



# Manhole Steps

$3 \frac{5}{16}''$   
84mm

$9 \frac{1}{16}''$   
230mm

$10 \frac{1}{2}''$   
267mm

$11 \frac{3}{8}''$   
289mm



# M.A. MANHOLE STEP: First in

## • Long Life in Corrosive Environments

Has polypropylene's superior resistance to all types of corrosive environments found in manholes. Tests show polypropylene resists even 50% hydrogen sulfide or sulfuric acid up to 120°F. Accelerated aging tests on polypropylene indicate a life expectancy as long as the manhole you install in it.

## • M.A. Step

The manhole step most widely specified in the industry. Injection molded of tough copolymer polypropylene that encapsulates a 1/2" grade 60 steel reinforced rod. This combination is the best solution for a dependable manhole step.

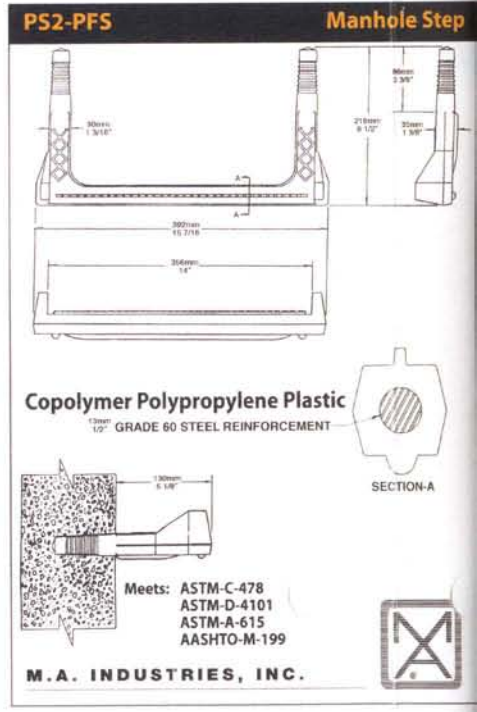
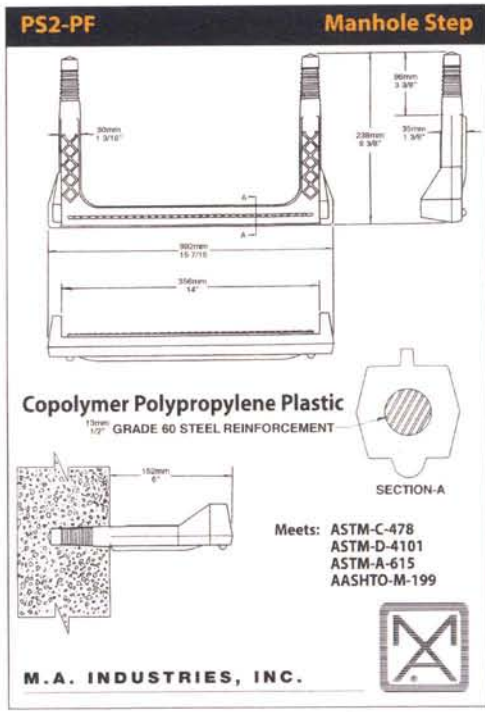
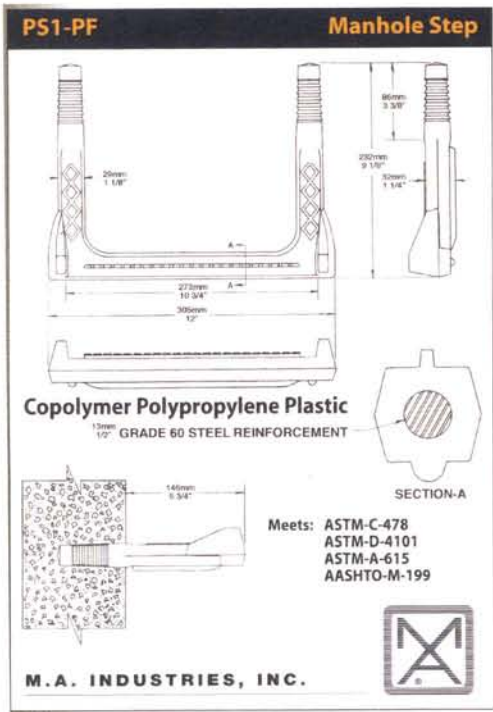
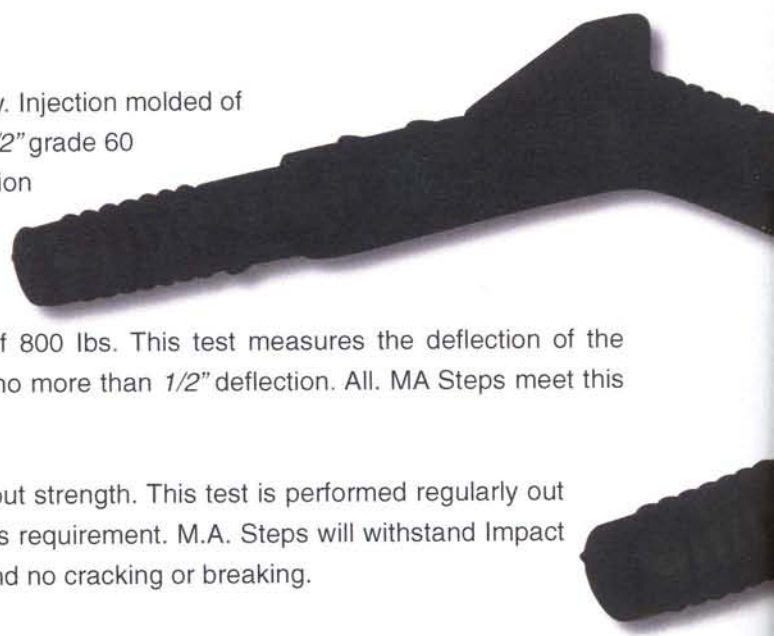
## • Vertical Load and Pullout Strength

Manhole steps must withstand a vertical load test of 800 lbs. This test measures the deflection of the step after a load of 800 lbs is applied. There can be no more than 1/2" deflection. All MA Steps meet this requirement.

Manhole steps must have a minimum of 400 lbs pullout strength. This test is performed regularly out in the field by our sales force. All M.A. Steps meet this requirement. M.A. Steps will withstand Impact Testing of up to 300 ft.lbs with only minor deflection and no cracking or breaking.

## • Consistently Tight Installations

The M.A. Press Fit step is simply driven into preformed holes in the cured concrete. No grout or epoxy is necessary. The locking Rings create a positive friction lock when the step is driven into the hole. This creates the excellent pullout strength.



# Quality, Safety & Price, Since 1969

## • OSHA

OSHA Instructions STD 1 - 1.9 issued December 29, 1978, revised the agency's original directive for Fixed Ladders, 29, (FR 1910.27, to specifically exclude manhole steps. STD 1 - 1.9 states, "individual rungs or steps used for access or egress, embedded in the walls of risers or conical top sections of manholes, shall be safe, well constructed and installed in accordance with good engineering practices."

As of this publication, OSHA has not updated this directive.

## • ASTM

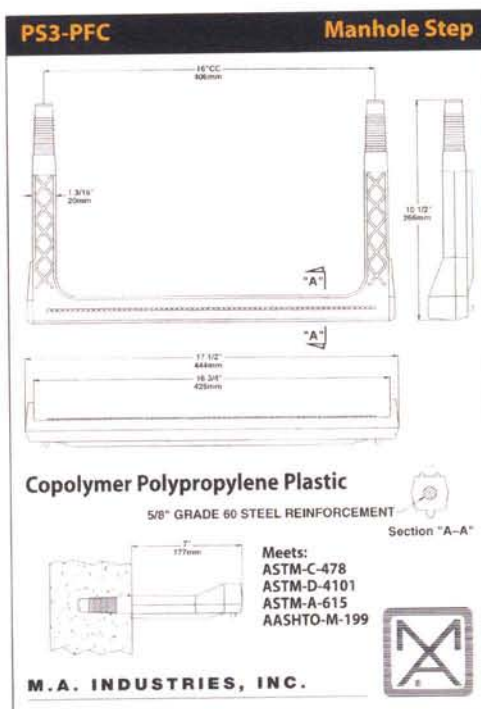
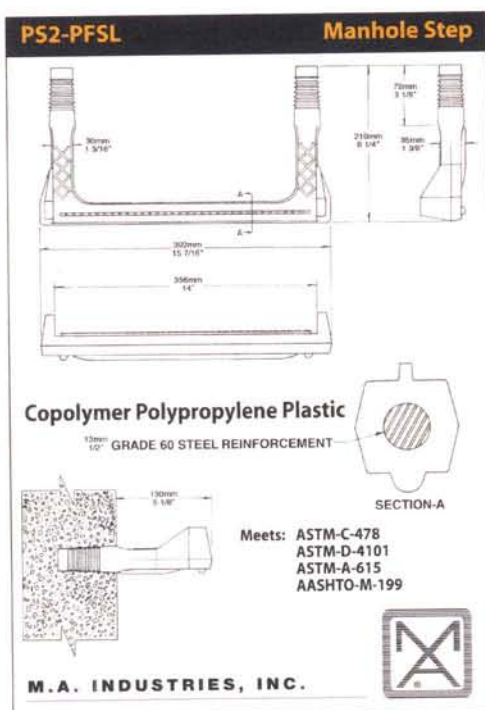
All of M.A. Industries' Manhole Steps meet ASTM Standard (-478. M.A. Industries has a representative on the committee that oversees (-478.

## • Material Specification

**Plastic** - M.A. Manhole steps are made of copolymer polypropylene. This material is available in many different formulations. After years of actual use, we have determined polypropylene conforming to the following specific values is the best currently available for manhole steps.

The copolymer polypropylene used in all M.A. manhole steps conforms to ASTM D-41 01 PP0344B3353402.

**Steel Reinforcing Bar** - The steel used in our manhole steps is deformed 1/2" reinforcing rod except the PS3- PFC model which is 5/8" rod. It is grade 60 and conforms to ASTM A-615.



*8 Warehouses  
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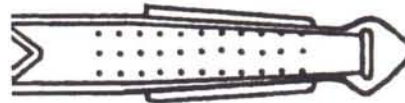
# Manhole Step Quick Reference

## Leg Design

Item#	Model	Tread Width	Projection	Leg Center	
004-501	PS1-PF	10 3/4"	5 3/4"	10"	
004-501-DF	PS1-PF-DF	10 1/2"	5 3/4"	10"	Double Faced
004-528	PFS-1	1- 1/8"	5 5/8"	10"	Straight Legged Step
004-510	PS2-PF	14"	6"	13"	
004-510-DF	PS2-PF-DF	13 1/2"	5 7/8"	13"	Double Faced
004-511	PS2-PFS	14"	5 1/8"	13"	
004-511-DF	PS2-PFS-DF	13 1/2"	5 1/16"	13"	Double Faced
004-512	PS2-PFSL	14"	5 1/8"	13"	
004-512-DF	PS2-PFSL-DF	13 1/2"	5"	13"	Double Faced
004-529	PFS-2	13 3/4"	5 5/8"	13"	Straight Legged Step
004-529-DF	PFS-2-DF	13 1/2"	5 7/8"	13"	Straight Legged Step Double Faced
004-516	PS3-PFC	16 3/4"	7"	16"	
004-521	PS5-PF	10 3/4"	5 3/4"	11"	
004-530-DF	PS12-PF-DF	12 1/2"	5 7/8"	12"	Double Faced
004-515	PS2-PF-HH	14"	3 1/8"	13"	Grade Ring Hand Hold
004-510-DRP-O	PS2-PF-DRP	11 13/16"	6 7/16"	13"	Drop Front Step
004-504	PS1-B	10 1/2"	5 1/2"	10"	Brick or Block



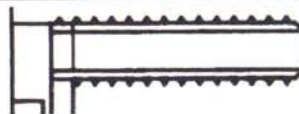
004-500	PS1	10 3/4"	5 3/4"	10"	Cast In Place Only
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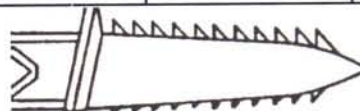
004-508	PS2-BG	14"	5 1/8"	13"	Brick or Block
004-509	PS2-BGLN	13 7/8"	3"	13"	Grade Ring Hand Hold



004-519	PS4-B	10 3/4"	5 3/4"	11"	Use with A-Lok Insert
004-507	PS2-B	13 3/4"	5 7/8"	13"	Use with A-Lok Insert
004-507-DF	PS2-B-DF	13 1/2"	5 5/8"	13"	Use with A-Lok Insert



004-505	PS1-DI	10 3/4"	5 3/8"	10"	Dri Cast
004-506	PS1-DIS	10 3/4"	5 3/8"	10"	Dri Cast
004-506-DF	PS1-DIS-DF	10 1/2"	5 1/4"	10"	Double Faced



## Manhole Steps

### PS1-PF Manhole Step

Item# – 004-501

Qty – 30 pieces per box, 750 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/4" (146 mm)

Leg Center Dimension – 10" (254 mm)

PS1-PF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. Minimum Embedment into the concrete is 3".



### PS1-PF Double Faced Manhole Step

Item# – 004-501-DF

Qty – 30 pieces per box, 750 pieces per pallet

Tread Width – 10-1/2" (273 mm)

Projection from Wall – 5-3/4" (146 mm)

Leg Center Dimension – 10" (254 mm)

PS1-PF-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. This step is double sided and cannot be driven in upside down. Minimum embedment into the concrete is 3".

### PS1-DI Manhole Step

Item# – 004-505

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/8" (137 mm)

Leg Center Dimension – 10" (254 mm)

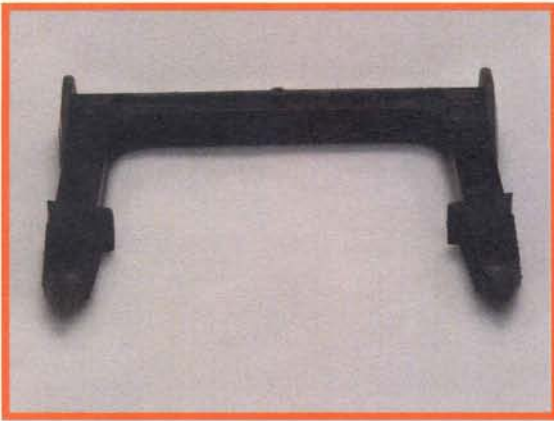
Leg Embedment – 4-3/8" (111 mm)

PS1-DI Manhole Steps are designed to be driven into Green (uncured) concrete. This step is used in Dry Cast Operations. Minimum Embedment into the concrete is 3".





## Manhole Steps



### PS1-DIS Manhole Step

Item# – 004-506

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/8" (137 mm)

Leg Center Dimension – 10" (254 mm)

Leg Embedment – 3-5/16" (84 mm)

PS1-DIS Manhole Steps are designed to be driven into Green (uncured) concrete. This step is used in Dry Cast Operations. Minimum Embedment into the concrete is 3".

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### PS1-DIS-DF Manhole Step

Item# – 004-501-DF

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-1/2" (273 mm)

Projection from Wall – 5-1/4" (133 mm)

Leg Center Dimension – 10" (254 mm)

Leg Embedment – 3-5/16" (84 mm)

PS1-DIS-DF Manhole Steps are designed to be driven into Green (uncured) concrete. This step is used in Dry Cast Operations. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".



### PS1 Manhole Step

Item# – 004-500

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/4" (146 mm)

Leg Center Dimension – 10" (254 mm)

PS1 manhole step is designed to be cast in place only. Minimum Embedment into the concrete is 3".

## Manhole Steps

### PS2-PF Manhole Step

Item# – 004-510

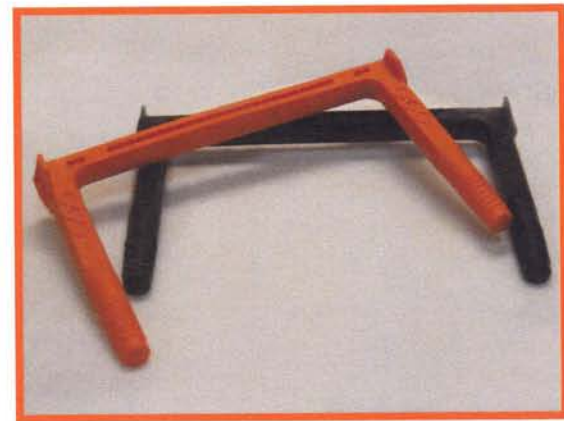
Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 14" (356 mm)

Projection from Wall – 6" (152 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. Minimum Embedment into the concrete is 3".



### PS2-PF Double Faced Manhole Step

Item# – 004-510-DF

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-1/2" (343 mm)

Projection from Wall – 5-7/8" (149 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PF-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".

### PS2-PFS Manhole Step

Item# – 004-511

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 14" (356 mm)

Projection from Wall – 5-1/8" (130 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PFS Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. Minimum Embedment into the concrete is 3".





## Manhole Steps



### PS2-PFS-DF Manhole Step

Item# – 004-511-DF

Qty – 20 pieces per box, 500 pieces per pallet

Tread Width – 13 1/2" (343 mm)

Projection from Wall – 5 1/16" (130 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PFS-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".

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### PS2-PFSL Manhole Step

Item# – 004-512

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 14" (356 mm)

Projection from Wall – 5-1/8" (130 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PFSL Manhole Steps are designed to be driven into a preformed hole created by a Step Insert or Cam Pin. This requires a 1-1/4" hole. Minimum Embedment into the concrete is 3".



### PS2-PFSL Double Faced Manhole Step

Item# – 004-512-DF

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-1/2" (343 mm)

Projection from Wall – 5" (127 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PFSL-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert or Cam Pin. This step is double sided and cannot be installed upside down. This requires a 1-1/4" hole. Minimum Embedment into the concrete is 3".



## Manhole Steps

### PS12-PF-DF Manhole Step

Item# – 004-521

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/4" (146 mm)

Leg Center Dimension – 11" (279 mm)

PS12-PF-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. Minimum Embedment into the concrete is 3".



### PS12-PF-DF Manhole Step

Item# – 004-530-DF

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 12-1/2" (318 mm)

Projection from Wall – 5-7/8" (149 mm)

Leg Center Dimension – 12" (305 mm)

PS12-PF-DF Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".

### PS3-PFC Manhole Step

Item# – 004-516

Qty – 15 pieces per box, 375 pieces per pallet

Tread Width – 16-3/4" (425 mm)

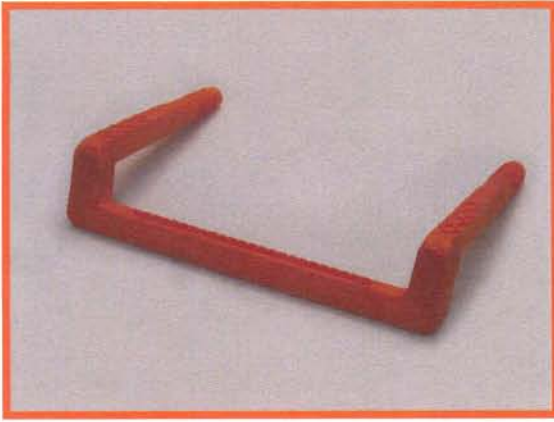
Projection from Wall – 7" (177 mm)

Leg Center Dimension – 16" (406 mm)

PS3-PFC Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. This requires a 1" hole. Minimum Embedment into the concrete is 3".



## Manhole Steps



### PS2-PF-DRP Manhole Step

Item# – 004-510-DRP-O

Qty – 20 pieces per box, 400 pieces per pallet

Tread Width – 11-13/16" (300 mm)

Projection from Wall – 6-7/16" (164 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PF-DRP Manhole Steps are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or by Drilling. Minimum Embedment into the concrete is 3".

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### PFS-1 Manhole Step

Item# – 004-528

Qty – 30 pieces per box, 750 pieces per pallet

Tread Width – 10-1/8" (257 mm)

Projection from Wall – 5-5/8" (143 mm)

Leg Center Dimension – 10" (254 mm)

PFS-1 Manhole Steps are designed to be driven into a preformed hole created by a PFS-1 Step Insert or Drilling. This requires a 1" Straight hole. Legs are not tapered. Minimum Embedment into the concrete is 3".



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### PFS-2 Manhole Step

Item# – 004-529

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-3/4" (349 mm)

Projection from Wall – 5-5/8" (143 mm)

Leg Center Dimension – 13" (330 mm)

PFS-2 Manhole Steps are designed to be driven into a preformed hole created by a PFS-1 Step Insert or Drilling. This requires a 1" Straight hole. Legs are not tapered. Minimum Embedment into the concrete is 3".





## Manhole Steps

### PFS-2-DF Manhole Step

Item# – 004-529-DF

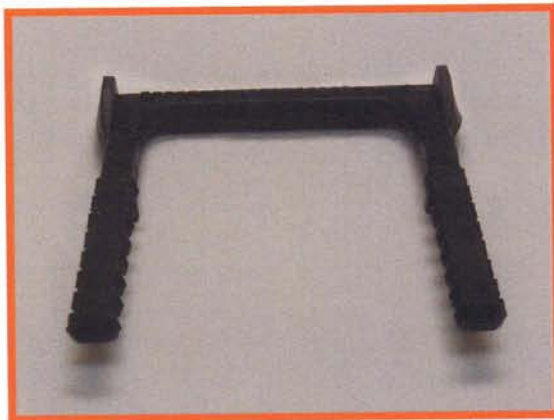
Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-3/8" (340 mm)

Projection from Wall – 5-1/2" (140 mm)

Leg Center Dimension – 13" (330 mm)

PFS-2 Manhole Steps are designed to be driven into a preformed hole created by a PFS-1 Step Insert or Drilling. This requires a 1" Straight hole. Legs are not tapered. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".



### PS1-B Manhole Step

Item# – 004-504

Qty – 20 pieces per box, 400 pieces per pallet

Tread Width – 10-1/2" (267 mm)

Projection from Wall – 5-1/2" (140 mm)

Leg Center Dimension – 10" (254 mm)

PS1-B Manhole Steps are designed to be installed into block or brick structures. Minimum Embedment into the concrete is 3".

### PS2-BG Manhole Step

Item# – 004-508

Qty – 20 pieces per box, 400 pieces per pallet

Tread Width – 14" (356 mm)

Projection from Wall – 5-1/8" (130 mm)

Leg Center Dimension – 13" (330 mm)

PS2-BG Manhole Steps are designed to be installed into block or brick structures. Minimum Embedment into the concrete is 3".



## Manhole Steps



### PS4-B Manhole Step

Item# – 004-519

Qty – 25 pieces per box, 625 pieces per pallet

Tread Width – 10-3/4" (273 mm)

Projection from Wall – 5-3/4" (146 mm)

Leg Center Dimension – 11" (279 mm)

PS4-B Manhole Steps are designed to be driven into "square" plastic insert only. Minimum Embedment into the concrete is 3".

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### PS2-B Manhole Step

Item# – 004-507

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-3/4" (349 mm)

Projection from Wall – 5-7/8" (149 mm)

Leg Center Dimension – 13" (330 mm)

PS2-B Manhole Steps are designed to be driven into "square" plastic insert only. Minimum Embedment into the concrete is 3".



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### PS2-B-DF Manhole Step

Item# – 004-507-DF

Qty – 25 pieces per box, 500 pieces per pallet

Tread Width – 13-1/2" (343 mm)

Projection from Wall – 5-5/8" (143 mm)

Leg Center Dimension – 13" (330 mm)

PS2-B-DF Manhole Steps are designed to be driven into "square" plastic insert only. This step is double sided and cannot be driven in upside down. Minimum Embedment into the concrete is 3".





## Manhole Steps

### PS2-PFHH Hand Hold

Item# – 004-515

Qty – 30 pieces per box, 600 pieces per pallet

Grasp Width – 14" (356 mm)

Projection from Wall – 3-1/8" (79 mm)

Leg Center Dimension – 13" (330 mm)

PS2-PFHH Hand Holds are designed to be driven into a preformed hole created by a Step Insert, Cam Pin or Drilling. This requires a 1" hole. This is not designed to be used as a Manhole Step.



### PS2-BGLN Grade Ring Hand Hold

Item# – 004-509

Qty – 20 pieces per box, 400 pieces per pallet

Tread Width – 13-7/8" (352 mm)

Projection from Wall – 3" (76 mm)

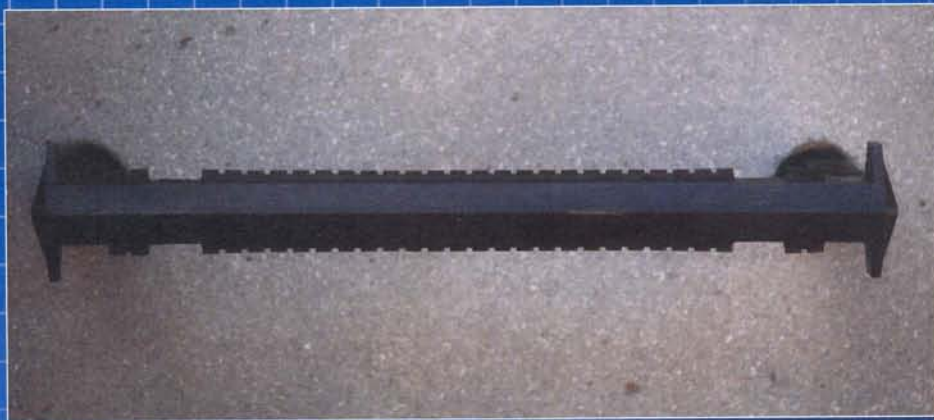
Leg Center Dimension – 13" (330 mm)

PS2-BGLN Grade Ring Hand Holds are designed to be installed between the grade rings and secured with 2 BGLN Nuts. This is not designed to be used as a Manhole Step.





# IS IT UPSIDE DOWN OR RIGHT SIDE UP?



## With M.A. Industries' Double Faced Manhole Steps, you will not have to worry.



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