

**Models ML4XXX, ML8XXX, MS4209, MS4309, MS8209, and MS8309**

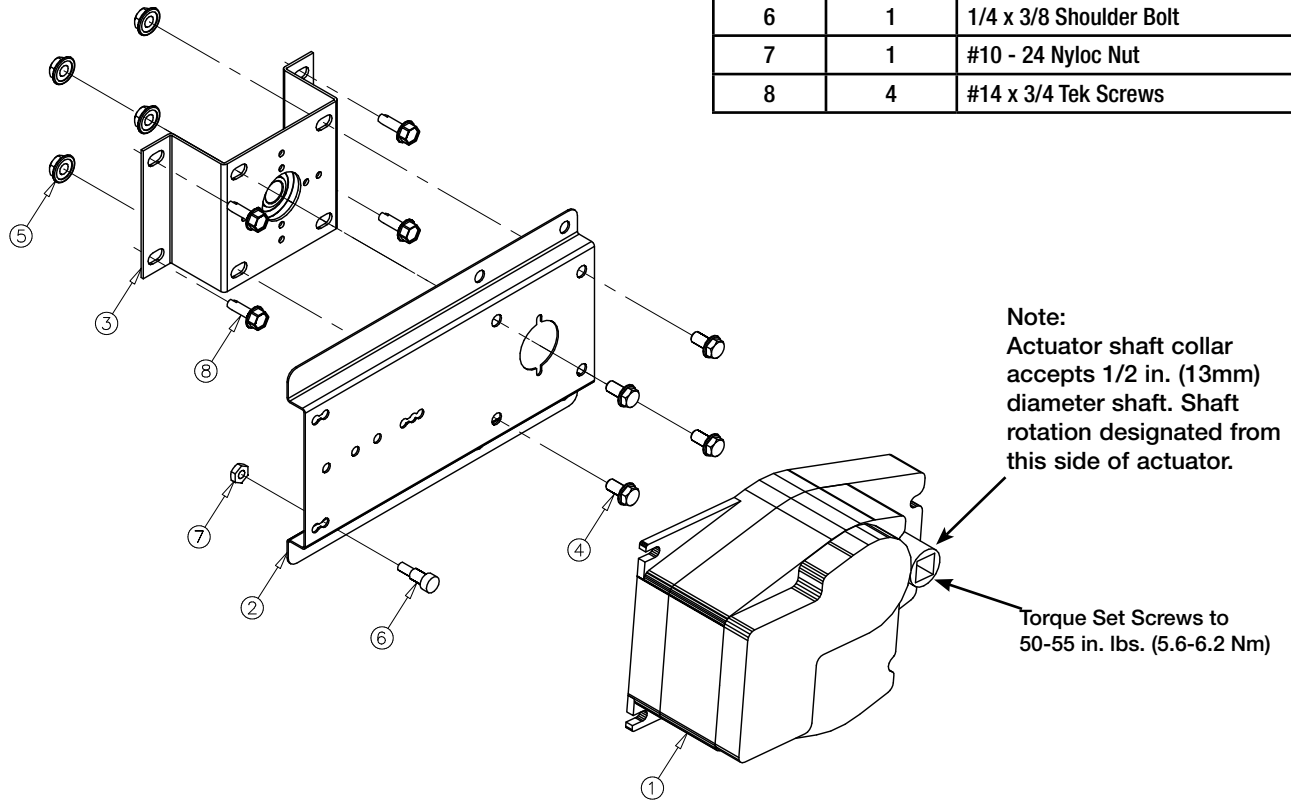
# INSTALLATION INSTRUCTIONS

These instructions apply to the external field installation of the Honeywell, FATPA Series, actuators on Greenheck models VCD Control Dampers when they are duct mounted or sleeved.

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.

**Tools Required:**  
Wrenches: (1) 7/16 in., (1) 3/8 in.  
(1) Ratchet with 3/8 in. deepwell socket  
(1) 1/8 in. Allen wrench

Part No.	Quantity	Description
1	1	Actuator, Honeywell FATPA Series
2	1	Anti Rotation Bracket
3	1	Standoff Bracket
4	4	1/4 - 20 x 1/2 Spinlock Bolt
5	4	1/4-20 Spinlock Nut
6	1	1/4 x 3/8 Shoulder Bolt
7	1	#10 - 24 Nyloc Nut
8	4	#14 x 3/4 Tek Screws



**Figure 1:** Honeywell FATPA Series external mount (exploded view).



## WARNING

Equipment Damage or Electrical Power Hazard. Line voltage can cause death or serious injury and short equipment circuitry. Disconnect power supply before installation.



## CAUTION

Device Malfunction Hazard. Improper set screw tightening causes device malfunction. Tighten set screws with proper torque to prevent damper shaft slippage.

# INSTRUCTIONS

# FATPA DIRECT DRIVE SERIES

These installation instructions assume the damper is already mounted in a duct or sleeve with the damper shaft extending beyond the duct or sleeve 6 inches (152mm).

## 1. Install the stand-off bracket

Dampers with a jackshaft

- 1a. Jackshaft supplied is typically 1 in. (25 mm) diameter. Mount the stand-off bracket (item #2) with [4] ¼-20 x ½ in. (M6 x 12mm) self drilling screws (item #3). Orient the stand-off bracket (item #2) so the hole is centered on the jackshaft (See **Figure 1**).

Dampers without a jackshaft (Shaft Extension)

- 1b. Mount the stand-off bracket (item #2) spanning across the damper frame flanges. Fasten to the damper frame with [4] ¼-20 x ½ in. (M6 x 12mm) self drilling screws (item #3). Be sure not to run the screws into the damper linkage, which is between the flanges.

## 2. Mount actuator bracket

Fasten the actuator bracket (item #6) (See **Figure 1**) to the stand-off bracket (item #2) using [4] ¼-20 x ½ in. (M6 X 20mm) thread studs (item #4) and [4] ¼-20 (M6) nuts (item #5). Use outer four holes of the actuator bracket (item #6) (See **Figure 2**).

## 3. Fail Position

If fail position is closed, make sure damper blades are fully close and ensure blade seals are compressed prior to tightening the actuator clamp to the damper extension pin or jackshaft.

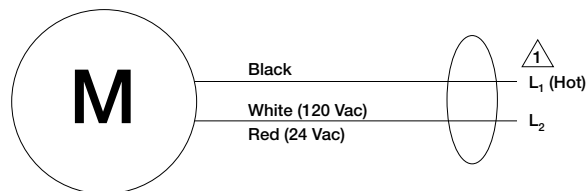
## 4. Install the actuator

Install the actuator (item #1) over the damper drive shaft and tight against the actuator bracket (item #6). Install [2] ¼-20 x ½ in. (M6 x 20mm) shoulder bolts (item #4) through lugs on actuator and through the holes in back of the actuator bracket (item #6). Secure with [2] ¼-20 M6 nuts (Item #5) (See **Figure 1**).

5. Secure actuator (Item #1) to drive shaft by tightening the set screws on actuator collar to 50-55 in. lbs. (5.6 - 6.2 Nm).
6. The wiring illustration identifies actuator electrical requirements and connections (See **Figure 3**). Wiring must comply with all applicable electrical codes.
7. Apply power to the actuator. The damper blades should fully open or close and return to the fail position when power is disconnected.

## IMPORTANT

For actuators with a product date code before 0527m a power break of less than two seconds can cause the actuator to spring-return 5 degrees or less and remain in place until a power break of longer duration. For actuators with a product date code of 0527 or after, a power break of any duration will cause the actuator to spring-return and be able to drive immediately when power is reapplied.



 Power supply. Provide disconnect and means of overload protection.

**Figure 3:** FATPA Series wiring illustration.

Power Consumption			
Model	Volts	Running	Holding
ML4XXX	120	18W	9W
MS4209 MS4309	120	23W	7W
ML8XXX	24	16W	8W
MS8209 MS8309	24	23W	7W

## Actuator Weight

5 lb (2.3 kg).

## Noise Rating

Driving Open: Maximum 65 dBA at 1m.

Holding: Maximum 20 dBA at 1m (no audible noise).

## Temperature Ratings

Ambient: 0°F to 130°F (-18°C to 55°C)

Shipping and Storage: -40°F to 140°F (-40°C to 60°C)

## Humidity Ratings

5% to 95% RH non-condensing.

## Environmental Protection Ratings

NEMA 1

IP42

## Approvals

Underwriters Laboratories Inc. UL 873 plenum rating, and cUL: File #E4436: Guide #XAPX.

## Direction of Spring Return

Counterclockwise (see **Figure 1**, see note)

MS4309, ML4302

MS8309, ML8302

Clockwise (see **Figure 1**, see note)

MS4209, ML4202

MS8209, ML8202

## Actuator Timing (Under Load)

Drive Open: 15 seconds.

Spring Close: 15 seconds.

