




# SAE 1000 PSI, 70 bar Reference Guide

					
<p><b>Flare Flange Dimensions</b></p> Page F1	<p><b>Flare Flange Clearance Holes NPS</b> FFC14, FFC34, FFC16, FFC18 Page F2</p>	<p><b>Flare Flange Clearance Holes Metric</b> FFCM14, FFCM34, FFCM16, FFCM18 Page F2</p>	<p><b>Flare Flange Threaded Holes NPS, Metric</b> FFT14, FFTM14 Page F3</p>	<p><b>Flare Flange Set O-Ring Face Cone Clearance Holes NPS</b> FFC14-CO Page F4</p>	<p><b>Flare Flange Set O-Ring Face Cone Clearance Holes Metric</b> FFCM14-CO Page F5</p>
					
<p><b>Flare Flange Set Flat Face Cone Clearance Holes NPS</b> FFC14-CF Page F6</p>	<p><b>Flare Flange Set Flat Face Cone Clearance Holes Metric</b> FFCM14-CF Page F7</p>	<p><b>Flare Flange Set Double Cone Clearance Holes NPS</b> FFC14-CD Page F8</p>	<p><b>Flare Flange Set Double Cone Clearance Holes Metric</b> FFCM14-CD Page F9</p>	<p><b>Flare Flange Cone Inserts NPS</b> CO, CF, CD Page F10</p>	<p><b>Flare Flange Cone Inserts with Pilot Port NPS</b> COP, CFP Page F11</p>
					
<p><b>Flare Flange Cone Inserts Metric</b> CO, CF, CD Page F12</p>	<p><b>Flare Flange Cone Inserts with Pilot Port Metric</b> COP, CFP Page F13</p>	<p><b>Low Pressure Retain Ring Flange Dimensions</b></p> Page F14	<p><b>Low Pressure Retain Ring Flange Clearance Holes</b> RFC14 Page F15</p>	<p><b>Low Pressure Butt Weld Adapter O-ring Face, NPS</b> A/LBWA0 Page F16</p>	<p><b>Low Pressure Butt Weld Adapter Flat Face, NPS</b> A/LBWA F Page F17</p>
					
<p><b>Low Pressure Butt Weld Adapter O-ring Face, Metric</b> A/LBWA F Page F18</p>	<p><b>Low Pressure Butt Weld Adapter Flat Face, Metric</b> A/LBWA F Page F19</p>	<p><b>Low Pressure Retain Ring</b></p> LR Page F20	<p><b>Low Pressure O-ring Connector to Hose End</b> LOCP Page F21</p>	<p><b>Low Pressure O-ring Face Pilot Tee Between NPS, Metric</b> LPPT, LPPTM Page F22</p>	<p><b>Low Pressure Flat Face Pilot Tee Between NPS, Metric</b> LPPT F, LPPTFM Page F23</p>
					
<p><b>Low Pressure BSPF Female Thread Adapter</b> A/LFBTA Page F24</p>	<p><b>Low Pressure Flare Flange Pipe Assembly NPS, Metric</b> LPAF Page F25, F26</p>	<p><b>Low Pressure Flare Flange Bent Pipe Assembly NPS</b> LBPAF Page F27, F28</p>	<p><b>Low Pressure Flare Flange Bent Pipe Assembly Metric</b> LBPAF Page F29, F30</p>	<p><b>Low Pressure Retain Ring Pipe Assembly NPS, Metric</b> LPAF Page F31, F32</p>	<p><b>Low Pressure Retain Ring Bent Pipe Assembly NPS</b> LBPAF Page F33, F34</p>

# SAE 1000 PSI, 70 bar Reference Guide



**Low Pressure Retain Ring Bent Pipe Assembly Metric BPAF**  
Page F35, F36



**Low Pressure Retain Ring Flange Bend Elbow A/LRE**  
Page F37



**Block Elbow NPS, Metric BE34, BEM34**  
Page F38



**Low Pressure Retain Ring Flange Tee A/LRT**  
Page F39



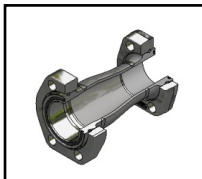
**Block Tee NPS, Metric BT34, BTM34**  
Page F40



**Reducing Branch Block Tee NPS, Metric BTR34, BTRM34**  
Page F41



**Transition Plate Reducer Manifold Mount NPS, Metric TPRO34, TPROM34**  
Page F42



**Low Pressure Retain Ring Flange Reducer A/LLR**  
Page F43



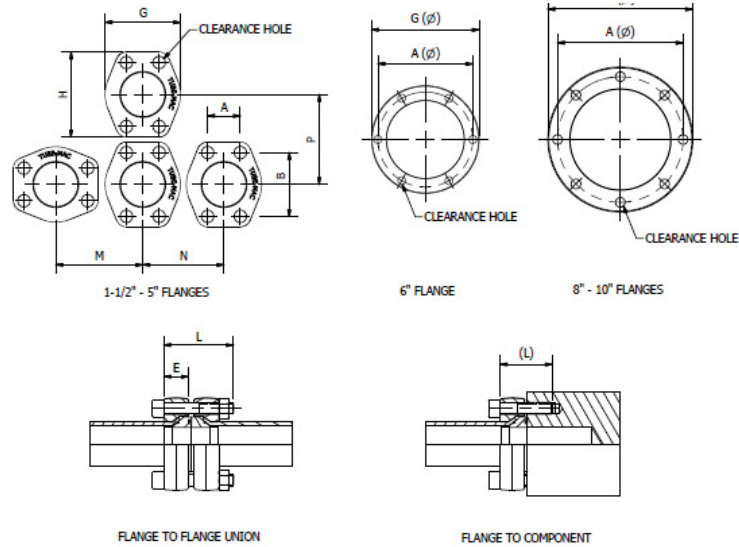
**Blanking Flange O-Ring Face with Clearance Holes, NPS, Metric BFO, BFOM**  
Page F44



**Blanking Flange Flat Face with Threaded Holes, NPS, Metric BFFO, BFFM**  
Page F45

# SAE 1000 PSI Flare Flange Dimensions

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



## Flare Flange Dimensions, NPS

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	0.79	1/2"-13 UNC x 3.00 (2.00)	1000 (70)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	0.98	1/2"-13 UNC x 3.50 (2.00)	1000 (70)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	1.18	1/2"-13 UNC x 4.00 (2.50)	1000 (70)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.18	5/8"-11 UNC x 4.50 (2.75)	1000 (70)
3-1/2"	2.75	4.75	5.50	6.00	5.85	5.60	6.15	1.18	5/8"-11 UNC x 5.00 (2.50)	1000 (70)
4"	3.06	5.13	6.00	6.38	6.30	6.10	6.50	1.44	5/8"-11 UNC x 4.00 (2.75)	1000 (70)
5"	3.63	6.00	7.12	7.24	7.28	7.20	7.32	1.58	5/8"-11 UNC x 4.75 (2.75)	1000 (70)
6"	8.19	-	9.29	-	9.79	9.79	9.79	1.58	5/8"-11 UNC x 4.75 (2.75)	725 (50)
8"	10.83	-	12.48	-	13.00	13.00	13.00	1.58	3/4"-10 UNC x 4.75 (2.75)	725 (50)
10"	13.58	-	16.14	-	16.60	16.60	16.60	2.00	3/4"-10 UNC x 5.50 (3.00)	725 (50)

### \* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 - B8M Class.1

For 3/4" SS Bolts and larger ASTM A-193-B8M Class.2

## Flare Flange Dimensions, Metric

Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	20	M12 x 75 (50)	1000 (70)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	25	M12 x 90 (50)	1000 (70)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	30	M12 x 100 (65)	1000 (70)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	30	M16 x 120 (70)	1000 (70)
3-1/2"	69.9	120.7	139.7	152.4	148.6	142.2	156.2	30	M16 x 130 (65)	1000 (70)
4"	77.7	130.3	152.4	162.1	160.0	154.9	165.1	39	M16 x 100 (70)	1000 (70)
5"	92.1	152.4	180.0	184.0	185.0	183.0	186.0	39	M16 x 120 (70)	1000 (70)
6"	208.0	-	236.0	-	249.0	249.0	249.0	39	M16 x 120 (70)	725 (50)
8"	275.0	-	317.0	-	330.0	330.0	330.0	39	M20 x 120 (70)	725 (50)
10"	345.0	-	410.0	-	422.0	422.0	422.0	50	M20 x 140 (80)	725 (50)

### \* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8

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

M16 and M20 SS Bolts, A4-80 DIN 912/ISO 4762

3D step models available upon request

# SAE 1000 PSI Flare Flange with Clearance Holes

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



1-1/2" - 5" FLANGES



6" FLANGE



8" - 10" FLANGES

FFC14, FFC34, FFC16, FFC18 - Flare Flange with Clearance Holes, NPS				
Size	Pipe O.D. in. (mm)	Standard Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	1.900" (48.26)	FFC14-150-*	1000 (70)	1.10 (0.50)
2"	2.375" (60.33)	FFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	2.875" (70.03)	FFC14-250-*	1000 (70)	2.17 (0.99)
3"	3.500" (88.90)	FFC14-300-*	1000 (70)	3.80 (1.73)
3-1/2"	4.000" (101.6)	FFC14-350-*	1000 (70)	4.38 (1.99)
4"	4.500" (114.30)	FFC34-400-*	1000 (70)	8.61 (3.91)
5"	5.563" (141.30)	FFC34-500-*	1000 (70)	9.80 (4.45)
6"	6.625" (168.28)	FFC16-600-*	725 (50)	10.50 (4.77)
8"	8.625" (219.08)	FFC18-800-*	725 (50)	23.20 (10.55)
10"	10.750" (273.05)	FFC18-1000-*	725 (50)	51.30 (23.32)

**\* Materials:**

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

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFC14-150-SS

\* Insert Material

FFCM14, FFCM34, FFCM16, FFCM18 - Flare Flange with Clearance Holes, Metric				
Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	50	FFCM14-150-50MM-*	1000 (70)	1.10 (0.50)
2"	60	FFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	75	FFCM14-250-75MM-*	1000 (70)	2.17 (0.99)
3"	90	FFCM14-300-90MM-*	1000 (70)	3.80 (1.73)
3-1-2"	100	FFCM14-350-100MM-*	1000 (70)	4.38 (1.99)
4"	115	FFC34-400-*	1000 (70)	8.61 (3.91)
5"	140	FFCM34-500-140MM-*	1000 (70)	9.80 (4.45)
6"	165	FFCM16-600-165MM-*	725 (50)	10.50 (4.77)
8"	220	FFCM18-800-220MM-*	725 (50)	23.20 (10.55)
10"	273	FFC18-1000-*	725 (50)	51.30 (23.32)

**\* Materials:**

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

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

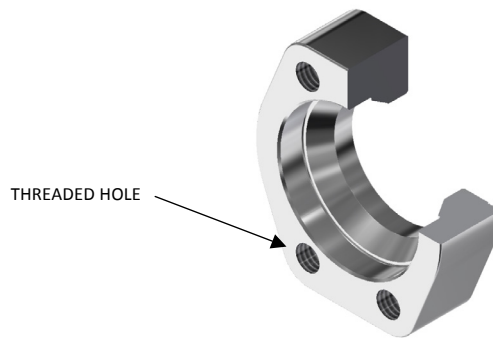
Ordering Example: FFCM14-150-50MM-SS

\* Insert Material

3D step models available upon request

# SAE 1000 PSI Flare Flange with Threaded Holes

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



## FFT14 - Flare Flange with Threaded Holes, NPS

Size	Pipe O.D. in (mm)	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)
1-1/2"	1.900" (48.26)	FFT14-150-*	1000 (70)	1.10 (0.50)
2"	2.375" (60.33)	FFT14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	2.875" (70.03)	FFT14-250-*	1000 (70)	2.17 (0.99)
3"	3.500" (88.90)	FFT14-300-*	1000 (70)	3.80 (1.73)

**\* Materials:**

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

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFT14-200-SS

\* Insert Material

## FFTM14 - Flare Flange with Threaded Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)
1-1/2"	50	FFTM14-150-50MM-*	1000 (70)	1.10 (0.50)
2"	60	FFTM14-200-60MM*	1000 (70)	1.90 (0.86)
2-1/2"	75	FFTM14-250-75MM*	1000 (70)	2.17 (0.99)
3"	90	FFTM14-300-90MM*	1000 (70)	3.80 (1.73)

**\* Materials:**

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

HDG = Carbon Steel, Hot Dip Galvanized.

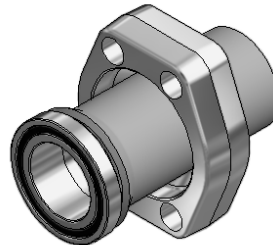
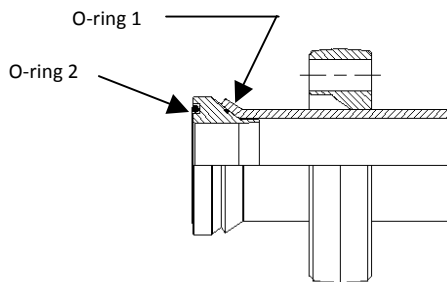
SS = Stainless Steel, Type 316.

Ordering Example: FFTM14-200-60MMSS

\* Insert Material

# SAE 1000 PSI Flare Flange Set O-Ring Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



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 F1)

## FFC14-CO, FFC34-CO, FFC16-CO, FFC18-CO - Flare Flange Set O-Ring Face 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" SCH40	FFC14-CO-SCH40-150-*^-^	1.93 (0.88)	FFC14-150-*	CO-SCH40-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH80	FFC14-CO-SCH80-150-*^-^	1.93 (0.88)	FFC14-150-*	CO-SCH80-150-*^-^	ORV-4315	OR^-2-225
2"	2" SCH40	FFC14-CO-SCH40-200-*^-^	2.67 (1.21)	FFC14-200-*	CO-SCH40-200-*^-^	ORV-5615	OR^-2-228
2"	2" SCH80	FFC14-CO-SCH80-200-*^-^	2.67 (1.21)	FFC14-200-*	CO-SCH80-200-*^-^	ORV-5515	OR^-2-228
2-1/2"	2-1/2" SCH40	FFC14-CO-SCH40-250-*^-^	4.01 (1.82)	FFC14-250-*	CO-SCH40-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH80	FFC14-CO-SCH80-250-*^-^	4.01 (1.82)	FFC14-250-*	CO-SCH80-250-*^-^	ORV-2-036	OR^-2-232
3"	3" SCH40	FFC14-CO-SCH40-300-*^-^	6.33 (2.87)	FFC14-300-*	CO-SCH40-300-*^-^	ORV-2-041	OR^-2-237
3"	3" SCH80	FFC14-CO-SCH80-300-*^-^	6.33 (2.87)	FFC14-300-*	CO-SCH80-300-*^-^	ORV-2-041	OR^-2-237
3-1/2"	3-1/2" SCH40	FFC14-CO-SCH40-350-*^-^	6.60 (3.00)	FFC14-350-*	CO-SCH40-350-*^-^	ORV-2-043	OR^-2-241
4"	4" SCH40	FFC34-CO-SCH40-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-SCH40-400-*^-^	ORV-2-044	OR^-2-245
4"	4" SCH80	FFC34-CO-SCH80-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-SCH80-400-*^-^	ORV-2-044	OR^-2-245
5"	5" SCH40	FFC34-CO-SCH40-500-*^-^	12.20 (5.55)	FFC34-500-*	CO-SCH40-500-*^-^	ORV-2-159	OR^-2-253
6"	6" SCH40	FFC16-CO-SCH40-600-*^-^	14.20 (6.45)	FFC16-600-*	CO-SCH40-600-*^-^	ORV-2-163	OR^-2-259
8"	8" SCH40	FFC18-CO-SCH40-800-*^-^	30.30 (13.77)	FFC18-800-*	CO-SCH40-800-*^-^	ORV-2-171	OR^-3-372
10"	10" SCH40	FFC18-CO-SCH40-1000-*^-^	61.00 (27.73)	FFC18-1000-*	CO-SCH40-1000-*^-^	ORV-2-273	OR^-2-377

### \* Materials:

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

SS = 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.

### ^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: FFC14-CO-SCH40-200-SS-V\*

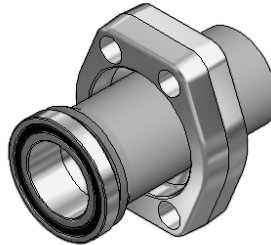
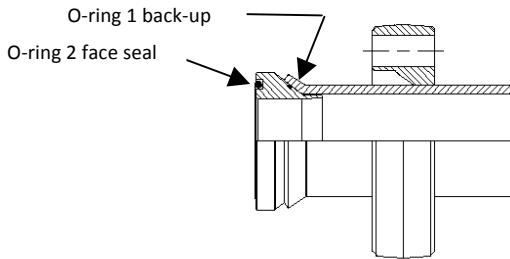
\*Insert Material \_\_\_\_\_

^ Insert O-Ring 2 Type \_\_\_\_\_

3D step models available upon request

# SAE 1000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



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 F1)

## FFCM14-CO, FFCM34-CO, FFCM16-CO, FFCM18-CO - Flare Flange Set O-Ring Face 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"	50x3.0	FFCM14-CO-50x3.0-150-*^-^	1.91 (0.87)	FFCM34-150-50MM-*	CO-50x3.0-150-*^-^	ORV-4715	OR^-2-225
2"	60x3.0	FFC14-CO-60x3.0-200-*^-^	2.63 (1.20)	FFC14-200-*	CO-60x3.0-200-*^-^	ORV-5715	OR^-2-228
2-1/2"	75x3.0	FFCM14-CO-75x3.0-250-*^-^	4.07 (1.85)	FFCM14-250-75MM-*	CO-75x3.0-250-*^-^	ORV-2-037	OR^-2-232
3"	90x3.5	FFCM14-CO-90x3.5-300-*^-^	5.92 (2.69)	FFCM14-300-90MM-*	CO-90x3.5-300-*^-^	ORV-2-041	OR^-2-237
3-1/2"	100x4.0	FFCM14-CO-100x4.0-250-*^-^	6.60 (3.00)	FFCM14-350-100MM-*	CO-100x4.0-350-*^-^	ORV-2-043	OR^-2-241
4"	115x4.0	FFC34-CO-115x4.0-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-115x4.0-400-*^-^	ORV-2-044	OR^-2-245
5"	140x4.5	FFCM34-CO-140x4.5-500-*^-^	12.20 (5.55)	FFCM34-500-140MM-*	CO-140x4.5-500-*^-^	ORV-2-159	OR^-2-253
6"	165x5.0	FFCM16-CO-165x5.0-600-*^-^	14.20 (6.45)	FFCM16-600-165MM-*^-^	CO-165x5.0-600-*^-^	ORV-2-163	OR^-2-259
8"	220x6.0	FFCM18-CO-220x6.0-800-*^-^	30.30 (13.77)	FFCM18-800-220MM-*^-^	CO-220x6.0-800-*^-^	ORV-2-171	OR^-3-372
10"	273x6.0	FFC18-CO-273x6.0-1000-*^-^	61.00 (27.73)	FFC18-1000-*^-^	CO-273x6.0-1000-*^-^	ORV-2-273	OR^-2-377

**\* Materials:**

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

SS = 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.

**^ O-Ring 2 Type:**

Standard, No Designation = Buna Nitrile.

V = Viton.

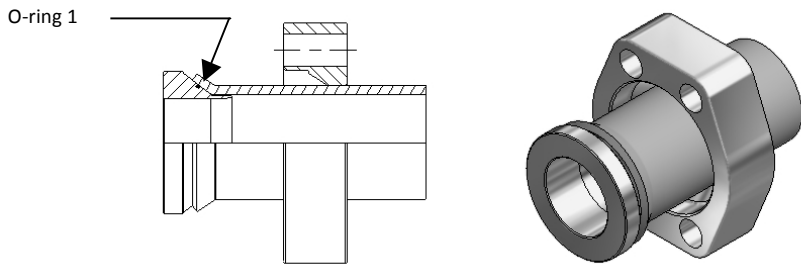
Ordering Example: FFCM14-CO-50x3.0-150-SS-V

\*Insert Material \_\_\_\_\_

^ Insert O-Ring 2 Type \_\_\_\_\_

# SAE 1000 PSI Flare Flange Set Flat Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



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 F1)

## FFC14-CF, FFC34-CF, FFC16-CF, FFC18-CF - Flare Flange Set Flat Face 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" SCH40	FFC14-CF-SCH40-150-*	1.93 (0.88)	FFC14-150-*	CF-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC14-CF-SCH80-150-*	1.93 (0.88)	FFC14-150-*	CF-SCH80-150-*	ORV-4315
2"	2" SCH40	FFC14-CF-SCH40-200-*	2.67 (1.21)	FFC14-200-*	CF-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC14-CF-SCH80-200-*	2.67 (1.21)	FFC14-200-*	CF-SCH80-200-*	ORV-5515
2-1/2"	2-1/2" SCH40	FFC14-CF-SCH40-250-*	4.01 (1.82)	FFC14-250-*	CF-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC14-CF-SCH80-250-*	4.01 (1.82)	FFC14-250-*	CF-SCH80-250-*	ORV-2-036
3"	3" SCH40	FFC14-CF-SCH40-300-*	6.33 (2.87)	FFC14-300-*	CF-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC14-CF-SCH80-300-*	6.33 (2.87)	FFC14-300-*	CF-SCH80-300-*	ORV-2-041
3-1/2"	3-1/2" SCH 40	FFC14-CF-SCH40-350-*	6.64 (3.02)	FFC14-350-*	CF-SCH40-350-*	ORV-2-043
4"	4" SCH40	FFC34-CF-SCH40-400-*	6.90 (3.13)	FFC34-400-*	CF-SCH40-400-*	ORV-2-044
4"	4" SCH80	FFC34-CF-SCH80-400-*	6.90 (3.13)	FFC34-400-*	CF-SCH80-400-*	ORV-2-044
5"	5" SCH40	FFC34-CF-SCH40-500-*	12.20 (5.55)	FFC34-500-*	CF-SCH40-500-*	ORV-2-159
6"	6" SCH40	FFC16-CF-SCH40-600-*	14.20 (6.45)	FFC16-600-*	CF-SCH40-600-*	ORV-2-163
8"	8" SCH40	FFC18-CF-SCH40-800-*	30.30 (13.77)	FFC18-800-*	CF-SCH40-800-*	ORV-2-171
10"	10" SCH40	FFC18-CF-SCH40-1000-*	61.00 (27.73)	FFC18-1000-*	CF-SCH40-1000-*	ORV-2-273

**\* Materials:**

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

SS = 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.

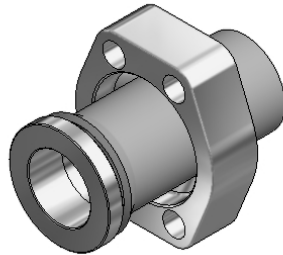
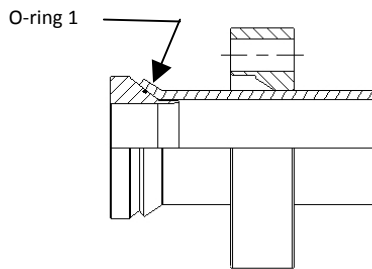
Ordering Example: FFC14-CF-SCH40-200-SS

\* Insert Material \_\_\_\_\_



# SAE 1000 PSI Flare Flange Set Flat Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



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 F1)

## FFCM14-CF, FFCM34-CF, FFCM16-CF, FFCM18-CF - Flare Flange Set Flat Face 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"	50x3.0	FFCM14-CF-50x3.0-150-*	1.93 (0.88)	FFCM14-150-50MM-*	CF-50x3.0-150-*	ORV-4715
2"	60x3.0	FFC14-CF-60x3.0-200-*	2.67 (1.21)	FFC14-200-*	CF-60x3.0-200-*	ORV-5715
2-1/2"	75x3.0	FFCM14-CF-75x3.0-250-*	4.01 (1.82)	FFCM14-250-75MM-*	CF-75x3.0-250-*	ORV-2-037
3"	90x3.5	FFCM14-CF-90x3.5-300-*	6.33 (2.87)	FFCM14-300-90MM-*	CF-90x3.5-300-*	ORV-2-041
3-1/2"	100x4.0	FFCM14-CF-100x4.0-350-*	6.64 (3.02)	FFCM14-350-100MM-*	CF-100x4.0-400-*	ORV-2-043
4"	115x4.0	FFC34-CF-115x4.0-400-*	6.93 (3.15)	FFC34-400-*	CF-115x4.0-400-*	ORV-2-044
5"	140x4.5	FFCM34-CF-140x4.5-500-*	12.25 (5.57)	FFCM34-500-140MM-*	CF-140x4.5-500-*	ORV-2-159
6"	165x5.0	FFCM16-CF-165x5.0-600-*	14.25 (6.47)	FFCM16-600-165MM-*	CF-165x5.0-600-*	ORV-2-163
8"	220x6.0	FFCM18-CF-220x6.0-800-*	30.38 (13.81)	FFCM18-800-220MM-*	CF-220x6.0-800-*	ORV-2-171
10"	273x6.0	FFC18-CF-273x6.0-1000-*	61.14 (27.80)	FFC18-1000-*	CF-273x6.0-1000-*	ORV-2-273

**\* Materials:**

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

SS = Stainless Steel, Type 316.

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

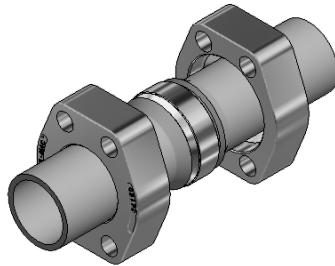
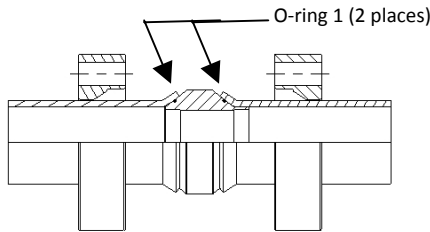
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM14-CF-50x3-150-SS

\* Insert Material \_\_\_\_\_

# SAE 1000 PSI Flare Flange Double Cone Union Set with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F1)

## FFC14-CD, FFC34-CD, FFC16-CD, FFC18-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" SCH40	FFC14-CD-SCH40-150-*	2.00 (0.91)	FFC14-150-*	CD-SCH40-150-*	ORV-4315
1-1/2"	1- 1/2" SCH80	FFC14-CD-SCH80-150-*	2.00 (0.91)	FFC14-150-*	CD-SCH80-150-*	ORV-4315
2"	2" SCH40	FFC14-CD-SCH40-200-*	2.90 (1.32)	FFC14-200-*	CD-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC14-CD-SCH80-200-*	2.90 (1.32)	FFC14-200-*	CD-SCH80-200-*	ORV-5515
2-1/2"	2-1/2" SCH40	FFC14-CD-SCH40-250-*	4.62 (2.10)	FFC14-250-*	CD-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC14-CD-SCH80-250-*	4.62 (2.10)	FFC14-250-*	CD-SCH80-250-*	ORV-2-036
3"	3" SCH40	FFC14-CD-SCH40-300-*	6.90 (3.13)	FFC14-300-*	CD-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC14-CD-SCH80-300-*	6.90 (3.13)	FFC14-300-*	CD-SCH80-300-*	ORV-2-041
3-1/2"	3-½" SCH40	FFC14-CD-SCH40-350-*	6.94 (3.15)	FFC14-350-*	CD-SCH40-350-*	ORV-2-043
4"	4" SCH40	FFC34-CD-SCH40-400-*	7.86 (3.57)	FFC34-400-*	CD-SCH40-400-*	ORV-2-044
4"	4" SCH80	FFC34-CD-SCH80-400-*	7.86 (3.57)	FFC34-400-*	CD-SCH80-400-*	ORV-2-044
5"	5" SCH40	FFC34-CD-SCH40-500-*	13.40 (6.09)	FFC34-500-*	CD-SCH40-500-*	ORV-2-159
6"	6" SCH40	FFC16-CD-SCH40-600-*	15.90 (7.23)	FFC14-600-*	CD-SCH40-600-*	ORV-2-259
8"	8" SCH40	FFC18-CD-SCH40-800-*	33.80 (15.36)	FFC14-800-*	CD-SCH40-800-*	ORV-2-372
10"	10" SCH40	FFC18-CD-SCH40-1000-*	66.10 (30.04)	FFC14-1000-*	CD-SCH40-1000-*	ORV-2-178

**\* Materials:**

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

SS = Stainless Steel, Type 316.

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

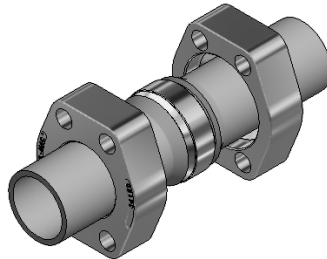
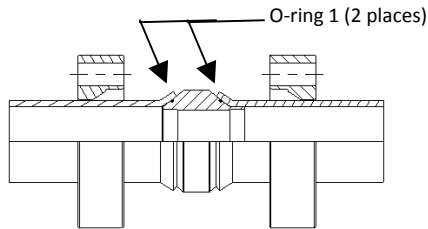
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC14-CD-SCH40-200-SS\*

\*Insert Material \_\_\_\_\_

# SAE 1000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F1)

## FFCM14-CD, FFCM34-CD, FFCM16-CD, FFCM18-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"	50x3.0	FFCM14-CD-50x3.0-150-*	2.00 (0.91)	FFCM14-150-*	CD-50x3.0-150-*	ORV-4715
2"	60x3.0	FFC14-CD-60x3.0-200-*	2.90 (1.32)	FFC14-200-*	CD-60x3.0-200-*	ORV-5715
2-1/2"	75x3.0	FFCM14-CD-75x3.0-250-*	4.62 (2.10)	FFCM14-250-*	CD-75x3.0-250-*	ORV-2-037
3"	90x3.5	FFCM14-CD-90x3.5-300-*	6.90 (3.13)	FFCM14-300-*	CD-90x3.5-300-*	ORV-2-041
3-1/2"	100x4.0	FFCM14-CD-100x4.0-350-*	6.94 (3.15)	FFCM14-350-*	CD-100x4.0-350-*	ORV-2-043
4"	115x4.0	FFC34-CD-115x4.0-400-*	7.86 (3.57)	FFC34-400-*	CD-115x4.0-400-*	ORV-2-044
5"	140x4.5	FFCM34-CD-140x4.5-500-*	13.40 (6.09)	FFCM34-500-*	CD-140x4.5-500-*	ORV-2-159
6"	165x5.0	FFCM16-CD-165x5.0-600-*	15.90 (7.23)	FFCM16-600-*	CD-165x5.0-600-*	ORV-2-163
8"	220x6.0	FFCM18-CD-220x6.0-800-*	33.80 (15.36)	FFCM18-800-*	CD-220x6.0-800-*	ORV-2-171
10"	273x6.0	FFC18-CD-273x6.0-1000-*	66.10 (30.04)	FFC18-1000-*	CD-273x6.0-1000-*	ORV-2-273

**\* Materials:**

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

SS = Stainless Steel, Type 316.

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

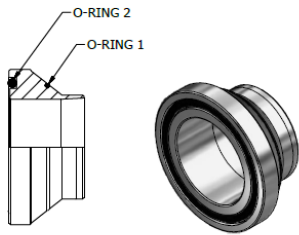
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM14-CD-50x3.0-150-SS

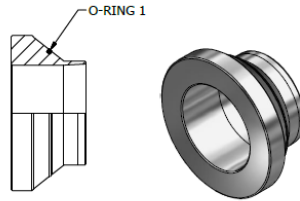
\*Insert Material \_\_\_\_\_

# SAE 1000 PSI Cone Inserts for Flare Flange Connections, NPS

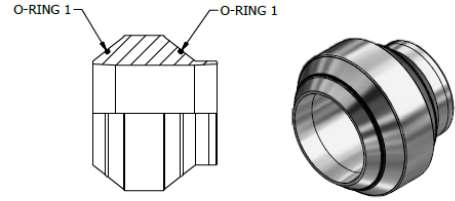
SAE J518 Code 61 (ISO 6162-1)



TYPE CO



TYPE CF



TYPE CD

## 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)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH40	CO-SCH40-150-*^	0.41 (0.19)	CF-SCH40-150-*	0.45 (0.20)	CD-SCH40-150-*	0.72 (0.33)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH80	CO-SCH80-150-*^	0.41 (0.19)	CF-SCH80-150-*	0.45 (0.20)	CD-SCH80-150-*	0.72 (0.33)	ORV-4315	OR^2-225
2"	2" SCH40	CO-SCH40-200-*^	0.47 (0.21)	CF-SCH40-200-*	0.52 (0.24)	CD-SCH40-200-*	0.84 (0.38)	ORV-5615	OR^2-228
2"	2" SCH80	CO-SCH80-200-*^	0.47 (0.21)	CF-SCH80-200-*	0.52 (0.24)	CD-SCH80-200-*	0.84 (0.38)	ORV-5515	OR^2-228
2-1/2"	2-1/2" SCH40	CO-SCH40-250-*^	0.99 (0.45)	CF-SCH40-250-*	1.01 (0.46)	CD-SCH40-250-*	1.60 (0.73)	ORV-2-036	OR^2-232
2-1/2"	2-1/2" SCH80	CO-SCH80-250-*^	0.99 (0.45)	CF-SCH80-250-*	1.01 (0.46)	CD-SCH80-250-*	1.60 (0.73)	ORV-2-036	OR^2-232
3"	3" SCH40	CO-SCH40-300-*^	1.33 (0.60)	CF-SCH40-300-*	1.39 (0.63)	CD-SCH40-300-*	2.17 (0.99)	ORV-2-041	OR^2-237
3"	3" SCH80	CO-SCH80-300-*^	1.33 (0.60)	CF-SCH80-300-*	1.39 (0.63)	CD-SCH80-300-*	2.17 (0.99)	ORV-2-041	OR^2-237
3-1/2"	3-1/2" SCH40	CO-SCH40-350-*^	1.50 (0.68)	CF-SCH40-350-*	1.60 (0.73)	CD-SCH40-350-*	2.50 (1.14)	ORV-2-043	OR^2-241
4"	4" SCH40	CO-SCH40-400-*^	1.80 (0.82)	CF-SCH40-400-*	1.90 (0.86)	CD-SCH40-400-*	3.00 (1.36)	ORV-2-044	OR^2-245
4"	4" SCH80	CO-SCH80-400-*^	1.80 (0.82)	CF-SCH80-400-*	1.90 (0.86)	CD-SCH80-400-*	3.00 (1.36)	ORV-2-044	OR^2-245
5"	5" SCH40	CO-SCH40-500-*^	2.40 (1.09)	CF-SCH40-500-*	2.50 (1.14)	CD-SCH40-500-*	3.90 (1.77)	ORV-2-159	OR^2-253
6"	6" SCH40	CO-SCH40-600-*^	4.70 (2.14)	CF-SCH40-600-*	4.80 (2.18)	CD-SCH40-600-*	7.40 (3.36)	ORV-2-163	OR^2-259
8"	8" SCH40	CO-SCH40-800-*^	7.10 (3.23)	CF-SCH40-800-*	7.30 (3.32)	CD-SCH40-800-*	11.68 (5.31)	ORV-2-171	OR^2-372
10"	10" SCH40	CO-SCH40-1000-*^	16.80 (7.64)	CF-SCH40-1000-*	17.00 (7.73)	CD-SCH40-1000-*	27.20 (12.36)	ORV-2-178	OR^2-377

### \* Materials:

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

### ^ O-Ring 2 Type

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

Ordering Example: CO-SCH40-200-SS-V

\* Insert Material \_\_\_\_\_

^ Insert O-Ring 2 Type \_\_\_\_\_

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

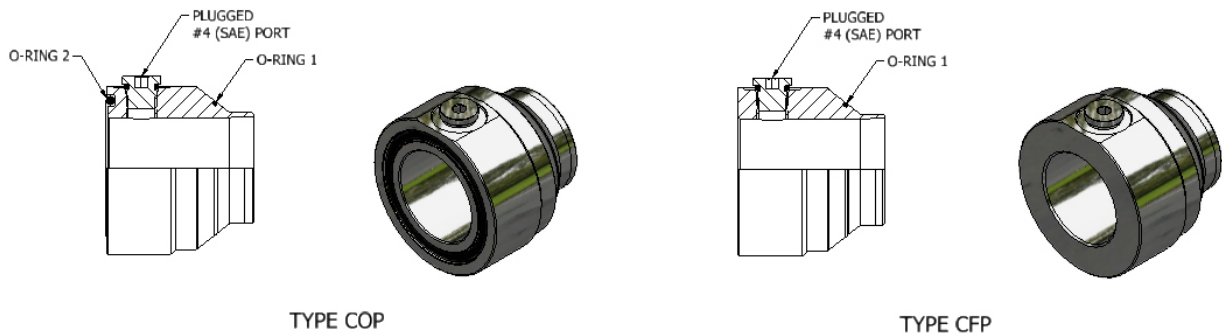
Clamp Supports - Heavy Series

Valves, Ball and Check

F10

# SAE 1000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, NPS

SAE J518 Code 61 (ISO 6162-1)



## COP and CFP Cone Inserts with Pilot Port for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH40	COP-SCH40-150-*^	1.31 (0.59)	CFP-SCH40-150-*	1.31 (0.59)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH80	COP-SCH80-150-*^	1.31 (0.59)	CFP-SCH80-150-*	1.31 (0.59)	ORV-4315	OR^2-225
2"	2" SCH40	COP-SCH40-200-*^	1.70 (0.77)	CFP-SCH40-200-*	1.70 (0.77)	ORV-5615	OR^2-228
2"	2" SCH80	COP-SCH80-200-*^	1.70 (0.77)	CFP-SCH80-200-*	1.70 (0.77)	ORV-5515	OR^2-228
2-1/2"	2-1/2" SCH40	COP-SCH40-250-*^	2.51 (1.14)	CFP-SCH40-250-*	2.51 (1.14)	ORV-2-036	OR^2-232
2-1/2"	2-1/2" SCH80	COP-SCH80-250-*^	2.51 (1.14)	CFP-SCH80-250-*	2.51 (1.14)	ORV-2-036	OR^2-232
3"	3" SCH40	COP-SCH40-300-*^	3.39 (1.54)	CFP-SCH40-300-*	3.39 (1.54)	ORV-2-041	OR^2-237
3"	3" SCH80	COP-SCH80-300-*^	3.39 (1.54)	CFP-SCH80-300-*	3.39 (1.54)	ORV-2-041	OR^2-237
3-1/2"	3-1/2" SCH40	COP-SCH40-350-*^	3.91 (1.78)	CFP-SCH40-350-*	3.91 (1.78)	ORV-2-043	OR^2-241
4"	4" SCH40	COP-SCH40-400-*^	4.70 (2.14)	CFP-SCH40-400-*	4.70 (2.14)	ORV-2-044	OR^2-245
4"	4" SCH80	COP-SCH80-400-*^	4.70 (2.14)	CFP-SCH80-400-*	4.70 (2.14)	ORV-2-044	OR^2-245
5"	5" SCH40	COP-SCH40-500-*^	6.11 (2.78)	CFP-SCH40-500-*	6.11 (2.78)	ORV-2-159	OR^2-253
6"	6" SCH40	COP-SCH40-600-*^	11.30 (5.14)	CFP-SCH40-600-*	11.30 (5.14)	ORV-2-163	OR^2-259
8"	8" SCH40	COP-SCH40-800-*^	14.85 (6.75)	CFP-SCH40-800-*	14.85 (6.75)	ORV-2-171	OR^3-372
10"	10" SCH40	COP-SCH40-1000-*^	32.29 (14.68)	CFP-SCH40-1000-*	32.29 (14.68)	ORV-2-178	OR^2-377

**\* Materials:**

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

**^ O-Ring 2 Type**

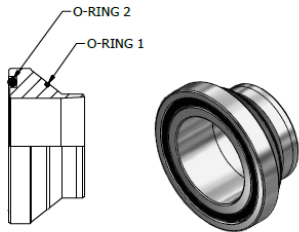
Standard, No Designation = Buna Nitrile.  
 V = Viton.

Ordering Example: COP-SCH40-200-SS-V

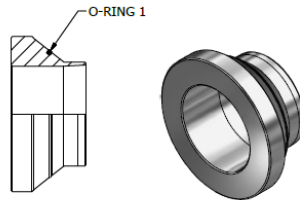
\* Insert Material \_\_\_\_\_  
 ^ Insert O-Ring 2 Type \_\_\_\_\_

# SAE 1000 PSI Cone Inserts for Flare Flange Connections, Metric

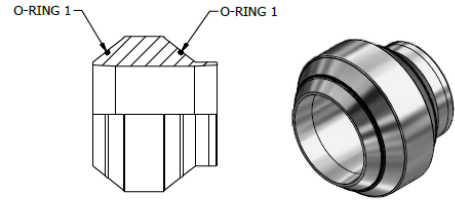
SAE J518 Code 61 (ISO 6162-1)



TYPE CO



TYPE CF



TYPE CD

## 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)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50x3.0	CO-50x3.0-150-* <sup>^</sup>	0.50 (0.23)	CF-50x3.0-150*	0.50 (0.23)	CD-50x3.0-150*	0.98 (0.45)	ORV-4715	OR <sup>^</sup> -2-225
2"	60x3.0	CO-60x3.0-200-* <sup>^</sup>	0.56 (0.25)	CF-60x3.0-200*	0.56 (0.25)	CD-60x3.0-200*	1.10 (0.50)	ORV-5715	OR <sup>^</sup> -2-228
2-1/2"	75x3.0	CO-75x3.0-250-* <sup>^</sup>	1.00 (0.45)	CF-75x3.0-250*	1.00 (0.45)	CD-75x3.0-250*	1.91 (0.87)	ORV-2-037	OR <sup>^</sup> -2-232
3"	90x3.5	CO-90x3.5-300-* <sup>^</sup>	1.50 (0.68)	CF-90x3.5-300*	1.50 (0.68)	CD-90x3.5-300*	2.70 (1.22)	ORV-2-041	OR <sup>^</sup> -2-237
3-1/2"	100x4.0	CO-100x4.0-350-* <sup>^</sup>	1.50 (0.68)	CF-100x4.0-350*	1.60 (0.73)	CD-100x4.0-350*	2.50 (1.14)	ORV-2-043	OR <sup>^</sup> -2-241
4"	115x4.0	CO-115x4.0-400-* <sup>^</sup>	1.80 (0.82)	CF-115x4.0-400*	1.90 (0.86)	CD-115x4.0-400*	3.00 (1.36)	ORV-2-044	OR <sup>^</sup> -2-245
5"	140x4.5	CO-140x4.5-500-* <sup>^</sup>	2.40 (1.09)	CF-140x4.5-500*	2.50 (1.14)	CD-140x4.5-500*	3.90 (1.77)	ORV-2-159	OR <sup>^</sup> -2-253
6"	165x5.0	CO-165x5.0-600-* <sup>^</sup>	4.70 (2.14)	CF-165x5.0-600*	4.80 (2.18)	CD-165x5.0-600*	7.40 (3.36)	ORV-2-163	OR <sup>^</sup> -2-259
8"	220x6.0	CO-220x6.0-800-* <sup>^</sup>	7.10 (3.23)	CF-220x6.0-800*	7.30 (3.32)	CD-220x6.0-800*	11.68 (5.31)	ORV-2-171	OR <sup>^</sup> -3-372
10"	273x6.0	CO-273x6.0-1000-* <sup>^</sup>	16.80 (7.64)	CF-273x6.0-1000*	17.00 (7.73)	CD-273x6.0-1000*	27.20 (12.36)	ORV-2-273	OR <sup>^</sup> -2-377

### \* Materials:

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

### <sup>^</sup> O-Ring 2 Type

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

Ordering Example: CO-SCH40-200-SS-V\*

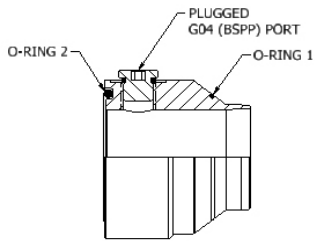
Insert Material \_\_\_\_\_

<sup>^</sup> Insert O-Ring 2 Type \_\_\_\_\_

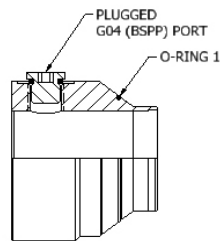
3D step models available upon request

# SAE 1000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



TYPE COP



TYPE CFP

## COP and CFP Metric Cone Inserts with Pilot Port for Flare Flange Connections

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50x3.0	COP-50x3.0-150-* <sup>^</sup>	1.31 (0.59)	CFP-50x3.0-150-*	1.31 (0.59)	ORV-4715	OR <sup>^</sup> -2-225
2"	60x3.0	COP-60x3.0-200-* <sup>^</sup>	1.70 (0.77)	CFP-60x3.0-200-*	1.70 (0.77)	ORV-5715	OR <sup>^</sup> -2-228
2-1/2"	75x3.0	COP-75x3.0-250-* <sup>^</sup>	2.60 (1.18)	CFP-75x3.0-250-*	2.60 (1.18)	ORV-2-037	OR <sup>^</sup> -2-232
3"	90x3.5	COP-90x3.5-300-* <sup>^</sup>	3.46 (1.57)	CFP-90x3.5-300-*	3.46 (1.57)	ORV-2-041	OR <sup>^</sup> -2-237
3-1/2"	100x4.0	COP-100x4.0-350-* <sup>^</sup>	3.60 (1.64)	CFP-100x4.0-350-*	3.60 (1.64)	ORV-2-043	OR <sup>^</sup> -2-241
4"	115x4.0	COP-115x4.0-400-* <sup>^</sup>	4.10 (1.86)	CFP-115x4.0-400-*	4.10 (1.86)	ORV-2-044	OR <sup>^</sup> -2-245
5"	140x4.5	COP-140x4.5-500-* <sup>^</sup>	5.00 (2.27)	CFP-140x4.5-500-*	5.00 (2.27)	ORV-2-159	OR <sup>^</sup> -2-253
6"	165x5.0	COP-165x5.0-600-* <sup>^</sup>	9.00 (4.10)	CFP-165x5.0-600-*	9.00 (4.10)	ORV-2-163	OR <sup>^</sup> -2-259
8"	220x6.0	COP-220x6.0-800-* <sup>^</sup>	13.20 (6.00)	CFP-220x6.0-800-*	13.20 (6.00)	ORV-2-171	OR <sup>^</sup> -3-372
10"	273x6.0	COP-273x6.0-1000-* <sup>^</sup>	28.70 (13.05)	CFP-273x6.0-1000-*	28.70 (13.05)	ORV-2-273	OR <sup>^</sup> -3-377

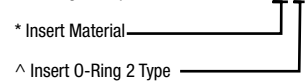
**\* Materials:**

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

**<sup>^</sup> O-Ring 2 Type**

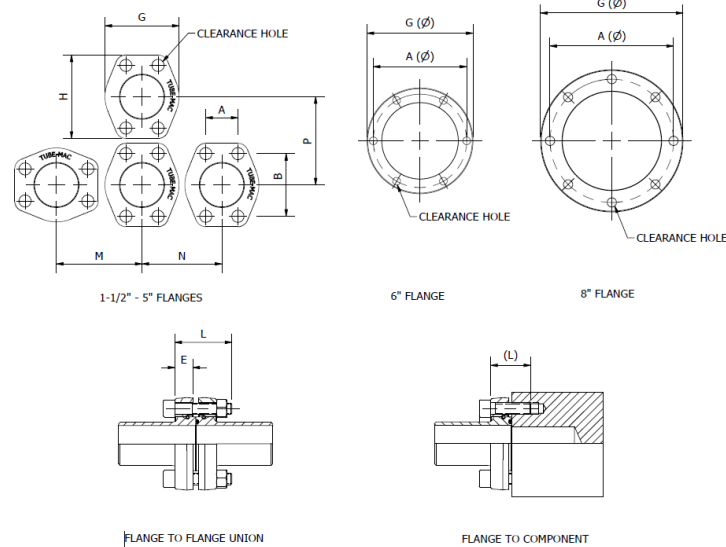
Standard, No Designation = Buna Nitrile.  
 V = Viton.

Ordering Example: COP-50x3.0-200-SS-V



# SAE 1000 PSI Retain Ring Flange Dimensions

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Retain Ring Flange Dimensions, NPS										
Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	0.79	1/2"-13 UNC x 3.00 (2.00)	1000 (70)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	0.79	1/2"-13 UNC x 3.50 (2.00)	1000 (70)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	0.79	1/2"-13 UNC x 4.00 (2.50)	1000 (70)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.00	5/8"-11 UNC x 4.50 (2.75)	1000 (70)
4"	3.06	5.13	6.00	6.38	6.30	6.10	6.50	1.18	5/8"-11 UNC x 4.00 (2.75)	1000 (70)
5"	3.63	6.00	7.09	7.24	7.28	7.20	7.32	1.57	5/8"-11 UNC x 4.75 (2.75)	1000 (70)
6"	8.19	-	9.29	-	-	-	-	1.57	5/8"-11 UNC x 4.75 (2.75)	725 (50)
8"	10.83	-	12.48	-	-	-	-	1.57	3/4"-10 UNC x 4.75 (2.75)	725 (50)

### \* SHCS Bolt Specification

Carbon Steel: ASTM A574/ SAE J429 Grade 8

316 Stainless Steel: ASTM A193 - B8M Class.1

Retain Ring Flange Dimensions, Metric										
Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	20	M12 x 75 (50)	1000 (70)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	20	M12 x 90 (50)	1000 (70)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	20	M12 x 100 (65)	1000 (70)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	25	M16 x 120 (70)	1000 (70)
4"	77.7	130.3	152.4	162.1	160.0	154.9	165.1	30	M16 x 100 (70)	1000 (70)
5"	92.1	152.4	180.0	184.0	185.0	183.0	186.0	40	M16 x 120 (70)	1000 (70)
6"	208.0	-	236.0	-	-	-	-	40	M16 x 120 (70)	725 (50)
8"	275.0	-	317.0	-	-	-	-	40	M20 x 120 (70)	725 (50)

### \* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8

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

3D step models available upon request



# SAE 1000 PSI Retain Ring Flange with Clearance Holes

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)

6" Flange Pattern TMI 6-bolt

8" Flange Pattern TMI 8-bolt



1-1/2" - 5" FLANGES



6" FLANGE



8" FLANGES

## RFC14, RFC34, RFC16, RFC18 - Flare Flange with Clearance Holes

Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	RFC14-150-*	1000 (70)	1.10 (0.50)
2"	RFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	RFC14-250-*	1000 (70)	2.17 (0.99)
3"	RFC14-300-*	1000 (70)	3.80 (1.73)
4"	RFC14-400-*	1000 (70)	8.61 (3.91)
5"	RFC14-500-*	1000 (70)	9.80 (4.45)
6"	RFC16-600-*	725 (50)	10.50 (4.77)
8"	RFC18-800-*	725 (50)	23.20 (10.55)

**\* Materials:**

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

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

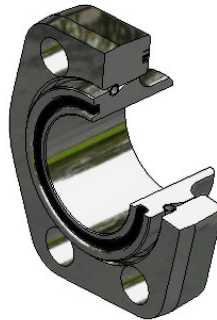
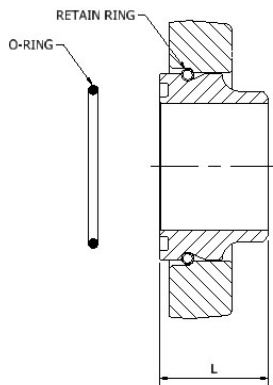
**Note:** Flanges can be used on NPS and Metric Low Pressure Butt Weld Adapters.

Ordering Example: RFC14-150-SS

\* Insert Material

# SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F14)

## A/LBWAO Low Pressure Butt Weld Adapter Assembly, O-Ring Face 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	Retain Ring (Stainless Steel) Part No.	"O" Ring (Buna) Part No.
1-1/2"	1-1/2" SCH10	A/LBWAO-SCH10-150-FC14-*	1.75 (0.80)	1.38	LBWAO-SCH10-150-*	RFC14-150-*	LR-150	OR*-2-225
1-1/2"	1-1/2" SCH40	A/LBWAO-SCH40-150-FC14-*	1.90 (0.86)	1.38	LBWAO-SCH40-150-*	RFC14-150-*	LR-150	OR*-2-225
2"	2" SCH10	A/LBWAO-SCH10-200-FC14-*	2.76 (1.25)	1.38	LBWAO-SCH10-200-*	RFC14-200-*	LR-200	OR*-2-228
2"	2" SCH40	A/LBWAO-SCH40-200-FC14-*	2.90 (1.32)	1.38	LBWAO-SCH40-200-*	RFC14-200-*	LR-200	OR*-2-228
2-1/2"	2-1/2" SCH10	A/LBWAO-SCH10-250-FC14-*	3.40 (1.55)	1.38	LBWAO-SCH10-250-*	RFC14-250-*	LR-250	OR*-2-232
2-1/2"	2-1/2" SCH40	A/LBWAO-SCH40-250-FC14-*	3.59 (1.63)	1.38	LBWAO-SCH40-250-*	RFC14-250-*	LR-250	OR*-2-232
3"	3" SCH10	A/LBWAO-SCH10-300-FC14-*	6.00 (2.73)	1.57	LBWAO-SCH10-300-*	RFC14-300-*	LR-300	OR*-2-237
3"	3" SCH40	A/LBWAO-SCH40-300-FC14-*	6.13 (2.79)	1.57	LBWAO-SCH40-300-*	RFC14-300-*	LR-300	OR*-2-237
4"	4" SCH10	A/LBWAO-SCH10-400-FC14-*	10.30 (4.68)	1.58	LBWAO-SCH10-400-*	RFC14-400-*	LR-400	OR*-2-245
4"	4" SCH40	A/LBWAO-SCH40-400-FC14-*	10.84 (4.93)	1.58	LBWAO-SCH40-400-*	RFC14-400-*	LR-400	OR*-2-245
5"	5" SCH10	A/LBWAO-SCH10-500-FC14-*	12.80 (5.82)	1.77	LBWAO-SCH10-500-*	RFC14-500-*	LR-500	OR*-2-253
5"	5" SCH40	A/LBWAO-SCH40-500-FC14-*	13.31 (6.05)	1.77	LBWAO-SCH40-500-*	RFC14-500-*	LR-500	OR*-2-253
6"	6" SCH10	A/LBWAO-SCH10-600-FC16-*	15.75 (15.60)	1.97	LBWAO-SCH10-600-*	RFC16-600-*	LR-600	OR*-2-259
6"	6" SCH40	A/LBWAO-SCH40-600-FC16-*	16.15 (7.34)	1.97	LBWAO-SCH40-600-*	RFC16-600-*	LR-600	OR*-2-259
8"	8" SCH10	A/LBWAO-SCH10-800-FC18-*	32.47 (14.76)	2.36	LBWAO-SCH10-800-*	RFC18-800-*	LR-800	OR*-2-372
8"	8" SCH40	A/LBWAO-SCH40-800-FC18-*	33.77 (15.35)	2.36	LBWAO-SCH40-800-*	RFC18-800-*	LR-800	OR*-2-372

**\* 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:**

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

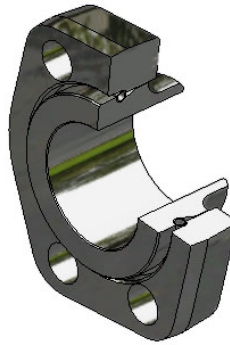
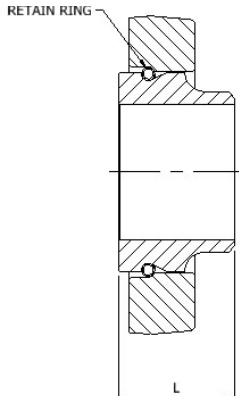
Ordering Example: A/LBWAO-SCH40-200-FC14-SS

\* Insert Material

3D step models available upon request

# SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F14)

## A/LBWF Low Pressure Butt Weld Adapter Assembly, Flat Face 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	Retain Ring (Stainless Steel) Part No.
1-1/2"	1-1/2" SCH10	A/LBWF-SCH10-150-FC14-*	1.87 (0.85)	1.38	LBWAF-SCH10-150-*	RFC14-150-*	LR-150
1-1/2"	1-1/2" SCH40	A/LBWF-SCH40-150-FC14-*	1.93 (0.88)	1.38	LBWAF-SCH40-150-*	RFC14-150-*	LR-150
2"	2" SCH10	A/LBWF-SCH10-200-FC14-*	2.86 (1.30)	1.38	LBWAF-SCH10-200-*	RFC14-200-*	LR-200
2"	2" SCH40	A/LBWF-SCH40-200-FC14-*	2.94 (1.33)	1.38	LBWAF-SCH40-200-*	RFC14-200-*	LR-200
2-1/2"	2-1/2" SCH10	A/LBWF-SCH10-250-FC14-*	3.53 (1.61)	1.38	LBWAF-SCH10-250-*	RFC14-250-*	LR-250
2-1/2"	2-1/2" SCH40	A/LBWF-SCH40-250-FC14-*	3.64 (1.66)	1.38	LBWAF-SCH40-250-*	RFC14-250-*	LR-250
3"	3" SCH10	A/LBWF-SCH10-300-FC14-*	6.05 (2.75)	1.57	LBWAF-SCH10-300-*	RFC14-300-*	LR-300
3"	3" SCH40	A/LBWF-SCH40-300-FC14-*	6.20 (2.82)	1.57	LBWAF-SCH40-300-*	RFC14-300-*	LR-300
4"	4" SCH10	A/LBWF-SCH10-400-FC14-*	10.72 (4.87)	1.58	LBWAF-SCH10-400-*	RFC14-400-*	LR-400
4"	4" SCH40	A/LBWF-SCH40-400-FC14-*	10.95 (4.98)	1.58	LBWAF-SCH40-400-*	RFC14-400-*	LR-400
5"	5" SCH10	A/LBWF-SCH10-500-FC14-*	13.13 (5.97)	1.77	LBWAF-SCH10-500-*	RFC14-500-*	LR-500
5"	5" SCH40	A/LBWF-SCH40-500-FC14-*	13.48 (6.13)	1.77	LBWAF-SCH40-500-*	RFC14-500-*	LR-500
6"	6" SCH10	A/LBWF-SCH10-600-FC16-*	15.85 (7.20)	1.97	LBWAF-SCH10-600-*	RFC16-600-*	LR-600
6"	6" SCH40	A/LBWF-SCH40-600-FC16-*	16.42 (7.46)	1.97	LBWAF-SCH40-600-*	RFC16-600-*	LR-600
8"	8" SCH10	A/LBWF-SCH10-800-FC18-*	33.22 (15.10)	2.36	LBWAF-SCH10-800-*	RFC18-800-*	LR-800
8"	8" SCH40	A/LBWF-SCH40-800-FC18-*	34.27 (15.58)	2.36	LBWAF-SCH40-800-*	RFC18-800-*	LR-800

**\* 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:**

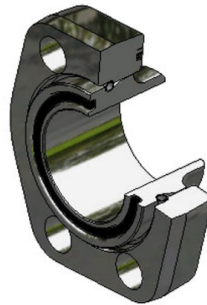
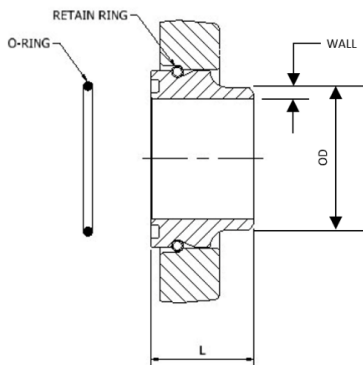
1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

Ordering Example: A/LBWF-SCH40-200-FC14-SS

\* Insert Material \_\_\_\_\_

# SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F14)

## A/LBWAO Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, Metric

Size	Pipe Size OD x wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.	"O" Ring (Buna) Part No.
1-1/2"	50 x 3.0	A/LBWAO-50x3-150-FC14-*	1.75 (0.80)	35	LBWAO-50x3-150-*	RFC14-150-*	LR-150	OR*-2-225
1-1/2"	50 x 5.0	A/LBWAO-50x5-150-FC14-*	1.90 (0.86)	35	LBWAO-50x5-150-*	RFC14-150-*	LR-150	OR*-2-225
2"	60 x 3.0	A/LBWAO-60x3-200-FC14-*	2.76 (1.25)	35	LBWAO-60x3-200-*	RFC14-200-*	LR-200	OR*-2-228
2"	60 x 5.0	A/LBWAO-60x5-200-FC14-*	2.90 (1.32)	35	LBWAO-60x5-200-*	RFC14-200-*	LR-200	OR*-2-228
2-1/2"	73 x 3.0	A/LBWAO-73x3-250-FC14-*	3.40 (1.55)	35	LBWAO-73x3-250-*	RFC14-250-*	LR-250	OR*-2-232
2-1/2"	75 x 3.0	A/LBWAO-75x3-250-FC14-*	3.59 (1.63)	35	LBWAO-75x3-250-*	RFC14-250-*	LR-250	OR*-2-232
3"	90 x 3.5	A/LBWAO-90x3.5-300-FC14-*	6.00 (2.73)	40	LBWAO-90x3.5-300-*	RFC14-300-*	LR-300	OR*-2-237
3"	90 x 5.0	A/LBWAO-90x5-300-FC14-*	6.13 (2.79)	40	LBWAO-90x5-300-*	RFC14-300-*	LR-300	OR*-2-237
4"	115 x 4.0	A/LBWAO-115x4-400-FC14-*	10.30 (4.68)	40	LBWAO-115x4-400-*	RFC14-400-*	LR-400	OR*-2-245
4"	114.3 x 4.5	A/LBWAO-114.3x4.5-400-FC14-*	10.84 (4.93)	40	LBWAO-114.3x4.5-400-*	RFC14-400-*	LR-400	OR*-2-245
5"	139.7 x 5.6	A/LBWAO-139.7x5.6-500-FC14-*	12.80 (5.82)	45	LBWAO-139.7x5.6-500-*	RFC14-500-*	LR-500	OR*-2-253
5"	140 x 4.5	A/LBWAO-140x4.5-500-FC14-*	13.31 (6.05)	45	LBWAO-140x4.5-500-*	RFC14-500-*	LR-500	OR*-2-253
6"	165 x 5.0	A/LBWAO-165x5-600-FC16-*	15.75 (15.60)	50	LBWAO-165x5-600-*	RFC16-600-*	LR-600	OR*-2-259
6"	168.3 x 7.1	A/LBWAO-SCH40-600-FC16-*	16.15 (7.34)	50	LBWAO-SCH40-600-*	RFC16-600-*	LR-600	OR*-2-259
8"	220 x 6.0	A/LBWAO-220x6-800-FC18-*	32.47 (14.76)	60	LBWAO-220x6-800-*	RFC18-800-*	LR-800	OR*-2-372
8"	219 x 8.18	A/LBWAO-SCH40-800-FC18-*	33.77 (15.35)	60	LBWAO-SCH40-800-*	RFC18-800-*	LR-800	OR*-2-372

**\* 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:**

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

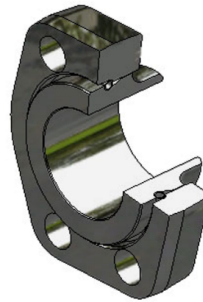
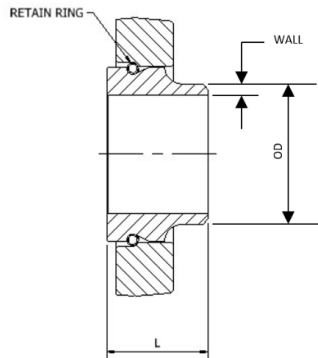
Ordering Example: A/LBWAO-60x3-200-FC14-SS

\* Insert Material \_\_\_\_\_

3D step models available upon request

# SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit (See Page F14)

## A/LBWF Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, Metric

Size	Pipe Size OD x wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.
1-1/2"	50 x 3.0	A/LBWF-50x3-150-FC14-*	1.87 (0.85)	35	LBWF-50x3-150-*	RFC14-150-*	LR-150
1-1/2"	50 x 5.0	A/LBWF-50x5-150-FC14-*	1.93 (0.88)	35	LBWF-50x5-150-*	RFC14-150-*	LR-150
2"	60 x 3.0	A/LBWF-60x3-200-FC14-*	2.86 (1.30)	35	LBWF-60x3-200-*	RFC14-200-*	LR-200
2"	60 x 5.0	A/LBWF-60x5-200-FC14-*	2.94 (1.33)	35	LBWF-60x5-200-*	RFC14-200-*	LR-200
2-1/2"	73 x 3.0	A/LBWF-73x3-250-FC14-*	3.53 (1.61)	35	LBWF-73x3-250-*	RFC14-250-*	LR-250
2-1/2"	75 x 3.0	A/LBWF-75x3-250-FC14-*	3.64 (1.66)	35	LBWF-75x3-250-*	RFC14-250-*	LR-250
3"	90 x 3.5	A/LBWAOF-90x3.5-300-FC14-*	6.05 (2.75)	40	LBWF-90x3.5-300-*	RFC14-300-*	LR-300
3"	90 x 5.0	A/LBWF-90x5-300-FC14-*	6.20 (2.82)	40	LBWF-90x5-300-*	RFC14-300-*	LR-300
4"	115 x 4.0	A/LBWF-115x4-400-FC14-*	10.72 (4.87)	40	LBWF-115x4-400-*	RFC14-400-*	LR-400
4"	114.3 x 4.5	A/LBWF-114.3x4.5-400-FC14-*	10.95 (4.98)	40	LBWF-114.3x4.5-400-*	RFC14-400-*	LR-400
5"	139.7 x 5.6	A/LBWF-139.7x5.6-500-FC14-*	13.13 (5.97)	45	LBWF-139.7x5.6-500-*	RFC14-500-*	LR-500
5"	140 x 4.5	A/LBWF-140x4.5-500-FC14-*	13.48 (6.13)	45	LBWF-140x4.5-500-*	RFC14-500-*	LR-500
6"	165 x 5.0	A/LBWF-165x5-600-FC16-*	15.85 (7.20)	50	LBWF-165x5-600-*	RFC16-600-*	LR-600
6"	168.3 x 7.1	A/LBWF-SCH40-600-FC16-*	16.42 (7.46)	50	LBWF-SCH40-600-*	RFC16-600-*	LR-600
8"	220 x 6.0	A/LBWF-220x6-800-FC18-*	33.22 (15.10)	60	LBWF-220x6-800-*	RFC18-800-*	LR-800
8"	219 x 8.18	A/LBWF-SCH40-800-FC18-*	34.27 (15.58)	60	LBWF-SCH40-800-*	RFC18-800-*	LR-800

**\* 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.

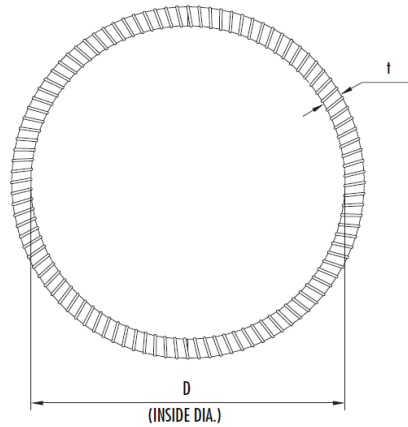
**Note:**

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

Ordering Example: A/LBWF-60x3-200-FC14-SS

\* Insert Material \_\_\_\_\_

# SAE 1000 PSI Low Pressure Retain Ring



Flange Dimensions , NPS				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1-1/2"	LR-150	2.165 (55)	.158 (4)	0.02 (0.01)
2"	LR-200	2.560 (65)	.158 (4)	0.03 (0.014)
2-1/2"	LR-250	2.992 (76)	.158 (4)	0.04 (0.02)
3"	LR-300	3.622 (92)	.197 (5)	0.09 (0.04)
4"	LR-400	4.685 (119)	.197 (5)	0.11 (0.05)
5"	LR-500	5.630 (143)	.236 (6)	0.19 (0.09)
6"	LR-600	6.811 (173)	.236 (6)	0.21 (0.10)
8"	LR-800	9.110 (231)	.315 (8)	0.59 (0.27)

**Materials:**  
Stainless Steel –AISI 316 Spring Temper

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

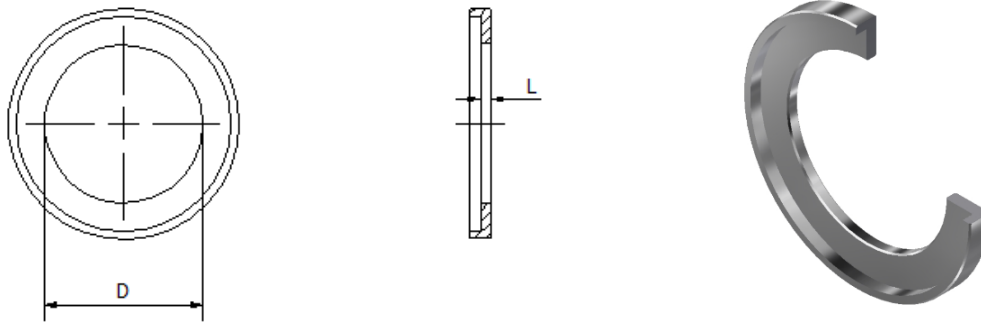
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

F20

# SAE 1000 PSI Low Pressure O-Ring Connector Plate



LOCP – Low Pressure O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LOCP-150-*	1.50 (38.1)	0.13 (3.18)	0.13 (0.06)
2"	LOCP-200-*	1.94 (49.3)	0.13 (3.18)	0.15 (0.07)
2-1/2"	LOCP-250-*	2.47 (62.74)	0.13 (3.18)	0.17 (0.08)
3"	LOCP-300-*	3.07 (78.00)	0.13 (3.18)	0.25 (0.11)
4"	LOCP-400-*	4.03 (102.36)	0.13 (3.18)	0.33 (0.15)
5"	LOCP-500-*	4.91 (124.71)	0.19 (4.75)	0.57 (0.26)
6"	LOCP-600-*	5.91 (150.00)	0.19 (4.75)	0.79 (0.36)
8"	LOCP-800-*	7.98 (202.69)	0.19 (4.75)	1.34 (0.61)

**\* Materials:**

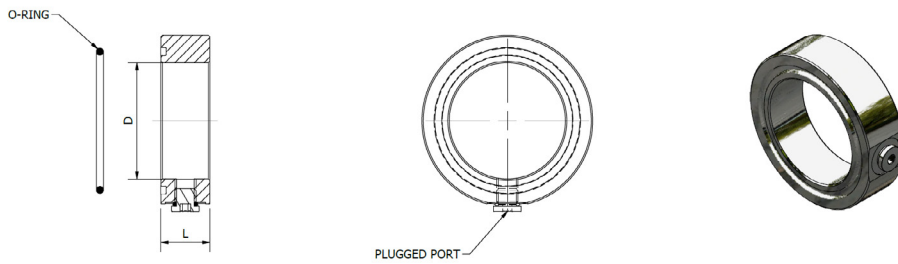
Standard, No Designation = All Carbon Steel,  
Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: LOCP-200-SS

\* Insert Material

# SAE 1000 PSI Low Pressure Pilot Tee Between



## LPPT – Low Pressure Pilot Tee Between with #4 SAE Port (Plugged), NPS

Size	Part Number	Dimensions in (mm)		O-Rings (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	LPPT-150-*^-^	1.61 (40.89)	1.00 (25.4)	OR^-3-924	86.9 (39.50)
2"	LPPT-200-*^-^	2.00 (50.08)	1.00 (25.4)	OR^-3-928	1.13 (0.54)
2-1/2"	LPPT-250-*^-^	2.50 (63.50)	1.00 (25.4)	OR^-2-232	1.47 (0.67)
3"	LPPT-300-*^-^	3.00 (76.20)	1.00 (25.4)	OR^-2-237	1.92 (0.87)
4"	LPPT-150-*^-^	4.00 (101.60)	1.00 (25.4)	OR^-2-245	2.69 (1.22)
5"	LPPT-200-*^-^	5.00 (127.00)	1.00 (25.4)	OR^-2-253	3.54 (1.61)
6"	LPPT-250-*^-^	6.00 (152.40)	1.00 (25.4)	OR^-2-259	4.08 (1.85)
8"	LPPT-300-*^-^	8.00 (203.20)	1.25 (31.75)	OR^-2-372	10.55 (4.80)

**\* 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: LPPT-200-SS-V

\* Insert Material

^ Insert O-Ring Type

## LPPTM – Low Pressure Pilot Tee Between with G 1/8 Port (Plugged), Metric

Size	Part Number	Dimensions in (mm)		O-Rings (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	LPPTM-150-*^-^	1.61 (40.89)	1.00 (25.4)	OR^-3-924	86.9 (39.50)
2"	LPPTM-200-*^-^	2.00 (50.08)	1.00 (25.4)	OR^-3-928	1.13 (0.54)
2-1/2"	LPPTM-250-*^-^	2.50 (63.50)	1.00 (25.4)	OR^-2-232	1.47 (0.67)
3"	LPPTM-300-*^-^	3.00 (76.20)	1.00 (25.4)	OR^-2-237	1.92 (0.87)
4"	LPPTM-150-*^-^	4.00 (101.60)	1.00 (25.4)	OR^-2-245	2.69 (1.22)
5"	LPPTM-200-*^-^	5.00 (127.00)	1.00 (25.4)	OR^-2-253	3.54 (1.61)
6"	LPPTM-250-*^-^	6.00 (152.40)	1.00 (25.4)	OR^-2-259	4.08 (1.85)
8"	LPPTM-300-*^-^	8.00 (203.20)	1.25 (31.75)	OR^-2-372	10.55 (4.80)

**\* 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: LPPTM-200-SS-V

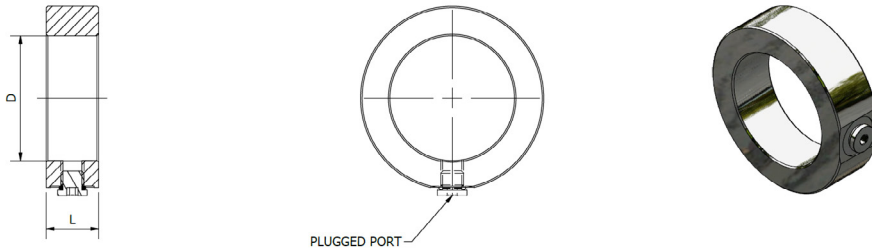
\* Insert Material

^ Insert O-Ring Type

3D step models available upon request



# SAE 1000 PSI Low Pressure Pilot Tee Between Flat Face



## LPPTF – Low Pressure Pilot Tee Between Flat Face with #4 SAE Port (Plugged), NPS

Size	Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LPPTF-150-*^-^	1.61 (40.89)	1.00 (25.4)	86.9 (39.50)
2"	LPPTF-200-*^-^	2.00 (50.08)	1.00 (25.4)	1.13 (0.54)
2-1/2"	LPPTF-250-*^-^	2.50 (63.50)	1.00 (25.4)	1.47 (0.67)
3"	LPPTF-300-*^-^	3.00 (76.20)	1.00 (25.4)	1.92 (0.87)
4"	LPPTF-150-*^-^	4.00 (101.60)	1.00 (25.4)	2.69 (1.22)
5"	LPPTF-200-*^-^	5.00 (127.00)	1.00 (25.4)	3.54 (1.61)
6"	LPPTF-250-*^-^	6.00 (152.40)	1.00 (25.4)	4.08 (1.85)
8"	LPPTF-300-*^-^	8.00 (203.20)	1.25 (31.75)	10.55 (4.80)

**\* Materials:**

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

SS = Stainless Steel, Type 316.

Ordering Example: LPPTF-200-SS-V

\* Insert Material

^ Insert O-Ring Type

**^ O-Ring Type:**

Standard, No Designation = Buna Nitrile.

V = Viton.

## LPPTFM – Low Pressure Pilot Tee Between Flat Face with G 1/8 Port (Plugged), Metric

Size	Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LPPTFM-150-*^-^	1.61 (40.89)	1.00 (25.4)	86.9 (39.50)
2"	LPPTFM-200-*^-^	2.00 (50.08)	1.00 (25.4)	1.13 (0.54)
2-1/2"	LPPTFM-250-*^-^	2.50 (63.50)	1.00 (25.4)	1.47 (0.67)
3"	LPPTFM-300-*^-^	3.00 (76.20)	1.00 (25.4)	1.92 (0.87)
4"	LPPTFM-150-*^-^	4.00 (101.60)	1.00 (25.4)	2.69 (1.22)
5"	LPPTFM-200-*^-^	5.00 (127.00)	1.00 (25.4)	3.54 (1.61)
6"	LPPTFM-250-*^-^	6.00 (152.40)	1.00 (25.4)	4.08 (1.85)
8"	LPPTFM-300-*^-^	8.00 (203.20)	1.25 (31.75)	10.55 (4.80)

**\* Materials:**

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

SS = Stainless Steel, Type 316.

Ordering Example: LPPTFM-200-SS-V

\* Insert Material

^ Insert O-Ring Type

**^ O-Ring Type:**

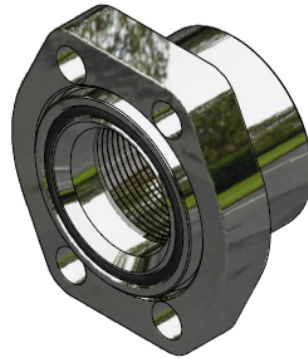
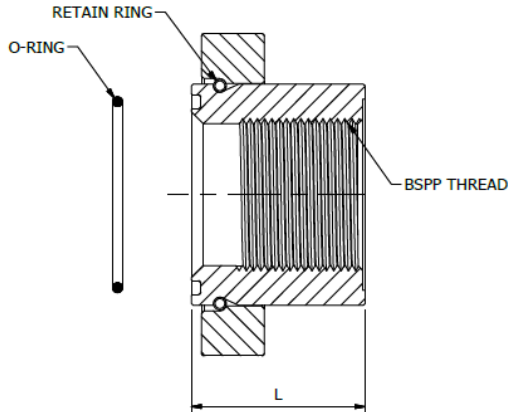
Standard, No Designation = Buna Nitrile.

V = Viton.

3D step models available upon request

# SAE 1000 PSI Low Pressure Female Thread Adapter, BSPP Complete Assembly

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



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 (See Page F14)

## A/LFBTA Low Pressure 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/LFBTA-150x125-FC14-*^-^	1.77 (45.00)	1 1/4"	OR^-2-225	0.99 (0.45)	LFBTA-150x125-*^-^	1.2 (0.54)		
2"x 1-1/2"	A/LFBTA-200x150-FC14-*^-^	2.17 (55.00)	1 1/2"	OR^-2-228	1.65 (0.75)	LFBTA-200x150-*^-^	2.0 (0.92)		
2-1/2"x 2"	A/LFBTA-250x200-FC14-*^-^	3.15 (80.00)	2"	OR^-2-232	3.35 (1.52)	LFBTA-250x200-*^-^	3.5 (1.59)		
3"x 2-1/2"	A/LFBTA-300x250-FC14-*^-^	3.35 (85.00)	2 1/2"	OR^-2-237	4.65 (2.11)	LFBTA-300x250-*^-^	4.8 (2.16)		

### Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

### \* Materials:

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

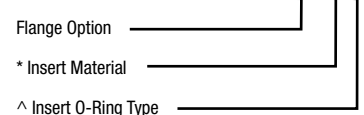
SS = Stainless Steel, Type 316.

### ^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/LFBTA-200x150-FC34-SS-V

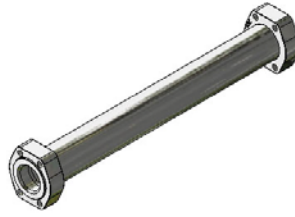
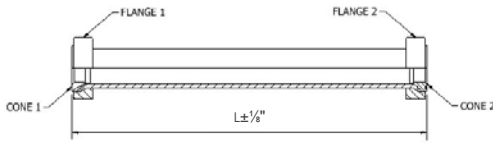


3D step models available upon request

# SAE 1000 PSI Flare Flange Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cone inserts
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LPAF</b>							
<b>Pipe &amp; Cone Material</b> Carbon Steel	<b>TMP52CD</b>	52							
	<b>◆◆TMP37CD</b>	37							
<b>Pipe &amp; Cone Material</b> Stainless Steel	<b>TMP304SS</b>	304							
	<b>TMP316SS</b>	316							
	<b>◆TMP2205SS</b>	2205							
<b>Pipe Size &amp; Schedule</b>	<b>1-1/2"</b>	SCH40-125							
		SCH80-125							
	<b>2"</b>	SCH40-200							
		SCH80-200							
	<b>2-1/2"</b>	SCH40-250							
		SCH80-250							
	<b>3"</b>	SCH40-300							
		SCH80-300							
	<b>4"</b>	SCH40-400							
		SCH80-400							
<b>5"</b>	SCH40-500								
<b>6"</b>	SCH40-600								
<b>8"</b>	SCH40-800								
<b>10"</b>	SCH40-1000								
<b>End Style</b>	Flat Face	CF							
	'O' Ring Face	CO							
<b>Length</b>	L	Specify (in.)							
<b>Options</b>	Viton	V							
	Painted (Specify)	P							
	Complete Stainless Steel Assembly: (including flanges)	SS							

**Note:**

TMP52CD (E355+N) PIPE IS AVAILBLE IN 1-1/2" UP TO 3" SCHEDULE 40 PIPE SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN 2 1/2" THROUGH 10" SCHEDULE 40 PIPE SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/52-SCH40150-CF-CO-240

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

# SAE 1000 PSI Flare Flange Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

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

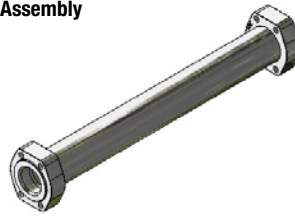
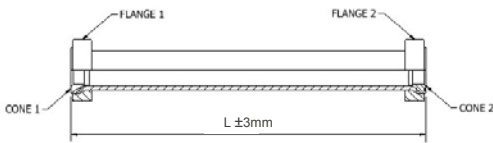
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

F26

Typical LPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cone inserts
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LPAF</b>							
<b>Pipe &amp; Cone Material</b>	Carbon Steel	◆◆TMP37CD	37						
<b>Pipe &amp; Cone Material</b>	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		◆TMP2205SS	2205						
<b>Pipe Size &amp; Schedule</b>	1-1/2"		50 x 3.0						
	2"		60 x 3.0						
	2-1/2"		75 x 3.0						
	3"		90 x 3.5						
	4"		115 x 4.0						
	5"		140 x 4.5						
	6"		165 x 5.0						
	8"		220 x 6.0						
10"		273 x 6.0							
<b>End Style</b>	Flat Face		CF						
	'O' Ring Face		CO						
<b>Length</b>	L		(mm)						
<b>Options</b>	Viton		V						
	Painted (Specify)		P						
	Complete Stainless Steel Assembly: (including flanges)		SS						

**Note:**

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/37-50x 3.0-150-CF-CO-6000

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

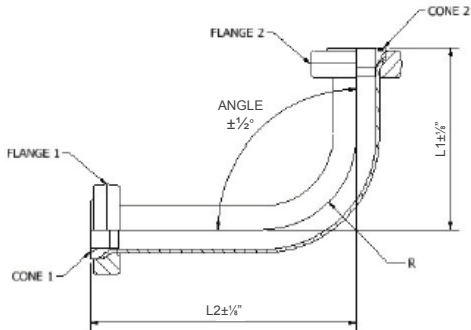
SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

3D step models available upon request

# SAE 1000 PSI Flare Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LBPAF Assembly



Complete assembly consists of:

- One (1) length of 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	13.50	9.50
2"	8.50	4.75	10.75	7.13	16.00	11.87
2-1/2"	9.75	5.75	12.63	8.63	18.00	14.38
3"	11.00	7.00	14.50	10.50	22.00	17.50
4"	-	-	17.50	13.50	26.50	22.50
5"	-	-	19.00	15.00	29.00	25.00
6"	-	-	22.00	18.00	34.00	30.00
8"	-	-	28.00	24.00	44.00	40.00
10"	-	-	34.00	30.00	54.00	50.00

**Note:**

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 4" AND ABOVE.
2. SIZES 5", 6", 8" AND 10" ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

# Flare Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Code		BPAF	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
<b>Bent Pipe Assembly - Flared</b>		<b>BPAF</b>									
<b>Pipe &amp; Cone Material</b> Carbon Steel	TMP52CD	52									
	♦♦TMP37CD	37									
<b>Pipe &amp; Cone Material</b> Stainless Steel	TMP304SS	304									
	TMP316SS	316									
	♦TMP2205SS	2205									
<b>Pipe Size &amp; Schedule</b>	1-1/2"	SCH40-150									
		SCH80-150									
	2"	SCH40-200									
		SCH80-200									
	2-1/2"	SCH40-250									
		SCH80-250									
	3"	SCH40-300									
		SCH80-300									
	4"	SCH40-400									
		SCH80-400									
5"	SCH40-500										
6"	SCH40-600										
8"	SCH40-800										
10"	SCH40-1000										
<b>End Type</b>	Flat Face	CF									
	'O' Ring Face	CO									
<b>Radius</b>	Factory Manufactured	R1									
	Factory Manufactured	R2									
	Field Manufactured	R3									
<b>Length</b>	L1	Specify (in)									
<b>Angle</b>	Max 90°	Specify (°)									
<b>Length</b>	L2	Specify (in)									
<b>Options</b>	Viton	V									
	Painted (Specify)	P									
	Complete Stainless Steel Assembly: (including flanges)	SS									

**Note:**

♦♦TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/52-SCH40-150-CO-CF-R1-25-90-11

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

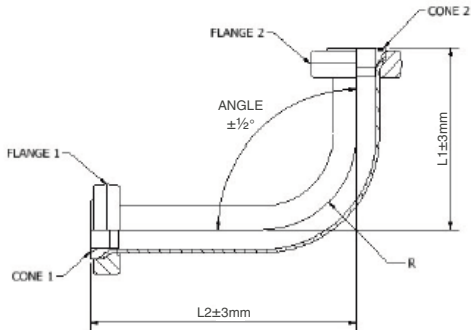
METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

3D step models available upon request

# SAE 1000 PSI Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LBPAF Assembly



Complete assembly consists of:

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

Pipe Size	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 3.0	1-1/2"	194	100	244	150	294	200
60 x 3.0	2"	215	120	275	180	335	240
75 x 3.0	2-1/2"	264	150	339	225	225	414
90 x 3.5	3"	294	180	384	270	474	360
115 x 4.0	4"	-	-	450	345	675	575
140 x 4.5	5"	-	-	530	420	800	700
165 x 5.0	6"	-	-	600	495	925	825
220 x 6.0	8"	-	-	710	610	1120	1016
273 x 6.0	10"	-	-	865	762	1370	1270

**Note:**

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 115mm AND ABOVE.
2. SIZES 140mm, 165mm, 220mm AND 273mm ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

# Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
<b>Bent Pipe Assembly - Flared</b>		<b>BPAF</b>										
<b>Pipe &amp; Cone Material</b> Carbon Steel	TMP52CD	52										
	♦♦TMP37CD	37										
<b>Pipe &amp; Cone Material</b> Stainless Steel	TMP304SS	304										
	TMP316SS	316										
	♦TMP2205SS	2205										
<b>Pipe Size &amp; Schedule</b>	1-1/2"	50x3.0										
	2"	60x3.0										
	2-1/2"	75x3.0										
	3"	90x3.5										
	4"	115x4.0										
	5"	140x4.5										
	6"	165x5.0										
	8"	220x6.0										
10"	273x6.0											
<b>End Type</b>	Flat Face	CF										
	'O' Ring Face	CO										
<b>Radius</b>	Factory Manufactured	R1										
	Factory Manufactured	R2										
	Field Manufactured	R3										
<b>Length</b>	L1	Specify (mm)										
<b>Angle</b>	Max 90°	Specify (°)										
<b>Length</b>	L2	Specify (mm)										
<b>Options</b>	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

**Note:**

TMP52CD (E355+N) PIPE IS AVAILABLE IN 50mm UP TO 115mm SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 50mm UP TO 273mm SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAF/52-50x3-CO-CF-R1-3175-90-292

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

3D step models available upon request

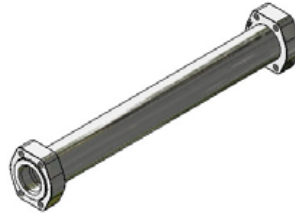
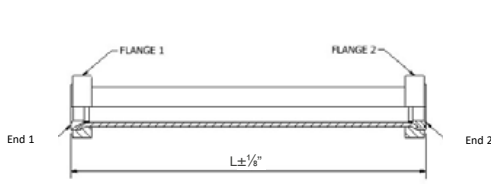
- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check



# SAE 1000 PSI Retain Ring Flange Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LPAR Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LPAR</b>							
<b>Pipe &amp; Cone Material</b>	Carbon Steel	TMP52CD	42						
		♦♦TMP37CD	37						
<b>Pipe &amp; Cone Material</b>	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		♦TMP2205SS	2205						
<b>Pipe Size &amp; Schedule</b>	1-1/2"	SCH40-125							
		SCH80-125							
	2"	SCH40-200							
		SCH80-200							
	2-1/2"	SCH40-250							
		SCH80-250							
	3"	SCH40-300							
		SCH80-300							
	4"	SCH40-400							
SCH80-400									
5"	SCH40-500								
	SCH40-600								
6"	SCH40-800								
	SCH40-1000								
<b>End Style</b>	Flat Face	LF							
	'O' Ring Face	LO							
<b>Length</b>	L	Specify (in.)							
<b>Options</b>	Viton	V							
	Painted (Specify)	P							
	Complete Stainless Steel Assembly: (including flanges)	SS							

**Note:**

TMP52CD (E355+N) PIPE IS AVAILABLE IN 1-1/2" UP TO 3" SCHEDULE 40 PIPE SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

♦♦TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAR/52-SCH40-150-LF-LO-240

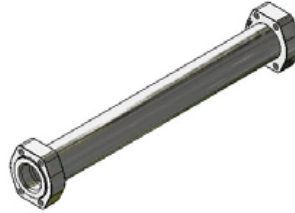
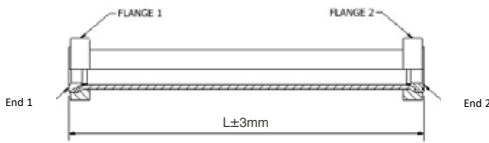
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

# SAE 1000 PSI Retain Ring Flange Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LPAR Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

		Code	LPAR	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LPAR</b>							
<b>Pipe &amp; Cone Material</b>	Carbon Steel	◆◆TMP37CD	37						
<b>Pipe &amp; Cone Material</b>	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		◆TMP2205SS	2205						
<b>Pipe Size &amp; Schedule</b>	1-1/2"		50 x 3.0						
	2"		60 x 3.0						
	2-1/2"		75 x 3.0						
	3"		90 x 3.5						
	4"		115 x 4.0						
	5"		140 x 4.5						
	6"		165 x 5.0						
	8"		220 x 6.0						
10"		273 x 6.0							
<b>End Style</b>	Flat Face		LF						
	'O' Ring Face		LO						
<b>Length</b>	L		(mm)						
<b>Options</b>	Viton		V						
	Painted (Specify)		P						
	Complete Stainless Steel Assembly: (including flanges)		SS						

**Note:**

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAR/37-50x3.0-150-LF-LO-6000

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE 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

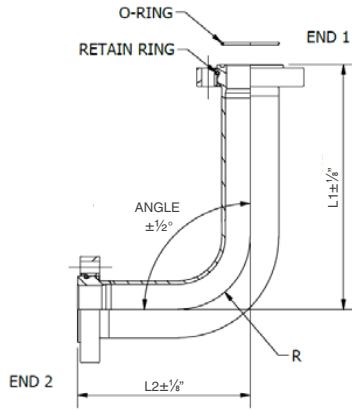
Clamp Supports - Heavy Series

Valves, Ball and Check

# SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LBPARG Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

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	13.50	9.50
2"	8.50	4.75	10.75	7.13	16.00	11.87
2-1/2"	9.75	5.75	12.63	8.63	18.00	14.38
3"	11.00	7.00	14.50	10.50	22.00	17.50
4"	-	-	17.50	13.50	26.50	22.50
5"	-	-	19.00	15.00	29.00	25.00
6"	-	-	22.00	18.00	34.00	30.00
8"	-	-	28.00	24.00	44.00	40.00

**Note:**

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 4" AND ABOVE.
2. SIZES 5", 6", 8" AND 10" ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

# SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Code		LBP <small>AR</small>	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Rad.	Lgth L1	Angle	Lgth L2	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LBP<small>AR</small></b>									
Pipe & Cone Material Carbon Steel	TMP52CD	52									
	♦♦TMP37CD	37									
Pipe & Cone Material Stainless Steel	TMP304SS	304									
	TMP316SS	316									
	♦TMP2205SS	2205									
Pipe Size & Schedule	1-1/2"	SCH40-150									
		SCH80-150									
	2"	SCH40-200									
		SCH80-200									
	2-1/2"	SCH40-250									
		SCH80-250									
	3"	SCH40-300									
		SCH80-300									
	4"	SCH40-400									
		SCH80-400									
5"	SCH40-500										
6"	SCH40-600										
8"	SCH40-800										
10"	N/A										
End Type	Flat Face	LF									
	'O' Ring Face	LO									
Radius	Factory Manufactured	R1									
	Factory Manufactured	R2									
	Field Manufactured	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									

**Note:**

TMP52CD (E355+N) PIPE IS AVAILABLE IN 1-1/2" UP TO 3" SCHEDULE 40 SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 2-1/2" UP TO 8" SCHEDULE 40 SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAR/52-SCH40-150-LO-LF-R1-125-90-11

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

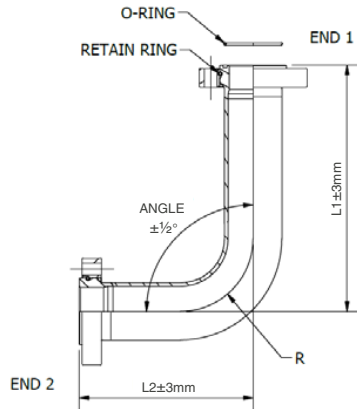
METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

3D step models available upon request

# SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LBPARG Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) lp retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

Pipe Size	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 3.0	1-1/2"	194	100	244	150	294	200
60 x 3.0	2"	215	120	275	180	335	240
75 x 3.0	2-1/2"	264	150	339	225	225	414
90 x 3.5	3"	294	180	384	270	474	360
115 x 4.0	4"	-	-	450	345	675	575
140 x 4.5	5"	-	-	530	420	800	700
165 x 5.0	6"	-	-	600	495	925	825
220 x 6.0	8"	-	-	710	610	1120	1016

**Note:**

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 115mm AND ABOVE.
2. SIZES 140mm, 165mm, 220mm AND 273mm ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

# Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

		Code	LBPAF /	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
<b>Bent Pipe Assembly - Flared</b>		<b>LBPAF</b>										
<b>Pipe &amp; Cone Material</b> Carbon Steel	TMP52CD	52										
	♦♦TMP37CD	37										
<b>Pipe &amp; Cone Material</b> Stainless Steel	TMP304SS	304										
	TMP316SS	316										
	♦TMP2205SS	2205										
<b>Pipe Size &amp; Schedule</b>	1-1/2"	50x3.0										
	2"	60x3.0										
	2-1/2"	75x3.0										
	3"	90x3.5										
	4"	115x4.0										
	5"	140x4.5										
	6"	165x5.0										
	8"	220x6.0										
10"	N/A											
<b>End Type</b>	Flat Face	LF										
	'O' Ring Face	LO										
<b>Radius</b>	Factory Manufactured	R1										
	Factory Manufactured	R2										
	Field Manufactured	R3										
<b>Length</b>	L1	Specify (mm)										
<b>Angle</b>	Max 90°	Specify (°)										
<b>Length</b>	L2	Specify (mm)										
<b>Options</b>	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

**Note:**

TMP52CD (E355+N) PIPE IS AVAILABLE IN 50mm UP TO 115mm SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 50mm UP TO 220mm SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAF/52-50x3-CO-CF-R1-3175-90-292

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

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

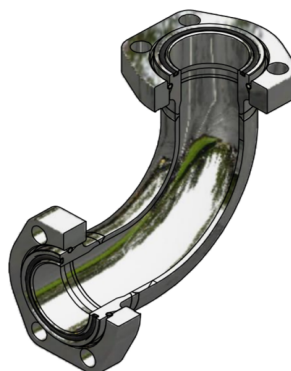
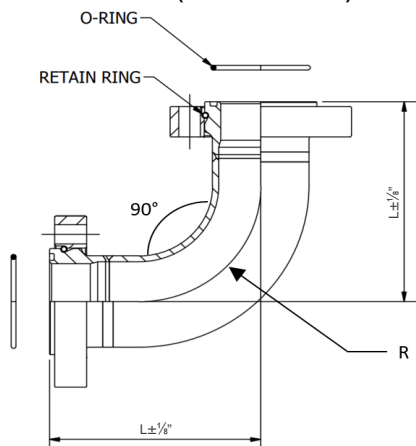
METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

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

# SAE 1000 PSI Low Pressure Retain Ring Flange Elbow Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



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/LRE – Low Pressure Retain Ring Flange Elbow Complete Assembly

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	LL					
1-1/2"	A/LRE-150-FC14-*^-^	2.98 (75.7)	2.25 (57.1)	OR^-3-924	5.34 (2.43)	LRE-150-*^-^	3.10 (1.41)	1000 (70)
2"	A/LRE-200-FC14-*^-^	4.50 (114.3)	3.00 (76.2)	OR^-3-928	8.26 (3.75)	LRE-200-*^-^	4.40 (2.00)	1000 (70)
2-1/2"	A/LRE-250-FC14-*^-^	5.22 (132.5)	3.75 (95.3)	OR^-2-232	10.48 (4.76)	LRE-250-*^-^	6.06 (2.75)	1000 (70)
3"	A/LRE-300-FC14-*^-^	6.19 (157.2)	4.50 (114.3)	OR^-2-237	16.98 (7.72)	LRE-300-*^-^	9.50 (4.32)	1000 (70)
4"	A/LRE-400-FC14-*^-^	7.69 (195.3)	6.00 (152.4)	OR^-2-245	19.85 (9.02)	LRE-400-*^-^	13.24 (6.02)	1000 (70)
5"	A/LRE-500-FC14-*^-^	9.36 (237.7)	7.50 (190.5)	OR^-2-253	30.75 (13.98)	LRE-500-*^-^	22.14 (10.06)	1000 (70)
6"	A/LRE-600-FC16-*^-^	11.13 (282.7)	9.00 (228.6)	OR^-2-259	45.17 (20.53)	LRE-600-*^-^	35.37 (16.08)	725 (50)
8"	A/LRE-800-FC18-*^-^	14.44 (366.8)	12.00 (304.8)	OR^-2-372	89.20 (40.54)	LRE-800-*^-^	69.95 (31.80)	725 (50)

### Flange Option:

FC14 = 1-1/2" Thru 5" SAE Code 61 (ISO 6162-1) Flange Pattern with Clearance Holes.

FC16 = 6" Round Flange with 6 Bolt Clearance Hole Pattern.

FC18 = 8" Round Flange with 8 Bolt Clearance Hole Pattern.

### \* Materials:

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

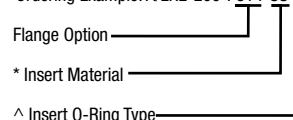
SS = Stainless Steel, Type 316.

### ^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

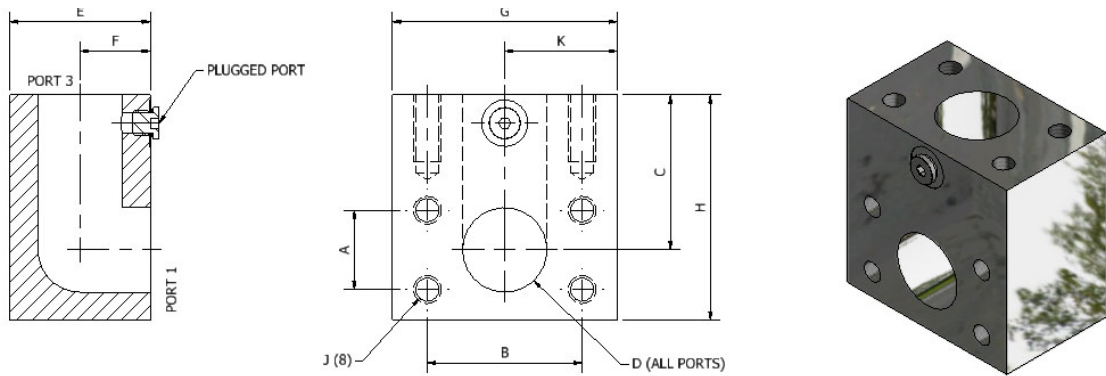
V = Viton.

Ordering Example: A/LRE-200-FC14-SS-V



# Block Elbow

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



## BE34 - Block Elbow Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)										Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K				
1-1/2"	BE34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.60 (3.90)	4000 (280)	
2"	BE34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.60 (4.81)	4000 (280)	
2-1/2"	BE34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	17.40 (7.89)	3000 (210)	
3"	BE34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	25.60 (11.61)	3000 (210)	
4"	BE34-400-*	3.06	5.13	4.13	2.88	6.00	3.00	5.50	7.00	3.25	5/8"-11	51.40 (23.30)	1000 (70)	

### Materials:

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

Ordering Example: BE34-200-SS

\* Insert Material

### Note:

The working pressure is dependent upon the flange and pipe selected.

## BEM34 - Block Elbow Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)										Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K				
1-1/2"	BEM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.60 (3.90)	4000 (280)	
2"	BEM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.60 (4.81)	4000 (280)	
2-1/2"	BEM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	17.40 (7.89)	3000 (210)	
3"	BEM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.70	152.4	69.9	M16 x 2.00	25.60 (11.61)	3000 (210)	
4"	BEM34-400-*	77.7	130.0	104.9	101.6	152.4	76.2	165.1	177.8	82.5	M16 x 2.00	51.40 (23.30)	1000 (70)	

### Materials:

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

Ordering Example: BEM34-200-SS

\* Insert Material

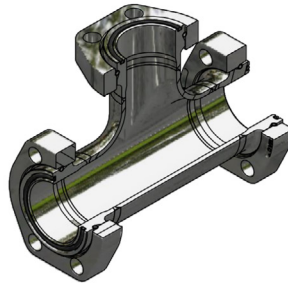
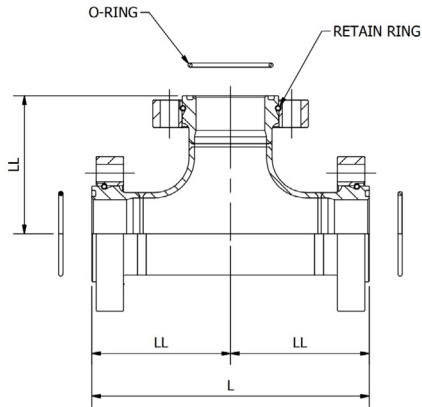
### Note:

The working pressure is dependent upon the flange and pipe selected.



# SAE 1000 PSI Low Pressure Retain Ring Flange Tee Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

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

To be Ordered Separately:

- Bolt Kit

## A/LRT - Retain Ring Flange Tee Complete Assembly Complete 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	LL					
1-1/2"	A/LRT-150-FC14-*-*^	7.44 (189.0)	3.72 (94.5)	OR^3-924	8.30 (3.77)	LRT-150-*-*^	4.90 (2.23)	1000 (70)
2"	A/LRT-200-FC14-*-*^	7.94 (201.7)	4.00 (101.6)	OR^3-928	13.70 (12.05)	LRT-200-*-*^	7.10 (3.23)	1000 (70)
2-1/2"	A/LRT-250-FC14-*-*^	8.95 (227.3)	4.47 (113.5)	OR^2-232	16.77 (7.63)	LRT-250-*-*^	9.06 (4.12)	1000 (70)
3"	A/LRT-300-FC14-*-*^	10.10 (256.5)	5.05 (128.3)	OR^2-237	22.95 (10.45)	LRT-300-*-*^	11.28 (5.13)	1000 (70)
4"	A/LRT-400-FC14-*-*^	11.60 (294.6)	5.80 (147.3)	OR^2-245	44.79 (20.36)	LRT-400-*-*^	18.63 (8.47)	1000 (70)
5"	A/LRT-500-FC14-*-*^	13.48 (342.4)	6.74 (171.2)	OR^2-253	60.96 (27.71)	LRT-500-*-*^	30.96 (14.07)	1000 (70)
6"	A/LRT-600-FC16-*-*^	15.44 (392.2)	7.75 (195.8)	OR^2-260	82.44 (37.47)	LRT-600-*-*^	50.31 (22.87)	725 (50)
8"	A/LRT-800-FC18-*-*^	18.91 (480.3)	9.45 (240.0)	OR^2-372	156.33 (71.06)	LRT-800-*-*^	84.93 (38.60)	725 (50)

**Note:**

FC16=Round 6-bolt flange and FC18=Round 8-bolt flange

**Flange Options:**

FC14 = SAE Code 61 (ISO 6162-1) Clearance Flange  
 FT14 = SAE Code 61 (ISO 6162-1) UNC Threaded Flange  
 FTM14 = SAE Code 61 (ISO 6162-1) Metric Threaded Flange

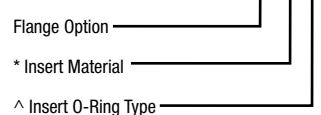
**Materials:**

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

**^ O-Ring Type:**

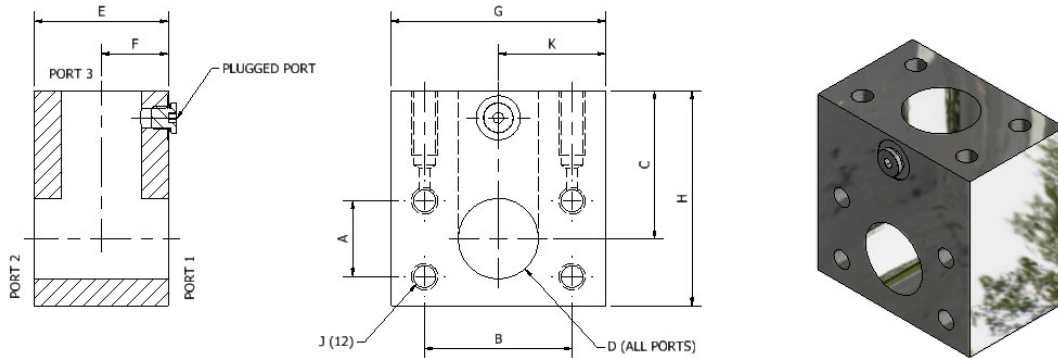
No Designation = Buna Nitrile.  
 V = Viton.

Ordering Example: A/LRT-200-FC14-SS-V



# Block Tee

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



## BT34 - Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BT34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.20 (3.72)	4000 (280)
2"	BT34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.00 (4.54)	4000 (280)
2-1/2"	BT34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	16.30 (7.39)	3000 (210)
3"	BT34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	23.70 (10.75)	3000 (210)
4"	BT34-400-*	3.06	5.13	4.13	4.00	6.00	3.00	6.50	7.00	3.25	5/8"-11	45.80 (20.60)	1000 (70)

**\* Materials:**

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

Ordering Example: BT34-200-SS

\* Insert Material \_\_\_\_\_

**Note:**

The working pressure is dependent upon the flange and pipe selected.

## BTM34 - Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (inch)	Block Tee Part No	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BTM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.20 (3.72)	4000 (280)
2"	BTM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.00 (4.54)	4000 (280)
2-1/2"	BTM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	16.30 (7.39)	3000 (210)
3"	BTM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.7	152.4	69.9	M16 x 2.00	23.70 (10.75)	3000 (210)
4"	BTM34-400-*	77.7	130.3	104.9	101.6	152.4	76.2	165.1	177.8	82.5	M16 x 2.00	45.80 (20.60)	1000 (70)

**\* Materials:**

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

Ordering Example: BTM34-200-SS

\* Insert Material \_\_\_\_\_

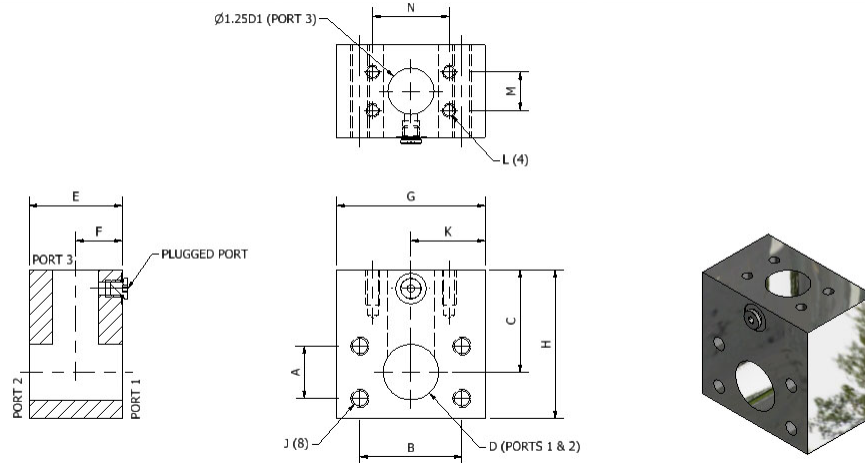
**Note:**

The working pressure is dependent upon the flange and pipe selected.

3D step models available upon request

# Reducing Branch Block Tee

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



## BTR34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Tee Part Number	Dimensions (in)												Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
2"x1-1/2"	BTR34-200x150-*	1.69	3.06	3.00	1.94	1.50	3.00	1.50	4.00	4.50	2.00	1.41	2.75	1/2"-13	1/2"-13	11.60 (5.26)	4000 (280)
2-1/2"x1/2"	BTR34-250x050-*	2.00	3.50	3.25	2.38	0.50	3.50	1.75	5.00	5.00	2.50	0.69	1.50	1/2"-13	5/16"-18	19.40 (8.80)	3000 (210)
2-1/2"x1-1/2"	BTR34-250x150-*	2.00	3.50	3.25	2.38	1.50	3.50	1.75	5.00	5.00	2.50	1.41	2.75	1/2"-13	1/2"-13	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTR34-250x200-*	2.00	3.50	3.25	2.38	1.94	3.50	1.75	5.00	5.00	2.50	1.69	3.06	1/2"-13	1/2"-13	17.56 (7.97)	3000 (210)
3"x1-1/2"	BTR34-300x150-*	2.44	4.19	3.75	2.88	1.50	4.00	2.00	5.50	6.00	2.75	1.41	2.75	5/8"-11	1/2"-13	27.67 (12.55)	3000 (210)
3"x2"	BTR34-300x200-*	2.44	4.19	3.75	2.88	1.94	4.00	2.00	5.50	6.00	2.75	1.69	3.06	5/8"-11	1/2"-13	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTR34-300x250-*	2.44	4.19	3.75	2.88	2.38	4.00	2.00	5.50	6.00	2.75	2.00	3.50	5/8"-11	1/2"-13	25.30 (11.48)	3000 (210)
4"x1-1/2"	BTR34-400x150-*	3.06	5.13	3.75	4.00	1.50	3.50	1.75	6.50	7.00	3.25	1.41	2.75	5/8"-11	1/2"-13	29.20 (13.25)	1000 (70)
2"x2"	BTR34-400x200-*	3.06	5.13	3.75	4.00	1.94	6.00	3.00	6.50	7.00	3.25	1.69	3.06	5/8"-11	1/2"-13	52.60 (23.85)	1000 (70)
4"x2-1/2"	BTR34-400x250-*	3.06	5.13	3.75	4.00	2.38	6.00	3.00	6.50	7.00	3.25	2.00	3.50	5/8"-11	1/2"-13	51.80 (23.50)	1000 (70)
4"x3"	BTR34-400x300-*	3.06	5.13	3.75	4.00	2.88	6.00	3.00	6.50	7.00	3.25	2.44	2.44	5/8"-11	5/8"-11	50.40 (22.91)	1000 (70)

**\* Materials:**

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

Ordering Example: BTR34-200x050-SS

\* Insert Material

## BTRM34 - 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)
		A	B	C	D	D1	E	F	G	H	K	M	N				
2"x1-1/2"	BTRM34-200x150-*	42.9	77.7	76.2	49.3	38.1	76.2	38.1	101.6	114.3	50.8	35.8	69.9	M12 X 1.75	M12 X 1.75	11.60 (5.26)	4000 (280)
2-1/2"x1-1/2"	BTRM34-250x150-*	50.8	88.9	82.6	60.5	38.1	88.9	44.5	127.0	127.0	63.5	35.8	69.9	M12 X 1.75	M12 X 1.75	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTRM34-250x200-*	50.8	88.9	82.6	60.5	49.3	88.9	44.5	127.0	127.0	63.5	42.9	77.7	M12 X 1.75	M12 X 1.75	17.56 (7.97)	3000 (210)
3"x1-1/2"	BTRM34-300x150-*	62.0	106.4	95.3	73.2	38.1	101.6	50.8	139.7	152.4	69.9	35.8	69.9	M16 X 2.00	M12 X 1.75	27.67 (12.55)	3000 (210)
3"x2"	BTRM34-300x200-*	62.0	106.4	95.3	73.2	49.3	101.6	50.8	139.7	152.4	69.9	42.9	77.7	M16 X 2.00	M12 X 1.75	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTRM34-300x250-*	62.0	106.4	95.3	73.2	60.5	101.6	50.8	139.7	152.4	69.9	50.8	88.9	M16 X 2.00	M12 X 1.75	25.30 (11.48)	3000 (210)
4"x1-1/2"	BTRM34-400x150-*	77.7	130.3	105.0	101.6	38.1	88.9	44.4	165.1	177.8	82.5	35.8	69.9	M12 X 2.00	M12 X 1.75	29.20 (13.25)	1000 (70)
2"x2"	BTRM34-400x200-*	77.7	130.3	105.0	101.6	49.3	152.4	76.2	165.1	177.8	82.5	43.0	77.7	M16 X 2.00	M12 X 1.75	52.60 (23.85)	1000 (70)
4"x2-1/2"	BTRM34-400x250-*	77.7	130.3	105.0	101.6	60.5	152.4	76.2	165.1	177.8	82.5	50.8	88.9	M16 X 2.00	M12 X 1.75	51.80 (23.50)	1000 (70)
4"x3"	BTRM34-400x300-*	77.7	130.3	105.0	101.6	73.2	152.4	76.2	165.1	177.8	82.5	62.0	106.4	M16 X 2.00	M16 X 2.00	50.40 (22.91)	1000 (70)

**\* Materials:**

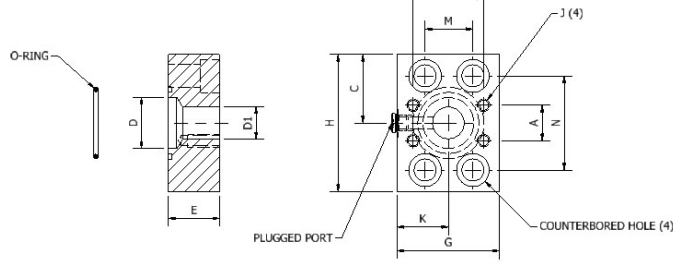
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.  
 SS = Stainless Steel, Type 316.

Ordering Example: BTRM34-200x050-SS

\* Insert Material

# Transition Plate Reducer with O-Ring Face and Countersunk Holes

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



**Note:**

5" Transition plate is round.  
Larger sizes available upon request

## TPRO34 – Transition Plate Reducer with O-Ring Face, Countersunk Holes and #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	J Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
2" x 1-1/2"	TPRO34-200x150-*^	1.41	2.75	2.00	1.94	1.50	1.75	4.00	4.00	2.00	1.69	3.06	1/2"-13	1/2"-13	OR^-2-228	5.90 (2.68)	4000 (280)
2-1/2" x 1-1/2"	TPRO34-250x150-*^	1.41	2.75	2.50	2.38	1.50	2.00	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	8.80 (3.99)	4000 (280)
2-1/2" x 2"	TPRO34-250x200-*^	1.69	3.06	2.50	2.38	1.94	1.75	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	7.30 (3.31)	4000 (280)
3" x 2"	TPRO34-300x200-*^	1.69	3.06	3.00	2.88	1.94	2.00	4.00	6.00	2.00	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.80 (4.45)	4000 (280)
3" x 2-1/2"	TPRO34-300x250-*^	2.00	3.50	3.00	2.88	2.38	1.75	4.50	6.00	2.25	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.50 (4.31)	3000 (210)
4" x 1-1/2"	TPRO34-400x150-*^	1.41	2.75	3.50	4.00	1.50	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	30.30 (13.77)	1000 (70)
4" x 2"	TPRO34-400x200-*^	1.69	3.06	3.50	4.00	1.94	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	26.50 (12.02)	1000 (70)
4" x 2-1/2"	TPRO34-400x250-*^	2.00	3.50	3.50	4.00	2.38	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	25.40 (11.50)	1000 (70)
4" x 3"	TPRO34-400x300-*^	2.44	4.19	3.50	4.00	2.88	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	5/8"-11	OR^-2-245	24.00 (10.90)	1000 (70)
5" x 4"	TPRO34-500x400-*^	3.06	5.13	4.13	5.00	4.00	2.00	8.25 dia.	4.13	3.63	6.00	5/8"-11	5/8"-11	OR^-2-253	20.40 (9.25)	1000 (70)	

**\* 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: TPRO34-200x150-SS-V

\* Insert Material \_\_\_\_\_  
^ Insert O-Ring Type \_\_\_\_\_

## TPROM34 – Transition Plate Reducer with O-Ring Face, Countersunk Holes and G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	J Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
2" x 1-1/2"	TPROM34-200x150-*^	35.8	69.9	50.8	49.3	38.1	44.5	101.6	101.6	50.8	42.9	77.7	M12x1.75	M12x1.75	OR^-2-228	5.90 (2.68)	4000 (280)
2-1/2" x 1-1/2"	TPROM34-250x150-*^	35.8	69.9	63.5	60.5	38.1	50.8	101.6	127.0	50.8	50.8	88.9	M12x1.75	M12x1.75	OR^-2-232	8.80 (3.99)	4000 (280)
2-1/2" x 2"	TPROM34-250x200-*^	42.9	77.7	63.5	60.5	49.3	44.5	101.6	127.0	50.8	50.8	88.9	M12x1.75	M12x1.75	OR^-2-232	7.30 (3.31)	4000 (280)
3" x 2"	TPROM34-300x200-*^	42.9	77.78	76.2	73.2	49.3	50.8	101.6	152.4	50.8	62.0	106.4	M16x2.00	M12x1.75	OR^-2-237	9.80 (4.45)	4000 (280)
3" x 2-1/2"	TPROM34-300x250-*^	50.8	88.9	76.2	73.2	60.5	44.5	114.3	152.4	57.2	62.0	106.4	M16x2.00	M12x1.75	OR^-2-237	9.50 (4.31)	3000 (210)
4" x 1-1/2"	TPROM34-400x150-*^	35.8	69.9	88.9	101.6	38.1	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	30.30 (13.77)	1000 (70)
4" x 2"	TPROM34-400x200-*^	42.9	77.7	88.9	101.6	49.3	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	26.50 (12.02)	1000 (70)
4" x 2-1/2"	TPROM34-400x250-*^	50.8	88.9	88.9	101.6	60.5	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	25.40 (11.50)	1000 (70)
4" x 3"	TPROM34-400x300-*^	62.0	106.4	88.9	101.6	73.2	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M16x2.00	OR^-2-245	24.00 (10.90)	1000 (70)
5" x 4"	TPROM34-500x400-*^	77.7	130.3	104.9	127.0	101.6	50.8	209.5 dia.	104.9	92.2	152.4	M16x2.00	M16x2.00	OR^-2-253	20.40 (9.25)	1000 (70)	

**\* 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.

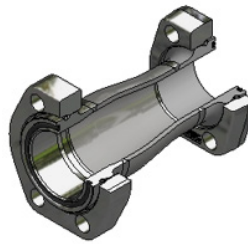
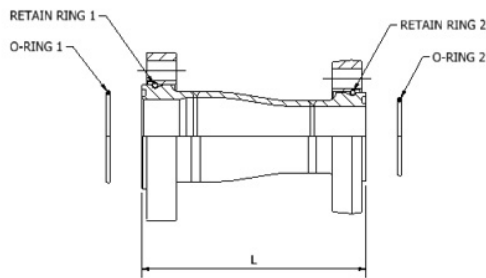
Ordering Example: TPROM34-200x150-SS-V

\* Insert Material \_\_\_\_\_  
^ Insert O-Ring Type \_\_\_\_\_

3D step models available upon request

# SAE 1000 PSI Low Pressure Retain Ring Flange Reducer Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Assembly Consists Of:

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

To be Ordered Separately:

- Bolt Kit

## SAE 1000 PSI Low Pressure Retain Ring Flange Reducer

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/LRR-200x150-FC14-FC14-*^-^	5.94 (150.9)	OR^-2-228	OR^-2-225	5.29 (2.4)	LRR-200x150-*^-^	2.24 (1.0)	4000 (280)
2-1/2" x 1-1/2"	A/LRR-250x150-FC14-FC14-*^-^	6.44 (163.6)	OR^-2-232	OR^-2-225	6.16 (2.8)	LRR-250x100-*^-^	2.83 (1.3)	3000 (210)
2-1/2" x 2"	A/LRR-250x200-FC14-FC14-*^-^	6.44 (163.6)	OR^-2-232	OR^-2-228	7.38 (3.4)	LRR-250x200-*^-^	3.24 (1.5)	3000 (210)
3" x 2"	A/LRR-300x200-FC14-FC14-*^-^	6.64 (168.7)	OR^-2-237	OR^-2-228	9.83 (4.5)	LRR-300x200-*^-^	4.01 (1.8)	3000 (210)
3" x 2-1/2"	A/LRR-300x250-FC14-FC14-*^-^	6.64 (168.7)	OR^-2-237	OR^-2-232	10.41 (4.7)	LRR-300x250-*^-^	4.45 (2.0)	3000 (210)
4" x 2-1/2"	A/LRR-400x250-FC14-FC14-*^-^	7.14 (181.4)	OR^-2-245	OR^-2-232	13.23 (6.0)	LRR-400x250-*^-^	6.39 (2.9)	1000 (70)
4" x 3"	A/LRR-400x300-FC14-FC14-*^-^	7.35 (186.7)	OR^-2-245	OR^-2-237	17.34 (7.9)	LRR-400x300-*^-^	6.93 (3.2)	1000 (70)
5" x 3"	A/LRR-500x300-FC14-FC14-*^-^	8.54 (216.9)	OR^-2-253	OR^-2-237	22.65 (10.3)	LRR-500x300-*^-^	10.25 (4.7)	1000 (70)
5" x 4"	A/LRR-500x400-FC14-FC14-*^-^	8.54 (216.9)	OR^-2-253	OR^-2-245	26.66 (12.1)	LRR-500x400-*^-^	11.44 (5.2)	1000 (70)
6" x 4"	A/LRR-600x400-FC16-FC14-*^-^	9.24 (234.7)	OR^-2-259	OR^-2-245	32.22 (14.6)	LRR-600x400-*^-^	15.81 (7.2)	725 (50)
6" x 5"	A/LRR-600x500-FC16-FC14-*^-^	9.43 (239.5)	OR^-2-259	OR^-2-253	35.66 (16.2)	LRR-600x500-*^-^	17.26 (7.9)	725 (50)
8" x 5"	A/LRR-800x500-FC18-FC14-*^-^	10.32 (262.1)	OR^-2-372	OR^-2-253	53.16 (24.2)	LRR-800x500-*^-^	25.30 (11.5)	725 (50)
8" x 6"	A/LRR-800x600-FC18-FC16-*^-^	10.52 (267.2)	OR^-2-372	OR^-2-259	57.71 (26.2)	LRR-800x600-*^-^	28.66 (13.0)	725 (50)

### Flange Options:

1-1/2" thru 5", RFC14 = SAE Code 61 (ISO 6162-1) Flange Pattern with clearance holes.

6", RFC16 = Round 6-bolt Flange Pattern with clearance holes.

8", RFC18 = Round 8-bolt Flange Pattern with clearance holes.

### Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

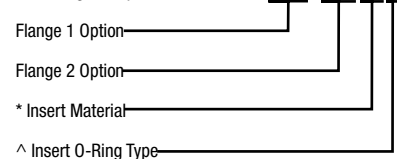
SS = Stainless Steel, Type 316.

### ^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

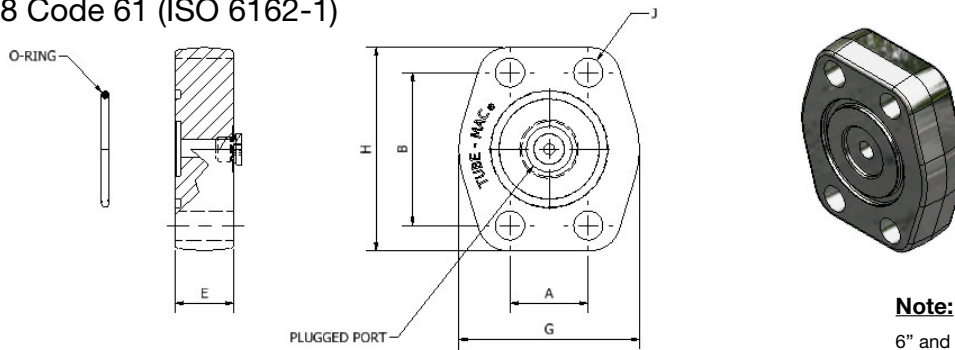
Ordering Example: A/LRR-200x150-FC14-FC14-SS-V



3D step models available upon request

# SAE 1000 PSI Low Pressure Blanking Flange O-Ring Face with Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



**Note:**

6" and 8" Blanking Flanges are Round

## BF014, BF016, BF018 – Blanking Flange O-Ring Face, Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1-1/2"	BF014-150-*^	1.41	2.75	3.25	3.66	0.79	1/2" – 13 UNC	OR^ -2-225	4000 (280)	2.1 (0.9)
2"	BF014-200-*^	1.69	3.06	3.81	4.02	0.79	1/2" – 13 UNC	OR^ -2-228	4000 (280)	2.6 (1.2)
2-1/2"	BF014-250-*^	2.00	3.50	4.28	4.49	0.79	1/2" – 13 UNC	OR^ -2-232	3000 (210)	3.4 (1.6)
3"	BF014-300-*^	2.44	4.19	5.16	5.28	1.00	5/8" – 11 UNC	OR^ -2-237	3000 (210)	6.0 (2.7)
4"	BF014-400-*^	3.06	5.13	6.00	6.38	1.18	5/8" – 11 UNC	OR^ -2-245	1000 (70)	10.4 (4.7)
5"	BF014-500-*^	3.63	6.00	7.09	7.24	1.57	5/8" – 11 UNC	OR^ -2-253	1000 (70)	18.9 (8.5)
6"	BF016-600-*^	8.19	-	9.29	-	1.57	5/8" – 11 UNC	OR^ -2-259	725 (50)	25.2 (11.5)
8"	BF018-800-*^	10.83	-	12.48	-	1.57	3/4" – 10 UNC	OR^ -2-372	725 (50)	51.2 (23.3)

**\* Materials:**

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

Ordering Example: BF014-200-SS-V\*

Insert Material \_\_\_\_\_  
 ^ Insert O-Ring 2 Type \_\_\_\_\_

**^ O-Ring Type:**

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

## BFOM14, BFOM16, BFOM18 – Blanking Flange O-Ring Face, Clearance Holes and G1/8 Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1-1/2"	BFOM14-150-*^	35.8	69.9	82.6	93.0	20	M12 x 1.75	OR^ -2-225	4000 (280)	2.1 (0.9)
2"	BFOM14-200-*^	42.9	77.7	96.8	102.1	20	M12 x 1.75	OR^ -2-228	4000 (280)	2.6 (1.2)
2-1/2"	BFOM14-250-*^	50.8	88.9	108.7	114.0	20	M12 x 1.75	OR^ -2-232	3000 (210)	3.4 (1.6)
3"	BFOM14-300-*^	62.0	106.4	131.1	134.1	25	M16 x 2.00	OR^ -2-237	3000 (210)	6.0 (2.7)
4"	BFOM14-400-*^	77.7	130.3	152.4	162.1	30	M16 x 2.00	OR^ -2-245	1000 (70)	10.4 (4.7)
5"	BFOM14-500-*^	92.2	152.4	180.0	184.0	40	M16 x 2.00	OR^ -2-253	1000 (70)	18.9 (8.5)
6"	BFOM16-600-*^	208.0	-	236.0	-	40	M16 x 2.00	OR^ -2-259	725 (50)	25.2 (11.5)
8"	BFOM18-800-*^	275.0	-	317.0	-	40	M20 x 2.50	OR^ -2-372	725 (50)	51.2 (23.3)

**\* Materials:**

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

Ordering Example: BFOM14-200-SS-V\*

Insert Material \_\_\_\_\_  
 ^ Insert O-Ring 2 Type \_\_\_\_\_

**^ O-Ring Type:**

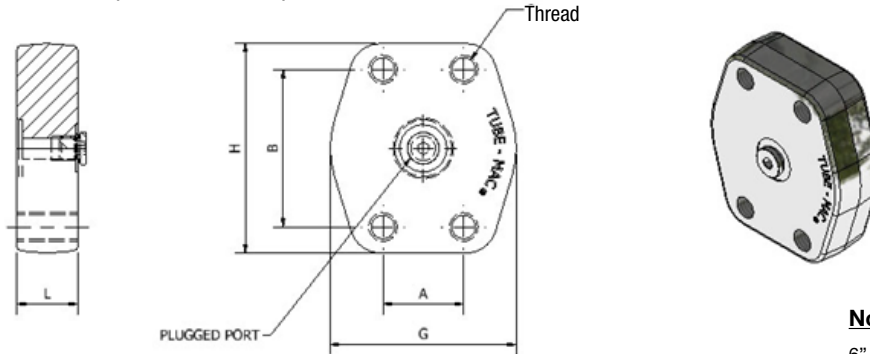
Standard, No Designation = Buna Nitrile.  
 V = Viton.

3D step models available upon request

# SAE 1000 PSI Low Pressure Blanking Flange

## Flat Face with Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



**Note:**

6" and 8" Blanking Flanges are Round

### BFF14, BFF16, BFF18 – Blanking Flange Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Thread	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1-1/2"	BFF14-150-*^	1.41	2.75	3.25	3.66	0.79	1/2" – 13 UNC	4000 (280)	2.1 (0.9)
2"	BFF14-200-*^	1.69	3.06	3.81	4.02	0.79	1/2" – 13 UNC	4000 (280)	2.7 (1.2)
2-1/2"	BFF14-250-*^	2.00	3.50	4.28	4.49	0.79	1/2" – 13 UNC	3000 (210)	3.5 (1.6)
3"	BFF14-300-*^	2.44	4.19	5.16	5.28	1.00	5/8" – 11 UNC	3000 (210)	6.2 (2.8)
4"	BFF14-400-*^	3.06	5.13	6.00	6.38	1.18	5/8" – 11 UNC	1000 (70)	10.4 (4.7)
5"	BFF14-500-*^	3.63	6.00	7.09	7.24	1.57	5/8" – 11 UNC	1000 (70)	19.0 (8.6)
6"	BFF16-600-*^	8.19	-	9.29	-	1.57	5/8" – 11 UNC	725 (50)	25.9 (11.7)
8"	BFF18-800-*^	10.83	-	12.48	-	1.57	3/4" – 10 UNC	725 (50)	52.2 (23.7)

**\* Materials:**

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

Ordering Example: BFF14-200-SS-V

\* Insert Material   
 ^ Insert O-Ring Type

**^ O-Ring Type:**

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

### BFFM14, BFFM16, BFFM18 – Blanking Flange Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Thread	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1-1/2"	BFFM14-150-*^	35.8	69.9	82.6	93.0	20	M12 x 1.75	4000 (280)	2.1 (0.9)
2"	BFFM14-200-*^	42.9	77.7	96.8	102.1	20	M12 x 1.75	4000 (280)	2.7 (1.2)
2-1/2"	BFFM14-250-*^	50.8	88.9	108.7	114.0	20	M12 x 1.75	3000 (210)	3.5 (1.6)
3"	BFFM14-300-*^	62.0	106.4	131.1	134.1	25	M16 x 2.00	3000 (210)	6.2 (2.8)
4"	BFFM14-400-*^	77.7	130.3	152.4	162.1	30	M16 x 2.00	1000 (70)	10.4 (4.7)
5"	BFFM14-500-*^	92.2	152.4	180.0	184.0	40	M16 x 2.00	1000 (70)	19.0 (8.6)
6"	BFFM16-600-*^	208.0	-	236.0	-	40	M16 x 2.00	725 (50)	25.9 (11.7)
8"	BFFM18-800-*^	275.0	-	317.0	-	40	M20 x 2.50	725 (50)	52.2 (23.7)

**\* Materials:**

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

Ordering Example: BFFM14-200-SS-V

\* Insert Material   
 ^ Insert O-Ring Type

**^ O-Ring Type:**

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

3D step models available upon request

