

Installation Guide: Tuff Span FRP Form Deck

Manufacturer's Assistance

These instructions are intended for Tuff Span panels used as permanent form deck for poured in place concrete slabs. For other assistance or installation instructions for Tuff Span to be installed as roof deck, roofing or siding, please contact:

Enduro

16602 Central Green Blvd.
Houston, Texas 77032

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Material Handling

1. Inspect materials upon delivery. If damage is found, promptly advise both freight carrier and Enduro. Note damage on carrier's receiving ticket.
2. When lifting panels, use spreader bars. Do not use wire slings unless panels are protected.
3. Use planking when moving loads across deck panels. Do not overload deck panels or use for storage platforms.
4. Protect panels from surface cuts, impacts, and abrasions.
5. Avoid interference and extreme bending when covering corners, valleys, and uneven surfaces. **FRP materials cannot be reshaped by use of external force such as hammering or extreme bending.**
6. Use abrasive cutting tools or fine-toothed saws to cut deck.

Storage of Bundled Panels

1. Store bundled panels off the ground high enough to allow air circulation under the bundle and to be above standing water. Elevate one end of the bundle for water drainage.
2. Prevent rain from entering bundle by covering with a tarp or shelter. Avoid moisture between bundled panels, by providing air circulation between draped edges of tarp and ground.
3. If water is present in the bundle: Open the bundle, separate the panels, and dry the materials.
4. If conditions do not permit immediate installation, extra care should be taken to protect panels while nested in bundles against trapped moisture, which can cause permanent watermarks.

Installation

1. Start deck installation on one end of the floor.
2. Place form deck panel on supporting structure. Square up panel into final position with proper bearing.
3. For 8.0 x 3.5 form deck, butt ends of panels over supports and aligned so that ribs are continuous and straight across the surface. For 6.5 x 2, 7.2 x 1.5 or 7.2D x 1.75 form deck, lap ends 3".
4. Nest side laps of adjacent deck panels.
4. **Use of proper equipment is critical to installation.** To drill pilot holes for Type A and B stainless steel screws use a 0-1000 RPM Variable Speed Drill and Carbide-Tipped Bit. *Impact or higher speed drills should not be used.* Refer to the Drill Bit Selection Chart for correct bit size. *Pilot holes are not required for SX5 or SX14 Self-Drilling screws.* To install stainless steel fasteners, use a 0-1000 RPM Variable Speed, Screw Gun equipped with clutch and depth sensing nose piece.
 - a. **For Type A and B stainless steel screws, drill pilot holes** through panels and into structural supports straight at very slow speed. High-speed drilling can harden inside of holes, making it difficult for fastener threads to bite and cause thread rolling. Excessive speed can cause drill bits to burn-up faster than normal. Applying a lubricant to drill bits can extend service life.

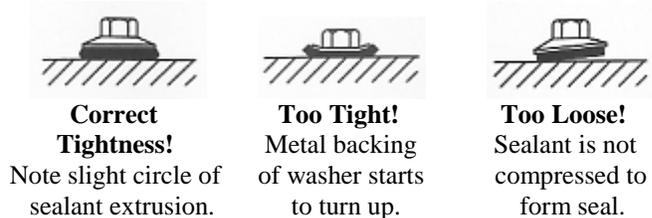
5. Fasten panels to supports at correct spacing with fasteners and washers as recommended on Page 2.
 - a. **Drive all screws at 500 rpm or less.** While installed, screws must be kept straight. Excessive speed may cause thread rolling or shearing the fastener. To avoid excessive speed and heat build-up, "trigger" the motor (vary the speed).
 - a. Tighten screws until sealing washer extrudes slightly beyond the metal washer as shown below. **Do not over tighten** screws as this can damage the fastener or panel.
 - b. If thread rolling occurs, 1) apply a lubricant to screws, 2) make sure appropriate equipment is being used and these instructions are followed. Tapping the hole with a heat-treated Type B carbon screw with similar threads may be needed.
7. For panel-to-panel side lap attachment, draw adjacent panels together and install 3/16 x 3/4" stainless steel rivets or SB2 grommet fasteners 12" on center.
8. Install flashing as required.

Cleaning and Repair

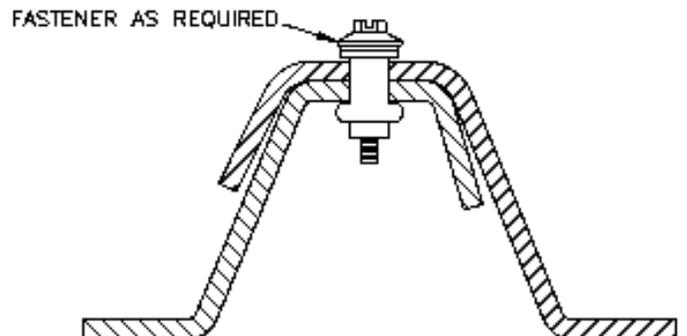
1. Clean panels with soap and water first. If this does not work, some solvents can be used to clean spills or stains on Tuff Span. However, solvents should be used sparingly and only if absolutely necessary. *Some solvents like acetone may remove the acrylic polymer surface coating on coated materials.*
2. Minor damage to deck or flashing can be patched with a Tuff Span repair kit. Materials with other damage should be replaced.

Correct Fastener Installation

Visual Inspection



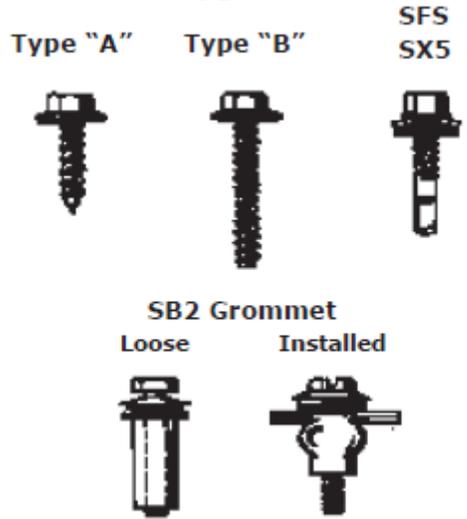
Form Deck Side Lap Detail



Selecting Fasteners

1. Type A Point screws (3/8" hex head): Used for fastening to wood structure, light gage metal (14 gage or lighter) and Tuff Span FRP structural members.
2. Type B Point screws (3/8" hex head): Used for fastening to steel members, 12 gage up to 1/2" thick.
 - Type A and B fasteners are available in 300 and 316 stainless steel or monel. These metals are softer than carbon steel; so extra care must be taken for installation.
3. SX5 Self-Drilling screws (5/16" hex head): Suitable for fastening of 6.5 Roof Deck to carbon steel members, 14 gage up to 1/4" thick. SX6 screws are available only in 305 stainless steel with S19, 3/4" diameter washers.
4. SB2 Grommet (5/16" hex head): Used to attach panel-to-panel side laps. The SB2 is a grommet type fastener with a machine screw (300 and 316 stainless steel or monel), brass nut, and rubber sleeve.
5. 3/16 x 3/4 Rivet (300 Series stainless steel): Used to attach panel-to-panel side laps.

Fastener Types



Drill Bit Selection Chart

Structural Fastener	Member Gage	Drill Bit Size
#14 Type B	.065-.085"	#8 (.199")
	.085-.115"	#7 (.201") or 13/64
	.115-.375"	#1 (.228") or 7/32
	.375-.500"	#1 (.228") or 7/32
#14 Type A	.021-.026"	1/8 (.125")
	.027-.050"	3/16 (.187")
	.051-.075"	#8 (.199") or 13/64
	Wood	5/32"
	FRP	#22 (.157") or 11/64
SX5 Self Driller	.075-.157"	Not req'd
SX14 Self Driller	.158-.550"	Not req'd
#12XS Self Driller	FRP	Not req'd
Side Lap Fastener		Drill Bit Size
SB2 Grommet		3/8"
3/16 x 3/4 Rivet		No. 10