and power transmission at very high quality level.*

*6 decades of know-how and expertise in this field, makes **Balflex®** the first choice for the mining, agriculture, off-shore and construction industries.*

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Hose Fittings Pressure Ratings

For each type of fitting there is a maximum working pressure recommended in table below. Whenever information is not available, contact the manufacturer.

Inch Fittings (size)													
Maximum Working pressure (MPa/psi) – safety factor 4:1													
Description	Part Number	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
NPTF Male	XX.0400 XX.0410 XX.0490	34.5 5000		27.6 4000		20.7 3000	20.7 3000		17.2 2500	13.8 2000	7.9 1150	6.9 1000	6.9 1000
BSP Male	XX.0100	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female	XX.3012 XX.3042 XX.3092	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
BSP Swivel Female with O-ring	XX.3112 XX.3142 XX.3192			45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494
JIC 37° Male	XX.2000			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
JIC 37° Swivel Female	XX.4012 XX.4042 XX.4092 XX.4H12			35.0 5075	35.0 5075	35.0 5075	31.0 4495	24.0 3480	24.0 3480	21.0 3045	17.0 2465	14.0 2030	10.5 1523
Flange 3000 PSI	XX.7013 XX.7043 XX.7093						34.5 5000	34.5 5000	34.5 5000	34.5 5000	27.6 4000	20.7 3000	17.2 2500
Flange 6000 PSI	XX.7016 XX.7046 XX.7096						41.4 6000	41.4 6000		41.4 6000	41.4 6000	41.4 6000	41.4 6000
ORFS Male	XX.4000			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	
ORFS Female	XX.4414 XX.4444 XX.4494 XX.44H4			63.0 9135		63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625	

The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.

With our thick Zinc coating, Cr-VI free zinc plating process, a high corrosion resistance on all our carbon steel products is achieved, in compliance with EU and USA regulation, as well as with all relevant fitting standards, such as SAE J516 and DIN EN ISO 12151.

Due to exclusion of hexavalent chromium, we assure an environment friendly final product, without compromising the corrosion resistance.

Our zinc-plating when tested according to EN ISO 9227 guarantees minimum 240 hours, before appearance of corrosion.

(The presented values are measured before crimping operation)



Metric Tube (mm) – Light Serie "L"											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	15	18	22	28	35	42
Metric Male	XX.1000	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450
Metric Swivel Female with O-ring	XX.5013 XX.5043 XX.5093	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450

Metric Tube (mm) – Heavy Serie "S"											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	14	16	20	25	30	38
Metric Male	XX.1100	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625
Metric Swivel Female with O-ring	XX.5113 XX.5143 XX.5193	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625

The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.

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(The presented values are measured before crimping operation)

The Correct Method to Fit Female Swivel Ends

To ensure a leakproof seal between swivel female hose ends shown in this catalogue and the appropriate adaptors it is necessary to follow the procedure below which is different from hydraulic tube assembly (This instruction is not valid for ORFS fittings).

Metal-to-metal seal

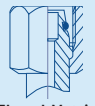
Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Soft seal by O-ring

Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

Ensure that in all cases the hose is correctly aligned before tightening the nut onto the corresponding adaptor.

Spanner Torque Values

Metric swivel female			
 Thread Metric	Tube O.D.	 Nm	
		nominal	min. - max.
M 12x1,5	06L	16	15 - 17
M 14x1,5	08L	16	15 - 17
M 16x1,5	10L	26	25 - 28
M 18x1,5	12L	37	35 - 39
M 22x1,5	15L	47	45 - 50
M 26x1,5	18L	89	85 - 94
M 30x2	22L	116	110 - 121
M 36x2	28L	137	130 - 143
M 45x2	35L	226	215 - 237
M 52x2	42L	347	330 - 363
M 14x1,5	06S	26	25 - 28
M 16x1,5	08S	42	40 - 44
M 18x1,5	10S	53	50 - 55
M 20x1,5	12S	63	60 - 66
M 22x1,2	14S	79	75 - 83
M 24x1,5	16S	84	80 - 88
M 30x2	20S	126	120 - 132
M 36x2	25S	179	170 - 187
M 42x2	30S	263	250 - 275
M 52x2	38S	368	350 - 385

BSP swivel female			
 Thread BSPP	Size	 Nm +10% -0%	
		style A	style B
G1/8	-2	-	10
G1/4	-4	20	20
G3/8	-6	35	35
G1/2	-8	50	60
G5/8	-10	60	70
G3/4	-12	85	115
G1	-16	115	140
G1.1/4	-20	190	210
G1.1/2	-24	240	290
G2	-32	300	400



JIC 37° Swivel Female		
		
Thread UNF	Size	Nm +10% -0%
7/16-20	-4	15
1/2-20	-5	19
9/16-18	-6	24
3/4-16	-8	49
7/8-14	-10	77
1.1/16-12	-12	107
1.5/16-12	-16	147
1.5/8-12	-20	172
1.7/8-12	-24	215
2.1/2-12	-32	332

ORFS Swivel Female		
		
Thread UNF	Size	Nm +10% -0%
9/16-18	-4	25
11/16-18	-6	40
13/16-16	-8	55
1-14	-10	60
1.3/16-12	-12	90
1.5/16-12	-14	115
1.7/16-12	-16	125
1.11/16-12	-20	170
2-12	-24	200

The torque values for other materials are as follows:

- **Brass fittings and adapters**
65% of the torque value for steel.
- **Stainless steel**
use high side of the torque range for steel.
threads to be lubricated for these materials.
- **Dissimilar metals**
use torque value designated for the lower of the two materials.
- **All fittings are dry except as noted above.**

Note

Values given in tables are typical to achieve the recommended assembly methods when fitting material is steel zinc plated. For other materials different values will be applicable.

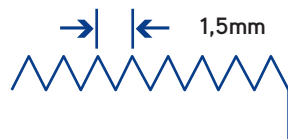
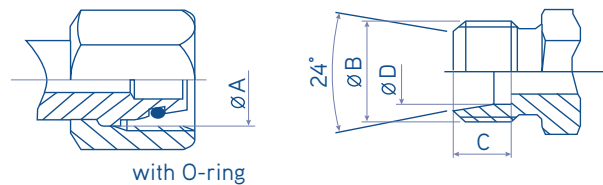
Quick identification of hydraulic connectors

DIN 24° light (L) and heavy series (S) with O-ring

The male has a 24° sealing angle cone seat with straight metric threads.

The female has a 24° convex cone with O-ring and a swivel straight metric threaded nut.

Standard: ISO 12151-2, ISO 8434-1, ISO 8434-4



Thread

Defined by the outside diameter and the pitch
(distance between 2 crests of the thread)

example: M22x1.5 - pitch of 1.5mm.

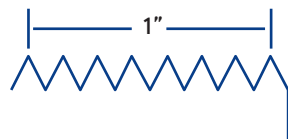
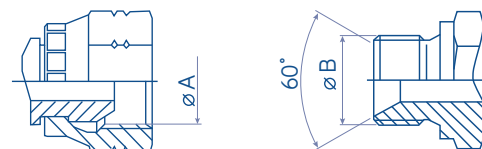
Tube O.D. (mm)	Tube type	Thread metric	ØA (mm)	ØB (mm)	C (mm)	ØD (mm)
6.00	6L	M12X1.5	10.50	12.00	7.00	6.00
6.00	6S	M14X1.5	12.50	14.00	7.00	6.00
8.00	8L	M14x1.5	12.50	14.00	7.00	8.00
8.00	8S	M16x1.5	14.50	16.00	7.00	8.00
10.0	10L	M16x1.5	14.50	16.00	7.00	10.0
10.0	10S	M18x1.5	16.50	18.00	7.50	10.0
12.0	12L	M18x1.5	16.50	18.00	7.00	12.0
12.0	12S	M20x1.5	18.50	20.00	7.50	12.0
14.0	14S	M22x1.5	20.50	22.00	8.00	14.0
15.0	15L	M22x1.5	20.50	22.00	7.00	15.0
16.0	16S	M24x1.5	22.5	24.0	8.5	16.0
18.0	18L	M26x1.5	24.5	26.0	7.50	18.0
20.0	20S	M30x2.0	27.9	30.0	10.50	20.0
22.0	22L	M30x2.0	27.9	30.0	7.50	22.0
25.0	25S	M36x2.0	33.9	36.0	12.00	25.0
28.0	28L	M36x2.0	33.9	36.0	7.50	28.0
30.0	30S	M42x2.0	39.9	42.0	13.50	30.0
35.0	35L	M45x2.0	42.9	45.0	10.50	35.0
38.0	38S	M52x2.0	49.9	52.0	16.00	38.0
42.0	42L	M52x2.0	49.9	52.0	11.00	42.0



British Standard Pipe Parallel (BSPP)

Referred to as Whitworth threads, the BSP thread type fittings seal use metal-to-metal angled surfaces or a combination of metal-to-metal and an O-ring. The angle of the sealing surfaces is 60° for both forms.

Standard: BS 5200 ISO 12151-6



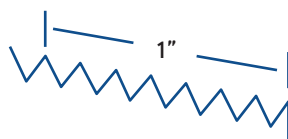
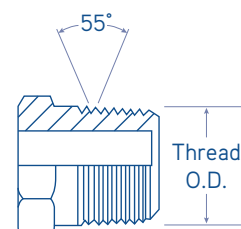
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSP	ØA (mm)	ØB (mm)
6	10	- 2	1/8" -28	8.60	9.70
8	13	- 4	1/4" -19	11.50	13.20
12	17	- 6	3/8" -19	14.90	16.70
15	21	- 8	1/2" -14	18.60	20.90
18	23	- 10	5/8" -14	20.60	22.90
20	27	- 12	3/4" -14	24.10	26.40
26	34	- 16	1" -11	30.3	33.20
33	42	- 20	1.1/4" -11	38.90	41.90
40	49	- 24	1.1/2" -11	44.90	47.80
50	60	- 32	2" -11	56.70	59.60

British Standard Pipe Tapered (BSPT)

Fittings seal through the thread interface mechanism. Care should be taken not to confuse the BSPT fitting with the NPTF male fitting. BSPT has a 55° thread angle.



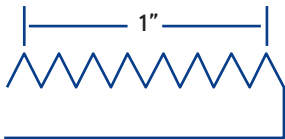
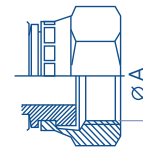
Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	ØA (mm)
5	10	- 2	1/8" -28	9.73
8	13	- 4	1/4" -19	13.16
12	17	- 6	3/8" -19	16.66
15	21	- 8	1/2" -14	20.96
20	27	- 12	3/4" -14	26.44
26	34	- 16	1" -11	33.25
33	42	- 20	1.1/4" -11	41.91
40	49	- 24	1.1/2" -11	47.80
50	60	- 32	2" -11	59.61
50	60	- 32	2" -11	56.70

BSP Flat Seal

These fittings have BSP parallel threads but the sealing surface is flat. The seal is made when the composite seal is compressed against the female flat face.



Thread

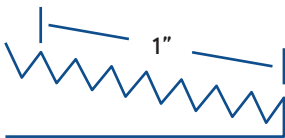
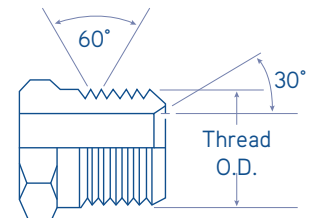
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

Tube I.D. (mm)	Tube O.D. (mm)	Size	Thread BSPT	ØA (mm)
6	10	- 2	1/8" -28	8.60
8	13	- 4	1/4" -19	11.50
12	17	- 6	3/8" -19	14.90
15	21	- 8	1/2" -14	18.60
18	23	- 12	5/8" -14	20.60
20	27	- 16	3/4" -14	24.10
26	34	- 20	1" -11	30.30
33	42	- 20	1 1/4" -11	38.90
40	49	- 24	1 1/2" -11	44.90
50	60	- 32	2" -11	56.70

Dry Seal American Standard Taper Pipe Thread (NPTF)

This type of fitting uses the thread interface to seal and as such has a tapered thread that deforms and forms the seal. They have 30° sealing angle surfaces, forming a 60° inverted (concave) seat.

Standard: SAE J476 / ANSI/ASME B1.20.1



Thread

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

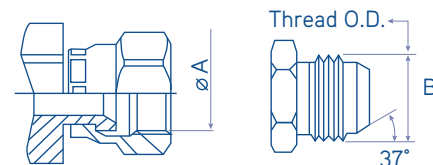
Size	Thread NPTF	ØA (mm)
- 2	1/8" -27	10.24
- 4	1/4" -18	13.61
- 6	3/8" -18	17.05
- 8	1/2" -14	21.22
- 12	3/4" -14	26.56
- 16	1" -11.5	33.22
- 20	1 1/4" -11.5	41.98
- 24	1 1/2" -11.5	48.05
- 32	2" -11.5	60.09



SAE JIC 37°

Commonly referred to as JIC fittings, these metal-to-metal sealing type fittings have a 37° flare (sealing surface angle) and straight United National Fine Threads (UNF). The original design specification for the fittings comes from the Society of Automotive Engineers (SAE).

Standard: ISO 12151-5, ISO 8434-2, SAE J516



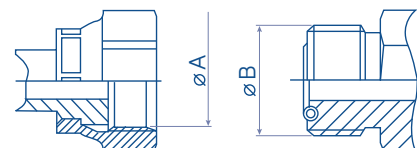
Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	7/16" -20	10.00	11.10
5/16"	- 5	1/2" -20	11.60	12.70
3/8"	- 6	9/16" -18	13.00	14.30
1/2"	- 8	3/4" -16	17.60	19.10
5/8"	- 10	7/8" -14	20.50	22.20
3/4"	- 12	1 1/16" -12	24.60	27.00
7/8"	- 14	1 3/16" -12	28.30	30.10
1"	- 16	1 5/8" -12	31.30	33.30
1 1/4"	- 20	1 5/8" -12	39.20	41.30
1 1/2"	- 24	1 7/8" -12	45.60	47.60
2"	- 32	2 1/2" -12	61.50	63.50

O-Ring Face Seal (ORFS)

This fitting type has a high level of sealing and good vibration resistance.

The fittings use the O-ring compression mechanism to seal. The female fittings have flat faces and straight threaded UNF swivel nuts. The male fittings have the O-ring in a groove in the flat face.

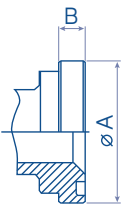
Standard: ISO 12151-1, ISO 8434-3, SAE J516



Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	9/16" -18	13.00	14.20
3/8"	- 6	1 1/16" -16	15.90	17.50
1/2"	- 8	1 3/16" -16	19.10	20.60
5/8"	- 10	1" -14	23.80	25.40
3/4"	- 12	1 3/16" -12	28.20	30.10
1"	- 16	1 7/16" -12	34.15	36.50
1 1/4"	- 20	1 11/16" -12	40.50	42.90
1 1/2"	- 24	2" -12	48.80	50.80

Flange 3000 psi and 6000 psi

The sealing mechanism is through compression of the Oring in the face of the flange head against the surface of the port connection. The flange fittings are generally separated into two pressure classes referred to as 21.0 MPa/ 3000 psi (SFL) or 42.0 MPa/ 6000 psi (SFS). In addition to these flanges, customer-specific Komatsu and CATERPILLAR flanges can also be found in the market. Standard: ISO 6162-1,ISO 6162-2

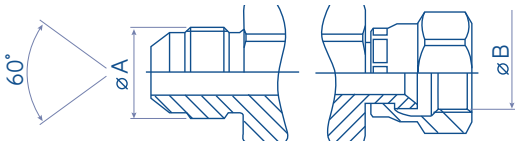


Flange (inch)	Size	3000 psi			6000 psi			SuperCat		
		ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)
1/2"	- 8	30.18	6.73	18.64x3.53	31.75	7.75	18.64x3.53	31.75	14.22	18.64x3.53
5/8"*	- 10	34.25	6.00	21.70x3.53						
3/4"	- 12	38.10	6.73	24.99x3.53	41.28	8.76	24.99x3.53	41.28	14.22	24.99x3.53
1"	- 16	44.45	8.00	32.92x3.53	47.63	9.53	32.92x3.53	47.63	14.22	32.92x3.53
1.1/4"	- 20	50.80	8.00	37.69x3.53	53.98	10.29	37.69x3.53	53.98	14.22	37.69x3.53
1.1/2"	- 24	60.33	8.00	47.22x3.53	63.50	12.57	47.22x3.53	63.50	14.22	47.22x3.53
2"	- 32	71.42	9.53	56.74x3.53	79.38	12.57	56.74x3.53	79.38	14.22	56.74x3.53
2.1/2"	- 40	84.12	9.53	69.44x3.53						
3"	- 48	101.60	9.53	85.32x3.53						

* Although not in the SAE or the ISO standard the size -10 (5/8) flange head is gaining popularity. This flange is often found on Komatsu equipment or hydrostatic drives in agricultural machines.

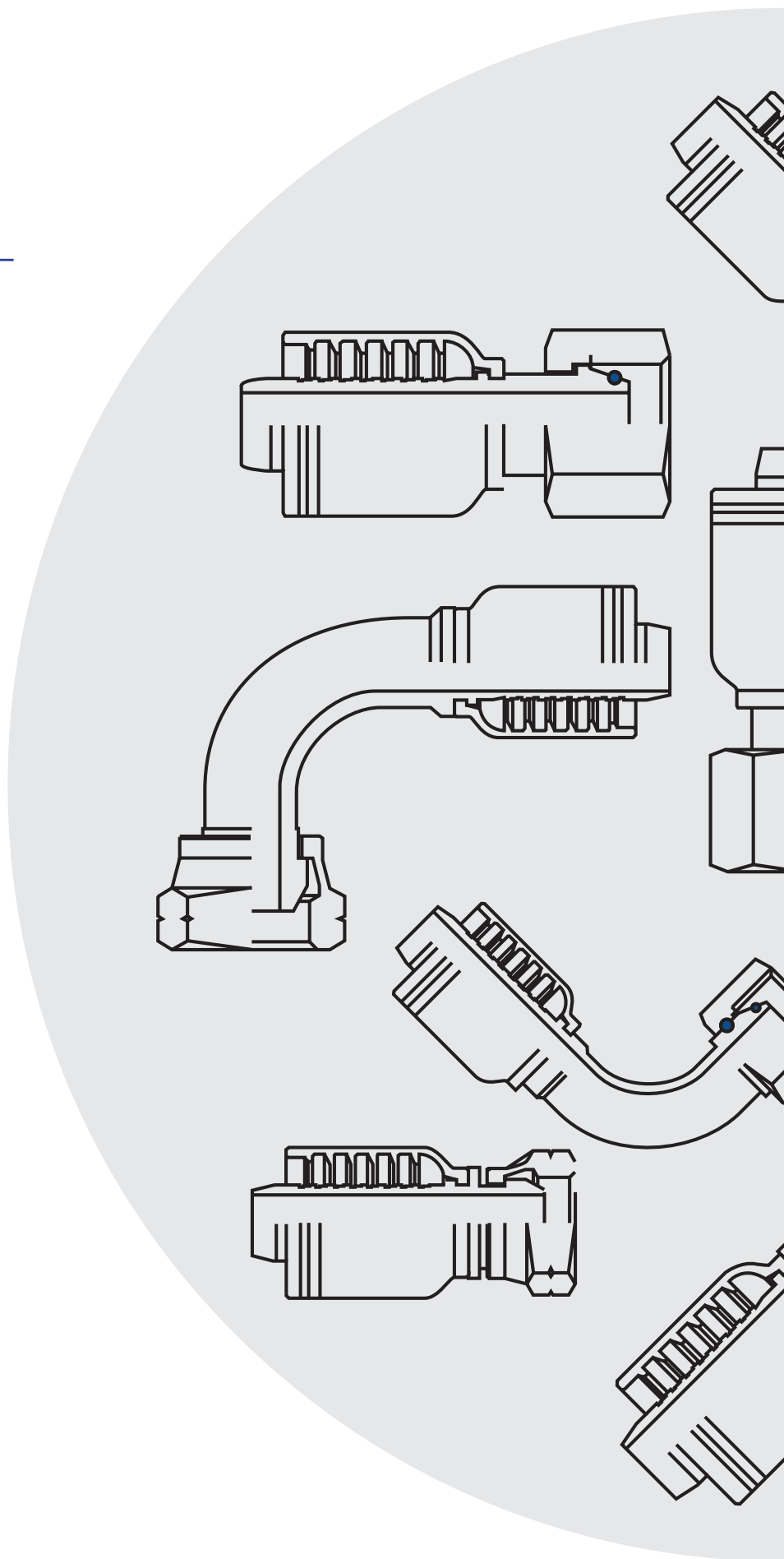
Japanese Industrial Standard (JIS)

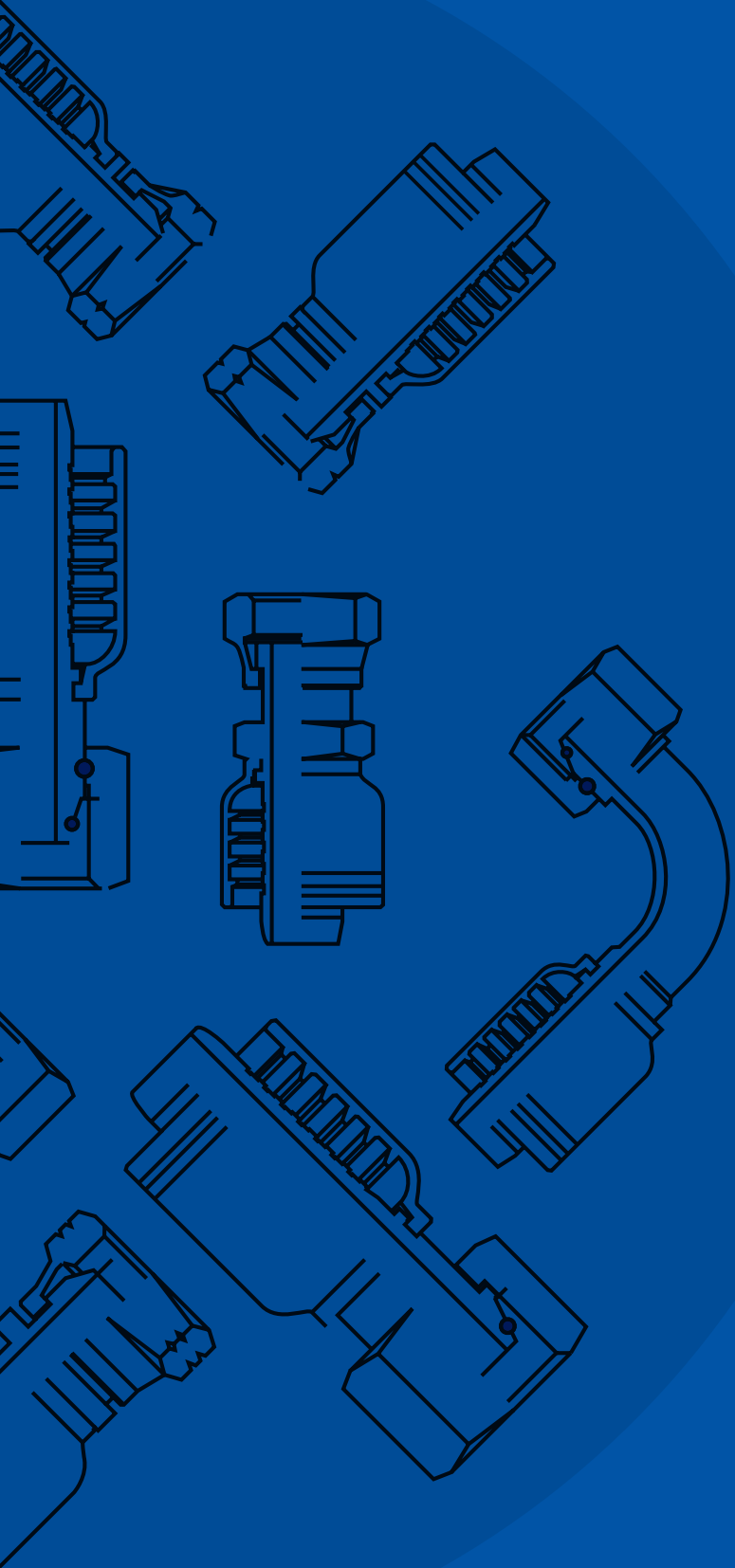
The Japanese Industrial Standard (JIS) uses a 30° sealing angle seat and either British Standard Pipe Parallel or metric threads.

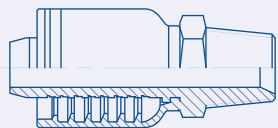


Thread metric	ØA (mm)	ØB (mm)	Thread BSP	ØA (mm)	ØB (mm)
M14X1.5	12.50	14.00	1/4" -19	11.50	13.20
M18X1.5	16.50	18.00	3/8" -19	14.90	16.70
M16X1.5	14.50	16.00	1/2" -14	18.60	20.90
M18X1.5	16.50	18.00	3/4" -14	24.10	26.40
M22X1.5	20.50	22.00	1" -11	30.30	33.20
M24X1.5	22.50	24.00			
M30X1.5	28.50	30.00			
M33X2.0	31.00	33.00			
M42X2.0	40.00	42.00			

BF21



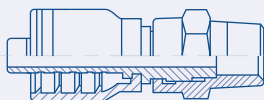




Male NPTF Pipe Rigid - MP

BF21.0400.

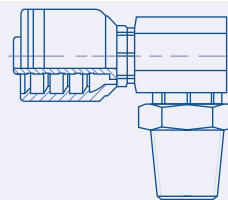
pag. 19



Male NPTF Swivel - MPX

BF21.0410.

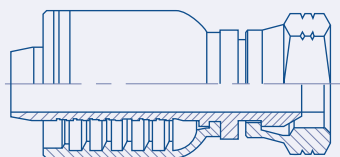
pag. 20



Male NPTF Swivel 90° Elbow - MPX90

BF21.0490.

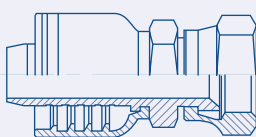
pag. 21



Female NPSM Pipe Swivel - FPX

BF21.3010.

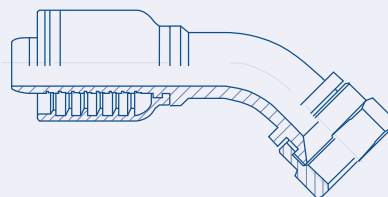
pag. 22



Female JIC 37° Swivel - FJ

BF21.4H12.

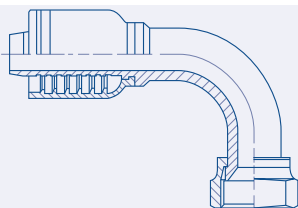
pag. 23



Female JIC 37° Swivel 45° Elbow - FJ45

BF21.4042.

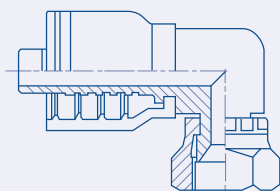
pag. 24



Female JIC 37° Swivel 90° Elbow - FJ90

BF21.4092.

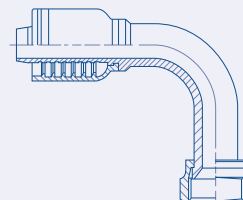
pag. 25



Female JIC 37° Swivel 90° Short Elbow - FJ90S

BF21.4082.

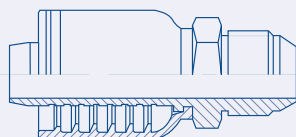
pag. 26



Female JIC 37° Swivel 90° Long Elbow - FJ90L

BF21.4092L.

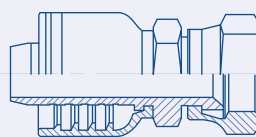
pag. 27



Male JIC 37° Rigid - MJ

BF21.2000.

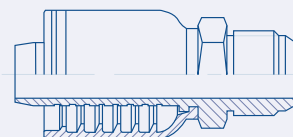
pag. 28



Female SAE 45° Swivel - FX

BF21.SH12.

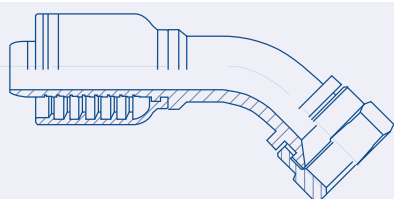
pag. 29



Male SAE 45° Rigid - MX

BF21.2S00.

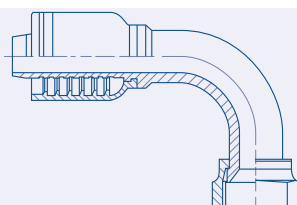
pag. 29



Female SAE 45° Swivel 45° Elbow - FX45

BF21.4S42.

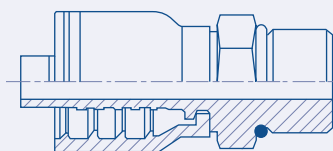
pag. 30



Female SAE 45° Swivel 90° Elbow - FX90

BF21.4S92.

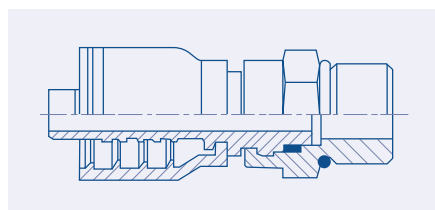
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SAE Straight O-ring Boss Male - RA

BF21.2010.

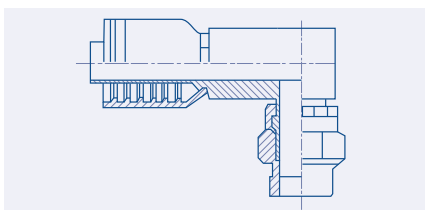
pag. 31



**SAE Straight Swivel O-ring
Boss Male - RAX**

BF21.2012.

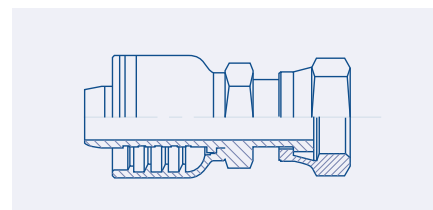
pag. 32



**SAE 90° Elbow Swivel O-ring
Boss Male - RAX90**

BF21.2092.

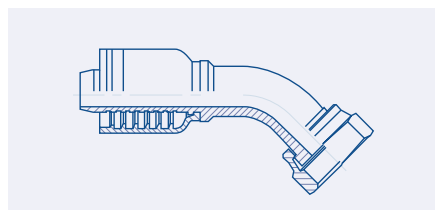
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Female ORFS Swivel - OFT

BF21.44H4.

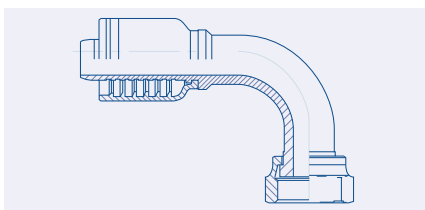
pag. 34



**Female ORFS Swivel 45°
Elbow- OFT45**

BF21.4444.

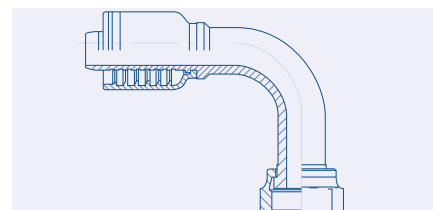
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**Female ORFS Swivel 90°
Elbow - OFT90**

BF21.4494.

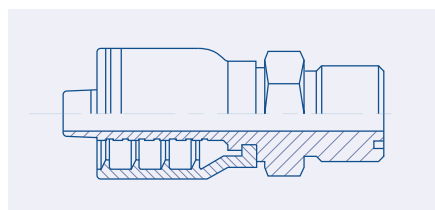
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**Female ORFS Swivel 90°
Long Elbow - OFT90**

BF21.4494L.

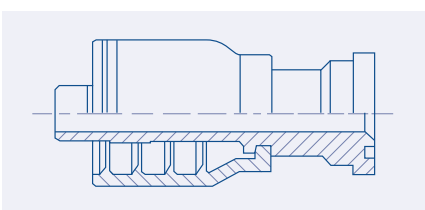
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Male ORFS - OFTM

BF21.4000.

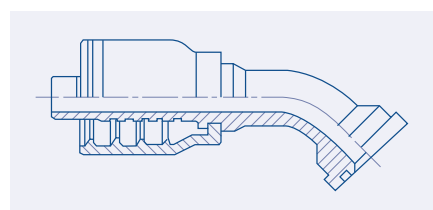
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**Straight SAE 3000 PSI
Code 61 Flange - PA**

BF21.7013.

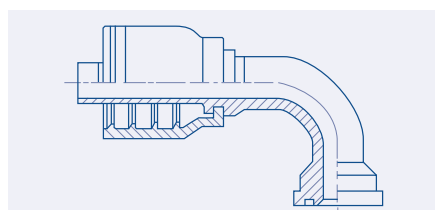
pag. 39



**45° Elbow SAE 3000 PSI
Code 61 Flange - PA45**

BF21.7043.

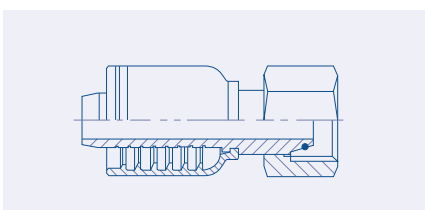
pag. 40



**90° Elbow SAE 3000 PSI
Code 61 Flange - PA90**

BF21.7093.

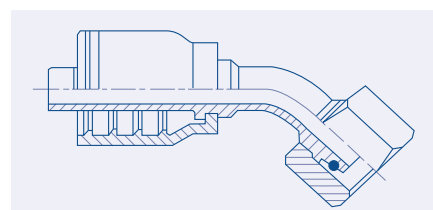
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**Light 24° Metric Female
- DLF**

BF21.5013.

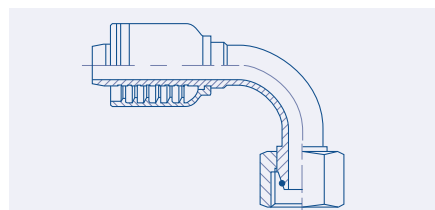
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**Light 24° Metric 45° Elbow
Female - DLF45**

BF21.5043.

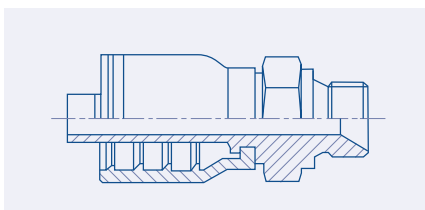
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**Light 24° Metric 90° Elbow
Female - DLF90**

BF21.5093.

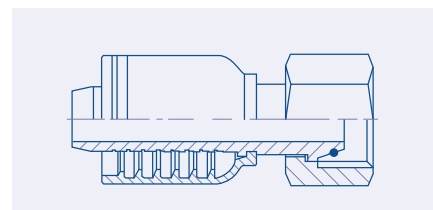
pag. 44



Light 24° Metric Male - DLM

BF21.1000.

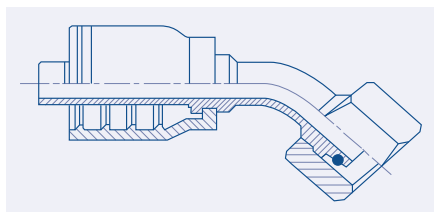
pag. 45



**Heavy 24° Metric Female
- DHF**

BF21.5113.

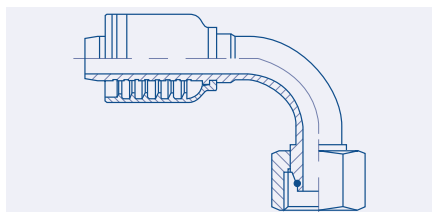
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**Heavy 24° Metric 45° Elbow
Female - DHF45**

BF21.5143.

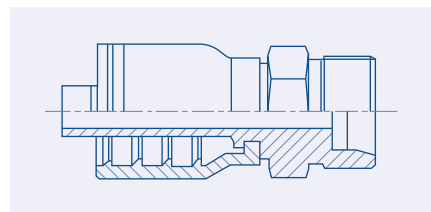
pag. 47



**Heavy 24° Metric 90° Elbow
Female - DHF90**

BF21.5193.

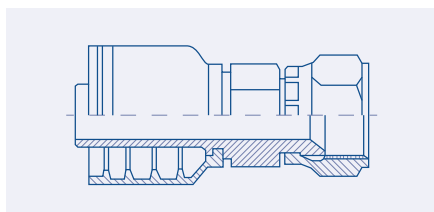
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Heavy 24° Metric Male - DHM

BF21.1100.

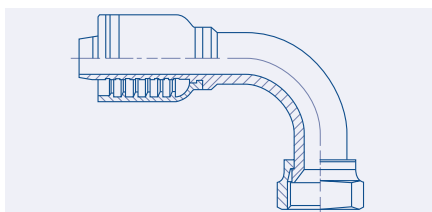
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**JIS 30° Female Swivel
- FX-KOMA**

BF21.5911.

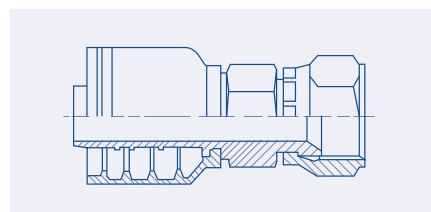
pag. 50



**Female JIS 30° Swivel 90°
Elbow - FX-KOMA90**

BF21.5991.

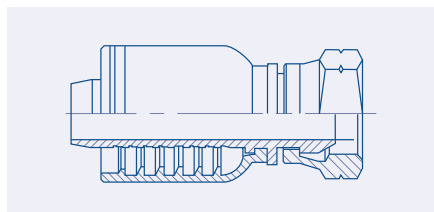
pag. 51



JIS 30° Female Swivel - JIS

BF21.3712.

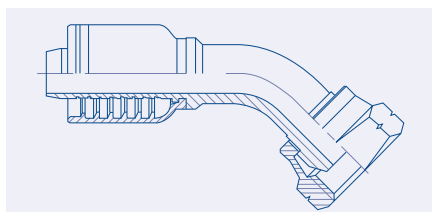
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**BSP 60° Swivel Female
- BSPXF**

BF21.3012.

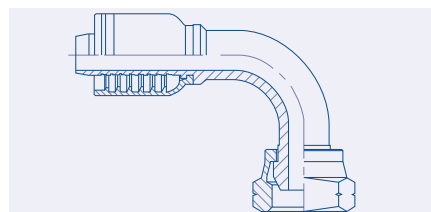
pag. 53



**BSP 60° Swivel 45° Elbow
Female - BSPXF45**

BF21.3042.

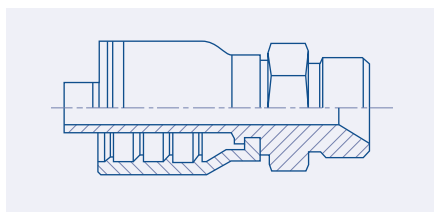
pag. 54



**BSP 60° Swivel 90° Elbow
Female - BSPXF90**

BF21.3092.

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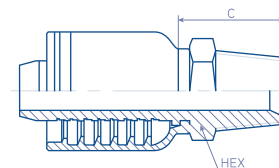
BSP 60° Male - BSPM

BF21.0100.

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Male NPTF Pipe Rigid - MP



BF21.0400.

SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-02MP	BF21.0400.0402	04	1/4"	1/8"-27	24,2	12
BF2104-04MP	BF21.0400.0404	04	1/4"	1/4"-18	29,7	14
BF2104-06MP	BF21.0400.0406	04	1/4"	3/8"-18	30,7	17
BF2104-08MP	BF21.0400.0408	04	1/4"	1/2"-14	35,7	22
BF2106-04MP	BF21.0400.0604	06	3/8"	1/4"-18	27,2	17
BF2106-06MP	BF21.0400.0606	06	3/8"	3/8"-18	28,7	19
BF2106-08MP	BF21.0400.0608	06	3/8"	1/2"-14	33,7	22
BF2108-04MP	BF21.0400.0804	08	1/2"	1/4"-18	31,0	19
BF2108-06MP	BF21.0400.0806	08	1/2"	3/8"-18	31,5	19
BF2108-08MP	BF21.0400.0808	08	1/2"	1/2"-14	35,5	22
BF2108-12MP	BF21.0400.0812	08	1/2"	3/4"-18	38,0	27
BF2110-08MP	BF21.0400.1008	10	5/8"	1/2"-14	37,5	22
BF2110-12MP	BF21.0400.1012	10	5/8"	3/4"-14	40,0	27
BF2112-08MP	BF21.0400.1208	12	3/4"	1/2"-14	38,8	27
BF2112-12MP	BF21.0400.1212	12	3/4"	3/4"-14	39,3	27
BF2112-16MP	BF21.0400.1216	12	3/4"	1"-11.5	45,8	36
BF2116-12MP	BF21.0400.1612	16	1"	3/4"-14	40,7	32
BF2116-16MP	BF21.0400.1616	16	1"	1"-11.5	46,2	36

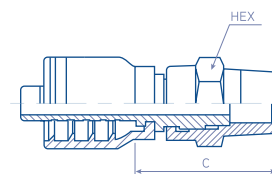
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Male NPTF Swivel - MPX



BF21.0410.

SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-02MPX	BF21.0410.0402	04	1/4"	1/8"-27	37,3	17
BF2104-04MPX	BF21.0410.0404	04	1/4"	1/4"-18	37,5	17
BF2104-06MPX	BF21.0410.0406	04	1/4"	3/8"-18	35,7	19
BF2106-04MPX	BF21.0410.0604	06	3/8"	1/4"-18	35,5	17
BF2106-06MPX	BF21.0410.0606	06	3/8"	3/8"-18	35,2	19
BF2106-08MPX	BF21.0410.0608	06	3/8"	1/2"-14	42,0	22
BF2108-06MPX	BF21.0410.0806	08	1/2"	3/8"-18	36,0	19
BF2108-08MPX	BF21.0410.0808	08	1/2"	1/2"-14	42,2	22
BF2108-12MPX	BF21.0410.0812	08	1/2"	3/4"-14	41,2	32
BF2110-08MPX	BF21.0410.1008	12	3/4"	1/2"-14	42,2	22
BF2110-12MPX	BF21.0410.1012	10	5/8"	3/4"-14	42,0	32
BF2112-08MPX	BF21.0410.1208	12	3/4"	1/2"-14	42,2	22
BF2112-12MPX	BF21.0410.1212	12	3/4"	3/4"-14	41,2	32
BF2116-16MPX	BF21.0410.1616	16	1"	1"-11.5	47,5	38

MATERIAL: Carbon Steel

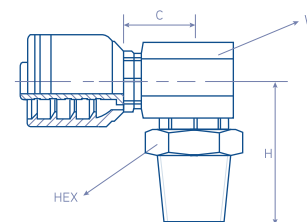
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Male NPTF Swivel 90° Elbow - MPX90



BF21.0490.

SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions			
		dash	inch		C - Cut Off	H	W	HEX
BF2104-02MPX90	BF21.0490.0402	04	1/4"	1/8"-27	22,7	40,1	17	17
BF2104-04MPX90	BF21.0490.0404	04	1/4"	1/4"-18	22,7	40,1	17	17
BF2104-06MPX90	BF21.0490.0406	04	1/4"	3/8"-18	22,7	39,3	17	19
BF2106-04MPX90	BF21.0490.0604	06	3/8"	1/4"-18	21,0	40,9	17	17
BF2106-06MPX90	BF21.0490.0606	06	3/8"	3/8"-18	21,0	38,5	17	19
BF2106-08MPX90	BF21.0490.0608	06	3/8"	1/2"-14	23,5	40,1	24	22
BF2108-06MPX90	BF21.0490.0806	08	1/2"	3/8"-18	26,5	41,0	22	19
BF2108-08MPX90	BF21.0490.0808	08	1/2"	1/2"-14	26,5	47,0	22	22
BF2112-12MPX90	BF21.0490.1212	12	3/4"	3/4"-14	28,8	49,7	27	32
BF2116-16MPX90	BF21.0490.1616	16	1"	1"-11.5	42,7	60,0	32	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

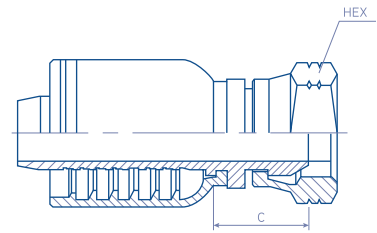
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female NPSM Pipe Swivel - FPX

BF21.3010.

SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-02FPX	BF21.3010.0402	04	1/4"	1/8"-18	23,7	14
BF2104-04FPX	BF21.3010.0404	04	1/4"	1/4"-18	26,7	19
BF2104-06FPX	BF21.3010.0406	04	1/4"	3/8"-18	29,1	22
BF2106-06FPX	BF21.3010.0606	06	3/8"	3/8"-18	27,2	22
BF2106-08FPX	BF21.3010.0608	06	3/8"	1/2"-14	29,0	27
BF2108-08FPX	BF21.3010.0808	08	1/2"	1/2"-14	30,7	27
BF2112-12FPX	BF21.3010.1212	12	3/4"	3/4"-18	35,3	32
BF2116-16FPX	BF21.3010.1616	16	1"	1"-11.5	38,0	41

MATERIAL: Carbon Steel

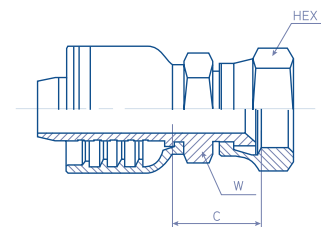
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female JIC 37° Swivel - FJ



BF21.4H12.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BF2104-04FJ	BF21.4H12.0404	04	1/4"	7/16"-20	22,7	14	14
BF2104-05FJ	BF21.4H12.0405	04	1/4"	1/2"-20	22,7	14	16
BF2104-06FJ	BF21.4H12.0406	04	3/8"	9/16"-18	24,7	14	19
BF2106-04FJ	BF21.4H12.0604	06	3/8"	7/16"-20	20,2	17	14
BF2106-06FJ	BF21.4H12.0606	06	3/8"	9/16"-18	20,7	17	19
BF2106-08FJ	BF21.4H12.0608	06	3/8"	3/4"-16	26,0	19	22
BF2106-10FJ	BF21.4H12.0610	06	3/8"	7/8"-14	28,5	22	27
BF2108-06FJ	BF21.4H12.0806	08	1/2"	9/16"-18	25,0	22	19
BF2108-08FJ	BF21.4H12.0808	08	1/2"	3/4"-16	27,0	22	22
BF2108-10FJ	BF21.4H12.0810	08	1/2"	7/8"-14	30,0	22	27
BF2108-12FJ	BF21.4H12.0812	08	1/2"	1.1/16"-12	34,0	25	32
BF2110-08FJ	BF21.4H12.1008	10	5/8"	3/4"-16	28,5	22	22
BF2110-10FJ	BF21.4H12.1010	10	5/8"	7/8"-14	30,5	22	27
BF2110-12FJ	BF21.4H12.1012	10	5/8"	1.1/16"-12	35,5	27	32
BF2112-10FJ	BF21.4H12.1210	12	3/4"	7/8"-14	33,3	27	27
BF2112-12FJ	BF21.4H12.1212	12	3/4"	1.1/16"-12	34,8	27	32
BF2112-14FJ	BF21.4H12.1214	12	3/4"	1.3/16"-12	36,3	32	38
BF2112-16FJ	BF21.4H12.1216	12	3/4"	1.5/16"-12	36,3	32	38
BF2116-12FJ	BF21.4H12.1612	16	1"	1.3/16"-12	34,2	32	32
BF2116-16FJ	BF21.4H12.1616	16	1"	1.5/16"-12	35,7	32	38

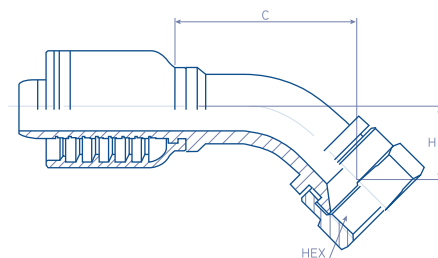
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female JIC 37° Swivel 45° Elbow - FJ45



BF21.4042.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-04FJ45	BF21.4042.0404	04	1/4"	7/16"-20	35,0	10,5	14
BF2104-05FJ45	BF21.4042.0405	04	1/4"	1/2"-20	35,0	10,5	16
BF2104-06FJ45	BF21.4042.0406	04	3/8"	9/16"-18	35,0	10,5	19
BF2106-06FJ45	BF21.4042.0606	06	3/8"	9/16"-18	38,5	14,5	19
BF2106-08FJ45	BF21.4042.0608	06	3/8"	3/4"-16	41,0	16,0	22
BF2106-10FJ45	BF21.4042.0610	06	3/8"	7/8"-14	40,0	16,5	27
BF2108-08FJ45	BF21.4042.0808	08	1/2"	3/4"-16	44,5	18,0	22
BF2108-10FJ45	BF21.4042.0810	08	1/2"	7/8"-14	46,5	21,3	27
BF2108-12FJ45	BF21.4042.0812	08	1/2"	1 1/16"-12	48,0	23,0	32
BF2110-10FJ45	BF21.4042.1010	10	5/8"	7/8"-14	52,0	21,3	27
BF2110-12FJ45	BF21.4042.1012	10	5/8"	1 1/16"-12	64,0	27,0	32
BF2112-12FJ45	BF21.4042.1212	12	3/4"	1 1/16"-12	70,0	27,0	32
BF2112-16FJ45	BF21.4042.1216	12	3/4"	1 5/16"-12	72,0	30,0	38
BF2116-16FJ45	BF21.4042.1616	16	1"	1 5/16"-12	77,0	32,0	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

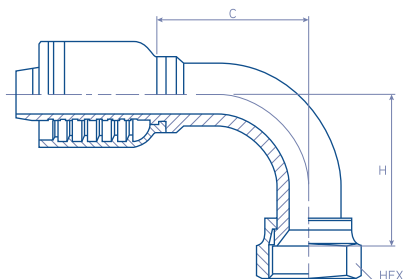
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female JIC 37° Swivel 90° Elbow - FJ90

BF21.4092.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-04FJ90	BF21.4092.0404	04	1/4"	7/16"-20	26,0	24,5	14
BF2104-05FJ90	BF21.4092.0405	04	1/4"	1/2"-20	29,0	25,0	16
BF2104-06FJ90	BF21.4092.0406	04	3/8"	9/16"-18	29,0	25,0	19
BF2106-06FJ90	BF21.4092.0606	06	3/8"	9/16"-18	34,0	31,5	19
BF2106-08FJ90	BF21.4092.0608	06	3/8"	3/4"-16	35,0	30,0	22
BF2106-10FJ90	BF21.4092.0610	06	3/8"	7/8"-14	37,1	38,0	27
BF2108-08FJ90	BF21.4092.0808	08	1/2"	3/4"-16	42,5	40,0	22
BF2108-10FJ90	BF21.4092.0810	08	1/2"	7/8"-14	37,0	40,5	27
BF2108-12FJ90	BF21.4092.0812	08	1/2"	1 1/16"-12	47,0	50,0	32
BF2110-10FJ90	BF21.4092.1010	10	5/8"	7/8"-14	50,0	47,5	27
BF2110-12FJ90	BF21.4092.1012	10	5/8"	1 1/16"-12	54,0	55,0	32
BF2112-12FJ90	BF21.4092.1212	12	3/4"	1 1/16"-12	55,5	55,0	32
BF2112-16FJ90	BF21.4092.1216	12	3/4"	1 5/16"-12	55,5	65,0	38
BF2116-16FJ90	BF21.4092.1616	16	1"	1 5/16"-12	72,0	71,0	38

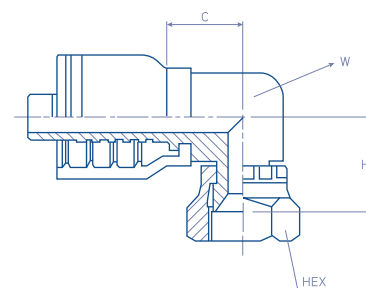
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female JIC 37° Swivel 90° Short Elbow - FJ90S



BF21.4082.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions			
		dash	inch		C - Cut Off	H	W	HEX
BF2104-04FJ90S	BF21.4082.0404	04	1/4"	7/16"-20	18,5	19,6	11	14
BF2104-05FJ90S	BF21.4082.0405	04	1/4"	1/2"-20	18,5	21,5	14	16
BF2104-06FJ90S	BF21.4082.0406	04	3/8"	9/16"-18	18,5	21,8	14	19
BF2106-06FJ90S	BF21.4082.0606	06	3/8"	9/16"-18	21,5	25,5	16	19
BF2106-08FJ90S	BF21.4082.0608	06	3/8"	3/4"-16	21,5	26,5	19	22
BF2108-08FJ90S	BF21.4082.0808	08	1/2"	3/4"-16	25,5	29,5	19	22
BF2108-10FJ90S	BF21.4082.0810	08	1/2"	7/8"-14	25,5	28,0	22	27
BF2110-10FJ90S	BF21.4082.1010	10	5/8"	7/8"-14	25,5	28,0	22	27
BF2112-12FJ90S	BF21.4082.1212	12	3/4"	1.1/16"-12	30,8	28,5	30,7	28,5
BF2112-16FJ90S	BF21.4082.1216	12	3/4"	1.5/16"-12	30,0	33,5	33	38
BF2116-16FJ90S	BF21.4082.1616	16	1"	1.5/16"-12	33,5	30,5	33,5	30,5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

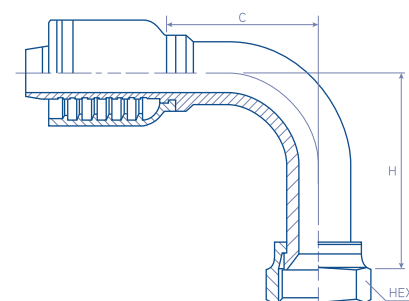
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female JIC 37° Swivel 90° Long Elbow - FJ90L

BF21.4092L.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BF2104-04FJ90L	BF21.4092.0404L	04	1/4"	7/16"-20	31,9	46,0	14
BF2104-05FJ90L	BF21.4092.0405L	04	1/4"	1/2"-20	32,0	46,0	16
BF2104-06FJ90L	BF21.4092.0406L	04	3/8"	9/16"-18	31,7	46,0	19
BF2106-06FJ90L	BF21.4092.0606L	06	3/8"	9/16"-18	33,0	54,0	19
BF2106-08FJ90L	BF21.4092.0608L	06	3/8"	3/4"-16	38,0	64,0	22
BF2108-08FJ90L	BF21.4092.0808L	08	1/2"	3/4"-16	44,0	64,0	22
BF2108-10FJ90L	BF21.4092.0810L	08	1/2"	7/8"-14	46,0	65,0	27
BF2110-10FJ90L	BF21.4092.1010L	10	5/8"	7/8"-14	55,0	70,0	27
BF2112-12FJ90L	BF21.4092.1212L	12	3/4"	1.1/16"-12	56,0	96,0	32
BF2112-16FJ90L	BF21.4092.1216L	12	3/4"	1.5/16"-12	60,0	100,0	38
BF2116-16FJ90L	BF21.4092.1616L	16	1"	1.5/16"-12	76,0	114,0	38

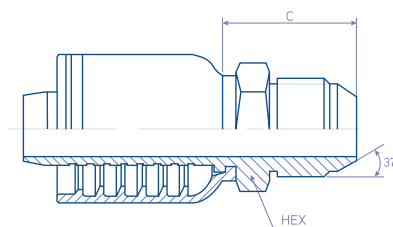
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Male JIC 37° Rigid - MJ



BF21.2000.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-04MJ	BF21.2000.0404	04	1/4"	7/16"-20	27,7	14
BF2104-05MJ	BF21.2000.0405	04	1/4"	1/2"-20	28,2	14
BF2104-06MJ	BF21.2000.0406	04	1/4"	9/16"-20	28,2	17
BF2106-06MJ	BF21.2000.0606	06	3/8"	9/16"-18	27,0	17
BF2106-08MJ	BF21.2000.0608	06	3/8"	3/4"-16	31,2	19
BF2106-10MJ	BF21.2000.0610	06	3/8"	7/8"-14	48,0	24
BF2108-06MJ	BF21.2000.0806	08	1/2"	9/16"-18	29,6	19
BF2108-08MJ	BF21.2000.0808	08	1/2"	3/4"-16	32,2	22
BF2108-10MJ	BF21.2000.0810	08	1/2"	7/8"-14	37,3	24
BF2108-12MJ	BF21.2000.0812	08	1/2"	1.1/16"-12	41,4	27
BF2110-08MJ	BF21.2000.1008	10	5/8"	3/4"-16	38,0	24
BF2110-10MJ	BF21.2000.1010	10	5/8"	7/8"-14	39,3	24
BF2110-12MJ	BF21.2000.1012	10	5/8"	1.1/16"-12	42,0	27
BF2112-10MJ	BF21.2000.1210	12	3/4"	7/8"-14	40,0	27
BF2112-12MJ	BF21.2000.1212	12	3/4"	1.1/16"-12	41,7	27
BF2112-14MJ	BF21.2000.1214	12	3/4"	1.3/16"-12	46,5	32
BF2112-16MJ	BF21.2000.1216	12	3/4"	1.5/16"-12	47,1	36
BF2116-16MJ	BF21.2000.1616	16	1"	1.5/16"-12	44,5	36

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

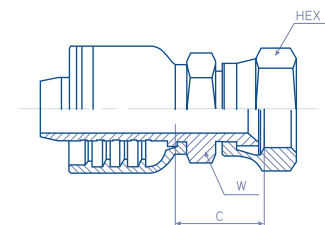
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female SAE 45° Swivel - FX

BF21.SH12.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	W mm	HEX mm
BF2106-06FX	BF21.SH12.0606	-6	3/8"	5/8" - 18 UNF	26.3	19	22
BF2112-12FX	BF21.SH12.1212	-12	3/4"	1.1/16" - 14 UNS	33.7	27	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

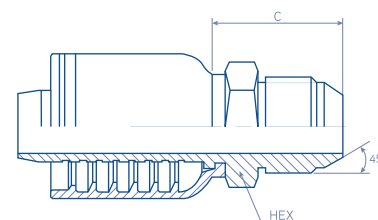
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Male SAE 45° Rigid - MX

BF21.2S00.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	HEX mm
BF2106-06MX	BF21.2S00.0606	-6	3/8"	5/8" - 18 UNF	27.1	22
BF2112-12MX	BF21.2S00.1212	-12	3/4"	1.1/16" - 14 UNS	40.6	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

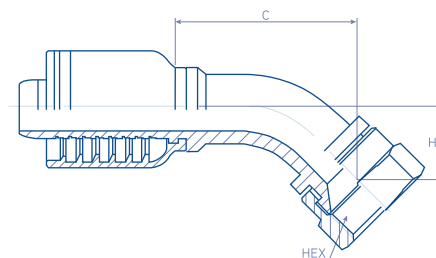
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female SAE 45° Swivel 45° Elbow - FX45

BF21.4S42.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
BF2106-06FX45	BF21.4S42.0606	-6	3/8"	5/8" - 18 UNF	34.0	15.5	22
BF2112-12FX45	BF21.4S42.1212	-12	3/4"	1.1/16" - 14 UNS	55.5	27.0	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

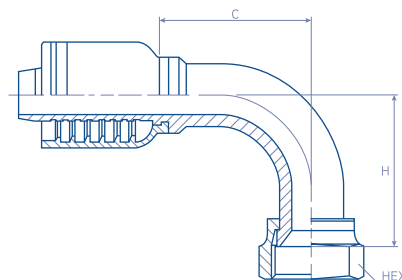
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female SAE 45° Swivel 90° Elbow – FX90

BF21.4S92.

SAE J512 / SAE J513



REFERENCE	#	hose dash	hose Ø inch	thread	C cut off mm	H mm	HEX mm
BF2106-06FX90	BF21.4S92.0606	-6	3/8"	5/8" - 18 UNF	34.0	30	22
BF2112-12FX90	BF21.4S92.1212	-12	3/4"	1.1/16" - 14 UNS	55.5	55	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

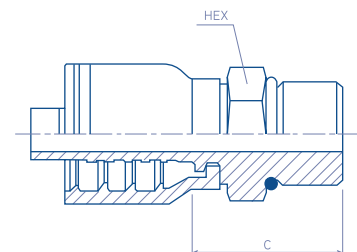
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



SAE Straight O-ring Boss Male - RA



BF21.2010.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-04RA	BF21.2010.0404	04	1/4"	7/16"-20	23,4	14
BF2106-06RA	BF21.2010.0606	06	3/8"	9/16"-18	23	17
BF2106-08RA	BF21.2010.0608	06	3/8"	3/4"-16	26,2	22
BF2108-08RA	BF21.2010.0808	08	1/2"	3/4"-16	27,9	22
BF2108-10RA	BF21.2010.0810	08	1/2"	7/8"-14	31,9	27
BF2108-12RA	BF21.2010.0812	08	1/2"	1.1/16"-12	36	32
BF2110-10RA	BF21.2010.1010	10	5/8"	7/8"-14	33,2	27
BF2110-12RA	BF21.2010.1012	10	5/8"	1.1/16"-12	37,4	32
BF2112-12RA	BF21.2010.1212	12	3/4"	1.1/16"-12	36,5	32
BF2112-16RA	BF21.2010.1216	16	1"	1.5/16"-12	39	41
BF2116-16RA	BF21.2010.1616	16	1"	1.5/16"-12	35,7	38

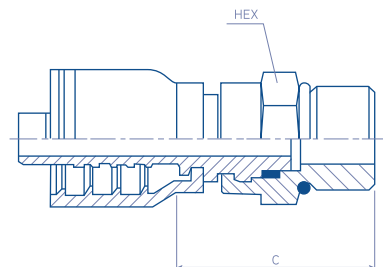
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

SAE Straight Swivel O-ring Boss Male - RAX



BF21.2012.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-04RAX	BF21.2012.0404	04	1/4"	7/16"-20	39,7	19
BF2104-06RAX	BF21.2012.0406	04	1/4"	9/16"-18	40,2	19
BF2106-06RAX	BF21.2012.0606	06	3/8"	9/16"-18	38,2	19
BF2106-08RAX	BF21.2012.0608	06	3/8"	3/4"-16	42,7	22
BF2108-08RAX	BF21.2012.0808	08	1/2"	3/4"-16	44,5	22
BF2108-10RAX	BF21.2012.0810	08	1/2"	7/8"-14	38,0	27
BF2108-12RAX	BF21.2012.0812	08	1/2"	1.1/16"-12	47,3	32
BF2110-10RAX	BF21.2012.1010	10	5/8"	7/8"-14	39,5	27
BF2112-12RAX	BF21.2012.1212	12	3/4"	1.1/16"-12	48,1	32
BF2112-16RAX	BF21.2012.1216	12	3/4"	1.5/16"-12	53,1	41
BF2116-16RAX	BF21.2012.1616	16	1"	1.5/16"-12	53,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

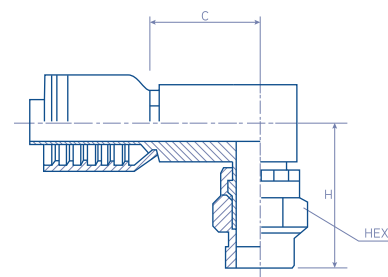
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



SAE 90° Elbow Swivel O-ring Boss Male - RAX90

BF21.2092.

ISO 12151-5 / ISO 8434-2 / SAE J512 / SAE J513



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2106-06RA90X	BF21.2092.0606	06	3/8"	9/16"-18	38,0	50,0	43,3
BF2106-08RA90X	BF21.2092.0608	06	3/8"	3/4"-16	40,0	47,0	45,0
BF2108-08RA90X	BF21.2092.0808	08	1/2"	3/4"-16	43,0	47,0	45,0
BF2108-10RA90X	BF21.2092.0810	08	1/2"	7/8"-14	43,0	49,0	39,5
BF2112-12RA90X	BF21.2092.1212	12	3/4"	1.1/16"-12	48,0	58,0	51,7

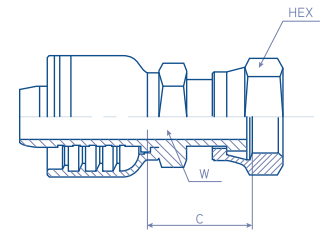
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female ORFS Swivel - OFT



BF21.44H4.

ISO 12151-1 / ISO 8434-3 / SAE J1453

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BF2104-04OFT	BF21.44H4.0404	04	1/4"	9/16"-18	30,2	14	17
BF2104-06OFT	BF21.44H4.0406	04	1/4"	1.1/16"-18	32,4	17	22
BF2106-04OFT	BF21.44H4.0604	06	3/8"	9/16"-18	29,3	17	17
BF2106-06OFT	BF21.44H4.0606	06	3/8"	11/16"-18	32,3	17	22
BF2106-08OFT	BF21.44H4.0608	06	3/8"	1.3/16"-16	35,3	19	24
BF2108-06OFT	BF21.44H4.0806	08	1/2"	1.1/16"-18	34,7	19	22
BF2108-08OFT	BF21.44H4.0808	08	1/2"	13/16"-16	36,7	19	24
BF2108-10OFT	BF21.44H4.0810	08	1/2"	1"-14	42,7	24	30
BF2108-12OFT	BF21.44H4.0812	08	1/2"	1.3/16"-12	45,5	30	36
BF2110-08OFT	BF21.44H4.1008	10	5/8"	13/16"-16	39,8	22	24
BF2110-10OFT	BF21.44H4.1010	10	5/8"	1"-14	43,8	24	30
BF2110-12OFT	BF21.44H4.1012	10	5/8"	1.3/16"-12	47,3	28	36
BF2112-10OFT	BF21.44H4.1210	12	3/4"	1"-14	44,8	28	30
BF2112-12OFT	BF21.44H4.1212	12	3/4"	1.3/16"-12	46,8	30	36
BF2112-16OFT	BF21.44H4.1216	12	3/4"	1.7/16"-12	51,3	35	41
BF2116-12OFT	BF21.44H4.1612	16	1"	1.3/16"-12	49,2	35	36
BF2116-16OFT	BF21.44H4.1616	16	1"	1.7/16"-12	51,3	35	41

MATERIAL: Carbon Steel

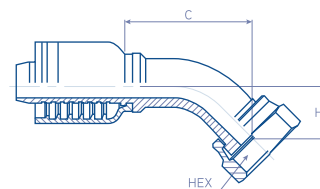
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female ORFS Swivel 45° Elbow- OFT45



BF21.4444.

ISO 12151-1 / ISO 8434-3 / SAE J1453

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-04OF45	BF21.4444.0404	04	1/4"	9/16"-18	35	10	17
BF2104-06OF45	BF21.4444.0406	04	1/4"	11/16"-18	35	11	22
BF2106-04OF45	BF21.4444.0604	06	3/8"	9/16"-18	40	15	17
BF2106-06OF45	BF21.4444.0606	06	3/8"	11/16"-18	40	13,5	22
BF2106-08OF45	BF21.4444.0608	06	3/8"	13/16"-16	40	15	24
BF2108-06OF45	BF21.4444.0806	08	1/2"	11/16"-18	46	18,5	24
BF2108-08OF45	BF21.4444.0808	08	1/2"	13/16"-16	43	15	24
BF2108-10OF45	BF21.4444.0810	08	1/2"	1"-14	45	16	30
BF2108-12OF45	BF21.4444.0812	08	1/2"	1.3/16"-12	54	21	36
BF2110-10OF45	BF21.4444.1010	10	5/8"	1"-14	50	18	30
BF2110-12OF45	BF21.4444.1012	10	5/8"	1.3/16"-12	55	21	36
BF2112-12OF45	BF21.4444.1212	12	3/4"	1.3/16"-12	65	21	36
BF2112-16OF45	BF21.4444.1216	12	3/4"	1.7/16"-12	74	25	41
BF2116-12OF45	BF21.4444.1612	16	1"	1.3/16"-12	75	25	36
BF2116-16OF45	BF21.4444.1616	16	1"	1.7/16"-12	76	25	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

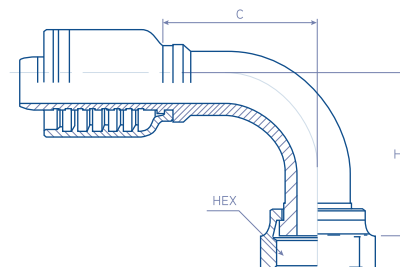
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female ORFS Swivel 90° Elbow - OFT90

BF21.4494.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-04OF90	BF21.4494.0404	04	1/4"	9/16"-18	33,0	21,0	17
BF2104-06OF90	BF21.4494.0406	04	1/4"	11/16"-18	33,0	23,0	22
BF2106-04OF90	BF21.4494.0604	06	1/4"	9/16"-18	34,5	27,0	17
BF2106-06OF90	BF21.4494.0606	06	3/8"	11/16"-18	34,5	29,0	22
BF2106-08OF90	BF21.4494.0608	06	3/8"	13/16"-16	37,0	30,0	24
BF2108-06OF90	BF21.4494.0806	08	1/2"	11/16"-18	39,5	34,0	22
BF2108-08OF90	BF21.4494.0808	08	1/2"	13/16"-16	39,5	35,0	24
BF2108-10OF90	BF21.4494.0810	08	1/2"	1"-14	39,5	36,5	30
BF2108-12OF90	BF21.4494.0812	08	1/2"	1.3/16"-12	42,0	45,0	36
BF2110-08OF90	BF21.4494.1008	10	5/8"	13/16"-16	45,0	30,0	24
BF2110-10OF90	BF21.4494.1010	10	5/8"	1"-14	54,0	40,0	30
BF2110-12OF90	BF21.4494.1012	10	5/8"	1.3/16"-12	54,0	48,0	36
BF2112-12OF90	BF21.4494.1212	12	3/4"	1.3/16"-12	57,0	48,0	36
BF2112-16OF90	BF21.4494.1216	12	3/4"	1.7/16"-12	57,0	56,0	41
BF2116-12OF90	BF21.4494.1612	16	1"	1.3/16"-12	65,0	58,0	36
BF2116-16OF90	BF21.4494.1616	16	1"	1.7/16"-12	70,0	60,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

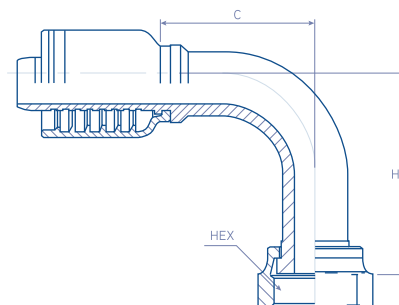
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Female ORFS Swivel 90° Long Elbow - OFT90

BF21.4494-L.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-04OF90L	BF21.4494.0404L	04	1/4"	9/16"-18	21,0	46,0	17
BF2106-06OF90L	BF21.4494.0606L	06	3/8"	11/16"-18	35,5	54,0	22
BF2106-08OF90L	BF21.4494.0608L	06	3/8"	13/16"-16	37,0	64,0	24
BF2108-08OF90L	BF21.4494.0808L	08	1/2"	13/16"-16	40,0	64,0	24
BF2110-10OF90L	BF21.4494.1010L	10	5/8"	1"-14	53,5	70,0	30
BF2112-12OF90L	BF21.4494.1212L	12	3/4"	1.3/16"-12	57,0	96,0	36
BF2116-16OF90L	BF21.4494.1616L	16	1"	1.7/16"-12	70,3	114,0	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

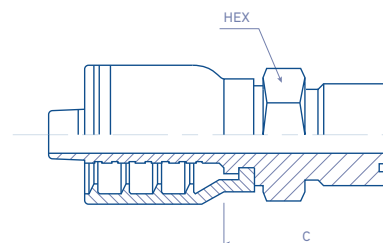
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Male ORFS - OFTM

BF21.4000.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-04OFTM	BF21.4000.0404	04	1/4"	9/16"-18	24,9	17
BF2104-06OFTM	BF21.4000.0406	04	1/4"	1.1/16"-18	26,2	19
BF2106-06OFTM	BF21.4000.0606	06	3/8"	11/16"-18	26,0	19
BF2106-08OFTM	BF21.4000.0608	06	3/8"	1.3/16"-16	27,5	22
BF2108-08OFTM	BF21.4000.0808	08	1/2"	13/16"-16	29,7	22
BF2108-10OFTM	BF21.4000.0810	08	1/2"	1"-14	34,0	27
BF2108-12OFTM	BF21.4000.0812	08	1/2"	1.3/16"-12	38,2	32
BF2110-10OFTM	BF21.4000.1010	10	5/8"	1"-14	36,0	27
BF2110-12OFTM	BF21.4000.1012	10	5/8"	1.3/16"-12	38,5	32
BF2112-12OFTM	BF21.4000.1212	12	3/4"	1.3/16"-12	37,7	32
BF2112-16OFTM	BF21.4000.1216	12	3/4"	1.7/16"-12	42,2	41
BF2116-16OFTM	BF21.4000.1616	16	1"	1.7/16"-12	42,7	41

MATERIAL: Carbon Steel

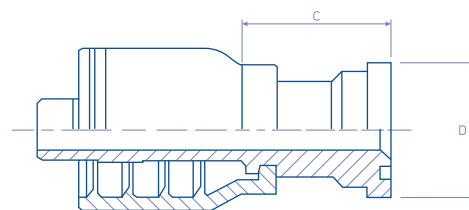
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Straight SAE 3000 PSI Code 61 Flange - PA



BF21.7013.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
BF2108-08PA	BF21.7013.0808	08	1/2"	1/2"	47,0	30,2
BF2108-12PA	BF21.7013.0812	08	1/2"	3/4"	48,0	38,1
BF2110-10PA	BF21.7013.1010	10	5/8"	5/8"	58,0	34,0
BF2110-12PA	BF21.7013.1012	10	5/8"	3/4"	44,0	38,1
BF2112-12PA	BF21.7013.1212	12	3/4"	3/4"	48,8	38,1
BF2112-16PA	BF21.7013.1216	12	3/4"	1"	52,0	44,5
BF2116-16PA	BF21.7013.1616	16	1"	1"	56,0	44,5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

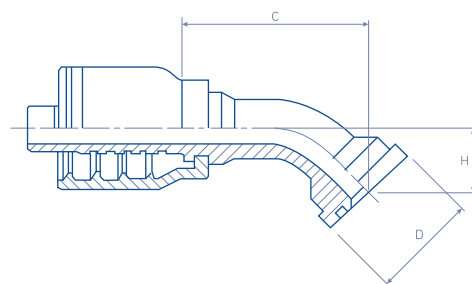
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

45° Elbow SAE 3000 PSI Code 61 Flange - PA45

BF21.7043.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BF2108-08PA45	BF21.7043.0808	08	1/2"	1/2"	57,0	23,0	30,2
BF2108-12PA45	BF21.7043.0812	08	1/2"	3/4"	63,0	30,0	38,1
BF2110-10PA45	BF21.7043.1010	10	5/8"	5/8"	68,0	27,0	34,0
BF2112-12PA45	BF21.7043.1212	12	3/4"	3/4"	69,0	28,0	38,1
BF2112-16PA45	BF21.7043.1216	12	3/4"	1"	77,0	32,0	44,5
BF2116-16PA45	BF21.7043.1616	16	1"	1"	79,0	31,0	44,5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

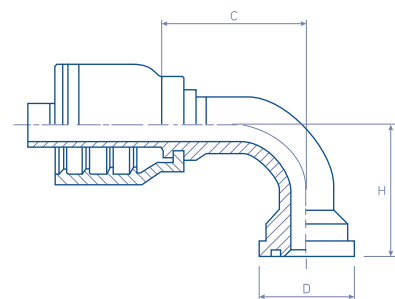
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



90° Elbow SAE 3000 PSI Code 61 Flange - PA90

BF21.7093.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
BF2108-08PA90	BF21.7093.0808	08	1/2"	1/2"	48,0	41,0	30,2
BF2108-12PA90	BF21.7093.0812	08	1/2"	3/4"	50,0	48,0	38,1
BF2110-12PA90	BF21.7093.1012	10	5/8"	3/4"	55,0	55,0	38,1
BF2112-12PA90	BF21.7093.1212	12	3/4"	3/4"	60,0	60,0	38,1
BF2112-16PA90	BF21.7093.1216	12	3/4"	1"	65,0	60,0	44,5
BF2116-16PA90	BF21.7093.1616	16	1"	1"	73,0	61,0	44,5

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

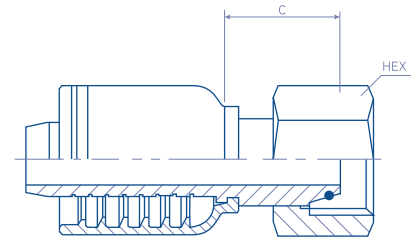
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Light 24° Metric Female - DLF

BF21.5013.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BF2104-12DLF	BF21.5013.0412	04	1/4"	M12X1.5	6	27,7	14
BF2104-14DLF	BF21.5013.0414	04	1/4"	M14X1.5	8	25,9	17
BF2104-16DLF	BF21.5013.0416	04	1/4"	M16X1.5	10	24,9	19
BF2104-18DLF	BF21.5013.0418	04	1/4"	M18X1.5	12	26,4	22
BF2106-16DLF	BF21.5013.0616	06	3/8"	M16X1.5	10	27,2	19
BF2106-18DLF	BF21.5013.0618	06	3/8"	M18X1.5	12	25,5	22
BF2106-22DLF	BF21.5013.0622	08	1/2"	M22X1.5	12	26,0	27
BF2108-22DLF	BF21.5013.0822	08	1/2"	M22X1.5	15	27,7	27
BF2108-26DLF	BF21.5013.0826	08	1/2"	M26X1.5	18	28,7	32
BF2110-26DLF	BF21.5013.1026	10	5/8"	M26X1.5	18	30,0	32
BF2112-30DLF	BF21.5013.1230	12	3/4"	M30X2.0	22	32,3	36
BF2116-36DLF	BF21.5013.1636	16	1"	M36X2.0	28	35,8	41

MATERIAL: Carbon Steel

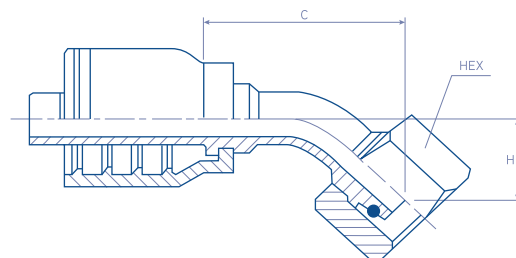
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Light 24° Metric 45° Elbow Female - DLF45



BF21.5043.

ISO 12151-2 / ISO 8434-1

REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BF2104-12DLF45	BF21.5043.0412	04	1/4"	M12X1.5	6	39	15	14
BF2104-14DLF45	BF21.5043.0414	04	1/4"	M14X1.5	8	42,7	17,7	17
BF2104-16DLF45	BF21.5043.0416	04	1/4"	M16X1.5	10	41,5	17,7	19
BF2104-18DLF45	BF21.5043.0418	04	1/4"	M18X1.5	12	42,0	18,3	22
BF2106-16DLF45	BF21.5043.0616	06	3/8"	M16X1.5	10	44,5	21	19
BF2106-18DLF45	BF21.5043.0618	06	3/8"	M18X1.5	12	42,5	19	22
BF2108-22DLF45	BF21.5043.0822	08	1/2"	M22X1.5	15	49,0	21,5	27
BF2108-26DLF45	BF21.5043.0826	08	1/2"	M26X1.5	18	60,0	25,0	32
BF2110-26DLF45	BF21.5043.1026	10	5/8"	M26X1.5	18	62,5	25	32
BF2112-30DLF45	BF21.5043.1230	12	3/4"	M30X2.0	22	76,0	29,5	36
BF2116-36DLF45	BF21.5043.1636	16	1"	M36X2.0	28	90,5	35	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

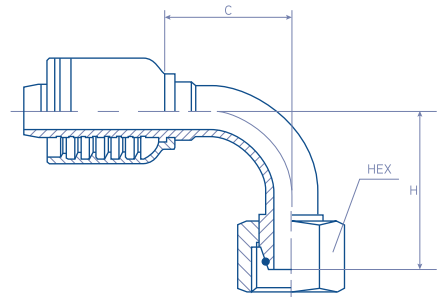
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Light 24° Metric 90° Elbow Female - DLF90

BF21.5093.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BF2104-12DLF90	BF21.5093.0412	04	1/4"	M12X1.5	6	30	30	14
BF2104-14DLF90	BF21.5093.0414	04	1/4"	M14X1.5	8	32	38	17
BF2104-16DLF90	BF21.5093.0416	04	1/4"	M16X1.5	10	31,7	38,0	19
BF2104-18DLF90	BF21.5093.0418	04	1/4"	M18X1.5	12	30,0	36,0	22
BF2106-16DLF90	BF21.5093.0616	06	3/8"	M16X1.5	10	35	36,0	19
BF2106-18DLF90	BF21.5093.0618	06	3/8"	M18X1.5	12	36	36,0	22
BF2106-22DLF90	BF21.5093.0622	06	3/8"	M22X1.5	15	34,2	36	27
BF2108-22DLF90	BF21.5093.0822	08	1/2"	M22X1.5	15	38	40,5	27
BF2108-26DLF90	BF21.5093.0826	08	1/2"	M26X1.5	18	48	51,5	32
BF2110-26DLF90	BF21.5093.1026	10	5/8"	M26X1.5	18	48	51,5	32
BF2112-30DLF90	BF21.5093.1230	12	3/4"	M30X2.0	22	54	54,5	36
BF2116-36DLF90	BF21.5093.1636	16	1"	M36X2.0	28	75	68,5	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

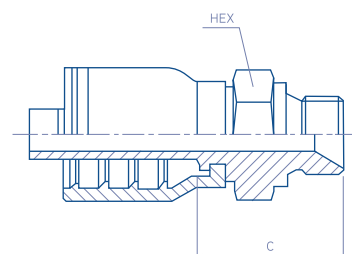
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Light 24° Metric Male - DLM

BF21.1000.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BF2104-12DLM	BF21.1000.0412	04	1/4"	M12X1.5	6	24,2	14
BF2104-14DLM	BF21.1000.0414	04	1/4"	M14X1.5	8	24,7	17
BF2104-16DLM	BF21.1000.0416	04	1/4"	M16X1.5	10	25,7	17
BF2104-18DLM	BF21.1000.0418	04	1/4"	M18X1.5	12	26,7	19
BF2106-16DLM	BF21.1000.0616	06	3/8"	M16X1.5	10	23,7	17
BF2106-18DLM	BF21.1000.0618	06	3/8"	M18X1.5	12	24,7	19
BF2106-22DLM	BF21.1000.0622	06	3/8"	M22X1.5	15	27,7	24
BF2108-18DLM	BF21.1000.0818	08	1/2"	M18X1.5	12	26,5	19
BF2108-22DLM	BF21.1000.0822	08	1/2"	M22X1.5	15	29,5	24
BF2110-26DLM	BF21.1000.1026	10	5/8"	M26X1.5	18	32,0	27
BF2110-30DLM	BF21.1000.1030	10	5/8"	M30X2.0	22	36,0	32
BF2112-30DLM	BF21.1000.1230	12	3/4"	M30X2.0	22	35,3	32
BF2116-36DLM	BF21.1000.1636	16	1"	M36X2.0	28	38,2	41

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

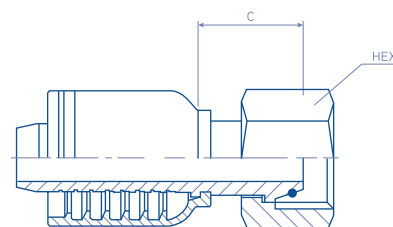
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Heavy 24° Metric Female - DHF

BF21.5113.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BF2104-16DHF	BF21.5113.0416	04	1/4"	M16X1.5	8	27,0	19
BF2104-18DHF	BF21.5113.0418	04	1/4"	M18X1.5	10	27,5	22
BF2106-18DHF	BF21.5113.0618	06	3/8"	M18X1.5	10	25,5	22
BF2106-20DHF	BF21.5113.0620	06	3/8"	M20X1.5	12	25,0	24
BF2106-22DHF	BF21.5113.0622	06	3/8"	M22X1.5	14	29,5	27
BF2108-24DHF	BF21.5113.0824	08	1/2"	M24X1.5	16	31,0	30

MATERIAL: Carbon Steel

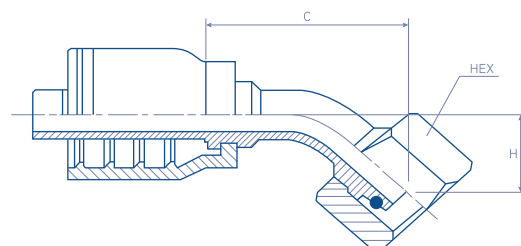
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Heavy 24° Metric 45° Elbow Female - DHF45



BF21.5143.

ISO 12151-2 / ISO 8434-1

REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BF2104-16DHF45	BF21.5143.0416	04	1/4"	M16X1.5	8	36,5	17,0	19
BF2104-18DHF45	BF21.5143.0418	04	1/4"	M18X1.5	10	40,5	16,7	22
BF2106-20DHF45	BF21.5143.0620	06	3/8"	M20X1.5	12	42,0	18,4	24
BF2106-22DHF45	BF21.5143.0622	06	3/8"	M22X1.5	14	42,4	18,7	27
BF2108-24DHF45	BF21.5143.0824	08	1/2"	M24X1.5	16	49,9	21,0	30

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

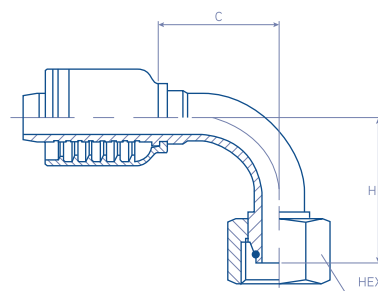
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Heavy 24° Metric 90° Elbow Female - DHF90

BF21.5193.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions			
		dash	inch		d	C - Cut Off	H	HEX
BF2104-16DHF90	BF21.5193.0416	04	1/4"	M16X1.5	8	28,2	32,0	19
BF2104-18DHF90	BF21.5193.0418	04	1/4"	M18X1.5	10	31,7	32,0	22
BF2106-18DHF90	BF21.5193.0618	06	3/8"	M18X1.5	10	33,0	33,0	22
BF2106-20DHF90	BF21.5193.0620	06	3/8"	M20X1.5	12	34,2	36,5	24
BF2106-22DHF90	BF21.5193.0622	06	3/8"	M22X1.5	14	34,2	37,0	27
BF2108-24DHF90	BF21.5193.0824	08	1/2"	M24X1.5	16	41,0	43,0	30

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

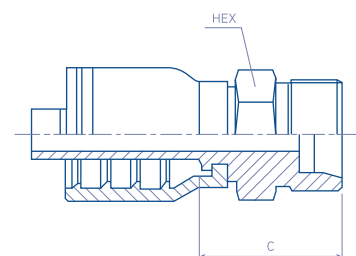
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



Heavy 24° Metric Male - DHM

BF21.1100.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		d	C - Cut Off	HEX
BF2104-14DHM	BF21.1100.0414	04	1/4"	M14X1.5	6	26,7	17
BF2104-16DHM	BF21.1100.0416	04	1/4"	M16X1.5	8	26,7	17
BF2104-18DHM	BF21.1100.0418	04	1/4"	M18X1.5	10	27,7	19
BF2104-20DHM	BF21.1100.0420	04	1/4"	M20X1.5	12	29,2	22
BF2106-18DHM	BF21.1100.0618	06	3/8"	M18X1.5	10	25,7	19
BF2106-20DHM	BF21.1100.0620	06	3/8"	M20X1.5	12	27,2	22
BF2106-22DHM	BF21.1100.0622	06	3/8"	M22X1.5	14	29,7	24
BF2106-24DHM	BF21.1100.0624	06	3/8"	M24X1.5	16	31,2	27
BF2108-24DHM	BF21.1100.0824	08	1/2"	M24X1.5	16	33,0	27
BF2110-30DHM	BF21.1100.1030	10	5/8"	M30X2.0	20	38,0	32

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

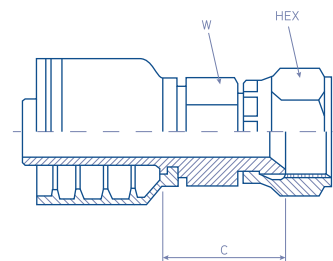
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

JIS 30° Female Swivel - FX-KOMA

BF21.5911.

JIS B 8363



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BF2104-14FX-KOMA	BF21.5911.0414	04	1/4"	M14X1.5	24,2	19	19
BF2106-16FX-KOMA	BF21.5911.0616	06	3/8"	M16X1.5	23,2	19	22
BF2106-18FX-KOMA	BF21.5911.0618	06	3/8"	M18X1.5	24,2	19	24
BF2106-20FX-KOMA	BF21.5911.0620	06	3/8"	M20X1.5	25,2	19	27
BF2108-22FX-KOMA	BF21.5911.0822	08	1/2"	M22X1.5	28,0	22	27
BF2110-24FX-KOMA	BF21.5911.1024	10	5/8"	M24X1.5	30,5	24	32
BF2112-30FX-KOMA	BF21.5911.1230	12	3/4"	M30X2.0	32,8	30	36
BF2112-33FX-KOMA	BF21.5911.1233	12	3/4"	M33X2.0	33,8	32	41
BF2112-36FX-KOMA	BF21.5911.1236	12	3/4"	M36X2.0	36,3	41	46
BF2116-33FX-KOMA	BF21.5911.1633	16	1"	M33X2.0	33,7	32	41
BF2116-36FX-KOMA	BF21.5911.1636	16	1"	M36X2.0	26,2	41	46

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

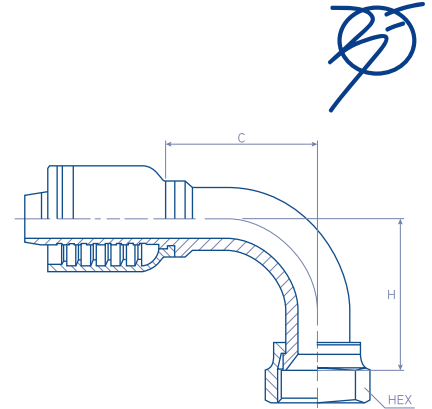
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

Female JIS 30° Swivel 90° Elbow - FX-KOMA90

BF21.5991.

JIS B 8363



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-14FX-KOMA90	BF21.5991.0414	04	1/4"	M14X1.5	25,0	28	19
BF2106-18FX-KOMA90	BF21.5991.0618	06	3/8"	M18X1.5	31,0	37	24
BF2108-22FX-KOMA90	BF21.5991.0822	08	1/2"	M22X1.5	41,0	48	27
BF2110-24FX-KOMA90	BF21.5991.1024	10	5/8"	M24X1.5	42,0	50	32
BF2112-30FX-KOMA90	BF21.5991.1230	12	3/4"	M30X2.0	48,5	57	36

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

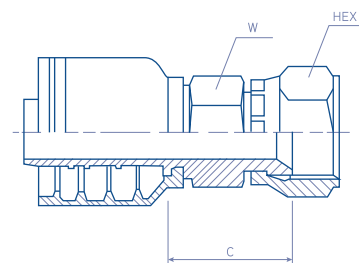
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

JIS 30° Female Swivel - JIS

BF21.3712.

JIS B 8363



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
BF2104-04JIS	BF21.3712.0404	04	1/4"	1/4" - 19	23,0	19	19
BF2106-06JIS	BF21.3712.0606	06	3/8"	3/8" - 19	23,0	22	22
BF2108-08JIS	BF21.3712.0808	08	1/2"	1/2" - 14	27,7	27	27
BF2112-12JIS	BF21.3712.1212	12	3/4"	3/4" - 14	31,4	32	32
BF2116-16JIS	BF21.3712.1616	16	1"	1" - 11	32,0	41	41

MATERIAL: Carbon Steel

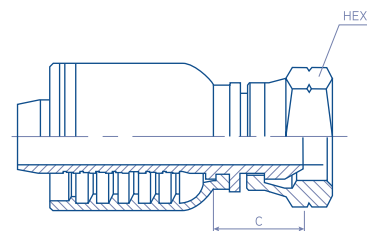
FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



BSP 60° Swivel Female - BSPXF



BF21.3012.

ISO 12151-6 / ISO 8434-6

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-02BSPXF	BF21.3012.0402	04	1/4"	1/8"-28	17,7	14
BF2104-04BSPXF	BF21.3012.0404	04	1/4"	1/4"-19	19,9	19
BF2104-06BSPXF	BF21.3012.0406	04	1/4"	3/8"-19	20,7	22
BF2104-08BSPXF	BF21.3012.0408	04	1/4"	1/2"-14	22,7	27
BF2106-06BSPXF	BF21.3012.0606	06	3/8"	3/8"-19	19,5	22
BF2106-08BSPXF	BF21.3012.0608	06	3/8"	1/2"-14	20,7	27
BF2108-08BSPXF	BF21.3012.0808	08	1/2"	1/2"-14	22,7	27
BF2108-10BSPXF	BF21.3012.0810	08	1/2"	5/8"-14	23,0	30
BF2110-10BSPXF	BF21.3012.1010	10	5/8"	5/8"-14	25,0	30
BF2110-12BSPXF	BF21.3012.1012	10	5/8"	3/4"-14	25,5	32
BF2112-12BSPXF	BF21.3012.1212	12	3/4"	3/4"-14	24,9	32
BF2112-16BSPXF	BF21.3012.1216	12	3/4"	1"-11	26,8	38
BF2116-16BSPXF	BF21.3012.1616	16	1"	1"-11	26,8	38

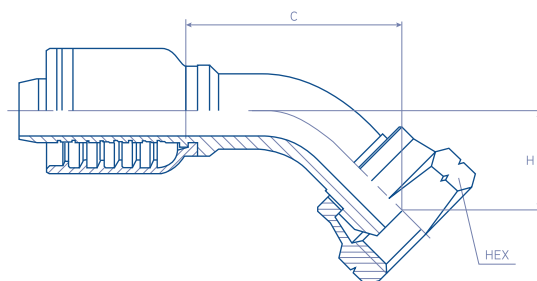
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

BSP 60° Swivel 45° Elbow Female - BSPXF45



BF21.3042.

ISO 12151-6 / ISO 8434-6

REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-02BSPXF45	BF21.3042.0402	04	1/4"	1/8"-28	33,0	14,0	14
BF2104-04BSPXF45	BF21.3042.0404	04	1/4"	1/4"-19	41,1	15,0	19
BF2104-06BSPXF45	BF21.3042.0406	04	1/4"	3/8"-19	34,2	15,0	22
BF2106-06BSPXF45	BF21.3042.0606	06	3/8"	3/8"-19	40,0	17,5	22
BF2106-08BSPXF45	BF21.3042.0608	06	3/8"	1/2"-14	38,6	17,0	27
BF2108-08BSPXF45	BF21.3042.0808	08	1/2"	1/2"-14	46,0	19,0	27
BF2108-10BSPXF45	BF21.3042.0810	08	1/2"	5/8"-14	56,0	23,0	27
BF2110-10BSPXF45	BF21.3042.1010	10	5/8"	5/8"-14	60,5	23,3	27
BF2110-12BSPXF45	BF21.3042.1012	10	5/8"	3/4"-14	63,0	28,0	32
BF2112-12BSPXF45	BF21.3042.1212	12	3/4"	3/4"-14	67,8	29,0	32
BF2112-16BSPXF45	BF21.3042.1216	12	3/4"	1"-11	72,6	27,5	38
BF2116-16BSPXF45	BF21.3042.1616	16	1"	1"-11	83,7	33,8	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

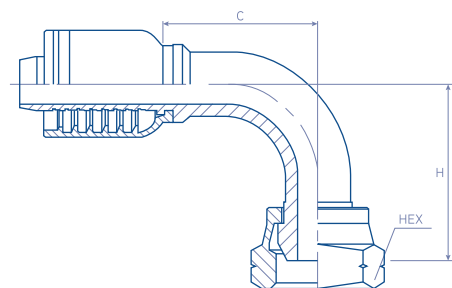
FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W



BSP 60° Swivel 90° Elbow Female - BSPXF90

BF21.3092.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
BF2104-02BSPXF90	BF21.3092.0402	04	1/4"	1/8"-28	27,5	27,0	14
BF2104-04BSPXF90	BF21.3092.0404	04	1/4"	1/4"-19	27,6	28,0	19
BF2104-06BSPXF90	BF21.3092.0406	04	1/4"	3/8"-19	30,0	31,0	22
BF2106-06BSPXF90	BF21.3092.0606	06	3/8"	3/8"-19	34,2	31,7	22
BF2106-08BSPXF90	BF21.3092.0608	06	3/8"	1/2"-14	32,7	36,5	27
BF2108-08BSPXF90	BF21.3092.0808	08	1/2"	1/2"-14	41,0	40,0	27
BF2108-10BSPXF90	BF21.3092.0810	08	1/2"	5/8"-14	46,5	46,0	27
BF2110-10BSPXF90	BF21.3092.1010	10	5/8"	5/8"-14	54,0	50,0	27
BF2110-12BSPXF90	BF21.3092.1012	10	5/8"	3/4"-14	54,0	54,0	32
BF2112-12BSPXF90	BF21.3092.1212	12	3/4"	3/4"-14	56,0	58,0	32
BF2112-16BSPXF90	BF21.3092.1216	12	3/4"	1"-11	60,0	62,0	38
BF2116-16BSPXF90	BF21.3092.1616	16	1"	1"-11	71,5	71,0	38

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

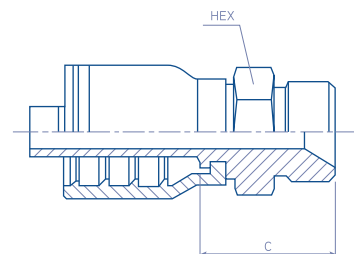
Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

BSP 60° Male - BSPM

BF21.0100.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
BF2104-02BSPM	BF21.0100.0402	04	1/4"	1/8"-28	24,2	14
BF2104-04BSPM	BF21.0100.0404	04	1/4"	1/4"-19	28,2	19
BF2104-06BSPM	BF21.0100.0406	04	1/4"	3/8"-19	30,7	22
BF2104-08BSPM	BF21.0100.0408	04	1/4"	1/2"-14	35,2	27
BF2106-04BSPM	BF21.0100.0604	06	3/8"	1/4"-19	26,2	19
BF2106-06BSPM	BF21.0100.0606	06	3/8"	3/8"-19	28,7	22
BF2106-08BSPM	BF21.0100.0608	06	3/8"	1/2"-14	33,2	27
BF2108-06BSPM	BF21.0100.0806	08	1/2"	3/8"-19	30,5	22
BF2108-08BSPM	BF21.0100.0808	08	1/2"	1/2"-14	34,5	27
BF2108-10BSPM	BF21.0100.0810	08	1/2"	5/8"-14	37,5	30
BF2108-12BSPM	BF21.0100.0812	08	1/2"	3/4"-14	40,5	32
BF2110-08BSPM	BF21.0100.1008	10	5/8"	1/2"-14	36,5	27

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Suitable to be used on medium and high pressure braided hoses:

FORZA UNO R1AT/1SN; FORZA UNO "SHARK SKIN" R1AT/1SN; FORZA UNO TROPIC R1AT/1SN; FORZA DUE R2AT/2SN; FORZA DUE "SHARK SKIN" R2AT/2SN; FORZA DUE TROPIC R2AT/2SN; BALPAC PREMIUM R16/2SC; BALPAC PREMIUM "SHARK SKIN" R16/2SC; BALPAC PREMIUM TROPIC R16/2SC; IMPACTUS 5K; IMPACTUS 6K; BALPAC 3000 R17/1SC; BALPAC 3000 "SHARK SKIN" R17/1SC; 2-MAX JACK; BALWASH 1W; BALWASH 2W

PRODUCTS LIMITED WARRANTY

The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

This warranty is in lieu of and excludes all other warranties, or conditions expressed, implied, statutory or otherwise created under applicable law including, but not limited to the warranty of merchantability and the warranty of fitness for a particular purpose.

In addition, this warranty shall not apply and will be null and void to any products or portions thereof that have been subject to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by balflex or used in any other manner inconsistent with any Balflex® instructions or specifications. Balflex® disclaims any liability for any hose assemblies which have not been produced with in conformance with Balflex® assembly recommendations and parts.

In no event shall balflex have any liability whatsoever to any person, including without limitation, any immediate buyer, purchaser or other third party, for any special, punitive, incidental or consequential damages, including without limitation, profit loss or customer loss, loss or damage to physical property of customer or any other person and loss of anticipated revenue, profits, goodwill, savings or other economic loss of customer or any other person.

Specification subject to change without prior notice.
Errors and omission excluded.



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Balflex[®]



**BALFLEX
60° BSP
ADAPTERS
CATALOG**

European Technology

*Established since 1963, **Balflex®** is a European international group of companies dedicated to the design, production, assembly and distribution of all types of high-tech products for conduction of fluids, measuring of pressure and power transmission at very high quality level.*

*6 decades of know-how and expertise in this field, makes **Balflex®** the first choice for the mining, agriculture, off-shore and construction industries.*

*Today the **Balflex®** Group covers worldwide users through our own company's production facilities, branches and net of certified distributors.*

Balflex® valorizes the inside meaning of the words we use: **Excellence** the quality of being outstanding; **Innovation** the action or process of innovating; **Partnership** cooperation relationship between two or more people, having in mind a common goal; **Tradition** way of thinking or acting, inherited from previous generations.





Quality

Quality is very important for us. We have fully equipped, modern laboratories and equipment, employing the industries most experienced personnel.

Balflex® has earned various certifications for our Management Systems and Products. This reliable and consistent approach has allowed us to achieve our ISO 9001:2015 certification. At Balflex® quality and service always comes first. We are dedicated to continue the development of new products with a strong emphasis on quality.

Member of:



Certified by:





Balfit® Hydraulic Adapters (Series 52 and 53)

The range of Balfit® hydraulic adapters is produced according to Balflex® specifications and to the ISO 8434-6 standard. It covers a very wide variety of applications typical of hydraulic pipe pressure lines.

Balflex® optimized the production of these fittings and their compatibility with a wide range of other types of hydraulic fittings, in order to assure the highest performance and the most extensive range of applications. The Balfit® hydraulic fittings program in this catalogue includes connectors with several threads:

- BSP parallel thread
- BSP taper thread
- NPT thread
- BSPT taper thread

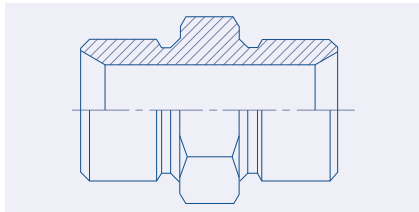
The Balfit® hydraulic adapters part code is composed of three groups of digits:



Adapters



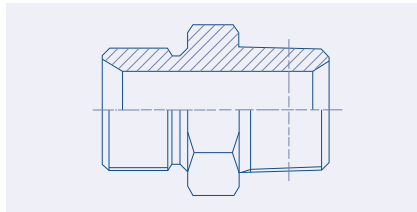




BSP Male Union

52.100.

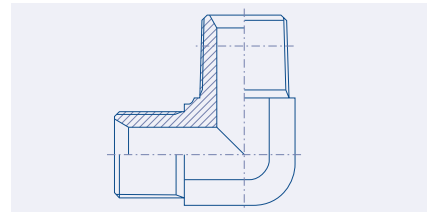
pag. 11



Male BSP x Male NPT Connector

52.101.

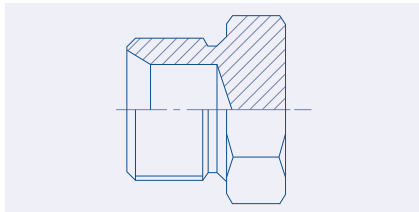
pag. 12



90° Male BSP x Male NPT Connector

53.102.

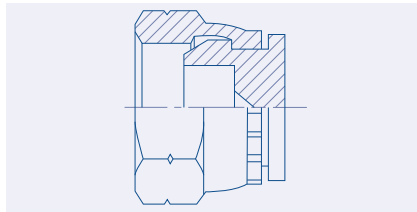
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BSP Male Plug

52.400.

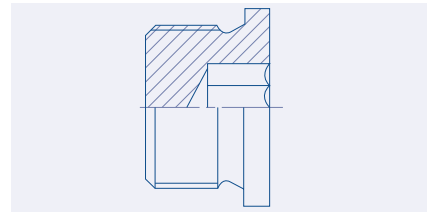
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BSP Swivel Female Plug

52.401.

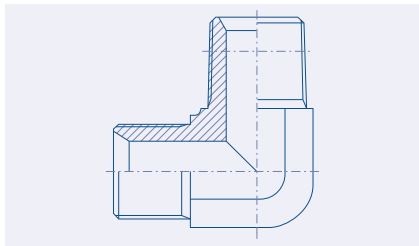
pag. 14



BSP Inner Hexagon Male Plug

52.402.

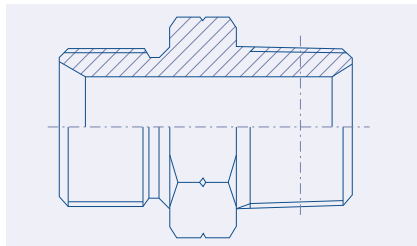
pag. 15



Male BSPT Union

52.103.

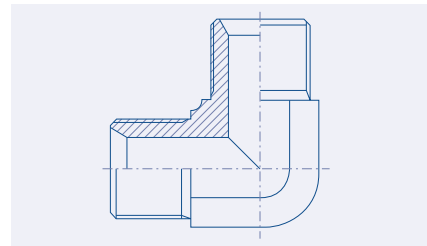
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Male BSP x Male BSPT Connector

52.1200.

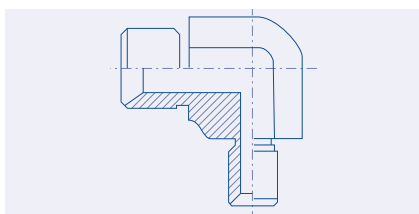
pag. 16



Male 90° BSP Union

53.100.

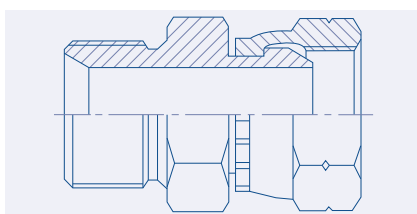
pag. 17



Male 90° BSP Union Reduction

53.101.

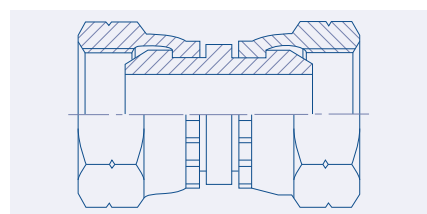
pag. 18



Male x Swivel Female BSP Adapter

52.500.

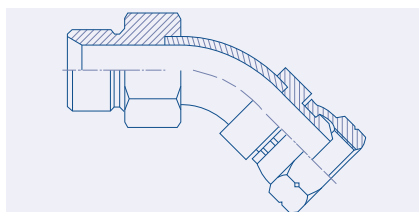
pag. 19



Swivel Female x Female BSP Adapter

52.502.

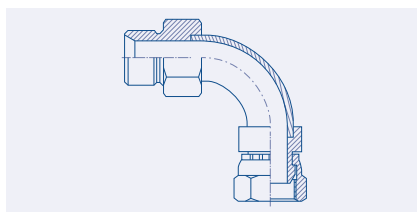
pag. 20



45° Elbow Male x Swivel Female BSP

52.545.

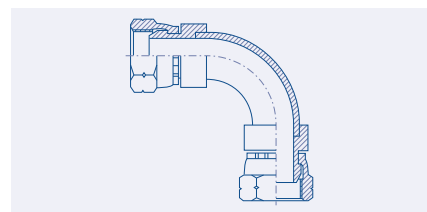
pag. 21



90° Elbow Male x Swivel Female BSP

52.590.

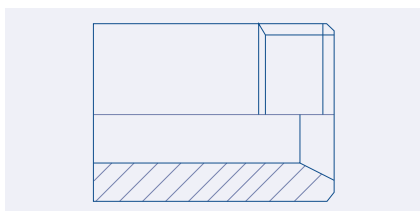
pag. 22



90° Elbow Swivel Female BSP

52.592.

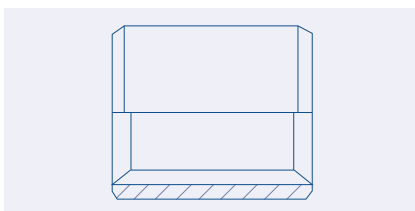
pag. 22



BSP Male Welding Bosses

52.806.

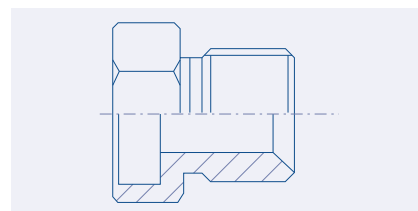
pag. 23



BSP Female Welding Bosses

52.807.

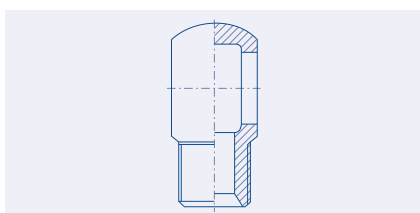
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BSP Hexagon Male Welding Bosses

52.808.

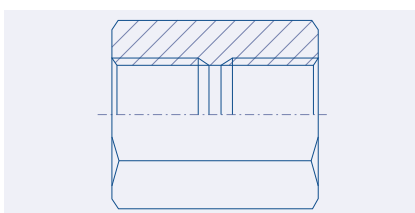
pag. 24



BSP Threaded Banjo Eye

52.800.

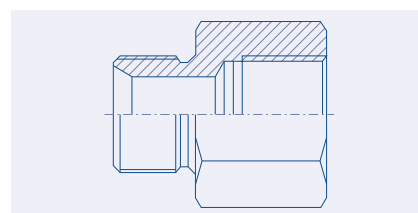
pag. 24



BSPP Female Union

52.3000.

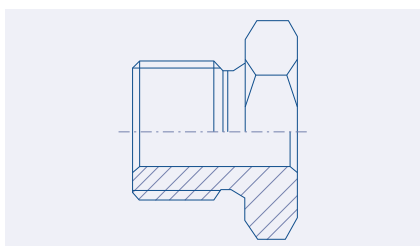
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BSPP Male x BSP Fixed Female Adapter

52.5000.

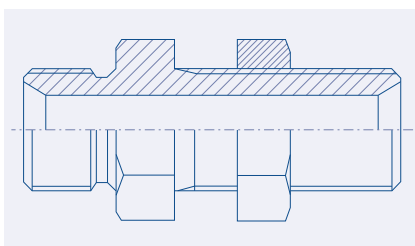
pag. 26



BSPP Male x BSP Fixed Female Adapter

52.5001.

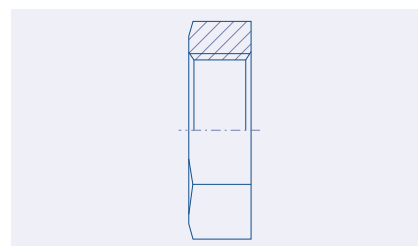
pag. 27



BSP Bulkhead Connector

52.5003.

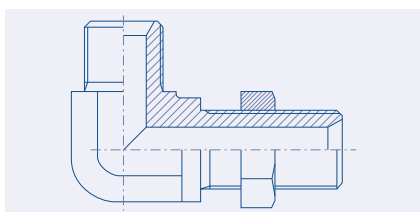
pag. 28



BSP Locknut

52.5004.

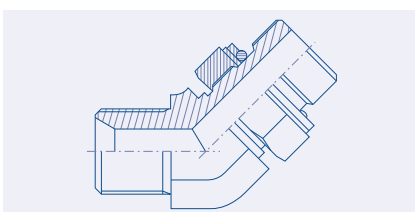
pag. 28



90° Elbow BSP Bulkhead Connector

52.5005.

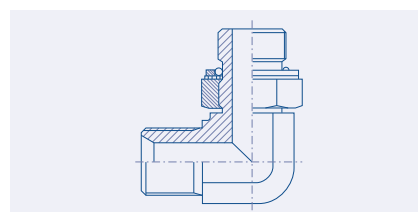
pag. 29



45° Elbow Adjustable BSPP Male

52.7008.

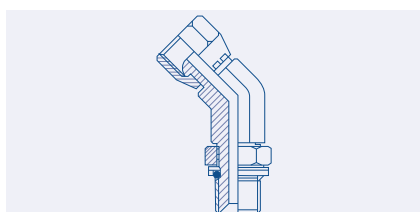
pag. 29



90° Elbow Adjustable BSPP Male

52.7009.

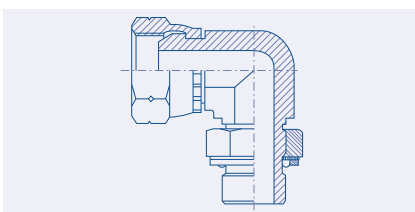
pag. 30



45° Elbow Adjustable BSPP Male x Female

52.7011.

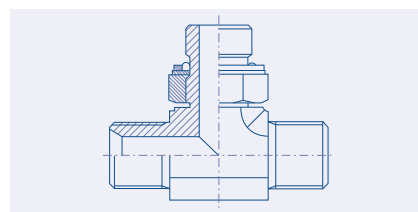
pag. 30



90° Elbow Adjustable BSPP Male x Female

52.7010.

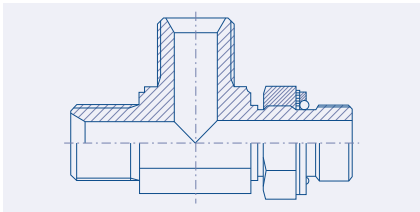
pag. 31



BSPP Male Adjustable Branch Tee

52.7012.

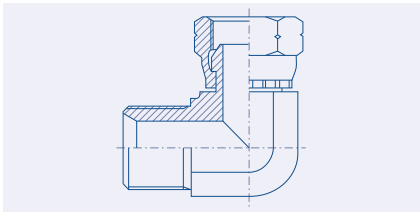
pag. 31



**BSPP Male Adjustable
Run Tee**

52.7013.

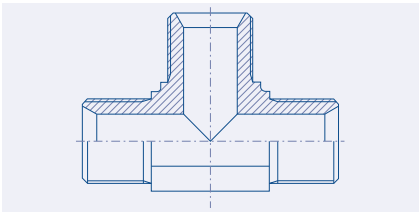
pag. 32



**90° Elbow BSPP Male x
Female**

53.110.

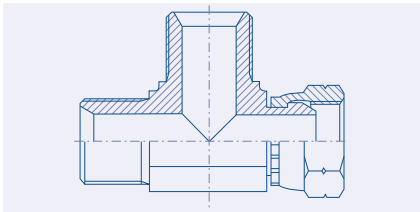
pag. 32



Union BSPP Male Tee

53.300.

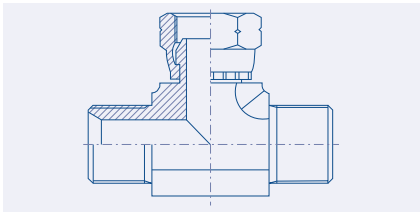
pag. 33



Swivel BSP Run Tee

53.4011.

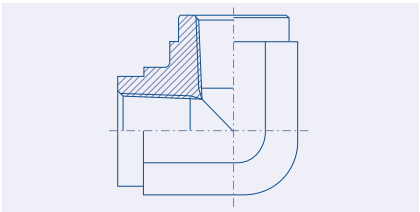
pag. 33



Swivel BSP Branch Tee

53.4012.

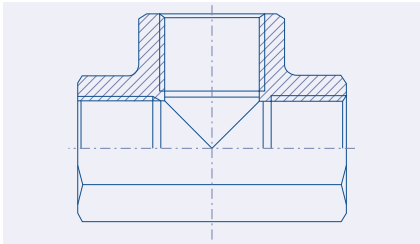
pag. 34



**90° BSPP Elbow Fixed
Female Union**

53.120.

pag. 34



Fixed Female BSPP Tee

53.302.

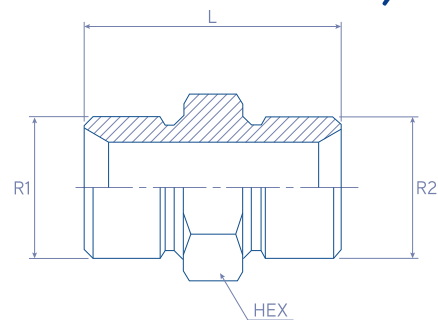
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Balfit® BSP Male Union

52.100.

ISO 8434-6



REFERENCE	thread		dimensions	
	R1	R2	L	HEX
52.100.02	1/8" – 28	1/8" – 28	24	14
52.100.0402	1/4" – 19	1/8" – 28	30	19
52.100.04	1/4" – 19	1/4" – 19	34	19
52.100.0602	3/8" – 19	1/8" – 28	30	22
52.100.0604	3/8" – 19	1/4" – 19	35	22
52.100.06	3/8" – 19	3/8" – 19	35	22
52.100.0804	1/2" – 14	1/4" – 19	38	27
52.100.0806	1/2" – 14	3/8" – 19	39	27
52.100.08	1/2" – 14	1/2" – 14	41	27
52.100.1008	5/8" – 14	1/2" – 14	43	30
52.100.10	5/8" – 14	5/8" – 14	45	30
52.100.1204	3/4" – 14	1/4" – 19	42	32
52.100.1206	3/4" – 14	3/8" – 19	43	32
52.100.1208	3/4" – 14	1/2" – 14	45	32
52.100.1210	3/4" – 14	5/8" – 14	47	32
52.100.12	3/4" – 14	3/4" – 14	47	32
52.100.1608	1" – 11	1/2" – 14	50	41
52.100.1612	1" – 11	3/4" – 14	52	41
52.100.16	1" – 11	1" – 11	56	41
52.100.2008	1-1/4" – 11	1/2" – 14	52	50
52.100.2012	1-1/4" – 11	3/4" – 14	54	50
52.100.2016	1-1/4" – 11	1" – 11	58	50
52.100.20	1-1/4" – 11	1-1/4" – 11	58	50
52.100.2412	1-1/2" – 11	3/4" – 14	59	55
52.100.2416	1-1/2" – 11	1" – 11	63	55
52.100.2420	1-1/2" – 11	1-1/4" – 11	63	55
52.100.24	1-1/2" – 11	1-1/2" – 11	66	55
52.100.3216	2" – 11	1" – 11	69	70
52.100.3220	2" – 11	1-1/4" – 11	69	70
52.100.3224	2" – 11	1-1/2" – 11	72	70
52.100.32	2" – 11	2" – 11	74	70

MATERIAL: Carbon Steel

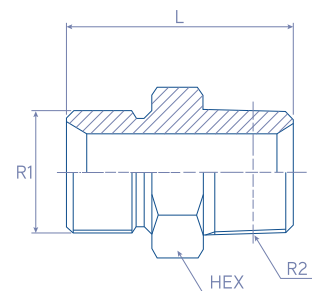
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE UNION (add an 'S' at the end of the part
number; ex: 52.100.24 S)

Balfit® Male BSP x Male NPT Connector

52.101.

ISO 8434-6 and ANSI B1.20.3



REFERENCE	thread		dimensions	
	R1	R2	L	HEX
52.101.02	1/8" - 28	1/6" - 27	24.7	14
52.101.04	1/4" - 19	1/4" - 18	32	18
52.101.06	3/8" - 19	3/8" - 18	35.2	22
52.101.08	1/2" - 14	1/2" - 14	41.8	27
52.101.12	3/4" - 14	3/4" - 14	46	32
52.101.16	1" - 11	1" - 11.1/2"	55	40
52.101.20	1-1/4" - 11	1-1/4" - 11.1/2"	56.6	50
52.101.24	1-1/2" - 11	1-1/2" - 11.1/2"	59.4	55
52.101.32	2" - 11	2" - 11.1/2"	66.8	70

MATERIAL: Carbon Steel

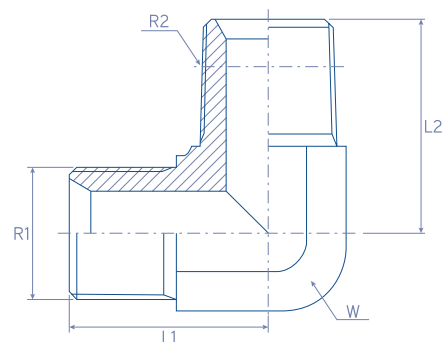
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE BSP x MALE NPT / 90° MALE BSP x
MALE NPT (add an 'S' at the end of the part
number; ex: 52.101.24 S - 53.102.1212 S)

Balfit® 90° Male BSP x Male NPT Connector

53.102.

ISO 8434-6 and ANSI B1.20.3



REFERENCE	thread		dimensions		
	R1	R2	L1	L2	W
53.102.0202	1/8" - 28	1/8" - 27	19.3	19.5	11
53.102.0404	1/4" - 19	1/4" - 18	25	27	14
53.102.0606	3/8" - 19	3/8" - 18	30	30	19
53.102.0808	1/2" - 14	1/2" - 14	34.5	37.3	22
53.102.1212	3/4" - 14	3/4" - 14	39	40.4	27
53.102.1616	1" - 11	1" - 11.1/2"	45	47.3	33
53.102.2020	1-1/4" - 11	1-1/4" - 11.1/2"	50	55	41
53.102.2424	1-1/2" - 11	1-1/2" - 11.1/2"	55	57.4	48
53.102.3232	2" - 11	2" - 11.1/2"	62	62	58

MATERIAL: Carbon Steel

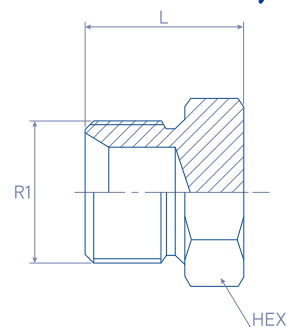
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE BSP x MALE NPT / 90° MALE BSP x
MALE NPT (add an 'S' at the end of the part
number; ex: 53.102.1212 S)



Balfit® BSP Male Plug

52.400.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	HEX
52.400.02	1/8" – 28	15	14
52.400.04	1/4" – 19	17	19
52.400.06	3/8" – 19	20	22
52.400.08	1/2" – 14	23	27
52.400.10	5/8" – 14	25	28
52.400.12	3/4" – 14	26	32
52.400.16	1" – 11	30	41
52.400.20	1-1/4" – 11	31	50
52.400.24	1-1/2" – 11	34	55
52.400.32	2" – 11	38	70

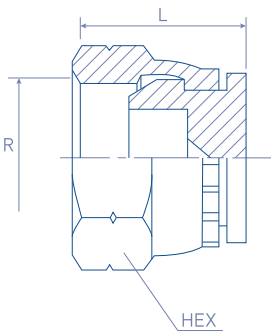
MATERIAL: Carbon Steel, zinc plated

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP
MALE PLUG (add an 'S' at the end of the part
number; ex: 52.400.16 S)

Balfit® BSP Swivel Female Plug

52.401.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	HEX
52.401.02	1/8" – 28	16	14
52.401.04	1/4" – 19	18	18
52.401.06	3/8" – 19	19,5	22
52.401.08	1/2" – 14	23,5	27
52.401.10	5/8" – 14	24,5	27
52.401.12	3/4" – 14	26	32
52.401.16	1" – 11	28	38
52.401.20	1-1/4" – 11	30	50
52.401.24	1-1/2" – 11	31	60
52.401.32	2" – 11	34	70

MATERIAL: Carbon Steel

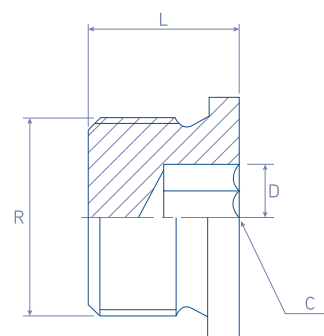
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP SWIVEL FEMALE PLUG (add an 'S' at the end of the part number; ex: 52.401.16 S)



Balfit® BSP Inner Hexagon Male Plug

52.402.
ISO 8434-6



REFERENCE	thread				
	R	L	C	D	
52.402.02	1/8" - 28	12	14	5.1	
52.402.04	1/4" - 19	17	19	6.1	
52.402.06	3/8" - 19	17	22	8.1	
52.402.08	1/2" - 14	19	27	10.1	
52.402.12	3/4" - 14	21	32	12.1	
52.402.16	1" - 11	22.5	40	17.1	
52.402.20	1-1/4" - 11	22.5	50	22.1	
52.402.24	1-1/2" - 11	22.5	55	24.1	
52.402.32	2" - 11	25	68	32.1	

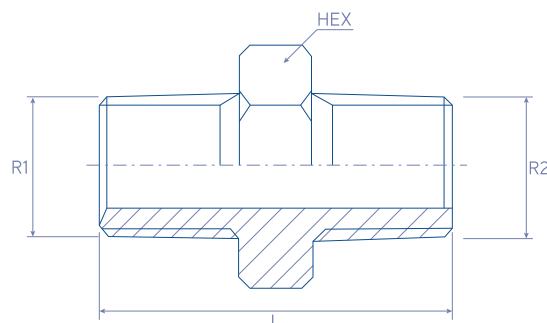
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP
INNER HEXAGON MALE PLUG (add an 'S' at
the end of the part number; ex: 52.402.16 S)

Balfit® Male BSPT Union

52.103.
ISO 8434-6



REFERENCE	thread		dimensions	
	R1	R2	L	HEX
52.103.02	1/8" - 28	1/8" - 28	27	11
52.103.04	1/4" - 19	1/4" - 19	37,1	14
52.103.06	3/8" - 19	3/8" - 19	38,9	17
52.103.08	1/2" - 14	1/2" - 14	48	22
52.103.12	3/4" - 14	3/4" - 14	50,1	27
52.103.16	1" - 11	1" - 11	61,8	36

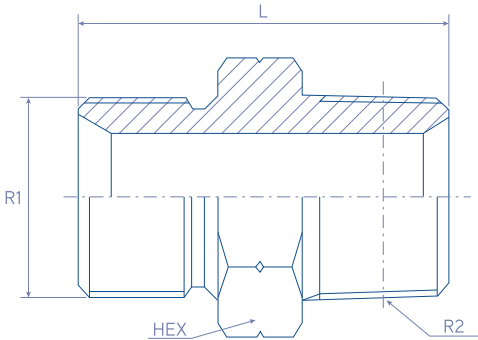
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE BSPT UNION (add an 'S' at the end of
the part number; ex: 52.103.24 S)

Balfit® Male BSP x Male BSPT Connector

52.1200.
ISO 8434-6



REFERENCE	thread		dimensions	
	R1	R2	L	HEX
52.1200.04	1/4" - 19	1/4" - 19	32	18
52.1200.06	3/8" - 19	3/8" - 19	35,2	22
52.1200.08	1/2" - 14	1/2" - 14	41,8	27
52.1200.12	3/4" - 14	3/4" - 14	46	32
52.1200.16	1" - 11	1" - 11	55	40
52.1200.20	1-1/4" - 11	1-1/4" - 11	56,6	50
52.1200.24	1-1/2" - 11	1-1/2" - 11	59,4	55
52.1200.32	2" - 11	2" - 11	66,8	70

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

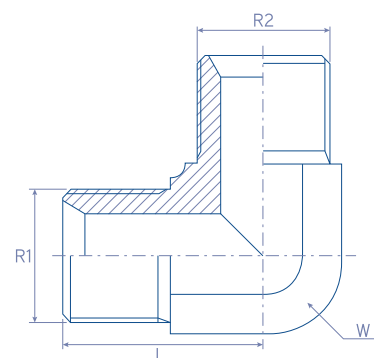
VERSIONS: BALFIT® STAINLESS STEEL
MALE BSP X MALE BSPT CONNECTOR (add
an 'S' at the end of the part number; ex:
52.1200.24 S)



Balfit® Male 90° BSP Union

53.100.

ISO 8434-6



REFERENCE	thread		dimensions	
	R1	R2	L	W
53.100.0202	1/8" - 28	1/8" - 28	19,3	11
53.100.0404	1/4" - 19	1/4" - 19	23,2	14
53.100.0606	3/8" - 19	3/8" - 19	28,5	19
53.100.0808	1/2" - 14	1/2" - 14	32,5	22
53.100.1010	5/8" - 14	5/8" - 14	34,5	22
53.100.1212	3/4" - 14	3/4" - 14	37,2	27
53.100.1616	1" - 11	1" - 11	41,1	33
53.100.2020	1-1/4" - 11	1-1/4" - 11	49,5	41
53.100.2424	1-1/2" - 11	1-1/2" - 11	55	48
53.100.3232	2" - 11	2" - 11	60,5	58

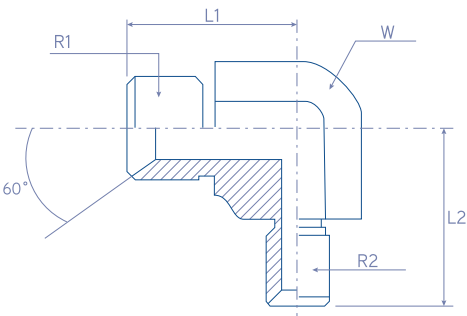
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE 90° BSP UNION (add an 'S' at the end
of the part number; ex: 53.100.2424 S)

Balfit® Male 90° BSP Union Reduction

53.101.
ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L1	L2	W
53.101.0402	1/4" - 19	1/8" - 28	24	23,2	14
53.101.0602	3/8" - 19	1/4" - 19	27	26,8	19
53.101.0604	3/8" - 19	1/4" - 19	27	26,8	19
53.101.0804	1/2" - 14	1/4" - 19	32	26,8	22
53.101.0806	1/2" - 14	3/8" - 19	32	30,7	22
53.101.1008	5/8" - 14	1/2" - 14	38	35,2	27
53.101.1204	3/4" - 14	1/4" - 19	36	26,8	27
53.101.1206	3/4" - 14	3/8" - 19	36	33	27
53.101.1208	3/4" - 14	1/2" - 14	36	35,2	27
53.101.1210	3/4" - 14	5/8" - 14	36	38	27
53.101.1608	1" - 11	1/2" - 14	42	34	33
53.101.1612	1" - 11	3/4" - 14	42	38	33
53.101.2012	1.1/4" - 11	3/4" - 14	48	38	41
53.101.2016	1.1/4" - 11	1" - 11	48	48	41
53.101.2412	1.1/2" - 11	3/4" - 14	55	38	48
53.101.2416	1.1/2" - 11	1" - 11	55	48	48
53.101.2420	1.1/2" - 11	1.1/4" - 11	55	51,5	48
53.101.3216	2" - 11	1" - 11	60,5	48	58
53.101.3220	2" - 11	1.1/4" - 11	60,5	51,5	58
53.101.3224	2" - 11	1.1/2" - 11	60,5	60,5	58

MATERIAL: Carbon Steel

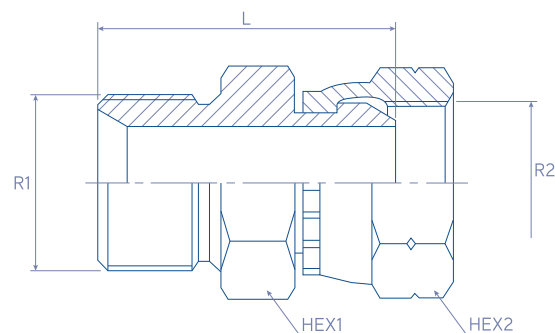
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE 90° BSP UNION REDUCTION
(add an 'S' at the end of the part number;
ex: 53.101.0402 S)



Balfit® Male x Swivel Female BSP Adapter

52.500.
ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L	HEX1	HEX2
52.500.02	1/8" - 28	1/8" - 28	29,5	14	14
52.500.0204	1/8" - 28	1/4" - 19	31,5	18	14
52.500.04	1/4" - 19	1/4" - 19	33	18	18
52.500.0402	1/4" - 19	1/8" - 28	32	14	18
52.500.0406	1/4" - 19	3/8" - 19	36,2	22	18
52.500.06	3/8" - 19	3/8" - 19	37,7	22	22
52.500.0604	3/8" - 19	1/4" - 19	35	22	18
52.500.0608	3/8" - 19	1/2" - 14	40	22	27
52.500.08	1/2" - 14	1/2" - 14	44,1	27	27
52.500.0804	1/2" - 14	1/4" - 19	39,2	22	27
52.500.0806	1/2" - 14	3/8" - 19	41,7	22	27
52.500.0810	1/2" - 14	3/8" - 14	46,5	27	27
52.500.0812	1/2" - 14	3/4" - 14	46,5	32	27
52.500.10	5/8" - 14	5/8" - 14	45	27	27
52.500.12	3/4" - 14	3/4" - 14	49	32	32
52.500.1208	3/4" - 14	1/2" - 14	46,5	27	32
52.500.1216	3/4" - 14	1" - 11	53,5	40	32
52.500.16	1" - 11.5	1" - 11	55	40	40
52.500.1612	1" - 11.5	3/4" - 14	51	32	38
52.500.1620	1" - 11	1.1/4" - 11	56,9	50	38
52.500.20	1.1/4" - 11.5	1.1/4" - 11	59,9	50	50
52.500.2012	1.1/4" - 11	3/4" - 14	55	40	50
52.500.2016	1.1/4" - 11	1" - 11	58	40	50
52.500.2024	1.1/4" - 11	1.1/2" - 11	62	55	50
52.500.24	1.1/2" - 11.5	1.1/2" - 11	64	55	55
52.500.2420	1.1/2" - 11	1.1/4" - 11	64	50	55
52.500.32	2" - 11.5	2" - 11	71,5	70	70
52.500.3220	2" - 11	1.1/4" - 11	63,5	60	70

MATERIAL: Carbon Steel

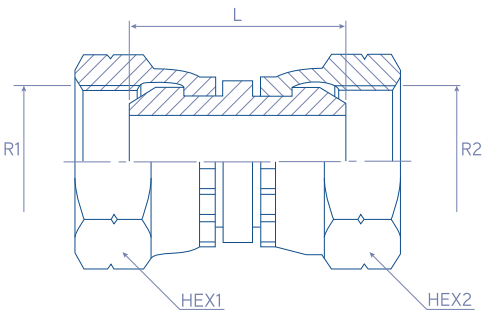
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
MALE X SWIVEL FEMALE BSP ADAPTER
(add an 'S' at the end of the part number; ex:
52.500.12 S)

Balfit® Swivel Female x Female BSP Adapter

52.502.

ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L	HEX1	HEX2
52.502.02	1/8" – 28	1/8" – 28	34	14	14
52.502.04	1/4" – 19	1/4" – 19	39	18	18
52.502.06	3/8" – 19	3/8" – 19	43,2	22	22
52.502.08	1/2" – 14	1/2" – 14	51,6	27	27
52.502.12	3/4" – 14	3/4" – 14	56,5	32	32
52.502.16	1" – 11	1" – 11	61	38	38
52.502.20	1-1/4" – 11	1-1/4" – 11	68	50	50
52.502.24	1-1/2" – 11	1-1/2" – 11	76	55	55
52.502.32	2" – 11	2" – 11	78	70	70

MATERIAL: Carbon Steel

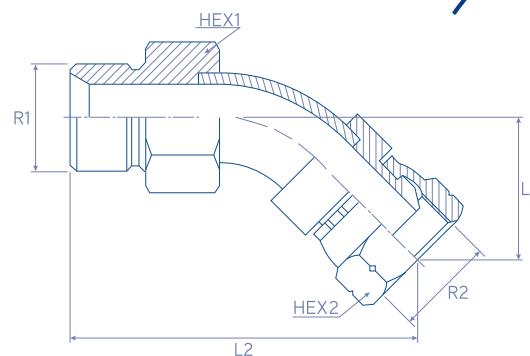
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
SWIVEL FEMALE X FEMALE BSP ADAPTER
(add an 'S' at the end of the part number; ex:
52.502.12 S)



Balfit® 45° Elbow Male x Swivel Female BSP

52.545.
ISO 8434-6



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	HEX1	HEX2
52.545.04	1/4" - 19	1/4" - 19	20	47	18	16
52.545.06	3/8" - 19	3/8" - 19	22	53	22	22
52.545.08	1/2" - 14	1/2" - 14	27	60	27	27
52.545.12	3/4" - 14	3/4" - 14	30	70	32	32
52.545.16	1" - 11	1" - 11	32	90	40	36
52.545.20	1-1/4" - 11	1-1/4" - 11	44	99	50	50
52.545.24	1-1/2" - 11	1-1/2" - 11	51	124	60	55
52.545.32	2" - 11	2" - 11	59	145	70	70

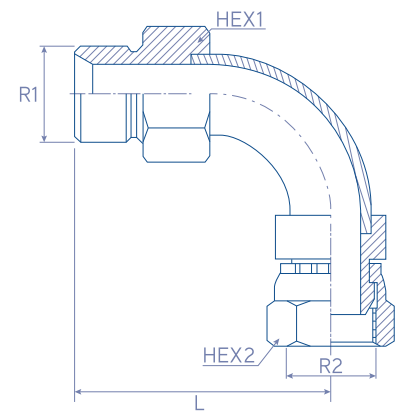
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 45°
ELBOW MALE X SWIVEL FEMALE BSP (add
an 'S' at the end of the part number;
ex: 52.545.12 S)

Balfit® 90° Elbow Male x Swivel Female BSP

52.590.
ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L	HEX1	HEX2
52.590.04	1/4" – 19	1/4" – 19	36	18	18
52.590.06	3/8" – 19	3/8" – 19	36	22	22
52.590.08	1/2" – 14	1/2" – 14	49	27	27
52.590.12	3/4" – 14	3/4" – 14	63	32	32
52.590.16	1" – 11	1" – 11	75	36	36
52.590.20	1-1/4" – 11	1-1/4" – 11	82	50	50
52.590.24	1-1/2" – 11	1-1/2" – 11	96	55	55
52.590.32	2" – 11	2" – 11	122	70	70

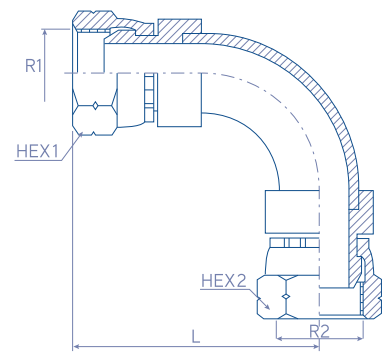
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 90° ELBOW MALE X SWIVEL FEMALE BSP
(add an 'S' at the end of the part number;
ex: 52.590.12 S)

Balfit® 90° Elbow Swivel Female BSP

52.592.
ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L	HEX1	HEX2
52.592.04	1/4" – 19	1/4" – 19	36	18	18
52.592.06	3/8" – 19	3/8" – 19	42	22	22
52.592.08	1/2" – 14	1/2" – 14	49	27	27
52.592.12	3/4" – 14	3/4" – 14	63	32	32
52.592.16	1" – 11	1" – 11	75	36	36
52.592.20	1-1/4" – 11	1-1/4" – 11	82	50	50
52.592.24	1-1/2" – 11	1-1/2" – 11	96	55	55
52.592.32	2" – 11	2" – 11	122	70	70

MATERIAL: Carbon Steel

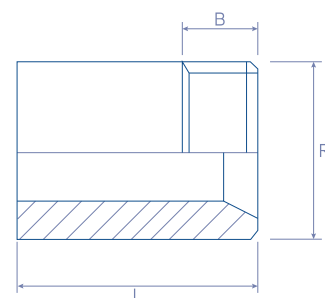
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 90° ELBOW SWIVEL FEMALE BSP (add an 'S' at the end of the part number; ex: 52.592.12 S)



Balfit® BSP Male Welding Bosses

52.806.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	B
52.806.02	1/8" - 28	18	8
52.806.04	1/4" - 19	21	10
52.806.06	3/8" - 19	25	12
52.806.08	1/2" - 14	27	14
52.806.12	3/4" - 14	31	16
52.806.16	1" - 11	33	18

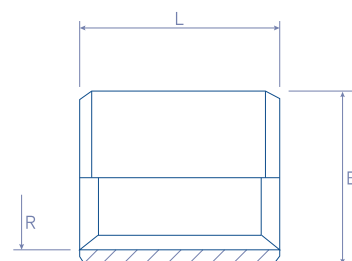
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP MALE WELDING BOSSES (add an 'S' at the end of the part number; ex: 52.806.12 S)

Balfit® BSP Female Welding Bosses

52.807.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	B
52.807.02	1/8" - 28	18	14
52.807.04	1/4" - 19	22	18
52.807.06	3/8" - 19	25	25
52.807.08	1/2" - 14	32	30
52.807.12	3/4" - 14	35	35
52.807.16	1" - 11	38	42
52.807.20	1-1/4" - 11	40	50
52.807.24	1-1/2" - 11	43	60
52.807.32	2" - 11	47	70

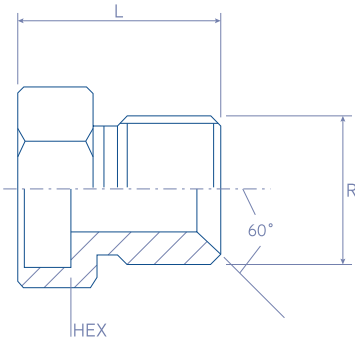
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP FEMALE WELDING BOSSES (add an 'S' at the end of the part number; ex: 52.807.12 S)

Balfit® BSP Hexagon Male Welding Bosses

52.808.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	HEX
52.808.02	1/8" – 28	17	14
52.808.04	1/4" – 19	18	18
52.808.06	3/8" – 19	20	22
52.808.08	1/2" – 14	22	27
52.808.12	3/4" – 14	26	32
52.808.16	1" – 11	31	40
52.808.20	1-1/4" – 11	37	50
52.808.24	1-1/2" – 11	39	60
52.808.32	2" – 11	43	70

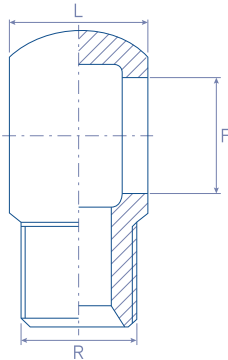
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP
HEXAGON MALE WELDING BOSSES
(add an 'S' at the end of the part number;
ex: 52.808.12 S)

Balfit® BSP Threaded Banjo Eye

52.800.
carbon steel BSP threaded banjo eye



REFERENCE	thread	dimensions	
	R	L	F
52.800.02	1/8" – 28	10	10
52.800.04	1/4" – 19	14	13.4
52.800.06	3/8" – 19	17.5	17
52.800.08	1/2" – 14	22	21
52.800.12	3/4" – 14	28	26.5
52.800.16	1" – 11	38	33.5
52.800.20	1.1/4" – 11	45	42.2
52.800.24	1.1/2" – 11	50	48

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

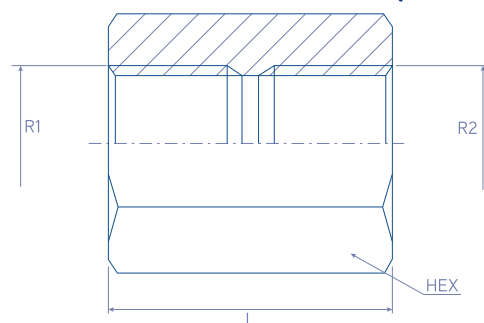
VERSIONS: BALFIT® STAINLESS STEEL BSP
THREADED BANJO EYE (add an 'S' at the
end of the part number; ex: 52.800.12 S)



Balfit® BSPP Female Union

52.3000.

ISO 8434-6



REFERENCE	thread		dimensions	
	R1	R2	L	HEX
52.3000.0202	1/8" - 28	1/8" - 28	22	14
52.3000.0402	1/4" - 19	1/8" - 28	21	18
52.3000.0404	1/4" - 19	1/4" - 19	22	17
52.3000.0602	3/8" - 19	1/8"	25	22
52.3000.0604	3/8" - 19	1/4"	27	22
52.3000.0606	3/8" - 19	3/8" - 19	27	22
52.3000.0802	1/2" - 14	1/8"	30	27
52.3000.0804	1/2" - 14	1/4"	30	27
52.3000.0806	1/2" - 14	3/6"	32	27
52.3000.0808	1/2" - 14	1/2" - 14	31	27
52.3000.1204	3/4" - 14	1/4"	35	32
52.3000.1206	3/4"	3/8"	35	32
52.3000.1208	3/4"	1/2"	36	32
52.3000.1212	3/4" - 14	3/4" - 14	35	32
52.3000.1608	1"	1/2"	38	40
52.3000.1612	1"	3/4"	40	40
52.3000.1616	1" - 11	1" - 11	39	40
52.3000.2012	1.1/4"	3/4"	44	50
52.3000.2016	1.1/4"	1"	45	50
52.3000.2020	1-1/4" - 11	1-1/4" - 11	41	50
52.3000.2416	1.1/2"	1"	45	60
52.3000.2420	1.1/2"	1.1/4"	45	60
52.3000.2424	1-1/2" - 11	1-1/2" - 11	46	60
52.3000.3220	2"	1.1/4"	47	70
52.3000.3224	2"	1.1/2"	48	70
52.3000.3232	2" - 11	2" - 11	52	70

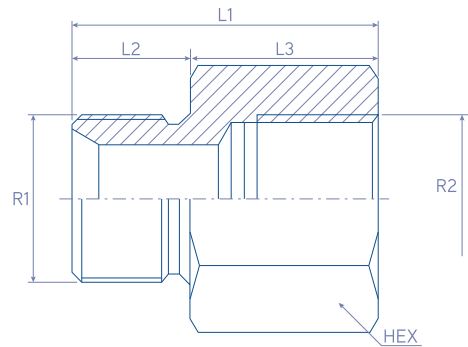
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
BSPP FEMALE UNION (add an 'S' at the end
of the part number; ex: 52.3000.1212 S)

Balfit® BSPP Male x BSP Fixed Female Adapter

52.5000.
ISO 8434-6



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	L3	HEX
52.5000.02	1/8" – 28	1/8" – 28	25	10	15	14
52.5000.0204	1/8" – 28	1/4" – 19	28	10	18	18
52.5000.0206	1/8" – 28	3/8" – 19	32	10	22	22
52.5000.0208	1/8" – 28	1/2" – 14	34	10	24	27
52.5000.04	1/4" – 19	1/4" – 19	30	10	20	18
52.5000.0402	1/4" – 19	1/8" – 28	25	10	15	18
52.5000.0406	1/4" – 19	3/8" – 19	32	10	22	22
52.5000.0408	1/4" – 19	1/2" – 14	34	10	24	27
52.5000.0412	1/4" – 19	3/4" – 14	37	10	27	32
52.5000.0416	1/4" – 19	1" – 11	40	10	30	40
52.5000.06	3/8" – 19	3/8" – 19	34	12	22	22
52.5000.0602	3/8" – 19	1/8" – 28	27	12	15	22
52.5000.0604	3/8" – 19	1/4" – 19	30	12	18	22
52.5000.0608	3/8" – 19	1/2" – 14	36	12	24	27
52.5000.0612	3/8" – 19	3/4" – 14	39	12	27	32
52.5000.0616	3/8" – 19	1" – 11	42	12	30	40
52.5000.08	1/2" – 14	1/2" – 14	38	14	24	27
52.5000.0802	1/2" – 14	1/8" – 28	29	14	15	27
52.5000.0804	1/2" – 14	1/4" – 19	32	14	18	27
52.5000.0806	1/2" – 14	3/8" – 19	36	14	22	27
52.5000.0812	1/2" – 14	3/4" – 14	41	14	27	32
52.5000.0816	1/2" – 14	1" – 11	44	14	30	40
52.5000.12	3/4" – 14	3/4" – 14	43	16	27	32
52.5000.1204	3/4" – 14	1/4" – 19	34	16	18	32
52.5000.1206	3/4" – 14	3/8" – 19	38	16	22	32
52.5000.1208	3/4" – 14	1/2" – 14	40	16	24	32
52.5000.1216	3/4" – 14	1" – 11	46	16	30	40
52.5000.1220	3/4" – 14	1.1/4" – 11	48	16	32	50
52.5000.16	1" – 11	1" – 11	49	19	30	40
52.5000.1606	1" – 11	3/8" – 19	41	19	22	40
52.5000.1608	1" – 11	1/2" – 14	43	19	24	40
52.5000.1612	1" – 11	3/4" – 14	46	19	27	40
52.5000.1620	1" – 11	1.1/4" – 11	51	19	32	50
52.5000.1624	1" – 11	1.1/2" – 11	53	19	34	55



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	C	HEX
52.5000.2016	1.1/4" – 11	1" – 11	52	20	32	50
52.5000.2024	1.1/4" – 11	1.1/2" – 11	54	20	34	55
52.5000.2032	1.1/4" – 11	2" – 11	56	20	36	70
52.5000.24	1.1/2" – 11		56	22	34	55
52.5000.2420	1.1/2" – 11	1.1/4" – 11	56	22	34	55
52.5000.2432	1.1/2" – 11	2" – 11	58	22	36	70
52.5000.32	2" – 11	2" – 11	61	25	36	70
52.5000.3224	2" – 11	1.1/2" – 11	61	25	36	70

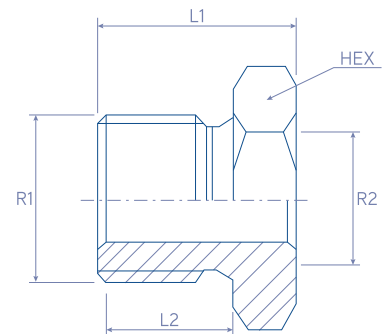
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
BSPP MALE X BSP FIXED FEMALE
ADAPTER (add an 'S' at the end of the part
number; ex: 52.5000.0812 S)

Balfit® BSPP Male x BSP Fixed Female Adapter

52.5001.
ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L1	L2	HEX
52.5001.0402	1/4" -19	1/8"-28	15	10	18
52.5001.0602	3/8" - 19	1/8"-28	17	12	22
52.5001.0604	3/8" - 19	1/4" - 19	17	12	22
52.5001.0804	1/2" - 14	1/4" - 19	20	14	27
52.5001.0806	1/2" - 14	3/8" - 19	20	14	27
52.5001.1204	3/4" - 14	1/4" - 19	23	16	32
52.5001.1206	3/4" - 14	3/8" - 19	23	16	32
52.5001.1208	3/4" - 14	1/2" - 14	23	16	32
52.5001.1604	1" - 11	1/4" - 19	26	18	40
52.5001.1606	1" - 11	3/8" - 19	26	18	40
52.5001.1608	1" - 11	1/2" - 14	26	18	40
52.5001.1612	1" - 11	3/4" - 14	26	18	40
52.5001.2008	1.1/4" - 11	1/2" - 14	28	19	50
52.5001.2012	1.1/4" - 11	3/4" - 14	28	19	50
52.5001.2016	1.1/4" - 11	1" - 11	28	19	50
52.5001.2408	1.1/2" - 11	1/2" - 14	30	20	55
52.5001.2412	1.1/2" - 11	3/4" - 14	30	20	55
52.5001.2416	1.1/2" - 11	1" - 11	30	20	55
52.5001.2420	1.1/2" - 11	1.1/4" - 11	30	20	55
52.5001.3216	2" - 11	1" - 11	34	22	70
52.5001.3220	2" - 11	1.1/4" - 11	34	22	70
52.5001.3224	2" - 11	1.1/2" - 11	34	22	70

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

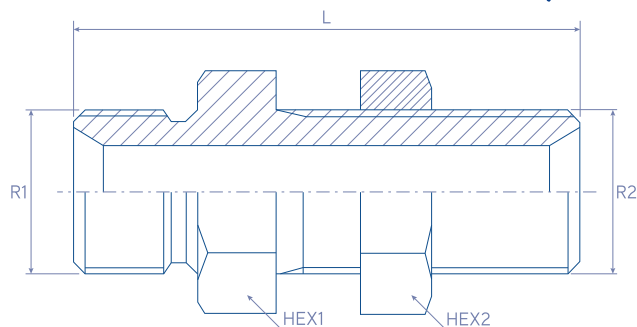
VERSIONS: BALFIT® STAINLESS STEEL
BSPP MALE X BSP FIXED FEMALE
ADAPTER (add an 'S' at the end of the part
number; ex: 52.5001.0806 S)



Balfit® BSP Bulkhead Connector

52.5003.

ISO 8434-6



REFERENCE	thread		dimensions		
	R1	R2	L	HEX1	HEX2
52.5003.04	1/4" - 19	1/4" - 19	48,4	19	19
52.5003.06	3/8" - 19	3/8" - 19	54,2	22	22
52.5003.08	1/2" - 14	1/2" - 14	61	27	27
52.5003.12	3/4" - 14	3/4" - 14	66,2	32	32
52.5003.16	1" - 11	1" - 11	74,2	38	38

MATERIAL: Carbon Steel

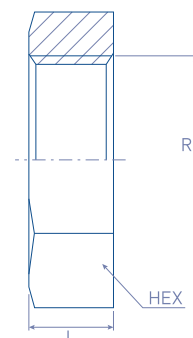
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP BULKHEAD CONNECTOR (add an 'S' at the end of the part number; ex: 52.5003.06 S)

Balfit® BSP Locknut

52.5004.

ISO 8434-6



REFERENCE	thread	dimensions	
		L	HEX
52.5004.04	1/4" - 19	7	19
52.5004.06	3/8" - 19	7	22
52.5004.08	1/2" - 14	9	27
52.5004.12	3/4" - 14	12	32
52.5004.16	1" - 11	12	38

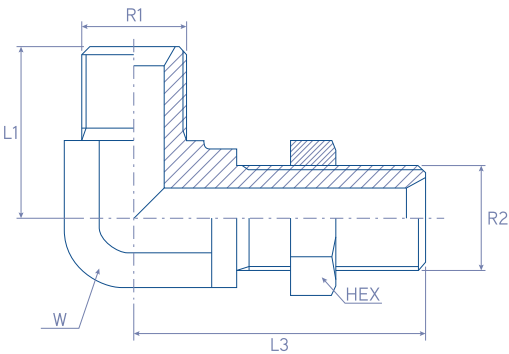
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL BSP LOCKNUT (add an 'S' at the end of the part number; ex: 52.5004.06 S)

Balfit® 90° Elbow BSP Bulkhead Connector

52.5005.
ISO 8434-6



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	W	HEX
52.5005.04	1/4" – 19	1/4" – 19	25	46	14	19
52.5005.06	3/8" – 19	3/8" – 19	30	54	19	22
52.5005.08	1/2" – 14	1/2" – 14	37	61	22	27
52.5005.12	3/4" – 14	3/4" – 14	40	68	27	32
52.5005.16	1" – 11	1" – 11	48	71	33	38
52.5005.20	1.1/4" – 11	1.1/4" – 11	50	79	41	50

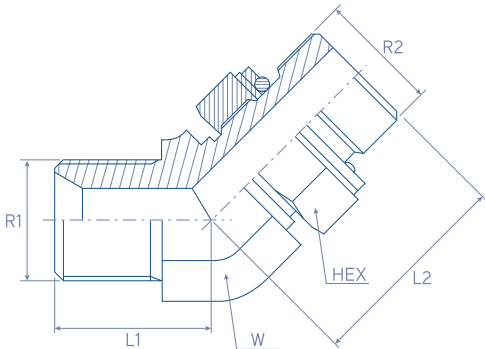
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 90°
ELBOW BSP BULKHEAD CONNECTOR
(add an 'S' at the end of the part number;
ex: 52.5005.06 S)

Balfit® 45° Elbow BSP Adjustable Connector

52.7008.
ISO 8434-6



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	W	HEX
52.7008.02	1/8" – 28	1/8" – 28	25,5	14,8	11	14
52.7008.04	1/4" – 19	1/4" – 19	29	19,8	14	18
52.7008.06	3/8" – 19	3/8" – 19	33	23,3	19	22
52.7008.08	1/2" – 14	1/2" – 14	39	25,5	22	27
52.7008.12	3/4" – 14	3/4" – 14	42,3	29,3	27	32
52.7008.16	1" – 11	1" – 11	47	37	33	38
52.7008.20	1.1/4" – 11	1.1/4" – 11	48,5	35,5	41	50
52.7008.24	1.1/2" – 11	1.1/2" – 11	58,2	45,2	48	55

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

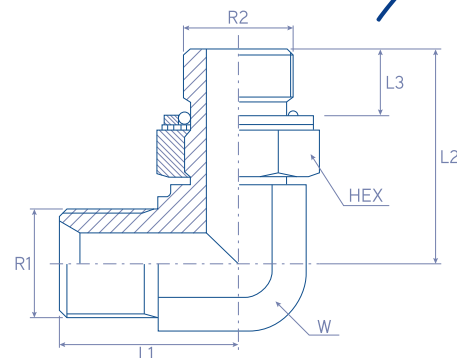
VERSIONS: BALFIT® STAINLESS STEEL 45°
ELBOW ADJUSTABLE BSPP MALE
(add an 'S' at the end of the part number;
ex: 52.7008.06 S)



Balfit® 90° Elbow Adjustable BSPP Male

52.7009.

ISO 8434-6



REFERENCE	thread		dimensions				
	R1	R2	L1	L2	L3	W	HEX
52.7009.02	1/8" - 28	1/8" - 28	19	26	6	11	14
52.7009.04	1/4" - 19	1/4" - 19	25	32	10	14	19
52.7009.06	3/8" - 19	3/8" - 19	30	37	10	19	22
52.7009.08	1/2" - 14	1/2" - 14	36	44	13	22	27
52.7009.12	3/4" - 14	3/4" - 14	39	50	13	27	36
52.7009.16	1" - 11	1" - 11	46	54	16	33	41
52.7009.20	1-1/4" - 11	1-1/4" - 11	50	57	16	41	50
52.7009.24	1-1/2" - 11	1-1/2" - 11	55	63	16	48	55

MATERIAL: Carbon Steel

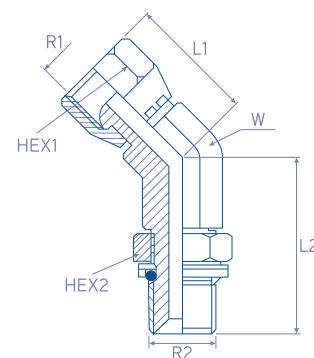
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 90° ELBOW ADJUSTABLE BSPP MALE
(add an 'S' at the end of the part number;
ex: 52.7009.06 S)

Balfit® 45° Elbow Adjustable BSPP Male x Female

52.7011.

ISO 8434-6



REFERENCE	thread		dimensions				
	R1	R2	L1	L2	W	HEX1	HEX2
52.7011.02	1/8" - 28	1/8" - 28	23,5	18	11	14	14
52.7011.04	1/4" - 19	1/4" - 19	26	21	14	18	18
52.7011.06	3/8" - 19	3/8" - 19	34	25	19	22	22
52.7011.08	1/2" - 14	1/2" - 14	36	28	22	27	27
52.7011.12	3/4" - 14	3/4" - 14	39	33	27	32	32
52.7011.16	1" - 11	1" - 11	39	37	33	38	38

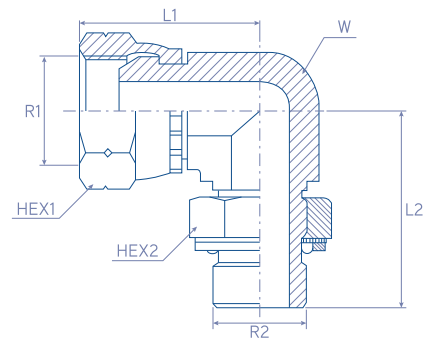
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 45° ELBOW ADJUSTABLE BSPP MALE X FEMALE (add an 'S' at the end of the part number; ex: 52.7011.06 S)

Balfit® 90° Elbow Adjustable BSPP Male x Female

52.7010.
ISO 8434-6



REFERENCE	thread		dimensions				
	R1	R2	L1	L2	W	HEX1	HEX2
52.7010.02	1/8" - 28	1/8" - 28	24	26	11	14	14
52.7010.04	1/4" - 19	1/4" - 19	29	32	14	18	18
52.7010.06	3/8" - 19	3/8" - 19	31	37	19	22	22
52.7010.08	1/2" - 14	1/2" - 14	41	44	22	27	27
52.7010.12	3/4" - 14	3/4" - 14	46	50	27	32	32
52.7010.16	1" - 11	1" - 11	49	54	33	38	38
52.7010.20	1-1/4" - 11	1-1/4" - 11	58	57	41	50	50

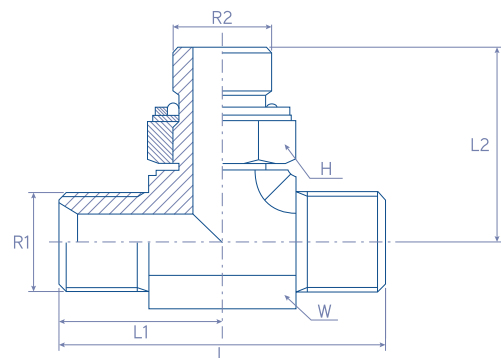
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
90° ELBOW ADJUSTABLE BSPP MALE X
FEMALE (add an 'S' at the end of the part
number; ex: 52.7010.06 S)

Balfit® BSPP Male Adjustable Branch Tee

52.7012.
ISO 8434-6



REFERENCE	thread	dimensions				
	R1	L	L1	L2	W	HEX
52.7012.020202	1/8" - 28	40	26	20	11	14
52.7012.040404	1/4" - 19	52	32	26	14	19
52.7012.060606	3/8" - 19	60	37	30	19	22
52.7012.080808	1/2" - 14	72	43	36	22	27
52.7012.121212	3/4" - 14	78	50	39	27	36
52.7012.161616	1" - 11	92	52	46	33	41
52.7012.202020	1-1/4" - 11	99	57	49,5	41	50

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

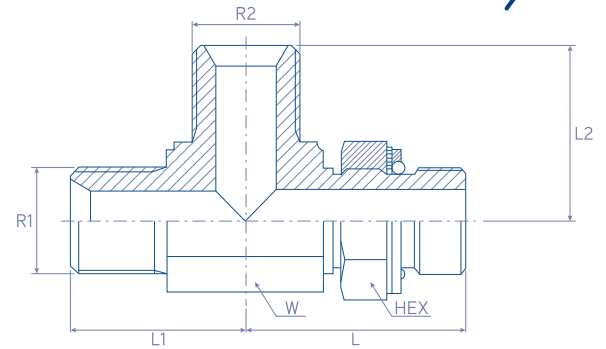
VERSIONS: BALFIT® STAINLESS STEEL
BSPP MALE ADJUSTABLE BRANCH AND
RUN TEE (add an 'S' at the end of the part
number; ex: 52.7012.06 S)



Balfit® BSPP Male Adjustable Run Tee

52.7013.

ISO 8434-6



REFERENCE	thread	dimensions				
	R1	L	L1	L2	W	HEX
52.7013.020202	1/8" – 28	46	26	20	11	14
52.7013.040404	1/4" – 19	58	32	26	14	19
52.7013.060606	3/8" – 19	67	37	30	19	22
52.7013.080808	1/2" – 14	79	43	36	22	27
52.7013.121212	3/4" – 14	88,5	49,5	39	27	36
52.7013.161616	1" – 11	98	52	46	33	41
52.7013.202020	1.1/4" – 11	106,5	57	49,5	41	50

MATERIAL: Carbon Steel

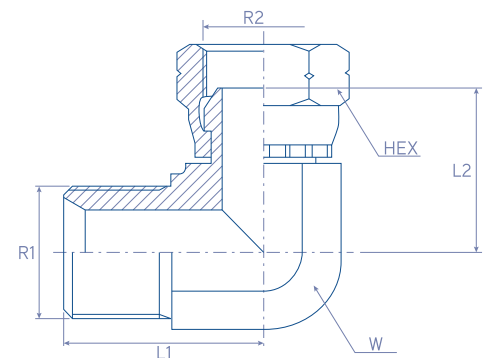
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
BSPP MALE ADJUSTABLE BRANCH AND
RUN TEE (add an 'S' at the end of the part
number; ex: 52.7013.06 S)

Balfit® 90° Elbow BSPP Male x Female

53.110.

ISO 8434-6



REFERENCE	thread		dimensions			
	R1	R2	L1	L2	W	HEX
53.110.0202	1/8" – 28	1/8" – 28	23,5	19,3	11	14
53.110.0404	1/4" – 19	1/4" – 19	29	25	14	18
53.110.0606	3/8" – 19	3/8" – 19	34	30	19	22
53.110.0808	1/2" – 14	1/2" – 14	40	34,5	22	27
53.110.1212	3/4" – 14	3/4" – 14	51,5	39	27	32
53.110.1616	1" – 11	1" – 11	48,5	45	33	38
53.110.2020	1.1/4" – 11	1.1/4" – 11	57	50	41	50
53.110.2424	1.1/2" – 11	1.1/2" – 11	62	55	48	60
53.110.3232	2" – 11	2" – 11	70	62	58	70

MATERIAL: Carbon Steel

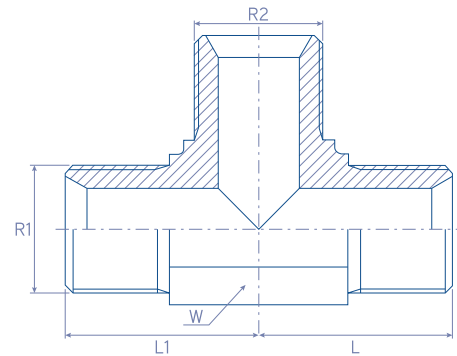
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL 90°
ELBOW BSPP MALE X FEMALE (add an 'S' at
the end of the part number; ex: 53.110.0606 S)

Balfit® Union BSPP Male Tee

53.300.

ISO 8434-6



REFERENCE	thread	dimensions		
	R	L	L1	W
53.300.020202	1/8" - 28	40	20	11
53.300.040404	1/4" - 19	50	25	14
53.300.060606	3/8" - 19	60	30	19
53.300.080808	1/2" - 14	69	34,5	22
53.300.121212	3/4" - 14	80	40	27
53.300.161616	1" - 11	92	46	33
53.300.202020	1.1/4" - 11	99	49,5	41
53.300.242424	1.1/2" - 11	110	55	48
53.300.323232	2.1" - 11	124	62	58

MATERIAL: Carbon Steel

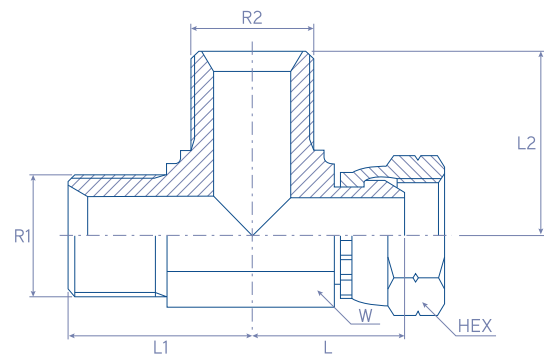
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
UNION BSPP MALE TEE (add an 'S' at the
end of the part number; ex: 53.300.06 S)

Balfit® Swivel BSP Run Tee

53.4011.

ISO 8434-6



REFERENCE	thread		dimensions				
	R1	R2	L	L1	L2	W	HEX
53.4011.020202	1/8" - 28	1/8" - 28	43,5	25	20	11	14
53.4011.040404	1/4" - 19	1/4" - 19	54	29	25	14	18
53.4011.060606	3/8" - 19	3/8" - 19	64	34	30	19	22
53.4011.080808	1/2" - 14	1/2" - 14	74,5	40	34,5	22	27
53.4011.121212	3/4" - 14	3/4" - 14	85	46	39	27	32
53.4011.161616	1" - 11	1" - 11	96	50	46	33	38
53.4011.202020	1.1/4" - 11	1.1/4" - 11	103,5	54	49,5	41	50
53.4011.242424	1.1/2" - 11	1.1/2" - 11	120	65	55	48	60
53.4011.323232	2" - 11	2" - 11	132	70	62	58	70

MATERIAL: Carbon Steel

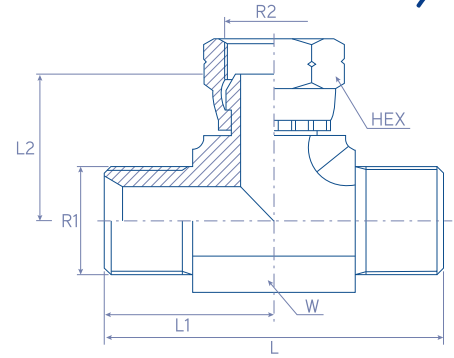
FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
SWIVEL BSP RUN TEE (add an 'S' at the end
of the part number; ex: 53.4011.06 S)



Balfit® Swivel BSP Branch Tee

53.4012.
ISO 8434-6



REFERENCE	thread		dimensions				
	R1	R2	L	L1	L2	W	HEX
53.4012.020202	1/8" - 28	1/8" - 28	40	20	23,5	11	14
53.4012.040404	1/4" - 19	1/4" - 19	50	25	29	14	18
53.4012.060606	3/8" - 19	3/8" - 19	60	30	34	19	22
53.4012.080808	1/2" - 14	1/2" - 14	66	34,5	40	22	27
53.4012.121212	3/4" - 14	3/4" - 14	78	39	46	27	32
53.4012.161616	1" - 11	1" - 11	92	46	50	33	38
53.4012.202020	1.1/4" - 11	1.1/4" - 11	99	49,5	54	41	50
53.4012.242424	1.1/2" - 11	1.1/2" - 11	110	55	65	48	60
53.4012.323232	2" - 11	2" - 11	124	62	70	58	70

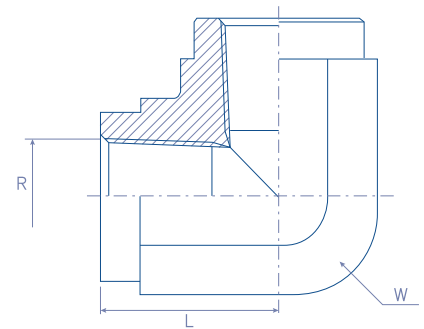
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
SWIVEL BSP BRANCH TEE (add an 'S' at the
end of the part number; ex: 53.4012.06 S)

Balfit® 90° BSPP Elbow Fixed Female Union

53.120.
ISO 8434-6



REFERENCE	thread	dimensions	
	R	L	W
53.120.0202	1/8" - 28	16	14
53.120.0404	1/4" - 19	22	19
53.120.0606	3/8" - 19	26	22
53.120.0808	1/2" - 14	31	27
53.120.1212	3/4" - 14	36	33
53.120.1616	1" - 11	44	41
53.110.2020	1.1/4" - 11	50	48
53.120.2424	1.1/2" - 11	54	58
53.110.3232	2" - 11	70	65

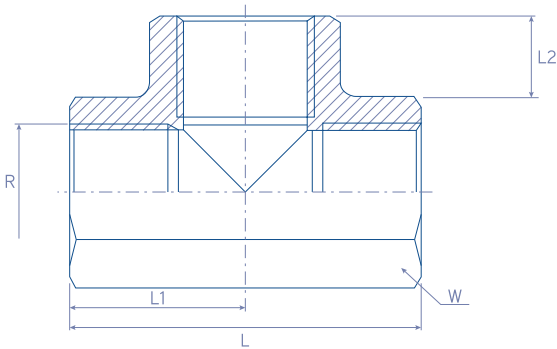
MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
90° BSPP ELBOW FIXED FEMALE UNION
(add an 'S' at the end of the part number; ex:
53.120.0606 S)

Balfit® Fixed Female BSPP Tee

53.302.
ISO 8434-6



REFERENCE	thread	dimensions			
	R	L	L1	L2	W
53.302.020202	1/8" – 28	33	16,5	10	14
53.302.040404	1/4" – 19	44	22	11	19
53.302.060606	3/8" – 19	52	26	13	22
53.302.080808	1/2" – 14	62	31	15	27
53.302.121212	3/4" – 14	70	35	17	33
53.302.161616	1" – 11	88	44	20	41
53.302.202020	1.1/4" – 11	100	50	23	48
53.302.242424	1.1/2" – 11	108	54	24	58
53.302.323232	2" – 11	140	70	26	66

MATERIAL: Carbon Steel

FINISH: Chromium - (VI) Free Plating

VERSIONS: BALFIT® STAINLESS STEEL
FIXED FEMALE BSPP TEE (add an 'S' at the
end of the part number; ex: 53.302.06 S)



PRODUCTS LIMITED WARRANTY

The products sold by Balflex® are warranted to our customers to be free from defects in material and workmanship when shipment at Balflex® warehouses takes place.

All warranty claims shall be made present in writing to Balflex®. Balflex® liability hereunder is limited to the purchase price of the merchandise proving to be defective or, at balflex sole discretion, to the replacement of such merchandise upon its authorized return to Balflex®.

This warranty is in lieu of and excludes all other warranties, or conditions expressed, implied, statutory or otherwise created under applicable law including, but not limited to the warranty of merchantability and the warranty of fitness for a particular purpose.

In addition, this warranty shall not apply and will be null and void to any products or portions thereof that have been subject to abuse, misuse, improper installation, maintenance or operation, electrical failure or abnormal conditions and to products that have been tampered with, altered, modified, repaired, reworked by anyone not approved by balflex or used in any other manner inconsistent with any Balflex® instructions or specifications. Balflex® disclaims any liability for any hose assemblies which have not been produced with in conformance with Balflex® assembly recommendations and parts.

In no event shall balflex have any liability whatsoever to any person, including without limitation, any immediate buyer, purchaser or other third party, for any special, punitive, incidental or consequential damages, including without limitation, profit loss or customer loss, loss or damage to physical property of customer or any other person and loss of anticipated revenue, profits, goodwill, savings or other economic loss of customer or any other person.

Specification subject to change without prior notice.
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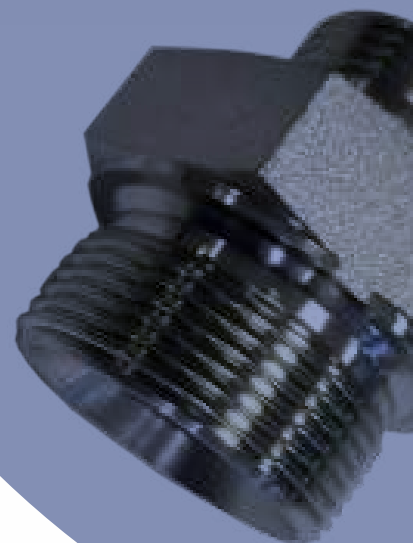
An ISO 9001:2015 Company:



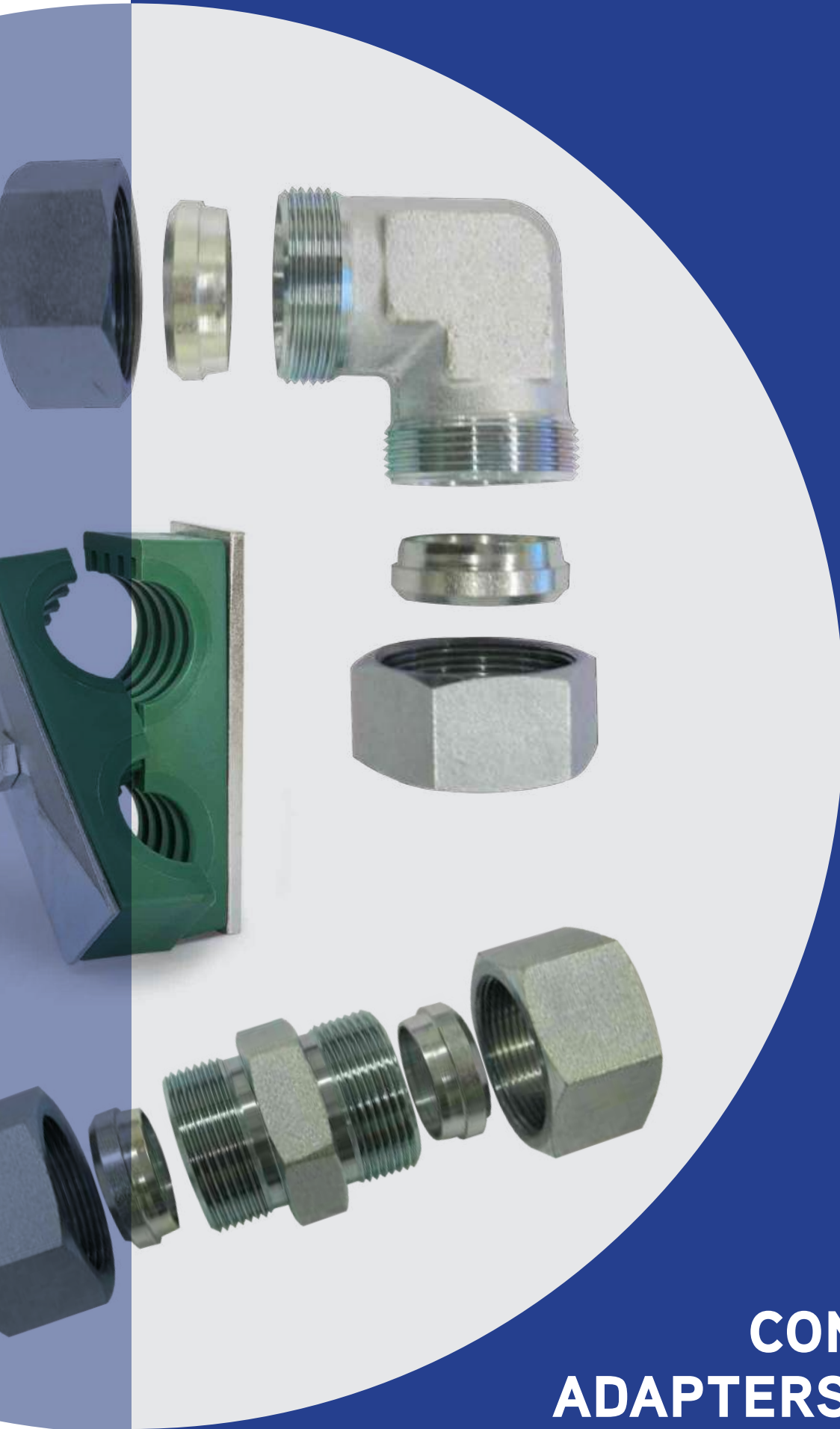
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Fundo Europeu
de Desenvolvimento Regional



Balflex[®]



**BALFLEX
24° TUBE
CONNECTORS
ADAPTERS CATALOG**

European Technology

*Established since 1963, **Balflex®** is a European international group of companies dedicated to the design, production, assembly and distribution of all types of high-tech products for conduction of fluids, measuring of pressure and power transmission at very high quality level.*

*6 decades of know-how and expertise in this field, makes **Balflex®** the first choice for the mining, agriculture, off-shore and construction industries.*

*Today the **Balflex®** Group covers worldwide users through our own company's production facilities, branches and net of certified distributors.*

Balflex® valorizes the inside meaning of the words we use: **Excellence** the quality of being outstanding; **Innovation** the action or process of innovating; **Partnership** cooperation relationship between two or more people, having in mind a common goal; **Tradition** way of thinking or acting, inherited from previous generations.





Quality

Quality is very important for us. We have fully equipped, modern laboratories and equipment, employing the industries most experienced personnel.

Balflex® has earned various certifications for our Management Systems and Products. This reliable and consistent approach has allowed us to achieve our ISO 9001:2015 certification. At Balflex® quality and service always comes first. We are dedicated to continue the development of new products with a strong emphasis on quality.

Member of:



Certified by:



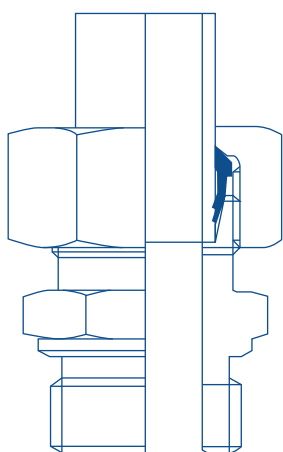
FRAS





Balfit 24° Compression Ring Hydraulic Pipe Fittings

The range of Balfit® 24° compression ring hydraulic pipe fittings is produced according to ISO 8434-1 and DIN 2353 standards. It covers a very wide variety of applications typical of hydraulic pipe pressure lines.



Balflex® optimized the production of these fittings and their compatibility with a wide range of other types of hydraulic fittings, in order to assure the highest performance and the most extensive range of applications, including BSP and taper threads included in DIN 2353 and not included in ISO 8434-1, as well NPTFF threads and banjos not foreseen in both standards, but common in industrial standards. The Balfit® hydraulic fittings program in this catalogue includes thus complete fittings (body, cutting ring and nut) with:

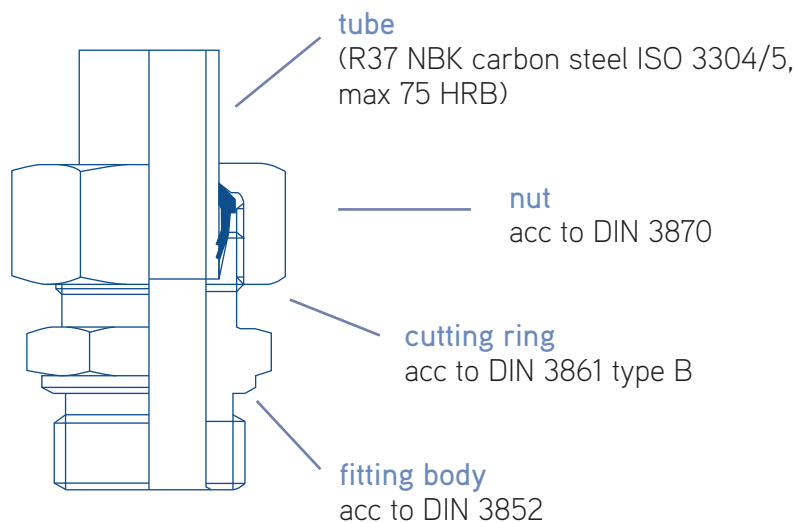
- metric parallel
- BSP parallel and taper threads
- NPTFF threads
- UNF threads

Compression ring operation principle

The compression ring (also called cutting ring) mechanical fittings assure assembly of threaded fittings to removable hydraulic tubes without any need of tapping, welding or flaring. It provides maximum assembly simplicity with perfect sealing characteristics.

Sealing is achieved through permanent deformation of the tube. The compression ring is designed to fit on the tube and into the 24° cone of the fitting body. When the nut is tightened the ring is compressed into the cone and its cutting edge bites into the tube, assuring through deformation of the tube outer wall both securement and sealing.

Balfit® compression ring fittings use DIN 3861 type B compression rings, with 2 cutting edges. This design has the advantage of providing a better balance of forces, superior sealing and added resistance to vibrations.



Assembly Instructions

The preparation sequence comprises the following 3 steps:

- a) The tube is cut square with a hack-saw (roller type saws should be avoided), leaving a straight section for assembly of the fitting with at least twice the length of the nut; the tube edges must be de-burred.
- b) All contact parts (e.g. the 24° cone, the threads and the ring) must be lubricated with an adequate product.
- c) The nut and the compression ring are inserted up the tube as in the picture above; the larger diameter of the ring must face the nut in order that the cutting edges will face the 24° cone of the fitting body.

Tubes shall conform to ISO 3304/5 R37 NBK or DIN 1630 St 37.4, with maximum hardness of HRB 75. Light wall tubes may require an insert.

Assembly should follow the instructions of DIN 3859 part 2 and is also a 3-step procedure:

- the cutting ring is made to bite the tube;
- the correct seating of the cutting ring is verified;
- the assembly is tightened.

The first step can be made either on the final application placement, using standard fitting body, or as a pre-assembly on a workbench using a specific hardened tool with the 24° cone form. The wear of pre-assembly tools has to be verified every 40 to 50 assemblies. Large diameter tubes (Ø 10 mm) should always be pre-assembled using hardened blocks. If standard fitting bodies are used, they should be replaced with each tightening.

Assembly using hardened tools comprises:

- a) To make the compression ring bite into the tube (step 1), hold the tube firmly against the 24° cone and tighten the nut 3/4 of a turn.
- b) Loosen the nut to verify (step 2) that the compression ring edges have cut into the tube (a raised edge of tube material must be clearly visible all around the tube in front of the compression ring).
- c) Tighten the tube on the pressure line (step 3) until resistance is met (which means that the previous tightening position is found); turn the nut another 1/4 of a turn for optimal pressure resistance.



Note: In step one make sure that the tube is held firmly against the cone; otherwise it will advance with the nut and the ring will not cut into its surface. Make sure also that the tube does not rotate with the nut. In a successful pre-assembly the ring may still be turned around the tube, although not moving from its placement. If the ring is not correctly secured the process has to be restarted.

Assembly on the final placement with standard fittings comprises:

- a) To make the compression ring bite into the tube (step 1), hold the tube firmly against the 24° cone tighten the nut by hand against the ring and then tighten the nut 1 1/2 turns with two wrenches.
- b) Loosen the nut to verify (step 2) that the compression ring edges have cut into the tube (a raised edge of tube material must be clearly visible all around the tube in front of the compression ring).
- c) Tighten the nut again (step 3) with the same force as in step 1.

Technical Characteristics

The **Balfit®** compression ring fittings in carbon steel are designed for petroleum based hydraulic fluids applications with a **temperature range of -20°C to +100°C**. These limits may be exceeded using other construction materials for the fittings bodies and sealing rings. Stainless steel variants of the fittings with viton seals, achieving maximum temperatures of 200° C, are listed in the catalogue pages. If other fluids are used, corrosion resistance of the fittings should be verified before application.

Pressure classes for **Balfit®** compression ring fittings follow ISO and DIN standards classification in

- **L** for light duty fittings, with a maximum working pressure of 31,5 MPa (4500 PSI); and
- **S** for heavy duty fittings, with a maximum working pressure of 63 MPa (9000 PSI).

The **safety factor of 4:1** relating minimum burst pressure to recommended working pressure applies. The working pressure for each fitting and size is listed in the catalogue pages for working temperature of 20° C. A linear de-rating factor of 12%/100°C should be used for higher working temperatures.

Compression ring fittings have good resistance to vibration. However, in presence of fluid hammering, the heavy duty fittings should be used.

Cylindrical and taper threads should be used always matched. In case of cylindrical threads used against softer materials, gasket type should always be preferred, to guarantee sealing even at low torque values.

Hose Fittings Pressure Ratings

For each type of fitting there is a maximum working pressure recommended in table below. Whenever information is not available, contact the manufacturer.

Inch Fittings (size)													
Maximum Working pressure (MPa/psi) – safety factor 4:1													
Description	Part Number	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
NPTF Male	XX.0400 XX.0410 XX.0490	34.5 5000		27.6 4000		20.7 3000	20.7 3000		17.2 2500	13.8 2000	7.9 1150	6.9 1000	6.9 1000
BSP Male	XX.0100	42.0 6090		45.0 6525		40.0 5800	40.0 5800	40.0 5800	38.0 5510	34.5 5003	24.0 3480	21.0 3045	17.2 2494

Metric Tube (mm) – Light Serie “L”											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	15	18	22	28	35	42
Metric Male	XX.1000	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450
Metric Swivel Female with O-ring	XX.5013 XX.5043 XX.5093	25.0 3625	25.0 3625	25.0 3625	25.0 3625	25.0 3625	16.0 2320	16.0 2320	10.0 1450	10.0 1450	10.0 1450

Metric Tube (mm) – Heavy Serie “S”											
Maximum Working pressure (MPa/psi) – safety factor 4:1											
Description	Part Number	6	8	10	12	14	16	20	25	30	38
Metric Male	XX.1100	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625
Metric Swivel Female with O-ring	XX.5113 XX.5143 XX.5193	63.0 9135	63.0 9135	63.0 9135	63.0 9135	63.0 9135	40.0 5800	40.0 5800	40.0 5800	25.0 3625	25.0 3625

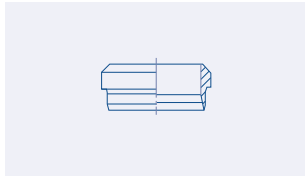
The Working Pressure of the hose assembly shall be the lower of the pressures given for its sizes in the fittings standards and in the the relevant hose specification.

Balfit 24° Compression Ring Hydraulic Pipe Fittings





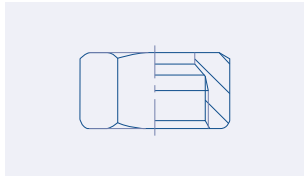
Nut, Ring & Locknut



**24° Double Edge
Compression Ring**

34.101

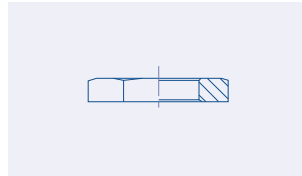
pag. 16



Tightening Nut

34.102

pag. 17

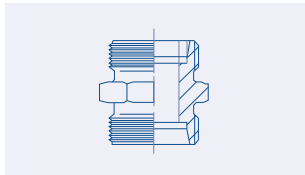


Metric Bulkhead Nut

34.179

pag. 18

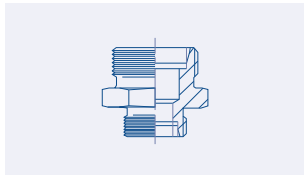
Tube to Tube



**Straight Union
Tube Connector**

34.135

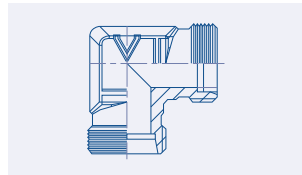
pag. 19



**Straight Reducing
Union Tube Connector**

34.141

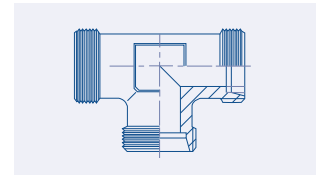
pag. 20



**90° Elbow Union
Tube Connector**

34.138

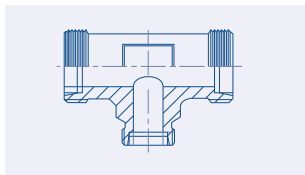
pag. 21



**Tee Union
Tube Connector**

34.139

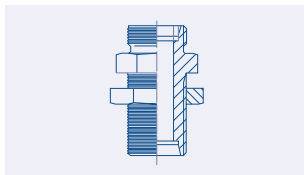
pag. 22



**Tee Reducing Union
Tube Connector**

34.145

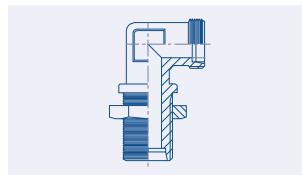
pag. 23



**Straight Bulkhead
Union Tube Connector**

34.136

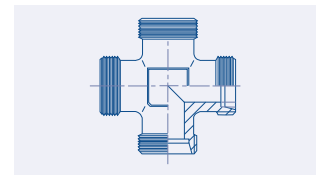
pag. 25



**90° Elbow Bulkhead
Union Tube Connector**

34.137

pag. 26

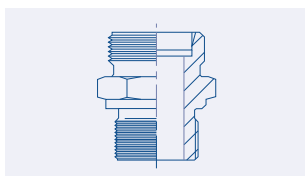


**Cross Union
Tube Connector**

34.140

pag. 27

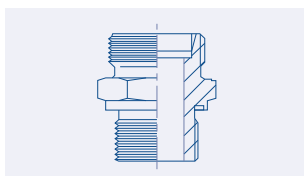
Male Stud Tube Connectors



**BSP Parallel Male
Tube Connector**

34.103

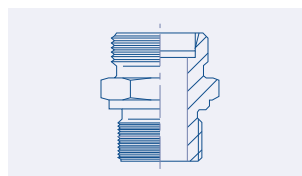
pag. 28



**BSP Parallel Male
Tube Connector with
Elastomeric Seal**

34.105

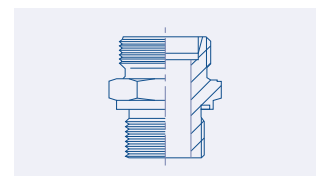
pag. 30



**Metric Male
Tube Connector**

34.104

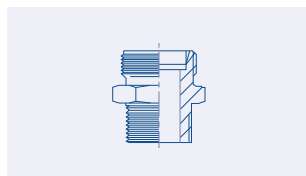
pag. 32



**Metric Male Tube
Connector with
Elastomeric Seal**

34.106

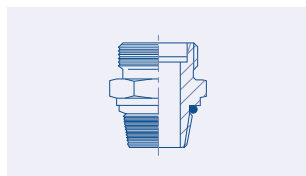
pag. 33



**BSPT Tapered Male
Tube Connector**

34.117

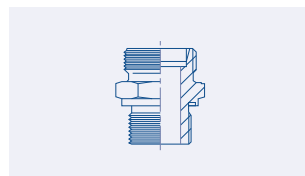
pag. 34



**NPTF Male
Tube Connector**

34.118

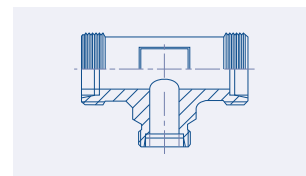
pag. 35



**UNF Male
Tube Connector**

34.161

pag. 37

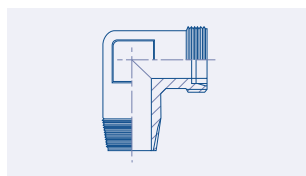


**Swivel Reducing
Tube Connector**

34.153

pag. 38

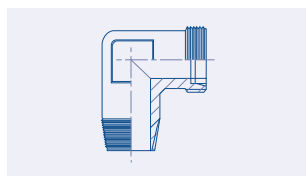
Elbow Male Tube Connectors



**BSPT Tapered 90° Elbow
Male Tube Connector**

34.120

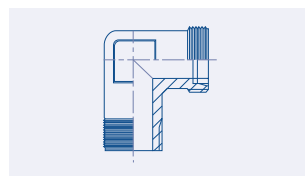
pag. 40



**NPTF Tapered 90°
Elbow Male Tube
Connector**

34.121

pag. 41

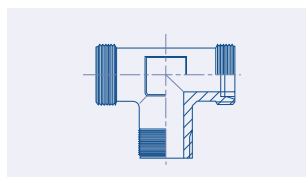


**Metric 90° Elbow
Male Tube Connector**

34.124

pag. 42

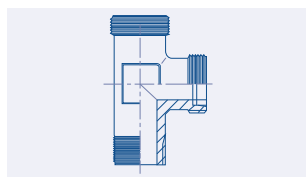
Tee Tube Connectors



**BSPT Male Tapered
Branch Tee Tube
Connector**

34.125

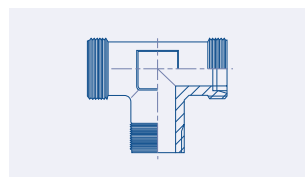
pag. 43



**BSPT Male Tapered
Run Tee Tube Connector**

34.130

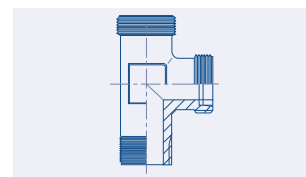
pag. 44



**Metric Male Branch
Tee Tube Connector**

34.129

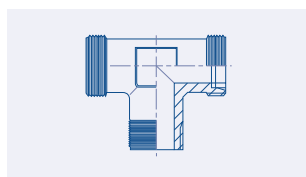
pag. 45



**Metric Male Run
Tee Tube Connector**

34.134

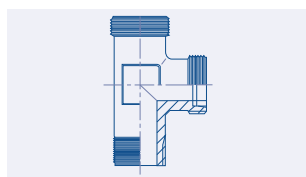
pag. 46



**NPTF Male Branch
Tee Tube Connector**

34.126

pag. 47

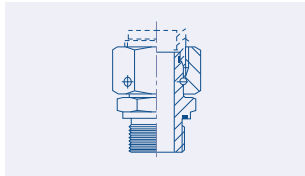


**NPTF Male Run Tee
Tube Connector**

34.127

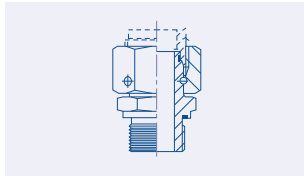
pag. 48

Swivel Tube Connectors



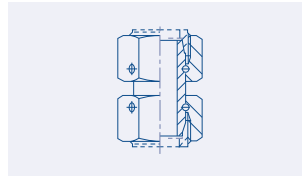
**BSP Male Swivel
Tube Connector**

34.605 pag. 49



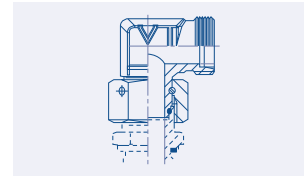
**Metric Male Swivel
Tube Connector**

34.606 pag. 50



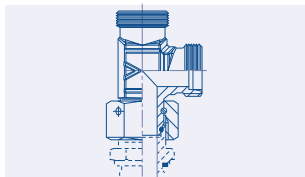
**Metric Swivel
Tube Connector**

34.635 pag. 51



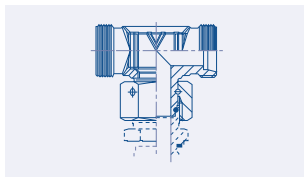
**Swivel 90° Elbow
Adjustable Tube
Connector**

34.642 pag. 52



**Swivel Run Tee
Adjustable Tube
Connector**

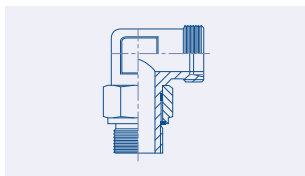
34.646 pag. 53



**Swivel Branch Tee
Adjustable Tube
Connector**

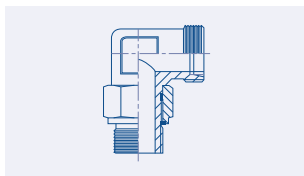
34.150 pag. 54

Adjustable Tube Connectors



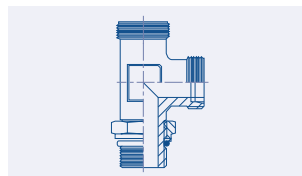
**BSP Male Adjustable 90°
Elbow Tube Connector**

34.143 pag. 55



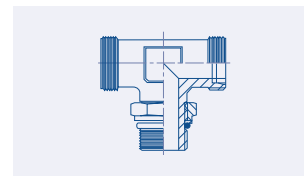
**Metric Male Adjustable 90°
Elbow Tube Connector**

34.144 pag. 56



**Metric Male Run
Tee Tube Connector**

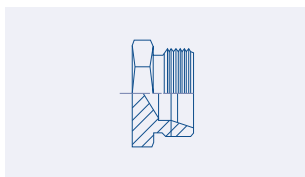
34.148 pag. 57



**Metric Male Branch
Tee Tube Connector**

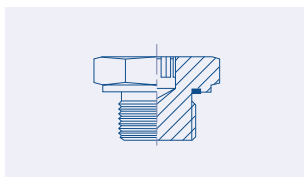
34.152 pag. 58

Plugs



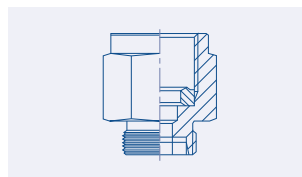
Tube Blanking Screw

34.175 pag. 59



**Metric Plug with
Hexagon Socket**

34.177 pag. 60

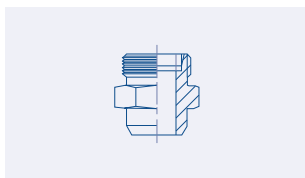


**BSP Gauge
Tube Connector**

34.159 pag. 60



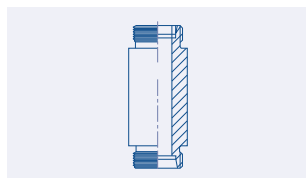
Welding Tube Connectors



**Straight Welding
Tube Connector**

34.155

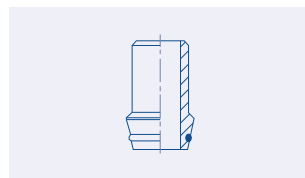
pag. 61



**Bulkhead Welding
Tube Connector**

34.156

pag. 62



**Welding Nipple with
O-Ring**

34.157

pag. 63

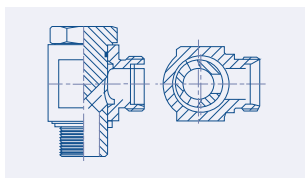


Blanking Nipple

34.158

pag. 64

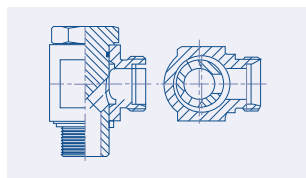
Banjo Tube Connectors



**BSP Banjo
Tube Connector**

34.113

pag. 65

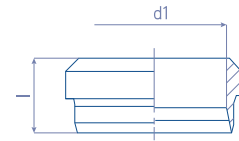


**Metric Banjo
Tube Connector**

34.114

pag. 66

24° Double Edge Compression Ring



34.101

ISO 8434-1 Cutting Ring

REFERENCE	serie	dimensions (mm)	dimensions (mm)
		Ø tube d1	l
34.101.06LS	L/S	6	9.5
34.101.08LS	L/S	8	9.5
34.101.10LS	L/S	10	10.0
34.101.12LS	L/S	12	10.0
34.101.15L	L	15	10.0
34.101.18L	L	18	10.0
34.101.22L	L	22	10.5
34.101.28L	L	28	11.0
34.101.35L	L	35	13.0
34.101.42L	L	42	13.0
34.101.14S	S	14	10.0
34.101.16S	S	16	10.5
34.101.20S	S	20	12.0
34.101.25S	S	25	12.0
34.101.30S	S	30	13.0
34.101.38S	S	38	13.0

MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating
with Finigard® protective coating

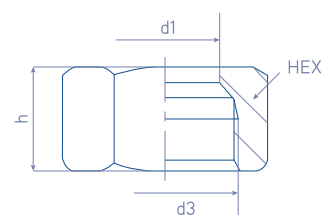
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Tightening Nut

34.102.

ISO 8434-1 Nut



REFERENCE	serie	dimensions (mm)	dimensions (mm)		
		Ø tube d1	H	d3	HEX
34.102.06L	L	6	14.5	12x1.5	14
34.102.08L	L	8	14.5	14x1.5	17
34.102.10L	L	10	15.5	16x1.5	19
34.102.12L	L	12	15.5	18x1.5	22
34.102.15L	L	15	17.0	22x1.5	27
34.102.18L	L	18	18.0	26x1.5	32
34.102.22L	L	22	20.0	30x2.0	36
34.102.28L	L	28	21.0	36x2.0	41
34.102.35L	L	35	24.0	45x2.0	50
34.102.42L	L	42	24.0	52x2.0	60
34.102.06S	S	6	16.5	14x1.5	17
34.102.08S	S	8	16.5	16x1.5	19
34.102.10S	S	10	17.5	18x1.5	22
34.102.12S	S	12	17.5	20x1.5	24
34.102.14S	S	14	20.5	22x1.5	27
34.102.16S	S	16	20.5	24x1.5	30
34.102.20S	S	20	24	30x2	36
34.102.25S	S	25	27	36x2	46
34.102.30S	S	30	29	42x2	50
34.102.38S	S	38	32.5	52x2	60

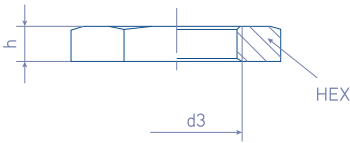
MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Bulkhead Nut

34.179.
ISO 8434-1 nut



REFERENCE	dimensions (mm)		
	d3	h	HEX
34.179.M12	M12x1.5	6.0	17
34.179.M14	M14x1.5	6.0	19
34.179.M16	M16x1.5	6.0	22
34.179.M18	M18x1.5	6.0	24
34.179.M20	M22x1.5	6.0	27
34.179.M22	M22x1.5	7.0	30
34.179.M24	M24x1.5	7.0	32
34.179.M26	M26x1.5	8.0	36
34.179.M30	M30x2.0	8.0	41
34.179.M36	M36x2.0	9.0	46
34.179.M42	M42x2.0	9.0	50
34.179.M45	M45x2.0	9.0	55
34.179.M52	M52x2.0	10.0	65

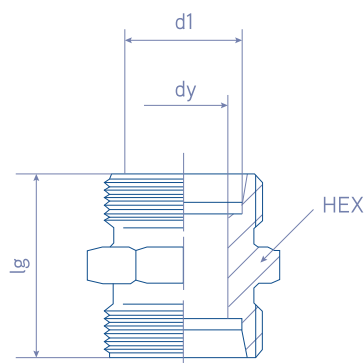
MATERIAL: Carbon Steel **FINISH:** : Chromium-(VI) Free plating **VERSIONS:** Stainless Steel (add an 'S' at the end of the REFERENCE)



Straight Union Tube Connector

34.135.

ISO 8434-1 tube coupling



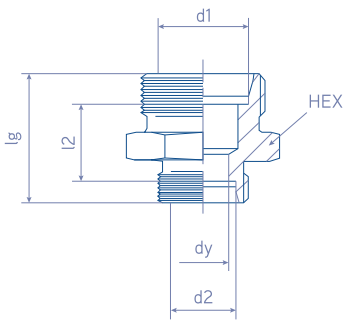
REFERENCE	serie	dimensions (mm)			
		Ø tube d1	dy	lg	HEX
34.135.06L	L	6	4	24.0	12
34.135.08L	L	8	6	25.0	14
34.135.10L	L	10	8	27.0	17
34.135.12L	L	12	10	28.0	19
34.135.15L	L	15	12	30.0	24
34.135.18L	L	18	15	31.0	27
34.135.22L	L	22	19	35.0	32
34.135.28L	L	28	24	36.0	41
34.135.35L	L	35	30	41.0	46
34.135.42L	L	42	36	43.0	55
34.135.06S	S	6	4	30.0	14
34.135.08S	S	8	5	32.0	17
34.135.10S	S	10	7	32.0	19
34.135.12S	S	12	8	34.0	22
34.135.14S	S	14	10	38.0	24
34.135.16S	S	16	12	38.0	27
34.135.20S	S	20	16	44.0	32
34.135.25S	S	25	20	50.0	41
34.135.30S	S	30	25	54.0	46
34.135.38S	S	38	32	61.0	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Straight Reducing Union Tube Connector



34.141.
ISO 8434-1 tube coupling

REFERENCE	serie	dimensions (mm)	dimensions (mm)	dimensions (mm)			
		Ø tube d1	Ø tube d2	dy	lg	l2	HEX
34.141.0806L	L	8	6	4	25.0	11.0	14
34.141.1006L	L	10	6	4	26.0	12.0	17
34.141.1008L	L	10	8	6	26.0	12.0	17
34.141.1206L	L	12	6	4	27.0	13.0	19
34.141.1208L	L	12	8	6	27.0	13.0	19
34.141.1210L	L	12	10	8	28.0	14.0	19
34.141.1510L	L	15	10	8	29.0	15.0	24
34.141.1512L	L	15	12	10	29.0	15.0	24
34.141.1810L	L	18	10	8	30.0	15.5	27
34.141.1812L	L	18	12	10	30.0	15.5	27
34.141.1815L	L	18	15	12	31.0	16.5	27
34.141.2215L	L	22	15	12	33.0	18.5	32
34.141.2218L	L	22	18	15	33.0	18.0	32
34.141.2818L	L	28	18	15	34.0	19.0	41
34.141.2822L	L	28	22	19	36.0	21.0	41
34.141.3522L	L	35	22	19	39.0	21.0	46
34.141.3528L	L	35	28	24	39.0	21.0	46
35.141.4228L	L	42	28	24	41.0	22.5	55
35.141.4235L	L	42	35	30	43.0	21.5	55
34.141.0806S	S	8	6	4	32.0	18.0	17
34.141.1006S	S	10	6	4	32.0	17.5	19
34.141.1008S	S	10	8	8	32.0	17.5	19
34.141.1206S	S	12	6	4	34.0	19.5	22
34.141.1208S	S	12	8	5	34.0	19.5	22
34.141.1210S	S	12	10	7	34.0	19.0	22
34.141.1410S	S	14	10	7	36.0	20.5	24
34.141.1412S	S	14	12	8	36.0	20.5	24
34.141.1612S	S	16	12	8	36.0	20.0	27
34.141.1614S	S	16	14	10	38.0	21.5	27
34.141.2010S	S	20	10	7	40.0	22.0	32
34.141.2012S	S	20	12	8	40.0	22.0	32
34.141.2016S	S	20	16	12	42.0	23.0	32
34.141.2516S	S	25	16	12	47.0	26.5	41
34.141.2520S	S	25	20	16	48.0	25.5	41
34.141.3020S	S	30	20	16	50.0	26.0	46
34.141.3025S	S	30	25	20	52.0	26.5	46
34.141.3830S	S	38	30	25	59.0	29.5	55

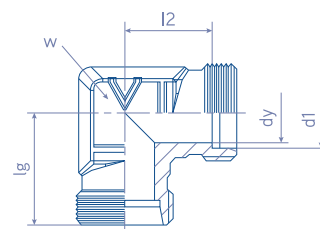
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



90° Elbow Union Tube Connector



34.138.

ISO 8434-1 tube coupling

REFERENCE	serie	dimensions (mm)				
		Ø tube d1	dy	lg	l2	w
34.138.06L	L	6	4	19.0	12.0	12
34.138.08L	L	8	6	21.0	14.0	14
34.138.10L	L	10	8	22.0	15.0	17
34.138.12L	L	12	10	24.0	17.0	19
34.138.15L	L	15	12	28.0	21.0	19
34.138.18L	L	18	15	31.0	23.5	24
34.138.22L	L	22	19	35.0	27.5	27
34.138.28L	L	28	24	38.0	30.5	36
34.138.35L	L	35	30	45.0	34.5	41
34.138.42L	L	42	36	51.0	40.0	50
34.138.06S	S	6	4	23.0	16.0	14
34.138.08S	S	8	5	24.0	17.0	17
34.138.10S	S	10	7	25.0	17.5	19
34.138.12S	S	12	8	29.0	21.5	22
34.138.14S	S	14	10	30.0	22.0	19
34.138.16S	S	16	12	33.0	24.5	24
34.138.20S	S	20	16	37.0	26.5	27
34.138.25S	S	25	20	42.0	30.0	36
34.138.30S	S	30	25	49.0	35.5	41
34.138.38S	S	38	32	57.0	41.0	50

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

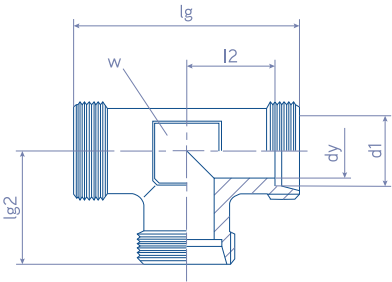
COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Tee Union Tube Connector

34.139.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)					
		Ø tube d1	dy	lg	lg2	l2	w
34.139.06L	L	6	4	38.0	19.0	12.0	12
34.139.08L	L	8	6	42.0	21.0	14.0	14
34.139.10L	L	10	8	44.0	22.0	15.0	17
34.139.12L	L	12	10	48.0	24.0	17.0	19
34.139.15L	L	15	12	56.0	28.0	21.0	19
34.139.18L	L	18	15	62.0	31.0	23.5	24
34.139.22L	L	22	19	70.0	35.0	27.5	27
34.139.28L	L	28	24	76.0	38.0	30.5	36
34.139.35L	L	35	30	90.0	45.0	34.5	41
34.139.42L	L	42	36	102.0	51.0	40.0	50
34.139.06S	S	6	4	46.0	23.0	16.0	14
34.139.08S	S	8	5	48.0	24.0	17.0	17
34.139.10S	S	10	7	50.0	25.0	17.5	19
34.139.12S	S	12	8	58.0	29.0	21.5	22
34.139.14S	S	14	10	60.0	30.0	22.0	19
34.139.16S	S	16	12	66.0	33.0	24.5	24
34.139.20S	S	20	16	74.0	37.0	26.5	27
34.139.25S	S	25	20	84.0	42.0	30.0	36
34.139.30S	S	30	25	98.0	49.0	35.5	41
34.139.38S	S	38	32	114.0	57.0	41.0	50

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

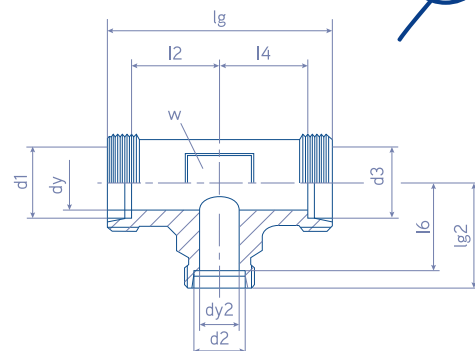
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Tee Reducing Union Tube Connector

34.145.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	Ø tube d1	Ø tube d1	dy	dy2	lg	lg2	l2	l4	l6	w
34.145.0806L	L	6	8	6	4.0	6.0	42.0	21.0	14.0	14.0	14.0	14
34.145.1006L	L	6	10	6	4.0	8.0	44.0	22.0	15.0	15.0	15.0	17
34.145.0608L	L	8	6	8	6.0	4.0	42.0	21.0	14.0	14.0	14.0	14
34.145.1008L	L	8	10	8	6.0	8.0	44.0	22.0	15.0	15.0	15.0	17
34.145.1208L	L	8	12	8	6.0	10.0	48.0	24.0	17.0	17.0	17.0	19
34.145.0610L	L	10	6	10	8.0	4.0	44.0	22.0	15.0	15.0	15.0	17
34.145.0810L	L	10	8	10	8.0	6.0	44.0	22.0	15.0	15.0	15.0	17
34.145.1210L	L	10	12	10	8.0	10.0	48.0	24.0	17.0	17.0	17.0	19
34.145.1510L	L	10	15	10	8.0	11.0	56.0	28.0	21.0	21.0	21.0	19
34.145.0612L	L	12	6	12	10.0	4.0	48.0	24.0	17.0	17.0	17.0	19
34.145.0812L	L	12	8	12	10.0	6.0	48.0	24.0	17.0	17.0	17.0	19
34.145.1012L	L	12	10	12	10.0	8.0	48.0	24.0	17.0	17.0	17.0	19
34.145.1512L	L	12	15	12	10.0	12.0	56.0	28.0	21.0	21.0	21.0	19
34.145.1812L	L	12	18	12	10.0	15.0	62.0	31.0	24.0	24.0	24.0	24
34.145.2212L	L	12	22	12	10.0	19.0	70.0	35.0	28.0	28.0	28.0	27
34.145.1015L	L	15	10	15	12.0	8.0	56.0	28.0	21.0	21.0	21.0	19
34.145.1215L	L	15	12	15	12.0	10.0	56.0	28.0	21.0	21.0	21.0	19
34.145.1815L	L	15	18	15	12.0	15.0	62.0	31.0	24.0	24.0	24.0	24
34.145.2215L	L	15	22	15	12.0	19.0	70.0	35.0	28.0	28.0	27.5	27
34.145.1018L	L	18	10	18	15.0	8.0	62.0	31.0	23.5	23.5	24.0	24
34.145.1218L	L	18	12	18	15.0	10.0	62.0	31.0	23.5	23.5	24.0	24
34.145.1518L	L	18	15	18	15.0	12.0	62.0	31.0	23.5	23.5	24.0	24
34.145.2218L	L	18	22	18	15.0	19.0	70.0	35.0	27.5	27.5	27.5	27
34.145.1222L	L	22	12	22	19.0	10.0	70.0	35.0	27.5	27.5	28.0	27
34.145.1522L	L	22	15	22	19.0	12.0	70.0	35.0	27.5	27.5	28.0	27
34.145.1822L	L	22	18	22	19.0	15.0	70.0	35.0	27.5	27.5	27.5	27
34.145.2822L	L	22	28	22	19.0	24.0	76.0	38.0	30.5	30.5	30.5	36
34.145.1528L	L	28	15	28	24.0	12.0	76.0	38.0	30.5	30.5	31.0	36
34.145.1828L	L	28	18	28	24.0	15.0	76.0	38.0	30.5	30.5	30.5	36
34.145.2228L	L	28	22	28	24.0	19.0	76.0	38.0	30.5	30.5	30.5	36

REFERENCE	serie	dimensions (mm)										
		Ø tube d1	Ø tube d1	Ø tube d1	dy	dy2	lg	lg2	l2	l4	l6	w
34.145.3528L	L	28	35	28	24.0	30.0	90.0	45.0	37.5	37.5	34.5	41
34.145.4228L	L	28	42	28	24.0	36.0	102.0	51.0	43.5	43.5	40.0	50
34.145.3835L	L	35	28	35	30.0	24.0	90.0	45.0	34.5	34.5	37.5	41
34.145.4235L	L	35	42	35	30.0	36.0	102.0	51.0	40.5	40.5	40.0	50
34.145.2242L	L	42	22	42	36.0	19.0	102.0	51.0	40.0	40.0	43.5	50
34.145.2842L	L	42	28	42	36.0	24.0	102.0	51.0	40.0	40.0	43.5	50
34.145.0610S	S	10	6	10	7.0	4.0	50.0	25.0	17.5	17.5	18.0	19
34.145.0812S	S	12	8	12	8.0	5.0	58.0	29.0	21.5	21.5	22.0	22
34.145.1012S	S	12	10	12	8.0	7.0	58.0	19.0	21.5	21.5	21.5	22
34.145.1612S	S	12	16	12	8.0	12.0	66.0	33.0	24.5	24.5	24.5	24
34.145.0816S	S	16	8	16	12.0	5.0	66.0	33.0	24.5	24.5	26.0	24
34.145.1016S	S	16	10	16	12.0	7.0	66.0	33.0	24.5	24.5	25.5	24
34.145.1216S	S	16	12	16	12.0	8.0	66.0	33.0	24.5	24.5	25.5	24
34.145.2016S	S	16	20	16	12.0	16.0	74.0	37.0	28.5	28.5	26.5	27
34.145.1020S	S	20	10	20	16.0	7.0	74.0	37.0	26.5	26.5	29.5	27
34.145.1220S	S	20	12	20	16.0	8.0	74.0	37.0	26.5	26.5	29.5	27
34.145.1620S	S	20	16	20	16.0	12.0	74.0	37.0	26.5	26.5	28.5	27
34.145.2520S	S	20	25	20	16.0	20.0	84.0	42.0	31.5	31.5	30.0	36
34.145.1225S	S	25	12	25	20.0	8.0	84.0	42.0	30.0	30.0	34.5	36
34.145.1625S	S	25	16	25	20.0	12.0	84.0	42.0	30.0	30.0	33.5	36
34.145.1825S	S	25	18	25	20.0	15.0	84.0	42.0	30.0	30.0	34.5	36
34.145.2025S	S	25	20	25	20.0	16.0	84.0	42.0	30.0	30.0	31.5	36
34.145.3025S	S	25	30	25	20.0	25.0	98.0	49.0	37.0	37.0	35.5	41
34.145.1630S	S	30	16	30	25.0	12.0	98.0	49.0	35.5	35.5	40.5	41
34.145.2030S	S	30	20	30	25.0	16.0	98.0	49.0	35.5	35.5	38.5	41
34.145.1638S	S	38	16	38	32.0	12.0	114.0	57.0	41.0	41.0	48.5	50
34.145.2538S	S	38	25	38	32.0	20.0	114.0	57.0	41.0	41.0	45.0	50

MATERIAL: Carbon Steel
FINISH: Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

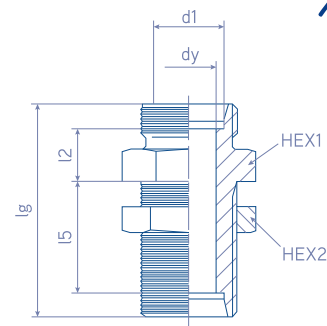
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Straight Bulkhead Union Tube Connector

34.136.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)						
		Ø tube d1	dy	lg	l2	l5	HEX 1	HEX 2
34.136.06L M12	L	6	4	48.0	7.0	27.0	17	17
34.136.08L M14	L	8	6	49.0	8.0	27.0	19	19
34.136.10L M16	L	10	8	52.0	10.0	28.0	22	22
34.136.12L M18	L	12	10	53.0	10.0	29.0	24	24
34.136.15L M22	L	15	12	57.0	12.0	31.0	27	27
34.136.18L M26	L	18	15	61.0	13.5	32.5	32	32
34.136.22L M30	L	22	19	66.0	16.5	34.5	36	36
34.136.28L M36	L	28	24	69.0	18.5	35.5	41	41
34.136.35L M45	L	35	30	76.0	18.5	36.5	50	50
34.136.42L M52	L	42	36	77.0	19.0	36.0	60	60
34.136.06S M14	S	6	4	55.0	12.0	29.0	19	19
34.136.08S M16	S	8	5	56.0	13.0	29.0	22	22
34.136.10S M18	S	10	7	59.0	14.5	29.5	24	24
34.136.12S M20	S	12	8	60.0	14.5	30.5	27	27
34.136.14S M22	S	14	10	65.0	17.0	32.0	30	30
34.136.16S M24	S	16	12	65.0	16.5	31.5	32	32
34.136.20S M30	S	20	16	72.0	17.5	33.5	41	41
34.136.25S M36	S	25	20	79.0	20.0	35.0	46	46
34.136.30S M42	S	30	25	86.0	21.5	37.5	50	50
34.136.38S M52	S	38	32	91.0	22.0	37.0	65	65

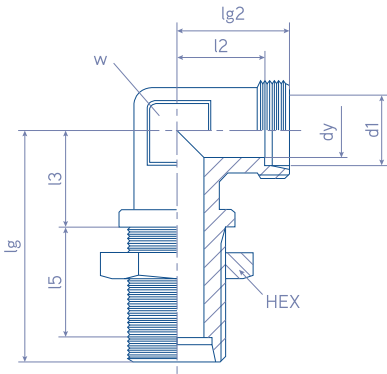
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

90° Elbow Bulkhead Union Tube Connector

34.137.
ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)								
		Ø tube d1	dy	lg	lg2	l2	l3	l5	W	HEX
34.137.06L	L	6	4	48.0	19.0	12.0	14.0	27.0	12	17
34.137.08L	L	8	6	51.0	21.0	14.0	17.0	27.0	12	19
34.137.10L	L	10	8	53.0	22.0	15.0	18.0	28.0	14	22
34.137.12L	L	12	10	56.0	24.0	17.0	20.0	29.0	17	24
34.137.15L	L	15	12	61.0	28.0	21.0	23.0	31.0	19	30
34.137.18L	L	18	15	64.0	31.0	23.5	24.0	32.5	24	36
34.137.22L	L	22	19	72.0	35.0	27.5	30.0	34.5	27	41
34.137.28L	L	28	24	77.0	38.0	30.5	34.0	35.5	36	46
34.137.35L	L	35	30	86.0	45.0	34.5	39.0	36.5	41	55
34.137.42L	L	42	36	90.0	51.0	40.0	43.0	36.0	50	65
34.137.06S	S	6	4	53.0	23.0	16.0	17.0	29.0	12	19
34.137.08S	S	8	5	54.0	24.0	17.0	18.0	29.0	14	22
34.137.10S	S	10	7	57.0	25.0	17.5	20.0	29.5	17	24
34.137.12S	S	12	8	59.0	29.0	21.5	21.0	30.5	17	27
34.137.14S	S	14	10	63.0	30.0	22.0	23.0	32.0	19	30
34.137.16S	S	16	12	64.0	33.0	24.5	24.0	31.5	24	32
34.137.20S	S	20	16	74.0	37.0	26.5	30.0	33.5	27	41
34.137.25S	S	25	20	81.0	42.0	30.0	34.0	35.0	36	46
34.137.30S	S	30	25	90.0	49.0	35.5	39.0	37.5	41	50
34.137.38S	S	38	32	96.0	57.0	41.0	43.0	37.0	50	65

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

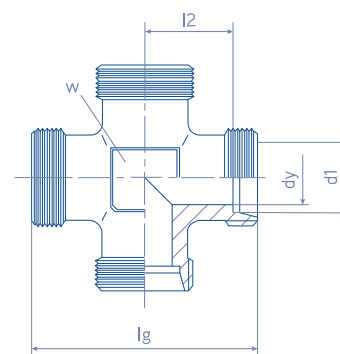
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



Cross Union Tube Connector

34.140.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)				
		Ø tube d1	dy	lg	l2	w
34.140.06L	L	6	4.0	38.0	12.0	12
34.140.08L	L	8	6.0	42.0	14.0	12
34.140.10L	L	10	8.0	44.0	15.0	14
34.140.12L	L	12	10.0	48.0	17.0	17
34.140.15L	L	15	12.0	56.0	21.0	19
34.140.18L	L	18	15.0	62.0	23.5	24
34.140.22L	L	22	19.0	70.0	27.5	27
34.140.28L	L	28	24.0	76.0	30.5	36
34.140.35L	L	35	30.0	90.0	34.5	41
34.140.42L	L	42	36.0	102.0	40.0	50
34.140.06S	S	6	4.0	46.0	16.0	12
34.140.08S	S	8	5.0	48.0	17.0	14
34.140.10S	S	10	7.0	50.0	17.5	17
34.140.12S	S	12	8.0	58.0	21.5	17
34.140.14S	S	14	10.0	60.0	22.0	19
34.140.16S	S	16	12.0	66.0	24.5	24
34.140.20S	S	20	16.0	74.0	26.5	27
34.140.25S	S	25	20.0	84.0	30.0	36
34.140.30S	S	30	25.0	98.0	35.5	41
34.140.38S	S	38	32.0	114.0	41.0	50

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

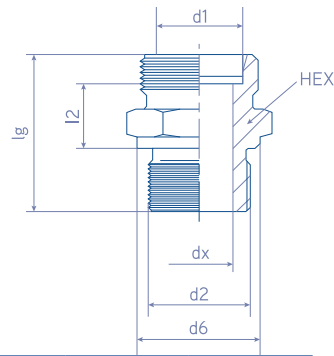
COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

BSP Parallel Male Tube Connector

34.103.

ISO 8434-1 tube coupling and DIN ISO 1179-4 Form-B BSP Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)				
		Ø tube d1	thread d2	d6	dx	lg	l2	HEX
34.103.06LR02	L	6	1/8"	14	4	23.5	8.5	14
34.103.06LR04	L	6	1/4"	18	4	28.0	9.0	19
34.103.08LR02	L	8	1/8"	14	4	24.5	9.5	17
34.103.08LR04	L	8	1/4"	18	6	29.0	10.0	19
34.103.08LR06	L	8	3/8"	22	6	30.5	11.5	22
34.103.08LR08	L	8	1/2"	26	6	33.0	12.0	27
34.103.10LR02	L	10	1/8"	14	4	25.5	10.5	17
34.103.10LR04	L	10	1/4"	18	6	30.0	11.0	19
34.103.10LR06	L	10	3/8"	22	7	31.5	12.5	22
34.103.10LR08	L	10	1/2"	26	7	34.0	13.0	27
34.103.12LR04	L	12	1/4"	18	6	31.0	12.0	19
34.103.12LR06	L	12	3/8"	22	9	31.5	12.5	22
34.103.12LR08	L	12	1/2"	26	9	34.0	13.0	27
34.103.15LR06	L	15	3/8"	22	9	32.5	13.5	24
34.103.15LR08	L	15	1/2"	26	11	35.0	14.0	27
34.103.15LR12	L	15	3/4"	32	12	38.0	15.0	32
34.103.18LR08	L	18	1/2"	26	14	36.0	14.5	27
34.103.18LR12	L	18	3/4"	32	15	38.0	14.5	32
34.103.22LR08	L	22	1/2"	26	14	38.0	16.5	32
34.103.22LR12	L	22	3/4"	32	18	40.0	16.5	32
34.103.22LR16	L	22	1"	39	19	43.0	17.5	41
34.103.28LR12	L	28	3/4"	32	18	41.0	17.5	41
34.103.28LR16	L	28	1"	39	23	43.0	17.5	41
34.103.35LR16	L	35	1"	39	23	46.0	17.5	50
34.103.35LR20	L	35	1.1/4"	49	30	18.0	17.5	50
34.103.42LR20	L	42	1.1/4"	49	30	50.0	19.0	55
34.103.42LR24	L	42	1.1/2"	55	36	52.0	19.0	55
34.103.06SR04	S	6	1/4"	18	4	32.0	13.0	19
34.103.06SR06	S	6	3/8"	22	4	34.5	15.5	22



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)				
		Ø tube d1	thread d2	d6	dx	lg	l2	HEX
34.103.08SR04	S	8	1/4"	18	5	34.0	15.0	19
34.103.08SR06	S	8	3/8"	22	5	34.5	15.5	22
34.103.10SR04	S	10	1/4"	18	5	34.0	14.5	19
34.103.10SR06	S	10	3/8"	22	7	34.5	15.0	22
34.103.10SR08	S	10	1/2"	26	7	35.0	13.5	27
34.103.12SR04	S	12	1/4"	18	5	36.0	16.5	22
34.103.12SR06	S	12	3/8"	22	8	36.5	17.0	22
34.103.12SR08	S	12	1/2"	26	8	39.0	17.5	27
34.103.14SR06	S	14	3/8"	22	8	39.0	19.0	24
34.103.14SR08	S	14	1/2"	26	10	41.0	19.0	27
34.103.16SR06	S	16	3/8"	22	8	38.5	18.0	27
34.103.16SR08	S	16	1/2"	26	12	41.0	18.5	27
34.103.16SR12	S	16	3/4"	32	12	45.0	20.5	32
34.103.20SR08	S	20	1/2"	26	12	45.0	20.5	32
34.103.20SR12	S	20	3/4"	32	16	47.0	20.5	32
34.103.20SR16	S	20	1"	39	16	51.0	22.5	41
34.103.25SR12	S	25	3/4"	32	16	51.0	23.0	41
34.103.25SR16	S	25	1"	39	20	53.0	23.0	41
34.103.30SR16	S	30	1"	39	20	55.0	23.5	50
34.103.30SR20	S	30	1.1/4"	49	25	57.0	23.5	50
34.103.38SR20	S	38	1.1/4"	49	25	62.0	26.0	55
34.103.38SR24	S	38	1.1/2"	55	32	64.0	26.0	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

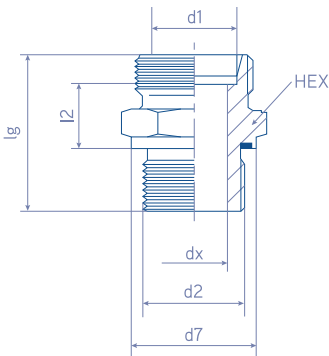
COMPLETE: With Double Edge Compression
 Ring and Tightening Nut (add an 'P' at the
 begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
 at the end of the REFERENCE)

BSP Parallel Male Tube Connector with Elastomeric Seal

34.105.

ISO 8434-1 tube coupling and DIN ISO 1179-2 Form-E BSP Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)				
		Ø tube d1	thread d2	d7	dx	lg	l2	HEX
34.105.06LR02	L	6	1/8"	13.9	4	23.5	8.5	14
34.105.06LR04	L	6	1/4"	18.9	4	28.0	9.0	19
34.105.06LR06	L	6	3/8"	21.9	4	30.5	11.5	22
34.105.08LR02	L	8	1/8"	13.9	4	24.5	9.5	17
34.105.08LR04	L	8	1/4"	18.9	6	29.0	10.0	19
34.105.08LR06	L	8	3/8"	21.9	6	30.5	11.5	22
34.105.08LR08	L	8	1/2"	26.9	6	33.0	12.0	27
34.105.10LR02	L	10	1/8"	13.9	4	25.5	10.5	17
34.105.10LR04	L	10	1/4"	18.9	6	30.0	11.0	19
34.105.10LR06	L	10	3/8"	21.9	7	31.5	12.5	22
34.105.10LR08	L	10	1/2"	26.9	7	34.0	13.0	27
34.105.12LR04	L	12	1/4"	18.9	6	31.0	12.0	19
34.105.12LR06	L	12	3/8"	21.9	9	31.5	12.5	22
34.105.12LR08	L	12	1/2"	26.9	9	34.0	13.0	27
34.105.15LR06	L	15	3/8"	21.9	9	32.5	13.5	24
34.105.15LR08	L	15	1/2"	26.9	11	35.0	14.0	27
34.105.15LR12	L	15	3/4"	31.9	12	38.0	15.0	32
34.105.18LR08	L	18	1/2"	26.9	14	36.0	14.5	27
34.105.18LR12	L	18	3/4"	31.9	15	38.0	14.5	32
34.105.22LR08	L	22	1/2"	26.9	14	38.0	16.5	32
34.105.22LR12	L	22	3/4"	31.9	18	40.0	16.5	32
34.105.22LR16	L	22	1"	39.9	19	43.0	17.5	41
34.105.28LR12	L	28	3/4"	31.9	18	41.0	17.5	41
34.105.28LR16	L	28	1"	39.9	23	43.0	17.5	41
34.105.35LR16	L	35	1"	39.9	23	46.0	17.5	50
34.105.35LR20	L	35	1.1/4"	49.9	30	18.0	17.5	50
34.105.42LR20	L	42	1.1/4"	49.9	30	50.0	19.0	55
34.105.42LR24	L	42	1.1/2"	54.9	36	52.0	19.0	55
34.105.06SR04	S	6	1/4"	18.9	4	32.0	13.0	19



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)				
		Ø tube d1	thread d2	d7	dx	lg	l2	HEX
34.105.06SR06	S	6	3/8"	21.9	4	34.5	15.5	22
34.105.08SR04	S	8	1/4"	18.9	5	34.0	15.0	19
34.105.08SR06	S	8	3/8"	21.9	5	34.5	15.5	22
34.105.10SR04	S	10	1/4"	18.9	5	34.0	14.5	19
34.105.10SR06	S	10	3/8"	21.9	7	34.5	15.0	22
34.105.10SR08	S	10	1/2"	26.9	7	35.0	13.5	27
34.105.12SR04	S	12	1/4"	18.9	5	36.0	16.5	22
34.105.12SR06	S	12	3/8"	21.9	8	36.5	17.0	22
34.105.12SR08	S	12	1/2"	26.9	8	39.0	17.5	27
34.105.14SR06	S	14	3/8"	21.9	8	39.0	19.0	24
34.105.14SR08	S	14	1/2"	26.9	10	41.0	19.0	27
34.105.16SR06	S	16	3/8"	21.8	8	38.5	18.0	27
34.105.16SR08	S	16	1/2"	26.9	12	41.0	18.5	27
34.105.16SR12	S	16	3/4"	31.9	12	45.0	20.5	32
34.105.20SR08	S	20	1/2"	26.9	12	45.0	20.5	32
34.105.20SR12	S	20	3/4"	31.9	16	47.0	20.5	32
34.105.20SR16	S	20	1"	39.9	16	51.0	22.5	41
34.105.25SR12	S	25	3/4"	31.9	16	51.0	23.0	41
34.105.25SR16	S	25	1"	39.9	20	53.0	23.0	41
34.105.30SR16	S	30	1"	39.9	20	55.0	23.5	50
34.105.30SR20	S	30	1.1/4"	49.9	25	57.0	23.5	50
34.105.38SR20	S	38	1.1/4"	49.9	25	62.0	26.0	55
34.105.38SR24	S	38	1.1/2"	54.9	32	64.0	26.0	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

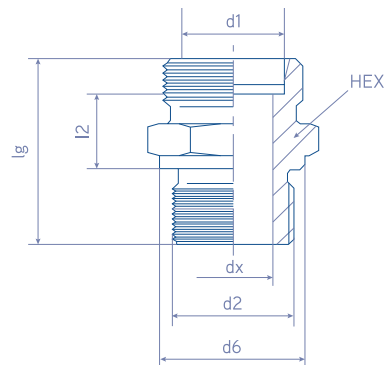
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Male Tube Connector

34.104.

ISO 8434-1 tube coupling and DIN 3852-1 Form-C Metric Thread



REFERENCE	serie	dimensions (mm)	dimensions (mm)	dimensions (mm)				
		Ø tube d1	thread d2	d6	dx	lg	l2	HEX
34.104.06LM10	L	6	M10x1.0	14.0	4	23.5	8.5	14
34.104.08LM12	L	8	M12x1.5	17.0	6	29.0	10.0	17
34.104.08LM18	L	8	M18x1.5	23.0	6	30.5	11.5	24
34.104.10LM14	L	10	M14x1.5	19.0	7	30.0	11.0	19
34.104.10LM16	L	10	M16x1.5	21.0	7	31.5	12.5	22
34.104.10LM18	L	10	M18x1.5	23.0	7	31.5	12.5	24
34.104.10LM22	L	10	M22x1.5	27.0	8	35.0	14.0	27
34.104.12LM14	L	12	M14x1.5	19.0	7	31.5	12.5	19
34.104.12LM16	L	12	M16x1.5	21.0	9	31.5	12.5	22
34.104.12LM18	L	12	M18x1.5	23.0	9	31.5	12.5	24
34.104.12LM22	L	12	M22x1.5	27.0	10	35.0	14.0	27
34.104.15LM16	L	15	M16x1.5	21.0	9	32.0	13.0	24
34.104.15LM18	L	15	M18x1.5	23.0	11	32.5	13.5	24
34.104.15LM22	L	15	M22x1.5	27.0	12	36.0	15.0	27
34.104.18LM18	L	18	M18x1.5	23.0	11	33.5	14.0	27
34.104.18LM22	L	18	M22x1.5	27.0	14	36.0	14.5	27
34.104.22LM22	L	22	M22x1.5	27.0	14	38.0	16.5	32
34.104.22LM26	L	22	M26x1.5	31.0	18	40.0	16.5	32
34.104.28LM33	L	28	M33x2.0	39.0	23	43.0	17.5	41
34.104.35LM42	L	35	M42x2.0	49.0	30	48.0	17.5	50
34.104.42LM48	L	42	M48x2.0	55.0	36	52.0	19.0	55
34.104.06SM12	S	6	M12x1.5	17.0	4	32.0	13.0	17
34.104.08SM14	S	8	M14x1.5	19.0	5	34.0	15.0	19
34.104.10SM16	S	10	M16x1.5	21.0	7	34.5	15.0	22
34.104.12SM18	S	12	M18x1.5	23.0	8	36.5	17.0	24
34.104.12SM22	S	12	M22x1.5	27.0	8	39.0	17.5	27
34.104.14SM20	S	14	M20x1.5	25.0	10	41.0	19.0	27
34.104.16SM18	S	16	M18x1.5	23.0	8	38.5	18.0	24
34.104.16SM22	S	16	M22x1.5	27.0	12	41.0	18.5	27
34.104.20SM27	S	20	M27x2.0	32.0	16	47.0	20.5	32
34.104.25SM33	S	25	M33x2.0	39.0	20	53.0	23.0	41
34.104.30SM42	S	30	M42x2.0	49.0	25	57.0	23.5	50
34.104.38SM48	S	38	M48x2.0	55.0	32	64.0	26.0	55

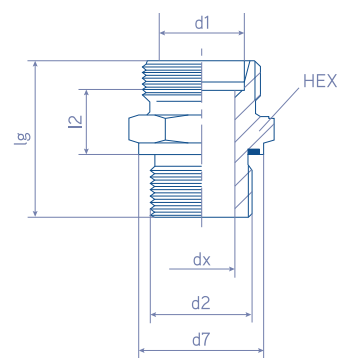
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Metric Male Tube Connector with Elastomeric Seal



34.106.

ISO 8434-1 tube coupling and ISO 9974-2 Form-E Metric Thread

REFERENCE	serie	dimensions (mm)	dimensions (mm)	dimensions (mm)				
		Ø tube d1	thread d2	d7	dx	lg	l2	HEX
34.106.06LM10	L	6	M10x1.0	13.9	4	23.5	8.5	14
34.106.08LM12	L	8	M12x1.5	16.9	6	29.0	10.0	17
34.106.08LM18	L	8	M18x1.5	23.9	6	30.5	11.5	24
34.106.10LM14	L	10	M14x1.5	18.9	7	30.0	11.0	19
34.106.10LM16	L	10	M16x1.5	21.9	7	31.5	12.5	22
34.106.10LM18	L	10	M18x1.5	23.9	7	31.5	12.5	24
34.106.10LM22	L	10	M22x1.5	26.9	8	35.0	14.0	27
34.106.12LM14	L	12	M14x1.5	18.9	7	31.5	12.5	19
34.106.12LM16	L	12	M16x1.5	21.9	9	31.5	12.5	22
34.106.12LM18	L	12	M18x1.5	23.9	9	31.5	12.5	24
34.106.12LM22	L	12	M22x1.5	26.9	10	35.0	14.0	27
34.106.15LM16	L	15	M16x1.5	21.9	9	32.0	13.0	24
34.106.15LM18	L	15	M18x1.5	23.9	11	32.5	13.5	24
34.106.15LM22	L	15	M22x1.5	26.9	12	36.0	15.0	27
34.106.18LM18	L	18	M18x1.5	23.9	11	33.5	14.0	27
34.106.18LM22	L	18	M22x1.5	26.9	14	36.0	14.5	27
34.106.22LM22	L	22	M22x1.5	26.9	14	38.0	16.5	32
34.106.22LM26	L	22	M26x1.5	31.9	18	40.0	16.5	32
34.106.28LM33	L	28	M33x2.0	39.9	23	43.0	17.5	41
34.106.35LM42	L	35	M42x2.0	49.9	30	48.0	17.5	50
34.106.42LM48	L	42	M48x2.0	54.9	36	52.0	19.0	55
34.106.06SM12	S	6	M12x1.5	16.9	4	32.0	13.0	17
34.106.08SM14	S	8	M14x1.5	18.9	5	34.0	15.0	19
34.106.10SM16	S	10	M16x1.5	21.9	7	34.5	15.0	22
34.106.12SM18	S	12	M18x1.5	23.9	8	36.5	17.0	24
34.106.12SM22	S	12	M22x1.5	26.9	8	39.0	17.5	27
34.106.14SM20	S	14	M20x1.5	25.9	10	41.0	19.0	27
34.106.16SM18	S	16	M18x1.5	23.9	8	38.5	18.0	24
34.106.16SM22	S	16	M22x1.5	26.9	12	41.0	18.5	27
34.106.20SM27	S	20	M27x2.0	31.9	16	47.0	20.5	32
34.106.25SM33	S	25	M33x2.0	39.9	20	53.0	23.0	41
34.106.30SM42	S	30	M42x2.0	49.9	25	57.0	23.5	50
34.106.38SM48	S	38	M48x2.0	54.9	32	64.0	26.0	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

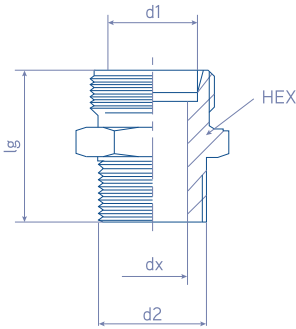
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

BSPT Tapered Male Tube Connector

34.117.

ISO 8434-1 tube coupling and DIN 3852-2 Form-C BSPT Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)		
		Ø tube d1	thread d2	dx	lg	HEX
34.117.06LR02	L	6	1/8"	4	22.0	14
34.117.06LR04	L	6	1/4"	4	26.0	14
34.117.08LR02	L	8	1/8"	4	23.0	14
34.117.08LR04	L	8	1/4"	6	27.0	17
34.117.08LR06	L	8	3/8"	6	28.0	19
34.117.08LR08	L	8	1/2"	6	30.0	24
34.117.10LR04	L	10	1/4"	7	28.0	17
34.117.10LR06	L	10	3/8"	8	28.0	19
34.117.10LR08	L	10	1/2"	8	31.0	24
34.117.12LR04	L	12	1/4"	7	29.0	19
34.117.12LR06	L	12	3/8"	9	29.0	19
34.117.12LR08	L	12	1/2"	9	31.0	24
34.117.15LR06	L	15	3/8"	11	30.0	24
34.117.15LR08	L	15	1/2"	11	32.0	24
34.117.18LR08	L	18	1/2"	14	33.0	27
34.117.18LR12	L	18	3/4"	14	35.0	30
34.117.22LR12	L	22	3/4"	18	37.0	32
34.117.28LR16	L	28	1"	23	40.0	41
34.117.06SR04	S	6	1/4"	4	30.0	17
34.117.08SR04	S	8	1/4"	5	32.0	17
34.117.10SR06	S	10	3/8"	7	32.0	19
34.117.12SR06	S	12	3/8"	8	34.0	22
34.117.14SR08	S	14	1/2"	10	38.0	27
34.117.16SR08	S	16	1/2"	12	38.0	27
34.117.20SR12	S	20	3/4"	16	44.0	32

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

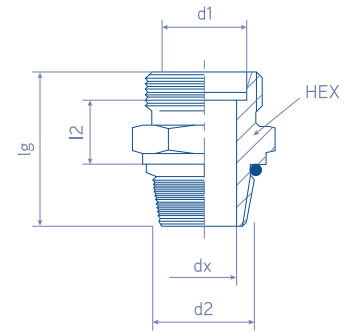
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



NPTF Male Tube Connector

34.118.

ISO 8434-1 tube coupling and ANSI B1.20.3 NPTF Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)		
		Ø tube d1	thread d2	dx	lg	HEX
34.118.06LN02	L	6	1/8"	4	23.9	12
34.118.06LN04	L	6	1/4"	4	30.0	17
34.118.08LN02	L	8	1/8"	5	24.9	14
34.118.08LN04	L	8	1/4"	6	30.1	17
34.118.08LN06	L	8	3/8"	6	31.2	19
34.118.08LN08	L	8	1/2"	6	38.5	24
34.118.10LN02	L	10	1/8"	4	27.0	17
34.118.10LN04	L	10	1/4"	7	31.1	17
34.118.10LN06	L	10	3/8"	8	32.2	19
34.118.10LN08	L	10	1/2"	8	37.8	24
34.118.12LN04	L	12	1/4"	7	32.0	19
34.118.12LN06	L	12	3/8"	9	32.2	19
34.118.12LN08	L	12	1/2"	10	36.8	24
34.118.15LN06	L	15	3/8"	9	33.2	24
34.118.15LN08	L	15	1/2"	11	37.8	24
34.118.18LN08	L	18	1/2"	14	38.8	27
34.118.18LN12	L	18	3/4"	14	39.1	30
34.118.22LN08	L	22	1/2"	14	40.8	32
34.118.22LN12	L	22	3/4"	18	41.1	32
34.118.28LN16	L	28	1"	23	47.0	41
34.118.35LN20	L	35	1 1/4"	30	50.6	46
34.118.42LN24	L	42	1 1/2"	36	53.0	55
34.118.06SN04	S	6	1/4"	4	33.1	17
34.118.08SN04	S	8	1/4"	5	35.1	17
34.118.08SN06	S	8	3/8"	5	35.0	19

REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)		
		Ø tube d1	thread d2	dx	lg	HEX
34.118.10SN04	S	10	1/4"	5	35.1	19
34.118.10SN06	S	10	3/8"	7	35.2	19
34.118.10SN08	S	10	1/2"	7	41.8	24
34.118.12SN04	S	12	1/4"	5	37.1	22
34.118.12SN06	S	12	3/8"	8	37.2	22
34.118.12SN08	S	12	1/2"	8	41.8	24
34.118.14SN06	S	14	3/8"	8	39.0	24
34.118.14SN08	S	14	1/2"	10	43.8	27
34.118.16SN06	S	16	3/8"	8	39.2	27
34.118.16SN08	S	16	1/2"	12	43.8	27
34.118.16SN12	S	16	3/4"	12	44.0	30
34.118.20SN08	S	20	1/2"	14	47.8	32
34.118.20SN12	S	20	3/4"	16	48.1	32
34.118.20SN16	S	20	1"	16	55.0	36
34.118.25SN12	S	25	3/4"	18	52.1	41
34.118.25SN16	S	25	1"	20	57.0	41
34.118.30SN16	S	30	1"	22	59.0	46
34.118.30SN20	S	30	1.1/4"	25	59.6	46
34.118.38SN24	S	38	1.1/2"	32	65.0	55

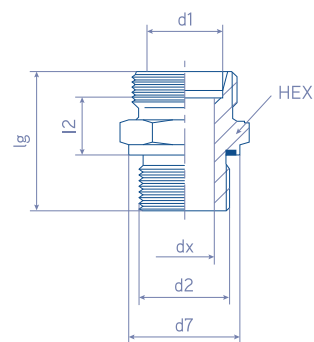
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



UNF Male Tube Connector



34.161.

ISO 8434-1 tube coupling and ISO 11926-2/3 Form-F UNF Thread

REFERENCE	serie	dimensions (mm)	dimensions (UNF)	dimensions (mm)				
		Ø tube d1	thread d2	d7	dx	lg	l2	HEX
34.161.06LU04	L	6	7/16"	15.8	4.0	25.2	9.0	17
34.161.08LU04	L	8	7/16"	15.8	5.0	26.2	10.0	17
34.161.10LU04	L	10	7/16"	15.8	5.0	28.2	12.0	17
34.161.10LU06	L	10	9/16"	17.7	7.0	28.0	11.0	19
34.161.12LU08	L	12	3/4"	23.0	9.0	30.7	12.5	24
34.161.12LU10	L	12	7/8"	27.0	10.0	32.7	13.0	27
34.161.15LU08	L	15	3/4"	23.0	11.0	32.2	14.0	24
34.161.15LU10	L	15	7/8"	27.0	11.0	33.7	14.0	27
34.161.18LU08	L	18	3/4"	23.0	12.0	33.2	14.5	27
34.161.18LU10	L	18	7/8"	27.0	14.0	34.7	14.5	27
34.161.22LU12	L	22	1.1/16"	32.0	18.0	39.0	16.5	32
34.161.22LU16	L	22	1.5/16"	38.1	18.0	39.0	16.5	41
34.161.28LU12	L	28	1.1/16"	32.0	18.0	40.0	17.5	41
34.161.28LU16	L	28	1.5/16"	38.1	23.0	40.0	17.4	41
34.161.35LU16	L	35	1.5/16"	39.0	23.0	43.0	17.5	46
34.161.35LU20	L	35	1.5/8"	48.0	30.0	43.0	17.5	50
34.161.42LU24	L	42	1.7/8"	54.0	36.0	45.0	19.0	55
34.161.06SU04	S	6	7/16"	15.8	4.0	29.2	13.0	17
34.161.08SU04	S	8	7/16"	15.8	4.0	31.2	15.0	17
34.161.10SU06	S	10	9/16"	17.7	7.0	32.5	15.0	19
34.161.10SU08	S	10	3/4"	23.0	7.0	33.7	15.0	24
34.161.12SU06	S	12	9/16"	17.7	7.0	34.5	17.5	22
34.161.12SU08	S	12	3/4"	23.0	8.0	36.2	17.5	24
34.161.14SU08	S	14	3/4"	23.0	10.0	38.2	19.0	24
34.161.16SU08	S	16	3/4"	23.0	12.0	38.2	18.5	27
34.161.16SU10	S	16	7/8"	27.0	12.0	37.5	15.0	30
34.161.16SU12	S	16	1.1/16"	32.0	12.0	42.0	18.5	32
34.161.20SU10	S	20	7/8"	27.0	12.0	43.7	20.5	32
34.161.20SU12	S	20	1.1/16"	32.0	16.0	46.0	20.5	32
34.161.25SU12	S	25	1.1/16"	32.0	16.0	50.0	23.0	41
34.161.25SU16	S	25	1.5/16"	38.1	20.0	50.0	23.0	41
34.161.30SU16	S	30	1.5/16"	32.0	16.0	52.0	23.5	46
34.161.30SU20	S	30	1.5/8"	48.0	25.0	52.0	23.5	50
34.161.38SU24	S	38	1.7/8"	54.0	32.0	57.0	26.0	55

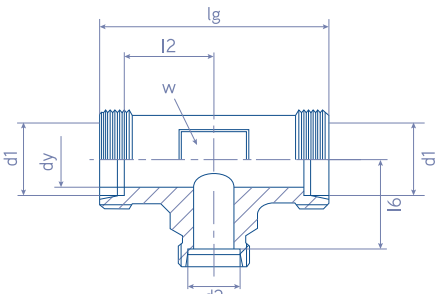
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Tee Reducer Tube Connector

34.153.
ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)						
		Ø tube d1	Ø tube d1	dy	lg	l2	l6	w
34.153.0806L	L	6	8	4.0	33.0	26.0	12	17
34.153.1006L	L	6	10	4.0	34.0	27.0	12	19
34.153.1008L	L	8	10	6.0	35.0	28.0	14	19
34.153.1206L	L	6	12	4.0	37.0	30.0	14	22
34.153.1208L	L	8	12	6.0	37.0	30.0	14	22
34.153.1210L	L	10	12	8.0	38.0	31.0	17	22
34.153.1506L	L	6	15	4.0	38.0	31.0	17	27
34.153.1508L	L	8	15	6.0	38.0	31.0	17	27
34.153.1510L	L	10	15	8.0	39.0	32.0	17	27
34.153.1512L	L	12	15	10.0	40.0	33.0	19	27
34.153.1806L	L	6	18	4.0	37.5	30.5	19	32
34.153.1808L	L	8	18	6.0	37.5	30.5	19	32
34.153.1810L	L	10	18	8.0	38.5	31.5	19	32
34.153.1812L	L	12	18	10.0	38.5	31.5	19	32
34.153.1815L	L	15	18	12.0	39.5	32.5	24	32
34.153.2206L	L	6	22	4.0	41.0	34.0	24	36
34.153.2208L	L	8	22	6.0	38.5	31.5	24	36
34.153.2210L	L	10	22	8.0	39.5	32.5	24	36
34.153.2212L	L	12	22	10.0	39.5	32.5	24	36
34.153.2215L	L	15	22	12.0	40.5	33.5	24	36
34.153.2218L	L	18	22	15.0	41.5	34.0	27	36
34.153.2806L	L	6	28	4.0	42.0	35.0	30	41
34.153.2808L	L	8	28	6.0	42.0	35.0	30	41
34.153.2810L	L	10	28	8.0	41.0	34.0	30	41
34.153.2812L	L	12	28	10.0	41.0	34.0	30	41
34.153.2815L	L	15	28	12.0	42.0	35.0	30	41
34.153.2818L	L	18	28	15.0	43.0	35.5	30	41
34.153.2822L	L	22	28	19.0	45.0	37.5	32	41
34.153.3508L	L	8	35	6.0	48.0	41.0	36	50
34.153.3510L	L	10	35	8.0	49.0	42.0	36	50
34.153.3512L	L	12	35	10.0	47.5	40.5	36	50
34.153.3515L	L	15	35	12.0	48.5	41.5	36	50
34.153.3518L	L	18	35	15.0	49.5	42.0	36	50
34.153.3522L	L	22	35	19.0	51.5	44.0	36	50
34.153.3528L	L	28	35	24.0	52.5	45.0	41	50
34.153.4210L	L	10	42	8.0	51.0	44.0	46	60
34.153.4212L	L	12	42	10.0	51.0	44.0	46	60
34.153.4215L	L	15	42	12.0	52.0	45.0	46	60



REFERENCE	serie	dimensions (mm)						
		Ø tube d1	Ø tube d1	dy	lg	l2	l6	w
34.153.4218L	L	18	42	15.0	52.0	44.5	46	60
34.153.4222L	L	22	42	19.0	54.0	46.5	46	60
34.153.4228L	L	28	42	24.0	55.0	47.5	46	60
34.153.4235L	L	35	42	30.0	58.0	47.5	46	60
34.153.0806S	S	6	8	4.0	37.0	30.0	14	19
34.153.1006S	S	6	10	4.0	39.0	32.0	14	22
34.153.1008S	S	8	10	5.0	41.0	34.0	17	22
34.153.1206S	S	6	12	4.0	39.0	32.0	17	24
34.153.1208S	S	8	12	5.0	41.0	34.0	17	24
34.153.1210S	S	10	12	7.0	41.0	33.5	19	24
34.153.1406S	S	6	14	4.0	42.0	35.0	17	27
34.153.1408S	S	8	14	5.0	44.0	37.0	17	27
34.153.1410S	S	10	14	7.0	44.0	36.5	19	27
34.153.1412S	S	12	14	8.0	46.0	38.5	22	27
34.153.1608S	S	8	16	5.0	44.0	37.0	17	30
34.153.1610S	S	10	16	7.0	44.0	36.5	19	30
34.153.1612S	S	12	16	8.0	46.0	38.5	22	30
34.153.1614S	S	14	16	10.0	48.0	40.0	24	30
34.153.2006S	S	6	20	4.0	47.0	40.0	22	36
34.153.4212L	L	12	42	10.0	51.0	44.0	46	60
34.153.4215L	L	15	42	12.0	52.0	45.0	46	60
34.153.4218L	L	18	42	15.0	52.0	44.5	46	60
34.153.4222L	L	22	42	19.0	54.0	46.5	46	60
34.153.4228L	L	28	42	24.0	55.0	47.5	46	60
34.153.4235L	L	35	42	30.0	58.0	47.5	46	60
34.153.0806S	S	6	8	4.0	37.0	30.0	14	19
34.153.1006S	S	6	10	4.0	39.0	32.0	14	22
34.153.1008S	S	8	10	5.0	41.0	34.0	17	22
34.153.1206S	S	6	12	4.0	39.0	32.0	17	24
34.153.1208S	S	8	12	5.0	41.0	34.0	17	24
34.153.1210S	S	10	12	7.0	41.0	33.5	19	24
34.153.1406S	S	6	14	4.0	42.0	35.0	17	27
34.153.1408S	S	8	14	5.0	44.0	37.0	17	27
34.153.1410S	S	10	14	7.0	44.0	36.5	19	27
34.153.1412S	S	12	14	8.0	46.0	38.5	22	27
34.153.1608S	S	8	16	5.0	44.0	37.0	17	30
34.153.1610S	S	10	16	7.0	44.0	36.5	19	30
34.153.1612S	S	12	16	8.0	46.0	38.5	22	30
34.153.1614S	S	14	16	10.0	48.0	40.0	24	30
34.153.2006S	S	6	20	4.0	47.0	40.0	22	36
34.153.1612S	S	12	16	8.0	46.0	38.5	22	30
34.153.1614S	S	14	16	10.0	48.0	40.0	24	30
34.153.2006S	S	6	20	4.0	47.0	40.0	22	36

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

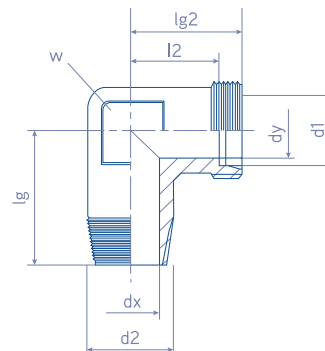
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

BSPT Tapered 90° Elbow Male Tube Connector

34.120.

ISO 8434-1 tube coupling and DIN 3852-2 Form-C BSPT Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)					
		Ø tube d1	thread d2	dx	dy	lg	lg2	l2	w
34.120.06LR02	L	6	1/8"	4	4	20.0	19.0	12.0	12
34.120.06LR04	L	6	1/4"	7	4	26.0	14.0	14.0	14
34.120.08LR02	L	8	1/8"	4	6	26.0	21.0	14.0	14
34.120.08LR04	L	8	1/4"	6	6	26.0	21.0	14.0	14
34.120.08LR06	L	8	3/8"	8	6	28.0	22.0	15.0	19
34.120.10LR02	L	10	1/8"	4	7	25.0	22.0	15.0	17
34.120.10LR04	L	10	1/4"	7	8	27.0	22.0	15.0	17
34.120.10LR06	L	10	3/8"	7	7	28.0	23.0	16.0	19
34.120.10LR08	L	10	1/2"	11	7	34.0	27.0	20.0	19
34.120.12LR04	L	12	1/4"	7	9	28.0	24.0	17.0	19
34.120.12LR06	L	12	3/8"	9	10	28.0	24.0	17.0	19
34.120.12LR08	L	12	1/2"	11	9	34.0	27.0	20.0	19
34.120.15LR06	L	15	3/8"	9	11	32.0	28.0	21.0	19
34.120.15LR08	L	15	1/2"	11	12	34.0	28.0	21.0	19
34.120.18LR08	L	18	1/2"	14	15	36.0	31.0	23.5	24
34.120.18LR12	L	18	3/4"	18	15	42.0	35.0	27.5	27
34.120.22LR12	L	22	3/4"	18	19	42.0	27.5	27.5	27
34.120.06SR04	S	6	1/4"	4	4	26.0	23.0	16.0	14
34.120.08SR04	S	8	1/4"	5	5	17.0	24.0	17.0	17
34.120.10SR06	S	10	3/8"	7	7	28.0	25.0	17.5	19
34.120.12SR06	S	12	3/8"	8	8	28.0	29.0	21.5	22
34.120.12SR08	S	12	1/2"	11	8	34.0	29.0	21.5	19
34.120.14SR06	S	14	3/8"	8	10	30.0	30.0	22.0	19
34.120.14SR08	S	14	1/2"	10	10	32.0	30.0	22.0	19
34.120.16SR08	S	16	1/2"	12	12	32.0	33.0	24.5	24
34.120.20SR08	S	20	1/2"	12	16	40.0	37.0	26.5	27
34.120.20SR12	S	20	3/4"	16	16	42.0	37.0	26.5	27

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

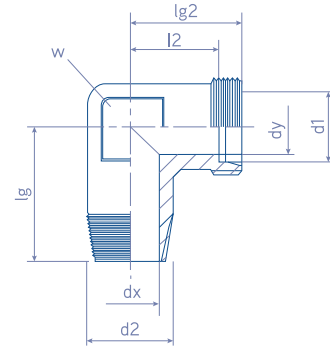
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



NPTF Tapered 90° Elbow Male Tube Connector

34.121.

ISO 8434-1 tube coupling and ANSI B1.20.3 NPTF Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)					
		Ø tube d1	thread d2	dx	dy	lg	lg2	l2	w
34.121.06LN02	L	6	1/8"	4	4	20.0	19.0	12.0	12
34.121.06LN04	L	6	1/4"	4	4	26.0	21.0	14.0	14
34.121.08LN04	L	8	1/4"	6	6	26.0	21.0	14.0	14
34.121.10LN04	L	10	1/4"	7	7	27.0	22.0	15.0	17
34.121.10LN06	L	10	3/8"	9	8	28.0	24.0	17.0	19
34.121.12LN04	L	12	1/4"	7	9	28.0	24.0	17.0	19
34.121.12LN06	L	12	3/8"	9	9	28.0	24.0	17.0	19
34.121.12LN08	L	12	1/2"	12	9	33.0	28.0	21.0	24
34.121.15LN08	L	15	1/2"	11	11	36.0	31.0	24.0	24
34.121.18LN08	L	18	1/2"	14	14	37.0	31.0	23.5	24
34.121.22LN12	L	22	3/4"	18	19	42.0	35.0	27.5	27
34.121.28LN16	L	28	1"	23	24	48.0	38.0	30.5	36
34.121.35LN20	L	35	1 1/4"	30	30	54.0	45.0	34.5	41
34.121.42LN24	L	42	1 1/2"	36	36	61.0	51.0	40.0	50
34.121.06SN04	S	6	1/4"	4	4	26.0	23.0	16.0	14
34.121.08SN04	S	8	1/4"	5	5	27.0	24.0	17.0	17
34.121.10SN06	S	10	3/8"	7	7	28.0	25.0	17.5	19
34.121.12SN06	S	12	3/8"	8	8	29.0	29.0	21.5	22
34.121.14SN08	S	14	1/2"	10	10	33.0	33.0	25.0	24
34.121.16SN08	S	16	1/2"	12	12	36.0	33.0	24.5	24
34.121.20SN12	S	20	3/4"	16	16	42.0	37.0	26.5	27
34.121.25SN16	S	25	1"	20	20	49.0	42.0	30.0	36
34.121.30SN20	S	30	1 1/4"	25	25	54.0	49.0	35.5	41
34.121.38SN24	S	38	1 1/2"	32	32	61.0	57.0	41.0	50

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

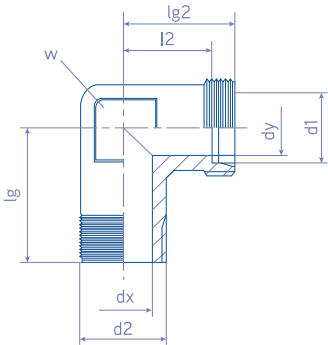
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric 90° Elbow Male Tube Connector

34.124.

ISO 8434-1 tube coupling and DIN 3852-1 Form-C Metric Thread



REFERENCE	serie	dimensions (mm)	dimensions (inch)	dimensions (mm)					
		Ø tube d1	thread d2	dx	dy	lg	lg2	l2	w
34.124.06LM10	L	6	M10x1.0	4	4	20.0	19.0	12.0	12
34.124.08LM12	L	8	M12x1.5	6	6	26.0	21.0	14.0	14
34.124.10LM14	L	10	M14x1.5	7	8	27.0	22.0	15.0	17
34.124.12LM16	L	12	M16x1.5	9	10	28.0	24.0	17.0	19
34.124.12LM18	L	12	M18x1.5	11	12	32.0	28.0	21.0	19
34.124.15LM18	L	15	M18x1.5	14	15	36.0	31.0	23.5	24
34.124.06SM12	S	6	M12x1.5	4	4	26.0	23.0	16.0	14
34.124.08SM14	S	8	M14x1.5	5	5	27.0	24.0	17.0	17
34.124.10SM16	S	10	M16x1.5	7	7	28.0	25.0	17.5	19
34.124.12SM18	S	12	M18x1.5	8	8	28.0	29.0	21.5	22
34.124.14SM20	S	14	M20x1.5	10	10	32.0	30.0	22.0	19
34.124.16SM22	S	16	M22x1.5	12	12	32.0	33.0	24.5	24

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

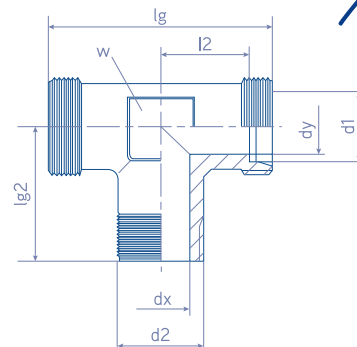
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



BSPT Male Tapered Branch Tee Tube Connector

34.125.

ISO 8434-1 tube coupling and DIN 3852-2 Form-C BSPT Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.125.06LR02	L	6	1/8"	4.0	4.0	38.0	20.0	12.0	12
34.125.08LR04	L	8	1/4"	6.0	6.0	42.0	26.0	14.0	14
34.125.10LR04	L	10	1/4"	7.0	8.0	44.0	27.0	15.0	17
34.125.12LR04	L	12	1/4"	9.0	10.0	48.0	28.0	17.0	19
34.125.15LR08	L	15	1/2"	11.0	12.0	56.0	32.0	21.0	19
34.125.18LR08	L	18	1/2"	14.0	15.0	62.0	36.0	23.5	24
34.125.06SR04	S	6	1/4"	4.0	4.0	46.0	26.0	16.0	14
34.125.08SR04	S	8	1/4"	5.0	5.0	48.0	27.0	17.0	17
34.125.10SR06	S	10	3/8"	7.0	7.0	50.0	28.0	17.5	19
34.125.12SR06	S	12	3/8"	8.0	8.0	58.0	28.0	21.5	22
34.125.14SR08	S	14	1/2"	10.0	10.0	60.0	32.0	22.0	19
34.125.16SR08	S	16	1/2"	12.0	12.0	66.0	32.0	24.5	24

MATERIAL: Carbon Steel

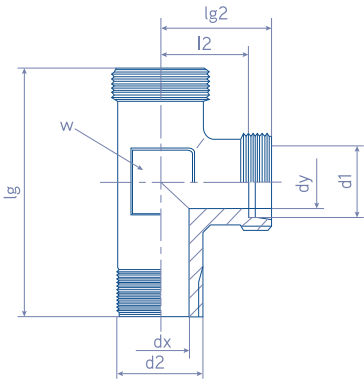
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

BSPT Male Tapered Run Tee Tube Connector

34.130.
ISO 8434-1 tube coupling and DIN 3852-2 Form-C BSPT Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.130.06LR02	L	6	1/8"	4.0	4.0	39.0	19.0	12.0	12
34.130.08LR04	L	8	1/4"	6.0	6.0	47.0	21.0	14.0	14
34.130.10LR04	L	10	1/4"	7.0	8.0	49.0	22.0	15.0	17
34.130.12LR04	L	12	1/4"	9.0	10.0	52.0	24.0	17.0	19
34.130.15LR08	L	15	1/2"	11.0	12.0	60.0	28.0	21.0	19
34.130.18LR08	L	18	1/2"	14.0	15.0	67.0	31.0	23.5	24
34.130.06SR04	S	6	1/4"	4.0	4.0	49.0	23.0	16.0	14
34.130.08SR04	S	8	1/4"	5.0	5.0	51.0	24.0	17.0	17
34.130.10SR06	S	10	3/8"	7.0	7.0	53.0	25.0	17.5	19
34.130.12SR06	S	12	3/8"	8.0	8.0	57.0	29.0	21.5	22
34.130.14SR08	S	14	1/2"	10.0	10.0	62.0	30.0	22.0	19
34.130.16SR08	S	16	1/2"	12.0	12.0	65.0	33.0	24.5	24

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

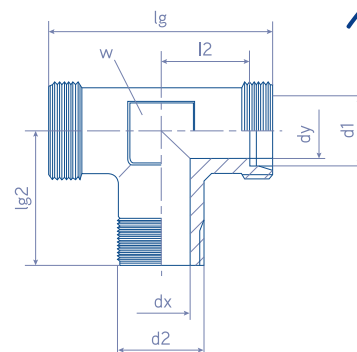
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Metric Male Branch Tee Tube Connector

34.129.

ISO 8434-1 tube coupling and DIN 3852-1 Form-C Metric Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.129.06LM10	L	6	M10x1.0	4.0	4.0	38.0	20.0	12.0	12
34.129.08LM12	L	8	M12x1.5	6.0	6.0	42.0	26.0	14.0	14
34.129.10LM14	L	10	M14x1.5	7.0	8.0	44.0	27.0	15.0	17
34.129.12LM16	L	12	M16x1.5	9.0	10.0	48.0	28.0	17.0	19
34.129.15LM18	L	15	M18x1.5	11.0	12.0	56.0	32.0	21.0	19
34.129.18LM22	L	18	M22x1.5	14.0	15.0	62.0	36.0	23.5	24
34.129.06SM12	S	6	M12x1.5	4.0	4.0	46.0	26.0	16.0	14
34.129.08SM14	S	8	M14x1.5	5.0	5.0	48.0	27.0	17.0	17
34.129.10SM16	S	10	M16x1.5	7.0	7.0	50.0	28.0	17.5	19
34.129.12SM18	S	12	M18x1.5	8.0	8.0	58.0	28.0	21.5	22
34.129.14SM20	S	14	M20x1.5	10.0	10.0	60.0	32.0	22.0	19
34.129.16SM22	S	16	M22x1.5	12.0	12.0	66.0	32.0	24.5	24

MATERIAL: Carbon Steel

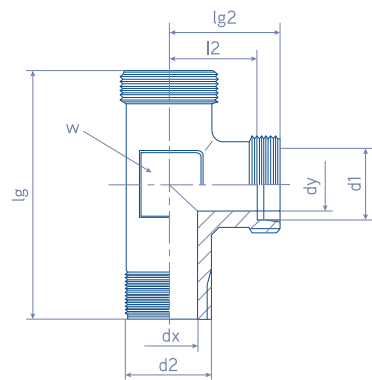
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Male Run Tee Tube Connector

34.134.
ISO 8434-1 tube coupling and DIN 3852-1 Form-C Metric Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.134.06LM10	L	6	M10x1.0	4.0	4.0	39.0	19.0	12.0	12
34.134.08LM12	L	8	M12x1.5	6.0	6.0	47.0	21.0	14.0	14
34.134.10LM14	L	10	M14x1.5	7.0	8.0	49.0	22.0	15.0	17
34.134.12LM16	L	12	M16x1.5	9.0	10.0	52.0	24.0	17.0	19
34.134.15LM18	L	15	M18x1.5	11.0	12.0	60.0	28.0	21.0	19
34.134.18LM22	L	18	M22x1.5	14.0	15.0	67.0	31.0	23.5	24
34.134.06SM12	S	6	M12x1.5	4.0	4.0	49.0	23.0	16.0	14
34.134.08SM14	S	8	M14x1.5	5.0	5.0	51.0	24.0	17.0	17
34.134.10SM16	S	10	M16x1.5	7.0	7.0	53.0	25.0	17.5	19
34.134.12SM18	S	12	M18x1.5	8.0	8.0	57.0	29.0	21.5	22
34.134.14SM20	S	14	M20x1.5	10.0	10.0	62.0	30.0	22.0	19
34.134.16SM22	S	16	M22x1.5	12.0	12.0	65.0	33.0	24.5	24

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

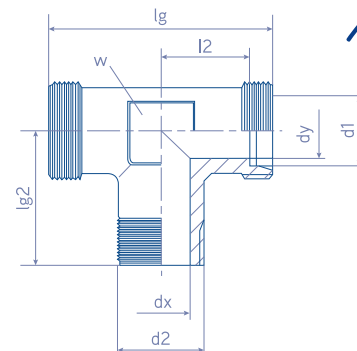
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

NPTF Male Branch Tee Tube Connector

34.126.

ISO 8434-1 tube coupling and ANSI B1.20.3 NPTF Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.126.06LN02	L	6	1/8"	4.0	4.0	38.0	20.0	12.0	12
34.126.08LN04	L	8	1/4"	6.0	6.0	42.0	26.0	14.0	14
34.126.10LN04	L	10	1/4"	7.0	8.0	44.0	27.0	15.0	17
34.126.12LN04	L	12	1/4"	9.0	10.0	48.0	28.0	17.0	19
34.126.15LN08	L	15	1/2"	11.0	12.0	56.0	32.0	21.0	19
34.126.18LN08	L	18	1/2"	14.0	15.0	62.0	36.0	23.5	24
34.126.06SN04	S	6	1/4"	4.0	4.0	46.0	26.0	16.0	14
34.126.08SN04	S	8	1/4"	5.0	5.0	48.0	27.0	17.0	17
34.126.10SN06	S	10	3/8"	7.0	7.0	50.0	28.0	17.5	19
34.126.12SN06	S	12	3/8"	8.0	8.0	58.0	28.0	21.5	22
34.126.14SN08	S	14	1/2"	10.0	10.0	60.0	32.0	22.0	19
34.126.16SN08	S	16	1/2"	12.0	12.0	66.0	32.0	24.5	24

MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating

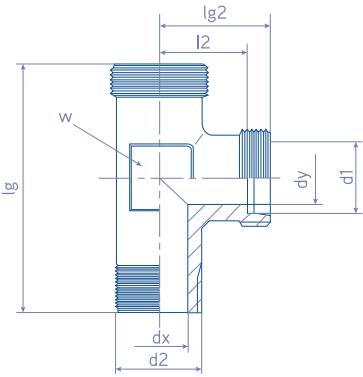
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

NPTF Male Run Tee Tube Connector

34.127.

ISO 8434-1 tube coupling and ANSI B1.20.3 NPTF Thread



REFERENCE	serie	dimensions (mm)							
		Ø tube d1	d2	dx	dy	lg	lg2	l2	w
34.127.06LN02	L	6	1/8"	4.0	4.0	39.0	19.0	12.0	12
34.127.08LN04	L	8	1/4"	6.0	6.0	47.0	21.0	14.0	14
34.127.10LN04	L	10	1/4"	7.0	8.0	49.0	22.0	15.0	17
34.127.12LN04	L	12	1/4"	9.0	10.0	52.0	24.0	17.0	19
34.127.15LN08	L	15	1/2"	11.0	12.0	60.0	28.0	21.0	19
34.127.18LN08	L	18	1/2"	14.0	15.0	67.0	31.0	23.5	24
34.127.06SN04	S	6	1/4"	4.0	4.0	49.0	23.0	16.0	14
34.127.08SN04	S	8	1/4"	5.0	5.0	51.0	24.0	17.0	17
34.127.10SN06	S	10	3/8"	7.0	7.0	53.0	25.0	17.5	19
34.127.12SN06	S	12	3/8"	8.0	8.0	57.0	29.0	21.5	22
34.127.14SN08	S	14	1/2"	10.0	10.0	62.0	30.0	22.0	19
34.127.16SN08	S	16	1/2"	12.0	12.0	65.0	33.0	24.5	24

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

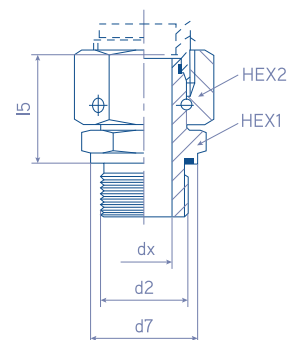
VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)



BSP Male Swivel Tube Connector

34.605.

ISO 8434-1 tube coupling and DIN ISO 1179-2 Form-E BSP Thread



REFERENCE	serie	dimensions (mm)						
		Ø tube d1	d2	d7	dx	l5	HEX 1	HEX 2
34.605.06LR02	L	6	1/8"	13.9	2.5	24.5	14	17
34.605.08LR04	L	8	1/4"	18.9	4.5	29.5	19	17
34.605.10LR04	L	10	1/4"	18.9	6.0	27.5	19	19
34.605.12LR06	L	12	3/8"	21.9	8.0	34.0	22	22
34.605.15LR08	L	15	1/2"	26.9	10.0	32.0	27	27
34.605.18LR08	L	18	1/2"	26.9	13.0	31.5	27	32
34.605.22LR12	L	22	3/4"	31.9	17.0	32.5	32	36
34.605.28LR16	L	28	1"	39.9	22.0	35.0	41	41
34.605.35LR20	L	35	1.1/4"	49.9	28.0	42.5	50	50
34.605.42LR24	L	42	1.1/2"	54.9	34.0	46.5	55	60
34.605.06SR04	S	6	1/4"	18.9	2.5	27.0	19	17
34.605.08SR04	S	8	1/4"	18.9	4.0	29.5	19	19
34.605.10SR06	S	10	3/8"	21.9	6.0	32.0	22	22
34.605.12SR06	S	12	3/8"	21.9	8.0	34.0	22	24
34.605.14SR08	S	14	1/2"	26.9	9.0	36.5	27	27
34.605.16SR08	S	16	1/2"	26.9	11.0	37.0	27	30
34.605.20SR12	S	20	3/4"	31.9	14.0	43.0	32	36
34.605.25SR16	S	25	1"	39.9	18.0	48.0	41	46
34.605.30SR20	S	30	1.1/4"	49.9	23.0	51.0	50	50
34.605.38SR24	S	38	1.1/2"	54.9	30.0	60.0	55	60

MATERIAL: Carbon Steel

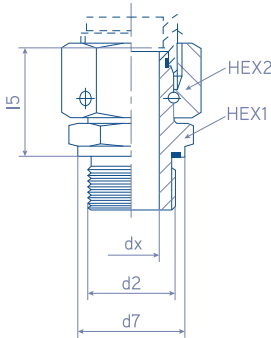
FINISH: : Chromium-(VI) Free plating

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Metric Male Swivel Tube Connector

34.606.

ISO 9974-2 tube coupling and DIN ISO 1179-2 Form-E BSP Thread



REFERENCE	serie	dimensions (mm)						
		Ø tube d1	d2	d7	dx	l5	HEX 1	HEX 2
34.606.06LM10	L	6	M10x1.0	13.9	2.5	24.5	14	14
34.606.08LM12	L	8	M12x1.5	16.9	4.5	26.5	17	17
34.606.10LM14	L	10	M14x1.5	18.9	6.0	27.5	19	19
34.606.12LM16	L	12	M16x1.5	21.9	8.0	30.5	22	22
34.606.15LM18	L	15	M18x1.5	23.9	10.0	31.5	24	27
34.606.18LM22	L	18	M22x1.5	26.9	13.0	31.5	27	32
34.606.22LM26	L	22	M26x1.5	31.9	17.0	32.5	32	36
34.606.28LM33	L	28	M33x2.0	39.9	22.0	35.0	41	41
34.606.35LM42	L	35	M42x2.0	49.9	28.0	42.5	50	50
34.606.42LM48	L	42	M48x2.0	54.9	34.0	46.5	55	60
34.606.06SM12	S	6	M12x1.5	16.9	2.5	27.0	19	17
34.606.08SM14	S	8	M14x1.5	18.9	4.0	29.5	19	19
34.606.10SM16	S	10	M16x1.5	21.9	6.0	32.0	22	22
34.606.12SM18	S	12	M18x1.5	23.9	8.0	34.0	24	24
34.606.14SM20	S	14	M20x1.5	25.9	9.0	36.5	27	27
34.606.16SM22	S	16	M22x1.5	26.9	11.0	37.0	27	30
34.606.20SM27	S	20	M27x2.0	31.9	14.0	43.0	32	36
34.606.25SM33	S	25	M33x2.0	39.9	18.0	48.0	41	46
34.606.30SM42	S	30	M42x2.0	49.9	23.0	51.0	50	50
34.606.38SM48	S	38	M48x2.0	54.0	30.0	60.0	55	60

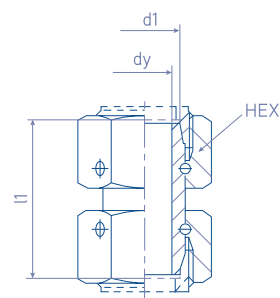
MATERIAL: Carbon Steel **FINISH:** : Chromium-(VI) Free plating **VERSIONS:** Stainless Steel (add an 'S' at the end of the REFERENCE)



Metric Swivel Tube Connector

34.635.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)			
		Ø tube d1	dy	l1	HEX
34.635.06L	L	6	2.5	39.0	14
34.635.08L	L	8	4.5	39.5	17
34.635.10L	L	10	6.0	39.5	19
34.635.12L	L	12	8.0	39.5	22
34.635.15L	L	15	10.0	42.5	27
34.635.18L	L	18	13.0	45.0	32
34.635.22L	L	22	17.0	49.5	36
34.635.28L	L	28	22.0	51.5	41
34.635.35L	L	35	28.0	61.0	50
34.635.42L	L	42	34.0	62.5	60
34.635.06S	S	6	2.5	40.5	17
34.635.08S	S	8	4.0	40.5	19
34.635.10S	S	10	6.0	43.5	22
34.635.12S	S	12	8.0	44.0	24
34.635.14S	S	14	9.0	48.5	27
34.635.16S	S	16	11.0	49.0	30
34.635.20S	S	20	14.0	60.5	36
34.635.25S	S	25	18.0	67.5	46
34.635.30S	S	30	23.0	72.5	50
34.635.38S	S	38	30.0	83.0	60

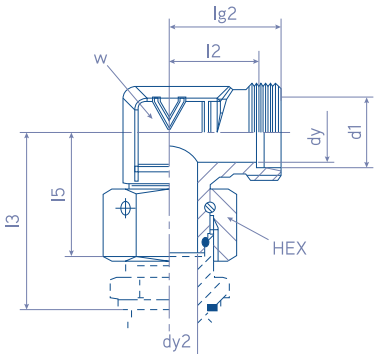
MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Swivel 90° Elbow Adjustable Tube Connector

34.642.
ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)								
		Ø tube d1	dy	dy2	lg2	l2	l3	l5	w	HEX
34.642.06LM12	L	6	4	2.5	19.0	12.0	34.5	26.0	12	14
34.642.08LM14	L	8	6	4.0	21.0	14.0	37.5	27.5	14	17
34.642.10LM16	L	10	8	6.0	22.0	15.0	40.0	29.0	14	19
34.642.12LM18	L	12	10	8.0	24.0	17.0	42.0	29.5	17	22
34.642.15LM22	L	15	12	10.0	28.0	21.0	46.0	32.5	19	27
34.642.18LM26	L	18	15	13.0	31.0	23.5	50.0	35.5	24	32
34.642.22LM30	L	22	19	17.0	35.0	27.5	55.0	38.5	27	36
34.642.28LM36	L	28	24	22.0	38.0	30.5	59.0	41.5	36	41
34.642.35LM45	L	35	30	28.0	45.0	34.5	68.5	51.0	41	50
34.642.42LM52	L	42	36	34.0	51.0	40.0	75.0	56.0	50	60
34.642.06SM14	S	6	4	2.5	23.0	16.0	40.0	27.0	14	17
34.642.08SM16	S	8	5	4.0	24.0	17.0	42.5	27.5	17	19
34.642.10SM18	S	10	7	6.0	25.0	17.5	45.0	30.0	19	22
34.642.12SM20	S	12	8	8.0	29.0	21.5	48.0	31.5	17	24
34.642.14SM22	S	14	10	9.0	30.0	22.0	54.0	35.0	19	27
34.642.16SM24	S	16	12	11.0	33.0	24.5	55.0	36.5	24	30
34.642.20SM30	S	20	16	14.0	37.0	26.5	65.0	44.5	27	36
34.642.25SM36	S	25	20	18.0	42.0	30.0	73.0	50.0	36	46
34.642.30SM42	S	30	25	23.0	49.0	35.5	78.5	55.0	41	50
34.642.38SM52	S	38	32	30.0	57.0	41.0	89.0	63.0	50	60

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

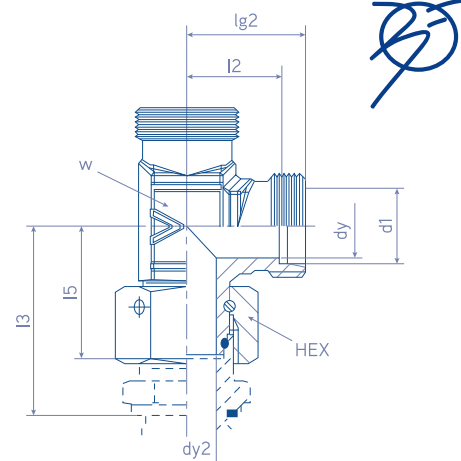
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Swivel Run Tee Adjustable Tube Connector

34.646.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)								
		Ø tube d1	dy	dy2	lg2	l2	l3	l5	w	HEX
34.646.06LM12	L	6	4	2.5	19.0	12.0	34.5	26.0	12	14
34.646.08LM14	L	8	6	4.0	21.0	14.0	37.5	27.5	14	17
34.646.10LM16	L	10	8	6.0	22.0	15.0	40.0	29.0	14	19
34.646.12LM18	L	12	10	8.0	24.0	17.0	42.0	29.5	17	22
34.646.15LM22	L	15	12	10.0	28.0	21.0	46.0	32.5	19	27
34.646.18LM26	L	18	15	13.0	31.0	23.5	50.0	35.5	24	32
34.646.22LM30	L	22	19	17.0	35.0	27.5	55.0	38.5	27	36
34.646.28LM36	L	28	24	22.0	38.0	30.5	59.0	41.5	36	41
34.646.35LM45	L	35	30	28.0	45.0	34.5	68.5	51.0	41	50
34.646.42LM52	L	42	36	34.0	51.0	40.0	75.0	56.0	50	60
34.646.06SM14	S	6	4	2.5	23.0	16.0	40.0	27.0	14	17
34.646.08SM16	S	8	5	4.0	24.0	17.0	42.5	27.5	17	19
34.646.10SM18	S	10	7	6.0	25.0	17.5	45.0	30.0	19	22
34.646.12SM20	S	12	8	8.0	29.0	21.5	48.0	31.5	17	24
34.646.14SM22	S	14	10	9.0	30.0	22.0	54.0	35.0	19	27
34.646.16SM24	S	16	12	11.0	33.0	24.5	55.0	36.5	24	30
34.646.20SM30	S	20	16	14.0	37.0	26.5	65.0	44.5	27	36
34.646.25SM36	S	25	20	18.0	42.0	30.0	73.0	50.0	36	46
34.646.30SM42	S	30	25	23.0	49.0	35.5	78.5	55.0	41	50
34.646.38SM52	S	38	32	30.0	57.0	41.0	89.0	63.0	50	60

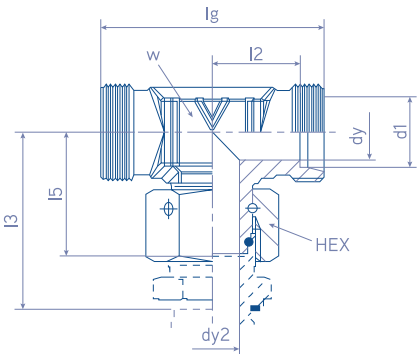
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Swivel Branch Tee Adjustable Tube Connector

34.150.
ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)								
		Ø tube d1	dy	dy2	lg	l2	l3	l5	w	HEX
34.150.06LM12	L	6	4	2.5	38.0	12.0	34.5	26.0	12	14
34.150.08LM14	L	8	6	4.0	42.0	14.0	37.5	27.5	14	17
34.150.10LM16	L	10	8	6.0	44.0	15.0	40.0	29.0	14	19
34.150.12LM18	L	12	10	8.0	48.0	17.0	42.0	29.5	17	22
34.150.15LM22	L	15	12	10.0	56.0	21.0	46.0	32.5	19	27
34.150.18LM26	L	18	15	13.0	62.0	23.5	50.0	35.5	24	32
34.150.22LM30	L	22	19	17.0	70.0	27.5	55.0	38.5	27	36
34.150.28LM36	L	28	24	22.0	76.0	30.5	59.0	41.5	36	41
34.150.35LM45	L	35	30	28.0	90.0	34.5	68.5	51.0	41	50
34.150.42LM52	L	42	36	34.0	102.0	40.0	75.0	56.0	50	60
34.150.06SM14	S	6	4	2.5	46.0	16.0	40.0	27.0	14	17
34.150.08SM16	S	8	5	4.0	48.0	17.0	42.5	27.5	17	19
34.150.10SM18	S	10	7	6.0	50.0	17.5	45.0	30.0	19	22
34.150.12SM20	S	12	8	8.0	58.0	21.5	48.0	31.5	17	24
34.150.14SM22	S	14	10	9.0	60.0	22.0	54.0	35.0	19	27
34.150.16SM24	S	16	12	11.0	66.0	24.5	55.0	36.5	24	30
34.150.20SM30	S	20	16	14.0	74.0	26.5	65.0	44.5	27	36
34.150.25SM36	S	25	20	18.0	84.0	30.0	73.0	50.0	36	46
34.150.30SM42	S	30	25	23.0	98.0	35.5	78.5	55.0	41	50
34.150.38SM52	S	38	32	30.0	114.0	41.0	89.0	63.0	50	60

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

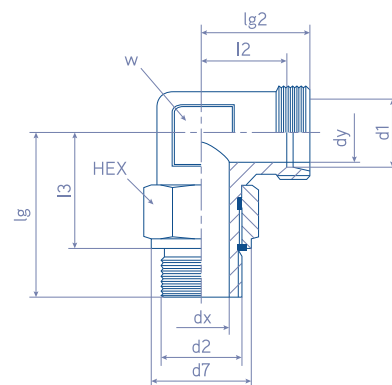
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



BSP Male Adjustable 90° Elbow Tube Connector

34.143.

ISO 8434-1 tube coupling and DIN ISO 1179-2 Form-E BSP Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d7	dx	dy	lg	lg2	l2	l3	w	HEX
34.143.06LR02	L	6	1/8"	13.9	4.0	4.0	29.0	21.0	14.0	21.0	14	14
34.143.08LR04	L	8	1/4"	18.9	7.0	6.0	38.0	23.0	16.0	26.0	17	19
34.143.10LR04	L	10	1/4"	18.9	7.0	8.0	38.0	24.0	17.0	26.0	17	19
34.143.12LR06	L	12	3/8"	21.9	10.0	10.0	41.0	26.0	19.0	29.0	19	22
34.143.15LR08	L	15	1/2"	26.9	12.5	12.0	44.0	28.0	21.0	30.0	22	27
34.143.18LR08	L	18	1/2"	26.9	12.5	15.0	51.0	33.0	25.5	37.0	27	27
34.143.22LR12	L	22	3/4"	35.9	18.0	19.0	55.0	35.0	27.5	39.0	27	36
34.143.28LR16	L	28	1"	40.9	21.5	24.0	68.5	40.0	32.5	50.5	41	41
34.143.35LR20	L	35	1.1/4"	49.9	27.5	30.0	76.0	46.5	36.0	56.0	50	50
34.143.42LR24	L	42	1.1/2"	54.9	33.0	36.0	79.5	51.0	40.0	57.5	50	55
34.143.06SR04	S	6	1/4"	18.9	6.0	4.0	38.0	25.0	18.0	26.0	17	19
34.143.08SR04	S	8	1/4"	18.9	7.0	5.0	38.0	25.0	18.0	26.0	17	19
34.143.10SR06	S	10	3/8"	21.9	10.0	7.0	41.0	27.0	19.5	29.0	19	22
34.143.12SR06	S	12	3/8"	21.9	10.0	8.0	41.0	29.0	21.5	29.0	19	22
34.143.14SR08	S	14	1/2"	26.9	10.0	10.0	44.0	30.0	22.0	30.0	24	27
34.143.16SR08	S	16	1/2"	26.9	10.0	12.0	51.0	35.0	26.5	37.0	27	27
34.143.20SR12	S	20	3/4"	35.9	15.5	16.0	55.0	38.0	27.5	39.0	27	36
34.143.25SR16	S	25	1"	40.9	21.5	20.0	68.5	44.0	32.0	50.5	41	41
34.143.30SR20	S	30	1.1/4"	49.9	27.5	25.0	76.0	50.0	36.5	56.0	50	50
34.143.38SR24	S	38	1.1/2"	54.9	33.0	32.0	79.5	57.0	41.0	57.5	50	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

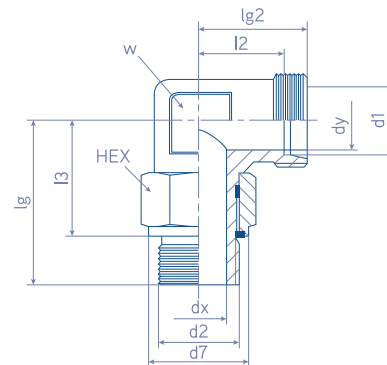
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Male Adjustable 90° Elbow Tube Connector

34.144.

ISO 8434-1 tube coupling and ISO 9974-2 Form-E Metric Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d7	dx	dy	lg	lg2	l2	l3	w	HEX
34.144.06LM10	L	6	M10x1.0	13.9	4.5	4.0	29.5	21.0	14.0	21.5	14	14
34.144.08LM12	L	8	M12x1.5	16.9	6.0	6.0	36.5	23.0	16.0	24.5	17	19
34.144.10LM14	L	10	M14x1.5	18.9	7.5	8.0	39.0	24.0	17.0	27.0	17	19
34.144.12LM16	L	12	M16x1.5	21.9	9.0	10.0	40.0	26.0	19.0	28.0	19	22
34.144.15LM18	L	15	M18x1.5	23.9	11.0	12.0	32.0	28.0	21.0	30.0	22	27
34.144.18LM22	L	18	M22x1.5	26.9	14.0	15.0	49.5	33.0	25.5	35.5	27	27
34.144.22LM26	L	22	M26x1.5	31.9	18.0	19.0	53.0	35.0	27.5	37.0	27	36
34.144.28LM33	L	28	M33x2.0	40.9	23.0	24.0	68.5	40.0	32.5	50.5	41	41
34.144.35LM42	L	35	M42x2.0	49.9	30.0	30.0	75.5	46.5	36.0	55.5	50	50
34.144.42LM48	L	42	M48x2.0	54.9	36.0	36.0	79.5	51.0	40.0	57.5	50	55
34.144.06SM12	S	6	M12x1.5	16.9	4.0	4.0	36.5	25.0	18.0	24.5	17	19
34.144.08SM14	S	8	M14x1.5	18.9	6.0	5.0	39.0	25.0	18.0	27.0	17	19
34.144.10SM16	S	10	M16x1.5	21.9	7.0	7.0	40.0	27.0	19.5	28.0	19	22
34.144.12SM18	S	12	M18x1.5	23.9	9.0	8.0	42.0	29.0	21.5	30.0	19	22
34.144.16SM22	S	16	M22x1.5	26.9	12.0	12.0	49.5	35.0	26.5	35.5	27	27
34.144.20SM27	S	20	M27x2.0	31.9	15.0	16.0	56.0	38.0	27.5	40.0	27	36
34.144.25SM33	S	25	M33x2.0	40.9	20.0	20.0	68.5	44.0	32.0	50.5	41	41
34.144.30SM42	S	30	M42x2.0	49.9	26.0	25.0	75.5	50.0	36.5	55.5	50	50
34.144.38SM48	S	38	M48x2.0	54.9	32.0	32.0	79.5	57.0	41.0	57.5	50	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

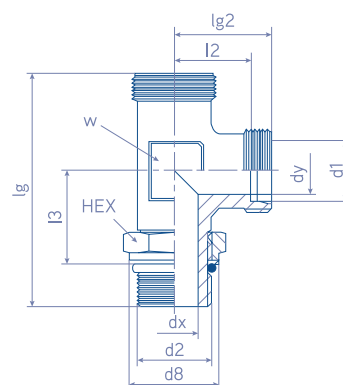
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Metric Male Run Tee Tube Connector

34.148.

ISO 8434-1 tube coupling and ISO 9974-2 Form-E Metric Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d8	dx	dy	lg	lg2	l2	l3	w	HEX
34.148.06LM10	L	6	M10x1.0	14.5	4.5	4.0	44.0	27.0	15.0	20.0	14	14
34.148.08LM12	L	8	M12x1.5	17.5	6.0	6.0	44.0	32.0	15.0	22.0	14	17
34.148.10LM14	L	10	M14x1.5	19.5	7.5	8.0	49.0	35.0	17.5	25.0	17	19
34.148.12LM16	L	12	M16x1.5	22.5	9.0	10.0	54.0	36.0	20.0	26.0	19	22
34.148.15LM18	L	15	M18x1.5	24.5	11.0	12.0	56.0	41.0	21.0	30.0	22	24
34.148.18LM22	L	18	M22x1.5	27.5	14.0	15.0	66.0	45.0	25.5	33.0	27	27
34.148.22LM26	L	22	M26x1.5	32.5	18.0	19.0	70.0	49.0	27.5	35.0	27	32
34.148.28LM33	L	28	M33x2.0	41.5	23.0	24.0	76.0	52.0	30.5	38.0	36	41
34.148.35LM42	L	35	M42x2.0	50.5	30.0	30.0	90.0	62.0	34.5	48.0	41	50
34.148.42LM48	L	42	M48x2.0	55.5	36.0	36.0	102.0	65.0	40.0	49.0	50	55
34.148.06SM12	S	6	M12x1.5	17.5	4.0	4.0	44.0	32.0	15.0	22.0	17	17
34.148.08SM14	S	8	M14x1.5	19.5	6.0	5.0	54.0	36.0	20.0	26.0	19	19
34.148.10SM16	S	10	M16x1.5	22.5	7.0	7.0	55.0	38.0	20.0	27.0	19	22
34.148.12SM18	S	12	M18x1.5	24.5	9.0	8.0	58.0	43.0	21.5	31.0	22	24
34.148.16SM22	S	16	M22x1.5	27.5	12.0	12.0	66.0	49.0	24.5	35.0	22	27
34.148.20SM27	S	20	M27x2.0	32.5	15.0	16.0	74.0	55.0	26.5	39.0	27	32
34.148.25SM33	S	25	M33x2.0	41.5	20.0	20.0	84.0	60.0	30.0	44.0	36	41
34.148.30SM42	S	30	M42x2.0	50.5	26.0	25.0	98.0	68.0	35.5	51.0	41	50
34.148.38SM48	S	38	M48x2.0	55.5	32.0	32.0	114.0	73.0	41.0	54.0	50	55

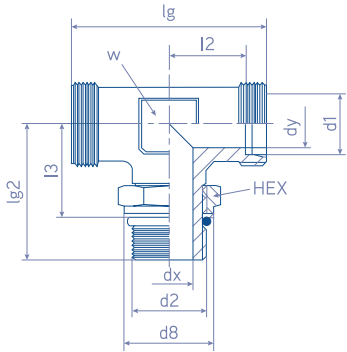
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Male Branch Tee Tube Connector

34.152.
ISO 8434-1 tube coupling and ISO 9974-2 Form-E Metric Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d8	dx	dy	lg	lg2	l2	l3	w	HEX
34.152.06LM10	L	6	M10x1.0	14.5	4.5	4.0	48.0	21.0	14.0	20.0	14	14
34.152.08LM12	L	8	M12x1.5	17.5	6.0	6.0	55.0	23.0	16.0	22.0	14	17
34.152.10LM14	L	10	M14x1.5	19.5	7.5	8.0	59.0	24.0	17.0	25.0	17	19
34.152.12LM16	L	12	M16x1.5	22.5	9.0	10.0	62.0	26.0	19.0	26.0	19	22
34.152.15LM18	L	15	M18x1.5	24.5	11.0	12.0	69.0	28.0	21.0	30.0	22	24
34.152.18LM22	L	18	M22x1.5	27.5	14.0	15.0	79.0	34.0	26.5	33.0	27	27
34.152.22LM26	L	22	M26x1.5	32.5	18.0	19.0	84.0	35.0	27.5	35.0	27	32
34.152.28LM33	L	28	M33x2.0	41.5	23.0	24.0	90.0	38.0	30.5	38.0	36	41
34.152.35LM42	L	35	M42x2.0	50.5	30.0	30.0	107.0	45.0	34.5	48.0	41	50
34.152.42LM48	L	42	M48x2.0	55.5	36.0	36.0	116.0	51.0	40.0	49.0	50	55
34.152.06SM12	S	6	M12x1.5	17.5	4.0	4.0	55.0	23.0	16.0	22.0	17	17
34.152.08SM14	S	8	M14x1.5	19.5	6.0	5.0	60.0	24.0	17.0	26.0	19	19
34.152.10SM16	S	10	M16x1.5	22.5	7.0	7.0	65.0	27.0	19.5	27.0	19	22
34.152.12SM18	S	12	M18x1.5	24.5	9.0	8.0	75.0	32.0	24.5	31.0	22	24
34.152.16SM22	S	16	M22x1.5	27.5	12.0	12.0	82.0	33.0	24.5	35.0	22	27
34.152.20SM27	S	20	M27x2.0	32.5	15.0	16.0	92.0	37.0	26.5	39.0	27	32
34.152.25SM33	S	25	M33x2.0	41.5	20.0	20.0	102.0	42.0	30.0	44.0	36	41
34.152.30SM42	S	30	M42x2.0	50.5	26.0	25.0	117.0	49.0	35.5	51.0	41	50
34.152.38SM48	S	38	M48x2.0	55.5	32.0	32.0	130.0	57.0	41.0	54.0	50	55

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

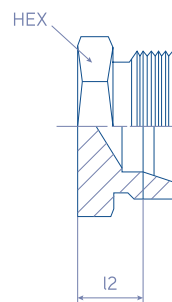
VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)



Tube Blanking Screw

34.175.

ISO 8434-1 Plug



REFERENCE	serie	dimensions (mm)		
		Ø tube d1	l2	HEX
34.175.06L	L	6	7.0	12
34.175.08L	L	8	8.0	14
34.175.10L	L	10	9.0	17
34.175.12L	L	12	10.0	19
34.175.15L	L	15	11.0	24
34.175.18L	L	18	11.5	27
34.175.22L	L	22	13.5	32
34.175.28L	L	28	14.5	41
34.175.35L	L	35	14.5	46
34.175.42L	L	42	18.5	55
34.175.06S	S	6	11.0	14
34.175.08S	S	8	13.0	17
34.175.10S	S	10	12.5	19
34.175.12S	S	12	14.5	22
34.175.14S	S	14	16.0	24
34.175.16S	S	16	15.5	27
34.175.20S	S	20	17.5	32
34.175.25S	S	25	20.0	41
34.175.30S	S	30	20.5	46
34.175.38S	S	38	23.0	55

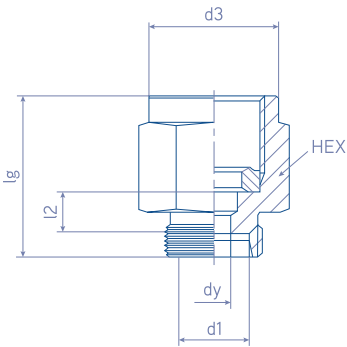
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

BSP Gauge Tube Connector

34.159.



REFERENCE	serie	dimensions (mm)					
		Ø tube d1	d3	dy	lg	l2	HEX
34.159.06LR04	L	6	1/4"	4.0	29.0	7.5	19
34.159.08LR04	L	8	1/4"	4.0	29.0	7.5	19
34.159.10LR04	L	10	1/4"	4.0	30.0	8.5	19
34.159.12LR04	L	12	1/4"	4.0	30.0	8.5	19

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

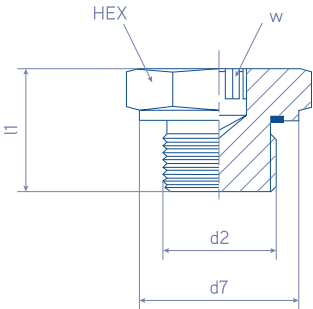
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Metric Plug with Hexagon Socket

34.177.

ISO 8434-1 Plug



REFERENCE	dimensions (mm)				
	d2	d7	l1	W	HEX
34.177.M10	M10X1.0	13.9	18.0	5	14
34.177.M12	M12x1.5	17.0	17.3	6	17
34.177.M14	M14x1.5	18.9	22.0	8	19
34.177.M16	M16x1.5	21.9	17.3	8	22
34.177.M18	M18x1.5	23.9	22.0	8	24
34.177.M20	M20x1.5	25.9	19.3	10	27
34.177.M22	M22x1.5	27.0	19.3	10	30
34.177.M24	M24x1.5	29.9	19.3	12	32
34.177.M26	M26x1.5	31.9	21.3	12	36
34.177.M27	M27x2.0	32.0	21.3	12	36
34.177.M33	M33x2.0	46.0	33.0	17	41
34.177.M42	M42x2.0	49.9	22.8	22	46
34.177.M48	M48x2.0	55.0	22.8	24	50

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

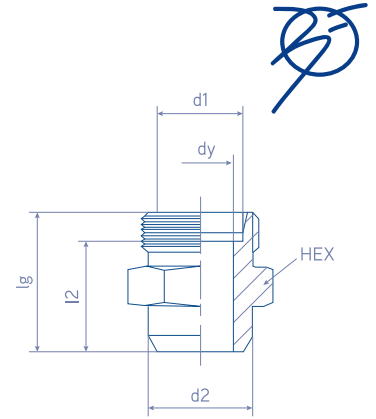
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Straight Welding Tube Connector

34.155.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)					
		Ø tube d1	d2	dy	lg	l2	HEX
34.155.06L	L	6	10.0	4.0	21.0	14.0	12
34.155.08L	L	8	12.0	6.0	23.0	16.0	14
34.155.10L	L	10	14.0	8.0	25.0	16.0	17
34.155.12L	L	12	16.0	10.0	25.0	18.0	19
34.155.15L	L	15	19.0	12.0	29.0	22.0	22
34.155.18L	L	18	22.0	15.0	31.0	23.5	27
34.155.22L	L	22	27.0	19.0	36.0	28.5	32
34.155.28L	L	28	32.0	24.0	38.0	30.5	41
34.155.35L	L	35	40.0	30.0	43.0	32.5	46
34.155.42L	L	42	46.0	36.0	46.0	35.0	55
34.155.06S	S	6	11.0	4.0	26.0	19.0	14
34.155.08S	S	8	13.0	5.0	28.0	21.0	17
34.155.10S	S	10	15.0	7.0	30.0	22.5	19
34.155.12S	S	12	17.0	8.0	32.0	24.5	22
34.155.14S	S	14	19.0	10.0	35.0	27.0	24
34.155.16S	S	16	21.0	12.0	35.0	26.5	27
34.155.20S	S	20	26.0	16.0	40.0	29.5	32
34.155.25S	S	25	31.0	20.0	44.0	32.0	41
34.155.30S	S	30	36.0	25.0	49.0	35.5	46
34.155.38S	S	38	44.0	32.0	54.0	38.0	55

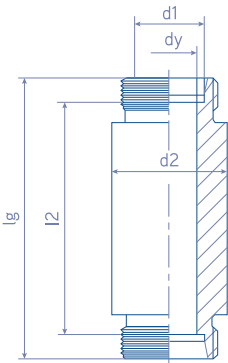
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Bulkhead Welding Tube Connector

34.156.
ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)				
		Ø tube d1	d2	dy	lg	l2
34.156.06L	L	6	18.0	4.0	70.0	56.0
34.156.08L	L	8	20.0	6.0	70.0	56.0
34.156.10L	L	10	22.0	8.0	72.0	58.0
34.156.12L	L	12	25.0	10.0	72.0	58.0
34.156.15L	L	15	28.0	12.0	84.0	70.0
34.156.18L	L	18	32.0	15.0	84.0	69.0
34.156.22L	L	22	36.0	19.0	88.0	73.0
34.156.28L	L	28	40.0	24.0	88.0	73.0
34.156.35L	L	35	50.0	30.0	92.0	71.0
34.156.42L	L	42	60.0	36.0	92.0	70.0
34.156.06S	S	6	20.0	4.0	74.0	60.0
34.156.08S	S	8	22.0	5.0	74.0	60.0
34.156.10S	S	10	25.0	7.0	74.0	59.0
34.156.12S	S	12	28.0	8.0	74.0	59.0
34.156.14S	S	14	30.0	10.0	88.0	72.0
34.156.16S	S	16	35.0	12.0	88.0	71.0
34.156.20S	S	20	38.0	16.0	92.0	71.0
34.156.25S	S	25	45.0	20.0	96.0	72.0
34.156.30S	S	30	50.0	25.0	100.0	73.0
34.156.38S	S	38	60.0	32.0	104.0	72.0

MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating

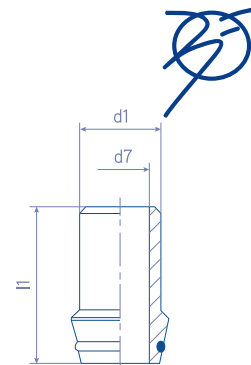
COMPLETE: With Double Edge Compression Ring and Tightening Nut (add an 'P' at the begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Welding Nipple With O-ring

34.157.

ISO 8434-1 tube coupling



REFERENCE	serie	dimensions (mm)		
		Ø tube d1	d7	l1
34.157.06LS	L/S	6	3.0	31.0
34.157.08LS	L/S	8	5.0	31.0
34.157.10LS	L/S	10	8.0	32.5
34.157.12LS	L/S	12	9.0	32.5
34.157.15L	L	15	11.0	34.5
34.157.18L	L	18	13.0	36.0
34.157.22L	L	22	17.0	38.5
34.157.28L	L	28	23.0	41.5
34.157.35L	L	35	28.0	47.5
34.157.42L	L	42	36.0	47.5
34.157.14S	S	6	10.0	38.5
34.157.16S	S	8	13.0	39.0
34.157.20S	S	10	16.0	45.0
34.157.25S	S	12	20.0	50.0
34.157.30S	S	14	24.0	52.0
34.157.38S	S	16	32.0	56.5

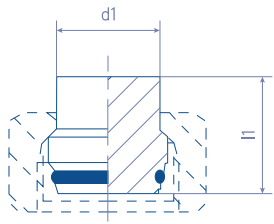
MATERIAL: Carbon Steel

FINISH: : Chromium-(VI) Free plating

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

Blanking Nipple

34.158.
ISO 8434-1 nipple



REFERENCE	serie	dimensions (mm)	
		Ø tube d1	l1
34.158.06LS	L/S	6	18.5
34.158.08LS	L/S	8	19.0
34.158.10LS	L/S	10	21.0
34.158.12LS	L/S	12	21.5
34.158.15L	L	15	20.5
34.158.18L	L	18	23.5
34.158.22L	L	22	26.0
34.158.28L	L	28	26.5
34.158.35L	L	35	32.0
34.158.42L	L	42	32.5
34.158.14S	S	6	24.0
34.158.16S	S	8	25.0
34.158.20S	S	10	30.5
34.158.25S	S	12	32.5
34.158.30S	S	14	35.5
34.158.38S	S	16	40.5

MATERIAL: Carbon Steel

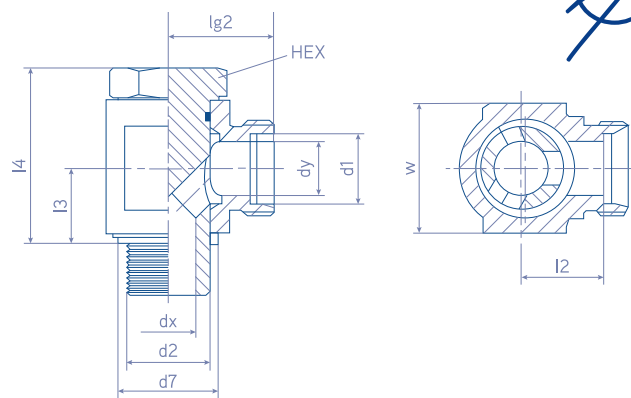
FINISH: : Chromium-(VI) Free plating

VERSIONS: Stainless Steel (add an 'S' at the end of the REFERENCE)

BSP Banjo Tube Connector

34.113.

ISO 8434-1 tube coupling and DIN ISO 1179-1 Form-B
BSP Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d7	dx	dy	lg2	l2	l3	l4	w	HEX
34.113.06LR02	L	6	1/8"	14.9	4.0	4.0	19.0	12.0	10.5	25.3	19	17
34.113.08LR04	L	8	1/4"	18.9	6.0	6.0	21.5	14.5	14.0	31.5	22	19
34.113.10LR04	L	10	1/4"	18.9	8.0	8.0	22.5	15.5	14.0	33.0	22	19
34.113.12LR06	L	12	3/8"	21.9	10.0	10.0	25.0	18.0	16.5	38.5	27	22
34.113.15LR08	L	15	1/2"	26.9	12.0	12.0	29.0	22.0	21.5	45.5	32	27
34.113.18LR08	L	18	1/2"	26.9	15.0	15.0	29.0	21.5	21.5	47.5	36	27
34.113.22LR12	L	22	3/4"	32.9	19.0	19.0	36.0	28.5	24.0	56.5	46	36
34.113.28LR16	L	28	1"	39.9	24.0	24.0	39.0	31.5	30.5	68.0	50	41
34.113.35LR20	L	35	1.1/4"	49.9	30.0	30.0	46.0	35.5	35.5	78.0	60	50
34.113.42LR24	L	42	1.1/2"	55.9	36.0	36.0	51.0	40.0	40.5	88.5	70	60
34.113.06SR04	S	6	1/4"	18.9	4.0	4.0	23.5	16.5	14.0	30.5	22	19
34.113.08SR04	S	8	1/4"	18.9	5.0	5.0	23.5	16.5	14.0	31.0	22	19
34.113.10SR06	S	10	3/8"	21.9	7.0	7.0	26.0	18.5	16.5	37.0	27	22
34.113.12SR06	S	12	3/8"	21.9	8.0	8.0	26.0	18.5	16.5	37.5	27	22
34.113.14SR08	S	14	1/2"	26.9	10.0	10.0	31.0	23.0	21.5	44.0	32	27
34.113.16SR08	S	16	1/2"	26.9	12.0	12.0	31.0	22.5	21.5	47.0	36	27
34.113.20SR12	S	20	3/4"	32.9	16.0	16.0	38.0	27.5	24.0	55.0	46	36
34.113.25SR16	S	25	1"	39.9	20.0	20.0	43.0	31.0	30.5	66.5	50	41
34.113.30SR20	S	30	1.1/4"	49.9	25.0	25.0	50.0	36.5	35.5	75.5	60	50
34.113.38SR24	S	38	1.1/2"	55.9	32.0	32.0	57.0	41.0	40.5	86.5	70	60

MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

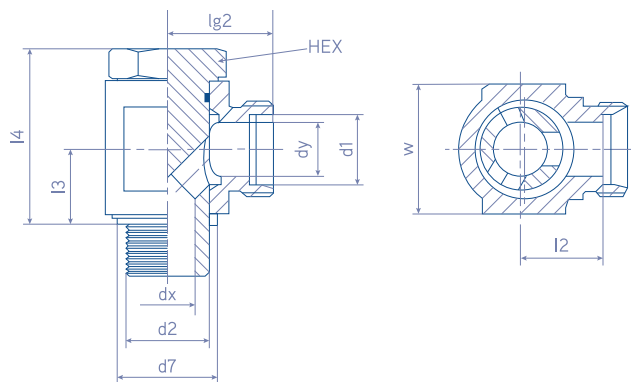
COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Metric Banjo Tube Connector

34.114.

ISO 8434-1 tube coupling and ISO 9974-1 Form-B
Metric Thread



REFERENCE	serie	dimensions (mm)										
		Ø tube d1	d2	d7	dx	dy	lg2	l2	l3	l4	w	HEX
34.114.06LM10	L	6	M10x1.0	14.9	4.0	4.0	19.0	12.0	10.5	25.3	19	14
34.114.08LM12	L	8	M12x1.5	17.0	6.0	6.0	21.5	14.5	14.0	31.5	22	17
34.114.10LM14	L	10	M14x1.5	18.9	8.0	8.0	22.5	15.5	14.0	33.0	22	19
34.114.12LM16	L	12	M16x1.5	21.9	10.0	10.0	25.0	18.0	16.5	38.5	27	22
34.114.15LM18	L	15	M18x1.5	26.9	12.0	12.0	29.0	22.0	21.5	45.5	32	24
34.114.18LM22	L	18	M22x1.5	26.9	15.0	15.0	29.0	21.5	21.5	47.5	36	27
34.114.22LM26	L	22	M26x1.5	32.9	19.0	19.0	36.0	28.5	24.0	56.5	46	32
34.114.28LM33	L	28	M33x2.0	39.9	24.0	24.0	39.0	31.5	30.5	68.0	50	41
34.114.35LM42	L	35	M42x2.0	49.9	30.0	30.0	46.0	35.5	35.5	78.0	60	50
34.114.42LM48	L	42	M48x2.0	55.9	36.0	36.0	51.0	40.0	40.5	88.5	70	60
34.114.06SM12	S	6	M12x1.5	17.0	4.0	4.0	23.5	16.5	14.0	30.5	22	17
34.114.08SM14	S	8	M14x1.5	18.9	5.0	5.0	23.5	16.5	14.0	31.0	22	19
34.114.10SM16	S	10	M16x1.5	21.9	7.0	7.0	26.0	18.5	16.5	37.0	27	22
34.114.12SM18	S	12	M18x1.5	23.9	8.0	8.0	26.0	18.5	16.5	37.5	27	24
34.114.16SM22	S	16	M22x1.5	26.9	12.0	12.0	31.0	22.5	21.5	47.0	36	27
34.114.20SM27	S	20	M27x2.0	32.9	16.0	16.0	38.0	27.5	24.0	55.0	46	36
34.114.25SM33	S	25	M33x2.0	39.9	20.0	20.0	43.0	31.0	30.5	66.5	50	41
34.114.30SM42	S	30	M42x2.0	49.9	25.0	25.0	50.0	36.5	35.5	75.5	60	50
34.114.38SM48	S	38	M48x2.0	55.9	32.0	32.0	57.0	41.0	40.5	86.5	70	60

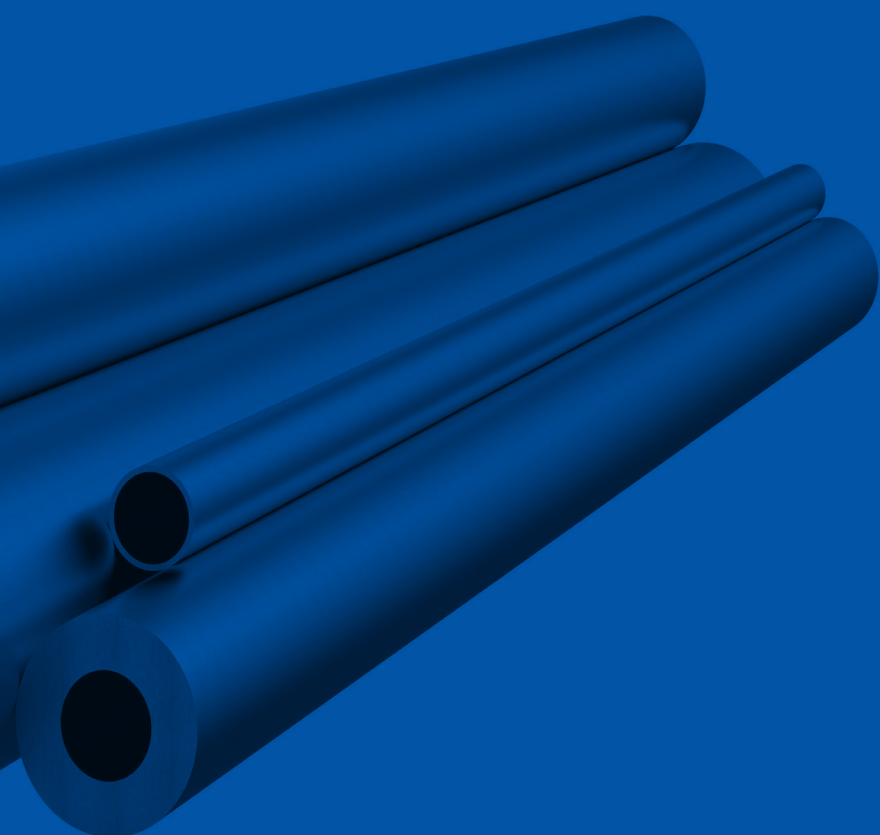
MATERIAL: Carbon Steel
FINISH: : Chromium-(VI) Free plating

COMPLETE: With Double Edge Compression
Ring and Tightening Nut (add an 'P' at the
begin of REFERENCE)

VERSIONS: Stainless Steel (add an 'S'
at the end of the REFERENCE)

Seamless Tube





Cold Drawn Seamless Tube



34.205.

DIN 2391-C / EN ISO 10305-4

#	Specification Tube (O.D x W.T)			Wall Thickness		
		mm	mm		MPa	PSI
34.205.0410G	4 x 1	2	4	1	52.2	7571
34.205.0610G	6 x 1	4	6	1	38.9	5642
34.205.0615G	6 x 1.5	3	6	1.5	54.9	7963
34.205.0620G	6 x 2	2	6	2	69.2	10037
34.205.0810G	8 x 1	6	8	1	33.3	4830
34.205.0815G	8 x 1.5	5	8	1.5	43.1	6251
34.205.0820G	8 x 2	4	8	2	54.9	7963
34.205.0825G	8 x 2.5	3	8	2.5	65.8	9543
34.205.1010G	10 x 1	8	10	1	28.2	4090
34.205.1015G	10 x 1.5	7	10	1.5	37.3	5410
34.205.1020G	10 x 2	6	10	2	47.8	6933
34.205.1025G	10 x 2.5	5	10	2.5	57.6	8354
34.205.1210G	12 x 1	10	12	1	23.5	3408
34.205.1215G	12 x 1.5	9	12	1.5	35.3	5120
34.205.1220G	12 x 2	8	12	2	40.9	5932
34.205.1225G	12 x 2.5	7	12	2.5	49.5	7179
34.205.1415G	14 x 1.5	11	14	1.5	30.2	4380
34.205.1420G	14 x 2	10	14	2	40.3	5845
34.205.1515G	15 x 1.5	12	15	1.5	28.2	4090
34.205.1520G	15 x 2	11	15	2	37.6	5453
34.205.1615G	16 x 1.5	13	16	1.5	26.4	3829
34.205.1620G	16 x 2	12	16	2	35.3	5120
34.205.1625G	16 x 2.5	11	16	2.5	38.6	5598
34.205.1630G	16 x 3	10	16	3	45.2	6556
34.205.1815G	18 x 1.5	15	18	1.5	23.5	3408
34.205.1820G	18 x 2	14	18	2	31.3	4540
34.205.1825G	18 x 2.5	13	18	2.5	39.2	5685
34.205.2015G	20 x 1.5	17	20	1.5	21.2	3075
34.205.2020G	20 x 2	16	20	2	28.2	4090
34.205.2025G	20 x 2.5	15	20	2.5	35.3	5120
34.205.2030G	20 x 3	14	20	3	37.3	5410
34.205.2040G	20 x 4	12	20	4	47.8	6933
34.205.2215G	22 x 1.5	19	22	1.5	19.2	2785
34.205.2220G	22 x 2	18	22	2	25.6	3713



#	Specification Tube (O.D x W.T)			Wall Thickness		
		mm	mm	mm	MPa	PSI
34.205.2225G	22 x 2.5	17	22	2.5	32	4641
34.205.2520G	25 x 2	21	25	2	22.6	3278
34.205.2525G	25 x 2.5	20	25	2.5	28.2	4090
34.205.2540G	25 x 4	17	25	4	39.4	5714
34.205.2820G	28 x 2	24	28	2	20.1	2915
34.205.2825G	28 x 2.5	23	28	2.5	25.2	3655
34.205.2830G	28 x 3	22	28	3	30.2	4380
34.205.2840G	28 x 4	20	28	4	40.3	5845
34.205.3020G	30 x 2	26	30	2	18.8	2727
34.205.3030G	30 x 3	24	30	3	28.2	4090
34.205.3040G	30 x 4	22	30	4	37.6	5453
34.205.3520G	35 x 2	31	35	2	16.1	2335
34.205.3530G	35 x 3	29	35	3	24.2	3510
34.205.3540G	35 x 4	27	35	4	32.2	4670
34.205.3825G	38 x 2.5	33	38	2.5	18.6	2698
34.205.3830G	38 x 3	32	38	3	22.3	3234
34.205.3840G	38 x 4	30	38	4	29.7	4308
34.205.3850G	38 x 5	28	38	5	37.1	5381
34.205.3860G	38 x 6	26	38	6	39	5656
34.205.4220G	42 x 2	38	42	2	13.4	1944
34.205.4230G	42 x 3	36	42	3	20.1	2915
34.205.4240G	42 x 4	34	42	4	26.9	3902

Dimensions and tolerances according to DIN 2391/1 – EN ISO 10305-4 (ISO 3304), and material conforming St 37.4
All **Balflex** pipes are normalized and controlled.
The Working Pressure indicated were determined in conforming with DIN213. Scope to application I, for primary static load at temperatures up to +120°C (+248°F)
Balflex covers the wide range needed in high performance piping system:
G -NBK/ZN – Normalized, electric zinc plated with Cr-VI-free passivation c. E355N (St 52.4)
PH- NBK – Normalized, phosphated and oiled inside and outside d. E355N (St 52.4)

Hydraulic Pipe Clamps







Hydraulic Pipe Clamps

Balflex® hydraulic pipe clamps are designed for use with Balflex® hydraulic pipes in high-pressure hydraulic systems.



The range of **Balflex®** clamps is produced according to **Balflex®** specifications and DIN 3015 standard. **Balflex®** has optimized the construction of these hydraulic pipe clamps in order to assure top rated performance, wide range of application, reliability and economy. Among their features are:

Heat resistance: **Balflex®** hydraulic pipe clamps are available in three materials:

Polypropylene - for temperatures up to 90°C

Polyamide 6 - for temperatures up to 180°C

Aluminum - for temperatures up to 380°C.

Wide range: **Balflex®** hydraulic pipe clamps are available in three series:

L - for light-duty (standard wall) hydraulic pipes

S - for heavy-duty (thick wall) hydraulic pipes

T - for twin lines of hydraulic pipes

Versatility & easy handling: **Balflex®** hydraulic pipe clamps can be mounted on rails, welded or directly screwed on the walls. They are available in 8 different kinds of sets, ready to install with all accessories.

Security: **Balflex®** polypropylene hydraulic pipe clamps can be supplied on request also with photoluminescence pigments (radiation and toxicity free) in the yellow/green spectrum that allow the localization of the pipes in complete darkness for many hours after light failure.

The Balflex® industrial couplings part code is composed of three groups of digits:

84 . XXX Y . XXXX Y

A B C D E

A series

B design type: 100 - light duty; 200 - heavy duty; 300 - twin line

C set A through H

D pipe external diameter

E body material: P - polypropylene; N - polyamide 6; A - aluminum

Materials

Balflex® hydraulic pipe clamps are available in three materials - polypropylene, polyamide 6 and aluminum compound with 12% silicum. Materials

characteristics are given in table 1. Normally, the material choice is made according to the rated working temperature of the pipes.

Table 1: Physical characteristics of Balflex Pipe Clamps Materials

	Polypropylene	Polyamide	Aluminum
Density	0,906 g/cm ³	1,13 g/cm ³	2,66 g/cm ³
Flexure resistance (acc to DIN 53452 test method)	0,906 g/cm ³	130 N/mm ²	70 N/mm ²
Impact resistance (acc to DIN 53453 test method)	no break	60 kJ/cm ²	na
Compression strength (acc to DIN 53454 test method)	90 N/mm ²	120 N/mm ²	500 N/mm ²
Elasticity module (acc to DIN 53452 test method)	200 N/mm	4500 N/mm	70000 N/mm
Fatigue resistance (acc to DIN 53454 test method)	27 N/mm ²	170 N/mm ²	180 N/mm ²
max working temperature	90°C	180°C	380°C
expansion coefficient	0,22 W/m*K	0,30 W/m*K	12,6 W/m*K
Thermal conductivity	15 x 10 ⁵ / °K	15 x 10 ⁵ / °K	21 x 10 ⁶ / °K
Electrical resistance	10 ¹⁸ Ohm cm	10 ¹⁵ Ohm cm	na



Series

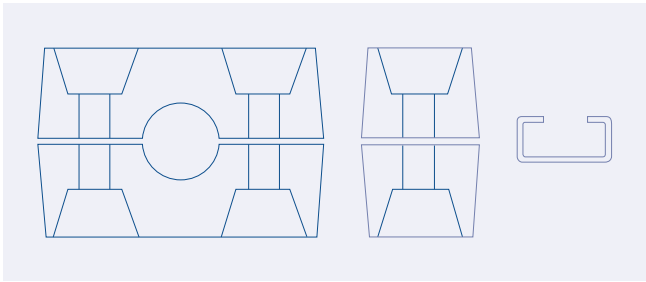
Balflex® hydraulic pipe clamps are available in three series:

- **Light Duty** series for standard wall hydraulic pipe and working pressures up to 200 bar (2900 PSI) (from 6 mm to 50,8 mm external hydraulic pipes and from 1/8" to 1-1/2" nominal internal diameter pipes)

- **Heavy Duty** series for thick wall hydraulic pipe and working pressures above 200 bar (2900 PSI) (from 6 mm to 216 mm external diameter

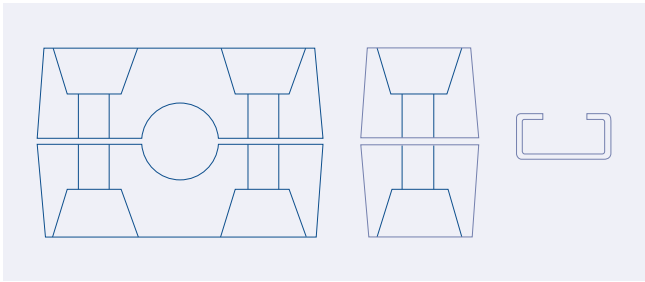
hydraulic pipes and from 1/8" to 16" nominal internal diameter pipes). Heavy-duty metal components such as upper plates, locking plates, rails, etc. are treated in a cathaphoresis process in order to withstand 750 h salt spray ASTM tests.

- **Twin series** for twin lines of standard hydraulic pipe and working pressures up to 200 bar (2900 PSI) (from 6 mm to 42,4 mm external diameter hydraulic pipes and from 1/4" to 1-1/2" nominal internal diameter pipes)



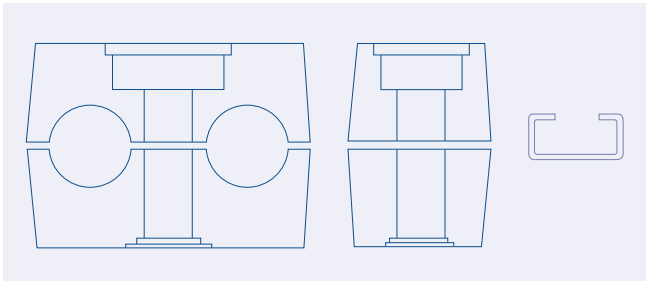
Light Duty Hydraulic Pipe Clamps
84.100A

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Heavy Duty Hydraulic Pipe Clamps
84.200A

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Twin Line Hydraulic Pipe Clamps
84.300A

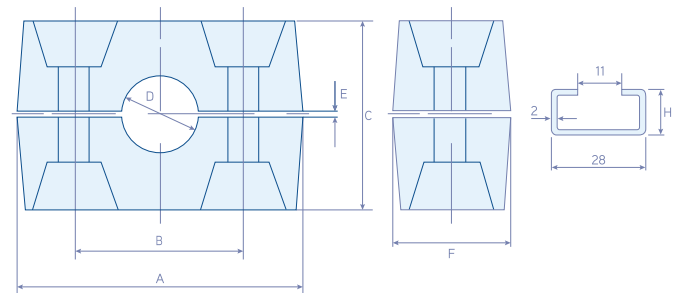
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Light Duty Hydraulic Pipe Clamps

84.100A.

According to DIN 3015

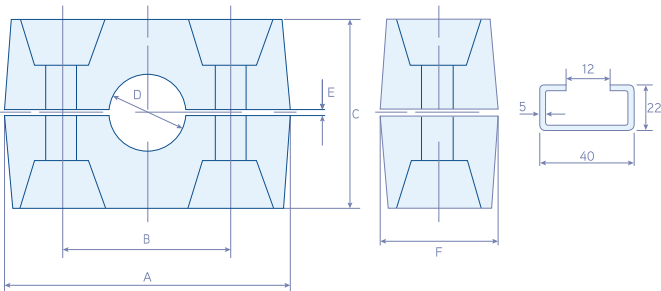


#	Pipe External Ø	dimensions (mm)						
	D mm	A	B	C	E	Screw	Lower Plate (LxWxTH)	Upper Plate (LxWxTH)
84.100A.0060P	6	37	20	27	0,4	M6	36 x 30 x 3	34 x 30 x 3
84.100A.0080P	8	37	20	27	0,4	M6	36 x 30 x 3	34 x 30 x 3
84.100A.0100P	10	37	20	27	0,4	M6	36 x 30 x 3	34 x 30 x 3
84.100A.0120P	12	37	20	27	0,4	M6	36 x 30 x 3	34 x 30 x 3
84.100A.0127P	12,7	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0135P	13,5	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0140P	14	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0150P	15	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0160P	16	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0172P	17,2	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0180P	18	43	26	33	0,6	M6	42 x 30 x 3	40 x 30 x 3
84.100A.0190P	19	50	33	35	0,6	M6	50 x 30 x 3	48 x 30 x 3
84.100A.0200P	20	50	33	35	0,6	M6	50 x 30 x 3	48 x 30 x 3
84.100A.0213P	21,3	50	33	35	0,6	M6	50 x 30 x 3	48 x 30 x 3
84.100A.0220P	22	50	33	35	0,6	M6	50 x 30 x 3	48 x 30 x 3
84.100A.0250P	25	50	33	35	0,6	M6	50 x 30 x 3	48 x 30 x 3
84.100A.0269P	26,9	59	40	42	0,6	M6	60 x 30 x 3	57 x 30 x 3
84.100A.0280P	28	59	40	42	0,6	M6	60 x 30 x 3	57 x 30 x 3
84.100A.0300P	30	59	40	42	0,6	M6	60 x 30 x 3	57 x 30 x 3
84.100A.0320P	32	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0337P	33,7	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0350P	35	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0380P	38	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0400P	40	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0420P	42	71	52	58	0,8	M6	72 x 30 x 3	70 x 30 x 3
84.100A.0483P	48,3	86	66	66	0,8	M6	88 x 30 x 3	86 x 30 x 3
84.100A.0508P	50,8	86	66	66	0,8	M6	88 x 30 x 3	86 x 30 x 3

Heavy Duty Hydraulic Pipe Clamps

84.200A.

According to DIN 3015



#	Pipe External Ø	dimensions (mm)							
	D mm	A	B	C	E	F	Screw	Lower Plate (LxWxTH)	Upper Plate (LxWxTH)
84.200A.0060P	6	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0080P	8	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0100P	10	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0120P	12	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0135P	13,5	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0140P	14	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0150P	15	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0160P	16	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0167P	16,7	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0172P	17,2	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0180P	18	56	33	33	1,0	30	M10	74 x 30 x 8	74 x 30 x 8
84.200A.0200P	20	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0213P	21,3	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0220P	22	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0250P	25	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0269P	26,9	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0280P	28	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0300P	30	71	45	48	1,0	30	M10	86 x 30 x 8	86 x 30 x 8
84.200A.0301P	30	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0320P	32	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0337P	33,7	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0350P	35	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0380P	38	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0381P	38	116	90	90	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0400P	40	85	60	61	1,0	30	M10	100 x 30 x 8	100 x 30 x 8
84.200A.0420P	42	116	90	90	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0483P	48,3	116	90	90	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0500P	50	116	90	90	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0550P	55	116	90	122	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0603P	60,3	116	90	122	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0635P	63,5	116	90	122	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0650P	65	116	90	122	2,0	45	M12	140 x 45 x 8	140 x 45 x 10
84.200A.0700P	70	116	90	122	2,0	45	M12	140 x 45 x 8	140 x 45 x 10

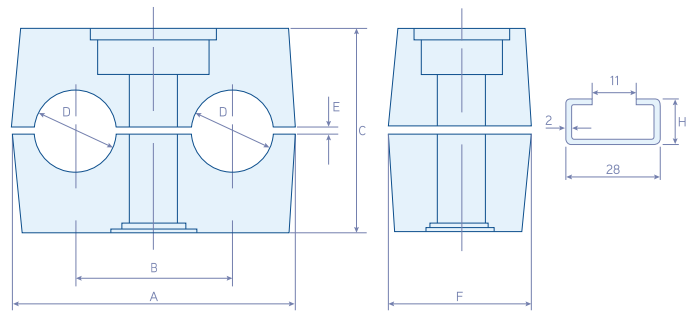


#	Pipe External Ø	dimensions (mm)							
	D mm	A	B	C	E	F	Screw	Lower Plate (LxWxTH)	Upper Plate (LxWxTH)
84.200A.0650P	65	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0700P	70	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0730P	73	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0761P	76,1	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0800P	80	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0825P	82,5	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0889P	88,9	155	122	122	2,5	60	M16	180 x 60 x 11	180 x 60 x 10
84.200A.0890P	88,9	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1000P	100	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1016P	101,6	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1080P	108	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1143P	114,3	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1270P	127	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1330P	133	209	168	172	2,5	80	M20	226 x 80 x 17	226 x 80 x 15
84.200A.1397P	139,7	252	205	202	3,5	90	M24	270 x 90 x 20	270 x 90 x 15
84.200A.1524P	152,4	252	205	202	3,5	90	M24	270 x 90 x 20	270 x 90 x 15
84.200A.1590P	159	252	205	202	3,5	90	M24	270 x 90 x 20	270 x 90 x 15
84.200A.1650P	165	252	205	202	3,5	90	M24	270 x 90 x 20	270 x 90 x 15
84.200A.1778P	177,8	252	205	202	3,5	90	M24	270 x 90 x 20	270 x 90 x 15
84.200A.2160P	216	338	265	271	3,5	120	M30	340 x 120 x 20	340 x 120 x 25
84.200A.2194P	219,4	338	265	271	3,5	120	M30	340 x 120 x 20	340 x 120 x 25
84.200A.2445P	244,5	476	395	410	10	160	M30	520 x 160 x 22	520 x 160 x 30
84.200A.2730P	273	476	395	410	10	160	M30	520 x 160 x 22	520 x 160 x 30
84.200A.3239P	323,9	476	395	410	10	160	M30	520 x 160 x 22	520 x 160 x 30
84.200A.3556P	355,6	640	535	542	30	180	M30	680 x 180 x 22	680 x 180 x 30
84.200A.4064P	406,4	640	535	542	30	180	M30	680 x 180 x 22	680 x 180 x 30

Twin Line Hydraulic Pipe Clamps

84.300.

According to DIN 3015



#	Pipe External Ø	dimensions (mm)					Screw	Lower Plate (LxWxTH)
	D mm	A	B	C	E	F		
84.300A.0060P	6	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0064P	6,4	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0080P	8	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0095P	9,5	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0100P	10	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0120P	12	36	20	27	0,5	30	M8	37 x 30 x 3
84.300A.0127P	12,7	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0135P	13,5	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0140P	14	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0150P	15	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0160P	16	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0172P	17,2	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0180P	18	53	29	29	0,8	30	M8	55 x 30 x 5
84.300A.0190P	19	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0200P	20	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0213P	21,3	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0220P	22	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0230P	23	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0250P	25	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0254P	25,4	67	36	37	1,0	30	M8	70 x 30 x 5
84.300A.0269P	26,9	82	45	42	1,0	30	M8	85 x 30 x 5
84.300A.0280P	28	82	45	42	1,0	30	M8	85 x 30 x 5
84.300A.0300P	30	82	45	42	1,0	30	M8	85 x 30 x 5
84.300A.0320P	32	106	56	54	1,0	30	M8	110 x 30 x 5
84.300A.0337P	33,7	106	56	54	1,0	30	M8	110 x 30 x 5
84.300A.0350P	35	106	56	54	1,0	30	M8	110 x 30 x 5
84.300A.0380P	38	106	56	54	1,0	30	M8	110 x 30 x 5
84.300A.0400P	40	106	56	54	1,0	30	M8	110 x 30 x 5
84.300A.0424P	42,4	106	56	54	1,0	30	M8	110 x 30 x 5

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