

# TS Construction screw for timber and chipboard

Hardened screws for new generation wood composites and timber



## Product information

### Features and benefits

- Easy to screw-in
- Underhead cutting ribs for easy countersinking and a precise flush finish
- The partial thread on the shaft of the screw allows multiple elements to be clamped together securely without separation
- Notched thread and wax coating for reduced friction
- Crack avoidance
- Clean application
- Power and battery-saving
- TX drive guarantees secure transmission of screw-in torque and no pop-out of the bit
- Wide range of dimensions and surfaces

### Applications

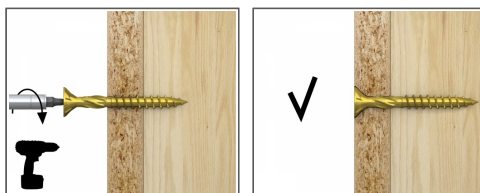
- Chipboards
- Laminated wood and exotic wood construction
- Plywood
- Anchoring of wood connection elements
- Wooden fences
- Wooden elements

### Base materials

#### Approved for use in:

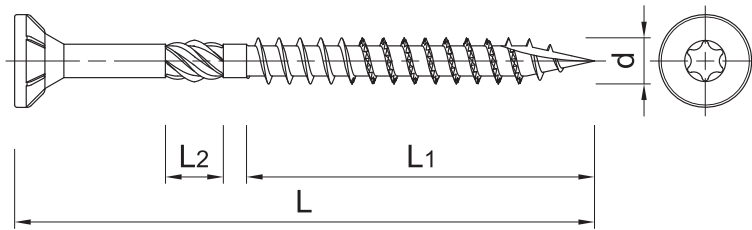
- Chipboard
- Wood
- Timber
- Plywood

## Installation guide



1. Choose the right length and diameter of the screw
2. Drive the screw straight until the head is flush
3. Screws with partial thread can clamp wooden parts avoiding spaces between them
4. Full-thread screws are recommended for fastening thin parts and in less firm wood materials (e.g. soft woods)
5. Screws with countersunk head allow flush connection

**Product information**



Size	Product Code	Screw				Screw drive
		Diameter	Length			
		d	L	L1	L2	-
		[mm]	[mm]	[mm]	[mm]	-
3,0	TS-3016	3	16	13	-	T10
	TS-3020	3	20	16	-	T10
	TS-3025	3	25	21	-	T10
	TS-3030	3	30	18	2.6	T10
	TS-3035	3	35	21	2.6	T10
	TS-3040	3	40	24	2.6	T10
3,5	TS-3516	3.5	16	12	-	T20
	TS-3520	3.5	20	16	-	T20
	TS-3525	3.5	25	21	-	T20
	TS-3530	3.5	30	26	-	T20
	TS-3535	3.5	35	21	3.6	T20
	TS-3540	3.5	40	24	3.6	T20
	TS-3545	3.5	45	27	3.6	T20
	TS-3550	3.5	50	30	3.6	T20
4,0	TS-4016	4	16	11	-	T20
	TS-4020	4	20	16	-	T20
	TS-4025	4	25	20	-	T20
	TS-4030	4	30	25	-	T20
	TS-4035	4	35	21	4.6	T20
	TS-4040	4	40	24	4.6	T20
	TS-4045	4	45	27	4.6	T20
	TS-4050	4	50	30	4.6	T20
	TS-4060	4	60	36	4.6	T20
	TS-4070	4	70	42	4.6	T20
5,0	TS-5020	5	20	15	-	T25
	TS-5025	5	25	20	-	T25
	TS-5030	5	30	25	-	T25
	TS-5035	5	35	30	-	T25
	TS-5040	5	40	24	8	T25
	TS-5050	5	50	30	8	T25
	TS-5060	5	60	36	8	T25
	TS-5070	5	70	42	8	T25
	TS-5080	5	80	48	8	T25
	TS-5090	5	90	54	8	T25
	TS-5100	5	100	60	8	T25
	TS-5120	5	120	72	8	T25
6,0	TS-6030	6	30	24	-	T30
	TS-6040	6	40	33	-	T30
	TS-6050	6	50	30	8	T30
	TS-6060	6	60	36	8	T30
	TS-6070	6	70	42	8	T30
	TS-6080	6	80	48	8	T30
	TS-6090	6	90	54	8	T30
	TS-6100	6	100	60	8	T30
	TS-6120	6	120	72	8	T30
	TS-6140	6	140	72	8	T30
	TS-6160	6	160	72	8	T30

## Product information

Size	Product Code	Screw				Screw drive
		Diameter	Length			
		d	L	L1	L2	
		[mm]	[mm]	[mm]	[mm]	-
6,0	TS-6180	6	180	72	8	T30
	TS-6200	6	200	72	8	T30
4,0	TSK-4025	4	25	20	-	T20
	TSK-4030	4	30	25	-	T20
	TSK-4035	4	35	21	4.6	T20
	TSK-4040	4	40	24	4.6	T20
	TSK-4050	4	50	30	4.6	T20
	TSK-4060	4	60	36	4.6	T20
	TSK-4070	4	70	42	4.6	T20
5,0	TSK-5040	5	40	24	8	T25
	TSK-5050	5	50	30	8	T25
	TSK-5060	5	60	36	8	T25
	TSK-5080	5	80	48	8	T25
	TSK-5100	5	100	60	8	T25
	TSK-5120	5	120	72	8	T25
6,0	TSK-6040	6	40	33	-	T30
	TSK-6050	6	50	30	8	T30
	TSK-6060	6	60	36	8	T30
	TSK-6080	6	80	48	8	T30
	TSK-6100	6	100	60	8	T30
	TSK-6120	6	120	72	8	T30
	TSK-6140	6	140	72	8	T30
	TSK-6160	6	160	72	8	T30
	TSK-6180	6	180	72	8	T30
TSK-6200	6	200	72	8	T30	

## Installation data

Size			Ø3	Ø3,5	Ø4	Ø5	Ø6
Substrate			Timber	Timber	Timber	Timber	Timber
Min. installation depth	$h_{nom}$	[mm]	12	14	16	20	24
Min. substrate thickness	$h_{min}$	[mm]	24	28	32	40	48
Min. spacing	$s_{min}$	[mm]	30	30	30	30	30
Min. edge distance	$c_{min}$	[mm]	30	30	30	30	30

## Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Size			Ø3	Ø3,5	Ø4	Ø5	Ø6
Characteristic yield moment	$M_{y,k}$	[Nmm]	2192	3273	4632	8274	13291
Characteristic pull-out strength (perpendicular to grain)	$f_{ax,k}$	[N/mm <sup>2</sup> ]	17	21.21	19.56	17.85	26.18
Characteristic pull-out strength (parallel to grain)	$f_{ax,k}$	[N/mm <sup>2</sup> ]	9.48	11.49	9.97	9.9	14.92
Characteristic head pull-through strength	$f_{head,k}$	[N/mm <sup>2</sup> ]	26.1	30.95	26.15	25.13	27.13
Characteristic tensile strength	$f_{tens,k}$	[kN]	3.79	4.76	5.81	8.69	12.61
Characteristic torsional strength	$f_{tor,k}$	[Nm]	2.2	2.91	3.67	6.79	12.92
Characteristic ratio of moments (the ratio of torque and characteristic resistance)	$f_{tor,k} / R_{tor,k}$	[-]	5.95	5.02	2.96	1.96	7.98

## Product commercial data

Product Code	Screw			Quantity [pcs]			Weight [kg]			Bar Codes
	Length [mm]			Box	Outer	Pallet	Box	Outer	Pallet	
TS-3016	16	13	-	500.0	32000.0	768000.0	0.30	19.1	487.7	5906675454993
TS-3020	20	16	-	500.0	32000.0	768000.0	0.37	23.4	592.2	5906675455006
TS-3025	25	21	-	500.0	32000.0	768000.0	0.43	27.2	682.8	5906675455013
TS-3030	30	18	2.6	500.0	16000.0	384000.0	0.53	16.8	433.2	5906675455020
TS-3035	35	21	2.6	500.0	16000.0	384000.0	0.57	18.3	469.3	5906675455037
TS-3040	40	24	2.6	500.0	16000.0	384000.0	0.66	21.1	536.9	5906675455044
TS-3516	16	12	-	500.0	32000.0	768000.0	0.39	25.0	630.6	5906675455051
TS-3520	20	16	-	500.0	32000.0	768000.0	0.46	29.1	728.9	5906675455068
TS-3525	25	21	-	500.0	16000.0	384000.0	0.57	18.2	467.8	5906675455075
TS-3530	30	26	-	500.0	16000.0	384000.0	0.66	21.1	536.9	5906675455082
TS-3535	35	21	3.6	500.0	16000.0	384000.0	0.82	26.2	659.8	5906675455099
TS-3540	40	24	3.6	500.0	12000.0	288000.0	0.89	21.4	542.6	5906675455105
TS-3545	45	27	3.6	250.0	8000.0	192000.0	0.48	15.5	401.7	5906675455112
TS-3550	50	30	3.6	250.0	8000.0	192000.0	0.55	17.4	448.6	5906675455129
TS-4016	16	11	-	500.0	32000.0	768000.0	0.58	36.9	916.3	5906675455136
TS-4020	20	16	-	500.0	16000.0	384000.0	0.69	21.9	556.1	5906675455143
TS-4025	25	20	-	500.0	16000.0	384000.0	0.84	26.9	675.1	5906675455150
TS-4030	30	25	-	250.0	16000.0	384000.0	0.46	29.3	733.5	5906675455167
TS-4035	35	21	4.6	250.0	8000.0	192000.0	0.51	16.4	423.2	5906675455174
TS-4040	40	24	4.6	250.0	8000.0	192000.0	0.57	18.3	469.3	5906675455181
TS-4045	45	27	4.6	250.0	8000.0	192000.0	0.60	19.2	490.8	5906675455358
TS-4050	50	30	4.6	250.0	6000.0	144000.0	0.70	16.9	434.4	5906675455365
TS-4060	60	36	4.6	250.0	4000.0	96000.0	0.84	13.5	353.7	5906675455372
TS-4070	70	42	4.6	100.0	3200.0	76800.0	0.39	12.5	330.3	5906675455389
TSK-4025	25	20	-	-	-	-	10.0	10.0	750.0	5906675486680
TSK-4030	30	25	-	-	-	-	10.0	10.0	750.0	5906675486697
TSK-4035	35	21	4.6	-	-	-	10.0	10.0	750.0	5906675486703
TSK-4040	40	24	4.6	-	-	-	10.0	10.0	750.0	5906675486710
TSK-4050	50	30	4.6	-	-	-	10.0	10.0	750.0	5906675486727
TSK-4060	60	36	4.6	-	-	-	10.0	10.0	750.0	5906675486734
TSK-4070	70	42	4.6	-	-	-	10.0	10.0	750.0	5906675486741
TS-6030	30	24	-	100.0	3200.0	76800.0	0.45	14.2	371.8	5906675455624
TS-6040	40	33	-	100.0	3200.0	76800.0	0.56	17.8	457.0	5906675455631
TS-6050	50	30	8	100.0	3200.0	76800.0	0.65	20.9	532.3	5906675455648
TS-6060	60	36	8	100.0	3200.0	76800.0	0.75	24.0	606.0	5906675455655
TS-6070	70	42	8	50.0	1600.0	38400.0	0.46	14.8	384.8	5906675455662
TS-6080	80	48	8	50.0	1600.0	38400.0	0.52	16.5	427.1	5906675455679
TS-6090	90	54	8	50.0	1600.0	38400.0	0.58	18.4	471.6	5906675455686
TS-6100	100	60	8	50.0	1600.0	38400.0	0.63	20.0	510.0	5906675455693
TS-6120	120	72	8	50.0	1200.0	28800.0	0.74	17.9	458.5	5906675455709
TS-6140	140	72	8	50.0	1200.0	28800.0	0.87	20.9	531.1	5906675455723
TS-6160	160	72	8	50.0	1200.0	28800.0	0.99	23.8	601.4	5906675455747
TS-6180	180	72	8	50.0	1200.0	28800.0	1.06	25.4	639.4	5906675455754
TS-6200	200	72	8	50.0	800.0	19200.0	1.24	19.8	505.6	5906675455761
TSK-6040	40	33	-	-	-	-	10.0	10.0	750.0	5906675486819
TSK-6050	50	30	8	-	-	-	10.0	10.0	750.0	5906675486826
TSK-6060	60	36	8	-	-	-	10.0	10.0	750.0	5906675486833
TSK-6080	80	48	8	-	-	-	10.0	10.0	750.0	5906675486840
TSK-6100	100	60	8	-	-	-	10.0	10.0	750.0	5906675486857
TSK-6120	120	72	8	-	-	-	10.0	10.0	750.0	5906675486864
TSK-6140	140	72	8	-	-	-	10.0	10.0	750.0	5906675486871
TSK-6160	160	72	8	-	-	-	10.0	10.0	750.0	5906675486888
TSK-6180	180	72	8	-	-	-	10.0	10.0	750.0	5906675486895
TSK-6200	200	72	8	-	-	-	10.0	10.0	750.0	5906675486901

## Product commercial data

Product Code	Screw			Quantity [pcs]			Weight [kg]			Bar Codes
	Length [mm]			Box	Outer	Pallet	Box	Outer	Pallet	
TS-5020	20	15	-	250.0	16000.0	384000.0	0.55	35.0	871.0	5906675455396
TS-5025	25	20	-	250.0	16000.0	384000.0	0.66	42.4	1047.6	5906675455402
TS-5030	30	25	-	250.0	8000.0	192000.0	0.76	24.4	615.6	5906675455426
TS-5035	35	30	-	250.0	8000.0	192000.0	0.85	27.2	682.8	5906675455433
TS-5040	40	24	8	100.0	3200.0	76800.0	0.38	12.2	321.8	5906675455440
TS-5050	50	30	8	100.0	3200.0	76800.0	0.47	15.0	391.0	5906675455457
TS-5060	60	36	8	100.0	1600.0	38400.0	0.54	8.7	237.7	5906675455464
TS-5070	70	42	8	100.0	1600.0	38400.0	0.62	10.0	269.6	5906675455471
TS-5080	80	48	8	50.0	1600.0	38400.0	0.36	11.6	308.0	5906675455570
TS-5090	90	54	8	50.0	1600.0	38400.0	0.41	13.1	344.9	5906675455587
TS-5100	100	60	8	50.0	1600.0	38400.0	0.45	14.4	375.6	5906675455594
TS-5120	120	72	8	50.0	1600.0	38400.0	0.48	15.4	400.6	5906675455617
TSK-5040	40	24	8	-	-	-	10.0	10.0	750.0	5906675486758
TSK-5050	50	30	8	-	-	-	10.0	10.0	750.0	5906675486765
TSK-5060	60	36	8	-	-	-	10.0	10.0	750.0	5906675486772
TSK-5080	80	48	8	-	-	-	10.0	10.0	750.0	5906675486789
TSK-5100	100	60	8	-	-	-	10.0	10.0	750.0	5906675486796
TSK-5120	120	72	8	-	-	-	10.0	10.0	750.0	5906675486802