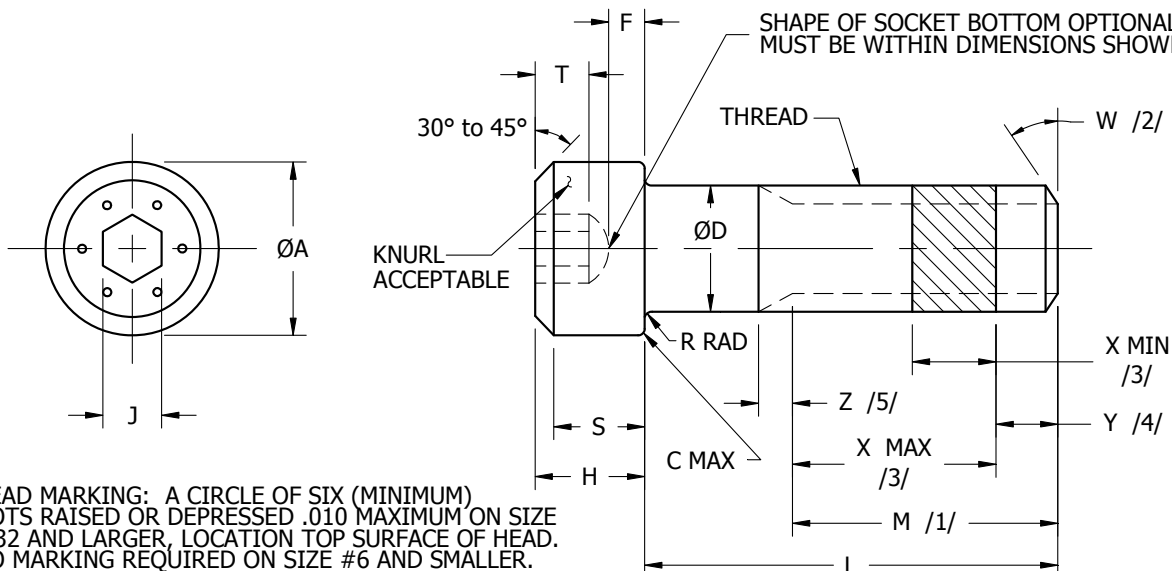


FED. SUPPLY CLASS

5305



HEAD MARKING: A CIRCLE OF SIX (MINIMUM) DOTS RAISED OR DEPRESSED .010 MAXIMUM ON SIZE 8-32 AND LARGER, LOCATION TOP SURFACE OF HEAD. NO MARKING REQUIRED ON SIZE #6 AND SMALLER.

TABLE I – DIMENSIONS

THREAD /6/	ØD BODY	ØA HEAD	H HEAD HEIGHT	F HOLE DEPTH LIMIT	S HEAD SIDE HEIGHT	J SOCKET WIDTH ACROSS FLATS MAX MIN	T KEY DEPTH	C RADIUS OR CHAMFER	R RADIUS	M THREAD LENGTH /7/	X	ULTIMATE TENSILE STRENGTH LBF (W _{tu}) /8/ MIN
②	MAX MIN	MAX MIN	MAX MIN	MIN	MIN	MAX MIN	MIN	MAX	MAX MIN	MIN	MIN	
.1120-40 UNC-3A	.1120 .1075	.183 .176	.112 .108	.009	.101	.0952 .0937	.051	.005	.009 .005	.750	.125	480
.1380-32 UNC-3A	.1380 .1329	.226 .218	.138 .134	.013	.124	.1111 .1094	.064	.005	.010 .006	.750	.156	720
.1640-32 UNC-3A	.1640 .1585	.270 .262	.164 .159	.011	.148	.1426 .1406	.077	.005	.012 .007	.875	.156	1,120
.1900-32 UNF-3A	.1900 .1840	.312 .303	.190 .185	.016	.171	.1587 .1562	.090	.005	.014 .009	.875	.156	1,600
.2500-28 UNF-3A	.2500 .2435	.375 .365	.250 .244	.026	.225	.1900 .1875	.120	.008	.014 .009	1.000	.178	2,910
.3125-24 UNF-3A	.3125 .3053	.468 .457	.312 .306	.027	.281	.2530 .2500	.151	.008	.017 .012	1.125	.208	4,640
.3750-24 UNF-3A	.3750 .3678	.562 .550	.375 .368	.029	.337	.3160 .3125	.182	.008	.020 .015	1.250	.208	7,020
.4375-20 UNF-3A	.4375 .4294	.656 .642	.437 .430	.031	.394	.3790 .3750	.213	.010	.023 .018	1.375	.250	9,490
.5000-20 UNF-3A	.5000 .4919	.750 .735	.500 .492	.051	.450	.3790 .3750	.245	.010	.026 .020	1.500	.250	12,790
.6250-18 UNF-3A	.6250 .6163	.937 .921	.625 .616	.055	.562	.5050 .5000	.307	.010	.032 .024	1.750	.278	19,200

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS21295, REVISION A. PART NUMBERS REMAIN MS21295.

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 2
PROCUREMENT SPECIFICATION FF-S-86 & MIL-DTL-18240	TITLE SCREWS, SELF LOCKING, 250 °F, CYLINDRICAL HEAD, HEXAGONAL WRENCHING SOCKET, CRES, 80 KSI F_{tu}, (SOCKET HEAD CAP SCREWS)	CLASSIFICATION PART STANDARD MS21295

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MATERIAL:

CRES – PER PROCUREMENT SPECIFICATION FF-S-86. (2)

FINISH:

PASSIVATED PER PROCUREMENT SPECIFICATION.

EXAMPLE OF PART NUMBER:

(2) MS21295-56 = .2500-28 SCREW, 1 INCH LONG.

NOTES:

- /1/ "M" REPRESENTS THREAD LENGTH. THE LENGTH OF THE SCREW THREAD IS MEASURED FROM THE EXTREME POINT TO THE LAST COMPLETE THREAD PITCH.
- /2/ "W" REPRESENTS SCREW POINT CHAMFER. THE POINT SHALL BE FLAT AND CHAMFERED. THE FLAT SHALL BE NORMAL TO THE AXIS OF THE SCREW AND THE CHAMFER "W" SHALL BE AT AN ANGLE 35° +10°/-0° WITH THE PLANE OF THE FLAT. THE CHAMFER SHALL EXTEND SLIGHTLY BELOW THE ROOT OF THE THREAD, AND THE EDGE BETWEEN FLAT AND CHAMFER SHALL BE SLIGHTLY ROUNDED.
- /3/ "X_{min}" REPRESENTS THE MINIMUM LENGTH OF EXTERNAL THREADS REQUIRED FOR ENGAGEMENT WITH COMPLETE INTERNAL THREAD PITCHES. THE ELEMENT SHALL ENGAGE WITHIN THIS MINIMUM LENGTH AND MEET REQUIREMENTS OF MIL-DTL-18240. "X_{min}" IS EQUAL TO 5 THREAD PITCHES. "X_{max}" EQUALS THE LENGTH OF COMPLETE THREAD BETWEEN "Y" AND "Z".
- /4/ "Y" MINIMUM SHALL HAVE AT LEAST ONE PITCH OF COMPLETE THREAD. Y MAXIMUM EQUALS 2 PITCHES OF COMPLETE THREAD PLUS 2 PITCHES WHICH INCLUDES THE INCOMPLETE THREAD AND CHAMFER. THE LOCKING ELEMENT SHALL NOT BE EFFECTIVE WITHIN THE AREA OF "Y" MINIMUM.
- /5/ "Z" EQUALS INCOMPLETE THREAD AND/OR EXTRUSION ANGLE PERMISSIBLE UP TO 2 THREAD PITCHES LENGTH MAXIMUM. THE ELEMENT OR ANY MACHINE HOLES OR GROOVES FOR THE ELEMENT SHALL NOT PENETRATE THIS AREA.
- /6/ THREADS SHALL BE FULLY FORMED BY ANY SINGLE ROLLING PROCESS AND IN ACCORDANCE WITH SPECIFICATION MIL-S-7742.
- /7/ ON SHORT SCREWS THE COMPLETE (FULL FORMED) THREADS SHALL EXTEND TO WITHIN TWO THREAD PITCH LENGTHS OF THE HEAD.
- /8/ BASED ON 80 KSI ULTIMATE TENSILE STRENGTH, AND STRESS AREA = $3.1418 ("E"/2 - 3"H"/16)^2$. SEE FED-STD-H28/1.
- (9) SURFACE ROUGHNESS: SURFACE OF THE SHANK, FILLET AND BEARING AREA: 125 MICROINCHES Ra PER ASME B46.1.
- (10) LOCKING ELEMENT: IN ACCORDANCE WITH MIL-DTL-18240. (LOCKING ELEMENT AREA MUST PASS THRU A PLAIN RING GAGE, EQUAL TO THE MAXIMUM MAJOR THREAD DIAMETER +.010, FREELY OR WITH FINGER PRESSURE.
- (11) MAGNETIC PERMEABILITY SHALL BE LESS THAN 2.0 (AIR = 1.0) FOR A FIELD STRENGTH H = 200 OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR PER ASTM A342/A342M, TEST METHOD 3.

REVISION

2

Documents

SHEET 2



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