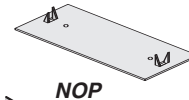


MOISTURE BARRIER PLATESPAGE 150

- **NOP Series**

Protects bottom chord of trusses from moisture damage.



EMBEDDED TRUSS ANCHORS .PAGES 150-153

- **LPTA Series & HLPTA75**

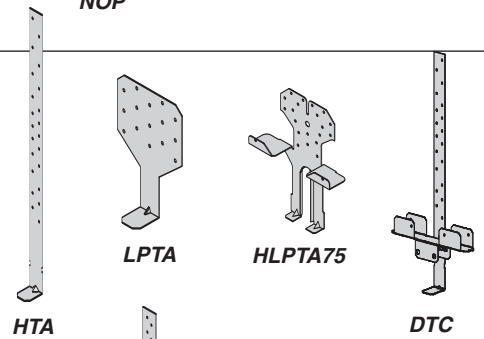
Low profile truss anchors provide uplift and lateral load resistance.

- **HTA Series**

Strap truss anchor provides uplift and lateral load resistance.

- **DTC**

Strap truss anchor provides uplift and higher lateral load resistance.



STRAP TRUSS TIEDOWNSPAGE 154

- **SGP Series**

Strap truss anchor bolts to concrete or wood.

UPLIFT GIRDER TIESPAGES 155-157

- **RUSC**

Retrofit Strap Connector provides a wood-to-wood uplift connection with WS Wood Screws.

- **UGTS & USC Series**

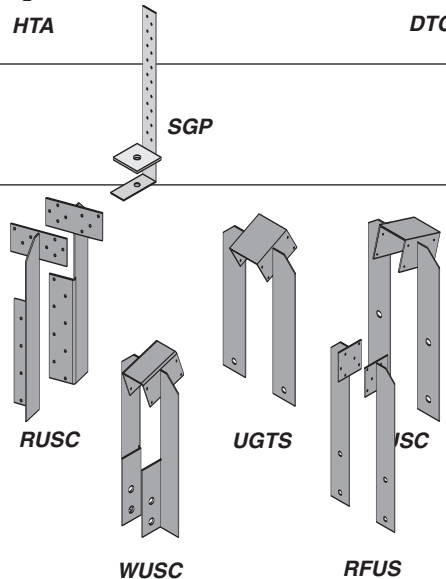
Wraparound truss anchor mechanically fastens into the face of masonry or concrete.

- **WUSC Series**

Wraparound truss anchor bolts to wall studs.

- **RFUS**

Retrofit truss anchor installed mechanically fastens into the face of masonry or concrete.



GIRDER TIEDOWNSPAGES 157-159

- **LUGT Series**

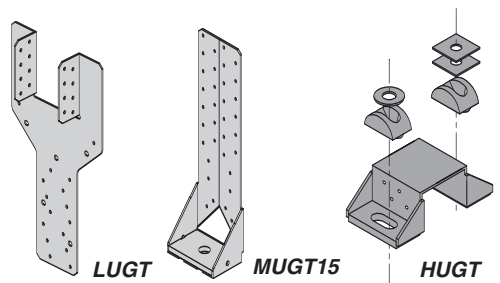
Light capacity girder truss anchor nails to the truss/rafter and the stud. Can also be used for masonry applications.

- **MUGT15**

Medium capacity girder truss anchor wraps over the top chord and bolts to the concrete or tension tie.

- **HUGT Series**

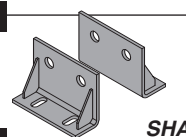
Heavy capacity girder truss anchor installs over the top chord and bolts to the concrete or tension tie.



MASONRY UPLIFT CONNECTORS ...PAGE 159

- **SHA Series**

Heavy capacity uplift connector bolts both to the truss and masonry.



HURRICANE GUSSET ANGLESPAGE 160

- **HGA Series**

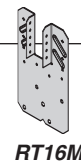
Connects gable trusses to top plates.



HURRICANE RETRO-FIT CONNECTORPAGES 160-161

- **RT16M**

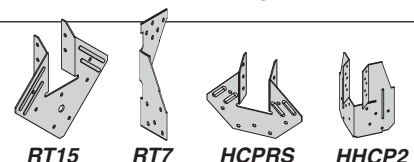
Retro-fit connector for trusses installed on top plates.



HURRICANE/SEISMIC ANCHORSPAGES 161-163

- **HC520, HCPRS, HHCP2, & RT Series**

Top plate to truss anchors.

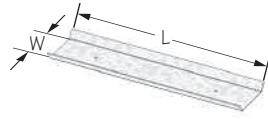


Moisture Barrier Plates protect the bottom chords of trusses from moisture damage caused by direct contact with concrete. These plates eliminate the need for more expensive treated wood plates.

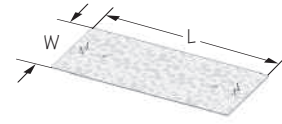
Materials: See chart
Finish: G90 galvanizing

Installation:

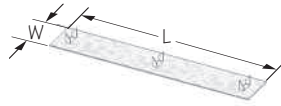
- Use all specified fasteners. See Product Notes, page 10.
- Pre-attach to truss bottom chord or rafter using pre-punched prongs and/or 6d common nails to prevent wood-to-concrete contact.



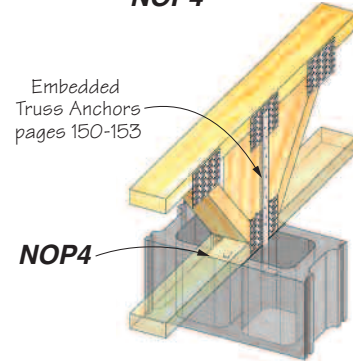
NOP1



NOP4



NOP2X



NOP4

Typical NOP4 installation

Size	USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule		Code Ref.
				W	L	Qty	Type	
2x	NOP2X	---	26	1-7/16	8	---	---	120
2x	NOP1	TSS2	22	1-1/2	8	2	6d	
4x	NOP4	---	26	3-1/2	8	2	6d	

EMBEDDED TRUSS ANCHORS – LPTA SERIES

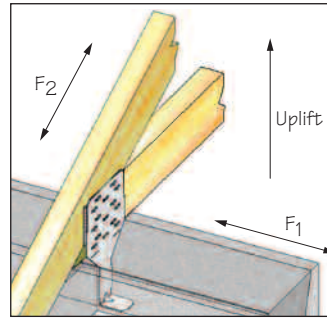
LPTA – Low profile design attaches to 2 x 4 or larger bottom chords and provides uplift and lateral load resistance.

LPTA-S – Features a slotted hole design which allows up to 3/4" horizontal movement when attaching to scissor trusses.

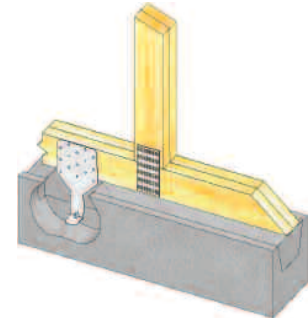
Materials: 18 gauge
Finish: G90 galvanizing
Codes: 2031C, FL859

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Embed LPTA & LPTA-S 4" into concrete tie beam or masonry bond beam.
- Anchors should be spaced no closer than 8" center-to-center.
- **Moisture barrier may be required.**



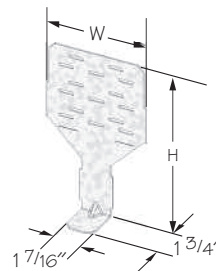
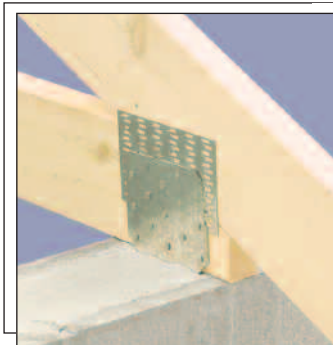
Typical LPTA-S installation



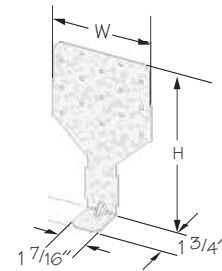
Typical LPTA installation

USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule ²		Allowable Loads (Lbs.)				Code Ref.
			W	H	Min Qty. ³	Type	Uplift (160%) ¹		F1	F2	
							DF-L / SP	S-P-F			
LPTA	LTA1	18	5	8-1/4	10	10d x 1-1/2	1250	1250	810	1500	L1, F17
LPTA-S	---	18	5	8-1/4	11	10d x 1-1/2	1250	1250	520	---	

1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.
3) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.



LPTA-S



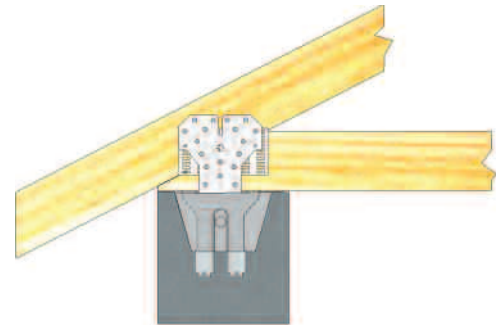
LPTA

The HLPTA75 is designed and tested to provide higher lateral capacity and net uplift. Offers greater pullout resistance and is compatible with bond beam reinforcing.

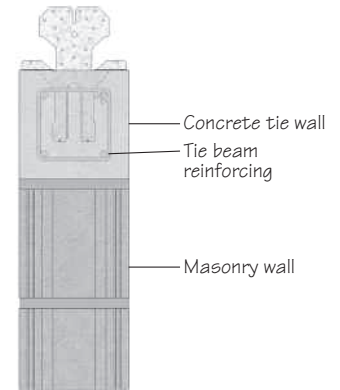
- Materials:** 18 gauge
- Finish:** G90 galvanizing
- Codes:** Dade County, FL 08-0715.01, FL1247
- Patent:** #7,254,919

Installation:

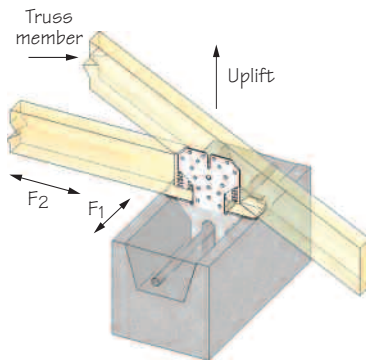
- Use all specified fasteners. See Product Notes, page 10.
- Embed in concrete tie beam or masonry bond beam until the seat is resting on the surface.
- Minimum of one #7 rebar or two #5 rebars through the theoretical shear cone is required.
- Grout or concrete compressive strength shall be 2,000 psi at 28 days.
- Minimum spacing between anchors is 10" to achieve full design load capacities on single anchors.
- When used in a double rebar installation, concrete tie beam stirrup should be sized to accommodate connector leg placement.
- Designer shall verify connector clearance when using in conjunction with stirrups and two rebar applications.
- Verify grout is not in contact with truss member. Moisture barrier may be required.



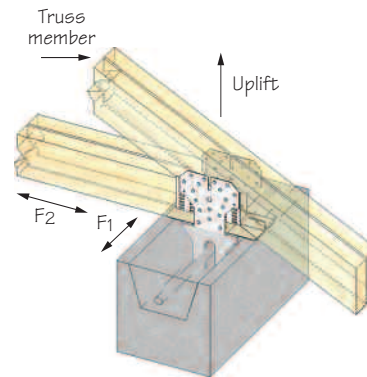
Typical HLPTA75 single rebar installation



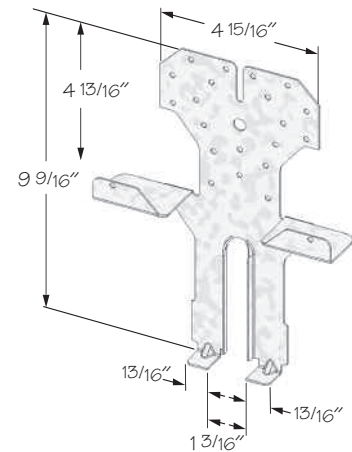
Typical HLPTA75 double rebar installation



Typical HLPTA75 single anchor installation



Typical HLPTA75 double anchor installation



HLPTA75

USP Stock No.	Ref. No.	Steel Gauge	Installation Type	Fastener Schedule ²				Allowable Loads (Lbs.) ¹					Code Ref.	
				Seat Plate		Truss/Rafter		DF-L / SP (160%)			S-P-F (160%)			
				Qty	Type	Qty	Type	F1	F2	Uplift	F1	F2		Uplift
HLPTA75	--	18	Single Anchor	2	10d x 1-1/2	20	10d x 1-1/2	1860	1715	2125	1860	1160	2125	F22, D13
			Double Anchor	--	--	40	10d x 1-1/2	2040	2100	3500	2040	2100	3500	130

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
 2) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.

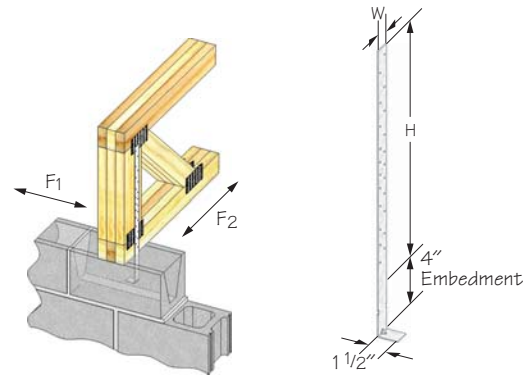
© Copyright 2009 USP Structural Connectors®

Truss & Rafter

- Materials:** HTA-18 – 18 gauge; HTA – 16 gauge;
Finish: G90 galvanizing
Options: HTA20 and HTA24 are available in Triple Zinc. To order, add TZ to stock number, as in **HTA20-TZ**.
Codes: NER 608, 2031C, FL859

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Embed 4" into concrete tie beam or masonry bond beam.
- **For double anchor installations:** anchors should be installed on opposite sides of wood member and centered in masonry bond beam.
- Designer may specify alternative nailing schedules. Refer to Nail Specification table on page 14 for nail shear values, load values shall not exceed published allowable loads.
- When using alternative nailing schedules, lower-most holes in strap shall be filled progressing upward towards the top of the strap.
- **Moisture barrier may be required for HTA installations.**



Typical HTA24-18 installation

HTA24-18

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Truss & Rafter

USP Stock No.	Ref. No.	W	Out of Concrete H	Single Anchor						Double Anchor						Code Ref.		
				Fastener Schedule ^{3,5}		Allowable Loads (Lbs.) ^{1,6}				Fastener Schedule ^{3,5}		Allowable Loads (Lbs.) ^{1,6}						
				Per Anchor		Uplift		Lateral Loads		Per Anchor		Uplift		Lateral Loads				
				Min Qty. ⁷	Type	DF-L / SP	S-P-F	F1	F2	Min Qty. ⁷	Type	DF-L / SP	S-P-F	F1	F2			
						1 Ply	1 Ply					1 Ply	2 Ply or >	1 Ply	2 Ply or >			
		160%	160%	160%	160%			160%	160%	160%	160%	160%	160%					
HTA16-18	META16	1-1/4	12	10	10d x 1-1/2	1400	1400	395	325	10	10d x 1-1/2	2800	2800	2800	2800	790	650	L1, F17
HTA20-18	META20	1-1/4	16	10	10d x 1-1/2	1400	1400	395	325	10	10d x 1-1/2	2800	2800	2800	2800	790	650	L1, F17
HTA24-18	META24	1-1/4	20	10	10d x 1-1/2	1400	1400	395	325	10	10d x 1-1/2	2800	2800	2800	2800	790	650	L1, F17
HTA12	HETA12	1-1/4	8	8	10d x 1-1/2	1600	1265	590	660	8	10d x 1-1/2	3200	3200	2530	2530	1180	1320	L7
HTA16	HETA16	1-1/4	12	10	10d x 1-1/2	1615	1585	590	660	10	10d x 1-1/2	3230	3230	3170	3170	1180	1320	L7
HTA20	HETA20	1-1/4	16	10	10d x 1-1/2	1615	1585	590	660	10	10d x 1-1/2	3230	3230	3170	3170	1180	1320	L7
HTA24	HETA24	1-1/4	20	10	10d x 1-1/2	1615	1585	590	660	10	10d x 1-1/2	3230	3230	3170	3170	1180	1320	L7
HTA48	---	1-1/4	42-1/2	10	10d x 1-1/2	1615	1585	590	660	10	10d x 1-1/2	3230	3230	3170	3170	1180	1320	130

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Anchors are installed on opposite sides of the wood member, centered in masonry bond beam.
3) Minimum nail penetration shall be 1-1/2" for 10d nails.
4) Grout or concrete compressive strength shall be 2500 psi or greater at 28 days.
5) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.
6) Allowable loads require a No. 4 rebar through the shear cones of the anchors.
7) Minimum quantity of fasteners to be installed. Product may have additional nail holes not needed to meet published allowable load of product.

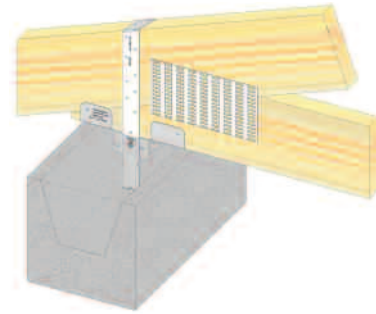
continued on next page

The DTC series attaches trusses to concrete or masonry walls. Innovative seat design gives added lateral resistance while still providing a moisture barrier.

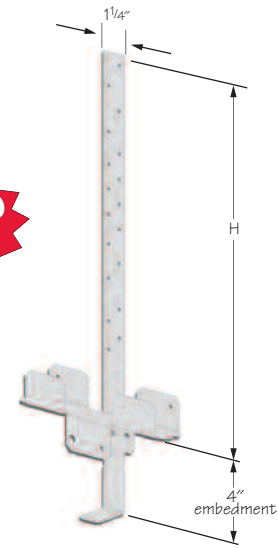
- Materials:** 14 gauge
- Finish:** G90 galvanizing
- Codes:** Dade County, FL 07-1003.10, FL578

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Embed 4" into concrete tie beam or masonry bond beam.
- Installations should be spaced no closer together than 8" center-to-center.



Typical DTC installation



DTC

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Truss & Rafter

USP Stock No.	Ref. No.	Steel Gauge	Out of Concrete H	Fastener Schedule ²				Allowable Loads (Lbs.) ¹								Code Ref.
				Seat Plate		Truss/Rafter		DF-L / SP (160%)				S-P-F (160%)				
				Qty	Type	Qty	Type	F1		F2	Uplift	F1		F2	Uplift	
								Toward Strap	Away from Strap			Toward Strap	Away from Strap			
DTC	HETAL12, HETAL16, HETAL20	16	12-3/4	4	10d x 1-1/2	9	10d x 1-1/2	840	1200	1290	1825	840	1200	1290	1440	F9, D8

1) Allowable loads have been increased 60% for wind and seismic loads; no further increase shall be permitted.
 2) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.
 3) Grout or concrete compressive strength shall be 2500 psi or greater at 28 days.
 4) Allowable loads require a No. 5 rebar through the shear cones of the anchors.
 New products or updated product information are designated in red.

SGP Strap Truss Tiedowns provide strong wood-to-wood or wood-to-masonry connections for retrofit or new construction. Ideal for anchoring trusses to foundations in seismic or high wind regions.

Materials: See chart

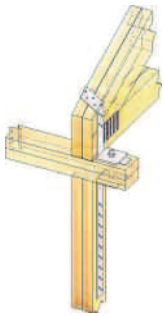
Finish: G90 galvanizing

Codes: ESR-1881, Dade County, FL 08-0111.09, FL576

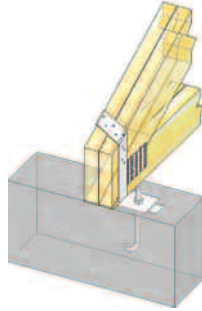
Installation:

- Use all specified fasteners to attach the strap portion of the connector to the side of the stud, post, joist, purlin, or beam.
- Secure the base to the concrete or masonry wall with specified anchor bolt.
- A design professional shall specify the type, length, and embedment of the anchor bolt.
- Connectors must be mounted flush to the surface of the mudsill.
- SGP series include load transfer plates; no washers are required.
- Allowable loads are based on either nail or bolt fastening; nail and bolt values cannot be combined.
- Washers are not required on the transfer plate that fits over the anchor bolt.
- **Moisture barrier may be required.**

Truss & Rafter



**Typical SGP2
wood-to-wood
installation**



**Typical SGP2
wood-to-masonry
installation**



Bolts must be ordered separately. See page 20 for available sizes.

USP Stock No.	Ref. No.	Steel Gauge		Dimensions				Fastener Schedule						Allowable Loads (Lbs.) ^{1,5}		Code Ref.
		Strap	Plate	W	L	D	CL	Qty	Dia.	Strap				DF-L / SP		
										Nails ²		Bolts ^{3,7}		Uplift		
												Nails	Bolts			
										160%	160%					
SGP2	---	14	3	1-5/8	18-1/4	4	1-1/2	1	1/2	10	10d	---	---	1580	---	6, F8, D10
										10	16d	---	---	1580	---	
SGP3	---	14	3	3	18-1/4	4	1-1/2	1	5/8	14	10d	---	---	2460	---	F8, D10
										14	16d	---	---	2460	---	
										---	---	5	1/2	---	---	

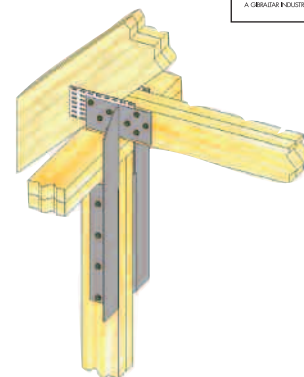
1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 2) Minimum nail penetration shall be 1-1/2" for 10d and 1-5/8" for 16d nails.
 3) Bolts require a minimum penetration of 1-1/2" for the listed loads.
 4) The designer must specify anchor bolt type, length and embedment.
 5) Allowable loads are based on the use of either nails or bolts; nail and bolt values cannot be combined.
 6) SGP base shall be installed flush to the plate.
 7) Bolts shall conform to ASTM A 307 or better.
 New products or updated product information are designated in red.

The RUSC Retro Uplift Strap Connector provides a wood-to-wood uplift connection attaching trusses with a 2 x 4 bottom chord to a double stud in the wall below. WS3 Wood Screws are utilized for fast installation. The connector can be installed after roof sheathing has been installed.

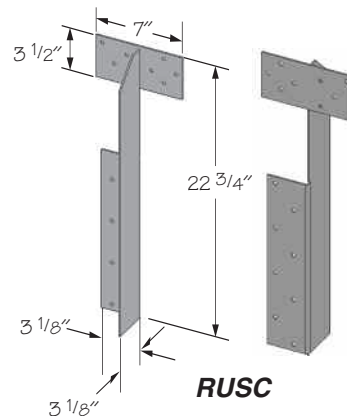
Materials: 10 gauge
Finish: USP primer
Codes: FL6223

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- **The RUSC should be installed in pairs.**
- Install on minimum 2 ply with equal wall studs centered directly below.
- Works with 2 x 4 bottom chord member and 2 x 4 wall studs.



Typical RUSC installation



Truss & Rafter

USP Stock No.	Ref. No.	Steel Gauge	No. of Plys ⁶	Fastener Schedule ^{4,5}		Allowable Uplift 160% ¹		Code Ref.
				Rafter/Truss	Stud	DF-L / SP	S-P-F	
RUSC	---	10	2 Ply or greater	(16) WS3	(16) WS3	6040	5225	F26

- 1) Allowable loads are based on the 1997 NDS[®] and are for a pair of RUSC devices.
- 2) Uplift loads have been increased 33-1/3% or 60% for wind or seismic loads; no further increase shall be permitted.
- 3) Designer must specify stud or post to resist published load values.
- 4) WS3 Wood Screws are 1/4" x 3" long and are included with RUSC connectors.
- 5) Fastener schedule is for two straps used together. The RUSC shall be installed in pairs with a minimum 2 ply truss and wall stud attachment.
- 6) Truss plys shall be fastened together to act as a unit.

UPLIFT GIRDER TIES – UGTS & USC SERIES

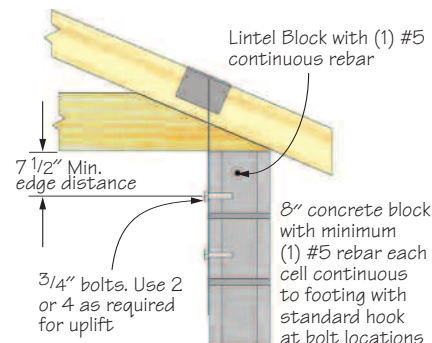
UGTS – 2-bolt shorter design when space is limited.

USC – 4-bolt high load design.

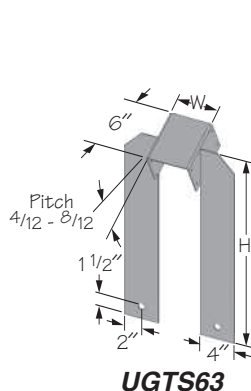
Materials: 10 gauge
Finish: USP primer
Codes: Dade County, FL 07-0322.15, FL2033

Installation:

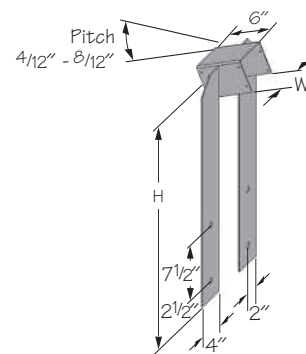
- Use all specified fasteners. See Product Notes, page 10.
- Bolts must be ordered separately.
- Place connector over truss or rafter and fasten with specified fasteners.
- Designer shall be responsible for design of masonry structure, including any required reinforcement.
- For 2 ply applications, add filler block.
- Works with heel heights up to 14".
- **Moisture barrier may be required.**



Typical USC53 installation
 UGTS similar



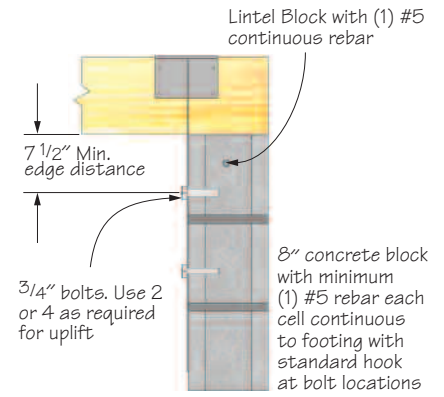
UGTS63



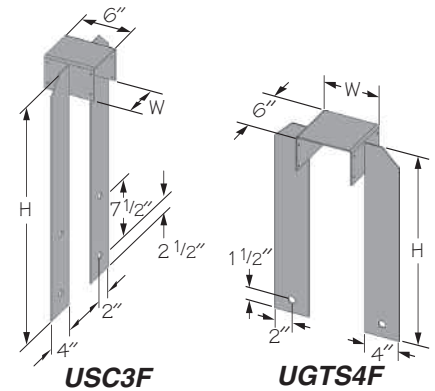
USC53

continued on next page

Description	USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule ^{2,3,4}				Allowable Loads (Lbs.)		Code Ref.
				W	H	Rafter/Truss ⁵		Concrete/Masonry Wall		DF-L / SP		
						Qty	Type	Qty	Bolt Dia.	Uplift ¹		
3 Ply Flat	UGTS3F	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	USC3F	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
4 Ply Flat	UGTS4F	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC4F	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6
4/12 pitch	UGTS43	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	UGTS44	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC43	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
	USC44	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6
5/12 pitch	UGTS53	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	UGTS54	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC53	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
	USC54	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6
6/12 pitch	UGTS63	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	UGTS64	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC63	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
	USC64	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6
7/12 pitch	UGTS73	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	UGTS74	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC73	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
	USC74	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6
8/12 pitch	UGTS83	---	10	4-3/4	23	8	10d	2	3/4	6180	130	F23, D6
	UGTS84	---	10	6-1/2	23	8	10d	2	3/4	6180	130	F23, D6
	USC83	---	10	4-3/4	30-1/2	8	16d	2	3/4	6170	130	F23, D6
	USC84	---	10	6-1/2	30-1/2	8	16d	2	3/4	6170	130	F23, D6



Typical USC3F installation UGTS similar



Bolts must be ordered separately. See page 20 for available sizes.

- 1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 - 2) Use Powers Fasteners 3/4" - 6" Wedge Bolts; 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 = 2000 psi at 28 days).
 - 4) Bolts shall conform to ASTM A 307 or better.
 - 5) Minimum nail embedment shall be 1-5/8" for 16d nails.
- New products or updated product information are designated in red

UPLIFT GIRDER TIES – WUSC SERIES

WUSC series provides designers a wood-to-wood uplift connection that secures trusses or rafters directly to wall studs. Works with heel heights up to 11".

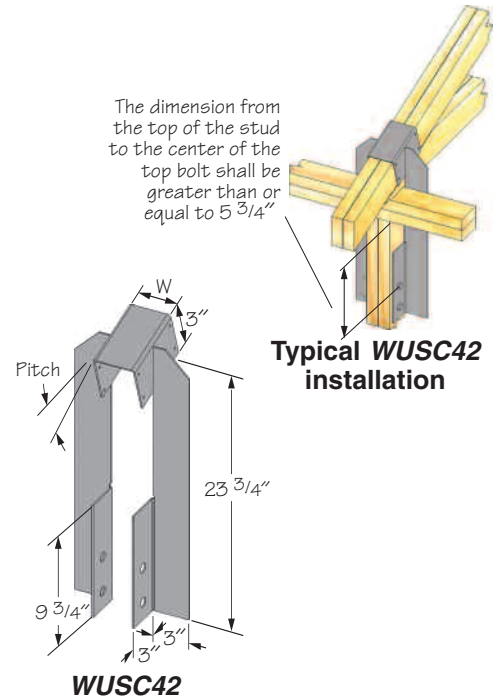
Materials: See chart
Finish: USP primer

Installation:

- Use all specified fasteners. See Product Notes, page 10.

Description	USP Stock No.	Ref. No.	Steel Gauge	W	Fastener Schedule				Allowable Loads (Lbs.)		Code Ref.
					Rafter/Truss		Stud ³		DF-L / SP		
					Qty	Type	Qty	Bolt Dia.	Uplift ^{1,2}		
4/12 pitch	WUSC42	---	10	3-1/4	8	10d	2	3/4	8520	130	130
	WUSC43	---	10	4-3/4	8	10d	2	3/4	9815		
	WUSC44	---	10	6-1/2	8	10d	2	3/4	9815		
5/12 pitch	WUSC52	---	10	3-1/4	8	10d	2	3/4	8520		
	WUSC53	---	10	4-3/4	8	10d	2	3/4	9815		
	WUSC54	---	10	6-1/2	8	10d	2	3/4	9815		
6/12 pitch	WUSC62	---	10	3-1/4	8	10d	2	3/4	8520		
	WUSC63	---	10	4-3/4	8	10d	2	3/4	9815		
	WUSC64	---	10	6-1/2	8	10d	2	3/4	9815		
7/12 pitch	WUSC72	---	10	3-1/4	8	10d	2	3/4	8520		
	WUSC73	---	10	4-3/4	8	10d	2	3/4	9815		
8/12 pitch	WUSC74	---	10	6-1/2	8	10d	2	3/4	9815		
	WUSC82	---	10	3-1/4	8	10d	2	3/4	8520		
	WUSC83	---	10	4-3/4	8	10d	2	3/4	9815		
	WUSC84	---	10	6-1/2	8	10d	2	3/4	9815		

The dimension from the top of the stud to the center of the top bolt shall be greater than or equal to 5 3/4"



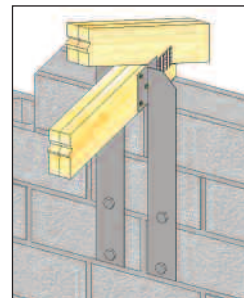
- 1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 2) Designer must specify stud or post to resist published load values.
- 3) Bolts shall conform to ASTM A 307 or better.
- 4) Minimum nail penetration shall be 1-1/2" for 10d nails.

The RFUS is a multi-purpose engineered solution for attaching trusses to concrete or masonry walls. Wedgebolt™ fastening eliminates mislocated cast-in-place anchor bolts and allows retrofit installations. Works with heel heights up to 14”.

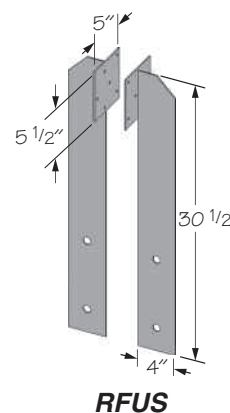
Materials: 10 gauge
Finish: USP primer
Codes: FL6223

Installation:

- **Always install in pairs.**
- Use all specified fasteners. See Product Notes, page 10.
- Designer shall be responsible for design of masonry structure, including any required reinforcement.
- For 1 ply applications, add filler block. Refer to page 192 for wood filler block installation.
- **Moisture barrier may be required.**



Typical RFUS installation



RFUS

USP Stock No.	Ref. No.	Steel Gauge	No. of Plys ⁷	Fastener Schedule ^{4,6}		DF-L / SP Allowable Uplift 160% ¹	Code Ref.
				Rafter/ Truss ⁸	Concrete/ Masonry ^{3,5}		
RFUS	-- --	10	2 Ply or greater	(12) WS3	(4) 3/4" x 6" Wedge Bolts	5940	F26

- 1) Allowable loads are based on the 1997 NDS®.
- 2) Uplift loads have been increased 33-1/3% or 60% for wind or seismic loads; no further increase shall be permitted.
- 3) Use Powers Fasteners 3/4" x 6" Wedge Bolts; or equal, installed in accordance with manufacturer's specifications.
- 4) Fasteners shall be installed to fully grouted and reinforced concrete masonry or reinforced concrete (f'c = 2000 psi at 28 days).
- 5) Bolts shall conform to ASTM A 307 or better.
- 6) Fastener schedule is for two straps used together. The straps shall be installed in pairs.
- 7) Truss plys shall be fastened together to act as a unit.
- 8) WS3 Wood Screws are 1/4" x 3" long and are supplied with RFUS connector.

GIRDER TIEDOWNS – LUGT SERIES

Designed to provide light load alternatives for girder trusses in retrofit and new construction.

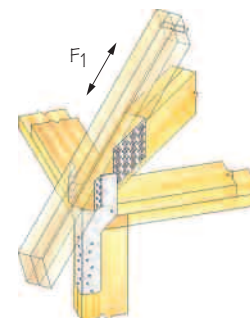
LUGT2 – Install on either the inside or outside of wall.

LUGTC2 – For corner hip applications.

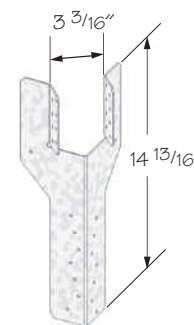
Materials: 14 gauge
Finish: G90 galvanizing
Codes: ESR-2576, FL817, FL568, Dade County, FL 07-0322.15

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- All nail holes must be filled with specified nails to achieve loads listed in chart. Large holes are for alternative masonry installation and do not need to be filled when used for girder-to-stud application.
- **LUGT2** may be installed on either the inside or outside of wall.
- **Moisture barrier may be required.**

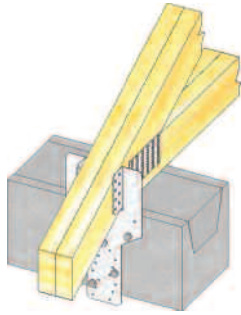


Typical LUGTC2 installation

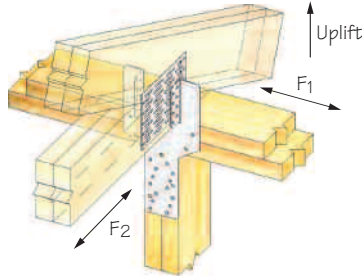


LUGTC2

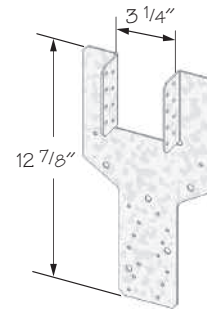
continued on next page



Typical **LUGT2**
masonry installation



Typical **LUGT2**
wood installation



LUGT2

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ²						Allowable Loads (Lbs.) ^{1,2}						Code Ref.
			Rafter/Truss		Plate		Stud ^{4,5}		DF-L / SP			S-P-F			
			Qty	Type	Qty	Type	Qty	Type	F1	F2	Uplift	F1	F2	Uplift	
LUGT2	LGT2	14	16	10d	2	10d	14	10d	1015	440	2260	850	370	1900	11, F3, F12, D6
LUGTC2	---	14	16	10d	2	10d	14	10d	575	---	2260	480	---	1900	130
Masonry Application															
LUGT2	LGT2	14	16	10d	---	---	5	1/4" x 3" Wedge Bolts	1220	460	1850	1025	265	1810	11, F3, F12, D6

- 1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 2) Additional anchorage products to be designed by others.
- 3) Use Powers Fasteners 1/4" x 3" Wedge-Bolt[®]; or equal, installed in accordance with manufacturer's specifications.
- 4) Fasteners shall be installed to fully grouted and reinforced concrete masonry or reinforced concrete (f'c = 2000 psi at 28 days).
- 5) Minimum nail penetration shall be 1-1/2" for 10d nails.

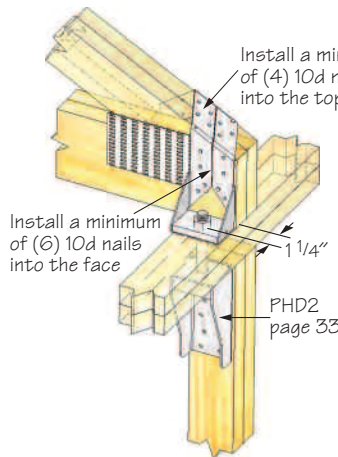
GIRDER TIEDOWN – MUGT 15

Designed for higher uplift resistance for wood frame and concrete block construction. The MUGT15 can accommodate variable truss bearing depths.

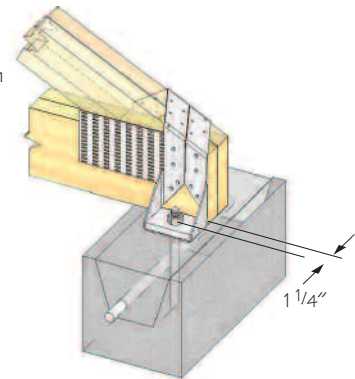
Materials: 12 gauge
Finish: G90 galvanizing
Codes: ESR-1178

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- When straps are wrapped over the truss, install nails in backside of truss. See MUGT15 installation diagram for minimum nail requirements into the face and on top of the truss.
- If installed straight-up with no wrap over the top of the truss, fill all nail holes.
- **Moisture barrier may be required.**



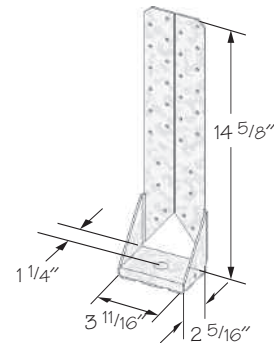
Typical **MUGT15**
wood installation
with PHD2



Typical **MUGT15**
concrete installation

USP Stock No.	Ref. No.	Steel Gauge	Mounting Condition	Fastener Schedule ^{2,3}						DF-L / SP Allowable Uplift 160% ¹	Code Ref.
				Anchor		Rafter/Truss ³					
				Qty	Dia.	Qty			Type		
MUGT15	MGT	12	Face-Max	1	5/8	---	28	---	10d	4495	1
			Top-Min	1	5/8	4	6	12	10d	4165	

- 1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 - 2) Additional anchorage products to be designed by others.
 - 3) Minimum nail penetration shall be 1-1/2" for 10d nails.
 - 4) Designer must specify anchor bolt type, length, and embedment.
- New products or updated product information are designated in red.



MUGT15

The HUGT series high uplift girder tiedowns can be installed on beams and top chords of trusses with slopes from 0° to 34°.

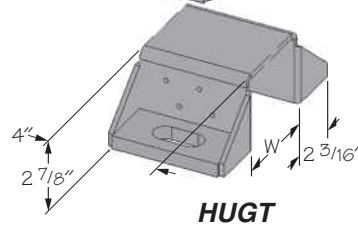
Materials: 7 gauge
Finish: USP primer
Codes: FL6223

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Install the HUGT over the beam or truss (see “W” dimension on chart for appropriate width).
- Install (4) LBP58-TZ washers if (2) 5/8” tension bolts are used (wood installation) or (2) 3/4” dia. washers if a 3/4” dia. anchor bolt is used (concrete installation).
- Attached members shall be designed to resist applied loads.
- **Moisture barrier may be required.**

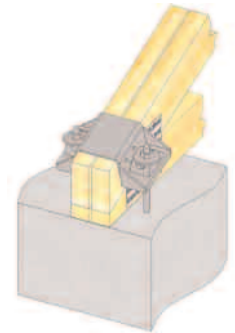
Concrete Installation
 (2) 3/4” washers are required if 3/4” dia. bolt is used (washer not included)

Wood Installation
 (4) LBP58-TZ washers are required if 5/8” dia. bolt is used (washer not included) see chart on this page



HTT22 (not included) see page 34-35

Typical HUGT3 wood-to-wood installation with HTT22's



Typical HUGT2 wood-to-concrete installation

USP Stock No.	Ref. No.	Steel Gauge	W	O.C. Dim Between Anchors	Installation Type	Fastener Schedule ³						Allowable Loads (Lbs.) ^{1,2}		Code Ref.
						Anchor Washers		Threaded Rod		Girder ⁴		DF-L / SP	S-P-F	
						Qty	Type	Qty	Bolt Dia.	Qty	Type	160%	160%	
HUGT2	HGT-2	7	3-5/16	5-3/4	Wood	4	LBP58-TZ	2	5/8	8	10d	9790	7020	F26
					Concrete	---	---	2	3/4					
HUGT3	HGT-3	7	4-15/16	7-3/8	Wood	4	LBP58-TZ	2	5/8	8	10d	9860	9650	
					Concrete	---	---	2	3/4					
HUGT4	HGT-4	7	6-7/8	9	Wood	4	LBP58-TZ	2	5/8	8	10d	9860	9860	
					Concrete	---	---	2	3/4					

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 2) Listed loads apply where roof pitch is between 3:12 and 8:12.
 3) Additional anchorage products to be designed by others.
 4) Minimum nail penetration shall be 1-1/2” for 10d nails.
 5) Designer must specify anchor bolt type, length, and embedment.

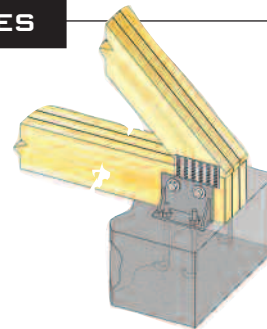
MASONRY UPLIFT CONNECTORS – SHA SERIES

Connects trusses directly to masonry or concrete and features slotted base holes to ease installation.

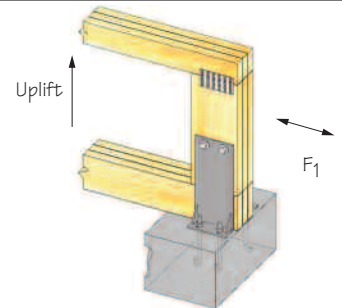
Materials: Angle – 3 gauge; Gussets – 10 gauge
Finish: USP primer
Codes: 2031C, FL859

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Install directly flush to masonry wall.
- **The SHA series connectors shall be installed in pairs.**
- **Moisture barrier may be required.**



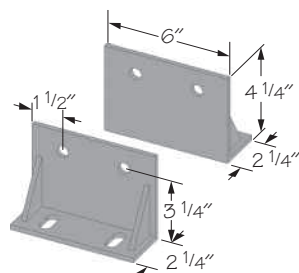
Typical SHA6 installation



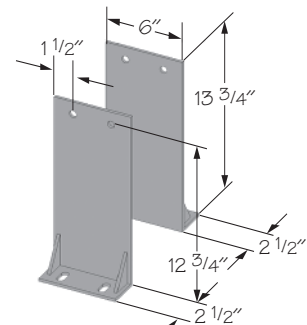
Typical SHA6T installation

USP Stock No.	Ref. No.	Fastener Schedule ³				No. of Plys ⁶	Allowable Loads (Lbs.) ^{1,2}		Code Ref.
		Concrete Wall		Rafter/Truss ⁷			DF-L / SP		
		Anchor Bolts ^{4,5,8}		Qty	Dia.		160%	Uplift	
SHA6	---	4	1/2			2	3/4	2 Ply	4005
				3 Ply or greater	5565			5615	
SHA6T	---	4	1/2	2	3/4	2 Ply	1590	8370	
						3 Ply or greater	2190		

Bolts must be ordered separately. See page 20 for available sizes.



SHA6



SHA6T

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 2) Allowable loads are for a pair of SHA devices. SHA's shall be installed in pairs.
 3) Fastener schedule is for a pair of SHA devices.
 4) 1/2” x 8” J-Bolts or equivalent.
 5) Concrete compressive strength shall be 2500 psi or greater at 28 days.
 6) Multiple ply truss shall be fastened together to act as a single unit.
 7) Bolts shall conform to ASTM A 307 or better.
 8) The designer must specify anchor bolt type, length, and embedment.

Designed for attaching gable end trusses to wood top plates and masonry walls.

HGA10 – Versatile wood-to-wood connector that satisfies high wind and seismic loading requirements.

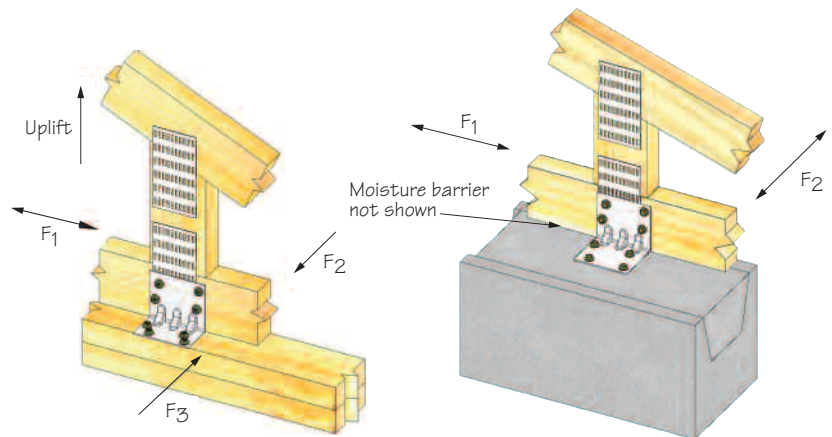
HGAM10 – For installation into grouted concrete tie beam or masonry bond beam. Provides lateral and uplift resistance.

Materials: 14 gauge
Finish: G90 galvanizing
Codes: ESR-2757, FL819

Installation:

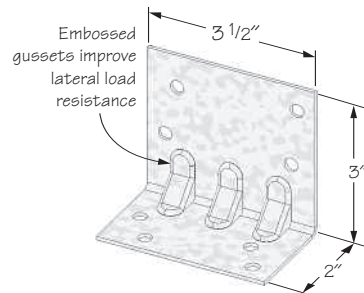
- Use all specified fasteners. See Product Notes, page 10.
- **HGAM10** – Install USP's WS15 Wood Screws into the truss and drill holes for wedge bolts. Install wedge bolts into concrete block per manufacturer's recommendation.
- **HGA10** – Install with USP's WS3 Wood Screws into top plate, and WS15 Wood Screws into the truss.
- WS Wood Screws are included with **HGA10** angles.
- WS Wood Screws and Wedge bolts are included with **HGAM10** angles.

• **Moisture barrier may be required.**

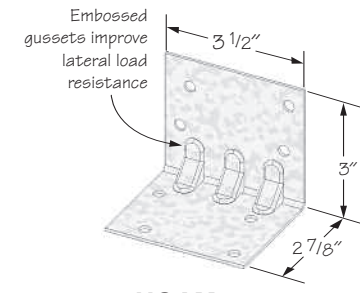


Typical HGA10 installation

Typical HGAM10 installation



HGA10



HGAM10

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ²				Allowable Loads (Lbs.) ¹				Code Ref.
			Rafter/Truss		Plate ³		DF-L / SP				
			Qty	Type	Qty	Type	F1	F2	F3	Uplift	
HGA10	HGA10	14	4	WS15	4	WS3	1320	1565	835	1285	11, F13
HGAM10	HGAM10	14	4	WS15	4	1/4"	1075	1110	740	915	130

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) WS15 Wood Screws are 1/4" x 1-1/2" long and WS3 Wood Screws are 1/4" x 3" long.
3) Use Powers Fasteners 1/4" x 1-1/4" Wedge-Bolt® (included); or equal. Drill hole in concrete or masonry with 1/4" masonry drill. Refer to manufacturer's literature for further information.
New products or updated product information are designated in red.

HURRICANE RETROFIT CONNECTOR – RT16M

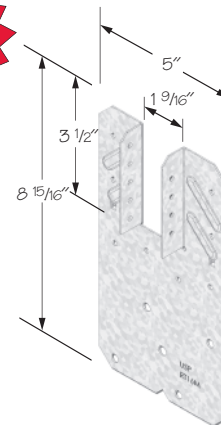
Designed as a retrofit connector for trusses installed on top plates. Can also be used as a holdown for a roof or floor system.

Materials: 18 gauge
Finish: G90 galvanizing

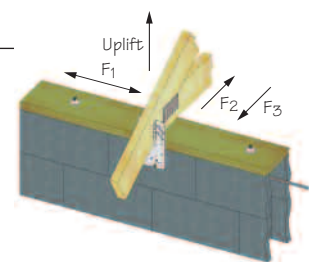
Installation:

- Use all specified fasteners. See Product Notes, page 10.
- Tapcon® Concrete Screws are not supplied with RT16M connector.
- Install Tapcon® Concrete Screws in lower two holes for Single Top Plate or Conventional Raised Foundation or Modular Home Installations.

• **Moisture barrier may be required.**



RT16M



Typical RT16M top plate installation

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ^{2,3,4}						Allowable Loads (Lbs.) ¹					Code Ref.
			Truss/Rafter		Top Plate		Masonry Block		Lateral 160%			Uplift		
			Qty	Type	Qty	Type	Qty	Type	F1	F2	F3	DF-L / SP 160%	S-P-F 160%	
RT16M	HM9	18	9	10d x 1-1/2	--	--	4	1/4" x 1-3/4" Tapcon	630	480	115	1395	1395	130
			9	10d x 1-1/2	4	16d	2	1/4" x 1-3/4" Tapcon	--	--	--	1360	1360	

- 1) Allowable loads have been increased 33-1/3% or 60% for wind or seismic loads; no further increase shall be permitted.
 - 2) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.
 - 3) Install with 1/4" x 1-3/4" Tapcon® Concrete Screws in accordance to manufacturer's installation specifications.
 - 4) Fasteners to be installed to fully grouted and reinforced concrete masonry.
- New products or updated product information are designated in red.

HURRICANE/SEISMIC ANCHORS – HC520, HCPRS, HHCP2, & RT SERIES

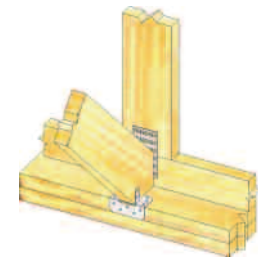
These anchors tie trusses and rafters to top plates and may be used to tie wood framing members to resist uplift and lateral forces.

Materials: See chart

Finish: G90 galvanizing; RT7A-GC & RT15-GC – Gold Coat

Options: HHCP2, RT3A, RT4, RT5, RT7, RT7A, RT10, RT15, RT16A, and RT16-2, are available in Triple Zinc. To order, add TZ to stock number, as in **RT10-TZ**. RT3A, RT4, RT5, RT7, RT8A, RT10, RT16A, and RT16-2 are available in Stainless Steel. To order, add SS to stock number, as in **RT7-SS**.

Codes: ESR-1881, ESR-2756, 2031C, FL565, FL816, FL817, FL859, Dade County, FL 07-0306.10



Typical HC520 gable brace installation



Typical HCPRS stud to plate installation



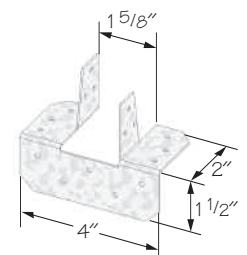
HCPRS



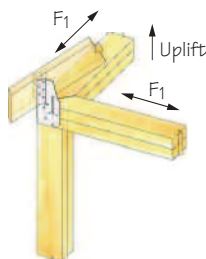
HCPRS3



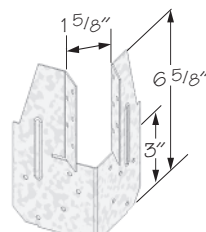
Typical HC520 stud to plate installation



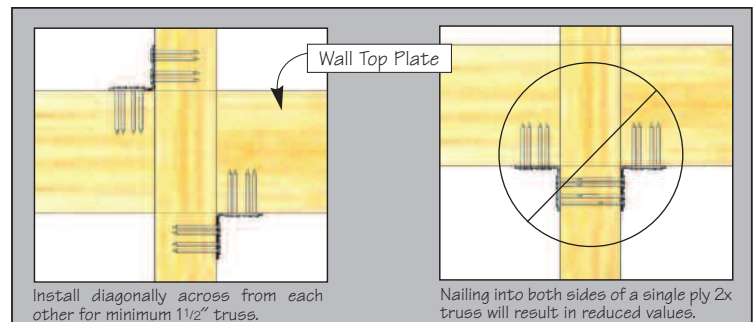
HC520



Typical HHCP2 truss/rafter to double plate corner installation



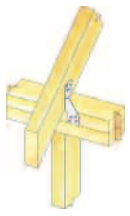
HHCP2



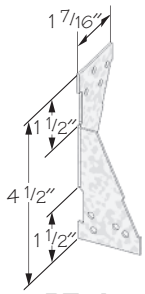
Install diagonally across from each other for minimum 1 1/2" truss.

Nailing into both sides of a single ply 2x truss will result in reduced values.

Hurricane Anchor installation to achieve twice the load (Top View)



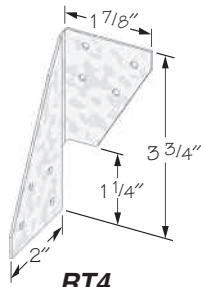
**Typical RT3A
truss/rafter
to plate installation**



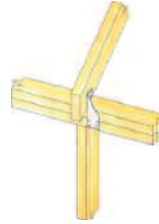
RT3A



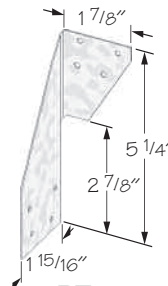
**Typical RT4
truss/rafter to
plate installation**



RT4



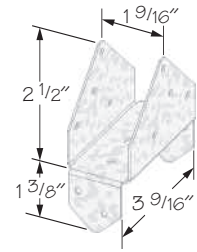
**Typical RT5
truss/rafter
to double
plate installation**



RT5



**Typical RT6
truss/rafter
to double
plate installation**

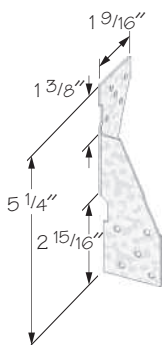


RT6

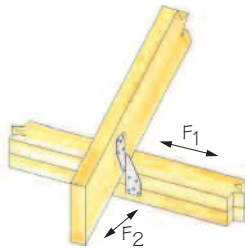
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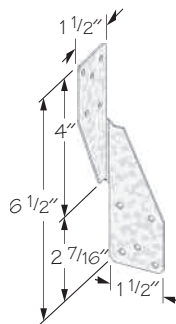
**Typical RT7
truss/rafter
to double
plate installation**



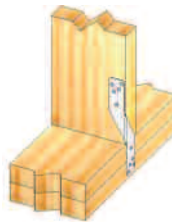
RT7



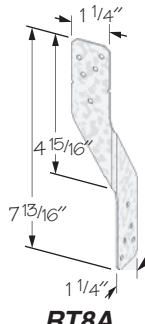
**Typical RT7A
truss/rafter
to double
plate installation**



RT7A



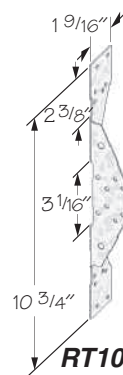
**Typical RT8A
stud to double
plate installation**



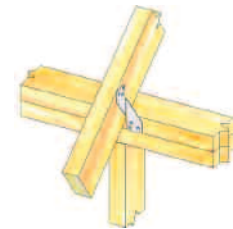
RT8A



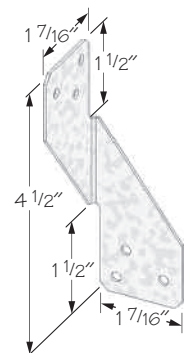
**Typical RT10
truss/rafter
to double plate to
stud installation**



RT10



**Typical RT12A
truss/rafter to
plate installation**

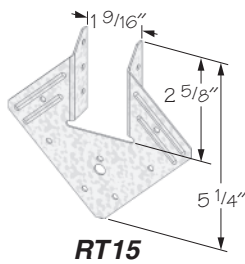


RT12A

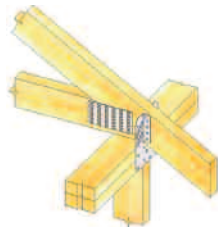
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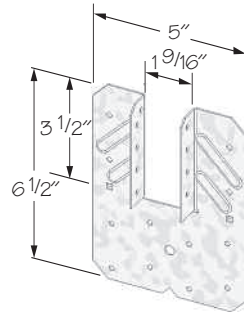
Typical RT15 truss/rafter to double plate installation



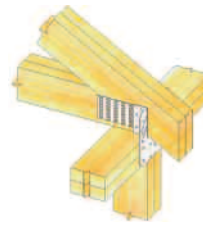
RT15



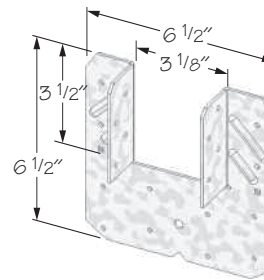
Typical RT16A truss/rafter to double plate installation



RT16A



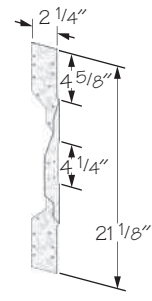
Typical RT16-2 truss/rafter to double plate installation



RT16-2



Typical RT20 truss/rafter to double plate to stud installation



RT20

Installation:

- Use all specified fasteners. See Product Notes, page 10.
- All nail holes must be filled with specified nails to achieve loads listed in the chart.
- Depending on pitch, birdsmouth notching may be required with some models to enable installers to fill all nail holes.
- Designer shall determine if solid blocking is required.

AVAILABLE IN
GOLD COAT

In some applications rafter ties are required by the codes to connect roof assemblies to the wall below.
IRC 802.10.5, IBC 2308.10.1, UBC 2337.5.8.

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ^{2,3,4,5}						Allowable Loads (Lbs.) ¹								Code Ref.
			Truss/Rafter		Plate		Stud		DF-L / SP				S-P-F				
			Qty	Type	Qty	Type	Qty	Type	Lateral 160%		Uplift 160%	Lateral 160%		Uplift 160%	Uplift 160%		
									F1	F2	160%	8d x 1-1/2"	F1	F2	160%	8d x 1-1/2"	
RT3A	H3	18	4	8d	4	8d	---	---	190	190	610	610	160	160	525	525	11
RT4	H4	18	4	8d	4	8d	---	---	215	215	410	410	180	180	345	345	11
RT5	H5	18	4	8d	4	8d	---	---	265	265	540	540	225	225	450	450	11
RT6	HS24	18	8	10d x 1-1/2	6	10d x 1-1/2	---	---	800	800	665	665	670	670	560	560	11, L2, R1
RT7	H2.5	18	5	8d	5	8d	---	---	195	195	585	585	160	160	495	495	11, F1, F11, D5, R6
RT7A	H2.5A	18	5	8d	5	8d	---	---	210	210	670	670	175	175	565	565	11
RT7A-GC	---	18	5	N8-GC	5	N8-GC	---	---	---	---	---	---	---	---	---	---	---
RT8A	H8	18	5	10d x 1-1/2	5	10d x 1-1/2	---	---	215	215	775	775	180	180	650	650	11
RT10	H2	18	6	8d	8	8d	6	8d	195	195	585	585	160	160	495	495	11, F1, F11, D5, R6
RT15	H1	18	5	8d x 1-1/2	5	8d	---	---	500	340	530	530	285	410	445	445	11, F1, F11, D5, R6
RT15-GC	---	18	5	N8-GC	5	N8-GC	---	---	---	---	---	---	---	---	---	---	---
RT16A	H10/H14	18	9	10d x 1-1/2	8	10d	---	---	800	645	1380	1380	670	545	1160	1160	11
RT16-2	H10-2	18	8	8d	8	8d	---	---	655	415	1160	1160	550	345	975	975	11, F11, R6
HHCP2	HCP2	18	10	10d x 1-1/2	10	10d x 1-1/2	---	---	370	---	800	800	310	---	670	670	11, F12
HC520	GBC	18	---	---	11	8d	6	8d	470	430	515	515	405	370	445	445	L1, F17
HCPRS	---	18	---	---	5	8d	6	8d x 1-1/2	500	340	540	540	375	285	455	455	6
HCPRS3	---	18	---	---	6	8d	6	8d	500	340	540	540	375	285	455	455	6
RT20	H7	16	9	10d x 1-1/2	4	10d	9	10d x 1-1/2	---	---	1200	1200	---	---	1005	1005	11, F1, F11, D5, R6

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
 2) 8d common nails may be substituted for 8d x 1-1/2 nails, and 10d common nails may be substituted for 10d x 1-1/2 nails.
 3) 8d x 1-1/2 nails are 11 gauge (0.131" diameter) by 1-1/2" long.
 4) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.
 5) Minimum nail penetration shall be 1-5/16" for 8d nails and 1-1/2" for 10d nails.
 New products or updated product information are designated in red.