



# Plugs & Test Equipment for Piping Systems

## Product Catalog



**CHERNE INDUSTRIES INC.**

800.843.7584 [www.cherneind.com](http://www.cherneind.com)

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# Cherne® Industries Best in the Business

## From Humble Beginnings to an Industry Standard

In 1953, Cherne® Industries created an innovative inflatable device for stack testing. Cherne's pneumatic product offering expanded to include testing, maintenance and repair equipment for residential, commercial, industrial and municipal systems.

Acquired by Oatey® Company in 1990, Cherne Industries maintained its focus on system testing, maintenance and repair. As a part of the Oatey Family of Brands, Cherne Industries earned ISO certification in 1998, confirming both Oatey's and Cherne's commitment to consistency and quality.

Available in Oatey Company distribution centers throughout North America and through partner distribution on every continent, Cherne products are relied on by residential and commercial contractors and industrial and municipal engineers worldwide. Product lines are available in both domestic and international specifications.

While Cherne Industries has grown, its focus remains constant – providing customers the most reliable and innovative testing, maintenance and repair equipment in the plumbing, waterworks and underground industries – good enough to bear the Cherne name.



**An ISO 9001-Certified Company**



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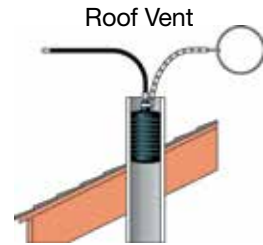
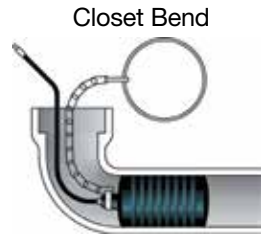
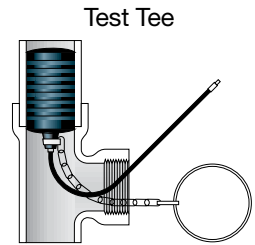
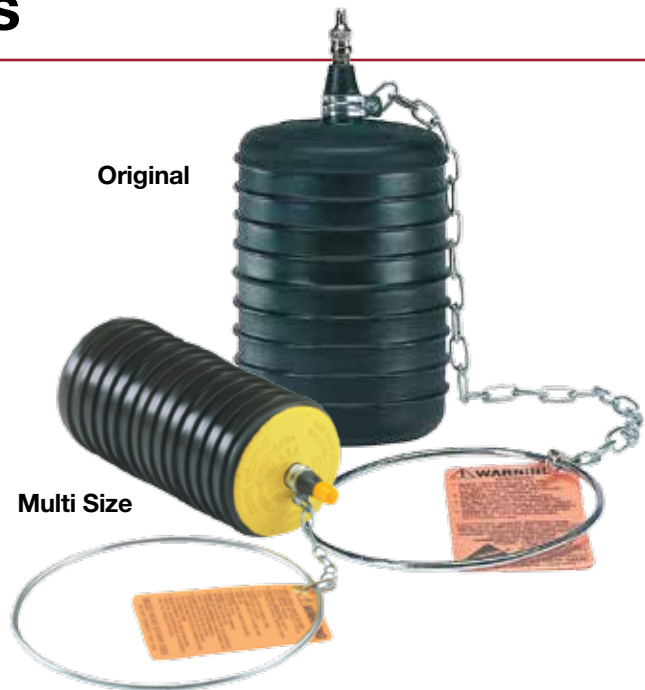
# Plumbing Test Ball® Plugs

Cherne Plumbing Test Ball® Plugs were first introduced in 1953 as a more versatile product than traditional mechanical plugs. Designed to test drain, vent and waste systems Cherne Test Ball® Plugs could be used in any type of pipe, could be inserted through a test tee, and sealed out of round pipe as well.

Cherne introduced the multi-size yellow-top Test Ball® plugs in 2002. These test ball plugs have the same great features found in the original test ball plugs, but can be used in more than one pipe size.

### Features:

- **Natural Rubber:** Great sealing properties as well as excellent expansion and memory
- **Schrader Valve Inflator:** Includes cap with valve core tightener
- **Ring and Chain Assembly:** Prevents plug from dropping into DWV system during test



### Original Test-Balls

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
270008	.75" - 1.25" (20-30 mm)	.75"-1.30" (20-33 mm)	17 psi (1,2 bar)	40 ft. (12 M)	45 psi (3,1 bar)	3.5 oz (0.1 kg)	3.75" (95 mm)	0.73" (18.5 mm)	Molded in Valve Removable Chain
270016	1.25" - 1.5" (35-40 mm)	1.17"-1.75" (30-44 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	40 psi (2,8 bar)	3.5 oz (0.1 kg)	5.5" (141 mm)	1.1" (31 mm)	Molded in Valve Removable Chain
270024	2" (50 mm)	1.9"-2.25" (48-57 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	40 psi (2,8 bar)	3.5 oz (0.1 kg)	2.84" (72 mm)	1.77" (45 mm)	Molded in Valve Removable Chain
270108	2.5" (65 mm)	2.34"-2.75" (48-70 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	6.5 oz (0.2 kg)	4.5" (114 mm)	2.3" (59 mm)	Molded in Valve Removable Chain
270032	3" (75 mm)	2.77"-3.25" (70-83 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	6.5 oz (0.2 kg)	5.25" (132 mm)	2.64" (67 mm)	Molded in Valve Removable Chain
270040	4" (100 mm)	3.41"-4.25" (87-108 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	9 oz (0.25 kg)	6.5" (163 mm)	3.25" (83 mm)	Molded in Valve Removable Chain
270059	5" (125 mm)	4.6"-5.25" (117-133 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	1.3 lbs (0.6 kg)	7.75" (200 mm)	4.5" (114 mm)	Molded in Valve Removable Chain
270067	6" (150 mm)	5.44"-6.25" (138-159 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	1.9 lbs (0.85 kg)	9.00" (230 mm)	5.25" (135 mm)	Molded in Valve Removable Chain

### Multi Size Test-Balls

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
276128	1.25" - 2" (35-50 mm)	1.25"-2.10" (32-53 mm)	17 psi (1,2 bar)	40 ft. (12 M)	40 psi (2,8 bar)	3.7 oz (0.11 kg)	5.56" (141 mm)	1.21" (31 mm)	Molded in Valve Removable Chain
276238	2" - 3" (50-75 mm)	1.9"-3.1" (48-80 mm)	17 psi (1,2 bar)	40 ft. (12 M)	35 psi (2,4 bar)	4.7 oz (0.13 kg)	5.57" (141 mm)	1.78" (45 mm)	Molded in Valve Removable Chain
276348	3" - 4" (75-100 mm)	2.8"-4.25" (70-108 mm)	17 psi (1,2 bar)	40 ft. (12 M)	40 psi (2,8 bar)	7.8 oz (0.22 kg)	5.18" (132 mm)	2.64" (67 mm)	Molded in Valve Removable Chain
276468	4" - 6" (100-150 mm)	3.4"-6.25" (87-155 mm)	17 psi (1,2 bar)	40 ft. (12 M)	30 psi (2,1 bar)	1.4 lbs (0.62 kg)	9.47" (241 mm)	3.28" (83 mm)	Molded in Valve Removable Chain

Always block plugs when conducting air tests.

# Long Test-Ball® • MS2® Test-Ball® Plugs



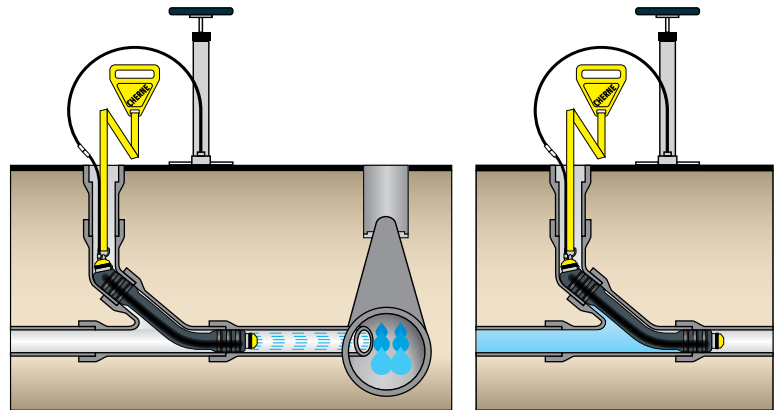
Cherne's Long Test-Ball® plugs are designed for waste stack testing—sealing the rise and the run to perform the test. These long ball plugs can also be used to seal the wye to conduct sewer air tests. Molded-in sealing ribs at each end of the plug ensure a leak-free seal.

## Long Test-Ball® Plug (“The Original”) Features:

- Ring and chain assembly keeps plug from entering line during deflation
- Includes 3' extension hose

## MS2® Long Test-Ball® Plug Features:

- Multi-size design for use in various pipe diameters
- Multi-stage design eliminates backsplash
- Integrated relief valve reduces the possibility of over-inflation
- Nylon strap and handle keeps plug from entering line during deflation
- Includes 5' extension hose



Long Test-Ball® & MS2® Long Test-Ball® plugs seals lateral during sewer air test

MS2® Long Test-Ball® Plugs Top inflates first, deflates last; *no backsplash*

## Long Test-Ball

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter
271020	2" (50 mm)	1.75"-2.25" (44-57 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	45 psi (3,1 bar)	1.1 lbs (0.51 kg)	18.25" (464 mm)
271039	3" (75 mm)	2.75"-3.25" (70-83 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	1.88 lbs (0.85 kg)	20.75" (527 mm)
271047	4" (100 mm)	3.5"-4.25" (89-108 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	2.31 lbs (1.04 kg)	24.75" (629 mm)
271098	4" - 6" (100-150 mm)	3.25"-6.25" (83-159 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	45 psi (3,1 bar)	4 lbs (1.81 kg)	28.5" (724 mm)
271063	6" (150 mm)	5.5"-6.25" (140-159 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	5.3 lbs (2.41 kg)	28.25" (718 mm)

## MS2 Long Test-Ball

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter
274518	2" - 3" (50-75 mm)	1.75"-3.25" (44-83 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	40 psi (2,8 bar)	1.31 lbs (0.5 kg)	19.44" (494 mm)
274526	3" - 4" (75-100 mm)	2.75"-4.25" (70-108 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	40 psi (2,8 bar)	2.45 lbs (1.1 kg)	23.75" (603 mm)
274534	4" - 6" (100-150 mm)	3.5"-6.25" (89-159 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	3.91 lbs (1.41 kg)	26.62" (676 mm)

Always block plugs when conducting air tests.

# Clean-Seal® & Clean-Seal® 2 Plugs

Designed for stack testing of drain, waste, and vent plumbing systems, Clean-Seal® plugs thread into a standard test tee. The bladder is inflated and then water is introduced into the pipe. Upon test completion, deflate the bladder; water travels down the pipe, eliminating test water backslash.

## Features:

- Works in both plastic and cast-iron test tees
- Natural rubber body provides a leak-free seal
- High-impact ABS threads for maximum durability
- Removable/replaceable tire inflation valve fitting

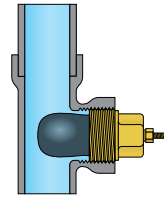
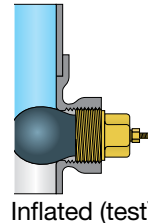
The Clean-Seal® 2's new patent-pending design adds the ability to plug, fill and drain a DWV system from any PVC, ABS or cast iron tee. Cherne has added Clean-Seal 2 to their broad offering of DWV test products. Trusted by the trade as the best in the business, Clean-Seal 2 offers the same reliable features as the original Clean-Seal with the ability to test the DWV system with either air or water. No longer fill a DWV system from the stack or use other complicated multi-piece products.

## Features:

- Patent pending design
- Plug, fill and drain from same cleanout tee
- Multi-lobe gasket allows sealing of all tees including cast iron
- Hand-tighten in place, no tools required
- Rubber cap protects hose connection when not in use
- Check-valve allows removal of hose after filling system and keeps DWV water from back-filling into potable lines



## Clean-Seal® Application



Inflated (test)

Deflated (test release)

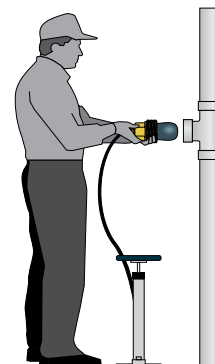


## Clean-Seal

Part Number	Nominal Size	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
271508	1.5" (40 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	.15 lbs (0.07 kg)	4.75" (121 mm)	1.5" (38 mm)
271705	2" (50 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	.3 lbs (0.14 kg)	5.81" (150 mm)	1/8"
271713	3" (75 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	.8 lbs (0.36 kg)	7.38" (188 mm)	1/4"
271721	4" (100 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	1.3 lbs (0.59 kg)	8.5" (215 mm)	1/4"
271758	6" (150 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	25 psi (1,7 bar)	3.5 lbs (1.59 kg)	11" (280 mm)	1/4"

## Clean-Seal 2

Part Number	Nominal Size	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
271828	2" (50 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	.35 lbs (0.16 kg)	5.5" (140 mm)	1/4"
271838	3" (75 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	.85 lbs (0.39 kg)	5.5" (140 mm)	1/4"
271848	4" (100 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	1.4 lbs (0.64 kg)	6.75" (171 mm)	1/4"



Simply thread into test tee and inflate (for maximum sealing performance, apply thread seal tape to the threads before use).



# Test Ball® Plugs – Underground



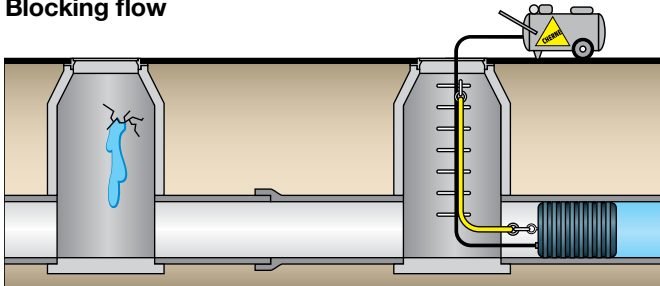
Cherne's Original Single Size and Multi-Size Test Ball Plugs are our most economical pneumatic plugs for blocking flow to do maintenance in sanitary and storm sewer systems. These plugs may also be used as a back plug for sewer air tests.

All of the single-size and multi-size Test Ball plugs have eyebolts for attaching a rope or clevis for lifting and lowering the plug. And each plug also has a removable Schrader valve for easy replacement or substitution with a quick disconnect fitting.

Made from natural rubber, these plugs are tough, tear-resistant and will work on any type of pipe, including out-of-round pipe.



## Blocking flow



## Single Size Original Test Balls

Part Number	Nominal Size	Usage Range	Maximum Back Pressure		Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
041386	8" (200 mm)	7"-8.25" (178-210 mm)	17 psi (1,2 bar)	40 ft. (12 M)	25 psi (1,7 bar)	3.4 lbs (1.6 kg)	10.25" (257 mm)	6.75" (172 mm)	1/4" (1)	3/8" (1)
041394	10" (250 mm)	9"-10.25" (229-260 mm)	17 psi (1,2 bar)	40 ft. (12 M)	25 psi (1,7 bar)	5.6 lbs (2.5 kg)	11.75" (298 mm)	8.75" (221 mm)	1/4" (1)	3/8" (1)
041408	12" (300 mm)	10.5"-12.25" (267-311 mm)	17 psi (1,2 bar)	40 ft. (12 M)	25 psi (1,7 bar)	10.9 lbs (5 kg)	13.75" (351 mm)	10.25" (262 mm)	1/4" (1)	3/8" (1)
041416	15-16" (375-400 mm)	14" - 16.25" (356-413 mm)	13 psi (0,9 bar)	30 ft. (9,1 M)	25 psi (1,7 bar)	29.5 lbs (13.4 kg)	19.75" (502 mm)	13.75" (346 mm)	1/4" (1)	3/8" (2)

## Multi-Size Original Test Balls

Part Number	Nominal Size	Usage Range	Maximum Back Pressure		Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
275048	4" - 6" (100-150 mm)	3.75"-6.25" (92-159 mm)	17 psi (1,2 bar)	40 ft. (12 M)	30 psi (2,1 bar)	2 lbs (0.91 kg)	9.8" (250 mm)	3.5" (85 mm)	1/8" (1)	1/4" (1)
275058	6" - 8" (150-200 mm)	5.25"-8.25" (135-210 mm)	17 psi (1,2 bar)	40 ft. (12 M)	30 psi (2,1 bar)	3.5 lbs (1.6 kg)	14" (356 mm)	5" (127 mm)	1/4" (1)	3/8" (1)
275088	8" - 12" (200-300 mm)	7"-12.25" (178-311 mm)	11 psi (0,75 bar)	25 ft. (8 M)	20 psi (1,4 bar)	6.63 lbs (3 kg)	16" (406 mm)	6.75" (171 mm)	1/4" (1)	3/8" (1)
275128	12" - 18" (300-450 mm)	10.75"-18.25" (273-464 mm)	11 psi (0,75 bar)	25 ft. (8 M)	25 psi (1,7 bar)	22.4 lbs (10.2 kg)	24" (610 mm)	10.5" (267 mm)	1/4" (1)	3/8" (1)

Always block plugs when conducting air tests.

# I-Series Test-Ball® Plugs

Cherne's I-Series plugs were designed to meet the needs of both the US and International markets in terms of size and expansion range. Our I-Series plugs have full body cording for added durability.

### Our I-Series plugs feature:

- Superior expansion range
- Small deflated diameters
  - All plugs up through our 24-60" size easily fit through a 24" manhole frame
  - 48-72" and 54-96" plugs fit through 36" openings

### Plugs 15-32" and larger

- Aluminum end plates – minimizes rust/corrosion
- 3/4" eyebolts on plugs 15-32" and larger – better holding strength
- Patented Field Replaceable Rupture Discs on plugs 15-32" and larger – protects plug from over-inflation



Protective sleeves available for 12-24" and larger plugs. See page 21.

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
385088	4" - 8" Short (100-200 mm)	3.6"-8.25" (92-210 mm)	**	45 psi (3,1 bar)	3.0 lbs (1.36 kg)	15.75" (400 mm)	3.43" (87 mm)	1/4" (1)	1/4" (1)
395088	4" - 8" (100-200 mm)	3.6"-8.25" (92-210 mm)	**	30 psi (2,1 bar)	2.5 lbs (1.13 kg)	20.6" (469 mm)	3.5" (70 mm)	1/4" (1)	3/8" (1)
395128	6"-12" (150-300 mm)	5.5"-12.25" (140-310 mm)	**	30 psi (2,1 bar)	5.3 lbs (2.4 kg)	26.25" (667 mm)	5.25" (133 mm)	1/4" (1)	3/8" (1)
385168	8" - 16" Short (200-400 mm)	7.5"-16.25" (186-413 mm)	**	30 psi (2,1 bar)	11 lbs (9.5 kg)	23" (585 mm)	7.25" (184 mm)	1/4" (1)	3/8" (1)
395168	8" - 16" (200-400 mm)	7.5"-16.25" (186-413 mm)	**	30 psi (2,1 bar)	14.5 lbs (6.5 kg)	29.5" (750 mm)	7.25" (184 mm)	1/4" (1)	3/8" (1)
385248	12" - 24" Short (300-600 mm)	11"-24.25" (279-616 mm)	**	30 psi (2,1 bar)	30 lbs (11 kg)	24.75" (839 mm)	10.75" (273 mm)	1/4" (1)	3/8" (2)
395248	12" - 24" (300-600 mm)	11"-24.25" (279-616 mm)	**	30 psi (2,1 bar)	28 lbs (12.7 kg)	39.5" (1003 mm)	10.75" (273 mm)	1/4" (1)	3/8" (2)
*310328	15" - 32" (380 - 800 mm)	15" - 32" (380 - 800 mm)	**	25 (1,72 bar)	65 lbs (29.5 kg)	48" (1220 mm)	14.3" (363 mm)	1/4" & 1/2"	3/4" (2)
*310408	20"-40" (500-1000 mm)	19"-40" (475-1000 mm)	**	22 psi (1,5 bar)	66 lbs (30 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	3/4" (2)
*310488	24" - 48" (600-1200 mm)	20.5"-50" (521-1270 mm)	**	22 psi (1,5 bar)	125 lbs (57 kg)	68" (1730 mm)	19.1" (485 mm)	1/4" & 1/2"	3/4" (2)
*310600	24" - 60" (600-1500 mm)	20.5" - 60.5" (520 - 1537 mm)	**	22 psi (1,5 bar)	140 lbs (63.6 kg)	88" (2235 mm)	19.1" (485 mm)	1/4" & 1/2"	3/4" (2)
*310728	48" - 72" (1200-1800 mm)	44"-72.25" (1118-1835 mm)	**	12 psi (0,83 bar)	290 lbs (132 kg)	100" (2540 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*310968	54" - 96" (1400-2400 mm)	54"-96.25" (1400-2450 mm)	**	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	50" (1270 mm)	1/2" (2)	3/4" (3)

\*Rupture Disc \*\* Consult back pressure table below.

### BACK PRESSURE DATA: I-Series Plugs

PLUG SIZE	PIPE DIAMETER																			
	4"	6"	8"	12"	15"	18"	19.35"	21"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	
4"-8"	16.7 psi	14.4 psi	13.0 psi																	
6"-12"		23.6 psi	20.9 psi	18.2 psi																
8"-16"			18.2 psi	14.8 psi	13.4 psi															
12"-24"				18.7 psi	16.8 psi	15.2 psi	12.4 psi	14.0 psi	13.0 psi											
15"-32"					18.6 psi	17.6 psi	17.2 psi	16.6 psi	15.4 psi	12.2 psi										
20"-40"								13.6 psi	12.5 psi	11.2 psi	10.2 psi	8.7 psi								
24"-48"									15.2 psi	13.9 psi	12.8 psi	11.4 psi	10.1 psi							
24"-60"									15.6 psi	15.2 psi	14.8 psi	14.0 psi	12.6 psi	9.6 psi	6.0 psi					
40"-60"												15.0 psi	13.0 psi	11.0 psi	8.7 psi					
48"-72"													7.2 psi	6.8 psi	6.4 psi	6.2 psi	6.0 psi			
54"-96"														7.3 psi	7.2 psi	6.9 psi	6.8 psi	6.6 psi	6.4 psi	

Consult page 66 for back pressure conversion to feet of head pressure.

Always block plugs when conducting air tests.

# Pillow-Style Test-Ball® Plugs



Cherne's Pillow-Style Test-Balls are great for blocking sewer flow and can also be used as a "back plug" for sewer air testing. Made from heavy-duty elastic urethane, these plugs are lightweight, flexible, chemical and petroleum resistant, and will fit through small diameter openings. Pillow-style plugs can be tethered to full head pressure with the tether bar.



## Features:

- Equipped with a special 30' inflation hose, read-back line and gauge
- A repair kit is available to fix small tears and punctures

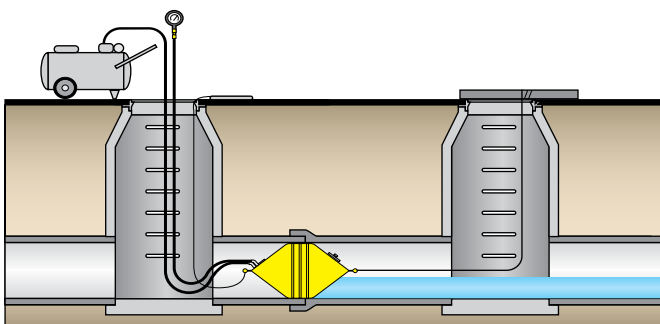
## Pillow-Style Test-Ball

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	
277108	*15" (375 mm)	14.7"-15.5" (373-394 mm)	15 psi (1 bar)	35 ft. (11 M)	24 psi (1,65 bar)	7 lbs (3.2 kg)	43" (1100 mm)	12" (305 mm)	1/4" (1)
277118	*18" (450 mm)	17.8"-18.8" (451-477 mm)	15 psi (1 bar)	35 ft. (11 M)	24 psi (1,65 bar)	9 lbs (4.1 kg)	43" (1100 mm)	12" (305 mm)	1/4" (1)
277128	*20" (500 mm)	19.6"-20.7" (498-526 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	18 psi (1,24 bar)	12 lbs (5.5 kg)	43" (1100 mm)	12" (305 mm)	1/4" (1)
277134	*21" (525 mm)	20.6"-21.8" (523-554 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	18 psi (1,24 bar)	14 lbs (6.4 kg)	43" (1100 mm)	12" (305 mm)	1/4" (1)
277142	*24" (600 mm)	23.5"-25.2" (598-641 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	18 psi (1,24 bar)	16 lbs (7.3 kg)	66" (1700 mm)	12" (305 mm)	1/4" (1)
277150	*27" (700 mm)	26.5"-28.2" (672-717 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	18 psi (1,24 bar)	18 lbs (8.2 kg)	66" (1700 mm)	12" (305 mm)	1/2" (1)
277169	30" (750 mm)	29.4"-31.25" (747-794 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	18 psi (1,24 bar)	20 lbs (9.1 kg)	66" (1700 mm)	12" (305 mm)	1/2" (1)
277177	33" (850 mm)	32.3"-34.25" (819-870 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	13 psi (0,9 bar)	22 lbs (9.9 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
277185	36" (900 mm)	35.3"-37.5" (896-953 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	13 psi (0,9 bar)	32 lbs (14.5 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
277193	42" (1100 mm)	41.2"-43.7" (1045-1111 mm)	7.8 psi (0,55 bar)	18 ft. (5.5 M)	12 psi (0,83 bar)	36 lbs (16.4 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
277207	48" (1200 mm)	47.04"-50" (1195-1270 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	12 psi (0,83 bar)	41 lbs (18.6 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
277215	54" (1400 mm)	52.92"-56" (1344-1422 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	10 psi (0,7 bar)	48 lbs (21.8 kg)	95" (2413 mm)	15" (381 mm)	1/2" (1)
277223	60" (1500 mm)	58.8"-62" (1494-1575 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	10 psi (0,7 bar)	64 lbs (29.1 kg)	126" (3200 mm)	15" (381 mm)	1/2" (1)
277231	66" (1700 mm)	64.7"-68" (1643-1727 mm)	3.5 psi (0,24 bar)	8 ft. (2.4 M)	8 psi (0,55 bar)	70 lbs (31.8 kg)	126" (3200 mm)	15" (381 mm)	1/2" (1)

\*15" - 27" pillow-style plugs have standard snifter valve air connection.

Large single-size plugs are not suitable for leak location or vacuum testing. Custom sizes of the Pillow-Style Test-Ball® and Muni-Ball® plugs are also available.

## Blocking flow



## Accessories

Part Number	Description
008948	12" x 24" Pillow Plug Patch Kit

Large single-size plugs are not suitable for leak location or vacuum testing. Custom sizes of the Pillow-Style Test-Ball® and Muni-Ball® plug are also available.

Always block plugs when conducting air tests.

# Remo® Remote Placement Plugs

The Remo® Remote Placement plug provides two advantages—it eliminates the need to enter confined spaces and speeds up the pipe plugging process. The system is safer and less expensive to use than conventional plugging methods because it requires no confined space equipment to simply block sewer flow. A lightweight aluminum pole system\* or a standard 1 1/4" iron pipe\*\* is used to place the Remo® plug in the sewer system.

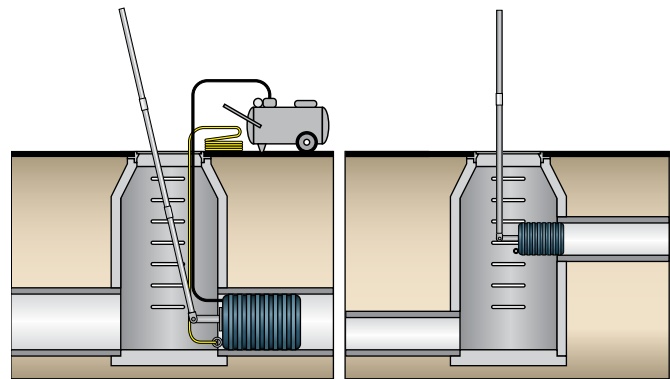


## Remo® Plug Features:

- Multi-size design to seal multiple pipe sizes
- Can be locked at a 90° angle to seal openings in manholes at different levels
- Can be used as a back plug for sewer tests
- Adapters available to convert Muni-Ball® plugs into Remo® plugs

## Pole System Features:

- Consists of 6' lightweight aluminum poles with push-button construction
- Designed for plugs up to 30 lbs used in manhole depths of up to 20'
- Poles are 1/6th the weight of iron pipe
- Pole system requires Remo® pole adapter



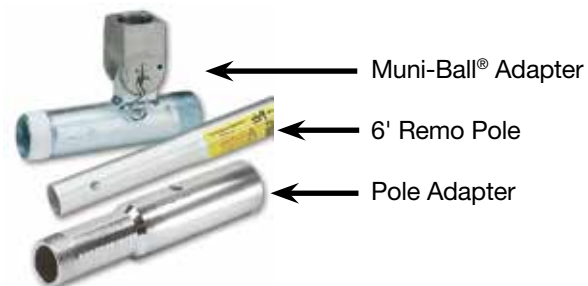
\*Requires pole adapter

\*\*When added strength is needed, iron pipe is recommended

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Eye bolts
275428	6" - 10" (150-250 mm)	5.5"-10.25" (140-260 mm)	13 psi (0,9 bar)	30 ft (9.1 M)	30 psi (2,1 bar)	8 lbs (3.64 kg)	24" (610 mm)	5.25" (133 mm)	1/4" (2) 3/8" (1)
275438	8" - 12" (200-300 mm)	7.0"-12.25" (178-311 mm)	13 psi (0,9 bar)	30 ft (9.1 M)	30 psi (2,1 bar)	10.75 lbs (4.88 kg)	25.5" (648 mm)	6.75" (171 mm)	1/4" (2) 3/8" (1)
275448	12" - 18" (300-450 mm)	10.50"-18.25" (273-464 mm)	13 psi (0,9 bar)	30 ft (9.1 M)	30 psi (2,1 bar)	27 lbs (12.25 kg)	34" (863 mm)	10.5" (267 mm)	1/4" (2) 3/8" (1)

## Accessories

Part Number	Description
019473	6' Remo® Pole
019458	Remo® Pole Adapter (1 1/4" M NPT)
019558	1 1/2" Remo® Muni-Ball® Adapter
019568	2" Remo® Muni-Ball® Adapter
019548	2" - 1 1/2" Remo® Reducer Bushing
060508	3" - 2" Remo® Reducer Bushing
059688	4" - 2" Remo® Reducer Bushing



# Original Muni-Ball® Plugs



The Muni-Ball® Plug was introduced over 50 years ago and the Cherne brand continues to be the most trusted name in pneumatic plugs today. Muni-Ball® Plugs offer a full bypass allowing both testing and monitoring of piping systems. Muni-Balls® are ideal for installation and repair of residential or commercial piping systems. Cherne Muni-Ball® products can also be used for maintenance of municipal infrastructure, including sanitary and storm sewer pipe systems. Muni-Ball® plugs are durable, rugged and are effective on almost any type of pipe.



- Muni-Ball® Plugs are supplied with Schrader tire inflation valves
- Larger diameter Muni-Ball® Plugs include a removable threaded valve, allowing the user to replace with quick disconnect fittings
- Multi-Size® Muni-Ball® Plugs allow more options and less inventory
- 8", 10", 12" and 15" Sizes now include new modified plug for sewer air tests

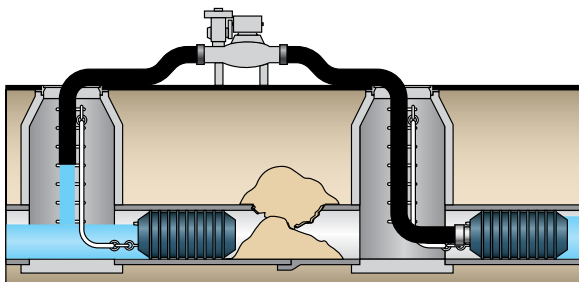
## Single Size

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
262008	1.5" (40 mm)	1/4" M	1.49"-1.88" (38-48 mm)	22 psi (1,5 bar)	50 ft (15 M)	40 psi (2,8 bar)	0.3 lbs (0.2 kg)	3.8" (97 mm)	1.4" (36 mm)	Molded in Valve Removable Chain
262010	2" (50 mm)	1/8" F	1.88"-2.25" (48-57 mm)	22 psi (1,5 bar)	50 ft (15 M)	40 psi (2,8 bar)	0.4 lbs (0.3 kg)	6" (152 mm)	1.75" (44 mm)	Molded in Valve Removable Chain
262021	3" (75 mm)	3/4" F	2.62"-3.25" (67-83 mm)	22 psi (1,5 bar)	50 ft (15 M)	40 psi (2,8 bar)	1.25 lbs (0.5 kg)	8" (203 mm)	2.5" (64 mm)	Molded in Valve Removable Chain
262048	4" (100 mm)	3/4" F	3.25"-4.25" (83-108 mm)	22 psi (1,5 bar)	50 ft (15 M)	40 psi (2,8 bar)	1.5 lbs (0.7 kg)	8" (203 mm)	3.13" (80 mm)	Molded in Valve 1/4" (1)
262064	6" (150 mm)	1 1/2" F	4.50"-6.25" (144-159 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	2 lbs (1 kg)	7" (178 mm)	4.5" (112 mm)	1/8" 1/4" (1)
262080	8" (200 mm)	3" F	7.00"-8.25" (178-210 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	5 lbs (2.3 kg)	10" (254 mm)	6.75" (170 mm)	1/4" 3/8" (1)
262110	10" (250 mm)	3" F	9.00"-10.25" (229-260 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	9 lbs (4 kg)	11.75" (298 mm)	8.75" (222 mm)	1/4" 3/8" (1)
262129	12" (300 mm)	3" F	10.50"-12.25" (267-311 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	13 lbs (6 kg)	13.75" (350 mm)	10.25" (260 mm)	1/4" 3/8" (1)
262137	15" - 16" (375-400 mm)	3" F	14.0"-16.0" (356-413 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	35 psi (2,4 bar)	33 lbs (15 kg)	19.75" (502 mm)	13.75" (346 mm)	1/4" 3/8" (1)
262188	18" (450 mm)	4" F	17.5"-19.5" (445-504 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	25 psi (1,7 bar)	79 lbs (36 kg)	24.75" (629 mm)	16.9" (429 mm)	1/4" 1/2" (2)
262218	21" (525 mm)	4" F	18.55"-21.38" (479-543 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	25 psi (1,7 bar)	87 lbs (39 kg)	26" (660 mm)	18.25" (462 mm)	1/4" 1/2" (2)
262242	24" (600 mm)	4" F	22.0"-25" (558-632 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	25 psi (1,7 bar)	124 lbs (56 kg)	28.75" (730 mm)	21.25" (538 mm)	1/4" 1/2" (2)

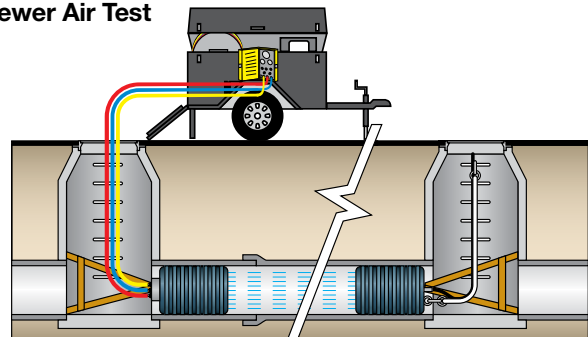
## Multi-Size

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
265048	4" - 6" (100-150 mm)	3/4" F	3.75"-6.25" (95-159 mm)	17 psi (1,2 bar)	40 ft (12 M)	35 psi (2,4 bar)	2.5 lbs (1.1 kg)	10.75" (273 mm)	3.46" (88 mm)	1/8" 1/4" (1)
265068	6" - 8" (150-200 mm)	1 1/2" F	5.50"-8.35" (133-212 mm)	17 psi (1,2 bar)	40 ft (12 M)	35 psi (2,4 bar)	6 lbs (2.7 kg)	13" (330 mm)	5" (125 mm)	1/4" 3/8" (1)
265078	8" - 10" (200-250 mm)	2" F	7.00"-10.25" (178-260 mm)	17 psi (1,2 bar)	40 ft (12 M)	30 psi (2,1 bar)	9 lbs (3 kg)	14.5" (368 mm)	6.75" (171 mm)	1/4" 3/8" (1)
265098	8" - 12" (200-300 mm)	2" F	7.00"-12.25" (178-311 mm)	17 psi (1,2 bar)	40 ft (12 M)	25 psi (1,7 bar)	16 lbs (7.3 kg)	22" (559 mm)	6.75" (171 mm)	1/4" 3/8" (1)
265128	12" - 18" (300-450 mm)	4" F	10.75"-18.75" (273-477 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	25 psi (1,7 bar)	32 lbs (14.5 kg)	27.25" (692 mm)	10.5" (267 mm)	1/4"(2) 3/8" (2)

## Bypass Pumping



## Sewer Air Test



# Big Mouth® Flow-Through Plugs

Big Mouth® plugs serve multiple applications. Great for **gravity bypassing** or **bypass pumping**.

## Original Big Mouth Plugs

- Large male NPT threaded bypass
- Equipped with removable 3/8" eyebolt for lifting /lowering plug
- Removable tire valve for easy replacement with optional quick disconnect
- Lightweight aluminum bypass



## Single Size Big Mouth Plug

- Allows for largest bypass by pipe diameter
- 6", 8", 10" sizes have threaded bypasses
- 12", 15", 18", 21" and 24" have straight tube bypasses
  - Attach hose with banding



## Multi-Size Big Mouth Plug

- Multi-size Big Mouth Plug offers greater expansion range
- Lightweight aluminum bypass
- Removable tire valve for easy replacement with optional quick disconnect

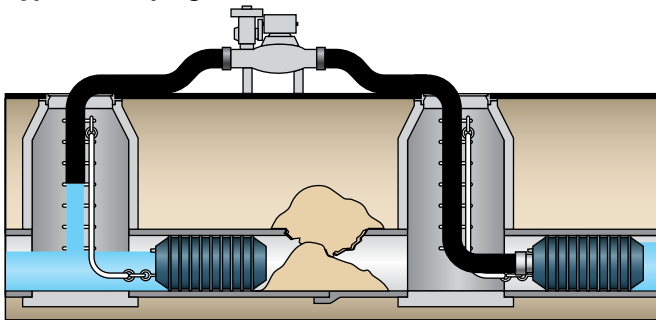


## Multi-Size Big Mouth Plug with Interchangeable Bypass Flange

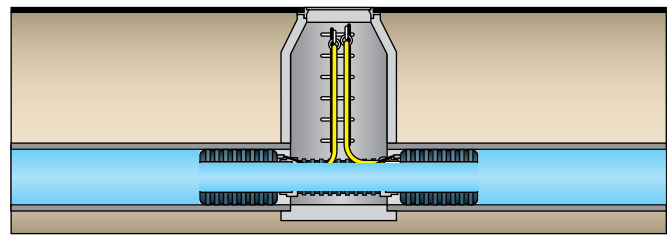
- Interchangeable Bypass for different bypass needs Multi-size Big Mouth Plug offers greater expansion range
- Lightweight aluminum bypass
- Removable tire valve for easy replacement with optional quick disconnect



## Bypass Pumping



## Gravity Bypassing





**Original Size Big Mouth Plugs**

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts	
269008	8" - 10" (200-250 mm)	4" M	7.25"-10.25" (185-250 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	35 psi (2,4 bar)	8.8 lbs (4 kg)	14.88" (378 mm)	6.94" (176 mm)	1/4" (1)	3/8" (1)
269018	10" - 12" (250-300 mm)	6" M	9.25"-12.25" (235-311 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	15.7 lbs (7.12 kg)	17.25" (438 mm)	8.81" (224 mm)	1/4" (1)	3/8" (1)
269028	12" - 15" (300-380 mm)	6" M	10.62"-15.25" (270-387 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	20 lbs (9 kg)	17.88" (454 mm)	10.25" (260 mm)	1/4" (1)	3/8" (1)

**Single Size Big Mouth Plugs**

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts	
369068	6" (150 mm)	4" M	5.69"-6.34" (145-161 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	7 lbs (3.2 kg)	13.25" (337 mm)	5.38" (137 mm)	1/4" (1)	3/8" (1)
369088	8" (200 mm)	6" M	7.75"-8.45" (195-215 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	10 lbs (4.5 kg)	16" (406 mm)	7.5" (191 mm)	1/4" (1)	3/8" (1)
369108	10" (250 mm)	8" OD	9.75"-10.46" (250-266 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	17 lbs (7.7 kg)	20" (508 mm)	9.13" (232 mm)	1/4" (1)	3/8" (1)
369128	12" (300 mm)	10" OD	11.75"-12.52" (300-318 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	21 lbs (9.5 kg)	20" (508 mm)	11.13" (283 mm)	1/4" (1)	3/8" (1)
369158	15" (380 mm)	12" OD	13.9"-15.56" (353-395 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	26 lbs (11.8 kg)	20" (508 mm)	13.13" (333 mm)	1/4" (1)	3/8" (1)
369188	18" (450 mm)	15" OD	16.88"-18.74" (429-476 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	31 lbs (14 kg)	20" (508 mm)	16.13" (410 mm)	1/4" (1)	3/8" (1)
369218	21" (525 mm)	18" OD	20.01"-21.81" (508-554 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	37 lbs (16.8 kg)	20" (508 mm)	19.13" (486 mm)	1/4" (1)	3/8" (1)
369248	24" (600 mm)	20" OD	22.63"-24.98" (575-634 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	30 psi (2,1 bar)	42 lbs (19 kg)	20" (508 mm)	21.13" (537 mm)	1/4" (1)	3/8" (1)

**Multi-Size Big Mouth Plugs**

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts	
374068	6" - 10" (150-250 mm)	4" M	5.75"-10.25" (146-260 mm)	10 psi (0,69 bar)	23 ft. (10 M)	40 psi (2,8 bar)	15 lbs (6.8 kg)	24.5" (622 mm)	5.65" (146 mm)	1/4" (1)	3/8" (1)
374088	8" - 12" (200-300 mm)	4" M	7"-12.25" (178-311 mm)	15 psi (1 bar)	34 ft. (10.5 M)	35 psi (2,4 bar)	22 lbs (10 kg)	26" (660 mm)	6.75" (165 mm)	1/4" (1)	3/8" (1)
376088	8" - 12" (200-300 mm)	6" M	7"-12.25" (178-311 mm)	15 psi (1 bar)	34 ft. (10.5 M)	35 psi (2,4 bar)	22 lbs (10 kg)	26" (660 mm)	6.76" (165 mm)	1/4" (1)	3/8" (1)
376128	12" - 18" (300-450 mm)	6" M	11.25"-18.25" (286-464 mm)	10 psi (0,69 bar)	23 ft. (10 M)	25 psi (1,7 bar)	45 lbs (21 kg)	28" (711 mm)	11" (279 mm)	1/4" (1)	3/8" (1)
378128	12" - 18" (300-450 mm)	8" M	11.25"-18.25" (286-464 mm)	10 psi (0,69 bar)	23 ft. (10 M)	25 psi (1,7 bar)	45 lbs (21 kg)	28" (711 mm)	11" (279 mm)	1/4" (1)	3/8" (1)

**Multi-Size Plugs with Interchangeable Flange**

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts	
376148	14" - 21" (375-525 mm)	6" M	13.6"-21.25" (345-540 mm)	10 psi (0,69 bar)	23 ft. (10 M)	25 psi (1,7 bar)	60 lbs (27 kg)	30" (762 mm)	13.25" (337 mm)	1/8" (1)	3/8" (2)
378148	14" - 21" (375-525 mm)	8" M	13.6"-21.26" (345-540 mm)	10 psi (0,69 bar)	23 ft. (10 M)	25 psi (1,7 bar)	60 lbs (27 kg)	30" (762 mm)	13.25" (337 mm)	1/8" (1)	3/8" (2)
380148	14" - 21" (375-525 mm)	10" M	13.6"-21.27" (345-540 mm)	10 psi (0,69 bar)	23 ft. (10 M)	25 psi (1,7 bar)	60 lbs (27 kg)	30" (762 mm)	13.25" (337 mm)	1/8" (1)	3/8" (2)
376188	18" - 24" (450-600 mm)	6" M	16.5"-24.25" (419-616 mm)	10 psi (0,69 bar)	23 ft. (10 M)	22 psi (1,5 bar)	90 lbs (41 kg)	34" (864 mm)	16" (406 mm)	1/8" (1)	1/2" (2)
378188	18" - 24" (450-600 mm)	8" M	16.5"-24.26" (419-616 mm)	10 psi (0,69 bar)	23 ft. (10 M)	22 psi (1,5 bar)	90 lbs (41 kg)	34" (864 mm)	16" (406 mm)	1/8" (1)	1/2" (2)
380188	18" - 24" (450-600 mm)	10" M	16.5"-24.27" (419-616 mm)	10 psi (0,69 bar)	23 ft. (10 M)	22 psi (1,5 bar)	90 lbs (41 kg)	34" (864 mm)	16" (406 mm)	1/8" (1)	1/2" (2)

**Big Mouth Flange Kits**

Part Number	Nominal Size	Bypass Diameter
049068	14" - 21"	6" M
049088	14" - 21"	8" M
049188	18" - 24"	8" M
049208	18" - 24"	10" M

# I-Series Muni Ball® Plugs

Cherne's I-Series Muni-Ball plugs were designed to meet the needs of both the US and International markets in terms of size and expansion range. Our I-Series plugs have full body cording for added durability.

## Our I-Series plugs feature:

- Superior expansion range
- Small deflated diameters
  - All plugs up through our 24-60" size easily fit through a 24" manhole frame
  - 48-72" and 54-96" plugs fit through 36" openings
- Flexible bypass hoses – plugs can be bent to 90 degrees

## Plugs 15-32" and larger:

- Aluminum end plates – minimizes rust/corrosion
- $\frac{3}{4}$ " eyebolts on plugs 15-32" and larger – better holding strength
- Patented Field Replaceable Rupture Discs on plugs 15-32" and larger – protects plug from over-inflation

Protective sleeves available for 12-24" and larger plugs. See page 21.







**I-Series Muni Ball® Plugs**

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
355088	4" - 8" (100-200 mm)	3/4" M	3.75"-8.25" (100-210 mm)	**	30 psi (2,1 bar)	6 lbs (2.7 kg)	22" (559 mm)	3.65" (93 mm)	1/4"	1/4" (1)
355128	6" - 12" (150-300 mm)	1" M	5.50"-12.25" (150-311 mm)	**	30 psi (2,1 bar)	8.5 lbs (3.9 kg)	26.25" (667 mm)	5.25" (133 mm)	1/4"	3/8" (1)
355168	8" - 16" (200-400 mm)	2" F	7.7"-16.25" (196-413 mm)	**	30 psi (2,1 bar)	23 lbs (10.5 kg)	32" (813 mm)	7.6" (194 mm)	1/4"	3/8" (2)
355248	12" - 24" (300-600 mm)	2" M	11.25"-24.25" (286-616 mm)	**	30 psi (2,1 bar)	41 lbs (18.6 kg)	40" (1016 mm)	11" (282 mm)	1/4"	3/8" (2)
*312328	15"-32" (375-800 mm)	2" M	15"-32" (375-800 mm)	**	25 psi (1,72 bar)	73 lbs (33.2 kg)	48" (1220 mm)	14.3" (363 mm)	1/4" & 1/2"	3/4" (2)
*314328	15"-32" (375-800 mm)	4" M	15"-32" (375-800 mm)	**	25 psi (1,72 bar)	80 lbs (36.4 kg)	48" (1220 mm)	14.3" (363 mm)	1/4" & 1/2"	3/4" (2)
*316328	15"-32" (375-800 mm)	6" M	15"-32" (375-800 mm)	**	25 psi (1,72 bar)	94 lbs (42.75 kg)	48" (1220 mm)	14.3" (363 mm)	1/4" & 1/2"	3/4" (2)
*312408	20" - 40" (500-1000 mm)	2" M	19"-40" (475-1000 mm)	**	22 psi (1,5 bar)	88 lbs (40 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	1/2" (2)
*314408	20" - 40" (500-1000 mm)	4" M	19"-40" (475-1000 mm)	**	22 psi (1,5 bar)	95 lbs (43 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	1/2" (2)
*316408	20" - 40" (500-1000 mm)	6" M	19"-40" (475-1000 mm)	**	22 psi (1,5 bar)	106 lbs (48 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	1/2" (2)
*314488	24" - 48" (600-1200 mm)	4" M	20"-50" (510-1270 mm)	**	22 psi (1,5 bar)	150 lbs (68 kg)	68" (1730 mm)	20" (485 mm)	1/4" & 1/2"	3/4" (2)
*316488	24" - 48" (600-1200 mm)	6" M	20"-50" (510-1270 mm)	**	22 psi (1,5 bar)	153 lbs (69.5 kg)	68" (1730 mm)	20" (485 mm)	1/2"	3/4" (2)
*314600	24" - 60" (1400-1500 mm)	4" M	20.5" - 60.5" (520 - 1537 mm)	**	22 psi (1,5 bar)	153 lbs (69.5 kg)	88" (2235 mm)	20" (485 mm)	1/4" & 1/2"	3/4" (2)
316600	24" - 60" (600-1500 mm)	6" M	20.5" - 60.5" (520 - 1537 mm)	**	22 psi (1,5 bar)	164 lbs (74.5 kg)	88" (2235 mm)	20" (485 mm)	1/4" & 1/2"	3/4" (2)
*314728	48" - 72" (1200-1800 mm)	4" M	44"-72.25" (1118-1835 mm)	**	12 psi (0,83 bar)	310 lbs (141 kg)	93" (2632 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*316728	48" - 72" (1200-1800 mm)	6" M	44" - 72.25" (1200 - 1835 mm)	**	12 psi (0,83 bar)	418 lbs (190.0 kg)	93" (2632 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*318728	48" - 72" (1200-1800 mm)	8" Flanged	44" - 72.25" (1200 - 1835 mm)	**	12 psi (0,83 bar)	448 lbs (203.6 kg)	93" (2632 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*314968	54" - 96" (1400-2400 mm)	4" M	54"-96.25" (1400-2450 mm)	**	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*316968	54" - 96" (1400-2400 mm)	6" M	50" - 96.25" (1270 - 2400 mm)	**	11 psi (0,75 bar)	480 lbs (218.2 kg)	132" (3353 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*319968	54" - 96" (1400-2400 mm)	8" Flanged	50" - 96.25" (1270 - 2400 mm)	**	11 psi (0,75 bar)	506 lbs (230.0 kg)	132" (3353 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)

\*Rupture Disc \*\* Consult back pressure table below.

**BACK PRESSURE DATA: I-Series Plugs**

PLUG SIZE	PIPE DIAMETER																			
	4"	6"	8"	12"	15"	18"	19.35"	21"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	
4"-8"	16.7 psi	14.4 psi	13.0 psi																	
6"-12"		23.6 psi	20.9 psi	18.2 psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8"-16"			18.2 psi	14.8 psi	13.4 psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12"-24"				18.7 psi	16.8 psi	15.2 psi	12.4 psi	14.0 psi	13.0 psi	-	-	-	-	-	-	-	-	-	-	-
15"-32"					18.6 psi	17.6 psi	17.2 psi	16.6 psi	15.4 psi	12.2 psi	-	-	-	-	-	-	-	-	-	-
20"-40"								13.6 psi	12.5 psi	11.2 psi	10.2 psi	8.7 psi	-	-	-	-	-	-	-	-
24"-48"									15.2 psi	13.9 psi	12.8 psi	11.4 psi	10.1 psi	-	-	-	-	-	-	-
24"-60"									15.6 psi	15.2 psi	14.8 psi	14.0 psi	12.6 psi	9.6 psi	6.0 psi	-	-	-	-	-
40"-60"												15.0 psi	13.0 psi	11.0 psi	8.7 psi	-	-	-	-	-
48"-72"													7.2 psi	6.8 psi	6.4 psi	6.2 psi	6.0 psi	6.0 psi	-	-
54"-96"															7.3 psi	7.2 psi	6.9 psi	6.8 psi	6.6 psi	6.4 psi

Consult page 66 for back pressure conversion to feet of head pressure.

# Pillow-Style Muni-Ball® Plugs

Cherne's Pillow-Style Muni-Balls are great for blocking sewer flow and can also be used for sewer testing. Made from heavy-duty elastic urethane these plugs are lightweight, flexible, chemical and petroleum resistant, and will fit through small diameter openings. Pillow-style plugs can be tethered to full head pressure with the tether bar.

### Features:

- Equipped with a special 30' inflation hose, read-back line and gauge
- A repair kit is available to fix small tears and punctures
- Muni-Ball® style plugs feature a bypass with threaded nipples on both ends



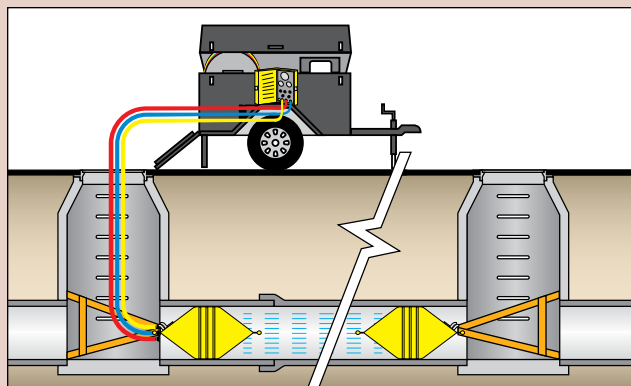
### Pillow-Style Muni-Ball

Part Number	Nominal Size	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
266027	30" (750 mm)	2 1/2" F	29.4"-31.25" (747-794 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	55 lbs (25 kg)	66" (1700 mm)	12" (305 mm)	1/2" (1)
266035	33" (850 mm)	2 1/2" F	32.3"-34.25" (819-870 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	57 lbs (25.9 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
266043	36" (900 mm)	2 1/2" F	35.3"-37.5" (896-953 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	67 lbs (30.4 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
266051	42" (1100 mm)	2 1/2" F	41.2"-43" (1045-111 mm)	7.8 psi (0,55 bar)	18 ft. (5.5 M)	68 lbs (30.8 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
266078	48" (1200 mm)	2 1/2" F	47.04"-50" (1195-1270 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	70 lbs (31.8 kg)	95" (2413 mm)	12" (305 mm)	1/2" (1)
266086	54" (1400 mm)	2 1/2" F	52.92"-56" (1344-1422 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	105 lbs (47 kg)	95" (2413 mm)	15" (381 mm)	1/2" (1)
266094	60" (1600 mm)	2 1/2" F	58.8"-62" (1494-1575 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	125 lbs (56.7 kg)	126" (3200 mm)	15" (381 mm)	1/2" (1)
266108	66" (1700 mm)	2 1/2" F	64.7"-68" (1643-1727 mm)	3.5 psi (0,24 bar)	8 ft. (2.4 M)	130 lbs (58.9 kg)	126" (3200 mm)	15" (381 mm)	1/2" (1)

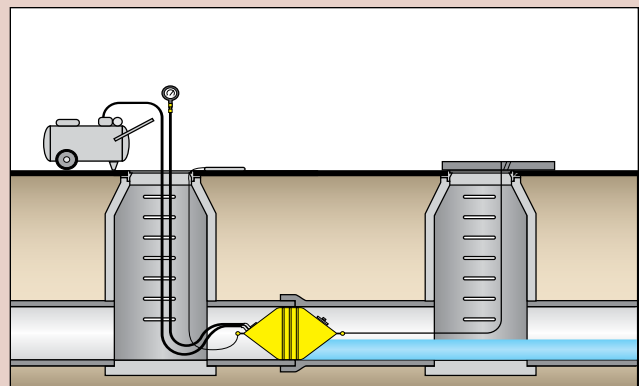
### Accessories

Part Number	Description
008948	12" x 24" Pillow Plug Patch Kit

### Sewer air test



### Blocking flow



Large single-size plugs are not suitable for leak location or vacuum testing. Custom sizes of the Pillow-Style Test-Ball® and Muni-Ball® plugs are also available.

**Always block plugs when conducting air tests.**

# Air-Loc® & I-Series Leak Locator Plugs



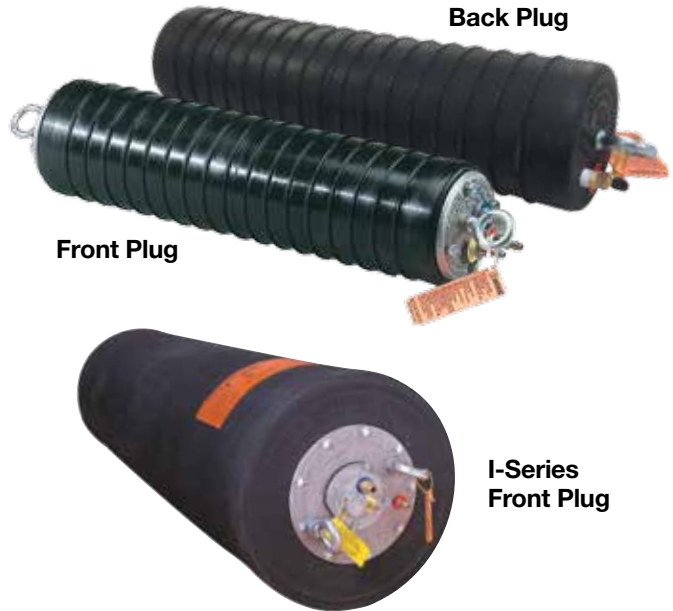
Air-Loc leak locator plugs are designed for both line acceptance tests as well as leak location testing. Air-Loc front plugs can also be used as blocking plugs by simply plugging the fill and read-back ports.

**Features:**

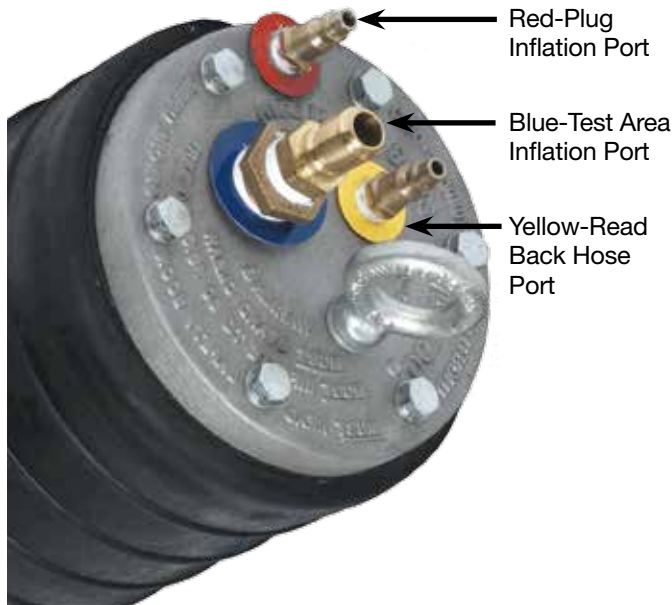
- Eyebolts on both ends for interconnecting plugs
- Easy to use quick-disconnect hose connections
- Rupture discs on sizes 15-32" and larger to safeguard plug against over-inflation
- Aramid cording on sizes 15-32" and larger

**"Front" Air-Loc Leak Locator Plugs also come equipped with:**

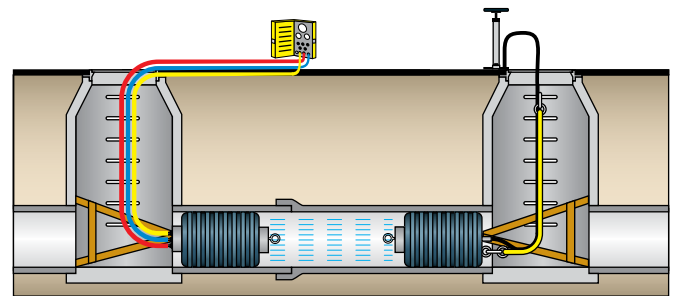
- Color coded inflation ports
- Removable air fittings
- Flexible internal hoses



**Front Plug**



**Line Acceptance Test**



**Air-Loc Pressure Testing Panel**

Ideal for line acceptance testing and leak location testing.  
See page 44



**Triple Hose**

Connect Air-Loc plug to the control panel.  
See page 45



Always block plugs when conducting air tests.

# Air-Loc® & I-Series Leak Locator Plugs

## Front Plugs

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
<b>Original Front Plugs</b>									
267068	6" - 10" (150-250 mm)	5.5"-10.5" (140-260 mm)	**	30 psi (2,1 bar)	8 lbs (3.5 kg)	23.5" (593 mm)	5.25" (133 mm)	1/4" (1)	7/16" (2)
267088	8" - 12" (200-300 mm)	7"-12.3" (178-312 mm)	**	30 psi (2,1 bar)	15 lbs (6.8 kg)	26.25" (667 mm)	6.75" (171 mm)	1/4" (1)	7/16" (2)
267128	12" - 18" (300-450 mm)	10.75"-18.5" (273-478 mm)	**	25 psi (1,7 bar)	27 lbs (12.2 kg)	31.5" (800 mm)	10.25" (260 MM)	1/4" (1)	7/16" (2)
<b>I-Series Front Plugs</b>									
*317328	15" - 32" (380 - 800 mm)	15" - 32" (380 - 800 mm)	**	25 psi (1,72 bar)	73 lbs (33.2 kg)	48" (1220 mm)	14.5" (370 mm)	1/4" & 1/2"	3/4" (2)
*317408	20" - 40" (500-1000 mm)	19"-40" (475-1000 mm)	**	22 psi (1,5 bar)	95 lbs (43 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	3/4" (2)
*317488	24" - 48" (600-1200 mm)	20.5"-50" (521-1270 mm)	**	22 psi (1,5 bar)	125 lbs (57 kg)	74.5" (1892 mm)	20" (508 mm)	1/4" & 1/2"	3/4" (2)
*317600	24" - 60" (600-1525 mm)	20.5"-60.5" (520-1537 mm)	**	22 psi (1,5 bar)	148 lbs (69.5 kg)	88" (2235 mm)	20" (500 mm)	1/4" & 1/2"	3/4" (2)
*317728	48" - 72" (1200-1800 mm)	44"-72.25" (1118-1835 mm)	**	12 psi (0,83 bar)	290 lbs (132 kg)	100" (2540 mm)	43" (1092 mm)	1/2" (2)	3/4" (3)
*317968	54" - 96" (1400-2400 mm)	54"-96.25" (1400-2450 mm)	**	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	50" (1270 mm)	1/2" (2)	3/4" (3)

## Back Plugs

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
275078	6" - 10" (150-250 mm)	5.5"-10.5" (140-2650 mm)	**	30 psi (2,1 bar)	5.84 lbs (2.5 kg)	23.5" (593 mm)	5.25" (133 mm)	1/4" (1)	3/8" (2)
275108	8" - 12" (200-300 mm)	7"-12.5" (178-312 mm)	**	30 psi (2,1 bar)	9.3 lbs (4.2 kg)	26.25" (667 mm)	6.75" (171 mm)	1/4" (1)	3/8" (2)
275138	12" - 18" (300-450 mm)	10.75"-18.5" (273-478 mm)	**	25 psi (1,7 bar)	23 lbs (10.3 kg)	31.5" (800 mm)	10.25" (260 MM)	1/4" (1)	3/8" (2)

\*Rupture Disc \*\* Consult back pressure table below.

## BACK PRESSURE DATA: I-Series Plugs

PLUG SIZE	PIPE DIAMETER																			
	4"	6"	8"	12"	15"	18"	19.35"	21"	24"	30"	36"	42"	48"	54"	60"	66"	72"	84"	96"	
4"-8"	16.7 psi	14.4 psi	13.0 psi																	
6"-12"		23.6 psi	20.9 psi	18.2 psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8"-16"			18.2 psi	14.8 psi	13.4 psi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12"-24"				18.7 psi	16.8 psi	15.2 psi	12.4 psi	14.0 psi	13.0 psi	-	-	-	-	-	-	-	-	-	-	-
15"-32"					18.6 psi	17.6 psi	17.2 psi	16.6 psi	15.4 psi	12.2 psi	-	-	-	-	-	-	-	-	-	-
20"-40"								13.6 psi	12.5 psi	11.2 psi	10.2 psi	8.7 psi	-	-	-	-	-	-	-	-
24"-48"									15.2 psi	13.9 psi	12.8 psi	11.4 psi	10.1 psi	-	-	-	-	-	-	-
24"-60"									15.6 psi	15.2 psi	14.8 psi	14.0 psi	12.6 psi	9.6 psi	6.0 psi	-	-	-	-	-
40"-60"												15.0 psi	13.0 psi	11.0 psi	8.7 psi	-	-	-	-	-
48"-72"													7.2 psi	6.8 psi	6.4 psi	6.2 psi	6.0 psi	-	-	-
54"-96"														7.3 psi	7.2 psi	6.9 psi	6.8 psi	6.6 psi	6.4 psi	-

Consult page 66 for back pressure conversion to feet of head pressure.

# Protective Sleeves



Greatly reduces possibility of damage to plug due to debris and sharp objects in the pipe. The protective sleeve also protects plugs when the pipe is degraded. Works particularly well in coastal areas where oysters and barnacles are present.

## Features:

- 1/4" thick sleeve extends plug life
- Eliminates superficial cuts on plugs
- Great for rental distributors & frequent users
- Maintains back pressure ratings
- Easy to install without special tools



## Protective Sleeve

Threading rope through eyelets holds sleeve in place during plug installation and removal.



Plug with sleeve installed

## Protective Sleeves

Part Number	Sleeve Size
300988	12" - 24"
300998	15" - 30" & 15" - 32"
301408	20" - 40"
301028	24" - 48"
301059	24" - 60"
301048	48" - 72"
301068	54" - 96"

Consult customer service for factory installed protective sleeves.

# Rupture Disc

## Rupture Disc Features:

### Increases Plug Life

- Disc activates at 60% over required inflation pressure
  - Helps prevent "non-visible" damage to cording
  - Rupture disc won't burst until well over stated inflation pressure
  - No more catastrophic plug failures due to faulty gauges
  - Discs can be replaced in field

### Improves User Safety

- Reduces the possibility of plug explosion due to over-inflation

### Superior components/design

- Aluminum housing - will not rust
- Graphite rupture disc
  - Leak-free design
  - Precision calibrated



**240008**  
Rupture Disc for Test Balls and Air-Loc Plugs with inflation pressures of 22-25 psi.

**All Rupture Discs are Field Replaceable**



**240068**  
Rupture Disc for Muni-Balls with inflation pressure of 22-25 psi.

**220028**  
Rupture disc for Test Balls, Muni Balls, and Air-Loc Plugs with inflation pressure of 11-12 psi.

# High-Pressure Plugs

## Our High-Pressure plugs feature:

- Multi-range use (6 plugs will cover pipe sizes from 4" to 32")
- Unlike competitive products, Cherne's new HP plug has the rubber and metal bonded, eliminating fears of separation or rolling off resulting from high backpressures
- Aramid fiber construction
- Optimized design using steel, aramid and natural rubber to ensure longevity and robust construction
- Water must be used to pressurize these plugs due to high working pressure
- Removable and field repairable hardware
- Safety/over-inflation device



**New Product!**

Part Number	Plug Description	Bypass Diameter (NPT)	Usage Range	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
511088	4" - 8" (102-203 mm)	3/8" M	3.8" - 8.2" (97-208 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	8 lbs (3.63 kg)	16" (406 mm)	3.8" (97 mm)	1/8"	None
511128	8" - 12" (203-305 mm)	3/4" M	7.7" - 12.2" (196-310 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	24 lbs (10.89 kg)	16" (406 mm)	7.7" (196 mm)	1/4"	1
512168	12" - 16" (305-152 mm)	2" M	11.9" - 16.2" (302-411 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	52 lbs (23.59 kg)	16" (406 mm)	11.9" (302 mm)	1/4"	1
512208	16" - 20" (152-508 mm)	2" M	15.2" - 20.2" (386-513 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	92 lbs (41.73 kg)	16" (406 mm)	15.2" (386 mm)	1/2" & 1/4"	2
512268	20" - 26" (508-660 mm)	2" M	19.2" - 26.2" (488-665 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	146 lbs (66.22 kg)	16" (406 mm)	19.2" (488 mm)	1/2" & 1/4"	2
512328	26" - 32" (660-813 mm)	2" M	25.8" - 32.2" (655-818 mm)	150 psi (10,34 bar)	200 psi (13,79 bar)	371 lbs (168.28 kg)	16" (406 mm)	25.8" (655 mm)	1/2" & 1/4"	4

Pressurize with water.







# Mechanical Plugs



Original Gripper®	26
Hub-Fit Gripper® • Clean-Out Gripper®	27
T-Handle Gripper®	28
Iron Grip	29
Econ-O-Grip® • Petro Econ-O-Grip®	30
Kwik 'N Sure® • Sure-Grip®	31
Monitor-Well Plugs	32
Test Kap™	33



# Original Gripper®

Cherne's Gripper plugs can be used in a variety of applications including DWV (drain, waste and vent) testing and stack testing. End-of-Pipe design won't fall in, whereas the Inside-of-Pipe design allows you to locate the plug inside the pipe as far as you need. Time tested, the Gripper® remains one of the most popular mechanical plugs on the market.

## Original Gripper® Plug Features:

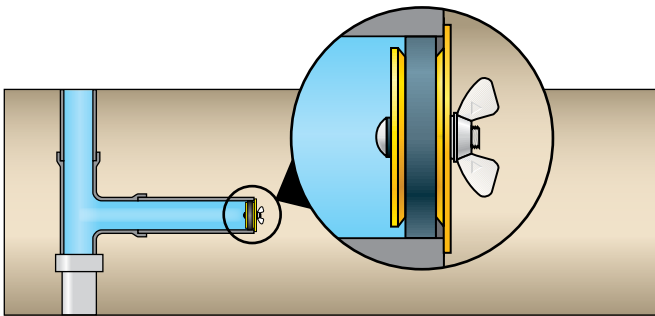
- Ideal for sewer testing and long-term applications
- Made with glass-reinforced ABS plastic
- End-of-pipe design seals only at the end of a pipe
- Inside-of-pipe design seals inside pipe as far as needed

## Equipped with:

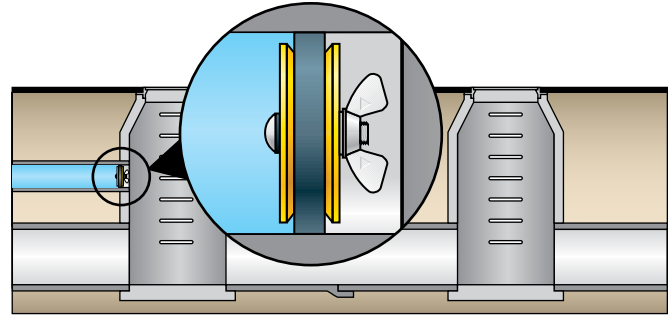
- Easy-to-install extra large zinc wing nut – won't rust
- Natural rubber o-ring
- Galvanized carriage bolt to prevent corrosion



End-of-Pipe Gripper® plug



Inside-of-Pipe Gripper® plug



## End-of-Pipe Gripper

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight
270210	1 1/2" (40 mm)	1.48"-1.65" (39-42 mm)	17 psi (1,2 bar)	40 ft. (12 M)	1.75" (44.5 mm) 0.13 lbs (0.05 kg)
270229	2" (50 mm)	1.9"-2.17" (49-55 mm)	17 psi (1,2 bar)	40 ft. (12 M)	1.87" (47.5 mm) 0.19 lbs (0.09 kg)
270237	3" (75 mm)	2.8"-3.1" (71-79 mm)	17 psi (1,2 bar)	40 ft. (12 M)	2.5" (63.5 mm) 0.375 lbs (0.16 kg)
270245	4" (100 mm)	3.8"-4.06" (96-103 mm)	17 psi (1,2 bar)	40 ft. (12 M)	2.5" (63.5 mm) 0.5 lbs (0.23 kg)
270261	6" (150 mm)	5.77"-6.08" (147-154 mm)	17 psi (1,2 bar)	40 ft. (12 M)	3.75" (95.3 mm) 2.5 lbs (1.14 kg)
270270	8" (200 mm)	7.7"-8.03" (196-204 mm)	17 psi (1,2 bar)	40 ft. (12 M)	3.75" (95.3 mm) 3 lbs (1.37 kg)

## Inside-of-Pipe Gripper

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight
270296	4" (100 mm)	3.8"-4.06" (96-103 mm)	17 psi (1,2 bar)	40 ft. (12 M)	2.5" (63.5 mm) .5 lbs (0.23 kg)
270253	6" (150 mm)	5.77"-6.08" (147-154 mm)	17 psi (1,2 bar)	40 ft. (12 M)	3.75" (95.3 mm) 2.5 lbs (1.14 kg)
270288	8" (200 mm)	7.7"-8.03" (196-204 mm)	17 psi (1,2 bar)	40 ft. (12 M)	3.75" (95.3 mm) 3 lbs (1.37 kg)

# Hub-Fit Gripper® • Clean-Out Gripper®



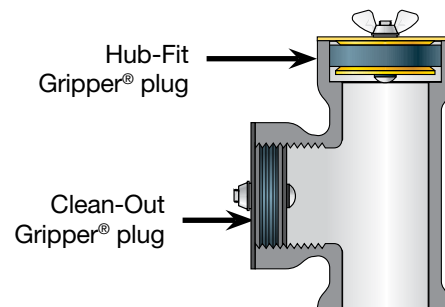
## Hub-Fit Gripper® Plug Features:

- Ideal for use in hub fittings and in bell-end pipe
- Pressure rated for conducting DWV tests
- Made with glass-reinforced ABS plastic
- Yellow color for greater visibility in pipe
- Natural rubber o-ring for positive seal
- Galvanized carriage bolt to prevent corrosion
- Easy-to-install, extra large zinc wing nut – won't rust



## Clean-Out Gripper® Plug Features:

- Guaranteed to seal any damaged threads
- Made with glass-reinforced ABS plastic
- Black color blends well with cast-iron pipe
- Stainless steel hardware
- NPT sizes, including hard to find 3 1/2"
- Natural rubber threaded o-ring for positive seal



## Hub-Fit Gripper

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	
270528	2" (50 mm)	2.25"-2.45" (57-63 mm)	13 psi (0,9 bar)	30 ft. (9 M)	1.9" (48 mm)	3.3 oz (0.09 kg)
270538	3" (75 mm)	3.44"-3.53" (88-90 mm)	13 psi (0,9 bar)	30 ft. (9 M)	2.4" (61 mm)	9.5 oz (0.27 kg)
270548	4" (100 mm)	4.41"-4.53" (112-115 mm)	13 psi (0,9 bar)	30 ft. (9 M)	2.4" (61 mm)	11.9 oz (0.34 kg)

## Clean-Out Gripper

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	
270168	2"	2.20"-2.5"	17 psi	40 ft.	1.9"	2.4 oz
270178	3"	3.23"-3.50"	17 psi	40 ft.	2.2"	3.5 oz
270138	3.5"	3.78"-4.25"	17 psi	40 ft.	2.2"	7.5 oz
270188	4"	4.22"-4.6"	17 psi	40 ft.	2.2"	9.7 oz

# T-Handle Gripper®

## T-Handle Aluminum Gripper® Plug Features:

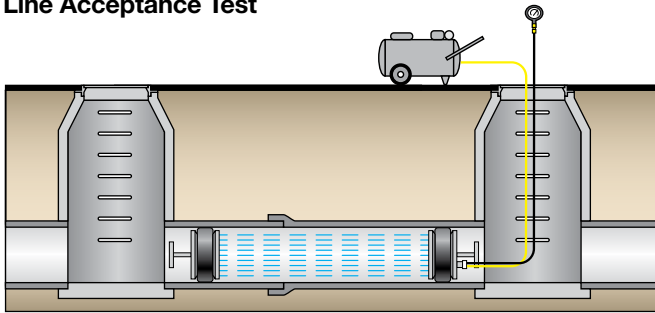
- Ideal for long term applications
- 6" - 12" plugs are sized for concrete, clay, and SDR 26 and 35 pipe
- 15" and 18" plugs are sized for concrete and clay pipe sizes only
- Available with or without bypass
- Can be used for sewer air pressure tests

## Equipped with:

- Heavy duty aluminum body and zinc plated steel T-handle
- Chemical resistant neoprene o-ring



## Line Acceptance Test



## T-Handle Gripper with Bypass

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	Bypass Diameter (NPT)
272949	6" (150 mm)	5.7"-6.3" (144-160 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	6.5 lbs (3 kg)
272957	8" (200 mm)	7.7"-8.3" (196-211 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	9.5 lbs (4.3 kg)
272965	10" (250 mm)	9.8"-10.3" (248-262 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	12.5 lbs (5.7 kg)
272973	12" (300 mm)	11.7"-12.3" (297-312 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	9.7" (247 mm)	16 lbs (7.3 kg)
272981	15" (380 mm)	14.8"-15.3" (377-388 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	9.7" (247 mm)	24 lbs (10.7 kg)
272998	18" (460 mm)	17.7"-18.3" (450-465 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	9.7" (247 mm)	31 lbs (14 kg)

## T-Handle Gripper

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight
272892	6" (150 mm)	5.7"-6.3" (144-160 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)
272906	8" (200 mm)	7.7"-8.3" (196-211 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)
272914	10" (250 mm)	9.8"-10.3" (248-262 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)
272922	12" (300 mm)	11.7"-12.3" (297-312 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	9.7" (247 mm)
272930	15" (380 mm)	14.8"-15.3" (377-388 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	9.7" (247 mm)
272888	18" (460 mm)	17.7"-18.3" (450-465 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	9.7" (247 mm)

Always block plugs when conducting air tests.

# Iron Grip



## Iron Grip Bypass Mechanical Plug Features:

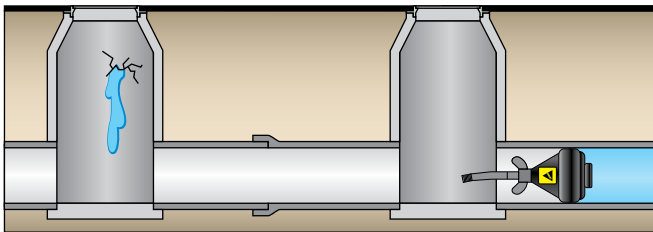
- Easy, tool-free installation
- For permanent or temporary use
- For use in water and air sewer testing
- Cast-iron design

## Equipped with:

- Large installation wing-nut
- Natural rubber o-ring



## Blocking Flow



## Iron Grip

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	Bypass Diameter (NPT)
268028	2" (50 mm)	1.94"-2.12" (49-54 mm)	13 psi (0,9 bar)	30 ft. (9,1 M)	9.75" (248 mm)	1.1 lbs (.5 kg)
268038	3" (75 mm)	2.82"-3.12" (75-80 mm)	11 psi (0,76 bar)	25 ft. (7,6 M)	12.75" (324 mm)	2.3 lbs (1.1 kg)
268048	4" (100 mm)	3.6"-4.06" (92-103 mm)	8.7 psi (0,61 bar)	20 ft. (6.1 M)	12.75" (324 mm)	3.1 lbs (1.4 kg)
268068	6" (150 mm)	5.57"-6.12" (142-155 mm)	4.3 psi (0,30 bar)	10 ft. (3 M)	12.75" (324 mm)	5.6 lbs (2.5 kg)
268088	8" (200 mm)	7.72"-8.2" (196-208 mm)	4.3 psi (0,30 bar)	10 ft. (3 M)	17" (432 mm)	11.5 lbs (5.9 kg)
268108	10" (250 mm)	9.8"-10.2" (249-260 mm)	3.5 psi (0,24 bar)	8 ft. (2.4 M)	17" (432 mm)	20 lbs (9.0 kg)
268128	12" (300 mm)	11.56"-12.2" (294-310 mm)	2.6 psi (0,18 bar)	6 ft. (1.8 M)	19.5" (500 mm)	28 lbs (12.8 kg)

Always block plugs when conducting air tests.

# Econ-O-Grip® • Petro Econ-O-Grip®

## Econ-O-Grip® Plug Features:

- Cost effective method for plugging open-ended pipe
- Works well as a pipe dust cover

## Equipped with:

- Galvanized metal plates and bolts
- Natural rubber o-ring



## Petro Econ-O-Grip® Plug Features:

- Cost effective, chemical-resistant plug
- Works well as a pipe dust cover

## Equipped with:

- Stainless-steel bolt and plate
- Chemical resistant nitrile rubber



## Econo-O-Grip

Part Number	Nominal Size	Usage Range	Maximum Back Pressure		Length	Product Weight
271519	1.5" (40 mm)	1.44"-1.65" (37-42 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.56" (65 mm)	3.5 oz (0.1 kg)
271527	2" (50 mm)	1.96"-2.25" (50-57 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.62" (67 mm)	5 oz (0.14 kg)
271535	3" (75 mm)	2.86"-3.25" (73-82 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.64" (67 mm)	8.5 oz (0.24 kg)
271543	4" (100 mm)	3.78"-4.5" (96-114 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	3.25" (82 mm)	12.48 oz (0.35 kg)
271551	5" (125 mm)	4.62"-5.3" (117-135 mm)	1 psi (0,07 bar)	2 ft. (0.7 M)	3.55" (90 mm)	1.1 lbs (0.5 kg)
271578	6" (150 mm)	5.62"-6.4" (143-162 mm)	1 psi (0,07 bar)	2 ft. (0.7 M)	3.19" (81 mm)	1.6 lbs (0.7 kg)

## Petro Econ-O-Grip

Part Number	Nominal Size	Usage Range	Maximum Back Pressure		Length	Product Weight
273318	1.5" (40 mm)	1.44"-1.65" (37-42 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.56" (65 mm)	3.5 oz (0.1 kg)
273328	2" (50 mm)	1.96"-2.25" (50-57 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.62" (67 mm)	5 oz (0.14 kg)
273338	3" (75 mm)	2.86"-3.25" (73-82 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	2.64" (67 mm)	8.5 oz (0.24 kg)
273348	4" (100 mm)	3.78"-4.3" (96-109 mm)	2 psi (0,14 bar)	5 ft. (1.4 M)	3.25" (82 mm)	12.48 oz (0.35 kg)
273358	5" (125 mm)	4.62"-5.3" (117-135 mm)	1 psi (0,07 bar)	2 ft. (0.7 M)	3.55" (90 mm)	1.1 lbs (0.5 kg)
273368	6" (150 mm)	5.62"-6.4" (143-162 mm)	1 psi (0,07 bar)	2 ft. (0.7 M)	3.19" (81 mm)	1.6 lbs (0.7 kg)

Always block plugs when conducting air tests.

# Kwik 'N Sure® • Sure-Grip®



## Kwik 'N Sure® Plug Features:

- Works in all types of pipe
- Ideal for plugging water line stub-outs
- Designed for high pressure applications

## Equipped with:

- Natural rubber o-ring
- Wing nut on the .39"-1.25" sizes
- Hex nut on the 1.5"-5" sizes



## Sure-Grip® Plug Features:

- Polypropylene construction
- Fits all types of pipe at nominal sizes
- Permanent or temporary use

## Equipped with:

- Natural rubber o-ring
- Can be tapped for use with cleanout cover



## Sure-Grip

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	
271158	1.5" (40 mm)	1.48"-1.63" (40-42 mm)	22 psi (1,5 bar)	50 ft. (15 M)	2.5" (64 mm)	1.6 oz (0.7 kg)
271208	2" (50 mm)	1.89"-2.09" (48-53 mm)	22 psi (1,5 bar)	50 ft. (15 M)	3" (75 mm)	2.4 oz
271308	3" (75 mm)	2.89"-3.09" (73-79 mm)	13 psi (0,9 bar)	30 ft. (9 M)	3.7" (94 mm)	4.9 oz
271408	4" (100 mm)	3.87"-4.09" (98-103 mm)	13 psi (0,9 bar)	30 ft. (9 M)	3.5" (87 mm)	6.8 oz

## Kwik 'N Sure

Part Number	Nominal Size	Usage Range	Maximum Back Pressure	Length	Product Weight	
269832	0.39" (10 mm)	0.38"-0.43" (10-11 mm)	185 psi (12,8 bar)	428 ft. (128 M)	1.87" (48 mm)	1 oz (0.03 kg)
269840	0.5" (13 mm)	0.5"-0.56" (13-14 mm)	180 psi (12,4 bar)	415 ft. (124 M)	1.87" (48 mm)	1.5 oz (0.04 kg)
269867	0.75" (20 mm)	0.72"-0.87" (18-22 mm)	180 psi (12,4 bar)	415 ft. (124 M)	2.06" (52 mm)	1.6 oz (0.05 kg)
269875	1" (25 mm)	0.86"-1.02" (22-26 mm)	40 psi (2,8 bar)	92 ft. (28 M)	2.18" (55 mm)	1.9 oz (0.05 kg)
269883	1.25" (32 mm)	1.24"-1.43" (32-36 mm)	112 psi (7,7 bar)	258 ft. (77 M)	2.06" (52 mm)	3 oz (0.07 kg)
269891	1.5" (40 mm)	1.43"-1.53" (36-39 mm)	88 psi (6,1 bar)	203 ft. (62 M)	1.87" (48 mm)	3.4 oz (0.08 kg)
269905	2" (50 mm)	1.73"-2.06" (44-52 mm)	112 psi (7,7 bar)	258 ft. (77 M)	2.63" (67 mm)	7 oz (0.2 kg)
269913	2.5" (60 mm)	2.3"-2.78" (58-71 mm)	72 psi (4,9 bar)	166 ft. (51 M)	2.75" (70 mm)	12 oz (0.3 kg)
269921	3" (75 mm)	2.73"-3.2" (69-81 mm)	28 psi (1,9 bar)	65 ft. (19 M)	3.12" (79 mm)	1.5 lbs (0.68 kg)
269948	4" (100 mm)	3.72"-4.5" (95-114 mm)	24 psi (1,7 bar)	55 ft. (17 M)	3.12" (79 mm)	2.6 lbs (1.2 kg)
269956	5" (125 mm)	4.8"-5.19" (122-132 mm)	8 psi (0,6)	18 ft. (6 M)	3.25" (82 mm)	2.25 lbs (1 kg)

Always block plugs when conducting air tests.

# Monitor-Well Plugs

## Monitor-Well Locking Plug Features:

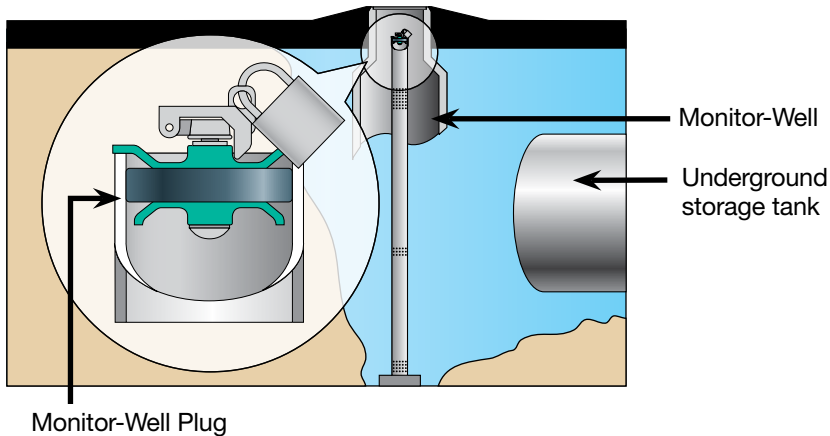
- Designed to seal monitor wells
- Meets all EPA requirements for locking plugs
- Sized to seal Schedule 40 piping
- 2" and 4" sizes can also seal Schedule 5 pipe
- Works with Cherne's solid brass padlock or #2 Masterlock® padlock

## Equipped with:

- Chemical and petroleum-resistant Estaloc™ plastic top and bottom plates
- Petroleum resistant nitrile o-ring
- Stainless steel carriage bolt
- Yellow chromate-coated locking latch



## Monitor-Well Plug Installed



## Monitor-Well

Part Number	Nominal Size	Usage Range	Maximum Back Pressure		Length	Product Weight
271648	1" - 1.25" (25-30 mm)	1"-1.38" (25-35 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	2.5" (64 mm)	4.7 oz (0.14 kg)
271675	2" (50 mm)	1.9"-2.31" (49-59 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	2.5" (64 mm)	4.5 oz (0.13 kg)
271669	3" (75 mm)	2.8"-3.1" (71-79 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	2.6" (66 mm)	7.5 oz (0.21 kg)
271683	4" (100 mm)	3.8"-4.38" (97-111 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	3.0" (76 mm)	12.5 oz (0.35 kg)
271691	6" (150 mm)	5.77"-6.08" (147-155 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	3.98" (101 mm)	2 lbs (0.91 kg)
271735	8" (200 mm)	7.76"-8.03" (197-204 mm)	6.5 psi (0.45 bar)	15 ft. (4.5 M)	3.98" (101 mm)	3 lbs (1.22 kg)
112941	Dolphin Padlock (All padlocks keyed alike.)					



## Test-Kap™

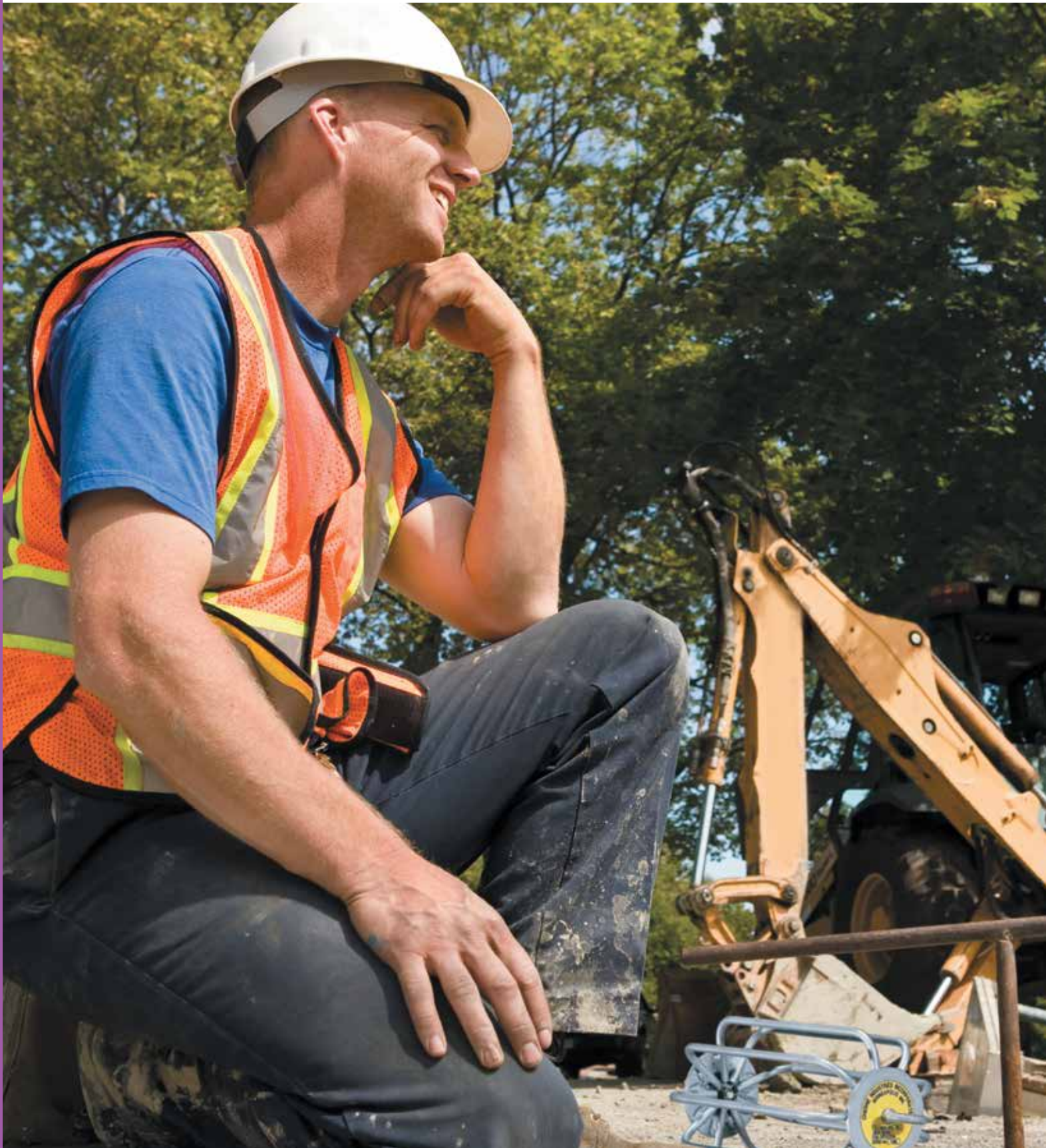
- Made of flexible PVC
- Stainless steel hose clamp - will not rust
- Can be used on plastic, steel, copper, and cast iron pipe

## Test-Kap

Part Number	Nominal Size	Maximum Back Pressure	
270725	1.5"	13 psi	30 ft.
270733	2"	13 psi	30 ft.
270741	3"	13 psi	30 ft.
270768	4"	13 psi	30 ft.
270776	5"	13 psi	30 ft.
270784	6"	13 psi	30 ft.



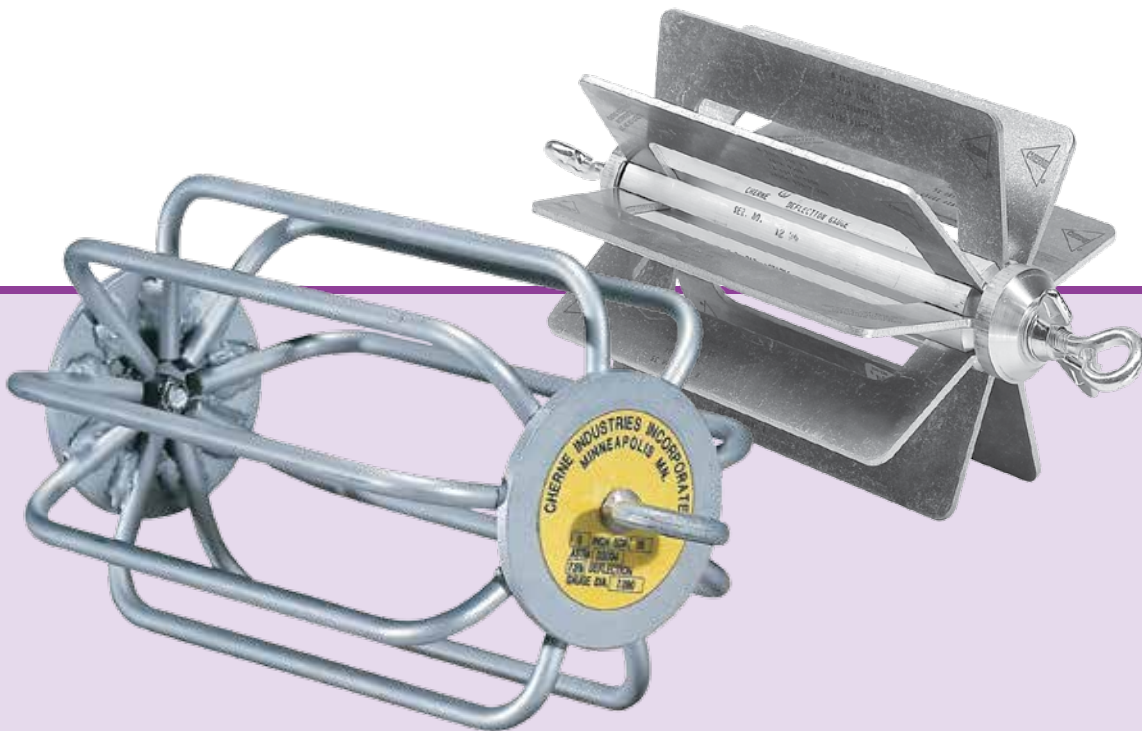
Always block plugs when conducting air tests.



# Deflection Gauges



Fixed Steel Deflection Gauges	36
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# Fixed Steel Deflection Gauges

Deflection Gauges (mandrels) are used to test flexible sewer pipe for out-of-roundness or deflection per ASTM specifications D3034 and F679. This testing ensures that flexible pipe has been properly bedded and backfilled (ASTM D2321) to give optimal performance.

Other gauges can get hung up – causing a deflection test to fail, even though the pipe is within tolerance. Sized to .01", steel deflection gauge styles meet ASTM requirements.

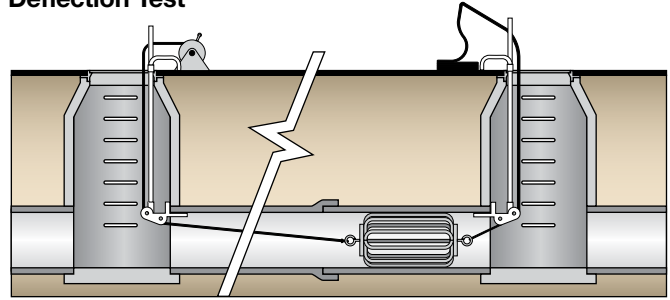
## Fixed Steel Style Deflection Gauge:

- Durable, zinc-plated construction resists corrosion
- Conforms to mandrel sizing specifications—blade length is equal to or greater than the nominal pipe size
- Nine-arm design ensures testing accuracy
- Open design allows gravel and debris pass-through



**Custom sizes available!**

## Deflection Test



### 5% Fixed Steel Deflection Gauges

Deflection Gauges for SDR-35 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286068	6" (152.40 mm)	5.893" (149.68 mm)	5.742" (145.85 mm)	5.46" (138.68 mm)	5.0 lbs.
286078	8" (203.20 mm)	7.891" (200.43 mm)	7.665" (194.69 mm)	7.28" (184.91 mm)	7.0 lbs.
286088	10" (254.00 mm)	9.864" (250.55 mm)	9.563" (242.90 mm)	9.09" (230.89 mm)	8.0 lbs.
286098	12" (304.80 mm)	11.737" (298.12 mm)	11.360" (288.54 mm)	10.79" (274.07 mm)	9.0 lbs.
286108	15" (381.00 mm)	14.374" (365.10 mm)	13.897" (352.98 mm)	13.20" (335.28 mm)	13.5 lbs.

Deflection Gauges for PS 46 (SDR-35) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286118	18" (457.20 mm)	17.643" (448.13 mm)	17.054" (433.17 mm)	16.20" (411.48 mm)	15.0 lbs.
286278	21" (533.40 mm)	20.800" (528.32 mm)	20.098" (510.49 mm)	19.09" (484.89 mm)	18.0 lbs.
286288	24" (609.60 mm)	23.402" (594.41 mm)	22.586" (573.68 mm)	21.46" (545.08 mm)	21.0 lbs.

### 7.5% Fixed Steel Deflection Gauges

Deflection Gauges for SDR-35 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286188	6" (152.40 mm)	5.893" (149.68 mm)	5.742" (145.85 mm)	5.31" (134.90 mm)	5.0 lbs.
286198	8" (203.20 mm)	7.891" (200.43 mm)	7.665" (194.69 mm)	7.09" (180.10 mm)	7.0 lbs.
286208	10" (254.00 mm)	9.864" (250.55 mm)	9.563" (242.90 mm)	8.85" (224.80 mm)	8.0 lbs.
286218	12" (304.80 mm)	11.737" (298.12 mm)	11.360" (288.54 mm)	10.51" (267.00 mm)	9.0 lbs.
286228	15" (381.00 mm)	14.374" (365.10 mm)	13.897" (352.98 mm)	12.85" (326.40 mm)	13.5 lbs.

Deflection Gauges for PS 46 (SDR-35) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286238	18" (457.20 mm)	17.643" (448.13 mm)	17.054" (433.17 mm)	15.77" (400.56 mm)	15.0 lbs.
286248	21" (533.40 mm)	20.800" (528.32 mm)	20.098" (510.49 mm)	18.59" (472.19 mm)	18.0 lbs.
286258	24" (609.60 mm)	23.402" (594.41 mm)	22.586" (573.68 mm)	20.89" (530.61 mm)	21.0 lbs.

Deflection Gauges for SDR-26 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286008	6" (152.40 mm)	5.764" (146.41 mm)	5.612" (142.54 mm)	5.33" (135.38 mm)	5.0 lbs.
286018	8" (203.20 mm)	7.715" (195.96 mm)	7.488" (190.20 mm)	7.11" (180.59 mm)	7.0 lbs.
286028	10" (254.00 mm)	9.644" (244.96 mm)	9.342" (237.29 mm)	8.87" (225.30 mm)	8.0 lbs.
286038	12" (304.80 mm)	11.480" (291.59 mm)	11.102" (281.99 mm)	10.55" (267.97 mm)	9.0 lbs.
286048	15" (381.00 mm)	14.053" (356.95 mm)	13.575" (344.81 mm)	12.90" (327.66 mm)	13.5 lbs.

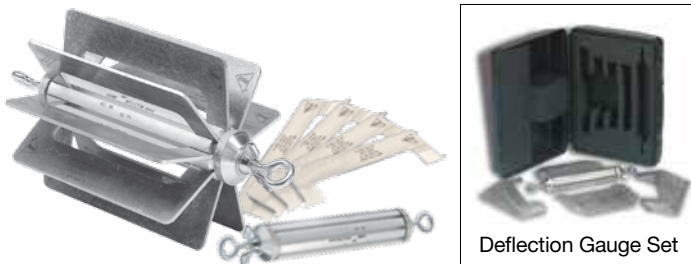
Deflection Gauges for PS 115 (SDR-26) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286058	18" (457.20 mm)	17.278" (438.86 mm)	16.688" (423.87 mm)	15.85" (402.59 mm)	15.0 lbs.
286528	21" (533.40 mm)	20.370" (517.40 mm)	19.666" (499.52 mm)	18.68" (474.47 mm)	18.0 lbs.
286538	24" (609.60 mm)	22.918" (582.12 mm)	22.102" (561.39 mm)	21.00" (533.40 mm)	21.0 lbs.

Deflection Gauges for SDR-26 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
286128	6" (152.40 mm)	5.764" (146.41 mm)	5.612" (142.54 mm)	5.19" (131.80 mm)	5.0 lbs.
286138	8" (203.20 mm)	7.715" (195.96 mm)	7.488" (190.20 mm)	6.93" (176.00 mm)	7.0 lbs.
286148	10" (254.00 mm)	9.644" (244.96 mm)	9.342" (237.29 mm)	8.64" (219.50 mm)	8.0 lbs.
286158	12" (304.80 mm)	11.480" (291.59 mm)	11.102" (281.99 mm)	10.27" (260.90 mm)	9.0 lbs.
286168	15" (381.00 mm)	14.053" (356.95 mm)	13.575" (344.81 mm)	12.56" (319.00 mm)	13.5 lbs.

Deflection Gauges for PS 115 (SDR-26) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
Custom	18" (457.20 mm)	17.278" (438.86 mm)	16.688" (423.87 mm)	15.44" (392.18 mm)	15.0 lbs.
286548	21" (533.40 mm)	20.370" (517.40 mm)	19.666" (499.52 mm)	18.19" (462.03 mm)	18.0 lbs.
286558	24" (609.60 mm)	22.918" (582.12 mm)	22.102" (561.39 mm)	20.44" (519.18 mm)	21.0 lbs.

PS 46 closely relates to SDR 35 and PS 115 closely relates to SDR 26  
 \*Base inside diameter (Base Pipe I.D.) allows for our of roundness and wall thickness tolerances as defined by ASTM standards.  
 Custom sizes available - consult factory

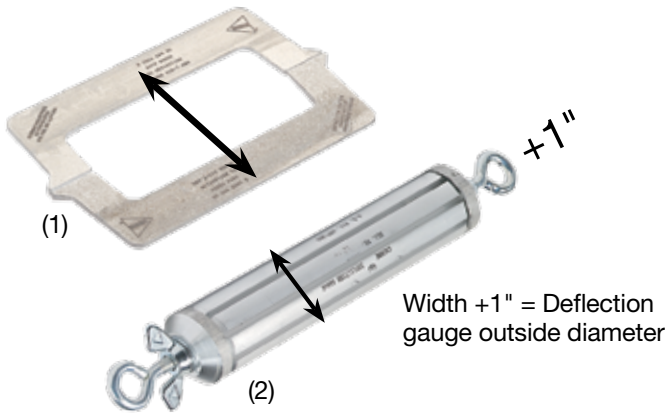
# Aluminum Deflection Gauge Kits



Deflection Gauge Set

## Field Verification:

Cherne's Aluminum Fin Style Deflection Gauges are designed to be field verified by inspectors without the use of a proving ring. Simply place two fins end-to-end as pictured below (1) and measure the width. Add one inch to the mandrel (2) and you have the outside dimension of the gauge. Using this method simplifies the inspector's job of verifying sizes on deflection gauges.



## Aluminum Fin Style Deflection Gauge:

- Lightweight, corrosion-resistant
- Field-verifiable without a proving ring
- Assembles without tools
- All sizes fit through standard 24" manhole
- Fins for 4"-15" gauges have skid size equal to the nominal pipe size—gauge will meet regional codes and will not tip in the line
- Nine-fin design ensures testing accuracy
- Open design allows gravel and debris pass-through

## 5% Aluminum Fin Set Deflection Gauge Kits (Fin Sets, Core Mandrel and Carrying Case)

Kits for SDR 26 Pipe per ASTM D3034					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285688	6"	5.764"	5.612"	5.33"	18 lbs.
	(152.40 mm)	(146.41 mm)	(142.54 mm)	(135.38 mm)	
	8"	7.715"	7.488"	7.11"	
285698	10"	9.644"	9.342"	8.87"	19 lbs.
	(254.00 mm)	(244.96 mm)	(237.29 mm)	(225.30 mm)	
	8"	7.715"	7.488"	7.11"	
285699	10"	9.644"	9.342"	8.87"	19 lbs.
	(254.00 mm)	(244.96 mm)	(237.29 mm)	(225.30 mm)	
	12"	11.480"	11.102"	10.55"	
285698	12"	11.480"	11.102"	10.55"	19 lbs.
	(304.80 mm)	(291.59 mm)	(281.99 mm)	(267.97 mm)	
	8"	7.715"	7.488"	7.11"	

Kits for SDR 35 Pipe per ASTM D3034					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285005	6"	5.893"	5.742"	5.46"	18 lbs.
	(152.40 mm)	(149.68 mm)	(145.85 mm)	(138.68 mm)	
	8"	7.891"	7.665"	7.28"	
285021	10"	9.864"	9.563"	9.09"	19 lbs.
	(254.00 mm)	(250.55 mm)	(242.90 mm)	(230.89 mm)	
	8"	7.891"	7.665"	7.28"	
285021	10"	9.864"	9.563"	9.09"	19 lbs.
	(254.00 mm)	(250.55 mm)	(242.90 mm)	(230.89 mm)	
	12"	11.737"	11.360"	10.79"	
285021	12"	11.737"	11.360"	10.79"	19 lbs.
	(304.80 mm)	(298.12 mm)	(288.54 mm)	(274.07 mm)	
	8"	7.891"	7.665"	7.28"	

## 7.5% Aluminum Fin Set Deflection Gauge Kits (Fin Sets, Core Mandrel and Carrying Case)

Kits for SDR 26 Pipe per ASTM D3034					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
Custom Kit Consult Factory	6"	5.764"	5.612"	5.19"	18 lbs.
	(152.40 mm)	(146.41 mm)	(142.54 mm)	(131.80 mm)	
	8"	7.715"	7.488"	6.93"	
Custom Kit Consult Factory	10"	9.644"	9.342"	8.64"	19 lbs.
	(254.00 mm)	(244.96 mm)	(237.29 mm)	(219.50 mm)	
	8"	7.715"	7.488"	6.93"	
Custom Kit Consult Factory	10"	9.644"	9.342"	8.64"	19 lbs.
	(254.00 mm)	(244.96 mm)	(237.29 mm)	(219.50 mm)	
	12"	11.480"	11.102"	10.27"	
Custom Kit Consult Factory	12"	11.480"	11.102"	10.27"	19 lbs.
	(304.80 mm)	(291.59 mm)	(281.99 mm)	(260.90 mm)	
	8"	7.715"	7.488"	6.93"	

Kits for SDR 35 Pipe per ASTM D3034					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285013	6"	5.893"	5.742"	5.31"	18 lbs.
	(152.40 mm)	(149.68 mm)	(145.85 mm)	(134.90 mm)	
	8"	7.891"	7.665"	7.09"	
285048	10"	9.864"	9.563"	8.85"	19 lbs.
	(254.00 mm)	(250.55 mm)	(242.90 mm)	(224.80 mm)	
	12"	11.737"	11.360"	10.51"	
285048	12"	11.737"	11.360"	10.51"	19 lbs.
	(304.80 mm)	(298.12 mm)	(288.54 mm)	(267.00 mm)	
	8"	7.891"	7.665"	7.09"	

Base inside diameter (Base Pipe I.D.) allows for our of roundness and wall thickness tolerances as defined by ASTM standards.  
Custom kits available - consult factory

# Aluminum Deflection Gauge Fin Sets

## 5% Deflection Aluminum Fins Sets

Aluminum Fin Sets for SDR-35 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285056	4" (101.60 mm)	NA	NA	3.696" (93.88 mm)	1.5 lbs.
285072	6" (152.40 mm)	5.893" (149.68 mm)	5.742" (145.85 mm)	5.46" (138.68 mm)	2.0 lbs.
285080	8" (203.20 mm)	7.891" (200.43 mm)	7.665" (194.69 mm)	7.28" (184.91 mm)	2.5 lbs.
285099	10" (254.00 mm)	9.864" (250.55 mm)	9.563" (242.90 mm)	9.09" (230.89 mm)	3.0 lbs.
285102	12" (304.80 mm)	11.737" (298.12 mm)	11.360" (288.54 mm)	10.79" (274.07 mm)	4.0 lbs.
285110	15" (381.00 mm)	14.374" (365.10 mm)	13.897" (352.98 mm)	13.20" (335.28 mm)	5.0 lbs.

Aluminum Fin Sets for PS 46 (SDR-35) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285536	18" (457.20 mm)	17.643" (448.13 mm)	17.054" (433.17 mm)	16.20" (411.48 mm)	8.0 lbs.
285544	21" (533.40 mm)	20.800" (528.32 mm)	20.098" (510.49 mm)	19.09" (484.89 mm)	10.0 lbs.
285552	24" (609.60 mm)	23.402" (594.41 mm)	22.586" (573.68 mm)	21.46" (545.08 mm)	11.0 lbs.
285595	27" (685.80 mm)	26.374" (669.90 mm)	25.446" (646.33 mm)	24.17" (613.92 mm)	12.0 lbs.
285748	30" CIOD (762.00 mm)	30.192" (766.88 mm)	29.151" (740.44 mm)	27.69" (703.33 mm)	13.0 lbs.
285758	36" CIOD (914.40 mm)	36.135" (917.83 mm)	34.869" (885.67 mm)	33.13" (841.50 mm)	15.0 lbs.
285768	42" CIOD (1066.80 mm)	41.984" (1066.39 mm)	40.491" (1028.47 mm)	38.47" (977.14 mm)	17.0 lbs.
285788	48" CIOD (1219.20 mm)	47.927" (1217.35 mm)	46.209" (1173.71 mm)	43.90" (1115.06 mm)	19.0 lbs.

## 7.5% Deflection Aluminum Fins Sets

Aluminum Fin Sets for SDR-35 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285137	4" (101.60 mm)	NA	NA	3.598" (91.39 mm)	1.5 lbs.
285153	6" (152.40 mm)	5.893" (149.68 mm)	5.742" (145.85 mm)	5.31" (134.90 mm)	2.0 lbs.
285161	8" (203.20 mm)	7.891" (200.43 mm)	7.665" (194.69 mm)	7.09" (180.10 mm)	2.5 lbs.
285188	10" (254.00 mm)	9.864" (250.55 mm)	9.563" (242.90 mm)	8.85" (224.80 mm)	3.0 lbs.
285196	12" (304.80 mm)	11.737" (298.12 mm)	11.360" (288.54 mm)	10.51" (267.00 mm)	4.0 lbs.
285218	15" (381.00 mm)	14.374" (365.10 mm)	13.897" (352.98 mm)	12.85" (326.40 mm)	5.0 lbs.

Aluminum Fin Sets for PS 46 (SDR-35) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
285560	18" (457.20 mm)	17.643" (448.13 mm)	17.054" (433.17 mm)	15.77" (400.56 mm)	8.0 lbs.
285579	21" (533.40 mm)	20.800" (528.32 mm)	20.098" (510.49 mm)	18.59" (472.19 mm)	10.0 lbs.
285587	24" (609.60 mm)	23.402" (594.41 mm)	22.586" (573.68 mm)	20.89" (530.61 mm)	11.0 lbs.
285609	27" (685.80 mm)	26.374" (669.90 mm)	25.446" (646.33 mm)	23.53" (597.66 mm)	12.0 lbs.
285708	30" CIOD (762.00 mm)	30.192" (766.88 mm)	29.151" (740.44 mm)	26.96" (684.78 mm)	13.0 lbs.
285718	36" CIOD (914.40 mm)	36.135" (917.83 mm)	34.869" (885.67 mm)	32.25" (819.15 mm)	15.0 lbs.
285728	42" CIOD (1066.80 mm)	41.984" (1066.39 mm)	40.491" (1028.47 mm)	37.45" (951.23 mm)	17.0 lbs.
285738	48" CIOD (1219.20 mm)	47.927" (1217.35 mm)	46.209" (1173.71 mm)	42.74" (1085.60 mm)	19.0 lbs.

Aluminum Fin Sets for SDR-26 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
Custom	4" (101.60 mm)	NA	NA	Consult Factory	1.5 lbs.
285638	6" (152.40 mm)	5.764" (146.41 mm)	5.612" (142.54 mm)	5.33" (135.38 mm)	2.0 lbs.
285648	8" (203.20 mm)	7.715" (195.96 mm)	7.488" (190.20 mm)	7.11" (180.59 mm)	2.5 lbs.
285658	10" (254.00 mm)	9.644" (244.96 mm)	9.342" (237.29 mm)	8.87" (225.30 mm)	3.0 lbs.
285668	12" (304.80 mm)	11.480" (291.59 mm)	11.102" (281.99 mm)	10.55" (267.97 mm)	4.0 lbs.
285678	15" (381.00 mm)	14.053" (356.95 mm)	13.575" (344.81 mm)	12.90" (327.66 mm)	5.0 lbs.

Aluminum Fin Sets for PS 115 (SDR-26) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
284688	18" (457.20 mm)	17.278" (438.86 mm)	16.688" (423.87 mm)	15.85" (402.59 mm)	8.0 lbs.
284698	21" (533.40 mm)	20.370" (517.40 mm)	19.666" (499.52 mm)	18.68" (474.47 mm)	10.0 lbs.
284708	24" (609.60 mm)	22.918" (582.12 mm)	22.102" (561.39 mm)	21.00" (533.40 mm)	11.0 lbs.
284718	27" (685.80 mm)	25.829" (656.06 mm)	24.899" (632.43 mm)	23.65" (600.71 mm)	12.0 lbs.
284728	30" CIOD (762.00 mm)	29.566" (750.97 mm)	28.523" (724.48 mm)	27.10" (688.34 mm)	13.0 lbs.
284738	36" CIOD (914.40 mm)	35.389" (898.88 mm)	34.120" (866.65 mm)	32.41" (823.21 mm)	15.0 lbs.
284748	42" CIOD (1066.80 mm)	41.116" (1044.35 mm)	39.621" (1006.37 mm)	37.64" (956.06 mm)	17.0 lbs.
284758	48" CIOD (1219.20 mm)	46.937" (1192.20 mm)	45.216" (1148.49 mm)	42.96" (1091.18 mm)	19.0 lbs.

Aluminum Fin Sets for SDR-26 Pipe per ASTM D3034 (4" - 15" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
Custom	4" (101.60 mm)	Consult Factory	Consult Factory	Consult Factory	1.5 lbs.
017378	6" (152.40 mm)	5.764" (146.41 mm)	5.612" (142.54 mm)	5.19" (131.80 mm)	2.0 lbs.
Custom	8" (203.20 mm)	7.715" (195.96 mm)	7.488" (190.20 mm)	6.93" (176.00 mm)	2.5 lbs.
Custom	10" (254.00 mm)	9.644" (244.96 mm)	9.342" (237.29 mm)	8.64" (219.50 mm)	3.0 lbs.
Custom	12" (304.80 mm)	11.480" (291.59 mm)	11.102" (281.99 mm)	10.27" (260.90 mm)	4.0 lbs.
285778	15" (381.00 mm)	14.053" (356.95 mm)	13.575" (344.81 mm)	12.56" (319.00 mm)	5.0 lbs.

Aluminum Fin Sets for PS 115 (SDR-26) Pipe per ASTM F679 (18" - 48" Dia.)					
Part Number	Nominal Size	Average Pipe I.D.	Base Pipe I.D.*	Pipe I.D. @ Defl.	Product Wt.
284768	18" (457.20 mm)	17.278" (438.86 mm)	16.688" (423.87 mm)	15.44" (392.18 mm)	8.0 lbs.
284778	21" (533.40 mm)	20.370" (517.40 mm)	19.666" (499.52 mm)	18.19" (462.03 mm)	10.0 lbs.
284788	24" (609.60 mm)	22.918" (582.12 mm)	22.102" (561.39 mm)	20.44" (519.18 mm)	11.0 lbs.
284798	27" (685.80 mm)	25.829" (656.06 mm)	24.899" (632.43 mm)	23.03" (584.96 mm)	12.0 lbs.
284808	30" CIOD (762.00 mm)	29.566" (750.97 mm)	28.523" (724.48 mm)	26.38" (670.05 mm)	13.0 lbs.
284818	36" CIOD (914.40 mm)	35.389" (898.88 mm)	34.120" (866.65 mm)	31.56" (801.62 mm)	15.0 lbs.
284828	42" CIOD (1066.80 mm)	41.116" (1044.35 mm)	39.621" (1006.37 mm)	36.65" (930.91 mm)	17.0 lbs.
284838	48" CIOD (1219.20 mm)	46.937" (1192.20 mm)	45.216" (1148.49 mm)	41.82" (1062.23 mm)	19.0 lbs.

PS 46 closely relates to SDR 35 and PS 115 closely relates to SDR 26  
 \*Base inside diameter (Base Pipe I.D.) allows for our of roundness and wall thickness tolerances as defined by ASTM standards.  
 Custom sizes available - consult factory

# Core Mandrels



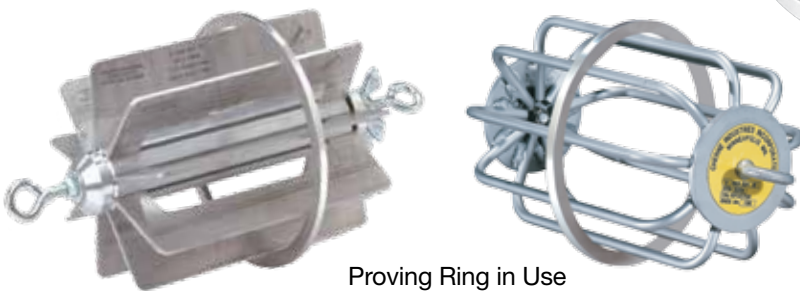
## Core Mandrels for Aluminum Finned Deflection Gauges

Part Number	Nominal Size
285617	10" mandrel for 4" thru 15" aluminum fin sets
285250	24" mandrel for 18" thru 48" aluminum fin sets

# Proving Rings

### Proving Ring:

- Used to verify deflection gauge sizes
- Standard sizes: 6"-15" SDR 35 5% deflection and 8"-12" SDR 35 7.5% deflection
- Custom sizes also available



Proving Ring in Use

### Proving Rings

Part Number	Nominal Size	Pipe	Deflection	Product Weight
073199	6"	SDR 35	5%	4 oz (.11 kg)
073202	8"	SDR 35	5%	4 oz (.11 kg)
073253	8"	SDR 35	7.5%	4 oz (.11 kg)
073210	10"	SDR 35	5%	6 oz (.17 kg)
073261	10"	SDR 35	7.5%	6 oz (.17 kg)
073229	12"	SDR 35	5%	6 oz (.17 kg)
073288	12"	SDR 35	7.5%	6 oz (.17 kg)
073237	15"	SDR 35	5%	7 oz (.20 kg)

Larger and custom sizes are available.





# Testing Equipment



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# Air-Loc® Pressure Testing

**The Cherne Air-Loc® Low Pressure Air-Testing System** has been successfully used for testing sewer pipe installations since the 1960's. This method of testing pipelines has proven to be the fastest, most economical and accurate method of testing pipe. It allows you to perform tests as prescribed by ASTM C 828, C 924, and F 1417. (Procedures on page 47.)

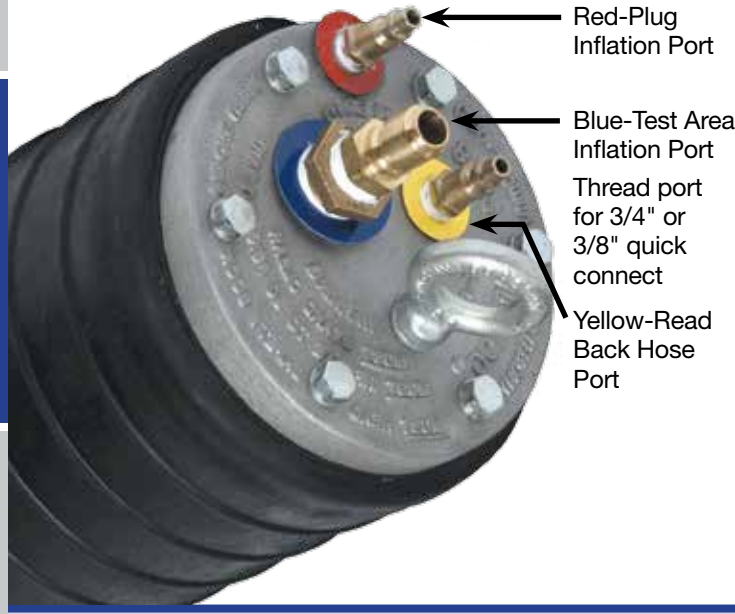
**Air-Loc® Line Acceptance Kit  
(Part #253398 - 75 lbs)**

Cherne's Line Acceptance Kit is used to perform low pressure air tests on newly installed sewer lines. The Line Acceptance Kit includes all items needed to conduct the test except an air compressor and two pipe plugs.



Line Acceptance Kit with Storage Container

**Front Plug**



**Air-Loc® Plugs**

- Air-Loc Leak Locator Plugs are designed for both low-pressure sewer line acceptance tests as well as leak location testing
- Color coded inflation ports match hose and panel of Air-Loc system
- Flexible internal hoses and air fittings make these plugs the best in the business

**See page 19-20 for more information**

See page 13 for Muni-Ball Plugs adaptable to Air-Loc Testing



**Air-Loc® Conversion Kit Features:**

- Converts Muni-Ball® plugs to air test plugs
- Available for line acceptance and/or leak location tests

**Equipped with:**

- Colored discs coded to hose connections
- Conversion set up instructions

**Line Acceptance Conversion Kit Cap Version**

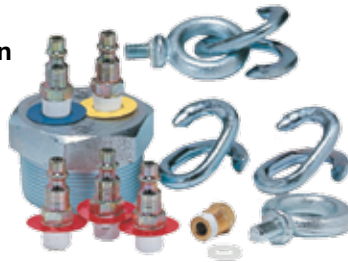
3/8" Leak Location quick connect


**Hi-Flow™ Line Acceptance Conversion Kit Plug Version**

3/4" Test Pressure quick connect


**Leak Location Conversion Kit Plug Version**

3/8" Leak Location quick connect


**Hi-Flow™ Line Acceptance Conversion Kit Cap Version**

3/4" Test Pressure quick connect


**Hi-Flow™ Line Acceptance Conversion Kits (3/8" and 3/4" Hi Flow Hose)**

Part Number	Description	Product Weight
041748	2" M NPT Plug conversion kit	3.3 lbs (1.5 kg)
041758	3" M NPT Plug conversion kit	2.5 lbs (1.13 kg)
041768	4" M NPT Plug conversion kit	4.25 lbs (2 kg)
049108	2" F NPT Cap conversion kit	3.3 lbs (1.5 kg)
041778	2½" F NPT Cap conversion kit	2.5 lbs (1.13 kg)
041788	4" F NPT Cap conversion kit	6.25 lbs (2.84 kg)
041718	6" F NPT PVC Cap conversion kit	2.75 lbs (1.25 kg)

**Line Acceptance / Leak Location Conversion Kits (for 3/8" hoses)**

Part Number	Description	Product Weight
028588	¾" M NPT Plug conversion kit with quick-disconnect fittings	1.5 lbs (.7 kg)
028598	1½" M NPT Plug conversion kit with quick-disconnect fittings	2.75 lbs (1.25 kg)
028608	2" M NPT Plug conversion kit with quick-disconnect fittings	3.3 lbs (1.5 kg)
028618	3" M NPT Plug conversion kit with quick-disconnect fittings	2.5 lbs (1.13 kg)
028628	4" M NPT Plug conversion kit with quick-disconnect fittings	4.5 lbs (2 kg)
049028	2" F NPT Cap conversion kit with quick-disconnect fittings	3.3 lbs (1.5 kg)
028648	2½" F NPT Cap conversion kit with quick-disconnect fittings	2.5 lbs (1.13 kg)
028668	4" F NPT Cap conversion kit with quick-disconnect fittings	6.25 lbs (2.84 kg)

# Air-Loc® Pressure Testing Panel

## Hi-Flow™ Air-Loc® Panel (Part #304708 - 40 lbs)

Panel includes gauges to monitor compressor pressure, plug pressure and test pressure, all in a sturdy steel case with a durable powder-coat enamel finish. Panel also has regulators to control plug and test pressure. Panel can be used with either 3/8" or 3/4" fill hose, accomplished by simply turning a valve. Panel is designed to work with air compressors fitted with either crow's foot or standard quick disconnect fittings.

Part Number	Description
304708	Control Panel
026358	0-10 PSI Test Pressure Gauge – Retarded increments from 11-30 PSI
014828	0-60 PSI Ball Pressure-Gauge
014848	0-160 PSI Compressor Gauge
043048 0A	3-Way Valve
296643	Regulator



# Air-Loc® Pressure Testing Hoses



## Triple Hose

The 3/8" diameter hose assembly is used to connect the Air-Loc Panel to the front plug. Triple hose is color-coded, making connections easy to understand. Hose features locking quick disconnects for convenience and safety. Hose also includes strain relief to protect hose and connections from damage.

Hi-Flow™ Triple Hose available with 3/4 blue test pressure hose for quick exhausting



Part Number	Description
035268	25' Triple Hose
257038	50' Triple Hose
060498	500' Triple Hose
257108	25' Hi-Flow Triple Hose
257098	50' Hi-Flow Triple Hose

## 22' Interconnect Hose (#043338 – 4 lbs)

The interconnect hose is used to attach the front and back air test plugs when conducting a leak location test. This hose includes a cable for attaching to the pipe plugs to take strain off the hose during the leak location process.



# Manhole Jacks • Rollers • Winch

## Manhole Jack (Hose Guide) Part #056228

- Guides air hoses and cables at pipe invert in manhole
- Zinc-plated for corrosion resistance
- Fits pipe 5"-24"
- Includes eye bolt for securing rope and ease of retrieval



## Manhole Roller (Hose Guide) Part #056707

- Guides air hoses and cables at pipe invert in manhole
- Adjustable push-pin pole system
- Installs at surface - no need to enter manhole



## Manhole Winch Part #253318

- Drags plugs in leak location testing
- Feeds Jet-Ball™ down line for sewer cleaning
- Normal pull-strength up to 550 pounds
- 3/32" diameter steel cable

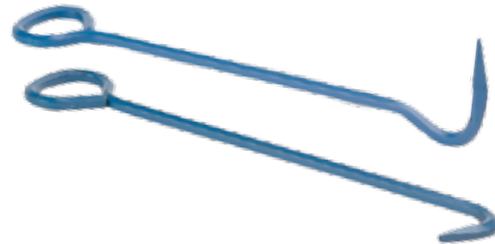


## Manhole Cover Hooks

- Forged 5/8" hexagonal steel for extra strength
- Available with flat or 90° handles

## Manhole Cover Hooks

Part Number	Description
015443	24" Manhole cover hook with 90° handle
015438	36" Manhole cover hook with 90° handle
251429	24" Manhole cover hook with flat handle
251438	36" Manhole cover hook with flat handle



## Air-Loc® Line Stringer

String lines between manholes quickly for segment testing with a Cherne Line Stringer.

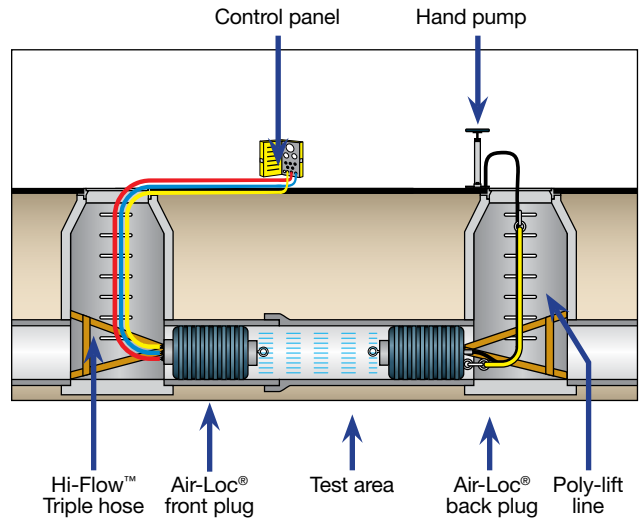
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# Air-Loc® Pressure Testing Procedure



## Air-Loc® Line Acceptance Test Procedure:

1. Install Back Plug. Attach poly lift line to pipe plug and place plug in line to be tested. Inflate plug to proper inflation pressure from above ground using hand pump.
2. Insert Front Plug. Connect triple hose assembly to front plug and insert plug into line. Connect other end of triple hose to Air-Loc® Control Panel.
3. Conduct Test. Connect air compressor to control panel. Then inflate front plug to proper inflation pressure. Introduce air through control panel until test pressure is achieved. Monitor pressure for the time designated for the test. If the pressure holds for the designated time losing one psi or less, the line passes and is "Accepted".

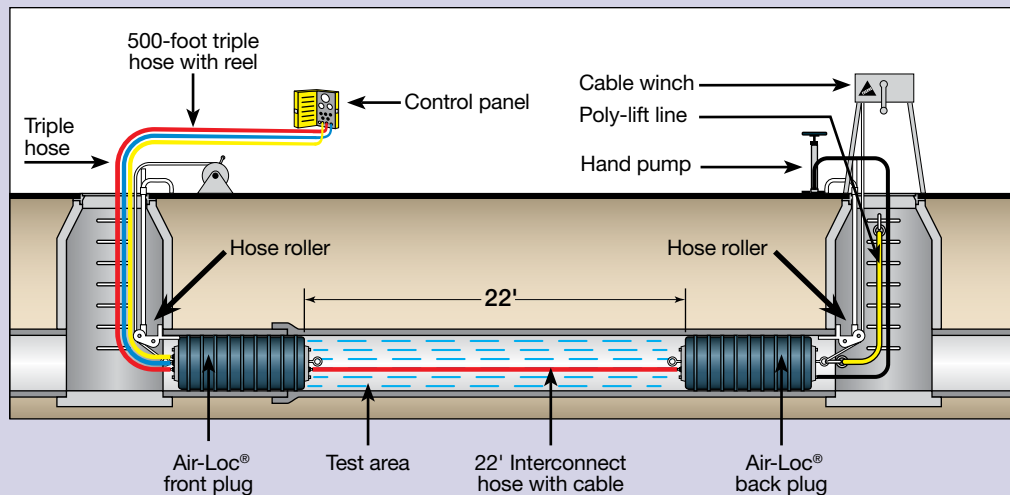


**STAY OUT OF THE DANGER ZONE DURING THE TEST!!**  
Always block plugs when conducting air tests.

## Leak Location Test Procedure:

A leak location test needs to be conducted if the line acceptance test fails. The leak location test procedure is as follows:

1. String pipe using Cherne's Air-Loc Line Stringer or other method, attaching winch cable which is then pulled back through line.
2. Attach two pipe plugs connected together with interconnect hose to winch cable and place in pipeline.
3. Connect 500' triple hose to front plug.
4. Conduct pressure test on first 22' segment of sewer line and record results.
5. Advance plugs forward 22' using the winch and conduct test, once again recording results. Repeat procedure until entire line has been tested.



**STAY OUT OF THE DANGER ZONE DURING THE TEST!!**  
Always block plugs when conducting air tests.

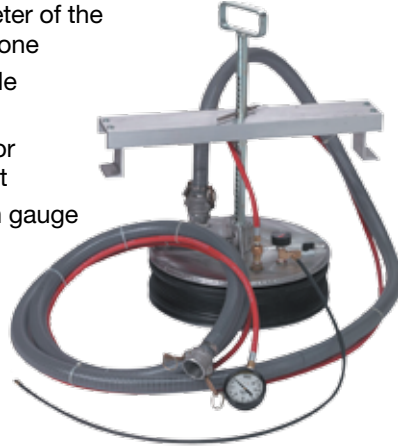
# Air-Loc® Manhole Testers

Air-Loc® Manhole Testers provide the most efficient, accurate and cost-effective method of testing new, existing and rehabilitated manholes, per ASTM C 1244.

Vacuum testing identifies infiltration and exfiltration problems by creating a vacuum in a manhole and then monitoring a gauge for vacuum loss. Less expensive and faster than water testing, the Air-Loc® manhole tester's remote-inflation and monitoring system keeps users away from the "danger zone."

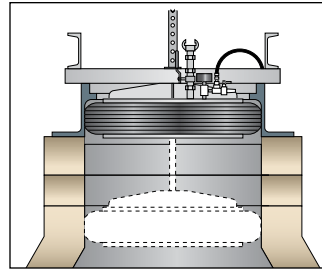
### Bladder-Style Air-Loc® Head Assembly Features:

- Seals the inside diameter of the manhole at frame or cone
- Supported by a durable aluminum brace
- Push-pin rod design for easy depth adjustment
- Includes 20' hose with gauge

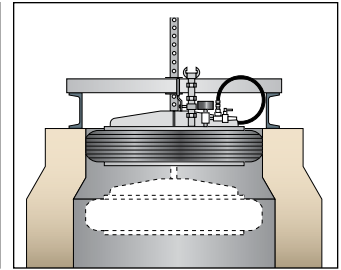


### Bladder Style Manhole Testers

Part Number	Description
210248	24" Tester. Seals 20" - 24.3" openings
210268	26" Tester. Seals 21.5" - 26.3" openings
210298	29" Tester. Seals 24" - 29.3" openings
210308	30" Tester. Seals 25" - 30.3" openings
210328	32" Tester. Seals 27.5" - 32.8" openings
210348	34" Tester. Seals 30" - 34.3" openings
210368	36" Tester. Seals 31.5" - 36" openings
098485	24" Bladder, Replacement
008404	26" Bladder, Replacement
060678	29" Bladder, Replacement
099406	30" Bladder, Replacement
063339	32" Bladder, Replacement
063541	36" Bladder, Replacement
055348	20' Replacement Hose and Gauge Assembly
304058	0-30" Hg Vacuum Test Gauge, 3.5" Dial
251372	0-60 PSI Bladder Pressure Gauge, 2" Dial



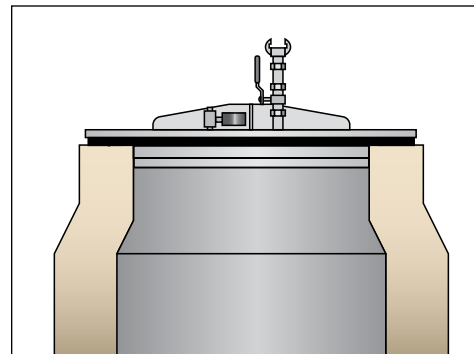
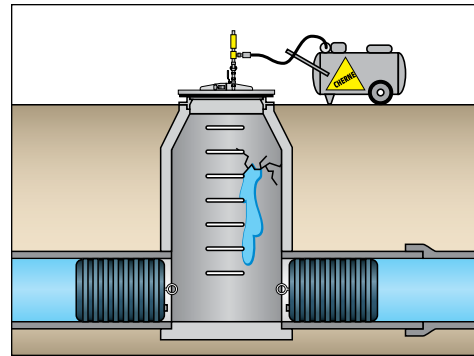
Seals on frame



Seals at top of cone

### Plate-Style Air-Loc® Head Assembly:

- Designed to seal manhole cone surface
- Seals a wide range of manhole diameters
- Neoprene gasket for leak-free seal
- Includes 20' hose with gauge



### Plate Style Manhole Testers

Part Number	Description
220328	32" Tester. Seals 18" - 30" openings
220388	38" Tester. Seals 18" - 36" openings
220448	44" Tester. Seals 18" - 42" openings
033018	32" Replacement Pad
033028	38" Replacement pad
023748	44" Replacement pad
055348	Replacement Hose and Gauge Assembly, 20 feet
304058	0-30" Hg Vacuum Test Gauge, 3.5" Dial



# Air-Loc® Vacuum Equipment



## Air-Loc® Vacuum Pump Features:

- Choose a Honda or Briggs & Stratton engine—each with low-oil shut-off to prevent engine failure
- Heavy-duty frame with optional wheel kit
- Unbreakable aluminum filter jars
- Oil-free graphite vane pump for no-fuss lubrication
- Draws 10" Hg vacuum in about two minutes for a 15' deep manhole (18 CFM at 10" Hg)



## Vacuum Pump

Part Number	Description
278088	Vacuum Pump: Honda Engine
278168	Vacuum Pump: Briggs engine
045918	Optional Wheel Kit
019501	Replacement Pump
015823	Replacement Line Filter
019321	Replacement Pump Vanes (four required)
107379	Line Filter Jar, Metal

## Air-Loc® Vacuum Generator Features:

- Converts standard air compressor into a vacuum source for testing manholes—draws a vacuum in minutes
- Vacuum Generator 460 delivers 14 CFM at 10" Hg
  - Air compressor: minimum 7 CFM at 100 PSI
- Vacuum Generator 600 delivers 42 CFM at 10" Hg, meeting or exceeding the competition
  - Air compressor: minimum 85 CFM at 100 PSI



Air-Loc® Vacuum Generator 460

## Generator 460

Part Number	Description
200468	Vacuum Generator 460
033868	Replacement Silencer for Vacuum Generator 460
035248	Replacement Filter for Generator 460

## Generator 600

Part Number	Description
200908	Vacuum Generator 600
054268	Replacement Silencer for Generator 600



Air-Loc® Hi-Flow Vacuum Generator 600

# Air-Loc® Stringer • Ventilators

## Air-Loc® Fan Assembly Features:

- For use as a line stringer, ventilator and smoke blower
- Made of lightweight, cast aluminum
- Foam base minimizes vibration
- 30" Diameter base plate

## Equipped with:

- Honda or Briggs & Stratton engine
- Top-mounted handles for easy maneuverability

## Line Stringer Usage Details:

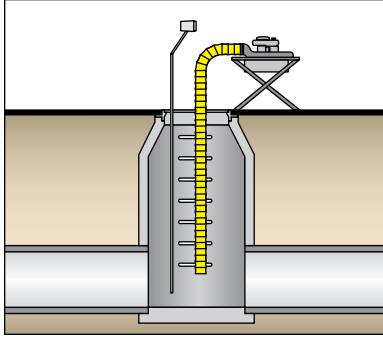
- Will string a 300' section of sewer line in under a minute without plugging the line
- Line stringer vacuum pulls a lightweight nylon parachute through wet or dry lines

## Ventilator Usage Details:

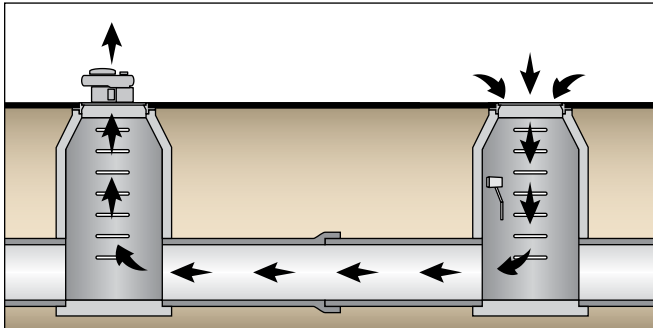
- Supports OSHA guidelines for confined space entry
- Provides up to 2,350 CFM as a blow-in ventilator and up to 3,470 CFM as a suction ventilator<sup>1</sup>
- Out-performs similar competitive models by 40% at 3" of static pressure



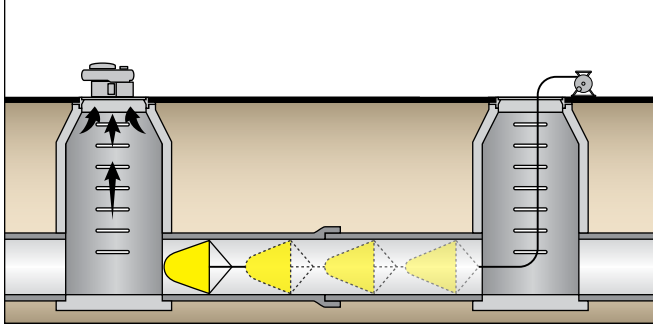
Blow-in Ventilator



Suction Ventilator



Line Stringer



## Stringer • Ventilator

Part Number	Description
303318	Line Stringer Kit: Honda engine 1000' nylon rope and reel, 6-10" parachute
301000	Line Stringer Kit: Briggs & Stratton engine 1000' nylon rope and reel, 6-10" parachute
303338	Ventilator Kit: Honda engine Shroud, Stand and 20 ft of 8" diameter duct hose
303232	Ventilator Kit: Briggs & Stratton engine Shroud, Stand and 20 ft of 8" diameter duct hose
013108	Fan Assembly: Honda engine
012100	Fan Assembly: Briggs & Stratton engine
014714	Replacement fan: Line Stringer/Ventilator (right pitch)
300608	1000' Nylon Rope and Reel
066303	4" Parachute
015403	6"-10" Parachute
050628	8"-12" Parachute
300594	10"-18" Parachute
006525	18"-36" Parachute
008250	Line Stringer to Ventilator Conversion Kit: Shroud, Stand and 20 ft of 8" diameter duct hose

<sup>1</sup> - CFM performance based on independent laboratory tests. When tested side-by-side at an independent air flow laboratory, Cherne's line stringer, ventilator, and smoke blower beat the competition at every flow condition.

# Air-Loc® Smoke Testing



## Smoke Blower Features:

- Effectively identifies inflow
- For use with traditional smoke bombs or liquid smoke
- Available with Briggs & Stratton engine
- Generates up to 3,769 cubic feet per minute of air flow<sup>1</sup>
- Made of lightweight, cast aluminum



## Equipped with:

- ½" foam cell gasket to ensure a leak-free seal on manholes and minimize vibration
- Smoke bomb box holder (traditional smoke blower only)
- Pressurized tank, hose and all necessary components (liquid smoke blower only)

## Smoke Fluid Features:

- Produces thick, dense smoke
- Easy-to-regulate
- Virtually indefinite storage life
- Improved packaging for ease in pouring



## Smoke Bomb Features:

- Produces a thick, dense smoke
- Time-proven
- Simple to use
- Can be used with most smoke blowers
- 3 minute bombs available with double wick that allows units to be strung together for a longer smoke time



## Smoke Bomb

Part Number	Description
303550	Smoke Bomb Smoke Blower Kit: Briggs & Stratton engine
034348	Smoke Bomb: 30 seconds (12 per case)
034358	Smoke Bomb: 60-seconds (12 per case)
034368	Smoke Bomb: 3 minutes (12 per case)
034378	Smoke Bomb: 3 minutes, double wick (12 per case)

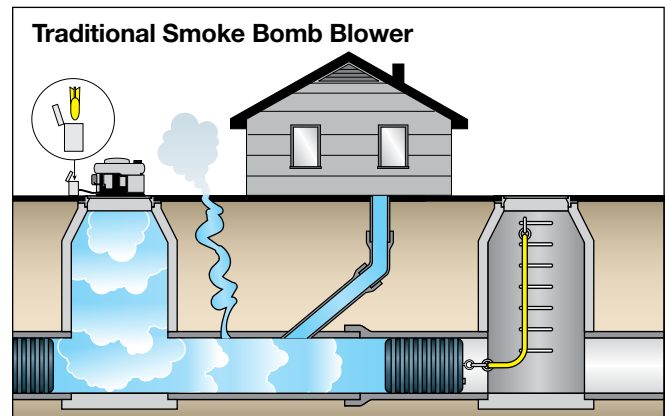
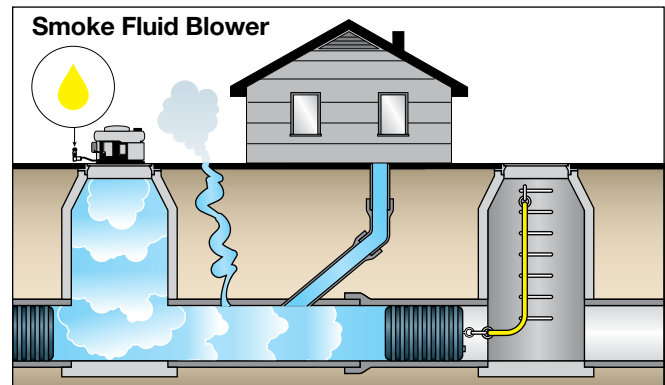
## Smoke Fluid

Part Number	Description
303008	Smoke Fluid Smoke blower Kit: Briggs & Stratton engine
036488	Fluid Smoke pressure container and hose: 2 gallons capacity
065808	Fluid Smoke: one gallon (1 per case)
065818	Fluid Smoke: five gallons (1 per case)
065828	Fluid Smoke: fifty-five gallon drum

## Accessories

Part Number	Description
014722	Smoke Blower replacement fan (left pitch)
058368	Smoke bomb holding cage
036308	Fluid Smoke conversion kit from Smoke Bomb Briggs & Stratton engine

<sup>1</sup> - CFM performance based on independent laboratory tests. When tested side-by-side at an independent air flow laboratory, Cherne's line stringer, ventilator, and smoke blower beat the competition at every flow condition.



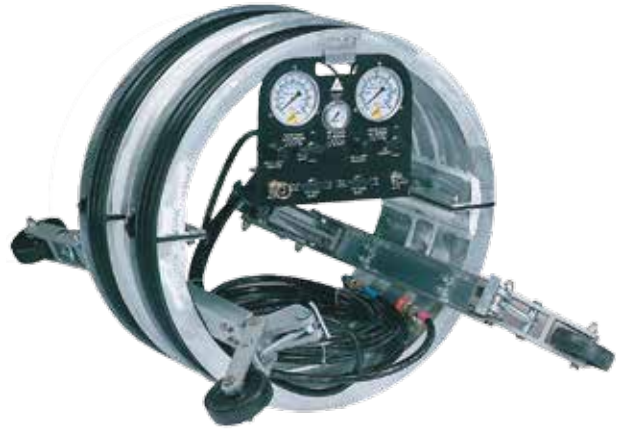
# Air-Loc® Joint Testers

Fast, safe and easy to use, a five-second test determines joint integrity. Cherne's Air-Loc® Joint Tester is designed to test large diameter, installed, pre-cast concrete pipe as described in ASTM C1103.

Ready to test with water or air straight from Cherne's factory—no modifications are needed—the Air-Loc® Joint Tester also allows you to pre-test before backfilling. Capable of testing to 10 psi air or 50 psi water.

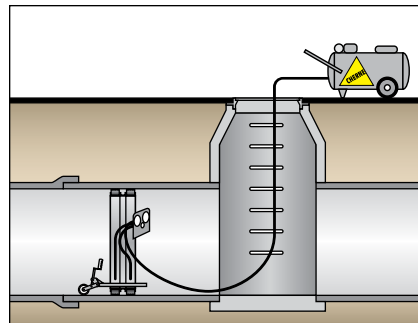
**Features:**

- Lightweight aluminum design allows for easy assembly in manholes
- Independent, adjustable wheels—easy to move
- Quick-connect control panel is simple to install and remove, plus the top-mounting feature won't interfere with laser usage
- Available with or without control panel and wheel kit
- Replacement end elements are available
- Recommended for testing pipe 21" and larger



Part Number	Description			
Full Joint Tester	Nominal Size	Product Diameter	Less Wheels & Control Panel	Replacement End Element
009018	21"	19"	012018	098485
009028	24"	22"	012028	091456
009038	27"	25"	012038	091464
009048	30"	28"	012048	063339
009058	33"	31"	012058	063347
009068	36"	34"	012066	063355
009078	39"	37"	012078	070319
009088	42"	40"	012088	063363
009098	48"	46"	012098	063371
009108	54"	52"	012148	063398
009118	60"	58"	012118	063401
009128	66"	64"	012128	063428
009138	72"	70"	012138	063436
009158	78"	76"	012158	063444
009168	84"	82"	012168	063452
009178	90"	88"	012178	063460
009188	96"	94"	012188	063479
009198	102"	100"	012198	063487
009208	108"	106"	012208	063495
009228	120"	118"	012228	063517

**Pipe Joint Test**



**Accessories/Replacement Parts**

Part Number	Description
010048	Control Panel
026350	0-10 PSI 4" Retard Gauge for Air Test
087602	0-60 PSI 4" Gauge for Water Test
014838	0-100 PSI 2" Gauge For End Elements
007892	Three way valve
296643	Regulator
086363	21"-36" Wheel Assembly
067008	39"-54" Wheel Assembly
093661 0A	60"-90" Wheel Assembly
024358	96" and up Wheel Assembly
010628	27"-54" Frame Gasket
010638	60"-120" Frame Gasket
013008	12' Panel to Joint Tester Hose

Custom Sizes Available

# Aqua-Loc® Hydrostatic Test Pump



Hydrostatic Test Pumps are designed for pressure testing water lines and sewer force mains as prescribed by AWWA Standard C600 Installation of Ductile-Iron Water Mains and C605 Installation of PVC Pressure Pipe.

Aqua-Loc® Hydrostatic Test Pumps are designed to be the most user friendly in the industry. Both Diaphragm and Piston Style pumps are available and come powered by either a Honda or Briggs & Stratton engine.

## Aqua-Loc® Hydrostatic Test Pump:

### Diaphragm Style – Features:

- Honda or Briggs Engine with low oil shut off
- Hypro® Twin diaphragm pump - 9.5 gpm/550 PSI
- Handles up to 10% chlorine solutions
- May be run dry
- Test pressures can be set from 100-550 psi
- Integral manifolds - eliminates leak points
- Enclosed gear reduction - excellent heat dissipation
- Pulsation dampener - no need to surge tank

### Equipped with:

- Heavy-duty frame
- Hydraulic quick-disconnect - brass, swivel fitting
- Inline strainer - easy to clean clear bowl
- Clear hose - flow verification
- Silicone filled test gauge w/stainless steel case

## Aqua-Loc Hydrostatic Test Pump

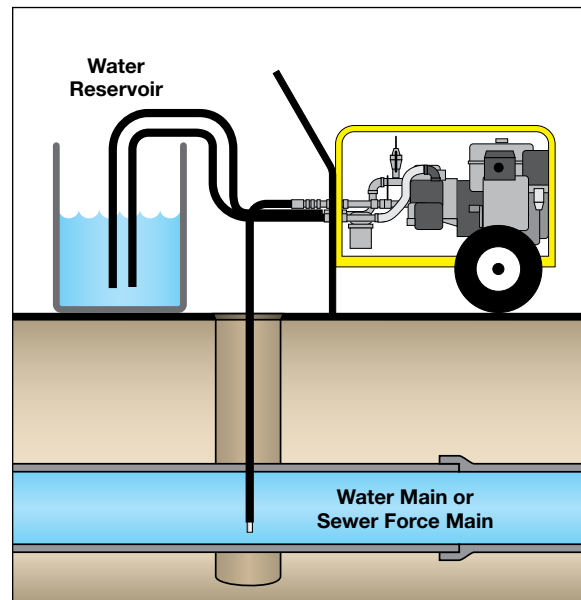
Part Number	Description
278068	Diaphragm-style Test Pump: 9.5 gpm/550 psi Honda engine, 12' output & 10' intake hoses
278058	Diaphragm-style Test Pump: 9.5 gpm/550 psi Briggs & Stratton engine, 12' output & 10' intake hoses
039168	16 gallon optional water tank
045918	Optional Wheel Kit
031198	Replacement Output Hose W/O Quick Disconnects
022828	Quick Disconnect for Output Hose
064348	0-300 PSI Retard Gauge with 5 PSI Increments
030938	Replacement Bypass/Intake Hose
022768	Replacement Strainer



**9.5 Gallon Diaphragm Pump**

Shown with optional wheel kit

## Diaphragm Pump



**Suction Feed**

# Aqua-Loc® Hydrostatic Test Pump

## Aqua-Loc® Hydrostatic Test Pump

### Piston Style Features:

- Honda Engine with low oil shut off engine
- Self-priming Hypro® Big-Twin® Piston Pump for suction feed
- Piston Pump can also be pressure fed
- 10 gpm/450 PSI

### Equipped with:

- Heavy-duty frame
- Heavy-duty coupling - with protective cover
- Pressure regulator - easy adjustment
- Clear hose - flow verification
- Inline strainer/filter - easy to clean, brass
- Thermal relief valve - guards against overheating
- Pulsation hose - reduces gauge fluctuation
- Hydraulic quick - disconnect-brass, swivel fitting
- Silicone filled test gauge with stainless steel case

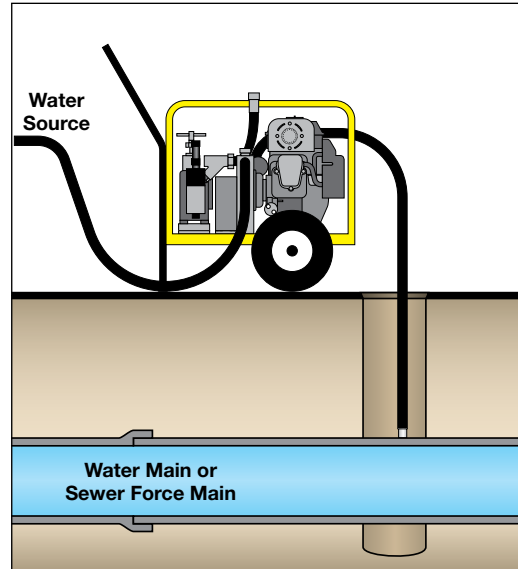


Shown with optional wheel kit

## Aqua-Loc Hydrostatic Test Pump

Part Number	Description
278138	Piston-style Test Pump: 10 gpm/450 psi Honda engine, 12' output hose
045918	Optional Wheel Kit
031198	Replacement 12' Output Hose with Quick Disconnect
022828	Disconnect for Output
064348	0 - 300 PSI Retard Gauge with 5 psi increments
030938	Replacement 12' Input Hose
022768	Replacement Brass Strainer

## Piston Pump



Suction or Pressure Feed

## Aqua-Loc® Hydrostatic Test Pump High-Volume 35 GPM Diaphragm

### Features:

- Honda engine with Oil alert® shut off system
- Hypro® triple diaphragm pump – 35 gpm/290 PSI
- Self priming, handles up to 10% chlorine solutions
- Enclosed gear reduction – excellent heat dissipation
- Heavy duty coupling with protective cover

### Equipped with:

- Heavy-duty frame
- Pressure regulator - easy adjustment
- Silicone filled test gauge with stainless steel case
- Inline strainer - easy to clean clear bowl



### Optional Water Tank:

- 16 gallon capacity polyethylene tank
- Allows pump to be pressure fed
- Hinged frame allows easy access to engine
- For use with 9.5 gallon diaphragm style pump

### Optional Wheel Kit:

- For use with all models



Shown with optional wheel kit and water tank

## Aqua-Loc Hydrostatic Test Pump

Part Number	Description
278178	Diaphragm-style Test Pump: 35 gpm/290 psi Honda engine, 12' output & 10' intake hoses
045918	Optional Wheel Kit
031198	Replacement 12' Output Hose with Quick Disconnect
022828	Replacement Disconnect for Output
064348	0 - 300 PSI Retard Gauge with 5 psi increments
030938	Replacement 12' Suction Hose
022768	Replacement Strainer Nylon Filter

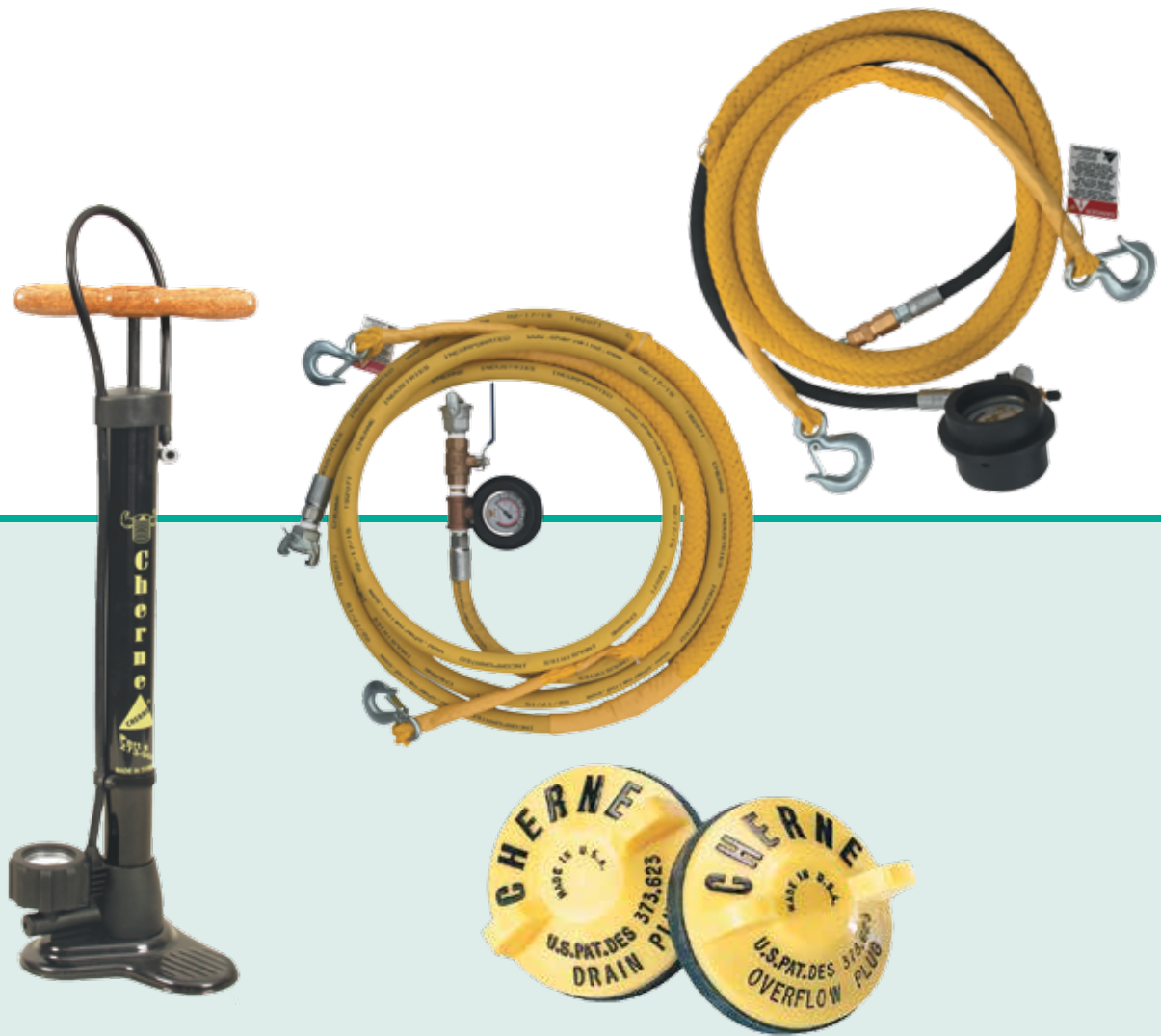




# Tools & Accessories



Test Pumps • Clog-Buster • Manometer	58
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PNEUMATIC PLUGS

MECHANICAL PLUGS

DEFLECTION GAUGES

TESTING EQUIPMENT

TOOLS & ACCESSORIES

TECHNICAL DATA

# Test Pumps • Clog-Buster • Manometer

## A) Air-Max® Pro HV Test Pump (Part #273968)

- Larger barrel diameter - fewer strokes per inflation
- Contoured solid wood handle
- Forged steel construction for extra toughness
- Gauge with molded rubber cover
- Traditional metal thumb lock
- 3' hose with strain-relief
- Product Weight: 6.25 lbs (2.83 kg)



## B) Air Max® Test Pump (Part # 273958)

- Gauge raised from base for protection
- Durable Steel Barrel
- Textured steel base prevents pump from slipping
- Durable, no-kink hose
- Product Weight: 3.6 lbs (1.36 kg)



## C) Econ-O-Pump™ Test Pump (Part #273888)

- Traditional thumb lock
- 140 PSI high-pressure gauge with protective cover
- All steel construction with cast iron base
- Product Weight: 1 lb (.45 kg)



## Clog-Buster Drain Flusher

- Unclogs drain pipes in seconds
- Simply remove aerator from faucet and attach faucet adapter
- Attaches to standard garden hose fitting
- Insert clog buster as far as possible into drain and slowly turn on the cold water - clog should dislodge almost immediately
- Eliminates need for using chemicals

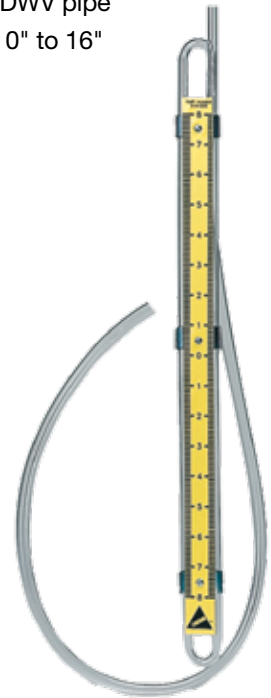
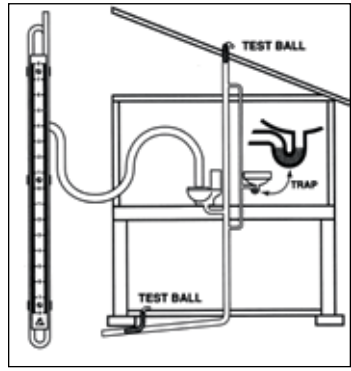


## Clog-Buster Drain Flusher

Part Number	Product Description
303127	1" - 2" Clog-Buster drain flusher
303135	1.5" - 3" Clog-Buster drain flusher
303143	4" - 6" Clog-Buster drain flusher
006193	Faucet adapter

## Manometer (Part #010205)

- Used for testing gas lines and DWV pipe
- Measures water columns from 0" to 16"
- Reads in increments of 1/10"
- Product Weight: .5 lb (.23 kg)



# Point Repair Carrier



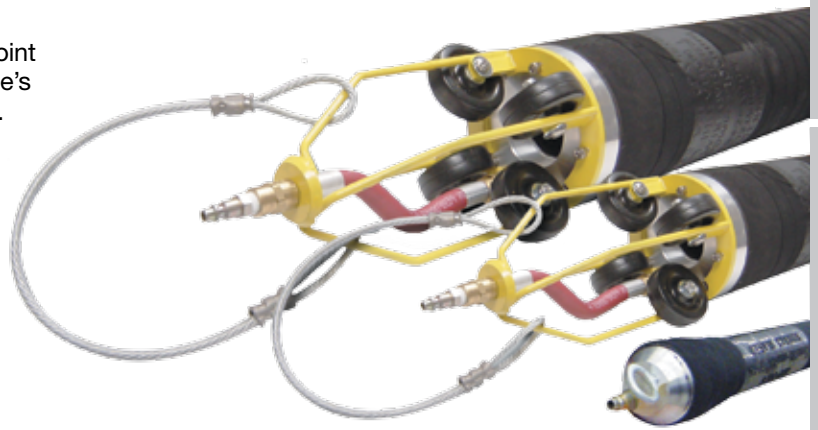
Cherne's point repair carriers are well-suited for most point repair systems. Available for pipe sizes 4" to 12", Cherne's carriers are known for both their durability and reliability. Custom lengths are available upon request.

## Features for all sizes:

- Made of aramid corded natural rubber: extremely durable and flexible
- Flexible: All units can fold in half for transport
- 1/4" NPT Inflation Port with male quick disconnect for ease of connection

## Features on 6"-10" and 8"-12":

- Integrated cage/wheel assembly for ease of movement down the pipe
- Bypass design allows sewage bypass during repair
- Unique centered inflation port for use with push rod inflation poles
- Wire harness keeps unit centered in pipe
- 2" bypass allows for continuous sewer flow



## Multi-Size Point Repair Carriers 4" - 6" Diameter

Part Number	Length	Approx. Contact Length 4" - 6"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
278548	5'	52"	6.25"	2.60"	50 PSI (3,4 bar)
278558	8'	88"	6.25"	2.60"	50 PSI (3,4 bar)
278508	10'	112"	6.25"	2.60"	50 PSI (3,4 bar)
278568	12'	136"	6.25"	2.60"	50 PSI (3,4 bar)
278578	15'	172"	6.25"	2.60"	50 PSI (3,4 bar)

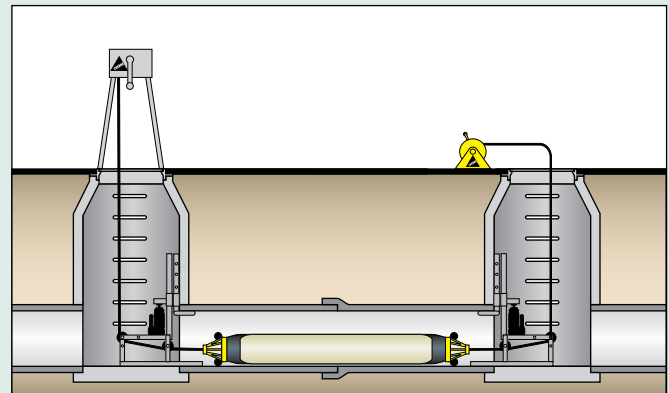
## Multi-Size Point Repair Carriers 6" - 10" Diameter

Part Number	Length	Approx. Contact Length 6" - 10"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
278588	5'	48"	10.25"	4.63"	25 PSI (1,7 bar)
278598	8'	84"	10.25"	4.63"	25 PSI (1,7 bar)
278518	10'	108"	10.25"	4.63"	25 PSI (1,7 bar)
278608	12'	132"	10.25"	4.63"	25 PSI (1,7 bar)
278618	15'	168"	10.25"	4.63"	25 PSI (1,7 bar)

## Multi-Size Point Repair Carriers 8" - 12" Diameter

Part Number	Length	Approx. Contact Length 8" - 12"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
278628	5'	48"	12.25"	5.80"	25 PSI (1,7 bar)
278638	8'	84"	12.25"	5.80"	25 PSI (1,7 bar)
278528	10'	108"	12.25"	5.80"	25 PSI (1,7 bar)
278648	12'	132"	12.25"	5.80"	25 PSI (1,7 bar)
278658	15'	168"	12.25"	5.80"	25 PSI (1,7 bar)

## Point Repair Carrier



# Chain Assemblies • Extension Hoses Test Gauges • Tub Plugs

## Tub Waste & Overflow Plugs: (Part #012678)

- Isolate bath waste for air/water testing
- Yellow ABS plastic
- Natural rubber gasket
- Threads into drain spuds with center hole and center hole overflow elbows
- Can only be used in overflow drains with 1/2" and 3/8" center hole diameters



## A) Extension/Inflation Hoses with Gauge:

- Well suited for plugs up to 15"
- 0-100 PSIG gauge
- 3/16" ID hose



## Extension/Inflation Hoses

- Well suited for plugs up to 15"
- 3/16" ID hose

## Extension/Inflation Hoses with Gauge

Part Number	Description
274218	5' Extension hose with gauge
274228	10' Extension hose with gauge
274238	20' Extension hose with gauge

## Extension/Inflation Hoses

Part Number	Description
274011	2' Extension hose
274038	3' Extension hose
274054	5' Extension hose
274100	10' Extension hose
274208	20' Extension hose
055816	Deflator with clamp (female replacement end)
055808	Inflator with clamp (male replacement end)

## Test Gauges:

- 2" plastic face
- High-quality brass 1/4" connection



## Test Gauges without Test Body

Part Number	Description	
000698	0-15 PSI pressure range	.1 PSI increments
000628	0-30 PSI pressure range	.5 PSI increments
000638	0-60 PSI pressure range	1 PSI increments
000648	0-100 PSI pressure range	2 PSI increments

## Test Gauges:

- 2" plastic face
- Chrome plated body
- 1/8" Schrader valve
- 3/4" NPT(F) pipe connection



## Test Gauges with Hexagonal Test Body

Part Number	Description	
024568	0-15 PSI pressure range	.1 PSI increments
019698	0-30 PSI pressure range	.5 PSI increments
019708	0-60 PSI pressure range	1 PSI increments
019718	0-100 PSI pressure range	2 PSI increments

## Replacement Ring & Chain Assembly:

- Prevents Test-Ball® plugs from falling down a line
- Includes safety tag



## Replacement Ring & Chain Assemblies

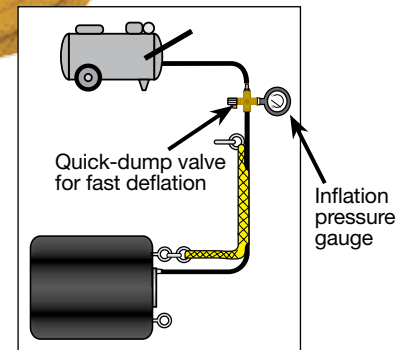
Part Number	Product Description
059708	2" Ring with 12" chain
059718	3" Ring with 12" chain
059728	4" Ring with 12" chain
059748	6" Ring with 12" chain
059758	2" Ring with 24" chain
059768	3" Ring with 24" chain
059778	4" Ring with 24" chain
059798	6" Ring with 24" chain

# Poly-Lift Lines



## Hi-Flow Poly Lift Line

- Greater Lifting Strength
- Recommended for plugs 6" to 48"
- Retard gauge: helps prevent "peg-out" damage
- Heavy-duty rubber gauge cover protects gauge
- 3/8" heavy-duty ID hose for quick inflate/deflate
- Quick-dump valve for easy deflation
- Industrial Quick Disconnect
- Designed for use with plugs with removable inflator valve



## Poly-Lift Line with Gauge

Part Number	Length
383108	Hi-Flow Hose, 10 FT W/Gauge
383208	Hi-Flow Hose, 20 FT W/Gauge
383308	Hi-Flow Hose, 30 FT W/Gauge
383408	Hi-Flow Hose, 40 FT W/Gauge

Consult factory for lines without gauges.

## Super-Flow Hose with Gauge:

- Designed for large diameter multi-size plugs - (15"-32" to 54"-96")
- 3/4" Heavy-duty hose for both durability and faster deflation
- Retard gauge: Helps prevent gauge "peg-out"
- Heavy-duty rubber gauge cover protects gauge
- Utilizes traditional "crow's foot" air compressor fittings
- Quick dump valve for easy deflation



## Super-Flow Hose with Gauge

Part Number	Description
341208	Super-Flow Hose, 20 FT W/Gauge
341308	Super-Flow Hose, 30 FT W/Gauge
341408	Super-Flow Hose, 40 FT W/Gauge

## Poly-Lift Line:

- Great for plugs up to 15"
- 3/16" ID hose
- Threaded connection fittings

## Poly-Lift Line

Part Number	Product Length
261076	10'
261084	20'
261106	30'
261114	40'



# Jet-Ball™

## Jet-Ball™ Pipeline Cleaning Balls:

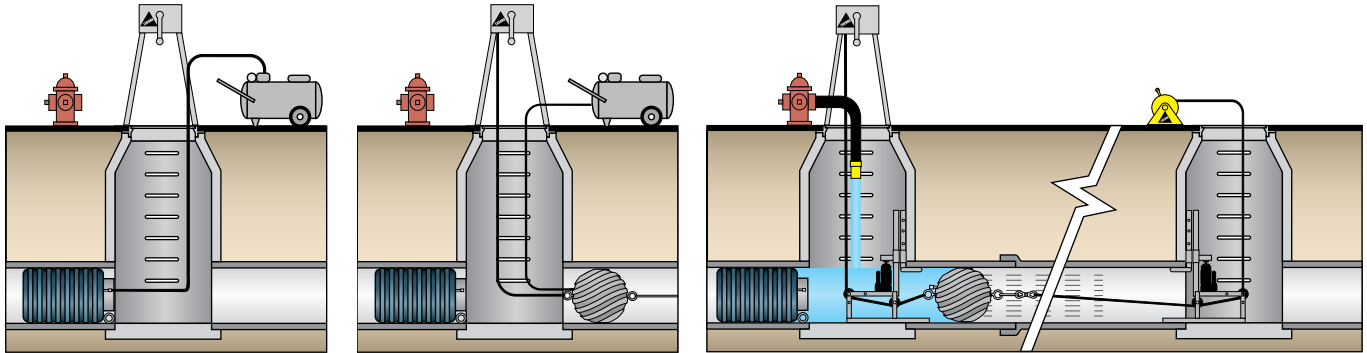
- Inexpensive method for cleaning new lines prior to line acceptance testing
- Also for cleaning grease out of existing lines—the better alternative to an expensive jet truck
- Made of natural rubber



## Equipped with:

- Eye bolts at each end for tethering
- Spiral grooves turn Jet Ball for superior pipe cleaning

## Jet-Ball™ Application



1) Install plug to isolate manhole

2) Attach Jet-Ball™ to tag line and inflate

3) Introduce water into manhole and slowly release Jet-Ball™ down the line.

Part Number	Nominal Size	Usage Range		Head Pressure (Feet of Head)	Product Weight	Deflated Length	Deflated Diameter	Inflation Valve Thread Size	Eye Bolt
254207	6" - 10" (150 - 250 mm)	5.87" (149 mm)	10.25" (260 mm)	5 (1.5 M)	2.5 lbs (1.1 kg)	8" (203 mm)	5.62" (142 mm)	1/4" (1)	3/8" (2)
254215	10" - 14" (250 - 350 mm)	8.75" (222 mm)	14.25" (362 mm)	5 (1.5 M)	7.5 lbs (3.4 kg)	12.25" (311 mm)	8.5" (216 mm)	1/4" (1)	3/8" (2)
254223	15" - 18" (375 - 450 mm)	11" (279 mm)	18.25" (464 mm)	5 (1.5 M)	13 lbs (5.9 kg)	14.75" (375 mm)	10.75" (273 mm)	1/4" (1)	3/8" (2)



See Winches and Rollers on page 46







# Technical Data



Conversion • Testing	66
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# Conversion • Testing

## Water Test:

The DWV plumbing system is plugged leaving the top vent open. Water is then introduced to the system, purging any trapped air that may occur. The test passes if no water column is lost or no pressure drop is noted on a gauge.

## Air Test:

The DWV plumbing system is plugged at all openings including traps and vents, leaving one opening as a point to both introduce and monitor the test pressure. Air is introduced, pressurizing the system (normally 5 PSI or less), making sure all are outside the danger zone. (See safety and usage instructions.) The test passes if the measurable loss of pressure is within the time and pressure allowances of the test specifications.

## Manometer (or U-Tube):

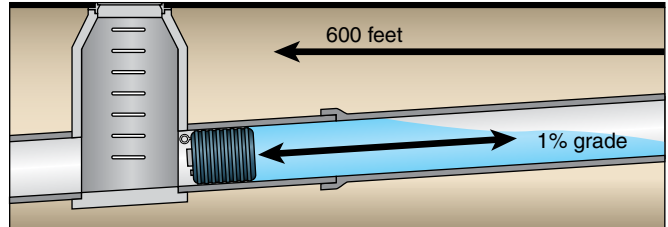
Also known as a final test, the manometer test verifies trap tightness in a new plumbing system. All traps are filled with water and all vents are then plugged. The manometer tube is first filled with water so that it “zeroes” out. Then the lower tube of the manometer is placed through a trap. A second hose is then put through the same trap and a small amount of pressure is applied. A decrease in water column measured on the manometer scale indicates that there is a leak in the system.

## Scent Test:

The DWV system is plugged at all openings except one. Liquid scent is applied in that opening, which is then plugged. Leaks are detected via smell.

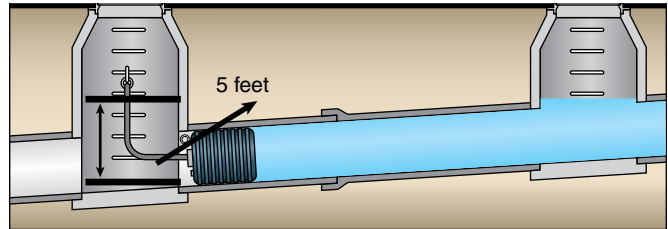
## Calculating Head Pressure/Feet of Head

- 1) Measure the distance of the pipe and multiply it by the slope of the grade.
- 2) Measure the distance of the pipe above the plug. (used when pipe is vertical)



In the example above, the answer is  $600 \times .01 = 6$  feet of head.

- 3) Attach a hose to a Muni-Ball® bypass. Raise the hose until the flow stops. Measure the height of the water in the hose.



In the example above, the answer is 5 feet of head

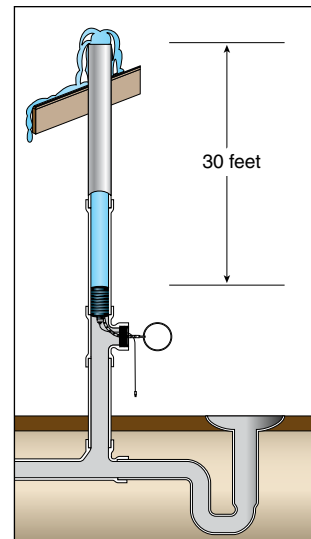
## Measures Conversion Chart

Unit	=	Conversion Factor	x	Unit
Pounds per square inch	=	14.5	x	Bars
Gallons	=	7.48052	x	Cubic feet
Meters	=	.3048	x	Feet
Inches of mercury	=	.8825	x	Feet of water
Pounds per square inch	=	.4335	x	Feet of water
Millimeters	=	25.4	x	Inches
Feet of water	=	1.133	x	Inches of mercury
Pounds per square inch	=	.4912	x	Inches of mercury
Pounds	=	2.2046	x	Kilograms
Feet	=	3.281	x	Meters
Inches	=	.03937	x	Millimeters
Feet of water	=	2.307	x	Pounds per square inch (PSI)
Inches of mercury	=	2.036	x	Pounds per square inch (PSI)

## Pressure Conversion Chart

PSI	Feet of Head	PSI	Feet of Head
1	2.31	14	32.33
2	4.62	15	34.64
3	6.93	16	36.94
4	9.24	17	39.25
5	11.55	18	41.56
6	13.85	19	43.87
7	16.16	20	46.18
8	18.47	25	57.73
9	20.78	30	69.27
10	23.09	35	80.82
11	25.40	40	92.36
12	27.71	45	103.91
13	30.02	50	115.45

Always block plugs when conducting air tests.



In the example above, the answer is: 30 feet of pipe above the plug = 30 feet of head

# Safety Instructions



## Calculating Pipeline Forces and Pressures\*

- 1) Determine the inside diameter of the pipeline in inches.
- 2) Determine the maximum back pressure.
- 3) Calculate the pipe area in square inches.  
(Pipe area =  $\pi r^2$ )
- 4) Calculate the force the plug must withstand.  
(pounds of force = PSI X pipe area)

## Formula: $\pi r^2 \times \text{PSI} = \text{POUNDS OF FORCE}$

Example: 36" diameter pipe

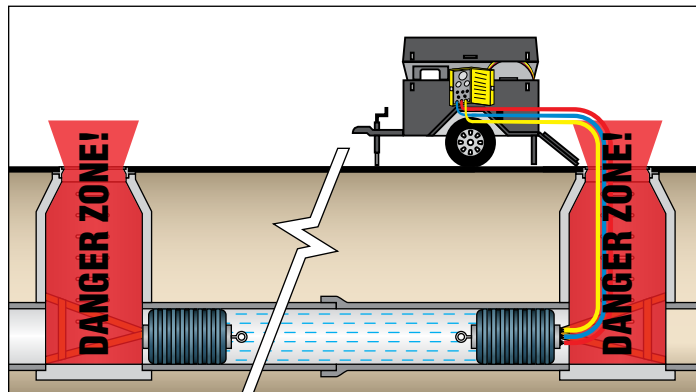
Radius = 18"

$\pi = 3.14$

PSI = 5

$18" \times 18" \times 3.14 \times 5 \text{ PSI} = 5087 \text{ POUNDS OF FORCE}$

\*Calculating pounds of force aids in building blocking systems. It also illustrates the tremendous force generated by a sewer air test.



**Stand clear of the danger zone!**

Always block plugs when conducting air tests.

## Special Notes:

- Pressures being exerted on a plug—regardless of the medium (liquid, water, or air)—are the same. Ten (10) PSI of water is the same as ten (10) PSI of air. However, air is a compressible media. Therefore when a plug dislodges under air back-pressure, it is much more dangerous than water pressure as the air will expand to its original atmospheric volume. Use extreme caution when conducting air tests!
- Air back-pressure ratings reflect absolute back-pressure capabilities. Common engineering standards have been used to convert head pressure to PSI. It is imperative to block pipe plugs when performing air pressure tests and to ensure no one is in the danger zone when a plug is in use. Please see the Cherne Safety and Instruction Manual for complete details.

## General Safety and Usage Instructions:

- 1) Death, bodily injury, and/or property damage may result if plug fails for any reason.
- 2) Read and understand safety instruction sheet before using plug.
- 3) Must wear safety glasses and a hard hat.
- 4) Do not enter danger zone when plug is in use.
- 5) Measure pipe diameter before selecting plug.
- 6) Inspect plug for damage before and after use.
- 7) Never use a plug in a pipe size different from recommended usage range.
- 8) Always attach an inflation hose so plug can be inflated and deflated from outside the danger zone.
- 9) Never remove the inflation hose until all back pressure is released and the plug is deflated.
- 10) Must inflate plug to the pressure shown on plug.
- 11) Always use properly-calibrated pressure gauges.
- 12) Do not exceed recommended maximum allowable back pressure (refer to safety instruction sheet).
- 13) Always release back pressure from the pipe first, before deflating plug.
- 14) Check pneumatic plug inflation pressure at least every four hours.

# Numerical Listing

Product Number	Size	Description	Page Number
000628		Test Gauges without Test Body: 0-30 PSI pressure range	60
000638		Test Gauges without Test Body: 0-60 PSI pressure range	60
000648		Test Gauges without Test Body: 0-100 PSI pressure range	60
000698		Test Gauges without Test Body: 0-15 PSI pressure range	60
006193		Clog-Buster Drain Flusher: Faucet adapter	58
006525		Air-Loc 4" Parachute	50
007892		Air-Loc Three way valve	52
008250		Air-Loc 6"-10" Parachute	50
008404		Air-Loc Bladder Style Manhole Tester: 26" Bladder, Replacement	48
008948	12" x 24"	12" x 24" Pillow Plug Patch Kit	18
008948	12" x 24"	12" x 24" Pillow Plug Patch Kit	18
009018	21"	Air-Loc Joint Tester	52
009028	24"	Air-Loc Joint Tester	52
009038	27"	Air-Loc Joint Tester	52
009048	30"	Air-Loc Joint Tester	52
009058	33"	Air-Loc Joint Tester	52
009068	36"	Air-Loc Joint Tester	52
009078	39"	Air-Loc Joint Tester	52
009088	42"	Air-Loc Joint Tester	52
009098	48"	Air-Loc Joint Tester	52
009108	54"	Air-Loc Joint Tester	52
009118	60"	Air-Loc Joint Tester	52
009128	66"	Air-Loc Joint Tester	52
009138	72"	Air-Loc Joint Tester	52
009158	78"	Air-Loc Joint Tester	52
009168	84"	Air-Loc Joint Tester	52
009178	90"	Air-Loc Joint Tester	52
009188	96"	Air-Loc Joint Tester	52
009198	102"	Air-Loc Joint Tester	52
009208	108"	Air-Loc Joint Tester	52
009228	120"	Air-Loc Joint Tester	52
010048		Air-Loc Control Panel	52
010205		Manometer	58
010628		Air-Loc 27"-54" Frame Gasket	52
010638		Air-Loc 60"-120" Frame Gasket	52
012100		Air-Loc Shroud, Stand and 20 ft of 8" diameter duct hose	50
013008		Air-Loc 12' Panel to Joint Tester Hose	52
013108		Air-Loc Ventilator Kit: Honda engine	50
014714		Air-Loc Ventilator Kit: Briggs & Stratton engine	50
014722		Air-Loc Smoke Blower replacement fan (left pitch)	51
014828		Air-Loc Pressure Testing Panel: 0-60 PSI Ball Pressure-Gauge	44
014838		Air-Loc 0-100 PSI 2" Gauge For End Elements	52
014848		Air-Loc Pressure Testing Panel: 0-160 PSI Compressor Gauge	44
015403		Air-Loc Fan Assembly: Briggs & Stratton engine	50
015438		Manhole Cover Hook: 36" Manhole cover hook with 90° handle	46
015443		Manhole Cover Hook: 24" Manhole cover hook with 90° handle	46
015823		Air-Loc Vacuum Pump: Replacement Line Filter	49
019321		Air-Loc Vacuum Pump: Replacement Pump Vanes (four required)	49



Product Number	Size	Description	Page Number
019458	1¼"	Remo Pole Adapter (1¼" M NPT)	12
019473	6'	6' Remo Pole	12
019501		Air-Loc Vacuum Pump: Replacement Pump	49
019548	2" - 1½"	2" - 1½" Remo Reducer Bushing	12
019558	1½"	1½" Remo Muni-Ball Adapter	12
019568	2"	2" Remo Muni-Ball Adapter	12
019698		Test Gauges with Hexagonal Test Body: 0-30 PSI pressure range	60
019708		Test Gauges with Hexagonal Test Body: 0-60 PSI pressure range	60
019718		Test Gauges with Hexagonal Test Body: 0-100 PSI pressure range	60
022768		Aqua-Loc Hydrostatic Test Pump: s0-300 PSI Retard Gauge with 5 PSI Increments	53
022768		Aqua-Loc Hydrostatic Test Pump: Replacement Brass Strainer	54
022768		Aqua-Loc Hydrostatic Test Pump: Replacement Strainer Nylon Filter	55
022828		Aqua-Loc Hydrostatic Test Pump: Optional Wheel Kit	53
022828		Aqua-Loc Hydrostatic Test Pump: Disconnect for Output	54
022828		Aqua-Loc Hydrostatic Test Pump: Replacement Disconnect for Output	55
023748		Air-Loc Plate Style Manhole Tester: 44" Replacement pad	48
024358		Air-Loc 96" and up Wheel Assembly	52
024568		Test Gauges with Hexagonal Test Body: 0-15 PSI pressure range	60
026350		Air-Loc 0-10 PSI 4" Retard Gauge for Air Test	52
026358		Air-Loc Pressure Testing Panel: 0-10 PSI Test Pressure Gauge – Retarded increments from 11-30 PSI	44
028588		Line Acceptance / Leak Location: ¾" M NPT Plug conversion kit with quick-disconnect fittings	43
028598		Line Acceptance / Leak Location: 1½" M NPT Plug conversion kit with quick-disconnect fittings	43
028608		Line Acceptance / Leak Location: 2" M NPT Plug conversion kit with quick-disconnect fittings	43
028618		Line Acceptance / Leak Location: 3" M NPT Plug conversion kit with quick-disconnect fittings	43
028628		Line Acceptance / Leak Location: 4" M NPT Plug conversion kit with quick-disconnect fittings	43
028648		Line Acceptance / Leak Location: 2½" F NPT Cap conversion kit with quick-disconnect fittings	43
028668		Line Acceptance / Leak Location: 4" F NPT Cap conversion kit with quick-disconnect fittings	43
030938		Aqua-Loc Hydrostatic Test Pump: Quick Disconnect for Output Hose	54
030938		Aqua-Loc Hydrostatic Test Pump: Replacement 12' Input Hose	55
030938		Aqua-Loc Hydrostatic Test Pump: Replacement 12' Suction Hose	53
031198		Aqua-Loc Hydrostatic Test Pump:	53
031198		Aqua-Loc Hydrostatic Test Pump: Replacement 12' Output Hose with Quick Disconnect	55
031198		Aqua-Loc Hydrostatic Test Pump: Replacement 12' Output Hose with Quick Disconnect	54
033018		Air-Loc Plate Style Manhole Tester: 32" Replacement Pad	48
033028		Air-Loc Plate Style Manhole Tester: 38" Replacement pad	48
033868		Air-Loc Replacement Silencer for Vacuum Generator 460	49
034348		Air-Loc Smoke Bomb: 30 seconds (12 per case)	51
034358		Air-Loc Smoke Bomb: 60-seconds (12 per case)	51
034368		Air-Loc Smoke Bomb: 3 minutes (12 per case)	51
034378		Air-Loc Smoke Bomb: 3 minutes, double wick (12 per case)	51
035248		Air-Loc Replacement Filter for Generator 460	49
035268		Air-Loc Pressure Testing Hose: 25' Triple Hose	45
036308		Air-Loc Fluid Smoke conversion kit from Smoke Bomb Briggs & Stratton engine	51
036488		Air-Loc Fluid Smoke pressure container and hose: 2 gallons capacity	51
039168		Aqua-Loc Hydrostatic Test Pump: 16 gallon optional water tank	53
041386	8" (200 mm)	Test Ball Plugs: Single Size Original Test Balls	9
041394	10" (250 mm)	Test Ball Plugs: Single Size Original Test Balls	9
041408	12" (300 mm)	Test Ball Plugs: Single Size Original Test Balls	9

# Numerical Listing

Product Number	Size	Description	Page Number
041416	15-16" (375-400 mm)	Test Ball Plugs: Single Size Original Test Balls	9
041718		Hi-Flow Line Acceptance: 6" F NPT PVC Cap conversion kit	43
041748		Hi-Flow Line Acceptance: 2" M NPT Plug conversion kit	43
041758		Hi-Flow Line Acceptance: 3" M NPT Plug conversion kit	43
041768		Hi-Flow Line Acceptance: 4" M NPT Plug conversion kit	43
041778		Hi-Flow Line Acceptance: 2½" F NPT Cap conversion kit	43
041788		Hi-Flow Line Acceptance: 4" F NPT Cap conversion kit	43
043338		Air-Loc Pressure Testing Hose: 22' Interconnect Hose	45
045918		Air-Loc Vacuum Pump: Optional Wheel Kit	53
045918		Aqua-Loc Hydrostatic Test Pump:	49
045918		Aqua-Loc Hydrostatic Test Pump: Optional Wheel Kit	49
045918		Aqua-Loc Hydrostatic Test Pump: Optional Wheel Kit	55
049028		Line Acceptance / Leak Location: 2" F NPT Cap conversion kit with quick-disconnect fittings	43
049068	14" - 21"	Big Mouth Flange Kit	15
049088	14" - 21"	Big Mouth Flange Kit	15
049108		Hi-Flow Line Acceptance: 2" F NPT Cap conversion kit	43
049188	18" - 24"	Big Mouth Flange Kit	15
049208	18" - 24"	Big Mouth Flange Kit	15
050628		Air-Loc Replacement fan: Line Stringer/Ventilator (right pitch)	50
054268		Air-Loc Replacement Silencer for Generator 600	49
055348		Air-Loc Bladder Style Manhole Tester: 20' Replacement Hose and Gauge Assembly	48
055348		Air-Loc Plate Style Manhole Tester: Replacement Hose and Gauge Assembly, 20 feet	46
055808		Inflator with clamp (male replacement end)	60
055816		Deflator with clamp (female replacement end)	60
056228		Manhole Jack (Hose Guide)	46
056707		Manhole Roller (Hose Guide)	46
058368		Air-Loc Smoke bomb holding cage	51
059688	4" - 2"	4" - 2" Remo Reducer Bushing	12
059708		Replacement Ring & Chain Assembly: 2" Ring with 12" chain	60
059718		Replacement Ring & Chain Assembly: 3" Ring with 12" chain	60
059728		Replacement Ring & Chain Assembly: 4" Ring with 12" chain	60
059748		Replacement Ring & Chain Assembly: 6" Ring with 12" chain	60
059758		Replacement Ring & Chain Assembly: 2" Ring with 24" chain	60
059768		Replacement Ring & Chain Assembly: 3" Ring with 24" chain	60
059778		Replacement Ring & Chain Assembly: 4" Ring with 24" chain	60
059798		Replacement Ring & Chain Assembly: 6" Ring with 24" chain	60
060498		Air-Loc Pressure Testing Hose: 500' Triple Hose	45
060508	3" - 2"	3" - 2" Remo Reducer Bushing	12
060678		Air-Loc Bladder Style Manhole Tester: 29" Bladder, Replacement	48
063339		Air-Loc Bladder Style Manhole Tester: 32" Bladder, Replacement	48
063541		Air-Loc Bladder Style Manhole Tester: 36" Bladder, Replacement	48
064348		Aqua-Loc Hydrostatic Test Pump: Replacement Output Hose W/O Quick Disconnects	53
064348		Aqua-Loc Hydrostatic Test Pump: 0 - 300 PSI Retard Gauge with 5 psi increments	54
064348		Aqua-Loc Hydrostatic Test Pump: 0 - 300 PSI Retard Gauge with 5 psi increments	55
065808		Air-Loc Fluid Smoke: one gallon (1 per case)	51
065818		Air-Loc Fluid Smoke: five gallons (1 per case)	51
065828		Air-Loc Fluid Smoke: fifty-five gallon drum	51
066303		Air-Loc Fan Assembly: Honda engine	50



Product Number	Size	Description	Page Number
067008		Air-Loc 39"-54" Wheel Assembly	52
073199	6"	Proving Ring	39
073202	8"	Proving Ring	39
073210	10"	Proving Ring	39
073229	12"	Proving Ring	39
073237	15"	Proving Ring	39
073253	8"	Proving Ring	39
073261	10"	Proving Ring	39
073288	12"	Proving Ring	39
086363		Air-Loc 21"-36" Wheel Assembly	52
087602		Air-Loc 0-60 PSI 4" Gauge for Water Test	52
098485		Air-Loc Bladder Style Manhole Tester: 24" Bladder, Replacement	48
099406		Air-Loc Bladder Style Manhole Tester: 30" Bladder, Replacement	48
107379		Air-Loc Vacuum Pump: Line Filter Jar, Metal	49
112941	Dolphin Padlock (All padlocks keyed alike.)	Monitor-Well Plug	32
200468		Air-Loc Vacuum Generator 460	49
200908		Air-Loc Vacuum Generator 600	49
210248		Air-Loc Bladder Style Manhole Tester: 24" Tester. Seals 20" - 24.3" openings	48
210268		Air-Loc Bladder Style Manhole Tester: 26" Tester. Seals 21.5" - 26.3" openings	48
210298		Air-Loc Bladder Style Manhole Tester: 29" Tester. Seals 24" - 29.3" openings	48
210308		Air-Loc Bladder Style Manhole Tester: 30" Tester. Seals 25" - 30.3" openings	48
210328		Air-Loc Bladder Style Manhole Tester: 32" Tester. Seals 27.5" - 32.8" openings	48
210348		Air-Loc Bladder Style Manhole Tester: 34" Tester. Seals 30" - 34.3" openings	48
210368		Air-Loc Bladder Style Manhole Tester: 36" Tester. Seals 31.5" - 36" openings	48
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220328		Air-Loc Plate Style Manhole Tester: 32" Tester. Seals 18" - 30" openings	48
220388		Air-Loc Plate Style Manhole Tester: 38" Tester. Seals 18" - 36" openings	48
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262064	6" (150 mm)	Original Muni-Ball Plug: Single Size	13
262080	8" (200 mm)	Original Muni-Ball Plug: Single Size	13
262110	10" (250 mm)	Original Muni-Ball Plug: Single Size	13
262129	12" (300 mm)	Original Muni-Ball Plug: Single Size	13
262137	15" - 16" (375-400 mm)	Original Muni-Ball Plug: Single Size	13
262188	18" (450 mm)	Original Muni-Ball Plug: Single Size	13
262218	21" (525 mm)	Original Muni-Ball Plug: Single Size	13
262242	24" (600 mm)	Original Muni-Ball Plug: Single Size	13
265048	4" - 6" (100-150 mm)	Original Muni-Ball Plug: Multi-Size	13
265068	6" - 8" (150-200 mm)	Original Muni-Ball Plug: Multi-Size	13
265078	8" - 10" (200-250 mm)	Original Muni-Ball Plug: Multi-Size	13
265098	8" - 12" (200-300 mm)	Original Muni-Ball Plug: Multi-Size	13
265128	12" - 18" (300-450 mm)	Original Muni-Ball Plug: Multi-Size	13
266027	30" (750 mm)	Pillow-Style Muni-Ball Plug	18
266035	33" (850 mm)	Pillow-Style Muni-Ball Plug	18
266043	36" (900 mm)	Pillow-Style Muni-Ball Plug	18
266051	42" (1100 mm)	Pillow-Style Muni-Ball Plug	18
266078	48" (1200 mm)	Pillow-Style Muni-Ball Plug	18
266086	54" (1400 mm)	Pillow-Style Muni-Ball Plug	18
266094	60" (1600 mm)	Pillow-Style Muni-Ball Plug	18
266108	66" (1700 mm)	Pillow-Style Muni-Ball Plug	18
267068	6" - 10" (150-250 mm)	Air-Loc & I-Series Leak Locator Plug: Original Front Plug	20
267088	8" - 12" (200-300 mm)	Air-Loc & I-Series Leak Locator Plug: Original Front Plug	20
267128	12" - 18" (300-450 mm)	Air-Loc & I-Series Leak Locator Plug: Original Front Plug	20
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268038	3" (75 mm)	Iron Grip	29
268048	4" (100 mm)	Iron Grip	29
268068	6" (150 mm)	Iron Grip	29
268088	8" (200 mm)	Iron Grip	29
268108	10" (250 mm)	Iron Grip	29
268128	12" (300 mm)	Iron Grip	29
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269840	0.5" (13 mm)	Sure-Grip Plug	31
269867	0.75" (20 mm)	Sure-Grip Plug	31
269875	1" (25 mm)	Sure-Grip Plug	31
269883	1.25" (32 mm)	Sure-Grip Plug	31
269891	1.5" (40 mm)	Sure-Grip Plug	31
269905	2" (50 mm)	Sure-Grip Plug	31
269913	2.5" (60 mm)	Sure-Grip Plug	31
269921	3" (75 mm)	Sure-Grip Plug	31
269948	4" (100 mm)	Sure-Grip Plug	31
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270024	2" (50 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270032	3" (75 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270040	4" (100 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270059	5" (125 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270067	6" (150 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270108	2.5" (65 mm)	Plumbing Test Ball Plugs: Original Test-Balls	6
270138	3.5"	Clean-Out Gripper	27
270168	2"	Clean-Out Gripper	27
270178	3"	Clean-Out Gripper	27
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270229	2" (50 mm)	End-of-Pipe Gripper Plug	26
270237	3" (75 mm)	End-of-Pipe Gripper Plug	26
270245	4" (100 mm)	End-of-Pipe Gripper Plug	26
270253	6" (150 mm)	Inside-of-Pipe Gripper Plug	26
270261	6" (150 mm)	End-of-Pipe Gripper Plug	26
270270	8" (200 mm)	End-of-Pipe Gripper Plug	26
270288	8" (200 mm)	Inside-of-Pipe Gripper Plug	26
270296	4" (100 mm)	Inside-of-Pipe Gripper Plug	26
270528	2" (50 mm)	Hub-Fit Gripper	27
270538	3" (75 mm)	Hub-Fit Gripper	27
270548	4" (100 mm)	Hub-Fit Gripper	27
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270733	2"	Test Kap	33
270741	3"	Test Kap	33
270768	4"	Test Kap	33
270776	5"	Test Kap	33
270784	6"	Test Kap	33
271020	2" (50 mm)	Long Test-Ball	7
271039	3" (75 mm)	Long Test-Ball	7
271047	4" (100 mm)	Long Test-Ball	7
271063	6"	Long Test-Ball	7
271098	4" - 6" (100-150 mm)	Long Test-Ball	7
271158	1.5" (40 mm)	Kwik 'N Sure Plug	31
271208	2" (50 mm)	Kwik 'N Sure Plug	31
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271519	1.5" (40 mm)	Econ-O-Grip	30
271527	2" (50 mm)	Econ-O-Grip	30
271535	3" (75 mm)	Econ-O-Grip	30
271543	4" (100 mm)	Econ-O-Grip	30
271551	5" (125 mm)	Econ-O-Grip	30
271578	6" (150 mm)	Econ-O-Grip	30
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271713	3" (75 mm)	Clean-Seal Plug	8
271721	4" (100 mm)	Clean-Seal Plug	8
271735	8" (200 mm)	Monitor-Well Plug	32
271758	6" (150 mm)	Clean-Seal Plug	8
271828	2" (50 mm)	Clean-Seal 2 Plug	8
271838	3" (75 mm)	Clean-Seal 2 Plug	8
271848	4" (100 mm)	Clean-Seal 2 Plug	8
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272892	6" (150 mm)	T-Handle Gripper	28
272906	8" (200 mm)	T-Handle Gripper	28
272914	10" (250 mm)	T-Handle Gripper	28
272922	12" (300 mm)	T-Handle Gripper	28
272930	15" (380 mm)	T-Handle Gripper	28
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272957	8" (200 mm)	T-Handle Gripper with Bypass	28
272965	10" (250 mm)	T-Handle Gripper with Bypass	28
272973	12" (300 mm)	T-Handle Gripper with Bypass	28
272981	15" (380 mm)	T-Handle Gripper with Bypass	28
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273328	2" (50 mm)	Petro Econ-O-Grip	30
273338	3" (75 mm)	Petro Econ-O-Grip	30
273348	4" (100 mm)	Petro Econ-O-Grip	30
273358	5" (125 mm)	Petro Econ-O-Grip	30
273368	6" (150 mm)	Petro Econ-O-Grip	30
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277150	*27" (700 mm)	Pillow-Style Test-Ball Plug	11
277169	30" (750 mm)	Pillow-Style Test-Ball Plug	11
277177	33" (850 mm)	Pillow-Style Test-Ball Plug	11
277185	36" (900 mm)	Pillow-Style Test-Ball Plug	11
277193	42" (1100 mm)	Pillow-Style Test-Ball Plug	11
277207	48" (1200 mm)	Pillow-Style Test-Ball Plug	11
277215	54" (1400 mm)	Pillow-Style Test-Ball Plug	11
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314328	15"-32" (375-800 mm)	I-Series Muni Ball Plug	17
314408	20" - 40" (500-1000 mm)	I-Series Muni Ball Plug	17
314488	24" - 48" (600-1200 mm)	I-Series Muni Ball Plug	17
314600	24" - 60" (1400-1500 mm)	I-Series Muni Ball Plug	17
314728	48" - 72" (1200-1800 mm)	I-Series Muni Ball Plug	17
314968	54" - 96" (1400-2400 mm)	I-Series Muni Ball Plug	17
316328	15"-32" (375-800 mm)	I-Series Muni Ball Plug	17
316408	20" - 40" (500-1000 mm)	I-Series Muni Ball Plug	17
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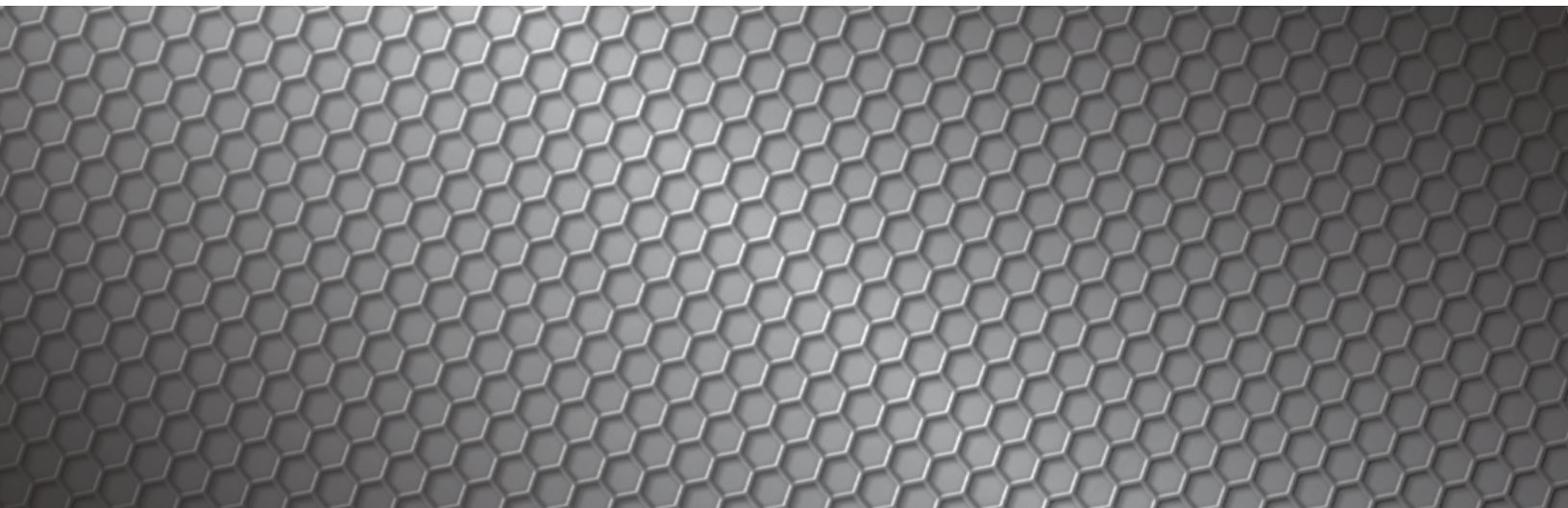
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