

# CHERNE INDUSTRIES INC.

Best in the Business



**CHERNE**<sup>®</sup>

**800.843.7584**  
**PRODUCT CATALOG**

Since 1998, Cherne Industries has been certified to the ISO9001 internationally-recognized Standard for Quality Management Systems. Covering companies that design, manufacture, test, and service a particular product, the ISO9001 standard is governed by the International Organization for Standardization (ISO)—a worldwide federation of national standards bodies from over 100 countries.

**What does “certified” mean?**

Every six months, Cherne's Quality Management System is audited by a third party registrar to ensure that our products continue to consistently meet the requirements of the ISO9001 Standard.

**How does this standard impact Cherne's business and your decision to purchase its products?**

- Cherne's entire design and development process is implemented and recorded for each of its products, ensuring that the items you purchase meet documented product specifications and safety requirements.
- All of Cherne's manufacturing procedures are documented and utilized by trained associates to produce the plugs and equipment you purchase.
- The tools and equipment used to measure and inspect production materials and finished products are calibrated at declared intervals to meet internal and external equipment requirements.

- Cherne has a documented procedure for handling customer complaints and suggestions. Please contact Cherne with any comments or concerns you have.
- In addition to a third party audit twice a year, Cherne also conducts internal audits to ensure conformance to its standard and documented procedures.

**Documented procedures ... conformance to the Standard ... external and internal audits ... What does this mean to you, Cherne's customers?**

It means the products you purchase from Cherne have passed through a Certified System based on the fundamentals of consistency and continuous improvement. Combined, those two elements yield quality products time after time.

**CHERNE'S QUALITY POLICY STATEMENT**

Cherne Industries Incorporated is committed to exceeding our customers' expectations by providing timely delivery of safe and defect free products combined with excellent technical service. Cherne supports this effort through associate training and education and a continuous improvement process.

**Pneumatic Plugs**

	Test-Ball® ..... 6-7
	Muni-Ball® ..... 8-9
	Pressure Charts ..... 10
	Rupture Disc ..... 11
	Protective Sleeves ..... 12
	Remo® ..... 13
	Big-Mouth® Flow-Through ..... 14-15
	Factory-Replaceable Sleeve Muni-Ball® ..... 16
	Jet-Ball® ..... 17
	Air-Loc® Leak Locator ..... 18-19
	Long Test-Ball® • MS2® Test-Ball® ..... 20
	Clean-Seal® ..... 21
	Pillow Plugs ..... 22-23


**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 ..... 32
	Test Caps • Test Kap ..... 33


**Deflection Gauges**

	Deflection Gauges ..... 36-38
	Proving Rings ..... 39

**Testing Equipment**

	Air-Loc® Pressure Testing ..... 42-44
	Air-Loc® Pressure Testing Hoses ..... 45
	Manhole Jack • Roller • Winch ..... 46
	Air-Loc® Pressure Testing Procedures ..... 47
	Air-Loc® Manhole Testers Head Assemblies ..... 48-49
	Air-Loc® Vacuum Equipment ..... 50-51
	Air-Loc® Stringer • Ventilators ..... 52
	Air-Loc® Smoke Testing ..... 53
	Air-Loc® Joint Testers ..... 54
	Aqua-Loc® Hydrostatic Test Pumps ..... 55-57

**Tools & Accessories**

	Test Pumps • Clog-Buster® Drain Flusher • Manometer ..... 60
	Point Repair Carrier ..... 61
	Chain Assemblies • Test Gauges • Tub Plugs ..... 62
	Poly-Lift Lines • Extension Hoses ..... 63

**Technical Data**

Conversion Charts • Testing Methods ..... 66	
Safety Instructions ..... 67	

### Pneumatic Plugs

Test-Ball® (Blocking Plugs)	6-7
Muni-Ball® (Bypass Plugs)	8-9
Pressure Charts By Diameter	10
Rupture Disc Information	11
Protective Sleeves	12
Remo® Remote Placement Plugs	13
Big-Mouth® Flow-Through (Bypass Plugs)	14-15
Factory-Replaceable Sleeve Muni-Ball® (Bypass Plugs)	16
Jet-Ball® Sewer Cleaning Ball	17
Air-Loc® Leak Locator (Sewer Air Test Plugs)	18-19
Long Test-Ball® • MS2® Test-Ball®	20
Clean-Seal® (Test Tee Plugs)	21
Pillow Plugs (Blocking and Bypass Plugs)	22-23

# Pneumatic Plugs





**Cherne Test-Ball®**

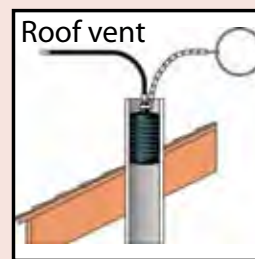
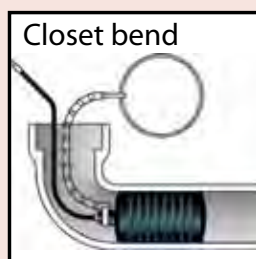
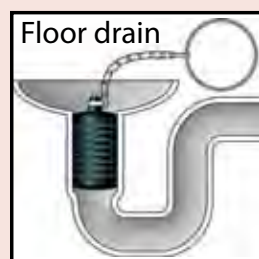
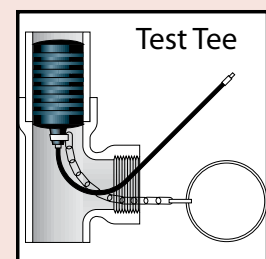
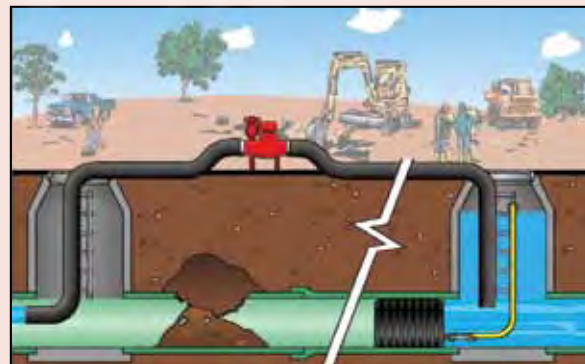
The Cherne Test-Ball has been the contractor's choice for over 50 years and continues to be the most trusted pneumatic test ball in the industry. Designed for applications from pressure testing and blocking of residential DWV systems to repair maintenance and installation of municipal infrastructure including storm and sanitary sewer piping systems, the Cherne Test-Ball does it all. Cherne Test-Balls are durable, rugged and effective in any type of pipe.

- Multi-size: More options, less inventory
- Larger plugs now feature field repairable rupture disc technology
- Large plugs feature a removable valve allowing them to be repaired or replaced with quick disconnect fittings
- All Test-Balls are bendable to 90°

Test-Balls 15-30" size and larger now include our Rupture Disc Technology. This feature prevents over-inflation of the pneumatic plug. Rupture Disc Technology also prevents damage to cording. Damaged cording is an unseen condition that compromises plug performance and safety.



**Bypass Pumping Application**



**Rupture disc now field repairable!**

- Rupture Disc**
- Protect investment
  - Prevent damage
  - Increase safety
- See page 11



**Poly-Lift Line with Gauge**  
Great for plugs from 6" to 60" with removable tire valves  
See page 63

Part Number	Nominal Size	Range of Use	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 40 ft.	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" (30-40 mm)	1.17"-1.75" (30-44 mm)	13 psi 30 ft.	40 psi (2,8 bar)	3.5 oz (0.1 kg)	5.5" (141 mm)	1.1" (33 mm)	Molded in Valve	Removable Chain
276128	1.25" - 2" (32-50 mm)	1.25"-2.10" (32-53 mm)	17 psi 40 ft.	40 psi (2,8 bar)	3.7 oz (0.11 kg)	5.56" (141 mm)	1.21" (31 mm)	Molded in Valve	Removable Chain
270024	2" (50 mm)	1.9"-2.25" (48-57 mm)	13 psi 30 ft.	40 psi (2,8 bar)	3.5 oz (0.1 kg)	2.84" (72 mm)	1.77" (45 mm)	Molded in Valve	Removable Chain
276238	2" - 3" (50-75 mm)	1.9"-3.1" (48-80 mm)	17 psi 40 ft.	35 psi (2,4 bar)	4.7 oz (0.13 kg)	5.57" (141 mm)	1.78" (45 mm)	Molded in Valve	Removable Chain
270108	2.5" (65 mm)	2.34"-2.75" (48-70 mm)	13 psi 30 ft.	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 30 ft.	35 psi (2,4 bar)	6.5 oz (0.2 kg)	5.25" (132 mm)	2.64" (67 mm)	Molded in Valve	Removable Chain
276348	3" - 4" (75-100 mm)	2.8"-4.25" (70-108 mm)	17 psi 40 ft.	40 psi (2,8 bar)	7.8 oz (0.22 kg)	5.18" (132 mm)	2.64" (67 mm)	Molded in Valve	Removable Chain
270040	4" (100 mm)	3.41"-4.25" (87-108 mm)	13 psi 30 ft.	30 psi (2,1 bar)	9 oz (0.25 kg)	6.5" (163 mm)	3.25" (83 mm)	Molded in Valve	Removable Chain
275048	4" - 6" (100-150 mm)	3.75"-6.25" (92-159 mm)	17 psi 40 ft.	30 psi (2,1 bar)	2 lbs (0.91 kg)	9.8" (250 mm)	3.5" (85 mm)	1/8" (1)	1/4" (1)
276468	4" - 6" (100-150 mm)	3.4"-6.25" (87-155 mm)	17 psi 40 ft.	30 psi (2,1 bar)	1.4 lbs (0.62 kg)	9.47" (241 mm)	3.28" (83 mm)	Molded in Valve	Removable Chain
395088	4" - 8" (100-200 mm)	3.6"-8.25" (92-210 mm)	13 psi 30 ft.	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)
270059	5" (125 mm)	4.6"-5.25" (117-133 mm)	13 psi 30 ft.	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 30 ft.	30 psi (2,1 bar)	1.9 lbs (0.85 kg)	9.00" (230 mm)	5.25" (135 mm)	Molded in Valve	Removable Chain
275058	6" - 8" (150-200 mm)	5.25"-8.25" (135-210 mm)	17 psi 40 ft.	30 psi (2,1 bar)	3.5 lbs (1.6 kg)	14" (356 mm)	5" (127 mm)	1/4" (1)	1/4" (1)
395128	6" - 12" (150-300 mm)	5.5"-12.25" (140-310 mm)	13 psi 30 ft.	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)
041386	8" (200 mm)	7"-8.25" (178-210 mm)	17 psi 40 ft.	25 psi (1,7 bar)	3.4 lbs (1.6 kg)	10.25" (257 mm)	6.75" (172 mm)	1/4" (1)	3/16" (1)
275088	8" - 12" (200-300 mm)	7"-12.25" (178-311 mm)	11 psi 25 ft.	20 psi (1,4 bar)	6.63 lbs (3 kg)	16" (406 mm)	6.75" (171 mm)	1/4" (1)	3/8" (1)
395168	8" - 16" (200-400 mm)	7.5"-16.25" (186-413 mm)	13 psi 30 ft.	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)
385168	8" - 16" Short (200-400 mm)	7.5"-16.25" (186-413 mm)	7.5 psi 16.75 ft.	30 psi (2,1 bar)	11 lbs (5 kg)	23" (585 mm)	7.25" (184 mm)	1/4" (1)	3/8" (1)
041394	10" (250 mm)	9"-10.25" (229-260 mm)	17 psi 40 ft.	25 psi (1,7 bar)	5.6 lbs (2.5 kg)	11.75" (298 mm)	8.75" (221 mm)	1/4" (1)	3/16" (1)
041408	12" (300 mm)	10.5"-12.25" (267-311 mm)	17 psi 40 ft.	25 psi (1,7 bar)	10.9 lbs (5 kg)	13.75" (351 mm)	10.25" (262 mm)	1/4" (1)	3/16" (1)
275128	12" - 18" (300-450 mm)	10.75"-18.25" (273-464 mm)	11 psi 25 ft.	25 psi (1,7 bar)	22.4 lbs (10.2 kg)	24" (610 mm)	10.5" (267 mm)	1/4" (1)	3/8" (1)
395248	12" - 24" (300-600 mm)	11"-24.25" (279-616 mm)	13 psi 30 ft.	30 psi (2,1 bar)	28 lbs (12.7 kg)	39.5" (1003 mm)	10.75" (273 mm)	1/4" (1)	3/8" (1)
385248	12" - 24" Short (300-600 mm)	11"-24.25" (279-616 mm)	7.5 psi 16.75 ft.	30 psi (2,1 bar)	24 lbs (11 kg)	33" (839 mm)	10.75" (273 mm)	1/4" (1)	3/8" (2)
*410308	15" - 30" (375-750 mm)	14.5"-30.5" (368-775 mm)	**11 psi (0,76 bar)	25 psi (1,7 bar)	45 lbs (21 kg)	51" (1289 mm)	14" (356 mm)	1/4" & 1/2"	3/8" (2)
*310408	20" - 40" (500-1000 mm)	19"-40" (475-1000 mm)	8.7 psi 20 ft.	22 psi (1,5 bar)	66 lbs (30 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	1/2" (2)
*410428	24" - 42" (600-1050 mm)	22.5"-42.5" (570-1080 mm)	**9 psi (0,62 bar)	20 psi (1,4 bar)	100 lbs (46 kg)	52" (1320 mm)	22" (560 mm)	1/4" & 1/2"	1/2" (2)
*310488	24" - 48" (600-1200 mm)	20.5"-50" (521-1270 mm)	**10 psi (0,7 bar)	23 psi (1,6 bar)	125 lbs (57 kg)	68" (1730 mm)	19.1" (485 mm)	1/4" & 1/2"	3/4" (2)
*310608	30" - 60" (700-1500 mm)	26.5"-60.5" (675-1537 mm)	**10 psi (0,7 bar)	23 psi (1,6 bar)	210 lbs (95.4 kg)	102" (2591 mm)	26" (661 mm)	1/2" (2)	5/8" (3)
*410608	40" - 60" (1000-1500 mm)	38"-60.5" (965-1537 mm)	**8.7 psi (0,6 bar)	20 psi (1,4 bar)	235 lbs (106 kg)	73" (1855 mm)	37.25" (946 mm)	1/4" & 1/2"	1/2" (2)
*310728	48" - 72" (1200-1800 mm)	44"-72.25" (1118-1835 mm)	6 psi 14 ft.	12 psi (0,83 bar)	290 lbs (132 kg)	100" (2540 mm)	43" (1092 mm)	1/2" (2)	5/8" (3)
*310968	54" - 96" (1400-2400 mm)	54"-96.25" (1400-2450 mm)	6 psi 14 ft.	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	50" (1270 mm)	1/2" (2)	5/8" (3)

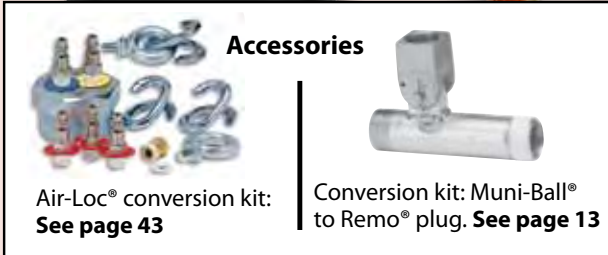
\*Rupture Disc  
\*\*See chart for full pressure range on page 10  
Always block plugs when conducting air tests.



**Cherne Muni-Ball®**

The Muni-Ball® Plug was introduced over 50 years ago and the Cherne brand continues to be the most trusted name in pneumatic plugs. 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.

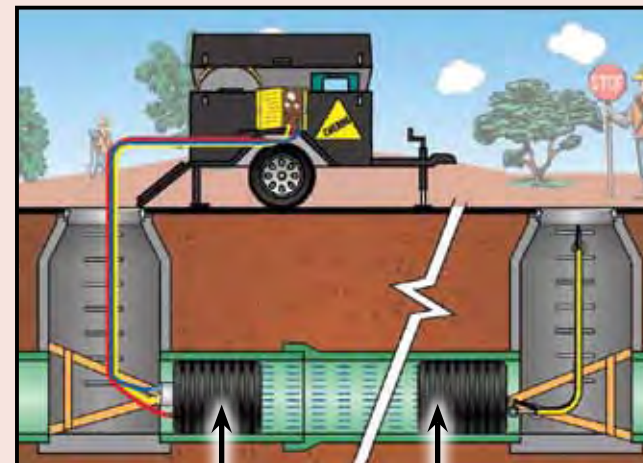
- Muni-Ball® Plugs are supplied with Schrader tire inflation valves
- Larger diameter Muni-Ball® Plugs include a removable threaded valve, allowing the user to replace with quick disconnect fittings
- Muni-Balls® with flexible bypass are bendable to 90°
- Multi-Size® Muni-Ball® Plugs allow more options and less inventory
- **8", 10", 12" and 15" Sizes now include new modified plug for sewer air tests**
- Larger plugs now feature patented field repairable rupture disc technology



**Muni-Ball® Applications Bypass Pumping**



**Sewer Air Test**



Front or back plug



**Rupture disc now field repairable!**

- Protect investment
  - Prevent damage
  - Increase safety
- See page 11



**Poly-Lift Line with Gauge**  
Great for plugs from 6" to 60" with removable tire valves  
See page 63

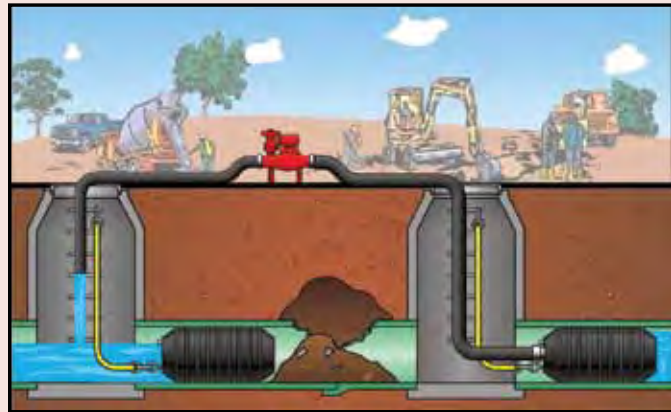
Part Number	Nominal Size	Bypass Diameter (NPT)	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts	
262008	1.5" (40 mm)	1/8" M	1.49"-1.88" (38-48 mm)	22 psi (1,5 bar)	50 ft (15 M)	40 psi (2,8 bar)	0.3 lbs (0.2 kg)	3.8" (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)
265048	4" - 6" (100-150 mm)	3/4" F	3.75"-6.25" (100-150 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)
355088	4" - 8" (100-200 mm)	†3/4" M	3.75"-8.25" (100-210mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	6 lbs (2.7 kg)	22" (559mm)	3.65" (93 mm)	1/4"	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)
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)
355128	6" - 12" (150-300 mm)	†1" M	5.50"-12.25" (150-311 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	8.5 lbs (3.9 kg)	26.25" (667 mm)	5.25" (133 mm)	1/4"	3/8" (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)
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 (7.3kg)	22" (559 mm)	6.75" (171 mm)	1/4"	3/8" (1)
355168	8" - 16" (200-400 mm)	†2" F	7.7"-16.25" (196-413 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	23 lbs (10.5 kg)	32" (813 mm)	7.6" (194 mm)	1/4"	3/8" (2)
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)
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)
355248	12" - 24" (300-600 mm)	†2" M	11.25"-24.25" (286-616 mm)	13 psi (0,9 bar)	30 ft. (9.1 M)	30 psi (2,1 bar)	41 lbs (18.6 kg)	40" (1016 mm)	11" (282 mm)	1/4"	3/8" (2)
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)
*412308	15" - 30" (375-750 mm)	†2 1/2" M	14.5"-30.5" (368-775 mm)	**11 psi (0,76 bar)	25 ft. (7.6 M)	25 psi (1,7 bar)	62 lbs (28 kg)	51" (1289 mm)	14" (356 mm)	1/4" & 1/2"	3/8" (4)
*414308	15" - 30" (375-750 mm)	†4" M	14.5"-30.5" (368-775 mm)	**11 psi (0,76 bar)	25 ft. (7.6 M)	25 psi (1,7 bar)	105 lbs (48 kg)	51" (1289 mm)	14" (356 mm)	1/4" & 1/2"	3/8" (4)
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)
*312408	20" - 40" (500-1000 mm)	†2" M	19"-40" (475-1000mm)	8.7 psi (0,6 bar)	20 ft. (6.1 M)	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" (500-1000mm)	†4" M	19"-40" (475-1000mm)	8.7 psi (0,6 bar)	20 ft. (6.1 M)	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" (500-1000mm)	†6" M	19"-40" (475-1000mm)	8.7 psi (0,6 bar)	20 ft. (6.1 M)	22 psi (1,5 bar)	106 lbs (48 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2"	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)
*410428	24" - 42" (600-1050 mm)	†4" M	22.5"-42.5" (600-1050 mm)	**9 psi (0,62 bar)	20 ft. (6.1 M)	25 psi (1,7 bar)	150 lbs (68 kg)	52" (1320 mm)	22" (560 mm)	1/4" & 1/2"	1/2" (4)
*314488	24" - 48" (600-1200 mm)	†4" M	20"-50" (510-1270 mm)	**10 psi (0,7 bar)	23 ft. (7 M)	22 psi (1,5 bar)	150 lbs (68 kg)	68" (1730 mm)	20" (485 mm)	1/2"	5/8" (3)
*316488	24" - 48" (600-1200 mm)	†6" M	20"-50" (510-1270 mm)	**10 psi (0,7 bar)	23 ft. (7 M)	22 psi (1,5 bar)	153 lbs (69.5 kg)	68" (1730 mm)	20" (485 mm)	1/2"	5/8" (3)
*314608	30" - 60" (700-1500 mm)	†4" M	26.5"-60.5" (700-1537 mm)	**10 psi (0,7 bar)	23 ft. (7 M)	22 psi (1,5 bar)	210 lbs (95.4 kg)	102" (2590 mm)	26" (661 mm)	1/2" (2)	5/8" (3)
*414608	40" - 60" (1000-1500 mm)	†4" M	38"-60" (965-1537 mm)	**8.7 psi (0,62 bar)	20 ft. (6.1 M)	25 psi (1,7 bar)	350 lbs (159 kg)	73" (1855 mm)	37.25" (946 mm)	1/4" & 1/2"	1/2" (4)
*314728	48" - 72" (1200-1800 mm)	†4" M	44"-72.25" (1118-1835 mm)	6 psi (0,41 bar)	14 ft. (4.3 M)	12 psi (0,83 bar)	310 lbs (141 kg)	100" (2540 mm)	43" (1092 mm)	1/2" (2)	5/8" (3)
*314968	54" - 96" (1400-2400 mm)	†4" M	54"-96.25" (1400-2450 mm)	6 psi (0,41 bar)	14 ft. (4.3 M)	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	50" (1270 mm)	1/2" (2)	5/8" (3)

New Model with 6" bypass!

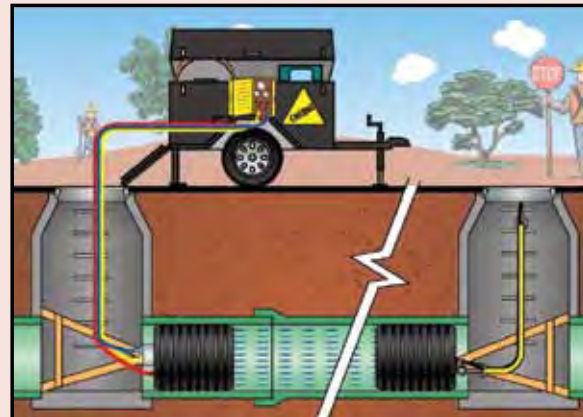
\*Rupture Disc | †Flexible Bypass | \*\*See chart on page 10 for backpressure ratings by diameter



**Bypass Pumping**



**Sewer Air Test**



**Air Pressure Ratings**

Plug Size	PIPE DIAMETER									
	15"	18"	21"	24"	30"	36"	42"	48"	54"	60"
15"-30"	17 psi (1,2 bar)	13 psi (0,9 bar)	13 psi (0,9 bar)	11 psi (0,76 bar)	11 psi (0,76 bar)					
24"-42"				15 psi (1,0 bar)	13 psi (0,9 bar)	11 psi (0,76 bar)	9 psi (0,62 bar)			
24"-48"				15 psi (1,0 bar)	13 psi (0,9 bar)	12 psi (0,83 bar)	11 psi (0,76 bar)	10 psi (0,7 bar)		
30"-60"					15 psi (1,0 bar)	15 psi (1,0 bar)	15 psi (1,0 bar)	13 psi (0,9 bar)	12 psi (0,83 bar)	10 psi (0,7 bar)
40"-60"							15 psi (1,0 bar)	13 psi (0,9 bar)	11 psi (0,76 bar)	8,7 psi (0,6 bar)

**Head Pressure Ratings**

Plug Size	PIPE DIAMETER									
	15"	18"	21"	24"	30"	36"	42"	48"	54"	60"
15"-30"	40 ft. (12 M)	30 ft. (9.1 M)	30 ft. (9.1 M)	25 ft. (7.6 M)	25 ft. (7.6 M)					
24"-42"				35 ft. (11 M)	30 ft. (9.1 M)	25 ft. (7.6 M)	20 ft. (6.1 M)			
24"- 48"				35 ft. (11 M)	30 ft. (9.1 M)	28 ft. (8.4 M)	25 ft. (7.6 M)	23 ft. (7 M)		
30"-60"					35 ft. (11 M)	35 ft. (11 M)	35 ft. (11 M)	30 ft. (9.1 M)	28 ft. (8.4 M)	23 ft. (7 M)
40"-60"							35 ft. (11 M)	30 ft. (9.1 M)	25 ft. (7.6 M)	20 ft. (6.1 M)

**Rupture Disc Features:**

**Increases Plug Life**

- Disc ruptures 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

**Rupture disc now field repairable!**



**Part Number 220018**  
External Mount  
Left Hand Female Threads  
For Plugs listed below:  
Plug# 314728  
Plug# 314968

**Part Number 240058**  
External Mount  
Left Hand Female Threads  
For Plugs listed below:  
Plug# 314608

**Part Number 220008**  
Internal Mount  
Left Hand Male Threads  
For Plugs listed below:  
Plug# 310728  
Plug# 310968  
Plug# 317728  
Plug# 317968

**Part Number 240008**  
Internal Mount  
Left Hand Male Threads  
For Plugs listed below:  
Plug# 310488  
Plug# 310608  
Plug# 317488  
Plug# 317608  
Plug# 410308  
Plug# 410428  
Plug# 410608  
Plug# 417308  
Plug# 417428  
Plug# 417608

**Part Number 240068**  
External Mount  
Left Hand Male Threads  
For Plugs listed below:  
Plug# 314488  
Plug# 316488  
Plug# 412308  
Plug# 414308  
Plug# 414428  
Plug# 414608

# 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.



90° Bend  
**Protective Sleeve Installed**  
Installed sleeve is bendable to 90°

**Protective Sleeves**

Part Number	Sleeve Size
300988	12"-24"
300998	15"-30"
301408	20"-40"
301018	24"-42"
301028	24"-48"
301058	30"-60"
301038	40"-60"
301048	48"-72"

**Air-Loc Plug with Sleeve Installed**

Part Number	Size
817308	15"-30"
717408	20"-40"
817428	24"-42"
717488	24"-48"
717608	30"-60"
817608	40"-60"
717728	48"-72"

**Test-Ball with Sleeve Installed**

Part Number	Size
700248	12"-24"
810308	15"-30"
710408	20"-40"
810428	24"-42"
710488	24"-48"
710608	30"-60"
810608	40"-60"
710728	48"-72"

**Muni-Ball with Sleeve Installed**

Part Number	Size	Bypass Diameter (NPT)
702248	12"-24"	2" M bypass
812308	15"-30"	2.5" M bypass
814308	15"-30"	4" M bypass
712408	20"-40"	2" M bypass
714408	20"-40"	4" M bypass
716408	20"-40"	6" M bypass
812428	24"-42"	4" M bypass
714488	24"-48"	4" M bypass
716488	24"-48"	6" M bypass
714608	30"-60"	4" M bypass
814608	40"-60"	4" M bypass
714728	48"-72"	4" M bypass

# Remo®

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.

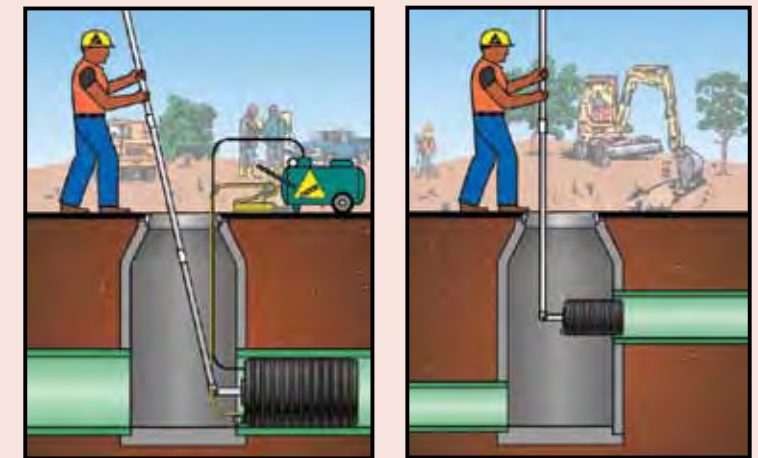


**Remo® Plug Features:**

- 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:**

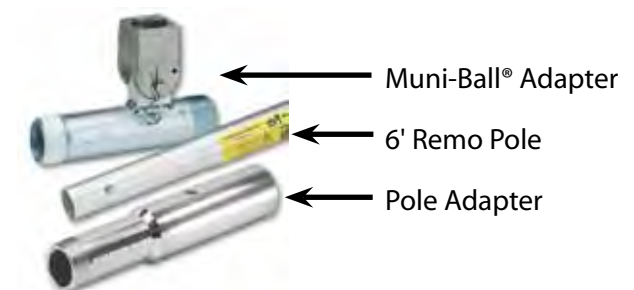
- Consists of 6' lightweight aluminum poles with push-button construction
- Designed for plugs up to 30 lbs used in manhole depths of up to 20'
- 1/6th the weight of iron pipe
- Pole system requires Remo® pole adapter



\*Requires pole adapter  
\*\*When added strength is needed, iron pipe is recommended

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / 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)	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)	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 (9.1M)	27 lbs (12.25 kg)	34" (863 mm)	10.5" (267 mm)	1/4" (2)	3/8" (1)

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





# Big Mouth® Flow-Through

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

**The Original Big-Mouth® Plug:**

- Large male NPT threaded bypass
- Equipped with removable 3/8" eye bolt for lifting and lowering with a poly-lift line
- Removable tire valve allows for easy replacement
- Lightweight aluminum bypass

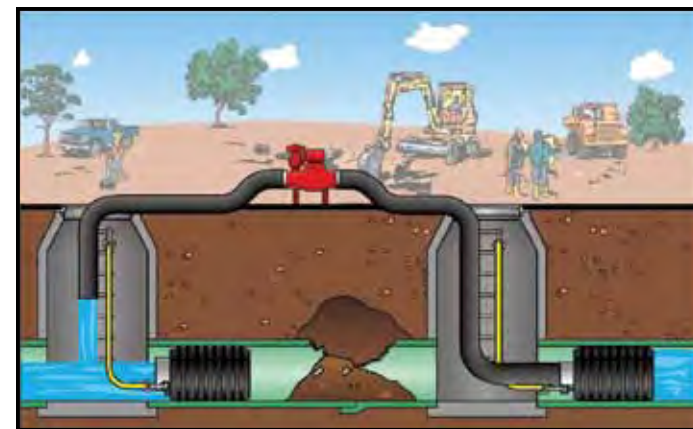


**Multi-Size Big-Mouth® Plug with Interchangeable Flanges:**

- Multi-size offers great expansion range
- Lightweight aluminum bypass
- Feature interchangeable bypass flange, allowing the same plug to be used for different applications
- Removable tire valve allows for easy replacement

Part Number	Nominal Size	Bypass Diameter
<b>Big Mouth Flange Kits</b>		
049068	14" - 21"	6" M
049088	14" - 21"	8" M
049188	18" - 24"	8" M
049208	18" - 24"	10" M

**Bypass Pumping**



**Gravity Bypassing**



# Big Mouth® Flow-Through

Part Number	Nominal Size	Bypass Diameter (NPT)	Range of Use	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)	7 lbs (3.2 kg)	13.25" (337 mm)	5.38" (137 mm)	1/4" (1)	3/8" (1)
374068	6" - 10" (150-250 mm)	4" M	5.75"-10.25" (146-260 mm)	10 psi (0,69 bar)	23 ft. (10 M)	15 lbs (6.8 kg)	24.5" (622 mm)	5.65" (146 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)	10 lbs (4.5 kg)	16" (406 mm)	7.5" (191 mm)	1/4" (1)	3/8" (1)
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)	8.8 lbs (4 kg)	14.88" (378 mm)	6.94" (176 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)	22 lbs (10 kg)	26" (660 mm)	7.75" (199 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)	22 lbs (10 kg)	26" (660 mm)	6.76" (173 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)	17 lbs (7.7 kg)	20" (508 mm)	9.13" (232 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)	15.7 lbs (7.12 kg)	17.25" (438 mm)	8.81" (224 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)	21 lbs (9.5 kg)	20" (508 mm)	11.13" (283 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)	20 lbs (9 kg)	17.88" (454 mm)	10.25" (260 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)	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)	45 lbs (21 kg)	28" (711 mm)	11" (279 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)	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)	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)	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)	42 lbs (19 kg)	20" (508 mm)	21.13" (537 mm)	1/4" (1)	3/8" (1)

Part Number	Nominal Size	Bypass Diameter (NPT)	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
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**Multi-Size Big Mouth Plugs**

376148	14" - 21" (375-525 mm)	6" M	13.6"-21.25" (345-540 mm)	10 psi (0,69 bar)	23 ft. (10 M)	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)	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)	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)	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)	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)	90 lbs (41 kg)	34" (864 mm)	16" (406 mm)	1/8" (1)	1/2" (2)

OD – Outside Diameter Straight Tube



## Factory-Replaceable Sleeve Muni-Ball®

Factory Replaceable Sleeve Muni-Ball® Plugs are designed to block or bypass sewage flow as well as conduct low pressure sewer air tests. This plug can be used for both line acceptance testing and leak location testing. The sleeve on this plug can be repaired at Cherne for less than the cost of a new plug. Made of natural rubber reinforced with polyester cording.

### Features:

- Flexible to 90° by removing inflator valve
- Aluminum castings and ductile iron rings protect the plug during installation and removal
- Durability makes this plug ideal for rental distributors and frequent users
- Works great with Cherne's poly-lift line (page 63) and sewer air testing conversion kits (page 43)



Part Number	Nominal Size	Bypass Diameter (NPT)	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
265110	6" - 12" (150-300 mm)	2" F	5.7"-12.6" (145-320 mm)	**13 psi (0,9 bar)	30 ft. (9 M)	23 lbs (10,4 kg)	34" (864 mm)	5.4" (136 mm)	1/8" & 1/8"	3/8" (2)
265138	12" - 21" (300-525 mm)	2.5" M	10.75"-21.5" (273-546 mm)	**13 psi (0,9 bar)	30 ft. (9 M)	53 lbs (24,4 kg)	34" (864 mm)	10.5" (263 mm)	1/4" & 1/2"	1/2" (2)
265144	16" - 24" (400-600 mm)	4" M	14.75"-25" (375-635 mm)	**13 psi (0,9 bar)	30 ft. (9 M)	93 lbs (42 kg)	37" (940 mm)	14.5" (362 mm)	1/4" & 1/2"	1/2" (2)
265152	24" - 36" (600-900 mm)	4" M	21.25"-37.5" (540-953 mm)	**11 psi (0,76 bar)	25 ft. (7,6 M)	175 lbs (79 kg)	49" (1245 mm)	21" (525 mm)	1/4" & 1/2"	1/2" (2)

\*\*See chart below for greater pressure at lower diameters

Pressure Ratings for Factory-Replaceable Sleeve Muni-Ball® Plug																				
Part Number	Plug Size	Actual Pipe Inside Diameter																		
		6"	8"	10"	12"	12" DI	15"	18"	21"	24"	24" DI	30"	36"	36" DI						
<b>Air Pressure Ratings (PSI)</b>																				
265110	6" - 12"	22 (1,5 bar)	20 (1,4 bar)	17 (1,2 bar)	13 (0,9 bar)	13 (0,9 bar)	<i>DI = Ductile iron, all classes</i>													
265138	12" - 21"				22 (1,5 bar)	22 (1,5 bar)								20 (1,4 bar)	17 (1,2 bar)	13 (0,9 bar)				
265144	16" - 24"													22 (1,5 bar)	20 (1,4 bar)	17 (1,2 bar)	17 (1,2 bar)	13 (0,9 bar)		
265152	24" - 36"																22 (1,5 bar)	20 (1,4 bar)	20 (1,4 bar)	15 (1,0 bar)
<b>Head Pressure Ratings (Feet of Head)</b>																				
265110	6" - 12"	50 (15 M)	45 (14 M)	40 (12 M)	30 (9 M)	30 (9 M)														
265138	12" - 21"				50 (15 M)	50 (15 M)	45 (14 M)	40 (12 M)	30 (9 M)											
265144	16" - 24"						50 (15 M)	45 (14 M)	40 (12 M)	40 (12 M)	30 (9 M)									
265152	24" - 36"									50 (15 M)	50 (15 M)	45 (14 M)	35 (11 M)	25 (7,6 M)						

## 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



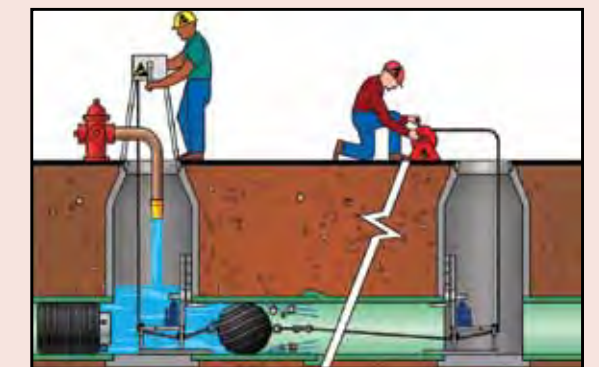
### Jet-Ball® Application



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	Range of Use	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)	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)	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)	14.75" (375 mm)	10.75" (273 mm)	1/4" (1)	3/8" (2)



See Winches and Rollers on page 46

# Air-Loc® Leak Locator

Air-Loc® leak locator plugs are designed for both low-pressure sewer line acceptance tests as well as leak location testing. Air-Loc® plugs can also be used to block flow by simply plugging the fill and read-back ports.

**Features:**

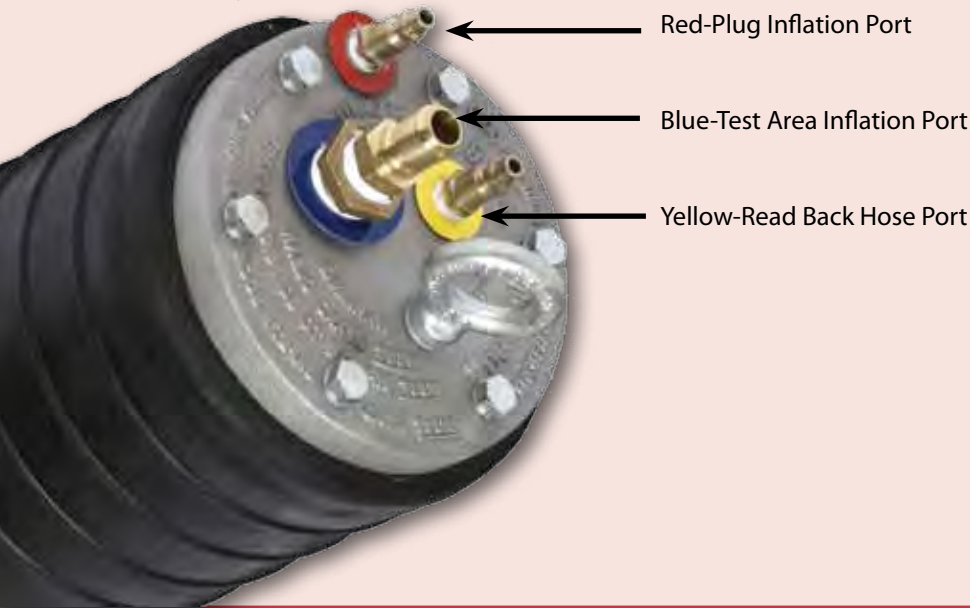
- Eye bolts on both ends
- Easy-to-use quick-disconnect hose connections
- Rupture discs available
- Cross-biased cording on sizes 15"-30", 24"-42", 24"-48" and 40"-60"

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

- Color-coded inflation ports
- Removable air fittings
- Flexible internal hoses
- Field replaceable sleeves



**Front Plug**

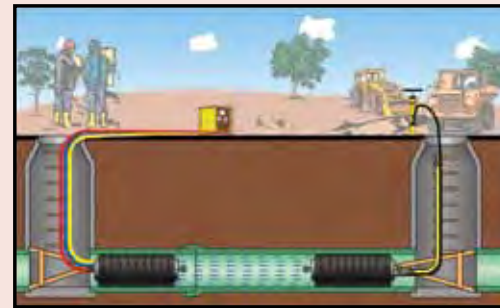


Red-Plug Inflation Port

Blue-Test Area Inflation Port

Yellow-Read Back Hose Port

**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® Leak Locator

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread	Chain / Eye bolts
<b>Front Plug</b>									
267068	6" - 10" (150-250 mm)	5.5"-10.5" (140-260 mm)	13 psi (0,9 bar)	30 ft. (9 M)	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)	13 psi (0,9 bar)	30 ft. (9 M)	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)	13 psi (0,9 bar)	30 ft. (9 M)	25 psi (1,7 bar)	27 lbs (12,2 kg)	31.5" (800 mm)	10.25" (260 MM)	1/4" (1) 7/16" (2)
*417308	15" - 30" (375-750 mm)	14.5"-30.5" (368-775 mm)	**11 psi (0,76 bar)	25 ft. (7,6 M)	25 psi (1,7 bar)	53 lbs (24 kg)	51" (1289 mm)	14" (356 mm)	1/4" & 1/2" 3/8" (2)
*317408	20" - 40" (500-1000 mm)	19"-40" (475-1000 mm)	8,7 psi (0,6 bar)	20 ft. (6,1 M)	22 psi (1,5 bar)	95 lbs (43 kg)	46.25" (1175 mm)	18.5" (470 mm)	1/4" & 1/2" 1/2" (2)
*417428	24" - 42" (600-1050 mm)	22.5"-42.5" (570-1080 mm)	**9 psi (0,62 bar)	20 ft. (6,1 M)	25 psi (1,7 bar)	100 lbs (46 kg)	52" (1320 mm)	22" (560 mm)	1/4" & 1/2" 3/8" (2)
*317488	24" - 48" (600-1200 mm)	20.5"-50" (521-1270 mm)	10 psi (0,7 bar)	23 ft. (7 M)	22 psi (2,5 bar)	125 lbs (57 kg)	74.5" (1892 mm)	20" (508 mm)	1/4" & 1/2" 5/8" (3)
*317608	30" - 60" (700-1525 mm)	26.5"-60" (675-1525 mm)	10 psi (0,7 bar)	23 ft. (7 M)	22 psi (2,5 bar)	210 lbs (95,4 kg)	102" (2591 mm)	26" (661 mm)	1/2" (2) 5/8" (3)
*417608	40" - 60" (1000-1525 mm)	38"-60" (965-1525 mm)	**8,7 psi (0,6 bar)	20 ft. (6,1 M)	25 psi (1,7 bar)	235 lbs (106 kg)	73" (1855 mm)	37.25" (946 mm)	1/4" & 1/2" 3/8" (2)
*317728	48" - 72" (1200-1800 mm)	44"-72.25" (1118-1835 mm)	6 psi (0,41 bar)	14 ft. (4,3 M)	12 psi (0,83 bar)	290 lbs (132 kg)	100" (2540 mm)	43" (1092 mm)	1/2" (2) 5/8" (3)
*317968	54" - 96" (1400-2400 mm)	54"-96.25" (1400-2450 mm)	6 psi (0,41 bar)	14 ft. (4,3 M)	11 psi (0,75 bar)	500 lbs (228 kg)	128" (3200 mm)	50" (1270 mm)	1/2" (2) 5/8" (3)
<b>Back Plug</b>									
275078	6" - 10" (150-250 mm)	5.5"-10.5" (140-2650 mm)	13 psi (0,9 bar)	30 ft. (9 M)	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)	13 psi (0,9 bar)	30 ft. (9 M)	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)	13 psi (0,9 bar)	30 ft. (9 M)	25 psi (1,7 bar)	23 lbs (10,3 kg)	31,5" (800 mm)	10,25" (260 MM)	1/4" (1) 3/8" (2)

\*With Rupture Disc

\*\*Consult table below for greater pressures at smaller diameters

Pressure Ratings for Air-Loc® Leak Locator Plug											
Actual Pipe Inside Diameter											
Part Number	Plug Size	15"	18"	21"	24"	30"	36"	42"	48"	54"	60"
Air Pressure Ratings (PSI)											
417308	15" - 30"	17 (1,2 bar)	13 (0,9 bar)	13 (0,9 bar)	11 (0,76 bar)	11 (0,76 bar)					
417428	24" - 42"				15 (1,0 bar)	13 (0,9 bar)	11 (0,76 bar)	9 (0,62 bar)			
417608	40" - 60"							15 (1,0 bar)	13 (0,9 bar)	11 (0,76 bar)	8,7 (0,6 bar)
Head Pressure Ratings (Feet of Head)											
417308	15" - 30"	40 (12 M)	30 (9 M)	30 (9 M)	25 (7,6 M)	25 (7,6 M)					
417428	24" - 42"				35 (11 M)	30 (9 M)	25 (7,6 M)	20 (6,1 M)			
417608	40" - 60"							35 (11 M)	30 (9 M)	25 (7,6 M)	20 (6,1 M)



## Long Test-Ball® • MS2® Test-Ball®

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.

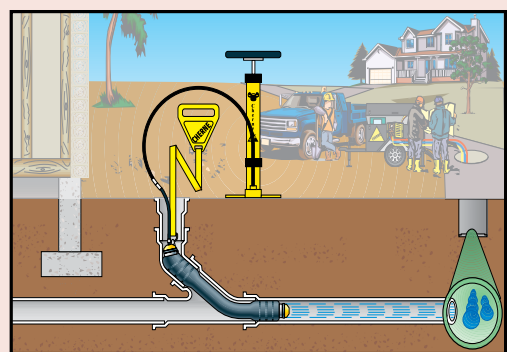
### Long Test-Ball® Plug ("The Original")

#### Features:

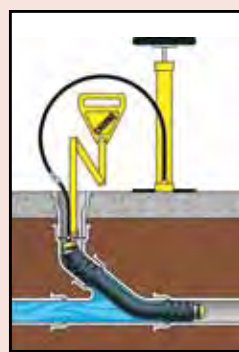
- Ring and chain assembly keeps plug from entering line during deflation
- Includes 3' extension hose

### 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



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

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter
<b>Long Test-Ball</b>							
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)
271055	5" (125 mm)	4.5"-5.25" (114-133 mm)	13 psi (0,9 bar)	30 ft. (9,1 M)	30 psi (2,1 bar)	4 lbs (1,81 kg)	27.75" (705 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)
<b>MS2 Long Test-Ball</b>							
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 (1,76 kg)	26.62" (676 mm)

## Clean-Seal®

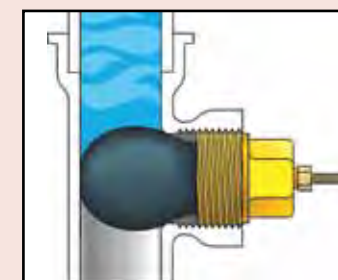
Designed for stack testing of drain, waste, and vent plumbing systems, Clean-Seal® plugs thread into a standard test tee. The bladder is inflated and then water is introduced into the pipe. Upon test completion, deflate the bladder; water travels down the pipe, eliminating test water backsplash.

#### Features:

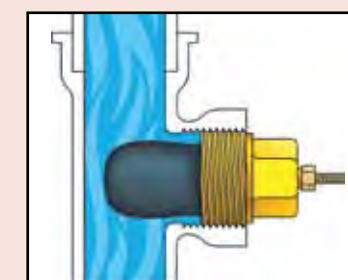
- Works in both plastic and cast-iron test tees
- Natural rubber body provides a leak-free seal
- High-impact ABS threads for maximum durability
- Removable/replaceable tire inflation valve fitting



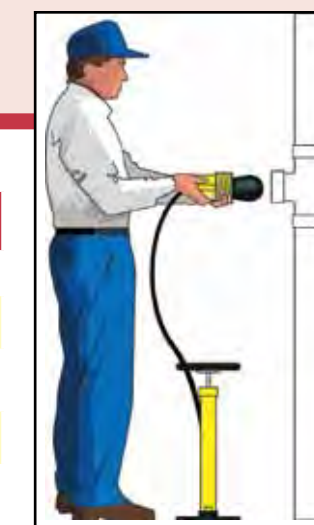
### Clean-Seal® Application



Inflated (test)



Deflated (test release)



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

Part Number	Nominal Size	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
<b>Clean-Seal</b>							
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)	2.38" (60 mm)
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)	3.5" (89 mm)
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)	4.5" (115 mm)
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)	6.63" (168 mm)



# Pillow Plugs

Cherne's Pillow-Style Test-Ball® and Muni-Ball® plugs are great for blocking sewer flow and can also be used 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 with the attached tether bars, and will work in all types of pipe, including ductile iron sizes.

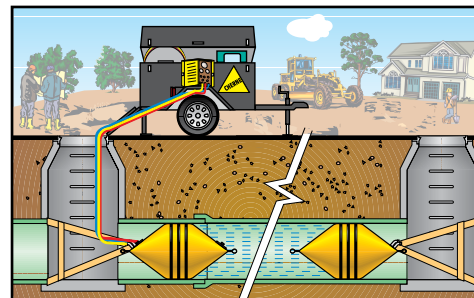
**Features:**

- 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

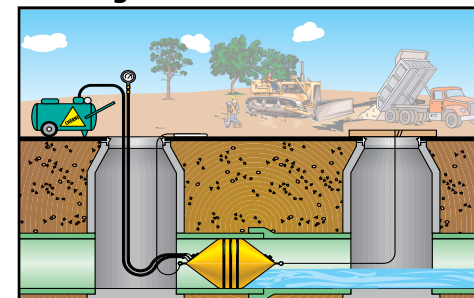


Part Number	Nominal Size	Bypass Diameter (NPT)	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
<b>Pillow-Style Muni-Ball</b>									
266027	30" (750 mm)	2 1/2" F	29.4"-31.25" (747-794 mm)	11 psi (0,76 bar)	25 ft. (7.6 M)	18 psi (1,24 bar)	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)	13 psi (0,9 bar)	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)	13 psi (0,9 bar)	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)	12 psi (0,83 bar)	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)	12 psi (0,83 bar)	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)	10 psi (0,7 bar)	105 lbs (47 kg)	95" (2413 mm)	15" (381 mm) 1/2" (1)
266086	60" (1600 mm)	2 1/2" F	58.8"-62" (1494-1575 mm)	5.6 psi (0,4 bar)	13 ft. (4 M)	10 psi (0,7 bar)	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)	8 psi (0,55 bar)	130 lbs (58.9 kg)	126" (3200 mm)	15" (381 mm) 1/2" (1)

**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® plug are also available. Always block plugs when conducting air tests.

# Pillow Plugs

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Inflation Pressure	Product Weight	Deflated Length	Deflated Diameter	Inflation Thread
<b>Pillow-Style Test-Ball</b>								
277108	*15" (375 mm)	14.7"-15.5" (373-394 mm)	15 psi (1 bar)	35 ft. (11 M)	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)	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)	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)	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)	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 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)	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)	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)	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)	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)	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)	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)	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)	70 lbs (31.8 kg)	126" (3200 mm)	15" (381 mm)	1/2" (1)
<b>Rubber Pillow Plug</b>								
301118	54" - 72" (1400-1800 mm)	53.5"-72.25" (1360-1842 mm)	4.5 psi (0,3 bar)	10 ft. (3.2 M)	350 lbs (160 kg)	174" (4420 mm)	21" (533 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® plug are also available.



54"-72" Multi-Size Rubber Test-Ball® Plug

**Pneumatic Plugs**

**Pneumatic Plugs**



# Mechanical Plugs®



### 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	32
Test Caps • Test Kap	33



# Original Gripper®

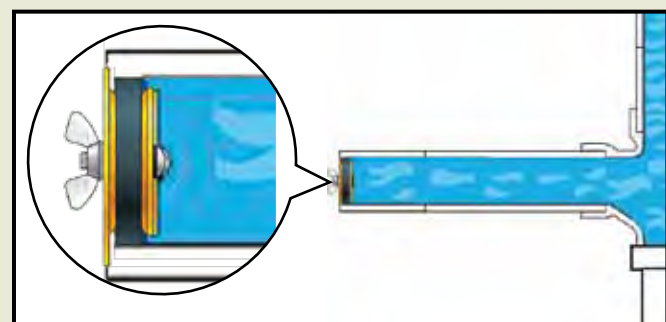
Cherne's Gripper plugs can be used in a variety of applications including DWV (drain, waste and vent) testing and stack testing. End-of-Pipe design won't fall in, whereas the Inside-of-Pipe design allows you to locate the plug inside the pipe as far as you need. Time tested, the Gripper® remains one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

### Original Gripper® Plug Features:

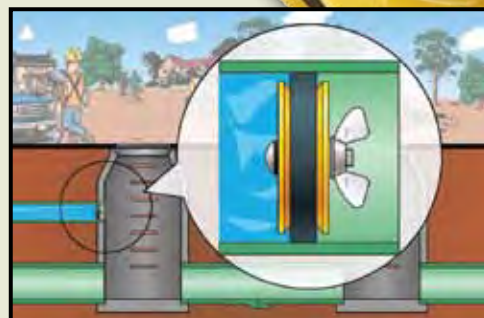
- Ideal for sewer testing and long-term applications
- Made with glass-reinforced ABS plastic
- End-of-pipe design seals only at the end of a pipe
- Inside-of-pipe design seals inside pipe as far as needed

### 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

# 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:

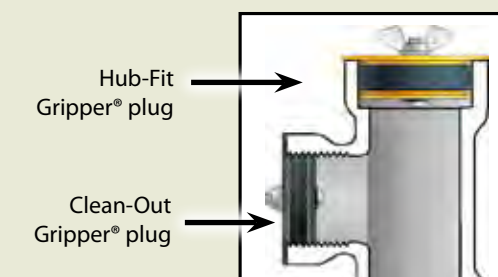
- Guaranteed to seal any damaged threads
- Made with glass-reinforced ABS plastic
- Black color blends well with cast-iron pipe
- Stainless steel hardware
- NPT sizes, including hard to find 3½"
- Natural rubber threaded o-ring for positive seal



Problem



Solution



Hub-Fit Gripper® plug

Clean-Out Gripper® plug

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight
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#### End-of-Pipe Gripper

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

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)

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight
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#### Hub-Fit Gripper

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

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®

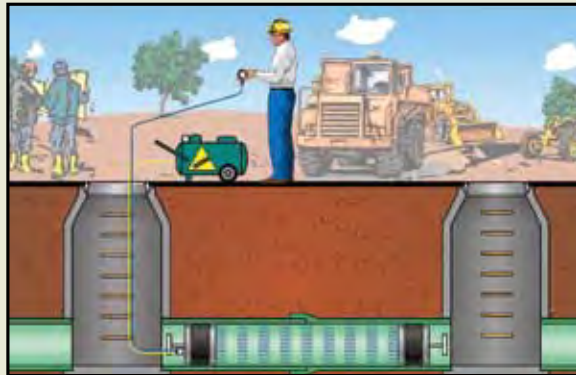
### T-Handle Aluminum Gripper® Plug Features:

- 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 T-handle
- Chemical resistant neoprene o-ring

### Line Acceptance Test



# Iron Grip®

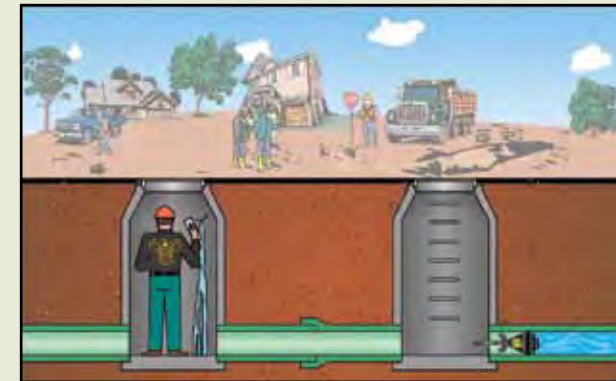
### Iron Grip® Bypass Mechanical Plug Features:

- 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
- Neoprene rubber o-ring

### Blocking Flow



Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight	Bypass Diameter (NPT)
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#### T-Handle Gripper with Bypass

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)	1/4" M
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)	3/4" M
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)	3/4" M
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)	3/4" M
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)	3/4" M
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)	3/4" M

#### T-Handle Gripper

272892	6" (150 mm)	5.7"-6.3" (144-160 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	6 lbs (2.7 kg)	
272906	8" (200 mm)	7.7"-8.3" (196-211 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	9 lbs (4.1 kg)	
272914	10" (250 mm)	9.8"-10.3" (248-262 mm)	17 psi (1,2 bar)	40 ft. (12 M)	9.7" (247 mm)	12 lbs (5.4 kg)	
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)	15.5 lbs (7 kg)	
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)	23 lbs (10.4 kg)	
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)	30 lbs (13.6 kg)	

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight	Bypass Diameter (NPT)
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#### Iron Grip

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)	3/8" M
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)	1/2" M
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)	1/2" M
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)	1/2" M
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)	1/2" M
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)	1/2" M
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)	1" M

Econ-O-Grip® • Petro Econ-O-Grip®

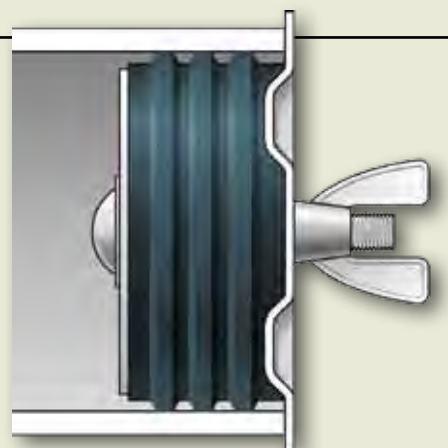


**Econ-O-Grip® Plug Features:**

- 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



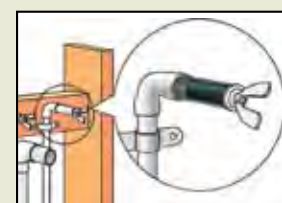
Kwik 'N Sure® • Sure-Grip®

**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



**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

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight
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**Econo-O-Grip**

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 Econo-O-Grip**

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)

Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight
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**Sure-Grip**

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**

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)



# Monitor-Well

### Monitor-Well Locking Plug Features:

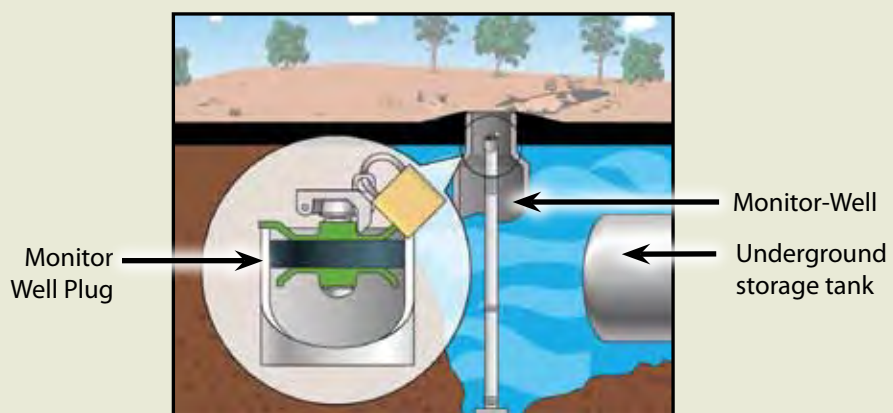
- Designed to seal monitor wells
- Meets all EPA requirements for locking plugs
- Sized to seal Schedule 40 piping
- 2" and 4" sizes can also seal Schedule 5 pipe
- Works with Cherne's solid brass padlock or #2 Masterlock® padlock

### 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



Part Number	Nominal Size	Range of Use	Maximum Back Pressure	Length	Product Weight
<b>Monitor-Well</b>					
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	Cherne padlock. (All padlocks keyed alike.)				



# Test Caps • Test Kap

### A) Push-Cap™ Test Cap

- Ideal for protecting open pipe
- Slips over DWV pipe or inside the fitting
- Does not require solvent cement
- Schedule 40 ABS and PVC DWV pipe

### B) End-Cap™ Test Cap

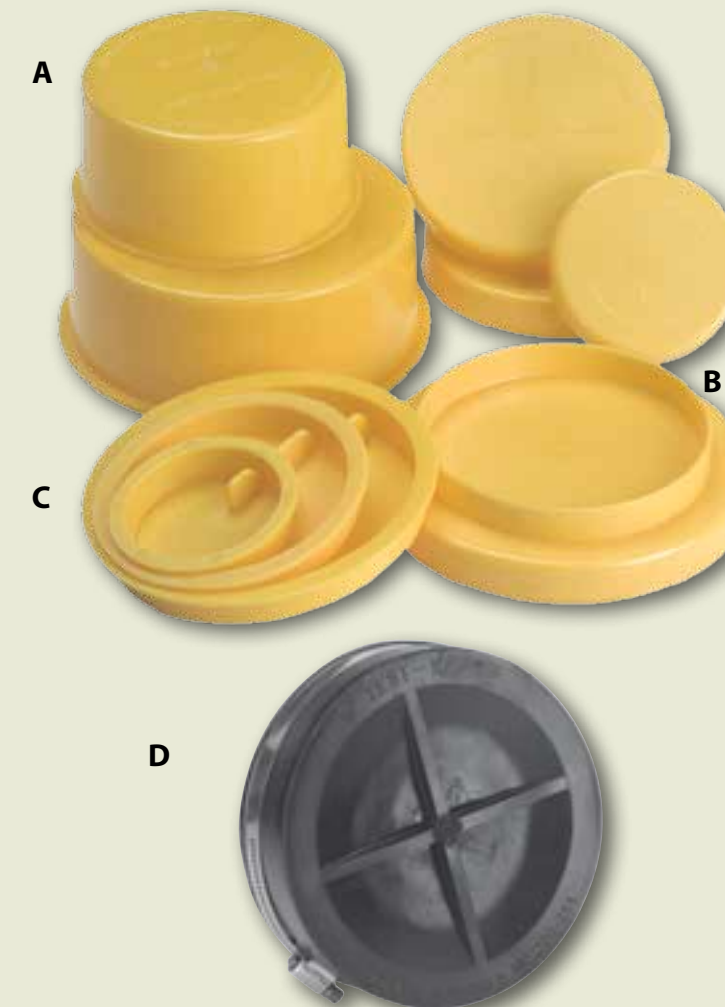
- Deep design provides extra sealing strength
- Perfect for DWV water or air tests on Schedule 40 ABS and PVC DWV pipe

### C) Knock-Out™ Test Cap

- Deep design provides stronger, leak-free connections
- For use with Schedule 40 ABS and PVC DWV pipe

### D) Test-Kap™

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

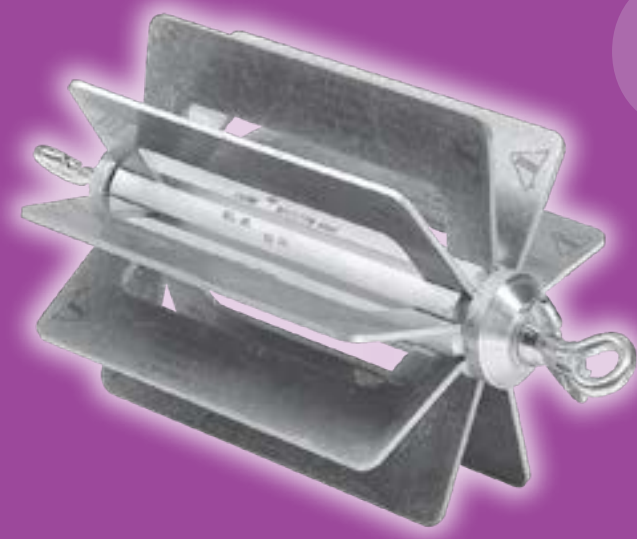


Part Number	Nominal Size	Maximum Back Pressure
<b>A) Push-Cap Test Cap</b>		
228108	1.5"	4.3 psi 10 ft.
228208	2"	4.3 psi 10 ft.
228308	3"	4.3 psi 10 ft.
228408	4"	4.3 psi 10 ft.
<b>B) End-Cap Test Cap</b>		
238108	1.5"	17 psi 40 ft.
238128	1.5" - 2"	17 psi 40 ft.
238208	2"	17 psi 40 ft.
238308	3"	17 psi 40 ft.
238348	3" - 4"	17 psi 40 ft.
238408	4"	17 psi 40 ft.

Part Number	Nominal Size	Maximum Back Pressure
<b>C) Knock-Out Insert Test Cap</b>		
238701	1.5"	4.3 psi 10 ft.
238702	2"	4.3 psi 10 ft.
238703	3"	4.3 psi 10 ft.
238704	4"	4.3 psi 10 ft.
<b>D) Test-Kap</b>		
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



<b>Deflection Gauges</b>	
Deflection Gauges	36-38
Proving Rings	39





# Deflection Gauges

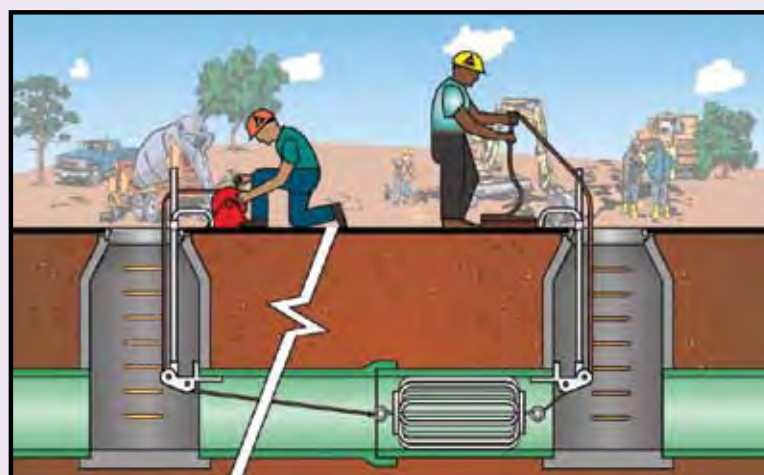
## Deflection Gauges

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.

Both steel and aluminum gauges utilize a nine arm design to ensure the pipe is tested accurately. This design also allows gravel and debris to easily pass through. Other gauges can get hung up – causing a deflection test to fail, even though the pipe is within tolerance. Sized to .01", both deflection gauge styles meet ASTM requirements.



### Deflection Test



Nominal Size	Pipe	Average ID	Base ID*	5% Deflection	7.5% Deflection
<b>ASTM Specification D3034 (4" - 15")</b>					
4"	SDR 35	3.965	3.895	3.70	3.60
6"	SDR 26	5.764	5.612	5.33	5.19
6"	SDR 35	5.893	5.742	5.46	5.31
8"	SDR 26	7.715	7.488	7.11	6.93
8"	SDR 35	7.891	7.665	7.28	7.09
10"	SDR 26	9.644	9.342	8.87	8.64
10"	SDR 35	9.864	9.563	9.08	8.84
12"	SDR 26	11.480	11.102	10.55	10.27
12"	SDR 35	11.737	11.361	10.79	10.51
15"	SDR 26	14.053	13.575	12.90	12.56
15"	SDR 35	14.374	13.898	13.20	12.86

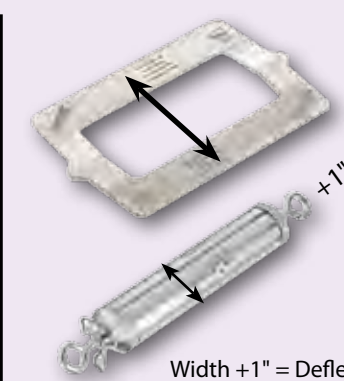
Nominal Size	Pipe	Average ID	Base ID*	5% Deflection	7.5% Deflection
<b>ASTM Specification F679 (18" - 27")</b>					
18"	SDR 26	17.177	16.586	15.76	15.34
18"	SDR 35	17.564	16.976	16.13	15.70
21"	SDR 26	20.249	19.545	18.57	18.08
21"	SDR 35	20.707	20.004	19.00	18.50
24"	SDR 26	22.781	21.964	20.87	20.32
24"	SDR 35	23.296	22.481	21.36	20.79
27"	SDR 26	25.674	24.744	23.51	22.89
27"	SDR 35	26.258	25.327	24.06	23.43
30"	SDR 35	29.306	28.673	26.29	26.52

\*Base Inside Diameter (Base ID) - Allows for out of roundness and wall thickness tolerances as defined by ASTM standards.

# Aluminum 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



**Field Verification:**  
Cherne's 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 to the right and measure the width. Add one inch to the mandrel and you have the outside dimension of the gauge. Using this method simplifies the inspector's job of verifying sizes on deflection gauges.

Part Number	Nominal Size	Pipe	Deflection	Product Weight
<b>Aluminum Fin Sets</b>				
285688	6", 8", 10"	SDR 26	5%	18 lbs
285005	6", 8", 10"	SDR 35	5%	18 lbs
285013	6", 8", 10"	SDR 35	7.5%	18 lbs
285698	8", 10", 12"	SDR 26	5%	19 lbs
285021	8", 10", 12"	SDR 35	5%	19 lbs
285048	8", 10", 12"	SDR 35	7.5%	19 lbs

Nominal Size	Pipe	5% Deflection	7.5% Deflection	Product Weight
<b>Deflection Gauge Part Numbers</b>				
4"	SDR 35	285056	285137	1.5 lbs
6"	SDR 26	285638	Custom	2 lbs
6"	SDR 35	285072	285153	2 lbs
8"	SDR 26	285648	Custom	2.5 lbs
8"	SDR 35	285080	285161	2.5 lbs
10"	SDR 26	285658	Custom	3 lbs
10"	SDR 35	285099	285188	3 lbs
12"	SDR 26	285668	Custom	4 lbs
12"	SDR 35	285102	285196	4 lbs
15"	SDR 26	285678	Custom	5 lbs
15"	SDR 35	285110	285218	5 lbs
18"	SDR 35	285536	285560	8 lbs
21"	SDR 35	285544	285579	10 lbs
24"	SDR 35	285552	285587	11 lbs
27"	SDR 35	285595	285609	12 lbs

Larger and custom sizes are available.



**Air-Loc® Line Stringer**  
 • Strings lines between manholes quickly  
 • Use lines to pull deflection gauges  
 See page 52



## Steel Deflection Gauges

### 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



## 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 for 5"-18" also available



Nominal Size	Pipe	5% Deflection	7.5% Deflection	Product Weight
<b>Deflection Gauge Part Numbers</b>				
6"	SDR 26	286008	286128	5 lbs
6"	SDR 35	286068	286188	5 lbs
8"	SDR 26	286018	286138	7 lbs
8"	SDR 35	286078	286198	7 lbs
10"	SDR 26	286028	286148	8 lbs
10"	SDR 35	286088	286208	8 lbs
12"	SDR 26	286038	286158	9 lbs
12"	SDR 35	286098	286218	9 lbs
15"	SDR 26	286048	286168	13.5 lbs
15"	SDR 35	286108	286228	13.5 lbs
18"	SDR 35	286118	286238	15 lbs
18"	SDR 26	286058	N/A	18 lbs
21"	SDR 35	286278	N/A	18 lbs
24"	SDR 35	286288	N/A	21 lbs

Larger and custom sizes are available.

Part Number	Nominal Size	Pipe	Deflection	Product Weight
<b>Proving Rings</b>				
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

Air-Loc® Pressure Testing	42-44
Air-Loc® Pressure Testing Hoses	45
Manhole Jack • Roller • Winch	46
Air-Loc® Pressure Testing	47
Air-Loc® Manhole Testers	48-49
Air-Loc® Vacuum Equipment	50-51
Air-Loc® Stringer • Ventilators	52
Air-Loc® Smoke Testing	53
Air-Loc® Joint Testers	54
Aqua-Loc® Hydrostatic Test Pumps	55-57



# Testing Equipment





Line Acceptance Kit  
Now with Storage  
Container!

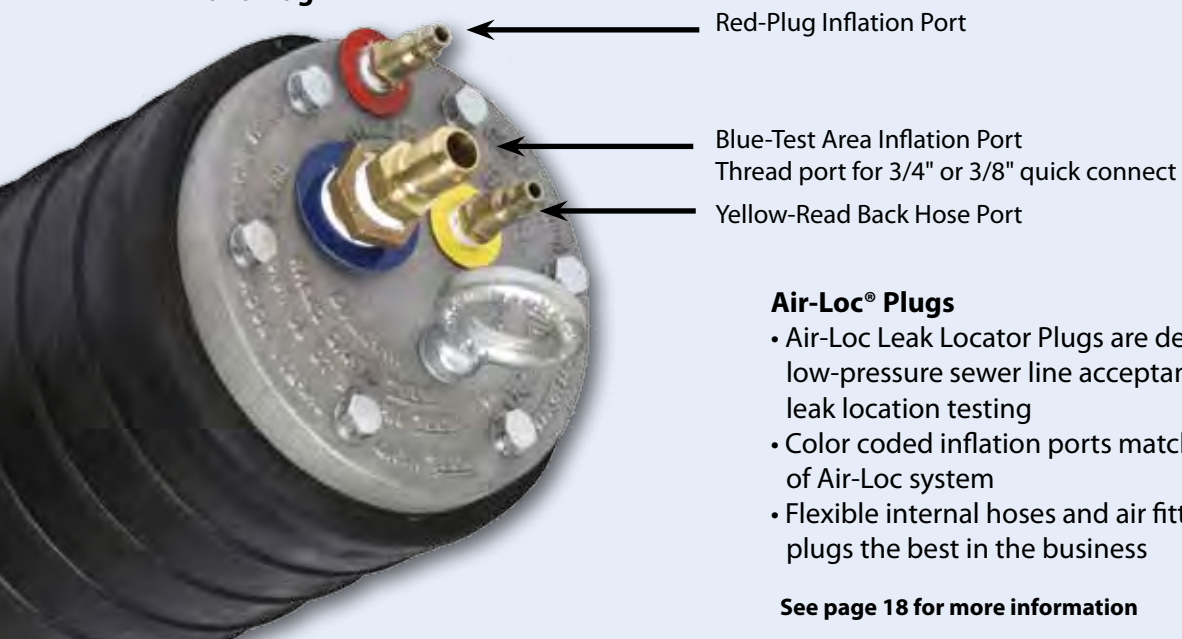
**The Cherne Air-Loc® Low Pressure Air-Testing**

**System** has been successfully used for testing sewer pipe installations for over 40 years. 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 #253298 - 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.

**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 18 for more information

**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

Part Number	Description	Product Weight
<b>Hi-Flow™ Line Acceptance Conversion Kits (3/8" and 3/4" fittings)</b>		
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)

Part Number	Description	Product Weight
<b>Line Acceptance / Leak Location Conversion Kits (3/8" fittings)</b>		
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)

See page 8 for Muni-Ball Plugs adaptable to Air-Loc Testing





## Air-Loc® Pressure Testing Panel



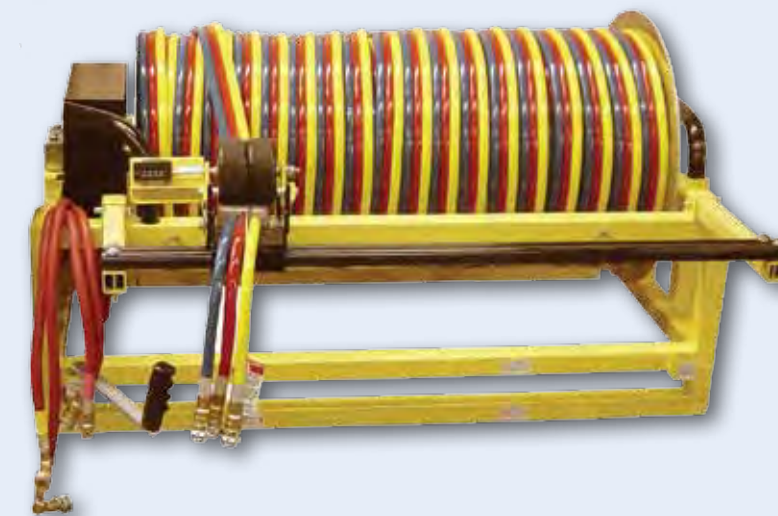
### Hi-Flow™ Air-Loc® Panel (Part #304708 - 40 lbs)

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  $\frac{3}{8}$ " or  $\frac{3}{4}$ " 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	3-Way Valve
296643	Regulator

## Air-Loc® Pressure Testing Hoses

**500' Triple Hose Reel (#253308 - 400 lbs)**  
The triple hose reel is used to pull the tandem plug assembly through the sewer line. It's designed to be mounted to the back of a pickup and features durable color-coded hose, a hose distance counter, a two way air motor and more. Cherne also offers an economical version of this reel that does not include the air motor or counter system (#253328).



### Triple Hose

The  $\frac{3}{8}$ " 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  $\frac{3}{4}$ " 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.

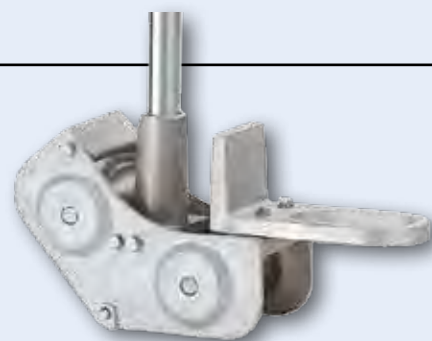




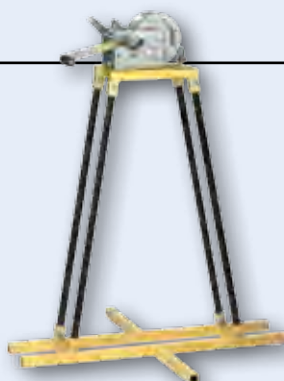
# Manhole Jacks • Rollers • Winch



- 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



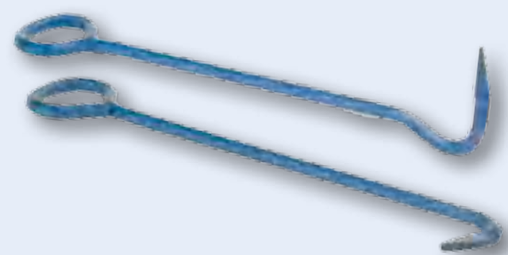
- Manhole Roller (Hose Guide) Part #056707**
- Guides air hoses and cables at pipe invert in manhole
  - Adjustable push-pin pole system
  - Installs at surface - no need to enter manhole



- 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



Part Number	Description
<b>Manhole Cover Hooks</b>	
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

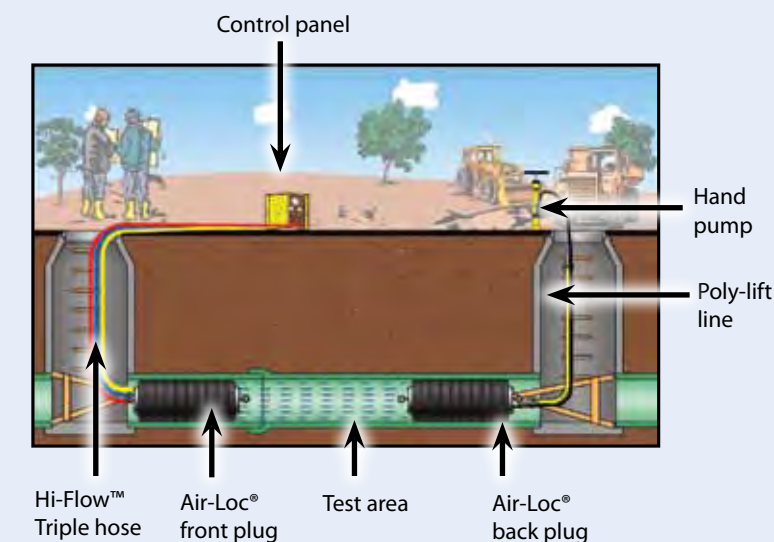


**Air-Loc Line Stringer**  
String lines between manholes quickly for segment testing with a Cherne Line Stringer. See page 52

# Air-Loc® Pressure Testing

**Air-Loc® Line Acceptance Test Procedure:**

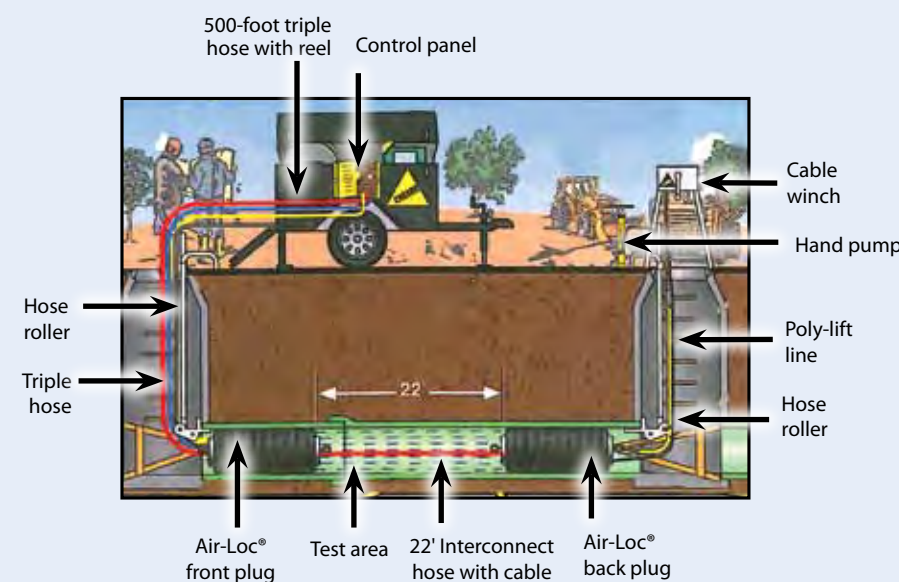
1. Install Back Plug. Attach poly lift line to pipe plug and place plug in line to be tested. Inflate plug to proper inflation pressure from above ground using hand pump.
2. Insert Front Plug. Connect triple hose assembly to front plug and insert plug into line. Connect other end of triple hose to Air-Loc® 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."



**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.

Testing Equipment

1.800.843.7584 | www.cherneind.com

Testing Equipment

1.800.843.7584 | www.cherneind.com



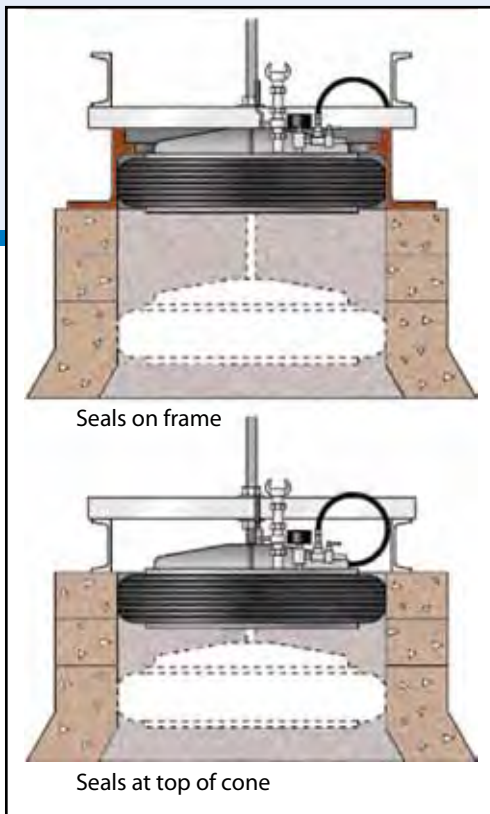
## Air-Loc® Manhole Testers

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:

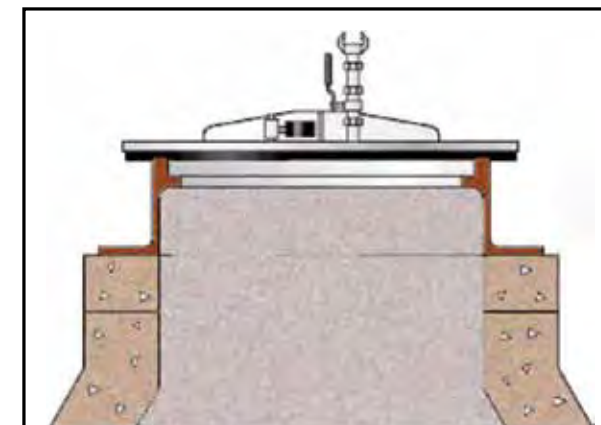
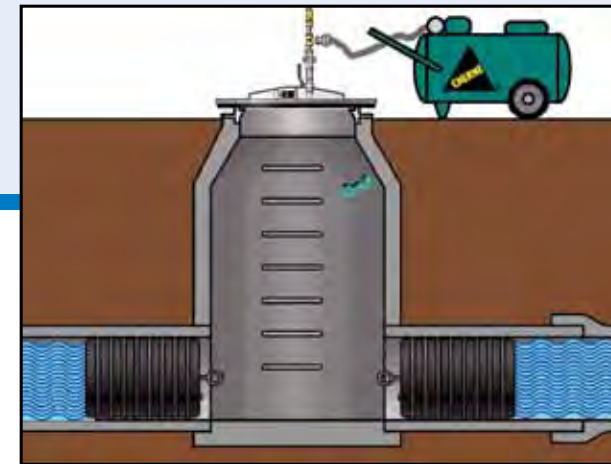
- Seals the inside diameter of the manhole at frame or cone
- Supported by a durable aluminum brace
- Push-pin rod design for easy depth adjustment
- Includes 20' hose with gauge



Part Number	Description
<b>Bladder Style Manhole Testers</b>	
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

### 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



Part Number	Description
<b>Plate Style Manhole Testers</b>	
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

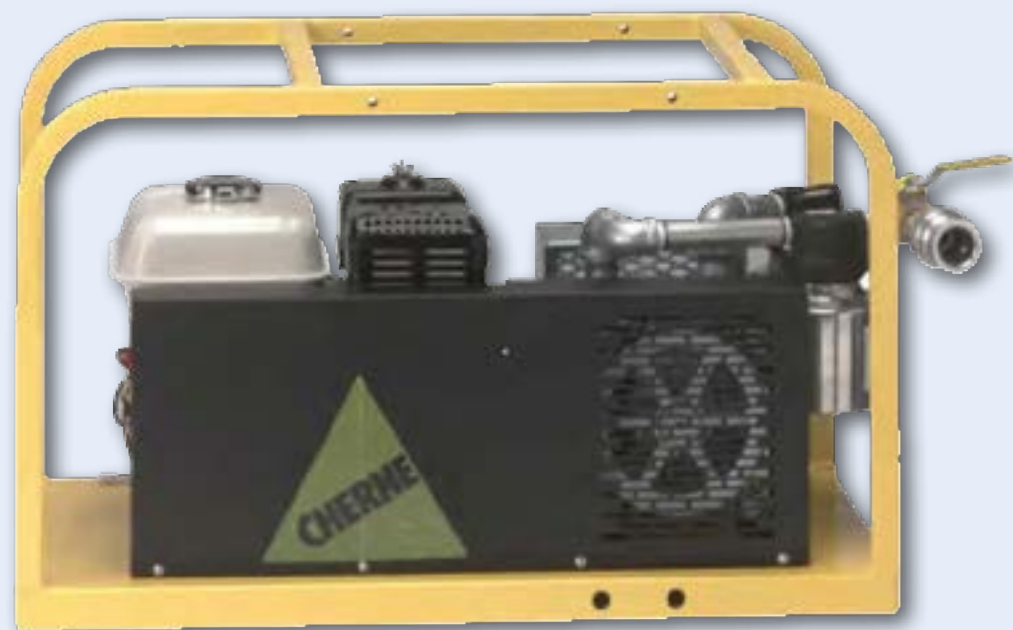
## Air-Loc® Manhole Testers



## 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)



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



## Air-Loc® Vacuum Equipment

### 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



Air-Loc® Hi-Flow  
Vacuum Generator 600

Part Number	Description
<b>Generator 460</b>	
200468	Vacuum Generator 460
033868	Silencer for Generator 460
035248	Replacement Filter for Generator 460
<b>Generator 600</b>	
200908	Vacuum Generator 600
054268	Replacement Silencer for 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:

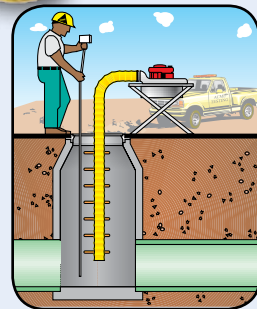
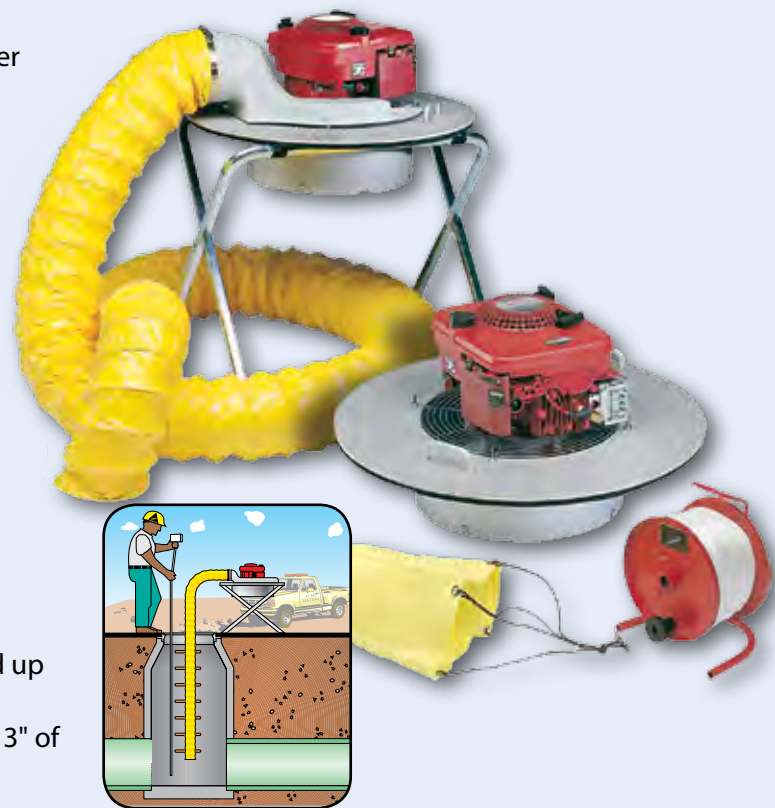
- Honda or Briggs & Stratton engine
- Top-mounted handles for easy maneuverability

### 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

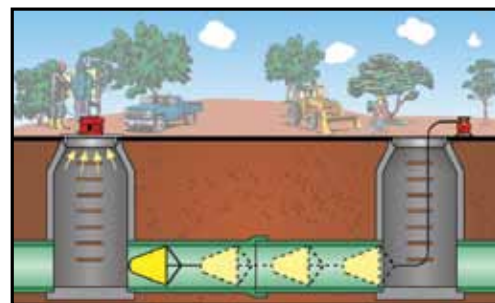


Blow-in ventilator

### Suction Ventilator



### Line Stringer



Part Number	Description
<b>Stringer • Ventilator</b>	
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 Schroud, Stand and 20ft of 8" diameter duct hose
303232	Ventilator Kit: Briggs & Stratton engine Schroud, Stand and 20ft 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: Schroud, 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 Honda or 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:

- 1/2" 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

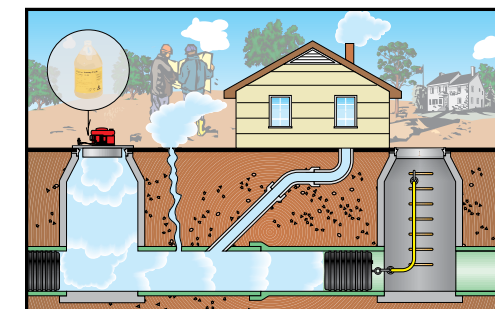


### Smoke Bomb Features:

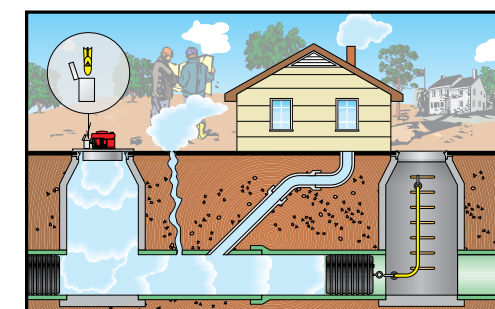
- Produces a thick, dense smoke
- Time-proven
- Simple to use
- Can be used with most smoke blowers
- 3 minute bombs available with

double wick that allows units to be strung together for a longer smoke time

### Smoke Fluid Blower



### Traditional Smoke Bomb Blower



Part Number	Description
<b>Smoke Bomb</b>	
303568	Smoke Bomb Smoke Blower Kit: Honda engine
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)
<b>Smoke Fluid</b>	
303018	Smoke Fluid Smoke blower Kit: Honda engine
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
<b>Accessories</b>	
014722	Smoke Blower replacement fan (left pitch)
058368	Smoke bomb holding cage
036308	Fluid Smoke conversion kit from Smoke Bomb Briggs & Stratton engine
038558	Fluid Smoke conversion kit from Smoke Bomb Honda engine pre 2006
061028	Fluid Smoke conversion kit from Smoke Bomb Honda engine 2006 and newer

<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.

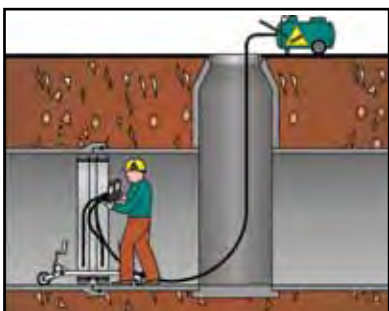
Ready to test with water or air straight from Cherne's factory—no modifications are needed—the Air-Loc® Joint Tester also allows you to pre-test before backfilling. Capable of testing to 15 PSI air or 50 psi water.

**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



**Pipe Joint Test**



Part Number	Description
<b>Accessories</b>	
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	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

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

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

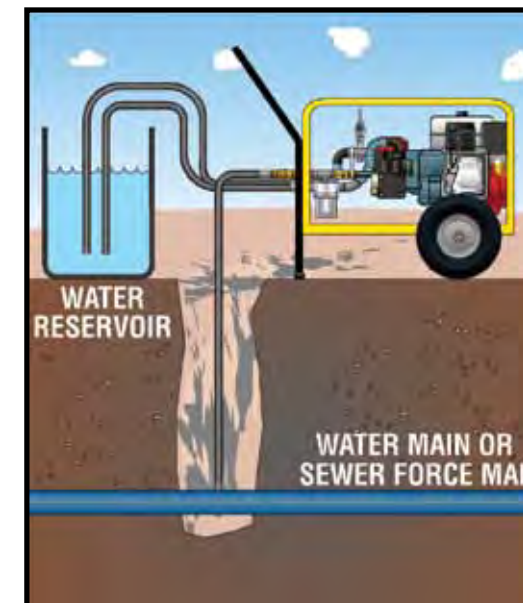


**9.5 Gallon Diaphragm Pump**

*Shown with optional wheel kit*

Part Number	Description
<b>Aqua-Loc Hydrostatic Test Pump</b>	
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 12' Output Hose with Quick Disconnect Fitting
022828	Disconnect for Output
064348	0-300 PSI Retard Gauge with 5 PSI Increments
030938	Replacement 12' Hose
022768	Replacement Strainer

**Diaphragm Pump**



**Suction Feed**



# Aqua-Loc® Hydrostatic Test Pump

## Aqua-Loc® Hydrostatic Test Pump

### Piston Style Features:

- Honda or Briggs & Stratton 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

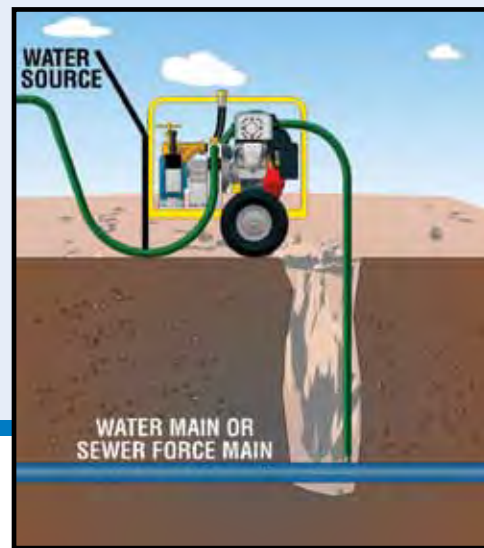
### Equipped with:

- 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

### Piston Pump



Suction or Pressure Feed

Part Number	Description
<b>Aqua-Loc Hydrostatic Test Pump</b>	
278138	Piston-style Test Pump: 10 gpm/450 psi Honda engine, 12' output hose
278148	Piston-style Test Pump: 10 gpm/450 psi Briggs & Stratton 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



# Aqua-Loc® Hydrostatic Test Pump

## 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

Part Number	Description
<b>Aqua-Loc Hydrostatic Test Pump</b>	
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®	60
Point Repair Carrier	61
Chain Assemblies • Test Gauges • Tub Plugs	62
Poly-Lift Lines • Extension Hoses	63

# Tools & Accessories





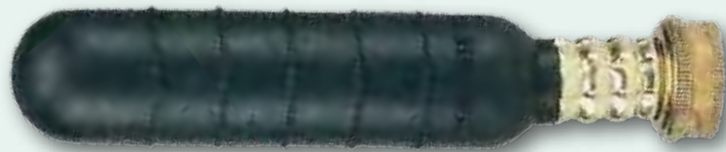
## Test Pumps • Clog-Buster®

- 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)

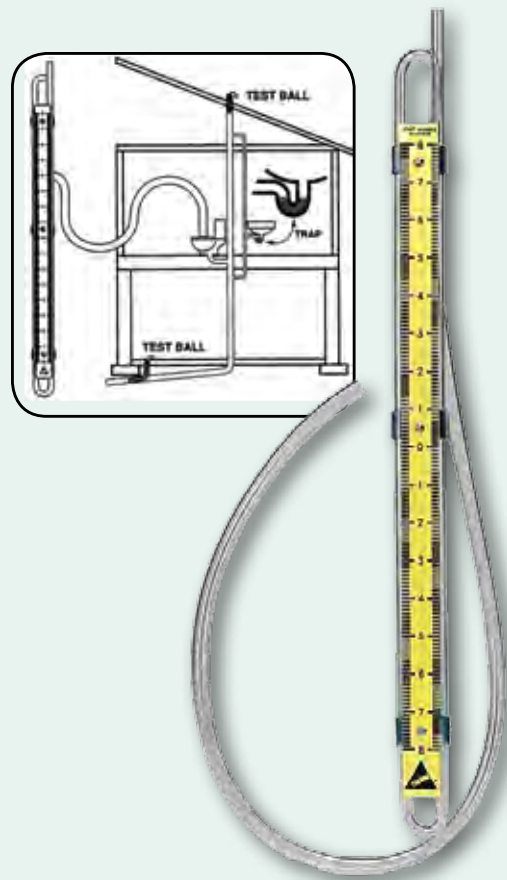
- C) Econ-O-Pump™ Test Pump (Part #273888)**
- Traditional thumb lock
  - 140 PSI high-pressure gauge with protective cover
  - All steel construction with cast iron base
  - Product Weight: 1 lb (.45 kg)

- Clog-Buster® Drain Flusher**
- Unclogs drain pipes in seconds
  - Simply remove aerator from spigot of 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

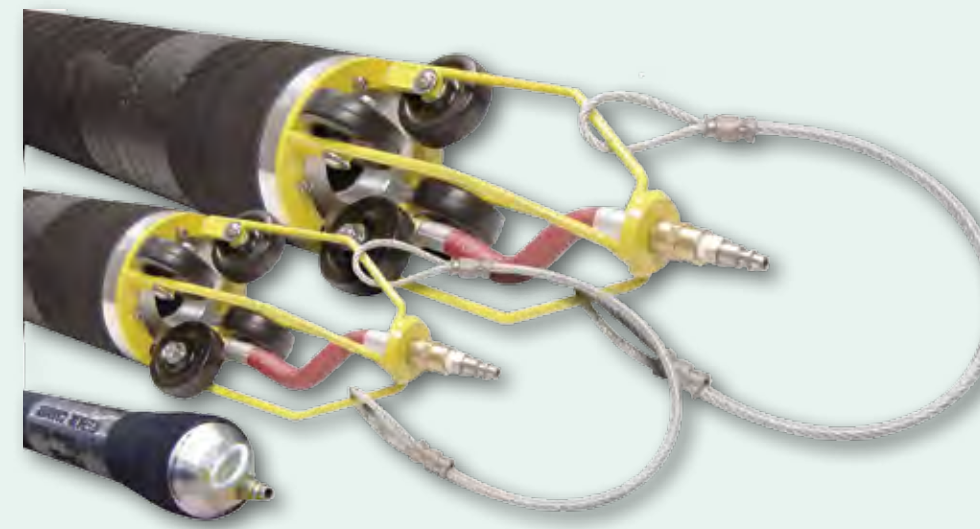


Part Number	Product Description
<b>Clog-Buster® Drain Flusher</b>	
303127	1" - 2" Clog-Buster® drain flusher
303135	1.5" - 3" Clog-Buster® drain flusher
303143	4" - 6" Clog-Buster® drain flusher
006193	Faucet adapter

- 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
- ¼" 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

**Point Repair Carrier**



Part Number	Length	Approx. Contact Length 6" - 10"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
<b>Multi-Size Point Repair Carriers 6" - 10" Diameter</b>					
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)

Part Number	Length	Approx. Contact Length 8" - 12"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
<b>Multi-Size Point Repair Carriers 8" - 12" Diameter</b>					
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)

Part Number	Length	Approx. Contact Length 4" - 6"	Max Pipe Diameter	Deflated Diameter	Inflation Pressure
<b>Multi-Size Point Repair Carriers 4" - 6" Diameter</b>					
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)





Chain Assemblies • 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

Part Number	Description
<b>Extension/Inflation Hoses with Gauge</b>	
274218	5' Extension hose with gauge
274228	10' Extension hose with gauge
274238	20' Extension hose with gauge
<b>Extension/Inflation Hoses</b>	
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

Part Number	Description
<b>Test Gauges without Test Body</b>	
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

Part Number	Description
<b>Test Gauges with Hexagonal Test Body</b>	
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

Part Number	Product Description
<b>Replacement Ring &amp; Chain Assemblies</b>	
059708	2" Ring with 12" chain
059718	3" Ring with 12" chain
059728	4" Ring with 12" chain
059738	5" 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
059788	5" Ring with 24" chain
059798	6" Ring with 24" chain

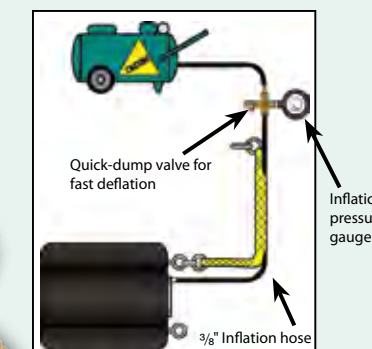


Poly-Lift Lines • Extension Hoses

**Poly-Lift Line with Gauge:**

- Retard gauge: helps prevent "peg-out" damage
- Heavy-duty rubber gauge cover protects gauge face
- 3/8" ID hose for quick inflate/deflate
- Quick-dump valve for easy deflation
- Quick disconnect design for easy installation
- Designed for use with plugs with removable inflator valve and eye bolt

Part Number	Length
<b>Poly-Lift Line with Gauge</b>	
261398	20'
261408	30'
261418	40'
048468	0-60 psi retard gauge with protective rubber cover
053458	0-60 psi retard gauge only



**Dual Inflation Hose:**

- Designed for large diameter multi-size plugs (15"-30" to 54"-96")
- 0-60 psi gauge with high impact resistant cover
- 3/4" inflation line with 3/16" read-back hose
- Dual hose assembly helps prevent gauge "peg-out"/flutter
- Quick disconnect fittings
- Quick dump valve on 3/4" hose to speed up deflation

Part Number	Description
<b>Dual Inflation Hose w/ Gauge</b>	
058058	30' Length

**Poly-Lift Line:**

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

Part Number	Product Length
<b>Poly-Lift Line</b>	
261084	20'
261106	30'
261114	40'





**Technical Data**

Conversion • Testing	66
Safety Instructions	67

# Technical Data

**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):**

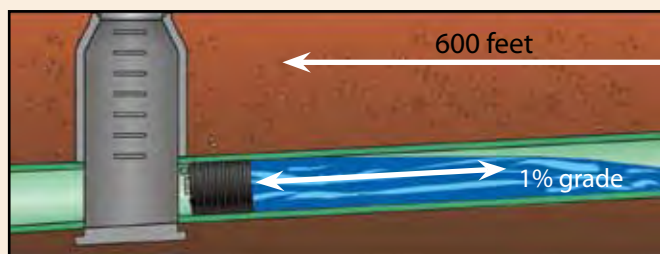
Also known as a final test, the manometer test verifies trap tightness in a new plumbing system. All traps are filled with water and all vents are then plugged. The manometer tube is first filled with water so that it "zeroes" out. Then the lower tube of the manometer is placed through a trap. A second 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.

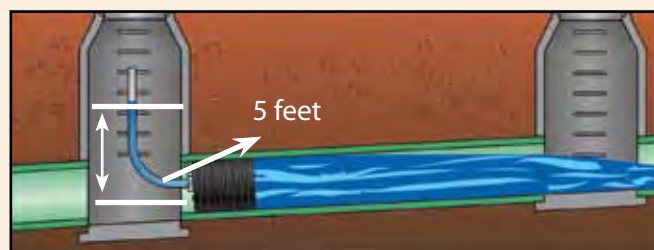
**Calculating Head Pressure/Feet of Head**

- 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.



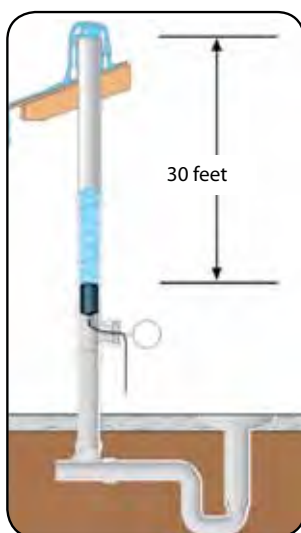
In the example above, the answer is 5 feet of head

**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



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

Always block plugs when conducting air tests.



**Calculating Pipeline Forces and Pressures\***

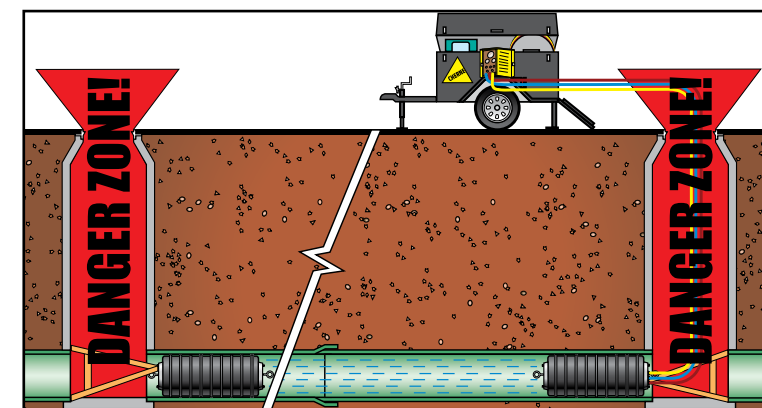
- 1) Determine the inside diameter of the pipeline in inches.
- 2) Determine the maximum back pressure.
- 3) Calculate the pipe area in square inches. (Pipe area =  $\pi r^2$ )
- 4) Calculate the force the plug must withstand. (pounds of force = PSI X pipe area)

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

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

Example: 36" diameter pipe

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



**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.



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