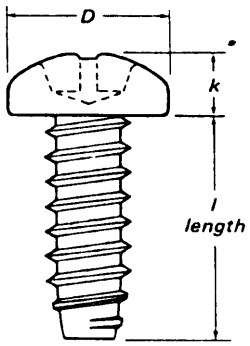
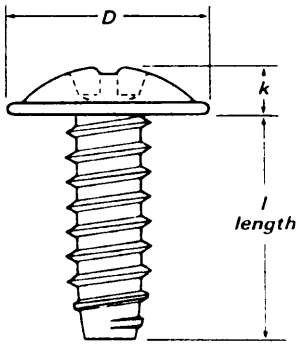
HEAD DIMENSIONS

TYPES AB, B and Y

The drive medium may be Supadriv® or Torx® . The Supadriv recess is suitable for all diameters listed. On occasions, customer preference may be for Torx.



Pan head



Flange head

INCH SERIES

Supadriv and Torx
Pan and Flange

Screw Size	Pan		Flange		Recess	
	Dia of head *D* Max	Depth of head *k* Max	Dia of head *D* Max	Depth of head *k* Max	Supadriv	Torx*
2	0.167	0.062			1	T8
4	0.219	0.080	0.257	0.063	1	T10
6	0.270	0.097	0.321	0.074	2	T15
8	0.322	0.115	0.384	0.093	2	T20
10	0.373	0.133	0.448	0.114	2	T25
12	0.425	0.151	0.511	0.124	3	T27
14	0.492	0.175	0.573	0.145	3	T30

Dimensions in inches
Length tolerances for AB, B and Y are shown on Page 16.
*For Torx flange head dimensions please consult Nettlefolds Application Engineers.

METRIC SERIES

Supadriv and Torx
Pan and Flange

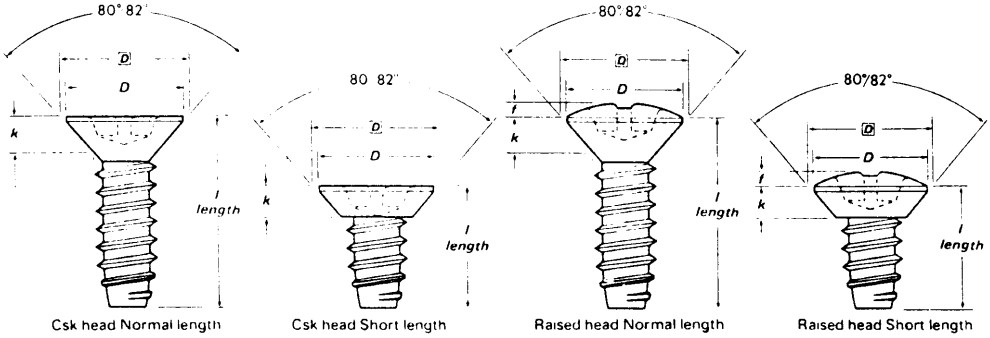
Screw Size	Pan		Flange		Recess	
	Dia of head *D* Max	Depth of head *k* Max	Dia of head *D* Max	Depth of head *k* Max	Supadriv	Torx*
2	4.24	1.57			1	T8
4	5.56	2.03	6.53	1.60	1	T10
6	6.86	2.46	8.15	1.88	2	T15
8	8.18	2.92	9.75	2.36	2	T20
10	9.47	3.38	11.38	2.90	2	T25
12	10.80	3.84	13.00	3.15	3	T27
14	12.50	4.44	14.55	3.68	3	T30

Dimensions in mm
Length tolerances for AB, B and Y are shown on Page 16.
*For Torx flange head dimensions please consult Nettlefolds Application Engineers.

HEAD DIMENSIONS

TYPES AB and B

The drive medium may be Supadriv® or Torx® . The Supadriv recess is suitable for all diameters listed. On occasions, customer preference may be for Torx.



INCH SERIES

Supadriv and Torx
Countersunk and Raised

Screw size	Countersunk and raised							Raised head only
	Normal length screws			Recess		Short length screws only		
	Diameter of head ● D Max	D Min	Depth of head k ref	Supadriv	Torx*	This length and shorter	Depth of head kMax	Height of raise f Nom
2	0.172	0.147	0.051	1	T6	3/16	0.036	0.025
4	0.225	0.195	0.067	1	T8	1/4	0.047	0.033
6	0.279	0.244	0.083	2	T10	5/16	0.059	0.040
8	0.332	0.292	0.100	2	T15	7/16	0.070	0.048
10	0.385	0.340	0.116	2	T20	1/2	0.081	0.055
12	0.438	0.389	0.132	3	T25	9/16	0.092	0.063
14	0.507	0.452	0.153	3	T27	5/8	0.107	0.072

Dimensions in inches
● The dimensions for D are the theoretical diameters of head to sharp corners and are the diameter to which holes should be countersunk to enable the screw heads to fit flush with the surface.

*For Torx recess detail in Raised countersunk and truncated countersunk heads: consult Nettlefolds Application Engineers.

METRIC SERIES

Supadriv and Torx
Countersunk and Raised

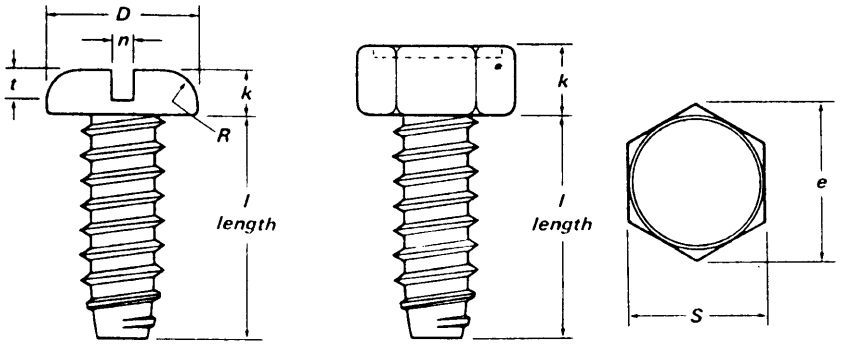
Screw size	Countersunk and raised							Raised head only
	Normal length screws			Recess		Short length screws only		
	Diameter of head ● D Max	D Min	Depth of head k ref	Supadriv	Torx*	This length and shorter	Depth of head kMax	Height of raise f Nom
2	4.37	3.73	1.30	1	T6	4.5	0.91	0.64
4	5.71	4.95	1.70	1	T8	6.5	1.19	0.84
6	7.09	6.20	2.11	2	T10	8.0	1.50	1.02
8	8.43	7.42	2.54	2	T15	11.0	1.78	1.22
10	9.78	8.64	2.95	2	T20	13.0	2.06	1.40
12	11.13	9.88●	3.35	3	T25	14.0	2.34	1.60
14	12.88	11.48	3.89	3	T27	16.0	2.72	1.83

Dimensions in mm
● The dimensions for D are the theoretical diameters of head to sharp corners and are the diameter to which holes should be countersunk to enable the screw heads to fit flush with the surface.

*For Torx recess detail in Raised countersunk and truncated countersunk heads: consult Nettlefolds Application Engineers.

HEAD DIMENSIONS

TYPES AB and B



Pan head Hexagon head

INCH SERIES

Slotted
Pan and Hexagon

Screw size	Pan								Hexagon				
	Slot width *n*		Slot Depth *t*	Dia of head *D*		Depth of head *k*		Radius of head *R*	Width* across flats *S*	Width across corners *e*		Depth of head *k*	
	Max	Min	Nom	Max	Min	Max	Min	Nom	Max	Max	Min	Max	Min
2	0.031	0.023	0.027	0.167	0.155	0.053	0.045	0.035					
4	0.039	0.031	0.035	0.219	0.205	0.068	0.058	0.042	0.187	0.216	0.202	0.080	0.070
6	0.048	0.039	0.044	0.270	0.265	0.082	0.072	0.046	0.250	0.289	0.272	0.110	0.095
8	0.054	0.045	0.052	0.322	0.306	0.096	0.085	0.052	0.250	0.289	0.272	0.115	0.100
10	0.060	0.050	0.061	0.373	0.357	0.110	0.099	0.061	0.312	0.361	0.340	0.120	0.105
12	0.067	0.056	0.069	0.425	0.407	0.125	0.122	0.078	0.312	0.361	0.340	0.155	0.139
14	0.075	0.064	0.079	0.492	0.473	0.144	0.130	0.087	0.375	0.433	0.409	0.190	0.172

Dimensions in inches
*The sizes in this table have hexagon dimensions to suit inch A/F wrench sizes

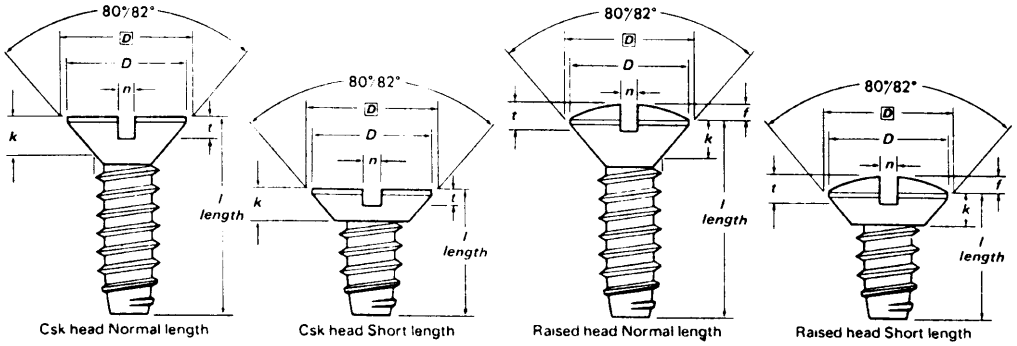
METRIC SERIES

Slotted
Pan and Hexagon

Screw size	Pan								Hexagon				
	Slot width *n*		Slot Depth *t*	Dia of head *D*		Depth of head *k*		Radius of head *R*	Width* across flats *S*	Width across corners *e*		Depth of head *k*	
	Max	Min	Nom	Max	Min	Max	Min	Nom	Max	Max	Min	Max	Min
2	0.79	0.58	0.68	4.24	3.94	1.35	1.14	0.89					
4	0.99	0.79	0.89	5.56	5.21	1.73	1.47	1.07	5.0	5.8	5.40	1.62	1.38
6	1.22	0.99	1.12	6.86	6.50	2.08	1.83	1.17	5.5	6.4	5.95	2.42	2.18
8	1.37	1.14	1.32	8.18	7.77	2.44	2.16	1.32	7.0	8.1	7.60	2.92	2.68
10	1.52	1.27	1.55	9.47	9.07	2.79	2.51	1.55	8.0	9.2	8.71	3.12	2.88
12	1.70	1.42	1.75	10.80	10.34	3.18	2.84	1.98	8.0	9.2	8.71	4.15	3.85
14	1.90	1.63	2.01	12.50	12.01	3.66	3.30	2.21	10.0	11.5	10.94	4.95	4.65

Dimensions in mm
*The sizes in this table have hexagon dimensions to suit metric A/F wrench sizes

HEAD DIMENSIONS
TYPES AB AND B



Csk head Normal length | Csk head Short length | Raised head Normal length | Raised head Short length

INCH SERIES

Slotted
Countersunk and Raised

Screw size	Countersunk and raised											
	Normal length screws								Short length screws			
	Dia of head ● D Max	Dia of head D Min	Depth of head k Ref	Slot width n Max	Slot width n Min	Depth of slot Csk t Nom	Depth of slot Rsd Csk t Nom	Height of raise f Nom	This length & shorter	Depth of head k Max	Depth of slot Csk t Nom	Depth of slot Rsd t Nom
2	0.172	0.147	0.051	0.031	0.023	0.019	0.041	0.025	3/16	0.036	0.014	0.037
4	0.225	0.195	0.067	0.039	0.031	0.025	0.054	0.033	1/4	0.047	0.018	0.048
6	0.279	0.244	0.083	0.048	0.039	0.031	0.067	0.040	5/16	0.059	0.022	0.059
8	0.332	0.292	0.100	0.054	0.045	0.037	0.080	0.048	7/16	0.070	0.027	0.071
10	0.385	0.340	0.116	0.060	0.050	0.044	0.094	0.055	1/2	0.081	0.031	0.082
12	0.438	0.389	0.132	0.067	0.056	0.050	0.107	0.063	9/16	0.092	0.036	0.094
14	0.507	0.452	0.153	0.075	0.064	0.058	0.124	0.072	5/8	0.107	0.041	0.109

Dimensions in inches

● The dimensions for D are the theoretical diameters of head to sharp corners and are the diameter to which holes should be countersunk to enable the screwheads to fit flush with the surface.

METRIC SERIES

Slotted
Countersunk and Raised

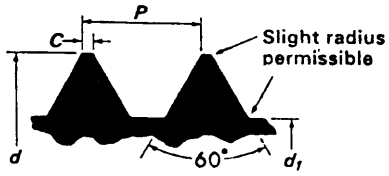
Screw size	Countersunk and raised											
	Normal length screws								Short length screws			
	Dia of head ● D Max	Dia of head D Min	Depth of head k Ref	Slot width n Max	Slot width n Min	Depth of slot Csk t Nom	Depth of slot Rsd Csk t Nom	Height of raise f Nom	This length & shorter	Depth of head k Max	Depth of slot Csk t Nom	Depth of slot Rsd t Nom
2	4.37	3.73	1.30	0.79	0.58	0.48	1.04	0.64	4.5	0.91	0.36	0.94
4	5.71	4.95	1.70	0.99	0.79	0.63	1.37	0.84	6.5	1.19	0.46	1.22
6	7.09	6.20	2.11	1.22	0.99	0.79	1.70	1.02	8.0	1.50	0.56	1.50
8	8.43	7.42	2.54	1.37	1.14	0.94	2.03	1.22	11.0	1.78	0.68	1.80
10	9.78	8.64	2.95	1.52	1.27	1.12	2.39	1.40	13.0	2.06	0.79	2.08
12	11.13	9.88	3.35	1.70	1.42	1.27	2.72	1.60	14.0	2.34	0.91	2.39
14	12.88	11.48	3.89	1.90	1.63	1.47	3.15	1.83	16.0	2.72	1.04	2.77

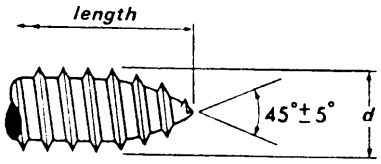
Dimensions in mm

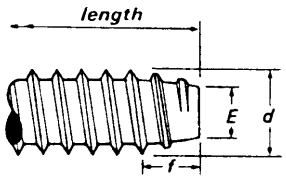
● The dimensions for D are the theoretical diameters of head to sharp corners and are the diameter to which holes should be countersunk to enable the screwheads to fit flush with the surface.

THREAD AND POINT DIMENSIONS

TYPES AB and B







INCH SERIES

Screw size	Threads per inch	Major dia d		Minor dia d_1		Crest width C	Point dia E		See note 1 f	
		max.	min.	max.	min.	max.	max.	min.	Countersunk & Raised	All other heads
2	32	0.088	0.084	0.064	0.060	0.004	0.058	0.054	3/16	—
4	24	0.114	0.110	0.086	0.082	0.004	0.079	0.074	1/4	3/16
6	20	0.139	0.135	0.104	0.099	0.004	0.095	0.089	1/4	1/4
8	18	0.166	0.161	0.122	0.116	0.004	0.112	0.106	3/8	1/4
10	16	0.189	0.183	0.141	0.135	0.006	0.130	0.123	1/2	3/8
12	14	0.215	0.209	0.164	0.157	0.006	0.152	0.145	1/2	3/8
14	14	0.246	0.240	0.192	0.185	0.006	0.179	0.171	5/8	1/2
16	12	0.315	0.308	0.244	0.236	0.006	0.230	0.222	5/8	1/2

Dimensions in ins

Note: 1. Type B screws - these lengths and shorter have a point length 'f' of 1.1/2-2 pitches. For longer screws the point length 'f' is 2-2.1/2 pitches.

Note: 2. The above dimensions are for uncoated screws and may be exceeded after coating.

METRIC SERIES

Screw size	Threads per inch	Major dia d		Minor dia d_1		Crest width C	Point dia E		See note 1 f	
		max.	min.	max.	min.	max.	max.	min.	Countersunk & Raised	All other heads
2	0.79	2.24	2.13	1.63	1.52	0.1	1.47	1.37	4.5	
4	1.07	2.90	2.79	2.18	2.08	0.1	2.01	1.88	6.5	4.5
6	1.27	3.53	3.43	2.64	2.51	0.1	2.41	2.26	6.5	6.5
8	1.41	4.22	4.09	3.10	2.95	0.1	2.84	2.70	9.5	6.5
10	1.59	4.80	4.65	3.58	3.43	0.15	3.30	3.12	13.0	9.5
12	1.80	5.46	5.31	4.17	3.99	0.15	3.86	3.68	13.0	9.5
14	1.80	6.25	6.10	4.88	4.70	0.15	4.55	4.34	16.0	13.0
16	2.12	8.00	7.82	6.20	5.99	0.15	5.84	5.64	16.0	13.0

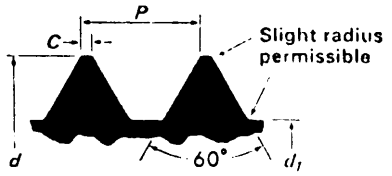
Dimensions in mm

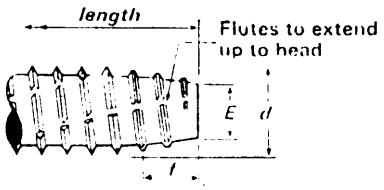
Note: 1. Type B screws - these lengths and shorter have a point length 'f' of 1.1/2-2 pitches. For longer screws the point length 'f' is 2-2.1/2 pitches.

Note: 2. The above dimensions are for uncoated screws and may be exceeded after coating.

THREAD AND POINT DIMENSIONS

TYPE Y





INCH SERIES

Screw size	Threads per inch	Major dia *d*		Minor dia d_1		Crest width *C*	Point dia *E*		See note 1 *f*	
		max.	min.	max.	min.	max.	max.	min.	Countersunk & Raised	All other heads
4	24	0.116	0.112	0.090	0.086	0.005	0.079	0.074	1/4	3/16
6	20	0.141	0.137	0.108	0.103	0.006	0.095	0.089	1/4	1/4
8	18	0.168	0.163	0.126	0.120	0.008	0.112	0.106	3/8	1/4
10	16	0.192	0.186	0.145	0.139	0.008	0.130	0.123	1/2	3/8
12	14	0.218	0.212	0.168	0.161	0.008	0.152	0.145	1/2	3/8
14	14	0.250	0.244	0.196	0.189	0.008	0.179	0.171	5/8	1/2

Dimensions in ins

Note: 1. Screws these lengths and shorter have a point length *'f'* of 1.1/2-2 pitches. For longer screws the point length *'f'* is 2-2.1/2 pitches.

Note: 2. The above dimensions are for uncoated screws and may be exceeded after coating.

METRIC SERIES

Screw size	Threads per inch	Major dia *d*		Minor dia d_1		Crest width *C*	Point dia *E*		See note 1 *f*	
		max.	min.	max.	min.	max.	max.	min.	Countersunk & Raised	All other heads
4	1.07	2.95	2.84	2.29	2.18	0.127	2.01	1.88	6.5	4.5
6	1.27	3.58	3.48	2.74	2.62	0.152	2.41	2.26	6.5	6.5
8	1.41	4.27	4.14	3.20	3.05	0.203	2.84	2.70	9.5	6.5
10	1.59	4.88	4.72	3.68	3.53	0.203	3.30	3.12	13.0	9.5
12	1.80	5.54	5.38	4.27	4.09	0.203	3.86	3.68	13.0	9.5
14	1.80	6.35	6.20	4.98	4.80	0.203	4.55	4.34	16.0	13.0

Dimensions in mm

Note: 1. Screws these lengths and shorter have a point length *'f'* of 1.1/2-2 pitches. For longer screws the point length *'f'* is 2-2.1/2 pitches.

Note: 2. The above dimensions are for uncoated screws and may be exceeded after coating.

RECOMMENDED HOLES AND DRILL SIZES

TYPES AB and B
Hardened steel

In mild steel, brass, aluminium, stainless steel and monel

Screw size and nom dia	Material thickness			Pierced or extruded hole dia in	Drilled or clean-punched holes		
	in	mm	SWG or fraction		Hole dia in	Drill size	
						mm	Alternatives
2 (0.086″)	0.018	0.45	26	—	0.063	1.60	52
	0.036	0.91	20	—	0.073	1.85	49
	0.064	1.62	16	—	0.077	1.95	48
4 (0.112″)	0.018	0.45	26	—	0.081	2.05	46
	0.036	0.91	20	0.098	0.091	2.30	42
	0.064	1.62	16	—	0.095	2.40	41
	0.080	2.03	14	—	0.102	2.60	38
6 (0.138″)	0.018	0.45	26	—	0.092	2.35	42
	0.036	0.91	20	0.111	0.110	2.80	35
	0.064	1.62	16	—	0.116	2.95	32
	0.080	2.03	14	—	0.122	3.10	31
	0.104	2.64	12	—	0.126	3.20	30
8 (0.164″)	0.028	0.71	22	—	0.114	2.90	33
	0.036	0.91	20	0.136	0.122	3.10	1/8″
	0.048	1.22	18	—	0.126	3.20	30
	0.064	1.62	16	—	0.134	3.40	29
	0.104	2.64	12	—	0.146	3.70	26
	0.125	3.18	1/8″	—	0.150	3.80	25
10 (0.186″)	0.028	0.71	22	—	0.134	3.40	29
	0.048	1.22	18	—	0.142	3.60	28
	0.064	1.62	16	—	0.150	3.80	25
	0.104	2.64	12	—	0.161	4.10	20
	0.125	3.18	1/8″	—	0.169	4.30	18
	0.187	4.75	3/16″	—	0.177	4.50	16
12 (0.212″)	0.028	0.71	22	—	0.161	4.10	20
	0.048	1.22	18	—	0.169	4.30	18
	0.064	1.62	16	—	0.177	4.50	16
	0.104	2.64	12	—	0.189	4.80	12
	0.125	3.18	1/8″	—	0.193	4.90	10
	0.187	4.75	3/16″	—	0.201	5.10	7
14 (0.242″)	0.048	1.22	18	—	0.189	4.80	12
	0.064	1.62	16	—	0.205	5.20	6
	0.080	2.03	14	—	0.213	5.40	3
	0.125	3.18	1/8″	—	0.224	5.70	1
	0.187	4.75	3/16″	—	0.232	5.90	A
	0.250	6.35	1/4″	—	0.236	6.00	B

Note: It is important that the correct hole size is used and the recommendations above should be followed. If the material is very hard, a hole size slightly larger may have to be used. In very soft material, a smaller hole may be necessary. If any difficulty is encountered, send a sample to Nettlefolds Application Engineers for testing to determine optimum screw type, gauge and pilot hole size.

TYPES AB AND B
Hardened steel and stainless steel (18/9/3)

In thermopliable plastics

Screw size (No.) and nom dia	Normal penetration			Minimum penetration in blind holes in
	Hole dia in	Drill size		
		mm	Alternatives	
2(0.086″)	0.070	1.80	50	1/4
4(0.112″)	0.093	2.35	42	1/4
6(0.138″)	0.114	2.90	32	1/4
8(0.164″)	0.135	3.40	29	5/16
10(0.186″)	0.154	3.90	23	5/16
12(0.212″)	0.180	4.60	15	3/8
14(0.242″)	0.210	5.30	4	3/8

Note: Because of the vast difference in these plastics, the above table is intended only as a guideline. It may be necessary to increase or decrease the recommended hole size to obtain optimum fastening conditions.

RECOMMENDED HOLES AND DRILL SIZES

TYPE B

Hexagon head. Hardened steel

In structural steel

Screw size and nom. dia.	Metal thickness			Lubricated screws			Self colour, zinc plated or non-lubricated screws		
			SWG or	Hole dia	Drill size		Hole dia	Drill size	
	in	mm	fraction	in	mm	Alternatives	in	mm	Alternatives
6 (0.138")	0.036	0.91	20	0.102	2.60	38	0.102	2.60	38
	0.064	1.62	16	0.110	2.80	35	0.110	2.80	35
	0.080	2.03	14	0.114	2.90	33	0.114	2.90	33
	0.104	2.64	12	0.122	3.10	1/8"	0.122	3.10	1/8"
8 (0.164")	0.064	1.62	16	0.130	3.30	30	0.130	3.30	30
	0.080	2.03	14	0.142	3.60	28	0.142	3.60	28
	0.104	2.64	12	0.142	3.60	28	0.146	3.70	26
	0.125	3.18	1/8"	0.146	3.70	26	0.150	3.80	25
10 (0.186")	0.064	1.62	16	0.150	3.80	25	0.150	3.80	25
	0.104	2.64	12	0.158	4.00	22	0.158	4.00	22
	0.125	3.18	1/8"	0.161	4.10	20	0.161	4.10	20
	0.187	4.75	3/16"	0.173	4.40	17	0.177	4.50	16
12 (0.212")	0.104	2.64	12	0.189	4.80	12	0.189	4.80	12
	0.125	3.18	1/8"	0.197	5.00	8	0.197	5.00	8
	0.187	4.75	3/16"	0.197	5.00	8	0.201	5.10	7
	0.250	6.35	1/4"	0.201	5.10	7	0.201	5.10	7
14 (0.242")	0.125	3.18	1/8"	0.220	5.60	2	0.220	5.60	2
	0.187	4.75	3/16"	0.232	5.90	A	0.232	5.90	A
	0.250	6.35	1/4"	0.232	5.90	A	0.232	5.90	A
	0.312	7.92	5/16"	0.232	5.90	A	0.232	5.90	A

Note: It is important that the correct hole size is used and the recommendations above should be followed. If the material is very hard, a hole size slightly larger may have to be used. In very soft material, a smaller hole may be necessary. If any difficulty is encountered, send a sample to Nettlefolds Application Engineers for testing to determine optimum screw type, gauge and pilot hole size.

TYPE B

Hardened steel

In non-ferrous castings or sections, aluminium, magnesium, zinc, brass, bronze, etc

Screw size and nom dia	Min penetration				Normal max penetration			
	Hole depth in	Hole dia in	Drill size		Hole depth in	Hole dia in	Drill size	
			mm	Alternatives			mm	Alternatives
2(0.086")	1/8	0.071	1.80	50	1/4	0.079	2.00	47
4(0.112")	5/32	0.096	2.45	41	5/16	0.104	2.65	37
6(0.138")	3/16	0.130	3.30	30	3/8	0.130	3.30	30
8(0.164")	7/32	0.153	3.90	24	7/16	0.153	3.90	23
10(0.186")	1/4	0.177	4.50	16	1/2	0.177	4.50	16
12(0.212")	9/32	0.201	5.10	7	9/16	0.201	5.10	7
14(0.242")	5/16	0.236	6.00	A	5/8	0.236	6.00	B

Notes: 1. Cored holes. A side taper of 1°11' is permissible. The diameter of a cored hole should equal the nominal hole size shown in the table above at one half of the screw penetration depth.

2. Porous castings may require the use of a smaller hole and/or increased depth of engagement.

RECOMMENDED HOLE AND DRILL SIZES

TYPE U HAMMER DRIVE
Hardened Steel

In sheet metal, cast iron, non-ferrous castings, plastics, etc.

Screw size and nom dia	Thin sheet metal, non-ferrous castings, plastics, etc			Cast iron and thick sheet metal			Clearance hole		
	Hole dia in	Drill size		Hole dia in	Drill size		Hole dia in	Drill size	
		mm	Alternatives		mm	Alternatives		mm	Alternatives
00 (0.059″)	0.051	1.30	55	0.055	1.40	54	0.067	1.70	51
0 (0.074″)	0.065	1.65	52	0.069	1.75	50	0.082	2.10	45
2 (0.099″)	0.087	2.20	44	0.091	2.30	42	0.107	2.70	36
4 (0.114″)	0.100	2.55	39	0.106	2.70	36	0.125	3.20	1/8″
6 (0.138″)	0.122	3.10	31	0.130	3.30	30	0.150	3.80	25
8 (0.165″)	0.146	3.70	27	0.154	3.90	23	0.181	4.60	15
10 (0.180″)	0.161	4.10	20	0.169	4.30	18	0.196	5.00	9
12 (0.209″)	0.189	4.80	12	0.197	5.00	8	0.228	5.80	1
14 (0.239″)	0.217	5.50	2	0.228	5.80	1	0.261	6.60	G

Notes: 1. The material should be thick enough to provide adequate thread engagement, and normally should not be less than the screw diameter.
2. In applications in plastic, the rigidity of the section and the brittleness of the plastic must be considered.

TYPE Y
Hardened steel

In thermosetting (hard) plastics and cast iron

Screw size and nom dia	Material thickness in	Cellulose acetate, acrylic resin, cellulose nitrate (i.e. perspex types)			Phenol formaldehyde (i.e. bakelite types)			Cast iron		
		Hole dia in	Drill size		Hole dia in	Drill size		Hole dia in	Drill size	
			mm	Alternatives		mm	Alternatives		mm	Alternatives
4	1/8	0.094	2.40	42	0.100	2.55	39	—	—	—
(0.122″)	1/4	0.094	2.40	42	0.100	2.55	39	—	—	—
	1/2	0.095	2.40	42	0.100	2.55	39	0.102	2.60	38
6	1/8	0.118	3.00	31	—	—	—	—	—	—
(0.138″)	1/4	0.125	3.20	1/8″	0.130	3.30	30	—	—	—
	1/2	0.125	3.20	1/8″	0.130	3.30	30	0.125	3.20	1/8″
8	1/8	0.150	3.80	25	—	—	—	—	—	—
(0.164″)	1/4	0.150	3.80	25	0.150	3.80	25	—	—	—
	1/2	0.150	3.80	25	0.150	3.80	25	0.153	3.90	23
10	1/4	0.173	4.40	17	0.177	4.50	16	—	—	—
(0.186″)	1/2	0.177	4.50	16	0.177	4.50	16	0.177	4.50	16

Notes: 1. Because conditions differ widely it may be necessary to vary the hole size to suit a particular application.
2. Type 'Y' screws are not generally suitable in materials other than those listed above.

RECOMMENDED HOLE AND DRILL SIZES

TYPES AB AND B

Stainless steel (18/9/3)

In mild steel, aluminium, brass and monel

Screw size and nom dia	Material thickness			Drilled or clean-punched holes		
				Hole dia	Drill size	
	in	mm	SWG	in	mm	Alternatives
4 (0.112″)	0.018	0.45	26	0.087	2.20	44
	0.036	0.91	20	0.091	2.30	43
6 (0.138″)	0.018	0.45	26	0.106	2.70	36
	0.036	0.91	20	0.110	2.80	35
8 (0.164″)	0.028	0.71	22	0.118	3.00	32
	0.048	1.22	18	0.126	3.20	1/8″
	0.064	1.62	16	0.134	3.40	29
10 (0.186″)	0.028	0.71	22	0.138	3.50	29
	0.048	1.22	18	0.146	3.70	26
	0.064	1.62	16	0.150	3.80	25
12 (0.212″)	0.028	0.71	22	0.165	4.20	19
	0.048	1.22	18	0.181	4.60	14
	0.064	1.62	16	0.185	4.70	13

Note: Because conditions differ widely it may be necessary to vary the hole size to suit a particular application.

DRILLED AND CORED HOLES

TYPE B

Stainless steel (18/9/3)

In non-ferrous castings or sections, aluminium, magnesium, zinc, brass, bronze, etc

Screw size and nom dia	Min. penetration				Normal max. penetration			
	Hole depth	Hole dia	Drill size		Hole depth	Hole dia	Drill size	
	in	in	mm	Alternative	in	in	mm	Alternative
4 (0.112″)	5/32	0.096	2.45	41	5/16	0.104	2.65	37
6 (0.138″)	3/16	0.130	3.30	30	3/8	0.130	3.30	30
8 (0.164″)	7/32	0.153	3.90	24	7/16	0.153	3.90	23
10 (0.186″)	1/4	0.177	4.50	16	1/2	0.177	4.50	16
12 (0.212″)	5/16	0.205	5.20	5	9/16	0.205	5.20	5

Notes: 1. Cored holes. A side taper of 1°11′ is permissible. The diameter of a cored hole should equal the nominal hole size shown in the table above at one half the screw penetration depth.
2. Porous castings may require the use of a smaller hole and/or increased depth of engagement.

HAMMER DRIVE

TYPE U

Stainless steel (18/9/3)

In non-ferrous sheet or castings and plastics

Screw size and nom dia	In non-ferrous sheet and castings			In plastics		
	Hole dia	Drill size		Hole dia	Drill size	
	in	mm	Alternatives	in	mm	Alternatives
00 (0.059″)	0.055	1.40	54	0.051	1.30	55
0 (0.074″)	0.071	1.80	50	0.067	1.70	51
2 (0.099″)	0.089	2.25	43	0.087	2.20	44
4 (0.114″)	0.108	2.75	36	0.104	2.65	37
6 (0.138″)	0.125	3.20	1/8″	0.118	3.00	31

Note: 18/9/3 quality stainless steel self-tapping screws are much softer than case hardened steel screws and therefore care must be exercised in using them. They cannot be used in very hard material. Also due to the galling tendency of stainless steel they should not be used in stainless steel sheet.

LENGTH TOLERANCES

TYPES AB, B, Y and U

In European metric-using countries, the length of self tapping screws is expressed to a 'rounded-off' metric length approximately equivalent to the inch or fractional length. We recommend users to express length either in inch units or to the rounded-off metric equivalent. The gauge number used to specify the diameter of a self tapping screw is the same for both inch and metric systems.

Length									
Nominal		Type AB				Types B & Y			
		Max		Min		Max		Min	
in	mm	in	mm	in	mm	in	mm	in	mm
1/8	3.20	0.149	3.78	0.102	2.58	0.125	3.18	0.102	2.58
3/16	4.50	0.211	5.36	0.164	4.16	0.188	4.76	0.164	4.16
1/4	6.50	0.280	7.10	0.220	5.60	0.250	6.35	0.220	5.60
3/8	9.50	0.404	10.27	0.345	8.77	0.375	9.52	0.345	8.77
1/2	13.00	0.535	13.60	0.465	11.80	0.500	12.70	0.465	11.80
5/8	16.00	0.661	16.78	0.590	14.98	0.625	15.88	0.590	14.98
3/4	19.00	0.791	20.10	0.709	18.00	0.750	19.05	0.709	18.00
1	25.00	1.041	26.45	0.959	24.35	1.000	25.40	0.959	24.35
1.1/4	32.00	1.300	33.00	1.201	30.50	1.250	31.75	1.201	30.50
1.1/2	38.00	1.549	39.35	1.451	36.85	1.500	38.10	1.451	36.85
1.3/4	45.00	1.799	45.70	1.701	43.20	1.750	44.45	1.701	43.20
2	50.00	2.059	52.30	1.941	49.30	2.000	50.80	1.941	49.30

TYPE U

	Length		Tolerance	
	in	mm	in	mm
U.T.A.I.	3/8	9.5	±0.010	±0.25
Over	3/8	9.5	±0.015	±0.38

U.T.A.I. — Up to and including

MECHANICAL PROPERTIES

TYPES AB, B and Y

For the torsional strength test, the shank of the screw is clamped so that at least two threads protrude above the clamping device. Using a calibrated torque measuring device, torque is applied until fracture occurs. Screws have to meet the minimum torsional strengths shown in the table below:

Screw size	Min Torsional load	
	lbf in	Nm
2	4	0.45
4	13	1.47
6	24	2.7
8	39	4.4
10	56	6.3
12	88	9.9
14	142	16.0