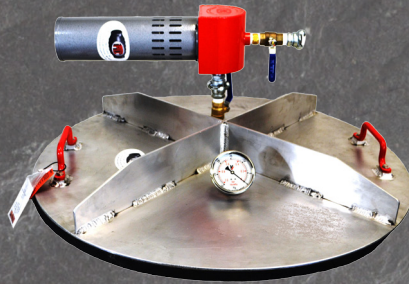




PLUG TECHNOLOGIES, INC.

855-758-4489

www.plugtechinc.com



PRODUCT CATALOG

Single Size FatBoy Plugster™

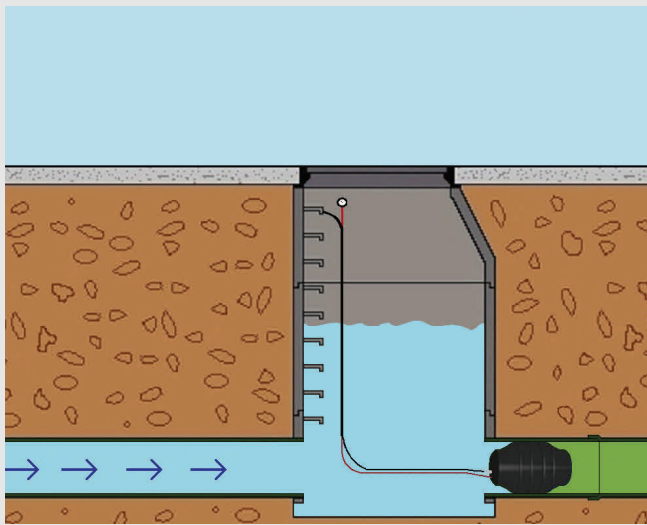
Our Single Size Plugsters™ are our most economical inflatable plugs.

Our Single Size Plugsters™ can be used in a variety of different applications by municipalities and contractors including blocking flow and holding pressure.

These inflatable plugs have a size range that covers one nominal pipe size, including 6", 8", 10", and 12" pipes.

Plugsters™ are made of high quality natural rubber making them durable and long lasting.

Plugsters™ have either a 1/4" or 3/8" eyebolt for lifting and lowering the plug.



Recommended Applications:

blocking flow, vacuum testing, air testing (back side only).

Always block plugs when conducting air tests.

Recommended Accessories:

Part Number:
445-30

30' Fill Kit/
Retrieval Rope
with Removable
Gauge. 3/8" ID
Hose



Size Usage Range

Description	Part #	Minimum Diameter	Maximum Diameter	Maximum Allowable Back Pressure PSI and Feet of Head	Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity	Bypass Size (s)
6" FatBoy Plugster™	100-06	5" 127mm	6.4" 162mm	15 PSI 34 FT	25 PSI	2.5 Lbs	4.75"	6"	1/8" Tank Valve	(1) 1/4"	None
8" FatBoy Plugster™	100-08	6.75" 171mm	8.55" 217mm	15 PSI 34 FT	25 PSI	5 Lbs	6.5"	8"	1/4" Tank Valve	(1) 3/8"	None
10" FatBoy Plugster™	100-10	8.75" 222mm	10.58" 268mm	15 PSI 34 FT	25 PSI	8 Lbs	8.5"	10"	1/4" Tank Valve	(1) 3/8"	None
12" FatBoy Plugster™	100-12	10.75" 273mm	12.64" 321mm	15 PSI 34 FT	25 PSI	12 Lbs	10.5"	12"	1/4" Tank Valve	(1) 3/8"	None

Single Size FatBoy Guzzler™

Our natural rubber single size inflatable Guzzler™ plugs are used in a variety of different applications including blocking flow, bypassing and air testing.

Guzzlers™ are the most versatile and economical inflatable bypass plugs.

Aluminum bypasses make these plugs lightweight and easy to install.

Our plugs come standard with a removable 1/8" or 1/4" tank valve (tire valve).

Our 3" plastic molded two port (1/2" and 1/4") Guzzler™ plug makes it easy to convert our Guzzlers™ into Testers™ without purchasing any additional conversion caps/plugs.

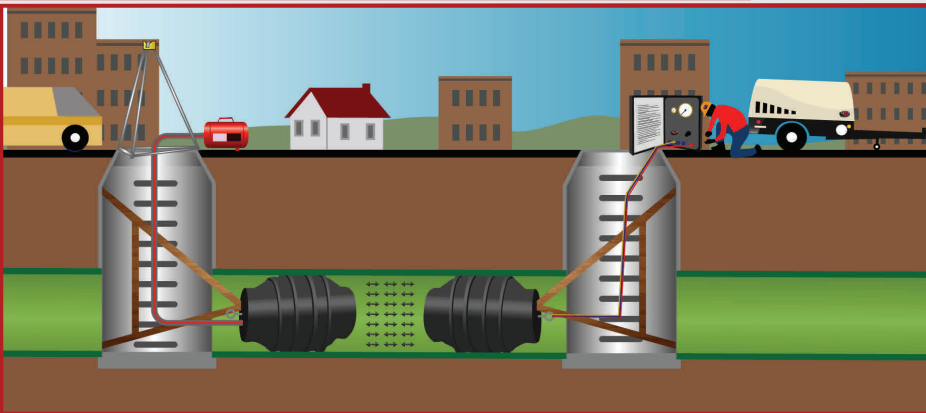
Our plugs also include a removable eyebolt (1/4" or 3/8") for lifting and lowering the plug.



Recommended Accessories:

Part # 410-30

30' Fill Kit without gauge (Swivel-Ball)



Recommended Applications: blocking flow, air testing, bypassing pumping flow and gravity bypassing.

Always block plugs when conducting air tests.

Size Usage Range

Description	Part #	Minimum Diameter	Maximum Diameter	Maximum Allowable Back Pressure PSI and Feet of Head	Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity	Bypass Size (s)
6" FatBoy Guzzler™	150-06	5" 127mm	6.4" 162mm	15 PSI 34 FT	35 PSI	3 Lbs	4.75"	6"	1/8" Tank Valve (Removable)	(1) 1/4"	1.5" NPT (F)
8" FatBoy Guzzler™	150-08	6.75" 171mm	8.55" 217mm	15 PSI 34 FT	35 PSI	6.5 Lbs	6.5"	8"	1/4" Tank Valve (Removable)	(1) 3/8"	3" NTP (F)
10" FatBoy Guzzler™	150-10	8.75" 222mm	10.58" 268mm	15 PSI 34 FT	35 PSI	10 Lbs	8.5"	10"	1/4" Tank Valve (Removable)	(1) 3/8"	3" NTP (F)
12" FatBoy Guzzler™	150-12	10.75" 273mm	12.64" 321mm	15 PSI 34 FT	35 PSI	14.75 Lbs	10.5"	12"	1/4" Tank Valve (Removable)	(1) 3/8"	3" NTP (F)
3" Molded Plug (2) Test Ports (1/4" and 1/2")	50-100										

Multi-Size FatBoy Rapid Placement Plugs™ RPP

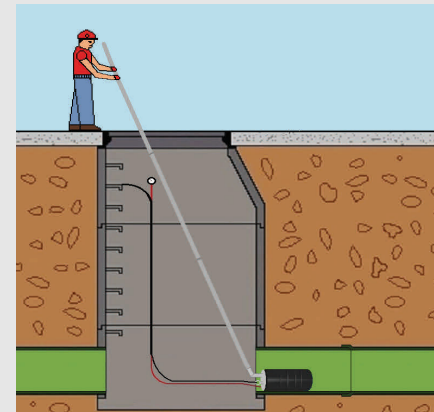
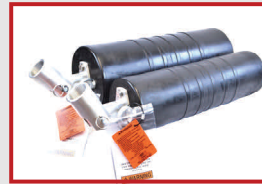
Our FatBoy Rapid Placement Plugs (RPP)™ plugs are designed to allow the user to quickly and easily install a plug without getting into the manhole.

No need for confined space entry equipment and procedures saving the user a significant amount of time.

Easy pull pin allows for rapid adjustment of the angle of the plug during installation. Six different pin placements give six different angle options.

Removable/replaceable 1/4" tank valve (fire valve) standard on all Fatboy RPP™ plugs.

Light weight easy snap together poles make lifting and lowering the RPP™ plugs into and out of different depth manholes quick and easy. For deeper manholes just snap together more 6' poles.



Recommended Applications: Air Testing (blocking side) Blocking Flow, Vacuum Testing.

Description	Part #	Size Usage Range		Maximum Allowable		Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity
		Minimum Diameter	Maximum Diameter	Back Pressure PSI and Head							
6"-10" FatBoy RPP™	215-610	6" 150mm	10.58" 268mm	13 PSI 30 Ft		30 PSI	6 LBS	5"	17.25"	1/4" Tank Valve Removable	3/8" (1) & (1) Optional 3/8" Backside Eyebolt
8"-12" FatBoy RPP™	215-812	8" 200mm	12.64" 321mm	13 PSI 30 Ft		25 PSI	8 Lbs	6.75"	19"	1/4" Tank Valve Removable	3/8" (1) & (1) Optional 3/8" Backside Eyebolt
RPP Adapter Aluminum	65-079										
RPP Pole 6' Aluminum	31-215										

FatBoy Max-Sleeve™

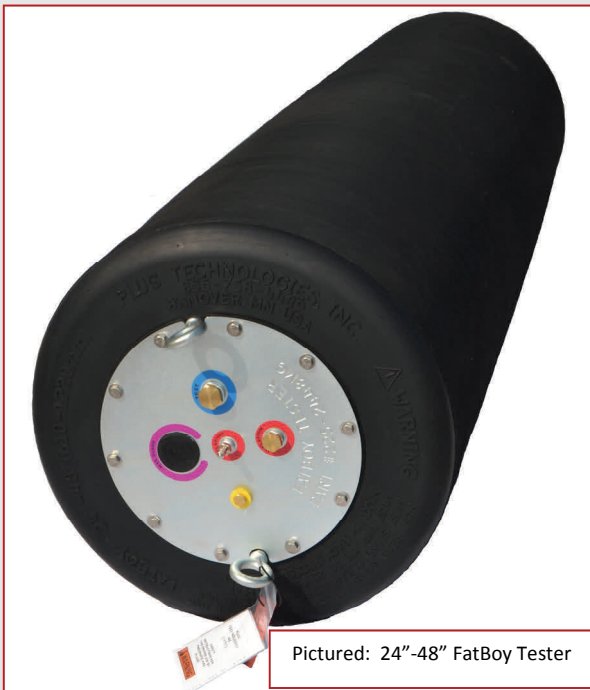
Our FatBoy Max-Sleeves™ were designed to be an extra protective layer (1/4" natural rubber) over our multisize FatBoy™ plugs sizes 12"-18" larger. The Max-Sleeve™ greatly reduces damage a plug can sustain from pipeline debris, degraded pipes and sharp objects. Add **SI** to the end of any sleeve part number and the sleeve will be installed on a the matching sized plug (plug sold separately). Plug installation includes 5/16" coated cable for securing the sleeve to the plugs



Description	Part #	Product Weight	Product Length	Eyelets
12"-18" Max-Sleeve™	600-1218	10 lbs.	28 "	(4) 1/2" on each end
12"-18" Max-Sleeve™ Installed on Plug (Sold Separately) (Includes 5/16" Coated Cable for Securing Sleeve on the Plug)	600-1218SI	11 Lbs.	28"	(4) 1/2" on each end
12"-24" Max-Sleeve™	600-1224	13.25 lbs.	39"	(4) 1/2" on each end
12"-24" Max-Sleeve™ Installed on Plug (Sold Separately) (Includes 5/16" Coated Cable for Securing Sleeve on the Plug)	600-1224SI	13.25 lbs.	39"	(4) 1/2" on each end
15"-30" Max-Sleeve™	600-1530	21 Lbs.	50.5"	(4) 1/2" on each end
15"-30" Max-Sleeve™ Installed on Plug (Sold Separately) (Includes 5/16" Coated Cable for Securing Sleeve on the Plug)	600-1530SI	23 Lbs.	50.5"	(4) 1/2" on each end
24"-48" Max-Sleeve™	600-2448	50 Lbs.	76"	(4) 1/2" on each end
24"-48" Max-Sleeve™ Installed on Plug (Sold Separately) (Includes 5/16" Coated Cable for Securing Sleeve on the Plug)	600-2448SI	52 Lbs.	76"	(4) 1/2" on each end

Power of Max-Guard™ (Relief Valve)

Pictured:
Max-Guard™
Relief Valve
P/N: 65-074



Pictured: 24"-48" FatBoy Tester

Our Max-Guard™ option is available on plugs 15"-30" and larger. Our Plugster, Tester and Guzzler style plugs all offer the Max-Guard option. Protect your plugs to the Max with Max-Guard™!

Protect your plugs to the Max with Max-Guard™!

Our optional Max-Guard™ relief valve protects your plug from over inflation caused by operator error or malfunctioning gauges.

How does it work?

- ◆ If the plug is over inflated, the Max-Guard™ relief valve opens at a designated pressure allowing the excess air pressure to be released from the plug.
- ◆ Once a certain amount of air pressure has been released (a few PSI less than the required inflation pressure) the Max-Guard™ relief valve will reset.
- ◆ While the relief valve is relieving the excess air, it will make a loud distinguishable whistle alerting the operator that they have over inflated the plug.
- ◆ After the Max-Guard™ relief valve is reset, the operator may need to re-inflate the plug back to the plug's required inflation pressure.

Advantages of the Max-Guard™

Relief Valve:

- ◆ Your plug will continue to do it's job (hold air and blocking flow in a pipe) while the Max-Guard™ relief valve protects the plug from over inflation.
- ◆ No Downtime. Max-Guard™ is not a one time use protection device. The Max-Guard™ will protect your plug over and over. No downtime waiting for expensive replacement parts.
- ◆ The Max-Guard™ is sheltered in a cavity and closed off by a rubber debris cover to protect the valve from the harsh working environment. Nothing is protruding from the front of the plug that can be damaged during transport or use.

Multi-Size FatBoy Plugster™

Our durable **Multi-Size FatBoy Plugster™** works in any pipe that falls inside the plug's size usage range.

Our **Multi-Size Plugsters™** are ideal for rental customers because each plug will cover several different pipe sizes which allows better utilization of the asset.

The **Multi-Size Plugster™ style plugs** are designed specifically for either blocking flow or holding air/vacuum pressure.

Our **Multi-Size Plugsters™** are the most economical multi-size **plugs** and are great for contractors or municipalities that are working with different diameter pipes but do not need air testing capabilities.

Our **Multi-Size Plugsters™ natural rubber construction** allow our FatBoy Plugs™ to be flexible enough to bend at a 90 degree angle making them very easy to install.

Removable/replaceable 1/4" tank valve (tire valve) are standard on all Fatboy Plugsters™.

Optional Max-Guard™ on 15"-30" plugs and larger protects the plug from being over inflated due to operator error or malfunctioning gauges.

Innovative manufacturing process allows our 15"-30" and larger plugs to be vulcanized in one cure. This process also allows the use of high strength cording throughout the plug and around each end of the plug to ensure maximum strength and durability.

Recommended Applications:

Plugsters™ are designed for blocking flow, air test (back side) and vacuum testing.

Always block plugs when conducting air tests.

Recommended Optional Accessories:

Fill Kits/Retrieval Rope with Gauge (see page 12 and 13).



Pictured: 200-1530MG



Multi-Size FatBoy Plugster™

Description	Part #	Size Usage Range		Maximum Allowable Back Pressure PSI and Feet of Head	Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity
		Minimum Diameter	Maximum Diameter							
3-4" FatBoy Plugster™	200-34	2.9" 75mm	4.3" 109mm	20 PSI 46 FT	35 PSI	0.66 LBS	2.75"	6"	1/8" Tank Valve Removable	1/4" (1)
4" - 6" FatBoy Plugster™	200-46	3.75" 100mm	6.4" 162mm	17 PSI 39 FT	45 PSI	1.5 LBS	3.5"	9"	1/8" Tank Valve Removable	1/4" (1)
6"-10" FatBoy Plugster™	200-610	5.5" 150mm	10.58" 268mm	13 PSI 30 FT	30 PSI	4.5 LBS	5.2"	17.25"	1/4" Tank Valve Removable	3/8" (1) & (1) Optional 3/8" Backside Eyebolt
8"-12" FatBoy Plugster™	200-812	7" 200mm	12.64" 321mm	13 PSI 30 FT	25 PSI	6.75 LBS	6.75"	19"	1/4" Tank Valve Removable	3/8" (1) & (1) Optional 3/8" Backside Eyebolt
12"-18" FatBoy Plugster™	200-1218	11" 200mm	18.50" 479mm	13 PSI 30 FT	25 PSI	24 LBS	10.75"	28"	1/4" Tank Valve Removable	3/8" (2) & (1) Optional 3/8" Backside Eyebolt
12"-24" FatBoy Plugster™	200-1224	11" 300mm	24.5" 600mm	13 PSI 30 FT	30 PSI	27 lbs	10.75"	37"	1/4" Tank Valve Removable	3/8" (2) & (1) Optional 3/8" Backside Eyebolt
15"-30" FatBoy Plugster™	200-1530	14" 375 mm	31.5" 800mm	11 PSI 25 FT	25 Psi	50 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
15"-30" FatBoy Plugster™ With Max-Guard™ (Relief Valve)	200-1530MG	14" 375 mm	31.5" 800mm	11 PSI 25 FT	25 Psi	50 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
15"-30" FatBoy Plugster™ With Max-Sleeve™ Installed	200-1530MS	14" 375 mm	31.5" 800mm	11 PSI 25 FT	25 Psi	71 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
15"-30" FatBoy Plugster™ With Max-Guard™ (Relief valve) and Max-Sleeve™ Installed	200-1530 MGMS	14" 375 mm	31.5" 800mm	11 PSI 25 FT	25 Psi	71 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
24"-48" FatBoy Plugster™	200-2448	22" 610 mm	49.5" 1,220mm	11 PSI 25 FT	25 PSI	120 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
24"-48" FatBoy Plugster™ With Max-Guard™ (Relief Valve)	200-2448MG	22" 610 mm	49.5" 1,220mm	11 PSI 25 FT	25 Psi	120 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
24"-48" FatBoy Plugster™ With Max-Sleeve™ Installed	200-2448MS	22" 610 mm	49.5" 1,220mm	11 PSI 25 FT	25 PSI	170 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside
24"-48" FatBoy Plugster™ With Max-Guard™ (Relief valve) and Max-Sleeve™ Installed	200-2448 MGMS	22" 610 mm	49.5" 1,220mm	11 PSI 25 FT	25 Psi	170 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside



Optional Accessories:

Max-Sleeves™ Available for plugs sizes 12"-18" and larger (see page 4).

Fill Kits /Retrieval Rope with Gauge (see page 12).



Multi-Size FatBoy Guzzler™

Multi-Size FatBoy Max- Guzzlers™



Our Multi-Sized Guzzler™ Plugs can be used for blocking flow, air testing (testing and blocking), vacuum testing and bypassing flow, making the Guzzlers™ our most versatile multisize plugs.

Natural rubber construction gives our Guzzler™ plugs a broad usage range.

Polyester cord gives our plugs strength and durability.

The lightweight aluminum bypasses make our Guzzler™ plugs lightweight and easy to install.

Optional Max-Guard™ on 15"-30" and larger plugs. The Max-Guard™ relief valve helps prevent the plug from being over inflated due to operator error or malfunctioning gauges.

Flexible Bypasses on all plugs 15"-30" and above.

8"-12" plug includes a 3" plug installed in the bypass with 1/2" and 1/4" air test ports which allow the plug to be used for air testing without purchasing an extra conversion plug.

Recommended Applications: bypassing flow, gravity bypassing, air testing (testing and blocking), vacuum testing.

Always block plugs when conducting air tests.

Our Max-Guzzlers™ are specifically designed for bypassing flow. The male nipple with npt threads make it easy to connect bypass hoses for pumping and or gravity bypassing.

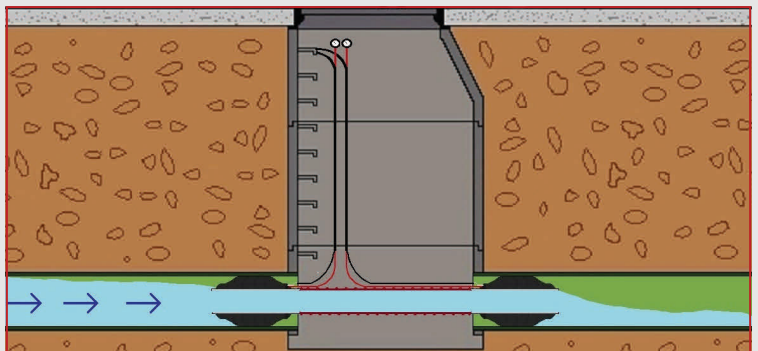
Natural rubber construction gives our Guzzler™ and Max-Guzzlers™ plugs a broad usage range.

Polyester cord gives our plugs strength and durability.

The lightweight aluminum bypasses make our Guzzler™ plugs lightweight and easy to install.

Replaceable 1/4" tank valve and inflation assembly.

Recommended Applications: bypassing flow, gravity bypassing, Not recommended for air testing or vacuum testing.



Multi-Size FatBoy Guzzlers™ and Max-Guzzlers™

Size Usage Range

Description	Part #	Minimum Diameter	Maximum Diameter	Maximum Allowable Back Pressure PSI and Feet of Head	Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity	Bypass Size (s)
3"-4" FatBoy Guzzler™	250-34	2.75" 70mm	4.3" 109mm	20 PSI 46 FT	35 PSI	.75 LBS	2.65"	6.25"	1/8" Tank Valve (removable)	(1) 1/4"	1/4" NPT (F)
4" - 6" FatBoy Guzzler™	250-46	3.75" 95mm	6.4" 162mm	17 PSI 39 FT	45 PSI	2.25 lbs	3.5"	9"	1/8" Tank Valve (removable)	(1) 1/4"	3/4" NPT (F)
6"-10" FatBoy Guzzler™	250-610	5.5" 140mm	10.5" 266mm	13 PSI 30 FT	30 PSI	7 lbs	5.25"	17.5"	1/8" Tank Valve (removable)	(1) 1/4"	2" NPT (F)
6"-10" Max-Guzzler™ with 4" Bypass	274-610	5.75" 146mm	10.5" 250mm	10 PSI 23 FT	35 PSI	13 Lbs	5.6"	23"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	4" (M) NPT
8"-12" FatBoy Guzzler™	250-812	7" 177mm	12.64" 321mm	13 PSI	25 PSI	11.5 lbs	6.75"	19"	1/4" Tank Valve (removable)	(1) 3/8"	3" NPT (F)
8"-12" Max-Guzzler™ with 4" Bypass	274-812	7" 177mm	12.64" 321mm	10 PSI 23 FT	45 PSI	20 LBS	6.5"	26.5"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	4" (M) NPT
8"-12" Max-Guzzler™ with 6" Bypass	276-812	7.75" 196mm	12.64" 321mm	10 PSI 23 FT	35 PSI	20 Lbs	7.5"	25"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	6" (M) NPT
12"-18" FatBoy Guzzler™ with 4" Bypass	274-1218	10.75" 300mm	18.5" 450mm	10 PSI 23 FT	35 PSI	47 lbs	10.5"	32"	1/4" Tank Valve (removable)	3/16" x 7/8" Galvanized Shackles	4" (M) NPT
12"-18" Max-Guzzler™ with 6" Bypass	276-1218	10" 254mm	18.5" 470mm	10 PSI 23 FT	35 PSI	48 lbs	9.5"	30.75"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	6" (M) NPT
12"-18" Max-Guzzler™ with 8" Bypass (No Cap)	278-1218	10" 254mm	18.5" 470mm	10 PSI 23 FT	35 PSI	48 lbs	9.5"	31"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	8" (M) NPT**
12"-24" Max-Guzzler™ with 4" Bypass	274-1224	10" 254mm	24.5" 622mm	5 PSI 11.5 FT	45 PSI	59 lbs	9.5"	42.5"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	4" (M) NPT
12"-24" Max-Guzzler™ with 6" Bypass	276-1224	10" 254mm	24.5" 622mm	5 PSI 11.5 FT	45 PSI	61 lbs	9.5"	42.5"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	6" (M) NPT
12"-24" Max-Guzzler™ with 8" Bypass (No Cap)	278-1224	10" 254mm	24.5" 622mm	5 PSI 11.5 FT	45 PSI	63 lbs	9.5"	43"	1/4" Tank Valve (removable)	1/4" x 1-1/8" Galvanized Shackles	8" (M) NPT**
15"-30" FatBoy Guzzler™ with 4" Bypass	250-1530	14" 355 mm	31.5" 775mm	11 PSI 25Ft	25 Psi	68 lbs	13.75"	58"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
15"-30" FatBoy Guzzler™ with 4" Bypass and Max-Guard™ (Relief Valve)	250-1530MG	14" 355 mm	31.5" 775mm	11 PSI 25Ft	25 Psi	68 lbs	13.75"	58"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
15"-30" FatBoy Guzzler™ with 4" Bypass and Max-Sleeve™ Installed	250-1530MS	14" 355 mm	31.5" 775mm	11 PSI 25Ft	25 Psi	90 lbs	13.75"	58"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
15"-30" FatBoy Guzzler™ with 4" Bypass and Max-Guard™ (Relief Valve) and Max-Sleeve™ Installed	250-1530MGMS	14" 355 mm	31.5" 775mm	11 PSI 25Ft	25 Psi	90 lbs	13.75"	58"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
24"-48" FatBoy Guzzler™ with 4" Bypass	250-2448	22" 558 mm	49.5" 1,220mm	11 PSI 25Ft	25 PSI	140 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
24"-48" FatBoy Guzzler™ with 4" Bypass and Max-Guard™ (Relief Valve)	250-2448MG	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 Psi	140 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
24"-48" FatBoy Guzzler™ with 4" Bypass and Max-Sleeve™ Installed	250-2448MS	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 PSI	190 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
24"-48" FatBoy Guzzler™ with 4" Bypass and Max-Guard™ (Relief Valve) and Max-Sleeve™ Installed	250-2448MGMS	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 Psi	190lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	4" (M) NPT
24"-48" FatBoy Guzzler™ with 6" Bypass	276-2448	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 PSI	150 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	6" (M) NPT
24"-48" FatBoy Guzzler™ with 6" Bypass and Max-Guard™ (Relief Valve)	276-2448MG	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 Psi	150 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	6" (M) NPT
24"-48" FatBoy Guzzler™ with 6" Bypass and Max-Guard™ (Relief Valve) and Max-Sleeve™ Installed	276-2448MGMS	22" 558 mm	49.5" 1,257mm	11 PSI 25Ft	25 Psi	200 lbs	21"	82"	1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) 1/2" Optional Backside	6" (M) NPT

Multi-Size FatBoy Testers™

Our FatBoy Tester™ plugs come standard with 3/4" and 1/4" bypasses allowing for easy transition from a blocking plug to an air testing plug.

Natural rubber construction gives our FatBoy Tester™ plugs a sizable usage range and long lasting durability.

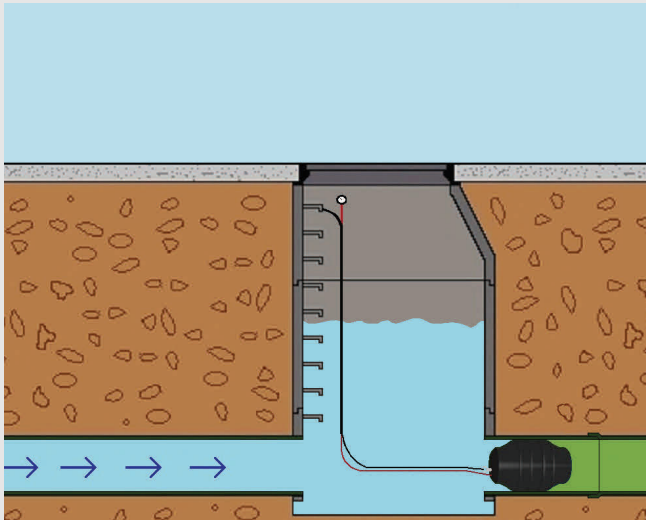
Removable/replaceable 1/4" tank valve (tire valve) standard on all FatBoy Testers™.

Cross-woven fabric gives our plugs strength and durability.

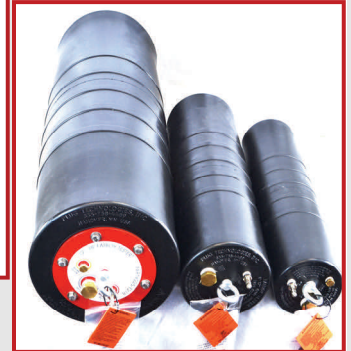
Flexible bypasses on our 12"-18" and larger plugs make our Testers™ plugs flexible and easy to install.

Innovative manufacturing process allows our 15"-30" and larger plugs to be vulcanized in one cure. This process also allows the use of high strength cording throughout the plug and around each end of the plug to ensure maximum strength and durability.

Optional Max-Guard™ on 15"-30" and larger plugs. The optional Max-Guard™ relief valve helps prevent the plug from being over inflated due to user error or malfunctioning gauges.



Pictured: 225-1530MG



Pictured: 225-610,
225-812 and 225-1218



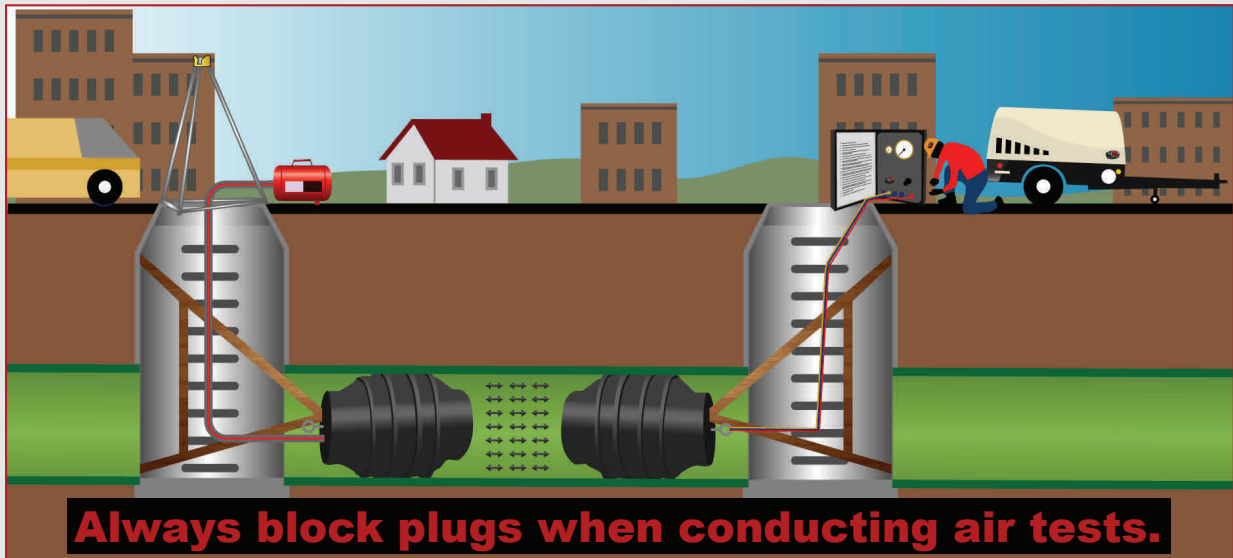
Pictured: 225-2448MG

Recommended Applications:
Air Testing (front and back side),
Blocking Flow, Vacuum Testing.

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

Multi-Size FatBoy Tester™

Description	Part #	Size Usage Range		Maximum Allowable Back Pressure PSI and Feet of Head	Required Inflation Pressure	Weight	Deflated Diameter	Deflated Length	Inflation Fitting	Eye Bolts Size & Quantity	Bypass Size (s)
		Minimum Diameter	Maximum Diameter								
6"-10" FatBoy Tester™	225-610	5.5" 150mm	10.58" 268mm	13 PSI 30 Ft	25 PSI	6.5 lbs	5.25"	16"	1/4" Tank Valve (removable)	(1) 3/8" (1) Optional 3/8" on Backside of plug	3/4" and 1/4"
8"-12" FatBoy Tester™	225-812	7.0" 200mm	12.64" 321mm	13 PSI 30 Ft	25 PSI	10 lbs	6.5"	19"	1/4" Tank Valve (removable)	(1) 3/8" (1) Optional 3/8" on Backside of plug	3/4" and 1/4"
12"-18" FatBoy Tester™	225-1218	11" 300mm	18.5" 450mm	13 PSI 30 Ft	25 PSI	31 lbs	10.75"	28"	1/4" Tank Valve (removable)	(1) 3/8" (1) Optional 3/8" on Backside of plug	3/4" and 1/4"
12"-24" FatBoy Tester™	225-1224	11" 300mm	24.5" 600mm	13 PSI 30 Ft	30 PSI	27 lbs	10.75"	37"	1/4" Tank Valve Removable	3/8" (2) (1) Optional 3/8" Backside Eyebolt	3/4" and 1/4"
15"-30" FatBoy Tester™	225-1530	14" 375 mm	31.5" 800mm	11 PSI 25 Ft	25 PSI	51 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
15"-30" FatBoy Tester™ With Max-Guard™ (Relief Valve)	225-1530MG	14" 375 mm	31.5" 800mm	11 PSI 25 Ft	25 PSI	51 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
15"-30" FatBoy Tester™ With Max-Sleeve™ Installed	225-1530MS	14" 375 mm	31.5" 800mm	11 PSI 25 Ft	25 PSI	72 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
15"-30" FatBoy Tester™ With Max-Guard™ (Relief valve) and Max-Sleeve™ Installed	225-1530 MGMS	14" 375 mm	31.5" 800mm	11 PSI 25 Ft	25 PSI	72 lbs	13.75"	50"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
24"-48" FatBoy Tester™	225-2448	22" 610 mm	49.5" 1,220mm	11 PSI 25 Ft	25 PSI	124 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
24"-48" FatBoy Tester™ With Max-Guard™(Relief Valve)	225-2448MG	22" 610 mm	49.5" 1,220mm	11 PSI 25 Ft	25 PSI	124 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
24"-48" FatBoy Tester™ With Max-Sleeve™ Installed	225-2448MS	22" 610 mm	49.5" 1,220mm	11 PSI 25 Ft	25 PSI	174 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"
24"-48" FatBoy Tester™ With Max-Guard™ (Relief valve) and Max-Sleeve™ Installed	225-2448 MGMS	22" 610 mm	49.5" 1,220mm	11 PSI 25 Ft	25 PSI	174 lbs	21"	76"	(1) 1/4" Tank Valve (removable) (1) 1/2" (F) NTP Port	(2) 1/2" Eyebolts (2) Optional 1/2" on Backside	3/4" and 1/4"



440 and 445 Series Fill Kit™ (3/8" ID PVC Hose) Retrieval Rope with Gauge

Our combination retrieval rope (used to lift and lower plugs into and out of the manhole) and inflation line (used to inflate and deflate your plugs) is our Max-Fill heavy duty offering. The large 3/8" ID hose allows you to inflate and deflate your plug 40% faster than our standard 1/4" hose. The gauge tree includes a removable 0-60 PSI liquid filled gauge with snubber, a tank valve (tire valve) and a 1/4" quick dump valve. The removable gauge featured in the 440 series allows you to quickly remove the gauge for safe storage and transporting.

Heavy Duty natural rubber Gauge Guardian™ protects your gauge from the hazardous construction environment.

The retrieval rope has a 3,000 lbs tensile strength which protects the fittings on the fill kit from being stressed on while the plug is lifted into and out of a manhole.

445 Series includes removable liquid filled gauge.

Universal Quick Coupler will be included by adding UQC to the end of any part number. The universal quick coupler works with both the industrial and automotive QD nipples.



445 Series

445 Series includes a removable gauge



440 Series

Description	Part #	Product Weight	Product Length
20' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge	445-20	8 Lbs	20' 6.09 m
20' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge and Universal Coupler	445-20UQC	8 Lbs	20' 6.09 m
30' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge	445-30	10 Lbs	30' 9.15 m
30' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge and Universal Coupler	445-30UQC	10 Lbs	30' 9.15 m
40' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge	445-40	12 Lbs	40' 12.2 m
40' 445 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Removable Liquid Filled Gauge and Universal Coupler	445-40UQC	12 Lbs	40' 12.2 m
20' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge	440-20	8 Lbs	20' 6.09 m
20' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge and Universal Coupler	440-20UQC	8 Lbs	20' 6.09 m
30' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge	440-30	10 Lbs	30' 9.15 m
30' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge and Universal Coupler	440-30UQC	10 Lbs	30' 9.15 m
40' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge	440-40	12 Lbs	40' 12.2 m
40' 440 Series Fill Kit (3/8" PVC Hose) / Retrieval Rope with Gauge and Universal Coupler	440-40UQC	12 Lbs	40' 12.2 m

450 and 455 Series Max-HD Fill Kit/Retrieval Rope (3/8" Hydraulic Hose) with Gauge

"Heavy Duty" is in the name!

Hydraulic Hose: 3/8" Hydraulic Hose with heavy duty hydraulic fittings. NPT (male) connection.

Swivel NPT Fitting: The plug end of the hose includes a swivel (M) NPT fitting. The swivel prevents the hose from getting twisted up in the manhole and allows the hose to be easily hard plumbed to the plug.

Crimped hydraulic fitting eliminates the weak section near the hose barbs of rubber or vinyl hoses. No leaking hose!

Heavy Duty Natural Rubber Gauge Guardian™ protects the gauge from the hazardous construction environment.

455 Series: Includes removable gauge.



Perfect for your rental fleet!

Add UQC to any Fill Kit part number and receive a Universal Quick Coupler that can be used with either Industrial or Automotive QD Nipples.

Description	P/N	Weight	Length	Hose ID
20' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Removable Gauge	455-20	8 LBS	20'	3/8"
30' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Removable Gauge	455-30	10 Lbs	30'	3/8"
20' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Removable Gauge and Universal Quick Coupler	455-20UQC	8 LBS	20'	3/8"
30' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Removable Gauge and Universal Quick Coupler	455-30UQC	10 Lbs	30'	3/8"
20' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Gauge	450-20	8 LBS	20'	3/8"
30' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Gauge	450-30	10 Lbs	30'	3/8"
20' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Gauge and Universal Quick Coupler	450-20UQC	8 LBS	20'	3/8"
30' Max-HD (3/8" Hydraulic Hose) Fill Kit/Retrieval Rope with Gauge and Universal Quick Coupler	450-30UQC	10 Lbs	30'	3/8"

410, 420 and 430 Series Fill Kit/Retrieval Rope (1/4" ID PVC Hose)

This combination retrieval rope and inflation hose can be used to lift and lower plugs into and out of the manhole and has a fill line for inflating and deflating plugs from outside of the danger zone.

The polypropylene rope has a 3,000 lbs tensile strength which protects the fill line from being tugged on during the installation of your plugs.

The snap hook makes it easy to attach and detach the retrieval rope from the plug. The fill line comes with a tank valve (tire valve) on one side and either an industrial quick disconnect or a swivel ball connection on the other side.

The 430 Series includes a gauge tree consisting of a 0-60 PSI liquid filled gauge with snubber, a tank valve (tire valve) and a 1/4" quick dump valve.

ADD UQC to the end of any part number and the Fill Kit will include a universal coupler that can be used with both industrial and automatic QD nipple.

Description	Part #	Product Weight	Product Length
20' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Industrial Quick Coupler	420-20	4 Lbs	20' 6.09 m
20' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Universal Quick Coupler	420-20UQC	4 Lbs	20' 6.09 m
30' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Industrial Quick Coupler	420-30	5.5 Lbs	30' 9.15 m
30' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Universal Quick Coupler	420-30UQC	5.5 Lbs	30' 9.15 m
40' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Industrial Quick Coupler	420-40	7 Lbs	40' 12.2 m
40' 420 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Universal Quick Coupler	420-40UQC	7 Lbs	40' 12.2 m
20' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge	430-20	5 Lbs	20' 6.09 m
20' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge and Universal Quick Coupler	430-20UQC	5 Lbs	20' 6.09 m
30' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge	430-30	7 Lbs	30' 9.15 m
30' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge and Universal Quick Coupler	430-30UQC	7 Lbs	30' 9.15 m
40' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge	430-40	9 Lbs	40' 12.2 m
40' 430 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope with Gauge and Universal Quick Coupler	430-40UQC	9 Lbs	40' 12.2 m
20' 410 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Swivel Ball Fittings	410-20	4 Lbs	20' 6.09 m
30' 410 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Swivel Ball Fittings	410-30	5.5 Lbs	30' 9.15 m
40' 410 Series Fill Kit (1/4" PVC Hose) /Retrieval Rope without Gauge with Swivel Ball Fittings	410-40	7 Lbs	40' 12.2 m



410 Series Swivel Ball Fittings

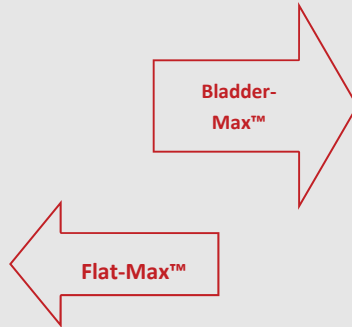
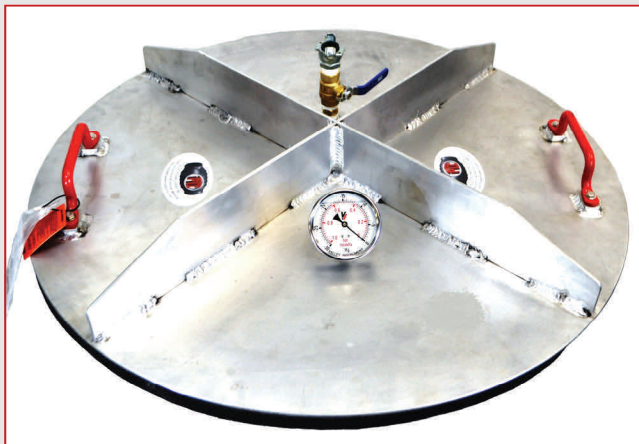


420 Series QD Fittings

430 Series
Includes Gauge Tree
and QD Fittings



Manhole Vacuum Testing Assemblies

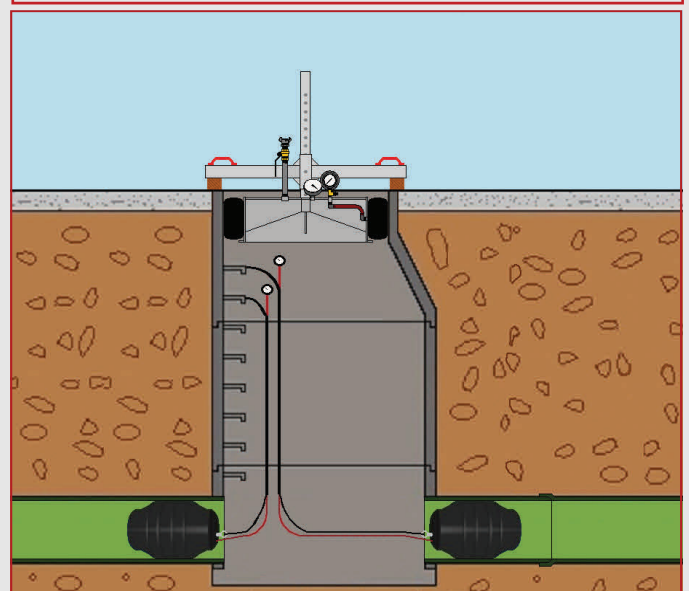
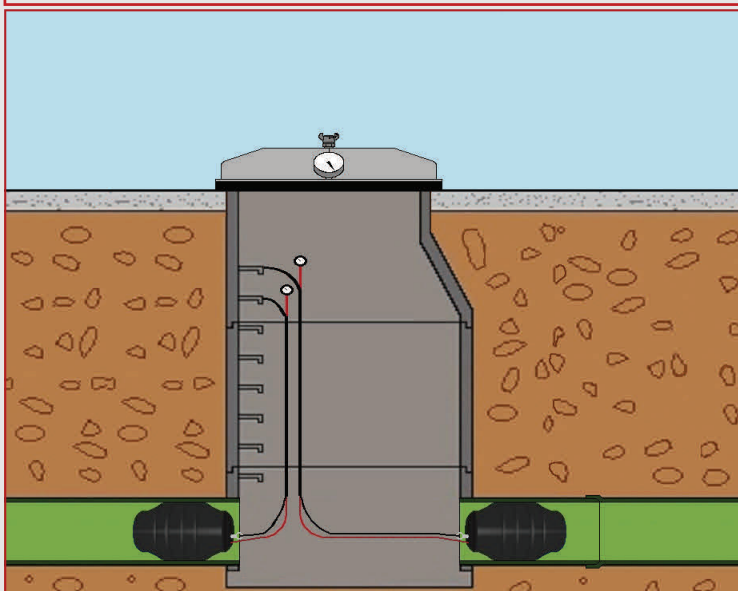


38" and 44" Flat-Max™ Plate Manhole Vacuum Head Assembly

- ◆ Our lightweight aluminum plate weighs only 45 pounds (38") and has two lifting handles making our Flat-Max™ easy and comfortable for one person to use.
- ◆ The Flat-Max™ features a large 4" Grade A liquid filled gauge that is angled up to allow easy gauge reading from a safe distance.
- ◆ 1" thick closed cell foam liner makes forming a seal easy and leak free. Seals on both manhole frame and manhole cone surfaces.
- ◆ Maximum size usage range allows you to seal manhole openings from 18"-36".
- ◆ Universal coupling (Chicago Style) makes attaching your air source to the Max-Vac™ Venturi Pump quick and easy. No need for special fittings and hoses.

Bladder-Max™ Manhole Vacuum Test Assembly.

- ◆ Easy slide design makes adjusting the height of the bladder quick and easy.
- ◆ 11 pin placements gives the user maximum height adjustment flexibility.
- ◆ Bladder inflation assembly allows for easy inflation and deflation of the bladder. No tire valves to force the air in and out of your bladder. Gauge is angled up 45° making it easy to read from a safe distance
- ◆ 12" galvanized pipe (3/4") extension with universal coupling (Chicago Style) allows for quick and easy hook up to the Max-Vac™ venturi pump even when the bladder is lowered into the manhole. No need for special fittings or hoses.



Manhole Vacuum Testing

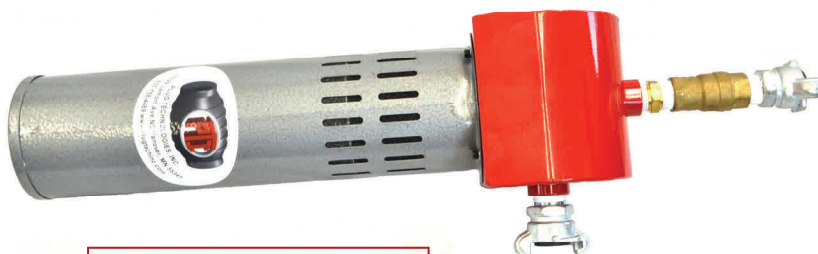
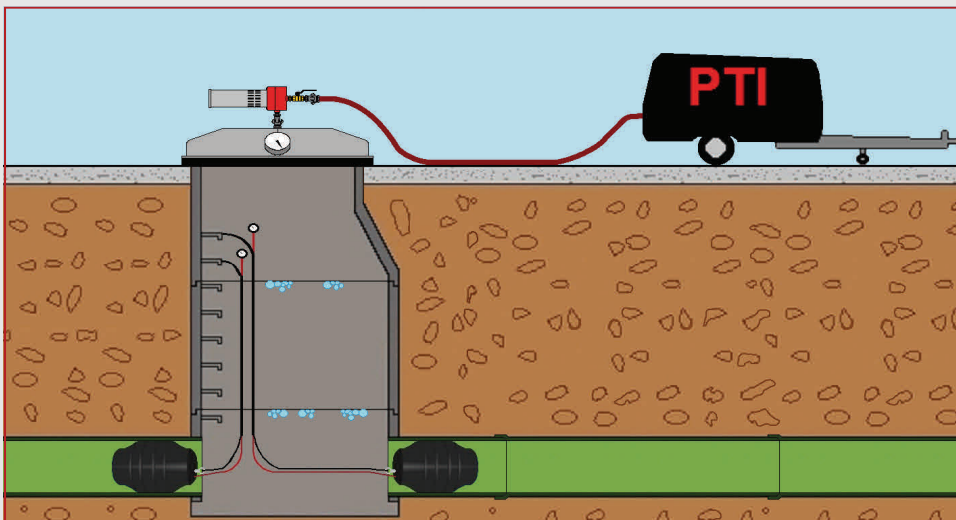
Part #	Description	Usage Range	Unit OD	Bladder Inflation Pressure	Weight
550-2127	21"-27" Bladder-Max™ Manhole Vacuum Testing Unit	21" - 27.5"	20.75"	25 PSI	72 Lbs
550-38	38" Flat-Max™ Manhole Vacuum Unit	18" - 36"	38"	N/A	45 Lbs
550-44	44" Flat-Max™ Manhole Vacuum Assembly	18" - 42"	44"	N/A	70 Lbs
550-00	Max-Vac™ Venturi Pump	N/A	N/A	N/A	10 Lbs
55-2127B	21"-27" Replacement Bladder	21" - 27.5"	20.75"	25 PSI	19 Lbs
37-001	0-60 PSI Liquid Filled Gauge (Bladder Inflate)	0-60 PSI	2.5"	N/A	.5lbs
37-010	Guage Guardian	2.5"	4"	N/A	.5 lbs
37-011	0-60 PSI Liquid Filled Gauge (Bladder Inflate) with Guage Guardian installed	0-60 PSI	2.5"	N/A	1 lbs
37-006	0-30HG Liquid Filled Vacuum Gauge	0-30 HG	4"	N/A	1 lbs
55-38F	1" Foam Replacement for 38" Flat-Max™ Plate	38"	N/A	N/A	5 Lbs
55-44F	1" Foam Replacement for 44" Flat-Max™ Plate	44"	N/A	N/A	8 lbs

Vacuum Testing Accessories:

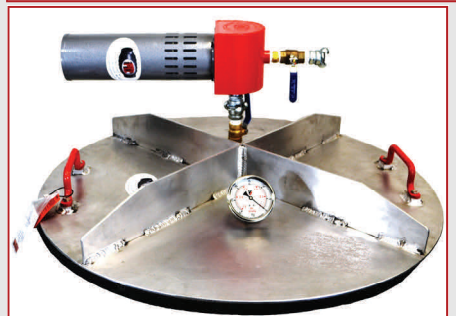


Tru-Test Max-Vac™ Venturi Pump

- ◆ Our Max-Vac™ Venturi Pump offers high vacuum flows for the rapid evacuation of manholes.
- ◆ This lightweight aluminum unit attaches easily to the vacuum head assemblies with a universal coupling (Chicago Style). No need for specialty fittings.
- ◆ Universal Couplers (Chicago Style) eliminates any need for special hose fittings.
- ◆ Recommended air compressor size: 85 CFM at 100 psi or higher.



550-00 Max-Vac Venturi Pump



Air Testing Equipment



**Durable
Pelican
Case**



Part Number 500-00

Max-Flow™ Control Panel is designed to perform a line acceptance test. The panel is color coded to make it easy to identify and connect to the triple hose. The plug pressure regulator allows you to quickly inflate the FatBoy Tester™ plug to the proper inflation pressure without over-inflating the plug. A durable plastic Pelican® case protects the gauges during transport and use.

MAX-Flow AT™ Line Acceptance Kit has

everything a contractor needs to perform a sewer line air test (except for the air compressor). The color coded triple hose includes quick disconnect fittings making it easy and fast to properly connect the hose to both the Max-Flow™ Control Panel and the FatBoy Tester™ plug. Our Max-Flow AT™ kits include a set of either 6"-10" or 8"-12" FatBoy Plugs.

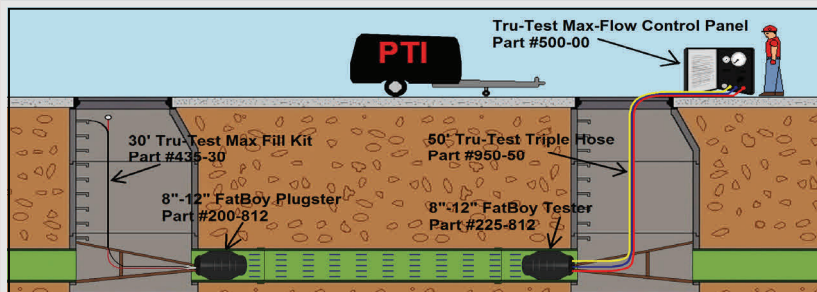
Part Number	Description
500-00	Max-Flow Control Panel
950-25	25' Max-Flow Triple Hose
950-50	50' Max-Flow Triple Hose
37-010	Guage Guardian
500-610 Includes:	Max-Flow AT Line Acceptance Kit with 6"-10" Plugs
200-610	6"-10" FatBoy Plugster™
225-610	6"-10" FatBoy Tester™
500-00	Max-Flow™ Control Panel
950-50	50' Max-Flow™ Triple Hose
430-30	30' Fill Kit (1/4" Hose) /Retrieval Rope with Gauge
50-091	Durable Plastic Storage Box
Part Number: 500-812 Includes:	Max-Flow AT Line Acceptance Kit with 8"-12" Plugs
200-812	8"-12" FatBoy Plugster™
225-812	8"-12" FatBoy Tester™
500-00	Max-Flow™ Control Panel
950-50	50' Tru-Test Triple Hose
430-30	30' Fill Kit (1/4" Hose) /Retrieval Rope with Gauge
50-091	Durable Plastic Storage Box



Max-Flow Triple Hose: Our triple hose has a 3/4" hose that pressurizes the test area. It has one 1/4" hose inflating the FatBoy Tester™ plug and one 1/4" hose for reading the pressure back to the test pressure gauge on the control panel. The hoses are color coded to make it easy to identify which hose goes to each connection on the plug and the panel.

Part Number 950-25—25' Max-Flow™ Triple Hose.

Part Number 950-50—50' Max-Flow™ Triple Hose.



New Max-Pro™ Parts Organizer



Part # 525-00

Get your test equipment parts organized with the New “Max-Pro™ Parts Organizer” from Plug Technologies, Inc.

Never miss a rental opportunity again because you don't have the correct fitting to connect the plug to the fill kit.

Front cover includes a diagram that maps out the parts organizer to help you keep it organized and help remind you which parts need to be reordered.

Easy re-order form includes all the parts in the Max-Pro™ Parts Organizer and some additional parts that you might need to order.

Durable steel compartment box has a positive locking catch to keep the lid closed during transport and storage.

Each compartment has a scooped bottom for easy parts removal.

Qty	P/N	Description
1	50-001	Parts Case
2	37-011	0-60 PSI Gauge with Gauge Guardian
4	37-021	Dump Valve x 1/4" (Male) npt
4	32-002	Schrader Valve x 1/4" (Male) npt
10	33-008	Nipple, Quick Disconnect, Industrial x 1/4" (Male) npt
4	33-007	Nipple, Quick Disconnect, Industrial x 1/4" (Female) npt
5	55-075	Max-Guard Rubber Debris Cover
2	32-003	Cross-Brass 1/4" (Female) npt
1	30-010	3/8" Eye Bolt
1	30-012	1/2" Eye Bolt
4	33-006	Quick Coupler, Industrial x 1/4" (Female)npt
4	33-005	Quick Coupler, Industrial x 1/4" (Male)npt
5	32-005	Plug, Brass, 1/4" (Male) npt
5	08-020	Safety Tag
5	07-101	Safety Instructions
1	31-001	Thread Tape

Technical Data

Conversion Table

Convert From Unit	Multiply By	Convert to Unit
PSI (Pounds per Square Inch)	2.307	Feet of Head
Feet of Head	0.4335	PSI (Pounds per Square Inch)
Inches of Mercury	0.4912	PSI (Pounds per Square Inch)
PSI (Pounds per Square Inch)	2.036	Inches of Mercury
Bars	14.5	PSI (Pounds per Square Inch)
PSI (Pounds per Square Inch)	0.0689	Bar
Inches	0.03937	Millimeters
Millimeters	25.4	Inches
Feet	0.3048	Meters
Meters	3.281	Feet

Pressure Conversion Table - PSI to Ft of Head

Feet of head	PSIG	Feet of head	PSIG	Feet of head	PSIG
1	0.43	16	6.94	31	13.44
2	0.87	17	7.37	32	13.87
3	1.30	18	7.80	33	14.31
4	1.73	19	8.24	34	14.74
5	2.17	20	8.67	35	15.17
6	2.60	21	9.10	36	15.61
7	3.03	22	9.54	37	16.04
8	3.47	23	9.97	38	16.47
9	3.90	24	10.40	39	16.91
10	4.34	25	10.84	40	17.34
11	4.77	26	11.27	41	17.77
12	5.20	27	11.70	42	18.21
13	5.64	28	12.14	43	18.64
14	6.07	29	12.57	44	19.07
15	6.50	30	13.01	45	19.51

Back Pressure/Feet of Head

Back Pressure defined: Back pressure is the amount of air or water that is built up behind (or in front of) a pipe plug.

Feet of Head or Head Pressure defined: The depth of the water from the center-line of the plug to the water's surface.

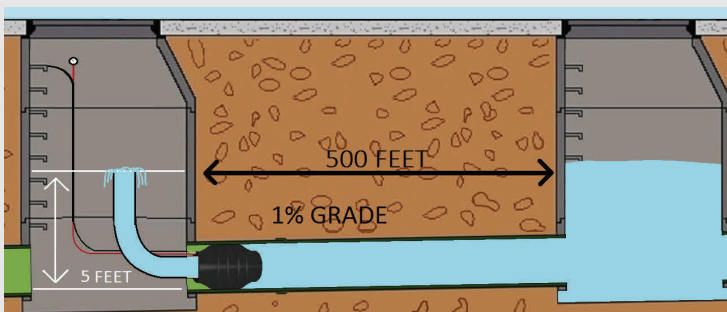
Calculating feet of head by using the slope or grade of the pipe:

In order to calculate the feet of head/head pressure that is backing up behind a pipe plug you must know the grade or slope of the pipe and the distance the water is backing up behind the plug.

Grade or Slope Defined: The percentage the pipe is slanted downward to allow the affluent to flow. Example: If the pipe is on a 1% grade that means the pipe gradually slants downward at a rate of 1 foot every 100 feet of pipe.

Calculating Feet of Head Example: If a pipe is laid on a 1% grade and the water inside the pipe has backed up 500 feet behind the plug then the plug will be holding back five feet of head.

Example (Showing the Math): The number of feet the water is backed up in the pipe behind the plug equals 500 Ft multiplied by the slope or grade. In this case equals 1% or .01 = (500 x .01 = 5 feet of head) Every additional 100 feet the water backs up would add one additional foot of head to the back pressure.



Pounds of Force Defined: The amount of force being exerted on a pipe plug (back pressure).

Formula: $\pi \times 3.14 \times (\text{radius of pipe}^2) = \text{square inches or area of the pipe}$. Multiply the square inches by PSI (back pressure) = Pounds of Force.

Why is it important? It is important to understand the pounds of force that a plug is holding back to help you understand the amount of damaged/danger that can be caused if a pipe plug fails or deflates. This also helps in developing or designing a proper blocking or bracing strategy.

Example: If a plug is installed in an eight inch pipe and the plug is holding back five psi of air pressure how much force is the plug holding back?

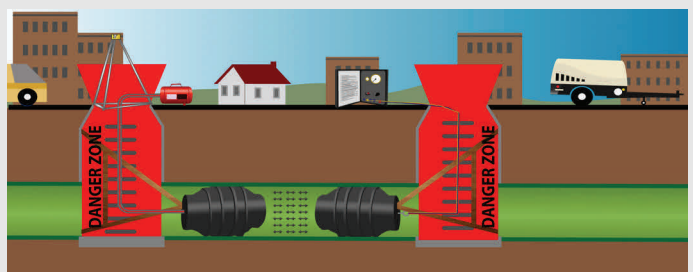
1. Calculate the surface area of 8" pipe using formula πr^2 .

$$3.14 (\text{PI}) \times 4(\text{pipe radius})^2$$

$$3.14 \times (4 \times 4) 16 = 50.24 \text{ Square Inches}$$

2. Multiply the back pressure (PSI) x Square Inches

$$5 (\text{psi}) \times 50.24 = 251.20 \text{ Pounds of Force}$$





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