

REV.
B

SAE AS102

RATIONALE

FEDERAL SUPPLY CLASS
4730

CANCELED MILITARY STANDARD NUMBERS HAVE BEEN REPLACED. PRI-QPL NOTE HAS BEEN UPDATED AND CADMIUM WARNING NOTE ADDED. OTHER UPDATES.

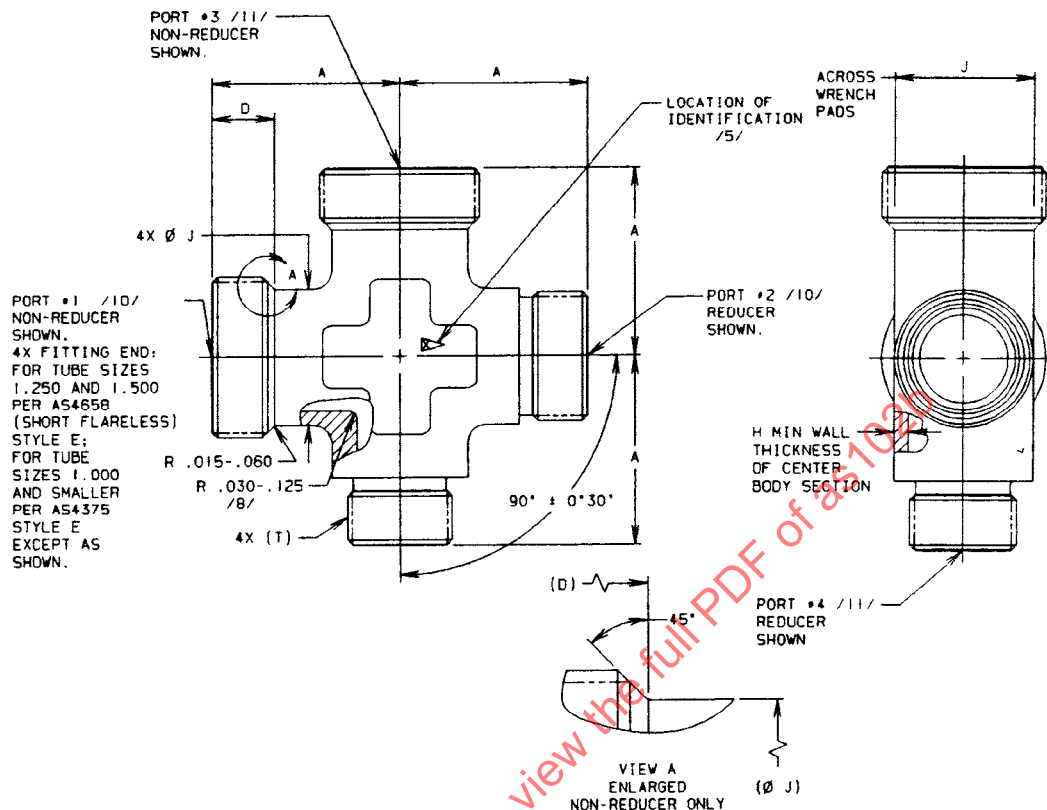


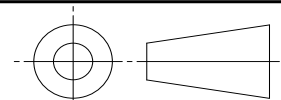
FIGURE 1 - FITTING CROSS, REDUCER

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS102 /09/ 119/ SIZE CODE	D	H	J +.005/ -.020	LB/EA APPROX REF ALUM	LB/EA APPROX REF CRES	LB/EA APPROX REF TI
20	.517	.124	1.375	.385	1.117	.650
24	.614	.156	1.688	.559	1.620	.941

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS102B>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING, CROSS, REDUCER, FLARELESS AND
SHORT FLARELESS

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TABLE 2 – LEG LENGTH A

SIZE OF PORT	FORGING SIZE /9/ 20	FORGING SIZE /9/ 24
02	1.585	1.710
03	1.632	1.757
04	1.663	1.788
05	1.663	1.788
06	1.679	1.804
08	1.772	1.897
10	1.835	1.960
12	1.898	2.023
14	1.898	2.023
16	1.898	2.023
20	1.673	1.798
24	---	1.798

TABLE 3 – TUBE SIZE AND CORRESPONDING THREADS

PORT SIZE	(NOMINAL TUBE SIZE)	THREAD PER AS8879 CLASS 3A
02	.125	.3125-24 UNJF
03	.188	.3759-24 UNJF
04	.250	.4375-20 UNJF
05	.312	.5000-20 UNJF
06	.375	.5625-16 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	1.5625-12 UNJ
24	1.500	1.8125-12 UNJ

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

/1/ MATERIAL:

- a. CODE LETTER T: TYPE 6AL-4V TITANIUM ALLOY PER AMS4928
- b. CODE LETTER V: TYPE 15-5PH CORROSION RESISTANT STEEL PER AMS5659
- c. CODE LETTER W: TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS4141 OR TYPE 7075-T7351
ALUMINUM ALLOY BAR PER AMS4124

2. HEAT TREATMENT

- a. MATERIAL CODE LETTER T: NONE
- b. MATERIAL CODE LETTER V: HEAT TREAT TO CONDITION H-1075 PER AMS2759/3
- c. MATERIAL CODE LETTER W: NONE

/3/ FINISH:

- a. MATERIAL CODE LETTER T: FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486
- b. MATERIAL CODE LETTER V:
 - 1. V CODE PARTS TO BE PASSIVATED ONLY WILL HAVE NO FINISH CODE LETTER AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: PASSIVATE PER AMS 2700 TYPE 2 OR 8.
 - 2. V CODE PARTS TO BE CADMIUM PLATED ONLY WILL HAVE THE FINISH CODE LETTER "P" AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
- c. MATERIAL CODE LETTER W: ANODIZE PER AMS2472 OR PER MIL-A-8625, TYPE II, CLASS 2 DYED BROWN SIMILAR TO COLOR 10080 OF FED-STD-595.

/4/ PROCUREMENT SPECIFICATION: AS18280 UNLESS SPECIFIED OTHERWISE ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED BY AN ACCREDITED MANUFACTURER AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-AS18280 FOR THIS STANDARD. SEE [HTTP://WWW.EAUDITNET.COM](http://www.eauditnet.com) FOR CURRENT QPL ONLINE.

/5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D OR METHOD 7A3, 15A3, OR 15B. MANUFACTURER'S NAME, TRADEMARK OR CAGE CODE, BASIC PART NUMBER AND MATERIAL CODE LETTER.

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

- a. SIZES -20 AND -24 TITANIUM ALLOY AND CORROSION RESISTANT STEEL AT 3000 psi
- b. SIZES -20 AND -24 ALUMINUM ALLOY AT 600 psi

LARGEST PORT DETERMINES PRESSURE RATING.

7. WHEN MACHINED FROM BAR OR OVERSIZED FORGINGS, THE CENTER BODY SECTION SHALL CONFORM TO AS1376 TABLE 10.

/8/ RADIUS APPLICABLE FOR TITANIUM PARTS ONLY.

/9/ PORT #1 DETERMINES FORGING SIZE. MINIMUM FORGING SIZE IS -20. THIS STANDARD IS FOR REDUCERS ONLY; AT LEAST ONE PORT SHALL BE SIZE 20 OR OVER. FOR ALL PORTS THE SAME SIZE USE AS100.

/10/ PORT #1 IS LARGER OR SAME SIZE AS PORT #2 AND/OR PORT #3.

/11/ PORT #3 IS LARGER OR SAME SIZE AS PORT #4.

 <i>An SAE International Group</i>	AEROSPACE STANDARD		SAE AS102 SHEET 3 OF 4	REV. B
	FITTING, CROSS, REDUCER, FLARELESS AND SHORT FLARELESS			