



Residential North America

Product Evaluation Report
MiTek Inc.
UGTS & USC Uplift Girder Ties

Florida Product Approval FL 2033
Florida Building Code
Per Rule 61G20-3.005(1)(d) Method
1-d

Category: Structural Components
Subcategory: Wood Connector
Compliance Method: 61G20-3.005
HVHZ

Product Manufacturer:

MiTek Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Engineer Evaluator:

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Validator:

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Compliance Statement:

The product as described in this report has demonstrated compliance with the 2026 Florida Building Code, Sections 2304.10.3 and 2314.

Product Description:

The UGTS & USC are uplift girder truss ties consisting of a steel bucket welded to two straps to connect a wood member to a masonry wall. The connector is used to transfer uplift load between wood members and masonry walls.

Product Material:

Strap: 10 Ga. steel ASTM A1011-40
Seat: 10 Ga. steel ASTM A1011-40

Materials:

Wood

Wood members must be Southern Pine with a minimum specific gravity (G) of 0.55, or an approved member with an equivalent specific gravity (G) of 0.55. 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 2026 FBC Section 2304.10.5.

Nail

Nails shall meet the requirements in the Table and the requirements specified in ASTM F1667.

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.

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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 2026 FBC. Fasteners shall be installed to fully grouted and reinforced masonry units (CMU) type S or better mortar, or reinforced concrete ($f'_c = 2,500$ psi at 28 days) designed by a registered design professional per the FBC.

Installation:

Install the anchor 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 D1761-88(00) Standard Test Methods for Mechanical Fasteners in Wood
2. Test Report No.3018 02-50883.3 dated 11/19/2002 by Twin City Testing Corporation
3. Test Report No.031205 dated 11/30/2001 and revised 04/18/2002 by Twin City Testing Corporation
4. 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:

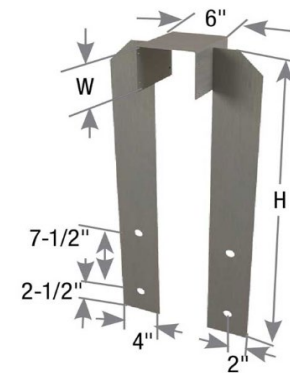
The manufacturer has established compliance in accordance with the 2026 Florida Building Code and Rule 61G20-3.005 (3) for the manufacturing assurance program audited by an approved quality assurance entity.

MiTek Inc.

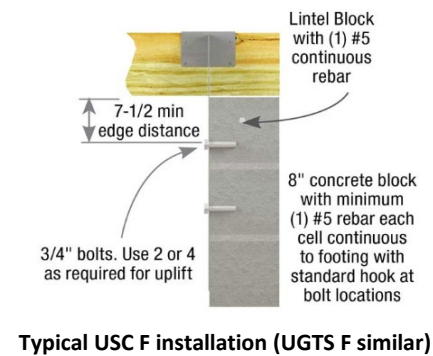
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Description	Stock No.	Steel Gauge	Dimensions		Fastener Schedule ^{2,3,4}				Allowable Loads (Lbs.)	
			W	H	Rafter/ Truss ⁵		Concrete / Masonry Wall		DF-L / SP	Uplift ¹
					Qty	Type	Qty	Bolt Dia.		
3 Ply Flat	UGTS3F	10	4-3/4	23	8	16d	2	3/4	7813	
	USC3F	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
4 Ply Flat	UGTS4F	10	6-1/2	23	8	16d	2	3/4	7813	
	USC4F	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
4/12 pitch	UGTS43	10	4-3/4	23	8	16d	2	3/4	7813	
	UGTS44	10	6-1/2	23	8	16d	2	3/4	7813	
	USC43	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
	USC44	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
5/12 pitch	UGTS53	10	4-3/4	23	8	16d	2	3/4	7813	
	UGTS54	10	6-1/2	23	8	16d	2	3/4	7813	
	USC53	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
	USC54	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
6/12 pitch	UGTS63	10	4-3/4	23	8	16d	2	3/4	7813	
	UGTS64	10	6-1/2	23	8	16d	2	3/4	7813	
	USC63	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
	USC64	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
7/12 pitch	UGTS73	10	4-3/4	23	8	16d	2	3/4	7813	
	UGTS74	10	6-1/2	23	8	16d	2	3/4	7813	
	USC73	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
	USC74	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
8/12 pitch	UGTS83	10	4-3/4	23	8	16d	2	3/4	7813	
	UGTS84	10	6-1/2	23	8	16d	2	3/4	7813	
	USC83	10	4-3/4	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	
	USC84	10	6-1/2	30-1/2	8	16d	2	3/4	7813	
					8	16d	4	3/4	10133	

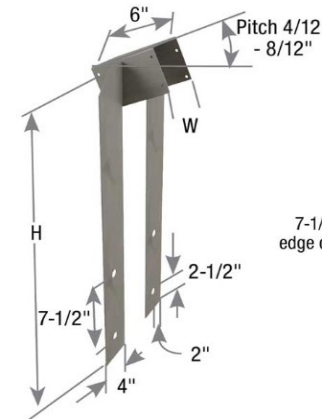
- 1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 2) Use DeWalt 3/4" dia. X 6" Screw-Bolt™ or equal, installed in accordance with manufacturer's specifications.
- 3) Fasteners shall be installed to fully grouted and reinforced concrete masonry or reinforced concrete (f'c = 2500 psi at 28 days).
- 4) Bolts shall conform to ASTM A 307 or better.
- 5) 16d nails are 0.162" dia. x 3-1/2" long. Minimum nail embedment shall be 1-5/8" for 16d nails.



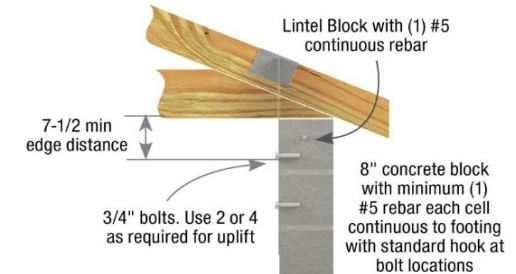
USC F Uplift Girder Tie (4-bolt design)



Typical USC F installation (UGTS F similar)



USC Uplift Girder Tie (4-bolt design)



Typical USC installation (UGTS similar)



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