

# Joist & Beam Connections

## HI - Heavy I-Joist Hanger

The Cullen HI hanger has all the benefits of the LI with enhanced factored resistance values for 2 ply I-Joist connections. No web stiffeners or backer blocks are necessary. It provides one size of hanger to suit all header widths.

The HI has full height side flanges and a bearing length of 2<sup>15</sup>/<sub>16</sub>". The product code is stamped on the hanger for simple identification.

### ADVANTAGES

- No web stiffeners or **backer blocks** required
- Only one size of nail required
- Anti-rotation bar minimizes top flange rotation
- Unique bearing enhancers spread load over greater surface area

### MATERIAL

- 14 ga. (0.078") galvanized mild steel - G90

### FASTENER TYPE

- 10d x 1<sup>1</sup>/<sub>2</sub>" nail



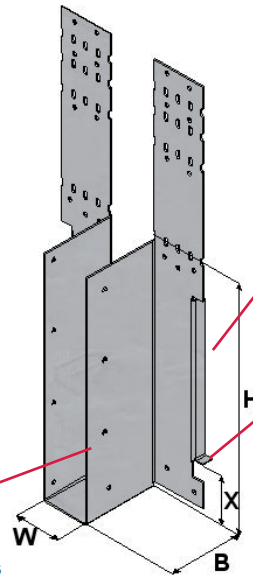
CCMC Evaluation Report No. 13281-R



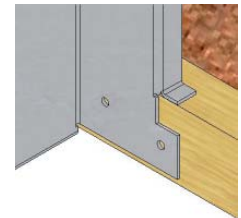
LVL/PSL/LSL or glulam to double I-Joist



Optional triangular nail holes for increased uplift resistance (web stiffeners required)



Anti-rotation bar

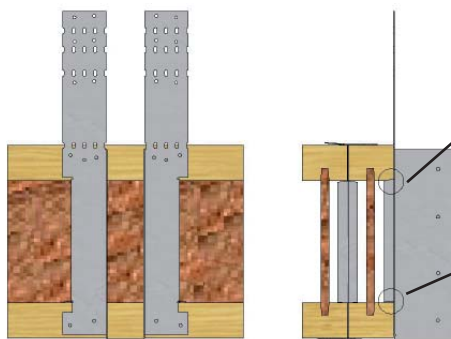


Unique bearing enhancers

## Backer free I-Joist Hanger

### Installation

#### Stage 1



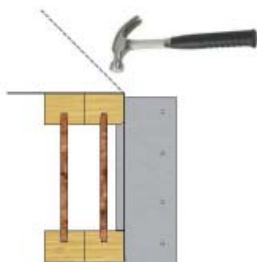
Joist specific anti-rotation bar to ensure tightness of fit.

Bearing enhancers

Position HI against face of I-Joist ensuring bearing enhancers are located tightly onto bottom flange.

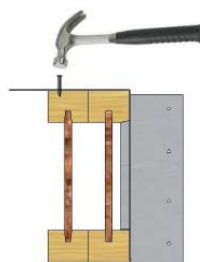
Face fix to I-Joist using 10 nails.

#### Stage 2



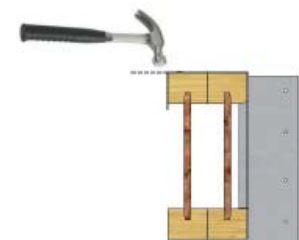
Wrap hanger flanges at crease line to give a flush fit to top of I-Joist.

#### Stage 3



Nail hanger flanges into top flange of I-Joist flange using 4 nails.

#### Stage 4



Wrap remaining hanger flanges around back side of I-Joist at crease line to give a flush fit to I-Joist (No nails required). Place incoming I-Joist into hanger and nail bottom 2 nails.

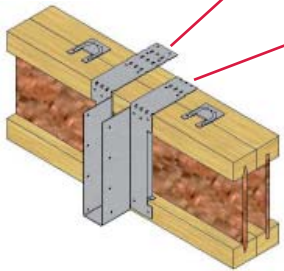
# Joist & Beam Connections

## HI - Heavy I-Joist Hanger

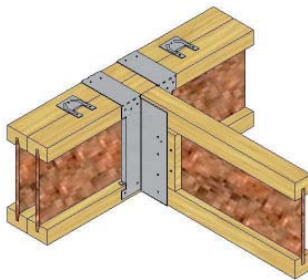
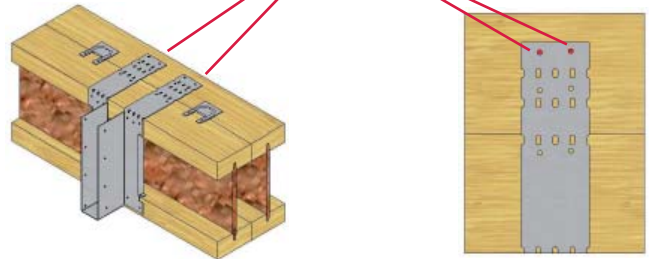
### Nailing Options

Up to a maximum of double 3" wide joists, wrap hanger flange down around the rear of header.

Nail in furthest visible top nails in 2nd ply of header joist.



For double 3½" wide joists nail in furthest nail holes in 2nd ply of header joist.



I-Joist with web stiffeners

### ENHANCED UPLIFT RESISTANCE

Enhanced uplift resistance can be achieved by using additional triangular nail holes in the side flanges. Where the incoming member is an I-Joist, fix web stiffeners in accordance with I-Joist manufacturer's technical guidelines.

| ENHANCED UPLIFT RESISTANCE      |                                    |      |
|---------------------------------|------------------------------------|------|
| Number of side nails<br>10dx1½" | Uplift (Short-term)<br>(Kd = 1.15) |      |
|                                 | kN                                 | lbs  |
| 4                               | 3.10                               | 696  |
| 6                               | 4.65                               | 1045 |
| 8                               | 6.20                               | 1393 |

# Joist & Beam Connections

## HI - Heavy I-Joist Hanger

### HI - Single Joists - EWP

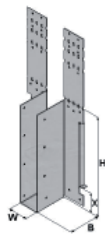
| I-Joist Size | Product Code | Ga | Hanger Dimensions |     |    | Fasteners - 10dx1½" |       | Factored Resistance |     |               |      |               |      |
|--------------|--------------|----|-------------------|-----|----|---------------------|-------|---------------------|-----|---------------|------|---------------|------|
|              |              |    | W                 | H   | B  | Header              | Joist | Uplift (Kd = 1.15)  |     | SPF - I-Joist |      | LVL - I-Joist |      |
|              |              |    |                   |     |    |                     |       | kN                  | lbs | kN            | lbs  | kN            | lbs  |
| 1½ x 9½      | HI1.5/9.5    | 14 | 1⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 1½ x 11⅞     | HI1.5/11.88  | 14 | 1⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 1¾ x 9½      | HI1.75/9.5   | 14 | 1⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 1¾ x 11⅞     | HI1.75/11.88 | 14 | 1⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 1¾ x 14      | HI1.75/14    | 14 | 1⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 1¾ x 16      | HI1.75/16    | 14 | 1⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 9½      | HI2.06/9.5   | 14 | 2⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 11⅞     | HI2.06/11.88 | 14 | 2⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 14      | HI2.06/14    | 14 | 2⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 16      | HI2.06/16    | 14 | 2⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 9½      | HI2.31/9.5   | 14 | 2⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 11⅞     | HI2.31/11.88 | 14 | 2⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 14      | HI2.31/14    | 14 | 2⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2⅞ x 16      | HI2.31/16    | 14 | 2⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2½ x 9½      | HI2.5/9.5    | 14 | 2⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2½ x 11⅞     | HI2.5/11.88  | 14 | 2⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2½ x 14      | HI2.5/14     | 14 | 2⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 2½ x 16      | HI2.5/16     | 14 | 2⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3 x 9½       | HI3/9.5      | 14 | 3⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3 x 11⅞      | HI3/11.88    | 14 | 3⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3½ x 9½      | HI3.5/9.5    | 14 | 3⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3½ x 11⅞     | HI3.5/11.88  | 14 | 3⅞                | 11⅞ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3½ x 14      | HI3.5/14     | 14 | 3⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |
| 3½ x 16      | HI3.5/16     | 14 | 3⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47         | 2803 | 12.47         | 2803 |

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## HI - Heavy I-Joist Hanger

### HI - Double Joists - EWP

| I-Joist Size | Product Code | Ga | Hanger Dimensions |     |    | Fasteners - 10dx1½" |       | Factored Resistance |     |              |      |              |      |
|--------------|--------------|----|-------------------|-----|----|---------------------|-------|---------------------|-----|--------------|------|--------------|------|
|              |              |    | W                 | H   | B  | Header              | Joist | Uplift (Kd = 1.15)  |     | SPF- I-Joist |      | LVL- I-Joist |      |
|              |              |    |                   |     |    |                     |       | kN                  | lbs | kN           | lbs  | kN           | lbs  |
| 3 x 9½       | HI3/9.5      | 14 | 3⅜                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 3 x 11½      | HI3/11.88    | 14 | 3⅜                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 3½ x 9½      | HI3.5/9.5    | 14 | 3⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 3½ x 11½     | HI3.5/11.88  | 14 | 3⅞                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 3½ x 14      | HI3.5/14     | 14 | 3⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 3½ x 16      | HI3.5/16     | 14 | 3⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4½ x 9½      | HI4.12/9.5   | 14 | 4⅜                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4½ x 11½     | HI4.12/11.88 | 14 | 4⅜                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4½ x 14      | HI4.12/14    | 14 | 4⅜                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4½ x 16      | HI4.12/16    | 14 | 4⅜                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4¾ x 9½      | HI4.62/9.5   | 14 | 4⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4¾ x 11½     | HI4.62/11.88 | 14 | 4⅞                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4¾ x 14      | HI4.62/14    | 14 | 4⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 4¾ x 16      | HI4.62/16    | 14 | 4⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5 x 9½       | HI5/9.5      | 14 | 5⅜                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5 x 11½      | HI5/11.88    | 14 | 5⅜                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5 x 14       | HI5/14       | 14 | 5⅜                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5 x 16       | HI5/16       | 14 | 5⅜                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5¼ x 9½      | HI5.25/9.5   | 14 | 5⅞                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5¼ x 11½     | HI5.25/11.88 | 14 | 5⅞                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5¼ x 14      | HI5.25/14    | 14 | 5⅞                | 14  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 5¼ x 16      | HI5.25/16    | 14 | 5⅞                | 16  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 7 x 9½       | HI7/9.5      | 14 | 7⅜                | 9½  | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |
| 7 x 11½      | HI7/11.88    | 14 | 7⅜                | 11½ | 2⅝ | 14                  | 2     | 1.55                | 348 | 12.47        | 2803 | 12.47        | 2803 |



#### To order the HI

W dimension – Joist width e.g. 2½"  
 H dimension – Joist height e.g. 9½"

Example - Hanger required – HI2.5/9.5