



# A Guide to Assembling Reactor System: Large Scale

*You are a proud owner of an Ace Glass Reactor system - Congratulations!*

Lay out all pieces to compare with packing list. Contact Ace Glass immediately if something is missing. For optimum assembly, we recommend having at least two people, following the instructions in this order.

1. Ensure that the Support Stand is securely level on the floor. Lock casters on Reactor Stand.
2. Fasten the Chuck/Coupling to the Motor Chuck (rod-mounted motors). For flange-mounted motors, secure Chuck/Coupling AFTER placing on the Motor Mount.
3. Secure the Motor to the Flange/Rod Mount at the top of the Support Stand.
4. Attach the Flush Seal Valve with Beaded Pipe Coupling to the Bottom of the Flask. If necessary, slightly wet the inside of the PTFE liner with fingertip dipped in water. Keep bottom plug in open position without removing plug entirely.
5. Place Flask on Support Shelf (or on the Heating Mantle, for Non-Jacketed Reactor) of Stand and secure with Bolt Latch Clamp). Be careful with the Bottom Outlet.
6. For systems that have Heating/Cooling Coil, place Coil inside of Reactor, gently resting on the bottom.
7. Assemble Agitator(s) on the Stir Shaft by securing the bottom first with its bushing, if included.
8. Place the assembled Stir Shaft with Agitator(s) into the Flask, gently resting on the bottom. Do not secure to Chuck quite yet.
9. Place Gasket/O-Ring on Flask flange, then the Head on the Flask by gently leaning the Stir Shaft- slightly loosening first the Bolt Latch Clamp, if necessary, with the Stir Shaft through the center neck from the bottom. If utilizing Heating/Cooling Coil, also consider that the Coil ends need to carefully be aligned to fit through their corresponding joints when placing the Head.
10. For KF flanges lay one half of the Clamp on the Flask, open-end up. Clamps with Insert Arcs should be connected with their respective pins, leaving to link the last Arc after placing it inside of the bottom Clamp. The newer 400mm and 450mm bottom Clamps will need to be split via the two bolts.
11. Use the Clamp to Very Loosely secure the Head to the Flask. For KF flanges, place the other half of the Clamp open-end down with Inserts, over the Head. Nuts and Bolts should be secured in star pattern and tightened appropriately with corresponding torque wrench and socket.
12. Place the assembled glass Bearing in the center joint of the Head, with PTFE Sleeve, through the top of the Stir Shaft.
13. The PTFE Gasket goes on top of the Bearing.
14. Place collar on top of the Gasket and tighten screws evenly on both sides. [The Collar is a safety feature to prevent the Stir Shaft from dropping into the Flask.] Gasket and Collar are not included with PTFE and Pressure Bearings.
15. Raise the Stir Shaft to secure into the Chuck/Coupling (that is already attached to the Motor Chuck – see step #3). If Bottom Agitator has Stabilizing Pin, screw Bottom Valve Plug so that the Agitator Pin sits in it.
16. Once the Stir Shaft is in place, move the Gasket and Collar so that they sit on the Bearing, and tighten the Collar on to the Shaft.
17. If using Heating/Cooling Coil, make sure the Coil ends are secured with Bushings and O-Rings in their corresponding Adapters in neck openings of Head. Coil should not rest on bottom when running the Reactor.
18. All Adapters and Peripherals (i.e. Condenser, Funnel, Temp Probe, etc) should be placed. Utilize offset Adapters where necessary to avoid contact with Motor and other items. We recommend PTFE Sleeves for joints- or grease.

*Note: Do not overtighten O-Rings used with Ace internal threads; hand-tighten only. Thread the Bushing or Plug just until the O-Ring expands; then a ¼ turn more.*



*If you have any questions, please contact your local Sales Rep, or ask for our Technical Department:*

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