

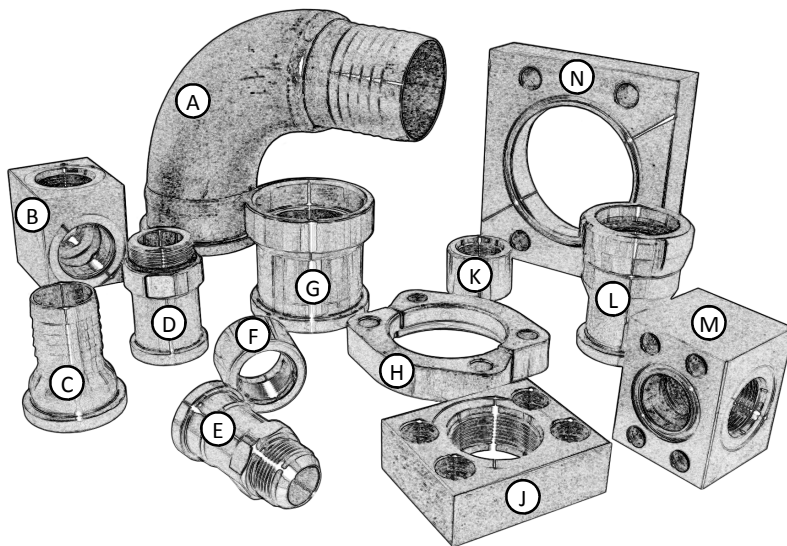
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ON THE COVER:

- A) 1670-Series – Barb / C61 ORH
- B) 2485-Series – ORB Tee
- C) 1650-Series – Barb / C61 ORH
- D) 1593-Series – ORB Male / C61 ORH
- E) 1841-Series – Male JIC / C61 ORH
- F) 1805-Series – ORB / SWP
- G) 1500-Series – SWP / C61 ORH
- H) 1585-Series – C61 Split Flange Kit
- J) 1203-Series – ORF / C61 ORF
- K) 1875-Series – ORB Coupling
- L) 2568-Series – ORFJ / C61 ORH
- M) 1815-Series – ORB / C61 ORF Elbow
- N) 1210-Series – SWP / C61 ORF

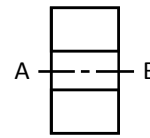
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Part Numbering System

All Sealum part numbers start with four digits. This set of numbers is considered to be the *series number*. The *series number* identifies the style of the part and its function. Each *series* of flange or adapter will come in a variety of sizes. To identify the different sizes, Sealum uses a two-digit number equal to the size in inches multiplied by sixteen. For example, 1.50" x 16 = 24. This two-digit number is called a *dash number*. The majority of flanges and adapters have two or more sides to them, therefore two or more *dash numbers*. The order in which the *dash numbers* follow the *series number* is extremely important. This is especially true in a fitting with jump sizes. The *series number* together with the *dash numbers* will now become the *part number*. On fittings with two different types of ports, there are some rules that tell us which port comes first and which comes second. The following list will show which ports take precedence over the next. Generally, the higher up on the list, the farther to the end of the part number it goes. Male threads are always higher up on the list than female threads.

- C61** SAE J518C Code 61
- C62** SAE J518C Code 62
- ORF** O'Ring Face
- ORH** O'Ring Head
- Comp** Companion Face
- ORB** O'Ring Boss
- NPT** National Pipe Thread
- JIC** Joint Industrial Council
- BSPP** British Standard Pipe thread – Parallel
- BSPT** British Standard Pipe thread – Tapered
- ORFS** O'Ring Face Seal
- SWP** Socket Weld Pipe
- BWP** Butt Weld Pipe
- SWT** Socket Weld Tube
- ORFJ** O'Ring Flex Joint



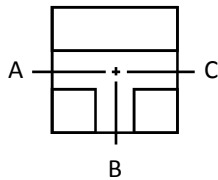
1203 - 16 - 20

Series number:

Side A:
(#16 ORB)

Side B:
(1.25" C61 ORF)

On fittings with more than two ports, such as tees and crosses, the order in which the dash numbers fall will always start at the left side of the block and go in a counterclockwise direction. The preceding list has no bearing on the order in which dash numbers fall when it comes to tees and crosses.



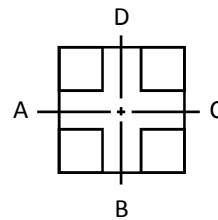
1806 - 16 - 16 - 16

Series number:

(Side A)

(Side B)

(Side C)



1810 - 16 - 16 - 16 - 16

Series number:

(Side A)

(Side B)

(Side C)

(Side D)

CONTINUED ON NEXT PAGE

Part Numbering System

Bolt Kits:

With the exception of Sandwich style flanges, all Sealum O'Ring Face flanges come standard with Imperial grade 8 bolt kits. Metric bolt kits are available upon request and must be specified in the part number by adding a 'M' to the end of the part number, for example 1203-16-16**M**. For bolt sizes and torque specifications see page 41-12.

Material Grades:

Sealum flanges and adapters are manufactured from C1018 & G40.21-44W steel, 316 Stainless Steel as well as 6061-T6 Aluminum are also available upon special request. To specify stainless steel, add '**SS**' to the end of the part number. For example 1203-16-16**SS**. To specify aluminum, add an '**A**' to the end of the part number. For example 1203-16-16**A**.

Plating:

In some instances it is preferred to have your flanges and adapters yellow zinc plated or black oxidized. For yellow zinc plating add '**ZY**' after the series number. For example 1203**ZY**-16-16. For black oxide coating add '**XB**' after the series number. For example 1203**XB**-16-16.

Pressure Rating:

While Code 61 flanges are sometimes referred to as "*3000 psi flanges*" the actual pressure rating varies between 500 psi and 5000 psi depending on the size of flange. Code 62 flanges are all rated for 6000 psi regardless of the size of flange. For the actual pressure ratings and specifications refer to page 41-12.

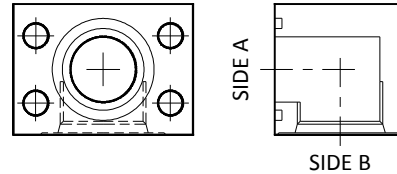
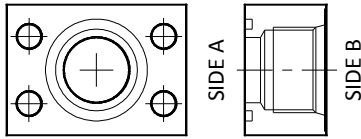
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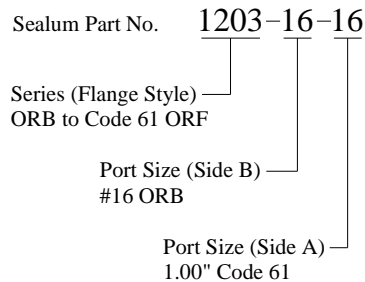


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Code 61 O'Ring Flange		ORB	1203	42-2
		NPT	1201	42-2
		SWP	1210	42-10
		SWT	1208	42-5
		BWP (Sch 80)	2313	42-6
Code 61 Companion Flange		ORB	1202	42-2
		NPT	1200	42-3
		SWP	1211	42-10
		SWT	1209	42-5
		BWP (Sch 80)	2314	42-6
Code 62 O'Ring Flange		ORB	1856	43-2
		NPT	1858	43-3
		SWP	1852	43-4
		SWT	1854	43-5
		BWP (Sch 80)	3245	43-6
Code 62 Companion Flange		ORB	1855	43-2
		NPT	1857	43-3
		SWP	1851	43-4
		SWT	1853	43-5
		BWP (Sch 80)	2346	43-6

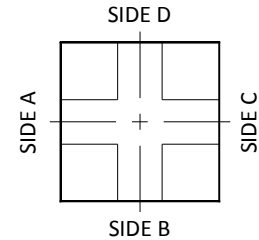
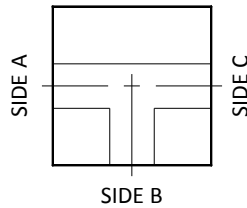
	Side A	Side B	Series	Page
Code 61 O'Ring Elbow		ORB	1815	44-2
		NPT	1833	45-2
		SWP	1824	44-4
		SWT	1829	44-5
		Companion	2573	44-6
Code 61 Companion Elbow		ORB	1817	44-2
		NPT	1835	44-3
		SWP	1808	44-4
		SWT	1831	44-5
		Companion	2574	44-6
Code 62 O'Ring Elbow		ORB	1842	45-2
		NPT	1846	45-3
		SWP	1834	45-4
		SWT	1838	45-5
		Companion	2594	45-6
Code 62 Companion Elbow		ORB	1840	45-2
		NPT	1844	45-3
		SWP	1832	45-4
		SWT	1836	45-5
		Companion	2593	45-6

Example:

1.00" Code 61 O'Ring Face Flange to #16 ORB Female



Function to Part Number Index

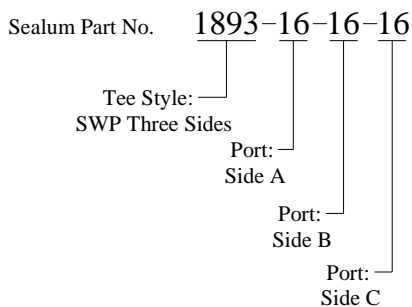


Side A	Side B	Side C	Series	Page
ORB	ORB	ORB	2485	46-18
	SWP	ORB	2481	46-19
	SWT	ORB	2483	46-19
NPT	NPT	NPT	2492	46-19
	SWP	NPT	2489	46-19
	SWT	NPT	2490	46-20
SWP	ORB	ORB	2463	46-20
		SWP	2058	46-20
	NPT	NPT	2468	46-21
		SWP	2465	46-21
	SWP	ORB	2456	46-21
		NPT	2457	46-21
SWT	ORB	ORB	2476	46-22
		SWT	2475	46-22
	NPT	NPT	2480	46-22
		SWT	2478	46-23
	SWT	ORB	2473	46-23
		NPT	2474	46-23
	SWT	2472	46-23	

Side A	Side B	Side C	Side D	Series	Page
Code 61 O'Ring Face	Comp	Comp	Comp	2599	47-3
	ORB	Comp	ORB	2601	47-3
		ORB	ORB	2600	47-3
	SWP	Comp	SWP	2598	47-3
Code 61 Companion	Comp	Comp	Comp	1810	47-4
			SWP	2596	47-4
	ORB	ORB	ORB	2628	47-4
SWP		ORB	2572	47-4	
	SWP	Comp	SWP	2597	47-5
Code 62 O'Ring Face	Comp	Comp	Comp	2635	47-3
	ORB	Comp	ORB	2637	47-3
		ORB	ORB	2636	47-3
	SWP	Comp	SWP	2634	47-3
Code 62 Companion	Comp	Comp	Comp	1811	47-4
			SWP	2630	47-4
	ORB	ORB	ORB	2632	47-4
SWP		ORB	2631	47-4	
	SWP	Comp	SWP	2633	47-5
ORB	ORB	ORB	ORB	2627	47-6
NPT	NPT	NPT	NPT	2606	47-6
SWP	ORB	ORB	ORB	2784	47-5
		SWP	ORB	2603	47-5
	NPT	NPT	NPT	2785	47-6
	SWP	SWP	SWP	2602	47-5

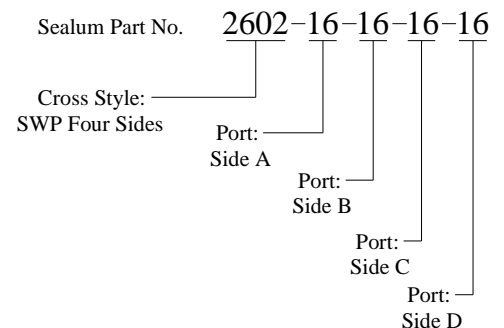
Example:

1.00" Socket Weld Pipe Tee (All Three Sides)

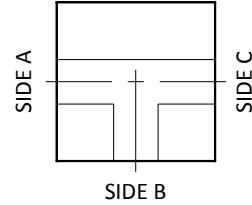


Example:

1.00" Socket Weld Pipe Cross (All Four Sides)

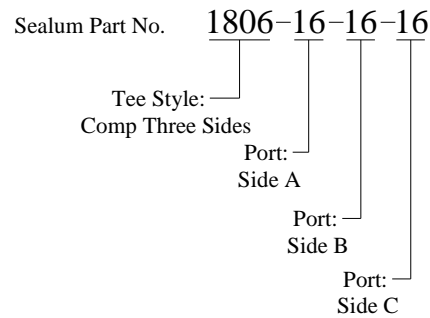


Function to Part Number Index Code 61 Tee



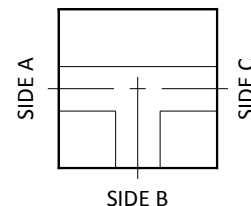
Side A	Side B	Side C	Series	Page
Code 61 Companion	ORB	ORB	2390	46-13
		SWP	2388	46-13
		SWT	2389	46-13
		Comp	2387	46-12
	NPT	NPT	2396	46-14
		SWP	2393	46-14
		SWT	2394	46-14
		Comp	2392	46-13
	SWP	ORB	2380	46-15
		NPT	2381	46-15
		SWP	2378	46-15
		Comp	2377	46-14
	SWT	ORB	2385	46-16
		NPT	2386	46-16
		SWT	2384	46-16
		Comp	2382	46-15
	Comp	ORB	2371	46-11
		NPT	2372	46-12
		SWP	1966	46-12
		SWT	2370	46-12
	ORF	Comp	1806	46-11
		ORB	2375	46-8
		NPT	2376	46-8
		SWP	2373	46-9
ORB	SWT	2374	46-9	
	Comp	2012	46-8	
	ORB	2411	46-11	
	Comp	2409	46-18	
NPT	ORB	2414	46-11	
	Comp	2413	46-18	
SWP	Comp	ORB	2398	46-16
		NPT	2399	46-17
	SWP	1865	46-17	
	ORF	ORB	2401	46-9
NPT		2402	46-9	
SWP		2014	46-10	
SWT	Comp	ORB	2404	46-17
		NPT	2405	46-17
		SWT	2403	46-18
	ORF	ORB	2407	46-10
		NPT	2408	46-10
		SWT	2406	46-10

Example:
1.00" Code 61 Companion Tee (All Three Sides)



Side A	Side B	Side C	Series	Page
Code 61 O'Ring Face	ORB	ORB	2431	46-4
		SWP	2429	46-4
		SWT	2430	46-5
		Comp	1870	46-4
	NPT	NPT	2437	46-5
		SWP	2434	46-5
		SWT	2435	46-6
		Comp	2433	46-5
	SWP	ORB	2422	46-6
		NPT	2423	46-6
		SWP	2420	46-7
		Comp	1869	46-6
	SWT	ORB	2427	46-7
		NPT	2428	46-7
		SWT	2426	46-8
		Comp	2424	46-7
	Comp	ORB	2418	46-3
		NPT	2419	46-3
		SWP	2416	46-3
		SWT	2417	46-4
		Comp	2415	46-3

Function to Part Number Index Code 62 Tee



Side A	Side B	Side C	Series	Page
Code 62 Companion	ORB	ORB	2513	46-13
		SWP	2511	46-13
		SWT	2512	46-13
		Comp	2510	46-12
	NPT	NPT	2519	46-14
		SWP	2516	46-14
		SWT	2517	46-14
		Comp	2515	46-13
	SWP	ORB	2503	46-15
		NPT	2504	46-15
		SWP	2501	46-15
		Comp	2500	46-14
	SWT	ORB	2508	46-16
		NPT	2509	46-16
		SWT	2507	46-16
		Comp	2505	46-15
	Comp	ORB	2494	46-11
		NPT	2495	46-12
		SWP	1969	46-12
		SWT	2493	46-12
Comp		1807	46-11	
ORF	ORB	2498	46-8	
	NPT	2499	46-8	
	SWP	2496	46-9	
	SWT	2497	46-9	
	Comp	2015	46-8	
ORB	ORF	ORB	2452	46-11
	Comp	ORB	2450	46-18
NPT	ORF	NPT	2544	46-11
	Comp	NPT	2543	46-18
SWP	Comp	ORB	2439	46-16
		NPT	2440	46-17
	SWP	1879	46-17	
ORF	ORB	2442	46-9	
	NPT	2443	46-9	
	SWP	2017	46-10	
SWT	Comp	ORB	2445	46-17
		NPT	2446	46-17
	SWT	2444	46-18	
	ORF	ORB	2448	46-10
	NPT	2449	46-10	
	SWT	2447	46-10	

Example:
1.00" Code 62 Companion Tee (All Three Sides)

Sealum Part No. **1807-16-16-16**

Tee Style: 1807
Comp Three Sides

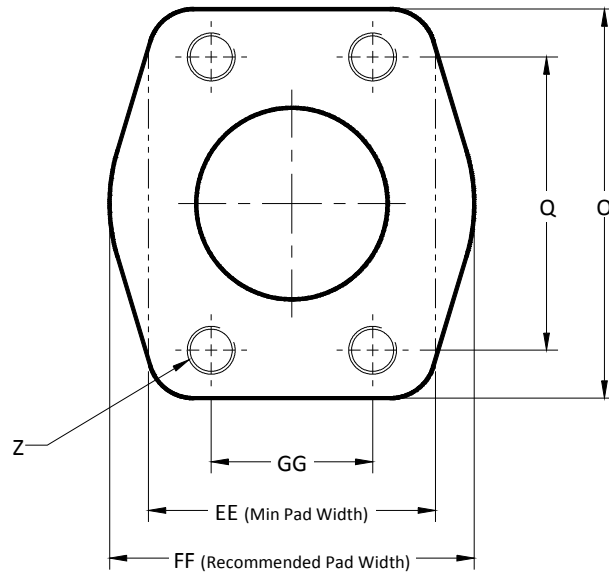
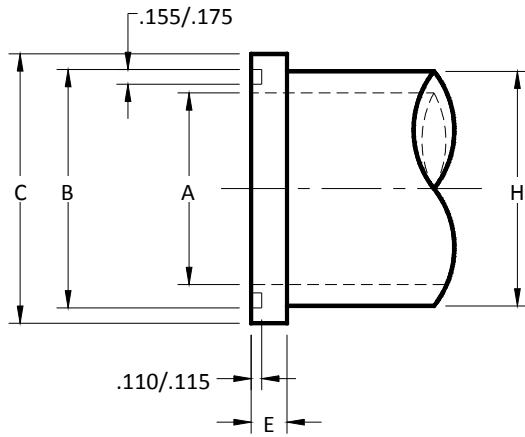
Port: 16
Side A

Port: 16
Side B

Port: 16
Side C

Side A	Side B	Side C	Series	Page
Code 62 O"Ring Face	ORB	ORB	2536	46-4
		SWP	2534	46-4
		SWT	2535	46-5
		Comp	1872	46-4
	NPT	NPT	2542	46-5
		SWP	2539	46-5
		SWT	2540	46-6
		Comp	2538	46-5
	SWP	ORB	2527	46-6
		NPT	2528	46-6
		SWP	2525	46-7
		Comp	1871	46-6
	SWT	ORB	2532	46-7
		NPT	2533	46-7
		SWT	2531	46-8
		Comp	2529	46-7
	Comp	ORB	2523	46-3
		NPT	2524	46-3
		SWP	2521	46-3
		SWT	2522	46-4
	Comp	2520	46-3	

SAE J518C 4-Bolt Flange Specifications



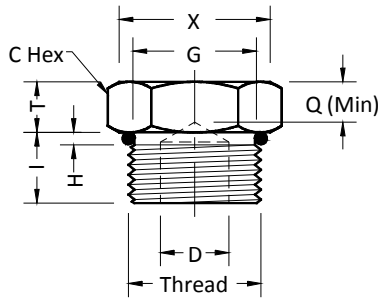
Code 61

Nom. Flange Size	A +0.00 -0.06	B +0.005 -0.000	C ±0.010	E ±0.005	H Dia Max	GG ±0.010	Q ±0.010	O	EE Min.	FF	Z Thread UNC	Z Thread Metric	Max Work. Pres.	Bolt Torque lb-in	N70 "O" Ring
1/2"	0.50	1.000	1.188	0.265	0.94	0.688	1.500	2.12	1.31	1.81	5/16-18	M8x1.25	5000 psi	175-225	2-210
3/4"	0.75	1.250	1.500	0.265	1.25	0.875	1.875	2.56	1.62	2.06	3/8-16	M10x1.50	5000 psi	250-350	2-214
1"	1.00	1.560	1.750	0.315	1.50	1.031	2.062	2.75	1.88	2.31	3/8-16	M10x1.50	5000 psi	325-425	2-219
1 1/4"	1.25	1.750	2.000	0.315	1.70	1.188	2.312	3.12	2.12	2.88	7/16-14	M10x1.50	4000 psi	425-550	2-222
1 1/2"	1.50	2.115	2.375	0.315	1.98	1.406	2.750	3.69	2.50	3.25	1/2-13	M12x1.75	3000 psi	550-700	2-225
2"	2.00	2.490	2.812	0.375	2.45	1.688	3.062	4.00	3.00	3.81	1/2-13	M12x1.75	3000 psi	650-800	2-228
2 1/2"	2.50	2.995	3.312	0.375	2.92	2.000	3.500	4.50	3.50	4.28	1/2-13	M12x1.75	2500 psi	950-1100	2-232
3"	3.00	3.615	4.000	0.375	3.55	2.438	4.188	5.31	4.19	5.16	5/8-11	M16x2.00	2000 psi	1650-1800	2-237
3 1/2"	3.50	4.095	4.500	0.442	4.00	2.750	4.750	6.00	4.69	5.50	5/8-11	M16x2.00	500 psi	1400-1600	2-241
4"	4.00	4.595	5.000	0.442	4.50	3.062	5.125	6.38	5.19	6.00	5/8-11	M16x2.00	500 psi	1400-1600	2-245
5"	5.00	5.595	6.000	0.442	5.50	3.625	6.000	7.25	6.19	7.12	5/8-11	M16x2.00	500 psi	1400-1600	2-253

Code 62

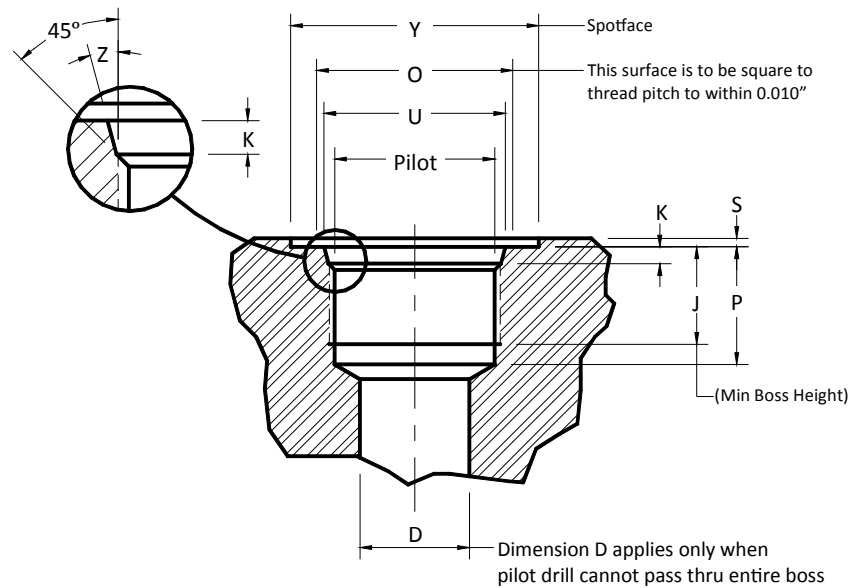
Nom. Flange Size	A +0.00 -0.06	B +0.005 -0.000	C ±0.010	E ±0.005	H Dia Max	GG ±0.010	Q ±0.010	O	EE Min.	FF	Z Thread UNC	Z Thread Metric	Max Work. Pres.	Bolt Torque lb-in	N70 "O" Ring
1/2"	0.50	1.000	1.250	0.305	0.94	0.718	1.574	2.22	1.50	1.88	5/16-18	M8x1.25	6000 psi	175-225	2-210
3/4"	0.75	1.250	1.625	0.345	1.25	0.937	2.000	2.81	1.88	2.38	3/8-16	M10x1.50	6000 psi	300-400	2-214
1"	1.00	1.560	1.875	0.375	1.50	1.093	2.250	3.19	2.12	2.75	7/16-14	M12x1.75	6000 psi	500-600	2-219
1 1/4"	1.25	1.750	2.125	0.405	1.72	1.250	2.625	3.75	2.38	3.06	1/2-13	M14x2.00	6000 psi	750-900	2-222
1 1/2"	1.50	2.115	2.500	0.495	2.00	1.437	3.125	4.44	2.75	3.75	5/8-11	M16x2.00	6000 psi	1400-1600	2-225
2"	2.00	2.490	3.125	0.495	2.62	1.750	3.812	5.25	3.38	4.50	3/4-10	M20x2.50	6000 psi	2400-2600	2-228

Male O'Ring Boss (ORB) Specifications



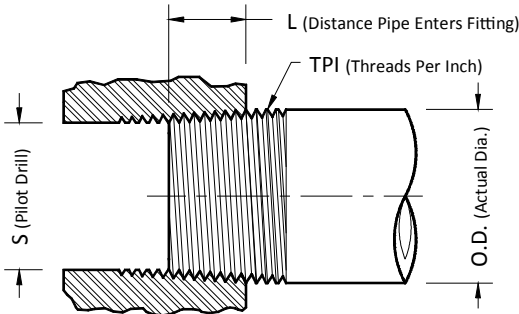
Nom. Size	Dash No.	UNF Thread	C Hex	D ^{+0.005} / _{-0.000}	G ^{+0.002} / _{-0.003}	H ^{+0.015} / _{-0.000}	I ^{±0.005}	T	Q	X	N70 O'Ring
1/8	-02	5/16"-24	7/16	0.093	0.250	0.063	0.297	0.125	0.06	0.438	2-902
3/16	-03	3/8"-24	1/2	0.125	0.313	0.063	0.297	0.125	0.08	0.500	2-903
1/4	-04	7/16"-20	9/16	0.203	0.364	0.075	0.360	0.156	0.10	0.563	2-904
5/16	-05	1/2"-20	5/8	0.234	0.427	0.075	0.360	0.156	0.12	0.625	2-905
3/8	-06	9/16"-18	11/16	0.297	0.482	0.083	0.391	0.188	0.16	0.688	2-906
1/2	-08	3/4"-16	7/8	0.422	0.660	0.094	0.438	0.188	0.22	0.875	2-908
5/8	-10	7/8"-14	1	0.500	0.773	0.107	0.500	0.250	0.25	1.000	2-910
3/4	-12	1-1/16"-12	1-1/4	0.656	0.945	0.125	0.594	0.313	0.25	1.250	2-912
7/8	-14	1-3/16"-12	1-3/8	0.718	1.07	0.125	0.594	0.313	0.25	1.375	2-914
1	-16	1-5/16"-12	1-1/2	0.875	1.195	0.125	0.594	0.375	0.25	1.500	2-916
1-1/4	-20	1-5/8"-12	1-7/8	1.093	1.507	0.125	0.594	0.375	0.25	1.875	2-920
1-1/2	-24	1-7/8"-12	2-1/8	1.344	1.756	0.125	0.594	0.375	0.25	2.125	2-924
2	-32	2-1/2"-12	2-3/4	1.813	2.381	0.125	0.594	0.375	0.30	2.750	2-932

Female O'Ring Boss (ORB) Specifications



Nom. Size	Dash No.	UNF Thread	Y	O	U ^{+0.005} / _{-0.000}	Pilot Drill	K ^{+0.015} / _{-0.000}	S	J	P	D	Z ± 1°
1/8	-02	5/16"-24	0.672	0.438	0.358	I	0.074	0.062	0.390	0.468	0.062	12
3/16	-03	3/8"-24	0.750	0.500	0.421	Q	0.074	0.062	0.390	0.468	0.125	12
1/4	-04	7/16"-20	0.828	0.563	0.487	25/64	0.093	0.062	0.454	0.547	0.172	12
5/16	-05	1/2"-20	0.906	0.625	0.550	29/64	0.093	0.062	0.454	0.547	0.234	12
3/8	-06	9/16"-18	0.969	0.688	0.616	33/64	0.097	0.062	0.500	0.609	0.297	12
1/2	-08	3/4"-16	1.188	0.875	0.811	11/16	0.10	0.094	0.562	0.688	0.391	15
5/8	-10	7/8"-14	1.344	1.000	0.942	13/16	0.100	0.094	0.656	0.781	0.484	15
3/4	-12	1-1/16"-12	1.625	1.250	1.148	63/64	0.130	0.094	0.750	0.906	0.609	15
7/8	-14	1-3/16"-12	1.765	1.375	1.273	1-3/32	0.130	0.094	0.750	0.906	0.719	15
1	-16	1-5/16"-12	1.910	1.500	1.398	1-15/64	0.130	0.125	0.750	0.906	0.844	15
1-1/4	-20	1-5/8"-12	2.270	1.875	1.713	1-17/32	0.132	0.125	0.750	0.906	1.078	15
1-1/2	-24	1-7/8"-12	2.560	1.125	1.962	1-51/64	0.132	0.125	0.750	0.906	1.312	15
2	-32	2-1/2"-12	3.480	2.750	2.587	2-27/64	0.132	0.125	0.750	0.906	1.781	15

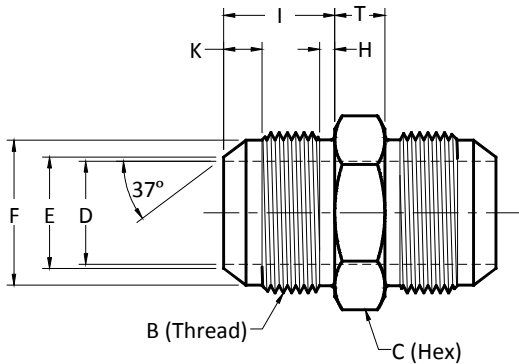
National Pipe Thread (NPT) Specifications



**Pipe size may be designated by giving a nominal pipe size and wall thickness or schedule. See chart on following page for schedules and physical dimensions.

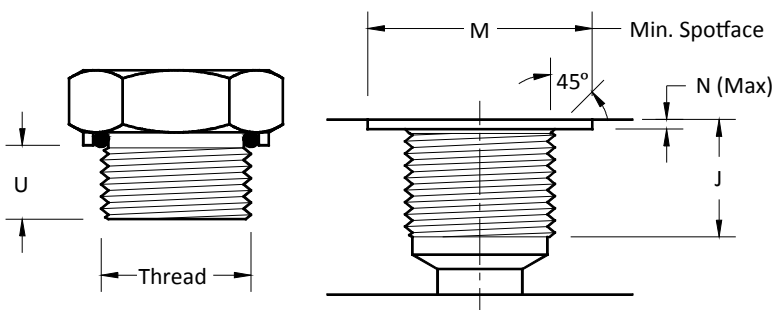
Nominal Pipe Size	TPI	OD	S	L	WALL THICKNESS**			
					Sch. 40	Sch. 80	Sch. 160	XXS
1/8	27	.405	11/32	3/16	.068	0.95	---	---
1/4	18	.540	7/16	9/32	0.88	.119	---	---
3/8	18	.675	37/64	19/64	0.91	.126	---	---
1/2	14	.840	23/32	3/8	.109	.147	.187	.294
3/4	14	1.050	59/64	13/32	.113	.154	.218	.308
1.00	11.50	1.315	1-5/32	1/2	.133	.179	.250	.358
1.25	11.50	1.660	1-1/2	35/64	.140	.191	.250	.382
1.50	11.50	1.900	1-47/64	9/16	.145	.200	.281	.400
2.00	11.50	2.375	2-7/32	37/64	.154	.218	.343	.436
2.50	8	2.875	2-5/8	7/8	.203	.276	.375	.552
3.00	8	3.50	3-1/4	15/16	.216	.300	.437	.600
3.50	8	4.00	3-3/4	1	.226	.318	---	---
4.00	8	4.50	4-1/4	1-1/16	.237	.337	.531	.674

JIC Specifications



Nom. Size	Dash No.	B UNF Thread	C Hex	D	E ± .003	F ^{+0.000} / _{-0.005}	H ^{+0.015} / _{-0.000}	I ± .015	K ^{+0.015} / _{-0.000}	T
1/8	-02	5/16"-24	7/16	.062	.083	.245	.063	.448	.177	.22
3/16	-03	3/8"-24	7/16	.125	.146	.307	.063	.479	.177	.22
1/4	-04	7/16"-20	1/2	.172	.193	.359	.075	.550	.193	.22
5/16	-05	1/2"-20	9/16	.234	.255	.421	.075	.550	.193	.22
3/8	-06	9/16"-18	5/8	.297	.318	.476	.083	.556	.198	.25
1/2	-08	3/4"-16	13/16	.391	.426	.654	.094	.657	.253	.25
5/8	-10	7/8"-14	15/16	.484	.539	.767	.107	.758	.266	.31
3/4	-12	1-1/16"-12	1-1/8	.609	.664	.938	.125	.864	.315	.38
7/8	-14	1-3/16"-12	1-1/4	.718	.788	1.063	.125	.890	.315	.38
1	-16	1-5/16"-12	1-3/8	.844	.913	1.188	.125	.911	.315	.38
1-	-20	1-5/8"-12	1-11/16	1.078	1.147	1.501	.125	.958	.367	.46
1-	-24	1-7/8"-12	2	1.312	1.381	1.750	.125	1.083	.378	.53
2	-32	2-1/2"-12	2-5/8	1.781	1.880	2.375	.125	1.333	.461	.68

British Standard Pipe Parallel (BSPP) Specifications



Dash Size	Whitworth Thread	Major Dia.	Minor Dia.	U	M	N	J
-04	1/4"-19	.52	.45	.37	.85	.059	.43
-06	3/8"-19	.66	.59	.37	1.00	.059	.43
-08	1/2"-14	.83	.74	.51	1.19	.059	.55
-12	3/4"-14	1.04	.95	.51	1.44	.059	.63
-16	1"-11	1.31	1.19	.63	1.81	.078	.75
-20	1-1/4"-11	1.65	1.54	.63	2.25	.078	.83
-24	1-1/2"-11	1.88	1.77	.63	2.50	.078	.83

A.S.A. Pipe Schedules

Pipe Size	Actual O.D.	Wall Thickness (I.D.)												
		10	20	30	40	Std.	60	80	XS	100	120	140	160	XXS
1/8	.405	.049 (.307)			.068 (.269)	.068 (.269)		.095 (.215)	.095 (.215)					
1/4	.540	.065 (.410)			.088 (.364)	.088 (.364)		.119 (.302)	.119 (.302)					
3/8	.675	.065 (.545)			.091 (.493)	.091 (.493)		.126 (.423)	.126 (.423)					
1/2	.840	.083 (.674)			.109 (.622)	.109 (.622)		.147 (.546)	.147 (.546)				.187 (.466)	.294 (.252)
3/4	1.050	.083 (.884)			.113 (.824)	.113 (.824)		.154 (.742)	.154 (.742)				.218 (.614)	.308 (.434)
1	1.315	.109 (1.097)	.100 (1.115)	.125 (1.065)	.133 (1.049)	.133 (1.049)		.179 (.957)	.179 (.957)				.250 (.815)	.358 (.599)
1 1/4	1.660	.109 (1.442)	.100 (1.460)	.125 (1.41)	.140 (1.38)	.140 (1.38)		.191 (1.218)	.191 (1.270)				.250 (1.16)	.382 (.896)
1 1/2	1.900	.109 (1.682)	.110 (1.680)	.125 (1.65)	.145 (1.61)	.145 (1.61)		.200 (1.50)	.200 (1.50)				.281 (1.338)	.400 (1.10)
2	2.375	.109 (2.157)	.125 (2.125)		.154 (2.067)	.154 (2.067)		.218 (1.939)	.218 (1.939)				.343 (1.689)	.436 (1.503)
2 1/2	2.875	.120 (2.635)			.203 (2.469)	.203 (2.469)		.276 (2.323)	.276 (2.323)				.375 (2.125)	.552 (1.771)
3	3.50	.120 (3.260)	.125 (3.25)	.188 (3.124)	.216 (3.068)	.216 (3.068)		.300 (2.90)	.300 (2.90)				.438 (2.624)	.600 (2.30)
3 1/2	4.00	.120 (3.760)			.226 (3.548)	.226 (3.548)		.318 (3.364)	.318 (3.364)					.636 (2.728)
4	4.50	.120 (4.260)			.237 (4.026)	.237 (4.026)	.281 (3.938)	.337 (3.826)	.337 (3.826)		.438 (3.624)		.531 (3.438)	.674 (3.152)
4 1/2	5.00					.247 (4.506)			.355 (4.29)					.710 (3.58)
5	5.563	.134 (5.295)			.258 (5.047)	.258 (5.047)		.375 (4.813)	.375 (4.813)		.500 (4.563)		.625 (4.313)	.750 (4.063)
6	6.625	.134 (6.357)			.280 (6.065)	.280 (6.065)		.432 (5.761)	.432 (5.761)		.562 (5.501)		.718 (5.189)	.864 (4.897)
7	7.625					.301 (7.023)			.500 (6.625)					.875 (5.875)
8	8.625	.148 (8.329)	.250 (8.125)	.277 (8.071)	.322 (7.981)	.322 (7.981)	.406 (7.813)	.500 (7.625)	.500 (7.625)	.593 (7.439)	.718 (7.189)	.812 (7.001)	.906 (6.813)	.875 (6.875)
9	9.625					.342 (8.941)			.500 (8.625)					
10	10.75	.165 (10.420)	.250 (10.25)	.307 (10.136)	.365 (10.02)	.365 (10.02)	.500 (9.75)	.593 (9.564)	.500 (9.75)	.718 (9.314)	.843 (9.064)	1.000 (8.75)	1.125 (8.50)	
11	11.75					.375 (11.00)			.500 (10.75)					
12	12.75	.180 (12.39)	.250 (12.25)	.330 (12.09)	.406 (11.938)	.375 (12.00)	.562 (11.626)	.687 (11.376)	.500 (11.75)	.843 (11.064)	1.000 (10.75)	1.125 (10.50)	1.312 (10.126)	
14	14.00	.250 (13.50)	.312 (13.376)	.375 (13.25)	.437 (13.126)	.375 (13.25)	.593 (12.814)	.750 (12.50)	.500 (13.00)	.937 (12.126)	1.093 (11.814)	1.250 (11.50)	1.406 (11.188)	
16	16.00	.250 (15.50)	.312 (15.376)	.375 (15.25)	.500 (15.00)	.375 (15.25)	.656 (14.688)	.843 (14.314)	.500 (15.00)	1.031 (13.938)	1.218 (13.564)	1.437 (13.126)	1.593 (12.814)	
18	18.00	.250 (17.50)	.312 (17.376)	.437 (17.176)	.562 (16.876)	.375 (17.25)	.750 (16.50)	.937 (16.126)	.500 (17.00)	1.156 (15.688)	1.375 (15.25)	1.562 (14.876)	1.781 (14.438)	
20	20.00	.250 (19.50)	.375 (19.25)	.500 (19.00)	.593 (18.814)	.375 (19.25)	.812 (18.376)	1.031 (17.938)	.500 (19.00)	1.280 (17.44)	1.500 (17.00)	1.750 (16.50)	1.968 (16.064)	
24	24.00	.250 (23.50)	.375 (23.25)	.562 (22.876)	.687 (22.626)	.375 (23.25)	.968 (22.064)	1.218 (21.564)	.500 (23.00)	1.531 (20.938)	1.812 (20.376)	2.062 (19.876)	2.343 (19.314)	

Pressure Losses In Pipe & Tubing

						Flow Rate (GPM) & Pressure Loss (PSI/FT) @ AVG. Velocity (FPS)									
Pipe				Pressure (PSI)		5 FPS		10 FPS		15 FPS		20 FPS		25 FPS	
Size	Sch.	O.D.	I.D.	Working	Burst	Loss	GPM	Loss	GPM	Loss	GPM	Loss	GPM	Loss	GPM
1/2	80	0.840	0.546	4,100	21,000	0.37	4	0.73	7	1.11	11	2.62	15	3.87	18
	40	0.840	0.622	2,300	15,600	0.28	5	0.57	10	1.35	14	2.23	19	3.29	24
3/4	80	1.050	0.742	3,500	17,600	0.20	7	0.40	14	1.08	20	1.79	27	2.64	34
	40	1.050	0.824	2,000	12,900	0.16	8	0.32	17	0.95	25	1.57	33	2.31	42
1	80	1.315	0.957	3,500	15,900	0.12	11	0.39	22	0.79	34	1.30	45	1.92	56
	40	1.315	1.049	2,100	12,100	0.10	14	0.34	27	0.70	40	1.16	54	1.71	67
1 1/4	80	1.660	1.278	3,000	13,900	0.07	20	0.27	40	0.55	60	0.91	80	1.34	100
	40	1.660	1.380	1,800	10,100	0.06	23	0.24	47	0.50	70	0.82	93	1.21	117
1 1/2	160	1.900	1.338	4,500	17,700	0.06	22	0.25	44	0.52	66	0.85	88	1.26	110
	80	1.900	1.500	2,800	12,600	0.05	28	0.22	55	0.45	83	0.74	110	1.09	138
	40	1.900	1.610	1,700	9,100	0.04	32	0.20	64	0.41	95	0.68	127	1.00	159
2	160	2.375	1.687	4,600	17,500	0.04	35	0.19	70	0.39	105	0.64	139	0.95	174
	80	2.375	1.939	2,500	11,000	0.05	46	0.16	92	0.33	138	0.54	184	0.79	230
	40	2.375	2.067	1,500	7,800	0.04	52	0.15	105	0.30	157	0.50	209	0.73	262
2 1/2	160	2.875	2.125	4,200	15,700	0.04	55	0.14	111	0.29	166	0.48	221	0.71	276
	80	2.875	2.323	2,800	11,500	0.04	66	0.13	132	0.26	198	0.43	264	0.63	330
	40	2.875	2.469	1,900	8,500	0.04	75	0.12	149	0.24	224	0.40	299	0.59	373
3	160	3.500	2.624	4,100	15,000	0.03	84	0.11	169	0.22	253	0.37	337	0.54	421
	80	3.500	2.900	2,600	10,300	0.03	103	0.10	206	0.20	309	0.33	412	0.48	515
	40	3.500	3.068	1,600	7,400	0.03	115	0.09	230	0.18	346	0.30	461	0.45	576

Pressure rating based on ASTM A53 grade B or A 103 grade B seamless
Based on Barlows & 55,000 type ASAB93, 4-1966
Medium hydraulic oil 220 SSU @ 120° F

						Flow Rate (GPM) & Pressure Loss (PSI/FT) @ AVG. Velocity (FPS)									
Tubing			Pressure (PSI)		5 FPS		10 FPS		15 FPS		20 FPS		25 FPS		
O.D.	I.D.	Wall	Working	Burst	Loss	GPM	Loss	GPM	Loss	GPM	Loss	GPM	Loss	GPM	
1/4	0.180	0.035	3850	15,400	1.8	0.4	3.7	0.8	6.0	1.3	7.0	1.6	9.5	2.0	
3/8	0.305	0.035	2580	10,300	0.6	1.1	1.1	2.2	2.4	3.4	3.8	4.6	5.5	6.0	
	0.245	0.065	4750	19,100	0.8	0.7	1.9	1.5	2.4	2.1	4.5	2.9	6.5	3.5	
1/2	0.430	0.035	1930	7,700	0.4	2.4	1.1	4.9	2.0	7.5	4.0	9.7	5.0	12.0	
	0.370	0.065	3580	14,300	0.2	1.8	1.0	3.5	2.0	5.2	3.5	7.1	4.4	8.6	
3/4	0.652	0.049	1800	7,200	0.15	4.8	0.5	9.4	0.9	15.0	1.7	19.0	2.5	24.0	
	0.560	0.095	3400	13,950	0.2	4.0	0.6	8.0	1.6	12.5	2.4	16.5	4.3	20.0	
1	0.870	0.065	1790	7,150	0.1	9.2	0.3	19.0	0.7	28.0	1.2	39.0	1.7	48.0	
	0.760	0.120	3300	13,200	0.13	7.9	0.5	15.5	1.0	23.0	1.4	31.0	2.5	40.0	
1 1/4	1.060	0.095	2080	8,350	0.09	14.0	0.27	27.0	0.5	41.0	1.0	54.0	1.4	70.0	
	0.010	0.120	2650	10,600	0.43	12.0	0.15	24.0	0.3	37.0	0.5	50.0	0.8	62.0	
1 1/2	1.260	0.120	2200	8,800	0.07	21.0	0.25	42.0	0.45	62.0	0.75	82.0	1.4	110.0	
2	1.500	0.250	3480	13,750	0.05	28.0	0.15	54.0	0.32	82.0	0.55	108.0	0.8	140.0	

Unified and American Screw Threads

Size	UNC Coarse Thread Series		UNF Fine Thread Series	
	Threads Per Inch	Tap Drill	Threads Per Inch	Tap Drill
	1 (.073)	64	No. 53	72
2 (.086)	56	No. 50	64	No. 50
3 (.099)	48	No. 47	56	No. 45
4 (.112)	40	No. 43	48	No. 42
5 (.125)	40	No. 38	44	No. 37
6 (.138)	32	No. 36	40	No. 33
8 (.164)	32	No. 29	36	No. 29
10 (.190)	24	No. 25	32	No. 21
12 (.216)	24	No. 16	28	No. 14
1/4	20	No. 7	28	No. 3
5/16	18	F	24	I
3/8	16	5/16	24	Q
7/16	14	U	20	25/64
1/2	13	27/64	20	29/64
9/16	12	31/64	18	33/64
5/8	11	17/32	18	37/64
3/4	10	21/32	16	11/16
7/8	9	49/64	14	13/16
1	8	7/8	12	59/64
1 1/8	7	63/64	12	1 3/64
1 1/4	7	1 7/64	12	1 11/64
1 3/8	6	1 7/32	12	1 19/64
1 1/2	6	1 11/32	12	1 27/64
1 3/4	5	1 9/16		
2	4 1/2	1 25/32		
2 1/4	4 1/2	2 1/32		
2 1/2	4	2 1/4		
2 3/4	4	2 1/2		
3	4	2 3/4		

NUMBER & LETTER DRILL SIZES							
Number Drill				Letter Drill			
No.	Size	No.	Size	No.	Size	Letter	Size
1	0.2280	28	0.1405	55	0.0520	A	0.2340
2	0.2210	29	0.1360	56	0.0465	B	0.2380
3	0.2130	30	0.1285	57	0.0430	C	0.2420
4	0.2090	31	0.1200	58	0.0420	D	0.2460
5	0.2055	32	0.1160	59	0.0410	E	0.2500
6	0.2040	33	0.1130	60	0.0400	F	0.2570
7	0.2010	34	0.1110	61	0.0390	G	0.2610
8	0.1990	35	0.1100	62	0.0380	H	0.2660
9	0.1996	36	0.1065	63	0.0370	I	0.2720
10	0.1935	37	0.1040	64	0.0360	J	0.2770
11	0.1910	38	0.1015	65	0.0350	K	0.2810
12	0.1890	39	0.0995	66	0.0330	L	0.2900
13	0.1850	40	0.0980	67	0.0320	M	0.2950
14	0.1820	41	0.0960	68	0.0310	N	0.3020
15	0.1800	42	0.0935	69	0.0292	O	0.3160
16	0.1770	43	0.0890	70	0.0280	P	0.3230
17	0.1730	44	0.0860	71	0.0260	Q	0.3320
18	0.1695	45	0.0820	72	0.0250	R	0.3390
19	0.1660	46	0.0810	73	0.0240	S	0.3480
20	0.1610	47	0.0785	74	0.0225	T	0.3580
21	0.1590	48	0.0760	75	0.0210	U	0.3680
22	0.1570	49	0.0730	76	0.0200	V	0.3770
23	0.1540	50	0.0700	77	0.0180	W	0.3860
24	0.1520	51	0.0670	78	0.0160	X	0.3970
25	0.1495	52	0.0635	79	0.0145	Y	0.4040
26	0.1470	53	0.0595	80	0.0135	Z	0.4130
27	0.1440	54	0.0550				

Thread Guide

Dash Size	NPT	ORB & JIC	BSPP	ORFS
-02	1/8"-27	5/16"-24	1/8"-28	---
-03	---	3/8"-24	---	---
-04	1/4"-18	7/16"-20	1/4"-19	9/16"-18
-05	---	1/2"-20	---	---
-06	3/8"-18	9/16"-18	3/8"-19	11/16"-16
-08	1/2"-14	3/4"-16	1/2"-14	13/16"-16
-10	---	7/8"-14	5/8"-14	1"-14
-12	3/4"-14	1-1/16"-12	3/4"-14	1-3/16"-12
-14	---	1-3/16"-12	---	---
-16	1"-11.5	1-5/16"-12	1"-11	1-7/16"-12
-20	1-1/4"-11.5	1-5/8"-12	1-1/4"-11	1-11/16"-12
-24	1-1/2"-11.5	1-7/8"-12	1-1/2"-11	2"-12
-32	2"-11.5	2-1/2"-12	2"-11	---

Fluid Powers Formulae & Useful Information

Fluid Power Formulae:

Torque and horsepower relations:

$$T = HP \times 5252 \div RPM$$

$$HP = T \times RPM \div 5252$$

$$RPM = HP \times 5252 \div T$$

Torque values are in foot pounds.

Hydraulic power flowing through pipe:

$$HP = PSI \times GPM \div 1714$$

HP = horsepower

PSI = gage pressure in lbs/sq. inch

GPM = flow in gallons per minute

Burst pressure of pipe and tube:

$$P = 2t \times S \div O$$

P = burst pressure in lbs/sq. inch

t = wall thickness of pipe or tube

S = tensile strength of pipe mat'l in lbs/sq. inch

O = outside diameter of pipe or tube in inches

Velocity of oil flow in hydraulic lines:

$$V = GPM \times 0.3208 \div A$$

V = velocity in feet per second

GPM = oil flow in gallons per minute

A = inside area of line in square inches

Rules of Thumb For Hydraulic Systems:

- a) Hydraulic Line Velocity: Suction 2 to 4 FPS
Return 6 to 10 FPS
Pressure 15 to 20 FPS

b) One H.P. is required for every one GPM @ 1500 PSI

c) Power required @ idle is approximately 5% of pump maximum rated pressure.

d) Heat generated in a system: BTU / Hour = 1.5 x PSI x GPM

e) Size of heat exchanger is 25% of input H.P.

f) Heat radiated from steel reservoir:

$$H.P. = .001 \times \Delta T \times A$$

Where A = area in square feet of tank surface

ΔT = difference between surface temperature and ambient temperature.

g) The size of a reservoir is 2-1/2 times the flow rate of the system.

Density

Common Metals (Pounds / Cubic Inch)	
Material	Weight
Aluminum	.0975
Brass: 80C.,20Z	.3105
Chromium	.2502
Copper	.3210
Gold	.6969
Iron, Cast	.254/.279
Iron, Wrought	.282/.285
Lead	.4096
Magnesium	.0628
Mercury (68° F)	.4892
Nickel	.3178
Silver	.376/.380
Steel, Carbon	.283/.284
Tin	.2633
Titanium	.1621
Tungsten	.672/.690
Vanadium	.2022
Zinc	.254/.259

Miscellaneous Substances (Pounds / Cubic Foot)	
Material	Weight
Asphaltum	87
Brick, Common	112
Brick, Fire	143
Brickwork, in mortar	100
Brickwork, in cement	112
Charcoal	25
Coal, anthracite	94
Coal, bituminous	81
Concrete	137
Earth, loose	75
Earth, rammed	100
Granite	168
Gravel	109
Gypsum	150
Limestone	162
Masonry	150
Sandstone	143
Slate	175

American Woods (Pounds / Cubic Foot)		
Material	Green	Airdry
Alder, red	46	28
Birch	57	44
Birch, paper	50	38
Cedar, western red	27	23
Cedar, eastern red	37	33
Cedar, northern white	28	22
Douglas Fir, coast reg.	38	34
Douglas Fir, rocky mt. Reg.	35	30
Hemlock, eastern	50	28
Hemlock, western	41	29
Oak, red	64	44
Oak, white	63	47
Pine, western white	35	27
Poplar, yellow	38	28
Redwood	50	28
Spruce, eastern	34	28
Spruce, engelmann	39	23
Walnut, black	58	38

Conversion Factors

Equivalent Units		
1 Inch (in)	=	25.4 Millimeters (mm)
1 Kilogram (kg)	=	2.2064 Pounds (lb)
1 Liter (l)	=	61.026 Cubic inches
1 Gallon (U.S.)	=	3.79 Liters (l)
1 Pound (lb)	=	4.448 Newton
1 Horsepower (HP)	=	550 Foot Pounds per Second
1 Ton (metric)	=	1000 Kilograms (kg)
1 Foot (ft)	=	12 Inches (in)
1 Yard (yd)	=	3 Feet (ft)
1 Mile	=	1760 Yards (yd)
1 Mile	=	8 Furlong
1 league	=	3 Miles
1 fathom	=	6 Feet (ft)
1 rod	=	5.50 Yards (yd)
1 pint	=	4 Gills
1 quart	=	2 Pints
1 Gallon (British)	=	4 Quarts
1 are	=	100 Square Meters
1 Cubic Foot	=	12 Board Feet

Metric Prefixes




Prefix	Symbol	Multiplier
tera	T	1,000,000,000,000
giga	G	1,000,000,000
mega	M	1,000,000
kilo	k	1,000
hecto	h	100
deka	da	10
		1
deci	d	.1
centi	c	.01
milli	m	.001
micro	μ	.000001
nano	n	.000000001
pico	p	.000000000001

Conversion Factors						
Kilowatts	x	1.341	=	HP	x	.7457 = Kilowatts
Kilograms	x	2.205	=	Pounds	x	.4536 = Kilograms
Liters	x	.2642	=	Gallons (US)	x	3.785 = Liters
Pascals (Newton/M ²)	x	1.45x10 ⁻⁴	=	PSI	x	6897 = Pascals (Newton/M ²)
Dynes (Gram-CM/Sec ²)	x	2.248x10 ⁻⁶	=	Pounds	x	4.448x10 ⁵ = Dynes (Gram-CM/Sec ²)
Joules (Newton Meter)	x	.7376	=	Foot pounds	x	1.356 = Joules (Newton Meter)
Millimeter	x	.0394	=	Inches	x	25.4 = Millimeter
Newton (Kg M/Sec ²)	x	.2248	=	Pounds	x	4448 = Newton (Kg M/Sec ²)
Tons	x	2000	=	Pounds	x	5x10 ⁻⁴ = Tons
Tons-Long	x	2240	=	Pounds	x	4.464x10 ⁻⁴ = Tons-Long
Tons-Metric	x	2205	=	Pounds	x	4.535x10 ⁻⁴ = Tons-Metric
Atmosphers	x	14.7	=	PSI	x	.06804 = Atmosphers
Bars	x	14.5	=	PSI	x	.08695 = Bars
B.T.U.	x	778.2	=	Foot Pounds	x	.001285 = B.T.U.
Calories (Grams)	x	.003966	=	B.T.U.	x	252.2 = Calories (Grams)
Cubic Inch	x	.004329	=	Gallons	x	231 = Cubic Inch
Foot Pounds / Sec	x	.001818	=	H.P.	x	550 = Foot Pounds / Sec
BTU / Min	x	.02358	=	H.P.	x	42.41 = BTU / Min
Miles	x	1760	=	Yards	x	5.68x10 ⁻⁴ = Miles
Miles-Nautical	x	2027	=	Yards	x	4.933x10 ⁻⁴ = Miles-Nautical
Chains	x	22	=	Yards	x	.04545 = Chains
Cords	x	128	=	Cubic Foot	x	.007812 = Cords

Recommended Bolt Torque Values

For SAE Grade 2, Grade 5, Grade 8 cap screws & bolts.
Torques listed are approximate suggested values only on parts carrying residual oil of manufacture.
These values do not apply to plated or otherwise lubricated parts.
Torque-tension relationship is affected by lubrication, surface finish, thread fit, plating, lock washers, etc.
For plated cap screws and bolts, use only 75% of torque values listed.

Bolt Size	SAE Grade 2		SAE Grade 5		SAE Grade 8	
	Load	Torque	Load	Torque	Load	Torque
1/4"-20	1320 lbs.	5 ft. lbs.	2020 lbs.	8 ft. lbs.	2860 lbs.	12 ft. lbs.
1/4"-28	1500 lbs.	6 ft. lbs.	2320 lbs.	10 ft. lbs.	3280 lbs.	14 ft. lbs.
5/16"-18	2160 lbs.	11 ft. lbs.	3340 lbs.	17 ft. lbs.	4720 lbs.	24 ft. lbs.
5/16"-24	2400 lbs.	13 ft. lbs.	3700 lbs.	19 ft. lbs.	5220 lbs.	27 ft. lbs.
3/8"-16	3200 lbs.	20 ft. lbs.	4940 lbs.	30 ft. lbs.	7000 lbs.	45 ft. lbs.
3/8"-24	3620 lbs.	22 ft. lbs.	5600 lbs.	35 ft. lbs.	7900 lbs.	50 ft. lbs.
7/16"-14	4380 lbs.	30 ft. lbs.	6800 lbs.	50 ft. lbs.	9550 lbs.	70 ft. lbs.
7/16"-20	4900 lbs.	35 ft. lbs.	7550 lbs.	55 ft. lbs.	10700 lbs.	78 ft. lbs.
1/2"-13	5840 lbs.	50 ft. lbs.	9050 lbs.	75 ft. lbs.	12750 lbs.	105 ft. lbs.
1/2"-20	6600 lbs.	55 ft. lbs.	10700 lbs.	90 ft. lbs.	14400 lbs.	120 ft. lbs.
5/8"-11	8800 lbs.	90 ft. lbs.	14400 lbs.	150 ft. lbs.	20350 lbs.	210 ft. lbs.
5/8"-18	10000 lbs.	105 ft. lbs.	16950 lbs.	180 ft. lbs.	23000 lbs.	240 ft. lbs.
3/4"-10	13000 lbs.	160 ft. lbs.	21300 lbs.	270 ft. lbs.	30100 lbs.	375 ft. lbs.
3/4"-16	14550 lbs.	180 ft. lbs.	23800 lbs.	300 ft. lbs.	33600 lbs.	420 ft. lbs.
7/8"-9	9700 lbs.	145 ft. lbs.	27000 lbs.	395 ft. lbs.	41600 lbs.	610 ft. lbs.
7/8"-14	10700 lbs.	155 ft. lbs.	29800 lbs.	435 ft. lbs.	45800 lbs.	675 ft. lbs.
1"-8	12700 lbs.	210 ft. lbs.	35500 lbs.	590 ft. lbs.	54500 lbs.	910 ft. lbs.
1"-12	13900 lbs.	230 ft. lbs.	38800 lbs.	650 ft. lbs.	59700 lbs.	1000 ft. lbs.
1"-14	14300 lbs.	240 ft. lbs.	39700 lbs.	655 ft. lbs.	61000 lbs.	1015 ft. lbs.

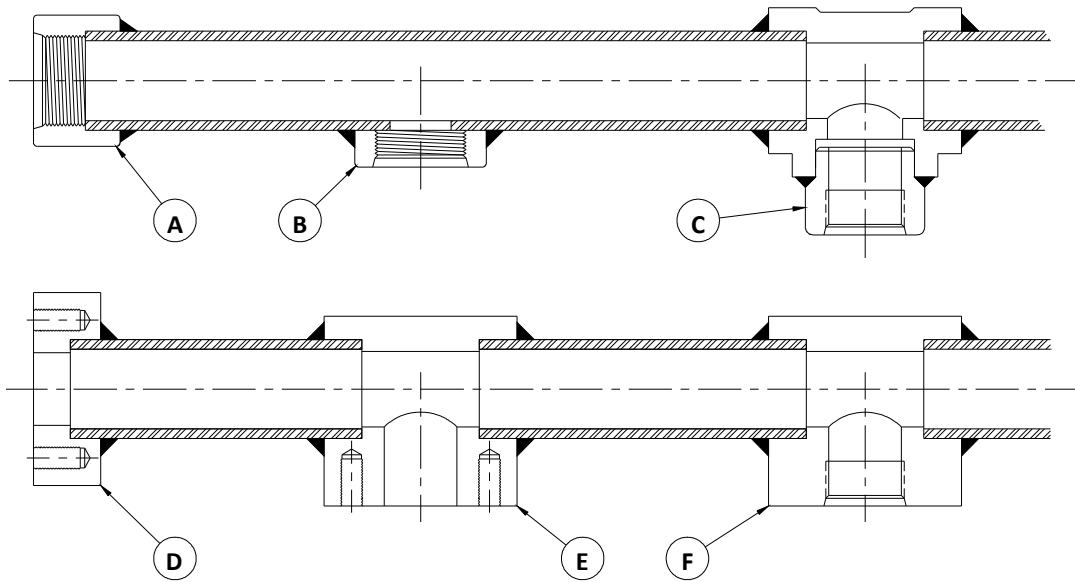
Grade	Markings	Material	Bolt & Screw Size	Proof Load (psi)	Tensile Strength min psi
2		Low Carbon Steel	1/4" thru 3/4" Over 3/4" thru 1-1/2"	55,000 33,000	74,000 60,000
5		Medium Carbon Steel Quenched & Tempered	1/4" thru 1" Over 1" thru 1-1/2"	85,000 74,000	120,000 105,000
8		Medium Carbon Alloy Steel Quenched & Tempered	1/4" thru 1-1/2"	120,000	150,000

Decimal Equivalents of Parts of an Inch in Imperial & Metric

<i>Fraction</i>	<i>Inches</i>	<i>Millimeters</i>
1/64	0.0156	0.3962
1/32	0.0313	0.7950
3/64	0.0469	1.1913
1/16	0.0625	1.5875
5/64	0.0781	1.9837
3/32	0.0938	2.3825
7/64	0.1094	2.7788
1/8	0.1250	3.1750
9/64	0.1406	3.5712
5/32	0.1563	3.9700
11/64	0.1719	4.3663
3/16	0.1875	4.7625
13/64	0.2031	5.1587
7/32	0.2188	5.5575
15/64	0.2344	5.9538
1/4	0.2500	6.3500
17/64	0.2656	6.7462
9/32	0.2813	7.1450
19/64	0.2969	7.5413
5/16	0.3125	7.9375
21/64	0.3281	8.3337
11/32	0.3438	8.7325
23/64	0.3594	9.1288
3/8	0.3750	9.5250
25/64	0.3906	9.9212
13/32	0.4063	10.3200
27/64	0.4219	10.7163
7/16	0.4375	11.1125
29/64	0.4531	11.5087
15/32	0.4688	11.9075
31/64	0.4844	12.3038
1/2	0.5000	12.7000

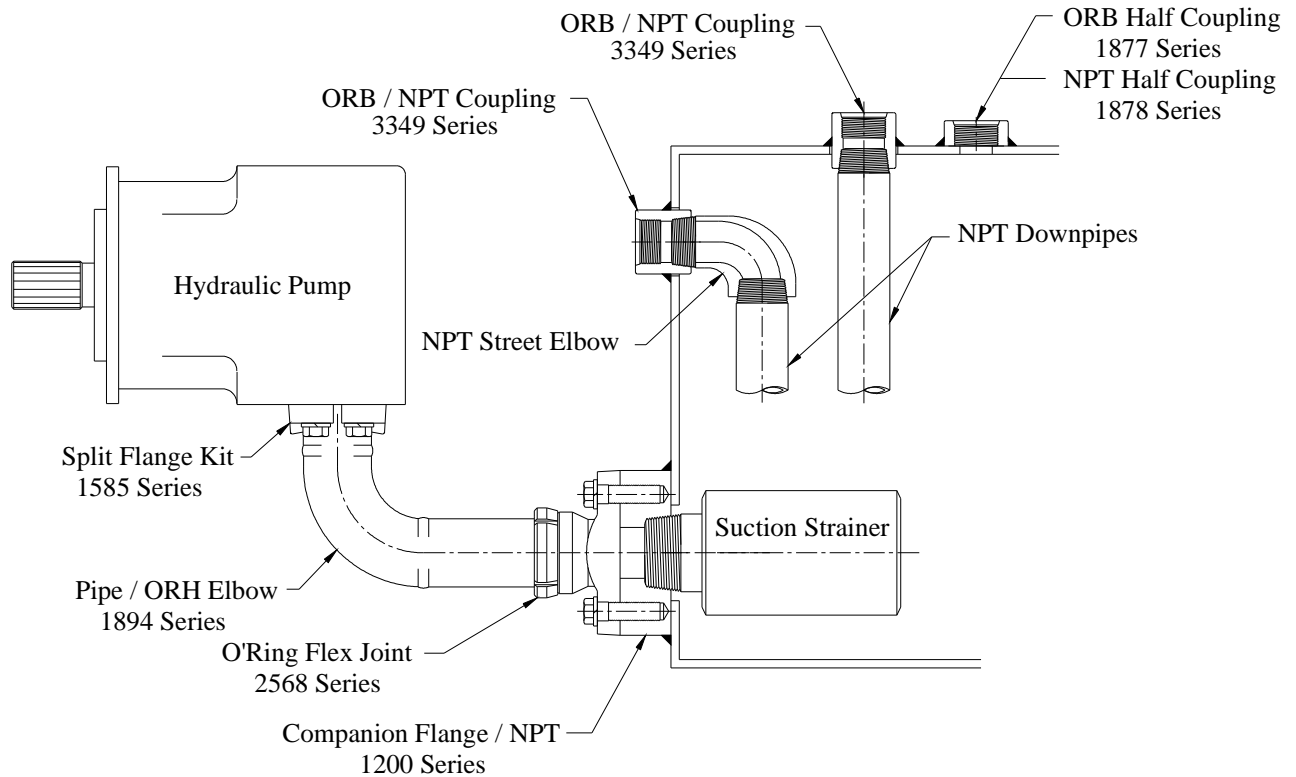
<i>Fraction</i>	<i>Inches</i>	<i>Millimeters</i>
33/64	0.5156	13.0962
17/32	0.5313	13.4950
35/64	0.5469	13.8913
9/16	0.5625	14.2875
37/64	0.5781	14.6837
19/32	0.5938	15.0825
39/64	0.6094	15.4788
5/8	0.6250	15.8750
41/64	0.6406	16.2712
21/32	0.6563	16.6700
43/64	0.6719	17.0663
11/16	0.6875	17.4625
45/64	0.7031	17.8587
23/32	0.7188	18.2575
47/64	0.7344	18.6538
3/4	0.7500	19.0500
49/64	0.7656	19.4462
25/32	0.7813	19.8450
51/64	0.7969	20.2413
13/16	0.8125	20.6375
53/64	0.8281	21.0337
27/32	0.8438	21.4325
55/64	0.8594	21.8288
7/8	0.8750	22.2250
57/64	0.8906	22.6212
29/32	0.9063	23.0200
59/64	0.9219	23.4163
15/16	0.9375	23.8125
61/64	0.9531	24.2087
31/32	0.9688	24.6075
63/64	0.9844	25.0038
1	1.0000	25.4000

Long Run Header Options



- A** *Threaded coupling, welded to the end of a pipe run in two styles, 1805 series, O' Ring Boss (ORB) to Socket Weld Pipe and 1809 series, National Pipe Thread (NPT) to Socket Weld Pipe.*
- B** *Weld-O-Let. , O' Ring Boss (2624 series) and National Pipe Thread (2625 series)*
This is an easy way to get a small port on a large pipe. Simply drill a hole in the side of your pipe and weld the Thread-O-Let in place. Disadvantage, too many too close will cause the pipe to warp due to welding.
- C** *ORB weld insert. 3348 Series*
An economical way to get an ORB port on your pipe run. This style fitting can be used in any socket weld pipe fitting such as elbows, tees, and crosses.
- D** *Companion Flange to Socket Weld Pipe. 1211 series in Code 61 and 1851 series in Code 62.*
When you want to terminate a pipe run for future expansion or to continue on in 4-bolt flange technology.
- E** *Socket Weld Pipe to 4-Bolt Flange Tees. 1865 series in Code 61 and 1879 series in Code 62*
When 4-bolt flanges are required on a pipe run. Simply cut the pipe and weld in place. Helps to eliminate pipe distortion so common with Weld-O-Lets.
- F** *Socket Weld Pipe to ORB Tees. 2058 series*
Used the same way as item E. A perfect way to get an ORB into your pipe run. Most commonly used when smaller hoses are needed off of a pipe run.

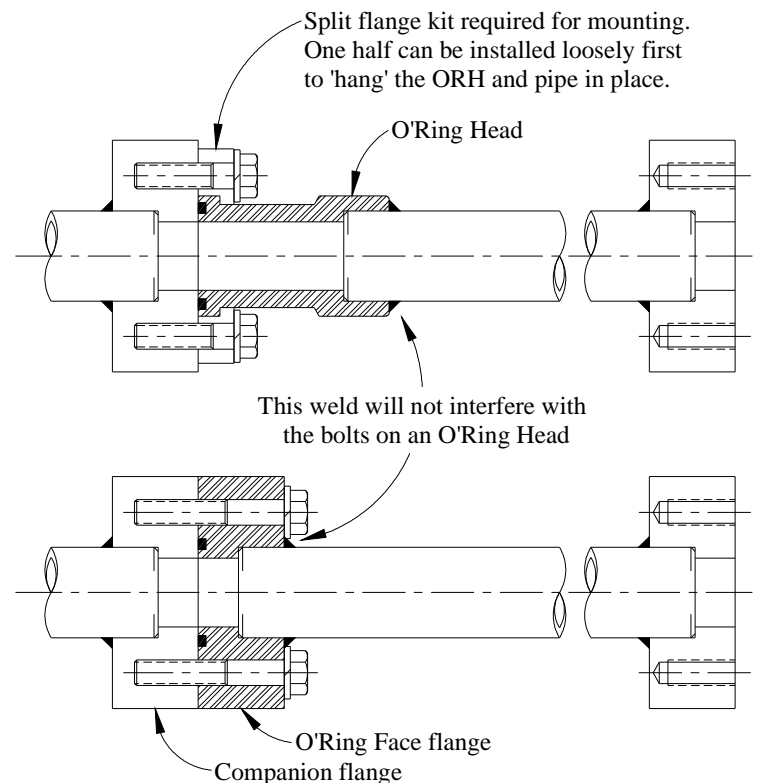
Tank Port Options



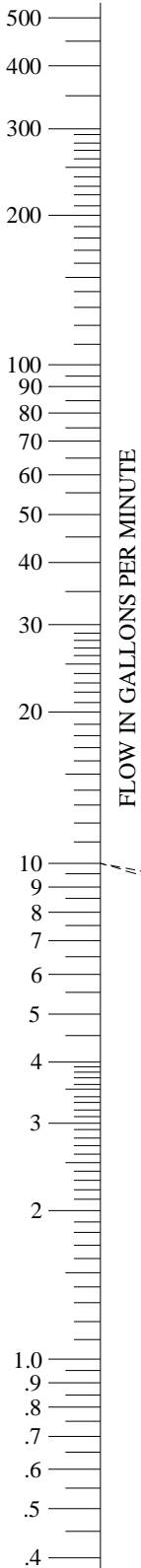
O'Ring Head versus O'Ring Face

In order to join two pieces of pipe using 4-bolt flange technology, you need two flanges. The first being a flat face flange with tapped bolt holes (companion face flange) and the second being a flange with an o'ring groove (o'ring flange). The o'ring flanges come in two styles, O'Ring Face (ORF) and O'Ring Head (ORH). The O'Ring Head style flange requires a split flange kit for mounting while the O'Ring Face flange bolts directly in place. The O'Ring Head (ORH) flange is a much superior flange and has many advantages over the O'Ring Face (ORF) flange.

- On socket weld pipe, as shown, the weld is moved farther away from the bolts, eliminating the need to grind welds in order to install the bolts when too much weld is put in place.
- There is no orientation required when welding in place as the flange itself is round.
- When installing your welded pipe together, one half of the split flange kit can be loosely installed to "hang" the pipe assembly in place as you tighten the bolts.
- The O'Ring Head style flange is the only way a larger pipe can be welded to a smaller flange as the socket for the pipe is well away from the bolt pattern of the flange and will not interfere.



Flow Capacities of Hydraulic Lines at Recommended Velocities



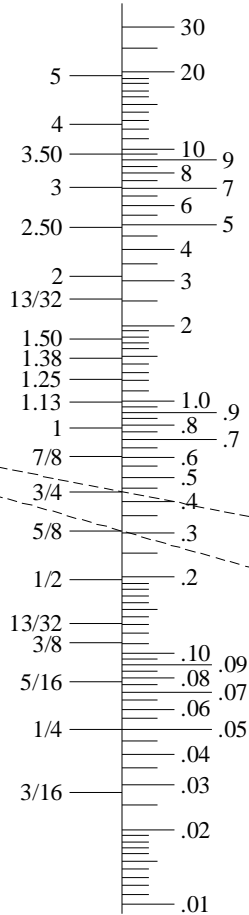
FLOW IN GALLONS PER MINUTE

This nomograph will aid you in selecting the correct line size when a straight edge is placed from the left column (GPM) to the recommended velocity in the right hand column. The example shows that with 10 gallons per minute a either a 5/8" or 3/4" I.D. line will give you a flow velocity within the recommended range for pressure lines.

$$\text{Area in Square Inches} = \frac{0.321 \times \text{Flow (G.P.M.)}}{\text{Velocity in Feet per Second}}$$

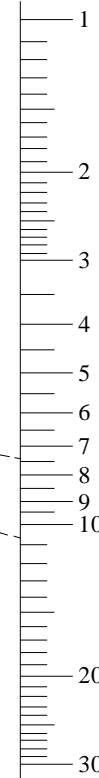
Recommendations are for hydraulic oils having a maximum viscosity of 315 S.S.U. at 100° F. And operating temperatures between 60° F and 155° F

INSIDE DIAMETER OF LINE IN INCHES



INSIDE AREA OF LINE IN SQUARE INCHES

VELOCITY ON FEET PER SECOND



RECOMMENDED VELOCITY RANGE FOR INTAKE LINES

RECOMMENDED VELOCITY RANGE FOR PRESSURE LINES



Code 61 4-Bolt Flanges

O'Ring Boss

National Pipe Thread

Socket Weld Pipe

Socket Weld Tube

Butt Weld Pipe

Cover Plates

Union Plates

Gage Blocks

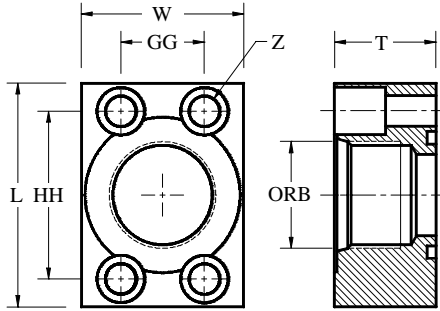
Transitions

Blanking Plates



O'Ring Boss (ORB) / Code 61 Flange

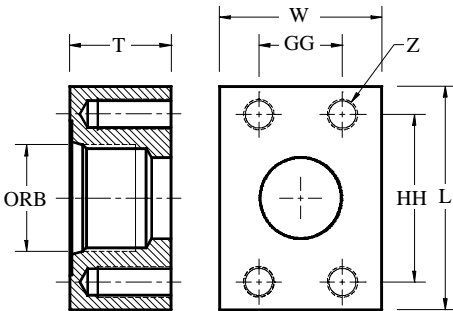
ORB / Code 61 O'Ring Face Flange



Socket Head Mounting Kit Supplied

Code 61 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1203-08-08	#8 (3/4"-16)	1/2"	11/32	0.688	1.500	1.50	2.19	1.00
1203-12-12	#12 (1-1/16"-12)	3/4"	13/32	0.875	1.875	1.75	2.63	1.00
1203-12-16	#12 (1-1/16"-12)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1203-16-16	#16 (1-5/16"-12)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1203-16-20	#16 (1-5/16"-12)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1203-20-20	#20 (1-5/8"-12)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1203-20-24	#20 (1-5/8"-12)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1203-24-24	#24 (1-7/8"-12)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1203-24-32	#24 (1-7/8"-12)	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1203-32-32	#32 (2.50"-12)	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1203-32-40	#32 (2.50"-12)	2.50"	17/32	2.00	3.500	4.00	4.50	1.50

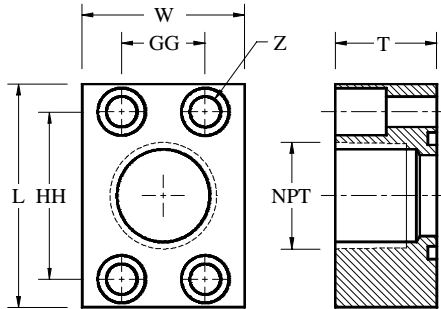
ORB / Code 61 Companion Face Flange



Code 61 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1202-08-08	#8 (3/4"-16)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.00
1202-12-12	#12 (1-1/16"-12)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.00
1202-12-16	#12 (1-1/16"-12)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1202-16-16	#16 (1-5/16"-12)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1202-16-20	#16 (1-5/16"-12)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1202-20-20	#20 (1-5/8"-12)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1202-20-24	#20 (1-5/8"-12)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1202-24-24	#24 (1-7/8"-12)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1202-24-32	#24 (1-7/8"-12)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1202-32-32	#32 (2.50"-12)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1202-32-40	#32 (2.50"-12)	2.50"	1/2"-13	2.00	3.500	4.00	4.50	1.50

National Pipe Thread (NPT) / Code 61 Flange

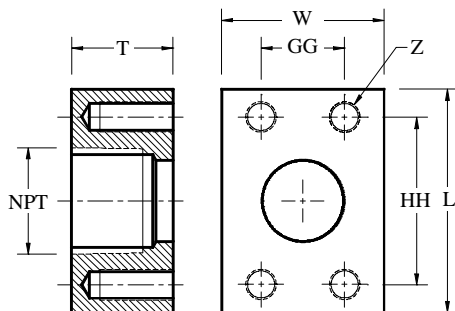
NPT / Code 61 O'Ring Face Flange



Socket Head Mounting Kit Supplied

Code 61 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1201-08-08	1/2"-14	1/2"	11/32	0.688	1.500	1.50	2.19	1.00
1201-12-12	3/4"-14	3/4"	13/32	0.875	1.875	1.75	2.63	1.00
1201-12-16	3/4"-14	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1201-16-16	1"-11.5	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1201-16-20	1"-11.5	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1201-20-20	1.25"-11.5	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1201-20-24	1.25"-11.5	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1201-24-24	1.50"-11.5	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1201-24-32	1.50"-11.5	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1201-32-32	2.00"-11.5	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1201-32-40	2.00"-11.5	2.50"	17/32	2.000	3.500	4.00	4.50	1.50
1201-40-40	2.50"-8	2.50"	17/32	2.000	3.500	4.00	4.50	1.50
1201-40-48	2.50"-8	3.00"	21/32	2.438	4.188	5.00	5.31	1.50
1201-48-48	3.00"-8	3.00"	21/32	2.438	4.188	5.00	5.31	1.50
1201-48-56	3.00"-8	3.50"	21/32	2.750	4.750	5.00	6.00	1.50
1201-56-56	3.50"-8	3.50"	21/32	2.750	4.750	5.00	6.00	1.50
1201-56-64	3.50"-8	4.00"	21/32	3.062	5.125	6.00	6.38	1.50
1201-64-64	4.00"-8	4.00"	21/32	3.062	5.125	6.00	6.38	1.50

NPT / Code 61 Companion Face Flange

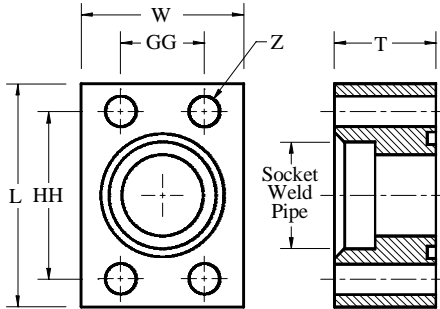


Code 61 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1200-08-08	1/2"-14	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.00
1200-12-12	3/4"-14	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.00
1200-12-16	3/4"-14	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1200-16-16	1"-11.5	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1200-16-20	1"-11.5	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1200-20-20	1.25"-11.5	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1200-20-24	1.25"-11.5	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1200-24-24	1.50"-11.5	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1200-24-32	1.50"-11.5	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1200-32-32	2.00"-11.5	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1200-32-40	2.00"-11.5	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
1200-40-40	2.50"-8	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
1200-40-48	2.50"-8	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
1200-48-48	3.00"-8	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
1200-48-56	3.00"-8	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
1200-56-56	3.50"-8	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
1200-56-64	3.50"-8	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50
1200-64-64	4.00"-8	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50

Socket Weld Pipe (SWP) / Code 61 Flange

SWP / Code 61 O'Ring Face Flange

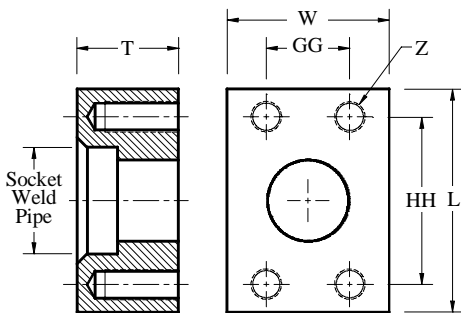
Code 61 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1210-08-08	1/2" (0.845)	1/2"	11/32	0.688	1.500	1.50	2.19	1.00
1210-12-12	3/4" (1.055)	3/4"	13/32	0.875	1.875	1.75	2.63	1.00
1210-12-16	3/4" (1.055)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1210-16-16	1.00" (1.320)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1210-16-20	1.00" (1.320)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1210-20-20	1.25" (1.670)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1210-20-24	1.25" (1.670)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1210-24-24	1.50" (1.910)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1210-24-32	1.50" (1.910)	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1210-32-32	2.00" (2.385)	2.00"	17/32	1.688	3.062	3.50	4.00	1.50
1210-32-40	2.00" (2.385)	2.50"	17/32	2.000	3.500	4.00	4.50	1.50
1210-40-40	2.50" (2.888)	2.50"	17/32	2.000	3.500	4.00	4.50	1.50
1210-40-48	2.50" (2.888)	3.00"	21/32	2.438	4.188	5.00	5.31	1.50
1210-48-48	3.00" (3.510)	3.00"	21/32	2.438	4.188	5.00	5.31	1.50
1210-48-56	3.00" (3.510)	3.50"	21/32	2.750	4.750	5.00	6.00	1.50
1210-56-56	3.50" (4.010)	3.50"	21/32	2.750	4.750	5.00	6.00	1.50
1210-56-64	3.50" (4.010)	4.00"	21/32	3.062	5.125	6.00	6.38	1.50
1210-64-64	4.00" (4.510)	4.00"	21/32	3.062	5.125	6.00	6.38	1.50



Hex Head Mounting Kit Supplied

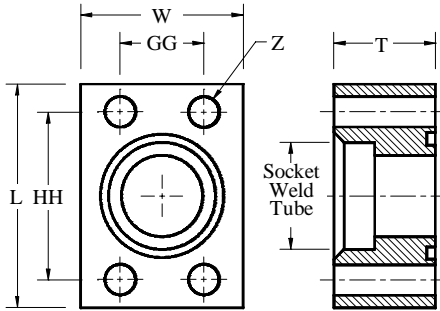
SWP / Code 61 Companion Face Flange

Code 61 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1211-08-08	1/2" (0.845)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.00
1211-12-12	3/4" (1.055)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.00
1211-12-16	3/4" (1.055)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1211-16-16	1.00" (1.320)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1211-16-20	1.00" (1.320)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1211-20-20	1.25" (1.670)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1211-20-24	1.25" (1.670)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1211-24-24	1.50" (1.910)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1211-24-32	1.50" (1.910)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1211-32-32	2.00" (2.385)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
1211-32-40	2.00" (2.385)	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
1211-40-40	2.50" (2.888)	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
1211-40-48	2.50" (2.888)	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
1211-48-48	3.00" (3.510)	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
1211-48-56	3.00" (3.510)	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
1211-56-56	3.50" (4.010)	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
1211-56-64	3.50" (4.010)	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50
1211-64-64	4.00" (4.510)	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50



Socket Weld Tube (SWT) / Code 61 Flange

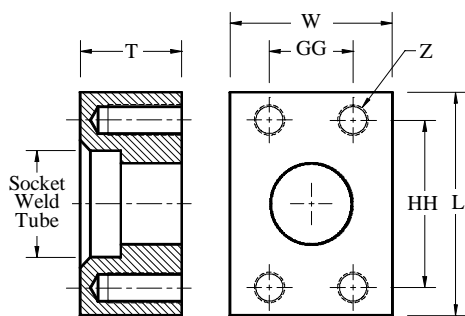
SWT / Code 61 O'Ring Face Flange



Hex Head Mounting Kit Supplied

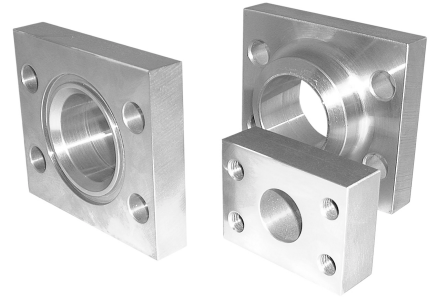
Code 61 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1208-08-08	1/2" (0.505)	1/2"	11/32	0.688	1.500	1.50	2.19	1.00
1208-10-08	5/8" (0.630)	1/2"	11/32	0.688	1.500	1.50	2.19	1.00
1208-12-12	3/4" (0.755)	3/4"	13/32	0.875	1.875	1.75	2.63	1.00
1208-16-12	1.00" (1.005)	3/4"	13/32	0.875	1.875	1.75	2.63	1.00
1208-16-16	1.00" (1.005)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1208-20-16	1.25" (1.255)	1.00"	13/32	1.031	2.062	2.00	2.81	1.00
1208-20-20	1.25" (1.255)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1208-24-20	1.50" (1.510)	1.25"	15/32	1.188	2.312	2.50	3.13	1.25
1208-24-24	1.50" (1.510)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1208-28-24	1.75" (1.760)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1208-32-24	2.00" (2.010)	1.50"	17/32	1.406	2.750	3.00	3.69	1.25
1208-32-32	2.00" (2.010)	2.00"	17/32	1.688	3.062	3.50	4.00	1.50

SWT / Code 61 Companion Face Flange

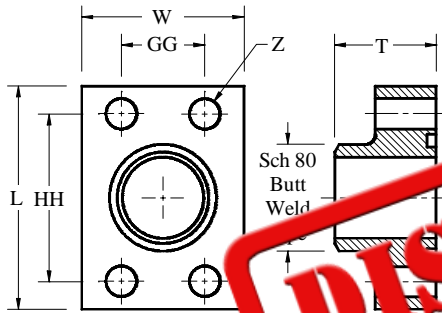


Code 61 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1209-08-08	1/2" (0.505)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.00
1209-10-08	5/8" (0.630)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.00
1209-12-12	3/4" (0.755)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.00
1209-16-12	1.00" (1.005)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.00
1209-16-16	1.00" (1.005)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1209-20-16	1.25" (1.255)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	1.00
1209-20-20	1.25" (1.255)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1209-24-20	1.50" (1.510)	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
1209-24-24	1.50" (1.510)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1209-28-24	1.75" (1.760)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1209-32-24	2.00" (2.010)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
1209-32-32	2.00" (2.010)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50

Sch 80 Butt Weld Pipe (BWP) / Code 61 Flange



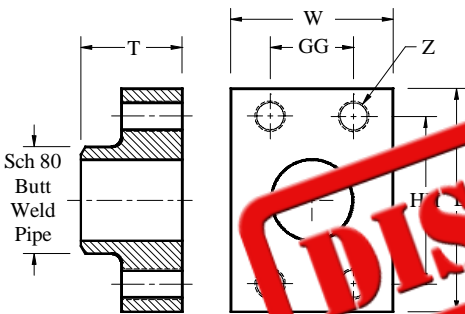
Sch 80 Butt Weld Pipe / Code 61 Hex Head Mounting Face Flange



Hex Head Mounting Face Flange

Code 61 Part No.	BWP Size	Flange Size	Z	GG	HH	W	L	T
2313-08-08	1/2" Sch 80	1/2"	5/8"-8	0.875	1.500	1.50	2.19	1.00
2313-12-12	3/4" Sch 80	3/4"	3/8"-16	0.875	1.750	1.75	2.63	1.00
2313-16-16	1.00" Sch 80	1.00"	3/8"-16	1.000	2.062	2.00	2.81	1.00
2313-20-20	1.25" Sch 80	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
2313-24-24	1.50" Sch 80	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
2313-32-32	2.00" Sch 80	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
2313-40-40	2.50" Sch 80	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
2313-48-48	3.00" Sch 80	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
2313-56-56	3.50" Sch 80	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
2313-64-64	4.00" Sch 80	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50

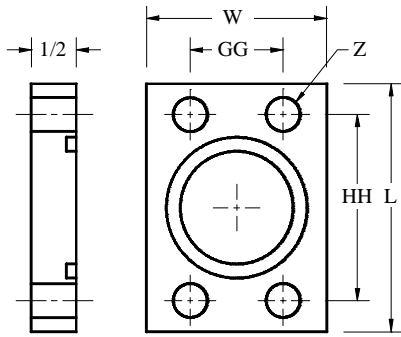
Sch 80 Butt Weld Pipe / Code 61 Common Face Flange



Code 61 Part No.	BWP Size	Flange Size	Z	GG	HH	W	L	T
2314-08-08	1/2" Sch 80	1/2"	5/8"-8	0.875	1.500	1.50	2.19	1.00
2314-12-12	3/4" Sch 80	3/4"	3/8"-16	0.875	1.750	1.75	2.63	1.00
2314-16-16	1.00" Sch 80	1.00"	3/8"-16	1.000	2.062	2.00	2.81	1.00
2314-20-20	1.25" Sch 80	1.25"	7/16"-14	1.188	2.312	2.50	3.13	1.25
2314-24-24	1.50" Sch 80	1.50"	1/2"-13	1.406	2.750	3.00	3.69	1.25
2314-32-32	2.00" Sch 80	2.00"	1/2"-13	1.688	3.062	3.50	4.00	1.50
2314-40-40	2.50" Sch 80	2.50"	1/2"-13	2.000	3.500	4.00	4.50	1.50
2314-48-48	3.00" Sch 80	3.00"	5/8"-11	2.438	4.188	5.00	5.31	1.50
2314-56-56	3.50" Sch 80	3.50"	5/8"-11	2.750	4.750	5.00	6.00	1.50
2314-64-64	4.00" Sch 80	4.00"	5/8"-11	3.062	5.125	6.00	6.38	1.50

Code 61 Blanking & Cover Plates

Code 61 O'Ring Face Blanking Plates

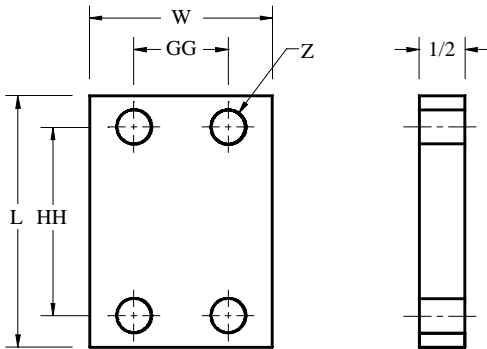


Hex Head Mounting Kit Supplied
c/w O'Ring

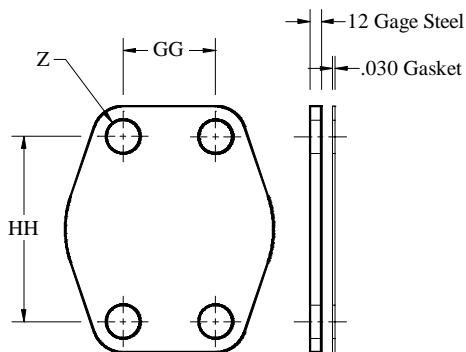
Code 61 Part No.	Flange Size	Z	GG	HH	W	L
3365-12	3/4"	13/32	0.875	1.875	1.75	2.63
3365-16	1.00"	13/32	1.031	2.062	2.00	2.81
3365-20	1.25"	15/32	1.188	2.312	2.50	3.13
3365-24	1.50"	17/32	1.406	2.750	3.00	3.69
3365-32	2.00"	17/32	1.688	3.062	3.50	4.00
3365-40	2.50"	17/32	2.000	3.500	4.00	4.50
3365-48	3.00"	21/32	2.438	4.188	5.00	5.31
3365-56	3.50"	21/32	2.750	4.750	5.00	6.00
3365-64	4.00"	21/32	3.062	5.125	6.00	6.38

For O'Ring Head Style Blanking Plugs, See Part No. 1830-Size

Code 61 Flat Face Blanking Plates



Code 61 Part No.	Flange Size	Z	GG	HH	W	L
1205-12	3/4"	13/32	0.875	1.875	1.75	2.63
1205-16	1.00"	13/32	1.031	2.062	2.00	2.81
1205-20	1.25"	15/32	1.188	2.312	2.50	3.13
1205-24	1.50"	17/32	1.406	2.750	3.00	3.69
1205-32	2.00"	17/32	1.688	3.062	3.50	4.00
1205-40	2.50"	17/32	2.000	3.500	4.00	4.50
1205-48	3.00"	21/32	2.438	4.188	5.00	5.31
1205-56	3.50"	21/32	2.750	4.750	5.00	6.00
1205-64	4.00"	21/32	3.062	5.125	6.00	6.38

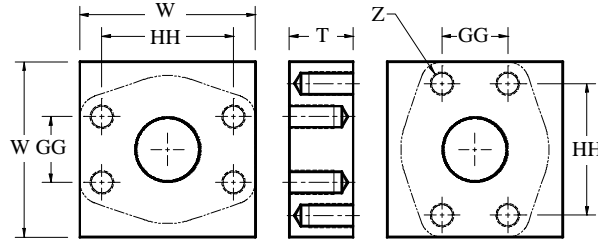


Hex Head Mounting Kit Supplied

Code 61 Protective Cover Plates

Code 61 Part No.	Flange Size	Z	GG	HH
3273-12	3/4"	13/32	0.875	1.875
3273-16	1.00"	13/32	1.031	2.062
3273-20	1.25"	15/32	1.188	2.312
3273-24	1.50"	17/32	1.406	2.750
3273-32	2.00"	17/32	1.688	3.062
3273-40	2.50"	17/32	2.000	3.500
3273-48	3.00"	21/32	2.438	4.188
3273-56	3.50"	21/32	2.750	4.750
3273-64	4.00"	21/32	3.062	5.125

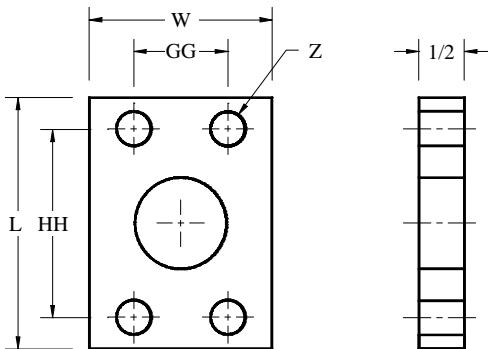
Code 61 Union Plates



Code 61 Companion Union Plates

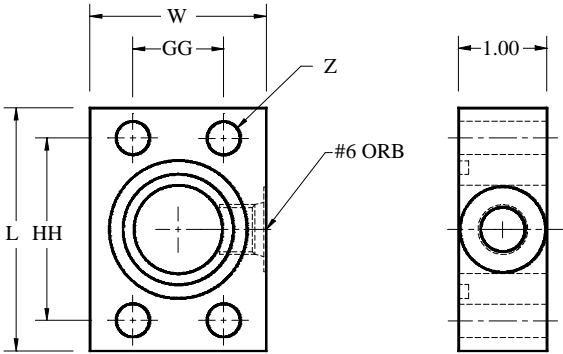
Code 61 Part No.	Flange Size	Z	GG	HH	W	T
3367-12-12	3/4"	3/8"-16	0.875	1.875	2.50	1.00
3367-16-16	1.00"	3/8"-16	1.031	2.062	2.75	1.00
3367-20-20	1.25"	7/16"-14	1.188	2.312	3.25	1.25
3367-24-24	1.50"	1/2"-13	1.406	2.750	3.75	1.50
3367-32-32	2.00"	1/2"-13	1.688	3.062	4.00	1.50
3367-40-40	2.50"	1/2"-13	2.000	3.500	4.50	1.50
3367-48-48	3.00"	5/8"-11	2.438	4.188	5.38	1.50
3367-56-56	3.50"	5/8"-11	2.750	4.750	6.00	1.50
3367-64-64	4.00"	5/8"-11	3.062	5.125	6.50	1.50

Code 61 Sandwich Union Plates



Code 61 Part No.	Flange Size	Z	GG	HH	W	L
1207-12	3/4"	13/32	0.875	1.875	1.75	2.63
1207-16	1.00"	13/32	1.031	2.062	2.00	2.81
1207-20	1.25"	15/32	1.188	2.312	2.50	3.13
1207-24	1.50"	17/32	1.406	2.750	3.00	3.69
1207-32	2.00"	17/32	1.688	3.062	3.50	4.00
1207-40	2.50"	17/32	2.000	3.500	4.00	4.50
1207-48	3.00"	21/32	2.438	4.188	5.00	5.31
1207-56	3.50"	21/32	2.750	4.750	5.00	6.00
1207-64	4.00"	21/32	3.062	5.125	6.00	6.38

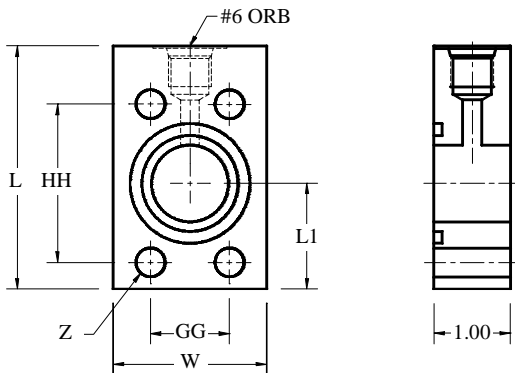
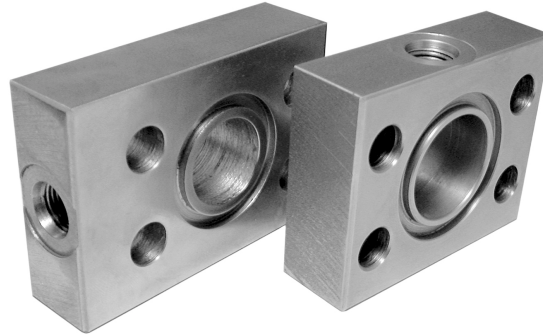
Code 61 Sandwich Style Gage Blocks



All sandwich style gage blocks come with #6 ORB side port and are 1.00" thick c/w O'Ring

Code 61 Sandwich Style Gage Blocks

Code 61 Part No.	Flange Size	Z	GG	HH	W	L
3046-12	3/4"	13/32	0.875	1.875	1.75	2.63
3046-16	1.00"	13/32	1.031	2.062	2.00	2.81
3046-20	1.25"	15/32	1.188	2.312	2.50	3.13
3046-24	1.50"	17/32	1.406	2.750	3.00	3.69
3046-32	2.00"	17/32	1.688	3.062	3.50	4.00
3046-40	2.50"	17/32	2.000	3.500	4.00	4.50
3046-48	3.00"	21/32	2.438	4.188	5.00	5.31
3046-56	3.50"	21/32	2.750	4.750	5.00	6.00
3046-64	4.00"	21/32	3.062	5.125	6.00	6.38

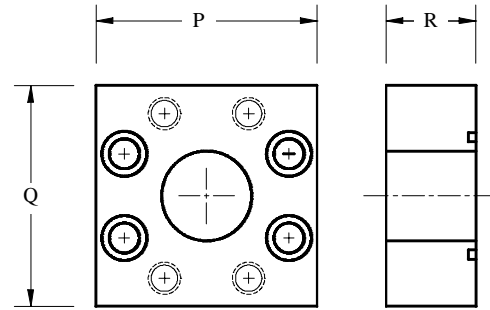
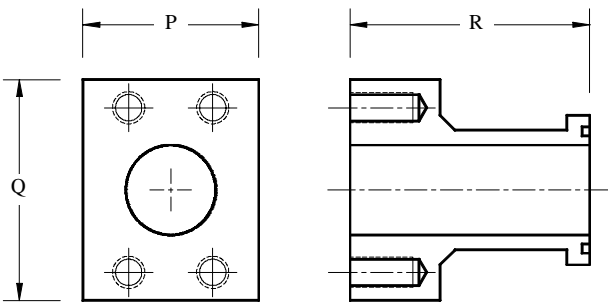


All sandwich style gage blocks come with #6 ORB side port and are 1.00" thick c/w O'Ring

Code 61 Sandwich Style Gage Blocks

Code 61 Part No.	Flange Size	Z	GG	HH	W	L	L1
3146-12	3/4"	13/32	0.875	1.875	1.75	3.13	1.28
3146-16	1.00"	13/32	1.031	2.062	2.00	3.19	1.38
3146-20	1.25"	15/32	1.188	2.312	2.50	3.50	1.56
3146-24	1.50"	17/32	1.406	2.750	3.00	3.69	1.84
3146-32	2.00"	17/32	1.688	3.062	3.50	4.00	2.00
3146-40	2.50"	17/32	2.000	3.500	4.00	4.50	2.25
3146-48	3.00"	21/32	2.438	4.188	5.00	5.31	2.66
3146-56	3.50"	21/32	2.750	4.750	5.00	6.00	3.00
3146-64	4.00"	21/32	3.062	5.125	6.00	6.38	3.19

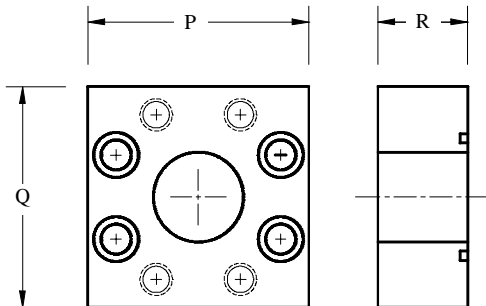
Code 61 Transition Flanges



Code 61 Step-Up Transition

Part No.	Code 61 Comp	Code 61 'O'Ring	P	Q	R
1816-12-08	3/4"	1/2"	1.75	2.56	2.88
1816-16-12	1.00"	3/4"	2.00	2.75	2.88
1816-20-16	1.25"	1.00"	2.50	3.12	3.00
1816-24-20	1.50"	1.25"	2.75	3.69	3.25
1816-32-24	2.00"	1.50"	3.50	4.00	3.63
1816-40-32	2.50"	2.00"	4.00	4.50	4.00
1816-48-40	3.00"	2.50"	5.00	5.31	4.50

Split Flange Kit Required for mounting
 See part number 1585-SIZE



Code 61 / Code 62 Transition

Part No.	Code 62 Comp	Code 61 'O'Ring	P	Q	R
1812-08-08	1/2"	1/2"	2.13	2.50	0.75
1812-12-12	3/4"	3/4"	2.63	3.00	0.75
1812-16-16	1.00"	1.00"	3.00	3.19	0.75
1812-20-20	1.25"	1.25"	3.13	4.00	1.00
1812-24-24	1.50"	1.50"	4.00	4.50	1.00
1812-32-32	2.00"	2.00"	4.00	5.25	1.50

Socket Head Mounting Kit Supplied

Code 61 Step-Down & Orientation Transitions

Part No.	Code 61 Comp	Code 61 'O'Ring	P	Q	R
1816-08-08	1/2"	1/2"	2.00	2.00	0.75
1816-08-12	1/2"	3/4"	3.00	2.13	0.75
1816-12-12	3/4"	3/4"	2.50	2.50	0.75
1816-12-16	3/4"	1.00"	3.00	2.56	0.75
1816-16-16	1.00"	1.00"	3.00	2.75	0.75
1816-12-20	3/4"	1.25"	3.13	2.50	1.00
1816-16-20	1.00"	1.25"	3.13	3.00	1.00
1816-20-20	1.25"	1.25"	3.13	3.00	1.00
1816-16-24	1.00"	1.50"	4.00	2.75	1.00
1816-20-24	1.25"	1.50"	4.00	3.13	1.00
1816-24-24	1.50"	1.50"	4.00	3.69	1.00
1816-20-32	1.25"	2.00"	4.00	3.13	1.50
1816-24-32	1.50"	2.00"	4.00	3.75	1.50
1816-32-32	2.00"	2.00"	4.00	4.00	1.50
1816-24-40	1.50"	2.50"	4.50	4.00	1.50
1816-32-40	2.00"	2.50"	4.50	4.00	1.50
1816-40-40	2.50"	2.50"	4.50	4.50	1.50
1816-32-48	2.00"	3.00"	5.50	4.00	1.50
1816-40-48	2.50"	3.00"	5.31	5.00	1.50
1816-48-48	3.00"	3.00"	5.50	5.31	1.50

Socket Head Mounting Kit Supplied

For Code 62 Transitions See Page 43-10



Code 62 4-Bolt Flanges

O'Ring Boss

National Pipe Thread

Socket Weld Pipe

Socket Weld Tube

Butt Weld Pipe

Cover Plates

Union Plates

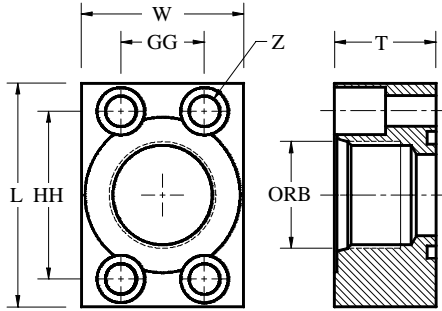
Gage Blocks

Transitions

Blanking Plates



O'Ring Boss (ORB) / Code 62 Flange

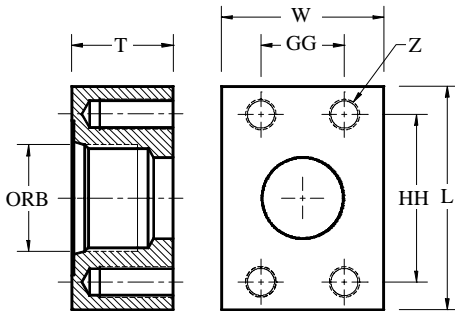


Socket Head Mounting Kit Supplied

ORB / Code 62 O'Ring Face Flange

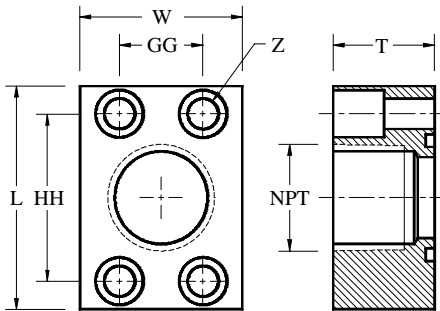
Code 62 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1856-08-08	#8 (3/4"-16)	1/2"	11/32	0.718	1.574	1.75	2.22	1.00
1856-12-12	#12 (1-1/16"-12)	3/4"	13/32	0.937	2.000	2.00	2.81	1.00
1856-12-16	#12 (1-1/16"-12)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1856-16-16	#16 (1-5/16"-12)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1856-16-20	#16 (1-5/16"-12)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1856-20-20	#20 (1-5/8"-12)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1856-20-24	#20 (1-5/8"-12)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1856-24-24	#24 (1-7/8"-12)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1856-24-32	#24 (1-7/8"-12)	2.00"	25/32	1.750	3.812	4.00	5.25	1.50
1856-32-32	#32 (2.50"-12)	2.00"	25/32	1.750	3.812	4.00	5.25	1.50

ORB / Code 62 Companion Face Flange



Code 62 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1855-08-08	#8 (3/4"-16)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.00
1855-12-12	#12 (1-1/16"-12)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	1.00
1855-12-16	#12 (1-1/16"-12)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1855-16-16	#16 (1-5/16"-12)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1855-16-20	#16 (1-5/16"-12)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1855-20-20	#20 (1-5/8"-12)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1855-20-24	#20 (1-5/8"-12)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1855-24-24	#24 (1-7/8"-12)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1855-24-32	#24 (1-7/8"-12)	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50
1855-32-32	#32 (2.50"-12)	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50

National Pipe Thread (NPT) / Code 62 Flange

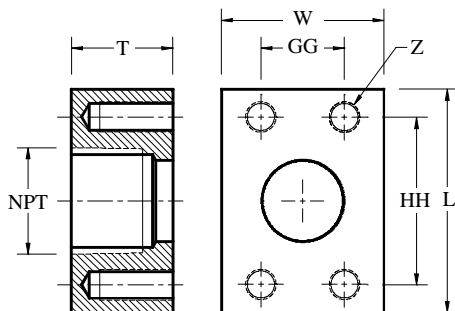


Socket Head Mounting Kit Supplied

NPT / Code 62 O'Ring Face Flange

Code 62 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1858-08-08	1/2"-14	1/2"	11/32	0.718	1.574	1.75	2.22	1.00
1858-12-12	3/4"-14	3/4"	13/32	0.937	2.000	2.00	2.81	1.00
1858-12-16	3/4"-14	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1858-16-16	1"-11.5	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1858-16-20	1"-11.5	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1858-20-20	1.25"-11.5	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1858-20-24	1.25"-11.5	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1858-24-24	1.50"-11.5	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1858-24-32	1.50"-11.5	2.00"	25/32	1.750	3.812	4.00	5.25	1.50
1858-32-32	2.00"-11.5	2.00"	25/32	1.750	3.812	4.00	5.25	1.50

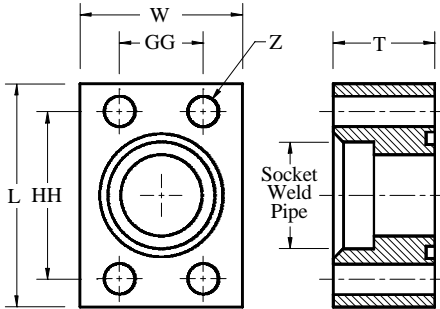
NPT / Code 62 Companion Face Flange



Code 62 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1857-08-08	1/2"-14	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.00
1857-12-12	3/4"-14	3/4"	3/8"-16	0.937	2.000	2.00	2.81	1.00
1857-12-16	3/4"-14	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1857-16-16	1"-11.5	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1857-16-20	1"-11.5	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1857-20-20	1.25"-11.5	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1857-20-24	1.25"-11.5	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1857-24-24	1.50"-11.5	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1857-24-32	1.50"-11.5	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50
1857-32-32	2.00"-11.5	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50

Socket Weld Pipe (SWP) / Code 62 Flange

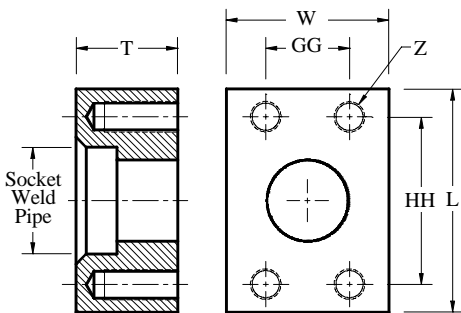
SWP / Code 62 O'Ring Face Flange



Hex Head Mounting Kit Supplied

Code 62 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1852-08-08	1/2" (0.845)	1/2"	11/32	0.718	1.574	1.75	2.22	1.00
1852-12-12	3/4" (1.055)	3/4"	13/32	0.937	2.000	2.00	2.81	1.00
1852-12-16	3/4" (1.055)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1852-16-16	1.00" (1.320)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1852-16-20	1.00" (1.320)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1852-20-20	1.25" (1.670)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1852-20-24	1.25" (1.670)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1852-24-24	1.50" (1.910)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1852-24-32	1.50" (1.910)	2.00"	25/32	1.750	3.812	4.00	5.25	1.50
1852-32-32	2.00" (2.385)	2.00"	25/32	1.750	3.812	4.00	5.25	1.50

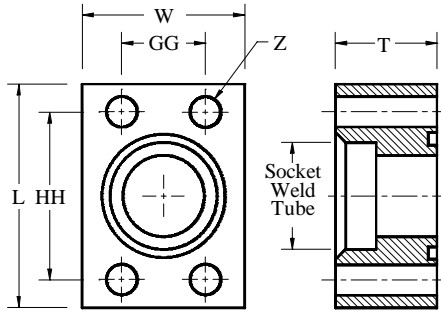
SWP / Code 62 Companion Face Flange



Code 62 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1851-08-08	1/2" (0.845)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.00
1851-12-12	3/4" (1.055)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	1.00
1851-12-16	3/4" (1.055)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1851-16-16	1.00" (1.320)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1851-16-20	1.00" (1.320)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1851-20-20	1.25" (1.670)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1851-20-24	1.25" (1.670)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1851-24-24	1.50" (1.910)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1851-24-32	1.50" (1.910)	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50
1851-32-32	2.00" (2.385)	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50

Socket Weld Tube (SWT) / Code 62 Flange

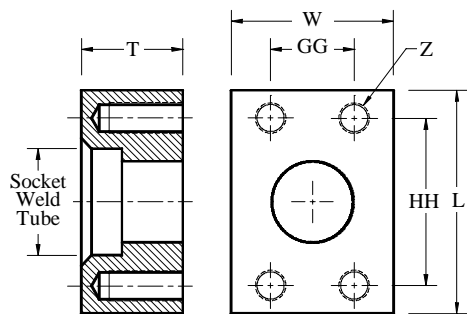
SWT / Code 62 O'Ring Face Flange



Hex Head Mounting Kit Supplied

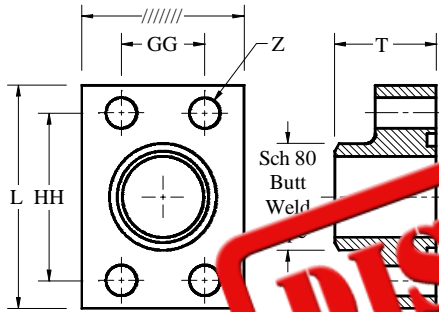
Code 62 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1854-08-08	1/2" (0.505)	1/2"	11/32	0.718	1.574	1.75	2.22	1.00
1854-10-08	5/8" (0.630)	1/2"	11/32	0.718	1.574	1.75	2.22	1.00
1854-12-12	3/4" (0.755)	3/4"	13/32	0.937	2.000	2.00	2.81	1.00
1854-16-12	1.00" (1.005)	3/4"	13/32	0.937	2.000	2.00	2.81	1.00
1854-16-16	1.00" (1.005)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1854-20-16	1.25" (1.255)	1.00"	15/32	1.093	2.250	2.50	3.19	1.25
1854-20-20	1.25" (1.255)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1854-24-20	1.50" (1.510)	1.25"	17/32	1.250	2.625	3.00	3.75	1.25
1854-24-24	1.50" (1.510)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1854-28-24	1.75" (1.760)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1854-32-24	2.00" (2.010)	1.50"	21/32	1.437	3.125	3.50	4.44	1.50
1854-32-32	2.00" (2.010)	2.00"	25/32	1.750	3.812	4.00	5.25	1.50

SWT / Code 62 Companion Face Flange



Code 62 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1853-08-08	1/2" (0.505)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.00
1853-10-08	5/8" (0.630)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.00
1853-12-12	3/4" (0.755)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	1.00
1853-16-12	1.00" (1.005)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	1.00
1853-16-16	1.00" (1.005)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1853-20-16	1.25" (1.255)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	1.25
1853-20-20	1.25" (1.255)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1853-24-20	1.50" (1.510)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	1.25
1853-24-24	1.50" (1.510)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1853-28-24	1.75" (1.760)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1853-32-24	2.00" (2.010)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	1.50
1853-32-32	2.00" (2.010)	2.00"	3/4"-10	1.750	3.812	4.00	5.25	1.50

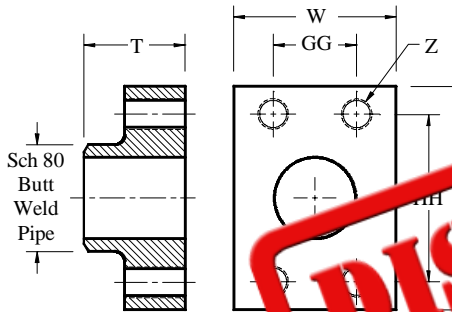
Sch 80 Butt Weld Pipe (BWP) / Code 62 Flange



Sch 80 Butt Weld Pipe / Code 62 O'Ring Face Flange

Code 62 Part No.	BWP Size	Flange Size	GG	HH	W	L	T
3245-08	1/2" Sch 80	1/2"	11/32	1.574	1.75	2.22	1.25
3245-12-12	3/4" Sch 80	3/4"	13/32	1.937	2.000	2.81	1.25
3245-16	1.00" Sch 80	1.00"	15/32	2.250	2.50	3.19	1.50
3245-20	1.25" Sch 80	1.25"	17/32	2.625	3.00	3.75	1.50
3245-24-24	1.50" Sch 80	1.50"	21/32	3.125	3.50	4.44	1.75
3245-32	2.00" Sch 80	2.00"	25/32	3.812	4.00	5.25	1.75

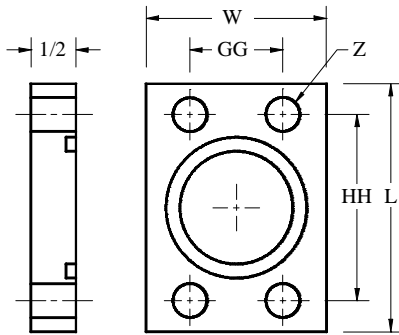
Hex Head Mounting Sur...



Sch 80 Butt Weld Pipe / Code 62 Companion Face Flange

Code 62 Part No.	BWP Size	Flange Size	GG	HH	W	L	T
2346-08	1/2" Sch 80	1/2"	5/16"	0.718	1.75	2.22	1.25
2346-12-12	3/4" Sch 80	3/4"	3/8"-16	0.937	2.000	2.81	1.25
2346-16	1.00" Sch 80	1.00"	3/8"-14	1.093	2.250	2.50	3.19
2346-20	1.25" Sch 80	1.25"	1/2"-13	1.250	2.625	3.00	3.75
2346-24-24	1.50" Sch 80	1.50"	5/8"-11	1.437	3.125	3.50	4.44
2346-32	2.00" Sch 80	2.00"	3/4"-10	1.750	3.812	4.00	5.25

Code 62 Blanking & Cover Plates

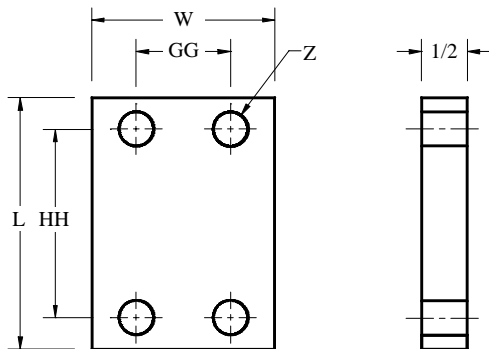


Hex Head Mounting Kit Supplied
c/w O'Ring

Code 62 O'Ring Face Blanking Plates

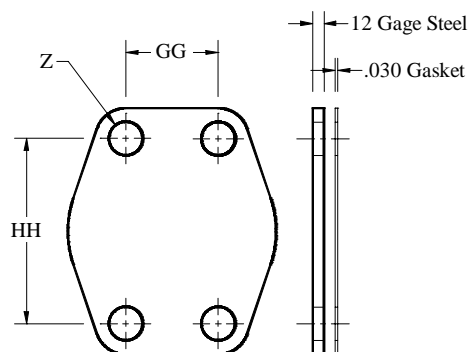
Code 62 Part No.	Flange Size	Z	GG	HH	W	L
3366-12	3/4"	13/32	0.937	2.000	2.00	2.81
3366-16	1.00"	15/32	1.093	2.250	2.50	3.19
3366-20	1.25"	17/32	1.250	2.625	3.00	3.75
3366-24	1.50"	21/32	1.437	3.125	3.50	4.44
3366-32	2.00"	25/32	1.750	3.812	4.00	5.25

For O'Ring Head Style Blanking Plugs, See Part No. 1646-Size



Code 62 Flat Face Blanking Plates

Code 62 Part No.	Flange Size	Z	GG	HH	W	L
1881-12	3/4"	13/32	0.937	2.000	2.00	2.81
1881-16	1.00"	15/32	1.093	2.250	2.50	3.19
1881-20	1.25"	17/32	1.250	2.625	3.00	3.75
1881-24	1.50"	21/32	1.437	3.125	3.50	4.44
1881-32	2.00"	25/32	1.750	3.812	4.00	5.25

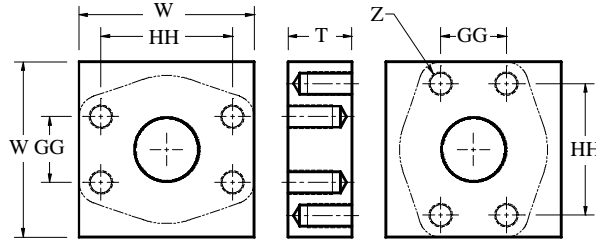


Hex Head Mounting Kit Supplied

Code 62 Protective Cover Plates

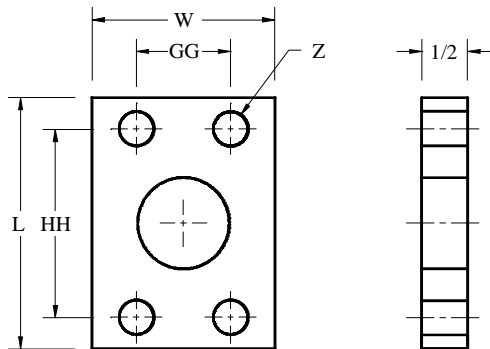
Code 62 Part No.	Flange Size	Z	GG	HH
3274-12	3/4"	13/32	0.937	2.000
3274-16	1.00"	15/32	1.093	2.250
3274-20	1.25"	17/32	1.250	2.625
3274-24	1.50"	21/32	1.437	3.125
3274-32	2.00"	25/32	1.750	3.812

Code 62 Union Plates



Code 62 Companion Union Plates

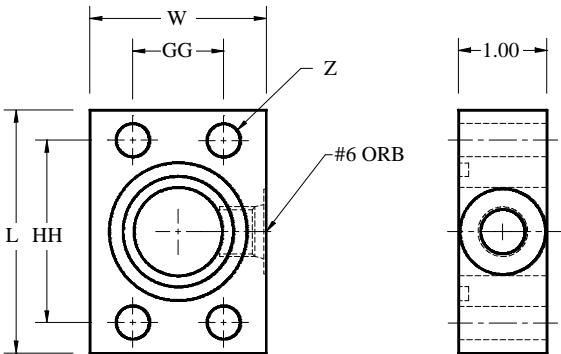
Code 62 Part No.	Flange Size	Z	GG	HH	W	T
3368-12-12	3/4"	3/8"-16	0.937	2.000	2.88	1.00
3368-16-16	1.00"	7/16"-14	1.093	2.250	3.25	1.25
3368-20-20	1.25"	1/2"-13	1.250	2.625	3.75	1.50
3368-24-24	1.50"	5/8"-11	1.437	3.125	4.50	1.50
3368-32-32	2.00"	3/4"-10	1.750	2.812	5.25	1.50



Code 62 Sandwich Union Plates

Code 62 Part No.	Flange Size	Z	GG	HH	W	L
1859-12	3/4"	13/32	0.937	2.000	2.00	2.81
1859-16	1.00"	15/32	1.093	2.250	2.50	3.19
1859-20	1.25"	17/32	1.250	2.625	3.00	3.75
1859-24	1.50"	21/32	1.437	3.125	3.50	4.44
1859-32	2.00"	25/32	1.750	3.812	4.00	5.25

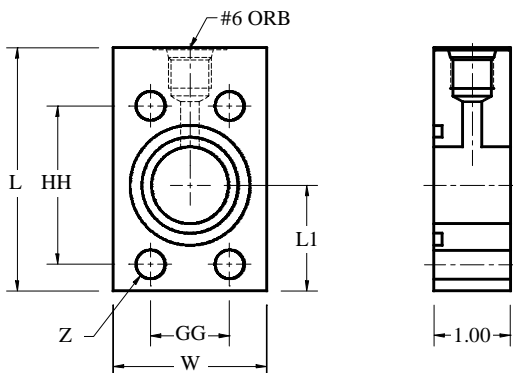
Code 62 Sandwich Style Gage Blocks



All sandwich style gage blocks come with #6 ORB side port and are 1.00" thick c/w O'Ring

Code 62 Sandwich Style Gage Blocks

Code 62 Part No.	Flange Size	Z	GG	HH	W	L
3047-12	3/4"	13/32	0.937	2.000	2.00	2.81
3047-16	1.00"	15/32	1.093	2.250	2.50	3.19
3047-20	1.25"	17/32	1.250	2.625	3.00	3.75
3047-24	1.50"	21/32	1.437	3.125	3.50	4.44
3047-32	2.00"	25/32	1.750	3.812	4.00	5.25

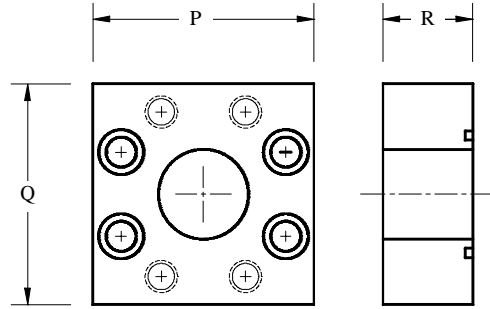
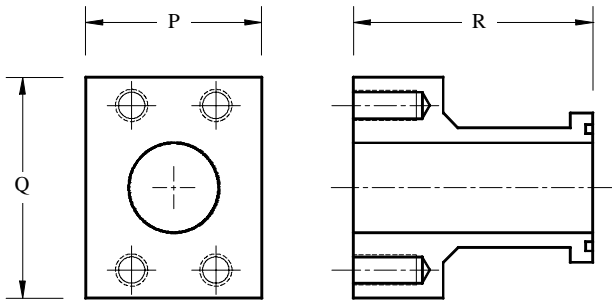


All sandwich style gage blocks come with #6 ORB side port and are 1.00" thick c/w O'Ring

Code 62 Sandwich Style Gage Blocks

Code 62 Part No.	Flange Size	Z	GG	HH	W	L	L1
3147-12	3/4"	13/32	0.937	2.000	2.00	3.31	1.41
3147-16	1.00"	15/32	1.093	2.250	2.50	3.56	1.59
3147-20	1.25"	17/32	1.250	2.625	3.00	4.00	1.88
3147-24	1.50"	21/32	1.437	3.125	3.50	4.44	2.22
3147-32	2.00"	25/32	1.750	3.812	4.00	5.25	2.63

Code 62 Transition Flanges



Code 62 Step-Up Transition

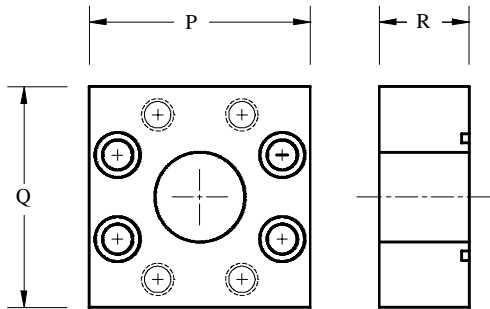
Part No.	Code 62 Comp	Code 62 'O'Ring	P	Q	R
1818-12-08	3/4"	1/2"	2.00	2.81	2.63
1818-16-12	1.00"	3/4"	2.50	3.19	2.75
1818-20-16	1.25"	1.00"	2.75	3.75	3.38
1818-24-20	1.50"	1.25"	3.00	4.44	3.63
1818-32-24	2.00"	1.50"	4.00	5.25	4.13

Split Flange Kit Required for mounting
See part number 1825-SIZE

Code 62 Step-Down & Orientation Transitions

Part No.	Code 62 Comp	Code 62 'O'Ring	P	Q	R
1818-08-08	1/2"	1/2"	2.50	2.25	0.75
1818-08-12	1/2"	3/4"	3.00	2.22	0.75
1818-12-12	3/4"	3/4"	3.00	2.81	0.75
1818-12-16	3/4"	1.00"	3.19	3.00	1.00
1818-16-16	1.00"	1.00"	3.50	3.19	1.00
1818-12-20	3/4"	1.25"	4.00	2.88	1.00
1818-16-20	1.00"	1.25"	4.00	3.19	1.00
1818-20-20	1.25"	1.25"	4.00	3.75	1.00
1818-16-24	1.00"	1.50"	4.50	3.19	1.50
1818-20-24	1.25"	1.50"	4.50	4.00	1.50
1818-24-24	1.50"	1.50"	4.50	4.44	1.50
1818-20-32	1.25"	2.00"	5.25	3.75	1.50
1818-24-32	1.50"	2.00"	5.25	5.00	1.50
1818-32-32	2.00"	2.00"	5.25	5.25	1.50

Socket Head Mounting Kit Supplied



Code 62 / Code 61 Transition

Part No.	Code 61 Comp	Code 62 'O'Ring	P	Q	R
1814-08-08	1/2"	1/2"	2.50	2.13	0.75
1814-12-12	3/4"	3/4"	2.81	2.50	0.75
1814-16-16	1.00"	1.00"	3.19	3.00	1.00
1814-20-20	1.25"	1.25"	3.75	3.00	1.00
1814-24-24	1.50"	1.50"	4.50	4.00	1.50
1814-32-32	2.00"	2.00"	5.25	4.00	1.50

Socket Head Mounting Kit Supplied

For Code 61 Transitions See Page 42-10



Code 61 4-Bolt Elbows

O'Ring Boss

National Pipe Thread

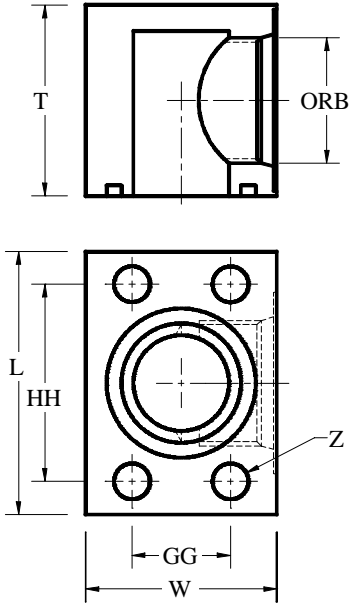
Socket Weld Pipe

Socket Weld Tube

4-Bolt Flange



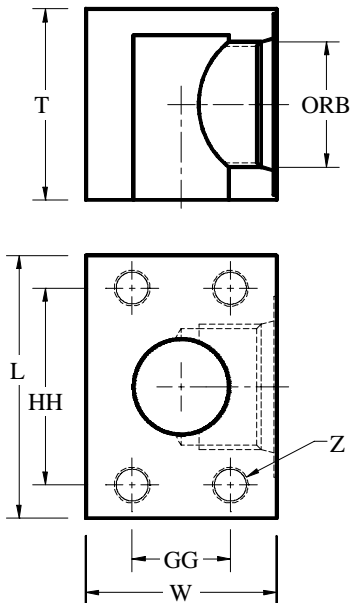
O'Ring Boss (ORB) / Code 61 Elbow



O'Ring Boss (ORB) / Code 61 O'Ring Face Elbow

Code 61 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1815-08-08	#8 (3/4"-16)	1/2"	11/32	0.688	1.500	1.50	2.19	1.50
1815-12-12	#12 (1-1/16"-12)	3/4"	13/32	0.875	1.875	1.75	2.63	1.75
1815-12-16	#12 (1-1/16"-12)	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1815-16-16	#16 (1-5/16"-12)	1.00"	13/32	1.031	2.602	2.00	2.81	2.00
1815-16-20	#16 (1-5/16"-12)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1815-20-20	#20 (1-5/8"-12)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1815-20-24	#20 (1-5/8"-12)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1815-24-24	#24 (1-7/8"-12)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1815-24-32	#24 (1-7/8"-12)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1815-32-32	#32 (2.50"-12)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1815-32-40	#32 (2.50"-12)	2.50"	17/32	2.000	3.500	4.00	4.50	4.00

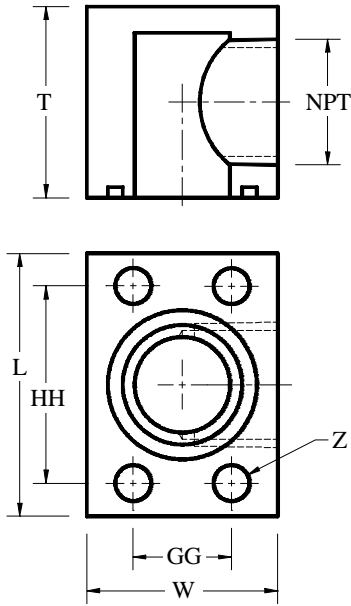
c/w Hex Head Mounting Kit



O'Ring Boss (ORB) / Code 61 Companion Face Elbow

Code 61 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1817-08-08	#8 (3/4"-16)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.50
1817-12-12	#12 (1-1/16"-12)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.75
1817-12-16	#12 (1-1/16"-12)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1817-16-16	#16 (1-5/16"-12)	1.00"	3/8"-16	1.031	2.602	2.00	2.81	2.00
1817-16-20	#16 (1-5/16"-12)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1817-20-20	#20 (1-5/8"-12)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1817-20-24	#20 (1-5/8"-12)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1817-24-24	#24 (1-7/8"-12)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1817-24-32	#24 (1-7/8"-12)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1817-32-32	#32 (2.50"-12)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1817-32-40	#32 (2.50"-12)	2.50"	1/2"-13	2.000	3.500	4.00	4.50	4.00

National Pipe Thread (NPT) / Code 61 Elbow

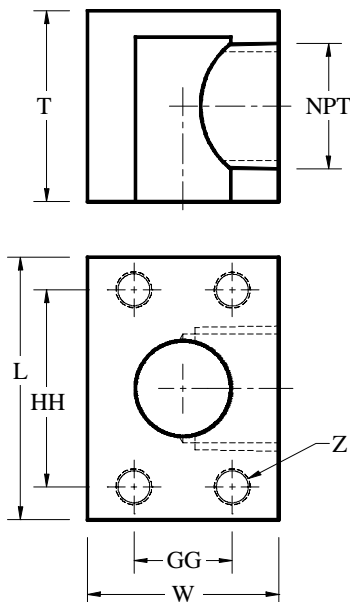


National Pipe Thread (NPT) / Code 61 O'Ring Face Elbow

Code 61 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1833-08-08	1/2"-14	1/2"	11/32	0.688	1.500	1.50	2.19	1.50
1833-12-12	3/4"-14	3/4"	13/32	0.875	1.875	1.75	2.63	1.75
1833-12-16	3/4"-14	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1833-16-16	1"-11.5	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1833-16-20	1"-11.5	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1833-20-20	1.25"-11.5	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1833-20-24	1.25"-11.5	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1833-24-24	1.50"-11.5	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1833-24-32	1.50"-11.5	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1833-32-32	2.00"-11.5	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1833-32-40	2.00"-11.5	2.50"	17/32	2.000	3.500	4.00	4.50	4.00
1833-40-40	2.50"-8	2.50"	17/32	2.000	3.500	4.00	4.50	4.00
1833-48-48	3.00"-8	3.00"	21/32	2.438	4.188	4.50	5.31	4.50
1833-56-56	3.50"-8	3.50"	21/32	2.750	4.750	5.00	6.00	4.00
1833-64-64	4.00"-8	4.00"	21/32	3.062	5.125	6.00	6.38	6.00

c/w Hex Head Mounting Kit

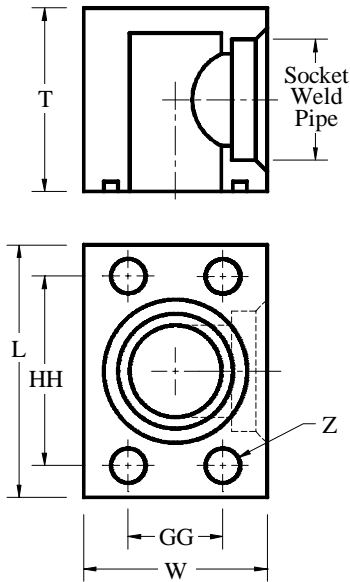
National Pipe Thread (NPT) / Code 61 Companion Face Elbow



Code 61 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1835-08-08	1/2"-14	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.50
1835-12-12	3/4"-14	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.75
1835-12-16	3/4"-14	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1835-16-16	1"-11.5	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1835-16-20	1"-11.5	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1835-20-20	1.25"-11.5	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1835-20-24	1.25"-11.5	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1835-24-24	1.50"-11.5	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1835-24-32	1.50"-11.5	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1835-32-32	2.00"-11.5	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1835-32-40	2.00"-11.5	2.50"	1/2"-13	2.000	3.500	4.00	4.50	4.00
1835-40-40	2.50"-8	2.50"	1/2"-13	2.000	3.500	4.00	4.50	4.00
1835-48-48	3.00"-8	3.00"	5/8"-11	2.438	4.188	4.50	5.31	4.50
1835-56-56	3.50"-8	3.50"	5/8"-11	2.750	4.750	5.00	6.00	4.00
1835-64-64	4.00"-8	4.00"	5/8"-11	3.062	5.125	6.00	6.38	6.00

Socket Weld Pipe (SWP) / Code 61 Elbow

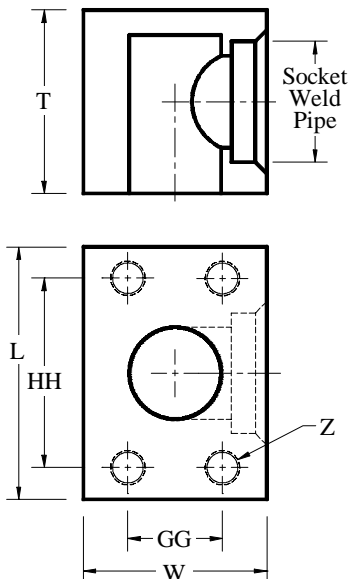
Socket Weld Pipe (SWP) / Code 61 O'Ring Face Elbow



Code 61 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1824-08-08	1/2" (0.845)	1/2"	11/32	0.688	1.500	1.50	2.19	1.50
1824-12-12	3/4" (1.055)	3/4"	13/32	0.875	1.875	1.75	2.63	1.75
1824-12-16	3/4" (1.055)	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1824-16-16	1.00" (1.320)	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1824-16-20	1.00" (1.320)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1824-20-20	1.25" (1.670)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1824-20-24	1.25" (1.670)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1824-24-24	1.50" (1.910)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1824-24-32	1.50" (1.910)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1824-32-32	2.00" (2.385)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1824-32-40	2.00" (2.385)	2.50"	17/32	2.000	3.500	4.00	4.50	4.00
1824-40-40	2.50" (2.888)	2.50"	17/32	2.000	3.500	4.00	4.50	4.00
1824-48-48	3.00" (3.510)	3.00"	21/32	2.438	4.188	4.50	5.31	4.50
1824-56-56	3.50" (4.010)	3.50"	21/32	2.750	4.750	5.00	6.00	4.00
1824-64-64	4.00" (4.510)	4.00"	21/32	3.062	5.125	6.00	6.38	6.00

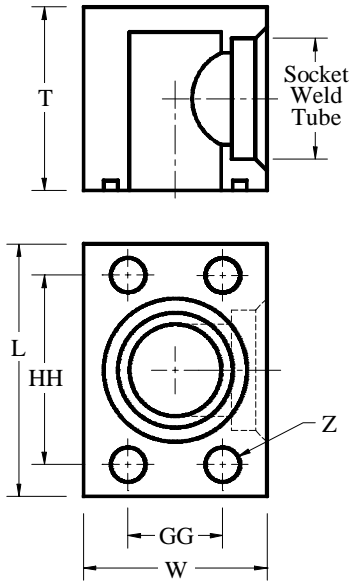
c/w Hex Head Mounting Kit

Socket Weld Pipe (SWP) / Code 61 Companion Face Elbow



Code 61 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1808-08-08	1/2" (0.845)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.50
1808-12-12	3/4" (1.055)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.75
1808-12-16	3/4" (1.055)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1808-16-16	1.00" (1.320)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1808-16-20	1.00" (1.320)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1808-20-20	1.25" (1.670)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1808-20-24	1.25" (1.670)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1808-24-24	1.50" (1.910)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1808-24-32	1.50" (1.910)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1808-32-32	2.00" (2.385)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1808-32-40	2.00" (2.385)	2.50"	1/2"-13	2.000	3.500	4.00	4.50	4.00
1808-40-40	2.50" (2.888)	2.50"	1/2"-13	2.000	3.500	4.00	4.50	4.00
1808-48-48	3.00" (3.510)	3.00"	5/8"-11	2.438	4.188	4.50	5.31	4.50
1808-56-56	3.50" (4.010)	3.50"	5/8"-11	2.750	4.750	5.00	6.00	4.00
1808-64-64	4.00" (4.510)	4.00"	5/8"-11	3.062	5.125	6.00	6.38	6.00

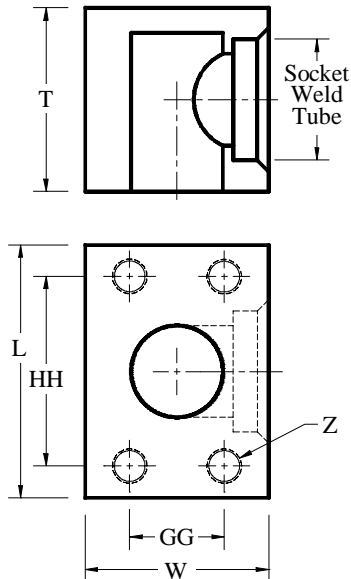
Socket Weld Tube (SWT) / Code 61 Elbow



Socket Weld Tube (SWT) / Code 61 O'Ring Face Elbow

Code 61 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1829-08-08	1/2" (0.505)	1/2"	11/32	0.688	1.500	1.50	2.19	1.50
1829-12-12	3/4" (0.755)	3/4"	13/32	0.875	1.875	1.75	2.63	1.75
1829-12-16	3/4" (0.755)	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1829-16-16	1.00" (1.005)	1.00"	13/32	1.031	2.062	2.00	2.81	2.00
1829-16-20	1.00" (1.005)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1829-20-20	1.25" (1.255)	1.25"	15/32	1.188	2.312	2.50	3.19	2.50
1829-20-24	1.25" (1.255)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1829-24-24	1.50" (1.510)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1829-28-24	1.75" (1.760)	1.50"	17/32	1.406	2.750	3.00	3.69	3.00
1829-24-32	1.50" (1.510)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1829-28-32	1.75" (1.760)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50
1829-32-32	2.00" (2.010)	2.00"	17/32	1.688	3.062	3.50	4.00	3.50

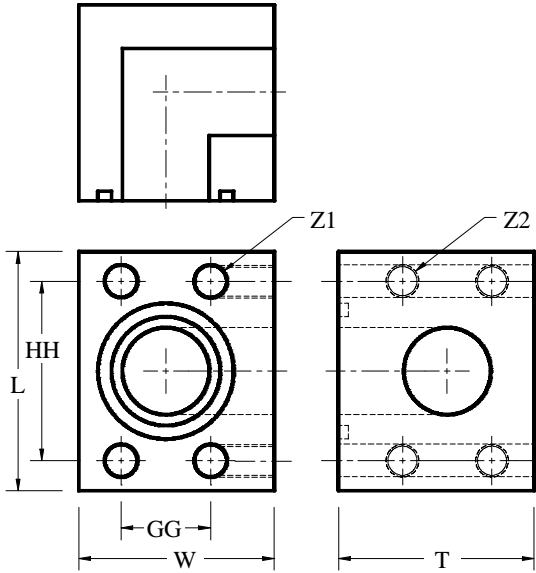
c/w Hex Head Mounting Kit



Socket Weld Tube (SWT) / Code 61 Companion Face Elbow

Code 61 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1831-08-08	1/2" (0.505)	1/2"	5/16"-18	0.688	1.500	1.50	2.19	1.50
1831-12-12	3/4" (0.755)	3/4"	3/8"-16	0.875	1.875	1.75	2.63	1.75
1831-12-16	3/4" (0.755)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1831-16-16	1.00" (1.005)	1.00"	3/8"-16	1.031	2.062	2.00	2.81	2.00
1831-16-20	1.00" (1.005)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1831-20-20	1.25" (1.255)	1.25"	7/16"-14	1.188	2.312	2.50	3.19	2.50
1831-20-24	1.25" (1.255)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1831-24-24	1.50" (1.510)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1831-28-24	1.75" (1.760)	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
1831-24-32	1.50" (1.510)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1831-28-32	1.75" (1.760)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50
1831-32-32	2.00" (2.010)	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50

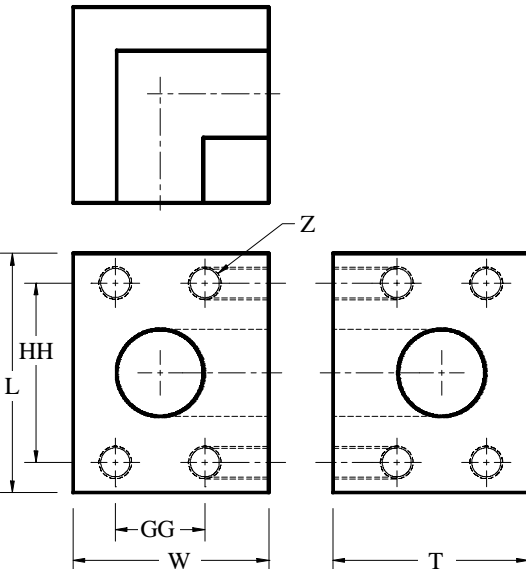
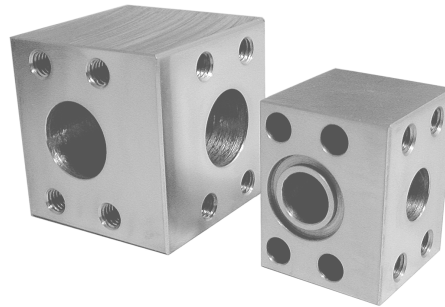
Code 61 / Code 61 Elbow



Code 61 Companion Face / O'Ring Face Elbow

Part No.	Code 61 Comp	Code 61 ORF	Z1	Z2	GG	HH	W	L	T
2573-08-08	1/2"	1/2"	11/32	5/16"-18	0.688	1.500	2.00	2.13	2.00
2573-12-12	3/4"	3/4"	13/32	3/8"-16	0.875	1.875	2.00	2.56	2.00
2573-16-16	1.00"	1.00"	13/32	3/8"-16	1.031	2.062	2.50	2.75	2.50
2573-20-20	1.25"	1.25"	15/32	7/16"-14	1.188	2.312	3.00	3.13	3.00
2573-24-24	1.50"	1.50"	17/32	1/2"-13	1.406	2.750	3.50	3.69	3.50
2573-32-32	2.00"	2.00"	17/32	1/2"-13	1.688	3.062	3.50	4.00	3.50

c/w Hex Head Mounting Kit



Code 61 Companion Face / Companion Face Elbow

Part No.	Code 61 Comp	Code 61 Comp	Z	GG	HH	W	L	T
2574-08-08	1/2"	1/2"	5/16"-18	0.688	1.500	2.00	2.13	2.00
2574-12-12	3/4"	3/4"	3/8"-16	0.875	1.875	2.00	2.56	2.00
2574-16-16	1.00"	1.00"	3/8"-16	1.031	2.062	2.50	2.75	2.50
2574-20-20	1.25"	1.25"	7/16"-14	1.188	2.312	3.00	3.13	3.00
2574-24-24	1.50"	1.50"	1/2"-13	1.406	2.750	3.00	3.69	3.00
2574-32-32	2.00"	2.00"	1/2"-13	1.688	3.062	3.50	4.00	3.50



Code 62 4-Bolt Elbows

O'Ring Boss

National Pipe Thread

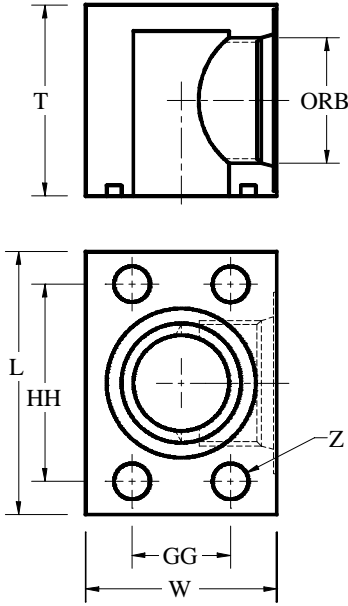
Socket Weld Pipe

Socket Weld Tube

4-Bolt Flange



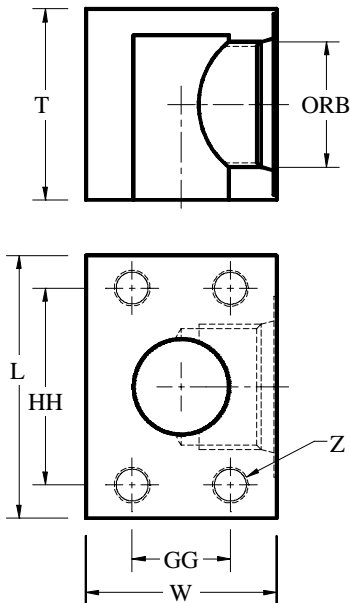
O'Ring Boss (ORB) / Code 62 Elbow



O'Ring Boss (ORB) / Code 62 O'Ring Face Elbow

Code 62 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1842-08-08	#8 (3/4"-16)	1/2"	11/32	0.718	1.574	1.75	2.22	1.75
1842-12-12	#12 (1-1/16"-12)	3/4"	13/32	0.937	2.000	2.00	2.81	2.00
1842-12-16	#12 (1-1/16"-12)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1842-16-16	#16 (1-5/16"-12)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1842-16-20	#16 (1-5/16"-12)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1842-20-20	#20 (1-5/8"-12)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1842-20-24	#20 (1-5/8"-12)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1842-24-24	#24 (1-7/8"-12)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1842-24-32	#24 (1-7/8"-12)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00
1842-32-32	#32 (2.50"-12)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00

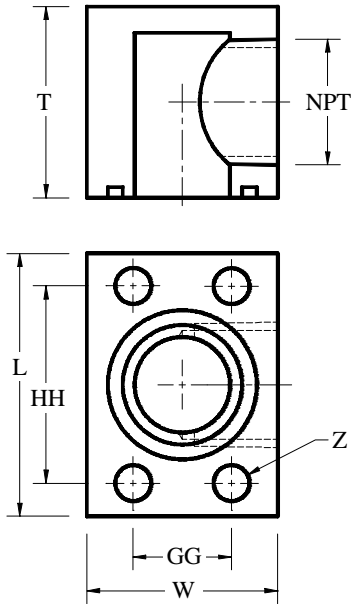
c/w Hex Head Mounting Kit



O'Ring Boss (ORB) / Code 62 Companion Face Elbow

Code 62 Part No.	ORB Size	Flange Size	Z	GG	HH	W	L	T
1840-08-08	#8 (3/4"-16)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.75
1840-12-12	#12 (1-1/16"-12)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	2.00
1840-12-16	#12 (1-1/16"-12)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1840-16-16	#16 (1-5/16"-12)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1840-16-20	#16 (1-5/16"-12)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1840-20-20	#20 (1-5/8"-12)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1840-20-24	#20 (1-5/8"-12)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1840-24-24	#24 (1-7/8"-12)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1840-24-32	#24 (1-7/8"-12)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00
1840-32-32	#32 (2.50"-12)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00

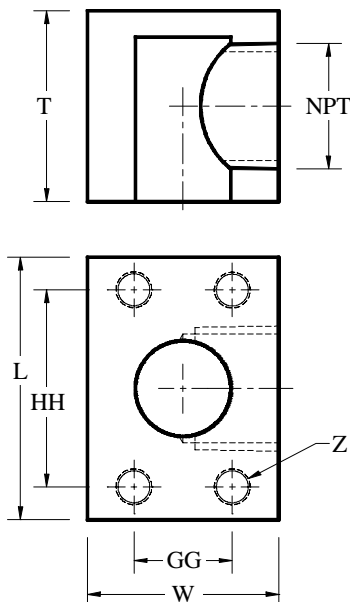
National Pipe Thread (NPT) / Code 62 Elbow



National Pipe Thread (NPT) / Code 62 O'Ring Face Elbow

Code 62 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1846-08-08	1/2"-14	1/2"	11/32	0.718	1.574	1.75	2.22	1.75
1846-12-12	3/4"-14	3/4"	13/32	0.937	2.000	2.00	2.81	2.00
1846-12-16	3/4"-14	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1846-16-16	1"-11.5	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1846-16-20	1"-11.5	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1846-20-20	1.25"-11.5	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1846-20-24	1.25"-11.5	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1846-24-24	1.50"-11.5	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1846-24-32	1.50"-11.5	2.00"	25/32	1.750	3.912	4.00	5.25	4.00
1846-32-32	2.00"-11.5	2.00"	25/32	1.750	3.912	4.00	5.25	4.00

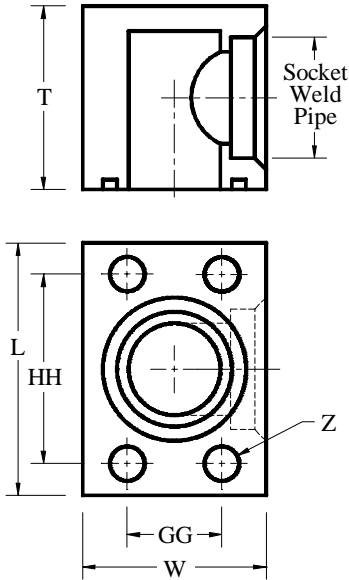
c/w Hex Head Mounting Kit



National Pipe Thread (NPT) / Code 62 Companion Face Elbow

Code 62 Part No.	NPT Size	Flange Size	Z	GG	HH	W	L	T
1844-08-08	1/2"-14	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.75
1844-12-12	3/4"-14	3/4"	3/8"-16	0.937	2.000	2.00	2.81	2.00
1844-12-16	3/4"-14	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1844-16-16	1"-11.5	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1844-16-20	1"-11.5	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1844-20-20	1.25"-11.5	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1844-20-24	1.25"-11.5	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1844-24-24	1.50"-11.5	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1844-24-32	1.50"-11.5	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00
1844-32-32	2.00"-11.5	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00

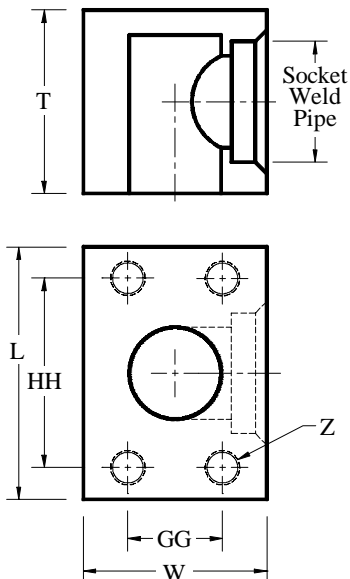
Socket Weld Pipe (SWP) / Code 62 Elbow



Socket Weld Pipe (SWP) / Code 62 O'Ring Face Elbow

Code 62 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1834-08-08	1/2" (0.845)	1/2"	11/32	0.718	1.574	1.75	2.22	1.75
1834-12-12	3/4" (1.055)	3/4"	13/32	0.937	2.000	2.00	2.81	2.00
1834-12-16	3/4" (1.055)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1834-16-16	1.00" (1.320)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1834-16-20	1.00" (1.320)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1834-20-20	1.25" (1.670)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1834-20-24	1.25" (1.670)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1834-24-24	1.50" (1.910)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1834-24-32	1.50" (1.910)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00
1834-32-32	2.00" (2.385)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00

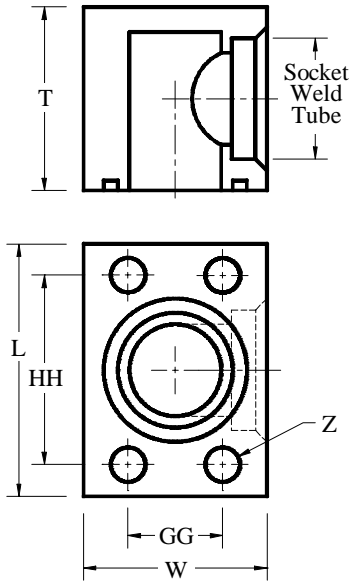
c/w Hex Head Mounting Kit



Socket Weld Pipe (SWP) / Code 62 Companion Face Elbow

Code 62 Part No.	SWP Size	Flange Size	Z	GG	HH	W	L	T
1832-08-08	1/2" (0.845)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.75
1832-12-12	3/4" (1.055)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	2.00
1832-12-16	3/4" (1.055)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1832-16-16	1.00" (1.320)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1832-16-20	1.00" (1.320)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1832-20-20	1.25" (1.670)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1832-20-24	1.25" (1.670)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1832-24-24	1.50" (1.910)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1832-24-32	1.50" (1.910)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00
1832-32-32	2.00" (2.385)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00

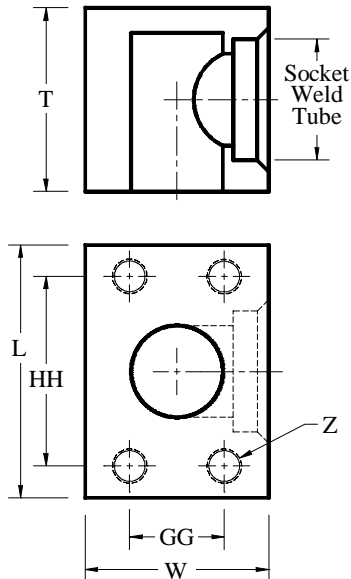
Socket Weld Tube (SWT) / Code 62 Elbow



Socket Weld Tube (SWT) / Code 62 O'Ring Face Elbow

Code 62 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1838-08-08	1/2" (0.505)	1/2"	11/32	0.718	1.574	1.75	2.22	1.75
1838-12-12	3/4" (0.755)	3/4"	13/32	0.937	2.000	2.00	2.81	2.00
1838-12-16	3/4" (0.755)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1838-16-16	1.00" (1.005)	1.00"	15/32	1.093	2.250	2.50	3.19	2.50
1838-16-20	1.00" (1.005)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1838-20-20	1.25" (1.255)	1.25"	17/32	1.250	2.625	3.00	3.75	3.00
1838-20-24	1.25" (1.255)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1838-24-24	1.50" (1.510)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1838-28-24	1.75" (1.760)	1.50"	21/32	1.437	3.125	3.50	4.44	3.50
1838-24-32	1.50" (1.510)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00
1838-28-32	1.75" (1.760)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00
1838-32-32	2.00" (2.010)	2.00"	25/32	1.750	3.912	4.00	5.25	4.00

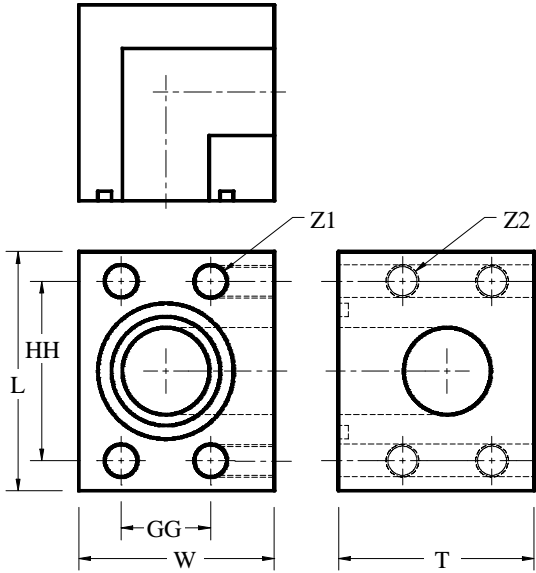
c/w Hex Head Mounting Kit



Socket Weld Tube (SWT) / Code 62 Companion Face Elbow

Code 62 Part No.	SWT Size	Flange Size	Z	GG	HH	W	L	T
1836-08-08	1/2" (0.505)	1/2"	5/16"-18	0.718	1.574	1.75	2.22	1.75
1836-12-12	3/4" (0.755)	3/4"	3/8"-16	0.937	2.000	2.00	2.81	2.00
1836-12-16	3/4" (0.755)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1836-16-16	1.00" (1.005)	1.00"	7/16"-14	1.093	2.250	2.50	3.19	2.50
1836-16-20	1.00" (1.005)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1836-20-20	1.25" (1.255)	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
1836-20-24	1.25" (1.255)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1836-24-24	1.50" (1.510)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1836-28-24	1.75" (1.760)	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
1836-24-32	1.50" (1.510)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00
1836-28-32	1.75" (1.760)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00
1836-32-32	2.00" (2.010)	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00

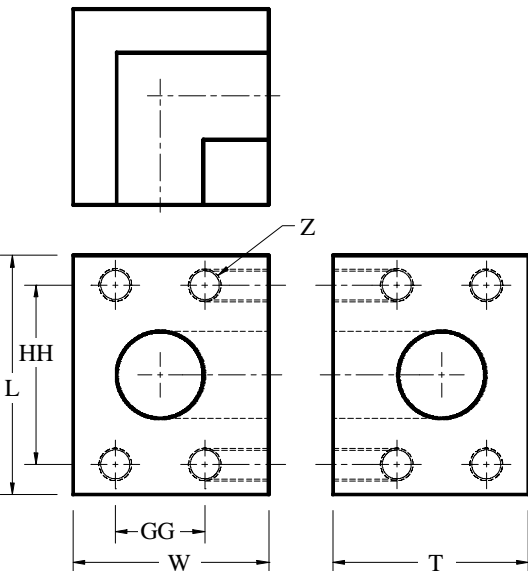
Code 62 / Code 62 Elbow



Code 62 Companion Face / O'Ring Face Elbow

Part No.	Code 62 Comp	Code 62 ORF	Z1	Z2	GG	HH	W	L	T
2594-08-08	1/2"	1/2"	11/32	11/32	0.718	1.574	2.00	2.25	2.00
2594-12-12	3/4"	3/4"	13/32	13/32	0.937	2.000	2.50	2.81	2.50
2594-16-16	1.00"	1.00"	15/32	15/32	1.093	2.250	3.00	3.00	2.50
2594-20-20	1.25"	1.25"	17/32	17/32	1.250	2.625	3.00	3.75	3.00
2594-24-24	1.50"	1.50"	21/32	21/32	1.437	3.125	3.50	4.44	3.50
2594-32-32	2.00"	2.00"	25/32	25/32	1.750	3.912	4.00	5.25	4.00

c/w Hex Head Mounting Kit



Code 62 Companion Face / Companion Face Elbow

Part No.	Code 62 Comp	Code 62 Comp	Z	GG	HH	W	L	T
2593-08-08	1/2"	1/2"	5/16"-18	0.718	1.574	2.00	2.25	2.00
2593-12-12	3/4"	3/4"	3/8"-16	0.937	2.000	2.50	2.81	2.50
2593-16-16	1.00"	1.00"	7/16"-14	1.093	2.250	3.00	3.00	2.50
2593-20-20	1.25"	1.25"	1/2"-13	1.250	2.625	3.00	3.75	3.00
2593-24-24	1.50"	1.50"	5/8"-11	1.437	3.125	3.50	4.44	3.50
2593-32-32	2.00"	2.00"	3/4"-10	1.750	3.912	4.00	5.25	4.00



Welded, Threaded & 4-Bolt Tees

O'Ring Boss

National Pipe Thread

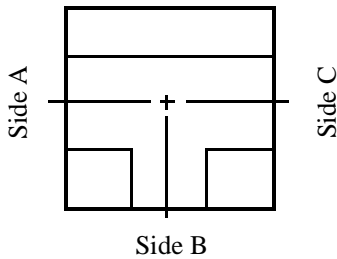
Socket Weld Pipe

Socket Weld Tube

4-Bolt Flange



Welded, Threaded & 4-Bolt Tees



All tees have three sides. Side A, B, & C
Side A & C are considered to be the 'RUN'
While Side B is considered to be the 'BRANCH'
Although most sizes shown are straight sizes,
Jump sizes are available upon request.

Contact our sales staff for sizes not shown in this catalog.

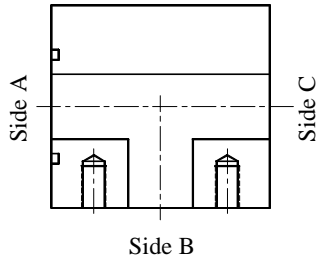
See page 46-24 for corner tees

Code 61 & 62 O'Ring Face Tees			
Side A	Side B	Side C	Page No.
ORF	Comp	Comp	46-3
		ORB	46-3
		NPT	46-3
		SWP	46-3
		SWT	46-4
	ORB	Comp	46-4
		ORB	46-4
		SWP	46-4
		SWT	46-5
		Comp	46-5
	NPT	NPT	46-5
		SWP	46-5
		SWT	46-6
		Comp	46-6
		ORB	46-6
	SWP	NPT	46-6
		SWP	46-7
		Comp	46-7
		ORB	46-7
		SWT	46-7
SWT	NPT	46-7	
	SWT	46-8	
	Comp	46-8	
	ORB	46-8	
	NPT	46-8	
Comp	ORF	NPT	46-8
		SWP	46-9
		SWT	46-9
		ORB	46-9
SWP	ORF	NPT	46-9
		SWP	46-10
		ORB	46-10
SWT	ORF	NPT	46-10
		SWT	46-10
		ORB	46-10
ORB	ORF	ORB	46-11
NPT	ORF	NPT	46-11

Code 61 & 62 Companion Tees			
Side A	Side B	Face C	Page No.
Comp	Comp	Comp	46-11
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		NPT	46-12
		SWP	46-12
		SWT	46-12
	ORB	Comp	46-12
		ORB	46-13
		SWP	46-13
		SWT	46-13
		Comp	46-13
	NPT	NPT	46-14
		SWP	46-14
		SWT	46-14
		Comp	46-14
		ORB	46-15
	SWP	NPT	46-15
		SWP	46-15
		Comp	46-15
		ORB	46-16
		NPT	46-16
SWT	SWT	46-16	
	Comp	46-16	
	ORB	46-16	
	NPT	46-17	
	SWP	46-17	
SWP	Comp	ORB	46-17
		NPT	46-17
	SWT	Comp	46-17
		ORB	46-17
		NPT	46-18
ORB	Comp	ORB	46-18
		NPT	46-18

Welded & Threaded Tees				
Side A	Side B	Side C	Page No.	
ORB	ORB	ORB	46-18	
	SWP	ORB	46-19	
	SWT	ORB	46-19	
NPT	NPT	NPT	46-19	
	SWP	NPT	46-19	
	SWT	NPT	46-20	
	ORB	ORB	46-20	
SWP	ORB	SWP	46-20	
		NPT	46-21	
	SWP	SWP	46-21	
		ORB	46-21	
		NPT	46-21	
SWT	ORB	SWP	46-22	
		SWT	46-22	
	NPT	NPT	46-22	
		SWT	46-23	
		ORB	46-23	
	SWT	NPT	NPT	46-23
			SWT	46-23

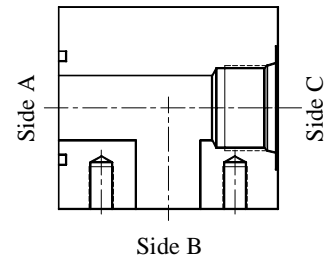
Code 61 & Code 62 4-Bolt Tees



ORF / Companion / Companion

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (Comp)
2415-08-08-08	2520-08-08-08	0.50	0.50	0.50
2415-12-12-12	2520-12-12-12	0.75	0.75	0.75
2415-16-16-16	2520-16-16-16	1.00	1.00	1.00
2415-20-20-20	2520-20-20-20	1.25	1.25	1.25
2415-24-24-24	2520-24-24-24	1.50	1.50	1.50
2415-32-32-32	2520-32-32-32	2.00	2.00	2.00

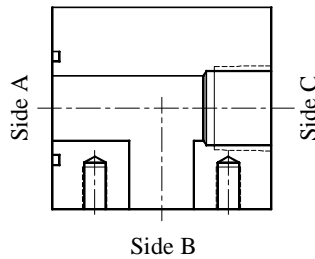
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



ORF / Companion / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (ORB)
2418-08-08-08	2523-08-08-08	0.50	0.50	#8 (3/4"-16)
2418-12-12-12	2523-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2418-16-16-16	2523-16-16-16	1.00	1.00	#16 (1-5/16"-12)
2418-20-20-20	2523-20-20-20	1.25	1.25	#20 (1-5/8"-12)
2418-24-24-24	2523-24-24-24	1.50	1.50	#24 (1-7/8"-12)
2418-32-32-32	2523-32-32-32	2.00	2.00	#32 (2-1/2"-12)

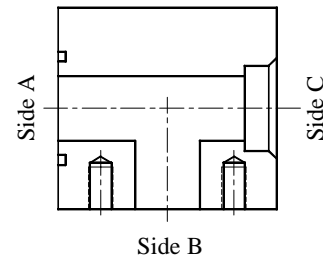
COMES COMPLETE WITH BOLT KIT



ORF / Companion / NPT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (NPT)
2419-08-08-08	2524-08-08-08	0.50	0.50	1/2"-14
2419-12-12-12	2524-12-12-12	0.75	0.75	3/4"-14
2419-16-16-16	2524-16-16-16	1.00	1.00	1"-11.5
2419-20-20-20	2524-20-20-20	1.25	1.25	1-1/4"-11.5
2419-24-24-24	2524-24-24-24	1.50	1.50	1-1/2"-11.5
2419-32-32-32	2524-32-32-32	2.00	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT

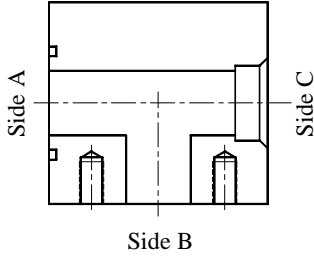


ORF / Companion / SWP

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (SWP)
2416-08-08-08	2521-08-08-08	0.50	0.50	1/2
2416-12-12-12	2521-12-12-12	0.75	0.75	3/4
2416-16-16-16	2521-16-16-16	1.00	1.00	1
2416-20-20-20	2521-20-20-20	1.25	1.25	1-1/4
2416-24-24-24	2521-24-24-24	1.50	1.50	1-1/2
2416-32-32-32	2521-32-32-32	2.00	2.00	2

COMES COMPLETE WITH BOLT KIT

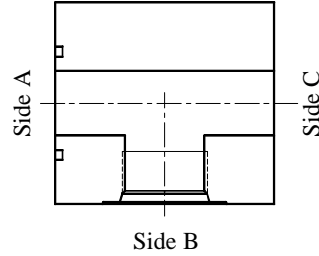
Code 61 & Code 62 4-Bolt Tees



ORF / Companion / SWT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (SWT)
2417-08-08-08	2522-08-08-08	0.50	0.50	0.50
2417-12-12-12	2522-12-12-12	0.75	0.75	0.75
2417-16-16-16	2522-16-16-16	1.00	1.00	1.00
2417-20-20-20	2522-20-20-20	1.25	1.25	1.25
2417-24-24-24	2522-24-24-24	1.50	1.50	1.50
2417-32-32-32	2522-32-32-32	2.00	2.00	2.00

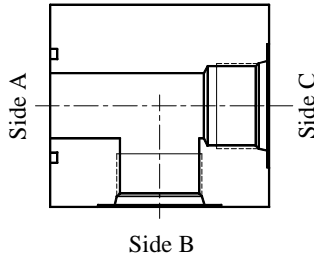
COMES COMPLETE WITH BOLT KIT



ORF / ORB / Companion

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (Comp)
1870-08-08-08	1872-08-08-08	0.50	#8 (3/4"-16)	0.50
1870-12-12-12	1872-12-12-12	0.75	#12 (1-1/16"-12)	0.75
1870-16-16-16	1872-16-16-16	1.00	#16 (1-5/16"-12)	1.00
1870-20-20-20	1872-20-20-20	1.25	#20 (1-5/8"-12)	1.25
1870-24-24-24	1872-24-24-24	1.50	#24 (1-7/8"-12)	1.50
1870-32-32-32	1872-32-32-32	2.00	#32 (2-1/2"-12)	2.00

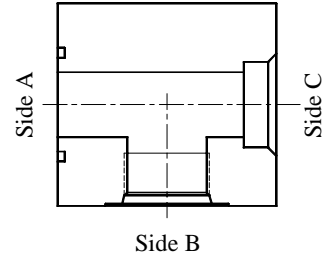
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



ORF / ORB / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (ORB)
2431-08-08-08	2536-08-08-08	0.50	#8 (3/4"-16)	#8 (3/4"-16)
2431-12-12-12	2536-12-12-12	0.75	#12 (1-1/16"-12)	#12 (1-1/16"-12)
2431-16-16-16	2536-16-16-16	1.00	#16 (1-5/16"-12)	#16 (1-5/16"-12)
2431-20-20-20	2536-20-20-20	1.25	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2431-24-24-24	2536-24-24-24	1.50	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2431-32-32-32	2536-32-32-32	2.00	#32 (2-1/2"-12)	#32 (2-1/2"-12)

COMES COMPLETE WITH BOLT KIT

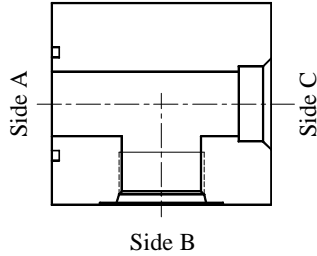


ORF / ORB / SWP

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (SWP)
2429-08-08-08	2534-08-08-08	0.50	#8 (3/4"-16)	1/2
2429-12-12-12	2534-12-12-12	0.75	#12 (1-1/16"-12)	3/4
2429-16-16-16	2534-16-16-16	1.00	#16 (1-5/16"-12)	1
2429-20-20-20	2534-20-20-20	1.25	#20 (1-5/8"-12)	1-1/4
2429-24-24-24	2534-24-24-24	1.50	#24 (1-7/8"-12)	1-1/2
2429-32-32-32	2534-32-32-32	2.00	#32 (2-1/2"-12)	2

COMES COMPLETE WITH BOLT KIT

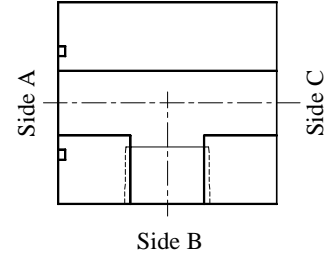
Code 61 & Code 62 4-Bolt Tees



ORF / ORB / SWT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (SWT)
2430-08-08-08	2535-08-08-08	0.50	#8 (3/4"-16)	0.50
2430-12-12-16	2535-12-12-16	0.75	#12 (1-1/16"-12)	1.00
2430-16-16-20	2535-16-16-20	1.00	#16 (1-5/16"-12)	1.25
2430-20-20-24	2535-20-20-24	1.25	#20 (1-5/8"-12)	1.50
2430-24-24-32	2535-24-24-32	1.50	#24 (1-7/8"-12)	2.00
2430-32-32-32	2535-32-32-32	2.00	#32 (2-1/2"-12)	2.00

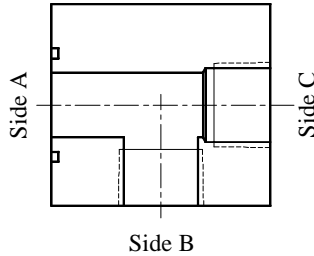
COMES COMPLETE WITH BOLT KIT



ORF / NPT / Companion

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (NPT)	Side C (Comp)
2433-08-08-08	2538-08-08-08	0.50	1/2"-14	0.50
2433-12-12-12	2538-12-12-12	0.75	3/4"-14	0.75
2433-16-16-16	2538-16-16-16	1.00	1"-11.5	1.00
2433-20-20-20	2538-20-20-20	1.25	1-1/4"-11.5	1.25
2433-24-24-24	2538-24-24-24	1.50	1-1/2"-11.5	1.50
2433-32-32-32	2538-32-32-32	2.00	2"-11.5	2.00

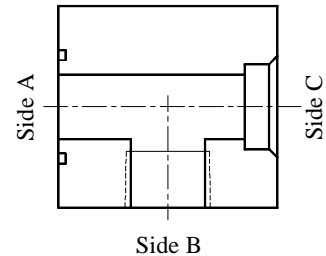
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



ORF / NPT / NPT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (NPT)	Side C (NPT)
2437-08-08-08	2542-08-08-08	0.50	1/2"-14	1/2"-14
2437-12-12-12	2542-12-12-12	0.75	3/4"-14	3/4"-14
2437-16-16-16	2542-16-16-16	1.00	1"-11.5	1"-11.5
2437-20-20-20	2542-20-20-20	1.25	1-1/4"-11.5	1-1/4"-11.5
2437-24-24-24	2542-24-24-24	1.50	1-1/2"-11.5	1-1/2"-11.5
2437-32-32-32	2542-32-32-32	2.00	2"-11.5	2"-11.5

COMES COMPLETE WITH BOLT KIT

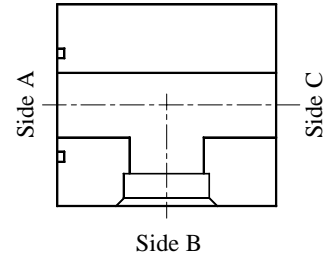
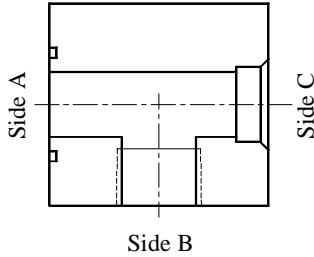


ORF / NPT / SWP

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (NPT)	Side C (SWP)
2434-08-08-08	2539-08-08-08	0.50	1/2"-14	1/2
2434-12-12-12	2539-12-12-12	0.75	3/4"-14	3/4
2434-16-16-16	2539-16-16-16	1.00	1"-11.5	1
2434-20-20-20	2539-20-20-20	1.25	1-1/4"-11.5	1-1/4
2434-24-24-24	2539-24-24-24	1.50	1-1/2"-11.5	1-1/2
2434-32-32-32	2539-32-32-32	2.00	2"-11.5	2

COMES COMPLETE WITH BOLT KIT

Code 61 & Code 62 4-Bolt Tees



ORF / NPT / SWT

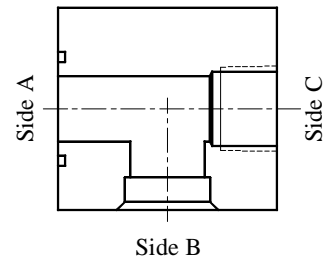
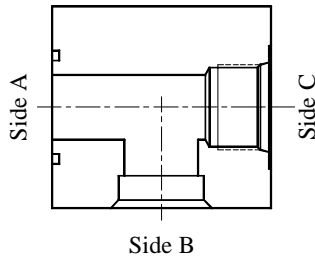
Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (NPT)	Side C (SWT)
2435-08-08-08	2540-08-08-08	0.50	1/2"-14	0.50
2435-12-12-12	2540-12-12-12	0.75	3/4"-14	0.75
2435-12-12-16	2540-12-12-16	0.75	3/4"-14	1.00
2435-16-16-20	2540-16-16-20	1.00	1"-11.5	1.25
2435-20-20-24	2540-20-20-24	1.25	1-1/4"-11.5	1.50
2435-24-24-32	2540-24-24-32	1.50	1-1/2"-11.5	2.00
2435-32-32-32	2540-32-32-32	2.00	2"-11.5	2.00

COMES COMPLETE WITH BOLT KIT

ORF / SWP / Companion

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWP)	Side C (Comp)
1869-08-08-08	1871-08-08-08	0.50	1/2	0.50
1869-12-12-12	1871-12-12-12	0.75	3/4	0.75
1869-16-16-16	1871-16-16-16	1.00	1	1.00
1869-20-20-20	1871-20-20-20	1.25	1-1/4	1.25
1869-24-24-24	1871-24-24-24	1.50	1-1/2	1.50
1869-32-32-32	1871-32-32-32	2.00	2	2.00

SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



ORF / SWP / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWP)	Side C (ORB)
2422-08-08-08	2527-08-08-08	0.50	1/2	#8 (3/4"-16)
2422-12-12-12	2527-12-12-12	0.75	3/4	#12 (1-1/16"-12)
2422-16-16-16	2527-16-16-16	1.00	1	#16 (1-5/16"-12)
2422-20-20-20	2527-20-20-20	1.25	1-1/4	#20 (1-5/8"-12)
2422-24-24-24	2527-24-24-24	1.50	1-1/2	#24 (1-7/8"-12)
2422-32-32-32	2527-32-32-32	2.00	2	#32 (2-1/2"-12)

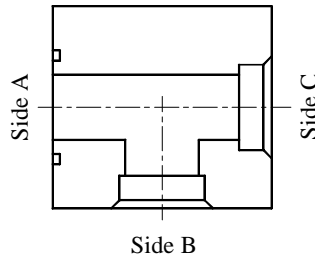
COMES COMPLETE WITH BOLT KIT

ORF / SWP / NPT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWP)	Side C (NPT)
2423-08-08-08	2528-08-08-08	0.50	1/2	1/2"-14
2423-12-12-12	2528-12-12-12	0.75	3/4	3/4"-14
2423-16-16-16	2528-16-16-16	1.00	1	1"-11.5
2423-20-20-20	2528-20-20-20	1.25	1-1/4	1-1/4"-11.5
2423-24-24-24	2528-24-24-24	1.50	1-1/2	1-1/2"-11.5
2423-32-32-32	2528-32-32-32	2.00	2	2"-11.5

COMES COMPLETE WITH BOLT KIT

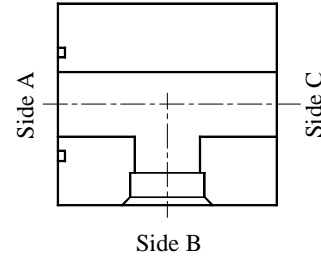
Code 61 & Code 62 4-Bolt Tees



ORF / SWP / SWP

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWP)	Side C (SWP)
2420-08-08-08	2525-08-08-08	0.50	1/2	1/2
2420-12-12-12	2525-12-12-12	0.75	3/4	3/4
2420-16-16-16	2525-16-16-16	1.00	1	1
2420-20-20-20	2525-20-20-20	1.25	1-1/4	1-1/4
2420-24-24-24	2525-24-24-24	1.50	1-1/2	1-1/2
2420-32-32-32	2525-32-32-32	2.00	2	2

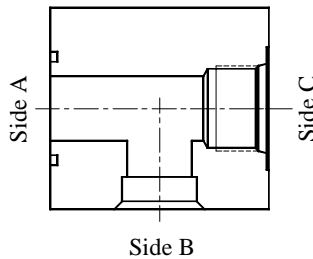
COMES COMPLETE WITH BOLT KIT



ORF / SWT / Companion

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWT)	Side C (Comp)
2424-08-08-08	2529-08-08-08	0.50	0.50	0.50
2424-12-12-12	2529-12-12-12	0.75	0.75	0.75
2424-12-16-12	2529-12-16-12	0.75	1.00	1.00
2424-16-20-16	2529-16-20-16	1.00	1.25	1.25
2424-20-24-20	2529-20-24-20	1.25	1.50	1.50
2424-24-32-24	2529-24-32-24	1.50	2.00	2.00
2424-32-32-32	2529-32-32-32	2.00	2.00	2.00

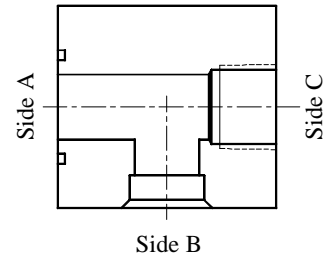
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



ORF / SWT / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWT)	Side C (ORB)
2427-08-08-08	2532-08-08-08	0.50	0.50	#8 (3/4"-16)
2427-12-12-12	2532-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2427-16-20-16	2532-16-20-16	1.00	1.25	#16 (1-5/16"-12)
2427-20-24-20	2532-20-24-20	1.25	1.50	#20 (1-5/8"-12)
2427-24-32-24	2532-24-32-24	1.50	2.00	#24 (1-7/8"-12)
2427-32-32-32	2532-32-32-32	2.00	2.00	#32 (2-1/2"-12)

COMES COMPLETE WITH BOLT KIT

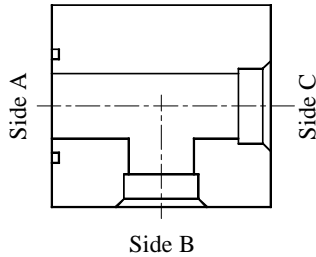


ORF / SWT / NPT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWT)	Side C (NPT)
2428-08-08-08	2533-08-08-08	0.50	0.50	1/2"-14
2428-12-12-12	2533-12-12-12	0.75	0.75	3/4"-14
2428-12-16-16	2533-12-16-16	0.75	1.00	1"-11.5
2428-16-20-16	2533-16-20-16	1.00	1.25	1"-11.5
2428-20-24-20	2533-20-24-20	1.25	1.50	1-1/4"-11.5
2428-24-32-24	2533-24-32-24	1.50	2.00	1-1/2"-11.5
2428-32-32-32	2533-32-32-32	2.00	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT

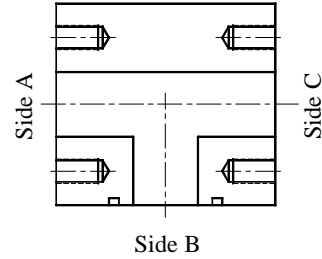
Code 61 & Code 62 4-Bolt Tees



ORF / SWT / SWT

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWT)	Side C (SWT)
2426-08-08-08	2531-08-08-08	0.50	0.50	0.50
2426-12-12-12	2531-12-12-12	0.75	0.75	0.75
2426-12-16-16	2531-12-16-16	0.75	1.00	1.00
2426-16-20-20	2531-16-20-20	1.00	1.25	1.25
2426-20-24-24	2531-20-24-24	1.25	1.50	1.50
2426-24-32-32	2531-24-32-32	1.50	2.00	2.00
2426-32-32-32	2531-32-32-32	2.00	2.00	2.00

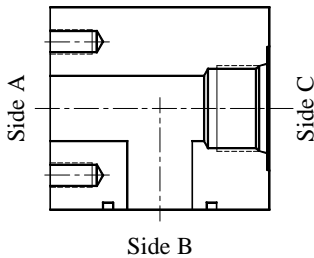
COMES COMPLETE WITH BOLT KIT



Companion / ORF / Companion

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORF)	Side C (Comp)
2012-08-08-08	2015-08-08-08	0.50	0.50	0.50
2012-12-12-12	2015-12-12-12	0.75	0.75	0.75
2012-16-16-16	2015-16-16-16	1.00	1.00	1.00
2012-20-20-20	2015-20-20-20	1.25	1.25	1.25
2012-24-24-24	2015-24-24-24	1.50	1.50	1.50
2012-32-32-32	2015-32-32-32	2.00	2.00	2.00

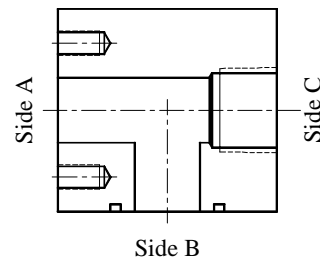
COMES COMPLETE WITH BOLT KIT



Companion / ORF / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORF)	Side C (ORB)
2375-08-08-08	2498-08-08-08	0.50	0.50	#8 (3/4"-16)
2375-12-12-12	2498-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2375-16-16-16	2498-16-16-16	1.00	1.00	#16 (1-5/16"-12)
2375-20-20-20	2498-20-20-20	1.25	1.25	#20 (1-5/8"-12)
2375-24-24-24	2498-24-24-24	1.50	1.50	#24 (1-7/8"-12)
2375-32-32-32	2498-32-32-32	2.00	2.00	#32 (2-1/2"-12)

COMES COMPLETE WITH BOLT KIT

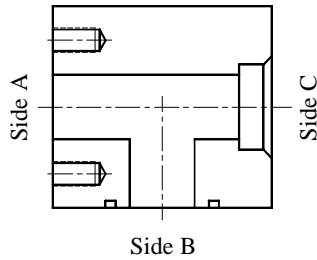


Companion / ORF / NPT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORF)	Side C (NPT)
2376-08-08-08	2499-08-08-08	0.50	0.50	1/2"-14
2376-12-12-12	2499-12-12-12	0.75	0.75	3/4"-14
2376-16-16-16	2499-16-16-16	1.00	1.00	1"-11.5
2376-20-20-20	2499-20-20-20	1.25	1.25	1-1/4"-11.5
2376-24-24-24	2499-24-24-24	1.50	1.50	1-1/2"-11.5
2376-32-32-32	2499-32-32-32	2.00	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT

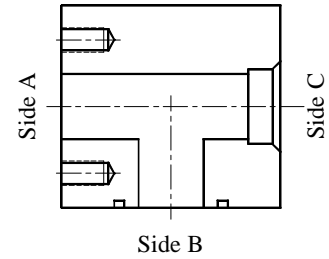
Code 61 & Code 62 4-Bolt Tees



Companion / ORF / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORF)	Side C (SWP)
2373-08-08-08	2496-08-08-08	0.50	0.50	1/2
2373-12-12-12	2496-12-12-12	0.75	0.75	3/4
2373-16-16-16	2496-16-16-16	1.00	1.00	1
2373-20-20-20	2496-20-20-20	1.25	1.25	1-1/4
2373-24-24-24	2496-24-24-24	1.50	1.50	1-1/2
2373-32-32-32	2496-32-32-32	2.00	2.00	2

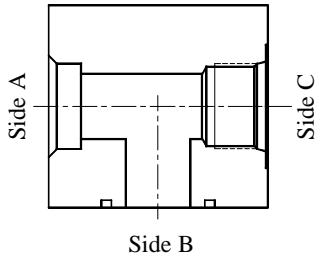
COMES COMPLETE WITH BOLT KIT



Companion / ORF / SWT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORF)	Side C (SWT)
2374-08-08-08	2497-08-08-08	0.50	0.50	0.50
2374-12-12-12	2497-12-12-12	0.75	0.75	0.75
2374-16-16-20	2497-16-16-20	1.00	1.00	1.25
2374-20-20-24	2497-20-20-24	1.25	1.25	1.50
2374-24-24-32	2497-24-24-32	1.50	1.50	2.00
2374-32-32-32	2497-32-32-32	2.00	2.00	2.00

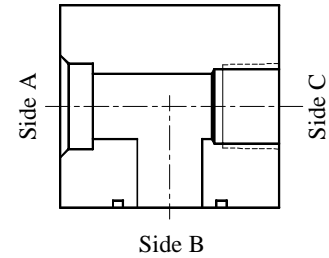
COMES COMPLETE WITH BOLT KIT



SWP / ORF / ORB

Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (ORF)	Side C (ORB)
2401-08-08-08	2442-08-08-08	1/2	0.50	#8 (3/4"-16)
2401-12-12-12	2442-12-12-12	3/4	0.75	#12 (1-1/16"-12)
2401-16-16-16	2442-16-16-16	1	1.00	#16 (1-5/16"-12)
2401-20-20-20	2442-20-20-20	1-1/4	1.25	#20 (1-5/8"-12)
2401-24-24-24	2442-24-24-24	1-1/2	1.50	#24 (1-7/8"-12)
2401-32-32-32	2442-32-32-32	2	2.00	#32 (2-1/2"-12)

COMES COMPLETE WITH BOLT KIT

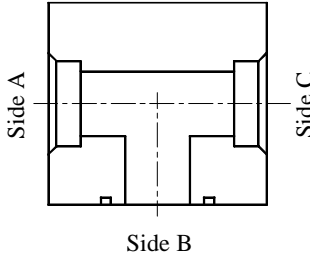


SWP / ORF / NPT

Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (ORF)	Side C (NPT)
2402-08-08-08	2443-08-08-08	1/2	0.50	1/2"-14
2402-12-12-12	2443-12-12-12	3/4	0.75	3/4"-14
2402-16-16-16	2443-16-16-16	1	1.00	1"-11.5
2402-20-20-20	2443-20-20-20	1-1/4	1.25	1-1/4"-11.5
2402-24-24-24	2443-24-24-24	1-1/2	1.50	1-1/2"-11.5
2402-32-32-32	2443-32-32-32	2	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT

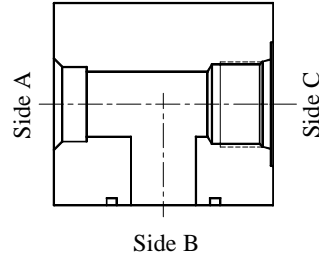
Code 61 & Code 62 4-Bolt Tees



SWP / ORF / SWP

Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (ORF)	Side C (SWP)
2014-08-08-08	2017-08-08-08	1/2	0.50	1/2
2014-12-12-12	2017-12-12-12	3/4	0.75	3/4
2014-16-16-16	2017-16-16-16	1	1.00	1
2014-20-20-20	2017-20-20-20	1-1/4	1.25	1-1/4
2014-24-24-24	2017-24-24-24	1-1/2	1.50	1-1/2
2014-32-32-32	2017-32-32-32	2	2.00	2

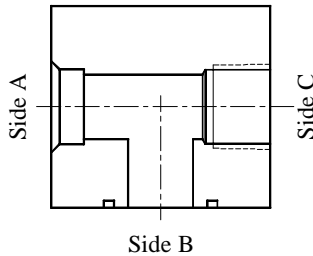
COMES COMPLETE WITH BOLT KIT



SWT / ORF / ORB

Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (ORF)	Side C (ORB)
2407-08-08-08	2448-08-08-08	0.50	0.50	#8 (3/4"-16)
2407-12-12-12	2448-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2407-16-16-16	2448-16-16-12	1.00	1.00	#16 (1-5/16"-12)
2407-20-16-16	2448-20-16-16	1.25	1.00	#16 (1-5/16"-12)
2407-24-20-20	2448-24-20-20	1.50	1.25	#20 (1-5/8"-12)
2407-32-24-24	2448-32-24-24	2.00	1.50	#24 (1-7/8"-12)
2407-32-32-32	2448-32-32-32	2.00	2.00	#32 (2-1/2"-12)

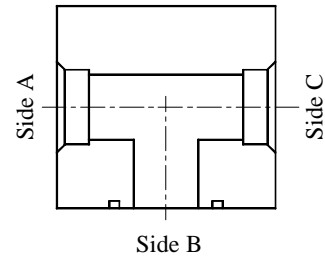
COMES COMPLETE WITH BOLT KIT



SWT / ORF / NPT

Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (ORF)	Side C (NPT)
2408-08-08-08	2449-08-08-08	0.50	0.50	1/2"-14
2408-12-12-12	2449-12-12-12	0.75	0.75	3/4"-14
2408-16-16-16	2449-16-16-16	1.00	1.00	1"-11.5
2408-20-16-16	2449-20-16-16	1.25	1.00	1"-11.5
2408-24-20-20	2449-24-20-20	1.50	1.25	1-1/4"-11.5
2408-32-24-24	2449-32-24-24	2.00	1.50	1-1/2"-11.5
2408-32-32-32	2449-32-32-32	2.00	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT

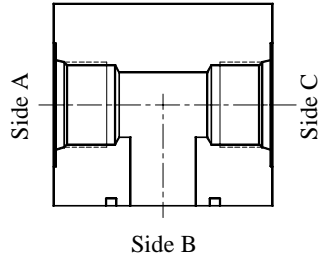


SWT / ORF / SWT

Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (ORF)	Side C (SWT)
2406-08-08-08	2447-08-08-08	0.50	0.50	0.50
2406-12-12-12	2447-12-12-12	0.75	0.75	0.75
2406-16-16-16	2447-16-16-16	1.00	1.00	1.00
2406-20-16-20	2447-20-16-16	1.25	1.00	1.25
2406-24-20-24	2447-24-20-24	1.50	1.25	1.50
2406-32-24-32	2447-32-24-32	2.00	1.50	2.00
2406-32-32-32	2447-32-32-32	2.00	2.00	2.00

COMES COMPLETE WITH BOLT KIT

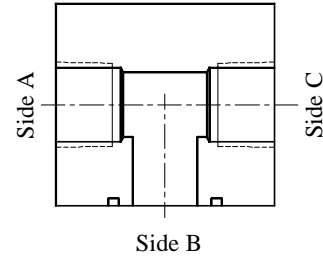
Code 61 & Code 62 4-Bolt Tees



ORB / ORF / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORB)	Side B (ORF)	Side C (ORB)
2411-08-08-08	2452-08-08-08	#8 (3/4"-16)	0.50	#8 (3/4"-16)
2411-12-12-12	2452-12-12-12	#12 (1-1/16"-12)	0.75	#12 (1-1/16"-12)
2411-16-16-16	2452-16-16-16	#16 (1-5/16"-12)	1.00	#16 (1-5/16"-12)
2411-20-20-20	2452-20-20-20	#20 (1-5/8"-12)	1.25	#20 (1-5/8"-12)
2411-24-24-24	2452-24-24-24	#24 (1-7/8"-12)	1.50	#24 (1-7/8"-12)
2411-32-32-32	2452-32-32-32	#32 (2-1/2"-12)	2.00	#32 (2-1/2"-12)

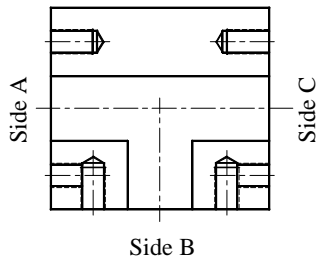
COMES COMPLETE WITH BOLT KIT



NPT / ORF / NPT

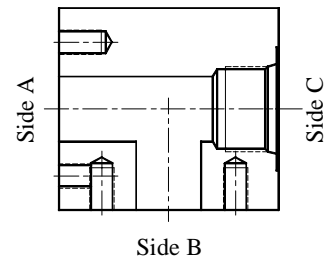
Code 61 Part No.	Code 62 Part No.	Side A (NPT)	Side B (ORF)	Side C (NPT)
2414-08-08-08	2544-08-08-08	1/2"-14	0.50	1/2"-14
2414-12-12-12	2544-12-12-12	3/4"-14	0.75	3/4"-14
2414-16-16-16	2544-16-16-16	1"-11.5	1.00	1"-11.5
2414-20-20-20	2544-20-20-20	1-1/4"-11.5	1.25	1-1/4"-11.5
2414-24-24-24	2544-24-24-24	1-1/2"-11.5	1.50	1-1/2"-11.5
2414-32-32-32	2544-32-32-32	2"-11.5	2.00	2"-11.5

COMES COMPLETE WITH BOLT KIT



Companion / Companion / Companion

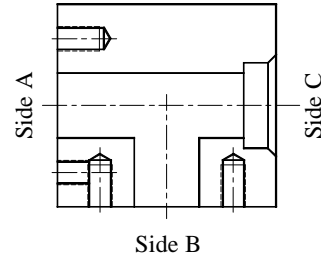
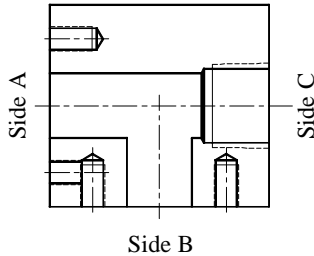
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (Comp)
1806-08-08-08	1807-08-08-08	0.50	0.50	0.50
1806-12-12-12	1807-12-12-12	0.75	0.75	0.75
1806-16-16-16	1807-16-16-16	1.00	1.00	1.00
1806-20-20-20	1807-20-20-20	1.25	1.25	1.25
1806-24-24-24	1807-24-24-24	1.50	1.50	1.50
1806-32-32-32	1807-32-32-32	2.00	2.00	2.00



Companion / Companion / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (ORB)
2371-08-08-08	2494-08-08-08	0.50	0.50	#8 (3/4"-16)
2371-12-12-12	2494-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2371-16-16-16	2494-16-16-16	1.00	1.00	#16 (1-5/16"-12)
2371-20-20-20	2494-20-20-20	1.25	1.25	#20 (1-5/8"-12)
2371-24-24-24	2494-24-24-24	1.50	1.50	#24 (1-7/8"-12)
2371-32-32-32	2494-32-32-32	2.00	2.00	#32 (2-1/2"-12)

Code 61 & Code 62 4-Bolt Tees

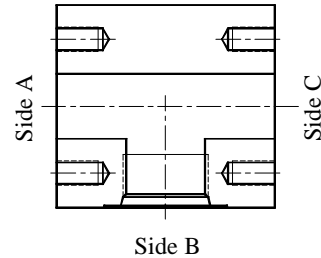
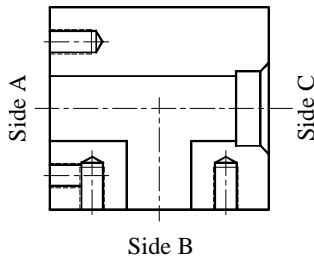


Companion / Companion / NPT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (NPT)
2372-08-08-08	2495-08-08-08	0.50	0.50	1/2"-14
2372-12-12-12	2495-12-12-12	0.75	0.75	3/4"-14
2372-16-16-16	2495-16-16-16	1.00	1.00	1"-11.5
2372-20-20-20	2495-20-20-20	1.25	1.25	1-1/4"-11.5
2372-24-24-24	2495-24-24-24	1.50	1.50	1-1/2"-11.5
2372-32-32-32	2495-32-32-32	2.00	2.00	2"-11.5

Companion / Companion / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (SWP)
1966-08-08-08	1969-08-08-08	0.50	0.50	1/2
1966-12-12-12	1969-12-12-12	0.75	0.75	3/4
1966-16-16-16	1969-16-16-16	1.00	1.00	1
1966-20-20-20	1969-20-20-20	1.25	1.25	1-1/4
1966-24-24-24	1969-24-24-24	1.50	1.50	1-1/2
1966-32-32-32	1969-32-32-32	2.00	2.00	2



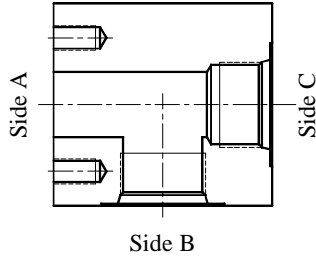
Companion / Companion / SWT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (SWT)
2370-08-08-08	2493-08-08-08	0.50	0.50	0.50
2370-12-12-12	2493-12-12-12	0.75	0.75	0.75
2370-12-12-16	2493-12-12-16	0.75	0.75	1.00
2370-16-16-20	2493-16-16-20	1.00	1.00	1.25
2370-20-20-24	2493-20-20-24	1.25	1.25	1.50
2370-24-24-32	2493-24-24-32	1.50	1.50	2.00
2370-32-32-32	2493-32-32-32	2.00	2.00	2.00

Companion / ORB / Companion

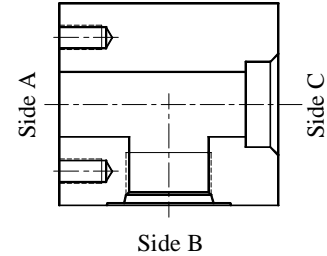
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (Comp)
2387-08-08-08	2510-08-08-08	0.50	#8 (3/4"-16)	0.50
2387-12-12-12	2510-12-12-12	0.75	#12 (1-1/16"-12)	0.75
2387-16-16-16	2510-16-16-16	1.00	#16 (1-5/16"-12)	1.00
2387-20-20-20	2510-20-20-20	1.25	#20 (1-5/8"-12)	1.25
2387-24-24-24	2510-24-24-24	1.50	#24 (1-7/8"-12)	1.50
2387-32-32-32	2510-32-32-32	2.00	#32 (2-1/2"-12)	2.00

Code 61 & Code 62 4-Bolt Tees



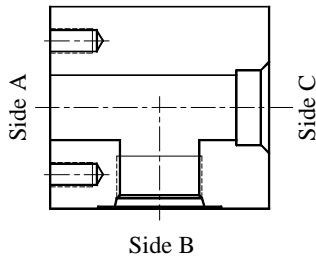
Companion / ORB / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (ORB)
2390-12-12-12	2513-12-12-12	0.75	#12 (1-1/16"-12)	#12 (1-1/16"-12)
2390-16-16-16	2513-16-16-16	1.00	#16 (1-5/16"-12)	#16 (1-5/16"-12)
2390-20-20-20	2513-20-20-20	1.25	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2390-24-24-24	2513-24-24-24	1.50	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2390-32-32-32	2513-32-32-32	2.00	#32 (2-1/2"-12)	#32 (2-1/2"-12)



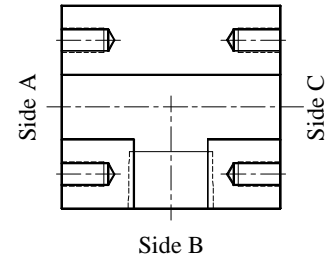
Companion / ORB / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (SWP)
2388-12-12-12	2511-12-12-12	0.75	#12 (1-1/16"-12)	3/4
2388-16-16-16	2511-16-16-16	1.00	#16 (1-5/16"-12)	1
2388-20-20-20	2511-20-20-20	1.25	#20 (1-5/8"-12)	1-1/4
2388-24-24-24	2511-24-24-24	1.50	#24 (1-7/8"-12)	1-1/2
2388-32-32-32	2511-32-32-32	2.00	#32 (2-1/2"-12)	2



Companion / ORB / SWT

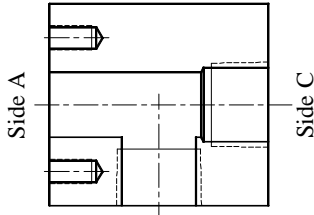
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (SWT)
2389-12-12-12	2512-12-12-12	0.75	#12 (1-1/16"-12)	0.75
2389-12-12-16	2512-12-12-16	0.75	#12 (1-1/16"-12)	1.00
2389-16-16-16	2512-16-16-16	1.00	#16 (1-5/16"-12)	1.00
2389-16-16-20	2512-16-16-20	1.00	#16 (1-5/16"-12)	1.25
2389-20-20-20	2512-20-20-20	1.25	#20 (1-5/8"-12)	1.25
2389-20-20-24	2512-20-20-24	1.25	#20 (1-5/8"-12)	1.50
2389-24-24-24	2512-24-24-24	1.50	#24 (1-7/8"-12)	1.50
2389-24-24-32	2512-24-24-32	1.50	#24 (1-7/8"-12)	2.00
2389-32-32-32	2512-32-32-32	2.00	#32 (2-1/2"-12)	2.00



Companion / NPT / Companion

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (NPT)	Side C (Comp)
2392-12-12-12	2515-12-12-12	0.75	3/4"-14	0.75
2392-16-12-16	2515-16-12-16	1.00	3/4"-14	1.00
2392-16-16-16	2515-16-16-16	1.00	1"-11.5	1.00
2392-20-16-20	2515-20-16-20	1.25	1"-11.5	1.25
2392-20-20-20	2515-20-20-20	1.25	1-1/4"-11.5	1.25
2392-24-20-24	2515-24-20-24	1.50	1-1/4"-11.5	1.50
2392-24-24-24	2515-24-24-24	1.50	1-1/2"-11.5	1.50
2392-32-24-32	2515-32-24-32	2.00	1-1/2"-11.5	2.00
2392-32-32-32	2515-32-32-32	2.00	2"-11.5	2.00

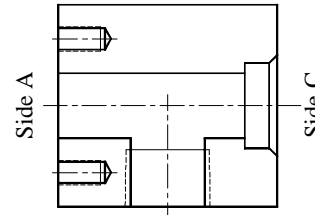
Code 61 & Code 62 4-Bolt Tees



Side B

Companion / NPT / NPT

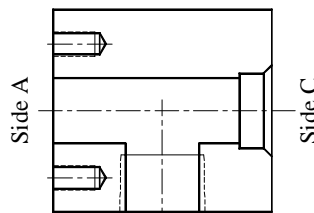
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (NPT)	Side C (NPT)
2396-12-12-12	2519-12-12-12	0.75	3/4"-14	3/4"-14
2396-16-12-12	2519-16-12-12	1.00	3/4"-14	3/4"-14
2396-16-16-16	2519-16-16-16	1.00	1"-11.5	1"-11.5
2396-20-16-16	2519-20-16-16	1.25	1"-11.5	1"-11.5
2396-20-20-20	2519-20-20-20	1.25	1-1/4"-11.5	1-1/4"-11.5
2396-24-20-20	2519-24-20-20	1.50	1-1/4"-11.5	1-1/4"-11.5
2396-24-24-24	2519-24-24-24	1.50	1-1/2"-11.5	1-1/2"-11.5
2396-32-24-24	2519-32-24-24	2.00	1-1/2"-11.5	1-1/2"-11.5
2396-32-32-32	2519-32-32-32	2.00	2"-11.5	2"-11.5



Side B

Companion / NPT / SWP

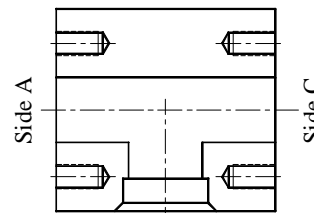
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (NPT)	Side C (SWP)
2393-12-12-12	2516-12-12-12	0.75	3/4"-14	3/4
2393-16-12-12	2516-16-12-12	1.00	3/4"-14	3/4
2393-16-16-16	2516-16-16-16	1.00	1"-11.5	1
2393-20-16-16	2516-20-16-16	1.25	1"-11.5	1
2393-20-20-20	2516-20-20-20	1.25	1-1/4"-11.5	1-1/4
2393-24-20-20	2516-24-20-20	1.50	1-1/4"-11.5	1-1/4
2393-24-24-24	2516-24-24-24	1.50	1-1/2"-11.5	1-1/2
2393-32-24-24	2516-32-24-24	2.00	1-1/2"-11.5	1-1/2
2393-32-32-32	2516-32-32-32	2.00	2"-11.5	2



Side B

Companion / NPT / SWT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (NPT)	Side C (SWT)
2394-12-12-12	2517-12-12-12	0.75	3/4"-14	0.75
2394-12-12-16	2517-12-12-16	0.75	3/4"-14	1.00
2394-16-16-16	2517-16-16-16	1.00	1"-11.5	1.00
2394-16-16-20	2517-16-16-20	1.00	1"-11.5	1.25
2394-20-20-20	2517-20-20-20	1.25	1-1/4"-11.5	1.25
2394-20-20-24	2517-20-20-24	1.25	1-1/4"-11.5	1.50
2394-24-24-24	2517-24-24-24	1.50	1-1/2"-11.5	1.50
2394-24-24-32	2517-24-24-32	1.50	1-1/2"-11.5	2.00
2394-32-32-32	2517-32-32-32	2.00	2"-11.5	2.00

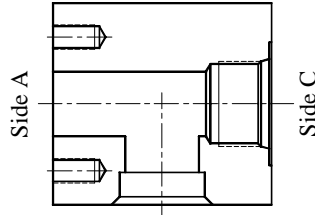


Side B

Companion / SWP / Companion

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWP)	Side C (Comp)
2377-12-12-12	2500-12-12-12	0.75	3/4	0.75
2377-16-12-16	2500-16-12-16	1.00	3/4	1.00
2377-16-16-16	2500-16-16-16	1.00	1	1.00
2377-20-16-20	2500-20-16-20	1.25	1	1.25
2377-20-20-20	2500-20-20-20	1.25	1-1/4	1.25
2377-24-20-24	2500-24-20-24	1.50	1-1/4	1.50
2377-24-24-24	2500-24-24-24	1.50	1-1/2	1.50
2377-32-24-32	2500-32-24-32	2.00	1-1/2	2.00
2377-32-32-32	2500-32-32-32	2.00	2	2.00

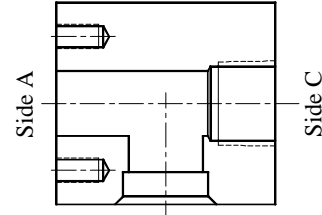
Code 61 & Code 62 4-Bolt Tees



Side B

Companion / SWP / ORB

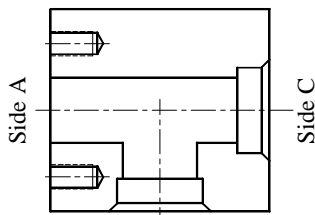
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWP)	Side C (ORB)
2380-12-12-12	2503-12-12-12	0.75	3/4	#12 (1-1/16"-12)
2380-16-12-12	2503-16-12-12	1.00	3/4	#12 (1-1/16"-12)
2380-16-16-16	2503-16-16-16	1.00	1	#16 (1-5/16"-12)
2380-20-16-16	2503-20-16-16	1.25	1	#16 (1-5/16"-12)
2380-20-20-20	2503-20-20-20	1.25	1-1/4	#20 (1-5/8"-12)
2380-24-20-20	2503-24-20-20	1.50	1-1/4	#20 (1-5/8"-12)
2380-24-24-24	2503-24-24-24	1.50	1-1/2	#24 (1-7/8"-12)
2380-32-24-24	2503-32-24-24	2.00	1-1/2	#24 (1-7/8"-12)
2380-32-32-32	2503-32-32-32	2.00	2	#32 (2-1/2"-12)



Side B

Companion / SWP / NPT

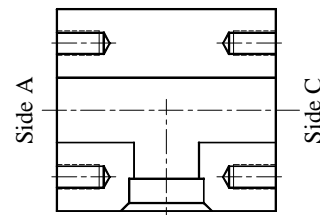
Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWP)	Side C (NPT)
2381-12-12-12	2504-12-12-12	0.75	3/4	3/4"-14
2381-16-12-12	2504-16-12-12	1.00	3/4	3/4"-14
2381-16-16-16	2504-16-16-16	1.00	1	1"-11.5
2381-20-16-16	2504-20-16-16	1.25	1	1"-11.5
2381-20-20-20	2504-20-20-20	1.25	1-1/4	1-1/4"-11.5
2381-24-20-20	2504-24-20-20	1.50	1-1/4	1-1/4"-11.5
2381-24-24-24	2504-24-24-24	1.50	1-1/2	1-1/2"-11.5
2381-32-24-24	2504-32-24-24	2.00	1-1/2	1-1/2"-11.5
2381-32-32-32	2504-32-32-32	2.00	2	2"-11.5



Side B

Companion / SWP / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWP)	Side C (SWP)
2378-12-12-12	2501-12-12-12	0.75	3/4	3/4
2378-16-12-12	2501-16-12-12	1.00	3/4	3/4
2378-16-16-16	2501-16-16-16	1.00	1	1
2378-20-16-16	2501-20-16-16	1.25	1	1
2378-20-20-20	2501-20-20-20	1.25	1-1/4	1-1/4
2378-24-20-20	2501-24-20-20	1.50	1-1/4	1-1/4
2378-24-24-24	2501-24-24-24	1.50	1-1/2	1-1/2
2378-32-24-24	2501-32-24-24	2.00	1-1/2	1-1/2
2378-32-32-32	2501-32-32-32	2.00	2	2

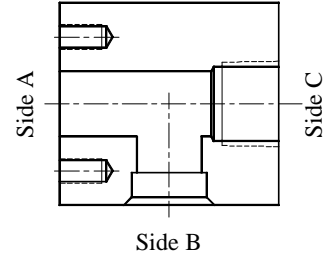
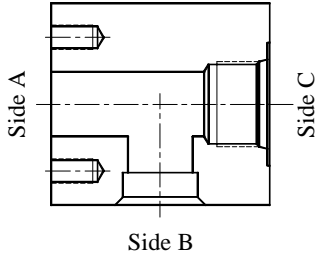


Side B

Companion / SWT / Companion

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWT)	Side C (Comp)
2382-12-12-12	2505-12-12-12	0.75	0.75	0.75
2382-12-16-12	2505-12-16-12	0.75	1.00	0.75
2382-16-16-16	2505-16-16-16	1.00	1.00	1.00
2382-16-20-16	2505-16-20-16	1.00	1.25	1.00
2382-20-20-20	2505-20-20-20	1.25	1.25	1.25
2382-20-24-20	2505-20-24-20	1.25	1.50	1.25
2382-24-24-24	2505-24-24-24	1.50	1.50	1.50
2382-24-32-24	2505-24-32-24	1.50	2.00	1.50
2382-32-32-32	2505-32-32-32	2.00	2.00	2.00

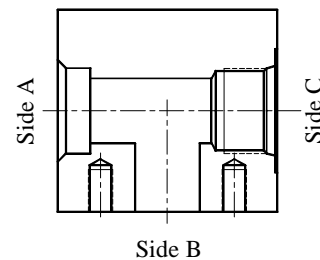
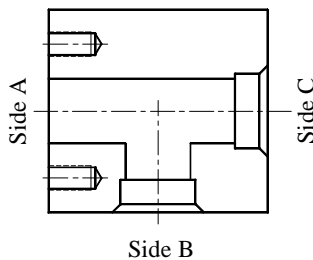
Code 61 & Code 62 4-Bolt Tees


Companion / SWT / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWT)	Side C (ORB)
2385-12-12-12	2508-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2385-16-12-12	2508-16-12-12	1.00	0.75	#12 (1-1/16"-12)
2385-16-16-16	2508-16-16-16	1.00	1.00	#16 (1-5/16"-12)
2385-20-16-16	2508-20-16-16	1.25	1.00	#16 (1-5/16"-12)
2385-20-20-20	2508-20-20-20	1.25	1.25	#20 (1-5/8"-12)
2385-24-20-20	2508-24-20-20	1.50	1.25	#20 (1-5/8"-12)
2385-24-24-24	2508-24-24-24	1.50	1.50	#24 (1-7/8"-12)
2385-32-24-24	2508-32-24-24	2.00	1.50	#24 (1-7/8"-12)
2385-32-32-32	2508-32-32-32	2.00	2.00	#32 (2-1/2"-12)

Companion / SWT / NPT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWT)	Side C (NPT)
2386-12-12-12	2509-12-12-12	0.75	0.75	3/4"-14
2386-16-16-12	2509-16-16-12	1.00	1.00	3/4"-14
2386-16-20-16	2509-16-20-16	1.00	1.25	1"-11.5
2386-20-20-16	2509-20-20-16	1.25	1.25	1"-11.5
2386-20-24-20	2509-20-24-20	1.25	1.50	1-1/4"-11.5
2386-24-24-20	2509-24-24-20	1.50	1.50	1-1/4"-11.5
2386-24-32-24	2509-24-32-24	1.50	2.00	1-1/2"-11.5
2386-32-32-24	2509-32-32-24	2.00	2.00	1-1/2"-11.5
2386-32-32-32	2509-32-32-32	2.00	2.00	2"-11.5

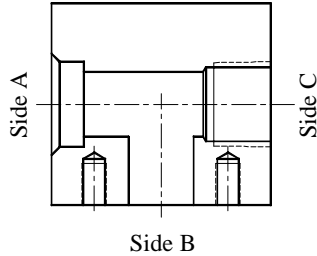

Companion / SWT / SWT

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWT)	Side C (SWT)
2384-12-12-12	2507-12-12-12	0.75	0.75	0.75
2384-16-16-16	2507-16-16-16	1.00	1.00	1.00
2384-16-20-20	2507-16-20-20	1.00	1.25	1.25
2384-20-20-20	2507-20-20-20	1.25	1.25	1.25
2384-20-24-24	2507-20-24-24	1.25	1.50	1.50
2384-24-24-24	2507-24-24-24	1.50	1.50	1.50
2384-24-32-32	2507-24-32-32	1.50	2.00	2.00
2384-32-32-32	2507-32-32-32	2.00	2.00	2.00

SWP / Companion / ORB

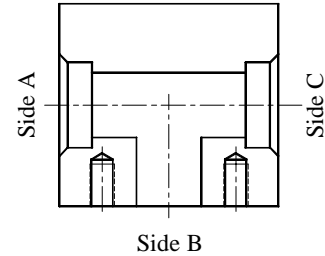
Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (Comp)	Side C (ORB)
2398-12-12-12	2439-12-12-12	3/4	0.75	#12 (1-1/16"-12)
2398-16-12-12	2439-16-12-12	3/4	1.00	#12 (1-1/16"-12)
2398-16-16-16	2439-16-16-16	1	1.00	#16 (1-5/16"-12)
2398-20-16-16	2439-20-16-16	1	1.25	#16 (1-5/16"-12)
2398-20-20-20	2439-20-20-20	1-1/4	1.25	#20 (1-5/8"-12)
2398-24-20-20	2439-24-20-20	1-1/4	1.50	#20 (1-5/8"-12)
2398-24-24-24	2439-24-24-24	1-1/2	1.50	#24 (1-7/8"-12)
2398-32-24-24	2439-32-24-24	1-1/2	2.00	#24 (1-7/8"-12)
2398-32-32-32	2439-32-32-32	2	2.00	#32 (2-1/2"-12)

Code 61 & Code 62 4-Bolt Tees



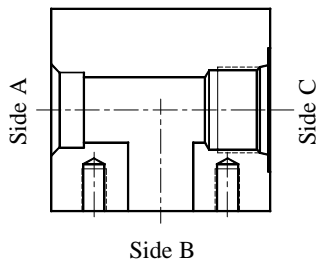
SWP / Companion / NPT

Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (Comp)	Side C (NPT)
2399-12-12-12	2440-12-12-12	3/4	0.75	3/4"-14
2399-16-12-12	2440-16-12-12	3/4	1.00	3/4"-14
2399-16-16-16	2440-16-16-16	1	1.00	1"-11.5
2399-20-16-16	2440-20-16-16	1	1.25	1"-11.5
2399-20-20-20	2440-20-20-20	1-1/4	1.25	1-1/4"-11.5
2399-24-20-20	2440-24-20-20	1-1/4	1.50	1-1/4"-11.5
2399-24-24-24	2440-24-24-24	1-1/2	1.50	1-1/2"-11.5
2399-32-24-24	2440-32-24-24	1-1/2	2.00	1-1/2"-11.5
2399-32-32-32	2440-32-32-32	2	2.00	2"-11.5



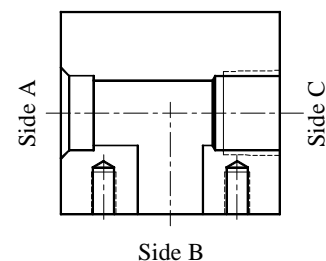
SWP / Companion / SWP

Code 61 Part No.	Code 62 Part No.	Side A (SWP)	Side B (Comp)	Side C (SWP)
1865-12-12-12	1879-12-12-12	3/4	0.75	3/4
1865-16-12-12	1879-16-12-12	3/4	1.00	3/4
1865-16-16-16	1879-16-16-16	1	1.00	1
1865-20-16-16	1879-20-16-16	1	1.25	1
1865-20-20-20	1879-20-20-20	1-1/4	1.25	1-1/4
1865-24-20-20	1879-24-20-20	1-1/4	1.50	1-1/4
1865-24-24-24	1879-24-24-24	1-1/2	1.50	1-1/2
1865-32-24-24	1879-32-24-24	1-1/2	2.00	1-1/2
1865-32-32-32	1879-32-32-32	2	2.00	2



SWT / Companion / ORB

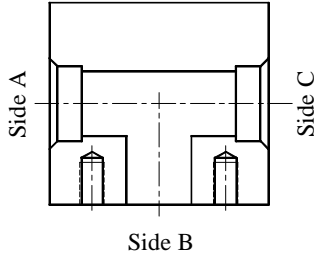
Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (Comp)	Side C (ORB)
2404-12-12-12	2445-12-12-12	0.75	0.75	#12 (1-1/16"-12)
2404-16-12-12	2445-16-12-12	1.00	0.75	#12 (1-1/16"-12)
2404-16-16-12	2445-16-16-12	1.00	1.00	#12 (1-1/16"-12)
2404-20-16-16	2445-20-16-16	1.25	1.00	#16 (1-5/16"-12)
2404-20-20-16	2445-20-20-16	1.25	1.25	#16 (1-5/16"-12)
2404-24-20-20	2445-24-20-20	1.50	1.25	#20 (1-5/8"-12)
2404-24-24-20	2445-24-24-20	1.50	1.50	#20 (1-5/8"-12)
2404-32-24-24	2445-32-24-24	2.00	1.50	#24 (1-7/8"-12)
2404-32-32-24	2445-32-32-24	2.00	2.00	#24 (1-7/8"-12)
2404-32-32-32	2445-32-32-32	2.00	2.00	#32 (2-1/2"-12)



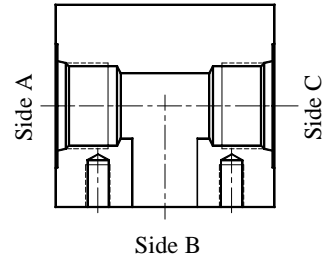
SWT / Companion / NPT

Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (Comp)	Side C (NPT)
2405-12-12-12	2446-12-12-12	0.75	0.75	3/4"-14
2405-16-12-12	2446-16-12-12	1.00	0.75	3/4"-14
2405-16-16-12	2446-16-16-12	1.00	1.00	3/4"-14
2405-20-16-16	2446-20-16-16	1.25	1.00	1"-11.5
2405-20-20-16	2446-20-20-16	1.25	1.25	1"-11.5
2405-24-20-20	2446-24-20-20	1.50	1.25	1-1/4"-11.5
2405-24-24-20	2446-24-24-20	1.50	1.50	1-1/4"-11.5
2405-32-24-24	2446-32-24-24	2.00	1.50	1-1/2"-11.5
2405-32-32-24	2446-32-32-24	2.00	2.00	1-1/2"-11.5
2405-32-32-32	2446-32-32-32	2.00	2.00	2"-11.5

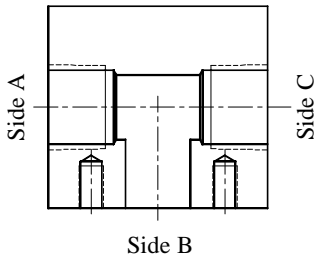
Code 61 & Code 62 4-Bolt Tees


SWT / Companion / SWT

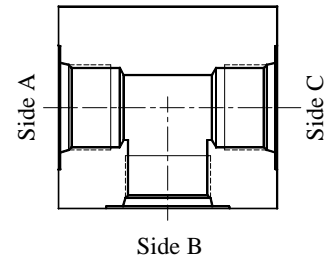
Code 61 Part No.	Code 62 Part No.	Side A (SWT)	Side B (Comp)	Side C (SWT)
2403-12-12-12	2444-12-12-12	0.75	0.75	0.75
2403-16-12-16	2444-16-12-16	1.00	0.75	1.00
2403-16-16-16	2444-16-16-16	1.00	1.00	1.00
2403-20-16-20	2444-20-16-20	1.25	1.00	1.25
2403-20-20-20	2444-20-20-20	1.25	1.25	1.25
2403-24-20-24	2444-24-20-24	1.50	1.25	1.50
2403-24-24-24	2444-24-24-24	1.50	1.50	1.50
2403-32-24-32	2444-32-24-32	2.00	1.50	2.00
2406-32-32-32	2444-32-32-32	2.00	2.00	2.00


ORB / Companion / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORB)	Side B (Comp)	Side C (ORB)
2409-12-12-12	2450-12-12-12	#12 (1-1/16"-12)	0.75	#12 (1-1/16"-12)
2409-12-16-12	2450-12-16-12	#12 (1-1/16"-12)	1.00	#12 (1-1/16"-12)
2409-16-16-16	2450-16-16-16	#16 (1-5/16"-12)	1.00	#16 (1-5/16"-12)
2409-16-20-16	2450-16-20-16	#16 (1-5/16"-12)	1.25	#16 (1-5/16"-12)
2409-20-20-20	2450-20-20-20	#20 (1-5/8"-12)	1.25	#20 (1-5/8"-12)
2409-20-24-20	2450-20-24-20	#20 (1-5/8"-12)	1.50	#20 (1-5/8"-12)
2409-24-24-24	2450-24-24-24	#24 (1-7/8"-12)	1.50	#24 (1-7/8"-12)
2409-24-32-24	2450-24-32-24	#24 (1-7/8"-12)	2.00	#24 (1-7/8"-12)
2409-32-32-32	2450-32-32-32	#32 (2-1/2"-12)	2.00	#32 (2-1/2"-12)

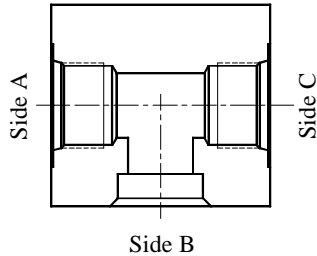

NPT / Companion / NPT

Code 61 Part No.	Code 62 Part No.	Side A (NPT)	Side B (Comp)	Side C (NPT)
2413-12-12-12	2543-12-12-12	3/4"-14	0.75	3/4"-14
2413-12-16-12	2543-12-16-12	3/4"-14	1.00	3/4"-14
2413-16-16-16	2543-16-16-16	1"-11.5	1.00	1"-11.5
2413-16-20-16	2543-16-20-16	1"-11.5	1.25	1"-11.5
2413-20-20-20	2543-20-20-20	1-1/4"-11.5	1.25	1-1/4"-11.5
2413-20-24-20	2543-20-24-20	1-1/4"-11.5	1.50	1-1/4"-11.5
2413-24-24-24	2543-24-24-24	1-1/2"-11.5	1.50	1-1/2"-11.5
2413-24-32-24	2543-24-32-24	1-1/2"-11.5	2.00	1-1/2"-11.5
2413-32-32-32	2543-32-32-32	2"-11.5	2.00	2"-11.5


ORB / ORB / ORB

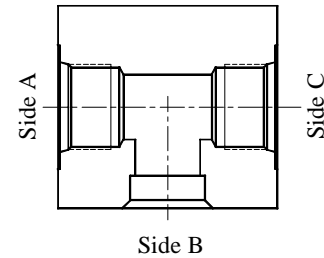
Part No.	Side A (ORB)	Side B (ORB)	Side C (ORB)
2485-08-08-08	#8 (3/4"-16)	#8 (3/4"-16)	#8 (3/4"-16)
2485-12-12-12	#12 (1-1/16"-12)	#12 (1-1/16"-12)	#12 (1-1/16"-12)
2485-16-16-16	#16 (1-5/16"-12)	#16 (1-5/16"-12)	#16 (1-5/16"-12)
2485-20-20-20	#20 (1-5/8"-12)	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2485-24-24-24	#24 (1-7/8"-12)	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2485-32-32-32	#32 (2-1/2"-12)	#32 (2-1/2"-12)	#32 (2-1/2"-12)

Code 61 & Code 62 4-Bolt Tees



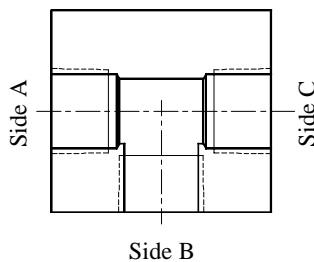
ORB / SWP / ORB

Part No.	Side A (ORB)	Side B (SWP)	Side C (ORB)
2481-16-16-16	#16 (1-5/16"-12)	1	#16 (1-5/16"-12)
2481-16-20-16	#16 (1-5/16"-12)	1-1/4	#16 (1-5/16"-12)
2481-20-20-20	#20 (1-5/8"-12)	1-1/4	#20 (1-5/8"-12)
2481-20-24-20	#20 (1-5/8"-12)	1-1/2	#20 (1-5/8"-12)
2481-24-24-24	#24 (1-7/8"-12)	1-1/2	#24 (1-7/8"-12)
2481-24-32-24	#24 (1-7/8"-12)	2	#24 (1-7/8"-12)
2481-32-32-32	#32 (2-1/2"-12)	2	#32 (2-1/2"-12)



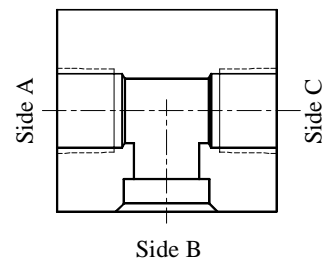
ORB / SWT / ORB

Part No.	Side A (ORB)	Side B (SWT)	Side C (ORB)
2483-12-16-12	#12 (1-1/16"-12)	1.00	#12 (1-1/16"-12)
2483-16-20-16	#16 (1-5/16"-12)	1.25	#16 (1-5/16"-12)
2483-20-24-20	#20 (1-5/8"-12)	1.50	#20 (1-5/8"-12)
2483-24-32-24	#24 (1-7/8"-12)	2.00	#24 (1-7/8"-12)
2483-32-32-32	#32 (2-1/2"-12)	2.00	#32 (2-1/2"-12)



NPT / NPT / NPT

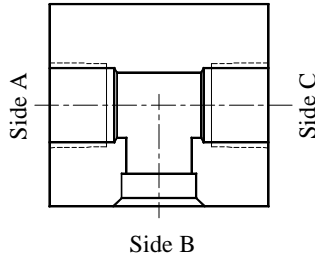
Part No.	Side A (NPT)	Side B (NPT)	Side C (NPT)
2492-12-12-12	3/4"-14	3/4"-14	3/4"-14
2492-16-16-16	1"-11.5	1"-11.5	1"-11.5
2492-20-20-20	1-1/4"-11.5	1-1/4"-11.5	1-1/4"-11.5
2492-24-24-24	1-1/2"-11.5	1-1/2"-11.5	1-1/2"-11.5
2492-32-32-32	2"-11.5	2"-11.5	2"-11.5



NPT / SWP / NPT

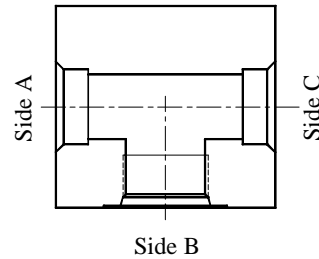
Part No.	Side A (NPT)	Side B (SWP)	Side C (NPT)
2489-12-12-12	3/4"-14	3/4	3/4"-14
2489-16-16-16	1"-11.5	1	1"-11.5
2489-20-20-20	1-1/4"-11.5	1-1/4	1-1/4"-11.5
2489-24-24-24	1-1/2"-11.5	1-1/2	1-1/2"-11.5
2489-32-32-32	2"-11.5	2	2"-11.5

Weld-On & Threaded Tees



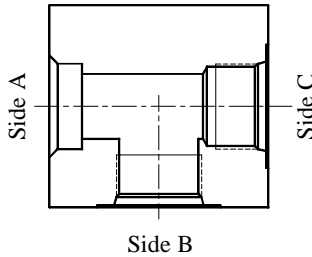
NPT / SWT / NPT

Part No.	Side A (NPT)	Side B (SWT)	Side C (NPT)
2490-12-16-12	3/4"-14	1	3/4"-14
2490-16-20-16	1"-11.5	1-1/4	1"-11.5
2490-20-24-20	1-1/4"-11.5	1-1/2	1-1/4"-11.5
2490-24-32-24	1-1/2"-11.5	2	1-1/2"-11.5



SWP / ORB / SWP

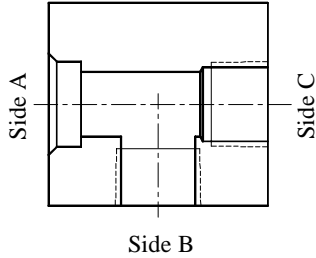
Part No.	Side A (SWP)	Side B (ORB)	Side C (SWP)
2058-12-08-12	3/4	#8 (3/4"-16)	3/4
2058-12-12-12	3/4	#12 (1-1/16"-12)	3/4
2058-16-08-16	1	#8 (3/4"-16)	1
2058-16-12-16	1	#12 (1-1/16"-12)	1
2058-16-16-16	1	#16 (1-5/16"-12)	1
2058-20-12-20	1-1/4	#12 (1-1/16"-12)	1-1/4
2058-20-16-20	1-1/4	#16 (1-5/16"-12)	1-1/4
2058-20-20-20	1-1/4	#20 (1-5/8"-12)	1-1/4
2058-24-12-24	1-1/2	#12 (1-1/16"-12)	1-1/2
2058-24-16-24	1-1/2	#16 (1-5/16"-12)	1-1/2
2058-24-20-24	1-1/2	#20 (1-5/8"-12)	1-1/2
2058-32-12-32	2	#12 (1-1/16"-12)	2
2058-32-16-32	2	#16 (1-5/16"-12)	2
2058-32-20-32	2	#20 (1-5/8"-12)	2
2058-40-16-40	2-1/2	#16 (1-5/16"-12)	2-1/2
2058-40-20-40	2-1/2	#20 (1-5/8"-12)	2-1/2
2058-48-16-48	3	#16 (1-5/16"-12)	3
2058-48-20-48	3	#20 (1-5/8"-12)	3
2058-64-16-64	4	#16 (1-5/16"-12)	4
2058-64-20-64	4	#20 (1-5/8"-12)	4



SWP / ORB / ORB

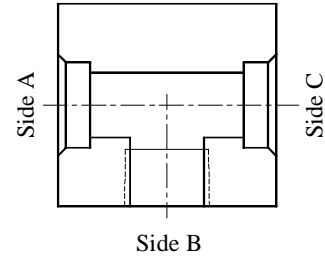
Part No.	Side A (SWP)	Side B (ORB)	Side C (ORB)
2463-12-12-12	3/4	#12 (1-1/16"-12)	#12 (1-1/16"-12)
2463-16-16-16	1	#16 (1-5/16"-12)	#16 (1-5/16"-12)
2463-20-20-20	1-1/4	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2463-24-20-20	1-1/2	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2463-24-24-24	1-1/2	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2463-32-24-24	2	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2463-32-32-32	2	#32 (2-1/2"-12)	#32 (2-1/2"-12)

Weld-On & Threaded Tees



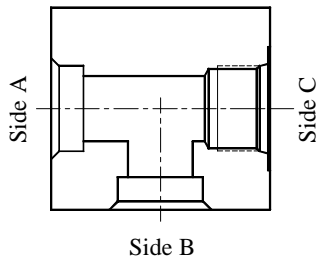
SWP / NPT / NPT

Part No.	Side A (SWP)	Side B (NPT)	Side C (NPT)
2468-12-12-12	3/4	3/4"-14	3/4"-14
2468-16-16-16	1	1"-11.5	1"-11.5
2468-20-20-20	1-1/4	1-1/4"-11.5	1-1/4"-11.5
2468-24-24-24	1-1/2	1-1/2"-11.5	1-1/2"-11.5
2468-32-32-32	2	2"-11.5	2"-11.5



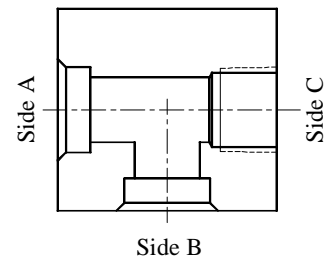
SWP / NPT / SWP

Part No.	Side A (SWP)	Side B (NPT)	Side C (SWP)
2465-12-12-12	3/4	3/4"-14	3/4
2465-16-16-16	1	1"-11.5	1
2465-20-20-20	1-1/4	1-1/4"-11.5	1-1/4
2465-24-24-24	1-1/2	1-1/2"-11.5	1-1/2
2465-32-32-32	2	2"-11.5	2



SWP / SWP / ORB

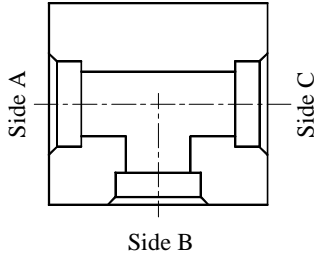
Part No.	Side A (SWP)	Side B (SWP)	Side C (ORB)
2456-12-12-12	3/4	3/4	#12 (1-1/16"-12)
2456-16-16-16	1	1	#16 (1-5/16"-12)
2456-20-20-20	1-1/4	1-1/4	#20 (1-5/8"-12)
2456-24-24-20	1-1/2	1-1/2	#20 (1-5/8"-12)
2456-24-24-24	1-1/2	1-1/2	#24 (1-7/8"-12)
2456-32-32-20	2	2	#20 (1-5/8"-12)
2456-32-32-24	2	2	#24 (1-7/8"-12)



SWP / SWP / NPT

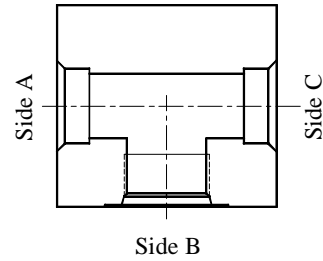
Part No.	Side A (SWP)	Side B (SWP)	Side C (NPT)
2457-12-12-12	3/4	3/4	3/4"-14
2457-16-16-16	1	1	1"-11.5
2457-20-20-20	1-1/2	1-1/2	1-1/4"-11.5
2457-24-24-24	1-1/2	1-1/2	1-1/2"-11.5
2457-32-32-32	2	2	2"-11.5
2457-40-40-40	2-1/2	2-1/2	2-1/2"-8

Weld-On & Threaded Tees



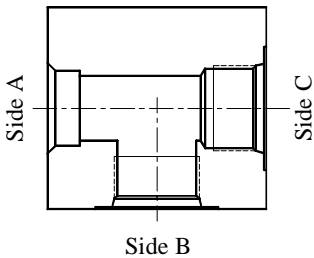
SWP / SWP / SWP

Part No.	Side A (SWP)	Side B (SWP)	Side C (SWP)
1893-16-16-16	1	1	1
1893-20-16-20	1-1/4	1	1-1/4
1893-20-20-20	1-1/4	1-1/4	1-1/4
1893-24-16-24	1-1/2	1	1-1/2
1893-24-20-24	1-1/2	1-1/4	1-1/2
1893-24-24-24	1-1/2	1-1/2	1-1/2
1893-32-20-32	2	1-1/4	2
1893-32-24-32	2	1-1/2	2
1893-32-32-32	2	2	2
1893-40-24-40	2-1/2	1-1/2	2-1/2
1893-40-32-40	2-1/2	2	2-1/2
1893-40-40-40	2-1/2	2-1/2	2-1/2
1893-48-24-48	3	1-1/2	3
1893-48-32-48	3	2	3
1893-48-40-48	3	2-1/2	3
1893-48-48-48	3	3	3
1893-64-32-64	4	2	4
1893-64-40-64	4	2-1/2	4
1893-64-48-64	4	3	4
1893-64-64-64	4	4	4



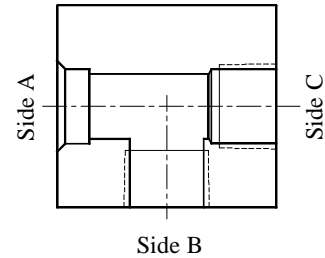
SWT / ORB / SWT

Part No.	Side A (SWT)	Side B (ORB)	Side C (SWT)
2475-12-12-12	0.75	#12 (1-1/16"-12)	0.75
2475-16-16-16	1.00	#16 (1-5/16"-12)	1.00
2475-20-20-20	1.25	#20 (1-5/8"-12)	1.25
2475-24-20-24	1.50	#20 (1-5/8"-12)	1.50
2475-24-24-24	1.50	#24 (1-7/8"-12)	1.50
2475-28-24-28	1.75	#24 (1-7/8"-12)	1.75
2475-32-20-32	2.00	#20 (1-5/8"-12)	2.00
2475-32-24-32	2.00	#24 (1-7/8"-12)	2.00
2475-32-32-32	2.00	#32 (2-1/2"-12)	2.00



SWT / ORB / ORB

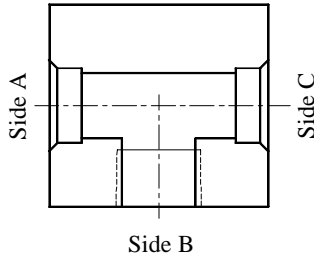
Part No.	Side A (SWT)	Side B (ORB)	Side C (ORB)
2476-12-12-12	0.75	#12 (1-1/16"-12)	#12 (1-1/16"-12)
2476-16-16-16	1.00	#16 (1-5/16"-12)	#16 (1-5/16"-12)
2476-20-20-20	1.25	#20 (1-5/8"-12)	#20 (1-5/8"-12)
2476-24-24-24	1.50	#24 (1-7/8"-12)	#24 (1-7/8"-12)
2476-28-24-24	1.75	#24 (1-7/8"-12)	#24 (1-7/8"-12)



SWT / NPT / NPT

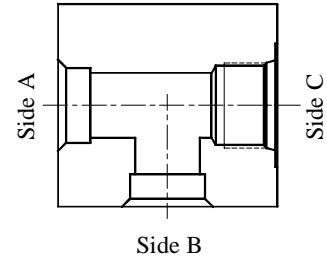
Part No.	Side A (SWT)	Side B (NPT)	Side C (NPT)
2480-16-12-12	1.00	3/4"-14	3/4"-14
2480-20-16-16	1.25	1"-11.5	1"-11.5
2480-24-20-20	1.50	1-1/4"-11.5	1-1/4"-11.5
2480-32-24-24	2.00	1-1/2"-11.5	1-1/2"-11.5
2480-32-32-32	2.00	2"-11.5	2"-11.5

Weld-On & Threaded Tees



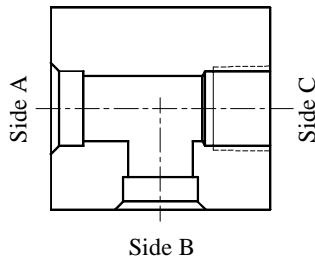
SWT / NPT / SWT

Part No.	Side A (SWT)	Side B (NPT)	Side C (SWT)
2478-16-12-16	1.00	3/4"-14	1.00
2478-20-16-20	1.25	1"-11.5	1.25
2478-24-20-24	1.50	1-1/4"-11.5	1.50
2478-32-24-32	2.00	1-1/2"-11.5	2.00
2478-32-32-32	2.00	2"-11.5	2.00



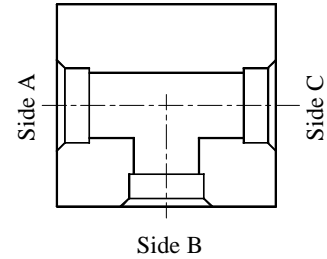
SWT / SWT / ORB

Part No.	Side A (SWT)	Side B (SWT)	Side C (ORB)
2473-16-16-12	1.00	1.00	#12 (1-1/16"-12)
2473-20-20-16	1.25	1.25	#16 (1-5/16"-12)
2473-24-24-20	1.50	1.50	#20 (1-5/8"-12)
2473-32-32-24	2.00	2.00	#24 (1-7/8"-12)
2473-32-32-32	2.00	2.00	#32 (2-1/2"-12)



SWT / SWT / NPT

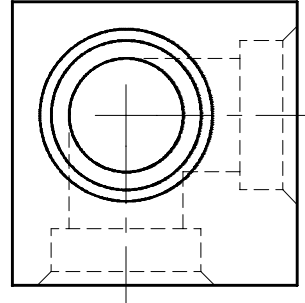
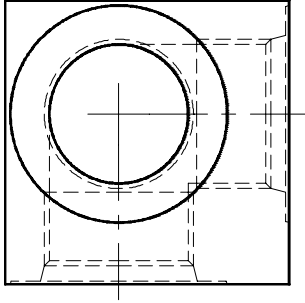
Part No.	Side A (SWT)	Side B (SWT)	Side C (NPT)
2474-16-16-12	1.00	1.00	3/4"-14
2474-20-20-16	1.25	1.25	1"-11.5
2474-24-24-20	1.50	1.50	1-1/4"-11.5
2474-32-32-24	2.00	2.00	1-1/2"-11.5
2474-32-32-32	2.00	2.00	2"-11.5



SWT / SWT / SWT

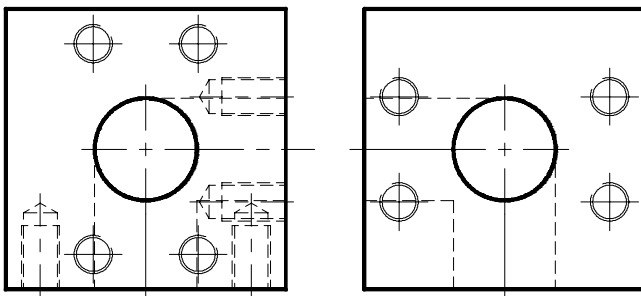
Part No.	Side A (SWT)	Side B (SWT)	Side C (SWT)
2472-12-12-12	0.75	0.75	0.75
2472-16-16-16	1.00	1.00	1.00
2472-20-20-20	1.25	1.25	1.25
2472-24-24-24	1.50	1.50	1.50
2472-28-28-28	1.75	1.75	1.75
2472-32-32-32	2.00	2.00	2.00

Corner Tees

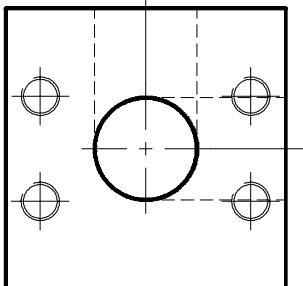


Part No.	ORB ports on three sides
3409-08-08-08	#8 (3/4"-16)
3409-12-12-12	#12 (1-1/16"-12)
3409-16-16-16	#16 (1-5/16"-12)
3409-20-20-20	#20 (1-5/8"-12)
3409-24-24-24	#24 (1-7/8"-12)
3409-32-32-32	#32 (2-1/2"-12)

Part No.	Socket Weld Pipe on three sides
3410-08-08-08	1/2"
3410-12-12-12	3/4"
3410-16-16-16	1"
3410-20-20-20	1-1/4"
3410-24-24-24	1-1/2"
3410-32-32-32	2"



Part No.	Code 61 Companion on three sides
3411-12-12-12	3/4"
3411-16-16-16	1"
3411-20-20-20	1-1/4"
3411-24-24-24	1-1/2"
3411-32-32-32	2"



Part No.	Code 62 Companion on three sides
3412-12-12-12	3/4"
3412-16-16-16	1"
3412-20-20-20	1-1/4"
3412-24-24-24	1-1/2"
3412-32-32-32	2"

Crosses

O'Ring Boss

National Pipe Thread

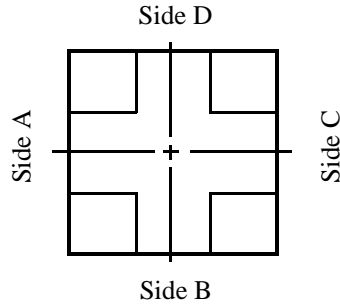
Socket Weld Pipe

Socket Weld Tube

4-Bolt Flange



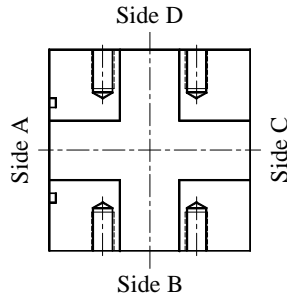
Crosses



All crosses have four sides. Side A, B, C, & D
Although most sizes shown are straight sizes,
Jump sizes are available upon request.
Contact our sales staff for sizes not shown in this catalog.

Side A	Side B	Side C	Side D	Page No.
ORF	Comp	Comp	Comp	47-3
ORF	ORB	Comp	ORB	47-3
ORF	ORB	ORB	ORB	47-3
ORF	SWP	Comp	SWP	47-3
Comp	Comp	Comp	Comp	47-4
Comp	Comp	Comp	SWP	47-4
Comp	ORB	ORB	ORB	47-4
Comp	ORB	SWP	ORB	47-4
Comp	SWP	Comp	SWP	47-5
SWP	ORB	SWP	ORB	47-5
SWP	SWP	SWP	SWP	47-5
SWP	ORB	ORB	ORB	47-5
SWP	NPT	NPT	NPT	47-6
ORB	ORB	ORB	ORB	47-6
NPT	NPT	NPT	NPT	47-6

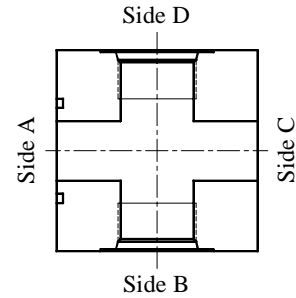
Crosses



Cross - ORF / Comp / Comp / Comp

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (Comp)	Side C (Comp)	Side D (Comp)
2599-16-16-16-16	2635-16-16-16-16	1.00	1.00	1.00	1.00
2599-20-20-20-20	2635-20-20-20-20	1.25	1.25	1.25	1.25
2599-24-24-24-24	2635-24-24-24-24	1.50	1.50	1.50	1.50
2599-32-32-32-32	2635-32-32-32-32	2.00	2.00	2.00	2.00

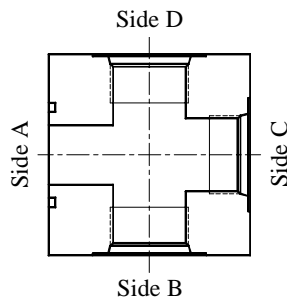
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



Cross - ORF / ORB / Comp / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (Comp)	Side D (ORB)
2601-16-16-16-16	2637-16-16-16-16	1.00	#16	1.00	#16
2601-20-20-20-20	2637-20-20-20-20	1.25	#20	1.25	#20
2601-24-24-24-24	2637-24-24-24-24	1.50	#24	1.50	#24
2601-32-32-32-32	2637-32-32-32-32	2.00	#32	2.00	#32

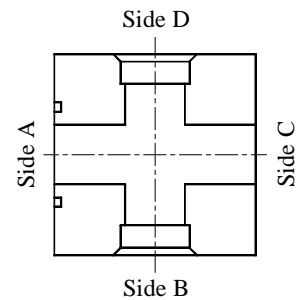
SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED



Cross - ORF / ORB / ORB / ORB

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (ORB)	Side C (ORB)	Side D (ORB)
2600-16-16-16-16	2636-16-16-16-16	1.00	#16	#16	#16
2600-20-20-20-20	2636-20-20-20-20	1.25	#20	#20	#20
2600-24-24-24-24	2636-24-24-24-24	1.50	#24	#24	#24
2600-32-32-32-32	2636-32-32-32-32	2.00	#32	#32	#32

COMES COMPLETE WITH BOLT KIT

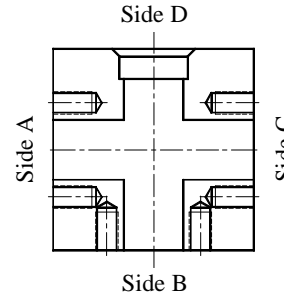
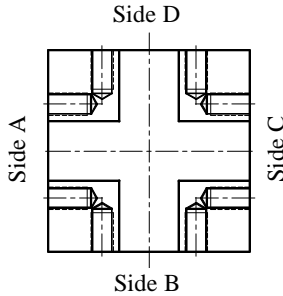


Cross - ORF / SWP / Comp / SWP

Code 61 Part No.	Code 62 Part No.	Side A (ORF)	Side B (SWP)	Side C (Comp)	Side D (SWP)
2598-16-16-16-16	2634-16-16-16-16	1.00	1	1.00	1
2598-20-20-20-20	2634-20-20-20-20	1.25	1-1/4	1.25	1-1/4
2598-24-24-24-24	2634-24-24-24-24	1.50	1-1/2	1.50	1-1/2
2598-32-32-32-32	2634-32-32-32-32	2.00	2	2.00	2

SANDWICH STYLE BLOCK, NO BOLTS SUPPLIED

Crosses

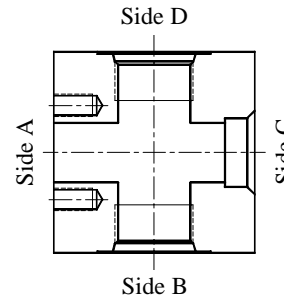
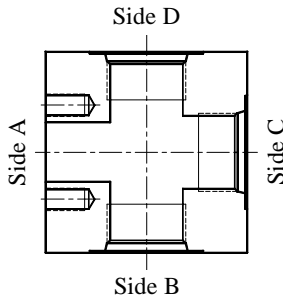


Cross - Comp / Comp / Comp / Comp

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (Comp)	Side D (Comp)
1810-16-16-16-16	1811-16-16-16-16	1.00	1.00	1.00	1.00
1810-20-20-20-20	1811-20-20-20-20	1.25	1.25	1.25	1.25
1810-24-24-24-24	1811-24-24-24-24	1.50	1.50	1.50	1.50
1810-32-32-32-32	1811-32-32-32-32	2.00	2.00	2.00	2.00

Cross - Comp / Comp / Comp / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (Comp)	Side C (Comp)	Side D (SWP)
2596-16-16-16-16	2630-16-16-16-16	1.00	1.00	1.00	1
2596-20-20-20-20	2630-20-20-20-20	1.25	1.25	1.25	1-1/4
2596-24-24-24-24	2630-24-24-24-24	1.50	1.50	1.50	1-1/2
2596-32-32-32-32	2630-32-32-32-32	2.00	2.00	2.00	2



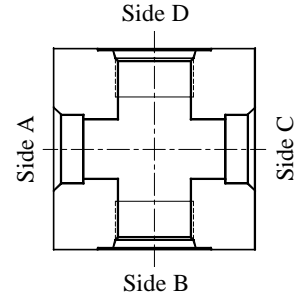
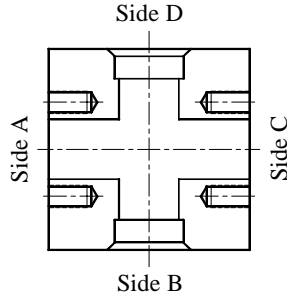
Cross - Comp / ORB / ORB / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (ORB)	Side D (ORB)
2628-16-16-16-16	2632-16-16-16-16	1.00	#16	#16	#16
2628-20-20-20-20	2632-20-20-20-20	1.25	#20	#20	#20
2628-24-24-24-24	2632-24-24-24-24	1.50	#24	#24	#24
2628-32-32-32-32	2632-32-32-32-32	2.00	#32	#32	#32

Cross - Comp / ORB / SWP / ORB

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (ORB)	Side C (SWP)	Side D (ORB)
2572-16-16-16-16	2631-16-16-16-16	1.00	#16	1	#16
2572-20-20-20-20	2631-20-20-20-20	1.25	#20	1-1/4	#20
2572-24-24-24-24	2631-24-24-24-24	1.50	#24	1-1/2	#24
2572-32-32-32-32	2631-32-32-32-32	2.00	#32	2	#32

Crosses

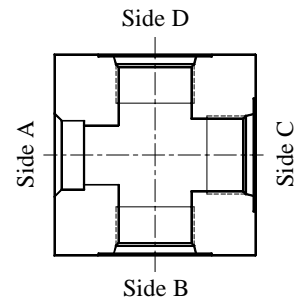
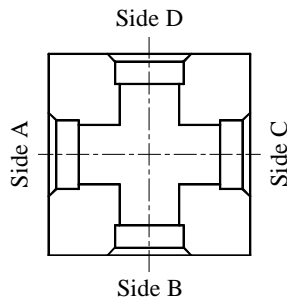


Cross - Comp / SWP / Comp / SWP

Code 61 Part No.	Code 62 Part No.	Side A (Comp)	Side B (SWP)	Side C (Comp)	Side D (SWP)
2597-16-16-16-16	2633-16-16-16-16	1.00	1	1.00	1
2597-20-20-20-20	2633-20-20-20-20	1.25	1-1/4	1.25	1-1/4
2597-24-24-24-24	2633-24-24-24-24	1.50	1-1/2	1.50	1-1/2
2597-32-32-32-32	2633-32-32-32-32	2.00	2	2.00	2

Cross - SWP / ORB / SWP / ORB

Part No.	Side A (SWP)	Side B (ORB)	Side C (SWP)	Side D (ORB)
2603-16-16-16-16	1	#16	1	#16
2603-20-20-20-20	1-1/4	#20	1-1/4	#20
2603-24-24-24-24	1-1/2	#24	1-1/2	#24
2603-32-32-32-32	2	#32	2	#32



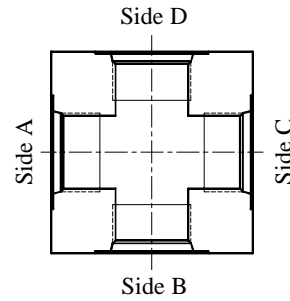
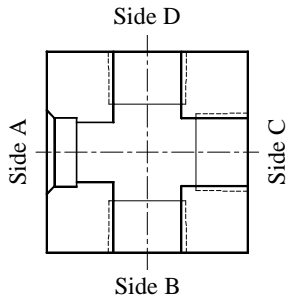
Cross - SWP / SWP / SWP / SWP

Part No.	Side A (SWP)	Side B (SWP)	Side C (SWP)	Side D (SWP)
2602-16-16-16-16	1	1	1	1
2602-20-20-20-20	1-1/4	1-1/4	1-1/4	1-1/4
2602-24-24-24-24	1-1/2	1-1/2	1-1/2	1-1/2
2602-32-32-32-32	2	2	2	2

Cross - SWP / ORB / ORB / ORB

Part No.	Side A (SWP)	Side B (ORB)	Side C (ORB)	Side D (ORB)
2784-16-16-16-16	1	#16	#16	#16
2784-20-20-20-20	1-1/4	#20	#20	#20
2784-24-24-24-24	1-1/2	#24	#24	#24
2784-32-32-32-32	2	#32	#32	#32

Crosses

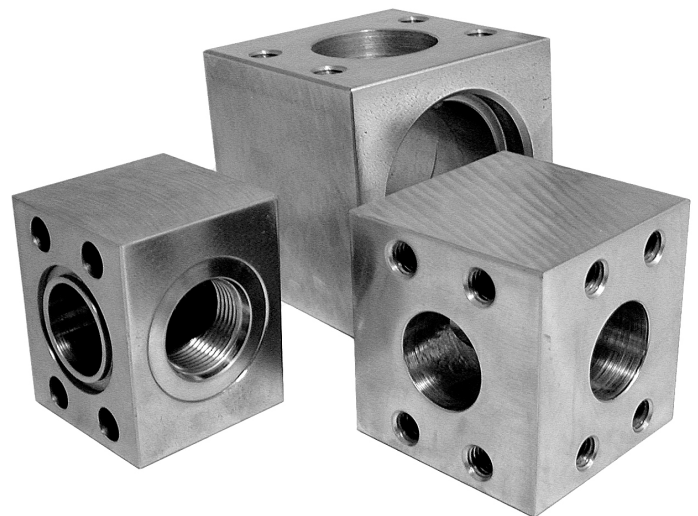
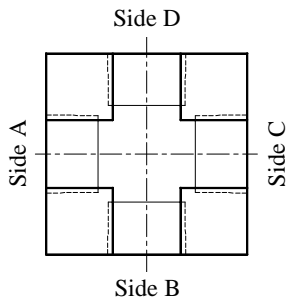


Cross - SWP / NPT / NPT / NPT

Cross - ORB / ORB / ORB / ORB

Part No.	Side A (SWP)	Side B (NPT)	Side C (NPT)	Side D (NPT)
2785-16-16-16-16	1	1"-11.5	1"-11.5	1"-11.5
2785-20-20-20-20	1-1/4	1.25"-11.5	1.25"-11.5	1.25"-11.5
2785-24-24-24-24	1-1/2	1.50"-11.5	1.50"-11.5	1.50"-11.5
2785-32-32-32-32	2	2.00"-11.5	2.00"-11.5	2.00"-11.5

Part No.	Side A (ORB)	Side B (ORB)	Side C (ORB)	Side D (ORB)
2627-16-16-16-16	#16	#16	#16	#16
2627-20-20-20-20	#20	#20	#20	#20
2627-24-24-24-24	#24	#24	#24	#24
2627-32-32-32-32	#32	#32	#32	#32



Cross - NPT / NPT / NPT / NPT

Part No.	Side A (NPT)	Side B (NPT)	Side C (NPT)	Side D (NPT)
2606-16-16-16-16	1"-11.5	1"-11.5	1"-11.5	1"-11.5
2606-20-20-20-20	1.25"-11.5	1.25"-11.5	1.25"-11.5	1.25"-11.5
2606-24-24-24-24	1.50"-11.5	1.50"-11.5	1.50"-11.5	1.50"-11.5
2606-32-32-32-32	2.00"-11.5	2.00"-11.5	2.00"-11.5	2.00"-11.5

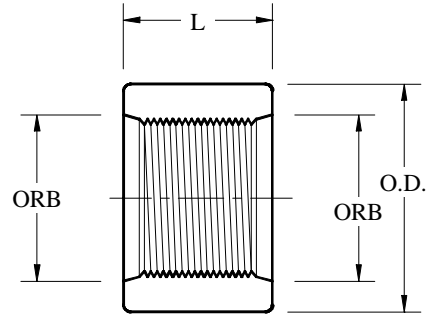
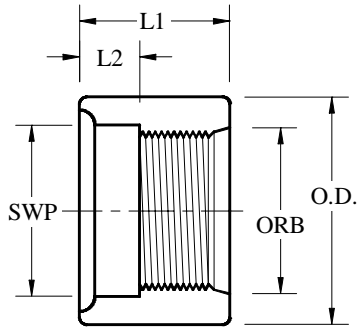


3,000 psi Weld-On & Threaded Adapters

ORB Half Coupling
NPT Half Coupling
ORB to ORB Adapter
SWP to ORB Adapter
ORB Weld-O-Let
NPT Weld-O-Let
SWP to ORFS Adapter
SWT to ORFS Adapter
ORB Weld Insert
SWP to SWP 90° Elbow
SWP to SWP 45° Elbow
SWT to ORB Adapter
SWP to NPT Adapters
NPT to ORB Adapters
ORB Reducer
SWP Coupling
SWP Cap



3000 PSI Weld-On & Threaded Adapters

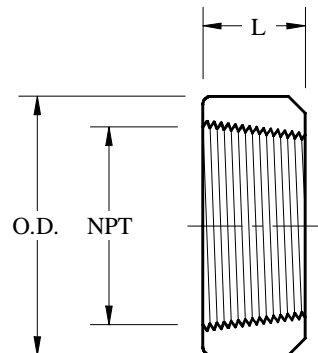
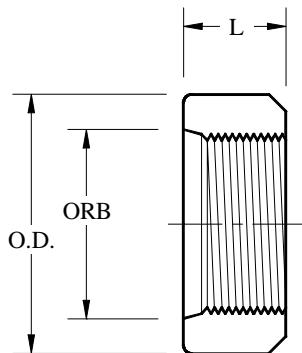


Socket Weld Pipe (SWP) / O'Ring Boss (ORB) Adapter

Part No.	SWP	ORB	L1	L2	O.D.
1805-08-08	1/2"	#8 (3/4"-16)	1.13	0.38	1.31
1805-12-12	3/4"	#12 (1-1/16"-12)	1.38	0.50	1.66
1805-16-16	1"	#16 (1-5/16"-12)	1.38	0.50	1.90
1805-20-20	1-1/4"	#20 (1-5/8"-12)	1.50	0.63	2.38
1805-24-24	1-1/2"	#24 (1-7/8"-12)	1.63	0.75	2.88
1805-32-32	2"	#32 (2.50"-12)	1.75	0.75	3.50

O'Ring Boss (ORB) / O'Ring Boss (ORB) Adapter

Part No.	ORB	ORB	L	O.D.
1875-08-08	#8 (3/4"-16)	#8 (3/4"-16)	1.38	1.31
1875-12-12	#12 (1-1/16"-12)	#12 (1-1/16"-12)	1.63	1.66
1875-16-16	#16 (1-5/16"-12)	#16 (1-5/16"-12)	1.63	1.90
1875-20-20	#20 (1-5/8"-12)	#20 (1-5/8"-12)	1.63	2.38
1875-24-24	#24 (1-7/8"-12)	#24 (1-7/8"-12)	1.63	2.88
1875-32-32	#32 (2.50"-12)	#32 (2.50"-12)	1.63	3.50



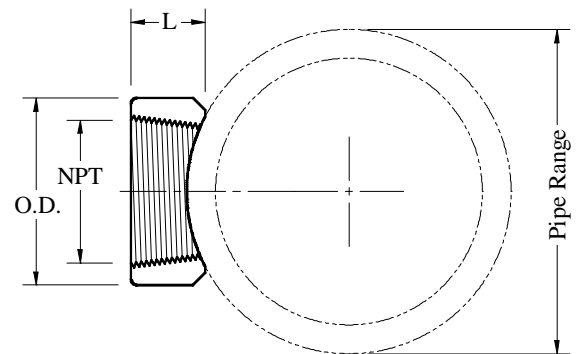
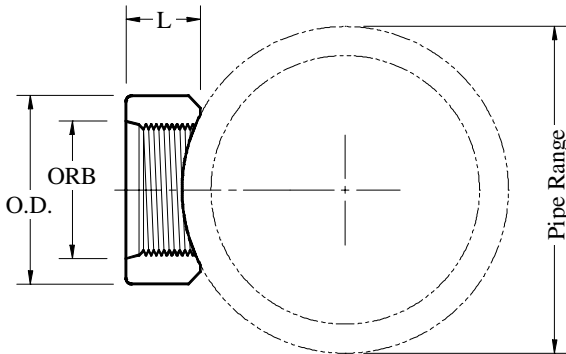
O'Ring Boss (ORB) Half Coupling

Part No.	ORB	L	O.D.
1877-06	#6 (9/16"-18)	0.88	1.00
1877-08	#8 (3/4"-16)	0.88	1.31
1877-12	#12 (1-1/16"-12)	1.13	1.66
1877-16	#16 (1-5/16"-12)	1.25	1.90
1877-20	#20 (1-5/8"-12)	1.25	2.38
1877-24	#24 (1-7/8"-12)	1.38	2.88
1877-32	#32 (2.50"-12)	1.50	3.50

National Pipe Thread (NPT) Half Coupling

Part No.	NPT	L	O.D.
1878-08	1/2"-14	0.88	1.31
1878-12	3/4"-14	1.13	1.66
1878-16	1"-11.5	1.25	1.90
1878-20	1.25"-11.5	1.38	2.38
1878-24	1.50"-11.5	1.50	2.88
1878-32	2.00"-11.5	1.50	3.50

3000 PSI Weld-On & Threaded Adapters

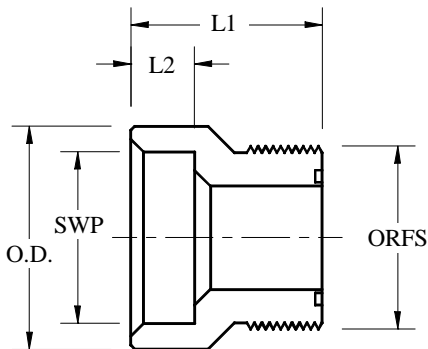


O'Ring Boss (ORB) Weld-O-Let

Part No.	Pipe Range	ORB	L	O.D.
2624-16-06	1/2" to 1"	#6 (9/16"-18)	0.88	1.06
2624-32-06	1-1/4" to 2"	#6 (9/16"-18)	0.88	1.06
2624-20-08	3/4" to 1"	#8 (3/4"-16)	0.88	1.31
2624-32-08	1-1/4" to 3"	#8 (3/4"-16)	0.88	1.31
2624-32-12	1-1/4" to 2"	#12 (1-1/16"-12)	1.13	1.66
2624-56-12	2-1/2" to 4"	#12 (1-1/16"-12)	1.13	1.66
2624-32-16	1-1/4" to 1-1/2"	#16 (1-5/16"-12)	1.25	1.90
2624-56-16	2" to 3"	#16 (1-5/16"-12)	1.25	1.90
2624-88-16	3-1/2" to 6"	#16 (1-5/16"-12)	1.25	1.90

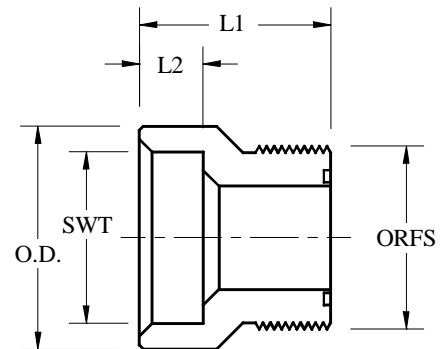
National Pipe Thread (NPT) Weld-O-Let

Part No.	Pipe Range	NPT	L	O.D.
2645-16-06	1/2" to 1"	3/8"-18	0.88	1.06
2645-32-06	1-1/4" to 2"	3/8"-18	0.88	1.06
2645-20-08	3/4" to 1"	1/2"-14	0.88	1.31
2645-32-08	1-1/4" to 3"	1/2"-14	0.88	1.31
2645-32-12	1-1/4" to 2"	3/4"-14	1.13	1.66
2645-56-12	2-1/2" to 4"	3/4"-14	1.13	1.66
2645-32-16	1-1/4" to 1-1/2"	1"-11.5	1.25	1.90
2645-56-16	2" to 3"	1"-11.5	1.25	1.90
2645-88-16	3-1/2" to 6"	1"-11.5	1.25	1.90



**Socket Weld Pipe (SWP) /
O'Ring Face Seal (ORFS) Adapter**

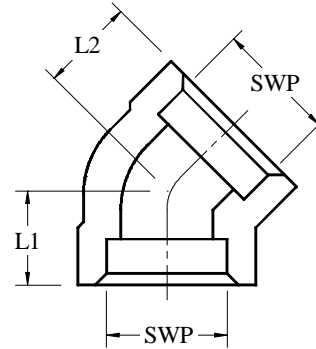
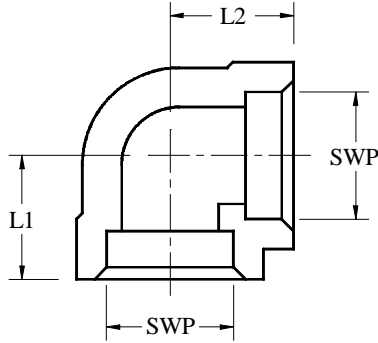
Part No.	SWP	ORFS	L1	L2	O.D.
2331-08-08	1/2"	13/16"-16	1.44	0.38	1.25
2331-12-12	3/4"	1-3/16"-12	1.44	0.38	1.50
2331-16-16	1"	1-7/16"-12	1.50	0.50	1.75
2331-20-20	1-1/4"	1-11/16"-12	1.63	0.50	2.25
2331-24-24	1-1/2"	2"-12	1.75	0.50	2.50



**Socket Weld Tube (SWT) /
O'Ring Face Seal (ORFS) Adapter**

Part No.	SWT	ORFS	L1	L2	O.D.
2356-08-08	1/2"	13/16"-16	1.44	0.38	1.25
2356-12-12	3/4"	1-3/16"-12	1.44	0.38	1.50
2356-16-16	1"	1-7/16"-12	1.50	0.50	1.75
2356-20-20	1-1/4"	1-11/16"-12	1.63	0.50	2.25
2356-24-24	1-1/2"	2"-12	1.75	0.50	2.50

3000 PSI Weld-On & Threaded Adapters



**90° Socket Weld Pipe (SWP) Elbow
(Forged Steel)**

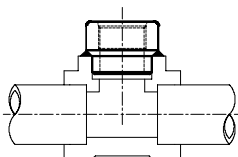
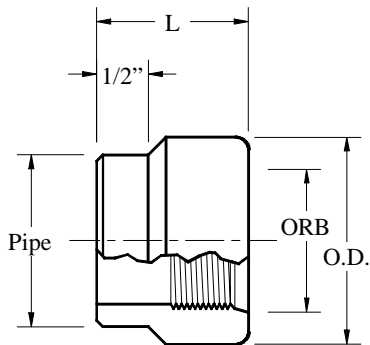
Part No.	SWP	SWP	L1	L2
2652-12-12	3/4"	3/4"	1.31	1.31
2652-16-16	1"	1"	1.50	1.50
2652-20-20	1-1/4"	1-1/4"	1.75	1.75
2652-24-24	1-1/2"	1-1/2"	2.00	2.00
2652-32-32	2"	2"	2.38	2.38
2652-40-40	2-1/2"	2-1/2"	3.00	3.00
2652-48-48	3"	3"	3.38	3.38
2652-64-64	4"	4"	4.18	4.18

**45° Socket Weld Pipe (SWP) Elbow
(Forged Steel)**

Part No.	SWP	SWP	L1	L2
2653-12-12	3/4"	3/4"	1.00	1.00
2653-16-16	1"	1"	1.13	1.13
2653-20-20	1-1/4"	1-1/4"	1.31	1.31
2653-24-24	1-1/2"	1-1/2"	1.38	1.38
2653-32-32	2"	2"	1.69	1.69
2653-40-40	2-1/2"	2-1/2"	2.06	2.06
2653-48-48	3"	3"	2.50	2.50
2653-64-64	4"	4"	3.13	3.13

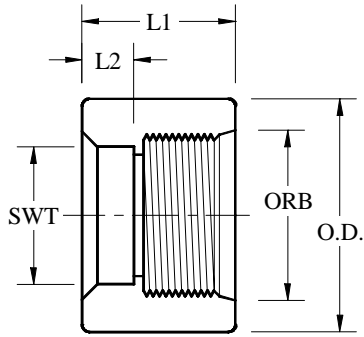
O'Ring Boss (ORB) Weld Insert

Part No.	ORB	Pipe	L	O.D.
3348-06-12	#6 (9/16"-18)	3/4" (1.050)	1.25	1.50
3348-08-12	#8 (3/4"-16)	3/4" (1.050)	1.25	1.50
3348-08-16	#8 (3/4"-16)	1" (1.315)	1.31	1.75
3348-12-16	#12 (1-1/16"-12)	1" (1.315)	1.31	1.75
3348-12-20	#12 (1-1/16"-12)	1-1/4" (1.660)	1.38	2.00
3348-16-20	#16 (1-5/16"-12)	1-1/4" (1.660)	1.38	2.00
3348-12-24	#12 (1-1/16"-12)	1-1/2" (1.900)	1.50	2.25
3348-16-24	#16 (1-5/16"-12)	1-1/2" (1.900)	1.50	2.25
3348-20-24	#20 (1-5/8"-12)	1-1/2" (1.900)	1.50	2.25
3348-16-32	#16 (1-5/16"-12)	2" (2.375)	1.63	2.75
3348-20-32	#20 (1-5/8"-12)	2" (2.375)	1.63	2.75
3348-24-32	#24 (1-7/8"-12)	2" (2.375)	1.63	2.75
3348-16-40	#16 (1-5/16"-12)	2-1/2" (2.875)	1.75	3.25
3348-20-40	#20 (1-5/8"-12)	2-1/2" (2.875)	1.75	3.25
3348-24-40	#24 (1-7/8"-12)	2-1/2" (2.875)	1.75	3.25
3348-32-40	#32 (2-1/2"-12)	2-1/2" (2.875)	1.75	3.25



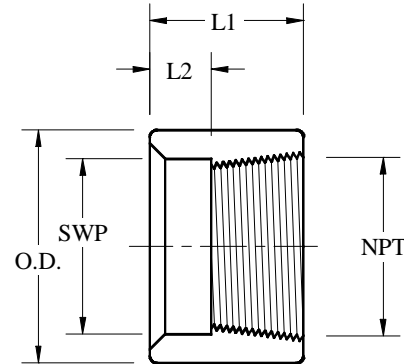
Eg. welded into forged steel socket weld tee

3000 PSI Weld-On & Threaded Adapters



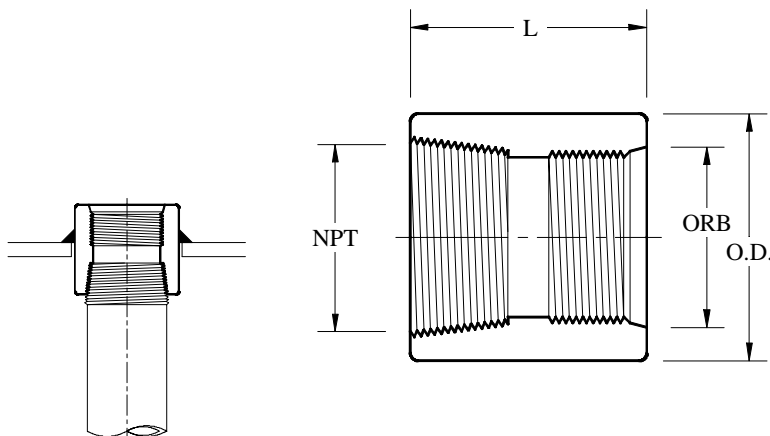
Socket Weld Tube (SWT) / O'Ring Boss (ORB) Adapter

Part No.	SWT	ORB	L1	L2	O.D.
2148-08-08	1/2"	#8 (3/4"-16)	1.00	0.31	1.25
2148-10-08	5/8"	#8 (3/4"-16)	1.00	0.31	1.25
2148-12-08	3/4"	#8 (3/4"-16)	1.00	0.38	1.31
2148-12-12	3/4"	#12 (1-1/16"-12)	1.25	0.44	1.50
2148-16-12	1"	#12 (1-1/16"-12)	1.25	0.50	1.66
2148-16-16	1"	#16 (1-5/16"-12)	1.25	0.50	1.75
2148-20-16	1-1/4"	#16 (1-5/16"-12)	1.25	0.50	1.90
2148-20-20	1-1/4"	#20 (1-5/8"-12)	1.38	0.50	2.25
2148-24-20	1-1/2"	#20 (1-5/8"-12)	1.38	0.50	2.25
2148-24-24	1-1/2"	#24 (1-7/8"-12)	1.50	0.50	2.50
2148-28-24	1-3/4"	#24 (1-7/8"-12)	1.50	0.50	2.50
2148-32-24	2"	#24 (1-7/8"-12)	1.50	0.75	2.88



Socket Weld Pipe (SWP) / National Pipe Thread (NPT) Adapters

Part No.	SWP	NPT	L1	L2	O.D.
1809-08-08	1/2"	1/2"-14	1.13	0.38	1.31
1809-12-12	3/4"	3/4"-14	1.38	0.50	1.66
1809-16-16	1"	1"-11.5	1.38	0.50	1.90
1809-20-20	1-1/4"	1.25"-11.5	1.50	0.63	2.38
1809-24-24	1-1/2"	1.50"-11.5	1.63	0.75	2.50
1809-32-32	2"	2.00"-11.5	1.63	0.75	3.50
1809-40-40	2-1/2"	2.50"-11.5	2.13	0.75	3.50
1809-48-48	3"	3.00"-11.5	2.13	0.75	4.50
1809-64-64	4"	4.00"-11.50	2.25	0.75	5.56

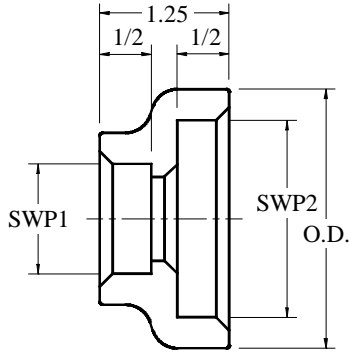


NPT / ORB Coupling

Part No.	NPT	ORB	L	O.D.
3349-08-08	1/2"-14	#8 (3/4"-16)	1.50	1.31
3349-12-12	3/4"-14	#12 (1-1/16"-12)	1.63	1.66
3349-16-16	1"-11.5	#16 (1-5/16"-12)	1.75	1.90
3349-20-20	1.25"-11.5	#20 (1-5/8"-12)	1.75	2.38
3349-24-24	1.50"-11.5	#24 (1-7/8"-12)	1.75	2.88
3349-32-32	2.00"-11.5	#32 (2.50"-12)	1.75	3.50

Perfect for downpipes
In hydraulic tanks

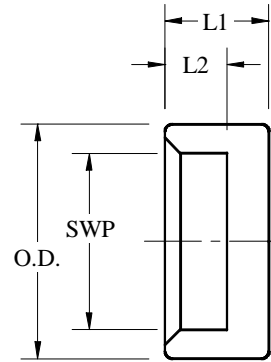
3000 PSI Weld-On & Threaded Adapters



Socket Weld Pipe (SWP) Coupling

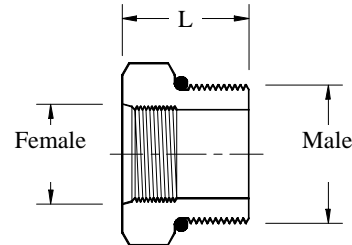
Part No.	SWP 1	SWP 2	O.D.
2265-12-12*	3/4"	3/4"	—
2265-12-16	3/4"	1"	1.75
2265-16-16*	1"	1"	—
2265-12-20	3/4"	1-1/4"	2.25
2265-16-20	1"	1-1/4"	2.25
2265-20-20*	1-1/4"	1-1/4"	—
2265-12-24	3/4"	1-1/2"	2.50
2265-16-24	1"	1-1/2"	2.50
2265-20-24	1-1/4"	1-1/2"	2.50
2265-24-24*	1-1/2"	1-1/2"	—
2265-16-32	1"	2"	2.88
2265-20-32	1-1/4"	2"	2.88
2265-24-32	1-1/2"	2"	2.88
2265-32-32*	2"	2"	—
2265-16-40	1"	2-1/2"	3.50
2265-20-40	1-1/4"	2-1/2"	3.50
2265-24-40	1-1/2"	2-1/2"	3.50
2265-32-40	2"	2-1/2"	3.50
2265-40-40*	2-1/2"	2-1/2"	—
2265-20-48	1-1/4"	3"	4.38
2265-24-48	1-1/2"	3"	4.38
2265-32-48	2"	3"	4.38
2265-40-48	2-1/2"	3"	4.38
2265-48-48*	3"	3"	—
2265-24-64	1-1/2"	4"	5.50
2265-32-64	2"	4"	5.50
2265-40-64	2-1/2"	4"	5.50
2265-48-64	3"	4"	5.50
2265-64-64*	4"	4"	—

*Forged steel, Profile may vary



Socket Weld Pipe (SWP) Cap

Part No.	SWP	L1	L2	O.D.
2651-12	3/4"	1.00	0.38	1.66
2651-16	1"	1.25	0.50	1.90
2651-20	1-1/4"	1.25	0.50	2.25
2651-24	1-1/2"	1.25	0.50	2.50
2651-32	2"	1.50	0.63	2.88
2651-40	2-1/2"	1.50	0.63	3.50
2651-48	3"	1.50	0.63	4.38
2651-64	4"	1.50	0.63	5.50



Female ORB / Male ORB Reducer

Part No.	Female ORB	Male ORB	L
2565-20	—	#20 (1-5/8"-12)	1.00
2565-12-20	#12 (1-1/16"-12)	#20 (1-5/8"-12)	1.00
2565-16-20	#16 (1-5/16"-12)	#20 (1-5/8"-12)	1.00
2565-24	—	#24 (1-7/8"-12)	1.18
2565-12-24	#12 (1-1/16"-12)	#24 (1-7/8"-12)	1.18
2565-16-24	#16 (1-5/16"-12)	#24 (1-7/8"-12)	1.18
2565-20-24	#20 (1-5/8"-12)	#24 (1-7/8"-12)	1.18
2565-32	—	#32 (2.50"-12)	1.34
2565-16-32	#16 (1-5/16"-12)	#32 (2.50"-12)	1.34
2565-20-32	#20 (1-5/8"-12)	#32 (2.50"-12)	1.34
2565-24-32	#24 (1-7/8"-12)	#32 (2.50"-12)	1.34



Code 61 O'Ring Head Adapters

Split Flange Kit

Plug

ORB Reducer

Union

Socket Weld Pipe

Socket Weld Tube

Butt Weld Pipe

Male ORB

Female ORB

Male NPT

Female NPT

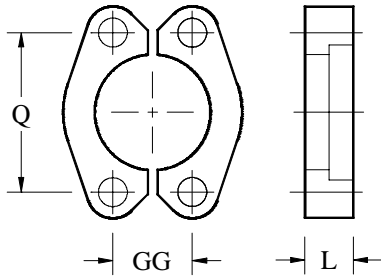
Male JIC

Male BSP

Pipe Stub



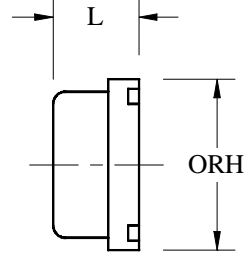
Code 61 O'Ring Head Adapters



Code 61 Split Flange Kit

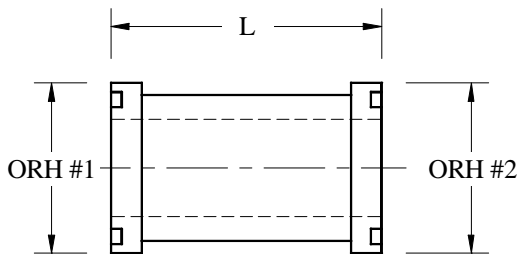
Hex Head Mounting Kit Supplied

Part No.	Size	Q	GG	L
1585-08	1/2"	1.50	0.69	0.50
1585-12	3/4"	1.88	0.88	0.56
1585-16	1.00"	2.06	1.03	0.63
1585-20	1.25"	2.31	1.19	0.56
1585-24	1.50"	2.75	1.41	0.63
1585-32	2.00"	3.06	1.69	0.63
1585-40	2.50"	3.50	2.00	0.88
1585-48	3.00"	4.19	2.44	1.00
1585-56	3.50"	4.75	2.75	1.00
1585-64	4.00"	5.13	3.06	1.25



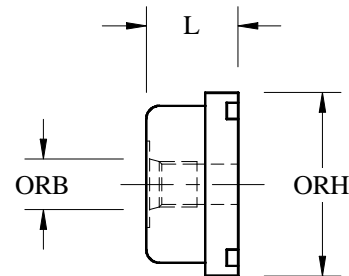
Code 61 O'Ring Head Plug

Part No.	ORH	L
1830-08	1/2"	0.63
1830-12	3/4"	0.69
1830-16	1.00"	0.69
1830-20	1.25"	0.69
1830-24	1.50"	0.75
1830-32	2.00"	0.75
1830-40	2.50"	0.81
1830-48	3.00"	0.88
1830-56	3.50"	1.00
1830-64	4.00"	1.13



Code 61 O'Ring Head Union

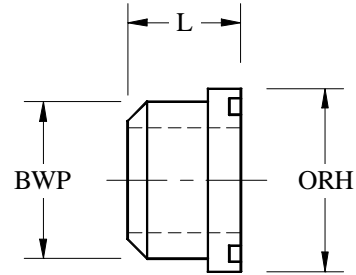
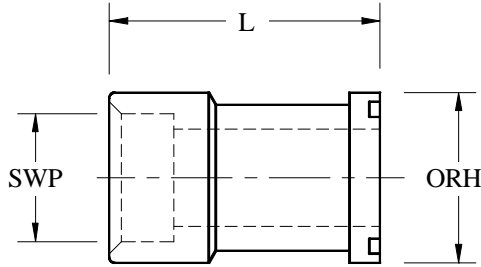
Part No.	ORH #1	ORH #2	L
1958-16-16	1.00	1.00	2.75
1958-16-20	1.00	1.25	2.84
1958-20-20	1.25	1.25	3.00
1958-20-24	1.25	1.50	3.13
1958-24-24	1.50	1.50	3.13
1958-24-32	1.50	2.00	3.13
1958-32-32	2.00	2.00	3.13
1958-32-40	2.00	2.50	3.38
1958-40-40	2.50	2.50	3.63
1958-40-48	2.50	3.00	3.88
1958-48-48	3.00	3.00	4.25
1958-48-56	3.00	3.50	4.25
1958-56-56	3.50	3.50	4.25
1958-56-64	3.50	4.00	4.50



ORB / Code 61 O'Ring Head Plug

Part No.	ORB	ORH	L
2732-06-20	#6 (9/16"-18)	1.25"	0.69
2732-06-24	#6 (9/16"-18)	1.50"	0.75
2732-12-24	#12 (1-1/16"-12)	1.50"	0.75
2732-06-32	#6 (9/16"-18)	2.00"	0.75
2732-12-32	#12 (1-1/16"-12)	2.00"	0.75
2732-16-32	#16 (1-5/16"-12)	2.00"	0.75
2732-08-40	#8 (3/4"-16)	2.50"	0.81
2732-12-40	#12 (1-1/16"-12)	2.50"	0.81
2732-16-40	#16 (1-5/16"-12)	2.50"	0.81
2732-08-48	#8 (3/4"-16)	3.00"	0.88
2732-12-48	#12 (1-1/16"-12)	3.00"	0.88
2732-16-48	#16 (1-5/16"-12)	3.00"	0.88
2732-08-56	#8 (3/4"-16)	3.50"	1.00
2732-12-56	#12 (1-1/16"-12)	3.50"	1.00
2732-16-56	#16 (1-5/16"-12)	3.50"	1.00
2732-08-64	#8 (3/4"-16)	4.00"	1.13
2732-12-64	#12 (1-1/16"-12)	4.00"	1.13
2732-16-64	#16 (1-5/16"-12)	4.00"	1.13

Code 61 O'Ring Head Adapters



Socket Weld Pipe / Code 61 O'Ring Head

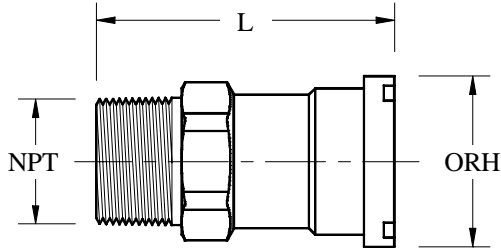
Part No.	SWP	ORH	L
1500-12-12	3/4" (1.055)	1/2"	2.19
1500-12-16	3/4" (1.055)	3/4"	1.50
1500-16-16	1.00" (1.320)	1.00"	2.19
1500-16-20	1.00" (1.320)	1.25"	1.63
1500-20-20	1.25" (1.670)	1.25"	2.50
1500-20-24	1.25" (1.670)	1.50"	2.63
1500-24-24	1.50" (1.910)	1.50"	2.63
1500-24-32	1.50" (1.910)	2.00"	1.75
1500-32-32	2.00" (2.385)	2.00"	2.75
1500-32-40	2.00" (2.385)	2.50"	2.00
1500-40-40	2.50" (2.888)	2.50"	3.25
1500-48-48	3.00" (3.515)	3.00"	3.38
1500-56-56	3.50" (4.015)	3.50"	3.75
1500-64-64	4.00" (4.515)	4.00"	3.75

Sch 80 Butt Weld Pipe / Code 61 O'Ring Head

Part No.	Sch 80 BWP	ORH	L
1604-16-16	1.00	1.00	1.00
1604-20-20	1.25	1.25	1.00
1604-24-20	1.50	1.25	1.50
1604-24-24	1.50	1.50	1.00
1604-32-24	2.00	1.50	2.00
1604-24-32	1.50	2.00	1.13
1604-32-32	2.00	2.00	1.13
1604-40-32	2.50	2.00	2.00
1604-32-40	2.00	2.50	1.25
1604-40-40	2.50	2.50	1.25
1604-48-40	3.00	2.50	2.25
1604-40-48	2.50	3.00	1.50
1604-48-48	3.00	3.00	1.50
1604-56-48	3.50	3.00	2.50
1604-64-48	4.00	3.00	2.50
1604-40-56	2.50	3.50	1.50
1604-48-56	3.00	3.50	1.50
1604-56-56	3.50	3.50	1.50
1604-64-56	4.00	3.50	2.50
1604-48-64	3.00	4.00	1.75
1604-56-64	3.50	4.00	1.75
1604-64-64	4.00	4.00	1.75

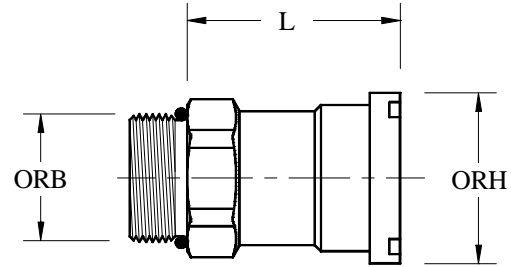


Code 61 O'Ring Head Adapters



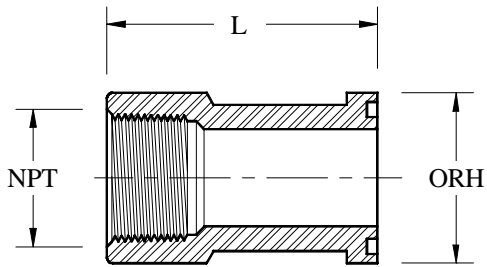
Male NPT / Code 61 O'Ring Head

Part No.	Male NPT	ORH	L
1750-12-12	3/4"-14	3/4"	2.69
1750-16-16	1.00"-11.5	1.00"	3.13
1750-20-20	1.25"-11.5	1.25"	3.50
1750-24-24	1.50"-11.5	1.50"	3.75
1750-32-32	2.00"-11.5	2.00"	4.00



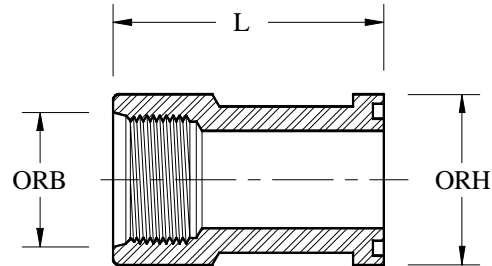
Male ORB / Code 61 O'Ring Head

Part No.	Male ORB	ORH	L
1593-12-12	#12 (1-1/16"-12)	3/4"	1.94
1593-12-16	#12 (1-1/16"-12)	1.00"	2.31
1593-16-16	#16 (1-5/16"-12)	1.00"	2.31
1593-20-16	#20 (1-5/8"-12)	1.00"	2.31
1593-16-20	#16 (1-5/16"-12)	1.25"	2.63
1593-20-20	#20 (1-5/8"-12)	1.25"	2.63
1593-24-20	#24 (1-7/8"-12)	1.25"	2.63
1593-20-24	#20 (1-5/8"-12)	1.50"	2.93
1593-24-24	#24 (1-7/8"-12)	1.50"	2.93
1593-32-24	#32 (2-1/2"-12)	1.50"	2.93
1593-24-32	#24 (1-7/8"-12)	2.00"	2.93
1593-32-32	#32 (2-1/2"-12)	2.00"	2.93



Female NPT / Code 61 O'Ring Head

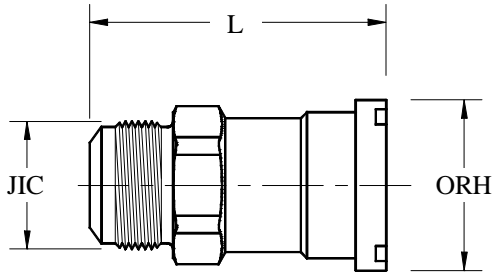
Part No.	Female NPT	ORH	L
1813-12-12	3/4"-14	3/4"	2.50
1813-12-16	3/4"-14	1.00"	1.50
1813-16-16	1.00"-11.5	1.00"	2.63
1813-16-20	1.00"-11.5	1.25"	2.88
1813-20-20	1.25"-11.5	1.25"	2.88
1813-20-24	1.25"-11.5	1.50"	3.00
1813-24-24	1.50"-11.5	1.50"	3.00
1813-24-32	1.50"-11.5	2.00"	3.13
1813-32-32	2.00"-11.5	2.00"	3.13
1813-32-40	2.00"-11.5	2.50"	3.50
1813-40-40	2.50"-8	2.50"	3.50
1813-48-48	3.00"-8	3.00"	3.75
1813-56-56	3.50"-8	3.50"	4.13
1813-64-64	4.00"-8	4.00"	4.25



Female ORB / Code 61 O'Ring Head

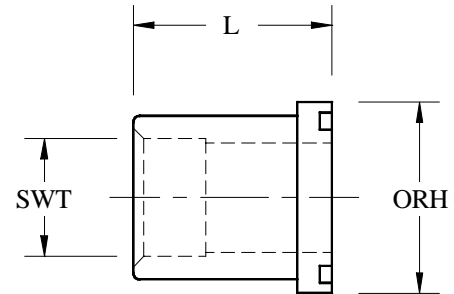
Part No.	Female ORB	ORH	L
1845-12-12	#12 (1-1/16"-12)	3/4"	2.13
1845-12-16	#12 (1-1/16"-12)	1.00"	2.63
1845-16-16	#16 (1-5/16"-12)	1.00"	2.63
1845-16-20	#16 (1-5/16"-12)	1.25"	2.88
1845-20-20	#20 (1-5/8"-12)	1.25"	2.88
1845-20-24	#20 (1-5/8"-12)	1.50"	3.00
1845-24-24	#24 (1-7/8"-12)	1.50"	3.00
1845-24-32	#24 (1-7/8"-12)	2.00"	3.13
1845-32-32	#32 (2-1/2"-12)	2.00"	3.13

Code 61 O'Ring Head Adapters



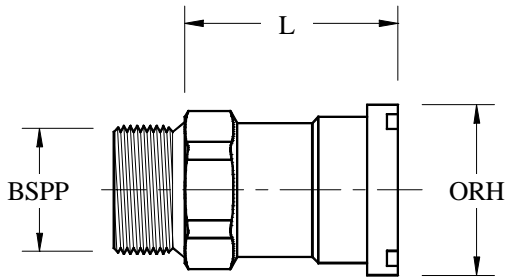
Male JIC / Code 61 O'Ring Head

Part No.	Male JIC	ORH	L
1841-12-12	#12 (1-1/16"-12)	3/4"	2.81
1841-12-16	#12 (1-1/16"-12)	1.00"	2.81
1841-16-16	#16 (1-5/16"-12)	1.00"	3.13
1841-20-16	#20 (1-5/8"-12)	1.00"	3.25
1841-16-20	#16 (1-5/16"-12)	1.25"	2.81
1841-20-20	#20 (1-5/8"-12)	1.25"	3.44
1841-24-20	#24 (1-7/8"-12)	1.25"	3.75
1841-20-24	#20 (1-5/8"-12)	1.50"	3.25
1841-24-24	#24 (1-7/8"-12)	1.50"	3.81
1841-32-24	#32 (2-1/2"-12)	1.50"	4.25
1841-24-32	#24 (1-7/8"-12)	2.00"	3.31
1841-32-32	#32 (2-1/2"-12)	2.00"	4.25



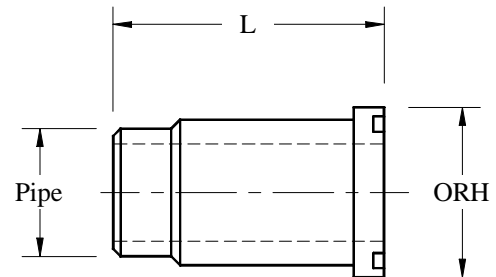
Socket Weld Tube / Code 61 O'Ring Head

Part No.	SWT	ORH	L
1330-12-12	3/4" (0.755)	3/4"	1.63
1330-16-12	1.00" (1.005)	3/4"	2.19
1330-16-16	1.00" (1.005)	1.00"	1.63
1330-20-16	1.25" (1.255)	1.00"	2.19
1330-20-20	1.25" (1.255)	1.25"	1.88
1330-24-20	1.50" (1.510)	1.25"	2.50
1330-24-24	1.50" (1.510)	1.50"	2.00
1330-28-24	1.75" (1.760)	1.50"	2.50
1330-32-24	2.00" (2.010)	1.50"	2.63
1330-32-32	2.00" (2.010)	2.00"	2.00



Male BSPP / Code 61 O'Ring Head

Part No.	Male BSPP	ORH	L
1965-12-16	3/4"-14	1.00"	2.81
1965-16-16	1.00"-11	1.00"	2.81
1965-20-16	1.25"-11	1.00"	3.13
1965-16-20	1.00"-11	1.25"	3.25
1965-20-20	1.25"-11	1.25"	2.81
1965-24-20	1.50"-11	1.25"	3.44
1965-20-24	1.25"-11	1.50"	3.75
1965-24-24	1.50"-11	1.50"	3.25
1965-24-32	1.50"-11	2.00"	3.81



Pipe Stub / Code 61 O'Ring Head

Part No.	Pipe	ORH	L
1827-12-12	3/4" (1.050)	3/4"	2.25
1827-16-16	1.00" (1.315)	1.00"	2.25
1827-20-20	1.25" (1.660)	1.25"	2.25
1827-24-24	150" (1.900)	1.50"	2.88
1827-32-32	2.00" (2.375)	2.00"	3.00



Code 62 O'Ring Head Adapters

Split Flange Kit

Plug

ORB Reducer

Union

Socket Weld Pipe

Butt Weld Pipe

Male ORB

Female ORB

Male NPT

Female NPT

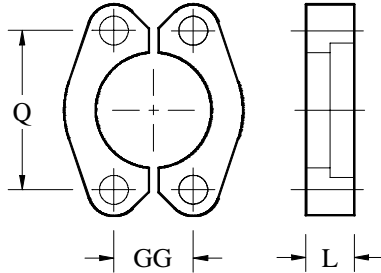
Male JIC

Male BSP

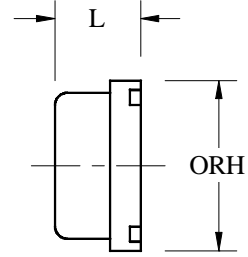
Pipe Stub



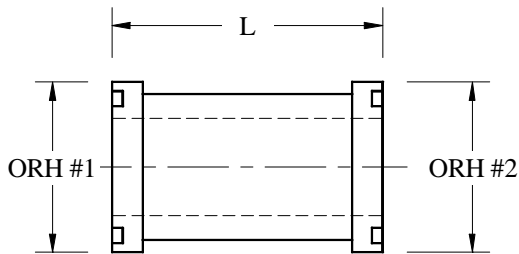
Code 62 O'Ring Head Adapters


Code 62 Split Flange Kit
Hex Head Mounting Kit Supplied

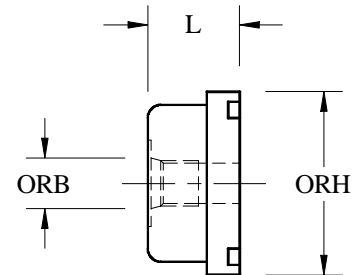
Part No.	Size	Q	GG	L
1825-08	1/2"	1.57	0.72	0.63
1825-12	3/4"	2.00	0.94	0.75
1825-16	1.00"	2.25	1.09	0.94
1825-20	1.25"	2.63	1.25	1.06
1825-24	1.50"	3.13	1.44	1.25
1825-32	2.00"	3.81	1.75	1.50


Code 62 O'Ring Head Plug

Part No.	ORH	L
1646-08	1/2"	0.69
1646-12	3/4"	0.81
1646-16	1.00"	0.94
1646-20	1.25"	1.13
1646-24	1.50"	1.31
1646-32	2.00"	1.63

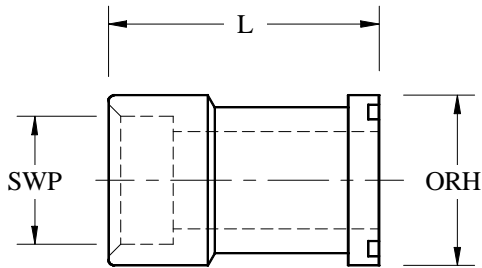

Code 62 O'Ring Head Union

Part No.	ORH #1	ORH #2	L
1959-16-16	1.00	1.00	3.56
1959-16-20	1.00	1.25	3.75
1959-20-20	1.25	1.25	3.81
1959-20-24	1.25	1.50	4.13
1959-24-24	1.50	1.50	4.69
1959-24-32	1.50	2.00	5.13
1959-32-32	2.00	2.00	5.69


ORB / Code 62 O'Ring Head Plug

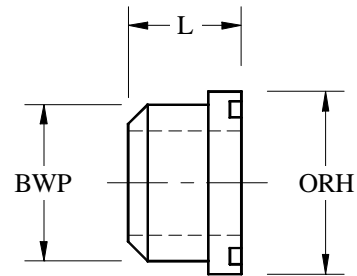
Part No.	ORB	ORH	L
2733-06-20	#6 (9/16"-18)	1.25"	1.13
2733-06-24	#6 (9/16"-18)	1.50"	1.31
2733-12-24	#12 (1-1/16"-12)	1.50"	1.31
2733-06-32	#6 (9/16"-18)	2.00"	1.63
2733-12-32	#12 (1-1/16"-12)	2.00"	1.63
2733-16-32	#16 (1-5/16"-12)	2.00"	1.63

Code 62 O'Ring Head Adapters



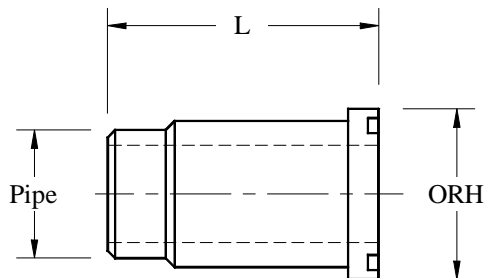
Socket Weld Pipe / Code 62 O'Ring Head

Part No.	SWP	ORH	L
1442-12-12	3/4" (1.055)	1/2"	1.94
1442-12-16	3/4" (1.055)	3/4"	1.88
1442-16-16	1.00" (1.320)	1.00"	2.13
1442-16-20	1.00" (1.320)	1.25"	2.13
1442-20-20	1.25" (1.670)	1.25"	2.50
1442-20-24	1.25" (1.670)	1.50"	2.50
1442-24-24	1.50" (1.910)	1.50"	3.00
1442-24-32	1.50" (1.910)	2.00"	3.00
1442-32-32	2.00" (2.385)	2.00"	3.50



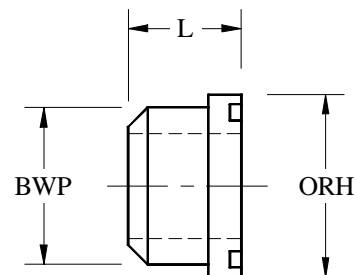
Sch 80 Butt Weld Pipe / Code 62 O'Ring Head

Part No.	Sch 80 BWP	ORH	L
1982-16-16	1.00	1.00	1.50
1982-20-16	1.25	1.00	2.00
1982-16-20	1.00	1.25	1.68
1982-20-20	1.25	1.25	1.68
1982-24-20	1.50	1.25	2.25
1982-20-24	1.25	1.50	2.00
1982-24-24	1.50	1.50	2.00
1982-32-24	2.00	1.50	3.00
1982-24-32	1.50	2.00	2.38
1982-32-32	2.00	2.00	2.38



Pipe Stub / Code 62 O'Ring Head

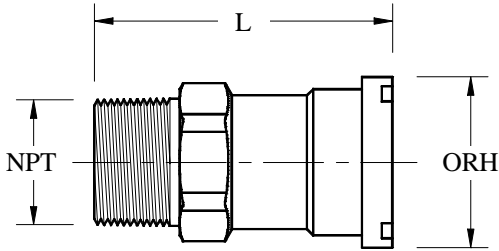
Part No.	Pipe	ORH	L
1882-12-12	3/4" (1.050)	3/4"	2.25
1882-16-16	1.00" (1.315)	1.00"	2.63
1882-20-20	1.25" (1.660)	1.25"	2.75
1882-24-24	1.50" (1.900)	1.50"	3.50
1882-32-32	2.00" (2.375)	2.00"	4.00



Sch 160 Butt Weld Pipe / Code 62 O'Ring Head

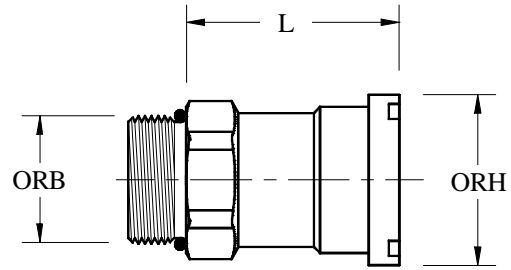
Part No.	Sch 160 BWP	ORH	L
1960-16-16	1.00	1.00	1.50
1960-20-20	1.25	1.25	1.69
1960-24-24	1.50	1.50	2.00
1960-32-32	2.00	2.00	2.38

Code 62 O'Ring Head Adapters



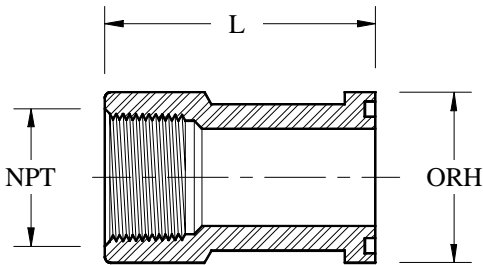
Male NPT / Code 62 O'Ring Head

Part No.	Male NPT	ORH	L
2021-12-12	3/4"-14	3/4"	2.56
2021-16-16	1.00"-11.5	1.00"	3.00
2021-20-20	1.25"-11.5	1.25"	3.25
2021-24-24	1.50"-11.5	1.50"	3.31
2021-32-32	2.00"-11.5	2.00"	4.38



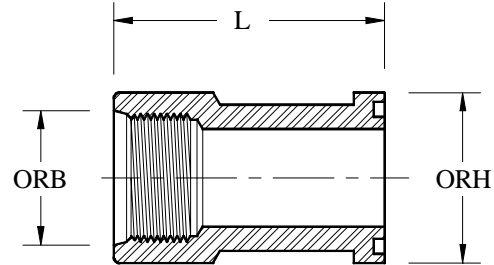
Male ORB / Code 62 O'Ring Head

Part No.	Male ORB	ORH	L
2020-12-12	#12 (1-1/16"-12)	3/4"	2.25
2020-12-16	#12 (1-1/16"-12)	1.00"	2.63
2020-16-16	#16 (1-5/16"-12)	1.00"	2.63
2020-20-16	#20 (1-5/8"-12)	1.00"	2.63
2020-16-20	#16 (1-5/16"-12)	1.25"	2.94
2020-20-20	#20 (1-5/8"-12)	1.25"	2.94
2020-24-20	#24 (1-7/8"-12)	1.25"	2.94
2020-20-24	#20 (1-5/8"-12)	1.50"	2.75
2020-24-24	#24 (1-7/8"-12)	1.50"	2.75
2020-32-24	#32 (2-1/2"-12)	1.50"	2.75
2020-24-32	#24 (1-7/8"-12)	2.00"	3.38
2020-32-32	#32 (2-1/2"-12)	2.00"	3.38



Female NPT / Code 62 O'Ring Head

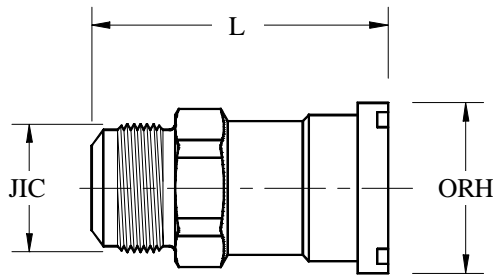
Part No.	Female NPT	ORH	L
1884-12-12	3/4"-14	3/4"	2.25
1884-12-16	3/4"-14	1.00"	2.00
1884-16-16	1.00"-11.5	1.00"	2.50
1884-16-20	1.00"-11.5	1.25"	2.38
1884-20-20	1.25"-11.5	1.25"	2.75
1884-20-24	1.25"-11.5	1.50"	2.75
1884-24-24	1.50"-11.5	1.50"	3.13
1884-24-32	1.50"-11.5	2.00"	3.25
1884-32-32	2.00"-11.5	2.00"	3.63



Female ORB / Code 62 O'Ring Head

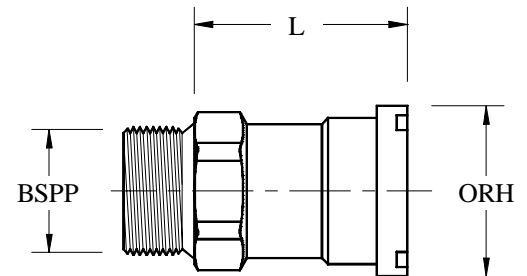
Part No.	Female ORB	ORH	L
1885-12-12	#12 (1-1/16"-12)	3/4"	2.25
1885-12-16	#12 (1-1/16"-12)	1.00"	2.00
1885-16-16	#16 (1-5/16"-12)	1.00"	2.50
1885-16-20	#16 (1-5/16"-12)	1.25"	2.38
1885-20-20	#20 (1-5/8"-12)	1.25"	2.75
1885-20-24	#20 (1-5/8"-12)	1.50"	2.75
1885-24-24	#24 (1-7/8"-12)	1.50"	3.13
1885-24-32	#24 (1-7/8"-12)	2.00"	3.25
1885-32-32	#32 (2-1/2"-12)	2.00"	3.63

Code 62 O'Ring Head Adapters



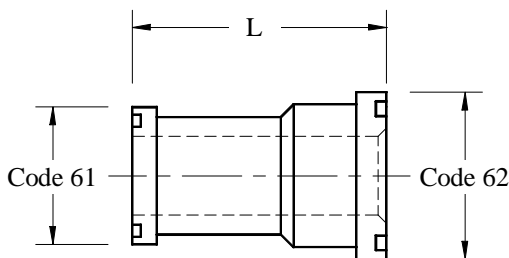
Male JIC / Code 62 O'Ring Head

Part No.	Male JIC	ORH	L
1883-12-12	#12 (1-1/16"-12)	3/4"	3.13
1883-12-16	#12 (1-1/16"-12)	1.00"	3.44
1883-16-16	#16 (1-5/16"-12)	1.00"	3.56
1883-20-16	#20 (1-5/8"-12)	1.00"	3.56
1883-16-20	#16 (1-5/16"-12)	1.25"	3.81
1883-20-20	#20 (1-5/8"-12)	1.25"	3.88
1883-24-20	#24 (1-7/8"-12)	1.25"	4.03
1883-20-24	#20 (1-5/8"-12)	1.50"	3.75
1883-24-24	#24 (1-7/8"-12)	1.50"	3.81
1883-32-24	#32 (2-1/2"-12)	1.50"	3.81
1883-24-32	#24 (1-7/8"-12)	2.00"	4.44
1883-32-32	#32 (2-1/2"-12)	2.00"	4.44



Male BSPP / Code 62 O'Ring Head

Part No.	Male BSPP	ORH	L
2022-12-16	3/4"-14	1.00"	2.63
2022-16-16	1.00"-11	1.00"	2.63
2022-20-16	1.25"-11	1.00"	2.63
2022-16-20	1.00"-11	1.25"	3.00
2022-20-20	1.25"-11	1.25"	3.00
2022-24-20	1.50"-11	1.25"	3.00
2022-20-24	1.25"-11	1.50"	2.75
2022-24-24	1.50"-11	1.50"	2.75
2022-24-32	1.50"-11	2.00"	3.31



Code 61 / Code 62 O'Ring Head Union

Part No.	Code 61 ORH	Code 62 ORH	L
1955-16-16	1.00	1.00	3.13
1955-20-16	1.25	1.00	3.38
1955-16-20	1.00	1.25	3.25
1955-20-20	1.25	1.25	3.50
1955-24-20	1.50	1.25	3.56
1955-20-24	1.25	1.50	3.75
1955-24-24	1.50	1.50	3.88
1955-32-24	2.00	1.50	3.88
1955-24-32	1.50	2.00	4.25
1955-32-32	2.00	2.00	4.25
1955-40-32	2.50	2.00	4.50

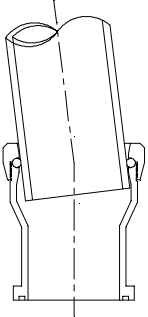


Suction & Return Adapters

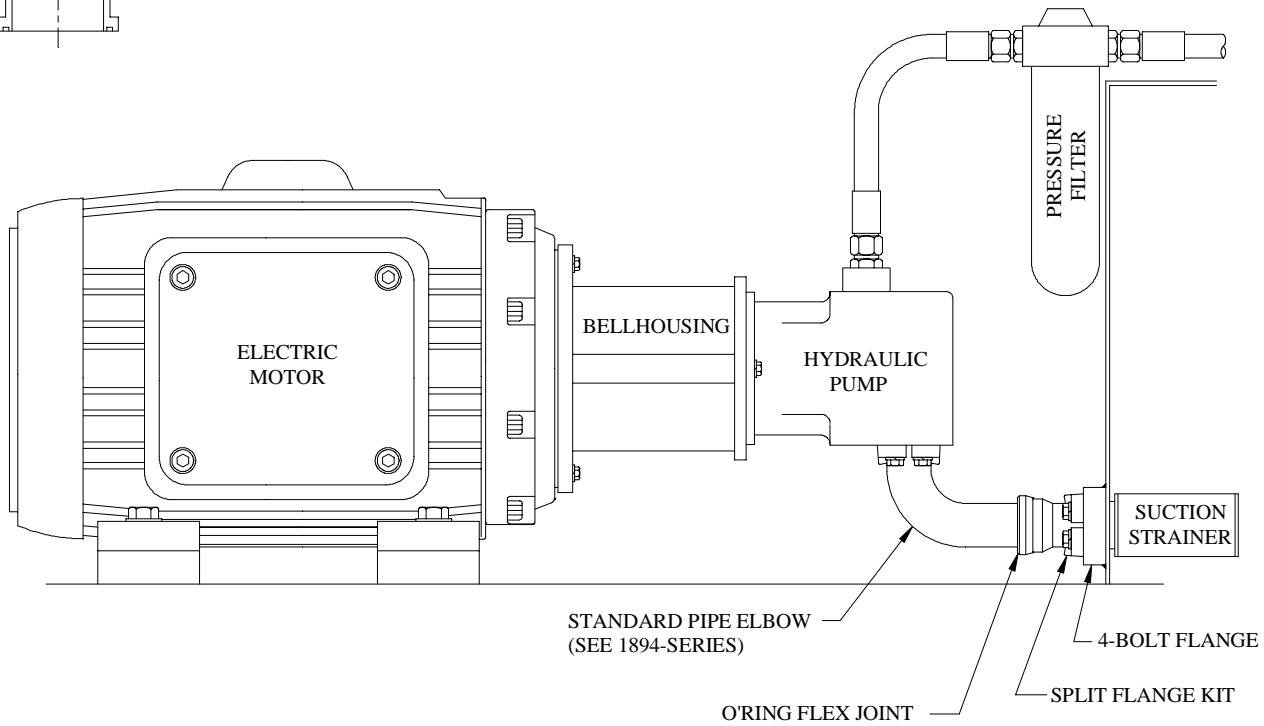
ORFJ Collar
ORFJ Coupling
ORFJ to Male NPT
ORFJ to BWP
ORFJ to ORH
ORFJ to ORH 45° Elbow
ORFJ to ORH 90° Elbow
Pipe
Barb
Male NPT
Kingnipple
ORH to ORH 90° Elbow
Barb to Male ORB
Barb to Butt Weld Pipe
Male NPT to Butt Weld Pipe
Barb to Male NPT 90° Elbow



O'Ring Flex Joint (ORFJ) Introduction & Installation



The O'Ring Flex Joint (ORFJ), in conjunction with SAE 4-bolt flanges, offers an elegant and simple solution to connecting ports of various components in the suction and return lines of every hydraulic system. This is especially true if a compact layout is essential, misalignment is severe and flow rates are high. The ORFJ will allow for approximately 7 degrees of misalignment per joint. The sealing is accomplished using a standard O'ring, and can be easily tightened into place using any adjustable collet wrench.



INSTALLATION PROCEDURE

STEP #1
Slide the collar
over your pipe.



STEP #2
Roll the O'Ring
up the pipe about



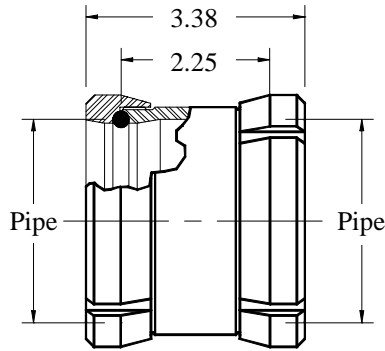
STEP #3
Push the coupling
up to the O'Ring.



STEP #4
Tighten the collar
to the coupling.



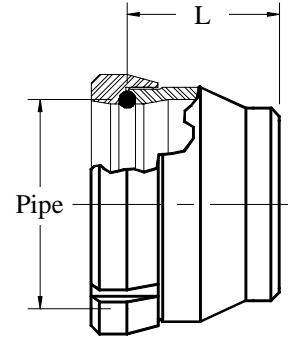
O'Ring Flex Joint (ORFJ) - 150 psi



ORFJ Coupling

Part No.	ORFJ	Pipe
2566-24-24	1.50"	1.50"
2566-32-32	2.00"	2.00"
2566-40-40	2.50"	2.50"
2566-48-48	3.00"	3.00"
2566-56-56	3.50"	3.50"
2566-64-64	4.00"	4.00"

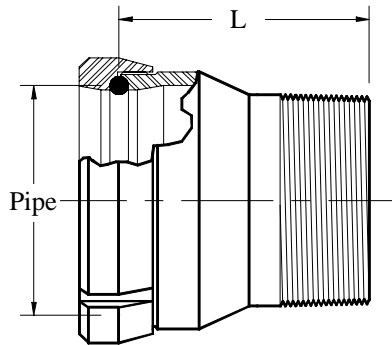
Complete With Collar & O'Ring



ORFJ / Butt Weld Pipe

Part No.	Pipe	BWP	L
2555-24-24	1.50"	1.50"	2.25
2555-32-32	2.00"	2.00"	2.25
2555-40-40	2.50"	2.50"	2.25
2555-48-48	3.00"	3.00"	2.25
2555-56-56	3.50"	3.50"	2.25
2555-64-64	4.00"	4.00"	2.25

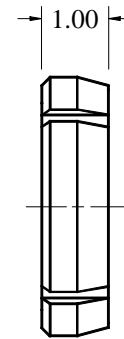
Complete With Collar & O'Ring



ORFJ / Male NPT

Part No.	Pipe	NPT	L
2569-24-24	1.50"	1.50"-11.5	3.75
2569-32-32	2.00"	2.00"-11.5	3.75
2569-40-40	2.50"	2.50"-8	3.75
2569-48-48	3.00"	3.00"-8	4.25
2569-56-56	3.50"	3.50"-8	4.25
2569-64-64	4.00"	4.00"-8	4.75

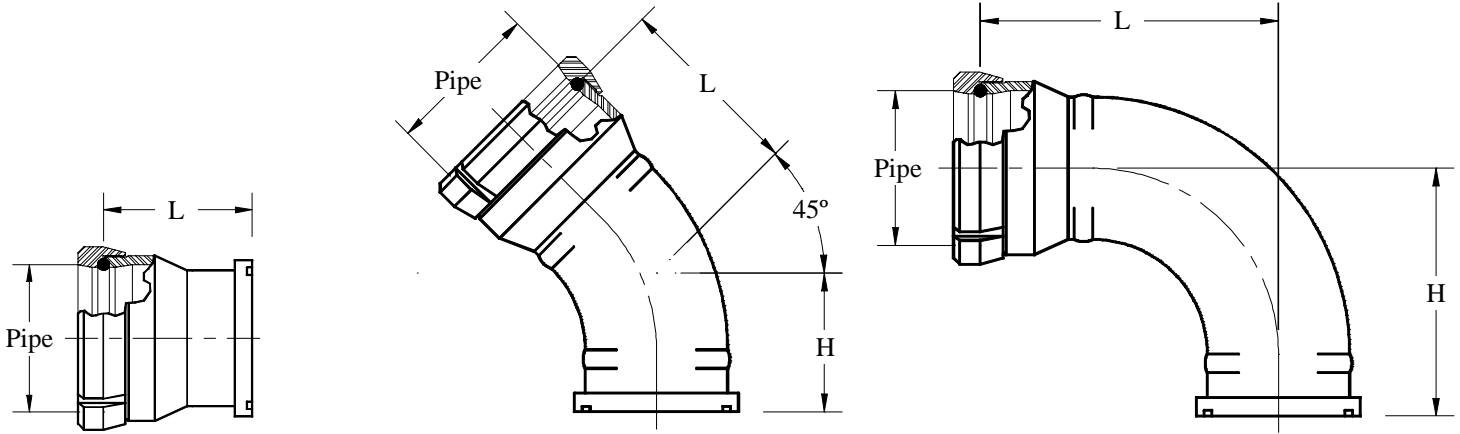
Complete With Collar & O'Ring



ORFJ Collar

Part No.	ORFJ
2554-24	1.50"
2554-32	2.00"
2554-40	2.50"
2554-48	3.00"
2554-56	3.50"
2554-64	4.00"

O'Ring Flex Joint (ORFJ) - 150 psi



**ORFJ /
Code 61 O'Ring Head**

Part No.	Pipe	Flange	L
2568-24-24	1.50"	1.50"	3.25
2568-32-24	2.00"	1.50"	4.25
2568-24-32	1.50"	2.00"	3.38
2568-32-32	2.00"	2.00"	3.38
2568-40-32	2.50"	2.00"	4.25
2568-32-40	2.00"	2.50"	3.50
2568-40-40	2.50"	2.50"	3.50
2568-48-40	3.00"	2.50"	4.50
2568-40-48	2.50"	3.00"	3.75
2568-48-48	3.00"	3.00"	3.75
2568-56-48	3.50"	3.00"	4.75
2568-48-56	3.00"	3.50"	3.75
2568-56-56	3.50"	3.50"	3.75
2568-64-56	4.00"	3.50"	4.75
2568-56-64	3.50"	4.00"	4.00
2568-64-64	4.00"	4.00"	4.00

Complete With Collar & O'Ring

**ORFJ / Code 61
O'Ring Head 45° Elbow**

Part No.	Pipe	Flange	L	H
3390-24-24	1.50"	1.50"	3.38	2.13
3390-32-24	2.00"	1.50"	3.63	3.38
3390-24-32	1.50"	2.00"	3.38	2.25
3390-32-32	2.00"	2.00"	3.63	2.50
3390-40-32	2.50"	2.00"	4.00	3.75
3390-32-40	2.00"	2.50"	3.63	2.63
3390-40-40	2.50"	2.50"	4.00	3.00
3390-48-40	3.00"	2.50"	4.25	4.25
3390-40-48	2.50"	3.00"	4.00	3.25
3390-48-48	3.00"	3.00"	4.25	3.50
3390-56-48	3.50"	3.00"	4.50	4.75
3390-48-56	3.00"	3.50"	4.25	3.50
3390-56-56	3.50"	3.50"	4.50	3.75
3390-64-56	4.00"	3.50"	4.75	5.00
3390-56-64	3.50"	4.00"	4.50	4.00
3390-64-64	4.00"	4.00"	4.75	4.25

Complete With Collar & O'Ring

**ORFJ / Code 61
O'Ring Head 90° Elbow**

Part No.	Pipe	Flang	L	H
2567-24-24	1.50"	1.50"	4.50	3.25
2567-32-24	2.00"	1.50"	5.25	5.00
2567-24-32	1.50"	2.00"	4.50	3.38
2567-32-32	2.00"	2.00"	5.25	4.13
2567-40-32	2.50"	2.00"	6.00	5.75
2567-32-40	2.00"	2.50"	5.25	4.25
2567-40-40	2.50"	2.50"	6.00	5.00
2567-48-40	3.00"	2.50"	6.75	6.75
2567-40-48	2.50"	3.00"	6.00	5.25
2567-48-48	3.00"	3.00"	6.75	6.00
2567-56-48	3.50"	3.00"	7.50	7.75
2567-48-56	3.00"	3.50"	6.75	6.00
2567-56-56	3.50"	3.50"	7.50	6.75
2567-64-56	4.00"	3.50"	8.25	8.50
2567-56-64	3.50"	4.00"	7.50	7.00
2567-64-64	4.00"	4.00"	8.25	7.75

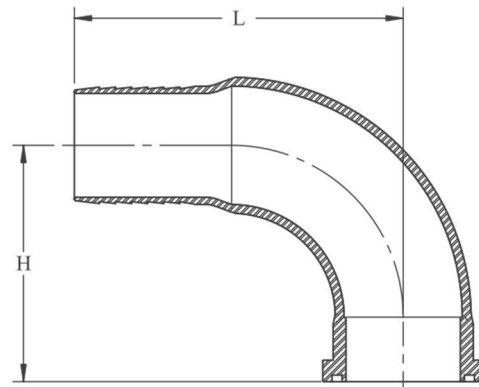
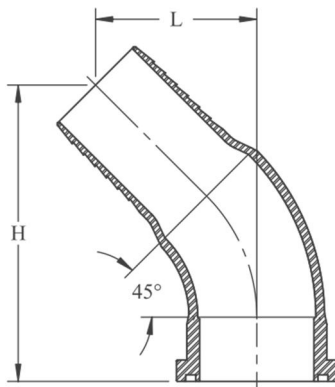
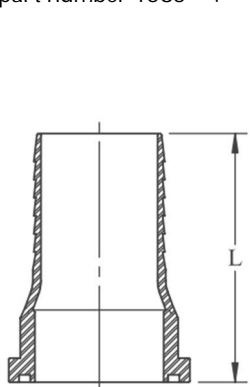
Complete With Collar & O'Ring

Code 61 split flange kit required for mounting
See part number 1585-size

150 psi Suction & Return Adapters

Hose Barb/Code 61 O-Ring Head

Code 61 split flange kit required for mounting.
 See part number 1585-**.



Hose Barb /
Code 61 O-Ring Head

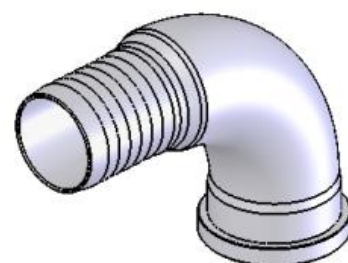
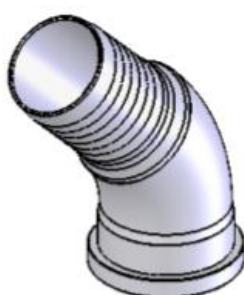
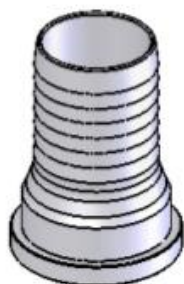
Part #	Barb	ORH	L
1650-20-20	1.25"	1 1/4"	3.00"
1650-24-20	1.50"	1 1/4"	3.25"
1650-32-20	2.00"	1 1/4"	4.25"
1650-20-24	1.25"	1 1/2"	3.00"
1650-24-24	1.50"	1 1/2"	3.25"
1650-32-24	2.00"	1 1/2"	3.75"
1650-40-24	2.50"	1 1/2"	5.00"
1650-24-32	1.50"	2"	3.38"
1650-32-32	2.00"	2"	3.88"
1650-40-32	2.50"	2"	4.13"
1650-48-32	3.00"	2"	5.25"
1650-32-40	2.00"	2 1/2"	4.00"
1650-40-40	2.50"	2 1/2"	4.25"
1650-48-40	3.00"	2 1/2"	4.50"
1650-40-48	2.50"	3"	4.50"
1650-48-48	3.00"	3"	4.75"
1650-64-48	4.00"	3"	6.00"
1650-48-56	3.00"	3 1/2"	4.75"
1650-64-56	4.00"	3 1/2"	5.00"
1650-48-64	3.00"	4"	5.00"
1650-64-64	4.00"	4"	5.25"

45° Elbow - Hose Barb /
Code 61 O-Ring Head

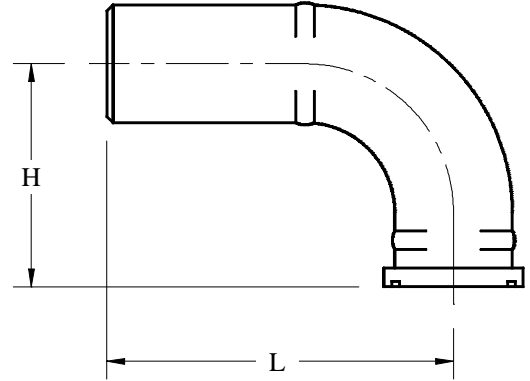
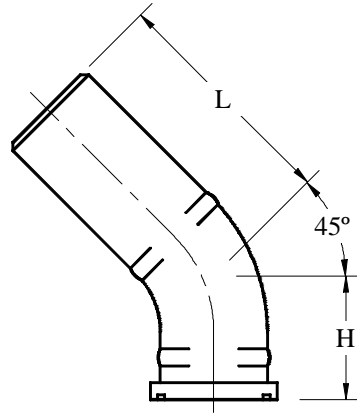
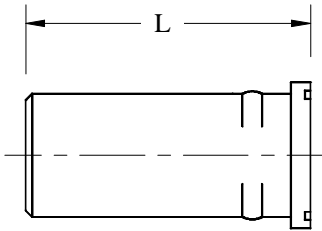
Part #	Barb	ORH	L	H
2675-20-20	1.25"	1 1/4"	2.12"	4.12"
2675-24-20	1.50"	1 1/4"	2.30"	4.30"
2675-32-20	2.00"	1 1/4"	2.74"	5.36"
2675-20-24	1.25"	1 1/2"	2.12"	4.12"
2675-24-24	1.50"	1 1/2"	2.39"	4.51"
2675-32-24	2.00"	1 1/2"	2.74"	4.86"
2675-40-24	2.50"	1 1/2"	3.09"	6.47"
2675-24-32	1.50"	2"	2.39"	4.64"
2675-32-32	2.00"	2"	2.91"	5.41"
2675-40-32	2.50"	2"	3.09"	5.59"
2675-48-32	3.00"	2"	3.54"	7.29"
2675-32-40	2.00"	2 1/2"	2.91"	5.54"
2675-40-40	2.50"	2 1/2"	3.36"	6.36"
2675-48-40	3.00"	2 1/2"	3.54"	6.54"
2675-40-48	2.50"	3"	3.36"	6.61"
2675-48-48	3.00"	3"	3.71"	7.21"
2675-64-48	4.00"	3"	4.06"	8.81"
2675-48-56	3.00"	3 1/2"	3.71"	7.21"
2675-64-56	4.00"	3 1/2"	4.06"	7.81"
2675-48-64	3.00"	4"	3.71"	7.46"
2675-64-64	4.00"	4"	4.24"	8.49"

90° Elbow - Hose Barb /
Code 61 O-Ring Head

Part #	Barb	ORH	L	H
1670-20-20	1.25"	1 1/4"	3.88"	2.88"
1670-24-20	1.50"	1 1/4"	4.13"	2.88"
1670-32-20	2.00"	1 1/4"	5.00"	3.75"
1670-20-24	1.25"	1 1/2"	3.88"	2.88"
1670-24-24	1.50"	1 1/2"	4.50"	3.25"
1670-32-24	2.00"	1 1/2"	5.00"	3.25"
1670-40-24	2.50"	1 1/2"	6.00"	5.00"
1670-24-32	1.50"	2"	4.50"	3.38"
1670-32-32	2.00"	2"	5.75"	4.13"
1670-40-32	2.50"	2"	6.00"	4.13"
1670-48-32	3.00"	2"	7.00"	5.75"
1670-32-40	2.00"	2 1/2"	5.75"	4.25"
1670-40-40	2.50"	2 1/2"	6.75"	5.00"
1670-48-40	3.00"	2 1/2"	7.00"	5.00"
1670-40-48	2.50"	3"	6.75"	5.25"
1670-48-48	3.00"	3"	7.75"	6.00"
1670-64-48	4.00"	3"	8.75"	7.75"
1670-48-56	3.00"	3 1/2"	7.75"	6.00"
1670-64-56	4.00"	3 1/2"	8.75"	6.75"
1670-48-64	3.00"	4"	7.75"	6.25"
1670-64-64	4.00"	4"	9.50"	7.75"



Suction & Return Adapters – 150 psi (Straight Pipe Fittings)



**Pipe /
Code 61 O'Ring Head**

Part No.	Pipe	Flange	L
1892-20-20	1.25"	1.25"	3.50
1892-24-20	1.50"	1.25"	4.50
1892-20-24	1.25"	1.25"	3.50
1892-24-24	1.50"	1.50"	4.00
1892-32-24	2.00"	1.50"	6.00
1892-24-32	1.50"	2.00"	4.13
1892-32-32	2.00"	2.00"	5.13
1892-40-32	2.50"	2.00"	7.00
1892-32-4	2.00"	2.50"	5.25
1892-40-40	2.50"	2.50"	6.25
1892-48-40	3.00"	2.50"	8.25
1892-40-48	2.50"	3.00"	6.50
1892-48-48	3.00"	3.00"	7.50
1892-64-48	4.00"	3.00"	10.50
1892-48-56	3.00"	3.50"	7.50
1892-64-56	4.00"	3.50"	10.50
1892-48-64	3.00"	4.00"	7.75
1892-64-64	4.00"	4.00"	9.75

**Pipe / Code 61
O'Ring Head 45° Elbow**

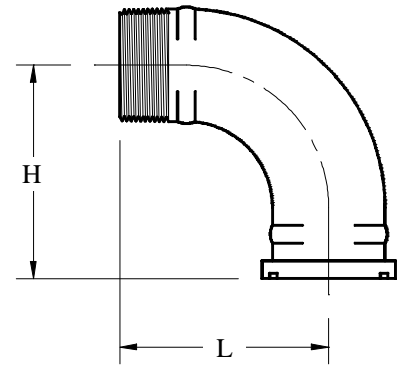
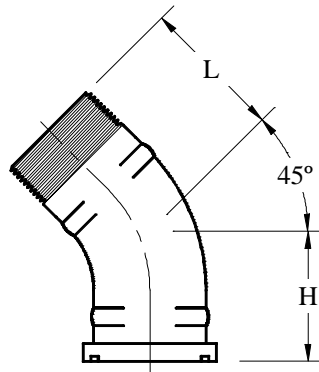
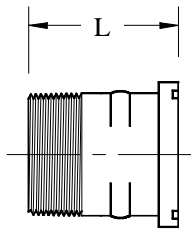
Part No.	Pipe	Flange	L	H
2677-20-20	1 1/4	1 1/4	3.50	2.00
2677-24-20	1 1/2	1 1/4	4.13	2.63
2677-20-24	1 1/4	1 1/2	3.50	2.00
2677-24-24	1 1/2	1 1/2	4.13	2.13
2677-32-24	2	1 1/2	5.38	3.38
2677-24-32	1 1/2	2	4.13	2.25
2677-32-32	2	2	5.38	2.50
2677-40-32	2 1/2	2	6.75	3.75
2677-32-40	2	2 1/2	5.38	2.63
2677-40-40	2 1/2	2 1/2	6.75	3.00
2677-48-40	3	2 1/2	8.25	4.25
2677-40-48	2 1/2	3	6.75	3.25
2677-48-48	3	3	8.25	3.50
2677-64-48	4	3	10.50	5.00
2677-48-56	3	3 1/2	8.25	3.50
2677-64-56	4	3 1/2	10.50	5.00
2677-48-64	3	4	8.25	3.75
2677-64-64	4	4	10.50	4.25

**Pipe / Code 61
O'Ring Head 90° Elbow**

Part No.	Pipe	Flange	L	H
1894-20-20	1 1/4	1 1/4	4.38	2.88
1894-24-20	1 1/2	1 1/4	5.25	3.75
1894-20-24	1 1/4	1 1/2	4.38	2.88
1894-24-24	1 1/2	1 1/2	5.25	3.25
1894-32-24	2	1 1/2	7.00	5.00
1894-24-32	1 1/2	2	5.25	3.38
1894-32-32	2	2	7.00	4.13
1894-40-32	2 1/2	2	8.75	5.75
1894-32-40	2	2 1/2	7.00	4.25
1894-40-40	2 1/2	2 1/2	8.75	5.00
1894-48-40	3	2 1/2	10.50	6.75
1894-40-48	2 1/2	3	8.75	5.25
1894-48-48	3	3	10.50	6.00
1894-64-48	4	3	14.00	8.50
1894-48-56	3	3 1/2	10.50	6.00
1894-64-56	4	3 1/2	14.00	8.50
1894-48-64	3	4	10.50	6.25
1894-64-64	4	4	14.00	7.75

Code 61 split flange kit required for mounting
See part number 1585-size

Suction & Return Adapters – 150 psi (Male NPT Fittings)



**Male NPT /
Code 61 O'Ring Head**

Part No.	NPT	Flange	L
1640-20-20	1.25"-11.5	1.25"	2.25
1640-24-20	1.50"-11.5	1.25"	2.75
1640-20-24	1.25"-11.5	1.25"	2.25
1640-24-24	1.50"-11.5	1.50"	2.50
1640-32-24	2.00"-11.5	1.50"	3.50
1640-24-32	1.50"-11.5	2.00"	2.63
1640-32-32	2.00"-11.5	2.00"	2.63
1640-40-32	2.50"-8	2.00"	4.00
1640-32-40	2.00"-11.5	2.50"	2.75
1640-40-40	2.50"-8	2.50"	3.25
1640-48-40	3.00"-8	2.50"	4.25
1640-40-48	2.50"-8	3.00"	3.50
1640-48-48	3.00"-8	3.00"	3.50
1640-64-48	4.00"-8	3.00"	5.00
1640-48-56	3.00"-8	3.50"	3.50
1640-64-56	4.00"-8	3.50"	5.00
1640-48-64	3.00"-8	4.00"	3.75
1640-64-64	4.00"-8	4.00"	4.25

**Male NPT / Code 61
O'Ring Head 45° Elbow**

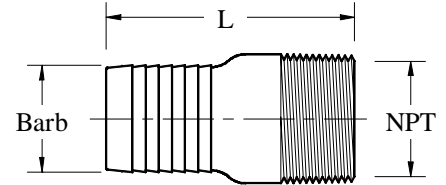
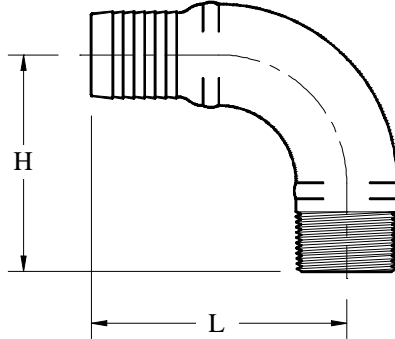
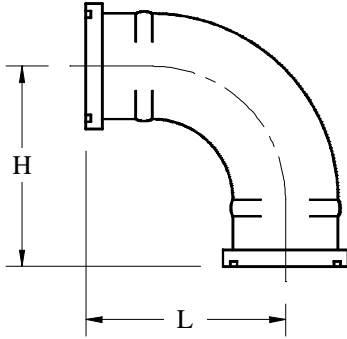
Part No.	NPT	Flange	L	H
2676-20-20	1.25"-11.5	1 1/4	2.25	2.00
2676-24-20	1.50"-11.5	1 1/4	2.63	2.63
2676-20-24	1.25"-11.5	1 1/2	2.25	2.00
2676-24-24	1.50"-11.5	1 1/2	2.63	2.13
2676-32-24	2.00"-11.5	1 1/2	2.88	3.38
2676-24-32	1.50"-11.5	2	2.63	2.25
2676-32-32	2.00"-11.5	2	2.88	2.50
2676-40-32	2.50"-8	2	3.75	3.75
2676-32-40	2.00"-11.5	2 1/2	2.88	2.63
2676-40-40	2.50"-8	2 1/2	3.75	3.00
2676-48-40	3.00"-8	2 1/2	4.00	4.25
2676-40-48	2.50"-8	3	3.75	3.25
2676-48-48	3.00"-8	3	4.00	3.50
2676-64-48	4.00"-8	3	5.00	5.00
2676-48-56	3.00"-8	3 1/2	4.00	3.50
2676-64-56	4.00"-8	3 1/2	5.00	5.00
2676-48-64	3.00"-8	4	4.00	3.75
2676-64-64	4.00"-8	4	5.00	4.25

**Male NPT / Code 61
O'Ring Head 90° Elbow**

Part No.	NPT	Flange	L	H
1660-20-20	1.25"-11.5	1 1/4	3.13	2.88
1660-24-20	1.50"-11.5	1 1/4	3.75	3.75
1660-20-24	1.25"-11.5	1 1/2	3.13	2.88
1660-24-24	1.50"-11.5	1 1/2	3.75	3.25
1660-32-24	2.00"-11.5	1 1/2	4.50	5.00
1660-24-32	1.50"-11.5	2	3.75	3.38
1660-32-32	2.00"-11.5	2	4.50	4.13
1660-40-32	2.50"-8	2	5.75	5.75
1660-32-40	2.00"-11.5	2 1/2	4.50	4.25
1660-40-40	2.50"-8	2 1/2	5.75	5.00
1660-48-40	3.00"-8	2 1/2	6.50	6.75
1660-40-48	2.50"-8	3	5.75	5.25
1660-48-48	3.00"-8	3	6.50	6.00
1660-64-48	4.00"-8	3	8.50	8.50
1660-48-56	3.00"-8	3 1/2	6.50	6.00
1660-64-56	4.00"-8	3 1/2	8.50	8.50
1660-48-64	3.00"-8	4	6.50	6.25
1660-64-64	4.00"-8	4	8.50	7.75

Code 61 split flange kit required for mounting
See part number 1585-size

Suction & Return Adapters – 150 psi



Code 61 O'Ring Head 90° Elbow

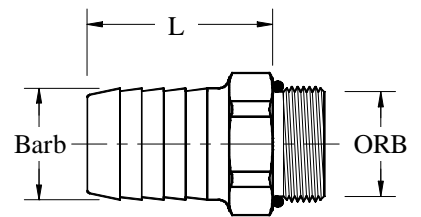
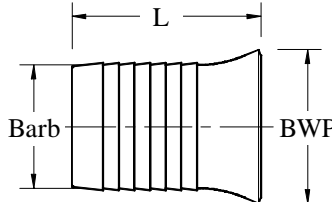
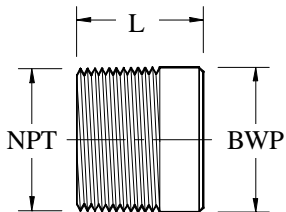
Hose Barb / NPT 90° Elbow

King Nipple

Part No.	Flange 2	Flange 1	L	H
2927-20-20	1.25	1.25	2.88	2.88
2927-20-24	1.25	1.50	2.88	2.88
2927-24-24	1.50	1.50	3.25	3.25
2927-24-32	1.50	2.00	3.25	3.38
2927-32-32	2.00	2.00	4.13	4.13
2927-32-40	2.00	2.50	4.13	4.25
2927-40-40	2.50	2.50	6.88	6.88
2927-40-48	2.50	3.00	5.00	5.25
2927-48-48	3.00	3.00	6.00	6.00
2927-48-56	3.00	3.50	6.00	6.00
2927-56-56	3.50	3.50	6.75	6.75
2927-56-64	3.50	4.00	6.75	7.00
2927-64-64	4.00	4.00	7.75	7.75

Part No.	Barb	NPT	L	H
1638-20-20	1.25	1.25"-11.5	3.88	3.13
1638-24-20	1.50	1.25"-11.5	4.13	3.13
1638-24-24	1.50	1.50"-11.5	4.50	3.75
1638-32-24	2.00	1.50"-11.5	5.00	3.75
1638-32-32	2.00	2.00"-11.5	5.75	4.50
1638-40-32	2.50	2.00"-11.5	6.00	4.50
1638-40-40	2.50	2.50"-8	6.75	5.75
1638-48-40	3.00	2.50"-8	7.00	5.75
1638-48-48	3.00	3.00"-8	7.75	6.50
1638-64-64	4.00	4.00"-8	9.50	8.50

Part No.	Barb	NPT	L
1636-20-20	1.25	1.25	3.88
1636-24-24	1.50	1.50	4.13
1636-32-32	2.00	2.00	4.75
1636-40-40	2.50	2.50	5.50
1636-48-48	3.00	3.00	6.00
1636-64-64	4.00	4.00	7.50



NPT / Butt Weld Pipe

Hose Barb / Butt Weld Pipe

Hose Barb / Male ORB

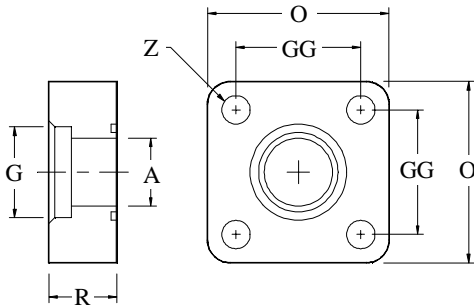
Part No.	NPT	BWP	L
1634-20-20	1.25	1.25	1.25
1634-24-24	1.50	1.50	1.50
1634-32-32	2.00	2.00	1.50
1634-40-40	2.50	2.50	2.00
1634-48-48	3.00	3.00	2.00
1634-64-64	4.00	4.00	2.50

Part No.	Barb	BWP	L
2547-20-20	1.25	1.25	2.00
2547-24-24	1.50	1.50	2.25
2547-32-32	2.00	2.00	2.75
2547-40-40	2.50	2.50	3.00
2547-48-48	3.00	3.00	3.25
2547-64-64	4.00	4.00	3.50

Part No.	Barb	ORB	L
2360-16-16	1.00	#16 (1-5/16"-12)	2.13
2360-20-16	1.25	#16 (1-5/16"-12)	2.13
2360-20-20	1.25	#20 (1-5/8"-12)	2.13
2360-24-20	1.50	#20 (1-5/8"-12)	2.50
2360-24-24	1.50	#24 (1-7/8"-12)	2.50
2360-32-24	2.00	#24 (1-7/8"-12)	2.50
2360-32-32	2.00	#32 (2.50"-12)	2.50

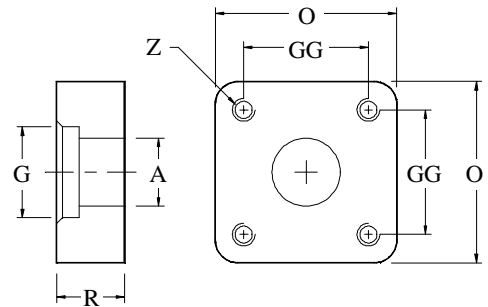
DISCONTINUED

ISO 6000 psi Flanges



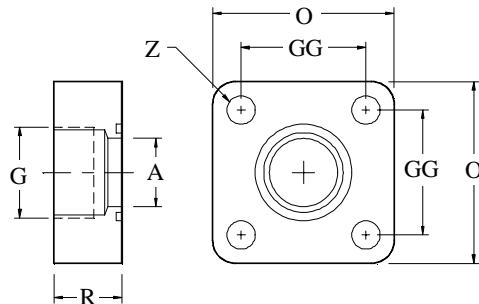
Socket Weld Pipe (SWP) / O'Ring Face (ORF)

Part No.	GG	O	A	G	R	Z
2183-32-32	2.728	4.00	1.63	2.385	1.75	0.69
2183-40-40	3.285	4.75	2.13	2.888	2.00	0.81
2183-48-48	4.037	5.75	2.75	3.515	2.00	1.06
2183-64-64	4.872	7.00	3.50	4.515	2.00	1.31



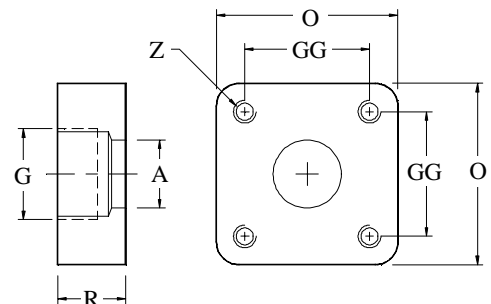
Socket Weld Pipe (SWP) / Companion

Part No.	GG	O	A	G	R	Z
2274-32-32	2.728	4.00	1.63	2.385	1.75	5/8-11
2274-40-40	3.285	4.75	2.13	2.888	2.00	3/4-10
2274-48-48	4.037	5.75	2.75	3.515	2.00	1-8
2274-64-64	4.872	7.00	3.50	4.515	2.00	1.25-7



National Pipe Thread (NPT) / O'Ring Face (ORF)

Part No.	GG	O	A	G	R	Z
2300-32-32	2.728	4.00	1.63	2 NPT	1.75	0.69
2300-40-40	3.285	4.75	2.13	2.5	2.00	0.81
2300-48-48	4.037	5.75	2.75	3 NPT	2.00	1.06
2300-64-64	4.872	7.00	3.50	4 NPT	2.00	1.31

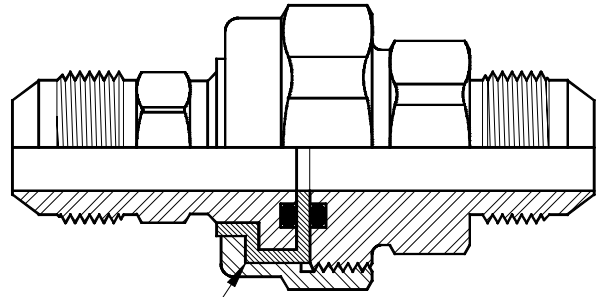


National Pipe Thread (NPT) / Companion

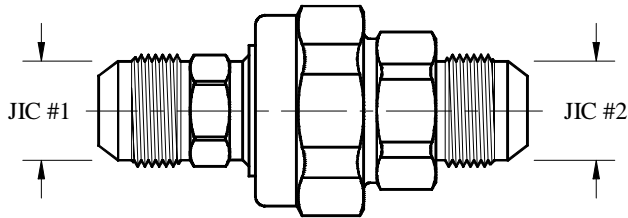
Part No.	GG	O	A	G	R	Z
2299-32-32	2.728	4.00	1.63	2 NPT	1.75	5/8-11
2299-40-40	3.285	4.75	2.13	2.5	2.00	3/4-10
2299-48-48	4.037	5.75	2.75	3 NPT	2.00	1-8
2299-64-64	4.872	7.00	3.50	4 NPT	2.00	1.25-7

Electrically Insulated Adapters

With a 3,000 psi capacity, **Sealum** insulated adapters are used where electrical insulation is required for hydraulic hose connections. The insulating material is Phenolic with a dielectric strength (short time) of 350 UPM and a compressive strength of 38,000 psi.

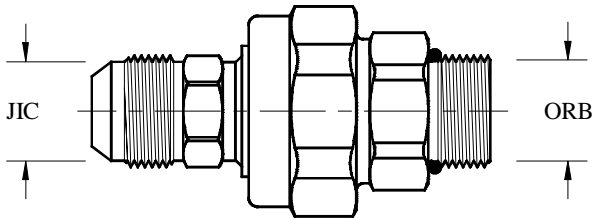


Phenolic Insulator



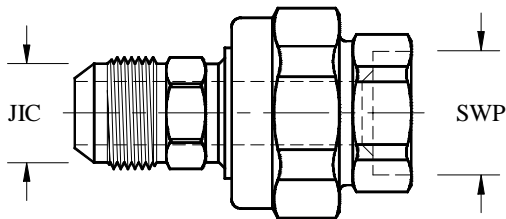
JIC Male / JIC Male

Part No.	JIC #1	JIC #2
3375-08-08	#8 (3/4"-16)	#8 (3/4"-16)
3375-12-12	#12 (1-1/16"-12)	#12 (1-1/16"-12)
3375-16-16	#16 (1-5/16"-12)	#16 (1-5/16"-12)



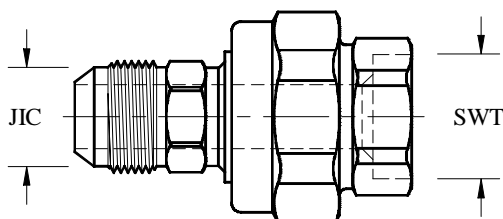
JIC Male / ORB Male

Part No.	JIC	ORB
3180-08-08	#8 (3/4"-16)	#8 (3/4"-16)
3180-12-12	#12 (1-1/16"-12)	#12 (1-1/16"-12)
3180-16-16	#16 (1-5/16"-12)	#16 (1-5/16"-12)



JIC Male / Socket Weld Pipe (SWP)

Part No.	JIC	SWP
3417-08-08	#8 (3/4"-16)	1/2" (0.845)
3417-12-12	#12 (1-1/16"-12)	3/4" (1.055)
3417-16-16	#16 (1-5/16"-12)	1" (1.320)



JIC Male / Socket Weld Tube (SWT)

Part No.	JIC	SWT
2958-08-08	#8 (3/4"-16)	1/2" (0.505)
2958-12-12	#12 (1-1/16"-12)	3/4" (0.755)
2958-16-16	#16 (1-5/16"-12)	1" (1.005)



Pump Motor Adapters

SAE Pump / NEMA Motor Adapters

Gas Engine Bellhousings

SAE Pump Brackets

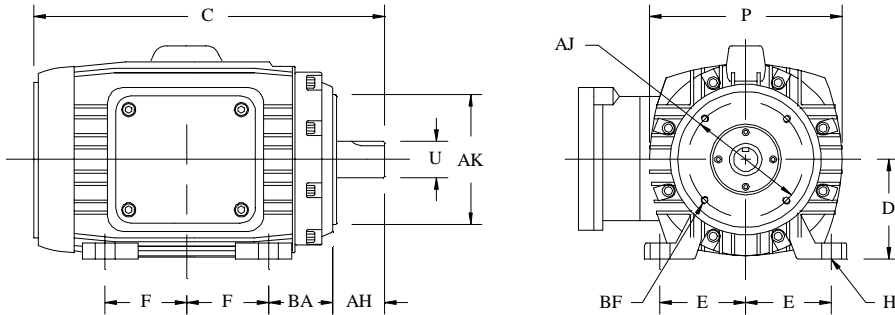
Motor Port Blocks

Motor Mounts

Accessories



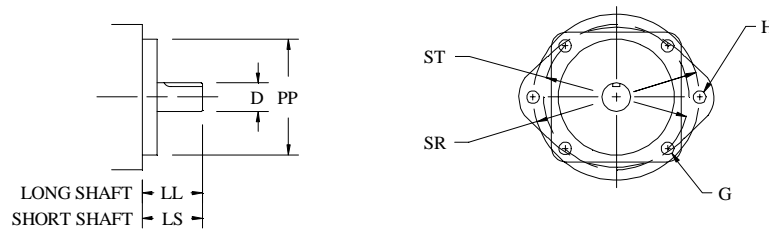
NEMA Motor & SAE Pump Specifications



**HP based on 1750 RPM and 440 volts.

NEMA Motor Specifications

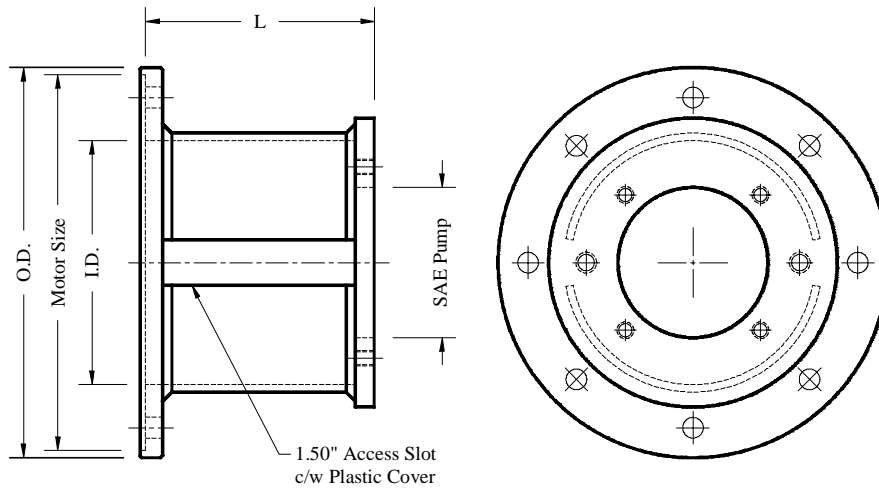
HP	Frame Size	E	F	H	BA	C	D	P	U	AH	AJ	AK	BF (QTY.)
1	143 TC	2.75	2.00	0.34	2.25	12.25	3.50	7.72	0.88	2.13	5.87	4.50	3/8-16 (4)
2	145 TC		2.50			13.25							
3	182 TC	3.75	2.25	0.41	2.75	15.00	4.50	8.91	1.13	2.62	7.25	8.50	1/2-13 (4)
5	184 TC		2.75			15.63							
7.5	213 TC	4.25	2.75	0.41	3.50	18.00	5.25	11.19	1.38	3.12			
10	215 TC		3.50			19.50							
15	254 TC	5.00	4.13	0.53	4.25	24.00	6.25	12.75	1.63	3.75	9.00	10.50	1/2-13 (4)
20	256 TC		5.00			25.60							
25	284 TC	5.50	4.75	0.53	4.75	25.60	7.00	14.50	1.88	4.37	11.00	12.50	5/8-11 (4)
30	286 TC		5.50			27.09							
40	324 TC	6.25	5.25	0.66	5.25	30.87	8.00	15.50	2.13	5.00	14.00	16.00	5/8-11 (8)
50	326 TC		6.00			30.86							
60	364 TC	7.00	5.63	0.66	5.87	35.00	9.00	17.50	2.38	5.62			
75	365 TC		6.13			36.00							
100	405 TC	8.00	6.88	0.81	6.63	38.00	10.00	19.13	2.88	7.00			
125	444 TC	9.00	7.25	0.81	7.50	43.00	11.00	22.06	3.38	8.25			
150	445 TC		8.25			46.00							



SAE Pump Specifications

Pump Size	PP (Pilot)	4-Bolt Mount		2-Bolt Mount		Straight Shaft		
		ST	G	SR	H	LL	LS	D
1.78	1.78	2.838	0.38	—	—	—	—	—
AA	2.00	—	—	3.250	0.41	—	1.06	0.50
A	3.25	4.125	0.44	4.188	0.44	2.31	1.25	0.63
B	4.00	5.000	0.56	5.750	0.56	2.81	1.63	0.88
C	5.00	6.375	0.56	7.125	0.69	3.31	2.19	1.25
D	6.00	9.000	0.81	9.000	0.81	3.94	2.94	1.75
E	6.50	12.500	0.81	12.500	0.81	3.94	2.94	1.75
F	7.00	13.780	1.06	13.780	1.06	—	—	—

Pump Motor Adapters



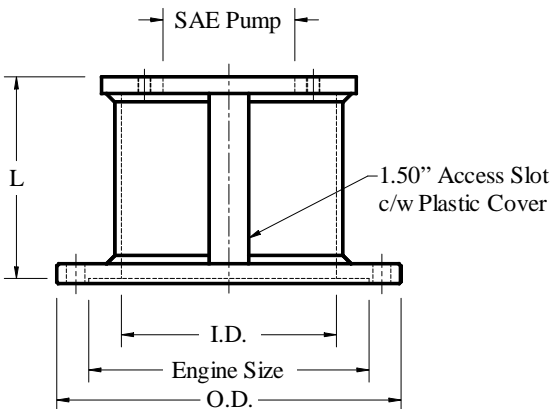
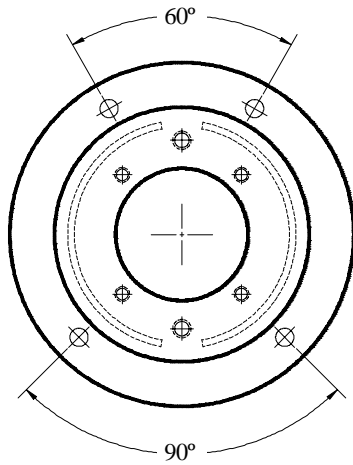
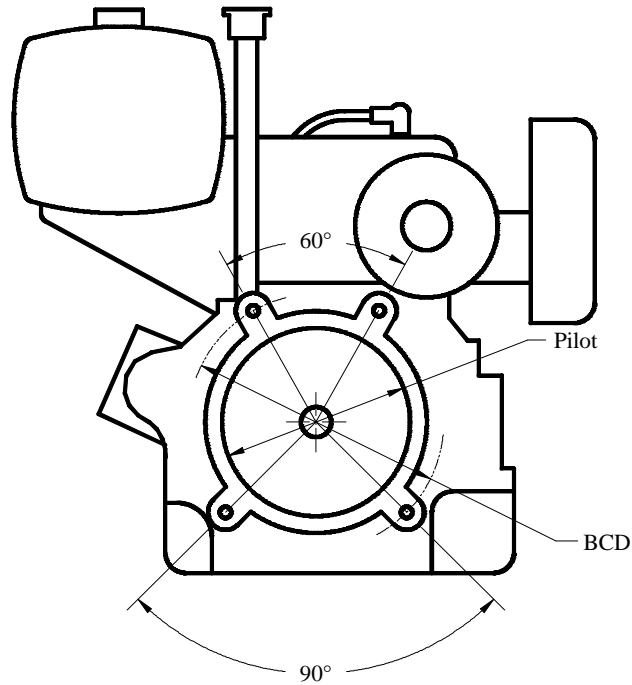
Motor Size	O.D.	I.D.	SAE Pump	L	Part No.	WT LB
Nema 56 TC To 145 TC	6.75	4.00	1.78	3.50	1416-1	10
				4.25	1416-3	
			AA	4.00	1417-1	11
				4.50	1417-3	
			A	4.00	1418-3	11
				4.50	1418-4	
5.25	1418-5					
5.75	1418-6					
Nema 182 TC To 256 TC	9.00	5.50	1.78	4.00	1419-1	15
				5.00	1419-2	
			AA	4.50	1420-1	16
				5.68	1420-2	
			A	4.88	1421-1	16
				5.68	1421-2	
			B	6.68	1421-3	17
				5.00	1422-1	
			5.81	1422-2	17	
				6.81		1422-3
			C	5.00	1423-1	20
				5.81	1423-2	
6.81	1423-3					

Motor Size	O.D.	I.D.	SAE Pump	L	Part No.	WT LB
Nema 284 TC To 286 TC	11.00	7.00	A	5.00	1424-1	24
				6.81	1424-2	
			B	6.81	1425-1	27
				7.63	1425-2	
				8.81	1425-3	
			C	6.81	1426-1	27
				7.63	1426-2	
			8.81	1426-3		
D	8.00	1427-3	30			
	9.19	1427-4				
Nema 324 TC To 405 TC	13.00	8.13	B	6.81	1428-1	35
				7.63	1428-2	
			8.81	1428-3	35	
				6.81		1429-1
			7.63	1429-2		
			8.81	1429-3		
			10.50	1429-4		
			D	8.00	1430-4	48
				9.19	1430-5	
			10.88	1430-6		
E	10.88	1431-3	68			
	12.00	1431-2				
Nema 444 TC To 445 TC	16.50	10.00	D	9.00	1432-1	80
				12.00	1432-2	
			E	9.00	1433-1	100
				12.00	1433-2	

- All dimensions are in inches
- Pump/Motor Adapters are suitable for 2-bolt & 4-bolt pumps.
- See page 62-2 For NEMA motor and SAE pump specifications.
- Material: G40.21-44W Steel.
- Complete with bolt kits.

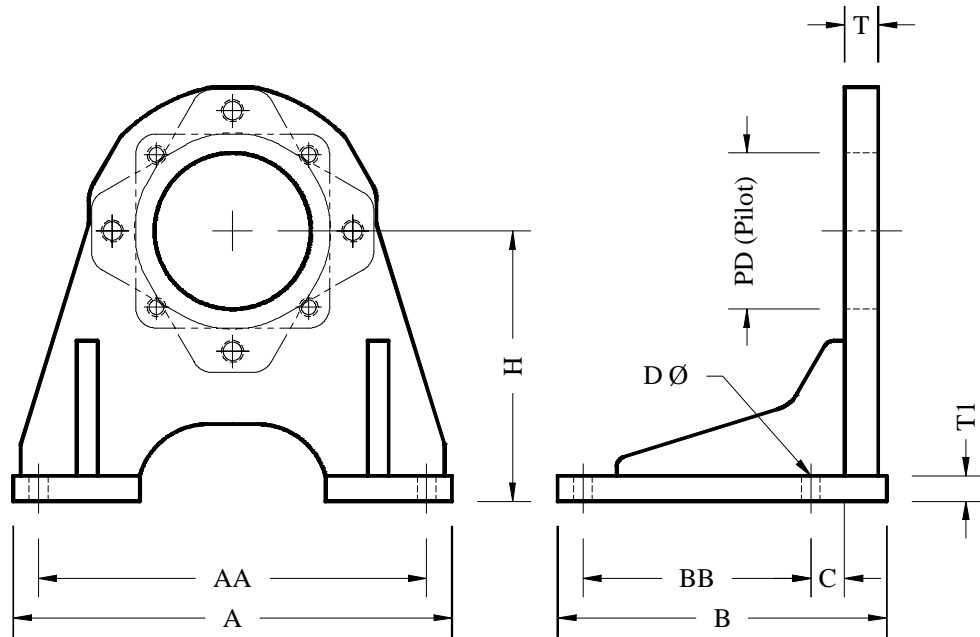
Gas Engine Bellhousings

Engine Size	Pilot	BCD
Small	5.75	6.50
Medium	7.00	7.75
Large	7.88	9.25



Engine	Pump	O.D.	I.D.	L	Part No.
Small	AA	7.50	5.00	5.00	2665-1
				5.50	2665-2
	A	7.50	5.00	5.00	2666-1
				5.50	2666-2
	B	7.50	5.00	5.00	2667-1
				5.50	2667-2
Medium	A	9.00	5.50	5.50	2668-1
				6.00	2668-2
				7.00	2668-3
	B	9.00	5.50	5.50	2669-1
				6.00	2669-2
				7.00	2669-3
	C	9.00	5.50	5.50	2670-1
				6.00	2670-2
				7.00	2670-3
Large	A	10.50	7.00	8.69	2671-1
	B	10.50	7.00	8.69	2672-1
	C	10.50	7.00	8.69	2673-1

Standard SAE Pump Brackets



Part No.	Mounting Flange	PD (Pilot)	H	AA	BB	T	T1	A	B	C	D	WT LB
744-3	SAE AA	2.000	3.50	5.25	1.88	0.50	0.50	6.00	3.50	0.44	0.44	5
980-4	SAE A	3.250	4.50	7.50	3.00	0.63	0.63	8.50	5.13	0.75	0.50	10
649-6	SAE B	4.000	6.25	9.00	4.63	0.75	0.63	10.25	7.00	0.75	0.56	20
612-7	SAE C	5.000	7.00	11.50	6.75	1.00	0.75	13.00	9.75	1.00	0.56	35
612-8			8.00									
612-9			9.00									
598-9	SAE D	6.000	9.00	14.50	8.25	1.25	1.00	16.00	11.75	1.25	0.69	65
625-10	SAE E	6.500	10.00	17.00	9.50	1.25	1.00	18.75	13.25	1.50	0.81	85
645-11	SAE F	7.000	11.00	18.50	10.38	1.50	1.25	21.00	14.50	1.50	1.06	140

ALL DIMENSIONS ARE IN INCHES

All footbrackets are suitable for 2-bolt and 4-bolt pumps.
Footbrackets with different height (H) are available upon request.
For SAE J748 standard pump specifications, see page 62-2

Motor Port Blocks

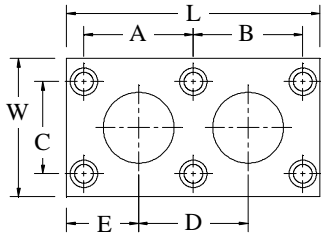


Figure 'A'

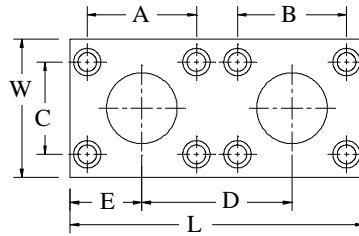


Figure 'B'

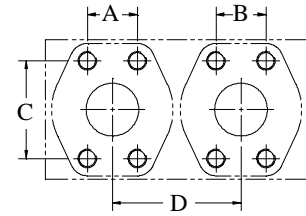


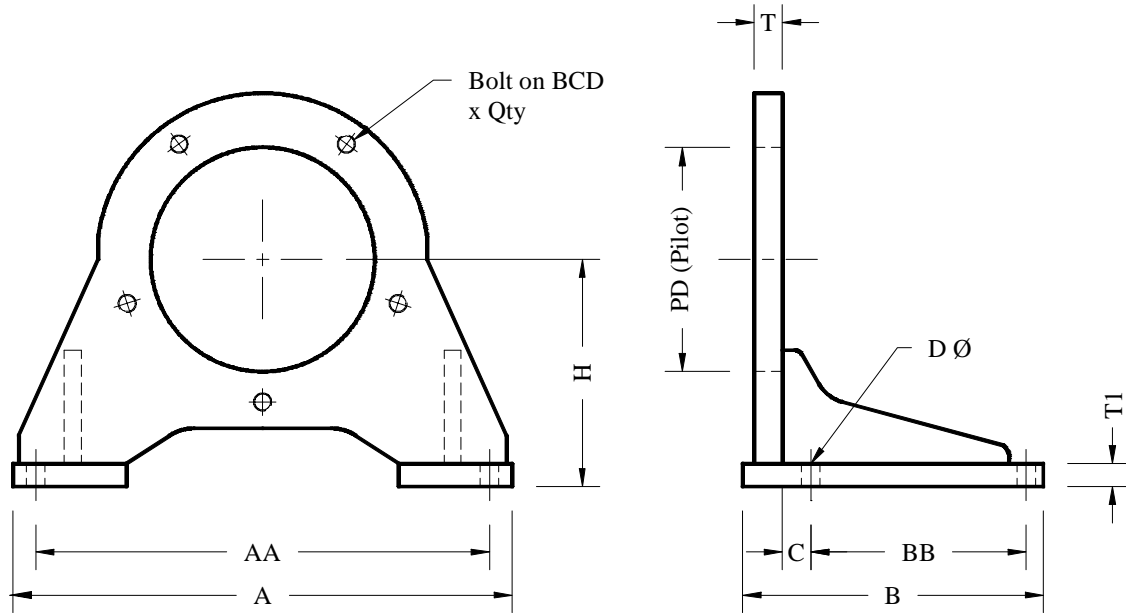
Figure 'C'

All Port Blocks Come With Mounting Kits

Motor Make	Motor Size	Fig.	Part Number	Port Size	A	B	C	D	E	L	W	THK
STAFFA	HMB010	B	MB367	#16 ORB	1.57	1.57	1.57	2.28	1.18	4.63	2.31	1.25
	B080 / 060	A	MB368	#16 ORB	2.00	2.00	1.75	2.38	1.18	4.75	2.50	1.25
	HMB100 / 125 HMC080 / 200											
	HMB150 B200	A	MB369	#16 ORB	1.88	1.88	1.75	2.00	1.25	4.50	2.50	1.25
	HMB270 / 325 HMC270	A	MB370	#20 ORB	2.38	2.38	2.00	2.63	1.43	5.50	3.00	1.25
	HMHDB400	A	MB371	#24 ORB	1.70	2.53	3.06	2.63	1.31	5.19	4.00	1.50
HYDROSTAR KYB	MRH12	C	See Section 42	3/4" Code 61	Standard Code 61 4-Bolt Flange							
	MRH30	C	See Section 42	3/4" Code 61	Standard Code 61 4-Bolt Flange							
	MRH45	C	See Section 42	1.00" Code 61	Standard Code 61 4-Bolt Flange							
	MRH60 to 270	C	See Section 42	1.25" Code 61	Standard Code 61 4-Bolt Flange							
	MRH375 / 250	A	MB610	2.00" Code 61	3.00	3.00	3.70	3.00	2.31	8.13	5.00	2.00
	MRH540	C	See Section 42	2.00" Code 61	Standard Code 61 4-Bolt Flange							
CALZONI	MR190 / 300	A	MB611	#12 ORB	1.97	1.97	1.34	1.97	1.36	4.69	2.00	1.25
	MR450 / 700	A	MB612	#16 ORB	2.36	2.36	1.57	2.36	1.60	5.56	2.50	1.50
	MR1100 / 1800 MRE1400 / 2100	A	MB613 MB345	#20 ORB 1.25" Code 61	2.67	2.67	1.97	2.79	1.79	6.38	3.00	1.50 1.00
	MR2400 / 2800 MRE3100	A	MB614	1.50" Code 61	3.55	3.55	2.44	3.38	2.40	8.19	3.50	1.00
	MR3600 to 7000 MRE5400 / 8500 MRE8500	A	MB615	2" Code 61	3.93	3.93	2.68	4.41	2.33	9.06	4.00	1.25

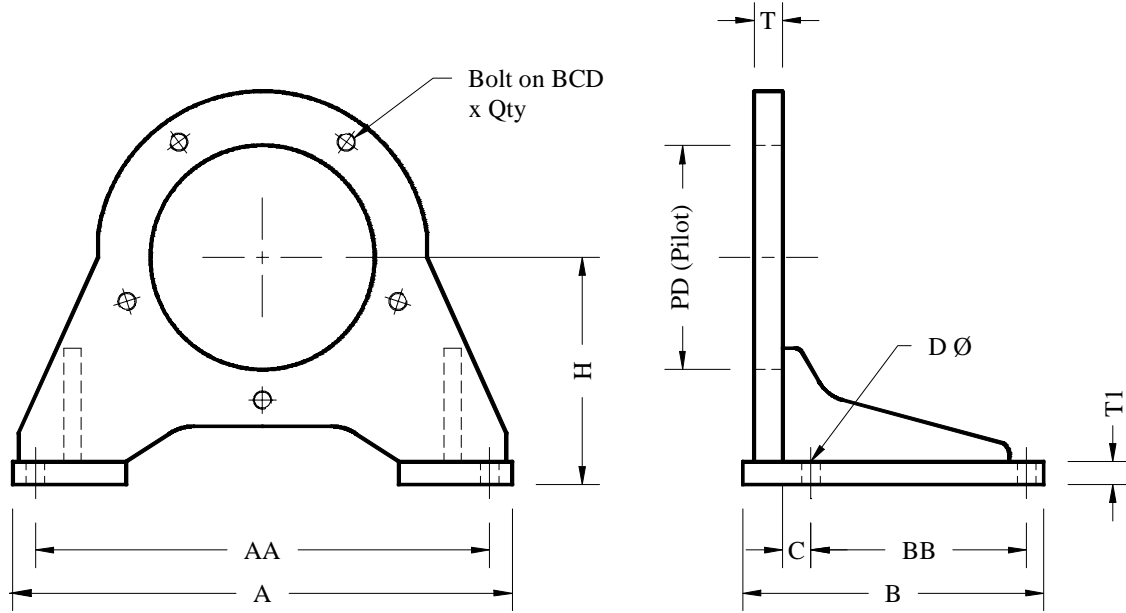
See manifold section 28 for cross port relief blocks.

HECO Motor Mounts



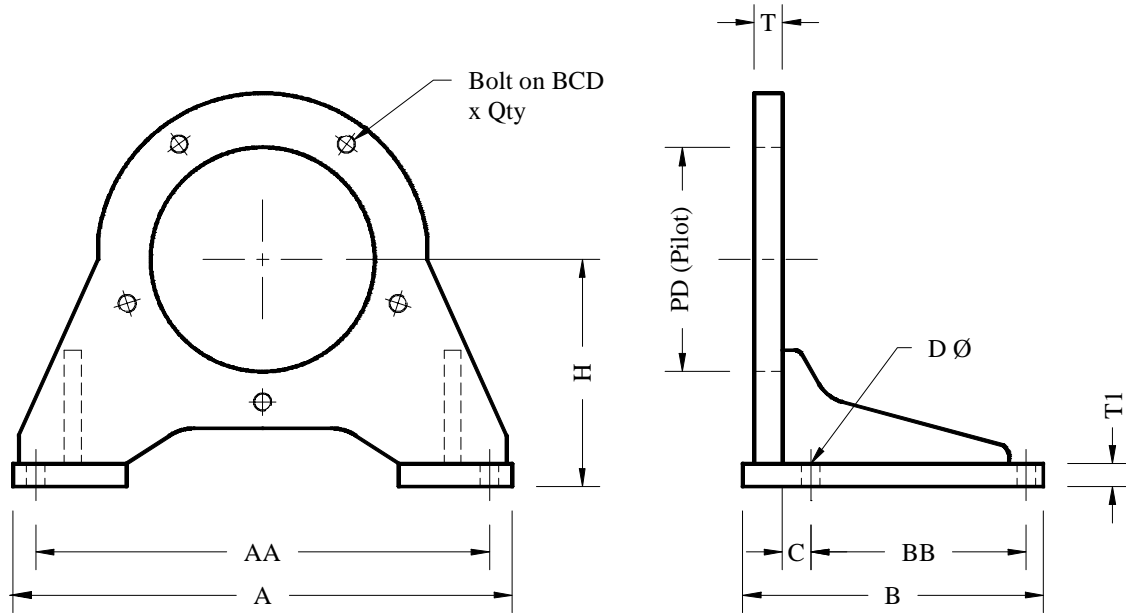
Motor Series	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
16FF	612-1	5.000	6.375	5/8 NC (4)	7.00	11.50	6.75	1.00	0.75	13.0	9.75	1.00	0.56 (4)	35
16CF	1128-4	7.000	8.250	5/8 NC (4)	6.50	13.50	5.63	1.00	0.75	15.0	8.50	1.00	0.56 (4)	35
20FF 20DFE	940-2	11.000	13.187	3/4 NC (10)	10.00	20.00	9.50	1.25	1.00	22.0	13.25	1.50	0.81 (4)	110
20CF 20DCF	1128-5	7.500	9.375	0.656 DIA (6)	6.50	13.50	5.63	1.00	0.75	15.0	8.50	1.00	0.56 (4)	35
50CF 50DCF 52DCF	920-3	9.750	11.000	0.781 DIA (6)	9.00	17.50	8.25	1.00	1.00	19.0	11.50	1.25	0.69 (4)	75

CALZONI Motor Mounts



Motor Size	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
MR190	1128-1	6.297	8.86	3/8 NC (5)	6.50	13.50	5.63	1.00	0.75	15.0	8.5	1.00	0.56 (4)	35
MR300	1128-2	6.888	9.13	3/8 NC (5)	6.50	13.50	5.63	1.00	0.75	15.0	8.5	1.00	0.56 (4)	35
MR450	979-1	7.478	10.47	7/16 NC (5)	8.00	16.00	6.75	1.00	0.75	18.0	9.8	1.00	0.56 (4)	55
MR700	920-1	8.659	11.42	7/16 NC (5)	9.00	17.50	8.25	1.00	1.00	19.0	11.5	1.25	0.69 (4)	75
MR1100	940-1	9.840	12.99	1/2 NC (5)	10.00	20.00	9.50	1.25	1.00	22.0	13.3	1.50	0.81 (4)	110
MR1800	939-1	11.414	14.96	5/8 NC (5)	11.50	24.00	10.38	1.25	1.25	26.5	14.5	1.75	1.06 (4)	160
MR2400 MR2800	1081-1	13.186	17.32	5/8 NC (5)	13.00	26.50	12.25	1.50	1.25	29.0	16.8	1.75	1.06 (4)	230
MR3600 MR4500	1127-1	15.745	21.26	7/8 NC (5)	15.50	31.50	7.50	1.50	1.50	34.5	19.5	1.75	1.06 (6)	335
MR7000	1082-1	17.713	23.62	7/8 NC (5)	18.00	35.50	8.38	1.75	1.50	38.5	21.5	1.75	1.06 (6)	470

CHAR-LYNN & NICHOLS Motor Mounts



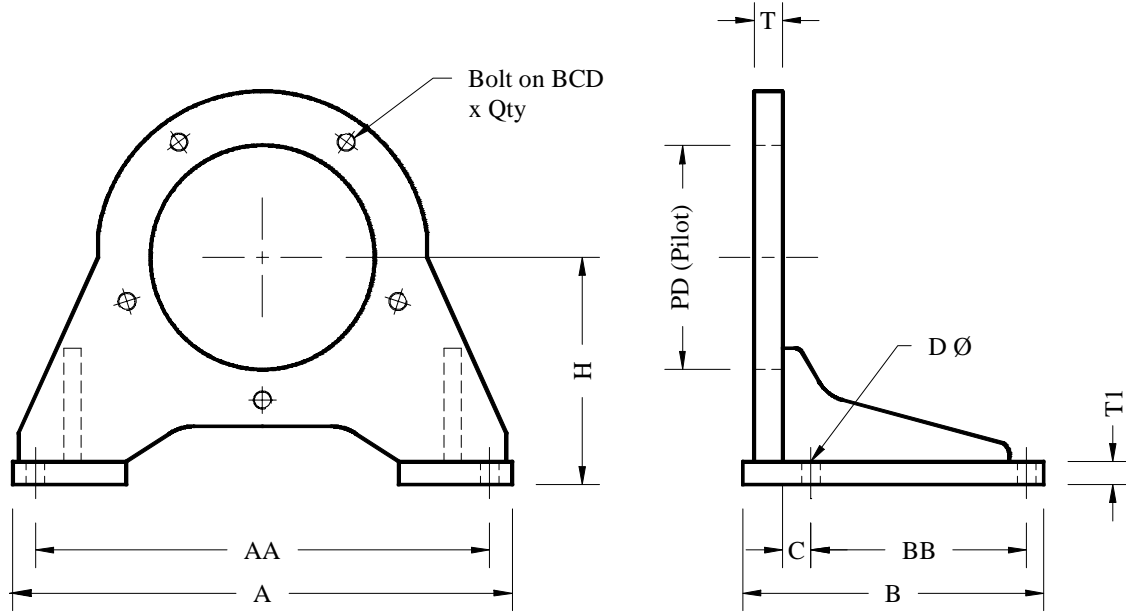
CHAR-LYNN Motor Mounts

Motor Series	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
2000	980-1	3.250	4.188	1/2 NC (2)	4.50	7.50	3.00	0.63	0.63	8.5	5.13	0.75	0.50 (4)	10
4000	649-6	4.000	5.000	1/2 NC (4)	6.25	9.00	4.63	0.75	0.63	10.3	7.00	0.75	0.56 (4)	20
6000	612-7	5.000	6.375	1/2 NC (4)	7.00	11.50	6.75	1.00	0.75	13.0	9.75	1.00	0.56 (4)	35
10,000	612-1	5.000	6.375	5/8 NC (4)	7.00	11.50	6.75	1.00	0.75	13.0	9.75	1.00	0.56 (4)	35

NICHOLS Motor Mounts

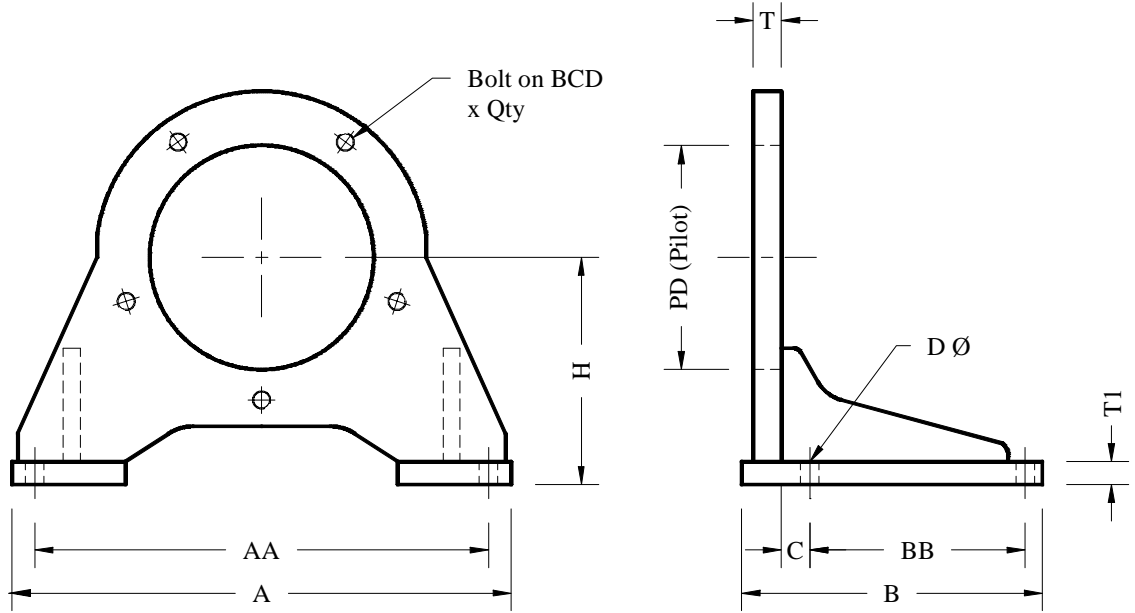
Model No.	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
050A 110A	980-1	3.250	4.188	1/2 NC (2)	4.50	7.50	3.00	0.63	0.63	8.5	5.13	0.75	0.50 (4)	10
130K	980-1	3.250	4.188	1/2 NC (4)	4.50	7.50	3.00	0.63	0.63	8.5	5.13	0.75	0.50 (4)	10
110B	649-6	4.000	5.750	1/2 NC (2)	6.25	9.00	4.63	0.75	0.63	10.3	7.00	0.75	0.56 (4)	20
120H	649-1	4.250	5.810	1/2 NC (4)	6.25	9.00	4.63	0.75	0.63	10.3	7.00	0.75	0.56 (4)	20
310E	1128-6	6.500	7.500	0.656 DIA (4)	6.50	13.50	5.63	1.00	0.75	15.0	8.50	1.00	0.56 (4)	35

STAFFA Motor Mounts



Motor Size	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
B10	1128-3	8.028	9.055	1/2 NC (5)	6.50	13.50	5.63	1.00	0.75	15.0	8.5	1.00	0.562 (4)	35
B30	979-3	7.083	10.240	5/8 NC (5)	8.00	16.00	6.75	1.00	0.75	18.0	9.8	1.00	0.562 (4)	55
B45	920-2	8.872	12.000	5/8 NC (5)	9.00	17.50	8.25	1.00	1.00	19.0	11.5	1.25	0.688 (4)	75
B60	939-2	11.870	12.875	3/4 NC (5)	11.50	24.00	10.38	1.25	1.25	26.5	14.5	1.75	1.062 (4)	160
B80														
B100														
B125	1081-2	14.995	16.500	3/4 NC (5)	13.00	26.50	12.25	1.50	1.25	29.0	16.8	1.75	1.062 (4)	230
B150														
B200														
B270	1127-2	17.995	20.500	3/4 NC (5)	15.50	31.50	7.50	1.50	1.50	34.5	19.5	1.75	1.062 (6)	335
B325														

HYDROSTAR (KYB) Motor Mounts

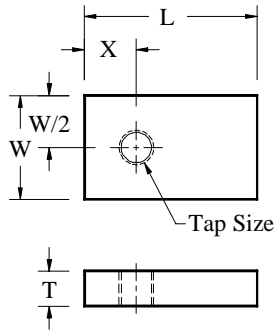
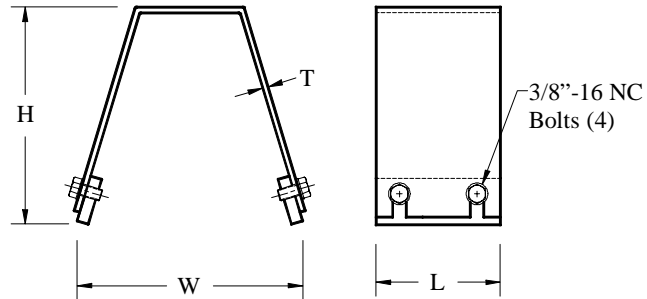


Motor Size	Part No.	PD	BCD	Bolt (QTY)	H	AA	BB	T	T1	A	B	C	D (QTY)	WT LB
MRH12	1128-3	8.028	9.0550	1/2 NC (5)	6.50	13.50	5.63	1.00	0.75	15.0	8.5	1.00	0.562 (4)	35
MRH30	979-2	8.816	10.240	5/8 NC (5)	8.00	16.00	6.75	1.00	0.75	18.0	9.8	1.00	0.562 (4)	55
MRH45	920-2	8.872	12.000	5/8 NC (5)	9.00	17.50	8.25	1.00	1.00	19.0	11.5	1.25	0.688 (4)	75
MRH80 MRH95	939-2	11.870	12.875	3/4 NC (5)	11.50	24.00	10.38	1.25	1.25	26.5	14.5	1.75	1.062 (4)	160
MRH135 MRH190	1081-2	14.995	16.500	3/4 NC (5)	13.00	26.50	12.25	1.50	1.25	29.0	16.8	1.75	1.062 (4)	230
MRH270	1127-2	17.995	20.500	3/4 NC (5)	15.50	31.50	7.50	1.50	1.50	34.5	19.5	1.75	1.062 (6)	335
MR375	1082-2	17.949	21.625	1 NC (5)	18.00	35.50	8.38	1.75	1.50	38.5	21.5	1.75	1.062 (6)	470
MR525	1082-3	17.949	21.654	1 NC (5)	18.00	35.50	8.38	1.75	1.50	38.5	21.5	1.75	1.062 (6)	470

Accessories

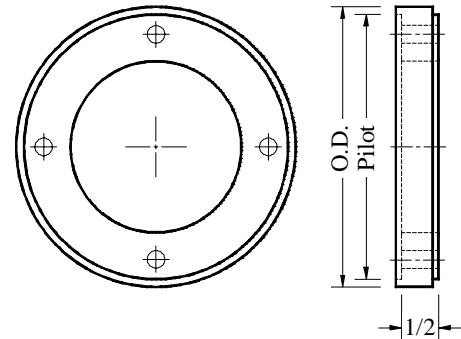
Coupling Guards

Part No.	W	H	L	T
1614-A	7.50	7.00	4.00	0.10
1801-B	9.50	9.00	5.00	0.10
1770-C	11.00	12.00	6.00	0.10
1756-D	15.00	14.50	9.00	0.13
1755-E	16.00	15.50	12.00	0.13
1787-F	18.00	17.00	12.00	0.13



Motor Mounting Pads

Part No.	HP	Motor Size	Tap Size	L	W	T	X
2757-1	1	143 TC	5/16-18 NC	2.00	2.00	0.75	0.50
	2	145 TC					
2757-2	3	182 TC	3/8-16 NC	2.50	2.00	0.75	0.75
	5	184 TC					
	7.5	213 TC					
2757-3	10	215 TC	1/2-13 NC	3.00	2.50	1.00	1.00
	15	254 TC					
	20	256 TC					
	25	284 TC					
2757-4	30	286 TC	5/8-11 NC	3.50	2.50	1.00	1.50
	40	324 TC					
	50	326 TC					
	60	364 TC					
2757-5	75	365 TC	3/4-10 NC	4.00	3.00	1.25	1.50
	100	405 TC					
	125	444 TC					
	150	445 TC					



Motor Spacers

Part No.	Motor Size	OD	Motor Pilot
2754-1	56 TC TO 145 TC	6.75	4.50
2754-2	182 TC TO 256 TC	9.00	8.50
2754-3	284 TC TO 286 TC	11.00	10.50
2754-4	324 TC TO 405 TC	13.00	12.50
2754-5	444 TC TO 445 TC	16.50	16.00



High Pressure Ball Valves (Full Bore)



SEALUM high-pressure ball valves utilize SAE J518 four-bolt flange technology to eliminate leaks so common with traditional pipe thread ball valves. With companion faces, virtually any O'Ring face flange adapter or hose head can be mounted directly to the valve itself, or by using O'Ring heads it can be mounted directly onto manifolds, cylinders or any four-bolt companion flange. With three different configurations to choose from, **SEALUM** ball valves will complement any hydraulic system.

MATERIALS

Ball: 4140 Heat Treated Steel

Stem: 4140 Heat Treated Steel

Body: C1018 Steel

Handle: G40.21-44W Plate

Ball Seats: Delrin

O'Ring Head: C1040 Steel

Companion Cover: C1018 Steel



PRODUCT FEATURES

Bore: All valves are full bore ball valves.

Cover: Four-bolt companion covers can be rotated to any 90° position.

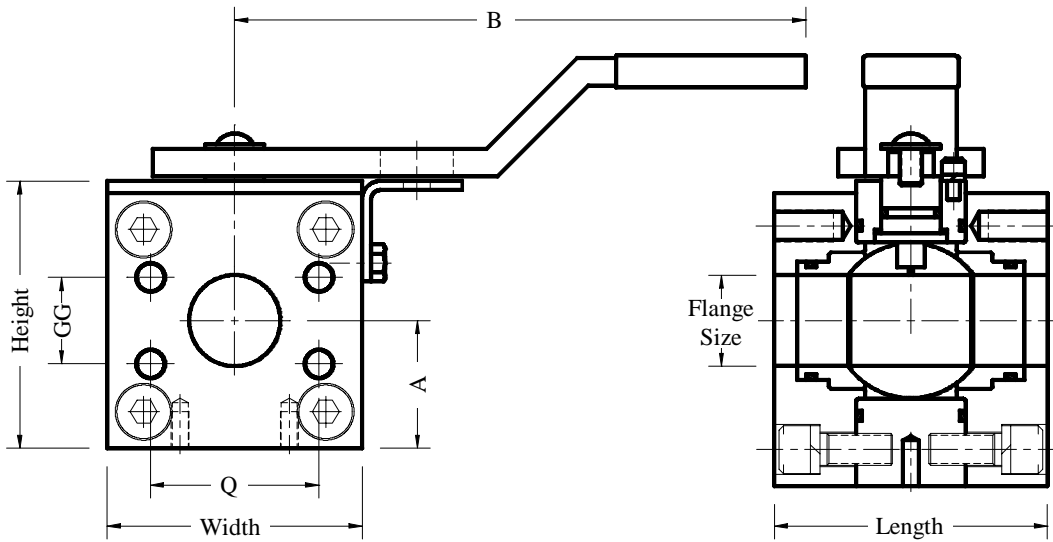
Mounting: Two threaded mounting holes in base of valve .

Pressure: Pressure ratings are based upon SAE Code 61 and Code 62.

Options: Mounting brackets are available to mount a limit or proximity switch to

Handle: Can be assembled in any of four 90° positions, and can be pad locked in the open or closed position (pad lock not included).

Companion Face / Companion Face

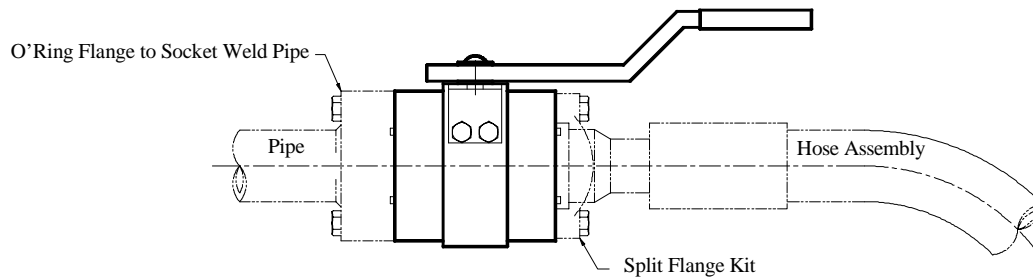


Code 61 Ball Valves

Part No.	Flange Size	Pressure	GG	Q	Width	Height	Length	A	B
3359-16	1.00	5000 psi	1.031	2.062	3.00	3.25	3.75	1.50	9.75
3359-20	1.25	4000 psi	1.188	2.312	3.50	3.65	3.75	1.75	9.75
3359-24	1.50	3000 psi	1.406	2.750	4.00	4.13	3.81	2.06	9.75
3359-32	2.00	3000 psi	1.688	3.062	4.50	4.84	4.75	2.25	11.00
3359-40	2.50	2500 psi	2.000	3.500	4.50	5.50	4.88	2.56	11.00
3359-48	3.00	2000 psi	2.438	4.188	6.00	6.31	5.75	3.00	11.00
3359-64	4.00	500 psi	3.062	5.125	7.75	8.25	6.88	3.88	18.00

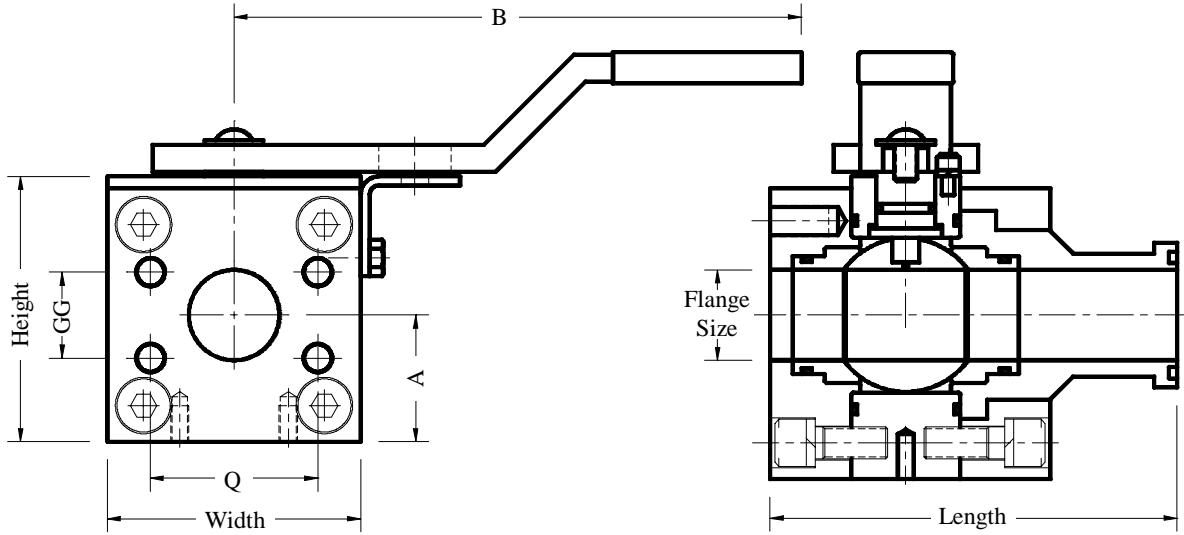
Code 62 Ball Valves

3362-16	1.00	6000 psi	1.093	2.250	3.50	3.75	3.75	1.88	9.75
3362-20	1.25	6000 psi	1.250	2.625	4.00	4.25	4.25	2.13	9.75
3362-24	1.50	6000 psi	1.437	3.125	5.00	4.94	4.75	2.44	11.00
3362-32	2.00	6000 psi	1.750	3.812	5.50	5.75	6.25	2.88	11.00

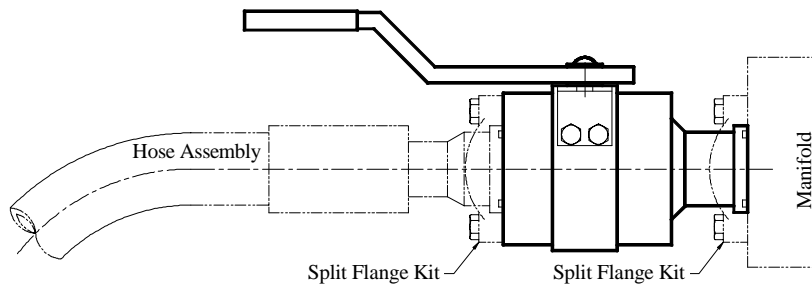


Example of a ball valve at the end of a pipe run

Companion Face to O'Ring Head

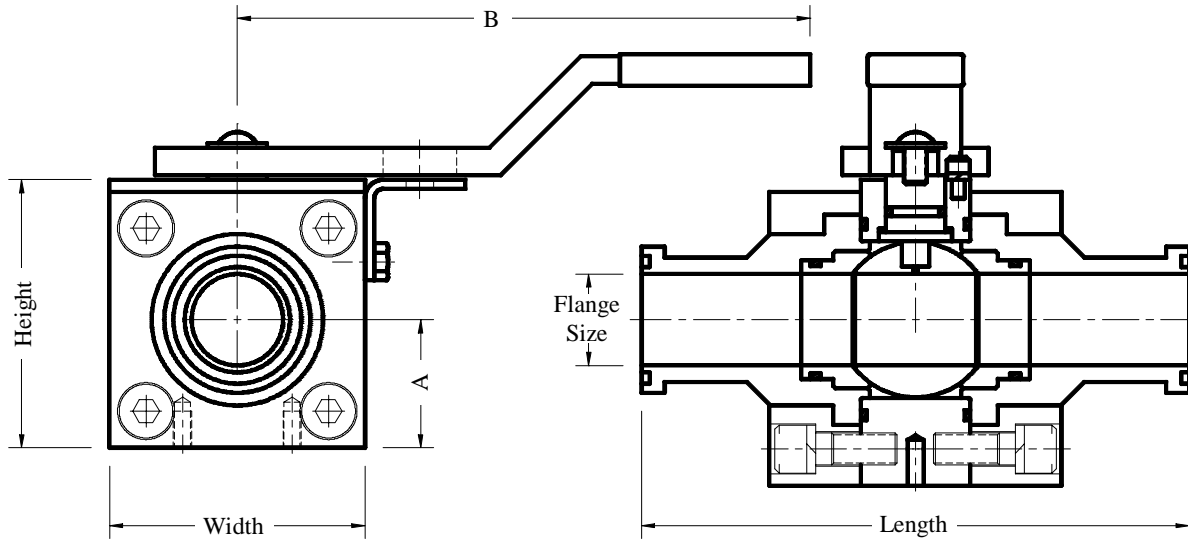


Code 61 Ball Valves									
Part No.	Flange Size	Pressure	GG	Q	Width	Height	Length	A	B
3360-16	1.00	5000 psi	1.031	2.062	3.50	3.25	5.38	1.50	9.75
3360-20	1.25	4000 psi	1.188	2.312	3.50	3.65	5.63	1.75	9.75
3360-24	1.50	3000 psi	1.406	2.750	4.00	4.13	6.06	2.06	9.75
3360-32	2.00	3000 psi	1.688	3.062	4.50	4.84	7.25	2.25	11.00
3360-40	2.50	2500 psi	2.000	3.500	4.50	5.50	8.19	2.56	11.00
3360-48	3.00	2000 psi	2.438	4.188	6.00	6.31	9.06	3.00	11.00
3360-64	4.00	500 psi	3.062	5.125	7.75	8.25	11.13	3.88	18.00
Code 62 Ball Valves									
3363-16	1.00	6000 psi	1.093	2.250	3.50	3.75	5.88	1.88	9.75
3363-20	1.25	6000 psi	1.250	2.625	4.00	4.25	6.63	2.13	9.75
3363-24	1.50	6000 psi	1.437	3.125	5.00	4.94	7.88	2.44	11.00
3363-32	2.00	6000 psi	1.750	3.812	5.50	5.75	9.75	2.88	11.00

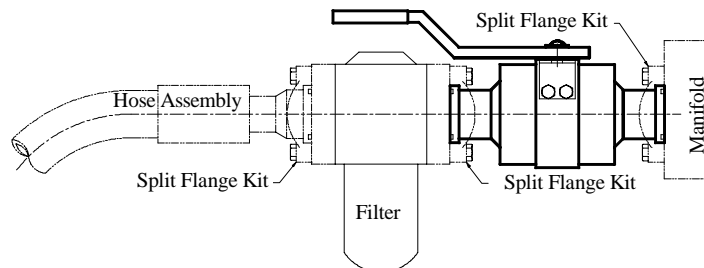


Example of connecting a ball valve to a manifold

O'Ring Head to O'Ring Head



Code 61 Ball Valves							
Part No.	Flange Size	Pressure	Width	Height	Length	A	B
3361-16	1.00	5000 psi	3.50	3.25	7.00	1.50	9.75
3361-20	1.25	4000 psi	3.50	3.65	7.50	1.75	9.75
3361-24	1.50	3000 psi	4.00	4.13	8.31	2.06	9.75
3361-32	2.00	3000 psi	4.50	4.84	9.75	2.25	11.00
3361-40	2.50	2500 psi	4.50	5.50	11.50	2.56	11.00
3361-48	3.00	2000 psi	6.00	6.31	12.38	3.00	11.00
3361-64	4.00	500 psi	7.75	8.25	15.50	3.88	18.00
Code 62 Ball Valves							
3364-16	1.00	6000 psi	3.50	3.75	8.00	1.88	9.75
3364-20	1.25	6000 psi	4.00	4.25	9.00	2.13	9.75
3364-24	1.50	6000 psi	5.00	4.94	11.00	2.44	11.00
3364-32	2.00	6000 psi	5.50	5.75	13.25	2.88	11.00



Example of connecting a filter to a manifold



In-Line Check Valves

Sealum Industries offers check valves in three cracking pressures, 5 PSI, 30 PSI, and 50 PSI. The poppets are machined from 4140 heat treated steel, while the seats are machined from 65-45-12 cast iron. The bodies are stocked in C1018 steel, but are also available in 316 stainless steel upon request. The stem is welded to the poppet for a positive lock, and the entire assembly is held in the body with a retaining ring.



Part Number & Ordering Information

The following example represents a 2.00" Code 61 sandwich style check with a 50 psi cracking pressure, reverse free flow, and 316 stainless body.

3385 - 32 - 50 R SS

Designates Style & Code:

Designates Size:

SS = 316 Stainless Body
Blank = C1018 Steel Body

R = Reverse Free Flow
Blank = Standard Free Flow

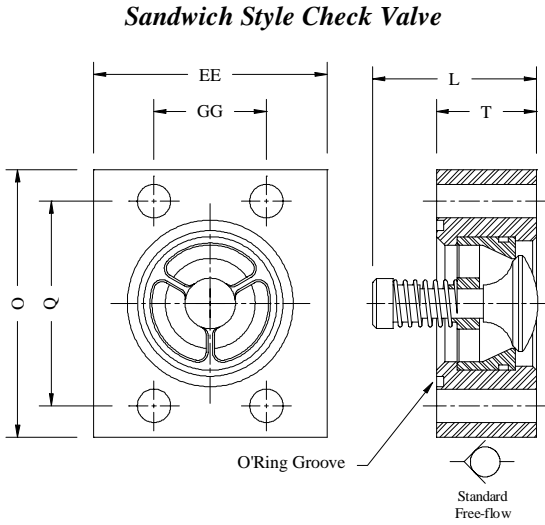
Designates Cracking Pressure:

5 = 5 psi Cracking Pressure

30 = 30 psi Cracking Pressure

50 = 50 psi Cracking Pressure

Sandwich Style In-Line Check Valves

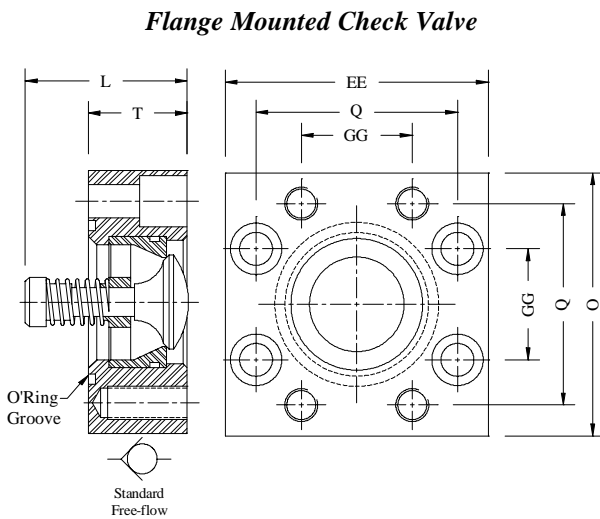


Code 61 Sandwich Style Check Valve									
Part No.	Flange Size	GG	Q	EE	O	T	L 5 psi	L 30 psi	L 50 psi
3385-16-***	1.00	1.03	2.06	2.00	2.81	1.25	1.56	1.94	2.34
3385-20-***	1.25	1.19	2.31	2.50	3.13	1.25	1.69	2.31	2.56
3385-24-***	1.50	1.41	2.75	3.00	3.69	1.50	1.97	2.53	2.94
3385-32-***	2.00	1.69	3.06	3.50	4.00	2.00	2.78	3.78	4.62
3385-40-***	2.50	2.00	3.50	4.00	4.50	2.00	3.09	4.68	5.59
3385-48-***	3.00	2.44	4.19	5.00	5.31	2.50	3.62	5.25	5.68
3385-56-***	3.50	2.75	4.75	5.00	6.00	3.00	4.13	6.25	7.00
3385-64-***	4.00	3.06	5.13	6.00	6.38	3.00	4.62	7.31	8.31

Code 62 Sandwich Style Check Valve									
Part No.	Flange Size	GG	Q	EE	O	T	L 5 psi	L 30 psi	L 50
3386-16-***	1.00	1.09	2.25	2.2	3.25	1.25	1.56	1.94	2.34
3386-20-***	1.25	1.25	2.63	3.0	3.75	1.25	1.69	2.31	2.56
3386-24-***	1.50	1.44	3.13	3.5	4.44	1.50	1.97	2.53	2.94
3386-32-***	2.00	1.75	3.81	4.0	5.25	2.00	2.78	3.78	4.62

*** See Page 64-1 For Part Number Information

Flange Mounted In-Line Check Valves

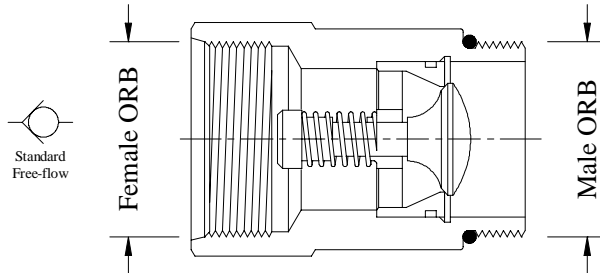


Code 61 Flange Mounted Check Valve									
Part No.	Flange Size	GG	Q	EE	O	T	L 5 psi	L 30 psi	L 50 psi
3387-16-***	1.00	1.03	2.06	2.75	2.75	1.25	1.56	1.94	2.34
3387-20-***	1.25	1.19	2.31	3.13	3.00	1.25	1.69	2.31	2.56
3387-24-***	1.50	1.41	2.75	4.00	3.69	1.50	1.97	2.53	2.94
3387-32-***	2.00	1.69	3.06	4.00	4.00	2.00	2.78	3.78	4.62
3387-40-***	2.50	2.00	3.50	4.50	4.50	2.00	3.09	4.68	5.59
3387-48-***	3.00	2.44	4.19	5.50	5.31	2.50	3.62	5.25	5.68
3387-56-***	3.50	2.75	4.75	6.00	6.00	3.00	4.13	6.25	7.00
3387-64-***	4.00	3.06	5.13	6.50	6.19	3.00	4.62	7.31	8.31

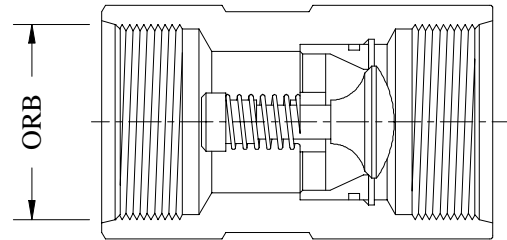
Code 62 Flange Mounted Check Valve									
Part No.	Flange Size	GG	Q	EE	O	T	L 5 psi	L 30 psi	L 50
3388-16-***	1.00	1.09	2.25	3.2	3.25	1.25	1.56	1.94	2.34
3388-20-***	1.25	1.25	2.63	4.0	3.75	1.25	1.69	2.31	2.56
3388-24-***	1.50	1.44	3.13	4.5	4.44	1.50	1.97	2.53	2.94
3388-32-***	2.00	1.75	3.81	5.2	5.25	2.00	2.78	3.78	4.62

*** See Page 64-1 For Part Number Information

ORB (O'Ring Boss) In-Line Check Valves



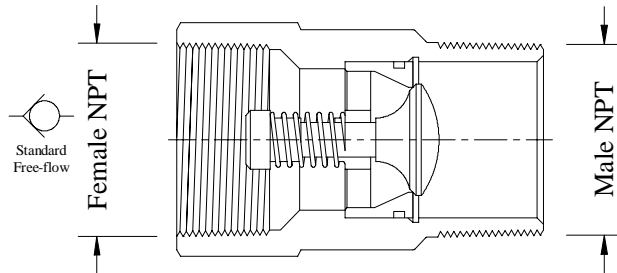
Part No.	Female ORB	Male ORB
3024-20-***	#20 (1-5/8"-12)	#20 (1-5/8"-12)
3024-24-***	#24 (1-7/8"-12)	#24 (1-7/8"-12)
3024-32-***	#32 (2-1/2"-12)	#32 (2-1/2"-12)



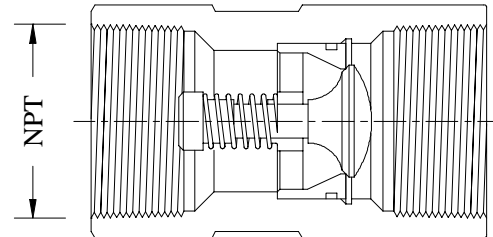
Part No.	Female ORB	Female ORB
3025-20-***	#20 (1-5/8"-12)	#20 (1-5/8"-12)
3025-24-***	#24 (1-7/8"-12)	#24 (1-7/8"-12)
3025-32-***	#32 (2-1/2"-12)	#32 (2-1/2"-12)

*** See Page 64-1 For Part Number Information

NPT (National Pipe Thread) In-Line Check Valves



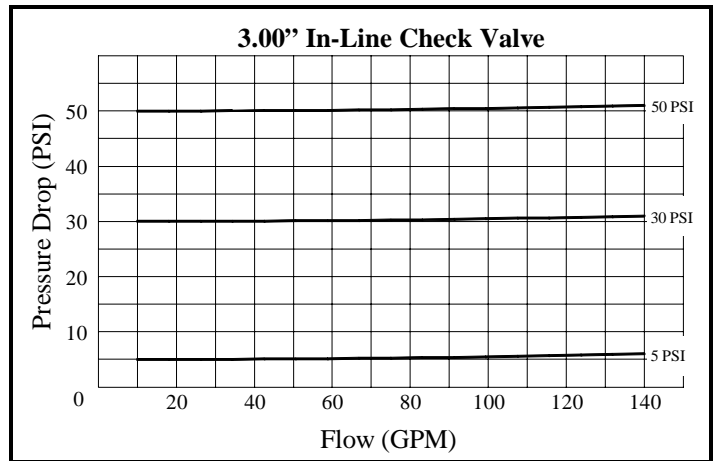
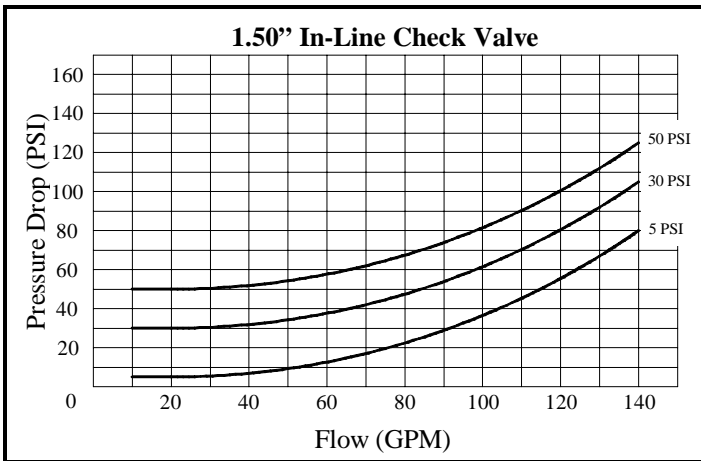
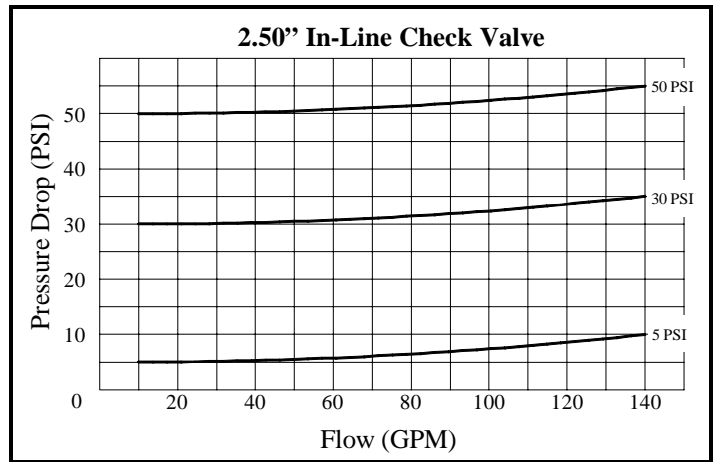
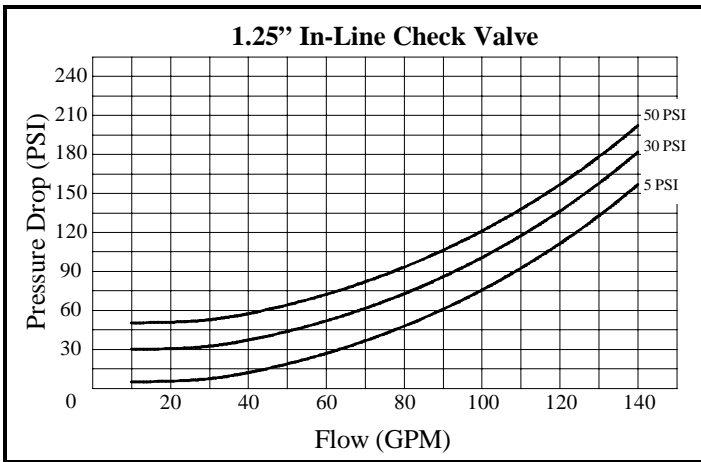
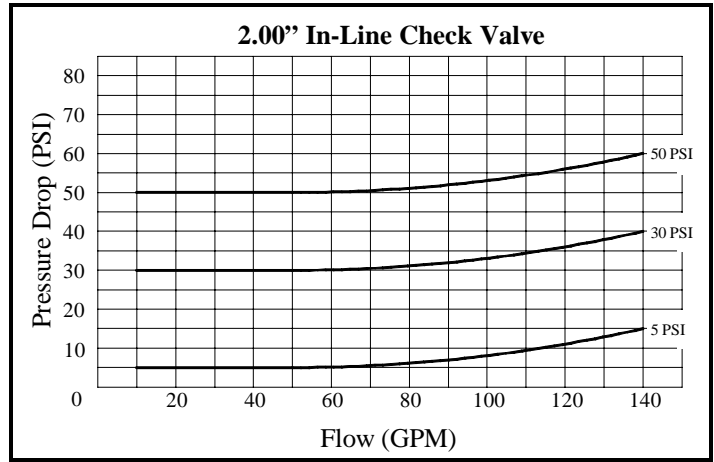
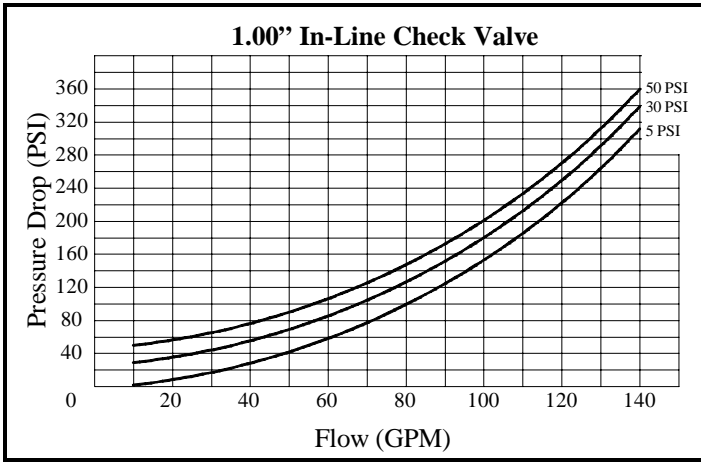
Part No.	Female NPT	Male NPT
3022-20-***	1.25"-11.5	1.25"-11.5
3022-24-***	1.50"-11.5	1.50"-11.5
3022-32-***	2.00"-11.5	2.00"-11.5
3022-40-***	2.50"-8	2.50"-8
3022-48-***	3.00"-8	3.00"-8
3022-56-***	3.50"-8	3.50"-8
3022-64-***	4.00"-8	4.00"-8



Part No.	Female NPT	Female NPT
3023-20-**	1.25"-11.5	1.25"-11.5
3023-24-**	1.50"-11.5	1.50"-11.5
3023-32-**	2.00"-11.5	2.00"-11.5
3023-40-**	2.50"-8	2.50"-8
3023-48-**	3.00"-8	3.00"-8
3023-56-**	3.50"-8	3.50"-8
3023-64-**	4.00"-8	4.00"-8

*** See Page 64-1 For Part Number Information

Check Valves – Pressure Drop versus Flow Specifications



All tests were performed with Texaco Rando HDZ-32 hydraulic oil at 50° C with a viscosity of 130 SSU.

All tests were performed on 5 PSI check valves. 30 PSI & 50 PSI check valve data has been extrapolated from the results.

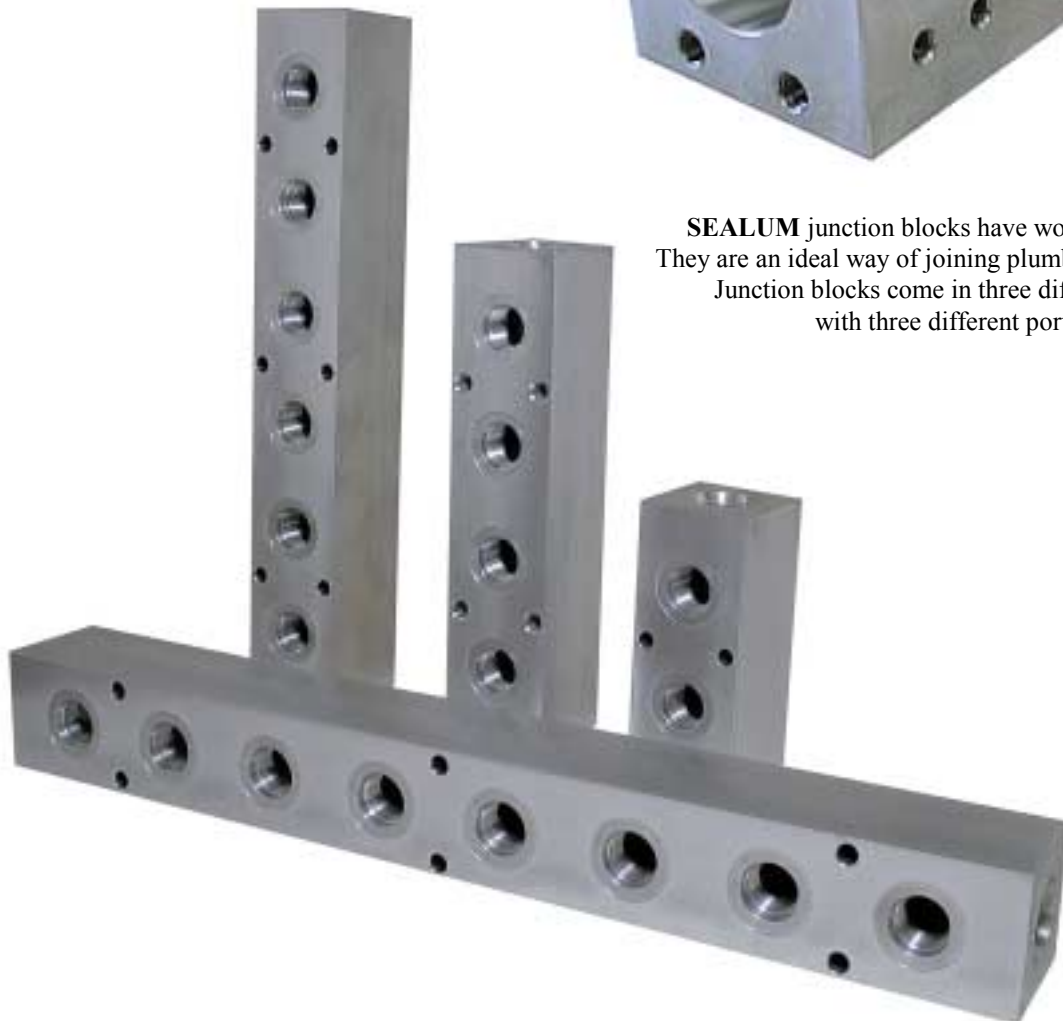


Header & Junction Blocks

SEALUM header blocks have all ports connected, with the work ports common to one center port. The center port is always one size larger than the work ports. Header blocks come in four different configurations, with three different porting options.



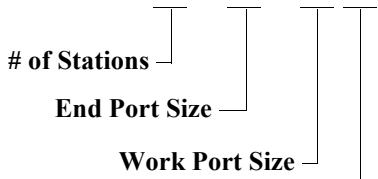
SEALUM junction blocks have work ports only connected. They are an ideal way of joining plumbing or to change direction. Junction blocks come in three different configurations, with three different porting options.



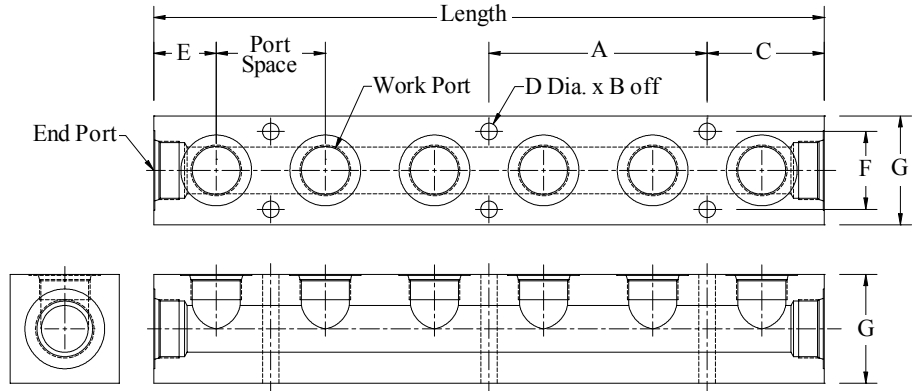
Materials range from C1018 Steel to 6061-T6 Aluminum to 316 Stainless Steel.

ORB (O'Ring Boss) Branch Header Blocks (All Ports Connected)

3053 - X - X - X X



Material:
S = C1018 Steel
SS = 316 Stainless
A = 6061-T6 Aluminum



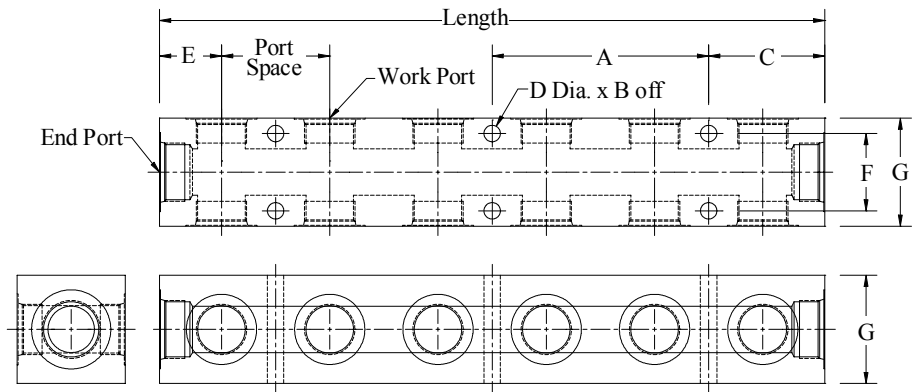
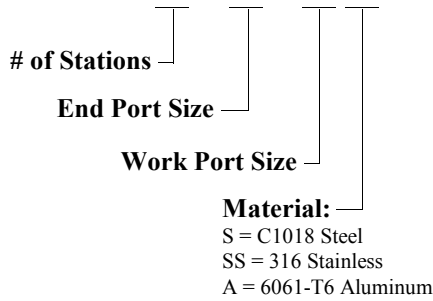
Pressure Ratings:

5000 PSI in C1018 Steel
5000 PSI in 316L Stainless
3000 PSI in 6061-T6 Aluminum

Number of Stations	End Port Size	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#12 ORB (1-1/16"-12)	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3			6.75	—	4						
4			8.75	—	4						
6			12.75	5.00	6						
8			16.75	7.00	6						
10			20.75	9.00	6						
2	#16 ORB (1-5/16"-12)	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3			8.00	—	4						
4			10.50	—	4						
6			15.50	6.25	6						
8			20.50	8.75	6						
10			25.50	11.25	6						
2	#20 ORB (1-5/8"-12)	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3			9.00	—	4						
4			11.75	—	4						
6			17.25	6.88	6						
8			22.75	9.63	6						
10			28.25	12.38	6						
2	#24 ORB (1-7/8"-12)	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3			11.00	—	4						
4			14.50	—	4						
6			21.50	10.50	6						
8			28.50	12.25	6						
2			#32 ORB (2-1/2"-12)	#24 ORB (1-7/8"-12)	8.25						
3	12.25	—			4						
4	16.25	—			4						
6	24.25	10.00			6						

ORB (O'Ring Boss) Run Header Blocks (*All Ports Connected*)

3057 - X - X - X X



Pressure Ratings:

5000 PSI in C1018 Steel

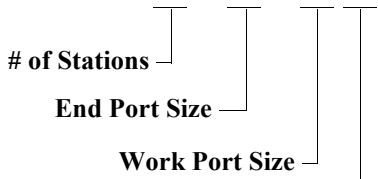
5000 PSI in 316L Stainless

3000 PSI in 6061-T6 Aluminum

Number of Stations	End Port Size	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#12 ORB (1-1/16"-12)	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3			6.75	—	4						
4			8.75	—	4						
6			12.75	5.00	6						
8			16.75	7.00	6						
10			20.75	9.00	6						
2	#16 ORB (1-5/16"-12)	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3			8.00	—	4						
4			10.50	—	4						
6			15.50	6.25	6						
8			20.50	8.75	6						
10			25.50	11.25	6						
2	#20 ORB (1-5/8"-12)	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3			9.00	—	4						
4			11.75	—	4						
6			17.25	6.88	6						
8			22.75	9.63	6						
10			28.25	12.38	6						
2	#24 ORB (1-7/8"-12)	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3			11.00	—	4						
4			14.50	—	4						
6			21.50	10.50	6						
8			28.50	12.25	6						
2			#32 ORB (2-1/2"-12)	#24 ORB (1-7/8"-12)	8.25						
3	12.25	—			4						
4	16.25	—			4						
6	24.25	10.00			6						

ORB (O'Ring Boss) Elbow Header Blocks (All Ports Connected)

3061 - X - X - X X

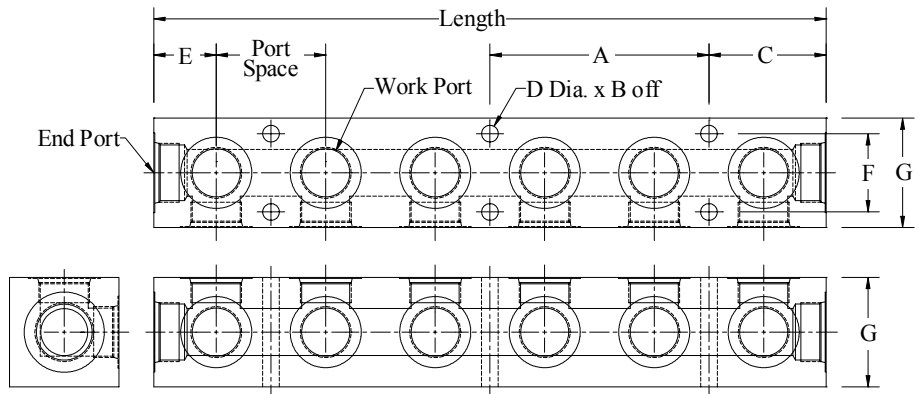


Material:

S = C1018 Steel
SS = 316 Stainless
A = 6061-T6 Aluminum

Pressure Ratings:

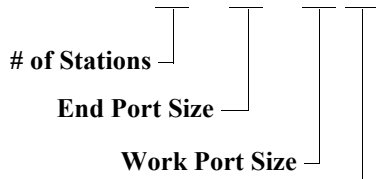
5000 PSI in C1018 Steel
5000 PSI in 316L Stainless
3000 PSI in 6061-T6 Aluminum



Number of Stations	End Port Size	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#12 ORB (1-1/16"-12)	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3			6.75	—	4						
4			8.75	—	4						
6			12.75	5.00	6						
8			16.75	7.00	6						
10			20.75	9.00	6						
2	#16 ORB (1-5/16"-12)	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3			8.00	—	4						
4			10.50	—	4						
6			15.50	6.25	6						
8			20.50	8.75	6						
10			25.50	11.25	6						
2	#20 ORB (1-5/8"-12)	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3			9.00	—	4						
4			11.75	—	4						
6			17.25	6.88	6						
8			22.75	9.63	6						
10			28.25	12.38	6						
2	#24 ORB (1-7/8"-12)	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3			11.00	—	4						
4			14.50	—	4						
6			21.50	10.50	6						
8			28.50	12.25	6						
2			#32 ORB (2-1/2"-12)	#24 ORB (1-7/8"-12)	8.25						
3	12.25	—			4						
4	16.25	—			4						
6	24.25	10.00			6						

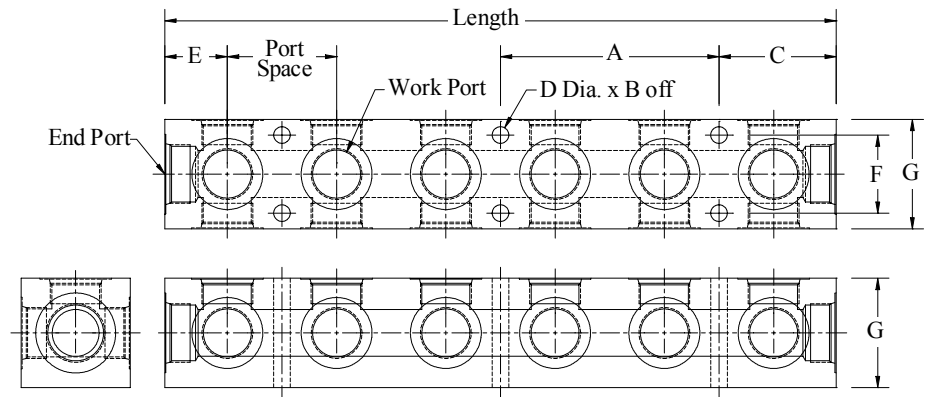
ORB (O'Ring Boss) Tee Header Blocks (*All Ports Connected*)

3065 - X - X - X X



Material:
S = C1018 Steel
SS = 316 Stainless
A = 6061-T6 Aluminum

Pressure Ratings:
5000 PSI in C1018 Steel
5000 PSI in 316L Stainless
3000 PSI in 6061-T6 Aluminum

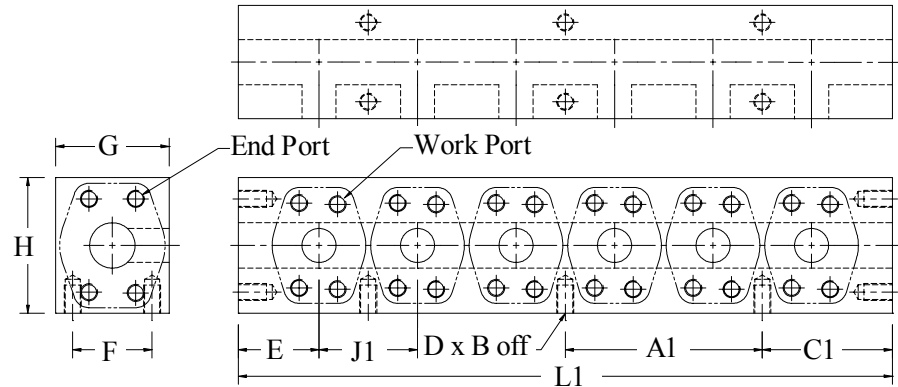


Number of Stations	End Port Size	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#12 ORB (1-1/16"-12)	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3			6.75	—	4						
4			8.75	—	4						
6			12.75	5.00	6						
8			16.75	7.00	6						
10			20.75	9.00	6						
2	#16 ORB (1-5/16"-12)	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3			8.00	—	4						
4			10.50	—	4						
6			15.50	6.25	6						
8			20.50	8.75	6						
10			25.50	11.25	6						
2	#20 ORB (1-5/8"-12)	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3			9.00	—	4						
4			11.75	—	4						
6			17.25	6.88	6						
8			22.75	9.63	6						
10			28.25	12.38	6						
2	#24 ORB (1-7/8"-12)	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3			11.00	—	4						
4			14.50	—	4						
6			21.50	10.50	6						
8			28.50	12.25	6						
2			#32 ORB (2-1/2"-12)	#24 ORB (1-7/8"-12)	8.25						
3	12.25	—			4						
4	16.25	—			4						
6	24.25	10.00			6						

Code 61 Branch Header Blocks (All Ports Connected)

3051 - X - X - X X

of Stations ———
End Port Size ———
Work Port Size ———
Material:
S = C1018 Steel
SS = 316 Stainless



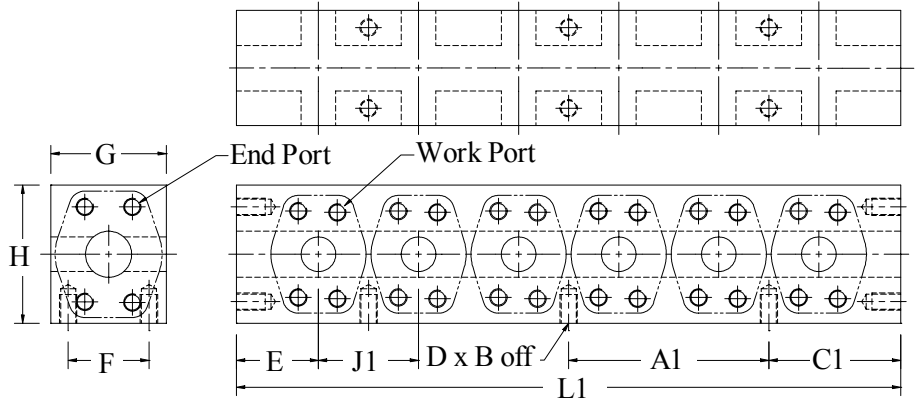
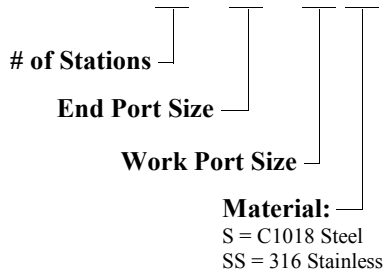
Pressure Ratings:

Pressure ratings are governed by largest flange size.
[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	End Port Size	Work Port Size	L1	A1	B	C1	C2	D	J1	E	F	G	H
2	1.00" Code 61	3/4" Code 61	5.69	—	2	2.84	3.09	3/8"-16 NC	2.19	1.75	1.75	2.50	3.00
3			7.88	—	4								
4			10.06	—	4								
6			14.44	4.38	6								
8			18.81	6.56	6								
10			23.19	8.75	6								
2	1.25" Code 61	1.00" Code 61	6.19	—	2	3.09	3.31	3/8"-16 NC	2.44	1.88	1.75	2.50	3.00
3			8.63	—	4								
4			11.06	—	4								
6			15.94	4.88	6								
8			20.81	7.31	6								
10			25.69	9.75	6								
2	1.50" Code 61	1.25" Code 61	7.63	—	2	3.81	3.94	7/16"-14 NC	3.00	2.31	2.13	3.00	4.00
3			10.63	—	4								
4			13.63	—	4								
6			19.63	6.00	6								
8			25.63	9.00	6								
10			31.63	12.00	6								
2	2.00" Code 61	1.50" Code 61	8.63	—	2	4.31	4.53	1/2"-13 NC	3.38	2.63	3.00	4.00	4.00
3			12.00	—	4								
4			15.38	—	4								
6			22.13	6.75	6								
8			28.88	10.13	6								
2			2.50" Code 61	2.00" Code 61	9.44								
3	13.38	—			4								
4	17.31	—			4								
6	25.19	7.88			6								

Code 61 Run Header Blocks (All Ports Connected)

3055 - X - X - X X



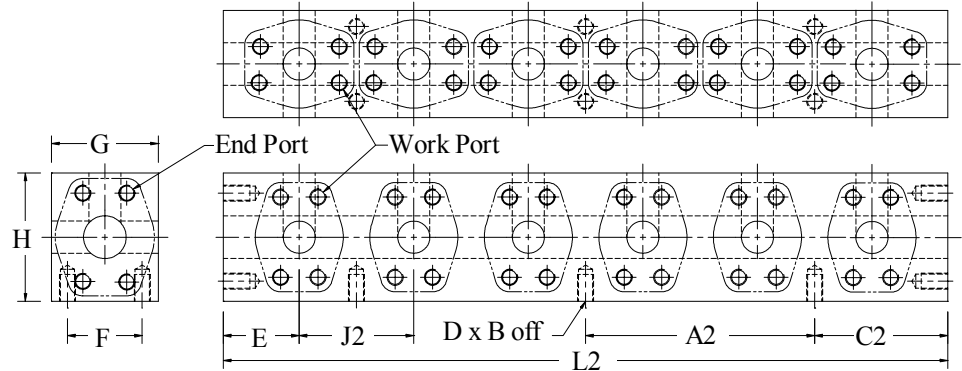
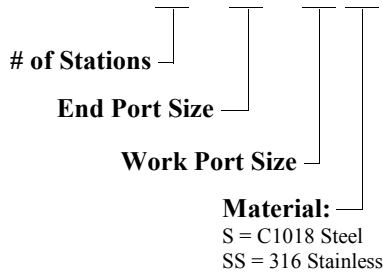
Pressure Ratings:

Pressure ratings are governed by largest flange size.
[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	End Port Size	Work Port Size	L1	A1	B	C1	D	J1	E	F	G	H
2	1.00" Code 61	3/4" Code 61	5.69	—	2	2.84	3/8"-16 NC	2.19	1.75	1.75	2.50	3.00
3			7.88	—	4							
4			10.06	—	4							
6			14.44	4.38	6							
8			18.81	6.56	6							
10	23.19	8.75	6									
2	1.25" Code 61	1.00" Code 61	6.19	—	2	3.09	3/8"-16 NC	2.44	1.88	1.75	2.50	3.00
3			8.63	—	4							
4			11.06	—	4							
6			15.94	4.88	6							
8			20.81	7.31	6							
10	25.69	9.75	6									
2	1.50" Code 61	1.25" Code 61	7.63	—	2	3.81	7/16"-14 NC	3.00	2.31	2.13	3.00	4.00
3			10.63	—	4							
4			13.63	—	4							
6			19.63	6.00	6							
8			25.63	9.00	6							
10	31.63	12.00	6									
2	2.00" Code 61	1.50" Code 61	8.63	—	2	4.31	1/2"-13 NC	3.38	2.63	3.00	4.00	4.00
3			12.00	—	4							
4			15.38	—	4							
6			22.13	6.75	6							
8			28.88	10.13	6							
2	2.50" Code 61	2.00" Code 61	9.44	—	2	4.72	1/2"-13 NC	3.94	2.75	3.50	4.50	4.50
3			13.38	—	4							
4			17.31	—	4							
6			25.19	7.88	6							

Code 61 Tee Header Blocks (All Ports Connected)

3063 - X - X - X X



Pressure Ratings:

Pressure ratings are governed by largest flange size.

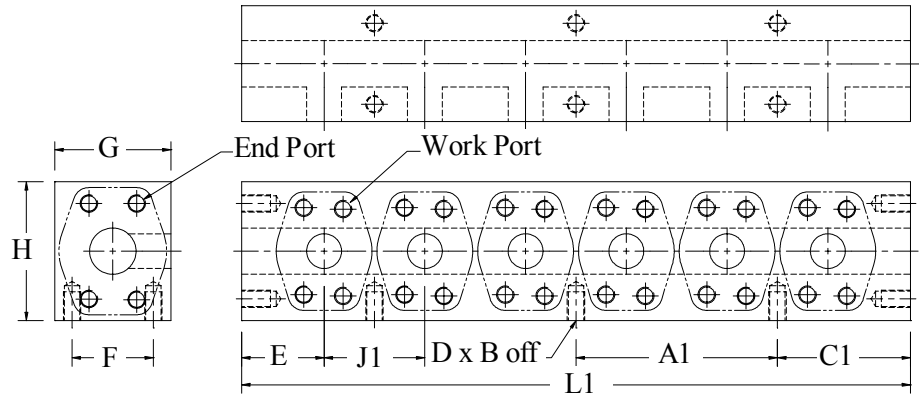
[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	End Port Size	Work Port Size	L2	A2	B	C2	D	J2	E	F	G	H
2	1.00" Code 61	3/4" Code 61	6.19	—	2	3.09	3/8"-16 NC	2.69	1.75	1.75	2.50	3.00
3			8.88	—	4							
4			11.56	—	4							
6			16.94	5.38	6							
8			22.31	8.06	6							
10			27.69	10.75	6							
2	1.25" Code 61	1.00" Code 61	6.63	—	2	3.31	3/8"-16 NC	2.88	1.88	1.75	2.50	3.00
3			9.50	—	4							
4			12.38	—	4							
6			18.13	5.75	6							
8			23.88	8.63	6							
10			29.63	11.50	6							
2	1.50" Code 61	1.25" Code 61	7.88	—	2	3.94	7/16"-14 NC	3.25	2.31	2.13	3.00	4.00
3			11.13	—	4							
4			14.38	—	4							
6			20.88	6.50	6							
8			27.38	9.75	6							
10			33.88	13.00	6							
2	2.00" Code 61	1.50" Code 61	9.06	—	2	4.53	1/2"-13 NC	3.81	2.63	3.00	4.00	4.00
3			12.88	—	4							
4			16.69	—	4							
6			24.31	7.63	6							
8			31.94	11.44	6							
2			2.50" Code 61	2.00" Code 61	9.63							
3	13.75	—			4							
4	17.88	—			4							
6	26.13	8.25			6							

Code 62 Branch Header Blocks (All Ports Connected)

3052 - X - X - X X

of Stations
End Port Size
Work Port Size
Material:
S = C1018 Steel
SS = 316 Stainless



Pressure Ratings:

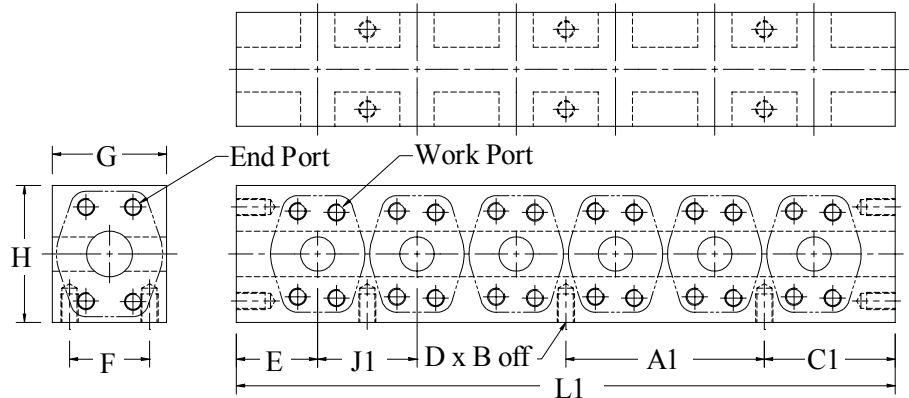
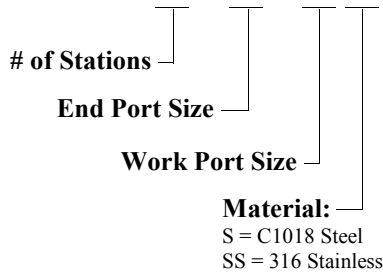
6000 PSI in C1018 Steel

6000 PSI in 316L Stainless

No. of Stations	End Port Size	Work Port Size	L1	A1	B	C1	D	J1	E	F	G	H
2	1.00" Code 62	3/4" Code 62	6.50	—	2	3.25	3/8"-16 NC	2.50	2.00	1.75	2.50	3.00
3			9.00	—	4							
4			11.50	—	4							
6			16.50	5.00	6							
8			21.50	7.50	6							
10			26.50	10.11	6							
2	1.25" Code 62	1.00" Code 62	7.63	—	2	3.81	7/16"-14 NC	2.88	2.38	2.13	3.00	3.75
3			10.50	—	4							
4			13.38	—	4							
6			19.13	5.75	6							
8			24.88	8.63	6							
10			30.63	11.50	6							
2	1.50" Code 62	1.25" Code 62	8.19	—	2	4.09	1/2"-13 NC	3.19	2.50	2.50	3.50	4.50
3			11.38	—	4							
4			14.56	—	4							
6			20.94	6.38	6							
8			27.31	9.56	6							
10			33.69	12.75	6							
2	2.00" Code 62	1.50" Code 62	9.88	—	2	4.94	5/8"-11 NC	3.88	3.00	2.75	4.00	5.00
3			13.75	—	4							
4			17.63	—	4							
6			25.38	7.75	6							
8			33.13	11.63	6							

Code 62 Run Header Blocks (All Ports Connected)

3056 - X - X - X X



Pressure Ratings:

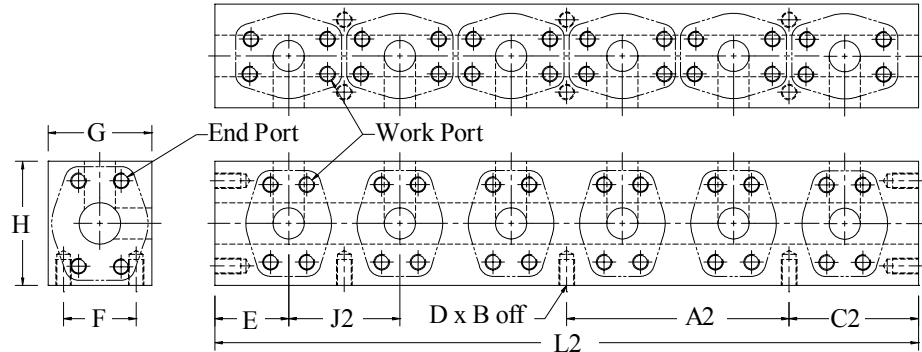
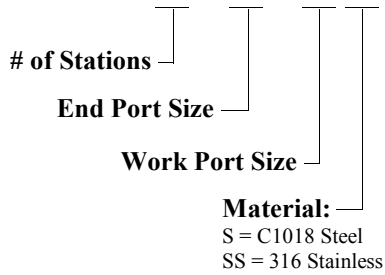
6000 PSI in C1018 Steel

6000 PSI in 316L Stainless

No. of Stations	End Port Size	Work Port Size	L1	A1	B	C1	D	J1	E	F	G	H
2	1.00" Code 62	3/4" Code 62	6.50	—	2	3.25	3/8"-16 NC	2.50	2.00	1.75	2.50	3.00
3			9.00	—	4							
4			11.50	—	4							
6			16.50	5.00	6							
8			21.50	7.50	6							
10			26.50	10.11	6							
2	1.25" Code 62	1.00" Code 62	7.63	—	2	3.81	7/16"-14 NC	2.88	2.38	2.13	3.00	3.75
3			10.50	—	4							
4			13.38	—	4							
6			19.13	5.75	6							
8			24.88	8.63	6							
10			30.63	11.50	6							
2	1.50" Code 62	1.25" Code 62	8.19	—	2	4.09	1/2"-13 NC	3.19	2.50	2.50	3.50	4.50
3			11.38	—	4							
4			14.56	—	4							
6			20.94	6.38	6							
8			27.31	9.56	6							
10			33.69	12.75	6							
2	2.00" Code 62	1.50" Code 62	9.88	—	2	4.94	5/8"-11 NC	3.88	3.00	2.75	4.00	5.00
3			13.75	—	4							
4			17.63	—	4							
6			25.38	7.75	6							
8			33.13	11.63	6							

Code 62 Elbow Header Blocks *(All Ports Connected)*

3060 - X - X - X X



Pressure Ratings:

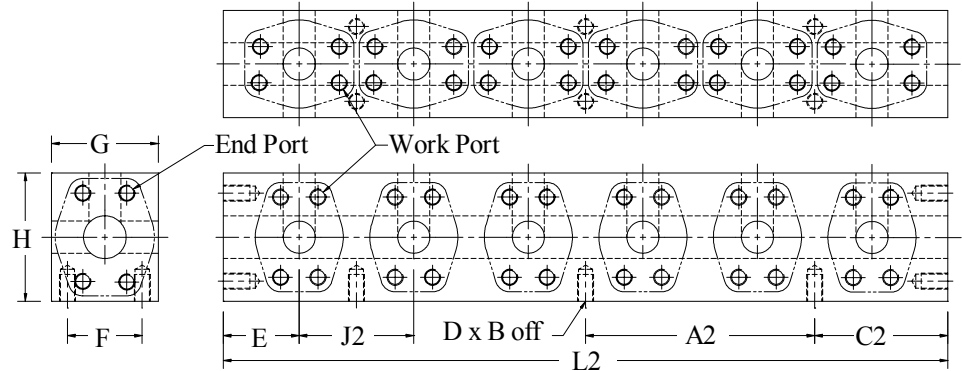
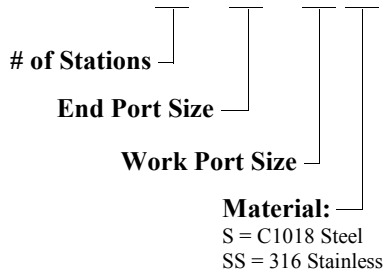
6000 PSI in C1018 Steel

6000 PSI in 316L Stainless

No. of Stations	End Port Size	Work Port Size	L2	A2	B	C2	D	J2	E	F	G	H
2	1.00" Code 62	3/4" Code 62	6.94	—	2	3.46	3/8"-16 NC	2.94	2.00	1.75	2.50	3.00
3			9.88	—	4							
4			12.81	—	4							
6			18.69	5.88	6							
8			24.56	8.81	6							
10			30.44	11.75	6							
2	1.25" Code 62	1.00" Code 62	8.00	—	2	4.00	7/16"-14 NC	3.25	2.38	2.13	3.00	3.75
3			11.25	—	4							
4			14.50	—	4							
6			21.00	6.50	6							
8			27.50	9.75	6							
10			34.00	13.00	6							
2	1.50" Code 62	1.25" Code 62	8.88	—	2	4.44	1/2"-13 NC	3.88	2.50	2.50	3.50	4.50
3			12.75	—	4							
4			16.63	—	4							
6			24.38	7.75	6							
8			32.13	11.63	6							
10			39.88	15.50	6							
2	2.00" Code 62	1.50" Code 62	10.63	—	2	5.31	5/8"-11 NC	4.63	3.00	2.75	4.00	5.00
3			15.25	—	4							
4			19.88	—	4							
6			29.13	9.25	6							
8			38.38	13.88	6							

Code 62 Tee Header Blocks (All Ports Connected)

3064 - X - X - X X



Pressure Ratings:

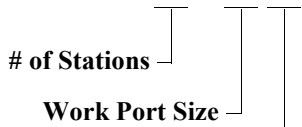
6000 PSI in C1018 Steel

6000 PSI in 316L Stainless

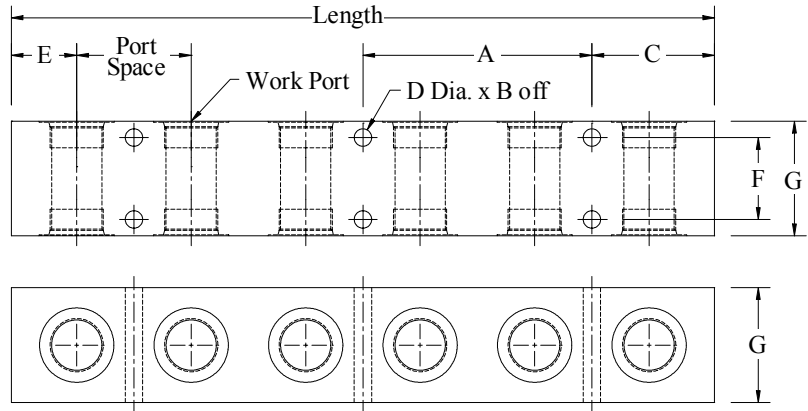
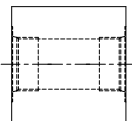
No. of Stations	End Port Size	Work Port Size	L2	A2	B	C2	D	J2	E	F	G	H
2	1.00" Code 62	3/4" Code 62	6.94	—	2	3.46	3/8"-16 NC	2.94	2.00	1.75	2.50	3.00
3			9.88	—	4							
4			12.81	—	4							
6			18.69	5.88	6							
8			24.56	8.81	6							
10			30.44	11.75	6							
2	1.25" Code 62	1.00" Code 62	8.00	—	2	4.00	7/16"-14 NC	3.25	2.38	2.13	3.00	3.75
3			11.25	—	4							
4			14.50	—	4							
6			21.00	6.50	6							
8			27.50	9.75	6							
10			34.00	13.00	6							
2	1.50" Code 62	1.25" Code 62	8.88	—	2	4.44	1/2"-13 NC	3.88	2.50	2.50	3.50	4.50
3			12.75	—	4							
4			16.63	—	4							
6			24.38	7.75	6							
8			32.13	11.63	6							
10			39.88	15.50	6							
2	2.00" Code 62	1.50" Code 62	10.63	—	2	5.31	5/8"-11 NC	4.63	3.00	2.75	4.00	5.00
3			15.25	—	4							
4			19.88	—	4							
6			29.13	9.25	6							
8			38.38	13.88	6							

ORB (O'Ring Boss) Run Junction Blocks *(Work Ports Connected)*

3069 - X - X X



Material:
S = C1018 Steel
SS = 316 Stainless
A = 6061-T6 Aluminum



Pressure Ratings:

5000 PSI in C1018 Steel
5000 PSI in 316L Stainless
3000 PSI in 6061-T6 Aluminum

Number of Stations	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3		6.75	—	4						
4		8.75	—	4						
6		12.75	5.00	6						
8		16.75	7.00	6						
10		20.75	9.00	6						
2	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3		8.00	—	4						
4		10.50	—	4						
6		15.50	6.25	6						
8		20.50	8.75	6						
10		25.50	11.25	6						
2	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3		9.00	—	4						
4		11.75	—	4						
6		17.25	6.88	6						
8		22.75	9.63	6						
10		28.25	12.38	6						
2	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3		11.00	—	4						
4		14.50	—	4						
6		21.50	10.50	6						
8		28.50	12.25	6						
2		#24 ORB (1-7/8"-12)	8.25	—						
3	12.25		—	4						
4	16.25		—	4						
6	24.25		10.00	6						

ORB (O'Ring Boss) Elbow Junction Blocks *(Work Ports Connected)*

3073 - X - X X

of Stations

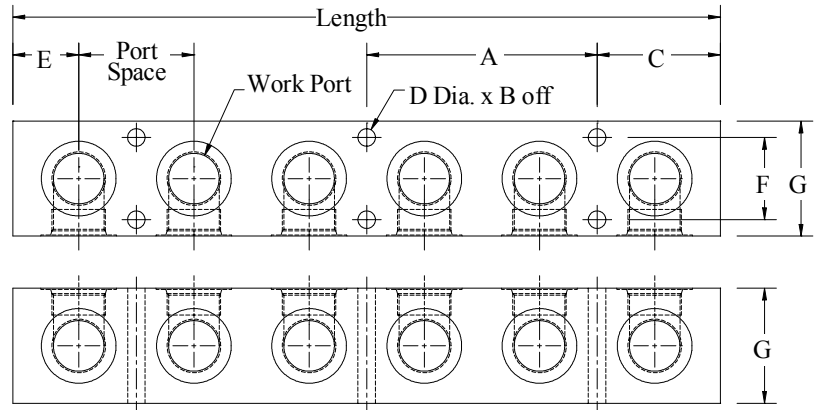
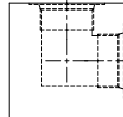
Work Port Size

Material:

S = C1018 Steel

SS = 316 Stainless

A = 6061-T6 Aluminum



Pressure Ratings:

5000 PSI in C1018 Steel

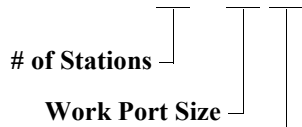
5000 PSI in 316L Stainless

3000 PSI in 6061-T6 Aluminum

Number of Stations	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3		6.75	—	4						
4		8.75	—	4						
6		12.75	5.00	6						
8		16.75	7.00	6						
10		20.75	9.00	6						
2	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3		8.00	—	4						
4		10.50	—	4						
6		15.50	6.25	6						
8		20.50	8.75	6						
10		25.50	11.25	6						
2	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3		9.00	—	4						
4		11.75	—	4						
6		17.25	6.88	6						
8		22.75	9.63	6						
10		28.25	12.38	6						
2	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3		11.00	—	4						
4		14.50	—	4						
6		21.50	10.50	6						
8		28.50	12.25	6						
2		#24 ORB (1-7/8"-12)	8.25	—						
3	12.25		—	4						
4	16.25		—	4						
6	24.25		10.00	6						

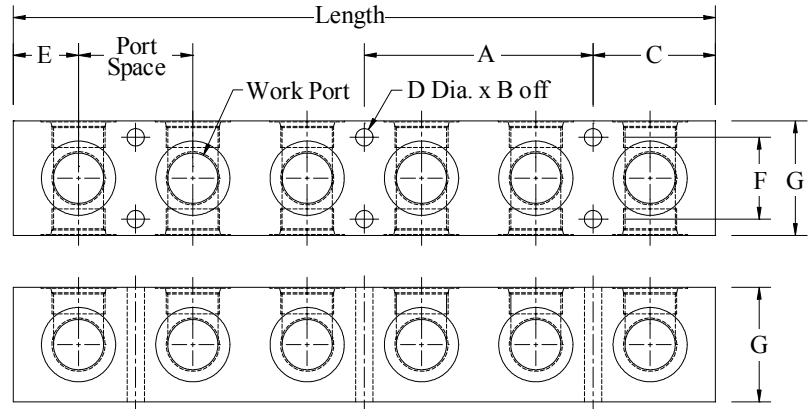
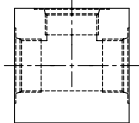
ORB (O'Ring Boss) Tee Junction Blocks (*Work Ports Connected*)

3077 - X - X X



Material:

- S = C1018 Steel
- SS = 316 Stainless
- A = 6061-T6 Aluminum



Pressure Ratings:

- 5000 PSI in C1018 Steel
- 5000 PSI in 316L Stainless
- 3000 PSI in 6061-T6 Aluminum

Number of Stations	Work Port Size	Length	A	B	C	D	Port Spacing	E	F	G
2	#8 ORB (3/4"-16)	4.75	—	4	2.38	9/32	2.00	1.38	1.50	2.00
3		6.75	—	4						
4		8.75	—	4						
6		12.75	5.00	6						
8		16.75	7.00	6						
10		20.75	9.00	6						
2	#12 ORB (1-1/16"-12)	5.50	—	4	2.75	9/32	2.50	1.50	1.75	2.50
3		8.00	—	4						
4		10.50	—	4						
6		15.50	6.25	6						
8		20.50	8.75	6						
10		25.50	11.25	6						
2	#16 ORB (1-5/16"-12)	6.25	—	4	3.13	13/32	2.75	1.75	2.25	3.00
3		9.00	—	4						
4		11.75	—	4						
6		17.25	6.88	6						
8		22.75	9.63	6						
10		28.25	12.38	6						
2	#20 ORB (1-5/8"-12)	7.50	—	4	3.75	17/32	3.50	2.00	2.50	3.50
3		11.00	—	4						
4		14.50	—	4						
6		21.50	10.50	6						
8		28.50	12.25	6						
2		#24 ORB (1-7/8"-12)	8.25	—						
3	12.25		—	4						
4	16.25		—	4						
6	24.25		10.00	6						

Code 61 Run Junction Blocks *(Work Ports Connected)*

3067 - X - X X

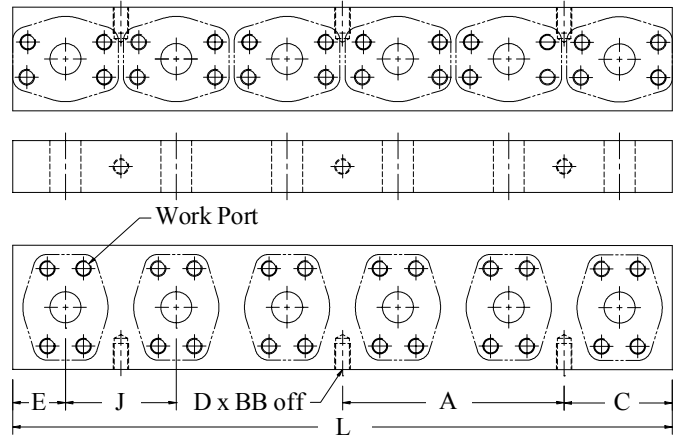
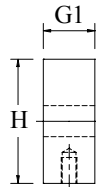
of Stations

Work Port Size

Material:

S = C1018 Steel

SS = 316 Stainless



Pressure Ratings:

Pressure ratings are governed by largest flange size.

[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	Work Port Size	L	A	BB	C	D	J	E	F	G1	H
2	3/4" Code 61	5.19	—	—	2.59	3/8"-16 NC	2.69	1.25	1.75	1.00	2.50
3		7.88	—	2							
4		10.56	—	2							
6		15.94	5.38	3							
8		21.31	8.06	3							
10	26.69	10.75	3								
2	1.00" Code 61	5.63	—	—	2.81	3/8"-16 NC	2.88	1.38	1.75	1.00	3.00
3		8.50	—	2							
4		11.38	—	2							
6		17.13	5.75	3							
8		22.88	8.63	3							
10	28.63	11.50	3								
2	1.25" Code 61	6.50	—	—	3.25	7/16"-14 NC	3.25	1.63	2.00	1.25	3.50
3		9.75	—	2							
4		13.00	—	2							
6		19.50	6.50	3							
8		26.00	9.75	3							
10	32.50	13.00	3								
2	1.50" Code 61	7.56	—	—	3.78	1/2"-13 NC	3.82	1.88	3.00	1.50	4.00
3		11.38	—	2							
4		15.19	—	2							
6		22.81	7.63	3							
8		30.44	11.44	3							
2	2.00" Code 61	8.13	—	—	4.06	1/2"-13 NC	4.13	2.00	3.00	1.50	4.00
3		12.25	—	2							
4		16.38	—	2							
6		24.63	8.25	3							

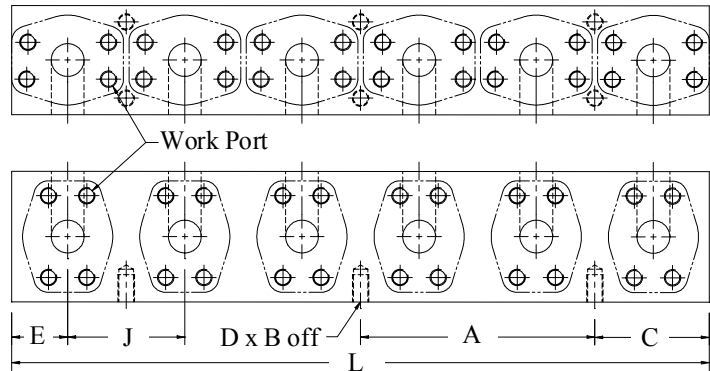
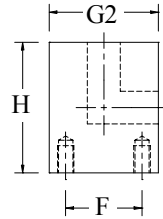
Code 61 Elbow Junction Blocks (Work Ports Connected)

3071 - X - X X

of Stations

Work Port Size

Material:
S = C1018 Steel
SS = 316 Stainless



Pressure Ratings:

Pressure ratings are governed by largest flange size.

[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	Work Port Size	L	A	B	C	D	J	E	F	G2	H
2	3/4" Code 61	5.19	—	2	2.59	3/8"-16 NC	2.69	1.25	1.75	2.50	2.50
3		7.88	—	4							
4		10.56	—	4							
6		15.94	5.38	6							
8		21.31	8.06	6							
10	26.69	10.75	6								
2	1.00" Code 61	5.63	—	2	2.81	3/8"-16 NC	2.88	1.38	1.75	2.50	3.00
3		8.50	—	4							
4		11.38	—	4							
6		17.13	5.75	6							
8		22.88	8.63	6							
10	28.63	11.50	6								
2	1.25" Code 61	6.50	—	2	3.25	7/16"-14 NC	3.25	1.63	2.00	3.00	3.50
3		9.75	—	4							
4		13.00	—	4							
6		19.50	6.50	6							
8		26.00	9.75	6							
10	32.50	13.00	6								
2	1.50" Code 61	7.56	—	2	3.78	1/2"-13 NC	3.82	1.88	3.00	4.00	4.00
3		11.38	—	4							
4		15.19	—	4							
6		22.81	7.63	6							
8		30.44	11.44	6							
2	2.00" Code 61	8.13	—	2	4.06	1/2"-13 NC	4.13	2.00	3.00	4.00	4.00
3		12.25	—	4							
4		16.38	—	4							
6		24.63	8.25	6							

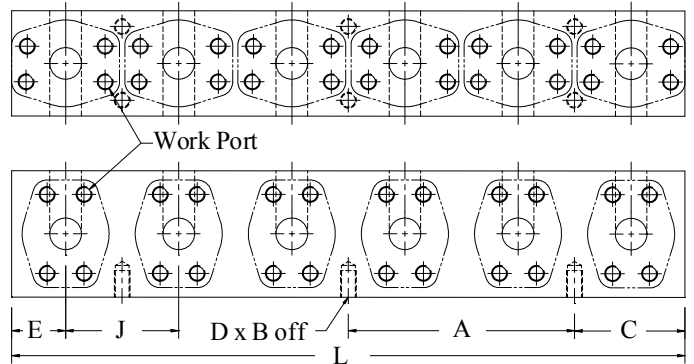
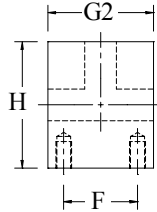
Code 61 Tee Junction Blocks (*Work Ports Connected*)

3075 - X - X X

of Stations

Work Port Size

Material:
S = C1018 Steel
SS = 316 Stainless



Pressure Ratings:

Pressure ratings are governed by largest flange size.

[CLICK HERE](#) for code 61 pressure ratings.

No. of Stations	Work Port Size	L	A	B	C	D	J	E	F	G2	H
2	3/4" Code 61	5.19	—	2	2.59	3/8"-16 NC	2.69	1.25	1.75	2.50	2.50
3		7.88	—	4							
4		10.56	—	4							
6		15.94	5.38	6							
8		21.31	8.06	6							
10		26.69	10.75	6							
2	1.00" Code 61	5.63	—	2	2.81	3/8"-16 NC	2.88	1.38	1.75	2.50	3.00
3		8.50	—	4							
4		11.38	—	4							
6		17.13	5.75	6							
8		22.88	8.63	6							
10		28.63	11.50	6							
2	1.25" Code 61	6.50	—	2	3.25	7/16"-14 NC	3.25	1.63	2.00	3.00	3.50
3		9.75	—	4							
4		13.00	—	4							
6		19.50	6.50	6							
8		26.00	9.75	6							
10		32.50	13.00	6							
2	1.50" Code 61	7.56	—	2	3.78	1/2"-13 NC	3.82	1.88	3.00	4.00	4.00
3		11.38	—	4							
4		15.19	—	4							
6		22.81	7.63	6							
8		30.44	11.44	6							
2		2.00" Code 61	8.13	—							
3	12.25		—	4							
4	16.38		—	4							
6	24.63		8.25	6							

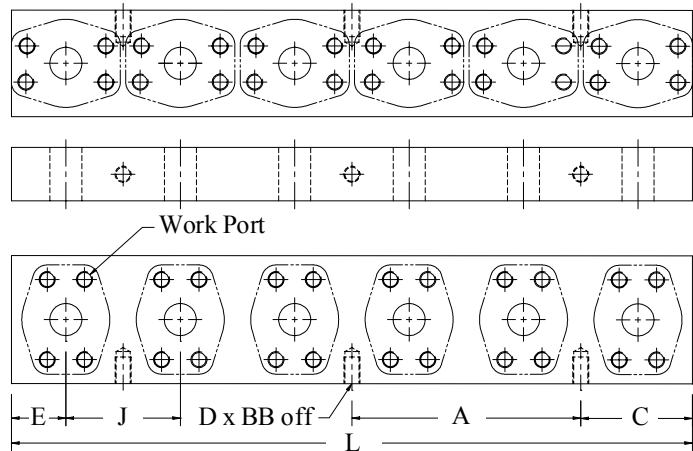
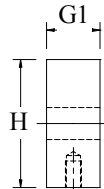
Code 62 Run Junction Blocks *(Work Ports Connected)*

3068 - X - X X

of Stations

Work Port Size

Material:
S = C1018 Steel
SS = 316 Stainless



Pressure Ratings:
6000 PSI in C1018 Steel
6000 PSI in 316L Stainless

No. of Stations	Work Port Size	L	A	BB	C	D	J	E	F	G1	H
2	3/4" Code 62	6.00	—	—	3.00	3/8"-16 NC	3.00	1.50	1.75	1.00	3.00
3		9.00	—	2							
4		12.00	—	2							
6		18.00	6.00	3							
8		24.00	9.00	3							
10		30.00	12.00	3							
2	1.00" Code 62	6.50	—	—	3.25	7/16"-14 NC	3.25	1.63	2.63	1.25	3.50
3		9.75	—	2							
4		13.00	—	2							
6		19.50	6.50	3							
8		26.00	7.75	3							
10		32.50	13.00	3							
2	1.25" Code 62	7.88	—	—	3.94	1/2"-13 NC	3.88	2.00	3.00	1.50	4.00
3		11.75	—	2							
4		15.63	—	2							
6		23.38	7.75	3							
8		31.13	11.63	3							
10		38.88	15.50	3							
2	1.50" Code 62	9.13	—	—	4.56	5/8"-11 NC	4.63	2.25	3.25	2.00	4.50
3		13.75	—	2							
4		18.38	—	2							
6		27.63	9.25	3							
8		36.88	13.88	3							
2		2.00" Code 62	10.63	—							
3	16.00		—	2							
4	21.38		—	2							
6	32.13		10.75	3							

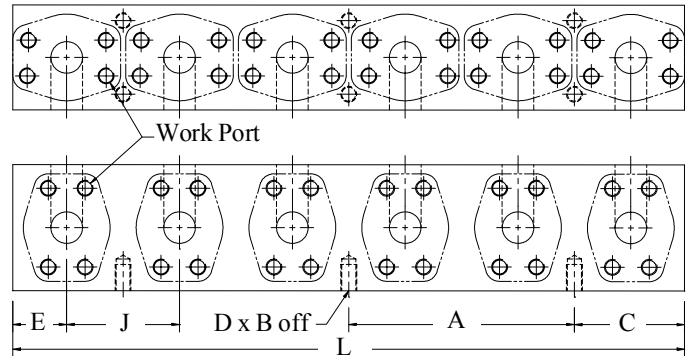
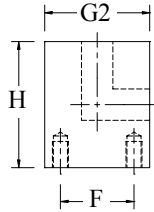
Code 62 Elbow Junction Blocks (Work Ports Connected)

3072 - X - X X

of Stations

Work Port Size

Material:
S = C1018 Steel
SS = 316 Stainless



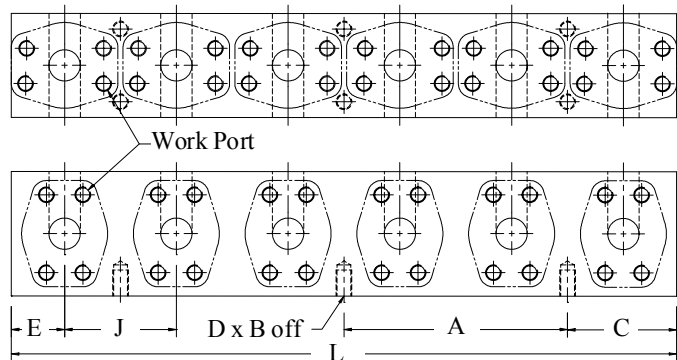
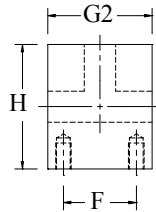
Pressure Ratings:
6000 PSI in C1018 Steel
6000 PSI in 316L Stainless

No. of Stations	Work Port Size	L	A	B	C	D	J	E	F	G2	H
2	3/4" Code 62	6.00	—	2	3.00	3/8"-16 NC	3.00	1.50	1.75	2.50	3.00
3		9.00	—	4							
4		12.00	—	4							
6		18.00	6.00	6							
8		24.00	9.00	6							
10	30.00	12.00	6								
2	1.00" Code 62	6.50	—	2	3.25	7/16"-14 NC	3.25	1.63	2.63	3.50	3.50
3		9.75	—	4							
4		13.00	—	4							
6		19.50	6.50	6							
8		26.00	7.75	6							
10	32.50	13.00	6								
2	1.25" Code 62	7.88	—	2	3.94	1/2"-13 NC	3.88	2.00	3.00	4.00	4.00
3		11.75	—	4							
4		15.63	—	4							
6		23.38	7.75	6							
8		31.13	11.63	6							
10	38.88	15.50	6								
2	1.50" Code 62	9.13	—	2	4.56	5/8"-11 NC	4.63	2.25	3.25	4.50	4.50
3		13.75	—	4							
4		18.38	—	4							
6		27.63	9.25	6							
8		36.88	13.88	6							
2	2.00" Code 62	10.63	—	2	5.31	3/4"-10 NC	5.38	2.63	3.00	4.50	5.25
3		16.00	—	4							
4		21.38	—	4							
6		32.13	10.75	6							

Code 62 Tee Junction Blocks (*Work Ports Connected*)

3076 - X - X X

of Stations ———
Work Port Size ———
Material:
S = C1018 Steel
SS = 316 Stainless



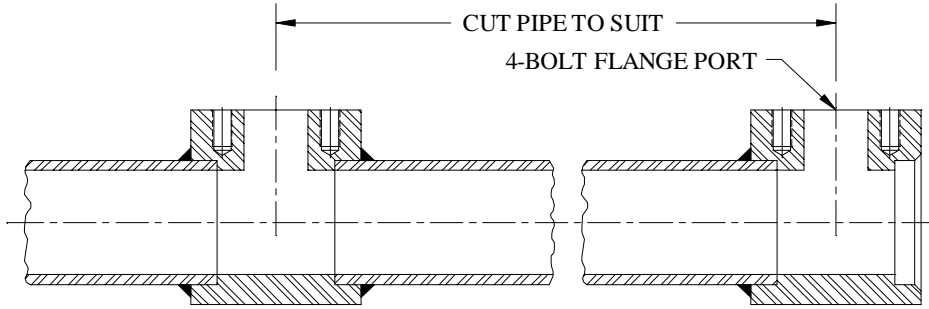
Pressure Ratings:

6000 PSI in C1018 Steel

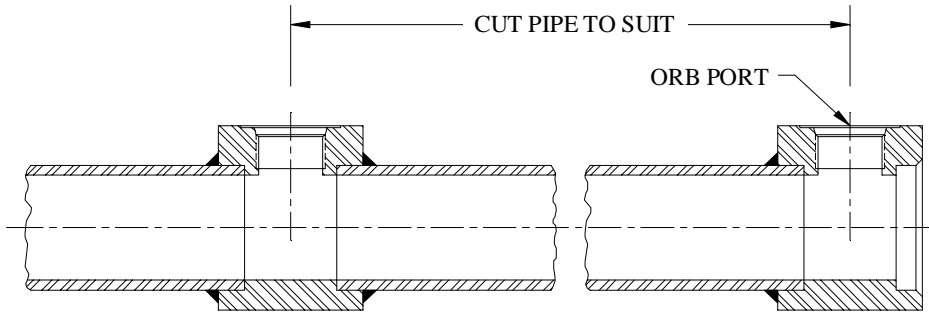
6000 PSI in 316L Stainless

No. of Stations	Work Port Size	L	A	B	C	D	J	E	F	G2	H
2	3/4" Code 62	6.00	—	2	3.00	3/8"-16 NC	3.00	1.50	1.75	2.50	3.00
3		9.00	—	4							
4		12.00	—	4							
6		18.00	6.00	6							
8		24.00	9.00	6							
10	30.00	12.00	6								
2	1.00" Code 62	6.50	—	2	3.25	7/16"-14 NC	3.25	1.63	2.63	3.50	3.50
3		9.75	—	4							
4		13.00	—	4							
6		19.50	6.50	6							
8		26.00	7.75	6							
10	32.50	13.00	6								
2	1.25" Code 62	7.88	—	2	3.94	1/2"-13 NC	3.88	2.00	3.00	4.00	4.00
3		11.75	—	4							
4		15.63	—	4							
6		23.38	7.75	6							
8		31.13	11.63	6							
10	38.88	15.50	6								
2	1.50" Code 62	9.13	—	2	4.56	5/8"-11 NC	4.63	2.25	3.25	4.50	4.50
3		13.75	—	4							
4		18.38	—	4							
6		27.63	9.25	6							
8		36.88	13.88	6							
2	2.00" Code 62	10.63	—	2	5.31	3/4"-10 NC	5.38	2.63	3.00	4.50	5.25
3		16.00	—	4							
4		21.38	—	4							
6		32.13	10.75	6							

Alternative Methods for Long Run Headers



Part No. 1865-XX-XX-XX (Socket Weld Pipe on the run and Code 61 companion flange on the branch)
Part No. 1879-XX-XX-XX (Socket Weld Pipe on the run and Code 62 companion flange on the branch)



Part No. 2058-XX-XX-XX (Socket Weld Pipe on the run and ORB female on the branch)

Tee – SWP / ORB / SWP

Part No.	Socket Weld Pipe	Female ORB	Socket Weld Pipe
2058-12-08-12	3/4	#8 (3/4"-16)	3/4
2058-12-12-12	3/4	#12 (1-1/16"-12)	3/4
2058-16-08-16	1	#8 (3/4"-16)	1
2058-16-12-16	1	#12 (1-1/16"-12)	1
2058-16-16-16	1	#16 (1-5/16"-12)	1
2058-20-12-20	1-1/4	#12 (1-1/16"-12)	1-1/4
2058-20-16-20	1-1/4	#16 (1-5/16"-12)	1-1/4
2058-20-20-20	1-1/4	#20 (1-5/8"-12)	1-1/4
2058-24-12-24	1-1/2	#12 (1-1/16"-12)	1-1/2
2058-24-16-24	1-1/2	#16 (1-5/16"-12)	1-1/2
2058-24-20-24	1-1/2	#20 (1-5/8"-12)	1-1/2
2058-32-12-32	2	#12 (1-1/16"-12)	2
2058-32-16-32	2	#16 (1-5/16"-12)	2
2058-32-20-32	2	#20 (1-5/8"-12)	2
2058-40-16-40	2-1/2	#16 (1-5/16"-12)	2-1/2
2058-40-20-40	2-1/2	#20 (1-5/8"-12)	2-1/2
2058-48-16-48	3	#16 (1-5/16"-12)	3
2058-48-20-48	3	#20 (1-5/8"-12)	3
2058-64-16-64	4	#16 (1-5/16"-12)	4
2058-64-20-64	4	#20 (1-5/8"-12)	4

4-Bolt Flange Tee – SWP / Companion / SWP

Code 61 Part No.	Code 62 Part No.	Socket Weld Pipe	4-Bolt Flange	Socket Weld Pipe
1865-12-12-12	1879-12-12-12	3/4	0.75	3/4
1865-16-12-12	1879-16-12-12	3/4	1.00	3/4
1865-16-16-16	1879-16-16-16	1	1.00	1
1865-20-16-16	1879-20-16-16	1	1.25	1
1865-20-20-20	1879-20-20-20	1-1/4	1.25	1-1/4
1865-24-20-20	1879-24-20-20	1-1/4	1.50	1-1/4
1865-24-24-24	1879-24-24-24	1-1/2	1.50	1-1/2
1865-32-24-24	1879-32-24-24	1-1/2	2.00	1-1/2
1865-32-32-32	1879-32-32-32	2	2.00	2

PLEASE NOTE:

These are just a few of the many ways to make long run pipe headers. Because your pipe is welded all around as opposed to just one side as you would do with a weld-o-let or saddle flange, there will be less distortion and your pipe will remain virtually straight even after welding.

When installed on new units or retrofitted to existing units, Sealum air breather adapters allow the hydraulic tank to “*breath*” and let the level of oil move up and down. Bayonet style breather adapters can be installed onto any existing bayonet style filler adapter, while the threaded breather adapters can be installed into any NPT port such as scullys and couplings. Both style adapters will accept standard filter or breather element.

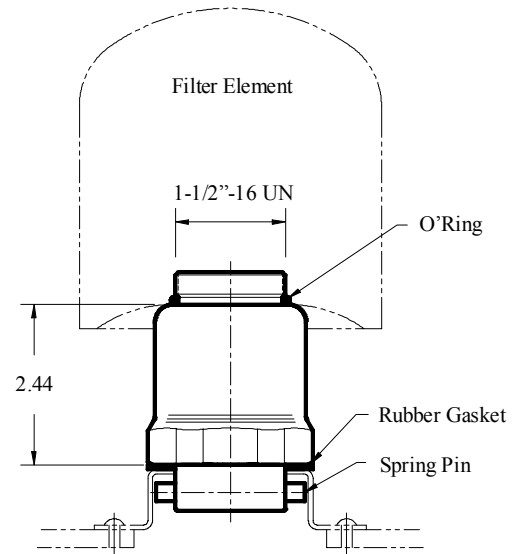
Bayonet Style Air Breather Adapter



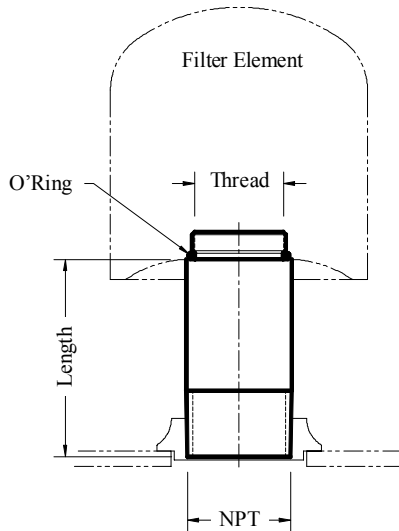
Bayonet Style Air Breather Adapter

Part Number: 2106

Material: Zinc Plated C1045 Steel
Comes with O’Ring & Gasket



NPT Breather Adapters



Material: 304 Stainless Steel
Comes Complete With O’Ring

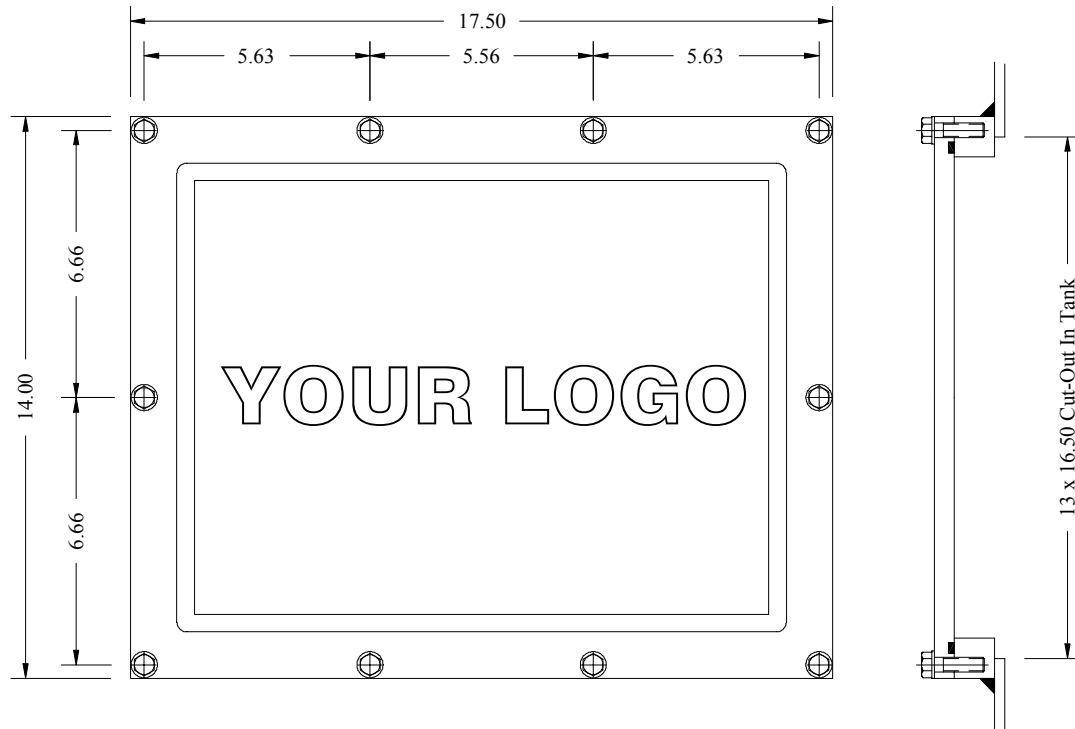


NPT Breather Adapters

Part No.	Length	NPT	Thread
2747	2.00	3/4”	1”-12
2550	2.13	1”	1 1/8”-16
2551	3.00	1.25”	1 1/2”-16

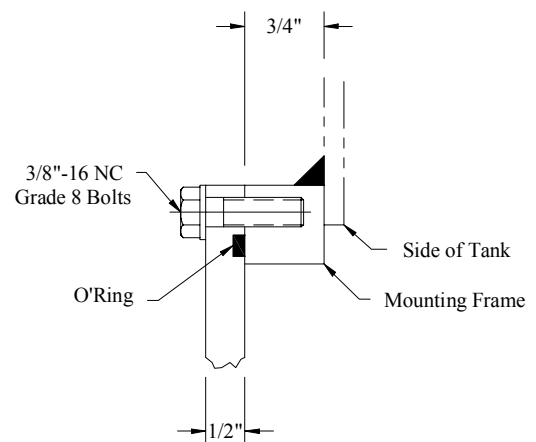
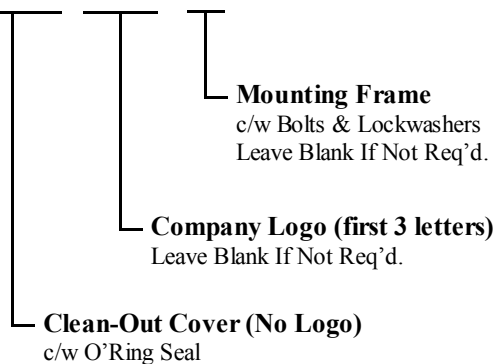
Clean-Out Cover

SEALUM aluminium clean-out covers offer a quick easy way to install an access cover to any hydraulic reservoir. Simply by welding the mounting frame to the side of your reservoir the SEALUM clean-out cover can be bolted into place with bolts supplied. The clean-out cover seals with a standard 1/4" cross section O'Ring, and with ten blind mounting holes is ideal for pressurized reservoirs. To give your reservoir more of a *custom* look you can have your company logo machined into the face of the clean-out cover.



Ordering Information

PART No. 2752-YOU-M



Materials:

Cover Plate: 1/2" 6061-T6 extruded aluminum
Mounting Frame: C1018 Steel