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REV. B

AS5190™

RATIONALE

FEDERAL SUPPLY CLASS  
4730

"INACTIVE IN PART" STATUS REPLACED BY "NOT RECOMMENDED IN PART." OPTIONAL MATERIALS ADDED TO NOTE 1. HEAT TREATMENT NOTE 2, REVISED. FINISH FOR MATERIAL CODE LETTER D AND S ADDED TO NOTE 3. QML STATEMENT REVISED. INTENDED USE NOTE REVISED, TABLE 2 REMOVED. NOTE 10 REVISED TO REFLECT CURRENT SPECIFICATION CALLOUT. USE OF TITANIUM AND CADMIUM IN OXYGEN OR POTABLE WATER SYSTEM WARNING NOTE REMOVED. CHANGE BAR NOTE REVISED.

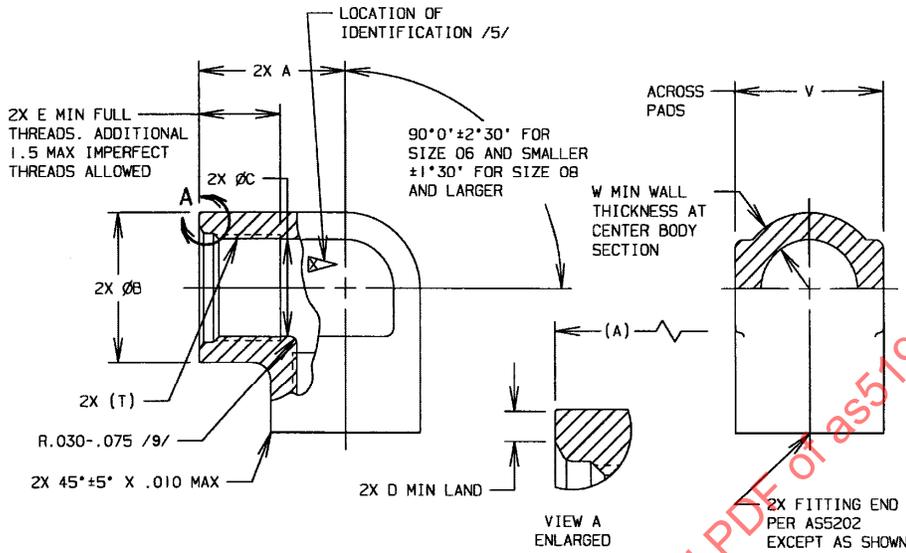
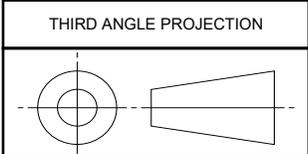


FIGURE 1 - FITTING, ELBOW, 90°

NOT RECOMMENDED IN PART /18/

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CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: AS4875 /4/



AEROSPACE STANDARD

FITTING, ELBOW, 90°, INTERNAL  
STRAIGHT THREAD PORT

AS5190™  
SHEET 1 OF 4

REV. B

ISSUED 2000-07 REAFFIRMED 2015-04 REVISED 2021-02

**TABLE 1 - DIMENSIONS A-W AND WEIGHTS**

BASIC NO. AS5190 /15/ SIZE CODE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS 3B	DIMENSIONS								LB/EA	LB/EA	LB/EA
			A	B ±.016	C -.015/+0.00	D	E	V	W	APPROX REF AL	APPROX REF STEEL	APPROX REF TI	
04	.250	.4375-20 UNJF	.787	.688	.397	.040	.483	.735-	.753	.050	.0459	.135	.0743
05	.312	.5000-20 UNJF	.849	.750	.459	.040	.452	.735-	.753	.050	.0486	.140	.0772
06	.375	.5625-18 UNJF	.849	.813	.516	.040	.475	.797-	.815	.050	.0461	.132	.0732
08	.500	.7500-16 UNJF	1.037	1.063	.697	.071	.569	1.047-	1.065	.050	.110	.312	.175
10	.625	.8750-14 UNJF	1.193	1.188	.815	.071	.638	1.173-	1.191	.070	.122	.427	.235
12	.750	1.0625-12 UNJ	1.396	1.438	.991	.077	.730	1.418-	1.443	.080	.250	.718	.396
16	1.000	1.3125-12 UNJ	1.568	1.688	1.241	.077	.777	1.668-	1.693	.090	.341	.981	.540
20	1.250	1.6250-12 UNJ	1.771	2.000	1.553	.077	.824	1.980-	2.005	.110	.471	1.350	.745

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. DASH AS CODE LETTER: TYPE 4130 CARBON STEEL FORGING OR BAR PER AMS-S-6758 OR AMS6370, OR TYPE 4140 STEEL BAR PER AMS6349 OR AMS6382. /2/
- b. CODE LETTER D: TYPE 2014-T6 ALUMINUM ALLOY FORGING PER AMS-QQ-A-367 OR AMS4133 OR TYPE 2024-T6 ALUMINUM ALLOY BAR PER AMS-QQ-225/6, OR TYPE 2024-T851 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/6 OR AMS4339. /18/
- c. CODE LETTER J: TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5639.
- d. CODE LETTER K: TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5648.
- e. CODE LETTER R: TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5645.
- f. CODE LETTER T: TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS4928.
- g. CODE LETTER S: TYPE 347 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS5646. /18/
- h. CODE LETTER W: TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS-QQ-A-367 OR AMS4141; OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQA-225/9; OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS4124. /2/

/2/ HEAT TREATMENT:

- a. DASH AS MATERIAL CODE LETTER: REFER TO HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- b. MATERIAL CODE LETTERS D AND W: REFER TO ELECTRICAL CONDUCTIVITY AND HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
- c. OTHER MATERIAL CODE LETTERS: NONE.

	<b>AEROSPACE STANDARD</b>	<b>AS5190™</b> SHEET 2 OF 4	<b>REV.</b> <b>B</b>
	FITTING, ELBOW, 90°, INTERNAL STRAIGHT THREAD PORT		

3. FINISH:

- a. DASH AS MATERIAL CODE LETTER: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2, DYE BLACK AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION.
  - b. MATERIAL CODE LETTER D: ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BLUE, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
  - c. MATERIAL CODE LETTERS J, K, R, AND S: PASSIVATE PER AMS2700 TYPE 6 OR TYPE 7.
  - d. MATERIAL CODE LETTER T: ANODIZE PER AMS2488, TYPE 2 OR FLUORIDE PHOSPHATE CONVERSION COAT PER AMS2486 WITH COLOR PER PROCUREMENT SPECIFICATION.
  - e. MATERIAL CODE LETTER W:
    1. ANODIZE PER AMS2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.
    2. W CODE PARTS TO BE COATED WITH HIGH PURITY ALUMINUM ONLY WILL HAVE THE FINISH CODE LETTER "V" PLACED AFTER THE SIZE CODE IN THE PART NUMBER. THE FINISH WILL BE: COAT WITH HIGH PURITY ALUMINUM PER MIL-DTL-83488, CLASS 3, TYPE II, WITH MAXIMUM COATING THICKNESS OF .0005. GLASS BEAD PEEN PRESSURE SHALL BE 25 PSI MAXIMUM. /15/ SEE PROCUREMENT SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
- /4/ PROCUREMENT SPECIFICATION: AS4875 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT MANUFACTURED TO THIS STANDARD SHALL MEET THE REQUIREMENTS SPECIFIED HEREIN AND THE PROCUREMENT SPECIFICATION. ORIGINAL COMPONENT MANUFACTURERS (OCM) AND VALUE ADDED DISTRIBUTORS (VAD) SHALL BE LISTED IN THE NADCAP QUALIFIED MANUFACTURER LIST (QML) FOR THIS PRODUCT TYPE. THE QML IS AVAILABLE AT [www.eAuditNet.com](http://www.eAuditNet.com).
- /5/ IDENTIFICATION AT LOCATION SHOWN: MARK PER AS478 CLASS C OR D, OR METHOD 7A3, 15A3, OR 15B.
- a. FOR SIZE 06 AND SMALLER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, LETTERS "AS," AND MATERIAL CODE LETTER.
  - b. FOR SIZE 08 AND LARGER: MANUFACTURER'S NAME, CAGE CODE OR TRADEMARK, BASIC PART NUMBER, AND MATERIAL CODE LETTER.
6. INTENDED USE: THIS PART IS DESIGNED FOR USE IN SYSTEMS WITH MAXIMUM OPERATING PRESSURES AS SPECIFIED IN THE PROCUREMENT SPECIFICATION.
7. THIS STANDARD IS THE FUNCTIONAL EQUIVALENT OF AN939 AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.
8. WHEN MACHINED FROM BAR OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 1.
- /9/ RADIUS APPLICABLE FOR TITANIUM ALLOY PARTS ONLY.
10. INTERPRETATION OF DRAWING PER AS4296.
11. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 MICROINCHES Ra. FORGED SURFACES MAY BE 250 MICROINCHES Ra.
12. BREAK EDGES .003 TO .015, UNLESS OTHERWISE SPECIFIED.
13. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.
14. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS  $\pm 0.10$ , ANGULAR DIMENSIONS  $\pm 0^{\circ}30'$ .

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	FITTING, ELBOW, 90°, INTERNAL STRAIGHT THREAD PORT		