

NEW *Strong-Drive*
SWD DOUBLE-THREADED™ Screw
For Exterior Structural Wood Connections



**Double-threaded.
Low profile.
Code listed.**

(800) 999-5099
strongtie.com

For Interior or Exterior Structural Wood Connections

Introducing the Strong-Drive SWD Double-Threaded screw from Simpson Strong-Tie.

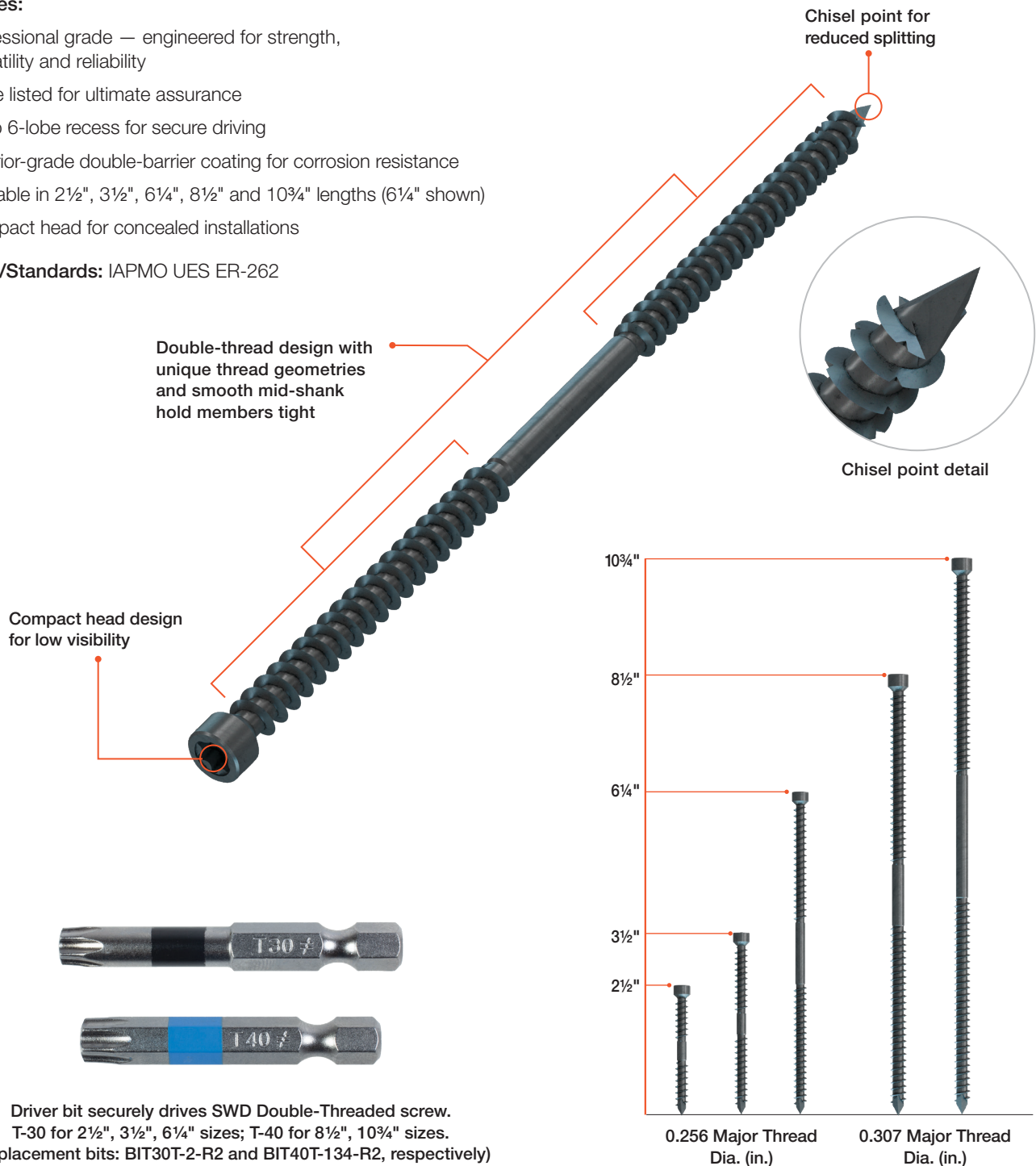
Designed for stealth, strength and speed, it's ideal for securing two wood members together on interior or exterior structural jobs. Fasten a variety of connections with ease, such as beam to post, beam to joist, purlin to truss, guardrail to post, roof to wall, knee bracing, and post cap connector replacement, along with post-frame configurations and multi-ply assemblies.

Code listed for structural applications, the SWD™ has a low-profile head and exterior grade double-barrier coating that provides corrosion resistance equivalent to hot-dip galvanization, making it suitable for certain exterior and preservative-treated wood applications, as described in the evaluation report.

Features:

- Professional grade — engineered for strength, versatility and reliability
- Code listed for ultimate assurance
- Deep 6-lobe recess for secure driving
- Exterior-grade double-barrier coating for corrosion resistance
- Available in 2½", 3½", 6¼", 8½" and 10¾" lengths (6¼" shown)
- Compact head for concealed installations

Codes/Standards: IAPMO UES ER-262



For a Variety of Structural Connections

The Strong-Drive SWD Double-Threaded screw combines several value-engineered features that contribute to its unique ability to provide strong load capacities, resist corrosion in certain exterior applications and clamp wood or engineered wood members together tightly — all while installing easily and requiring no predrilling in most applications. The SWD™ has been tested and load rated per ICC-ES AC233, demonstrating strength and durability under a variety of forces. Its black double-barrier coating provides exterior-grade corrosion resistance, making it ideal for applications where exposure to moisture or preservative-treated wood is involved. The chisel point allows for easier angled installations and the double-threaded design comprises two different geometries with a smooth shank between them. This allows the SWD to pull members together snugly. The cap-style head finishes with a low-profile appearance.



Multi-Ply Assemblies



Knee Brace Connections



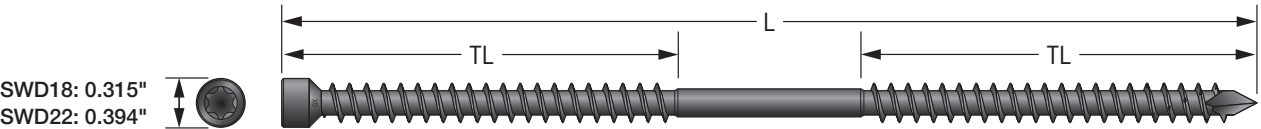
Joist-to-Beam Connections



Beam-to-Post Connection

Technical Data

The loads contained herein are per the aforementioned code report, and many of the applications depicted in this flier are load-rated by separate assembly testing in accordance with ICC-ES AC233. Subsequent Engineering Letters describing the load-rated assemblies have been published and are available at strongtie.com



Strong-Drive SWD Double-Threaded Screw Properties

Model	Fastener Length L (in.)	Thread Length TL (in.)	Unthreaded Shank Diameter (in.)	Major Thread Diameter (in.)	Minor Thread (Root) Diameter (in.)	Fastener Allowable Steel Strength		
						Bending Yield Strength (F _{yb}) (psi)	Tension (lb.)	Shear (lb.)
SWD18212DBB	2½	1½	0.180	0.256	0.157	180,000	965	680
SWD18312DBB	3½	1½						
SWD18614DBB	6¼	2½						
SWD22812DBB	8½	3¾	0.235	0.307	0.213	180,000	1,840	1,240
SWD221034DBB	10¾	4¼						

SWD Double-Threaded Screw Solution Lateral Loads

Allowable Shear Loads

Model	Thread Length (in.)	DFL/SP Allowable Shear Loads (lb.)					SPF/HF Allowable Shear Loads (lb.)				
		Wood Side Member Thickness (in.)					Wood Side Member Thickness (in.)				
		¾	1½	3½	5½	7½	¾	1½	3½	5½	7½
SWD18212DBB	1½	134	156	—	—	—	109	103	—	—	—
SWD18312DBB	1½	134	220	—	—	—	109	159	—	—	—
SWD18614DBB	2½	134	220	325	—	—	109	159	225	—	—
SWD22812DBB	3¾	163	220	325	450	—	112	155	225	290	—
SWD221034DBB	4¼	163	220	325	430	300	112	155	225	330	275

For SI: 1 inch = 25.4 mm, 1 ksi = 6.89 MPa, 1 lb. = 4.45 N.

1. The main and side members shall be wood having a minimum NDS referenced specific gravity of 0.55 for SP, 0.50 for DFL, 0.42 for SPF and 0.43 for HF. Lateral table values for sawn lumber are also applicable for fasteners installed into structural composite lumber described in Section 3.2.2 of IAPMO UES ER-262. When the specific gravities or equivalent specific gravities of the main member and side member are different, the design values of the wood with the lowest specific gravity shall be used.
2. Tabulated lateral design values (Z) are shown at a C_D = 1.0. Loads may be increased for load duration per the building code up to a C_D = 1.6. Tabulated values shall be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC. For in-service moisture content greater than 19%, use C_M=0.70 for DFL/SP and C_M=0.58 for SPF/HF.
3. Screws shall be installed straight into the side grain of the wood main member with the screw axis at a 90° angle to the wood fibers.
4. Minimum main member thickness shall be equal to the screw length minus the side member thickness.
5. SP is southern pine; DFL is Douglas fir-larch; HF is hem-fir; SPF is spruce-pine-fir.

Withdrawal and Pull-Through Loads

Allowable Withdrawal Loads

Model	Fastener Length, L (in.)	Thread Length, TL (in.)	Reference Withdrawal Design Value, W (lb./in.)		Max Reference Withdrawal Design Value, W _{MAX} (lb.)	
			DFL/SP	SPF/HF	DFL/SP	SPF/HF
SWD18212DBB	2½	1½	148	117	165	130
SWD18312DBB	3½	1½	148	117	240	190
SWD18614DBB	6¼	2½	190	178	475	445
SWD22812DBB	8½	3¾	194	194	695	695
SWD221034DBB	10¾	4¼	194	194	695	695

For SI: 1 inch = 25.4 mm, 1 ksi = 6.89 MPa, 1 lb. = 4.45 N.

1. The main members shall be wood having a minimum NDS referenced specific gravity of 0.50 for DFL, 0.55 for SP, 0.43 for HF and 0.42 for SPF. Withdrawal table values for sawn lumber are also applicable for fasteners installed into structural composite lumber described in Section 3.2.2 of IAPMO UES ER-262.
2. Tabulated reference withdrawal design values are in pounds per inch of the thread penetration into the main member.
3. Tabulated max reference withdrawal design values are in pounds where the entire thread length shall penetrate into the main member.
4. Tabulated reference withdrawal design values are shown at a C_D = 1.0. Loads may be increased for load duration per the building code up to a C_D = 1.6. Tabulated values shall be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC. For in-service moisture content greater than 19%, use C_M=0.70 for SPF/HF and C_M=0.56 for DFL/SP.
5. Screws shall be installed straight into the side grain of the wood main member with the screw axis at a 90° angle to the wood fibers.
6. End-grain factor of 0.65 shall be applied when installed into the end grain of member.
7. SP is southern pine; DFL is Douglas fir-larch; SPF is spruce-pine-fir; HF is hem-fir.

Allowable Pull-Through Loads

Model	Fastener Length, L (in.)	Thread Length, TL (in.)	Max Reference Pull-Through Design Value, (lb.)					
			2x Side Member		4x Side Member		6x Side Member	
			DFL/SP	SPF/HF	DFL/SP	SPF/HF	DFL/SP	SPF/HF
SWD18212DBB	2½	1½	175	175	—	—	—	—
SWD18312DBB	3½	1½	175	175	—	—	—	—
SWD18614DBB	6¼	2½	175	175	540	—	—	—
SWD22812DBB	8½	3¾	260	260	590	—	—	—
SWD221034DBB	10¾	4¼	260	260	590	—	695	695

For SI: 1 inch = 25.4 mm, 1 ksi = 6.89 MPa, 1 lb. = 4.45 N.

1. The main members shall be wood having a minimum NDS referenced specific gravity of 0.50 for DFL, 0.55 for SP, 0.43 for HF and 0.42 for SPF. Pull-through table values for sawn lumber are also applicable for fasteners installed into structural composite lumber described in Section 3.2.2 of IAPMO UES ER-262.
2. Tabulated maximum reference design values are in pounds into the side member.
3. Tabulated maximum reference pull-through design values are shown at a C_D = 1.0. Loads may be increased for load duration per the building code up to a C_D = 1.6. Tabulated values shall be multiplied by all applicable adjustment factors from the NDS as referenced in the IBC or IRC. For in-service moisture content greater than 19%, use C_M=0.70 for SPF/HF and C_M=0.56 for DFL/SP.
4. Screws shall be installed straight into the side grain of the wood main member with the screw axis at a 90° angle to the wood fibers.
5. SP is southern pine; DFL is Douglas fir-larch; SPF is spruce-pine-fir; HF is hem-fir.



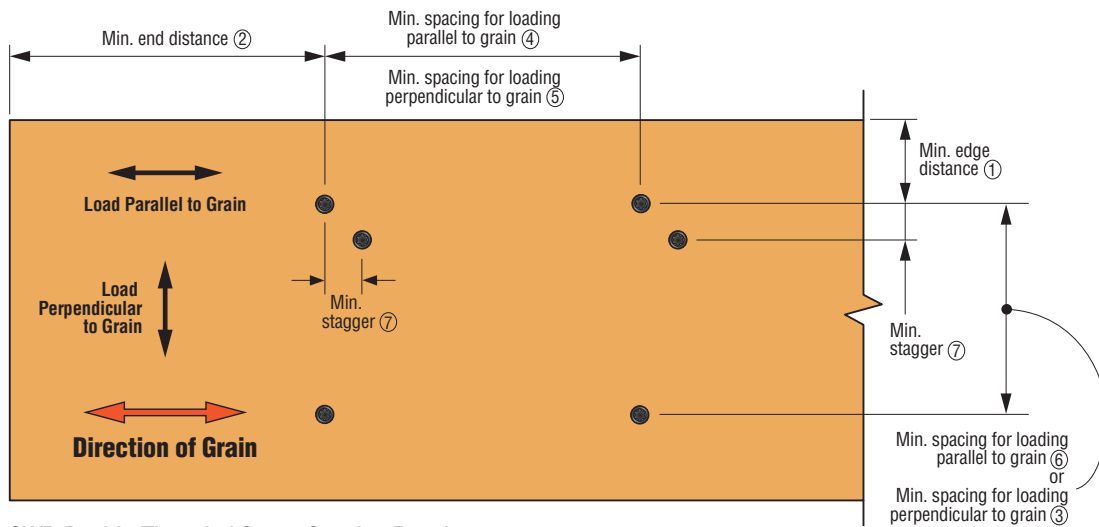
Strong-Drive SWD Double-Threaded Screw Sizes and Packaging

SWD Double-Threaded Screw Spacing Geometry

SWD Double-Threaded Screw Spacing Requirements

Condition	Direction of Load to Grain	ID	Minimum Distance or Spacing (in.)	
			SWD18	SWD22
Edge Distance	Perpendicular	①	1	1¼
	Parallel	①	1¾	1¾
End Distance	Perpendicular	②	4	5
	Parallel	②	4	5
Spacing Between Fasteners in a Row	Perpendicular	③	4	5
	Parallel	④	4	5
Spacing Between Rows of Fasteners	Perpendicular	⑤	1½	1¾
	Parallel	⑥	1½	1¾
Spacing Between Staggered Rows	Perpendicular or Parallel	⑦	7/8	7/8

Note: For axial loading, use the following dimensions: For SWD18, end distance = 2½", edge distance = 1", spacing parallel to grain = 1¾", spacing perpendicular to grain = 1". For SWD22, end distance = 3", edge distance = 1¼", spacing parallel to grain = 2", spacing perpendicular to grain = 1¼".



SWD Double-Threaded Screw Spacing Requirements

Product Information

Black Double-Barrier Coating

Model	Dimensions							
	Inches				Millimeters			
	OD¹ x Length	Shank Diameter	Thread Length	Head Diameter	OD¹ x Length	Shank Diameter	Thread Length	Head Diameter
SWD18212DBB-R50	0.255 x 2½	0.180	1½	0.315	6.5 x 65	4.6	28	8.0
SWD18312DBB-R50	0.255 x 3½	0.180	1¾		6.5 x 90	4.6	40	
SWD18614DBB-R50	0.255 x 6¼	0.180	2½		6.5 x 160	4.6	65	
SWD22812DBB-R30	0.315 x 8½	0.235	3¾	0.394	8.0 x 220	6	95	10.0
SWD221034DBB-R30	0.315 x 10¾	0.235	4¼		8.0 x 275	6	100	

1. OD = is the thread Outer (Major Thread) Diameter that includes adjustments for potential manufacturing tolerances.

Multi-Screw Packaging

Retail Pack		Bulk	
Model No.	Fasteners Per Pack	Model No.	Fasteners Per Pack
SWD18212DBB-R50	50	—	—
SWD18312DBB-R50	50	—	—
SWD18614DBB-R50	50	SWD18614DBB	500
SWD22812DBB-R30	30	—	—
SWD221034DBB-R30	30	—	—

Accessories (sold separately)

Part Number	Description	Quantity
BIT30T-2-R2	T-30 6-Lobe Driver Bit	2
BIT40T-134-R2	T-40 6-Lobe Driver Bit	2