

# SHOP SUBMITTAL / DRAWING REVIEW



**SW Associates**  
1700 Pacific Ave  
Suite 2100 LB 178  
Dallas, TX 75201  
[www.swaengineers.com](http://www.swaengineers.com)  
Tel 214.397.0211

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**Project Name:** Jules E. Muchert Renovation      **From:** SWA Consulting Engineers

**Project No:** 13333

**Description:** 22 05 29 Hangers and Supports Submittal - Submittal

SW Associates Consulting Engineers	Engineer's review is for general compliance with the design concept and contract documents. Markings or comments or the lack thereof shall not be construed as relieving the Contractor from compliance with the project plans and specifications. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of construction, for performing this work in a safe manner and for coordinating his work with that of other trades
<input checked="" type="checkbox"/> No Exception Taken	This review does not constitute approval or acceptance of deviations from contract documents, such deviations if any must be requested in writing or clearly identified as deviations in accordance with contract documents.
<input type="checkbox"/> Make Corrections Noted	
<input type="checkbox"/> Revise and Submit	
<input type="checkbox"/> Rejected	
SWA Project No. 13333	Submittal No. <b>22 05 29</b>
Date 3-26-19	Checked By: Carlos Saavedra

**Comments:**

# SUBMITTAL TRANSMITTAL

CONTRACTOR'S REVIEW STAMP

A/E REVIEW STAMP

**DENCO CONSTRUCTION SPECIALISTS  
SHOP DRAWING AND SUBMITTAL REVIEW**

JOB NO.  DPA-220529   
DATE  3-12-19   
REVIEWER  Shawnee Hallmark

Corrections or comments made relative to submittals during this review do not relieve the subcontractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The subcontractor is responsible for conforming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of other trades and performing his work in a safe and satisfactory manner.

**THIS REVIEW DOES NOT INDICATE NOR IMPLY ANY APPROVAL  
OF CHANGES TO TIME OR CHANGES IN COSTS**

**SUBMITTAL DATA**

Project  Dallas Park & Rec Dept Admin Offices  Location  10031 E. Northwest Highway Dallas, TX 75238   
General Contractor  DENCO CONSTRUCTION SPECIALISTS   
Trade  Plumbing   
Items Submitted  Hangers and Supports   
Supplier  Southwest Mechanical  Phone  21-325-3475   
Substitutions and Deviations \_\_\_\_\_  
Remarks \_\_\_\_\_

I CERTIFY THAT THE ABOVE ITEM DESCRIBED IN THE ATTACHED SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS EXCEPT AS NOTED ABOVE.

Shawnee Hallmark   972-226-2609 ext. 108   3-12-19

NAME (TRADE) PHONE NO. DATE

Review Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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# Pipe Hangers

## B3100 - Standard Clevis Hanger

### SLIDE-RITE™ Clevis Hanger Features

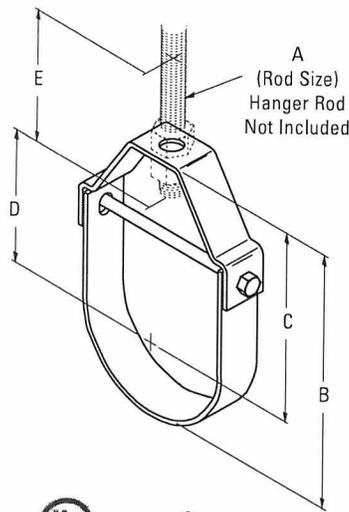
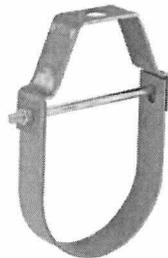
Pipe will not 'pinch' when installing.

15° swing in either direction allows pipe to easily feed thru.

Engineered design aligns bolt holes for quicker overhead installation.

\*SLIDE-RITE™ Clevis Hanger design, as shown below, for sizes 2, 2½, 3, 4, 5 & 6.

Pat. No. 5,848,770  
5,924,655



Component of State of California OSHPD Approved Seismic Restraints System

B  
Bottom of pipe to top of hanger.

C  
Center of pipe to top of hanger.

D  
Rod Take-Out  
Center of pipe to bottom of hanger rod.

E  
Minimum thread length of hanger rod

F  
Adjustment  
Top of cross bolt to bottom of hanger rod nut inside the hanger.



Part No.	Nominal Pipe Size		Rod Size A		B		C		D	
	in.	(mm)	Std	NFPA**	in.	(mm)	in.	(mm)	in.	(mm)
B3100-1/2	1/2"	(15)	3/8"-16	3/8"-16	2 1/8"	(54.0)	1 3/4"	(44.4)	1 5/16"	(23.8)
B3100-3/4	3/4"	(20)	3/8"-16	3/8"-16	2 1/2"	(63.5)	2"	(50.8)	1 1/8"	(28.6)
B3100-1	1"	(25)	3/8"-16	3/8"-16	2 7/8"	(73.0)	2 1/4"	(57.1)	1 3/8"	(34.9)
B3100-1 1/4	1 1/4"	(32)	3/8"-16	3/8"-16	3 1/2"	(88.9)	2 11/16"	(68.2)	1 13/16"	(46.0)
B3100-1 1/2	1 1/2"	(40)	3/8"-16	3/8"-16	4"	(101.6)	3 1/16"	(77.8)	2 1/4"	(57.1)
B3100-2 *	2"	(50)	3/8"-16	3/8"-16	4 1/2"	(114.3)	3 5/16"	(84.1)	2 1/2"	(63.5)
B3100-2 1/2 *	2 1/2"	(65)	1/2"-13	3/8"-16	5 3/8"	(136.5)	3 15/16"	(100.0)	3 1/16"	(77.8)
B3100-3 *	3"	(80)	1/2"-13	3/8"-16	6 1/2"	(165.1)	4 3/4"	(120.6)	3 15/16"	(100.0)
B3100-3 1/2	3 1/2"	(90)	1/2"-13	3/8"-16	7 1/4"	(184.1)	5 1/4"	(133.3)	4 1/16"	(103.2)
B3100-4 *	4"	(100)	5/8"-11	3/8"-16	7 3/4"	(196.8)	5 1/2"	(139.7)	5 1/2"	(139.7)
B3100-5 *	5"	(125)	5/8"-11	1/2"-13	8 3/4"	(222.2)	6 1/8"	(155.6)	6"	(152.4)
B3100-6 *	6"	(150)	3/4"-10	1/2"-13	10 5/16"	(261.9)	6 15/16"	(176.2)	7"	(177.8)
B3100-8	8"	(200)	3/4"-10	1/2"-13	12 3/4"	(323.8)	8 7/16"	(214.3)	7 1/8"	(181.0)
B3100-10	10"	(250)	7/8"-9	5/8"-11	15 1/8"	(384.2)	9 3/4"	(247.6)	8 3/8"	(212.7)
B3100-12	12"	(300)	7/8"-9	5/8"-11	17 1/2"	(444.5)	11 1/8"	(282.6)	9 11/16"	(246.1)
B3100-14	14"	(350)	1"-8	--	19 3/8"	(492.1)	12 3/8"	(314.3)	10 5/8"	(269.9)
B3100-16	16"	(400)	1"-8	--	21 3/8"	(542.9)	13 3/8"	(339.7)	11 9/16"	(293.7)
B3100-18	18"	(450)	1"-8	--	25"	(635.0)	16"	(406.4)	14 3/16"	(360.3)
B3100-20	20"	(500)	1 1/4"-7	--	28 3/4"	(730.2)	17 3/4"	(450.8)	16 5/8"	(422.3)
B3100-24	24"	(600)	1 1/4"-7	--	32 3/4"	(831.8)	19 3/4"	(501.6)	18 5/8"	(473.1)
B3100-30	30"	(750)	1 1/4"-7	--	39 15/16"	(1014.4)	24 15/16"	(633.4)	22 3/4"	(577.8)
B3100-36	36"	(900)	1 1/4"-7	--	46"	(1168.4)	28"	(711.2)	25"	(635.0)

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

## B3100 - Standard Clevis Hanger

Component of State of California OSHPD Approved Seismic Restraints System

**Size Range:** 1/2" (15mm) to 36" (900mm)

**Material:** Steel

**Function:** Recommended for the suspension of non-insulated pipe or insulated pipe with a B3151 shield.

**Note:** When an oversized clevis is used, a pipe spacer should be placed over the cross bolt to assure that the lower U-strap will not move in on the bolt. When attaching seismic bracing to the clevis hangers, a Fig. 1CBS (cross bolt spacer) must be installed. See Seismic Restraints Approval Guidelines.

**Order pipe sleeves Fig. 1CBS-(pipe size) separately.**

**Approvals:** Included in our Seismic Restraints Catalog approved by the State of California Office of Statewide Health Planning and Development (OSHPD). For additional load, spacing and placement information relating to OSHPD projects, please refer to the B-Line/TOLCO Seismic Restraint Systems Guidelines. Underwriter's Laboratories Listed in the USA (UL) and Canada (cUL) for sizes 3/4" (20mm) thru 12" (300mm). Factory Mutual Engineering Approved (FM) for 3/4" (20mm) thru 12" (300mm) pipe. Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 1 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 1. Also available to accommodate rod schedule per National Fire Protection Association (NFPA) Pamphlet 13.

**Maximum Temperature:** 650°F (343°C).

**Standard Finish:** Plain, Electro-Galvanized, DURA GREEN™, or Hot-Dip Galvanized also available in Stainless Steel



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

For AWWA - Ductile Iron Clevis Hangers, see B3102, page 52.

**Special Note:** Do not use the dimensions shown in the B3100 chart for NFPA hanger sizes. Contact customer service for NFPA rod sizing on 1/2" (15mm) thru 12" (300mm) pipe. Part numbers will be 1NFPA-pipe size.

Part No.	E		Adjustment F		Design Load		Approx. Wt./100	
	in.	(mm)	in.	(mm)	Lbs.	(kN)	Lbs.	(kg)
B3100-1/2	2 1/2"	(63.5)	7/16"	(11.1)	730	(3.25)	25	(11.3)
B3100-3/4	2 1/2"	(63.5)	1/2"	(12.7)	730	(3.25)	29	(13.1)
B3100-1	2 1/2"	(63.5)	5/8"	(15.9)	730	(3.25)	35	(15.9)
B3100-1 1/4	2 1/2"	(63.5)	7/8"	(22.2)	730	(3.25)	40	(18.1)
B3100-1 1/2	2 1/2"	(63.5)	1 3/16"	(30.2)	730	(3.25)	42	(19.0)
B3100-2 *	2 1/2"	(63.5)	1 5/8"	(41.3)	730	(3.25)	52	(23.6)
B3100-2 1/2 *	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	90	(40.8)
B3100-3 *	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	110	(49.9)
B3100-3 1/2	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	142	(64.4)
B3100-4 *	2 1/2"	(63.5)	2"	(50.8)	1430	(6.36)	132	(59.9)
B3100-5 *	2 1/2"	(63.5)	2"	(50.8)	1430	(6.36)	215	(97.5)
B3100-6 *	3"	(76.2)	2"	(50.8)	1940	(8.63)	320	(145.1)
B3100-8	3 1/2"	(88.9)	2 5/16"	(58.7)	2000	(8.89)	485	(220.0)
B3100-10	3 1/2"	(88.9)	2 5/16"	(58.7)	3600	(16.01)	846	(383.7)
B3100-12	3 1/2"	(88.9)	2 5/8"	(66.7)	3800	(16.90)	1083	(491.2)
B3100-14	4"	(101.6)	2 7/8"	(73.0)	4200	(18.68)	1432	(649.5)
B3100-16	4"	(101.6)	2 11/16"	(68.3)	4600	(20.46)	2200	(997.9)
B3100-18	4 1/2"	(114.3)	3 15/16"	(100.0)	4800	(21.35)	2500	(1134.0)
B3100-20	5"	(127.0)	5 3/8"	(136.5)	4800	(21.35)	4400	(1995.8)
B3100-24	5"	(127.0)	5 3/8"	(136.5)	4800	(21.35)	5000	(2268.0)
B3100-30	5"	(127.0)	6 1/4"	(158.7)	6000	(26.69)	6600	(2993.7)
B3100-36	5"	(127.0)	5 7/16"	(138.1)	6000	(26.69)	8474	(3843.8)

\*SLIDE-RITE™ Clevis Hanger design, as shown above, for sizes 2, 2 1/2, 3, 4, 5 & 6.

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

# Pipe Hangers

## B3100C - Standard Clevis Hanger - Plastic Coated B3100F - Standard Clevis Hanger - Felt Lined for Copper Tubing

**Size Range:** 1/2" (15mm) to 8" (200mm) pipe

**Material:** Steel

**Insulation Material:** 3/16" (4.8mm) Felt

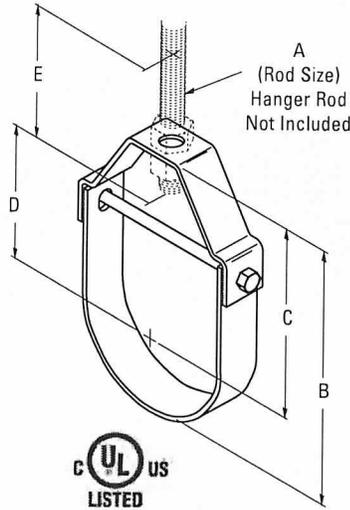
**Service:** The B3100F is designed for the suspension of copper tube so as to prevent electrolysis between tubing and hanger. The B3100C is designed for steel or other pipe types of the same O.D. Both B3100F and B3100C act to reduce noise and vibration in pipe or tubing systems.

**Approvals:** Underwriter's Laboratories Listed in the USA (UL) and Canada (cUL).

**Maximum Temperature:** 650°F (343°C).

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

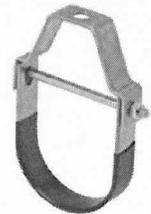
**Order By:** Part number and finish.



- B Bottom of pipe to top of hanger.
- C Center of pipe to top of hanger.
- D Rod Take-Out  
Center of pipe to bottom of hanger rod.
- E Minimum thread length of hanger rod
- F Adjustment  
Top of cross bolt to bottom of hanger rod nut inside the hanger.

Part No.	Pipe Size		Rod Size A	B		C		D	
	in.	(mm)		in.	(mm)	in.	(mm)	in.	(mm)
B3100-1/2	1/2"	(15)	3/8"-16	2 1/8"	(54.0)	1 1/16"	(42.9)	15/16"	(23.8)
B3100-3/4	3/4"	(20)	3/8"-16	2 7/16"	(61.9)	1 7/8"	(47.6)	1 1/8"	(28.6)
B3100-1	1"	(25)	3/8"-16	2 13/16"	(71.4)	2 1/8"	(54.0)	1 3/8"	(34.9)
B3100-1 1/4	1 1/4"	(32)	3/8"-16	3 7/16"	(87.3)	2 9/16"	(65.1)	1 13/16"	(46.0)
B3100-1 1/2	1 1/2"	(40)	3/8"-16	4"	(101.6)	3"	(76.2)	2 1/4"	(57.1)
B3100-2	2"	(50)	3/8"-16	4 1/2"	(114.3)	3 1/4"	(82.5)	2 1/2"	(63.5)
B3100-2 1/2	2 1/2"	(65)	1/2"-13	5 9/16"	(141.3)	4"	(101.6)	3 1/16"	(77.8)
B3100-3	3"	(80)	1/2"-13	6 3/4"	(171.4)	4 7/8"	(123.8)	3 15/16"	(100.0)
B3100-3 1/2	3 1/2"	(90)	1/2"-13	7"	(177.8)	5"	(127.0)	4 1/16"	(103.2)
B3100-4	4"	(100)	5/8"-11	7 13/16"	(198.4)	5 1/2"	(139.7)	4 3/8"	(111.1)
B3100-5	5"	(125)	5/8"-11	9 1/16"	(230.2)	6 1/8"	(155.6)	5"	(127.0)
B3100-6	6"	(150)	3/4"-10	10 7/16"	(265.1)	6 15/16"	(176.2)	5 11/16"	(144.5)
B3100-8	8"	(200)	3/4"-10	12 3/4"	(323.8)	8 3/8"	(212.7)	7 1/8"	(181.0)

Part No.	E		Adjustment F		Design Load		Approx. Wt./100	
	in.	(mm)	in.	(mm)	Lbs.	(kN)	Lbs.	(kg)
B3100-1/2	2 1/2"	(63.5)	7/16"	(11.1)	730	(3.25)	25	(11.3)
B3100-3/4	2 1/2"	(63.5)	1/2"	(12.7)	730	(3.25)	29	(13.1)
B3100-1	2 1/2"	(63.5)	5/8"	(15.9)	730	(3.25)	35	(15.9)
B3100-1 1/4	2 1/2"	(63.5)	7/8"	(22.2)	730	(3.25)	40	(18.1)
B3100-1 1/2	2 1/2"	(63.5)	1 3/16"	(30.2)	730	(3.25)	42	(19.0)
B3100-2	2 1/2"	(63.5)	1 5/8"	(41.3)	730	(3.25)	52	(23.6)
B3100-2 1/2	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	90	(40.8)
B3100-3	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	110	(49.9)
B3100-3 1/2	2 1/2"	(63.5)	2"	(50.8)	1350	(6.00)	142	(64.4)
B3100-4	2 1/2"	(63.5)	2"	(50.8)	1430	(6.36)	132	(59.9)
B3100-5	2 1/2"	(63.5)	2"	(50.8)	1430	(6.36)	215	(97.5)
B3100-6	3"	(76.2)	2"	(50.8)	1940	(8.63)	320	(145.1)
B3100-8	3 1/2"	(88.9)	2 5/16"	(58.7)	2000	(8.89)	485	(220.0)



**B3100C**



**B3100F**

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

801.971.9993  
(toll-free: 801.733.9993)

844 South 430 West, Heber  
City, UT

sales@miroind.com  
(mailto:sales@miroind.com)

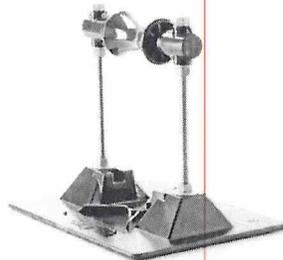
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Type Product Name

**SPECIFIER RESOURCES**  
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### 3-RAH-8

A "roller-bearing" pipe support used to support roof-mounted gas pipes, electrical conduit, solar piping and other mechanical piping. Unique design absorbs thermal expansion and contraction of pipes thus preventing damage to the roof membrane. Pipes rest on a self-lubricating polycarbonate resin roller rod and roller. The pipe support base is made of polycarbonate resin, the supporting all-thread and all metal parts are made of stainless steel. Pipestand will accommodate up to 3 3/4" (outside diameter) pipes.

[👉 Contact Your Rep to Buy](#)  
(https://www.miroind.com/rep-locator/)

Previous model name: 3-RAH-7

SKU: 3-RAH-8 Category: [Roller Supports](#)  
(https://www.miroind.com/product-category/roller-supports/)

Description	Accessories	Gallery	Downloads
<b>DESCRIPTION</b>			
<b>BASE MATERIAL</b>	Polycarbonate		
<b>SIZE</b>	The deck base is 7.5" by 10" and the maximum cradle width is 4".		
<b>MAX PIPE SIZE</b>	3.75" outside diameter.		
<b>MAX PIPE CLEARANCE</b>	Minimum clearance height of 3.875" and maximum clearance height of 8".		
<b>MAX LOAD WEIGHT</b>	Maximum load weight may not exceed 172 lbs. per pipestand		
<b>SPACING</b>	Manufacturer's recommended spacing is not to exceed 10 foot centers depending upon the load.		