



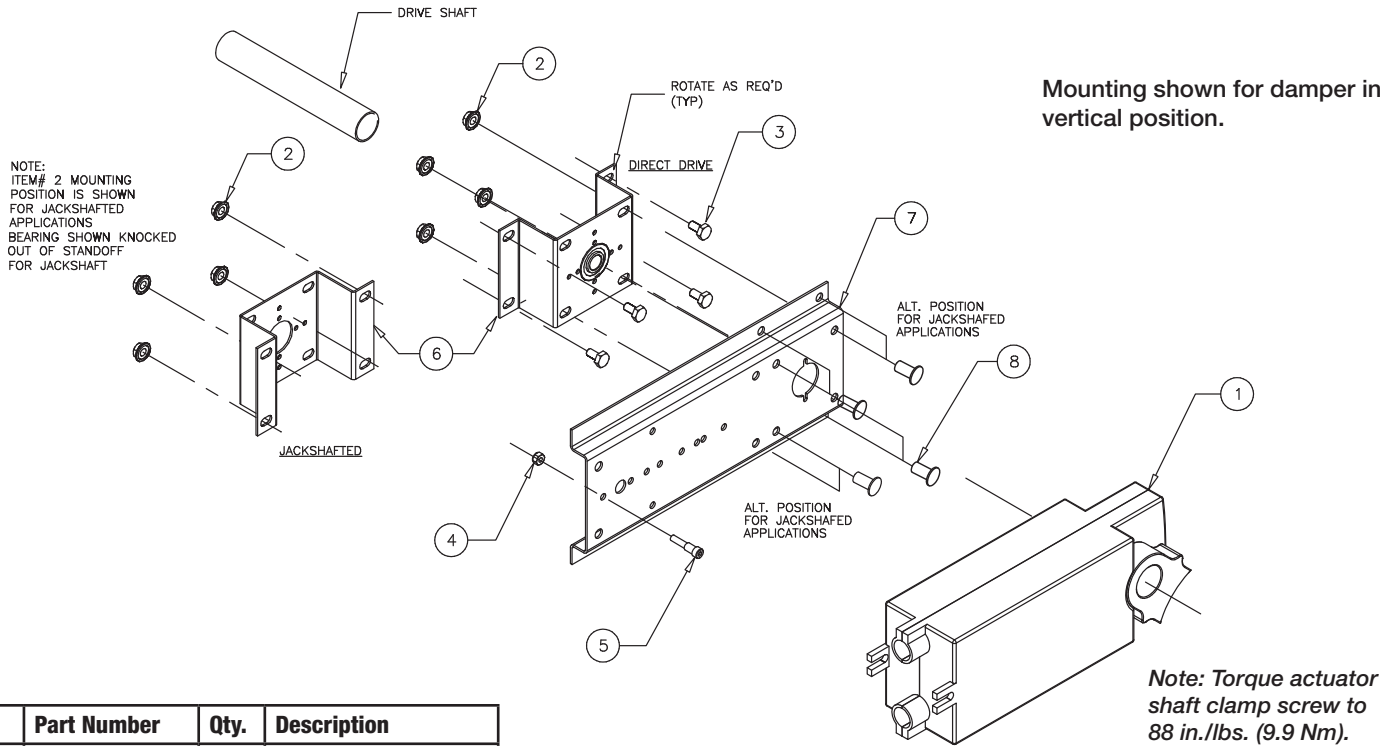
**Honeywell Actuators
Direct Drive Series**

**MS4120, MS4620, MS8110, MS8120, MS7510, MS7520
UL Listed Direct Drive Actuator**

INSTALLATION INSTRUCTIONS

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

Tools Required:
Wrenches:
(1) 3/8 in., (1) 7/16 in., and (1) 10mm



No.	Part Number	Qty.	Description
1			MS actuator
2	415455	4	1/4 - 20 spinlock nut
3	415586	4	#14 x 3/4 TEK SMS
4	415934	1	#10-24 nylock nut
5	416048	1	1/4 x 3/8 shoulder bolt
6	815027	1	standoff bracket
7	651815	1	mounting bracket
8	415609	4	thread stud

Figure 1: Honeywell MS 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:

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

1. Install the stand off bracket.

Dampers with a jackshaft

- 1a. Jackshaft supplied is typically 1 in. (25mm) diameter. For these applications the bearing must be removed from stand-off bracket (Item #6). Mount the stand-off bracket (item #6) with [4] threadstuds (item #8) and [4] 1/4 - 20 spinlock nut (item 2). Orient the stand-off bracket (item #6) so the hole is centered on the jackshaft.

Dampers without a jackshaft (Shaft Extension)

- 1b. Mount the stand off bracket (item #6) spanning across the damper frame flanges. Fasten to the damper frame with [4] #14 x 3/4 (M6 x 12mm) Tek screws (item #3). Be sure not to run the screws into the damper linkage, which is between the flanges.

2. Mount actuator bracket

Mount actuator bracket (item #7) using [4] thread studs (item #8) and [4] 1/4-20 (M6) nuts (item #2).

Note: The mounting bracket (item #7) may be attached in three positions: parallel with the duct, perpendicular up from the duct, or perpendicular down from the duct. Choose a position that offers the most clearance for the application.

3. Actuator rotation

If the fail rotation of the damper is counter clockwise the universal clamp should be on the side of the actuator showing the power direction as clockwise rotation (usually shipped in this orientation).

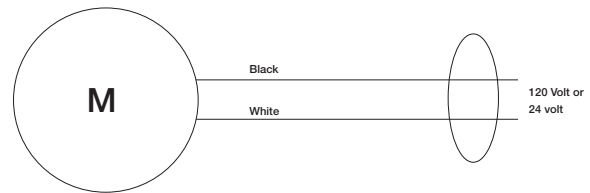
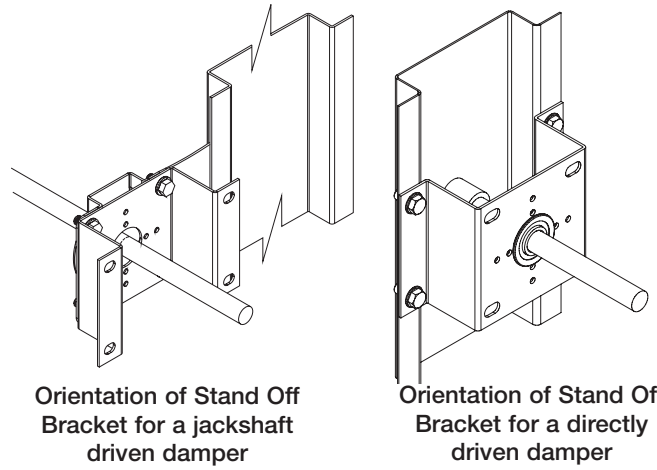
To change the universal clamp to the other side, remove the retaining clip and then the universal clamp from the actuator. Move the universal clamp onto the actuator. When the clamp is installed, then lock in place using the retaining clip.

Note: All fail rotations refer to the damper shaft rotation needed to achieve the desired blade 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. Inspect the damper blades and the damper shaft to determine the proper damper shaft rotation for the desired fail position.

4. Mounting actuator

Slide the actuator (item #1) over damper drive shaft. Install thread stud through the mounting lug on the back of the actuator and through the corresponding hole of the actuator bracket (item #7). Secure the thread stud to actuator bracket (item #7) with #10-24 (M5) nut. Verify that the damper is in its fail position. Secure actuator (item #1) to damper drive shaft by torquing the screw on the actuator universal clamp to 88 in. lbs. (9.9Nm).

5. The wiring illustration below identifies actuator electrical requirements and connections. Wiring must comply with all applicable electrical codes.
6. Apply power to the actuator. The damper blades should fully open or close and return to the fail position when power is disconnected.



Important

A break in power of less than one second can cause the actuator to spring-return 5 degrees or less and remain in place until a break in power of longer duration.

Model	Volts	Running	Holding
MS4120F1006	120 VAC	35W	10W
MS4120F1204			
MS4620F1005	230 VAC	35W	10W
MS4620F1203			
MS7510A2008	24 VAC/VDC	14W	5W
MS7510A2206		14W	
MS7520A2007		16W	
MS7520A2015		22W	
MS7520A2205		16W	
MS7520A2213		22W	
MS8110A1206	24 VAC/VDC	30W	8W
MS8120F1002	24 VAC	45W	10W
MS8120F1200			

