

Socket Set Screws

A set screw is a type of screw generally used to secure an object within or against another object, normally not using a nut. The most common examples are securing a pulley or gear to a shaft. Set screws are usually headless (also called blind), meaning that the screw is fully threaded and has no head projecting past the major diameter of the screw thread. An example application is when a set screw is screwed into a pulley hub so that its end-point bears firmly against the shaft. The fastening action is by friction between the screw and the shaft, often (but not always) with some amount of elastic or plastic deformation of one or both.



Brief Data:

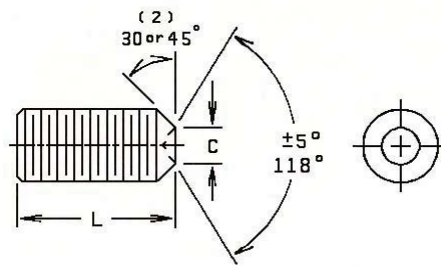
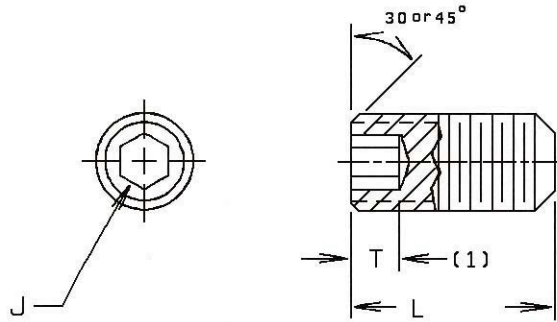
- Units: Metric
- Category: Set screws
- Drive type: Allen
- Point type: Cup
- Grade: A-2
- Thread direction: Right hand
- Thread density: Coarse
- Diameter: 3~5mm
- Thread pitch: 0.5~0.8mm
- Length: 3~8mm

Mechanical Dimension:



NOTE: Image not to scale

Metric Cup Point Socket Set Screws



CUP POINT

Nominal Size	J Hex Socket Size	T Minimum Key Engagement Note 1	C Cup Point Diameter	
			Max.	Min.
M2x0.4	0.9	0.6-1.5	1.00	1.25
M2.5x0.45	1.3	0.7-1.8	1.25	1.05
M3x0.5	1.5	0.6-2.1	1.50	1.28
M4x0.7	2.0	1.0-2.3	2.00	1.75
M5x0.8	2.5	1.2-2.7	2.50	2.22
M6x1.0	3.0	1.8-3.0	3.00	2.75
M8x1.25	4.0	1.8-4.0	4.00	3.65
M10x1.50	5.0	2.0-5.0	5.00	4.60
M12x1.75	6.0	3.0-6.0	6.00	5.57
M16x2.0	8.0	3.0-8.0	8.00	7.50
M20x2.5	10.0	6.0-10.0	10.00	9.44
M24x3.0	12.0	5.0-12.0	12.00	11.39

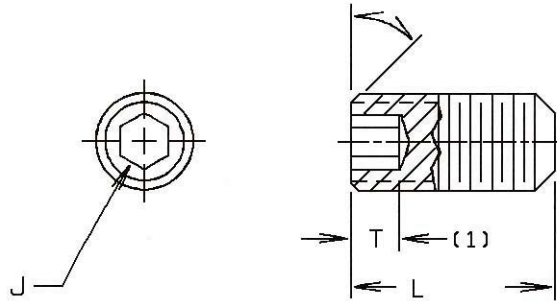
Applicable Specifications: ASME B18.3.6M and ASTM F912M

Note 1: Depth of socket is dependent on screw length. See chart on next page

Note 2: The point angle shall be $45^{\circ} \pm 5^{\circ}$ for screws equal to or longer than the screw diameter, and a minimum 30° for screws shorter in length than diameter.

Metric Cup Point Socket Set Screws (continued)

Minimum Hex Key Engagement



Nominal Screw Diameter	Minimum Key Engagement													
	Screw Length													
	1.5	2	2.5	3	4	5	6	8	10	12	16	20	25	30
M2x0.4	0.6	0.8	1.0	1.2	1.5									
M2.5x0.45		0.7	1.1	1.5	1.8									
M3x0.5		0.6	1.1	1.5	2.1	2.1								
M4x0.7			1.0	1.3	1.8	2.3	2.3							
M5x0.8				1.2	2.0	2.7	2.7	2.7						
M6x1.0					1.8	2.5	3.0	3.0						
M8x1.25						1.8	2.5	4.0	4.0					
M10x1.50							2.0	3.6	5.0	5.0				
M12x1.75								3.0	4.5	6.0	6.0			
M16x2.0									3.0	4.8	8.0	8.0		
M20x2.5										---	6.0	9.0	12.0	
M24x3.0											5.0	8.0	12.0	12.0