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Comfort Systems USA (Arkansas), Inc. P.O. Box 16620 Little Rock, AR 72231 Phone 501-834-3320 Fax 501-834-5416

Date: 2/4/2025 Return Request: 2/14/2025 Project: City Of Sherwood Public Works (Maintenance Building) Supplier: Comfort Systems USA (Arkansas), Inc. Manufacturer: Various Submittal: Hangers & Supports (HVAC) Submittal Number: 23 05 29-01 Drawing # and Installation: Mechanical Drawings

ARCHITECT

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

GENERAL CONTRACTOR

Baldwin & Shell 1000 W. Capitol Ave. Little Rock, AR 72201 501-374-8677

Notes:

ENGINEER

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc. 9924 Landers Rd. N. Little Rock, AR 72117 501-834-3320

CSUSA PROJECT NO. 24-6084 sean@comfortar.com

> 9924 Landers Rd. No. Little Rock, AR 72117



Specifications Materials: Zinc Plated Steel Part Numbers:

05-470-00 05-471-00

05-472-00

Use With: 05-475-00

Setting Tool 05-474-00

Setting Tool 05-476-00

Setting Tool

³/8"

¹/₂"

³/8"

¹/2"

³/8", mini

³/8", mini

Drop-in Anchors Fig. 05-470



Description

FPPI Drop–In Anchors and Mini Drop–In Anchors are UL listed in accordance with NFPA requirements. Zinc plating provides corrosion resistance. Follow NFPA requirements and installation instructions for proper use.

Installation

STEP 1: Using a masonry bit suitable for the material being drilled, drill an appropriate diameter hole at the correct depth according to the table below.

Anchor Size	Drill Size	Minimum Hole Depth
³ /8" Standard	¹ /2"	1 ⁹ / ₁₆ "
¹ / ₂ " Standard	⁵ /8"	2"
³/8" Mini	¹ /2"	³ /4″

STEP 2: Insert the anchor into the hole until the edge of the anchor is flush* with the surface of the material the anchor is being installed in. *The Anchor may be installed at a greater depth by drilling the hole to the desired depth and threading the correct size bolt for the size anchor being installed and tapping the anchor into the drilled hole.

STEP 3: After inserting the anchor to the desired depth, insert the correct size setting tool into the anchor and drive the plug into the anchor until the shoulder of the setting tool meets the edge of the anchor. The anchor is now installed and ready to be used.

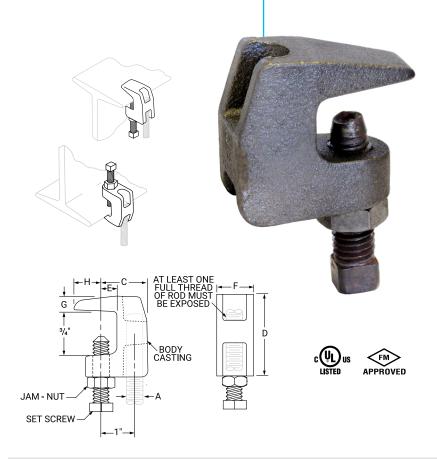
Note: It is recommended that when used in cinder block, that the anchor be placed between the cells.

Average Pullout Values For 4000psi Concrete							
Part Number	Bolt Size	Pullout Value					
Standard Drop–In							
05-470-00	³ / ₈ ″	5,530 lbs					
05-471-00	¹ / ₂ "	8,080 lbs					
Mini Drop-In							
05-472-00	³ /8″	1,980 lbs					



PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
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Notes 1:	
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Universal C-type Clamp (Standard Throat) Fig. 92 (Formerly Afcon Fig. 100)



Dimensions (In) - Load (Lbs) - Torque (In-Lbs) - Weight (Lbs)

Rod Size A	Set	Torque	Max L	.oads ■	Weight	С	п	F	F	G	н
A	Size	Value	Тор	Bottom	Treight	Ũ	U	-	1	U	
In.	In.	InLbs.	Lbs.	Lbs.	Lbs.	In.	ln.	In.	In.	In.	In.
3/8	3/8	60	500	250	0.34	1 ⁵ /16	1 % ₁₆	^{9/} 16	¹³ / ₁₆	3/8	1/2
1/2	1/2	125	950	760	0.63	1 ³ /8	1 ¹³ / ₁₆	1/2	1 1/16	7/16	²³ / ₃₂

Note:

Maximum temperature of 450° F

Engineered Solutions

Material Specifications

Size Range

3/8" and 1/2

Material

Ductile iron, hardened steel cup point set screw and locknut.

Finish

Plain

Zinc Plated (Hot-Dip Galvanized optional)

Service

Recommended for use under roof installations with bar joist type construction, or for attachment to the top or bottom flange of structural shapes where the vertical hanger rod is required to be offset from the edge of the flange and where the thickness of joist or flange does not exceed 3/4".

Approvals

Complies with Federal Specification A-A-1192A (Type 19 & 23), WW-H-171-E (Type 23), ANSI/MSS SP-69 and MSS SP-58 (Type 19 & 23).

UL, ULC Listed and FM Approved.

How to size

Size of clamp is determined by size of rod to be used.

Installation

Follow recommended set screw torque values per MSS-SP-69.

Features

- They may be attached to horizontal flanges of structural members in either the top beam or bottom beam positions.
- Secured in place by a cup-pointed Set Screw tightened against the flange. A Jam Nut is provided for tightening the Set Screw against the Body Casting.
- Thru tapping of the body casting permits extended adjustment of the threaded rod.
- Can be used with Fig 89X retaining clip for seismic applications.

Ordering

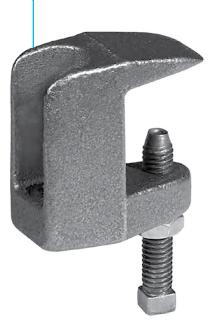
Specify rod size, figure number, name of clamp and finish.

Available with oversized tapped rod hole for Hot Dip Galvanized finish.



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Wide Throat Top Beam C–Clamp Fig. 94





Features:

- Provides clamping to bar joists which are directly under roof installations.
- Provides for vertical hanger rod installed offset from the edge of the beam flange.
- Ductile iron body assures full thread engagement of rod.



Material Specifications

Size Range ⁵/₈" and ³/₄"

Material

Ductile iron body, hardened steel cup point set screw and locknut.

Finish

Plain or

Zinc Plated (Hot-Dip Galvanized optional)

Service

Recommended for use under roof installations with bar joist type construction, or for attachment to the top flange of structural shapes where the vertical hanger rod is required to be offset from the edge of the flange and where the thickness of joists or flange does not exceed 15/16".

Approvals

Complies with Federal Specification A-A-1192A (Type 19)

WW-H-171-E (Type 19), ANSI/MSS SP-69 and MSS SP-58 (Type 19), UL Listed.

How to size

Size of clamp is determined by size of rod to be used.

Installation

Follow maximum recommended set screw torque values per MSS-SP-69.

Ordering

Specify rod size, figure number, name of clamp and finish.

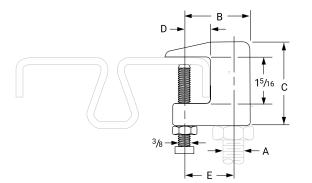
Available with oversized tapped rod hole for Hot Dip Galvanized finish.

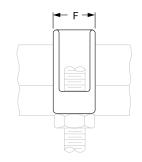


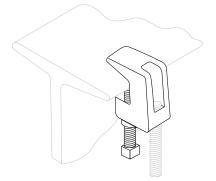
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Wide Throat Top Beam C–Clamp **Fig. 94**







Dimensions (In) • Load (Lbs) • Torque (In-Lbs) • Weight (Lbs)

Rod Size A	Set Screw Size	Torque Value	Max Loads*	Weight	В	С	D	E	F
5/8	3/8	60	1,200	0.66	13⁄4	21/4	2.	11⁄4	1
3/4	3/8	60	1,600	0.83	17/8	23/8	3⁄4	13/8	13/16

Note:

* Maximum temperature of 450° F

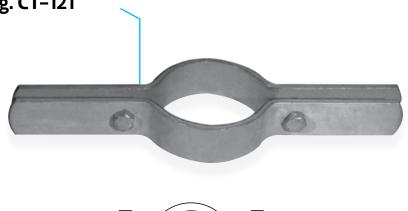


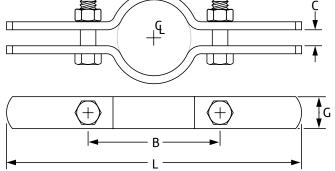
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Building connections that last "



Copper Tubing Riser Clamp Fig. CT-121





Size Range: ½" through 4" Material: Carbon steel Finish: Copper plated

Service: Recommended for support and steadying of copper tube risers, either insulated or non-insulated. This product is not intended for use with hanger rods.

Approvals: Complies with Federal Specification A-A-1192A (Type 8), WW-H-171-E (Type 8), ANSI/MSS SP-69 and MSS SP-58 (Type 8).

Service: For support and steadying of copper tubing risers.

Installation: Clamp is fitted and bolted preferably below a coupling or fitting on the tubing. Do not over tighten bolts.

Features: Rounded ears provide greater safety for personnel.

Ordering: Specify tube size, figure number, and name.



Fig. CT-121: Dimensions (in) • Loads (lbs) • Torque (ft-lbs) • Weight (lbs)

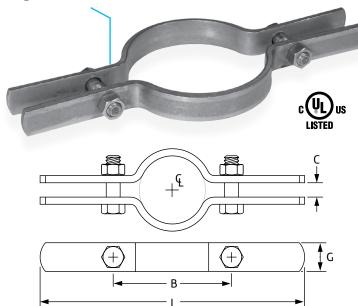
Tube Size	Max Load	Weight	L	G Width	В	С	Bolt Size	Torque Values
1/2	75	0.52	61/2	1	77/-		5/16	11
3/4	75	0.56	7	-	27/8		716	11
1	120	0.94	9 ³ /8		31/8	³ /8		
11/4		0.98	95/8		31/2			
11/2	150	1.50	10	-	37/8			
2		1.50	10 ³ /8	11/4	41/4		3/8	21
2¹/ ₂		1.70	11 ¹³ /16		43/4			
3	200	1.80	1111/2		51/2	1/2		
3 ¹ / ₂	300	1.90	12		61/2			
4		2.60	13	1	7		1/2	46

Note: Minimum loads per MSS SP only applicable to 11/4" and up.

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Extension Pipe or Riser Clamp **Fig. 261** (Formerly Afcon Fig. 400)



Size Range: ³/₄" through 24"

Material: Carbon steel

Finish:Plain,Hot-Dip Galvanized with Zinc PlatedBolts & Nuts,Epoxy Coated orPainted.

Service: For support of stationary steel pipe risers, cast iron pipe or conduit. This product is not intended for use with hanger rods. For this application refer to Fig. 40 Riser Clamp.

Maximum Temperature: Plain 650° F, Galvanized and Epoxy 450° F

Approvals: Complies with Federal Specification A-A-1192A (Type 8) WW-H-171-E (Type 8), ANSI/MSS SP-69 and MSS SP-58 (Type 8). UL, ULC Listed (Sizes 1½" - 8").

Installation: Clamp is fitted and bolted preferably below a coupling, hub or welded lugs on steel pipe. Bolt torques should be per industry standards (see page 248). Clamp is designed for standard steel pipe O.D. and this must be considered in sizing the riser for other types of piping.

Ordering: Specify pipe size, figure number, name and finish.

Note: Refer to Technical Data Section of the Pipe Hanger Catalog for cast iron soil pipe data.

Fig. 261: Dimensions (in) • Loads (lbs) • Torque (ft-lbs) • Weight (lbs)

Pipe Size	Max Load	Weight	L	G Width	В	С	Bolt Diameter	Torque Values
¹ / ₂ & ³ / ₄	220	1.1	87/8		27/8			
1	220	1.1	878		31/8	3/8	³ /8	71
11/4	250	1.6	10	-	31/2	-78	-78	21
11/2	250	1.6	101/4		37/8			
2	300	1.7	1074	1	41/4			
2 ¹ / ₂	400	1.9	111/4	-	4 ³ / ₄	1/2	7/16	32
3	500	1.9	113/8		5 ¹ / ₂			
31/2	600	2.3	127/8		61/2			
4	750	2.4	1278		7	1/2	1/2	10
5	1,500	3.6	13 ³ / ₄		8	72	72	46
6	1,600	4.0	14 ³ / ₄	11/2	9			
8	2 5 0 0	7.6	181/2		12			
10	2,500	11.1	201/4		13 ³ /4	57	57	100
12	2 700	16.5	22 ³ /4	2	15 ³ /4	5/8	5/8	100
14	2,700	17.7	24		171/4			
16		30.4	26		19 ³ /4			
18	2,900	33.8	28	21/2	213/4	3/4	3/4	150
20		35.0	30		23 ³ / ₄			
24	3,200	82.0	363/4	3	30	1	7/8	190

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Notes 2:	



Adjustable Clevis Hanger Fig. 260 (Formerly Afcon Fig. 371)

Size Range: 1/2" through 30"

Material: Carbon Steel

 Finish: Plain, 8" & Smaller: Zinc Plated (Hot–Dip Galvanized optional), 10" & Larger: Hot–Dip Galvanized with Zinc Plated Bolts & Nuts, or Primed, also available in Plastic or Epoxy Coated.

Service: Recommended for the suspension of stationary pipe lines.

Maximum Temperature: Plain 650° F, Galvanized and Epoxy 450° F

Approvals: Complies with Federal Specification A-A-1192A (Type 1), WW-H-171-E (Type 1), ANSI/MSS SP-69 and MSS SP-58 (Type 1). FM Approved (Sizes ¾" through 8"), UL and ULC Listed (Sizes ½" through 8").

Installation: Hanger load nut above clevis must be tightened securely to assure proper hanger performance.

Adjustment: Vertical adjustment without removing pipe may be made from ³/₈" through 5¹/₈", varying with the size of clevis. Tighten upper nut after adjustment.

Features:

- Design has yoke on outside of lower U-strap so yoke cannot slide toward center of bolt, thus bending of bolt is minimized.
- Sizes 5" and up have rod and two nuts instead of bolt and nut; thread length on clevis rod is such that the thread locks the nuts in place, and threads are not in shear plane.

Ordering:

Specify pipe size, figure number, name and finish.

Notes:

- Punched forming holes may be present on certain sizes of this clevis hanger. These holes are solely for the purpose of manufacturing, and do not effect the structural integrity or load carrying capacities of these hangers.
- For insulated line options without shields, see Figures 260 ISS and Figure 300. For insulated line options with shields, see Figures 167 and 168. For ductile iron pipe sizes, see Figure 590.
- Fig. 260F (Felt lined) available for use for suspension of copper (or other material) so as to prevent electrolysis between the dissimilar metals of the hanger and the pipe, tube or conduit.

Caution:

When an oversize clevis is used, a pipe spacer or multispacer should be placed over clevis bolt to ensure that the lower U-strap will not move in on the bolt.



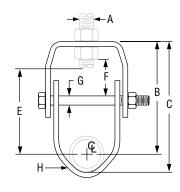
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Notes 2:	

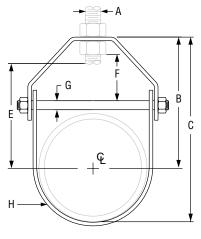


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Adjustable Clevis Hanger (Cont.) Fig. 260 (Formerly Afcon Fig. 371)





Pipe Size 1/2" to 3/4"

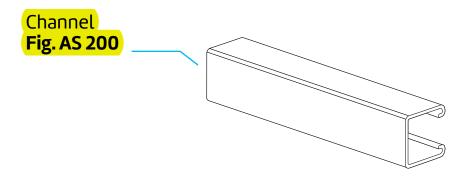
Pipe Sizes 1" and Larger

Pipe Size	Max Load	Span Ft.	Weight	Rod Size A	В	С	Rod Take Out E	Adjust. F	G	H Width Lowe	
1/2	(10		0.34		2 ³ / ₁₆	2117	111/2				
3/4	610	7*	0.34		2	211/16	15/16				
1		7*	0.35	37	25/16	3	15/8	5/8			
11/4	720		0.40	- ³ / ₈ -	2 ³ / ₈	31/4	111/16		1⁄4	1	
11/2	730	9*	0.45		213/16	313/16	21/8	7/8		1	
2		10*	0.50		35/16	4 ¹ / ₂	25/8	11/8			
2¹/ ₂		11*	0.65		4 ¹ / ₁₆	5 ¹ / ₂	33/16	15/16			
3	1,350	12*	0.85	0.85	1/2	43/4	61/2	4 ¹ / ₁₆	15/8	3/8	
31/2		13*	1.10	1.10	51/16	71/16	4 ³ / ₁₆	1 ¹³ /16		11/4	
4	1 420	14*	1.51		5 ⁹ /16	713/16	41/2	111/16	3/8	174	
5	1,430	16*	1.70	- 78 -	6%16	815/16	51/2	1 ¹⁵ /16		1 ³ / ₁₆	
6	1,940	17*	3.10	- ³ /4 -	615/16	101/4	5 ³ /4	111/16	1/2	17/	
8	2,000	19*	4.75	74	8 ³ / ₈	1211/16	7 ³ / ₁₆	2		17/16	
10	3,600	22*	8.60	- 7/8 -	97/8	15 ¹ /4	87/16	21/8	5/8	1 ³ /4	
12	3,800	23*	11.20	- 78 -	119/16	1715/16	101/8	2 ¹³ / ₁₆	78	2	
14	4,200	25*	12.50		12%16	19 ⁹ /16	1011/16	211/16	3/4	2	
16	4,600	27	19.85	1	14	22	12	23/4	1	21/	
18	4,800	28	22.25		15 ¹⁵ /16	2415/16	1315/16	313/16	I	21/2	
20	4,800	30	40.33		17%/16	27 ⁹ /16	15 ³ / ₁₆	27/	1 ¹ /4		
24**	4,800	32	49.83	11⁄4	19 ¹³ /16	3113/16	175/16	37/8	⁷ /8*	3	
30***	6,000	33	70.18		24 ³ /16	39 ³ / ₁₆	219/16	5 ¹ /8	11/4		

"Span" represents the maximum recommended distance between hangers on a continuous and straight run of horizontal standard weight steel pipe filled with water. In all cases, verify that chosen location of hangers does not subject hangers to a load greater than the maximum recommended load shown above. *Indicates that span represents the maximum span for water filled pipe. **The 24" pipe size assembly includes a 1¼" SCH 40 pipe spacer over the 7%" threaded rod. ***The 30" pipe size assembly includes a 1¼" SCH 40 pipe spacer over the 1¼" threaded rod.

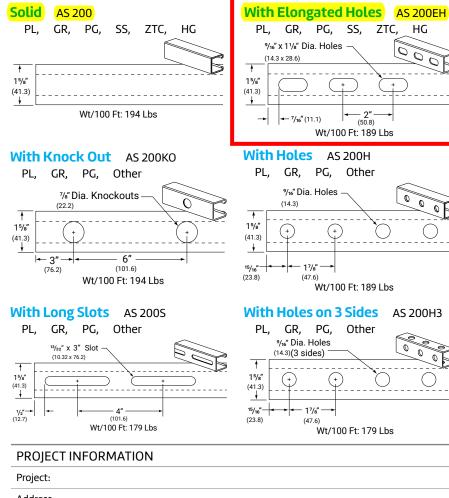


Pipe Hangers & Supports



Description

Anvil–Strut channels are manufactured by a series of forming dies, or rolls, which progressively cold work the strip steel into the desired channel configuration. This method produces a cross section of uniform dimensions within a tolerance of plus or minus 0.015", on outside dimensions.



Specifications

Size:

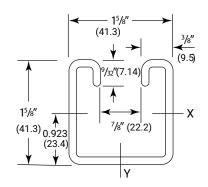
1⁵/8" X 1⁵/8" (41.3 x 41.3mm) 12 Gauge Channel • wt./100 ft. – 194 lbs.

Materials:

Carbon Steel Stainless Steel Aluminum

Finishes

Pre-Galvanized Hot Dip Galvanized - Post Fabrication Supr-Green Powder Coated Zinc Trivalent Chromium PVC



LEGEND: GR: Powder Coated Supr-Green EG: Electro-Galvanized PG: Pre-Galvanized AL: Aluminum HG: Hot Dipped Galvanized PL: Plain SS: Stainless Steel ZTC: Zinc Trivalent Chromium Stainless Steel (SS), Zinc Trivalent Chromium (ZTC) and Hot Dipped Galvanized (HG) are specialty finishes. Pricing is located in the Specialty Strut Section of the Anvil-Strut price book.



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Channel Fig. AS 200

1⁵/8" X 1⁵/8" (41.3 x 41.3mm) 12 Gauge Channel • wt./100 ft. - 194 lbs Stocked in pre-galvanized, plain, powder coated Supr-Green, zinc trivalent chromium, and hot dipped galvanized, in 10 & 20 ft. lengths. Note: Also available in Stainless Steel 304 & 316 Alloys. Other materials, finishes & lengths are available upon request.

Properties of Section

Catalog	Wt.	/Ft.		ea of ection		X-X Axis				Y-Y Axis						
Number	Lbs.	Kg.	Sq. In.	Sq. CM	l in ⁴	I cm ⁴	S in ³	S cm ³	r in	r cm	l in⁴	I cm ⁴	S in ³	S cm ³	r in	r cm
AS 200	1.94	2.9	0.552	3.561	0.188	7.825	0.208	3.409	0.584	1.483	0.236	9.823	0.290	4.752	0.654	1.661

I = Moment of Inertia S = Section Modulus r = Radius of Gyration

Beam and Column Loads

			Static Bear	n Load (X-X A	xis)			Column Loading Data			
	Мах			Uniform Loa	ad at Deflectio	n	Max.		Max. Column Lo	ad Applied at C.G.	
Unbraced U	Allowable Uniform Load		Span/180 Deflection	Span/240 Deflection	Span/360 Deflection	Weight of Channel	Allowable Load at Slot Face	k=.65	k=.80	k=1.0	k=1.2
In	Lbs	In	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
12	3,480	0.01	3.480	3,480	3,480	1.9	3,850	12,240	11,940	11,480	10,960
18	2,320	0.03	2,320	2,320	2,320	2.9	3,710	11,540	10,960	10,130	9,290
24	1,740	0.06	1,740	1,740	1,740	3.9	3,530	10,690	9,850	8,740	7,710
30	1,390	0.09	1,390	1,390	1,310	4.9	3,330	9,780	8,740	7,470	6,380
36	1,160	0.13	1,160	1,160	910	5.8	3,120	8,880	7,710	6,380	5,310
42	990	0.17	990	990	670	6.8	2,910	8,020	6,800	5,470	4,430
48	870	0.23	870	770	510	7.8	2,710	7,240	6,000	4,690	3,810
60	700	0.35	660	490	330	9.7	2,340	5,910	4,690	3,630	2,960
72	580	0.51	460	340	230	11.6	2,040	4,840	3,810	2,960	2,400
84	500	0.69	340	250	170	13.6	1,800	4,040	3,200	2,480	1,980
96	430	0.90	260	190	130	15.5	1,600	3,480	2,750	2,110	1,670
108	390	1.14	200	150	100	17.5	1,440	3,050	2,400	1,820	**
120	350	1.41	160	120	80	19.4	1,290	2,700	2,110	**	**
144	290	2.03	110	90	60	23.3	1,060	2,180	1,670	**	**
168	250	2.77	80	60	40	27.2	**	1,790	**	**	**
180	230	3.18	70	50	40	29.1	**	**	**	**	**
192	220	3.61	60	50	NR	31.6	**	**	**	**	**
216	190	4.57	50	40	NR	34.9	**	**	**	**	**
240	170	5.65	40	NR	NR	38.8	**	**	**	**	**

Bearing Load may limit load ** Not recommended – KL/r exceeds 200

Notes

1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these

capacities to arrive at the net beam capacity. 2. Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan

at a single point, multiply the beam capacity by 50% and deflection by 80%. 3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply by the following: EH by 88%, S by 90%,

H (%/% holes) by 88%, KO by 82%. 4. Refer to the Anvil-Strut Catalog for reduction factors for unbraced lengths.



Channel Fig. AS 200

Beam and Column Loads - Metric

			Static Bear	n Load (X-X A	xis)			Column Loading Data				
	Мах			Uniform Lo	ad at Deflectio	n	Max.		Max. Column Lo	ad Applied at C.G.		
Span or Unbraced Height	Allowable Uniform Load	Deflection at Uniform Load	Span/180 Deflection	Span/240 Deflection	Span/360 Deflection	Weight of Channel	Allowable Load at Slot Face	k=.65	k=.80	k=1.0	k=1.2	
mm	Kn	mm	Kn	Kn	Kn	Kg	Kn	Kn	Kn	Kn	Kn	
305	15.5	0.3	15.5	15.5	15.5	0.9	17.1	54.4	53.1	51.1	48.8	
457	10.3	0.8	10.3	10.3	10.3	1.3	16.5	51.3	48.8	45.1	41.3	
610	7.7	1.5	7.7	7.7	7.7	1.8	15.7	47.6	43.8	38.9	34.3	
762	6.2	2.3	6.2	6.2	5.8	2.2	14.8	43.5	38.9	33.2	28.4	
914	5.2	3.3	5.2	5.2	4.0	2.6	13.9	39.5	34.3	28.4	23.6	
1,067	4.4	4.3	4.4	4.4	3.0	3.1	12.9	35.7	30.2	24.3	19.7	
1,219	3.9	5.8	3.9	3.4	2.3	3.5	12.1	32.2	26.7	20.9	16.9	
1,524	3.1	8.9	2.9	2.2	1.5	4.4	10.4	26.3	20.9	16.1	13.2	
1,829	2.6	13.0	2.0	1.5	1.0	5.3	9.1	21.5	16.9	13.2	10.7	
2,134	2.2	17.5	1.5	1.1	0.8	6.2	8.0	18.0	14.2	11.0	8.8	
2,438	1.9	22.9	1.2	0.8	0.6	7.0	7.1	15.5	12.2	9.4	7.4	
2,743	1.7	29.0	0.9	0.7	0.4	7.9	6.4	13.6	10.7	8.1	**	
3,048	1.6	35.8	0.7	0.5	0.4	8.8	5.7	12.0	9.4	**	**	
3,658	1.3	51.6	0.5	0.4	0.3	10.6	4.7	9.7	7.4	**	**	
4,267	1.1	70.4	0.4	0.3	0.2	12.3	**	8.0	**	**	**	
4,572	1.0	80.8	0.3	0.2	0.2	13.2	**	**	**	**	**	
4,877	1.0	91.7	0.3	0.2	**	14.1	**	**	**	**	**	
5,486	0.8	116.1	0.2	0.2	**	15.8	**	**	**	**	**	
6,096	0.8	143.5	0.2	**	**	17.6	**	**	**	**	**	



Channel Fig. AS 200

Materials

Carbon Steel: Channels are formed from high–quality, structural grade carbon steel which has been manufactured in accordance with ASTM A-1011–04– SS Grade 33 (hot rolled), or ASTM 366 (cold rolled), with mechanical properties of 33 ksi minimum yield and 52 ksi minimum tensile strength. The precision roll–forming process by which the channels are formed "cold works" the steel, thereby increasing its mechanical properties.

Stainless Steel: Channels are formed from chromium–nickel stainless steel sheet manufactured in accordance with ASTM A-240 specification, offered in both AISI Type 304 and 316 material to provide protection in varying corrosive conditions.

Aluminum: Extruded aluminum channel is produced from 6063–T6 alloy, and fittings are produced from 5052–H32 alloy, both in accordance with ASTM B–221 specifications. Aluminum is suitable for use in various corrosive environments.

Finishes

Pre-Galvanized: Hot dip, mill galvanized coating produced through a process of continuously passing the steel through a bath of molten zinc. This process is performed in accordance with ASTM A-653. The thickness of the zinc coating conforms with ASTM G-90 which represents a coating thickness of .90 ounces of zinc per square foot. This coating is applied to the steel master coils prior to slitting and fabrication.

Hot Dip Galvanized – Post Fabrication: The finished channel is completely immersed in a bath of molten zinc, resulting in the complete coating of all surfaces of the product, including edges and welds. Strut channels that are hot dip galvanized, have a total coating weight of 3.0 ounces of zinc per square foot in accordance with ASTM A-123 specification. This coating provides superior results in applications calling for prolonged outdoor exposure.

Supr–Green Powder Coating: Strut channels are coated after fabrication with polyester powder finish. This coating is applied using an electrostatic spray process, beginning with cleaning and phosphating, through a bonderite pretreatment process, and ending with oven curing. The resulting finish provides a high quality appearance and durability. Powder Coating is in accordance with ASTM B–117 (standard practice for operating salt spray (fog) apparatus) to 500 hours with less than 1/8" scribe creep.

Zinc Trivalent Chromium: The finished channel undergoes a multi-step process consisting of electrogalvanizing, in accordance with ASTM B-633-85, followed by an application of zinc trivalent chromium, which provides the distinctive gold coloration of the finish. All surfaces are coated because the process is performed after fabrication.

PVC: A corrosive resistant PVC (polyvinyl chloride) coating is applied over the completed strut channel. The coating process consists of surface pretreatment, followed by preheating of the part, which is then passed through a fluidized bed of vinyl plastic powder. The powder melts onto the heated channel forming a smooth coating which undergoes a final heat curing.







Description

Anvil–Strut Pipe Clamps are all manufactured to fit into the standard openings of 1⁵/₈" channel to support runs of piping where desired, to secure the pipe in place.

AS 0040D Thru AS 106P EG, 304SS, 316SS, ZTC

LEGEND:

GR: Powder Coated Supr-Green **EG**: Electro-Galvanized **PG**: Pre-Galvanized **AL**: Aluminum **HG**: Hot Dipped Galvanized **PL**: Plain SS: Stainless Steel

ZTC: Zinc Trivalent Chromium Stainless Steel (SS), Zinc Trivalent Chromium (ZTC) and Hot Dipped Galvanized (HG) are specialty finishes. Pricing is located in the Specialty Strut Section of the Anvil–Strut price book.

PROJECT INFORMATION APPROVAL STAMP Project: Approved Address: Approved as noted Contractor: Not approved Engineer: Submittal Date: Notes 1: Notes 2:

Specifications

Materials:

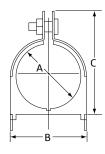
Clamp: 1008-1018 Carbon Steel Cushion: High Strength TPE Locknut: Nylon Insert

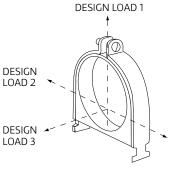
Service Temperature: -65°F to 275°F

Approvals:

UL 2043 Fire Test for Heat and Visible Smoke Release 25/50 Flame Spread/Smoke Development Index











Tube Series

Part Number	0.D. Size	А	В	С	Std Pkg	Wt/100 pcs
AS 0040D	1/4"	0.25	0.62	0.98	25	10
AS 0060DN	3/8"	0.37	0.82	1.13	25	11
AS 0080DN	1/2"	0.50	0.94	1.34	25	13
AS 0100DN	5/8"	0.62	1.06	1.54	25	14
AS 0120DN	3/4"	0.75	1.20	1.68	25	14
AS 0140DN	7/8"	0.87	1.31	1.82	25	15
AS 0160D	1"	1.00	1.44	1.95	25	17
AS 0180DN	1 1/8"	1.12	1.57	2.08	20	18
AS 0200D	1 1⁄4"	1.25	1.70	2.21	20	18
AS 0220DN	1 ³⁄8"	1.37	1.82	2.34	20	20
AS 0240D	1 1/2"	1.50	1.95	2.47	20	33
AS 0260DN	1 5⁄8"	1.62	2.07	2.60	20	35
AS 0280D	1 ³ /4"	1.75	2.20	2.73	20	37
AS 0320D	2"	2.00	2.45	3.04	10	41
AS 0340D	2 1/8"	2.12	2.57	3.23	10	46
AS 0400D	2 1/2"	2.50	2.94	3.79	10	49
AS 0420D	2 5/8"	2.62	3.07	3.92	5	51
AS 0480D	3"	3.00	3.57	4.42	5	57
AS 0500D	3 1⁄8"	3.12	3.57	4.42	5	60
AS 0580D	3 5⁄8"	3.62	4.20	5.11	5	70
AS 0660D	4 ¹ /8"	4.12	4.57	5.54	5	94
AS 0820D	5 1⁄8"	5.12	5.57	6.54	5	125
AS 0980D	6 1⁄8"	6.12	6.57	7.54	5	130

Std Pkg & Wt/100 pcs: See charts above.

Specifications

Materials:

Clamp: 1008–1018 Carbon Steel Cushion: High Strength TPE Locknut: Nylon Insert

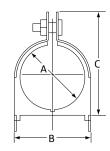
Service Temperature:

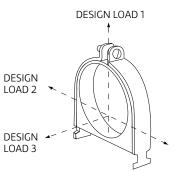
-65°F to 275°F

Approvals:

UL 2043 Fire Test for Heat and Visible Smoke Release 25/50 Flame Spread/Smoke Development Index









Tube Series

Copper & Steel Tube O.D. Size	Design Load 1 (lbs)	Design Load 2 (lbs)	Design Load 3 (lbs)
1⁄4"	400	50	50
3/8"	400	50	50
1/2"	400	50	50
⁵ /8"	400	50	50
3/4"	600	75	75
7/8"	600	75	75
1"	600	75	75
1 1⁄8"	600	75	75
1 1⁄4"	600	75	75
1 3⁄8"	600	75	75
1 1/2"	600	75	75
1 5/8"	600	75	75
1 3⁄4"	800	125	125
1 7⁄8"	800	125	125
2"	800	125	125
2 1/8"	800	125	125
2 1/4"	800	125	125
2 3/8"	800	125	125
2 1/2"	800	125	125
2 5/8"	800	125	125
3"	800	125	125
3 1⁄8"	800	125	125
3 5/8"	1000	200	150
4 1/8"	1000	200	150
6 1⁄8"	1000	200	150

Std Pkg & Wt/100 pcs: See charts above.



Specifications

Materials:

Clamp: 1008-1018 Carbon Steel Cushion: High Strength TPE Locknut: Nylon Insert

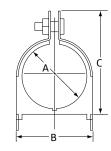
Service Temperature:

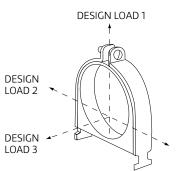
-65°F to 275°F

Approvals:

UL 2043 Fire Test for Heat and Visible Smoke Release 25/50 Flame Spread/Smoke Development Index











Pipe Series

Part Number	0.D. Size	А	В	С	Std Pkg	Wt/100 pcs
AS 009P	1⁄4" Pipe	0.54	0.98	1.34	25	13
AS 011P	³⁄₀" Pipe	0.67	1.13	1.54	25	14
AS 014P	1⁄2" Pipe	0.84	1.29	1.82	25	15
AS 017P	³⁄₄" Pipe	1.05	1.50	2.08	20	17
AS 021P	1" Pipe	1.31	1.76	2.34	20	19
AS 027P	1 1⁄4" Pipe	1.66	2.17	2.73	20	35
AS 0300DP	1 1⁄2" Pipe	1.90	2.35	2.86	20	39
AS 0380DP	2" Pipe	2.37	2.82	3.67	10	47
AS 0460DP	2 1⁄2" Pipe	2.87	3.32	4.17	5	55
AS 0560DP	3" Pipe	3.50	3.95	4.79	5	55
AS 0640DP	3 1⁄2" Pipe	4.00	4.45	5.42	5	88
AS 0720DP	4" Pipe	4.50	4.95	5.92	5	110
AS 089P	5" Pipe	5.56	6.01	6.92	5	130
AS 106P	6" Pipe	6.62	7.07	8.23	5	140

Pipe Series

Pipe Sizes (Nominal)	Design Load 1 (lbs)	Design Load 2 (lbs)	Design Load 3 (lbs)	
1/4"	400	50	50	
3/8"	600	75	75	
1/2"	600	75	75	
3/4"	600	75	75	
1"	600	75	75	
1 1⁄4"	800	125	125	
1 1/2"	800	125	125	
2"	800	125	125	
2 1/2"	800	125	125	
3"	1000	200	150	
3 1/2"	1000	200	150	
4"	1000	200	150	
5"	1000	200	150	
6"	1000	200	150	

Std Pkg & Wt/100 pcs: See charts above.

Specifications

Materials:

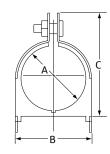
Clamp: 1008-1018 Carbon Steel Cushion: High Strength TPE Locknut: Nylon Insert

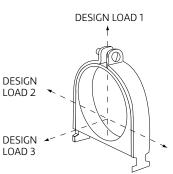
Service Temperature: -65°F to 275°F

051 10 275

Approvals: UL 2043 Fire Test for Heat and Visible Smoke Release 25/50 Flame Spread/Smoke Development Index



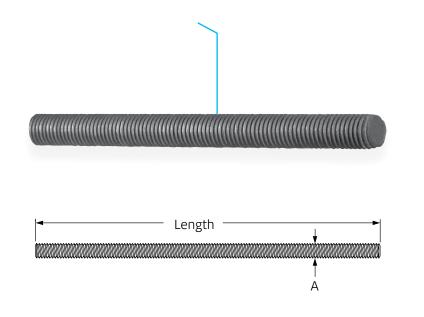








Continuous Threaded Rod Fig. 146 (Formerly Afcon Fig. 650)



Size Range: ¼" through 1½" stocked in six, ten, and twelve foot lengths. Other even foot lengths can be furnished to order.

Material: Carbon steel or Stainless Steel Gr 304

Threads: National Coarse (USS), rod threaded complete length.

Finish: Plain or Zinc Plated (Hot–Dip Galvanized optional)

Maximum Temperature:

Zinc Plated 450°F, Stainless Steel 650°F Approvals: Complies with MSS SP–58.

Ordering: Specify rod diameter and length, figure number, name and finish.

Note: The acceptability of galvanized coatings at

temperatures above 450°F is at the discretion of the end user.

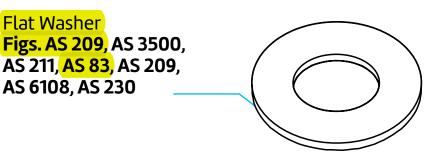


Fig. 146: Dimensions (in) • Loads (lbs) • Weight (lbs)

Rod Size A	Threads per Inch	Max Load	Weight per Ft.	
RUU SIZE A	meaus per men	650° F	weight per rt.	
1/4	20	240	0.12	
3/8	16	730	0.30	
1/2 13		1,350	0.53	
⁵ /8	11	2,160	0.84	
3/4	10	3,230	1.20	
7/8	9	4,480	1.70	
1	8	5,900	2.30	
11⁄/4	7	9,500	3.60	
11/2	6	13,800	5.10	

PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	



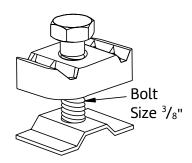


Description

Anvil-Strut Hardware, when used in conjunction with Anvil-Strut Channel and Nuts, provides a superior grip between channels and fittings.

Seismic Rod Stiffener

AS 3500 EG, ZTC

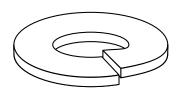


Size	Wt./100 Pcs.
³ / ₈ " - ⁵ / ₈ "	16

Std Pkg: 25 · Wt/100 pcs: See chart above.

Lock Washer

AS 211 EG



Size	Wt./100 Pcs.
1⁄4"	0.3
3⁄8"	0.7
1/2"	1.5

Std Pkg: 100 · Wt/100 pcs: See chart above.

LEGEND:

GR: Powder Coated Supr-Green EG: Electro-Galvanized PG: Pre-Galvanized AL: Aluminum

HG: Hot Dipped Galvanized PL: Plain SS: Stainless Steel

ZTC: Zinc Trivalent Chromium Stainless Steel (**SS**), Zinc Trivalent Chromium (**ZTC**) and Hot Dipped Galvanized (**HG**) are specialty finishes. Pricing is located in the Specialty Strut Section of the Anvil–Strut price book.



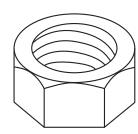
PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	_
Notes 1:	
Notes 2:	



Flat Washer Figs. AS 209, AS 3500, AS 211, AS 83, AS 209, AS 6108, AS 230

Hexagon Nut

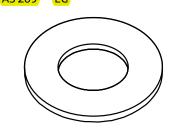
AS 83 EG



Size	Std. Pkg.	Wt./100 Pcs.
1/4"	500	0.6
3/8"	500	1.6
1/2"	100	4.8
5/8"	50	7.0
3/4"	50	12.0

Std Pkg & Wt/100 pcs: See chart above.

Flat Washer AS 209 EG

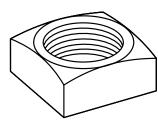


Size	Std. Pkg.	Wt./100 Pcs.
1⁄4"	200	0.7
3⁄8"	100	1.5
1/2"	100	3.5
5/8"	100	8.0
3/4"	100	11.0

Std Pkg & Wt/100 pcs: See chart above.

Square Nut

AS 6108 EG

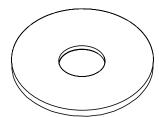


Size	Std. Pkg.	Wt./100 Pcs.
1/4"	100	0.9
⁵ /16 ["]	100	1.6
3/8"	100	2.7
1/2"	100	5.8

Std Pkg & Wt/100 pcs: See chart above.

Square Nut

AS 230 EG



Size	Std. Pkg.	Wt./100 Pcs.
1/4"	100	3.3
3/8"	100	3.0
1/2"	100	2.8

Std Pkg & Wt/100 pcs: See chart above.

LEGEND:

GR: Powder Coated Supr-Green EG: Electro-Galvanized PG: Pre-Galvanized AL: Aluminum
 HG: Hot Dipped Galvanized PL: Plain SS: Stainless Steel
 ZTC: Zinc Trivalent Chromium Stainless Steel (SS), Zinc Trivalent Chromium (ZTC) and Hot Dipped Galvanized (HG) are specialty finishes. Pricing is located in the Specialty Strut Section of the Anvil-Strut price book.



DURA-BLOK Rooftop Supports



DURA-BLOK[™] is made from 100% recycled rubber and qualifies for LEED credits. Reflective strips on both sides allow for easy product visibility.

Channels are through bolted on all sizes for added strength and a 1" (25.4mm) gap between blocks allows water to flow freely around longer assemblies.

Product composition is not sharp or abrasive, helping to extend the roof life and no penetration through the roof is required.

The DURA-BLOK dampens vibration, needs no supplemental rubber pad, and will not float or blow away.

The DURA-BLOK is UV resistant and is suitable for any type roofing material or other flat surface. For sloped surfaces see page 289 for adjustable hinge fitting (B634).

The open ends allow for easier adjustments to DBE, DBR, and DBM series supports. A drainage channel through the center of the block keeps water from pooling under the support.

DURA-BLOK can be used to support piping, HVAC/Ducts, roof walkways, conduit and cable tray.

DURA-BLOK Rooftop Supports

DB - Series

Base with Galv. Channel - 1" (25.4mm) high

Dimensions - 5" (127mm) High x 6" (152mm) Wide x Length (overall length) Material - 100% recycled rubber, UV resistant Ultimate Load Capacity - (uniform load) *

> DB5 = 500 lbs. (2.22kN) DB10 = 500 lbs. (2.22kN) DB20 = 1,000 lbs. (4.45kN) DB30 = 1,500 lbs. (6.67kN) DB40 = 2,000 lbs. (8.89kN) DB48 = 2,500 lbs. (11.12kN)



DURA-BLOK[™] DB-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. For sloped roofs see adjustable hinge fitting (B634).



Part No.	Heigh in. (m			idth (mm)	Overall in.	Length (mm)	Weigh Ibs.	t Each (kg)
DB5	5″ (12	27)	6″	(152)	4.8″	(122)	2.75	(1.25)
DB10	5″ (12	27)	6″	(152)	9.6″	(244)	5.28	(2.39)
DB20	5″ (12	27)	6″	(152)	20.2″	(513)	10.63	(4.82)
DB30	5″ (12	27)	6″	(152)	30.8″	(782)	15.99	(7.25)
DB40	5″ (12	27)	6″	(152)	41.4"	(1052)	21.34	(9.68)
DB48	5″ (12	27)	6″	(152)	52.0″	(1321)	26.70	(12.4)

For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 302.

* For Roof Loading, Consult Roofing Manufacturer or Engineer. As with most commercial roofs, the weakest point may be the insulation board beneath the rubber membrane.

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

DB6 - Series

Base with Galv. Channel - 27/16" (62mm) high

Dimensions - 6⁷/16" (163mm) High x 6" (152mm) Wide x Length (overall length) **Material -** 100% recycled rubber, UV resistant **Ultimate Load Capacity -** (uniform load) *

> DB610 = 500 lbs. (2.22kN) DB620 = 1,000 lbs. (4.45kN) DB630 = 1,500 lbs. (6.67kN) DB640 = 2,000 lbs. (8.89kN) DB648 = 2,500 lbs. (22.12kN)



DURA-BLOK[™] DB6-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. For sloped roofs see adjustable hinge fitting (B634).



Part No.	Height in. (mm)	Width in. (mm)	Overall Length in. (mm)	Weight Each Ibs. (kg)
DB610	6 ⁷ /16″ (167)	6" (152)	9.6″ (244)	6.36 (2.88)
DB620	6 ⁷ /16″ (167)	6″ (152)	20.2" (513)	12.90 (5.85)
DB630	6 ⁷ /16″ (167)	6″ (152)	30.8" (782)	19.45 (8.82)
DB640	6 ⁷ /16″ (167)	6″ (152)	41.4" (1052)	26.00 (11.79)
DB648	6 ⁷ /16″ (167)	6" (152)	52.0" (1321)	32.55 (14.76)

For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 302.

* For Roof Loading, Consult Roofing Manufacturer or Engineer. As with most commercial roofs, the weakest point may be the insulation board beneath the rubber membrane.

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