

Automatic Round Damper With MDM Power Open/ Power Close Motor Model: RDM

The Modulating Round Damper, Model RDM, is a 24 Volt AC, power open, power closed modulating damper. The damper is constructed of 22 or 24 gauge galvanized steel (subject to size) formed as a rigid spiral pipe and has a circular blade that closes tightly against a neoprene gasket seal.

The RDM can be used for zone control, fresh air intake, ventilation or as the motorized damper for by-pass air when controlled by the Static Pressure Switch (SPS) or Static Pressure Control (SPC). It is also designed to also handle high velocity air conditioning systems up to 2"W.C.

The simple 3 wire motor has two light emitting diodes (LED's) to indicate the damper position. The **RED** LED is lit when the damper is **closed** and the **Green** is lit when the damper is **open**. The MDM also has adjustable minimum position stop under the motor cover. This motor's energy saving design uses end switches to break power to the motor once the motor reaches the end travel position. This lengthens the motor life and conserves energy. The MDM has been factory tested to over 250,000 cycles.

The RDM is available in 4", 5", 6", 7", 8", 9", 10", 12", 14", 16", 18" and 20" diameters.

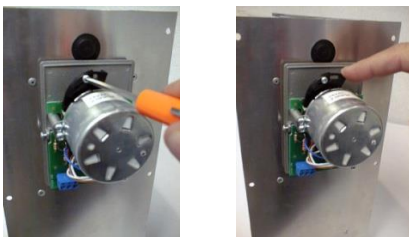


Motor Actuator

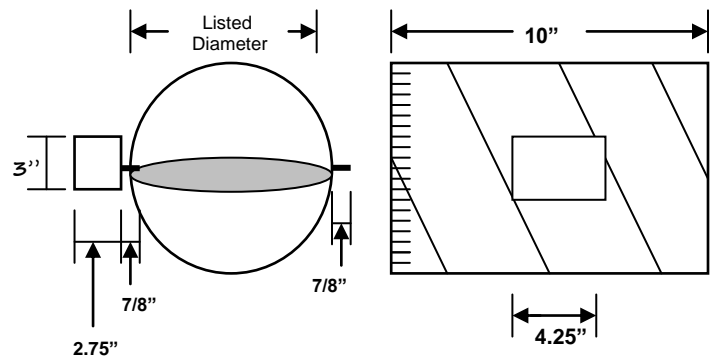


The MDM Actuator delivers up to 250 in/oz. (15.62 in/lbs.) of torque that powers the RDM open and closed. This powerful motor allows the damper to handle higher static pressures and can be modulated using the SPS or SPC Static Pressure Switch or similar type control.

The MDM is a reversible motor that powers the damper both open and closed. It also has an adjustable stop for a minimum damper position setting.



DIMENSIONAL DRAWING – All dimensions are nominal.



All Dimensions are nominal. Dampers 10" diameter and less are 9.750" in length. Dampers 12" and over are .250" shorter in length than the diameter.

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, 4VA, .17A

Torque – 250 in/oz. (15.62 in/lbs.)

Temperature Rating - 0°F to 150°F Operating, -20°F to 175°F Storage

Humidity – 5% to 95% Non-Condensing

Damper Timing – Nominal 9 Sec. Powered

Connection – Screw Terminals

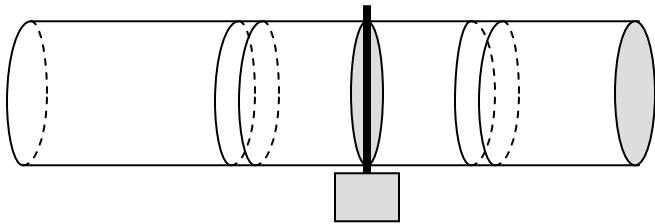
Duct Pressure – Maximum 2.0" W.C.

INSTALLATION

The RDM is used in-line with the duct and can be installed on a take-off or in-line at any point in the duct. It is recommended the damper be installed as close to the air handler as practical.

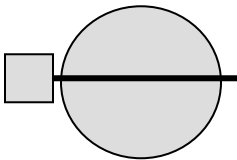
Place the flat collar end of the damper over the crimped end of the take-off or rigid metal duct. Insert crimped end of round damper into un-crimped end of rigid round duct and secure with sheet metal screws. When using flexible duct, slip duct over end of the round damper and secure with duct straps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

The drawing below shows a top view of the damper in line of the duct. When mounting, it is recommended that the motor and blade shaft be horizontal to the ground.



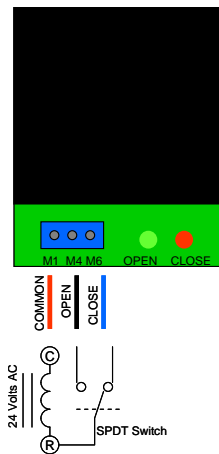
Round damper in-line with round duct.

SideView

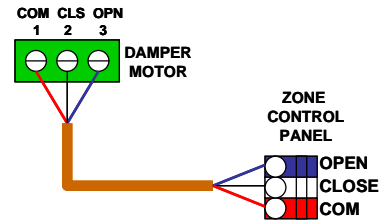


CHECKOUT

To checkout the operation of the dampers, place 24V across terminals M1 and M4. The damper will open and the Green LED will light at the end of the cycle. Place 24V to terminals M1 and M6 and the damper will close and the Red LED will light at the end of the cycle. All dampers are 100% factory tested.



WIRING DIAGRAM



TROUBLESHOOTING

After performing the checkout of the damper, check the motor terminals for 24V across terminals M1 and M4 if the damper should be open, and M1 and M6 if the damper should be closed. If power is not at the proper terminals, check the wiring and control panel for power.