

Pipe Covering Protection Saddle For Nominal Thickness of Covering Shown

Fig. 160 1"

Fig. 163 2½"

Fig. 165A 4"Alloy

Fig. 161 1½"

Fig. 164 3"

Fig. 166A 5½"Alloy

Fig. 162 2"

Fig. 165 4"

Size Range: ¾" through 36"

Materials:

- 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

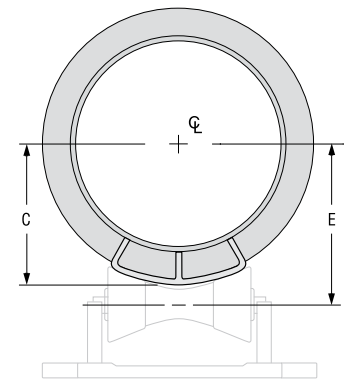
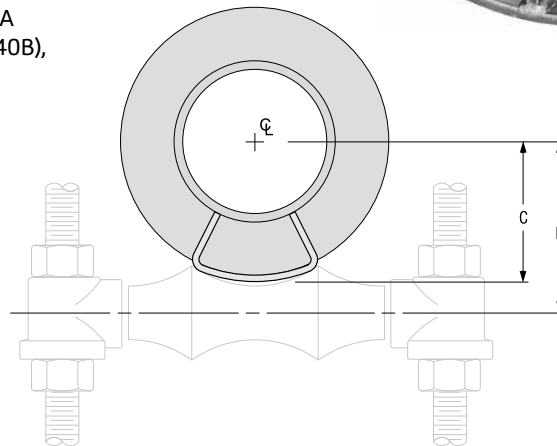
Approvals:

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.



Note: Additional sizes not shown in the chart above are available. Contact ASC to special order sizes to accommodate thicker insulation as needed.

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

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

Fig. 160, 161, 162, 163, 164, 165, 165A, 166A: Dimensions (in) • Loads (lbs) • Weight (lbs)

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		
				Figs. 171, 175, 177	Fig. 181	Figs. 271, 274, 277		D		E
								Figs. 171, 175, 177	Fig. 181	Figs. 271, 274, 277
3/4	160•	1,200	1.4	2	2 1/2	1 5/8	2 1/16	2 1/8	2 1/4	
	161•		2.1	3	3 1/2	2 3/16	2 3/4	2 3/4	2 7/8	
	162•		2.8	4	5	2 11/16	3 5/16	3 5/16	3 3/8	
1	160•	1,200	1.4	2 1/2	3	1 13/16	2 5/16	2 1/4	2 7/16	
	161•		2.1	3	4	2-3 1/2	2 7/8	2 7/8	3	
	162•		2.8	4	5	2 7/8	3 1/2	3 1/2	3 1/2	
1 1/4	160•	1,200	1.4	2 1/2	3	1 15/16	2 1/2	2 7/16	2 9/16	
	161•		2.1	3 1/2	5	2-3 1/2	2 9/16	3 1/16	3 1/16	
	162•		2.8	4	5	3	3 5/8	3 5/8	3 11/16	
1 1/2	160•	1,200	1.5	3	3 1/2	3 3/4	4 3/8	4 3/8	4 3/8	
	161•		2.1	3 1/2	5	2-3 1/2	2 1/8	2 5/8	2 5/8	
	162•		3.2	5	6	2 5/8	3 1/4	3 1/4	3 5/16	
2	160•	1,200	1.7	3 1/2	4	4-6	3 5/16	4	4 3/8	
	161•		2.3	4	5	2-3 1/2	3 7/8	4 1/2	4 1/2	
	162•		3.2	5	6	3 9/16	4 1/4	4 1/4	4 3/16	
2 1/2	160•	1,200	1.7	3 1/2	5	2-3 1/2	4 1/16	4 3/4	4 3/4	
	161•		2.8	5	6	4 9/16	5 3/8	5 3/8	5 1/4	
	162•		3.2	6	8	4 7/8	5 5/8	5 3/4	5 1/2	
3	160•	1,200	1.9	4	5	2-3 1/2	4 1/4	5 1/8	5 1/8	
	161•		2.8	5	6	4 7/8	5 5/8	5 3/4	5 1/2	
	162•		3.6	6	8	4 1/8	4 13/16	4 13/16	4 11/16	
3 1/2	160•	1,200	2.3	5	6	4-6	4 11/16	5 7/16	5 7/16	
	161•		3.2	6	8	4-6	5 1/16	6	6	
	162•		3.6	8	10	8-10	5 1/16	6	6	
4	160•	1,200	2.3	5	6	4-6	5 1/16	6	6	
	161•		3.2	6	8	4-6	3 5/16	4	4	
	162•		3.6	8	10	8-10	3 11/16	4 9/16	4 9/16	
4	160•	7,200	2.3	5	6	4-6	4 5/16	5 1/8	5 1/8	
	161•		3.2	6	8	4-6	4 11/16	5 5/8	5 5/8	
	162•		3.6	8	10	8-10	4 5/16	5 1/8	5 1/8	
4	163•	7,200	4.5	10	12	12-14	4 11/16	5 5/8	5 5/8	
	164•		4.9	10	12	12-14	4 11/16	5 5/8	5 5/8	
	165•		6.1	10	12	12-14	5 3/8	6 5/16	6 5/16	
4	165A	7,200	11.6	14	16	12-14	5 3/8	6 5/16	6 5/16	
	166A		15.7	14	16	12-14	5 3/8	6 5/16	6 5/16	
	166A		15.7	14	16	12-14	5 3/8	6 5/16	6 5/16	

■ 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: Dimensions (in) • Loads (lbs) • Weight (lbs)

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		
				Figs. 171, 175, 177	Fig. 181	Figs. 271, 274, 277		D		E
								Figs. 171, 175, 177	Fig. 181	Figs. 271, 274, 277
5	160	1,200	2.3	6	8	4-6	4 ¹ / ₈	4 ¹³ / ₁₆	4 ³ / ₄	
	161		3.2	8			4 ¹¹ / ₁₆	5 ¹ / ₂	5 ³ / ₈	
	162		3.6	10	10	8-10	5 ³ / ₁₆	6	6 ¹ / ₈	
	163		4.5				5 ⁵ / ₈	6 ⁹ / ₁₆	6 ⁵ / ₈	
	164	4.9	7,200	12	14	12-14	6 ³ / ₁₆	7 ¹ / ₈	7 ¹ / ₄	
	165	6.1		8 ³ / ₁₆			8 ³ / ₈	8 ³ / ₁₆		
	165A	11.6		16	18	8 ¹¹ / ₁₆	10 ¹ / ₁₆	10 ¹ / ₁₆	9 ⁷ / ₈	
	166A	15.7		16	18	8 ¹¹ / ₁₆	10 ¹ / ₁₆	10 ¹ / ₁₆	9 ⁷ / ₈	
6	160	1,800	3.8	8	8-10	4-6	4 ¹ / ₂	5 ³ / ₈	5 ³ / ₈	
	161		4.4				10	5 ¹ / ₁₆	5 ⁷ / ₈	5 ¹¹ / ₁₆
	162		5.7	10	10	8-10	5 ¹ / ₂	6 ⁷ / ₁₆	6 ⁷ / ₁₆	
	163		6.5				6 ³ / ₁₆	7 ¹ / ₈	7 ³ / ₁₆	
	164	7.7	7,200	12	16	12-14	6 ⁹ / ₁₆	7 ⁵ / ₈	7 ⁵ / ₈	
	165	10.2		7 ⁹ / ₁₆			9	9	8 ³ / ₄	
	165A	12.9		16	18	9 ¹ / ₈	10 ⁵ / ₈	10 ⁹ / ₁₆	10 ⁷ / ₁₆	
	166A	16.3		16	18	9 ¹ / ₈	10 ⁵ / ₈	10 ⁹ / ₁₆	10 ⁷ / ₁₆	
8	161	1,800	5.8	10	12	8-10	6	7 ¹ / ₁₆	7 ¹ / ₁₆	
	162		6.3				8-10	6 ¹ / ₂	7 ⁹ / ₁₆	7 ⁹ / ₁₆
	163		7.2	14	16	12-14	7 ¹ / ₄	8 ⁵ / ₁₆	8 ¹ / ₂	
	164		7.7				7 ¹¹ / ₁₆	9	9	
	165	10.2	7,200	16	18	16-20	8 ¹¹ / ₁₆	10 ¹ / ₈	10 ¹ / ₈	
	165A	16.9		10 ¹ / ₁₆			10 ¹ / ₈	9 ⁷ / ₈		
	166A	22.6		18	20	10 ¹ / ₄	11 ⁷ / ₈	11 ¹³ / ₁₆	11 ⁵ / ₈	
	161	5.8		12	14	8-10	7 ¹ / ₄	8 ⁵ / ₁₆	8 ¹ / ₂	
162	7.7	7 ⁵ / ₈	9 ¹ / ₁₆				9			
10	163	1,800	8.2	14	16	12-14	8 ³ / ₈	9 ⁹ / ₁₆	9 ⁹ / ₁₆	
	164		8.8				8 ¹¹ / ₁₆	10 ¹ / ₈	10 ¹ / ₁₆	
	165		10.8	7,200	18	20	16-20	9 ³ / ₄	11 ¹ / ₄	11 ¹ / ₈
	165A		18.9		9 ¹¹ / ₁₆			11 ⁵ / ₁₆	11 ¹ / ₄	
	166A	24.3	20		24	11 ¹ / ₈	12 ¹⁵ / ₁₆	-	12 ¹ / ₂	
	161	7.8	14		16	12-14	8 ¹ / ₁₆	9 ¹ / ₂	9 ¹ / ₂	
	162	9.9		8 ⁵ / ₈			10 ³ / ₁₆	10 ¹ / ₁₆		
	12	163	5,000	10.5	16	18	16-20	9 ¹ / ₈	10 ¹¹ / ₁₆	10 ⁹ / ₁₆
164		11.4		9 ⁵ / ₈				11 ¹ / ₈	11 ¹ / ₈	
165		14.0		11,140	20	-	10 ¹³ / ₁₆	12 ³ / ₈	-	
165A		28.0			-	11	12 ¹ / ₂	-		
166A		35.5	24		-	12 ⁵ / ₁₆	14 ¹ / ₄	-		
161		7.8	16		18	12-14	8 ³ / ₄	10 ³ / ₁₆	10 ¹ / ₈	
162		9.9		9 ⁵ / ₁₆			10 ⁷ / ₈	10 ¹³ / ₁₆		
14		163	5,000	10.5	18	20	16-20	9 ⁷ / ₈	11 ⁵ / ₁₆	11 ³ / ₈
	164	11.4		10 ⁵ / ₁₆				11 ³ / ₄	11 ³ / ₄	
	165	14.0		11,140	20	-	11 ⁵ / ₁₆	12 ⁷ / ₈	-	
	165A	27.6			-	22-24	11 ⁹ / ₁₆	13 ¹ / ₁₆	-	
	166A	35.5	24		-	12 ⁷ / ₈	14 ³ / ₄	-		
	161	7.8	16		18	12-14	8 ³ / ₄	10 ³ / ₁₆	10 ¹ / ₈	
	162	9.9		9 ⁵ / ₁₆			10 ⁷ / ₈	10 ¹¹ / 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: Dimensions (in) • Loads (lbs) • Weight (lbs)

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		
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		D		E
								Figs. 171, 175, 177	Fig. 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		11.1	20	-	10 ¹³ / ₁₆	12 ⁵ / ₁₆	-	12 ³ / ₁₆	
	164	7,200	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		10.4				11 ⁵ / ₁₆	12 ⁷ / ₈	-	12 ¹¹ / ₁₆
	163		12.4	11 ⁵ / ₈	13 ⁹ / ₁₆	-	13 ¹ / ₁₆			
	164	7,200	13.3	24	-	22-24	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	13,370	13.4	30	-	26-30	13 ⁵ / ₁₆	15 ¹ / ₄	-	14 ³ / ₄
	165		22.8				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	13,370	20.3	-	-	36-42	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			
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	13,370	21.4	-	-	36-42	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	13,370	21.6	-	-	36-42	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			

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 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.