

Metric Screws Head Dimensions

Head Type	Dim	Screw Size												
		M2	M2.5	M3	M3.5	M4	M5	M6	M8	M10	M12	M16	M20	
PAN		D	3.80	5.00	6.00	7.00	8.00	10.00	12.00	16.00	20.00			
	H	1.30	1.50	1.80	2.10	2.40	3.00	3.60	4.80	6.00				
	T	0.60	0.75	0.80	0.95	1.15	1.35	1.70	2.20	2.70				
	W	0.60	0.70	0.80	1.10	1.30	1.40	1.70	2.10	2.60				
CHEESE		D	3.80	4.50	5.50	6.00	7.00	8.50	10.00	13.00	16.00			
	H	1.30	1.60	2.00	2.40	2.60	3.30	3.90	5.00	6.00				
	T	0.90	1.00	1.30	1.40	1.60	2.00	2.30	2.80	3.20				
	W	0.70	0.80	1.00	1.10	1.20	1.50	1.90	2.30	2.80				
HEXAGON		A/F	3.20	4.00	5.50	6.00	7.00	8.00	10.00	13.00	17.00	19.00	24.00	30.00
	D	3.70	4.62	6.40	7.20	8.10	9.20	11.50	15.00	19.60	21.90	27.70	34.50	
	H	1.15	1.30	2.00	2.40	2.80	3.50	4.00	5.50	7.00	8.00	10.00	13.00	
COUNTERSUNK		D	3.80	4.70	5.60	6.5-8.2	7.5-9.4	9.20	11.00	15.4-17.3	18.00			
	H	1.20	1.50	1.65	2.30	2.70	2.50	3.00	4.00	5.00				
	T	0.50	0.60	0.70	1.20	1.30	1.20	1.50	1.80	2.30				
	W	0.50	0.60	0.80	1.20	1.50	1.20	1.60	2.00	2.50				
RAISED COUNTERSUNK		D	4.00	4.70	5.60	6.50	8.0-9.4	9.20	11.00	14.50	18.00			
	H	1.70	1.85	2.25	2.65	3.00	3.75	4.50	6.00	7.50				
	J	0.50	0.60	0.75	0.90	1.00	1.25	1.50	2.00	2.50				
	T	1.00	1.20	1.45	1.70	1.90	2.30	2.80	3.70	4.60				
	W	0.50	0.60	0.80	0.80	1.00	1.20	1.60	2.00	2.50				
THUMB		D			8.10	8.80	9.70	10.50	12.50					
	H			5.50	6.40	7.10	8.10	8.30						
	T			1.10	1.30	1.50	1.70	2.20						
	W			1.00	1.10	1.20	1.40	1.80						
GRUB		T			1.05	1.21					3.61			
	W			0.60	0.70						2.31			
	C					2.00	3.30	4.10	5.20	6.60				
	D					0.76	1.30	1.50	2.40	2.80				
HEXAGON SOCKET		A/F							5.00	6.00				
	D								10.22	13.27				
	H								6.00	8.00				
	T								3.00	4.00				
CUP SQUARE		A/F					5.48	6.48	8.58					
	D						13.55	16.55	20.65					
	H						3.30	3.88	4.88					
	T						4.10	4.60	5.60					
CROSS RECESSED PAN		D			5.60		8.00	9.50	12.00					
	H			2.40		3.10	3.70	4.60						
CROSS RECESSED COUNTERSUNK		D			5.50		8.40	9.30	11.30					
	H			1.65		2.70	2.70	3.30						

All dimensions shown are maximum

Metric Screws Test Data

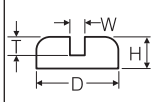
N/A = Test data not available

1N = 0.101 Kg
1Nm = 8.851lbf-in

Above information is for guidance only and should not be used to establish specifications or as the basis of a design

Thread Size	Suggested Max. Tightening Torque Nm	Failure Torque Nm	Tensile		Double Shear	
			Yield N	Failure N	Yield N	Failure N
M2	N/A	N/A	7.12	N/A	89	116
M2.5	N/A	N/A	8.9	N/A	156	169
M3	0.22	0.32	22	N/A	294	329
M3.5	0.30	0.43	53	N/A	378	405
M4	0.36	0.45	214	N/A	600	636
M5	0.74	0.93	271	N/A	1081	1134
M6	1.46	1.83	845	912	1806	1877
M8	2.71	3.39	1677	1744	2980	3034
M10	4.25	5.31	2749	N/A	5026	5280

Unified Screws Head Dimensions

Head Type	Dim	Screw Size								
		No.1	No.2	No.3	No.4	No.6	No.8	No.10	1/4"	
	H	-	0.050	-	0.065	0.075	0.080	0.130	0.160	
	D	-	0.160	-	0.210	0.265	0.320	0.365	0.475	
	T	-	0.025	-	0.035	0.045	0.050	0.060	0.085	
	W	-	0.028	0.075	0.035	0.045	0.050	0.055	0.070	

All dimensions shown are maximum and in inches

Unified Screws Test Data

Thread Size	Suggested Max. Tightening Torque lbf.in	Failure Torque lbf.in	Tensile		Double Shear	
			Yield lbf	Failure lbf	Yield lbf	Failure lbf
4 - 40	1.0	1.5	38	41	45	50
6 - 32	1.3	1.9	65	69	91	97
8 - 32	3.5	5.0	99	108	158	164
10 - 24	4.0	6.0	139	149	187	257
10 - 32	4.9	7.0	155	165	234	241
1/4 - 20	9.1	13.0	296	312	413	432
3/8 - 18	26.0	37.0	403	424	866	880
1/2 - 16	34.0	49.0	480	513	1108	1173
3/4 - 13	92.0	132.0	1393	1425	2276	2313
1 - 11	184.0	264.0	2260	2303	3340	3410

N/A = Test data not available

1lbf = 4.448 N

1lbf.in = 0.113 Nm

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Chemical Resistance Data

Chemical	Concentration %	Nylon 66	Polypropylene
Acetic acid	100	P	G
Acetone	100	G	G
Ammonia Liquid		G	G
Aniline	100	P	G
Benzene	100	G	P
Bleaching Solutions Dilute		N	G
Caustic Potash	10	G	G
Caustic Potash	50	G	G
Chlorine Water Saturated		P	F
Chloroform	100	N	N
Chromic Acid	10	P	G
Citric Acid	10	P	G
Detergent-Soaps		G	G
Ethanol	80	G	G
Ethylacetate	100	G	G
Formic Acid	50	N	G
Fuel Oil		G	P
Glycerine		F	G
Hydrochloric Acid	30	N	G
Lactic Acid	10	F	G
Methyl Alcohol	100	G	G
Mineral Oil		G	G

The above information is given on the assumption that the temperature of the chemical does not exceed 20°C

Chemical	Concentration %	Nylon 66	Polypropylene
Nitric Acid	10	N	G
Nitric Acid	50	N	P
Oleic Acid	100	G	G
Oxalic Acid	10	P	G
Petrol		G	P
Phosphoric Acid	85	N	G
Sea Water		G	G
Sodium Chloride (salt)		G	G
Sodium Hydroxide	10	G	G
Sodium Hydroxide	50	G	G
Sodium Hypochloride	10	N	G
Stearic Acid	100	P	G
Sulphuric Acid	10	N	G
Sulphuric Acid	100	N	N
Tetrachloroethylene		G	N
Toluene	100	G	N
Trichloroethylene		G	N
Turpentine	100	G	N
Vaseline		G	G
Vegetable Oil		G	G

Resistance Key: G = Good, F = Fair, P = Poor, N = Not suitable

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