

FGTR/LGT/VGT

Retrofit Girder Tiedowns

The LGT, VGT and FGTR products are moderate-to-high load capacity girder tiedowns for new or retrofit applications.

LGT connectors provide a low-profile connection to the wall for easy installation of drywall. Simple to install and can be installed on the inside or outside of the wall.

The VGT variable girder tiedown is a higher capacity alternative to the LGT and MGT for girder trusses. It attaches with Strong-Drive® SDS Heavy-Duty Connector screws to the side of truss and features a predeflected crescent washer that allows it to accommodate top chord pitches up to 8/12. The VGT is also available with one flange concealed for attachment to trusses with no tail.

The FGTR face-mount girder tiedown is a non-pitch specific girder tiedown that offers the highest uplift capacity for retrofit applications. The FGTRHL/R is designed for corner hip applications.

Material: VGT — 7 gauge; LGT2 — 14 gauge; LGT3/LGT4 — 12 gauge; FGTR — straps: 7 gauge, plate: 3 gauge

Finish: VGT, LGT — galvanized; FGTR — powder coated

Installation:

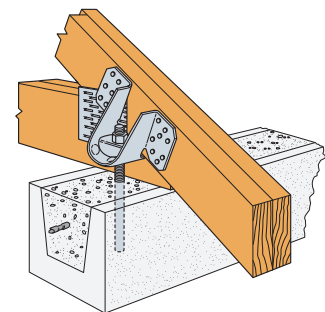
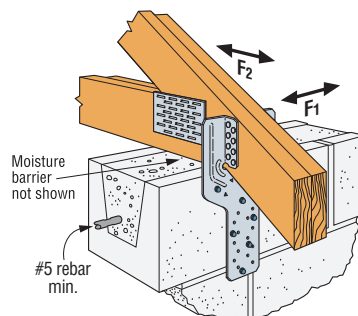
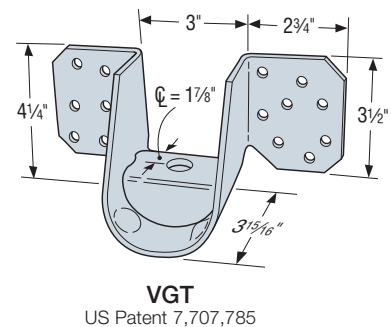
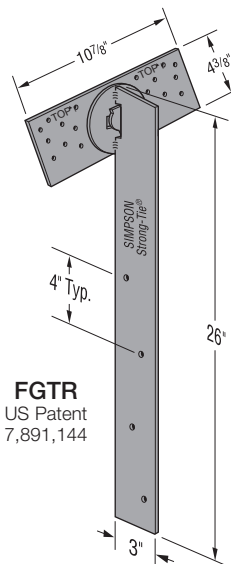
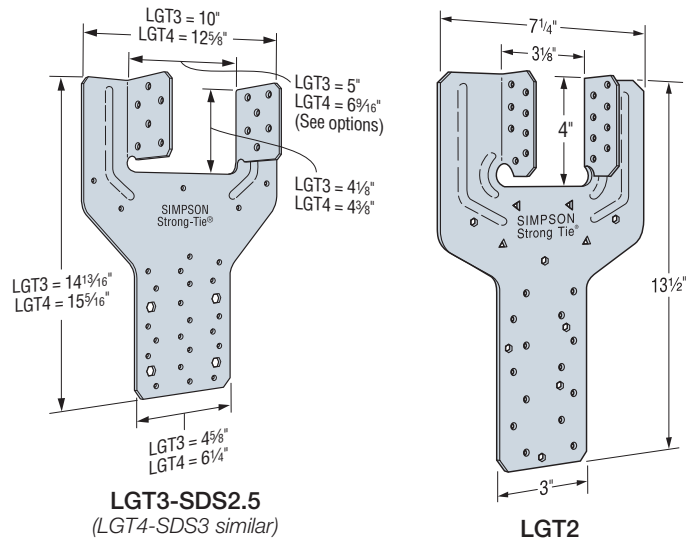
- Use all specified fasteners; see General Notes.
- Connectors attached using Titen Turbo™ screws shall use hex head models.
- To achieve the loads listed in the table below, the product shall be attached to a grouted and reinforced block wall or a reinforced concrete wall designed by others to transfer the high concentrated uplift loads to the foundation.
- Strong-Drive SDS Heavy-Duty Connector screws included with LGT3, LGT4, VGT series and FGTR series.
- Products shall be installed such that Titen Turbo screws and non-stainless Titen HD® anchors are not exposed to the exterior environment.

VGT/FGTR:

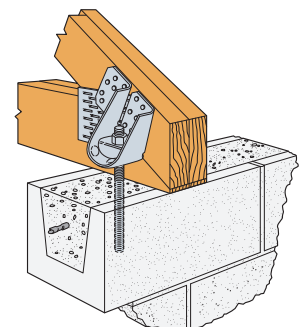
- Screw holes are configured to allow for double installation on a two-ply (minimum) truss.
- The product can be installed in a single application or in pairs to achieve a higher uplift capacity.
- Can be installed on roof pitches up to 8/12 or on a bottom chord designed to transfer the loads.
- FGTR — Only two of the four holes provided on each strap are required to be filled to achieve the catalog loads. The first Titen HD anchor ½" x 5" (THD™ included) shall be installed a minimum of 4" from the top of the wall. Anchors shall not be installed in adjacent holes.
- VGT — When installed on trusses with no overhangs, specify VGTR/L.
- VGT — Install washer component (provided) so that top of washer is horizontal as well as parallel with top of wall.

Codes: See p. 13 for Code Reference Key Chart

Web Applications: Visit app.strongtie.com/rws to access our Roof-to-Wall Selector web application.



Typical VGT Installation



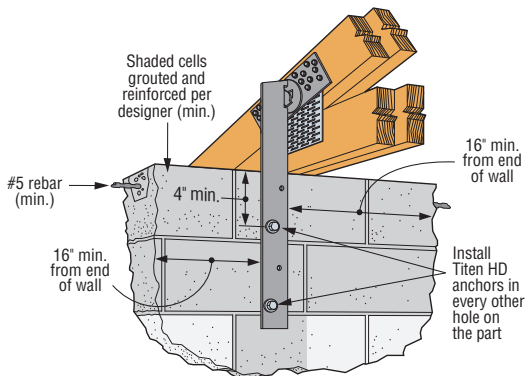
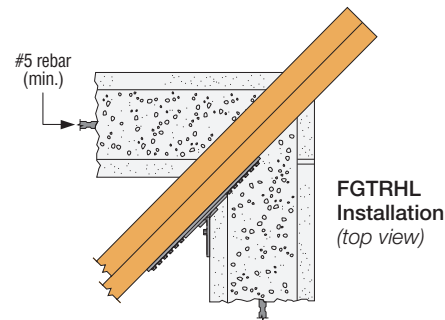
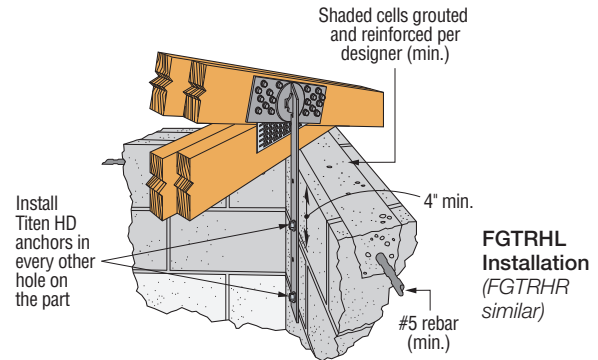
Typical VGTR Installation
(VGTL similar)

FGTR/LGT/VGT

Retrofit Girder Tiedowns (cont.)

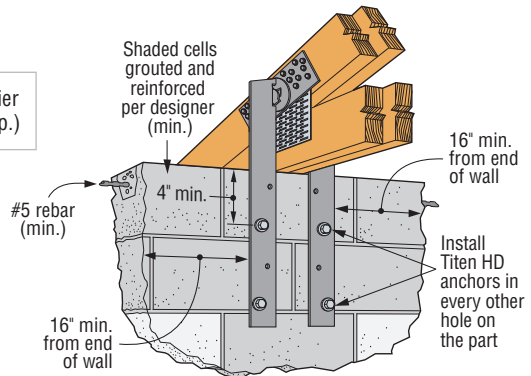
Model No.	Qty.	No. of Plies	Fasteners (in.)		Allowable Uplift Load (160)		Code Ref.
			Girder	Concrete and GFCMU	DF/SP	SPF/HF	
LGT2	1	2 ply	(16) 0.148 x 3¼	(7) ¼ x 2¼ Titen Turbo™10	2,030	1,750	FL
LGT3-SDS2.5	1	3 ply	(12) ¼ x 2½ SDS	(4) ⅝ x 5 Titen HD®	3,285	2,365	
LGT4-SDS3	1	4 ply	(16) ¼ x 3 SDS	(4) ⅝ x 5 Titen HD	3,285	2,365	
VGT	1	2 ply min.	(16) ¼ x 3 SDS	(1) ⅝ anchor ²	4,940	3,555	IBC®, FL, LA
	2	2 ply min.	(32) ¼ x 3 SDS	(2) ⅝ anchors ²	7,185	5,170	
		3 ply min.	(32) ¼ x 3 SDS	(2) ⅝ anchors ²	8,890	6,400	
VGT/L/R	1	2 ply min.	(16) ¼ x 3 SDS	(1) ⅝ anchor ²	2,225	1,600	
	2		(32) ¼ x 3 SDS	(2) ⅝ anchors ²	5,545	3,990	
FGTR	1	2 ply min.	(18) ¼ x 3 SDS	(2) ½ x 5 Titen HD	4,725	3,400	
	2		(36) ¼ x 3 SDS	(4) ½ x 5 Titen HD	8,885	6,395	
FGTRHL/R	1	2 ply min.	(18) ¼ x 3 SDS	(2) ½ x 5 Titen HD	3,635	2,615	

- Allowable loads have been increased for wind or earthquake loading with no further increase allowed. Reduce where other loads govern.
- To achieve the loads listed for the VGT single- and double-connector options, anchorage into a 8" wide concrete tie-beam or grouted and reinforced CMU bond beam can be made using SET-3G™, AT-3G™ or ET-3G™ anchoring adhesive with a minimum embedment depth of 12", with a minimum end distance of 12", and centered in the 8" member. Vertical reinforcement may be required to transfer the loads per designer. Alternate anchorage solutions may be determined by designer.
- Concrete shall have a minimum compressive strength of $f'_c = 2,500$ psi.
- Grout-filled CMU (GFCMU) shall have a minimum compressive strength of $f'_m = 1,500$ psi.
- FGTR — minimum edge distance for Titen HD® anchor is 4".
- FGTR — Titen HD anchors should be spaced in every other hole on the part.
- FGTR — Titen HD anchors and Strong-Drive® SDS Heavy-Duty Connector screws are provided with the part.
- For a single FGTR corner installation (4" min. end distance for Titen HD anchors), allowable uplift is 4,425 lb. (DF/SP) and 3,400 lb. (SPF/HF).
- LGT2 — F_1 load = 700 lb.; F_2 load = 170 lb.; LGT3 — F_1 load = 795 lb.; F_2 load = 385 lb.; LGT4 — F_1 load = 2,000 lb.; F_2 load = 675 lb.
- For concrete wall applications, use ¼" x 1¼" Titen Turbo screws.
- Strong-Drive SDS Heavy-Duty Connector screws may be installed through metal truss plates as approved by the Truss Designer, provided the requirements of ANSI/TPI 1-2014, Sections 7.5.3.4 and 8.9.2 are met (predrilling required through the plate using a ⅝" bit maximum).
- See p. 367 for Titen Turbo screw information.
- Fasteners:** Nail dimensions are listed diameter by length. SDS screws are Simpson Strong-Tie Strong-Drive screws. Titen Turbo screws are Simpson Strong-Tie concrete and masonry screws (hex-head model required). See pp. 23–24 for fastener information.



Typical FGTR Single Installation

Moisture barrier not shown (typ.)



Typical FGTR Double Installation