

109 Series Pipeline Cleaning Balls

THREE SIZES: 6-10 , 10-14 & 15-18



The 109 Series pipeline cleaning ball uses the force of water to spin and scrub pipes clean. The ball's spiral ribs create the spin, while eyebolts on each end of the ball allow it to move in either direction through pipe. The following instructions describe how to install and operate your cleaning ball.

WARNING

- Before entering any manhole, test it for toxic or flammable gases and ventilate it if gases are present to avoid injury, asphyxiation and death!
- When you enter a manhole, observe all local, state and federal regulations and follow the procedure on page 4 of this manual.
- Wear a hard hat, safety glasses and ear protection. Use a respirator with a self-contained air source when entering a manhole

INSTALLATION AND OPERATION

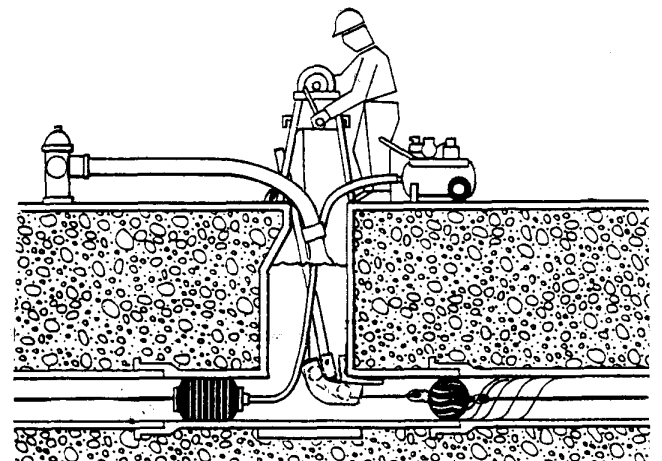
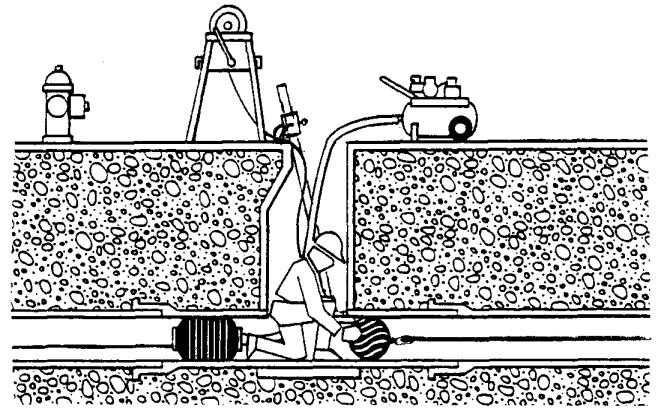
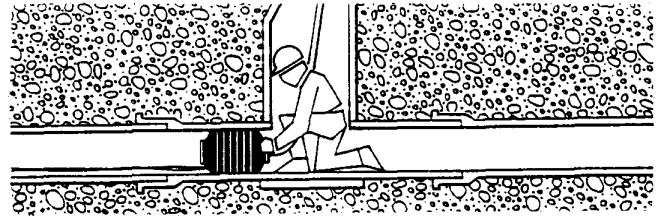
1. Enter the upstream manhole of the pipeline to be cleaned. Install plugs (using inflation hoses and tethering lines) into any pipes carrying sewage into the manhole.
2. Locate a water source close to the upstream manhole.
3. Build a catch basin in the pipe outlet of the downstream manhole to keep debris from washing into the next section of pipe.
4. String a line to the downstream manhole. Pull a tag line with a minimum break strength of 500 PPI (pounds per inch) from the downstream manhole with the strung line.
5. Attach the tag line to the cleaning ball. The tag line is used to free the ball IF it becomes stuck in the pipe.
6. Insert the proper size cleaning ball into the line at the upstream manhole. Inflate the ball until it fits snugly in the pipe.
7. Place a down roller assembly behind the cleaning ball and set the steel cable under the rollers. (The down roller will help control the ball and prevent damage to the cable and pipeline.)
8. Place the winch over the upstream manhole.

CAUTION: Check the elevation of building connections along the line to be cleaned -- they must have higher elevations than the level of water you'll put in the upstream manhole. If any building connection is too low, plug it with a pneumatic or mechanical plug. Then warn those in the building not to use any water until the job is finished.

9. Fill the upstream manhole with enough water to rise two to five feet above the top of the outlet holding the cleaning ball.
10. Controlling with the winch, let the water carry the cleaning ball slowly downstream.
11. Don't let the cable go slack. If it slackens, tighten it and hold the tightness briefly (this should loosen any debris blocking the ball). If this doesn't work, crank the ball back 1-2 feet to increase the jet stream. If this

doesn't work, let the water subside and pull the ball back. You'll need to clear the obstruction with a different method.

12. When the cleaning ball reaches the downstream manhole, allow the remaining water to subside.
13. Detach the cleaning ball from the winch cable and remove it from the manhole.
14. Rewind the cable onto the winch.
15. Remove the down roller assembly from the upstream manhole.
16. Move the winch to the downstream manhole.
17. Attach a bucket to the winch cable and lower it into the downstream manhole.
18. Shovel debris into the bucket and remove it from the manhole.
19. Remove the catch basin from the downstream manhole and replace the manhole cover.
20. Remove any pneumatic or mechanical plugs you've installed in building connections.
21. Using inflation hoses and tethering lines, remove any plugs installed in the upstream manhole. Don't remove any plugs while you're in the manhole.



MANHOLE SAFETY PROCEDURE

RECOMMENDED SAFETY PROCEDURE FOR ENTRANCE INTO MANHOLES OR CONFINED SPACES

WARNING: THIS INSTRUCTION IS TO BE USED AS A GENERAL GUIDELINE ONLY: ALTHOUGH PETERSEN PRODUCTS RECOMMENDS FOLLOWING THESE GUIDELINES, IT DOES NOT WARRANT, DOES NOT REPRESENT AND ASSUMES NO RESPONSIBILITY THAT THESE RECOMMENDATIONS WILL FULFILL ALL APPLICABLE FEDERAL, STATE, OR LOCAL REQUIREMENTS. PETERSEN PRODUCTS ASSUMES NO LIABILITY FOR EITHER PERSONAL INJURY OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE RELIANCE ON THESE RECOMMENDATIONS.

IT IS THE PRODUCT USER'S RESPONSIBILITY TO READ AND COMPLY WITH ALL APPLICABLE REGULATIONS. REFER TO THE CODE OF FEDERAL REGULATIONS, "CFR" PART 1926 AND ALL OTHER PERTINENT FEDERAL, STATE, AND LOCAL REGULATIONS.

Outfit yourself with the necessary safety equipment for entrance into a manhole or confined space. This may include, but may not be limited to, the items listed below (refer to warning stated immediately above). Ensure that all equipment meets or exceeds the minimum requirements of all applicable regulatory guidelines. All equipment should be properly maintained, stored, calibrated (if necessary), and inspected prior to each use, in compliance with applicable regulations and equipment manufacturer recommendations.

Recommended equipment is as follows:

- | | |
|---|--|
| A. Safety Hat | G. Ear Protection |
| B. Safety Glasses | H. Hazardous Gas Detector |
| C. Respirator or Self-Contained Air Source | I. Manhole or Confined Space Ventilation |
| D. Safety Harness, Ropes, and Winching System | J. Protective Clothing |
| E. Safety Shoes or Boots | K. Safety Ladders |
| F. Protective Gloves | L. Any Other Recommended or Required Equipment |

DANGER

PROPERLY VENTILATE MANHOLE OR CONFINED SPACE BEFORE ENTERING AND MAINTAIN VENTILATION WHILE IN MANHOLE OR CONFINED SPACE.

BEFORE ENTERING MANHOLE OR CONFINED SPACE, THOROUGHLY CHECK AT ALL LEVELS FOR HAZARDOUS GASES AND PROPER OXYGEN LEVELS (20 PERCENT MINIMUM). MONITOR THESE LEVELS CONTINUOUSLY WHEN WORKERS ARE IN THE MANHOLE.

NEVER ENTER A MANHOLE OR CONFINED SPACE WITHOUT CO-WORKER ASSISTANCE. CO-WORKERS MUST BE PROPERLY TRAINED IN SAFETY REQUIREMENTS FOR ACCESS TO MANHOLES OR CONFINED SPACES.

IF YOU ENCOUNTER OR OBSERVE ANY CONDITIONS THAT ARE NOT EXPLAINED HERE OR WHICH YOU DO NOT FULLY UNDERSTAND, NOTIFY YOUR SUPERVISOR OR SAFETY DIRECTOR BEFORE PROCEEDING.

CONSULT WITH PROPER STATE, LOCAL, AND FEDERAL AGENCIES TO INSURE THAT ALL REQUIRED REGULATIONS ARE BEING FULFILLED.

FAILURE TO COMPLY WITH PROPER SAFETY REGULATIONS MAY RESULT IN SERIOUS BODILY INJURY OR DEATH!!!