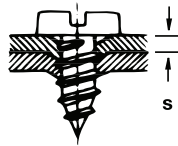




Assembly instructions for tapping screws

General assembly instructions

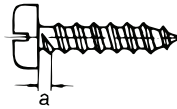
Screwing in of thinner sheet metal with continuous tapping holes or ones enlarged with a drift.



Screwing in of thicker sheet metal with drilled or punched tapping holes



Sheet metal thickness lower/upper limit* s min/max (a max = s min)



Ø/ST	2.2	2.9	3.5	3.9	4.2	4.8	5.5	6.3	8
s _{min} = a _{max}	0.8	1.1	1.3	1.3	1.4	1.6	1.8	1.8	2.1
s _{max}	1.8	2.2	2.8	3	3.5	4	4.5	5	6.5

s = sheet thickness
 a = distance from head to thread

* With very thin metal sheets (< a max.) the usage of special thin tapping screws or clamping nuts (spring nuts) is recommended.

Drilling hole diameters for tapping screws

The tapping hole diameters in the following tables are non-binding approximate values for round holes.

The values may differ depending on the material or assembly conditions –

this applies in particular to screws made from non-hardenable, stainless steels of the austenitic material groups A 2/A 4 (→ ISO 3506-4).

When using synthetic-based screws, the following conditions apply.

Table 21: Drilling hole diameters

Nominal thread diameter d _n	for sheet thickness s		Drilling hole Ø (Tol. H 12) for tapping screws from material				Stainless steels	
			Hardened steel (min 450 HV)				A 2/A 4 (approx. 250 HV)	
			Drift-enlarged/Continuous hole Sheet from material		Drilled/Punched hole Sheet from material		Sheet from material	
>	≤	St, Ni, MS, Cu, Monel	Al	St, Ni, MS, Cu, Monel	Al	Steel St. 37	Al	
2.2 mm	–	0.56	–	–	1.60	–		
	0.56	0.75	–	–	1.70	1.60		
	0.75	0.88	–	–	1.80	1.60		
	0.88	1.13	–	–	1.85	1.60		
	1.13	1.38	–	–	1.85	1.70		
	1.38	1.50	–	–	1.90	1.80		
2.9 mm		0.56	2.20	–	2.20	–		
	0.56	0.63	2.50	2.20	2.25	–	2.30	2.40
	0.63	0.75	2.50	2.20	2.25	2.20	2.30	2.40
	0.75	0.88	2.50	2.20	2.40	2.20	2.30	2.40
	0.88	1.25	–	2.20	2.40	2.20	2.30	2.40
	1.25	1.38	–	–	2.40	2.20	2.30	2.40
	1.38	1.75	–	–	2.50	2.25	2.30	2.40
	1.75	2.50	–	–	2.60	2.40	2.40	2.50
3.5 mm		0.56	2.80	–	2.60	–	2.70	2.80
	0.56	0.75	2.80	2.80	2.70	–	2.70	2.80
	0.75	0.88	2.80	2.80	2.70	2.65	2.70	2.80
	0.88	1.25	–	2.80	2.80	2.65	2.70	2.80
	1.25	1.38	–	–	2.80	2.65	2.70	2.80
	1.38	1.75	–	–	2.90	2.75	2.80	2.90
	1.75	2.50	–	–	3.00	2.85	2.80	2.90
	2.50	3.00	–	–	3.20	3.00	2.90	3.00
	3.00	6.00	–	–	–	3.00	2.90	3.00
	3.9 mm		0.50	3.00	–	2.95	–	3.00
0.50		0.63	3.00	3.00	2.95	–	3.00	3.10
0.63		0.88	3.00	3.00	2.95	2.90	3.00	3.10
0.88		1.13	3.00	3.00	2.95	2.95	3.00	3.10
1.13		1.25	3.00	3.00	3.00	2.95	3.00	3.10
1.25		1.38	–	–	3.00	2.95	3.00	3.10
1.38		1.75	–	–	3.20	3.00	3.00	3.10
1.75		2.00	–	–	3.20	3.50	3.00	3.10
2.00		2.50	–	–	3.50	3.50	3.10	3.20
2.50		3.50	–	–	3.60	3.50	3.20	3.30

Continued → TI-185