

“M” refers to metric option

ALPHA-NUMERIC LISTING

AS/ASX	24	W24	32	W51M.	31	W165	40
AS/ASXM	25	W24M.	33	W53	10	W165M.	41
BWSF/BWSFN	12	W25	32	W54	10	W168	40
BWSFX/BWSFXN	13	W25M.	33	W58	22	W168M.	41
CP/CPX	11	W26	34	W58M.	23	W169	42
F-FO	11	W26M.	35	W59	20	W169M.	43
FOP/FP	9	W27	32	W59M.	21	W170	40
FOPX/FPX	9	W27M.	33	W60	20	W170M.	41
P-BWSF/P-BWSFN	12	W28	34	W60M.	21	W172	42
P-BWSFX/P-BWSFXN	13	W28M.	35	W61	20	W172M.	43
S-FO	11	W29	34	W61M.	21	W176	42
SF-2/SFX-2.	6	W29M.	35	W62	22	W176M.	43
SF-2/SFX-2M	7	W30	34	W62M.	23	W177	42
SFW/SFTW	6	W30M.	35	W63	22	W177M.	43
SFW/SFTWM	7	W31	28	W63M.	23	W180	40
SFXW/SFXTW	6	W31M.	29	W65	46	W180M.	41
SFXW/SFXTWM	7	W32	34	W65M.	47	W182	44
T-SF/T-SFN	8	W32M.	35	W66	46	W182M.	45
T-SFX/T-SFXN	8	W33	34	W66M.	47	W184	40
T-WSF	10	W33M.	35	W69	36	W184M.	41
W3	28	W34	32	W69M.	37	W185	40
W3M.	29	W34M.	33	W72	20	W185M.	41
W4	20	W35	32	W72M.	21	W186	44
W4M.	21	W35M.	33	W75	46	W186M.	45
W5	30	W36	26	W75M.	47	W187	44
W5M.	31	W36M.	27	W76	46	W187M.	45
W6	22	W37	26	W76M.	47	W188	40
W6M.	23	W37M.	27	W80	28	W188M.	41
W7	36	W38	26	W80M.	29	W189	44
W7M.	37	W38M.	27	W81	28	W189M.	45
W8	36	W39	26	W81M.	29	W192	18
W8M.	37	W39M.	27	W82	30	W192M.	19
W16	38	W43	14	W82M.	31	W193	18
W16M.	39	W43M.	15	W83	30	W193M.	19
W17	38	W44	16	W83M.	31	W194	18
W17M.	39	W44M.	17	W87	36	W194M.	19
W18	38	W45	16	W87M.	37	W195	18
W18M.	39	W45M.	17	W91	20	W195M.	19
W19	38	W46	14	W91M.	21		
W19M.	39	W46M.	15	W104	14		
W20	9	W48	16	W104M.	15		
W22	24	W48M.	17	W106	14		
W22M.	25	W49	16	W106M.	15		
W23	32	W49M.	17	W164	40		
W23M.	33	W51	30	W164M.	41		

"M" refers to metric option

SAE J518 SPLIT/CAPTIVE FLANGES

FOR SAE FLANGED HEAD CONNECTION

3000 PSI - 6000 PSI	6
3000 PSI - 6000 PSI-M	7

FLANGED HEAD FITTINGS

FOR PIPE

3000 PSI - 6000 PSI SOCKET WELD	10
3000 PSI NPTF THREAD	11
3000 PSI SAE THREAD	11
3000 PSI BUTT WELD-SCHED 40/SCHED 80/SCHED 160	12
6000 PSI BUTT WELD-SCHED 40/SCHED 80/SCHED XXS	13

FOR TUBE

3000 PSI - 6000 PSI SOCKET WELD	10
3000 PSI - 6000 PSI BRAZE-ON	8

FOR PIPE & TUBE

CODE 61 - CODE 62 FLANGE PLUG	9
---	---

SAE 4 BOLT FLANGES

FOR PIPE

500 PSI - 3000 PSI - 6000 PSI FLAT SOCKET WELD	20
500 PSI - 3000 PSI - 6000 PSI FLAT SOCKET WELD-M	21
3000 PSI NPTF & SAE THREAD	14
3000 PSI NPTF & SAE THREAD-M	15
6000 PSI NPTF & SAE THREAD	16
6000 PSI NPTF & SAE THREAD-M	17
3000 PSI - 6000 PSI BSPP THREAD	18
3000 PSI - 6000 PSI BSPP THREAD-M	19
3000 PSI DEEP SOCKET WELD	28
3000 PSI DEEP SOCKET WELD-M	29
6000 PSI DEEP SOCKET WELD	28
6000 PSI DEEP SOCKET WELD-M	29
3000 PSI BUTT WELD-SCHED 40/SCHED 80/SCHED 160	32
3000 PSI BUTT WELD-SCHED 40/SCHED 80/SCHED 160-M	33
6000 PSI BUTT WELD-SCHED 80/SCHED 160/SCHED XXS	34
6000 PSI BUTT WELD-SCHED 80/SCHED 160/SCHED XXS-M	35
3000 PSI TANK PILOT	24
3000 PSI TANK PILOT-M	25
3000 PSI - 6000 PSI BLANKING	26
3000 PSI - 6000 PSI BLANKING-M	27

3000 PSI - 6000 PSI SPACER BLOCKS WITH GAUGE PORT	24
3000 PSI - 6000 PSI SPACER BLOCKS WITH GAUGE PORT-M	25
3000 PSI SADDLE	36
3000 PSI SADDLE-M	37
3000 PSI ELBOW SOCKET WELD	42
3000 PSI ELBOW SOCKET WELD-M	43
6000 PSI ELBOW SOCKET WELD	44
6000 PSI ELBOW SOCKET WELD-M	45
3000 PSI ELBOW NPTF & SAE THREAD	40
3000 PSI ELBOW NPTF & SAE THREAD-M	41
6000 PSI ELBOW NPTF & SAE THREAD	40
6000 PSI ELBOW NPTF & SAE THREAD-M	41

FOR TUBE

3000 PSI - 6000 PSI FLAT SOCKET WELD	22
3000 PSI - 6000 PSI FLAT SOCKET WELD-M	23
3000 PSI DEEP SOCKET WELD	30
3000 PSI DEEP SOCKET WELD-M	31
6000 PSI DEEP SOCKET WELD	30
6000 PSI DEEP SOCKET WELD-M	31
3000 PSI SADDLE WELD	36
3000 PSI SADDLE WELD-M	37
3000 PSI ELBOW SOCKET WELD	42
3000 PSI ELBOW SOCKET WELD-M	43
6000 PSI ELBOW SOCKET WELD	44
6000 PSI ELBOW SOCKET WELD-M	45

SQUARE 4 BOLT FLANGES

FOR PIPE

3000 PSI FLAT SOCKET WELD	11
3000 PSI NPTF THREAD	46
3000 PSI NPTF THREAD-M	47

MISCELLANEOUS COMPONENTS

FOR PIPE & TUBE

CODE 61 - CODE 62 CONNECTOR PLATES	11
3000 PSI - 6000 PSI TEE JUNCTION BLOCK	38
3000 PSI - 6000 PSI TEE JUNCTION BLOCK-M	39
WELD PLUG	9
O-RINGS	68
RECOMMENDED BOLT TORQUE	5

"M" refers to metric option

ALPHA-NUMERIC LISTING

SF-2/SFX-2	48	W39	56
SF-2/SFX-2M	49	W39M	57
SFW/SFTW	48	W43	50
SFW/SFTWM	49	W43M	51
SFXW/SFXTW	48	W44	52
SFXW/SFXTWM	49	W44M	53
W4	54	W45	52
W4M	55	W45M	53
W16	64	W46	50
W16M	65	W46M	51
W17	64	W48	52
W17M	65	W48M	53
W18	64	W49	52
W18M	65	W49M	53
W19	64	W59	54
W19M	65	W59M	55
W23	58	W60	54
W23M	59	W60M	55
W24	58	W61	54
W24M	59	W61M	55
W25	58	W65	66
W25M	59	W65M	67
W26	60	W66	66
W26M	61	W66M	67
W27	58	W72	54
W27M	59	W72M	55
W28	60	W75	66
W28M	61	W75M	67
W29	60	W76	66
W29M	61	W76M	67
W30	60	W91	54
W30M	61	W91M	55
W32	60	W104	50
W32M	61	W104M	51
W33	60	W106	50
W33M	61	W106M	51
W34	58	W169	62
W34M	59	W169M	63
W35	58	W176	62
W35M	59	W176M	63
W36	56	W186	62
W36M	57	W186M	63
W37	56	W189	62
W37M	57	W189M	63
W38	56		
W38M	57		

SAE J518 SPLIT/CAPTIVE FLANGES

FOR SAE FLANGED HEAD CONNECTION	
CODE 61 - CODE 62	48
CODE 61 - CODE 62-M	49

SAE 4 BOLT FLANGES

FOR PIPE	
500 PSI - CODE 61 - CODE 62 FLAT SOCKET	54
500 PSI - CODE 61 - CODE 62 FLAT SOCKET-M	55
CODE 61 NPTF & SAE THREAD	50
CODE 61 NPTF & SAE THREAD-M	51
CODE 62 NPTF & SAE THREAD	52
CODE 62 NPTF & SAE THREAD-M	53
CODE 61 BUTT WELD-SCHED 40/SCHED 80/SCHED 160	58
CODE 61 BUTT WELD-SCHED 40/SCHED 80/SCHED 160-M	59
CODE 62 BUTT WELD-SCHED 80/SCHED 160/SCHED XXS	60
CODE 62 BUTT WELD-SCHED 80/SCHED 160/SCHED XXS-M	61
CODE 61 - CODE 62 BLANKING	56
CODE 61 - CODE 62 BLANKING-M	57
CODE 61 - CODE 62 ELBOW SOCKET WELD	62
CODE 61 - CODE 62 ELBOW SOCKET WELD-M	63

SQUARE 4 BOLT FLANGES

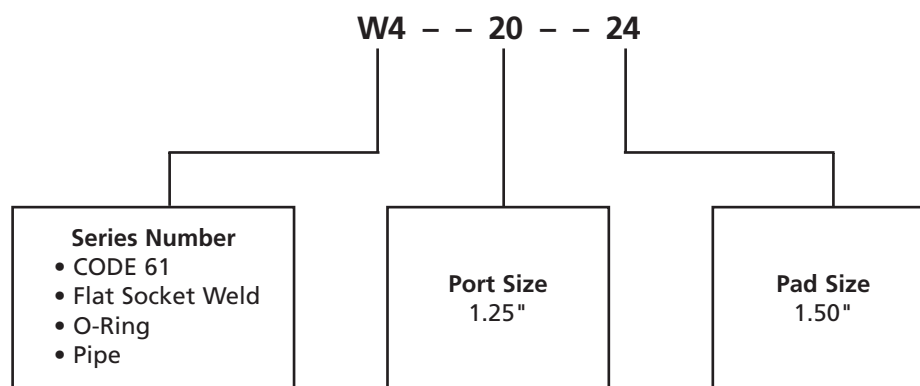
FOR PIPE	
CODE 61 FLAT SOCKET WELD	66
CODE 61 FLAT SOCKET WELD-M	67
CODE 61 NPTF THREAD	66
CODE 61 NPTF THREAD-M	67

MISCELLANEOUS COMPONENTS

FOR PIPE & TUBE	
CODE 61 - CODE 62 TEE JUNCTION BLOCK	64
CODE 61 - CODE 62 TEE JUNCTION BLOCK-M	65

*THE USE OF STAINLESS STEEL BOLTS MAY REDUCE THE PRESSURE RATING OF THE ASSEMBLY.

Our basic part numbering system is **simple to use**. The explanation of our part numbering system is detailed below. The **series number** provides the greatest amount of information pertaining to the flange product. The **port size** and **pad size** simply refer to size only, with all sizes based on 1/16 of an inch.



NOTE #1 – All items available with mounting kit by simply adding suffix letter “U”.

NOTE #2 – All items available in stainless steel material by simply adding the suffix letters “SS”.

NOTE #3 – All items available with metric mounting holes simply by adding the appropriate suffix (IE: M10, M12, etc.).

Pressure Ratings of SAE 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

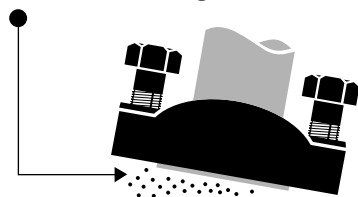
HIGH PRESSURE: 6000 PSI (J518 CODE 62)

SIZE	PSI	BAR	RECOMMENDED
			BOLT TORQUE
			Lb-in
3/4"	6000	420	300-400
1"	6000	420	500-600
1 1/4"	6000	420	750-900
1 1/2"	6000	420	1400-1600
2"	6000	420	2400-2600

Split-Flange Clamp

See diagram for proper installation.

1 Clean the sealing surface



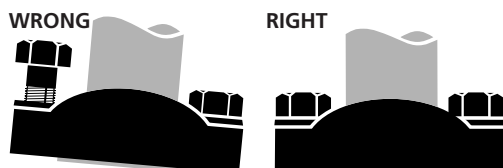
Clean the sealing source and make certain the O-Ring groove is free of chips, dirt, nicks, etc. Foreign material prevents a proper seal.

2 Make sure of full flange-to-head contact



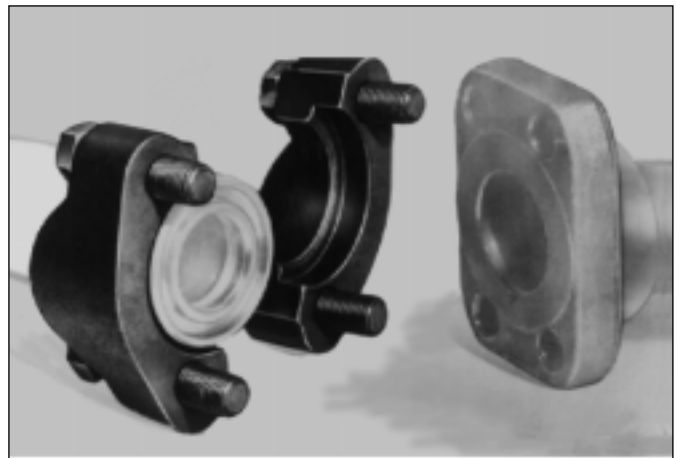
Check O-Ring to see that it is properly seated to prevent cutting during installation. Push clamp halves inward as far as they will go so as to give greatest possible bearing area necessary to long service life.

3 Tighten bolts evenly and torque to specs



This insures even distribution of the necessary sealing forces on the clamps and O-Ring head.

Anchor's Split-Flange Clamp design gives you a tilt proof clamp. By locating the plane of the Split-Flange Clamp half bolt centerlines so that it passes through the center of force of the flanged head on the Split-Flange Clamp half, unbalanced moments are eliminated. This design principle prevents tilting of the clamp half and extrusion of the O-Ring. It conforms to SAE Standard J518.



Hose assembly removal is facilitated by the rounded end design of the clamp halves. Loosening of the four bolts and removal of one bolt permits the end of one clamp half to be pivoted to the side about the other bolt. This opens the clamp fully and allows the flanged head assembly to be removed. It also allows the easy assembly of the hose in close quarters.

Use of the highly efficient and widely used static O-Ring seal eliminates the use of gaskets, tapered threads and sealing compounds. There are no spiral leakage paths. The connector may be assembled with small automotive wrenches in tight quarters with low torque requirements. Large wrenches and high assembly forces are not required.

4 Bolt Flange Fittings



All measurements are in inches.

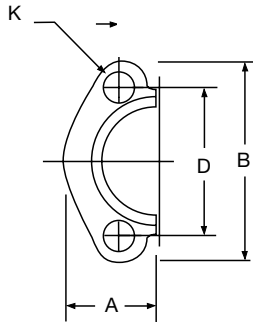
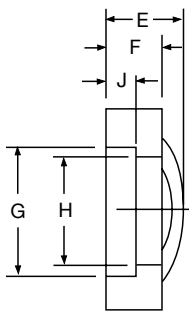


FIGURE 1



CODE 61 SPLIT FLANGE - FIG. 1

FLANGE HALF NUMBER	**CATALOG NO. FOR KIT FORM	FLANGE SIZE	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	MOUNTING HARDWARE	
												O-RING	HHCS
8SF-2	8SFO	0.50	0.86	2.12	1.50	0.75	0.50	1.22	0.96	0.245	0.344	210	5/16-18 X 1.25
12SF-2	12SFO	0.75	0.98	2.56	1.88	0.88	0.56	1.53	1.27	0.245	0.406	214	3/8-16 X 1.25
16SF-2	16SFO	1.00	1.11	2.75	2.06	0.94	0.62	1.78	1.52	0.295	0.406	219	3/8-16 X 1.25
20 SF-2	20SFO	1.25	1.39	3.12	2.31	0.88	0.56	2.03	1.72	0.295	0.469	222	7/16-14 X 1.50
24 SF-2	24SFO	1.50	1.58	3.69	2.75	1.00	0.62	2.41	2.00	0.295	0.531	225	1/2-13 X 1.50
32 SF-2	32SFO	2.00	1.86	4.00	3.06	1.03	0.62	2.84	2.47	0.355	0.531	228	1/2-13 X 1.50
40 SF-2	40SFO	2.50	2.09	4.50	3.50	1.50	0.75	3.34	2.95	0.355	0.531	232	1/2-13 X 1.75
48 SF-2	48SFO	3.00	2.53	5.31	4.19	1.62	0.88	4.03	3.58	0.355	0.656	237	5/8-11 X 1.75
56 SF-2	56SFO	3.50	2.70	6.00	4.75	1.12	0.88	4.53	4.03	0.422	0.656	241	5/8-11 X 2.00
64 SF-2	64SFO	4.00	2.95	6.38	5.13	1.38	1.00	5.03	4.53	0.422	0.656	245	5/8-11 X 2.00

CODE 62 SPLIT FLANGE - FIG. 1

FLANGE HALF NUMBER	**CATALOG NO. FOR KIT FORM	FLANGE SIZE	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	MOUNTING HARDWARE	
												O-RING	HHCS
12SFX-2	12SFXO	0.75	1.14	2.81	2.00	1.12	0.75	1.66	1.28	0.325	0.406	214	3/8-16 X 1.50
16SFX-2	16SFXO	1.00	1.33	3.19	2.25	1.31	0.94	1.91	1.53	0.355	0.469	219	7/16-14 X 1.75
20SFX-2	20SFXO	1.25	1.48	3.75	2.63	1.50	1.06	2.16	1.75	0.385	0.531	222	1/2-13 X 1.75
24SFX-2	24SFXO	1.50	1.83	4.44	3.13	1.69	1.19	2.53	2.03	0.475	0.656	225	5/8-11 X 2.25
32SFX-2	32SFXO	2.00	2.20	5.25	3.81	2.06	1.44	3.16	2.66	0.475	0.781	228	3/4-10 X 2.75

*RECOMMENDED BOLT TORQUE CAN BE FOUND ON PG. 5

** When ordering this part # you will receive: (2) split flange halves, (4) hex head bolts and lockwashers, and (1) Buna N O-Ring

CODE 61 CAPTIVE FLANGE - FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A ±.010	B ±.010	C ±.030	D ±.010	E ±.010	F ±.010	F TAPPED	G ±.030	H ±.010	J ±.010	K ±.030	L ±.016	M ±.005
8 SFW	8 SFTW	0.50	1.500	0.750	2.12	0.688	0.344	0.344	5/16-18	1.81	1.219	0.955	0.75	0.50	0.245
12 SFW	12 SFTW	0.75	1.875	0.938	2.56	0.875	0.438	0.406	3/8-16	2.06	1.531	1.265	0.88	0.56	0.245
16 SFW	16 SFTW	1.00	2.062	1.031	2.75	1.031	0.516	0.406	3/8-16	2.31	1.781	1.515	0.94	0.62	0.295
20 SFW	20 SFTW	1.25	2.312	1.156	3.12	1.188	0.594	0.469	7/16-14	2.88	2.031	1.720	0.88	0.56	0.295
24 SFW	24 SFTW	1.50	2.750	1.375	3.69	1.406	0.703	0.531	1/2-13	3.25	2.406	2.000	1.00	0.62	0.295
32 SFW	32 SFTW	2.00	3.062	1.531	4.00	1.688	0.844	0.531	1/2-13	3.81	2.844	2.470	1.03	0.62	0.355
40 SFW	40 SFTW	2.50	3.500	1.750	4.50	2.000	1.000	0.531	1/2-13	4.28	3.344	2.950	1.50	0.75	0.355
48 SFW	48 SFTW	3.00	4.188	2.094	5.31	2.438	1.219	0.656	5/8-11	5.16	4.031	3.580	1.62	0.88	0.355
56 SFW	56 SFTW	3.50	4.750	2.375	6.00	2.750	1.375	0.656	5/8-11	5.50	4.531	4.030	1.12	0.88	0.422
64 SFW	64 SFTW	4.00	5.125	2.562	6.38	3.062	1.531	0.656	5/8-11	6.00	5.031	4.530	1.38	1.00	0.422

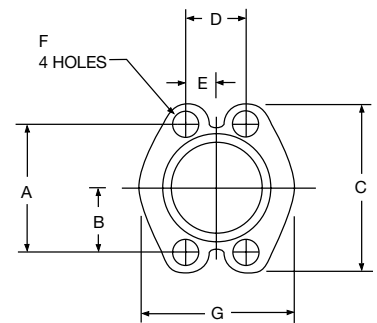
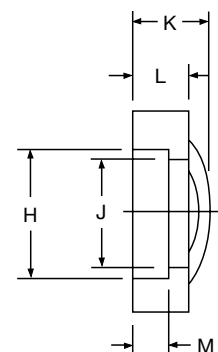


FIGURE 2

CODE 62 CAPTIVE FLANGE - FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A ±.010	B ±.010	C ±.030	D ±.010	E ±.010	F ±.010	F TAPPED	G ±.030	H ±.010	J ±.010	K ±.030	L ±.016	M ±.005
12 SFXW	12 SFXTW	0.75	2.000	1.000	2.81	0.938	0.469	0.406	3/8-16	2.38	1.656	1.280	1.12	0.75	0.325
16 SFXW	16 SFXTW	1.00	2.250	1.125	3.19	1.094	0.547	0.469	7/16-14	2.75	1.906	1.530	1.31	0.94	0.355
20 SFXW	20 SFXTW	1.25	2.625	1.313	3.75	1.250	0.625	0.531	1/2-13	3.06	2.156	1.750	1.50	1.06	0.385
24 SFXW	24 SFXTW	1.50	3.125	1.563	4.44	1.438	0.719	0.656	5/8-11	3.75	2.531	2.030	1.69	1.19	0.475
32 SFXW	32 SFXTW	2.00	3.812	1.906	5.25	1.750	0.875	0.781	3/4-10	4.50	3.156	2.660	2.06	1.44	0.475



All measurements are in millimeters.

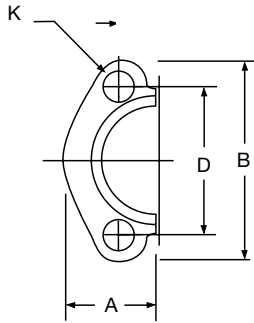
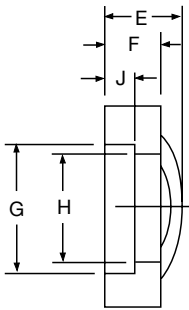


FIGURE 1



CODE 61 SPLIT FLANGE - FIG. 1

FLANGE HALF NUMBER	**CATALOG NO. FOR KIT FORM	FLANGE SIZE	A	B	D	E	F	G	H	J	K	MOUNTING HARDWARE	
												O-RING	HHCS
8SF-2-M8	8SFO-M8	0.50	21.84	53.85	38.10	19.05	12.70	30.96	24.26	6.22	8.70	210	M8 X 30
12SF-2-M10	12SFO-M10	0.75	24.89	65.02	47.63	22.35	14.22	38.89	32.13	6.22	10.70	214	M10 X 30
16SF-2-M10	16SFO-M10	1.00	28.19	69.85	52.37	23.88	15.75	45.24	38.48	7.49	10.70	219	M10 X 30
20SF-2-M10	20SFO-M10	1.25	35.31	79.25	58.72	22.35	14.22	51.59	43.69	7.49	10.70	222	M10 X 40
24SF-2-M12	24SFO-M12	1.50	40.13	93.73	69.85	25.40	15.75	61.11	50.80	7.49	12.70	225	M12 X 40
32SF-2-M12	32SFO-M12	2.00	47.24	101.60	77.77	26.16	15.75	72.24	62.74	9.02	12.70	228	M12 X 40
40SF-2-M12	40SFO-M12	2.50	53.09	114.30	88.90	38.10	19.05	84.94	74.93	9.02	12.70	232	M12 X 45
48SF-2-M16	48SFO-M16	3.00	64.26	134.87	106.38	41.15	22.35	102.39	90.93	9.02	16.60	237	M16 X 45
56SF-2-M16	56SFO-M16	3.50	68.58	152.40	120.65	28.45	22.35	115.09	102.36	10.72	16.60	241	M16 X 50
64SF-2-M16	64SFO-M16	4.00	74.93	162.05	130.18	35.05	25.40	127.79	115.06	10.72	16.60	245	M16 X 50

CODE 62 SPLIT FLANGE - FIG. 1

FLANGE HALF NUMBER	**CATALOG NO. FOR KIT FORM	FLANGE SIZE	A	B	D	E	F	G	H	J	K	MOUNTING HARDWARE	
												O-RING	HHCS
12SFX-2-M10	12SFXO-M10	0.75	28.96	71.37	50.80	28.45	19.05	42.06	32.51	8.26	10.70	214	M10 X 40
16SFX-2-M12	16SFXO-M12	1.00	33.78	81.03	57.15	33.27	23.88	48.41	38.86	9.02	12.70	219	M12 X 45
20SFX-2-M14	20SFXO-M14	1.25	37.59	95.25	66.68	38.10	26.92	54.76	44.45	9.78	15.00	222	M14 X 45
24SFX-2-M16	24SFXO-M16	1.50	46.48	112.78	79.38	42.93	30.23	64.29	51.56	12.07	16.60	225	M16 X 55
32SFX-2-M20	32SFXO-M20	2.00	55.88	133.35	96.82	52.32	36.58	80.16	67.56	12.07	21.00	228	M20 X 70

*RECOMMENDED BOLT TORQUE CAN BE FOUND ON PG. 5

** When ordering this part # you will receive: (2) split flange halves, (4) hex head bolts and lockwashers, and (1) Buna N O-Ring

CODE 61 CAPTIVE FLANGE - FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A	B	C	D	E	F	F TAPPED	G	H	J	K	L	M
8SFW-M8	8SFTW-M8	0.50	38.10	19.05	53.85	17.48	8.74	8.70	M8	45.97	30.96	24.26	19.05	12.70	6.22
12SFW-M10	12SFTW-M10	0.75	47.63	23.83	65.02	22.23	11.13	10.70	M10	52.32	38.89	32.13	22.35	14.22	6.22
16SFW-M10	16SFTW-M10	1.00	52.37	26.19	69.85	26.19	13.11	10.70	M10	58.67	45.24	38.48	23.88	15.75	7.49
20SFW-M10	20SFTW-M10	1.25	58.72	29.36	79.25	30.18	15.09	10.70	M10	73.15	51.59	43.69	22.35	14.22	7.49
24SFW-M12	24SFTW-M12	1.50	69.85	34.93	93.73	35.71	17.86	12.70	M12	82.55	61.11	50.80	25.40	15.75	7.49
32SFW-M12	32SFTW-M12	2.00	77.77	38.89	101.60	42.88	21.44	12.70	M12	96.77	72.24	62.74	26.16	15.75	9.02
40SFW-M12	40SFTW-M12	2.50	88.90	44.45	114.30	50.80	25.40	12.70	M12	108.71	84.94	74.93	38.10	19.05	9.02
48SFW-M16	48SFTW-M16	3.00	106.38	53.19	134.87	61.93	30.96	16.60	M16	131.06	102.39	90.93	41.15	22.35	9.02
56SFW-M16	56SFTW-M16	3.50	120.65	60.33	152.40	69.85	34.93	16.60	M16	139.70	115.09	102.36	28.45	22.35	10.72
64SFW-M16	64SFTW-M16	4.00	130.18	65.07	162.05	77.77	38.89	16.60	M16	152.40	127.79	115.06	35.05	25.40	10.72

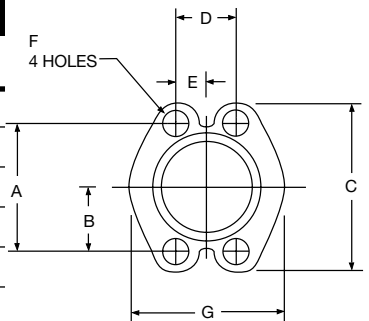
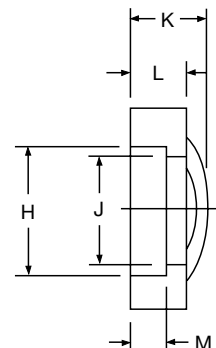


FIGURE 2

CODE 62 CAPTIVE FLANGE - FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A	B	C	D	E	F	F TAPPED	G	H	J	K	L	M
12SFXW-M10	12SFXTW-M10	0.75	50.80	25.40	71.37	23.83	11.91	10.70	M10	60.45	42.062	32.512	28.45	19.05	8.26
16SFXW-M12	16SFXTW-M12	1.00	57.15	28.58	81.03	27.79	13.89	12.70	M12	69.85	48.412	38.862	33.27	23.88	9.02
20SFXW-M14	20SFXTW-M14	1.25	66.68	33.35	95.25	31.75	15.88	15.00	M14	77.72	54.762	44.450	38.10	26.92	9.78
24SFXW-M16	24SFXTW-M16	1.50	79.38	39.70	112.78	36.53	18.26	16.60	M16	95.25	64.287	51.562	42.93	30.23	12.07
32SFXW-M20	32SFXTW-M20	2.00	96.82	48.41	133.35	44.45	22.23	21.00	M20	114.30	80.162	67.564	52.32	36.58	12.07



4 Bolt Flange Fittings

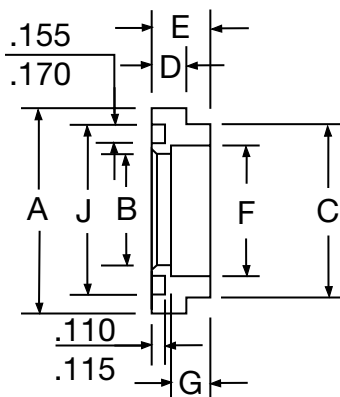
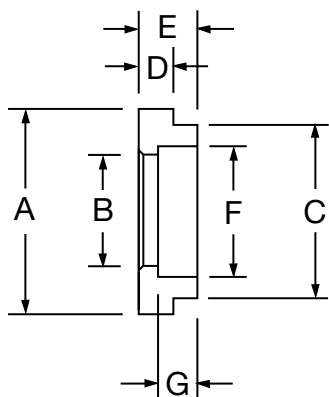
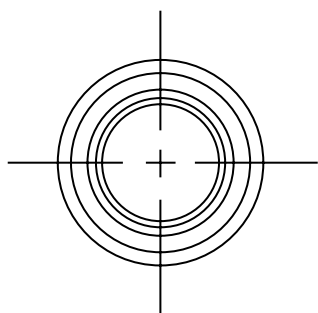


FIGURE 1



**FIG. 2
FIGURE 2**

All measurements are in inches.

CODE 61 BRAZED FLANGED HEAD FITTING												
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	FLANGE SIZE	TUBE SIZE	A	B	C	D	E	F +.003 -0.000	G	J MIN.	J MAX.
8T-8SF	8T-8SFN	0.50	0.500	1.188	0.406	0.940	0.265	0.50	0.502	0.312	1.000	1.005
10T-8SF	10T-8SFN	0.50	0.625	1.188	0.500	0.940	0.265	0.50	0.625	0.312	1.000	1.005
12T-12SF	12T-12SFN	0.75	0.750	1.500	0.656	1.250	0.265	0.56	0.752	0.375	1.250	1.255
16T-12SF	16T-12SFN	0.75	1.000	1.500	0.750	1.250	0.265	0.56	1.002	0.375	1.250	1.255
16T-16SF	16T-16SFN	1.00	1.000	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.560	1.565
20T-16SF	20T-16SFN	1.00	1.250	1.750	1.000	1.500	0.315	0.56	1.252	0.375	1.560	1.565
20T-20SF	20T-20SFN	1.25	1.250	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.750	1.755
24T-20SF	24T-20SFN	1.25	1.500	2.000	1.250	1.700	0.315	0.56	1.502	0.375	1.750	1.755
24T-24SF	24T-24SFN	1.50	1.500	2.380	1.375	1.980	0.315	0.62	1.502	0.438	2.115	2.125
28T-24SF	28T-24SFN	1.50	1.750	2.380	1.500	1.980	0.315	0.62	1.752	0.438	2.115	2.125
32T-32SF	32T-32SFN	2.00	2.000	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.490	2.500
36T-32SF	36T-32SFN	2.00	2.250	2.810	2.000	2.450	0.375	0.62	2.252	0.500	2.490	2.500
40T-40SF	40T-40SFN	2.50	2.500	3.312	2.375	2.921	0.375	0.68	2.502	0.562	2.995	3.005
44T-40SF	44T-40SFN	2.50	2.750	3.312	2.500	2.921	0.375	0.68	2.752	0.500	2.995	3.005
48T-48SF	48T-48SFN	3.00	3.000	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.615	3.625

CODE 62 BRAZED FLANGED HEAD FITTING												
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	FLANGE SIZE	TUBE SIZE	A	B	C	D	E	F +.003 -0.000	G	J MIN.	J MAX.
12T-12SFX	12T-12SFXN	0.75	0.750	1.625	0.656	1.250	0.345	0.69	0.752	0.500	1.250	1.255
16T-12SFX	16T-12SFXN	0.75	1.000	1.625	0.750	1.250	0.345	0.69	1.002	0.500	1.250	1.255
16T-16SFX	16T-16SFXN	1.00	1.000	1.875	0.810	1.500	0.375	0.81	1.002	0.625	1.560	1.565
20T-16SFX	20T-16SFXN	1.00	1.250	1.875	1.000	1.500	0.375	0.81	1.252	0.625	1.560	1.565
20T-20SFX	20T-20SFXN	1.25	1.250	2.125	1.010	1.718	0.405	1.00	1.252	0.812	1.750	1.755
24T-20SFX	24T-20SFXN	1.25	1.500	2.125	1.250	1.718	0.405	1.00	1.502	0.812	1.750	1.755
24T-24SFX	24T-24SFXN	1.50	1.500	2.500	1.250	2.000	0.495	1.19	1.502	1.000	2.115	2.125
28T-24SFX	28T-24SFXN	1.50	1.750	2.500	1.500	2.000	0.495	1.19	1.757	1.000	2.115	2.125
32T-32SFX	32T-32SFXN	2.00	2.000	3.125	1.750	2.620	0.495	1.50	2.002	1.375	2.490	2.500
36T-32SFX	36T-32SFXN	2.00	2.250	3.125	2.000	2.620	0.495	1.50	2.252	1.312	2.490	2.500

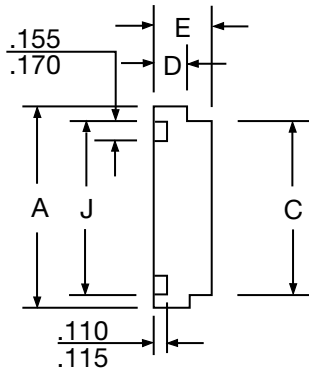


FIGURE 1

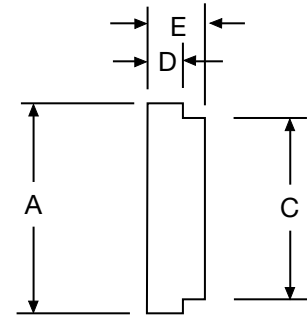
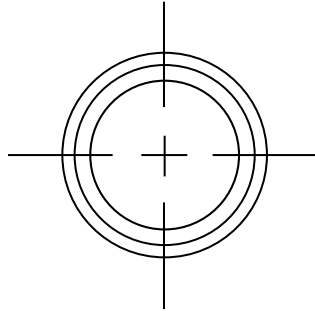


FIGURE 2

All measurements are in inches.

FLANGE PLUG - CODE 61								
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	FLANGE SIZE	A	C	D	E	J MIN.	J MAX.
8-FOP	8-FP	0.50	1.188	0.940	0.265	0.500	1.000	1.005
12-FOP	12-FP	0.75	1.500	1.250	0.265	0.560	1.250	1.255
16-FOP	16-FP	1.00	1.750	1.500	0.315	0.560	1.560	1.565
20-FOP	20-FP	1.25	2.000	1.700	0.315	0.560	1.750	1.755
24-FOP	24-FP	1.50	2.380	1.980	0.315	0.620	2.115	2.125
32-FOP	32-FP	2.00	2.810	2.450	0.375	0.620	2.490	2.500
40-FOP	40-FP	2.50	3.312	2.921	0.375	0.680	2.995	3.005
48-FOP	48-FP	3.00	4.000	3.546	0.375	0.750	3.615	3.625

FLANGE PLUG - CODE 62									
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	FLANGE SIZE	A	C	D	E	J MIN.	J MAX.	
12-FOPX	12-FPX	0.75	1.625	1.250	0.345	0.687	1.250	1.255	
16-FOPX	16-FPX	1.00	1.875	1.500	0.375	0.812	1.560	1.565	
20-FOPX	20-FPX	1.25	2.125	1.718	0.405	1.000	1.750	1.755	
24-FOPX	24-FPX	1.50	2.500	2.000	0.495	1.187	2.115	2.125	
32-FOPX	32-FPX	2.00	3.125	2.625	0.495	1.500	2.490	2.500	

WELD PIPE PLUG - SCHED. 40 & 80 - FIG. 3					
CATALOG NO.	PIPE SIZE	A	C	D	E
W20-12	0.75	0.688	1.050	0.19	0.53
W20-16	1.00	0.877	1.315	0.25	0.62
W20-20	1.25	1.194	1.660	0.38	0.75
W20-24	1.50	1.414	1.900	0.38	0.75
W20-32	2.00	1.856	2.375	0.38	0.81

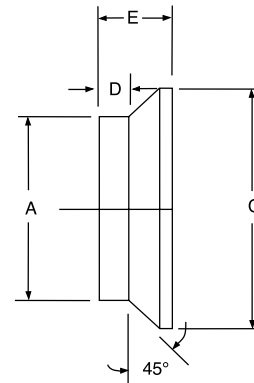
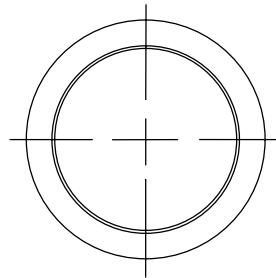


FIGURE 3

4 Bolt Flange Fittings



All measurements are in inches.

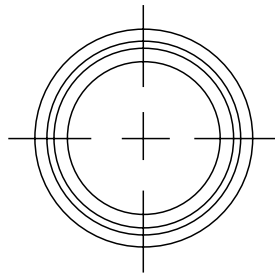
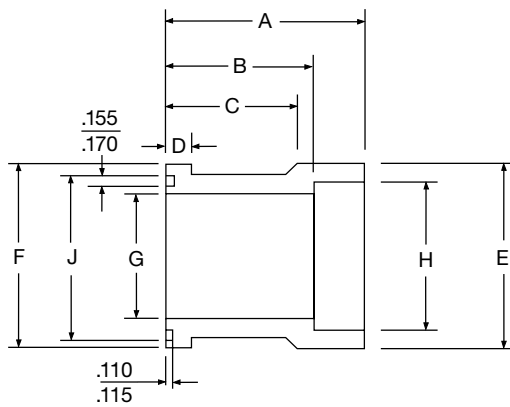


FIGURE 1



CODE 61 SOCKET WELD TO FLANGED HEAD FOR PIPE - FIG. 1

CATALOG NO.	PIPE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.
12P-12WSF	0.75	0.75	2.34	1.78	1.62	0.265	1.500	1.500	0.750	1.062	1.250	1.255
16P-16WSF	1.00	1.00	2.38	1.75	1.62	0.315	1.750	1.750	1.000	1.328	1.560	1.565
20P-20WSF	1.25	1.25	2.62	1.94	1.81	0.315	2.000	2.000	1.250	1.672	1.750	1.755
24P-24WSF	1.50	1.50	2.88	2.12	2.00	0.315	2.375	2.375	1.500	1.922	2.115	2.125
32P-32WSF	2.00	2.00	3.00	2.12	2.00	0.375	2.812	2.812	2.000	2.406	2.490	2.500

CODE 61 SOCKET WELD TO FLANGED HEAD FOR TUBE - FIG. 1

CATALOG NO.	TUBE SIZE	CLAMP SIZE	A	B	C	D	E	F	G	H +0.003 -0.000	J MIN.	J MAX.
12T-12WSF	0.75	0.75	2.34	1.78	1.62	0.265	1.500	1.500	0.625	0.752	1.250	1.255
16T-12WSF	1.00	0.75	2.34	1.78	1.62	0.265	1.500	1.500	0.750	1.002	1.250	1.255
16T-16WSF	1.00	1.00	2.38	1.75	1.62	0.315	1.750	1.750	0.875	1.002	1.560	1.565
20T-16WSF	1.25	1.00	2.38	1.75	1.62	0.315	1.750	1.750	1.000	1.252	1.560	1.565
20T-20WSF	1.25	1.25	2.62	2.00	1.81	0.315	2.000	2.000	1.125	1.252	1.750	1.755
24T-20WSF	1.50	1.25	2.62	1.94	1.81	0.315	2.000	2.000	1.250	1.502	1.750	1.755
24T-24WSF	1.50	1.50	2.88	2.19	2.00	0.315	2.375	2.375	1.375	1.502	2.115	2.125
28T-24WSF	1.75	1.50	2.88	2.12	2.00	0.315	2.375	2.375	1.500	1.752	2.115	2.125
32T-32WSF	2.00	2.00	3.00	2.12	2.00	0.375	2.812	2.812	1.875	2.002	2.490	2.500
36T-32WSF	2.25	2.00	3.00	2.12	2.00	0.375	2.812	2.812	2.000	2.252	2.490	2.500

CODE 62 SOCKET WELD TO FLANGED HEAD FOR PIPE - FIG. 2

CATALOG NO.	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.
W53-16-16	1.000	1.000	3.06	2.43	2.34	0.375	2.000	1.328	1.000	1.875	1.560	1.565
W53-20-20	1.250	1.250	3.31	2.62	2.50	0.405	2.312	1.672	1.125	2.125	1.750	1.755
W53-24-24	1.500	1.500	3.93	3.18	3.06	0.495	2.750	1.922	1.375	2.500	2.115	2.125
W53-32-32	2.000	2.000	4.06	3.18	3.18	0.495	3.250	2.406	1.875	3.125	2.490	2.500

CODE 62 SOCKET WELD TO FLANGED HEAD FOR TUBE - FIG. 2

CATALOG NO.	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.
W54-16-16	1.000	1.000	3.06	2.43	2.34	0.375	2.000	1.002	0.875	1.875	1.560	1.565
W54-20-16	1.250	1.000	3.06	2.43	2.34	0.375	2.000	1.252	1.000	1.875	1.560	1.565
W54-20-20	1.250	1.250	3.31	2.62	2.50	0.405	2.312	1.252	1.125	2.125	1.750	1.755
W54-24-20	1.500	1.250	3.31	2.62	2.50	0.405	2.312	1.502	1.250	2.125	1.750	1.755
W54-24-24	1.500	1.500	3.93	3.18	3.06	0.495	2.750	1.502	1.375	2.500	2.115	2.125
W54-28-24	1.750	1.500	3.93	3.18	3.06	0.495	2.750	1.752	1.500	2.500	2.115	2.125
W54-32-32	2.000	2.000	4.06	3.18	3.18	0.495	3.250	2.002	1.875	3.125	2.490	2.500
W54-36-32	2.250	2.000	4.06	3.18	3.18	0.495	3.250	2.252	2.000	3.125	2.490	2.500

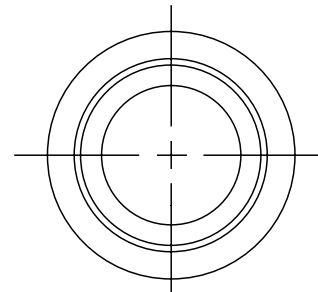
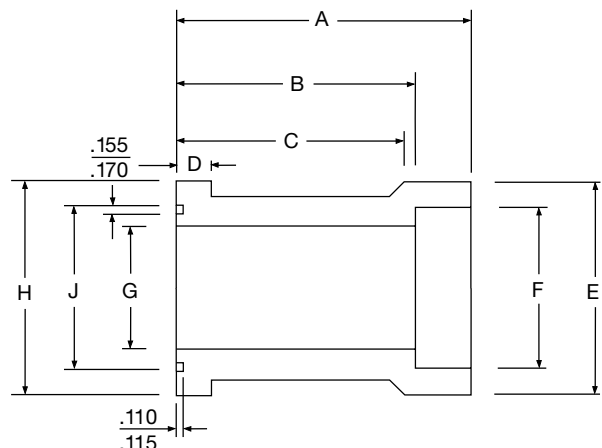


FIGURE 2



All measurements are in inches.

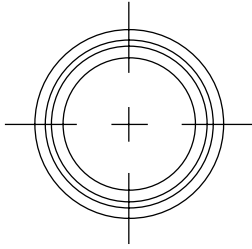


FIGURE 1

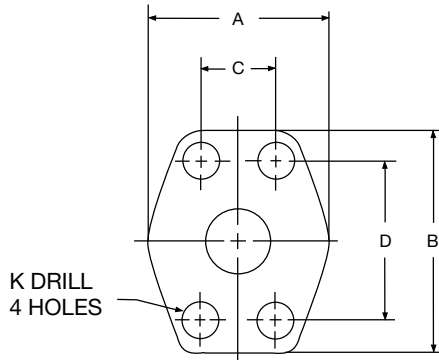
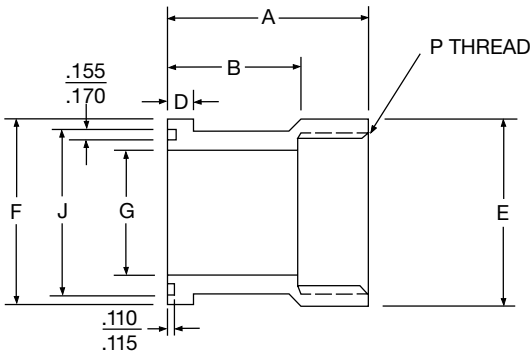
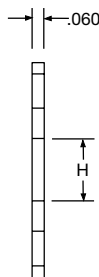


FIGURE 2



CODE 61 NPTF THREAD TO FLANGED HEAD

CATALOG NO. FIG. 1	PIPE SIZE	CLAMP SIZE	A	B	D	E	F	G	J MIN.	J MAX.	P THREAD NPTF
12F-12FO	0.75	0.75	2.47	1.62	0.265	1.50	1.500	0.75	1.250	1.255	0.75
16F-16FO	1.00	1.00	2.66	1.62	0.315	1.75	1.750	1.00	1.560	1.565	1.00
20F-20FO	1.25	1.25	2.84	1.81	0.315	2.00	2.000	1.25	1.750	1.755	1.25
24F-24FO	1.50	1.50	3.00	2.00	0.315	2.38	2.375	1.50	2.115	2.125	1.50
32F-32FO	2.00	2.00	3.00	2.00	0.375	2.81	2.812	2.00	2.490	2.500	2.00

CODE 61 S.A.E. THREAD TO FLANGED HEAD

CATALOG NO. FIG. 1	PIPE SIZE	CLAMP SIZE	A	B	D	E	F	G	J MIN.	J MAX.	P THREAD UN-2B
12S-12FO	0.75	0.75	2.47	1.62	.265	1.50	1.500	0.75	1.250	1.255	1 1/6-12
16S-16FO	1.00	1.00	2.66	1.62	.315	1.75	1.750	1.00	1.560	1.565	1 5/16-12
20S-20FO	1.25	1.25	2.84	1.81	.315	2.00	2.000	1.25	1.750	1.755	1 5/8-12
24S-24FO	1.50	1.50	3.00	2.00	.315	2.38	2.375	1.50	2.115	2.125	1 7/8-12
32S-32FO	2.00	2.00	3.00	2.00	.375	2.81	2.812	2.00	2.490	2.500	2 1/2-12

CONNECTOR PLATE - CODE 61

CATALOG NO. FIG. 2	SIZE	A	B	C	D	H	K DRILL DIA.
8 CP	0.50	1.81	2.12	0.688	1.500	0.50	0.344
12 CP	0.75	2.06	2.56	0.875	1.875	0.75	0.406
16 CP	1.00	2.31	2.75	1.031	2.062	1.00	0.406
20 CP	1.25	2.88	3.12	1.188	2.312	1.25	0.469
24 CP	1.50	3.25	3.69	1.406	2.750	1.50	0.531
32 CP	2.00	3.81	4.00	1.688	3.062	2.00	0.531
40 CP	2.50	4.12	4.44	2.000	3.500	2.50	0.531
48 CP	3.00	5.16	5.31	2.438	4.188	3.00	0.656

CONNECTOR PLATE - CODE 62

CATALOG NO. FIG. 2	SIZE	A	B	C	D	H	K DRILL DIA.
12 CPX	0.75	2.38	2.81	0.937	2.000	0.750	0.406
16 CPX	1.00	2.75	3.19	1.093	2.250	1.000	0.469
20 CPX	1.25	3.06	3.75	1.250	2.625	1.250	0.531
24 CPX	1.50	3.75	4.44	1.437	3.125	1.500	0.656
32 CPX	2.00	4.50	5.25	1.750	3.812	2.000	0.781

4 Bolt Flange Fittings

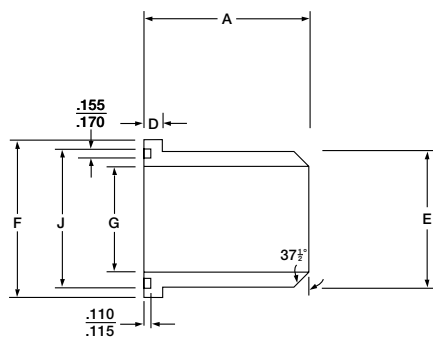


FIGURE 1

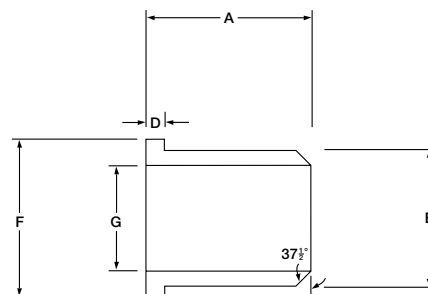
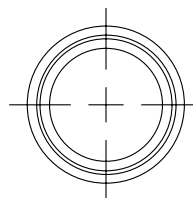


FIGURE 2

All measurements are in inches.

CODE 61 BUTT WELD TO FLANGED HEAD FOR SCHED. 40 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
8P-8BWSF-40	8P-8BWSFN-40	0.50	0.50	1.06	0.265	0.840	1.188	0.622	1.000	1.005
12P-12BWSF-40	12P-12BWSFN-40	0.75	0.75	1.06	0.265	1.050	1.500	0.824	1.250	1.255
16P-16BWSF-40	16P-16BWSFN-40	1.00	1.00	1.25	0.315	1.315	1.750	1.049	1.560	1.565
20P-20BWSF-40	20P-20BWSFN-40	1.25	1.25	1.44	0.315	1.660	2.000	1.380	1.750	1.755
24P-24BWSF-40	24P-24BWSFN-40	1.50	1.50	1.75	0.315	1.900	2.375	1.610	2.115	2.125
32P-32BWSF-40	32P-32BWSFN-40	2.00	2.00	2.00	0.375	2.375	2.812	2.067	2.490	2.500
40P-40BWSF-40	40P-40BWSFN-40	2.50	2.50	2.31	0.375	2.875	3.312	2.469	2.995	3.005
48P-48BWSF-40	48P-48BWSFN-40	3.00	3.00	2.32	0.375	3.500	4.000	3.068	3.615	3.625

CODE 61 BUTT WELD TO FLANGED HEAD FOR SCHED. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
8P-8BWSF-80	8P-8BWSFN-80	0.50	0.50	1.06	0.265	0.840	1.188	0.546	1.000	1.005
12P-12BWSF-80	12P-12BWSFN-80	0.75	0.75	1.06	0.265	1.050	1.500	0.742	1.250	1.255
16P-16BWSF-80	16P-16BWSFN-80	1.00	1.00	1.25	0.315	1.315	1.750	0.957	1.560	1.565
20P-20BWSF-80	20P-20BWSFN-80	1.25	1.25	1.44	0.315	1.660	2.000	1.278	1.750	1.755
24P-24BWSF-80	24P-24BWSFN-80	1.50	1.50	1.75	0.315	1.900	2.375	1.500	2.115	2.125
32P-32BWSF-80	32P-32BWSFN-80	2.00	2.00	2.00	0.375	2.375	2.812	1.939	2.490	2.500
40P-40BWSF-80	40P-40BWSFN-80	2.50	2.50	2.31	0.375	2.875	3.312	2.323	2.995	3.005
48P-48BWSF-80	48P-48BWSFN-80	3.00	3.00	2.32	0.375	3.500	4.000	2.900	3.615	3.625

CODE 61 BUTT WELD TO FLANGED HEAD FOR SCHED. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
8P-8BWSF-160	8P-8BWSFN-160	0.50	0.50	1.06	0.265	0.840	1.188	0.464	1.000	1.005
12P-12BWSF-160	12P-12BWSFN-160	0.75	0.75	1.06	0.265	1.050	1.500	0.614	1.250	1.255
16P-16BWSF-160	16P-16BWSFN-160	1.00	1.00	1.25	0.315	1.315	1.750	0.815	1.560	1.565
20P-20BWSF-160	20P-20BWSFN-160	1.25	1.25	1.44	0.315	1.660	2.000	1.160	1.750	1.755
24P-24BWSF-160	24P-24BWSFN-160	1.50	1.50	1.75	0.315	1.900	2.375	1.337	2.115	2.125
32P-32BWSF-160	32P-32BWSFN-160	2.00	2.00	2.00	0.375	2.375	2.812	1.689	2.490	2.500
40P-40BWSF-160	40P-40BWSFN-160	2.50	2.50	2.31	0.375	2.875	3.312	2.125	2.995	3.005
48P-48BWSF-160	48P-48BWSFN-160	3.00	3.00	2.32	0.375	3.500	4.000	2.624	3.615	3.625

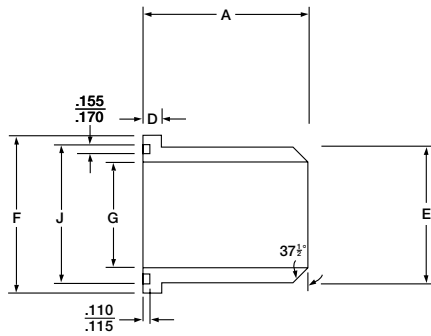


FIGURE 1

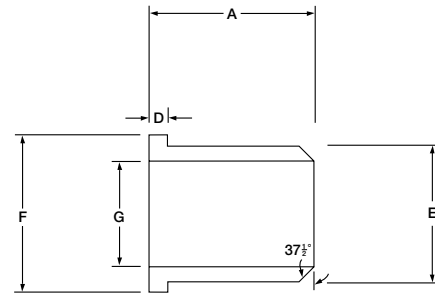
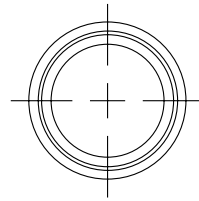


FIGURE 2

All measurements are in inches.

CODE 62 BUTT WELD TO FLANGED HEAD FOR SCHED. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
12P-12BWSFX-80	12P-12BWSFXN-80	0.75	0.75	1.42	0.345	1.050	1.625	0.742	1.250	1.255
16P-16BWSFX-80	16P-16BWSFXN-80	1.00	1.00	1.61	0.375	1.315	1.875	0.957	1.560	1.565
20P-20BWSFX-80	20P-20BWSFXN-80	1.25	1.25	1.73	0.405	1.660	2.125	1.278	1.750	1.755
24P-24BWSFX-80	24P-24BWSFXN-80	1.50	1.50	2.17	0.495	1.900	2.500	1.500	2.115	2.125
32P-32BWSFX-80	32P-32BWSFXN-80	2.00	2.00	2.48	0.495	2.375	3.125	1.939	2.490	2.500

CODE 62 BUTT WELD TO FLANGED HEAD FOR SCHED. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
12P-12BWSFX-160	12P-12BWSFXN-160	0.75	0.75	1.42	0.345	1.050	1.625	0.614	1.250	1.255
16P-16BWSFX-160	16P-16BWSFXN-160	1.00	1.00	1.61	0.375	1.315	1.875	0.815	1.560	1.565
20P-20BWSFX-160	20P-20BWSFXN-160	1.25	1.25	1.73	0.405	1.660	2.125	1.160	1.750	1.755
24P-24BWSFX-160	24P-24BWSFXN-160	1.50	1.50	2.17	0.495	1.900	2.500	1.337	2.115	2.125
32P-32BWSFX-160	32P-32BWSFXN-160	2.00	2.00	2.48	0.495	2.375	3.125	1.689	2.490	2.500

CODE 62 BUTT WELD TO FLANGED HEAD FOR SCHED. XXS PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	CLAMP SIZE	A	D	E	F	G	J MIN.	J MAX.
12P-12BWSFX-XXS	12P-12BWSFXN-XXS	0.75	0.75	1.42	0.345	1.050	1.625	0.434	1.250	1.255
16P-16BWSFX-XXS	16P-16BWSFXN-XXS	1.00	1.00	1.61	0.375	1.315	1.875	0.599	1.560	1.565
20P-20BWSFX-XXS	20P-20BWSFXN-XXS	1.25	1.25	1.73	0.405	1.660	2.125	0.896	1.750	1.755
24P-24BWSFX-XXS	24P-24BWSFXN-XXS	1.50	1.50	2.17	0.495	1.900	2.500	1.100	2.115	2.125
32P-32BWSFX-XXS	32P-32BWSFXN-XXS	2.00	2.00	2.48	0.495	2.375	3.125	1.503	2.490	2.500

4 Bolt Flange Fittings

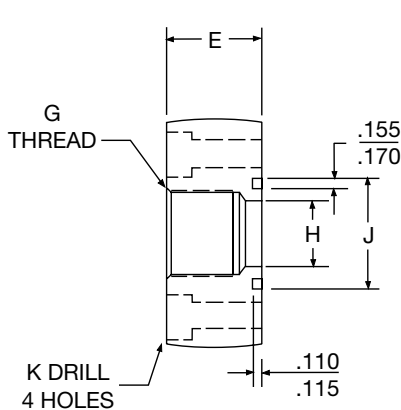


FIGURE 1

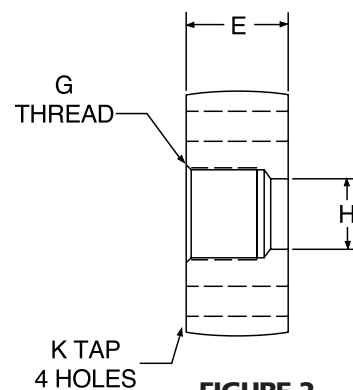
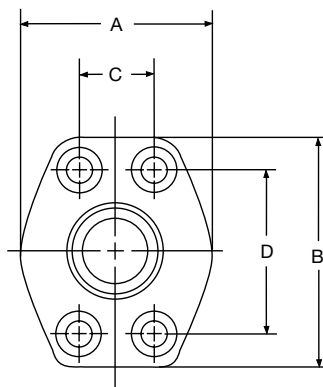


FIGURE 2

All measurements are in inches.

CODE 61 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W43-8-8	W104-8-8	0.50	0.50	1.82	2.17	0.688	1.500	1.25	0.50	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W43-12-12	W104-12-12	0.75	0.75	2.06	2.69	0.875	1.875	1.25	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W43-16-16	W104-16-16	1.00	1.00	2.31	2.88	1.031	2.062	1.50	1.00	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W43-20-20	W104-20-20	1.25	1.25	2.88	3.25	1.188	2.312	1.50	1.25	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W43-24-24	W104-24-24	1.50	1.50	3.25	3.81	1.406	2.750	1.75	1.50	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.00
W43-32-32	W104-32-32	2.00	2.00	3.81	4.13	1.688	3.062	1.75	2.00	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W43-40-40	W104-40-40	2.50	2.50	4.28	4.63	2.000	3.500	2.00	2.50	2.50	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.25
W43-48-48	W104-48-48	3.00	3.00	5.16	5.44	2.438	4.188	2.25	3.00	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.50

*Additional reducer flanges available from stock

CODE 61 S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W46-8-8	W106-8-8	0.50	0.50	1.82	2.17	0.688	1.500	1.25	3/4-16	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W46-12-12	W106-12-12	0.75	0.75	2.06	2.69	0.875	1.875	1.25	1 1/16-12	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W46-16-16	W106-16-16	1.00	1.00	2.31	2.88	1.031	2.062	1.50	1 5/16-12	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W46-20-20	W106-20-20	1.25	1.25	2.88	3.25	1.188	2.312	1.50	1 5/8-12	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W46-24-24	W106-24-24	1.50	1.50	3.25	3.81	1.406	2.750	1.75	1 7/8-12	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.00

*Additional reducer flanges available from stock

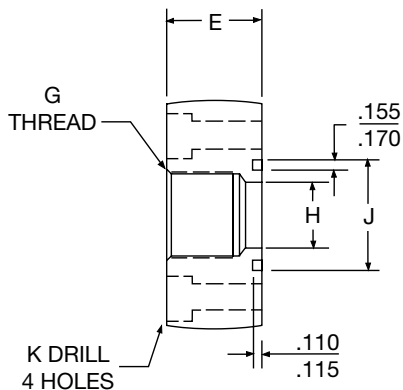


FIGURE 3

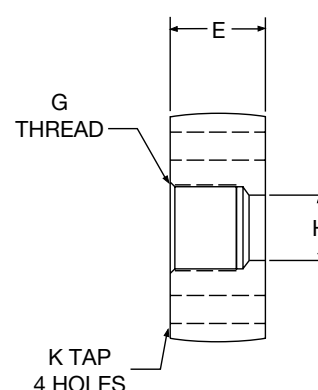
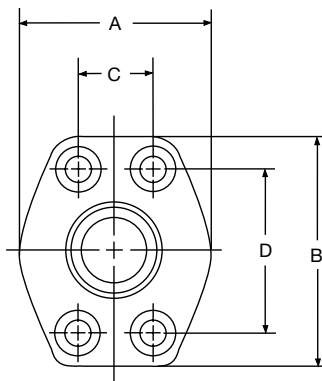


FIGURE 4

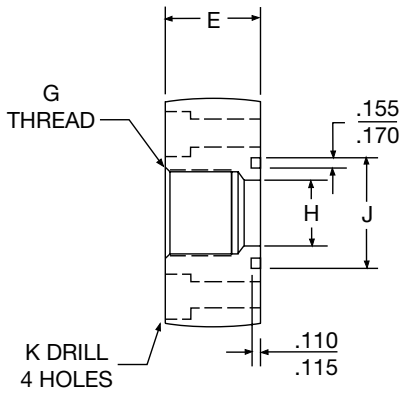


FIGURE 1

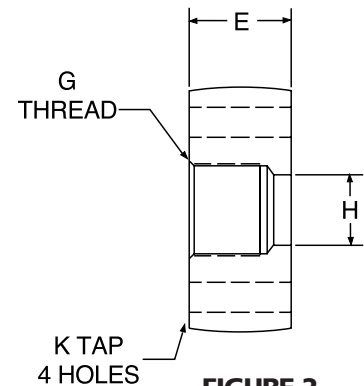
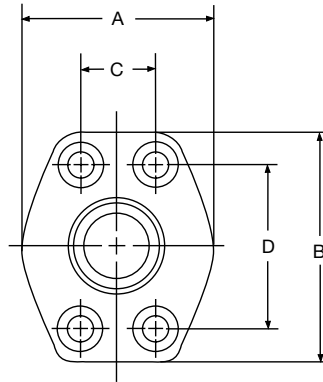


FIGURE 2

All measurements are in millimeters.

CODE 61 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W43-8-8-M8	W104-8-8-M8	0.50	0.50	46.23	55.12	17.48	38.10	31.75	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 50
W43-12-12-M10	W104-12-12-M10	0.75	0.75	52.32	68.33	22.23	47.63	31.75	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W43-16-16-M10	W104-16-16-M10	1.00	1.00	58.67	73.15	26.19	52.37	38.10	1.00	25.40	39.62	39.75	10.31	M10	219	M10 X 60
W43-20-20-M10	W104-20-20-M10	1.25	1.25	73.15	82.55	30.18	58.72	38.10	1.25	31.75	44.45	44.58	11.91	M10	222	M10 X 60
W43-24-24-M12	W104-24-24-M12	1.50	1.50	82.55	96.77	35.71	69.85	44.45	1.50	38.10	53.72	53.98	13.49	M12	225	M12 X 70
W43-32-32-M12	W104-32-32-M12	2.00	2.00	96.77	104.90	42.88	77.77	44.45	2.00	50.80	63.25	63.50	13.49	M12	228	M12 X 70
W43-40-40-M12	W104-40-40-M12	2.50	2.50	108.71	117.60	50.80	88.90	50.80	2.50	63.50	76.07	76.33	13.49	M12	232	M12 X 85
W43-48-48-M16	W104-48-48-M16	3.00	3.00	131.06	138.18	61.93	106.38	57.15	3.00	76.20	91.82	92.08	16.66	M16	237	M16 X 90

*Additional reducer flanges available from stock

CODE 61 S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W46-8-8-M8	W106-8-8-M8	0.50	0.50	46.23	55.12	17.48	38.10	31.75	3/4-16	12.70	25.40	25.53	8.74	M8	210	M8 X 30
W46-12-12-M10	W106-12-12-M10	0.75	0.75	52.32	68.33	22.25	47.63	31.75	1 1/16-12	19.05	31.75	31.88	10.31	M10	214	M10 X 30
W46-16-16-M10	W106-16-16-M10	1.00	1.00	58.67	73.15	26.19	52.37	38.10	1 5/16-12	25.40	39.62	39.75	10.31	M10	219	M10 X 40
W46-20-20-M10	W106-20-20-M10	1.25	1.25	73.15	82.55	30.18	58.72	38.10	1 5/8-12	31.75	44.45	44.58	11.91	M10	222	M10 X 40
W46-24-24-M12	W106-24-24-M12	1.50	1.50	82.55	96.77	35.71	69.85	44.45	1 7/8-12	38.10	53.72	53.98	13.49	M12	225	M12 X 45

*Additional reducer flanges available from stock

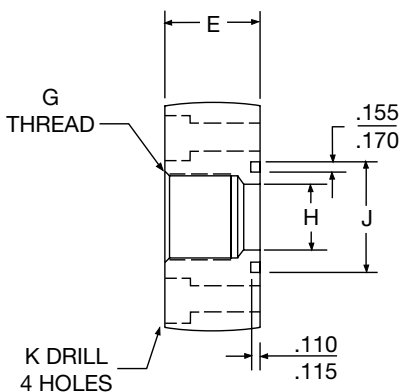


FIGURE 3

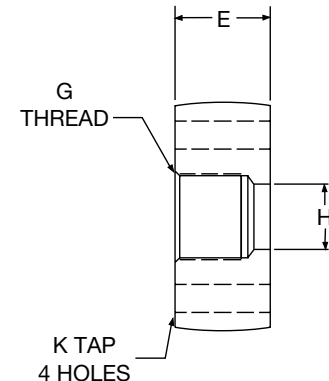
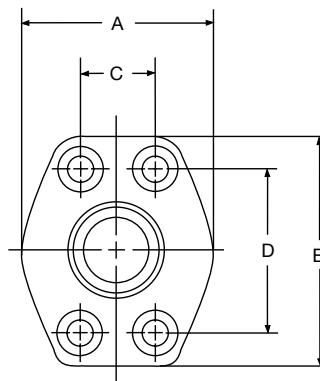


FIGURE 4

4 Bolt Flange Fittings

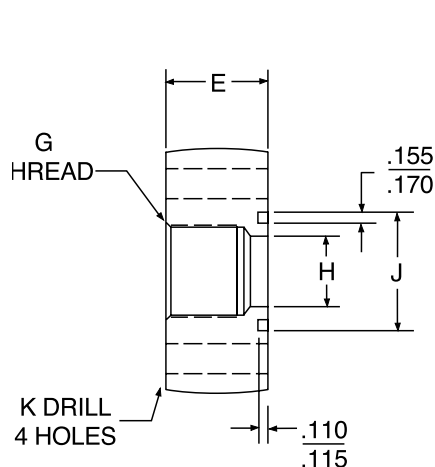


FIGURE 1

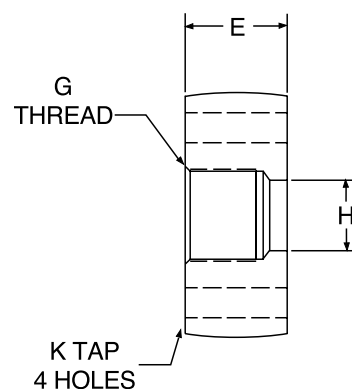
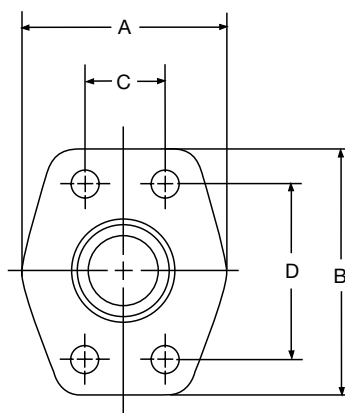


FIGURE 2

All measurements are in inches.

CODE 62 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W44-8-8	W45-8-8	0.50	0.50	1.94	2.30	0.718	1.594	1.25	0.50	0.50	1.00	1.005	0.344	5/16-18	210	5/16-18 X 2.00
W44-12-12	W45-12-12	0.75	0.75	2.50	2.95	0.937	2.000	1.25	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W44-16-16	W45-16-16	1.00	1.00	2.75	3.19	1.093	2.250	1.50	1.00	1.00	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.50
W44-20-20	W45-20-20	1.25	1.25	3.06	3.75	1.250	2.625	1.50	1.25	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W44-24-24	W45-24-24	1.50	1.50	3.75	4.44	1.437	3.125	1.75	1.50	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W44-32-32	W45-32-32	2.00	2.00	4.50	5.25	1.750	3.812	1.75	2.00	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00

CODE 62 S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD UN-2B	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W48-8-8	W49-8-8	0.50	0.50	1.94	2.30	0.718	1.594	1.25	3/4-16	0.50	1.00	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W48-12-12	W49-12-12	0.75	0.75	2.50	2.95	0.937	2.000	1.25	1 1/16-12	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.75
W48-16-16	W49-16-16	1.00	1.00	2.75	3.19	1.093	2.250	1.50	1 5/16-12	1.00	1.560	1.565	0.409	7/16-14	219	7/16-14 X 1.75
W48-20-20	W49-20-20	1.25	1.25	3.06	3.75	1.250	2.625	1.50	1 5/8-12	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W48-24-24	W49-24-24	1.50	1.50	3.75	4.44	1.437	3.125	1.75	1 7/8-12	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W48-32-32	W49-32-32	2.00	2.00	4.50	5.25	1.750	3.812	1.75	2 1/2-12	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 1.50

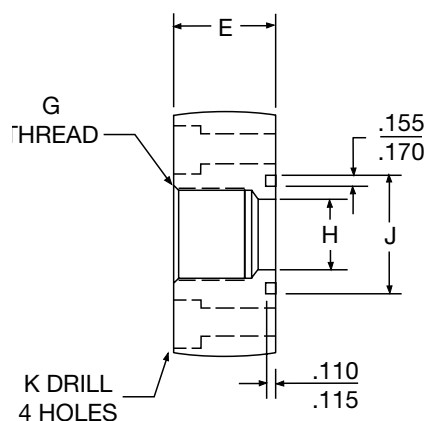


FIGURE 3

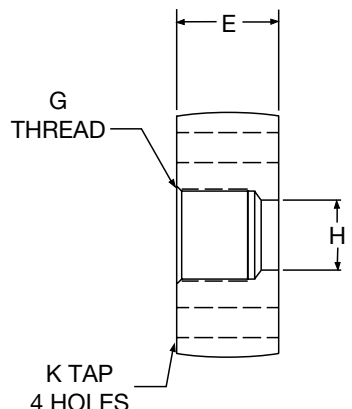
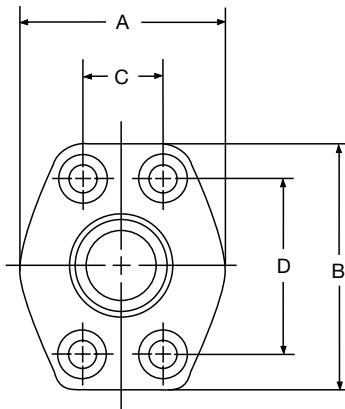


FIGURE 4

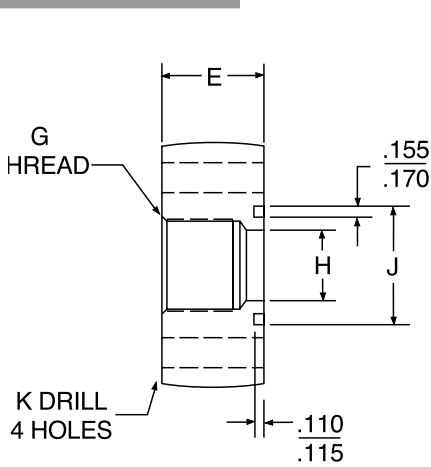


FIGURE 1

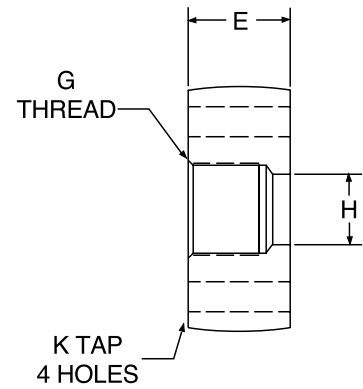
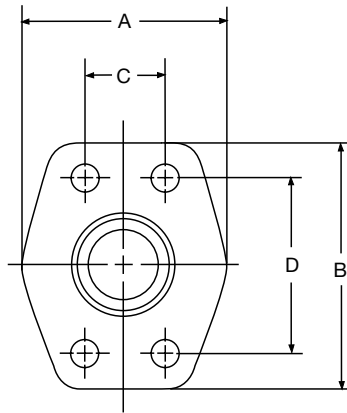


FIGURE 2

All measurements are in millimeters.

CODE 62 NPTF THREAD																
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W44-8-8-M8	W45-8-8-M8	0.50	0.50	49.28	58.42	18.24	40.49	31.75	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 50
W44-12-12-M10	W45-12-12-M10	0.75	0.75	63.50	74.93	23.80	50.80	31.75	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W44-16-16-M12	W45-16-16-M12	1.00	1.00	69.85	81.03	27.76	57.15	38.10	1.00	25.40	39.62	39.75	12.50	M12	219	M12 X 60
W44-20-20-M14	W45-20-20-M14	1.25	1.25	77.72	95.25	31.75	66.68	38.10	1.25	31.75	44.45	44.58	14.48	M14	222	M14 X 65
W44-24-24-M16	W45-24-24-M16	1.50	1.50	95.25	112.78	36.50	79.38	44.45	1.50	38.10	53.72	53.98	16.66	M16	225	M16 X 70
W44-32-32-M20	W45-32-32-M20	2.00	2.00	114.30	133.35	44.45	96.82	44.45	2.00	50.80	63.25	63.50	20.98	M20	228	M20 X 80

CODE 62 S.A.E. STRAIGHT THREAD																
O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W48-8-8-M8	W49-8-8-M8	0.50	0.50	49.28	58.42	18.24	40.49	31.75	3/4-16	12.70	25.40	25.53	8.74	M8	210	M8 X 30
W48-12-12-M10	W49-12-12-M10	0.75	0.75	63.50	74.93	23.80	50.80	31.75	1 1/16-12	19.05	31.75	31.88	10.31	M10	214	M10 X 30
W48-16-16-M12	W49-16-16-M12	1.00	1.00	69.85	81.03	27.76	57.15	38.10	1 5/16-12	25.40	39.62	39.75	12.50	M12	219	M12 X 40
W48-20-20-M14	W49-20-20-M14	1.25	1.25	77.72	95.25	31.75	66.68	38.10	1 5/8-12	31.75	44.45	44.58	14.48	M14	222	M14 X 40
W48-24-24-M16	W49-24-24-M16	1.50	1.50	95.25	112.78	36.50	79.38	44.45	1 7/8-12	38.10	53.72	53.98	16.66	M16	225	M16 X 45
W48-32-32-M20	W49-32-32-M20	2.00	2.00	114.30	133.35	44.45	96.82	44.45	2 1/2-12	50.80	63.25	63.50	20.98	M20	228	M20 X 45

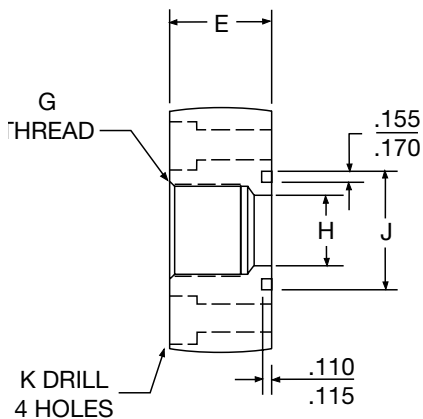


FIGURE 3

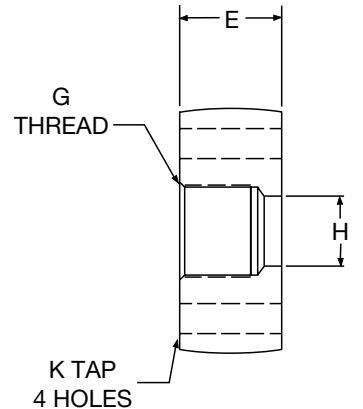
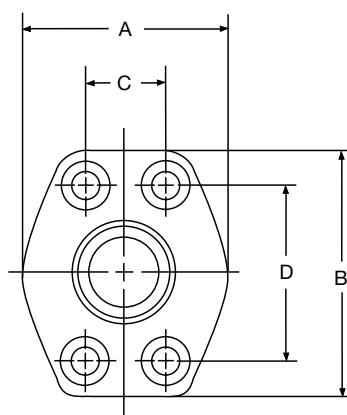


FIGURE 4

4 Bolt Flange Fittings

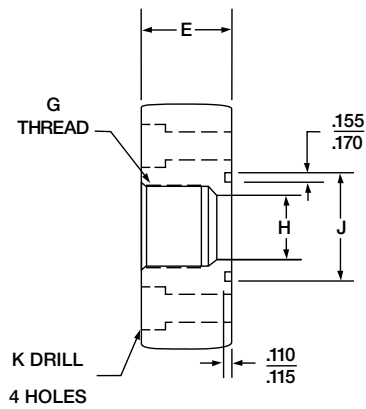
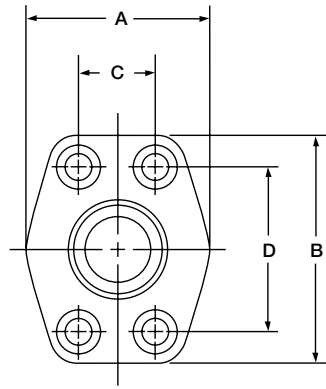


FIGURE 1



All measurements are in inches.

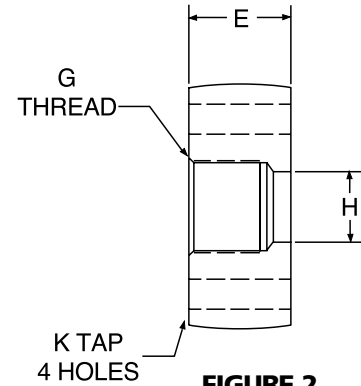


FIGURE 3

CODE 61 B.S.P.P. THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G B.S.P.P. THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
* W192-8-8	W193-8-8	0.50	0.50	1.82	2.17	0.688	1.500	1.25	0.50	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W192-12-12	W193-12-12	0.75	0.75	2.06	2.69	0.875	1.875	1.25	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W192-16-16	W193-16-16	1.00	1.00	2.31	2.88	1.031	2.062	1.50	1.00	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W192-20-20	W193-20-20	1.25	1.25	2.88	3.25	1.188	2.312	1.50	1.25	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W192-24-24	W193-24-24	1.50	1.50	3.25	3.81	1.406	2.750	1.75	1.50	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.00
W192-32-32	W193-32-32	2.00	2.00	3.81	4.13	1.688	3.062	1.75	2.00	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W192-40-40	W193-40-40	2.50	2.50	4.28	4.63	2.000	3.500	2.00	2.50	2.50	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.25
* W192-48-48	W193-48-48	3.00	3.00	5.16	5.44	2.438	4.188	2.25	3.00	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.50

CODE 62 B.S.P.P. THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G B.S.P.P. THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
* W194-8-8	W195-8-8	0.50	0.50	1.88	2.22	0.718	1.594	1.250	0.50	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 2.00
W194-12-12	W195-12-12	0.75	0.75	2.50	2.95	0.937	2.000	1.250	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W194-16-16	W195-16-16	1.00	1.00	2.75	3.19	1.093	2.250	1.500	1.00	1.00	1.560	1.565	0.469	7/16-14	219	7-16-14 X 2.50
W194-20-20	W195-20-20	1.25	1.25	3.06	3.75	1.250	2.625	1.500	1.25	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W194-24-24	W195-24-24	1.50	1.50	3.75	4.44	1.437	3.125	1.750	1.50	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W194-32-32	W195-32-32	2.00	2.00	4.50	5.25	1.750	3.812	1.750	2.00	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00

*NOTE - BAR STOCK MATERIAL

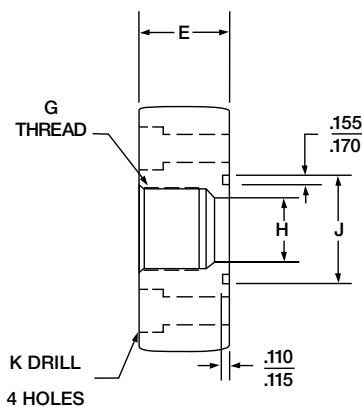


FIGURE 3

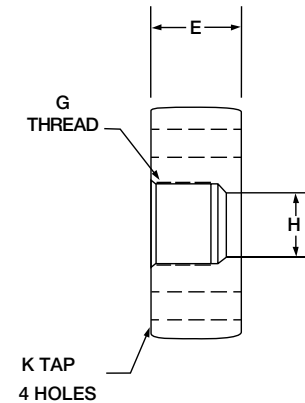
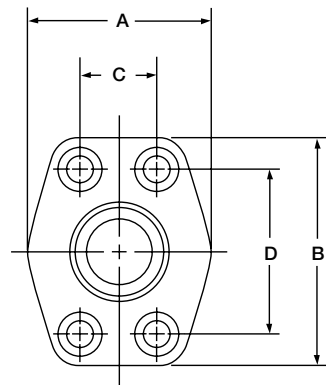


FIGURE 4

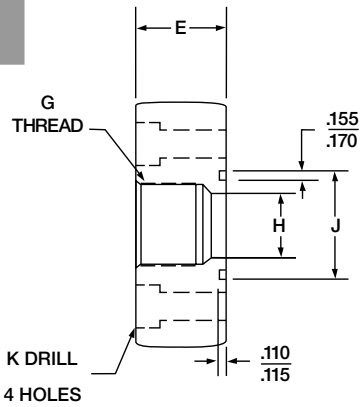
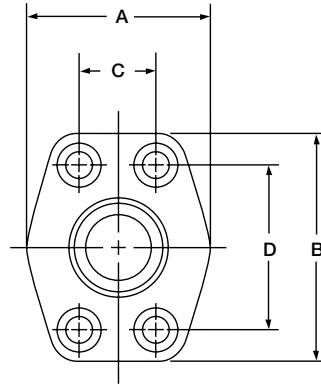


FIGURE 1



All measurements are in millimeters.

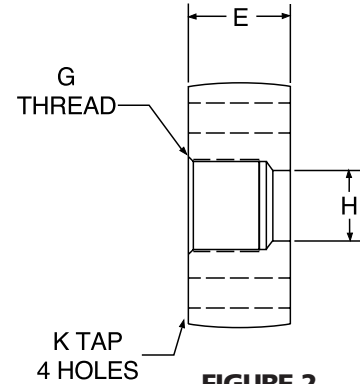


FIGURE 2

CODE 61 B.S.P.P. THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	G B.S.P.P. THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
*W192-8-8-M8	W193-8-8-M8	0.50	0.50	46.23	55.12	17.48	38.10	31.75	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 30
W192-12-12-M10	W193-12-12-M10	0.75	0.75	52.32	68.33	22.23	47.63	31.75	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 30
W192-16-16-M10	W193-16-16-M10	1.00	1.00	58.67	73.15	26.19	52.37	38.10	1.00	25.40	39.62	39.75	10.31	M10	219	M10 X 40
W192-20-20-M10	W193-20-20-M10	1.25	1.25	73.15	82.55	30.18	58.72	38.10	1.25	31.75	44.45	44.58	11.91	M10	222	M10 X 40
W192-24-24-M12	W193-24-24-M12	1.50	1.50	82.55	96.77	35.71	69.85	44.45	1.50	38.10	53.72	53.98	13.49	M12	225	M12 X 45
W192-32-32-M12	W193-32-32-M12	2.00	2.00	96.77	108.71	42.88	77.77	44.45	2.00	50.80	63.25	63.50	13.49	M12	228	M12 X 45
W192-40-40-M12	W193-40-40-M12	2.50	2.50	108.71	131.06	50.80	88.90	50.80	2.50	63.50	76.07	76.33	13.49	M12	232	M12 X 50
W192-48-48-M16	W193-48-48-M16	3.00	3.00	131.06	138.16	61.93	106.38	57.15	3.00	76.20	91.82	92.08	16.66	M16	237	M16 X 60

CODE 62 B.S.P.P. THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	G B.S.P.P. THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
* W194-8-8-M8	W195-8-8-M8	0.50	0.50	47.75	56.39	18.24	40.49	31.75	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 40
W194-12-12-M10	W195-12-12-M10	0.75	0.75	63.50	74.93	23.80	50.80	31.75	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 30
W194-16-16-M12	W195-16-16-M12	1.00	1.00	69.85	81.03	27.76	57.15	38.10	1.00	25.40	39.62	39.75	12.50	M12	219	M12 X 45
W194-20-20-M14	W195-20-20-M14	1.25	1.25	77.72	95.25	31.75	66.68	38.10	1.25	31.75	44.45	44.58	14.48	M14	222	M14 X 45
W194-24-24-M16	W195-24-24-M16	1.50	1.50	95.25	112.78	36.50	79.38	44.45	1.50	38.10	53.72	53.98	16.66	M16	225	M16 X 50
W194-32-32-M20	W195-32-32-M20	2.00	2.00	114.30	133.35	44.45	96.82	44.45	2.00	50.80	63.25	63.50	20.98	M20	228	M20 X 40

*NOTE - BAR STOCK MATERIAL

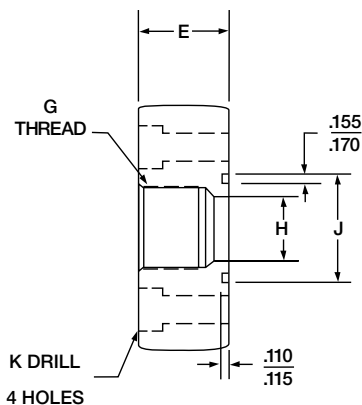


FIGURE 3

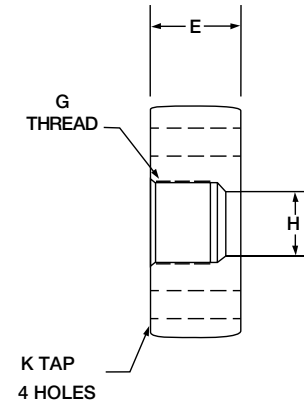
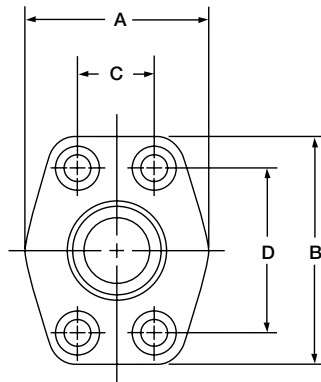


FIGURE 4

4 Bolt Flange Fittings

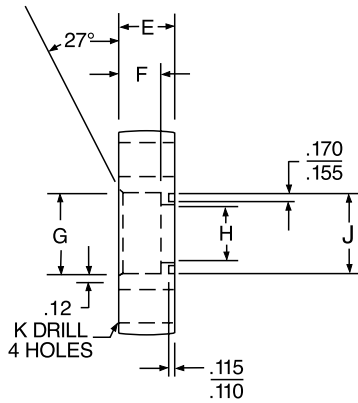
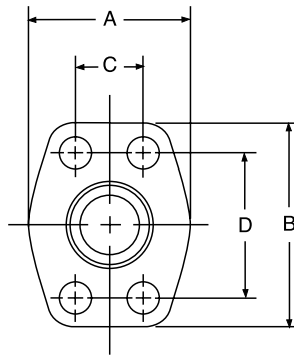


FIGURE 1



All measurements are in inches.

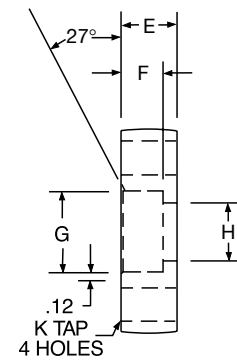


FIGURE 2

CODE 61 FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA.	H DIA.	J DIA. MIN.	J DIA. MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W4-8-8	W61-8-8	0.500	0.500	1.813	2.125	0.688	1.500	0.750	0.560	0.855	0.500	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W4-12-12	W61-12-12	0.750	0.750	2.063	2.563	0.875	1.875	0.750	0.560	1.062	0.750	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W4-16-16	W61-16-16	1.000	1.000	2.313	2.750	1.031	2.063	0.880	0.630	1.326	1.000	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W4-20-20	W61-20-20	1.250	1.250	2.875	3.125	1.188	2.313	0.940	0.690	1.672	1.250	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W4-24-24	W61-24-24	1.500	1.500	3.250	3.688	1.406	2.750	1.190	0.750	1.922	1.500	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.25
W4-32-32	W61-32-32	2.000	2.000	3.813	4.000	1.688	3.063	1.380	0.875	2.406	2.000	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.50
W4-40-40	W61-40-40	2.500	2.500	4.281	4.500	2.000	3.500	1.750	1.000	2.906	2.500	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.75
W4-48-48	W61-48-48	3.000	3.000	5.156	5.313	2.438	4.188	2.120	1.250	3.547	3.000	3.615	3.625	0.656	5/8-11	237	5/8-11 X 3.50

CODE 62 FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA.	H DIA.	J DIA. MIN.	J DIA. MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W59-8-8	W60-8-8	0.500	0.500	1.94	2.30	0.718	1.594	1.250	0.560	0.855	0.500	1.000	1.005	0.344	5/16-18	210	5/16-18 X 2.00
W59-12-12	W60-12-12	0.750	0.750	2.50	2.95	0.937	2.000	1.250	0.560	1.062	0.750	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W59-16-16	W60-16-16	1.000	1.000	2.75	3.19	1.093	2.250	1.500	0.630	1.326	1.000	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.50
W59-20-20	W60-20-20	1.250	1.250	3.06	3.75	1.250	2.625	1.500	0.690	1.672	1.250	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W59-24-24	W60-24-24	1.500	1.500	3.75	4.44	1.437	3.125	1.750	0.750	1.922	1.500	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W59-32-32	W60-32-32	2.000	2.000	4.50	5.25	1.750	3.812	1.750	0.875	2.406	2.000	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00
W59-40-40	W60-40-40	2.500	2.500	5.87	6.87	2.312	4.875	2.060	1.000	2.906	2.500	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.50
W59-48-48	W60-48-48	3.000	3.000	7.00	8.50	2.812	6.000	2.620	1.250	3.547	3.000	3.615	3.625	1.156	1 1/8-7	237	1 1/8-7 X 4.50

500 PSI FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W72-48-48	W91-48-48	3.000	3.000	5.12	5.31	2.438	4.188	1.380	1.120	3.547	3.000	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.50
W72-56-56	W91-56-56	3.500	3.500	5.50	6.00	2.750	4.750	1.440	1.190	4.047	3.500	4.095	4.115	0.656	5/8-11	241	5/8-11 X 2.75
W72-64-64	W91-64-64	4.000	4.000	6.00	6.38	3.062	5.125	1.500	1.250	4.578	4.000	4.595	4.615	0.656	5/8-11	245	5/8-11 X 2.75
W72-80-80	W91-80-80	5.000	5.000	7.12	7.25	3.625	6.000	1.750	1.380	5.641	5.000	5.595	5.615	0.656	5/8-11	253	5/8-11 X 3.00

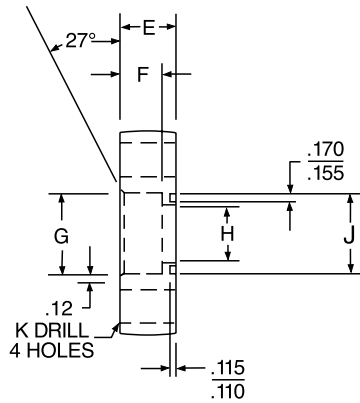
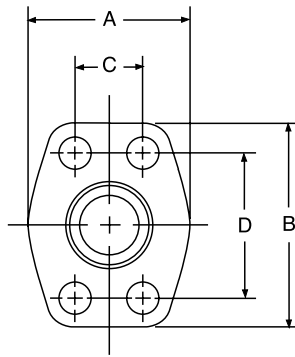


FIGURE 1



All measurements are in millimeters.

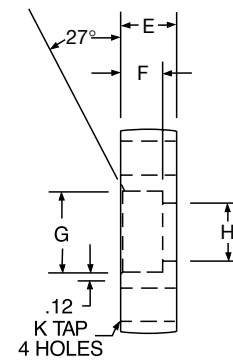


FIGURE 2

CODE 61 FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA.	H DIA.	J DIA. MIN.	J DIA. MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W4-8-8-M8	W61-8-8-M8	0.500	0.500	46.05	53.98	17.48	38.10	19.05	14.22	21.72	12.70	25.40	25.53	8.74	M8	210	M8 X 40
W4-12-12-M10	W61-12-12-M10	0.750	0.750	52.40	65.10	22.23	47.63	19.05	14.22	26.97	19.05	31.75	31.88	10.31	M10	214	M10 X 40
W4-16-16-M10	W61-16-16-M10	1.000	1.000	58.75	69.85	26.19	52.40	22.35	16.00	33.68	25.40	39.62	39.75	12.50	M10	219	M10 X 45
W4-20-20-M10	W61-20-20-M10	1.250	1.250	73.03	79.38	30.18	58.75	23.88	17.53	42.47	31.75	44.45	44.58	14.48	M10	222	M10 X 45
W4-24-24-M12	W61-24-24-M12	1.500	1.500	82.55	93.68	35.71	69.85	30.23	19.05	48.82	38.10	53.72	53.98	16.66	M12	225	M12 X 60
W4-32-32-M12	W61-32-32-M12	2.000	2.000	96.85	101.60	42.88	77.80	35.05	22.23	61.11	50.80	63.25	63.50	2.98	M12	228	M12 X 65
W4-40-40-M12	W61-40-40-M12	2.500	2.500	108.74	114.30	50.80	88.90	44.45	25.40	73.81	63.50	76.07	76.33	25.00	M12	232	M12 X 70
W4-48-48-M16	W61-48-48-M16	3.000	3.000	130.96	134.95	61.93	106.38	53.85	31.75	90.09	76.20	91.82	92.08	31.00	M16	237	M16 X 80

CODE 62 FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W59-8-8-M8	W60-8-8-M8	0.500	0.500	49.28	58.42	18.24	40.49	22.10	14.22	21.72	12.70	25.40	25.53	8.74	M8	210	M8 X 40
W59-12-12-M10	W60-12-12-M10	0.750	0.750	63.50	74.93	23.80	50.80	31.75	14.22	26.97	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W59-16-16-M12	W60-16-16-M12	1.000	1.000	69.85	81.03	27.76	57.15	38.10	16.00	33.68	25.40	39.62	39.75	12.50	M12	219	M12 X 60
W59-20-20-M14	W60-20-20-M14	1.250	1.250	77.72	95.25	31.75	66.68	38.10	17.53	42.47	31.75	44.45	44.58	14.48	M14	222	M14 X 65
W59-24-24-M16	W60-24-24-M16	1.500	1.500	95.25	112.78	36.50	79.38	44.45	19.05	48.82	38.10	53.72	53.98	16.66	M16	225	M16 X 70
W59-32-32-M20	W60-32-32-M20	2.000	2.000	114.30	133.35	44.45	96.82	44.45	22.23	61.11	50.80	63.25	63.50	20.98	M20	228	M20 X 80
W59-40-40-M24	W60-40-40-M24	2.500	2.500	149.10	174.50	58.72	123.83	52.32	25.40	73.81	63.50	76.07	76.33	25.00	M24	232	M24 X 90
W59-48-48-M30	W60-48-48-M30	3.000	3.000	177.80	215.90	71.42	152.40	66.55	31.75	90.09	76.20	91.82	92.08	31.00	M30	237	M30 X 115

500 PSI FLAT SOCKET – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W72-48-48-M16	W91-48-48-M16	3.000	3.000	130.05	134.87	61.93	106.38	35.05	28.45	90.09	76.20	91.82	92.08	16.66	M16	237	M16 X 65
W72-56-56-M16	W91-56-56-M16	3.500	3.500	139.70	152.40	69.85	120.65	36.58	30.23	102.79	88.90	104.01	104.52	16.66	M16	241	M16 X 65
W72-64-64-M16	W91-64-64-M16	4.000	4.000	152.40	162.05	77.77	130.18	38.10	31.75	116.28	101.60	116.71	117.22	16.66	M16	245	M16 X 70
W72-80-80-M16	W91-80-80-M16	5.000	5.000	180.85	184.15	92.08	152.40	44.45	35.05	143.28	127.00	142.11	142.62	16.66	M16	253	M16 X 80

4 Bolt Flange Fittings

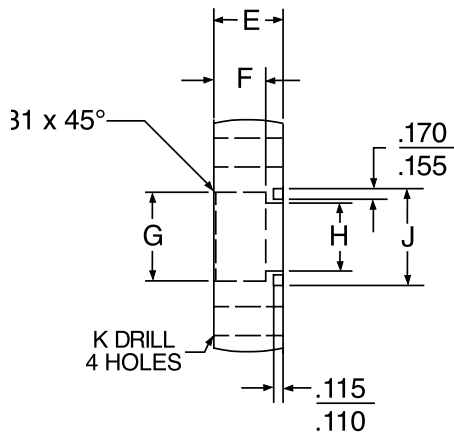


FIGURE 1

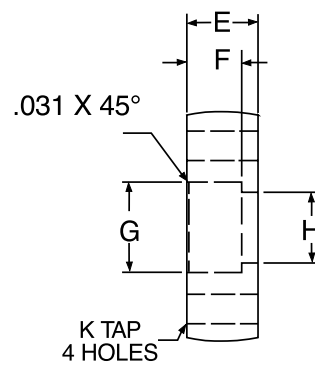
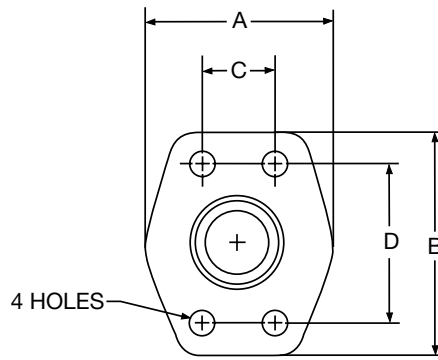


FIGURE 2

All measurements are in inches.

CODE 61 FLAT SOCKET – UBE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA. +0.003 -0.000	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W6-12-12	W62-12-12	0.750	0.750	2.060	2.560	0.875	1.875	0.750	0.560	0.752	0.625	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W6-16-12	W62-16-12	1.000	0.750	2.060	2.560	0.875	1.875	0.750	0.560	1.002	0.750	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W6-16-16	W62-16-16	1.000	1.000	2.310	2.750	1.031	2.062	0.880	0.630	1.002	0.875	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W6-20-16	W62-20-16	1.250	1.000	2.310	2.750	1.031	2.062	0.880	0.630	1.252	1.000	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W6-20-20	W62-20-20	1.250	1.250	2.880	3.120	1.188	2.312	0.940	0.690	1.252	1.125	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W6-24-20	W62-24-20	1.500	1.250	2.880	3.120	1.188	2.312	0.940	0.690	1.502	1.250	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W6-24-24	W62-24-24	1.500	1.500	3.250	3.690	1.406	2.750	1.190	0.750	1.502	1.375	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.25
W6-28-24	W62-28-24	1.750	1.500	3.250	3.690	1.406	2.750	1.190	0.750	1.752	1.500	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.25
W6-32-32	W62-32-32	2.000	2.000	3.810	4.000	1.688	3.062	1.375	0.875	2.002	1.875	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.50
W6-36-32	W62-36-32	2.250	2.000	3.810	4.000	1.688	3.062	1.375	0.875	2.252	2.000	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.50

CODE 62 FLAT SOCKET – TUBE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA. +0.003 -0.000	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W58-12-12	W63-12-12	0.750	0.750	2.50	2.95	0.937	2.000	1.250	0.560	0.752	0.625	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W58-16-12	W63-16-12	1.000	0.750	2.50	2.95	0.937	2.000	1.250	0.560	1.002	0.750	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W58-16-16	W63-16-16	1.000	1.000	2.75	3.19	1.093	2.250	1.500	0.630	1.002	0.875	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.50
W58-20-16	W63-20-16	1.250	1.000	2.75	3.19	1.093	2.250	1.500	0.630	1.252	1.000	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.50
W58-20-20	W63-20-20	1.250	1.250	3.06	3.75	1.250	2.625	1.500	0.690	1.252	1.125	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W58-24-20	W63-24-20	1.500	1.250	3.06	3.75	1.250	2.625	1.500	0.690	1.502	1.250	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W58-24-24	W63-24-24	1.500	1.500	3.75	4.44	1.437	3.125	1.750	0.750	1.502	1.375	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W58-28-24	W63-28-24	1.750	1.500	3.75	4.44	1.437	3.125	1.750	0.750	1.752	1.500	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W58-32-32	W63-32-32	2.000	2.000	4.50	5.25	1.750	3.812	1.750	0.875	2.002	1.875	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00
W58-36-32	W63-36-32	2.250	2.000	4.50	5.25	1.750	3.812	1.750	0.875	2.252	2.000	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00

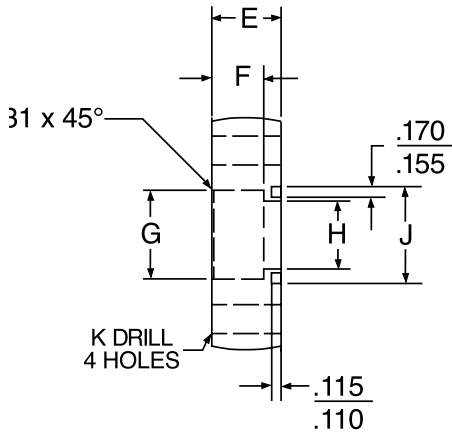


FIGURE 1

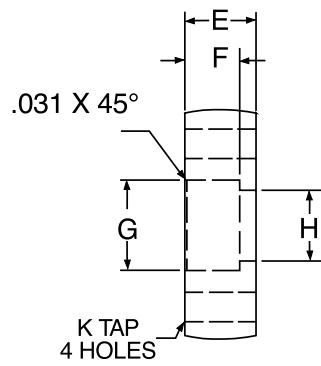
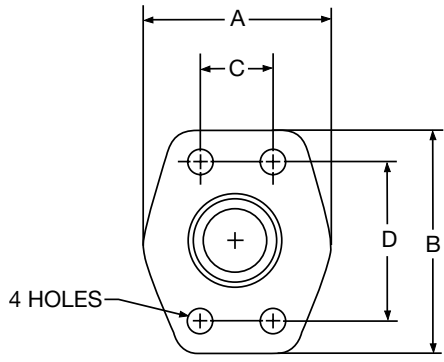


FIGURE 2

All measurements are in millimeters.

CODE 61 FLAT SOCKET – TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA.	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W6-12-12-M10	W62-12-12-M10	0.750	0.750	52.32	65.02	22.23	47.63	19.05	14.22	19.10	15.88	31.75	31.88	10.31	M10	214	M10 X 40
W6-16-12-M10	W62-16-12-M10	1.000	0.750	52.32	65.02	22.23	47.63	19.05	14.22	25.45	19.05	31.75	31.88	10.31	M10	214	M10 X 40
W6-16-16-M10	W62-16-16-M10	1.000	1.000	58.67	69.85	26.19	52.37	22.35	16.00	25.45	22.23	39.62	39.75	10.31	M10	219	M10 X 45
W6-20-16-M10	W62-20-16-M10	1.250	1.000	58.67	69.85	26.19	52.37	22.35	16.00	31.80	25.40	39.62	39.75	10.31	M10	219	M10 X 45
W6-20-20-M10	W62-20-20-M10	1.250	1.250	73.15	79.25	30.18	58.72	23.88	17.53	31.80	28.58	44.45	44.58	10.31	M10	222	M10 X 45
W6-24-20-M10	W62-24-20-M10	1.500	1.250	73.15	79.25	30.18	58.72	23.88	17.53	38.15	31.75	44.45	44.58	10.31	M10	222	M10 X 45
W6-24-24-M12	W62-24-24-M12	1.500	1.500	82.55	93.73	35.71	69.85	30.23	19.05	38.15	34.93	53.72	53.98	13.49	M12	225	M12 X 60
W6-28-24-M12	W62-28-24-M12	1.750	1.500	82.55	93.73	35.71	69.85	30.23	19.05	44.50	38.10	53.72	53.98	13.49	M12	225	M12 X 60
W6-32-32-M12	W62-32-32-M12	2.000	2.000	96.77	101.60	42.88	77.77	34.93	22.23	50.85	47.63	63.25	63.50	13.49	M12	228	M12 X 65
W6-36-32-M12	W62-36-32-M12	2.250	2.000	96.77	101.60	42.88	77.77	34.93	22.23	57.20	50.80	63.25	63.50	13.49	M12	228	M12 X 65

CODE 62 FLAT SOCKET – TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G DIA.	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W58-12-12-M10	W63-12-12-M10	0.750	0.750	63.50	74.93	23.80	50.80	31.75	14.22	19.10	15.88	31.75	31.88	10.31	M10	214	M10 X 50
W58-16-12-M10	W63-16-12-M10	1.000	0.750	63.50	74.93	23.80	50.80	31.75	14.22	25.45	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W58-16-16-M12	W63-16-16-M12	1.000	1.000	69.85	81.03	27.76	57.15	38.10	16.00	25.45	22.23	39.62	39.75	12.50	M12	219	M12 X 60
W58-20-16-M12	W63-20-16-M12	1.250	1.000	69.85	81.03	27.76	57.15	38.10	16.00	31.80	25.40	39.62	39.75	12.50	M12	219	M12 X 60
W58-20-20-M14	W63-20-20-M14	1.250	1.250	77.72	95.25	31.75	66.68	38.10	17.53	31.80	28.58	44.45	44.58	14.48	M14	222	M14 X 65
W58-24-20-M14	W63-24-20-M14	1.500	1.250	77.72	95.25	31.75	66.68	38.10	17.53	38.15	31.75	44.45	44.58	14.48	M14	222	M14 X 65
W58-24-24-M16	W63-24-24-M16	1.500	1.500	95.25	112.78	36.50	79.38	44.45	19.05	38.15	34.93	53.72	53.98	16.66	M16	225	M16 X 70
W58-28-24-M16	W63-28-24-M16	1.750	1.500	95.25	112.78	36.50	79.38	44.45	19.05	44.50	38.10	53.72	53.98	16.66	M16	225	M16 X 70
W58-32-32-M20	W63-32-32-M20	2.000	2.000	114.30	133.35	44.45	96.82	44.45	22.23	50.85	47.63	63.25	63.50	20.98	M20	228	M20 X 80
W58-36-32-M20	W63-36-32-M20	2.250	2.000	114.30	133.35	44.45	96.82	44.45	22.23	57.20	50.80	63.25	63.50	20.98	M20	228	M20 X 80

4 Bolt Flange Fittings

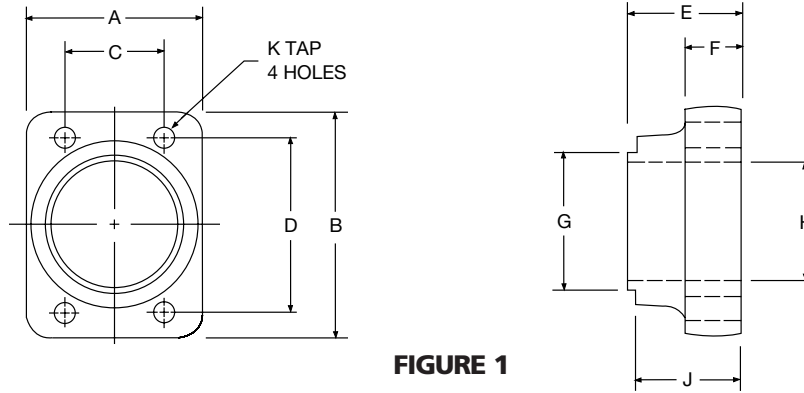


FIGURE 1

All measurements are in inches.

CODE 61 TANK PILOT											
CATALOG NO. FIG. 1	PAD SIZE	A	B	C	D	E	F	G	H	J	K TAP UNC-2B
W22-12	0.750	1.69	2.56	0.875	1.875	1.18	0.62	1.375	0.75	1.06	3/8-16
W22-16	1.000	1.94	2.75	1.031	2.062	1.25	0.56	1.500	1.00	1.12	3/8-16
W22-20	1.250	2.19	3.12	1.188	2.312	1.44	0.62	1.750	1.25	1.20	7/16-14
W22-24	1.500	2.56	3.69	1.406	2.750	1.75	0.81	2.125	1.50	1.62	1/2-13
W22-32	2.000	3.06	4.00	1.688	3.062	2.00	1.06	2.500	2.00	1.88	1/2-13
W22-40	2.500	3.56	4.50	2.000	3.500	2.31	1.12	3.250	2.50	2.19	1/2-13

CODE 62 O-RING SPACER										
CATALOG NO. FIG. 3	PAD SIZE	A	B	C ±.010	D ±.010	E	H	J DIA. MIN.	J DIA. MAX.	K DIA.
ASX-8-GP	0.500	1.94	2.30	0.718	1.594	0.870	0.500	1.000	1.005	0.344
ASX-12-GP	0.750	2.50	2.95	0.937	2.000	1.250	0.750	1.250	1.256	0.406
ASX-16-GP	1.000	2.75	3.19	1.093	2.250	1.500	1.000	1.560	1.565	0.469
ASX-20-GP	1.250	3.06	3.75	1.250	2.625	1.500	1.250	1.750	1.755	0.531
ASX-24-GP	1.500	3.75	4.44	1.437	3.125	1.750	1.500	2.115	2.115	0.656
ASX-32-GP	2.000	4.50	5.25	1.750	3.812	1.750	2.000	2.490	2.500	0.781
ASX-40-GP	2.500	5.87	6.87	2.312	4.875	2.060	2.500	2.995	3.005	0.906
ASX-48-GP	3.000	7.00	8.50	2.812	6.000	2.620	3.000	3.615	3.625	1.156

CODE 61 O-RING SPACER										
CATALOG NO. FIG. 3	PAD SIZE	A	B	C ±.010	D ±.010	E	H	J DIA. MIN.	J DIA. MAX.	K DIA.
AS-8-GP	0.500	1.813	2.125	0.688	1.500	0.88	0.500	1.000	1.005	0.344
AS-12-GP	0.750	2.063	2.563	0.875	1.875	0.88	0.750	1.250	1.255	0.406
AS-16-GP	1.000	2.313	2.750	1.031	2.063	0.88	1.000	1.560	1.565	0.406
AS-20-GP	1.250	2.875	3.125	1.188	2.313	0.94	1.250	1.750	1.755	0.469
AS-24-GP	1.500	3.250	3.688	1.406	2.750	1.19	1.500	2.115	2.125	0.531
AS-32-GP	2.000	3.813	4.000	1.688	3.063	1.38	2.000	2.490	2.500	0.531
AS-40-GP	2.500	4.281	4.500	2.000	3.500	1.75	2.500	2.995	3.005	0.531
AS-48-GP	3.000	5.156	5.313	2.438	4.188	1.38	3.000	3.615	3.625	0.656

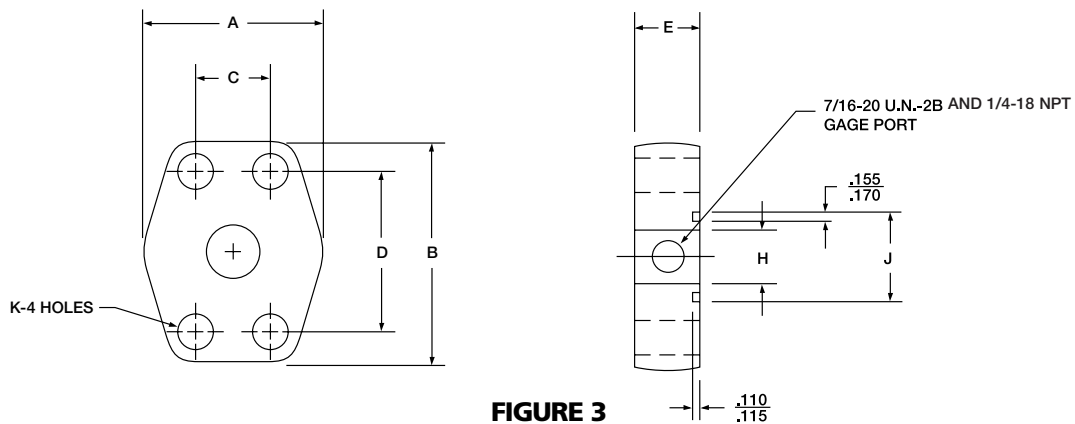


FIGURE 3

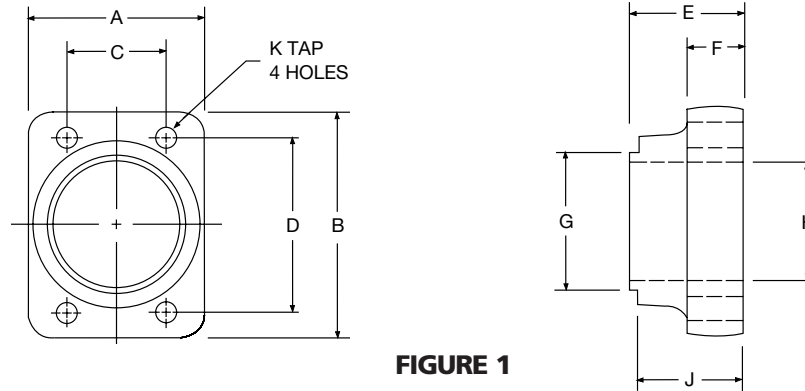


FIGURE 1

All measurements are in millimeters.

CODE 61 TANK PILOT											
CATALOG NO. FIG. 1	PAD SIZE	A	B	C	D	E	F	G	H	J	K TAP
W22-12-M10	0.750	42.93	65.02	22.23	47.63	29.97	15.75	34.93	19.05	26.93	M10
W22-16-M10	1.000	49.28	69.85	26.19	52.37	31.75	14.22	38.10	25.40	28.45	M10
W22-20-M10	1.250	55.63	79.25	30.18	58.72	36.58	15.75	44.45	31.75	30.48	M10
W22-24-M12	1.500	65.02	93.73	35.71	69.85	44.45	20.57	53.98	38.10	41.15	M12
W22-32-M12	2.000	77.72	101.60	42.88	88.90	50.80	26.92	63.50	50.80	47.75	M12
W22-40-M12	2.500	90.42	114.30	50.80	88.90	58.67	28.45	82.55	63.50	55.63	M12

CODE 62 O-RING SPACER										
CATALOG NO. FIG. 3	PAD SIZE	A	B	C	D	E	H	J DIA. MIN.	J DIA. MAX.	K DIA.
ASX-8-GP-M8	0.500	49.28	58.42	18.24	40.49	22.10	12.70	25.40	25.53	8.74
ASX-12-GP-M10	0.750	63.50	74.93	23.80	50.80	31.75	19.05	31.75	31.90	10.31
ASX-16-GP-M12	1.000	69.85	81.03	27.76	57.15	38.10	25.40	39.62	39.75	12.50
ASX-20-GP-M14	1.250	77.72	95.25	31.75	66.68	38.10	31.75	44.45	44.58	14.48
ASX-24-GP-M16	1.500	95.25	112.78	36.50	79.38	44.45	38.10	53.72	53.72	16.66
ASX-32-GP-M20	2.000	114.30	133.35	44.45	96.82	44.45	50.80	63.25	63.50	20.98
ASX-40-GP-M24	2.500	149.10	174.50	58.72	123.83	52.32	63.50	76.07	76.33	25.00
ASX-48-GP-M30	3.000	177.80	215.90	71.42	152.40	66.55	76.20	91.82	92.08	31.00

CODE 61 O-RING SPACER										
CATALOG NO. FIG. 3	PAD SIZE	A	B	C	D	E	H	J DIA. MIN.	J DIA. MAX.	K DIA.
AS-8-GP-M8	0.500	46.05	53.98	17.48	38.10	22.35	12.70	25.40	25.53	8.74
AS-12-GP-M10	0.750	52.40	65.10	22.23	47.63	22.35	19.05	31.75	31.88	10.31
AS-16-GP-M10	1.000	58.75	69.85	26.19	52.40	22.35	25.40	39.62	39.75	10.31
AS-20-GP-M10	1.250	73.03	79.38	30.18	58.75	23.88	31.75	44.45	44.58	10.31
AS-24-GP-M12	1.500	82.55	93.68	35.71	69.85	30.23	38.10	53.72	53.98	13.49
AS-32-GP-M12	2.000	96.85	101.60	42.88	77.80	35.05	50.80	63.25	63.50	13.49
AS-40-GP-M12	2.500	108.74	114.30	50.80	88.90	44.45	63.50	76.07	76.33	13.49
AS-48-GP-M16	3.000	130.96	134.95	61.93	106.38	35.05	76.20	91.82	92.08	16.66

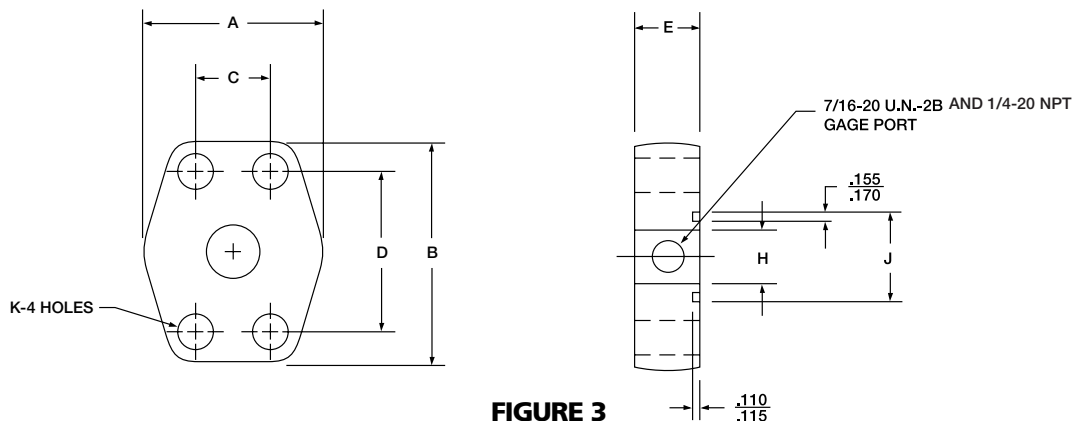


FIGURE 3

4 Bolt Flange Fittings

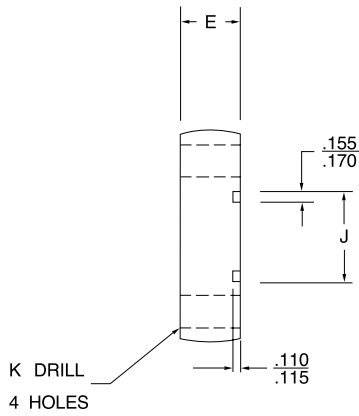
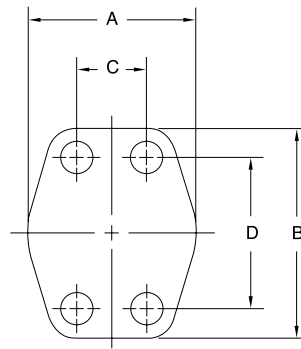


FIGURE 1



All measurements are in inches.

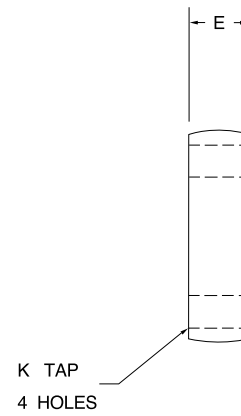


FIGURE 2

CODE 61 BLANKING

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
												O-RING	SHCS
W36-8-8	W37-8-8	0.500	1.813	2.125	0.688	1.500	0.750	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W36-12-12	W37-12-12	0.750	2.063	2.563	0.875	1.875	0.750	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W36-16-16	W37-16-16	1.000	2.313	2.750	1.031	2.063	0.880	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W36-20-20	W37-20-20	1.250	2.875	3.125	1.188	2.313	0.940	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W36-24-24	W37-24-24	1.500	3.250	3.688	1.406	2.750	1.190	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.25
W36-32-32	W37-32-32	2.000	3.813	4.000	1.688	3.063	1.440	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.50
W36-40-40	W37-40-40	2.500	4.281	4.500	2.000	3.500	1.815	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.75
W36-48-48	W37-48-48	3.000	5.156	5.313	2.438	4.188	2.190	3.615	3.625	0.656	5/8-11	237	5/8-11 X 3.50

CODE 62 BLANKING

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
												O-RING	SHCS
W38-12-12	W39-12-12	0.75	2.50	2.95	0.937	2.000	1.250	1.250	1.255	0.406	3/8-16	210	3/8-16 X 1.50
W38-16-16	W39-16-16	1.00	2.75	3.19	1.093	2.250	1.500	1.560	1.565	0.469	7/16-14	214	7/16-14 X 1.75
W38-20-20	W39-20-20	1.25	3.06	3.75	1.250	2.625	1.565	1.750	1.755	0.531	1/2-13	219	1/2-13 X 1.75
W38-24-24	W39-24-24	1.50	3.75	4.44	1.437	3.125	1.815	2.115	2.125	0.656	5/8-11	222	5/8-11 X 2.25
W38-32-32	W39-32-32	2.00	4.50	5.25	1.750	3.812	1.815	2.490	2.500	0.781	3/4-10	225	3/4-10 X 2.50

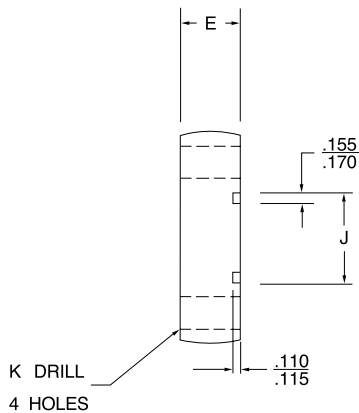


FIGURE 3

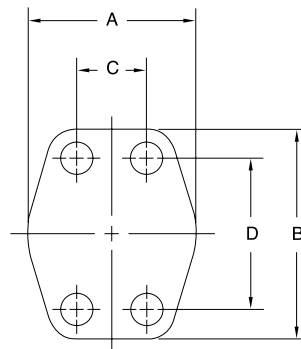


FIGURE 4

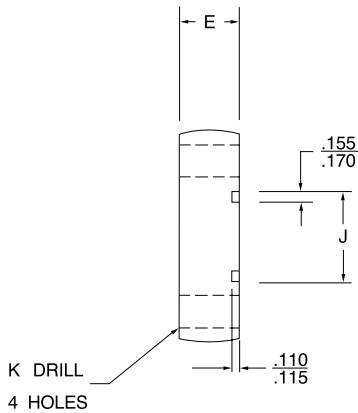
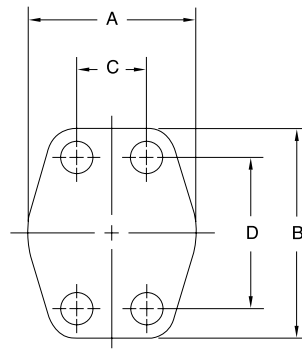


FIGURE 1



All measurements are in millimeters.

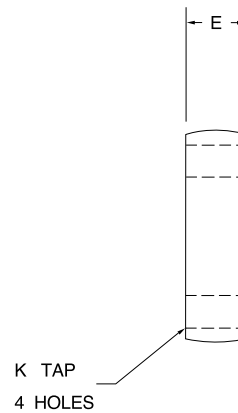


FIGURE 2

CODE 61 BLANKING

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
												O-RING	SHCS
W36-8-8-M8	W37-8-8-M8	0.500	46.05	53.98	17.48	38.10	19.05	25.40	25.53	8.74	M8	210	M8 X 40
W36-12-12-M10	W37-12-12-M10	0.750	52.40	65.10	22.23	48.63	19.05	31.75	31.88	10.31	M10	214	M10 X 40
W36-16-16-M10	W37-16-16-M10	1.000	58.75	69.85	26.19	52.40	22.35	39.62	39.75	10.31	M10	219	M10 X 45
W36-20-20-M10	W37-20-20-M10	1.250	73.03	79.38	30.18	58.75	23.88	44.45	44.58	10.31	M10	222	M10 X 45
W36-24-24-M12	W37-24-24-M12	1.500	82.55	93.68	35.71	69.85	30.23	53.72	53.98	13.49	M12	225	M12 X 60
W36-32-32-M12	W37-32-32-M12	2.000	96.85	101.60	42.88	77.80	36.58	63.25	63.50	13.49	M12	228	M12 X 65
W36-40-40-M12	W37-40-40-M12	2.500	108.74	114.30	50.80	88.90	46.10	76.07	76.33	13.49	M12	232	M12 X 70
W36-48-48-M16	W37-48-48-M16	3.000	130.96	134.95	61.93	106.38	55.63	91.82	92.08	16.66	M12	237	M12 X 80

CODE 62 BLANKING

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
												O-RING	SHCS
W38-12-12-M10	W39-12-12-M10	0.75	63.50	74.93	23.80	50.80	31.75	31.75	31.88	10.31	M10	214	M10 X 50
W38-16-16-M12	W39-16-16-M12	1.00	69.85	81.03	27.76	57.15	38.10	39.62	39.75	12.50	M12	219	M12 X 60
W38-20-20-M14	W39-20-20-M14	1.25	77.72	95.25	31.75	66.68	39.75	44.45	44.58	14.48	M14	222	M14 X 65
W38-24-24-M16	W39-24-24-M16	1.50	95.25	112.78	36.50	79.38	46.10	53.72	53.98	16.66	M16	225	M16 X 70
W38-32-32-M20	W39-32-32-M20	2.00	114.30	133.35	44.45	96.82	46.10	63.25	63.50	20.98	M20	228	M20 X 80

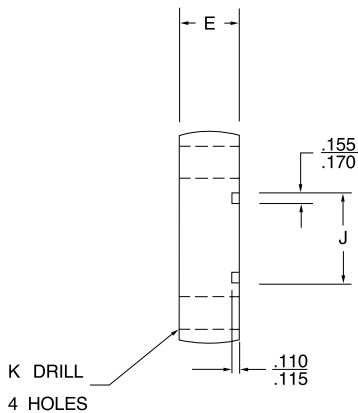


FIGURE 3

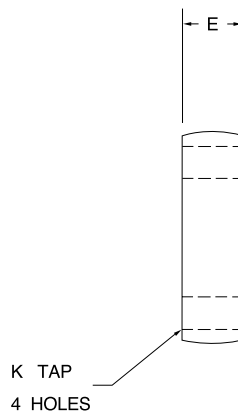
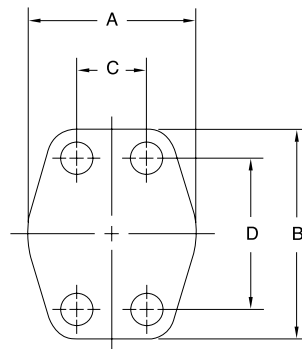


FIGURE 4

4 Bolt Flange Fittings

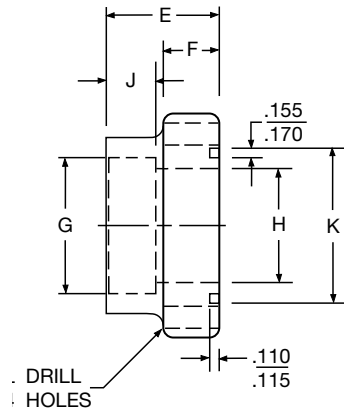


FIGURE 1

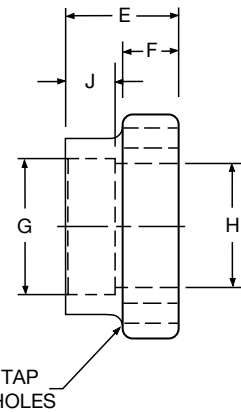
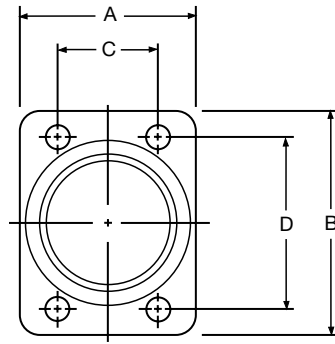


FIGURE 2

All measurements are in inches.

CODE 61 DEEP SOCKET – PIPE																		
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP UN-2B	MOUNTING HARDWARE	
																	O-RING	SHCS
W31-12-12	W3-12-12	0.750	0.750	1.69	2.56	0.875	1.875	1.185	0.625	1.062	0.750	0.685	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W31-16-16	W3-16-16	1.000	1.000	1.94	2.75	1.031	2.062	1.25	0.56	1.328	1.000	0.630	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W31-20-20	W3-20-20	1.250	1.250	2.19	3.12	1.188	2.312	1.44	0.62	1.672	1.250	0.690	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W31-24-24	W3-24-24	1.500	1.500	2.56	3.69	1.406	2.750	1.75	0.81	1.922	1.500	0.750	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W31-32-32	W3-32-32	2.000	2.000	3.06	4.00	1.688	3.062	2.00	1.06	2.406	2.000	0.875	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W31-40-40	W3-40-40	2.500	2.500	3.56	4.50	2.000	3.500	2.31	1.12	2.906	2.500	1.000	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00

CODE 62 DEEP SOCKET – PIPE																		
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP UN-2B	MOUNTING HARDWARE	
																	O-RING	SHCS
W81-12-12	W80-12-12	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.062	0.750	0.56	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W81-16-16	W80-16-16	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.328	1.000	0.63	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W81-20-20	W80-20-20	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.672	1.250	0.69	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W81-24-24	W80-24-24	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.922	1.500	0.75	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W81-32-32	W80-32-32	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.406	2.000	0.88	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75

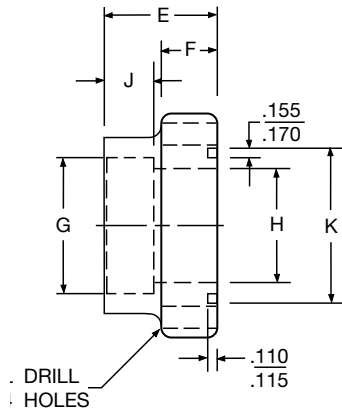


FIGURE 1

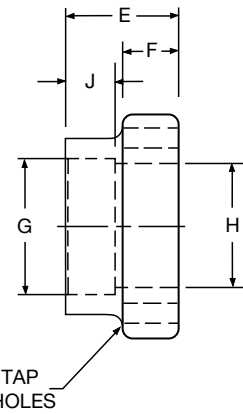
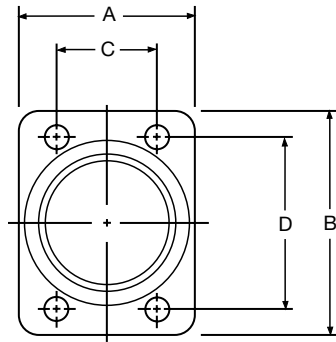


FIGURE 2

All measurements are in millimeters.

CODE 61 DEEP SOCKET – PIPE																		
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP	MOUNTING HARDWARE	
																	O-RING	SHCS
W31-12-12-M10	W3-12-12-M10	0.750	0.750	42.93	65.02	22.23	47.63	30.10	15.88	26.97	19.05	17.40	31.75	31.88	10.31	M10	214	M10 X 30
W31-16-16-M10	W3-16-16-M10	1.000	1.000	49.28	69.85	26.19	52.37	31.75	14.22	33.73	25.40	16.00	39.62	39.75	10.31	M10	219	M10 X 35
W31-20-20-M10	W3-20-20-M10	1.250	1.250	55.63	79.25	30.18	58.72	36.58	15.75	42.47	31.75	17.53	44.45	44.58	10.31	M10	222	M10 X 35
W31-24-24-M12	W3-24-24-M12	1.500	1.500	65.02	93.73	35.71	69.85	44.45	20.57	48.82	38.10	19.05	53.72	53.98	13.49	M12	225	M12 X 45
W31-32-32-M12	W3-32-32-M12	2.000	2.000	77.72	101.60	42.88	77.77	50.80	26.92	61.11	50.80	22.23	63.25	63.50	13.49	M12	228	M12 X 50
W31-40-40-M12	W3-40-40-M12	2.500	2.500	90.42	114.30	50.80	88.90	58.67	28.45	73.81	63.50	25.40	76.07	76.33	13.49	M12	232	M12 X 60

CODE 62 DEEP SOCKET – PIPE																		
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP	MOUNTING HARDWARE	
																	O-RING	SHCS
W81-12-12-M10	W80-12-12-M10	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.97	19.05	14.22	31.75	31.88	10.31	M10	214	M10 X 40
W81-16-16-M12	W80-16-16-M12	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.73	25.40	16.00	39.62	39.75	12.50	M12	219	M12 X 40
W81-20-20-M14	W80-20-20-M14	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.47	31.75	17.53	44.45	44.58	14.48	M14	222	M14 X 45
W81-24-24-M16	W80-24-24-M16	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.82	38.10	19.05	53.72	53.98	16.66	M16	225	M16 X 50
W81-32-32-M20	W80-32-32-M20	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	61.11	50.80	22.35	63.25	63.50	20.98	M20	228	M20 X 65

4 Bolt Flange Fittings

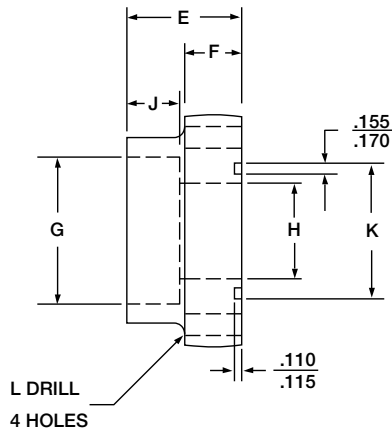
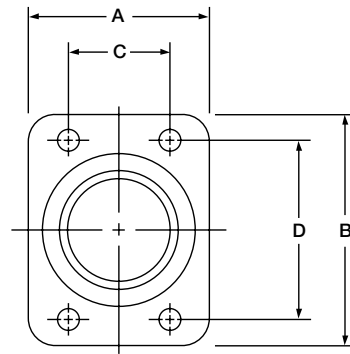


FIGURE 1



All measurements are in inches.

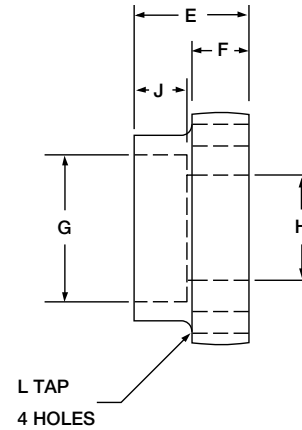


FIGURE 2

CODE 61 DEEP SOCKET – TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP UN-2B	MOUNTING HARDWARE	
																	O-RING	SHCS
W51-12-12	W5-12-12	0.750	0.750	1.69	2.56	0.875	1.875	1.185	0.50	0.752	0.625	0.685	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W51-16-12	W5-16-12	1.000	0.750	1.69	2.56	0.875	1.875	1.185	0.50	1.002	0.750	0.685	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W51-16-16	W5-16-16	1.000	1.000	1.94	2.75	1.031	2.062	1.25	0.56	1.002	0.875	0.63	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W51-20-16	W5-20-16	1.250	1.000	1.94	2.75	1.031	2.062	1.25	0.56	1.252	1.000	0.63	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W51-20-20	W5-20-20	1.250	1.250	2.19	3.12	1.188	2.312	1.44	0.62	1.252	1.125	0.69	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W51-24-20	W5-24-20	1.500	1.250	2.19	3.12	1.188	2.312	1.44	0.62	1.502	1.250	0.69	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W51-24-24	W5-24-24	1.500	1.500	2.56	3.69	1.406	2.750	1.75	0.81	1.502	1.375	0.75	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W51-28-24	W5-28-24	1.750	1.500	2.56	3.69	1.406	2.750	1.75	0.81	1.752	1.500	0.75	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W51-32-32	W5-32-32	2.000	2.000	3.06	4.00	1.688	3.062	2.00	1.06	2.002	1.875	0.87	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W51-36-32	W5-36-32	2.250	2.000	3.06	4.00	1.688	3.062	2.00	1.06	2.252	2.000	0.87	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W51-40-40	W5-40-40	2.500	2.500	3.56	4.50	2.000	3.500	2.31	1.12	2.502	2.375	1.00	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00
W51-44-40	W5-44-40	2.750	2.500	3.56	4.50	2.000	3.500	2.31	1.12	2.752	2.500	1.00	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00

CODE 62 DEEP SOCKET – TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP UN-2B	MOUNTING HARDWARE	
																	O-RING	SHCS
W83-12-12	W82-12-12	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	0.752	0.625	0.56	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W83-16-12	W82-16-12	1.00	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.002	0.750	0.56	1.250	1.755	0.406	3/8-16	214	3/8-16 X 1.50
W83-16-16	W82-16-16	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.002	0.875	0.63	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W83-20-16	W82-20-16	1.25	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.252	1.000	0.63	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W83-20-20	W82-20-20	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.252	1.125	0.69	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W83-24-20	W82-24-20	1.50	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.502	1.250	0.69	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W83-24-24	W82-24-24	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.502	1.375	0.75	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W83-28-24	W82-28-24	1.75	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.752	1.500	0.75	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W83-32-32	W82-32-32	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.002	1.875	0.88	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
W83-36-32	W82-36-32	2.25	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.252	2.000	0.88	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75

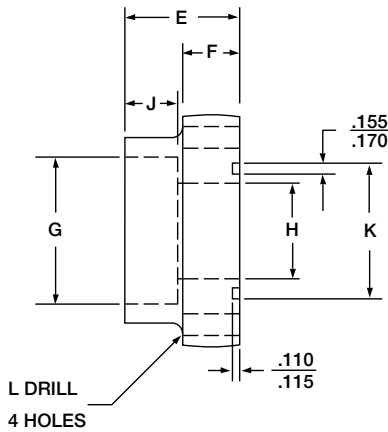


FIGURE 1

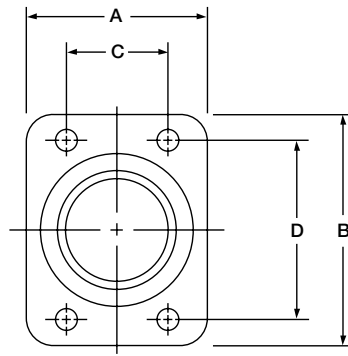


FIGURE 2

All measurements are in millimeters.

CODE 61 DEEP SOCKET - TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP	MOUNTING HARDWARE	
																	O-RING	SHCS
W51-12-12-M10	W5-12-12-M10	0.750	0.750	42.93	65.02	22.23	47.63	30.10	12.70	19.10	15.88	17.40	31.75	31.88	10.31	M10	214	M10 X 30
W51-16-12-M10	W5-16-12-M10	1.000	0.750	42.93	65.02	22.23	47.63	30.10	12.70	25.45	19.05	17.40	31.75	31.88	10.31	M10	214	M10 X 30
W51-16-16-M10	W5-16-16-M10	1.000	1.000	49.28	69.85	26.19	52.37	31.75	14.22	25.45	22.23	16.00	39.62	39.75	10.31	M10	219	M10 X 35
W51-20-16-M10	W5-20-16-M10	1.250	1.000	49.28	69.85	26.19	52.37	31.75	14.22	31.80	25.40	16.00	39.62	39.75	10.31	M10	219	M10 X 35
W51-20-20-M10	W5-20-20-M10	1.250	1.250	55.63	79.25	30.18	58.72	36.58	15.75	31.80	28.58	17.53	44.45	44.58	10.31	M10	222	M10 X 35
W51-24-20-M10	W5-24-20-M10	1.500	1.250	55.63	79.25	30.18	58.72	36.58	15.75	38.15	31.75	17.53	44.45	44.58	10.31	M10	222	M10 X 35
W51-24-24-M12	W5-24-24-M12	1.500	1.500	65.02	93.73	35.71	69.85	44.45	20.57	38.15	34.93	19.05	53.72	53.98	13.49	M12	225	M12 X 45
W51-28-24-M12	W5-28-24-M12	1.750	1.500	65.02	93.73	35.71	69.85	44.45	20.57	44.50	38.10	19.05	53.72	53.98	13.49	M12	225	M12 X 45
W51-32-32-M12	W5-32-32-M12	2.000	2.000	77.72	101.60	42.88	77.77	50.80	26.92	50.85	47.63	22.10	63.25	63.50	13.49	M12	228	M12 X 50
W51-36-32-M12	W5-36-32-M12	2.500	2.000	77.72	101.60	42.88	77.77	50.80	26.92	57.20	50.80	22.10	63.25	63.50	13.49	M12	228	M12 X 50
W51-40-40-M12	W5-40-40-M12	2.500	2.500	90.42	114.30	50.80	88.90	58.67	28.45	63.55	60.33	25.40	76.07	76.33	13.49	M12	232	M12 X 60
W51-44-40-M12	W5-44-40-M12	2.750	2.500	90.42	114.30	50.80	88.90	58.67	28.45	69.90	63.50	25.40	76.07	76.33	13.49	M12	232	M12 X 60

CODE 62 DEEP SOCKET - TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J	K MIN.	K MAX.	L DRILL DIA.	L TAP	MOUNTING HARDWARE	
																	O-RING	SHCS
W83-12-12-M10	W82-12-12-M10	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	19.10	15.88	14.22	31.75	31.88	10.31	M10	214	M10 X 40
W83-16-12-M10	W82-16-12-M10	1.00	0.75	49.28	71.37	23.80	50.80	36.07	21.08	25.45	19.05	14.22	31.75	44.58	10.31	M10	214	M10 X 40
W83-16-16-M12	W82-16-16-M12	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	25.45	22.23	16.00	39.62	39.75	12.50	M12	219	M12 X 40
W83-20-16-M12	W82-20-16-M12	1.25	1.00	55.37	81.03	27.76	57.15	40.89	21.08	31.80	25.40	16.00	39.62	39.75	12.50	M12	219	M12 X 40
W83-20-20-M14	W82-20-20-M14	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	31.80	28.58	17.53	44.45	44.58	14.48	M14	222	M14 X 45
W83-24-20-M14	W82-24-20-M14	1.50	1.25	61.98	95.25	31.75	66.68	43.94	23.88	38.15	31.75	17.53	44.45	44.58	14.48	M14	222	M14 X 45
W83-24-24-M16	W82-24-24-M16	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	38.15	34.93	19.05	53.72	53.98	16.66	M16	225	M16 X 50
W83-28-24-M16	W82-28-24-M16	1.75	1.50	71.37	112.78	36.50	79.38	55.12	27.94	44.50	38.10	19.05	53.72	53.98	16.66	M16	225	M16 X 50
W83-32-32-M20	W82-32-32-M20	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	50.85	47.63	22.35	63.25	63.50	20.98	M20	228	M20 X 65
W83-36-32-M20	W82-36-32-M20	2.25	2.00	87.38	133.35	44.45	96.82	62.99	37.08	57.20	50.80	22.35	63.25	63.50	20.98	M20	228	M20 X 65

4 Bolt Flange Fittings

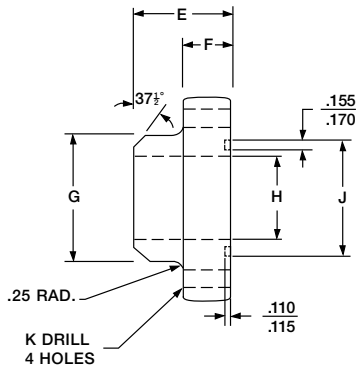
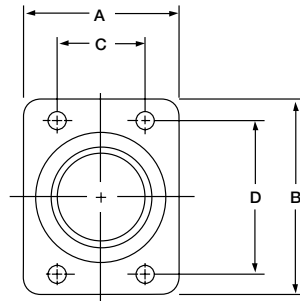


FIGURE 1



All measurements are in inches.

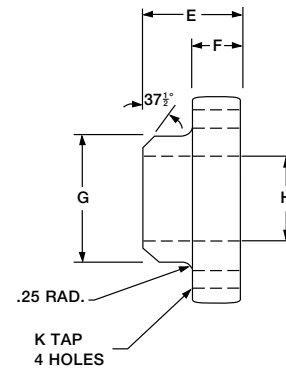


FIGURE 2

CODE 61 BUTT WELD – SCHED. 40 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W35-12	W34-12	0.75	0.75	1.69	2.56	0.875	1.875	1.185	.625	1.050	0.82	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W35-16	W34-16	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	1.04	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W35-20	W34-20	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.38	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W35-24	W34-24	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.61	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W35-32	W34-32	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	2.06	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W35-40	W34-40	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.46	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00
* W35-48	* W34-48	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	3.06	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.75

CODE 61 BUTT WELD – SCHED. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W24-12	W23-12	0.75	0.75	1.69	2.56	0.875	1.875	1.185	.625	1.050	0.742	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W24-16	W23-16	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.957	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W24-20	W23-20	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.278	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W24-24	W23-24	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.500	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W24-32	W23-32	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.939	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W24-40	W23-40	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.323	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00
* W24-48	W23-48	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	2.900	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.75

CODE 61 BUTT WELD – SCHED. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W27-12	W25-12	0.75	0.75	1.69	2.56	0.875	1.875	1.185	.625	1.050	0.614	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W27-16	W25-16	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.815	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W27-20	W25-20	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.160	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W27-24	W25-24	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.337	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W27-32	W25-32	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.689	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00
W27-40	W25-40	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.125	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.00
* W27-48	W25-48	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	2.624	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.75

* NOTE - BAR STOCK MATERIAL

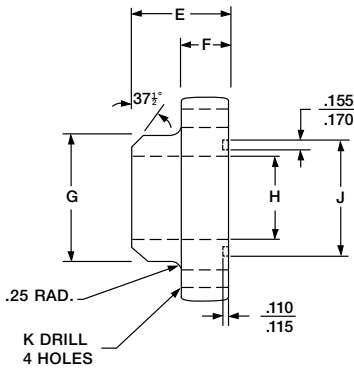
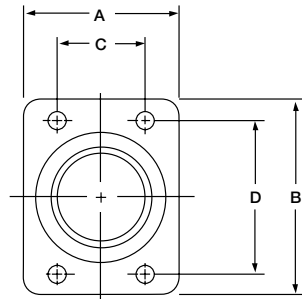


FIGURE 1



All measurements are in millimeters.

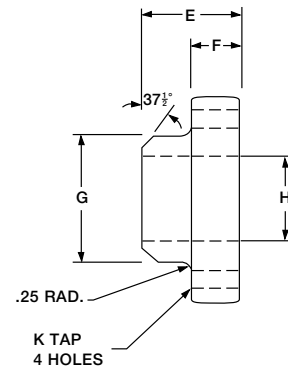


FIGURE 2

CODE 61 BUTT WELD – SCHED. 40 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W35-12-M10	W34-12-M10	0.75	0.75	42.93	65.02	22.23	47.63	30.10	15.88	26.67	20.83	31.75	31.88	10.31	M10	214	M10 X 30
W35-16-M10	W34-16-M10	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	26.42	39.62	39.75	10.31	M10	219	M10 X 35
W35-20-M10	W34-20-M10	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	35.05	44.45	44.58	10.31	M10	222	M10 X 35
W35-24-M12	W34-24-M12	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	40.89	53.72	53.98	13.49	M12	225	M12 X 45
W35-32-M12	W34-32-M12	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	52.32	63.25	63.50	13.49	M12	228	M12 X 50
W35-40-M12	W34-40-M12	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	62.48	76.07	76.33	13.49	M12	232	M12 X 60
* W35-48-M16	* W34-48-M16	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	77.72	91.82	92.08	16.66	M16	237	M16 X 80

CODE 61 BUTT WELD – SCHED. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W24-12-M10	W23-12-M10	0.75	0.75	42.93	65.02	22.23	47.63	30.10	15.88	26.67	18.85	31.75	31.88	10.31	M10	214	M10 X 30
W24-16-M10	W23-16-M10	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	24.31	39.62	39.75	10.31	M10	219	M10 X 35
W24-20-M10	W23-20-M10	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	32.46	44.45	44.58	10.31	M10	222	M10 X 35
W24-24-M12	W23-24-M12	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	38.10	53.72	53.98	13.49	M12	225	M12 X 45
W24-32-M12	W23-32-M12	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	49.25	63.25	63.50	13.49	M12	228	M12 X 50
W24-40-M12	W23-40-M12	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	59.00	76.07	76.33	13.49	M12	232	M12 X 60
* W24-48-M16	W23-48-M16	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	73.66	91.82	92.08	16.66	M16	237	M16 X 80

CODE 61 BUTT WELD – SCHED. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W27-12-M10	W25-12-M10	0.75	0.75	42.93	65.02	22.23	47.63	30.10	15.88	26.67	15.60	31.75	31.88	10.31	M10	214	M10 X 30
W27-16-M10	W25-16-M10	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	20.70	39.62	39.75	10.31	M10	219	M10 X 35
W27-20-M10	W25-20-M10	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	29.46	44.45	44.58	10.31	M10	222	M10 X 35
W27-24-M12	W25-24-M12	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	33.96	53.72	53.98	13.49	M12	225	M12 X 45
W27-32-M12	W25-32-M12	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	42.90	63.25	63.50	13.49	M12	228	M12 X 50
W27-40-M12	W25-40-M12	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	53.98	76.07	76.33	13.49	M12	232	M12 X 60
* W27-48-M16	W25-48-M16	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	66.65	91.82	92.08	16.66	M16	237	M16 X 80

* NOTE - BAR STOCK MATERIAL

4 Bolt Flange Fittings

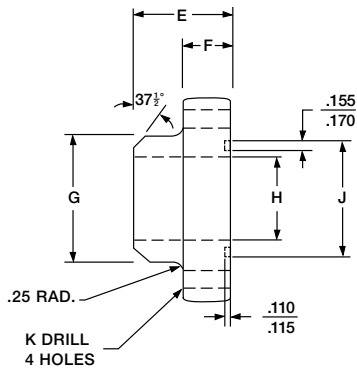
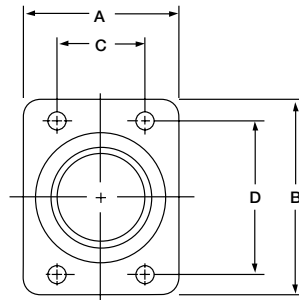


FIGURE 1



All measurements are in inches.

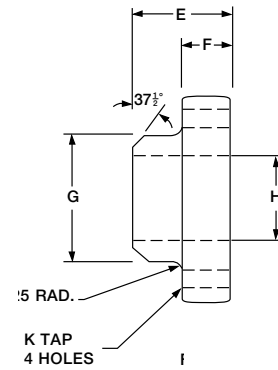


FIGURE 2

CODE 62 BUTT WELD – SCHED. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W28-12	W26-12	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.742	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W28-16	W26-16	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.957	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W28-20	W26-20	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.278	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W28-24	W26-24	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.500	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W28-32	W26-32	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.939	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
* W28-40	* W26-40	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.323	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
* W28-48	* W26-48	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.900	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

CODE 62 BUTT WELD – SCHED. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W30-12	W29-12	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.614	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W30-16	W29-16	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.815	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W30-20	W29-20	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.160	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W30-24	W29-24	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.337	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W30-32	W29-32	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.689	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
* W30-40	* W29-40	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.125	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
* W30-48	* W29-48	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.624	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

CODE 62 BUTT WELD – SCHED. XXS. PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W33-12	W32-12	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.434	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W33-16	W32-16	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.599	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W33-20	W32-20	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	0.896	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W33-24	W32-24	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.100	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W33-32	W32-32	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.503	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
* W33-40	* W32-40	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	1.771	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
* W33-48	* W32-48	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.300	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

* NOTE-BAR STOCK MATERIAL

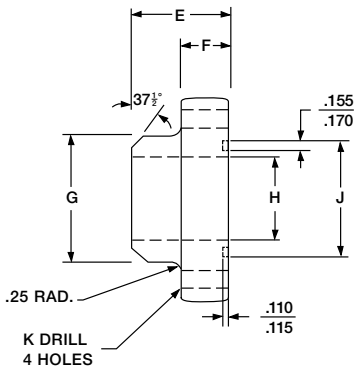


FIGURE 1

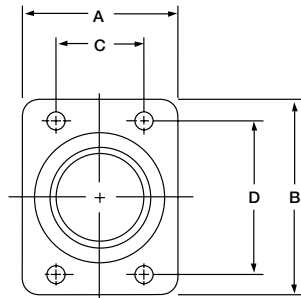


FIGURE 2

All measurements are in millimeters.

CODE 62 BUTT WELD – SCHED. 80 PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W28-12-M10	W26-12-M10	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.67	18.85	31.75	31.88	10.31	M10	214	M10 X 40
W28-16-M12	W26-16-M12	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	24.31	39.62	39.75	12.50	M12	219	M12 X 40
W28-20-M14	W26-20-M14	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	32.46	44.45	44.58	14.48	M14	222	M14 X 45
W28-24-M16	W26-24-M16	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	38.10	53.72	53.98	16.66	M16	225	M16 X 50
W28-32-M20	W26-32-M20	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	49.25	63.25	63.50	20.98	M20	228	M20 X 65
* W28-40-M24	* W26-40-M24	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	59.00	76.07	76.33	25.00	M24	232	M24 X 80
* W28-48-M30	* W26-48-M30	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	73.66	91.82	92.08	31.00	M30	237	M30 X 105

CODE 62 BUTT WELD – SCHED. 160 PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W30-12-M10	W29-12-M10	0.75	0.75	49.28	71.37	0.94	50.80	36.07	21.08	26.67	15.60	31.75	31.88	10.31	M10	214	M10 X 40
W30-16-M12	W29-16-M12	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	20.70	39.62	39.75	12.50	M12	219	M12 X 40
W30-20-M14	W29-20-M14	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	29.46	44.45	44.58	14.48	M14	222	M14 X 45
W30-24-M16	W29-24-M16	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	33.96	53.72	53.98	16.66	M16	225	M16 X 50
W30-32-M20	W29-32-M20	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	42.90	63.25	63.50	20.98	M20	228	M20 X 65
* W30-40-M24	* W29-40-M24	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	53.98	76.07	76.33	25.00	M24	232	M24 X 80
* W30-48-M30	* W29-48-M30	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	66.65	91.82	92.08	31.00	M30	237	M30 X 105

CODE 62 BUTT WELD – SCHED. XXS. PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W33-12-M10	W32-12-M10	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.67	11.02	31.75	31.88	10.31	M10	214	M10 X 40
W33-16-M12	W32-16-M12	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	15.21	39.62	39.75	12.50	M12	219	M12 X 40
W33-20-M14	W32-20-M14	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	22.76	44.45	44.58	14.48	M14	222	M14 X 45
W33-24-M16	W32-24-M16	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	27.94	53.72	53.98	16.66	M16	225	M16 X 50
W33-32-M20	W32-32-M20	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	38.18	63.25	63.50	20.98	M20	228	M20 X 65
* W33-40-M24	* W32-40-M24	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	44.98	76.07	76.33	25.00	M24	232	M24 X 80
* W33-48-M30	* W32-48-M30	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	58.42	91.82	92.08	31.00	M30	237	M30 X 105

* NOTE - BAR STOCK MATERIAL

4 Bolt Flange Fittings

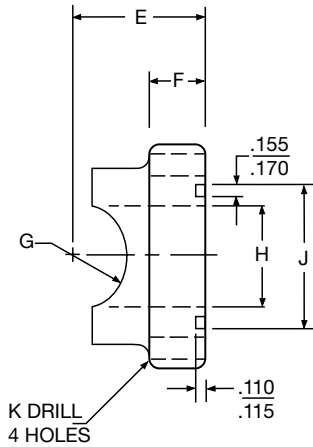


FIGURE 1

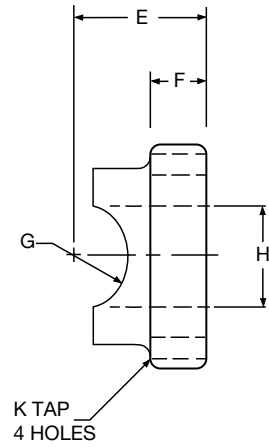
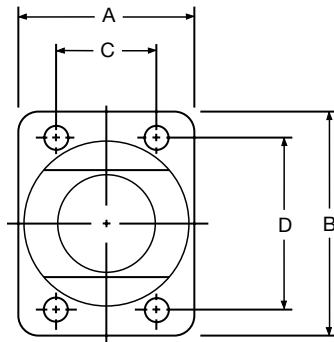


FIGURE 2

All measurements are in inches.

CODE 61 SADDLE – PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W8-12-12	W7-12-12	0.75	0.75	1.69	2.56	0.875	1.875	1.31	.625	0.532	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W8-16-16	W7-16-16	1.00	1.00	1.94	2.75	1.031	2.062	1.50	0.56	0.665	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W8-20-20	W7-20-20	1.25	1.25	2.19	3.12	1.188	2.312	1.81	0.62	0.837	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W8-24-24	W7-24-24	1.50	1.50	2.56	3.69	1.406	2.750	2.12	0.81	0.957	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W8-32-32	W7-32-32	2.00	2.00	3.06	4.00	1.688	3.062	2.62	1.06	1.200	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00

CODE 61 SADDLE – TUBE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W87-12-12	W69-12-12	0.75	0.75	1.69	2.56	0.875	1.875	1.06	.625	0.382	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W87-16-12	W69-16-12	1.00	0.75	1.69	2.56	0.875	1.875	1.28	.625	0.507	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W87-20-12	W69-20-12	1.25	0.75	1.69	2.56	0.875	1.875	1.38	.625	0.632	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.25
W87-16-16	W69-16-16	1.00	1.00	1.94	2.75	1.031	2.062	1.13	0.56	0.507	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W87-20-16	W69-20-16	1.25	1.00	1.94	2.75	1.031	2.062	1.44	0.56	0.632	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W87-24-16	W69-24-16	1.50	1.00	1.94	2.75	1.031	2.062	1.59	0.56	0.757	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.25
W87-20-20	W69-20-20	1.25	1.25	2.19	3.12	1.188	2.312	1.375	0.62	0.632	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W87-24-20	W69-24-20	1.50	1.25	2.19	3.12	1.188	2.312	1.687	0.62	0.757	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W87-32-20	W69-32-20	2.00	1.25	2.19	3.12	1.188	2.312	2.00	0.62	1.007	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.50
W87-24-24	W69-24-24	1.50	1.50	2.56	3.69	1.406	2.750	1.63	0.81	0.757	1.50	2.125	2.115	0.531	1/2-13	225	1/2-13 X 1.75
W87-28-24	W69-28-24	1.75	1.50	2.56	3.69	1.406	2.750	2.00	0.81	0.882	1.50	2.125	2.115	0.531	1/2-13	225	1/2-13 X 1.75
W87-32-24	W69-32-24	2.00	1.50	2.56	3.69	1.406	2.750	2.12	0.81	1.007	1.50	2.125	2.115	0.531	1/2-13	225	1/2-13 X 1.75
W87 32 32	W69-32-32	2.00	2.00	3.06	4.00	1.688	3.062	2.12	1.06	1.007	2.00	2.500	2.490	0.531	1/2-13	228	1/2-13 X 2.00
W87-36-32	W69-36-32	2.25	2.00	3.06	4.00	1.688	3.062	2.44	1.06	1.132	2.00	2.500	2.490	0.531	1/2-13	228	1/2-13 X 2.00

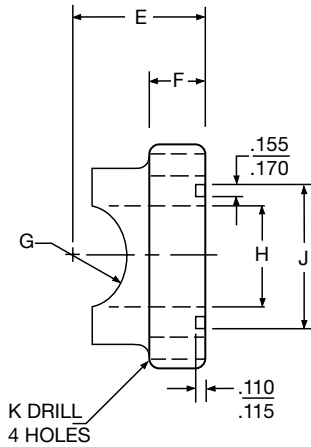


FIGURE 1

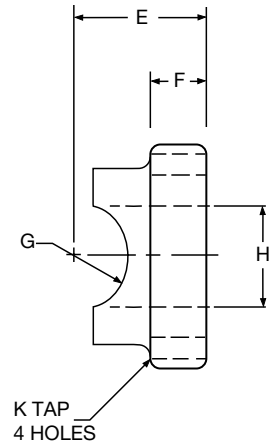
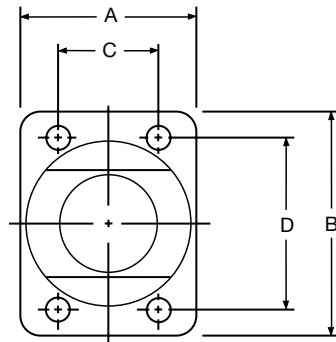


FIGURE 2

All measurements are in millimeters.

CODE 61 SADDLE – PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W8-12-12-M10	W7-12-12-M10	0.75	0.75	42.93	65.02	22.23	47.63	33.27	15.88	13.51	19.05	31.75	31.88	10.31	M10	214	M10 X 35
W8-16-16-M10	W7-16-16-M10	1.00	1.00	49.28	69.85	26.19	52.37	38.10	14.22	16.89	25.40	39.62	39.75	10.31	M10	219	M10 X 35
W8-20-20-M10	W7-20-20-M10	1.25	1.25	55.63	79.25	30.18	58.72	45.97	15.75	21.26	31.75	44.45	44.58	10.31	M10	222	M10 X 35
W8-24-24-M12	W7-24-24-M12	1.50	1.50	65.02	93.73	35.71	69.85	53.85	20.57	24.31	38.10	53.72	53.98	13.49	M12	225	M12 X 45
W8-32-32-M12	W7-32-32-M12	2.00	2.00	77.72	101.60	42.88	77.77	66.55	26.92	30.48	50.80	63.25	63.50	13.49	M12	228	M12 X 50

CODE 61 SADDLE – TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	TUBE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W87-12-12-M10	W69-12-12-M10	0.750	0.750	42.93	65.02	22.23	47.63	26.92	15.88	9.70	19.05	31.75	31.88	10.31	M10	214	M10 X 35
W87-16-12-M10	W69-16-12-M10	1.000	0.750	42.93	65.02	22.23	47.63	32.51	15.88	12.88	19.05	31.75	31.88	10.31	M10	214	M10 X 35
W87-20-12-M10	W69-20-12-M10	1.250	0.750	42.93	65.02	22.23	47.63	35.05	15.88	16.05	19.05	31.75	31.88	10.31	M10	214	M10 X 35
W87-16-16-M10	W69-16-16-M10	1.000	1.000	49.28	69.85	26.19	52.37	28.70	14.22	12.88	25.40	39.62	39.75	10.31	M10	219	M10 X 35
W87-20-16-M10	W69-20-16-M10	1.250	1.000	49.28	69.85	26.19	52.37	36.58	14.22	16.05	25.40	39.62	39.75	10.31	M10	219	M10 X 35
W87-24-16-M10	W69-24-16-M10	1.500	1.000	49.28	69.85	26.19	52.37	40.39	14.22	19.23	25.40	39.62	39.75	10.31	M10	219	M10 X 35
W87-20-20-M10	W69-20-20-M10	1.250	1.250	55.63	79.25	30.18	58.72	34.93	15.75	16.05	31.75	44.45	44.58	10.31	M10	222	M10 X 35
W87-24-20-M10	W69-24-20-M10	1.500	1.250	55.63	79.25	30.18	58.72	42.83	15.75	19.23	31.75	44.45	44.58	10.31	M10	222	M10 X 35
W87-32-20-M10	W69-32-20-M10	2.000	1.250	55.63	79.25	30.18	58.72	50.80	15.75	25.58	31.75	44.45	44.58	10.31	M10	222	M10 X 35
W87-24-24-M12	W69-24-24-M12	1.500	1.500	65.02	93.73	35.71	69.85	41.40	20.57	19.23	38.10	53.98	53.72	13.49	M12	225	M12 X 45
W87-28-24-M12	W69-28-24-M12	1.750	1.500	65.02	93.73	35.71	69.85	50.80	20.57	22.40	38.10	53.98	53.72	13.49	M12	225	M12 X 45
W87-32-24-M12	W69-32-24-M12	2.000	1.500	65.02	93.73	35.71	69.85	53.85	20.57	25.58	38.10	53.98	53.72	13.49	M12	225	M12 X 45
W87 32 32-M12	W69-32-32-M12	2.000	2.000	77.72	101.60	42.88	77.77	53.85	26.92	25.58	50.80	63.50	63.25	13.49	M12	228	M12 X 50
W87-36-32-M12	W69-36-32-M12	2.250	2.000	77.72	101.60	42.88	77.77	61.98	26.92	28.75	50.80	63.50	63.25	13.49	M12	228	M12 X 50

4 Bolt Flange Fittings

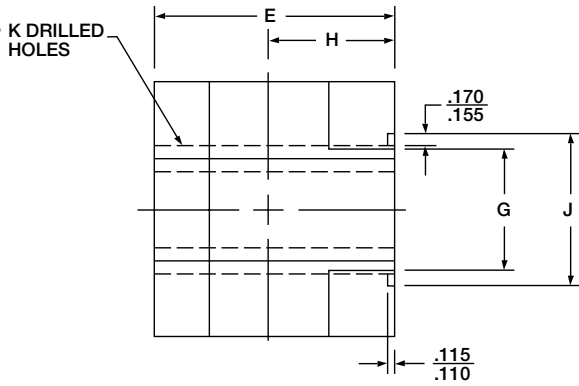


FIGURE 1

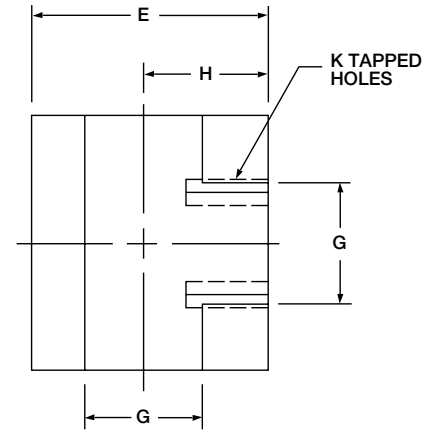
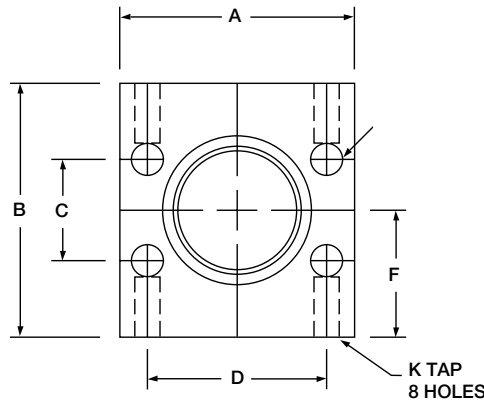


FIGURE 2



All measurements are in inches.

CODE 61 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD UN-2B
W17-12	W16-12	0.75	2.62	2.75	0.875	1.875	2.25	1.38	0.75	1.03	1.250	1.255	0.406	3/8-16
W17-16	W16-16	1.00	2.82	3.00	1.031	2.062	2.50	1.50	1.00	1.16	1.560	1.565	0.406	3/8-16
W17-20	W16-20	1.25	3.19	3.50	1.188	2.312	3.00	1.75	1.25	1.44	1.750	1.755	0.469	7/16-14
W17-24	W16-24	1.50	3.75	4.00	1.406	2.750	3.50	2.00	1.50	1.62	2.115	2.125	0.531	1/2-13
W17-32	W16-32	2.00	4.00	4.25	1.688	3.062	4.00	2.12	2.00	1.91	2.495	2.500	0.531	1/2-13

CODE 62 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD UN-2B
W19-12	W18-12	0.75	2.81	3.00	0.937	2.000	2.50	1.50	0.75	1.19	1.255	1.250	0.406	3/8-16
W19-16	W18-16	1.00	3.19	3.50	1.093	2.250	3.00	1.75	1.00	1.38	1.565	1.560	0.469	7/16-14
W19-20	W18-20	1.25	3.75	4.00	1.250	2.625	3.00	2.00	1.25	1.41	1.755	1.750	0.531	1/2-13
W19-24	W18-24	1.50	4.50	4.50	1.437	3.125	4.00	2.25	1.50	1.88	2.125	2.115	0.656	5/8-11
W19-32	W18-32	2.00	5.00	5.00	1.750	3.812	5.00	2.50	2.00	2.25	2.500	2.495	0.781	3/4-10

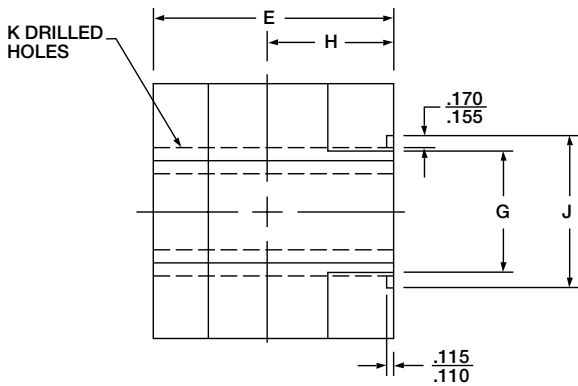


FIGURE 1

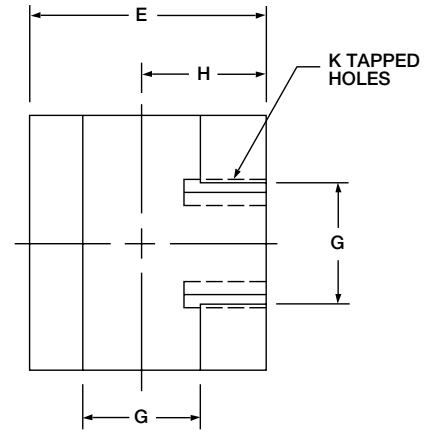
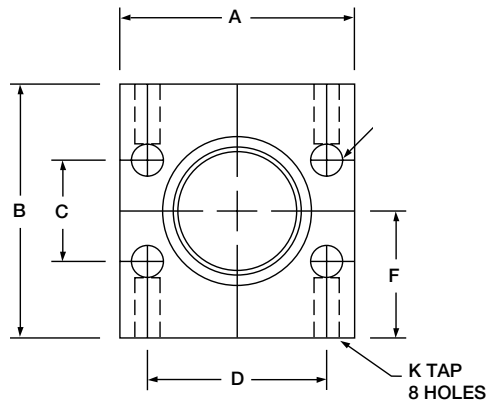


FIGURE 2



All measurements are in millimeters.

CODE 61 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD
W17-12-M10	W16-12-M10	0.75	66.55	69.85	22.23	47.63	57.15	35.05	19.05	26.16	31.75	31.88	10.31	M10
W17-16-M10	W16-16-M10	1.00	71.63	76.20	26.19	52.37	63.50	38.10	25.40	29.46	39.62	39.75	10.31	M10
W17-20-M10	W16-20-M10	1.25	81.03	88.90	30.18	58.72	76.20	44.45	31.75	36.58	44.45	44.58	10.31	M10
W17-24-M12	W16-24-M12	1.50	95.25	101.60	35.71	69.85	88.90	50.80	38.10	41.15	53.72	53.98	13.49	M12
W17-32-M12	W16-32-M12	2.00	101.60	107.95	42.88	77.77	101.60	53.85	50.80	48.51	63.37	63.50	13.49	M12

CODE 62 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD
W19-12-M10-SS	W18-12-M10-SS	0.75	71.37	76.20	23.80	50.80	63.50	38.10	19.05	30.23	31.88	31.75	10.31	M10
W19-16-M12-SS	W18-16-M12-SS	1.00	81.03	88.90	27.76	57.15	76.20	44.45	25.40	35.05	39.75	39.62	12.50	M12
W19-20-M14-SS	W18-20-M14-SS	1.25	95.25	101.60	31.75	66.68	76.20	50.80	31.75	35.81	44.58	44.45	14.48	M14
W19-24-M16-SS	W18-24-M16-SS	1.50	114.30	114.30	36.50	79.38	101.60	57.15	38.10	47.75	53.98	53.72	16.66	M16
W19-32-M20-SS	W18-32-M20-SS	2.00	127.00	127.00	44.45	96.82	127.00	63.50	50.80	57.15	63.50	63.37	20.98	M20

4 Bolt Flange Fittings

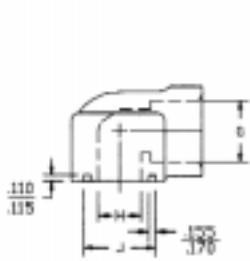


FIGURE 1

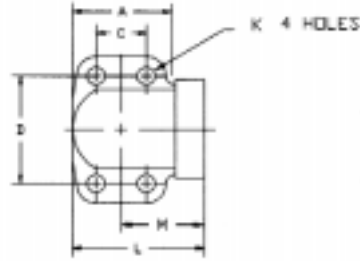


FIGURE 2

All measurements are in inches.

CODE 61 ELBOW S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W164-12-12	W165-12-12	0.75	1.69	2.56	0.875	1.875	1.25	1-1/16-12	0.75	1.250	1.255	0.406	3/8-16	2.28	1.440	0.875	214	3/8-16 X 2.00
W164-16-16	W165-16-16	1.00	1.94	2.75	1.031	2.062	1.50	1-5/16-12	1.00	1.560	1.565	0.406	3/8-16	2.62	1.660	1.062	219	3/8-16 X 2.25
W164-20-20	W165-20-20	1.25	2.19	3.12	1.188	2.312	1.81	1-5/8-12	1.25	1.750	1.755	0.469	7/16-14	3.00	1.910	1.188	222	7/16-14 X 2.75
W164-24-24	W165-24-24	1.50	2.56	3.69	1.406	2.750	2.00	1-7/8-12	1.50	2.115	2.125	0.531	1/2-13	3.33	2.050	1.312	225	1/2-13 X 3.00
W164-32-32	W165-32-32	2.00	3.06	4.33	1.688	3.062	2.50	2-1/2-12	2.00	2.490	2.500	0.531	1/2-13	3.81	2.280	1.656	228	1/2-13 X 3.50

CODE 61 ELBOW NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W168-12-12	W170-12-12	0.75	1.69	2.56	0.875	1.875	1.25	0.75	0.75	1.250	1.255	0.406	3/8-16	2.28	1.440	0.875	214	3/8-16 X 2.00
W168-16-16	W170-16-16	1.00	1.94	2.75	1.031	2.062	1.50	1.00	1.00	1.560	1.565	0.406	3/8-16	2.62	1.660	1.062	219	3/8-16 X 2.25
W168-20-20	W170-20-20	1.25	2.19	3.12	1.188	2.312	1.81	1.25	1.25	1.750	1.755	0.469	7/16-14	3.00	1.910	1.188	222	7/16-14 X 2.75
W168-24-24	W170-24-24	1.50	2.56	3.69	1.406	2.750	2.00	1.50	1.50	2.115	2.125	0.531	1/2-13	3.33	2.050	1.312	225	1/2-13 X 3.00
W168-32-32	W170-32-32	2.00	3.06	4.33	1.688	3.062	2.50	2.00	2.00	2.490	2.500	0.531	1/2-13	3.81	2.280	1.656	228	1/2-13 X 3.50

CODE 62 ELBOW S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W184-12-12	W185-12-12	0.75	1.94	2.75	0.937	2.000	1.50	1-1/16-12	0.75	1.250	1.255	0.406	3/8-16	2.62	1.660	1.062	214	3/8-16 X 2.25
W184-16-16	W185-16-16	1.00	2.19	3.12	1.093	2.250	1.81	1-5/16-12	1.00	1.560	1.565	0.469	7/16-14	3.00	1.910	1.188	219	7/16-14 X 2.50
W184-20-20	W185-20-20	1.25	2.56	3.69	1.250	2.625	2.00	1-5/8-12	1.25	1.750	1.755	0.531	1/2-13	3.32	2.050	1.312	222	1/2-13 X 3.00
W184-24-24	W185-24-24	1.50	3.06	4.33	1.437	3.125	2.50	1-7/8-12	1.50	2.115	2.125	0.656	5/8-11	3.81	2.280	1.656	225	5/8-11 X 3.50

CODE 62 ELBOW NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W188-12-12	W180-12-12	0.75	1.94	2.75	0.937	2.000	1.50	0.75	0.75	1.250	1.255	0.406	3/8-16	2.62	1.660	1.062	214	3/8-16 X 2.25
W188-16-16	W180-16-16	1.00	2.19	3.12	1.093	2.250	1.81	1.00	1.00	1.560	1.565	0.469	7/16-14	3.00	2.000	1.188	219	7/16-14 X 2.50
W188-20-20	W180-20-20	1.25	2.56	3.69	1.250	2.625	2.00	1.25	1.25	1.750	1.755	0.531	1/2-13	3.32	2.050	1.312	222	1/2-13 X 3.00
W188-24-24	W180-24-24	1.50	3.06	4.33	1.437	3.125	2.50	1.50	1.50	2.115	2.125	0.656	5/8-11	3.81	2.280	1.656	225	5/8-11 X 3.50

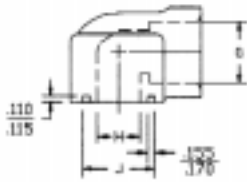


FIGURE 1

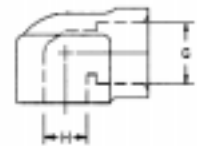
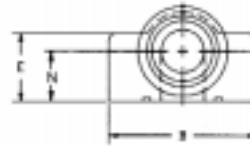
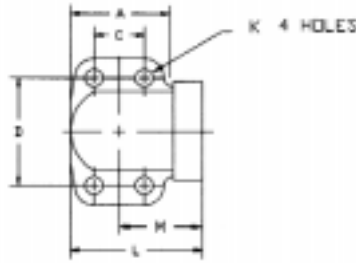


FIGURE 2

All measurements are in millimeters.

CODE 61 ELBOW S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W164-12-12-M10	W165-12-12-M10	0.75	42.93	65.02	22.23	47.63	31.75	1-1/16-12	19.05	31.75	31.88	10.31	M10	57.91	36.58	22.23	214	M10 X 50
W164-16-16-M10	W165-16-16-M10	1.00	49.28	69.85	26.19	52.37	38.10	1-5/16-12	25.40	39.62	39.75	10.31	M10	66.55	42.16	26.97	219	M10 X 65
W164-20-20-M10	W165-20-20-M10	1.25	55.63	79.25	30.18	58.72	45.97	1-5/8-12	31.75	44.45	44.58	10.31	M10	76.20	48.51	30.18	222	M10 X 75
W164-24-24-M12	W165-24-24-M12	1.50	65.02	93.73	35.71	69.85	50.80	1-7/8-12	38.10	53.72	53.98	13.49	M12	84.58	52.07	33.32	225	M12 X 85
W164-32-32-M12	W165-32-32-M12	2.00	77.72	109.98	42.88	77.77	63.50	2-1/2-12	50.80	63.25	63.50	13.49	M12	96.77	57.91	42.06	228	M12 X 100

CODE 61 ELBOW NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W168-12-12-M10	W170-12-12-M10	0.75	42.93	65.02	22.23	47.63	31.75	0.75	19.05	31.75	31.88	10.31	M10	57.91	36.58	22.23	214	M10 X 50
W168-16-16-M10	W170-16-16-M10	1.00	49.28	69.85	26.19	52.37	38.10	1.00	25.40	39.62	39.75	10.31	M10	66.55	42.16	26.97	219	M10 X 65
W168-20-20-M10	W170-20-20-M10	1.25	55.63	79.25	30.18	58.72	45.97	1.25	31.75	44.45	44.58	10.31	M10	76.20	48.51	30.18	222	M10 X 75
W168-24-24-M12	W170-24-24-M12	1.50	65.02	93.73	35.71	69.85	50.80	1.50	38.10	53.72	53.98	13.49	M12	84.58	52.07	33.32	225	M12 X 85
W168-32-32-M12	W170-32-32-M12	2.00	77.72	109.98	42.88	77.77	63.50	2.00	50.80	63.25	63.50	13.49	M12	96.77	57.91	42.06	228	M12 X 100

CODE 62 ELBOW S.A.E. STRAIGHT THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W184-12-12-M10	W185-12-12-M10	0.75	49.28	69.85	23.80	50.80	38.10	1-1/16-12	19.05	31.75	31.88	10.31	M10	66.55	42.16	26.97	214	M10 X 65
W184-16-16-M12	W185-16-16-M12	1.00	55.63	79.25	27.76	57.15	45.97	1-5/16-12	25.40	39.62	39.75	12.50	M12	76.20	48.51	30.18	219	M12 X 75
W184-20-20-M14	W185-20-20-M14	1.25	65.02	93.73	31.75	66.68	50.80	1-5/8-12	31.75	44.45	44.58	14.48	M14	84.33	52.07	33.32	222	M14 X 85
W184-24-24-M16	W185-24-24-M16	1.50	77.72	109.98	36.50	79.38	63.50	1-7/8-12	38.10	53.72	53.98	16.66	M16	96.77	57.91	42.06	225	M16 X 100

CODE 62 ELBOW NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	MOUNTING HARDWARE	
																	O-RING	SHCS
W188-12-12-M10	W180-12-12-M10	0.75	49.28	69.85	23.80	50.80	38.10	0.75	19.05	31.75	31.88	10.31	M10	66.55	42.16	26.97	214	M10 X 65
W188-16-16-M12	W180-16-16-M12	1.00	55.63	79.25	27.76	57.15	45.97	1.00	25.40	39.62	39.75	12.50	M12	76.20	50.80	30.18	219	M12 X 75
W188-20-20-M14	W180-20-20-M14	1.25	65.02	93.73	31.75	66.68	50.80	1.25	31.75	44.45	44.58	14.48	M14	84.33	52.07	33.32	222	M14 X 85
W188-24-24-M16	W180-24-24-M16	1.50	77.72	109.98	36.50	79.38	63.50	1.50	38.10	53.72	53.98	16.66	M16	96.77	57.91	42.06	225	M16 X 100

4 Bolt Flange Fittings

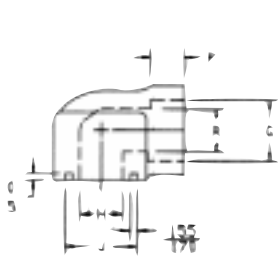


FIGURE 1

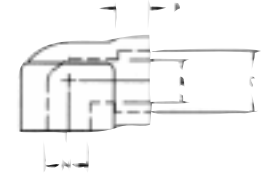
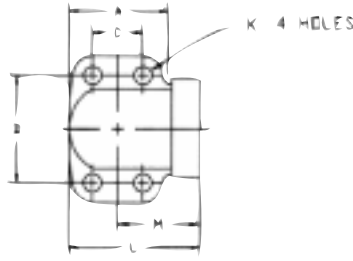


FIGURE 2

All measurements are in inches.

CODE 61 ELBOW SOCKET WELD-PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W176-12-12	W169-12-12	0.75	1.69	2.56	0.875	1.875	1.25	1.062	0.75	1.250	1.255	0.406	3/8-16	2.28	1.44	0.875	0.56	0.75	214	3/8-16 X 2.00
W176-16-16	W169-16-16	1.00	1.94	2.75	1.031	2.062	1.50	1.328	1.00	1.560	1.565	0.406	3/8-16	2.62	1.66	1.062	0.56	1.00	219	3/8-16 X 2.25
W176-20-20	W 169-20-20	1.25	2.19	3.12	1.188	2.312	1.81	1.672	1.25	1.750	1.755	0.469	7/16-14	3.00	1.91	1.188	0.62	1.25	222	7/16-14 X 2.75
W176-24-24	W169-24-24	1.50	2.56	3.69	1.406	2.750	2.00	1.922	1.50	2.115	2.125	0.531	1/2-13	3.28	2.05	1.312	0.69	1.50	225	1/2-13 X 3.00
W176-32-32	W169-32-32	2.00	3.06	4.33	1.688	3.062	2.50	2.406	2.00	2.490	2.500	0.531	1/2-13	3.81	2.28	1.656	0.75	2.00	228	1/2-13 X 3.50
W176-40-40	W169-40-40	CONSULT PAGE 62 FOR DIMENSIONS.																		
W176-48-48	W169-48-48	CONSULT PAGE 62 FOR DIMENSIONS.																		

CODE 61 ELBOW SOCKET WELD-TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G +0.003 -0.000	H ±.010	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W172-12-12	W177-12-12	0.75	1.69	2.56	0.875	1.875	1.25	0.752	0.750	1.250	1.255	0.406	3/8-16	2.280	1.44	0.875	0.312	0.625	214	3/8-16 X 2.00
W172-16-12	W177-16-12	0.75	1.69	2.56	0.875	1.875	1.25	1.002	0.750	1.250	1.255	0.406	3/8-16	2.280	1.44	0.875	0.438	0.750	214	3/8-16 X 2.00
W172-16-16	W177-16-16	1.00	1.94	2.75	1.031	2.062	1.50	1.002	1.000	1.560	1.565	0.406	3/8-16	2.620	1.66	1.062	0.438	0.875	219	3/8-16 X 2.25
W172-20-16	W177-20-16	1.00	1.94	2.75	1.031	2.062	1.50	1.252	1.000	1.560	1.565	0.406	3/8-16	2.620	1.66	1.062	0.500	1.000	219	3/8-16 X 2.25
W172-20-20	W177-20-20	1.25	2.19	3.12	1.188	2.312	1.81	1.252	1.250	1.750	1.755	0.469	7/16-14	3.000	1.91	1.188	0.500	1.125	222	7/16-14 X 2.75
W172-24-20	W177-24-20	1.25	2.19	3.12	1.188	2.312	1.81	1.502	1.250	1.750	1.755	0.469	7/16-14	3.000	1.91	1.188	0.562	1.250	222	7/16-14 X 2.75
W172-24-24	W177-24-24	1.50	2.56	3.69	1.406	2.750	2.00	1.502	1.500	2.115	2.125	0.531	1/2-13	3.328	2.05	1.312	0.562	1.375	225	1/2-13 X 3.00
W172-28-24	W177-28-24	1.50	2.56	3.69	1.406	2.750	2.00	1.752	1.500	2.115	2.125	0.531	1/2-13	3.328	2.05	1.312	0.562	1.500	225	1/2-13 X 3.00
W172-32-32	W177-32-32	2.00	3.06	4.33	1.688	3.062	2.50	2.002	2.000	2.490	2.500	0.531	1/2-13	3.812	2.28	1.656	0.625	1.875	228	1/2-13 X 3.50
W172-36-32	W177-36-32	2.00	3.06	4.33	1.688	3.062	2.50	2.252	2.000	2.490	2.500	0.531	1/2-13	3.812	2.28	1.656	0.625	2.000	228	1/2-13 X 3.50

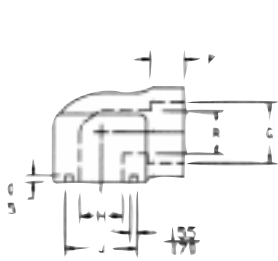


FIGURE 1

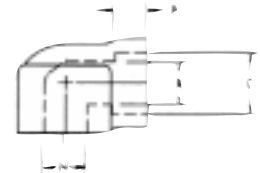
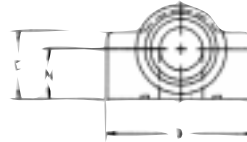
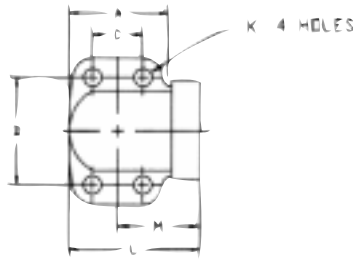


FIGURE 2

All measurements are in millimeters.

CODE 61 ELBOW SOCKET WELD-PIPE																				
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W176-12-12-M10	W169-12-12-M10	0.75	42.93	65.02	22.23	47.63	31.75	26.97	19.05	31.75	31.88	10.31	M10	57.91	36.58	22.23	14.22	19.05	214	M10 X 50
W176-16-16-M10	W169-16-16-M10	1.00	49.28	69.85	26.19	52.37	38.10	33.73	25.40	39.62	39.75	10.31	M10	66.55	42.16	26.97	14.22	25.40	219	M10 X 65
W176-20-20-M10	W 169-20-20-M10	1.25	55.63	79.25	30.18	58.72	45.97	42.47	31.75	44.45	44.58	10.31	M10	76.20	48.51	30.18	15.75	31.75	222	M10 X 75
W176-24-24-M12	W169-24-24-M12	1.50	65.02	93.73	35.71	69.85	50.80	48.82	38.10	53.72	53.98	13.49	M12	83.31	52.07	33.32	17.53	38.10	225	M12 X 85
W176-32-32-M12	W169-32-32-M12	2.00	77.72	109.98	42.88	77.77	63.50	61.11	50.80	63.25	63.50	13.49	M12	96.77	57.91	42.06	19.05	50.80	228	M12 X 100
W176-40-40-M12	W169-40-40-M12	CONSULT PAGE 63 FOR DIMENSIONS.																		
W176-48-48-M16	W169-48-48-M16	CONSULT PAGE 63 FOR DIMENSIONS.																		

CODE 61 ELBOW SOCKET WELD-TUBE																				
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W172-12-12-M10	W177-12-12-M10	0.75	42.93	65.02	22.23	47.63	31.75	19.10	19.05	31.75	31.88	10.31	M10	57.91	36.58	22.23	7.92	15.88	214	M10 X 50
W172-16-12-M10	W177-16-12-M10	0.75	42.93	65.02	22.23	47.63	31.75	25.45	19.05	31.75	31.88	10.31	M10	57.91	36.58	22.23	11.13	19.05	214	M10 X 50
W172-16-16-M10	W177-16-16-M10	1.00	49.28	69.85	26.19	52.37	38.10	25.45	25.40	39.62	39.75	10.31	M10	66.55	42.16	26.97	11.13	22.23	219	M10 X 65
W172-20-16-M10	W177-20-16-M10	1.00	49.28	69.85	26.19	52.37	38.10	31.80	25.40	39.62	39.75	10.31	M10	66.55	42.16	26.97	12.70	25.40	219	M10 X 65
W172-20-20-M10	W177-20-20-M10	1.25	55.63	79.25	30.18	58.72	45.97	31.80	31.75	44.45	44.58	10.31	M10	76.20	48.51	30.18	12.70	28.58	222	M10 X 75
W172-24-20-M10	W177-24-20-M10	1.25	55.63	79.25	30.18	58.72	45.97	38.15	31.75	44.45	44.58	10.31	M10	76.20	48.51	30.18	14.27	31.75	222	M10 X 75
W172-24-24-M12	W177-24-24-M12	1.50	65.02	93.73	35.71	69.85	50.80	38.15	38.10	53.72	53.98	13.49	M12	84.53	52.07	33.32	14.27	34.93	225	M12 X 85
W172-28-24-M12	W177-28-24-M12	1.50	65.02	93.73	35.71	69.85	50.80	44.50	38.10	53.72	53.98	13.49	M12	84.53	52.07	33.32	14.27	38.10	225	M12 X 85
W172-32-32-M12	W177-32-32-M12	2.00	77.72	109.98	42.88	77.77	63.50	50.85	50.80	63.25	63.50	13.49	M12	96.82	57.91	42.06	15.88	47.63	228	M12 X 100
W172-36-32-M12	W177-36-32-M12	2.00	77.72	109.98	42.88	77.77	63.50	57.20	50.80	63.25	63.50	13.49	M12	96.82	57.91	42.06	15.88	50.80	228	M12 X 100

4 Bolt Flange Fittings

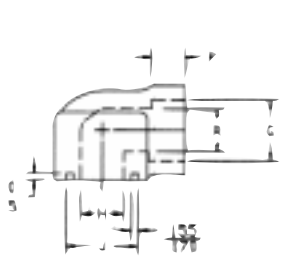


FIGURE 1

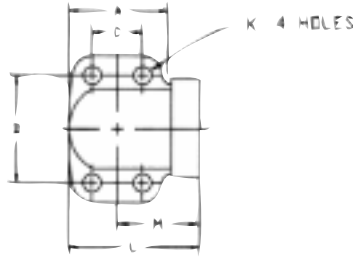


FIGURE 2

All measurements are in inches.

CODE 62 ELBOW SOCKET WELD-PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W186-12-12	W189-12-12	0.75	1.94	2.75	0.937	2.000	1.50	1.062	0.75	1.250	1.255	0.406	3/8-16	2.62	1.66	1.062	0.56	0.75	214	3/8-16 X 2.25
W186-16-16	W189-16-16	1.00	2.19	3.12	1.093	2.250	1.81	1.328	1.00	1.560	1.565	0.469	7/16-14	3.00	1.91	1.188	0.62	1.00	219	7/16-14 X 2.75
W186-20-20	W189-20-20	1.25	2.56	3.69	1.250	2.625	2.00	1.672	1.25	1.750	1.755	0.531	1/2-13	3.32	2.05	1.312	0.69	1.25	222	1/2-13 X 3.00
W186-24-24	W189-24-24	1.50	3.06	4.33	1.437	3.125	2.50	1.922	1.50	2.115	2.125	0.656	5/8-11	3.81	2.28	1.656	0.75	1.50	225	5/8-11 X 3.75

CODE 62 ELBOW SOCKET WELD-TUBE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G +0.003 -0.000	H ±0.010	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W182-12-12	W187-12-12	0.75	1.94	2.75	0.937	2.000	1.50	0.752	0.750	1.250	1.255	0.406	3/8-16	2.62	1.66	1.062	0.56	0.625	214	3/8-16 X 2.25
W182-16-12	W187-16-12	0.75	1.94	2.75	0.937	2.000	1.50	1.002	0.750	1.250	1.255	0.406	3/8-16	2.62	1.66	1.062	0.62	0.750	214	3/8-16 X 2.25
W182-16-16	W187-16-16	1.00	2.19	3.12	1.093	2.250	1.81	1.002	1.000	1.560	1.565	0.469	7/16-14	3.00	1.91	1.188	0.62	0.875	219	7/16-14 X 2.75
W182-20-16	W187-20-16	1.00	2.19	3.12	1.093	2.250	1.81	1.252	1.000	1.560	1.565	0.469	7/16-14	3.00	1.91	1.188	0.69	1.000	219	7/16-14 X 2.75
W182-20-20	W187-20-20	1.25	2.56	3.69	1.250	2.625	2.00	1.252	1.250	1.750	1.755	0.531	1/2-13	3.32	2.05	1.312	0.69	1.125	222	1/2-13 X 3.00
W182-24-20	W187-24-20	1.25	2.56	3.69	1.250	2.625	2.00	1.502	1.250	1.750	1.755	0.531	1/2-13	3.32	2.05	1.312	0.75	1.250	222	1/2-13 X 3.00
W182-24-24	W187-24-24	1.50	3.06	4.33	1.437	3.125	2.50	1.502	1.500	2.115	2.125	0.656	5/8-11	3.81	2.28	1.656	0.75	1.375	225	5/8-11 X 3.75
W182-28-24	W187-28-24	1.50	3.06	4.33	1.437	3.125	2.50	1.752	1.500	2.115	2.125	0.656	5/8-11	3.81	2.28	1.656	0.75	1.500	225	5/8-11 X 3.75

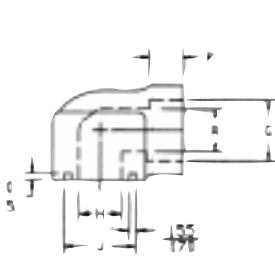


FIGURE 1

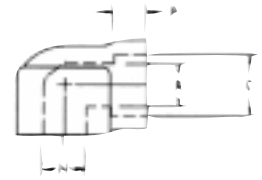
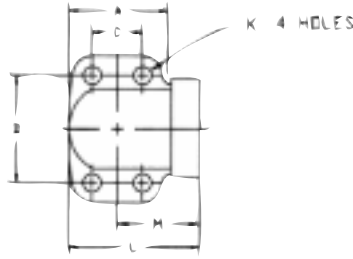


FIGURE 2

All measurements are in millimeters.

CODE 62 ELBOW SOCKET WELD-PIPE																				
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W186-12-12-M10	W189-12-12-M10	0.75	49.28	69.85	23.80	50.80	38.10	26.97	19.05	31.75	31.88	10.31	M10	66.55	42.16	26.97	14.22	19.05	214	M10 X 65
W186-16-16-M12	W189-16-16-M12	1.00	55.63	79.25	27.76	57.15	45.97	33.73	25.40	39.62	39.75	12.50	M12	76.20	48.51	30.18	15.75	25.40	219	M12 X 75
W186-20-20-M14	W189-20-20-M14	1.25	65.02	93.73	31.75	66.68	50.80	42.47	31.75	44.45	44.58	14.48	M14	84.33	52.07	33.32	17.53	31.75	222	M14 X 85
W186-24-24-M16	W189-24-24-M16	1.50	77.72	109.98	36.50	79.38	63.50	48.82	38.10	53.72	53.98	16.66	M16	96.77	57.91	42.06	19.05	38.10	225	M16 X 100

CODE 62 ELBOW SOCKET WELD-TUBE																				
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	L	M	N	P	R	MOUNTING HARDWARE	
																			O-RING	SHCS
W182-12-12-M10	W187-12-12-M10	0.75	49.28	69.85	23.80	50.80	38.10	19.10	19.05	31.75	31.88	10.31	M10	66.55	42.16	26.97	14.22	15.88	214	M10 X 65
W182-16-12-M10	W187-16-12-M10	0.75	49.28	69.85	23.80	50.80	38.10	25.45	19.05	31.75	31.88	10.31	M10	66.55	42.16	26.97	15.75	19.05	214	M10 X 65
W182-16-16-M12	W187-16-16-M12	1.00	55.63	79.25	27.76	57.15	45.97	25.45	25.40	39.62	39.75	12.50	M12	76.20	48.51	30.18	15.75	22.23	219	M12 X 75
W182-20-16-M12	W187-20-16-M12	1.00	55.63	79.25	27.76	57.15	45.97	31.80	25.40	39.62	39.75	12.50	M12	76.20	48.51	30.18	17.53	25.40	219	M12 X 75
W182-20-20-M14	W187-20-20-M14	1.25	65.02	93.73	31.75	66.68	50.80	31.80	31.75	44.45	44.58	14.48	M14	84.33	52.07	33.32	17.53	28.58	222	M14 X 85
W182-24-20-M14	W187-24-20-M14	1.25	65.02	93.73	31.75	66.68	50.80	38.15	31.75	44.45	44.58	14.48	M14	84.33	52.07	33.32	19.05	31.75	222	M14 X 85
W182-24-24-M16	W187-24-24-M16	1.50	77.72	109.98	36.50	79.38	63.50	38.15	38.10	53.72	53.98	16.66	M16	96.77	57.91	42.06	19.05	34.93	225	M16 X 100
W182-28-24-M16	W187-28-24-M16	1.50	77.72	109.98	36.50	79.38	63.50	44.50	38.10	53.72	53.98	16.66	M16	96.77	57.91	42.06	19.05	38.10	225	M16 X 100

4 Bolt Flange Fittings

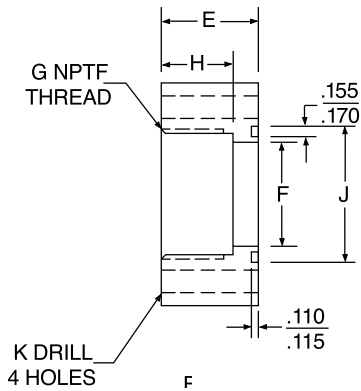
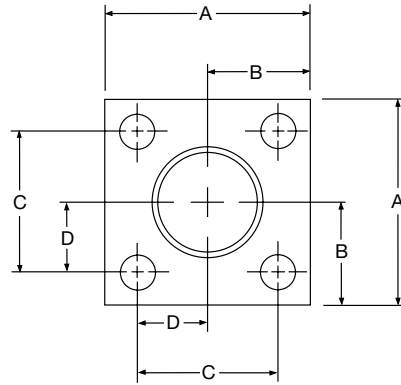


FIGURE 1



All measurements are in inches.

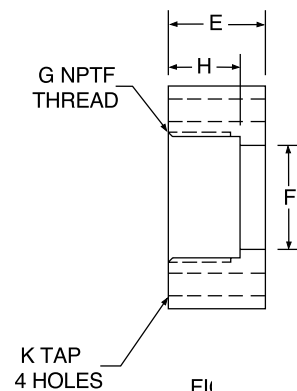


FIGURE 2

SQUARE NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G NPTF THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W65-12	W75-12	0.75	2.25	1.12	1.438	0.719	1.25	0.75	0.75	1.06	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W65-16	W75-16	1.00	3.00	1.50	2.000	1.000	1.50	1.00	1.00	1.25	1.560	1.565	0.531	1/2-13	219	1/2-13 X 2.50
W65-20	W75-20	1.25	3.00	1.50	2.000	1.000	1.50	1.25	1.25	1.31	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W65-24	W75-24	1.50	4.00	2.00	2.750	1.375	1.75	1.50	1.50	1.31	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W65-32	W75-32	2.00	4.00	2.00	2.750	1.375	1.75	2.00	2.00	1.31	2.490	2.500	0.656	5/8-11	228	5/8-11 X 3.00
W65-40	W75-40	2.50	5.50	2.75	3.750	1.875	2.25	2.50	2.50	1.84	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.75
W65-48	W75-48	3.00	5.50	2.75	3.750	1.875	2.25	3.00	3.00	1.91	3.615	3.625	0.906	7/8-9	237	7/8-9 X 4.00

SQUARE SOCKET WELD - PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W66-12	W76-12	0.75	2.25	1.12	1.438	0.719	1.00	0.75	1.062	0.50	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.75
W66-16	W76-16	1.00	3.00	1.50	2.000	1.000	1.00	1.00	1.328	0.50	1.560	1.565	0.531	1/2-13	219	1/2-13 X 2.00
W66-20	W76-20	1.25	3.00	1.50	2.000	1.000	1.00	1.25	1.672	0.50	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W66-24	W76-24	1.50	4.00	2.00	2.750	1.375	1.25	1.50	1.922	0.62	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.50
W66-32	W76-32	2.00	4.00	2.00	2.750	1.375	1.25	2.00	2.406	0.62	2.490	2.500	0.656	5/8-11	228	5/8-11 X 2.50
W66-40	W76-40	2.50	5.50	2.75	3.750	1.875	1.50	2.50	2.906	0.75	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.00
W66-48	W76-48	3.00	5.50	2.75	3.750	1.875	1.50	3.00	3.547	0.75	3.615	3.625	0.906	7/8-9	237	7/8-9 X 3.00

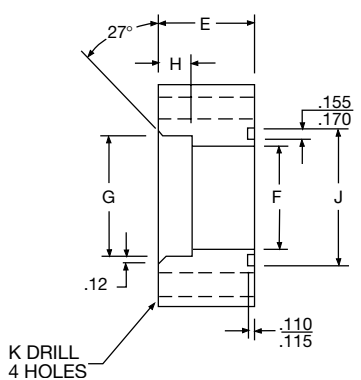


FIGURE 3

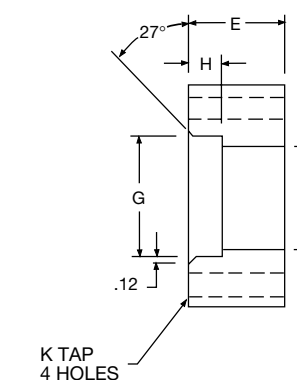
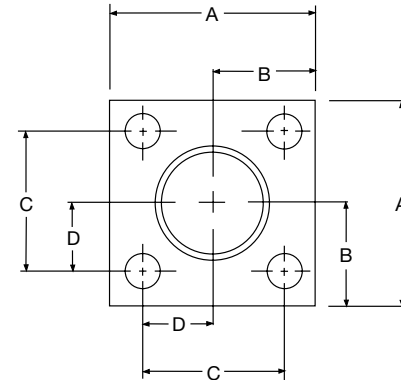


FIGURE 4

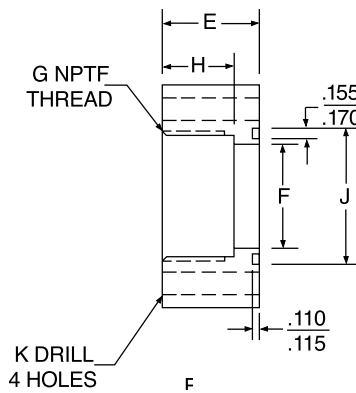
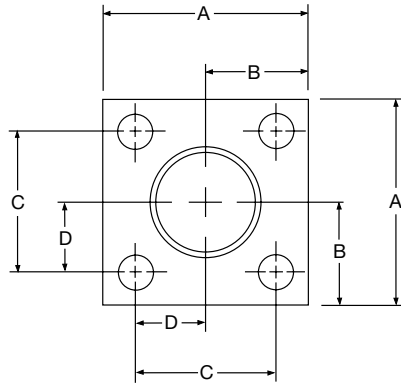


FIGURE 1



All measurements are in millimeters.

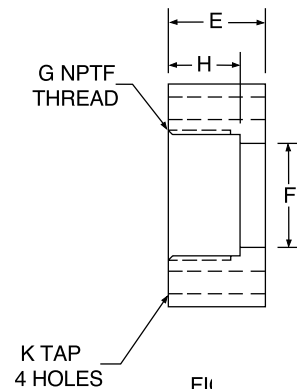


FIGURE 2

SQUARE NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G NPTF THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W65-12-M10	W75-12-M10	0.75	57.15	28.45	36.53	18.26	31.75	19.05	0.75	26.92	31.75	31.88	10.31	M10	214	M10 X 50
W65-16-M12	W75-16-M12	1.00	76.20	38.10	50.80	25.40	38.10	25.40	1.00	31.75	39.62	39.75	10.31	M12	219	M12 X 55
W65-20-M12	W75-20-M12	1.25	76.20	38.10	50.80	25.40	38.10	31.75	1.25	33.27	44.45	44.58	10.31	M12	222	M12 X 55
W65-24-M16	W75-24-M16	1.50	101.60	50.80	69.85	34.93	44.45	38.10	1.50	33.27	53.72	53.98	13.49	M16	225	M16 X 70
W65-32-M16	W75-32-M16	2.00	101.60	50.80	69.85	34.93	44.45	50.80	2.00	33.27	63.25	63.50	13.49	M16	228	M16 X 70
W65-40-M24	W75-40-M24	2.50	139.70	69.85	95.25	47.63	57.15	63.50	2.50	46.74	76.07	76.33	13.49	M24	232	M24 X 90
W65-48-M24	W75-48-M24	3.00	139.70	69.85	95.25	47.63	57.15	76.20	3.00	48.51	91.82	92.08	16.66	M24	237	M24 X 90

SQUARE SOCKET WELD - PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W66-12-M10	W76-12-M10	0.75	57.15	28.45	36.53	18.26	25.40	19.05	26.97	12.70	31.75	31.88	10.31	M10	214	M10 X 45
W66-16-M12	W76-16-M12	1.00	76.20	38.10	50.80	25.40	25.40	25.40	33.73	12.70	39.62	39.75	10.31	M12	219	M12 X 45
W66-20-M12	W76-20-M12	1.25	76.20	38.10	50.80	25.40	25.40	31.75	42.47	12.70	44.45	44.58	10.31	M12	222	M12 X 45
W66-24-M16	W76-24-M16	1.50	101.60	50.80	69.85	34.93	31.75	38.10	48.82	15.75	53.72	53.98	13.49	M16	225	M16 X 55
W66-32-M16	W76-32-M16	2.00	101.60	50.80	69.85	34.93	31.75	50.80	61.11	15.75	63.25	63.50	13.49	M16	228	M16 X 55
W66-40-M24	W76-40-M24	2.50	139.70	69.85	95.25	47.63	38.10	63.50	73.81	19.05	76.07	76.33	13.49	M24	232	M24 X 70
W66-48-M24	W76-48-M24	3.00	139.70	69.85	95.25	47.63	38.10	76.20	90.09	19.05	91.82	92.08	16.66	M24	237	M24 X 70

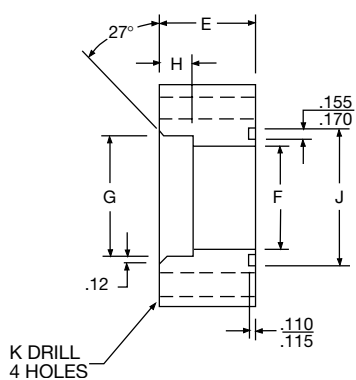


FIGURE 3

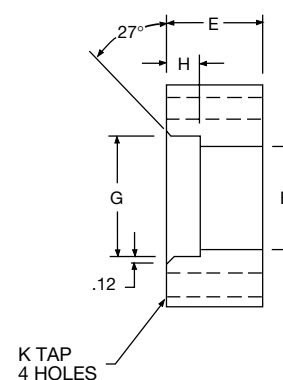
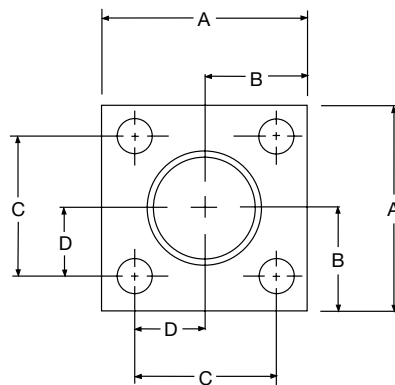


FIGURE 4

4 Bolt Flange Fittings Stainless Steel



All measurements are in inches.

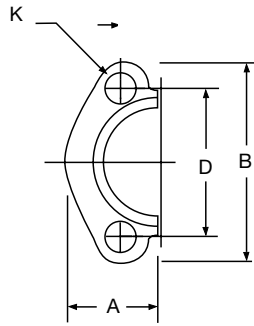
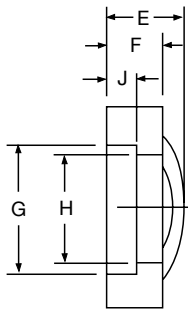


FIGURE 1



CODE 61 SPLIT FLANGE – FIG. 1

CATALOG NO.	FLANGE SIZE	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	MOUNTING HARDWARE	
											O-RING	HHCS
8SF-2-SS	0.50	0.86	2.12	1.50	0.75	0.50	1.22	0.96	0.245	0.344	210	5/16-18 X 1.25
12SF-2-SS	0.75	0.98	2.56	1.88	0.88	0.56	1.53	1.27	0.245	0.406	214	3/8-16 X 1.25
16SF-2-SS	1.00	1.11	2.75	2.06	0.94	0.62	1.78	1.52	0.295	0.406	219	3/8-16 X 1.25
20SF-2-SS	1.25	1.39	3.12	2.31	0.88	0.56	2.03	1.72	0.295	0.469	222	7/16-14 X 1.50
24SF-2-SS	1.50	1.58	3.69	2.75	1.00	0.62	2.41	2.00	0.295	0.531	225	1/2-13 X 1.50
32SF-2-SS	2.00	1.86	4.00	3.06	1.03	0.62	2.84	2.47	0.355	0.531	228	1/2-13 X 1.50
40SF-2-SS	2.50	2.09	4.50	3.50	1.50	0.75	3.34	2.95	0.355	0.531	232	1/2-13 X 1.75
48SF-2-SS	3.00	2.53	5.31	4.19	1.62	0.88	4.03	3.58	0.355	0.656	237	5/8-11 X 1.75

CODE 62 SPLIT FLANGE – FIG. 1

CATALOG NO.	FLANGE SIZE	A ±.030	B ±.030	D ±.010	E ±.030	F ±.016	G ±.010	H ±.010	J ±.005	K ±.010	MOUNTING HARDWARE	
											O-RING	HHCS
12SFX-2-SS	0.75	1.14	2.81	2.00	1.12	0.75	1.66	1.28	0.325	0.406	214	3/8-16 X 1.50
16SFX-2-SS	1.00	1.33	3.19	2.25	1.31	0.94	1.91	1.53	0.355	0.469	219	7/16-14 X 1.75
20SFX-2-SS	1.25	1.48	3.75	2.63	1.50	1.06	2.16	1.75	0.385	0.531	222	1/2-13 X 1.75
24SFX-2-SS	1.50	1.83	4.44	3.13	1.69	1.19	2.53	2.03	0.475	0.656	225	5/8-11 X 2.25
32SFX-2-SS	2.00	2.20	5.25	3.81	2.06	1.44	3.16	2.66	0.475	0.781	228	3/4-10 X 2.75

*RECOMMENDED BOLT TORQUE CAN BE FOUND ON PG. 5

CODE 61 CAPTIVE FLANGE – FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A ±.010	B ±.010	C ±.030	D ±.010	E ±.010	F ±.010	F TAPPED	G ±.030	H ±.010	J ±.010	K ±.010	L ±.016	M ±.005
12SFW-SS	12SFTW-SS	0.75	1.875	0.938	2.56	0.875	0.438	0.406	3/8-16	2.06	1.531	1.265	0.88	0.56	0.245
16SFW-SS	16SFTW-SS	1.00	2.062	1.031	2.75	1.031	0.516	0.406	3/8-16	2.31	1.781	1.515	0.94	0.62	0.295
20SFW-SS	20SFTW-SS	1.25	2.312	1.156	3.12	1.188	0.594	0.469	7/16-14	2.88	2.031	1.720	0.88	0.56	0.295
24SFW-SS	24SFTW-SS	1.50	2.750	1.375	3.69	1.406	0.703	0.531	1/2-13	3.25	2.406	2.000	1.00	0.62	0.295
32SFW-SS	32SFTW-SS	2.00	3.062	1.531	4.00	1.688	0.844	0.531	1/2-13	3.81	2.844	2.470	1.03	0.62	0.355
40SFW-SS	40SFTW-SS	2.50	3.500	1.750	4.50	2.000	1.000	0.531	1/2-13	4.28	3.344	2.950	1.50	0.75	0.355
48SFW-SS	48SFTW-SS	3.00	4.188	2.094	5.31	2.438	1.219	0.656	5/8-11	5.16	4.031	3.580	1.62	0.88	0.355
56SFW-SS	56SFTW-SS	3.50	4.750	2.375	6.00	2.750	1.375	0.656	5/8-11	5.50	4.531	4.030	1.12	0.88	0.422
64SFW-SS	64SFTW-SS	4.00	5.125	2.562	6.38	3.062	1.531	0.656	5/8-11	6.00	5.031	4.530	1.38	1.00	0.422

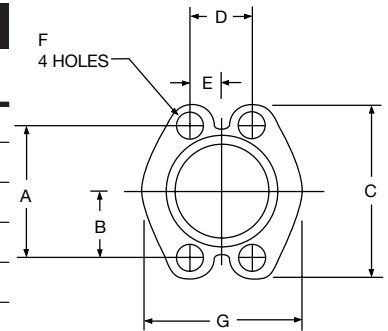
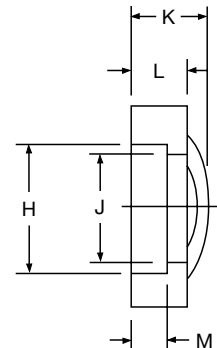


FIGURE 2

CODE 62 CAPTIVE FLANGE – FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A ±.010	B ±.010	C ±.030	D ±.010	E ±.010	F ±.010	F TAPPED	G ±.030	H ±.010	J ±.010	K ±.010	L ±.016	M ±.005
16SFXW-SS	16SFXTW-SS	1.00	2.250	1.125	3.19	1.094	0.547	0.469	7/16-14	2.75	1.906	1.530	1.31	0.94	0.355
20SFXW-SS	20SFXTW-SS	1.25	2.625	1.313	3.75	1.250	0.625	0.531	1/2-13	3.06	2.156	1.750	1.50	1.06	0.385
24SFXW-SS	24SFXTW-SS	1.50	3.125	1.563	4.44	1.438	0.719	0.656	5/8-11	3.75	2.531	2.030	1.69	1.19	0.475
32SFXW-SS	32SFXTW-SS	2.00	3.812	1.906	5.25	1.750	0.875	0.781	3/4-10	4.50	3.156	2.660	2.06	1.44	0.475



All measurements are in millimeters.

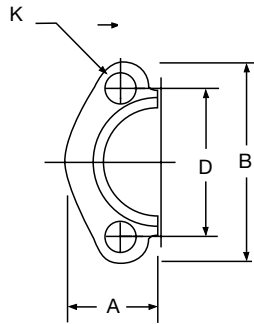
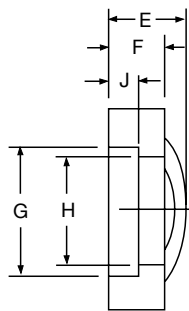


FIGURE 1



CODE 61 SPLIT FLANGE – FIG. 1

CATALOG NO.	FLANGE SIZE	A	B	D	E	F	G	H	J	K	MOUNTING HARDWARE	
											O-RING	HHCS
8SF-2-M8-SS	0.50	21.84	53.85	38.10	19.05	12.70	30.96	24.26	6.22	8.70	210	M8 X 30
12SF-2-M10-SS	0.75	24.89	65.02	47.63	22.35	14.22	38.89	32.13	6.22	10.70	214	M10 X 30
16SF-2-M10-SS	1.00	28.19	69.85	52.37	23.88	15.75	45.24	38.48	7.49	10.70	219	M10 X 30
20SF-2-M10-SS	1.25	35.31	79.25	58.72	22.35	14.22	51.59	43.69	7.49	10.70	222	M10 X 40
24SF-2-M12-SS	1.50	40.13	93.73	69.85	25.40	15.75	61.11	50.80	7.49	12.70	225	M12 X 40
32SF-2-M12-SS	2.00	47.24	101.60	77.77	26.16	15.75	72.24	62.74	9.02	12.70	228	M12 X 40
40SF-2-M12-SS	2.50	53.09	114.30	88.90	38.10	19.05	84.94	74.93	9.02	12.70	232	M12 X 45
48SF-2-M16-SS	3.00	64.26	134.87	106.38	41.15	22.35	102.39	90.93	9.02	16.60	237	M16 X 45

CODE 62 SPLIT FLANGE – FIG. 1

CATALOG NO.	FLANGE SIZE	A	B	D	E	F	G	H	J	K	MOUNTING HARDWARE	
											O-RING	HHCS
12SFX-2-M10-SS	0.75	28.96	71.37	50.80	28.45	19.05	42.06	32.51	8.26	10.70	214	M10 X 40
16SFX-2-M12-SS	1.00	33.78	81.03	57.15	33.27	23.88	48.41	38.86	9.02	12.70	219	M12 X 45
20SFX-2-M14-SS	1.25	37.59	95.25	66.68	38.10	26.92	54.76	44.45	9.78	15.00	222	M14 X 45
24SFX-2-M16-SS	1.50	46.48	112.78	79.38	42.93	30.23	64.29	51.56	12.07	16.60	225	M16 X 55
32SFX-2-M20-SS	2.00	55.88	133.35	96.82	52.32	36.58	80.16	67.56	12.07	21.00	228	M20 X 70

*RECOMMENDED BOLT TORQUE CAN BE FOUND ON PG. 5

CODE 61 CAPTIVE FLANGE – FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A	B	C	D	E	F	F TAPPED	G	H	J	K	L	M
8SFW-M8-SS	8SFTW-M8-SS	0.50	38.10	19.05	53.85	17.48	8.74	8.70	M8	45.97	30.96	24.26	19.05	12.70	6.22
12SFW-M10-SS	12SFTW-M10-SS	0.75	47.63	23.83	65.02	22.23	11.13	10.70	M10	52.32	38.89	32.13	22.35	14.22	6.22
16SFW-M10-SS	16SFTW-M10-SS	1.00	52.37	26.19	69.85	26.19	13.11	10.70	M10	58.67	45.24	38.48	23.88	15.75	7.49
20SFW-M10-SS	20SFTW-M10-SS	1.25	58.72	29.36	79.25	30.18	15.09	10.70	M10	73.15	51.59	43.69	22.35	14.22	7.49
24SFW-M12-SS	24SFTW-M12-SS	1.50	69.85	34.93	93.73	35.71	17.86	12.70	M12	82.55	61.11	50.80	25.40	15.75	7.49
32SFW-M12-SS	32SFTW-M12-SS	2.00	77.77	38.89	101.60	42.88	21.44	12.70	M12	96.77	72.24	62.74	26.16	15.75	9.02
40SFW-M12-SS	40SFTW-M12-SS	2.50	88.90	44.45	114.30	50.80	25.40	12.70	M12	108.71	84.94	74.93	38.10	19.05	9.02
48SFW-M16-SS	48SFTW-M16-SS	3.00	106.38	53.19	134.87	61.93	30.96	16.60	M16	131.06	102.39	90.93	41.15	22.35	9.02
56SFW-M16-SS	56SFTW-M16-SS	3.50	120.65	60.33	152.40	69.85	34.93	16.60	M16	139.70	115.09	102.36	28.45	22.35	10.72
64SFW-M16-SS	64SFTW-M16-SS	4.00	130.18	65.07	162.05	77.77	38.89	16.60	M16	152.40	127.79	115.06	35.05	25.40	10.72

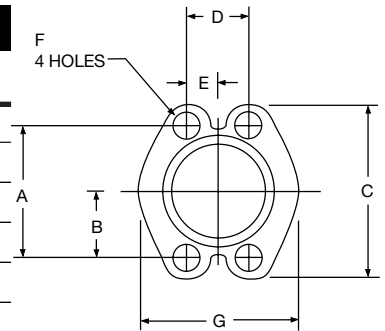
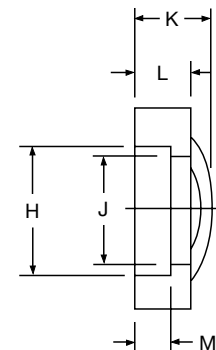


FIGURE 2

CODE 62 CAPTIVE FLANGE – FIG. 2

PART NO. DRILLED HOLES	PART NO. TAPPED HOLES	FLANGE SIZE	A	B	C	D	E	F	F TAPPED	G	H	J	K	L	M
12SFXW-M10-SS	12SFXTW-M10-SS	0.75	50.80	25.40	71.37	23.83	11.91	10.70	M10	60.45	42.06	32.51	28.45	19.05	8.26
16SFXW-M12-SS	16SFXTW-M12-SS	1.00	57.15	28.58	81.03	27.79	13.89	12.70	M12	69.85	48.41	38.86	33.27	23.88	9.02
20SFXW-M14-SS	20SFXTW-M14-SS	1.25	66.68	33.35	95.25	31.75	15.88	15.00	M14	77.72	54.76	44.45	38.10	26.92	9.78
24SFXW-M16-SS	24SFXTW-M16-SS	1.50	79.38	39.70	112.78	36.53	18.26	16.60	M16	95.25	64.29	51.56	42.93	30.23	12.07
32SFXW-M20-SS	32SFXTW-M20-SS	2.00	96.82	48.41	133.35	44.45	22.23	21.00	M20	114.30	80.16	67.56	52.32	36.58	12.07



4 Bolt Flange Fittings Stainless Steel

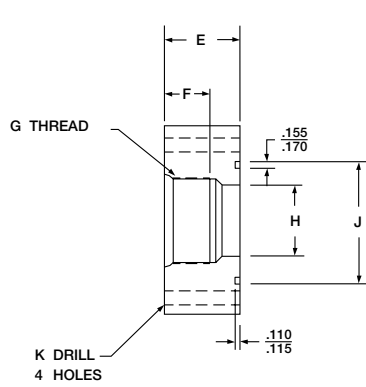


FIGURE 1

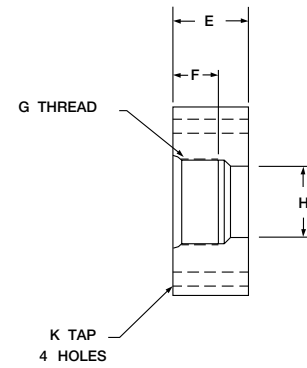
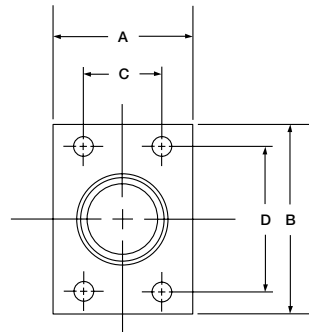


FIGURE 2

All measurements are in inches.

CODE 61 NPTF THREAD																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W43-8-8-SS	W104-8-8-SS	0.50	0.50	1.50	2.12	0.688	1.500	1.25	0.650	0.50	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.75
W43-12-12-SS	W104-12-12-SS	0.75	0.75	1.75	2.62	0.875	1.875	1.25	0.760	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W43-16-16-SS	W104-16-16-SS	1.00	1.00	2.00	2.82	1.031	2.062	1.50	0.922	1.00	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 2.25
W43-20-20-SS	W104-20-20-SS	1.25	1.25	2.50	3.19	1.188	2.312	1.50	0.940	1.25	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 2.25
W43-24-24-SS	W104-24-24-SS	1.50	1.50	2.75	3.75	1.406	2.750	1.75	0.940	1.50	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.75
W43-32-32-SS	W104-32-32-SS	2.00	2.00	3.25	4.00	1.688	3.062	1.75	0.960	2.00	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.75
W43-40-40-SS	W104-40-40-SS	2.50	2.50	4.00	4.50	2.000	3.500	2.00	1.290	2.50	2.50	2.995	3.005	0.531	1/2-13	232	1/2-13 X 3.00
W43-48-48-SS	W104 48 48 SS	3.00	3.00	4.50	5.31	2.438	4.188	2.25	1.390	3.00	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 3.50

CODE 61 SAE STRAIGHT THREAD																	
O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W46-8-8-SS	W106-8-8-SS	0.50	0.50	1.50	2.12	0.688	1.500	1.25	0.56	3/4-16	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.25
W46-12-12-SS	W106-12-12-SS	0.75	0.75	1.75	2.62	0.875	1.875	1.50	0.75	1 1/16-12	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W46-16-16-SS	W106-16-16-SS	1.00	1.00	2.00	2.82	1.031	2.062	1.50	0.75	1 5/16-12	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.50
W46-20-20-SS	W106-20-20-SS	1.25	1.25	2.50	3.19	1.188	2.312	1.50	0.75	1 5/8-12	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W46-24-24-SS	W106-24-24-SS	1.50	1.50	2.75	3.75	1.406	2.750	1.75	0.75	1 7/8-12	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.00
W46-24-32-SS	W106-24-32-SS	1.50	2.00	3.25	4.00	1.688	3.062	1.75	0.75	1 7/8-12	1.50	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.00

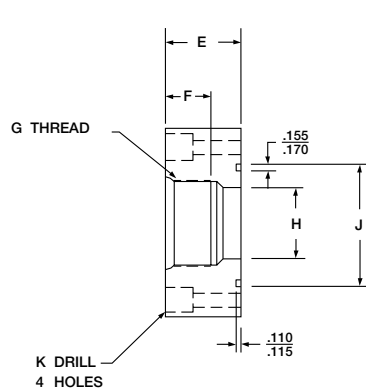


FIGURE 3

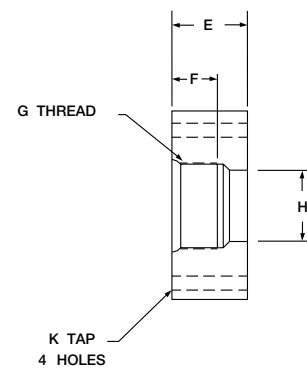
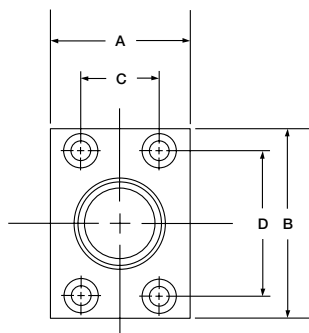


FIGURE 4

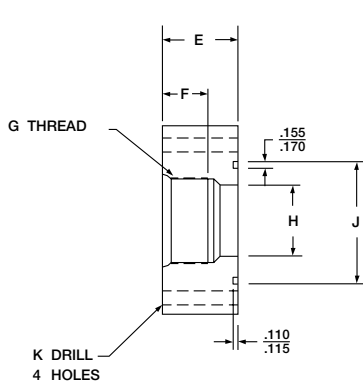
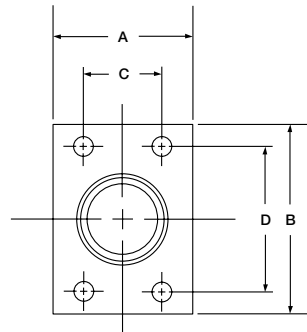


FIGURE 1



All measurements are in millimeters.

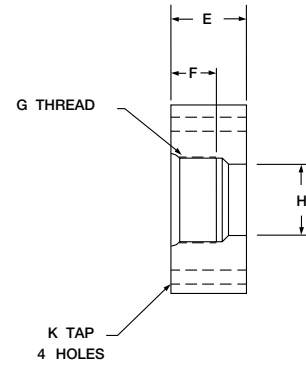


FIGURE 2

CODE 61 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W43-8-8-M8-SS	W104-8-8-M8-SS	0.50	0.50	38.10	53.85	17.48	38.10	31.75	16.51	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 45
W43-12-12-M10-SS	W104-12-12-M10-SS	0.75	0.75	44.45	66.55	22.23	47.63	31.75	19.30	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W43-16-16-M10-SS	W104-16-16-M10-SS	1.00	1.00	50.80	71.63	26.19	52.37	38.10	23.42	1.00	25.40	39.62	39.75	10.31	M10	219	M10 X 60
W43-20-20-M10-SS	W104-20-20-M10-SS	1.25	1.25	63.50	81.03	30.18	58.72	38.10	23.88	1.25	31.75	44.45	44.58	10.31	M10	222	M10 X 60
W43-24-24-M12-SS	W104-24-24-M12-SS	1.50	1.50	69.85	95.25	35.71	69.85	44.45	23.88	1.50	38.10	53.72	53.98	13.49	M12	225	M12 X 65
W43-32-32-M12-SS	W104-32-32-M12-SS	2.00	2.00	82.55	101.60	42.88	77.77	44.45	24.38	2.00	50.80	63.25	63.50	13.49	M12	228	M12 X 65
W43-40-40-M12-SS	W104-40-40-M12-SS	2.50	2.50	101.60	114.30	50.80	88.90	50.80	32.77	2.50	63.50	76.07	76.33	13.49	M12	232	M12 X 70
W43-48-48-M16-SS	W104-48-48-M16-SS	3.00	3.00	114.30	134.87	61.93	106.38	57.15	35.31	3.00	76.20	91.82	92.08	16.66	M16	237	M16 X 90

CODE 61 SAE STRAIGHT THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W46-8-8-M8-SS	W106-8-8-M8-SS	0.50	0.50	38.10	53.85	17.48	38.10	31.75	14.22	3/4-16	12.70	25.40	25.53	8.74	M8	210	M8 X 35
W46-12-12-M10-SS	W106-12-12-M10-SS	0.75	0.75	44.45	66.55	22.23	47.63	38.10	19.05	1 1/16-12	19.05	31.75	31.88	10.31	M10	214	M10 X 40
W46-16-16-M10-SS	W106-16-16-M10-SS	1.00	1.00	50.80	71.63	26.19	52.37	38.10	19.05	1 5/16-12	25.40	39.62	39.75	10.31	M10	219	M10 X 40
W46-20-20-M10-SS	W106-20-20-M10-SS	1.25	1.25	63.50	81.03	30.18	58.72	38.10	19.05	1 5/8-12	31.75	44.45	44.58	10.31	M10	222	M10 X 40
W46-24-24-M12-SS	W106-24-24-M12-SS	1.50	1.50	69.85	95.25	35.71	69.85	44.45	19.05	1 7/8-12	38.10	53.72	53.98	13.49	M12	225	M12 X 45
W46-24-32-M12-SS	W106-24-32-M12-SS	1.50	2.00	82.55	101.60	42.88	77.77	44.45	19.05	1 7/8-12	38.10	63.25	63.50	13.49	M12	228	M12 X 45

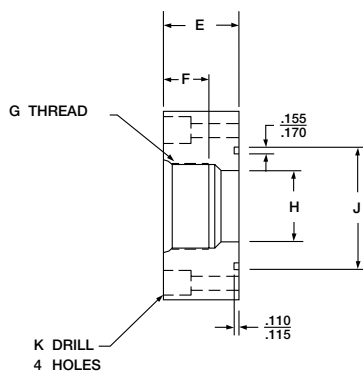


FIGURE 3

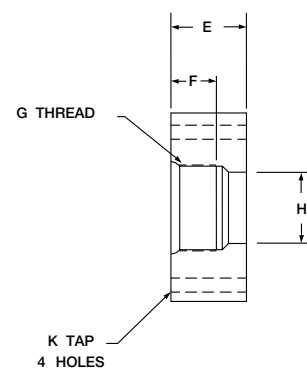
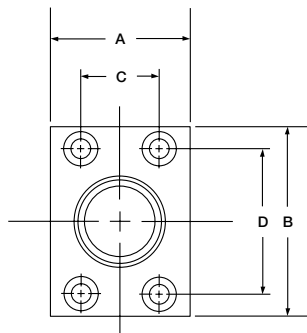


FIGURE 4

4 Bolt Flange Fittings Stainless Steel

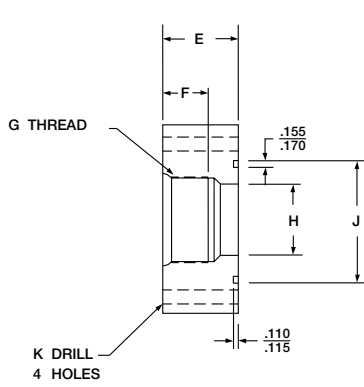


FIGURE 1

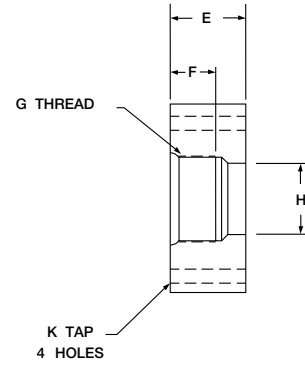
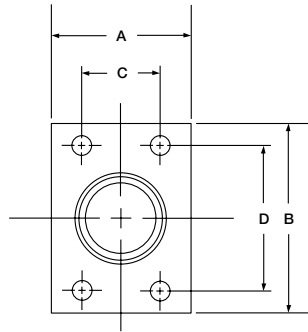


FIGURE 2

All measurements are in inches.

CODE 62 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W44-8-8-SS	W45-8-8-SS	0.50	0.50	1.75	2.22	0.718	1.594	1.00	0.648	0.50	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W44-12-12-SS	W45-12-12-SS	0.75	0.75	2.00	2.81	0.937	2.000	1.25	0.760	0.75	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W44-16-16-SS	W45-16-16-SS	1.00	1.00	2.25	3.19	1.093	2.250	1.50	0.922	1.00	1.00	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.25
W44-20-20-SS	W45-20-20-SS	1.25	1.25	2.75	3.75	1.250	2.625	1.50	0.940	1.25	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W44-24-24-SS	W45-24-24-SS	1.50	1.50	3.25	4.50	1.437	3.125	1.75	0.940	1.50	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W44-32-32-SS	W45-32-32-SS	2.00	2.00	4.00	5.25	1.750	3.812	1.75	0.940	2.00	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00

CODE 62 SAE STRAIGHT THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W48-8-8-SS	W49-8-8-SS	0.50	0.50	1.75	2.22	0.718	1.594	1.00	0.75	3/4-16	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.25
W48-12-12-SS	W49-12-12-SS	0.75	0.75	2.00	2.81	0.937	2.000	1.25	0.75	1 1/16-12	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W48-16-16-SS	W49-16-16-SS	1.00	1.00	2.25	3.19	1.093	2.250	1.50	0.75	1 5/16-12	1.00	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.75
W48-20-20-SS	W49-20-20-SS	1.25	1.25	2.75	3.75	1.250	2.625	1.50	0.75	1 5/8-12	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 1.75
W48-24-24-SS	W49-24-24-SS	1.50	1.50	3.25	4.50	1.437	3.125	1.75	0.75	1 7/8-12	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.00
W48-32-32-SS	W49-32-32-SS	2.00	2.00	4.00	5.25	1.750	3.812	1.75	0.75	2 1/2-12	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.25

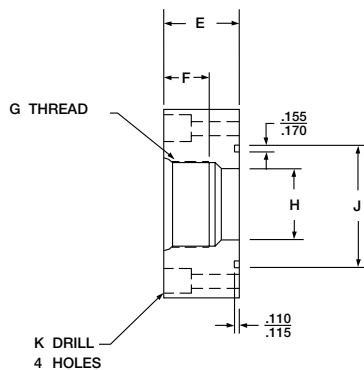


FIGURE 3

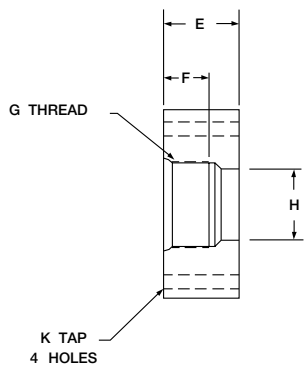
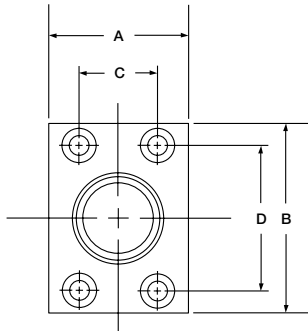


FIGURE 4

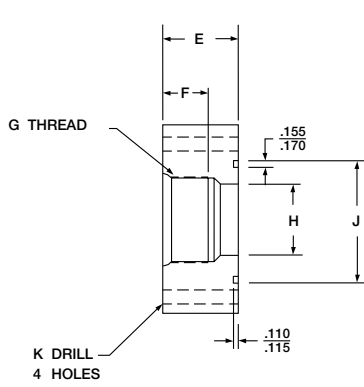


FIGURE 1

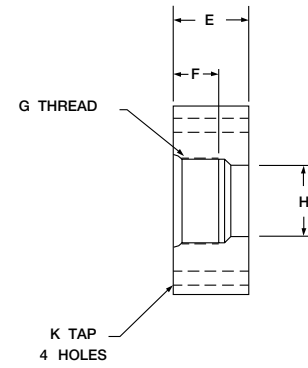
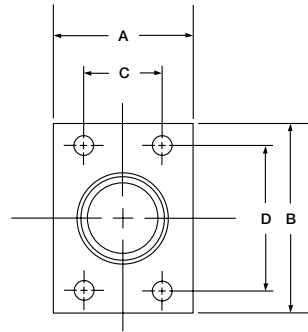


FIGURE 2

All measurements are in millimeters.

CODE 62 NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G THREAD NPTF	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W44-8-8-M10-SS	W45-8-8-M10-SS	0.50	0.50	44.45	56.39	18.24	40.40	25.40	16.46	0.50	12.70	25.40	25.53	8.74	M8	210	M8 X 45
W44-12-12-M10-SS	W45-12-12-M10-SS	0.75	0.75	50.80	71.37	23.80	50.80	31.75	19.30	0.75	19.05	31.75	31.88	10.31	M10	214	M10 X 50
W44-16-16-M12-SS	W45-16-16-M12-SS	1.00	1.00	57.15	81.03	27.76	57.15	38.10	23.42	1.00	25.40	39.62	39.75	12.50	M12	219	M12 X 60
W44-20-20-M14-SS	W45-20-20-M14-SS	1.25	1.25	69.85	95.25	31.75	66.68	38.10	23.88	1.25	31.75	44.45	44.58	14.48	M14	222	M14 X 65
W44-24-24-M16-SS	W45-24-24-M16-SS	1.50	1.50	82.55	114.30	36.50	79.38	44.45	23.88	1.50	38.10	53.72	53.98	16.66	M16	225	M16 X 70
W44-32-32-M20-SS	W45-32-32-M20-SS	2.00	2.00	101.60	133.35	44.45	96.82	44.45	23.88	2.00	50.80	63.25	63.50	20.98	M20	228	M20 X 80

CODE 62 SAE STRAIGHT THREAD

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	PAD SIZE	A	B	C	D	E	F MIN.	G STRAIGHT THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W48-8-8-M10-SS	W49-8-8-M10-SS	0.50	0.50	44.45	56.39	18.24	40.49	25.40	19.05	3/4-16	12.70	25.40	25.53	8.74	M8	210	M8 X 40
W48-12-12-M10-SS	W49-12-12-M10-SS	0.75	0.75	50.80	71.37	23.80	50.80	31.75	19.05	1 1/16-12	19.05	31.75	31.88	10.31	M10	214	M10 X 30
W48-16-16-M12-SS	W49-16-16-M12-SS	1.00	1.00	57.15	81.03	27.76	57.15	38.10	19.05	5/16-12	25.40	39.62	39.75	12.50	M12	219	M12 X 40
W48-20-20-M14-SS	W49-20-20-M14-SS	1.25	1.25	69.85	95.25	31.75	66.68	38.10	19.05	1 5/8-12	31.75	44.45	44.58	14.48	M14	222	M14 X 40
W48-24-24-M16-SS	W49-24-24-M16-SS	1.50	1.50	82.55	114.30	36.50	79.38	44.45	19.05	1 7/8-12	38.10	53.72	53.98	16.66	M16	225	M16 X 45
W48-32-32-M20-SS	W49-32-32-M20-SS	2.00	2.00	101.60	133.35	44.45	96.82	44.45	19.05	2 1/2-12	50.80	63.25	63.50	20.98	M20	228	M20 X 40

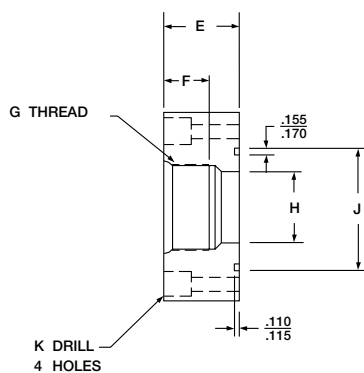


FIGURE 3

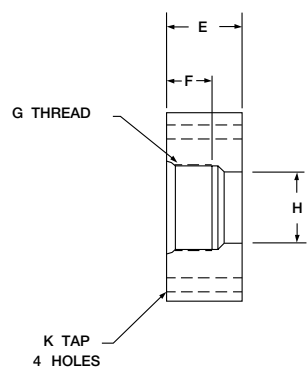
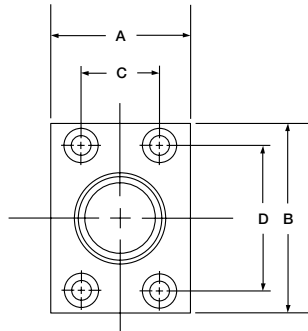


FIGURE 4

4 Bolt Flange Fittings Stainless Steel

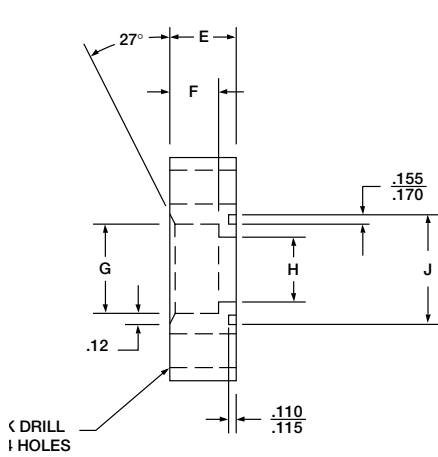


FIGURE 1

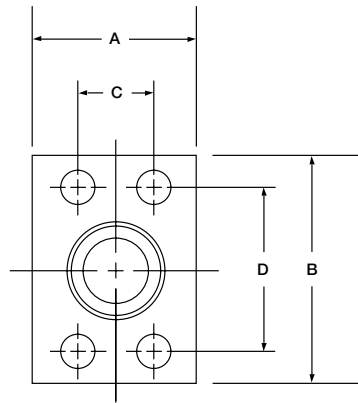


FIGURE 2

All measurements are in inches.

CODE 61 FLAT SOCKET-PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W4-8-8-SS	W61-8-8-SS	0.50	0.50	1.50	2.12	0.688	1.500	0.75	0.38	0.860	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.25
W4-12-12-SS	W61-12-12-SS	0.75	0.75	1.75	2.62	0.875	1.875	1.00	0.50	1.070	0.75	1.255	1.250	0.406	3/8-16	214	3/8-16 X 1.75
W4-16-16-SS	W61-16-16-SS	1.00	1.00	2.00	2.82	1.031	2.063	1.00	0.50	1.335	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 1.75
W4-20-20-SS	W61-20-20-SS	1.25	1.25	2.50	3.19	1.188	2.313	1.00	0.50	1.680	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 1.75
W4-24-24-SS	W61-24-24-SS	1.50	1.50	2.75	3.75	1.406	2.750	1.25	0.50	1.920	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.25
W4-32-32-SS	W61-32-32-SS	2.00	2.00	3.25	4.00	1.688	3.063	1.50	0.62	2.411	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.50
W4-40-40-SS	W61-40-40-SS	2.50	2.50	4.00	4.50	2.000	3.500	1.75	0.75	2.911	2.50	2.995	3.005	0.531	1/2-13	232	1/2-13 X 2.75
W4-48-48-SS	W61-48-48-SS	3.00	3.00	4.50	5.31	2.438	4.188	2.12	1.24	3.540	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 3.50

CODE 62 FLAT SOCKET-PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W59-8-8-SS	W60-8-8-SS	0.50	0.50	1.75	2.22	0.718	1.594	1.00	0.50	0.860	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W59-12-12-SS	W60-12-12-SS	0.75	0.75	2.00	2.81	0.937	2.000	1.00	0.50	1.070	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.75
W59-16-16-SS	W60-16-16-SS	1.00	1.00	2.25	3.19	1.093	2.250	1.00	0.50	1.335	1.00	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.75
W59-20-20-SS	W60-20-20-SS	1.25	1.25	2.75	3.75	1.250	2.625	1.25	0.50	1.680	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.25
W59-24-24-SS	W60-24-24-SS	1.50	1.50	3.25	4.50	1.437	3.125	1.50	0.50	1.920	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.75
W59-32-32-SS	W60-32-32-SS	2.00	2.00	4.00	5.25	1.750	3.812	1.75	0.62	2.411	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00
W59-40-40-SS	W60-40-40-SS	2.50	2.50	5.00	6.88	2.312	4.875	2.00	0.62	2.911	2.50	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.50
W59-48-48-SS	W60-48-48-SS	3.00	3.00	6.00	8.50	2.812	6.000	2.50	0.62	3.540	3.00	3.615	3.625	1.156	1 1/8-7	237	1 1/8-7 X 4.50

500 PSI FLAT SOCKET-PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W72-48-48-SS	W91-48-48-SS	3.00	3.00	4.50	5.31	2.438	4.188	1.38	1.13	3.540	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 2.50
W72-56-56-SS	W91-56-56-SS	3.50	3.50	5.00	6.00	2.750	4.750	1.44	1.19	4.045	3.50	4.095	4.115	0.656	5/8-11	241	5/8-11 X 2.50
W72-64-64-SS	W91-64-64-SS	4.00	4.00	5.50	6.38	3.062	5.125	1.50	1.25	4.550	4.00	4.595	4.615	0.656	5/8-11	245	5/8-11 X 2.50

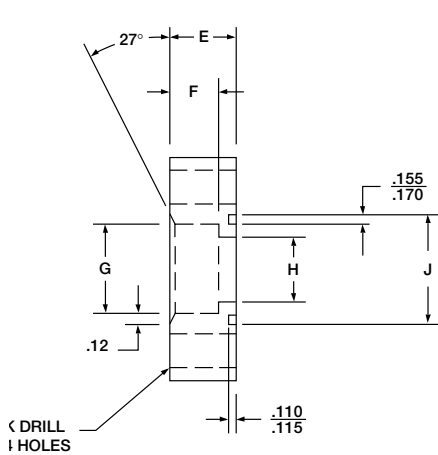


FIGURE 1

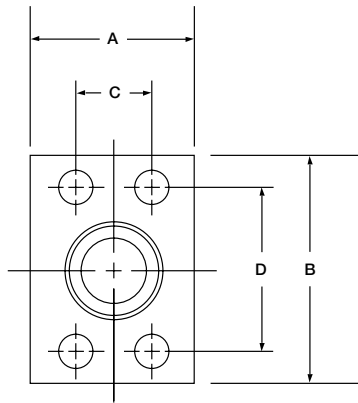


FIGURE 2

All measurements are in millimeters.

K TAP
4 HOLES

CODE 61 FLAT SOCKET-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W4-8-8-M8-SS	W61-8-8-M8-SS	0.50	0.50	38.10	53.85	17.48	38.10	19.05	9.65	21.84	12.70	25.40	25.53	8.74	M8	210	M8 X 30
W4-12-12-M10-SS	W61-12-12-M10-SS	0.75	0.75	44.45	66.55	22.23	47.63	25.40	12.70	27.18	19.05	31.88	31.75	10.31	M10	214	M10 X 45
W4-16-16-M10-SS	W61-16-16-M10-SS	1.00	1.00	50.80	71.63	26.19	52.40	25.40	12.70	33.91	25.40	39.62	39.75	10.31	M10	219	M10 X 45
W4-20-20-M10-SS	W61-20-20-M10-SS	1.25	1.25	63.50	81.03	30.18	58.75	25.40	12.70	42.67	31.75	44.45	44.58	10.31	M10	222	M10 X 45
W4-24-24-M12-SS	W61-24-24-M12-SS	1.50	1.50	69.85	95.25	35.71	69.85	31.75	12.70	48.77	38.10	53.72	53.98	13.49	M12	225	M12 X 50
W4-32-32-M12-SS	W61-32-32-M12-SS	2.00	2.00	82.55	101.60	42.88	77.80	38.10	15.75	61.24	50.80	63.25	63.50	13.49	M12	228	M12 X 65
W4-40-40-M12-SS	W61-40-40-M12-SS	2.50	2.50	101.60	114.30	50.80	88.90	44.45	19.05	73.94	63.50	76.07	76.33	13.49	M12	232	M12 X 70
W4-48-48-M16-SS	W61-48-48-M16-SS	3.00	3.00	114.30	134.87	61.93	106.38	53.85	31.50	89.92	76.20	91.82	92.08	16.66	M16	237	M16 X 90

CODE 62 FLAT SOCKET-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W59-8-8-M8-SS	W60-8-8-M8-SS	0.50	0.50	44.45	56.39	18.24	40.49	25.40	12.70	21.84	12.70	25.40	25.53	8.74	M8	210	M8 X 40
W59-12-12-M10-SS	W60-12-12-M10-SS	0.75	0.75	50.80	71.37	23.80	50.80	25.40	12.70	27.18	19.05	31.75	31.88	10.31	M10	214	M10 X 45
W59-16-16-M12-SS	W60-16-16-M12-SS	1.00	1.00	57.15	81.03	27.76	57.15	25.40	12.70	33.91	25.40	39.62	39.75	12.50	M12	219	M12 X 45
W59-20-20-M14-SS	W60-20-20-M14-SS	1.25	1.25	69.85	95.25	31.75	66.68	31.75	12.70	42.67	31.75	44.45	44.58	14.48	M14	222	M14 X 55
W59-24-24-M16-SS	W60-24-24-M16-SS	1.50	1.50	82.55	114.30	36.50	79.38	38.10	12.70	48.77	38.10	53.72	53.98	16.66	M16	225	M16 X 65
W59-32-32-M20-SS	W60-32-32-M20-SS	2.00	2.00	101.60	133.35	44.45	96.82	44.45	15.75	61.24	50.80	63.25	63.50	20.98	M20	228	M20 X 80
W59-40-40-M24-SS	W60-40-40-M24-SS	2.50	2.50	127.00	174.75	58.72	123.83	50.80	15.75	73.94	63.50	76.07	76.33	25.00	M24	232	M24 X 90
W59-48-48-M30-SS	W60-48-48-M30-SS	3.00	3.00	152.40	215.90	71.42	152.40	63.50	15.75	89.92	76.20	91.82	92.08	31.00	M30	237	M30 X 115

500 PSI FLAT SOCKET-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H DIA.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W72-48-48-M16-SS	W91-48-48-M16-SS	3.00	3.00	114.30	134.87	61.93	106.38	35.05	28.70	89.92	76.20	91.82	92.08	16.66	M16	237	M16 X 65
W72-56-56-M16-SS	W91-56-56-M16-SS	3.50	3.50	127.00	152.40	69.85	120.65	36.58	30.23	102.74	88.90	104.01	104.52	16.66	M16	241	M16 X 65
W72-64-64-M16-SS	W91-64-64-M16-SS	4.00	4.00	139.70	162.05	77.77	130.18	38.10	31.75	115.57	101.60	116.71	117.22	16.66	M16	245	M16 X 70

4 Bolt Flange Fittings Stainless Steel

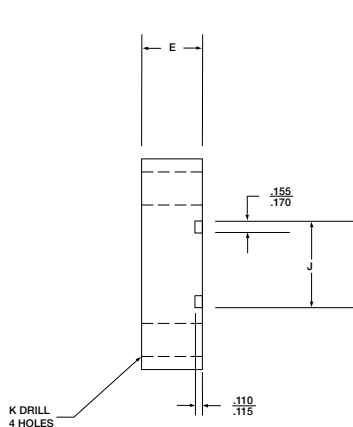


FIGURE 1

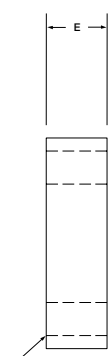
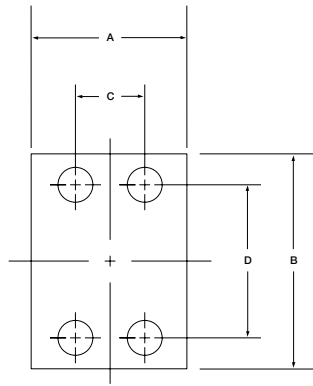


FIGURE 2

All measurements are in inches.

CODE 61 BLANKING

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K	K TAP UN-2B	MOUNTING HARDWARE	
												O-RING	SHCS
W36-8-8-SS	W37-8-8-SS	0.500	1.50	2.12	0.688	1.500	1.25	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.75
W36-12-12-SS	W37-12-12-SS	0.750	1.75	2.62	0.875	1.875	1.25	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W36-16-16-SS	W37-16-16-SS	1.000	2.00	2.82	1.031	2.063	1.50	1.560	1.565	0.406	3/8-16	219	3/8-16 X 2.25
W36-20-20-SS	W37-20-20-SS	1.250	2.50	3.19	1.188	2.313	1.50	1.750	1.755	0.469	7/16-14	222	7/16-14 X 2.25
W36-24-24-SS	W37-24-24-SS	1.500	2.75	3.75	1.406	2.750	1.75	2.115	2.125	0.531	1/2-13	225	1/2-13 X 2.75
W36-32-32-SS	W37-32-32-SS	2.000	3.25	4.00	1.688	3.063	1.75	2.490	2.500	0.531	1/2-13	228	1/2-13 X 2.75
W36-40-40-SS	W37-40-40-SS	2.500	4.00	4.50	2.000	3.500	2.00	2.995	3.005	0.531	1/2-13	232	1/2-13 X 3.00
W36-48-48-SS	W37-48-48-SS	3.000	4.50	5.31	2.438	4.188	2.25	3.615	3.625	0.656	5/8-11	237	5/8-11 X 3.50

CODE 62 BLANKING

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K	K TAP UN-2B	MOUNTING HARDWARE	
												O-RING	SHCS
W38-8-8-SS	W39-8-8-SS	0.500	1.75	2.22	0.718	1.594	1.00	1.000	1.005	0.344	5/16-18	210	5/16-18 X 1.50
W38-12-12-SS	W39-12-12-SS	0.750	2.00	2.81	0.937	2.000	1.25	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W38-16-16-SS	W39-16-16-SS	1.000	2.25	3.19	1.093	2.250	1.50	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.25
W38-20-20-SS	W39-20-20-SS	1.250	2.75	3.75	1.250	2.625	1.50	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W38-24-24-SS	W39-24-24-SS	1.500	3.25	4.50	1.437	3.125	1.75	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W38-32-32-SS	W39-32-32-SS	2.000	4.00	5.25	1.750	3.812	1.75	2.490	2.500	0.781	3/4-10	228	3/4-10 X 3.00

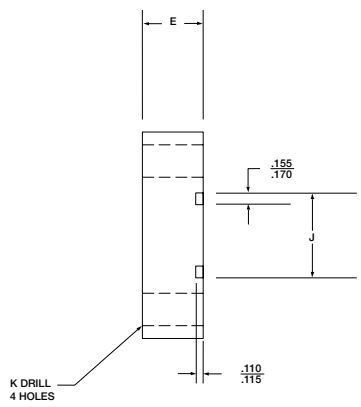


FIGURE 3

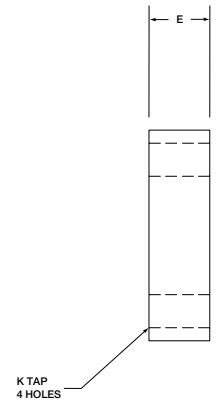
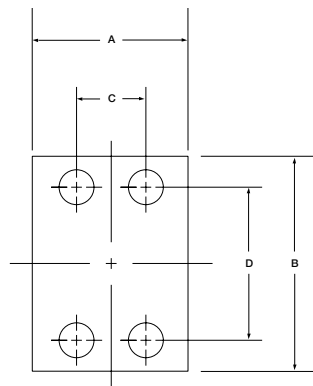


FIGURE 4

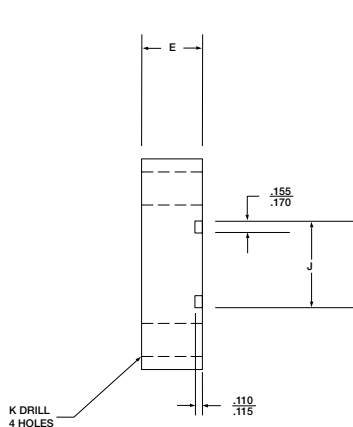


FIGURE 1

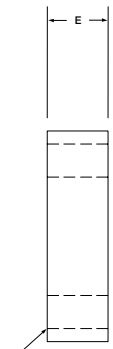
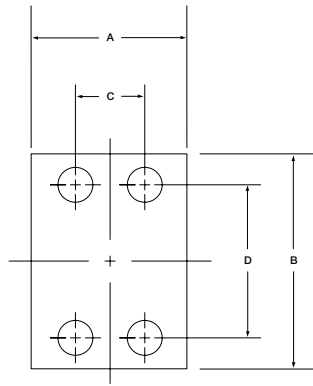


FIGURE 2

All measurements are in millimeters.

CODE 61 BLANKING

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K	K TAP	MOUNTING HARDWARE	
												O-RING	SHCS
W36-8-8-M8-SS	W37-8-8-M8-SS	0.500	38.10	53.85	17.48	38.10	19.05	25.40	25.53	8.74	M8	210	M8 X 40
W36-12-12-M10-SS	W37-12-12-M10-SS	0.750	44.45	66.55	22.23	47.63	25.40	31.75	31.88	10.31	M10	214	M10 X 40
W36-16-16-M10-SS	W37-16-16-M10-SS	1.000	50.80	71.63	26.19	52.40	25.40	39.62	39.75	10.31	M10	219	M10 X 45
W36-20-20-M10-SS	W37-20-20-M10-SS	1.250	63.50	81.03	30.18	58.75	25.40	44.45	44.58	10.31	M10	222	M10 X 45
W36-24-24-M12-SS	W37-24-24-M12-SS	1.500	69.85	95.25	35.71	69.85	31.75	53.72	53.98	13.49	M12	225	M12 X 60
W36-32-32-M12-SS	W37-32-32-M12-SS	2.000	82.55	101.60	42.88	77.80	38.10	63.25	63.50	13.49	M12	228	M12 X 65
W36-40-40-M12-SS	W37-40-40-M12-SS	2.500	101.60	114.30	50.80	88.90	44.45	76.07	76.33	13.49	M12	232	M12 X 70
W36-48-48-M16-SS	W37-48-48-M16-SS	3.000	114.30	134.87	61.93	106.38	53.85	91.82	92.08	16.66	M16	237	M16 X 80

CODE 62 BLANKING

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PAD SIZE	A	B	C	D	E	J MIN.	J MAX.	K	K TAP	MOUNTING HARDWARE	
												O-RING	SHCS
W38-8-8-M8-SS	W39-8-8-M8-SS	0.500	44.45	56.39	18.24	40.49	25.40	25.40	25.53	8.74	M8	210	M8 X 40
W38-12-12-M10-SS	W39-12-12-M10-SS	0.750	50.80	71.37	23.80	50.80	25.40	31.75	31.88	10.31	M10	214	M10 X 45
W38-16-16-M12-SS	W39-16-16-M12-SS	1.000	57.15	81.03	27.76	57.15	25.40	39.62	39.75	12.50	M12	219	M12 X 45
W38-20-20-M14-SS	W39-20-20-M14-SS	1.250	69.85	95.25	31.75	66.68	31.75	44.45	44.58	14.48	M14	222	M14 X 55
W38-24-24-M16-SS	W39-24-24-M16-SS	1.500	82.55	114.30	36.50	79.38	38.10	53.72	53.98	16.66	M16	225	M16 X 65
W38-32-32-M20-SS	W39-32-32-M20-SS	2.000	101.60	133.35	44.45	96.82	44.45	63.25	63.50	20.98	M20	228	M20 X 80

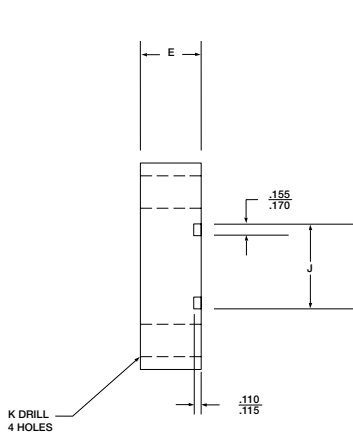


FIGURE 3

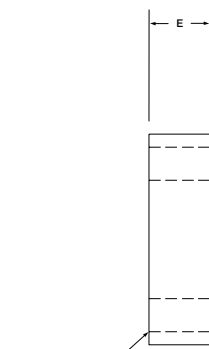
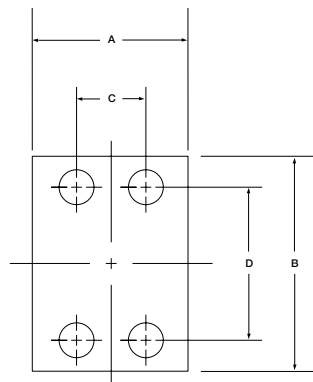


FIGURE 4

4 Bolt Flange Fittings Stainless Steel

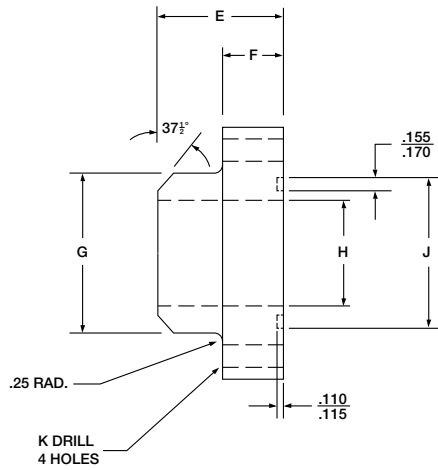


FIGURE 1

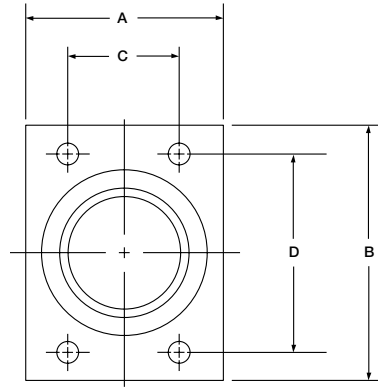


FIGURE 2

All measurements are in inches.

CODE 61 BUTT WELD - SCH. 40 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W35-12-SS	W34-12-SS	0.75	0.75	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.82	1.250	1.255	0.406	3/8-16	214	3/8-16 x 1.25
W35-16-SS	W34-16-SS	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	1.04	1.560	1.565	0.406	3/8-16	219	3/8-16 x 1.25
W35-20-SS	W34-20-SS	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.38	1.750	1.755	0.469	7/16-14	222	7/16-14 x 1.50
W35-24-SS	W34-24-SS	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.61	2.115	2.125	0.531	1/2-13	225	1/2-13 x 1.75
W35-32-SS	W34-32-SS	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	2.06	2.490	2.500	0.531	1/2-13	228	1/2-13 x 2.00
W35-40-SS	W34-40-SS	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.46	2.995	3.005	0.531	1/2-13	232	1/2-13 x 2.00
W35-48-SS	W34-48-SS	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	3.06	3.615	3.625	0.656	5/8-11	237	5/8-11 x 2.75

CODE 61 BUTT WELD - SCH. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W24-12-SS	W23-12-SS	0.75	0.75	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.742	1.250	1.255	0.406	3/8-16	214	3/8-16 x 1.25
W24-16-SS	W23-16-SS	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.957	1.560	1.565	0.406	3/8-16	219	3/8-16 x 1.25
W24-20-SS	W23-20-SS	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.278	1.750	1.755	0.469	7/16-14	222	7/16-14 x 1.50
W24-24-SS	W23-24-SS	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.500	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W24-32-SS	W23-32-SS	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.939	2.490	2.500	0.531	1/2-13	228	1/2-13 x 2.00
W24-40-SS	W23-40-SS	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.323	2.995	3.005	0.531	1/2-13	232	1/2-13 x 2.00
W24-48-SS	W23-48-SS	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	2.900	3.615	3.625	0.656	5/8-11	237	5/8-11 x 2.75

CODE 61 BUTT WELD - SCH. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W27-12-SS	W25-12-SS	0.75	0.75	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.614	1.250	1.255	0.406	3/8-16	214	3/8-16 x 1.25
W27-16-SS	W25-16-SS	1.00	1.00	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.815	1.560	1.565	0.406	3/8-16	219	3/8-16 x 1.25
W27-20-SS	W25-20-SS	1.25	1.25	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.160	1.750	1.755	0.469	7/16-14	222	7/16-14 x 1.50
W27-24-SS	W25-24-SS	1.50	1.50	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.337	2.115	2.125	0.531	1/2-13	225	1/2-13 X 1.75
W27-32-SS	W25-32-SS	2.00	2.00	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.689	2.490	2.500	0.531	1/2-13	228	1/2-13 x 2.00
W27-40-SS	W25-40-SS	2.50	2.50	3.56	4.50	2.000	3.500	2.31	1.12	2.875	2.125	2.995	3.005	0.531	1/2-13	232	1/2-13 x 2.00
W27-48-SS	W25-48-SS	3.00	3.00	4.19	5.31	2.438	4.188	2.75	1.62	3.500	2.624	3.615	3.625	0.656	5/8-11	237	5/8-11 x 2.75

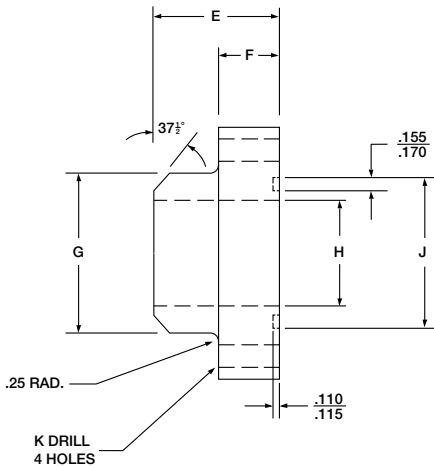


FIGURE 1

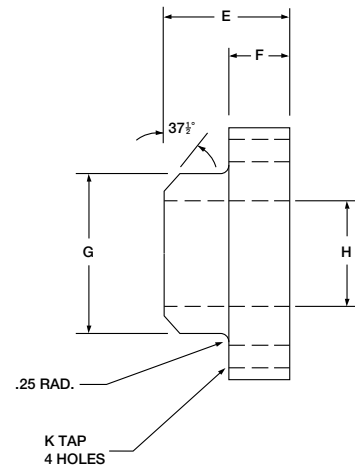
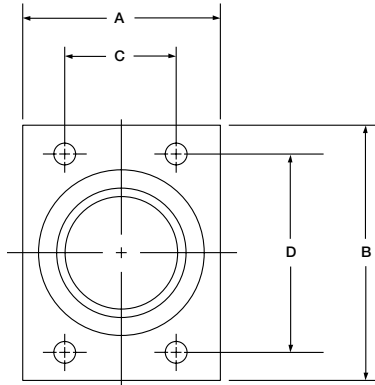


FIGURE 2

All measurements are in millimeters.

CODE 61 BUTT WELD - SCH. 40 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W35-12-M10-SS	W34-12-M10-SS	0.75	0.75	42.93	65.02	22.23	47.63	26.92	12.70	26.67	20.83	31.75	31.88	10.31	M10	214	M10 X 30
W35-16-M10-SS	W34-16-M10-SS	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	26.42	39.62	39.75	10.31	M10	219	M10 X 30
W35-20-M10-SS	W34-20-M10-SS	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	35.05	44.45	44.58	10.31	M10	222	M10 X 35
W35-24-M12-SS	W34-24-M12-SS	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	40.89	53.72	53.98	13.49	M12	225	M12 X 40
W35-32-M12-SS	W34-32-M12-SS	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	52.32	63.25	63.50	13.49	M12	228	M12 X 45
W35-40-M12-SS	W34-40-M12-SS	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	62.48	76.07	76.33	13.49	M12	232	M12 X 50
W35-48-M16-SS	W34-48-M16-SS	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	77.72	91.82	92.08	16.66	M16	237	M16 X 65

CODE 61 BUTT WELD - SCH. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W24-12-M10-SS	W23-12-M10-SS	0.75	0.75	42.93	65.02	22.23	47.63	26.92	12.70	26.67	18.85	31.75	31.88	10.31	M10	214	M10 X 30
W24-16-M10-SS	W23-16-M10-SS	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	24.31	39.62	39.75	10.31	M10	219	M10 X 30
W24-20-M10-SS	W23-20-M10-SS	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	32.46	44.45	44.58	10.31	M10	222	M10 X 35
W24-24-M12-SS	W23-24-M12-SS	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	38.10	53.72	53.98	13.49	M12	225	M12 X 40
W24-32-M12-SS	W23-32-M12-SS	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	49.25	63.25	63.50	13.49	M12	228	M12 X 45
W24-40-M12-SS	W23-40-M12-SS	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	59.00	76.07	76.33	13.49	M12	232	M12 X 50
W24-48-M16-SS	W23-48-M16-SS	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	73.66	91.82	92.08	16.66	M16	237	M16 X 65

CODE 61 BUTT WELD - SCH. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W27-12-M10-SS	W25-12-M10-SS	0.75	0.75	42.93	65.02	22.23	47.63	26.92	12.70	26.67	15.60	31.75	31.88	10.31	M10	214	M10 X 30
W27-16-M10-SS	W25-16-M10-SS	1.00	1.00	49.28	69.85	26.19	52.37	31.75	14.22	33.40	20.70	39.62	39.75	10.31	M10	219	M10 X 30
W27-20-M10-SS	W25-20-M10-SS	1.25	1.25	55.63	79.25	30.18	58.72	36.58	15.75	42.16	29.46	44.45	44.58	10.31	M10	222	M10 X 35
W27-24-M12-SS	W25-24-M12-SS	1.50	1.50	65.02	93.73	35.71	69.85	44.45	20.57	48.26	33.96	53.72	53.98	13.49	M12	225	M12 X 40
W27-32-M12-SS	W25-32-M12-SS	2.00	2.00	77.72	101.60	42.88	77.77	50.80	26.92	60.33	42.90	63.25	63.50	13.49	M12	228	M12 X 45
W27-40-M12-SS	W25-40-M12-SS	2.50	2.50	90.42	114.30	50.80	88.90	58.67	28.45	73.03	53.98	76.07	76.33	13.49	M12	232	M12 X 50
W27-48-M16-SS	W25-48-M16-SS	3.00	3.00	106.42	134.87	61.93	106.38	69.85	41.15	88.90	66.65	91.82	92.08	16.66	M16	237	M16 X 65

4 Bolt Flange Fittings Stainless Steel

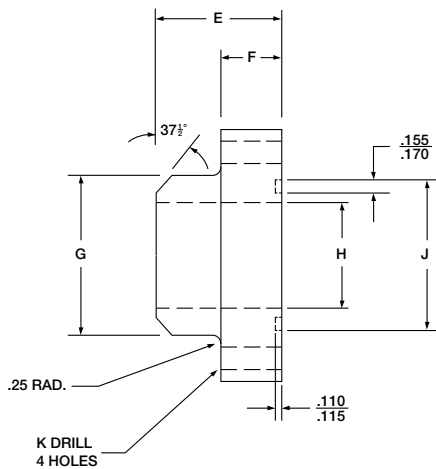


FIGURE 1

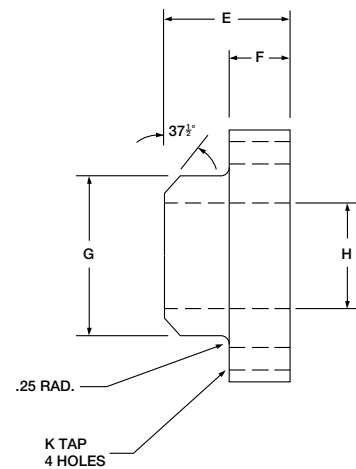
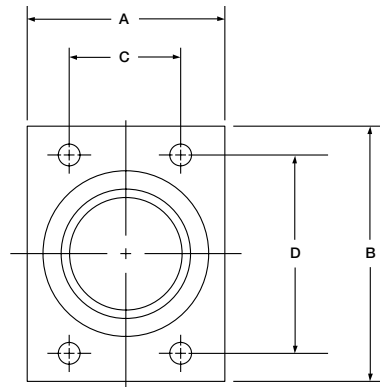


FIGURE 2

All measurements are in inches.

CODE 62 BUTT WELD - SCH. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W28-12-SS	W26-12-SS	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.742	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W28-16-SS	W26-16-SS	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.957	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W28-20-SS	W26-20-SS	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.278	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W28-24-SS	W26-24-SS	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.500	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W28-32-SS	W26-32-SS	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.939	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
W28-40-SS	W26-40-SS	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.323	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
W28-48-SS	W26-48-SS	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.900	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

CODE 62 BUTT WELD - SCH. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W30-12-SS	W29-12-SS	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.614	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W30-16-SS	W29-16-SS	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.815	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W30-20-SS	W29-20-SS	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	1.160	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W30-24-SS	W29-24-SS	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.337	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W30-32-SS	W29-32-SS	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.689	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
W30-40-SS	W29-40-SS	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	2.125	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
W30-48-SS	W29-48-SS	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.624	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

CODE 62 BUTT WELD - SCH. XXS PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W33-12-SS	W32-12-SS	0.75	0.75	1.94	2.81	0.937	2.000	1.42	0.83	1.050	0.434	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.50
W33-16-SS	W32-16-SS	1.00	1.00	2.18	3.19	1.093	2.250	1.61	0.83	1.315	0.599	1.560	1.565	0.469	7/16-14	219	7/16-14 X 1.50
W33-20-SS	W32-20-SS	1.25	1.25	2.44	3.75	1.250	2.625	1.73	0.94	1.660	0.896	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W33-24-SS	W32-24-SS	1.50	1.50	2.81	4.44	1.437	3.125	2.17	1.10	1.900	1.100	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.25
W33-32-SS	W32-32-SS	2.00	2.00	3.44	5.25	1.750	3.812	2.48	1.46	2.375	1.503	2.490	2.500	0.781	3/4-10	228	3/4-10 X 2.75
W33-40-SS	W32-40-SS	2.50	2.50	5.00	6.88	2.312	4.875	2.37	1.50	2.875	1.771	2.995	3.005	0.940	7/8-9	232	7/8-9 X 3.00
W33-48-SS	W32-48-SS	3.00	3.00	6.00	8.50	2.812	6.000	2.96	2.00	3.500	2.300	3.615	3.625	1.190	1 1/8-7	237	1 1/8-7 X 4.00

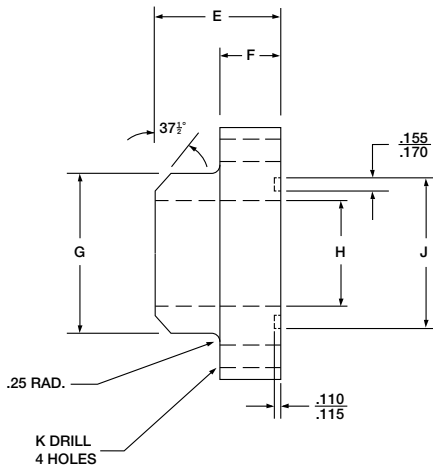


FIGURE 1

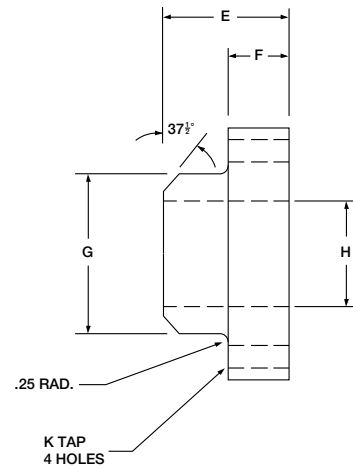
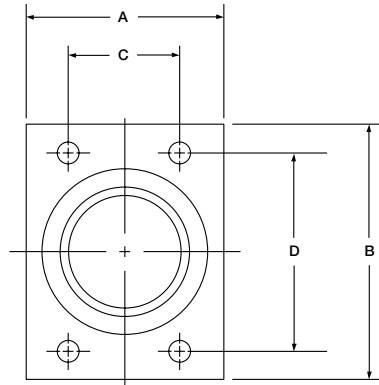


FIGURE 2

All measurements are in millimeters.

CODE 62 BUTT WELD - SCH. 80 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W28-12-M10-22	W26-12-M10-SS	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.67	18.85	31.75	31.88	10.31	M10	214	M10 X 40
W28-16-M12-SS	W26-16-M12-SS	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	24.31	39.62	39.75	12.50	M12	219	M12 X 40
W28-20-M14-SS	W26-20-M14-SS	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	32.46	44.45	44.58	14.48	M14	222	M14 X 45
W28-24-M16-22	W26-24-M16-SS	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	38.10	53.72	53.98	16.66	M16	225	M16 X 50
W28-32-M20-SS	W26-32-M20-SS	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	49.25	63.25	63.50	20.98	M20	228	M20 X 65
W28-40-M24-SS	W26-40-M24-SS	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	59.00	76.07	76.33	25.00	M24	232	M24 X 80
W28-48-M30-SS	W26-48-M30-SS	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	73.66	91.82	92.08	31.00	M30	237	M30 X 105

CODE 62 BUTT WELD - SCH. 160 PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W30-12-M10-SS	W29-12-M10-SS	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.67	15.60	31.75	31.88	10.31	M10	214	M10 X 40
W30-16-M12-SS	W29-16-M12-SS	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	20.70	39.62	39.75	12.50	M12	219	M12 X 40
W30-20-M14-SS	W29-20-M14-SS	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	29.46	44.45	44.58	14.48	M14	222	M14 X 45
W30-24-M16-SS	W29-24-M16-SS	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	33.96	53.72	53.98	16.66	M16	225	M16 X 50
W30-32-M20-SS	W29-32-M20-SS	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	42.90	63.25	63.50	20.98	M20	228	M20 X 65
W30-40-M24-SS	W29-40-M24-SS	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	53.98	76.07	76.33	25.00	M24	232	M24 X 80
W30-48-M30-SS	W29-48-M30-SS	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	66.65	91.82	92.08	31.00	M30	237	M30 X 105

CODE 62 BUTT WELD - SCH. XXS PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G PIPE O.D.	H PIPE I.D.	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W33-12-M10-SS	W32-12-M10-SS	0.75	0.75	49.28	71.37	23.80	50.80	36.07	21.08	26.67	11.02	31.75	31.88	10.31	M10	214	M10 X 40
W33-16-M12-SS	W32-16-M12-SS	1.00	1.00	55.37	81.03	27.76	57.15	40.89	21.08	33.40	15.21	39.62	39.75	12.50	M12	219	M12 X 40
W33-20-M14-SS	W32-20-M14-SS	1.25	1.25	61.98	95.25	31.75	66.68	43.94	23.88	42.16	22.76	44.45	44.58	14.48	M14	222	M14 X 45
W33-24-M16-SS	W32-24-M16-SS	1.50	1.50	71.37	112.78	36.50	79.38	55.12	27.94	48.26	27.94	53.72	53.98	16.66	M16	225	M16 X 50
W33-32-M20-SS	W32-32-M20-SS	2.00	2.00	87.38	133.35	44.45	96.82	62.99	37.08	60.33	38.18	63.25	63.50	20.98	M20	228	M20 X 65
W33-40-M24-SS	W32-40-M24-SS	2.50	2.50	127.00	174.75	58.72	123.83	60.20	38.10	73.03	44.98	76.07	76.33	25.00	M24	232	M24 X 80
W33-48-M30-SS	W32-48-M30-SS	3.00	3.00	152.40	215.90	71.42	152.40	75.18	50.80	88.90	58.42	91.82	92.08	31.00	M30	237	M30 X 105

4 Bolt Flange Fittings Stainless Steel

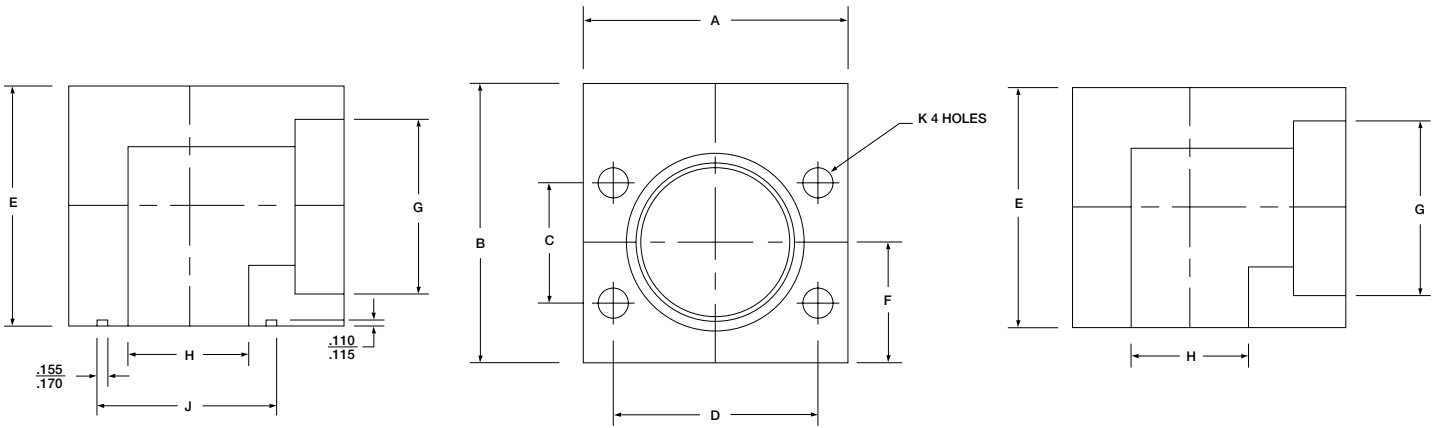


FIGURE 1

FIGURE 2

All measurements are in inches.

CODE 61 ELBOW SOCKET WELD-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W176-8-8-SS	W169-8-8-SS	0.50	0.50	2.12	1.75	0.688	1.500	1.50	0.75	0.855	0.50	1.000	1.005	0.344	5/16-18	210	5/16-18 X 2.00
W176-12-12-SS	W169-12-12-SS	0.75	0.75	2.62	2.00	0.875	1.875	1.75	0.88	1.062	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.50
W176-16-16-SS	W169-16-16-SS	1.00	1.00	2.82	2.25	1.031	2.062	2.00	1.00	1.328	1.00	1.560	1.565	0.406	3/8-16	219	3/8-16 X 2.75
W176-20-20-SS	W169-20-20-SS	1.25	1.25	3.19	2.75	1.188	2.312	2.25	1.25	1.672	1.25	1.750	1.755	0.469	7/16-14	222	7/16-14 X 3.00
W176-24-24-SS	W169-24-24-SS	1.50	1.50	3.75	3.00	1.406	2.750	3.00	1.38	1.922	1.50	2.115	2.125	0.531	1/2-13	225	1/2-13 X 4.00
W176-32-32-SS	W169-32-32-SS	2.00	2.00	4.00	3.50	1.688	3.062	3.50	1.62	2.406	2.00	2.490	2.500	0.531	1/2-13	228	1/2-13 X 4.50
W176-40-40-SS	W169-40-40-SS	2.50	2.50	4.50	4.00	2.000	3.500	4.00	2.00	2.906	2.50	2.995	3.005	0.531	1/2-13	232	1/2-13 X 5.00
W176-48-48-SS	W169-48-48-SS	3.00	3.00	5.31	5.00	2.438	4.188	5.00	2.25	3.547	3.00	3.615	3.625	0.656	5/8-11	237	5/8-11 X 6.00

CODE 62 ELBOW SOCKET WELD-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
																O-RING	SHCS
W186-12-12-SS	W189-12-12-SS	0.75	0.75	2.81	2.25	0.937	2.000	1.75	1.00	1.062	0.75	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.50
W186-16-16-SS	W189-16-16-SS	1.00	1.00	3.19	2.50	1.093	2.250	2.00	1.12	1.328	1.00	1.560	1.565	0.469	7/16-14	219	7/16-14 X 2.75
W186-20-20-SS	W189-20-20-SS	1.25	1.25	3.75	3.00	1.250	2.625	2.25	1.38	1.672	1.25	1.750	1.755	0.531	1/2-13	222	1/2-13 X 3.25
W186-24-24-SS	W189-24-24-SS	1.50	1.50	4.50	3.50	1.437	3.125	3.00	1.62	1.922	1.50	2.115	2.125	0.656	5/8-11	225	5/8-11 X 4.25
W186-32-32-SS	W189-32-32-SS	2.00	2.00	5.25	4.00	1.750	3.812	3.50	2.00	2.406	2.00	2.490	2.500	0.781	3/4-10	228	3/4-10 X 4.75

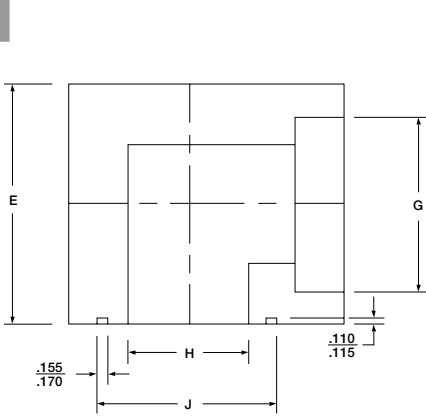


FIGURE 1

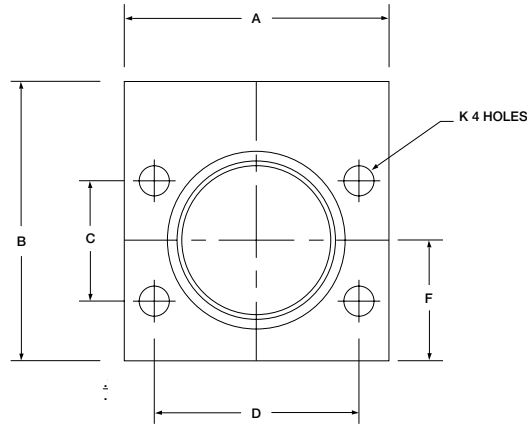


FIGURE 2

All measurements are in millimeters.

CODE 61 ELBOW SOCKET WELD-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W176-8-8-M8-SS	W169-8-8-M8-SS	0.50	0.50	53.85	44.45	17.48	38.10	38.10	19.05	21.72	12.70	25.40	25.53	8.74	M8	210	M8 X 65
W176-12-12-M10-SS	W169-12-12-M10-SS	0.75	0.75	66.55	50.80	22.23	47.63	44.45	22.35	26.97	19.05	31.75	31.88	10.31	M10	214	M10 X 70
W176-16-16-M10-SS	W169-16-16-M10-SS	1.00	1.00	71.63	57.15	26.19	52.37	50.80	25.40	33.73	25.40	39.62	39.75	10.31	M10	219	M10 X 80
W176-20-20-M10-SS	W169-20-20-M10-SS	1.25	1.25	81.03	69.85	30.18	58.72	57.15	31.75	42.47	31.75	44.45	44.58	10.31	M10	222	M10 X 90
W176-24-24-M12-SS	W169-24-24-M12-SS	1.50	1.50	95.25	76.20	35.71	69.85	76.20	35.05	48.82	38.10	53.72	53.98	13.49	M12	225	M12 X 115
W176-32-32-M12-SS	W169-32-32-M12-SS	2.00	2.00	101.60	88.90	42.88	77.77	88.90	41.15	61.11	50.80	63.25	63.50	13.49	M12	228	M12 X 140
W176-40-40-M12-SS	W169-40-40-M12-SS	2.50	2.50	114.30	101.60	50.80	88.90	101.60	50.80	73.81	63.50	76.07	76.33	13.49	M12	232	M12 X 160
W176-48-48-M16-SS	W169-48-48-M16-SS	3.00	3.00	134.87	127.00	61.93	106.38	127.00	57.15	90.09	76.20	91.82	92.08	16.66	M16	237	M16 X 195

CODE 62 ELBOW SOCKET WELD-PIPE																	
O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
																O-RING	SHCS
W186-12-12-M10-SS	W189-12-12-M10-SS	0.75	0.75	71.37	57.15	23.80	50.80	44.45	25.40	26.97	19.05	31.75	31.88	10.31	M10	214	M10 X 70
W186-16-16-M12-SS	W189-16-16-M12-SS	1.00	1.00	81.03	63.50	27.76	57.15	50.80	28.45	33.73	25.40	39.62	39.75	12.50	M12	219	M12 X 80
W186-20-20-M14-SS	W189-20-20-M14-SS	1.25	1.25	95.25	76.20	31.75	66.68	57.15	35.05	42.47	31.75	44.45	44.58	14.48	M14	222	M14 X 90
W186-24-24-M16-SS	W189-24-24-M16-SS	1.50	1.50	114.30	88.90	36.50	79.38	76.20	41.15	48.82	38.10	53.72	53.98	16.66	M16	225	M16 X 115
W186-32-32-M20-SS	W189-32-32-M20-SS	2.00	2.00	133.35	101.60	44.45	96.82	88.90	50.80	61.11	50.80	63.25	63.50	20.98	M20	228	M20 X 140

4 Bolt Flange Fittings Stainless Steel

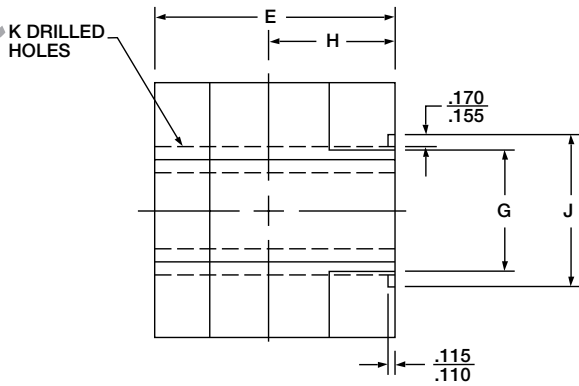


FIGURE 1

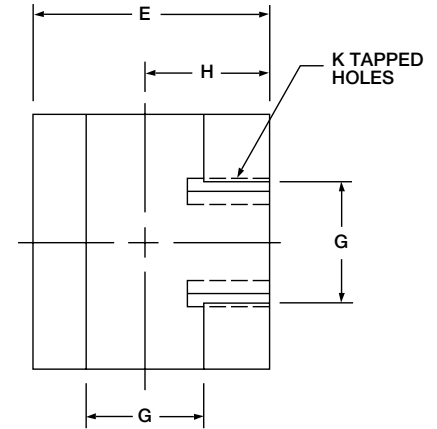
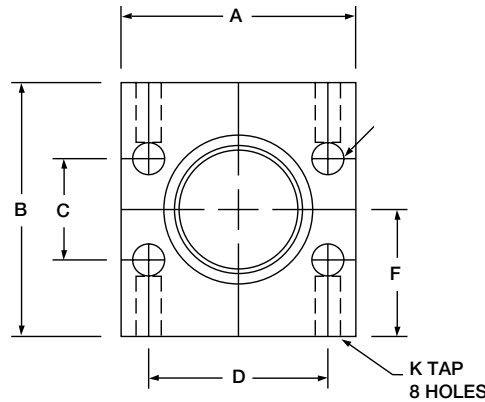


FIGURE 2



All measurements are in inches.

CODE 61 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD UN-2B
W17-12-SS	W16-12-SS	0.75	2.62	2.75	0.875	1.875	2.25	1.38	0.75	1.03	1.250	1.255	0.406	3/8-16
W17-16-SS	W16-16-SS	1.00	2.82	3.00	1.031	2.062	2.50	1.50	1.00	1.16	1.560	1.565	0.406	3/8-16
W17-20-SS	W16-20-SS	1.25	3.19	3.50	1.188	2.312	3.00	1.75	1.25	1.44	1.750	1.755	0.469	7/16-14
W17-24-SS	W16-24-SS	1.50	3.75	4.00	1.406	2.750	3.50	2.00	1.50	1.62	2.115	2.125	0.531	1/2-13
W17-32-SS	W16-32-SS	2.00	4.00	4.25	1.688	3.062	4.00	2.12	2.00	1.91	2.495	2.500	0.531	1/2-13

CODE 62 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD UN-2B
W19-12-SS	W18-12-SS	0.75	2.81	3.00	0.937	2.000	2.50	1.50	0.75	1.19	1.255	1.250	0.406	3/8-16
W19-16-SS	W18-16-SS	1.00	3.19	3.50	1.093	2.250	3.00	1.75	1.00	1.38	1.565	1.560	0.469	7/16-14
W19-20-SS	W18-20-SS	1.25	3.75	4.00	1.250	2.625	3.00	2.00	1.25	1.41	1.755	1.750	0.531	1/2-13
W19-24-SS	W18-24-SS	1.50	4.50	4.50	1.437	3.125	4.00	2.25	1.50	1.88	2.125	2.115	0.656	5/8-11
W19-32-SS	W18-32-SS	2.00	5.00	5.00	1.750	3.812	5.00	2.50	2.00	2.25	2.500	2.495	0.781	3/4-10

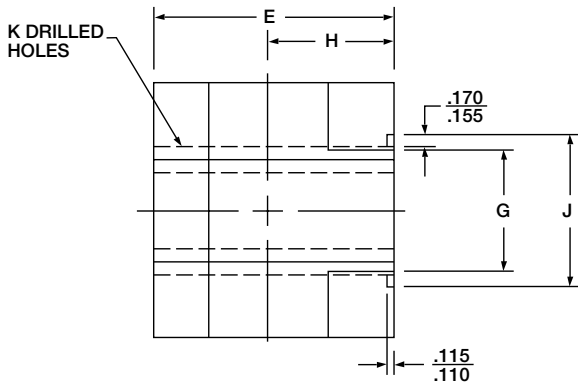


FIGURE 1

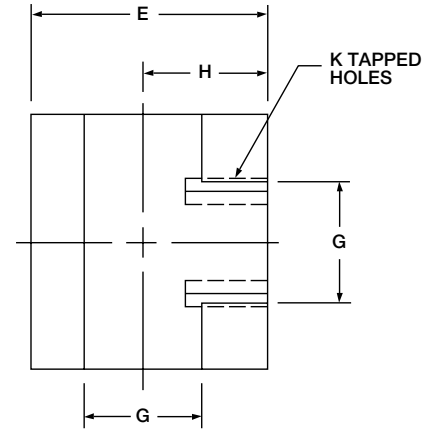
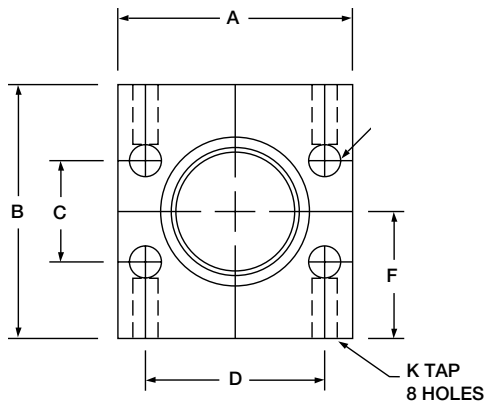


FIGURE 2



All measurements are in millimeters.

CODE 61 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD
W17-12-M10-SS	W16-12-M10-SS	0.75	66.55	69.85	22.23	47.63	57.15	35.05	19.05	26.16	31.75	31.88	10.31	M10
W17-16-M10-SS	W16-16-M10-SS	1.00	71.63	76.20	26.19	52.37	63.50	38.10	25.40	29.46	39.62	39.75	10.31	M10
W17-20-M10-SS	W16-20-M10-SS	1.25	81.03	88.90	30.18	58.72	76.20	44.45	31.75	36.58	44.45	44.58	10.31	M10
W17-24-M12-SS	W16-24-M12-SS	1.50	95.25	101.60	35.71	69.85	88.90	50.80	38.10	41.15	53.72	53.98	13.49	M12
W17-32-M12-SS	W16-32-M12-SS	2.00	101.60	107.95	42.88	77.77	101.60	53.85	50.80	48.51	63.37	63.50	13.49	M12

CODE 62 TEE JUNCTION BLOCK

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PAD SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K THREAD
W19-12-M10-SS	W18-12-M10-SS	0.75	71.37	76.20	23.80	50.80	63.50	38.10	19.05	30.23	31.88	31.75	10.31	M10
W19-16-M12-SS	W18-16-M12-SS	1.00	81.03	88.90	27.76	57.15	76.20	44.45	25.40	35.05	39.75	39.62	12.50	M12
W19-20-M14-SS	W18-20-M14-SS	1.25	95.25	101.60	31.75	66.68	76.20	50.80	31.75	35.81	44.58	44.45	14.48	M14
W19-24-M16-SS	W18-24-M16-SS	1.50	114.30	114.30	36.50	79.38	101.60	57.15	38.10	47.75	53.98	53.72	16.66	M16
W19-32-M20-SS	W18-32-M20-SS	2.00	127.00	127.00	44.45	96.82	127.00	63.50	50.80	57.15	63.50	63.37	20.98	M20

4 Bolt Flange Fittings Stainless Steel

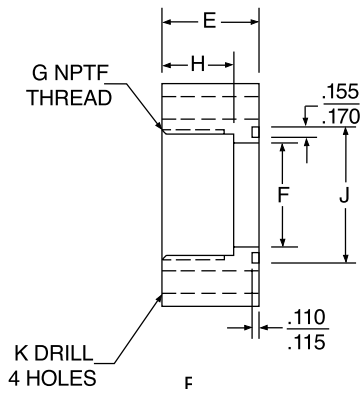
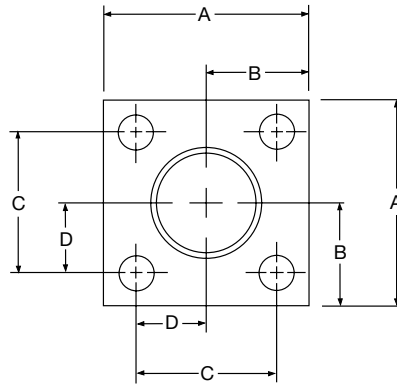


FIGURE 1



All measurements are in inches.

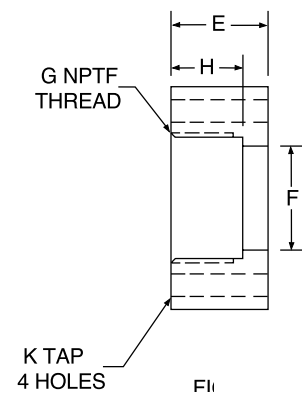


FIGURE 2

SQUARE NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G NPTF THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W65-12-SS	W75-12-SS	0.75	2.25	1.12	1.438	0.719	1.25	0.75	0.75	1.06	1.250	1.255	0.406	3/8-16	214	3/8-16 X 2.00
W65-16-SS	W75-16-SS	1.00	3.00	1.50	2.000	1.000	1.50	1.00	1.00	1.25	1.560	1.565	0.531	1/2-13	219	1/2-13 X 2.50
W65-20-SS	W75-20-SS	1.25	3.00	1.50	2.000	1.000	1.50	1.25	1.25	1.31	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.50
W65-24-SS	W75-24-SS	1.50	4.00	2.00	2.750	1.375	1.75	1.50	1.50	1.31	2.115	2.125	0.656	5/8-11	225	5/8-11 X 3.00
W65-32-SS	W75-32-SS	2.00	4.00	2.00	2.750	1.375	1.75	2.00	2.00	1.31	2.490	2.500	0.656	5/8-11	228	5/8-11 X 3.00
W65-40-SS	W75-40-SS	2.50	5.50	2.75	3.750	1.875	2.25	2.50	2.50	1.84	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.75
W65-48-SS	W75-48-SS	3.00	5.50	2.75	3.750	1.875	2.25	3.00	3.00	1.91	3.615	3.625	0.906	7/8-9	237	7/8-9 X 4.00

SQUARE SOCKET WELD - PIPE

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP UN-2B	MOUNTING HARDWARE	
															O-RING	SHCS
W66-12-SS	W76-12-SS	0.75	2.25	1.12	1.438	0.719	1.00	0.75	1.062	0.50	1.250	1.255	0.406	3/8-16	214	3/8-16 X 1.75
W66-16-SS	W76-16-SS	1.00	3.00	1.50	2.000	1.000	1.00	1.00	1.328	0.50	1.560	1.565	0.531	1/2-13	219	1/2-13 X 2.00
W66-20-SS	W76-20-SS	1.25	3.00	1.50	2.000	1.000	1.00	1.25	1.672	0.50	1.750	1.755	0.531	1/2-13	222	1/2-13 X 2.00
W66-24-SS	W76-24-SS	1.50	4.00	2.00	2.750	1.375	1.25	1.50	1.922	0.62	2.115	2.125	0.656	5/8-11	225	5/8-11 X 2.50
W66-32-SS	W76-32-SS	2.00	4.00	2.00	2.750	1.375	1.25	2.00	2.406	0.62	2.490	2.500	0.656	5/8-11	228	5/8-11 X 2.50
W66-40-SS	W76-40-SS	2.50	5.50	2.75	3.750	1.875	1.50	2.50	2.906	0.75	2.995	3.005	0.906	7/8-9	232	7/8-9 X 3.00
W66-48-SS	W76-48-SS	3.00	5.50	2.75	3.750	1.875	1.50	3.00	3.547	0.75	3.615	3.625	0.906	7/8-9	237	7/8-9 X 3.00

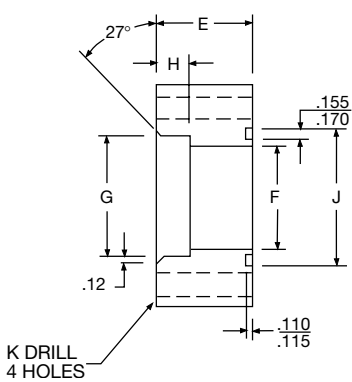


FIGURE 3

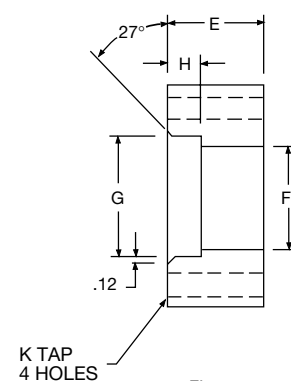
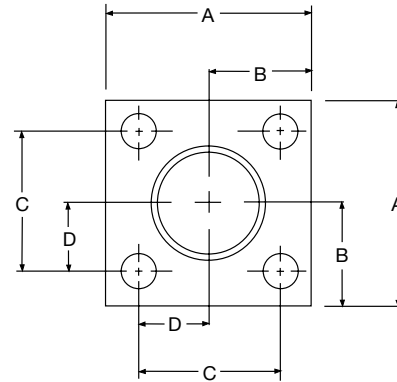


FIGURE 4

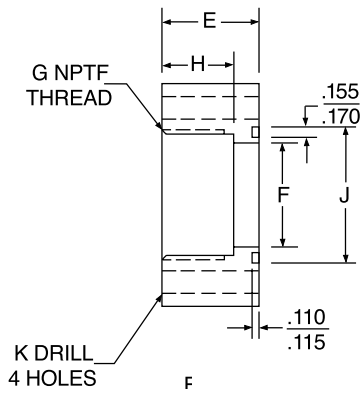
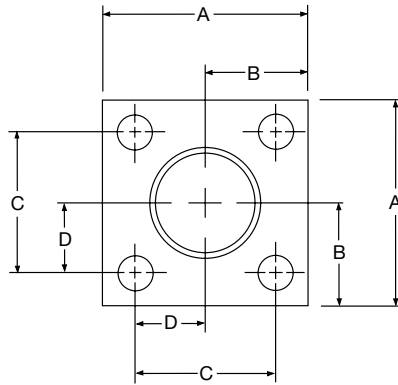


FIGURE 1



All measurements are in millimeters.

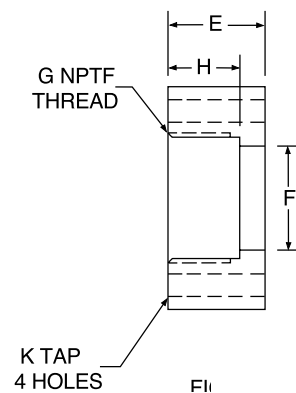


FIGURE 2

SQUARE NPTF THREAD

O-RING PART NO. FIG. 1	FLAT FACE PART NO. FIG. 2	PIPE SIZE	A	B	C	D	E	F	G NPTF THREAD	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W65-12-M10-SS	W75-12-M10-SS	0.75	57.15	28.45	36.53	18.26	31.75	19.05	0.75	26.92	31.75	31.88	10.31	M10	214	M10 X 50
W65-16-M12-SS	W75-16-M12-SS	1.00	76.20	38.10	50.80	25.40	38.10	25.40	1.00	31.75	39.62	39.75	10.31	M12	219	M12 X 55
W65-20-M12-SS	W75-20-M12-SS	1.25	76.20	38.10	50.80	25.40	38.10	31.75	1.25	33.27	44.45	44.58	10.31	M12	222	M12 X 55
W65-24-M16-SS	W75-24-M16-SS	1.50	101.60	50.80	69.85	34.93	44.45	38.10	1.50	33.27	53.72	53.98	13.49	M16	225	M16 X 70
W65-32-M16-SS	W75-32-M16-SS	2.00	101.60	50.80	69.85	34.93	44.45	50.80	2.00	33.27	63.25	63.50	13.49	M16	228	M16 X 70
W65-40-M24-SS	W75-40-M24-SS	2.50	139.70	69.85	95.25	47.63	57.15	63.50	2.50	46.74	76.07	76.33	13.49	M24	232	M24 X 90
W65-48-M24-SS	W75-48-M24-SS	3.00	139.70	69.85	95.25	47.63	57.15	76.20	3.00	48.51	91.82	92.08	16.66	M24	237	M24 X 90

SQUARE SOCKET WELD - PIPE

O-RING PART NO. FIG. 3	FLAT FACE PART NO. FIG. 4	PIPE SIZE	A	B	C	D	E	F	G	H	J MIN.	J MAX.	K DRILL DIA.	K TAP	MOUNTING HARDWARE	
															O-RING	SHCS
W66-12-M10-SS	W76-12-M10-SS	0.75	57.15	28.45	36.53	18.26	25.40	19.05	26.97	12.70	31.75	31.88	10.31	M10	214	M10 X 45
W66-16-M12-SS	W76-16-M12-SS	1.00	76.20	38.10	50.80	25.40	25.40	25.40	33.73	12.70	39.62	39.75	10.31	M12	219	M12 X 45
W66-20-M12-SS	W76-20-M12-SS	1.25	76.20	38.10	50.80	25.40	25.40	31.75	42.47	12.70	44.45	44.58	10.31	M12	222	M12 X 45
W66-24-M16-SS	W76-24-M16-SS	1.50	101.60	50.80	69.85	34.93	31.75	38.10	48.82	15.75	53.72	53.98	13.49	M16	225	M16 X 55
W66-32-M16-SS	W76-32-M16-SS	2.00	101.60	50.80	69.85	34.93	31.75	50.80	61.11	15.75	63.25	63.50	13.49	M16	228	M16 X 55
W66-40-M24-SS	W76-40-M24-SS	2.50	139.70	69.85	95.25	47.63	38.10	63.50	73.81	19.05	76.07	76.33	13.49	M24	232	M24 X 70
W66-48-M24-SS	W76-48-M24-SS	3.00	139.70	69.85	95.25	47.63	38.10	76.20	90.09	19.05	91.82	92.08	16.66	M24	237	M24 X 70

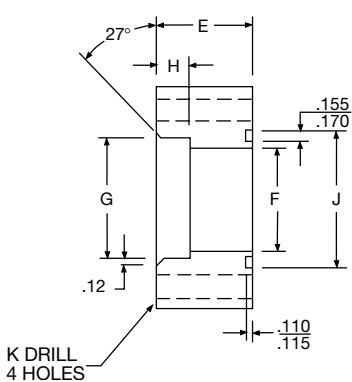


FIGURE 3

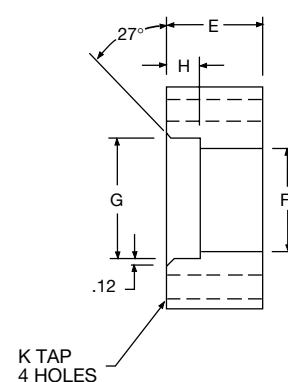
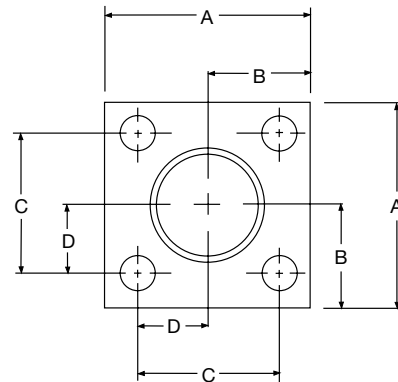


FIGURE 4

4 Bolt Flange Fittings



All measurements are in inches.

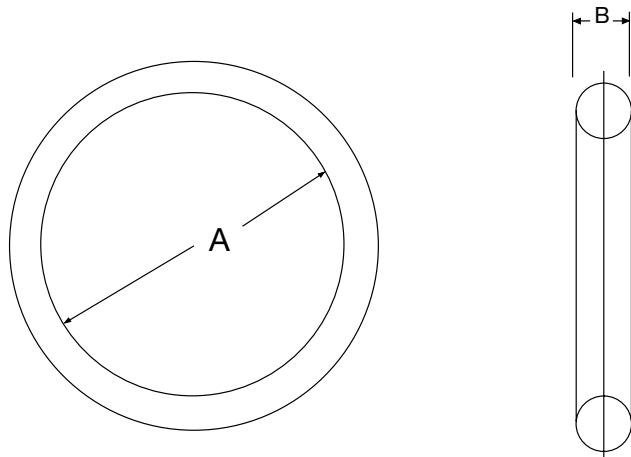


FIGURE 3

**90 DUROMETER
BUNA N.
O-RING - FOR
SPLIT CLAMP HEADS
FIG. 1**

O-RING	SIZE	A	B
210	0.50	0.75	0.139
214	0.75	1.00	0.139
219	1.00	1.31	0.139
222	1.25	1.50	0.139
225	1.50	1.88	0.139
228	2.00	2.25	0.139
232	2.50	2.75	0.139
237	3.00	3.38	0.139
241	3.50	3.88	0.139
245	4.00	4.38	0.139

*ALSO AVAILABLE IN VITON

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