

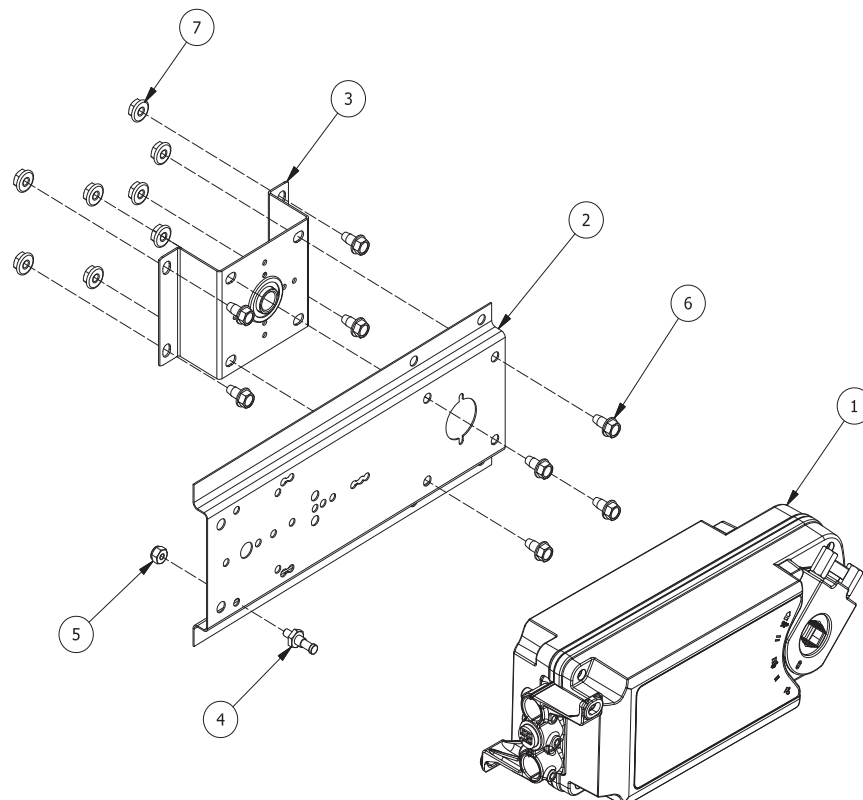
## Installation Instructions for Belimo Actuators Direct Drive Series (EFB, EFCX series) Actuator

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

Model	Volts	Running	Holding
EFB24 (-S)	24 VAC	9.5 W	4.5 W
EFB24-SR (-S)	24 VAC/VDC	8 W	4.5 W
EFB24 N4 (-S)	24 VAC/VDC	9.5 W	4.5 W
EFB24-SR (-S) N4	24 VAC/VDC	8 W	4.5 W
EFB120 (-S)	120	9.5W	4.5 W
EFB120-S N4	120	9.5 W	4.5 W
EFCX120-S N4	120	9.5 W	4.5 W

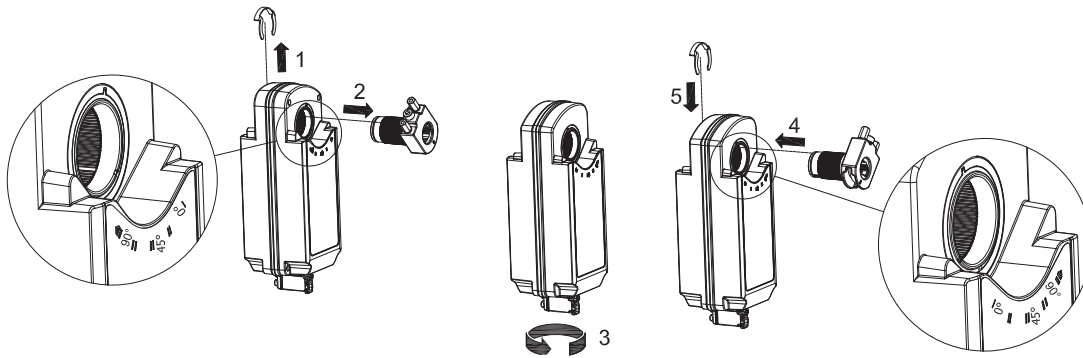
### Galvanized Steel Kit

Item	Part	Description	Qty
1	-	Actuator	1
2	732089	Anti-rotation bracket	1
3	815027	Extension pin support bracket	1
4	417279	#10-24 x 1.068 ZP stud	1
5	415934	#10-24 HH Nylock ZP nut	1
6	415264	¼-20 x ½ in. ZP bolt	8
7	415455	¼ - 20 spinlock ZP nut	8

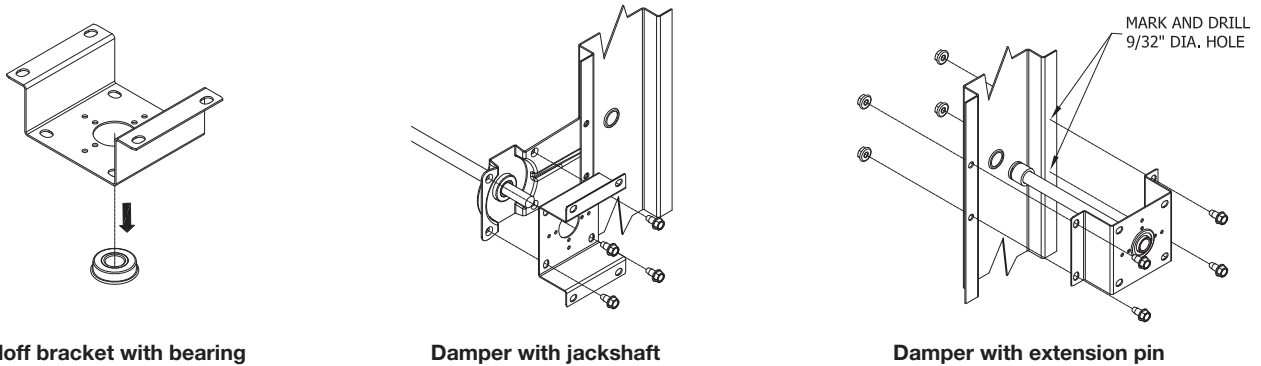


## Instructions for Galvanized Steel Kit

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).

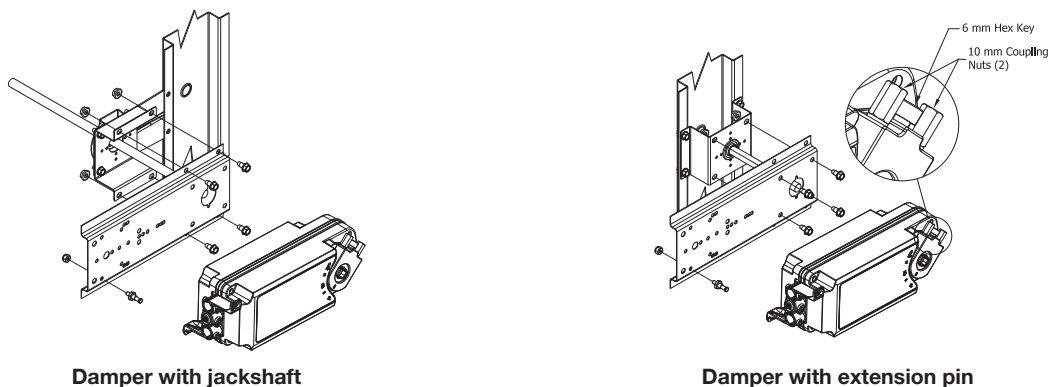


Standoff bracket with bearing

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).



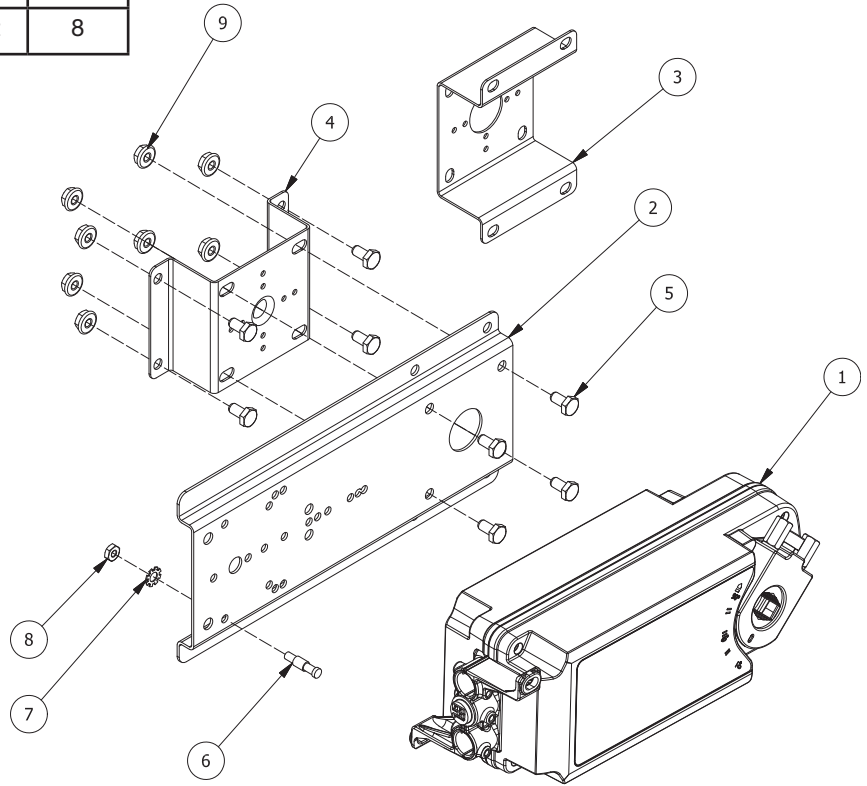
Damper with jackshaft

Damper with extension pin

6. Rotate damper blades to desired fail position (open) or (closed, ensure blade seals are compressed). Turn 6mm hex screw to center damper shaft. Tighten (2) 10 mm coupling nuts 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.

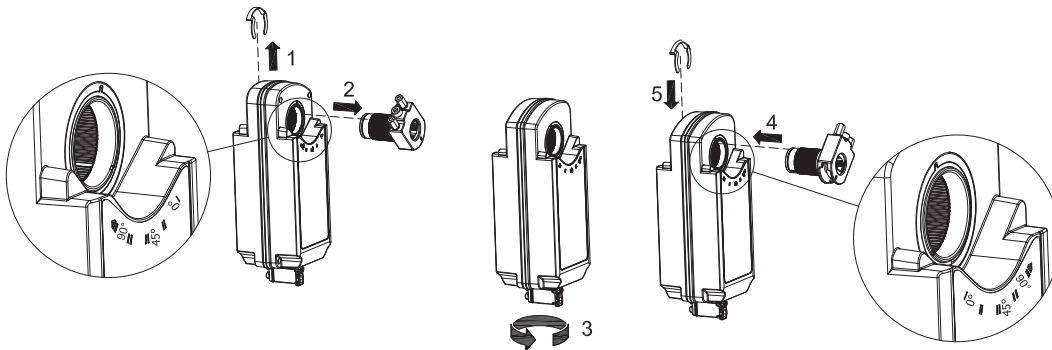
### 316 Stainless Steel Kit

Item	Part #	Description	Qty
1	-	Actuator	1
2	689986	Anti-rotation bracket 316SS	1
3	687405	316SS standoff bracket	1
4	687784	316SS standoff bracket	1
5	415868	¼-20x½ 316SS bolt	8
6	463888	316SS mounting stud	1
7	416204	¼ 316SS lock washer	1
8	415702	#10-32 316SS nut	1
9	417305	¼-20 316SS spinlock nut	8

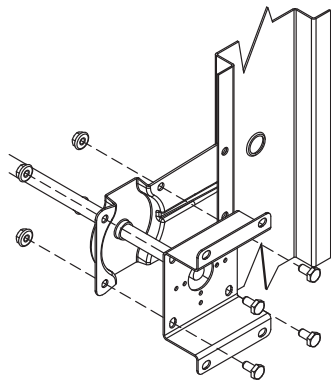


### Instructions for 316SS Kit

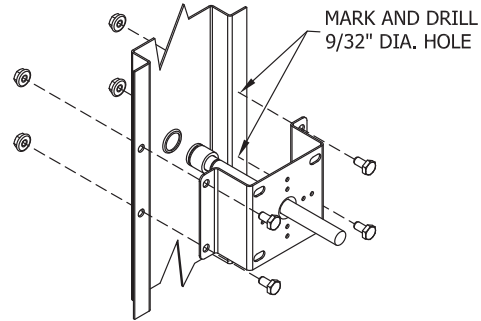
1. Determine actuator fail position and change actuator clamp location if necessary.
2. Lock actuator clamp in place using the retaining clamp.



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

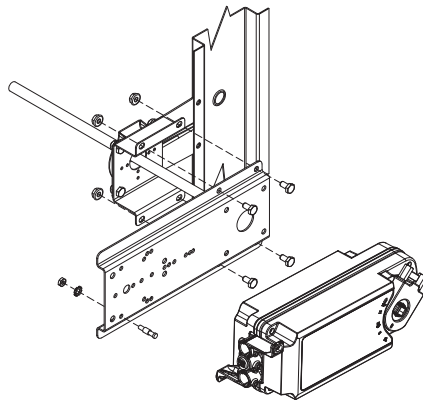


Damper with jackshaft

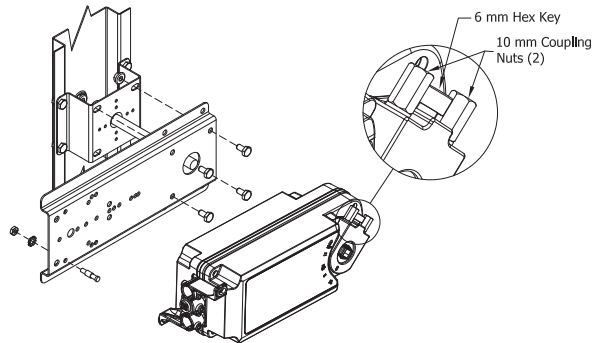


Damper with extension pin

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

6. Rotate damper blades to desired fail position (open) or (closed, ensure blade seals are compressed). Turn 6mm hex screw to center damper shaft. Tighten (2) 10 mm coupling nuts 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.

## Our Commitment

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

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