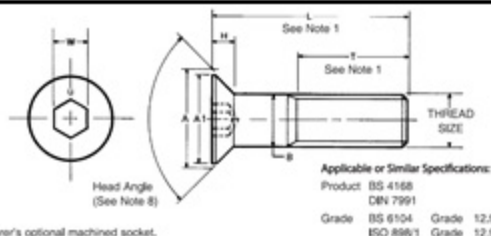


COUNTERSUNK SOCKET HEAD SCREWS - UNC and UNF Threads



| Thread size (B Max.) | Pitch | A Max. (Note 2) | A1 Max. (note 2) | B Max. | H Ref | W Nom. | Max Tightening Torques | | | | Tensile Load |
|----------------------|-------|-----------------|------------------|--------|-------|--------|------------------------|---------|--------|---------|--------------|
| | | | | | | | UNPLATED | | PLATED | | |
| | | | | | | | Nm | lbf.in. | Nm | lbf.in. | kN |
| M3 | 0.5 | 6.72 | 5.82 | 2.98 | 1.86 | 2.0 | 1.4 | 12 | 1.1 | 9 | 5.28 |
| M4 | 0.7 | 8.96 | 7.80 | 3.98 | 2.48 | 2.5 | 3.4 | 30 | 2.6 | 22 | 9.22 |
| M5 | 0.8 | 11.2 | 9.78 | 4.98 | 3.10 | 3.0 | 6.8 | 60 | 5.1 | 45 | 14.90 |
| M6 | 1.00 | 13.44 | 11.73 | 5.97 | 3.72 | 4.0 | 11.0 | 97 | 8.3 | 73 | 21.10 |
| M8 | 1.25 | 17.92 | 15.73 | 7.97 | 4.96 | 5.0 | 28.0 | 248 | 21.0 | 186 | 38.40 |
| M10 | 1.50 | 22.40 | 19.67 | 9.97 | 6.20 | 6.0 | 55.0 | 486 | 41.0 | 365 | 60.90 |
| M12 | 1.75 | 26.88 | 23.67 | 11.97 | 7.44 | 8.0 | 95.0 | 840 | 71.0 | 630 | 88.50 |
| (M14) | 2.00 | 30.24 | 26.67 | 13.96 | 8.12 | 10.0 | 150.0 | 1330 | 112.0 | 990 | 121.00 |
| M16 | 2.00 | 33.60 | 29.67 | 15.96 | 8.80 | 10.0 | 237.0 | 2100 | 177.0 | 1570 | 165.00 |
| (M18) | 2.50 | 36.96 | 32.61 | 17.96 | 9.48 | 12.0 | 340.0 | 3000 | 255.0 | 2250 | 202.00 |
| M20 | 2.50 | 40.32 | 35.61 | 19.96 | 10.11 | 12.0 | 480.0 | 4250 | 360.0 | 3190 | 257.00 |
| M22 | 2.50 | 37.38 | 35.61 | 21.96 | 13.32 | 14.0 | 637.0 | 5640 | 477.0 | 4220 | 318.00 |

ALL DIMENSIONS IN MILLIMETRES. SIZES IN BRACKETS ARE NON-PREFERRED STANDARDS.

MECHANICAL PROPERTIES

| | |
|-----------------|--------------------------------|
| Material | Unbrako High Grade Alloy Steel |
| Heat Treatment | Rc 39-44 |
| Shear Strength | 630 N/mm ² |
| Min. Elongation | 9% |

NOTES:

- For overall and thread lengths see pages 22 & 23.
- A - Maximum theoretical sharp corner.
- A1 - Absolute minimum head diameter.
- G - Transition diameter.
- Thread Class:** 4g 6g
- Working Temperature:** -50°C +300°C
- Torques calculated in accordance with VDI 2230 "Systematic calculation of high duty bolted joints" with $\sigma_{0.2} = 720 \text{ N/mm}^2$ and $\mu = 0.125$ for plain finish and $\mu = 0.094$ for plated.
- For sizes up to and including M20 Head Angle shall be 92°/90°, over M20 Head Angle be 62°/60°.

N.B. Because of their head configurations, countersunk head screws may not meet the minimum ultimate tensile load for property class 12.9, specified in table 6 OF BS 6104: Part 1: 1981. They are nevertheless required to meet the other material and property requirements for property class 12.9 in BS 6104: Part 1.