

AprilAire

Zone Control

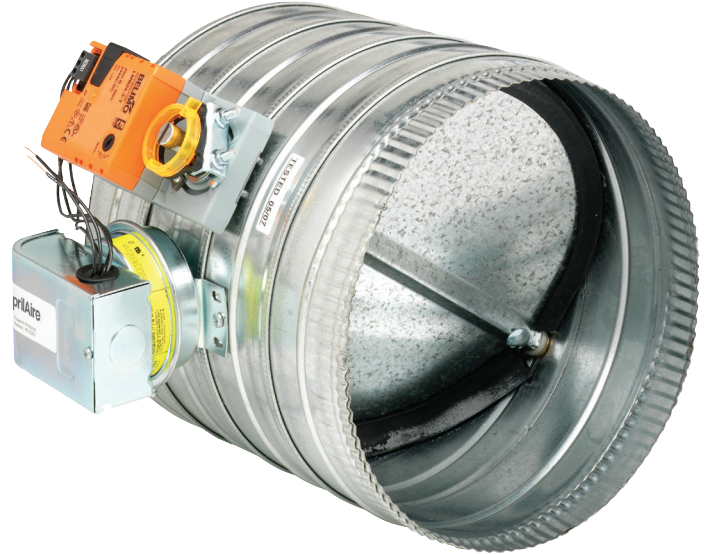
SPECIFICATION SHEET

Static Pressure Controlled Motorized Bypass Dampers

FEATURES

Static pressure controlled motorized bypass dampers shall:

- Be fully factory assembled
- Feature a 24 volt, modulating actuator, factory mounted and wired
- Feature a Solid State Static Pressure Sensor and Time Delay, factory mounted and wired
- Feature an adjustable pressure range, .17" - 2"
- Feature a built-in pressure adjustment LED to simplify initial set-up
- Feature an elliptical blade to provide for linear air control
- Be equipped with a low-leakage neoprene blade seal
- Be equipped with a blade position indicator
- Included a pressure sensing probe and tubing, for field installation in the HVAC ductwork
- Be constructed of 24 GA galvanized spiral steel, with rolled stiffening beads and one crimped end



Model Number	Size	Max FPM	CFM	Max System Tons
6208	8"	1500	500	1.5
6210	10"		800	2.6
6212	12"		1200	3.7
6214	14"		1600	5.0
6216	16"		2100	6.5
6218	18"		2650	8.3
6220	20"		3300	10.2

PRODUCT SPECIFICATIONS

Electrical

Actuator Voltage	24VAC
Actuator Operation	Power Open/Power Close (PO/PC)
Time Delay Interval	30 Seconds
Field Electrical Connections	2 Terminals, Power & Common, 1/2" Knock-out in enclosure

Pressure

Pressure Set Point Range	.17" - 2" WC
Pressure Sensing Element	Neoprene Diaphragm
Pressure Tube Connections	1/4" OD Hose Barb
Pressure Sensor Diaphragm Mounting Orientation	Vertical

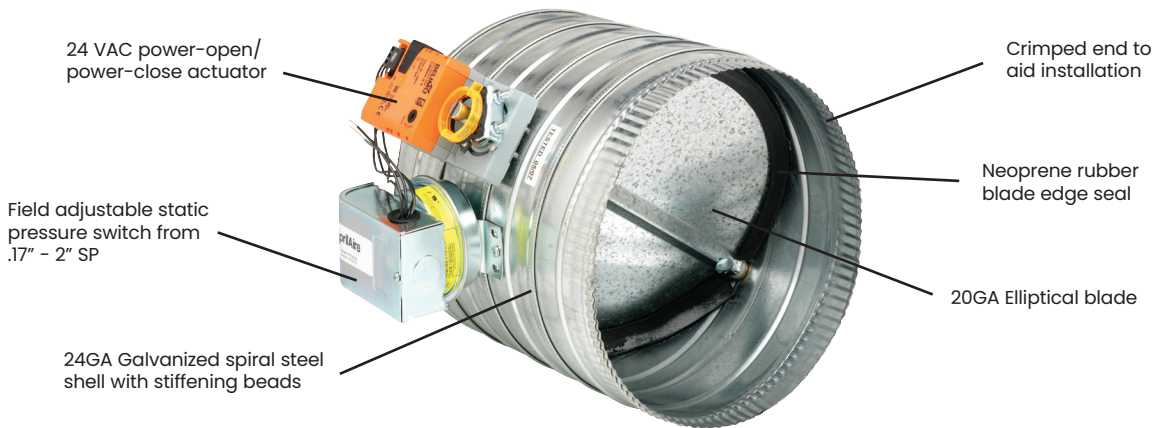
Damper

Damper Construction	24 GA Galvanized Spiral Steel with Stiffening Beads, One End Crimped
Damper Shell Length	OD + 1"
Damper Blade Construction	20 GA Galvanized Steel
Damper Blade Seal	Neoprene Rubber on Blade Edge

DAMPER OPERATION

As the individual zone dampers open and close, the system static pressure will fall and rise. In order to maintain proper air flow and static pressure through the HVAC system, a bypass system incorporating a reversible type motorized damper and a static pressure control is used.

The bypass damper features a power open/power closed 24-volt actuator that is controlled by a static pressure switch with integral time delay control. As the system pressure rises above the desired setting, the damper will immediately open to release the pressure, causing the system pressure to return to the desired setting. As the system pressure drops below the desired static pressure, the damper will delay approximately 30 seconds and then begin to close until the static pressure in the system is returned to the pre-set system pressure. Consult furnace/blower manufacturer for system pressure/airflow recommendations.



INSTALLATION GUIDELINES

1. IDENTIFY BYPASS DAMPER POSITION IN SYSTEM

Identify where the bypass damper is to be installed. The bypass damper must be located downstream of any heating or cooling components and upstream of all zone dampers.

The bypass damper should be installed with the bypass air being discharged into the return air plenum (up to 30% of system volume), or above the ceiling if this area is used as a common return, or into a "Dump" Zone that is part of HVAC system (featuring system returns).

2. INSTALL THE DAMPER TO THE DUCTWORK

- A. Install the damper with the crimped end downstream.
- B. The bypass damper must be installed such that the diaphragm of the static pressure control is in the vertical position.

3. INSTALL THE STATIC PRESSURE PROBE

The probe should then be inserted into the main supply plenum, downstream of the bypass damper and at least 2 to 3 feet from the air handling unit in a straight section of the duct at the center line. Attach one end of the sensing tube to the static pressure control and the other end to the pressure sensing probe.

4. PROVIDE POWER TO THE BYPASS DAMPER

Supply 24VAC to the bypass damper.

5. ADJUSTING THE STATIC PRESSURE CONTROL

- A. Confirm that the HVAC system has been properly balanced.
- B. Ensure all zone dampers are fully open and that the filter is clean (replace if necessary).
- C. Turn on the system blower at high speed. You may need to make a cooling call to do this. If the outside temperature is below 50°F, do not turn on the compressor. Disconnect power to the condensing unit by switching off the circuit breaker or removing the fuse before making a cooling call.
- D. With the air handler running and the bypass damper system powered, turn the static pressure adjusting screw counter-clockwise until the bypass damper just starts to open and the green LED turns on. Then, turn the adjusting screw clockwise just enough so the green LED turns off and the damper is fully closed.