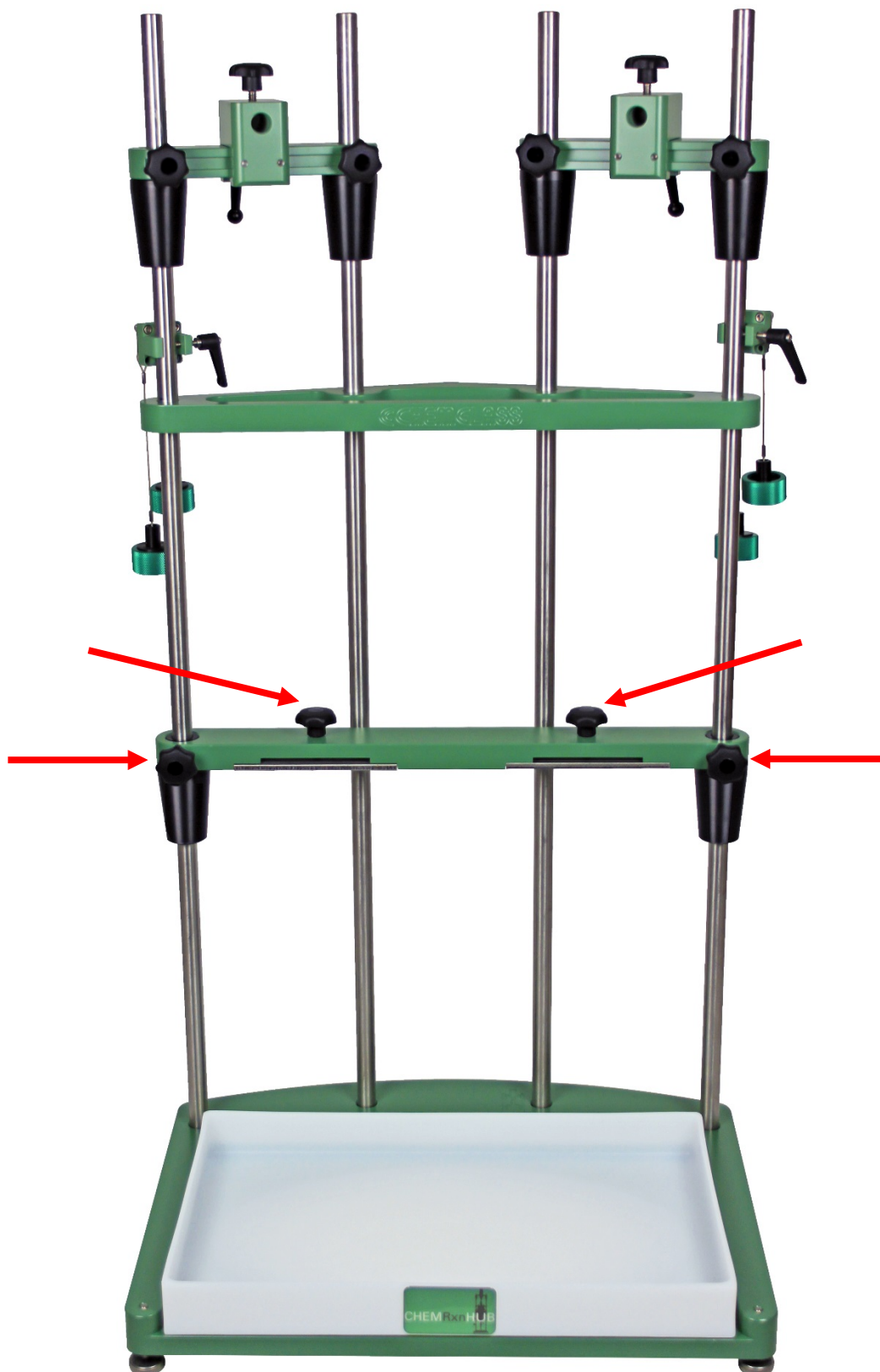


Assembly Instructions for Dual ChemRxnHub™ Reactor Systems



1) Place the reactor stand on a sturdy bench with the bottom plate facing toward the front.

- Loosen knobs on the right and left using 2 hands of the adjusting plate and move 3/4 of the way up the rods to ensure there is enough room to fit both vessels.
- Remove knob from center of each adjusting plate.



2) Insert the reactor clamps into the adjusting plate.

- Make sure that the beveled end is up on the clamp and the knob is facing to the left.
- Place in each slot until it stops.
- Replace the knob and make sure it is hand tight and the clamp does not move.



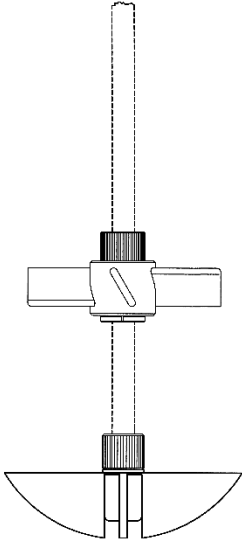
NOTE: The Following Steps are to be Completed for Each Vessel

3) Mount the reaction vessel.

- Carefully unpack the reaction vessel.
- Remove knob from reactor clamps and open completely.
(Two people should be used for next step)
- Have one person hold the vessel and place in the clamp with the jacket ports facing left.
- Have the second person close the clamp and tighten until the vessel cannot move.



4) Assemble the stirrer shaft and agitators.



- Loosen and remove screw and ring on the stirrer shaft.
- Fit the ground end of shaft into 5" agitator.
- Line up the holes on the agitator and glass shaft.
- Insert pin and make sure it's flush on both ends.
- Now put ring and tighten up screw until it is hand tight.
- Loosen set screw on the 4" agitator.
- Place on the shaft and slide down to the grounded portion of the shaft.
- Line up set screw with flat portion of the shaft.
- Move the agitator to the desired position.
- Tighten set screw with a flat head screw driver (do not over tighten).
- Place the stirrer shaft in the vessel.

5) Attach the vessel lid, o-ring and quick release clamp.



- Place the o-ring in the top of the vessel and fit into groove.
- Take a hold of the stir shaft and direct it in the middle hole of the lid.
- Place lid on vessel.
- Open the quick release clamp and put it around the lid and vessel.
- Once positioned, close clamp and tighten until the lid does not move.

6) Install the stirrer bearing.

- Unscrew and remove nut from stirrer bearing.
- With the spring facing toward the bearing, slide the stirrer bearing down the shaft and push it into the center neck of the lid.
- Slide the nut down the shaft and hand tighten onto bearing.



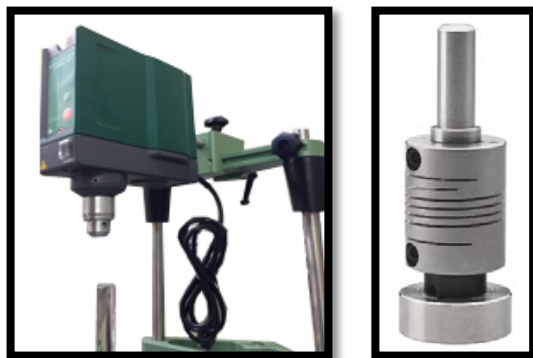
7) Install the baffle and baffle adapter.

- Unscrew nut and be careful not to lose the 2 ferrules underneath.
- Place the round end of the baffle in the bottom of the baffle adapter.
- Place the PTFE ferrule (white) flat end up down the shaft of the baffle.
- Place the Nylon ferrule (clear) with the flat end down, down the end of the baffle shaft.
- Place nut down the baffle shaft and screw loosely.
- Place baffle and adapter in a straight port on the reaction lid.
- Adjust to desired height in vessel and tighten nut.
(MAKE SURE BAFFLE DOES NOT TOUCH IMPELLER)



8) Mount the stirrer motor and stirrer rod coupling.

- Make sure the center of the locking handle on the top adjusting plate is facing toward the back of the unit.
- The top motor adjusting plate on the stand should be as high as possible, make sure both knobs are tight.
- Place stirrer rod in the hole and roughly adjust it to be lined up with the stirrer shaft. (There should be about 3 to 4 inches between the stirrer shaft and glass stirrer rod).



9) Motor, coupling and stirrer rod assembly.

- Place the assembled stirrer coupling on the stir shaft and tighten the Allen screw.
- Carefully lower the top of the motor support down to the coupling and stop. Make sure that everything is lined up!
- Lower the motor down so the shaft goes into the coupling about 3/4 of the way and tighten the motor support bracket.
- Lift coupling with stirrer rod attached the rest of the way up. (This is to make sure the lower impeller is not rubbing against the bottom of the reaction vessel.)
- Tighten the Chuck on the Stirrer motor.

10) Install the lower vessel support.

(2L & 5L Capacity Only)

- Loosen the locking handle.
- With the rubber side of support facing up, place above drain valve just so it touches the vessel.
- Fix lower vessel support to the reactor frame and tighten locking handle.



11) Attaching Tool-Free™ fittings.

- Slide green locking ring over the glass fittings on the jacket followed by the PTFE split ring.
- Assemble the Tool-Free™ hose flange, o-ring and green locking ring together, **HAND TIGHTEN**.



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