This military standard is approved by the Department of Defense and is mandatory for all activities. It shall be used for all new engineering and design applications and for replacement parts. No deviation shall be made from this document.

Review activities: NAVY - AS, USAF - 82

User activities

P.A. 82

Other Coast Navy - AS, USAF - 82

PROCUREMENT SPECIFICATION: NONE

SUPERSEDES: AN782

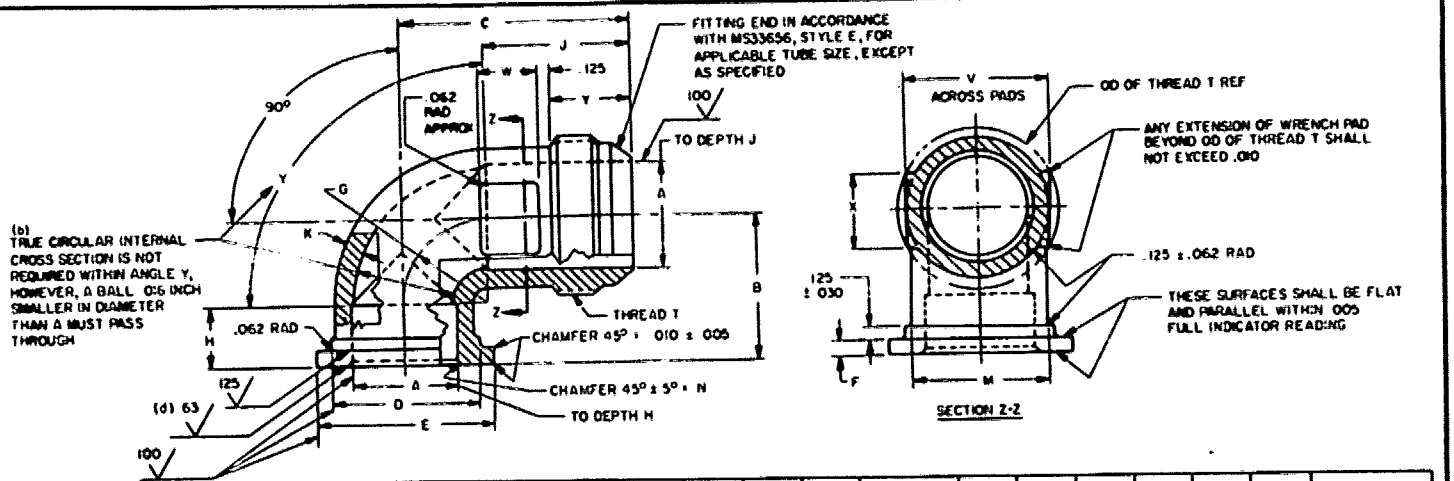
TITLE: ELBOW, FLARED TUBE, FLANGED, SWIVEL, 90°

DD FORM 672-1 (coordination) EDITION OF 1 SEP 63 IS OBSOLETE

MILITARY STANDARD

MS20762

SHEET 1 OF 1



DASH NO STEEL	DASH NO AL ALLOY	TUBING OD	THREAD T REF	(c) A ±.003 DIA	B -.047 -.000	C +.047 -.000	(c) D +.000 -.005 DIA	(c) E +.000 -.005 DIA	F -.000 -.005	G RAD REF	H -.047 -.000	J +.047 -.000	K MIN	K MAX	M ±.015 DIA	N DIA	V ±.015	W APPROX	X APPROX	Y ±.015	WEIGHT MAX AL ALLOY	WEIGHT MAX STEEL
-12	-012	750	1-1/16-12UN-3A	.609	1 156	1 938	938	1 250	156	594	562	1 344	125	.184	.922	.669	.891	500	.562	724	12	34
-12-16	-012-16					2.000		1 500		719		1 406									15	42
-16	-016	1.000	1-5/16-12UN-3A	.844	1 281	2 125	1 188						141	176	1 172	904	1 156	562	625	771	18	50
-20	-020	1 250	1-5/8-12N-3A	1 078	1 500	2 375	1 500	1.844		875	625	1 900	156	221	1 484	1 130	1 438	625	750	818	32	90
-20-24	-020-24				1 562	2 562		2 125		1 000	688	1 688	172	234	1 734	1 372	1 710	688		943	36	1.00
-24	-024	1 500	1-7/0-12N-3A	1 312	1 688	2 688	1 750		188	1.312	750	2.062	203	322	2 359	1 841	2 250	.750	.938	1.193	45	1 26
-32	-032	2 000	2-1/2-12UN-3A	1 781	2 062	3.375	2 375	2 750		1.562	812	1.938	234	333	2 859	2.341	2 812	.875	1.000	969	1 02	2.66
(e)-40	-040	2.500	3-12UN-3A	2 281	2 375	3.500	2 875	3 281		1 812		2.062	290	344	3 359	2.841	3.344	1.000		1.047	1 37	3.84
(e)-48	-048	3.000	3-1/2-12UN-3A	2 781	2 625	3 875	3.375	3 781													1 62	5 10

(a) NOT TO BE USED UNLESS APPROVED BY PROCURING ACTIVITY
(b) INTERNAL FLOW PASSAGE AROUND BEND SHALL BE SMOOTH AND FREE FROM PROJECTIONS
(c) DIAMETERS A, D, AND E SHALL BE CONCENTRIC WITH EACH OTHER WITHIN .010 FULL INDICATOR READING.
(d) ANNULAR TOOL MARKS UP TO 63 RHR MAXIMUM WILL BE ALLOWED.
REDUCTION BY FORGING DRAFT ANGLE OF 7° MAXIMUM IS PERMISSIBLE.
POROSITY TEST. FINISHED CASTINGS SHALL NOT LEAK WHEN SUBJECTED TO 100-PSI AIR PRESSURE AND SUBMERGED IN WATER FOR 3 MINUTES MINIMUM.
FOR TUBE SIZES THRU 1 INCH. MAXIMUM OPERATING TEMPERATURE 275° F, MAXIMUM PRESSURE 1500 PSI.
FOR TUBE SIZES EXCEEDING 1 INCH: MAXIMUM OPERATING TEMPERATURE 275° F, MAXIMUM PRESSURE 500 PSI
MATERIAL: ALUMINUM-ALLOY FORGING, QQ-A-367 (2014), CLASS 5 OR 1. OPTIONAL MATERIAL: PERMANENT MOLD ALUMINUM ALLOY CASTING, QQ-A-596 OR ALUMINUM ALLOY BAR STOCK, QQ-A-225/6 (2024)
STEEL FORGING, QQ-S-637 (1137) OR (1141).
UNLESS OTHERWISE SPECIFIED, SURFACE ROUGHNESS SHALL NOT EXCEED 100 MICROINCHES RHR. SEE USASI B 46.1
FINISH: ALUMINUM-ALLOY, ANODIZE, MIL-A-8625, TYPE 2, DYE LIGHT BLUE
STEEL, CADMIUM PLATE, QQ-P-416, TYPE 2, CLASS 3, DYE BLACK.
FITTINGS SHALL BE PERMANENTLY MARKED WITH MS PART NO. ON AN UNFINISHED SURFACE.
FOR NOMINAL USE ON FUEL AND OIL SYSTEMS.
BREAK ALL SHARP EDGES AND REMOVE ALL HANGING BURRS AND SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE.
DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED, TOLERANCES DECIMALS ± .005, ANGLES ± 1/2°.
THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

(A) CENTIRE STANDARD REVISED

FED. SUP CLASS 4730

APPROVED 9 Aug 57 REVISED (A) 11 DEC 70

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