

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.

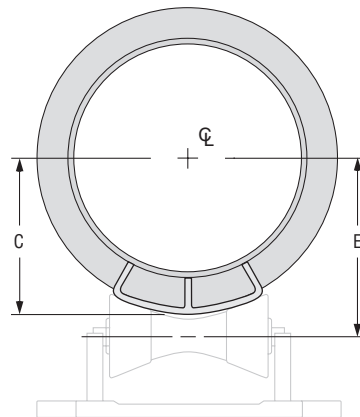
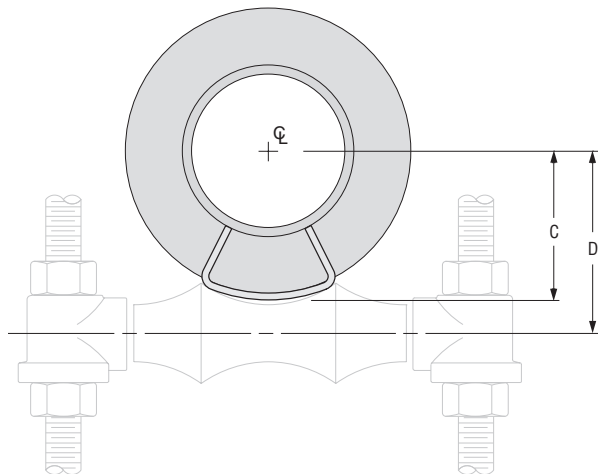
Maximum Temperature: 650° F carbon steel, 950° F alloy steel.

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.



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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			
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		D		E	
								Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277	
¾	160•	1,200	1.4	2	2½	2-3½	1⅝	2¼	2⅝	2¼	
	161•		2.1	3	3½		2⅞	2¾	2¾	2⅞	
	162•		2.8	4	5		2⅞	3⅝	3⅝	3⅞	
1	160•	1,200	1.4	2½	3	2-3½	1⅜	2⅝	2¼	2⅞	
	161•		2.1	3	4		2⅞	2⅞	2⅞	3	
	162•		2.8	4	5		2⅞	3½	3½	3½	
1¼	160	1,200	1.4	2½	3	2-3½	1⅜	2½	2⅞	2⅞	
	161•		2.1	3½	5		2⅞	3⅞	3⅞	3⅞	
	162•		2.8	4			3	3⅝	3⅝	3⅞	
	163•		3.6	5	6	4-6	3¾	4⅜	4⅜	4⅜	
1½	160	1,200	1.5	3	3½	2-3½	2⅞	2⅝	2⅞	2⅞	
	161•		2.1	3½	5		2⅞	3¼	3¼	3⅝	
	162•		3.2	5	6		3⅝	4	4	3⅞	
	163•		3.6	6	8	4-6	3⅞	4½	4⅞	4½	
2	160	1,200	1.7	3½	4	2-3½	2⅞	3	2⅞	3⅞	
	161•		2.3	4	5		2⅞	3½	3½	3⅞	
	162•		3.2	5	6		3⅞	4¼	4¼	4⅞	
	163•		3.6	6	8	4-6	4⅞	4¾	4⅞	4¾	
	164•		4.5	8		4⅞	5⅞	5⅞	5¼	5¼	
2½	160	1,200	1.7	3½	5	2-3½	2⅞	3¼	3¼	3⅞	
	161		2.8	5	6		3⅞	4	4	3⅞	
	162		3.2	6	8		4-6	3⅞	4½	4⅞	4½
	163		4.1	8		4⅞	5⅞	5⅞	5	5	
	164		4.5			10	4⅞	5⅞	5¼	5½	
3	160	1,200	1.9	4	5	2-3½	2⅞	3½	3½	3⅞	
	161		2.8	5	6		3⅞	4⅞	4⅞	4¼	
	162		3.6	6	8		4-6	4⅞	4⅞	4⅞	4⅞
	163		4.1	8		4⅞	5⅞	5⅞	5⅞	5⅞	
	164		4.9			10	8-10	5⅞	6	6	6⅞

- 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		
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		D		E
								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			10	4 ⁵ / ₁₆	5 ¹ / ₈	5 ¹ / ₈
	163		4.5		10	8-10		4 ¹¹ / ₁₆	5 ⁵ / ₈	5 ⁵ / ₈
	164		4.9	10			5 ³ / ₈	6 ⁵ / ₁₆	6 ⁵ / ₁₆	6 ³ / ₈
4	160	1,200	2.3	5	6	4-6	3 ³ / 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			10	4 ⁹ / ₁₆	5 ³ / ₈	5 ³ / ₈
	163		4.5		10	8-10		5	5 ¹⁵ / ₁₆	5 ¹⁵ / ₁₆
	164		4.9	10			12-14	5 ⁵ / ₈	6 ⁹ / ₁₆	6 ⁹ / ₁₆
	165	6.1	12		6½	7 ⁵ / ₈		7 ⁵ / ₈	7 ⁹ / ₁₆	
	165A	11.6	7,200	14	16	8½	9 ⁵ / ₈	9½	9 ⁵ / ₁₆	
166A	15.7	16		8 ¹ / ₈	9 ⁵ / ₈	9½	9 ⁵ / ₁₆			
5	160	1,200	2.3	6	8	4-6	4 ¹ / ₈	4 ¹³ / ₁₆	4 ¹³ / ₁₆	4¾
	161		3.2	8	10		4 ¹¹ / ₁₆	5½	5½	5 ³ / ₈
	162		3.6				10	8-10	5 ³ / ₁₆	6
	163		4.5	12	12-14	5 ⁵ / ₈			6 ⁹ / ₁₆	6 ⁹ / ₁₆
	164		4.9			12	14	6 ³ / ₁₆	7 ¹ / ₈	7¼
	165	6.1	14	7 ¹ / ₈	8 ³ / ₁₆			8 ³ / ₁₆	8 ³ / ₁₆	
	165A	11.6	7,200	16	16	8 ¹ / ₁₆	10 ¹ / ₁₆	10 ¹ / ₁₆	9 ⁵ / ₈	
166A	15.7	16		8 ¹ / ₁₆	10 ¹ / ₁₆	10 ¹ / ₁₆	9 ⁵ / ₈			
6	160	1,800	3.8	8	8	4-6	4½	5 ³ / ₈	5 ³ / ₈	5¼
	161		4.4		10	8-10	5 ¹ / ₁₆	5 ⁷ / ₈	5 ¹¹ / ₁₆	6
	162		5.7	12			8-10	5½	6 ⁷ / ₁₆	6 ⁷ / ₁₆
	163		6.5		12	12-14		6 ³ / ₁₆	7 ¹ / ₈	7 ³ / ₁₆
	164		7.7	14			16	6 ⁹ / ₁₆	7 ⁵ / ₈	7 ⁵ / ₈
	165	10.2	16		7 ⁹ / ₁₆	9		9	8¾	
	165A	12.9	7,200	18	18	7 ⁵ / ₈	9 ¹ / ₈	9 ¹ / ₈	8 ¹³ / ₁₆	
	166A	16.3		18	16-20	9 ¹ / ₈	10 ⁵ / ₈	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				
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		D		E		
								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		7 ¹¹ / ₁₆	9	9	8 ³ / ₄		
	165	10.2	16	18	16-20	8 ¹¹ / ₁₆	10 ³ / ₈	10 ³ / ₈	9 ⁷ / ₈			
	165A	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
	163		8.2	8 ¹ / ₈		9 ⁹ / ₁₆					9 ⁹ / ₁₆	9 ⁵ / ₁₆
	164		8.8	16		18		8 ¹¹ / ₁₆	10 ³ / ₈		10 ¹ / ₁₆	10
	165	10.8	18	20	16-20	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	—	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
	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	—	22-24	10 ¹³ / ₁₆	12 ³ / ₈	—	12 ³ / ₁₆			
	165A	28.0				11	12 ¹ / ₂	—	12 ³ / ₈			
	166A	35.5				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 ³ / ₈	10 ¹ / ₁₆
	162		9.9					16	18	16-20	9 ⁵ / ₁₆	10 ⁷ / ₈
	163		10.5	18		20					9 ⁷ / ₈	11 ⁵ / 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

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- 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			
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								Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277	Figs. 271, 274, 277
16	161	5,000	8.4	18	20	16-20	9 ³ / ₁₆	11 ¹ / ₄	11 ¹ / ₄	11 ¹ / ₈	
	162		10.4				10 ³ / ₁₆	11 ³ / ₁₆	11 ³ / ₄	11 ³ / 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	–	26-30	12 ⁷ / ₁₆	14 ⁵ / ₁₆	–	13 ⁷ / ₈		
	166A		40.0	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		–		11 ⁵ / ₁₆	12 ⁷ / ₈	–	12 ¹ / 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 ⁹ / ₁₆	15 ¹ / ₄	–	14 ³ / ₄				
	165A	13,370	40.3	–	26-30	13 ³ / ₄	15 ¹¹ / ₁₆	–	15 ¹ / ₈		
	166A		52.1	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	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	–	26-30	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	–	26-30	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		
				Figs. 171, 175, 177	Figs. 174, 181	Figs. 271, 274, 277		D		E
								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 ¹ / 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 ¹ / ₁₆
	165		24.1	–	–		22 ⁷ / ₈	–	–	24 ¹ / ₁₆
	165A	13,370	48.3	–	–		23 ¹ / ₈	–	–	25
	166A		55.8	–	–		24 ³ / ₈	–	–	26 ¹ / ₂

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