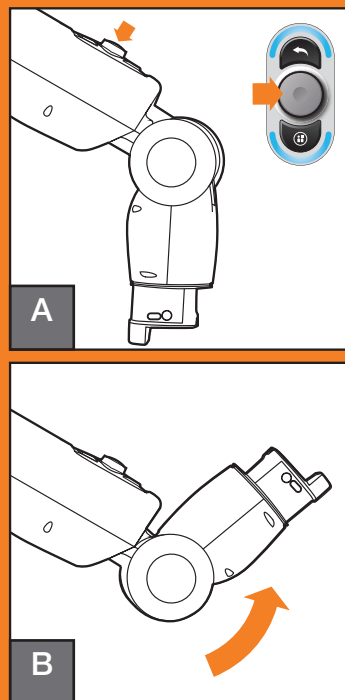


# 1 position wrist



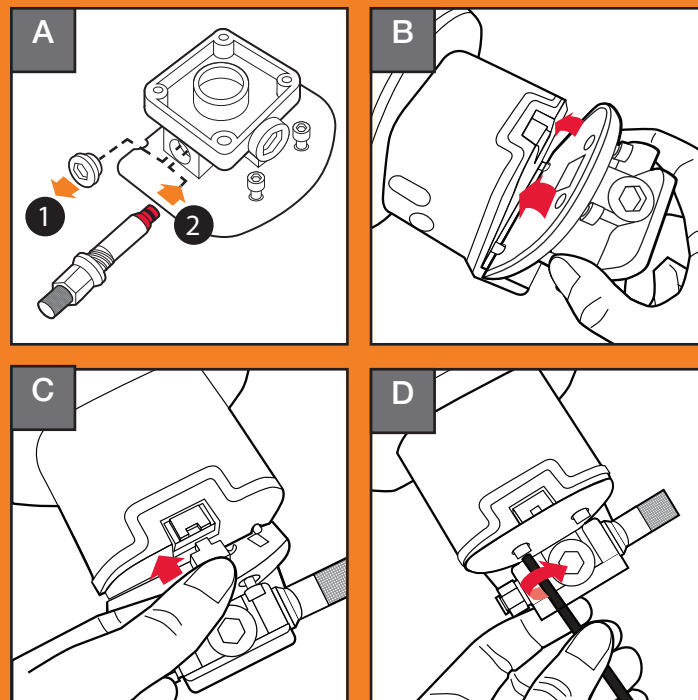
- A.** To attach Gripper, use the Navigator Knob to go to Settings > Hardware > Configure End Effectors.

Choose “Front” or “Behind”.

- B.** Baxter will pose with tool plate facing upward for easy gripper attachment.

*Note: Rethink Robotics recommends the use of safety glasses when interacting with Baxter, as with other equipment used in industrial environments.*

# 2 attach gripper



Vacuum Cup Grippers require a vacuum generator. Rethink Robotics recommends use of the integrated vacuum generator included in this kit.

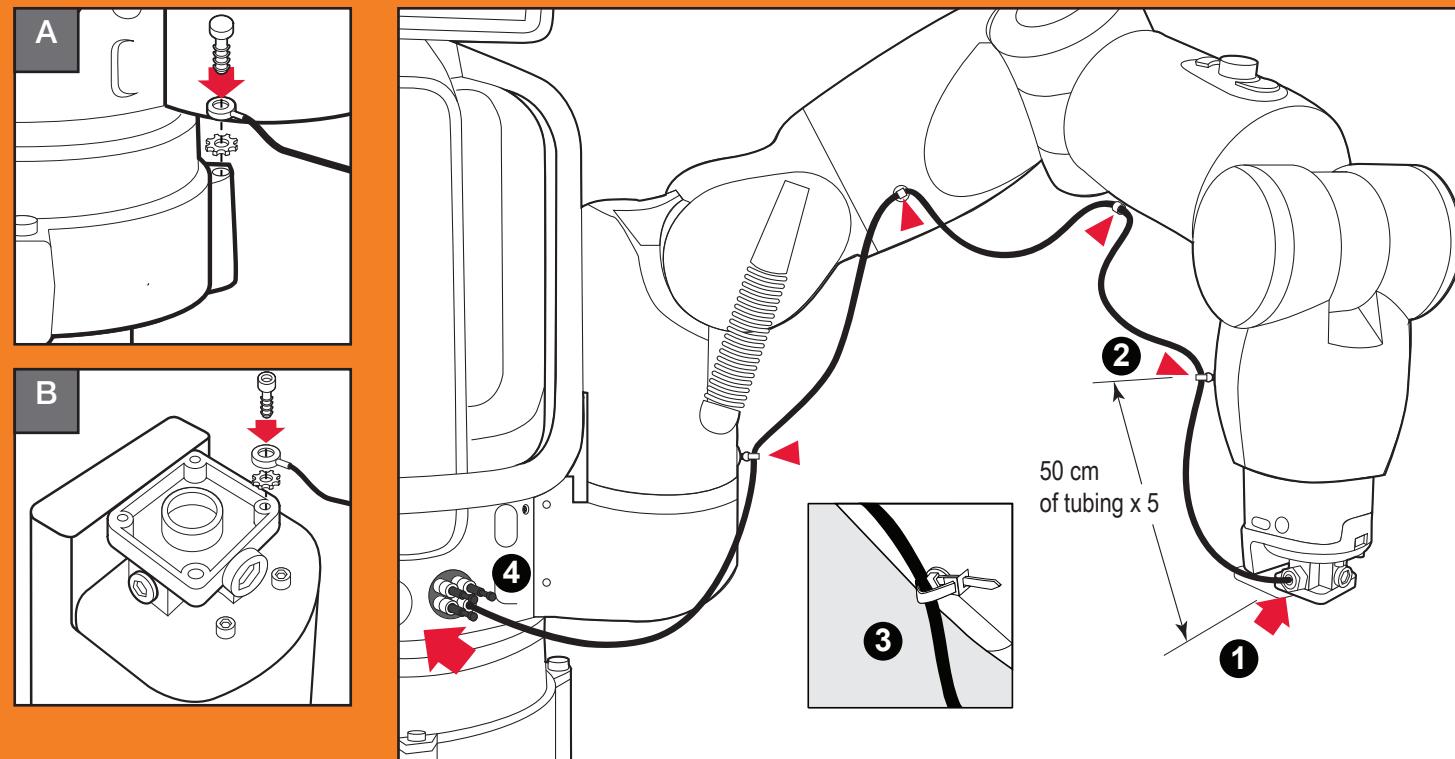
- A.** To install vacuum generator, remove plug with 8mm hex key **1** and in the same port, screw in vacuum generator, red tip first. **2** Hand tighten.

- B.** Hook Vacuum Cup Gripper onto two posts on tool plate.

- C.** Insert plug into receptacle until you hear a “click”.

- D.** Tighten both screws with enclosed 3mm hex key.

# 3 attach tubing to arm - ground wire optional



**Rethink Robotics recommends grounding the Gripper to the Pedestal using the provided ESD ground wire, routing it with tubing.**

- A.** Attach ground wire to same side as Gripper. Remove pedestal bolt on selected side. Attach large ring terminal end of wire and toothed washer to pedestal. Hand-tighten bolt. Using a 17 mm wrench, **TIGHTEN A HALF TURN MORE.**

- B.** Attach other end of ground wire as close as possible to vacuum cup. Use part of your vacuum cup configuration, or a manifold block screw boss as shown. Fasten using M4 screw and toothed washer provided.

**Make sure valves are installed before adding tubing. See other side for instructions to install valves.**

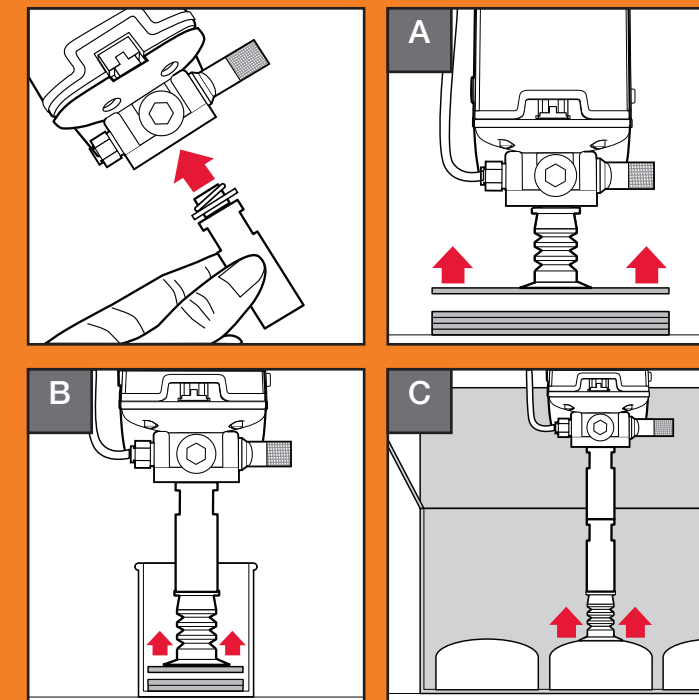
Check to ensure tubing is on same arm as installed valves.

- 1** Starting at the Gripper, insert tubing into Gripper fitting. Push tubing into fitting firmly.

- 2** Attach tubing (and optional wire) to each arm clip with zip ties, every 50cm as indicated. **3** Firmly tighten zip ties to fix tubing in place. Do not crush tubing. Trim zip ties.

- 4** Insert tubing end into valve port on Lower Front Panel.

# attach extensions - optional



Extensions are used to provide additional reach.

If using an extension, screw in until snug.

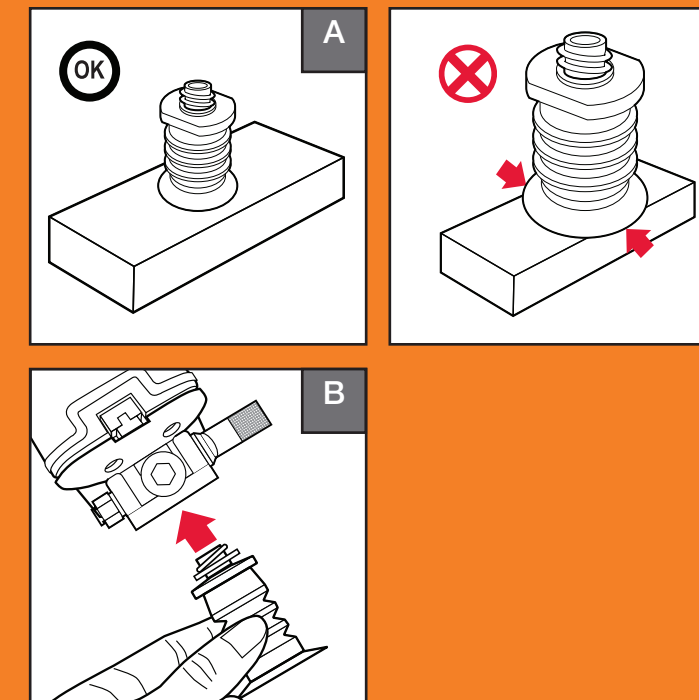
*Note: Up to two extensions may be attached to each Vacuum Cup Gripper.*

- A.** No Extension.

- B.** One Extension.

- C.** Two Extensions.

# 4 select and attach vacuum cup

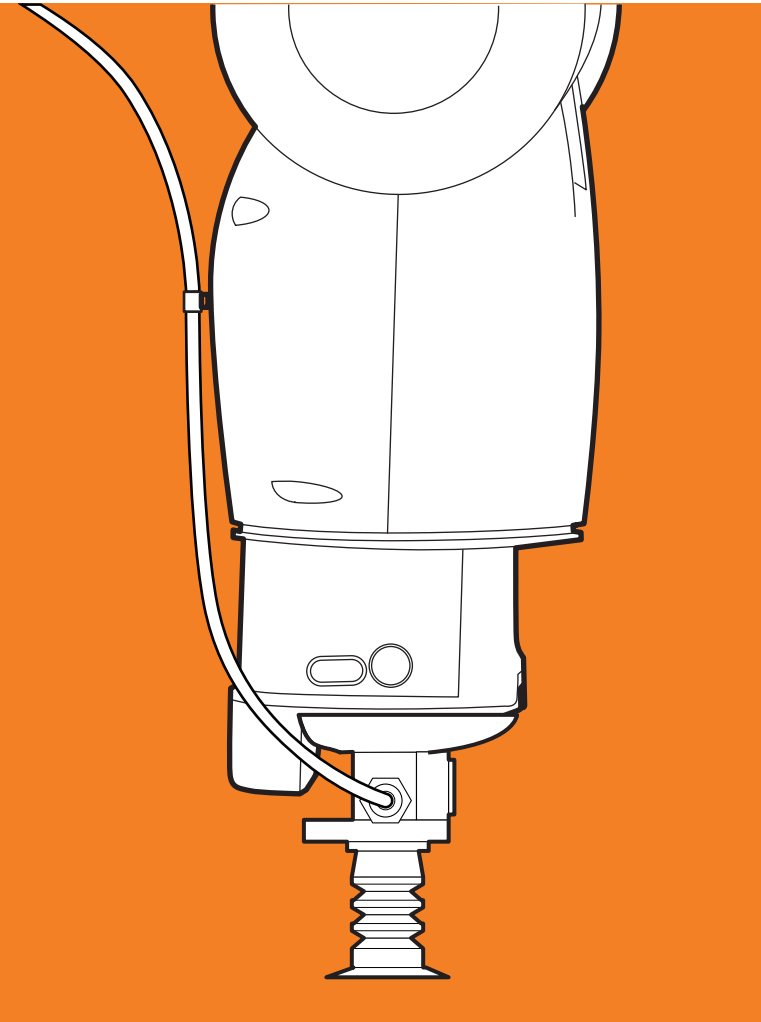


- A.** Select Vacuum Cup.

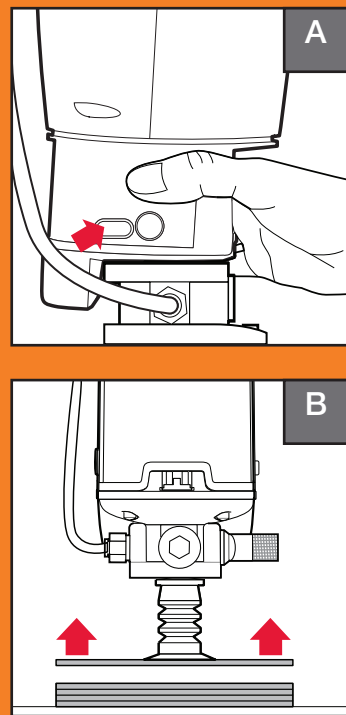
Vacuum Cups should fit entirely on the object surface. Choose the smallest vacuum cup wherever possible. Choose a larger vacuum cup if robot cannot lift the weight of the object.

*Note: Baxter can lift a maximum weight of 5 lbs (2.27kg), including weight of gripper which is 0.3 lbs (145 g). Texture, irregular surfaces, items packaged in bags, etc. may require a different vacuum cup selection.*

- B.** Screw on Vacuum Cup until snug.



## 5 test grasp



Configure gripper on screen and choose “Train”.

- Once trained, press grasp button on wrist to test grasp.
- Pick up object. Make adjustments as necessary.



To view helpful videos and tutorials, visit the Rethink Robotics YouTube channel.

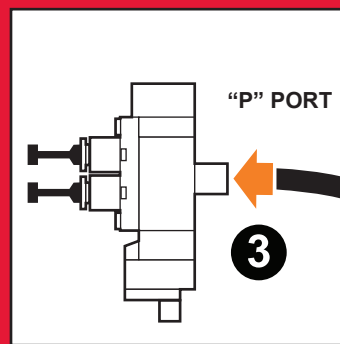
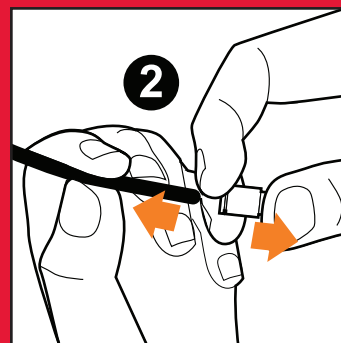
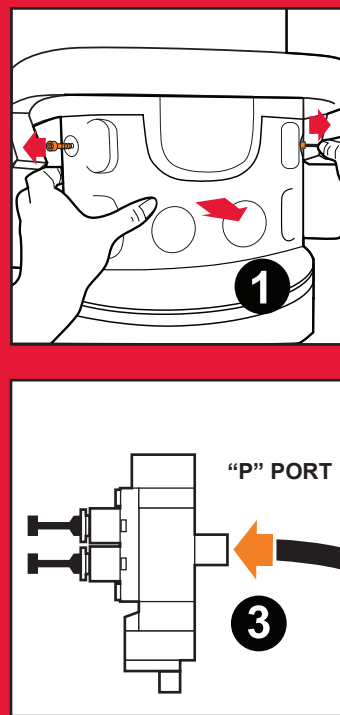
To order additional parts, accessories, or replacement parts, please contact Rethink Robotics or your local authorized Rethink Robotics distributor.

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[www.RethinkRobotics.com](http://www.RethinkRobotics.com)

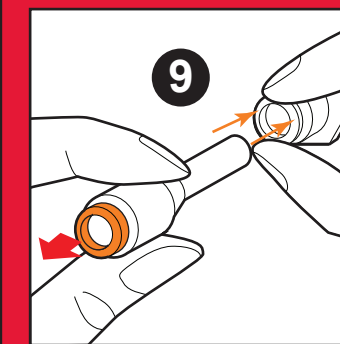
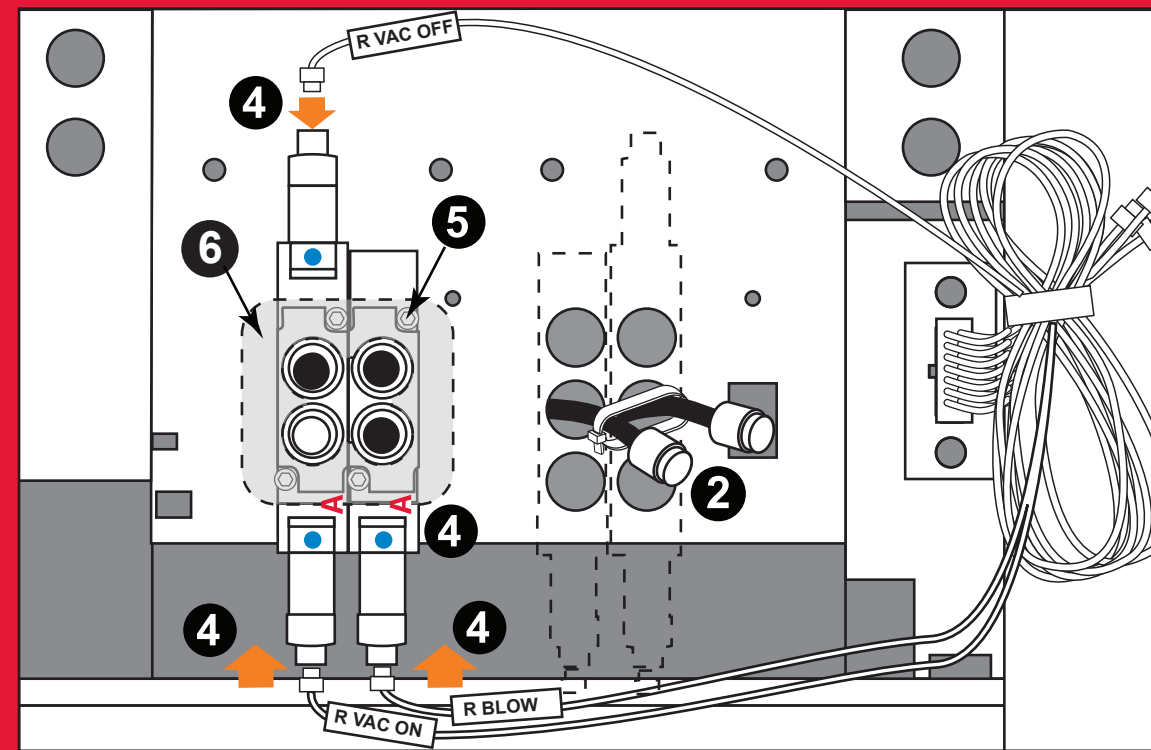
For new installations

## install valves



Choose arm for Vacuum Cup Gripper. Valves mount to same side as selected arm. **Two valves are required for each side.** Two valve pairs can be mounted on the plate.

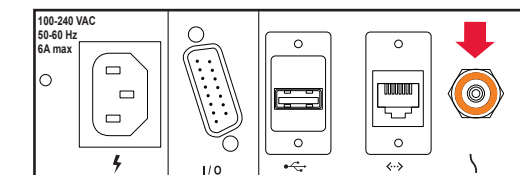
- Remove Lower Front Panel using 2 thumb screws.
- Squeeze cap collar and pull tubing to remove end caps from supply tube harness. Remove zip tie around tubes.
- Insert supply tubes into the “P” ports of each valve.
- Using wire bundle attached to plate, connect wires to valves as shown. Valves should be oriented “**A**” (on front of valve) down, larger valve to outside. Right side is shown.



- Using 2.5 mm hex key, screw valves in place using four M3 x 25mm screws provided.
- Place gray foam gasket on valve as shown.
- On same side as valve install, remove black plastic hole plug from Lower Front Panel.
- After valves are installed, gently re-attach Lower Front Panel. Re-install 2 thumb screws to hold panel in place.

Determine air supply tubing diameter. Connect tubing to rear of robot at connector panel.

- For 1/4” tube, insert tubing into adapter.
- For 6mm tube, **9** remove adapter then insert tubing into fitting.



Air supply should be 60 PSI (min) to 100 PSI (max). Air must be filtered and oil-free.



**baxter™**  
vacuum gripper starter kit

