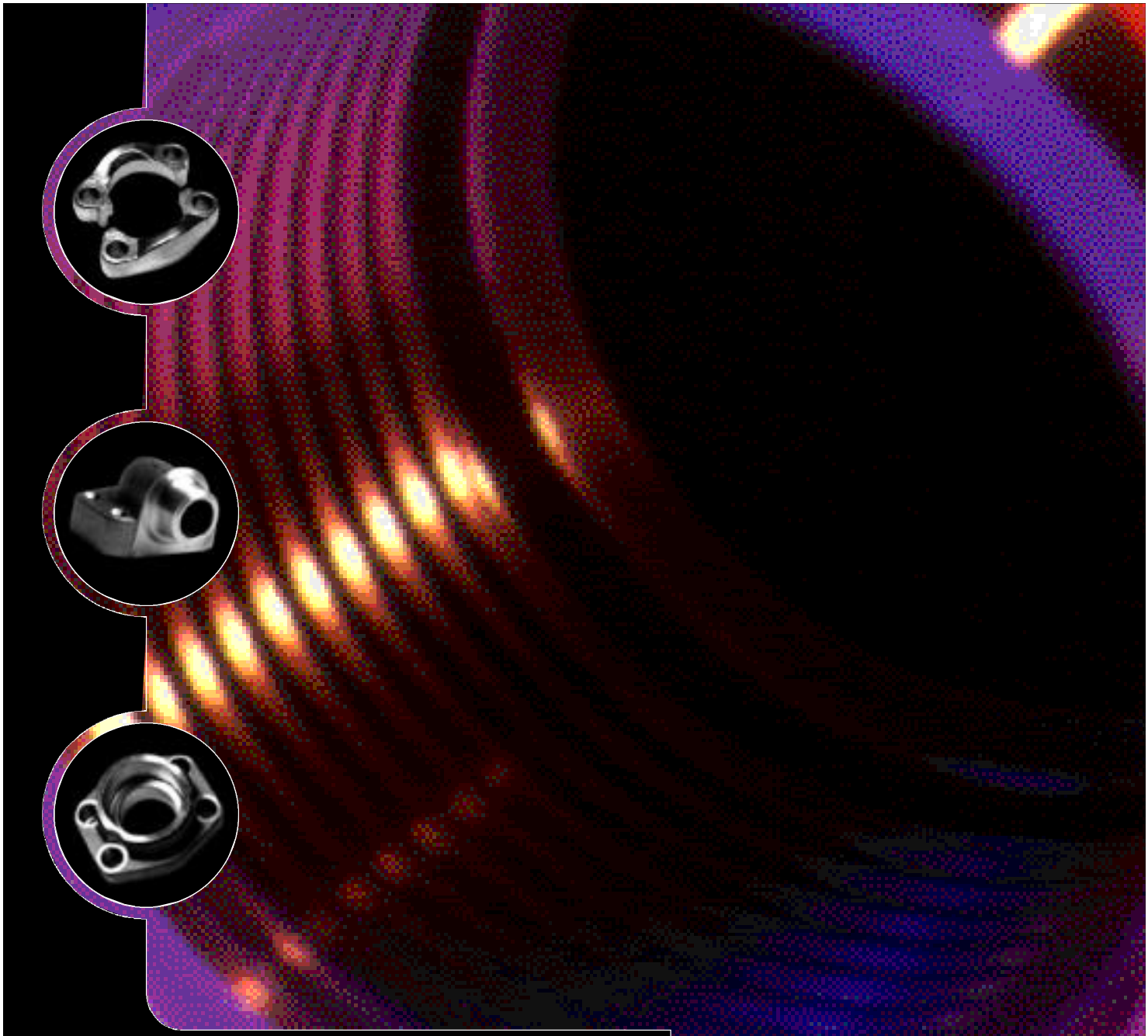


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CLINTON INDUSTRIES

HYDRAULIC FLANGES AND COMPONENTS

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LIMITED WARRANTY

Clinton Industries, Inc. and Havit Hydraulics GmbH warrant only that the parts conform to the dimensions set forth in its catalog at the time of sale. Havit and Clinton products are warranted for dimensional accuracy only. All other warranties, expressed or implied, including any warranty or merchantability or fitness for a particular purpose, are excluded and will not apply to the products sold.

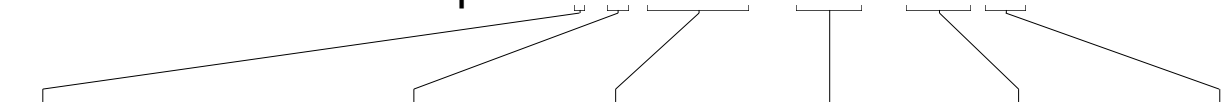
The soundness of steel cannot be, and is not, guaranteed by steel manufacturers as it is always possible that a part may leak from a pinhole or porosity not detected commercially. Under no circumstances will Clinton Industries, Inc. or Havit Hydraulic GmbH be liable for any damages or claims with respect to soundness of material.

LIMITATION OF REMEDY

Liability extends to repair or replacement of a defective part only. Replacement or repair of the defective part shall be the buyer's sole remedy when it is returned, freight prepaid, within 180 days from purchase, after receiving permission, and neither Clinton Industries, Inc. or Havit Hydraulic GmbH shall be liable for any consequential damages.

How to order S.A.E. 4-Bolt Flanges and Square 4-Bolt Flanges

Example: 1 3 0 0 4 - 2 4 - 2 0 M



TYPE	PSI	MODEL	PAD	PORT	OPTION

TYPE CODES

Carbon Steel
1=Standard Flange
2=Flange with 1/4" NPTF Gauge Port
3=Flange with 7/16-20 (-4) Gauge Port

Stainless Steel - 316L
7=Standard Flange
8=Flange with 1/4" NPTF Gauge Port
9=Flange 7/16-20 (-4) Gauge Port

PSI CODES

3=3000
6=6000
5=500

OPTION CODES

M=Metric
* K=Mounting Hardware
MK=Metric Mounting Hardware
VK=Viton O-Ring With Hardware

* If you would like mounting hardware to be included with a flange, simply add "K" to the end of the part number. If a metric kit is required, simply add "MK". To order mounting kits separately please see the page with the respective flange required. If you wish to order a stainless steel mounting kit separately, please add "SS" to the end of the mounting kit part number.

General Information

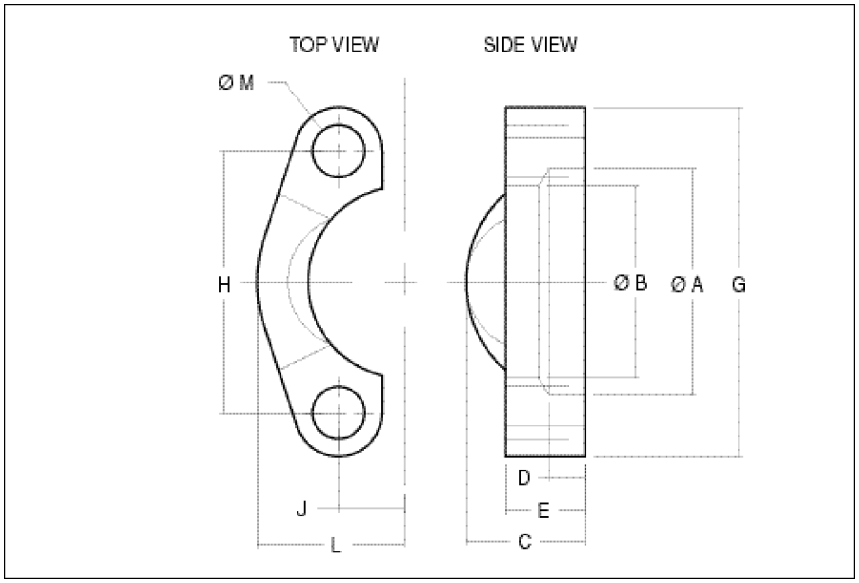
Pressure Ratings of S.A.E. Flanges

STANDARD PRESSURE : 3000 PSI (J518 CODE 61)

SIZE	PSI	BAR	RECOMMENDED BOLT TORQUE Lb-in
1/2"	5000	350	175-225
3/4"	5000	350	250-350
1"	5000	350	325-425
1 1/4"	4000	280	425-550
1 1/2"	3000	210	550-700
2"	3000	210	650-800
2 1/2"	2500	170	950-1100
3"	2000	140	1650-1800
3 1/2"	500	35	1400-1600
4"	500	35	1400-1600

HIGH PRESSURE : 6000 PSI (J518 CODE 62)

SIZE	PSI	BAR	RECOMMENDED BOLT TORQUE Lb-in
1/2"	6000	415	175-225
3/4"	6000	415	300-400
1 1/2"	6000	415	500-600
1 1/4"	6000	415	750-900
1 1/2"	6000	415	1400-1600
2"	6000	415	2400-2600





Split Flange Halves

STANDARD PRESSURE : CODE 61

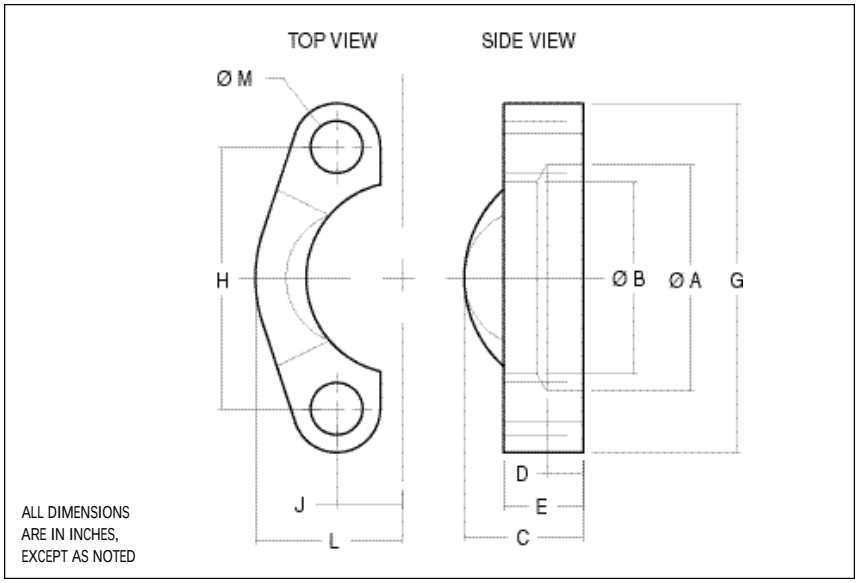
FLANGE SIZE	PART NO. [2]	A	B	C	D	E	G	H	J	L	DRILLED DIA. M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT [2]
1/2"	13001-08-08	1.22	0.96	0.75	0.25	0.51	2.13	1.500	0.344	0.90	0.33	HK-080	-210	5/16-18x1-1/4	0.30
3/4"	13001-12-12	1.53	1.27	0.87	0.25	0.55	2.56	1.875	0.438	1.02	0.41	HK-100	-214	3/8-16x1-1/4	0.40
1"	13001-16-16	1.78	1.52	0.95	0.30	0.63	2.76	2.062	0.515	1.15	0.41	HK-102	-219	3/8-16x1-1/4	0.48
1 1/4"	13001-20-20	2.03	1.72	0.87	0.30	0.63	3.11	2.312	0.599	1.43	0.47	HK-104	-222	7/16-14x1-1/2	0.66
1 1/2"	13001-24-24	2.41	2.00	0.98	0.30	0.63	3.70	2.750	0.703	1.62	0.53	HK-106	-225	1/2-13x1-1/2	1.02
2"	13001-32-32	2.84	2.47	1.02	0.36	0.63	4.02	3.062	0.844	1.90	0.53	HK-108	-228	1/2-13x1-1/2	1.10
2 1/2" [3]	13001-40-40	3.34	2.95	1.50	0.36	0.75	4.49	3.500	1.000	2.13	0.53	HK-110	-232	1/2-13x1-3/4	1.64
3" [4]	13001-48-48	4.03	3.58	1.61	0.36	0.87	5.32	4.188	1.219	2.57	0.66	HK-112	-237	5/8-11x1-3/4	2.87
3 1/2" [5]	13001-56-56	4.53	4.03	1.10	0.42	0.87	5.98	4.750	1.375	2.74	0.67	HK-114	-241	5/8-11x2	3.30
4" [5]	13001-64-64	5.03	4.53	1.38	0.42	0.98	6.38	5.125	1.531	2.99	0.67	HK-116	-245	5/8-11x2	3.70
5" [5]	13001-80-80	6.03	5.53	1.61	0.42	1.10	7.24	6.000	1.813	3.54	0.67	HK-118	-253	5/8-11x2-1/4	5.52

HIGH PRESSURE : CODE 62

FLANGE SIZE	PART NO. [2]	A	B	C	D	E	G	H	J	L	DRILLED DIA. M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT [2]
1/2"	16001-08-08	1.28	0.97	0.87	0.29	0.63	2.21	1.594	0.359	0.93	0.34	HK-401	-210	5/16-18x1-1/4	0.36
3/4"	16001-12-12	1.66	1.28	1.10	0.33	0.75	2.80	2.000	0.469	1.18	0.41	HK-402	-214	3/8-16x1-1-1/2	0.80
1"	16001-16-16	1.91	1.53	1.30	0.36	0.95	3.19	2.250	0.547	1.37	0.49	HK-403	-219	7/16-14x1-3/4	1.18
1 1/4"	16001-20-20	2.16	1.75	1.50	0.39	1.06	3.74	2.625	0.625	1.52	0.53	HK-404	-222	1/2-13x1-3/4	1.76
1 1/2"	16001-24-24	2.53	2.03	1.69	0.48	1.18	4.45	3.125	0.719	1.87	0.66	HK-405	-225	5/8-11x2-1/4	3.00
2"	16001-32-32	3.16	2.66	2.05	0.48	1.46	5.24	3.812	0.875	2.24	0.83	HK-406	-228	3/4-10x2-3/4	4.62

[1] Add a "K" to flange part # to include mounting hardware
[2] Includes both halves
[3] 2500 PSI max.
[4] 2000 PSI max.
[5] 500 PSI max.





ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED

Split Flange Halves – Metric

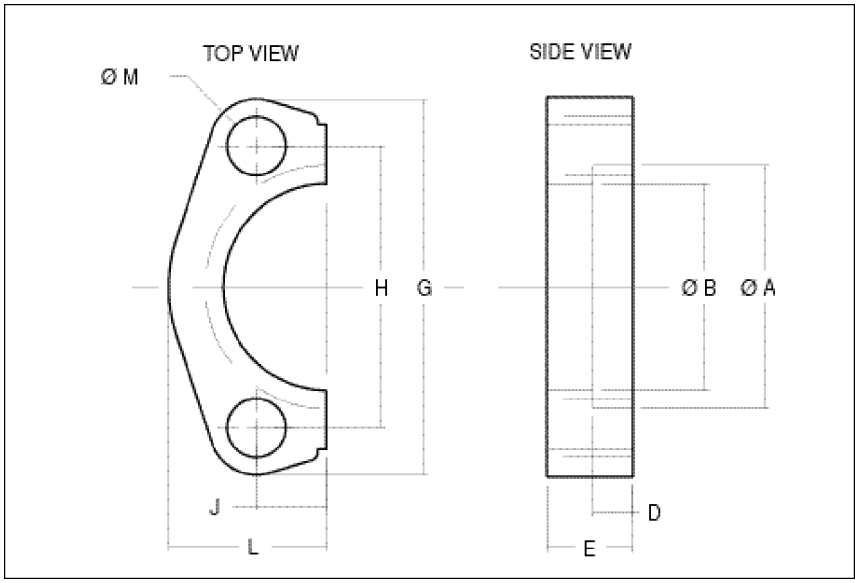
STANDARD PRESSURE : CODE 61

FLANGE SIZE	PART NO.[2]	A	B	C	D	E	G	H	J	L	DRILLED DIA. mm M	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	HEX HEAD BOLT	WT[2]
1/2"	13002-08-08	1.22	0.96	0.75	0.25	0.51	2.13	1.500	0.344	0.90	8.50	HKM-080	-210	M8x30	0.30
3/4"	13002-12-12	1.53	1.27	0.87	0.25	0.55	2.56	1.875	0.438	1.02	10.50	HKM-100	-214	M10x30	0.40
1"	13002-16-16	1.78	1.52	0.95	0.30	0.63	2.76	2.062	0.515	1.15	10.50	HKM-102	-219	M10x30	0.48
1 1/4"	13002-20-201	2.03	1.72	0.87	0.30	0.63	3.11	2.312	0.599	1.43	10.50	HKM-104	-222	M10x40	0.66
1 1/4"	13002-20-202	2.03	1.72	0.87	0.30	0.63	3.11	2.312	0.599	1.43	12.50	HKM-105	-222	M12x40	0.66
1 1/2"	13002-24-24	2.41	2.00	0.98	0.30	0.63	3.70	2.750	0.703	1.62	13.50	HKM-106	-225	M12x40	1.02
2"	13002-32-32	2.84	2.47	1.02	0.36	0.63	4.02	3.062	0.844	1.90	13.50	HKM-108	-228	M12x40	1.10
2 1/2"[3]	13002-40-40	3.34	2.95	1.50	0.36	0.75	4.49	3.500	1.000	2.13	13.50	HKM-110	-232	M12x45	1.64
3"[4]	13002-48-48	4.03	3.58	1.61	0.36	0.87	5.32	4.188	1.219	2.57	16.75	HKM-112	-237	M16x45	2.87

HIGH PRESSURE : CODE 62

FLANGE SIZE	PART NO.[2]	A	B	C	D	E	G	H	J	L	DRILLED DIA. mm M	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	HEX HEAD BOLT	WT[2]
1/2"	16002-08-08	1.28	0.97	0.87	0.28	0.63	2.20	1.594	0.359	0.93	8.50	HKM-401	-210	M8x30	0.36
3/4"	16002-12-12	1.66	1.28	1.10	0.33	0.75	2.80	2.000	0.469	1.18	10.50	HKM-402	-214	M10x40	0.80
1"	16002-16-16	1.91	1.53	1.30	0.36	0.94	3.19	2.250	0.547	1.37	12.50	HKM-403	-219	M12x45	1.18
1 1/4"	16002-20-20	2.16	1.75	1.50	0.39	1.06	3.74	2.625	0.625	1.52	14.50	HKM-404	-222	M14x45	1.76
1 1/2"	16002-24-24	2.53	2.03	1.69	0.48	1.18	4.45	3.125	0.719	1.87	16.75	HKM-405	-225	M16x55	3.00
2"	16002-32-32	3.16	2.66	2.05	0.48	1.46	5.24	3.812	0.875	2.24	21.00	HKM-406	-228	M20x70	4.62

[1] Add a "K" to flange part # to include mounting hardware.
[2] Includes both halves.
[3] 2500 PSI max.
[4] 2000 PSI max.





Split Flange Halves — Low Profile

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PART NO. [2]	A	B	D	E	G	H	J	L	DRILLED DIA. M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT [2]
1/2"	13003-08-08	1.22	0.96	0.25	0.51	2.13	1.500	0.344	0.90	0.35	HK-080	-210	5/16-18x1-1/4	0.13
3/4"	13003-12-12	1.53	1.27	0.25	0.55	2.56	1.875	0.438	1.02	0.43	HK-100	-214	3/8-16x1-1/4	0.15
1"	13003-16-16	1.78	1.52	0.30	0.63	2.75	2.062	0.515	1.15	0.43	HK-102	-219	3/8-16x1-1/4	0.22
1 1/4"	13003-20-20	2.03	1.72	0.30	0.63	3.11	2.312	0.594	1.44	0.43	HK-104	-222	7/16-14x1-1/2	0.33
1 1/2"	13003-24-24	2.41	2.00	0.30	0.63	3.70	2.750	0.703	1.62	0.51	HK-106	-225	1/2-13x1-1/2	0.40
2"	13003-32-32	2.84	2.47	0.36	0.63	4.02	3.062	0.844	1.90	0.51	HK-108	-228	1/2-13x1-1/2	0.49

HIGH PRESSURE : CODE 62

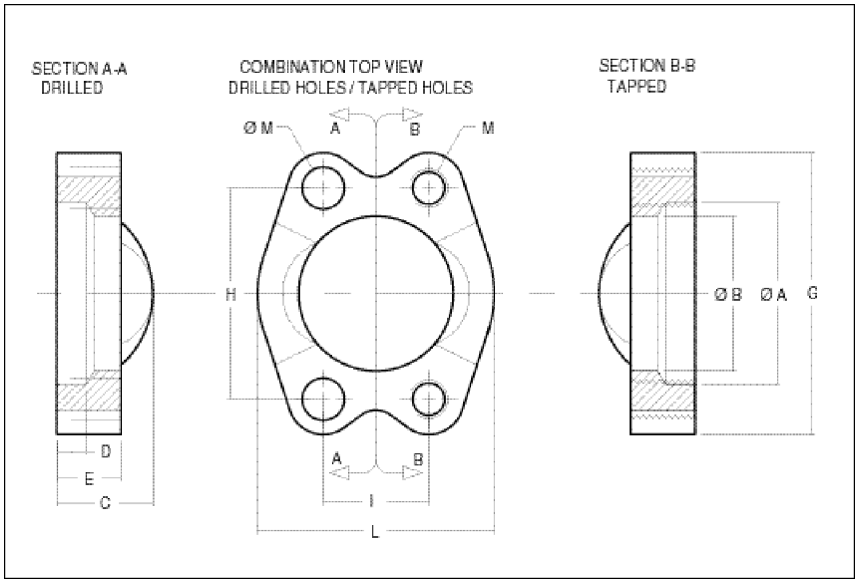
FLANGE SIZE	PART NO. [2]	A	B	D	E	G	H	J	L	DRILLED DIA. M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT [2]
1/2"	16003-08-08	1.28	0.97	0.29	0.63	2.21	1.594	0.359	0.93	0.35	HK-401	-210	5/16-18x1-1/4	0.35
3/4"	16003-12-12	1.66	1.28	0.33	0.79	2.80	2.000	0.469	1.18	0.43	HK-402	-214	3/8-16x1-1/2	0.70
1"	16003-16-16	1.91	1.53	0.36	0.98	3.19	2.250	0.547	1.37	0.51	HK-403	-219	7/16-14x1-3/4	1.10
1 1/4"	16003-20-20	2.16	1.75	0.39	1.06	3.74	2.625	0.625	1.52	0.59	HK-404	-222	1/2-13x1-3/4	1.50
1 1/2"	16003-24-24	2.53	2.03	0.48	1.18	4.45	3.125	0.719	1.87	0.67	HK-405	-225	5/8-11x2-1/4	2.42
2"	16003-32-32	3.16	2.66	0.48	1.46	5.24	3.812	0.875	2.24	0.83	HK-406	-228	3/4-10x2-3/4	4.49
2 1/2" [3]	16003-40-40	4.29	3.54	0.81	1.77	7.09	4.875	1.157	2.96	1.02	HK-407	-232	7/8-9x3	9.02
3" [3]	16003-48-48	5.22	4.53	1.00	2.17	8.47	6.000	1.409	3.90	1.26	HK-408	-237	1-1/8-7x3-1/2	18.92

[1] Add a "K" to flange part # to include mounting hardware.

[2] Includes both halves.

[3] Not in SAE specifications.





Captive Flanges

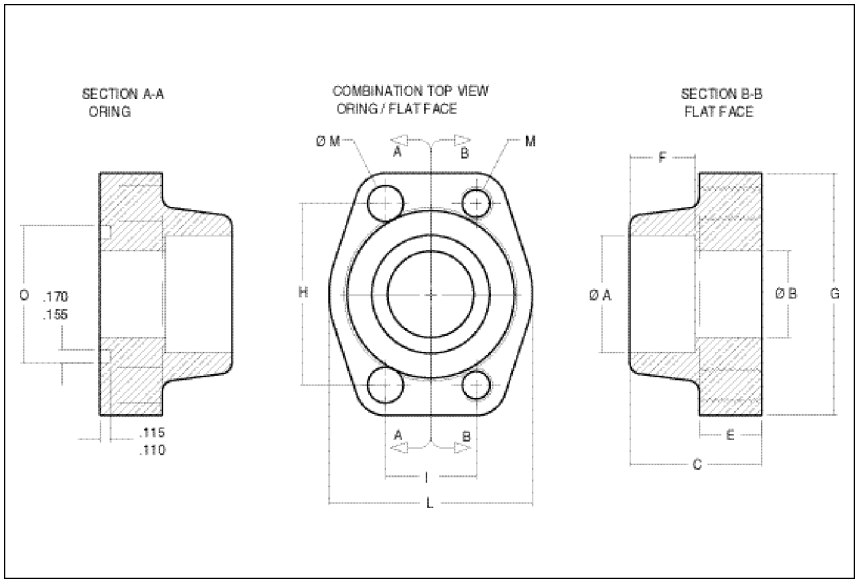
STANDARD PRESSURE : CODE 61

FLANGE SIZE	DRILLED HOLES PART NO.	TAPPED HOLES PART NO.	A	B	C	D	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT
1/2"	13004-08-08	13005-08-08	1.22	0.96	0.75	0.25	0.51	2.13	1.500	0.688	1.80	0.34	5/16-18	HK-080	-210	5/16-18x1-1/4	0.33
3/4"	13004-12-12	13005-12-12	1.53	1.27	0.87	0.25	0.55	2.56	1.875	0.875	2.04	0.41	3/8-16	HK-100	-214	3/8-16x1-1/4	0.37
1"	13004-16-16	13005-16-16	1.78	1.52	0.95	0.30	0.63	2.76	2.062	1.031	2.30	0.41	3/8-16	HK-102	-219	3/8-16x1-1/4	0.49
1 1/4"	13004-20-20	13005-20-20	2.03	1.72	0.87	0.30	0.63	3.11	2.312	1.188	2.86	0.47	7/16-14	HK-104	-222	7/16-14x1-1/2	0.66
1 1/2"	13004-24-24	13005-24-24	2.41	2.00	0.98	0.30	0.63	3.70	2.750	1.406	3.24	0.53	1/2-13	HK-106	-225	1/2-13x1-1/2	0.99
2"	13004-32-32	13005-32-32	2.84	2.47	1.02	0.36	0.63	4.02	3.062	1.688	3.80	0.53	1/2-13	HK-108	-228	1/2-13x1-1/2	1.10
2 1/2" [2]	13004-40-40	13005-40-40	3.34	2.95	1.50	0.36	0.75	4.49	3.500	2.000	4.26	0.53	1/2-13	HK-110	-232	1/2-13x1-3/4	1.63
3" [3]	13004-48-48	13005-48-48	4.03	3.58	1.61	0.36	0.87	5.32	4.188	2.438	5.14	0.66	5/8-11	HK-112	-237	5/8-11x1-3/4	2.87
3 1/2" [4]	13004-56-56	13005-56-56	4.53	4.03	1.10	0.42	0.87	5.98	4.750	2.750	5.47	0.66	5/8-11	HK-114	-241	5/8-11x2	3.31
4" [4]	13004-64-64	13005-64-64	5.03	4.53	1.38	0.42	0.98	6.38	5.125	3.062	5.98	0.66	5/8-11	HK-116	-245	5/8-11x2	3.64
5" [4]	13004-80-80	13005-80-80	6.03	5.53	1.61	0.42	1.10	7.24	6.000	3.625	7.09	0.66	5/8-11	HK-118	-253	5/8-11x2-1/4	5.51

HIGH PRESSURE : CODE 62

FLANGE SIZE	DRILLED HOLES PART NO.	TAPPED HOLES PART NO.	A	B	C	D	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	HHCS	WT
1/2"	16004-08-08	16005-08-08	1.28	0.97	0.87	0.29	0.63	2.21	1.594	0.718	1.86	0.34	5/16-18	HK-401	-210	5/16-18x1-1/4	0.35
3/4"	16004-12-12	16005-12-12	1.66	1.28	1.10	0.33	0.75	2.80	2.000	0.937	2.36	0.41	3/8-16	HK-402	-214	3/8-16x1-1/2	0.77
1"	16004-16-16	16005-16-16	1.91	1.53	1.30	0.36	0.95	3.19	2.250	1.093	2.75	0.47	7/16-14	HK-403	-219	7/16-14x1-3/4	1.17
1 1/4"	16004-20-20	16005-20-20	2.16	1.75	1.50	0.39	1.06	3.74	2.625	1.250	3.04	0.53	1/2-13	HK-404	-222	1/2-13x1-3/4	1.76
1 1/2"	16004-24-24	16005-24-24	2.53	2.03	1.69	0.48	1.18	4.45	3.125	1.437	3.74	0.66	5/8-11	HK-405	-225	5/8-11x2-1/4	2.98
2"	16004-32-32	16005-32-32	3.16	2.66	2.05	0.48	1.46	5.24	3.812	1.750	4.48	0.78	3/4-10	HK-406	-228	3/4-10x2-3/4	4.63

[1] Add a "K" to flange part # to include mounting hardware.
[2] 2500 PSI max.
[3] 2000 PSI max.
[4] 500 PSI max.





4-Bolt Socket Weld Flanges For Pipe

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	1/2"	13016-08-08	13017-08-08	0.85	0.51	1.42	0.63	0.75	2.13	1.500	0.688	1.81	0.34	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	13016-12-12	13017-12-12	1.07	0.75	1.42	0.71	0.75	2.56	1.875	0.875	1.97	0.41	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13016-16-16	13017-16-16	1.34	0.98	1.50	0.71	0.75	2.76	2.062	1.031	2.17	0.41	3/8-16	1.560	1.565	SK-102	-219	3/8-16x-1-1/2	1.01
1 1/4"	1 1/4"	13016-20-20	13017-20-20	1.69	1.26	1.61	0.83	0.87	3.11	2.312	1.188	2.68	0.47	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13016-24-24	13017-24-24	1.91	1.50	1.77	0.98	0.94	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.32
2"	2"	13016-32-32	13017-32-32	2.40	2.01	1.77	0.98	1.02	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2" [2]	2 1/2"	13016-40-40	13017-40-40	2.91	2.48	1.97	0.98	1.18	4.49	3.500	2.000	4.09	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	3.09
3" [3]	3"	13016-48-48	13017-48-48	3.56	2.87	1.97	1.06	1.34	5.28	4.188	2.438	4.88	0.66	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	4.74
3 1/2" [4]	3 1/2"	13016-56-56	13017-56-56	4.06	3.50	1.89	1.06	1.34	5.98	4.750	2.750	5.35	0.66	5/8-11	4.095	4.115	SK-114	-241	5/8-11x2	5.30
4" [4]	4"	13016-64-64	13017-64-64	4.55	3.90	1.89	1.06	1.34	6.38	5.125	3.062	5.75	0.66	5/8-11	4.595	4.615	SK-116	-245	5/8-11x2-1/4	6.28

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	1/2"	16016-08-08	16017-08-08	0.85	0.51	1.42	0.63	0.75	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16016-12-12	16017-12-12	1.07	0.75	1.38	0.83	0.87	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16016-16-16	16017-16-16	1.34	0.98	1.65	0.98	0.87	3.19	2.250	1.093	2.56	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.68
1 1/4"	1 1/4"	16016-20-20	16017-20-20	1.69	1.26	1.77	1.06	0.98	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16016-24-24	16017-24-24	1.91	1.50	1.97	1.18	1.10	4.41	3.125	1.437	3.70	0.69	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16016-32-32	16017-32-32	2.40	2.01	2.56	1.46	0.94	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40
2 1/2" [5]	2 1/2"	16016-40-40	16017-40-40	2.91	2.44	3.15	1.77	1.18	7.09	4.875	2.312	5.98	0.94	7/8-9	2.995	3.005	SK-407	-232	7/8-9x3-1/4	18.30
*3" [5]	3"	16016B-48-48	16017B-48-48	3.54	2.94	2.50	2.50	1.25	8.50	6.000	2.812	6.00	1.19	1 1/8-7	3.615	3.625	SKB1-408	-237	1 1/8-7x4-1/2	28.0

*Made from Bar Stock Material. Rectangular flat socket (not contoured).

[1] Add a "K" to flange part # to include mounting hardware.

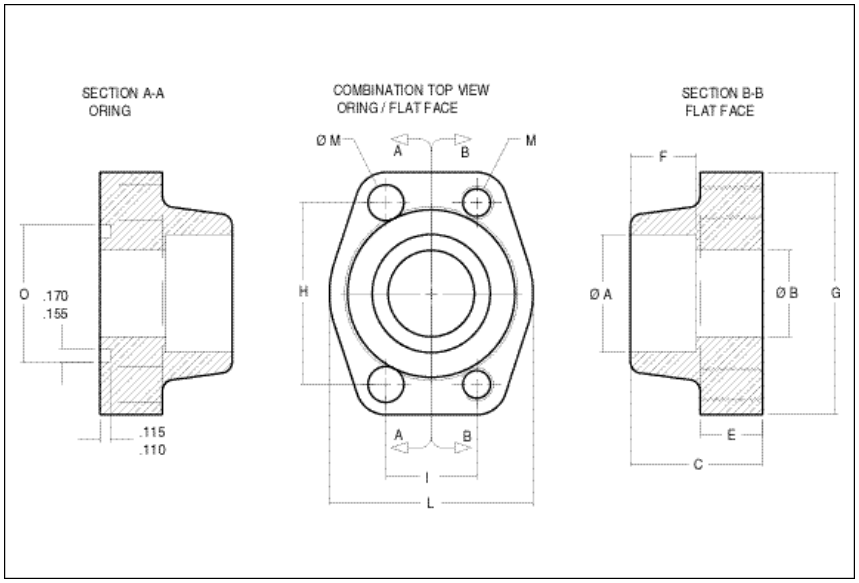
[2] 2500 PSI.

[3] 2000 PSI max.

[4] 500 PSI max.

[5] Not in SAE specification.





4-Bolt Socket Weld Flanges For Tube

STANDARD PRESSURE : CODE 61

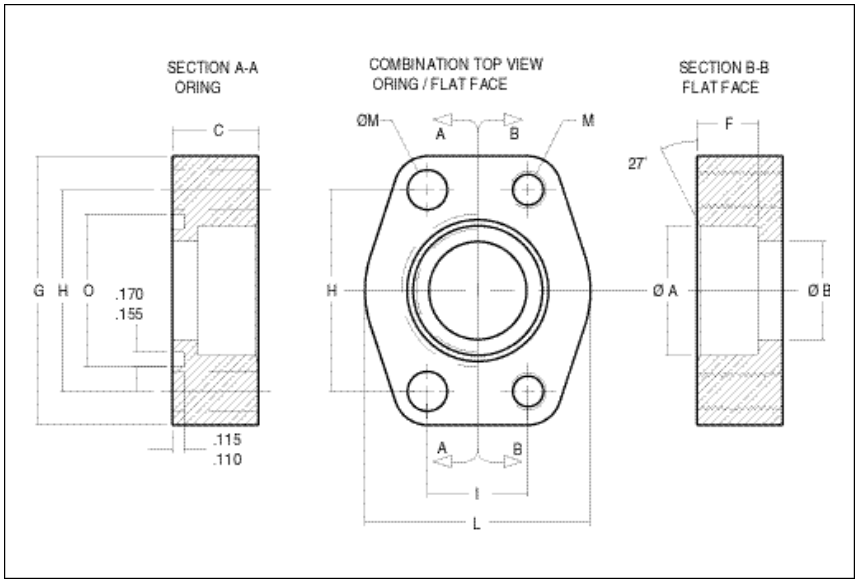
FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	3/4"	13016T-08-12	13017T-08-12	0.752	0.500	1.42	0.63	0.56	2.13	1.500	0.688	1.81	0.34	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	13016T-12-12	13017T-12-12	0.752	0.625	1.42	0.71	0.56	2.56	1.875	0.875	1.97	0.41	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
3/4"	1"	13016T-12-16	13017T-12-16	1.002	0.750	1.42	0.71	0.56	2.56	1.875	0.875	1.97	0.41	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13016T-16-16	13017T-16-16	1.002	0.875	1.50	0.71	0.63	2.76	2.062	1.031	2.17	0.41	3/8-16	1.560	1.565	SK-102	-219	3/8-16x-1-1/2	1.01
1"	1 1/4"	13016T-16-20	13017T-16-20	1.252	1.000	1.50	0.71	0.63	2.76	2.062	1.031	2.17	0.41	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13016T-20-20	13017T-20-20	1.252	1.125	1.61	0.83	0.69	3.11	2.312	1.188	2.68	0.47	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/4"	1 1/2"	13016T-20-24	13017T-20-24	1.502	1.250	1.61	0.83	0.69	3.11	2.312	1.188	2.68	0.47	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13016T-24-24	13017T-24-24	1.502	1.375	1.77	0.98	0.75	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.32
1 1/2"	1 3/4"	13016T-24-28	13017T-24-28	1.752	1.500	1.77	0.98	0.75	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.32
2"	2"	13016T-32-32	13017T-32-32	2.002	1.875	1.77	0.98	0.87	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2"	2 1/4"	13016T-32-36	13017T-32-36	2.252	2.000	1.77	0.98	0.87	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2" [2]	2 1/2"	13016T-40-40	13017T-40-40	2.502	2.375	1.97	0.98	1.00	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	3.09

STANDARD PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	3/4"	16016T-08-12	16017T-08-12	0.752	0.500	1.42	0.63	0.56	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16016T-12-12	16017T-12-12	0.752	0.625	1.38	0.83	0.56	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
3/4"	1"	16016T-12-16	16017T-12-16	1.002	0.750	1.38	0.83	0.56	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16016T-16-16	16017T-16-16	1.002	0.875	1.65	0.98	0.63	3.19	2.250	1.093	2.56	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.68
1"	1 1/4"	16016T-16-20	16017T-16-20	1.252	1.000	1.65	0.98	0.63	3.19	2.250	1.093	2.56	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.68
1 1/4"	1 1/4"	16016T-20-20	16017T-20-20	1.252	1.125	1.77	1.06	0.69	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/4"	1 1/2"	16016T-20-24	16017T-20-24	1.502	1.250	1.77	1.06	0.69	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16016T-24-24	16017T-24-24	1.502	1.375	1.97	1.18	0.75	4.41	3.125	1.437	3.70	0.69	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
1 1/2"	1 3/4"	16016T-24-28	16017T-24-28	1.752	1.500	1.97	1.18	0.75	4.41	3.125	1.437	3.70	0.69	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16016T-32-32	16017T-32-32	2.002	1.875	2.56	1.46	0.87	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40

[1] Add a "K" to flange part # to include mounting hardware.

[2] 2500 PSI max.





4-Bolt Flat Socket Weld Flanges For Pipe

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
3/4"	3/4"	13048-12-12	13049-12-12	1.07	0.75	0.750	0.560	2.563	1.875	0.875	2.063	0.41	3/8-16	1.250	1.255	SKF-100	-214	3/8-16x1-1/2	0.69
1"	1"	13048-16-16	13049-16-16	1.34	0.98	0.880	0.630	2.750	2.062	1.031	2.313	0.41	3/8-16	1.560	1.565	SKF-102	-219	3/8-16x1-3/4	0.94
1 1/4"	1 1/4"	13048-20-20	13049-20-20	1.69	1.26	0.940	0.690	3.125	2.312	1.188	2.875	0.47	7/16-14	1.750	1.755	SKF-104	-222	7/16-14x1-3/4	1.25
1 1/2"	1 1/2"	13048-24-24	13049-24-24	1.91	1.50	1.190	0.750	3.688	2.750	1.406	3.250	0.53	1/2-13	2.115	2.125	SKF-106	-225	1/2-13x2-1/4	2.40
2"	2"	13048-32-32	13049-32-32	2.40	2.01	1.380	0.875	4.000	3.062	1.688	3.813	0.53	1/2-13	2.490	2.500	SKF-108	-228	1/2-13x2-1/2	3.25

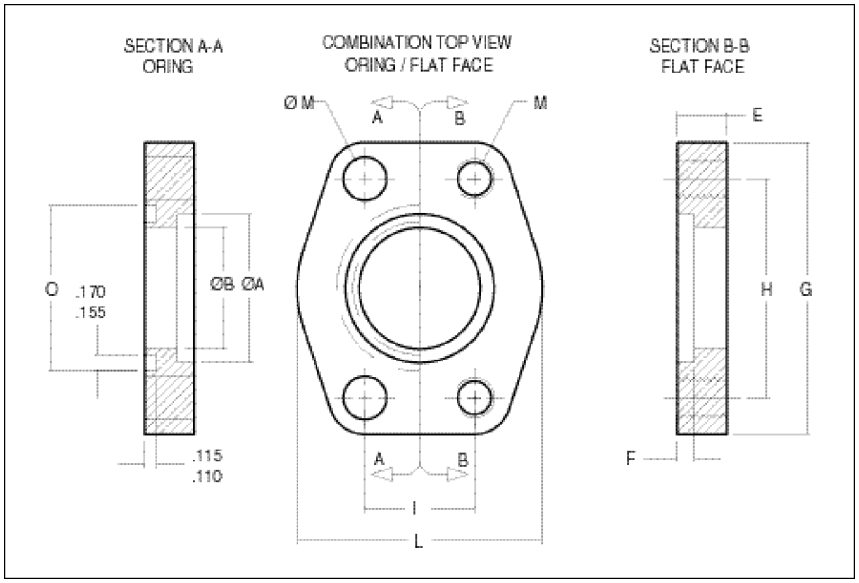
4-Bolt Flat Socket Weld Flanges For Tube

STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
3/4"	3/4"	13048T-12-12	13049T-12-12	0.752	0.625	0.750	0.560	2.560	1.875	0.875	2.063	0.41	3/8-16	1.250	1.255	SKF-100	-214	3/8-16x1-1/2	0.72
3/4"	1"	13048T-12-16	13049T-12-16	1.002	0.750	0.750	0.560	2.560	1.875	0.875	2.063	0.41	3/8-16	1.250	1.255	SKF-100	-214	3/8-16x1-1/2	0.69
1"	1"	13048T-16-16	13049T-16-16	1.002	0.875	0.880	0.630	2.750	2.062	1.031	2.313	0.41	3/8-16	1.560	1.565	SKF-102	-219	3/8-16x1-3/4	0.97
1"	1 1/4"	13048T-16-20	13049T-16-20	1.252	1.000	0.880	0.630	2.750	2.062	1.031	2.313	0.41	3/8-16	1.560	1.565	SKF-102	-219	3/8-16x1-3/4	0.94
1 1/4"	1 1/4"	13048T-20-20	13049T-20-20	1.252	1.125	0.940	0.690	3.120	2.312	1.188	2.875	0.47	7/16-14	1.750	1.755	SKF-104	-222	7/16-14x1-3/4	1.29
1 1/4"	1 1/2"	13048T-20-24	13049T-20-24	1.502	1.250	0.940	0.690	3.120	2.312	1.188	2.875	0.47	7/16-14	1.750	1.755	SKF-104	-222	7/16-14x1-3/4	1.25
1 1/2"	1 1/2"	13048T-24-24	13049T-24-24	1.502	1.375	1.190	0.750	3.690	2.750	1.406	3.250	0.53	1/2-13	2.115	2.125	SKF-106	-225	1/2-13x2-1/4	2.44
1 1/2"	1 3/4"	13048T-24-28	13049T-24-28	1.752	1.500	1.190	0.750	3.690	2.750	1.406	3.250	0.53	1/2-13	2.115	2.125	SKF-106	-225	1/2-13x2-1/4	2.40
2"	2"	13048T-32-32	13049T-32-32	2.002	1.875	1.375	0.875	4.000	3.062	1.688	3.813	0.53	1/2-13	2.490	2.500	SKF-108	-228	1/2-13x2-1/2	3.29
2"	2 1/4"	13048T-32-36	13049T-32-36	2.252	2.000	1.375	0.875	4.000	3.062	1.688	3.813	0.53	1/2-13	2.490	2.500	SKF-108	-228	1/2-13x2-1/2	3.25

[1] Add a "K" to flange part # to include mounting hardware.



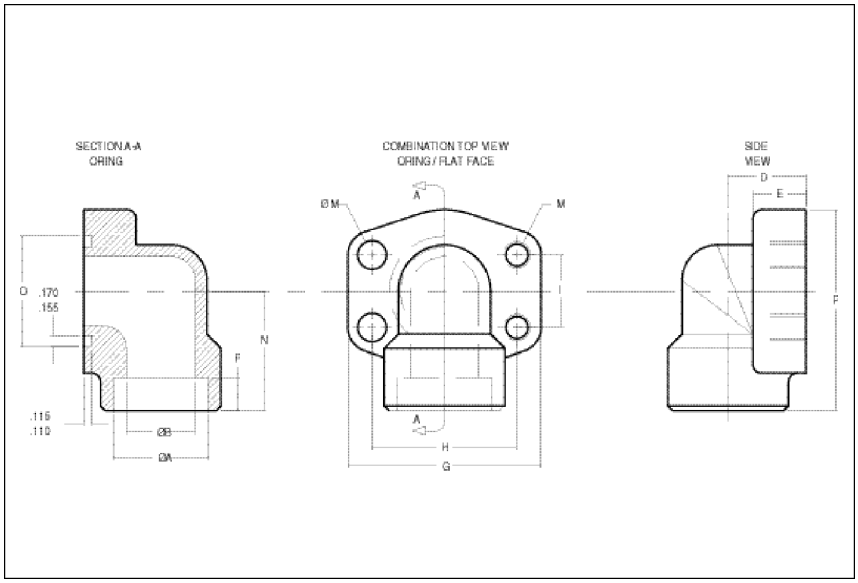


500 PSI 4-Bolt Socket Weld Flanges For Pipe

LOW PRESSURE : 500 PSI

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	15020-08-08	15021-08-08	0.85	0.51	0.39	0.12	2.21	1.500	0.688	1.81	0.35	5/16-18	1.000	1.005	SK5-080	-210	5/16-18x1	0.26
3/4"	3/4"	15020-12-12	15021-12-12	1.07	0.75	0.47	0.16	2.56	1.875	0.875	1.97	0.43	3/8-16	1.250	1.255	SK5-100	-214	3/8-16x1-1/4	0.44
1"	1"	15020-16-16	15021-16-16	1.34	0.98	0.47	0.16	2.76	2.062	1.031	2.17	0.43	3/8-16	1.560	1.565	SK5-102	-219	3/8-16x1-1/4	0.55
1 1/4"	1 1/4"	15020-20-20	15021-20-20	1.69	1.26	0.47	0.16	3.11	2.312	1.188	2.68	0.45	7/16-14	1.750	1.755	SK5-104	-222	7/16-14x1-1/4	0.68
1 1/2"	1 1/2"	15020-24-24	15021-24-24	1.91	1.50	0.59	0.16	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK5-106	-225	1/2-13x1-1/2	1.10
2"	2"	15020-32-32	15021-32-32	2.40	2.01	0.59	0.16	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK5-108	-228	1/2-13x1-1/2	1.30
2 1/2"	2 1/2"	15020-40-40	15021-40-40	2.91	2.48	0.59	0.16	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK5-110	-232	1/2-13x1-1/2	1.59
3"	3"	15020-48-48	15021-48-48	3.56	2.87	0.79	0.20	5.28	4.188	2.438	4.88	0.69	5/8-11	3.615	3.625	SK5-112	-237	5/8-11x1-1/2	2.76
3 1/2"	3 1/2"	15020-56-56	15021-56-56	4.06	3.50	0.79	0.20	5.98	4.750	2.750	5.35	0.69	5/8-11	4.095	4.115	SK5-114	-241	5/8-11x1-1/2	3.31
4"	4"	15020-64-64	15021-64-64	4.55	3.90	0.98	0.24	6.38	5.125	3.062	5.75	0.69	5/8-11	4.595	4.615	SK5-116	-245	5/8-11x1-3/4	4.74
5"	5"	15020-80-80	15021-80-80	5.64	4.96	1.10	0.31	7.48	6.000	3.625	6.69	0.69	5/8-11	5.595	5.615	SK5-118	-253	5/8-11x1-3/4	6.61

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt 90° Socket Weld Flanges For Pipe

STANDARD PRESSURE : CODE 61

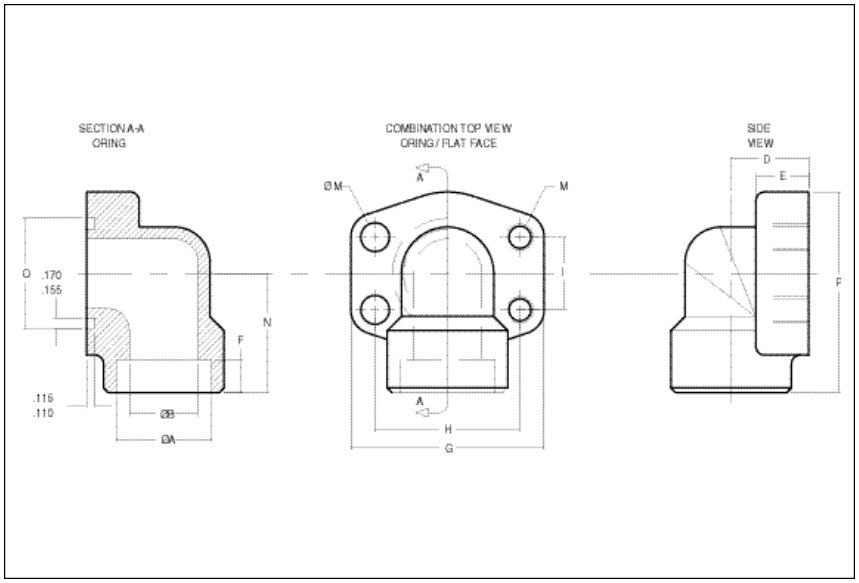
FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13018-08-08	13019-08-08	0.85	0.51	0.79	0.63	0.39	2.13	1.500	0.688	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.77
3/4"	3/4"	13018-12-12	13019-12-12	1.07	0.75	0.95	0.71	0.39	2.56	1.875	0.875	2.48	0.43	3/8-16	1.50	1.250	1.255	SK-100	-214	3/8-16x1-1/2	1.21
1"	1"	13018-16-16	13019-16-16	1.34	0.98	1.10	0.75	0.47	2.76	2.062	1.031	2.76	0.43	3/8-16	1.69	1.560	1.565	SK-102	-219	3/8-16x-1-1/2	1.76
1 1/4"	1 1/4"	13018-20-20	13019-20-20	1.69	1.26	1.34	0.83	0.55	3.11	2.312	1.188	3.35	0.45	7/16-14	2.01	1.750	1.755	SK-104	-222	7/16-14x1-1/2	2.86
1 1/2"	1 1/2"	13018-24-24	13019-24-24	1.91	1.50	1.50	0.98	0.63	3.66	2.750	1.406	3.74	0.53	1/2-13	2.20	2.115	2.125	SK-106	-225	1/2-13x1-3/4	3.52
2"	2"	13018-32-32	13019-32-32	2.40	2.01	1.65	0.98	0.71	4.33	3.062	1.688	4.33	0.53	1/2-13	2.56	2.490	2.500	SK-108	-228	1/2-13x1-3/4	4.40

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16018-08-08	16019-08-08	0.85	0.51	0.79	0.63	0.39	2.13	1.594	0.718	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-401	-210	5/16-18x-1-1/4	0.77
3/4"	3/4"	16018-12-12	16019-12-12	1.07	0.75	1.10	0.75	0.47	2.76	2.000	0.937	2.76	0.43	3/8-16	1.69	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.76
1"	1"	16018-16-16	16019-16-16	1.34	0.98	1.34	0.83	0.55	3.11	2.250	1.093	3.35	0.51	7/16-14	2.01	1.560	1.565	SK-403	-219	7/16-14x1-3/4	2.86
1 1/4"	1 1/4"	16018-20-20	16019-20-20	1.69	1.26	1.50	0.98	0.63	3.66	2.625	1.250	3.74	0.53	1/2-13	2.20	1.750	1.755	SK-404	-222	1/2-13x1-3/4	3.52
1 1/2"	1 1/2"	16018-24-24	16019-24-24	1.91	1.50	1.65	0.98	0.71	4.33	3.125	1.437	4.33	0.69	5/8-11	2.56	2.115	2.125	SK-405	-225	5/8-11x2-1/4	4.40
2"	2"	16018-32-32	16019-32-32	2.40	2.01	2.36	3.01	0.71	5.27	3.812	1.750	5.90	0.83	3/4-10	3.62	2.490	2.500	SKE11-406	-228	3/4-10x4-1/2	18.04

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt 90° Socket Weld Flanges For Tube

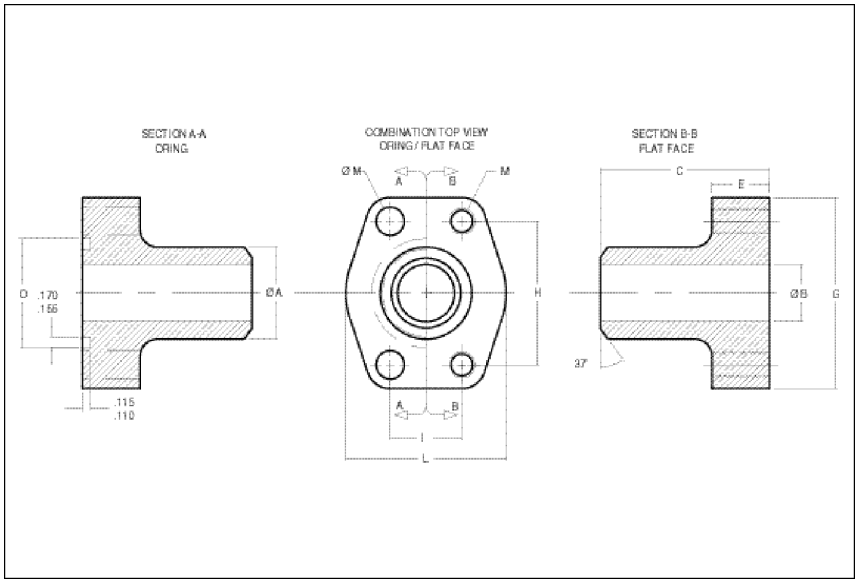
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	F	G	H	I	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13018T-08-08	13019T-08-08	0.502	0.51	0.79	0.63	0.39	2.13	1.500	0.688	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-080	-210	5/16-18x1-1/4	0.77
1/2"	3/4"	13018T-08-12	13019T-08-12	0.752	0.51	0.79	0.63	0.39	2.13	1.500	0.688	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-080	-210	5/16-18x1-1/4	0.75
3/4"	3/4"	13018T-12-12	13019T-12-12	0.752	0.75	0.95	0.71	0.39	2.56	1.875	0.875	0.43	3/8-16	1.50	1.250	1.255	2.48	SK-100	-214	3/8-16x1-1/2	1.21
3/4"	1"	13018T-12-16	13019T-12-16	1.002	0.75	0.95	0.71	0.47	2.56	1.875	0.875	0.43	3/8-16	1.50	1.250	1.255	2.48	SK-100	-214	3/8-16x-1-1/2	1.15
1"	1"	13018T-16-16	13019T-16-16	1.002	0.98	1.10	0.75	0.47	2.76	2.062	1.031	0.43	3/8-16	1.69	1.560	1.565	2.76	SK-102	-219	3/8-16x-1-1/2	1.76
1"	1 1/4"	13018T-16-20	13019T-16-20	1.252	0.98	1.10	0.75	0.47	2.76	2.062	1.031	0.43	3/8-16	1.69	1.560	1.565	2.76	SK-102	-219	3/8-16x-1-1/2	1.65
1 1/4"	1 1/4"	13018T-20-20	13019T-20-20	1.252	1.26	1.34	0.83	0.55	3.11	2.312	1.188	0.45	7/16-14	2.01	1.750	1.755	3.35	SK-104	-222	7/16-14x1-1/2	2.86
1 1/4"	1 1/2"	13018T-20-24	13019T-20-24	1.502	1.26	1.34	0.83	0.55	3.11	2.312	1.188	0.45	7/16-14	2.01	1.750	1.755	3.35	SK-104	-222	7/16-14x1-1/2	2.75
1 1/2"	1 1/2"	13018T-24-24	13019T-24-24	1.502	1.50	1.50	0.98	0.63	3.66	2.750	1.406	0.53	1/2-13	2.20	2.115	2.125	3.74	SK-106	-225	1/2-13x1-3/4	3.55
1 1/2"	1 3/4"	13018T-24-28	13019T-24-28	1.752	1.50	1.50	0.98	0.63	3.66	2.750	1.406	0.53	1/2-13	2.20	2.115	2.125	3.74	SK-106	-225	1/2-13x1-3/4	3.42
2"	2"	13018T-32-32	13019T-32-32	2.002	2.01	1.65	0.98	0.71	4.33	3.062	1.688	0.53	1/2-13	2.56	2.490	2.500	4.33	SK-108	-228	1/2-13x1-3/4	4.40

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	F	G	H	I	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16018T-08-08	16019T-08-08	0.502	0.51	0.79	0.63	0.39	2.13	1.594	0.718	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-401	-210	5/16-18x1-1/4	0.77
1/2"	3/4"	16018T-08-12	16019T-08-12	0.752	0.51	0.79	0.63	0.39	2.13	1.594	0.718	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-401	-210	5/16-18x1-1/4	0.75
3/4"	3/4"	16018T-12-12	16019T-12-12	0.752	0.75	1.10	0.75	0.47	2.76	2.000	0.937	0.43	3/8-16	1.69	1.250	1.255	2.76	SK-402	-214	3/8-16x1-1/2	1.76
3/4"	1"	16018T-12-16	16019T-12-16	1.002	0.75	1.10	0.75	0.47	2.76	2.000	0.937	0.43	3/8-16	1.69	1.250	1.255	2.76	SK-402	-214	3/8-16x1-1/2	1.65
1"	1"	16018T-16-16	16019T-16-16	1.002	0.98	1.34	0.83	0.55	3.11	2.250	1.093	0.51	7/16-14	2.01	1.560	1.565	3.35	SK-403	-219	7/16-14x1-3/4	2.86
1"	1 1/4"	16018T-16-20	16019T-16-20	1.252	0.98	1.34	0.83	0.55	3.11	2.250	1.093	0.51	7/16-14	2.01	1.560	1.565	3.35	SK-403	-219	7/16-14x1-3/4	2.75
1 1/4"	1 1/4"	16018T-20-20	16019T-20-20	1.252	1.26	1.50	0.98	0.63	3.66	2.625	1.250	0.53	1/2-13	2.20	1.750	1.755	3.74	SK-404	-222	1/2-13x1-3/4	3.52
1 1/4"	1 1/2"	16018T-20-24	16019T-20-24	1.502	1.26	1.50	0.98	0.63	3.66	2.625	1.250	0.53	1/2-13	2.20	1.750	1.755	3.74	SK-404	-222	1/2-13x1-3/4	3.40
1 1/2"	1 1/2"	16018T-24-24	16019T-24-24	1.502	1.50	1.65	0.98	0.71	4.33	3.125	1.437	0.69	5/8-11	2.56	2.115	2.125	4.33	SK-405	-225	5/8-11x2-1/4	4.40
1 1/2"	1 3/4"	16018T-24-28	16019T-24-28	1.752	1.50	1.65	0.98	0.71	4.33	3.125	1.437	0.69	5/8-11	2.56	2.115	2.125	4.33	SK-405	-225	5/8-11x2-1/4	4.25
2"	2"	16018T-32-32	16019T-32-32	2.40	2.01	2.36	0.98	0.71	5.27	3.812	1.750	0.83	1/2-13	3.62	2.490	2.500	5.90	SKE11-406	-228	3/4-10x4-1/2	18.04

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt Butt Weld Flanges for Schedule 40

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13022-08-08	13023-08-08	0.84	0.62	1.42	0.63	2.13	1.500	0.688	1.81	0.35	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.62
3/4"	3/4"	13022-12-12	13023-12-12	1.05	0.82	1.42	0.71	2.56	1.875	0.875	1.97	0.43	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13022-16-16	13023-16-16	1.32	1.04	1.50	0.71	2.76	2.062	1.031	2.17	0.43	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13022-20-20	13023-20-20	1.66	1.38	1.61	0.83	3.11	2.312	1.188	2.68	0.45	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13022-24-24	13023-24-24	1.90	1.61	1.73	0.98	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.32
2"	2"	13022-32-32	13023-32-32	2.38	2.06	1.77	0.98	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2"[2]	2 1/2"	13022-40-40	13023-40-40	2.88	2.46	1.97	0.98	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	3.09
3"[3]	3"	13022-48-48	13023-48-48	3.50	3.06	1.97	1.06	5.27	4.188	2.438	4.88	0.69	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	4.74
3 1/2"[4]	3 1/2"	13022-56-56	13023-56-56	4.00	3.55	1.89	1.06	5.98	4.750	2.750	5.35	0.69	5/8-11	4.095	4.115	SK-114	-241	5/8-11x2	5.29
4"[4]	4"	13022-64-64	13023-64-64	4.50	4.03	1.89	1.06	6.38	5.125	3.062	5.75	0.69	5/8-11	4.595	4.615	SK-116	-245	5/8-11x2	6.28

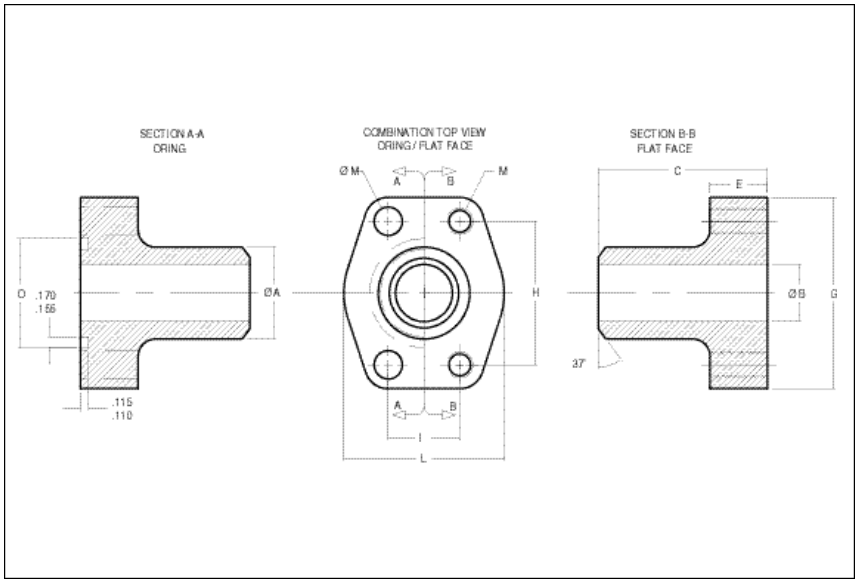
4-Bolt Butt Weld Flanges for Schedule 80

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13024-08-08	13025-08-08	0.84	0.55	1.42	0.63	2.13	1.500	0.688	1.81	0.35	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.62
3/4"	3/4"	13024-12-12	13025-12-12	1.05	0.74	1.42	0.71	2.56	1.875	0.875	1.97	0.43	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13024-16-16	13025-16-16	1.32	0.96	1.50	0.71	2.76	2.062	1.031	2.17	0.43	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13024-20-20	13025-20-20	1.66	1.28	1.61	0.83	3.11	2.312	1.188	2.68	0.45	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13024-24-24	13025-24-24	1.90	1.50	1.73	0.98	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.32
2"	2"	13024-32-32	13025-32-32	2.38	1.94	1.77	0.98	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2"[2]	2 1/2"	13024-40-40	13025-40-40	2.88	2.32	1.97	0.98	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	3.09
3"[3]	3"	13024-48-48	13025-48-48	3.50	2.90	1.97	1.06	5.27	4.188	2.438	4.88	0.69	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	4.74
3 1/2"[4]	3 1/2"	13024-56-56	13025-56-56	4.00	3.36	1.89	1.06	5.98	4.750	2.750	5.35	0.69	5/8-11	4.095	4.115	SK-114	-241	5/8-11x2	5.29
4"[4]	4"	13024-64-64	13025-64-64	4.50	3.83	1.89	1.06	6.38	5.125	3.062	5.75	0.69	5/8-11	4.595	4.615	SK-116	-245	5/8-11x2	6.28

[1] Add a "K" to flange part # to include mounting hardware.
[2] 2500 PSI max.
[3] 2000 PSI max.
[4] 500 PSI max.





4-Bolt Butt Weld Flanges for Schedule 160

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	G	H	I	L	DRILLED TAPPED DIA. M	UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16026-08-08	16027-08-08	0.85	0.47	1.42	0.63	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	16026-12-12	16027-12-12	1.10	0.61	1.38	0.83	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16026-16-16	16027-16-16	1.34	0.82	1.61	0.83	3.11	2.250	1.093	2.68	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.54
1 1/4"	1 1/4"	16026-20-20	16027-20-20	1.69	1.16	1.73	0.98	3.66	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16026-24-24	16027-24-24	1.91	1.34	2.17	1.18	4.41	3.125	1.437	3.70	0.68	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16026-32-32	16027-32-32	2.40	1.69	2.56	1.46	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40
2 1/2"[2]	2 1/2"	16026-40-40	16027-40-40	3.00	2.13	3.15	1.77	7.09	4.875	2.312	5.98	0.94	7/8-9	2.995	3.005	SK-407	-232	7/8-9x3-1/4	18.26
3"[2]	3"	16026B-48-48	16027B-48-48	3.50	2.63	2.50	2.00	8.50	6.000	2.812	6.00	1.16	1 1/8-7	3.615	3.625	SKB4-408	-237	1 1/8-7x4	23.2

4-Bolt Butt Weld Flanges for Schedule XX

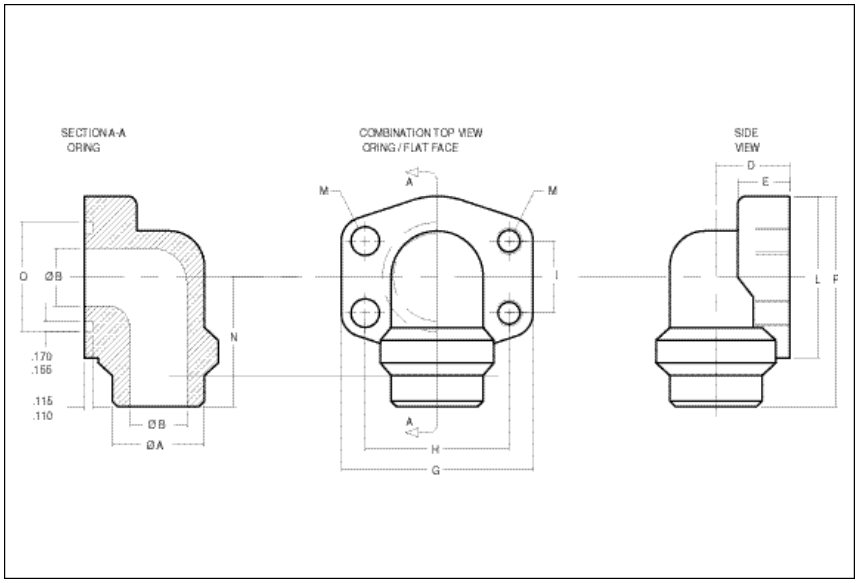
HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	E	G	H	I	L	DRILLED TAPPED DIA. M	UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16028-08-08	16029-08-08	0.85	0.25	1.42	0.63	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16028-12-12	16029-12-12	1.10	0.43	1.38	0.83	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16028-16-16	16029-16-16	1.34	0.60	1.61	0.83	2.11	2.250	1.093	2.68	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.54
1 1/4"	1 1/4"	16028-20-20	16029-20-20	1.69	0.90	1.73	0.98	3.66	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16028-24-24	16029-24-24	1.91	1.10	2.17	1.18	4.41	3.125	1.437	3.70	0.68	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16028-32-32	16029-32-32	2.40	1.50	2.56	1.46	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40
2 1/2"[3]	2 1/2"	16028-40-40	16029-40-40	3.00	1.77	3.15	1.77	7.09	4.875	2.312	5.98	0.94	7/8-9	2.995	3.005	SK-407	-232	7/8-9x3-1/4	18.26
3"[2, 3]	3"	16028B-48-48	16029B-48-48	3.50	2.30	2.50	2.00	8.50	6.000	2.812	6.00	1.16	1 1/8-7	3.615	3.625	SKB4-408	-237	1 1/8-7x4	23.5

[1] Add a "K" to flange part # to include mounting hardware.

[2] Made from bar stock material. Rectangular (not contoured).

[3] Not included in S.A.E. J518 specification.





4-Bolt 90° Butt Weld Flanges for Schedule 40

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13030-08-08	13031-08-08	0.84	0.62	0.79	0.63	2.13	1.500	0.688	1.89	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-080	-210	5/16-18x1-1/4	1.01
3/4"	3/4"	13030-12-12	13031-12-12	1.06	0.82	0.95	0.71	2.56	1.875	0.875	1.97	0.43	3/8-16	1.50	1.250	1.255	2.48	SK-100	-214	3/8-16x1-1/2	1.43
1"	1"	13030-16-16	13031-16-16	1.36	1.04	1.10	0.75	2.76	2.062	1.031	2.36	0.43	3/8-16	1.69	1.560	1.565	2.76	SK-102	-219	3/8-16x1-1/2	1.87
1 1/4"	1 1/4"	13030-20-20	13031-20-20	1.69	1.38	1.34	0.83	3.11	2.312	1.188	2.68	0.45	7/16-14	2.01	1.750	1.755	3.35	SK-104	-222	7/16-14x1-1/2	2.54
1 1/2"	1 1/2"	13030-24-24	13031-24-24	1.97	1.61	1.50	0.98	3.66	2.750	1.406	3.07	0.55	1/2-13	2.17	2.115	2.125	3.74	SK-106	-225	1/2-13x1-3/4	3.75
2"	2"	13030-32-32	13031-32-32	2.56	2.06	1.65	0.98	4.33	3.062	1.688	3.54	0.55	1/2-13	2.56	2.490	2.500	4.33	SK-108	-228	1/2-13x1-3/4	4.74

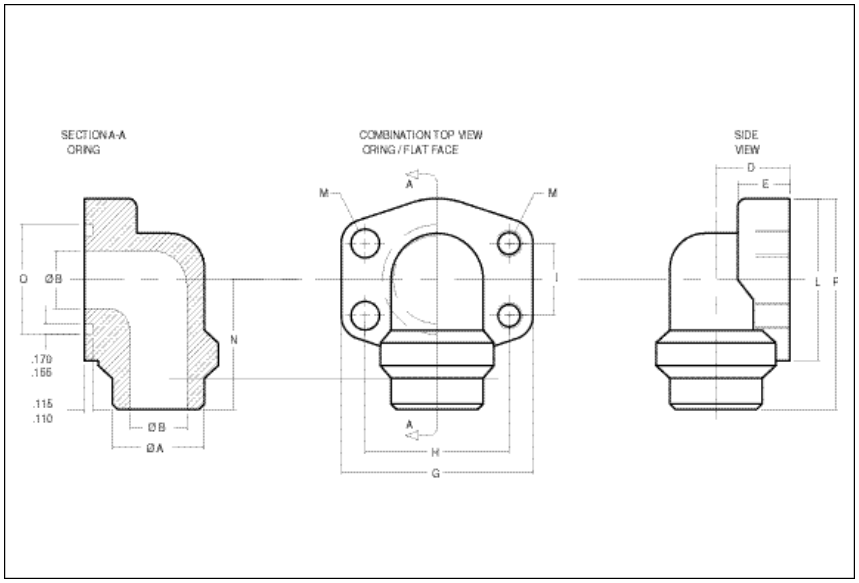
4-Bolt 90° Butt Weld Flanges for Schedule 80

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13032-08-08	13033-08-08	0.84	0.55	0.79	0.63	2.13	1.500	0.688	1.89	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-080	-210	5/16-18x1-1/4	1.03
3/4"	3/4"	13032-12-12	13033-12-12	1.06	0.74	0.95	0.71	2.56	1.875	0.875	1.97	0.43	3/8-16	1.50	1.250	1.255	2.48	SK-100	-214	3/8-16x1-1/2	1.45
1"	1"	13032-16-16	13033-16-16	1.36	0.96	1.10	0.75	2.76	2.062	1.031	2.36	0.43	3/8-16	1.69	1.560	1.565	2.76	SK-102	-219	3/8-16x1-1/2	1.89
1 1/4"	1 1/4"	13032-20-20	13033-20-20	1.69	1.28	1.34	0.83	3.11	2.312	1.188	2.68	0.45	7/16-14	2.01	1.750	1.755	3.35	SK-104	-222	7/16-14x1-1/2	2.57
1 1/2"	1 1/2"	13032-24-24	13033-24-24	1.97	1.50	1.50	0.98	3.66	2.750	1.406	3.07	0.55	1/2-13	2.17	2.115	2.125	3.74	SK-106	-225	1/2-13x1-3/4	3.78
2"	2"	13032-32-32	13033-32-32	2.56	1.94	1.65	0.98	4.33	3.062	1.688	3.54	0.55	1/2-13	2.56	2.490	2.500	4.33	SK-108	-228	1/2-13x1-3/4	4.79

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt 90° Butt Weld Flanges for Schedule 160

HIGH PRESSURE : CODE 62

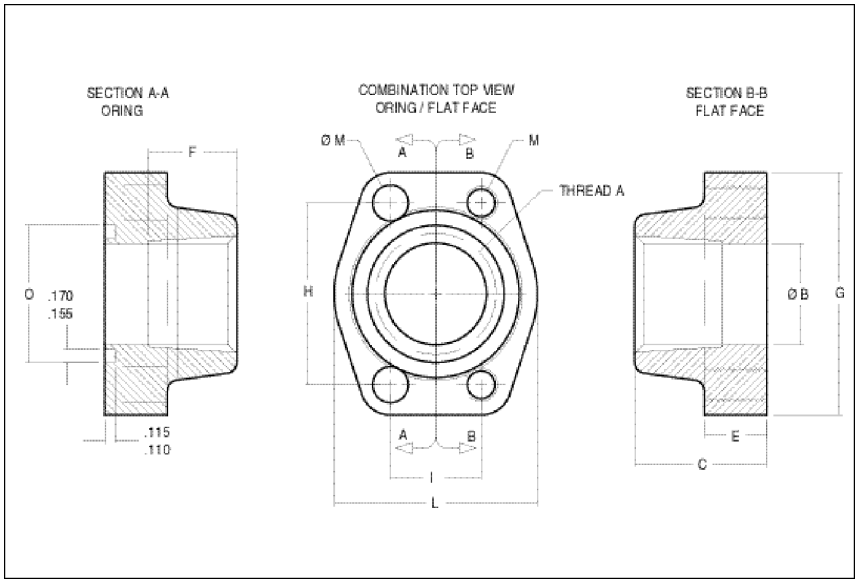
FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16034-08-08	16035-08-08	0.84	0.47	0.79	0.63	1.594	0.718	1.89	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-401	-210	5/16-18x1-1/4	0.79
3/4"	3/4"	16034-12-12	16035-12-12	1.10	0.61	1.10	0.75	2.000	0.937	2.36	0.43	3/8-16	1.69	1.250	1.255	2.76	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16034-16-16	16035-16-16	1.34	0.82	1.34	0.94	2.250	1.093	2.76	0.51	7/16-14	2.01	1.560	1.565	3.35	SK-403	-219	7/16-14x1-3/4	1.76
1 1/4"	1 1/4"	16034-20-20	16035-20-20	1.65	1.16	1.50	1.06	2.625	1.250	3.01	0.59	1/2-13	2.20	1.750	1.755	3.74	SK-404	-222	1/2-13x1-3/4	2.54
1 1/2"	1 1/2"	16034-24-24	16035-24-24	1.89	1.34	1.65	1.18	3.125	1.437	3.70	0.67	5/8-11	2.56	2.115	2.125	4.33	SK-405	-225	5/8-11x2-1/4	4.41
2"	2"	16034-32-32	16035-32-32	2.56	1.69	2.36	3.01	3.812	1.750	4.17	0.83	3/4-10	3.62	2.490	2.500	5.91	SKE41-406	-228	3/4-10x4-1/4	18.04

4-Bolt 90° Butt Weld Flanges for Schedule XX

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	D	E	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	P	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16036-08-08	16037-12-12	0.84	0.25	0.79	0.63	1.594	0.718	1.89	0.35	5/16-18	1.46	1.000	1.005	2.36	SK-401	-210	5/16-18x1-1/4	0.84
3/4"	3/4"	16036-12-12	16037-12-12	1.10	0.43	1.10	0.75	2.000	0.937	2.36	0.43	3/8-16	1.69	1.250	1.255	2.76	SK-402	-214	3/8-16x1-1/2	1.14
1"	1"	16036-16-16	16037-16-16	1.34	0.60	1.34	0.94	2.250	1.093	2.76	0.51	7/16-14	2.01	1.560	1.565	3.35	SK-403	-219	7/16-14x1-3/4	1.80
1 1/4"	1 1/4"	16036-20-20	16037-20-20	1.65	1.90	1.50	1.06	2.625	1.250	3.01	0.59	1/2-13	2.20	1.750	1.755	3.74	SK-404	-222	1/2-13x1-3/4	2.59
1 1/2"	1 1/2"	16036-24-24	16037-24-24	1.89	1.10	1.65	1.18	3.125	1.437	3.70	0.67	5/8-11	2.56	2.115	2.125	4.33	SK-405	-225	5/8-11x2-1/4	4.46
2"	2"	16036-32-32	16037-32-32	2.56	1.50	2.36	3.01	3.812	1.750	4.17	0.83	3/4-10	3.62	2.490	2.500	5.91	SKE41-406	-228	3/4-10x4-1/4	18.04

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt Pipe Thread Flanges

STANDARD PRESSURE : CODE 61

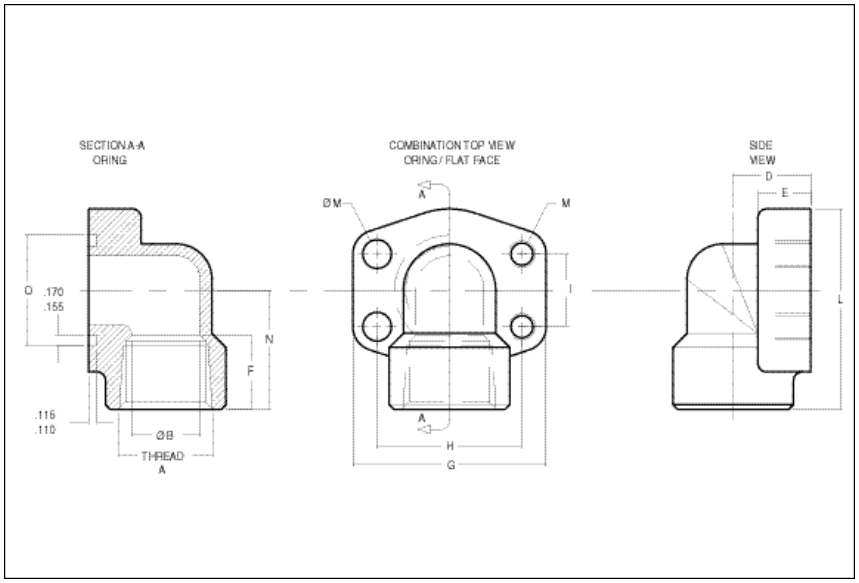
FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (NPTF) A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13008-08-08	13009-08-08	1/2"	0.51	1.42	0.63	0.75	2.13	1.500	0.688	1.81	0.34	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	13008-12-12	13009-12-12	3/4"	0.75	1.42	0.71	0.75	2.56	1.875	0.875	1.97	0.41	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13008-16-16	13009-16-16	1"	0.98	1.50	0.71	0.87	2.76	2.062	1.031	2.17	0.41	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13008-20-20	13009-20-20	1 1/4"	1.26	1.61	0.83	0.87	3.11	2.312	1.188	2.68	0.47	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13008-24-24	13009-24-24	1 1/2"	1.50	1.77	0.98	0.94	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.31
2"	2"	13008-32-32	13009-32-32	2"	2.01	1.77	0.98	1.18	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2"[2]	2 1/2"	13008-40-40	13009-40-40	2 1/2"	2.48	1.97	0.98	1.18	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	3.09
3"[3]	3"	13008-48-48	13009-48-48	3"	2.87	1.97	1.06	1.34	5.28	4.188	2.438	4.88	0.66	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	4.74
3 1/2"[4]	3 1/2"	13008-56-56	13009-56-56	3 1/2"	3.50	1.89	1.06	1.34	5.98	4.750	2.750	5.35	0.66	5/8-11	4.095	4.115	SK-114	-241	5/8-11x2	5.30
4"[4]	4"	13008-64-64	13009-64-64	4"	3.90	1.89	1.06	1.34	6.38	5.125	3.062	5.75	0.66	5/8-11	4.595	4.615	SK-116	-245	5/8-11x2	6.28

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (NPTF) A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16008-08-08	16009-08-08	1/2"	0.51	1.42	0.63	0.75	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16008-12-12	16009-12-12	3/4"	0.75	1.38	0.83	0.87	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16008-16-16	16009-16-16	1"	0.98	1.65	0.98	0.94	3.19	2.250	1.093	2.56	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.68
1 1/4"	1 1/4"	16008-20-20	16009-20-20	1 1/4"	1.26	1.77	1.06	0.98	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16008-24-24	16009-24-24	1 1/2"	1.50	1.97	1.18	1.10	4.41	3.125	1.437	3.70	0.69	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16008-32-32	16009-32-32	2"	2.01	2.56	1.46	1.18	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40

[1] Add a "K" to flange part # to include mounting hardware
[2] 2500 PSI max.
[3] 2000 PSI max.
[4] 500 PSI max.





4-Bolt 90° Pipe Thread Flanges

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (NPTF) A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13010-08-08	13011-08-08	1/2"	0.51	0.79	0.63	0.75	2.13	1.500	0.688	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.77
3/4"	3/4"	13010-12-12	13011-12-12	3/4"	0.75	0.94	0.71	0.75	2.56	1.875	0.875	2.48	0.43	3/8-16	1.50	1.250	1.255	SK-100	-214	3/8-16x1-1/2	1.21
1"	1"	13010-16-16	13011-16-16	1"	0.98	1.10	0.75	0.79	2.76	2.062	1.031	2.76	0.43	3/8-16	1.69	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.76
1 1/4"	1 1/4"	13010-20-20	13011-20-20	1 1/4"	1.26	1.34	0.83	0.87	3.11	2.312	1.188	3.35	0.45	7/16-14	2.01	1.750	1.755	SK-104	-222	7/16-14x1-1/2	2.87
1 1/2"	1 1/2"	13010-24-24	13011-24-24	1 1/2"	1.50	1.50	0.98	0.98	3.66	2.750	1.406	3.74	0.53	1/2-13	2.20	2.115	2.125	SK-106	-225	1/2-13x1-3/4	3.53
2"	2"	13010-32-32	13011-32-32	2"	2.01	1.65	0.98	1.10	4.33	3.062	1.688	4.33	0.53	1/2-13	2.56	2.490	2.500	SK-108	-228	1/2-13x1-3/4	4.41
2 1/2"[2]*	2 1/2"	13010-40-40	13011-40-40	2 1/2"	2.48	2.11	3.89	1.14	4.49	3.500	2.000	4.69	0.53	1/2-13	2.34	2.995	3.005	SKB21-110	-232	1/2-13x4-1/2	17.20

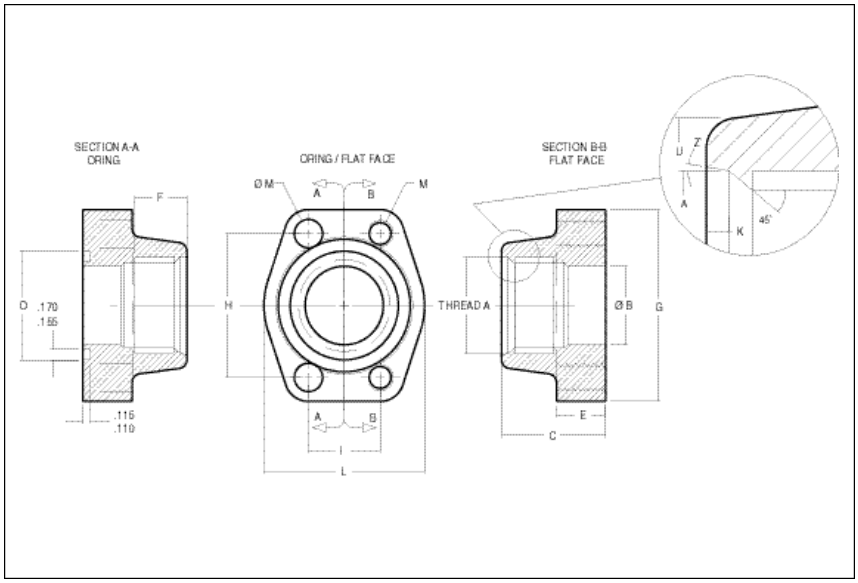
HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (NPTF) A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16010-08-08	16011-08-08	1/2"	0.51	0.79	0.63	0.75	2.13	1.594	0.718	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.77
3/4"	3/4"	16010-12-12	16011-12-12	3/4"	0.75	1.10	0.75	0.79	2.76	2.000	0.937	2.76	0.43	3/8-16	1.69	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.76
1"	1"	16010-16-16	16011-16-16	1"	0.98	1.34	0.83	0.87	3.11	2.250	1.093	3.35	0.51	7/16-14	2.01	1.560	1.565	SK-403	-219	7/16-14x1-3/4	2.87
1 1/4"	1 1/4"	16010-20-20	16011-20-20	1 1/4"	1.26	1.50	0.98	0.98	3.66	2.625	1.250	3.74	0.53	1/2-13	2.20	1.750	1.755	SK-404	-222	1/2-13x1-3/4	3.53
1 1/2"	1 1/2"	16010-24-24	16011-24-24	1 1/2"	1.50	1.65	0.98	1.10	4.33	3.125	1.437	4.33	0.67	5/8-11	2.56	2.115	2.125	SK-405	-225	5/8-11x2-1/4	4.43
2"	2"	16010-32-32	16011-32-32	2"	2.01	1.77	1.38	1.30	5.28	3.812	1.750	5.20	0.83	3/4-10	2.95	2.490	2.500	SK-406	-228	3/4-10x2-3/4	18.04

[1] Add a "K" to flange part # to include mounting hardware.

[2] 2500 PSI max.

* Made from bar stock. (Block style)





4-Bolt S.A.E. Straight Thread Flanges

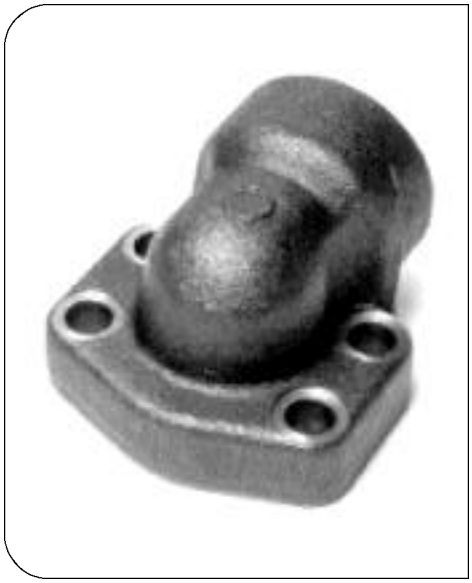
STANDARD PRESSURE : CODE 61

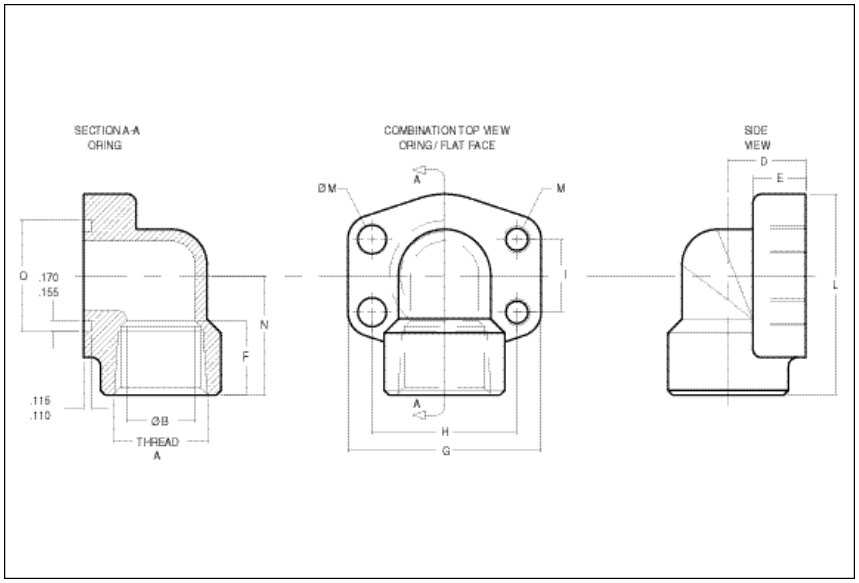
FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (S.A.E.) A	B	C	E	F	G	H	I	K	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	U	Z	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13012-08-08	13013-08-08	3/4"-16	0.51	1.42	0.63	0.67	2.13	1.500	0.688	0.10	1.81	0.35	5/16-18	1.000	1.005	0.81	15°	SK-080	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	13012-12-12	13013-12-12	1 1/16"-12	0.75	1.42	0.71	0.91	2.56	1.875	0.875	0.13	1.97	0.41	3/8-16	1.250	1.255	1.15	15°	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13012-16-16	13013-16-16	1 5/16"-12	0.98	1.50	0.71	0.91	2.76	2.062	1.031	0.13	2.17	0.41	3/8-16	1.560	1.565	1.40	15°	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13012-20-20	13013-20-20	1 5/8"-12	1.26	1.61	0.83	0.91	3.11	2.312	1.188	0.13	2.68	0.47	7/16-14	1.750	1.755	1.71	15°	SK-104	-222	7/16-14x1-1/2	1.46
1 1/2"	1 1/2"	13012-24-24	13013-24-24	1 7/8"-12	1.50	1.77	0.98	0.91	3.66	2.750	1.406	0.13	3.07	0.53	1/2-13	2.115	2.125	1.96	15°	SK-106	-225	1/2-13x1-3/4	2.32
2"	1 1/2"	13012-32-24	13013-32-24	1 7/8"-12	1.50	1.77	0.98	1.05	4.02	3.062	1.688	0.13	3.54	0.53	1/2-13	2.490	2.500	1.96	15°	SK-108	-228	1/2-13x1-3/4	2.63

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (S.A.E.) A	B	C	E	F	G	H	I	K	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	U	Z	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16012-08-08	16013-08-08	3/4"-16	0.51	1.42	0.63	0.67	2.13	1.594	0.718	0.10	1.81	0.35	5/16-18	1.000	1.005	0.81	15°	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16012-12-12	16013-12-12	1 1/16"-12	0.75	1.38	0.83	0.91	2.80	2.000	0.937	0.13	2.17	0.43	3/8-16	1.250	1.255	1.15	15°	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16012-16-16	16013-16-16	1 5/16"-12	0.98	1.65	0.98	0.91	3.19	2.250	1.093	0.13	2.56	0.51	7/16-14	1.560	1.565	1.40	15°	SK-403	-219	7/16-14x1-3/4	1.54
1 1/4"	1 1/4"	16012-20-20	16013-20-20	1 5/8"-12	1.26	1.77	1.06	0.91	3.74	2.625	1.250	0.13	3.07	0.53	1/2-13	1.750	1.755	1.71	15°	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16012-24-24	16013-24-24	1 7/8"-12	1.50	1.97	1.18	0.91	4.41	3.125	1.437	0.13	3.70	0.67	5/8-11	2.115	2.125	1.96	15°	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16012-32-32	16013-32-32	2 1/2"-12	2.01	2.56	1.46	1.05	5.28	3.812	1.750	0.13	4.49	0.83	3/4-10	2.490	2.500	2.58	15°	SK-406	-228	3/4-10x2-3/4	5.40

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt 90° S.A.E. Threaded Flanges

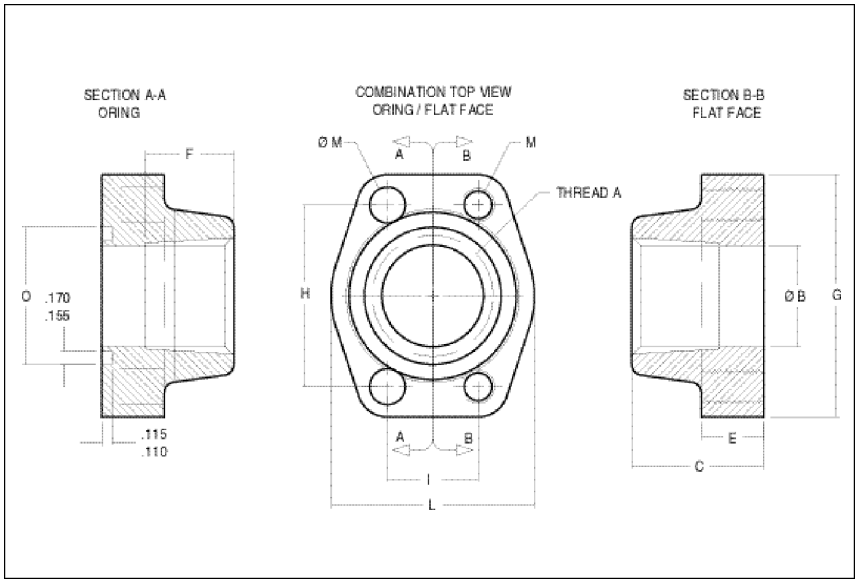
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (S.A.E.) A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13014-08-08	13015-08-08	3/4"-16	0.51	0.79	0.63	0.75	2.13	1.500	0.688	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.77
3/4"	3/4"	13014-12-12	13015-12-12	1 1/16"-12	0.75	0.94	0.71	0.75	2.56	1.875	0.875	2.48	0.43	3/8-16	1.50	1.250	1.255	SK-100	-214	3/8-16x1-1/2	1.21
1"	1"	13014-16-16	13015-16-16	1 5/16"-12	0.98	1.10	0.75	0.79	2.76	2.062	1.031	2.76	0.43	3/8-16	1.69	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.76
1 1/4"	1 1/4"	13014-20-20	13015-20-20	1 5/8"-12	1.26	1.34	0.83	0.87	3.11	2.312	1.188	3.35	0.45	7/16-14	2.01	1.750	1.755	SK-104	-222	7/16-14x1-1/2	2.87
1 1/2"	1 1/2"	13014-24-24	13015-24-24	1 7/8"-12	1.50	1.50	0.98	0.98	3.66	2.750	1.406	3.74	0.53	1/2-13	2.20	2.115	2.125	SK-106	-225	1/2-13x1-3/4	3.53
2"	2"	13014-32-32	13015-32-32	2 1/2"-12	2.01	1.65	0.98	1.10	4.33	3.062	1.688	4.33	0.53	1/2-13	2.56	2.490	2.500	SK-108	-228	1/2-13x1-3/4	4.41

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (S.A.E.) A	B	D	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	N	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16014-08-08	16015-08-08	3/4"-16	0.51	0.79	0.63	0.75	2.13	1.594	0.718	2.36	0.35	5/16-18	1.46	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.77
3/4"	3/4"	16014-12-12	16015-12-12	1 1/16"-12	0.75	1.10	0.75	0.79	2.76	2.000	0.937	2.76	0.43	3/8-16	1.69	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.76
1"	1"	16014-16-16	16015-16-16	1 5/16"-12	0.98	1.34	0.83	0.87	3.11	2.250	1.093	3.35	0.51	7/16-14	2.01	1.560	1.565	SK-403	-219	7/16-14x1-3/4	2.87
1 1/4"	1 1/4"	16014-20-20	16015-20-20	1 5/8"-12	1.26	1.50	0.98	0.98	3.66	2.625	1.250	3.74	0.53	1/2-13	2.20	1.750	1.755	SK-404	-222	1/2-13x1-3/4	3.53
1 1/2"	1 1/2"	16014-24-24	16015-24-24	1 7/8"-12	1.50	1.65	0.98	1.10	4.33	3.125	1.437	4.33	0.67	5/8-11	2.56	2.115	2.125	SK-405	-225	5/8-11x2-1/4	4.43

[1] Add a "K" to flange part # to include mounting hardware.





4-Bolt B.S.P.P. Threaded Flanges

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (B.S.P.P.) A	B	C	E	F	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	1/2"	13110-08-08	13111-08-08	1/2"	0.51	1.42	0.63	0.75	2.13	1.500	0.688	1.81	0.35	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.55
3/4"	3/4"	13110-12-12	13111-12-12	3/4"	0.75	1.42	0.71	0.75	2.56	1.875	0.875	1.97	0.43	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.86
1"	1"	13110-16-16	13111-16-16	1"	0.98	1.50	0.71	0.87	2.76	2.062	1.031	2.17	0.43	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.01
1 1/4"	1 1/4"	13110-20-20	13111-20-20	1 1/4"	1.26	1.61	0.83	0.87	3.11	2.312	1.188	2.68	0.45	7/16-14	1.750	1.755	SK-104	-222	7/16-14x-1-12	1.46
1 1/2"	1 1/2"	13110-24-24	13111-24-24	1 1/2"	1.50	1.77	0.98	0.95	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.31
2"	2"	13110-32-32	13111-32-32	2"	2.01	1.77	0.98	1.18	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.62
2 1/2" [2]	2 1/2"	13110-40-40	13111-40-40	2 1/2"	2.48	1.97	0.98	1.18	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x-1-3/4	3.09
3" [3]	3"	13110-48-48	13111-48-48	3"	2.87	1.97	1.06	1.34	5.28	4.188	2.438	4.88	0.69	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	4.74

STANDARD PRESSURE : CODE 62

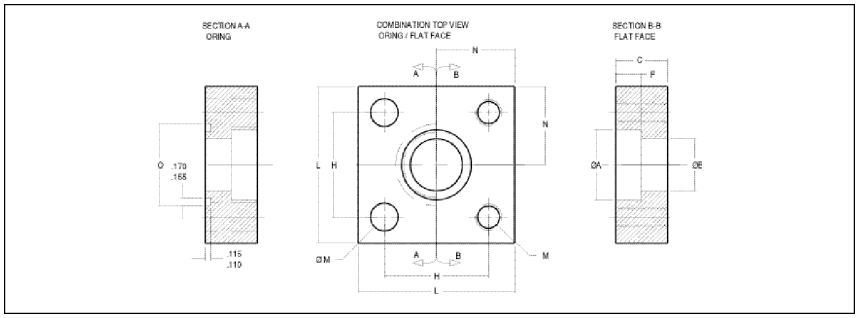
FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (B.S.P.P.) A	B	C	E	F	G	H	I	L	DIA. M	DRILLED UN-2B M	TAPPED MIN O	MAX O	MOUNTING KIT INFORMATION PART NO. [1]	O-RING	SHCS	WT
1/2"	1/2"	16110-08-08	16111-08-08	1/2"	0.51	1.42	0.63	0.75	2.13	1.594	0.718	1.81	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.57
3/4"	3/4"	16110-12-12	16111-12-12	3/4"	0.75	1.38	0.83	0.87	2.80	2.000	0.937	2.17	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.10
1"	1"	16110-16-16	16111-16-16	1"	0.98	1.65	0.98	0.95	3.19	2.250	1.093	2.56	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.68
1 1/4"	1 1/4"	16110-20-20	16111-20-20	1 1/4"	1.26	1.77	1.06	0.98	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	2.65
1 1/2"	1 1/2"	16110-24-24	16111-24-24	1 1/2"	1.50	1.97	1.18	1.10	4.41	3.125	1.437	3.70	0.67	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.64
2"	2"	16110-32-32	16111-32-32	2"	2.01	2.56	1.46	1.18	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	5.40

[1] Add a "K" to flange part # to include mounting hardware

[2] 2500 PSI max.

[3] 2000 PSI max.

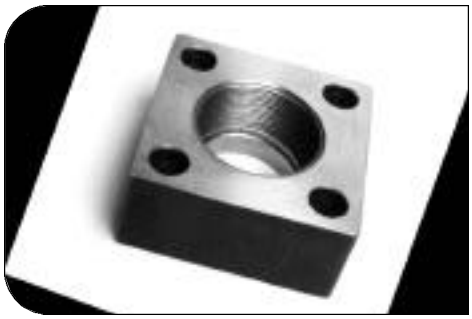


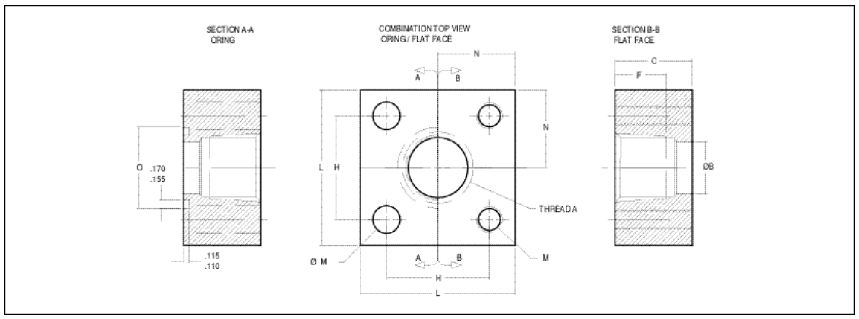


4-Bolt Square, Socket Weld Pipe Flanges

3000 Series

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	H	L	DRILLED DIA. M	TAPPED UN-2B M	N	O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13616-08-08	13617-08-08	0.860	0.50	1.00	0.50	1.438	2.25	0.41	3/8-16	1.12	1.375	SKQ1-080	-216	3/8-16x1-3/4	1.20
3/4"	3/4"	13616-12-12	13617-12-12	1.070	0.75	1.00	0.50	1.438	2.25	0.41	3/8-16	1.12	1.375	SKQ1-100	-216	3/8-16x1-3/4	1.00
1"	1"	13616-16-16	13617-16-16	1.335	1.00	1.00	0.50	2.000	3.00	0.53	1/2-13	1.50	1.750	SKQ1-102	-222	1/2-13x1-3/4	2.00
1 1/4"	1 1/4"	13616-20-20	13617-20-20	1.680	1.25	1.00	0.50	2.000	3.00	0.53	1/2-13	1.50	1.750	SKQ1-104	-222	1/2-13x1-3/4	1.70
1 1/2"	1 1/2"	13616-24-24	13617-24-24	1.920	1.50	1.25	0.62	2.750	4.00	0.66	5/8-11	2.00	2.500	SKQ1-106	-228	5/8-11x2-1/4	4.20
2"	2"	13616-32-32	13617-32-32	2.411	1.94	1.25	0.62	2.750	4.00	0.66	5/8-11	2.00	2.500	SKQ1-108	-228	5/8-11x2-1/4	3.70
2 1/2"	2 1/2"	13616-40-40	13617-40-40	2.911	2.44	1.50	0.75	3.750	5.50	0.94	7/8-9	2.75	3.500	SKQ1-110	-236	7/8-9x2-3/4	9.20
3"	3"	13616-48-48	13617-48-48	3.540	2.88	1.50	0.75	3.750	5.50	0.94	7/8-9	2.75	3.500	SKQ1-112	-236	7/8-9x2-3/4	8.00
3 1/2"	3 1/2"	13616-56-56	13617-56-56	4.045	3.38	1.75	0.75	4.250	6.00	0.94	7/8-9	3.00	4.000	SKQ1-114	-240	7/8-9x3	11.00
4"	4"	13616-64-64	13617-64-64	4.550	3.88	2.00	0.75	5.000	7.00	1.06	1-8	3.50	4.625	SKQ1-116	-347	1-8x3-1/2	18.00



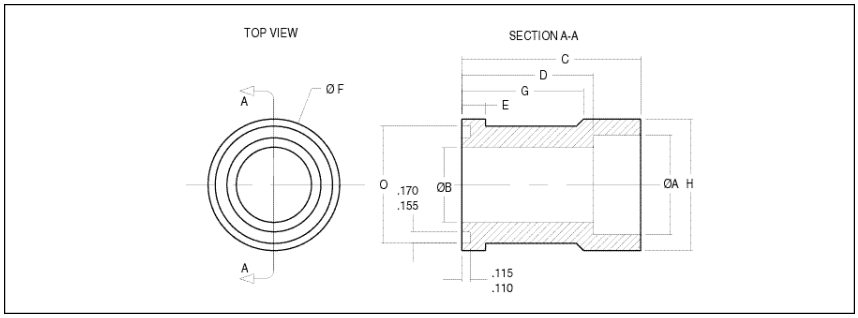


4-Bolt Square, NPTF Threaded Pipe Flanges

3000 Series

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	THREAD (NPTF) A	B	C	F	H	L	DRILLED DIA. M	TAPPED UN-2B M	N	O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13608-08-08	13609-08-08	1/2"	0.50	1.25	1.06	1.438	2.25	0.41	3/8-16	1.12	1.375	SKQ2-080	-216	3/8-16x2	1.50
3/4"	3/4"	13608-12-12	13609-12-12	3/4"	0.75	1.25	1.06	1.438	2.25	0.41	3/8-16	1.12	1.375	SKQ2-100	-216	3/8-16x2	1.40
1"	1"	13608-16-16	13609-16-16	1"	1.00	1.50	1.25	2.000	3.00	0.53	1/2-13	1.50	1.750	SKQ2-102	-222	1/2-13x2-1/4	3.10
1 1/4"	1 1/4"	13608-20-20	13609-20-20	1 1/4"	1.25	1.50	1.31	2.000	3.00	0.53	1/2-13	1.50	1.750	SKQ2-104	-222	1/2-13x2-1/4	2.70
1 1/2"	1 1/2"	13608-24-24	13609-24-24	1 1/2"	1.50	1.75	1.31	2.750	4.00	0.66	5/8-11	2.00	2.500	SKQ2-106	-228	5/8-11x2-3/4	6.20
2"	2"	13608-32-32	13609-32-32	2"	1.94	1.75	1.31	2.750	4.00	0.66	5/8-11	2.00	2.500	SKQ2-108	-228	5/8-11x2-3/4	5.50
2 1/2"	2 1/2"	13608-40-40	13609-40-40	2 1/2"	2.44	2.25	1.84	3.750	5.50	0.94	7/8-9	2.75	3.500	SKQ2-110	-236	7/8-9x3-1/2	14.00
3"	3"	13608-48-48	13609-48-48	3"	2.88	2.25	1.91	3.750	5.50	0.94	7/8-9	2.75	3.500	SKQ2-112	-236	7/8-9x3-1/2	12.80

[1] Add a "K" to flange part # to include mounting hardware





Socket Weld Flange Heads For Pipe

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	PART NO.	A	B	C	D	E	F	G	H	MIN O	MAX O	WT
3/4"	3/4"	13078-12-12	1.062	0.75	2.34	1.78	0.265	1.500	1.62	1.50	1.250	1.255	0.56
1"	1"	13078-16-16	1.328	1.00	2.38	1.75	0.315	1.750	1.62	1.75	1.560	1.565	0.69
1 1/4"	1 1/4"	13078-20-20	1.672	1.25	2.62	1.94	0.315	2.000	1.81	2.00	1.750	1.755	0.81
1 1/2"	1 1/2"	13078-24-24	1.922	1.50	2.88	2.12	0.315	2.375	2.00	2.38	2.115	2.125	1.13
2"	2"	13078-32-32	2.406	2.00	3.00	2.12	0.375	2.812	2.00	2.81	2.490	2.500	1.40

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	PART NO.	A	B	C	D	E	F	G	H	MIN O	MAX O	WT
1"	1"	16078-16-16	1.328	1.000	3.06	2.43	0.375	1.875	2.34	2.000	1.560	1.565	1.12
1 1/4"	1 1/4"	16078-20-20	1.672	1.125	3.31	2.62	0.405	2.125	2.50	2.312	1.750	1.755	1.56
1 1/2"	1 1/2"	16078-24-24	1.922	1.375	3.93	3.18	0.495	2.500	3.06	2.750	2.115	2.125	2.75
2"	2"	16078-32-32	2.406	1.875	4.06	3.18	0.495	3.125	3.18	3.250	2.490	2.500	4.20

Socket Weld Flange Heads For Tube

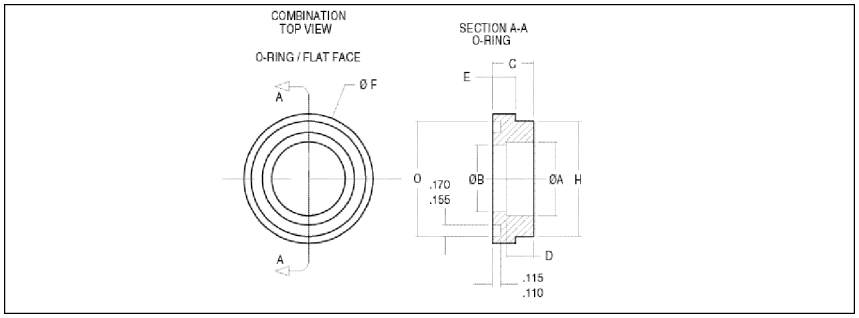
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	PART NO.	A	B	C	D	E	F	G	H	MIN O	MAX O	WT
3/4"	3/4"	13092-12-12	0.752	0.625	2.34	1.78	0.265	1.500	1.62	1.50	1.250	1.255	0.69
3/4"	1"	13092-12-16	1.002	0.750	2.34	1.78	0.265	1.500	1.62	1.50	1.250	1.255	0.65
1"	1"	13092-16-16	1.002	0.875	2.38	1.75	0.315	1.750	1.62	1.75	1.560	1.565	0.88
1"	1 1/4"	13092-16-20	1.252	1.000	2.38	1.75	0.315	1.750	1.62	1.75	1.560	1.565	0.84
1 1/4"	1 1/4"	13092-20-20	1.252	1.125	2.62	2.00	0.315	2.000	1.81	2.00	1.750	1.755	1.06
1 1/4"	1 1/2"	13092-20-24	1.502	1.250	2.62	1.94	0.315	2.000	1.81	2.00	1.750	1.755	1.00
1 1/2"	1 1/2"	13092-24-24	1.502	1.375	2.88	2.19	0.315	2.375	2.00	2.38	2.115	2.125	1.56
1 1/2"	1 3/4"	13092-24-28	1.752	1.500	2.88	2.12	0.315	2.375	2.00	2.38	2.115	2.125	1.49
2"	2"	13092-32-32	2.002	1.875	3.00	2.12	0.375	2.812	2.00	2.81	2.490	2.500	1.80
2"	2 1/4"	13092-32-36	2.252	2.000	3.00	2.12	0.375	2.812	2.00	2.81	2.490	2.500	1.76

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	PART NO.	A	B	C	D	E	F	G	H	MIN O	MAX O	WT
1"	1"	16092-16-16	1.002	0.875	3.06	2.43	0.375	1.875	2.34	2.000	1.560	1.565	0.88
1"	1 1/4"	16092-16-20	1.252	1.000	3.06	2.43	0.375	1.875	2.34	2.000	1.560	1.565	0.80
1 1/4"	1 1/4"	16092-20-20	1.252	1.125	3.31	2.62	0.405	2.125	2.50	2.312	1.750	1.755	1.75
1 1/4"	1 1/2"	16092-20-24	1.502	1.250	3.31	2.62	0.405	2.125	2.50	2.312	1.750	1.755	1.65
1 1/2"	1 1/2"	16092-24-24	1.502	1.375	3.93	3.18	0.495	2.500	3.06	2.750	2.115	2.125	2.10
1 1/2"	1 3/4"	16092-24-28	1.752	1.500	3.93	3.18	0.495	2.500	3.06	2.750	2.115	2.125	2.20
2"	2"	16092-32-32	2.002	1.875	4.06	3.18	0.495	3.125	3.18	3.250	2.490	2.500	2.95
2"	2 1/4"	16092-32-36	2.252	2.000	4.06	3.18	0.495	3.125	3.18	3.250	2.490	2.500	2.85





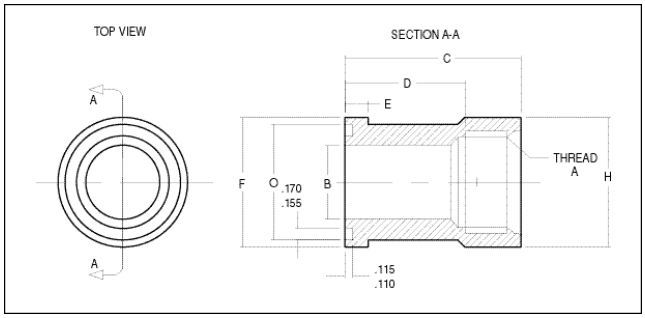
SAE Flange Heads For Brazing

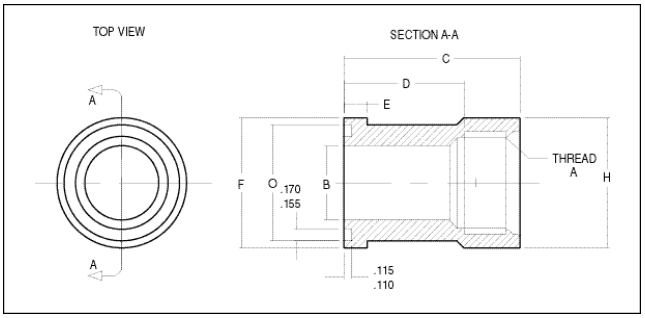
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FACE FLAT PART NO.	+.003/-.000 A	B	C	D	E	F	H	MIN O	MAX O	WT
1/2"	1/2"	13090-08-08	13091-08-08	0.502	0.406	0.50	0.312	0.265	1.188	0.940	1.000	1.005	0.12
3/4"	3/4"	13090-12-12	13091-12-12	0.752	0.656	0.56	0.375	0.265	1.500	1.250	1.250	1.255	0.19
1"	1"	13090-16-16	13091-16-16	1.002	0.906	0.56	0.375	0.315	1.750	1.500	1.560	1.565	0.22
1 1/4"	1 1/4"	13090-20-20	13091-20-20	1.252	1.125	0.56	0.375	0.315	2.000	1.700	1.750	1.755	0.25
1 1/2"	1 1/2"	13090-24-24	13091-24-24	1.502	1.375	0.62	0.438	0.315	2.380	1.980	2.115	2.125	0.31
2"	2"	13090-32-32	13091-32-32	2.002	1.875	0.62	0.500	0.375	2.810	2.450	2.490	2.500	0.44
2 1/2" [1]	2 1/2"	13090-40-40	13091-40-40	2.502	2.375	0.68	0.562	0.375	3.312	2.921	2.995	3.005	0.98
3" [2]	3"	13090-48-48	13091-48-48	3.002	2.875	0.75	0.562	0.375	4.000	3.546	3.615	3.625	1.47

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	O-RING GROOVE PART NO.	FACE FLAT PART NO.	+.003/-.000 A	B	C	D	E	F	H	MIN O	MAX O	WT
3/4"	3/4"	16090-12-12	16091-12-12	0.752	0.656	0.69	0.500	0.345	1.625	1.250	1.250	1.255	0.19
1"	1"	16090-16-16	16091-16-16	1.002	0.810	0.81	0.625	0.375	1.875	1.500	1.560	1.565	0.31
1 1/4"	1 1/4"	16090-20-20	16091-20-20	1.252	1.010	1.00	0.812	0.405	2.125	1.718	1.750	1.755	0.44
1 1/2"	1 1/2"	16090-24-24	16091-24-24	1.502	1.250	1.19	1.000	0.495	2.500	2.000	2.115	2.125	0.69
2"	2"	16090-32-32	16091-32-32	2.002	1.750	1.50	1.375	0.495	3.125	2.620	2.490	2.500	1.25





NPTF Threaded Flange Heads

STANDARD PRESSURE : CODE 61

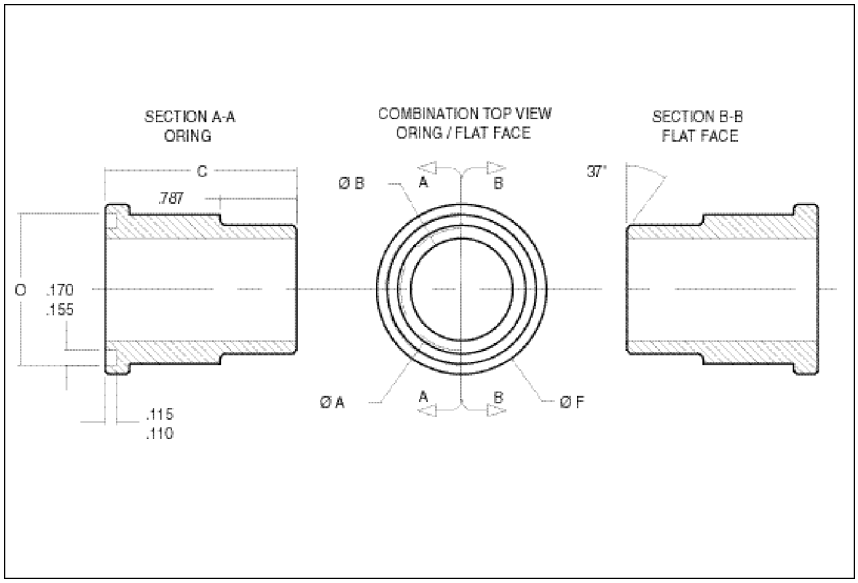
FLANGE SIZE	PIPE SIZE	PART NO.	THREAD (NPTF) A	B	C	D	E	F	H	MIN O	MAX O	WT
3/4"	3/4"	13076-12-12	3/4"	0.75	2.47	1.62	0.265	1.500	1.500	1.250	1.255	0.75
1"	1"	13076-16-16	1"	1.00	2.66	1.62	0.315	1.750	1.750	1.560	1.565	0.81
1 1/4"	1 1/4"	13076-20-20	1-1/4"	1.25	2.84	1.81	0.315	2.000	2.000	1.750	1.755	0.98
1 1/2"	1 1/2"	13076-24-24	1-1/2"	1.50	3.00	2.00	0.315	2.380	2.375	2.115	2.125	1.41
2"	2"	13076-32-32	2"	2.00	3.00	2.00	0.375	2.810	2.812	2.490	2.500	1.78

S.A.E. Threaded Flange Heads

STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE SIZE	PART NO.	THREAD (S.A.E.) A	B	C	D	E	F	H	MIN O	MAX O	WT
3/4"	3/4"	13128-12-12	1 1/16-12	0.75	2.47	1.62	0.265	1.500	1.500	1.250	1.255	0.74
1"	1"	13128-16-16	1 5/16-12	1.00	2.66	1.62	0.315	1.750	1.750	1.560	1.565	0.80
1 1/4"	1 1/4"	13128-20-20	1 5/8-12	1.25	2.84	1.81	0.315	2.000	2.000	1.750	1.755	0.97
1 1/2"	1 1/2"	13128-24-24	1 7/8-12	1.50	3.00	2.00	0.315	2.380	2.375	2.115	2.125	1.40
2"	2"	13128-32-32	2 1/2-12	2.00	3.00	2.00	0.375	2.810	2.812	2.490	2.500	1.77

[1] 2500 PSI max.
[2] 2000 PSI max.





Butt Weld Flange Heads for Schedule 40

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	MIN O	MAX O	WT
1/2"	1/2"	13070-08-08	13071-08-08	0.84	0.62	1.61	1.19	1.000	1.005	0.22
3/4"	3/4"	13070-12-12	13071-12-12	1.05	0.82	1.97	1.50	1.250	1.255	0.33
1"	1"	13070-16-16	13071-16-16	1.32	1.05	1.97	1.75	1.560	1.565	0.50
1 1/4"	1 1/4"	13070-20-20	13071-20-20	1.66	1.38	2.17	2.00	1.750	1.755	0.58
1 1/2"	1 1/2"	13070-24-24	13071-24-24	1.90	1.61	2.24	2.37	2.115	2.125	0.78
2"	2"	13070-32-32	13071-32-32	2.38	2.07	2.24	2.81	2.490	2.500	1.00
2 1/2" [1]	2 1/2"	13070-40-40	13071-40-40	2.88	2.47	2.28	3.31	2.995	3.005	1.25
3" [2]	3"	13070-48-48	13071-48-48	3.50	3.07	2.36	4.00	3.615	3.625	1.66
3 1/2" [3]	3 1/2"	13070-56-56	13071-56-56	4.00	3.55	2.36	4.50	4.095	4.115	2.20
4" [3]	4"	13070-64-64	13071-64-64	4.50	4.03	2.36	5.00	4.595	4.615	2.50
5" [3]	5"	13070-80-80	13071-80-80	5.56	5.05	2.36	6.00	5.595	5.615	3.10

Butt Weld Flange Heads for Schedule 80

STANDARD PRESSURE : CODE 61

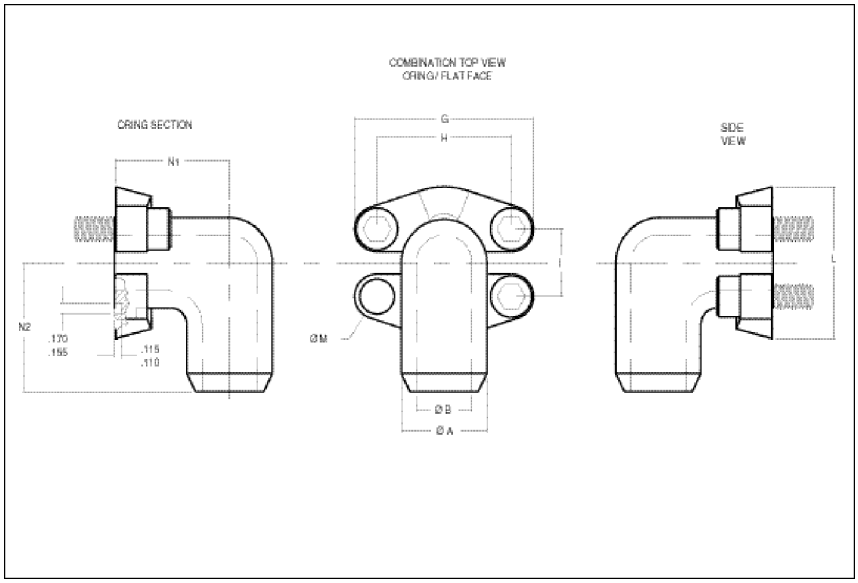
FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	MIN O	MAX O	WT
1/2"	1/2"	13072-08-08	13073-08-08	0.84	0.55	1.61	1.19	1.000	1.005	0.24
3/4"	3/4"	13072-12-12	13073-12-12	1.05	0.74	1.97	1.50	1.250	1.255	0.38
1"	1"	13072-16-16	13073-16-16	1.32	0.96	1.97	1.75	1.560	1.565	0.56
1 1/4"	1 1/4"	13072-20-20	13073-20-20	1.66	1.28	2.17	2.00	1.750	1.755	0.59
1 1/2"	1 1/2"	13072-24-24	13073-24-24	1.90	1.50	2.24	2.37	2.115	2.125	0.81
2"	2"	13072-32-32	13073-32-32	2.38	1.94	2.24	2.81	2.490	2.500	1.09
2 1/2" [1]	2 1/2"	13072-40-40	13073-40-40	2.88	2.32	2.28	3.31	2.995	3.005	1.59
3" [2]	3"	13072-48-48	13073-48-48	3.50	2.90	2.36	4.00	3.615	3.625	1.96
3 1/2" [3]	3 1/2"	13072-56-56	13073-56-56	4.00	3.36	2.36	4.50	4.095	4.115	2.70
4" [3]	4"	13072-64-64	13073-64-64	4.50	3.83	2.36	5.00	4.595	4.615	2.85
5" [3]	5"	13072-80-80	13073-80-80	5.56	4.81	2.36	6.00	5.595	5.615	3.40

Butt Weld Flange Heads for Schedule 160

STANDARD PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	C	F	MIN O	MAX O	WT
1/2"	1/2"	16074-08-08	16075-08-08	0.84	0.47	1.34	1.25	1.000	1.005	0.19
3/4"	3/4"	16074-12-12	16075-12-12	1.05	0.59	1.50	1.63	1.250	1.255	0.38
1"	1"	16074-16-16	16075-16-16	1.32	0.82	1.57	1.87	1.560	1.565	0.63
1 1/4"	1 1/4"	16074-20-20	16075-20-20	1.66	1.16	1.77	2.13	1.750	1.755	0.69
1 1/2"	1 1/2"	16074-24-24	16075-24-24	1.90	1.34	1.97	2.50	2.115	2.125	1.06
2"	2"	16074-32-32	16075-32-32	2.38	1.69	2.28	3.13	2.490	2.500	2.10
2 1/2" [4]	2 1/2"	16074-40-40	16075-40-40	2.88	2.13	2.95	4.24	2.995	3.005	5.20
3" [4]	3"	16074-48-48	16075-48-48	3.50	2.62	3.15	5.18	3.615	3.625	9.00

[1] 2500 PSI Max.
[2] 2000 PSI Max.
[3] 500 PSI Max.
[4] Not in SAE specifications.



90° Butt Weld Flange Heads for Schedule 40

HIGH PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	G	H	I	L	M	N1	N2	WT
1/2"	1/2"	13062-08-08	13063-08-08	0.84	0.62	2.13	1.500	0.688	1.80	0.34	1.53	1.50	0.80
3/4"	3/4"	13062-12-12	13063-12-12	1.05	0.82	2.56	1.875	0.875	2.04	0.41	1.65	1.77	1.30
1"	1"	13062-16-16	13063-16-16	1.32	1.05	2.75	2.062	1.031	2.30	0.41	1.77	1.97	1.81
1 1/4"	1 1/4"	13062-20-20	13063-20-20	1.66	1.38	3.13	2.312	1.188	2.86	0.47	1.97	2.32	2.58
1 1/2"	1 1/2"	13062-24-24	13063-24-24	1.90	1.61	3.69	2.750	1.406	3.24	0.53	3.35	2.99	4.39

90° Butt Weld Flange Heads for Schedule 80

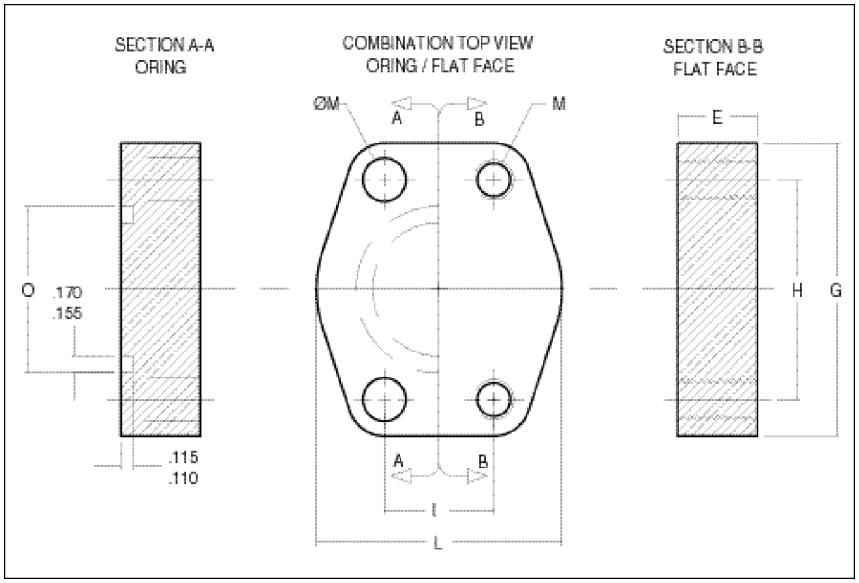
HIGH PRESSURE : CODE 61

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	G	H	I	L	M	N1	N2	WT
1/2"	1/2"	13064-08-08	13065-08-08	0.84	0.55	2.13	1.500	0.688	1.80	0.34	1.53	1.50	0.81
3/4"	3/4"	13064-12-12	13065-12-12	1.05	0.74	2.56	1.875	0.875	2.04	0.41	1.65	1.77	1.31
1"	1"	13064-16-16	13065-16-16	1.32	0.96	2.75	2.062	1.031	2.30	0.41	1.77	1.97	1.82
1 1/4"	1 1/4"	13064-20-20	13065-20-20	1.66	1.28	3.13	2.312	1.188	2.86	0.47	1.97	2.32	2.59
1 1/2"	1 1/2"	13064-24-24	13065-24-24	1.90	1.50	3.69	2.750	1.406	3.24	0.53	3.35	2.99	4.39

90° Butt Weld Flange Heads for Schedule 160

HIGH PRESSURE : CODE 62

FLANGE SIZE	PIPE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	A	B	G	H	I	L	M	N1	N2	WT
1/2"	1/2"	16066-08-08	16067-08-08	0.84	0.47	2.20	1.594	0.718	1.86	0.34	1.54	1.50	1.06
3/4"	3/4"	16066-12-12	16067-12-12	1.05	0.61	2.80	2.000	0.937	2.36	0.41	1.89	1.89	2.07
1"	1"	16066-16-16	16067-16-16	1.32	0.82	3.19	2.250	1.093	2.74	0.49	2.36	2.36	3.33
1 1/4"	1 1/4"	16066-20-20	16067-20-20	1.66	1.16	3.74	2.625	1.250	3.04	0.53	2.68	2.68	5.20
1 1/2"	1 1/2"	16066-24-24	16067-24-24	1.90	1.34	4.45	3.125	1.437	3.74	0.66	3.35	2.99	7.34





4-Bolt Closed Flanges

STANDARD PRESSURE : CODE 61

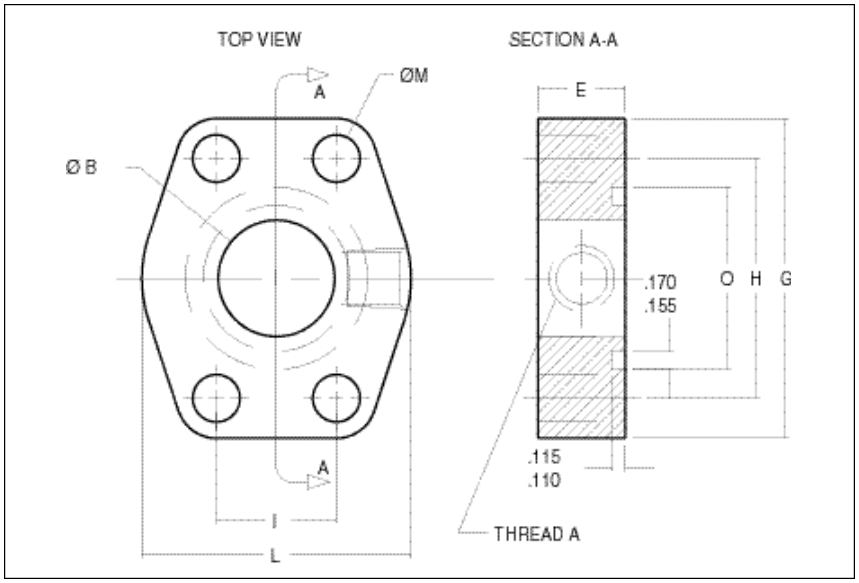
FLANGE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	13038-08	13039-08	0.63	2.20	1.500	0.688	1.89	0.35	5/16-18	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.44
3/4"	13038-12	13009-12	0.63	2.56	1.875	0.875	1.97	0.43	3/8-16	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.66
1"	13038-16	13039-16	0.75	2.76	2.062	1.031	2.36	0.43	3/8-16	1.560	1.565	SK-102	-219	3/8-16x1-1/2	0.82
1 1/4"	13038-20	13039-20	0.71	3.11	2.312	1.188	2.68	0.45	7/16-14	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.19
1 1/2"	13038-24	13039-24	0.79	3.66	2.750	1.406	3.07	0.53	1/2-13	2.115	2.125	SK-106	-225	1/2-13x1-3/4	1.98
2"	13038-32	13039-32	0.79	4.02	3.062	1.688	3.54	0.53	1/2-13	2.490	2.500	SK-108	-228	1/2-13x1-3/4	2.21
2 1/2"[2]	13038-40	13039-40	0.79	4.49	3.500	2.000	4.13	0.53	1/2-13	2.995	3.005	SK-110	-232	1/2-13x1-3/4	2.98
3"[3]	13038-48	13039-48	0.95	5.28	4.188	2.438	4.88	0.69	5/8-11	3.615	3.625	SK-112	-237	5/8-11x2	5.18
3 1/2"[4]	13038-56	13039-56	0.87	5.98	4.750	2.750	5.35	0.69	5/8-11	4.095	4.115	SK-114	-241	5/8-11x2	6.39
4"[4]	13038-64	13039-64	0.98	6.38	5.125	3.062	5.75	0.69	5/8-11	4.595	4.615	SK-116	-245	5/8-11x2	8.60
5"[4]	13038-80	13039-80	1.10	7.48	6.000	3.625	6.69	0.69	5/8-11	5.595	5.615	SK-118	-253	5/8-11x2-1/4	8.82

HIGH PRESSURE : CODE 62

FLANGE SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	E	G	H	I	L	DRILLED DIA. M	TAPPED UN-2B M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	16038-08	16039-08	0.63	2.20	1.594	0.718	1.89	0.35	5/16-18	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.44
3/4"	16038-12	16039-12	0.75	2.80	2.000	0.937	2.36	0.43	3/8-16	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.06
1"	16038-16	16039-16	0.94	3.19	2.250	1.093	2.76	0.51	7/16-14	1.560	1.565	SK-403	-219	7/16-14x1-3/4	1.70
1 1/4"	16038-20	16039-20	1.06	3.74	2.625	1.250	3.07	0.53	1/2-13	1.750	1.755	SK-404	-222	1/2-13x1-3/4	1.87
1 1/2"	16038-24	16039-24	1.18	4.41	3.125	1.437	3.70	0.67	5/8-11	2.115	2.125	SK-405	-225	5/8-11x2-1/4	3.97
2"	16038-32	16039-32	1.10	5.28	3.812	1.750	4.49	0.83	3/4-10	2.490	2.500	SK-406	-228	3/4-10x2-3/4	4.41
2 1/2"[5]	16038-40	16039-40	1.77	7.09	4.874	2.315	5.91	0.94	7/8-9	2.995	3.005	SK-407	-232	7/8-9x3-1/2	11.66
3"[5]	16038B-48	16039B-48	2.50	8.50	6.000	2.812	6.00	1.156	1 1/8-7	3.615	3.625	SKB7-408	-237	1 1/8-7x4 1/2	33.70

[1] Add a "K" to flange part # to include mounting hardware.
[2] 2500 PSI max.
[3] 2000 PSI max.
[4] 500 PSI max.
[5] Not included in S.A.E. J518 specification.





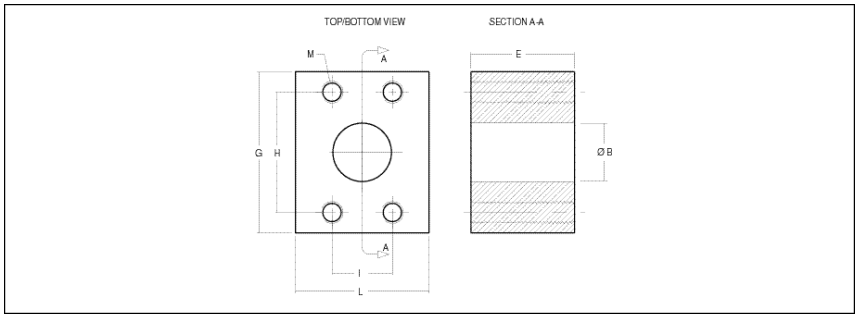
4-Bolt Gauge Port Adapter/O-Ring Spacer

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PART NO.	THREAD A	B	E	G	H	I	L	DRILLED DIA. M	MIN O	MAX O	O-RING	WT
3/4"	13045-12-12	--	0.74	0.94	2.56	1.875	0.875	1.97	0.43	1.250	1.255	-214	1.35
3/4"	23045-12-12	1/4 NPTF	0.74	0.94	2.56	1.875	0.875	1.97	0.43	1.250	1.255	-214	1.32
3/4"	33045-12-12	7/16-20	0.74	0.94	2.56	1.875	0.875	1.97	0.43	1.250	1.255	-214	1.32
1"	13045-16-16	--	0.94	0.94	2.76	2.062	1.031	1.97	0.43	1.560	1.565	-219	135
1"	23045-16-16	1/4 NPTF	0.94	0.94	2.76	2.062	1.031	1.97	0.43	1.560	1.565	-219	1.32
1"	33045-16-16	7/16-20	0.94	0.94	2.76	2.062	1.031	1.97	0.43	1.560	1.565	-219	1.32
1 1/4"	13045-20-20	--	1.26	0.91	3.19	2.312	1.188	2.76	0.49	1.750	1.755	-222	1.68
1 1/4"	23045-20-20	1/4 NPTF	1.26	0.91	3.19	2.312	1.188	2.76	0.49	1.750	1.755	-222	1.65
1 1/4"	33045-20-20	7/16-20	1.26	0.91	3.19	2.312	1.188	2.76	0.49	1.750	1.755	-222	1.65
1 1/2"	13045-24-24	--	1.50	0.94	3.74	2.750	1.406	3.07	0.53	2.115	2.125	-225	1.79
1 1/2"	23045-24-24	1/4 NPTF	1.50	0.94	3.74	2.750	1.406	3.07	0.53	2.115	2.125	-225	1.76
1 1/2"	33045-24-24	7/16-20	1.50	0.94	3.74	2.750	1.406	3.07	0.53	2.115	2.125	-225	1.76
2"	13045-32-32	--	1.97	0.94	4.02	3.062	1.688	3.54	0.53	2.490	2.500	-228	2.80
2"	23045-32-32	1/4 NPTF	1.97	0.94	4.02	3.062	1.688	3.54	0.53	2.490	2.500	-228	2.75
2"	33045-32-32	7/16-20	1.97	0.94	4.02	3.062	1.688	3.54	0.53	2.490	2.500	-228	2.75

HIGH PRESSURE : CODE 62

FLANGE SIZE	PART NO.	A	B	E	G	H	I	L	DRILLED DIA M	MIN O	MAX O	O-RING	WT
1/2"	16045-08-08	--	0.47	0.94	2.17	1.594	0.718	1.50	0.35	1.000	1.005	-210	0.71
1/2"	26045-08-08	1/4 NPTF	0.47	0.94	2.17	1.594	0.718	1.50	0.35	1.000	1.005	-210	0.69
1/2"	36045-08-08	7/16-20	0.47	0.94	2.17	1.594	0.718	1.50	0.35	1.000	1.005	-210	0.69
3/4"	16045-12-12	--	0.74	0.94	2.76	2.000	0.937	1.97	0.43	1.250	1.255	-214	1.10
3/4"	26045-12-12	1/4 NPTF	0.74	0.94	2.76	2.000	0.937	1.97	0.43	1.250	1.255	-214	1.06
3/4"	36045-12-12	7/16-20	0.74	0.94	2.76	2.000	0.937	1.97	0.43	1.250	1.255	-214	1.06
1"	16045-16-16	--	0.94	0.91	3.19	2.250	1.093	2.76	0.51	1.560	1.565	-219	1.32
1"	26045-16-16	1/4 NPTF	0.94	0.91	3.19	2.250	1.093	2.76	0.51	1.560	1.565	-219	1.25
1"	36045-16-16	7/16-20	0.94	0.91	3.19	2.250	1.093	2.76	0.51	1.560	1.565	-219	1.25
1 1/4"	16045-20-20	--	1.26	0.94	3.74	2.625	1.250	3.07	0.53	1.750	1.755	-222	2.00
1 1/4"	26045-20-20	1/4 NPTF	1.26	0.94	3.74	2.625	1.250	3.07	0.53	1.750	1.755	-222	1.88
1 1/4"	36045-20-20	7/16-20	1.26	0.94	3.74	2.625	1.250	3.07	0.53	1.750	1.755	-222	1.88
1 1/2"	16045-24-24	--	1.50	0.94	4.41	3.125	1.437	3.70	0.67	2.115	2.125	-225	2.98
1 1/2"	26045-24-24	1/4 NPTF	1.50	0.94	4.41	3.125	1.437	3.70	0.67	2.115	2.125	-225	2.80
1 1/2"	36045-24-24	7/16-20	1.50	0.94	4.41	3.125	1.437	3.70	0.67	2.115	2.125	-225	2.80
2"	16045-32-32	--	2.01	0.94	5.28	3.812	1.750	4.49	0.83	2.490	2.500	-228	4.45
2"	26045-32-32	1/4 NPTF	2.01	0.94	5.28	3.812	1.750	4.49	0.83	2.490	2.500	-228	4.20
2"	36045-32-32	7/16-20	2.01	0.94	5.28	3.812	1.750	4.49	0.83	2.490	2.500	-228	4.20





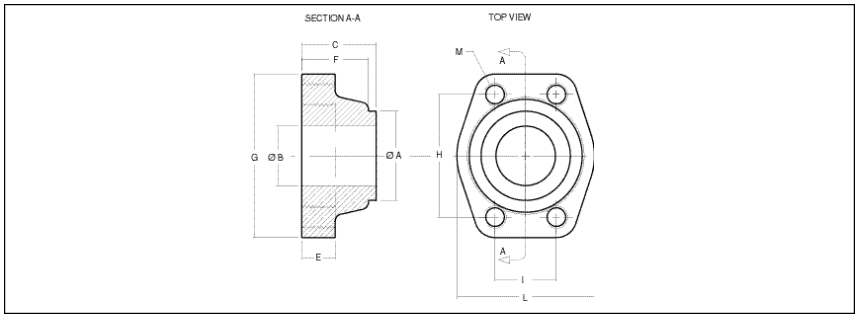
4-Bolt Connector Block

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PART NO.	B	E	G	H	I	L	TAPPED UN-2B M	WT
1/2"	13051-08-08	0.50	1.77	2.16	1.500	0.688	1.97	5/16-18	1.80
3/4"	13051-12-12	0.75	1.77	2.60	1.875	0.875	1.97	3/8-16	2.10
1"	13051-16-16	1.00	1.77	2.76	2.062	1.031	2.28	3/8-16	2.40
1 1/4"	13051-20-20	1.25	1.97	3.15	2.312	1.188	2.99	7/16-14	4.40
1 1/2"	13051-24-24	1.50	1.97	3.74	2.750	1.406	3.50	1/2-13	5.90
2"	13051-32-32	1.94	1.97	3.94	3.062	1.688	3.86	1/2-13	6.60

HIGH PRESSURE : CODE 62

FLANGE SIZE	PART NO.	B	E	G	H	I	L	TAPPED UN-2B M	
1/2"	16051-08-08	0.50	1.77	2.16	1.594	0.718	1.97	5/16-18	1.90
3/4"	16051-12-12	0.75	1.97	2.76	2.000	0.937	2.48	3/8-16	3.40
1"	16051-16-16	1.00	1.97	3.15	2.250	1.093	2.76	7/16-14	4.20
1 1/4"	16051-20-20	1.25	1.97	3.74	2.625	1.250	3.03	1/2-13	5.20
1 1/2"	16051-24-24	1.50	2.48	4.49	3.125	1.437	3.86	5/8-11	10.30
2"	16051-32-32	1.94	2.99	5.24	3.812	1.750	4.49	3/4-10	16.20



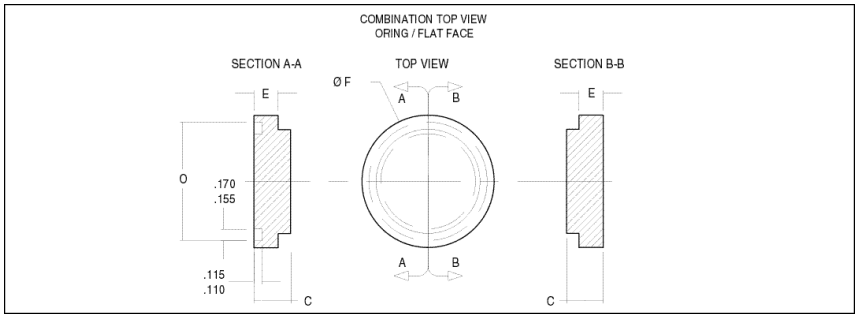
4-Bolt Tank Pilot

STANDARD PRESSURE : CODE 61

FLANGE SIZE	FLAT FACE PART NO.	A	B	C	E	F	G	H	I	L	TAP UNC-2B M	WT
3/4"	13047-12-12	1.375	0.75	1.42	0.71	0.94	2.56	1.875	0.875	1.97	3/8-16	0.86
1"	13047-16-16	1.500	1.00	1.50	0.71	1.12	2.76	2.062	1.031	2.17	3/8-16	1.01
1 1/4"	13047-20-20	1.750	1.25	1.61	0.83	1.20	3.11	2.312	1.188	2.68	7/16-14	1.46
1 1/2"	13047-24-24	2.125	1.50	1.77	0.98	1.62	3.66	2.750	1.406	3.07	1/2-13	2.32
2"	13047-32-32	2.500	2.00	1.77	0.98	1.88	4.02	3.062	1.688	3.54	1/2-13	2.62
2 1/2" [1]	13047-40-40	3.250	2.50	1.97	0.98	2.19	4.49	3.500	2.000	4.13	1/2-13	3.09

[1] 2500 PSI





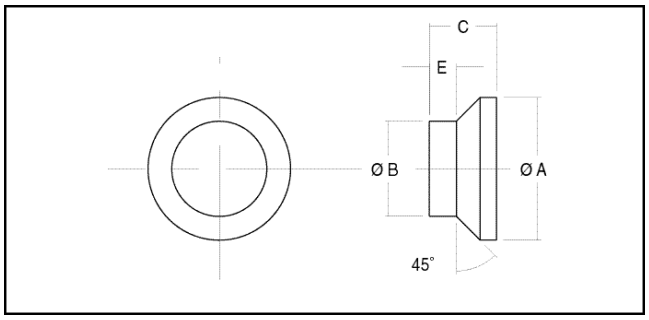
SAE Flange Plugs

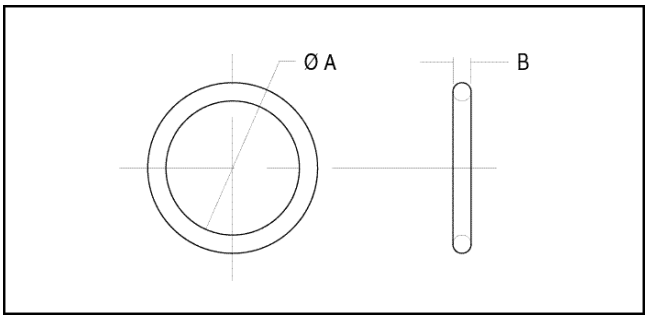
STANDARD PRESSURE : CODE 61

SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	C	E	F	MIN O	MAX O	WT
1/2"	13041-08	13042-08	0.63	0.27	1.19	1.000	1.005	0.07
3/4"	13041-12	13042-12	0.67	0.27	1.50	1.250	1.255	0.11
1"	13041-16	13042-16	0.67	0.32	1.75	1.560	1.565	0.18
1 1/4"	13041-20	13042-20	0.67	0.32	2.00	1.750	1.755	0.24
1 1/2"	13041-24	13042-24	0.75	0.32	2.37	2.115	2.125	0.35
2"	13041-32	13042-32	0.75	0.38	2.81	2.490	2.500	0.59
2 1/2" [1]	13041-40	13042-40	1.58	0.38	3.31	2.995	3.005	1.98
3" [2]	13041-48	13042-48	1.77	0.38	4.00	3.615	3.625	2.86

HIGH PRESSURE : CODE 62

SIZE	O-RING GROOVE PART NO.	FLAT FACE PART NO.	C	E	F	MIN O	MAX O	WT
1/2"	16041-08	16042-08	0.71	0.31	1.25	1.000	1.005	0.09
3/4"	16041-12	16042-12	0.59	0.35	1.63	1.250	1.255	0.18
1"	16041-16	16042-16	0.63	0.38	1.87	1.560	1.565	0.26
1 1/4"	16041-20	16042-20	0.63	0.41	2.13	1.750	1.755	0.37
1 1/2"	16041-24	16042-24	0.75	0.50	2.50	2.115	2.125	0.66
2"	16041-32	16042-32	1.18	0.50	3.13	2.490	2.500	1.03





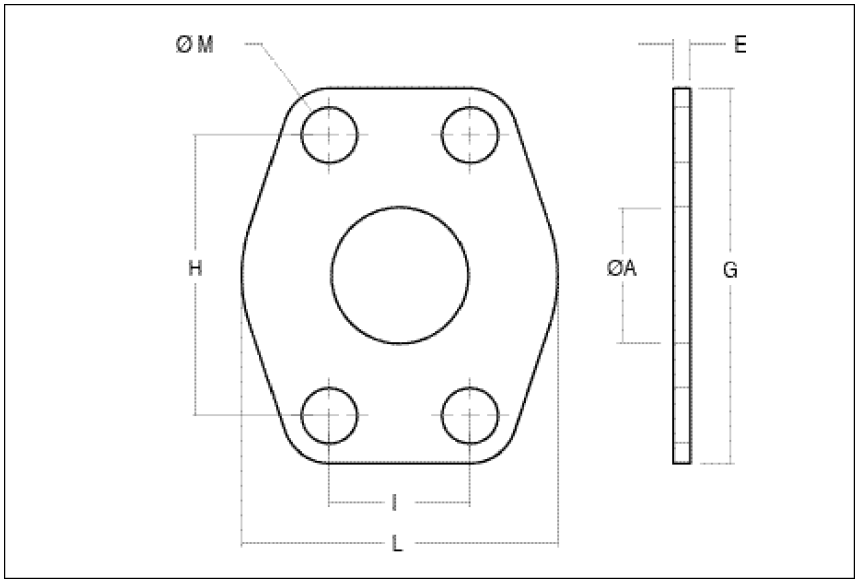
Weld Pipe Plugs for Schedules 40 & 80

PIPE SIZE	PART NO.	A	B	C	E
3/4"	10042-12	1.050	0.688	0.53	0.19
1"	10042-16	1.315	0.877	0.62	0.25
1 1/4"	10042-20	1.660	1.194	0.75	0.38
1 1/2"	10042-24	1.900	1.414	0.75	0.38
2"	10042-32	2.375	1.856	0.81	0.38

[1] 2500 PSI max.
[2] 2000 PSI max.

O-Rings — SAE

FLANGE SIZE	PART NO.	DASH SIZE	± .005 A	± .004 B
1/2"	OR12	-210	0.734	0.139
3/4"	OR34	-214	0.984	0.139
1"	OR1	-219	1.296	0.139
1 1/4"	OR114	-222	1.484	0.139
1 1/2"	OR112	-225	1.859	0.139
2"	OR2	-228	2.234	0.139
2 1/2"	OR212	-232	2.734	0.139
3"	OR3	-237	3.359	0.139
3 1/2"	OR312	-241	3.859	0.139
4"	OR4	-245	4.359	0.139
5"	OR5	-253	5.359	0.139





Connector Plates

STANDARD PRESSURE : CODE 61

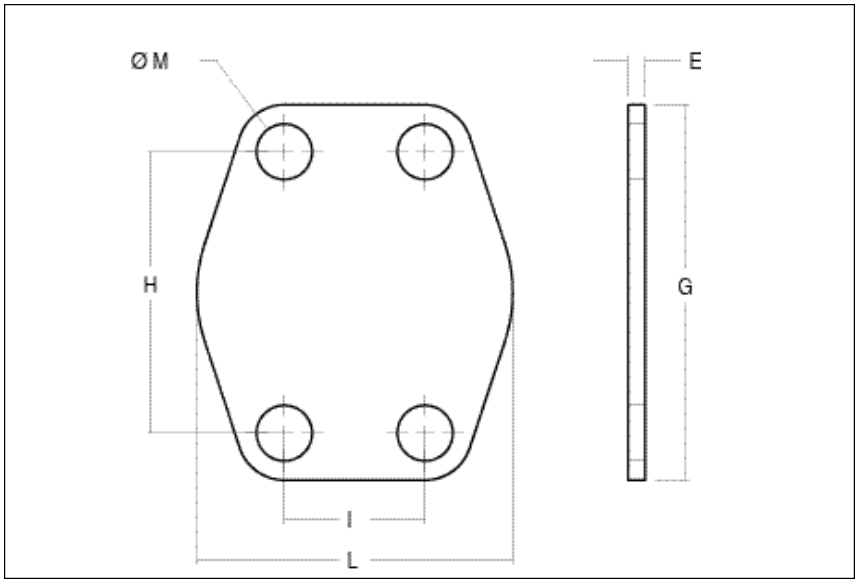
FLANGE SIZE	PART NO.	A	E	G	H	I	L	DRILLED DIA. M	WT
1/2"	CP3-08	0.51	0.12	2.13	1.500	0.688	1.80	0.35	0.02
3/4"	CP3-12	0.75	0.12	2.56	1.875	0.875	2.04	0.43	0.02
1"	CP3-16	0.98	0.12	2.75	2.062	1.031	2.30	0.43	0.02
1 1/4"	CP3-20	1.26	0.12	3.11	2.312	1.188	2.86	0.43	0.04
1 1/2"	CP3-24	1.50	0.12	3.70	2.750	1.406	3.24	0.53	0.04
2"	CP3-32	2.00	0.12	4.01	3.062	1.688	3.54	0.53	0.06
2 1/2" [1]	CP3-40	2.48	0.12	4.49	3.500	2.000	4.26	0.53	0.06
3" [2]	CP3-48	2.87	0.16	5.31	4.188	2.438	5.14	0.67	0.09

STANDARD PRESSURE : CODE 62

FLANGE SIZE	PART NO.	A	E	G	H	I	L	DRILLED DIA. M	WT
1/2"	CP6-08	0.51	0.16	2.20	1.594	0.718	1.86	0.35	0.02
3/4"	CP6-12	0.67	0.16	2.80	2.000	0.937	2.36	0.43	0.02
1"	CP6-16	0.94	0.16	3.19	2.250	1.093	2.74	0.51	0.04
1 1/4"	CP6-20	1.22	0.16	3.74	2.625	1.250	3.04	0.59	0.06
1 1/2"	CP6-24	1.50	0.16	4.45	3.125	1.437	3.74	0.67	0.09
2"	CP6-32	2.00	0.16	5.24	3.812	1.750	4.48	0.83	0.11

[1] 2500 PSI max.
[2] 2000 PSI max.





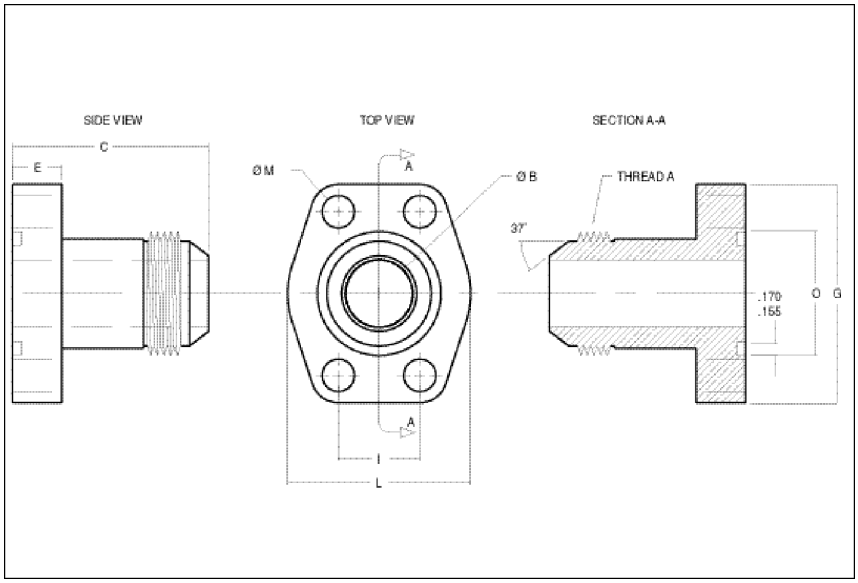
Shipping Plates

STANDARD PRESSURE : CODE 61

FLANGE SIZE	PART NO.	E	G	H	I	L	DRILLED DIA. M	WT
1/2"	SP3-08	0.12	2.13	1.500	0.688	1.80	0.35	0.02
3/4"	SP3-12	0.12	2.56	1.875	0.875	2.04	0.43	0.02
1"	SP3-16	0.12	2.76	2.062	1.031	2.30	0.43	0.02
1 1/4"	SP3-20	0.12	3.11	2.312	1.188	2.86	0.43	0.04
1 1/2"	SP3-24	0.12	3.70	2.750	1.406	3.24	0.53	0.04
2"	SP3-32	0.12	4.01	3.062	1.688	3.54	0.53	0.06
2 1/2"	SP3-40	0.12	4.49	3.500	2.000	4.26	0.53	0.06
3"	SP3-48	0.16	5.31	4.188	2.438	5.14	0.67	0.09

HIGH PRESSURE : CODE 62

FLANGE SIZE	PART NO.	E	G	H	I	L	DRILLED DIA. M	WT
1/2"	SP6-08	0.16	2.20	1.594	0.718	1.86	0.35	0.02
3/4"	SP6-12	0.16	2.80	2.000	0.937	2.36	0.43	0.02
1"	SP6-16	0.16	3.19	2.250	1.093	2.74	0.51	0.04
1 1/4"	SP6-20	0.16	3.74	2.625	1.250	3.04	0.59	0.06
1 1/2"	SP6-24	0.16	4.45	3.125	1.437	3.74	0.67	0.09
2"	SP6-32	0.16	5.24	3.812	1.750	4.48	0.83	0.11





4-Bolt J.I.C. Adapters

STANDARD PRESSURE : CODE 61

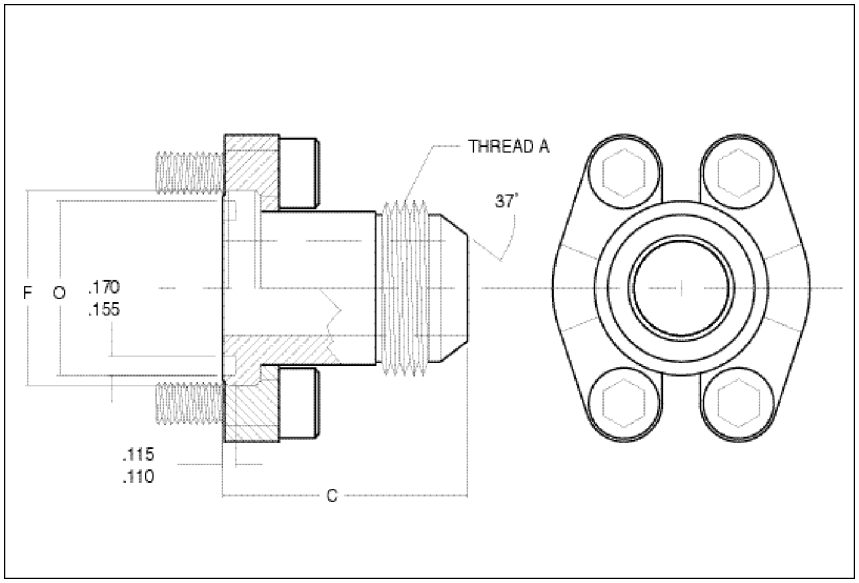
FLANGE SIZE	TUBE SIZE	PART NO.	THREAD (J.I.C.) A	B	C	E	G	H	I	L	DRILLED DIA. M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	13040-08-08	3/4"-16	0.39	2.05	0.51	2.13	1.500	0.688	1.81	0.35	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.55
1/2"	5/8"	13040-08-10	7/8"-14	0.48	2.05	0.51	2.13	1.500	0.688	1.81	0.35	1.000	1.005	SK-080	-210	5/16-18x1-1/4	0.66
3/4"	3/4"	13040-12-12	1 1/16"-12	0.61	2.36	0.55	2.56	1.875	0.875	1.97	0.45	1.250	1.255	SK-100	-214	3/8-16x1-1/2	0.77
1"	1"	13040-16-16	1 5/16"-12	0.85	2.48	0.63	2.76	2.062	1.031	2.17	0.45	1.560	1.565	SK-102	-219	3/8-16x1-1/2	1.10
1 1/4"	1 1/4"	13040-20-20	1 5/8"-12	1.08	2.56	0.55	3.11	2.312	1.188	2.68	0.45	1.750	1.755	SK-104	-222	7/16-14x1-1/2	1.54
1 1/2"	1 1/2"	13040-24-24	1 7/8"-12	1.30	2.76	0.63	3.70	2.750	1.406	3.07	0.53	2.115	2.125	SK-106	-225	1/2-13x1-3/4	2.20

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE SIZE	PART NO.	THREAD (J.I.C.) A	B	C	E	G	H	I	L	DRILLED DIA. M	MIN O	MAX O	MOUNTING KIT INFORMATION PART NO.[1]	O-RING	SHCS	WT
1/2"	1/2"	16040-08-08	3/4" - 16	0.39	2.36	0.63	2.20	1.594	0.718	1.89	0.35	1.000	1.005	SK-401	-210	5/16-18x1-1/4	0.66
3/4"	3/4"	16040-12-12	1 1/16" - 12	0.61	2.87	0.75	2.80	2.000	0.937	2.36	0.45	1.250	1.255	SK-402	-214	3/8-16x1-1/2	1.54
1"	1"	16040-16-16	1 5/16" - 12	0.85	3.23	0.94	3.19	2.250	1.093	2.76	0.51	1.560	1.565	SK-403	-219	7/16-14x1-3/4	2.20
1 1/4"	1 1/4"	16040-20-20	1 5/8" - 12	1.08	3.62	1.06	3.74	2.625	1.250	3.07	0.53	1.750	1.755	SK-404	-222	1/2-13x1-3/4	3.30
1 1/2"	1 1/2"	16040-24-24	1 7/8" -12	1.30	3.78	1.18	4.45	3.125	1.437	3.74	0.69	2.115	2.125	SK-405	-225	5/8-11x2-1/4	5.06

[1] Add a "K" to flange part # to include mounting hardware.





J.I.C. Adapters

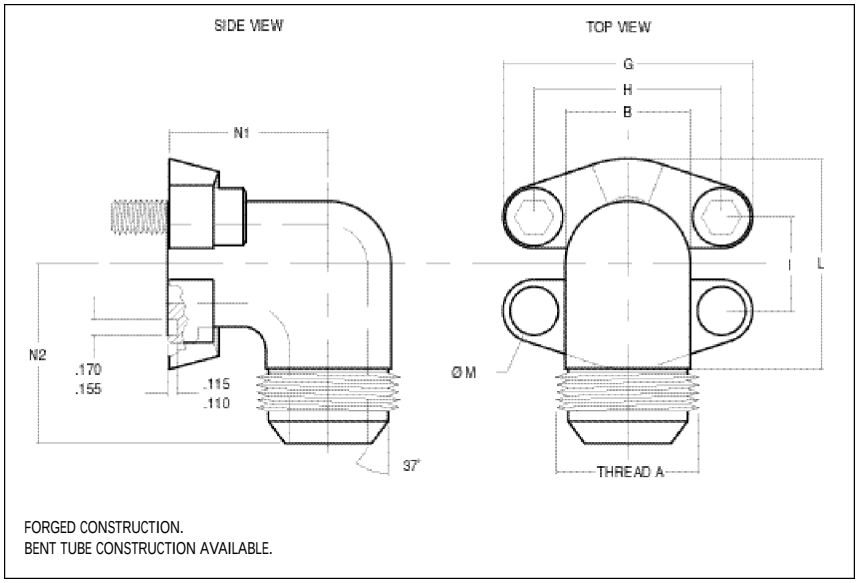
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE O.D.	PART NO.[1]	THREAD (J.I.C.) A	C	F	MIN O	MAX O	WT
1/2"	1/2"	13080-08-08	3/4" - 16	1.77	1.19	1.000	1.005	0.25
1/2"	5/8"	13080-08-10	7/8" - 14	1.77	1.19	1.000	1.005	0.19
3/4"	5/8"	13080-12-10	7/8" - 14	2.09	1.50	1.250	1.255	0.48
3/4"	3/4"	13080-12-12	1 1/16" - 12	2.09	1.50	1.250	1.255	0.60
3/4"	1"	13080-12-16	1 5/16" - 12	2.09	1.50	1.250	1.255	0.40
1"	3/4"	13080-16-12	1 1/16" - 12	2.20	1.75	1.560	1.565	0.75
1"	1"	13080-16-16	1 5/16" - 12	2.20	1.75	1.560	1.565	0.68
1"	1 1/4"	13080-16-20	1 5/8" - 12	2.20	1.75	1.560	1.565	0.85
1 1/4"	1"	13080-20-16	1 5/16" - 12	2.30	2.00	1.750	1.755	1.00
1 1/4"	1 1/4"	13080-20-20	1 5/8" - 12	2.30	2.00	1.750	1.755	0.90
1 1/2"	1 1/4"	13080-24-20	1 5/8" - 12	2.46	2.37	2.115	2.125	1.35
1 1/2"	1 1/2"	13080-24-24	1 7/8" - 12	2.46	2.37	2.115	2.125	0.95

HIGH PRESSURE : CODE 62

FLANGE SIZE	TUBE O.D.	PART NO.[1]	THREAD (J.I.C.) A	C	F	MIN O	MAX O	WT
1/2"	1/2"	16080-08-08	3/4" - 16	1.97	1.25	1.000	1.005	0.31
1/2"	5/8"	16080-08-10	7/8" - 14	1.97	1.25	1.000	1.005	0.25
3/4"	5/8"	16080-12-10	7/8" - 14	2.52	1.63	1.250	1.255	0.62
3/4"	3/4"	16080-12-12	1 1/16" - 12	2.52	1.63	1.250	1.255	0.58
3/4"	1"	16080-12-16	1 5/16" - 12	2.52	1.63	1.250	1.255	0.54
1"	3/4"	16080-16-12	1 1/16" - 12	2.85	1.87	1.560	1.565	1.00
1"	1"	16080-16-16	1 5/16" - 12	2.85	1.87	1.560	1.565	0.88
1"	1 1/4"	16080-16-20	1 5/8" - 12	2.85	1.87	1.560	1.565	1.06
1 1/4"	1"	16080-20-16	1 5/16" - 12	3.21	2.13	1.750	1.755	1.44
1 1/4"	1 1/4"	16080-20-20	1 5/8" - 12	3.21	2.13	1.750	1.755	1.19
1 1/2"	1 1/4"	16080-24-20	1 5/8" - 12	3.41	2.50	2.115	2.125	1.84
1 1/2"	1 1/2"	16080-24-24	1 7/8" - 12	3.41	2.50	2.115	2.125	1.63

[1] Please note we have changed the part number to reflect flange size followed by tube size.



FORGED CONSTRUCTION.
BENT TUBE CONSTRUCTION AVAILABLE.



90° J.I.C. Adapters

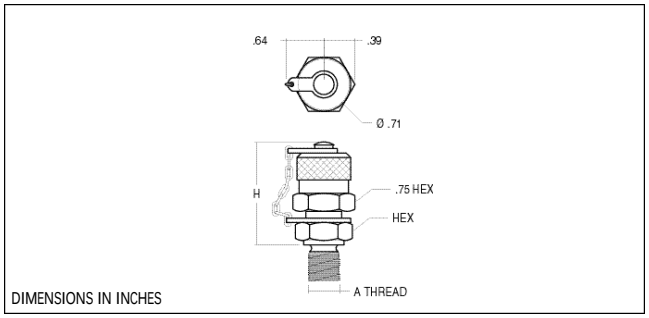
STANDARD PRESSURE : CODE 61

FLANGE SIZE	TUBE O.D.	PART NO.[1]	THREAD (J.I.C.) A	B	G	H	I	L	DRILLED DIA. M	N1	N2	WT
1/2"	1/2"	13081-08-08	3/4" - 16	0.87	2.13	1.500	0.688	1.80	0.35	1.50	1.50	0.75
1/2"	5/8"	13081-08-10	7/8" - 14	0.87	2.13	1.500	0.688	1.80	0.35	1.50	1.50	0.88
3/4"	5/8"	13081-12-10	7/8" - 14	1.06	2.56	1.875	0.875	2.04	0.41	1.65	1.77	1.32
3/4"	3/4"	13081-12-12	1 1/16" - 12	1.06	2.56	1.875	0.875	2.04	0.41	1.65	1.77	1.39
3/4"	1"	13081-12-16	1 5/16" - 12	1.06	2.56	1.875	0.875	2.04	0.41	1.65	1.77	1.46
1"	3/4"	13081-16-12	1 1/16" - 12	1.34	2.76	2.062	1.031	2.30	0.41	1.77	1.97	1.76
1"	1"	13081-16-16	1 5/16" - 12	1.34	2.76	2.062	1.031	2.30	0.41	1.77	1.97	1.87
1"	1 1/4"	13081-16-20	1 5/8" - 12	1.34	2.76	2.062	1.031	2.30	0.41	1.77	1.97	1.96
1 1/4"	1"	13081-20-16	1 5/16" - 12	1.65	3.11	2.312	1.188	2.86	0.47	1.97	2.32	2.42
1 1/4"	1 1/4"	13081-20-20	1 5/8" - 12	1.65	3.11	2.312	1.188	2.86	0.47	1.97	2.32	2.80
1 1/2"	1 1/4"	13081-24-20	1 5/8" - 12	1.97	3.70	2.750	1.406	3.24	0.53	3.35	2.99	4.19
1 1/2"	1 1/2"	13081-24-24	1 7/8" - 12	1.97	3.70	2.750	1.406	3.24	0.53	3.35	2.99	4.52

HIGH PRESSURE : CODE 62

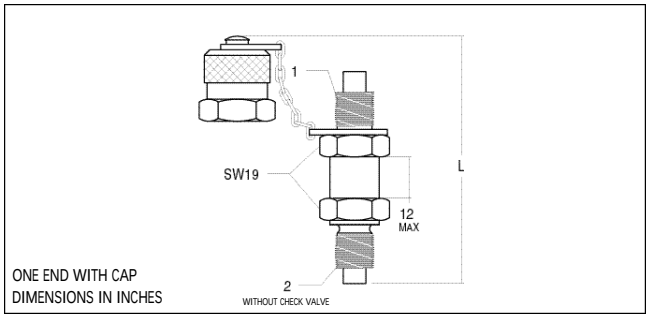
FLANGE SIZE	TUBE O.D.	PART NO.[1]	THREAD (J.I.C.) A	B	G	H	I	L	DRILLED DIA. M	N1	N2	WT
1/2"	1/2"	16081-08-08	3/4" - 16	0.87	2.20	1.594	0.718	1.86	0.35	1.54	1.50	0.82
1/2"	5/8"	16081-08-10	7/8" - 14	0.87	2.20	1.594	0.718	1.86	0.35	1.54	1.50	0.99
3/4"	5/8"	16081-12-10	7/8" - 14	1.06	2.80	2.000	0.937	2.36	0.43	1.89	1.89	1.94
3/4"	3/4"	16081-12-12	1 1/16" - 12	1.06	2.80	2.000	0.937	2.36	0.43	1.89	1.89	2.14
3/4"	1"	16081-12-16	1 5/16" - 12	1.06	2.80	2.000	0.937	2.36	0.43	1.89	1.89	2.25
1"	3/4"	16081-16-12	1 1/16" - 12	1.34	3.19	2.250	1.093	2.75	0.51	2.36	2.36	3.22
1"	1"	16081-16-16	1 5/16" - 12	1.34	3.19	2.250	1.093	2.75	0.51	2.36	2.36	3.46
1"	1 1/4"	16081-16-20	1 5/8" - 12	1.34	3.19	2.250	1.093	2.75	0.51	2.36	2.36	3.75
1 1/4"	1"	16081-20-16	1 5/16" - 12	1.65	3.74	2.625	1.250	3.04	0.59	2.68	2.68	4.85
1 1/4"	1 1/4"	16081-20-20	1 5/8" - 12	1.65	3.74	2.625	1.250	3.04	0.59	2.68	2.68	5.07
1 1/2"	1 1/4"	16081-24-20	1 5/8" - 12	1.97	4.45	3.125	1.437	3.74	0.67	3.35	2.99	6.79
1 1/2"	1 1/2"	16081-24-24	1 7/8" - 12	1.97	4.45	3.125	1.437	3.74	0.67	3.35	2.99	7.61

[1] Please note we have changed the part number to reflect flange size followed by tube size.



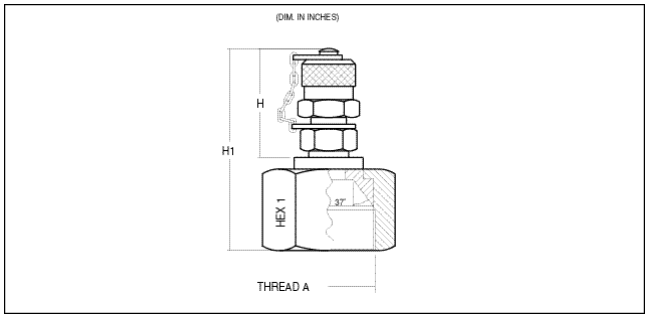
Micro-Test Couplings with Safety Caps

PART NO.	THREAD A	H	HEX	SEAL / TYPE	BAR / PSI
20.10.68	1/8 NPT	1.60	0.67	TAPER	400/5800
20.10.59	1/4 NPT	1.60	0.67	TAPER	630/9100
20.10.74	5/16 UNF	1.60	0.67	O-RING	315/4500
20.10.67	7/16 UNF	1.60	0.67	O-RING	630/9100
20.10.75	1/2 UNF	1.60	0.67	O-RING	630/9100
20.10.72	9/16 UNF	1.60	0.67	O-RING	630/9100
20.10.73	1/8 BSPP	1.60	0.67	SOFT SEAL	400/5800
20.10.60	1/4 BSPP	1.60	0.75	SEALING EDGE	630/9100
20.10.66	1/4 BSPP	1.60	0.75	SOFT SEAL	630/9100
20.10.58	3/8 BSPP	1.60	0.87	SOFT SEAL	630/9100
20.10.63	1/8 BSPT	1.60	0.67	TAPER	400/5800
20.10.65	1/4 BSPT	1.60	0.67	TAPER	630/9100
20.10.61	M8 x 1	1.60	0.67	O-RING	400/5800
20.10.62	M10 x 1	1.60	0.67	O-RING	630/9100
20.10.56	M12 x 1.5	1.60	0.67	SOFT SEAL	630/9100
20.10.76	M14 x 1.5	1.60	0.75	SOFT SEAL	630/9100



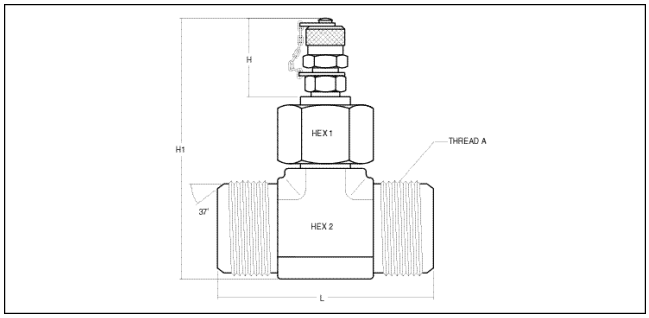
Bulkhead Micro-Test Couplings With Safety Caps

PART NO.	THREAD 1	THREAD 2	HEX 1	HEX 2	L
20.23.22	M16 x 2	M16 x 2	0.75	0.67	3.00
20.23.24	M16 x 2	M16 x 1.5	0.75	0.67	3.40



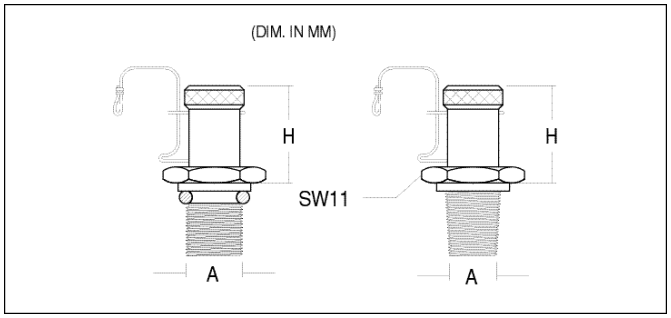
J.I.C. Fittings with Micro-Test Couplings

PART NO.	SIZE	THREAD A	H	H1	HEX1
20.10.81	1/4"	7/16-20		2.16	0.67
20.10.85	5/16"	1/2-20		2.16	0.74
20.10.80	3/8"	9/16-18		2.16	0.74
20.10.86	1/2"	3/4-16	1.61	2.60	0.87
20.10.87	5/8"	7/8-14	1.61	2.76	1.06
20.10.88	3/4"	1 - 1/16-12	1.61	2.80	1.26
20.10.89	1"	1 - 5/16-12	1.61	2.83	1.61
20.10.90	1 1/4"	1 - 5/8-12	1.61	2.95	1.97
20.10.91	1 1/2"	1 - 7/8-12	1.61	3.15	2.36



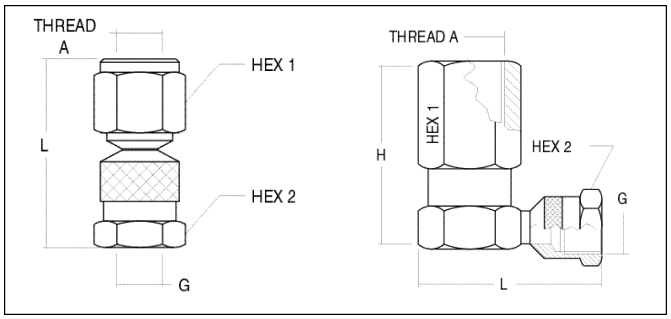
T-Style J.I.C. Fittings with Micro-Test Couplings

PART NO.	SIZE	THREAD A	H	H1	HEX1	HEX 2
20.42.04	1/4"	7/16-20	0.02	2.72	0.67	0.43
20.42.05	5/16"	1/2-20	0.02	2.87	0.75	0.51
20.42.06	3/8"	9/16-18	0.02	2.99	0.75	0.55
20.42.08	1/2"	3/4-16	0.02	3.70	0.87	0.75
20.42.10	5/8"	7/8-14	0.02	3.94	1.06	0.87
20.42.12	3/4"	1 - 1/16-12	0.02	4.25	1.26	1.06
20.42.16	1"	1 - 5/16-12	0.02	5.08	1.61	1.30
20.42.20	1 1/4"	1 - 5/8-12	0.02	5.12	1.97	1.61
20.42.24	1 1/2"	1 - 7/8-12	0.02	5.67	2.36	1.89



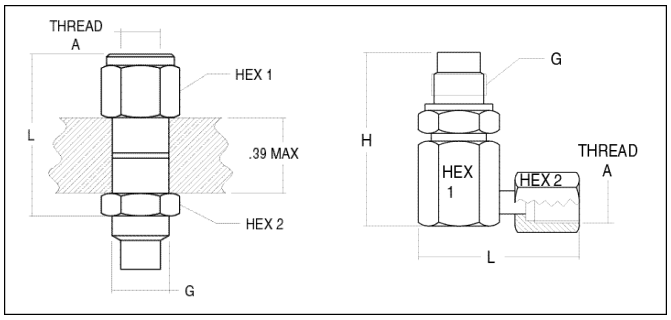
Staple Micro-Test Couplings

PART NO.	THREAD A	H	HEX	SEAL / TYPE	BAR / PSI
40.10.61	M8 X 1	0.7	0.47	O-RING	400/5800
40.10.62	M10 X 1	0.7	0.47	O-RING	400/5800
40.10.63	1/8" BSP	0.7	0.47	TAPER	400/5800



Gauge Connectors

PART NO.	THREAD A	G	GAUGE SEAL	HEX 1	HEX 2	H	L
20.21.33	1/4 BSP	M16 x 2	NBR O-RING	0.75	0.75	--	2.20
20.21.34	1/2 BSP	M16 x 2	DKI METAL RING	1.06	0.75	--	2.40
20.21.43	1/4 NPT	M16 x 2	TAPER	0.75	0.75	--	2.20
20.21.33/90	1/4 BSP	M16 x 2	NBR O-RING	0.75	0.75	1.70	1.80
20.21.34/90	1/2 BSP	M16 x 2	DKI METAL RING	1.06	0.75	3.10	1.80
20.21.43/90	1/4 NPT	M16 X 2	TAPER	0.75	0.75	1.70	1.80

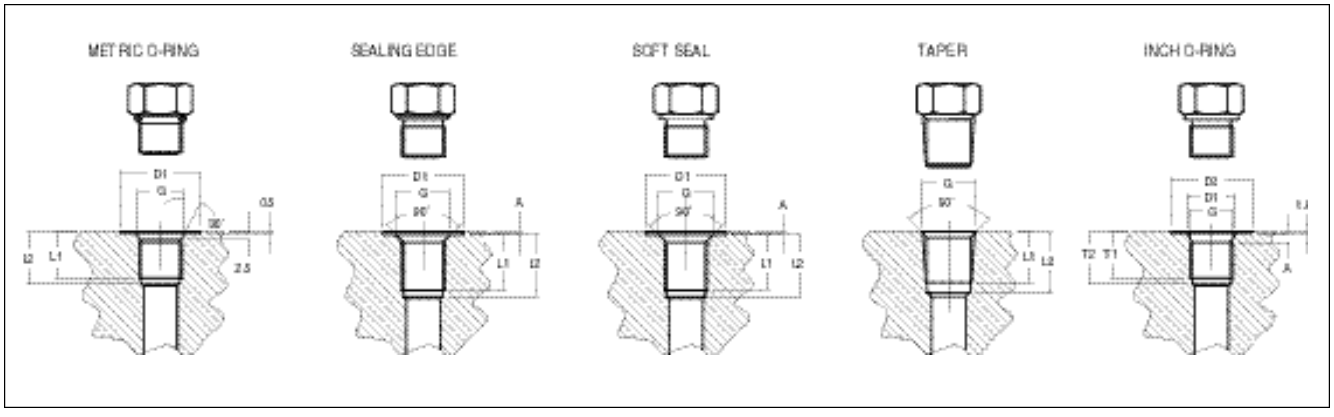


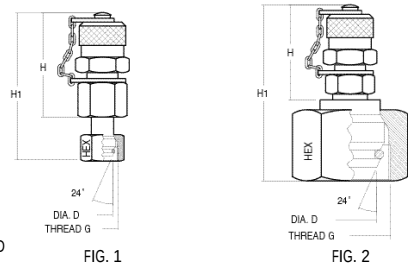
Gauge Connectors for Hose

PART NO.	THREAD A	G	GAUGE SEAL	HEX 1	HEX 2	H	L
20.20.33	1/4 BSP	M16 x 2	NBR O-RING	0.75	0.94	--	2.10
20.20.34	1/2 BSP	M16 x 2	NBR O-RING	1.06	0.94	--	2.20
20.20.43	1/4 NPT	M16 x 2	TAPER	0.75	0.94	--	2.10
20.20.33/90	1/4 BSP	M16 x 2	NBR O-RING	0.75	0.75	2.10	1.60
20.20.34/90*	1/2 BSP	M16 x 2	DKI METALRING	0.75	1.06	1.90	3.10

* HEX 2 of20.20.34/90 is non-swivel.

Thread Form and Port





ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED

FIG. 1 FIG. 2

Metric Female Test Couplings

PART NO.	TUBE OD	SERIES	THREAD G	HEX	H	H 1	FIG	BAR / PSI
20.50.06	6	L	M12x1.5	0.55	1.60	2.60	1	250/3600
20.51.06	6	H	M14x1.5	0.67	1.60	2.60	1	630/9100
20.50.08	8	L	M14x1.5	0.67	1.60	2.20	2	250/3600
20.51.08	8	H	M16x1.5	0.75	1.60	2.20	2	630/9100
20.50.10	10	L	M16x1.5	0.75	1.60	2.20	2	250/3600
20.51.10	10	H	M18x1.5	0.87	1.60	2.20	2	630/9100
20.50.12	12	L	M18x1.5	0.87	1.60	2.10	2	250/3600
20.51.12	12	H	M20x1.5	0.94	1.60	2.10	2	630/9100
20.51.14	14	H	M22x1.5	1.06	1.60	2.40	2	630/9100
20.50.15	15	L	M22x1.5	1.06	1.60	2.30	2	250/3600
20.51.16	16	H	M24x1.5	1.18	1.60	2.80	2	400/5800
20.50.18	18	L	M26x1.5	1.26	1.60	2.80	2	160/2300
20.51.20	20	H	M30x2	1.42	1.60	3.00	2	400/5800
20.50.22	22	L	M30x2	1.42	1.60	3.00	2	160/2300
20.51.25	25	H	M36x2	1.81	1.60	2.60	2	400/5800
20.50.28	28	L	M36x2	1.61	1.60	2.60	2	100/1450
20.51.30	30	H	M42x2	1.97	1.60	2.80	2	250/3600
20.50.35	35	L	M45x2	1.97	1.60	2.80	2	100/1450
20.51.38	38	H	M52x2	2.36	1.60	2.90	2	250/3600
20.50.42	42	L	M52x2	2.36	1.60	2.80	2	100/1450

Test Kit

- The test kit can be made individually on customer's request.
- Case Material is durable plastic (black), inlays are foam.
- Dimensions of case: L x W x H = 11.8" x 13.9" x 3.15"
- A maximum of three pressure gauges can be stored.

EXAMPLE:

Pressure Gauges
1 x 1,000 PSI, 1 x 6,000 PSI, 1 x 10,000 PSI

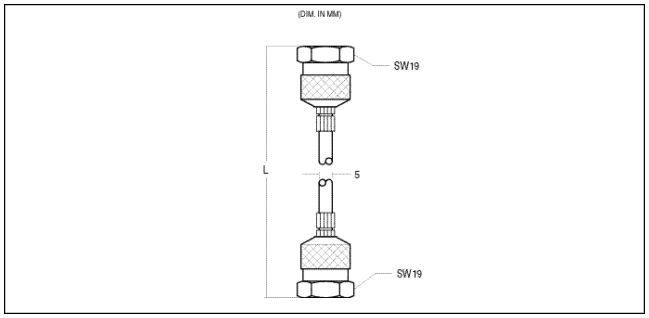
Gauge Adaptor
1 x 20.20.43

Direct Gauge Adaptor
1 x 20.21.43

Hose Connection
1 x 20.22.22

Test Points
1 x 20.10.67; 1 x 20.10.59; 1 x 20.10.60

Hose Assemblies
1 x 20.30.72"



Metric Microbore Hose Assemblies

PART NO.	END	END
20.30.XX	Both M16 x 2	
10.30.XX	Both M16 x 1.5	
30.30.XX	Both M12 x 1.5	
50.43.XX	M16 x 2	M16 x 1.5
50.44.XX	M16 x 1.5	M12 x 1.5
50.45.XX	M16 x 2	M12 x 1.5

Notes:
XX = Length e.g. 1,000 mm = NN.NN.10
10 ft. = NN.NN.120"
Standard Lengths: 200, 400, 600, 800, 1,000, 2,000, mm etc.
Microbore hose is also available with 4mm (.157") ID.

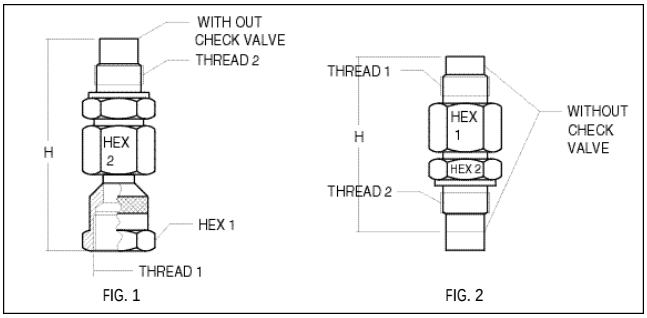
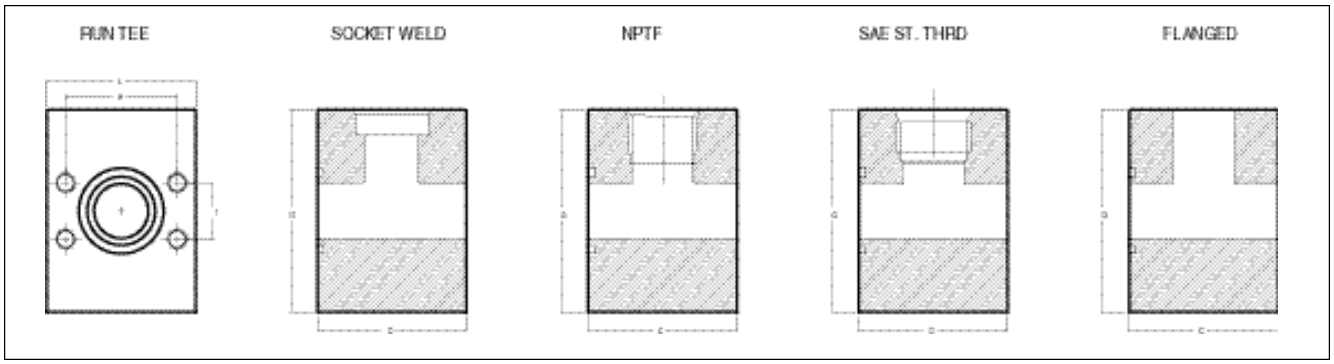


FIG. 1 FIG. 2

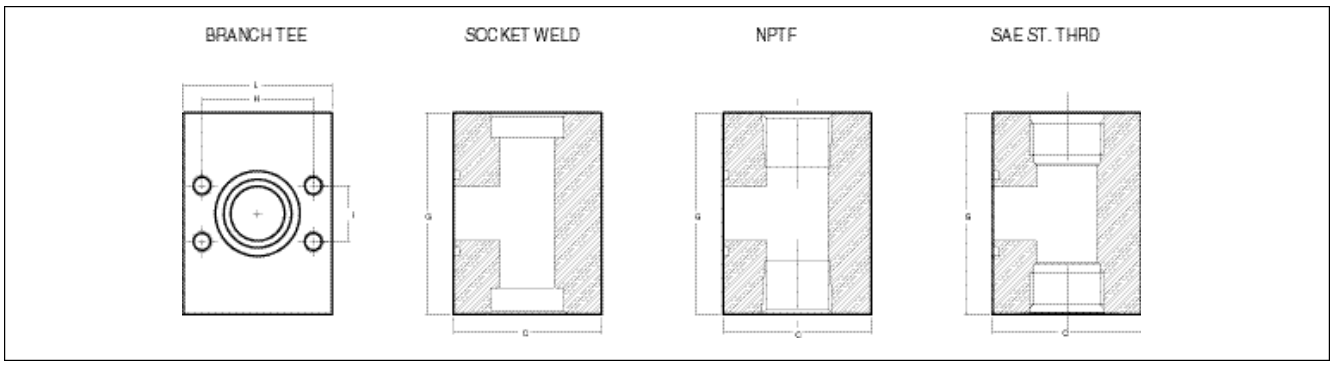
Bulkhead Micro-Test Couplings

PART NO.	THREAD 1	THREAD 2	HEX 1	HEX 2	H	FIGURE
20.24.24	M16 x 2	M16 x 1.5	0.75	0.67	2.20	1
20.24.22	M16 x 2	M16 x 2	0.75	0.67	2.20	1
20.24.25	M16 x 1.5	M16 x 2	0.75	0.67	2.20	1
20.24.26	M16 x 1.5	M16 x 1.5	0.75	0.67	2.20	1
20.22.22	M16 x 2	M16 x 2	0.67	0.67	2.40	2
20.22.24	M16 x 2	M16 x 1.5	0.67	0.67	2.40	2
20.22.26	M16 x 1.5	M16 x 1.5	0.67	0.67	2.40	2

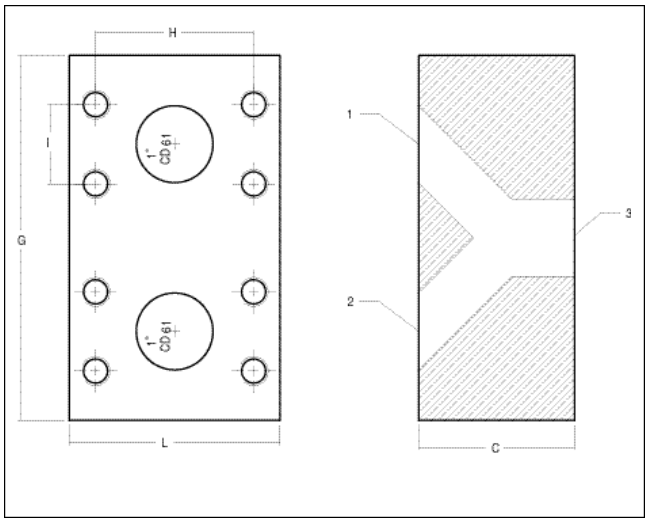
Other Available Parts



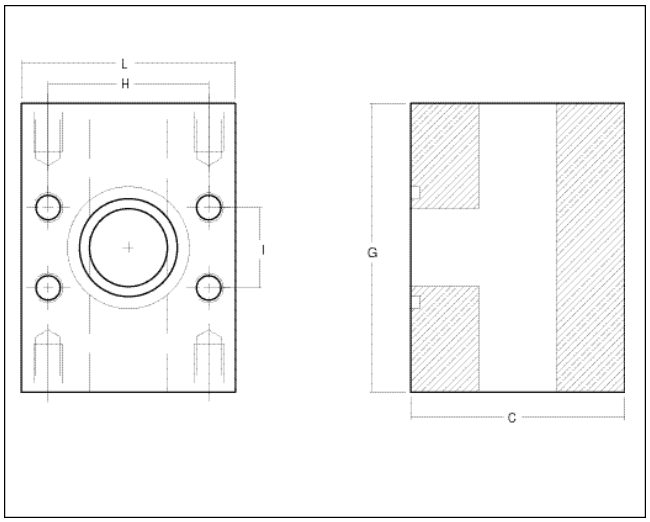
Run Tees



Branch Tees



WYE



Flanged Branch Tee

Special Flanges and Machining Needs

We have attempted to feature the most common flanges in our catalog. If you have a special flange or special machining need please contact us for a quote to your specifications.

Sales Terms and Conditions

ORDERING

1. Special parts: Please furnish full information including drawings, dimensions, and system pressure, if available.
2. Standard parts: Please order by part number, with description.
3. Confirming orders: Please mark clearly as "CONFIRMING" order, preferably across the order.
4. Minimum order: $25.00

TERMS

5. Net 30 days on approved credit. F.O.B. (shipping point). A 1 1/2 % finance charge will be assessed on all past due accounts.
6. Title and possession will pass to the customer upon delivery to the carrier.
7. Claims for damage in transit should be made by the customer to the carrier.
8. Claims for shortages, or other shipping errors, must be made within four days of receipt.

RETURNS

9. Must be authorized by obtaining a Return Goods Authorization (RGA) number from us. Unauthorized returns will be returned to the customer freight collect.
10. No returns for special orders, or six months after delivery.
11. Must be returned within 25 days of issuance of RGA.

Material Specifications

Socket weld and Buttweld flanges are manufactured from forgings, DIN specification Fe 42, equivalent to ASTM A105. NPTF and SAE threaded flanges are manufactured from the same forgings as the welding flanges. Stainless steel flanges are manufactured from 316L forgings. Other materials are available including aluminum, and other grades of stainless steel. If certification is required, certification must be specified before the order is placed.



CLINTON INDUSTRIES

HYDRAULIC FLANGES AND COMPONENTS

CORPORATE HEADQUARTERS

1.800.327.5521

1.713.523.5521

6435 Gulfton Drive

Houston, Texas 77081

sales@clintonindustries.com