

# Pillow Packer - Installation Instructions

The pillow packer is a fold-flat, oblong inflatable packer for repairs to larger diameter infrastructure.

## Equipment checklist

- Pipe Doctor Pillow Packer
- Tractor mounted compressor
- Pull cable
- Sewer camera
- Ground sheet
- Matting
- Resin
- Insulation tape
- Gloves



## Read ALL instructions and inspect equipment BEFORE beginning.

Min. of 4 installers required for this type of repair.

- 1. Inspection & preparation:** Using a sewer camera, visually inspect the damaged area. Clean the pipe to remove any roots or other debris. Inspect a second time to verify that pipe is clear of debris and determine that Pipe Doctor is suitable for your specific application.
- 2. Measuring:** Position the camera head at the centre of the damaged area. Attach a piece of tape to the camera cable at the entry point into the sewer line. This will serve as the distance to the centre of the patch on the packer.
- 3. Prepare the Pillow Packer:** Unwrap the ground sheet. Wrap the packer in the ground sheet so that the sheet overlaps and tape into position.
- 4. Preparing the airline/pull cable:** Connect the air hose to the packer. Attach the pull cable to the harnesses at the packer ends. Securely tape the quick disconnects fitting to prevent accidental disconnection. Position the camera head at the centre of the packer and transfer the measurements from the camera cable to the air hose/pull cable with vinyl tape.
- 5. Mixing Resin:** Refer to the advised resin working time. Put on two pairs of gloves. Layout the work surface, unfold the fiberglass mat and position it bright shiny side down (woven surface down). Mix the resin until it is a consistent colour (about 1 minute).

**IMPORTANT:** Mix ALL resin required at the same time. Once mixed, move immediately to Step 6. Work quickly to apply resin, prepare patch/packer assembly and install in pipe.

### IMPORTANT

- Installer must examine and determine whether the damaged pipe is repairable. Consult factory if necessary.
- The resin used in this system is ambient cure and is greatly affected by temperature. Store in a cool place. Working and curing time will be affected by temperature. Mixing temperature recommended at 20°C. The warmer the resin, the less working and curing time. The colder the resin, the more working and curing time.
- Ensure that the packer is protected in accordance with the installation instructions before wrapping the resin-impregnated patch around the packer.
- If the damaged pipe is not cleaned of sharp edges the packer could be punctured.

**6. Wetting Out:** Pour 75% onto the fiberglass mat. Use squeegees and spatulas to spread the resin evenly and liberally to coat the surface of the mat. Flip entire mat over. Pour out remaining resin and spread out evenly. Fold the left side of the wetted mat over to the black centre line located on the woven side of the mat as shown in (Fig. 1). Fold the right side of patch overlapping the edge of the first fold by 2.5cm (Fig. 2).

**7. Folding the Packer:** Position the packer on the folded mat with approximately two thirds of the mat showing to the left side of the packer (Fig. 3.). Fold the right side of the wetted mat over the packer (Fig. 4). Fold the left side of the wetted mat over the packer overlapping the first fold and fold any excess under the packer's right edge (Fig. 5). Fold back the left side of the loaded packer (Fig. 6). Fold back the right side of the packer (Fig. 7). Fold or roll the work surface to the edges of the packer.

**8. Loading the Packer:** Secure the packer using insulation tape (one on each end of the folded packer about 450mm from either end.) Secure the wetted patch to the packer using tape around the centre of the patch and on each end of the patch (Fig. 8). Pull/carry the packer and patch to the position of the point of repair as marked on the air hose/ pull cables.

**9. Inflating the Packer:** Begin inflation process. The insulation tape will release as inflation progresses. Observe the system while inflating using an inline sewer camera. Once packer inflates sufficiently (makes contact with inner walls of pipe) so the patch is no longer visible, continue inflating the packer to 0.5 bar and maintain.

**NOTE:** If the pipe is badly damaged then care must be taken when inflating the packer to avoid further damage to the pipe and possible packer failure. Full pressure may not be needed. Consult with Source One Environmental for any questions.

**10. Removing the Packer:** Leave the packer in place under maintained pressure allowing the patch to cure for about 3 hours. Deflate the packer, then remove it using the attached pull cable(s). Inspect the point of the repair with the sewer camera.

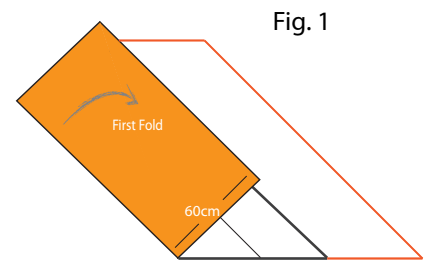


Fig. 1

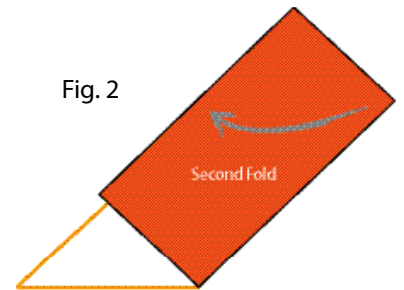


Fig. 2

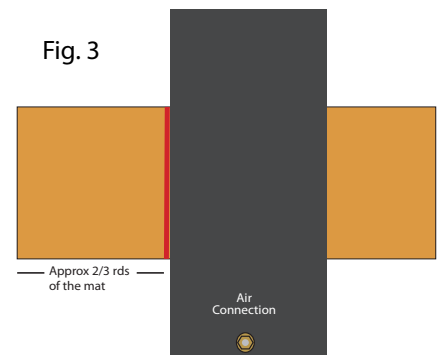


Fig. 3

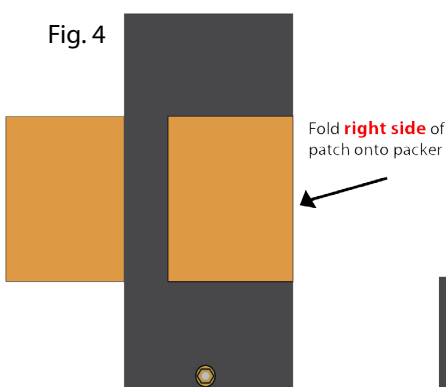


Fig. 4

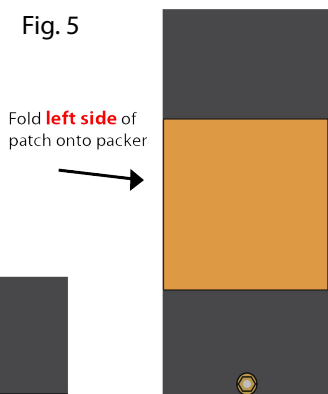


Fig. 5

Fold **left side** of packer and patch



Fig. 6

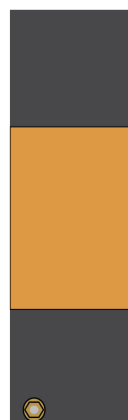


Fig. 7

Fold **right side** of packer and patch



Fig. 8



Secure with cable ties and proceed