

FLOOR TRUSS JOBSITE PACKAGE

**IMPORTANT DOCUMENTS ENCLOSED!
PLEASE REVIEW**

WARNING

- DO NOT CUT TRUSSES OR USE DAMAGED TRUSSES
- DURING INSTALLATION, TRUSSES REQUIRE CAREFUL HANDLING AND TEMPORARY BRACING. ADEQUATE PERMANENT BRACING MUST BE INSTALLED BEFORE ANY LOADS APPLIED.
- CONSULT AN ARCHITECT OR ENGINEER IF TRUSSES ARE CUT OR DAMAGED AND FOR. ANY PARTY WHO CUTS OR DAMAGES A TRUSS SHALL BE RESPONSIBLE FOR THE ENGINEERING DESIGN AND FOR THE COST OF THE REQUIRED REPAIR.

AUTOMATED BUILDING COMPONENTS
2359 GRAND RD
NORTH BALTIMORE, OHIO 45872

CUSTOMER SERVICE POLICY

CHANGES, ALTERATIONS, REPAIRS:

Automated Building Components, Inc. (ABC) wants to caution against making agreements relative to the scope of work, changes, alterations, or repairs of products supplied by ABC with anyone other than ABC. It is your responsibility to include ABC in any communication to the above. ABC will not accept back charges regardless of fault unless notified by the customer, and ABC is given two business days to investigate the situation.

NOTIFICATION:

Prompt notification must be given to ABC when any difficulties arise in the field that will require "on-site" repair or re-building of any products supplied by ABC. This notification can be given either to the ABC salesman handling the account, or calling the ABC Customer Service Department at (419) 257-2152 or toll free at (800) 837-2152.

INVESTIGATION:

ABC will have a representative at the job site no later than the day after being apprised to fully investigate the difficulty. If it is an emergency situation that must be handled immediately, it will be treated in just that manner, and ABC won't delay your building program. However, do not proceed with re-working the product in any way for which you anticipate reimbursement without requesting authorization from ABC.

JOB SITE RE-WORKING:

ABC not only wants, but insists on having the opportunity to rectify our mistakes with our own people performing the work. By following this procedure, we get an immediate feed-back as to precisely what happened, and what must be done to prevent its future recurrence. We have qualified people to perform this service, and assure you that ABC will complete any on-site remodeling within a period of time mutually agreed upon as being acceptable.

If an emergency situation arises, requiring immediate action in order to keep the job running on schedule, ABC must be contacted for authorization for customer to correct. At this time, the builder's representative should be in a position to specify exactly what occurred and the number of hours that will be required to rectify. This information will then be recorded by ABC, noting the date, the jobsite address, the specific problem and the time allowed for the repair. By following this method, future disagreements will be eliminated.

CREDIT POLICY

Payment is expected as stated under "terms" of the invoice. Any late payments will be charged interest fees and assessed to the builder.

DO NOT CUT ANY TRUSSES

**THE CUTTING OF A TRUSS COULD
JEOPARDIZE THE ROOF & FLOOR
SYSTEM AND COULD VOID ANY
WARRANTY.**

**IF YOU ENCOUNTER A PROBLEM
CALL ABC FOR ASSISTANCE
FIRST.**

1-(800) 837-2152

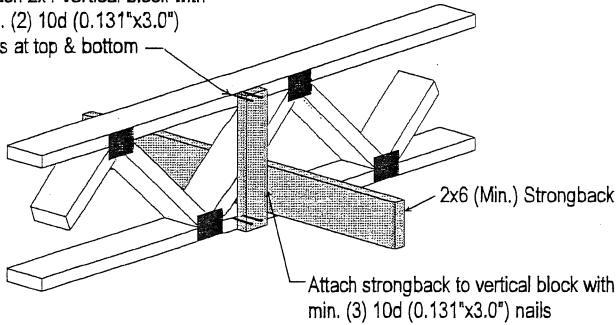
THANK YOU!

The purpose of strongback bridging, or strongbacking, is to develop load sharing between individual trusses, resulting in an overall increase in the stiffness of the floor system. This not only reduces the amount of "bounce" or floor vibration that can occur from footsteps, but it also helps to limit the differential deflection between adjacent trusses. Although strongbacking is not required for the structural integrity of the floor system, it does improve the level of serviceability and the perceived performance of the floor. Therefore, strongbacking is strongly recommended for all floor systems even when not specified as part of the construction documents. In lieu of project-specific details, refer to the notes and details below for the proper installation of strongback bridging.

Notes:

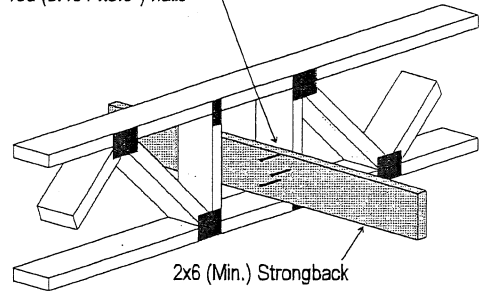
1. Refer to Details 1A through 1D for different methods of attaching the strongbacking.
2. Strongbacking shall be minimum 2x6 (nominal) stress-graded lumber oriented vertically and shall be continuous (see Detail 2 for a splice detail).
3. Spacing between rows of strongbacks shall not exceed 10'-0" o.c. (max.).
4. Strongbacking or bridging should not be mistaken as lateral restraint/bracing for the chord members. Permanent lateral restraint/bracing of the chords is required to prevent lateral buckling and is critical to the structural performance of the truss. Unless a rigid ceiling is directly applied to the bottom chords, bottom chord lateral restraint is required at 10' o.c. (max) along with diagonal bracing at 20' intervals or as otherwise specified. See BCSI (Building Component Safety Information) for more information about permanent restraint/bracing. Note: When positioned at the upper side of the bottom chord and installed at 10' o.c. (max), continuous rows of strongbacking may also satisfy the lateral restraint requirements for the bottom chord of the truss. Lateral restraint must be diagonally braced or otherwise restrained at each end to be effective.
5. Refer to ANSI/TP1 Section 7.6.2 for strongbacking configurations required to control live load deflection.
6. Cross Bridging is permitted as an alternate bracing method to strongbacking.

Attach 2x4 vertical block with min. (2) 10d (0.131"x3.0") nails at top & bottom



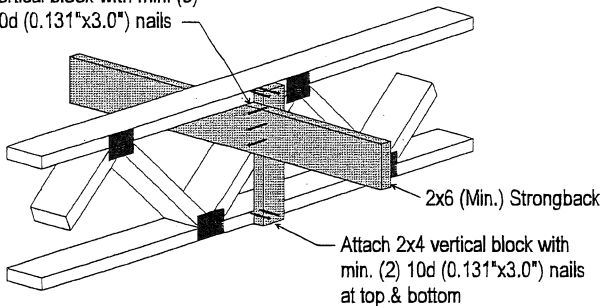
Detail 1A

Attach strongback to web with min. (3) 10d (0.131"x3.0") nails

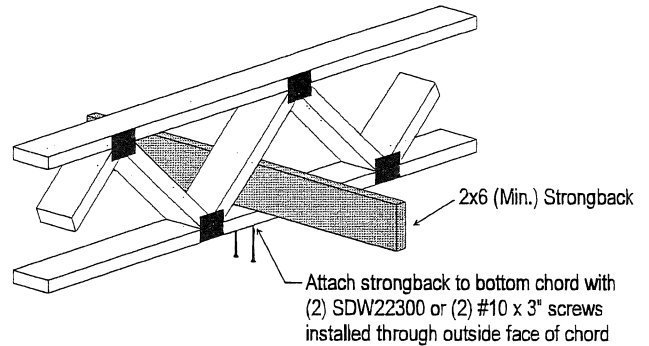


Detail 1B

Attach strongback to vertical block with min. (3) 10d (0.131"x3.0") nails



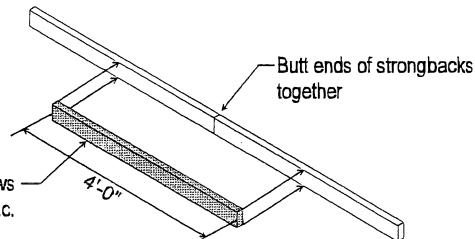
Detail 1C



Detail 1D

NOTE: In lieu of splicing, lap strongbacks for at least one truss spacing.

2x6x4'-0" scab attached with 2 rows of 10d (0.131"x3.0") nails at 6" o.c.



Detail 2 - Strongbacking Splice Detail

This detail provides maximum stack heights for construction materials that get placed on floor trusses during the construction process. Refer to Table 1 below for the maximum stack heights of various construction materials. Trusses must be properly restrained and braced before any construction materials are stacked on them (see Notes below for additional information).

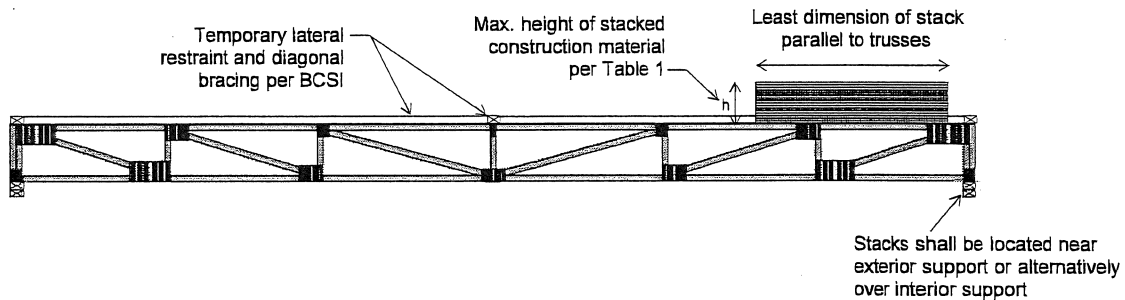


Table 1 - Maximum Height (h) of Stacked Construction Materials^{1,2}

Material	Max. Height (h)
Gypsum Board	12"
Plywood/OSB	16"
Asphalt Shingles	2 bundles
Concrete Block	8"
Clay Tile	4 tiles high

1. Stacks shall not remain on the trusses for more than one week.
2. Stacks exceeding the max. height (h) specified in the table require additional shoring (design by others) and approval.

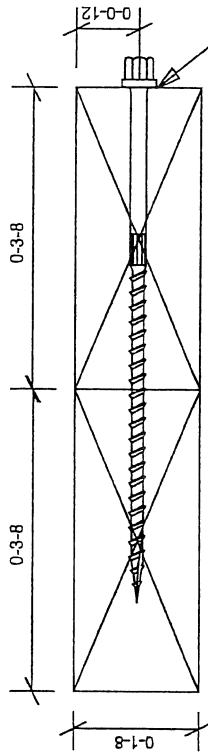
Notes:

1. Trusses must be designed for a minimum of 40 psf live load.
2. Trusses shall be properly braced prior to being loaded with construction materials. At a minimum, the truss assembly shall be restrained and braced according to BCSI-B7 before placing any construction loads on them. (If the floor truss is constructed with the wide face of the lumber oriented vertically, refer to BCSI-B2 instead.)
3. Stacks of construction material shall be placed over two or more trusses with the longest dimension perpendicular to the trusses.
4. Stacks shall not be placed at the midspan of the truss, on cantilevers, or near truss-to-girder connections.
5. Stacks shall not be dropped onto the trusses.
6. Refer to BCSI-B4 for additional information and guidelines pertaining to construction loading.

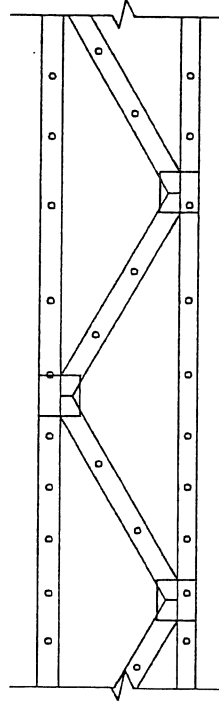
2 PLY FLOOR TRUSS (4X2 TRUSS) CONNECTION DETAIL

1. DETAIL APPLICABLE TO PLY TO PLY CONNECTION USING SIMPSON SDS 0.25"X6" OR TRUSSLOC-Z TSL006 OR USP WS 6 0.25"X6" OR SIMPSON SDW 0.22"X6.75" SCREWS.
2. REFER TO INDIVIDUAL TRUSS DESIGN DRAWING FOR SPACING & NUMBER OF ROWS INFORMATION FOR CONNECTORS.
3. MAINTAIN MINIMUM END DISTANCE OF 4" & A MIN. EDGE DISTANCE OF 3/4" IN ALL MEMBERS.
4. WHERE SCREW GOES THROUGH A METAL PLATE IT MUST NOT LOOSEN THE PLATE.
5. INSERTION OF SCREWS MUST NOT SPLIT THE LUMBER. SCREWS TO BE INSERTED STRAIGHT INTO THE LUMBER & NOT AT AN ANGLE.
6. CONCENTRATED LOADS TO BE APPLIED AT PANEL POINTS OR VERTICAL WEB LOCATIONS.
7. REFER TO CONNECTOR'S MANUFACTURER CATALOG FOR LOAD CAPACITY & OTHER INSTALLATION INSTRUCTIONS.
8. SCREWS NOT TO BE INSTALLED IN AREAS WITH MAJOR LUMBER DEFECTS. SCREW LOCATIONS MAY BE ADJUSTED TO AVOID METAL PLATES OR LUMBER DEFECTS BY 3".
9. REFER TO INDIVIDUAL TRUSS DESIGN DRAWING FOR BRACING, LOADING, REACTION, AXIAL FORCES & OTHER IMPORTANT INFORMATION.
10. APPROVED SHEATHING TO BE ATTACHED TO EACH TRUSS TOP CHORD WITH CONNECTORS AS SPECIFIED BY BUILDING DESIGNER.

CONNECTION DETAIL



HEADS MAY BE COUNTERSUNK INTO THE FACE OF CHORD



DETAIL REFERENCE

2PLY 4X2 TRUSS CONNECTION

DATE:

REV: 000

DWG BY:

SCALE:

2 PLY FLOOR TRUSS (4X2 TRUSS) CONNECTION DETAIL

JOB: \\replicator\ENG\Wood_Truss\Details\Unsealed\Misc\2Ply 4X2 Truss Connection.dwg Nov 11, 2011

WARNING:
DETAILS SHALL ONLY BE USED AS SPECIFIED ON DESIGN DRAWING. DETAILS ARE VALID FOR USE ONLY IF DETAIL IS REFERENCED ON SPECIFIC TRUSS DESIGN DRAWING PROVIDED BY KEYMARK ENGINEERING, INC. AND ENGINEERS SEAL IS ACCOMPANYING SAID DESIGN DRAWING. KEYMARK ENGINEERING, INC. IS NOT RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN.



KEYMARK ENGINEERING, INC.
BOULDER, COLORADO 80301
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THA/THAC/THAR/L

Adjustable Truss Hangers



This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

The THA series' extra long straps allow full code nailing and can be field-formed to give top flange hanger convenience. Designed for 4x2 floor trusses and 4x beams, the THAR/L422 has a standard skew of 45°. Straps must be bent for top flange hanger installation. PAN nailing helps eliminate splitting of 4x2 truss bottom chords.

Material: See table

Finish: Galvanized. Some products available in ZMAX® coating; see Corrosion Information, pp. 15-18.

Installation:

- Use all specified fasteners. See General Notes.

The following installation methods may be used:

• Top Flange Installation:

The straps must be field formed over the header — see table for minimum top flange requirements. Install top and face nails according to the table. Top nails shall not be within ¼" from the edge of the top flange members. For the THA29, nails used for joist attachment must be driven at an angle so that they penetrate through the corner of the joist and into the header. For all other top flange installations, straighten the double shear nailing tabs and install the nails straight into the joist.

• Face Mount Installation

Install all face nails according to the table. Not all nail holes will be filled on all models. On models where there are more nail holes than required, the lowest four face holes must be filled. Nails used for the joist attachment must be driven at an angle so that they penetrate through the corner of the joist into the header.

• Alternate Installation:

The THA 4x hangers may be installed in a top flange configuration using the tabulated fasteners for face mount installation and achieve the face mount installation loads. Install the tabulated face nails into the face and top of the carrying member. Nails used for the joist attachment must be driven at an angle so that they penetrate through the corner of the joist into the header.

• Suspended Beam:

Refer to engineering letter L-C-THAALT at strongtie.com.

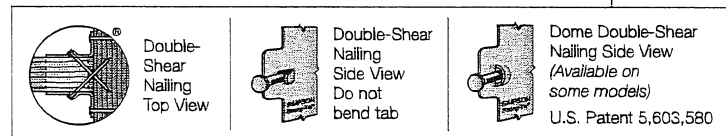
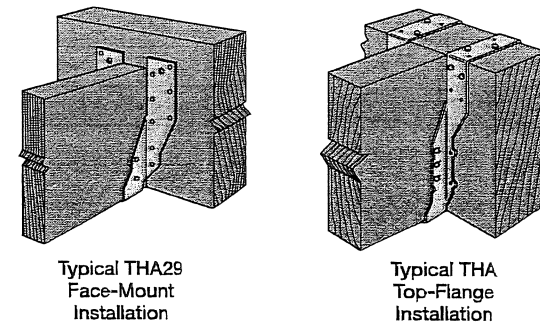
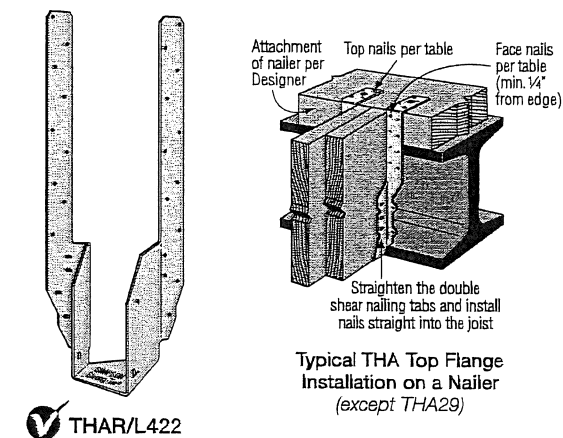
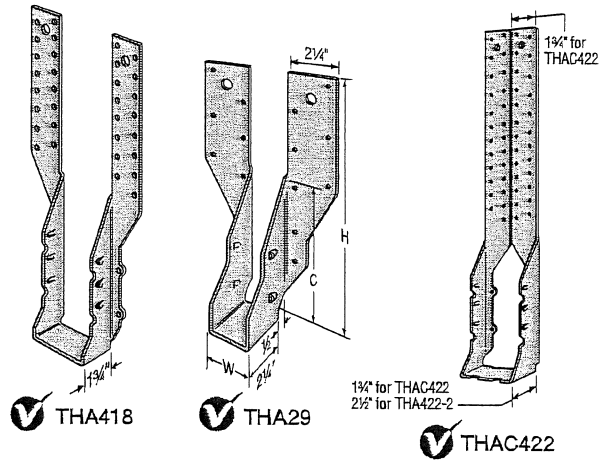
• Uplift:

Lowest face nails must be filled to achieve uplift loads.

Options:

- THA hangers available with the header flanges turned in for 3% (except THA413) and larger, with no load reduction — order THAC hanger

Codes: See p. 14 for Code Reference Key Chart



Solid Sawn Joist Hangers

THA/THAC/THAR/L

Adjustable Truss Hangers (cont.)

These products are available with additional corrosion protection. For more information, see p. 16.

Minimum Carried Member	Model No.	Ga.	Dimensions (in.)				Min. Top Flange	Min. Header Depth	Fasteners ¹				DF/SP Allowable Loads				SPF/HF Allowable Loads				Code Ref.	
			W	H	C	Carrying Member			Carried Member		Uplift ² (160)	Floor (100)	Snow (115)	Roof (125)	Uplift ² (160)	Floor (100)	Snow (115)	Roof (125)				
						Top			Face	Straight									Slant			
Top-Flange Installation																						
2x4	THA29	18	1 5/8	9 1/16	5 1/2	2 1/16	—	(4) 10d	(4) 10d	—	(4) 10d	—	560	2,260	2,310	2,350	480	1,740	1,785	1,815	18, FL, L15	
2x6	THA213	18	1 5/8	13 3/16	5 1/2	1 1/2	—	(4) 10d	(2) 10d	(4) 10d x 1 1/2"	—	—	1,615	1,615	1,615	—	1,280	1,280	1,280			
2x6	THA218	18	1 5/8	17 9/16	5 1/2	2	—	(4) 10d	(2) 10d	(4) 10d x 1 1/2"	—	—	1,615	1,615	1,615	—	1,280	1,280	1,280			
(2) 2x10	THA218-2	16	3 3/8	17 11/16	8	2	—	(4) 16d	(2) 16d	(6) 10d	—	—	2,245	2,245	2,245	—	1,935	1,935	1,935			
(2) 2x10	THA222-2	16	3 3/8	22 3/8	8	2	—	(4) 16d	(2) 16d	(6) 10d	—	—	2,245	2,245	2,245	—	1,935	1,935	1,935			
4x6	THA413	18	3 3/8	13 3/16	4 1/2	1 1/2	—	(4) 10d	(2) 10d	(4) 10d	—	—	1,615	1,615	1,615	—	1,280	1,280	1,280			
4x10	THA418	16	3 3/8	17 1/2	7 1/4	2	—	(4) 16d	(2) 16d	(6) 10d	—	—	2,245	2,245	2,245	—	1,935	1,935	1,935			
4x10	THA422	16	3 3/8	22	7 1/4	2	—	(4) 16d	(2) 16d	(6) 10d	—	—	2,245	2,245	2,245	—	1,935	1,935	1,935			
4x10	THA426	14	3 3/8	26	7 1/4	2	—	(4) 16d	(4) 16d	(6) 16d	—	—	2,435	2,435	2,435	—	2,095	2,095	2,095	FL		
4x10	THAR/L422	16	3 3/8	22 3/8	8	2 1/2	—	(4) 10d	(2) 10d	(1) 10d	(2) 10d x 1 1/2"	—	1,090*	1,090*	1,090*	—	915*	915*	915*	18, FL, L15		
4x10	THAR/L422	16	3 3/8	22 3/8	8	2 1/2	—	(4) 10d	(8) 10d	(1) 10d	(2) 10d x 1 1/2"	—	310	1,675	1,675	1,675	260	1,405	1,405	1,405	18, FL, L15	
(2) 4x10	THA422-2	14	7 1/4	22 11/16	9 1/4	2	—	(4) 16d	(4) 16d	(6) 16d	—	—	3,330	3,330	3,330	—	2,865	2,865	2,865	FL		
(2) 4x10	THA426-2	14	7 1/4	26 1/16	9 1/4	2	—	(4) 16d	(4) 16d	(6) 16d	—	—	3,330	3,330	3,330	—	2,865	2,865	2,865	FL		
Face-Mount Installation																						
2x4	THA29	18	1 5/8	9 1/16	5 1/2	—	9 1/16	—	(16) 10d	—	(4) 10d	—	560	2,125	2,310	2,350	480	1,740	1,785	1,815	18, FL, L15	
2x6	THA213	18	1 5/8	13 3/16	5 1/2	—	13 3/16	—	(14) 10d	—	(4) 10d	—	1,170	1,955	2,020	2,065	780	1,680	1,735	1,775		
2x6	THA218	18	1 5/8	17 9/16	5 1/2	—	17 9/16	—	(18) 10d	—	(4) 10d	—	1,170	1,955	2,020	2,065	780	1,680	1,735	1,775		
(2) 2x10	THA218-2	16	3 3/8	17 11/16	8	—	14 1/16	—	(22) 16d	—	(6) 16d	—	1,855	3,695	3,695	3,695	1,595	3,185	3,185	3,185		
(2) 2x10	THA222-2	16	3 3/8	22 3/8	8	—	14 1/16	—	(22) 16d	—	(6) 16d	—	1,855	3,695	3,695	3,695	1,595	3,185	3,185	3,185		
4x6	THA413	18	3 3/8	13 3/16	4 1/2	—	13 3/8	—	(14) 10d	—	(4) 10d	—	1,170	1,940	2,235	2,400	780	1,660	1,910	2,075		
4x10	THA418	16	3 3/8	17 1/2	7 1/4	—	14 1/16	—	(22) 16d	—	(6) 16d	—	1,855	3,695	3,695	3,695	1,595	3,185	3,185	3,185		
4x10	THA422	16	3 3/8	22	7 1/4	—	14 1/16	—	(22) 16d	—	(6) 16d	—	1,855	3,695	3,695	3,695	1,595	3,185	3,185	3,185		
4x10	THA426	14	3 3/8	26	7 1/4	—	16 1/16	—	(30) 16d	—	(6) 16d	—	1,855	4,480	4,480	4,480	1,595	3,855	3,855	3,855		FL
(2) 4x10	THA422-2	14	7 1/4	22 11/16	9 1/4	—	16 3/16	—	(30) 16d	—	(6) 16d	—	1,855	5,160	5,520	5,520	1,595	4,440	4,745	4,745		
(2) 4x10	THA426-2	14	7 1/4	26 1/16	9 1/4	—	18	—	(38) 16d	—	(6) 16d	—	1,855	5,520	5,520	5,520	1,595	4,440	4,745	4,745		

- 16d sinkers may be used to replace 16d commons at 0.85 of table load.
- Uplift has been increased for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
- Roof loads are 125% of floor loads unless limited by other criteria.
- THAR/L422 with (4) 10d top nails and (2) 10d face nails: when the hanger height is between 9" to 12", the allowable download is 1,440 lb. for DFL and 1,210 lb. for SPF. No further increase allowed.
- For top flange installation on a nailer (see detail on pp. 162–163), install joist nails straight by bending the double shear tabs.
- For single 2x and 3x nailers, the following THA hangers can be installed using 10d x 1 1/2" top nails and (2) 16d face nails with reduced allowable loads as noted: THA418/THA422: 1,415 lb. for DFL, 1,215 lb. for SPF; THA426: 2,245 lb. for DFL, 1,930 lb. for SPF.
- Min. Top Flange refers to the minimum length of strap that must be field-formed over the header.
- Nails: 16d = 0.162" dia. x 3 1/2" long, 16d x 2 1/2" = 0.162" dia. x 2 1/2" long, 10d = 0.148" dia. x 3" long, 10d x 1 1/2" = 0.148" dia. x 1 1/2" long. See pp. 26–27 for other nail sizes and information.

Solid Sawn Joist Hangers