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REV.
F

AS1300™

FEDERAL SUPPLY CLASS
4730

RATIONALE

CORRECT TYPO FOR COUNTERSINK FINISH IN FIGURE 2, VIEW Z. COMPANY NAME CHANGE IN NOTE 4.

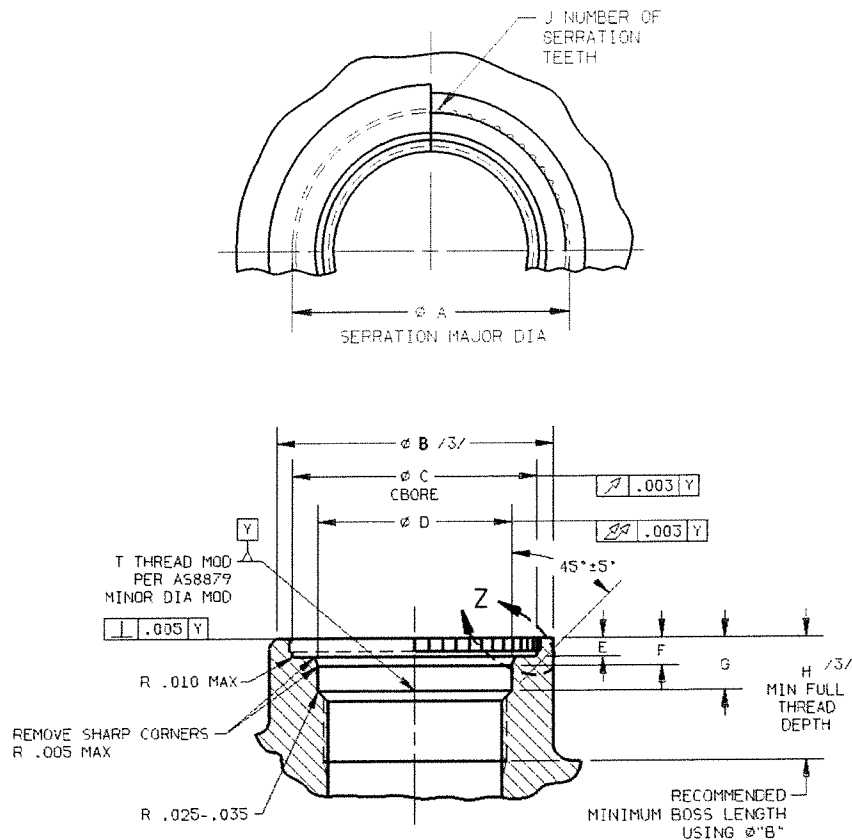


FIGURE 1

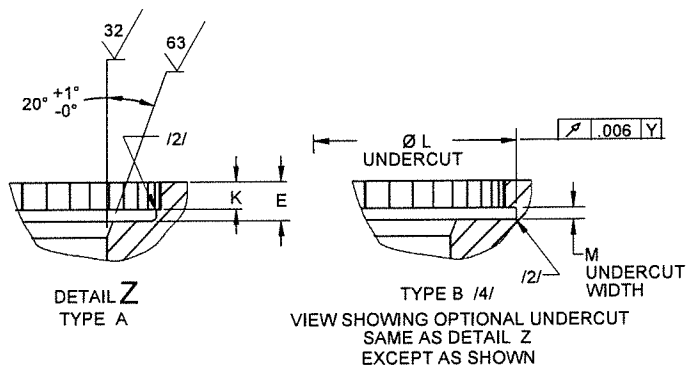
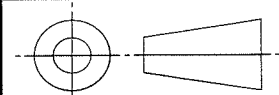


FIGURE 2

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AS1300F>

THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3B

PROCUREMENT SPECIFICATION: NONE



AEROSPACE STANDARD

PORT - RING LOCKED FLUID
CONNECTION TYPE
STANDARD DIMENSIONS FOR

AS1300™
SHEET 1 OF 3

REV.
F

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ISSUED 1975-08 REAFFIRMED 2014-10 REVISED 2019-03

TABLE 1A - THREADS AND DIMENSIONS A-E


BASIC NO. AS1300 /12/ SIZE CODE	(TUBE OD)	T THREAD		A MIN	B MIN	C	D	E
		AS8879 CLASS-3B	MINOR DIA MOD					
02	.125	.2160-28UNJF	.1827- .1857	.408	.50	.381- .384	.254- .256	.093
03	.188	.2500-28UNJF	.2167- .2197	.478	.62	.448- .451	.286- .288	.093
04	.250	.3125-24UNJF	.2734- .2764	.524	.68	.495- .498	.339- .341	.093
05	.312	.3750-24UNJF	.3359- .3389	.635	.79	.601- .604	.401- .403	.093
06	.375	.4375-20UNJF	.3903- .3933	.710	.85	.675- .678	.464- .466	.108
08	.500	.5625-18UNJF	.5099- .5129	.826	1.04	.784- .787	.582- .584	.108
10	.625	.6875-24UNJEF	.6484- .6514	1.052	1.17	1.015-1.018	.725- .727	.108
12	.750	.8125-20UNJEF	.7653- .7683	1.182	1.42	1.139-1.142	.899- .901	.108
14	.875	.9375-20UNJEF	.8903- .8933	1.354	1.54	1.311-1.314	1.030-1.032	.108
16	1.000	1.1250-18UNJEF	1.0714-1.0744	1.471	1.67	1.427-1.430	1.162-1.164	.108
20	1.250	1.3125-18UNJEF	1.2599-1.2629	1.795	1.98	1.750-1.753	1.387-1.389	.135
24	1.500	1.6250-18UNJEF	1.5724-1.5754	2.045	2.23	2.000-2.005	1.664-1.666	.135
32	2.000	2.1250-16UNJ	2.0627-2.0657	2.561	2.86	2.516-2.521	2.202-2.204	.135

TABLE 1B - DIMENSIONS F-M AND TOOLING

BASIC NO. AS1300 /12/ SIZE CODE	F	G	H	J	K MIN	L	M REF	TOOLING /4/		
								PORTING TOOL NO.	BROACHING TOOL NO.	CHIP REMOVAL TOOL
02	.153-.158	.296-.301	.507	24	.061	.418	.032	RPT02	RFOPB5002HDB	RF02CR
03	.153-.158	.296-.301	.568	26	.061	.488	.032	RPT03	RFOPB5003HDB	RF03CR
04	.153-.158	.296-.301	.568	30	.061	.534	.032	RPT04	RFOPB5004HDB	RF04CR
05	.153-.158	.296-.301	.594	36	.061	.645	.032	RPT05	RFOPB5005HDB	RF05CR
06	.168-.173	.311-.316	.631	36	.073	.720	.035	RPT06	RFOPB5006HDB	RF06CR
08	.168-.173	.311-.316	.672	40	.073	.831	.035	RPT08	RFOPB5008HDB	RF08CR
10	.168-.173	.311-.316	.693	38	.073	1.062	.035	RPT10	RFOPB5010HDB	RF10CR
12	.168-.173	.343-.348	.763	40	.073	1.192	.035	RPT12	RFOPB5012HDB	RF12CR
14	.168-.173	.343-.348	.800	50	.073	1.364	.035	RPT14	RFOPB5014HDB	RF14CR
16	.168-.173	.343-.348	.806	36	.073	1.481	.035	RPT16	RFOPB5016HDB	RF16CR
20	.195-.200	.375-.380	.838	56	.093	1.805	.042	RPT20	RFOPB5020HDB	RF20CR
24	.195-.200	.375-.380	.877	81	.093	2.055	.042	RPT24	RFOPB5024HDB	RF24CR
32	.236-.241	.416-.421	1.050	102	.093	2.571	.042	RPT32	RFOPB5032HDB	RF32CR

NOTES:

1. THE DRILL AND PORTING TOOL METHOD OF PREPARING THE MACHINED CAVITY IS MANDATORY FOR USE WITH RING-LOCKED FITTING INSTALLED IN ACCORDANCE WITH AS1301. DRILL .015 TO .030 SMALLER THAN MINOR DIA MODIFIED SPECIFIED. THE PORTING TOOL WILL SIZE THE MINOR DIA AND PROVIDE BALANCE OF CAVITY CONFIGURATION READY FOR BROACHING SERRATION.
- /2/ AFTER SERRATIONS ARE BROACHED DIMENSION 'E' APPLIES, CHIP AND DEFORMED MATERIAL REMOVAL IS REQUIRED. THE CHIP REMOVAL TOOL MAY NOT BE REQUIRED FOR TYPE B UNDERCUT PORT FITTING GEOMETRY.

	AEROSPACE STANDARD		AS1300™ SHEET 2 OF 3	REV. F
	PORT - RING LOCKED FLUID CONNECTION TYPE STANDARD DIMENSIONS FOR			

- /3/ FOR PORT DESIGNS THAT INCORPORATE A BOSS FEATURE, THE MINIMUM BOSS DIAMETER 'B' AND BOSS LENGTH 'H' ARE RECOMMENDED. THE MINIMUM BOSS FEATURES ARE TO SUPPORT THE AS1301 FITTING INSTALLATION TORQUE AND COUPLING NUT TORQUE. THE MINIMUM BOSS CONFIGURATION IS SATISFACTORY FOR USE IN MATERIALS THAT EXHIBIT MINIMUM SHEAR STRENGTHS OF 26 KSI AND ELONGATION GREATER THAN 2%. STRESS ANALYSIS OR INTERFACE LOAD VERIFICATION TESTING OF THE PORT BOSS AT THE "LEAST MATERIAL CONDITION" (LMC) IS RECOMMENDED TO ENSURE THE PERFORMANCE OF THE FITTING ASSEMBLY IN EQUIPMENT OR COMPONENT DESIGN (REFER TO AS18280, AS5000, AS85720, AND QUALIFICATION TESTING). SPECIAL ATTENTION IS REQUIRED FOR SOME LOW DUCTILITY, LOW STRENGTH BOSS MATERIALS (SUCH AS ALUMINUM) AS BOSSES MAY DEVELOP UNACCEPTABLE EXTERNAL BOSS CRACKS DURING FITTING INSTALLATION. A GUIDELINE FOR BOSSES WITH SHEAR STRENGTH LESS THAN 26 KSI IS TO INCREASE THE MINIMUM BOSS DIAMETER 'B' BY 15%.
- /4/ USE OF PORTING TOOL, BROACH TOOL, AND OPTIONAL CHIP REMOVAL TOOL SPECIFIED WILL GENERATE THE PORT CONFIGURATION. ALTERNATIVE TOOLS THAT CONFORM TO THE PORT DIMENSIONS AND THE PORT CONFIGURATION MAY BE USED. THE TOOLS SPECIFIED IN TABLE 1B ARE AVAILABLE FROM ARCONIC FASTENING SYSTEMS, FULLERTON, CA - CAGE CODE 66776; OR EQUIVALENT ALTERNATE SOURCES (FABER ENTERPRISES, CANOGA PARK, CA - CAGE CODE 14397; AND MCKINNON INDUSTRIES, A SHUR-LOK COMPANY, IRVINE, CA - CAGE CODE 65085).
5. INTERPRETATION OF DRAWING PER AS4296.
6. REVISION INDICATOR: A CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.
7. SURFACE TEXTURE: SYMBOLS PER ASME Y14.36M. REQUIREMENTS PER ASME B46.1. UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 MICROINCHES Ra AND SEALING SURFACE TO BE 63 MICROINCHES Ra.
8. BREAK EDGES .003 TO .015, UNLESS OTHERWISE SPECIFIED.
9. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.
10. DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS ± 0.005 , ANGULAR DIMENSIONS $\pm 1^\circ$.

/11/ EXAMPLE OF DRAWING CALLOUT:

a. TABULATED PART DRAWING: PORT RING-LOCKED DESIGN STANDARD PER AS1300.

b. INDIVIDUAL PORT DRAWING: AS1300-02 B

BASIC PORT-RING LOCKED
DESIGN STANDARD NUMBER

CHIP REMOVAL UNDERCUT
SEE DETAIL Z
IF NO "TYPE" IS DESIGNATED ON THE EQUIPMENT OR
COMPONENT SPECIFICATION OR DRAWING, THEN EITHER
TYPE-A OR TYPE-B MAY BE SUPPLIED.

SIZE CODE TUBE SIZE IN INCHES.

	AEROSPACE STANDARD		AS1300™ SHEET 3 OF 3	REV. F
	PORT - RING LOCKED FLUID CONNECTION TYPE STANDARD DIMENSIONS FOR			