

# Successful Seal Instructions

- 1. Read entire installation procedure** before beginning installation.
- 2. Handle components carefully.** Careless handling of the critical seal components may result in chipping, cracking or breakage.
- 3. Do not touch sealing areas.** The sealing faces, O-rings, wedges, and bellows must be kept perfectly clean. Even fingerprint can cause a seal to leak. Primary and secondary sealing areas must be kept clean and undamaged to ensure a proper seal. Rubber gaskets tear easily when handled carelessly.
- 4.** Make sure that the **shaft or sleeve is free of burrs, nicks, grooves, and sharp edges.**
- 5. Bleed all trapped gases from the seal cavity before start-up,** otherwise the seal cavity may vapor lock and burn the seal.
- 6. All valves must be open on the suction side of the pump** so that the seal is assured of a positive flow of liquid at all times. Failure to do so will also cause the seal to burn.

# INSTALLATION INSTRUCTIONS

## TYPE 21 DOUBLE SHAFT SEAL

### CAUTION

This seal is a precision product and should be handled with extreme care. Be especially careful of the lapped sealing surfaces of the rotary washer and stationary seat.

### LAPPED RUNNING FACES

The lapped running surfaces of the rotary seal head and stationary seat must be treated with care. **KEEP CLEAN. DO NOT SCRATCH.** Use a clean, soft cloth during installation. Protect the faces. Install both the seat and rotary square to the shaft. Check the stationary seat installation from behind the seal cavity for squareness.

### THE SEAL IS SUPPLIED WITH A PACKET OF LUBRICANT.

#### 1. INBOARD STATIONARY SEAT

Stationary seat is supplied with either an O-ring or cup.

Clean the seal seat cavity of the backplate and lubricate. Position the stationary seat with the silver dot down (away from you) and the lapped face (shiny side) facing you.

Lubricate the seat O-ring or cup and press the stationary seat in seal plate squarely and evenly. Be careful not to scratch or touch the lapped surface of stationary seat.

Inspect the face of the stationary seat to be certain there is no dirt on the face. If there is any dirt or fingerprints on the face, wipe it off carefully with a soft cloth.

#### 2. INBOARD ROTARY SEAL HEAD

Clean, polish and lubricate the shaft sleeve.

Check lapped faces on the stationary seat and rotary seal head. Be certain no dirt is on either face.

Slide the rotary seal head on the shaft with the carbon rotating ring facing the inboard stationary seat. Press the drive band until the head seats firmly against the seat.

#### 3. SPRING

Place the spring over the drive band on the rotary seal.

#### 4. OUTBOARD ROTARY SEAL HEAD

Inspect the face on the rotary seal head to make sure there is no dirt on the face. If there is any dirt or fingerprints on the face, wipe it off carefully with a soft cloth.

Lightly lubricate the shaft sleeve and the rubber bellows of the rotary seal and slide the rotary seal head on the shaft pressing on the outer ring of the stainless steel seal retainer until the head seats firmly in the seal spring.

#### 5. OUTBOARD STATIONARY SEAT

Stationary seat is supplied with either an O-ring or cup.

Clean the seal seat cavity of the backplate and lubricate. Position the stationary seat with the silver dot down (away from you) and the lapped face (shiny side) facing you.

Lubricate the O-ring or cup and press the stationary seat in the seal plate squarely and evenly.

Gently reinstall seal plate into backplate, which will compress the spring assuring correct pressure on the lapped faces. Install 3 cap screws to secure the seal plate into position. To avoid damage to the seal, don't allow the seal plate to slide back after the spring has been compressed.

**NOTE: The lubricant supplied with the seal is the only approved lubricant. DO NOT USE OTHER LUBRICATING LIQUIDS.**

