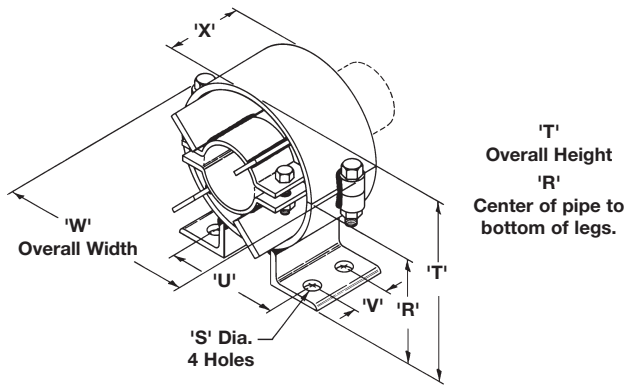


Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Black Primer

Service: Designed for use in directing thermal expansion of insulated or non-insulated pipe in the direction permitted by expansion joints or loops. The use of two or more guides on both sides of an expansion joint or loop is recommended. Pipe lines should be supported with hangers or rollers so that when properly installed, the guides will not be supporting any pipe loads. Maximum operating temperature should not exceed 750°F (399°C).

Ordering: Specify part number and finish. For use with copper tubing, add CT suffix to the part number.

Figure B3281 thru B3287 Pipe Alignment Guide

Body Size	'R'		'S'		'T'		'U'		'V'	
001	3 ¹ / ₂ "	(88.9)	5 ⁸ / ₈ "	(15.9)	5 ⁷ / ₈ "	(149.2)	4 ¹ / ₈ "	(104.8)	1 ³ / ₄ "	(44.4)
002	4"	(101.6)	5 ⁸ / ₈ "	(15.9)	6 ³ / ₄ "	(171.4)	4 ³ / ₈ "	(111.1)	1 ³ / ₄ "	(44.4)
003	4 ³ / ₈ "	(111.1)	5 ⁸ / ₈ "	(15.9)	7 ⁵ / ₈ "	(193.7)	5 ¹ / ₈ "	(130.2)	1 ³ / ₄ "	(44.4)
004	5 ¹ / ₄ "	(133.3)	5 ⁸ / ₈ "	(15.9)	9 ¹ / ₄ "	(234.9)	6 ¹ / ₈ "	(155.6)	1 ³ / ₄ "	(44.4)
005	6 ¹ / ₄ "	(158.7)	5 ⁸ / ₈ "	(15.9)	11 ⁵ / ₈ "	(295.3)	7"	(177.8)	2 ³ / ₄ "	(69.8)
006	7"	(177.8)	5 ⁸ / ₈ "	(15.9)	13 ³ / ₈ "	(339.7)	8 ¹ / ₄ "	(209.5)	2 ³ / ₄ "	(69.8)
007	7 ⁷ / ₈ "	(200.0)	3 ⁴ / ₄ "	(19.0)	15 ¹ / ₈ "	(384.2)	9 ⁷ / ₈ "	(250.8)	4"	(101.6)
008	8 ⁷ / ₈ "	(225.4)	3 ⁴ / ₄ "	(19.0)	17"	(431.8)	10 ⁷ / ₈ "	(276.2)	4"	(101.6)
009	9 ³ / ₄ "	(247.6)	3 ⁴ / ₄ "	(19.0)	18 ³ / ₄ "	(476.2)	11 ⁷ / ₈ "	(301.6)	4"	(101.6)
010	10 ⁷ / ₈ "	(276.2)	3 ⁴ / ₄ "	(19.0)	21"	(533.4)	11 ³ / ₄ "	(298.4)	6"	(152.4)
011	12 ¹ / ₈ "	(308.0)	7 ⁸ / ₈ "	(22.2)	23 ¹ / ₈ "	(587.4)	14 ¹ / ₂ "	(368.3)	6"	(152.4)
012	13"	(330.2)	7 ⁸ / ₈ "	(22.2)	25"	(635.0)	15 ¹ / ₂ "	(393.7)	6"	(152.4)
013	14 ³ / ₄ "	(374.6)	11 ⁸ / ₈ "	(28.6)	27 ³ / ₄ "	(704.8)	17 ¹ / ₈ "	(435.0)	6"	(152.4)
014	16 ¹ / ₂ "	(419.1)	11 ⁸ / ₈ "	(28.6)	31 ¹ / ₂ "	(800.1)	19 ¹ / ₄ "	(488.9)	6"	(152.4)

Body Size	'W'		'X'		Wt./C	
	Lbs.	kg	Lbs.	kg	Lbs.	kg
001	6 ¹ / ₈ "	(155.6)	3"	(76.2)	700	(317.5)
002	7 ¹ / ₈ "	(181.0)	3"	(76.2)	800	(362.9)
003	8 ¹ / ₈ "	(206.4)	3"	(76.2)	900	(408.2)
004	10 ¹ / ₈ "	(257.2)	3"	(76.2)	1100	(498.9)
005	12 ¹ / ₈ "	(308.0)	4"	(101.6)	1700	(771.1)
006	14 ¹ / ₈ "	(358.8)	4"	(101.6)	2000	(907.2)
007	16 ¹ / ₈ "	(409.6)	6"	(152.4)	4000	(1814.4)
008	18 ¹ / ₈ "	(460.4)	6"	(152.4)	4800	(2177.3)
009	20 ¹ / ₈ "	(511.2)	6"	(152.4)	5400	(2449.4)
010	22 ¹ / ₈ "	(562.0)	8"	(203.2)	6100	(2766.9)
011	24 ¹ / ₈ "	(612.8)	8"	(203.2)	8900	(4037.0)
012	26 ¹ / ₈ "	(663.6)	8"	(203.2)	10200	(4626.7)
013	28 ¹ / ₈ "	(714.4)	8"	(203.2)	11000	(4989.6)
014	32 ¹ / ₈ "	(816.0)	8"	(203.2)	15000	(6804.0)

Note: CT sizes have lead shims between the steel clamp and the copper tubing.

Guides with greater allowable movement available, Contact B-Line Engineering for more information.

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

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Figure B3281 thru B3287 Pipe Alignment Guide (Continued)

Nominal Pipe Size	Insulation Thickness											
	1" (25.4)			1 1/2" (38.1)			2" (50.8)			2 1/2" (63.5)		
	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**
1/2" (15)	B3281-1/2	001	4" (101.6)	B3281-1/2	001	4" (101.6)	B3283-1/2	002	4" (101.6)	B3284-1/2	003	4" (101.6)
3/4" (20)	B3281-3/4	001	4" (101.6)	B3282-3/4	002	4" (101.6)	B3283-3/4	003	4" (101.6)	B3284-3/4	004	4" (101.6)
1" (25)	B3281-1	001	4" (101.6)	B3282-1	002	4" (101.6)	B3283-1	003	4" (101.6)	B3284-1	004	4" (101.6)
1 1/4" (32)	B3281-1 1/4	001	4" (101.6)	B3282-1 1/4	002	4" (101.6)	B3283-1 1/4	003	4" (101.6)	B3284-1 1/4	004	4" (101.6)
1 1/2" (40)	B3281-1 1/2	002	4" (101.6)	B3281-1 1/2	002	4" (101.6)	B3283-1 1/2	003	4" (101.6)	B3284-1 1/2	004	4" (101.6)
2" (50)	B3281-2	002	4" (101.6)	B3282-2	003	4" (101.6)	B3283-2	004	4" (101.6)	B3283-2	004	4" (101.6)
2 1/2" (65)	B3281-2 1/2	003	4" (101.6)	B3281-2 1/2	003	4" (101.6)	B3283-2 1/2	004	4" (101.6)	B3283-2 1/2	004	4" (101.6)
3" (80)	B3281-3	003	4" (101.6)	B3282-3	004	4" (101.6)	B3283-3	004	4" (101.6)	B3284-3	005	4" (101.6)
4" (100)	B3281-4	004	4" (101.6)	B3281-4	004	4" (101.6)	B3283-4	005	4" (101.6)	B3284-4	005	4" (101.6)
5" (125)	B3281-5	005	4" (101.6)	B3281-5	005	4" (101.6)	B3281-5	005	4" (101.6)	B3284-5	006	4" (101.6)
6" (150)	B3281-6	005	4" (101.6)	B3281-6	005	4" (101.6)	B3283-6	006	4" (101.6)	B3283-6	006	4" (101.6)
8" (200)	B3281-8	006	4" (101.6)	B3281-8	006	4" (101.6)	B3283-8	007	6" (152.4)	B3284-8	008	6" (152.4)
10" (250)	B3281-10	008	6" (152.4)	B3281-10	008	6" (152.4)	B3281-10	008	6" (152.4)	B3284-10	009	6" (152.4)
12" (300)	B3281-12	009	6" (152.4)	B3281-12	009	6" (152.4)	B3281-12	009	6" (152.4)	B3284-12	010	6" (152.4)
14" (350)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)
16" (400)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)
18" (450)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)
20" (500)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)
24" (600)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)

Nominal Pipe Size	Insulation Thickness								
	3" (76.2)			3 1/2" (88.9)			4" (101.6)		
	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**
1/2" (15)	B3285-1/2	004	4" (101.6)	B3285-1/2	004	4" (101.6)	B3287-1/2	005	4" (101.6)
3/4" (20)	B3284-3/4	004	4" (101.6)	B3286-3/4	005	4" (101.6)	B3286-3/4	005	4" (101.6)
1" (25)	B3284-1	004	4" (101.6)	B3286-1	005	4" (101.6)	B3286-1	005	4" (101.6)
1 1/4" (32)	B3284-1 1/4	004	4" (101.6)	B3286-1 1/4	005	4" (101.6)	B3286-1 1/4	005	4" (101.6)
1 1/2" (40)	B3284-1 1/2	004	4" (101.6)	B3286-1 1/2	005	4" (101.6)	B3286-1 1/2	005	4" (101.6)
2" (50)	B3285-2	005	4" (101.6)	B3285-2	005	4" (101.6)	B3287-2	006	4" (101.6)
2 1/2" (65)	B3285-2 1/2	005	4" (101.6)	B3285-2 1/2	005	4" (101.6)	B3287-2 1/2	006	4" (101.6)
3" (80)	B3284-3	005	4" (101.6)	B3286-3	006	4" (101.6)	B3286-3	006	4" (101.6)
4" (100)	B3285-4	006	4" (101.6)	B3285-4	006	4" (101.6)	B3287-4	007	6" (152.4)
5" (125)	B3284-5	006	4" (101.6)	B3286-5	007	6" (152.4)	B3287-5	008	6" (152.4)
6" (150)	B3285-6	007	6" (152.4)	B3286-6	008	6" (152.4)	B3286-6	008	6" (152.4)
8" (200)	B3284-8	008	6" (152.4)	B3286-8	009	6" (152.4)	B3286-8	009	6" (152.4)
10" (250)	B3284-10	009	6" (152.4)	B3286-10	010	6" (152.4)	B3286-10	010	6" (152.4)
12" (300)	B3284-12	010	6" (152.4)	B3286-12	011	6" (152.4)	B3286-12	011	6" (152.4)
14" (350)	B3285-14	011	8" (203.2)	B3285-14	011	8" (203.2)	B3287-14	012	8" (203.2)
16" (400)	B3285-16	012	8" (203.2)	B3285-16	012	8" (203.2)	B3287-16	013	8" (203.2)
18" (450)	B3285-18	013	8" (203.2)	B3285-18	013	8" (203.2)	B3287-18	014	8" (203.2)
20" (500)	B3285-20	014	8" (203.2)	B3285-20	014	8" (203.2)	B3285-20	014	8" (203.2)
24" (600)	---	---	---	---	---	---	---	---	---

BS* = Body Size

SAM** = Standard Allowable Movement

Note: Use 1" (25.4mm) insulation thickness column when no insulation is present.

Installation: Attach outer housing of the first pipe guide to the structure a maximum of four pipe diameters from an expansion joint. The second pipe guide should be located a maximum of 14 pipe diameters from the first pipe guide. The spider pipe clamp should be offset at a minimum of half the distance in the opposite direction of the axial expansion. See chart for Standard Allowable Movement (SAM).

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