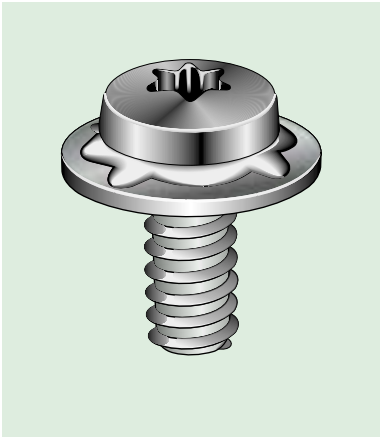
CONE SEMS



This unique Sems fastener features an integral, free-spinning, Cone washer. With two distinct configurations, this dual action spring washer has two separate load deflection rates. The configurations act in unison to provide a reliable low torque, controlled tension fastener.

The Cone Sems assembly provides a higher retained clamp load and improved compensation for thermal cycling and vibration. This fastener is capable of accepting a high tension load while maintaining a live spring action and generates a constant load, even with variations in installation torques. By increasing the acceptable driving torque range it enhances flexibility in component design.

The Cone washer's long deflection period and two-stage loading contribute to better control during installation, improved tool bit life and reduced operator fatigue. (See Fig.1) Load is directed towards the outer diameter of the washer, making the fastener ideal for clamping fragile materials and for spanning large clearance holes.

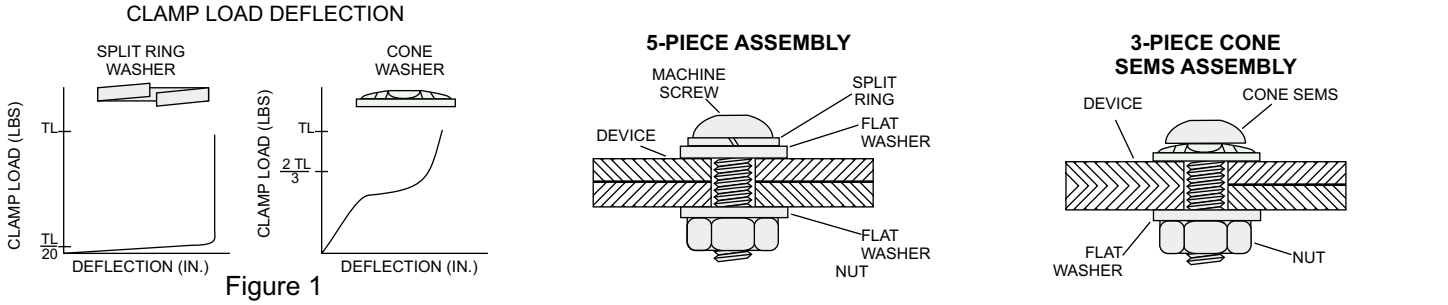
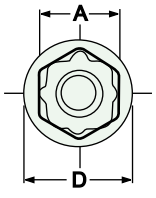
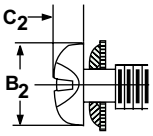


Figure 1

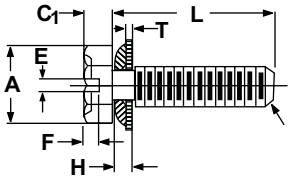
PHILLIPS INDENTED HEX HEAD AND PHILLIPS PAN HEAD SPECIFICATIONS



HEX HEAD



PHILLIPS PAN HEAD



SCREW MATERIAL:
SAE 1022

WASHER MATERIAL:
SAE 1050

A_1 = Across Flats
B_2 = Across Corners
B_1 = Pan Head O.D.
C_2 = Hex Head Height
C = Pan Head Height
D = Washer Diameter
H = Overall Washer Height
T = Washer Material Thickness
E = Slot Width
F = Slot Depth

METRIC SIZE

SIZE	A	B1	B2	C1	C2	D	H	T	E	F	TORQUE★
M3x0.5	5.00 4.82	5.40 MIN.	5.50 5.00	2.30 2.00	2.15 1.85	7.82 7.52	1.55 0.99	0.64	1.00 0.80	1.17 0.84	0.6
M3.5X0.6	5.50 5.32	5.96 MIN.	6.00 5.50	2.60 2.30	2.45 2.15	7.82 7.52	1.55 0.99	0.64	1.20 1.00	1.47 1.17	1.2
M4X0.7	7.00 6.78	7.59 MIN.	7.00 6.50	3.00 2.60	2.75 2.45	8.46 8.20	1.65 1.32	0.78	1.50 1.20	1.76 1.40	2.4
M5X0.8	8.00 7.78	8.74 MIN.	9.00 8.40	3.80 3.30	3.45 3.15	9.73 9.47	2.59 1.65	0.94	1.50 1.20	2.18 1.78	4.O
M6X1	10.00 9.78	10.95 MIN.	10.50 9.80	4.70 4.10	4.10 3.70	12.90 12.57	2.24 1.63	0.99	1.90 1.60	2.36 1.91	7.5

★ Newton Meters (Nm) property class 5.8 screw material

INCH SIZE

SIZE	A	B1	B2	C1	C2	D	H	T	E	F	TORQUE★
4-40	.187 .181	.202 MIN.	.219 .205	.096 .084	.080 .070	.250 .244	.039 .021	.015	.039 .031	.054 .044	5.0
6-32	.250 .244	.272 MIN.	.270 .256	.096 .084	.097 .087	.320 .303	.061 .039	.025	.048 .038	.054 .044	11.0
8-32	.250 .244	.272 MIN.	.322 .306	.120 .105	.115 .105	.383 .370	.073 .050	.030	.054 .045	.066 .052	21.0
10-32	.312 .305	.340 MIN.	.373 .357	.141 .126	.133 .122	.446 .433	.075 .051	.032	.060 .050	.080 .060	35.0
1/4-20	.375 .367	.409 MIN.	.492 .473	.206 .140	.175 .162	.508 .498	.088 .064	.039	.075 .064	.101 .083	75.0

★ Pound-Inch (lb-in) grade 2 screw material

(1 N.m = 8.85 Inch pounds. N.m x 8.85 = Inch pounds x 0.113 = N.m)
Data also applicable to over-the-thread style Tooth and Cone washers.