

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

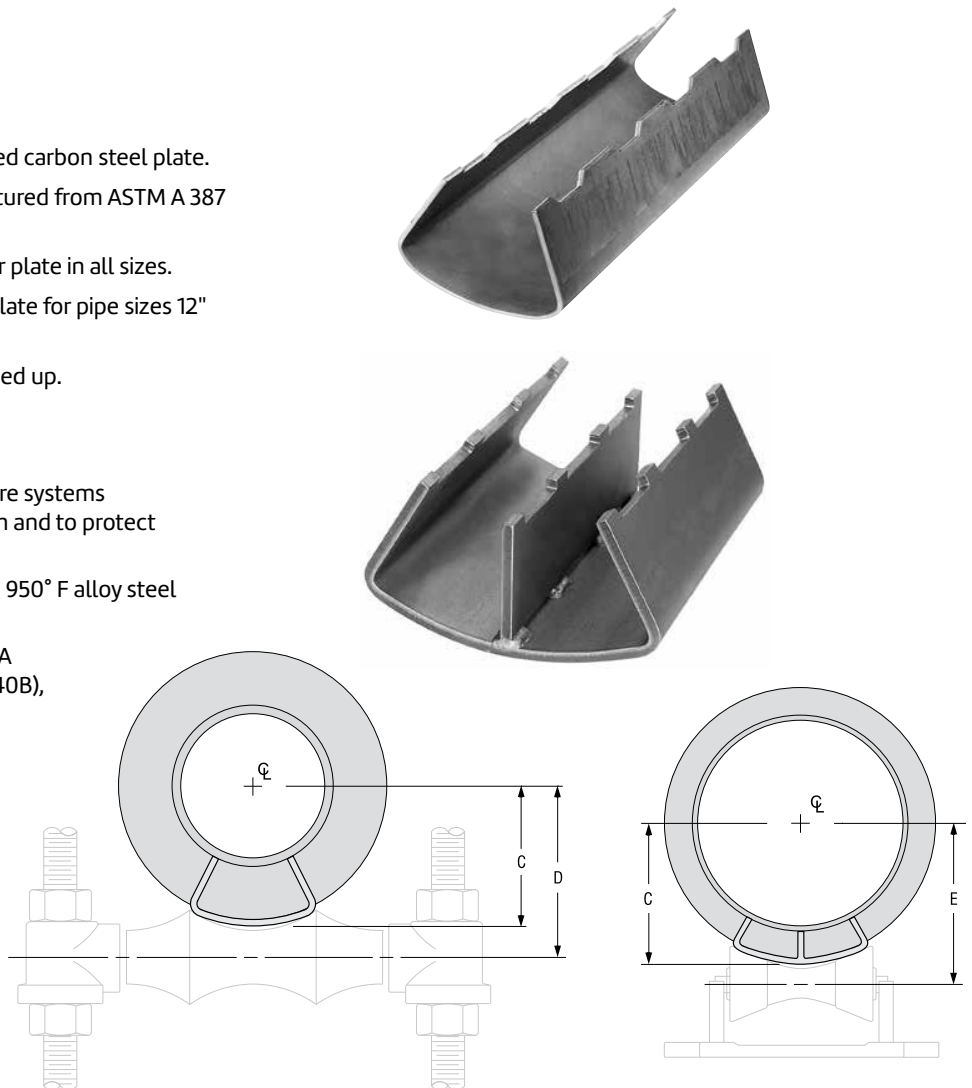
Approvals:

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

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	2⅛	2¼	
	161•		2.1	3	3½		2⅜	2¾	2⅞	
	162•		2.8	4	5		2⅞	3⅛	3⅜	
1	160•	1,200	1.4	2½	3	2-3½	1⅓	2⅝	2¼	
	161•		2.1	3	4		2⅝	2⅞	3	
	162•		2.8	4	5		2⅞	3½	3½	
1¼	160	1,200	1.4	2½	3	2-3½	1⅕	2½	2⅞	
	161•		2.1	3½	5		2⅞	3⅛	3⅜	
	162•		2.8	4	5		3	3⅝	3⅞	
1½	163•	1,200	3.6	5	6	4-6	3¾	4⅜	4⅜	
	160		1.5	3	3½	2⅞	2⅝	2⅝		
	161•		2.1	3½	5	2⅝	3¼	3¼		
2	162•	1,200	3.2	5	6	4-6	3⅝	4	3⅞	
	163•		3.6	6	8	3⅞	4½	4⅝		
	160		1.7	3½	4	2⅞	2⅜	3	2⅕	
2½	161•	1,200	2.3	4	5	2-3½	2⅞	3½	3½	
	162•		3.2	5	6	3⅞	4¼	4¼		
	163•		3.6	6	8	4-6	4⅛	4⅜		
3	164•	1,200	4.5	8	10	8-10	4⅞	5⅜	5¼	
	160		1.7	3½	5	2-3½	2⅞	3¼	3¼	
	161		2.8	5	6	3⅝	4	4		
3½	162	1,200	3.2	6	8	4-6	3⅞	4½	4⅝	
	163		4.1	8	10	4⅞	5⅛	5⅛		
	164		4.5	10	12	4⅞	5⅝	5¾		
4	160	1,200	1.9	4	5	2-3½	2⅕	3½	3½	
	161		2.8	5	6	3⅝	4⅝	4⅝		
	162		3.6	6	8	4-6	4⅛	4⅓		
4½	163	1,200	4.1	8	10	8-10	4⅞	5⅞	5⅞	
	164		4.9	10	12	5⅞	6	6		
	160		2.3	5	6	3⅝	4	4		
5	161	1,200	3.2	6	8	4-6	3⅞	4⅝	4⅝	
	162		3.6	8	10	4⅝	5⅛	5⅛		
	163		4.5	10	12	4⅞	5⅝	5⅝		
5½	164	1,200	4.9	10	12	8-10	5⅝	6⅝	6⅝	
	160		2.3	5	6	3⅞	4¼	4¼		
	161		3.2	6	8	4⅞	4⅞	4⅞		
6	162	1,200	3.6	8	10	8-10	4⅞	5⅝	5⅝	
	163		4.5	10	12	5	5⅕	5⅕		
	164		4.9	10	12	5⅝	6⅝	6⅝		
6½	165	7,200	6.1	10	12	12-14	6½	7⅝	7⅝	
	165A		11.6							
	166A		15.7	14	16	8⅛	9⅝	9½		

■ 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.

Pipe Covering Protection Saddle Fig. 160 to Fig. 166A

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	4¾
	161		3.2	8			4 ¹¹ / ₁₆	5½	5½	5 ³ / ₈
	162		3.6		10		5 ³ / ₁₆	6	6 ¹ / ₁₆	6 ¹ / ₈
	163		4.5	10		8-10	5 ⁵ / ₈	6 ⁹ / ₁₆	6 ⁹ / ₁₆	6 ⁵ / ₈
	164	4.9		12		6 ³ / ₁₆	7 ¹ / ₈	7¼	7¼	
	165	6.1	12	14		7 ¹ / ₈	8 ³ / ₁₆	8 ³ / ₈	8 ³ / ₁₆	
	165A	11.6			12-14	8 ¹¹ / ₁₆	10 ¹ / ₁₆	10 ¹ / ₁₆	9 ⁷ / ₈	
	166A	15.7	16	18						
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				5½	6 ⁷ / ₁₆	6 ⁷ / ₁₆	6½
	163		6.5	10	12	8-10	6 ³ / ₁₆	7 ¹ / ₈	7 ³ / ₁₆	7¼
	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	8¾	
	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	10 ⁷ / ₁₆	
8	161	1,800	5.8	10	12		6	7 ¹ / ₁₆	7 ¹ / ₁₆	7 ¹ / ₁₆
	162		6.3			8-10	6½	7 ⁹ / ₁₆	7 ⁹ / ₁₆	7 ⁹ / ₁₆
	163		7.2	12	14		7¼	8 ⁵ / ₁₆	8½	8 ⁵ / ₁₆
	164		7.7	14	16	12-14	7 ¹¹ / ₁₆	9	9	8¾
	165	10.2	16	18		8 ¹¹ / ₁₆	10 ¹ / ₈	10 ¹ / ₈	9 ⁷ / ₈	
	165A	16.9			16-20	10¼	11 ⁷ / ₈	11 ¹³ / ₁₆	11 ⁵ / ₈	
	166A	22.6	18	20						
	166A	22.6	18	20						
10	161	1,800	5.8	12	14	8-10	7¼	8 ⁵ / ₁₆	8½	8 ⁵ / ₁₆
	162		7.7			12-14	7 ⁵ / ₈	9 ¹ / ₁₆	9	8 ¹³ / ₁₆
	163		8.2	14	16		8 ¹ / ₈	9 ⁹ / ₁₆	9 ⁹ / ₁₆	9 ⁵ / ₁₆
	164		8.8	16	18		8 ¹¹ / ₁₆	10 ¹ / ₈	10 ¹ / ₁₆	10
	165	10.8			16-20	9¾	11¼	11¼	11 ¹ / ₈	
	165A	18.9	18			9 ¹¹ / ₁₆	11 ⁵ / ₁₆			
	166A	24.3	20	24	22-24	11 ¹ / ₈	12 ¹⁵ / ₁₆	-	12½	
	166A	24.3	20	24	22-24	11 ¹ / ₈	12 ¹⁵ / ₁₆	-	12½	
12	161	5,000	7.8	14	16	12-14	8 ¹ / ₁₆	9½	9½	9¼
	162		9.9				8 ⁵ / ₈	10 ³ / ₁₆	10 ¹ / ₁₆	10
	163		10.5	16	18		9 ¹ / ₈	10 ¹¹ / ₁₆	10 ⁹ / ₁₆	10½
	164		11.4	18	20	16-20	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	12½	-	12 ³ / ₈	
	166A	35.5	24	-	22-24	12 ⁵ / ₁₆	14¼	-	13 ¹¹ / ₁₆	
	166A	35.5	24	-	22-24	12 ⁵ / ₁₆	14¼	-	13 ¹¹ / ₁₆	
14	161	5,000	7.8	16	18	12-14	8¾	10 ³ / ₁₆	10 ¹ / ₈	10 ¹ / ₁₆
	162		9.9				9 ⁵ / ₁₆	10 ⁷ / ₈	10 ¹³ / ₁₆	10 ¹¹ / ₁₆
	163		10.5			16-20	9 ⁷ / ₈	11 ⁵ / ₁₆	11 ³ / ₈	11 ³ / ₁₆
	164		11.4	18	20		10 ⁵ / ₁₆	11¾	11¾	11 ⁵ / ₈
	165	14.0		-		11 ⁵ / ₁₆	12 ⁷ / ₈	-	12 ³ / ₈	
	165A	27.6	20	-	22-24	11 ⁹ / ₁₆	13 ¹ / ₁₆	-	12 ⁷ / ₈	
	166A	35.5	24	-		12 ⁷ / ₈	14¾	-	14¼	
	166A	35.5	24	-		12 ⁷ / ₈	14¾	-	14¼	

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

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
16	161	5,000	8.4	18	20	16-20	9 ¹³ / ₁₆	11¼	11¼	11 ¹ / ₈
	162		10.4				10 ³ / ₁₆	11 ³ / ₁₆	11¾	11 ⁹ / ₁₆
	163		11.1				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		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		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	12¼	14 ³ / ₁₆	—	13 ⁵ / ₈
	165		15.3				13 ⁵ / ₁₆	15¼	—	14¾
	165A		40.3				13¾	15 ¹¹ / ₁₆	—	15 ¹ / ₈
	166A	13,370	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				12¼	14 ¹ / ₈	—	13 ⁵ / ₈
	163		12.4				12¾	14 ¹¹ / ₁₆	—	14 ³ / ₁₆
	164	13,370	13.4	30	—	26-30	13 ⁵ / ₁₆	15¼	—	14¾
	165		22.8				14 ¹ / ₈	17	—	15 ⁷ / ₈
	165A		44.8				14 ³ / ₈	17 ³ / ₁₆	—	16 ¹ / ₈
	166A	13,370	52.1	—	—	—	16 ¹ / ₈	18 ¹⁵ / ₁₆	—	17 ⁷ / ₈
24	161	7,200	12.3	30	—	26-30	13½	16 ⁵ / ₁₆	—	15¼
	162		13.4				14	16 ⁷ / ₈	—	15¾
	163		14.3				14 ⁵ / ₈	17½	—	16 ⁷ / ₁₆
	164	13,370	20.3	—	—	36-42	15¼	18 ¹ / ₁₆	—	17
	165		23.1				16 ⁷ / ₁₆	19¼	—	18 ³ / ₁₆
	165A		45.4				16 ¹¹ / ₁₆	19½	—	18 ⁷ / ₁₆
	166A	13,370	52.1	—	—	—	18	—	—	19¾
30	161	7,200	13.3	—	—	36-42	16 ¹⁵ / ₁₆	—	—	18 ⁷ / ₈
	162		14.0				17½	—	—	19 ³ / ₈
	163		20.0				18 ¹ / ₁₆	—	—	19 ¹⁵ / ₁₆
	164	13,370	21.4				18 ⁵ / ₈	—	—	20½
	165		24.0				19 ¹¹ / ₁₆	—	—	21½
	165A		47.9				19 ¹⁵ / ₁₆	—	—	21¾
	166A	13,370	55.6	—	—	—	21½	—	—	23 ³ / ₈
36	161	7,200	18.0	—	—	36-42	20¼	—	—	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				21 ⁷ / ₈	—	—	23 ¹¹ / ₁₆
	165		24.1				22 ⁷ / ₈	—	—	24 ¹¹ / ₁₆
	165A		48.3				23 ¹ / ₈	—	—	25
	166A	13,370	55.8	—	—	—	24 ⁵ / ₈	—	—	26½

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