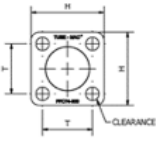
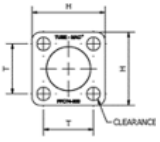










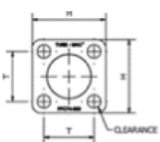
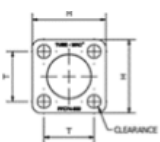









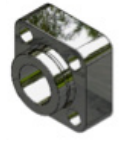


















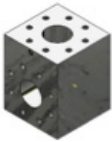


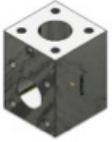
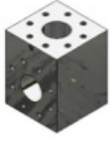

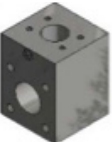
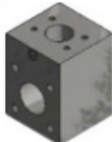
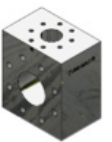
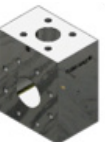



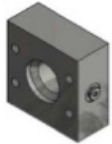







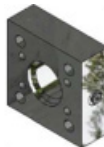





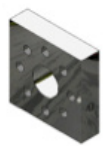








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ISO 6164 5800 PSI, 400 bar Reference Guide

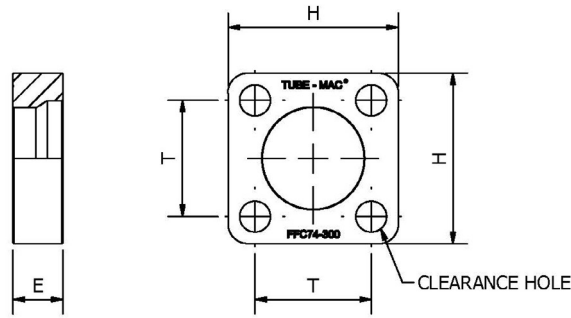
					
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ISO 6164 5800 PSI, 400 bar Reference Guide

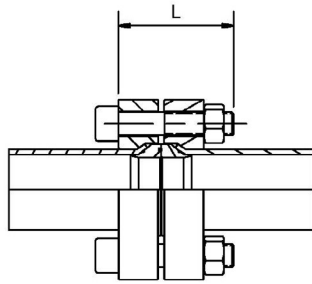
					
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ISO 6164, 400 bar Flare Flange Dimensions, NPS

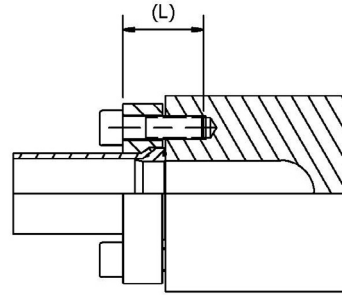
Flange Pattern Drilled to ISO 6164



1-1/2" - 4" FLANGES



FLANGE TO FLANGE UNION



FLANGE TO COMPONENT

Flare Flange Dimensions, NPS						
Flange Size	Pipe Size	Dimensions (in)			SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
		T	H	E		
1-1/2"	1-1/2" SCH80	2.37	3.50	1.38	5/8" UNC x 4.00" (2.50")	4920 (339)*
1-1/2"	1-1/2" SCH160	2.37	3.50	1.38	5/8" UNC x 4.25" (2.75")	5800 (400)
2"	2" SCH80	2.73	4.00	1.48	5/8" UNC x 3.75" (2.25")	4246 (293)*
2"	2" SCH160	2.73	4.00	1.48	5/8" UNC x 4.00" (2.50")	5800 (400)
2-1/2"	2-1/2" SCH80	3.29	4.72	1.48	3/4" UNC x 4.50" (3.00")	4455 (307)*
2-1/2"	2-1/2" SCH160	3.29	4.72	1.48	3/4" UNC x 5.00" (3.25")	5800 (400)
3"	3" SCH80	4.04	5.91	1.73	1" UNC x 5.00" (3.50")	3946 (272)*
3"	3" SCH160	4.04	5.91	1.73	1" UNC x 5.50" (4.50")	5800 (400)
4"	4" SCH80	4.87	7.00	1.98	1-1/8" UNC x 6.75" (4.00")	3420 (236)*

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

***SHCS Bolt Specification**

Carbon Steel: ASTM A574

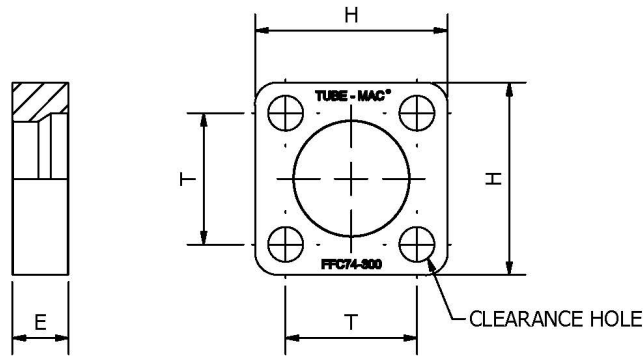
316 Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

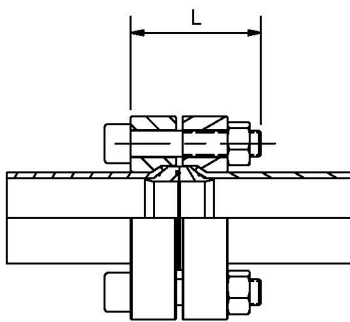
3D step models available upon request

ISO 6164, 400 bar Flare Flange Dimensions, Metric

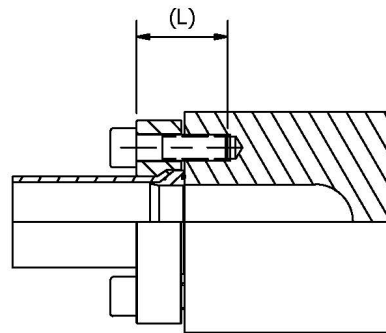
Flange Pattern Drilled to ISO 6164



1-1/2" - 3" FLANGES



FLANGE TO FLANGE UNION



FLANGE TO COMPONENT

Flare Flange Dimensions, Metric						
Size	Pipe Size (mm)	Dimensions (mm)			SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
		T	H	E		
1-1/2"	50 x 5	60.1	88.9	35.0	M16 x 100 (60)	5235 (361)*
1-1/2"	50 x 6	60.1	88.9	35.0	M16 x 100 (60)	5800 (400)
1-1/2"	50 x 8	60.1	88.9	35.0	M16 x 100 (60)	5800 (400)
1-1/2"	56 x 8.5	60.1	88.9	35.0	M16 x 110 (70)	5800 (400)
2"	60 x 5	69.3	101.6	37.6	M16 x 100 (60)	4307 (297)
2"	60 x 6	69.3	101.6	37.6	M16 x 100 (60)	5307 (366)*
2"	60 x 8	69.3	101.6	37.6	M16 x 100 (60)	5800 (400)
2"	66 x 8.5	69.3	101.6	37.6	M16 x 100 (60)	5800 (400)
2-1/2"	73 x 7	83.5	119.9	37.6	M20 x 120 (75)	5119 (353)*
2-1/2"	80 x 10	83.5	119.9	37.6	M20 x 130 (85)	5800 (400)
3"	90 x 9	102.5	150.1	43.9	M24 x 130 (90)	5800 (400)
3"	97 x 12	102.5	150.1	60.3	M24 x 155 (120)	5800 (400)

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

***SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762

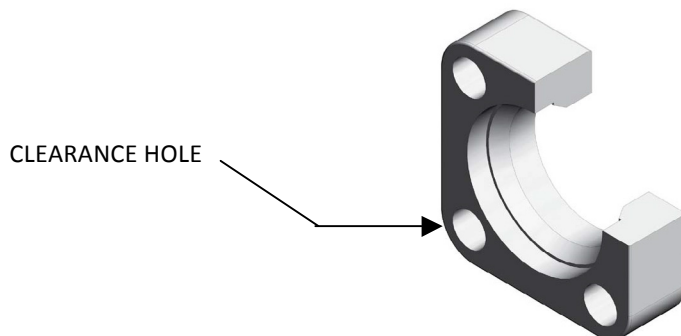
- Minimum Grade 8.8

316 Stainless Steel: A4-70 DIN 912/ISO 4762

- For M16 SS Bolts and larger A4-80, DIN 912/ISO 4762

ISO 6164, 400 bar Flare Flange with Clearance Holes

DIN 400 bar (ISO 6164)



FFC74 Flare Flange with Clearance Holes, NPS

Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (Bar)	WT lbs (kg)
1-1/2"	1-1/2" SCH80/160	FFC74-150	FFC74-150-HDG	FFC74-150-SS	5800 (400)	2.75 (1.25)
2"	2" SCH80/160	FFC74-200	FFC74-200-HDG	FFC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	2-1/2" SCH80/160	FFC74-250	FFC74-250-HDG	FFC74-250-SS	5800 (400)	5.06 (2.30)
3"	3" SCH80/160	FFC74-300	FFC74-300-HDG	FFC74-300-SS	5800 (400)	8.79 (4.00)
4"	4" SCH80	FFC74-400	FFC74-400-HDG	FFC74-400-SS	5800 (400)	14.80 (6.71)

FFCM74 Flare Flange with Clearance Holes, Metric

Size	Pipe OD (mm)	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (Bar)	WT lbs (kg)
1-1/2"	50	FFCM74-150-50MM	FFCM74-150-50MM-HDG	FFCM74-150-50MM-SS	5800 (400)	2.75 (1.25)
1-1/2"	56	FFCM74-150-56MM	FFCM74-150-56MM-HDG	FFCM74-150-56MM-SS	5800 (400)	2.75 (1.25)
2"	60	FFC74-200	FFC74-200-HDG	FFC74-200-SS	5800 (400)	3.10 (1.41)
2"	66	FFCM74-200-66MM	FFCM74-200-66MM-HDG	FFCM74-200-66MM-SS	5800 (400)	3.10 (1.41)
2-1/2"	73	FFC74-250	FFC74-250-HDG	FFC74-250-SS	5800 (400)	5.06 (2.30)
2-1/2"	75	FFCM74-250-75MM	FFCM74-250-75MM-HDG	FFCM74-250-75MM-SS	5800 (400)	4.80 (2.18)
2-1/2"	80	FFCM74-250-80MM	FFCM74-250-80MM-HDG	FFCM74-250-80MM-SS	5800 (400)	4.80 (2.18)
3"	90	FFCM74-300-90MM	FFCM74-300-90MM-HDG	FFCM74-300-90MM-SS	5800 (400)	8.79 (4.00)
3"	97	FFCM74-300-97MM	FFCM74-300-97MM-HDG	FFCM74-300-97MM-SS	5800 (400)	12.70 (5.80)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

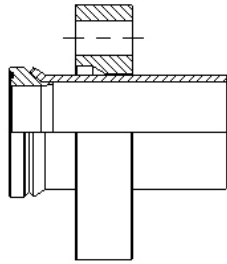
The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

3D step models available upon request

ISO 6164, 400 bar Flare Flange Set O-Ring Face with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CO Flare Flange O-Ring Face Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH80	FFC74-CO-SCH80-150-*^-^	3.17 (1.44)	FFC74-150-*	CO-SCH80-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH160	FFC74-CO-SCH160-150-*^-^	3.17 (1.44)	FFC74-150-*	CO-SCH160-150-*^-^	ORV-3815	OR^-2-225
2"	2" SCH80	FFC74-CO-SCH80-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-SCH80-200-*^-^	ORV-5515	OR^-2-228
2"	2" SCH160	FFC74-CO-SCH160-200-*^-^	3.77 (1.71)	FFC74-200-*	CO-SCH160-200-*^-^	ORV-5015	OR^-2-228
2-1/2"	2-1/2" SCH80	FFC74-CO-SCH80-250-*^-^	6.05 (2.75)	FFC74-250-*	CO-SCH80-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH160	FFC74-CO-SCH160-250-*^-^	6.48 (2.95)	FFC74-250-*	CO-SCH160-250-*^-^	ORV-5615	OR^-2-232
3"	3" SCH80	FFC74-CO-SCH80-300-*^-^	10.00 (4.55)	FFC74-300-*	CO-SCH80-300-*^-^	ORV-2-040	OR^-2-237
3"	3" SCH160	FFC74-CO-SCH160-300-*^-^	10.69 (4.86)	FFC74-300-*	CO-SCH160-300-*^-^	ORV-2-037	OR^-2-237
4"	4" SCH80	FFC74-CO-SCH80-400-*^-^	16.85 (7.66)	FFC74-400-*	CO-SCH80-400-*^-^	ORV-2-044	OR^-2-245

FFCM74-CO Flare Flange O-Ring Face Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50 x 5.0	FFCM74-CO-50x5.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x5.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50 x 6.0	FFCM74-CO-50x6.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x6.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50 x 8.0	FFCM74-CO-50x8.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x8.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	56 x 8.5	FFCM74-CO-56x8.5-150-*^-^	3.17 (1.44)	FFCM74-150-56MM-*	CO-56x8.5-150-*^-^	ORV-4315	OR^-2-225
2"	60 x 5.0	FFCM74-CO-60x5.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x5.0-200-*^-^	ORV-5615	OR^-2-228
2"	60 x 6.0	FFCM74-CO-60x6.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x6.0-200-*^-^	ORV-5015	OR^-2-228
2"	60 x 8.0	FFCM74-CO-60x8.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x8.0-200-*^-^	ORV-5015	OR^-2-228
2"	66 x 8.5	FFCM74-CO-66x8.5-200-*^-^	3.77 (1.71)	FFCM74-200-66MM-*	CO-66x8.5-200-*^-^	ORV-5615	OR^-2-228
2-1/2"	73 x 7.0	FFCM74-CO-73x7.0-250-*^-^	6.05 (2.75)	FFC74-250-*	CO-73x7.0-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	75 x 5.0	FFCM74-CO-75x5.0-250-*^-^	6.48 (2.95)	FFCM74-250-75MM-*	CO-75x5.0-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	80 x 10.0	FFCM74-CO-80x10-250-*^-^	5.75 (2.61)	FFCM74-250-80MM-*	CO-80x10-250-*^-^	ORV-6715	OR^-2-232
3"	90 x 9.0	FFCM74-CO-90x9.0-300-*^-^	10.11 (4.60)	FFCM74-300-90MM-*	CO-90x9.0-300-*^-^	ORV-2-041	OR^-2-237
3"	97 x 12.0	FFCM74-CO-97x12-300-*^-^	15.30 (6.95)	FFCM74-300-97MM-*	CO-97x12-300-*^-^	ORV-2-041	OR^-2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC74-CO-SCH80-200-SS-V

*Insert Material

^ Insert O-Ring 2 Type

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

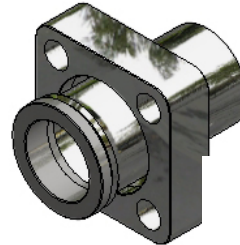
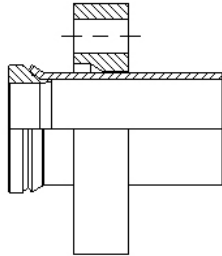
V = Viton.

3D step models available upon request

ISO 6164, 400 bar Flare Flange Set

Flat Face with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CF Flare Flange Flat Face Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	1-1/2" SCH80	FFC74-CF-SCH80-150-*	3.21 (1.46)	FFC74-150-*	CF-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC74-CF-SCH160-150-*	3.21 (1.46)	FFC74-150-*	CF-SCH160-150-*	ORV-3815
2"	2" SCH80	FFC74-CF-SCH80-200-*	3.63 (1.65)	FFC74-200-*	CF-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC74-CF-SCH160-200-*	3.81 (1.73)	FFC74-200-*	CF-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH80	FFC74-CF-SCH80-250-*	6.12 (2.78)	FFC74-250-*	CF-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC74-CF-SCH160-250-*	6.56 (2.98)	FFC74-250-*	CF-SCH160-250-*	ORV-5615
3"	3" SCH80	FFC74-CF-SCH80-300-*	10.07 (4.58)	FFC74-300-*	CF-SCH80-300-*	ORV-2-040
3"	3" SCH160	FFC74-CF-SCH160-300-*	10.76 (4.89)	FFC74-300-*	CF-SCH160-300-*	ORV-2.037
4"	4" SCH80	FFC74-CF-SCH80-400-*	16.85 (7.66)	FFC74-400-*	CF-SCH80-400-*	ORV-2.044

FFCM74-CF Flare Flange Flat Face Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50 x 5.0	FFCM74-CF-50x5.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x5.0-150-*	ORV-4515
1-1/2"	50 x 6.0	FFCM74-CF-50x6.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x6.0-150-*	ORV-4515
1-1/2"	50 x 8.0	FFCM74-CF-50x8.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x8.0-150-*	ORV-4515
1-1/2"	56 x 8.5	FFCM74-CF-56x8.5-150-*	3.22 (1.46)	FFCM74-150-56MM-*	CF-56x8.5-150-*	ORV-4315
2"	60 x 5.0	FFCM74-CF-60x5.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x5.0-200-*	ORV-5615
2"	60 x 6.0	FFCM74-CF-60x6.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x6.0-200-*	ORV-5015
2"	60 x 8.0	FFCM74-CF-60x8.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x8.0-200-*	ORV-5015
2"	66 x 8.5	FFCM74-CF-66x8.5-200-*	3.84 (1.75)	FFCM74-200-66MM-*	CF-66x8.5-200-*	ORV-5615
2-1/2"	73 x 7.0	FFCM74-CF-73x7.0-250-*	6.14 (2.80)	FFC74-250-*	CF-73x7.0-250-*	ORV-2-036
2-1/2"	75 x 5.0	FFCM74-CF-75x5.0-250-*	6.64 (3.02)	FFCM74-250-75MM-*	CF-75x5.0-250-*	ORV-2-036
2-1/2"	80 x 10.0	FFCM74-CF-80x10-250-*	5.79 (2.63)	FFCM74-250-80MM-*	CF-80x10-250-*	ORV-6715
3"	90 x 9.0	FFCM74-CF-90x9.0-300-*	10.15 (4.61)	FFCM74-300-90MM-*	CF-90x9.0-300-*	ORV-2-041
3"	97 x 12.0	FFCM74-CF-97x12-300-*	15.40 (7.00)	FFCM74-300-97MM-*	CF-97x12-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

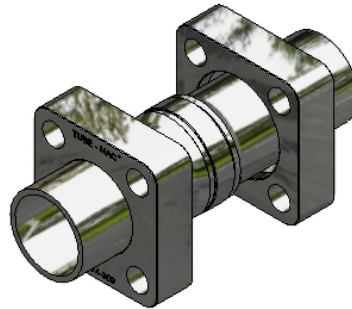
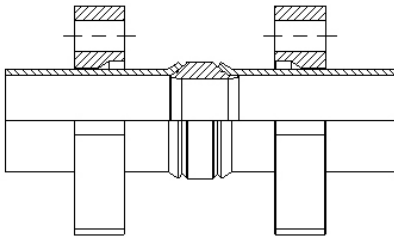
Ordering Example: FFC74-CF-SCH80-200-SS

*Insert Material _____

3D step models available upon request

ISO 6164, 400 bar Flare Flange Double Cone Union Set with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CD Flare Flange Double Cone Union Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1- 1/2"	1-1/2" SCH80	FFC74-CD-SCH80-150-*	6.34 (2.88)	FFC74-150-*	CD-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC74-CD-SCH160-150-*	6.34 (2.88)	FFC74-150-*	CD-SCH160-150-*	ORV-3815
2"	2" SCH80	FFC74-CD-SCH80-200-*	7.17 (3.26)	FFC74-200-*	CD-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC74-CD-SCH160-200-*	7.51 (3.41)	FFC74-200-*	CD-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH80	FFC74-CD-SCH80-250-*	12.07 (5.49)	FFC74-250-*	CD-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC74-CD-SCH160-250-*	12.89 (5.86)	FFC74-250-*	CD-SCH160-250-*	ORV-5615
3"	3" SCH80	FFC74-CD-SCH80-300-*	19.95 (9.07)	FFC74-300-*	CD-SCH80-300-*	ORV-2-040
3"	3" SCH160	FFC74-CD-SCH160-300-*	21.26 (9.66)	FFC74-300-*	CD-SCH160-300-*	ORV-2.037
4"	4" SCH80	FFC74-CD-SCH80-400-*	34.07 (15.49)	FFC74-400-*	CD-SCH80-400-*	ORV-2.044

FFCM74-CD Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50 x 5.0	FFCM74-CD-50x5.0-150-*	6.31 (2.87)	FFCM74-150-50MM-*	CD-50x5.0-150-*	ORV-4515
1-1/2"	50 x 6.0	FFCM74-CD-50x6.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CD-50x6.0-150-*	ORV-4515
1-1/2"	50 x 8.0	FFCM74-CD-50x8.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CD-50x8.0-150-*	ORV-4515
1-1/2"	56 x 8.5	FFCM74-CD-56x8.5-150-*	6.31 (2.87)	FFCM74-150-56MM-*	CD-56x8.5-150-*	ORV-4315
2"	60 x 5.0	FFCM74-CD-60x5.0-200-*	3.65 (1.66)	FFC74-200-*	CD-60x5.0-200-*	ORV-5615
2"	60 x 6.0	FFCM74-CD-60x6.0-200-*	7.09 (3.22)	FFC74-200-*	CD-60x6.0-200-*	ORV-5015
2"	60 x 8.0	FFCM74-CD-60x8.0-200-*	3.65 (1.66)	FFC74-200-*	CD-60x8.0-200-*	ORV-5015
2"	66 x 8.5	FFCM74-CD-66x8.5-200-*	7.09 (3.22)	FFCM74-200-66MM-*	CD-66x8.5-200-*	ORV-5615
2-1/2"	73 x 7.0	FFCM74-CD-73x7.0-250-*	12.12 (5.51)	FFC74-250-*	CD-73x7.0-250-*	ORV-2-036
2-1/2"	75 x 5.0	FFCM74-CD-75x5.0-250-*	11.60 (5.27)	FFCM74-250-75MM-*	CD-75x5.0-250-*	ORV-2-036
2-1/2"	80 x 10.0	FFCM74-CD-80x10-250-*	11.48 (5.23)	FFCM74-250-80MM-*	CD-80x10-250-*	ORV-6715
3"	90 x 9.0	FFCM74-CD-90x9.0-300-*	20.18 (9.17)	FFCM74-300-90MM-*	CD-90x9.0-300-*	ORV-2-041
3"	97 x 12.0	FFCM74-CD-97x12-300-*	30.50 (13.86)	FFCM74-300-97MM-*	CD-97x12-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

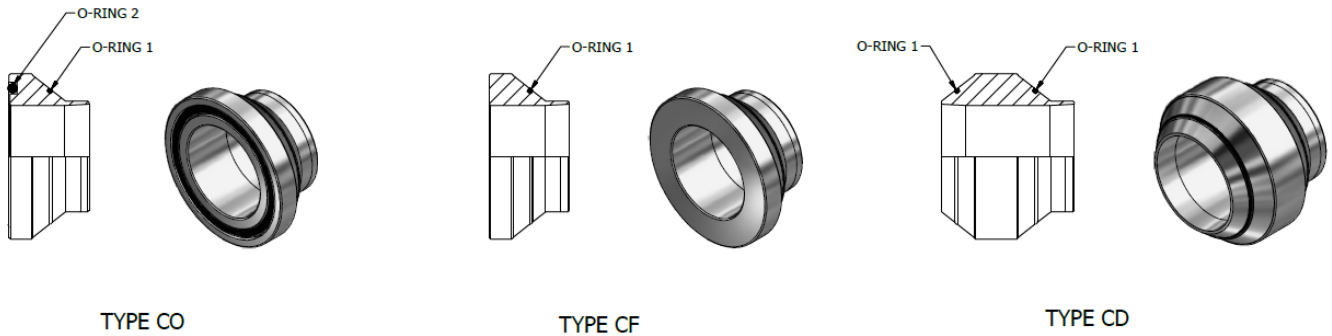
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC74-CD-SCH80-200-SS

*Insert Material _____

ISO 6164, 400 bar Cone Inserts for Flare Flange Connections

DIN 400 bar (ISO 6164)



CO, CF and CD Cone Inserts for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part No.
1-1/2"	1-1/2" SCH80	CO-SCH80-150-* [^]	0.42 (0.19)	0.42 (0.19)	0.46 (0.21)	CD-SCH80-150-*	0.84 (0.38)	ORV-4315	OR [^] -2-225
1-1/2"	1-1/2" SCH160	CO-SCH160-150-* [^]	0.42 (0.19)	0.42 (0.19)	0.45 (0.20)	CD-SCH160-150-*	0.83 (0.37)	ORV-3815	OR [^] -2-225
2"	2" SCH80	CO-SCH80-200-* [^]	0.49 (0.22)	0.49 (0.22)	0.53 (0.24)	CD-SCH80-200-*	0.97 (0.44)	ORV-5515	OR [^] -2-228
2"	2" SCH160	CO-SCH160-200-* [^]	0.67 (0.30)	0.67 (0.30)	0.71 (0.32)	CD-SCH160-200-*	1.31 (0.59)	ORV-5015	OR [^] -2-228
2-1/2"	2-1/2" SCH80	CO-SCH80-250-* [^]	0.99 (0.45)	0.99 (0.45)	1.06 (0.48)	CD-SCH80-250-*	1.95 (0.88)	ORV-2-036	OR [^] -2-232
2-1/2"	2-1/2" SCH160	CO-SCH160-250-* [^]	1.42 (0.64)	1.42 (0.64)	1.50 (0.68)	CD-SCH160-250-*	2.77 (1.26)	ORV-5615	OR [^] -2-232
3"	3" SCH80	CO-SCH80-300-* [^]	1.21 (0.55)	1.21 (0.55)	1.28 (0.58)	CD-SCH80-300-*	2.37 (1.07)	ORV-2-040	OR [^] -2-237
3"	3" SCH160	CO-SCH160-300-* [^]	1.86 (0.85)	1.86 (0.85)	1.93 (0.88)	CD-SCH160-300-*	3.68 (1.67)	ORV-2-037	OR [^] -2-237
4"	4" SCH80	CO-SCH80-400-* [^]	2.05 (0.93)	2.05 (0.93)	2.12 (0.96)	CD-SCH80-400-*	4.47 (2.03)	ORV-2-044	OR [^] -2-245

CO, CF and CD Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part No.
1-1/2"	50x5.0	CO-50x5.0-150-* [^]	0.42 (0.19)	CF-50x5.0-150-*	0.44 (0.20)	CD-50x5.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	50x6.0	CO-50x6.0-150-* [^]	0.42 (0.19)	CF-50x6.0-150-*	0.44 (0.20)	CD-50x6.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	50x8.0	CO-50x8.0-150-* [^]	0.42 (0.19)	CF-50x8.0-150-*	0.44 (0.20)	CD-50x8.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	56x8.5	CO-56x8.5-150-* [^]	0.42 (0.19)	CF-56x8.5-150-*	0.44 (0.20)	CD-56x8.5-150-*	0.81 (0.37)	ORV-4315	OR [^] -2-225
2"	60x5.0	CO-60x5.0-200-* [^]	0.46 (0.21)	CF-60x5.0-200-*	0.48 (0.22)	CD-60x5.0-200-*	0.89 (0.40)	ORV-5615	OR [^] -2-228
2"	60x6.0	CO-60x6.0-200-* [^]	0.46 (0.21)	CF-60x6.0-200-*	0.48 (0.22)	CD-60x6.0-200-*	0.89 (0.40)	ORV-5015	OR [^] -2-228
2"	60x8.0	CO-60x8.0-200-* [^]	0.46 (0.21)	CF-60x8.0-200-*	0.48 (0.22)	CD-60x8.0-200-*	0.89 (0.40)	ORV-5015	OR [^] -2-228
2"	66x8.5	CO-66x8.5-200-* [^]	0.46 (0.21)	CF-66x8.5-200-*	0.48 (0.22)	CD-66x8.5-200-*	0.89 (0.40)	ORV-5615	OR [^] -2-228
2-1/2"	73x7.0	CO-73x7.0-250-* [^]	1.00 (0.45)	CF-73x7.0-250-*	1.08 (0.49)	CD-73x7.0-250-*	2.00 (0.90)	ORV-2-036	OR [^] -2-232
2-1/2"	75 x 5.0	CO-75x5.0-250-* [^]	1.00 (0.45)	CF-75x5.0-250-*	1.08 (0.49)	CD-75x5.0-250-*	2.00 (0.90)	ORV-2-036	OR [^] -2-232
2-1/2"	80x10	CO-80x10-250-* [^]	0.95 (0.43)	CF-80x10-250-*	0.98 (0.44)	CD-80x10-250-*	1.88 (0.86)	ORV-6715	OR [^] -2-232
3"	90x9.0	CO-90x9.0-300-* [^]	1.32 (0.60)	CF-90x9.0-300-*	1.36 (0.62)	CD-90x9.0-300-*	2.60 (1.18)	ORV-2-041	OR [^] -2-237
3"	97x12	CO-97x12-300-* [^]	2.60 (1.18)	CF-97x12-300-*	2.70 (1.23)	CD-97x12-300-*	5.10 (2.32)	ORV-2-041	OR [^] -2-237

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: CO-SCH80-200-SS-V

*Insert Material

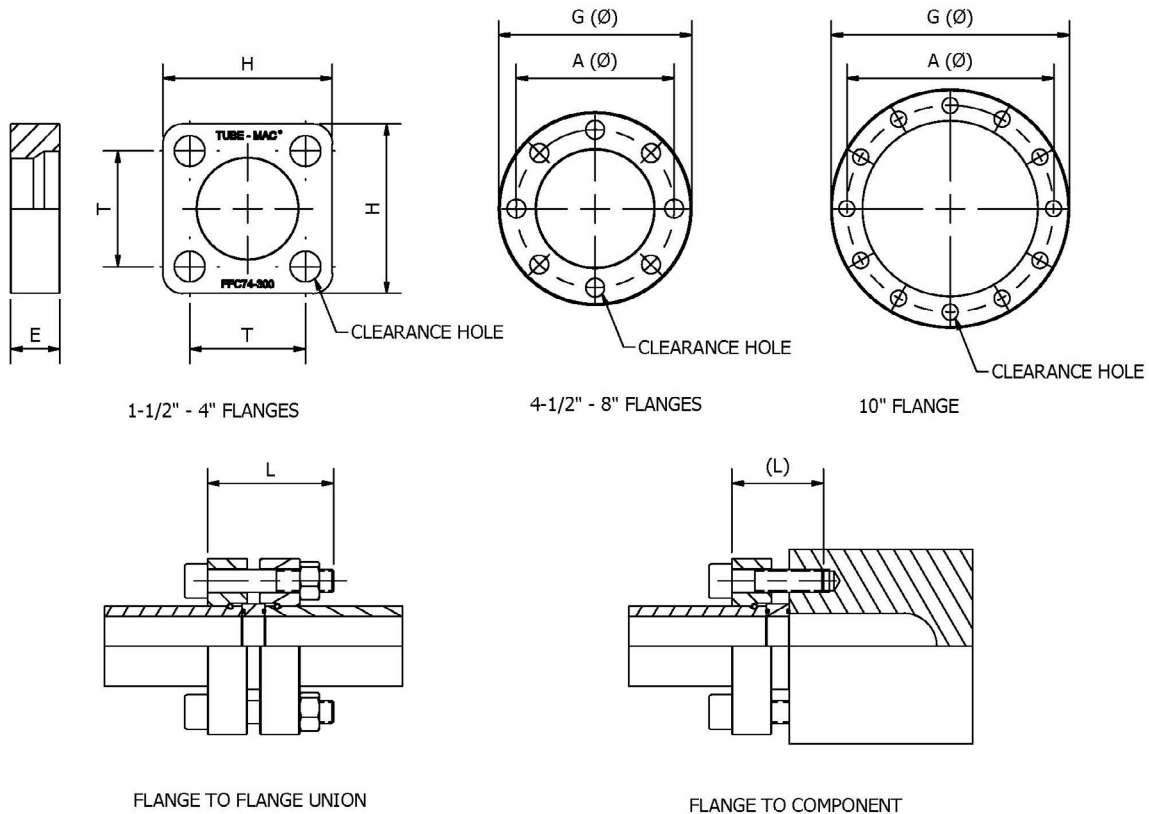
^ Insert O-Ring 2 Type

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange

Dimensions, NPS

Flange Pattern Drilled to ISO 6164 up to 4"



Retain Ring Flange Dimensions, NPS							
Size	Dimensions (in)					SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	T	H	E	AØ	GØ		
1-1/2"	2.37	3.50	1.38	-	-	5/8" UNC x 3 3/4" (2 3/4")	5800 (400)
2"	2.73	4.00	1.48	-	-	5/8" UNC x 3 1/2" (2 1/2")	5800 (400)
2-1/2"	3.29	4.72	1.48	-	-	3/4" UNC x 4 1/2" (3 1/2")	5800 (400)
3"	4.04	5.91	1.73	-	-	1" UNC x 5" (4")	5800 (400)
4"	4.87	7.00	1.98	-	-	1 1/8" UNC x 5 3/4" (4 1/2")	5800 (400)
4-1/2"	-	-	1.97	6.89	8.43	3/4" UNC x 6" (4 1/4")	5000 (350)
5"	-	-	2.00	8.07	9.65	1" UNC x 6" (5")	5000 (350)
6"	-	-	2.31	9.65	11.81	1 1/8" UNC x 7" (5")	5000 (350)
8 ⁽¹⁾	-	-	3.00	11.42	13.78	1 1/8" UNC x 8 1/2" (6")	5000 (350)
8"	-	-	3.00	12.40	15.13	1 1/2" UNC x 8 1/2" (6")	5000 (350)
10"	-	-	3.80	14.76	17.75	1 1/2" UNC x 10" (7")	3600 (250)

***SHCS Bolt Specification**

Carbon Steel: ASTM A574/ SAE J429 Grade 8

Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

Note:

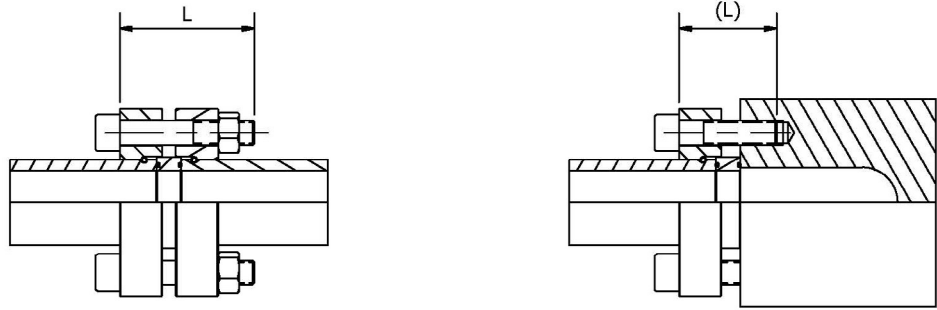
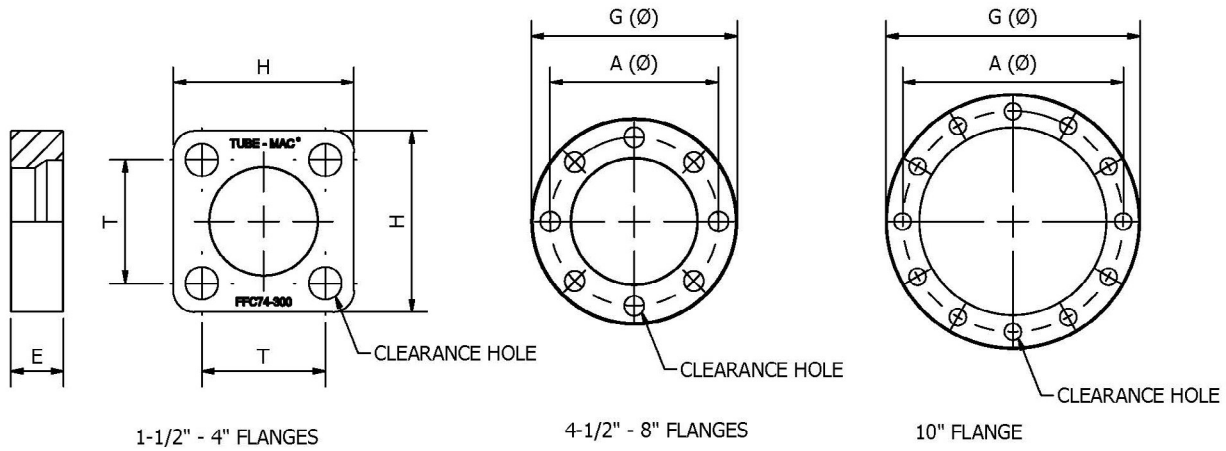
The working pressure ratings are subject to the lesser of the flange or pipe rating.

(1) Special Flange Size

ISO 6164, 400 bar Retain Ring Flange

Dimensions, Metric

Flange Pattern Drilled to ISO 6164 up to 4"



FLANGE TO FLANGE UNION

FLANGE TO COMPONENT

Retain Ring Flange Dimensions, Metric							
Size	Dimensions (mm)					SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	T	H	E	AØ	GØ		
1-1/2"	60.1	88.9	35.0	-	-	M16 x 100 (60)	5800 (400)
2"	69.3	101.6	37.6	-	-	M16 x 90 (60)	5800 (400)
2-1/2"	83.5	119.9	37.6	-	-	M20 x 115 (90)	5800 (400)
3"	102.5	150.1	43.9	-	-	M24 x 130 (100)	5800 (400)
4"	123.7	177.8	50.3	-	-	M30 x 150 (115)	5800 (400)
4-1/2"	-	-	50.0	175	214	M20 x 160 (115)	5000 (350)
5"	-	-	50.8	205	245	M24 x 160 (120)	5000 (350)
6"	-	-	58.7	245	300	M30 x 180 (130)	5000 (350)
8 ⁽¹⁾	-	-	76.2	290	350	M30 X 220 (160)	5000 (350)
8"	-	-	76.2	315	385	M36 X 220 (160)	5000 (350)
10"	-	-	96.5	375	450	M36 x 250 (180)	3600 (250)

***SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762

- Minimum Grade 8.8

Stainless Steel: A4 DIN 912/ISO 4762

- For M16 SS Bolts and smaller A4-70, DIN 912/ISO 4762
- For M20 SS Bolts and larger A4-80, DIN 912/ISO 4762

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

(1) Special Flange Size

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

DIN 400 bar (ISO 6164)



1 1/2"- 4" Flanges



5" – 8" Flanges



10" Flange

RFAC74, RFAC48, RFAC412 Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	1-1/2"SCHXXS	RFAC74-150	RFAC74-150-HDG	RFAC74-150-SS	5800 (400)	2.75 (1.25)
2"	2"SCH160/XXS	RFAC74-200	RFAC74-200-HDG	RFAC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	2-1/2"SCH160/XXS	RFAC74-250	RFAC74-250-HDG	RFAC74-250-SS	5800 (400)	5.06 (2.30)
3"	3"SCH160/XXS	RFAC74-300	RFAC74-300-HDG	RFAC74-300-SS	5800 (400)	8.79 (4.00)
4"	4"SCH160/XXS	RFC74-400	RFC74-400-HDG	RFC74-400-SS	5800 (400)	14.80 (6.71)
5"	5"SCH160/XXS	RFAC48-500	RFAC48-500-HDG	RFAC48-500-SS	5100 (350)	20.85 (9.48)
6"	6"SCH160/XXS	RFAC48-600	RFAC48-600-HDG	RFAC48-600-SS	5100 (350)	44.25 (20.11)
8" ⁽¹⁾	8"SCH160/XXS	RFAC48-800-290BC	RFAC48-800-290BC-HDG	RFAC48-800-290BC-SS	5100 (350)	65.30 (29.68)
8"	8"SCH160/XXS	RFAC48-800	RFAC48-800-HDG	RFAC48-800-SS	5100 (350)	87.06 (39.57)
10"	10"SCH160	RFAC412-1000	RFAC412-1000-HDG	RFAC412-1000-SS	3600 (250)	138.00 (62.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

(1) Special Flange Size

ISO 6164, 400 bar Retain Ring Flange with Clearance Holes, for Grooved Metric Pipe Only

DIN 400 bar (ISO 6164)



1 1/2" – 4" Flanges



4 1/2" – 8" Flanges



10" Flange

RFC74 Retain Ring Flange with Clearance Holes, for Grooved Metric Pipe Only						
Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	56x8.5	RFC74-150	RFC74-150-HDG	RFC74-150-SS	5800 (400)	2.75 (1.25)
2"	66x8.5	RFC74-200	RFC74-200-HDG	RFC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	80x10	RFC74-250	RFC74-250-HDG	RFC74-250-SS	5800 (400)	5.06 (2.30)
3"	97x12	RFC74-300	RFC74-300-HDG	RFC74-300-SS	5800 (400)	8.79 (4.00)
4"	115x15	RFC74-400	RFC74-400-HDG	RFC74-400-SS	5800 (400)	14.80 (6.71)
4-1/2"	130x15	RFAC48-450-130MM	RFAC48-450-130MM-HDG	RFAC48-450-130MM-SS	5100 (350)	16.40 (7.45)
5"	150x15	RFAC48-500-150MM	RFAC48-500-150MM-HDG	RFAC48-500-150MM-SS	5100 (350)	20.85 (9.48)
6"	190x20	RFAC48-600-190MM	RFAC48-600-190MM-HDG	RFAC48-600-190MM-SS	5100 (350)	44.25 (20.11)
8" ⁽¹⁾	220x20	RFAC48-800-290BC	RFAC48-800-290BC-HDG	RFAC48-800-290BC-SS	5100 (350)	65.30 (29.68)
8"	250x25	RFAC48-800-250MM	RFAC48-800-250MM-HDG	RFAC48-800-250MM-SS	5100 (350)	87.06 (39.57)
10"	273x28.6	RFAC412-1000	RFAC412-1000-HDG	RFAC412-1000-SS	3600 (250)	138.00 (62.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

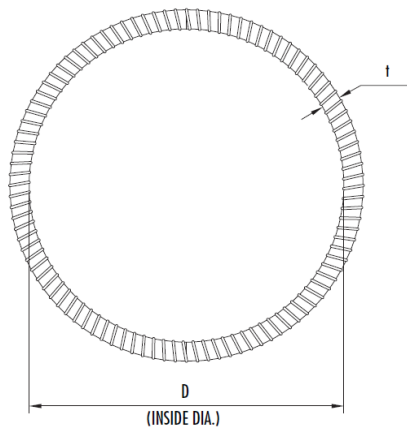
The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

(1) Special Flange Size with 290 mm Bolt Circle

ISO 6164, 400 bar Retain Ring

DIN 400 bar (ISO 6164)



R – Retain Ring, Metric

Size	Pipe Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
			D	t	
1-1/2"	56x8.5	R-150	1.99 (50.5)	0.20 (5.0)	0.05 (0.023)
2"	66x8.5	R-200	2.38 (60.5)	0.20 (5.0)	0.06 (0.027)
2-1/2"	80x10	R-250	2.93 (74.4)	0.20 (5.0)	0.07 (0.032)
3"	97x12	R-300	3.56 (90.4)	0.24 (6.0)	0.12 (0.054)
4"	115x15	R-400	4.19 (106.4)	0.31 (8.0)	0.27 (0.123)
4-1/2"	130x15	R-450	4.72 (120.0)	0.31 (8.0)	0.30 (0.136)
5"	150x15	R-500	5.51 (140.0)	0.31 (8.0)	0.34 (0.155)
6"	190x20	R-600	7.12 (181.0)	0.39 (10.0)	0.73 (0.330)
8"	220x20	RA-800	8.13 (206.6)	0.47 (12.0)	1.19 (0.540)
8"	250x25	R-800	9.35 (237.5)	0.47 (12.0)	1.31 (0.595)
10	273x28.6	RA-1000	10.01 (255.0)	0.47 (12.0)	1.43 (0.650)

RA – Retain Ring

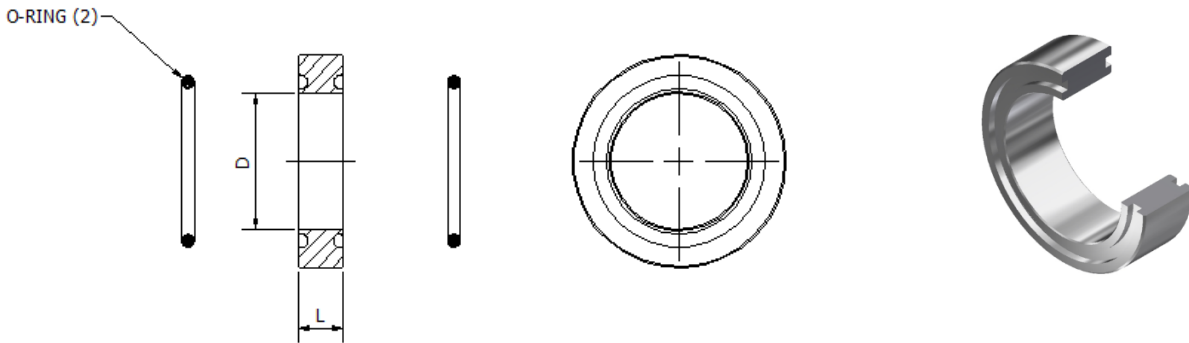
Size	Pipe Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
			D	t	
1-1/2"	1-1/2" SCHXXS	RA-150	1.68 (42.8)	0.20 (5.0)	0.05 (0.023)
2"	2" SCH160/XXS	RA-200	2.16 (54.8)	0.20 (5.0)	0.06 (0.027)
2-1/2"	2-1/2" SCH160/XXS	RA-250	2.66 (67.5)	0.20 (5.0)	0.07 (0.032)
3"	3" SCH160/XXS	RA-300	3.24 (82.4)	0.24 (6.0)	0.12 (0.054)
4"	4" SCH160/XXS	R-400	4.19 (106.4)	0.31 (8.0)	0.27 (0.123)
5"	5" SCH160/XXS	RA-500	5.23 (132.8)	0.31 (8.0)	0.33 (0.155)
6"	6" SCH160/XXS	RA-600	6.21 (157.8)	0.39 (10.0)	0.64 (0.290)
8"	8" SCH160/XXS	RA-800	8.13 (206.6)	0.47 (12.0)	1.19 (0.540)
10	10" SCH160	RA-1000	10.01 (255.0)	0.47 (12.0)	1.43 (0.650)

*** Materials:**

Stainless Steel – AISI 316 Spring Temper

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe, NPS

DIN 400 (ISO 6164)



OSA – O-Ring Spacer for Retain Ring Pipe, NPS						
Size	Pipe Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	1-1/2" SCH160	OSA-SCH160-150-*-*^	1.34 (34.0)	0.50 (12.7)	OR^3-924	0.30 (0.14)
1-1/2"	1-1/2" SCHXXS	OSA-SCHXXS-150-*-*^	1.10 (27.9)	0.50 (12.7)	OR^3-924	0.33 (0.15)
2"	2" SCH160	OSA-SCH160-200-*-*^	1.69 (42.9)	0.50 (12.7)	OR^3-928	0.43 (0.20)
2"	2" SCHXXS	OSA-SCHXXS-200-*-*^	1.50 (38.1)	0.50 (12.7)	OR^2-225	0.40 (0.18)
2-1/2"	2-1/2" SCH160	OSA-SCH160-250-*-*^	2.13 (54.1)	1.00 (25.4)	OR^2-230	1.17 (0.53)
2-1/2"	2-1/2" SCHXXS	OSA-SCHXXS-250-*-*^	1.77 (44.9)	1.00 (25.4)	OR^2-230	1.30 (0.59)
3"	3" SCH160	OSA-SCH160-300-*-*^	2.62 (66.5)	1.00 (25.4)	OR^2-234	1.40 (0.64)
3"	3" SCHXXS	OSA-SCHXXS-300-*-*^	2.30 (58.4)	1.00 (25.4)	OR^2-234	1.80 (0.82)
4"	4" SCH160	OS-400-*-*^	3.35 (85.0)	1.00 (25.4)	OR^2-241	2.60 (1.18)
4"	4" SCHXXS	OSA-SCHXXS-400-*-*^	3.15 (80.0)	1.00 (25.4)	OR^2-241	2.90 (1.32)
5"	5" SCH160	OSA-SCH160-500-*-*^	4.31 (109.5)	1.50 (38.1)	OR^2-353	4.40 (2.00)
5"	5" SCHXXS	OSA-SCHXXS-500-*-*^	4.06 (103.1)	1.50 (38.1)	OR^2-353	5.50 (2.50)
6"	6" SCH160	OSA-SCH160-600-*-*^	5.19 (131.8)	1.50 (38.1)	OR^2-359	6.90 (3.14)
6"	6" SCHXXS	OSA-SCHXXS-600-*-*^	4.90 (124.5)	1.50 (38.1)	OR^2-359	7.70 (3.50)
8"	8" SCH160	OSA-SCH160-800-*-*^	6.81 (173.0)	1.50 (38.1)	OR^2-368	10.70 (4.86)
8"	8" SCHXXS	OSA-SCHXXS-800-*-*^	6.88 (174.8)	1.50 (38.1)	OR^2-368	11.30 (5.14)
10"	10" SCH160	OSA-SCH160-1000-*-*^	8.50 (215.9)	2.00 (50.8)	OR^2-377	21.60 (9.82)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: OSA-SCH160-200-SS-V

*Insert Material

^ Insert O-Ring Type

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

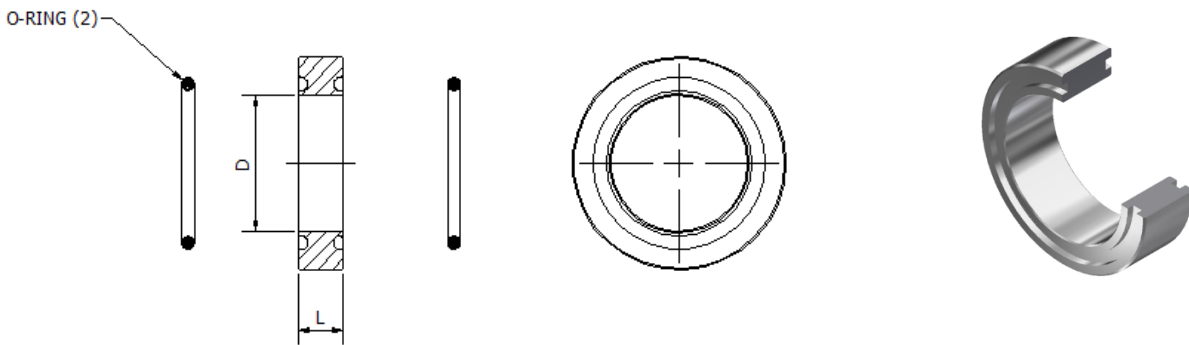
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe, Metric

DIN 400 (ISO 6164)



OS – O-Ring Spacer for Retain Ring Pipe, Metric						
Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	56x8.5	OS-150-*^-^	1.54 (39.1)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
2"	66x8.5	OS-200-*^-^	1.93 (49.0)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
2-1/2"	80x10	OS-250-*^-^	2.36 (59.9)	1.00 (25.4)	OR^-2-232	1.17 (0.53)
3"	97x12	OS-300-*^-^	2.88 (73.2)	1.00 (25.4)	OR^-2-237	1.70 (0.77)
4"	115x15	OS-400-*^-^	3.35 (85.1)	1.00 (25.4)	OR^-2-241	2.60 (1.18)
4-1/2"	130x15	OS-450-*^-^	3.94 (100.1)	1.50 (38.1)	OR^-2-245	4.40 (2.00)
5"	150x15	OS-500-*^-^	4.70 (119.4)	1.50 (38.1)	OR^-2-353	5.10 (2.32)
6"	190x20	OS-600-*^-^	5.91 (150.1)	1.50 (38.1)	OR^-2-362	8.50 (3.86)
8"	220x20	OSA-SCHXS-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	10.70 (4.86)
8"	250x25	OS-800-*^-^	---	---	---	---
10"	273x28.6	OSA-SCH160-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	21.60 (9.82)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

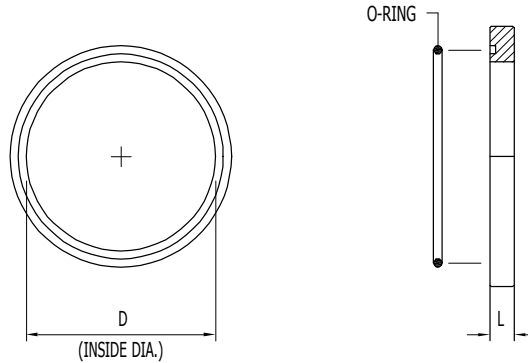
Ordering Example: OS-200-SS-V

*Insert Material

^ Insert O-Ring Type

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe to Hose End

DIN 400 (ISO 6164)



OSH O-Ring Spacer for Retain Ring Pipe to Hose End, 1-1/2" - 4" Complete with Buna O-Rings

Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	OSH-150-*^-^	1.54 (39.10)	0.25 (6.35)	OR^-3-924	0.12 (0.05)
2"	OSH-200-*^-^	1.93 (49.00)	0.25 (6.35)	OR^-3-928	0.15 (0.07)
2-1/2"	OSH-250-*^-^	2.36 (60.00)	0.50 (12.70)	OR^-2-232	0.26 (0.12)
3"	OSH-300-*^-^	2.88 (73.20)	0.50 (12.70)	OR^-2-237	0.39 (0.18)
4"	OSH-400-*^-^	3.35 (85.10)	0.50 (12.70)	OR^-2-241	0.60 (0.27)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: OSH-200-SS-V

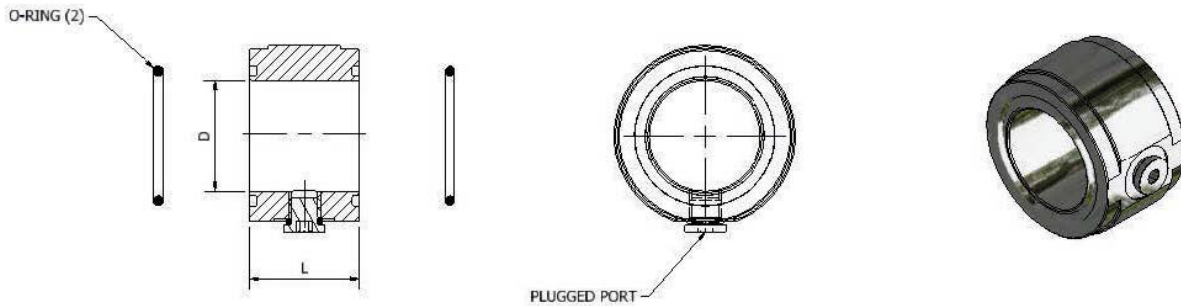
*Insert Material

^ Insert O-Ring Type

3D step models available upon request

ISO 6164, 400 bar O-Ring Spacer with Pilot Port for Retain Ring Pipe, NPS

DIN 400 (ISO 6164)



OSAP – O-Ring Spacer with Pilot Port for Retain Ring Pipe, NPS Complete with Buna O-rings (Standard) and #4 SAE Port (Plugged)

Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	1-1/2" SCH160	OSAP-SCH160-150-*^-^	1.54 (39.10)	0.25 (6.35)	OR^-3-924	0.12 (0.05)
1-1/2"	1-1/2" SCHXXS	OSAP-SCHXXS-150-*^-^	1.93 (49.00)	0.25 (6.35)	OR^-3-928	0.15 (0.07)
2"	2" SCH160	OSAP-SCH160-200-*^-^	2.36 (60.00)	0.50 (12.70)	OR^-2-232	0.26 (0.12)
2"	2" SCHXXS	OSAP-SCHXXS-200-*^-^	2.88 (73.20)	0.50 (12.70)	OR^-2-237	0.39 (0.18)
2-1/2"	2-1/2" SCH160	OSAP-SCH160-250-*^-^	3.35 (85.10)	0.50 (12.70)	OR^-2-241	0.60 (0.27)
2-1/2"	2-1/2" SCHXXS	OSAP-SCHXXS-250-*^-^	1.77 (44.9)	1.50 (38.1)	OR^-2-230	2.10 (0.95)
3"	3" SCH160	OSAP-SCH160-300-*^-^	2.62 (66.5)	1.50 (38.1)	OR^-2-234	2.80 (1.27)
3"	3" SCHXXS	OSAP-SCHXXS-300-*^-^	2.30 (58.4)	1.50 (38.1)	OR^-2-234	3.20 (1.45)
4"	4" SCH160	OSP-400-*^-^	3.35 (85.0)	1.50 (38.1)	OR^-2-241	6.21 (2.82)
4"	4" SCHXXS	OSAP-SCHXXS-400-*^-^	3.15 (80.0)	1.50 (38.1)	OR^-2-241	6.80 (3.09)
5"	5" SCH160	OSAP-SCH160-500-*^-^	4.31 (109.5)	1.50 (38.1)	OR^-2-353	8.76 (3.98)
5"	5" SCHXXS	OSAP-SCHXXS-500-*^-^	4.06 (103.1)	1.50 (38.1)	OR^-2-353	9.40 (4.27)
6"	6" SCH160	OSAP-SCH160-600-*^-^	5.19 (131.8)	1.50 (38.1)	OR^-2-359	12.62 (5.74)
6"	6" SCHXXS	OSAP-SCHXXS-600-*^-^	4.90 (124.5)	1.50 (38.1)	OR^-2-359	13.30 (6.04)
8"	8" SCH160	OSAP-SCH160-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	19.70 (8.95)
8"	8" SCHXXS	OSAP-SCHXXS-800-*^-^	6.88 (174.8)	1.50 (38.1)	OR^-2-368	21.30 (9.68)
10"	10" SCH160	OSAP-SCH160-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	35.60 (16.18)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

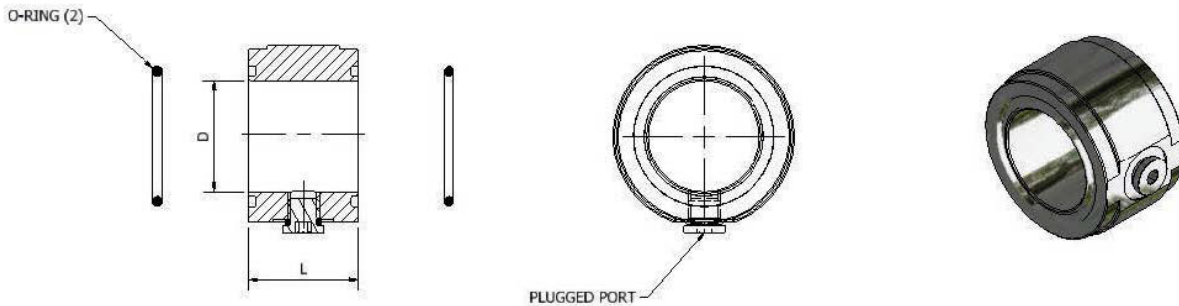
Ordering Example: OSAP-SCH160-200-SS-V

*Insert Material _____

^ Insert O-Ring Type _____

ISO 6164, 400 bar O-Ring Spacer with Pilot Port for Retain Ring Pipe, Metric

DIN 400 (ISO 6164)



OSPM – O-Ring Spacer for Retain Ring Pipe, Metric Complete with Buna O-ring (standard) and G 1/8 Port (Plugged)

Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	56x8.5	OSPM-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.25 (0.57)
2"	66x8.5	OSPM-200-*^-^	1.93 (49.0)	1.50 (38.1)	OR^-3-928	1.54 (0.70)
2-1/2"	80x10	OSPM-250-*^-^	2.36 (59.9)	1.50 (38.1)	OR^-2-232	1.98 (0.90)
3"	97x12	OSPM-300-*^-^	2.88 (73.2)	1.50 (38.1)	OR^-2-237	2.80 (1.27)
4"	115x15	OSPM-400-*^-^	3.35 (85.1)	1.50 (38.1)	OR^-2-241	6.20 (2.82)
4-1/2"	130x15	OSPM-450-*^-^	3.94 (100.1)	1.50 (38.1)	OR^-2-245	7.48 (3.40)
5"	150x15	OSPM-500-*^-^	4.70 (119.4)	1.50 (38.1)	OR^-2-353	8.76 (3.98)
6"	190x20	OSPM-600-*^-^	5.91 (150.1)	1.50 (38.1)	OR^-2-362	12.63 (5.74)
8"	220x20	OSPM-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	19.70 (8.95)
8"	250x25	OSPM-800-*^-^	---	---	---	---
10"	273x28.6	OSPM-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	35.60 (16.18)

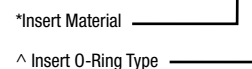
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: OSPM-200-SS-V

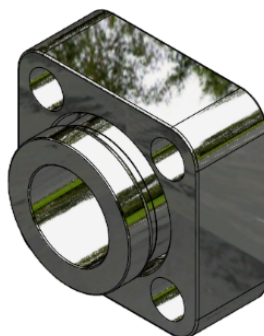
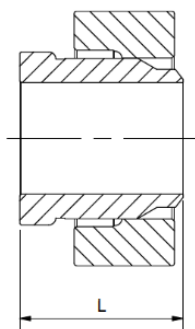


3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

ISO 6164, 400 bar Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J8)
- O-Ring Spacer (See Page J13)

A/BWA, A/BWAA Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	1-1/2" SCH80	A/BWA-SCH80-150-FC74-*	3.71 (1.67)	2.25	BWA-SCH80-150-*	RFC74-150-*
1-1/2"	1-1/2" SCH160	A/BWA-SCH160-150-FC74-*	3.95 (1.80)	2.25	BWA-SCH160-150-*	RFC74-150-*
1-1/2"	1-1/2" SCHXXS	A/BWA-SCHXXS-150-FC74-*	4.11 (1.89)	2.25	BWA-SCHXXS-150-*	RFC74-150-*
2"	2" SCH80	A/BWA-SCH80-200-FC74-*	4.30 (1.95)	2.50	BWA-SCH80-200-*	RFC74-200-*
2"	2" SCH160	A/BWA-SCH160-200-FC74-*	4.60 (2.10)	2.50	BWA-SCH160-200-*	RFC74-200-*
2"	2" SCHXXS	A/BWA-SCHXXS-200-FC74-*	4.80 (2.18)	2.50	BWA-SCHXXS-200-*	RFC74-200-*
2-1/2"	2-1/2" SCH80	A/BWA-SCH80-250-FC74-*	6.76 (3.07)	2.50	BWA-SCH80-250-*	RFC74-250-*
2-1/2"	2-1/2" SCH160	A/BWA-SCH160-250-FC74-*	7.06 (3.21)	2.50	BWA-SCH160-250-*	RFC74-250-*
2-1/2"	2-1/2" SCHXXS	A/BWA-SCHXXS-250-FC74-*	7.46 (3.39)	2.50	BWA-SCHXXS-250-*	RFC74-250-*
3"	3" SCH160	A/BWA-SCH160-300-FC74-*	12.39 (5.63)	2.75	BWA-SCH160-300-*	RFC74-300-*
3"	3" SCHXXS	A/BWA-SCHXXS-300-FC74-*	12.99 (5.90)	2.75	BWA-SCHXXS-300-*	RFC74-300-*
4"	4" SCH160	A/BWA-SCH160-400-FC74-*	21.50 (9.77)	4.00	BWA-SCH160-400-*	RFC74-400-*
4"	4" SCHXXS	A/BWA-SCHXXS-400-FC74-*	22.80 (10.36)	4.00	BWA-SCHXXS-400-*	RFC74-400-*
5"	5" SCH160	A/BWAA-SCH160-500-FAC48-*	39.05 (17.75)	6.00	BWAA-SCH160-500-*	RFAC48-500-*
5"	5" SCHXXS	A/BWAA-SCH1XXS-500-FAC48-*	40.25 (18.30)	6.00	BWAA-SCHXXS-500-*	RFAC48-500-*
6"	6" SCH160	A/BWAA-SCH160-600-FAC48-*	68.45 (31.11)	6.00	BWAA-SCH160-600-*	RFAC48-600-*
6"	6" SCHXXS	A/BWAA-SCHXXS-600-FAC48-*	70.25 (31.93)	6.00	BWAA-SCHXXS-600-*	RFAC48-600-*
8" ⁽¹⁾	8" SCH160	A/BWAA-SCH160-800-FAC48-290BC-*	102.50 (46.60)	6.00	BWAA-SCH160-800-*	RFAC48-800-*
8" ⁽¹⁾	8" SCHXXS	A/BWAA-SCHXXS-800-FAC48-290BC-*	103.00 (46.80)	6.00	BWAA-SCHXXS-800-*	RFAC48-800-*
8"	8" SCH160	A/BWAA-SCH160-800-FAC48-*	124.26 (56.48)	6.00	BWAA-SCH160-800-*	RFAC48-800-*
8"	8" SCHXXS	A/BWAA-SCHXXS-800-FAC48-*	125.76 (57.16)	6.00	BWAA-SCHXXS-800-*	RFAC48-800-*
10"	10" SCH160	A/BWAA-SCH160-1000-FAC412-*	241.40 (103.40)	8.00	BWAA-SCH160-1000-*	RFAC412-1000-*
10"	10" SCHXXS	A/BWAA-SCHXXS-1000-FAC412-*	243.80 (110.81)	8.00	BWAA-SCHXXS-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

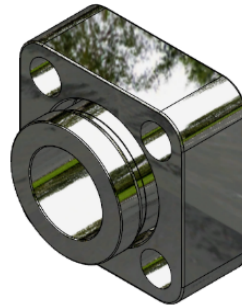
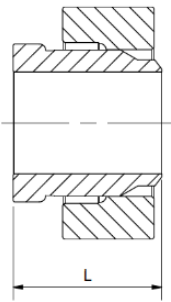
(1) Special Flange Size

Ordering Example: A/BWA-SCH160-200-FC74-SS

* Insert Material _____

ISO 6164, 400 bar Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J9)
- O-Ring Spacer (See Page J14)

A/BWA Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	56 x 8.5	A/BWA-56x8.5-150-FC74-*	3.72 (1.69)	57.2	BWA-56x8.5-150-*	RFC74-150-*
2"	66 x 8.5	A/BWA-66x8.5-200-FC74-*	4.31 (1.96)	63.5	BWA-66x8.5-200-*	RFC74-200-*
2-1/2"	80 x 10	A/BWA-80x10-250-FC74-*	6.76 (3.07)	63.5	BWA-80x10-250-*	RFC74-250-*
3"	97 x 12	A/BWA-97x12-300-FC74-*	11.79 (5.36)	69.9	BWA-97x12-300-*	RFC74-300-*
4"	115 x 15	A/BWA-115x15-400-FC74-*	20.57 (9.35)	101.6	BWA-115x15-400-*	RFC74-400-*
4-1/2"	130 x 15	A/BWA-130x15-450-FAC48-*	31.40 (14.27)	101.6	BWA-130x15-450-*	RFAC48-450-*
5"	150 x 15	A/BWA-150x15-500-FAC48-*	43.25 (19.66)	152.5	BWA-150x15-500-*	RFAC48-500-*
6"	190 x 20	A/BWA-190x20-600-FAC48-*	96.38 (43.80)	152.5	BWA-190x20-600-*	RFAC48-600-*
8" ⁽¹⁾	220 x 20	A/BWA-220x20-800-FAC48-290BC-*	102.04 (46.38)	152.5	BWA-220x20-800-*	RFAC48-800-290BC-*
8"	250 x 25	A/BWA-250x25-800-FAC48-*	123.80 (56.27)	152.5	BWA-250x25-800-*	RFAC48-800-*
10"	273 x 28.6	A/BWA-273x28.6-1000-FAC412-*	241.40 (109.73)	203.2	BWA-273x28.6-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

(1) Special Flange Size

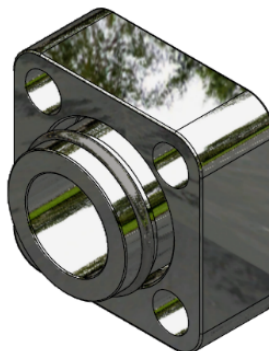
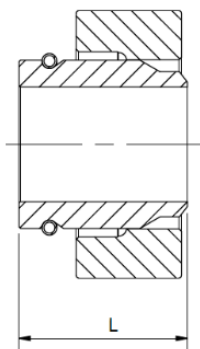
Ordering Example: A/BWA-66x8.5-200-FC74-SS

* Insert Material _____

3D step models available upon request

ISO 6164, 400 bar Butt Weld Adapter Assembly, Retain Ring with Clearance Holes, NPS

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J8)
- O-Ring Spacer (See Page J13)

A/BWAR, A/BWAAR Butt Weld Adapter Assembly, Retain Ring Style with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	1-1/2" SCH80	A/BWAR-SCH80-150-FC74-*	3.71 (1.67)	2.25	BWAR-SCH80-150-*	RFC74-150-*
1-1/2"	1-1/2" SCH160	A/BWAR-SCH160-150-FC74-*	3.95 (1.80)	2.25	BWAR-SCH160-150-*	RFC74-150-*
1-1/2"	1-1/2" SCHXXS	A/BWAR-SCHXXS-150-FC74-*	4.11 (1.89)	2.25	BWAR-SCHXXS-150-*	RFC74-150-*
2"	2" SCH80	A/BWAR-SCH80-200-FC74-*	4.30 (1.95)	2.50	BWAR-SCH80-200-*	RFC74-200-*
2"	2" SCH160	A/BWAR-SCH160-200-FC74-*	4.60 (2.10)	2.50	BWAR-SCH160-200-*	RFC74-200-*
2"	2" SCHXXS	A/BWAR-SCHXXS-200-FC74-*	4.80 (2.18)	2.50	BWAR-SCHXXS-200-*	RFC74-200-*
2-1/2"	2-1/2" SCH80	A/BWAR-SCH80-250-FC74-*	6.76 (3.07)	2.50	BWAR-SCH80-250-*	RFC74-250-*
2-1/2"	2-1/2" SCH160	A/BWAR-SCH160-250-FC74-*	7.06 (3.21)	2.50	BWAR-SCH160-250-*	RFC74-250-*
2-1/2"	2-1/2" SCHXXS	A/BWAR-SCHXXS-250-FC74-*	7.46 (3.39)	2.50	BWAR-SCHXXS-250-*	RFC74-250-*
3"	3" SCH160	A/BWAR-SCH160-300-FC74-*	12.39 (5.63)	2.75	BWAR-SCH160-300-*	RFC74-300-*
3"	3" SCHXXS	A/BWAR-SCHXXS-300-FC74-*	12.99 (5.90)	2.75	BWAR-SCHXXS-300-*	RFC74-300-*
4"	4" SCH160	A/BWAR-SCH160-400-FC74-*	21.50 (9.77)	4.00	BWAR-SCH160-400-*	RFC74-400-*
4"	4" SCHXXS	A/BWAR-SCHXXS-400-FC74-*	22.80 (10.36)	4.00	BWAR-SCHXXS-400-*	RFC74-400-*
5"	5" SCH160	A/BWAAR-SCH160-500-FAC48-*	39.05 (17.75)	6.00	BWAAR-SCH160-500-*	RFAC48-500-*
5"	5" SCHXXS	A/BWAAR-SCH1XXS-500-FAC48-*	40.25 (18.30)	6.00	BWAAR-SCHXXS-500-*	RFAC48-500-*
6"	6" SCH160	A/BWAAR-SCH160-600-FAC48-*	68.45 (31.11)	6.00	BWAAR-SCH160-600-*	RFAC48-600-*
6"	6" SCHXXS	A/BWAAR-SCHXXS-600-FAC48-*	70.25 (31.93)	6.00	BWAAR-SCHXXS-600-*	RFAC48-600-*
8" ⁽¹⁾	8" SCH160	A/BWAAR-SCH160-800-FAC48-290BC-*	102.50 (46.60)	6.00	BWAAR-SCH160-800-*	RFAC48-800-*
8" ⁽¹⁾	8" SCHXXS	A/BWAAR-SCHXXS-800-FAC48-290BC-*	103.00 (46.80)	6.00	BWAAR-SCHXXS-800-*	RFAC48-800-*
8"	8" SCH160	A/BWAAR-SCH160-800-FAC48-*	124.26 (56.48)	6.00	BWAAR-SCH160-800-*	RFAC48-800-*
8"	8" SCHXXS	A/BWAAR-SCHXXS-800-FAC48-*	125.76 (57.16)	6.00	BWAAR-SCHXXS-800-*	RFAC48-800-*
10"	10" SCH160	A/BWAAR-SCH160-1000-FAC412-*	241.40 (109.73)	8.00	BWAAR-SCH160-1000-*	RFAC412-1000-*
10"	10" SCHXXS	A/BWAAR-SCHXXS-1000-FAC412-*	243.80 (110.81)	8.00	BWAAR-SCHXXS-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Ordering Example: A/BWAR-SCH160-200-FC74-SS

* Insert Material

Note:

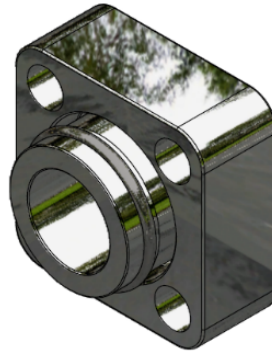
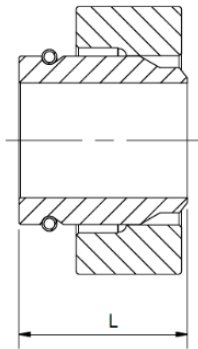
To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

(1) Special Flange Size

3D step models available upon request

ISO 6164, 400 bar Butt Weld Adapter Assembly, Retain Ring with Clearance Holes, Metric

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J9)
- O-Ring Spacer (See Page J14)

A/BWAR Butt Weld Adapter Assembly, Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	56 x 8.5	A/BWAR-56x8.5-150-FC74-*	3.72 (1.69)	57.2	BWAR-56x8.5-150-*	RFC74-150-*
2"	66 x 8.5	A/BWAR-66x8.5-200-FC74-*	4.31 (1.96)	63.5	BWAR-66x8.5-200-*	RFC74-200-*
2-1/2"	80 x 10	A/BWAR-80x10-250-FC74-*	6.76 (3.07)	63.5	BWAR-80x10-250-*	RFC74-250-*
3"	97 x 12	A/BWAR-97x12-300-FC74-*	11.79 (5.36)	69.9	BWAR-97x12-300-*	RFC74-300-*
4"	115 x 15	A/BWAR-115x15-400-FC74-*	20.57 (9.35)	101.6	BWAR-115x15-400-*	RFC74-400-*
4-1/2"	130 x 15	A/BWAR-130x15-450-FAC48-*	31.40 (14.27)	101.6	BWAR-130x15-450-*	RFAC48-450-*
5"	150 x 15	A/BWAR-150x15-500-FAC48-*	43.25 (19.66)	152.5	BWAR-150x15-500-*	RFAC48-500-*
6"	190 x 20	A/BWAR-190x20-600-FAC48-*	96.38 (43.80)	152.5	BWAR-190x20-600-*	RFAC48-600-*
8" ⁽¹⁾	220 x 20	A/BWAR-220x20-800-FAC48-290BC-*	102.04 (46.38)	152.5	BWAR-220x20-800-*	RFAC48-800-290BC-*
8"	250 x 25	A/BWAR-250x25-800-FAC48-*	123.80 (56.27)	152.5	BWAR-250x25-800-*	RFAC48-800-*
10"	273 x 28.6	A/BWAR-273x28.6-1000-FAC412-*	241.40 (109.73)	203.2	BWAR-273x28.6-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

(1) Special Flange Size

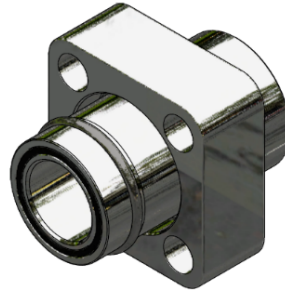
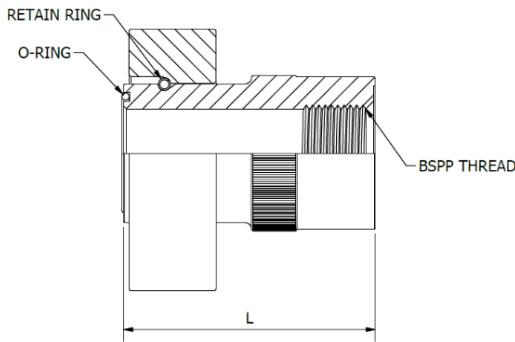
Ordering Example: A/BWAR-66x8.5-200-FC74-SS

* Insert Material _____

3D step models available upon request

ISO 6164, 400 bar BSPP Female Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Female Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit

A/FBTA Female Thread Adapter, BSPP – Complete Assembly Complete with Buna O-Ring

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L	R					
1-1/2" x 1-1/4"	A/FBTA-150x125-FC74-*^-^	2.00 (50.80)	1-1/4"	1-1/4"	OR^-3-924	4.27 (1.94)	FBTA-150x125-*^-^	1.52 (0.69)
1-1/2" x 1-1/2"	A/FBTA-150-150-FC74-*^-^	4.00 (101.60)	1-1/2"	1-1/2"	OR^-3-924	5.58 (2.54)	FBTA-150x150-*^-^	2.83 (1.28)
2" x 1-1/2"	A/FBTA-200x150-FC74-*^-^	2.17 (55.00)	1-1/2"	1-1/2"	OR^-3-928	4.75 (2.16)	FBTA-200x150-*^-^	1.65 (0.75)
2" x 2"	A/FBTA-200x200-FC74-*^-^	4.50 (114.30)	2"	2"	OR^-3-928	8.49 (3.86)	FBTA-200x200-*^-^	3.67 (1.66)
2-1/2" x 2"	A/FBTA-250x200-FC74-*^-^	3.15 (80.00)	2"	2"	OR^-2-232	8.40 (3.82)	FBTA-250x200-*^-^	3.34 (1.52)
2-1/2" x 2-1/2"	A/FBTA-250x250-FC74-*^-^	5.00 (127.00)	2-1/2"	2-1/2"	OR^-2-232	12.16 (5.53)	FBTA-250x250-*^-^	7.10 (3.23)
3" x 2-1/2"	A/FBTA-300x250-FC74-*^-^	3.35 (85.00)	2-1/2"	2-1/2"	OR^-2-237	13.43 (6.10)	FBTA-300x250-*^-^	4.64 (2.11)
3" x 3"	A/FBTA-300x300-FC74-*^-^	5.75 (146.05)	3"	3"	OR^-2-237	19.35 (8.80)	FBTA-300x300-*^-^	10.56 (4.80)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

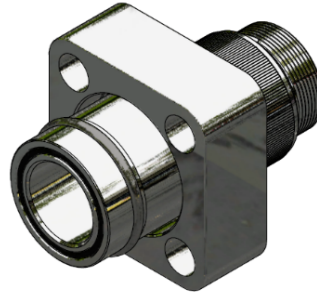
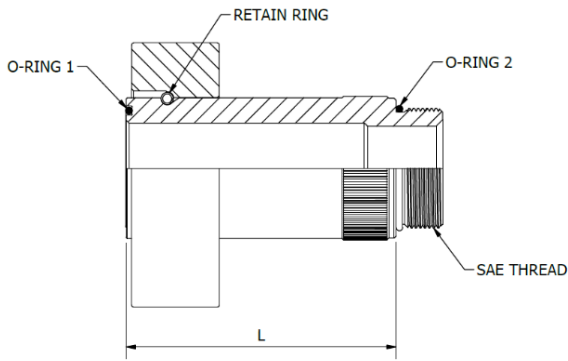
Ordering Example: A/FBTA-200x150-FC74-SS-V

*Insert Material _____

^ Insert O-Ring Type _____

ISO 6164, 400 bar SAE Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread O-Ring (O-Ring 2)

To be Ordered Separately:

- Bolt Kit

A/STA – SAE Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)	Thread Size UNF/UN-2A	O-Ring 1 (Buna) Part No.	O-Ring 2 (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L						
1-1/2" x 1-1/4"	A/STA-150x125-FC74-*^-^	4.25 (107.95)	1-5/8"-12	OR^-3-924	OR^-3-920	5.74 (2.61)	STA-150x125-*	2.94 (1.33)
1-1/2" x 1-1/2"	A/STA-150x150-FC74-*^-^	4.25 (107.95)	1-7/8"-12	OR^-3-924	OR^-3-924	5.77 (2.62)	STA-150x150-*	2.97 (1.35)
1-1/2" x 2"	A/STA-150x200-FC74-*^-^	4.25 (107.95)	2-1/2"-12	OR^-3-924	OR^-3-932	6.34 (2.88)	STA-150x200-*	3.54 (1.61)
2" x 1-1/2"	A/STA-200x150-FC74-*^-^	4.38 (111.25)	1-7/8"-12	OR^-3-928	OR^-3-924	6.92 (3.15)	STA-200x150-*	3.76 (1.71)
2" x 2"	A/STA-200x200-FC74-*^-^	4.38 (111.25)	2-1/2"-12	OR^-3-928	OR^-3-932	7.12 (3.24)	STA-200x200-*	3.96 (1.80)
2-1/2" x 2"	A/STA-250x200-FC74-*^-^	3.60 (91.44)	2-1/2"-12	OR ^-2-232	OR ^-3-932	9.31 (4.23)	STA-250-200-*	4.18 (1.90)
2-1/2" x 2-1/2"	A/STA-250x250-FC74-*^-^	3.60 (91.44)	3"-12	OR ^-2-232	OR ^-2-230	9.93 (4.51)	STA-250-250-*	4.80 (2.18)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/STA-200x150-FC74-SS-V

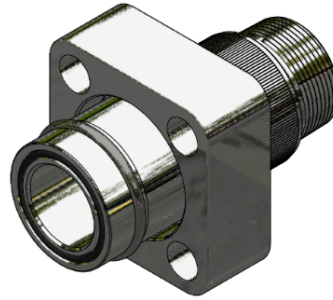
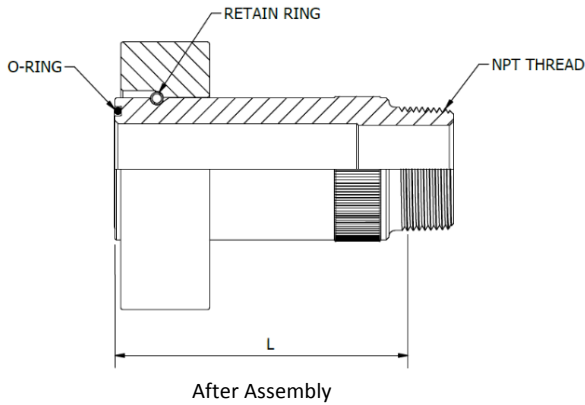
*Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar NPT Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit

A/NTA – NPT Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)	NPTF Thread (Dryseal)	O-Ring (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L					
1-1/2" x 1-1/4"	A/NTA-150x125-FC74-*-*^	4.51 (114.58)	1-1/4"-11-1/2	OR^3-924	5.82 (2.65)	NTA-150x125-*	3.02 (1.37)
1-1/2" x 1-1/2"	A/NTA-150x150-FC74-*-*^	4.51 (114.58)	1-1/2"-11-1/2	OR^3-924	5.90(2.68)	NTA-150x150-*	3.10 (1.41)
1-1/2" x 2"	A/NTA-150x200-FC74-*-*^	4.51 (114.58)	2"-11-1/2	OR^3-924	6.40 (2.91)	NTA-150x200-*	3.60 (1.64)
2" x 1-1/2"	A/NTA-200x150-FC74-*-*^	4.51 (114.58)	1-1/2"-11-1/2	OR^3-928	7.12 (3.24)	NTA-200x150-*	3.96 (1.80)
2" x 2"	A/NTA-200x200-FC74-*-*^	4.51 (114.58)	2"-11-1/2	OR^3-928	7.16 (3.25)	NTA-200x200-*	4.00 (1.82)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

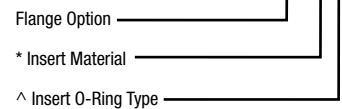
SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

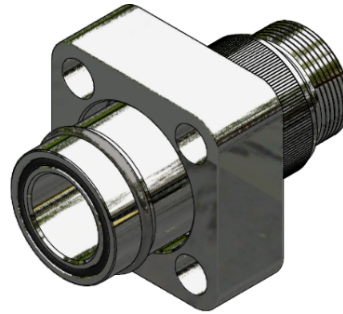
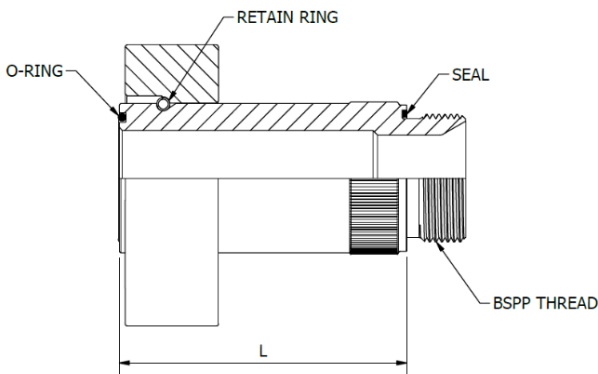
V = Viton.

Ordering Example: A/NTA-200x150-FC74-SS-V



ISO 6164, 400 bar BSPP Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread Seal (Seal 2)

To be Ordered Separately:

- Bolt Kit

A/BTA – BSPP Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)	Thread Size	O-Ring (Buna) Part No.	Seal (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L						
1-1/2" x 1-1/4"	A/BTA-150x125- FC74-*^-^	4.25 (108.0)	1-1/4"-11	OR^-3-924	DR^-G125	5.82 (2.65)	BTA-150x125-*	3.02 (1.37)
1-1/2" x 1-1/2"	A/BTA-150x150- FC74-*^-^	4.25 (108.0)	1-1/2"-11	OR^-3-924	DR^-G150	5.80 (2.64)	BTA-150x150-*	3.00 (1.36)
1-1/2" x \diamond 2"	A/BTA-150x200- FC74-*^-^	4.25 (108.0)	2"-11	OR^-3-924	BS^-3236	6.40 (2.90)	BTA-150x200-*	3.60 (1.63)
2" x 1-1/2"	A/BTA-200x150- FC74-*^-^	4.25 (108.0)	1-1/2"-11	OR^-3-928	DR^-G150	7.10 (3.23)	BTA-200x150-*	3.94 (1.79)
2" x \diamond 2"	A/BTA-200x200- FC74-*^-^	4.35 (110.5)	2"-11	OR^-3-928	BS^-3236	7.16 (3.25)	BTA-200x200-*	4.00 (1.81)
2-1/2" x \diamond 2"	A/BTA-250x200- FC74-*^-^	4.33 (110.0)	2"-11	OR^-2-232	BS^-3236	10.03 (4.56)	BTA-250x200-*	4.90 (2.25)
2-1/2" x \diamond 2 1/2"	A/BTA-250x250- FC74-*^-^	4.11 (104.4)	2-1/2" - 11	OR^-2-232	BS^-4037	10.33 (4.70)	BTA-250x250-*	5.20 (2.36)
3" x \diamond 2"	A/BTA-300x200- FC74-*^-^	4.17 (106.0)	2"-11	OR^-2-237	BS^-3236	15.86 (7.21)	BTA-300x200-*	6.95 (3.16)
3" x \diamond 2-1/2"	A/BTA-300x250- FC74-*^-^	4.41 (112.0)	2-1/2" - 11	OR^-2-237	BS^-4037	16.21 (7.37)	BTA-300x250-*	7.30 (3.32)
3" x \diamond 3"	A/BTA-300x300- FC74-*^-^	4.41 (112.0)	3" - 11	OR^-2-237	BS^-4839	16.41 (7.46)	BTA-300x300-*	7.50 (3.41)

♦The seal for the 2", 2-1/2" and 3" BSPP thread consists of a self-centering bonded seal included in dimension "L".

Flange Option:

Standard, FC74 = 400 bar (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

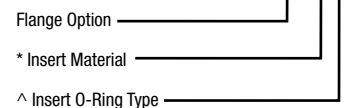
SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/BTA-200x150-FC74-SS-V

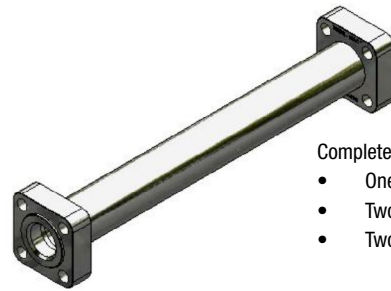
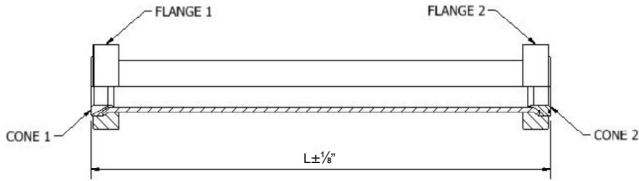


3D step models available upon request

ISO 6164, 400 bar Flare Flange Pipe Assembly, NPS

DIN 400 bar (ISO 6164)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

		Code	PAF	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Pipe Assembly - Flared		PAF									
Pipe Material	Carbon Steel	TMP52CD	52								
Pipe Material	Stainless Steel	TMP304SS	304								
		TMP316SS	316								
		♦TMP2205SS	2205								
Pipe Size	1-1/2"	SCH80-150									
		SCH160-150									
	2"	SCH80-200									
		SCH160-200									
	2-1/2"	SCH80-250									
		SCH160-250									
3"	SCH80-300										
	SCH160-300										
4"	SCH80-400										
Flange Type	Carbon Steel	FFC74 ISO 6164 W/Clearance Holes	FC74								
Cone Type	Cone - Flat Face		CF								
	Cone - 'O' Ring Face		CO								
Length	L		Specify (in.)								
Options	Viton		V								
	Painted (Specify)		P								
	Complete Stainless Steel Assembly: (including flanges)		SS								

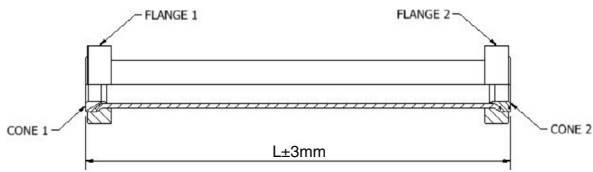
♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAF/52 - SCH160-200 - FC74 - FC74 - CO - CF - 240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

ISO 6164, 400 bar Flare Flange Pipe Assembly, Metric

DIN 400 bar (ISO 6164)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Code		PAF	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Pipe Assembly - Flared		PAF								
Pipe Material Carbon Steel	TMP52CD	52								
Pipe Material Stainless Steel	TMP304SS	304								
	TMP316SS	316								
	♦TMP2205SS	2205								
Pipe Size	1-1/2"	50 x 5.0								
		56 x 8.5								
	2"	60 x 6.0								
		66 x 8.5								
	2-1/2"	73 x 7.0								
		80 x 10								
3"	90 x 9.0									
	97 x 12									
4" and above	not available									
Flange Type Carbon Steel	FFCM74 ISO 6164 W/Clearance Holes	FCM74								
	*FFC74 ISO 6164 *2" (60mm) and 2-1.2" (73mm)	FC74								
Cone Type	Cone - Flat Face	CF								
	Cone - 'O' Ring Face	CO								
Length	L	Specify (mm)								
Options	Viton	V								
	Painted (Specify)	P								
	Complete Stainless Steel Assembly: (including flanges)	SS								

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAF/52 - 50x5 -150 - FCM74 - FCM74 - CO - CF - 6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

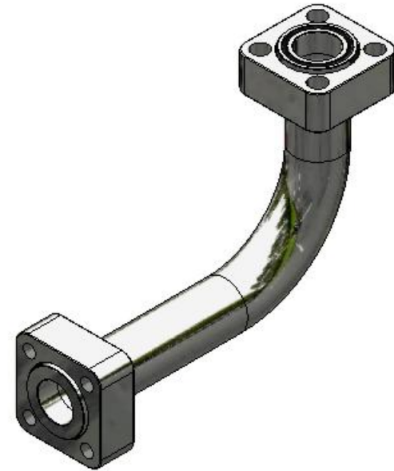
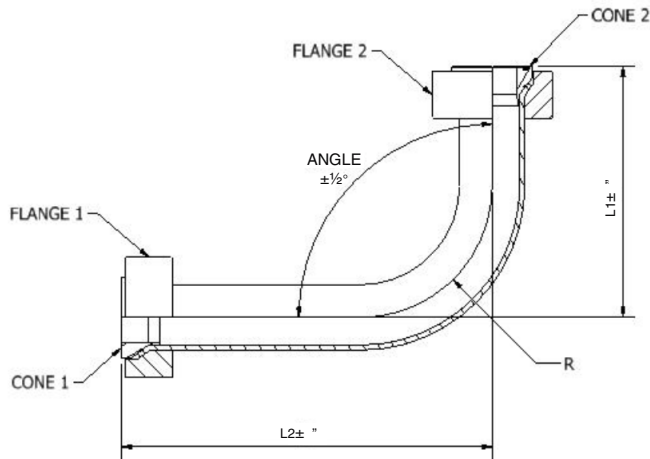
ISO 6164, 400 bar PSI Flare Flange Bent Pipe Assembly, NPS

DIN 400 (ISO 6164)

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1-1/2"	7.50	3.80	9.25	5.70	11.25	8.25
2"	8.50	4.75	10.75	7.13	13.00	9.50
2-1/2"	9.75	5.75	12.63	8.63	17.00	12.50
3"	11.00	7.00	14.50	10.50	19.50	15.00
4"	-	-	17.50	13.50	26.50	22.50

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

ISO 6164, 400 bar Flare Flange Bent Pipe Assembly, NPS

DIN 400 (ISO 6164)

Typical BPAF Assembly

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF													
Pipe & Cone Material Carbon Steel	TMP52CD	52													
	TMP304SS	304													
Pipe & Cone Material Stainless Steel	TMP316SS	316													
	♦TMP2205SS	2205													
Pipe Size & Schedule	1-1/2"	SCH80-150													
		SCH160-150													
	2"	SCH80-200													
		SCH160-200													
	2-1/2"	SCH80-250													
		SCH160-250													
3"	SCH80-300														
	SCH160-300														
4"	SCH80-400														
Flange Type Carbon Steel	FFC74 SAE Code 62 W/Clearance Holes	FC74													
Cone Type	Cone - Flat Face	CF													
	Cone - 'O' Ring Face	CO													
Radius	Field Manufactured	R1													
	Factory Manufactured	R2													
		R3													
Length	L1	Specify (in.)													
Angle	Max 90°	Specify (°)													
Length	L2	Specify (in.)													
Options	Viton	V													
	Painted (Specify)	P													
	Complete Stainless Steel Assembly: (including flanges)	SS													

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-SCH160-200 -FC74-FC74-CO-CF-R1-160-90-120

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

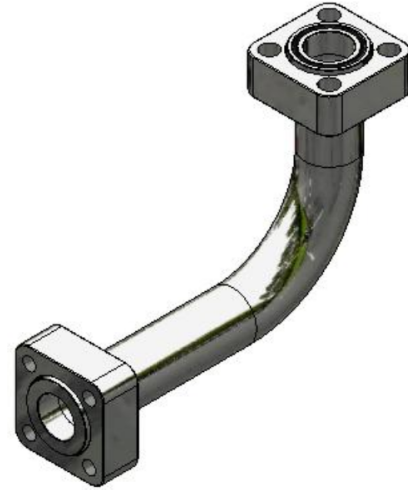
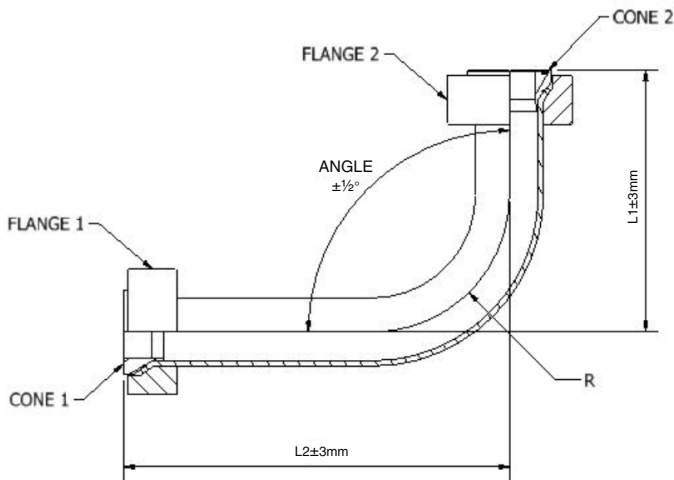
ISO 6164 Flare Flange Bent Pipe Assembly, Metric

DIN 400 bar (ISO 6164)

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size OD x wall	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 5.0	1-1/2"	194	100	244	150	294	200
60 x 6.0	2"	215	120	275	180	335	240
73 x 7.0	2-1/2"	264	150	339	225	225	414
90 x 9.0	3"	294	180	384	270	474	360
Heavy Wall Pipe							
56 x 8.5	1-1/2"	-	-	-	-	368	210
66 x 8.5	2"	-	-	-	-	406	241
80 x 10	2-1/2"	-	-	-	-	483	318
97 x 12	3"	-	-	-	-	560	381

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

ISO 6164 Flare Flange Bent Pipe Assembly, Metric

DIN 400 (ISO 6164)

Typical BPAF Assembly

		Code	BPAF	Pipe & Cone Material	Pipe Size & OD x wall	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF													
Pipe & Cone Material Carbon Steel	TMP52CD	52													
Pipe & Cone Material Stainless Steel	TMP304SS	304													
	TMP316SS	316													
	♦TMP2205SS	2205													
Pipe Size	1-1/2"	50x5.0-150													
		56x8.5-150													
	2"	60x6.0-200													
		66x8.5-200													
	2-1/2"	73x7.0-250													
		80x10-250													
3"	90x9.0-300														
	97x12-300														
4" and above		not available													
Flange Type Carbon Steel	FFCM74 ISO 6164 W/Clearance Holes	FCM74													
	*FFC74 ISO 6164 *2" (60mm) and 2-1.2" (73mm)	FC74													
Cone Type	Cone - Flat Face	CF													
	Cone - 'O' Ring Face	CO													
Radius	Field Manufactured	R1													
		R2													
	Factory Manufactured	R3													
Length	L1	Specify (mm)													
Angle	Max 90°	Specify (°)													
Length	L2	Specify (mm)													
Options	Viton	V													
	Painted (Specify)	P													
	Complete Stainless Steel Assembly: (including flanges)	SS													

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-50x5.0-150-FCM74-FCM74-CO-CF-R1-3000-90-2500

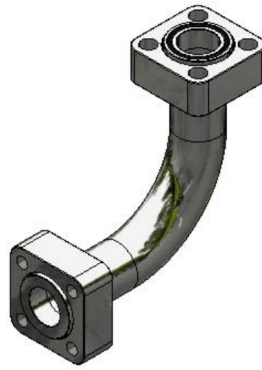
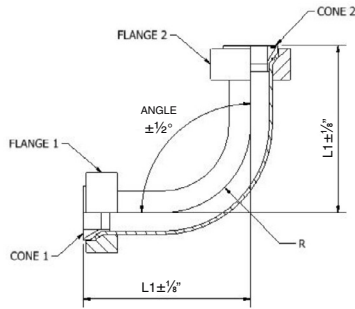
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

ISO 6164, 400 bar Flare Flange Bend Elbow Complete Assembly, NPS

DIN 400 bar (ISO 6164)



COMPLETE ASSEMBLY CONSISTS OF:

- FLARE FLANGE 90° ELBOW BODY
- TWO (2) FLARE FLANGES
- TWO (2) CONES

A/FFE - Flare Flange Bend Elbow Complete Assembly, NPS

Size	Complete Assembly Part Number	R1 Bend Radius (in)		R2 Bend Radius (in)		R3 Bend Radius (in)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1-1/2"	A/FFE-SCH80-050-FC34-FC34-CO-CO-•-•-^	3.80	7.50	5.70	9.25	8.25	11.75	4920 (339)
1-1/2"	A/FFE-SCH160-075-FC34-FC34-CO-CO-•-•-^	3.80	7.50	5.70	9.25	8.25	11.75	5800 (400)
2"	A/FFE-SCH80-200-FC74-FC74-CO-CO-•-•-^	4.75	8.50	7.13	10.75	9.50	13.00	4246 (293)
2"	A/FFE-SCH160-200-FC74-FC74-CO-CO-•-•-^	4.75	8.50	7.13	10.75	9.50	13.00	5800 (400)
2-1/2"	A/FFE-SCH80-100-FC74-FC74-CO-CO-•-•-^	5.75	9.75	8.63	12.63	12.50	17.00	4455 (307)
2-1/2"	A/FFE-SCH160-100-FC74-FC74-CO-CO-•-•-^	5.75	9.75	8.63	12.63	12.50	17.00	5800 (400)
3"	A/FFE-SCH80-125-FC74-FC74-CO-CO-•-•-^	7.00	11.00	10.50	14.50	15.00	19.50	3946 (272)
3"	A/FFE-SCH160-125-FC74-FC74-CO-CO-•-•-^	7.00	11.00	10.50	14.50	15.00	19.50	5800 (400)
4"	A/FFE-SCH80-150-FC74-FC74-CO-CO-•-•-^	-	-	13.50	17.50	22.50	26.50	3420 (236)

Flange Options:

FC74 = 5800 PSI (ISO 6164) Clearance Flange

Cone Options:

CO = O-Ring Faced Cone.

CF = Flat Faced Cone.

• Bend Radius Options (Other radii available, consult factory):

R1

R2

R3

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

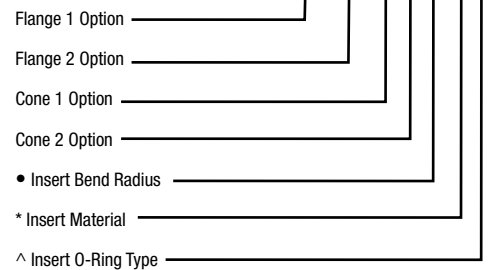
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

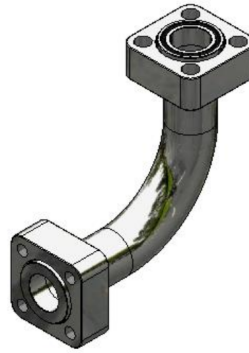
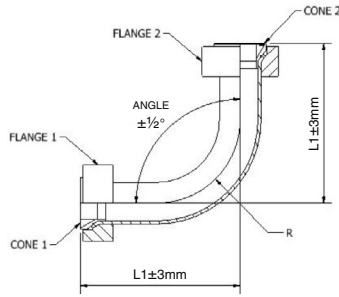
Ordering Example: A/FFE-SCH80-200-FC74-FC74-CO-CO-R1-SS-V



ISO 6164, 400 bar Flare Flange Bend Elbow

Complete Assembly, Metric

DIN 400 bar (ISO 6164)



- COMPLETE ASSEMBLY CONSISTS OF:
- FLARE FLANGE 90° ELBOW BODY
 - TWO (2) FLARE FLANGES
 - TWO (2) CONES

A/FFEM - Flare Flange Bend Elbow Complete Assembly, Metric

Size	Complete Assembly Part Number	R1 Bend Radius (mm)		R2 Bend Radius (mm)		R3 Bend Radius (mm)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1-1/2"	A/FFEM-50x5.0-150-FCM74-FCM74-CO-CO-□-*^-^	100	194	150	244	200	294	5235 (361)
1-1/2"	A/FFEM-56x8.5-150-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	210	368	5800 (400)
2"	A/FFEM-60x6.0-200-FC74-FC74-CO-CO-□-*^-^	120	215	180	275	240	335	5307 (366)
2"	A/FFEM-66x8.5-200-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	240	406	5800 (400)
2-1/2"	A/FFEM-73x7.0-250-FC74-FC74-CO-CO-□-*^-^	150	264	225	339	300	414	5119 (353)
2-1/2"	A/FFEM-80x10.0-250-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	318	483	5800 (400)
3"	A/FFEM-90x9.0-300-FCM74-FCM74-CO-CO-□-*^-^	180	294	270	384	360	474	5800 (400)
3"	A/FFEM-97x12.0-300-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	381	560	5800 (400)

Flange Options:

FC74 = 5800 PSI (ISO 6164) Clearance Flange

Cone Options:

CO = O-Ring Faced Cone.

CF = Flat Faced Cone.

•Bend Radius Options (Other radii available, consult factory):

R1

R2

R3

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

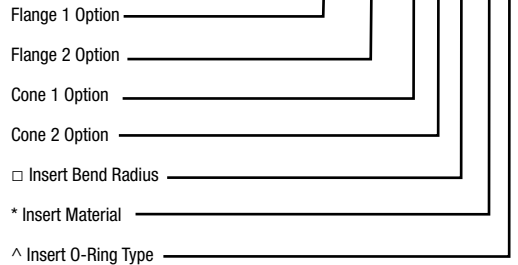
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

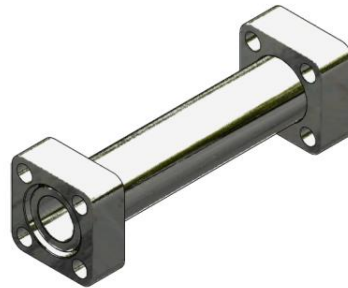
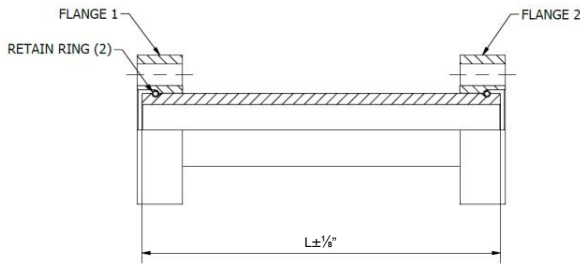
Ordering Example: A/FFEM-66x8.5-200-FCM74-FCM74-CO-CO-R1-SS-V



3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Pipe Assembly, NPS

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

- To be Ordered Separately:
- O-Ring Seal Spacers

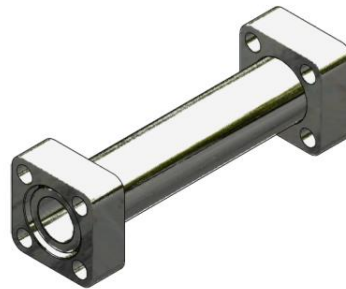
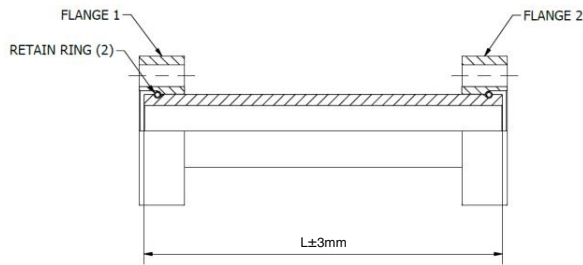
	Code	PAR	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Length	Options
Bent Pipe Assembly - Retain Ring		PAR						
Pipe & Cone Material Carbon Steel	No Designation Required							
Pipe & Cone Material Stainless Steel	TMP304SS	304						
	TMP316SS	316						
	♦TMP2205SS	2205						
Pipe Size	1-1/2"	SCH160-150						
		SCHXXS-150						
	2"	SCH160-200						
		SCHXXS-200						
	2-1/2"	SCH160-250						
		SCHXXS-250						
	3"	SCH160-300						
		SCHXXS-300						
	4"	SCH160-400						
		SCHXXS-400						
5"	SCH160-500							
	SCHXXS-500							
6"	SCH160-600							
	SCHXXS-600							
8"	SCH160-800							
	SCHXXS-800							
10"	SCH160-1000							
	SCHXXS-1000							
Flange Type Depending on Size	RFA74 1-1/2" up to 3"	FAC74						
	RFC74 4" only	FC74						
	RFA48 5" up to 8"	FAC48						
	RFC412 10" only	FAC412						
Length	L	Specify (in.)						
Options	Viton	V						
	Painted (Specify)	P						
	Complete Stainless Steel Assembly: (including flanges)	SS						

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAR/SCH160-250-FAC74-FAC74-240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

ISO 6164, 400 bar Retain Ring Flange Pipe Assembly, Metric

DIN 400 bar (ISO 6164)



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) retain ring flanges
- Two (2) retain rings

To be Ordered Separately:

- O-Ring Seal Spacers

Code		PAR	Pipe & Cone Material	Pipe OD & Wall	Flange 1	Flange 2	Length	Options
Bent Pipe Assembly - Retain Ring		PAR						
Pipe & Cone Material Carbon Steel	No Designation Required							
Pipe & Cone Material Stainless Steel	TMP304SS	304						
	TMP316SS	316						
	♦TMP2205SS	2205						
Flange Size & Metric Tube OD x Wall	1-1/2"	56 x 8.5						
	2"	66 x 8.5						
	2-1/2"	80 x 10						
	3"	97 x 12						
	4"	115x15						
	4-1/2"	130 x 15						
	5"	150 x 15						
	6"	190 x 20						
	8" ¹	220 x 20						
	8"	250 x 25						
10"	273 x 28.6							
Flange Type Depending on Size	RFAC74 1-1/2" up to 4" W/Clearance Holes	FC74						
	RFAC48 4-1/2" up to 8" W/Clearance Holes	FAC48						
	RFAC412 10" only W/Clearance Holes	FAC412						
Length	L	Specify (mm)						
Options	Viton	V						
	Painted (Specify)	P						
	Complete Stainless Steel Assembly: (including flanges)	SS						

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAR/97x12-300-FC74-FC74-6000-P

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

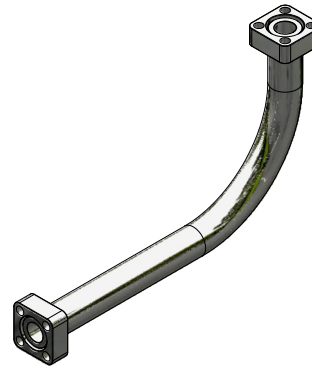
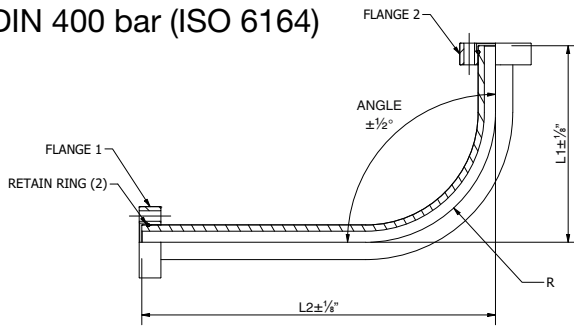
Clamp Supports - Heavy Series

Valves, Ball and Check

J35

ISO 6164, 400 bar Retain Ring Flange Bent Pipe Assembly, NPS

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of bent clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

		Code	BPAR /	Pipe & Cone Material	Pipe Schedule & Flange Size	Flange 1	Flange 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Retain Ring		BPAR										
Pipe & Cone Material	No Designation Required											
Pipe & Cone Material	TMP304SS	304										
Pipe & Cone Material	TMP316SS	316										
Pipe & Cone Material	♦TMP2205SS	2205										
Flange Size & Schedule	1-1/2"	SCHXX-150										
	2"	SCH160-200										
		SCHXXS-200										
	2-1/2"	SCH160-250										
		SCHXXS-250										
	3"	SCH160-300										
		SCHXXS-300										
	4"	SCH160-400										
		SCHXXS-400										
	5"	SCH160-500										
		SCHXXS500										
	6"	SCH160-600										
SCHXXS-600												
8"	SCH160-800											
	SCHXXS-800											
10"	SCH160-1000											
	SCHXXS-1000											
Flange Type	RFC74 1-1/2" up to 4"	FC74										
	RFAC48 4-1/2" up to 8"	FAC48										
	RFAC412 10" only	FAC412										
Radius	R	Specify (in)										
Length	L1	Specify (in)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (in)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Pipe Size	Flange Size	Dimensions	
Schedule	(in)	L (in)	R
1-1/2" SCHXXS	1-1/2"	11.5	8.2
2" SCH160/XXS	2"	13	9.5
2-1/2" SCH160/XXS	2-1/2"	16	12.5
3" SCH160/XXS	3"	20	15
4" SCH160/XXS	4"	25	20
5" SCH160/XXS	5"	25	20
6" SCH160/XXS	6"	30	24
8" SCH160/XXS	8"	40	32
10" SCH160/XXS	10"	50	40

Note:
OTHER RADII AVAILABLE (CONSULT FACTORY)

Note:

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

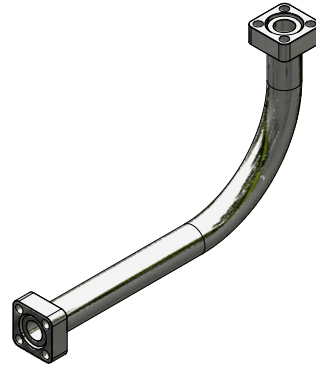
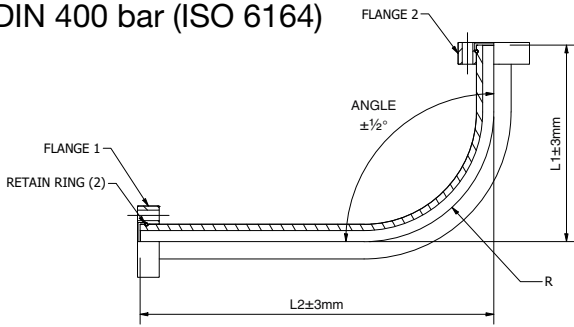
PART NO. (EXAMPLE): BPAR/SCH160-200-FC74-FC74-9.5-60-90-144

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Bent Pipe Assembly, Metric

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of bent clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

Code		BPAR	Pipe & Cone Material	OD x Wall & Flange Size	Flange 1	Flange 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Retain Ring		BPAR									
Pipe & Cone Material	TMP52CD	52	Carbon Steel								
Pipe & Cone Material	TMP304SS	304	Stainless Steel								
	TMP316SS	316									
	♦TMP2205SS	2205									
Flange Size & Metric Tube	1-1/2"	56x8.5-150	OD x Wall								
	2"	66x8.5-200									
	2-1/2"	80x10-250									
	3"	97x12-300									
	4"	115x15-400									
	4-1/2"	130x15-450									
	5"	150x15-500									
	6"	190x20-600									
	8"¹	220x20-800-290BC									
	8"	250x25-100									
10"	273x28.6-100										
Flange Type	RFC74 1-1/2" up to 4"	FC74									
	RFAC48 4-1/2" up to 8"	FAC48									
	RFAC412 10" only	FAC412									
Radius	R	Specify (mm)									
Length	L1	Specify (mm)									
Angle	Max 90°	Specify (°)									
Length	L2	Specify (mm)									
Options	Viton	V									
	Painted (Specify)	P									
	Complete Stainless Steel Assembly: (including flanges)	SS									

Pipe Size	Flange Size	Dimensions (mm)	
Schedule	(in)	L (min)	R
56 x 8.5	1-1/2"	318	210
66 x 8.5	2"	355	241
80 x 10	2-1/2"	432	318
97 x 12	3"	508	381
115 x 15	4"	635	508
130 x 15	4-1/2"	650	520
150 x 15	5"	730	600
190 x 20	6"	910	760
220 x 20	8" ¹	1016	813
250 x 25	8"	1200	1000
273 x 28.6	10"	1270	1016

Note:
OTHER RADII AVAILABLE (CONSULT FACTORY)

Note:

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): BPAR/52-66x8.5-200-FC74-FC74-241-125-90-115

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

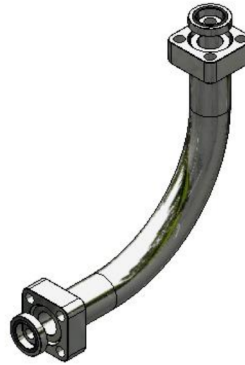
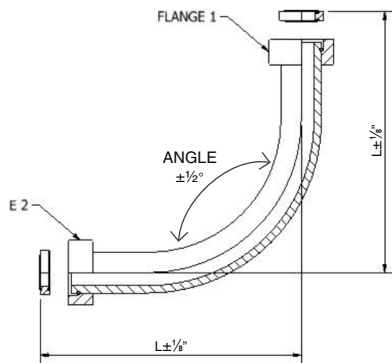
Clamp Supports - Heavy Series

Valves, Ball and Check

J37

ISO 6164, 400 bar Retain Ring Flange Bend Elbow Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange Bend Elbow Body
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) O-Ring Spacers

A/RFE - Retain Ring Flange Bend Elbow – Complete Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L				
1-1/2"	A/RFE-150-FC74-*-*^	13.00 (330.20)	17.76 (8.07)	RFE-150-*-*^	11.50 (5.22)	5800 (400)
2"	A/RFE-200-FC74-*-*^	14.50 (368.30)	22.71 (10.32)	RFE-200-*-*^	15.59 (7.07)	5800 (400)
2-1/2"	A/RFE-250-FC74-*-*^	18.00 (457.20)	39.53 (17.97)	RFE-250-*-*^	26.67 (12.12)	5800 (400)
3"	A/RFE-300-FC74-*-*^	21.00 (533.40)	67.22 (30.55)	RFE-300-*-*^	45.80 (20.82)	5800 (400)
4"	A/RFE-400-FC74-*-*^	26.00 (660.40)	119.45 (54.30)	RFE-400-*-*^	83.51 (37.96)	5800 (400)
4-1/2"	A/RFE-450-FAC48-*-*^	26.00 (660.40)	138.24 (62.84)	RFE-450-*-*^	96.04 (43.65)	5000 (350)
5"	A/RFE-500-FAC48-*-*^	26.50 (673.10)	174.98 (6.80)	RFE-500-*-*^	121.48 (55.22)	5000 (350)
6"	A/RFE-500-FAC48-*-*^	31.50 (800.10)	313.28 (142.40)	RFE-600-*-*^	206.32 (93.78)	5000 (350)
8" ⁽¹⁾	A/RFE-800-FAC48-290BC*-*^	41.50 (1054.10)	453.21 (206.00)	RFE-800-*-*^	298.83 (135.83)	5000 (350)
8"	A/RFE-800-FAC48-*-*^	41.50 (1054.10)	596.88 (271.31)	RFE-800-*-*^	391.34 (177.88)	5000 (350)
10"	A/RFE-1000-FAC412-*-*^	48.00 (1219.20)	786.46 (357.48)	RFE-1000-*-*^	464.40 (211.10)	3600 (250)

(1) Special 8" size flange and bot circle.

Flange Option:

Standard, Flange with Clearance Holes

FC74 = 5800 PSI (400 bar) ISO 6164, 4-Bolt Square Flange

Above 4" FAC48 = 5100 PSI (350 bar), 8-Bolt Round Flange

Size 10" FAC412 = 3600 PSI (250 bar), 12-Bolt Round Flange

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

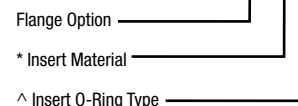
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

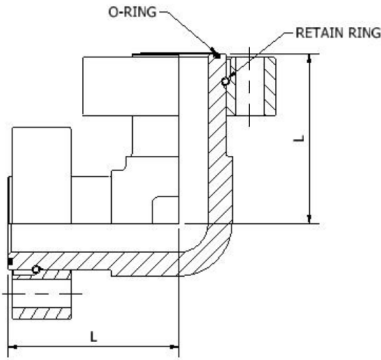
V = Viton.

Ordering Example: A/RFE-200-FC74-SS-V



ISO 6164, 400 bar Retain Ring Flange Elbow Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/RRFE - Retain Ring Flange Elbow – Complete Assembly with Buna O-Ring							
Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
1-1/2"	A/RRFE-150-FC74-*^-^	4.00 (101.6)	OR^3-924	11.68 (5.31)	RRFE-150-*^-^	6.08 (2.76)	5800 (400)
2"	A/RRFE-200-FC74-*^-^	4.40 (111.8)	OR^3-928	13.94 (6.34)	RRFE-200-*^-^	7.62 (3.46)	5800 (400)
2-1/2"	A/RRFE-250-FC74-*^-^	5.19 (131.8)	OR^2-232	21.56 (9.80)	RRFE-250-*^-^	11.30 (5.14)	5800 (400)
3"	A/RRFE-300-FC74-*^-^	6.30 (160.0)	OR^2-237	38.28 (17.40)	RRFE-300-*^-^	20.15 (9.16)	5800 (400)
4"	A/RRFE-400-FC74-*^-^	7.87 (200.0)	OR^2-241	71.06 (32.30)	RRFE-400-*^-^	41.00 (18.64)	5800 (400)

Note:

3" and 4" are welded assemblies - Larger sizes are available upon request

Flange Option:

Standard, Flange with Clearance Holes
FC74 = 5800 PSI (400 bar) ISO 6164 Square 4-Bolt Flange

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

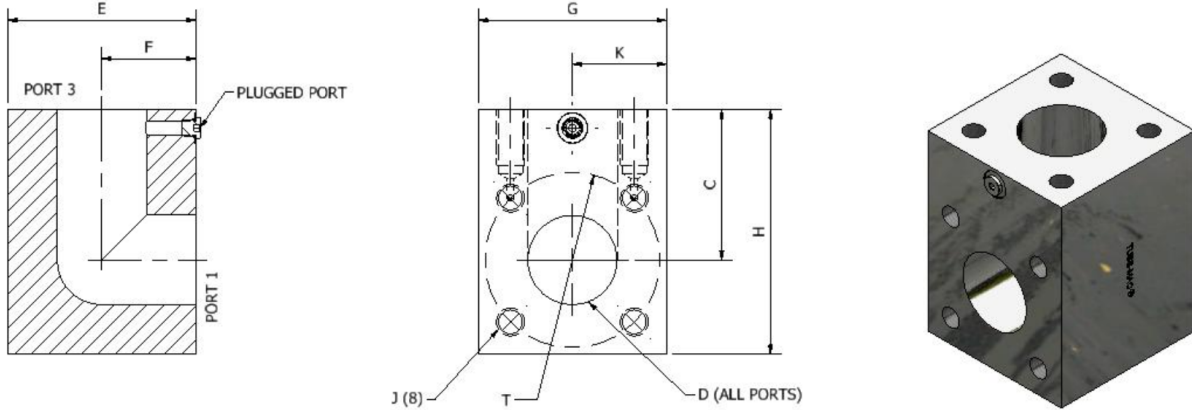
Ordering Example: A/RRFE-200-FC74-SS-V



3D step models available upon request

ISO 6164, 400 bar Block Elbow with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BE74 – Block Elbow with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)								Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BE74-150-*	3.35	3.50	1.50	3.50	1.75	3.50	5.25	1.75	5/8"- 11	14.60 (6.64)	5800 (400)
2"	BE74-200-*	3.86	3.50	1.94	4.00	2.00	4.00	5.50	2.00	5/8"- 11	19.40 (8.82)	5800 (400)
2-1/2"	BE74-250-*	4.65	4.13	2.38	5.00	2.50	5.00	6.50	2.50	3/4"-10	36.82 (16.74)	5800 (400)
3"	BE74-300-*	5.71	5.00	2.88	6.00	3.00	6.00	8.00	3.00	1"-8	65.40 (29.73)	5800 (400)
4"	BE74-400-*	6.89	5.50	3.50	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	92.60 (42.10)	5800 (400)

Materials:
 Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE74-200-SS
 * Insert Material _____

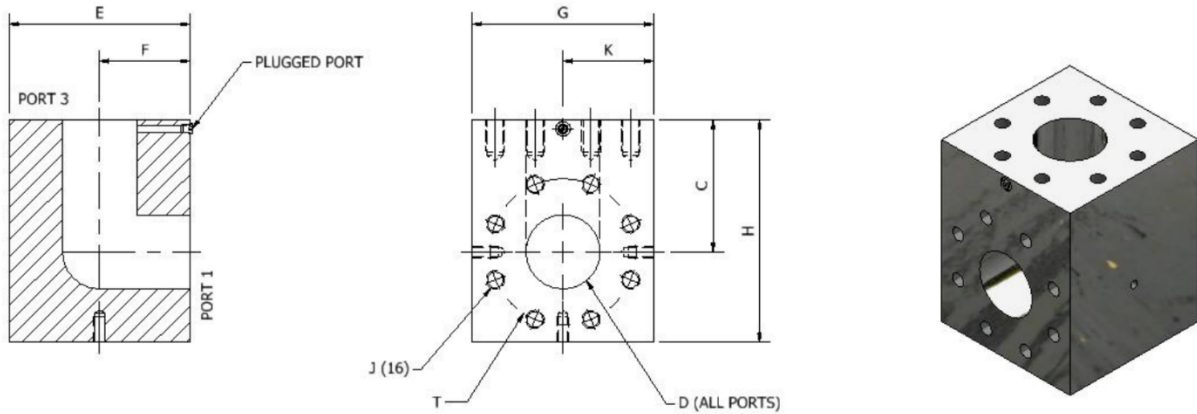
BEM74 – Block Elbow with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)								Thread	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BEM74-150-*	85.1	88.9	38.1	88.9	44.5	88.9	133.4	44.5	M16 x 2.00	14.60 (6.64)	5800 (400)
2"	BEM74-200-*	98.0	88.9	49.2	101.6	50.8	101.6	139.7	50.8	M16 x 2.00	19.40 (8.82)	5800 (400)
2-1/2"	BEM74-250-*	118.1	104.9	60.5	127.0	63.5	127.0	165.1	63.5	M20 x 2.50	36.82 (16.74)	5800 (400)
3"	BEM74-300-*	145.0	127.0	73.2	152.4	76.2	152.4	202.3	76.2	M24 x 3.00	65.40 (29.73)	5800 (400)
4"	BEM74-400-*	175.0	139.7	88.9	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	92.60 (42.10)	5800 (400)

Materials:
 Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE64-200-SS
 * Insert Material _____

Block Elbow, TMI 8-Bolt with Flat Face and Threaded Holes



BE48 – Block Elbow, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS												
Size	Block Elbow Part Number	Dimensions (in)								J - Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
5"	BE48-500-*	8.07	7.13	4.00	9.75	4.88	9.75	12.00	4.88	1"-8	274.5 (124.8)	5000 (350)
6"	BE48-600-*	9.65	8.00	4.90	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BE48-800-290BC-*	11.42	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/8" -7	990.0 (450.0)	5000 (350)
8"	BE48-800-*	12.40	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1007.0 (458.0)	5000 (350)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE48-600-SS

* Insert Material _____

BEM48 – Block Elbow, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric												
Size	Block Elbow Part Number	Dimensions (mm)								J - Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
4 1/2"	BEM48-450-*	175.0	160.0	100.0	214.0	107.0	214.0	267.0	107.0	M20 x 2.5	157.0 (71.4)	5000 (350)
5"	BEM48-500-*	205.0	181.1	101.6	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	274.5 (124.8)	5000 (350)
6"	BEM48-600-*	245.1	203.2	124.5	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BEM48-800-290BC-*	209.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	990.0 (450.0)	5000 (350)
8"	BEM48-800-*	315.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	1007.0 (458.0)	5000 (350)

Materials:

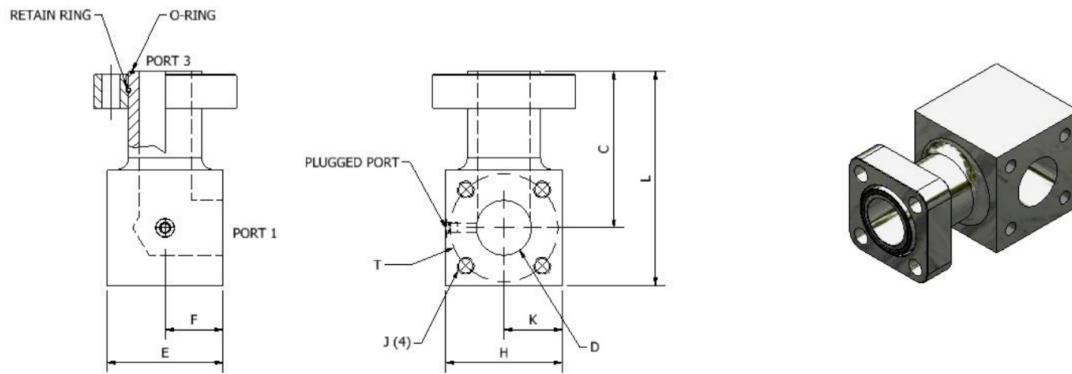
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BEM48-600-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Elbow

DIN 400 bar (ISO 6164)



A/RE74 – Retain Ring Elbow Assembly with #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part No.	Dimensions (in)								Thread UNC-2B	Assembly WT lbs (kg)	Body Only Part No.	Working Pressure PSI (bar)
		T	C	D	E	F	H	L	K				
1-1/2"	A/RE74-150-*	3.35	5.50	1.50	3.50	1.75	3.50	7.25	1.75	5/8" - 11	17.40 (7.90)	RE74-150-*	5800 (400)
2"	A/RE74-200-*	3.86	5.50	1.94	4.00	2.00	4.00	7.50	2.00	5/8" - 11	22.60 (10.27)	RE74-200-*	5800 (400)
2-1/2"	A/RE74-250-*	4.65	6.75	2.38	5.00	2.50	5.00	9.25	2.50	3/4" - 10	41.88 (19.04)	RE74-250-*	5800 (400)
3"	A/RE74-300-*	5.71	8.00	2.88	6.00	3.00	6.00	11.00	3.00	1" - 8	74.19 (33.72)	RE74-300-*	5800 (400)
4"	A/RE74-400-*	6.89	8.50	3.50	7.00	3.50	7.00	12.00	3.50	1-1/8" - 7	107.60 (48.90)	RE74-400-*	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: A/RE74-200-SS

* Insert Material

A/REM74 – Retain Ring Elbow Assembly with G1/8 Port (Plugged), Metric

Size	Complete Assembly Part No.	Dimensions (mm)								Thread UNC-2B	Assembly WT lbs (kg)	Body Only Part No.	Working Pressure PSI (bar)
		T	C	D	E	F	H	L	K				
1-1/2"	A/REM74-150-*	85.1	139.7	38.1	88.9	44.5	88.9	184.2	44.5	M16 x 2.00	17.40 (7.90)	REM74-150-*	5800 (400)
2"	A/REM74-200-*	98.0	139.7	49.2	101.6	50.8	101.6	190.5	50.8	M16 x 2.00	22.60 (10.27)	REM74-200-*	5800 (400)
2-1/2"	A/REM74-250-*	118.1	171.5	60.5	127.0	63.5	127.0	234.9	63.5	M20 x 2.50	41.88 (19.04)	REM74-250-*	5800 (400)
3"	A/REM74-300-*	145.0	203.2	73.2	152.4	76.2	152.4	279.4	76.2	M24 x 3.00	74.19 (33.72)	REM74-300-*	5800 (400)
4"	A/REM74-400-*	175.0	215.9	88.9	177.8	88.9	177.8	304.8	88.9	M30 x 3.50	107.60 (48.90)	REM74-400-*	5800 (400)

*** Materials:**

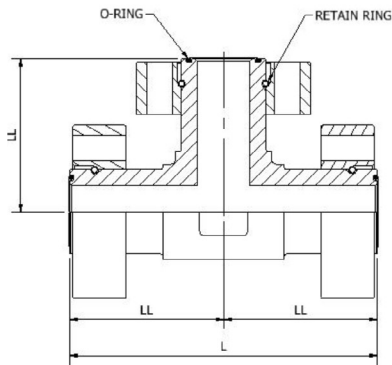
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: A/REM74-200-SS

* Insert Material

ISO 6164, 400 bar Retain Ring Flange Tee Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Three (3) Retain Ring Flanges
- Three (3) Retain Rings
- Three (3) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/RRFT - Retain Ring Flange Tee – Complete Assembly with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1-1/2"	A/RRFT-150-FC74-*-*^	8.00 (203.0)	4.00 (101.6)	OR^3-924	16.50 (7.50)	RRFT-150-*-*^	8.10 (3.76)	5800 (400)
2"	A/RRFT-200-FC74-*-*^	8.80 (223.5)	4.40 (111.8)	OR^3-928	19.38 (8.81)	RRFT-200-*-*^	9.90 (4.44)	5800 (400)
2-1/2"	A/RRFT-250-FC74-*-*^	10.38 (263.7)	5.19 (131.8)	OR^2-232	30.75 (13.98)	RRFT-250-*-*^	15.36 (6.97)	5800 (400)
3"	A/RRFT-300-FC74-*-*^	12.60 (320.0)	6.30 (160.0)	OR^2-237	50.82 (23.10)	RRFT-300-*-*^	24.09 (10.95)	5800 (400)
4"	A/RRFT-400-FC74-*-*^	15.74 (399.8)	7.87 (200.0)	OR^2-241	91.74 (41.70)	RRFT-400-*-*^	46.53 (21.15)	5800 (400)

Note:

3" and 4" are welded assemblies - Larger sizes are available upon request

Flange Options:

Standard with Clearance Holes

FC74 = 5800 PSI (400 bar) ISO 6164 Square 4-Bolt Flange

Materials:

No Designation = All Carbon Steel, Zinc Nickel Plated.

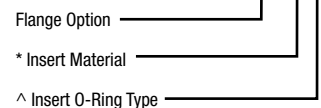
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

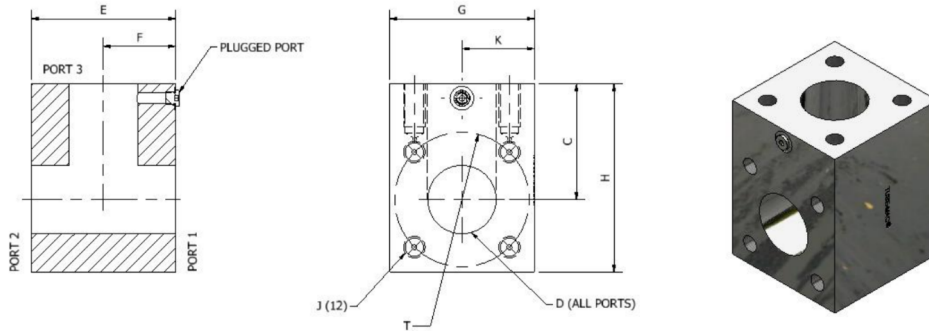
Ordering Example: A/RRFT-200-FC74-SS-V



3D step models available upon request

ISO 6164, 400 bar Block Tee with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BT74 – Block Tee with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)								J Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BT74-150-*	3.35	3.50	1.50	3.50	1.75	3.50	5.25	1.75	5/8" - 11	13.39 (6.08)	5800 (400)
2"	BT74-200-*	3.86	3.50	1.94	4.00	2.00	4.00	5.50	2.00	5/8" - 11	16.40 (7.45)	5800 (400)
2-1/2"	BT74-250-*	4.65	4.13	2.38	5.00	2.50	5.00	6.50	2.50	3/4" - 10	33.60 (15.27)	5800 (400)
3"	BT74-300-*	5.71	5.00	2.88	6.00	3.00	6.00	8.00	3.00	1" - 8	58.30 (26.50)	5800 (400)
4"	BT74-400-*	6.89	5.50	3.50	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	86.00 (39.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BT74-200-SS

* Insert Material _____

BTM74 – Block Tee with Flat Face, Threaded Holes with G 1/8" Port (Plugged), Metric

Size	Block Tee Part No	Dimensions (mm)								J Thread	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BTM74-150-*	85.1	88.9	38.1	88.9	44.5	88.9	133.4	44.5	M16x2.00	13.39 (6.08)	5800 (400)
2"	BTM74-200-*	98.0	88.9	49.2	101.6	50.8	101.6	139.7	50.8	M16x2.00	16.40 (7.45)	5800 (400)
2-1/2"	BTM74-250-*	118.1	104.9	60.5	127.0	63.5	127.0	165.1	63.5	M20x2.50	33.60 (15.27)	5800 (400)
3"	BTM74-300-*	145.0	127.0	73.2	152.4	76.2	152.4	202.3	76.2	M24x3.00	58.30 (26.50)	5800 (400)
4"	BTM74-400-*	175.0	139.7	88.9	177.8	88.9	177.8	228.6	88.9	M30x3.50	86.00 (39.10)	5800 (400)

*** Materials:**

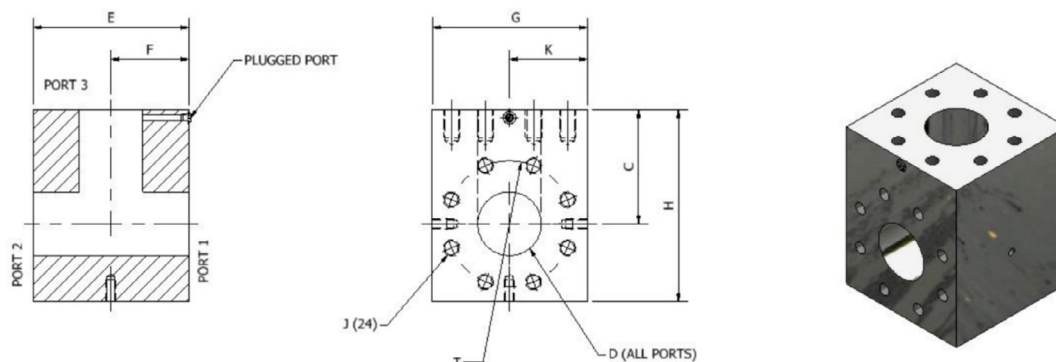
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTM74-200-SS

* Insert Material _____

Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt Flange Style



BT48 – Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No	Dimensions (in)								J Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
5"	BT48-500-*	8.07	7.13	4.00	9.75	4.88	9.75	12.00	4.88	1"-8	274.5 (124.8)	5000 (350)
6"	BT48-600-*	9.65	8.00	4.90	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BT48-800-290BC-*	11.42	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/8" - 7	990.0 (450.0)	5000 (350)
8"	BT48-800-*	12.40	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1007.0 (458.0)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BT48-600-SS

* Insert Material _____

BTM48 – Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No	Dimensions (mm)								J Thread Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
4 1/2"	BTM48-450-*	175.0	160.0	100.0	214.0	107.0	214.0	267.0	107.0	M20 x 2.5	157.0 (71.4)	5000 (350)
5"	BTM48-500-*	205.0	181.1	101.6	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	274.5 (124.8)	5000 (350)
6"	BTM48-600-*	245.1	203.2	124.5	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BTM48-800-290BC-*	209.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	990.0 (450.0)	5000 (350)
8"	BTM48-800-*	315.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	1007.0 (458.0)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTM48-600-SS

* Insert Material _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

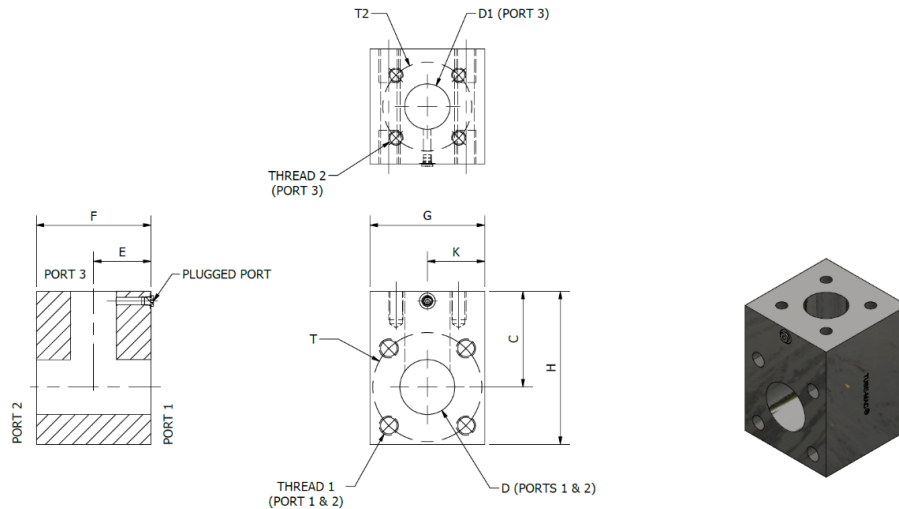
Clamp Supports - Heavy Series

Valves, Ball and Check

J45

ISO 6164, 400 bar Reducing Branch Block Tee with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BTR74 – Reducing Branch Block Tee, Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Tee Part Number	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
2" x 1-1/2"	BTR74-200x150-*	3.86	3.35	3.50	1.94	1.50	4.00	2.00	4.00	5.50	2.00	5/8"- 11	5/8"- 11	16.40 (7.45)	5800 (400)
2-1/2" x 2"	BTR74-250x200-*	4.65	3.86	4.13	2.38	1.94	5.00	2.50	5.00	6.50	2.50	3/4"-10	5/8"- 11	33.60 (15.27)	5800 (400)
3" x 2 -1/2"	BTR74-300x250-*	5.71	4.65	5.00	2.88	2.38	6.00	3.00	6.00	8.00	3.00	1"-8	3/4"-10	58.30 (26.50)	5800 (400)
4" x 2-1/2"	BTR74-400x250-*	6.89	4.65	5.50	3.50	2.38	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	3/4"-10	93.40 (42.45)	5800 (400)
4" x 3"	BTR74-400x300-*	6.89	5.71	5.50	3.50	2.88	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	1"-8	92.60 (42.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: BTR74-200-SS

* Insert Material _____

BTRM74 – Reducing Branch Block Tee, Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Tee Part Number	Dimensions (mm)										Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
2" x 1-1/2"	BTRM74-200x150-*	98.0	85.1	88.9	49.2	38.1	101.6	50.8	101.6	139.7	50.8	M16 x 2.00	M16 x 2.00	16.40 (7.45)	5800 (400)
2-1/2" x 2"	BTRM74-250-200*	118.1	98.0	104.9	60.5	49.2	127.0	63.5	127.0	165.1	63.5	M20 x 2.50	M16 x 2.00	33.60 (15.27)	5800 (400)
3" x 2-1/2"	BTRM74-300-250*	145.0	118.1	127.0	73.2	60.5	152.4	76.2	152.4	202.3	76.2	M24 x 3.00	M20 x 2.50	58.30 (26.50)	5800 (400)
4" x 2-1/2"	BTRM74-400-250*	175.0	118.1	139.7	88.9	60.5	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	M20 x 2.50	93.40 (42.45)	5800 (400)
4" x 3"	BTRM74-400-300*	175.0	145.0	139.7	88.9	73.2	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	M24 x 3.00	92.60 (42.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

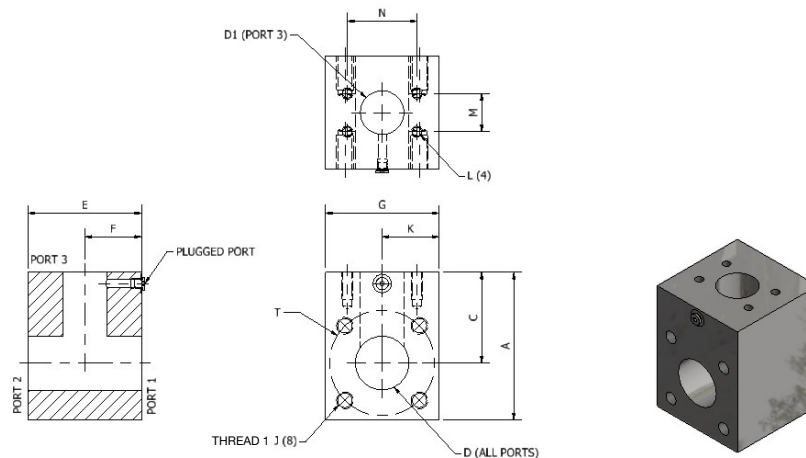
SS = Stainless Steel, Type 316.

Ordering Example: BTRM74-200-SS

* Insert Material _____

ISO 6164, 400 bar Reducing Branch Block Tee, Code 61

ISO 6164/SAE J518 Code 61 (ISO 6162-1) Flange Style



BTR7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-34-250x200-*	4.65	4.00	2.38	1.94	3.50	2.50	5.00	6.50	2.50	1.69	3.06	3/4"-10	1/2"-13	35.60 (16.15)	3000 (210)
3"x2"	BTR7-34-300x200-*	5.71	5.00	2.88	1.94	4.00	3.00	6.00	8.00	3.00	1.69	3.06	1"-8	1/2"-13	63.40 (28.76)	3000 (210)
4"x2"	BTR7-34-400x200-*	6.89	5.50	3.50	1.94	4.00	3.50	7.00	9.00	3.50	1.69	3.06	1-1/8"-7	1/2"-13	97.60 (44.27)	3000 (210)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR7-34-250x200-SS

* Insert Material

BTRM7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-34-250x200-*	118.1	101.6	60.5	49.3	127.0	63.5	127.0	165.1	63.5	42.9	77.7	M20 x 2.50	M12 x 175	35.60 (16.15)	3000 (210)
3"x2"	BTRM7-34-300x200-*	145.0	127.0	73.2	49.3	152.4	76.2	152.4	203.2	76.2	42.9	77.7	M24 x 3.00	M12 x 175	63.40 (28.76)	3000 (210)
4"x2"	BTRM7-34-400x200-*	175.0	139.7	88.9	49.3	177.8	88.9	177.8	228.6	88.9	42.9	77.7	M30 x 3.50	M12 x 175	97.60 (44.27)	3000 (210)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

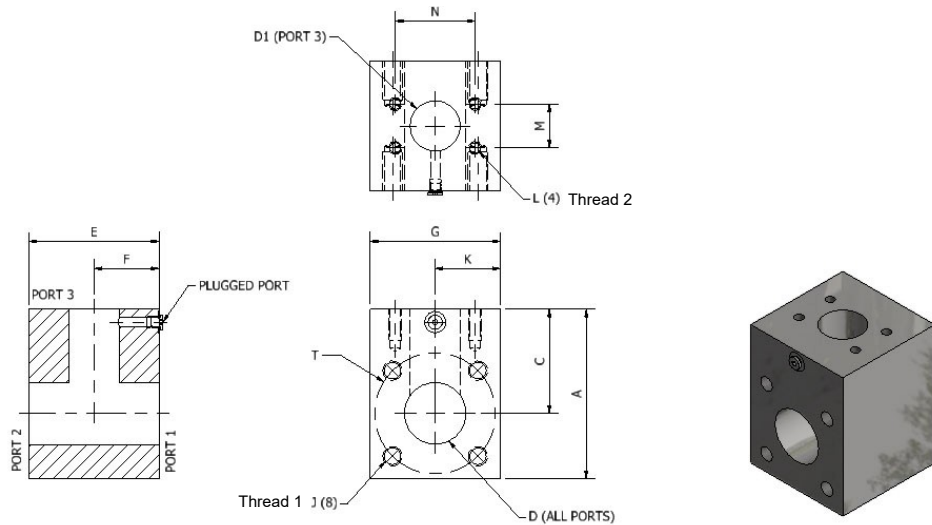
Ordering Example: BTRM7-34-250x200-SS

* Insert Material

3D step models available upon request

ISO 6164, 400 bar Reducing Branch Block Tee, Code 62

ISO 6164/SAE J518 Code 62 (ISO 6162-2) Flange Style



BTR7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-64-250x200-*	4.65	4.13	2.38	1.94	3.50	1.75	5.00	6.50	2.50	1.75	3.81	3/4"-10	3/4"-10	32.19 (14.60)	5800 (400)
3"x2"	BTR7-64-300x200-*	5.71	4.75	2.88	1.94	4.00	2.00	6.00	7.75	3.00	1.75	3.81	1"-8	3/4"-10	49.50 (22.45)	5800 (400)
4"x2"	BTR7-64-400x200-*	6.89	5.00	3.50	1.94	4.00	2.00	7.00	8.50	3.50	1.75	3.81	1-1/8"-7	3/4"-10	67.35 (30.55)	5800 (400)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR7-64-250x200-SS

* Insert Material

BTRM7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-64-250x200-*	118.1	104.9	60.5	49.3	88.9	44.5	127.0	165.1	63.5	44.5	96.8	M20 x 2.50	M20 x 2.50	32.25 (14.63)	5800 (400)
3"x2"	BTRM7-64-300x200-*	145.0	120.7	73.2	49.3	101.6	50.8	152.4	196.9	76.2	44.5	96.8	M24 x 3.00	M20 x 2.50	49.60 (22.50)	5800 (400)
4"x2"	BTRM7-64-400x200-*	175.0	127.0	88.9	49.3	101.6	50.8	177.8	215.9	88.9	44.5	96.8	M30 x 3.50	M20 x 2.50	67.48 (30.61)	5800 (400)

Materials:

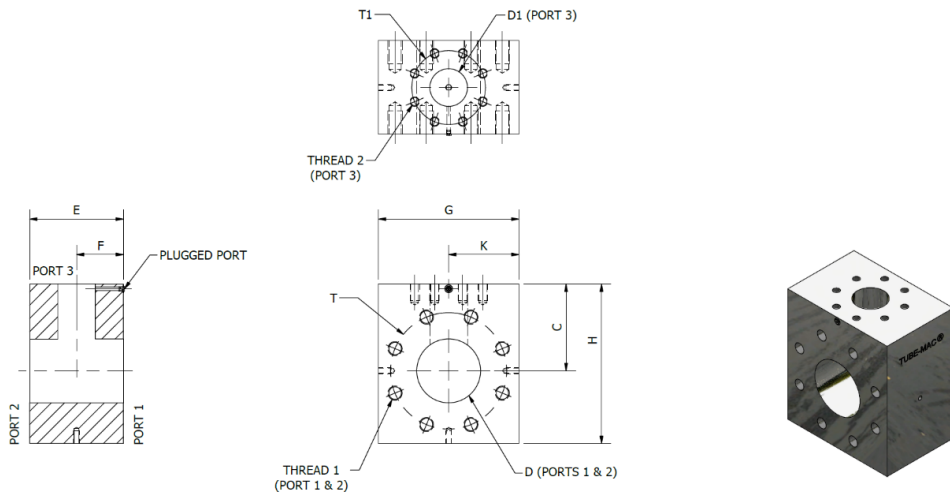
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTRM7-64-250x200-SS

* Insert Material

Reducing Branch Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt Flange Style



BTR48 – Reducer Branch Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No.	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
6" x 5"	BTR48-600x500-*	9.65	8.07	8.00	4.90	4.00	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1"-8	480.0 (218.2)	5000 (350)
8" ⁽¹⁾ x 5"	BTR48-800-290BCx500-*	11.42	8.07	10.25	6.81	4.00	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1"-8	999.0 (454.1)	5000 (350)
8" x 5"	BTR48-800x500-*	12.40	8.07	10.25	6.81	4.00	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1"-8	1015.0 (461.4)	5000 (350)
8" ⁽¹⁾ x 6"	BTR48-800-290BCx600-*	11.42	9.65	10.25	6.81	4.90	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1-1/8"-7	994.0 (451.8)	5000 (350)
8" x 6"	BTR48-800x600-*	12.40	9.65	10.25	6.81	4.90	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1011.0 (459.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTR48-600x500-SS

* Insert Material _____

BTRM48 – Reducer Branch Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No.	Dimensions (mm)										Thread 1 Metric	Thread 2 Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 4 1/2"	BTRM48-500x450-*	205.0	175.0	181.1	101.6	100.0	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M20 x 2.5	280.0 (127.4)	5000 (350)
6" x 5"	BTRM48-600x500-*	245.1	205.0	203.2	124.5	101.6	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M24 x 3.0	480.0 (218.2)	5000 (350)
8" ⁽¹⁾ x 5"	BTRM48-800-290BCx500-*	209.0	205.0	260.4	173.0	101.6	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M24 x 3.0	999.0 (454.1)	5000 (350)
8" x 5"	BTRM48-800x500-*	315.0	205.0	260.4	173.0	101.6	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M24 x 3.0	1015.0 (461.4)	5000 (350)
8" ⁽¹⁾ x 6"	BTRM48-800-290BCx600-*	209.0	245.1	260.4	173.0	124.5	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M30 x 4.0	994.0 (451.8)	5000 (350)
8" x 6"	BTRM48-800x600-*	315.0	245.1	260.4	173.0	124.5	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M30 x 4.0	1011.0 (459.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

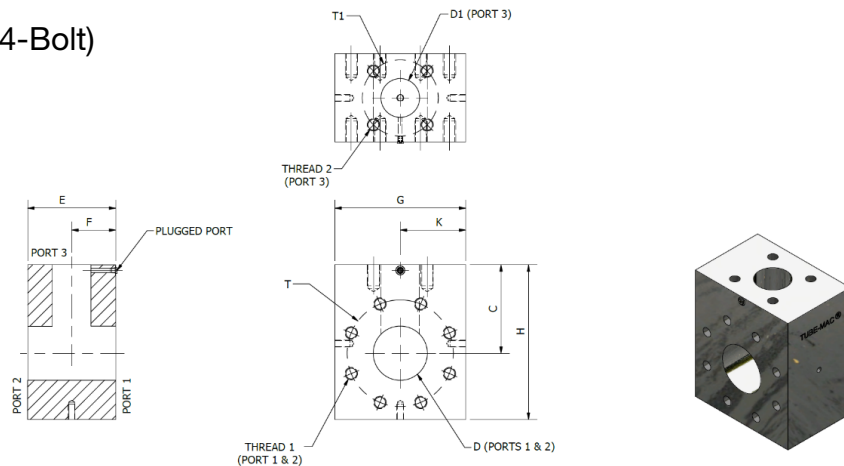
Ordering Example: BTRM48-600x500-SS

* Insert Material _____

3D step models available upon request

ISO 6164, 400 bar Reducing Branch Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt x ISO 6164 (4-Bolt)



BTR4-74 – Reducer Branch Block Tee, TMI 8-Bolt x ISO 6164 with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No.	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 3"	BTR4-74-500x300-*	8.07	5.71	7.13	4.00	2.88	9.75	4.88	9.75	12.00	4.88	1"-8	1"-8	295.0 (134.1)	5000 (350)
5" x 4"	BTR4-74-500x400-*	8.07	6.89	7.13	4.00	3.50	9.75	4.88	9.75	12.00	4.88	1"-8	1-1/8"-7	284.0 (129.1)	5000 (350)
6" x 3"	BTR4-74-600x300-*	9.65	5.71	8.00	4.90	2.88	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1"-8	499.0 (226.8)	5000 (350)
6" x 4"	BTR4-74-600x400-*	9.65	6.89	8.00	4.90	3.50	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1-1/8"-7	486.0 (220.9)	5000 (350)
8" ⁽¹⁾ x 4"	BTR4-74-800-290BCx400-*	11.42	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1-1/8"-7	999.0 (454.1)	5000 (350)
8" x 4"	BTR4-74-800x400-*	12.40	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1015.0 (461.4)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR4-74-600x400-SS

* Insert Material _____

BTRM4-74 – Reducer Branch Block Tee, TMI 8-Bolt x ISO 6164 with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No.	Dimensions (mm)										Thread 1 Metric	Thread 2 Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 3"	BTRM4-74-500x300-*	205.0	145.0	181.1	101.6	73.2	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M24 x 3.0	295.0 (134.1)	5000 (350)
5" x 4"	BTRM4-74-500x400-*	205.0	175.0	181.1	101.6	88.9	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M30 x 3.5	284.0 (129.1)	5000 (350)
6" x 3"	BTRM4-74-600x300-*	245.0	145.0	203.2	124.5	73.2	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M24 x 3.0	499.0 (226.8)	5000 (350)
6" x 4"	BTRM4-74-600x400-*	245.0	175.0	203.2	124.5	88.9	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M30 x 3.5	486.0 (220.9)	5000 (350)
8" ⁽¹⁾ x 4"	BTRM4-74-800-290BCx400-*	209.0	175.0	260.4	173.0	88.9	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M30 x 3.5	999.0 (454.1)	5000 (350)
8" x 4"	BTRM4-74-800x400-*	315.0	175.0	260.4	173.0	88.9	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M30 x 3.5	1015.0 (461.4)	5000 (350)
8" x 4"	BTR4-74-800x400-*	12.40	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1015.0 (461.4)	5000 (350)

*** Materials:**

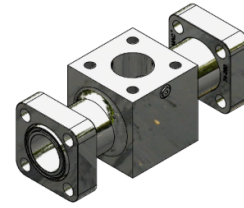
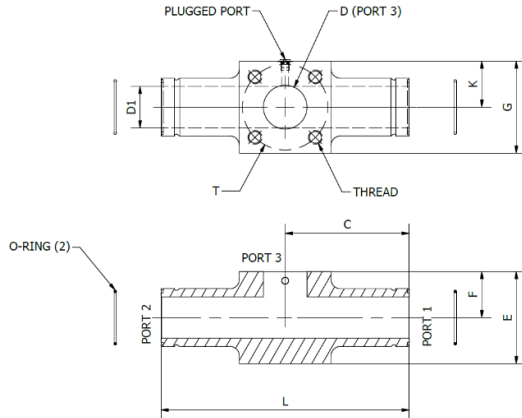
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTRM4-74-600x400-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Flange Tee Flat Face on the Branch, Complete Assembly

DIN 400 bar (ISO 6164)



A/RT74 – Retain Ring Flange Tee with ISO 6164 Flat Face on the Branch, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RT74-250-*^-^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	13.50	OR^-2-232	44.31 (20.2)	3/4"-10	RT74-250	34.05 (15.5)	5800 (400)
3"	A/RT74-300-*^-^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	16.00	OR^-2-237	66.58 (30.7)	1"-8	RT74-300	48.76 (22.2)	5800 (400)
4"	A/RT74-400-*^-^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	17.00	OR^-2-241	115.88 (52.7)	1-1/8" - 7	RT74-400	85.74 (39.0)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/RT74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

A/RTM74 – Retain Ring Flange Tee with ISO 6164 Flat Face on the Branch, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RTM74-250-*^-^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	342.9	OR^-2-232	44.31 (20.2)	M20 x 2.50	RTM74-250	34.05 (15.5)	5800 (400)
3"	A/RTM74-300-*^-^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	406.4	OR^-2-237	66.58 (30.7)	M24 x 3.00	RTM74-300	48.76 (22.2)	5800 (400)
4"	A/RTM74-400-*^-^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	431.8	OR^-2-241	115.88 (52.7)	M30 x 3.50	RTM74-400	85.74 (39.0)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

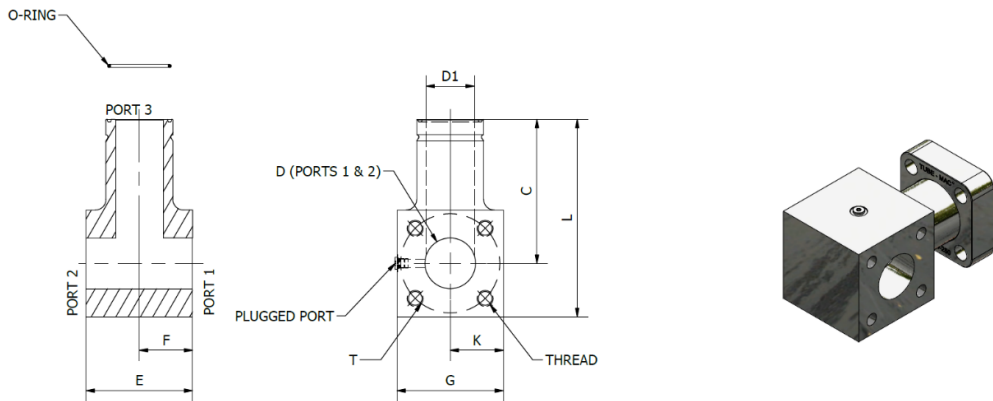
Ordering Example: A/RTM74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Branch Tee Flat Face on the Runs, Complete Assembly

DIN 400 bar (ISO 6164)



A/RBT74 – Retain Ring Flange Branch Tee with ISO 6164 Flat Face on the Runs, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RBT74-250-*^-^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	9.25	OR^-2-232	35.23 (16.0)	3/4"-10	RBT74-250	30.10 (13.7)	5800 (400)
3"	A/RBT74-300-*^-^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	11.00	OR^-2-237	49.27 (22.4)	1"-8	RBT74-300	40.36 (18.3)	5800 (400)
4"	A/RBT74-400-*^-^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	12.00	OR^-2-241	81.43 (37.0)	1-1/8" - 7	RBT74-400	66.36 (30.2)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/RBT74-200-SS-V

*Insert Material _____
^ Insert O-Ring Type _____

A/RBTM74 – Retain Ring Flange Branch Tee with ISO 6164 Flat Face on the Runs, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RBTM74-250-*^-^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	235.0	OR^-2-232	35.23 (16.0)	M20 x 2.50	RBTM74-250	30.10 (13.7)	5800 (400)
3"	A/RBTM74-300-*^-^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	279.4	OR^-2-237	49.27 (22.4)	M24 x 3.00	RBTM74-300	40.36 (18.3)	5800 (400)
4"	A/RBTM74-400-*^-^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	304.8	OR^-2-241	81.43 (37.0)	M30 x 3.50	RBTM74-400	66.36 (30.2)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

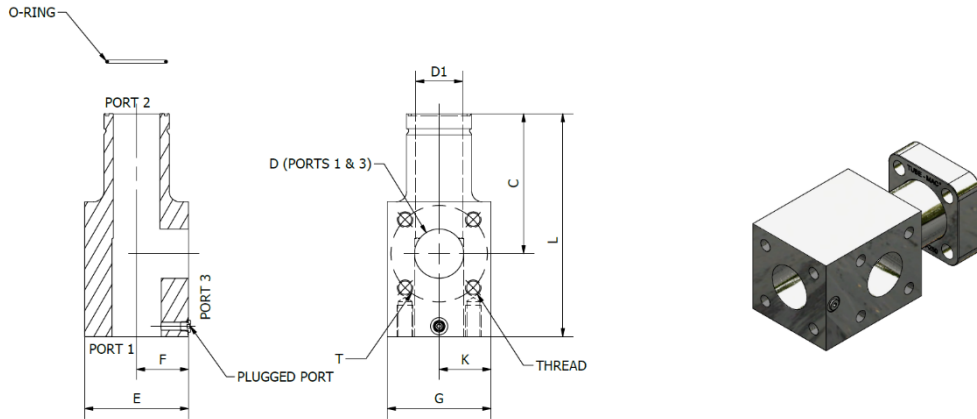
Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/RBTM74-200-SS-V

*Insert Material _____
^ Insert O-Ring Type _____

ISO 6164, 400 bar Retain Ring Flange Run Tee Flat Face on the Run and Branch, Complete Assembly

DIN 400 bar (ISO 6164)



A/RRT74 – Retain Ring Flange Run Tee with ISO 6164 Flat Face on the Run and Branch, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RRT74-250-*^-^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	10.75	OR^-2-232	42.26 (19.2)	3/4"-10	RRT74-250	37.13 (16.9)	5800 (400)
3"	A/RRT74-300-*^-^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	13.00	OR^-2-237	73.87 (33.6)	1"-8	RRT74-300	64.96 (29.5)	5800 (400)
4"	A/RRT74-400-*^-^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	14.00	OR^-2-241	110.26 (50.1)	1-1/8" - 7	RRT74-400	95.19 (43.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/RRT74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

A/RRTM74 – Retain Ring Flange Run Tee with ISO 6164 Flat Face on the Run and Branch, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RRTM74-250-*^-^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	235.0	OR^-2-232	42.26 (19.2)	M20 x 2.50	RRTM74-250	37.13 (16.9)	5800 (400)
3"	A/RRTM74-300-*^-^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	279.4	OR^-2-237	73.87 (33.6)	M24 x 3.00	RRTM74-300	64.96 (29.5)	5800 (400)
4"	A/RRTM74-400-*^-^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	304.8	OR^-2-241	110.26 (50.1)	M30 x 3.50	RRTM74-400	95.19 (43.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

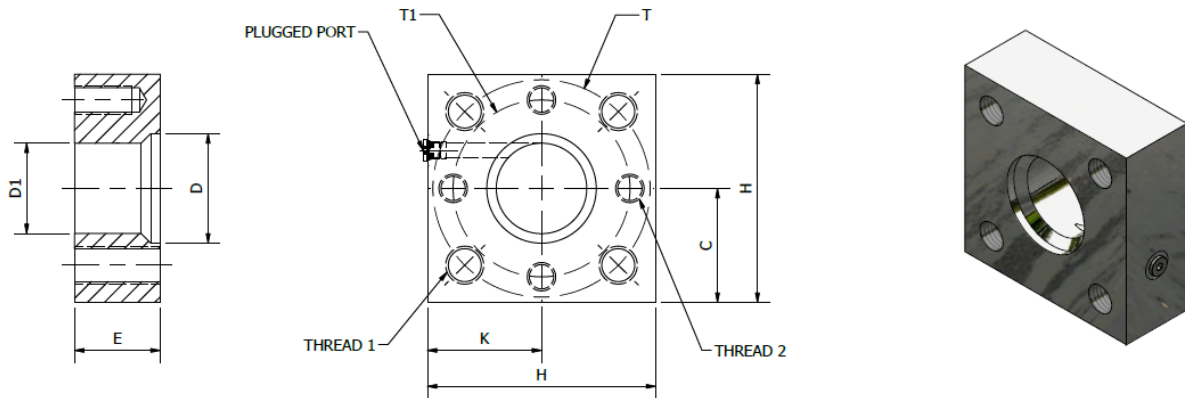
Ordering Example: A/RRTM74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Transition Plate Reducer

DIN 400 bar (ISO 6164) Flange Union Style



TPR74 Transition Plate Reducer – ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K				
2" x 1-1/2"	TPR74-200x150-*	3.86	3.35	2.00	1.94	1.50	2.00	4.00	2.00	5/8"-11	5/8"-11	11.5 (5.2)	5800 (400)
2-1/2" x 2"	TPR74-250x200-*	4.65	3.86	2.50	2.38	1.94	2.00	5.00	2.50	3/4"-10	5/8"-11	12.9 (5.7)	5800 (400)
3" x 2"	TPR74-300x200-*	5.71	3.86	3.00	2.88	1.94	2.25	6.00	3.00	1"-8	5/8"-11	17.40 (7.9)	5800 (400)
3" x 2-1/2"	TPR74-300x250-*	5.71	4.65	3.00	2.88	2.38	2.25	6.00	3.00	1"-8	3/4"-10	16.63 (7.6)	5800 (400)
4" x 2-1/2"	TPR74-400x250-*	6.89	4.65	3.50	3.50	2.38	2.25	7.00	3.50	1 1/8"-7	3/4"-10	24.10 (11.0)	5800 (400)
4" x 3"	TPR74-400x300-*	6.89	5.71	3.75	3.50	2.88	2.50	7.50	3.75	1 1/8" - 7	1" - 8	30.70 (13.9)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPR74-200x150-SS

* Insert Material

TPRM74 Transition Plate Reducer - ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K				
2" x 1-1/2"	TPRM74-200x150-*	98.0	85.1	50.8	49.3	38.1	50.8	101.6	50.8	M16x2.0	M16x2.0	11.5 (5.2)	5800 (400)
2-1/2" x 2"	TPRM74-250x200-*	118.1	98.0	63.5	60.5	49.3	50.8	127.0	63.5	M20 x2.5	M16x2.0	12.9 (5.7)	5800 (400)
3" x 2"	TPRM74-300x200-*	145.0	98.0	76.2	73.2	49.3	57.2	152.4	76.2	M24 x 3.0	M16x2.0	17.40 (7.9)	5800 (400)
3" x 2-1/2"	TPRM74-300x250-*	145.0	118.1	76.2	73.2	60.5	57.2	152.4	76.2	M24 x 3.0	M20 x2.5	16.63 (7.6)	5800 (400)
4" x 2-1/2"	TPRM74-400x250-*	175.0	118.1	88.9	88.9	60.5	57.2	177.8	88.9	M30 x 3.5	M20 x2.5	24.10 (11.0)	5800 (400)
4" x 3"	TPRM74-400x300-*	175.0	145.0	95.3	88.9	73.2	63.5	190.5	95.3	M30 x 3.5	M24 x3.0	30.70 (13.9)	5800 (400)

*** Materials:**

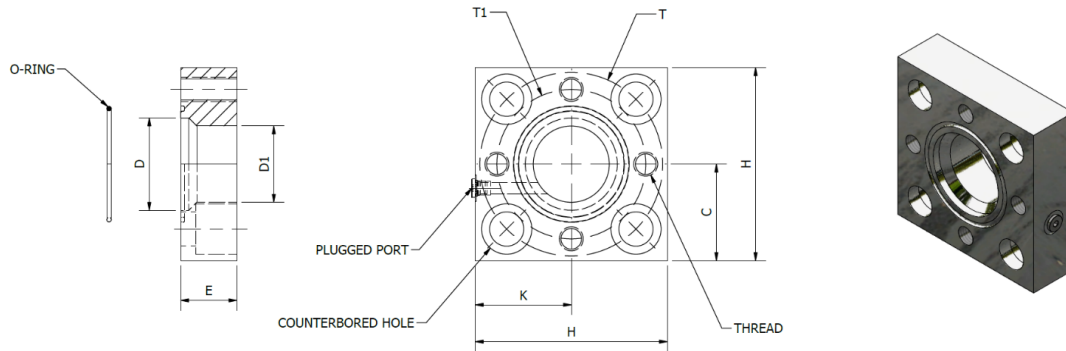
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPRM74-200x150-SS

* Insert Material

ISO 6164, 400 bar Transition Plate Reducer

DIN 400 bar (ISO 6164) Flange Manifold Mount Style



TPR074 Transition Plate Reducer – ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K					
2" x 1-1/2"	TPR074-200x150-*~^	3.86	3.35	2.00	1.94	1.50	1.50	4.00	2.00	5/8"	5/8"-11	OR-3-928	4.91 (2.2)	5800 (400)
2-1/2" x 2"	TPR074-250x200-*~^	4.65	3.86	2.50	2.38	1.94	1.50	5.00	2.50	3/4"	5/8"-11	OR-2-232	6.60 (3.0)	5800 (400)
3" x 2"	TPR074-300x200-*~^	5.71	3.86	3.00	2.88	1.94	2.25	6.00	3.00	1" - 8	5/8"-11	OR-2-237	11.74 (5.3)	5800 (400)
3" x 2-1/2"	TPR074-300x250-*~^	5.71	4.65	3.00	2.88	2.38	2.25	6.00	3.00	1" - 8	3/4"-10	OR-2-237	11.27 (5.1)	5800 (400)
4" x 2-1/2"	TPR074-400x250-*~^	6.89	4.65	3.50	3.50	2.38	2.25	7.00	3.50	1 1/8"	3/4"-10	OR-2-241	12.26 (5.6)	5800 (400)
4" x 3"	TPR074-400x300-*~^	6.89	5.71	3.75	3.50	2.88	2.50	7.50	3.75	1 1/8"	1" - 8	OR-2-241	21.39 (9.7)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPR074-200x150-SS-V
 * Insert Material _____
 ^ Insert O-Ring Type _____

TPROM74 Transition Plate Reducer - ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K					
2" x 1-1/2"	TPROM74-200x150-*~^	98.0	85.1	50.8	49.3	38.1	38.1	101.6	50.8	M16	M16x2.0	OR-3-928	4.91 (2.2)	5800 (400)
2 -1/2" x 2"	TPROM74-250x200-*~^	118.1	98.0	63.5	60.5	49.3	38.1	127.0	63.5	M20	M16x2.0	OR-2-232	6.60 (3.0)	5800 (400)
3" x 2"	TPROM74-300x200-*~^	145.0	98.0	76.2	73.2	49.3	57.2	152.4	76.2	M24	M16x2.0	OR-2-237	11.74 (5.3)	5800 (400)
3" x 2-1/2"	TPROM74-300x250-*~^	145.0	118.1	76.2	73.2	60.5	57.2	152.4	76.2	M24	M20 x2.5	OR-2-237	11.27 (5.1)	5800 (400)
4" x 2-1/2"	TPROM74-400x250-*~^	175.0	118.1	88.9	88.9	60.5	57.2	177.8	88.9	M30	M20 x2.5	OR-2-241	12.26 (5.6)	5800 (400)
4" x 3"	TPROM74-400x300-*~^	175.0	145.0	95.3	88.9	73.2	63.5	190.5	95.3	M30	M24 x3.0	OR-2-241	21.39 (9.7)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

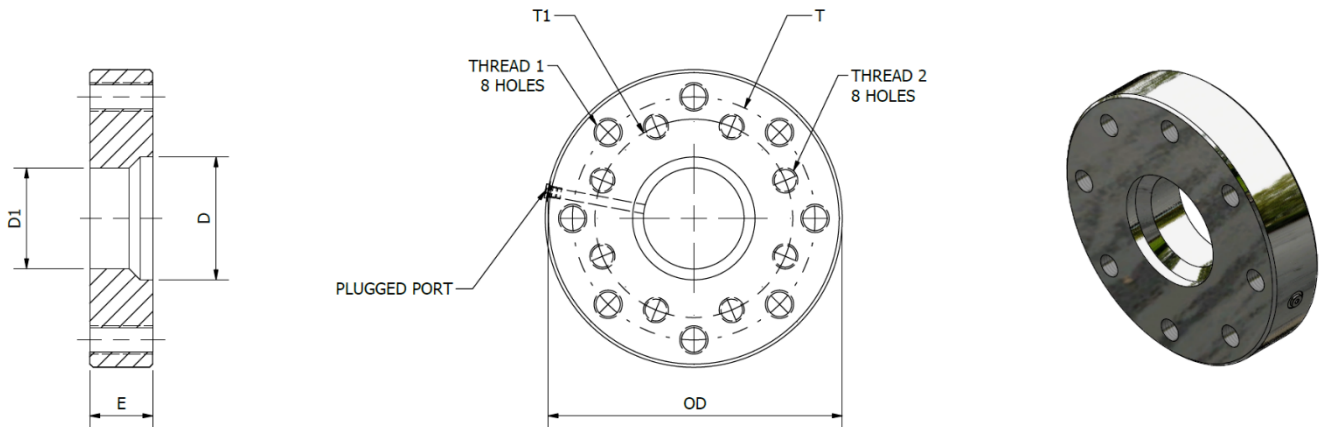
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPROM74-200x150-SS-V
 * Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

Transition Plate Reducer, TMI 8-Bolt

5000 PSI (350 bar) Flange Union Style



TPR48 Transition Plate Reducer – TMI 8-Bolt Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4-1/2"	TPR48-500x450-*	8.07	6.89	4.00	3.94	9.88	2.00	1"-8	3/4"-10	35.50 (16.1)	5000 (350)
6" x 4-1/2"	TPR48-600x450-*	9.65	6.89	4.90	3.94	11.81	2.50	1-1/8"-7	3/4"-10	62.90 (28.6)	5000 (350)
6" x 5"	TPR48-600x500-*	9.65	8.07	4.90	4.00	11.81	2.50	1-1/8"-7	1"-8	59.10 (26.9)	5000 (350)
8" x 5"	TPR48-800x500-*	12.40	8.07	6.81	4.00	15.50	2.50	1-1/2"-6	1"-8	132.19 (60.1)	5000 (350)
8" x 6"	TPR48-800x600-*	12.409	9.65	6.81	4.90	15.50	2.50	1-1/2"-6	1 1/8"-7	104.53 (47.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPR48-600x500-SS

* Insert Material _____

TPRM48 Transition Plate Reducer – TMI 8-Bolt Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4-1/2"	TPRM48-500x450-*	205.0	175.0	101.6	100.0	250.0	50.8	M24 x 3.0	M20 x 2.5	35.50 (16.1)	5000 (350)
6" x 4-1/2"	TPRM48-600x450-*	245.0	175.0	124.5	100.0	300.0	63.5	M30 x 3.5	M20 x 2.5	62.90 (28.6)	5000 (350)
6" x 5"	TPRM48-600x500-*	245.0	205.0	124.5	101.6	300.0	63.5	M30 x 3.5	M24 x 3.0	59.10 (26.9)	5000 (350)
8" x 5"	TPRM48-800x500-*	315.0	205.0	173.0	101.6	394.0	63.5	M36 x 4.0	M24 x 3.0	132.19 (60.1)	5000 (350)
8" x 6"	TPRM48-800x600-*	315.0	245.0	173.0	124.5	394.0	63.5	M36 x 4.0	M30 x 3.5	104.53 (47.5)	5000 (350)

*** Materials:**

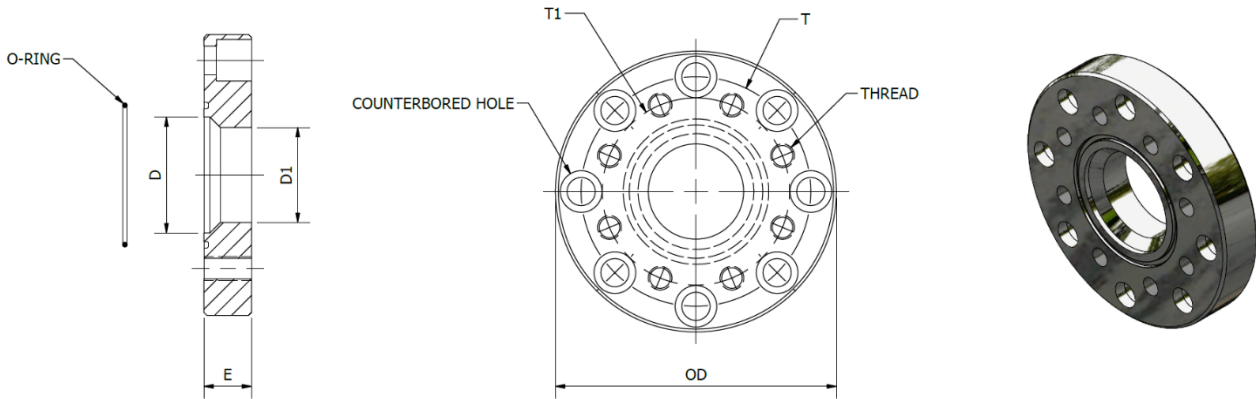
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPRM48-600x500-SS

* Insert Material _____

Transition Plate Reducer, TMI 8-Bolt

5000 PSI (350 bar) Flange Manifold Mount Style



TPRO48 Transition Plate Reducer – TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	C'Tbore Bolt	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4 1/2"	TPRO48-500x450-*^-^	8.07	6.89	4.00	3.94	9.88	2.00	1"	3/4"-10	OR^-2-353	32.91 (15.0)	5000 (350)
6" x 4 1/2"	TPRO48-600x450-*^-^	9.65	6.89	4.90	3.94	11.81	2.50	1 1/8"	3/4"-10	OR^-2-359	46.20 (21.0)	5000 (350)
6" x 5"	TPRO48-600x500-*^-^	9.65	8.07	4.90	4.00	11.81	2.00	1 1/8"	1"-8	OR^-2-359	42.00 (19.1)	5000 (350)
8" x 5"	TPRO48-800x500-*^-^	12.401	8.07	6.81	4.00	15.50	3.00	1 1/2"	1"-8	OR^-2-368	120.30 (54.7)	5000 (350)
8" x 6"	TPRO48-800x600-*^-^	12.40	9.65	6.81	4.90	15.50	2.50	1 1/2"	1 1/8"-7	OR^-2-368	93.81 (42.6)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPRO48-600x500-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

TPROM48 Transition Plate Reducer – TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	C'Tbore Bolt	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4 1/2"	TPROM48-500x450-*^-^	205.0	175.0	101.6	100.0	250.0	50.8	M24	M20x2.5	OR^-2-353	32.91 (15.0)	5000 (350)
6" x 4 1/2"	TPROM48-600x450-*^-^	245.1	175.0	124.5	100.0	300.0	63.5	M30	M20x2.5	OR^-2-359	46.20 (21.0)	5000 (350)
6" x 5"	TPROM48-600x500-*^-^	245.1	205.0	124.5	101.6	300.0	50.8	M30	M24x3.0	OR^-2-359	42.00 (19.1)	5000 (350)
8" x 5"	TPROM48-800x500-*^-^	315.0	205.0	173.0	101.6	393.7	76.2	M36	M24 x3.0	OR^-2-368	120.30 (54.7)	5000 (350)
8" x 6"	TPROM48-800x600-*^-^	315.0	245.0	173.0	124.5	393.7	63.5	M36	M30 x3.5	OR^-2-368	93.81 (42.6)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

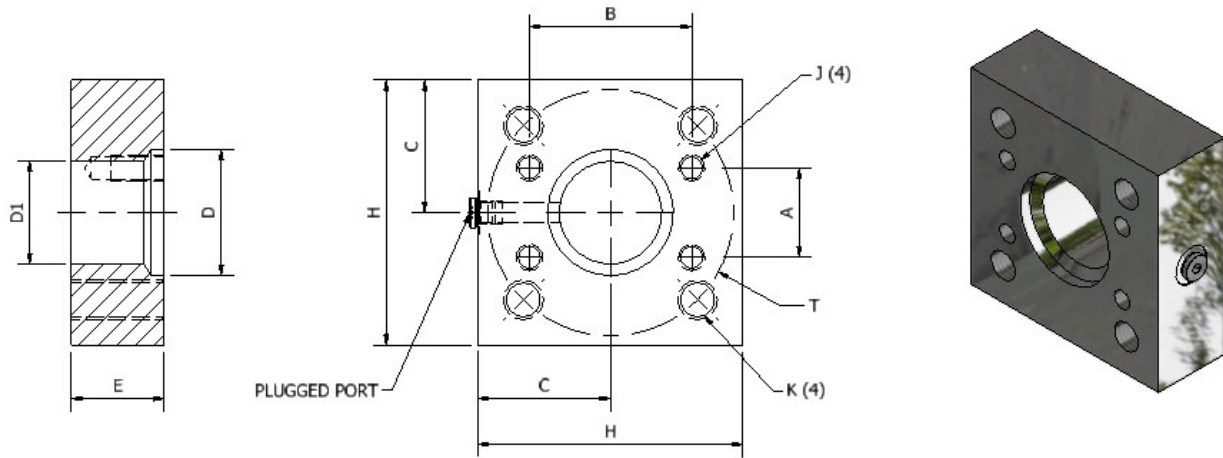
Ordering Example: TPROM48-600x500-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Union Style



TPR7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 61)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-34-250x150-*	4.65	1.41	2.75	2.50	2.38	1.50	1.75	5.00	3/4"-10	1/2"-13	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPR7-34-250x200-*	4.65	1.69	3.06	2.50	2.38	1.94	1.75	5.00	3/4"-10	1/2"-13	10.30 (4.67)	3000 (210)
3" x 2"	TPR7-34-300x200-*	5.71	1.69	3.06	3.00	2.88	1.94	2.00	6.00	1"-8	1/2"-13	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPR7-34-300x250-*	5.71	2.00	3.50	3.00	2.88	2.38	2.00	6.00	1"-8	1/2"-13	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPR7-34-400x250-*	6.89	2.00	3.50	3.50	3.50	2.38	2.00	7.00	1-1/8"-7	1/2"-13	22.70 (10.30)	2500 (175)
4" x 3"	TPR7-34-400x300-*	6.89	2.44	4.19	3.50	3.50	2.88	2.00	7.00	1-1/8"-7	5/8"-11	22.20 (10.07)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPR7-34-250x150-SS

* Insert Material _____

TPRM7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x ISO 6162-1)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-34-250x150-*	118.1	35.8	69.9	63.5	60.5	38.1	44.5	127.0	M20 x 2.50	M12 x 1.75	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPRM7-34-250x200-*	118.1	42.9	77.7	63.5	60.5	49.3	44.5	127.0	M20 x 2.50	M12 x 1.75	10.30 (4.67)	3000 (210)
3" x 2"	TPRM7-34-300x200-*	145.0	42.9	77.7	76.2	73.2	49.3	50.8	152.4	M24 x 3.00	M12 x 1.75	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPRM7-34-300x250-*	145.0	50.8	88.9	76.2	73.2	60.5	50.8	152.4	M24 x 3.00	M12 x 1.75	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPRM7-34-400x250-*	175.0	50.8	88.9	88.9	88.9	60.5	50.8	177.8	M30 x 3.50	M12 x 1.75	22.70 (10.30)	2500 (175)
4" x 3"	TPRM7-34-400x300-*	175.0	62.0	106.4	88.9	88.9	73.2	50.8	177.8	M30 x 3.50	M16 x 2.00	22.20 (10.07)	2000 (140)

*** Materials:**

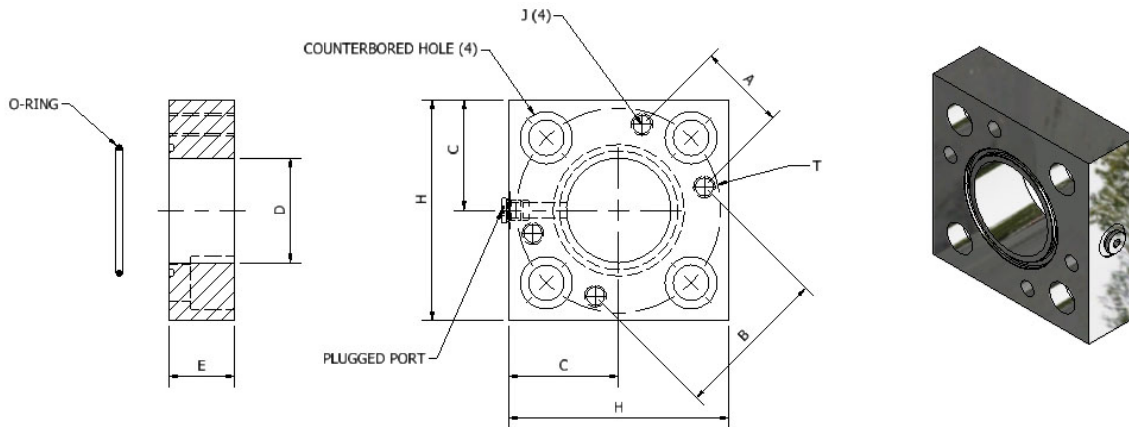
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPRM7-34-250x150-SS

* Insert Material _____

ISO 6164, 400 bar Transition Plate

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Manifold Mount Style



TP07-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Transition Plate Part Number	Dimensions (in)							C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TP07-34-250-*^-^	2.00	3.50	2.50	2.38	1.50	5.00	4.65	3/4"	1/2"-13	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TP07-34-300-*^-^	2.44	4.19	3.00	2.88	1.75	6.00	5.71	1"	5/8"-11	OR^-2-237	10.85 (4.92)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: TP07-34-250-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

TPOM7-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Transition Plate Part Number	Dimensions (mm)							C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TPOM7-34-250-*^-^	50.8	88.9	63.5	60.5	31.8	127.0	118.1	M20	M12 x 1.75	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TPOM7-34-300-*^-^	62.0	106.4	76.2	73.2	44.5	152.4	145.0	M24	M16 x 2.00	OR^-2-237	10.85 (4.92)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: TPOM7-34-250-SS-V

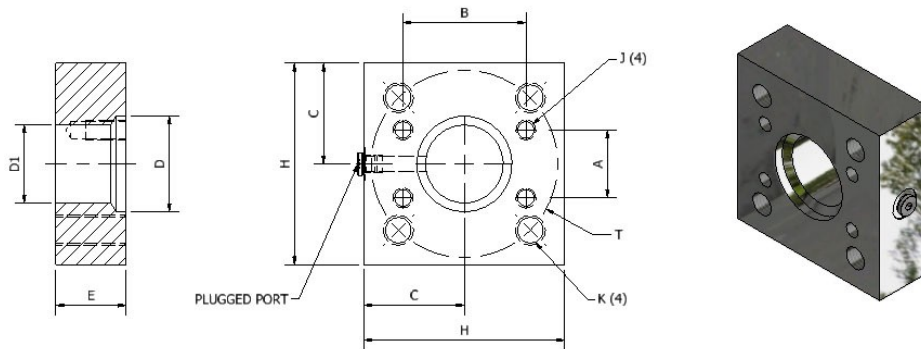
* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

Introduction
 Technical Data
 Pipe Selection Guide
 16 bar, 90° Flare
 ANSI 150#, 300# Flare
 SAE 1000, 70 bar
 SAE 3000, 210 bar
 SAE 6000, 420 bar
 SAE 10000, 690 bar
 ISO 6164, 400 bar
 ISO 6164, 400 bar F10° Flare
 Clamp Supports - Heavy Series
 Valves, Ball and Check
 J59

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/6162-2) Flange Union Style



TPR7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"-10	5/8"-11	11.46 (5.20)	5800 (400)
2-1/2" x 2"	TPR7-64-250x200-*	4.65	1.75	3.81	3.00	2.38	1.94	1.50	6.00	3/4"-10	3/4"-10	8.65 (3.92)	5800 (400)
3" x 2"	TPR7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"-8	3/4"-10	17.80 (8.07)	5800 (400)
4" x 2"	TPR7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	1 1/8"-7	3/4"-10	25.54 (11.58)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPR7-64-250x150-SS

* Insert Material _____

TPRM7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20 x 2.50	M16 x 2.00	11.49 (5.21)	5800 (400)
2-1/2" x 2"	TPRM7-64-250x200-*	118.1	44.5	96.8	76.2	60.5	49.3	38.1	152.4	M20 x 2.50	M20 x 2.50	8.66 (3.93)	5800 (400)
3" x 2"	TPRM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24 x 3.00	M20 x 2.50	17.84 (8.09)	5800 (400)
4" x 2"	TPRM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30 x 3.50	M20 x 2.50	25.60 (11.61)	5800 (420)

*** Materials:**

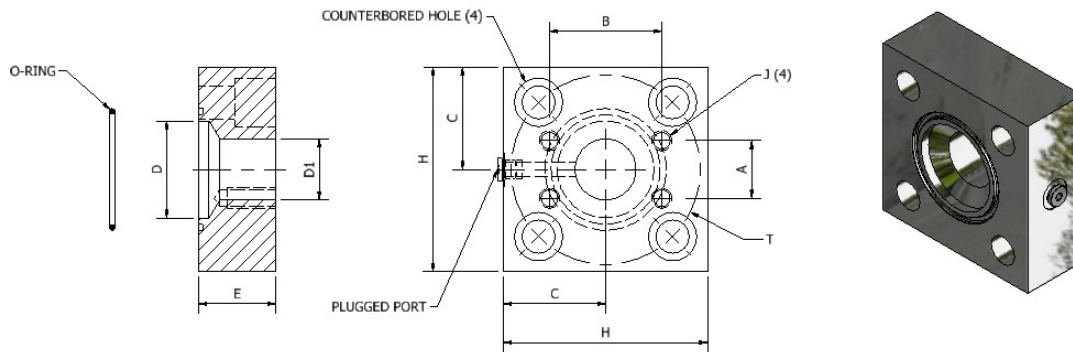
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPRM7-64-250x150-SS

* Insert Material _____

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/6162/2) Flange Manifold Mount Style



TPRO7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread C'T Bore Bolt UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPRO7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"	5/8"-11	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPRO7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"	3/4"-10	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPRO7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	1-1/8"	3/4"-10	OR^-2-241	23.09 (10.50)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPRO7-64-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

TPROM7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPROM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20	M16 x 2.00	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPROM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24	M20 x 2.50	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPROM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30	M20 x 2.50	OR^-2-241	23.09 (10.50)	5800 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPROM7-64-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

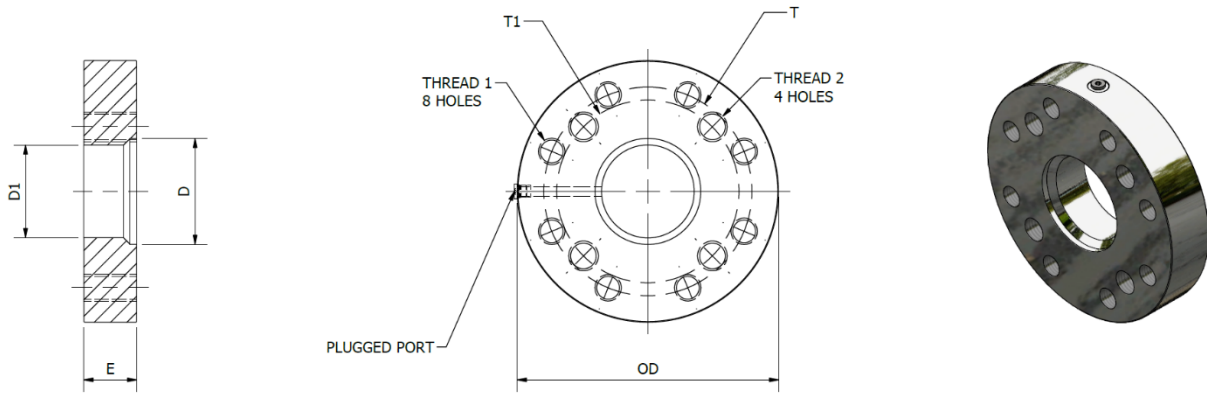
^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

3D step models available upon request

Transition Plate Reducer, TMI 8-Bolt/ISO 6164

5000 PSI (350 bar) Flange Union Style



TPR4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4"	TPR4-74-500x400-*	8.07	6.89	4.00	3.50	9.88	2.00	1" - 8	1-1/8"-7	31.67 (14.4)	5000 (350)
6" x 4"	TPR4-74-600x400-*	9.65	6.89	4.90	3.50	11.81	2.00	1 1/8"-7	1-1/8"-7	52.19 (23.7)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPR4-74-500x400-SS

* Insert Material _____

TPRM4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
4-1/2" x 3"	TPRM4-74-450x300-*	175.0	145.0	100.0	73.0	216.0	63.5	M20 x 2.5	M24 x 3.0	29.90 (13.6)	5000 (350)
4-1/2" x 4"	TPRM4-74-450x400-*	175.0	175.0	100.0	88.9	216.0	50.8	M20 x 2.5	M30 x 3.5	28.40 (12.9)	5000 (350)
5" x 4"	TPRM4-74-500x400-*	205.0	175.0	101.6	88.9	250.9	50.8	M24 x 3.0	M30 x 3.5	31.67 (14.4)	5000 (350)
6" x 4"	TPRM4-74-600x400-*	245.0	175.0	124.5	88.9	300.0	50.8	M30 x 3.5	M30 x 3.5	52.19 (23.7)	5000 (350)

*** Materials:**

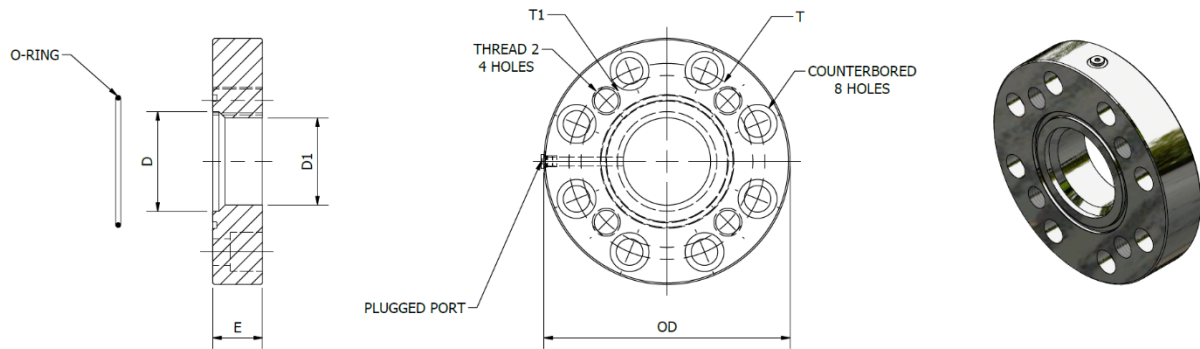
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPRM4-74-500x400-SS

* Insert Material _____

Transition Plate Reducer, TMI 8-Bolt/ISO 6164

5000 PSI (350 bar) Flange Manifold Mount Style



TPRO4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4"	TPRO4-74-500x400-*^-^	8.07	6.89	4.00	3.50	9.88	2.00	1"	1-1/8"-7	OR^-2-353	28.70 (13.0)	5000 (350)
6" x 4"	TPRO4-74-600x400-*^-^	9.65	6.89	4.90	3.50	11.81	3.00	1-1/8"	1-1/8"-7	OR^-2-359	56.20 (25.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO4-74-600x400-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

TPROM4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
4-1/2" x 3"	TPROM4-74-450x300-*^-^	175.0	145.0	100.0	73.0	216.0	63.5	M20	M24x3.0	OR^-2- 245	27.60 (12.5)	5000 (350)
4-1/2" x 4"	TPROM4-74-450x400-*^-^	175.0	175.0	100.0	88.9	216.0	50.4	M20	M30x3.5	OR^-2-245	24.20 (11.0)	5000 (350)
5" x 4"	TPROM4-74-500x400-*^-^	205.0	175.0	101.6	88.9	250.9	50.8	M24	M30x3.5	OR^-2-353	28.70 (13.0)	5000 (350)
6" x 4"	TPROM4-74-600x400-*^-^	245.0	175.0	124.5	88.9	300.0	76.2	M30	M30 x3.5	OR^-2-359	56.20 (25.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPROM4-74-600x400-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

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Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

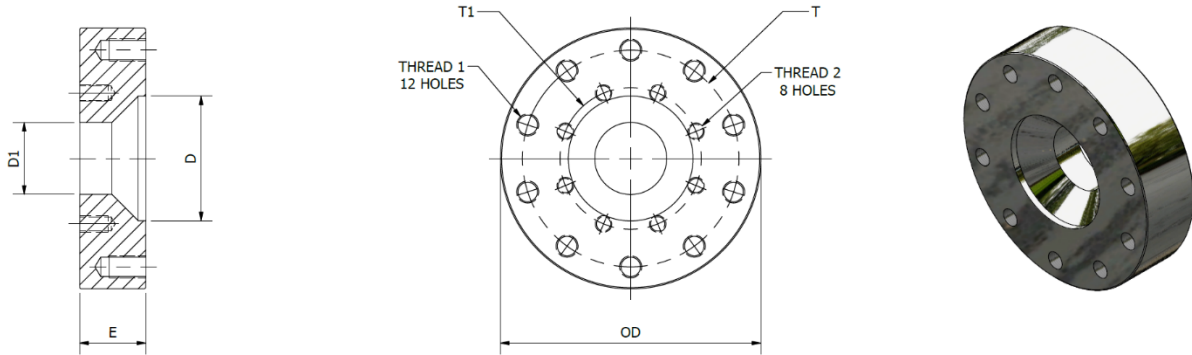
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

Transition Plate Reducer, TMI 12-Bolt/TMI 8-Bolt

3600 PSI (250 bar) Flange Union Style



TPR412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
10" x 6"	TPR412-48-1000x600-*	14.76	9.65	8.46	4.90	17.75	4.50	1-1/2"-6	1-1/8"-7	266.0 (121.0)	3600 (250)
10" x 8" ⁽¹⁾	TPR412-48-1000x800-290BC-*	14.76	11.42	8.46	6.81	17.75	6.00	1-1/2"-6	1-1/8"-7	319.0 (145.0)	3600 (250)
10" x 8"	TPR412-48-1000x800-*	14.76	12.40	8.46	6.81	17.75	6.50	1-1/2"-6	1-1/2"-6	339.0 (154.1)	3600 (250)

(1) Special Bolt Circle

Ordering Example: TPR412-48-1000x600-SS

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

* Insert Material _____

TPRM412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
10" x 6"	TPRM412-48-1000x600-*	375.0	245.0	215.0	125.0	450.0	114.3	M36 x 4.0	M30 x 3.5	266.0 (121.0)	3600 (250)
10" x 8" ⁽¹⁾	TPRM412-48-1000x800-290BC-*	375.0	290.0	215.0	173.0	450.0	152.4	M36 x 4.0	M30 x 3.5	319.0 (145.0)	3600 (250)
10" x 8"	TPRM412-48-1000x800-*	375.0	315.0	215.0	173.0	450.0	165.0	M36 x 4.0	M36 x 4.0	339.0 (154.1)	3600 (250)

(1) Special Bolt Circle

Ordering Example: TPRM412-48-1000x600-SS

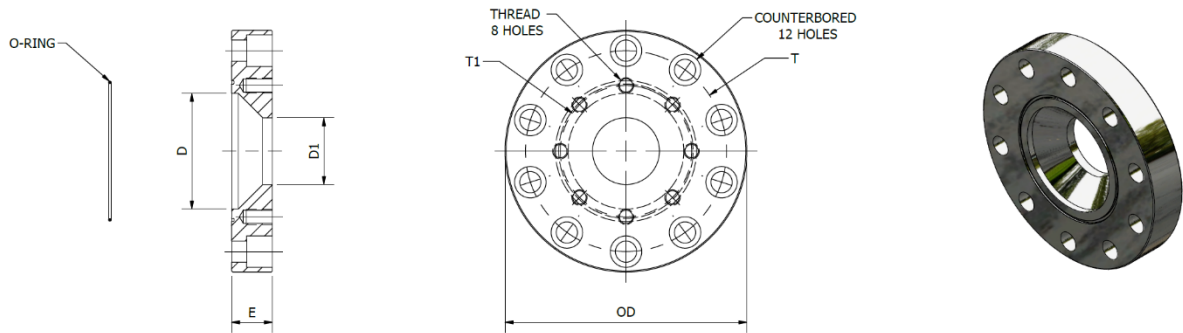
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

* Insert Material _____

Transition Plate Reducer, TMI 12-Bolt/TMI 8-Bolt

3600 PSI (250 bar) Flange Manifold Mount Style



TPRO412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
10" x 6"	TPRO412-48-1000x600-*~^	14.76	9.65	8.46	4.90	17.75	4.50	1-1/2"	1-1/8"-7	OR^~2-377	155.0 (70.5)	3600 (250)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPRO412-48-1000x600-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

TPROM412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
10" x 6"	TPROM412-48-1000x600-*~^	375.0	245.0	215.0	125.0	450.0	114.3	M36	M30 x 3.5	OR^~2-377	155.0 (70.5)	3600 (250)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

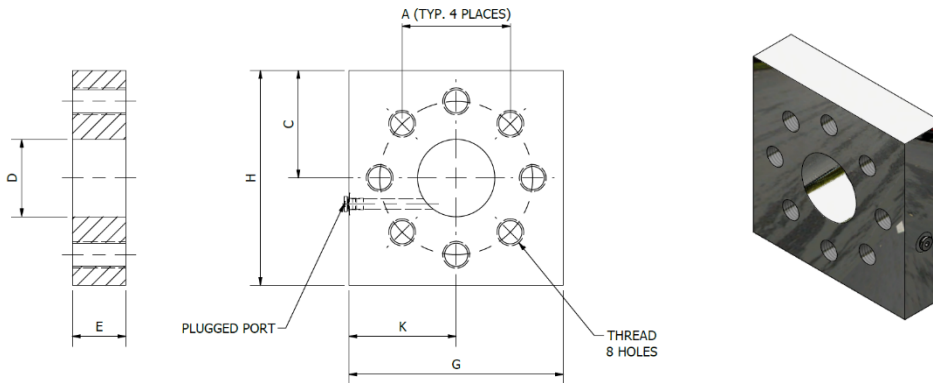
Ordering Example: TPROM4-74-600x400-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Adapter Plate

DIN 400 bar (ISO 6164)



AP74 Adapter Plate – ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Adapter Plate Part Number	Dimensions (in)							Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	C	D	E	G	H	K			
1-1/2"	AP74-150-*	2.37	2.50	1.50	1.25	5.00	5.00	2.50	5/8"- 11	7.25 (3.3)	5800 (400)
2"	AP74-200-*	2.73	2.50	1.94	1.25	5.00	5.00	2.50	5/8"- 11	8.10 (3.7)	5800 (400)
2-1/2"	AP74-250-*	3.29	3.00	2.38	1.50	6.00	6.00	3.00	3/4"- 10	12.50 (5.7)	5800 (400)
3"	AP74-300-*	4.04	4.00	2.88	2.00	8.00	8.00	4.00	1"- 8	21.00 (9.5)	5800 (400)
4"	AP74-400-*	4.87	4.25	3.50	2.00	8.50	8.50	4.25	1-1/8"-7	22.70 (10.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: AP74-200-SS

* Insert Material _____

APM74 Adapter Plate – ISO 6164 Flat Face with Threaded Holes Complete with G 1/8 Port (Plugged), Metric

Size	Adapter Plate Part Number	Dimensions (mm)							Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	C	D	E	G	H	K			
1-1/2"	APM74-150-*	60.1	63.5	38.1	31.8	127.0	127.0	63.5	M16 x 2.00	7.25 (3.3)	5800 (400)
2"	APM74-200-*	69.3	63.5	49.2	31.8	127.0	127.0	63.5	M16 x 2.00	8.10 (3.7)	5800 (400)
2-1/2"	APM74-250-*	83.5	76.2	60.5	38.1	152.4	152.4	76.2	M20 x 2.50	12.50 (5.7)	5800 (400)
3"	APM74-300-*	102.5	101.6	73.2	50.8	203.2	203.2	101.6	M24 x 3.00	21.00 (9.5)	5800 (400)
4"	APM74-400-*	123.7	108.0	88.9	50.8	216.0	216.0	108.0	M30 x 3.50	22.70 (10.3)	5800 (400)

*** Materials:**

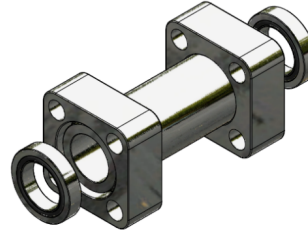
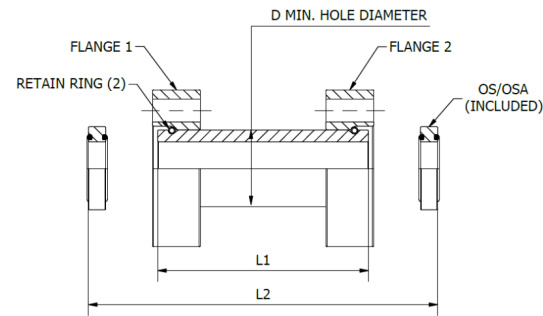
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: AP74-200-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Bulkhead Complete Assembly

DIN 400 bar (ISO 6164)



Complete Assembly Consists Of:

- One (1) retain ring flange bulkhead body
- Two (2) retain ring flanges
- Two (2) retain rings
- Two (2) o-ring spacers

A/RFBH – Retain Ring Flange Bulkhead, Complete Assembly

Size	Complete Part Number	Dimensions in (mm)			Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L1	L2	D				
1-1/2"	A/RFBH-150-FC74-FC74-*^-^	6.09 (154.6)	7.09 (180.0)	2.20 (56.0)	13.30 (6.05)	RFBH-150-*^-^	7.04 (3.2)	5800 (400)
2"	A/RFBH-200-FC74-FC74-*^-^	7.27 (184.6)	8.27 (210.0)	2.60 (66.0)	16.20 (7.36)	RFBH-200-*^-^	9.02 (4.1)	5800 (400)
2-1/2"	A/RFBH-250-FC74-FC74-*^-^	6.66 (169.2)	8.66 (220.0)	3.15 (80.0)	25.80 (11.73)	RFBH-250-*^-^	13.20 (6.0)	5800 (400)
3"	A/RFBH-300-FC74-FC74-*^-^	7.45 (189.2)	9.45 (240.0)	3.82 (97.0)	40.36 (18.35)	RFBH-300-*^-^	19.14 (8.7)	5800 (400)
4"	A/RFBH-400-FC74-FC74-*^-^	9.00 (229.2)	11.00 (280.0)	4.53 (115.0)	58.22 (26.46)	RFBH-400-*^-^	22.88 (10.4)	5800 (400)

Flange Options:

Standard, FC74 = (ISO 6164) Clearance Flange.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

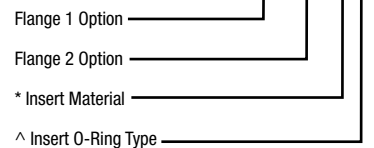
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

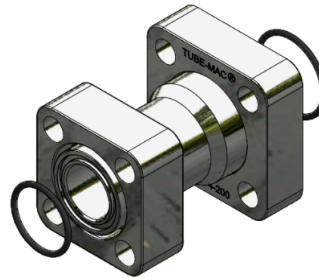
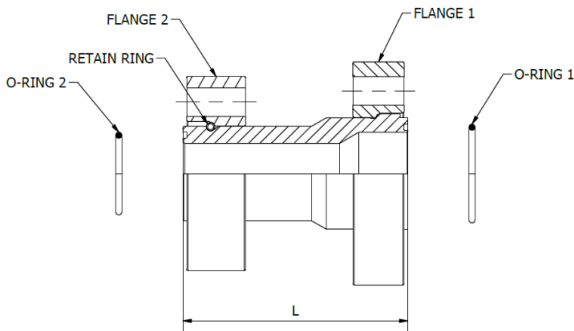
Ordering Example: A/RFBH-150-FC74-FC74-SS-V



3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Concentric Reducer Assembly

DIN 400 bar (ISO 6164)



Complete Assembly Consists Of:

- One (1) Concentric Reducer Body
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CR – Retain Ring Flange Concentric Reducer Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L						
2" x 1-1/2"	A/CR-200x150-FC74-FC74-*^-^	5.26 (133.6)	OR^-3-928	OR^-3-924	9.64 (4.38)	CR-200x150-*^-^	3.74 (1.70)	5800 (400)
2-1/2" x 1-1/2"	A/CR-250x150-FC74-FC74-*^-^	6.06 (153.9)	OR^-2-232	OR^-2-924	12.53 (5.70)	CR-250x150-*^-^	4.67 (2.12)	5800 (400)
2-1/2" x 2"	A/CR-250x200-FC74-FC74-*^-^	6.06 (153.9)	OR^-2-232	OR^-2-928	13.42 (6.10)	CR-250x200-*^-^	5.20 (2.36)	5800 (400)
3" x 1-1/2"	A/CR-300x150-FC74-FC74-*^-^	6.50 (165.1)	OR^-2-237	OR^-2-924	18.17 (8.26)	CR-300x150-*^-^	6.58 (2.99)	5800 (400)
3" x 2"	A/CR-300x200-FC74-FC74-*^-^	6.98 (177.3)	OR^-2-237	OR^-2-928	19.65 (8.93)	CR-300x200-*^-^	7.70 (3.49)	5800 (400)
3" x 2-1/2"	A/CR-300x250-FC74-FC74-*^-^	6.98 (177.3)	OR^-2-237	OR^-2-232	22.42 (10.198)	CR-300x250-*^-^	8.50 (3.86)	5800 (400)
4" x 2"	A/CR-400x200-FC74-FC74-*^-^	7.76 (197.1)	OR^-2-241	OR^-2-928	30.91 (14.05)	CR-400x200-*^-^	12.95 (20.7)	5800 (400)
4" x 2-1/2"	A/CR-400x250-FC74-FC74-*^-^	7.76 (197.1)	OR^-2-241	OR^-2-232	34.03 (15.47)	CR-400x250-*^-^	14.10 (6.40)	5800 (400)
4" x 3"	A/CR-400x300-FC74-FC74-*^-^	7.76 (197.1)	OR^-2-241	OR^-2-237	38.21 (17.37)	CR-400x300-*^-^	14.50 (6.58)	5800 (400)

Flange Options:

Standard, FC74 = ISO 6164 Clearance Flange.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

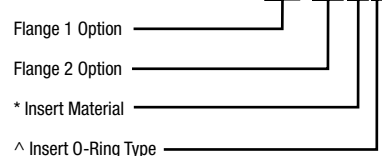
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

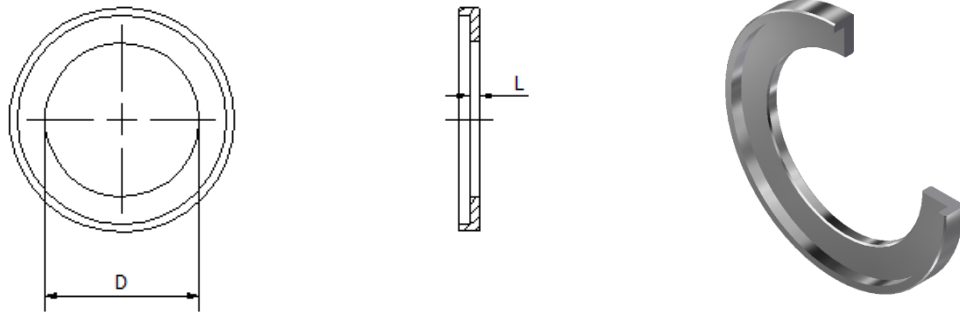
V = Viton.

Ordering Example: A/CR-200x150-FC74-FC74-SS-V



ISO 6164, 400 bar O-Ring Connector Plate

DIN 400 (ISO 6164)



OCP - O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	OCP-150-*	1.50 (38.1)	0.13 (3.3)	0.11 (0.05)
2"	OCP-200-*	1.94 (49.3)	0.13 (3.3)	0.13 (0.06)
2-1/2"	OCP-250-*	2.36 (59.9)	0.13 (3.3)	0.18 (0.08)
3"	OCP-300-*	2.88 (73.2)	0.13 (3.3)	0.26 (0.12)
4"	OCP-400-*	3.35 (85.1)	0.13 (3.3)	0.34 (0.15)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc * Insert Material _____
 Nickel Plated.

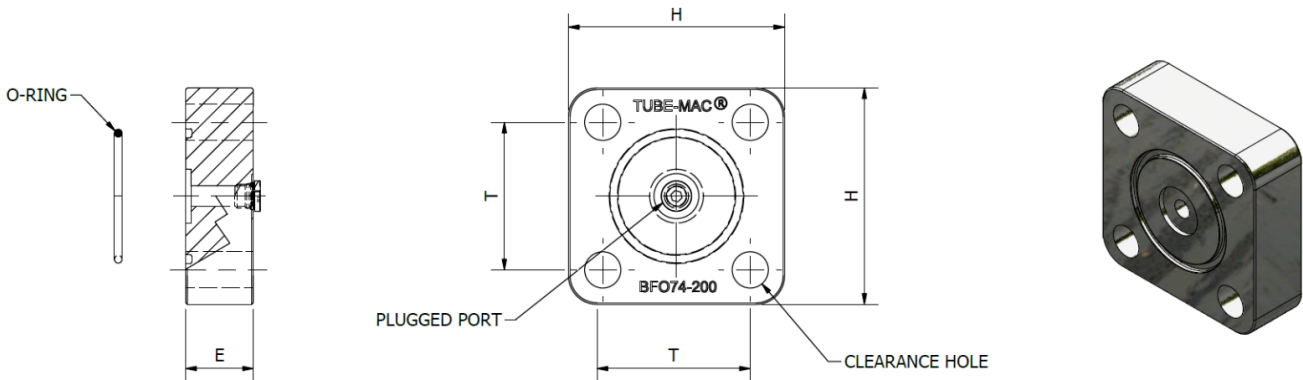
SS = Stainless Steel, Type 316.

Ordering Example: OCP-200-SS

3D step models available upon request

ISO 6164, 400 bar Blanking Flange O-Ring Face with Clearance Holes

DIN 400 (ISO 6164)



BF074 – Blanking Flange O-Ring Face with Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Bolt Size UNC	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E				
1-1/2"	BF074-150-*^-^	2.37	3.50	1.38	5/8"	OR^-3-924	5800 (400)	3.79 (1.72)
2"	BF074-200-*^-^	2.73	4.00	1.18	5/8"	OR^-3-928	5800 (400)	4.34 (1.97)
2-1/2"	BF074-250-*^-^	3.29	4.72	1.48	3/4"	OR^-2-232	5800 (400)	8.71 (3.96)
3"	BF074-300-*^-^	4.04	5.91	1.73	1"	OR^-2-237	5800 (400)	16.00 (7.28)
4"	BF074-400-*^-^	4.87	7.00	1.98	1 1/8"	OR^-2-241	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: BF074-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

BFOM74 – Blanking Flange O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Bolt Size	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E				
1-1/2"	BFOM74-150-*^-^	60.1	88.9	35.0	M16	OR^-3-924	5800 (400)	3.79 (1.72)
2"	BFOM74-200-*^-^	69.3	101.6	29.9	M16	OR^-3-928	5800 (400)	4.34 (1.97)
2-1/2"	BFOM74-250-*^-^	83.5	119.9	37.6	M20	OR^-2-232	5800 (400)	8.71 (3.96)
3"	BFOM74-300-*^-^	102.5	150.1	43.9	M24	OR^-2-237	5800 (400)	16.00 (7.28)
4"	BFOM74-400-*^-^	123.7	177.8	50.3	M30	OR^-2-241	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: BFOM74-200-SS-V

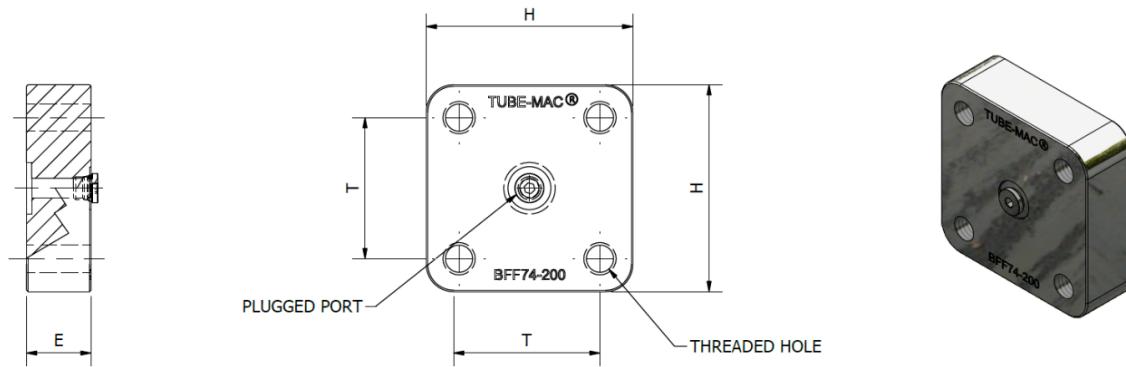
* Insert Material _____

^ Insert O-Ring 2 Type _____

ISO 6164, 400 bar Blanking Flange

Flat Face with Threaded Holes

DIN 400 (ISO 6164)



BFF74 – Blanking Flange Flat Face with Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Thread UNC-2B	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E			
1-1/2"	BFF74-150-*	2.37	3.50	1.38	5/8"-11	5800 (400)	3.79 (1.72)
2"	BFF74-200-*	2.73	4.00	1.18	5/8"-11	5800 (400)	4.34 (1.97)
2-1/2"	BFF74-250-*	3.29	4.72	1.48	3/4"-10	5800 (400)	8.71 (3.96)
3"	BFF74-300-*	4.04	5.91	1.73	1"-8	5800 (400)	16.00 (7.28)
4"	BFF74-400-*	4.87	7.00	1.98	1 1/8"-7	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFF74-200-SS

* Insert Material _____

BFFM74 – Blanking Flange O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Thread	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E			
1-1/2"	BFFM74-150-*	60.1	88.9	35.0	M16x2.00	5800 (400)	3.79 (1.72)
2"	BFFM74-200-*	69.3	101.6	29.9	M16x2.00	5800 (400)	4.34 (1.97)
2-1/2"	BFFM74-250-*	83.5	119.9	37.6	M20x2.50	5800 (400)	8.71 (3.96)
3"	BFFM74-300-*	102.5	150.1	43.9	M24x3.00	5800 (400)	16.00 (7.28)
4"	BFFM74-400-*	123.7	177.8	50.3	M30x3.50	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFFM74-200-SS

* Insert Material _____

3D step models available upon request

TUBE-MAC.com

Introduction

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16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

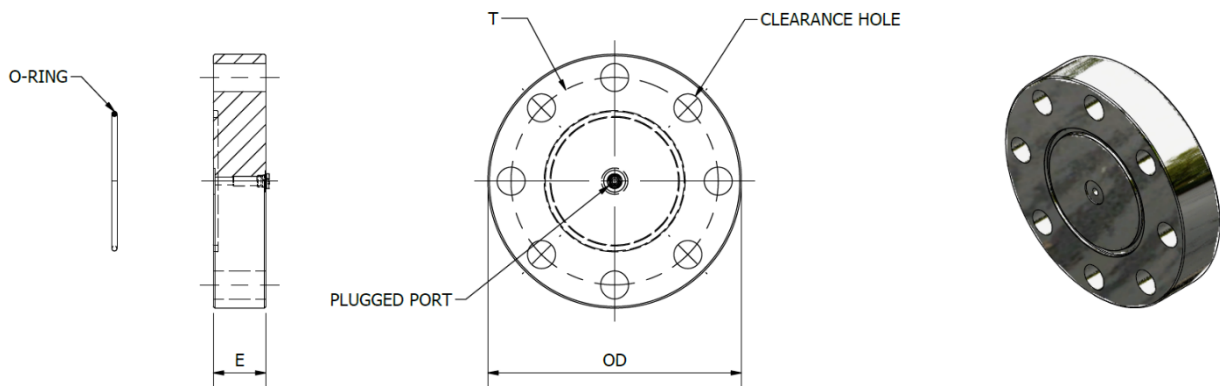
Clamp Supports - Heavy Series

Valves, Ball and Check

J71

Blanking Flange O-Ring Face with Clearance Holes

TMI® 8-Bolt and 10" TMI® 12-Bolt



BFO48 – Blanking Flange TMI® 8-Bolt O-Ring Face with Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Bolt Size UNC	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E				
4-1/2"	BFO48-450-*~^	6.89	8.43	1.97	3/4"	OR^~2-245	5000 (350)	28.90 (13.14)
5"	BFO48-500-*~^	8.07	9.65	2.00	1"	OR^~2-353	5000 (350)	37.84 (17.20)
6"	BFO48-600-*~^	9.65	11.81	2.31	1-1/8"	OR^~2-359	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFO48-800-290BC-*~^	11.42	13.78	3.00	1-1/8"	OR^~2-368	5000 (350)	122.76 (55.80)
8"	BFO48-800-*~^	12.40	15.13	3.00	1-1/2"	OR^~2-368	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BF0412-1000-*~^	14.76	17.75	3.80	1-1/2"	OR^~2-241	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: BFO48-600-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

BFOM48 – Blanking Flange TMI® 8-Bolt O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Bolt Size	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E				
4-1/2"	BFOM48-450-*~^	175.0	214.0	50.0	M20	OR^~2-245	5000 (350)	28.90 (13.14)
5"	BFOM48-500-*~^	205.0	245.0	50.8	M24	OR^~2-353	5000 (350)	37.84 (17.20)
6"	BFOM48-600-*~^	245.0	300.0	58.7	M30	OR^~2-359	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFOM48-800-290BC*~^	290.0	350.0	76.2	M30	OR^~2-368	5000 (350)	122.76 (55.80)
8"	BFOM48-800-*~^	315.0	385.0	76.2	M36	OR^~2-368	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFOM412-1000-*~^	375.0	450.0	96.5	M36	OR^~2-241	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

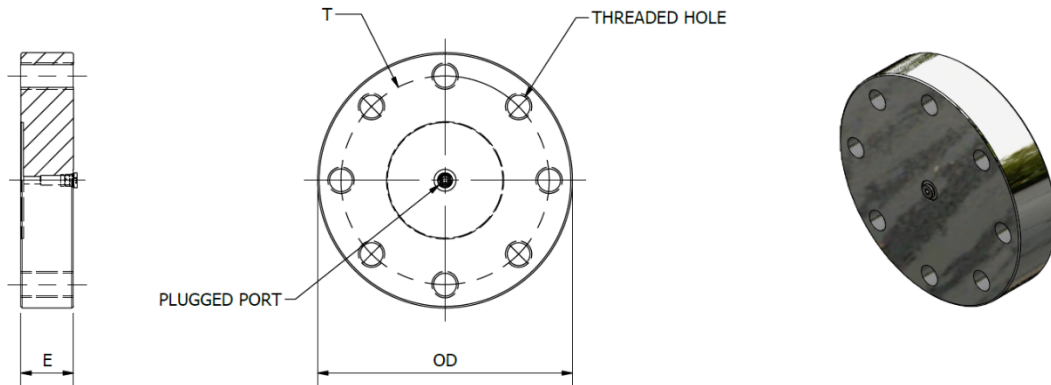
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: BFOM48-600-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

Blanking Flange O-Ring Face with Threaded Holes

TMI® 8-Bolt and 10" TMI® 12-Bolt



BFF48 – Blanking Flange TMI® 8-Bolt Flat Face with Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Thread UNC	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E			
4-1/2"	BFF48-450-*	6.89	8.43	1.97	3/4"-10	5000 (350)	28.90 (13.14)
5"	BFF48-500-*	8.07	9.65	2.00	1"-8	5000 (350)	37.84 (17.20)
6"	BFF48-600-*	9.65	11.81	2.31	1-1/8"-7	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFF48-800-290BC-*	11.42	13.78	3.00	1-1/8"-7	5000 (350)	122.76 (55.80)
8"	BFF48-800-*	12.40	15.13	3.00	1-1/2"-6	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFF412-1000-*	14.76	17.75	3.80	1-1/2"-6	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

Ordering Example: BFF48-600-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

* Insert Material

BFFM48 – Blanking Flange TMI® 8-Bolt Flat Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Thread	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E			
4-1/2"	BFFM48-450-*	175.0	214.0	50.0	M20x2.5	5000 (350)	28.90 (13.14)
5"	BFFM48-500-*	205.0	245.0	50.8	M24x3.0	5000 (350)	37.84 (17.20)
6"	BFFM48-600-*	245.0	300.0	58.7	M30x3.5	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFFM48-800-290BC*	290.0	350.0	76.2	M30x3.5	5000 (350)	122.76 (55.80)
8"	BFFM48-800-*	315.0	385.0	76.2	M36x4.0	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFFM412-1000-*	375.0	450.0	96.5	M36x4.0	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

Ordering Example: BFFM48-600-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

* Insert Material

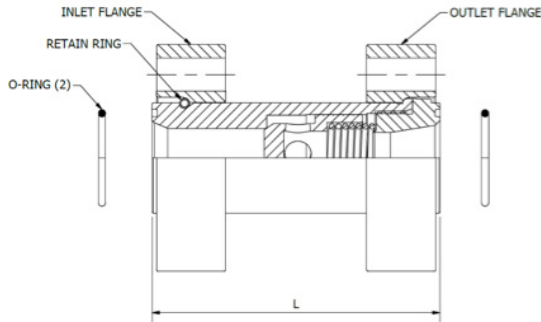
^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

3D step models available upon request

ISO 6164, 400 bar Check Valve Retain Ring Flange Style Complete Assembly

DIN 400 (ISO 6164)



Complete Assembly Consists Of:

- One (1) Check Valve Body – Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CV Check Valve Complete with Buna O-Rings (Standard)

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
1-1/2"	A/CV-150-FC74-FC74-07-*-*^	5.76 (146.3)	OR^3-924	9.80 (4.45)	CV-150-07-*-*^	4.25 (1.93)	5800 (400)
2"	A/CV-200-FC74-FC74-07-*-*^	6.74 (171.2)	OR^3-928	11.88 (5.40)	CV-200-07-*-*^	5.62 (2.55)	5800 (400)
2-1/2"	A/CV-250-FC74-FC74-07-*-*^	7.14 (181.4)	OR^2-232	19.18(8.72)	CV-250-07-*-*^	8.99 (2.45)	5800 (400)
3"	A/CV-300-FC74-FC74-07-*-*^	7.53 (191.3)	OR^2-237	31.36 (14.25)	CV-300-07-*-*^	13.66 (6.21)	5800 (400)

Flange Option:

Standard, FC74 = ISO 6164 Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

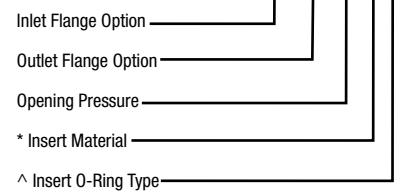
Standard, No Designation = Buna Nitrile.

V = Viton.

Opening Pressure

	PSI (bar)
Standard	07 (0.5)
Optional	21 (1.5)
Optional	43 (3.0)

Ordering Example: A/CV-200-FC74-FC74-07-SS-V



ISO 6164, 400 bar Check Valve Performance Curves

DIN 400 (ISO 6164)

Chart 1: Measured using oil at 190SUS and 122° F

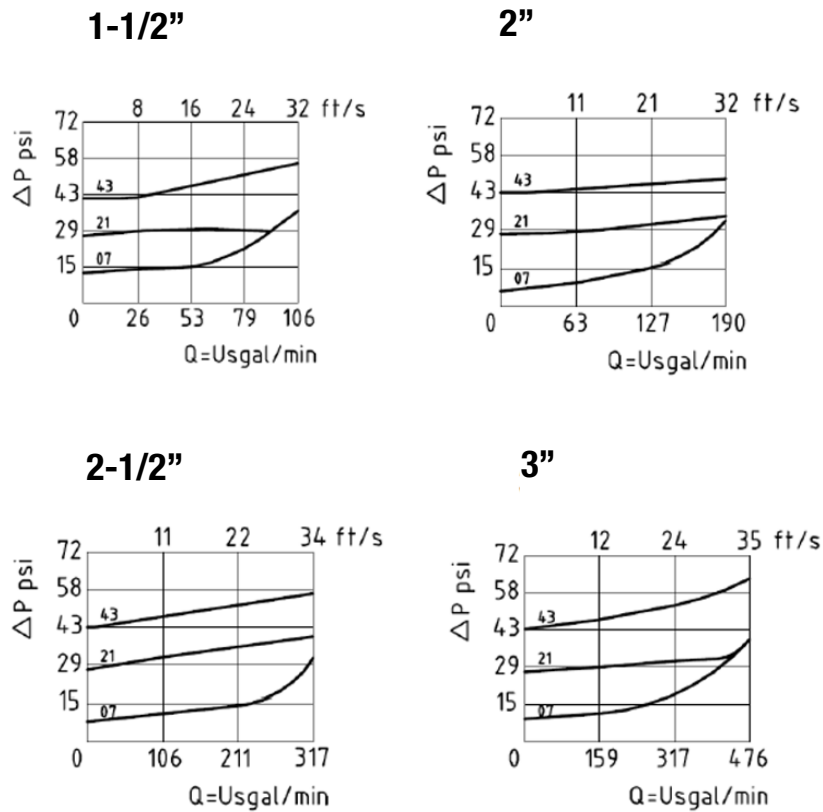
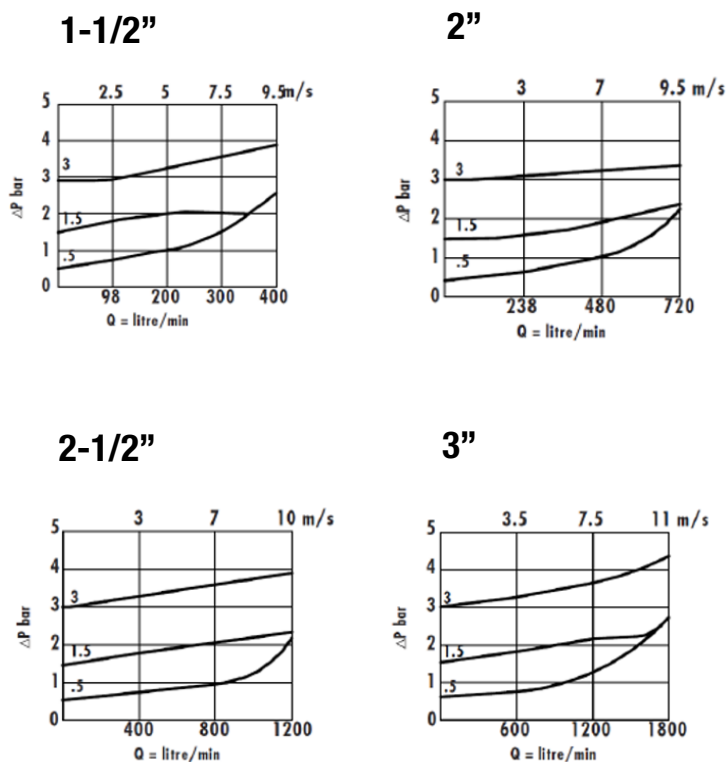


Chart 2: Measured using oil at 190SUS and 50° C



3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

