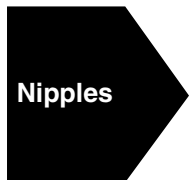

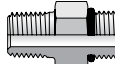

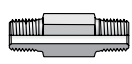



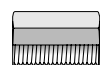


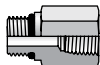


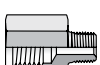

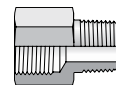
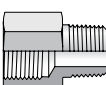
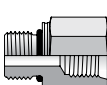
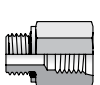







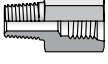
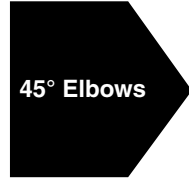


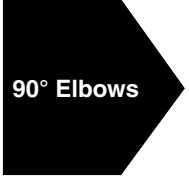


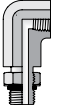



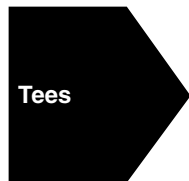
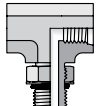
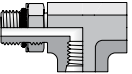
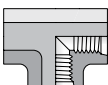
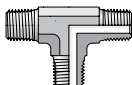
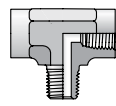
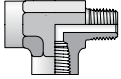

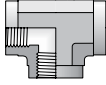
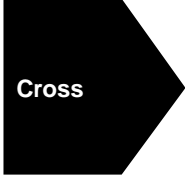


















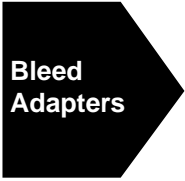
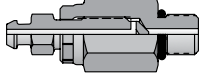
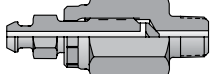
# Pipe Fittings and Port Adapters

F


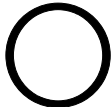
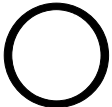
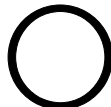
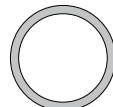
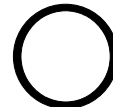
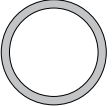
 <p><b>Nipples</b></p>	<p><b>F50HAO</b> SAE-ORB / SAE-ORB</p>  <p>F11</p>	<p><b>F50F</b> SAE-ORB / NPTF</p>  <p>F11</p>	<p><b>FF</b> NPTF / NPTF</p>  <p>F11</p>	<p><b>FFF</b> NPTF / NPTF Long</p>  <p>F11</p>	<p><b>FF33M</b> BSPT / BSPT</p>  <p>F12</p>
	<p><b>G5HG5</b> SAE-ORB / SAE-ORB</p>  <p>F12</p>	<p><b>GG</b> NPTF / NPTF</p>  <p>F12</p>	<p><b>GG44M</b> BSPP / BSPP</p>  <p>F12</p>	 <p><b>Reducers, Expanders, Conversions</b></p>	<p><b>F50G5</b> SAE-ORB / SAE-ORB</p>  <p>F13</p>
<p><b>F50G</b> SAE-ORB / NPTF</p>  <p>F13</p>	<p><b>F50HG8</b> SAE-ORB / Metric</p>  <p>F13</p>	<p><b>F50HG4</b> SAE-ORB / BSPP</p>  <p>F13</p>	<p><b>FHG5</b> NPTF / SAE-ORB</p>  <p>F14</p>		<p><b>FG</b> NPTF / NPTF</p>  <p>F14</p>
<p><b>FHG8</b> NPTF / Metric</p>  <p>F14</p>	<p><b>FHG4</b> NPTF / BSPP</p>  <p>F15</p>	<p><b>F87OHG87M</b> ISO 6149 / ISO 6149</p>  <p>F15</p>	<p><b>F8OHG5</b> Metric-ORR / SAE-ORB</p>  <p>F15</p>	<p><b>F8OHG</b> Metric-ORR / NPTF</p>  <p>F15</p>	<p><b>F4OHG5</b> BSPP-ORR / SAE-ORB</p>  <p>F16</p>
<p><b>F4OHG</b> BSPP-ORR / NPTF</p>  <p>F16</p>	<p><b>PTR34M</b> BSPT / BSPP</p>  <p>F16</p>	<p><b>RI-ED</b> BSPP-ED / BSPP</p>  <p>F17</p>	<p><b>RI</b> BSPP-CF / BSPP</p>  <p>F18</p>	<p><b>F3HG</b> BSPT / NPTF</p>  <p>F19</p>	<p><b>F3HG5</b> BSPT / SAE-ORB</p>  <p>F19</p>
 <p><b>45° Elbows</b></p>	<p><b>CD45</b> NPTF / NPTF</p>  <p>F19</p>	<p><b>DD45</b> NPTF / NPTF</p>  <p>F19</p>	 <p><b>90° Elbows</b></p>	<p><b>AOEG5</b> SAE-ORB / SAE-ORB</p>  <p>F19</p>	<p><b>AOEG</b> SAE-ORB / NPTF</p>  <p>F19</p>
	<p><b>AOE4G</b> SAE-ORB / NPTF Long</p>  <p>F20</p>	<p><b>CR</b> NPTF / NPTF</p>  <p>F20</p>		<p><b>CD</b> NPTF / NPTF</p>  <p>F20</p>	<p><b>DD</b> NPTF / NPTF</p>  <p>F20</p>
 <p><b>Tees</b></p>	<p><b>G5G5JAO</b> SAE-ORB Branch Tee</p>  <p>F21</p>	<p><b>AOG5JG5</b> SAE-ORB Run Tee</p>  <p>F22</p>	<p><b>G5G5JG5</b> SAE-ORB Tee</p>  <p>F22</p>	<p><b>RRS</b> NPTF Tee</p>  <p>F22</p>	<p><b>MMS</b> NPTF Branch Tee</p>  <p>F22</p>

<b>MRO</b> NPTF Run Tee  F22	<b>MMO</b> NPTF Tee  F23	<b>MMO444M</b> BSPP Tee  F23	 Cross F23	<b>KMMOO</b> NPTF Cross  F23	
 Plugs, Bleed Adapters	<b>P50N</b> SAE-ORB Hex Head  F23	<b>HP50N</b> SAE-ORB Hollow Hex  F24	<b>HP</b> NPTF Hex Head  F24	<b>SHP</b> NPTF Square Head  F24	<b>HHP</b> NPTF Hollow Hex Head  F24
<b>HPC</b> NPTF Pipe Cap  F25	<b>P87OMN</b> ISO 6149 Hex Head  F25	<b>VSTI M-OR</b> ISO 6149 Hollow Hex  F25	<b>VSTI M-ED</b> Metric-ED Hollow Hex  F25	<b>VSTI R-ED</b> BSPP-ED Hollow Hex  F26	<b>P47OMN</b> BSPP-ORB Hex Head  F26
<b>HP3M</b> BSPT Hex Head  F26					

**Diagnostic, Orifice and Bleed Adapters (Shown in Section M)**

 Bleed Adapters	<b>P50NBA</b> Bleed Screw / Bleed Adapter  M10	<b>HPBA</b> Bleed Screw / NPT  M10
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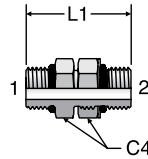
**O-Rings and Seals (Shown in Section N)**

 O-Rings and Seals	<b>SAE O-Ring</b>  N4	<b>ISO 6149 O-Ring</b>  N5	<b>Metric O-Ring</b>  N5	<b>Metric Retaining Ring</b>  N5	<b>BSPP O-Ring</b>  N6
<b>BSPP Retaining Ring</b>  N6					

# F5OHAO

Straight Thread Union  
SAE-ORB / SAE-ORB

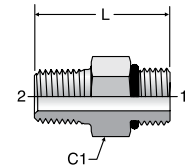
HPD Base # 0505



TUBE FITTING PART #	END SIZE		C4 HEX (in.)	L1 (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	UN/UNF-2A	UN/UNF-2A					
4 F5OHAO	7/16 - 20	7/16 - 20	9/16	1.27	6.0	6.0	3.3
6 F5OHAO	9/16 - 18	9/16 - 18	11/16	1.41	6.0	6.0	3.3
8 F5OHAO	3/4 - 16	3/4 - 16	7/8	1.64	6.0	6.0	3.3
10 F5OHAO	7/8 - 14	7/8 - 14	1	1.81	5.0	5.0	3.3
12 F5OHAO	1 1/16 - 12	1 1/16 - 12	1 1/4	2.13	5.0	5.0	3.3
16 F5OHAO	1 5/16 - 12	1 5/16 - 12	1 1/2	2.44	4.0	4.0	2.6
20 F5OHAO	1 5/8 - 12	1 5/8 - 12	1 7/8	2.44	4.0	4.0	2.6
24 F5OHAO	1 7/8 - 12	1 7/8 - 12	2 1/8	2.44	3.0	3.0	1.9
32 F5OHAO	2 1/2 - 12	2 1/2 - 12	2 3/4	2.44	2.0	2.0	1.3

# F5OF

Male Pipe Adapter  
SAE-ORB / NPTF



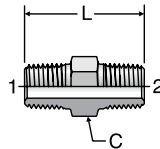
TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	UN/UNF-2A	NPTF					
4-1/8 F5OF	7/16 - 20	1/8 - 27	9/16	1.00	6.0	6.0	3.3
4-1/4 F5OF	7/16 - 20	1/4 - 18	9/16	1.20	6.0	6.0	3.3
5-1/4 F5OF	1/2 - 20	1/4 - 18	5/8	1.20	6.0	6.0	3.3
6-1/4 F5OF	9/16 - 18	1/4 - 18	11/16	1.25	6.0	6.0	3.3
6-3/8 F5OF	9/16 - 18	3/8 - 18	11/16	1.34	6.0	6.0	3.3
8-1/4 F5OF	3/4 - 16	1/4 - 18	7/8	1.36	6.0	6.0	3.3
8-3/8 F5OF	3/4 - 16	3/8 - 18	7/8	1.36	6.0	6.0	3.3
8-1/2 F5OF	3/4 - 16	1/2 - 14	7/8	1.53	6.0	6.0	3.3
10-1/2 F5OF	7/8 - 14	1/2 - 14	1	1.59	6.0	6.0	3.3
12-1/2 F5OF	1 1/16 - 12	1/2 - 14	1 1/4	1.80	5.0	6.0	3.3
12-3/4 F5OF	1 1/16 - 12	3/4 - 14	1 1/4	1.80	5.0	6.0	3.3
16-3/4 F5OF	1 5/16 - 12	3/4 - 14	1 1/2	1.78	4.5	5.4	2.9
16-1 F5OF	1 5/16 - 12	1 - 11 1/2	1 1/2	1.98	4.5	5.4	2.9
20-1 1/4 F5OF	1 5/8 - 12	1 1/4 - 11 1/2	1 7/8	2.02	3.0	3.6	1.9
24-1 1/2 F5OF	1 7/8 - 12	1 1/2 - 11 1/2	2 1/8	2.25	3.0	3.0	1.9

Note: All "F5OF" fittings have a 30° chamfer for sealing with NPSM swivel type fittings.

# FF

Pipe Nipple  
NPTF / NPTF

HPD Base # 0101

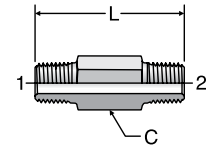


TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	NPTF	NPTF					
1/8 FF	1/8 - 27	1/8 - 27	7/16	1.06	6.0	7.2	3.9
1/4 x 1/8 FF	1/4 - 18	1/8 - 27	5/8	1.25	6.0	7.2	3.9
1/4 FF	1/4 - 18	1/4 - 18	5/8	1.45	6.0	7.2	3.9
3/8 x 1/8 FF	3/8 - 18	1/8 - 27	3/4	1.45	6.0	7.2	3.9
3/8 x 1/4 FF	3/8 - 18	1/4 - 18	3/4	1.45	6.0	7.2	3.9
3/8 FF	3/8 - 18	3/8 - 18	3/4	1.45	6.0	7.2	3.9
1/2 x 1/8 FF	1/2 - 14	1/8 - 27	7/8	1.52	6.0	7.2	3.3
1/2 x 3/8 FF	1/2 - 14	3/8 - 18	7/8	1.70	6.0	7.2	3.9
1/2 x 1/4 FF	1/2 - 14	1/4 - 18	7/8	1.70	6.0	7.2	3.9
1/2 FF	1/2 - 14	1/2 - 14	7/8	1.89	6.0	7.2	3.9
3/4 x 1/4 FF	3/4 - 14	1/4 - 18	1 1/8	1.78	5.5	6.6	3.5
3/4 x 3/8 FF	3/4 - 14	3/8 - 18	1 1/8	1.78	5.5	6.6	3.3
3/4 x 1/2 FF	3/4 - 14	1/2 - 14	1 1/8	1.96	5.5	6.6	3.5
3/4 FF	3/4 - 14	3/4 - 14	1 1/8	1.96	5.5	6.6	3.5
1 x 1/4 FF	1 - 11 1/2	1/4 - 18	1 3/8	1.96	4.5	5.4	3.3
1 x 3/8 FF	1 - 11 1/2	3/8 - 18	1 3/8	1.96	4.5	5.4	3.3
1 x 1/2 FF	1 - 11 1/2	1/2 - 14	1 3/8	2.09	4.5	5.4	3.3
1 x 3/4 FF	1 - 11 1/2	3/4 - 14	1 3/8	2.09	4.5	5.4	3.3
1 FF	1 - 11 1/2	1 - 11 1/2	1 3/8	2.34	4.5	5.4	3.0
1 1/4 x 1 FF	1 1/4 - 11 1/2	1 - 11 1/2	1 3/4	2.45	3.0	3.6	2.3
1 1/4 FF	1 1/4 - 11 1/2	1 1/4 - 11 1/2	1 3/4	2.48	3.0	3.6	2.3
1 1/2 x 1 FF	1 1/2 - 11 1/2	1 - 11 1/2	2	2.55	3.0	3.6	2.3
1 1/2 FF	1 1/2 - 11 1/2	1 1/2 - 11 1/2	2	2.61	3.0	3.6	2.3
2 x 1 1/2 FF	2 - 11 1/2	1 1/2 - 11 1/2	2 1/2	2.79	2.0	2.4	1.5
2 FF	2 - 11 1/2	2 - 11 1/2	2 1/2	2.83	2.0	2.4	1.5

Note: All steel "FF" fittings have a 30° chamfer for sealing with NPSM swivel type fittings.

# FFF

Long Pipe Nipple  
NPTF / NPTF



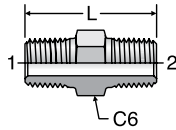
TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	NPTF	NPTF					
1/8 x 1.5 FFF	1/8 - 27	1/8 - 27	7/16	1.5	6.0	7.2	3.9
1/8 x 2.0 FFF	1/8 - 27	1/8 - 27	7/16	2.0	6.0	7.2	3.9
1/8 x 2.5 FFF	1/8 - 27	1/8 - 27	7/16	2.5	6.0	7.2	3.9
1/8 x 3.0 FFF	1/8 - 27	1/8 - 27	7/16	3.0	6.0	7.2	3.9
1/4 x 1.5 FFF	1/4 - 18	1/4 - 18	5/8	1.5	6.0	7.2	3.9
1/4 x 2.0 FFF	1/4 - 18	1/4 - 18	5/8	2.0	6.0	7.2	3.9
1/4 x 2.5 FFF	1/4 - 18	1/4 - 18	5/8	2.5	6.0	7.2	3.9
1/4 x 3.0 FFF	1/4 - 18	1/4 - 18	5/8	3.0	6.0	7.2	3.9
1/4 x 4.0 FFF	1/4 - 18	1/4 - 18	5/8	4.0	6.0	7.2	3.9
3/8 x 2.0 FFF	3/8 - 18	3/8 - 18	3/4	2.0	6.0	7.2	3.3
3/8 x 3.0 FFF	3/8 - 18	3/8 - 18	3/4	3.0	6.0	7.2	3.3
3/8 x 3.5 FFF	3/8 - 18	3/8 - 18	3/4	3.5	6.0	7.2	3.3
3/8 x 4.0 FFF	3/8 - 18	3/8 - 18	3/4	4.0	6.0	7.2	3.3
1/2 x 2.0 FFF	1/2 - 14	1/2 - 14	7/8	2.0	6.0	7.2	3.3
1/2 x 2.5 FFF	1/2 - 14	1/2 - 14	7/8	2.5	6.0	7.2	3.3
1/2 x 3.0 FFF	1/2 - 14	1/2 - 14	7/8	3.0	6.0	7.2	3.9
1/2 x 4.0 FFF	1/2 - 14	1/2 - 14	7/8	4.0	6.0	7.2	3.3
1/2 x 6.0 FFF	1/2 - 14	1/2 - 14	7/8	6.0	6.0	7.2	3.3
3/4 x 3.0 FFF	3/4 - 14	3/4 - 14	1 1/8	3.0	5.5	6.6	3.3
1 x 3.0 FFF	1 - 11 1/2	1 - 11 1/2	1 3/8	3.0	4.5	5.4	3.3

Dimensions and pressures for reference only, subject to change.



### FF33M

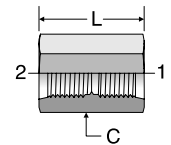
BSPT Pipe Nipple  
BSPT / BSPT



TUBE FITTING PART #	END SIZE		C6 HEX (mm)	L (mm)	Dynamic Pressure (x 1,000 PSI)		
	1 BSPT	2 BSPT			S	SS	B
	1/8FF33M	1/8 - 28					
1/4x1/8FF33M	1/4 - 19	1/8 - 28	14	32	6.0	6.0	3.3
1/4FF33M	1/4 - 19	1/4 - 19	14	37	6.0	6.0	3.3
3/8x1/4FF33M	3/8 - 19	1/4 - 19	17	37	6.0	6.0	3.3
3/8FF33M	3/8 - 19	3/8 - 19	17	37	6.0	6.0	3.3
1/2FF33M	1/2 - 14	1/2 - 14	22	48	6.0	6.0	3.3
1/2x3/8FF33M	1/2 - 14	3/8 - 19	22	43	6.0	6.0	3.3
3/4FF33M	3/4 - 14	3/4 - 14	27	50	5.5	5.5	3.3
3/4x1/2FF33M	3/4 - 14	1/2 - 14	27	50	5.5	5.5	3.3
1X3/4FF33M	1 - 11	3/4 - 14	36	55	4.5	4.5	2.9
1FF33M	1 - 11	1 - 11	36	59	4.5	4.5	2.9

### G5HG5

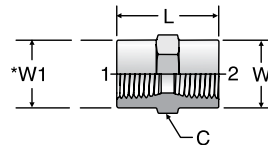
Straight Thread Coupling  
Female SAE / Female SAE



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2B	2 UN/UNF-2B			-S	-SS	-B
	4 G5HG5	7/16 - 20					
6 G5HG5	9/16 - 18	9/16 - 18	13/16	1.26	6.0	6.0	3.3
8 G5HG5	3/4 - 16	3/4 - 16	1	1.42	5.0	5.0	3.3
10 G5HG5	7/8 - 14	7/8 - 14	1 3/16	1.60	4.5	4.5	2.9
12 G5HG5	1 1/16 - 12	1 1/16 - 12	1 3/8	1.85	4.5	4.5	2.9
16 G5HG5	1 5/16 - 12	1 5/16 - 12	1 5/8	1.85	3.5	3.5	2.2

### GG

Pipe Coupling  
NPTF / NPTF

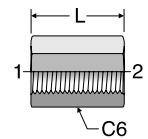


SAE 140138  
HPD Base # 0202

TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	W (in.)	W1 (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF					-S	-SS	-B
	1/8 GG	1/8 - 27							
1/4 x 1/8 GG	1/4 - 18	1/8 - 27	3/4	0.94	0.75	0.63	6.0	6.0	3.9
1/4 GG	1/4 - 18	1/4 - 18	3/4	1.13	0.75	0.75	6.0	6.0	3.9
3/8 x 1/8 GG	3/8 - 18	1/8 - 27	7/8	1.03	0.88	0.63	6.0	6.0	3.9
3/8 x 1/4 GG	3/8 - 18	1/4 - 18	7/8	1.13	0.88	0.75	6.0	6.0	3.9
3/8 GG	3/8 - 18	3/8 - 18	7/8	1.13	0.88	0.88	6.0	6.0	3.9
1/2 x 1/8 GG	1/2 - 14	1/8 - 27	1 1/8	1.06	1.13	0.63	6.0	6.0	3.2
1/2 x 1/4 GG	1/2 - 14	1/4 - 18	1 1/8	1.38	1.13	0.75	5.0	6.0	3.2
1/2 x 3/8 GG	1/2 - 14	3/8 - 18	1 1/8	1.50	1.13	0.88	5.0	6.0	3.2
1/2 GG	1/2 - 14	1/2 - 14	1 1/8	1.50	1.13	1.13	5.0	6.0	3.2
3/4 x 1/4 GG	3/4 - 14	1/4 - 18	1 3/8	1.55	1.36	0.75	4.0	4.8	3.1
3/4 x 1/2 GG	3/4 - 14	1/2 - 14	1 3/8	1.88	1.36	1.13	4.0	4.8	3.1
3/4 GG	3/4 - 14	3/4 - 14	1 3/8	1.53	1.38	1.38	4.0	4.8	2.6
1 GG	1 - 11 1/2	1 - 11 1/2	1 5/8	1.89	1.63	1.63	3.0	3.6	1.9
1 x 1/2 GG	1 - 11 1/2	1/2 - 14	1 5/8	1.77	1.63	1.13	3.0	3.6	1.9
1 x 3/4 GG	1 - 11 1/2	3/4 - 14	1 5/8	1.77	1.63	1.38	3.0	3.6	1.9
1 1/4 GG	1 1/4 - 11 1/2	1 1/4 - 11 1/2	2	1.93	2.00	2.00	2.5	3.0	1.9
1 1/4 x 1 GG	1 1/4 - 11 1/2	1 - 11 1/2	2	1.93	2.00	1.63	2.5	3.0	1.9
1 1/2 GG	1 1/2 - 11 1/2	1 1/2 - 11 1/2	2 3/8	1.93	2.38	2.38	2.0	2.4	1.5
1 1/2 x 1 1/4 GG	1 1/2 - 11 1/2	1 1/4 - 11 1/2	2 3/8	1.93	2.37	2.37	2.0	2.4	1.5
2 GG	2 - 11 1/2	2 - 11 1/2	2 7/8	1.97	2.88	2.88	2.0	2.4	1.5

### GG44M

BSPP Female Union  
BSPP / BSPP



TUBE FITTING PART #	END SIZE		C6 HEX (mm)	L (mm)	Dynamic Pressure (x 1,000 PSI)		
	1 BSPP	2 BSPP			S	SS	B
	1/8GG44M	1/8 - 28					
1/4X1/8GG44M	1/4 - 19	1/8 - 28	17	24.0	6.0	6.0	3.3
1/4GG44M	1/4 - 19	1/4 - 19	17	28.0	6.0	6.0	3.3
3/8GG44M	3/8 - 19	3/8 - 19	22	28.0	6.0	6.0	3.3
3/8x1/4GG44M	3/8 - 19	1/4 - 19	22	28.0	6.0	6.0	3.3
1/2x3/8GG44M	1/2 - 14	3/8 - 19	27	31.0	5.0	5.0	3.3
1/2GG44M	1/2 - 14	1/2 - 14	27	32.5	5.0	5.0	3.3
1GG44M	1 - 11	1 - 11	46	42.0	3.0	3.0	1.9

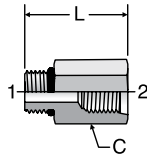
Dimensions and pressures for reference only, subject to change.



### F50G5

Straight Thread Reducer / Expander  
SAE-ORB / SAE-ORB

SAE 090136  
HPD Base # 0510

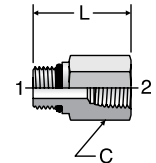


TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 UN/UNF-2B			-S	-SS	-B
2-4 F50G5	5/16 - 24	7/16 - 20	11/16	1.03	7.5	7.5	3.3
4-4 F50G5	7/16 - 20	7/16 - 20	11/16	1.08	7.5	7.5	3.3
4-6 F50G5	7/16 - 20	9/16 - 18	13/16	1.16	6.0	6.0	3.3
6-4 F50G5	9/16 - 18	7/16 - 20	11/16	1.03	6.0	6.0	3.3
6-6 F50G5	9/16 - 18	9/16 - 18	13/16	1.16	6.0	6.0	3.3
6-8 F50G5	9/16 - 18	3/4 - 16	1 1/16	1.38	6.0	6.0	3.3
8-4 F50G5	3/4 - 16	7/16 - 20	7/8	1.13	6.0	6.0	3.3
8-6 F50G5	3/4 - 16	9/16 - 18	7/8	1.13	6.0	6.0	3.3
8-10 F50G5	3/4 - 16	7/8 - 14	1 1/8	1.56	4.5	4.5	2.9
10-4 F50G5	7/8 - 14	7/16 - 20	1	0.81	5.0	5.0	3.3
10-6 F50G5	7/8 - 14	9/16 - 18	1	1.26	5.0	5.0	3.3
10-8 F50G5	7/8 - 14	3/4 - 16	1	1.31	5.0	5.0	3.3
10-12 F50G5	7/8 - 14	1 1/16 - 12	1 3/8	1.69	4.5	4.5	2.9
12-4 F50G5	1 1/16 - 12	7/16 - 20	1 1/4	1.00	5.0	5.0	3.3
12-6 F50G5	1 1/16 - 12	9/16 - 18	1 1/4	1.00	5.0	5.0	3.3
12-8 F50G5	1 1/16 - 12	3/4 - 16	1 1/4	1.45	5.0	5.0	3.3
12-10 F50G5	1 1/16 - 12	7/8 - 14	1 1/4	1.53	5.0	5.0	3.3
12-16 F50G5	1 1/16 - 12	1 5/16 - 12	1 5/8	1.88	3.5	3.5	2.2
16-6 F50G5	1 5/16 - 12	9/16 - 18	1 1/2	1.00	4.5	4.5	2.9
16-8 F50G5	1 5/16 - 12	3/4 - 16	1 1/2	1.00	4.5	4.5	2.9
16-10 F50G5	1 5/16 - 12	7/8 - 14	1 1/2	1.00	4.5	4.5	2.9
16-12 F50G5	1 5/16 - 12	1 1/16 - 12	1 1/2	1.75	4.5	4.5	2.9
16-20 F50G5	1 5/16 - 12	1 5/8 - 12	2 1/8	1.97	3.0	3.0	1.9
20-6 F50G5	1 5/8 - 12	9/16 - 18	1 7/8	1.00	4.0	4.0	2.6
20-8 F50G5	1 5/8 - 12	3/4 - 16	1 7/8	1.00	4.0	4.0	2.6
20-10 F50G5	1 5/8 - 12	7/8 - 14	1 7/8	1.00	4.0	4.0	2.6
20-12 F50G5	1 5/8 - 12	1 1/16 - 12	1 7/8	1.00	4.0	4.0	2.6
20-16 F50G5	1 5/8 - 12	1 5/16 - 12	1 7/8	1.72	4.0	4.0	2.6
20-24 F50G5	1 5/8 - 12	1 7/8 - 12	2 1/2	1.88	3.0	3.0	1.9
24-6 F50G5	1 7/8 - 12	9/16 - 18	2 1/8	1.00	3.0	3.0	1.9
24-12 F50G5	1 7/8 - 12	1 1/16 - 12	2 1/8	1.00	3.0	3.0	1.9
24-16 F50G5	1 7/8 - 12	1 5/16 - 12	2 1/8	1.00	3.0	3.0	1.9
24-20 F50G5	1 7/8 - 12	1 5/8 - 12	2 1/8	1.75	3.0	3.0	1.9
32-20 F50G5	2 1/2 - 12	1 5/8 - 12	2 3/4	1.00	2.0	2.0	1.3
32-24 F50G5	2 1/2 - 12	1 7/8 - 12	2 3/4	1.80	2.0	2.0	1.3

### F50G

Female Pipe Adapter  
SAE-ORB / NPTF

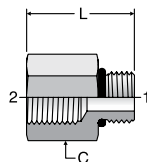
SAE 090156



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 NPTF			-S	-SS	-B
2-1/8 F50G	5/16 - 24	1/8 - 27	9/16	0.91	6.0	6.0	3.3
4-1/8 F50G	7/16 - 20	1/8 - 27	9/16	1.00	6.0	6.0	3.3
4-1/4 F50G	7/16 - 20	1/4 - 18	3/4	1.16	6.0	6.0	3.3
5-1/8 F50G	1/2 - 20	1/8 - 27	5/8	1.06	6.0	6.0	3.3
5-1/4 F50G	1/2 - 20	1/4 - 18	3/4	1.19	6.0	6.0	3.3
6-1/8 F50G	9/16 - 18	1/8 - 27	11/16	1.00	6.0	6.0	3.3
6-1/4 F50G	9/16 - 18	1/4 - 18	3/4	1.16	6.0	6.0	3.3
6-3/8 F50G	9/16 - 18	3/8 - 18	7/8	1.28	6.0	6.0	3.3
6-1/2 F50G	9/16 - 18	1/2 - 14	1 1/8	1.53	5.0	6.0	3.3
8-1/8 F50G	3/4 - 16	1/8 - 27	7/8	0.80	6.0	6.0	3.3
8-1/4 F50G	3/4 - 16	1/4 - 18	7/8	1.13	6.0	6.0	3.3
8-3/8 F50G	3/4 - 16	3/8 - 18	7/8	1.28	6.0	6.0	3.3
8-1/2 F50G	3/4 - 16	1/2 - 14	1 1/8	1.50	5.0	6.0	3.3
10-1/4 F50G	7/8 - 14	1/4 - 18	1	0.81	5.0	6.0	3.3
10-3/8 F50G	7/8 - 14	3/8 - 18	1	1.31	5.0	6.0	3.3
10-1/2 F50G	7/8 - 14	1/2 - 14	1 1/8	1.53	5.0	6.0	3.3
10-3/4 F50G	7/8 - 14	3/4 - 14	1 3/8	1.63	4.0	4.0	2.6
12-1/4 F50G	1 1/16 - 12	1/4 - 18	1 1/4	1.00	6.0	6.0	3.3
12-3/8 F50G	1 1/16 - 12	3/8 - 18	1 1/4	1.34	5.0	6.0	3.3
12-1/2 F50G	1 1/16 - 12	1/2 - 14	1 1/4	1.41	5.0	6.0	3.3
12-3/4 F50G	1 1/16 - 12	3/4 - 14	1 3/8	1.72	4.0	4.8	3.1
14-1/2 F50G	1 3/16 - 12	1/2 - 14	1 3/8	1.06	5.0	5.0	3.3
14-3/4 F50G	1 3/16 - 12	3/4 - 14	1 3/8	1.69	4.0	4.0	2.6
16-1/2 F50G	1 5/16 - 12	1/2 - 14	1 1/2	1.00	5.0	6.0	3.3
16-3/4 F50G	1 5/16 - 12	3/4 - 14	1 1/2	1.50	4.0	4.8	2.6
16-1 F50G	1 5/16 - 12	1 - 11 1/2	1 5/8	1.88	3.0	3.6	1.9
20-1 F50G	1 5/8 - 12	1 - 11 1/2	1 7/8	1.00	3.0	3.6	1.9
20-1 1/2 F50G	1 5/8 - 12	1 1/2 - 14	2 1/4	2.16	2.5	3.0	1.6
20-1 1/4 F50G	1 5/8 - 12	1 1/4 - 11 1/2	2	1.97	3.0	3.0	1.9
24-1 F50G	1 7/8 - 12	1 - 11 1/2	2 1/8	1.00	3.0	3.6	1.9
24-1 1/4 F50G	1 7/8 - 12	1 1/4 - 11 1/2	2 1/8	1.94	2.5	2.5	1.6
24-1 1/2 F50G	1 7/8 - 12	1 1/2 - 11 1/2	2 1/4	2.00	2.0	2.4	1.3
32-2 F50G	2 1/2 - 12	2 - 11 1/2	2 7/8	2.06	2.0	2.4	1.3

### F50HG8

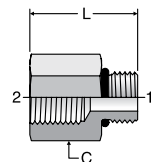
Conversion Adapter  
SAE-ORB / Metric



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 METRIC STR			S	SS	B
4M10F50HG8	7/16 - 20	M10X1	5/8	0.95	6.0	6.0	3.3
4M12F50HG8	7/16 - 20	M12X1.5	3/4	1.14	6.0	6.0	3.3
6M14F50HG8	9/16 - 18	M14X1.5	13/16	1.17	6.0	6.0	3.3
6M16F50HG8	9/16 - 18	M16X1.5	15/16	1.17	6.0	6.0	3.3
8M16F50HG8	3/4 - 16	M16X1.5	15/16	1.30	6.0	6.0	3.3
8M18F50HG8	3/4 - 16	M18X1.5	1	1.30	6.0	6.0	3.3
10M22F50HG8	7/8 - 14	M22X1.5	1 3/16	1.46	5.0	5.0	3.3
12M27F50HG8	1 1/16 - 12	M27X2	1 1/2	1.72	5.0	5.0	3.3
16M33F50HG8	1 5/16 - 12	M33X2	1 3/4	1.81	5.0	5.0	3.3

### F50HG4

Conversion Adapter  
SAE-ORB / BSPP



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 BSPP			S	SS	B
4-1/8F50HG4	7/16 - 20	1/8 - 28	5/8	0.96	6.0	6.0	3.3
4-1/4F50HG4	7/16 - 20	1/4 - 19	3/4	1.16	6.0	6.0	3.3
6-1/4F50HG4	9/16 - 18	1/4 - 19	3/4	1.19	6.0	6.0	3.3
6-3/8F50HG4	9/16 - 18	3/8 - 19	7/8	1.19	6.0	6.0	3.3
8-1/4F50HG4	3/4 - 16	1/4 - 19	7/8	1.32	6.0	6.0	3.3
8-3/8F50HG4	3/4 - 16	3/8 - 19	15/16	1.32	6.0	6.0	3.3
10-1/2F50HG4	7/8 - 14	1/2 - 14	1 1/8	1.52	5.0	5.0	3.3
12-3/4F50HG4	1 1/16 - 12	3/4 - 14	1 7/16	1.74	4.0	4.0	2.6
16-1F50HG4	1 5/16 - 12	1 - 11	1 7/8	1.87	3.0	3.0	1.9

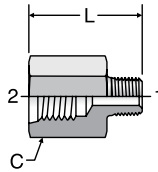
Dimensions and pressures for reference only, subject to change.



### FHG5

Female Straight Thread Adapter  
NPTF / SAE-ORB

HPD Base # 0110

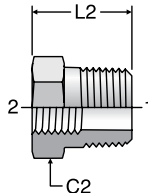


TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 UN/UNF-2B			-S	-SS	-B
	1/8-4 FHG5	1/8 - 27					
1/8-5 FHG5	1/8 - 27	1/2 - 20	3/4	1.09	6.0	6.0	3.3
1/4-6 FHG5	1/4 - 18	9/16 - 18	3/4	1.36	6.0	6.0	3.3
3/8-6 FHG5	3/8 - 18	9/16 - 18	3/4	1.42	6.0	6.0	3.3
3/8-8 FHG5	3/8 - 18	3/4 - 16	1	1.50	5.0	5.0	3.3
1/2-6 FHG5	1/2 - 14	9/16 - 18	7/8	1.58	6.0	6.0	3.3
1/2-8 FHG5	1/2 - 14	3/4 - 16	1	1.66	5.0	5.0	3.3
1/2-10 FHG5	1/2 - 14	7/8 - 14	1 1/4	1.75	4.5	4.5	2.9
3/4-8 FHG5	3/4 - 14	3/4 - 16	1 1/8	1.13	4.5	4.5	2.9
3/4-12 FHG5	3/4 - 14	1 1/16 - 12	1 3/8	1.97	4.5	4.5	2.9
1-16 FHG5	1 - 11 1/2	1 5/16 - 12	1 5/8	2.13	3.5	3.5	2.2

### PTR

Pipe Thread Reducer  
NPTF / NPTF

SAE 140140  
HPD Base # 0102



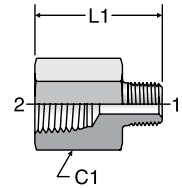
TUBE FITTING PART #	END SIZE		C2 HEX (in.)	L2 (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF			-S	-SS	-B
	1/4 x 1/8 PTR	1/4 - 18					
3/8 x 1/8 PTR	3/8 - 18	1/8 - 27	3/4	0.86	6.0	6.0	3.9
3/8 x 1/4 PTR	3/8 - 18	1/4 - 18	3/4	0.86	6.0	6.0	3.9
1/2 x 1/8 PTR	1/2 - 14	1/8 - 27	7/8	1.11	6.0	6.0	3.2
1/2 x 1/4 PTR	1/2 - 14	1/4 - 18	7/8	1.11	6.0	6.0	3.2
1/2 x 3/8 PTR	1/2 - 14	3/8 - 18	7/8	1.11	6.0	6.0	3.2
3/4 x 1/8 PTR	3/4 - 14	1/8 - 27	1 1/8	1.17	5.5	6.0	3.3
3/4 x 1/4 PTR	3/4 - 14	1/4 - 18	1 1/8	1.17	5.5	6.0	3.7
3/4 x 3/8 PTR	3/4 - 14	3/8 - 18	1 1/8	1.17	5.5	6.0	3.7
3/4 x 1/2 PTR	3/4 - 14	1/2 - 14	1 1/8	1.17	5.0	6.0	3.3
1 x 1/8 PTR	1 - 11 1/2	1/8 - 27	1 3/8	1.36	4.5	5.4	3.3
1 x 1/4 PTR	1 - 11 1/2	1/4 - 18	1 3/8	1.36	4.5	5.4	3.3
1 x 3/8 PTR	1 - 11 1/2	3/8 - 18	1 3/8	1.36	4.5	5.4	3.0
1 x 1/2 PTR	1 - 11 1/2	1/2 - 14	1 3/8	1.36	4.5	5.4	3.0
1 x 3/4 PTR	1 - 11 1/2	3/4 - 14	1 3/8	1.36	4.0	4.8	2.7
1 1/4 x 1/4 PTR	1 1/4 - 11 1/2	1/4 - 18	1 3/4	1.47	3.0	3.6	2.3
1 1/4 x 3/8 PTR	1 1/4 - 11 1/2	3/8 - 18	1 3/4	1.47	3.0	3.6	2.3
1 1/4 x 1/2 PTR	1 1/4 - 11 1/2	1/2 - 14	1 3/4	1.47	3.0	3.6	2.3
1 1/4 x 3/4 PTR	1 1/4 - 11 1/2	3/4 - 14	1 3/4	1.47	3.0	3.6	2.3
1 1/4 x 1 PTR	1 1/4 - 11 1/2	1 - 11 1/2	1 3/4	1.47	3.0	3.6	2.3
1 1/2 x 1/4 PTR	1 1/2 - 11 1/2	1/4 - 18	2	1.52	3.0	3.6	2.3
1 1/2 x 3/8 PTR	1 1/2 - 11 1/2	3/8 - 18	2	1.58	3.0	3.6	2.3
1 1/2 x 1/2 PTR	1 1/2 - 11 1/2	1/2 - 14	2	1.58	3.0	3.6	2.3
1 1/2 x 3/4 PTR	1 1/2 - 11 1/2	3/4 - 14	2	1.58	3.0	3.6	2.3
1 1/2 x 1 PTR	1 1/2 - 11 1/2	1 - 11 1/2	2	1.58	3.0	3.6	2.3
1 1/2 x 1 1/4 PTR	1 1/2 - 11 1/2	1 1/4 - 11 1/2	2	1.58	2.5	3.0	1.9
2 x 1/2 PTR	2 - 11 1/2	1/2 - 14	2 1/2	1.75	2.0	2.4	1.5
2 x 3/4	2 - 11 1/2	3/4 - 14	2 1/2	1.75	2.0	2.4	1.5
2 x 1 PTR	2 - 11 1/2	1 - 11 1/2	2 1/2	1.75	2.0	2.4	1.5
2 x 1 1/4 PTR	2 - 11 1/2	1 1/4 - 11 1/2	2 1/2	1.75	2.0	2.4	1.5
2 x 1 1/2 PTR	2 - 11 1/2	1 1/2 - 11 1/2	2 1/2	1.75	2.0	2.4	1.5

Dimensions and pressures for reference only, subject to change.

### FG

Expander / Adapter  
NPTF / NPTF

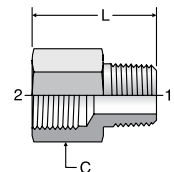
SAE 140139  
HPD Base # 0201



TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L1 (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF			-S	-SS	-B
	1/8 x 1/16 FG	1/16 - 27					
1/8 FG	1/8 - 27	1/8 - 27	5/8	1.03	6.0	6.0	3.3
1/4 x 1/8 FG	1/8 - 27	1/4 - 18	3/4	1.21	6.0	6.0	3.9
1/4 FG	1/4 - 18	1/4 - 18	3/4	1.39	6.0	6.0	3.9
3/8 x 1/8 FG	1/8 - 27	3/8 - 18	7/8	1.25	6.0	6.0	3.3
3/8 x 1/4 FG	1/4 - 18	3/8 - 18	7/8	1.44	6.0	6.0	3.9
3/8 FG	3/8 - 18	3/8 - 18	7/8	1.44	6.0	6.0	3.9
1/2 x 1/8 FG	1/8 - 27	1/2 - 14	1 1/8	1.50	5.0	6.0	3.2
1/2 x 1/4 FG	1/4 - 18	1/2 - 14	1 1/8	1.69	5.0	6.0	3.2
1/2 x 3/8 FG	3/8 - 18	1/2 - 14	1 1/8	1.69	5.0	6.0	3.2
1/2 FG	1/2 - 14	1/2 - 14	1 1/8	1.87	5.0	6.0	3.2
3/4 FG	3/4 - 14	3/4 - 14	1 3/8	1.93	4.0	4.8	2.6
3/4 x 1/4 FG	1/4 - 18	3/4 - 14	1 3/8	1.75	4.0	4.8	2.6
3/4 x 3/8 FG	3/8 - 18	3/4 - 14	1 3/8	1.75	4.0	4.8	2.6
3/4 x 1/2 FG	1/2 - 14	3/4 - 14	1 3/8	1.93	4.0	4.8	2.6
1 FG	1 - 11 1/2	1 - 11 1/2	1 5/8	2.37	3.0	3.6	2.3
1 x 1/4 FG	1/4 - 18	1 - 11 1/2	1 5/8	2.01	3.0	3.6	2.3
1 x 1/2 FG	1/2 - 14	1 - 11 1/2	1 5/8	2.19	3.0	3.6	2.3
1 x 3/4 FG	3/4 - 14	1 - 11 1/2	1 5/8	2.19	3.0	3.6	2.3
1 1/4 FG	1 1/4 - 11 1/2	1 1/4 - 11 1/2	2	2.50	2.5	3.0	1.9
1 1/4 x 1 FG	1 - 11 1/2	1 1/4 - 11 1/2	2	2.47	2.5	3.0	1.9
1 1/2 x 1 FG	1 - 11 1/2	1 1/2 - 11 1/2	2 3/8	2.47	2.0	2.4	1.5
1 1/2 x 1 1/4 FG	1 1/4 - 11 1/2	1 1/2 - 11 1/2	2 3/8	2.50	2.0	2.4	1.5
2 FG	2 - 11 1/2	2 - 11 1/2	2 7/8	2.66	2.0	2.4	1.5

### FHG8

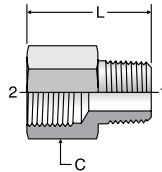
Conversion Adapter  
NPTF / Metric



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 METRIC STR			-S	-SS	-B
	1/8M10FHG8	1/8 - 27					
1/8M12FHG8	1/8 - 27	M12X1.5	3/4	1.16	6.0	6.0	3.3
1/4M14FHG8	1/4 - 18	M14X1.5	13/16	1.35	6.0	6.0	3.3
1/4M16FHG8	1/4 - 18	M16X1.5	15/16	1.37	6.0	6.0	3.3
3/8M18FHG8	3/8 - 18	M18X1.5	1	1.36	6.0	6.0	3.3
1/2M22FHG8	1/2 - 14	M22X1.5	1 3/16	1.65	6.0	5.0	3.3
3/4M27FHG8	3/4 - 14	M27X2	1 1/2	1.77	5.5	4.5	2.9

### FHG4

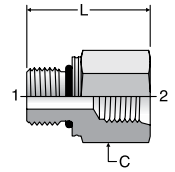
Conversion Adapter  
NPTF / BSPP



TUBE FITTING PART #	END SIZE		C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 BSPP			-S	-SS	-B
	1/4 - 18	1/4 - 19					
1/4X3/8FHG4	1/4 - 18	3/8 - 19	13/16	1.40	6.0	6.0	3.3
3/8X1/4FHG4	3/8 - 18	1/4 - 19	3/4	1.31	6.0	6.0	3.3
3/8X3/8FHG4	3/8 - 18	3/8 - 19	1	1.34	6.0	6.0	3.3
1/2X3/8FHG4	1/2 - 14	3/8 - 19	15/16	1.50	6.0	6.0	3.3
1/2X1/2FHG4	1/2 - 14	1/2 - 14	1 1/8	1.66	5.0	5.0	3.3
3/4X3/4FHG4	3/4 - 14	3/4 - 14	1 7/16	1.75	4.0	4.0	2.6

### F87OHG87M

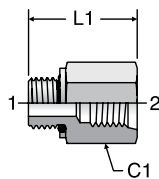
Reducer / Expander  
ISO 6149 / ISO 6149



TUBE FITTING PART #	END SIZE		C HEX	L	Dynamic Pressure (x 1,000 PSI)		
	1 METRIC STR	2 METRIC STR			-S	-SS	-B
	M8M10F87OHG87M	M8X1					
M10M8F87OHG87M	M10X1	M8X1	14	27.5	10.0	7.5	3.3
M10M12F87OHG87M	M10X1	M12X1.5	19	30.0	8.0	6.0	3.3
M12M10F87OHG87M	M12X1.5	M10X1	17	29.5	10.0	6.0	3.3
M12M14F87OHG87M	M12X1.5	M14X1.5	22	32.0	7.0	6.0	3.3
M12M16F87OHG87M	M12X1.5	M16X1.5	24	33.5	6.0	6.0	3.3
M14M12F87OHG87M	M14X1.5	M12X1.5	19	32.0	8.0	6.0	3.3
M14M16F87OHG87M	M14X1.5	M16X1.5	24	33.5	6.0	6.0	3.3
M16M14F87OHG87M	M16X1.5	M14X1.5	22	34.0	7.0	6.0	3.3
M16M18F87OHG87M	M16X1.5	M18X1.5	27	37.0	6.0	6.0	3.3
M18M16F87OHG87M	M18X1.5	M16X1.5	24	37.0	6.0	6.0	3.3
M18M20F87OHG87M	M18X1.5	M20X1.5	30	39.5	6.0	6.0	3.3
M20M18F87OHG87M	M20X1.5	M18X1.5	27	38.5	6.0	6.0	3.3
M20M22F87OHG87M	M20X1.5	M22X1.5	30	39.5	5.0	5.0	3.3
M22M20F87OHG87M	M22X1.5	M20X1.5	27	41.5	5.0	5.0	3.3
M27M22F87OHG87M	M27X2.0	M22X1.5	32	46.0	5.0	5.0	3.3
M27M33F87OHG87M	M27X2.0	M33X2.0	46	52.0	5.0	5.0	3.3
M33M27F87OHG87M	M33X2.0	M27X2.0	41	48.0	5.0	5.0	3.3
M33M42F87OHG87M	M33X2.0	M42X2.0	55	54.0	4.0	4.0	2.6
M42M27F87OHG87M	M42X2.0	M27X2.0	50	54.0	3.0	3.0	1.9
M42M33F87OHG87M	M42X2.0	M33X2.0	50	54.0	3.0	3.0	1.9
M42M48F87OHG87M	M42X2.0	M48X2.0	65	57.0	2.0	2.0	1.3

### F8OHG5

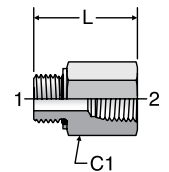
Conversion Adapter  
Metric-ORR / SAE-ORB  
(for ISO 9974 / DIN 3852-1 Port)



TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L1 (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 METRIC STR	2 UN/UNF-2B			-S	-SS	-B
	M10-4F8OHG5	M10x1					
M10-6F8OHG5	M10X1	9/16 - 18	7/8	1.15	5.0	5.0	3.3
M14-6F8OHG5	M14x1.5	9/16 - 18	13/16	1.19	5.0	5.0	3.3
M16-8F8OHG5	M16x1.5	3/4 - 16	1	1.31	5.0	5.0	3.3
M18-8F8OHG5	M18X1.5	3/4 - 16	1	1.38	3.5	3.5	2.2
M22-10F8OHG5	M22x1.5	7/8 - 14	1 1/8	1.50	3.5	3.5	2.2
M27-12F8OHG5	M27x2	1 1/16 - 12	1 1/4	1.88	3.5	3.5	2.2
M33-16F8OHG5	M33x2	1 5/16 - 12	1 5/8	1.91	3.0	3.0	1.9
M42-20F8OHG5	M42x2	1 5/8 - 12	2	1.91	2.0	2.0	1.3

### F8OHG

Conversion Adapter  
Metric-ORR / NPTF  
(for ISO 9974 / DIN 3852-1 Port)



TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 METRIC STR	2 NPTF			-S	-SS	-B
	M10-1/8F8OHG	M10X1.0					
M12-1/4F8OHG	M12X1.5	1/4 - 18	3/4	1.24	5.0	5.0	3.3
M14-1/4F8OHG	M14X1.5	1/4 - 18	3/4	1.24	5.0	5.0	3.3
M16-3/8F8OHG	M16X1.5	3/8 - 18	7/8	1.36	5.0	5.0	3.3
M16-1/2F8OHG	M16X1.5	1/2 - 14	1 1/8	1.58	5.0	5.0	3.3
M18-3/8F8OHG	M18X1.5	3/8 - 18	15/16	1.42	5.0	5.0	3.3
M18-1/2F8OHG	M18X1.5	1/2 - 14	1 1/8	1.67	5.0	5.0	3.3
M22-1/2F8OHG	M22X1.5	1/2 - 14	1 1/8	1.68	3.5	3.5	2.2
M27-3/4F8OHG	M27X2.0	3/4 - 14	1 3/8	1.87	3.5	3.5	2.2
M33-1F8OHG	M33X2.0	1 - 11 1/2	1 5/8	2.11	3.0	3.0	1.9

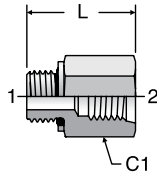
Dimensions and pressures for reference only, subject to change.





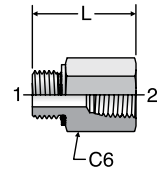
### F4OHG5

Conversion Adapter  
 BSP-ORR / SAE-ORB  
 (for ISO 1179-1 / DIN 3852-2 Port)



### F4OHG

Conversion Adapter  
 BSP-ORR / NPTF  
 (for ISO 1179-1 / DIN 3852-2 Port)

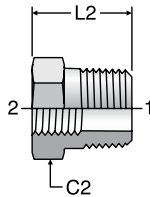


TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	BSP	UN/UNF-2B					
1/8-4F4OHG5	1/8 - 28	7/16 - 20	11/16	1.00	5.0	5.0	3.3
1/4-4F4OHG5	1/4 - 19	7/16 - 20	3/4	1.11	5.0	5.0	3.3
1/4-6F4OHG5	1/4 - 19	9/16 - 18	13/16	1.25	5.0	5.0	3.3
3/8-4F4OHG5	3/8 - 19	7/16 - 20	7/8	1.19	5.0	5.0	3.3
3/8-5F4OHG5	3/8 - 19	1/2 - 20	7/8	1.19	5.0	5.0	3.3
3/8-6F4OHG5	3/8 - 19	9/16 - 18	7/8	1.25	5.0	5.0	3.3
3/8-8F4OHG5	3/8 - 19	3/4 - 16	1	1.33	5.0	5.0	3.3
1/2-10F4OHG5	1/2 - 14	7/8 - 14	1 1/8	1.60	3.5	3.5	2.2
3/4-12F4OHG5	3/4 - 14	1 1/16 - 12	1 3/8	1.74	3.5	3.5	2.2
1-16F4OHG5	1 - 11	1 5/16 - 12	1 3/4	1.92	3.5	3.5	2.2
1 1/4-16F4OHG5	1 1/4 - 11	1 5/16 - 12	2	1.95	2.0	2.0	1.3
1 1/4-20F4OHG5	1 1/4 - 11	1 5/8 - 12	2	1.95	2.0	2.0	1.3

TUBE FITTING PART #	END SIZE		C6 HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	BSP	NPTF					
1/8 x 1/8F4OHG	1/8 - 28	1/8 - 27	5/8	0.97	5.0	5.0	3.3
1/4 x 1/4F4OHG	1/4 - 19	1/4 - 18	3/4	1.28	5.0	5.0	3.3
3/8 x 3/8F4OHG	3/8 - 19	3/8 - 18	7/8	1.33	5.0	5.0	3.3
1/2 x 1/2F4OHG	1/2 - 14	1/2 - 14	1 1/8	1.73	3.5	3.5	2.2
3/4 x 3/4F4OHG	3/4 - 14	3/4 - 14	1 3/8	1.77	3.5	3.5	2.2
1 x 1F4OHG	1 - 11	1 - 11 1/2	1 5/8	2.17	3.0	3.0	1.9

### PTR34M

BSPT Reducing Adapter  
 BSPT / BSPP

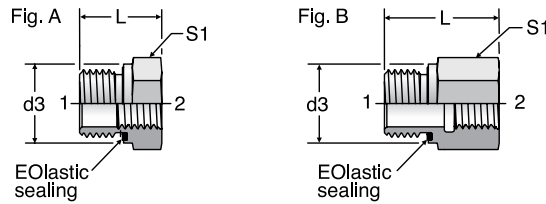


TUBE FITTING PART #	END SIZE		C2 (mm)	L2 (mm)	Dynamic Pressure (x 1,000 PSI)		
	1	2			S	SS	B
	BSPT	BSPP					
1/4X1/8PTR34M	1/4-19	1/8-28	17	28	6.0	6.0	3.3
3/8X1/4PTR34M	3/8-19	1/4-19	19	33	6.0	6.0	3.3
1/2X1/4PTR34M	1/2-14	1/4-19	22	39	5.0	5.0	3.3
1/2X3/8PTR34M	1/2-14	3/8-19	22	39	5.0	5.0	3.3

Dimensions and pressures for reference only, subject to change.

# RI-ED

BSPP Reducing Adatper / Expander  
 BSPP / BSPP-ED  
 (for ISO 1179-1 / DIN 3852-2 Port)

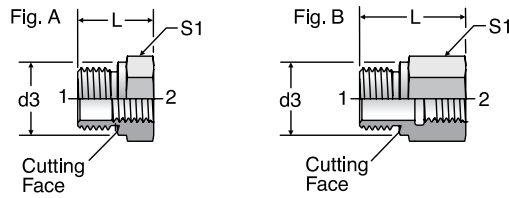


TUBE FITTING PART #	END SIZE		d3 (mm)	L (mm)	S1 (mm)	Fig.	Dynamic Pressure (x 1,000 PSI)		
	1 BSPP	2 BSPP					CF	71	MS
RI1/8EDX1/4	1/8 - 28	1/4 - 19	14	31.0	19	B	5.8	5.8	3.3
RI1/8EDX3/8	1/8 - 28	3/8 - 19	14	32.0	24	B	5.8	5.8	3.3
RI1/4EDX1/8	1/4 - 19	1/8 - 28	19	29.0	19	B	5.8	5.8	3.3
RI1/4EDX3/8	1/4 - 19	3/8 - 19	19	36.0	24	B	5.8	5.8	3.3
RI1/4EDX1/2	1/4 - 19	1/2 - 14	19	40.0	30	B	5.8	5.8	3.3
RI1/4EDX3/4	1/4 - 19	3/4 - 14	19	43.0	36	B	5.8	5.8	3.3
RI3/8EDX1/8	3/8 - 19	1/8 - 28	22	22.5	22	A	5.8	5.8	3.3
RI3/8EDX1/4	3/8 - 19	1/4 - 19	22	36.0	22	B	5.8	5.8	3.3
RI3/8EDX1/2	3/8 - 19	1/2 - 14	22	41.0	30	B	5.8	5.8	3.3
RI3/8EDX3/4	3/8 - 19	3/4 - 14	22	44.0	36	B	4.5	4.5	3.0
RI1/2EDX1/8	1/2 - 14	1/8 - 28	27	24.0	27	A	5.8	5.8	3.3
RI1/2EDX1/4	1/2 - 14	1/4 - 19	27	24.0	27	A	5.8	5.8	3.3
RI1/2EDX3/8	1/2 - 14	3/8 - 19	27	37.0	27	B	5.8	5.8	3.3
RI1/2EDX3/4	1/2 - 14	3/4 - 14	27	46.0	36	B	4.5	4.5	3.0
RI1/2EDX1	1/2 - 14	1 - 11	27	49.0	41	B	4.5	4.5	3.0
RI1/2EDX11/4	1/2 - 14	1 1/4 - 11	27	53.0	55	B	4.5	4.5	3.0
RI3/4EDX1/4	3/4 - 14	1/4 - 19	32	26.0	32	A	4.5	4.5	3.0
RI3/4EDX3/8	3/4 - 14	3/8 - 19	32	26.0	32	A	4.5	4.5	3.0
RI3/4EDX1/2	3/4 - 14	1/2 - 14	32	43.0	32	B	4.5	4.5	3.0
RI3/4EDX1	3/4 - 14	1 - 11	32	51.0	41	B	4.5	4.5	3.0
RI3/4EDX11/4	3/4 - 14	1 1/4 - 11	32	55.0	55	B	4.5	4.5	3.0
RI3/4EDX11/2	3/4 - 14	1 1/2 - 11	32	57.0	60	B	3.6	3.6	2.3
RI1EDX1/4	1 - 11	1/4 - 19	40	29.0	41	A	4.5	4.5	3.0
RI1EDX3/8	1 - 11	3/8 - 19	40	29.0	41	A	4.5	4.5	3.0
RI1EDX1/2	1 - 11	1/2 - 14	40	29.0	41	A	4.5	4.5	3.0
RI1EDX3/4	1 - 11	3/4 - 14	40	49.0	41	B	4.5	4.5	3.0
RI1EDX11/4	1 - 11	1 1/4 - 11	40	57.0	55	B	4.5	4.5	3.0
RI1EDX11/2	1 - 11	1 1/2 - 11	40	59.0	60	B	3.6	3.6	2.3
RI11/4EDX1/2	1 1/4 - 11	1/2 - 14	50	32.0	50	A	4.5	4.5	3.0
RI11/4EDX3/4	1 1/4 - 11	3/4 - 14	50	32.0	50	A	4.5	4.5	3.0
RI11/4EDX1	1 1/4 - 11	1 - 11	50	53.0	50	B	4.5	4.5	3.0
RI11/4EDX11/2	1 1/4 - 11	1 1/2 - 11	50	60.0	60	B	3.6	3.6	2.3
RI11/2EDX1/2	1 1/2 - 11	1/2 - 14	55	36.0	55	A	3.6	3.6	2.3
RI11/2EDX3/4	1 1/2 - 11	3/4 - 14	55	36.0	55	A	3.6	3.6	2.3
RI11/2EDX1	1 1/2 - 11	1 - 11	55	36.0	55	A	3.6	3.6	2.3
RI11/2EDX11/4	1 1/2 - 11	1 1/4 - 11	55	58.0	55	B	3.6	3.6	2.3
RI2EDX11/2	2 - 11	1 1/2 - 11	72	65.0	75	B	2.3	2.3	1.5

Dimensions and pressures for reference only, subject to change.

**RI**

**BSPP Reducing Adatper / Expander**  
**BSPP / BSPP-CF**  
 (for ISO 1179-1 / DIN 3852-2 Port)

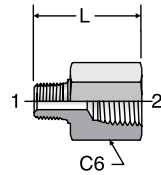


TUBE FITTING PART #	END SIZE		d3 (mm)	L (mm)	S1 (mm)	Fig.	Dynamic Pressure (x 1,000 PSI)		
	1 BSPP	2 BSPP					CF	71	MS
RI1/8X1/4CFX	1/8 - 28	1/4 - 19	14	31.0	19	B	5.8	5.8	3.3
RI1/8X3/8CFX	1/8 - 28	3/8 - 19	14	32.0	24	B	5.8	5.8	3.3
RI1/4X1/8CFX	1/4 - 19	1/8 - 28	18	28.0	19	B	5.8	5.8	3.3
RI1/4X3/8CFX	1/4 - 19	3/8 - 19	18	36.0	24	B	5.8	5.8	3.3
RI1/4X1/2CFX	1/4 - 19	1/2 - 14	18	40.0	30	B	5.8	5.8	3.3
RI1/4X3/4CFX	1/4 - 19	3/4 - 14	18	43.0	36	B	4.5	4.5	3.0
RI3/8X1/8CFX	3/8 - 19	1/8 - 28	22	22.5	22	A	5.8	5.8	3.3
RI3/8X1/4CFX	3/8 - 19	1/4 - 19	22	36.0	22	B	5.8	5.8	3.3
RI3/8X1/2CFX	3/8 - 19	1/2 - 14	22	41.0	30	B	5.8	5.8	3.3
RI3/8X3/4CFX	3/8 - 19	3/4 - 14	22	44.0	36	B	4.5	4.5	3.0
RI1/2X1/8CFX	1/2 - 14	1/8 - 28	26	24.0	27	A	5.8	5.8	3.3
RI1/2X1/4CFX	1/2 - 14	1/4 - 19	26	24.0	27	A	4.5	4.5	3.0
RI1/2X3/8CFX	1/2 - 14	3/8 - 19	26	36.0	27	B	4.5	4.5	3.0
RI1/2X3/4CFX	1/2 - 14	3/4 - 14	26	46.0	36	B	4.5	4.5	3.0
RI1/2X1CFX	1/2 - 14	1 - 11	26	49.0	41	B	2.3	2.3	1.5
RI1/2X11/4CFX	1/2 - 14	1 1/4 - 11	26	53.0	55	B	4.5	4.5	3.0
RI3/4X1/4CFX	3/4 - 14	1/4 - 19	32	26.0	32	A	4.5	4.5	3.0
RI3/4X3/8CFX	3/4 - 14	3/8 - 19	32	26.0	32	A	4.5	4.5	3.0
RI3/4X1/2CFX	3/4 - 14	1/2 - 14	32	41.0	32	B	4.5	4.5	3.0
RI3/4X1CFX	3/4 - 14	1 - 11	32	51.0	41	B	2.3	2.3	1.5
RI3/4X11/4CFX	3/4 - 14	1 1/4 - 11	32	55.0	55	B	2.3	2.3	1.5
RI3/4X11/2CFX	3/4 - 14	1 1/2 - 11	32	57.0	60	B	4.5	4.5	3.0
RI1X1/4CFX	1 - 11	1/4 - 19	39	29.0	41	A	4.5	4.5	3.0
RI1X3/8CFX	1 - 11	3/8 - 19	39	29.0	41	A	4.5	4.5	3.0
RI1X1/2CFX	1 - 11	1/2 - 14	39	29.0	41	A	4.5	4.5	3.0
RI1X3/4CFX	1 - 11	3/4 - 14	39	47.0	41	B	2.3	2.3	1.5
RI1X11/4CFX	1 - 11	1 1/4 - 11	39	57.0	55	B	2.3	2.3	1.5
RI1X11/2CFX	1 - 11	1 1/2 - 11	39	59.0	60	B	2.3	2.3	1.5
RI11/4X1/2CFX	1 1/4 - 11	1/2 - 14	49	32.0	50	A	2.3	2.3	1.5
RI11/4X3/4CFX	1 1/4 - 11	3/4 - 14	49	32.0	50	A	2.3	2.3	1.5
RI11/4X1CFX	1 1/4 - 11	1 - 11	49	52.0	50	B	2.3	2.3	1.5
RI11/4X11/2CFX	1 1/4 - 11	1 1/2 - 11	49	60.0	60	B	2.3	2.3	1.5
RI11/2X1/2CFX	1 1/2 - 11	1/2 - 14	55	36.0	55	A	2.3	2.3	1.5
RI11/2X3/4CFX	1 1/2 - 11	3/4 - 14	55	36.0	55	A	2.3	2.3	1.5
RI11/2X1CFX	1 1/2 - 11	1 - 11	55	36.0	55	A	2.3	2.3	1.5
RI11/2X11/4CFX	1 1/2 - 11	1 1/4 - 11	55	58.0	55	B	2.3	2.3	1.5
RI2X11/2CFX	2 - 11	1 1/2 - 11	68	62.0	70	B	2.3	2.3	1.5

Dimensions and pressures for reference only, subject to change.

### F3HG

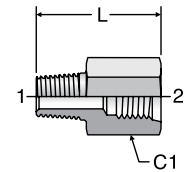
Conversion Adapter  
NPTF / BSPT



TUBE FITTING PART #	END SIZE		C6 HEX (in.)	L (mm)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	BSPT	NPTF					
1/8 x 1/8F3HG	1/8 - 38	1/8 - 27	9/16	1.08	6.0	6.0	3.3
1/4 x 1/4F3HG	1/4 - 19	1/4 - 18	3/4	1.37	6.0	6.0	3.3
3/8 x 3/8F3HG	3/8 - 19	3/8 - 19	7/8	1.38	6.0	6.0	3.3
1/2 x 1/2F3HG	1/2 - 14	1/2 - 14	1 1/8	1.88	5.0	5.0	3.3
3/4 x 3/4F3HG	3/4 - 14	3/4 - 14	1 3/8	1.95	4.0	4.0	2.6
1 x 1F3HG	1 - 11	1 - 11	1 5/8	2.38	3.0	3.0	1.9
1 1/2 x 1 1/2F3HG	1 1/2 - 11	1 1/2 - 11	2 3/8	2.53	2.0	2.0	1.3

### F3HG5

Conversion Adapter  
BSPT / SAE-ORB

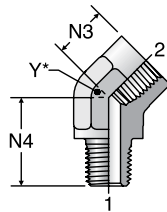


TUBE FITTING PART #	END SIZE		C1 HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	BSPT	UN/UNF-2B					
1/8-4F3HG5	1/8 - 28	7/16 - 20	11/16	1.09	6.0	6.0	3.3
1/8-5F3HG5	1/8 - 28	1/2 - 20	3/4	1.09	6.0	6.0	3.3
1/4-6F3HG5	1/4 - 19	9/16 - 18	13/16	1.36	6.0	6.0	3.3
3/8-8F3HG5	3/8 - 19	3/4 - 16	1	1.45	5.0	5.0	3.3
1/2-10F3HG5	1/2 - 14	7/8 - 14	1 1/8	1.78	4.5	4.5	2.9
3/4-12F3HG5	3/4 - 14	1 1/16 - 12	1 3/8	1.92	4.5	4.5	2.9
1-16F3HG5	1 - 11	1 5/16 - 12	1 5/8	2.13	3.5	3.5	2.2

### CD45

45° Pipe Elbow  
NPTF / NPTF

SAE 140339  
HPD Base # 3102

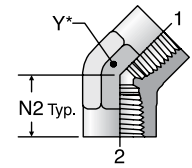


TUBE FITTING PART #	END SIZE		N3 (in.)	N4 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2				-S	-SS	-B
	NPTF	NPTF						
1/8 CD45	1/8 - 27	1/8 - 27	0.47	0.72	9/16	5.0	5.0	3.2
1/4 CD45	1/4 - 18	1/4 - 18	0.63	1.05	3/4	5.0	5.0	3.2
3/8 CD45	3/8 - 18	3/8 - 18	0.72	1.06	7/8	4.5	4.5	2.9
1/2 CD45	1/2 - 14	1/2 - 14	0.91	1.34	1 1/16	3.0	3.0	1.9
3/4 CD45	3/4 - 14	3/4 - 14	0.97	1.38	1 5/16	3.0	3.0	1.9
1 CD45	1 - 11 1/2	1 - 11 1/2	1.13	1.72	1 5/8	1.8	1.8	1.1
1 1/4 CD45	1 1/4 - 11 1/2	1 1/4 - 11 1/2	1.63	1.80	1 7/8	1.5	1.5	1.0

### DD45

45° Female Pipe Elbow  
NPTF / NPTF

SAE 140338  
HPD Base # 4202

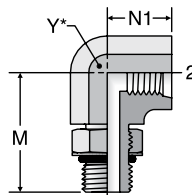


TUBE FITTING PART #	END SIZE		N2 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2			-S	-SS	-B
	NPTF	NPTF					
1/4 DD45	1/4 - 18	1/4 - 18	0.69	3/4	5.0	5.0	3.3
3/8 DD45	3/8 - 18	3/8 - 18	0.75	7/8	4.5	4.5	2.9
1/2 DD45	1/2 - 14	1/2 - 14	0.94	1 1/16	3.0	3.0	1.9
3/4 DD45	3/4 - 14	3/4 - 14	1.00	1 5/16	3.0	3.0	1.9
1 DD45	1 - 11 1/2	1 - 11 1/2	1.19	1 5/8	1.8	1.8	1.1

### AOEG5

Straight Thread Elbow  
SAE-ORB / SAE-ORB

HPD Base # 2510



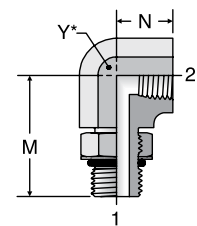
\* Y - Across Wrench Flats

TUBE FITTING PART #	END SIZE		M (in.)	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2				-S	-SS	-B
	UN/UNF-2A	UN/UNF-2B						
4 AOEG5	7/16 - 20	7/16 - 20	1.23	0.63	3/4	6.0	6.0	3.3
6 AOEG5	9/16 - 18	9/16 - 18	1.38	0.75	7/8	5.0	5.0	3.3
8 AOEG5	3/4 - 16	3/4 - 16	1.59	0.88	1 1/16	4.0	4.0	2.6
10 AOEG5	7/8 - 14	7/8 - 14	1.81	1.02	1 1/16	2.5	2.5	1.6
12 AOEG5	1 1/16 - 12	1 1/16 - 12	2.00	1.21	1 5/16	2.5	2.5	1.6
16 AOEG5	1 5/16 - 12	1 5/16 - 12	2.26	1.33	1 5/8	2.5	2.5	1.6

### AOEG

Female Pipe Elbow  
NPT / SAE-ORB

HPD Base # 2502



TUBE FITTING PART #	END SIZE		M (in.)	N (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2				-S	-SS	-B
	UN/UNF-2A	NPTF						
6-1/4 AOEG	9/16 - 18	1/4 - 18	1.34	0.63	3/4	5.0	5.0	3.3
8-3/8 AOEG	3/4 - 16	3/8 - 18	1.47	0.63	7/8	4.5	4.5	2.9
10-1/2 AOEG	7/8 - 14	1/2 - 14	1.81	0.75	1 1/16	3.0	3.0	1.9
12-3/4 AOEG	1 1/16 - 12	3/4 - 14	2.00	0.81	1 5/16	3.0	3.0	1.9
16-1 AOEG	1 5/16 - 12	1 - 11 1/2	2.25	1.00	1 5/8	1.8	1.8	1.1

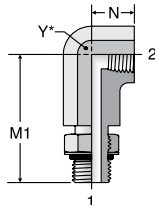
Dimensions and pressures for reference only, subject to change.



### AOE4G

Extra Long Female Pipe Elbow  
NPTF / SAE-ORB

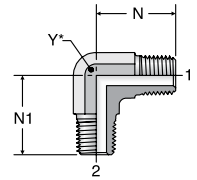
HPD Base # 5502



### CR

Male Pipe Elbow  
NPTF / NPTF

SAE 140237\*



\* Y – Across  
Wrench Flats

TUBE FITTING PART #	END SIZE		M1 (in.)	N (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 NPTF				-S	-SS	-B
8-3/8 AOE4G	3/4 - 16	3/8 - 18	2.94	0.63	7/8	4.5	4.5	2.9
10-1/2 AOE4G	7/8 - 14	1/2 - 14	3.56	0.75	1 1/16	3.0	3.0	1.9
12-3/4 AOE4G	1 1/16 - 12	3/4 - 14	4.06	0.81	1 5/16	3.0	3.0	1.9
16-1 AOE4G	1 5/16 - 12	1 - 11 1/2	4.63	1.00	1 5/8	1.8	1.8	1.1

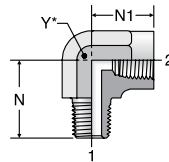
TUBE FITTING PART #	END SIZE		N (in.)	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF				-S	-SS	-B
1/8 CR	1/8 - 27	1/8 - 27	0.78	0.78	7/16	6.0	6.0	3.9
1/4 CR	1/4 - 18	1/4 - 18	1.09	1.09	9/16	6.0	6.0	3.9
3/8 CR	3/8 - 18	3/8 - 18	1.22	1.22	3/4	6.0	6.0	3.9
3/8 x 1/4 CR	3/8 - 18	1/4 - 18	1.22	1.22	3/4	6.0	6.0	3.3
1/2 CR	1/2 - 14	1/2 - 14	1.47	1.47	7/8	6.0	6.0	3.9
1/2 x 3/8 CR	1/2 - 14	3/8 - 18	1.47	1.28	7/8	6.0	6.0	3.3
3/4 CR	3/4 - 14	3/4 - 14	1.59	1.59	1 1/16	4.0	4.0	2.6
3/4 x 1/2 CR	3/4 - 14	1/2 - 14	1.59	1.47	1 1/16	4.0	4.0	2.6
1 CR	1 - 11 1/2	1 - 11 1/2	1.97	1.97	1 5/16	3.0	3.0	1.9
1 x 3/4 CR	1 - 11 1/2	3/4 - 14	1.97	1.78	1 5/16	3.0	3.0	1.9
1 1/4 CR	1 1/4 - 11 1/2	1 1/4 - 11 1/2	2.22	2.22	1 7/8	2.5	2.5	1.6
1 1/2 CR	1 1/2 - 11 1/2	1 1/2 - 11 1/2	2.34	2.34	1 7/8	2.5	2.5	1.6

\* Not shown in SAE J514, but coded per SAE J846.

### CD

Street Elbow  
NPTF / NPTF

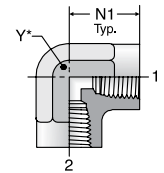
SAE 140239  
HPD Base # 2102



### DD

Female Pipe Elbow  
NPTF / NPTF

SAE 140238  
HPD Base # 2202



TUBE FITTING PART #	END SIZE		N (in.)	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF				-S	-SS	-B
1/8 CD	1/8 - 27	1/8 - 27	0.78	0.66	9/16	5.0	5.0	3.2
1/8 x 1/4 CD	1/8 - 27	1/4 - 18	0.90	0.88	9/16	5.0	5.0	3.2
1/4 CD	1/4 - 18	1/4 - 18	1.09	0.88	3/4	5.0	5.0	3.2
1/4 x 1/8 CD	1/4 - 18	1/8 - 27	1.09	0.66	9/16	5.0	5.0	3.2
1/4 x 1/2 CD	1/4 - 18	1/2 - 14	1.28	1.23	1 1/16	3.0	3.0	1.9
1/4 x 3/8 CD	1/4 - 18	3/8 - 18	1.22	1.01	7/8	4.5	4.5	2.9
3/8 CD	3/8 - 18	3/8 - 18	1.22	1.02	7/8	4.5	4.5	3.0
3/8 x 1/4 CD	3/8 - 18	1/4 - 18	1.22	0.88	3/4	5.0	5.0	3.2
3/8 x 1/2 CD	3/8 - 18	1/2 - 14	1.28	1.23	1 1/16	3.0	3.0	1.9
1/2 CD	1/2 - 14	1/2 - 14	1.47	1.23	1 1/16	3.0	3.0	1.9
1/2 x 3/8 CD	1/2 - 14	3/8 - 18	1.48	1.25	7/8	4.5	4.5	2.9
1/2 x 3/4 CD	1/2 - 14	3/4 - 14	1.58	1.36	1 5/16	3.0	3.0	1.9
3/4 CD	3/4 - 14	3/4 - 14	1.59	1.36	1 5/16	3.0	3.0	1.9
3/4 x 1/2 CD	3/4 - 14	1/2 - 14	1.59	1.23	1 1/16	3.0	3.0	1.9
1 CD	1 - 11 1/2	1 - 11 1/2	1.97	1.63	1 5/8	1.8	1.8	1.2
1 1/4 CD	1 1/4 - 11 1/2	1 1/4 - 11 1/2	2.38	1.70	1 7/8	1.5	1.5	1.0
1 1/4 x 1 1/2 CD	1 1/4 - 11 1/2	1 1/2 - 11 1/2	2.61	2.08	2 1/2	1.5	1.5	1.0
1 1/2 CD	1 1/2 - 11 1/2	1 1/2 - 11 1/2	2.64	2.08	2 1/2	1.5	1.5	1.0

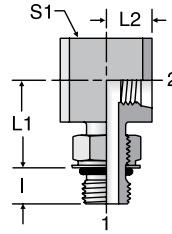
TUBE FITTING PART #	END SIZE		N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 NPTF	2 NPTF			-S	-SS	-B
1/8 DD	1/8 - 27	1/8 - 27	0.66	9/16	5.0	5.0	3.2
1/4 DD	1/4 - 18	1/4 - 18	0.88	3/4	5.0	5.0	3.2
3/8 DD	3/8 - 18	3/8 - 18	1.02	7/8	4.5	4.5	3.0
1/2 DD	1/2 - 14	1/2 - 14	1.23	1 1/16	3.0	3.0	1.9
1/2 x 3/8 DD	1/2 - 14	3/8 - 18	1.23	1 1/16	3.0	3.0	1.9
3/4 DD	3/4 - 14	3/4 - 14	1.36	1 5/8	3.0	3.0	1.9
1 DD	1 - 11 1/2	1 - 11 1/2	1.63	1 7/8	1.8	1.8	1.2
1 1/4 DD	1 1/4 - 11 1/2	1 1/4 - 11 1/2	1.70	1 7/8	1.5	1.5	1.5
1 1/2 DD	1 1/2 - 11 1/2	1 1/2 - 11 1/2	2.08	2 1/2	1.5	1.5	1.5

Dimensions and pressures for reference only, subject to change.



# A87LPOEG87LPM

ISO 6149\* Female Elbow  
 SHORT ISO 6149 / SHORT ISO 6149

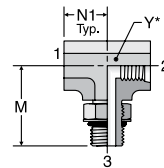


TUBE FITTING PART #	END SIZE		I (mm)	L1 (mm)	L2 (mm)	S1 (mm)	Dynamic Pressure (x 1,000 PSI)		
	1	2					S	SS	B
	Metric	Metric							
M08A87LPOEG87LPM	M8X1	M8X1	8.5	13.5	7.5	15	4.0	4.0	2.6
M10A87LPOEG87LPM	M10X1	M10X1	8.5	14.5	7.5	15	4.0	4.0	2.6
M12A87LPOEG87LPM	M12X1.5	M12X1.5	11.0	17.0	10.0	20	3.6	3.6	2.3
M14A87LPOEG87LPM	M14X1.5	M14X1.5	11.0	18.0	10.0	20	3.6	3.6	2.3

\* Male and female thread lengths have been shortened for compact design. The lengths do not conform to ISO 6149.

# G5G5JAO

Straight Thread Branch Tee  
 SAE-ORB (all three ends)



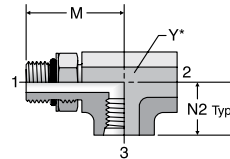
\* Y – Across Wrench Flats

TUBE FITTING PART #	END SIZE			M (in.)	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1	2	3				S	SS	B
	UN/UNF-2B	UN/UNF-2B	UN/UNF-2A						
4 G5G5JAO	7/16 - 20	7/16 - 20	7/16 - 20	1.23	0.63	3/4	6.0	6.0	3.3
6 G5G5JAO	9/16 - 18	9/16 - 18	9/16 - 18	1.38	0.75	7/8	5.0	5.0	3.3
8 G5G5JAO	3/4 - 16	3/4 - 16	3/4 - 16	1.59	0.88	1 1/16	4.0	4.0	2.6
10 G5G5JAO	7/8 - 14	7/8 - 14	7/8 - 14	1.81	1.02	1 1/16	2.5	2.5	1.6
12 G5G5JAO	1 1/16 - 12	1 1/16 - 12	1 1/16 - 12	2.00	1.21	1 5/16	2.5	2.5	1.6
16 G5G5JAO	1 5/16 - 12	1 5/16 - 12	1 5/16 - 12	2.25	1.33	1 5/8	2.5	2.5	1.6

Dimensions and pressures for reference only, subject to change.

# AOG5JG5

Straight Thread Run Tee  
SAE-ORB (all three ends)

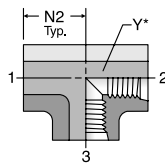


\* Y – Across Wrench Flats

TUBE FITTING PART #	END SIZE			M (in.)	N2 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
	1 UN/UNF-2A	2 UN/UNF-2B	3 UN/UNF-2B				-S	-SS	-B
	4 AOG5JG5	7/16 - 20	7/16 - 20						
6 AOG5JG5	9/16 - 18	9/16 - 18	9/16 - 18	1.38	0.86	7/8	5.0	5.0	3.3
8 AOG5JG5	3/4 - 16	3/4 - 16	3/4 - 16	1.59	1.03	1 1/16	4.0	4.0	2.6
10 AOG5JG5	7/8 - 14	7/8 - 14	7/8 - 14	1.81	1.18	1 1/16	2.5	2.5	1.6
12 AOG5JG5	1 1/16 - 12	1 1/16 - 12	1 1/16 - 12	2.00	1.39	1 5/16	2.5	2.5	1.6
16 AOG5JG5	1 5/16 - 12	1 5/16 - 12	1 5/16 - 12	2.25	1.52	1 5/8	2.5	2.5	1.6

# G5G5JG5

Female Straight Thread Tee  
SAE-ORB (all three ends)

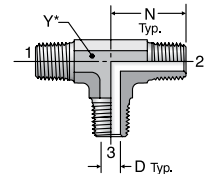


\* Y – Across Wrench Flats

TUBE FITTING PART #	END SIZE			Dynamic Pressure (x 1,000 PSI)		
	1-3 UN/UNF-2B	N2 (in.)	Y (in.)	-S	-SS	-B
	4 G5G5JG5	7/16 - 20	0.74			
6 G5G5JG5	9/16 - 18	0.86	3/4	5.0	5.0	3.3
8 G5G5JG5	3/4 - 16	1.03	1 1/16	4.0	4.0	2.6
10 G5G5JG5	7/8 - 14	1.18	1 1/16	2.5	2.5	1.6
12 G5G5JG5	1 1/16 - 12	1.39	1 5/16	2.5	2.5	1.6
16 G5G5JG5	1 5/16 - 12	1.52	1 5/8	2.5	2.5	1.6

# RRS

Male Pipe Tee  
NPTF (all three ends)

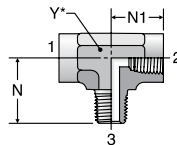


SAE 140437

TUBE FITTING PART #	END SIZE			Dynamic Pressure (x 1,000 PSI)		
	1-3 NPTF	N (in.)	Y (in.)	-S	-SS	-B
	1/8 RRS	1/8 - 27	0.78			
1/4 RRS	1/4 - 18	1.09	9/16	6.0	6.0	3.9
3/8 RRS	3/8 - 18	1.22	3/4	6.0	6.0	3.9
1/2 RRS	1/2 - 14	1.47	7/8	6.0	6.0	3.9
3/4 RRS	3/4 - 14	1.59	1 1/16	4.0	4.0	2.6

# MMS

Male Branch Tee  
NPTF (all three ends)

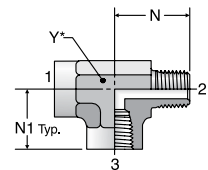


SAE 140425  
HPD Base # 212T

TUBE FITTING PART #	END SIZE				Dynamic Pressure (x 1,000 PSI)		
	1-3 NPTF	N (in.)	N1 (in.)	Y (in.)	-S	-SS	-B
	1/8 MMS	1/8 - 27	0.78	0.66			
1/4 MMS	1/4 - 18	1.09	0.88	3/4	5.0	5.0	3.2
3/8 MMS	3/8 - 18	1.22	1.02	7/8	4.5	4.5	3.0
1/2 MMS	1/2 - 14	1.47	1.23	1 1/16	3.0	3.0	1.9
3/4 MMS	3/4 - 14	1.59	1.36	1 5/16	3.0	3.0	1.9
1 MMS	1 - 11 1/2	1.97	1.62	1 5/8	1.8	1.8	1.1

# MRO

Male Run Tee  
NPTF (all three ends)



SAE 140424  
HPD Base # 012T

TUBE FITTING PART #	END SIZE				Dynamic Pressure (x 1,000 PSI)		
	1-3 NPTF	N (in.)	N1 (in.)	Y (in.)	-S	-SS	-B
	1/8 MRO	1/8 - 27	0.78	0.66			
1/4 MRO	1/4 - 18	1.09	0.88	3/4	5.0	5.0	3.2
3/8 MRO	3/8 - 18	1.22	1.02	7/8	4.5	4.5	3.0
1/2 MRO	1/2 - 14	1.47	1.23	1 1/16	3.0	3.0	1.9
3/4 MRO	3/4 - 14	1.59	1.36	1 5/16	3.0	3.0	1.9
1 MRO	1 - 11 1/2	1.97	1.63	1 5/8	1.8	1.8	1.1
1 1/4 MRO	1 1/4 - 11 1/2	2.38	1.70	1 7/8	1.5	1.5	1.0
1 1/2 MRO	1 1/2 - 11 1/2	2.64	2.08	2 1/2	1.5	1.5	1.0

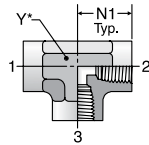
Dimensions and pressures for reference only, subject to change.



# MMO

Female Pipe Tee  
NPTF (all three ends)

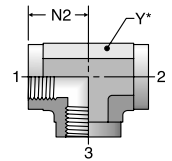
SAE 140438  
HPD Base # 022T



TUBE FITTING PART #	END SIZE	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
				1-3 NPTF		
	-S			-SS	-B	
1/8 MMO	1/8 - 27	0.66	9/16	5.0	5.0	3.2
1/4 MMO	1/4 - 18	0.88	3/4	5.0	5.0	3.2
3/8 MMO	3/8 - 18	1.02	7/8	4.5	4.5	3.0
1/2 MMO	1/2 - 14	1.23	1 1/16	3.0	3.0	1.9
3/4 MMO	3/4 - 14	1.36	1 5/16	3.0	3.0	1.9
1 MMO	1 - 11 1/2	1.63	1 5/8	1.8	1.8	1.2
1 1/4 MMO	1 1/4 - 11 1/2	1.70	1 7/8	1.5	1.5	1.0
1 1/2 MMO	1 1/2 - 11 1/2	2.08	2 1/2	1.5	1.5	1.0

# MMO444M

Female BSPP Tee  
BSPP (all three ends)

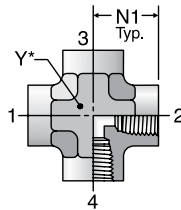


TUBE FITTING PART #	END SIZE	N2 (mm)	Y (mm)	Dynamic Pressure (x 1,000 PSI)		
				1-3 BSPP		
	S			SS	B	
1/4MMO444M	1/4 - 19	22	19	5.0	5.0	3.3
3/8MMO444M	3/8 - 19	26	22	4.5	4.5	2.9
1/2MMO444M	1/2 - 14	31	27	3.0	3.0	1.9
3/4MMO444M	3/4 - 14	40	33	3.0	3.0	1.9
1MMO444M	1 - 11	46	41	1.8	1.8	1.1

# KMMOO

Female Pipe Cross  
NPTF (all four ends)

SAE 140538  
HPD Base # 022X

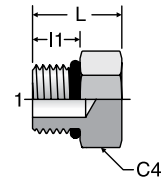


TUBE FITTING PART #	END SIZE	N1 (in.)	Y (in.)	Dynamic Pressure (x 1,000 PSI)		
				1-4 NPTF		
	S			SS	B	
1/8 KMMOO	1/8 - 27	0.66	9/16	5.0	5.0	3.2
1/4 KMMOO	1/4 - 18	0.88	3/4	5.0	5.0	3.2
3/8 KMMOO	3/8 - 18	1.02	7/8	4.5	4.5	2.9
1/2 KMMOO	1/2 - 14	1.23	1 1/16	3.0	3.0	1.9
3/4 KMMOO	3/4 - 14	1.36	1 5/16	3.0	3.0	1.9
1 KMMOO	1 - 11 1/2	1.63	1 5/8	1.8	1.8	1.1

# P50N

Hex Head Plug  
SAE-ORB

SAE 090109A  
HPD Base # 05CP



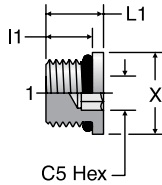
TUBE FITTING PART #	END SIZE	C4 HEX (in.)	I1 (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
					1 UN/UNF-2A		
	-S				-SS	-B	
2 P50N	5/16 - 24	7/16	0.30	0.60	7.5	9.0	3.3
3 P50N	3/8 - 24	1/2	0.30	0.60	7.5	9.0	3.3
4 P50N	7/16 - 20	9/16	0.36	0.67	7.5	9.0	3.3
5 P50N	1/2 - 20	5/8	0.36	0.67	6.0	7.2	3.3
6 P50N	9/16 - 18	11/16	0.39	0.73	6.0	7.2	3.3
8 P50N	3/4 - 16	7/8	0.44	0.80	6.0	7.2	3.3
10 P50N	7/8 - 14	1	0.50	0.94	6.0	7.2	3.3
12 P50N	1 1/16 - 12	1 1/4	0.59	1.09	6.0	7.2	3.3
14 P50N	1 3/16 - 12	1 3/8	0.59	1.09	5.5	6.6	3.3
16 P50N	1 5/16 - 12	1 1/2	0.59	1.13	5.5	6.6	3.3
20 P50N	1 5/8 - 12	1 7/8	0.59	1.20	4.0	4.8	2.6
24 P50N	1 7/8 - 12	2 1/8	0.59	1.27	3.0	3.6	1.9
32 P50N	2 1/2 - 12	2 3/4	0.59	1.44	2.0	2.4	1.3

Dimensions and pressures for reference only, subject to change.

### HP50N

Hollow Hex Plug  
SAE-ORB

SAE 090109B  
HPD Base # 05HP

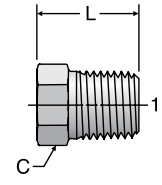


TUBE FITTING PART #	END SIZE 1 UN/UNF-2A	C5 HEX (in.)	I1 (in.)	L1 (in.)	X DIA (in.)	Dynamic Pressure (x 1,000 PSI)		
						-S	-SS	-B
2 HP50N	5/16 - 24	1/8	0.30	0.40	0.44	6.0	6.0	3.3
3 HP50N	3/8 - 24	5/32	0.30	0.40	0.50	6.0	6.0	3.3
4 HP50N	7/16 - 20	3/16	0.36	0.47	0.56	6.0	6.0	3.3
5 HP50N	1/2 - 20	7/32	0.36	0.47	0.63	6.0	6.0	3.3
6 HP50N	9/16 - 18	1/4	0.40	0.50	0.69	6.0	6.0	3.3
8 HP50N	3/4 - 16	5/16	0.44	0.58	0.88	6.0	6.0	3.3
10 HP50N	7/8 - 14	3/8	0.50	0.65	1.00	6.0	6.0	3.3
12 HP50N	1 1/16 - 12	9/16	0.59	0.77	1.25	6.0	6.0	3.3
14 HP50N	1 3/16 - 12	9/16	0.59	0.77	1.38	5.5	5.5	3.3
16 HP50N	1 5/16 - 12	5/8	0.59	0.77	1.50	5.5	5.5	3.3
20 HP50N	1 5/8 - 12	3/4	0.59	0.77	1.88	4.0	4.0	2.6
24 HP50N	1 7/8 - 12	3/4	0.59	0.77	2.13	3.0	3.0	1.9

### HP

Hex Head Pipe Plug  
NPTF

SAE 130109E  
HPD Base # 01CP

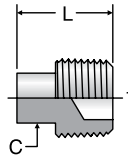


TUBE FITTING PART #	END SIZE 1 NPTF	C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
				-S	-SS	-B
1/8 HP	1/8 - 27	7/16	0.56	6.0	7.2	3.9
1/4 HP	1/4 - 18	9/16	0.75	6.0	7.2	3.9
3/8 HP	3/8 - 18	11/16	0.78	6.0	7.2	3.9
1/2 HP	1/2 - 14	7/8	0.97	6.0	7.2	3.9
3/4 HP	3/4 - 14	1 1/16	1.06	5.5	6.6	3.5
1 HP*	1 - 11 1/2	1 5/16	1.25	4.5	5.4	3.0
1 1/4 HP	1 1/4 - 11 1/2	1 3/4	1.41	3.0	3.6	1.9
1 1/2 HP	1 1/2 - 11 1/2	2	1.50	3.0	3.6	1.9
2 HP	2 - 11 1/2	2 1/2	1.69	2.0	3.0	1.3

\* 1 HP-SS Hex is 1 3/8

### SHP

Square Head Plug  
NPTF

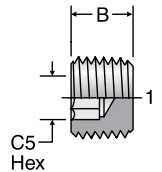


TUBE FITTING PART #	END SIZE 1 NPTF	C SQUARE (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
				-S	-SS	-B
1/8 SHP-S	1/8 - 27	9/32	0.51	6.0	7.2	3.3
1/4 SHP-S	1/4 - 18	3/8	0.75	6.0	6.0	3.3
3/8 SHP-S	3/8 - 18	7/16	0.83	6.0	6.0	3.3
1/2 SHP-S	1/2 - 14	9/16	1.08	6.0	6.0	3.3
3/4 SHP-S	3/4 - 14	5/8	1.14	6.0	6.0	3.3
1 SHP-S	1 - 11 1/2	13/16	1.38	5.5	5.5	3.3

### HHP

Hollow Hex Pipe Plug  
NPTF

SAE 130109N  
HPD Base # 01HP

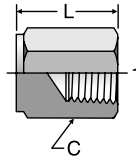


TUBE FITTING PART #	END SIZE 1 NPTF	B (in.)	C5 INTERNAL HEX (in.)	Dynamic Pressure (x 1,000 PSI)		
				-S	-SS	-B
1/16 HHP	1/16 - 27	0.30	5/32	6.0	7.2	3.3
1/8 HHP	1/8 - 27	0.30	3/16	6.0	7.2	3.9
1/4 HHP	1/4 - 18	0.46	1/4	6.0	7.2	3.9
3/8 HHP	3/8 - 18	0.46	5/16	6.0	7.2	3.3
1/2 HHP	1/2 - 14	0.61	3/8	6.0	7.2	3.3
3/4 HHP	3/4 - 14	0.62	9/16	5.5	6.6	3.3
1 HHP	1 - 11 1/2	0.77	3/4	4.5	5.4	3.3
1 1/4 HHP	1 1/4 - 11 1/2	0.77	3/4	3.0	5.0	3.3
1 1/2 HHP	1 1/2 - 11 1/2	0.83	3/4	3.0	3.0	1.9
2 HHP	2 - 11 1/2	0.86	3/4	2.0	2.5	1.6

Dimensions and pressures for reference only, subject to change.

### HPC

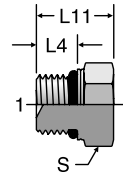
Hex Pipe Cap  
NPTF



TUBE FITTING PART #	END SIZE	C HEX (in.)	L (in.)	Dynamic Pressure (x 1,000 PSI)		
				1 NPTF		
	-S			-SS	-B	
1/8 HPC	1/8 - 27	9/16	.75	6.0	6.0	3.3
1/4 HPC	1/4 - 18	3/4	.91	6.0	6.0	3.3
3/8 HPC	3/8 - 18	7/8	1.03	6.0	6.0	3.3
1/2 HPC	1/2 - 14	1 1/16	1.34	6.0	6.0	3.3
3/4 HPC	3/4 - 14	1 1/4	1.44	4.8	4.8	3.1
1 HPC	1 - 11 1/2	1 5/8	1.68	3.6	3.6	2.3
1 1/2 HPC	1 1/2 - 1 1/2	2 3/8	1.92	2.4	2.4	1.5

### P87OMN

ISO 6149 Hex Head Plug  
ISO 6149  
(for ISO 6149-1 Port)



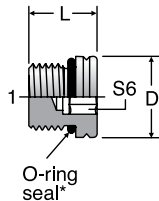
SAE J2244-4\* 62M0109A

TUBE FITTING PART #	END SIZE	L4 (mm)	L11 (mm)	S HEX (mm)	Dynamic Pressure (x 1,000 PSI)		
					1 THREAD		
	S				SS	B	
M8P87OMN	M8X1	8.5	16.2	12	9.0	9.0	3.3
M10P87OMN	M10X1	8.5	16.2	14	8.0	8.0	3.3
M12P87OMN	M12X1.5	11.0	18.5	17	9.0	9.0	3.3
M14P87OMN	M14X1.5	11.0	19.5	19	9.0	9.0	3.3
M16P87OMN	M16X1.5	11.5	21.5	22	9.0	9.0	3.3
M18P87OMN	M18X1.5	12.5	23.5	24	9.0	9.0	3.3
M20P87OMN	M20X1.5	12.5	24.0	27	6.0	6.0	3.3
M22P87OMN	M22X1.5	13.0	25.5	27	6.0	6.0	3.3
M27P87OMN	M27X2	16.0	32.0	32	6.0	6.0	3.3
M30P87OMN	M30X2	16.0	32.0	36	6.0	6.0	3.3
M33P87OMN	M33X2	16.0	32.0	41	6.0	6.0	3.3
M42P87OMN	M42X2	16.0	34.0	50	4.0	4.0	2.6
M48P87OMN	M48X2	17.5	35.5	55	2.0	2.0	1.3
M60P87OMN	M60X2	17.5	33.0	65	1.0	1.0	0.6

\* SAE J2244-4 and ISO 6149-4 are draft standards.

### VSTI M-OR

ISO 6149 Hollow Hex Plug  
ISO 6149  
(for ISO 6149-1 Port)



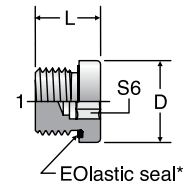
SAE J2244-4\* 62M0109B

TUBE FITTING PART #	END SIZE	D (mm)	L (mm)	S6 (mm)	Dynamic Pressure (x 1,000 PSI)		
					1 METRIC		
	CF				71	MS	
VSTI10X1ORCF	M10 x 1	13	13.5	5	9.1	9.1	3.3
VSTI12X1.5ORCF	M12 x 1.5	17	15.1	6	9.1	9.1	3.3
VSTI14X1.5ORCF	M14 x 1.5	19	16.0	6	9.1	9.1	3.3
VSTI16X1.5ORCF	M16 x 1.5	21	17.5	8	9.1	9.1	3.3
VSTI18X1.5ORCF	M18 x 1.5	23	19.0	8	9.1	9.1	3.3
VSTI22X1.5ORCF	M22 x 1.5	27	20.0	10	9.1	9.1	3.3
VSTI27X2ORCF	M27 x 2	32	23.5	12	5.8	5.8	3.3
VSTI33X2ORCF	M33 x 2	38	25.0	14	5.8	5.8	3.3
VSTI42X2ORCF	M42 x 2	48	25.5	22	5.8	5.8	3.3

\* SAE J2244-4 is a draft standard

### VSTI M-ED

Metric Hollow Hex Plug  
Metric-ED  
(for ISO 9974-1 / DIN 3852-1 Port)



TUBE FITTING PART #	END SIZE	D (mm)	L (mm)	S6 (mm)	Dynamic Pressure (x 1,000 PSI)		
					1 THREAD		
	CF				71	MS	
VSTI10X1ED	M10 x 1	14	12.0	5	5.8	5.8	3.3
VSTI12X1.5ED	M12 x 1.5	17	17.0	6	5.8	5.8	3.3
VSTI14X1.5ED	M14 x 1.5	19	17.0	6	5.8	5.8	3.3
VSTI16X1.5ED	M16 x 1.5	22	17.0	8	5.8	5.8	3.3
VSTI18X1.5ED	M18 x 1.5	24	17.0	8	5.8	5.8	3.3
VSTI20X1.5ED	M20 x 1.5	26	19.0	10	5.8	5.8	3.3
VSTI22X1.5ED	M22 x 1.5	27	19.0	10	5.8	5.8	3.3
VSTI26X1.5ED	M26 x 1.5	32	21.0	12	5.8	5.8	3.3
VSTI27X2ED	M27 x 2	32	21	12	5.8	5.8	3.3
VSTI33X2ED	M33 x 2	40	22.5	17	5.8	5.8	3.3
VSTI42X2ED	M42 x 2	50	22.5	22	4.5	4.5	2.9
VSTI48X2ED	M48 x 2	55	22.5	24	4.5	4.5	2.9

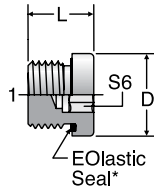
Dimensions and pressures for reference only, subject to change.





### VSTI R-ED

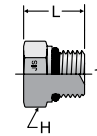
BSPP Hollow Hex Plug  
BSPP-ED  
(for ISO 1179-1 / DIN 3852-2 Port)



TUBE FITTING PART #	END SIZE	D (mm)	L (mm)	S6 (mm)	Dynamic Pressure (x 1,000 PSI)		
					CF	71	MS
	1 BSPP						
VSTI1/8ED	1/8 - 28	14	12.0	5	5.8	5.8	3.3
VSTI1/4ED	1/4 - 19	19	17.0	6	5.8	5.8	3.3
VSTI3/8ED	3/8 - 19	22	17.0	8	5.8	5.8	3.3
VSTI1/2ED	1/2 - 14	27	19.0	10	5.8	5.8	3.3
VSTI3/4ED	3/4 - 14	32	21.0	12	5.8	5.8	3.3
VSTI1ED	1 - 11	40	22.5	17	5.8	5.8	3.3
VSTI1 1/4ED	1 1/4 - 11	50	22.5	22	4.5	4.5	2.9
VSTI1 1/2ED	1 1/2 - 11	55	22.5	24	4.5	4.5	2.9

### P470MN

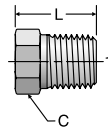
Hex Head Plug  
BSPP-ORB



TUBE FITTING PART #	END SIZE	H HEX (mm)	L (mm)	Dynamic Pressure (x 1,000 PSI)		
				S	SS	B
	1 BSPP					
4P470MNS	1/4-19	19	19.1	5.0		
6P470MNS	3/8-19	22	20.0	5.0		
8P470MNS	1/2-14	27	24.1	5.0		
12P470MNS	3/4-14	36	26.9	4.0		
16P470MNS	1-11	41	31.0	3.0		

### HP3M

Hex Head Pipe Plug  
BSPT



TUBE FITTING PART #	END SIZE	C HEX (mm)	L (mm)	Dynamic Pressure (x 1,000 PSI)		
				S	SS	B
	1 BSPT					
1/8 HP3M	1/8 - 28	10	14.2	6.0	6.0	3.3
1/4 HP3M	1/4 - 19	14	19.1	6.0	6.0	3.3
3/8 HP3M	3/8 - 19	17	19.8	6.0	6.0	3.3
1/2 HP3M	1/2 - 14	22	24.6	6.0	6.0	3.3
3/4 HP3M	3/4 - 14	27	26.9	5.5	5.5	3.3
1 HP3M	1 - 11	36	31.8	4.5	4.5	2.9

Dimensions and pressures for reference only, subject to change.