

Balflex®



**BW26 -
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.*

*58 years 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:



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

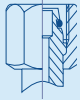
Screw the nut up hand tight and then with a spanner for one further 1/4 turn only.

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	
		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

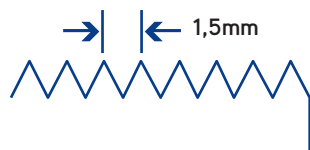
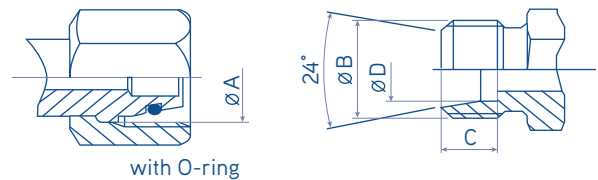
Values given in tables are typical to achieve the recommended assembly methods when fitting material is steel zinc plated. For other materials different values will be applicable.

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

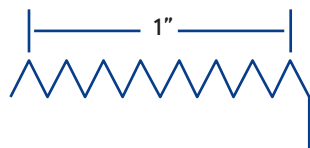
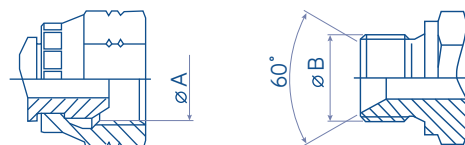
Defined by the outside diameter and the pitch
(distance between 2 crests of the thread)
example: M22x1.5 - pitch of 1.5mm.

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



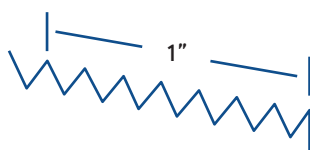
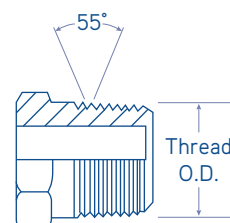
Thread

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	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	30.30	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.



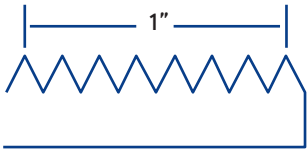
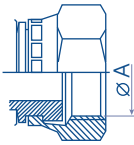
Thread

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	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.

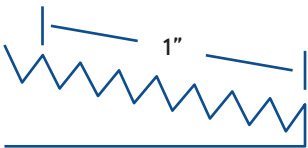
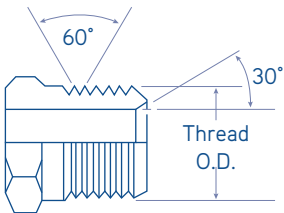


Thread
Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4mm).

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).

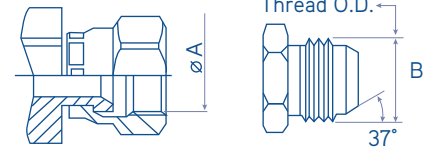
Size	Thread NPTF	ØA (mm)
- 2	1/8" -27	10.24
- 4	1/4" -18	13.61
- 6	3/8" -18	17.05
- 8	1/2" -14	21.22
- 12	3/4" -14	26.56
- 16	1" -11.5	33.22
- 20	1.1/4" -11.5	41.98
- 24	1.1/2" -11.5	48.05
- 32	2" -11.5	60.09



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

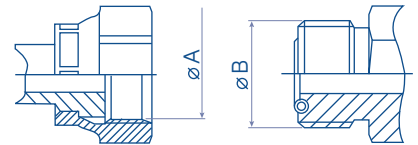


Tube O.D (inch)	Size	Thread UNF	ØA (mm)	ØB (mm)
1/4"	- 4	7/16" -20	10.00	11.10
5/16"	- 5	1/2" -20	11.60	12.70
3/8"	- 6	9/16" -18	13.00	14.30
1/2"	- 8	3/4" -16	17.60	19.10
5/8"	- 10	7/8" -14	20.50	22.20
3/4"	- 12	1.1/16" -12	24.60	27.00
7/8"	- 14	1.3/16" -12	28.30	30.10
1"	- 16	1.5/16" -12	31.30	33.30
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.

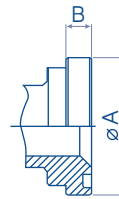
Standard: ISO 12151-1, ISO 8434-3, SAE J516



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

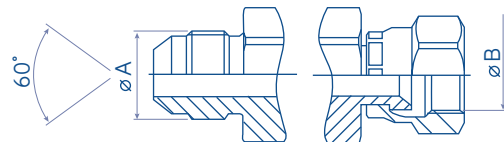


Flange (inch)	Size	3000 psi			6000 psi			SuperCat		
		ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)	ØA (mm)	B (mm)	O-ring (mm)
1/2"	- 8	30.18	6.73	18.64x3.53	31.75	7.75	18.64x3.53	31.75	14.22	18.64x3.53
5/8"*	- 10	34.20	6.73	21.70x3.53						
3/4"	- 12	38.10	6.73	24.99x3.53	41.28	8.76	24.99x3.53	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.

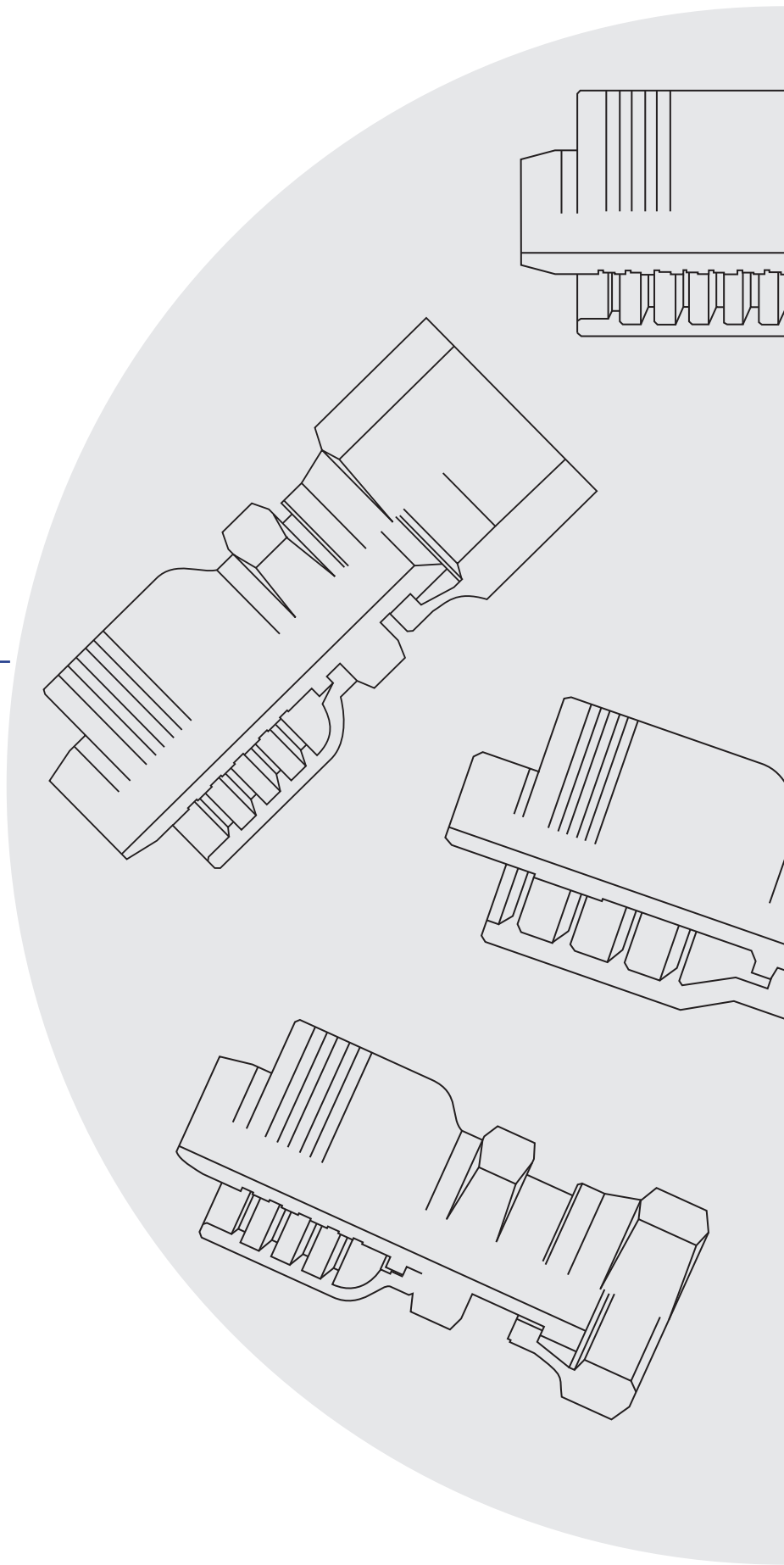
Japanese Industrial Standard (JIS)

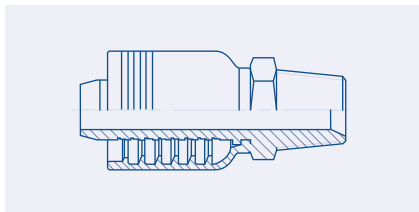
The Japanese Industrial Standard (JIS) uses a 30° sealing angle seat and either British Standard Pipe Parallel or metric threads.



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			

BW26 – 6 Spiral Series One Piece Fitting

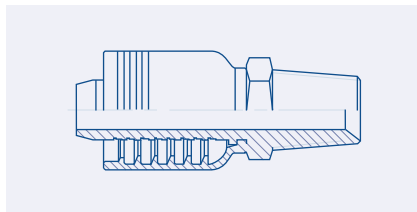




NPTF Male Pipe - MP

BW26.0400.

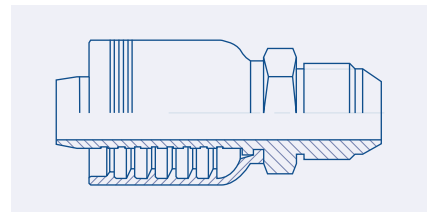
pag. 18



**Male API Pipe - MPAPI
(long Nose)**

BW26.0440.

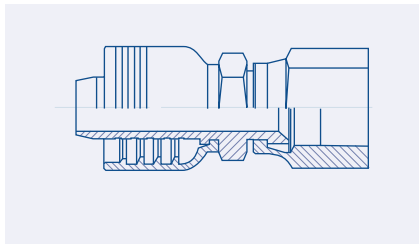
pag. 18



JIC 37° Male - MJ

BW26.2000.

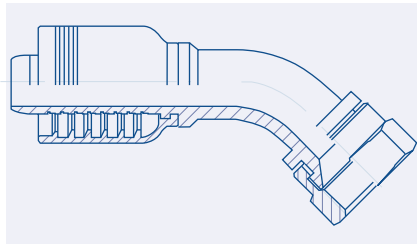
pag. 19



JIC 37° Female Swivel - FJ

BW26.4H12.

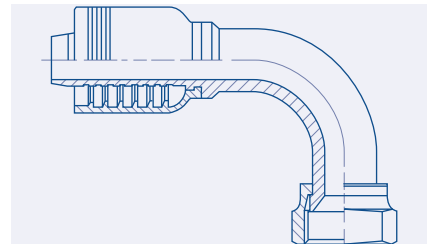
pag. 19



**JIC 37° Female Swivel 45°
- FJ45**

BW26.4042.

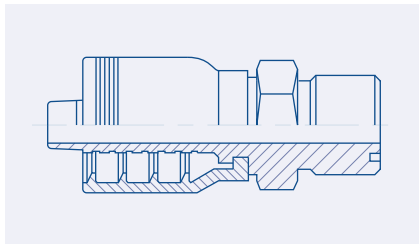
pag. 20



**JIC 37° Female Swivel 90°
- FJ90**

BW26.4092.

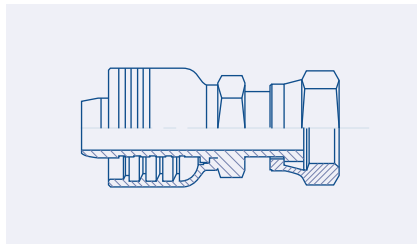
pag. 20



ORFS Male - OFTM

BW26.4000.

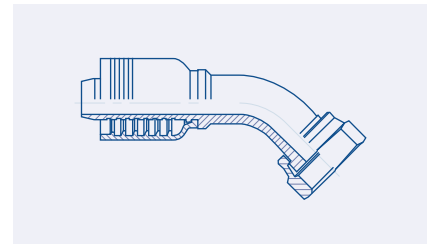
pag. 21



ORFS Female Swivel - OFT

BW26.44H4.

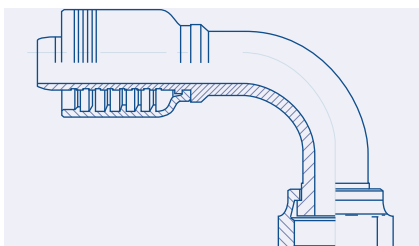
pag. 21



**ORFS Female Swivel 45°
- OFT45**

BW26.4444.

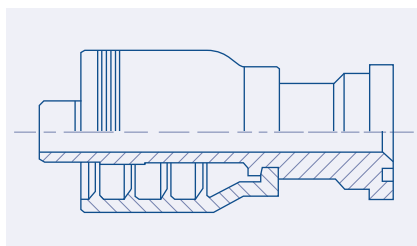
pag. 22



**ORFS Female Swivel 90°
- OFT90**

BW26.4494.

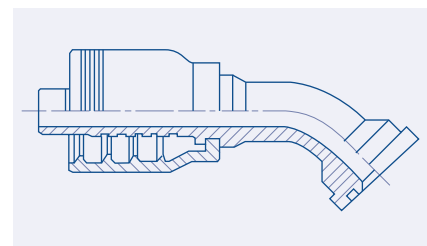
pag. 22



**Straight SAE 3000 PSI Code
61 Flange - PA**

BW26.7013.

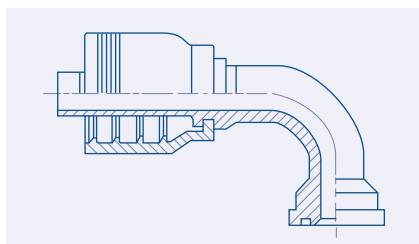
pag. 23



**45° Elbow SAE 3000 PSI
Code 61 Flange - PA45**

BW26.7043.

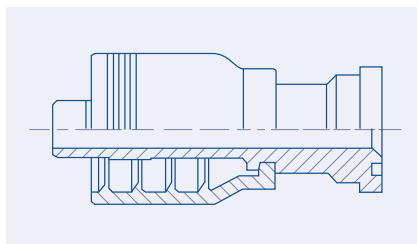
pag. 23



**90° Elbow SAE 3000 PSI
Code 61 Flange - PA90**

BW26.7093.

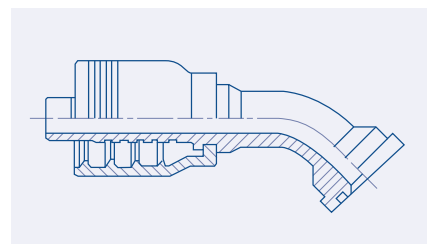
pag. 24



**Straight SAE 6000 PSI
Code 62 Flange - PH**

BW26.7016.

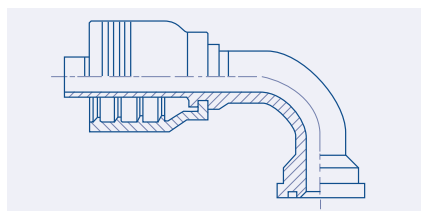
pag. 24



**45° Elbow SAE 6000 PSI
Code 62 Flange - PH45**

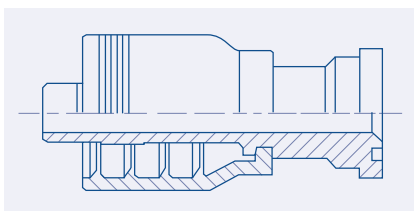
BW26.7046.

pag. 25



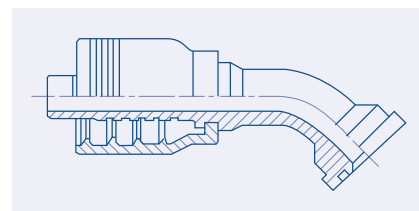
**90° Elbow SAE 6000 PSI
Code 62 Flange - PH90**

BW26.7096. pag. 25



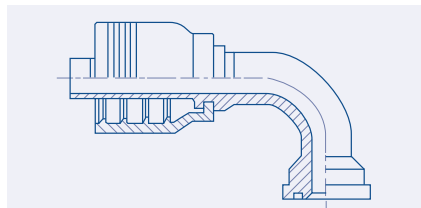
**Straight SuperCAT Flange -
SC**

BW26.7116. pag. 26



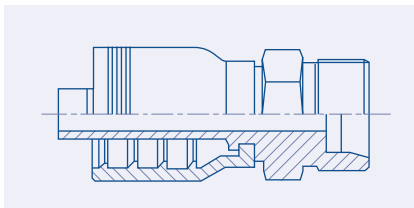
**45° Elbow SuperCAT Flange
- SC45**

BW26.7146. pag. 26



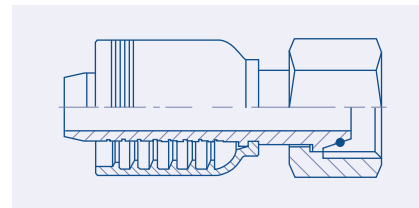
**90° Elbow SuperCAT Flange
- SC90**

BW26.7196. pag. 27



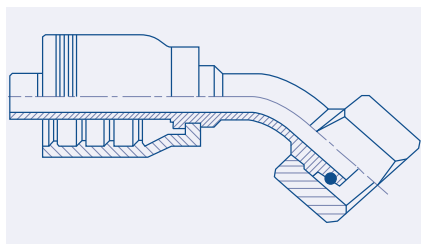
24° Metric Heavy Male - DHM

BW26.1100. pag. 27



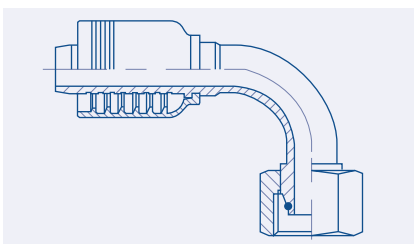
**24° Metric Heavy Female
Swivel - DHF**

BW26.5113. pag. 28



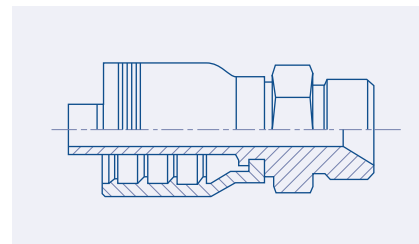
**24° Metric Heavy Female 45°
- DHF45**

BW26.5143. pag. 28



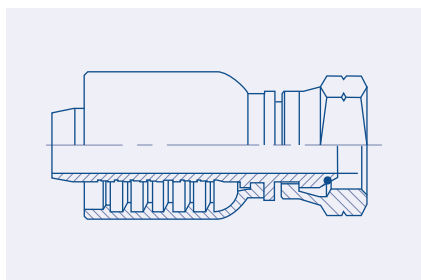
**24° Metric Heavy Female 90°
- DHF90**

BW26.5193. pag. 29



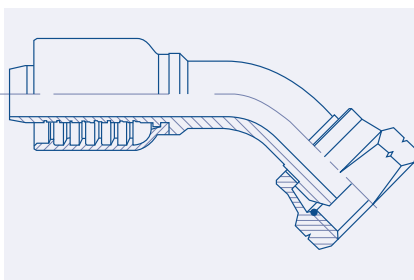
BSP 60° Male - BSPM

BW26.0100. pag. 29



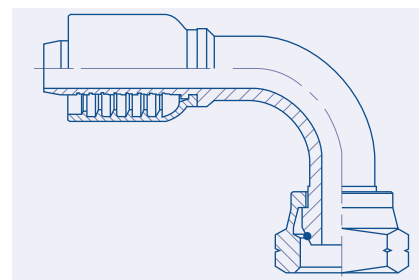
**BSP 60° Female Swivel -
BSPXF**

BW26.3112. pag. 30



**BSP 60° Female Swivel 45°
- BSPXF45**

BW26.3142. pag. 30



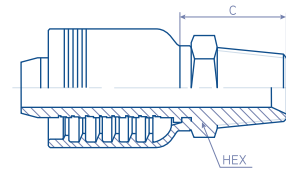
**BSP 60° Female Swivel 90°
- BSPXF90**

BW26.3192. pag. 31

NPTF Male Pipe - MP

BW26.0400.

SAE J516 / SAE J514

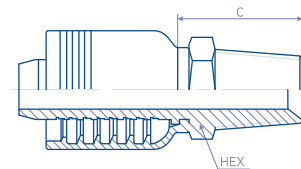


REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - NPTF M -2020	BW26.0400.2020	-20	1.1/4"	1.1/4" - 11.5	55.0	46
F-1P - NPTF M -2024	BW26.0400.2024	-20	1.1/4"	1.1/2" - 11.5	59.0	50
F-1P - NPTF M -2424	BW26.0400.2424	-24	1.1/2"	1.1/2" - 11.5	61.0	50
F-1P - NPTF M -2432	BW26.0400.2432	-24	1.1/2"	2" - 11.5	67.5	65
F-1P - NPTF M -3232	BW26.0400.3232	-32	2"	2" - 11.5	70.5	65

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

Male API Pipe – MPAPI (Long Nose)



BW26.0440.

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - NPTF API M - 3232	BW26.0440.3232	32	2"	2" - 11	107.8	50

MATERIAL: Carbon Steel

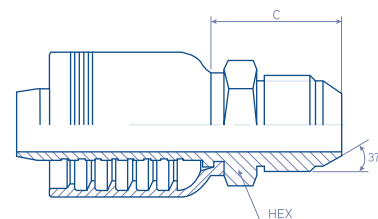
FINISH: Chromium-(VI) Free plating /
ROHS compliant



JIC 37° Male - MJ

BW26.2000.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - JIC M -2020	BW26.2000.2020	-20	1.1/4"	1.5/8" ' - 12	50.5	46
F-1P - JIC M -2024	BW26.2000.2024	-20	1.1/4"	1.7/8" ' - 12	56.0	50
F-1P - JIC M -2424	BW26.2000.2424	-24	1.1/2"	1.7/8" ' - 12	57.0	50
F-1P - JIC M -2432	BW26.2000.2432	-24	1.1/2"	2.1/2" ' - 12	68.0	65
F-1P - JIC M -3232	BW26.2000.3232	-32	2"	2.1/2" ' - 12	72.0	65

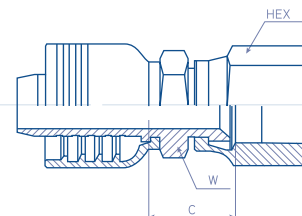
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

JIC 37° Female Swivel - FJ

BW26.4H12.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - JIC DH FS TW -2020	BW26.4H12.2020W	-20	1.1/4"	1.5/8" ' - 12	45.0	41	50
F-1P - JIC DH FS TW -2024	BW26.4H12.2024W	-20	1.1/4"	1.7/8" ' - 12	48.0	50	60
F-1P - JIC DH FS TW -2424	BW26.4H12.2424W	-24	1.1/2"	1.7/8" ' - 12	50.0	50	60
F-1P - JIC DH FS TW -2432	BW26.4H12.2432W	-32	2"	2.1/2" ' - 12	52.5	65	75
F-1P - JIC DH FS TW -3232	BW26.4H12.3232W	-32	2"	2.1/2" ' - 12	59.0	65	75

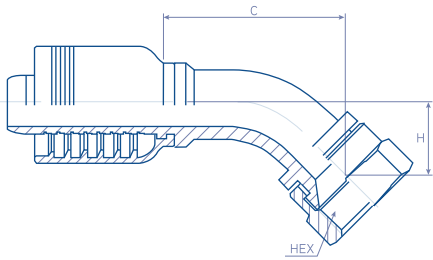
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

JIC 37° Female Swivel 45° - FJ45

BW26.4042.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - JIC FS 45 TW -2020	BW26.4042.2020W	-20	1.1/4"	1.5/8" - 12	98.0	38.0	50
F-1P - JIC FS 45 TW -2024	BW26.4042.2024W	-20	1.1/4"	1.7/8" - 12	99.0	39.0	60
F-1P - JIC FS 45 TW -2424	BW26.4042.2424W	-24	1.1/2"	1.7/8" - 12	118.0	46.0	60
F-1P - JIC FS 45 TW -2432	BW26.4042.2432W	-24	1.1/2"	2.1/2" - 12	122.0	50.0	75
F-1P - JIC FS 45 TW -3232	BW26.4042.3232W	-32	2"	2.1/2" - 12	157.0	62.0	75

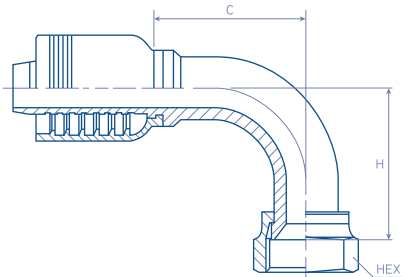
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

JIC 37° Female Swivel 90° - FJ90

BW26.4092.

ISO 12151-5 / ISO 8434-2 / SAE J516 / SAE J514



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - JIC FS 90 TW -2020	BW26.4092.2020W	-20	1.1/4"	1.5/8" - 12	87.0	81.0	50
F-1P - JIC FS 90 TW -2024	BW26.4092.2024W	-20	1.1/4"	1.7/8" - 12	87.0	82.0	60
F-1P - JIC FS 90 TW -2424	BW26.4092.2424W	-24	1.1/2"	1.7/8" - 12	105.0	97.0	60
F-1P - JIC FS 90 TW -2432	BW26.4092.2432W	-24	1.1/2"	2.1/2" - 12	105.0	102.0	75
F-1P - JIC FS 90 TW -3232	BW26.4092.3232W	-32	2"	2.1/2" - 12	140.0	132.0	75

MATERIAL: Carbon Steel

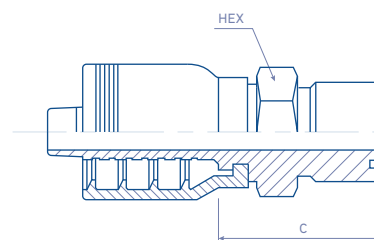
FINISH: Chromium-(VI) Free plating /
ROHS compliant



ORFS Male - OFTM

BW26.4000.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - ORFS M SO -202	BW26.4000.2020	-20	1.1/4"	1.11/16" - 12	44.0	46
F-1P - ORFS M SO -2424	BW26.4000.2424	-24	1.1/2"	2" - 12	48.0	55

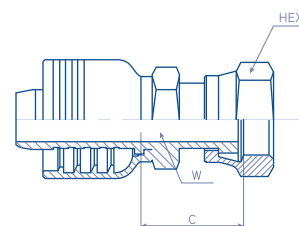
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

ORFS Female Swivel - OFT

BW26.44H4.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - ORFS DH FS -2020	BW26.44H4.2020	-20	1.1/4"	1.11/16" - 12	55.0	41	50
F-1P - ORFS DH FS -2424	BW26.44H4.2424	-24	1.1/2"	2" - 12	60.0	50	60

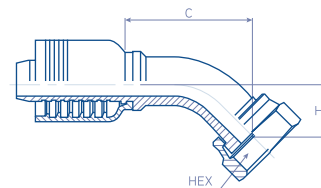
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

ORFS Female Swivel 45° - OFT45

BW26.4444.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - ORFS FS 45 SO -2020	BW26.4444.2020	-20	1.1/4"	1.11/16" - 12	93.0	34.0	50
F-1P - ORFS FS 45 SO -2424	BW26.4444.2424	-24	1.1/2"	2" - 12	113.0	41.0	60

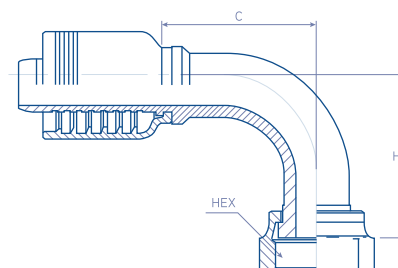
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

ORFS Female Swivel 90° - OFT90

BW26.4494.

ISO 12151-1 / ISO 8434-3 / SAE J1453



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	W	HEX
F-1P - ORFS FS 90 SO -2020	BW26.4494.2020	-20	1.1/4"	1.11/16" - 12	87.0	75.0	50
F-1P - ORFS FS 90 SO -2424	BW26.4494.2424	-24	1.1/2"	2" - 12	105.0	90.0	60

MATERIAL: Carbon Steel

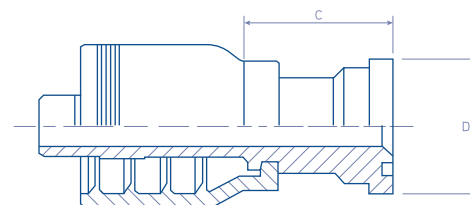
FINISH: Chromium-(VI) Free plating /
ROHS compliant



Straight SAE 3000 PSI Code 61 Flange - PA

BW26.7013.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions
		dash	inch		C - Cut Off
F-1P - SAE 61 3K PSI FL -2020	BW26.7013.2020	-20	1.1/4"	50.8	64.0
F-1P - SAE 61 3K PSI FL -2024	BW26.7013.2024	-20	1.1/4"	60.3	68.0
F-1P - SAE 61 3K PSI FL -2424	BW26.7013.2424	-24	1.1/2"	60.3	73.0
F-1P - SAE 61 3K PSI FL -2432	BW26.7013.2432	-24	1.1/2"	71.4	76.0
F-1P - SAE 61 3K PSI FL -3232	BW26.7013.3232	-32	2"	71.4	80.0

MATERIAL: Carbon Steel

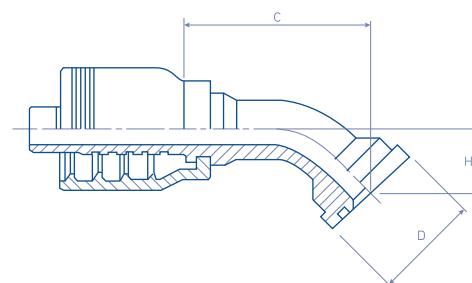
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Long drop upon demand

45° Elbow SAE 3000 PSI Code 61 Flange - PA45

BW26.7043.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	H
F-1P - SAE 61 3K PSI FL 45 -2020	BW26.7043.2020	-20	1.1/4"	50.8	90.5	32.0
F-1P - SAE 61 3K PSI FL 45 -2024	BW26.7043.2024	-20	1.1/4"	60.3	90.5	32.0
F-1P - SAE 61 3K PSI FL 45 -2424	BW26.7043.2424	-24	1.1/2"	60.3	108.0	36.0
F-1P - SAE 61 3K PSI FL 45 -2432	BW26.7043.2432	-24	1.1/2"	71.4	106.5	35.0
F-1P - SAE 61 3K PSI FL 45 -3232	BW26.7043.3232	-32	2"	71.4	148.5	57.0

MATERIAL: Carbon Steel

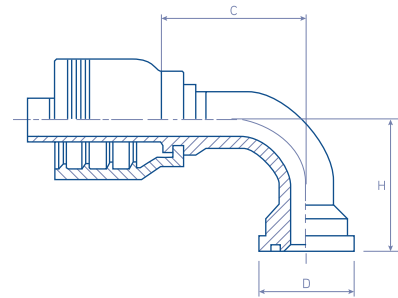
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Long drop upon demand

90° Elbow SAE 3000 PSI Code 61 Flange - PA90

BW26.7093.

SAE J516 (CODE 61) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	H
F-1P - SAE 61 3K PSI FL 90 -2020	BW26.7093.2020	-20	1.1/4"	50.8	87.5	71.0
F-1P - SAE 61 3K PSI FL 90 -2024	BW26.7093.2024	-20	1.1/4"	60.3	87.5	71.0
F-1P - SAE 61 3K PSI FL 90 -2424	BW26.7093.2424	-24	1.1/2"	60.3	105.5	83.0
F-1P - SAE 61 3K PSI FL 90 -2432	BW26.7093.2432	-24	1.1/2"	71.4	105.5	81.0
F-1P - SAE 61 3K PSI FL 90 -3232	BW26.7093.3232	-32	2"	71.4	140.5	122.0

MATERIAL: Carbon Steel

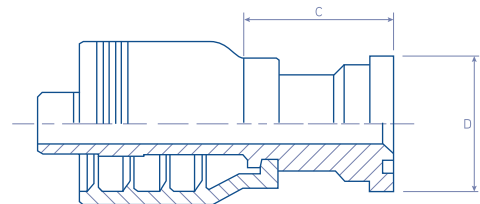
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Long drop upon demand

Straight SAE 6000 PSI Code 62 Flange - PH

BW26.7016.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
F-1P - SAE 62 6K PSI FL -2020	BW26.7016.2020	-20	1.1/4"	54.0	70.0	54
F-1P - SAE 62 6K PSI FL -2024	BW26.7016.2024	-20	1.1/4"	63.5	80.0	63,5
F-1P - SAE 62 6K PSI FL -2424	BW26.7016.2424	-24	1.1/2"	63.5	84.0	63,5
F-1P - SAE 62 6K PSI FL -2432	BW26.7016.2432	-24	1.1/2"	79.4	99.0	79,4
F-1P - SAE 62 6K PSI FL -3232	BW26.7016.3232	-32	2"	79.4	100.0	79,4

MATERIAL: Carbon Steel

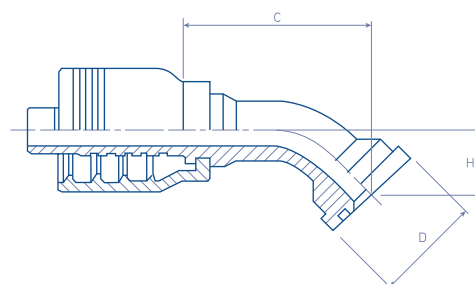
FINISH: Chromium-(VI) Free plating /
ROHS compliant



45° Elbow SAE 6000 PSI Code 62 Flange - PH45

BW26.7046.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3



REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
F-1P - SAE 62 6K PSI FL 45 -2020	BW26.7046.2020	-20	1.1/4"	54.0	93.0	35.5	54
F-1P - SAE 62 6K PSI FL 45 -2024	BW26.7046.2024	-20	1.1/4"	63.5	94.0	38.0	63,5
F-1P - SAE 62 6K PSI FL 45 -2424	BW26.7046.2424	-24	1.1/2"	63.5	112.0	43.0	63,5
F-1P - SAE 62 6K PSI FL 45 -2432	BW26.7046.2432	-24	1.1/2"	79.4	115.0	46.0	79,4
F-1P - SAE 62 6K PSI FL 45 -3232	BW26.7046.3232	32	2"	79.4	154.0	63.0	79,4

MATERIAL: Carbon Steel

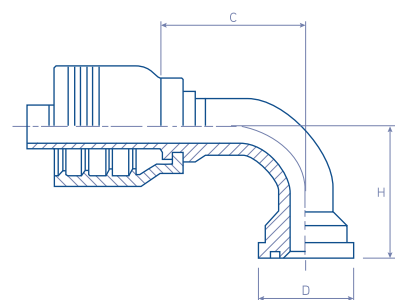
FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Other elbow angle
configuration upon demand
(Example: 22°)

90° Elbow SAE 6000 PSI Code 62 Flange - PH90

BW26.7096.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3



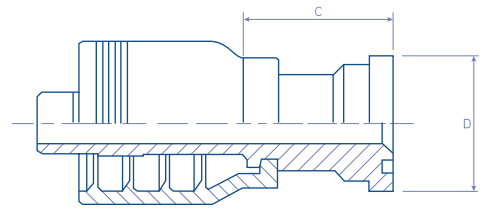
REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
F-1P - SAE 62 6K PSI FL 90 -2020	BW26.7096.2020	-20	1.1/4"	54.0	87.0	74.0	54
F-1P - SAE 62 6K PSI FL 90 -2024	BW26.7096.2024	-20	1.1/4"	63.5	87.0	79.0	63,5
F-1P - SAE 62 6K PSI FL 90 -2424	BW26.7096.2424	-24	1.1/2"	63.5	105.0	88.0	63,5
F-1P - SAE 62 6K PSI FL 90 -2432	BW26.7096.2432	-24	1.1/2"	79.4	105.0	93.0	79,4
F-1P - SAE 62 6K PSI FL 90 -3232	BW26.7096.3232	-32	2"	79.4	140.0	135.5	79,4

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Long drop upon demand

Straight SuperCAT Flange - SC



BW26.7116.

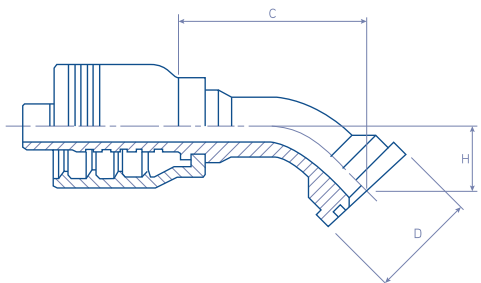
SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions	
		dash	inch		C - Cut Off	D
F-1P - SAE 62 6K PSI S CAT FL -2020	BW26.7116.2020	-20	1.1/4"	54.0	88.0	54
F-1P - SAE 62 6K PSI S CAT FL -2024	BW26.7116.2024	-20	1.1/4"	63.5	88.0	63,5
F-1P - SAE 62 6K PSI S CAT FL -2424	BW26.7116.2424	-24	1.1/2"	63.5	84.0	63,5
F-1P - SAE 62 6K PSI S CAT FL -2432	BW26.7116.2432	-24	1.1/2"	79.4	110.0	79,4
F-1P - SAE 62 6K PSI S CAT FL -3232	BW26.7116.3232	-32	2"	79.4	130.0	79,4

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

45° Elbow SuperCAT Flange - SC45



BW26.7146.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
F-1P - SAE 62 6K PSI S CAT FL 45 -2020	BW26.7146.2020	-20	1.1/4"	54.0	95.5	37.5	54
F-1P - SAE 62 6K PSI S CAT FL 45 -2024	BW26.7146.2024	-20	1.1/4"	63.5	95.5	44.0	63,5
F-1P - SAE 62 6K PSI S CAT FL 45 -2424	BW26.7146.2424	-24	1.1/2"	63.5	113.5	44.0	63,5
F-1P - SAE 62 6K PSI S CAT FL 45 -2432	BW26.7146.2432	-24	1.1/2"	79.4	116.5	47.0	79,4
F-1P - SAE 62 6K PSI S CAT FL 45 -3232	BW26.7146.3232	-32	2"	79.4	154.0	63.5	79,4

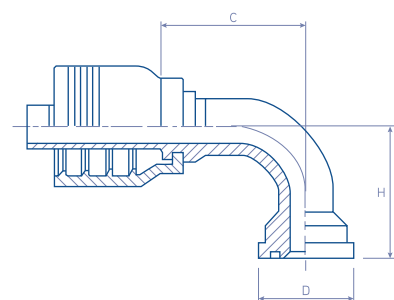
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Other elbow angle
configuration upon demand
(Example: 22°)



90° Elbow SuperCAT Flange – SC90



BW26.7196.

SAE J516 (CODE 62) / SAE J518 / ISO 12151-3

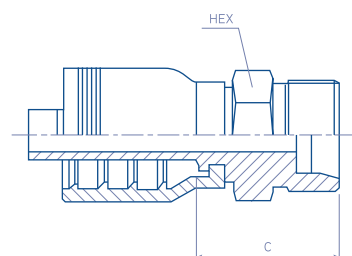
REFERENCE	#	hose		flange size	dimensions		
		dash	inch		C - Cut Off	H	D
F-1P - SAE 62 6K PSI S CAT FL 90 -2020	BW26.7196.2020	-20	1.1/4"	54.0	87.5	77.0	54
F-1P - SAE 62 6K PSI S CAT FL 90 -2024	BW26.7196.2024	-20	1.1/4"	63.5	87.5	81.0	63,5
F-1P - SAE 62 6K PSI S CAT FL 90 -2424	BW26.7196.2424	-24	1.1/2"	63.5	105.5	90.0	63,5
F-1P - SAE 62 6K PSI S CAT FL 90 -2432	BW26.7196.2432	-24	1.1/2"	79.4	105.5	95.0	79,4
F-1P - SAE 62 6K PSI S CAT FL 90 -3232	BW26.7196.3232	-32	2"	79.4	140.0	135.5	79,4

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

VERSIONS: Long drop upon demand

24° Metric Heavy Male - DHM



BW26.1100.

ISO 12151-2 / ISO 8434-1

REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - M-CES M -2052	BW26.1100.2052	-20	1.1/4"	M52X2.0	51.0	55

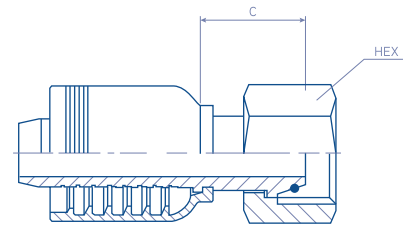
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

24° Metric Heavy Female Swivel - DHF

BW26.5113.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - M-DKOS FS SO -2052	BW26.5113.2052	-20	1.1/4"	M52X2.0	48.0	60
F-1P - M-DKOS FS SO -2452	BW26.5113.2452	-24	1.1/2"	M52X2.0	39.0	60

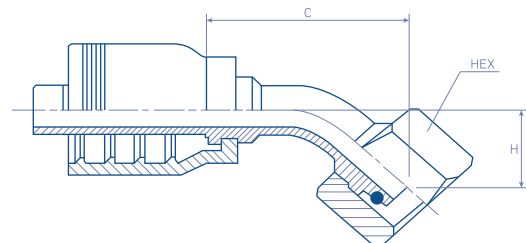
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

24° Metric Heavy Female 45° - DHF45

BW26.5143.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
F-1P - M-DKOS FS 45 SO -2052	BW26.5143.2052	-20	1.1/4"	M52X2.0	97.0	38.0	60

MATERIAL: Carbon Steel

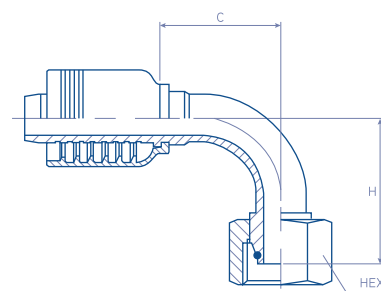
FINISH: Chromium-(VI) Free plating /
ROHS compliant



24° Metric Heavy Female 90° - DHF90

BW26.5193.

ISO 12151-2 / ISO 8434-1



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
F-1P - M-DKOS FS 90 -2052	BW26.5193.2052	-20	1.1/4"	M52X2.0	87.0	80.0	60

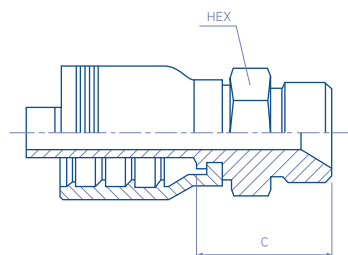
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

BSP 60° Male - BSPPM

BW26.0100.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - BSPP M -2020	BW26.0100.2020	-20	1.1/4"	1.1/4" - 11	51.0	50
F-1P - BSPP M -2024	BW26.0100.2024	-20	1.1/4"	1.1/2" - 11	54.0	55
F-1P - BSPP M -2424	BW26.0100.2424	-24	1.1/2"	1.1/2" - 11	54.1	55
F-1P - BSPP M -2432	BW26.0100.2432	-24	1.1/2"	2" - 11	60.5	70
F-1P - BSPP M -3232	BW26.0100.3232	-32	2"	2" - 11	65.5	70

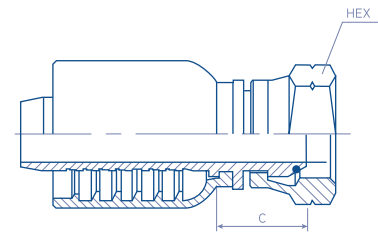
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating / ROHS compliant

BSP 60° Female Swivel - BSPXF

BW26.3112.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions	
		dash	inch		C - Cut Off	HEX
F-1P - BSPP OR FS TW -2020	BW26.3112.2020W	-20	1.1/4"	1.1/4" - 11	39.0	50
F-1P - BSPP OR FS TW -2024	BW26.3112.2024W	-20	1.1/4"	1.1/2" - 11	42.0	55
F-1P - BSPP OR FS TW -2424	BW26.3112.2424W	-24	1.1/2"	1.1/2" - 11	43.0	55
F-1P - BSPP OR FS TW -2432	BW26.3112.2432W	-24	1.1/2"	2" - 11	44.0	70
F-1P - BSPP OR FS TW -3232	BW26.3112.3232W	-32	2"	2" - 11	47.0	70

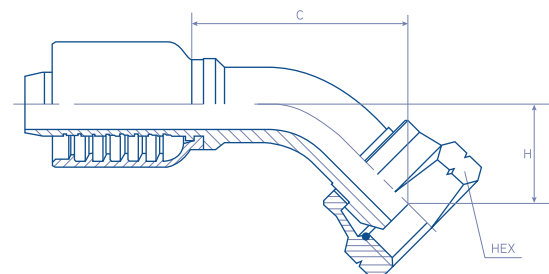
MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

BSP 60° Female Swivel 45° - BSPXF45

BW26.3142.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
F-1P - BSPP OR FS 45 TW -2020	BW26.3142.2020W	-20	1.1/4"	1.1/4" - 11	103.0	43.0	50
F-1P - BSPP OR FS 45 TW -2024	BW26.3142.2024W	-20	1.1/4"	1.1/2" - 11	103.0	43.0	55
F-1P - BSPP OR FS 45 TW -2424	BW26.3142.2424W	-24	1.1/2"	1.1/2" - 11	123.0	51.0	55
F-1P - BSPP OR FS 45 TW -2432	BW26.3142.2432W	-24	1.1/2"	2" - 11	127.0	55.0	70
F-1P - BSPP OR FS 45 TW -3232	BW26.3142.3232W	-32	2"	2" - 11	160.0	65.0	70

MATERIAL: Carbon Steel

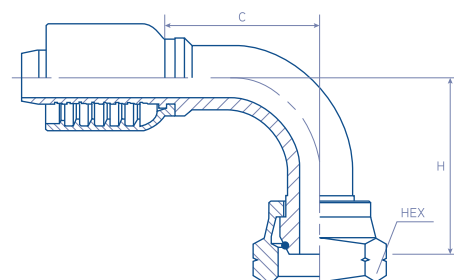
FINISH: Chromium-(VI) Free plating /
ROHS compliant



BSP 60° Female Swivel 90° - BSPXF90

BW26.3192.

ISO 12151-6 / ISO 8434-6



REFERENCE	#	hose		thread	dimensions		
		dash	inch		C - Cut Off	H	HEX
F-1P - BSPP OR FS 90 TW -2020	BW26.3192.2020W	-20	1.1/4"	1.1/4" - 11	87.0	88.0	50
F-1P - BSPP OR FS 90 TW -2024	BW26.3192.2024W	-20	1.1/4"	1.1/2" - 11	87.0	88.0	55
F-1P - BSPP OR FS 90 TW -2424	BW26.3192.2424W	-24	1.1/2"	1.1/2" - 11	105.0	104.0	55
F-1P - BSPP OR FS 90 TW -2432	BW26.3192.2432W	-24	1.1/2"	2" - 11	105.0	104.0	70
F-1P - BSPP OR FS 90 TW -3232	BW26.3192.3232W	-32	2"	2" - 11	140.0	137.0	70

MATERIAL: Carbon Steel

FINISH: Chromium-(VI) Free plating /
ROHS compliant

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