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CHEMGLASS
Scientific Apparatus

**MECHANICAL
SEAL STIR
BEARING**



INSTRUCTION MANUAL

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INSTALLATION:

Step 1 – Assemble Reactor System, with Vessel, Lid & Stirrer Shaft Complete with Agitators, Stirrer Shaft Should Extend Above The Center Neck of Lid, Refer to Picture **M-01**



M-01

Step 2 – Attach Lower Teflon Joint Adapter & Remove Stainless Steel Spindle Nut & Teflon Ferrule, Refer to Picture **M-02**



M-02

Page 2

Features:

- Dry Running Mechanical Seal Rotates With The Shaft providing For A Vacuum And Pressure Tight Seal
- Unlike Conventional Teflon Bearings, 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 At Up To 2000 RPM** With The Seal Life Being 3000 hours

***** MAX RPM WILL DEPEND ON SHAFT AND/OR AGITATOR TYPE, ALONG WITH ALIGNMENT OF MOTOR AND COUPLING. CHEMGLASS RECOMMENDS A MAX OF 500 RPM WHEN USED WITH ANY GLASS VESSEL, LID OR SHAFT. LONGER LENGTH STIRRER SHAFTS ARE REQUIRED FOR USE WITH CG-2077-M MECHANICAL SEAL STIR BEARINGS *****

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Mechanical Seal Stir Bearing

Our NEW mechanical seal bearing is the only design on the market that will permit you to use your current glass, metal or Teflon covered stir shaft. The design allows you to have the flexibility of vertical adjustment and still choose your agitator diameter and style. 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.



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Step 3 – While Holding Stirrer Shaft, Slide the Mechanical Seal Stirrer Bearing Over the End of Shaft, a Small Amount of Mineral Oil Can be Applied to the Stirrer Shaft to Help, Through the Bottom of Bearing, (See Shaft Notes on Page 6), Once the Bearing is Installed in Center Neck, Continue to Pull Shaft Through Bearing & Adjust to Proper Height, Please Refer to Picture **M-03** & **M-04**



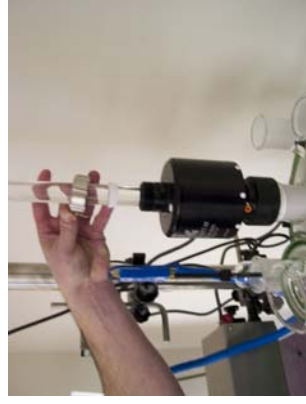
M-03



M-04

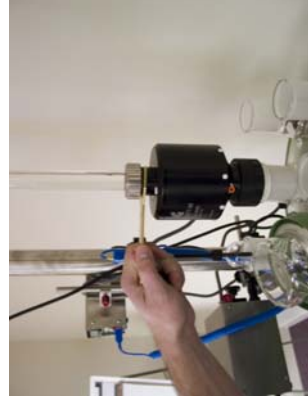
Page 3

Step 4 – Slide Teflon Ferrule, Bevel Down, Over the Shaft Followed By the Stainless Steel Spindle Nut, Tighten Top Spindle Nut Until Spindle Begins to Rotate, Please Refer To Picture **M-05**



M-05

Step 5 – Using the Brass Wrench, Hand Tighten Nut as Necessary. The Nut Will Secure the Ferrule to Shaft, Which will Keep the Shaft From Spinning in the Spindle. Please Note, If both the Spindle & Shaft Rotate Separately, Then Further Tightening is Needed. The Stirrer Shaft & Spindle Should Rotate Simultaneously, Do Not Over Tighten, Please Refer to Picture **M-06**



M-06

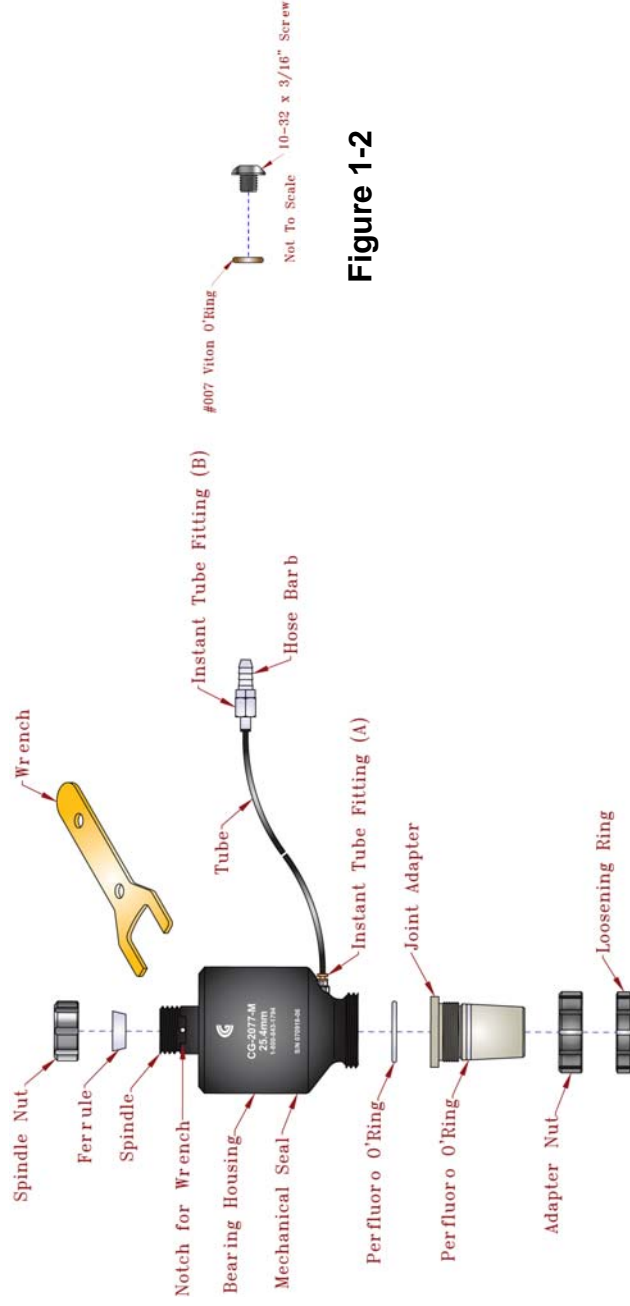


Figure 1-2

Figure 1-1

SETUP WITHOUT NITROGEN PURGE:
Refer to Figure 1-1 & 1-2 on Page 9

- Step 1** – Remove “Instant Tube Fitting (A)” with a 5/16” Socket.
- Step 2** – Place #007 Viton O’Ring onto 10-32 x 3/16” Screw
- Step 3** – Thread Screw into Mechanical Stir Bearing where “Instant Tube Fitting (A) was inserted.

Caution: When Placing “Instant Tube Fitting (A)” Back Into Bearing, Be Sure Not To Over Tighten!!! Thread of Fitting Will

***To Remove Nylon Tubing From Instant Tube Fitting, Simply Push Down On The O’Ring Of The Fitting**

*****Do Not Use Purge Port As A Vacuum Connection!*****

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Tighten Instruction

When Tightening Spindle Nut, Hold Wrench in Place & Rotate Nut Clockwise (Arrow). **{PLEASE REMEMBER NOT TO OVER TIGHTEN}**. Tighten Just Enough so the Spindle & Shaft Rotate Simultaneously

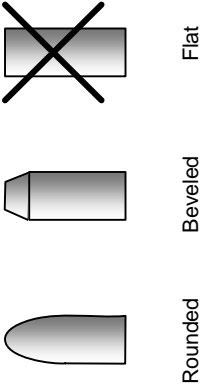
OPERATION: Bearing Can be Used for Either Clockwise or Counter Clockwise Direction. Due to the Design of the CG-2077-M Bearing Will Generate Heat During Normal Use. The Housing Temperature Will Rise to Approximate 40°-50°C.



M-07

Page 5

SHAFT NOTES: Bearing is designed for use with rounded or beveled shaft ends. **DO NOT** use with a flat ended shaft.



Page 6

NITROGEN PURGE SETUP:

Our mechanical stir bearing can be setup with or without using a Nitrogen Purge. The bearing will be sent with “Instant Tube Fitting (A)” already in place. Please refer to **Figure 1-1 on Page 9** for setup.

- Step 1** – Simply place one end of the Black Nylon Tube into “Instant
- Step 2** – Insert other end of Nylon Tube into “Instant Tube Fitting (B)”, again, tube will lock itself in place.
- Step 3** - Thread Nylon Hose Barb into “Instant Tube Fitting (B)” until tight. Hose Barb will accept 3/8” I.D. Tubing, which will fit most Nitrogen Ports in hoods

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