Technical Sheet

SDW
Structural Wood Screw

The Strong-Drive® SDW screw is a 8.0mm diameter, high-strength structural wood screw specifically designed for fastening multi-ply wood members together such as plated trusses, engineered timber products and solid-sawn timber. CE marked to EN14592. Driver bit included in every box.



Features

Material

Heat treated carbon steel - black E-coat™

Features

The SDW installs easily with no pre-drilling and is available in optimized lengths for fastening 2, 3 and 4-ply trusses or 45mm engineered timber such as Laminated Veneer Lumber (LVL). The SDW enables single-side fastening, while still allowing concurrent loading on both sides of the assembly to the full allowable head or point-side load of the fastener.

- CE marked to EN14592
- Low-profile head for reduced interference during handling or installation of hardware on the assembly
- High shear values enable wider screw spacing
- Bold thread design firmly clinches plies together to close gaps in multi-ply assemblies
- Optimal screw lengths provide maximum point side penetration
- Driver bit included in each box





Stud Wall Assembly



Truss Assembly



Frame reinforcemen



Applications

Common Applications

- Fastening of multiple wood elements including uprights and trusses
- Fastener Designer
- Engineered timber

Warning:

Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Accordingly, the SDW timber screws should only be used in dry, interior and non-corrosive environments e.g. Service class 1 & 2.

Technical Sheet

SDW
Structural Wood Screw

Technical Data





Product Dimensions

Reference	Fasteners Dimensions[mm]						
	Other	Product Dimensions[mm]					
	Weight[kg]	l[mm]	Thread Length[mm]	d1[mm]	d[mm]	dh[mm]	Driver Bit[mm]
SDW22258-R50E	0.018	66	36	5.6	8	19	T-40
SDW22300-R50E	0.02	76	37	5.6	8	19	T-40
SDW22338-R50E	0.021	86	40	5.6	8	19	T-40
SDW22438-R50E	0.025	111	37	5.6	8	19	T-40
SDW22458-R50E	0.028	117	37	5.6	8	19	T-40
SDW22500-R50E	0.03	127	40	5.6	8	19	T-40
SDW22600-R50E	0.034	152	37	5.6	8	19	T-40
SDW22638-R50E	0.037	162	37	5.6	8	19	T-40
SDW22634-R50E	0.038	172	40	5.6	8	19	T-40

Structural Parameters - hEN14592

Reference	Screw Parameters					
	Characteristic parameters					
	Characteristic Yield Moment – $M_{y,k}$[Nm]	Characteristic withdrawal parameter - $f_{ax,k,90°}$ [N/mm²]	Characteristic head pull-through parameter - $f_{head,k}$[N/mm²]	Characteristic tensile capacity - $f_{tens,k}$[kN]	Characteristic torsional strength - $f_{tor,k}$[Nm]	Torsional ratio
SDW22258-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22300-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22338-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22438-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22458-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22500-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22600-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22638-R50E	17.4	13.2	21.4	21.4	24.2	4.5
SDW22634-R50E	17.4	13.2	21.4	21.4	24.2	4.5

Technical Sheet

SDW
Structural Wood Screw

Connection detail for a Multiply Trimmer (UDL) - 2ply

Reference	Screw Loads			
	Multiply Timber for UDL - 2 plys			
	Characteristic loads - Maximum UDL(1)[kN/m]			Screw characteristic load
	1 Row at 600cm	2 Rows at 600cm	3 Rows at 600cm	SCL(2) Long term
SDW22300-R50E	9.7	19.3	29	2900
SDW22338-R50E	10.4	20.7	31.1	3110
SDW22500-R50E	12.7	25.4	38.1	3810
SDW22634-R50E	12.7	25.4	38.1	3810

1. Uniformly Distributed Load
2. Structural Composite Lumber
3. The load is uniformly distributed from hangers at regilar centres up to 600mm maximum
4. To calculate the maximum allowable end reaction for each hanger - multiply the UDL by the spacing e.g. 3.51x 0.6 = 2.1kN per hanger
5. To calculate the maximum span of trimmed joists use: 2 x UDL (from above table) / Floor Load (kN/m^2) e.g. 2 x 3.51 / 3.12kN

Connection detail for a Multiply Trimmer (UDL) - 3ply

Reference	Screw Loads			
	Multiply Timber for UDL - 3 plys			
	Screw characteristic load[N]	Characteristic loads - Maximum UDL(1)		
	SCL(2) Long term[N]	1 Row at 600cm	2 Rows at 600cm	3 Rows at 600cm
SDW22438-R50E	2950	7.4	14.8	22.1
SDW22500-R50E	3070	7.7	15.4	23

1. Uniformly Distributed Load
2. Structural Composite Lumber
3. The load is uniformly distributed from hangers at regilar centres up to 600mm maximum
4. To calculate the maximum allowable end reaction for each hanger - multiply the UDL by the spacing e.g. 3.51x 0.6 = 2.1kN per hanger
5. To calculate the maximum span of trimmed joists use: 2 x UDL (from above table) / Floor Load (kN/m2) e.g. 2 x 3.51 / 3.12kN

Technical Sheet

SDW
Structural Wood Screw

Connection detail for a Multiply Trimmer (UDL) - 4ply

Reference	Screw Loads			
	Multiply Timber for UDL - 4 plys			
	Screw characteristic load[N]	Characteristic loads - Maximum UDL(1)		
	SCL(2) Long term	1 Row at 600cm	2 Rows at 600cm	3 Rows at 600cm
SDW22600-R50E	3115	6.9	13.8	20.8
SDW22634-R50E	3070	6.8	13.6	20.5

1. Uniformly Distributed Load
2. Structural Composite Lumber
3. The load is uniformly distributed from hangers at regilar centres up to 600mm maximum
4. To calculate the maximum allowable end reaction for each hanger - multiply the UDL by the spacing e.g. 3.51x 0.6 = 2.1kN per hanger
5. To calculate the maximum span of trimmed joists use: 2 x UDL (from above table) / Floor Load (kN/m2) e.g. 2 x 3.51 / 3.12kN

Load Transfer - 2ply

Reference	Screw Loads	
	Load transfer - 2 plys	
	Maximum characteristic load - 2 plys[kN]	
	4 No. Screws	6 No. Screws
SDW22300-R50E	23.2	34.8
SDW22338-R50E	24.9	37.3
SDW22500-R50E	30.5	45.7
SDW22634-R50E	30.5	45.7

For 4 & 6 screw arrangement images, see installation tab below

Load Transfer - 3ply

Reference	Screw Loads	
	Load transfer - 3 plys	
	Maximum characteristic load - 3 plys[kN]	
	4 No. Screws	6 No. Screws
SDW22438-R50E	17.7	26.6
SDW22500-R50E	18.4	27.6

For 4 & 6 screw arrangement images, see installation tab below

Technical Sheet

SDW
Structural Wood Screw

Load Transfer - 4ply

Reference	Screw Loads	
	Load transfer - 4 plys	
	Maximum characteristic load - 4 plys[kN]	
	4 No. Screws	6 No. Screws
SDW22600-R50E	16.6	24.92
SDW22634-R50E	16.4	24.56

For 4 & 6 screw arrangement images, see installation tab below

Installation

Installation

- SDW screws install best with a low-speed drill and a T40 6-lobe bit (bit included with every box of screws).
- Pre-drilling is typically not required. SDW screws may be installed through metal truss plates as approved by the truss designer
- Drive the fastener so that the top of the head is slightly embedded into the top surface of the timber. To ensure correct performance, do not under or over-drive the fastener.
- Individual screw locations may be adjusted up to 75mm to avoid conflicts with other hardware or to avoid timber defects.



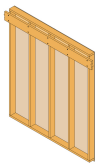
Stud Wall Assembly

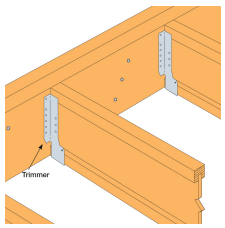


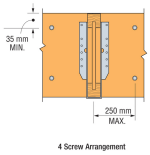
Truss Assembly



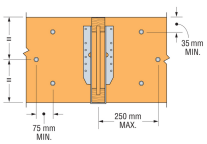
Frame reinforcemen







4 Screw Arrangement



6 Screw Arrangement

Copyright by Simpson Strong-Tie®
Information presented on this document is the exclusive property of Simpson Strong-Tie®