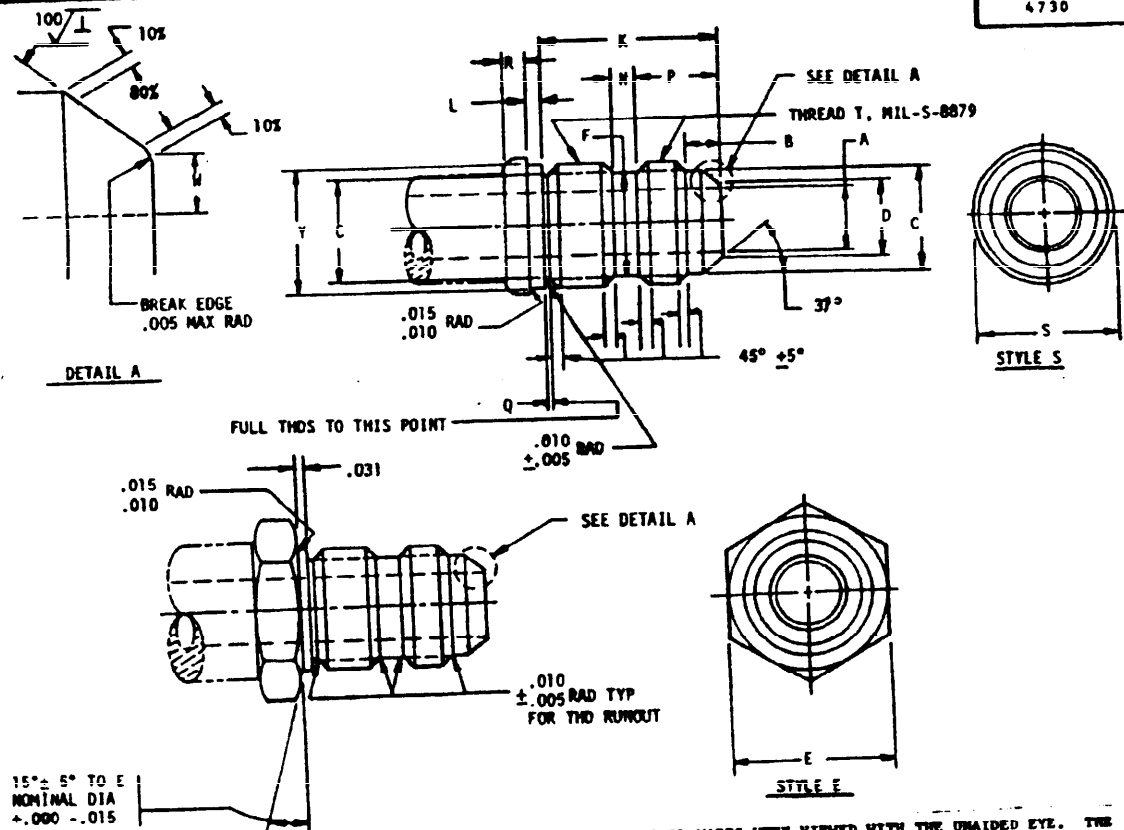


USER ACTIVITIES ARMY-ME

REVIEWER ACTIVITIES DLA-CS  
ARMY-MI

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THE CONICAL SEAL SURFACE SHALL BE FREE OF FLAWS, NICKS AND CHATTER MARKS WHEN VIEWED WITH THE UNAIDED EYE. THE CENTER BOX OF THE CONICAL SURFACE (SEE DETAIL A) SHALL ALSO HAVE NO LOW SPOTS AND SHALL HAVE AN UNBROKEN LINE OF CONTACT TO SHOW ALL AROUND WHEN ROTATED IN CONTACT  $74^{\circ} 0' \pm 1'$  INCLUDED ANGLE GAGE LIGHTLY COATED BY RUBBING WITH CARBON PAPER OR BY AN EQUIVALENT BLUING METHOD.

L AS LISTED PROVIDES FOR A WASHER TO FORM BACKING FACE AGAINST BULKHEAD PLUS  $1/32$  LAND FOR POSITIONING IN BULKHEAD. WHEN DESIGN OF FITTING INCLUDES A HEX OR FACE EQUAL TO OR GREATER THAN E, NO WASHER IS REQUIRED AND THIS DIMENSION WILL BE .031 AS IN STYLE E.

F SHALL BE 100AA MAX, FREE FROM BURRS, HAVING NO LONGITUDINAL OR SPIRAL TOOL MARKS. ANNULAR TOOL MARKS PERMISSIBLE TO 32AA MAX. TOLERANCE ON F MAY BE  $\pm .002$  TO  $\pm .003$  PROVIDED NO THREAD MARKS ARE PRESENT.

SQUARENESS BETWEEN THREAD T (PITCH DIA) AND FACE OF HEX (STYLE E) OR BACKING FACE (STYLE S) SHALL BE WITHIN H.

EXAMPLE OF DESIGN IDENTIFICATION NUMBER: MS33657E8

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SIZE OF FITTING END IN 16THS.  
E = STYLE E  
S = STYLE S  
BASIC DESIGN NUMBER

BREAK ALL SHARP EDGES AND REMOVE ALL HANGING BURRS AND SLIVERS.

DIMENSIONS IN INCHES, UNLESS OTHERWISE SPECIFIED, TOLERANCES:  
ANGLES  $\pm 1/2^{\circ}$  DECIMALS  $\pm .016$ .

DIMENSIONS D, C, F AND T (PITCH DIA) SHALL BE CONCENTRIC TO EACH OTHER AND WITH THE  $37^{\circ}$  ANGLE, MEASURED AND CALCULATED AS AN INCLUDED ANGLE, WITHIN .005 TOTAL INDICATOR READING. OTHER DIAMETERS SHALL BE CONCENTRIC WITHIN .010 TIR.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS.

SURFACE ROUGHNESS IN ACCORDANCE WITH ANSI B46.1.

REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

FITTINGS WITH MIL-S-7742 THREADS OF THE SAME SIZE, PITCH AND TOLERANCE CLASS MAY BE USED UNTIL STOCKS ARE EXHAUSTED, BUT ARE NOT TO BE SUPPLIED AFTER 1 JAN 1976.

FOR CHANGE SEE SHEET 1.

THIS IS A DESIGN STANDARD. NOT TO BE USED AS A PART NUMBER.

P. A. AIR FORCE - R2 Other Cost ARMY - AR NAVY - AS AIR FORCE - 99		INTERNATIONAL INTEREST	TITLE FITTING END, STANDARD DIMENSIONS FOR BULKHEAD FLARED TUBE CONNECTION.	MILITARY STANDARD <b>MS 33657</b>
PROCUREMENT SPECIFICATION NONE		SUPERSEDES AND10057	SHEET 1 OF 2	

DD FORM 672-1 (COORDINATED)  
1 MAY 75

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

4 20-0207

APPROVED 15 MAY 57  
REVISED E 11 OCT 74 F 15 MAY 75 G 10 MAR 85

User activities: ARMY-ME

Review activities: DIA-CS  
ARMY-MI

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TABLE I DIMENSIONS

SIZE TUBING NO	THREAD T MIL-S-8879	A DIA	B +.015 -.000	C +.000 -.005	D +.003 DIA	E	F +.000 -.003 DIA	H MAX	K	L	N +.010 -.000	P +.005 -.000	Q +.015 -.000	R	S DIA	U MIN	Y MAX
2	1/8 5/16-24 UNJF-3A	.062	.177	.245	.083	.563	.250	.922			.125	.385	.063	.109	.438		.3125
3	3/16 3/8-24 UNJF-3A	.125		.307	.146	.625	.312				.131				.500		.3750
4	1/4 7/16-20 UNJF-3A	.172		.359	.193	.688	.364	1.016	.094		.140	.443	.075	.125	.562	.005	.4375
5	5/16 1/2-20 UNJF-3A	.234	.193	.421	.255	.750	.426				.156	.476	.083	.141	.625		.5000
6	3/8 9/16-18 UNJF-3A	.297	.198	.476	.318	.813	.481	.005	1.094		.187	.565	.094	.156	.688		.5625
8	1/2 3/4-16 UNJF-3A	.391	.253	.654	.426	1.000	.660		1.250		.219	.623	.107	.172	.875	.012	.7500
10	5/8 7/8-14 UNJF-3A	.484	.266	.767	.539	1.125	.771		1.391						1.000	.022	.8750
12	3/4 1-1/16-12 UNJ-3A	.609		.938	.664	1.375	.945		1.562			.732			1.188		1.0625
16	1 1-5/16-12 UNJ-3A	.844	.315	1.188	.913	1.625	1.195								1.438	.029	1.3125
20	1-1/4 1-5/8-12 UNJ-3A	1.078	.367	1.501	1.147	1.875	1.507	.125	1.609			.784	.125		1.750		1.6250
24	1-1/2 1-7/8-12 UNJ-3A	1.312	.378	1.750	1.381	2.125	1.756	.008	1.625		.234	.795		.188	2.000		1.8750
28	1-3/4 2-1/4-12 UNJ-3A	1.547	.451	2.125	1.646	2.500	2.131		1.781			.868			2.375		2.2500
32	2 2-1/2-12 UNJ-3A	1.781	.461	2.375	1.880	2.750	2.301		1.906			.878			2.625	.044	2.5000
40	2-1/2 3-12 UNJ-3A	2.281	.395	2.882	2.380	3.250	2.881		1.719			.895			3.125		3.0000
48	3 3-1/2-12 UNJ-3A	2.781		3.382	2.880	3.750	3.331		1.812			.978			3.625		3.5000

FED. SUP CLASS  
4730

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P.A. AIR FORCE- 82

Other Code

ARMY-AR  
NAVY-AS  
AIR FORCE-99PROCUREMENT SPECIFICATION  
NONE

TITLE

FITTING END, STANDARD DIMENSIONS FOR BULKHEAD FLARED  
TUBE CONNECTION

SUPERSEDES:

AND10057

MILITARY STANDARD

MS33657

SHEET

2

OF

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(G) FOR CHANGE SEE SHEET I.

APPROVED 15 MAY 57 REVISED