Vektek LLC 1334 East Sixth Ave. P.O. Box 625 Emporia, Ks. 66801 U.S.A.	Instruction Sheet		IS6404	
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TITLE: EOAT and Vise Product Install and Maintenance				

This manual covers the installation and maintenance of Vektek grippers and self-centering vises. See the catalog pages for detailed information on port size, mounting hardware, and manifold mounting dimensions.

Installation

Grippers

Use filtered compressed air: dry, lubricated, or non-lubricated, following DIN ISO 8573-1:644.

Grippers and gripper jaws are mounted with bushings and socket head cap screws (DIN EN ISO 4762).

Standard installation:

1. Turn off air supply.
2. The grippers ship with plugs in the fitting ports and set screws in the manifold ports. Unscrew plugs or set screws as needed to mount pneumatic fittings or to manifold mount. It is recommended to use a heat gun or other method to soften the thread locker on the set screws before removal.
3. Clean the mounting surfaces.
4. Mount the gripper to the mounting surface using the mounting bushings, screws, and/or manifold mount o-rings. **Manifold o-ring glands must be machined into the mounting surface**.

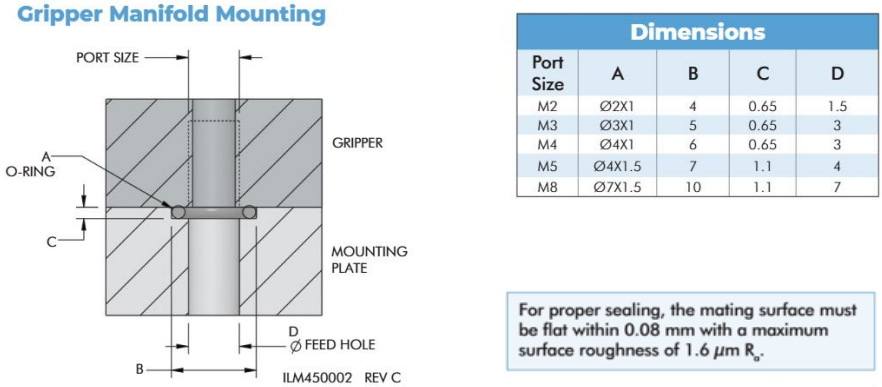


Figure 1 Gripper manifold gland dimensions

5. Connect air purge ports if being used.

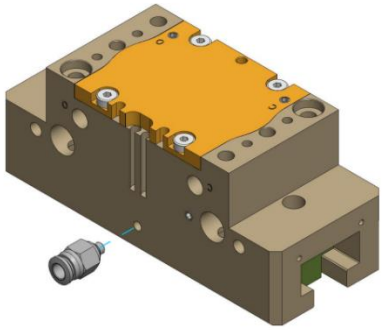


Figure 2 Using the air purge port

6. Mount the fingers to the jaws using the jaw bushings and screws.
7. Turn on the air supply.

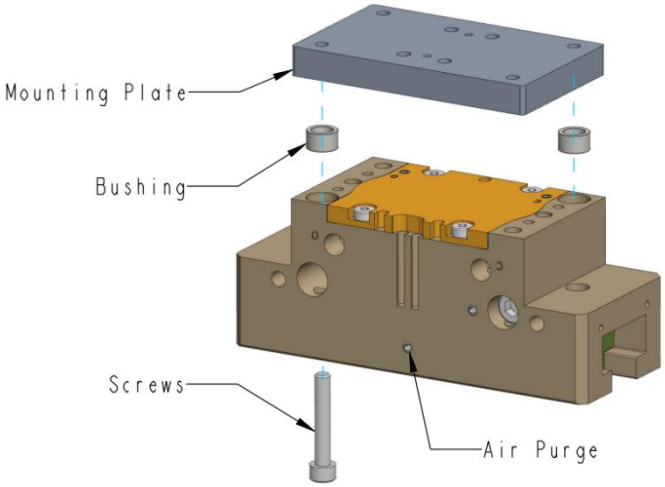


Figure 3 Gripper mounting

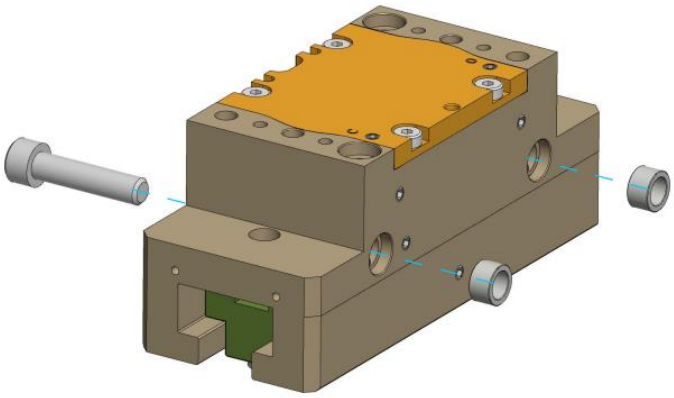


Figure 4 Gripper mounting Side

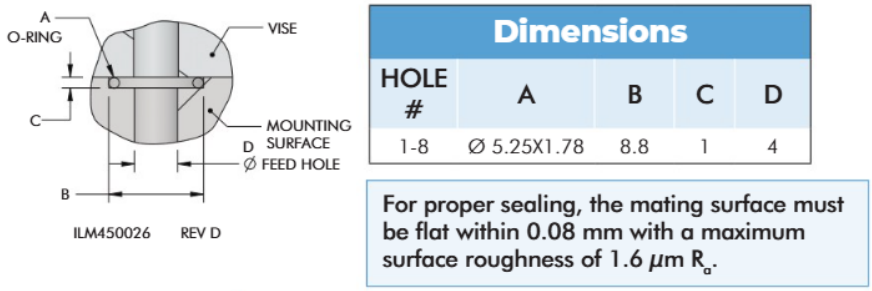
Vises

VFB installation:

1. Clean mounting surface.
2. Mount into place using the mounting screws and dowel pins. Use o-rings as needed for manifold mounting. The o-ring glands are built into the vise.
3. Connect side ports if being used.
4. Connect air purge ports if being used.

VCV installation:

1. Clean mounting surface.
2. Mount in place. Use o-rings as needed for manifold mounting. **Manifold o-ring glands must be machined into the mounting surface**.
    a. Standard mounting: Use 4 mounting screws and the two spring pins to mount the vise.
    b. Shoulder bolts: Use two screws and two shoulder bolts.
3. Connect side ports if being used.



Dimensions				
HOLE #	A	B	C	D
1-8	Ø 5.25X1.78	8.8	1	4

For proper sealing, the mating surface must be flat within 0.08 mm with a maximum surface roughness of 1.6 µm R_a.

Figure 5 Manifold gland dimensions

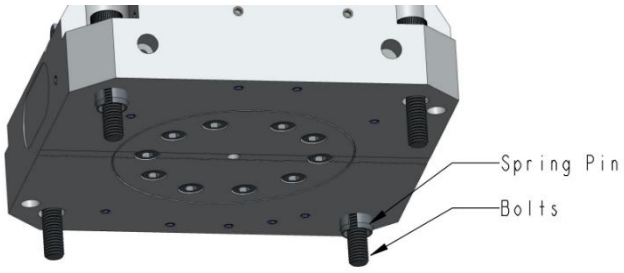


Figure 6 VCV Standard Mounting

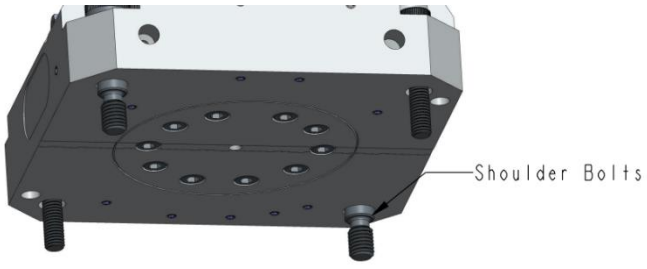


Figure 7 VCV Shoulder Bolt Mounting

Inductive proximity sensor installation

The inductive sensors used with the gripper and vise mounting kits below require the following specifications:

M5x0.5 threading	M8x1.0 threading
Flush mount	Flush mount
0.8mm sensing range	1.5mm or 2.0mm sensing range

Both sizes with multiple termination types are available in the Vektek catalog.

Gripper installation:

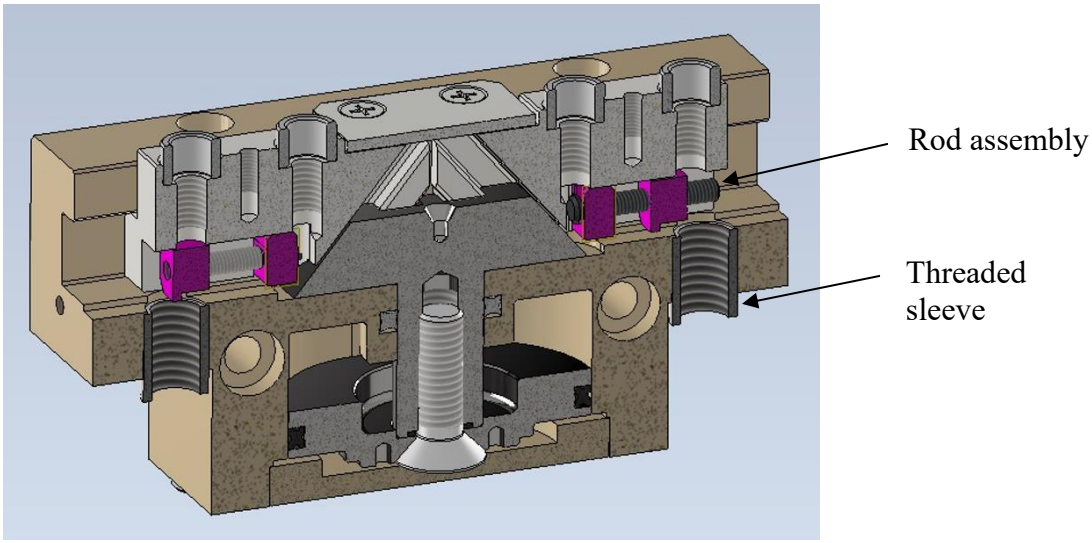


Figure 8 Gripper with inductive switch mounting kit

The grippers can also mount inductive sensors instead of magnetic sensors if desired. This requires a B5 or B8 installation kit, which can be purchased pre-mounted on the gripper or installed at a later time. This kit includes two threaded sleeves that install into pre-existing holes underneath the jaws and a threaded rod assembly that is installed into the jaws (shown in **Figure 8** in purple). The rod assembly is adjusted to determine the sensing point for the sensor.

Vise installation:

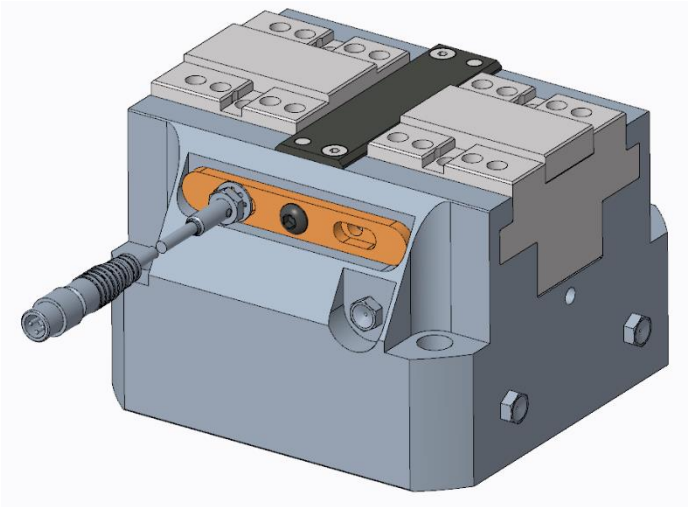


Figure 9 S installation kit with installed sensor

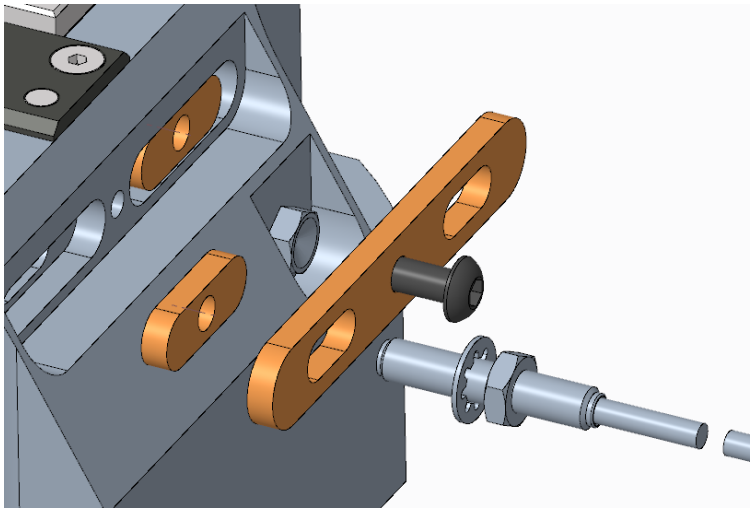


Figure 10 S Installation kit exploded view

VFB and VCV vises require the “S" installation kit to use inductive sensors. Each kit consists of a replacement cover plate and two smaller mounting plates. The sides of the vise jaws have machined ribs that are used for sensor detection (**Figure 12**). The rib edges determine the switching points. For OD clamping, the left inductive sensor is best used for detecting the fully open state and the right is best used for the part clamping position or fully closed state.

1. Remove the stock blank cover plate.
2. Insert the first sensor halfway through the new cover plate hole.
3. Thread one small mounting plate onto the sensor and continue until the sensing face is close to the tabulated distance below from the back of the small plate. This sets an initial starting depth.

Dim A distance per vise size	100	160	200	250
VFB	3.3mm	4.1mm	5.5mm	8.5mm
VCV	3.75mm	5.15mm	N/A	N/A

*Values are based on M5 and M8 sensors with 0.8mm and 2.0mm detection ranges, respectively.

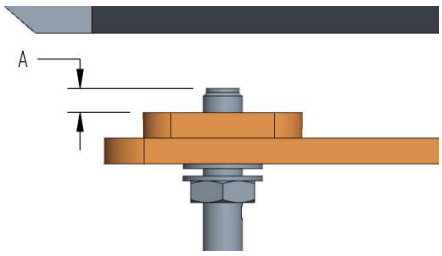


Figure 11 Initial sensor dimension

4. Repeat steps 2 and 3 for the second sensor if used.
5. Insert the assembly into the vise and screw into place.
6. Connect the sensor to power.
7. Slide the sensor left and right in the slot to verify sensor depth. If the sensor is not detecting the rib material, thread the sensor deeper and test again.
8. Move the sensor to the desired position. Ideally the left edges of the ribs are used for the switching point in a standard OD clamping use case due to the movement direction of the vise jaws. The width of the rib would keep the sensor activated for an extended amount of time if the right edge was used instead. **This behavior is flipped when the vise is used for ID clamping.** Determine the correct sensor position and lock into place using the nut/washer included with the sensor.

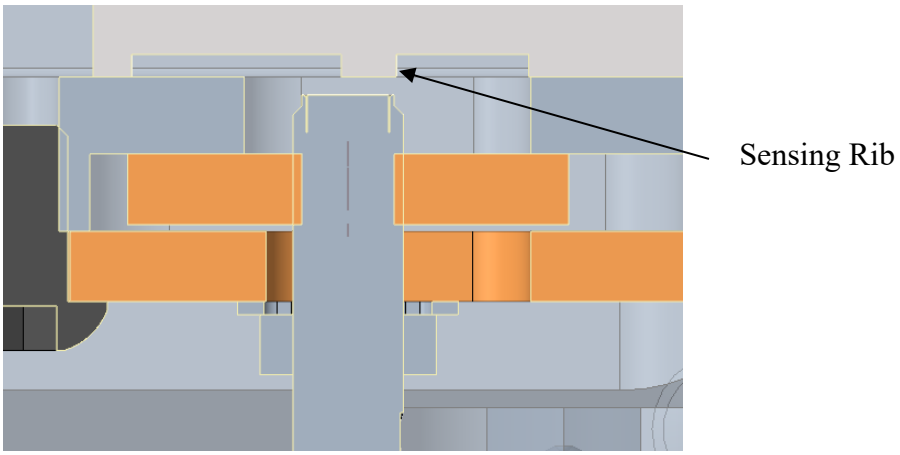


Figure 12 Top view of installed sensor detecting the left edge

Maintenance

Seal kits and replacement manifold o-rings are available from Vektek.

Grippers

No maintenance is needed for at least 1.5 million cycles.

Recommended grease: DX Molykote or similar

Vise

Grease every 10,000 cycles when used in handling. Grease every 5,000 cycles when used in a machining center.

Recommended grease: TP 42 Molykote or similar

Greasing process:

1. Move the vise to the open position
2. Press grease into the grease fittings
3. Cycle the vise multiple times