

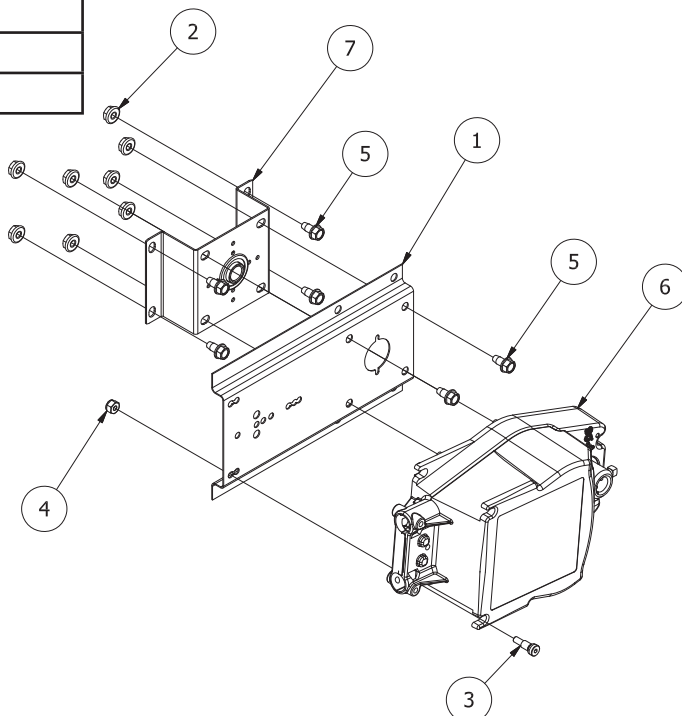
Installation, Operation and Maintenance Manual

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions will result in voiding of the product warranty and may result in personal injury and/or property damage.

These instructions apply to the external field installation of Honeywell actuators on Greenheck control dampers. These models are idrect drive actuators that rotate to their energized postiion when power is applied, and spring return to their fail position when power is disconnected.

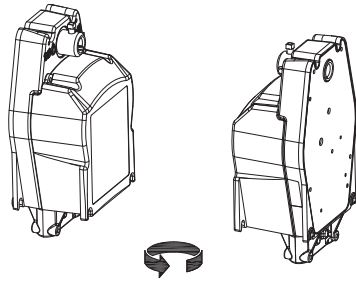
Power Consumption			
Model	Volts	Running	Holding
MS4104	120	18W	9W
MS4109	120	23W	7W
MS4604	230	18W	11W
MS4609	230	23W	7W
MS8104	24	16VA	8VA
MS8109	24	23VA	7VA

No.	Part No.	Qty	Description
1	730417	1	External mounting bracket
2	415455	8	¼ - 20 Spinlock nut
3	416048	1	#10-24 x ¾ Shoulder bolt
4	415934	1	#10-24 hylock nut
5	415264	8	¼ - 20 ½ bolt
6	-	1	Actuator
7	815027	1	Standoff bracket

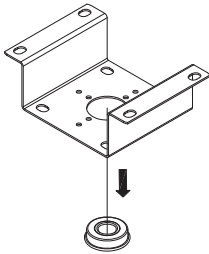


Instructions for Galvanized Steel Kit

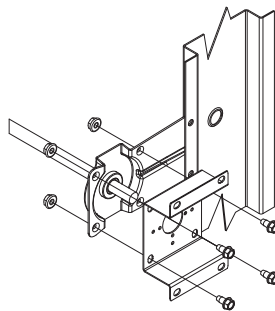
1. Determine actuator fail position and change actuator clamp location if necessary.
2. Lock actuator clamp in place using the retaining clamp.



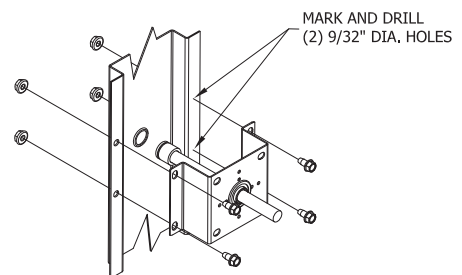
3. Remove the bearing from the stand-off bracket (jackshaft only).
4. Install stand-off bracket. Mark and drill $\frac{9}{32}$ in. holes (extension pin only).



Standoff bracket with bearing

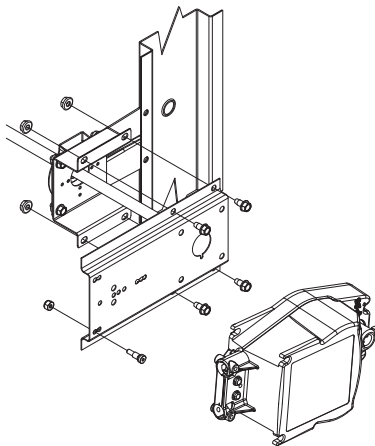


Damper with jackshaft

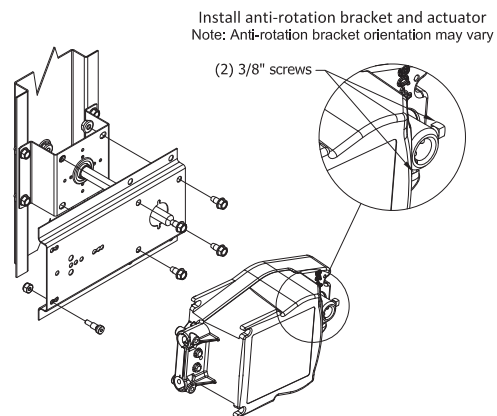


Damper with extension pin

5. Install anti-rotation bracket and actuator. Anti-rotation bracket may be attached (a) perpendicular up, (b) perpendicular down or (c) parallel from duct (shown).



Damper with jackshaft

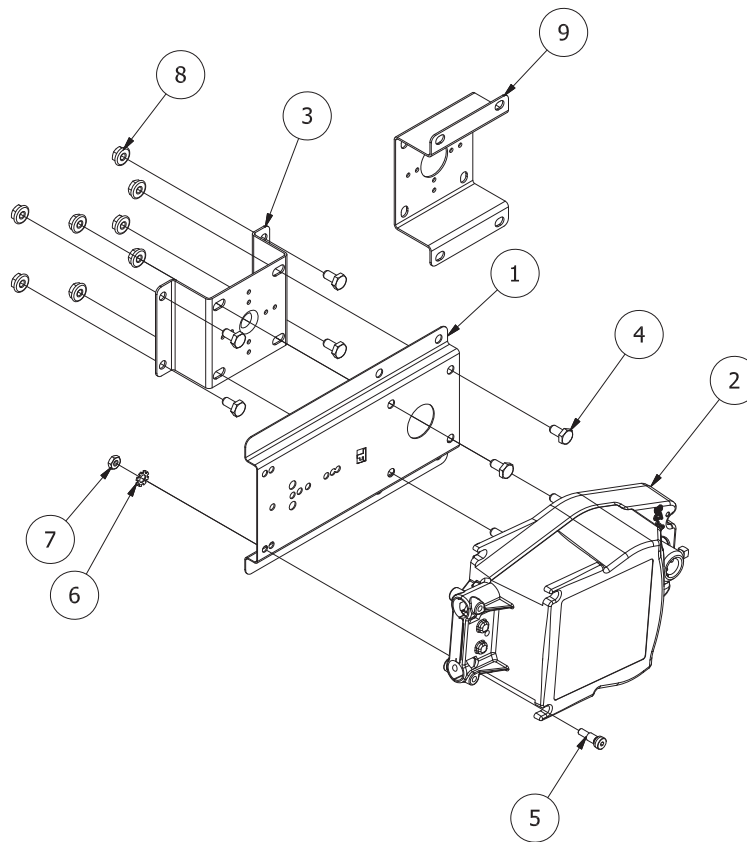


Damper with extension pin

6. Rotate damper blades to desired fail position (open) or (closed, ensure blade seals are compressed). Tighten (2) $\frac{3}{8}$ in. screws to allow 95 degrees of actuator rotation.
7. Wiring should be per an approved project or job wiring diagram and must comply with all applicable wiring codes.
8. Apply power to the actuator. Damper blades should fully open or close and return to the fail position when power is disconnected.

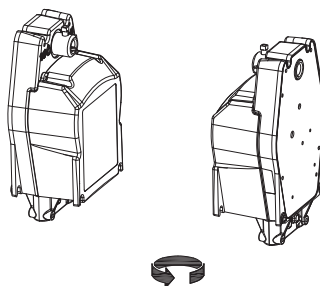
316 Stainless Steel Kit

No.	Part No.	Qty	Description
1	907255	1	Ext mounting bracket 316SS
2	-	1	Honeywell actuator
3	687784	1	Standoff bracket 316SS
4	415868	8	1/4 - 20 1/2 screw 316SS
5	416767	1	#10-24 x 3/8 Shoulder bolt SS
6	416204	1	1/4 in. lock washer SS
7	415934	1	#10-24 hylock nut 316SS
8	415264	8	1/4 - 20 Spinlock nut
9	687405	1	Standoff bracket 316SS

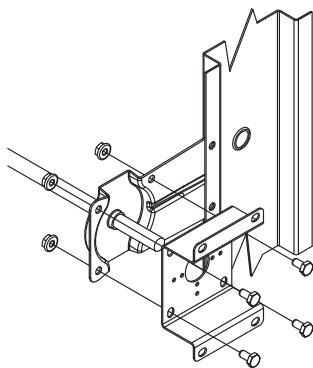


Instructions for 316SS Kit

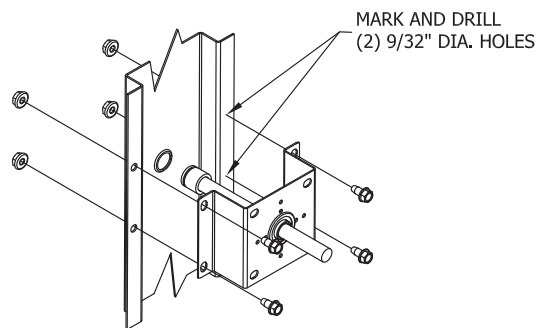
1. Determine actuator fail position and change actuator clamp location if necessary.
2. Lock actuator clamp in place using the retaining clamp.



3. Install stand-off bracket. Mark and drill $\frac{9}{32}$ in. holes (extension pin only).

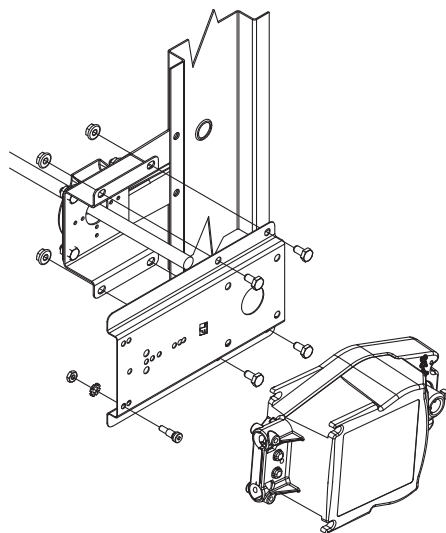


Damper with jackshaft

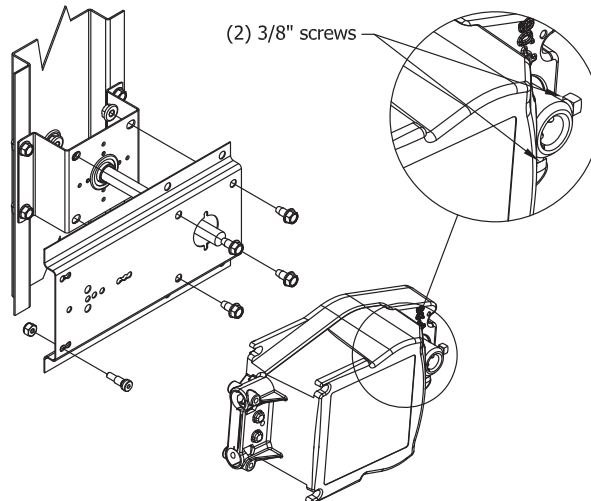


Damper with extension pin

4. Install anti-rotation bracket and actuator. Anti-rotation bracket may be attached (a) perpendicular up, (b) perpendicular down or (c) parallel from duct (shown).



Damper with jackshaft



Damper with extension pin

5. Rotate damper blades to desired fail position (open) or (closed, ensure blade seals are compressed). Tighten (2) $\frac{9}{16}$ in. screws to allow 95 degrees of actuator rotation.
6. Wiring should be per an approved project or job wiring diagram and must comply with all applicable wiring codes.
7. Apply power to the actuator. Damper blades should fully open or close and return to the fail position when power is disconnected.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Product warranties can be found online at Greenheck.com, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

