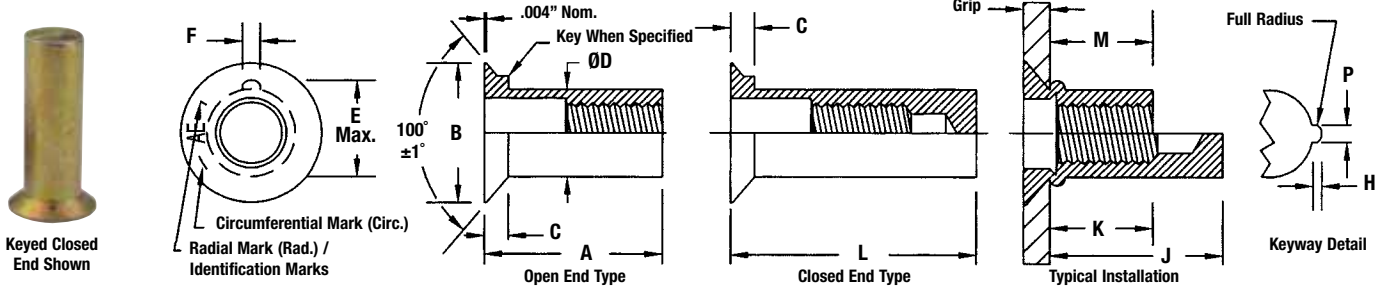




MaxTite® COUNTERSUNK HEAD — UNIFIED



- Designed for high load applications. Countersunk feature allow fastener to be installed flush with sheet surface.



All dimensions are in inches.

See page AE-35 for part number key.

Thread Size*	B Ref.	C Max.	ØD +.000 -.004	E Max.	F +.005 -.000	Install Drill Size (Ref.)	Install Hole Size		Keyway Dimensions		Pull Up Factor
							Min.	Max.	P +.003 -.000	H	
#6-32	.323	.063	.189	.240	.054	#12	.189	.193	.062	.056 - .058	.065
#8-32	.355	.063	.221	.271	.054	#2	.221	.226	.062	.056 - .058	.065
#10-32	.391	.065	.250	.302	.054	1/4	.250	.256	.062	.056 - .058	.080
1/4-20	.529	.089	.332	.382	.054	Q	.332	.338	.062	.056 - .058	.095
5/16-18	.656	.104	.413	.505	.120	Z	.413	.423	.128	.097 - .102	.120
3/8-16	.770	.124	.490	.597	.120	12.5mm	.490	.500	.128	.110 - .115	.155
1/2-13 (1)	.906	.124	.625	.733	.120	5/8	.625	.635	.128	.110 - .115	.185

(1) Before ordering please contact the factory for further information regarding this thread size.

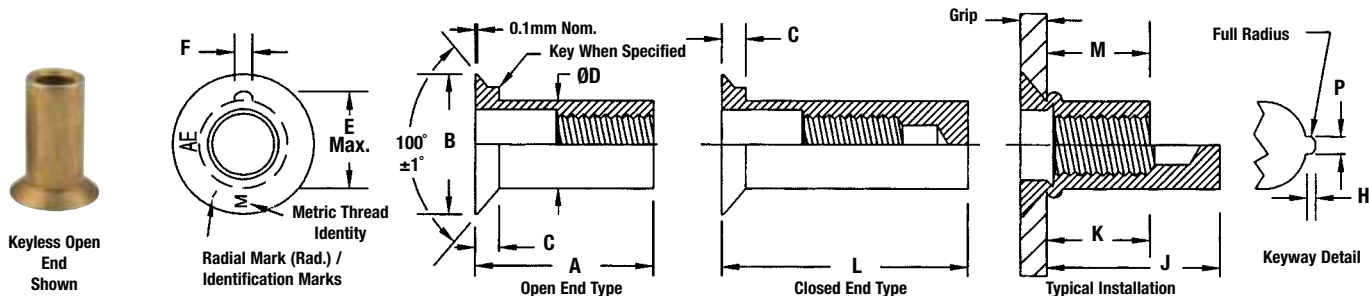
Thread-Grip Number	Grip Range	Indent. Mark	Open End Keyed and Keyless				Closed End Keyless				Closed End Keyed					
			A ±.015	M Ref.	Wt. (lbs./1000)		L ±.015	J Ref.	K Ref.	Wt. (lbs./1000)		L ±.015	J Ref.	K Ref.	Wt. (lbs./1000)	
					Alum.	Steel				Alum.	Steel				Alum.	Steel
6-106	.065 - .106	Blank	.500	.325	.8	2.5	.687	.510	.325	1.2	3.6	.812	.635	.425	1.4	4.2
6-161	.106 - .161	2 Rad.	.500	.280	.8	2.4	.687	.465	.280	1.2	3.5	.812	.590	.380	1.3	4.1
6-201	.161 - .201	4 Rad.	.562	.295	.9	2.6	.687	.420	.260	1.1	3.4	.812	.545	.335	1.3	4.0
6-241	.201 - .241	1 Circ.	.625	.315	.9	2.9	.812	.505	.295	1.3	4.0	.812	.505	.295	1.3	4.0
6-281	.241 - .281	2 Circ.	.625	.270	.9	2.8	.812	.465	.265	1.3	3.9	.812	.465	.265	1.3	3.9
6-321	.281 - .321	3 Circ.	.687	.290	1.0	3.0	.844	.455	.265	1.3	4.0	.844	.455	.265	1.3	4.0
8-106	.065 - .106	Blank	.500	.325	1.0	3.1	.687	.510	.325	1.5	4.6	.812	.635	.425	1.8	5.4
8-161	.106 - .161	2 Rad.	.500	.280	1.0	3.0	.687	.465	.280	1.5	4.5	.812	.590	.380	1.7	5.3
8-201	.161 - .201	4 Rad.	.562	.290	1.1	3.3	.687	.415	.255	1.4	4.4	.812	.540	.330	1.7	5.2
8-241	.201 - .241	1 Circ.	.625	.310	1.2	3.6	.875	.560	.290	1.8	5.5	.875	.560	.290	1.8	5.5
8-281	.241 - .281	2 Circ.	.687	.325	1.1	3.2	.875	.515	.290	1.8	5.4	.875	.515	.290	1.8	5.4
8-321	.281 - .321	3 Circ.	.687	.295	1.2	3.8	.875	.485	.300	1.7	5.2	.875	.485	.300	1.7	5.2
10-116	.065 - .116	Blank	.578	.395	1.4	4.3	.828	.645	.395	2.2	6.7	.828	.645	.395	2.2	6.7
10-166	.116 - .166	1 Rad.	.625	.385	1.5	4.6	.875	.635	.385	2.3	6.9	.875	.635	.385	2.3	6.9
10-216	.166 - .216	2 Rad.	.687	.400	1.6	4.9	.938	.650	.400	2.4	7.2	.938	.650	.400	2.4	7.2
10-266	.216 - .266	3 Rad.	.734	.390	1.7	5.1	.984	.640	.390	2.5	7.5	.984	.640	.390	2.5	7.5
10-316	.266 - .316	4 Rad.	.781	.385	1.8	5.4	1.031	.635	.385	2.5	7.7	1.031	.635	.385	2.5	7.7
10-366	.316 - .366	5 Rad.	.844	.400	1.9	5.7	1.094	.650	.400	2.6	8.0	1.094	.650	.400	2.6	8.0
25-151	.089 - .151	Blank	.687	.440	3.2	9.8	1.000	.750	.435	5.0	15.1	1.000	.750	.435	5.0	15.1
25-211	.151 - .211	1 Rad.	.750	.440	3.4	10.3	1.062	.750	.435	5.2	15.7	1.062	.750	.435	5.2	15.7
25-271	.211 - .271	2 Rad.	.812	.440	3.6	10.9	1.125	.750	.435	5.4	16.3	1.125	.750	.435	5.4	16.3
25-331	.271 - .331	3 Rad.	.875	.435	3.8	11.5	1.187	.750	.435	5.5	16.9	1.187	.750	.435	5.5	16.9
25-391	.331 - .391	4 Rad.	.937	.435	4.0	12.1	1.250	.750	.435	5.7	17.5	1.250	.750	.435	5.7	17.5
25-451	.391 - .451	5 Rad.	1.000	.445	4.2	12.7	1.312	.760	.445	5.9	18.1	1.312	.760	.445	5.9	18.1
31-181	.106 - .181	Blank	.844	.540	5.9	17.8	1.218	.915	.540	9.0	27.5	1.218	.915	.540	9.0	27.5
31-256	.181 - .256	1 Rad.	.937	.560	6.3	19.3	1.312	.935	.560	9.5	28.9	1.312	.935	.560	9.5	29.0
31-331	.256 - .331	2 Rad.	1.000	.550	6.6	20.1	1.406	.955	.550	10.0	30.4	1.406	.955	.550	10.0	30.5
31-406	.331 - .406	3 Rad.	1.093	.565	7.1	21.5	1.468	.940	.565	10.2	31.1	1.468	.940	.565	10.2	31.2
31-481	.406 - .481	4 Rad.	1.156	.555	7.3	22.3	1.562	.960	.555	10.7	32.6	1.562	.960	.555	10.8	32.7
31-556	.481 - .556	5 Rad.	1.250	.575	7.8	23.7	1.625	.950	.575	10.9	33.3	1.625	.950	.575	11.0	33.4
37-211	.125 - .211	Blank	.938	.580	8.9	27.0	1.375	1.020	.655	13.9	42.3	1.375	1.020	.655	13.9	42.4
37-296	.211 - .296	1 Rad.	1.031	.590	9.4	28.7	1.468	1.030	.655	14.5	44.1	1.468	1.030	.655	14.5	44.1
37-381	.296 - .381	2 Rad.	1.125	.600	10.0	30.5	1.562	1.040	.675	15.0	45.8	1.562	1.040	.675	15.1	45.9
37-466	.381 - .466	3 Rad.	1.219	.615	10.6	32.3	1.656	1.050	.690	15.6	47.6	1.656	1.050	.690	15.7	47.7
37-551	.466 - .551	4 Rad.	1.312	.625	11.2	34.0	1.750	1.065	.705	16.2	49.4	1.750	1.065	.705	16.2	49.5
37-636	.551 - .636	5 Rad.	1.422	.650	11.9	36.2	1.859	1.090	.715	16.9	51.6	1.859	1.090	.715	17.0	51.7
50-226	.125 - .226	Blank	.984	.610	14.0	43.2	1.406	1.030	.610	21.9	66.6	1.406	1.030	.610	21.9	66.6
50-326	.226 - .326	1 Rad.	1.094	.620	15.0	45.7	1.515	1.040	.620	22.9	69.7	1.515	1.040	.620	22.9	69.7
50-426	.326 - .426	2 Rad.	1.218	.640	16.2	49.2	1.625	1.050	.640	23.8	72.6	1.625	1.050	.640	23.8	72.6
50-526	.426 - .526	3 Rad.	1.312	.635	16.9	51.6	1.750	1.075	.635	25.0	76.3	1.750	1.075	.635	25.0	76.3

* Both UNC and UNF threads available in No. 10 and larger thread sizes. Check for availability of other grip ranges and designs.

Weights: For brass fasteners, multiply weight of aluminum equivalent by 3.13. Weights for CH (4037 alloy steel) and SS (Type 430 stainless steel) same as steel.

MaxTite® COUNTERSUNK HEAD — METRIC

- Designed for high load applications. Countersunk feature allow fastener to be installed flush with sheet surface.



All dimensions are in millimeters.

See page AE-35 for part number key.

Thread Size x Pitch	B Ref.	C Max.	ØD -0.1	E Max.	F +0.13	Install Drill Size (Ref.)	Install Hole Size		Keyway Dimensions		Pull Up Factor
							Min.	Max.	P +0.08	H	
M4 x 0.7	9.01	1.6	5.61	6.88	1.37	5.6	5.6	5.74	1.57	1.42 - 1.47	1.9
M5 x 0.8	11.17	1.83	7.13	8.73	1.85	7.2	7.2	7.3	2.06	1.7 - 1.75	2.4
M6 x 1	13.43	2.26	8.43	10.33	2.23	8.5	8.5	8.6	2.44	2.06 - 2.13	2.92
M8 x 1.25	16.65	2.64	10.48	12.82	3.05	10.5	10.5	10.75	3.25	2.46 - 2.59	3.18
M10 x 1.5	19.50	3.15	12.44	15.15	3.05	12.5	12.5	12.7	3.25	2.79 - 2.92	3.94
M12 x 1.75	22.79	3.15	15.88	18.6	3.05	15.9	15.9	16.13	3.25	2.79 - 2.92	4.7

Thread-Grip Number	Grip Range	Indent. Mark	Open End Keyed and Keyless				Closed End Keyed and Keyless					
			A ±0.38	M Ref.	Wt. (lbs./1000)		L ±0.38	J Ref.	K Ref.	Wt. (lbs./1000)		
					Alum.	Steel				Alum.	Steel	
M4 - 3.1	1.6 - 3.1	Blank	12	6.98	1	3	16.5	11.5	6.98	1.5	4.6	
M4 - 4.1	3.1 - 4.1	1 Rad.	13	6.98	1	3.2	17.5	11.5	6.98	1.6	4.7	
M4 - 5.1	4.1 - 5.1	2 Rad.	14	6.98	1.1	3.4	18.5	11.5	6.98	1.6	4.8	
M4 - 6.1	5.1 - 6.1	3 Rad.	15	6.98	1.1	3.5	19.5	11.5	6.98	1.6	5	
M4 - 7.1	6.1 - 7.1	4 Rad.	16	6.98	1.2	3.7	20.5	11.5	6.98	1.7	5.2	
M4 - 8.1	7.1 - 8.1	5 Rad.	17	6.98	1.2	3.8	21.5	11.5	6.98	1.8	5.3	
M5 - 3.6	1.8 - 3.6	Blank	16	9.98	2.1	6.3	22	15.97	9.98	3.1	9.5	
M5 - 5.1	3.6 - 5.1	1 Rad.	17.5	9.98	2.2	6.6	23.5	15.97	9.98	3.2	9.8	
M5 - 6.6	5.1 - 6.6	2 Rad.	19	9.98	2.3	7	25	15.97	9.98	3.3	10.1	
M5 - 8.1	6.6 - 8.1	3 Rad.	20.5	9.98	2.4	7.3	26.5	15.97	9.98	3.4	10.5	
M5 - 9.6	8.1 - 9.6	4 Rad.	22	9.98	2.5	7.6	28	15.97	9.98	3.5	10.8	
M5 - 11.1	9.6 - 11.1	5 Rad.	23.5	9.98	2.6	8	29.5	15.97	9.98	3.7	11.2	
M6 - 4.1	2.25 - 4.1	Blank	18	10.96	3.3	10.1	25	17.97	10.96	5	15.1	
M6 - 5.6	4.1 - 5.6	1 Rad.	19.5	10.96	3.5	10.6	26.5	17.97	10.96	5.1	15.6	
M6 - 7.1	5.6 - 7.1	2 Rad.	21	10.96	3.6	11.1	28	17.97	10.96	5.3	16	
M6 - 8.6	7.1 - 8.6	3 Rad.	22.5	10.96	3.8	11.6	29.5	17.97	10.96	5.4	16.5	
M6 - 10.1	8.6 - 10.1	4 Rad.	24	10.96	4	12.2	31	17.97	10.96	5.6	17.1	
M6 - 11.6	10.1 - 11.6	5 Rad.	25.5	10.96	4.2	12.7	32.5	17.97	10.96	5.8	17.7	
M8 - 5.1	2.69 - 5.1	Blank	20.5	12.23	5.2	15.9	28.5	20.23	12.23	7.9	24.2	
M8 - 7.1	5.1 - 7.1	1 Rad.	22.5	12.23	5.5	16.7	30.5	20.23	12.23	8.3	25.2	
M8 - 9.1	7.1 - 9.1	2 Rad.	24.5	12.23	5.8	17.7	32.5	20.23	12.23	8.5	26	
M8 - 11.1	9.1 - 11.1	3 Rad.	26.5	12.23	6.1	18.6	34.5	20.23	12.23	8.9	27	
M8 - 13.1	11.1 - 13.1	4 Rad.	28.5	12.23	6.4	19.6	36.5	20.23	12.23	9.1	27.8	
M8 - 15.1	13.1 - 15.1	5 Rad.	30.5	12.23	6.7	20.4	38.5	20.23	12.23	9.5	28.9	
M10 - 6.1	3.17 - 6.1	Blank	23	12.72	7.6	23.1	31.5	21.47	12.72	11.4	34.7	
M10 - 8.6	6.1 - 8.6	1 Rad.	25.5	12.72	8	24.4	34	21.47	12.72	11.8	36	
M10 - 11.1	8.6 - 11.1	2 Rad.	28	12.72	8.4	25.7	36.5	21.47	12.72	12.2	37.2	
M10 - 13.6	11.1 - 13.6	3 Rad.	30.5	12.72	8.9	27	39	21.47	12.72	12.7	38.6	
M10 - 16.1	13.6 - 16.1	4 Rad.	33	12.72	9.3	28.4	41.5	21.47	12.72	13.1	39.8	
M12 - 6.1	3.17 - 6.1	Blank	27	16.35	14.2	43.2	35	24.34	16.35	20.3	61.7	
M12 - 8.6	6.1 - 8.6	1 Rad.	29.5	16.35	15.1	46	37.5	24.34	16.35	21.1	64.4	
M12 - 11.1	8.6 - 11.1	2 Rad.	32	16.35	15.9	48.3	40	24.34	16.35	21.9	66.8	
M12 - 13.6	11.1 - 13.6	3 Rad.	34.5	16.35	16.9	51.4	42.5	24.34	16.35	22.9	69.8	
M12 - 16.1	13.6 - 16.1	4 Rad.	37	16.35	17.7	53.9	45	24.34	16.35	23.8	72.6	

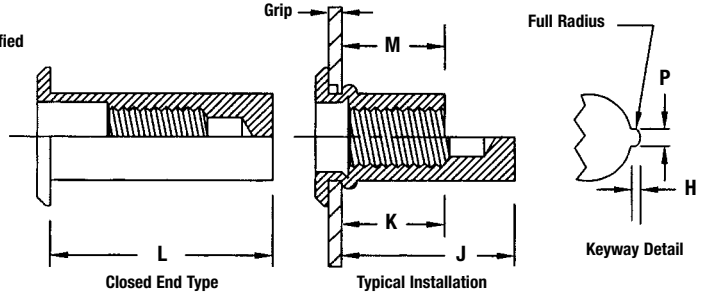
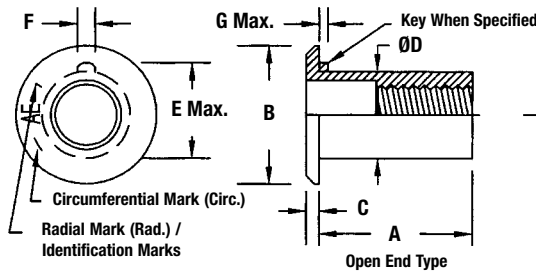
Weights: For brass fasteners, multiply weight of aluminum equivalent by 3.13. Weights for CH (4037 alloy steel) and SS (Type 430 stainless steel) same as steel.



MaxTite® FLATHEAD — UNIFIED



- Designed for high load applications. Available with rib, key or full hex features for high torque applications.



All dimensions are in inches.

See page AE-35 for part number key.

Thread Size*	B ±.015	C Nom.	ØD +.000 -0.004	E Max.	F +.005 -0.000	G Max.	Install Drill Size (Ref.)	Install Hole Size		Keyway Dimensions		Pull Up Factor
								Min.	Max.	P +.003 -0.000	H	
#6-32	.325	.032	.189	.240	.054	.023	#12	.189	.193	.062	.056 - .058	.065
#8-32	.357	.032	.221	.271	.054	.023	#2	.221	.226	.062	.056 - .058	.065
#10-32	.406	.038	.250	.302	.054	.023	1/4	.250	.256	.062	.056 - .058	.080
1/4-20	.475	.058	.332	.382	.054	.035	Q	.332	.338	.062	.056 - .058	.095
5/16-18	.665	.062	.413	.505	.120	.040	Z	.413	.423	.128	.097 - .102	.120
3/8-16	.781	.088	.490	.597	.120	.040	12.5mm	.490	.500	.128	.110 - .115	.155
1/2-13 (1)	.906	.085	.625	.733	.120	.040	5/8	.625	.635	.128	.110 - .115	.185

(1) Before ordering please contact the factory for further information regarding this thread size.

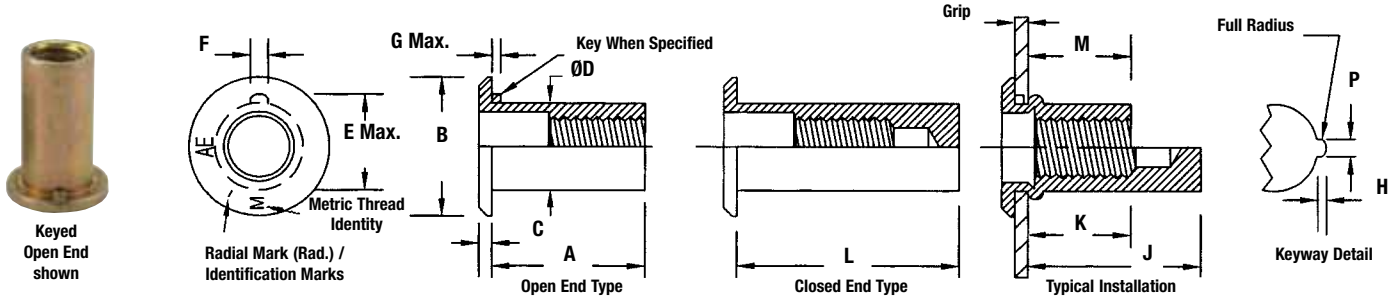
Thread-Grip Number	Grip Range	Indent. Mark	Open End Keyed and Keyless				Closed End Keyless				Closed End Keyed					
			A ±.015	M Ref.	Wt. (lbs./1000)		L ±.015	J Ref.	K Ref.	Wt. (lbs./1000)		L ±.015	J Ref.	K Ref.	Wt. (lbs./1000)	
					Alum.	Steel				Alum.	Steel				Alum.	Steel
6-75	.010 - .075	1 Rad.	.438	.300	.8	2.4	.625	.490	.305	1.2	3.5	.750	.615	.405	1.4	4.1
6-120	.075 - .120	3 Rad.	.500	.315	.9	2.6	.625	.440	.255	1.1	3.4	.750	.565	.355	1.3	4.0
6-160	.120 - .160	5 Rad.	.500	.270	.9	2.6	.750	.520	.260	1.3	4.0	.750	.520	.310	1.3	4.0
6-200	.160 - .200	1 Circ.	.562	.290	.9	2.8	.750	.480	.260	1.3	3.9	.750	.480	.260	1.3	3.9
6-240	.200 - .240	2 Circ.	.625	.310	1.0	3.0	.750	.435	.260	1.3	3.8	.750	.435	.260	1.3	3.8
6-280	.240 - .280	3 Circ.	.687	.330	1.1	3.3	.812	.455	.265	1.3	4.1	.812	.455	.265	1.3	4.1
8-75	.010 - .075	1 Rad.	.438	.300	1.0	3.0	.625	.490	.305	1.5	4.5	.750	.615	.405	1.7	5.3
8-120	.075 - .120	3 Rad.	.500	.315	1.1	3.3	.625	.440	.255	1.4	4.4	.750	.565	.355	1.7	5.2
8-160	.120 - .160	5 Rad.	.500	.270	1.1	3.2	.750	.520	.260	1.7	5.1	.750	.520	.310	1.7	5.1
8-200	.160 - .200	1 Circ.	.625	.350	1.3	3.9	.750	.475	.265	1.6	5.0	.750	.475	.265	1.6	5.0
8-240	.200 - .240	2 Circ.	.625	.305	1.2	3.8	.875	.555	.310	1.9	5.6	.875	.555	.310	1.9	5.6
8-280	.240 - .280	3 Circ.	.687	.340	1.3	4.1	.875	.530	.290	1.8	5.6	.875	.530	.290	1.8	5.6
10-80	.010 - .080	Blank	.531	.380	1.5	4.5	.781	.630	.380	2.3	6.8	.781	.630	.380	2.3	6.8
10-130	.080 - .130	1 Rad.	.594	.390	1.6	4.9	.843	.640	.390	2.4	7.2	.843	.640	.390	2.4	7.2
10-180	.130 - .180	2 Rad.	.641	.390	1.7	5.1	.891	.640	.390	2.4	7.4	.891	.640	.390	2.4	7.4
10-230	.180 - .230	3 Rad.	.703	.395	1.8	5.4	.953	.645	.395	2.6	7.8	.953	.645	.395	2.6	7.8
10-280	.230 - .280	4 Rad.	.750	.395	1.9	5.7	1.000	.645	.395	2.6	8.0	1.000	.645	.395	2.6	8.0
10-330	.280 - .330	5 Rad.	.797	.385	1.9	5.9	1.047	.630	.385	2.7	8.2	1.047	.630	.385	2.7	8.2
25-80	.020 - .080	Blank	.625	.450	3.2	9.7	.937	.760	.440	4.9	15.1	.937	.760	.440	5.0	15.1
25-140	.080 - .140	1 Rad.	.687	.450	3.4	10.3	1.000	.760	.440	5.1	15.7	1.000	.760	.440	5.1	15.7
25-200	.140 - .200	2 Rad.	.750	.450	3.6	10.9	1.062	.760	.440	5.3	16.2	1.062	.760	.440	5.3	16.3
25-260	.200 - .260	3 Rad.	.812	.445	3.8	11.5	1.125	.755	.445	5.5	16.8	1.125	.755	.445	5.5	16.8
25-320	.260 - .320	4 Rad.	.875	.445	4.0	12.0	1.187	.755	.445	5.7	17.4	1.187	.755	.445	5.7	17.4
25-380	.320 - .380	5 Rad.	.937	.445	4.1	12.6	1.250	.755	.445	5.9	18.0	1.250	.755	.445	5.9	18.0
31-125	.030 - .125	Blank	.750	.505	6.0	18.2	1.187	.940	.550	9.6	29.1	1.187	.940	.550	9.6	29.2
31-200	.125 - .200	1 Rad.	.875	.555	6.7	20.3	1.281	.960	.555	10.1	30.6	1.281	.960	.555	10.1	30.7
31-275	.200 - .275	2 Rad.	.937	.540	6.9	21.1	1.343	.950	.560	10.3	31.4	1.343	.950	.560	10.3	31.5
31-350	.275 - .350	3 Rad.	1.032	.560	7.4	22.6	1.437	.965	.570	10.8	32.9	1.437	.965	.570	10.8	32.9
31-425	.350 - .425	4 Rad.	1.125	.580	7.9	24.0	1.531	.985	.575	11.3	34.3	1.531	.985	.575	11.3	34.4
31-500	.425 - .500	5 Rad.	1.187	.565	8.2	24.9	1.593	.975	.580	11.5	35.1	1.593	.975	.580	11.6	35.2
37-115	.030 - .115	Blank	.844	.585	9.7	29.7	1.281	1.020	.660	14.8	45.0	1.281	1.020	.660	14.8	45.1
37-200	.115 - .200	1 Rad.	.938	.595	10.3	31.4	1.375	1.030	.670	15.4	46.8	1.375	1.030	.670	15.4	46.9
37-285	.200 - .285	2 Rad.	1.031	.605	10.9	33.2	1.468	1.040	.680	15.9	48.5	1.468	1.040	.680	16.0	48.6
37-370	.285 - .370	3 Rad.	1.125	.615	11.5	34.9	1.562	1.050	.690	16.5	50.3	1.562	1.050	.690	16.5	50.4
37-455	.370 - .455	4 Rad.	1.218	.630	12.0	36.7	1.656	1.065	.710	17.1	52.1	1.656	1.065	.710	17.1	52.2
37-540	.455 - .540	5 Rad.	1.312	.635	12.6	38.5	1.750	1.075	.715	17.7	53.8	1.750	1.075	.715	17.7	53.9
50-150	.050 - .150	Blank	.906	.605	14.0	42.6	1.328	1.030	.605	21.9	66.6	1.328	1.030	.605	21.9	66.6
50-250	.150 - .250	1 Rad.	1.031	.630	15.2	46.3	1.453	1.055	.630	23.1	70.3	1.453	1.055	.630	23.1	70.3
50-350	.250 - .350	2 Rad.	1.141	.640	16.2	49.2	1.562	1.060	.640	24.0	73.2	1.562	1.060	.640	24.0	73.2
50-450	.350 - .450	3 Rad.	1.250	.650	17.1	52.2	1.671	1.070	.650	25.0	76.1	1.671	1.070	.650	25.0	76.1

* Both UNC and UNF threads available in No. 10 and larger thread sizes. Check for availability of other grip ranges and designs.

Weights: For brass fasteners, multiply weight of aluminum equivalent by 3.13. Weights for CH (4037 alloy steel) and SS (Type 430 stainless steel) same as steel.

MaxTite® FLATHEAD — METRIC

- Designed for high load applications. Available with rib, key or full hex features for high torque applications.



All dimensions are in millimeters.

See page AE-35 for part number key.

Thread Size x Pitch	B ±0.38	C Nom.	ØD -0.1	E Max.	F +0.13	G Max.	Install Drill Size (Ref.)	Install Hole Size		Keyway Dimensions		Pull Up Factor
								Min.	Max.	P +0.08	H	
M4 x 0.7	9.01	0.81	5.61	6.88	1.37	0.58	5.6	5.6	5.74	1.57	1.42 - 1.47	1.9
M5 x 0.8	11.17	1.22	7.13	8.73	1.85	0.58	7.2	7.2	7.3	2.06	1.7 - 1.75	2.4
M6 x 1	13.43	1.47	8.43	10.33	2.23	0.89	8.5	8.5	8.6	2.44	2.06 - 2.13	2.9
M8 x 1.25	16.65	1.57	10.48	12.82	3.05	1.02	10.5	10.5	10.75	3.25	2.46 - 2.59	3.18
M10 x 1.5	19.5	2.23	12.44	15.15	3.05	1.02	12.5	12.5	12.7	3.25	2.79 - 2.92	3.94
M12 x 1.75	22.79	2.23	15.88	18.6	3.05	1.02	15.9	15.9	16.13	3.25	2.79 - 2.92	4.7

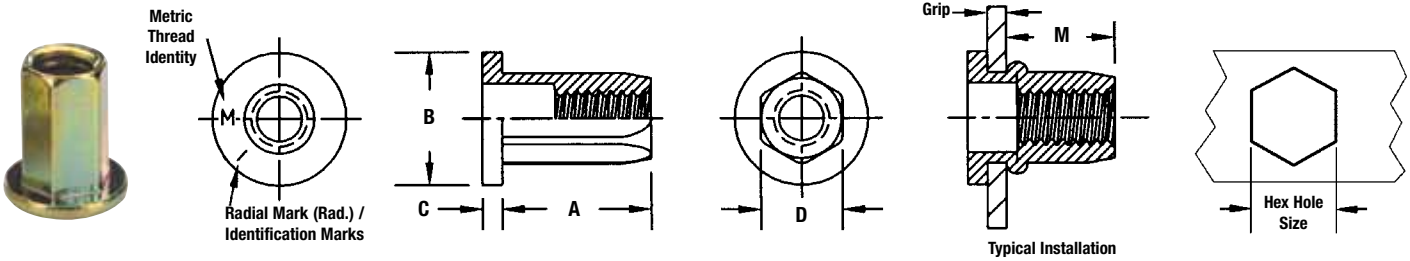
Thread-Grip Number	Grip Range	Indent. Mark	Open End Keyed and Keyless				Closed End Keyed and Keyless					
			A ±0.38	M Ref.	Wt. (lbs./1000)		L ±0.38	J Ref.	K Ref.	Wt. (lbs./1000)		
					Alum.	Steel				Alum.	Steel	
M4 - 2.0	0.25 - 2	Blank	11	7.08	1	3.1	16	12.08	7.08	1.6	5	
M4 - 3.0	2 - 3	1 Rad.	12	7.08	1.1	3.3	17	12.08	7.08	1.7	5.2	
M4 - 4.0	3 - 4	2 Rad.	13	7.08	1.1	3.4	18	12.08	7.08	1.8	5.3	
M4 - 5.0	4 - 5	3 Rad.	14	7.08	1.2	3.5	19	12.08	7.08	1.8	5.5	
M4 - 6.0	5 - 6	4 Rad.	15	7.08	1.2	3.7	20	12.08	7.08	1.9	5.7	
M4 - 7.0	6 - 7	5 Rad.	16	7.08	1.3	3.8	21	12.08	7.08	1.9	5.8	
M5 - 2.0	0.25 - 2	Blank	14.5	10.09	2.2	6.6	20	15.6	10.09	3	9.3	
M5 - 3.5	2 - 3.5	1 Rad.	16	10.09	2.3	6.9	21.5	15.6	10.09	3.2	9.6	
M5 - 5.0	3.5 - 5	2 Rad.	17.5	10.09	2.4	7.2	23	15.6	10.09	3.2	9.9	
M5 - 6.5	5 - 6.5	3 Rad.	19	10.09	2.5	7.5	24.5	15.6	10.09	3.4	10.3	
M5 - 8.0	6.5 - 8	4 Rad.	20.5	10.09	2.6	7.9	26	15.6	10.09	3.5	10.6	
M5 - 9.5	8 - 9.5	5 Rad.	22	10.09	2.7	8.2	27.5	15.6	10.09	3.6	11.1	
M6 - 2.0	0.75 - 2	Blank	15.5	10.58	3.4	10.3	23	18.07	10.58	5.1	15.5	
M6 - 3.5	2 - 3.5	1 Rad.	17	10.58	3.5	10.7	24.5	18.07	10.58	5.3	16	
M6 - 5.0	3.5 - 5	2 Rad.	18.5	10.58	3.7	11.2	26	18.07	10.58	5.4	16.5	
M6 - 6.5	5 - 6.5	3 Rad.	20	10.58	3.8	11.7	27.5	18.07	10.58	5.6	17	
M6 - 8.0	6.5 - 8	4 Rad.	21.5	10.58	4	12.2	29	18.07	10.58	5.7	17.5	
M6 - 9.5	8 - 9.5	5 Rad.	23	10.58	4.2	12.7	30.5	18.07	10.58	5.9	18	
M8 - 3.0	0.75 - 3	Blank	18	11.83	5.2	15.9	26	19.82	11.83	7.9	24	
M8 - 5.0	3 - 5	1 Rad.	20	11.83	5.7	16.9	28	19.82	11.83	8.2	25	
M8 - 7.0	5 - 7	2 Rad.	22	11.83	5.9	17.9	30	19.82	11.83	8.6	26	
M8 - 9.0	7 - 9	3 Rad.	24	11.83	6.2	19	32	19.82	11.83	8.9	27.2	
M8 - 11.0	9 - 11	4 Rad.	26	11.83	6.5	19.7	34	19.82	11.83	9.1	27.8	
M8 - 13.0	11 - 13	5 Rad.	28	11.83	6.8	20.8	36	19.82	11.83	9.5	28.8	
M10 - 3.0	1 - 3	Blank	20	13.2	8	24.5	29	22.18	13.2	12.2	37.3	
M10 - 5.5	3 - 5.5	1 Rad.	22.5	13.2	8.5	25.9	31.5	22.18	13.2	12.6	38.4	
M10 - 8.0	5.5 - 8	2 Rad.	25	13.2	8.9	27	34	22.18	13.2	13.1	39.5	
M10 - 10.5	8 - 10.5	3 Rad.	27.5	13.2	9.3	28.4	36.5	22.18	13.2	13.4	41	
M10 - 13.0	10.5 - 13	4 Rad.	30	13.2	9.7	29.6	39	22.18	13.2	13.8	42.1	
M12 - 3.0	1 - 3	Blank	24	16.45	14.9	45.5	32	24.44	16.45	21.1	64.1	
M12 - 5.5	3 - 5.5	1 Rad.	26.5	16.45	15.9	48.3	34.5	24.44	16.45	21.9	66.7	
M12 - 8.0	5.5 - 8	2 Rad.	29	16.45	16.6	50.7	37	24.44	16.45	22.7	69.3	
M12 - 10.5	8 - 10.5	3 Rad.	31.5	16.45	17.6	53.5	39.5	24.44	16.45	23.6	71.9	
M12 - 13.0	10.5 - 13	4 Rad.	34	16.45	18.5	56.3	42	24.44	16.45	24.5	74.7	

Weights: For brass fasteners, multiply weight of aluminum equivalent by 3.13. Weights for CH (4037 alloy steel) and SS (Type 430 stainless steel) same as steel.

STANDARD FULL-HEX

- Designed for high load applications.
- Full hex feature for high torque applications.

Installed With a Spin-Pull Tool
(See page 29)



All dimensions are in inches. See page AE-35 for part number key.

Thread Size (1)	Part Number (2)	Grip Range (1)	Identification Mark	A ±.015	B ±.015	C Nom.	D Max.	M Ref.	Hex Hole Size In Sheet +.005 -.000
#10-32	AES10H85ZYR	.010 - .085	Blank	.344	.344	.043	.223	.200	.224
#10-32	AES10H135ZYR	.085 - .135	1 Rad.	.406	.344	.043	.223	.210	.224
#10-32	AES10H185ZYR	.135 - .185	2 Rad.	.453	.344	.043	.223	.210	.224
1/4-20	AES25H85ZYR	.020 - .085	Blank	.406	.437	.043	.296	.245	.297
1/4-20	AES25H145ZYR	.085 - .145	1 Rad.	.469	.437	.043	.296	.250	.297
1/4-20	AES25H205ZYR	.145 - .205	2 Rad.	.531	.437	.043	.296	.250	.297
5/16-18	AES31H105ZYR	.030 - .105	Blank	.562	.562	.048	.368	.375	.369
5/16-18	AES31H175ZYR	.105 - .175	1 Rad.	.640	.562	.048	.368	.380	.369
5/16-18	AES31H245ZYR	.175 - .245	2 rad.	.703	.562	.048	.368	.375	.369
3/8-16	AES37H115ZYR	.030 - .115	Blank	.625	.656	.058	.437	.400	.438
3/8-16	AES37H205ZYR	.115 - .205	1 Rad.	.718	.656	.058	.437	.405	.438
3/8-16	AES37H295ZYR	.205 - .295	2 Rad.	.812	.656	.058	.437	.410	.438

All dimensions are in millimeters.

Thread Size (1)	Part Number (2)	Grip Range (1)	Identification Mark	A ±0.38	B ±0.38	C Nom.	D Max.	M Ref.	Hex Hole Size In Sheet +0.13
M5 x 0.8	AESM5H215ZYR	0.5 - 2.15	Blank	10.3	9.52	1.09	6.35	6.72	6.36
M5 x 0.8	AESM5H355ZYR	2.15 - 3.55	1 Rad.	11.9	9.52	1.09	6.35	6.72	6.36
M5 x 0.8	AESM5H505ZYR	3.55 - 5.05	2 Rad.	13.48	9.52	1.09	6.35	6.72	6.36
M6 x 1	AESM6H215ZYR	0.5 - 2.15	Blank	10.3	11.09	1.09	7.52	6.22	7.54
M6 x 1	AESM6H365ZYR	2.15 - 3.65	1 Rad.	11.9	11.09	1.09	7.52	6.22	7.54
M6 x 1	AESM6H520ZYR	3.65 - 5.2	2 Rad.	13.48	11.09	1.09	7.52	6.22	7.54
M8 x 1.25	AESM8H255ZYR	0.5 - 2.55	Blank	15.86	15.07	1.57	10.08	10.35	10.11
M8 x 1.25	AESM8H455ZYR	2.5 - 4.55	1 Rad.	17.84	15.07	1.57	10.08	10.35	10.11
M8 x 1.25	AESM8H660ZYR	4.55 - 6.6	2 Rad.	19.82	15.07	1.57	10.08	10.35	10.11
M10 x 1.5	AESM10H295ZYR	0.75 - 2.95	Blank	15.88	17.48	1.57	11.89	13.08	11.91
M10 x 1.5	AESM10H520ZYR	2.95 - 5.2	1 Rad.	18.24	17.48	1.57	11.89	13.08	11.91
M10 x 1.5	AESM10H750ZYR	5.2 - 7.5	2 Rad.	20.62	17.48	1.57	11.89	13.08	11.91

(1) Additional thread sizes and grip ranges are available.

(2) Other materials available. See page 35 for details. Cadmium finish available upon request.

MATERIAL & FINISH SPECIFICATIONS

Code	Material	Threads	Standard Finish	Min. Tensile Strength (PSI Ult.)
S	Low Carbon Steel	Unified, 2B per ASME B1.1 Metric, 6H per ASME B1.13M	RoHS Compliant Zinc Yellow	45,000

Note: See page 35 for part number key.