



Rotavator™ Installation Manual

ACI Services, Inc.

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The installation of the Rotavator, once assembled and aligned per the requisite instructions, is straightforward. The following document outlines the assembly procedure that should apply to most Rotavators. Refer to the assembly drawing and parts list for additional information.

Read the complete instructions before beginning the installation.

Important Notes:

- If you want to actuate the Rotavator with the cylinder under pressure and not running, please contact ACI Engineering.
- Air supply line recommendations
 - 3/8 inch diameter
 - MAX 100 ft length
 - MAX 4 actuators
 - If your conditions are different, please contact ACI Engineering.



STEP	DESCRIPTION
1	<p>Place the valve nose gasket into the cylinder.</p> <p>In some cases, the gasket can “fall” out of position in the cylinder. In these cases, it may be required to have the gasket on the Rotavator nose during installation. A generous film of grease around the nose of the valve will typically hold the gasket in place for installation.</p>
2	<p>With the poppets seated in the guard holes, install the Rotavator valve into the valve bore. If the poppets are not in the guard holes, rotate the shaft until they are in place.</p>
2	<p>Verify all o-rings and seals are in place on the seal cartridge. Assemble valve cap gasket and slide valve cap over shaft on to Rotavator valve. Take precautions to not chafe O-rings or back up rings. Ensure there is access to all tubing connections and vents. Torque valve cap to required specs. Ensure the valve turns after torquing valve cap. Place a wrench on the shaft and turn one revolution. There should be minimal resistance during rotation, except for the poppets seating and unseating.</p>
3	<p>Install 1/4 inch NPT air fitting into the Rotavator actuator air supply port.</p>
4	<p>Supply instrument air pressure (approx. 90-130 psi) to the actuator. Slide Rotavator actuator with actuator spool mount over Rotavator valve shaft. Orient actuator in proper direction when lowering into position. This will vary on a case by case basis due to tubing, electrical, and general space constraints. Take precautions to not chafe O-rings or back up rings. Actuator mount should seat against valve cap. Ensure there is access to all tubing connections and vents. Actuator and shaft can be rotated to get proper alignment of connections.</p>
5	<p>Verify poppets are seated in valve by trying to rotate pressurized actuator. If required, rotate pressurized actuator until poppets seat in place.</p>
6	<p>Install split ring clamp over actuator spool mount. Tighten and torque cap screws as required.</p>
7	<p>Air pressure may be removed from the actuator. It is recommended to verify Rotavator is operating properly as air pressure is supplied and removed.</p>
8	<p>Install control air tubing to actuator. The solenoid for air lines needs to be a vented 3-way solenoid. See Rotavator Actuator Alignment Manual PB-0113 for reference. Again, it is recommended to verify proper operation of the Rotavator as air pressure is supplied and removed.</p>
9	<p>On top of the actuator, it is recommended to verify the proximity target setting. If needed, the sensor target can be adjusted to fit the control system requirements. See Rotavator Actuator Alignment Manual PB-0113 for reference.</p>