Pipe Covering Protection Saddle

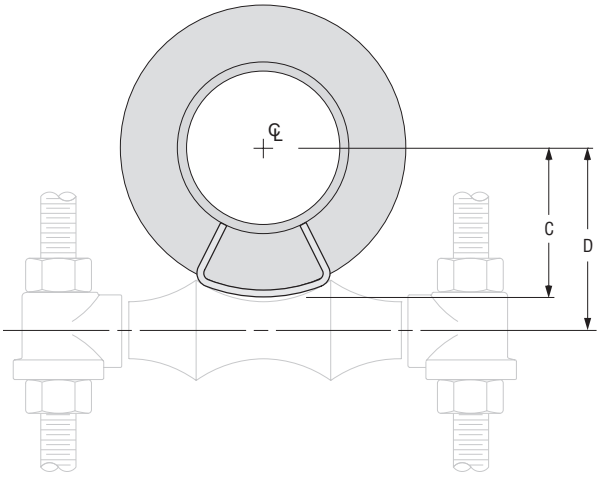
For Nominal Thickness of Covering Shown

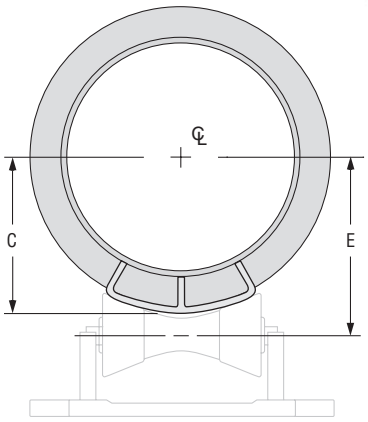
Fig. 160: 1" ❑ **Fig. 161: 1½" ❑** **Fig. 162: 2" ❑**
Fig. 163: 2½" ❑ **Fig. 164: 3" ❑** **Fig. 165: 4" ❑**
Fig. 165A: 4" (Alloy) ❑ **Fig. 166A: 5½" (Alloy) ❑**

Size Range: ³⁄₄" through 36"
Material:

- Figs. 160, 161, 162, 163, 164, and 165 are curved carbon steel plate.
- Figs. 165A and 166A are alloy steel manufactured from ASTM A 387 Grade 22 Chrome Molybdenum steel plate.
- Figs. 165A and 166A have a welded-in center plate in all sizes.
- All other saddles have a welded-in center plate for pipe sizes 12" and larger.
- All saddles are 12" long with side edges turned up.

Finish: ❑ Plain
Service: Designed for use on insulated high temperature systems where heat losses are to be kept to a minimum and to protect insulation against damage.
Maximum Temperature: 650° F carbon steel, 950° F alloy steel.
Approvals: Complies with Federal Specification A-A-1192A (Type 39A & 39B), *WW-H-171-E (Type 40A & 40B)*, ANSI/MSS SP-69 and MSS SP-58 (Type 39A & 39B).
Features: Permits finished, weather tight covering at all points of pipe support.
Ordering: Specify pipe size, figure number and name. Data for 42" size available on request.
Installation: It is recommended that saddle be welded to the pipe.





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Notes 1:	
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Fig. 160 to Fig 166A Pipe Covering Protection Saddle (cont.)

FIG. 160, 161, 162, 163, 164, 165, 165A, 166A: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)										
Pipe Size	Fig. No.	Max Load ■	Weight	Size of Pipe Roll			Center Line of Pipe to Outside of Saddle C	Center Line of Pipe to Center Line of Roll		
								D		E
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277
¾	160•	1,200	1.4	2	2½	2-3½	1⅝	2 1/16	2⅛	2¼
	161•		2.1	3	3½		2 3/16	2¾	2¾	2⅞
	162•		2.8	4	5		2 11/16	3 5/16	3 5/16	3⅜
1	160•	1,200	1.4	2½	3	2-3½	1 13/16	2 5/16	2¼	2 7/16
	161•		2.1	3	4		2 5/16	2⅞	2⅞	3
	162•		2.8	4	5		2⅞	3½	3½	3½
1¼	160	1,200	1.4	2½	3	2-3½	1 15/16	2½	2 7/16	2 9/16
	161•		2.1	3½	5		2 9/16	3 1/16	3 1/16	3 3/16
	162•		2.8	4			3	3⅝	3⅝	3 11/16
	163•		3.6	5	6	4-6	3¾	4⅜	4⅜	4⅜
1½	160	1,200	1.5	3	3½	2-3½	2⅛	2⅝	2⅝	2 11/16
	161•		2.1	3½	5		2⅝	3¼	3¼	3 5/16
	162•		3.2	5	6	4-6	3 5/16	4	4	3⅞
	163•		3.6	6	8		3⅞	4½	4⅝	4½
2	160	1,200	1.7	3½	4	2-3½	2⅜	3	2 15/16	3 1/16
	161•		2.3	4	5		2⅞	3½	3½	3 9/16
	162•		3.2	5	6	4-6	3 9/16	4¼	4¼	4 3/16
	163•		3.6	6	8		4 1/16	4¾	4 13/16	4¾
	164•		4.5	8			4 9/16	5⅜	5⅜	5¼
2½	160	1,200	1.7	3½	5	2-3½	2 11/16	3¼	3¼	3 5/16
	161		2.8	5	6	4-6	3 5/16	4	4	3 15/16
	162		3.2	6	8		3⅞	4½	4⅝	4½
	163		4.1	8			4¼	5⅛	5⅛	5
	164		4.5		10		4⅞	5⅝	5¾	5½
3	160	1,200	1.9	4	5	2-3½	2 15/16	3½	3½	3 9/16
	161		2.8	5	6	4-6	3⅝	4 5/16	4 5/16	4¼
	162		3.6	6	8		4⅛	4 13/16	4 13/16	4 11/16
	163		4.1	8			4 11/16	5 7/16	5 7/16	5 5/16
	164		4.9		10	8-10	5 1/16	6	6	6 1/16

■ Maximum recommended loads are applicable only when saddle is used on a flat bearing surface or roller hangers and tack welded to pipe. When saddle is used with a pipe roll, the maximum load for the assembly is the smaller of the two loads.

• Saddles may require notching when used with a U-bolt.

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Fig. 160 to Fig 166A Pipe Covering Protection Saddle (cont.)

FIG. 160, 161, 162, 163, 164, 165, 165A, 166A: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)

Pipe Size	Fig. No.	Max Load ■	Weight	Size of Pipe Roll			Center Line of Pipe to Outside of Saddle C	Center Line of Pipe to Center Line of Roll		
								D		E
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277
3½	160	1,200	2.3	5	6	4-6	3 5/16	4	4	3 15/16
	161		3.2	6	8		3 11/16	4 9/16	4 9/16	4½
	162		3.6	8			4 5/16	5⅛	5⅛	5
	163		4.5		10	8-10	4 11/16	5⅝	5⅝	5 11/16
	164		4.9	10			5⅜	6 5/16	6 5/16	6⅜
4	160	1,200	2.3	5	6	4-6	3 9/16	4¼	4¼	4 3/16
	161		3.2	6	8		4 1/16	4⅞	4⅞	4¾
	162		3.6	8			4 9/16	5⅜	5⅜	5¼
	163		4.5		10	8-10	5	5 15/16	5 15/16	6
	164		4.9	10			5⅝	6 9/16	6 9/16	6⅝
	165		6.1		12	12-14	6½	7⅝	7⅝	7 9/16
	165A	7,200	11.6							
	166A		15.7	14	16		8⅛	9⅝	9½	9 5/16
5	160	1,200	2.3	6	8	4-6	4⅛	4 13/16	4 13/16	4¾
	161		3.2	8			4 11/16	5½	5½	5⅜
	162		3.6		10	8-10	5 3/16	6	6 1/16	6⅛
	163		4.5	10			5⅝	6 9/16	6 9/16	6⅝
	164		4.9		12		6 3/16	7⅛	7¼	7¼
	165		6.1	12	14	12-14	7⅛	8 3/16	8⅜	8 3/16
	165A	7,200	11.6					8⅛		
	166A		15.7	16	16		8 11/16	10 1/16	10 1/16	9⅞
6	160	1,800	3.8	8	8	4-6	4½	5⅜	5⅜	5¼
	161		4.4		10	8-10	5 1/16	5⅞	5 11/16	6
	162		5.7	10			5½	6 7/16	6 7/16	6½
	163		6.5		12	8-10	6 3/16	7⅛	7 3/16	7¼
	164		7.7	12			6 9/16	7⅝	7⅝	7⅝
	165		10.2	14	16	12-14	7 9/16	9	9	8¾
	165A	7,200	12.9				7⅝	9⅛		8 13/16
	166A		16.3	16	18	16-20	9⅛	10⅝	10 9/16	10 7/16

■ Maximum recommended loads are applicable only when saddle is used on a flat bearing surface or roller hangers and tack welded to pipe. When saddle is used with a pipe roll, the maximum load for the assembly is the smaller of the two loads.

• Saddles may require notching when used with a U-bolt.

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Fig. 160 to Fig 166A Pipe Covering Protection Saddle (cont.)

FIG. 160, 161, 162, 163, 164, 165, 165A, 166A: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)										
Pipe Size	Fig. No.	Max Load ■	Weight	Size of Pipe Roll			Center Line of Pipe to Outside of Saddle C	Center Line of Pipe to Center Line of Roll		
								D		E
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277
8	161	1,800	5.8	10	12	8-10	6	7 1/16	7 1/16	7 1/16
	162		6.3				6 1/2	7 9/16	7 9/16	7 9/16
	163		7.2	12	14		7 1/4	8 5/16	8 1/2	8 5/16
	164		7.7	14	16	12-14	7 11/16	9	9	8 3/4
	165		10.2	16	18	16-20	8 11/16	10 1/8	10 1/8	9 7/8
	165A	7,200	16.9					10 1/16		
	166A		22.6	18	20		10 1/4	11 7/8	11 13/16	11 5/8
10	161	1,800	5.8	12	14	8–10	7 1/4	8 5/16	8 1/2	8 5/16
	162		7.7	14	16	12-14	7 5/8	9 1/16	9	8 13/16
	163		8.2				8 1/8	9 9/16	9 9/16	9 5/16
	164		8.8	16	18	16-20	8 11/16	10 1/8	10 1/16	10
	165		10.8	18	20		9 3/4	11 1/4	11 1/4	11 1/8
	165A	7,200	18.9				9 11/16	11 5/16		
	166A		24.3	20	–	22-24	11 1/8	12 15/16	–	12 1/2
12	161	5,000	7.8	14	16	12-14	8 1/16	9 1/2	9 1/2	9 1/4
	162		9.9	16	18	16-20	8 5/8	10 3/16	10 1/16	10
	163		10.5				9 1/8	10 11/16	10 9/16	10 1/2
	164		11.4	18	20		9 5/8	11 1/8	11 1/8	11
	165		14.0	20	–		10 13/16	12 3/8	–	12 3/16
	165A	11,140	28.0		–		11	12 1/2	–	12 3/8
	166A		35.5	24	–	22-24	12 5/16	14 1/4	–	13 11/16
14	161	5,000	7.8	16	18	12-14	8 3/4	10 3/16	10 1/8	10 1/16
	162		9.9			16-20	9 5/16	10 7/8	10 13/16	10 11/16
	163		10.5	18	20		9 7/8	11 5/16	11 3/8	11 3/16
	164		11.4				10 5/16	11 3/4	11 3/4	11 5/8
	165		14.0	20	–	22-24	11 5/16	12 7/8	–	12 5/8
	165A	11,140	27.6		–		11 9/16	13 1/16	–	12 7/8
	166A		35.5	24	–		12 7/8	14 3/4	–	14 1/4

■ Maximum recommended loads are applicable only when saddle is used on a flat bearing surface or roller hangers and tack welded to pipe. When saddle is used with a pipe roll, the maximum load for the assembly is the smaller of the two loads.

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Fig. 160 to Fig 166A Pipe Covering Protection Saddle (cont.)

FIG. 160, 161, 162, 163, 164, 165, 165A, 166A: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)										
Pipe Size	Fig. No.	Max Load ■	Weight	Size of Pipe Roll			Center Line of Pipe to Outside of Saddle C	Center Line of Pipe to Center Line of Roll		
								D		E
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277
16	161	5,000	8.4	18	20	16-20	9 13/16	11 1/4	11 1/4	11 1/8
	162		10.4				10 3/16	11 3/16	11 3/4	11 9/16
	163	7,200	11.1	20	–		10 13/16	12 5/16	–	12 3/16
	164		13.3	24	–	22-24	11 1/16	12 7/8	–	12 7/16
	165		15.3		–		12 3/16	14 1/8	–	13 5/8
	165A	11,140	30.1		–		12 7/16	14 5/16	–	13 7/8
	166A		40.0	30	–	26-30	13 13/16	16 5/8	–	15 5/8
18	161	5,000	9.1	20	–	16-20	10 13/16	12 5/16	–	12 3/16
	162	7,200	10.4		–	22-24	11 5/16	12 7/8	–	12 11/16
	163		12.4	24	–		11 5/8	13 9/16	–	13 1/16
	164		13.3		–		12 1/4	14 3/16	–	13 5/8
	165		15.3		–		13 5/16	15 1/4	–	14 3/4
	165A	13,370	40.3		–		13 3/4	15 11/16	–	15 1/8
	166A		52.1	30	–	26-30	14 7/8	17 5/8	–	16 5/8
20	161	7,200	10.4	24	–	22-24	11 5/8	13 9/16	–	13 1/16
	162		11.6		–		12 1/4	14 1/8	–	13 5/8
	163		12.4		–		12 3/4	14 11/16	–	14 3/16
	164		13.4		–		13 5/16	15 1/4	–	14 3/4
	165		22.8	30	–	26-30	14 1/8	17	–	15 7/8
	165A	13,370	44.8		–		14 3/8	17 3/16	–	16 1/8
	166A		52.1		–		16 1/8	18 15/16	–	17 7/8
24	161	7,200	12.3	30	–	26-30	13 1/2	16 5/16	–	15 1/4
	162		13.4		–		14	16 7/8	–	15 3/4
	163		14.3		–		14 5/8	17 1/2	–	16 7/16
	164		20.3		–		15 1/4	18 1/16	–	17
	165		23.1		–		16 7/16	19 1/4	–	18 3/16
	165A	13,370	45.4		–		16 11/16	19 1/2	–	18 7/16
	166A		52.1	–	–		18	–	–	19 3/4

■ Maximum recommended loads are applicable only when saddle is used on a flat bearing surface or roller hangers and tack welded to pipe. When saddle is used with a pipe roll, the maximum load for the assembly is the smaller of the two loads.

• Saddles may require notching when used with a U-bolt.

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Fig. 160 to Fig 166A Pipe Covering Protection Saddle (cont.)

FIG. 160, 161, 162, 163, 164, 165, 165A, 166A: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)										
Pipe Size	Fig. No.	Max Load ■	Weight	Size of Pipe Roll			Center Line of Pipe to Outside of Saddle C	Center Line of Pipe to Center Line of Roll		
								D		E
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277
30	161	7,200	13.3	–	–	36-42	16 15/16	–	–	18 7/8
	162		14.0	–	–		17 1/2	–	–	19 3/8
	163		20.0	–	–		18 1/16	–	–	19 15/16
	164		21.4	–	–		18 5/8	–	–	20 1/2
	165		24.0	–	–		19 11/16	–	–	21 1/2
	165A	13,370	47.9	–	–		19 15/16	–	–	21 3/4
	166A		55.6	–	–		21 1/2	–	–	23 3/8
36	161	7,200	18.0	–	–	36-42	20 1/4	–	–	22 1/8
	162		18.9	–	–		20 15/16	–	–	22 5/8
	163		20.2	–	–		21 5/16	–	–	23 3/16
	164		21.6	–	–		21 7/8	–	–	23 11/16
	165		24.1	–	–		22 7/8	–	–	24 11/16
	165A	13,370	48.3	–	–		23 1/8	–	–	25
	166A		55.8	–	–		24 5/8	–	–	26 1/2

■ Maximum recommended loads are applicable only when saddle is used on a flat bearing surface or roller hangers and tack welded to pipe. When saddle is used with a pipe roll, the maximum load for the assembly is the smaller of the two loads.

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