

User: ARMY

Review activities: ARMY-AV,EA  
DLA-1S

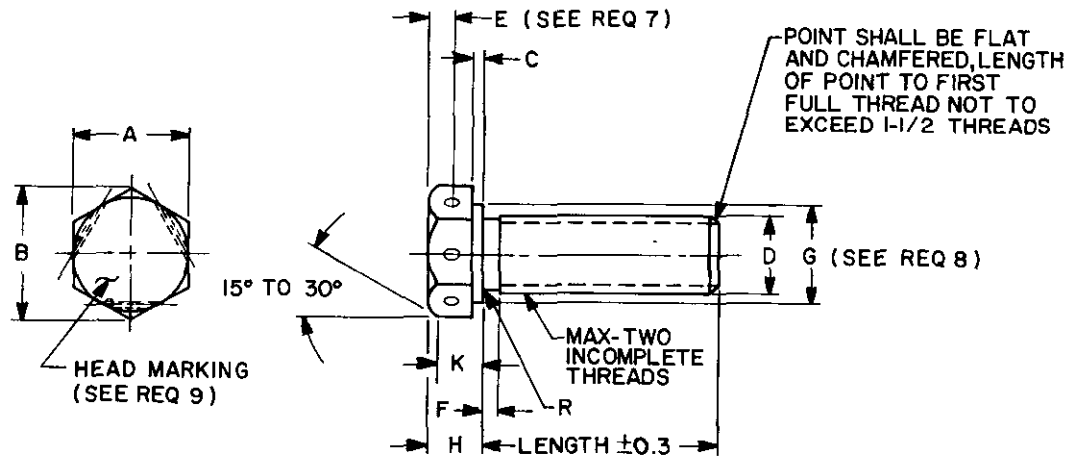


TABLE I. DIMENSIONS.

| NOMINAL<br>SCREW<br>DIA AND<br>THD PITCH<br>D | WIDTH ACROSS<br>FLATS<br>A |       | WIDTH ACROSS<br>CORNERS<br>B |       | WASHER FACE<br>THICKNESS<br>C |     | FILLET<br>LENGTH<br>E | WASHER<br>FACE<br>DIA<br>G |       | HEAD<br>HEIGHT<br>H |     | RADIUS<br>OF<br>FILLET<br>R | WRENCH-<br>ING<br>HEIGHT<br>K |
|---|----------------------------|-------|------------------------------|-------|-------------------------------|-----|-----------------------|----------------------------|-------|---------------------|-----|-----------------------------|-------------------------------|
|   | MAX                        | MIN   | MAX                          | MIN   | MAX                           | MIN | MAX                   | MIN                        | MAX   | MIN                 | MIN | MIN                         |                               |
| M3X0.5  | 5.50                       | 5.32  | 6.35                         | 6.07  | 0.4                           | 0.2 | 1.0                   | 4.6                        | 2.12  | 1.88                | 0.1 | 1.3                         |                               |
| M4X0.7  | 7.00                       | 6.78  | 8.08                         | 7.66  | 0.4                           | 0.2 | 1.2                   | 5.9                        | 2.92  | 2.68                | 0.2 | 1.9                         |                               |
| M5X0.8  | 8.00                       | 7.78  | 9.24                         | 8.79  | 0.5                           | 0.2 | 1.2                   | 6.9                        | 3.65  | 3.35                | 0.2 | 2.4                         |                               |
| M6X1  | 10.00                      | 9.78  | 11.55                        | 11.05 | 0.5                           | 0.2 | 1.4                   | 8.9                        | 4.15  | 3.85                | 0.3 | 2.8                         |                               |
| M8X1.25                                       | 13.00                      | 12.73 | 15.01                        | 14.38 | 0.6                           | 0.3 | 2.0                   | 11.6                       | 5.50  | 5.10                | 0.4 | 3.7                         |                               |
| M10X1.5                                       | 16.00                      | 15.73 | 18.48                        | 17.77 | 0.6                           | 0.3 | 2.0                   | 14.6                       | 6.63  | 6.17                | 0.4 | 4.5                         |                               |
| M12X1.75                                      | 18.00                      | 17.73 | 20.78                        | 20.03 | 0.6                           | 0.3 | 3.0                   | 16.6                       | 7.76  | 7.24                | 0.6 | 5.2                         |                               |
| M16X2   | 24.00                      | 23.67 | 27.71                        | 26.75 | 0.8                           | 0.4 | 3.0                   | 22.5                       | 10.32 | 9.68                | 0.6 | 7.0                         |                               |
| M20X2.5                                       | 30.00                      | 29.16 | 34.64                        | 32.95 | 0.8                           | 0.4 | 4.0                   | 28.2                       | 12.88 | 12.12               | 0.8 | 8.8                         |                               |
| M24X3   | 36.00                      | 35.00 | 41.57                        | 39.55 | 0.8                           | 0.4 | 4.0                   | 33.6                       | 15.44 | 14.56               | 0.8 | 10.5                        |                               |
| M30X3.5                                       | 46.00                      | 45.00 | 53.12                        | 50.85 | 0.8                           | 0.4 | 6.0                   | 42.7                       | 19.48 | 17.92               | 1.0 | 13.1                        |                               |
| M36X4   | 55.00                      | 53.80 | 63.51                        | 60.79 | 0.8                           | 0.4 | 6.0                   | 51.1                       | 23.38 | 21.62               | 1.0 | 15.8                        |                               |
| * M10X1.5                                     | 15.00                      | 14.73 | 17.32                        | 16.64 | 0.6                           | 0.3 | 2.0                   | 13.6                       | 6.63  | 6.17                | 0.4 | 4.5                         |                               |

\* SEE NOTE 2.

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METRIC

APPROVED 12 AUG 83 REVISED

|   |                           |   |                                  |
|---|---------------------------|---|----------------------------------|
| P. A. AR<br>Other Cust.                           | International<br>interest | TITLE<br><br>SCREW, CAP, HEX HEAD,<br>FULLY THREADED-METRIC | MILITARY STANDARD<br>DS51474(AR) |
| PROCUREMENT SPECIFICATION<br>ANSI B18.2.3.1M-1979 | SUPERSEDES:               | PAGE<br>1   | OF<br>3                          |

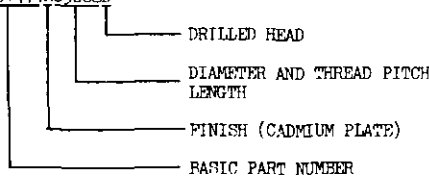
User activities:  
ARMY - ME

Review activities:  
ARMY - AV, EA  
DLA - IS

REQUIREMENTS:

1. MATERIAL. STEEL, PROPERTY CLASS 10.9, IN ACCORDANCE WITH ANSI B18.2.3.1M-1979.
2. FINISH. CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 3 (5.1 μm THICK).
3. THREADS. STANDARD COARSE FITCH M PROFILE TOLERANCE CLASS 6g, IN ACCORDANCE WITH FED-STD-H28/21. ACCEPTABILITY OF SCREW THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 21.
4. PART NUMBER. THE BASIC PART NUMBER IS FOLLOWED BY A FINISH CODE LETTER ("A" CADMIUM PLATE), FOLLOWED BY A FIVE DIGIT NUMBER TAKEN FROM TABLE II INDICATING DIAMETER AND THREAD PITCH AND LENGTH, FOLLOWED BY THE LETTER "D" IF A DRILLED HEAD IS REQUIRED, FOLLOWED BY THE LETTER "F" IF THE 15 mm WIDTH ACROSS FLATS IS REQUIRED FOR THE M10 DIAMETER SIZE.

EXAMPLE: DS51474A0500BD



DS51474A0500BD INDICATES SCREW, CAP, HEX HEAD, FULLY THREADED METRIC, M5X0.8 DIAMETER AND THREAD PITCH, 8 mm LENGTH, CADMIUM PLATED WITH DRILLED HEAD.

5. QUALITY ASSURANCE. QUALITY ASSURANCE PROVISIONS IN ACCORDANCE WITH PROCUREMENT SPECIFICATIONS.
6. PACKAGING. PACKAGING IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
7. 3 AND 4 mm DIAMETER SCREWS SHALL HAVE NO LOCKWIRE HOLES. "E" DIMENSION SHALL BE 1/2 OF "H" DIMENSION. WHEN SPECIFIED, DRILL HEAD HOLES AS FOLLOWS:  
 FOR 5 mm DIAMETER - DRILL THREE HOLES COUNTERSUNK 90° X 1 mm MINIMUM DIAMETER, WITHIN 0.3 mm OF CENTER OF HEX FLATS.  
 FOR 6 AND 8 mm DIAMETERS - DRILL THREE HOLES COUNTERSUNK 90° X 1.4 mm MINIMUM DIAMETER, WITHIN 0.3 mm OF CENTER OF HEX FLATS.  
 FOR 10 mm DIAMETER AND LARGER - DRILL THREE HOLES COUNTERSUNK 90° X 1.6 mm MINIMUM DIAMETER, WITHIN 0.3 mm OF CENTER OF HEX FLATS.
8. MAXIMUM DIAMETER OF WASHER FACE SHALL NOT EXCEED WIDTH ACROSS FLATS OF HEX HEAD OR BE LESS THAN THE "G" VALUES LISTED IN TABLE I.
9. HEAD MARKINGS. HEAD MARKINGS IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.

NOTES:

1. DIMENSIONS. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS.
2. THIS SIZE IS NOT AN ISO STANDARD. UNLESS M10 SCREWS WITH 15 mm WIDTH ACROSS FLATS ARE SPECIFICALLY ORDERED, M10 SCREWS WITH 16 mm WIDTH ACROSS FLATS SHALL BE FURNISHED.
3. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON THE DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
4. FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

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Use activities:  
ARMY - ME

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DLA - IS

TABLE II. DASH NUMBERS.

| LENGTH<br>+0.3 | NOMINAL SCREW DIAMETER AND THREAD PITCH |        |        |       |         |         |          |       |         |       |         |       |
|----------------|---|--------|--------|-------|---------|---------|----------|-------|---------|-------|---------|-------|
|                | M3X0.5                                  | M4X0.7 | M5X0.8 | M6X1  | M8X1.25 | M10X1.5 | M12X1.75 | M16X2 | M20X2.5 | M24X3 | M30X3.5 | M36X4 |
| 5              | 03005                                   |        |        |       |         |         |          |       |         |       |         |       |
| 6              | 03006                                   | 04006  |        |       |         |         |          |       |         |       |         |       |
| 8              | 03008                                   | 04008  | 05008  |       |         |         |          |       |         |       |         |       |
| 10             | 03010                                   | 04010  | 05010  | 06010 |         |         |          |       |         |       |         |       |
| 12             | 03012                                   | 04012  | 05012  | 06012 |         |         |          |       |         |       |         |       |
| 14             | 03014                                   | 04014  | 05014  | 06014 | 08014   |         |          |       |         |       |         |       |
| 16             | 03016                                   | 04016  | 05016  | 06016 | 08016   | 10016   |          |       |         |       |         |       |
| 20             | 03020                                   | 04020  | 05020  | 06020 | 08020   | 10020   | 12020    |       |         |       |         |       |
| 25             | 03025                                   | 04025  | 05025  | 06025 | 08025   | 10025   | 12025    | 16025 |         |       |         |       |
| 30             | 03030                                   | 04030  | 05030  | 06030 | 08030   | 10030   | 12030    | 16030 | 20030   |       |         |       |
| 35             |   | 04035  | 05035  | 06035 | 08035   | 10035   | 12035    | 16035 | 20035   | 24035 |         |       |
| 40             |   | 04040  | 05040  | 06040 | 08040   | 10040   | 12040    | 16040 | 20040   | 24040 | 30040   |       |
| 45             |   |        | 05045  | 06045 | 08045   | 10045   | 12045    | 16045 | 20045   | 24045 | 30045   |       |
| 50             |   |        | 05050  | 06050 | 08050   | 10050   | 12050    | 16050 | 20050   | 24050 | 30050   | 36050 |
| 60             |   |        |        | 06060 | 08060   | 10060   | 12060    | 16060 | 20060   | 24060 | 30060   | 36060 |
| 70             |   |        |        |       | 08070   | 10070   | 12070    | 16070 | 20070   | 24070 | 30070   | 36070 |
| 80             |   |        |        |       |         | 08080   | 12080    | 16080 | 20080   | 24080 | 30080   | 36080 |
| 90             |   |        |        |       |         |         | 10090    | 16090 | 20090   | 24090 | 30090   | 36090 |
| 100            |   |        |        |       |         |         | 10100    | 16100 | 20100   | 24100 | 30100   | 36100 |
| 110            |   |        |        |       |         |         |          | 16110 | 20110   | 24110 | 30110   | 36110 |
| 120            |   |        |        |       |         |         |          | 16120 | 20120   | 24120 | 30120   | 36120 |
| 130            |   |        |        |       |         |         |          | 16130 | 20130   | 24130 | 30130   | 36130 |
| 140            |   |        |        |       |         |         |          | 16140 | 20140   | 24140 | 30140   | 36140 |
| 150            |   |        |        |       |         |         |          | 16150 | 20150   | 24150 | 30150   | 36150 |
| 160            |   |        |        |       |         |         |          | 16160 | 20160   | 24160 | 30160   | 36160 |
| 180            |   |        |        |       |         |         |          |       | 20180   | 24180 | 30180   | 36180 |
| 200            |   |        |        |       |         |         |          |       | 20200   | 24200 | 30200   | 36200 |

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