Controlling Your Comfort Room by Room

Model: VK24xx

Make-Up Air Ventilation Damper System

The ZONEFIRST Make-Up Air Ventilation Damper System is designed to provide outdoor make-up air whenever an exhaust fan or ventilation hood is operating to replace the exhausted air by introducing make-up air into the building.

The system is a kit consisting of three basic components, the RDSC (normally closed) motorized damper, which opens to allow outdoor air into the building, the SPS05 pressure sensor switch to sense when the exhaust fan or hood is operating and a T24 24VAC transformer to power the damper and pressure sensing switch.

When the exhaust fan or hood is on, the pressure sensor switch will sense the increased air pressure and open the RDSC damper. When the exhaust fan or hood is off, the pressure sensor will sense the decrease in air pressure and cut the power to the damper motor. The damper blade will spring closed against the damper's internal gasket, ensuring a tight seal.

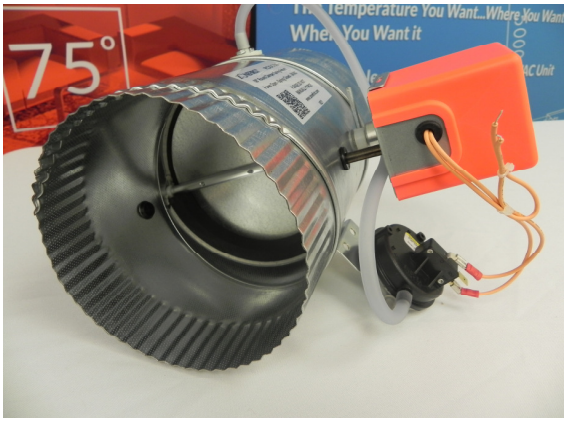
Models available:
Model VK2404 includes 4" Damper
Model VK2405 includes 5" Damper
Model VK2406 includes 6" Damper
Model VK2407 includes 7" Damper
Model VK2408 includes 8" Damper
Model VK2409 includes 9" Damper
Model VK2410 includes 10" Damper
Model VK2412 includes 12" Damper
Larger dampers sizes available to 20" diameter.

RDSC Damper Specifications

Construction – 24 Ga. Galvanized Steel (4"-8")
22 Ga. Galvanized Steel (9"-20")
Linkage – Direct Drive
Sizes – 4", 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20"
Motor Voltage – 24 Volts AC, 50/60 Hz, 6.5 Watts, 7VA
Torque – 35in-oz to 55in-oz
Temperature Rating - 0°F to 150°F Operating, -20°F to 175°F Storage
Humidity – 5% to 95% Non-Condensing
Damper Timing – Nominal 30 Sec. Powered, 18 Sec. Spring Return
Connection - 4" Wire Leads
Duct Pressure – Maximum 1.0" W.C.

SPS05 Pressure Sensing Switch Specifications

SPS05 - Pressure Sensing Switch, Set point: 0.05" W.C.
Operating Temperature - -40°F to 190°F



Installation

The Model VK24XX (RDSC damper, pressure sensor switch & pitot tube) is supplied pre-wired. The only field wiring required is to install/wire the T24 transformer (24vac/40VA) to a line voltage (WARNING: installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards) circuit and then connect the pre-wired damper/pressure switch leads to the transformer output terminals.

The RDSC damper can be installed vertically or horizontally. The RDSC/pressure switch is configured for immediate vertical installation. If the damper is to be installed horizontally the pressure switch must be rotated 90 degrees CCW as the **pressure switch must always be mounted in the vertical position**. The pressure switch is attached to the damper body with a ¼" nut, loosen the nut and rotate the pressure switch CCW, the re-tighten the nut.

Place the flat collar end of the damper over the crimped end of the take-off or rigid metal duct. Insert crimped end of round damper into un-crimped end of rigid round duct and secure with sheet metal screws (not included). When using flexible duct, slip duct over end of the round damper and secure with duct straps (not provided).

Damper INSTALLATION
Step 1: Install damper with crimped end downstream.
Step 2: Slide damper over end of crimped duct and secure to duct with sheet metal screws (not included).
NOTE: The damper blade, as supplied, is fully closed when not powered and will fully open when

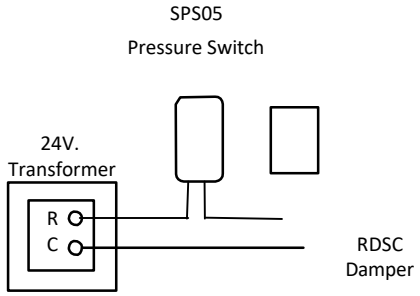
powered. The damper is 7 VA at 24 VAC power-opened/spring-closed.

Vertical Installation

Note: Pressure Switch <u>must</u> be vertical

Horizontal Installation

Wiring Diagram



ERROR: ioerror
OFFENDING COMMAND: image

STACK: