



Industry Packing & Seal, Inc.

MECHANICAL PACKING and SEAL SPECIALIST

WICKET GATE PACKING INSTALLATION INSTRUCTIONS

- 1: Remove all old packing. Examine the rings, this will indicate how the packing was previously installed. Look for compression of the first 2 – 3 rings of packing, by examining to see if the compression was placed on the rings during the last installation. This will indicate that they were preloaded or not. If the first 2 – 3 rings appear to be soft and pliable, this indicates they were not preloaded, which results in excessive leakage.
- 2: Clean stuffing box and shaft thoroughly.
- 3: Examine shaft and stuffing box for wear and/or erosion.
- 4: Repair shaft or shaft sleeve if excessive wear exists.
- 5: If preformed or die formed rings were not supplied, then cut rings of packing to the PROPER size, using a mandrel of the same diameter of the shaft.
- 6: Cut packing at a (45° angle), forming a ship-lap joint.
- 7: Install FIRST RING and seat it all the way to bottom of the stuffing box, with the use of a Tamping Tool.
- 8: Install second ring pushing it all the way to the bottom of the stuffing box.
- 9: Install One Ring at a time. Never push packing with packing, seat each ring properly one ring at a time.
- 10: Installation of the first three rings should allow for the gland follower neck to be placed into the stuffing box and compress the first three rings at least 15% – 25%. This is preloading the first rings, with the use of the gland follower.
- 11: Install remaining rings one at a time, using the gland follower or tamping tool to seat the remaining rings.
- 12: **IMPORTANT NOTE:**
Stuffing boxes that require 4 or more rings of packing, place joints 90 degrees apart:
(Example: the number of rings up to 4 rings and divided into 360).
Each ring is 90 degrees apart (12, 3, 6, 9 o'clock positions). Repeat this until the rest of the rings are installed.
- 13: In the case of deep stuffing boxes of 5 rings or more, the first 2 or 3 rings should be seated one at a time as discussed and with a the neck of the gland follower in the stuffing box and/or use of a Tamping Tool. Tighten Gland follower down until you feel a strong resistance. Tighten 2 or 3 turns more on the gland follower nuts or bolts. (Place a 15% to 25% compression of packing on the gland nuts or bolts.)
- 14: Seat each remaining ring FIRMLY against the proceeding ring ONE at a time. No need to compress these rings as with the first 2 or 3 rings.

- 15: The last ring when installed, replace Gland follower and tighten bolts or nuts and they should be tightened until you can feel the packing resisting slightly. The neck of the Gland follower should be inside the stuffing box a minimum of 1/8". Make sure no packing is visible from the outside of the stuffing box. The Gland follower should be straight not cocked; it should be even all the way around.
- 16: Make sure the cuts stay closed throughout the installation procedure.
- 17: Start equipment per plant procedures and safety guidelines.
- 18: Make adjustments if necessary.

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