

pipe sealing bladders

USER MANUAL



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Introduction

This booklet serves as the **USER MANUAL** for Ian Dickie Pipe Plugs/Sealing Bladders. **Safety should always be of the utmost importance when installing and using Pipe Plugs, please read the contents carefully to ensure safe and efficient operation.**

General Safety Precautions

- Review the intended installation procedures and complete a checklist to ensure all the required equipment for installation is available and in good working condition.
For example:
 - Pipe Plug
 - Protective Sleeve to prevent damage of pipe plug during use
 - Lifting device and lift rope, or for larger plugs, a triple bridle lifting sling
 - Inflation Kit or extension air hose
 - Gauge to monitor the plug inflation pressure
 - Air compressor
 - Materials to construct Blocking/Bracing/Restraining system
- Check the condition of the plug and ensure there are no missing or damaged fittings including the lifting eye-nuts, air fittings etc. Replace any missing or damaged fittings to ensure the proper use of the plug
- Ensure the Pipe Plugs integrity by making sure there are no cuts, gouges or holes in the plug and that the rubber is supple, in good condition and not aged or cracked in appearance
- Make sure you know the pipe diameter/s for which the Pipe Plug is intended. Do not attempt to use the Pipe Plug in a pipe that exceeds the maximum pipe diameter
- Make sure you know the Required Inflation Pressure and the Maximum Back / Test Pressure for the plug being used
- Make sure you know the maximum forces that will be exerted on the plug throughout the installation
- Ensure that all health and safety protocols are observed and that operators are wearing the prescribed safety gear: e.g. hard hats, gloves, goggles, safety boots etc.



Please Note: This Operators Manual is intended to serve as a generic guide for the safe use and installation of Pipe Plugs. Should you have questions or concerns regarding the safe operation or use of the equipment, please contact Ian Dickie for professional advice.

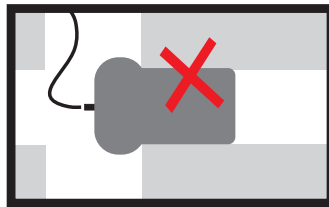
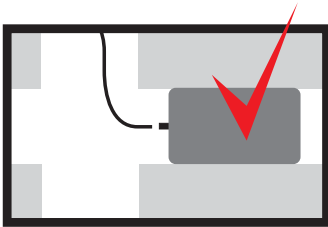


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Installing the Pipe Plug

- Ensure the Pipe Plug is the correct size for the pipe it is being used in
- Note the required inflation pressure as indicated on the Pipe Plug
- Ensure the Pipe Plug is rated to handle the Back / Test Pressures for the application
- Once you are sure of these factors, insert the Pipe Plug fully into the pipe
- There should be no portion of the inflated Pipe Plug protruding from the pipe at any time before or during the application. A good rule of thumb when using plugs of an all-rubber design is to install them one pipe diameter into the pipe



- Once the Pipe Plug has been inserted into the pipe correctly, lay out your Inflation Kit (inflation hose) which should be of a sufficient length to keep the operators out of the DANGER ZONE while inflating. The DANGER ZONE is the area within or around a pipe or manhole where a plug is installed. It is a cone shaped area, getting larger as it extends away from a pipe or manhole
- Always use an Inflation Kit or hose with a gauge to monitor the inflation pressure of the plug throughout the entire operation.

Inflating the Pipe Plug

- Do NOT Under-Inflate the Pipe Plug as this may cause the Pipe Plug to slip or become completely dislodged when pressure is applied against it
- Under-inflating a Pipe Plug may allow water, sewage, air or other materials to leak while the Pipe Plug is installed
- Exceeding the Maximum Back/Test Pressure of a Pipe Plug may also cause the Pipe Plug to slip or become dislodged when pressure is applied against it. This may result in water, sewage, air or other materials leaking while it is installed
- Do NOT Over-Inflate the Pipe Plug! - Be aware that over-inflating a Pipe Plug may cause the Pipe Plug to burst, rupture or explode causing damage and potential injury.



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Blocking or Bracing the Pipe Plug

Depending on the installation, blocking / bracing may be required to prevent the movement or dislodging of Pipe Plugs. It is recommended that an Engineer be consulted to design, construct and maintain the containment system for safety.

Some of the key considerations when Blocking / Bracing Pipe Plugs are as follows:

- Do not “Point Load” the Pipe Plug when Blocking / Bracing. A “Point Load” is a load which is localised to a specific location on a structure
- Instead, use multiple points of contact on the plug in order to spread the back pressure or test pressure forces over the biggest area possible on the Pipe Plug
- Be aware that Rubber Eyelets, Steel Rings, Metal Eye-Bolts, Eyelets and Eye-Nuts are not to be used for restraining Pipe Plugs. These are to be used for the lifting or lowering of Pipe Plugs during installation or removal only.

Deflating and Removing the Pipe Plug

Once the application is complete and you are ready to remove the Pipe Plug, caution must still be taken to ensure that equipment is not damaged and that the safety of workers is observed.

- Before attempting to remove any Pipe Plug, always make sure all Back Pressures or Test Pressures have been completely released and that there are no forces working against the Pipe Plug before deflating. If there is still Back / Test Pressure against the plug when it deflates, it can burst out of the pipe and potentially cause injury
- Before deflating the Pipe Plug for removal, be sure all materials used for Blocking and Bracing have been carefully removed
- Only after ensuring that all Back / Test Pressures are completely zeroed out and the materials used for Blocking / Bracing have been removed is it safe to deflate the Pipe Plug for removal
- Allow the Pipe Plug to fully deflate before removal to ensure you don't cause damage by attempting to pull the plug out partially deflated.

Storage and Maintenance

- Wash the Pipe Plugs with soap and water after use
- Dry the Pipe Plugs at room temperature
- Store in a clean, dry area out of direct sunlight
- Do not fold Pipe Plugs when storing
- Plugs should not be in direct contact with metal surfaces, other plugs or chemicals for a prolonged period.