

# Operators Check List

## Picote Pro Packer



**Before Use:** ensure correct (maximum) operating pressure for the Packer. Excessive pressure can cause Packers to fail or explode. Correct operating pressure can also be found marked on end caps.

**Picote Pro Packers are only intended for use in circular pipe profiles.**

### 3D PACKER

Model	Maximum Operating Pressure	Colour of End Caps
DN50-75 (2-3")	4.2 Bar (60 PSI)	<b>BLACK</b>
DN70-100 (3-4")	3.5 Bar (50 PSI)	<b>GREEN</b>
DN100-150 (4-6")	2.5 Bar (36 PSI)	<b>BLUE</b>
DN150-250 (6-10")	2.5 Bar (36 PSI)	<b>RED</b>

### BENDY PACKER

Model	Maximum Operating Pressure	Colour of End Caps
DN50 (2")	3.0 Bar (43 PSI)	<b>BLACK</b>
DN70 (3")	4.2 Bar (60 PSI)	<b>WHITE</b>
DN75-100 (3-4")	3.5 Bar (50 PSI)	<b>GREEN</b>
DN100-150 (4-6")	2.5 Bar (36 PSI)	<b>BLUE</b>
DN150-200 (6-8")	2.0 Bar (29 PSI)	<b>RED</b>

#### PREPARING THE PACKER:

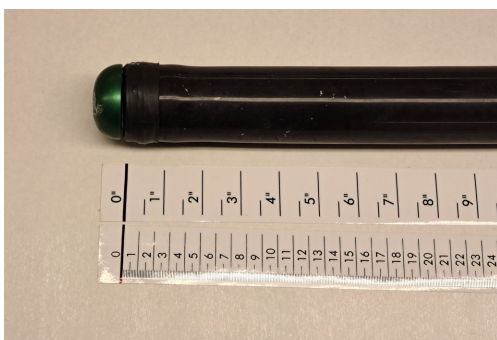
1. The Packer has to be unpressurised.
2. The outer surface of the Packer has to be covered with a stretch film. This reduces the need for cleaning the Packer and ensures a longer life-time.
3. Before covering the Packer with stretch film, attach pull ropes etc.
4. Ensure that the threaded connectors, on either of the cap ends, are not covered.
5. At an approximately a 45° angle, wrap Packer from front to rear, overlapping each pass by 150mm (6").
6. Tape each end to secure the protective wrapping.
7. Ensure that the whole length of Packer is covered with the film.



#### LOCATING THE REPAIR ON THE PACKER:

1. Due to the structure of the Packer, both ends of the Packer must be liner/patch free as the rubber does not fully inflate around the end caps.

**This "Off-limits"-Zone is measured at each end of the Packer from end of the bladder where it meets metal cap (Refer to Photograph and Table Below).**



PRO PACKER SIZE	MEASURE FOR OFF-LIMIT-ZONE
DN50 (2") - Bendy Packer DN75 (3") - Bendy Packer	7.5cm (3") 10cm (4")
DN75-100 (3-4") DN100-125 (4-5") DN125-150 (5-6")	15cm (6")
DN150-200 (6-8")	17.5cm (7")

2. Check Off-limits zone (from table)

Measure and mark the distance on the surface of the film using a marker.



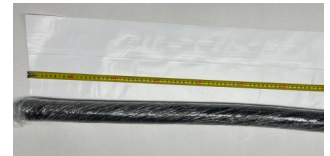
3. Cut required amount of liner/patch staying within section between Off-limit Zones.



**When inflating, Packer could swell and burst if no support hose is used.**

#### **SUPPORTING HOSE - FULL LENGTH OF PACKER:**

1. Measure out the support hose and cover the Packer from the end cap to the adapter hose located in the filler cap.



2. Fold support hose neatly around end cap. Secure the support hose in position by taping it to the both end caps. Do not cover the threaded connectors on the end caps.



3. Finally, use (doubled over if needed) rubber bands, approximately every 25cm (10"), to secure the support hose onto the bladder.



#### **SUPPORT HOSE - ENDS OF THE PACKER:**

1. When using support only on the ends, the support hose should be measured in a way that it will reach at **minimum 10cm (4")** under the patch. Same rule applies when patches are shorter than the full length.



2. Secure the support hose by taping it to the metal end cap. Use a rubber band (doubled over if needed) at the far end of the support hose. Repeat at the other end of the Packer.



3. Copy & mark "Off-Limit" measurement onto support hose surface using a marker.



4. Use the lines that you marked earlier for securing the patch, ensuring it is centered and won't extend into the off-limit zones.

5. Fold patch neatly.



***Always check local, state, & country regulations, requirements and application restrictions regarding the use of "Point Repair" for this application. Follow instructions provided by the manufacturer and supplier of the "Point Repair" system. The "Point Repair" examples used in this manual are presented for educational purposes only.***

4. There are a few ways to secure a patch to the Packer.  
In this example the patch is secured with rubber bands.
5. Start securing the patch from the edge, starting on the End Cap side using (doubled over if needed) rubber bands.
6. Depending of job site: install Navigation Guide ball, or pull rope to connector on end cap (if needed).
7. Attach the needed length/amount of Push Rods (mark location with tape).
8. Navigate the Packer until you reach the tape mark on your Push Rods. Packer should be in the proper renovation location if you have accurately marked the correct distance on Push Rods.
9. Use inspection camera to help verify that the patch is properly positioned.
10. Inflate Packer using the Pressure Regulator until it has reached desired inflation pressure.
11. Keep Packer pressurized until patch is cured completely. Prevent unauthorised access to the work site to ensure tools stay untouched during curing process.
12. Resins curing time depends of type of resin used and temperature. Curing can take longer in a cold environment.



**REMOVING THE PACKER (POST INSTALLATION):**

1. Once the patch has fully cured, release pressure from the Packer.
2. Once Packer has fully deflated, pull it from the pipe using the Picote Push Rods and/or pulling rope.
3. Use a CCTV camera to confirm that the patch has fully cured and is wrinkle free.
4. If there is no need to install another patch: remove supporting hoses, films, etc. from Packer.
5. Clean installation equipment and work environment.
6. Inspect Packer for damage or wear.

**MAINTENANCE:**

1. Before performing any maintenance always check that air supply line is disconnected.
2. Clean surface of the Packer before and after use. The primary method for cleaning the Pro Packers should be with a damp cloth and soap to clean the surfaces. (Protecting the Pro Packer with stretch film reduces the need to use cleaning solvents).
3. If the Packer has been stored for a extended, or unknown amount of time, or if you are not aware of its condition, it should be visually inspected and tested.
4. The test should be done by placing the deflated Packer inside a correctly sized pipe, carefully pressurizing the Packer inside while simultaneously monitoring for leaks. Do not exceed the recommended maximum operating air pressure!
5. Do not use the Packer if leaks are found. Contact Picote or you Picote Reseller for replacement if needed.