



PIPE TOOLS & VISES  
SINCE 1896

## Bear Hug™ Squeeze Tool System

### Air-over-Hydraulic Pump PESAPA #04330 Instructions



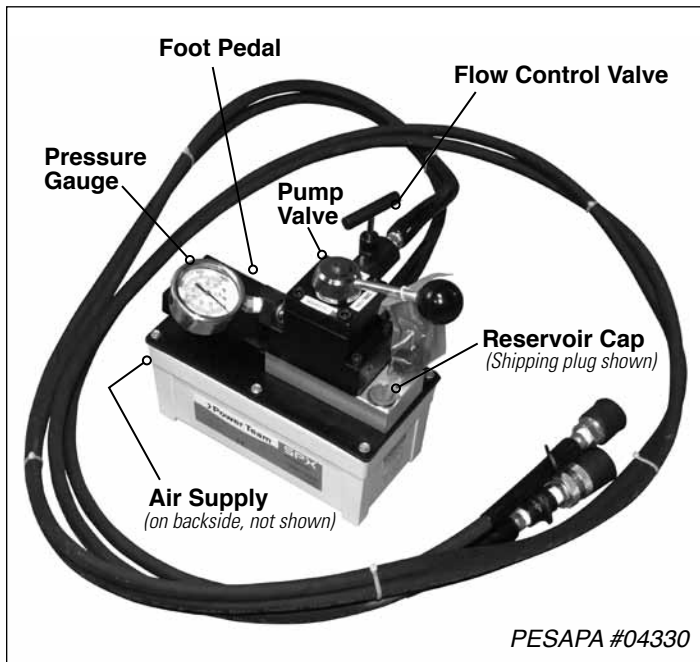
**Air-over-Hydraulic Pump PESAPA is used in conjunction with PES8BT Base Tool. Read and follow #54343 instructions for the PES8BT also.**

#### OPENING THE BOX

- Remove the red shipping plug from the pump and install the filler/vent cap.
- Remove the thread protector from the air inlet of the pump. Air fittings and hoses are not included. The air inlet is a 1/4" NPT thread.

#### PUMP INFORMATION

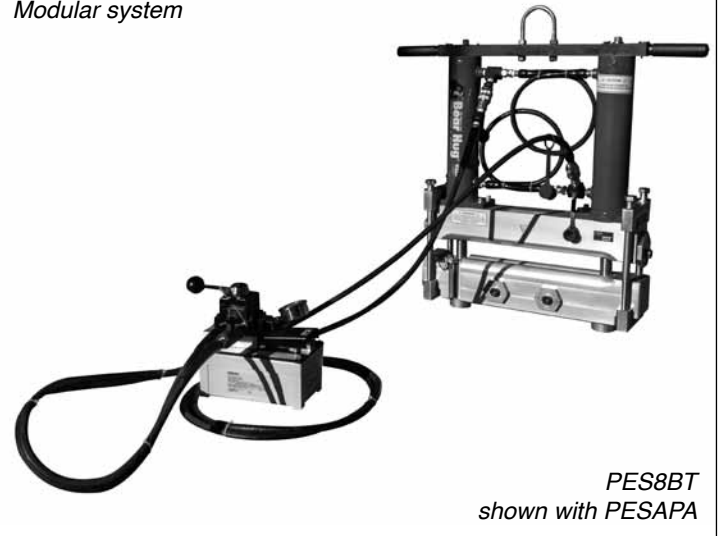
- The air-over-hydraulic pump PESAPA delivers hydraulic fluid through the use of compressed air as a power source. Regulate the air supply between 100-120 psi at the pump to obtain the rated 10,000 psi hydraulic pressure. Required air flow is 20 CFM.



PESAPA #04330

- PESAPA has a 3-position pump valve. The positions are release, neutral, and squeeze. The neutral position releases hydraulic pressure.
- PESAPA includes an internal pressure relief valve that will exhaust oil back into the reservoir beyond 10,000 psi, and a filler/vent cap used to refill and bleed the system. The pressure gauge on the pump reads outlet hydraulic pressure and not the air inlet pressure.
- PESAPA comes standard with a flow control valve (FCV) for slow metered return of hydraulic oil.
- Pressing the foot pedal on the PESAPA sends hydraulic oil through the control valve and into the system.

#### Modular system



PES8BT  
shown with PESAPA

- REED recommends the use of the PESFRLA #04331 with the PESAPA. An FRL (filter-regulator-lubricator) is key to preparing clean air for use in pneumatic system tools. Use of prepared air allows tools and equipment to operate with maximum effectiveness and efficiency.
- If an automatic in line oiler /FRL is not used, manually feed a few drops of a synthetic air line oil into the air inlet before each use of the tool.
- Maintain the PESAPA with a medium grade (AW46) hydraulic fluid\* as needed. Oil level in the reservoir should be approximately 1/2" from the filler/vent cap when the tool is in the fully closed position.

#### SQUEEZE PROCEDURE: WARNING:

- Avoid binding the tool. Keep the squeeze bars parallel to each other to avoid tool damage.
- Do not build pressure in the release mode. If pressure or pumping effort builds, stop pumping immediately and relieve excess pressure.

#### PART 1: SQUEEZING PE PIPE

1. Connect air supply to the pump and ensure proper inlet air pressure (100-120 psi). Required air flow is 20 CFM.
2. Connect pump couplers to the tool. Hand thread until the gap between mating couplers is closed.
3. Adjust pump lever to the release position.
4. Ensure the Flow Control Valve (FCV) is open fully.



*NOTE: FCV closes when turned clockwise and opens when turned counterclockwise. (approx. 7 full revolutions opens/closes FCV)*

- Press on the foot pedal until the tool is open sufficiently for the pipe. Do not overextend.
- Follow your company policy concerning static electric discharge at this stage of the procedure.

**NOTE: Reed strongly recommends use of the PEGR7 Static Grounding Device #04621 with PE Squeeze Tools. The threaded connection for the PEGR7 on the tool is on the top bar. Use a grounding accessory as a precaution against static build-up. Dissipate the charge and minimize the possibility of ignition. Additional information on static electricity is available in the PPI Handbook of Polyethylene Pipe 2nd Edition.**



- Remove the latch pin and swing out bottom bar.
- Mount the tool onto the pipe. Slightly lift latch end of bottom squeeze bar and swing close; re-insert latch pin.

**CAUTION: Center the pipe along the width of the bars and square the pipe relative to the cylinder rods.**

- Select both pipe stops based on pipe diameter and SDR. Position both pipe stops so that the corresponding flat is facing the bottom squeeze bar. Stops must match one another and chosen setting must be in bottom orientation on both sides.



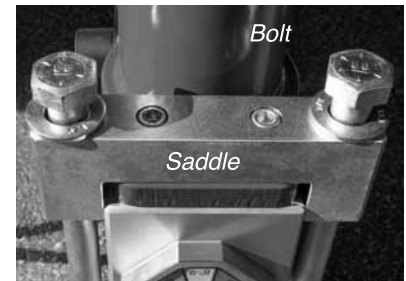
*This stop position (at bottom) is set to squeeze 6" 15.5 DR pipe. Stops on both sides of tool must match for proper use. And, desired setting must be in this bottom orientation.*

- Adjust the pump lever to the squeeze position. Pump using foot pedal to raise pressure. As the squeeze bars move closer together and the 4 saddle bolts begin to rise, continually hand thread in the 4 saddle bolts. The recommended squeeze rate to avoid pipe damage is 2.0 inches/min. Pump until pipe stops are contacted or 10,000 psig is reached. If 10,000 psig is reached wait for the pipe to relax (10-15 min.) and pump back up to pressure.

**CAUTION: Stop pumping when pipe stops contact bottom squeeze bar, further pumping will cause tool damage.**

*NOTE: Pipe stops don't need to contact bottom squeeze bar in order to satisfactorily control flow.*

- IMPORTANT:** Ensure all 4 saddle bolts are hand tight and the bolt heads are in contact with the top saddle clamps.



#### **PART 2: DISCONNECTING HYDRAULICS DURING SQUEEZE (optional)**

- Slowly adjust the pump valve to the neutral position until all hydraulic pressure is on the saddle bolts. Pressure gauge should read zero.

*NOTE: Adjusting the pump lever under pressure may take more effort – this is normal.*

- The hydraulics can now be disconnected.

#### **Part 3: RELEASING PE PIPE**

- Reconnect hydraulics and adjust the pump lever to the squeeze position. Pump to raise pressure until the saddle bolts are loose enough to rotate.
- Close FCV fully before releasing pipe.
- Loosen and fully disengage threads on the 4 saddle bolts before releasing pipe.
- Slowly move the pump valve to the neutral position. Pressure gauge should read zero.

*NOTE: Adjusting the pump lever under pressure may take more effort – this is normal.*

- Slowly open the FCV, close as necessary to achieve desired release rate. The recommended release rate to avoid pipe damage is 0.5 inches/min.
- When the squeeze bars no longer open due to pipe pressure, move the pump lever to the release position. Pump until there is enough room around the pipe to remove the tool.
- Remove the latch pin and swing the bottom squeeze bar clear of the pipe. Remove the tool from the pipe.

#### **PART 4: CARE AND MAINTENANCE**

- Wipe down and clean the tool.
- Store in a dry place with tool in the closed position.

\*SDS sheets are on file with Reed Manufacturing and can be found online at [www.reedmfgco.com](http://www.reedmfgco.com). For the Bear Hug™ series, REED uses an SDS for AW Hydraulic Oil ISO 46.