Installation Guide: Tuff Span FRP Louvers

Manufacturer's Assistance
These instructions are intended for Tuff Span FRP louvers. For further assistance, please contact:

Enduro Tel: 713-358-4000
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Houston, Texas 77032 sales@endurocomposites.com

Material Handling and Storage
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 materials, use spreader bars. Do not use wire slings unless panels are protected.
3. Protect materials from surface cuts, impacts, and abrasions.
4. *Louvers may have protective tape applied to bushings to hold parts in place during shipment. Do not remove this tape until after louver has been installed and shimmed.*
5. If conditions do not permit immediate installation, store louvers upright (not flat) and under a cover. Store materials off the ground high enough to allow for air circulation and to be above standing water. Do not stack or store other building materials on top of unprotected units.

Louver Installation
1. As indicated on drawings and required, cut and install framing for support of louver.
2. As needed, clean and remove any projections on bearing surfaces for louvers.
3. Place louvers on supporting structure and adjust into final position with proper bearing and alignment before fastening. Adjacent units should be closely abutted. Apply a bead of caulk at edges of abutted ends. Shim bottom and sides of louver units so they are straight and square.
4a. Before installing Type A or B stainless steel self-tapping screws, mark and drill pilot holes 12" on center. ***Drill pilot holes through louver and structural support at very slow speed*** using a sharp carbide-tipped sheeter's bit. High-speed drilling hardens inside of holes, making it difficult for fastener threads to bite (thread rolling) and causing drill bits to burn-up faster than normal. Using a lubricant may extend life span of bits.
5. Fasten louver to supports 12" on center with proper fasteners and washers (see Selecting Fasteners).
a. ***Drive all screws at 500 rpm or less.*** To avoid excessive speed and heat build-up, "trigger" the drill motor (turn it on and off). If thread rolling occurs, lubricate screws with a drill bit lubricant. *Thread rolling may occur when driving 316 stainless or monel fasteners into hard steel. If this happens, use a heat-treated Type B carbon steel screw to tap the hole before installing Type A or B stainless steel or monel fasteners.*
b. Tighten screws until the sealing washer extrudes slightly beyond the metal washer (see diagram). ***DO NOT OVER TIGHTEN*** screws as this can damage materials.
6. Install flashing as specified or shown on drawings with SB2 grommet fasteners, 12" o.c. Drill a pilot hole for SB2 fasteners before installation.
7. Apply sealant tape and caulk where specified or shown on drawings.

Cleaning and Repair
1. Clean louvers 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 necessary. *Some solvents like acetone may remove the acrylic polymer surface coating on coated materials.*
2. Minor damage to louver can be patched with a Tuff Span repair kit. Materials with other damage should be replaced.

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.
- Type A and B fasteners will include a .729" or 1.125" diameter metal and neoprene seal washer as required by specifications and structural requirements.
3. SB2 Grommet (5/16" hex head): Used to fasten flashing and 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.

Correct Fastener Installation

Visual Inspection

Correct Tightness!
Note slight circle of sealant extrusion.

Too Tight!
Metal backing of washer starts to turn up.

Too Loose!
Sealant is not compressed to form seal.

Drill Bit Selection Chart

Structural Fastener	Member Gage	Drill Bit Size
#14 Type B	14 up to 10 ga.	No. 8 or 13/64"
	10 ga. up to 3/16"	No. 4 or 7/32"
	3/16" to 3/8"	No. 1 or 15/64"
	3/8" to 1/2"	A Size or 15/64"
# 14 Type A	Wood, all depths	5/32"
	16 to 14 ga. Metal	No. 8 or 13/64"
	18 ga. Metal	No. 10 or 13/64"
	Tuff Span FRP	No. 22 or 11/64"
SX6 Self Driller	14 ga. to 1/4" Metal	Not required

Side Lap Fastener	Drill Bit Size
SB2 Grommet	3/8"

Notes:
1. SX6 self-drilling, self-tapping fasteners are not suitable for use into stainless steel support members.
2. For fastening into light gage metal, Type A screws install easier than Type B screws.

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