

# PERMAGLASS PUMP COLUMN INSTALLATION GUIDE

The following is a guide to the installation of Permaglass Pump Column and Bore Casing, it is a guide only and may depend upon the type of equipment used or circumstances at the time of installation. Installers should satisfy themselves that their equipment is correctly sized and fit for purpose. Installers may have developed other preferred methods, however descriptions in ***bold italics*** are a requirement with respect to the installation of Permaglass. For other specific requirements refer to the distributor. **Lifting of 2 or more joined lengths of Permaglass from the horizontal may result in distortion and permanent damage to joints, therefore this practice is not approved**

PERMAGLASS products described in installation procedures :

***O-ring (Nitrile)***



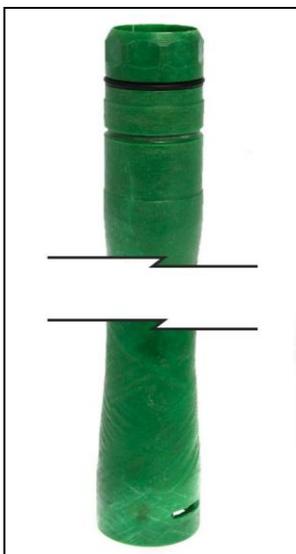
***Permaglass  
Stainless Steel  
Locking Wire***



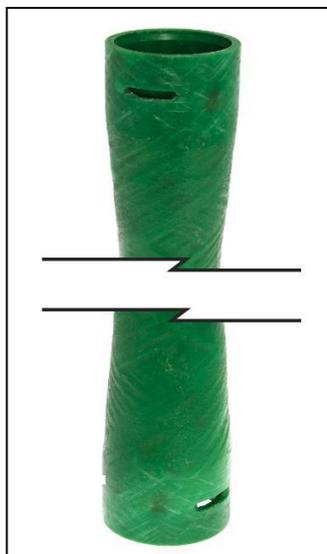
***Typical Lifting  
Clamp***



***Permaglass standard  
Male/Female Joint***



***Permaglass  
Female/Female  
Bottom Pipe***



***Permaglass End  
Connector***



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## STEP 1 Lubrication

- Lubricate locking wire groove in females for ease of insertion of locking wire
- Lubricate all O-rings for smooth insertion of male into female and to avoid damage to the O-ring
- Use a Permaglass recommended lubricant. Silicone base or similar.

## STEP 2 Install bottom SS316 end connector

- Method employing a pair of lifting clamps or elevators
- Thread the Permaglass 316 stainless steel BSP end connector into the female socket in the submersible pump, install O-ring on the protruding Permaglass male. Clamp under collar of end connector, connect clamp to crane with chain or wire rope sling and lift assembly into the bore. Hold with the clamp supported on a suitable device such as a C-plate or similar mounted over the bore.

## STEP 3 Install Permaglass bottom pipe

- Disconnect the sling from the clamp fitted under the collar of the stainless steel end connector and attach to a second lifting clamp. Fit the second clamp under the top bell of the double ended female bottom pipe, lift pipe into position over the spigot of the end connector, lower into position and install locking wire. Duct tape several times over end of locking wire, electrical cable and finish by taping over joint. Take up tension on the sling to allow the removal of the first clamp. Lower the pump and bottom pipe into the bore until the second lifting clamp under the top bell of the bottom pipe rests on the C-plate as for the first lifting clamp.

## STEP 4 Install remaining Permaglass pipe

- Insert the first lifting clamp under the bell of the next length of Permaglass. Attach the slings removed from the second lifting clamp and lift a pipe until vertical over the bottom pipe now secured in the bore. Lower until the male spigot is above the female, install a lubricated O-ring then insert into the female bell until locking wire grooves are aligned, insert the locking wire.
- Repeat the above until all pipe is installed. Then fit an O-ring to the second male end connector and install into the top female, secure with a locking wire.
- The assembly is now ready to accept head works

***If using an hydraulic or pneumatic clamping device, care must be taken not to exceed 70% of the external collapse pressure of the Permaglass (as stated in the manufacturer's specifications).***

***Lifting clamps should be positioned evenly under the bell and closed with a pin***

