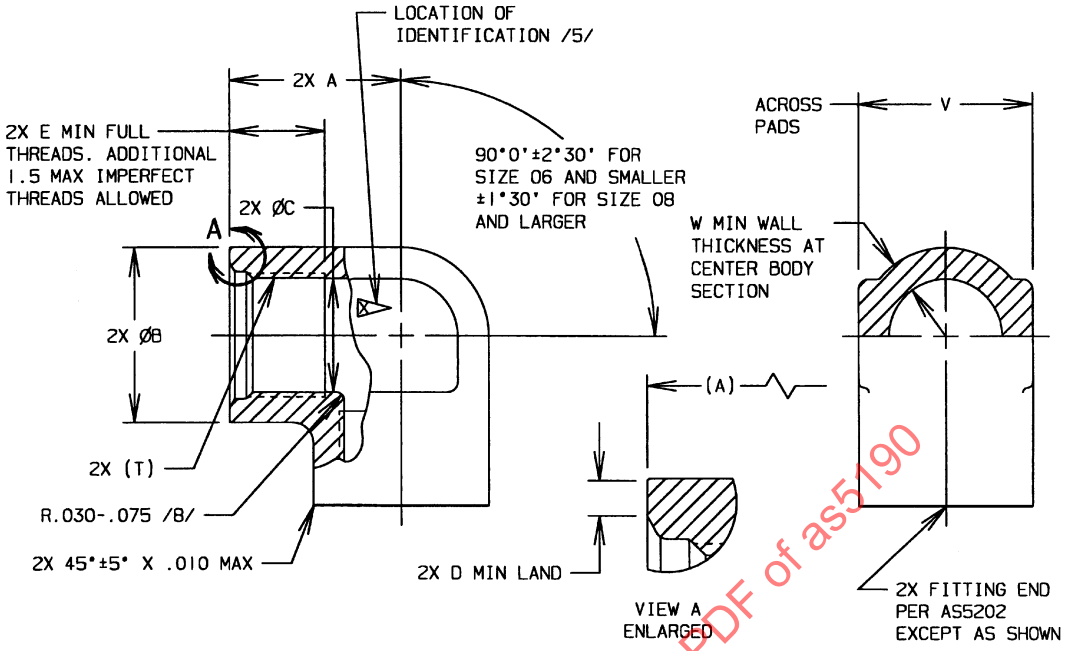


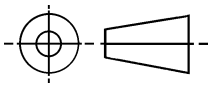
FIGURE 1 - FITTING, ELBOW, 90°

TABLE 1 - DIMENSIONS AND WEIGHTS

BASIC NO. AS5190 /14/ SIZE CODE	(NOMINAL TUBE SIZE)	T THREAD PER AS8879 CLASS 3B	A	B ±.016	C ±.015/+.000	D	E	V	W	LB/EA APPROX. REF AL	LB/EA APPROX. REF STEEL	LB/EA APPROX. REF TI
04	.250	.4375-20 UNJF	.787	.688	.397	.040	.483	.735- .753	.050	.0521	.150	.0826
05	.312	.5000-20 UNJF	.849	.750	.459	.040	.452	.735- .753	.050	.0541	.155	.0858
06	.375	.5625-18 UNJF	.849	.813	.516	.040	.475	.797- .815	.050	.0513	.147	.0813
08	.500	.7500-16 UNJF	1.037	1.063	.697	.071	.569	1.047-1.065	.050	.122	.352	.194
10	.625	.8750-14 UNJF	1.193	1.188	.815	.071	.638	1.173-1.191	.070	.165	.474	.261
12	.750	1.0625-12 UNJ	1.396	1.438	.991	.077	.730	1.418-1.443	.080	.278	.798	.440
16	1.000	1.3125-12 UNJ	1.568	1.688	1.241	.077	.777	1.668-1.693	.090	.379	1.09	.600
20	1.250	1.6250-12 UNJ	1.771	2.000	1.553	.077	.824	1.980-2.005	.110	.523	1.50	.828

ISSUED 2000-07 REAFFIRMED 2004-07

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3B

PROCUREMENT SPECIFICATION: /4/ AS4875

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

FITTING, ELBOW, 90°, INTERNAL
STRAIGHT THREAD PORT

AS5190
SHEET 1 OF 3

NOTES:

/1/ MATERIAL:

a. DASH AS CODE LETTER - TYPE 4130 CARBON STEEL FORGING OR BAR PER AMS-S-6758 OR AMS 6370, OR TYPE 4140 PER AMS 6382. /2/
b. CODE LETTER J - TYPE 304 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5639.
c. CODE LETTER K - TYPE 316 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5648.
d. CODE LETTER R - TYPE 321 CORROSION RESISTANT STEEL FORGING OR BAR PER AMS-QQ-S-763 OR AMS 5645.
e. CODE LETTER T - TYPE 6AL-4V TITANIUM ALLOY FORGING OR BAR PER AMS 4928.
f. CODE LETTER W - TYPE 7075-T73 ALUMINUM ALLOY FORGING PER AMS 4141, OR TYPE 7075-T73 ALUMINUM ALLOY BAR PER AMS-QQ-A-225/9, OR TYPE 7075-T7351 ALUMINUM ALLOY BAR PER AMS 4124. /2/

/2/ HEAT TREATMENT:

a. DASH AS MATERIAL CODE LETTER - SEE HARDNESS REQUIREMENT PER PROCUREMENT SPECIFICATION.
b. MATERIAL CODE LETTER W - SEE PROCUREMENT SPECIFICATION.
c. OTHER CODE LETTERS - NONE.

3. FINISH:

a. DASH AS MATERIAL CODE LETTER - CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2, DYE BLACK AND COAT WITH A LIGHT FILM OF OIL PER PROCUREMENT SPECIFICATION.
b. MATERIAL CODE LETTERS J, K, AND R - PASSIVATE PER AMS-QQ-P-35, TYPE VI OR VII.
c. MATERIAL CODE LETTER T - ANODIZE PER AMS 2488, TYPE 2 OR FLUORIDE PHOSPHATE CONVERSION COAT PER AMS 2486 WITH COLOR PER PROCUREMENT SPECIFICATION.
d. MATERIAL CODE LETTER W - ANODIZE PER AMS 2472 OR MIL-A-8625, TYPE II, CLASS 2, DYE BROWN, DUPLEX SEAL PER PROCUREMENT SPECIFICATION.

/4/ PROCUREMENT SPECIFICATION: AS4875 EXCEPT AS SPECIFIED ON THIS STANDARD. USERS OF THIS STANDARD SHALL PROCURE THIS PRODUCT FROM ACCREDITED MANUFACTURER(S), OR THEIR ACCREDITED DISTRIBUTOR(S), AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED MANUFACTURERS LIST (QML) FOR THIS TYPE OF PRODUCT.

/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 FOLLOWS:

a. SIZE 04 THROUGH 12 IN ALUMINUM ALLOY AND SIZES 04 THROUGH 16 IN STEEL, CORROSION RESISTANT STEEL AND TITANIUM AT 3000 psi.
b. SIZES 16 THROUGH 20 IN ALUMINUM ALLOY AND SIZE 20 IN STEEL, CORROSION RESISTANT STEEL, TITANIUM AT 1500 psi.

THIS STANDARD IS THE FUNCTIONAL EQUIVALENT OF AN939 AND IS INTENDED TO BE SUITABLE AS A REPLACEMENT STANDARD.

7. WHEN MACHINED FROM BAR OR OVERSIZED FORGING, THE CENTER BODY DIMENSIONS SHALL CONFORM TO AS1376, TABLE 1.

/8/ RADIUS APPLICABLE FOR TITANIUM ALLOY PARTS ONLY.

9. INTERPRETATION OF DRAWING PER ARP4296.

10. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M; REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 µin Ra. FORGED SURFACES MAY BE 250 µin Ra.

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

12. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.