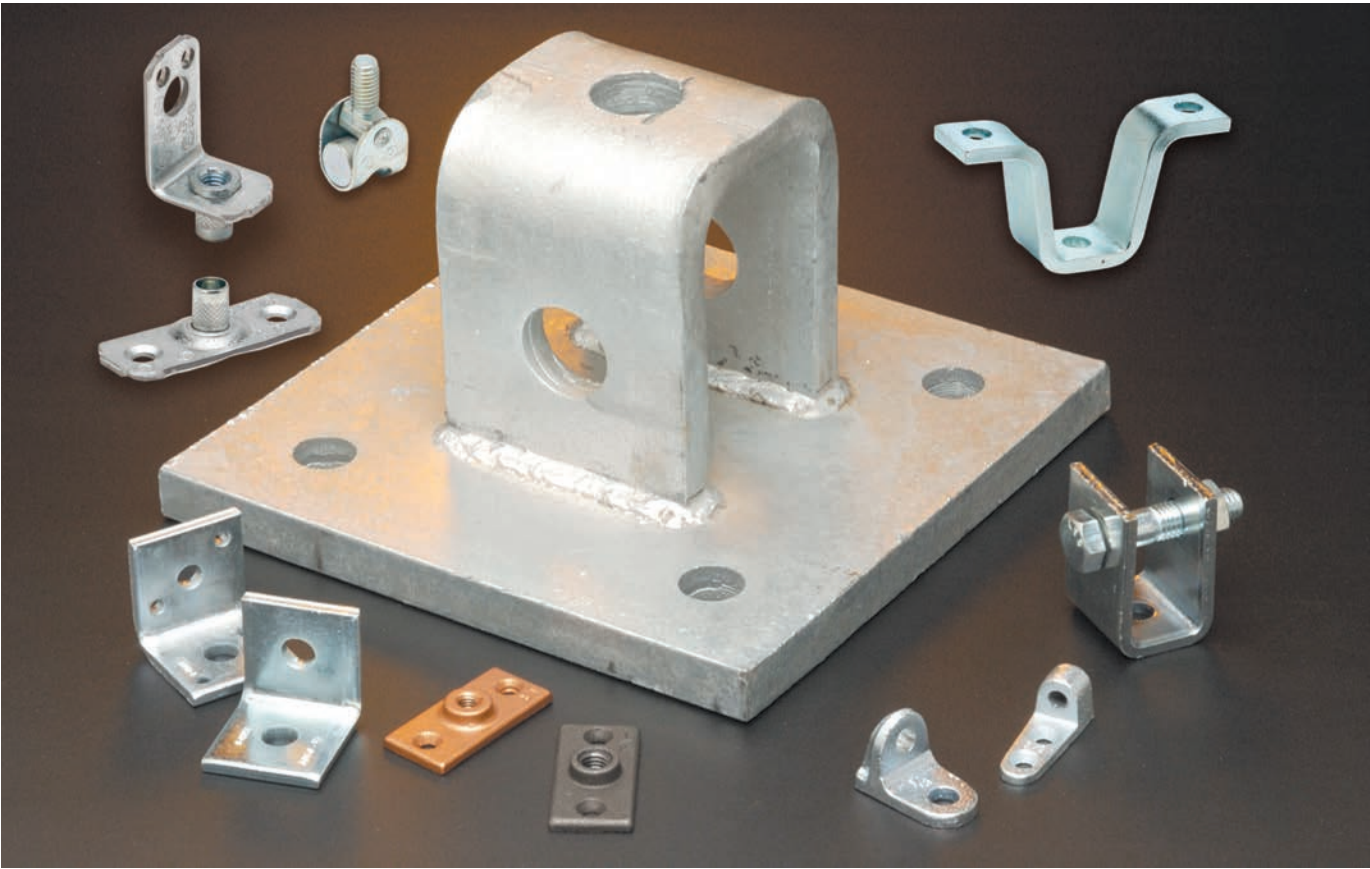


Upper Attachments



Upper attachments offered in this section are designed to suspend hanger rods from beams, concrete, and other structural surfaces by bolting or welding.

Materials

Carbon Steel and Malleable Iron are used in the manufacturing of upper attachments and provide the high strength properties required. Stainless Steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Galvanized Zinc (ASTM B633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Plastic Coating, DURA GREEN™ and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, copper plated, or in stainless steel.

Approvals (as noted)

Items in this section are Underwriters Laboratories Listed, Factory Mutual Approved, and comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58.

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

B3199R - Ceiling Flange

B3199RCT - Ceiling Flange Dura-Copper Coated

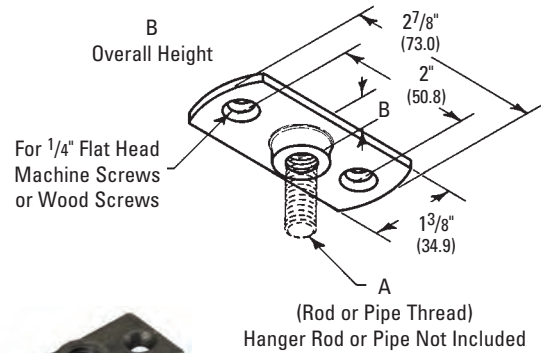
Size Range: 3/8"-16 & 1/2"-13 rod

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.	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

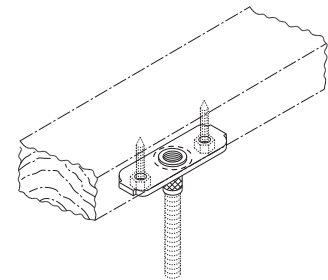
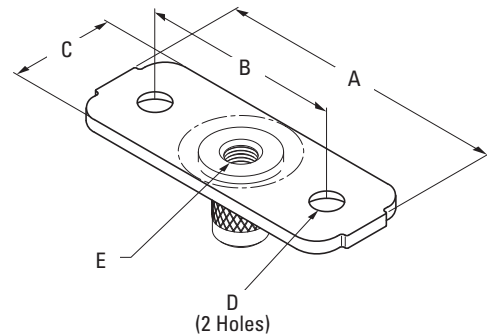
Function: Attachment to wood beams, ceilings, metal decks or walls. Can also be welded to steel beams.

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)

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.

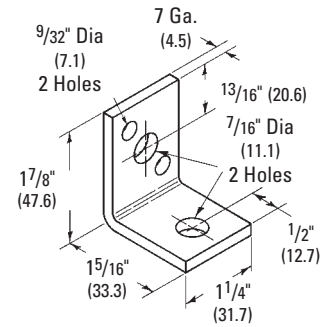
Approvals: Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

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.

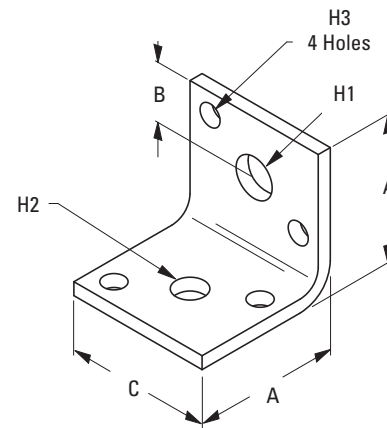
Approvals: Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 35 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 34.

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)



Upper Attachments

Part No.	Rod Size	A in. (mm)	B in. (mm)	C in. (mm)	Hole 1 in. (mm)	Hole 2 in. (mm)	Hole 3 in. (mm)	Max. Rec. Load Lbs. (kN)	Approx. Wt./100 Lbs. (kg)
B3070-3/8x1/2	3/8"-16 x 1/2"-13	2" (50.8)	1 3/16" (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

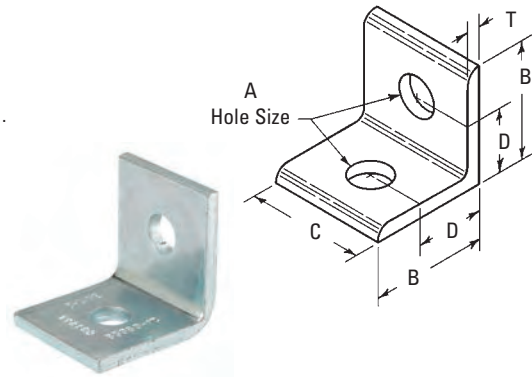
Material: Steel (Stainless steel available)

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 in. (mm)	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	T in. (mm)	Design Load Lbs. (kN)	Approx. Wt./100 Lbs. (kg)
B3060-3/8	7/16" (11.1)	2 3/16" (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)	2 3/16" (55.6)	2" (50.8)	1 1/4" (31.7)	1/4" (6.3)	565 (2.51)	51 (23.1)	
B3060-1/2	1 1/16" (17.5)	2 3/16" (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)

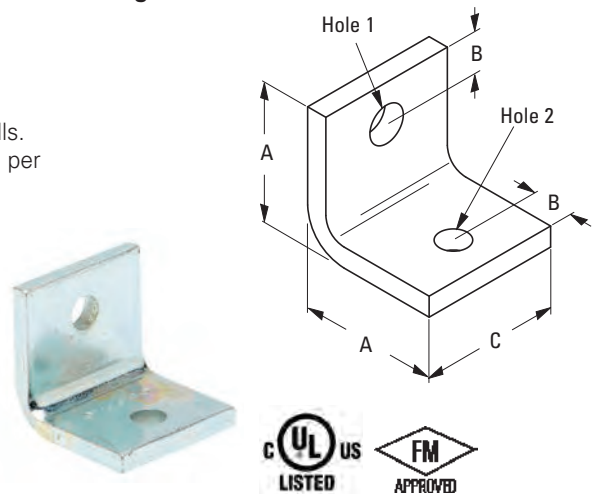
Material: Steel

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 in. (mm)	Rod Size	A in. (mm)	B in. (mm)	C in. (mm)	Hole 1 in. (mm)	Hole 2 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 Lbs. (kN)	Approx. Wt./100 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

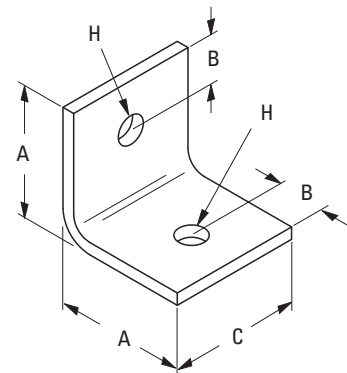
Material: Steel

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		B		C		Hole Size H	Max. Rec. Load Lbs. (kN)	Approx. Wt./100			
		in.	(mm)	in.	(mm)	in.	(mm)			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)

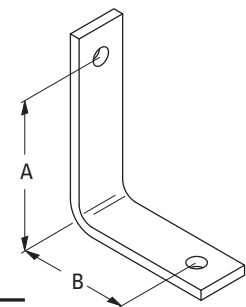
B3061 - Angle Bracket

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		B		Hole Size	Max. Rec. Load Lbs. (kN)	Approx. Wt./100			
		in.	(mm)	in.	(mm)			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.

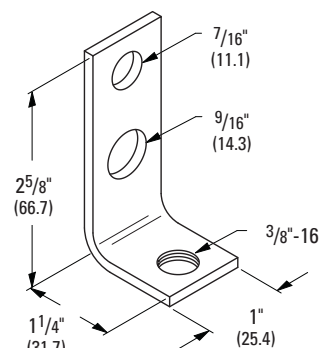
Approvals: Underwriters Laboratories Listed in the USA (UL) and Canada (cUL), and Factory Mutual Engineering approved for 1/2" (15mm) thru 4" (100mm) pipe.

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.

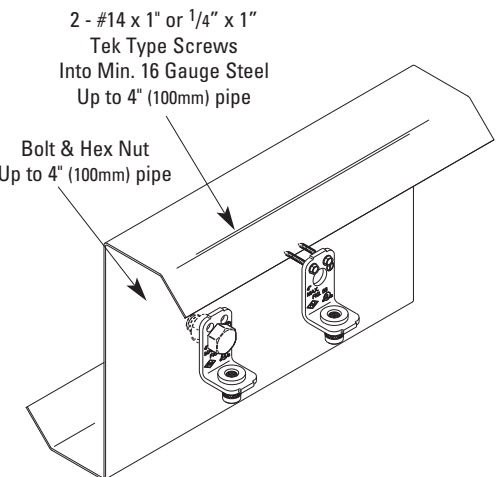
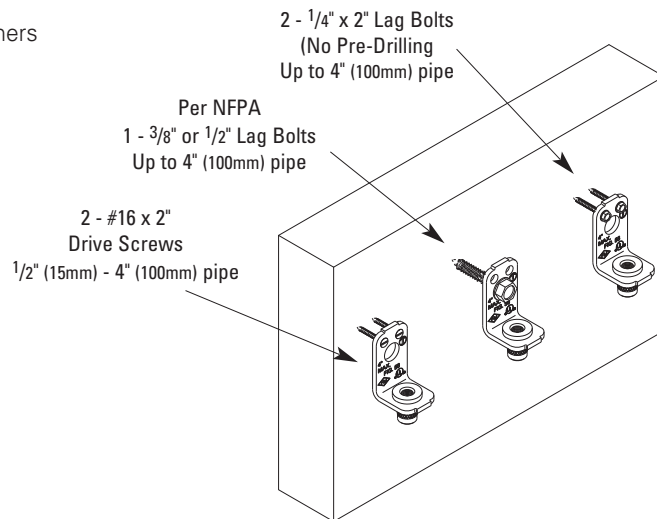
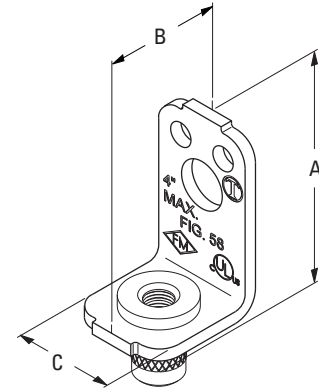
Features: Unique design allows rod to be easily threaded into bracket. Offset design permits unlimited rod adjustment. Center mounting hole will accept 3/8" and 1/2" fastener bolts. Per NFPA 13: 1/2" (15mm) thru 2" (50mm) pipe requires 3/8" fastener, 2 1/2" (65mm) thru 4" (100mm) pipe requires 1/2" fastener.*

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.



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		Rod Size	A		B		C		Max. Rec. Load		Approx. Wt./100	
	in.	(mm)		in.	(mm)	in.	(mm)	in.	(mm)	Lbs.	(kN)	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.

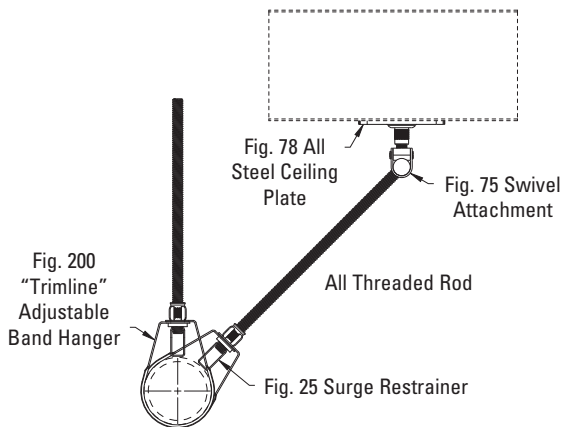
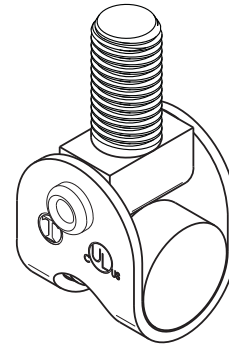
Approvals: Underwriters Laboratories Listed in the USA (**UL**) and Canada (**cUL**) to support up to 4" (100mm) pipe.

Finish: Electro-Galvanized

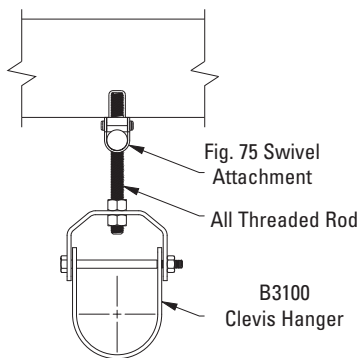
Weight: Approx. Wt./100 - 13.3 Lbs. (6.0kg)

Order By: Part number

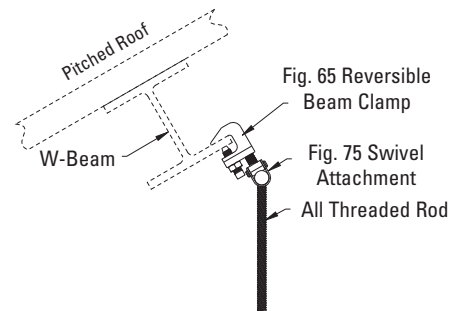
Patent: #7,887,248



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

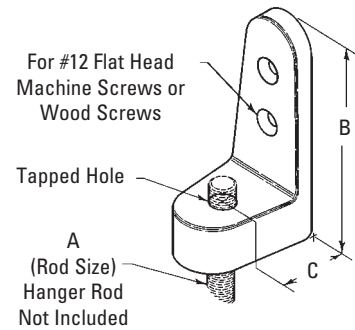
Material: Malleable Iron

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	B		C		Design Load		Approx. Wt./100	
	A	in.	(mm)	in.	(mm)	Lbs.	(kN)	Lbs.	(kg)
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

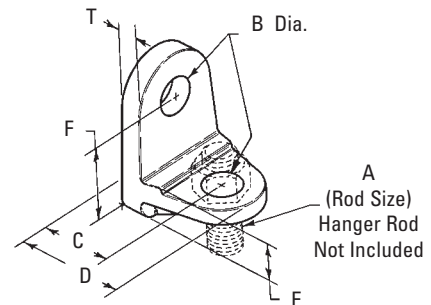
Material: Malleable Iron

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 A	For Nominal Pipe Sizes in. (mm)	Design Load		Approx. Wt./100	
			With Lag Screw Lbs. (kN)	With Bolt To Steel Lbs. (kN)	Lbs. (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.

Upper Attachments

B3083 - Welded Beam Attachment

B3083WO - Welded Beam Attachment Without Pin

Size Range: 3/8"-16 thru 2"-4 1/2 rod

Material: Steel (Stainless steel available)

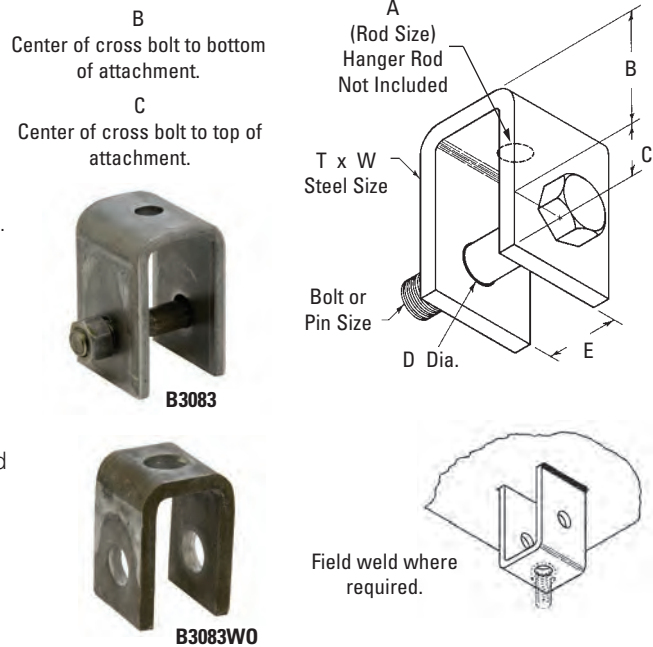
Function: Designed for attaching hanger rod to the bottom of structural steel where heavy loads and large hanger rod sizes are required. Can be welded in place in either the upright or inverted position. When using B3083WO, attach hanger rod to bolt or pin with a B3200 weldless eye nut or B3210 and B3211 series eye rods.

Approvals: Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 22 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 22.

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

Order By: Part number (with or without hardware) and finish.

Note: When ordering with hardware for sizes 3/8 thru 1 1/8, hex head cap screws and hex nuts will be supplied. For 1 1/4 thru 2, clevis pin and cotter pins will be supplied. Must be specified with or without hardware.



Part No.	Rod Size A	Pin or Bolt Size in. (mm)	Design Load		Approx. Wt./100			
			650° F (349°C) Lbs. (kN)	750° F (399°C) Lbs. (kN)	W/O Hardware		With Hardware	
			Lbs.	(kN)	Lbs.	(kg)	Lbs.	(kg)
B3083-3/8	3/8"-16	1/2" (12.7)	730	(3.25)	572	(2.54)	89 (40.3)	110 (49.9)
B3083-1/2	1/2"-13	5/8" (15.9)	1350	(6.00)	1057	(4.70)	87 (39.4)	123 (55.8)
B3083-5/8	5/8"-11	3/4" (19.0)	2160	(9.61)	1692	(7.52)	84 (38.1)	140 (63.5)
B3083-3/4	3/4"-10	7/8" (22.2)	3230	(14.37)	2530	(11.25)	173 (78.4)	268 (121.5)
B3083-7/8	7/8"-9	1" (25.4)	4480	(19.93)	3508	(15.60)	234 (106.1)	376 (170.4)
B3083-1	1"-8	1 1/8" (28.6)	5900	(26.24)	4620	(20.55)	394 (178.6)	596 (270.2)
B3083-1 1/8	1 1/8"-7	1 1/4" (31.7)	7450	(33.14)	5830	(25.93)	402 (182.2)	680 (308.3)
B3083-1 1/4	1 1/4"-7	1 3/8" (34.9)	9500	(42.25)	7440	(33.09)	734 (332.7)	955 (432.9)
B3083-1 1/2	1 1/2"-6	1 5/8" (41.3)	13800	(61.38)	10807	(48.07)	1460 (661.8)	1817 (823.7)
B3083-1 3/4	1 3/4"-5	1 7/8" (47.6)	18600	(82.73)	14566	(64.79)	1746 (791.5)	2310 (1047.1)
B3083-2	2"-4 1/2	2 1/4" (57.1)	24600	(109.42)	19625	(87.29)	2190 (992.7)	2996 (1358.1)

Part No.	B		C		Dia. D		E		T x W	
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
B3083-3/8	2"	(50.8)	7/8"	(22.2)	9/16"	(14.3)	1 1/4"	(31.7)	1/4" x 2"	(6.3 x 50.8)
B3083-1/2	2"	(50.8)	7/8"	(22.2)	1 1/16"	(17.5)	1 1/4"	(31.7)	1/4" x 2"	(6.3 x 50.8)
B3083-5/8	2"	(50.8)	7/8"	(22.2)	1 3/16"	(20.6)	1 1/4"	(31.7)	1/4" x 2"	(6.3 x 50.8)
B3083-3/4	2"	(50.8)	1 1/8"	(28.6)	1 5/16"	(23.8)	1 1/2"	(38.1)	3/8" x 2 1/2"	(9.5 x 63.5)
B3083-7/8	3"	(76.2)	1 1/4"	(31.7)	1 1/8"	(28.6)	2"	(50.8)	3/8" x 2 1/2"	(9.5 x 63.5)
B3083-1	3"	(76.2)	1 1/2"	(38.1)	1 1/4"	(31.7)	2"	(50.8)	1/2" x 3"	(12.7 x 76.2)
B3083-1 1/8	3"	(76.2)	1 1/2"	(38.1)	1 3/8"	(34.9)	2 3/4"	(69.8)	1/2" x 3"	(12.7 x 76.2)
B3083-1 1/4	3"	(76.2)	2"	(50.8)	1 1/2"	(38.1)	3"	(76.2)	5/8" x 4"	(15.9 x 101.6)
B3083-1 1/2	4"	(101.6)	2 1/2"	(63.5)	1 3/4"	(44.4)	3 1/2"	(88.9)	3/4" x 5"	(19.0 x 127.0)
B3083-1 3/4	5"	(127.0)	2 3/4"	(69.8)	2"	(50.8)	3 3/4"	(95.2)	3/4" x 5"	(19.0 x 127.0)
B3083-2	5"	(127.0)	3 1/4"	(82.5)	2 3/8"	(60.3)	3 3/4"	(95.2)	3/4" x 6"	(19.0 x 152.4)

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

B3080S - (Short) Structural Welding Lug B3080L - (Long) Structural Welding Lug

Size Range: Short lug is available for use with 1/2"-13 thru 2"-4 1/2 rods; Long lug may be used with 1/2"-13 thru 2"-4 1/2 rod.

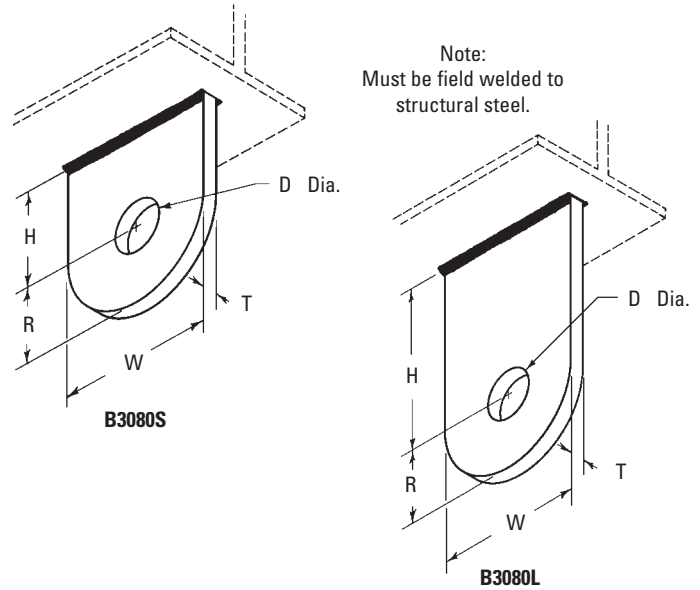
Material: Steel

Function: Designed for attachment to structural steel. Use with B3201 forged steel clevis.

Approvals: Conforms to Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 57.

Finish: Plain or Electro-Galvanized

Order By: Part number and finish.



Part No.	For Hanger	Pin or Bolt Size in. (mm)	Design Load Lbs. (kN)	Approx. Wt./100	
				Short Lbs. (kg)	Long Lbs. (kg)
B3080S-1/2	B3080L-1/2	1/2"-13	1350 (6.00)	44 (19.9)	71 (32.2)
B3080S-5/8	B3080L-5/8	5/8"-11	2160 (9.61)	44 (19.9)	68 (30.8)
B3080S-3/4	B3080L-3/4	3/4"-10	3230 (14.37)	63 (28.6)	100 (45.3)
B3080S-7/8	B3080L-7/8	7/8"-9	4480 (19.93)	71 (32.2)	100 (45.3)
B3080S-1	B3080L-1	1"-8	5900 (26.24)	126 (57.1)	169 (76.6)
B3080S-1 1/8	B3080L-1 1/8	1 1/8"-7	7450 (33.14)	166 (75.3)	208 (94.3)
B3080S-1 1/4	B3080L-1 1/4	1 1/4"-7	9500 (42.25)	310 (140.6)	381 (172.8)
B3080S-1 1/2	B3080L-1 1/2	1 1/2"-6	13800 (61.38)	503 (228.1)	662 (300.3)
B3080S-1 3/4	B3080L-1 3/4	1 3/4"-5	18600 (82.73)	487 (220.9)	646 (293.0)
B3080S-2	B3080L-2	2"-4 1/2	24600 (109.42)	744 (337.5)	808 (366.5)

Part No.	Hole Dia. 'D'	Short H	Long	R	T	W	
							Short in. (mm)
B3080S-1/2	B3080L-1/2	1 1/16" (17.5)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	1/4" (6.3)	2 1/2" (63.5)
B3080S-5/8	B3080L-5/8	13/16" (20.6)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	1/4" (6.3)	2 1/2" (63.5)
B3080S-3/4	B3080L-3/4	15/16" (23.8)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	3/8" (9.5)	2 1/2" (63.5)
B3080S-7/8	B3080L-7/8	1 1/8" (28.6)	2" (50.8)	3" (76.2)	1 1/4" (31.7)	3/8" (9.5)	2 1/2" (63.5)
B3080S-1	B3080L-1	1 1/4" (31.7)	2" (50.8)	3" (76.2)	1 1/2" (38.1)	1/2" (12.7)	3" (76.2)
B3080S-1 1/8	B3080L-1 1/8	1 3/8" (34.9)	3" (76.2)	4" (101.6)	1 1/2" (38.1)	1/2" (12.7)	3" (76.2)
B3080S-1 1/4	B3080L-1 1/4	1 1/2" (38.1)	3" (76.2)	4" (101.6)	2" (50.8)	5/8" (15.9)	4" (101.6)
B3080S-1 1/2	B3080L-1 1/2	1 3/8" (44.4)	3" (76.2)	4 1/2" (114.3)	2 1/2" (63.5)	3/4" (19.0)	5" (127.0)
B3080S-1 3/4	B3080L-1 3/4	2" (50.8)	3" (76.2)	4 1/2" (114.3)	2 1/2" (63.5)	3/4" (19.0)	5" (127.0)
B3080S-2	B3080L-2	2 3/8" (60.3)	4" (101.6)	4 1/2" (114.3)	3" (76.2)	3/4" (19.0)	6" (152.4)

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

Upper Attachments

B3085 - Rod Attachment Concrete Plate

Size Range: 3/8"-16 thru 2"-4 1/2 rod

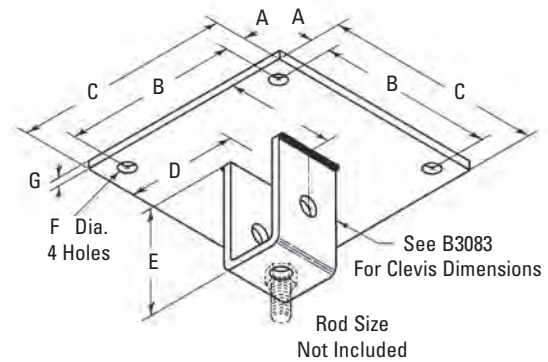
Material: Steel

Function: Structural attachment to concrete ceiling where vertical attachment is desired. Attach hanger rod directly to support bracket.

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

Order By: Part number and finish

Note: Design load is based off rod sizes. Before installation ensure that concrete and anchorage are sufficient to carry the load.



Part No.	Rod Size	A		B		C		D	
		in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
B3085-3/8	3/8"-16	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)
B3085-1/2	1/2"-13	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)
B3085-5/8	5/8"-11	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)
B3085-3/4	3/4"-10	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)
B3085-7/8	7/8"-9	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)
B3085-1	1"-8	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)
B3085-1 1/8	1 1/8"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)
B3085-1 1/4	1 1/4"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)
B3085-1 1/2	1 1/2"-6	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)

Part No.	E		F		G		Max. Rec. Load*		Approx. Wt./100	
	in.	(mm)	in.	(mm)	in.	(mm)	Lbs.	(kN)	Lbs.	(kg)
B3085-3/8	2 7/8"	(73.0)	9/16"	(14.3)	3/8"	(9.5)	730	(3.25)	1145	(519.4)
B3085-1/2	2 7/8"	(73.0)	9/16"	(14.3)	3/8"	(9.5)	1450	(6.00)	1143	(518.4)
B3085-5/8	2 7/8"	(73.0)	9/16"	(14.3)	1/2"	(12.7)	2160	(9.61)	1490	(675.8)
B3085-3/4	3 1/8"	(79.4)	1 1/16"	(17.5)	1/2"	(12.7)	3230	(14.37)	1574	(713.9)
B3085-7/8	4 1/4"	(107.7)	1 1/16"	(17.5)	1/2"	(12.7)	4480	(19.93)	1635	(741.6)
B3085-1	4 1/2"	(114.3)	1 3/16"	(20.6)	3/4"	(19.0)	5900	(26.24)	3420	(1551.3)
B3085-1 1/8	4 3/4"	(120.6)	1 5/16"	(23.8)	3/4"	(19.0)	7450	(33.14)	3413	(1548.1)
B3085-1 1/4	5"	(127.0)	1 5/16"	(23.8)	3/4"	(19.0)	9500	(42.25)	3747	(1699.6)
B3085-1 1/2	6 1/2"	(165.1)	1 1/8"	(28.6)	1"	(25.4)	13800	(61.38)	5438	(2466.7)

* Based on allowable stresses shown in the ANSI code for pressure piping.

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

B3086 - Clevis Concrete Plate

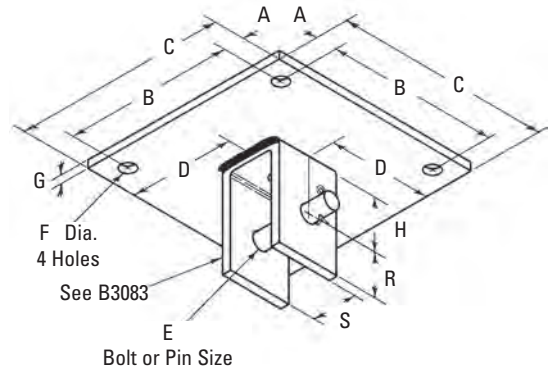
Size Range: 3/8"-16 thru 2"-4 1/2 rod

Material: Steel

Function: Structural attachment to concrete ceiling where flexibility is desired. (Use with B3200 weldless eye nut, B3210 eye rod or B3211 welded eye rod.)

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

Order By: Part number, rod size and finish



Part No.	For Hanger Rod Size	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
B3086-3/8	3/8"-16	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	1/2" (12.7)	9/16" (14.3)
B3086-1/2	1/2"-13	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	5/8" (15.9)	9/16" (14.3)
B3086-5/8	5/8"-11	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	3/4" (19.0)	9/16" (14.3)
B3086-3/4	3/4"-10	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	7/8" (22.2)	11/16" (17.5)
B3086-7/8	7/8"-9	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	1" (25.4)	11/16" (17.5)
B3086-1	1"-8	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	1 1/8" (28.6)	13/16" (20.6)
B3086-1 1/8	1 1/8"-7	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	1 1/4" (31.7)	15/16" (23.8)
B3086-1 1/4	1 1/4"-7	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	1 3/8" (34.9)	15/16" (23.8)
B3086-1 1/2	1 1/2"-6	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	1 5/8" (41.3)	1 1/8" (28.6)

Part No.	G in. (mm)	H in. (mm)	R in. (mm)	S in. (mm)	Max. Rec. Load* Lbs. (kN)	Approx. Wt./100 Lbs. (kg)
B3086-3/8	3/8" (9.5)	2" (50.8)	7/8" (22.2)	1 1/4" (31.7)	730 (3.25)	1165 (528.4)
B3086-1/2	3/8" (9.5)	2" (50.8)	7/8" (22.2)	1 1/4" (31.7)	1350 (6.00)	1178 (534.4)
B3086-5/8	1/2" (12.7)	2" (50.8)	7/8" (22.2)	1 1/4" (31.7)	2160 (9.61)	1546 (701.2)
B3086-3/4	1/2" (12.7)	2" (50.8)	1 1/8" (28.6)	1 1/2" (38.1)	3230 (14.37)	1673 (758.9)
B3086-7/8	1/2" (12.7)	3" (76.2)	1 1/4" (31.7)	2" (50.8)	4480 (19.93)	1783 (808.7)
B3086-1	3/4" (19.0)	3" (76.2)	1 1/2" (38.1)	2" (50.8)	5900 (26.24)	3636 (1649.3)
B3086-1 1/8	3/4" (19.0)	3" (76.2)	1 3/4" (44.4)	2 3/4" (69.8)	7450 (33.14)	3708 (1681.9)
B3086-1 1/4	3/4" (19.0)	3" (76.2)	2" (50.8)	3" (76.2)	9500 (42.25)	3986 (1808.0)
B3086-1 1/2	1" (25.4)	4" (101.6)	2 1/2" (63.5)	3 1/2" (88.9)	13800 (61.38)	5816 (2638.1)

* Based on allowable stresses shown in the ANSI code for pressure piping.

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

Upper Attachments

B3084 - Single Lug Concrete Plate

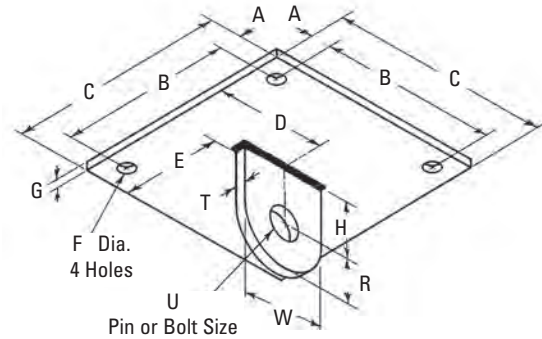
Size Range: 1/2"-13 thru 2"-4 1/2 rod

Material: Steel

Function: Structural attachment to concrete ceiling.
Use with B3201 bridge clevis to attach to center lug.

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

Order By: Part number, rod size and finish



Part No.	For Hanger Rod Size	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)
B3084-1/2	1/2"-13	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	4 7/8" (123.8)	9/16" (14.3)	3/8" (9.5)
B3084-5/8	5/8"-11	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	4 7/8" (123.8)	9/16" (14.3)	1/2" (12.7)
B3084-3/4	3/4"-10	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	4 13/16" (122.2)	11/16" (17.5)	1/2" (12.7)
B3084-7/8	7/8"-9	1" (25.4)	8" (203.2)	10" (254.0)	5" (127.0)	4 13/16" (122.2)	11/16" (17.5)	3/4" (19.0)
B3084-1	1"-8	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	5 3/4" (146.0)	13/16" (20.6)	3/4" (19.0)
B3084-1 1/8	1 1/8"-7	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	5 3/4" (146.0)	15/16" (23.8)	3/4" (19.0)
B3084-1 1/4	1 1/4"-7	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	5 11/16" (144.5)	15/16" (23.8)	3/4" (19.0)
B3084-1 1/2	1 1/2"-6	2" (50.8)	8" (203.2)	12" (304.8)	6" (152.4)	5 5/8" (142.9)	1 1/8" (28.6)	1" (25.4)

Part No.	H		R		U		T x W		Max. Rec. Load*		Approx. Wt./100	
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	Lbs.	(kN)	Lbs.	(kg)
B3084-1/2	1 1/2"	(38.1)	1 1/4"	(31.7)	5/8"	(15.9)	1/4" x 2 1/2"	(6.3 x 63.5)	1350	(6.00)	1096	(497.1)
B3084-5/8	1 1/2"	(38.1)	1 1/4"	(31.7)	3/4"	(19.0)	1/4" x 2 1/2"	(6.3 x 63.5)	2160	(9.61)	1447	(656.3)
B3084-3/4	1 1/2"	(38.1)	1 1/4"	(31.7)	7/8"	(22.2)	3/8" x 2 1/2"	(9.5 x 63.5)	3230	(14.37)	1459	(661.8)
B3084-7/8	2"	(50.8)	1 1/4"	(31.7)	1"	(25.4)	3/8" x 2 1/2"	(9.5 x 63.5)	4480	(19.93)	2166	(982.5)
B3084-1	2"	(50.8)	1 1/2"	(38.1)	1 1/8"	(28.6)	1/2" x 3"	(12.7 x 76.2)	5900	(26.24)	3145	(1426.6)
B3084-1 1/8	3"	(76.2)	1 1/2"	(38.1)	1 1/4"	(31.7)	1/2" x 3"	(12.7 x 76.2)	7450	(33.14)	3170	(1437.9)
B3084-1 1/4	3"	(76.2)	2"	(50.8)	1 3/8"	(34.9)	5/8" x 4"	(15.9 x 101.6)	9500	(42.25)	4312	(1955.9)
B3084-1 1/2	3"	(76.2)	2 1/2"	(63.5)	1 5/8"	(41.3)	3/4" x 5"	(19.0 x 127.0)	13800	(61.38)	4470	(2027.6)

* Based on allowable stresses shown in the ANSI code for pressure piping.

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

B3082 - Adjustable Rod Beam Attachment

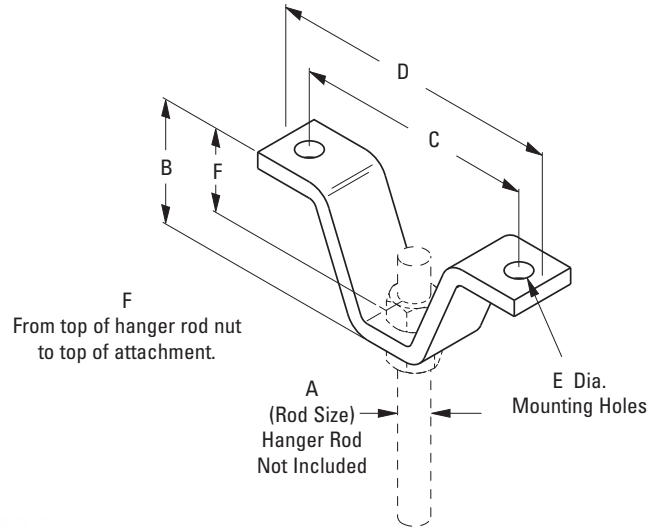
Size Range: 3/8"-16 thru 7/8"-9 rod

Material: Steel

Function: Designed for attaching hanger rod to bottom flange of beam or ceilings allowing for vertical adjustment where required.

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

Order By: Part number and finish.



Part No.	Rod Size	B		C		D	
	A	in.	(mm)	in.	(mm)	in.	(mm)
B3082-3/8	3/8"-16	2 3/4"	(69.8)	3 7/8"	(98.4)	4 7/8"	(123.8)
B3082-1/2	1/2"-13	3 1/8"	(97.4)	4 3/4"	(120.6)	6"	(152.4)
B3082-5/8	5/8"-11	3 1/8"	(79.4)	4 3/4"	(120.6)	6"	(152.4)
B3082-3/4	3/4"-10	3 11/16"	(93.7)	6 1/4"	(158.7)	7 3/4"	(196.8)
B3082-7/8	7/8"-9	3 3/4"	(95.2)	6 3/8"	(161.9)	8 1/4"	(209.5)

Part No.	Dia. E	Adjustment F	Design Load	Approx. Wt./100
	in. (mm)	in. (mm)	Lbs. (kN)	Lbs. (kg)
B3082-3/8	7/16" (11.1)	2 1/8" (54.0)	810 (3.60)	53 (24.0)
B3082-1/2	9/16" (14.3)	2 5/16" (58.7)	1130 (5.02)	129 (58.5)
B3082-5/8	9/16" (14.3)	2 3/16" (55.6)	1810 (8.05)	128 (58.0)
B3082-3/4	1 1/16" (17.5)	2 9/16" (65.1)	2710 (12.05)	196 (88.9)
B3082-7/8	1 3/16" (20.6)	2 1/2" (63.5)	3770 (16.77)	282 (127.9)

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