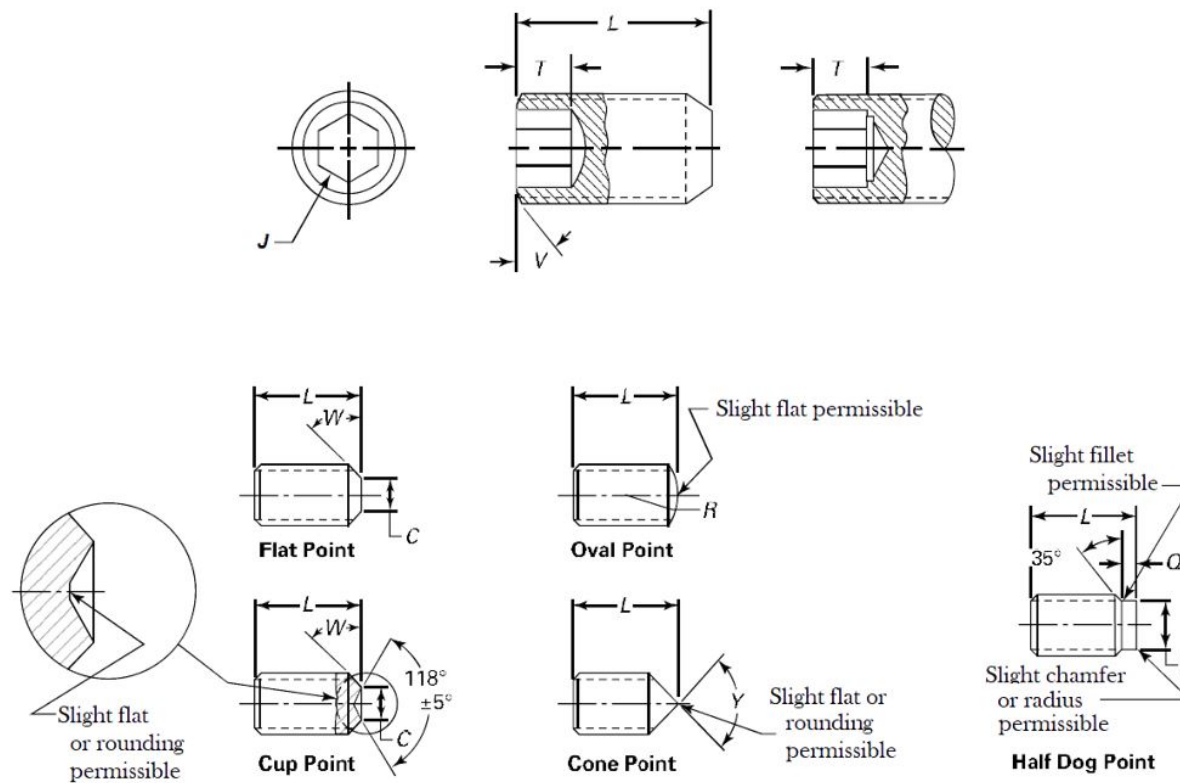


Dimensions of Hexagon Socket Set Screws

ASME B18.3-2012



NOTE: ALL DIMENSIONS ARE IN INCHES



Dimensions of Hexagon Socket Set Screws

ASME B18.3-2012

| Nominal Size (Basic Screw Diameter) | | J Nominal Hexagon Socket Size | | T Minimum Key Engagement to Develop Functional Capability of Key | C Cup and Flat Point Diameters | | R Basic Oval Point Radius | Y Cone Point Angle 90 deg ± 2 deg for These Nominal Lengths or Longer: 118 deg ± 2 deg for Shorter Nominal | P Half Dog Point | | Q Half Dog Point | | B Shortest Optimum Nominal Length to Which T _H Applies | | | B ₁ Nominal Length to Which T _S Applies | | |
|---|----------|-------------------------------------|-------|---|--------------------------------------|-------|---------------------------------------|--|---------------------|-------|---------------------|-------|---|--------------------------------------|-------------------|---|--------------------------------------|-------------------|
| | | | | | Max. | Min. | | | Diameter | | Legth | | Cup and Flat Points | 90 deg Cone and Oval Points | Half Dog Point | Cup and Flat Points | 90 deg Cone and Oval Points | Half Dog Point |
| | | Hex Socket, T _H | Max. | Min. | | | Max. | Min. | Max. | Min. | | | | | | | | |
| | | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 5 | (0.1250) | 1/16 | 0.062 | 0.080 | 0.067 | 0.057 | 0.094 | 0.19 | 0.083 | 0.078 | 0.033 | 0.027 | 0.19 | 0.19 | 0.19 | 0.13 | 0.19 | 0.19 |
| 6 | (0.1380) | 1/16 | 0.062 | 0.080 | 0.074 | 0.064 | 0.104 | 0.19 | 0.092 | 0.087 | 0.038 | 0.032 | 0.19 | 0.25 | 0.19 | 0.13 | 0.25 | 0.19 |
| 8 | (0.1640) | 5/64 | 0.078 | 0.090 | 0.087 | 0.076 | 0.123 | 0.25 | 0.109 | 0.103 | 0.043 | 0.037 | 0.19 | 0.25 | 0.25 | 0.19 | 0.25 | 0.25 |
| 10 | (0.1900) | 3/32 | 0.094 | 0.100 | 0.102 | 0.088 | 0.142 | 0.25 | 0.127 | 0.120 | 0.049 | 0.041 | 0.19 | 0.25 | 0.25 | 0.19 | 0.25 | 0.25 |
| 1/4 | (0.2500) | 1/8 | 0.125 | 0.125 | 0.132 | 0.118 | 0.188 | 0.31 | 0.156 | 0.149 | 0.067 | 0.059 | 0.25 | 0.31 | 0.31 | 0.25 | 0.31 | 0.31 |
| 5/16 | (0.3125) | 5/32 | 0.156 | 0.156 | 0.172 | 0.156 | 0.234 | 0.38 | 0.203 | 0.195 | 0.082 | 0.074 | 0.31 | 0.44 | 0.38 | 0.31 | 0.44 | 0.38 |
| 3/8 | (0.3750) | 3/16 | 0.188 | 0.188 | 0.212 | 0.194 | 0.281 | 0.44 | 0.250 | 0.241 | 0.099 | 0.089 | 0.38 | 0.44 | 0.44 | 0.38 | 0.44 | 0.44 |
| 7/16 | (0.4375) | 7/32 | 0.219 | 0.219 | 0.252 | 0.232 | 0.328 | 0.50 | 0.297 | 0.287 | 0.114 | 0.104 | 0.44 | 0.63 | 0.50 | 0.44 | 0.63 | 0.50 |
| 1/2 | (0.5000) | 1/4 | 0.250 | 0.250 | 0.291 | 0.270 | 0.375 | 0.57 | 0.344 | 0.334 | 0.130 | 0.120 | 0.50 | 0.63 | 0.63 | 0.50 | 0.63 | 0.63 |
| 5/8 | (0.6250) | 5/16 | 0.312 | 0.312 | 0.371 | 0.347 | 0.469 | 0.75 | 0.469 | 0.456 | 0.164 | 0.148 | 0.63 | 0.88 | 0.88 | 0.63 | 0.88 | 0.88 |
| 3/4 | (0.7500) | 3/8 | 0.375 | 0.375 | 0.450 | 0.425 | 0.562 | 0.88 | 0.562 | 0.549 | 0.196 | 0.180 | 0.75 | 1.00 | 1.00 | 0.75 | 1.00 | 1.00 |
| 7/8 | (0.8750) | 1/2 | 0.500 | 0.500 | 0.530 | 0.502 | 0.656 | 1.00 | 0.656 | 0.642 | 0.227 | 0.211 | 0.88 | 1.00 | 1.00 | 0.88 | 1.25 | 1.00 |
| 1 | (1.0000) | 9/16 | 0.562 | 0.562 | 0.609 | 0.579 | 0.750 | 1.13 | 0.750 | 0.734 | 0.260 | 0.240 | 1.00 | 1.25 | 1.25 | ... | ... | ... |
| 1-1/8 | (1.1250) | 9/16 | 0.562 | 0.562 | 0.689 | 0.655 | 0.844 | 1.25 | 0.844 | 0.826 | 0.291 | 0.271 | 1.25 | 1.50 | 1.25 | ... | ... | ... |
| 1-1/4 | (1.2500) | 5/8 | 0.625 | 0.625 | 0.767 | 0.733 | 0.938 | 1.50 | 0.938 | 0.920 | 0.323 | 0.303 | 1.25 | 1.50 | 1.50 | ... | ... | ... |
| 1-3/8 | (1.3750) | 5/8 | 0.625 | 0.625 | 0.848 | 0.808 | 1.031 | 1.63 | 1.031 | 1.011 | 0.354 | 0.334 | 1.50 | 1.75 | 1.50 | ... | ... | ... |
| 1-1/2 | (1.5000) | 3/4 | 0.750 | 0.750 | 0.926 | 0.886 | 1.125 | 1.75 | 1.125 | 1.105 | 0.385 | 0.365 | 1.50 | 2.00 | 1.75 | ... | ... | ... |
| 1-3/4 | (1.7500) | 1 | 1.000 | 1.000 | 1.086 | 1.039 | 1.312 | 2.00 | 1.312 | 1.289 | 0.448 | 0.428 | 1.75 | 2.25 | 2.00 | ... | ... | ... |
| 2 | (2.0000) | 1 | 1.000 | 1.000 | 1.244 | 1.193 | 1.500 | 2.25 | 1.500 | 1.474 | 0.510 | 0.490 | 2.00 | 2.50 | 2.50 | ... | ... | ... |

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