

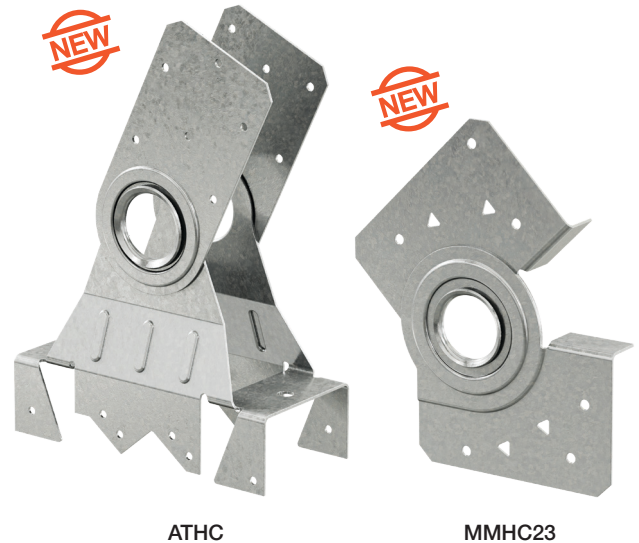
Unfold the Secret to Smarter Hinged Roof Components

SIMPSON
Strong-Tie

Introducing the Simpson Strong-Tie® ATHC™ and MMHC®23 Hinge Connectors

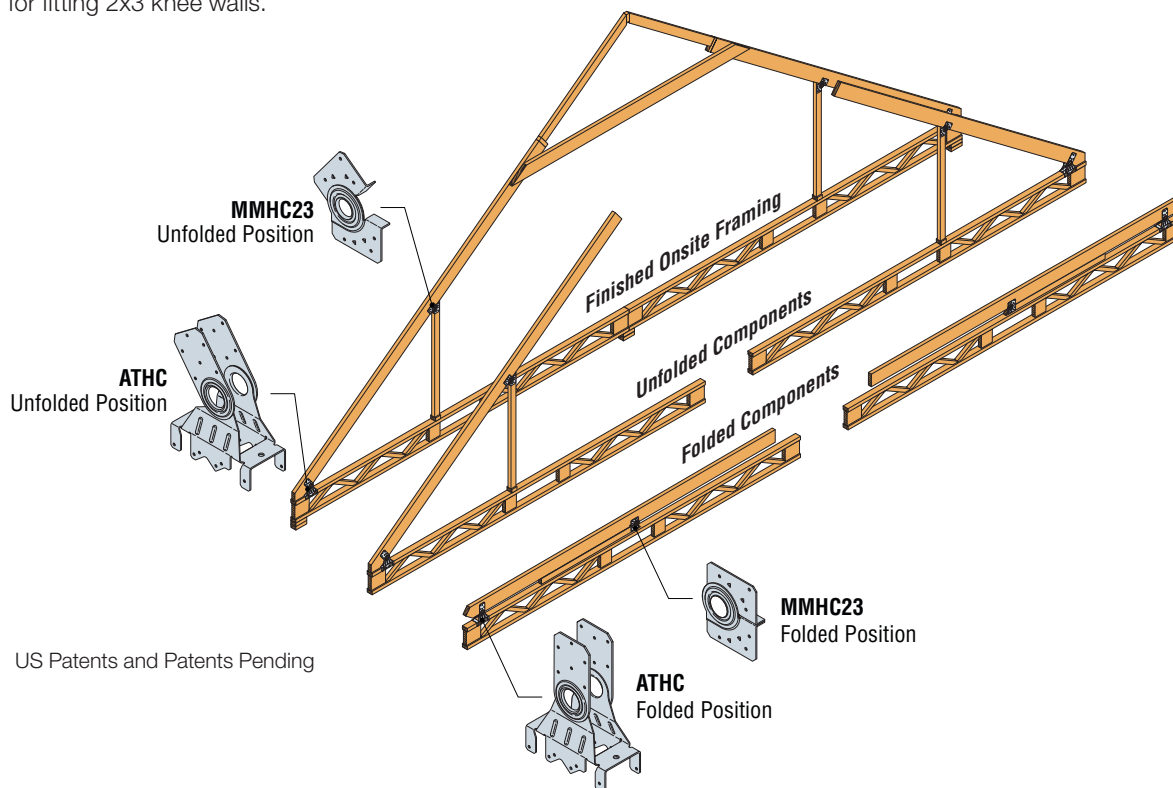
Discover the new ATHC and MMHC23 hinge connectors from Simpson Strong-Tie, designed to streamline the production, transportation and assembly of folding roof components. These innovative solutions eliminate the need for truss plates or expensive truss equipment, making your process easier, faster and more efficient.

The ATHC is a groundbreaking double-hinge connector that works seamlessly with 2½"-wide OPENJOIST™ and I-joist floor joists and 2x dimensional lumber roof rafters. Its one-piece design simplifies installation by eliminating the hassle of aligning separate hinges on each side of the members, resulting in a more consistent roof line. The MMHC23 is a cost-effective, modified version of our popular MMHC hinge, perfect for fitting 2x3 knee walls.



ATHC

MMHC23



US Patents and Patents Pending

Features

- **Simplified installation:** The ATHC's one-piece design streamlines hinge placement and provides installation efficiencies over other two-piece alternatives
- **Compatibility:** Works with OPENJOIST and I-joist floor joists to minimize the need for intermediate truss webs
- **Versatile pitch accommodation:** Supports a range of roof pitches, from 5:12 to 12:12
- **Efficient shipping:** The folded ATHC provides space to accommodate a folded 2x3 knee brace, allowing components to ship flat
- **Innovative design:** Eliminates the requirement for conventional metal-plate-connected roof trusses

NEW!

Unfold the Secret to Smarter Hinged Roof Components

SIMPSON

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ATHC™ Attic Truss Heel Hinge Connector

The first-of-its-kind ATHC double-hinge connector for truss heels gives builders a new cost-effective option to construct factory-built truss components using EWP floor joists and 2x solid sawn roof rafters. The connector works with 2½" wide OPENJOIST™ and I-joist floor joists that are commonly used for attic trusses. To enable folded components to ship flat for transportation, the ATHC heel height provides a 2½" gap between the top and bottom truss chords that accommodates a 2x3 folded knee brace.

Features

- One-piece design simplifies hinge placement and provides installation efficiencies over other two-piece hinge alternatives
- Works with 2½" wide OPENJOIST and I-joist floor joists to reduce the need for intermediate truss webs
- Accommodates a range of roof pitches between 5:12 and 12:12.
- A folded ATHC provides a space to accommodate a folded 2x3 knee brace so that components ship flat for transportation
- Eliminates the need for conventional metal-plate-connected roof trusses

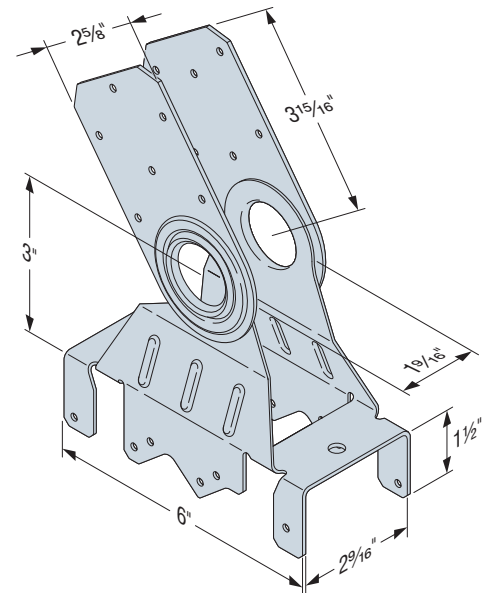
Material: 16 gauge

Finish: G90

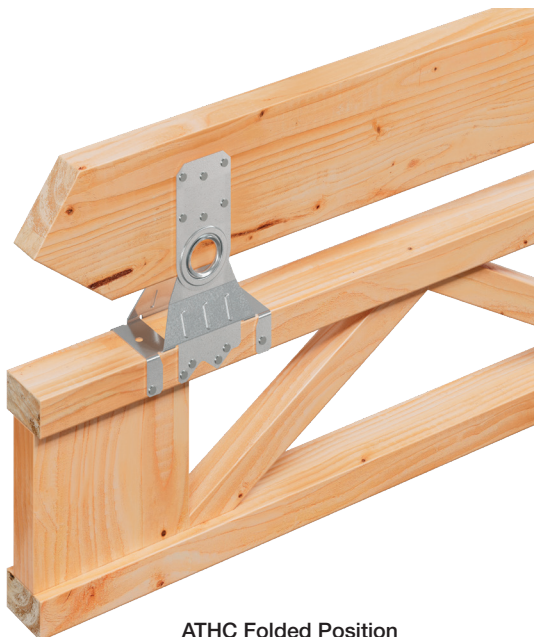
Installation:

- Minimum 2x6 roof rafter, 2½" wide OPENJOIST or I-joist floor joists, and 2x3 knee brace
- Utilizing a jig, arrange cut-to-length members and position ATHC in the open or folded position as desired
- Install with specified fasteners
- Fold components for transportation, then unfold at the jobsite

Codes: IAPMO UES ER-280, City of LA Supplement, Florida Building Code



ATHC
US Patent 11,131,088



ATHC Folded Position



ATHC Unfolded Position

Unfold the Secret to Smarter Hinged Roof Components

Allowable Loads for Roof Rafter to Floor Joist

| Model No. | Roof Pitch | Connector Quantity | Member | | Fasteners per Member | Allowable Load (lb.) | | | | | | | |
|-----------|------------|--------------------|--------|-------------|----------------------|----------------------|----------------|----------------|--------|----------------|----------------|----------------|--------|
| | | | | | | DF/SP | | | | SPF/HF | | | |
| | | | Rafter | Floor Joist | 0.148" x 1 ½" | F ₁ | F ₂ | F ₃ | Uplift | F ₁ | F ₂ | F ₃ | Uplift |
| | | | | | | (160) | (115/125/160) | | (160) | (160) | (115/125/160) | | (160) |
| ATHC | 5:12 | 1 | 2x | 3x | 12 | 100 | 730 | 755 | 780 | 100 | 635 | 650 | 675 |
| | 12:12 | 1 | 2x | 3x | 12 | 100 | 1,065 | 965 | 780 | 100 | 920 | 835 | 675 |

1. All installations assume a single-ply 2x rafter member.

2. Optional SDWC™ Installation 1 (see detail), F₂ 5:12 allowable loads can be increased to 820 lb. and 735 lb. for DF/SP and SPF/HF, respectively.

F₂ 12:12 allowable loads can be increased to 1,190 lb. and 1,060 lb. for DF/SP and SPF/HF, respectively.

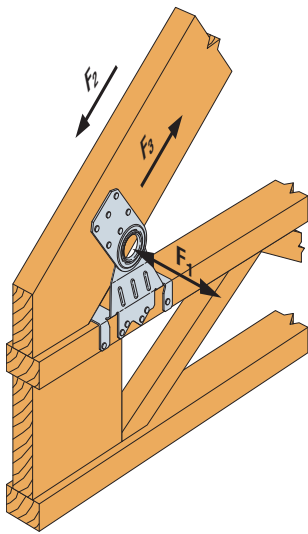
3. Optional SDWC Installation 2 (see detail), F₂ 5:12 allowable loads can be increased to 975 lb. and 840 lb. for DF/SP and SPF/HF, respectively.

F₂ 12:12 allowable loads can be increased to 1,385 lb. and 1,185 lb. for DF/SP and SPF/HF, respectively.

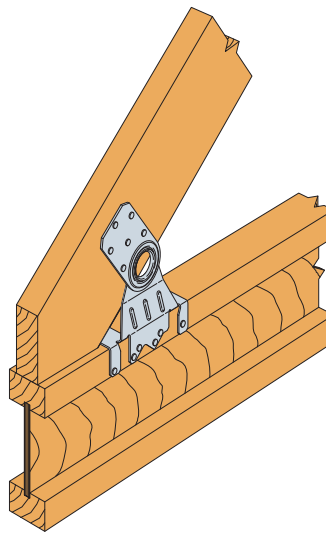
4. Linear interpolation of the loads is allowed for roof pitches between 5:12 and 12:12.

5. Table loads are applicable to installation on 3x (2 1/2" wide) solid sawn floor joists with a depth of 1 1/2" or greater.

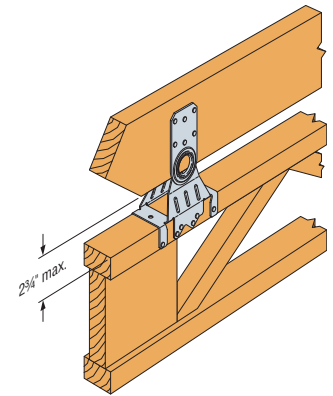
6. **Fasteners:** Nail dimensions are listed diameter by length. SDWC15600 = 0.152" shank diameter x 6" long Strong-Drive® SDWC Truss Screw.



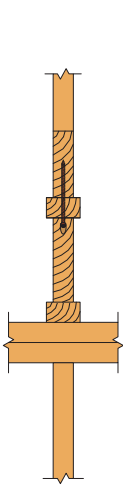
ATHC Installation on
OPENJOIST Bottom Chord —
Unfolded Position



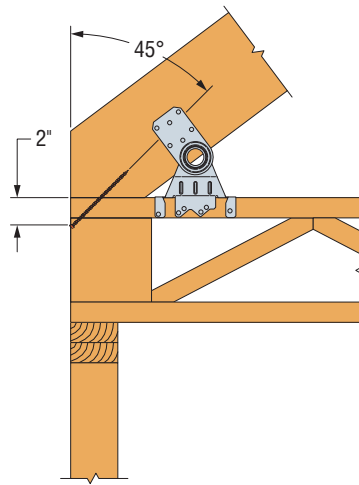
ATHC Installation on
I-joist Bottom Chord —
Unfolded Position



ATHC Installation on
OPENJOIST Bottom Chord —
Folded Position
(I-joist Bottom Chord Similar)

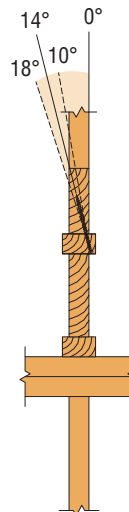


End View

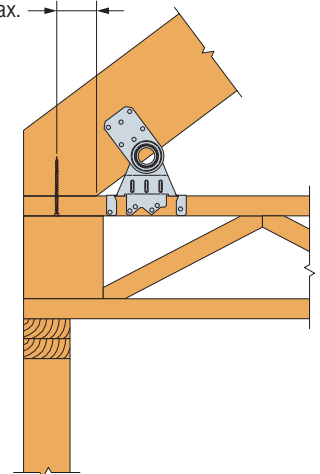


Side View

Optional SDWC Installation 1
on OPENJOIST Bottom Chord



1" min., 3" max.



Optional SDWC Installation 2
on OPENJOIST Bottom Chord
(I-joist Bottom Chord Similar)

NEW!**SIMPSON****Strong-Tie®**

Unfold the Secret to Smarter Hinged Roof Components

MMHC®23 Hinge Connector

The MMHC23 is a hinge for a 2x3 minimum attic truss knee wall. It is a modified version of our popular MMHC hinge connector and has been specifically designed to complement our ATHC™ heel hinge.

Features:

- Specifically designed for 2x3 attic truss knee walls
- The offset nail pattern allows for installation on both sides
- Connector tabs provide intuitive placement and nailing

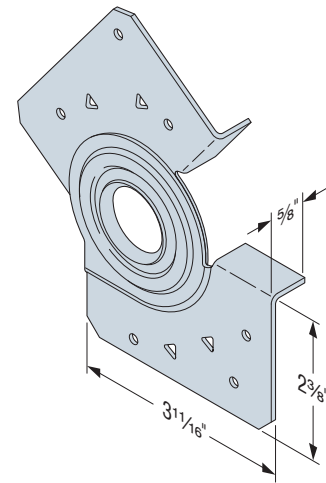
Material: 18 gauge

Finish: G90

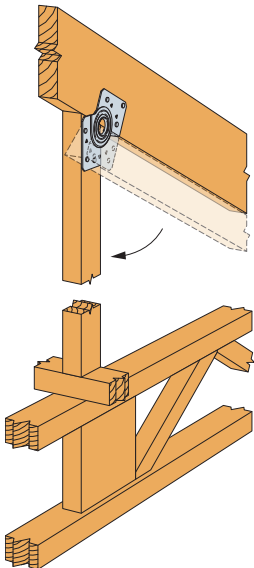
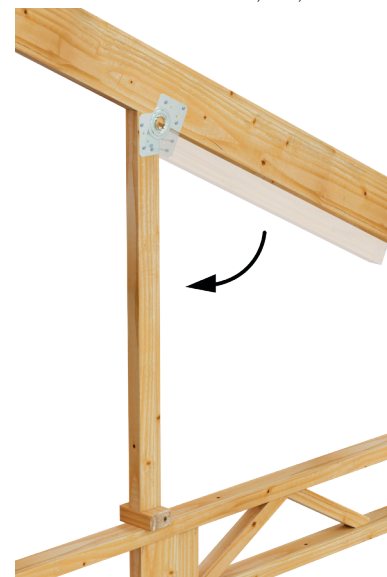
Installation:

- Minimum 2x3 knee wall stud
- Utilizing a jig, arrange cut-to-length members and position MMHC23 in the open or folded position as desired
- Install with specified fasteners
- Fold components for transportation, then unfold at the jobsite

Codes: IAPMO UES ER-280, City of LA Supplement, Florida Building Code



MMHC23
US Patent 11,131,088



**MMHC23 Installed
at 2x3 Knee Wall**

Allowable Loads for Knee Wall Application

| Model No. | Roof Pitch | Connector Quantity | Knee Wall Member | Fasteners per Member | Allowable Load (lb.) | | | |
|--------------|------------|--------------------|------------------|----------------------|---------------------------|-----------------|---------------------------|-----------------|
| | | | | | DF/SP | | SPF/HF | |
| | | | | | Download (115/125/160) | Uplift (160) | Download (115/125/160) | Uplift (160) |
| MMHC23 (min) | 3:12–12:12 | 1 | 2x3 min | (3) 0.148" x 1 1/2" | 715 | 185 | 625 | 160 |
| | | 2 | 2x3 min | (6) 0.148" x 1 1/2" | 1,260 | 410 | 1,105 | 370 |
| MMHC23 (max) | 3:12–12:12 | 1 | 2x3 min | (5) 0.148" x 1 1/2" | 1,235 | 335 | 1,090 | 295 |
| | | 2 | 2x3 min | (10) 0.148" x 1 1/2" | 1,395 | 600 | 1,225 | 530 |

1. All installations assume single-ply 2x members with minimum 2x3 minimum for the MMHC23.
2. Applications with double-ply 2x members are allowed and will achieve twice the published load of the single one-sided installation.
3. When Simpson Strong-Tie® SD #10 x 1 1/2" screws are substituted for 0.148" x 1 1/2" nails, MMHC23 (max) uplift capacities can be increased to 970 lb. and 835 lb. for DF/SP and SPF/HF capacities, respectively.
4. **Fasteners:** Nail dimensions are listed diameter by length.