

Datasheet

RS Stock No: 4838297

Steel Bright Zinc Plated, Hexagon Cap Socket Screws: Metric Thread



Socket Caps have a small cylindrical head with tall, vertical sides giving them space saving advantages as well as greater tensile strength. They also require less side room for wrenches. These socket screws are used in many applications including the manufacture and repair of vehicles, machine tooling, tools and dies, machine production and repair and general engineering applications. Most importantly, socket cap head screws provide safety, reliability and cost efficiency.

- Threaded in accordance with DIN 912 Standard
- 12.9 grade heat-treated high tensile alloy steel
- 1200 MPa maximum tensile strength* compared to just 800 MPa for structural grade 8.8 so can be used in high tensile applications
- 1100 yield strength** compared to 640-660 MPa depending on the size of the screw for structural grade 8.8
- 970 MPa proof load*** compared to just 580-600 depending on the size of the screw for structural grade 8.8
- Used for applications with limited space in high-tensile applications
- Suitable for use in many industrial applications and similarly medical, construction, electronic and domestic applications
- Requires a Hex Key / Allen Key

***Tensile Strength:** The maximum load in tension (pulling apart) which a material can withstand before breaking or fracturing.

****Yield Strength:** The maximum load at which a material exhibits a specific permanent deformation.

*****Proof Load:** An axial tensile load which the product must withstand without evidence of any permanent set.



ENGLISH

Please view our full range listing below for all Bright Zinc Plated Steel Hexagon Socket Cap Head Screws:

| Head Shape | Material | Thread Size | Length | RS Part No. |
|----------------|-------------------|-------------|--------|-------------|
| Hex Socket Cap | Zinc Plated Steel | M2.5 | 6 mm | 4838124 |
| Hex Socket Cap | Zinc Plated Steel | M2.5 | 12 mm | 4838130 |
| | | | | |
| Hex Socket Cap | Zinc Plated Steel | M3 | 6 mm | 4838146 |
| Hex Socket Cap | Zinc Plated Steel | M3 | 8 mm | 4838168 |
| Hex Socket Cap | Zinc Plated Steel | M3 | 10 mm | 4838174 |
| Hex Socket Cap | Zinc Plated Steel | M3 | 12 mm | 4915209 |
| Hex Socket Cap | Zinc Plated Steel | M3 | 16 mm | 4838180 |
| Hex Socket Cap | Zinc Plated Steel | M3 | 20 mm | 4838196 |
| | | | | |
| Hex Socket Cap | Zinc Plated Steel | M4 | 8 mm | 4915215 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 10 mm | 4838203 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 12 mm | 4915221 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 16 mm | 4838225 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 20 mm | 4838231 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 25 mm | 4915237 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 30 mm | 4838247 |
| Hex Socket Cap | Zinc Plated Steel | M4 | 40 mm | 4838253 |
| | | | | |
| Hex Socket Cap | Zinc Plated Steel | M5 | 10 mm | 4838269 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 12 mm | 4915243 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 16 mm | 4839981 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 20 mm | 4838275 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 25 mm | 4915259 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 30 mm | 4839997 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 40 mm | 4838281 |
| Hex Socket Cap | Zinc Plated Steel | M5 | 50 mm | 4838297 |

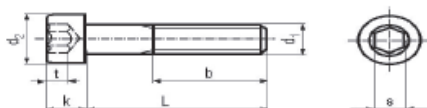


ENGLISH

Please view our full range listing below for all Bright Zinc Plated Steel Hexagon Socket Cap Head Screws:

| Head Shape | Material | Thread Size | Length | RS Part No. |
|----------------|-------------------|-------------|--------|-------------|
| Hex Socket Cap | Zinc Plated Steel | M6 | 10 mm | 4838304 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 12 mm | 4838310 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 16 mm | 4838326 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 20 mm | 4840004 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 25 mm | 4838332 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 30 mm | 4838348 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 35 mm | 4915265 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 40 mm | 4840010 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 50 mm | 4838354 |
| Hex Socket Cap | Zinc Plated Steel | M6 | 60 mm | 4838360 |
| | | | | |
| Hex Socket Cap | Zinc Plated Steel | M8 | 16 mm | 4838382 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 20 mm | 4838398 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 25 mm | 4915271 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 30 mm | 4838405 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 35 mm | 4915287 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 40 mm | 4838411 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 50 mm | 4838427 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 60 mm | 4839515 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 70 mm | 4839521 |
| Hex Socket Cap | Zinc Plated Steel | M8 | 80 mm | 4839537 |
| | | | | |
| Hex Socket Cap | Zinc Plated Steel | M10 | 20 mm | 4840026 |
| Hex Socket Cap | Zinc Plated Steel | M10 | 25 mm | 4840032 |
| Hex Socket Cap | Zinc Plated Steel | M10 | 30 mm | 4840054 |
| Hex Socket Cap | Zinc Plated Steel | M10 | 40 mm | 4840060 |
| Hex Socket Cap | Zinc Plated Steel | M10 | 50 mm | 4840076 |

SOCKET HEAD CAP SCREWS DIN 912/ ISO 4762 / ANSI B 18.3.1 M



Head Diameter d2 max. allows for
Knurled Head

| | | | | | | | | | | | | | | |
|---------------------------|---------------|--------|-------------|--------|--------------|-------|-------------|--------|--------------|--------|--------------|--------|------------|--------|
| Thread Size d1 | (M1.4) | | M1.6 | | M2 | | M2.5 | | M2.6 | | M3 | | M4 | |
| Thread Pitch | 0.3 | | 0.35 | | 0.4 | | 0.45 | | 0.45 | | 0.5 | | 0.7 | |
| Thread Length b | 14 | | 15 | | 16 | | 17 | | NA | | 18 | | 20 | |
| Head Dia. d2 | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 2.46 | 2.74 | 2.86 | 3.14 | 3.62 | 3.98 | 4.32 | 4.68 | 4.82 | 5.18 | 5.32 | 5.68 | 6.78 | 7.22 |
| ISO 4762 (1997) | | | 2.86 | 3.14 | 3.62 | 3.98 | 4.32 | 4.68 | | | 5.32 | 5.68 | 6.78 | 7.22 |
| ANSI B 18.3.1 M (1988) | | | 2.87 | 3.14 | 3.65 | 3.98 | 4.33 | 4.68 | | | 5.32 | 5.68 | 6.80 | 7.22 |
| Head Height k | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 1.28 | 1.40 | 1.46 | 1.60 | 1.86 | 2.00 | 2.36 | 2.50 | 2.46 | 2.60 | 2.86 | 3.00 | 3.82 | 4.00 |
| ISO 4762 (1997) | | | 1.46 | 1.60 | 1.86 | 2.00 | 2.36 | 2.50 | | | 2.86 | 3.00 | 3.82 | 4.00 |
| ANSI B 18.3.1 M (1988) | | | 1.52 | 1.60 | 1.91 | 2.00 | 2.40 | 2.50 | | | 2.89 | 3.00 | 3.88 | 4.00 |
| Key Size nominal s | 1.3 | | 1.5 | | 1.5 | | 2 | | 2 | | 2.5 | | 3 | |
| | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 1.32 | 1.38 | 1.52 | 1.56 | 1.52 | 1.56 | 2.02 | 2.06 | 2.02 | 2.06 | 2.52 | 2.58 | 3.02 | 3.08 |
| ISO 4762 (1997) | | | 1.52 | 1.56 | 1.52 | 1.56 | 2.02 | 2.06 | | | 2.52 | 2.58 | 3.02 | 3.08 |
| ANSI B 18.3.1 M (1988) | | | 1.520 | 1.545 | 1.520 | 1.545 | 2.020 | 2.045 | | | 2.52 | 2.58 | 3.020 | 3.071 |
| Key Engagement t | min. | | min. | | min. | | min. | | min. | | min. | | min. | |
| DIN 912 (1983) | 0.6 | | 0.7 | | 1 | | 1.10 | | 1.2 | | 1.3 | | 2 | |
| ISO 4762 (1997) | | | 0.7 | | 1 | | 1.10 | | | | 1.3 | | 2 | |
| ANSI B 18.3.1 M (1988) | | | 0.8 | | 1 | | 1.25 | | | | 1.5 | | 2 | |
| Thread Size d1 | M5 | | M6 | | M8 | | M10 | | M12 | | (M14) | | M16 | |
| Thread Pitch | 0.8 | | 1 | | 1.25 | | 1.5 | | 1.75 | | 2 | | 2 | |
| Thread Length b | 22 | | 24 | | 28 | | 32 | | 36 | | 40 | | 44 | |
| Head Dia. d2 | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 8.28 | 8.72 | 9.78 | 10.22 | 12.73 | 13.27 | 15.73 | 16.27 | 17.73 | 18.27 | 20.67 | 21.33 | 23.67 | 24.33 |
| ISO 4762 (1997) | 8.28 | 8.72 | 9.78 | 10.22 | 12.73 | 13.27 | 15.73 | 16.27 | 17.73 | 18.27 | 20.67 | 21.33 | 23.67 | 24.33 |
| ANSI B 18.3.1 M (1988) | 8.27 | 8.72 | 9.74 | 10.22 | 12.70 | 13.27 | 15.67 | 16.27 | 17.63 | 18.27 | 20.6 | 21.33 | 23.58 | 24.33 |
| Head Height k | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 4.82 | 5.00 | 5.7 | 6.0 | 7.64 | 8.00 | 9.64 | 10.00 | 11.57 | 12.00 | 13.57 | 14.00 | 15.57 | 16.00 |
| ISO 4762 (1997) | 4.82 | 5.00 | 5.7 | 6.0 | 7.64 | 8.00 | 9.64 | 10.00 | 11.57 | 12.00 | 13.57 | 14.00 | 15.57 | 16.00 |
| ANSI B 18.3.1 M (1988) | 4.86 | 5.00 | 5.85 | 6.00 | 7.83 | 8.00 | 9.81 | 10.00 | 11.79 | 12.00 | 13.77 | 14.00 | 15.76 | 16.00 |
| Key Size nominal s | 4 | | 5 | | 6 | | 8 | | 10 | | 12 | | 14 | |
| | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 4.020 | 4.095 | 5.02 | 5.14 | 6.02 | 6.14 | 8.025 | 8.175 | 10.025 | 10.175 | 12.032 | 12.212 | 14.032 | 14.212 |
| ISO 4762 (1997) | 4.020 | 4.095 | 5.02 | 5.14 | 6.02 | 6.14 | 8.025 | 8.175 | 10.025 | 10.175 | 12.032 | 12.212 | 14.032 | 14.212 |
| ANSI B 18.3.1 M (1988) | 4.020 | 4.084 | 5.020 | 5.084 | 6.020 | 6.095 | 8.025 | 8.115 | 10.025 | 10.127 | 12.032 | 12.146 | 14.032 | 14.159 |
| Key Engagement t | min. | | min. | | min. | | min. | | min. | | min. | | min. | |
| DIN 912 (1983) | 2.5 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
| ISO 4762 (1997) | 2.5 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
| ANSI B 18.3.1 M (1988) | 2.5 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
| Thread Size d1 | (M18) | | M20 | | (M22) | | M24 | | (M27) | | M30 | | M33 | |
| Thread Pitch | 2.5 | | 2.5 | | 2.5 | | 3 | | 3 | | 3.5 | | 3.5 | |
| Thread Length b | 48 | | 52 | | 56 | | 60 | | 66 | | 72 | | 78 | |
| Head Dia. d2 | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 26.67 | 27.33 | 29.67 | 30.33 | 32.61 | 33.39 | 35.61 | 36.39 | 39.61 | 40.39 | 44.61 | 45.39 | 49.61 | 50.39 |
| ISO 4762 (1997) | | | 29.67 | 30.33 | | | 35.61 | 36.39 | | | 44.61 | 45.39 | | |
| ANSI B 18.3.1 M (1988) | | | 29.53 | 30.33 | | | 35.48 | 36.39 | | | 44.42 | 45.39 | | |
| Head Height k | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 17.57 | 18.00 | 19.48 | 20.00 | 21.48 | 22.00 | 23.48 | 24.00 | 26.48 | 27.00 | 29.48 | 30.00 | 32.38 | 33.00 |
| ISO 4762 (1997) | | | 19.48 | 20.00 | | | 23.48 | 24.00 | | | 29.48 | 30.00 | | |
| ANSI B 18.3.1 M (1988) | | | 19.73 | 20.00 | | | 23.70 | 24.00 | | | 29.67 | 30.00 | | |
| Key Size nominal s | 14 | | 17 | | 17 | | 19 | | 19 | | 22 | | 24 | |
| | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| DIN 912 (1983) | 14.032 | 14.212 | 17.05 | 17.23 | 17.05 | 17.23 | 19.065 | 19.275 | 19.065 | 19.275 | 22.065 | 22.275 | 24.065 | 24.275 |
| ISO 4762 (1997) | | | 17.05 | 17.23 | | | 19.065 | 19.275 | | | 22.065 | 22.275 | | |
| ANSI B 18.3.1 M (1988) | | | 17.050 | 17.216 | | | 19.065 | 19.243 | | | 22.065 | 22.319 | | |
| Key Engagement t | min. | | min. | | min. | | min. | | min. | | min. | | min. | |
| DIN 912 (1983) | 9 | | 10 | | 11 | | 12 | | 13.5 | | 15.5 | | 18 | |
| ISO 4762 (1997) | | | 10 | | | | 12 | | | | 15.5 | | | |
| ANSI B 18.3.1 M (1988) | | | 10 | | | | 12 | | | | 15.0 | | | |