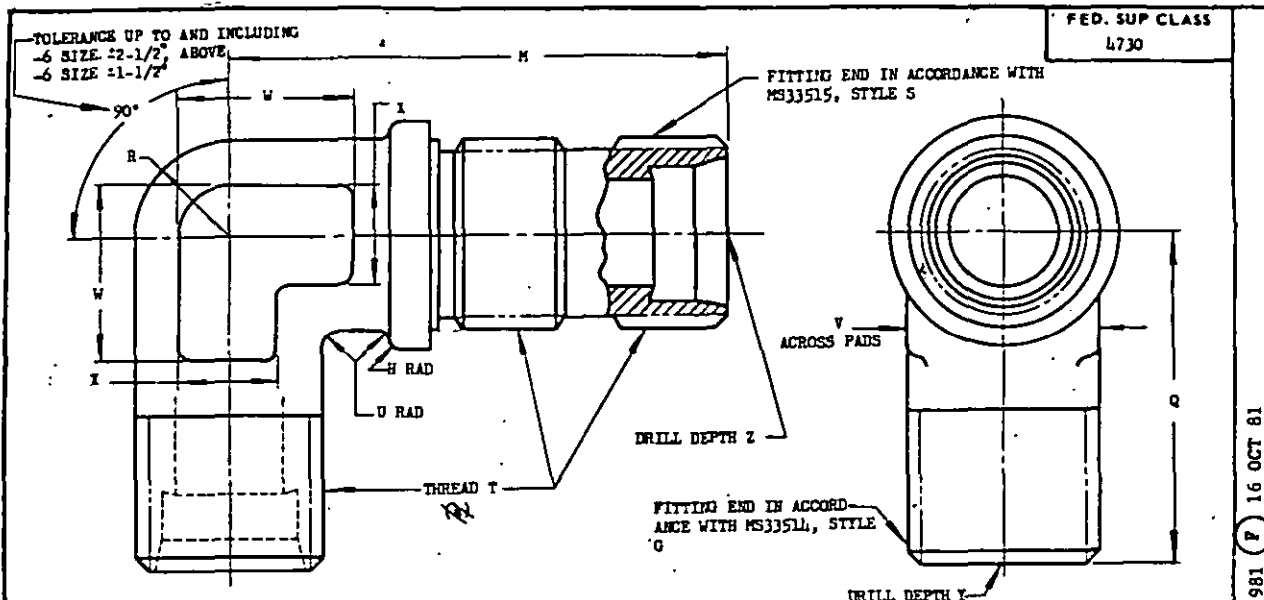


Review activities: USAF - 11
ARMY - AR, MI
DLA - CR

User activities: NAVY - OS
ARMY - GL, CR, ME, AT
DLA - CR

This military standard is approved by the Department of Defense and is mandatory on all activities. Selection for all new engineering and design applications and for repetitive use shall be made from this document.



DASH NO.	TUBE OD	THREAD T MIL-S-8879(4)	H RAD.	M +3/64 -0	Q +3/64 -0	R RAD.
-2	1/8	.3125-24UNJF-3A	1/16	1-5/16	.25/32	5/32
-3	3/16	.3750-24UNJF-3A		1-25/64	.29/32	3/16
-4	1/4	.4375-20UNJF-3A		1-1/2	.15/16	7/32
-5	5/16	.5000-20UNJF-3A		1-17/32	1-1/32	1/4
-6	3/8	.5625-18UNJF-3A	3/32	1-11/16	1-1/16	9/32
-8	1/2	.7500-16UNJF-3A		1-31/32	1-5/16	3/8
-10	5/8	.8750-14UNJF-3A		2-1/4	1-1/2	7/16
-12	3/4	1.0625-12UNJ-3A		2-15/32	1-5/8	17/32
-16	1	1.3125-12UNJ-3A	1/8	2-19/32	1-23/32	21/32
-20	1-1/4	1.6250-12UNJ-3A		2-7/8	2	13/16
-24	1-1/2	1.8750-12UNJ-3A		3-5/32	2-3/16	15/16
-32	2	2.5000-12UNJ-3A		3-3/4	2-3/8	1-1/4

DASH NO.	U RAD.	V	W APPROX.	X APPROX.	Y +3/64 -0	Z +3/64 -0	WT LB MAX		
							STEEL	AL ALLOY	TI ALLOY
-2	1/16	5/16	5/16	3/16	13/16	1-11/32	.048	.017	.027
-3		3/8	5/16	1/4	15/16	1-27/64	.064	.023	.036
-4		7/16	3/8	1/4	31/32	1-17/32	.071	.025	.040
-5		1/2	1/2	5/16	1-1/16	1-9/16	.102	.038	.058
-6	3/32	9/16	1/2	5/16	1-3/32	1-23/32	.123	.054	.070
-8		3/4	5/8	7/16	1-11/32	2	.237	.091	.136
-10		7/8	3/4	7/16	1-9/16	2-11/32	.400	.133	.230
-12		1-1/16	7/8	1/2	1-23/32	2-37/64	.530	.190	.305
-16	3/16	1-5/16	1-1/16	5/8	1-13/16	2-11/16	.920	.310	.530
-20		1-5/8	1-1/4	3/4	2-1/8	3	1.330	.524	.767
-24		1-7/8	1-7/16	7/8	2-23/64	3-23/64	1.960	.700	1.130
-32		2-9/16	1-15/16	1-3/16	2-7/16	4-1/16			

(a) PARTS WITH THREADS IN ACCORDANCE WITH MIL-S-8879(4) OF THE SAME THREAD SIZE, PITCH AND TOLERANCE CLASS ARE ACCEPTABLE FOR PROCUREMENT UNTIL 1 JULY 1971, BUT PARTS WITH MIL-S-8879(4) THREADS WILL NOT BE PROCURED HEREAFTER. EXISTING STOCKS ARE TO BE USED UNTIL EXHAUSTED.

- MATERIAL: CARBON STEEL - FORGINGS
ALUMINUM ALLOY - FORGINGS
CORROSION RESISTANT STEEL - FORGINGS
TITANIUM ALLOY - FORGINGS
- FINISH: SEE PROCUREMENT SPECIFICATION.
- BREAK ALL SHARP EDGES AND REMOVE ALL BURRS AND SLIVERS.
- DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: FRACTIONS $\pm 1/64$.

SEE PROCUREMENT SPECIFICATION

NOTE: PARTS MADE FROM 1137 OR 1141 FORGINGS QUALIFIED TO MIL-F-18280C SHALL NOT BE SUPPLIED AFTER 30 JUNE 1984.

(F) DENOTES CHANGES

P.A. Navy - AS Other Cust USAF - 90 Army-AV	INTERNATIONAL INTEREST	TITLE ELBOW, BULKHEAD UNIVERSAL 90°, FLARELESS TUBE	MILITARY STANDARD MS21908
PROCUREMENT SPECIFICATION MIL-F-18280	SEE NOTE	SUPERSEDES:	SHEET 1 OF 2

FED. SUP CLASS

4730

5. PART NUMBER:

NO CODE LETTER IN PART NUMBER FOR CARBON STEEL.

ADD D IN PLACE OF DASH FOR ALUMINUM ALLOY (2014).

ADD W IN PLACE OF DASH FOR ALUMINUM ALLOY (7075).

~~ADD C AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL, TYPE 302, 303, 304, 316, OR 304L.~~

ADD J IN PLACE OF DASH FOR CORROSION RESISTANT STEEL, TYPE 304.

ADD K IN PLACE OF DASH FOR CORROSION RESISTANT STEEL, TYPE 316.

ADD S AFTER DASH NUMBER FOR CORROSION RESISTANT STEEL, TYPE 304L AND 347. PARTS ARE NOT TO BE MANUFACTURED FROM TYPE 304L STEEL AFTER 27 JUNE 1969.

ADD T AFTER DASH NUMBER FOR TITANIUM ALLOY (6AL-4V).

EXAMPLES OF PART NUMBERS:

MS21908-4 - ELBOW, 1/4 TUBING, CARBON STEEL
 MS21908DA - ELBOW, 1/4 TUBING, ALUMINUM ALLOY (2014).
 MS21908WA - ELBOW, 1/4 TUBING, ALUMINUM ALLOY (7075).
 MS21908JA - ELBOW, 1/4 TUBING, CORROSION RESISTANT STEEL, TYPE 304.
 MS21908KA - ELBOW, 1/4 TUBING, CORROSION RESISTANT STEEL, TYPE 316.
 MS21908-4S - ELBOW, 1/4 TUBING, CORROSION RESISTANT STEEL, TYPE 347.
 MS21908-4T - ELBOW, 1/4 TUBING, TITANIUM ALLOY (6AL-4V).

6. ~~PARTS CODED C ARE INACTIVE FOR DESIGN AFTER 27 JUNE 1969. PARTS CODED C MAY BE USED UNTIL STOCKS ARE EXHAUSTED. PARTS CODED J OR K MAY BE USED IN LIEU OF PARTS CODED C.~~
 ITEMS CODED "C" ON PREVIOUS ISSUES OF THIS STANDARD ARE NO LONGER TO BE FURNISHED, UNLESS OTHERWISE SPECIFIED, PARTS CODED J, K OR S (AT SUPPLIER'S OPTION) SHALL BE FURNISHED IN LIEU OF "C" CODED PARTS.

7. CERTAIN PROVISIONS (SCREW THREADS AND UNDERCUT DIMENSIONS) OF THIS STANDARD ARE THE SUBJECT OF INTERNATIONAL STANDARDIZATION AGREEMENT ASCC AIR STD 17/19. WHEN REVISION OR CANCELLATION OF THIS STANDARD IS PROPOSED WHICH WILL AFFECT OR VIOLATE THE INTERNATIONAL AGREEMENT CONCERNED, THE PREPARING ACTIVITY WILL TAKE APPROPRIATE RECONCILIATION ACTION THROUGH INTERNATIONAL STANDARDIZATION CHANNELS, INCLUDING DEPARTMENTAL STANDARDIZATION OFFICES, IF REQUIRED.
8. TITANIUM NOT RECOMMENDED FOR USE IN OXYGEN SYSTEMS.
9. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
10. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

User activities:
 NAVY - GS
 ARMY - GL, CR, ME, AT

User activities:

USAF - 11
 ARMY - AR, M1
 DLA - CS

Review activities:

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APPROVED 4 Oct 51 REVISED 1 FOR CHANGES SEE SHEET 1

P.A. Navy-AS Other Crest	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
USAF-99 Army-AV	SEE NOTE 7	ELBOW, BULKHEAD UNIVERSAL 90°, FLARELESS TUBE	MS21908
PROCUREMENT SPECIFICATION MIL-F-18280	SUPERSEDES:		SHEET 2 OF 2