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Date: 2/21/2024 Return Request: 3/28/2024 Project: Little Rock West High School Supplier: Comfort Systems USA (Arkansas), Inc. Manufacturer: Various Submittal: Hangers & Supports for HVAC Submittal Number: 23 05 29-01 Drawing # and Installation: Mechanical Drawings

ARCHITECT

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GENERAL CONTRACTOR

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Notes:

ENGINEER

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MECHANICAL SUBCONTRACTOR

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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.



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



(ŲL)_{US}



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





Pipe Size 1/2" to 3/4"

Pipe Sizes 1" and Larger

			F	ig. 260: Dim	e <mark>nsions</mark> (in)	• Loads (lbs	i) • Weight (lbs)				
Pipe Size	Max Load	Span Ft.	Weight	Rod Size A	В	С	Rod Take Out E	Adjust. F	G	H Width Lower	
1/2	(10		0.34		23/16	211/	111/2				
3/4	610	7*	0.34		2	Ζ''/16	15/16				
1		1	0.35	37	25/16	3	15/8	5/8			
11/4	720		0.40	78	2 ³ / ₈	31/4	111/16		1/4	1	
11/2	730	9*	0.45		2 ¹³ /16	313/16	21/8	7/8		I	
2	-	10*	0.50		3 ⁵ / ₁₆	41/2	25/8	11/8			
2 ¹ / ₂		11*	0.65		41/16	51/2	33/16	15/16			
3	1,350	12*	0.85	1/2	4 ³ / ₄	61/2	4 ¹ / ₁₆	15/8	³ /8		
31/2	-	13*	1.10	1.10		5 ¹ / ₁₆	71/16	4 ³ / ₁₆	1 ¹³ /16		11/
4	1/130	14*	1.51	57	5 ⁹ /16	7 ¹³ /16	41/2	111/16	37	174	
5	1,430	16*	1.70	- 78	6%/16	815/16	51/2	115/16	3/8	13/16	
6	1,940	17*	3.10	37	615/16	101/4	5 ³ /4	111/16	1/2	17/	
8	2,000	19*	4.75	- 74	8³/8	1211/16	7 ³ / ₁₆	2		1716	
10	3,600	22*	8.60	7/	9 ⁷ / ₈	15 ¹ /4	87/16	21/8	57	1 ³ / ₄	
12	3,800	23*	11.20	- 78 -	11 ⁹ /16	1715/16	101/8	213/16	-78	2	
14	4,200	25*	12.50		12 ⁹ /16	19 ⁹ /16	1011/16	211/16	3/4	2	
16	4,600	27	19.85	1	14	22	12	2 ³ / ₄	1		
18	4,800	28	22.25		15 ¹⁵ /16	2415/16	1315/16	313/16	I	2.72	
20	4,800	30	40.33		17 ⁹ /16	27 ⁹ /16	15 ³ / ₁₆	27/	11/4	3	
24**	4,800	32	49.83	11/4	19 ¹³ /16	3113/16	17 ⁵ / ₁₆	578	7/8*		
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.





Universal C-type Clamp (Wide Throat) Fig. 93 (Formerly Afcon Fig. 105)



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

Rod Size Set Torque Max Loads ■ Weight C D		D	F	F	C	ц					
Α	Size	Value	Тор	Bottom	weight	U	U	E	Г	G	п
In.	In.	InLbs.	Lbs.	Lbs.	Lbs.	ln.	ln.	ln.	In.	ln.	In.
3/8	3/8	60	500	250	0.41	1 5/16	25/32	^{9/} 16	¹³ / ₁₆	3/8	⁵ /8
1/2	1/2	125	950	760	0.75	1 3/8	2 11/32	1/2	1 1/16	7/16	¹³ / ₁₆

Note:

Maximum temperature of 450° F

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 11/4".

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.
- Wider throat for attaching to flange with up to 11/4" thickness.

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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SS-01.18

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.	Are Sele	ea of ection			Х-Х	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 Lo	oading Data	
	Мах			Uniform Lo	ad at Deflectio	n	Мах		Max. Column Lo	ad Applied at C.G.	
Span or Allowable Unbraced Uniform Height Load	Allowable Uniform Load	Allowable Deflection Uniform at Uniform Load 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 Bean	n Load (X-X A	xis)				Column Lo	oading 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:











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:









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:











Pipe Series

Part Number	O.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

Approvals:











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



Size Range: 1/4" through 11/2" 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 $450^\circ F$ is at the discretion of the end user.



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

Rod Size A	Threads per loch	Max Load	Weight per Ft.	
		650° F		
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.



3.3.12 HDI+, HDI-L+, AND HDI DROP IN ANCHORS

PRODUCT DESCRIPTION

HDI+, HDI-L+, and HDI Drop-in anchors

Anchor System	Features and Benefits		
		 Anchor, setting tool and Hilti drill bit form a matched tolerance system to provide reliable fastenings 	
	HDI-L+ and HDI+ with Auto setting tools 1/4" to 1/2"	Allows shallow embedment without sacrificing performance	
		 Lip allows accurate flush surface setting, independent of hole depth for the HDI-L+ 	
		Ideal for repetitive fastenings with threaded rods of equal length	
		 HDI+ and HDI-L+ have an innovative stepped plug that reduces number of hammer blows by up to 50% 	
	HDI and Manual setting tool 5/8" to 3/4"	HDI+ and HDI-L+ can be installed with the new HDI+ Setting Tool system (stop drill bit and machine setting tool) for improved productivity	





Uncracked concrete

Fire sprinkler listings

Approvals/Listings	
FM (Factory Mutual)	Pipe hanger components for automatic sprinkler systems HDI+ 3/8, HDI-L+ 3/8, HDI+1/2, HDI-L+ 1/2, HDI 5/8 and HDI 3/4
	Pipe hanger equipment for fire protection services HDI+ 3/8, HDI-L+ 3/8,
	HDI+1/2, HDI-L+ 1/2, HDI 5/8 and HDI 3/4



INSTALLATION PARAMETERS

Table 1 - Hilti HDI+, HDI-L+ and HDI specifications¹

Catting Information	Symbol	Units	HDI+ and HDI-L+			HDI	
Setting mornation			1/4	3/8	1/2	5/8	3/4
Insert thread	d	UNC	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10
Nominal bit diameter	d _{bit}	in.	3/8	1/2	5/8	27/32	1
Nominal embedment Anchor length	h _{nom} ℓ	in.	1	1-9/16	2	2-9/16	3-3/16
Hole depth	h。	(mm)	(25)	(40)	(51)	(65)	(81)
Useable thread length	ρ	in.	7/16	5/8	11/16	7/8	1-3/8
	¹ th	(mm)	(11)	(15)	(17)	(22)	(34)
Installation torque	т	ft-lb	4	11	22	37	80
	inst	(Nm)	(5)	(15)	(30)	(50)	(109)
Minimum slab thickness	h	in.	3	3-1/8	4	5-1/8	6-3/8
		(mm)	(76)	(79)	(102)	(130)	(162)

MATERIAL SPECIFICATIONS

HDI+, HDI-L and HDI anchors are manufactured from mild carbon steel. Anchor bodies are zinc plated in accordance with ASTM B633, AC 1, Type III

HDI stainless steel anchors are manufactured from AISI Type 303 stainless steel

1 HDI+ and HDI-L+ are available in 1/4-, 3/8- and 1/2-in. The HDI is available in 5/8- and 3/4-in.

Anchor Fastening Technical Guide Edition 19 | 3.0 ANCHORING SYSTEMS | 3.3.12 HDI+, HDI-L+, AND HDI DROP IN ANCHORS Hilti, Inc. (U.S.) 1-800-879-8000 | en español 1-800-879-5000 | www.hilti.com | Hilti (Canada) Corporation | www.hilti.com | 1-800-363-4458

DESIGN DATA IN CONCRETE USING ALLOWABLE STRESS DESIGN

	Nominal		$f'_{c} = 1$	2,000			$f'_{c} = $	4,000		f' _c = 6,000			
Anchor type	anchor diameter in.	Tension	, lb (kN)	Shear,	lb (kN)	Tension	, lb (kN)	Shear,	lb (kN)	Tension	ı, lb (kN)	Shear,	lb (kN)
	1/4	385	(1.7)	450	(2.0)	510	(2.3)	625	(2.8)	640	(2.8)	700	(3.1)
HDI+	3/8	635	(2.8)	965	(4.3)	920	(4.1)	1,250	(5.6)	1,260	(5.6)	1,500	(6.7)
	1/2	945	(4.2)	1,500	(6.7)	1,605	(7.1)	2,125	(9.5)	1,950	(8.7)	2,500	(11.1)
	5/8	1,875	(8.3)	2,500	(11.1)	2,920	(13.0)	3,250	(14.5)	3,715	(16.5)	3,750	(16.7)
	3/4	2,500	(11.1)	3,875	(17.2)	4,065	(18.1)	5,000	(22.2)	5,565	(24.8)	5,500	(24.5)

Table 2 - Hilti HDI+, HDI-L+ and HDI carbon steel allowable loads in concrete^{1,2}

Table 3 - Hilti HDI+, HDI-L+ and HDI carbon steel ultimate loads in concrete¹

	Nominal		f'_c =	2,000			f'_c =	4,000		f' _c = 6,000			
Anchor type	anchor diameter in.	Tension	i, lb (kN)	Shear,	lb (kN)	Tension	, lb (kN)	Shear,	lb (kN)	Tension	ı, lb (kN)	Shear,	lb (kN)
	1/4	1,535	(6.8)	1,800	(8.0)	2,040	(9.1)	2,500	(11.1)	2,555	(11.4)	2,800	(12.5)
HDI+	3/8	2,540	(11.3)	3,850	(17.1)	3,685	(16.4)	5,000	(22.2)	5,035	(22.4)	6,000	(26.7)
	1/2	3,780	(16.8)	6,000	(26.7)	6,425	(28.6)	8,500	(37.8)	7,810	(34.7)	10,000	(44.5)
	5/8	7,500	(33.4)	10,000	(44.5)	11,685	(52.0)	13,000	(57.8)	14,865	(66.1)	15,000	(66.7)
דוטח+	3/4	10,000	(44.5)	15,500	(68.9)	16,260	(72.3)	20,000	(89.0)	22,250	(99.0)	22,000	(97.9)

1 The shear tests were conducted with SAE Grade 5 bolts with minimum yield strength of 85 ksi and minimum tension strength of 120 ksi. Shear testing for the 1/4-in. models were conducted with SAE Grade 8 bolts with minimum yield strength of 120 ksi and minimum tension strength of 150 ksi in 6,000 psi concrete. High-strength bolts were used to force concrete failure modes. When using steel bolts with a lower tensile strength, steel failure must be considered.

2 Allowable loads calculated with a factor of safety of 4.

Table 4 - Hilti HDI+, HDI-L+ and HDI carbon steel allowable loads in lightweight concrete and lightweight concrete poured over metal deck^{1,2,3,4}

	Nominal						3,0	00 psi ligh	tweight co	oncrete ov	er metal d	eck	
Anchor	anchor diameter	3,000) psi lightv	veight con	ocrete		Uppe	r flute		Lower flute			
type	in.	Tension	i, lb (kN)	Shear,	lb (kN)	Tensior	i, lb (kN)	Shear,	lb (kN)	Tension	n, Ib (kN)	Shear,	lb (kN)
	1/4	465	(2.1)	340	(1.5)	530	(2.4)	335	(1.5)	375	(1.7)	250	(1.1)
HDI+	3/8	720	(3.2)	940	(4.2)	810	(3.6)	1,010	(4.5)	500	(2.2)	500	(2.2)
	1/2	1,035	(4.6)	1,700	(7.6)	1,035	(4.6)	1,755	(7.8)	625	(2.8)	750	(3.3)
	5/8	1,465	(6.5)	2,835	(12.6)		-		-	875	(3.9)	875	(3.9)
	3/4	2,075	(9.2)	3,680	(16.4)		-		-	1,250	(5.6)	1,000	(4.4)

1 The shear tests were conducted with SAE Grade 5 bolts with minimum yield strength of 85 ksi and minimum tension strength of 120 ksi. Shear testing for the 1/4-in. models were conducted with SAE Grade 8 bolts with minimum yield strength of 120 ksi and minimum tension strength of 150 ksi in 6,000 psi concrete. High-strength bolts were used to force concrete failure modes. When using steel bolts with a lower tensile strength, steel failure must be considered.

2 Minimum compressive strength of structural lightweight concrete is 3,000 psi.

3 See figure 1 for typical details.

4 Allowable loads calculated with a factor of safety of 4.

Table 5 - Hilti HDI stainless steel allowable loads in concrete^{1,2,3}

Nominal			$f'_{\rm c} = f'_{\rm c}$	4,000		f' _c = 6,000				
anchor diameter in.	Nominal anchor	Tensior	ı, lb (kN)	Shear,	lb (kN)	Tension	ı, lb (kN)	Shear,	lb (kN)	
	1/4	480	(2.1)	600	(2.7)	740	(3.3)	600	(2.7)	
HDI+	3/8	1,040	(4.6)	1,230	(5.5)	1,460	(6.5)	1,230	(5.5)	
	1/2	1,840	(8.2)	2,760	(12.3)	2,410	(10.7)	2,760	(12.3)	
	5/8	2,630	(11.7)	4,510	(20.1)	3,770	(16.8)	4,510	(20.1)	
	3/4	3,830	(17.0)	5,580	(24.8)	5,030	(22.4)	5,580	(24.8)	

Table 6 - Hilti HDI stainless steel ultimate loads in concrete^{1,2}

Nominal			$f'_{\rm c} = f'_{\rm c}$	4,000		f' _c = 6,000				
anchor diameter in.	Nominal anchor	Tension	, lb (kN)	Shear,	lb (kN)	Tension	ı, lb (kN)	Shear,	lb (kN)	
-	1/4	1,930	(8.6)	2,400	(10.7)	2,950	(13.1)	2,400	(10.7)	
HDI+	3/8	4,170	(18.5)	4,920	(21.9)	5,850	(26.0)	4,920	(21.9)	
	1/2	7,350	(32.7)	11,040	(49.1)	9,630	(42.8)	11,040	(49.1)	
	5/8	10,540	(46.9)	18,040	(80.2)	15,100	(67.2)	18,040	(80.2)	
	3/4	15,340	(68.2)	22,320	(99.3)	20,130	(89.5)	22,320	(99.3)	

1 Stainless steel models available in HDI version only.

2 Shear testing conducted with 18-8 stainless steel bolts.

3 Allowable loads calculated with a factor of safety of 4.

Figure 1 - Installation of Hilti HDI+ and HDI drop-in anchor in the soffit of concrete over metal deck floor and roof assemblies W – deck



Combined shear and tension loading

$$\left(\begin{array}{c} {\sf N}_{\sf d} \\ {\sf N}_{\sf rec} \end{array}
ight)^{5/3}$$
 + $\left(\begin{array}{c} {\sf V}_{\sf d} \\ {\sf V}_{\sf rec} \end{array}
ight)^{5/3} \leq 1.0$

3.3.12



Anchor spacing and edge distance guidelines

Anchor spacing adjustment factors

s = Actual Spacing s_{min} = 2.0 h_{nom} s_{cr} = 3.5 h_{nom}



Anchor spacing adjustment Factor



Edge distance adjustment factors

2.0 h_{nom}

= 3.0 h_{nom}

= Actual edge distance

С

c_{min} =

C

Edge distance adjustment factor



Influence of anchor spacing and edge distance $f_{\rm A}$ and $f_{\rm R}$

Anche	or Size	h	om
in.	(mm)	in.	(mm)
1/4	(6.4)	1	(25)
3/8	(9.5)	1-9/16	(40)
1/2	(12.7)	2	(51)
5/8	(15.8)	2-9/16	(65)
3/4	(19.1)	3-3/16	(81)

h_{nom} = nominal embedment depth

Table 7 - Load adjustment factors for Hilti HDI drop-in anchors in concrete

Load	adjustr	nent fa	ctors fo	r ancho	r spacir	ng f_{A}			L	oad adji	ustment	t factors	for edg	ge dista	nce $f_{\rm R}$			
		Tensio	n/shear	loads			Tension f _{RN}							Shear $f_{_{\rm RV}}$				
Spac	ing s		Ancl	nor diam	neter		Edge distance c Anchor diameter							Ancł	nor dian	neter		
in.	(mm)	1/4	3/8	1/2	5/8	3/4	in.	(mm)	1/4	3/8	1/2	5/8	3/4	1/4	3/8	1/2	5/8	3/4
2	(51)	.50					2	(51)	.80					.65				
2-1/2	(64)	.67					2-1/2	(64)	.90					.83				
3	(76)	.83	.50				3	(76)	1.0	.80				1.0	.65			
3-1/2	(89)	1.0	.58				3-1/2	(89)		.85					.73			
4	(102)		.69	.50			4	(102)		.91	.80				.85	.65		
4-1/2	(114)		.79	.58			4-1/2	(114)		.98	.85				.96	.74		
5	(127)		.90	.67	.50		5	(127)		1.0	.90	.80			1.0	.83	.65	
5-1/2	(140)		1.0	.75	.55		5-1/2	(140)			.95	.83				.91	.70	
6	(152)			.83	.61	.50	6	(152)			1.0	.87				1.0	.77	
7	(178)			1.0	.74	.57	6-1/2	(165)				.91	.80				.84	.65
8	(203)				.87	.67	7	(178)				.95	.84				.91	.72
9	(229)				1.0	.77	8	(203)				1.0	.90				1.0	.83
10	(254)					.88	9	(229)					.96					.94
11	(279)					.98	10	(254)					1.0					1.0
12	(305)					1.0												
	$s_{min} = 2.0 h_{nom}$ $s_{cr} = 3.5 h_{nom}$						c _{min} =2.	0 h _{nom}	C _{cr} = 3	3.0 h _{nom}			$c_{min} = 2.0 h_{nom} c_{cr} = 3.0 h_{nom}$					
$f_{A} = 0.33 \frac{s}{h_{rom}} - 0.17$						$f_{\rm RN} =$	$0.2 \frac{c}{h}$	+ 0.	4			$f_{\rm RV} = 0.35 \frac{0}{h_{\rm nom}} - 0.05$						
			for s _{cr} 3	> s > s _{mi}	n					for c _{cr} >	• c > c _{min}				fo	r c _{cr} > c	> c _{min}	

INSTALLATION INSTRUCTIONS

Manufacturer's Printed Installation Instructions (MPII) are included with each product package. They can also be viewed or downloaded at www.hilti.com. Because of the possibility of changes, always verify that downloaded MPII are current when used. Proper installation is critical to achieve full performance. Training is available on request. Contact Hilti Technical Services for applications and conditions not addressed in the MPII.

ORDERING INFORMATION¹

HDI+, HDI-L+ and HDI

Carbon steel (Interior Use)

Description	Description	Anchor thread size	Qty / box
HDI+ 1/4	HDI-L+ 1/4	1/4	100
HDI+ 3/8	HDI-L+ 3/8	3/8	50
HDI+ 1/2	HDI-L+ 1/2	1/2	50
HDI 5/8	-	5/8	25
HDI 3/4	-	3/4	25

HDI-SS anchors

Stainless steel (Exterior Use)

Description	Anchor thread size	Qty / box
HDI 1/4 SS303	1/4	100
HDI 3/8 SS303	3/8	50
HDI 1/2 SS303	1/2	50
HDI 5/8 SS303	5/8	25
HDI 3/4 SS303	3/4	25

Setting tools for HDI and HDI-SS anchors

Description	Anchor thread size	
HST 5/8 Setting Tool	5/8	,
HST 3/4 Setting Tool	3/4	

Setting Tools for HDI+ and HDI-L+

Anchor thread size	Description
	HST 1/4 Setting tool
1/4	HSD-MM 1/4 (TE-C-24D6 1/4 Setting tool)
	HDI+ Setting Tool includes a TE-CX 3/8x1 carbide bit
	HST 3/8 Setting tool
3/8	HSD-MM 3/8 (TE-C-24SD10 3/8 Setting tool)
	HDI+ Setting Tool includes a TE-CX 1/2X1-9/16 carbide bit
	HST 1/2 Setting tool
1/2	HSD-MM 1/2 (TE-C-24SD12 1/2 Setting tool)
	HDI+ Setting Tool includes a TE-CX 5/8x2 carbide bit



1 All dimensions in inches



3.3.12



3.3.5 KWIK BOLT TZ EXPANSION ANCHOR

PRODUCT DESCRIPTION

KWIK Bolt TZ carbon steel and stainless steel anchors





Uncracked

concrete



Cracked

concrete

Grout-filled concrete masonry



Seismic Design Categories A-F



SAFE-ET

Profis Anchor design software

00000 Fire sprinkler listings

00000

Approvals/Listings	
ICC-ES (International Code Council)	ESR-1917 in concrete per ACI 318-14 Ch. 17 / ACI 355.2/ ICC-ES AC193
- 2018 International Building Code / International	ESR-3785 in grout-filled CMU per ICC-ES AC01
Residential Code (IBC/IRC)	ELC-1917 in concrete per CSA A23.3-14 / ACI 355.2
- 2015 National Building Code of Canada (NBC-C)	
City of Los Angeles	2017 LABC Supplement (within ESR-1917)
City of Los Angeles	RR 26057 grout-filled CMU
Florida Building Code	2010 FBC with HVHZ
FM (Factory Mutual)	Pipe hanger components for automatic sprinkler systems 3/8 through 3/4
UL and cUL (Underwriters Laboratory)	Pipe hanger equipment for fire protection services for 3/8 through 3/4



MATERIAL SPECIFICATIONS

Carbon steel with electroplated zinc

Carbon steel KB-TZ anchors have the following minimum bolt fracture loads.1

Anchor diameter (in.)	Shear (lb)	Tension (lb)
3/8	NA	6,744
1/2	7,419	11,240
5/8	11,465	17,535
3/4	17,535	25,853

Carbon steel anchor components plated in accordance with ASTM B633 to a minimum thickness of 5 µm.

Nuts conform to the requirements of ASTM A563, Grade A, Hex.

Washers meet the requirements of ASTM F844.

Expansion sleeves (wedges) are manufactured from type 316 stainless steel

Stainless steel

Stainless steel KB-TZ anchors are made of type 304 or 316 material and have the following minimum bolt fracture loads.¹

Anchor diameter (in.)	Shear (lb)	Tension (lb)
3/8	5,058	6,519
1/2	8,543	12,364
5/8	13,938	19,109
3/4	22,481	24,729

All nuts and washers for type 304 anchors are made from type 304 stainless.

All nuts and washers for type 316 anchors are made from type 316 stainless.

Nuts meet the dimensional requirements of ASTM F594.

Washers meet the dimensional requirements of ANSI B18.22.1, Type A, plain.

Expansion sleeve (wedges) are made from type 316 stainless steel.

1 Bolt fracture loads are determined by testing in a universal tensile machine for quality control at the manufacturing facility. These loads are not intended for design purposes. See tables 4 and 16 for the steel design strengths of carbon steel and stainless steel, respectively.

INSTALLATION PARAMETERS

Figure 1 - Hilti KWIK Bolt TZ specifications



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3.3.5

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.	Height in. (mm)	Width in. (mm)	Overall Length in. (mm)	Weight Each Ibs. (kg)
DB5	5″ (127)	6″ (152)	4.8″ (122)	2.75 (1.25)
DB10	5″ (127)	6″ (152)	9.6" (244)	5.28 (2.39)
DB20	5″ (127)	6″ (152)	20.2" (513)	10.63 (4.82)
DB30	5″ (127)	6″ (152)	30.8" (782)	15.99 (7.25)
DB40	5″ (127)	6″ (152)	41.4" (1052)	21.34 (9.68)
DB48	5" (127)	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.

DURA-BLOK Rooftop Supports

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.