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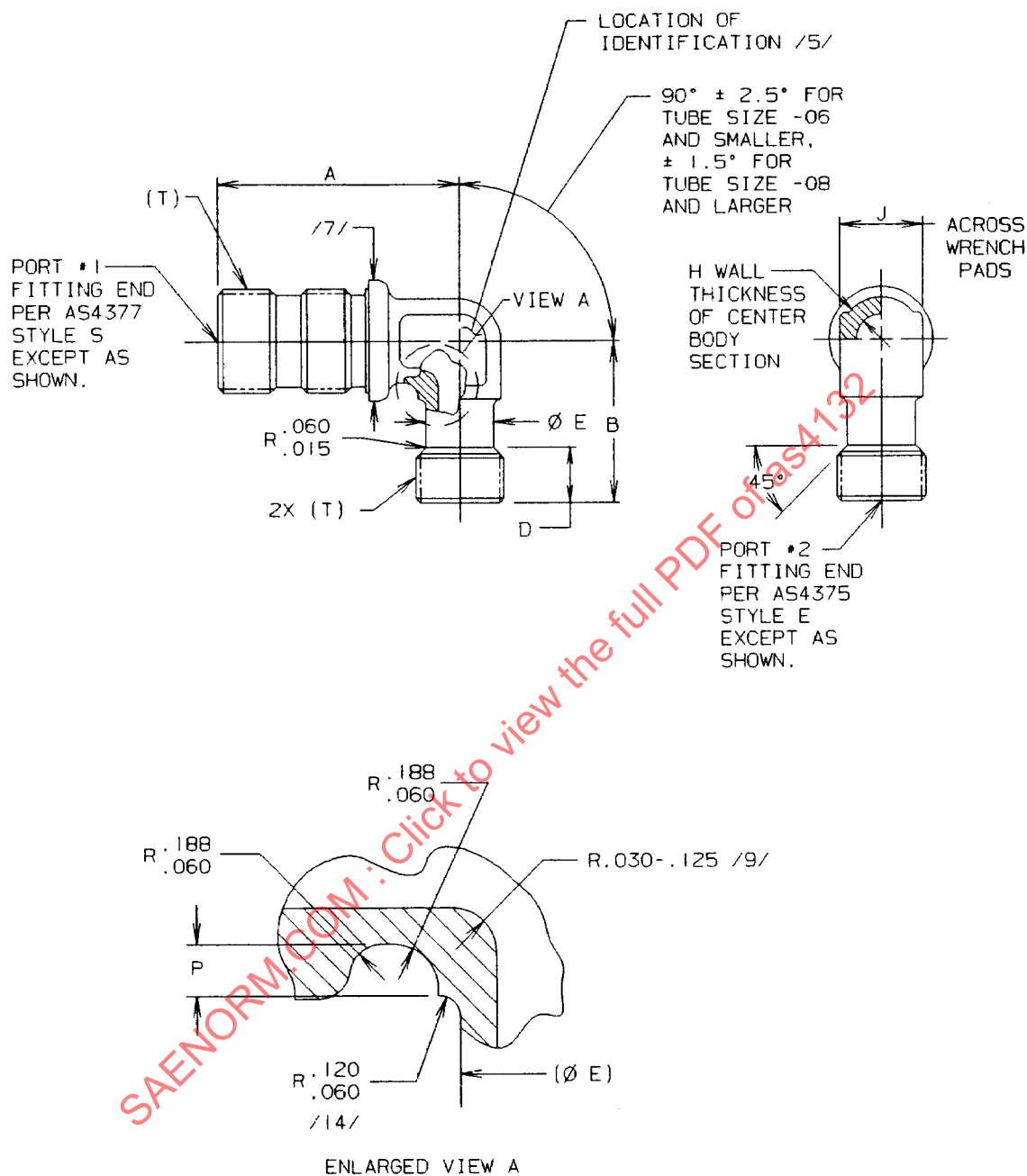


FIGURE 1 - ELBOW, 90°, BULKHEAD, REDUCED BODY, FLARELESS

CUSTODIAN: SAE G-3/G-3B

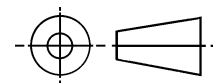
PROCUREMENT SPECIFICATION: /4/ MIL-F-18280

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

ELBOW, 90°, BULKHEAD,
REDUCED BODY, FLARELESS

THIRD ANGLE PROJECTION



AS4132
SHEET 1 OF 4

ISSUED 1992-11 REAFFIRMED 2000-10

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS4132 /20/ SIZE CODE	H MIN	J	P ±.030	LB/EA MAX CRES	LB/EA MAX TI
04	.050	.390	.030	.060	.034
05	.050	.453	.159	.086	.048
06	.050	.453	.137	.090	.051
08	.050	.577	.140	.169	.097
10	.070	.702	.157	.301	.172
12	.080	.890	.166	.432	.248
16	.090	1.140	.174	.565	.325
20	.110	1.390	.071	1.262	.730
24	.130	1.640	---	1.667	.965

TABLE 2 - FITTING END

SIZE CODE	TUBE OD	T THREAD PER MIL-S-8879	D	E
04	.250	.4375-20UNJF	.371	.350
05	.313	.5000-20UNJF	.371	.412
06	.375	.5625-18UNJF	.379	.453
08	.500	.7500-16UNJF	.461	.577
10	.625	.8750-14UNJF	.511	.702
12	.750	1.0625-12UNJ	.556	.890
16	1.000	1.3125-12UNJ	.556	1.140
20	1.250	1.6250-12UNJ	.556	1.390
24	1.500	1.8750-12UNJ	.556	1.640

TABLE 3 - LEG LENGTH A

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	1.523	---	---	---	---	---	---	---	---
05	1.555	1.555	---	---	---	---	---	---	---
06	1.665	1.665	1.711	---	---	---	---	---	---
08	1.774	1.774	1.820	1.992	---	---	---	---	---
10	1.914	1.914	1.960	2.132	2.273	---	---	---	---
12	2.024	2.024	2.070	2.242	2.383	2.492	---	---	---
16	2.149	2.149	2.195	2.367	2.508	2.617	2.617	---	---
20	2.430	2.430	2.476	2.648	2.789	2.898	2.898	2.898	---
24	2.712	2.712	2.758	2.930	3.071	3.180	3.180	3.180	3.180

TABLE 4 - LEG LENGTH B

FORGING SIZE	04	05	06	08	10	12	16	20	24
04	.961	---	---	---	---	---	---	---	---
05	1.055	1.055	---	---	---	---	---	---	---
06	1.070	1.070	1.086	---	---	---	---	---	---
08	1.227	1.227	1.243	1.336	---	---	---	---	---
10	1.352	1.352	1.368	1.461	1.524	---	---	---	---
12	1.414	1.414	1.430	1.523	1.586	1.649	---	---	---
16	1.507	1.507	1.523	1.616	1.679	1.742	1.742	---	---
20	1.788	1.788	1.804	1.897	1.960	2.023	2.023	2.023	---
24	1.976	1.976	1.992	2.085	2.148	2.211	2.211	2.211	2.211

NOTES:

/1/ MATERIAL:

- a. CODE LETTER J: TYPE 304 CORROSION RESISTANT STEEL PER AMS 5639
- b. CODE LETTER T: TYPE 6AL-4V TITANIUM ALLOY PER AMS 4928
- c. CODE LETTER V: TYPE 15-5PH CORROSION RESISTANT STEEL PER AMS 5659

2. HEAT TREATMENT:

- a. MATERIAL CODE LETTER J: NONE
- b. MATERIAL CODE LETTER T: NONE
- c. MATERIAL CODE LETTER V: HEAT TREAT TO CONDITION H-1075 PER AMS 2759/3

/3/ FINISH:

- a. MATERIAL CODE LETTER J: PASSIVATE PER QQ-P-35 TYPE VI OR TYPE VII
- b. MATERIAL CODE LETTER T: FLUORIDE PHOSPHATE CONVERSION COAT PER AMS 2486
- c. MATERIAL CODE LETTER V:

- (1) NO SUFFIX FINISH CODE LETTER: PASSIVATE PER QQ-P-35, TYPE II OR VIII
- (2) SUFFIX FINISH CODE LETTER "P": CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2

/4/ PROCUREMENT SPECIFICATION: MIL-F-18280 EXCEPT AS SPECIFIED ON THIS STANDARD. THIS PART SHALL BE QUALIFIED TO THE PROCUREMENT SPECIFICATION IN A COMPLETE ASSEMBLY. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.

/5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B.

- a. FOR SIZES 06 (.375 OD TUBE SIZE) AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTERS "AS", MATERIAL CODE LETTER AND FORGING MANUFACTURER'S IDENTIFICATION WHEN MADE FROM FORGING
- b. FOR SIZES 08 (.500 OD TUBE SIZE) AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER, MATERIAL CODE LETTER AND FORGING MANUFACTURER'S IDENTIFICATION WHEN MADE FROM FORGING

6. THIS PART IS INTENDED FOR USE IN SYSTEMS WITH OPERATING PRESSURES AS FOLLOWS:

- a. SIZES -04 THRU -16 AT 4000 psi
- b. SIZES -20 AND -24 AT 2000 psi