

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: ¾" 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.

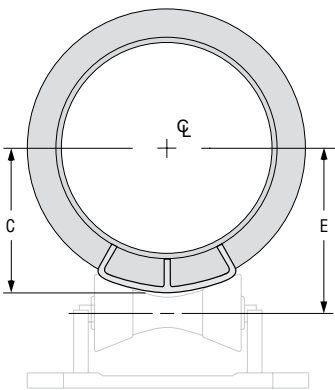
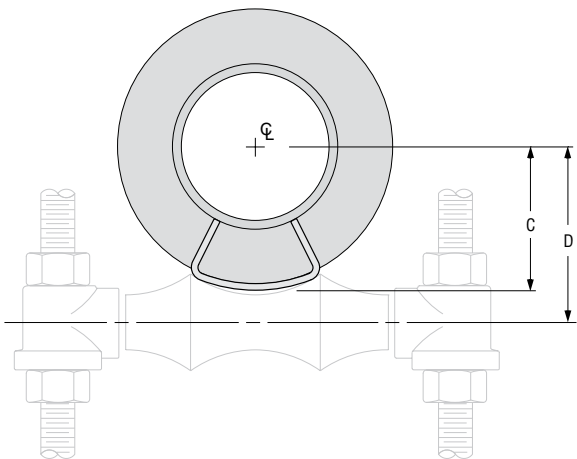
Maximum Temperature: 650° F carbon steel, 950° F alloy steel.

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.



Continued on Following Page.

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
¾	160•	1,200	1.4	2	2½	2-3½	1⅝	2¼ ₁₆	2⅝	2¼
	161•		2.1	3	3½		2¾ 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	2 ⁷ / ₈	2 ⁷ / ₈	3
	162•		2.8	4	5		2 ⁷ / ₈	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	3 ⁵ / ₈	3 ⁵ / ₈	3 ¹¹ / ₁₆
	163•		3.6	5	6	4-6	3¾	4 ³ / ₈	4 ³ / ₈	4 ³ / ₈
1½	160	1,200	1.5	3	3½	2-3½	2⅝	2 ⁵ / ₈	2 ⁵ / ₈	2 ¹¹ / ₁₆
	161•		2.1	3½	5		2 ⁵ / ₈	3¼	3¼	3 ⁵ / ₁₆
	162•		3.2	5	6	4-6	3 ⁵ / ₁₆	4	4	3 ⁷ / ₈
	163•		3.6	6	8		3 ⁷ / ₈	4½	4 ⁵ / ₈	4½
2	160	1,200	1.7	3½	4	2-3½	2¾	3	2 ¹⁵ / ₁₆	3 ¹ / ₁₆
	161•		2.3	4	5		2 ⁷ / ₈	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	5¾	5¾	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		3 ⁷ / ₈	4½	4 ⁵ / ₈	4½
	163		4.1	8			4¼	5⅞	5⅞	5
	164		4.5		10		4 ⁷ / ₈	5 ⁵ / ₈	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	3 ⁵ / ₈	4 ⁵ / ₁₆	4 ⁵ / ₁₆	4¼
	162		3.6	6	8		4 ¹ / ₈	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
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	5⅞	5⅞	5
	163		4.5	10	8-10	4 ¹¹ / ₁₆	5 ⁵ / ₈	5 ⁵ / ₈	5 ¹¹ / ₁₆	
	164		4.9			10	5¾	6 ⁵ / ₁₆	6 ⁵ / ₁₆	6¾
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	4 ⁷ / ₈	4 ⁷ / ₈	4¾
	162		3.6	8			4 ⁹ / ₁₆	5¾	5¾	5¼
	163		4.5	10	8-10	5	5 ¹⁵ / ₁₆	5 ¹⁵ / ₁₆	6	
	164		4.9			5 ⁵ / ₈	6 ⁹ / ₁₆	6 ⁹ / ₁₆	6 ⁵ / ₈	
	165		6.1	10	12	12-14	6½	7 ⁵ / ₈	7 ⁵ / ₈	7 ⁹ / ₁₆
	165A	11.6	8⅞				9 ⁵ / ₈	9½	9 ⁵ / ₁₆	
	166A	15.7	14	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 ¹³ / ₁₆	4 ³ / ₄	
	161		3.2	8			4 ¹¹ / ₁₆	5 ¹ / ₂	5 ¹ / ₂	5 ³ / ₈	
	162		3.6		10	8-10	5 ³ / ₁₆	6	6 ¹ / ₁₆	6 ¹ / ₈	
	163		4.5	5 ⁵ / ₈			6 ⁹ / ₁₆	6 ⁹ / ₁₆	6 ⁵ / ₈		
	164		4.9	10	12	6 ³ / ₁₆	7 ¹ / ₈	7 ¹ / ₄	7 ¹ / ₄		
	165	6.1	12	14	12-14	7 ¹ / ₈	8 ³ / ₁₆	8 ³ / ₈	8 ³ / ₁₆		
	165A	11.6				8 ¹ / 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	4-6	4 ¹ / ₂	5 ³ / ₈	5 ³ / ₈	5 ¹ / ₄	
	161		4.4		10	8-10	5 ¹ / ₁₆	5 ⁷ / ₈	5 ¹¹ / ₁₆	6	
	162		5.7	10		8-10	5 ¹ / ₂	6 ⁷ / ₁₆	6 ⁷ / ₁₆	6 ¹ / ₂	
	163		6.5		12		6 ³ / ₁₆	7 ¹ / ₈	7 ³ / ₁₆	7 ¹ / ₄	
	164		7.7	12		6 ⁹ / ₁₆	7 ⁵ / ₈	7 ⁵ / ₈	7 ⁵ / ₈		
	165	10.2	14	16	12-14	7 ⁹ / ₁₆	9	9	8 ³ / ₄		
	165A	12.9				7 ⁵ / ₈	9 ¹ / ₈		8 ¹³ / ₁₆		
	166A	16.3				16	18	16-20	9 ¹ / ₈	10 ⁵ / ₈	10 ⁹ / ₁₆
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	12-14	7 ¹ / ₄	8 ⁵ / ₁₆	8 ¹ / ₂	8 ⁵ / ₁₆	
	164		7.7	14	16		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	16.9				10 ¹ / ₄	11 ⁷ / ₈				
	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	18.9					9 ¹¹ / ₁₆	11 ⁵ / ₁₆			
	166A	24.3	20	24	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	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	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.
- Saddles may require notching when used with a U-bolt.

Continued on Following Page.

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	7,200	11.1	20	—	16-20	10 ¹³ / ₁₆	12 ⁵ / ₁₆	—	12 ³ / ₁₆
	164		13.3	24	—		11 ¹ / ₁₆	12 ⁷ / ₈	—	12 ⁷ / ₁₆
	165	15.3	—		22-24	12 ³ / ₁₆	14 ¹ / ₈	—	13 ⁵ / ₈	
	165A	30.1	—	12 ⁷ / ₁₆		14 ⁵ / ₁₆	—	13 ⁷ / ₈		
	166A	11,140	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	—	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	13,370	22.8	30	—	26-30	14 ¹ / ₈	17	—	15 ⁷ / ₈
	165A		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	
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	13,370	24.0	—	—		19 ¹¹ / ₁₆	—	—	21 ¹ / ₂
	165A		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	13,370	24.1	—	—		22 ⁷ / ₈	—	—	24 ¹¹ / ₁₆
	165A		48.3	—	—		23 ¹ / ₈	—	—	25
	166A		55.8	—	—		24 ⁵ / ₈	—	—	26 ¹ / ₂

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