

B. W. SINCLAIR INC.

BULK MATERIAL HANDLING
<http://www.bwsinclair.com>

P. O. Box 1111
13923 US Hwy 287 North
Wichita Falls TX 76307-1111
Phone 940-766-2556 Fax 940-766-0430
e-mail: sales@bwsinclair.com

APPLICATIONS DATA SHEET

BWSI PACKING GLAND COMPRESSION SEAL

- Description:** The SINCLAIR Packing Gland Compression Seal is a two-piece seal housing fitted with three-rings of 1/2" square braided pump packing material. The packing material varies according to the application, with special materials available for sanitary and food service, standard duty, and high temperature service. When required by the application, the seal can be modified to include a machined lantern ring and an air inlet fitting for purging the seal during operation. The introduction of air, or another purge media, helps to prevent the discharge of conveyed materials along the rotating shaft and through the seal housing.
- Design:** The seal consists of a carrier housing, welded or bolted to the conveyor housing, fabricated from machined tubing and a heavy back plate. The carrier tube is fitted with three (3) draw bolts. Into the carrier housing and around the shaft, we install three (3) rings of 1/2" square braided packing material. In a purged application, there is a machined steel lantern ring installed between the first and second rings of this packing. Then the compression ring is installed. The compression ring consists of a flange and a machined tube, designed to slide inside the carrier tube and contact the outside ring of packing. The flange has mating holes which slip over the ends of the three (3) draw bolts, and washers and hex nuts are used to complete this connection. When sequential pressure is applied to the draw nuts, the compression ring tightens against the packing, deforming it and compressing the material around shaft.
- Purge pressure:** A pressure regulator should be placed in the air line to the seal, which is normally a 1/4" NPT connection. The pressure into the seal should be set for 1-2 lbs. of pressure greater than the pressure inside the housing.
- Purge gas volume:** The amount of purge gas required for the normal operation of the seal is 0.85 - 1.03 m³/hr., or 0.5 - 0.6 SCFM. This volume is for each seal.
- Re-packing:** Seal re-packing kits are available for SINCLAIR seals. Instructions are as follows:
1. Lock out power to conveyor equipment.
 2. Loosen and remove the three (3) compression hex nuts.
 3. Withdraw the compression ring away from the carrier ring.
 4. Using a bent rod or wire, "fish out" the first two (2) old rings of packing.
 5. Use the same device to remove the lantern ring, if a purged seal.
 6. Remove the final ring of braided packing material.
 7. Clean the housing.
 8. Install one (1) new ring of packing around shaft and push into housing.
 9. Reinstall lantern ring on purged seals.
 10. Reinstall two (2) additional rings of packing. Stagger the lap seams.
 11. Reinstall compression ring and compression nuts and tighten sequentially.
 12. Check seal and readjust after restarting equipment.