

CG-2077-M

Mechanical Seal Stir Bearing Instruction Manual



The Chemglass Mechanical Seal Stir Bearing is the only design in the market that will permit you to use your current glass, metal or PTFE-covered stir shaft. The design allows you to have the flexibility of vertical adjustment and still choose your agitator diameter and style. The bearing has a ferrule and locking nut to ensure that the seal rotates properly, and is supplied complete with a gold plated wrench. Lower joint adapters are supplied complete with perfluorinated o-rings and a loosening nut.

Please note: bearing body and lower joint adapter must be ordered separately.



Please Note: The CG-2077-M Mechanical Seal Stir Bearing housing and components should not be cleaned or submersed in solvents. Bearing should be removed during cleaning to prevent solvent exposure.

FEATURES:

- Dry running mechanical seal rotates with the shaft, providing for a vacuum and pressure-tight seal.
- Unlike conventional PTFE bearings, Chemglass' mechanical seal stir bearing will not "flake", contaminating your reaction.
- All seals are made using perfluorinated o-rings providing outstanding resistance to the most aggressive chemicals.
- Bearing seals are rated up to 2,000rpm* with the seal life being 3,000 hours.

*Max RPM will depend on shaft and/or agitator type, along with alignment of motor and coupling. Chemglass recommends a max of 500rpm with used with any glass vessel, lid or shaft. Longer length stirrer shafts are required for use with CG-2077-M mechanical seal stir bearings.

Installation:

Step 1: Assemble reactor system, with vessel, lid and stirrer shaft complete with agitators. Stirrer shaft should extend above the center neck of the lid.



Step 2: Attach the lower PTFE joint adapter and remove the stainless steel spindle nut and PTFE ferrule.



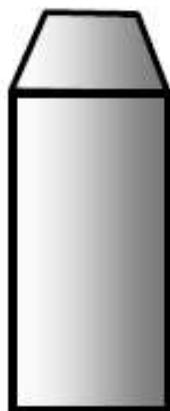
Step 3: While holding the stirrer shaft, slide the mechanical seal stir bearing over the end of the shaft (a small amount of mineral oil can be applied to the stirrer shaft to help), through the bottom of the bearing. Once the bearing is installed in the center neck, continue to pull the shaft through the bearing and adjust to proper height.



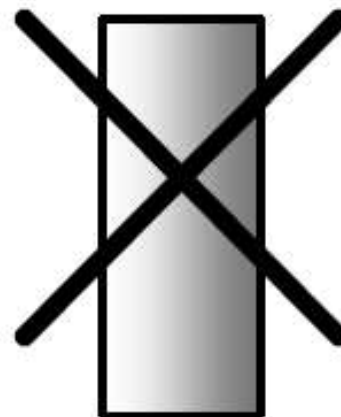
SHAFT NOTES: BEARING IS DESIGNED FOR USE WITH ROUNDED OR BEVELED SHAFT ENDS. DO NOT USE WITH FLAT ENDED SHAFTS.



Rounded



Beveled



Flat

Step 4: Slide the PTFE ferrule (bevel down) over the shaft, followed by the stainless steel spindle nut. Tighten the top spindle nut until the spindle begins to rotate.



Step 5: Using the brass wrench, hand tighten the nut as necessary. The nut will secure the ferrule to the shaft which will keep the shaft from spinning in the spindle. Please note: if both the spindle and the shaft rotate separately, then further tightening is needed. The stirrer shaft and spindle should rotate simultaneously. Do Not Over Tighten.



Operation: The mechanical seal stir bearing can be used for either clockwise or counterclockwise operation. Due to the design of the bearing, it will generate heat during normal use. The housing temperature will rise approximately 40-50°C.

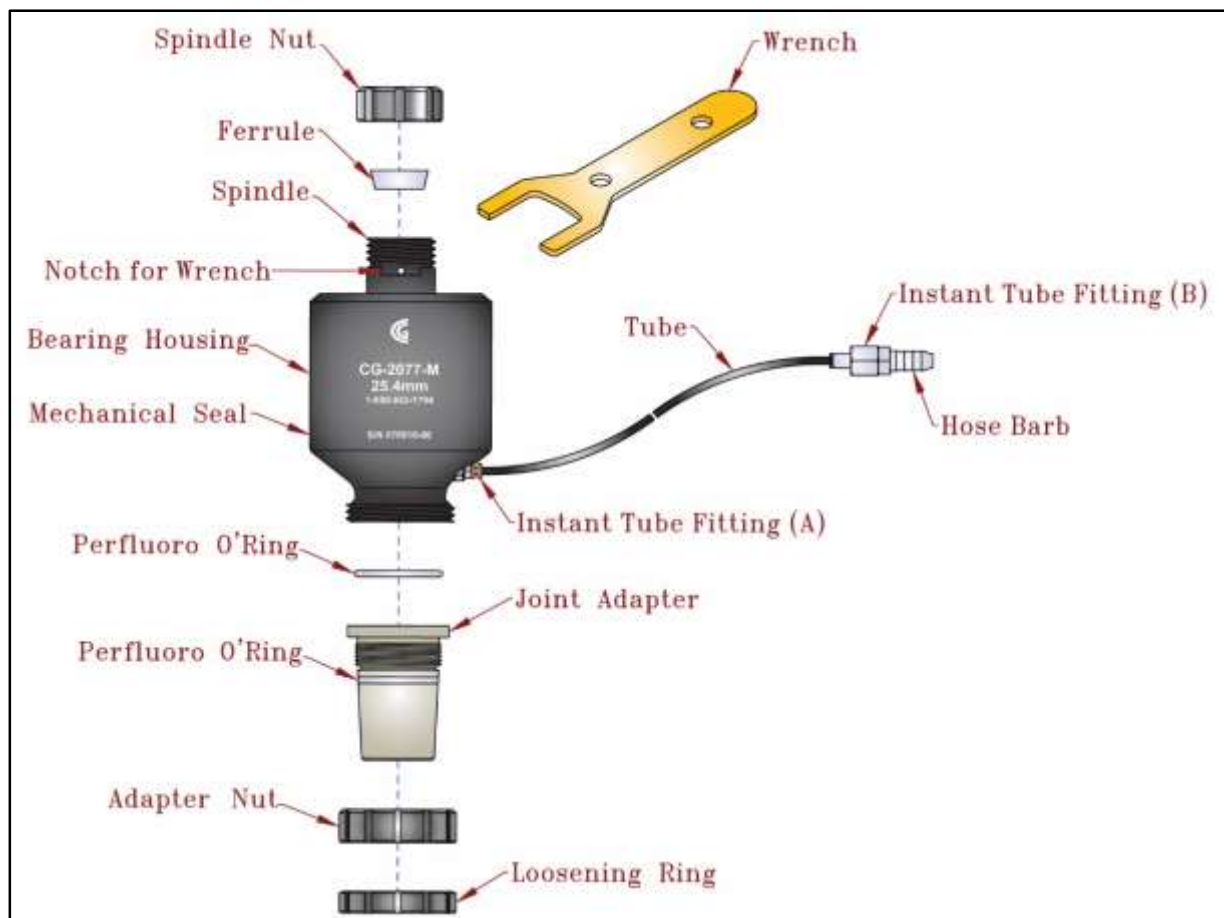
CAUTION: THE PURGE PORT MUST BE PLUGGED IF THE BEARING WILL NOT BE CONNECTED TO NITROGEN.

Nitrogen Purge Set-Up: Our mechanical seal stir bearing can be used with or without using a nitrogen purge. The bearing is included with an “Instant Tube Fitting” already in place.

Step 1: Place one end of the black nylon tube into the “instant tube fitting” (A).

Step 2: Insert the other end of the nylon tube into the “instant tube fitting” (B). Tube will lock itself in place.

Step 3: Thread the nylon hose barb into the “instant tube fitting” (B) until tight. Hose barb will accept 3/8”ID tubing, which will fit most nitrogen ports in hoods.



Set-Up Without Nitrogen Purge:

Step 1: Remove the “instant tube fitting” (A) using an Allen wrench.

Step 2: Place a #007 Viton® o-ring onto a 10-32 x 3/16” screw.

Step 3: Thread screw into the mechanical seal stir bearing where the “instant tube fitting” (A) was inserted.

Note: To remove the nylon tubing from the “instant tube fitting”, simply push down on the o-ring of the fitting.

CAUTION: WHEN PLACING THE “INSTANT TUBE FITTING” (A) BACK INTO THE MECHANICAL SEAL STIR BEARING, BE SURE NOT TO OVER TIGHTEN, THREAD OF FITTING WILL SNAP OFF. DO NOT USE PURGE PORT AS A VACUUM CONNECTION.