

## B3199R - Ceiling Flange

## B3199RCT - Ceiling Flange Dura-Copper Coated

**Size Range:** 3/8"-16 & 1/2"-13 rod

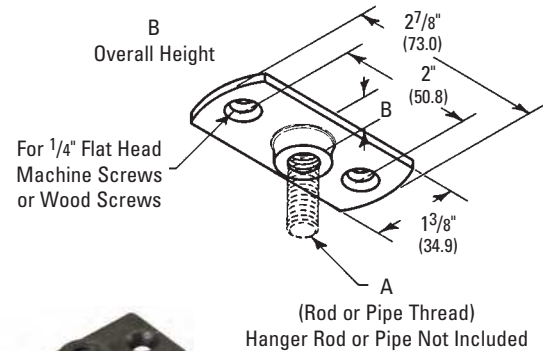
**Material:** Malleable Iron (Stainless Steel Type 304 available)

**Standard Finish:** Plain or Electro-Galvanized

B3199RCT is DURA-COPPER™ coated

**Function:** Designed for attaching a hanger or support rod to beams, ceilings, or walls.

**Order By:** Part number and finish.



| Part No.   | Thread Size  | A       | B            | Design Load | Approx. Wt./100 |
|------------|--------------|---------|--------------|-------------|-----------------|
|            |              |         | in. (mm)     | Lbs. (kN)   | Lbs. (kg)       |
| B3199R-3/8 | B3199RCT-3/8 | 3/8"-16 | 7/16" (11.1) | 180 (.80)   | 13 (5.9)        |
| B3199R-1/2 | B3199RCT-1/2 | 1/2"-13 | 1/2" (12.7)  | 180 (.80)   | 17 (7.7)        |

## TOLCO™ Fig. 78 - All Steel Ceiling Plate

**Size Range:** 3/8"-16 rod

**Material:** Pre-Galvanized Steel

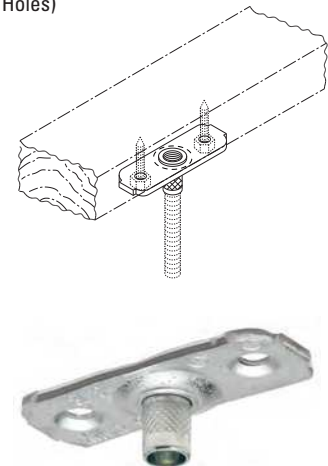
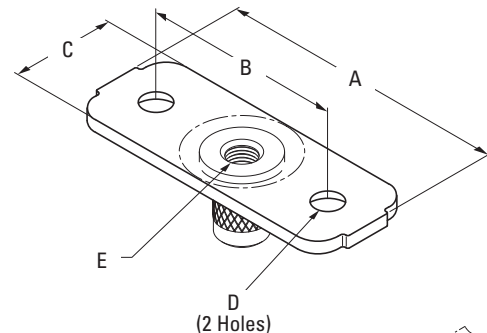
**Function:** Attachment to wood beams, ceilings, metal decks or walls. Can also be welded to steel beams.

**Approvals:** Underwriters Laboratories Listed in the USA (UL) and Canada (cUL). Additionally, UL has listed the Fig. 78 with fasteners as shown in the table below.

**Finish:** Plain. Contact customer service for alternative finishes and materials.

**Order By:** Part number, rod size and finish

**US Patent #5,702,077**



| UL Listed Fastener Table |     |                                                        |                          |
|--------------------------|-----|--------------------------------------------------------|--------------------------|
| Pipe Size                | Qty | Fastener Type                                          | Material                 |
| 1/2" - 2"                | 2   | #14 x 1 1/4" A-point hex-washer-head sheet metal screw | Wood                     |
| 2 1/2" - 4"              | 2   | 1/4" x 1 1/2" wood screws*                             | Wood                     |
| 1/2" - 2"                | 2   | 1/4" x 1" tek screws                                   | Metal (18 gauge)         |
| 1/2" - 2"                | 2   | #14 x 1 1/4" A-point hex-washer-head sheet metal screw | Wood                     |
| 1/2" - 2"                | 2   | #14 x 2" A-point-hex-washer-head sheet metal screw     | Wood thru 5/8" gyp board |

\* No pre-drilling

| Part No. | Pipe Size                | A         | B             | C             | Hole Dia. D | Thread Size | Design Load | Approx. Wt./100 |
|----------|--------------------------|-----------|---------------|---------------|-------------|-------------|-------------|-----------------|
|          | in. (mm)                 | in. (mm)  | in. (mm)      | in. (mm)      | in. (mm)    | E           | Lbs. (kN)   | Lbs. (kg)       |
| 78-3/8   | 1/2" - 2" (15 - 60)      | 3" (76.2) | 2 1/8" (54.0) | 1 1/8" (28.6) | 5/16" (7.9) | 3/8"-16     | 150 (0.67)  | 15 (6.8)        |
| --       | Consult Factory For Data |           |               |               |             |             |             |                 |

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

# Upper Attachments

## B3060L - Light Duty Angle Clip

**Size Range:** 3/8"-16 rod

**Material:** Steel (Stainless steel available)

**Function:** Designed for attaching 3/8"-16 hanger rod to the side of beams or walls.

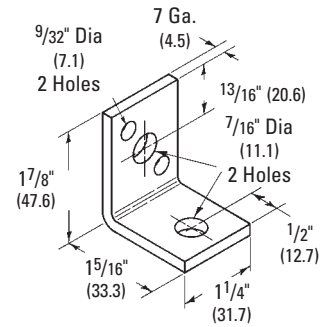
**Approvals:** Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

**Finish:** Plain or Electro-Galvanized

**Order By:** number and finish.

**Design Load:** 300 Lbs. (1.33kN)

**Weight:** Approx. Wt./100 - 15 Lbs. (6.8 kg)



## B3070 - Reversible Angle Clip

**Size Range:** 3/8"-16 and 1/2"-13 rod, 1/2" (15mm) thru 3 1/2" (90mm) pipe

**Material:** Steel

**Function:** Designed for attaching hanger rod to the side of beams or walls.

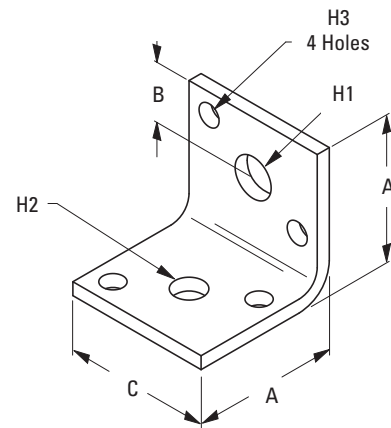
**Approvals:** Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

**Finish:** Plain or Electro-Galvanized

**Order By:** number and finish.

**Design Load:** 500 Lbs. (2.22 kN) when installed in either direction.

**Weight:** Approx. Wt./100 - 49 Lbs. (22.2 kg)



| Part No.      | Rod Size          | A<br>in. (mm) | B<br>in. (mm) | C<br>in. (mm) | Hole 1<br>in. (mm) | Hole 2<br>in. (mm) | Hole 3<br>in. (mm) | Max. Rec. Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|---------------|-------------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|-----------------------------|------------------------------|
| B3070-3/8x1/2 | 3/8"-16 x 1/2"-13 | 2" (50.8)     | 13/16" (20.6) | 2" (50.8)     | 9/16" (14.3)       | 7/16" (11.1)       | 5/16" (7.9)        | 700 (3.11)                  | 35 (15.9)                    |
| B3070-1/2x1/2 | 1/2"-13 x 1/2"-13 | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 9/16" (14.3)       | 9/16" (14.3)       | 5/16" (7.9)        | 700 (3.11)                  | 34 (15.4)                    |

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

## B3060 - Side Beam Angle Clip

**Size Range:** 3/8"-16 and 7/8"-9 rod

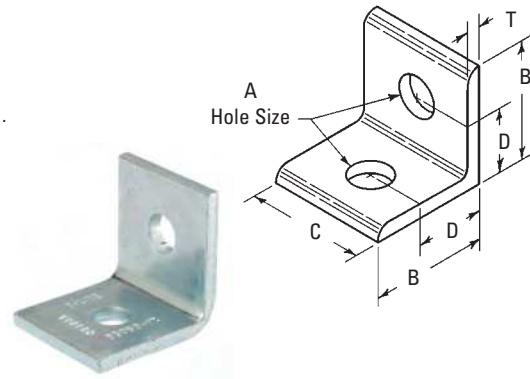
**Material:** Steel (Stainless steel available)

**Function:** Designed for attaching a hanger rod to the side of beams or walls.

**Approvals:** Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

**Finish:** Plain or Electro-Galvanized. Contact customer service for alternative finishes and materials.

**Order By:** Part number and finish.



| Part No.  | Hole Size A<br>in. (mm) | B<br>in. (mm) | C<br>in. (mm) | D<br>in. (mm) | T<br>in. (mm) | Design Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|-----------|-------------------------|---------------|---------------|---------------|---------------|--------------------------|------------------------------|
| B3060-3/8 | 7/16" (11.1)            | 23/16" (55.6) | 2" (50.8)     | 1 1/4" (31.7) | 1/4" (6.3)    | 305 (1.35)               | 53 (24.0)                    |
| B3060-1/2 | 9/16" (14.3)            | 23/16" (55.6) | 2" (50.8)     | 1 1/4" (31.7) | 1/4" (6.3)    | 565 (2.51)               | 51 (23.1)                    |
| B3060-5/8 | 1 1/16" (17.5)          | 23/16" (55.6) | 2" (50.8)     | 1 1/4" (31.7) | 1/4" (6.3)    | 909 (4.02)               | 48 (21.8)                    |
| B3060-3/4 | 1 3/16" (20.6)          | 3" (76.2)     | 3" (76.2)     | 1 3/4" (44.4) | 3/8" (9.5)    | 1355 (6.03)              | 169 (74.8)                   |
| B3060-7/8 | 1 5/16" (23.8)          | 4" (101.6)    | 4" (101.6)    | 2 1/2" (63.5) | 3/8" (9.5)    | 1870 (8.32)              | 312 (141.5)                  |

## TOLCO™ Fig. 51NFPA - Side Beam Bracket for NFPA Rod & Fastener Sizing

**Size Range:** 3/8"-16 thru 1/2"-13 rod, 1/2" (15mm) thru 8" pipe (200mm)

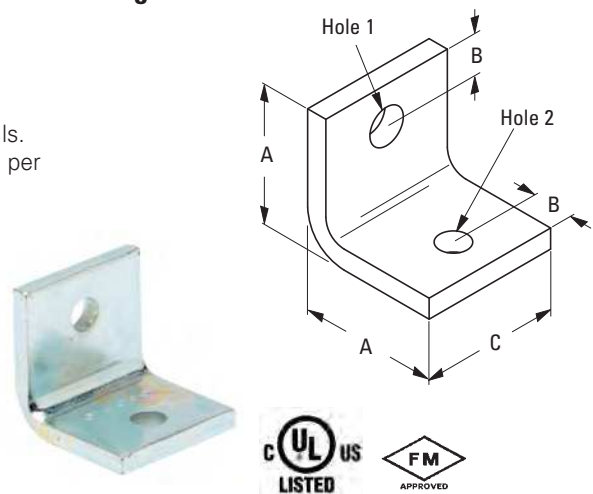
**Material:** Steel

**Function:** Recommended for attaching hanger rod to side of beams or walls. Designed to accommodate current rod schedule and fastener requirements per National Fire Protection Association (NFPA) Pamphlet 13.

**Approvals:** Underwriters Laboratories Listed in the USA (UL) and Canada (cUL), and Factory Mutual Engineering approved.

**Finish:** Plain. Contact customer service for alternative finishes and materials.

**Order By:** Part number, rod size and finish



| Part No.       | Pipe Size<br>in. (mm)  | Rod Size | A<br>in. (mm) | B<br>in. (mm) | C<br>in. (mm) | Hole 1<br>in. (mm) | Hole 2<br>in. (mm) |
|----------------|------------------------|----------|---------------|---------------|---------------|--------------------|--------------------|
| 51NFPA-3/8x3/8 | 1/2" - 2" (15 - 60)    | 3/8"-16  | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 7/16" (11.1)       | 7/16" (11.1)       |
| 51NFPA-3/8x1/2 | 2 1/2" - 4" (65 - 100) | 3/8"-16  | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 9/16" (14.3)       | 7/16" (11.1)       |
| 51NFPA-1/2x1/2 | 5" - 6" (125 - 150)    | 1/2"-13  | 2 1/2" (63.5) | 3/4" (19.0)   | 2 1/2" (63.5) | 9/16" (14.3)       | 9/16" (14.3)       |
| 51NFPA-1/2x5/8 | 8" (200)               | 1/2"-13  | 2 1/2" (63.5) | 3/4" (19.0)   | 2 1/2" (63.5) | 1 1/16" (17.5)     | 9/16" (14.3)       |

| Part No.       | Design Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|----------------|--------------------------|------------------------------|
| 51NFPA-3/8x3/8 | 700 (3.11)               | 35 (15.9)                    |
| 51NFPA-3/8x1/2 | 700 (3.11)               | 34 (15.4)                    |
| 51NFPA-1/2x1/2 | 1250 (5.56)              | 71 (32.2)                    |
| 51NFPA-1/2x5/8 | 1250 (5.56)              | 70 (31.7)                    |

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

# Upper Attachments

## TOLCO™ Fig. 50 - Side Beam Bracket for NFPA Rod & Fastener Sizing

**Size Range:** 3/8"-16 thru 7/8"-9 rod

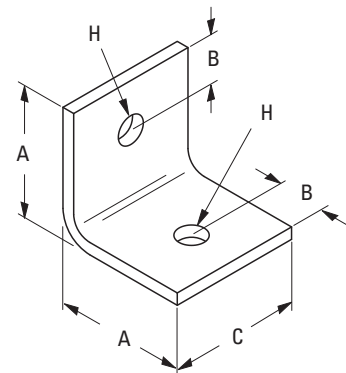
**Material:** Steel

**Function:** Recommended for attaching hanger rod to side of beams or walls.

**Approvals:** Factory Mutual Engineering approved (FM).

**Finish:** Plain. Contact customer service for alternative finishes and materials.

**Order By:** Part number, rod size and finish



| Part No. | Rod Size | A<br>in. (mm) | B<br>in. (mm) | C<br>in. (mm) | Hole Size H<br>in. (mm) | Max. Rec. Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|----------|----------|---------------|---------------|---------------|-------------------------|-----------------------------|------------------------------|
| 50-3/8   | 3/8"-16  | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 7/16" (11.1)            | 700 (3.22)                  | 35 (15.9)                    |
| 50-1/2   | 1/2"-13  | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 9/16" (14.3)            | 700 (3.22)                  | 35 (15.9)                    |
| 50-5/8   | 5/8"-11  | 2" (50.8)     | 3/4" (19.0)   | 2" (50.8)     | 11/16" (17.5)           | 700 (3.22)                  | 32 (14.5)                    |
| 50-3/4   | 3/4"-10  | 2 1/2" (63.5) | 3/4" (19.0)   | 2 1/2" (63.5) | 13/16" (20.6)           | 1250 (5.56)                 | 110 (49.9)                   |
| 50-7/8   | 7/8"-9   | 2 1/2" (63.5) | 3/4" (19.0)   | 2 1/2" (63.5) | 15/16" (23.8)           | 1250 (5.56)                 | 100 (45.3)                   |

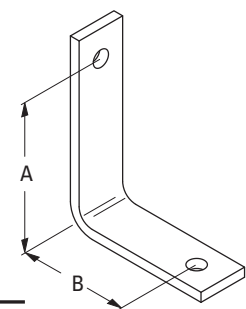
## B3061 - Angle Bracket

**Material:** Steel

**Function:** — Recommended for supporting pipe at various distances from wall or column.

**Finish:** Plain. Contact customer service for alternative finishes and materials.

**Order By:** Part number and finish



| Part No. | Size | A<br>in. (mm) | B<br>in. (mm) | Hole Size<br>in. (mm) | Max. Rec. Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|----------|------|---------------|---------------|-----------------------|-----------------------------|------------------------------|
| B3061-1  | 1    | 3" (76.2)     | 2" (50.8)     | 7/16" (11.1)          | 180 (0.80)                  | 46 (20.8)                    |
| B3061-2  | 2    | 4" (101.6)    | 3" (76.1)     | 7/16" (11.1)          | 180 (0.80)                  | 65 (29.5)                    |
| B3061-3  | 3    | 3" (76.2)     | 2" (50.8)     | 9/16" (14.3)          | 390 (1.73)                  | 85 (38.5)                    |
| B3061-4  | 4    | 4" (101.6)    | 3" (76.1)     | 9/16" (14.3)          | 390 (1.73)                  | 115 (52.1)                   |

## TOLCO™ Fig. 56 - Tapped Side Beam Connector (Stainless Steel)

**Size Range:** 1/2" (15mm) thru 4" (100mm) pipe (3/8"-16 rod)

**Material:** Stainless Steel

**Function:** Recommended for attaching hanger rod to steel or wood beams. Tapped hole allows easy adjustment of hanger rod.

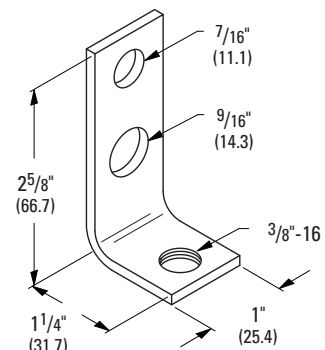
**Approvals:** Underwriters Laboratories Listed in the USA (UL) and Canada (cUL), and Factory Mutual Engineering approved for 1/2" (15mm) thru 4" (100mm) pipe.

**Weight:** Approx. Wt./100 - 20.0 Lbs. (9.1kg)

**Order By:** Part number

**Note:** Available only in Stainless Steel materials.

**Per NFPA 13:** 1/2" (15mm) thru 2" (50mm) pipe use 3/8"-16 fastener;  
2 1/2" (65mm) thru 4" (100mm) pipe, use 1/2"-13 fastener.



All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

## TOLCO™ Fig. 58 - Threaded Side Beam Bracket

**Size Range:** 3/8"-16 rod, pipe sizes 1/2" (15mm) thru 4" (100mm)

**Material:** Pre-Galvanized Steel

**Function:** Practical and economical bracket used to support piping from wood, concrete or steel beams.

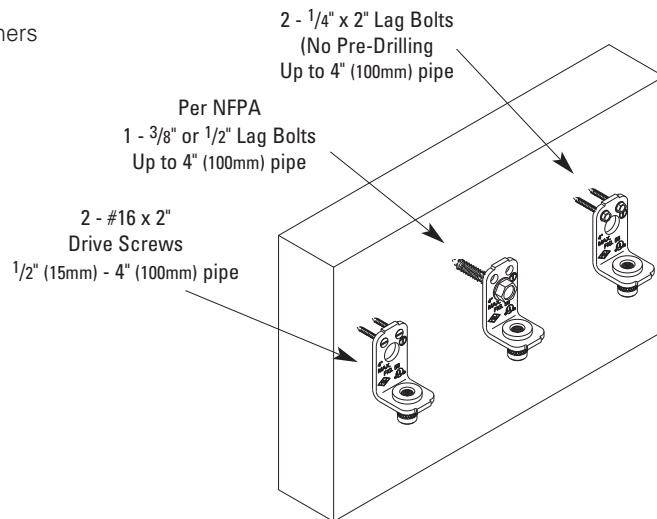
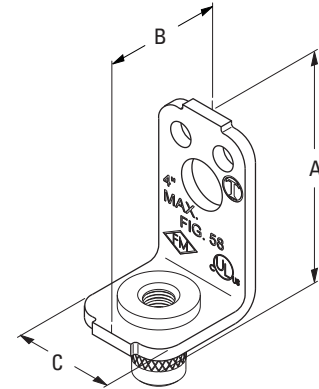
**Features:** Unique design allows rod to be easily threaded into bracket. Offset design permits unlimited rod adjustment. Center mounting hole will accept 3/8" and 1/2" fastener bolts. Per NFPA 13: 1/2" (15mm) thru 2" (50mm) pipe requires 3/8" fastener, 2 1/2" (65mm) thru 4" (100mm) pipe requires 1/2" fastener.\*

**Approvals:** Underwriters Laboratories Listed in the USA (UL) and Canada (cUL), and Factory Mutual Engineering approved thru 4" (100mm) pipe.

**Finish:** Pre-Galvanized

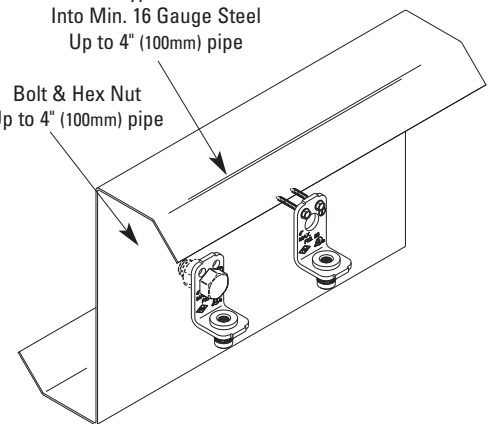
**Order By:** Part number and finish

**\*Note:** Additionally UL has listed the Fig. 58 with fasteners as shown in table below.



2 - #14 x 1" or 1/4" x 1"  
Tek Type Screws  
Into Min. 16 Gauge Steel  
Up to 4" (100mm) pipe

Bolt & Hex Nut  
Up to 4" (100mm) pipe



| UL Listed Fastener Table |     |                                       |                  |
|--------------------------|-----|---------------------------------------|------------------|
| Pipe Size                | Qty | Fastener Type                         | Material         |
| 2"                       | 2   | #16 x 2" Drive screws                 | Wood             |
| 2"                       | 1   | 3/8" Lag bolt                         | Wood             |
| 2 1/2" - 4"              | 1   | 1/2" Lag bolt                         | Wood             |
| 3 1/2"                   | 2   | 1/4" x 1 1/2" Lag bolts               | Wood             |
| 4"                       | 2   | 1/4" x 2" Lag bolts **                | Wood             |
| 4"                       | 2   | #14 x 1" or 1/4" x 1" Tek type screws | Metal (15 gauge) |
| 4"                       | 2   | #14 x 1" or 1/4" x 1" Tek type screws | Metal (16 gauge) |

\*\* No pre-drilling

| Part No. | Pipe Size<br>in. (mm) | Rod<br>Size | A<br>in. (mm) | B<br>in. (mm) | C<br>in. (mm) | Max. Rec. Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|----------|-----------------------|-------------|---------------|---------------|---------------|-----------------------------|------------------------------|
| 58       | 1/2" - 4" (15 - 100)  | 3/8"-16     | 2 3/4" (69.8) | 1 1/2" (38.1) | 1 1/8" (28.6) | 300*** (1.33)               | 14 (6.3)                     |

\*\*\* With Safety Factor of 5.

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

# Upper Attachments

## TOLCO™ Fig. 75 - Swivel Attachment

**Size Range:** — 3/8"-16 Rod Attachment

**Material:** Steel

**Function:** Three recommended applications for this product:

- May be used as a Branch Line Restraint for structural attachment to anchor bolt, beam clamp, etc.
- May be used as an upper attachment with short hanger rod to omit seismic bracing.
- May be used in a pitched or sloped roof application, to meet requirements of NFPA 13 (2010) 9.1.2.6.

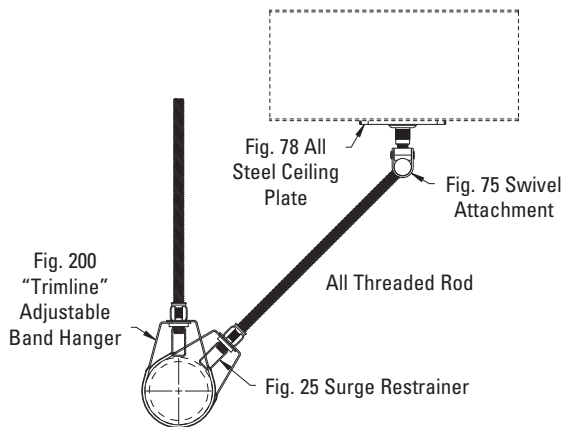
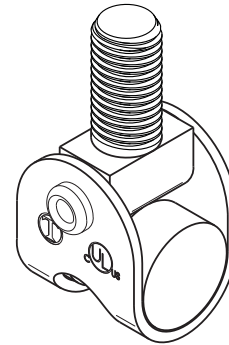
**Approvals:** Underwriters Laboratories Listed in the USA (**UL**) and Canada (**cUL**) to support up to 4" (100mm) pipe.

**Finish:** Electro-Galvanized

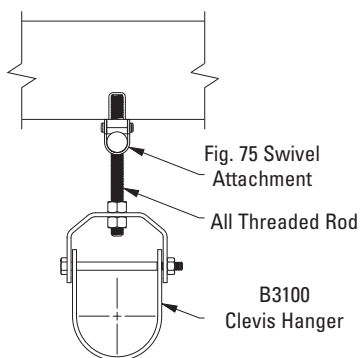
**Weight:** Approx. Wt./100 - 13.3 Lbs. (6.0kg)

**Order By:** Part number

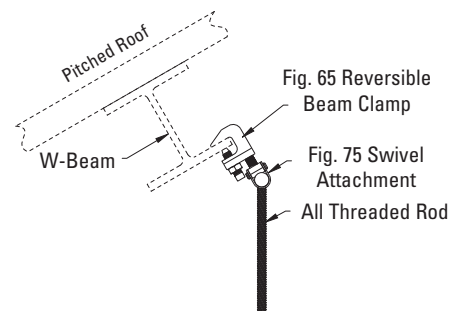
**Patent:** #7,887,248



May be used as a structural attachment component of a branch line restraint



May be used as an upper attachment with short hanger rod to omit seismic bracing



May be used with a pitched roof application, to meet requirements of NFPA 13 (2010) Sec. 9.1.2.5.

## B3058 - Side Beam Connector

**Size Range:** 3/8"-16 & 1/2"-13 rods

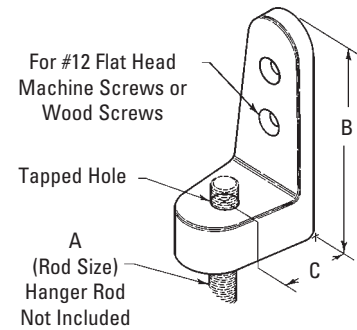
**Material:** Malleable Iron

**Function:** Designed for attaching hanger rod to the side of beams or walls.

**Approvals:** Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

**Finish:** Plain or Electro-Galvanized

**Order By:** Part number and finish.



| Part No.  | Rod Size<br>A | B      |        | C     |        | Design Load<br>Lbs. (kN) | Approx. Wt./100<br>Lbs. (kg) |
|-----------|---------------|--------|--------|-------|--------|--------------------------|------------------------------|
|           |               | in.    | (mm)   | in.   | (mm)   |                          |                              |
| B3058-3/8 | 3/8"-16       | 2 3/8" | (60.3) | 9/16" | (14.3) | 250 (1.11)               | 13 (5.9)                     |
| B3058-1/2 | 1/2"-13       | 2 3/4" | (69.8) | 3/4"  | (19.0) | 480 (2.13)               | 25 (11.3)                    |

## B3062 - Side Beam Bracket

**Size Range:** 3/8"-16 thru 5/8"-11 rods

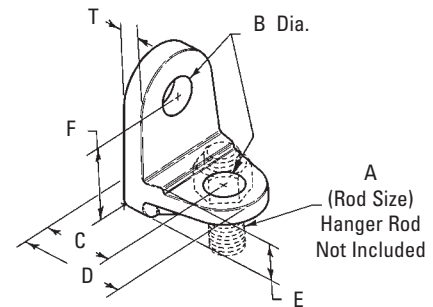
**Material:** Malleable Iron

**Function:** Designed for attaching hanger rod to the side of beams or walls.

**Approvals:** Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

**Finish:** Plain or Electro-Galvanized

**Order By:** Part number and finish.



| Part No.  | Rod Size<br>A | For Nominal<br>Pipe Sizes<br>in. (mm) | Design Load                 |                                 | Approx. Wt./100 |      |
|-----------|---------------|---------------------------------------|-----------------------------|---------------------------------|-----------------|------|
|           |               |                                       | With Lag Screw<br>Lbs. (kN) | With Bolt To Steel<br>Lbs. (kN) | Lbs. (kg)       | (kg) |
| B3062-3/8 | 3/8"-16       | 3/4"-2" (20-50)                       | 390 (1.73)                  | 730 (3.25)                      | 21 (9.5)        |      |
| B3062-1/2 | 1/2"-13       | 2 1/2"-3 1/2" (65-95)                 | 640 (2.84)                  | 1350 (6.00)                     | 44 (19.9)       |      |
| B3062-5/8 | 5/8"-11       | 4"-5" (100-125)                       | 760 (3.38)                  | 2160 (9.71)                     | 81 (36.7)       |      |

| Part No.  | B            | C              | D               | E           | F              | T             |
|-----------|--------------|----------------|-----------------|-------------|----------------|---------------|
|           | in. (mm)     | in. (mm)       | in. (mm)        | in. (mm)    | in. (mm)       | in. (mm)      |
| B3062-3/8 | 7/16" (11.1) | 7/8" (22.2)    | 1 3/8" (34.9)   | 5/8" (15.9) | 1 7/16" (36.5) | 1/4" (6.3)    |
| B3062-1/2 | 9/16" (14.3) | 1 3/16" (30.2) | 1 13/16" (46.0) | 3/4" (19.0) | 1 7/8" (47.6)  | 1 1/32" (8.7) |
| B3062-5/8 | 3/4" (19.0)  | 1 7/16" (36.5) | 2 3/16" (55.6)  | 7/8" (22.2) | 2 1/4" (54.0)  | 7/16" (11.1)  |

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.