

# Installation Instructions

## Valve Stem Packing

1. Remove all of the old packing from the stuffing box. Clean box and stem thoroughly and examine stem for wear and scoring. Replace stem if wear is excessive. Recommended surface finishes are 32 (micro inches) AARH on the stem, and 125 (micro inches) AARH maximum on the box bore.
2. Measure and record stem diameter, stuffing box bore and box depth. To determine the correct packing size, measure the diameter of the stem (inside the stuffing box area if possible), and the diameter of the stuffing box bore. Subtract the I.D. measurement from the O.D. measurement, and divide the difference by two. This is the required cross-sectional size.
3. Always cut the packing into individual rings. Never wind the packing into a coil in the stuffing box. Rings should be cut with a butt joint. Cut rings by using a spare stem, a mandrel with the same diameter as the stem or a packing cutter. The illustration shows how to use a mandrel to cut packing.

Hold the packing tightly on the mandrel, but do not stretch excessively. Cut the ring and insert it into the stuffing box, making certain that it fits the packing space properly. Each additional ring can be cut in the same manner.

4. Install one ring at a time. Make sure it is clean, and has not picked up any dirt in handling. Seat each ring firmly, making sure it is fully seated before the next ring is installed. Joints of successive rings should be staggered and kept at least 90° apart. When enough rings have been individually seated so that the nose of the gland follower will reach them, individual tamping of the rings should be supplemented by the gland follower. Bring down the gland follower and apply load with the gland bolts.
5. After the last ring is installed, bring down the gland follower and apply 25% to 35% compression to the entire packing set. If possible, record the gland nut torque values and actuate the valve through five (5) complete cycles (ending with the stem in the down position). Retighten the gland bolt nuts to the previously recorded torque value after each full actuation.

