

EXPANDING PIPE STOPPERS

SAFETY



- Extreme care must be taken to assure the safe use of any pipe stopper.
- Very high forces are involved in many pipeline plugging situations – forces increase dramatically as pressure and pipe diameter increase.
- Keep personnel out of the area in-line with plug ends, open plugged pipelines or manholes. This is any area near a line of sight to any part of the stopper.
- Maximum rated back pressures assume stoppers are inserted into clean dry pipes. Dirt in pipes (algae, grease, detergents, mildew, sand, etc) can considerably decrease the back pressure values.
- Petroleum and some chemical products can cause stoppers to rupture.
- Pipelines made of materials with lower coefficient of friction, e.g. polyethylene or new pipelines with remains of grease or agents, directly decrease the coefficient of friction as well as the back pressure values.
- Never use a pipe stopper where failure may result in injury or significant property damage.

This information provides a brief overview of certain safety regulations and systems. It is not intended to provide specific legal or engineering advice.

INSTALLATION SAFETY INSTRUCTIONS

- Wear eye protection, helmet, and protective clothing and use required safety equipment.
- Use confined space procedures and equipment during installation where necessary.
- Calculate the head pressure forces the stopper will be required to restrain.
- Select a stopper that is manufactured for the size, pressure, temperature and chemical requirements.
- Stop the pipeline flow before installing any type of pipe stopper.
- Thoroughly clean the pipeline before insertion of the pipe stopper.
- Insert the pipe stopper seal and any restraint surface completely so it is fully supported by the pipeline.
- Always position the stopper where there are no sharp edges or protrusions that may cause damage to the stopper.
- Stay clear of any area in-line with any part of the stopper, open pipeline or manhole when the stopper is holding back pressure.
- Inflating pipe stoppers to the required pressure is critical to prevent dislodging (due to under-inflation) or stopper rupture (due to over-inflation). Never use a pneumatic stopper without knowing the proper inflation pressure and back pressure. Never inflate stoppers outside of a pipe. Never inflate stoppers over a lateral or other openings in the pipe wall. Always insert the stopper completely into the pipe.
- Tighten seal expansion nuts or bolts to insure there is a tight seal and the stopper is securely locked into the pipe.
- Use accurate pressure gauges for the continuous monitoring of inflation pressures and back/test pressures.
- Never exceed the maximum rated head pressure for the pipe stopper.
- Blocking/bracing must be used to prevent the movement or complete dislodging of pipe stoppers. This blocking or bracing should be designed to contain a dislodged pipe stopper and all the materials behind the stopper should the pipe stopper fail (we recommend that you consult a certified engineer for this). Rubber eyelets, steel rings or metal eyes are not to be used in restraint of a stopper – these eyelets are designed only for lifting and lowering of the stopper.
- Release the back pressure or equalize the pressure on both sides of the stopper before deflating, relaxing or removing.
- Before and after each use, clean the pipe stopper and inspect for surface tears, cuts or any other damage.
- To protect the components, store in a clean, dry area, away from direct sunlight and in a manner that allows the stopper to remain dry. Rubber components are especially susceptible to deterioration from aging.

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