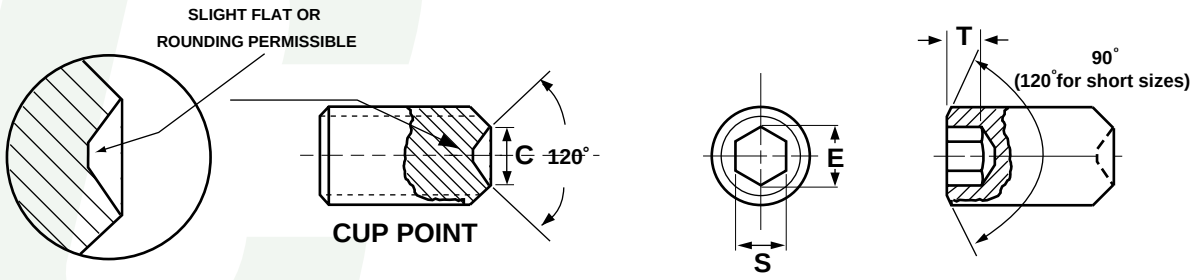
Sockets

METRIC Socket Set Screws

Cup Point



METRIC - Socket Set Screws, Cup Point

ISO 4029 & 898/5

Nominal Size	Thread Pitch	C		E	S		Screws Below this Length are Short Sizes	T		Min Length of Screw for Torque Test	Test Torque
		Point Diameter		Socket Size Across Corners	Socket Size Across the Flats			Key Engagement (Min)			
		Max	Min	Min	Max	Min		Short Sizes	Long Sizes		N. m
M1.6	0.35	0.80	0.55	0.803	0.724	0.711	2.5	0.7	1.5	-	-
M2	0.4	1.00	0.75	1.003	0.902	0.889	3	0.8	1.7	-	-
M2.5	0.45	1.20	0.95	1.427	1.295	1.270	4	1.2	2	-	-
M3	0.5	1.40	1.15	1.73	1.545	1.520	5	1.2	2	4	0.9
M4	0.7	2.00	1.75	2.3	2.045	2.020	6	1.5	2.5	5	2.5
M5	0.8	2.50	2.25	2.87	2.560	2.520	6	2	3	6	5
M6	1	3.00	2.75	3.44	3.071	3.020	8	2	3.5	8	8.5
M8	1.25	5.0	4.7	4.58	4.084	4.020	10	3	5	10	20
M10	1.5	6.0	5.7	5.72	5.084	5.020	12	4	6	12	40
M12	1.75	8.00	7.64	6.86	6.095	6.020	16	4.8	8	16	65
M16	2	10.00	9.64	9.15	8.115	8.025	20	6.4	10	20	160
M20	2.5	14.00	13.57	11.43	10.115	10.025	25	8	12	25	310
M24	3	16.00	15.57	13.72	12.142	12.032	30	10	15	30	520

Tolerance on Length				
	2-3mm: ±0.2	4-6mm: ±0.24	8-10mm: ±0.29	12-16mm: ±0.35
	20-30mm: ±0.42	35-50mm: ±0.5	55-60mm: ±0.6	

Description	A headless screw threaded the entire length with a metric thread pitch. It has a hexagonal drive at one end and a cup-shaped indentation at the other end.
Applications/ Advantages	The cup point is the most popular type of set screw, designed for fast, permanent and semi-permanent location of parts on shafts with hardness differential of 10-15 Rockwell C points and where cutting in of cup edge on the shaft is acceptable.
Material	Metric socket set screws shall be made from an alloy steel which conforms to the following chemical composition requirements-- *Carbon:* 0.19-0.50%; *Phosphorous:* 0.05% maximum; *Sulfur:* 0.05% maximum; *Lead:* 0.35% maximum. Set screws shall also contain one or more of these following elements: chromium, nickel, molybdenum, vanadium or boron.
Heat Treatment	Metric socket set screws shall be heat treated by quenching in oil from above the transformation temperature and then tempered by reheating to meet the hardness requirements listed below.
Hardness	Rockwell HRC 45 - 53 (Vickers HV 450 - 560)
Torsional Strength	Metric socket set screws of a sufficient length to be tested (as listed in the above table) shall withstand application of the test torque specified in said table without evidence of the socket reaming or the screw bursting.
Plating	Metric socket set screws are usually supplied with a thermal black finish.