

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

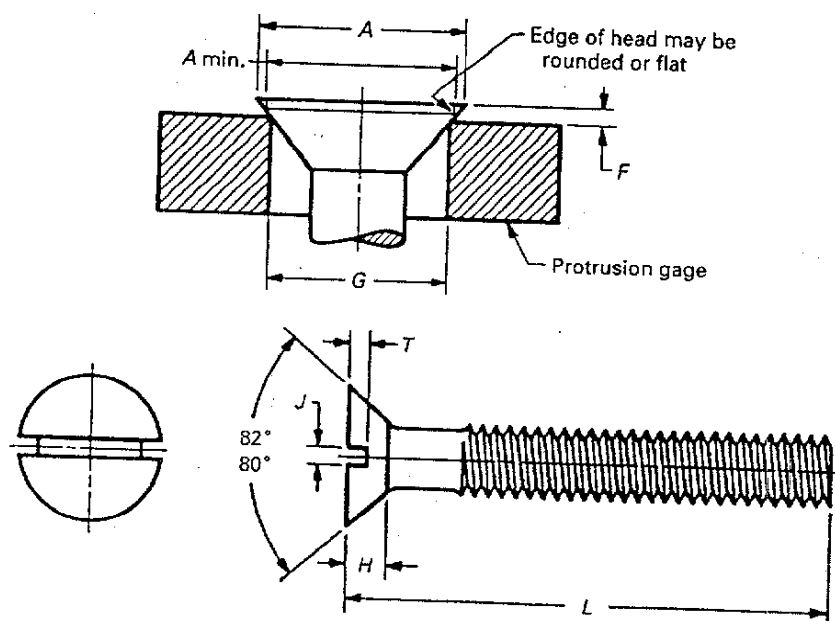


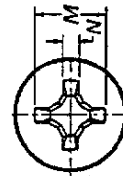
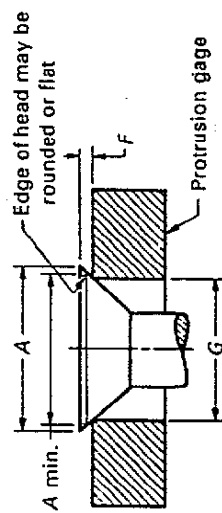
TABLE 1A DIMENSIONS OF SLOTTED FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H, Ref. [Note (3)]	Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	
0000 0.0210	...	0.040	0.035	0.011	0.008	0.004	0.007	0.003	Note (5)	Note (5)	Note (5)
000 0.0340	...	0.060	0.055	0.016	0.011	0.007	0.009	0.005	Note (5)	Note (5)	Note (5)
00 0.0470	...	0.087	0.080	0.028	0.017	0.010	0.014	0.009	Note (5)	Note (5)	Note (5)
0 0.0600	1/8	0.112	0.096	0.035	0.023	0.016	0.015	0.010	0.026	0.016	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.026	0.019	0.019	0.012	0.028	0.016	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.031	0.023	0.023	0.015	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.035	0.027	0.027	0.017	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.039	0.031	0.030	0.020	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.043	0.035	0.034	0.022	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.048	0.039	0.038	0.024	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.054	0.045	0.045	0.029	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.060	0.050	0.053	0.034	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.067	0.056	0.060	0.039	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.075	0.064	0.070	0.046	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.084	0.072	0.088	0.058	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.094	0.081	0.106	0.070	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.223	0.094	0.081	0.103	0.066	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.106	0.091	0.103	0.065	0.081	0.049	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.118	0.102	0.120	0.077	0.089	0.053	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.133	0.116	0.137	0.088	0.097	0.058	0.962
3/4 0.7500	...	1.285	1.215	0.372	0.149	0.131	0.171	0.111	0.112	0.067	1.186

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter shall have undercut heads as shown in Table 5A.
- (3) Tabulated values determined from formula for maximum H in Appendix A.
- (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (5) Not practical to gage.



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

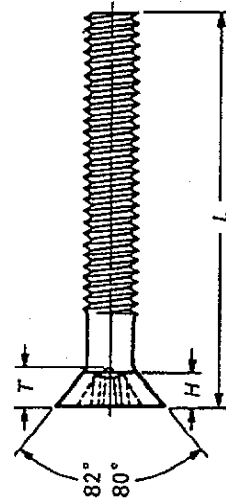


TABLE 1B ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 1B DIMENSIONS OF TYPE I CROSS RECESSED FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H, Ref. [Note (3)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.						Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.035	0.062	0.035	0.014	0	0.036	0.020	0.026	0.016	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.070	0.043	0.015	0	0.044	0.028	0.028	0.016	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.086	0.055	0.017	1	0.056	0.040	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.100	0.060	0.018	1	0.061	0.045	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.122	0.081	0.018	1	0.082	0.066	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.148	0.074	0.027	2	0.075	0.052	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.168	0.094	0.029	2	0.095	0.072	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.182	0.110	0.030	2	0.110	0.087	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.198	0.124	0.032	2	0.125	0.102	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.262	0.144	0.035	3	0.139	0.116	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.276	0.160	0.036	3	0.154	0.131	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.358	0.205	0.061	4	0.196	0.174	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.386	0.234	0.065	4	0.225	0.203	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.223	0.402	0.250	0.068	4	0.241	0.219	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.418	0.265	0.069	4	0.256	0.234	0.081	0.049	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.443	0.289	0.073	4	0.280	0.258	0.089	0.053	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.565	0.329	0.079	5	0.309	0.283	0.097	0.058	0.962
3/4 0.7500	...	1.285	1.215	0.372	0.628	0.393	0.087	5	0.373	0.347	0.112	0.067	1.186

GENERAL NOTES:

(a) For additional requirements refer to para. 2.

(b) For reference, see Table 1B Illustration on previous page.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter shall have undercut heads as shown in Table 5B.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

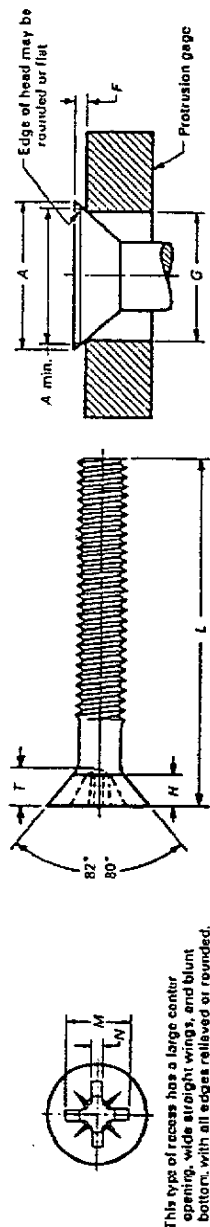


TABLE 1C DIMENSIONS OF TYPE 1A CROSS RECESSED FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H, Ref. [Note (3)]	Recess Depth T, Ref. [Note (3)]	Recess Diameter M, Ref. [Note (3)]	Driver Size	Recess Penetration Gaging Depth F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.					Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.035	0.036	0.062	0	0.037	0.021	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.044	0.070	0	0.045	0.029	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.055	0.096	1	0.053	0.037	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.060	0.100	1	0.058	0.042	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.081	0.122	1	0.079	0.063	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.077	0.148	2	0.071	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.098	0.168	2	0.091	0.073	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.112	0.182	2	0.107	0.089	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.127	0.198	2	0.122	0.104	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.149	0.262	3	0.136	0.118	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.164	0.276	3	0.151	0.133	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.211	0.358	4	0.193	0.175	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.239	0.386	4	0.222	0.204	0.653
7/16 0.4375	5/8	0.760	0.715	0.223	0.256	0.402	4	0.238	0.220	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.271	0.418	4	0.253	0.235	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.294	0.440	4	0.276	0.258	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.334	0.566	5	0.307	0.286	0.962
3/4 0.7500	...	1.285	1.215	0.372	0.400	0.630	5	0.372	0.351	1.186

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter shall have undercut heads as shown in Table 5C.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

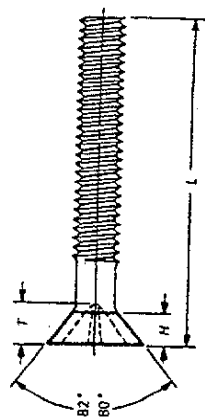
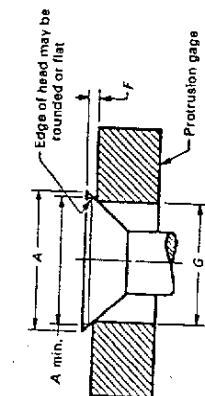


TABLE 1D DIMENSIONS OF TYPE II CROSS RECESSED FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H, Ref. [Note (3)]	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size [Note (4)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]
		Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.035	0.036	0.021	...	Note (6)	Note (6)	0.026	0.016	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.048	0.024	...	Note (6)	Note (6)	0.028	0.016	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.060	0.027	...	0.040	0.029	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.072	0.030	...	0.053	0.041	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.082	0.032	...	0.064	0.052	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.094	0.035	...	0.077	0.064	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.106	0.038	...	0.089	0.075	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.124	0.043	...	0.113	0.099	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.148	0.048	...	0.137	0.122	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.172	0.054	...	0.162	0.145	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.195	0.061	...	0.193	0.176	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.252	0.074	...	0.251	0.232	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.302	0.086	...	0.303	0.281	0.065	0.039	0.653
7/16 0.4375	5/8	0.780	0.715	0.223	0.332	0.092	...	0.332	0.310	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.358	0.098	...	0.359	0.335	0.081	0.049	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.387	0.104	...	0.389	0.364	0.089	0.053	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.387	0.104	...	0.389	0.364	0.097	0.058	0.962
3/4 0.7500	...	1.285	1.215	0.372	0.387	0.104	...	0.389	0.364	0.112	0.067	1.186

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter shall have undercut heads as shown in Table 5D.
- (3) Tabulated values determined from formula for maximum H in Appendix A.
- (4) Point same on all drivers.
- (5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (6) Not practical to gage.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

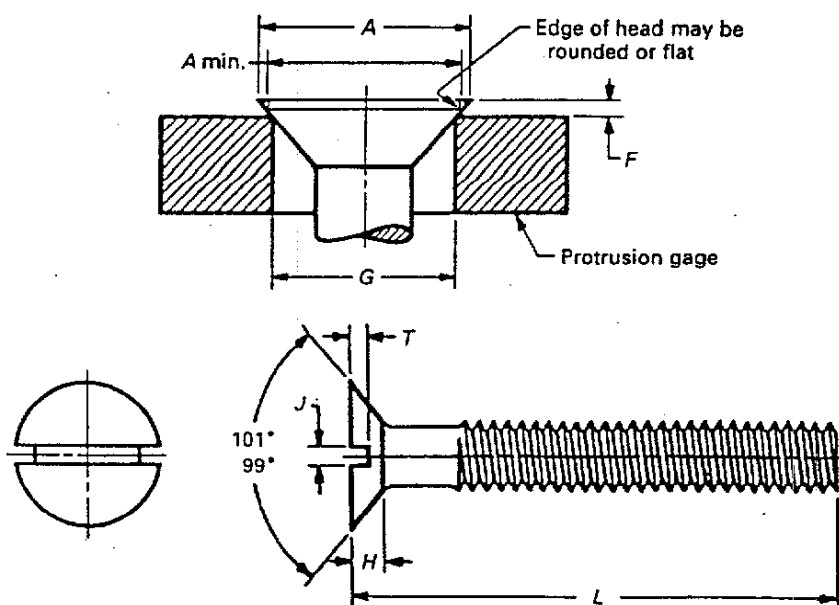


TABLE 2A DIMENSIONS OF SLOTTED 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]
	Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	
0000 0.0210	0.040	0.035	0.009	0.008	0.005	0.008	0.004	Note (4)	Note (4)	Note (4)
000 0.0340	0.060	0.055	0.014	0.012	0.008	0.011	0.007	Note (4)	Note (4)	Note (4)
00 0.0470	0.087	0.080	0.020	0.017	0.010	0.013	0.008	Note (4)	Note (4)	Note (4)
0 0.0600	0.112	0.095	0.026	0.023	0.016	0.013	0.008	0.020	0.012	0.074
1 0.0730	0.137	0.118	0.031	0.026	0.019	0.016	0.010	0.021	0.013	0.098
2 0.0860	0.162	0.142	0.037	0.031	0.023	0.019	0.012	0.022	0.014	0.121
3 0.0990	0.187	0.165	0.043	0.035	0.027	0.022	0.014	0.024	0.015	0.144
4 0.1120	0.212	0.188	0.049	0.039	0.031	0.024	0.017	0.025	0.016	0.167
6 0.1380	0.262	0.235	0.060	0.048	0.039	0.030	0.022	0.028	0.017	0.214
8 0.1640	0.312	0.282	0.072	0.054	0.045	0.036	0.027	0.031	0.019	0.261
10 0.1900	0.362	0.329	0.083	0.060	0.050	0.042	0.031	0.034	0.021	0.307
1/4 0.2500	0.477	0.437	0.110	0.075	0.064	0.055	0.042	0.040	0.025	0.415
5/16 0.3125	0.597	0.550	0.138	0.084	0.072	0.069	0.053	0.047	0.030	0.526
3/8 0.3750	0.717	0.662	0.165	0.094	0.081	0.083	0.065	0.053	0.034	0.638

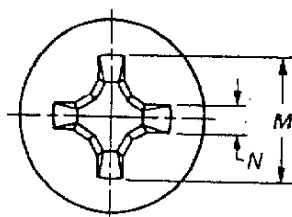
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (4) Not practical to gage.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.

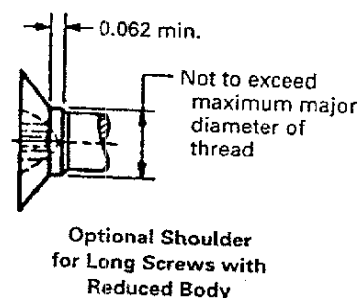
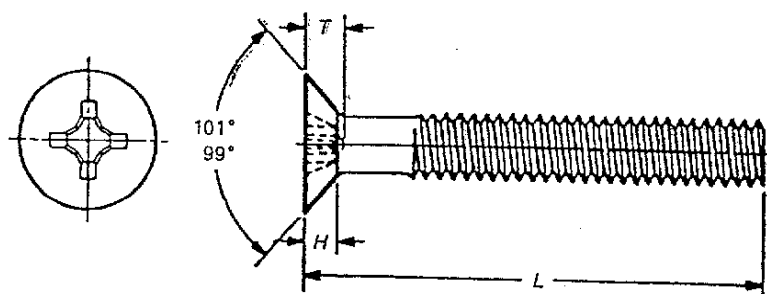
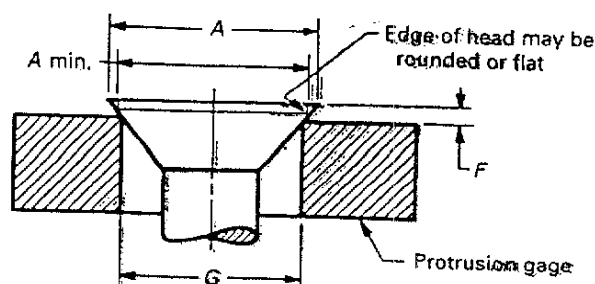


TABLE 2B DIMENSIONS OF TYPE I CROSS RECESSED 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
0	0.0600	0.112	0.095	0.026	0.054	0.027	0.013	0	0.028	0.012	0.020	0.012	0.074
1	0.0730	0.137	0.118	0.031	0.062	0.035	0.014	0	0.036	0.020	0.021	0.013	0.098
2	0.0860	0.162	0.142	0.037	0.088	0.048	0.012	1	0.049	0.033	0.022	0.014	0.121
3	0.0990	0.187	0.165	0.043	0.096	0.055	0.014	1	0.056	0.040	0.024	0.015	0.144
4	0.1120	0.212	0.188	0.049	0.110	0.070	0.018	1	0.071	0.055	0.025	0.016	0.167
6	0.1380	0.262	0.235	0.060	0.148	0.074	0.027	2	0.075	0.052	0.028	0.017	0.214
8	0.1640	0.312	0.282	0.072	0.162	0.090	0.028	2	0.090	0.067	0.031	0.019	0.261
10	0.1900	0.362	0.329	0.083	0.178	0.104	0.030	2	0.105	0.082	0.034	0.021	0.307
1/4	0.2500	0.477	0.437	0.110	0.240	0.124	0.033	3	0.118	0.095	0.040	0.025	0.415
5/16	0.3125	0.597	0.550	0.138	0.310	0.157	0.053	4	0.148	0.126	0.047	0.030	0.526
3/8	0.3750	0.717	0.662	0.165	0.336	0.182	0.056	4	0.173	0.151	0.053	0.034	0.638

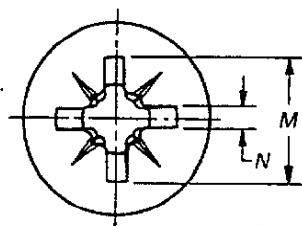
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

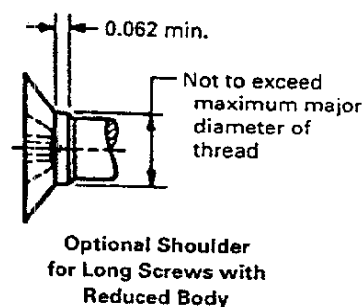
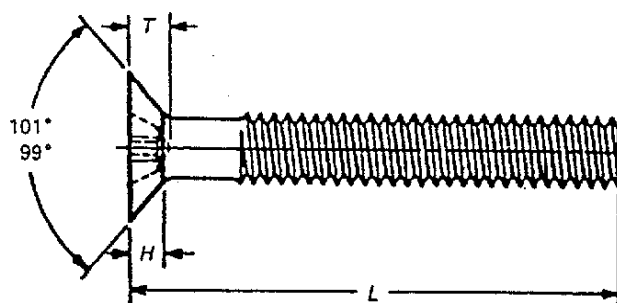
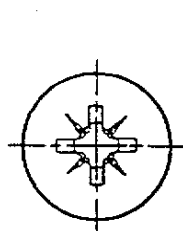
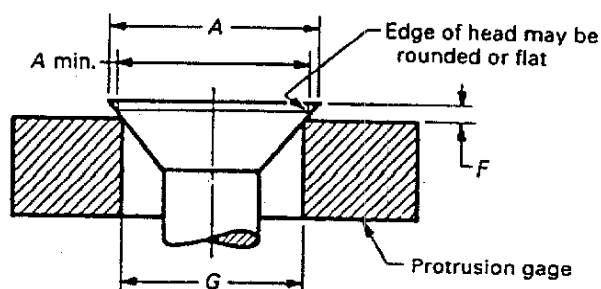


TABLE 2C DIMENSIONS OF TYPE IA CROSS RECESSED 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
0	0.0600	0.112	0.095	0.026	0.054	0.028	0.018	0	0.029	0.013	0.020	0.012	0.074
1	0.0730	0.137	0.118	0.031	0.062	0.036	0.018	0	0.037	0.021	0.021	0.013	0.098
2	0.0860	0.162	0.142	0.037	0.088	0.048	0.028	1	0.046	0.030	0.022	0.014	0.121
3	0.0990	0.187	0.165	0.043	0.096	0.055	0.029	1	0.053	0.037	0.024	0.015	0.144
4	0.1120	0.212	0.188	0.049	0.110	0.070	0.029	1	0.068	0.052	0.025	0.016	0.167
6	0.1380	0.262	0.235	0.060	0.148	0.077	0.041	2	0.071	0.053	0.028	0.017	0.214
8	0.1640	0.312	0.282	0.072	0.162	0.092	0.041	2	0.086	0.068	0.031	0.019	0.261
10	0.1900	0.362	0.329	0.083	0.178	0.107	0.041	2	0.101	0.083	0.034	0.021	0.307
1/4	0.2500	0.477	0.437	0.110	0.240	0.126	0.056	3	0.114	0.096	0.040	0.025	0.415
5/16	0.3125	0.597	0.550	0.138	0.310	0.163	0.085	4	0.145	0.127	0.047	0.030	0.526
3/8	0.3750	0.717	0.662	0.165	0.336	0.187	0.085	4	0.170	0.152	0.053	0.034	0.638

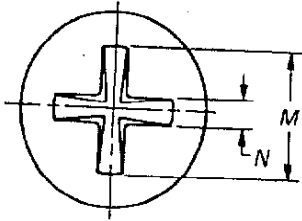
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

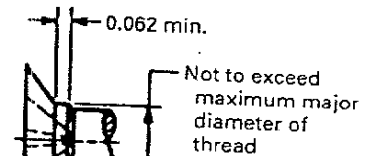
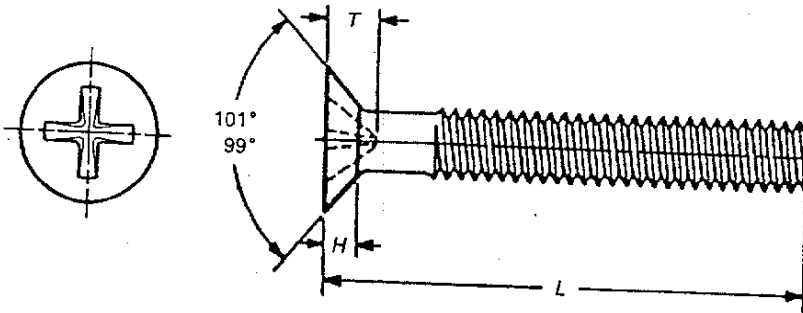
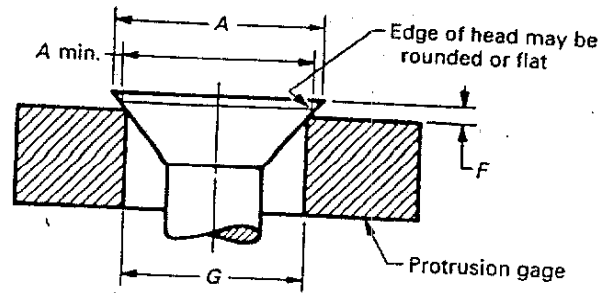
- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.



Optional Shoulder for Long Screws with Reduced Body

TABLE 2D DIMENSIONS OF TYPE II CROSS RECESSED 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size [Note (3)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
0	0.0600	0.112	0.095	0.026	0.057	0.026	0.020	...	Note (5)	Note (5)	0.020	0.012	0.074
1	0.0730	0.137	0.118	0.031	0.078	0.040	0.023	...	Note (5)	Note (5)	0.021	0.013	0.098
2	0.0860	0.162	0.142	0.037	0.092	0.048	0.025	...	0.025	0.015	0.022	0.014	0.121
3	0.0990	0.187	0.165	0.043	0.113	0.061	0.027	...	0.039	0.028	0.024	0.015	0.144
4	0.1120	0.212	0.188	0.049	0.131	0.070	0.029	...	0.051	0.036	0.025	0.016	0.167
6	0.1380	0.262	0.235	0.060	0.157	0.086	0.033	...	0.068	0.051	0.028	0.017	0.214
8	0.1640	0.312	0.282	0.072	0.185	0.102	0.037	...	0.086	0.067	0.031	0.019	0.261
10	0.1900	0.362	0.329	0.083	0.219	0.122	0.042	...	0.109	0.087	0.034	0.021	0.307
1/4	0.2500	0.477	0.437	0.110	0.288	0.164	0.053	...	0.154	0.132	0.040	0.025	0.415
5/16	0.3125	0.597	0.550	0.138	0.355	0.207	0.063	...	0.197	0.175	0.047	0.030	0.526
3/8	0.3750	0.717	0.662	0.165	0.433	0.258	0.075	...	0.249	0.226	0.053	0.034	0.638

GENERAL NOTE: For additional...

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) Point same on all drivers.
- (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (5) Not practical to gage.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

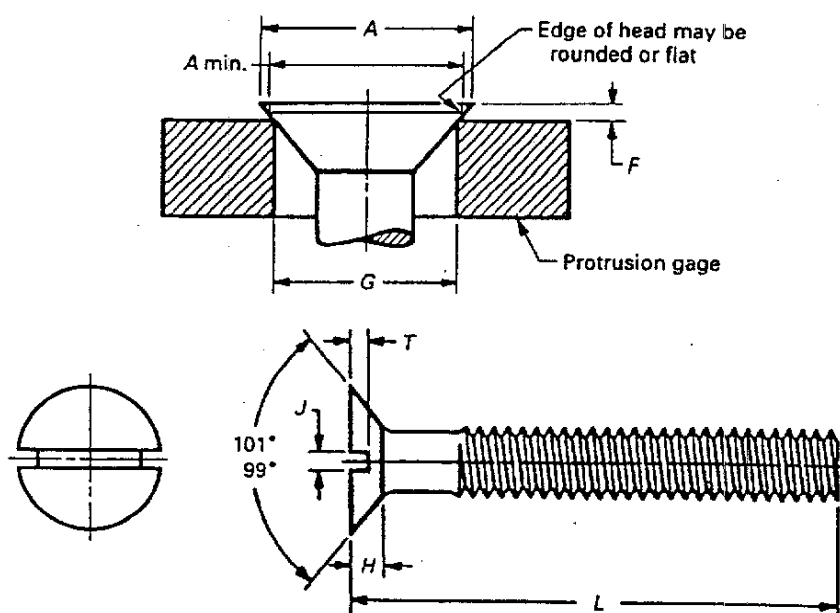


TABLE 3A DIMENSIONS OF SLOTTED CLOSE TOLERANCE 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]
	Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	
4 0.1120	0.212	0.188	0.049	0.039	0.031	0.024	0.017	0.025	0.019	0.167
6 0.1380	0.262	0.235	0.060	0.048	0.039	0.030	0.022	0.028	0.021	0.214
8 0.1640	0.312	0.282	0.072	0.054	0.045	0.036	0.027	0.031	0.023	0.261
10 0.1900	0.362	0.329	0.083	0.060	0.050	0.042	0.031	0.034	0.026	0.307
1/4 0.2500	0.477	0.437	0.110	0.075	0.064	0.055	0.042	0.040	0.031	0.415
5/16 0.3125	0.597	0.550	0.138	0.084	0.072	0.069	0.053	0.047	0.037	0.526
3/8 0.3750	0.717	0.662	0.165	0.094	0.081	0.083	0.065	0.053	0.042	0.638
7/16 0.4375	0.837	0.774	0.193	0.094	0.081	0.097	0.076	0.060	0.047	0.750
1/2 0.5000	0.957	0.887	0.221	0.106	0.091	0.111	0.088	0.066	0.053	0.862
9/16 0.5625	1.077	1.000	0.249	0.118	0.102	0.125	0.099	0.073	0.058	0.974
5/8 0.6250	1.197	1.112	0.276	0.133	0.116	0.139	0.111	0.080	0.063	1.086

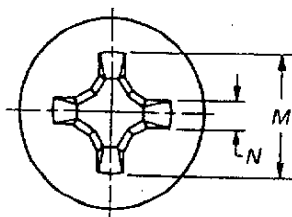
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.

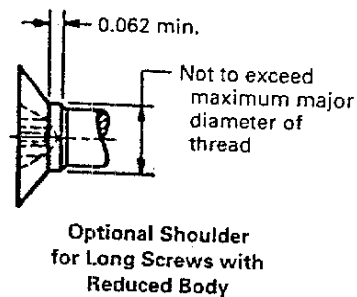
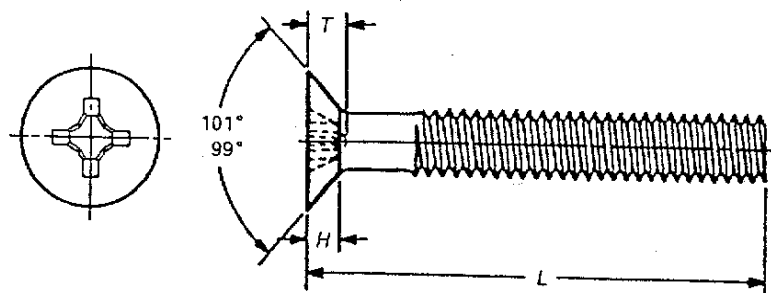
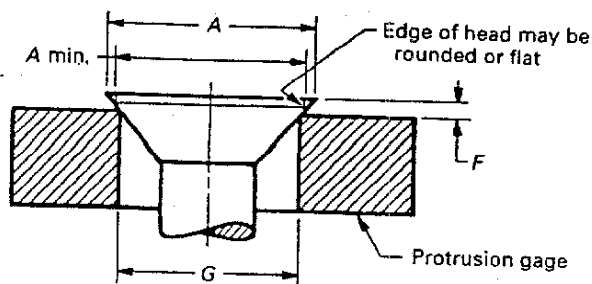


TABLE 3B DIMENSIONS OF TYPE I CROSS RECESSED CLOSE TOLERANCE 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
4	0.1120	0.212	0.188	0.049	0.110	0.070	0.018	1	0.071	0.055	0.025	0.019	0.167
6	0.1380	0.262	0.235	0.060	0.148	0.074	0.027	2	0.075	0.052	0.028	0.021	0.214
8	0.1640	0.312	0.282	0.072	0.162	0.090	0.028	2	0.090	0.067	0.031	0.023	0.261
10	0.1900	0.362	0.329	0.083	0.178	0.104	0.030	2	0.105	0.082	0.034	0.026	0.307
1/4	0.2500	0.477	0.437	0.110	0.240	0.124	0.033	3	0.118	0.095	0.040	0.031	0.415
5/16	0.3125	0.597	0.550	0.138	0.310	0.157	0.053	4	0.148	0.126	0.047	0.037	0.526
3/8	0.3750	0.717	0.662	0.165	0.336	0.182	0.056	4	0.173	0.151	0.053	0.042	0.638
7/16	0.4375	0.837	0.774	0.193	0.360	0.207	0.060	4	0.198	0.176	0.060	0.047	0.750
1/2	0.5000	0.957	0.887	0.221	0.386	0.234	0.063	4	0.226	0.204	0.066	0.053	0.862
9/16	0.5625	1.077	1.000	0.249	0.418	0.265	0.069	4	0.256	0.234	0.073	0.058	0.974
5/8	0.6250	1.197	1.112	0.276	0.504	0.265	0.073	5	0.248	0.222	0.080	0.063	1.086

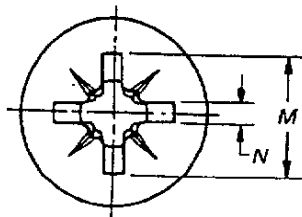
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

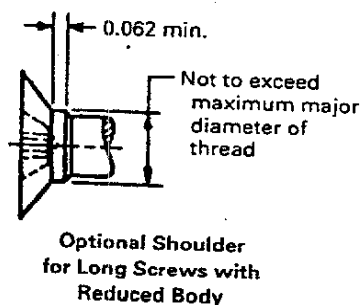
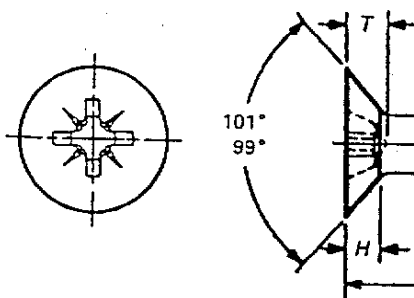
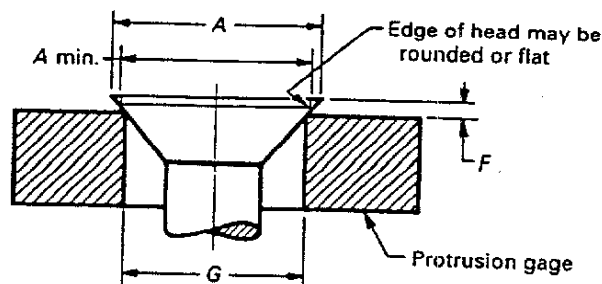


TABLE 3C DIMENSIONS OF TYPE 1A CROSS RECESSED CLOSE TOLERANCE 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
4	0.1120	0.212	0.188	0.049	0.110	0.070	0.029	1	0.068	0.052	0.025	0.019	0.167
6	0.1380	0.262	0.235	0.060	0.148	0.077	0.041	2	0.071	0.053	0.028	0.021	0.214
8	0.1640	0.312	0.282	0.072	0.162	0.092	0.041	2	0.086	0.068	0.031	0.023	0.261
10	0.1900	0.362	0.329	0.083	0.178	0.107	0.041	2	0.101	0.083	0.034	0.026	0.307
1/4	0.2500	0.477	0.437	0.110	0.240	0.126	0.056	3	0.114	0.096	0.040	0.031	0.415
5/16	0.3125	0.597	0.550	0.138	0.310	0.163	0.085	4	0.145	0.127	0.047	0.037	0.526
3/8	0.3750	0.717	0.662	0.165	0.336	0.187	0.085	4	0.170	0.152	0.053	0.042	0.638
7/16	0.4375	0.837	0.774	0.193	0.360	0.208	0.086	4	0.194	0.176	0.060	0.047	0.750
1/2	0.5000	0.957	0.887	0.221	0.386	0.239	0.086	4	0.222	0.204	0.066	0.053	0.862
9/16	0.5625	1.077	1.000	0.249	0.418	0.271	0.086	4	0.253	0.235	0.073	0.058	0.974
5/8	0.6250	1.197	1.112	0.276	0.488	0.256	0.097	5	0.228	0.207	0.080	0.063	1.086

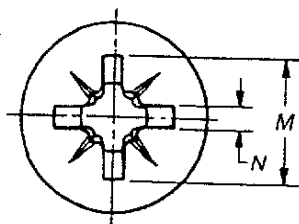
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

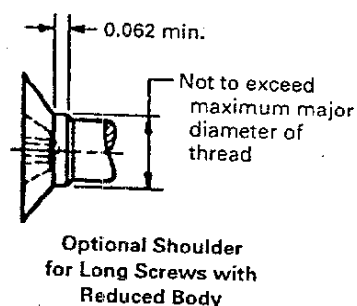
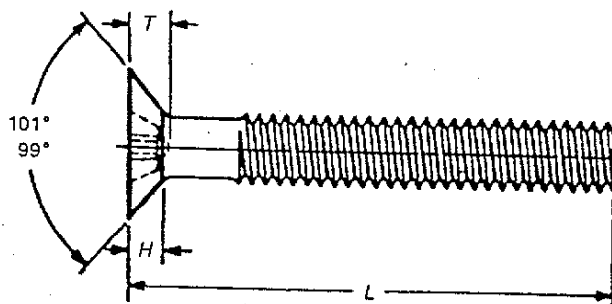
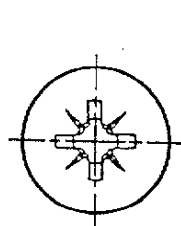
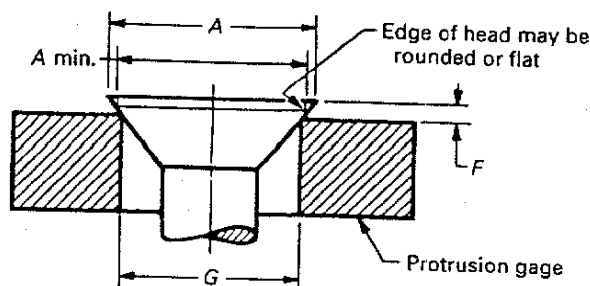


TABLE 3D DIMENSIONS OF TYPE II CROSS RECESSED CLOSE TOLERANCE 100 deg FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H, Ref. [Note (2)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size [Note (3)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]	
	Max.	Min.						Max.	Min.	Max.	Min.		
4	0.1120	0.212	0.188	0.049	0.131	0.070	0.029	...	0.051	0.036	0.025	0.019	0.167
6	0.1380	0.262	0.235	0.060	0.157	0.086	0.033	...	0.068	0.051	0.028	0.021	0.214
8	0.1640	0.312	0.282	0.072	0.185	0.102	0.037	...	0.086	0.067	0.031	0.023	0.261
10	0.1900	0.362	0.329	0.083	0.219	0.122	0.042	...	0.109	0.087	0.034	0.026	0.307
1/4	0.2500	0.477	0.437	0.110	0.288	0.164	0.053	...	0.154	0.132	0.040	0.031	0.415
5/16	0.3125	0.597	0.550	0.138	0.355	0.207	0.063	...	0.197	0.175	0.047	0.037	0.526
3/8	0.3750	0.717	0.662	0.165	0.433	0.258	0.075	...	0.249	0.226	0.053	0.042	0.638
7/16	0.4375	0.837	0.774	0.193	0.496	0.302	0.085	...	0.292	0.269	0.060	0.047	0.750
1/2	0.5000	0.957	0.887	0.221	0.555	0.338	0.093	...	0.328	0.304	0.066	0.053	0.862
9/16	0.5625	1.077	1.000	0.249	0.628	0.385	0.104	...	0.376	0.352	0.073	0.058	0.974
5/8	0.6250	1.197	1.112	0.276	0.687	0.424	0.113	...	0.415	0.390	0.080	0.063	1.086

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Tabulated values determined from formula for maximum H in Appendix A.
- (3) Point same on all drivers.
- (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

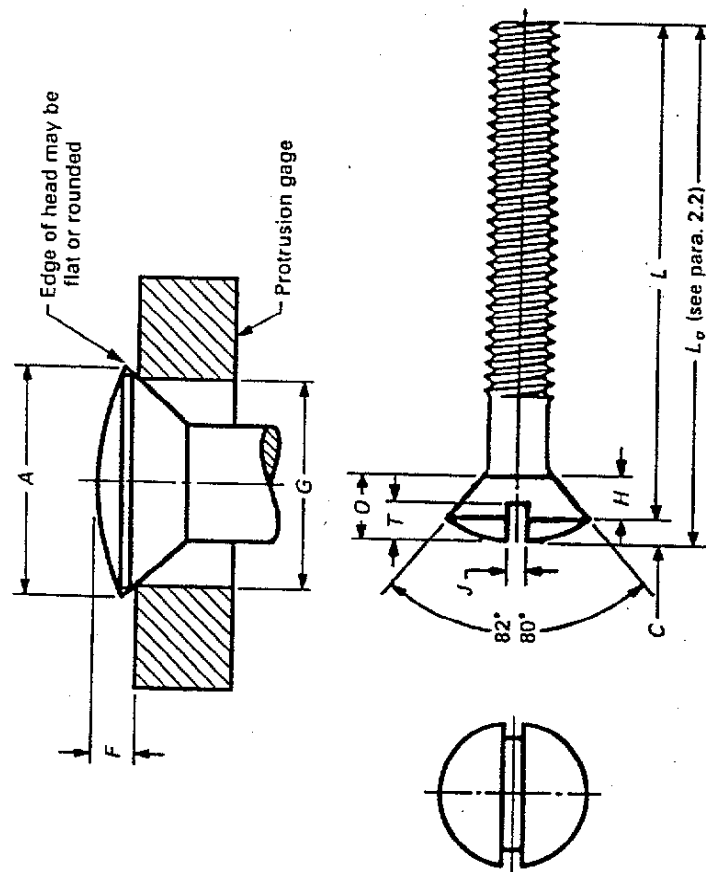


TABLE 4A ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 4A DIMENSIONS OF SLOTTED OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Side Height H, Ref. [Note (3)]	Head Crown Height C, Ref. [Note (4)]	Total Head Height Ref. [Note (4)]	Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F		Gaging Diameter G [Note (5)]
		Max.	Min.				Max.	Min.	Max.	Min.	Max.	Min.	
00 0.0470	...	0.087	0.080	0.028	0.014	0.042	0.017	0.010	0.023	0.016	Note (6)	Note (6)	Note (6)
0 0.0600	1/8	0.112	0.096	0.035	0.021	0.056	0.023	0.016	0.030	0.025	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.025	0.068	0.026	0.019	0.038	0.031	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.029	0.080	0.031	0.023	0.045	0.037	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.033	0.092	0.035	0.027	0.052	0.043	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.037	0.104	0.039	0.031	0.059	0.049	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.041	0.116	0.043	0.035	0.067	0.055	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.045	0.128	0.048	0.039	0.074	0.060	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.052	0.152	0.054	0.045	0.088	0.072	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.060	0.176	0.060	0.050	0.103	0.084	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.068	0.200	0.067	0.056	0.117	0.096	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.079	0.232	0.075	0.064	0.136	0.112	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.099	0.290	0.084	0.072	0.171	0.141	0.155	0.117	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.117	0.347	0.094	0.081	0.206	0.170	0.182	0.139	0.653
1/2 0.4375	5/8	0.760	0.715	0.223	0.122	0.345	0.094	0.081	0.210	0.174	0.195	0.150	0.690
5/8 0.5000	3/4	0.815	0.765	0.223	0.131	0.354	0.106	0.091	0.216	0.176	0.212	0.163	0.739
3/4 0.5625	...	0.932	0.878	0.260	0.150	0.410	0.118	0.102	0.250	0.207	0.239	0.184	0.851
7/8 0.6250	...	1.050	0.990	0.298	0.169	0.467	0.133	0.116	0.285	0.235	0.266	0.206	0.962
1 0.7500	...	1.285	1.215	0.372	0.206	0.578	0.149	0.131	0.353	0.293	0.318	0.240	1.186

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 4A Illustration on previous page.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (2) Screws of these lengths and shorter shall have undercut heads as shown in Table 6A.
 (3) Tabulated values determined from formula for maximum H in Appendix A.
 (4) Tabulated values determined from formula for maximum O in Appendix A.
 (5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
 (6) Not practical to gage.

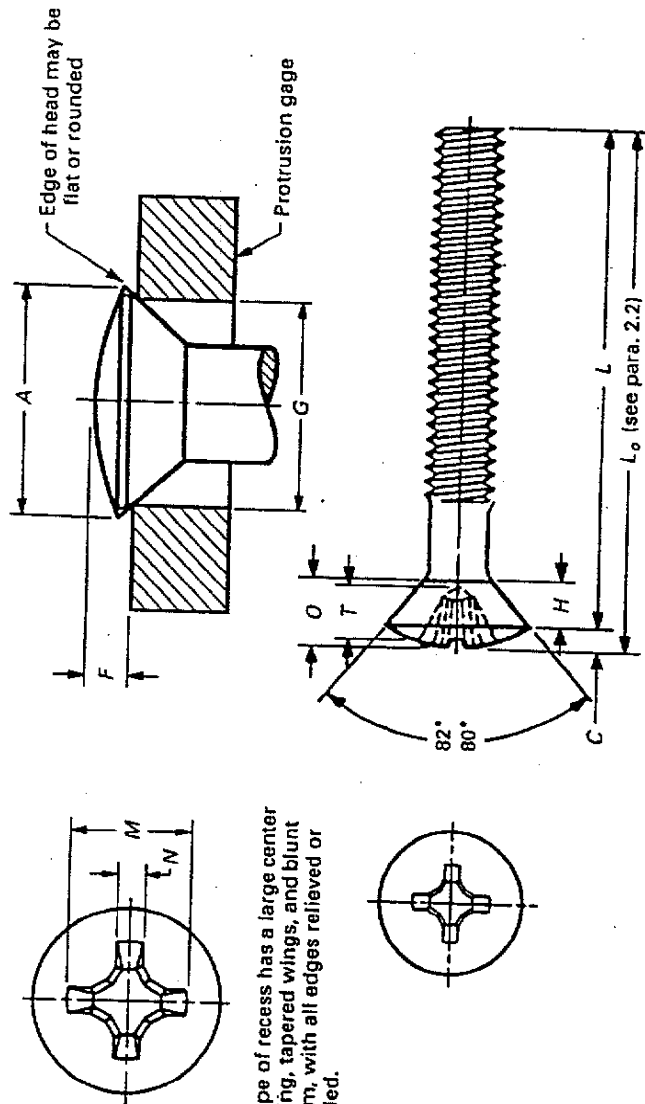
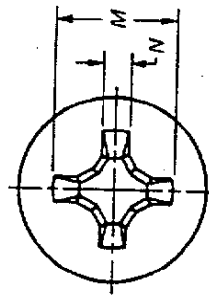
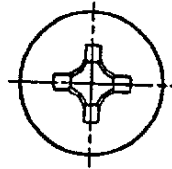


TABLE 4B ILLUSTRATION



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.



MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 4B DIMENSIONS OF TYPE I CROSS RECESSED OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter	Length L	Head Diameter A		Head Side Height H, Ref. [Note (3)]	Head Crown Height C, Ref. [Note (4)]	Total Head Height O, Ref. [Note (4)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F		Gaging Diameter G
		Max.	Min.								Max.	Min.	Max.	Min.	
[Note (1)]	[Note (2)]			[Note (3)]	C, Ref.	[Note (4)]	M, Ref.	T, Ref.	N, Ref.		Max.	Min.	[Note (5)]		
0 0.0600	1/8	0.112	0.096	0.035	0.021	0.056	0.068	0.036	0.014	0	0.038	0.020	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.025	0.068	0.070	0.039	0.015	0	0.041	0.023	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.029	0.080	0.106	0.060	0.018	1	0.062	0.045	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.033	0.092	0.118	0.072	0.019	1	0.074	0.057	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.037	0.104	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.041	0.116	0.152	0.073	0.028	2	0.074	0.050	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.045	0.128	0.172	0.092	0.030	2	0.094	0.069	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.052	0.152	0.186	0.107	0.031	2	0.108	0.084	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.060	0.176	0.202	0.125	0.033	2	0.126	0.102	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.068	0.200	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.079	0.232	0.284	0.160	0.040	3	0.156	0.131	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.099	0.290	0.384	0.226	0.065	4	0.218	0.194	0.155	0.117	0.539
3/8 0.3750	5/8	0.717	0.670	0.230	0.117	0.347	0.404	0.245	0.068	4	0.237	0.213	0.182	0.139	0.653
7/16 0.4375	5/8	0.760	0.715	0.223	0.122	0.345	0.416	0.257	0.070	4	0.249	0.225	0.195	0.150	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.131	0.354	0.430	0.271	0.071	4	0.263	0.239	0.212	0.163	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.150	0.410	0.462	0.304	0.075	4	0.296	0.272	0.239	0.184	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.169	0.467	0.580	0.340	0.081	5	0.323	0.291	0.266	0.206	0.962
3/4 0.7500	...	1.285	1.215	0.372	0.206	0.578	0.642	0.406	0.088	5	0.388	0.357	0.318	0.251	1.186

GENERAL NOTES:

(a) For additional requirements refer to para. 2.

(b) For reference, see Table 4B Illustration on previous page.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter shall have undercut heads as shown in Table 6B.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) Tabulated values determined from formula for maximum O in Appendix A.

(5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

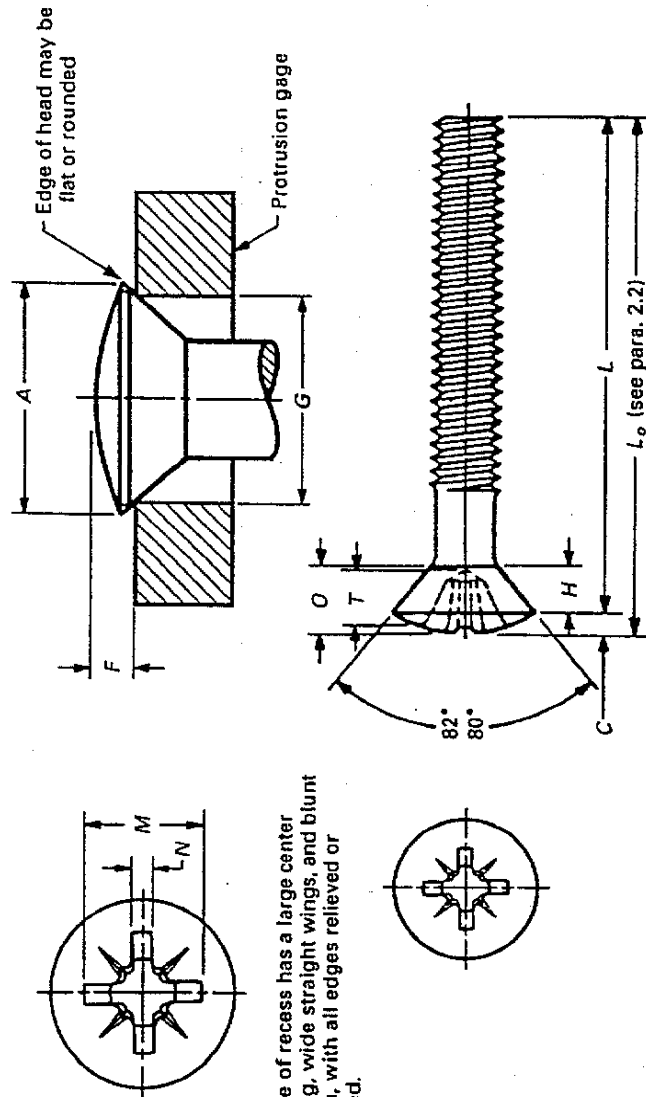


TABLE 4C ILLUSTRATION

This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 4C DIMENSIONS OF TYPE 1A CROSS RECESSED OVAL COUNTERSUNK HEAD MACHINE SCREWS

TABLE 4C DIMENSIONS OF TYPE 1A CROSS RECESS SCREWS																
Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Side Height H, Ref. [Note (3)]	Head Crown Height C, Ref. [Note (4)]	Total Head Height O, Ref. [Note (4)]	Recess Diameter M, Ref. [Note (4)]	Recess Depth T, Ref. [Note (4)]	Recess Width N, Ref. [Note (4)]	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]	
		Max.	Min.								Max.	Min.	Max.	Min.		
0 0.0600	1/8	0.112	0.096	0.035	0.021	0.056	0.068	0.040	0.018	0	0.042	0.024	0.047	0.031	0.078	
1 0.0730	1/8	0.137	0.120	0.043	0.025	0.068	0.070	0.043	0.018	0	0.043	0.027	0.053	0.035	0.101	
2 0.0860	1/8	0.162	0.144	0.051	0.029	0.080	0.106	0.065	0.029	1	0.062	0.046	0.058	0.039	0.124	
3 0.0990	1/8	0.187	0.167	0.059	0.033	0.092	0.118	0.077	0.030	1	0.074	0.058	0.064	0.044	0.148	
4 0.1120	3/16	0.212	0.191	0.067	0.037	0.104	0.130	0.089	0.030	1	0.086	0.070	0.069	0.048	0.172	
5 0.1250	3/16	0.237	0.215	0.075	0.041	0.116	0.152	0.080	0.041	2	0.074	0.056	0.075	0.053	0.196	
6 0.1380	3/16	0.262	0.238	0.083	0.045	0.128	0.172	0.100	0.041	2	0.093	0.075	0.080	0.057	0.220	
8 0.1640	1/4	0.312	0.285	0.100	0.052	0.152	0.186	0.115	0.041	2	0.108	0.090	0.091	0.066	0.267	
10 0.1900	5/16	0.362	0.333	0.116	0.060	0.176	0.202	0.132	0.041	2	0.125	0.107	0.102	0.075	0.313	
12 0.2160	3/8	0.412	0.380	0.132	0.068	0.200	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362	
1/4 0.2500	7/16	0.477	0.442	0.153	0.079	0.232	0.284	0.168	0.057	3	0.155	0.137	0.129	0.095	0.424	
5/16 0.3125	1/2	0.597	0.556	0.191	0.099	0.290	0.384	0.232	0.086	4	0.215	0.197	0.155	0.117	0.539	
3/8 0.3750	9/16	0.717	0.670	0.230	0.117	0.347	0.404	0.253	0.086	4	0.235	0.217	0.182	0.139	0.653	
7/16 0.4375	5/8	0.760	0.715	0.223	0.122	0.345	0.416	0.265	0.086	4	0.247	0.229	0.195	0.150	0.690	
1/2 0.5000	3/4	0.815	0.765	0.223	0.131	0.354	0.430	0.280	0.086	4	0.262	0.244	0.212	0.163	0.739	
9/16 0.5625	...	0.932	0.878	0.260	0.150	0.410	0.450	0.302	0.087	4	0.285	0.267	0.239	0.184	0.851	
5/8 0.6250	...	1.050	0.990	0.298	0.169	0.467	0.562	0.328	0.088	5	0.300	0.279	0.266	0.206	0.962	
3/4 0.7500	...	1.285	1.215	0.372	0.206	0.578	0.624	0.390	0.099	5	0.362	0.341	0.318	0.251	1.186	

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 4C Illustration on previous page.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (2) Screws of these lengths and shorter shall have undercut heads as shown in Table 6C.
 (3) Tabulated values determined from formula for maximum H in Appendix A.
 (4) Tabulated values determined from formula for maximum O in Appendix A.
 (5) No tolerance for gaging diameter is given, if the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

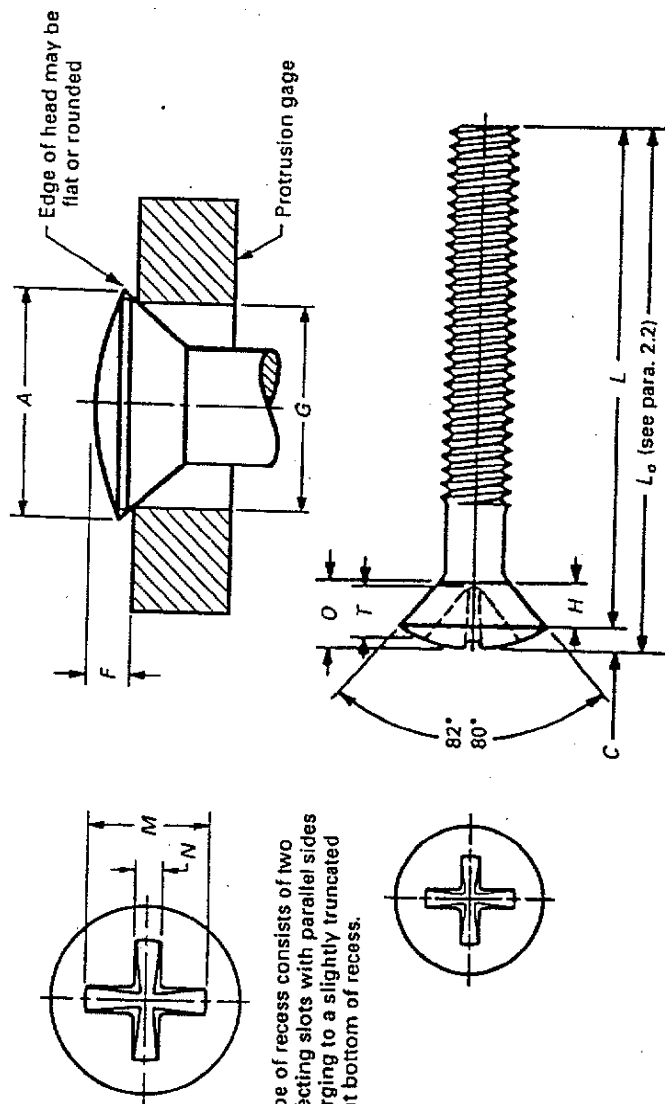
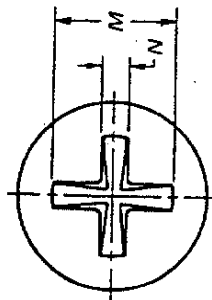
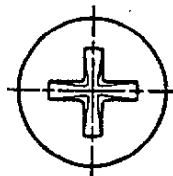


TABLE 4D ILLUSTRATION



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.



MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 4D DIMENSIONS OF TYPE II CROSS RECESSED OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Side Height H, Ref. [Note (3)]	Head Crown Height C, Ref. [Note (4)]	Total Head Height O, Ref. [Note (4)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size [Note (5)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (6)]		Gaging Diameter G [Note (6)]
		Max.	Min.								Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.035	0.021	0.056	0.078	0.036	0.021	...	Note (7)	Note (7)	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.043	0.025	0.068	0.092	0.048	0.024	...	Note (7)	Note (7)	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.051	0.029	0.080	0.114	0.060	0.027	...	0.040	0.029	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.059	0.033	0.092	0.133	0.072	0.030	...	0.053	0.041	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.067	0.037	0.104	0.151	0.082	0.032	...	0.064	0.052	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.075	0.041	0.116	0.169	0.094	0.035	...	0.077	0.064	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.083	0.045	0.128	0.188	0.106	0.038	...	0.089	0.075	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.100	0.052	0.152	0.224	0.124	0.043	...	0.113	0.099	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.116	0.060	0.176	0.260	0.148	0.048	...	0.137	0.122	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.132	0.068	0.200	0.297	0.172	0.054	...	0.162	0.145	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.153	0.079	0.232	0.344	0.195	0.061	...	0.193	0.176	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.191	0.099	0.290	0.432	0.252	0.074	...	0.251	0.232	0.155	0.117	0.539
3/8 0.3750	9/16	0.717	0.670	0.230	0.117	0.347	0.509	0.302	0.086	...	0.303	0.281	0.182	0.139	0.653
7/16 0.4375	5/8	0.760	0.715	0.223	0.122	0.345	0.554	0.332	0.092	...	0.332	0.310	0.195	0.150	0.690
1/2 0.5000	3/4	0.815	0.765	0.223	0.131	0.354	0.593	0.358	0.098	...	0.359	0.335	0.212	0.163	0.739
9/16 0.5625	...	0.932	0.878	0.260	0.150	0.410	0.640	0.387	0.104	...	0.389	0.364	0.239	0.184	0.851
5/8 0.6250	...	1.050	0.990	0.298	0.169	0.467	0.640	0.387	0.104	...	0.389	0.364	0.266	0.206	0.952
3/4 0.7500	...	1.285	1.215	0.372	0.206	0.578	0.640	0.387	0.104	...	0.389	0.364	0.318	0.251	1.186

GENERAL NOTES:

(a) For additional requirements refer to para. 2.

(b) For reference, see Table 4D illustration on previous page.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter shall have undercut heads as shown in Table 6D.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) Tabulated values determined from formula for maximum O in Appendix A.

(5) Point same on all drivers.

(6) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

(7) Not practical to gage.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

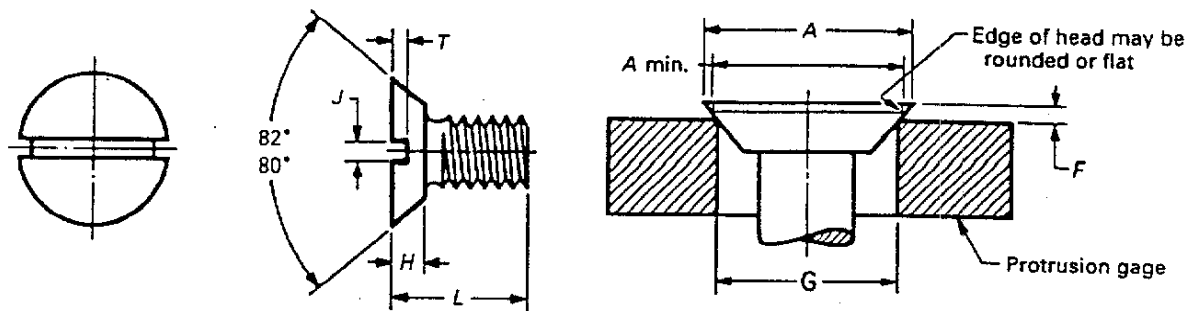


TABLE 5A DIMENSIONS OF SLOTTED UNDERCUT FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H		Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.018	0.023	0.016	0.011	0.007	Note (4)	Note (4)	Note (4)
1 0.0730	1/8	0.137	0.120	0.031	0.023	0.026	0.019	0.014	0.009	Note (4)	Note (4)	Note (4)
2 0.0860	1/8	0.162	0.144	0.036	0.028	0.031	0.023	0.016	0.011	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.035	0.027	0.019	0.012	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.038	0.039	0.031	0.022	0.014	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.043	0.043	0.035	0.024	0.016	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.048	0.048	0.039	0.027	0.017	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.058	0.054	0.045	0.032	0.021	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.068	0.060	0.050	0.037	0.024	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.078	0.067	0.056	0.043	0.028	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.092	0.075	0.064	0.050	0.032	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.116	0.084	0.072	0.062	0.041	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.161	0.140	0.094	0.081	0.075	0.049	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.133	0.094	0.081	0.072	0.045	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.130	0.106	0.091	0.072	0.046	0.081	0.049	0.739

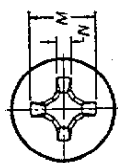
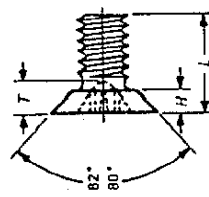
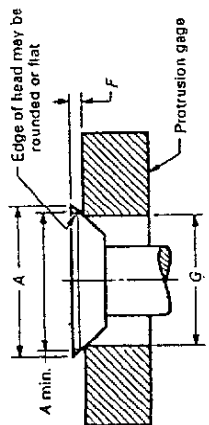
GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 1A.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (4) Not practical to gage.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.

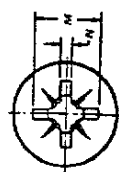
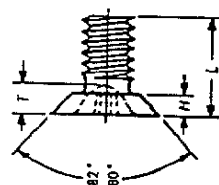
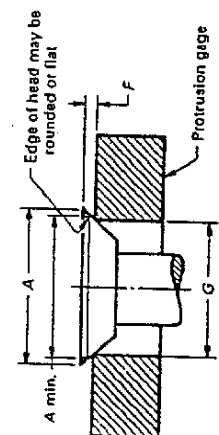
TABLE 5B DIMENSIONS OF TYPE I CROSS RECESSED UNDERCUT FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H		Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]
		Max.	Min.	Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.018	0.062	0.035	0.014	0	0.036	0.020	Note (4)	Note (4)	Note (4)
1 0.0730	1/8	0.137	0.120	0.031	0.023	0.070	0.043	0.015	0	0.044	0.028	Note (4)	Note (4)	Note (4)
2 0.0860	1/8	0.162	0.144	0.036	0.028	0.088	0.048	0.017	1	0.049	0.033	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.096	0.055	0.018	1	0.056	0.040	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.038	0.110	0.070	0.018	1	0.071	0.055	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.043	0.122	0.081	0.018	1	0.082	0.066	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.048	0.140	0.066	0.025	2	0.067	0.044	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.058	0.168	0.094	0.029	2	0.095	0.072	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.068	0.182	0.110	0.030	2	0.110	0.087	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.078	0.226	0.110	0.030	3	0.104	0.081	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.092	0.244	0.124	0.032	3	0.119	0.096	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.116	0.310	0.157	0.053	4	0.148	0.126	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.161	0.140	0.358	0.205	0.061	4	0.196	0.174	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.133	0.386	0.234	0.065	4	0.225	0.203	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.130	0.402	0.252	0.068	4	0.241	0.219	0.081	0.049	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 1B.
- (3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (4) Not practical to gage.



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

TABLE 5C DIMENSIONS OF TYPE 1A CROSS RECESSED UNDERCUT FLAT COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H		Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (3)]		Gaging Diameter G [Note (3)]
		Max.	Min.	Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/16	0.112	0.096	0.025	0.018	0.062	0.036	0.018	0	0.037	0.021	Note (4)	Note (4)	Note (4)
1 0.0730	1/8	0.137	0.120	0.031	0.023	0.070	0.044	0.018	0	0.045	0.029	Note (4)	Note (4)	Note (4)
2 0.0860	1/8	0.162	0.144	0.036	0.028	0.088	0.048	0.028	1	0.046	0.030	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.096	0.055	0.029	1	0.053	0.037	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.038	0.110	0.070	0.029	1	0.068	0.052	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.043	0.122	0.081	0.030	1	0.079	0.063	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.048	0.140	0.069	0.040	2	0.063	0.045	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.058	0.168	0.098	0.041	2	0.091	0.073	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.068	0.182	0.112	0.041	2	0.107	0.089	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.078	0.226	0.112	0.055	3	0.100	0.082	0.045	0.027	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.092	0.242	0.128	0.056	3	0.115	0.097	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.116	0.310	0.163	0.085	4	0.145	0.127	0.057	0.034	0.539
3/8 0.3750	9/16	0.717	0.670	0.161	0.140	0.358	0.211	0.086	4	0.193	0.175	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.133	0.366	0.239	0.086	4	0.222	0.204	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.130	0.402	0.256	0.086	4	0.238	0.220	0.081	0.049	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 1C.

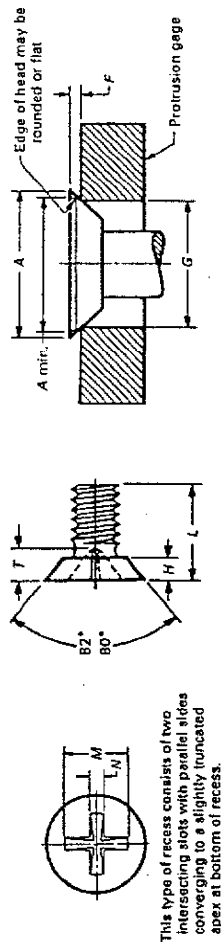
(3) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

(4) Not practical to gage.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 5D DIMENSIONS OF TYPE II CROSS RECESSED UNDERCUT FLAT COUNTERSUNK HEAD MACHINE SCREWS



Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H		Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size [Note (3)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.	Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.018	0.067	0.029	0.020	...	Note (5)	Note (5)	Note (5)	Note (5)	Note (5)
1 0.0730	1/8	0.137	0.120	0.031	0.023	0.082	0.039	0.022	...	Note (5)	Note (5)	Note (5)	Note (5)	Note (5)
2 0.0860	1/8	0.162	0.144	0.036	0.028	0.100	0.050	0.025	...	0.030	0.020	0.029	0.017	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.111	0.058	0.026	...	0.038	0.027	0.031	0.018	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.038	0.129	0.070	0.029	...	0.050	0.038	0.032	0.019	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.043	0.147	0.080	0.032	...	0.062	0.050	0.034	0.020	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.048	0.161	0.088	0.034	...	0.071	0.059	0.036	0.021	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.058	0.197	0.112	0.039	...	0.095	0.082	0.039	0.023	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.068	0.236	0.132	0.045	...	0.121	0.107	0.042	0.025	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.078	0.260	0.148	0.048	...	0.137	0.122	0.045	0.027	0.362
1/4 0.2500	1/2	0.477	0.442	0.107	0.092	0.304	0.169	0.054	...	0.167	0.150	0.050	0.029	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.116	0.381	0.218	0.066	...	0.218	0.198	0.057	0.034	0.539
3/8 0.3750	1/2	0.717	0.670	0.161	0.140	0.453	0.266	0.077	...	0.266	0.244	0.065	0.039	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.133	0.498	0.295	0.083	...	0.296	0.273	0.073	0.044	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.130	0.548	0.328	0.090	...	0.329	0.305	0.081	0.049	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter are undercuts. Screws of longer lengths shall have head heights as shown in Table 1D.
- (3) Point same on all drivers.
- (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.
- (5) Not practical to gage.

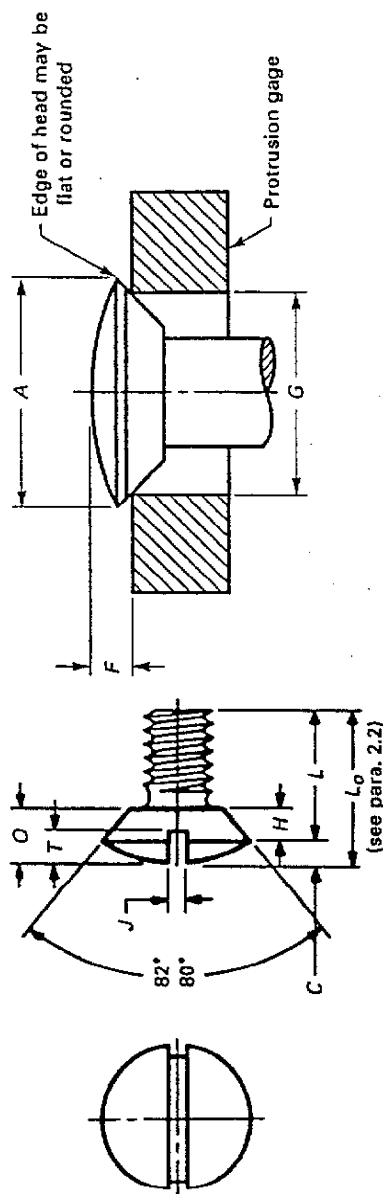


TABLE 6A DIMENSIONS OF SLOTTED UNDERCUT OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Side Height H _s Ref. [Note (3)]	Head Crown Height C Ref. [Note (3)]	Total Head Height O		Slot Width J		Slot Depth T		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.			Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.021	0.046	0.033	0.023	0.016	0.028	0.022	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.031	0.025	0.056	0.042	0.026	0.019	0.034	0.027	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.036	0.029	0.065	0.050	0.031	0.023	0.040	0.033	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.075	0.059	0.035	0.027	0.047	0.038	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.037	0.084	0.067	0.039	0.031	0.053	0.043	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.041	0.094	0.076	0.043	0.035	0.059	0.048	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.045	0.104	0.084	0.048	0.039	0.065	0.053	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.052	0.123	0.101	0.054	0.045	0.078	0.064	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.060	0.142	0.118	0.060	0.050	0.090	0.074	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.068	0.161	0.135	0.067	0.056	0.103	0.085	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.079	0.186	0.158	0.075	0.064	0.119	0.098	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.099	0.232	0.198	0.084	0.072	0.149	0.124	0.155	0.117	0.539
3/8 0.3750	9/16	0.717	0.670	0.161	0.117	0.278	0.239	0.094	0.081	0.179	0.149	0.182	0.139	0.653
1/2 0.4375	5/8	0.780	0.715	0.156	0.122	0.279	0.239	0.094	0.081	0.184	0.154	0.195	0.150	0.690
5/8 0.5000	3/4	0.815	0.765	0.156	0.131	0.288	0.244	0.106	0.091	0.204	0.169	0.212	0.163	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 4A.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

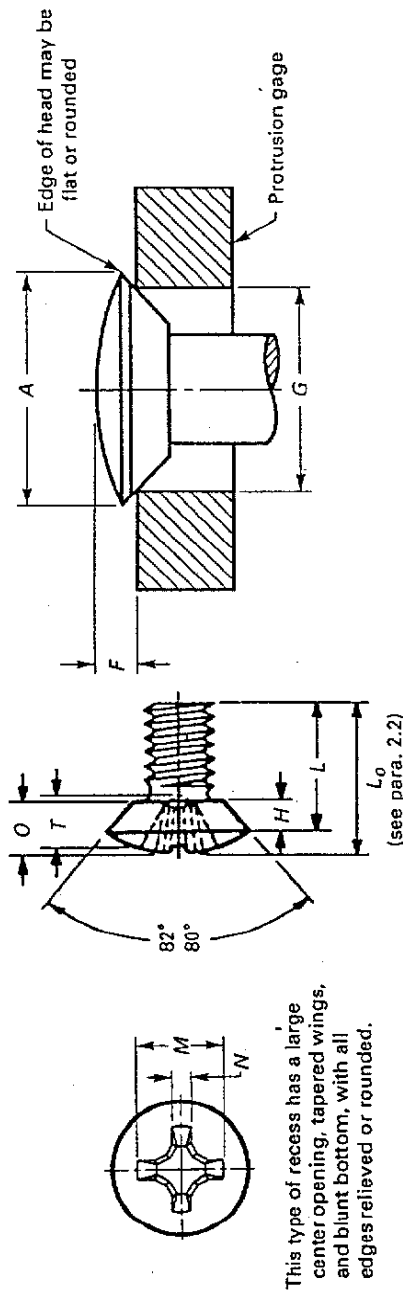


TABLE 6B DIMENSIONS OF TYPE I CROSS RECESSED UNDERCUT OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Side Height H, Ref. [Note (3)]	Head Crown Height C, Ref. [Note (3)]	Total Head Height O		Recess Diameter M, Ref. [Note (4)]	Recess Depth T, Ref. [Note (4)]	Recess Width N, Ref. [Note (4)]	Driver Size [Note (4)]	Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.			Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.021	0.046	0.033	0.068	0.036	0.014	0	0.038	0.020	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.031	0.025	0.056	0.042	0.070	0.039	0.015	0	0.041	0.023	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.036	0.029	0.065	0.050	0.106	0.060	0.018	1	0.062	0.045	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.075	0.059	0.118	0.072	0.019	1	0.074	0.057	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.037	0.084	0.067	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.041	0.094	0.076	0.152	0.073	0.028	2	0.074	0.050	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.045	0.104	0.084	0.172	0.092	0.030	2	0.094	0.069	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.052	0.123	0.101	0.186	0.107	0.031	2	0.108	0.084	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.060	0.142	0.118	0.202	0.125	0.033	2	0.126	0.102	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.068	0.161	0.135	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.079	0.186	0.158	0.284	0.160	0.040	3	0.156	0.131	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.099	0.232	0.198	0.374	0.214	0.064	4	0.206	0.182	0.155	0.117	0.539
3/8 0.3750	5/8	0.717	0.670	0.161	0.117	0.279	0.239	0.394	0.233	0.066	4	0.225	0.201	0.182	0.139	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.122	0.279	0.239	0.404	0.245	0.068	4	0.237	0.213	0.195	0.150	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.131	0.288	0.244	0.416	0.257	0.070	4	0.249	0.225	0.212	0.163	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 4B.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

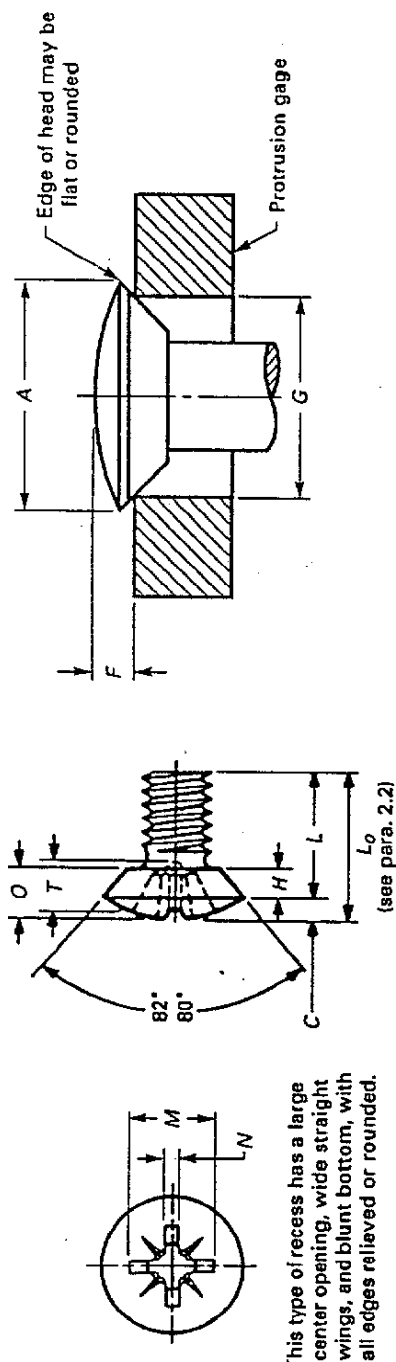


TABLE 6C DIMENSIONS OF TYPE 1A CROSS RECESSED UNDERCUT OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter	Length L	Head Diameter A		Head Side Height H, Ref.	Head Crown Height O	Recess Diameter M, Ref.		Recess Depth T, Ref.	Recess Width N, Ref.	Penetration		Protrusion		Gaging Diameter G		
		Max.	Min.			Max.	Min.			Max.	Min.	Max.	Min.			
															Gaging Depth	Above Gaging Diameter F
[Note (1)]	[Note (2)]			[Note (3)]												
0 0.0600	1/8	0.112	0.096	0.025	0.021	0.046	0.033	0.068	0.040	0.018	0	0.040	0.024	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.031	0.025	0.056	0.042	0.070	0.043	0.018	0	0.043	0.027	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.036	0.029	0.065	0.050	0.106	0.065	0.029	1	0.062	0.046	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.075	0.059	0.118	0.077	0.030	1	0.074	0.058	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.037	0.084	0.067	0.130	0.089	0.030	1	0.086	0.070	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.041	0.094	0.076	0.152	0.100	0.041	2	0.074	0.056	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.045	0.104	0.084	0.172	0.100	0.041	2	0.093	0.075	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.052	0.123	0.101	0.186	0.115	0.041	2	0.108	0.090	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.060	0.142	0.118	0.202	0.132	0.041	2	0.125	0.107	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.068	0.161	0.135	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.079	0.186	0.158	0.284	0.168	0.057	3	0.155	0.137	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.099	0.232	0.198	0.374	0.223	0.086	4	0.205	0.187	0.155	0.117	0.539
3/8 0.3750	5/8	0.717	0.670	0.161	0.117	0.278	0.239	0.394	0.243	0.086	4	0.225	0.207	0.182	0.139	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.122	0.279	0.239	0.404	0.253	0.086	4	0.235	0.217	0.195	0.150	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.131	0.288	0.244	0.416	0.265	0.086	4	0.247	0.229	0.212	0.163	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 4C.
- (3) Tabulated values determined from formula for maximum H in Appendix A.
- (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

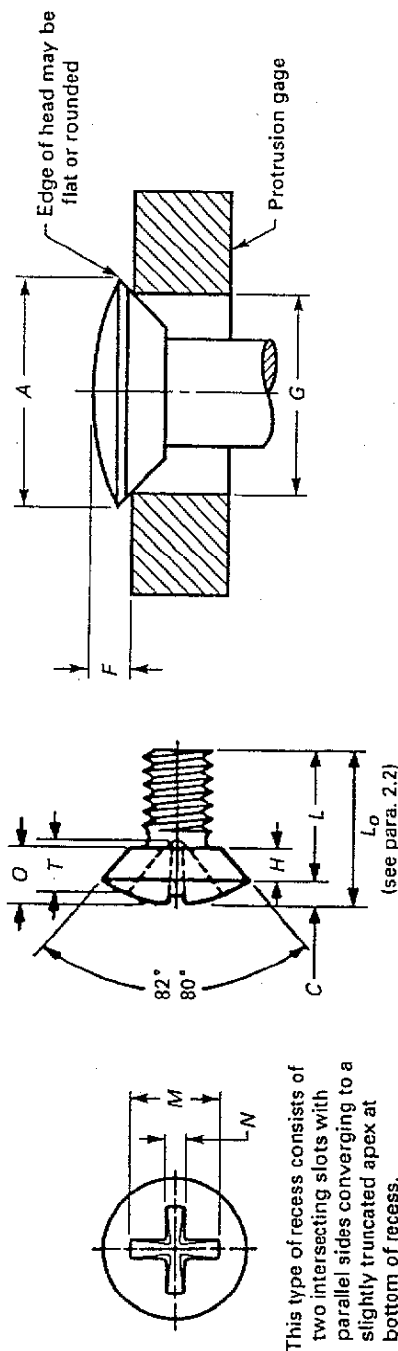


TABLE 6D DIMENSIONS OF TYPE II CROSS RECESSED UNDERCUT OVAL COUNTERSUNK HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Length L [Note (2)]	Head Diameter A		Head Height H, Ref. [Note (3)]	Head Crown Height O	Total Head Height O		Recess Diameter M, Ref. [Note (4)]	Recess Depth T, Ref. [Note (4)]	Recess Width N, Ref. [Note (4)]	Driver Size [Note (4)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter		Gaging Diameter G [Note (5)]
		Max.	Min.			Max.	Min.					Max.	Min.	Max.	Min.	
0 0.0600	1/8	0.112	0.096	0.025	0.021	0.046	0.033	0.067	0.029	0.020	...	Note (6)	Note (6)	0.047	0.031	0.078
1 0.0730	1/8	0.137	0.120	0.031	0.025	0.056	0.042	0.082	0.039	0.022	...	Note (6)	Note (6)	0.053	0.035	0.101
2 0.0860	1/8	0.162	0.144	0.036	0.029	0.065	0.050	0.100	0.050	0.025	...	0.030	0.020	0.058	0.039	0.124
3 0.0990	1/8	0.187	0.167	0.042	0.033	0.075	0.059	0.111	0.058	0.026	...	0.038	0.027	0.064	0.044	0.148
4 0.1120	3/16	0.212	0.191	0.047	0.037	0.084	0.067	0.129	0.070	0.029	...	0.050	0.038	0.069	0.048	0.172
5 0.1250	3/16	0.237	0.215	0.053	0.041	0.094	0.076	0.147	0.080	0.032	...	0.062	0.050	0.075	0.053	0.196
6 0.1380	3/16	0.262	0.238	0.059	0.045	0.104	0.084	0.161	0.088	0.034	...	0.071	0.059	0.080	0.057	0.220
8 0.1640	1/4	0.312	0.285	0.070	0.052	0.123	0.101	0.197	0.112	0.039	...	0.095	0.082	0.091	0.066	0.267
10 0.1900	5/16	0.362	0.333	0.081	0.060	0.142	0.118	0.236	0.132	0.045	...	0.121	0.107	0.102	0.075	0.313
12 0.2160	3/8	0.412	0.380	0.092	0.068	0.161	0.135	0.260	0.148	0.048	...	0.137	0.122	0.113	0.084	0.362
1/4 0.2500	7/16	0.477	0.442	0.107	0.079	0.186	0.158	0.304	0.169	0.054	...	0.167	0.150	0.129	0.095	0.424
5/16 0.3125	1/2	0.597	0.556	0.134	0.099	0.232	0.198	0.381	0.218	0.066	...	0.218	0.198	0.155	0.117	0.539
3/8 0.3750	5/8	0.717	0.670	0.161	0.117	0.278	0.239	0.453	0.266	0.077	...	0.266	0.244	0.182	0.139	0.653
7/16 0.4375	5/8	0.760	0.715	0.156	0.122	0.279	0.239	0.498	0.295	0.083	...	0.296	0.273	0.195	0.150	0.690
1/2 0.5000	3/4	0.815	0.765	0.156	0.131	0.288	0.244	0.548	0.328	0.090	...	0.329	0.305	0.212	0.163	0.739

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(2) Screws of these lengths and shorter are undercut. Screws of longer lengths shall have head heights as shown in Table 4D.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) Point same on all drivers.

(5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

(6) Not practical to gage.

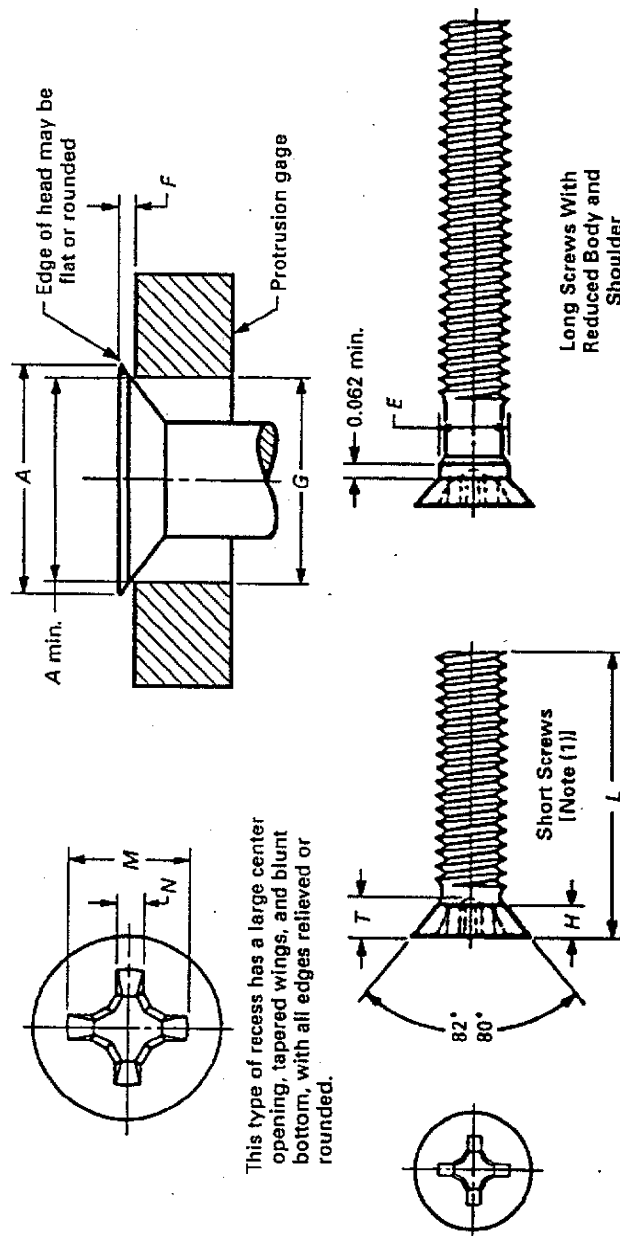


TABLE 7A ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 7A DIMENSIONS OF TYPE I CROSS RECESSED FLAT COUNTERSUNK TRIM HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Size	Shoulder Diameter E		Head Diameter A		Head Height H, Ref. [Note (3)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.	Max.	Min.						Max.	Min.	Max.	Min.	
4 0.1120	3	0.112	0.106	0.187	0.167	0.052	0.100	0.060	0.018	1	0.061	0.045	0.031	0.018	0.148
5 0.1250	4	0.125	0.119	0.212	0.191	0.060	0.122	0.081	0.018	1	0.082	0.066	0.032	0.019	0.172
6 0.1380	4	0.138	0.131	0.212	0.191	0.052	0.122	0.081	0.018	1	0.082	0.066	0.032	0.019	0.172
6 0.1380	5	0.138	0.131	0.237	0.215	0.068	0.148	0.074	0.027	2	0.075	0.052	0.034	0.020	0.196
8 0.1640	5	0.164	0.157	0.237	0.215	0.052	0.158	0.084	0.029	2	0.085	0.062	0.034	0.020	0.196
8 0.1640	6	0.164	0.157	0.262	0.238	0.069	0.176	0.102	0.030	2	0.103	0.080	0.036	0.021	0.220
10 0.1900	8	0.190	0.181	0.312	0.285	0.085	0.182	0.110	0.030	2	0.110	0.087	0.039	0.023	0.267
12 0.2160	8	0.216	0.207	0.312	0.285	0.069	0.192	0.120	0.032	2	0.120	0.097	0.039	0.023	0.267
12 0.2160	10	0.216	0.207	0.362	0.333	0.101	0.198	0.124	0.032	2	0.125	0.102	0.042	0.025	0.313
1/4 0.2500	10	0.250	0.240	0.362	0.333	0.080	0.198	0.124	0.032	2	0.125	0.102	0.042	0.025	0.313
1/4 0.2500	12	0.250	0.240	0.412	0.380	0.112	0.262	0.144	0.035	3	0.139	0.116	0.045	0.027	0.362
5/16 0.3125	12	0.312	0.302	0.412	0.380	0.075	0.262	0.144	0.035	3	0.139	0.116	0.045	0.027	0.362
5/16 0.3125	1/4	0.312	0.302	0.477	0.442	0.116	0.276	0.160	0.036	3	0.154	0.131	0.050	0.029	0.424
3/8 0.3750	5/16	0.375	0.364	0.597	0.556	0.155	0.358	0.205	0.061	4	0.196	0.174	0.057	0.034	0.539

GENERAL NOTES:

(a) For additional requirements refer to para. 2.

(b) For reference, see Table 7A illustration on previous page.

NOTES:

(1) Short screws include nominal lengths up to and including 1 1/8 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 7B DIMENSIONS OF TYPE 1A CROSS RECESSED FLAT COUNTERSUNK TRIM HEAD MACHINE SCREWS

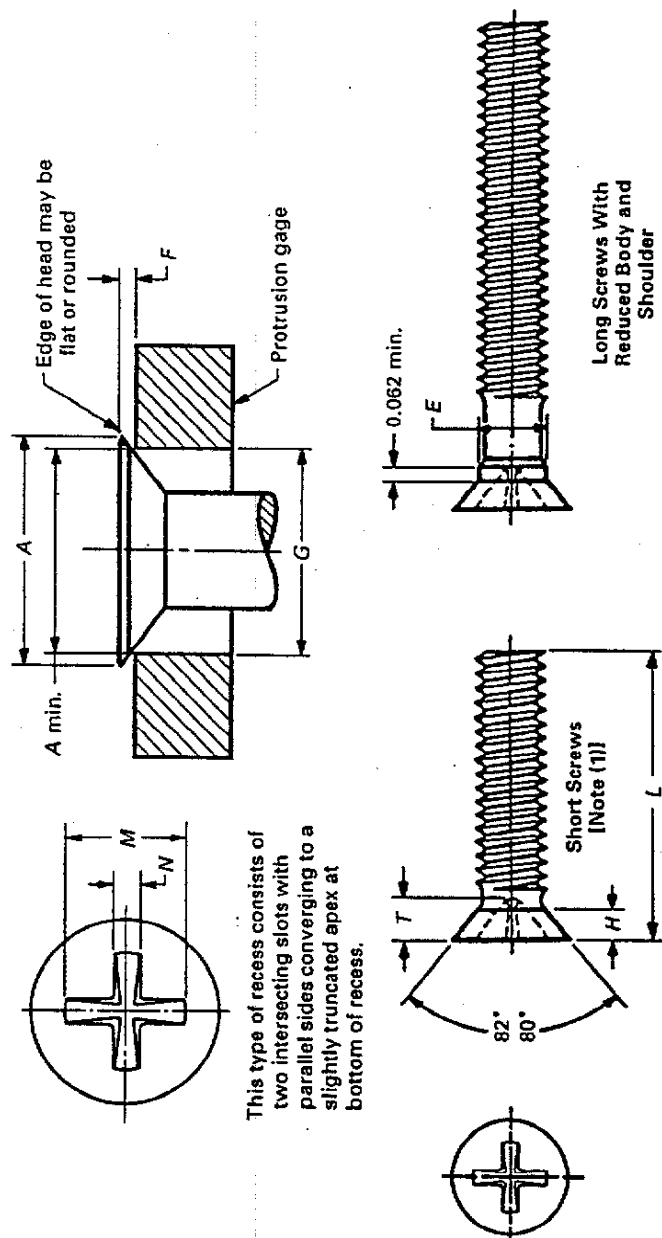
Nominal Size or Basic Screw Diameter [Note (2)]	Head Size	Shoulder Diameter E		Head Diameter A		Head Height, H, Ref. [Note (3)]	Recess Diameter M, Ref.	Recess Depth T, Ref.	Recess Width N, Ref.	Driver Size	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (4)]		Gaging Diameter G [Note (4)]
		Max.	Min.	Max.	Min.						Max.	Min.	Max.	Min.	
4 0.1120	3	0.112	0.106	0.187	0.167	0.052	0.100	0.060	0.029	1	0.058	0.042	0.031	0.018	0.148
5 0.1250	4	0.125	0.119	0.212	0.191	0.060	0.122	0.081	0.030	1	0.079	0.063	0.032	0.019	0.172
6 0.1380	4	0.138	0.131	0.212	0.191	0.052	0.122	0.081	0.030	1	0.079	0.063	0.032	0.019	0.172
6 0.1380	5	0.138	0.131	0.237	0.215	0.068	0.148	0.077	0.041	2	0.071	0.053	0.034	0.020	0.196
8 0.1640	5	0.164	0.157	0.237	0.215	0.052	0.158	0.088	0.041	2	0.081	0.063	0.034	0.020	0.196
8 0.1640	6	0.164	0.157	0.262	0.238	0.069	0.176	0.105	0.041	2	0.099	0.081	0.036	0.021	0.220
10 0.1900	8	0.190	0.181	0.312	0.285	0.085	0.182	0.112	0.041	2	0.107	0.089	0.039	0.023	0.267
12 0.2160	8	0.216	0.207	0.312	0.285	0.069	0.192	0.122	0.041	2	0.117	0.099	0.039	0.023	0.267
12 0.2160	10	0.216	0.207	0.362	0.333	0.101	0.198	0.127	0.041	2	0.122	0.104	0.042	0.025	0.313
1/4 0.2500	10	0.250	0.240	0.362	0.333	0.080	0.198	0.127	0.041	2	0.122	0.104	0.042	0.025	0.313
1/4 0.2500	12	0.250	0.240	0.412	0.380	0.112	0.262	0.149	0.056	3	0.136	0.118	0.045	0.027	0.362
5/16 0.3125	12	0.312	0.302	0.412	0.380	0.075	0.262	0.149	0.056	3	0.136	0.118	0.045	0.027	0.362
5/16 0.3125	1/4	0.312	0.302	0.477	0.442	0.116	0.276	0.164	0.057	3	0.151	0.133	0.050	0.029	0.424
3/8 0.3750	5/16	0.375	0.364	0.597	0.556	0.155	0.358	0.211	0.086	4	0.193	0.175	0.057	0.034	0.539

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 7B Illustration on previous page.

NOTES:

- (1) Short screws include nominal lengths up to and including 1 1/8 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.
 (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (3) Tabulated values determined from formula for maximum H in Appendix A.
 (4) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.

TABLE 7C ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 7C DIMENSIONS OF TYPE II CROSS RECESSED FLAT COUNTERSUNK TRIM HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Size [Note (2)]	Shoulder Diameter E		Head Diameter A		Head Height H, Ref. [Note (3)]	Recess Diameter M, Ref. [Note (3)]	Recess Depth T, Ref. [Note (3)]	Recess Width N, Ref. [Note (3)]	Driver Size [Note (4)]	Recess Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]
		Max.	Min.	Max.	Min.						Max.	Min.	Max.	Min.	
4 0.1120	3	0.112	0.106	0.187	0.167	0.052	0.133	0.072	0.030	...	0.053	0.041	0.031	0.018	0.148
5 0.1250	4	0.125	0.119	0.212	0.191	0.060	0.151	0.082	0.032	...	0.064	0.052	0.032	0.019	0.172
6 0.1380	4	0.138	0.131	0.212	0.191	0.052	0.151	0.082	0.032	...	0.064	0.052	0.032	0.019	0.172
6 0.1380	5	0.138	0.131	0.237	0.215	0.068	0.169	0.094	0.035	...	0.077	0.064	0.034	0.020	0.196
8 0.1640	5	0.164	0.157	0.237	0.215	0.052	0.169	0.094	0.035	...	0.077	0.064	0.034	0.020	0.196
8 0.1640	6	0.164	0.157	0.262	0.238	0.069	0.188	0.106	0.038	...	0.089	0.075	0.036	0.021	0.220
10 0.1900	8	0.190	0.181	0.312	0.285	0.085	0.224	0.124	0.043	...	0.113	0.099	0.039	0.023	0.267
12 0.2160	8	0.216	0.207	0.312	0.285	0.069	0.224	0.124	0.043	...	0.113	0.099	0.039	0.023	0.267
12 0.2160	10	0.216	0.207	0.362	0.333	0.101	0.260	0.148	0.048	...	0.137	0.122	0.042	0.025	0.313
1/4 0.2500	10	0.250	0.240	0.362	0.333	0.080	0.260	0.148	0.048	...	0.137	0.122	0.042	0.025	0.313
1/4 0.2500	12	0.250	0.240	0.412	0.380	0.112	0.297	0.172	0.054	...	0.162	0.145	0.045	0.027	0.362
5/16 0.3125	12	0.312	0.302	0.412	0.380	0.075	0.297	0.172	0.054	...	0.162	0.145	0.045	0.027	0.362
5/16 0.3125	1/4	0.312	0.302	0.477	0.442	0.116	0.344	0.195	0.061	...	0.193	0.176	0.050	0.029	0.424
3/8 0.3750	5/16	0.375	0.364	0.597	0.566	0.155	0.432	0.252	0.074	...	0.251	0.232	0.057	0.034	0.539

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 7C illustration on previous page.

NOTES:

- (1) Short screws include nominal lengths up to and including 1 1/8 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.
 (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (3) Tabulated values determined from formula for maximum H in Appendix A.
 (4) Point same on all drivers.
 (5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

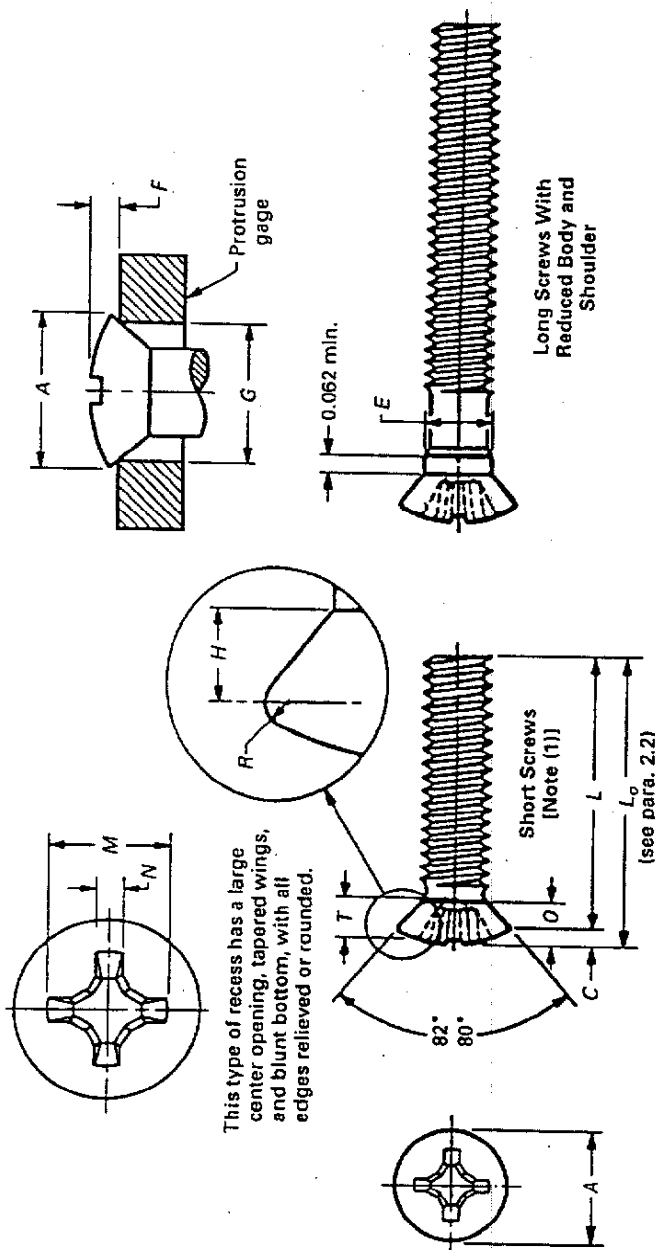


TABLE 8A DIMENSIONS OF TYPE I CROSS RECESSED OVAL COUNTERSUNK TRIM HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Shoulder Diameter E		Head Diameter A		Head Side Height H, Ref. [Note (3)]		Head Crown Height C, Ref. [Note (4)]		Total Head Height O, Ref. [Note (4)]		Recess Diameter M, Ref.		Recess Depth T, Ref.		Recess Width N, Ref.		Driver Size		Recess Penetration Gaging Depth Max. Min.		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
For Short Screws [Note (1)]																							
4	0.1120	3	...	...	0.187	0.167	0.057	0.033	0.086	0.014	0.118	0.072	0.019	1	0.074	0.057	0.064	0.044	0.148				
5	0.1250	4	...	...	0.212	0.191	0.066	0.037	0.099	0.017	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172				
6	0.1380	4	...	...	0.212	0.191	0.058	0.037	0.091	0.017	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172				
6	0.1380	5	...	...	0.237	0.215	0.075	0.041	0.112	0.019	0.152	0.073	0.028	2	0.074	0.050	0.075	0.053	0.196				
8	0.1640	5	...	...	0.237	0.215	0.060	0.041	0.096	0.019	0.152	0.073	0.028	2	0.074	0.050	0.075	0.053	0.196				
8	0.1640	6	...	...	0.262	0.238	0.076	0.045	0.117	0.021	0.172	0.092	0.030	2	0.094	0.069	0.080	0.057	0.220				
10	0.1900	8	...	...	0.312	0.285	0.094	0.076	0.141	0.025	0.186	0.107	0.031	2	0.108	0.084	0.091	0.066	0.267				
12	0.2160	8	...	...	0.312	0.285	0.078	0.076	0.125	0.025	0.186	0.107	0.031	2	0.108	0.084	0.091	0.066	0.267				
12	0.2160	10	...	...	0.362	0.333	0.111	0.060	0.166	0.029	0.202	0.125	0.033	2	0.126	0.102	0.102	0.075	0.313				

(continued)

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 8A DIMENSIONS OF TYPE I CROSS RECESSED OVAL COUNTERSUNK TRIM HEAD MACHINE SCREWS (CONT'D)

Nominal Size or Basic Screw Diameter [Note (2)]	Shoulder Diameter E				Head Diameter A		Head Side Height H _s Ref. [Note (3)]	Head Crown Height C Ref. [Note (3)]	Total Head Height O Ref. [Note (4)]	Head Radius R Ref. [Note (4)]	Recess Diameter M Ref. [Note (4)]	Recess Depth T Ref. [Note (4)]	Recess Width N Ref. [Note (4)]	Driver Size	Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]
	Max.	Min.	Max.	Min.	Max.	Min.									Max.	Min.			
	For Short Screws [Note (1)] (Cont'd)																		
1/4	0.2500	10	...	...	0.362	0.333	0.091	0.060	0.146	0.029	0.202	0.125	0.033	2	0.126	0.102	0.102	0.075	0.313
1/4	0.2500	12	...	...	0.412	0.380	0.124	0.068	0.187	0.033	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
5/16	0.3125	12	...	...	0.412	0.380	0.087	0.068	0.150	0.033	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
5/16	0.3125	1/4	...	...	0.477	0.442	0.130	0.079	0.202	0.038	0.284	0.160	0.040	3	0.156	0.131	0.129	0.095	0.424
3/8	0.3750	5/16	...	...	0.597	0.556	0.173	0.099	0.265	0.048	0.384	0.226	0.065	4	0.218	0.194	0.155	0.117	0.539
For Long Screws With Shoulder																			
4	0.1120	3	0.112	0.106	0.187	0.167	0.057	0.033	0.086	0.014	0.118	0.072	0.019	1	0.074	0.057	0.064	0.044	0.148
5	0.1250	4	0.125	0.119	0.212	0.191	0.066	0.037	0.099	0.017	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172
6	0.1380	4	0.138	0.131	0.212	0.191	0.058	0.037	0.091	0.017	0.130	0.086	0.019	1	0.087	0.070	0.069	0.048	0.172
6	0.1380	5	0.138	0.131	0.237	0.215	0.075	0.041	0.112	0.019	0.162	0.084	0.028	2	0.085	0.061	0.075	0.053	0.196
8	0.1640	5	0.164	0.157	0.237	0.215	0.060	0.041	0.096	0.019	0.162	0.084	0.028	2	0.085	0.061	0.075	0.053	0.196
8	0.1640	6	0.164	0.157	0.262	0.238	0.076	0.045	0.117	0.021	0.188	0.108	0.031	2	0.110	0.085	0.080	0.057	0.220
10	0.1900	8	0.190	0.181	0.312	0.285	0.094	0.076	0.141	0.025	0.200	0.122	0.031	2	0.124	0.099	0.091	0.066	0.267
12	0.2160	8	0.216	0.207	0.312	0.285	0.078	0.076	0.125	0.025	0.200	0.122	0.031	2	0.124	0.099	0.091	0.066	0.267
12	0.2160	10	0.216	0.207	0.362	0.333	0.111	0.060	0.166	0.029	0.214	0.136	0.033	2	0.137	0.112	0.102	0.075	0.313
1/4	0.2500	10	0.250	0.240	0.362	0.333	0.091	0.060	0.146	0.029	0.214	0.136	0.033	2	0.137	0.112	0.102	0.075	0.313
1/4	0.2500	12	0.250	0.240	0.412	0.380	0.124	0.068	0.187	0.033	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
5/16	0.3125	12	0.312	0.302	0.412	0.380	0.087	0.068	0.150	0.033	0.264	0.140	0.038	3	0.135	0.111	0.113	0.084	0.362
5/16	0.3125	1/4	0.312	0.302	0.477	0.442	0.130	0.079	0.202	0.038	0.284	0.160	0.040	3	0.156	0.131	0.129	0.095	0.424
3/8	0.3750	5/16	0.375	0.364	0.597	0.556	0.173	0.099	0.265	0.048	0.384	0.226	0.065	4	0.218	0.194	0.155	0.117	0.539

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Short screws include nominal lengths up to and including 1 1/8 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) Tabulated values determined from formula for maximum O in Appendix A.

(5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

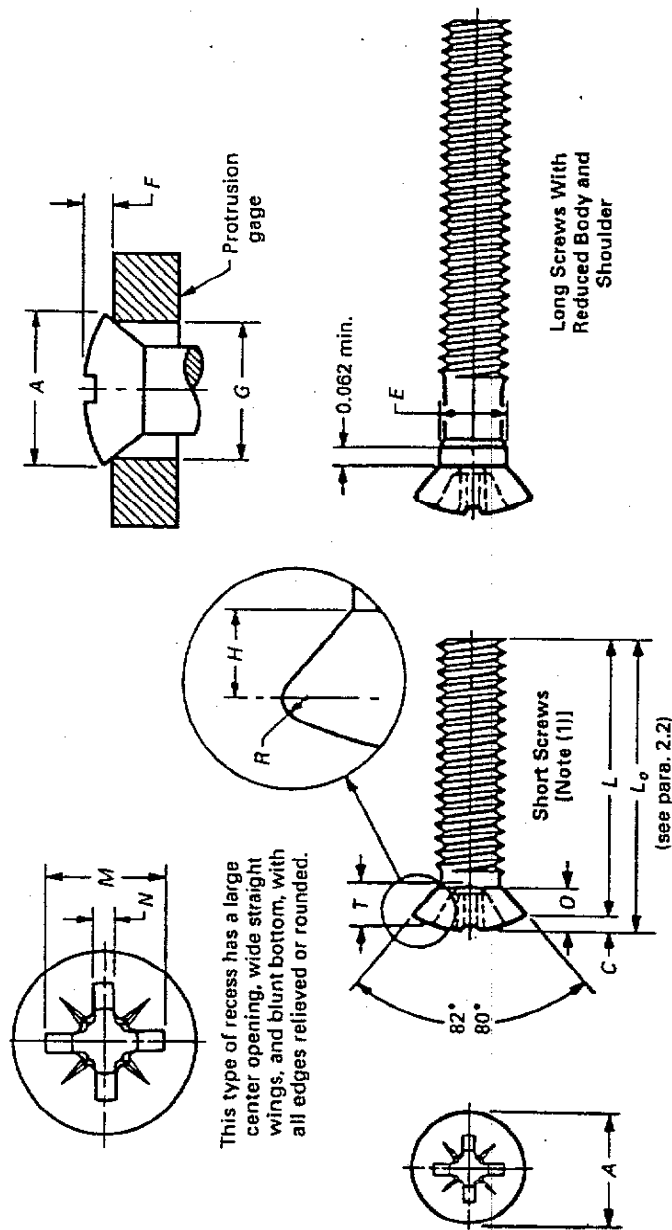


TABLE 8B DIMENSIONS OF TYPE IA CROSS RECESSED OVAL COUNTERSUNK TRIM HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Size	Shoulder Diameter E		Head Diameter A		Head Side Height H, Ref. [Note (3)]		Head Crown Height C, Ref. [Note (4)]		Total Head Height O, Ref. [Note (4)]		Head Radius R, Ref. [Note (4)]		Recess Diameter M, Ref. [Note (4)]		Recess Depth T, Ref. [Note (4)]		Recess Width N, Ref. [Note (4)]		Driver Size		Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (5)]		Gaging Diameter G [Note (5)]	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
		For Short Screws [Note (1)]																									
4	0.1120	3	...	...	...	0.187	0.167	0.057	0.033	0.086	0.014	0.014	0.118	0.077	0.030	0.030	1	0.074	0.058	0.064	0.044	0.148					
5	0.1250	4	...	...	...	0.212	0.191	0.066	0.037	0.099	0.017	0.017	0.130	0.089	0.030	0.030	1	0.086	0.070	0.069	0.048	0.172					
6	0.1380	4	...	...	...	0.212	0.191	0.058	0.037	0.091	0.017	0.017	0.130	0.089	0.030	0.030	1	0.086	0.070	0.069	0.048	0.172					
6	0.1380	5	...	...	...	0.237	0.215	0.075	0.041	0.112	0.019	0.019	0.152	0.080	0.041	0.041	2	0.074	0.056	0.075	0.053	0.196					
8	0.1640	5	...	...	...	0.237	0.215	0.060	0.041	0.096	0.019	0.019	0.152	0.080	0.041	0.041	2	0.074	0.056	0.075	0.053	0.196					
8	0.1640	6	...	...	...	0.262	0.238	0.076	0.045	0.117	0.021	0.021	0.172	0.100	0.041	0.041	2	0.093	0.075	0.080	0.057	0.220					
10	0.1900	8	...	...	...	0.312	0.285	0.094	0.076	0.141	0.025	0.025	0.186	0.115	0.041	0.041	2	0.108	0.090	0.091	0.066	0.267					
12	0.2160	8	...	...	...	0.312	0.285	0.078	0.076	0.125	0.025	0.025	0.186	0.115	0.041	0.041	2	0.108	0.090	0.091	0.066	0.267					
12	0.2160	10	...	...	...	0.362	0.333	0.111	0.060	0.166	0.029	0.029	0.202	0.132	0.041	0.041	2	0.125	0.107	0.102	0.075	0.313					

(continued)

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 8B DIMENSIONS OF TYPE 1A CROSS RECESSED OVAL COUNTERSUNK TRIM HEAD MACHINE SCREWS (CONT'D)

TABLE 6B DIMENSIONS OF TYPE 18-8 PHOSPHOR BRONZE																						
Nominal Size or Basic Screw Diameter [Note (2)]		Shoulder Diameter E		Head Diameter A		Head Side Height H, Ref. [Note (3)]		Head Crown Height C, Ref. [Note (4)]		Total Head Height O, Ref. [Note (4)]		Recess		Penetration		Protrusion		Gaging Diameter G				
												Recess Depth T, Ref. M, Ref.	Recess Width N, Ref.	Gaging Depth	Above Gaging Diameter F [Note (5)]	Max.	Min.			Max.	Min.	
For Short Screws [Note (1)] (Cont'd)																						
1/4	0.2500	10	...	0.362	0.333	0.091	0.060	0.146	0.029	0.202	0.132	0.041	2	0.125	0.107	0.102	0.075	0.313	0.313			
1/4	0.2500	12	...	0.412	0.380	0.124	0.068	0.187	0.033	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362	0.362			
5/16	0.3125	12	...	0.412	0.380	0.087	0.068	0.150	0.033	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362	0.362			
5/16	0.3125	1/4	...	0.477	0.442	0.130	0.079	0.202	0.038	0.284	0.168	0.057	3	0.155	0.137	0.129	0.095	0.424	0.424			
3/8	0.3750	5/16	...	0.597	0.556	0.173	0.099	0.265	0.048	0.384	0.232	0.086	4	0.215	0.197	0.155	0.117	0.539	0.539			
For Long Screws With Shoulder																						
4	0.1120	3	0.112	0.106	0.187	0.167	0.057	0.033	0.086	0.014	0.118	0.077	0.030	1	0.074	0.058	0.064	0.044	0.148	0.148		
5	0.1250	4	0.125	0.119	0.212	0.191	0.066	0.037	0.099	0.017	0.130	0.089	0.030	1	0.086	0.070	0.069	0.048	0.172	0.172		
6	0.1380	4	0.138	0.131	0.212	0.191	0.058	0.037	0.091	0.017	0.130	0.089	0.030	1	0.086	0.070	0.069	0.048	0.172	0.172		
6	0.1380	5	0.138	0.131	0.237	0.215	0.075	0.041	0.112	0.019	0.162	0.091	0.041	2	0.084	0.066	0.075	0.053	0.196	0.196		
8	0.1640	5	0.164	0.157	0.237	0.215	0.060	0.041	0.096	0.019	0.162	0.091	0.041	2	0.084	0.066	0.075	0.053	0.196	0.196		
8	0.1640	6	0.164	0.157	0.262	0.238	0.076	0.045	0.117	0.021	0.188	0.117	0.041	2	0.109	0.091	0.080	0.057	0.220	0.220		
10	0.1900	8	0.190	0.181	0.312	0.285	0.094	0.076	0.141	0.025	0.200	0.130	0.041	2	0.122	0.104	0.091	0.066	0.267	0.267		
12	0.2160	8	0.216	0.207	0.312	0.285	0.078	0.076	0.125	0.025	0.200	0.130	0.041	2	0.122	0.104	0.091	0.066	0.267	0.267		
12	0.2160	10	0.216	0.207	0.362	0.333	0.111	0.060	0.166	0.029	0.214	0.143	0.041	2	0.136	0.118	0.102	0.075	0.313	0.313		
1/4	0.2500	10	0.250	0.240	0.362	0.333	0.091	0.060	0.146	0.029	0.214	0.143	0.041	2	0.136	0.118	0.102	0.075	0.313	0.313		
1/4	0.2500	12	0.250	0.240	0.412	0.380	0.124	0.068	0.187	0.033	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362	0.362		
5/16	0.3125	12	0.312	0.302	0.412	0.380	0.087	0.068	0.150	0.033	0.264	0.148	0.056	3	0.135	0.117	0.113	0.084	0.362	0.362		
5/16	0.3125	1/4	0.312	0.302	0.477	0.442	0.130	0.079	0.202	0.038	0.284	0.168	0.057	3	0.155	0.137	0.129	0.095	0.424	0.424		
3/8	0.3750	5/16	0.375	0.364	0.597	0.556	0.173	0.099	0.265	0.048	0.384	0.232	0.086	4	0.215	0.197	0.155	0.117	0.539	0.539		

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Short screws include nominal lengths up to and including 1 1/8 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.
- (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (3) Tabulated values determined from formula for maximum H in Appendix A.
- (4) Tabulated values determined from formula for maximum O in Appendix A.
- (5) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

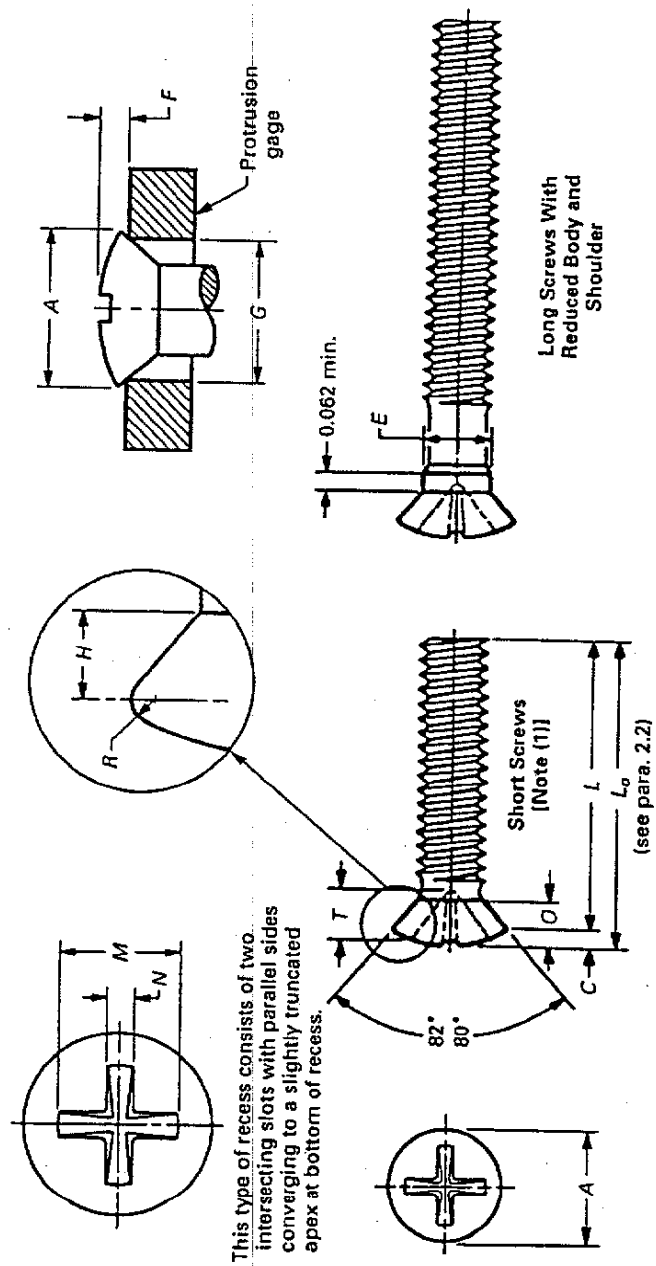


TABLE 8C ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 8C DIMENSIONS OF TYPE II CROSS RECESSED OVAL COUNTERSUNK TRIM HEAD MACHINE SCREWS

TABLE 8C DIMENSIONS OF TYPE II CROSS RECESSED OVAL COUNTERSINKS																						
Nominal Size or Basic Screw Diameter	Head Size [Note (2)]	Shoulder Diameter E		Head Diameter A		Head Side Height H, Ref. [Note (3)]		Head Crown Height C, Ref. [Note (4)]		Total Head Height O, Ref. [Note (4)]		Recess Diameter M, Ref. [Note (5)]	Recess Depth T, Ref. [Note (5)]		Recess Width N, Ref. [Note (5)]		Driver Size [Note (5)]	Penetration Gaging Depth		Protrusion Above Gaging Diameter F [Note (6)]		Gaging Diameter G [Note (6)]
		Max.	Min.	Max.	Min.	H, Ref. [Note (3)]	C, Ref. [Note (4)]	O, Ref. [Note (4)]	M, Ref. [Note (5)]	T, Ref. [Note (5)]	N, Ref. [Note (5)]		Max.	Min.	Max.	Min.						
4	0.1120	3	0.112	0.106	0.187	0.167	0.057	0.033	0.086	0.014	0.133	0.072	0.030	0.053	0.041	0.064	0.044	0.148	0.148	0.064	0.044	0.148
5	0.1250	4	0.125	0.119	0.212	0.191	0.066	0.037	0.099	0.017	0.151	0.082	0.032	0.064	0.052	0.069	0.048	0.172	0.172	0.064	0.052	0.069
6	0.1380	4	0.138	0.131	0.212	0.191	0.058	0.037	0.091	0.017	0.151	0.082	0.032	0.064	0.052	0.069	0.048	0.172	0.172	0.064	0.052	0.069
6	0.1380	5	0.138	0.131	0.237	0.215	0.075	0.041	0.112	0.019	0.169	0.094	0.035	0.077	0.064	0.075	0.053	0.196	0.196	0.077	0.064	0.075
8	0.1640	5	0.164	0.157	0.237	0.215	0.060	0.041	0.096	0.019	0.169	0.094	0.035	0.077	0.064	0.075	0.053	0.196	0.196	0.077	0.064	0.075
8	0.1640	6	0.164	0.157	0.262	0.238	0.076	0.045	0.117	0.021	0.188	0.106	0.038	0.089	0.075	0.080	0.057	0.220	0.220	0.089	0.075	0.080
10	0.1900	8	0.190	0.181	0.312	0.285	0.094	0.076	0.141	0.025	0.224	0.124	0.043	0.113	0.099	0.091	0.066	0.267	0.267	0.113	0.099	0.091
12	0.2160	8	0.216	0.207	0.312	0.285	0.078	0.076	0.125	0.025	0.224	0.124	0.043	0.113	0.099	0.091	0.066	0.267	0.267	0.113	0.099	0.091
12	0.2160	10	0.216	0.207	0.362	0.333	0.111	0.060	0.166	0.029	0.260	0.148	0.048	0.137	0.122	0.102	0.075	0.313	0.313	0.137	0.122	0.102
1/4	0.2500	10	0.250	0.240	0.362	0.333	0.091	0.060	0.146	0.029	0.260	0.148	0.048	0.137	0.122	0.102	0.075	0.313	0.313	0.137	0.122	0.102
1/4	0.2500	12	0.250	0.240	0.412	0.380	0.124	0.068	0.187	0.033	0.297	0.172	0.054	0.162	0.145	0.113	0.084	0.362	0.362	0.162	0.145	0.113
5/16	0.3125	12	0.312	0.302	0.412	0.380	0.087	0.068	0.150	0.033	0.297	0.172	0.054	0.162	0.145	0.113	0.084	0.362	0.362	0.162	0.145	0.113
5/16	0.3125	1/4	0.312	0.302	0.477	0.442	0.130	0.079	0.202	0.038	0.344	0.195	0.061	0.193	0.176	0.129	0.095	0.424	0.424	0.193	0.176	0.129
3/8	0.3750	5/16	0.375	0.364	0.597	0.556	0.173	0.099	0.265	0.048	0.432	0.252	0.074	0.251	0.232	0.155	0.117	0.539	0.539	0.251	0.232	0.155

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 8C illustration on previous page.

NOTES:
 (1) Short screws include nominal lengths up to and including 1 1/4 in. for sizes No. 5 and smaller, and 2 in. for sizes No. 6 and larger.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(3) Tabulated values determined from formula for maximum H in Appendix A.

(4) Tabulated values determined from formula for maximum O in Appendix A.

(5) Point same on all drivers.

(6) No tolerance for gaging diameter is given. If the gaging diameter of the gage used differs from tabulated value, the protrusion will be affected accordingly and the proper protrusion values must be recalculated using the formulas shown in Appendix I.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

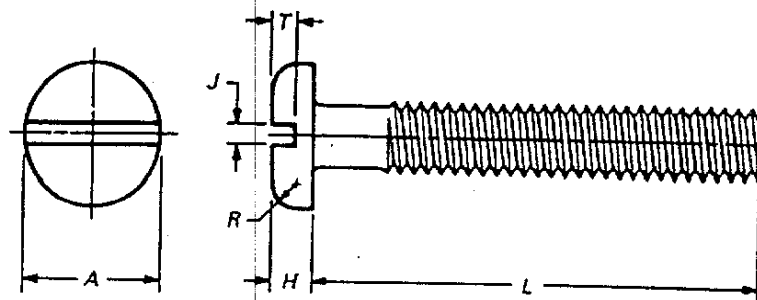


TABLE 9A DIMENSIONS OF SLOTTED PAN HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R, Max.	Slot Width J		Slot Depth T	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.
0000 0.0210	0.042	0.036	0.016	0.010	0.007	0.008	0.004	0.008	0.004
000 0.0340	0.066	0.060	0.023	0.017	0.010	0.012	0.008	0.012	0.008
00 0.0470	0.090	0.082	0.032	0.025	0.015	0.017	0.010	0.016	0.010
0 0.0600	0.116	0.104	0.039	0.031	0.020	0.023	0.016	0.022	0.014
1 0.0730	0.142	0.130	0.046	0.038	0.025	0.026	0.019	0.027	0.018
2 0.0860	0.167	0.155	0.053	0.045	0.035	0.031	0.023	0.031	0.022
3 0.0990	0.193	0.180	0.060	0.051	0.037	0.035	0.027	0.036	0.026
4 0.1120	0.219	0.205	0.068	0.058	0.042	0.039	0.031	0.040	0.030
5 0.1250	0.245	0.231	0.075	0.065	0.044	0.043	0.035	0.045	0.034
6 0.1380	0.270	0.256	0.082	0.072	0.046	0.048	0.039	0.050	0.037
8 0.1640	0.322	0.306	0.096	0.085	0.052	0.054	0.045	0.058	0.045
10 0.1900	0.373	0.357	0.110	0.099	0.061	0.060	0.050	0.068	0.053
12 0.2160	0.425	0.407	0.125	0.112	0.078	0.067	0.056	0.077	0.061
1/4 0.2500	0.492	0.473	0.144	0.130	0.087	0.075	0.064	0.087	0.070
5/16 0.3125	0.615	0.594	0.178	0.162	0.099	0.084	0.072	0.106	0.085
3/8 0.3750	0.740	0.716	0.212	0.195	0.143	0.094	0.081	0.124	0.100
7/16 0.4375	0.863	0.837	0.247	0.228	0.153	0.094	0.081	0.142	0.116
1/2 0.5000	0.987	0.958	0.281	0.260	0.175	0.106	0.091	0.161	0.131
9/16 0.5625	1.041	1.000	0.315	0.293	0.197	0.118	0.102	0.179	0.146
5/8 0.6250	1.172	1.125	0.350	0.325	0.219	0.133	0.116	0.197	0.162
3/4 0.7500	1.435	1.375	0.419	0.390	0.263	0.149	0.131	0.234	0.192

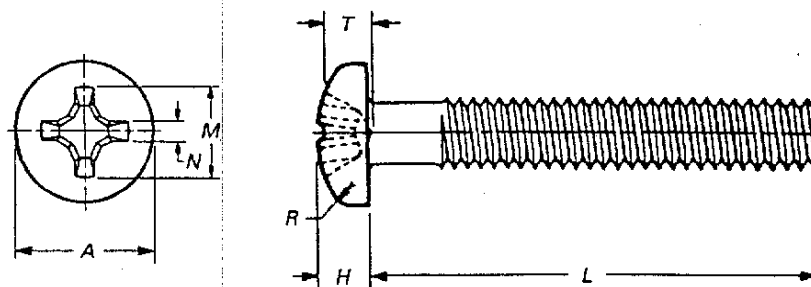
GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.

TABLE 9B DIMENSIONS OF TYPE I CROSS RECESSED PAN HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R _s Min.	Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.116	0.104	0.044	0.036	0.005	0.067	0.054	0.039	0.021	0.013	0	0.032	0.014
1 0.0730	0.142	0.130	0.053	0.044	0.005	0.074	0.061	0.045	0.025	0.014	0	0.040	0.022
2 0.0860	0.167	0.155	0.062	0.053	0.010	0.104	0.091	0.059	0.041	0.017	1	0.052	0.034
3 0.0990	0.193	0.180	0.071	0.062	0.010	0.112	0.099	0.068	0.050	0.019	1	0.061	0.043
4 0.1120	0.219	0.205	0.080	0.070	0.010	0.122	0.109	0.078	0.060	0.019	1	0.071	0.053
5 0.1250	0.245	0.231	0.089	0.079	0.015	0.158	0.145	0.083	0.057	0.028	2	0.072	0.046
6 0.1380	0.270	0.256	0.097	0.087	0.015	0.166	0.153	0.091	0.066	0.028	2	0.080	0.055
8 0.1640	0.322	0.306	0.115	0.105	0.015	0.182	0.169	0.108	0.082	0.030	2	0.097	0.071
10 0.1900	0.373	0.357	0.133	0.122	0.020	0.199	0.186	0.124	0.100	0.031	2	0.113	0.089
12 0.2160	0.425	0.407	0.151	0.139	0.025	0.259	0.246	0.141	0.115	0.034	3	0.124	0.098
1/4 0.2500	0.492	0.473	0.175	0.162	0.035	0.281	0.268	0.161	0.135	0.036	3	0.144	0.118
5/16 0.3125	0.615	0.594	0.218	0.203	0.040	0.350	0.337	0.193	0.169	0.059	4	0.173	0.149
3/8 0.3750	0.740	0.716	0.261	0.244	0.040	0.389	0.376	0.233	0.210	0.065	4	0.213	0.190
7/16 0.4375	0.863	0.837	0.305	0.284	0.050	0.413	0.400	0.259	0.234	0.068	4	0.239	0.214
1/2 0.5000	0.987	0.958	0.348	0.325	0.055	0.435	0.422	0.280	0.255	0.071	4	0.260	0.235
9/16 0.5625	1.041	1.000	0.391	0.366	0.065	0.470	0.447	0.312	0.288	0.076	4	0.292	0.268
5/8 0.6250	1.172	1.125	0.434	0.406	0.075	0.587	0.564	0.343	0.314	0.081	5	0.310	0.281
3/4 0.7500	1.435	1.375	0.521	0.488	0.085	0.633	0.610	0.382	0.355	0.086	5	0.349	0.322

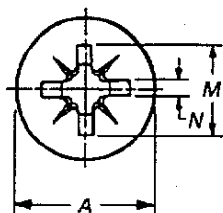
GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

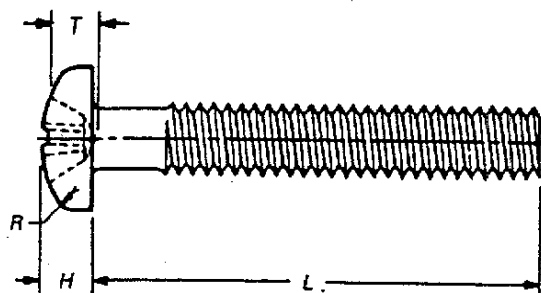


TABLE 9C DIMENSIONS OF TYPE IA CROSS RECESSED PAN HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R, Min.	Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.116	0.104	0.044	0.036	0.005	0.067	0.054	0.040	0.024	0.018	0	0.033	0.017
1 0.0730	0.142	0.130	0.053	0.044	0.005	0.074	0.061	0.047	0.031	0.018	0	0.040	0.024
2 0.0860	0.167	0.155	0.062	0.053	0.010	0.104	0.091	0.064	0.048	0.028	1	0.053	0.037
3 0.0990	0.193	0.180	0.071	0.062	0.010	0.112	0.099	0.073	0.057	0.029	1	0.062	0.046
4 0.1120	0.219	0.205	0.080	0.070	0.010	0.122	0.109	0.083	0.067	0.029	1	0.072	0.056
5 0.1250	0.245	0.231	0.089	0.079	0.015	0.154	0.141	0.084	0.066	0.040	2	0.068	0.050
6 0.1380	0.270	0.256	0.097	0.087	0.015	0.162	0.149	0.092	0.074	0.040	2	0.076	0.058
8 0.1640	0.322	0.306	0.115	0.105	0.015	0.177	0.164	0.108	0.090	0.041	2	0.092	0.074
10 0.1900	0.373	0.357	0.133	0.122	0.020	0.193	0.180	0.124	0.106	0.041	2	0.108	0.090
12 0.2160	0.425	0.407	0.151	0.139	0.025	0.254	0.241	0.139	0.121	0.056	3	0.117	0.099
1/4 0.2500	0.492	0.473	0.175	0.162	0.035	0.273	0.260	0.159	0.141	0.057	3	0.137	0.119
5/16 0.3125	0.615	0.594	0.218	0.203	0.040	0.341	0.328	0.191	0.173	0.086	4	0.164	0.146
3/8 0.3750	0.740	0.716	0.261	0.244	0.040	0.377	0.364	0.228	0.210	0.086	4	0.201	0.183
7/16 0.4375	0.863	0.837	0.305	0.284	0.050	0.399	0.386	0.251	0.233	0.086	4	0.224	0.206
1/2 0.5000	0.987	0.958	0.348	0.325	0.055	0.420	0.407	0.273	0.255	0.086	4	0.246	0.228
9/16 0.5625	1.041	1.000	0.391	0.366	0.065	0.456	0.433	0.304	0.286	0.087	4	0.277	0.259
5/8 0.6250	1.172	1.125	0.434	0.406	0.075	0.570	0.547	0.333	0.312	0.098	5	0.295	0.274
3/4 0.7500	1.435	1.375	0.521	0.488	0.085	0.614	0.591	0.379	0.358	0.098	5	0.341	0.320

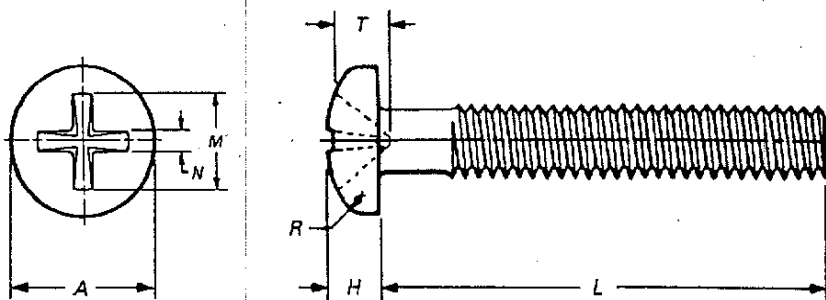
GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.

TABLE 9D DIMENSIONS OF TYPE II CROSS RECESSED PAN HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R, Min.	Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size [Note (2)]	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.116	0.104	0.044	0.036	0.005	0.076	0.066	0.038	0.026	0.022	...	Note (3)	Note (3)
1 0.0730	0.142	0.130	0.053	0.044	0.005	0.089	0.079	0.046	0.034	0.024	...	Note (3)	Note (3)
2 0.0860	0.167	0.155	0.062	0.053	0.010	0.109	0.097	0.059	0.046	0.027	...	0.033	0.022
3 0.0990	0.193	0.180	0.071	0.062	0.010	0.125	0.113	0.069	0.056	0.029	...	0.043	0.032
4 0.1120	0.219	0.205	0.080	0.070	0.010	0.143	0.130	0.079	0.066	0.032	...	0.055	0.043
5 0.1250	0.245	0.231	0.089	0.079	0.015	0.159	0.145	0.090	0.076	0.034	...	0.066	0.052
6 0.1380	0.270	0.256	0.097	0.087	0.015	0.176	0.162	0.096	0.082	0.037	...	0.077	0.064
8 0.1640	0.322	0.306	0.115	0.105	0.015	0.207	0.192	0.116	0.101	0.041	...	0.097	0.083
10 0.1900	0.373	0.357	0.133	0.122	0.020	0.240	0.224	0.137	0.122	0.046	...	0.118	0.104
12 0.2160	0.425	0.407	0.151	0.139	0.025	0.272	0.254	0.158	0.142	0.051	...	0.139	0.124
1/4 0.2500	0.492	0.473	0.175	0.162	0.035	0.318	0.300	0.180	0.163	0.058	...	0.169	0.153
5/16 0.3125	0.615	0.594	0.218	0.203	0.040	0.396	0.375	0.231	0.212	0.069	...	0.220	0.202
3/8 0.3750	0.740	0.716	0.261	0.244	0.040	0.480	0.457	0.286	0.266	0.081	...	0.275	0.256
7/16 0.4375	0.863	0.837	0.305	0.284	0.050	0.557	0.531	0.336	0.314	0.093	...	0.325	0.304
1/2 0.5000	0.987	0.958	0.348	0.325	0.055	0.630	0.604	0.384	0.362	0.104	...	0.373	0.352
9/16 0.5625	1.041	1.000	0.391	0.366	0.065	0.638	0.612	0.389	0.367	0.105	...	0.378	0.357
5/8 0.6250	1.172	1.125	0.434	0.406	0.075	0.638	0.612	0.389	0.367	0.105	...	0.378	0.357
3/4 0.7500	1.435	1.375	0.521	0.488	0.085	0.638	0.612	0.389	0.367	0.105	...	0.378	0.357

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (2) Point same on all drivers.
 (3) Not practical to gage.

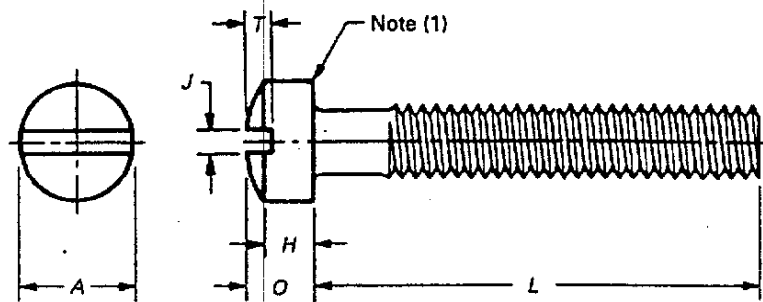


TABLE 10A DIMENSIONS OF SLOTTED FILLISTER HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Head Side Height H		Total Head Height O		Slot Width J		Slot Depth T	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
0000 0.0210	0.038	0.032	0.019	0.011	0.025	0.015	0.008	0.004	0.012	0.006
000 0.0340	0.059	0.053	0.029	0.021	0.035	0.027	0.012	0.006	0.017	0.011
00 0.0470	0.082	0.072	0.037	0.028	0.047	0.039	0.017	0.010	0.022	0.015
0 0.0600	0.096	0.083	0.043	0.038	0.055	0.047	0.023	0.016	0.025	0.015
1 0.0730	0.118	0.104	0.053	0.045	0.066	0.058	0.026	0.019	0.031	0.020
2 0.0860	0.140	0.124	0.062	0.053	0.083	0.066	0.031	0.023	0.037	0.025
3 0.0990	0.161	0.145	0.070	0.061	0.095	0.077	0.035	0.027	0.043	0.030
4 0.1120	0.183	0.166	0.079	0.069	0.107	0.088	0.039	0.031	0.048	0.035
5 0.1250	0.205	0.187	0.088	0.078	0.120	0.100	0.043	0.035	0.054	0.040
6 0.1380	0.226	0.208	0.096	0.086	0.132	0.111	0.048	0.039	0.060	0.045
8 0.1640	0.270	0.250	0.113	0.102	0.156	0.133	0.054	0.045	0.071	0.054
10 0.1900	0.313	0.292	0.130	0.118	0.180	0.156	0.060	0.050	0.083	0.064
12 0.2160	0.357	0.334	0.148	0.134	0.205	0.178	0.067	0.056	0.094	0.074
1/4 0.2500	0.414	0.389	0.170	0.155	0.237	0.207	0.075	0.064	0.109	0.087
5/16 0.3125	0.518	0.490	0.211	0.194	0.295	0.262	0.084	0.072	0.137	0.110
3/8 0.3750	0.622	0.590	0.253	0.233	0.355	0.315	0.094	0.081	0.164	0.133
7/16 0.4375	0.625	0.589	0.265	0.242	0.368	0.321	0.094	0.081	0.170	0.135
1/2 0.5000	0.750	0.710	0.297	0.273	0.412	0.362	0.106	0.091	0.190	0.151
9/16 0.5625	0.812	0.768	0.336	0.308	0.466	0.410	0.118	0.102	0.214	0.172
5/8 0.6250	0.875	0.827	0.375	0.345	0.521	0.461	0.133	0.116	0.240	0.193
3/4 0.7500	1.000	0.945	0.441	0.406	0.612	0.542	0.149	0.131	0.281	0.226

GENERAL NOTE: For additional requirements refer to para. 2.

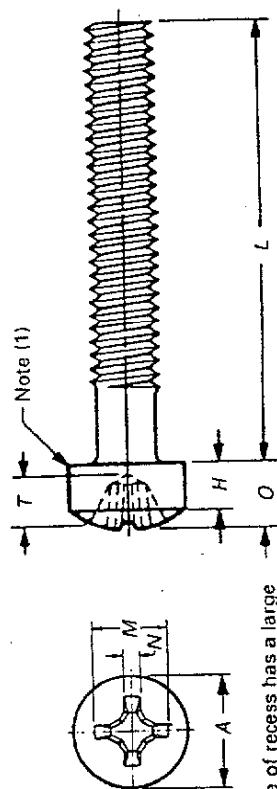
NOTES:

(1) A slight rounding of the edges at periphery of head shall be permissible provided the diameter of the bearing circle is equal to no less than 90% of the specified minimum head diameter.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess has a large center opening, tapered wings, and blunt bottom, with all edges relieved or rounded.

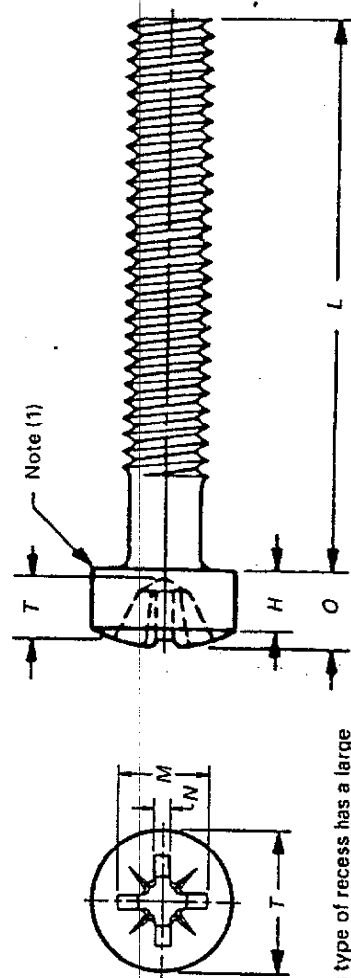
TABLE 10B DIMENSIONS OF TYPE I CROSS RECESSED FILLISTER HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Head Side Height H		Total Head Height O		Recess Diameter M		Recess Depth T		Recess Width N		Driver Size		Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
0 0.0600	0.096	0.083	0.043	0.038	0.055	0.047	0.067	0.054	0.039	0.021	0.013	0.013	0	0	0.032	0.014
1 0.0730	0.118	0.104	0.053	0.045	0.066	0.058	0.074	0.061	0.045	0.025	0.014	0.014	0	0	0.040	0.022
2 0.0860	0.140	0.124	0.062	0.053	0.083	0.066	0.104	0.091	0.059	0.041	0.017	0.017	1	1	0.052	0.034
3 0.0990	0.161	0.145	0.070	0.061	0.095	0.077	0.112	0.099	0.068	0.050	0.019	0.019	1	1	0.061	0.043
4 0.1120	0.183	0.166	0.079	0.069	0.107	0.088	0.122	0.109	0.078	0.060	0.019	0.019	1	1	0.071	0.053
5 0.1250	0.205	0.187	0.088	0.078	0.120	0.100	0.143	0.130	0.067	0.042	0.027	0.027	2	2	0.056	0.031
6 0.1380	0.226	0.208	0.096	0.086	0.132	0.111	0.166	0.153	0.091	0.066	0.028	0.028	2	2	0.080	0.055
8 0.1640	0.270	0.250	0.113	0.102	0.156	0.133	0.182	0.169	0.108	0.082	0.030	0.030	2	2	0.097	0.071
10 0.1900	0.313	0.292	0.130	0.118	0.180	0.156	0.199	0.186	0.124	0.100	0.031	0.031	2	2	0.113	0.089
12 0.2160	0.357	0.334	0.148	0.134	0.205	0.178	0.259	0.246	0.141	0.115	0.034	0.034	3	3	0.124	0.098
1/4 0.2500	0.414	0.389	0.170	0.155	0.237	0.207	0.281	0.268	0.161	0.135	0.036	0.036	3	3	0.144	0.118
5/16 0.3125	0.518	0.490	0.211	0.194	0.295	0.262	0.322	0.309	0.203	0.177	0.042	0.042	3	3	0.186	0.160
3/8 0.3750	0.622	0.590	0.253	0.233	0.355	0.315	0.389	0.376	0.233	0.210	0.065	0.065	4	4	0.213	0.190
7/16 0.4375	0.625	0.589	0.265	0.242	0.368	0.321	0.413	0.400	0.259	0.234	0.068	0.068	4	4	0.239	0.214
1/2 0.5000	0.750	0.710	0.297	0.273	0.412	0.362	0.435	0.422	0.280	0.255	0.071	0.071	4	4	0.260	0.235
9/16 0.5625	0.812	0.768	0.336	0.308	0.466	0.410	0.470	0.442	0.312	0.288	0.076	0.076	4	4	0.292	0.268
5/8 0.6250	0.827	0.775	0.375	0.345	0.521	0.461	0.587	0.564	0.343	0.314	0.081	0.081	5	5	0.310	0.281
3/4 0.7500	1.000	0.945	0.441	0.406	0.612	0.542	0.633	0.610	0.382	0.355	0.086	0.086	5	5	0.349	0.322

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) A slight rounding of the edges at periphery of head shall be permissible provided the diameter of the bearing circle is equal to no less than 90% of the specified minimum head diameter.
- (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.

TABLE 10C ILLUSTRATION

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

TABLE 10C DIMENSIONS OF TYPE IA CROSS RECESSED FILLISTER HEAD MACHINE SCREWS

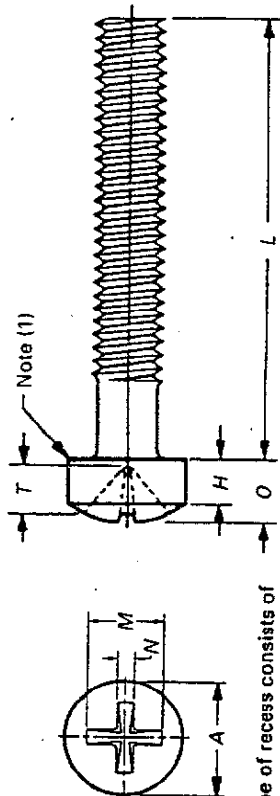
Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Head Side Height H		Total Head Height O		Recess Diameter M		Recess Depth T		Recess Width N _s		Driver Size		Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
0 0.0600	0.096	0.083	0.043	0.038	0.055	0.047	0.067	0.054	0.040	0.024	0.018	0.018	0	0	0.033	0.017
1 0.0730	0.118	0.104	0.053	0.045	0.066	0.058	0.074	0.061	0.047	0.031	0.018	0.018	0	0	0.040	0.024
2 0.0860	0.140	0.124	0.062	0.053	0.083	0.066	0.104	0.091	0.064	0.048	0.028	0.028	1	1	0.053	0.037
3 0.0990	0.161	0.145	0.070	0.061	0.095	0.077	0.112	0.099	0.073	0.057	0.029	0.029	1	1	0.062	0.046
4 0.1120	0.183	0.166	0.079	0.069	0.107	0.088	0.122	0.109	0.083	0.067	0.029	0.029	1	1	0.072	0.056
5 0.1250	0.205	0.187	0.088	0.078	0.120	0.100	0.140	0.127	0.070	0.052	0.040	0.040	2	2	0.054	0.036
6 0.1380	0.226	0.208	0.096	0.086	0.132	0.111	0.162	0.149	0.092	0.074	0.040	0.040	2	2	0.076	0.058
8 0.1640	0.270	0.250	0.113	0.102	0.156	0.133	0.177	0.164	0.108	0.090	0.041	0.041	2	2	0.092	0.074
10 0.1900	0.313	0.292	0.130	0.118	0.180	0.156	0.193	0.180	0.124	0.106	0.041	0.041	2	2	0.108	0.090
12 0.2160	0.357	0.334	0.148	0.134	0.205	0.178	0.254	0.241	0.139	0.121	0.056	0.056	3	3	0.117	0.099
1/4 0.2500	0.414	0.389	0.170	0.155	0.237	0.207	0.273	0.260	0.159	0.141	0.057	0.057	3	3	0.137	0.119
5/16 0.3125	0.518	0.490	0.211	0.194	0.295	0.262	0.315	0.302	0.202	0.184	0.057	0.057	3	3	0.181	0.163
3/8 0.3750	0.622	0.590	0.253	0.233	0.355	0.315	0.377	0.364	0.228	0.210	0.086	0.086	4	4	0.201	0.183
7/16 0.4375	0.625	0.589	0.265	0.242	0.368	0.321	0.399	0.386	0.251	0.233	0.086	0.086	4	4	0.224	0.206
1/2 0.5000	0.750	0.710	0.297	0.273	0.412	0.362	0.420	0.407	0.273	0.255	0.086	0.086	4	4	0.246	0.228
9/16 0.5625	0.812	0.768	0.336	0.308	0.466	0.410	0.456	0.433	0.304	0.286	0.087	0.087	4	4	0.277	0.259
5/8 0.6250	0.875	0.827	0.375	0.345	0.521	0.461	0.570	0.547	0.333	0.312	0.098	0.098	5	5	0.295	0.274
3/4 0.7500	1.000	0.945	0.441	0.406	0.612	0.542	0.614	0.591	0.379	0.358	0.098	0.098	5	5	0.341	0.320

GENERAL NOTES:

- (a) For additional requirements refer to para. 2.
 (b) For reference, see Table 10C illustration on previous page.

NOTES:

- (1) A slight rounding of the edges at periphery of head shall be permissible provided the diameter of the bearing circle is equal to no less than 90% of the specified minimum head diameter.
 (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.

TABLE 10D DIMENSIONS OF TYPE II CROSS RECESSED FILLISTER HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Head Side Height H		Total Head Height O		Recess Diameter M		Recess Depth T		Recess Width W		Driver Size [Note (3)]	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		Max.	Min.
0 0.0600	0.096	0.083	0.043	0.038	0.055	0.047	0.072	0.062	0.035	0.023	0.020	0.020	...	Note (4)	Note (4)
1 0.0730	0.118	0.104	0.053	0.045	0.066	0.058	0.088	0.078	0.045	0.034	0.022	0.022	...	Note (4)	Note (4)
2 0.0860	0.140	0.124	0.062	0.053	0.083	0.066	0.105	0.093	0.056	0.044	0.024	0.024	...	0.030	0.019
3 0.0990	0.161	0.145	0.070	0.061	0.095	0.077	0.121	0.109	0.067	0.054	0.027	0.027	...	0.041	0.029
4 0.1120	0.183	0.166	0.079	0.069	0.107	0.088	0.137	0.124	0.077	0.064	0.029	0.029	...	0.051	0.039
5 0.1250	0.205	0.187	0.088	0.078	0.120	0.100	0.154	0.140	0.086	0.072	0.031	0.031	...	0.062	0.049
6 0.1380	0.226	0.208	0.096	0.086	0.132	0.111	0.170	0.156	0.097	0.083	0.034	0.034	...	0.073	0.060
8 0.1640	0.270	0.250	0.113	0.102	0.156	0.133	0.202	0.187	0.118	0.103	0.039	0.039	...	0.094	0.080
10 0.1900	0.313	0.292	0.130	0.118	0.180	0.156	0.235	0.219	0.134	0.119	0.043	0.043	...	0.115	0.101
12 0.2160	0.357	0.334	0.148	0.134	0.205	0.178	0.268	0.250	0.156	0.139	0.048	0.048	...	0.137	0.121
1/4 0.2500	0.414	0.389	0.170	0.155	0.237	0.207	0.308	0.290	0.182	0.165	0.054	0.054	...	0.163	0.147
5/16 0.3125	0.518	0.490	0.211	0.194	0.295	0.262	0.388	0.367	0.226	0.207	0.066	0.066	...	0.215	0.197
3/8 0.3750	0.622	0.590	0.253	0.233	0.355	0.315	0.466	0.442	0.277	0.256	0.077	0.077	...	0.266	0.246
7/16 0.4375	0.625	0.589	0.265	0.242	0.368	0.321	0.466	0.442	0.277	0.256	0.077	0.077	...	0.266	0.246
1/2 0.5000	0.750	0.710	0.297	0.273	0.412	0.362	0.562	0.532	0.339	0.315	0.091	0.091	...	0.328	0.305
9/16 0.5625	0.812	0.768	0.336	0.308	0.466	0.410	0.609	0.576	0.370	0.343	0.097	0.097	...	0.359	0.333
5/8 0.6250	0.875	0.827	0.375	0.345	0.521	0.461	0.609	0.576	0.370	0.343	0.097	0.097	...	0.359	0.333
3/4 0.7500	1.000	0.945	0.441	0.406	0.612	0.542	0.609	0.576	0.370	0.343	0.097	0.097	...	0.359	0.333

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) A slight rounding of the edges at periphery of head shall be permissible provided the diameter of the bearing circle is equal to no less than 90% of the specified minimum head diameter.
- (2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
- (3) Point same on all drivers.
- (4) Not practical to gage.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

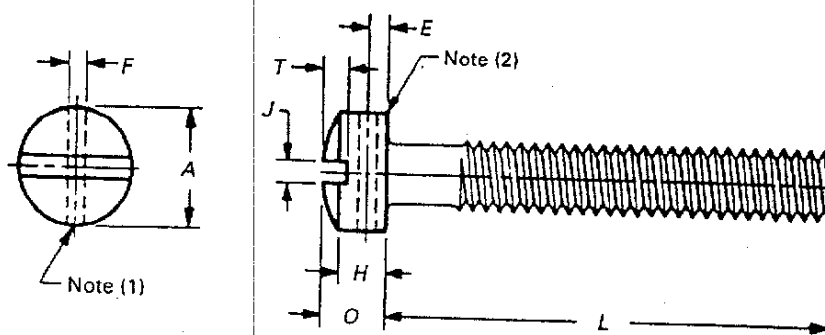


TABLE 11 DIMENSIONS OF SLOTTED DRILLED FILLISTER HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (3)]	Head Diameter A		Head Side Height H		Total Head Height O		Slot Width J		Slot Depth T		Drilled Hole Location E, Basic [Note (1)]	Drilled Hole Diameter F, Basic [Note (1)]
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
2 0.0860	0.140	0.124	0.062	0.055	0.083	0.070	0.031	0.023	0.030	0.022		
3 0.0990	0.161	0.145	0.070	0.064	0.095	0.082	0.035	0.027	0.034	0.026	0.026	0.031
											0.030	0.037
4 0.1120	0.183	0.166	0.079	0.072	0.107	0.094	0.039	0.031	0.038	0.030	0.035	0.037
5 0.1250	0.205	0.187	0.088	0.081	0.120	0.106	0.043	0.035	0.042	0.033	0.038	0.046
6 0.1380	0.226	0.208	0.096	0.089	0.132	0.118	0.048	0.039	0.045	0.035	0.043	0.046
8 0.1640	0.270	0.250	0.113	0.106	0.156	0.141	0.054	0.045	0.065	0.054	0.043	0.046
10 0.1900	0.313	0.292	0.130	0.123	0.180	0.165	0.060	0.050	0.075	0.064	0.043	0.046
12 0.2160	0.357	0.334	0.148	0.139	0.205	0.188	0.067	0.056	0.087	0.074	0.053	0.046
1/4 0.2500	0.414	0.389	0.170	0.161	0.237	0.219	0.075	0.064	0.102	0.087	0.062	0.062
5/16 0.3125	0.518	0.490	0.211	0.201	0.295	0.276	0.084	0.072	0.130	0.110	0.078	0.070
3/8 0.3750	0.622	0.590	0.253	0.242	0.355	0.333	0.094	0.081	0.154	0.134	0.094	0.070

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Drilled hole shall be approximately perpendicular to the axis of slot and may be permitted to break through bottom of the slot. Edges of the hole shall be free from burrs.
- (2) A slight rounding of the edges at periphery of head shall be permissible provided the diameter of the bearing circle is equal to no less than 90% of the specified minimum head diameter.
- (3) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

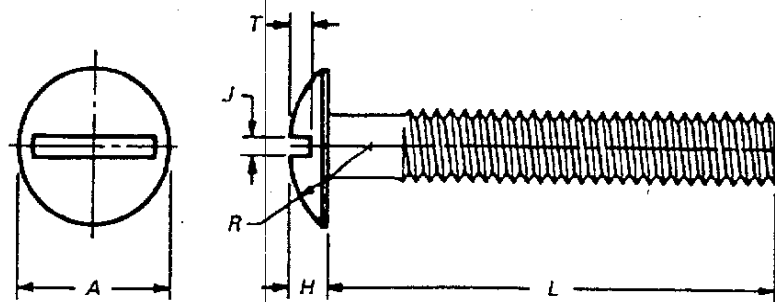


TABLE 12A DIMENSIONS OF SLOTTED TRUSS HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R	Slot Width J		Slot Depth T	
	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Min.
0000 0.0210	0.049	0.043	0.014	0.010	0.032	0.009	0.005	0.009	0.005
000 0.0340	0.077	0.071	0.022	0.018	0.051	0.013	0.009	0.013	0.009
00 0.0470	0.106	0.098	0.030	0.024	0.070	0.017	0.010	0.018	0.012
0 0.0600	0.131	0.119	0.037	0.029	0.087	0.023	0.016	0.022	0.014
1 0.0730	0.164	0.149	0.045	0.037	0.107	0.026	0.019	0.027	0.018
2 0.0860	0.194	0.180	0.053	0.044	0.129	0.031	0.023	0.031	0.022
3 0.0990	0.226	0.211	0.061	0.051	0.151	0.035	0.027	0.036	0.026
4 0.1120	0.257	0.241	0.069	0.059	0.169	0.039	0.031	0.040	0.030
5 0.1250	0.289	0.272	0.078	0.066	0.191	0.043	0.035	0.045	0.034
6 0.1380	0.321	0.303	0.086	0.074	0.211	0.048	0.039	0.050	0.037
8 0.1640	0.384	0.364	0.102	0.088	0.254	0.054	0.045	0.058	0.045
10 0.1900	0.448	0.425	0.118	0.103	0.283	0.060	0.050	0.068	0.053
12 0.2160	0.511	0.487	0.134	0.118	0.336	0.067	0.056	0.077	0.061
1/4 0.2500	0.573	0.546	0.150	0.133	0.375	0.075	0.064	0.087	0.070
5/16 0.3125	0.698	0.666	0.183	0.162	0.457	0.084	0.072	0.106	0.085
3/8 0.3750	0.823	0.787	0.215	0.191	0.538	0.094	0.081	0.124	0.100
7/16 0.4375	0.948	0.907	0.248	0.221	0.619	0.094	0.081	0.142	0.116
1/2 0.5000	1.073	1.028	0.280	0.250	0.701	0.106	0.091	0.161	0.131
9/16 0.5625	1.198	1.149	0.312	0.279	0.783	0.118	0.102	0.179	0.146
5/8 0.6250	1.323	1.269	0.345	0.309	0.863	0.133	0.116	0.196	0.162
3/4 0.7500	1.573	1.511	0.410	0.368	1.024	0.149	0.131	0.234	0.182

GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

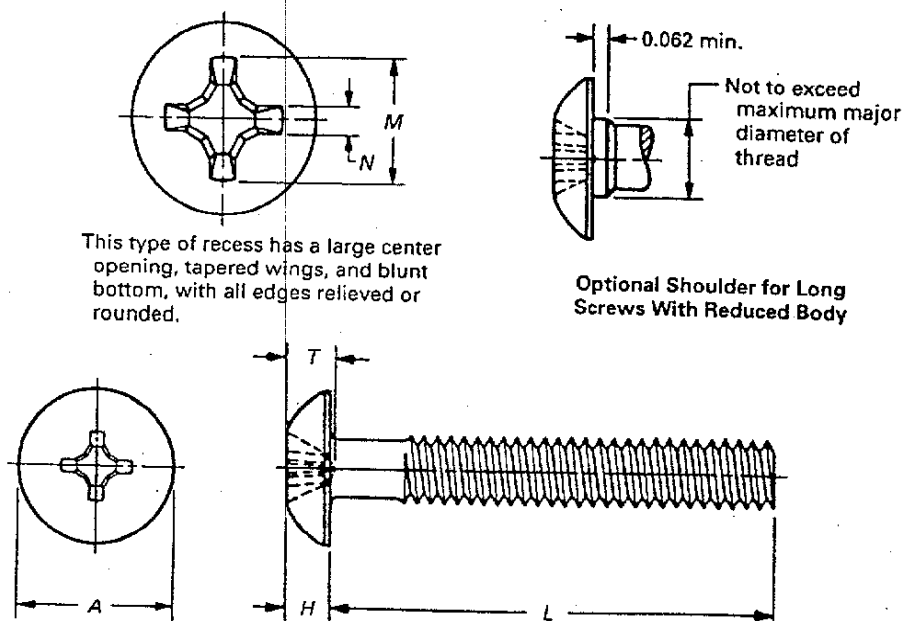


TABLE 12B DIMENSIONS OF TYPE I CROSS RECESSED TRUSS HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.131	0.119	0.037	0.029	0.063	0.050	0.037	0.019	0.013	0	0.030	0.012
1 0.0730	0.164	0.149	0.045	0.037	0.071	0.058	0.045	0.027	0.014	0	0.038	0.020
2 0.0860	0.194	0.180	0.053	0.044	0.104	0.091	0.059	0.041	0.018	1	0.052	0.034
3 0.0990	0.226	0.211	0.061	0.051	0.110	0.097	0.066	0.049	0.018	1	0.059	0.042
4 0.1120	0.257	0.241	0.069	0.059	0.112	0.099	0.069	0.051	0.018	1	0.062	0.044
5 0.1250	0.289	0.272	0.078	0.066	0.128	0.115	0.085	0.067	0.019	1	0.078	0.060
6 0.1380	0.321	0.303	0.086	0.074	0.158	0.145	0.084	0.059	0.027	2	0.073	0.048
8 0.1640	0.384	0.364	0.102	0.088	0.173	0.160	0.099	0.074	0.029	2	0.088	0.063
10 0.1900	0.448	0.425	0.118	0.103	0.188	0.175	0.115	0.090	0.030	2	0.104	0.079
12 0.2160	0.511	0.487	0.134	0.118	0.248	0.235	0.128	0.103	0.032	3	0.111	0.086
1/4 0.2500	0.573	0.546	0.150	0.133	0.263	0.250	0.143	0.118	0.033	3	0.126	0.101
5/16 0.3125	0.698	0.666	0.183	0.162	0.352	0.339	0.193	0.168	0.059	4	0.173	0.148
3/8 0.3750	0.823	0.787	0.215	0.191	0.383	0.370	0.226	0.202	0.063	4	0.206	0.182
7/16 0.4375	0.948	0.907	0.248	0.221	0.414	0.401	0.257	0.232	0.068	4	0.237	0.212
1/2 0.5000	1.073	1.028	0.280	0.250	0.444	0.431	0.288	0.263	0.072	4	0.268	0.243
9/16 0.5625	1.198	1.149	0.312	0.279	0.451	0.428	0.302	0.278	0.074	4	0.282	0.258
5/8 0.6250	1.323	1.269	0.345	0.309	0.559	0.536	0.322	0.289	0.077	5	0.289	0.256
3/4 0.7500	1.573	1.511	0.410	0.368	0.620	0.597	0.384	0.352	0.085	5	0.351	0.319

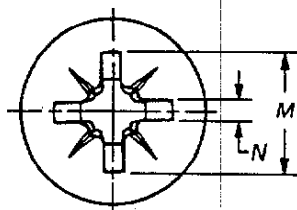
GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

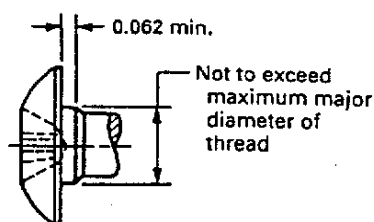
(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS



This type of recess has a large center opening, wide straight wings, and blunt bottom, with all edges relieved or rounded.



Optional Shoulder for Long Screws With Reduced Body

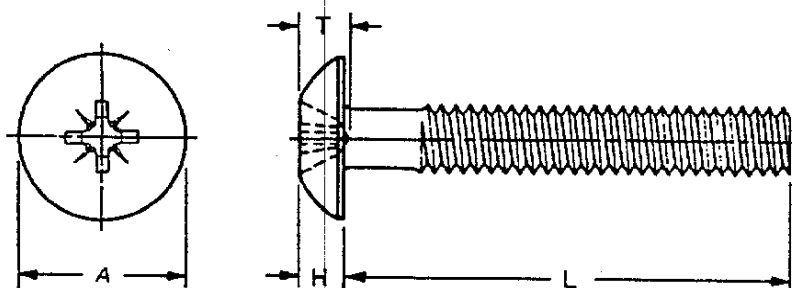


TABLE 12C DIMENSIONS OF TYPE IA CROSS RECESSED TRUSS HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.131	0.119	0.037	0.029	0.062	0.049	0.037	0.021	0.018	0	0.030	0.014
1 0.0730	0.164	0.149	0.045	0.037	0.070	0.057	0.045	0.029	0.018	0	0.038	0.022
2 0.0860	0.194	0.180	0.053	0.044	0.098	0.085	0.059	0.043	0.029	1	0.049	0.033
3 0.0990	0.226	0.211	0.061	0.051	0.105	0.092	0.066	0.050	0.029	1	0.056	0.040
4 0.1120	0.257	0.241	0.069	0.059	0.108	0.095	0.069	0.053	0.029	1	0.059	0.043
5 0.1250	0.289	0.272	0.078	0.066	0.124	0.111	0.085	0.069	0.030	1	0.075	0.059
6 0.1380	0.321	0.303	0.086	0.074	0.148	0.135	0.080	0.062	0.041	2	0.065	0.047
8 0.1640	0.384	0.364	0.102	0.088	0.162	0.149	0.094	0.076	0.041	2	0.079	0.061
10 0.1900	0.448	0.425	0.118	0.103	0.178	0.165	0.110	0.092	0.042	2	0.095	0.077
12 0.2160	0.511	0.487	0.134	0.118	0.234	0.221	0.122	0.104	0.055	3	0.101	0.083
1/4 0.2500	0.573	0.546	0.150	0.133	0.248	0.235	0.136	0.118	0.056	3	0.115	0.097
5/16 0.3125	0.698	0.666	0.183	0.162	0.333	0.320	0.187	0.169	0.086	4	0.161	0.143
3/8 0.3750	0.823	0.787	0.215	0.191	0.364	0.351	0.219	0.201	0.086	4	0.192	0.174
7/16 0.4375	0.948	0.907	0.248	0.221	0.394	0.381	0.249	0.231	0.086	4	0.223	0.205
1/2 0.5000	1.073	1.028	0.280	0.250	0.422	0.409	0.278	0.260	0.086	4	0.251	0.233
9/16 0.5625	1.198	1.149	0.312	0.279	0.432	0.409	0.283	0.265	0.086	4	0.256	0.238
5/8 0.6250	1.323	1.269	0.345	0.309	0.536	0.513	0.304	0.283	0.097	5	0.266	0.245
3/4 0.7500	1.573	1.511	0.410	0.368	0.593	0.570	0.362	0.341	0.098	5	0.323	0.302

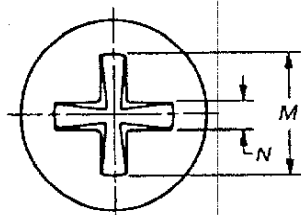
GENERAL NOTE: For additional requirements refer to para. 2.

NOTE:

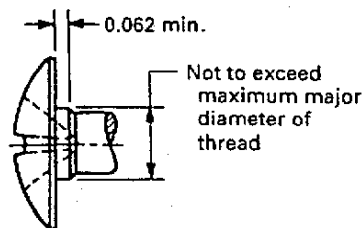
(1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998



This type of recess consists of two intersecting slots with parallel sides converging to a slightly truncated apex at bottom of recess.



Optional Shoulder for Long Screws With Reduced Body

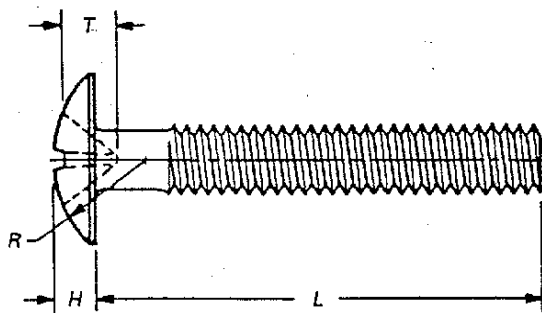
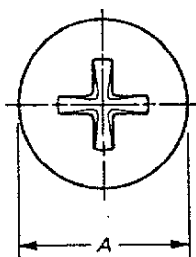


TABLE 12D DIMENSIONS OF TYPE II CROSS RECESSED TRUSS HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (1)]	Head Diameter A		Head Height H		Head Radius R, Min.	Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size [Note (2)]	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.131	0.119	0.037	0.029	0.087	0.073	0.067	0.036	0.027	0.021	...	Note (3)	Note (3)
1 0.0730	0.164	0.149	0.045	0.037	0.107	0.091	0.083	0.047	0.037	0.023	...	Note (3)	Note (3)
2 0.0860	0.194	0.180	0.053	0.044	0.129	0.109	0.101	0.059	0.049	0.026	...	0.033	0.024
3 0.0990	0.226	0.211	0.061	0.051	0.151	0.127	0.118	0.071	0.060	0.028	...	0.045	0.035
4 0.1120	0.257	0.241	0.069	0.059	0.169	0.144	0.135	0.080	0.069	0.031	...	0.056	0.046
5 0.1250	0.289	0.272	0.078	0.066	0.191	0.162	0.152	0.092	0.080	0.033	...	0.068	0.057
6 0.1380	0.321	0.303	0.086	0.074	0.211	0.180	0.170	0.103	0.091	0.035	...	0.079	0.068
8 0.1640	0.384	0.364	0.102	0.088	0.254	0.215	0.204	0.121	0.109	0.041	...	0.102	0.091
10 0.1900	0.448	0.425	0.118	0.103	0.283	0.251	0.238	0.145	0.131	0.046	...	0.126	0.113
12 0.2160	0.511	0.487	0.134	0.118	0.336	0.286	0.273	0.167	0.154	0.051	...	0.148	0.136
1/4 0.2500	0.573	0.546	0.150	0.133	0.375	0.321	0.306	0.182	0.167	0.057	...	0.171	0.157
5/16 0.3125	0.698	0.666	0.183	0.162	0.457	0.391	0.373	0.228	0.211	0.067	...	0.217	0.201
3/8 0.3750	0.823	0.787	0.215	0.191	0.538	0.456	0.436	0.270	0.252	0.076	...	0.259	0.242
7/16 0.4375	0.948	0.907	0.248	0.221	0.619	0.523	0.500	0.314	0.294	0.086	...	0.303	0.284
1/2 0.5000	1.073	1.028	0.280	0.250	0.701	0.601	0.576	0.365	0.343	0.097	...	0.354	0.333
9/16 0.5625	1.198	1.149	0.312	0.279	0.783	0.601	0.576	0.365	0.343	0.097	...	0.354	0.333
5/8 0.6250	1.323	1.269	0.345	0.309	0.863	0.601	0.576	0.365	0.343	0.097	...	0.354	0.333
3/4 0.7500	1.573	1.511	0.410	0.368	1.024	0.601	0.576	0.365	0.343	0.097	...	0.354	0.333

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

- (1) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.
 (2) Point same on all drivers.
 (3) Not practical to gage.

ASME B18.6.3-1998

MACHINE SCREWS AND MACHINE SCREW NUTS

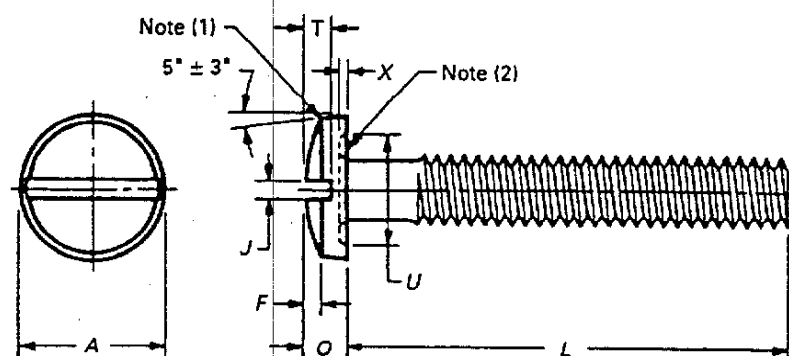


TABLE 13A DIMENSIONS OF SLOTTED BINDING HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (3)]	Head Diameter A		Total Head Height O		Head Oval Height F		Slot Width J		Slot Depth T		Undercut Diameter U [Note (2)]		Undercut Depth X [Note (2)]	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
0000 0.0210	0.046	0.040	0.014	0.009	0.006	0.003	0.008	0.004	0.009	0.005	...	...	...	...
000 0.0340	0.073	0.067	0.021	0.015	0.008	0.005	0.012	0.006	0.013	0.009	...	...	...	...
00 0.0470	0.098	0.090	0.028	0.023	0.011	0.007	0.017	0.010	0.018	0.012	...	...	...	...
0 0.0600	0.126	0.119	0.032	0.026	0.012	0.008	0.023	0.016	0.018	0.009	0.098	0.086	0.007	0.002
1 0.0730	0.153	0.145	0.041	0.035	0.015	0.011	0.026	0.019	0.024	0.014	0.120	0.105	0.008	0.003
2 0.0860	0.181	0.171	0.050	0.043	0.018	0.013	0.031	0.023	0.030	0.020	0.141	0.124	0.010	0.005
3 0.0990	0.208	0.197	0.059	0.052	0.022	0.016	0.035	0.027	0.036	0.025	0.162	0.143	0.011	0.006
4 0.1120	0.235	0.223	0.068	0.061	0.025	0.018	0.039	0.031	0.042	0.030	0.184	0.161	0.012	0.007
5 0.1250	0.263	0.249	0.078	0.069	0.029	0.021	0.043	0.035	0.048	0.035	0.205	0.180	0.014	0.009
6 0.1380	0.290	0.275	0.087	0.078	0.032	0.024	0.048	0.039	0.053	0.040	0.226	0.199	0.015	0.010
8 0.1640	0.344	0.326	0.105	0.095	0.039	0.029	0.054	0.045	0.065	0.050	0.269	0.236	0.017	0.012
10 0.1900	0.399	0.378	0.123	0.112	0.045	0.034	0.060	0.050	0.077	0.060	0.312	0.274	0.020	0.015
12 0.2160	0.454	0.430	0.141	0.130	0.052	0.039	0.067	0.056	0.089	0.070	0.354	0.311	0.023	0.018
1/4 0.2500	0.525	0.498	0.165	0.152	0.061	0.046	0.075	0.064	0.105	0.084	0.410	0.360	0.026	0.021
5/16 0.3125	0.656	0.622	0.209	0.194	0.077	0.059	0.084	0.072	0.134	0.108	0.513	0.450	0.032	0.027
3/8 0.3750	0.788	0.746	0.253	0.235	0.094	0.071	0.094	0.081	0.163	0.132	0.615	0.540	0.039	0.034

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Break sharp edge on head where spherical and conical surfaces meet.

(2) Unless otherwise specified by purchaser, slotted binding head machine screws shall not be undercut.

(3) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

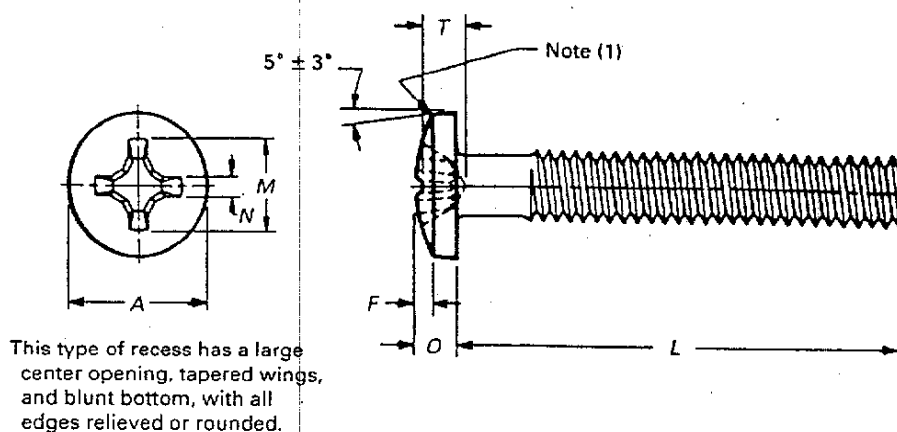


TABLE 13B DIMENSIONS OF TYPE I CROSS RECESSED BINDING HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Total Head Height O		Head Oval Height F		Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.126	0.119	0.032	0.026	0.012	0.008	0.067	0.054	0.040	0.023	0.013	0	0.033	0.016
1 0.0730	0.153	0.145	0.041	0.035	0.015	0.011	0.074	0.061	0.047	0.030	0.014	0	0.040	0.023
2 0.0860	0.181	0.171	0.050	0.043	0.018	0.013	0.100	0.087	0.058	0.041	0.017	1	0.051	0.034
3 0.0990	0.208	0.197	0.059	0.052	0.022	0.016	0.110	0.097	0.068	0.051	0.017	1	0.061	0.044
4 0.1120	0.235	0.223	0.068	0.061	0.025	0.018	0.118	0.105	0.077	0.059	0.017	1	0.070	0.052
5 0.1250	0.263	0.249	0.078	0.069	0.029	0.021	0.148	0.135	0.075	0.051	0.025	2	0.064	0.040
6 0.1380	0.290	0.275	0.087	0.078	0.032	0.024	0.160	0.147	0.088	0.064	0.026	2	0.077	0.053
8 0.1640	0.344	0.326	0.105	0.095	0.039	0.029	0.186	0.173	0.114	0.090	0.028	2	0.103	0.079
10 0.1900	0.399	0.378	0.123	0.112	0.045	0.034	0.205	0.192	0.134	0.109	0.029	2	0.123	0.098
12 0.2160	0.454	0.430	0.141	0.130	0.052	0.039	0.267	0.254	0.151	0.126	0.032	3	0.134	0.109
1/4 0.2500	0.525	0.498	0.165	0.152	0.061	0.046	0.281	0.268	0.164	0.140	0.046	3	0.147	0.123
5/16 0.3125	0.656	0.622	0.209	0.194	0.077	0.059	0.350	0.337	0.195	0.172	0.068	4	0.175	0.152
3/8 0.3750	0.788	0.746	0.253	0.235	0.094	0.071	0.400	0.387	0.247	0.223	0.076	4	0.227	0.203

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Break sharp edge on head where spherical and conical surfaces meet.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

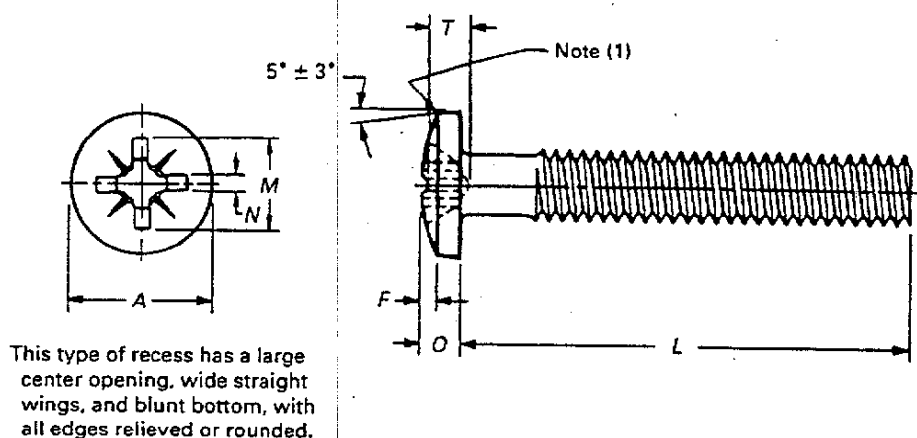


TABLE 13C DIMENSIONS OF TYPE IA CROSS RECESSED BINDING HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Total Head Height O		Head Oval Height F		Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.126	0.119	0.032	0.026	0.012	0.008	0.067	0.054	0.042	0.026	0.018	0	0.034	0.018
1 0.0730	0.153	0.145	0.041	0.035	0.015	0.011	0.074	0.061	0.049	0.033	0.018	0	0.043	0.027
2 0.0860	0.181	0.171	0.050	0.043	0.018	0.013	0.104	0.091	0.065	0.049	0.029	1	0.054	0.038
3 0.0990	0.208	0.197	0.059	0.052	0.022	0.016	0.109	0.096	0.070	0.054	0.029	1	0.059	0.043
4 0.1120	0.235	0.223	0.068	0.061	0.025	0.018	0.117	0.104	0.078	0.062	0.029	1	0.068	0.052
5 0.1250	0.263	0.249	0.078	0.069	0.029	0.021	0.144	0.131	0.075	0.057	0.040	2	0.059	0.041
6 0.1380	0.290	0.275	0.087	0.078	0.032	0.024	0.156	0.143	0.087	0.069	0.040	2	0.072	0.054
8 0.1640	0.344	0.326	0.105	0.095	0.039	0.029	0.181	0.168	0.113	0.095	0.041	2	0.097	0.079
10 0.1900	0.399	0.378	0.123	0.112	0.045	0.034	0.199	0.186	0.131	0.113	0.041	2	0.115	0.097
12 0.2160	0.454	0.430	0.141	0.130	0.052	0.039	0.260	0.247	0.147	0.129	0.056	3	0.125	0.107
1/4 0.2500	0.525	0.498	0.165	0.152	0.061	0.046	0.274	0.261	0.161	0.143	0.057	3	0.139	0.121
5/16 0.3125	0.656	0.622	0.209	0.194	0.077	0.059	0.339	0.326	0.190	0.172	0.086	4	0.163	0.145
3/8 0.3750	0.788	0.746	0.253	0.235	0.094	0.071	0.387	0.374	0.240	0.222	0.086	4	0.213	0.195

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Break sharp edge on head where spherical and conical surfaces meet.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

MACHINE SCREWS AND MACHINE SCREW NUTS

ASME B18.6.3-1998

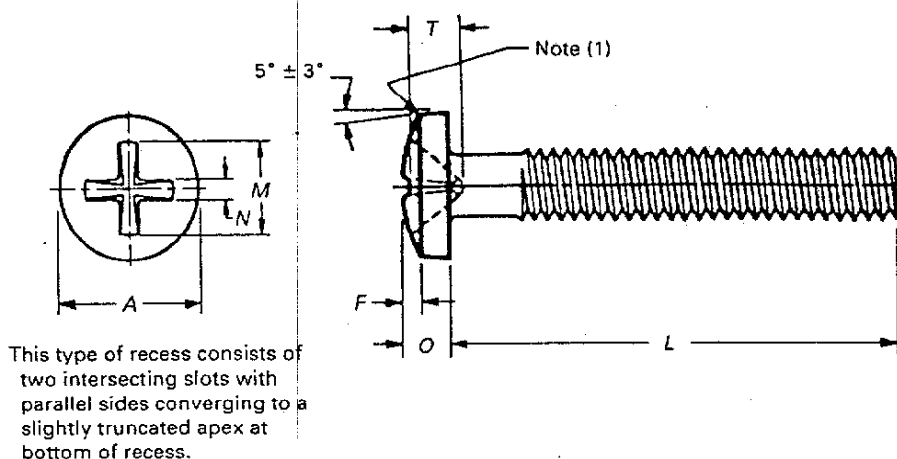


TABLE 13D DIMENSIONS OF TYPE II CROSS RECESSED BINDING HEAD MACHINE SCREWS

Nominal Size or Basic Screw Diameter [Note (2)]	Head Diameter A		Total Head Height O		Head Oval Height F		Recess Diameter M		Recess Depth T		Recess Width N, Min.	Driver Size [Note (3)]	Recess Penetration Gaging Depth	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.
0 0.0600	0.126	0.119	0.032	0.026	0.012	0.008	0.083	0.073	0.042	0.031	0.023	...	Note (4)	Note (4)
1 0.0730	0.153	0.145	0.041	0.035	0.015	0.011	0.097	0.087	0.051	0.040	0.025	...	Note (4)	Note (4)
2 0.0860	0.181	0.171	0.050	0.043	0.018	0.013	0.118	0.106	0.065	0.052	0.028	...	0.039	0.027
3 0.0990	0.208	0.197	0.059	0.052	0.022	0.016	0.136	0.124	0.077	0.064	0.031	...	0.051	0.039
4 0.1120	0.235	0.223	0.068	0.061	0.025	0.018	0.154	0.141	0.086	0.073	0.034	...	0.062	0.050
5 0.1250	0.263	0.249	0.078	0.069	0.029	0.021	0.172	0.158	0.098	0.084	0.036	...	0.074	0.061
6 0.1380	0.290	0.275	0.087	0.078	0.032	0.024	0.190	0.176	0.110	0.096	0.039	...	0.086	0.073
8 0.1640	0.344	0.326	0.105	0.095	0.039	0.029	0.224	0.209	0.126	0.112	0.044	...	0.108	0.094
10 0.1900	0.399	0.378	0.123	0.112	0.045	0.034	0.247	0.231	0.141	0.127	0.047	...	0.123	0.109
12 0.2160	0.454	0.430	0.141	0.130	0.052	0.039	0.293	0.275	0.171	0.155	0.054	...	0.153	0.137
1/4 0.2500	0.525	0.498	0.165	0.152	0.061	0.046	0.329	0.311	0.187	0.171	0.059	...	0.176	0.160
5/16 0.3125	0.656	0.622	0.209	0.194	0.077	0.059	0.414	0.393	0.243	0.224	0.072	...	0.232	0.214
3/8 0.3750	0.788	0.746	0.253	0.235	0.094	0.071	0.480	0.456	0.286	0.265	0.081	...	0.275	0.255

GENERAL NOTE: For additional requirements refer to para. 2.

NOTES:

(1) Break sharp edge on head where spherical and conical surfaces meet.

(2) Where specifying nominal size in decimals, zeros preceding decimal and in the fourth decimal place shall be omitted.

(3) Point same on all drivers.

(4) Not practical to gage.