## Stand up for wood-to-steel fastening

# SIMPSON Strong-Tie

#### Introducing the Simpson Strong-Tie<sup>®</sup> Quik Drive<sup>®</sup> PROHSD Wood-to-Steel Solution.

A fast, reliable and ergonomic fastening system for wood-to-steel applications, the Simpson Strong-Tie Quik Drive PROHSD Wood-to-Steel solution is designed to boost efficiency and performance while providing the perfect combination of speed and ease for many jobs that require attaching wood to steel — from truck and trailer beds to any high-paced manufacturing environment and beyond.

The Quik Drive PROHSD solution consists of a family of auto-feed screw driving systems and wood-to-steel fasteners. Simpson Strong-Tie is adding enhanced variations to the existing PROHSD60 and PROHSD75 Wood-to-Steel systems and Strong-Drive® TB Wood-to-Steel screws: the PROHSD60M, PROHSD75M, and a new high-performing Strong-Drive TF Wood-to-Steel screw.

The PROHSD60M and PROHSD75M have been enhanced with a new nosepiece that provides greater stability when driving the robust Strong-Drive TB and TF Wood-to-Steel fasteners. The PROHSD60M drives the 45 mm (1¾") and 60 mm (2%") Strong-Drive TB Wood-to-Steel screws and is an ideal solution for applications where wood is installed over steel up to ¼". For heavier-duty applications where steel member thickness is ¼" to 15/42", the PROHSD75M and Strong-Drive TF Wood-to-Steel fasteners are recommended.

To improve the performance of the PROHSD solution, Simpson Strong-Tie provides a variety of extensions to ensure more ergonomic, stand-up driving. A new optional footstep has been designed that attaches to the extension and allows for additional pressure to be applied while driving through the steel member.



#### Features



Strong-Drive TF Wood-to-Steel Screw

Strong-Drive TB Wood-to-Steel Screw

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## Stand Up and Drive — the Quik Drive® Advantage

- Extension enables ergonomic, stand-up screw driving, saving time while easing stress on knees, back and shoulders
- Patented Quik Drive auto-feed mechanism provides hands-free screw advancement, eliminating the extra time involved in handling individual screws
- No special certification is required to operate Quik Drive systems
- Limited lifetime warranty on the Quik Drive system; visit strongtie.com/warranty for more information

## Recommended Fasteners for the Quik Drive Wood-to-Steel Solution

The TB and TF screws are designed for performance and productivity in high-paced environments and install 26% faster than traditional predrill and hand-drive methods, eliminating the need to predrill. The screws are designed with a self-drilling tip and wings for boring through wood, self-tapping threads that securely fasten into steel, and a flat head with nibs to countersink easily into wood surfaces.

#### Applications

Wood-to-steel applications such as on trailer floors, truck beds, trailer walls, mezzanines, nailers and trimmers for steel buildings.

#### Features

- Testing has shown that Simpson Strong-Tie collated screws achieve high shear load values, ensuring a strong, secure connection
- Strong-Drive® TF Wood-to-Steel screw has a #5 drill point with wings for boring through wood and penetrating thicker gauge steel members
- Strong-Drive TB Wood-to-Steel screw has a #4 drill point with wings for boring through wood and penetrating lighter gauge steel members
- Self-tapping threads for securely attaching to metal
- Flat head with nibs for easy flush countersinking
- Available in bulk quantities for hand driving or collated for Quik Drive systems
- Available in black phosphate and mechanically galvanized N2000

# **Collated Fasteners**



Max. grip length

13/4" - 3"

### TFP Wood-to-Steel - Black Phosphate Coating

Length (in.) (mm)	Max. Grip Length (in.)	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.	PROHSD60/ PROHSD60/M	PROHSD75/ PROHSD75/M
3 (75)	1.941	#14	0.46	14	750	TFP1475S	_	$\checkmark$

Replacement driver bit: BITTX30.

#### TBG Wood-to-Steel — Mechanically Galvanized — N2000

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Length (in.) (mm)	Max. Grip Length (in.)*	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.	PROHSD60/ PROHSD60M	PROHSD75/ PROHSD75M
1 ¾ (45)	1.055	#12	0.39	14	1,000	TBG1245S	$\checkmark$	—
23⁄8 (60)	1.645	#12	0.46	14	1,000	TBG1260S	$\checkmark$	—
1 ¾ (45)	1.055	#14	0.39	14	1,000	TBG1445S	$\checkmark$	—
2¾ (60)	1.645	#14	0.46	14	750	TBG1460S	$\checkmark$	—
3 (75)	2.236	#14	0.46	14	750	TBG1475S		$\checkmark$

\*Grip length includes side member, steel thickness, air gaps (if any) and allowance for three threads protruding through the steel.

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## Collated Fasteners (cont.)

FBP Woo	d-to-Stee	el — Bla	ack Phos	phate Coa	ating		134" – 3	
Length (in.) (mm)	Max. Grip Length (in.)*	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.	PROHSD60/ PROHSD60M	PROHSD75/ PROHSD75M
1 ¾ (45)	1.055	#12	0.39	14	1,000	TBP1245S	$\checkmark$	_
23⁄8 (60)	1.645	#12	0.46	14	1,000	TBP1260S	$\checkmark$	—
23⁄8 (60)	1.645	#14	0.46	14	750	TBP1460S	$\checkmark$	_
3 (75)	1.941	#14	0.46	14	750	TBP1475S	—	$\checkmark$

# **Hand-Drive Fasteners**



— Max. grip length —

#### TFP Wood-to-Steel - Black Phosphate Coating

Length (in./mm)	Max. Grip Length (in.)*	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.	Bucket Quantity	Model No.
3 (75)	1.941	#14	0.46	14	50	TFP1475R50	1,000	TFP1475R1000



#### TBG Wood-to-Steel -Mechanically Galvanized - N2000

Length (in./mm)	Max. Grip Length (in.)*	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.
2¾ (60)	1.65	#12	0.39	14	1,500	TBG1260R1500



13/4" - 3"

## TBP Wood-to-Steel - Black Phosphate Coating

				0		
Length (in./mm)	Max. Grip Length (in.)*	Shank Size	Head Diameter (in.)	Threads per Inch	Carton Quantity	Model No.
1 ¾ (45)	1.06	#12	0.39	14	2,000	TBP1245R2000
1 ¾ (45)	1.06	#12	0.39	14	50	TBP1245R50
23⁄8 (60)	1.65	#14	0.46	14	1,000	TBP1460R1000
23⁄8 (60)	1.65	#14	0.46	14	50	TBP1460R50
3 (75)	2.24	#14	0.46	14	1,000	TBP1475R1000
3 (75)	2.24	#14	0.46	14	50	TBP1475R50

\*Grip length includes side member, steel thickness, air gap (if any) and allowance for three threads protruding through the steel.

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## Stand up for wood-to-steel fastening

## **Technical Information**

#### TF Wood-to-Steel — Allowable Loads — SPF, DFL, SP Lumber Attached to Steel (Results are the same per wood species for Steel Members 1/4"–15/32" Thick)

Model No.	l o w with	Nominal Wood Thickness (in.)	Wood Species	Reference SPF, DFL, SP Allowable Loads (lb.)				
	Length (in.) (mm)			Uplift		Shear		
				$C_{D} = 1.0$	$C_{D} = 1.6$	$C_{D} = 1.0$	$C_{D} = 1.6$	
			SPF	190	300	210	335	
TFP1475	3 (75)	1.5x	DFL	260	415	265	425	
			SP	370	590	300	480	

1. For use with structural steel members from 1/4" up to 15/32" thick.

2. Minimum steel strength  $F_{\mu} = 45$  ksi.

3. Standard product available in a black phosphate coating.

4. Reference allowable loads are based on tests using 2x (1.5 in.) thick wood members.

5. Use increased allowable loads (C<sub>D</sub> = 1.6) only when resisting wind or seismic forces. Values must be multiplied by all applicable adjustment factors per the NDS.

6. Minimum fastener spacing requirements to achieve allowable loads: 4" end distance, 1.5" edge distance, 0.75" between staggered rows, 2.5" between non-staggered rows (perpendicular to grain), 1.75" between non-staggered rows (parallel to grain), 1.75" between fasteners in a row (perpendicular to grain), and 4" between fasteners in a row (parallel to grain).

# TB Wood-to-Steel — Allowable Loads — DF and SP Lumber Attachment to Steel (Steel Members 16 ga.-5/16" Thick)

	I an aite	Nominal Wood Thickness (in.)	041		Reference DFL/SP A	llowable Loads (lb.)	
Model No.	Length (in.) (mm)		Steel Thickness [mil (ga.)]			Shear	
			[ (90.)]	$C_{D} = 1.0$	$C_{D} = 1.6$	$C_{D} = 1.0$	$C_{D} = 1.6$
		4.5	54 (16)	195	195	210	335
TB1460S	23⁄8 (60)		68 (14)	225	225	210	335
			97–375 (12–5⁄16'')	245	390	215	345
		1.5x	54 (16)	195	195	210	335
TB1475S	3 (75)		68 (14)	225	225	210	335
			97–375 (12–5⁄16'')	245	390	215	345

1. For use with structural steel members up to 5/16" thick or cold-formed steel members 54 mil (16 ga.) or thicker.

2. Minimum steel strength  $F_{\rm u}$  = 45 ksi.

3. Standard product available in a black phosphate coating. Mechanically galvanized (N2000) coating available for additional corrosion protection.

4. Reference allowable loads are based on tests using 2x (1.5 in.) thick wood members.

5. Use increased allowable loads (C<sub>p</sub> = 1.6) only when resisting wind or seismic forces. Values must be multiplied by all applicable adjustment factors per the NDS.

6. Minimum fastener spacing requirements to achieve allowable loads: 4" end distance, 1.5" edge distance, 1.5" between staggered rows, 3" between non-staggered rows, and 4" between fasteners in a row.



