



SEE REQT 5

OPTIONAL DESIGN

TABLE I DIMENSIONS AND PART NUMBERS.

| | | | |
|--|------------|----------------|----------------|
| NOMINAL SIZE - - - - - | | .250 | .375 |
| B - THREADS PER INCH UNC-2A - - - - - | | 20 | 16 |
| Ø D - BODY DIAMETER - - - - - | MAX MIN | .2500 .2450 | .3750 .3690 |
| F - WIDTH ACROSS FLATS - - - - - | MAX MIN | .4375 .4260 | .5625 .5510 |
| G - WIDTH ACROSS CORNERS - - - - - | MAX MIN | .5050 .4880 | .6500 .6280 |
| H - HEAD HEIGHT - - - - - | MAX MIN | .1630 .1500 | .2430 .2260 |
| R - RADIUS - - - - - | MAX MIN | .0250 .0150 | .0250 .0150 |
| ¹ /MINIMUM TENSILE LOAD - LBS - - - - - | | 4,750 | 11,600 |
| L - LENGTH - - - - - | | DASH NO | DASH NO |
| .625 +.000 -.031 | | 1 | 3 |
| 1.000 +.000 -.062 | | 2 | 4 |

USER ACTIVITIES
ARMY - M
NAVY - MC, OS

REVIEWER ACTIVITIES
ARMY - AV, EA
AIR FORCE
DLA - IS
NSA - NS

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

REVISED
APPROVED 1 AUG 84

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|--------------------------------------|----------------|------------------------|--|------------------------------|
| PA Other Cust | AR SH 99 | INTERNATIONAL INTEREST | TITLE SCREW, CAP HEXAGON HEAD (FINISHED HEXAGON BOLT), ALLOY STEEL, GRADE 8 | MILITARY STANDARD MS51488 |
| PROCUREMENT SPECIFICATION FF-S-85 | | SUPERSEDES | | PAGE 1 OF 2 |

USER ACTIVITIES
ARMY - MI
NAVY - MC, OS

REVIEWER ACTIVITIES
ARMY - AV, EA
AIR FORCE - 82
DLA - IS
NSA - NS

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REQUIREMENTS

1. MATERIAL. ALLOY STEEL, GRADE 8, IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
2. FINISH. ZINC COATING IN ACCORDANCE WITH ASTM B633-78, Fe/Zn5 (5 µm), TYPE II.
3. THREADS. THE THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/2. ACCEPTABILITY OF SCREW THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 21.
4. THREAD LENGTH. MINIMUM THREAD LENGTH SHALL BE TWICE THE DIAMETER PLUS .250 INCH. THE TOLERANCE SHALL BE PLUS 1/64 INCH OR 2-1/2 THREADS WHICHEVER IS GREATER. ON SCREWS THAT ARE TOO SHORT FOR MINIMUM THREAD LENGTHS, THE DISTANCE FROM THE BEARING SURFACE OF THE HEAD TO THE FIRST COMPLETE THREAD SHALL NOT EXCEED THE LENGTH OF 2-1/2 THREADS FOR SIZES UP TO AND INCLUDING 1.000 INCH.
5. HEAD MARKING. HEADS SHALL BE MARKED IN ACCORDANCE WITH MIL-HDEK-131. RAISED MARKINGS ARE PREFERRED, STAMPINGS ARE ACCEPTABLE.
6. BASED ON MINIMUM ULTIMATE TENSILE STRENGTH OF 150,000 PSI FOR DIAMETERS THRU 1/500 INCHES. TENSILE LOADS ARE CALCULATED BY THE STRESS AREAS INDICATED IN FED-STD-H28/2.
7. PART NUMBERS. THE BASIC MS PART NUMBER IS FOLLOWED BY A DASH NUMBER TAKEN FROM TABLE I.

EXAMPLE MS51488-1 - SCREW, CAP, HEXAGON HEAD, ALLOY STEEL, GRADE 8, .250-20 UNC-2A, LENGTH 625, ZINC COATED

NOTES

1. ALL DIMENSIONS ARE IN INCHES.
2. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS OR REQUESTS FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
3. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

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|--------------------------------------|----------|---------------------------|--|-------------------|--|
| PA Other Cost | AR | INTERNATIONAL INTEREST | TITLE SCREW, CAP HEXAGON HEAD (FINISHED HEXAGON BOLT), | MILITARY STANDARD | |
| | SH 99 | | | MS51488 | |
| PROCUREMENT SPECIFICATION FF-S-85 | | SUPERSEDES | PAGE 2 OF 2 | | |