



Hydro Seal[™] (Jacketed) Installation Tips

Hydro Seal[™] (Jacketed)  Product Series "HSJ"	Pressure Pipes Pipe Materials: ➤ Concrete ➤ Reinforced Concrete ➤ Steel ➤ Cast Iron ➤ PVC ➤ HDPE Pipe Diameter: Ø4" to 54"	Link-Pipe Jacketed Hydro Seal[™] Sleeve has two layers from different materials.* The inner perforated SST layer is mechanically locked in place and does not depend on internal or external pressure changes. The outer resilient layer is compressed between SST core and a host pipe wall. The diameter of this layer varies with the plastic host pipe or CIPP liner diameter which depends on operation pressure and temperature. Note: In the case of the joint repair with different pipe diameters the sleeve should be oriented with its bigger diameter to the bigger pipe. *US patent Pending
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Recommended Sealant:

Link-Pipe Inc. recommends the use of the **Link-Pipe Hydro Seal[™] Jacketed Sleeve** with **Sikaflex-221 Adhesive Sealant** for the repair of leaking joints. The **Sikaflex-221** together with the **Jacketed Sewer Sealer[™]** forms a rubber-like structure, with excellent sealing capability.

Warnings:

1. The **Sikaflex-221** cures by reaction with atmospheric moisture. If water is sprayed on the applied **Sikaflex-221**, or otherwise the adhesive gets wet, the sleeve should be installed within 2 hour after which, if the adhesive begins to thicken, the sealing quality may be lost. Although the adhesive is slow acting, no time should be wasted after the **Sikaflex-221** comes into contact with moisture.
2. The installed Sleeve transfers pressure to the host pipe. For this reason, the host pipe should not be made from materials that can easily be damaged. Sleeves should be used for **sealing joints and circumferential cracks only**. Host pipe should be **clean**, and free from all traces of grease, oil and dust.
3. Once open, the cartridge should be used up without delay. To extend the open cartridge life up to few days we recommend sealing the open cartridge with moisture-proof adhesive tape. A more detailed description is available in the **Sikaflex-221** Product Data Sheet.

Preparation for the Sleeve Installation:

In preparation for the sleeve installation, the installation plug must be calibrated. "**Calibration Pressure**" is the pressure required to inflate the plug only to the diameter of the inside wall of the host pipe (See Pic.1). In the photos below, an example is provided. Here the Calibration Pressure equals 30psi (see Pic.2)

Installation:

1. Remove sleeve from the package. **Don't use the sharp knife in order not to damage rubber parts in the box!** Insert the plug into the sleeve and center the sleeve on the plug (Pic.3).
2. Attach Air Hose to the Plug, and Air Pressure Regulator (Pic.4) to the second end of the Air Hose. Connect Regulator with Air Compressor with another Air Hose. Attach transportation cables and provide a CCTV camera with corresponding cables (Pic.5).





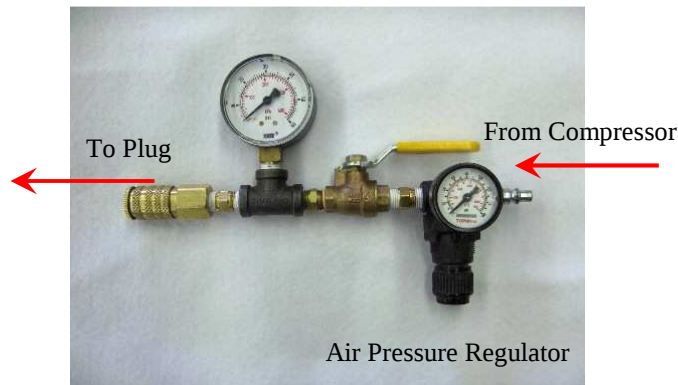
Pic.1



Pic.2



Pic.3



Pic.4



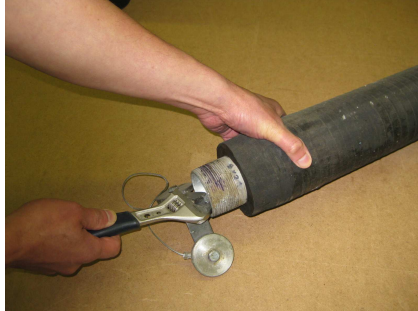
Pic.5

3. For the plug/sleeve assembly traveling, carefully inflate the plug a little bit just to snug the sleeve in place. If too much pressure is applied, the sleeve may prematurely open and then control may be lost when the assembly is being transported in the sewer. If needed remove and reattach wheels to the plug (Pic.6).
4. Apply **Sikaflex-221** evenly to cover the Rubber Jacket in the areas of the protruding O-Rings (Pic.7). The thickness of the applied adhesive bands is approximately 1 to 3mm. No gaps in the applied grout are allowed. To distribute adhesive evenly a paint roller is recommended. Depend on what is more convenient, **Sikaflex-221** might be applied on the Sleeve in vertical or horizontal position, before plug is inserted or after.
5. To shorten the curing time a slight water spray can be applied (Pic.8).
6. Pull the plug/sleeve assembly to the repair site. In the case of the joint repair with different pipe diameters the sleeve should be oriented with its bigger diameter to the bigger pipe. For the purpose of keeping good control over the installation process, the installer must monitor the accuracy of positioning the plug/sleeve assembly over the intended repair site. It is always helpful to accurately predetermine the distance from pipe entrance at the Manhole to the damage, and then marking the camera cable for easy reference.





- **Note:** Use Cable Tie to locate of the SLEEVE accurately. See Pic.9. The Cable Tie should touch leaking joint, or whatever is the target point. Then pull the Plug / Sleeve assembly so the Cable Tie touches the target location: Center of a hole, edge of a joint, end point of cracked area of the pipe. Then pull the distance on the transport cable so the sleeve will cover the target. In case of a leaking joint, pull the distance from Cable Tie to center of the sleeve.



Pic.6



Pic.7



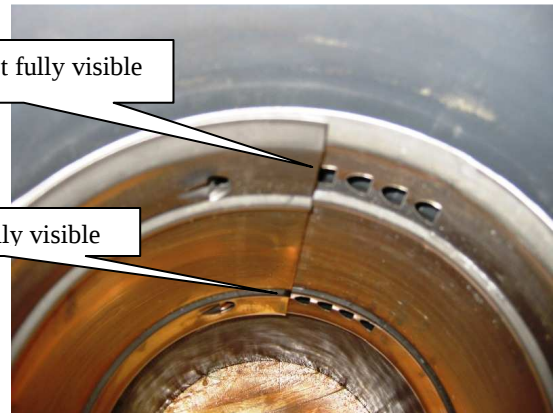
Pic.8



Pic.9

Fourth hole not fully visible

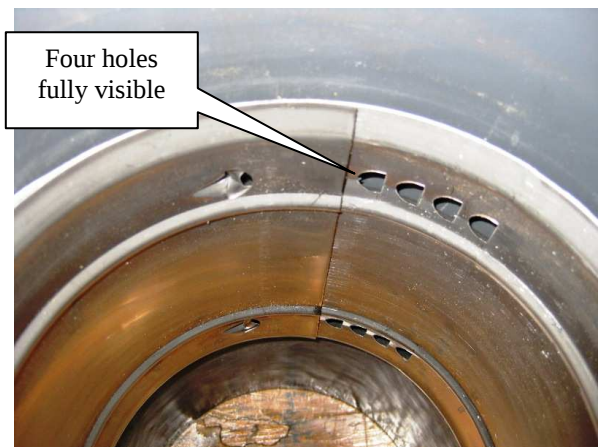
Four holes fully visible



Pic.10 (Holes quantity shown just for reference)

7. To install the sleeve, bring the air pressure to 35 to 40-psi above the calibration pressure. Check the air pressure in the hose. When it is as high as planned, release it slowly.
8. When air pressure is released, check with the camera that all locks are engaged along a single row (Pic.10); if locks are not engaged along a single row, insert the plug again, move the plug to the sleeve end with smaller diameter and apply 5psi more pressure. Check again (Pic.11).
9. Wait for 24 hours before putting the host pipe into service.

For more information, please call Lembit (Lem) Maimets or Danny Gan at 1-800-265-5696.



Pic.11 (Holes quantity shown just for reference)

