

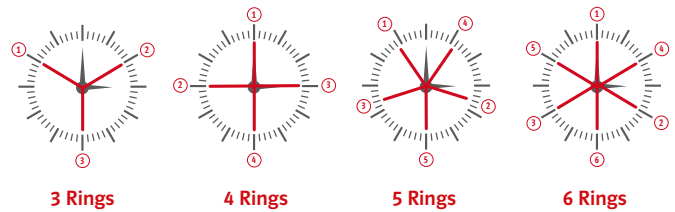
## Pump and Valve Packing Installation Instructions

1. Remove all old packing and the installed lantern ring, if there is one.
2. Clean shaft sleeve and bore from product residue.
3. Inspect stuffing box sealing areas for wear.
4. If lubricant is used to aid packing installation it should be water-based lubricant only. **Do not** use oil or grease for the lubricant!
5. Install packing ring one at a time.
6. Pump packing is usually installed with butt cut. Insert both cut ends together then work away from the cuts. **Do not** "snake" the packing in.
7. Distribute the cuts symmetric using the displayed pattern.
8. If using a trapezoidal packing (TP) there's a red arrow on the OD of the packing that should be installed pointing in the same direction as the equipment rotates.

9. See cut locations below, based upon the number of rings being installed.

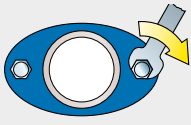
**Ring 1 is the first ring installed on the stuffing box bottom**

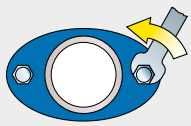
**\*\*If installing valve packing go to step 16**




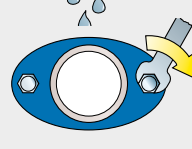
### Installation of Pump Packing

10. Seat each ring individually with a suitable compression tool against the stuffing box bottom. Use the compression tool with the gland follower to apply pressure and seat at least the first 2 bottom rings.
11. If used, install lantern ring in correct position. Ensure water will flow into the lantern ring through the stuffing box connection.

12.  Once all rings are installed, tighten the gland follower until you feel a response / tightness on the wrench indicating the packing is seated throughout the stack.

13.  Maintain that compression for at least 5 minutes, check if it is still there, if not, re-tighten. Once the compression is holding, back off, let the top rings breathe and snug the nuts finger tight.

14.  Monitor leakage after start up. Allow a high amount example a thin stream and adjust to desired drip rate accordingly.

15.  Tighten nuts only 1/6 turn (1 flat) at a time with at least 5 min time between further adjustments. Pump packing must leak! It is recommended 5 ml/min or 1 tbsp/min, per 25 mm or 1" shaft diameter. Example, a 2" shaft would need at least 2 tbsp/min.

**Never tighten gland nuts too fast!**

**Take your time. Never loosen gland nuts under pressure!**

### Installation of Valve Packing

16. Valve packing is usually installed with skive cut. Insert one end with cut area facing up then work away from this end around the circumference. Install all rings following pattern Step 9. Once all rings are installed move stem in closed position. Tighten the packing ring stack with the gland follower with maximal pressure to minimize further compression.  
**Do not overload gland bolts or stuffing box parts.**

17. Move the stem at least 3 times from open to close position and check if the applied compression is still apparent. In case of consolidation retighten until the compression is steady. For orientation a minimum compression must be at least 5 N/mm<sup>2</sup> // 725 lbf/in<sup>2</sup> for liquids and double of that for gaseous products. To achieve a low emission result on VOC applications, it can be necessary to apply a compression of up to 70 N/mm<sup>2</sup> // 10.000 lbf/in<sup>2</sup>.

#### SAFETY RECOMMENDATIONS

Please read these instructions carefully. Contact ProPack AG if any points are unclear. The selection of the product (type, suitability, materials) should be done by authorised persons. A wrong selection by unauthorised persons assumes no liability by ProPack AG. Pay due attention to the rules and regulations governing occupational safety, accident prevention, working with hazardous materials and normal usage. All technical information and advice is based on our experience and will be given most conscientiously but without any liability. We reserve the right to modify specifications at any time.

Operation Manual:

