



Residential North America

Product Evaluation Report
MiTek® Inc.
UGTQ/UGTQL/UGTQR

Florida Product Approval FL 33511
Florida Building Code
Per Rule 61G20-3
Method 1-d

Category: Structural Components
Subcategory: Wood Connector
Compliance Method: 61G20-(1)(d)
HVHZ

Product Manufacturer:
MiTek Inc.

16023 Swingley Ridge Rd
Chesterfield, MO 63017

Engineering Evaluator:
Todd Grevious, P.E.
FL P.E. #88918

Validator:
Johnathan Green, P.E.
FL P.E. #88223

Contents:
Evaluation Report Pages 1-6



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Compliance Statement:

The product as described in this report has demonstrated compliance with the 2026 Florida Building Code, Sections 2303.5, 2304.10.3, 2321.6, and 2321.7.

Product Description:

The Universal Girder Tiedown, UGTQ, is a high capacity tiedown designed to resist uplift loads on multi-ply roof trusses. The UGTQ installs with MiTek's WS structural wood screws and is fastened on one side for single connector installations or opposite sides for two connector installations. The UGTQ product series includes left and right models (UGTQL and UGTQR) for installation near the end of girders.

Product Material:

10 Ga. Steel ASTM A653 Gr 40 G90

Materials:

Wood

Wood members must be Douglas Fir or Southern Pine with a minimum specific gravity (G) of 0.50, or an approved member with an equivalent minimum specific gravity (G) of 0.50. Wood members shall have a moisture content not exceeding 19 percent (16 percent for structural engineered lumber). Wood members must be used under continuously dry conditions and where sustained temperatures are limited to 100° F.

Preservative and Fire-Retardant-treated Wood

Connectors or fasteners used in contact with preservative-treated and fire-retardant-treated wood shall be in accordance with Section 2304.10.5.

Fasteners

Required fastener types and sizes are specified in the Table.

Masonry

Material and quality of masonry construction must comply with the applicable sections of the 2026 FBC. Minimum concrete or grout compressive strength shall be 2500 psi.

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**Design Procedure:**

The allowable loads shown in the Table are based on allowable stress design and include a 60% increase for wind and seismic load conditions per Section 11.3.2 of the NDS. No further increases are permitted.

The allowable loads are based on wood members with a moisture content not exceeding 19 percent (16 percent for structural engineered lumber). If moisture content exceeds this value, a wet service factor, C_m , must be applied per Section 11.3.3 of the NDS. The allowable loads are based on wood members under continuously dry conditions and where sustained temperatures are limited to 100° F. Wood members that will experience sustained exposure to temperatures exceeding 100°F shall be adjusted by the temperature factor, C_t , per Section 11.3.4 of the NDS.

Wood members to which the anchor is attached must be designed by a registered design professional per the FBC. Masonry constructions must be a minimum of C90, fully grouted, concrete CMU block designed by a registered design professional per the 2026 FBC.

Installation:

Install the UGTQ/UGTQL/UGTQR in accordance with this evaluation report and the manufacturer's installation instructions.

For use within 3,000 feet of a saltwater coastline, fasteners and connectors must comply with Section 1711 and Table 1711.1 of the 2026 Florida Building Code - Building or Section R332 and Table R332.1 of the 2026 Florida Building Code - Residential, as applicable.

Testing and Specification:

1. ASTM D7147-11 Test Report No. J9719.01-201-47 by Intertek
2. ANSI/AWC National Design Specifications for Wood Construction (NDS) 2024

The 2026 Florida Building Code refers to ASTM D1761-06, ASTM D7147-21, and ANSI / AWC NDS 2024.

Based on my previous experience with these standards, a careful review of the existing literature, and a review of the revisions between ASTM D1761-20 and its previous editions, as well as ASTM D7147-21 and its previous editions, I can state that the results gathered from testing conducted in accordance with ASTM D1761-88(2000), ASTM D1761-06, ASTM D7147-05, and ASTM D7147-11 remain applicable to evaluations performed in accordance with ASTM D1761-20 and ASTM D7147-21.

As such, the results gathered from testing to ASTM D1761-88(2000), ASTM D1761-06, ASTM D7147-05, and ASTM D7147-11 can be applied to the analysis described in ASTM D1761-20 and ASTM D7147-21 when determining the allowable load capacity for the products covered by this evaluation.

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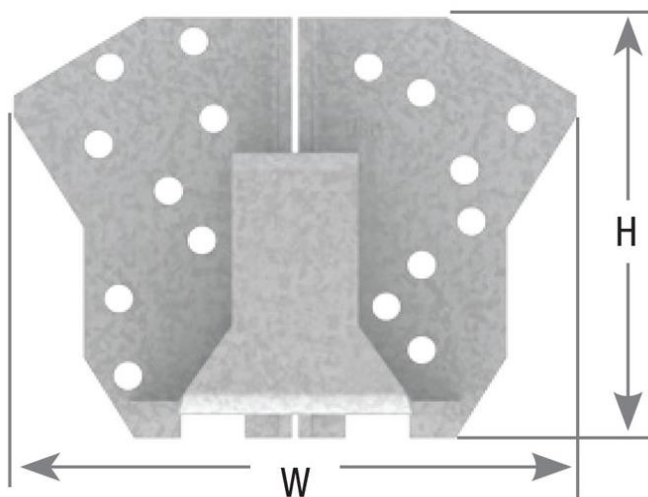
ASTM D1761-88(2000), "Standard Test Methods for Mechanical Fasteners in Wood," was updated in 2006 by removing the portion pertaining to joist hanger tests and using that as a basis for a separate ASTM standard, ASTM D7147-05, "Standard Specification for Testing and Establishing Allowable Loads of Joist Hangers." The remainder of ASTM D1761-88(2000) was reissued as ASTM D1761-06, with subsequent revisions published as ASTM D1761-12 and ASTM D1761-20.

Quality Assurance Entity:

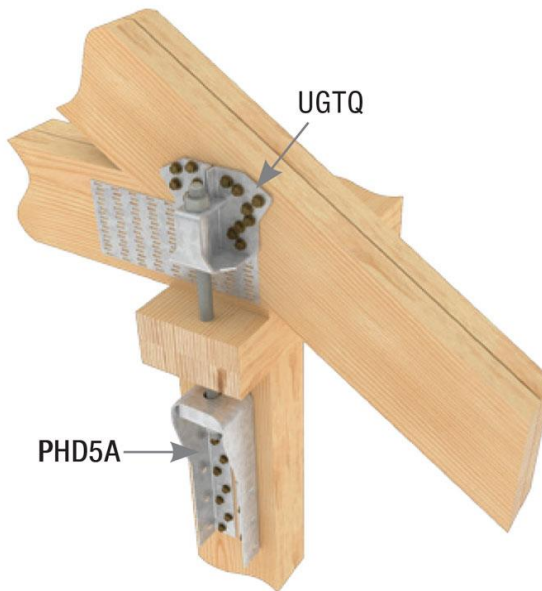
The manufacturer has established compliance in accordance with the 2026 Florida Building Code and Rule 61G20-3.005 (3) for the manufacturing assurance program audited by an approved quality assurance entity.

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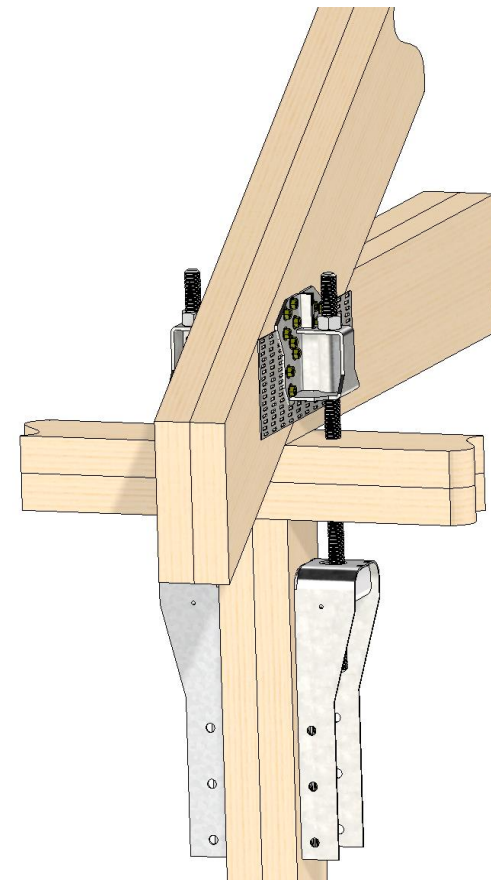
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UGTQ



Typical UGTQ single installation with PHD5A



Typical double UGTQ installation with back to back PHD5As

Stock Number	Qty of UGTQs	Min. No. of Plies ⁵	Dimensions (in.)			Fastener Schedule				Allowable Loads (lbs) ^{1,2,3,6,7,8}	
			W	H	D	Connecting Rod ⁹		Truss/Rafter ⁵		DF/SP	
						Qty	Type	Qty	Type ⁴	Uplift C _D = 1.6	
UGTQ - Single	1	2 Ply	5 9/16	4 1/4	2 1/8	1	5/8" Rod	16	WS3	5175	
UGTQ - Back-to-Back	2	2 Ply	5 9/16	4 1/4	2 1/8	2	5/8" Rod	32	WS3	9690	

For SI: 1 inch = 25.4 mm, 1 psi = 6.89 kPa, 1 lbf = 4.45 N

- 1 Allowable loads are for one UGTQ or UGTQL/R installed on one side of a 2-ply minimum truss/rafter (Qty of UGTQs listed as 1) or one UGTQ or UGTQL/R installed on each side of a 2-ply minimum truss/rafter (Qty of UGTQs listed as 2).
- 2 Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 3 Designer must specify the connection from the connecting rod to the supporting structure.
- 4 MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with UGTQ connectors.
- 5 Truss/rafter plies shall be fastened together to act as a single unit.
- 6 Anchorage into concrete/masonry must be designed by a designer.
- 7 May be installed elevated from top plate.
- 8 Can be installed on trusses and beams with top chord slopes up to 8/12
- 9 May be used with hold-down device, bearing plate or embedded/epoxy rod

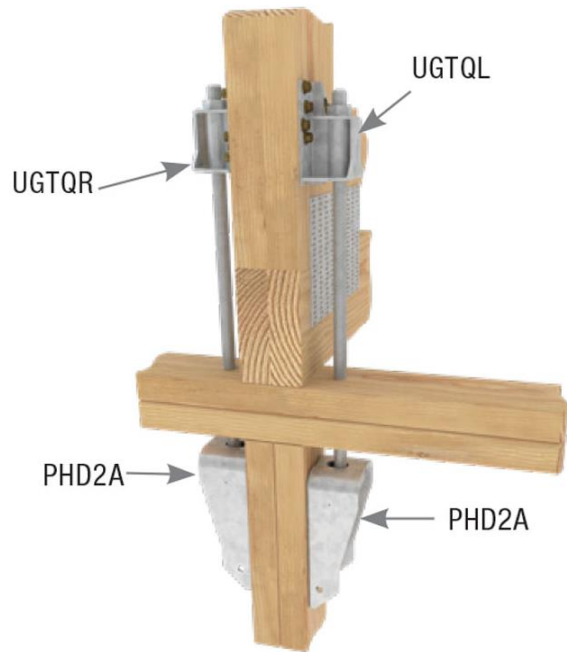


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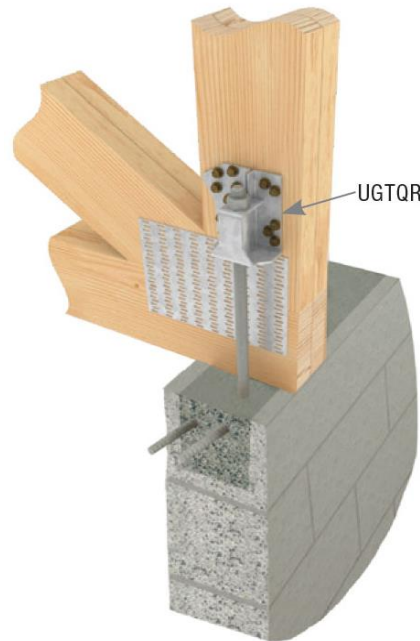
Name: UGTQ Universal Girder Tiedown
UGTQ, UGTQL, URTQR

Sheet 1
Date:
09/04/2026

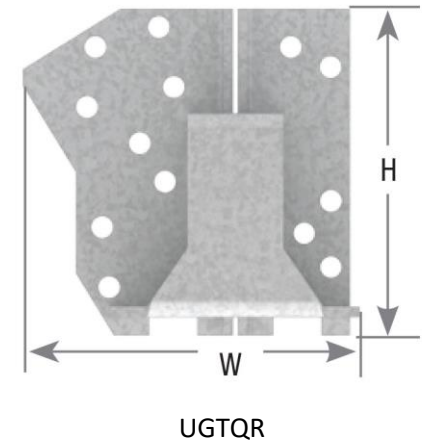
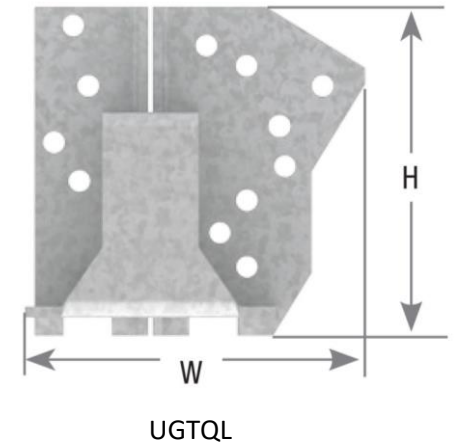
Todd Grevious, P.E.
PROFESSIONAL ENGINEER
License #: 88918



Typical UGTQL/R double installation with PHD2As



Typical UGTQR masonry installation
(UGTQ/UGTQL masonry installation similar)



Stock Number	Qty of UGTQs	Min. No. of Plies ⁵	Dimensions (in.)			Fastener Schedule				Allowable Loads (lbs) ^{1,2,3,6,7,8}	
			W	H	D	Connecting Rod ⁹		Truss/Rafter ⁵		DF/SP	
						Qty	Type	Qty	Type ⁴	Uplift C _D = 1.6	
UGTQR - Single	1	2 Ply	4 1/4	4 1/4	2 1/8	1	5/8" Rod	13	WS3	3070	
UGTQL - Single	1	2 Ply	4 1/4	4 1/4	2 1/8	1	5/8" Rod	12	WS3	3070	
UGTQL/R - Back-to-Back	2	2 Ply	4 1/4	4 1/4	2 1/8	2	5/8" Rod	25	WS3	7175	

For SI: 1 inch = 25.4 mm, 1 psi = 6.89 kPa, 1 lbf = 4.45 N

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- 8 Can be installed on trusses and beams with top chord slopes up to 8/12
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