

REV.  
A

AS4136

FEDERAL SUPPLY CLASS  
4730

## NOTE

THIS DOCUMENT INCLUDES CADMIUM AS A PLATING MATERIAL. THE USE OF CADMIUM HAS BEEN RESTRICTED AND/OR BANNED FOR USE IN MANY COUNTRIES DUE TO ENVIRONMENTAL AND HEALTH CONCERNS. THE USER SHOULD CONSULT WITH LOCAL OFFICIALS ON APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS REGARDING ITS USE.

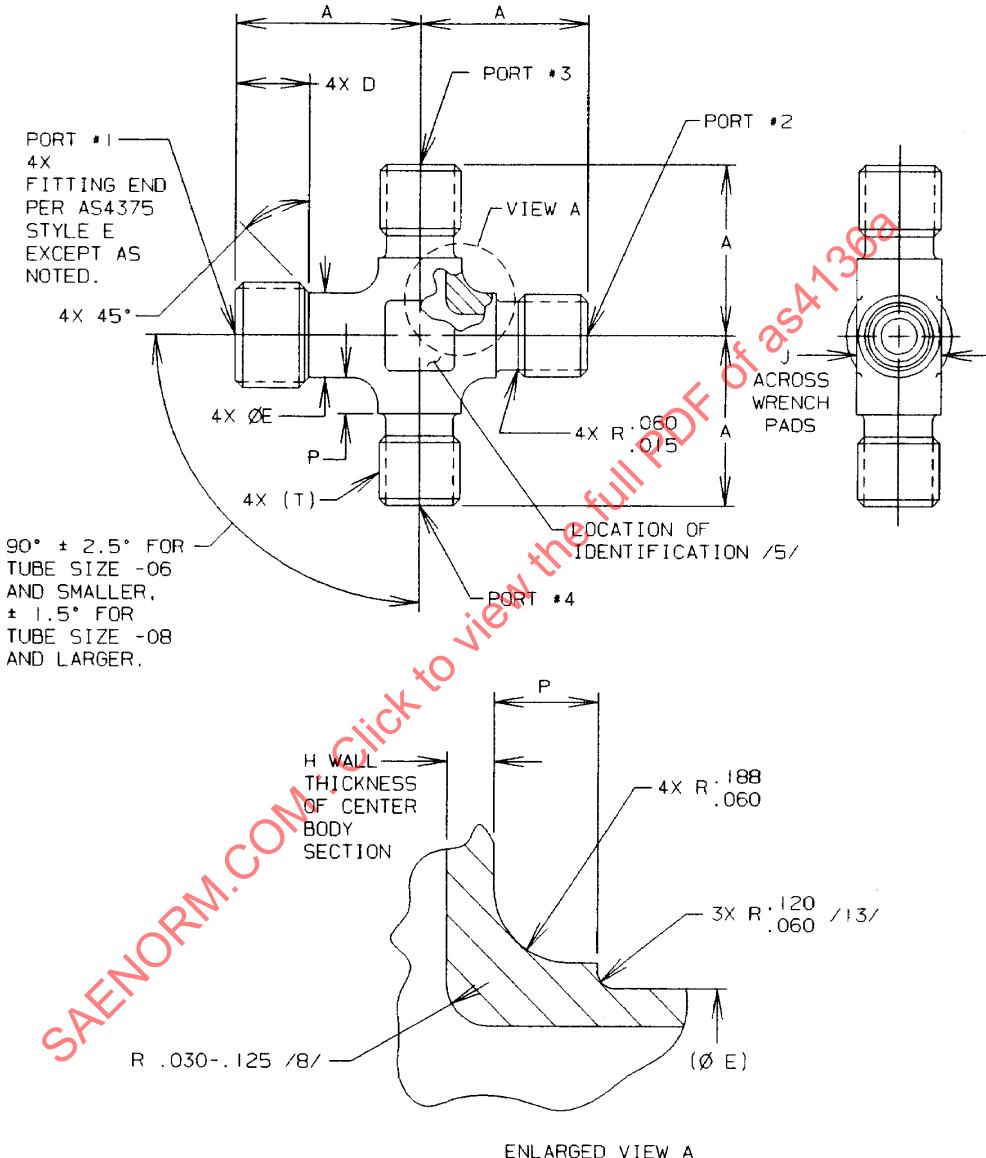
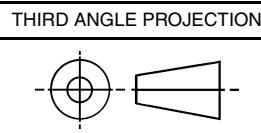


FIGURE 1 - CROSS, REDUCED BODY, FLARELESS



ISSUED 1992-11 REVISED 2004-01

CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS18280

**SAE**Aerospace  
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## AEROSPACE STANDARD

CROSS, REDUCED BODY, FLARELESS

AS4136  
SHEET 1 OF 4REV.  
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TABLE 1 - DIMENSIONS AND WEIGHTS

SIZE CODE	H MIN	J	P ± .030	LB/EA	LB/EA
				MAX CRES	MAX TI
04	.050	.390	.030	.072	.040
05	.050	.453	.159	.083	.047
06	.050	.453	.137	.112	.063
08	.050	.577	.140	.217	.122
10	.070	.702	.157	.342	.192
12	.080	.890	.166	.512	.288
16	.090	1.140	.174	.763	.428
20	.110	1.390	.071	1.200	.674
24	.130	1.640	---	1.537	.863

TABLE 2 - FITTING END

SIZE CODE	TUBE OD	THREAD	D	E
		PER AS8879		
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	.898	---	---	---	---	---	---	---	---
05	.961	.961	---	---	---	---	---	---	---
06	1.039	1.039	1.055	---	---	---	---	---	---
08	1.164	1.164	1.180	1.273	---	---	---	---	---
10	1.258	1.258	1.274	1.367	1.430	---	---	---	---
12	1.351	1.351	1.367	1.460	1.523	1.586	---	---	---
16	1.507	1.507	1.523	1.616	1.679	1.742	1.742	---	---
20	1.663	1.663	1.679	1.772	1.835	1.898	1.898	1.898	---
24	1.788	1.788	1.804	1.897	1.960	2.023	2.023	2.023	2.023

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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 AMS-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 AMS-QQ-P-35, TYPE II OR VIII
  - (2) SUFFIX FINISH CODE LETTER "P": CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2

/4/ USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS OR ACCREDITED DISTRIBUTORS AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS18280 FOR THIS STANDARD. SEE <http://www.pri.sae.org/QPL/as18280.pdf> FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIALS ON PRI-QPL-AS18280.

/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

7. WHEN MACHINED FROM BAR OR OVERSIZED FORGING, THE CENTER BODY SECTION SHALL CONFORM TO AS1376, TABLE 2.

/8/ RADIUS APPLICABLE TO TITANIUM PARTS ONLY.

9. INSPECTION: CLASSIFICATION OF DEFECTS AS SPECIFIED FOR EQUIVALENT PARTS IN MIL-HDBK-1655. IN ADDITION, 1.5% AQL FOR THE .030 TO .125 RADIUS AT BORE INTERSECTION.

10. THIS PART IS A REDUCED BODY VERSION OF MS21906 IF NONREDUCER, OR AS1006 IF REDUCER.

/11/ SPECIFY END SIZES IN THIS ORDER: LARGEST END FIRST, OPPOSITE END ON RUN SECOND, LARGEST END ON SIDE THIRD, OPPOSITE END FOURTH.

12. LARGEST END DETERMINES FORGING SIZE.

/13/ APPLICABLE ONLY TO REDUCERS AND SIZE 04 AND 05 NONREDUCERS.

14. INTERPRETATION OF DRAWING PER ARP4296.

15. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125  $\mu$ in Ra.

16. BREAK EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.