

# McDaniel Metals

281-987-8400 • 281-987-9494 (fax)  
1318 Buschong, Houston, TX 77039  
www.mcdanielmetals.com

## D(M)25FD90150

MANUAL/MOTORIZED 25% FRESH AIR  
DAMPER FITS DAIKIN DCG090-150,  
DCH090-150, DCC090-150



### APPLICATION

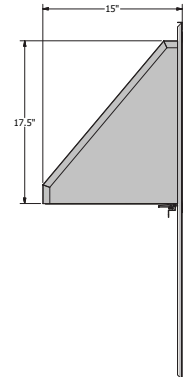
Most building codes require a certain amount of fresh air to overcome the effects of CO<sub>2</sub> during times when the space is occupied. Use of fresh air dampers on HVAC equipment is an inexpensive way to allow fresh air into the building. McDaniel Metals offers both a manual and motorized fresh air damper to fit Daikin light commercial packaged equipment. The manual fresh air damper is installed and fixed in place to allow a certain amount of fresh air to circulate at all times. The motorized fresh air damper includes a small two position actuator that opens the damper when the indoor blower is running and closes the damper when the blower turns off.

### MANUAL FRESH AIR DAMPER INSTALLATION

1. Remove the damper assembly from its container and inspect for damage or shortages
2. Locate and remove the panel covering the horizontal return air opening. Retain the screws for step 3.
3. Attach the damper to the side of the machine using the screws from step 2 and weatherproof with silicone or other approved sealant.
4. Locate the 5/16 set screws at the bottom of the slide damper and loosen them.
5. Slide the damper down until the damper is positioned to provide the correct amount of fresh air.
6. Tighten the set screws.
7. **For horizontal applications the damper can be mounted on the return air duct or evaporator access panel by field cutting a hole, mounting the damper over the hole and sealing around damper panel.**

### MOTORIZED FRESH AIR DAMPER INSTALLATION

1. Remove the damper assembly from its container and inspect for damage or shortages.
2. Remove the large evaporator access panel.
3. Slide the motorized damper section into the channels on the back of the manual damper.
4. See the instructions above for mounting the damper hood and setting the opening.
5. Remove the jumper plug from the economizer wiring harness and plug in the damper. (Note: It is a good idea to retain the jumper plug for emergencies.)
6. Replace the evaporator access panel.
7. **For horizontal applications the damper can be mounted on the evaporator access panel by field cutting a hole, mounting the damper over the hole and sealing around damper panel.**



### DETERMINING DAMPER SET POINT

While it is possible to estimate the amount of fresh air by visually adjusting the manual fresh air damper, a more accurate determination can be made using a digital thermometer and the equation below.

$$(To \times OA) + (Tr \times RA) = Tm$$

To = Outdoor air temperature

OA= Percent of outdoor air

Tr = Return air temperature

RA= Percent of return air

Tm= Resulting mixed air temperature

Example:

Fresh air required is 10% outdoor air.

Outdoor air temperature is 60 degrees F.

Return air temperature is 75 degrees F.

$$(0.1 \times 60) + (0.9 \times 75) =$$

$$6.0 + 67.5 = 73.5$$

Mixed air temperature will be 73.5 degrees F when the OA is 60 degrees F and the RA is 75 degrees F with 10% outdoor air.