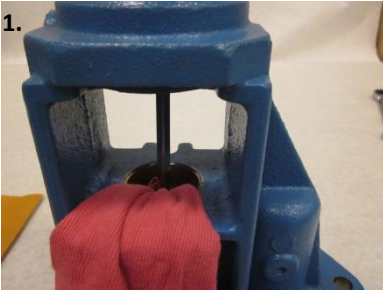


# Installation Instructions

## 11, 17, 22, 48 Mechanical Seal HB Series



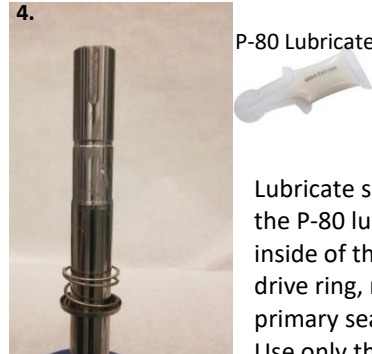
1. Clean the packing bore. Check the shaft to make sure there are no sharp edges, burrs, scratches, or corrosion where the seal must pass over.



2. DO NOT place face(s) down on any surface unless protected by clean cloth or paper. Make sure the shiny side of the mating ring surface is free from all scratches. Lay out parts on flat clean surface. Take care not to cut or damage any seal parts, as these can easily be damaged if mishandled.



3. Retaining Ring  
Insert the shaft into the top of the driveplate until it stops on the table. Do not push the shaft all the way through. Slide the retaining ring down the shaft until the first groove. Fit the retaining ring into this groove.



4. Slide down the spring holder onto the shaft until it rest on top of the retaining ring. Slide spring over shaft allowing it to rest on the spring holder.  
P-80 Lubricate  
Lubricate shaft from spring up to keyway using the P-80 lubricant included. Also lubricate the inside of the seal boot. (Seal boot consist of the drive ring, retainer, flexible diaphragm and primary sealing ring.) Ref. Pic. in step 2 above Use only the P-80 Lubricant.



5. Slide the seal boot onto the shaft until it meets the spring. Ref. Pic. in step 2 above



6. Carefully clean both faces of the mating ring with a clean rag to remove all traces any foreign material. Slide the mating ring onto the shaft until it sits on top of the seal boot. Ref. Pic. in step 2 above



7. Slide the ball bearing on to the shaft into place and tighten down the set screws locking the ball bearing into place. Push the shaft down until the ball bearing slides into position and stops.



Install the ball bearing retaining ring.



8. Slide the mechanical seal retainer plate around the shaft above the mating ring. Push and hold down the mechanical seal retainer plate by hand onto the faceplate and bolt down with the provided bolts and nuts.



Nuts & Bolts Retainer Plate