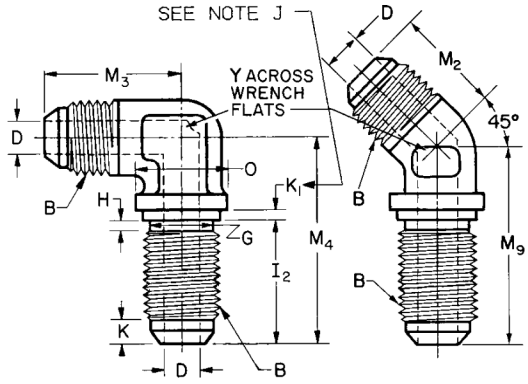


FIGURE 7A - 90 DEGREE BULKHEAD ELBOW (070701)

FIGURE 7B - 45 DEGREE BULKHEAD ELBOW (070801)

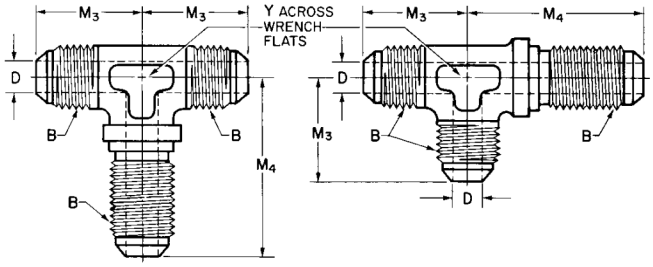


FIGURE 7C - BULKHEAD BRANCH TEE (070959)

FIGURE 7D - BULKHEAD RUN TEE (070958)

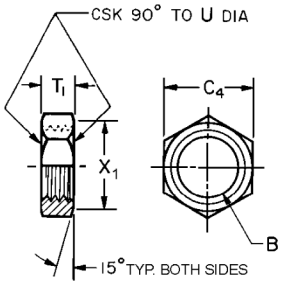


FIGURE 8A - STRAIGHT THREAD LOCKNUT* (070117)

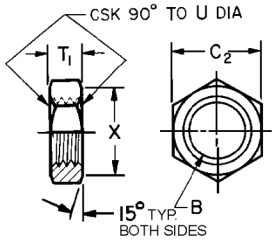


FIGURE 8B - BULKHEAD LOCKNUT (070118)

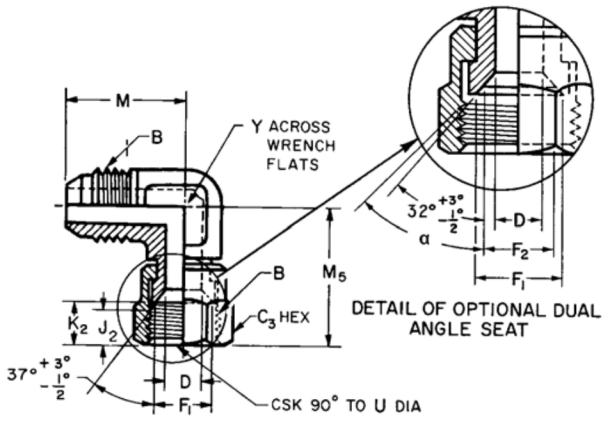


FIGURE 8C - 90 DEGREE SWIVEL ELBOW (070221)

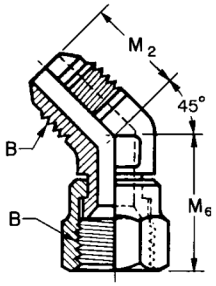


FIGURE 9A - 45 DEGREE SWIVEL ELBOW (070321)

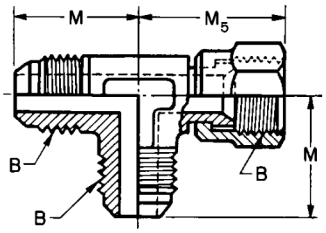


FIGURE 9B - SWIVEL RUN TEE (070432)

THE DESIGN AND METHOD OF ATTACHING THE SWIVEL NUT SHALL BE OPTIONAL WITH THE MANUFACTURER PROVIDING THE TABULATED DIMENSIONS ARE MAINTAINED AND THE NUT TURNS FREELY.

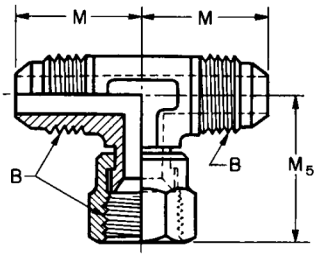


FIGURE 9C - SWIVEL BRANCH TEE (070433)

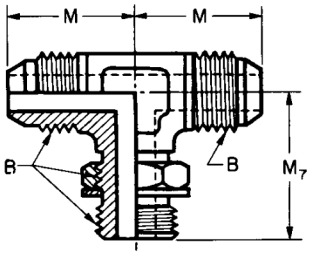
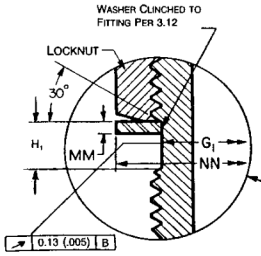
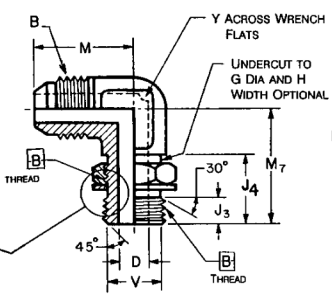


FIGURE 9D - STRAIGHT THREAD BRANCH TEE† (070429)





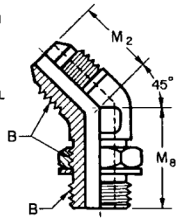


FIGURE 10A - 90 DEGREE STRAIGHT THREAD ELBOW† (070220)

FIGURE 10B - 45 DEGREE STRAIGHT THREAD ELBOW† (070320)

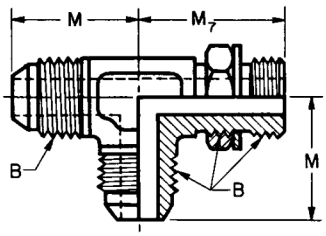


FIGURE 10C - STRAIGHT THREAD RUN TEE† (070428)

NOTES: UNSPECIFIED DETAIL WITH RESPECT TO DIMENSIONS, TOLERANCES, CONTOURS, MATERIAL, WORKMANSHIP, ETC., MUST CONFORM TO GENERAL SPECIFICATIONS FOR HYDRAULIC TUBE FITTINGS. THE DIMENSIONAL DESIGNATIONS FOR TUBE ENDS IN FIGURES 2A TO 10F, FOR SWIVEL ENDS IN FIGURES 8C TO 9C, FOR O-RING BOSS ENDS IN FIGURES 3B AND 3C, AND FOR ADJUSTABLE STRAIGHT THREAD ENDS IN FIGURES 9D TO 10F SHALL APPLY TO CORRESPONDING ENDS OF OTHER FIGURES ON THIS AND PRECEDING PAGE UNLESS SHOWN OTHERWISE. FIGURES 2A TO 10F ON THIS AND PRECEDING PAGE APPLY TO TABLE 4. CODES SHOWN IN BRACKETS ADJACENT TO FIGURE NUMBERS REPRESENT RESPECTIVE FITTING IDENTIFICATION IN ACCORDANCE WITH SAE J846.

* MODIFICATION OF 1/8-1 IN SIZES IN THESE TYPES OF FITTINGS FOR USE WITH MS 33649 (OR SUPERSEDED AND 10050) BOSSES IS SHOWN IN FIGURE 35 AND TABLE 15.

† IF DESIRED BY THE PURCHASER AND SO SPECIFIED, THESE FITTINGS MAY BE FURNISHED WITH LARGE HEXAGON LOCKNUT SHOWN IN FIGURE 8B.

TABLE 4 - DIMENSIONS OF ALL BODIES AND LOCKNUTS (FIGURES 2A TO 10C)

Nom Tube OD, in	A Dryseal Pipe Thread SAE J476 (ANSI B1.20.3)	B[g] Thread Size, in SAE J425 (ISO R725) Class 2A Ext Class 2B Int	C[h] Hex Nom in	C_1[h] Hex Nom in	C_2[h] Hex Nom in	C_3[h] Hex Min in	C_4[h] Hex Nom in	D[l][m] Metric Drill Size mm	D[l] Drill in	D_1[b][l] Drill mm	D_1[b][l] Drill in	E Dia mm ±0.08	E Dia in ±0.003	F_1 Dia mm ±0.25	F_1 Dia in ±0.010	F_2 Dia mm ±0.13	F_2 Dia in ±0.005
1/8	1/8-27	5/16-24	7/16	9/16	9/16	7/16	7/16	1.6	0.062	4.8	0.188	2.11	0.083	4.85	0.190	2.67	0.105
3/16	1/8-27	3/8-24	7/16	9/16	5/8	1/2	1/2	3.2	0.125	4.8	0.188	3.71	0.146	6.20	0.245	4.32	0.170
1/4	1/8-27	7/16-20	1/2	9/16	11/16	9/16	9/16	4.4	0.172	4.8	0.188	4.90	0.193	7.35	0.290	6.35	0.250
5/16	1/8-27	1/2-20	9/16	9/16	3/4	5/8	5/8	6.0	0.234	4.8	0.188	6.48	0.255	8.90	0.350	7.93	0.312
3/8	1/4-18	9/16-18	5/8	3/4	13/16	11/16	11/16	7.5	0.297	7.0	0.281	8.08	0.318	10.90	0.430	8.89	0.350
1/2	3/8-18	3/4-16	13/16	7/8	1	7/8	7/8	9.9	0.391	10.3	0.406	10.82	0.426	14.35	0.565	12.70	0.500
5/8	1/2-14	7/8-14	15/16	1-1/8	1-1/8	1	1	12.3	0.484	13.5	0.531	13.69	0.539	17.15	0.675	15.88	0.625
3/4	3/4-14	1-1/16-12	1-1/8	1-3/8	1-3/8	1-1/4	1-1/4	15.5	0.609	18.3	0.719	16.87	0.664	21.45	0.845	17.65	0.695
7/8	3/4-14	1-3/16-12	1-1/4	1-3/8	1-1/2	1-3/8	1-3/8	18.3(18.0)	0.719	18.3	0.719	20.02	0.788	24.65	0.970	20.83	0.820
1	1-11-1/2	1-5/16-12	1-3/8	1-5/8	1-5/8	1-1/2	1-1/2	(21.5)21.4	0.844	23.8	0.938	23.19	0.913	27.80	1.095	24.00	0.945
1-1/4	1-1/4-11-1/2	1-5/8-12	1-11/16	2	1-7/8	2	1-7/8	(27.5)27.4	1.078	31.7	1.250	29.13	1.147	35.70	1.405	29.85	1.175
1-1/2	1-1/2-11-1/2	1-7/8-12	2	2-3/8	2-1/8	2-1/4	2-1/8	(33.5)33.3	1.312	38.0	1.500	35.08	1.381	41.15	1.620	35.81	1.410
2	2-11-1/2	2-1/2-12	2-5/8	2-7/8	2-3/4	2-7/8	2-3/4	45.2(45.0)	1.781	49.0	1.938	47.75	1.880	56.75	2.235	48.51	1.910

Nom Tube OD in	G Dia mm +0.05 −0.25	G Dia in +0.002 −0.010	G_1[a] Dia mm +0.05 −0.08	G_1[a] Dia in +0.002 −0.003	H mm +0.8 −0.0	H in +0.030 −0.000	H_1 mm +0.3 −0.0	H_1 in +0.010 −0.000	I mm ±0.4	I in ±0.016	I_1 mm ±0.5	I_1 in ±0.02	I_2 mm ±0.5	I_2 in ±0.02	I_3 mm ±0.13	I_3 in ±0.005	I_4 mm ±0.5	I_4 in ±0.02	J[k] Full Thread Min mm	J[k] Full Thread Min in
1/8	6.35	0.250	6.35	0.250	1.6	0.063	3.2	0.125	11.4	0.448	28.2	1.11	23.4	0.92	7.54	0.297	29.7	1.17	11.00	0.433
3/16	7.92	0.312	7.95	0.313	1.6	0.063	3.3	0.131	12.2	0.479	28.2	1.11	23.4	0.92	7.54	0.297	31.8	1.25	11.81	0.464
1/4	9.25	0.364	9.25	0.364	1.9	0.075	4.0	0.156	14.0	0.550	30.5	1.20	25.9	1.02	9.14	0.360	35.3	1.39	13.59	0.535
5/16	10.82	0.426	10.85	0.427	1.9	0.075	4.0	0.156	14.0	0.550	30.5	1.20	25.9	1.02	9.14	0.360	36.8	1.45	13.59	0.535
3/8	12.22	0.481	12.24	0.482	2.1	0.083	4.0	0.156	14.1	0.556	32.5	1.28	27.7	1.09	9.93	0.391	39.6	1.56	13.74	0.541
1/2	16.74	0.659	16.76	0.660	2.4	0.094	4.8	0.187	16.7	0.657	36.6	1.44	31.8	1.25	11.13	0.438	47.8	1.88	16.31	0.642
5/8	19.61	0.772	19.63	0.773	2.7	0.107	5.6	0.219	19.3	0.758	40.1	1.58	35.3	1.39	12.70	0.500	53.1	2.09	18.87	0.743
3/4	23.95	0.943	24.00	0.945	3.2	0.125	5.9	0.234	21.9	0.864	44.4	1.75	39.6	1.56	15.09	0.594	63.5	2.50	21.56	0.849
7/8	27.13	1.068	27.18	1.070	3.2	0.125	5.9	0.234	22.6	0.890	44.4	1.75	39.6	1.56	15.09	0.594	68.3	2.69	22.22	0.875
1	30.30	1.193	30.35	1.195	3.2	0.125	5.9	0.234	23.1	0.911	44.4	1.75	39.6	1.56	15.09	0.594	72.1	2.84	22.76	0.896
1-1/4	38.25	1.506	38.28	1.507	3.2	0.125	5.9	0.234	24.3	0.958	45.7	1.80	40.9	1.61	15.09	0.594	88.1	3.47	23.95	0.943
1-1/2	44.58	1.755	44.60	1.756	3.2	0.125	5.9	0.234	27.5	1.083	46.0	1.81	41.1	1.62	15.09	0.594	98.6	3.88	27.13	1.068
2	60.45	2.380	60.48	2.381	3.2	0.125	5.9	0.234	33.9	1.333	53.1	2.09	48.5	1.91	15.09	0.594	122.9	4.84	33.48	1.318

Continued on next page.

TABLE 4 - DIMENSIONS OF ALL BODIES AND LOCKNUTS (FIGURES 2A TO 10C) (CONTINUED)

Nom Tube OD, in	J_2 Full Thread Min mm	J_2 Full Thread Min in	J_3 Full Thread mm ±0.13	J_3 Full Thread in ±0.005	J_4 Min mm	J_4 Min in	K mm +0.4 −0.0	K in +0.016 −0.000	K_1[(j)] mm ±0.5	K_1[(j)] in ±0.02	K_2 mm +0.8 −0.4	K_2 in +0.030 −0.016	L mm ±0.5	L in ±0.02	L_1 mm ±0.5	L_1 in ±0.02	L_2 mm ±0.5	L_2 in ±0.02	L_3 mm ±0.5	L_3 in ±0.02	L_4 mm ±0.5	L_4 in ±0.02
1/8	6.38	0.251	5.94	0.234	15.0	0.59	4.5	0.177	2.4	0.094	7.9	0.312	28.2	1.11	29.7	1.17	28.4	1.12	17.8	0.70	47.5	1.87
3/16	7.16	0.282	5.94	0.234	15.0	0.59	4.5	0.177	2.4	0.094	8.3	0.328	29.0	1.14	31.2	1.23	28.7	1.13	18.5	0.73	48.3	1.90
1/4	7.62	0.300	6.73	0.265	18.5	0.73	4.9	0.193	2.4	0.094	8.7	0.344	31.0	1.22	34.8	1.37	30.2	1.19	20.3	0.80	52.6	2.07
5/16	8.41	0.331	6.73	0.265	18.5	0.73	4.9	0.193	2.4	0.094	9.5	0.375	31.0	1.22	34.8	1.37	29.7	1.17	20.3	0.80	52.6	2.07
3/8	8.46	0.333	7.92	0.312	19.1	0.75	5.0	0.198	2.4	0.094	9.5	0.375	36.3	1.43	35.8	1.41	35.6	1.40	21.3	0.84	55.4	2.18
1/2	9.52	0.375	8.74	0.344	21.9	0.86	6.4	0.253	3.2	0.125	10.7	0.422	38.9	1.53	41.1	1.62	39.6	1.56	23.9	0.94	62.0	2.44
5/8	11.71	0.461	9.93	0.391	25.4	1.00	6.8	0.266	3.2	0.125	12.7	0.500	48.0	1.89	47.8	1.88	48.0	1.89	27.9	1.10	69.6	2.74
3/4	11.91	0.469	11.91	0.469	29.0	1.14	8.0	0.315	3.2	0.125	14.3	0.562	52.3	2.06	54.9	2.16	52.3	2.06	32.5	1.28	78.5	3.09
7/8	13.11	0.516	11.91	0.469	29.0	1.14	8.0	0.315	3.2	0.125	14.7	0.578	53.1	2.09	56.1	2.21	52.3	2.06	33.3	1.31	79.2	3.12
1	14.30	0.563	11.91	0.469	29.0	1.14	8.0	0.315	3.2	0.125	15.1	0.594	58.4	2.30	57.2	2.25	59.7	2.35	33.8	1.33	79.8	3.14
1-1/4	14.30	0.563	11.91	0.469	29.0	1.14	9.3	0.367	3.2	0.125	15.9	0.625	62.2	2.45	61.7	2.43	63.2	2.49	36.8	1.45	84.1	3.31
1-1/2	16.79	0.661	11.91	0.469	29.0	1.14	9.6	0.378	3.2	0.125	18.6	0.734	68.1	2.68	69.8	2.75	66.5	2.62	41.9	1.65	89.4	3.52
2	21.44	0.844	11.91	0.469	29.0	1.14	11.7	0.461	3.2	0.125	23.8	0.938	79.0	3.11	86.4	3.40	75.4	2.97	52.1	2.05	106.7	4.20

Nom Tube OD, in	L_5 mm ±0.5	L_5 in ±0.02	L_6 mm ±0.5	L_6 in ±0.02	M mm ±0.8	M in ±0.03	M_1 mm ±0.8	M_1 in ±0.03	M_2 mm ±0.8	M_2 in ±0.03	M_3 mm ±0.8	M_3 in ±0.03	M_4 mm ±0.8	M_4 in ±0.03	M_5 mm ±1.5	M_5 in ±0.06	M_6 mm ±1.5	M_6 in ±0.06	M_7 mm ±0.8	M_7 in ±0.03	M_8 mm ±0.8	M_8 in ±0.03	M_9 mm ±0.8	M_9 in ±0.03
1/8	26.9	1.06	45.5	1.79	19.6	0.77	25.4	1.00	17.5	0.69	22.4	0.88	38.1	1.50	24.6	0.97	23.9	0.94	23.9	0.94	22.4	0.88	36.1	1.42
3/16	27.9	1.10	47.5	1.87	21.1	0.83	26.2	1.03	17.5	0.69	23.9	0.94	38.1	1.50	25.4	1.00	23.9	0.94	23.9	0.94	22.4	0.88	36.1	1.42
1/4	31.2	1.23	52.8	2.08	22.6	0.89	27.4	1.08	18.3	0.72	24.6	0.97	40.4	1.59	25.4	1.00	23.9	0.94	26.2	1.03	26.7	1.05	38.9	1.53
5/16	31.2	1.23	54.4	2.14	24.1	0.95	27.4	1.08	19.6	0.77	26.9	1.06	43.7	1.72	26.9	1.06	25.4	1.00	28.7	1.13	26.7	1.05	42.2	1.66
3/8	33.0	1.30	58.7	2.31	26.9	1.06	31.2	1.23	21.1	0.83	27.7	1.09	46.0	1.81	31.8	1.25	28.4	1.12	31.8	1.25	29.0	1.14	42.4	1.67
1/2	37.6	1.48	68.6	2.70	31.8	1.25	36.1	1.42	24.9	0.98	34.5	1.36	53.6	2.11	35.1	1.38	32.5	1.28	36.8	1.45	33.0	1.30	49.3	1.94
5/8	43.2	1.70	77.2	3.04	36.8	1.45	41.7	1.64	28.2	1.11	39.6	1.56	60.7	2.39	41.1	1.62	36.6	1.44	43.2	1.70	38.6	1.52	55.1	2.17
3/4	50.0	1.97	91.7	3.61	42.2	1.66	48.0	1.89	32.5	1.28	45.2	1.78	67.8	2.67	44.4	1.75	38.1	1.50	49.3	1.94	43.9	1.73	62.0	2.44
7/8	50.5	1.99	96.5	3.80	45.7	1.80	47.2	1.86	36.8	1.45	48.8	1.92	71.1	2.80	45.2	1.78	41.1	1.62	50.8	2.00	47.2	1.86	63.5	2.50
1	51.8	2.04	101.1	3.98	46.0	1.81	55.1	2.17	37.3	1.47	49.3	1.94	71.1	2.80	50.8	2.00	44.4	1.75	52.1	2.05	47.2	1.86	65.0	2.56
1-1/4	55.1	2.17	119.1	4.69	52.3	2.06	59.2	2.33	40.4	1.59	55.1	2.17	79.2	3.12	58.7	2.31	51.6	2.03	57.2	2.25	48.5	1.91	67.3	2.65
1-1/2	60.2	2.37	131.3	5.17	59.2	2.33	73.4	2.89	45.2	1.78	59.4	2.34	86.9	3.42	65.8	2.59	57.2	2.25	60.7	2.39	48.5	1.91	67.8	2.67
2	70.6	2.78	159.8	6.29	77.7	3.06	83.8	3.30	56.4	2.22	73.4	2.89	104.4	4.11	85.9	3.38	73.9	2.91	73.4	2.89	47.2	1.86	73.9	2.91

Nom Tube OD, in	N mm ±0.8	N in ±0.03	N_1 mm ±0.8	N_1 in ±0.03	N_2 mm ±0.8	N_2 in ±0.03	N_3 mm ±0.8	N_3 in ±0.03	N_4 mm ±0.8	N_4 in ±0.03	O mm ±0.8	O in ±0.03	P Min mm	P Min in	P_1 Max mm	P_1 Max in	Q Min mm	Q Min in	$S^{(b)}$ Max mm	$S^{(b)}$ Max in	S_1[(b)(c)] Min mm	S_1[(b)(c)] Min in	S_2[(c)] Min mm	S_2[(c)] Min in
1/8	18.3	0.72	16.8	0.66	13.2	0.52	25.4	1.00	32.5	1.28	11.1	0.438	9.7	0.38	11.7	0.46	2.8	0.11	12.4	0.49	20.1	0.79	18.5	0.73
3/16	18.3	0.72	16.8	0.66	13.2	0.52	26.4	1.04	34.3	1.35	12.7	0.500	9.7	0.38	11.7	0.46	2.8	0.11	12.4	0.49	20.8	0.82	19.3	0.76
1/4	19.8	0.78	16.8	0.66	16.3	0.64	29.7	1.17	39.6	1.56	14.3	0.562	9.7	0.38	11.7	0.46	2.8	0.11	12.4	0.49	23.1	0.91	20.1	0.79
5/16	19.8	0.78	16.8	0.66	16.3	0.64	29.7	1.17	41.4	1.63	15.9	0.625	9.7	0.38	11.7	0.46	3.0	0.12	16.3	0.64	28.2	1.11	20.8	0.82
3/8	27.7	1.09	22.4	0.88	21.8	0.86	40.1	1.58	52.6	2.07	17.5	0.688	14.2	0.56	17.0	0.67	3.0	0.12	17.0	0.67	31.8	1.25	27.2	1.07
1/2	31.0	1.22	25.9	1.02	24.1	0.95	46.2	1.82	61.5	2.42	22.2	0.875	14.2	0.56	17.3	0.68	4.1	0.16	17.3	0.68	37.1	1.46	32.0	1.26
5/8	37.3	1.47	31.2	1.23	29.7	1.17	55.1	2.17	72.9	2.87	25.4	1.000	19.0	0.75	22.9	0.90	4.1	0.16	23.1	0.91	44.4	1.75	38.4	1.51
3/4	40.4	1.59	34.5	1.36	30.5	1.20	62.0	2.44	83.3	3.28	30.2	1.188	19.0	0.75	23.1	0.91	4.8	0.19	23.9	0.94	49.3	1.94	43.4	1.71
7/8	42.9	1.69	36.1	1.42	33.02	1.30	65.8	2.59	88.9	3.50	33.3	1.312	19.0	0.75	23.1	0.91	4.8	0.19	—	—	—	—	46.2	1.82
1	50.0	1.97	41.1	1.62	37.6	1.48	76.5	3.01	102.9	4.05	36.5	1.438	23.9	0.94	29.0	1.14	4.8	0.19	28.7	1.13	61.7	2.43	52.8	2.08
1-1/4	60.5	2.38	43.2	1.70	42.4	1.67	93.7	3.69	127.0	5.00	44.4	1.750	24.6	0.97	29.5	1.16	5.8	0.23	30.5	1.20	75.2	2.96	57.9	2.28
1-1/2	67.1	2.64	52.8	2.08	45.0	1.77	104.1	4.10	141.0	5.55	50.8	2.000	25.4	1.00	29.5	1.16	5.8	0.23	32.3	1.27	84.8	3.34	70.6	2.78
2	76.2	3.00	60.7	2.39	53.6	2.11	122.2	4.81	168.4	6.63	66.7	2.625	26.2	1.03	30.0	1.18	8.4	0.33	34.8	1.37	100.1	3.94	84.6	3.33

Continued on next page.

TABLE 4 - DIMENSIONS OF ALL BODIES AND LOCKNUTS (FIGURES 2A TO 10C) (CONTINUED)

Nom Tube OD, in	T[(d)] Ref mm	T[(d)] Ref in	T_1 mm ±0.5	T_1 in ±002	T_2[(d)] Ref mm	T_2[(d)] Ref in	U Dia mm +0.4 –0.0	U Dia in +0.016 –0.000	V Dia mm ±0.25	V Dia in ±0.010	X Dia mm ±0.13	X Dia in ±0.005	X_1 Dia mm ±0.13	X_1 Dia in ±0.005
1/8	5.6	0.22	5.6	0.22	7.1	0.28	8.1	0.317	6.25	0.245	14.27	0.562	11.13	0.438
3/16	5.6	0.22	5.6	0.22	7.1	0.28	9.7	0.380	7.75	0.305	15.88	0.625	12.70	0.500
1/4	5.6	0.22	7.1	0.28	7.1	0.28	11.3	0.443	9.15	0.360	17.48	0.688	14.30	0.563
5/16	5.6	0.22	7.1	0.28	7.1	0.28	12.8	0.505	10.65	0.420	19.05	0.750	15.88	0.625
3/8	6.4	0.25	6.9	0.27	7.9	0.31	14.4	0.567	12.05	0.475	20.62	0.812	17.48	0.688
1/2	6.4	0.25	7.9	0.31	8.6	0.34	19.2	0.755	16.65	0.655	25.40	1.000	22.22	0.875
5/8	7.9	0.31	9.1	0.36	10.2	0.40	22.4	0.880	19.55	0.770	28.58	1.125	25.40	1.000
3/4	9.7	0.38	10.4	0.41	11.9	0.47	27.1	1.067	23.90	0.940	34.92	1.375	31.75	1.250
7/8	9.7	0.38	10.4	0.41	11.9	0.47	30.3	1.193	27.05	1.065	38.10	1.500	34.92	1.375
1	9.7	0.38	10.4	0.41	12.7	0.50	33.5	1.317	30.25	1.190	41.28	1.625	38.10	1.500
1-1/4	11.7	0.46	10.4	0.41	14.7	0.58	41.4	1.630	38.10	1.500	47.62	1.875	47.62	1.875
1-1/2	13.5	0.53	10.4	0.41	16.5	0.65	47.8	1.880	44.45	1.750	53.98	2.125	53.98	2.125
2	17.3	0.68	10.4	0.41	20.6	0.81	63.6	2.505	60.35	2.375	69.85	2.750	69.85	2.750

Nom Tube OD, in	Y Forging[(f)], mm +0.0	Y Forging[(f)], in +0.000	Y[(f)] Barstock Max mm	Y[(f)] Barstock Max in	Y_1[(e)(f)] mm +0.0	Y_1[(e)(f)] in +0.000	MM mm ±0.08	MM in ±0.003	NN Dia mm ±0.4	NN Dia in ±0.016	PP Dia mm ±0.25	PP Dia in ±0.010	α ° +3.0° -0.5°
1/8	11.1-0.8	0.438-0.030	—	—	14.3-0.8	0.562-0.030	0.76	0.030	12.8	0.504	6.25	0.245	47
3/16	11.1-0.8	0.438-0.030	—	—	14.3-0.8	0.562-0.030	0.76	0.030	14.6	0.575	7.75	0.305	47
1/4	11.1-0.8	0.438-0.030	14.3	0.562	14.3-0.8	0.562-0.030	0.89	0.035	16.5	0.650	9.15	0.360	47
5/16	14.3-0.8	0.562-0.030	15.9	0.625	14.3-0.8	0.562-0.030	0.89	0.035	18.3	0.722	10.65	0.420	47
3/8	14.3-0.8	0.562-0.030	20.6	0.812	19.0-0.8	0.750-0.030	0.89	0.035	20.2	0.794	12.05	0.475	47
1/2	19.0-0.8	0.750-0.030	22.2	0.875	22.2-0.8	0.875-0.030	1.04	0.041	25.7	1.010	16.65	0.655	47
5/8	22.2-0.8	0.875-0.030	28.6	1.125	27.0-0.8	1.062-0.030	1.27	0.050	29.3	1.155	19.55	0.770	47
3/4	27.0-1.0	1.062-0.040	34.9	1.375	33.3-1.0	1.312-0.040	1.27	0.050	36.7	1.444	23.90	0.940	42
7/8	33.3-1.0	1.312-0.040	38.1	1.500	33.3-1.0	1.312-0.040	1.27	0.050	40.4	1.589	27.05	1.065	42
1	33.3-1.0	1.312-0.040	41.3	1.625	41.3-1.0	1.625-0.040	1.27	0.050	44.0	1.732	30.25	1.190	42
1-1/4	41.3-1.0	1.625-0.040	54.0	2.125	47.6-1.0	1.875-0.040	1.27	0.050	55.0	2.165	38.10	1.500	42
1-1/2	47.6-1.0	1.875-0.040	57.2	2.250	65.1-1.0	2.562-0.040	1.27	0.050	62.3	2.454	44.45	1.750	42
2	63.5-1.0	2.500-0.040	82.6	3.250	71.4-1.0	2.812-0.040	1.27	0.050	80.3	3.160	—	—	42

(a) O-ring groove undercut must be smooth and free from tool marks.
(b) At manufacturer's option, through passages in Figures 2A and 5C may conform with the smaller diameter specified or the appropriate end may be counterbored to the larger diameter for depths S and S_1, respectively.
(c) Maximum depth shall be optional with manufacturer providing wall thickness is controlled with General Specifications.
(d) Minimum design thickness, not subject to inspection.
(e) The basic dimensions shown shall apply as minimum for boss diameters.
(f) For optional metric fitting flats see Appendix A.
(g) Unified class 2B thread shall apply to swivel nuts Figures 8C to 9C and with minor diameter modified to class 3B limits for locknuts Figures 8A and 8B.
(h) Across flat widths must fit standard wrench openings. See ANSI B18.2.2.
(j) Diameter of bulkhead pilot is the same as major thread diameter. Recommended pilot hole for bulkhead fittings is 0.4 mm (0.016 in) over major thread diameter.
(k) J full thread minimum with thread runout. If undercut to G diameter and H width. Length of thread and undercut must not be less than I.
(l) See Table 1A for tolerance.
(m) At Manufacturers option, alternate metric drills shown in brackets with corresponding tolerances may be used.