FEDERAL SUPPLY CLASS
4730

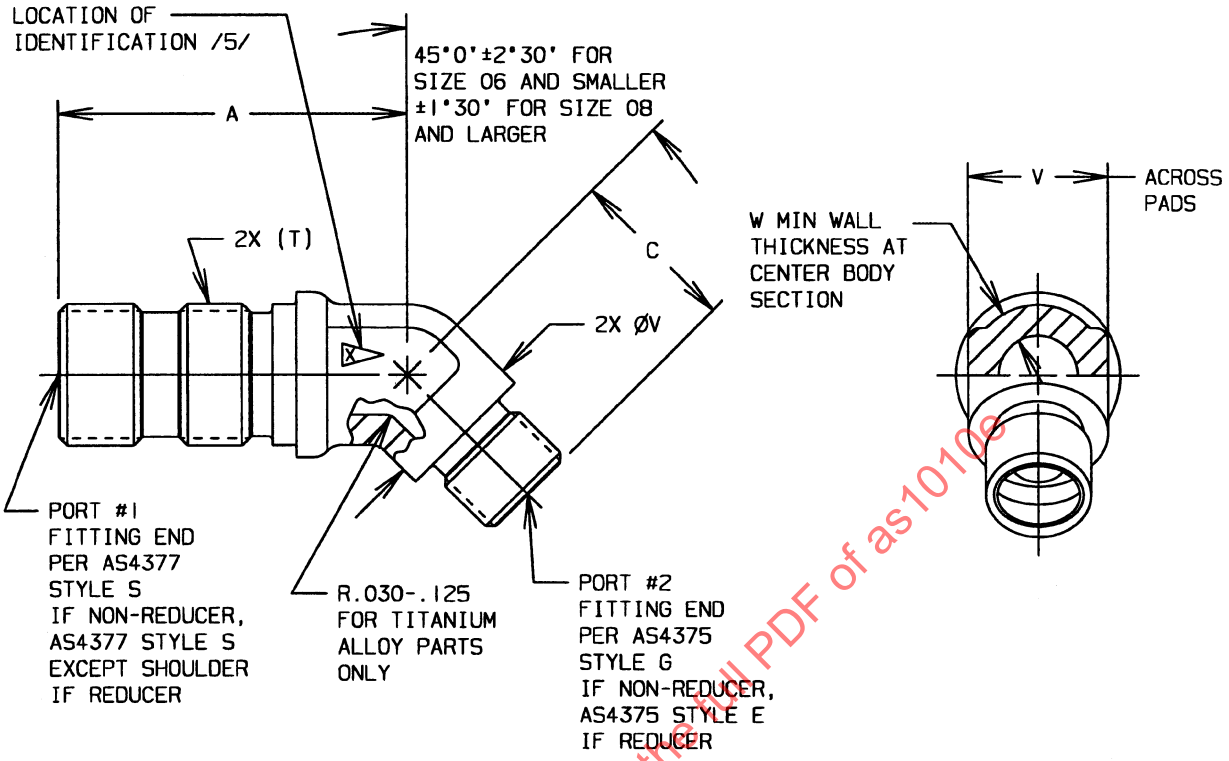
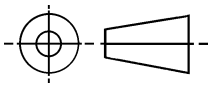


FIGURE 1 - FITTING, ELBOW, 45°, BULKHEAD END FOR OPTIONAL USE IN PORT INSTALLATION, PORT #2 SHOWN AS REDUCER

INACTIVE IN PART /22/

ISSUED 1966-03 REVISED 2001-08 REAFFIRMED 2005-06

THIRD ANGLE PROJECTION



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PROCUREMENT SPECIFICATION: /4/ AS18280

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AEROSPACE STANDARD

(R) FITTING, ELBOW, 45°, STANDARD AND REDUCER, BULKHEAD, FLARELESS

AS1010
SHEET 1 OF 7

REV. E

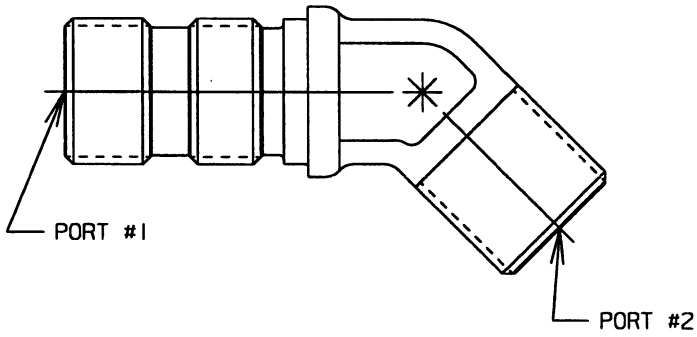

FIGURE 2 - FITTING, ELBOW, 45°, BULKHEAD END FOR OPTIONAL USE IN PORT INSTALLATION, NON-REDUCER SHOWN, SAME AS FIGURE 1 EXCEPT AS SHOWN

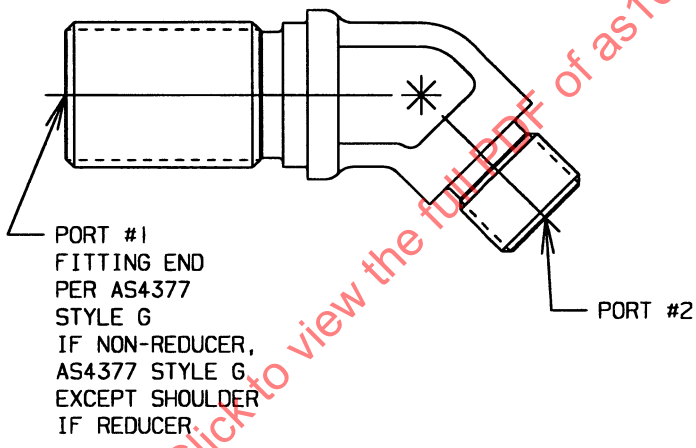

FIGURE 3 - FITTING, ELBOW, 45°, BULKHEAD END NOT FOR USE IN PORT INSTALLATION, PORT #2 SHOWN AS REDUCER, SAME AS FIGURE 1 EXCEPT AS SHOWN

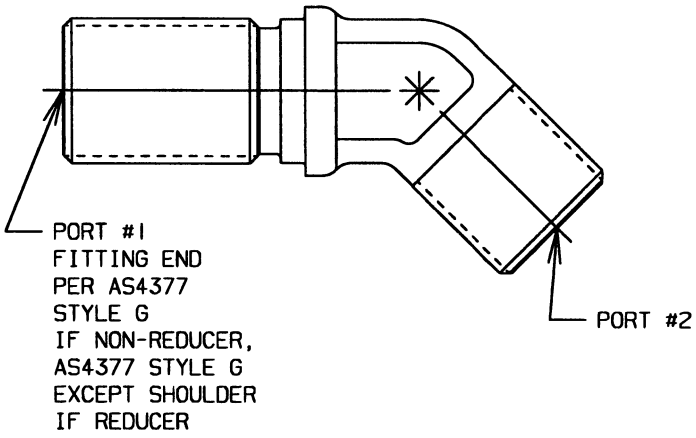

FIGURE 4 - FITTING, ELBOW, 45°, BULKHEAD END NOT FOR USE IN PORT INSTALLATION, NON-REDUCER SHOWN, SAME AS FIGURE 2 EXCEPT AS SHOWN

TABLE 1 - DIMENSIONS AND WEIGHTS /13/

BASIC NO. AS1010 /12/ /21/ SIZE CODE	V	W	LB/EA APPROX REF ALUM	LB/EA APPROX REF STEEL	LB/EA APPROX REF TI
02	.297- .314	.090	.0135	.0315	.0180
03	.360- .377	.100	.0162	.0459	.0261
04	.423- .440	.110	.0243	.0531	.0306
05	.485- .502	.120	.0315	.0882	.0504
06	.547- .565	.120	.0351	.0936	.054
08	.735- .753	.150	.0648	.191	.110
10	.860- .878	.170	.0981	.275	.158
12	1.047-1.065	.185	.157	.363	.256
14	1.173-1.191	.200	-	-	-
16	1.292-1.317	.205	.230	.603	.347
20	1.605-1.630	.240	.369	.990	.571
24	1.855-1.880	.250	-	-	-
32	2.542-2.572	.350	-	-	-

TABLE 2 - LEG LENGTH A /14/

FORGING SIZE /12/	TUBE SIZE OF PORT #1 02	TUBE SIZE OF PORT #1 03	TUBE SIZE OF PORT #1 04	TUBE SIZE OF PORT #1 05	TUBE SIZE OF PORT #1 06	TUBE SIZE OF PORT #1 08	TUBE SIZE OF PORT #1 10	TUBE SIZE OF PORT #1 12	TUBE SIZE OF PORT #1 14	TUBE SIZE OF PORT #1 16	TUBE SIZE OF PORT #1 20	TUBE SIZE OF PORT #1 24	TUBE SIZE OF PORT #1 32
02	1.305	1.305	1.367	1.367	1.430	1.508	1.601	1.695	1.789	1.820	1.852	1.867	1.821
03	-	1.352	1.414	1.414	1.477	1.555	1.648	1.742	1.836	1.867	1.899	1.914	1.868
04	-	-	1.477	1.477	1.540	1.618	1.711	1.805	1.899	1.930	1.962	1.977	1.931
05	-	-	-	1.477	1.540	1.618	1.711	1.805	1.899	1.930	1.962	1.977	1.931
06	-	-	-	-	1.586	1.664	1.757	1.851	1.945	1.976	2.008	2.023	1.977
08	-	-	-	-	-	1.836	1.929	2.023	2.117	2.148	2.180	2.195	2.149
10	-	-	-	-	-	-	2.070	2.164	2.258	2.289	2.321	2.336	2.290
12	-	-	-	-	-	-	-	2.273	2.367	2.398	2.430	2.445	2.399
14	-	-	-	-	-	-	-	-	2.336	2.398	2.430	2.445	2.399
16	-	-	-	-	-	-	-	-	-	2.398	2.430	2.445	2.399
20	-	-	-	-	-	-	-	-	-	-	2.430	2.445	2.399
24	-	-	-	-	-	-	-	-	-	-	-	2.445	2.399
32	-	-	-	-	-	-	-	-	-	-	-	-	2.602

TABLE 3 - LEG LENGTH C /14/

FORGING SIZE /12/	TUBE SIZE OF PORT #2 OR #3 02	TUBE SIZE OF PORT #2 OR #3 03	TUBE SIZE OF PORT #2 OR #3 04	TUBE SIZE OF PORT #2 OR #3 05	TUBE SIZE OF PORT #2 OR #3 06	TUBE SIZE OF PORT #2 OR #3 08	TUBE SIZE OF PORT #2 OR #3 10	TUBE SIZE OF PORT #2 OR #3 12	TUBE SIZE OF PORT #2 OR #3 14	TUBE SIZE OF PORT #2 OR #3 16	TUBE SIZE OF PORT #2 OR #3 20	TUBE SIZE OF PORT #2 OR #3 24	TUBE SIZE OF PORT #2 OR #3 32
02	.649	.633	.633	.664	.742	.805	.836	.960	1.023	1.054	1.148	1.242	1.523
03	-	.680	.680	.711	.789	.852	.883	1.007	1.070	1.101	1.195	1.289	1.570
04	-	-	.711	.742	.820	.883	.914	1.038	1.101	1.132	1.226	1.320	1.601
05	-	-	-	.742	.820	.883	.914	1.038	1.101	1.132	1.226	1.320	1.601
06	-	-	-	-	.836	.899	.930	1.054	1.117	1.148	1.243	1.336	1.617
08	-	-	-	-	-	.992	1.023	1.147	1.210	1.241	1.335	1.429	1.710
10	-	-	-	-	-	-	1.086	1.210	1.273	1.304	1.398	1.492	1.773
12	-	-	-	-	-	-	-	1.273	1.336	1.367	1.461	1.555	1.836
14	-	-	-	-	-	-	-	-	1.305	1.367	1.461	1.555	1.836
16	-	-	-	-	-	-	-	-	-	1.367	1.461	1.555	1.836
20	-	-	-	-	-	-	-	-	-	-	1.461	1.555	1.836
24	-	-	-	-	-	-	-	-	-	-	-	1.555	1.836
32	-	-	-	-	-	-	-	-	-	-	-	-	1.836

TABLE 4 - TUBE SIZE AND CORRESPONDING THREAD

PORT SIZE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS A
02	.125	.3125-24 UNJF
03	.188	.3750-24 UNJF
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-18 UNJF
08	.500	.7500-16 UNJF
10	.625	.8750-14 UNJF
12	.750	1.0625-12 UNJ
14	.875	1.1875-12 UNJ
16	1.000	1.3125-12 UNJ
20	1.250	1.6250-12 UNJ
24	1.500	1.8750-12 UNJ
32	2.000	2.5000-12 UNJ

NOTES:

/1/ MATERIAL:

a. NO CODE LETTER - TYPE 4130 LOW ALLOY STEEL FORGING OR BAR PER AMS 6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/
b. CODE LETTER D - TYPE 2024-T6 OR -T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS 4133. /2/ /22/
c. CODE LETTR F - TYPE 4130 LOW ALLOY STEEL FORGING OR BAR PER AMS 6370 OR AMS-S-6758 EXCEPT HEAT TREATMENT PER PROCUREMENT SPECIFICATION. /2/ /22/
d. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5639 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
e. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5648 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
f. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5645 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/
g. CODE LETTER S - TYPE 347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS 5646 OR AMS-QQ-S-763 EXCEPT HARDNESS PER PROCUREMENT SPECIFICATION. /2/ /22/
h. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS 4928.
i. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS 4141 OR AMS-QQ-A-367; OR 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124; OR 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9. /2/

/2/ HEAT TREATMENT:

a. NO CODE LETTER AND MATERIAL CODE LETTER F - HARDNESS SHALL BE 92 HRB TO 40 HRC PER PROCUREMENT SPECIFICATION.
b. MATERIAL CODE LETTERS D AND W - ELECTRICAL CONDUCTIVITY AND HARDNESS PER PROCUREMENT SPECIFICATION.
c. MATERIAL CODE LETTERS J, K, R AND S - HARDNESS SHALL BE Rb 80 MINIMUM PER PROCUREMENT SPECIFICATION.
d. OTHER MATERIAL CODES - NONE.