

# Bosch IAQ Series Fresh Outside Air Damper

Engineering  
Submittal  
Sheet



# BOSCH

## Models and Sizes



Available Sizes	Bosch Model Description
4"	FADB-04007-6--A
5"	FADB-05011-6--A
6"	FADB-06015-6--A

## Engineering Specifications

The Fresh Air Damper (FAD) is part of Bosch's IAQ Series of products and strategy of Control-Filtration-Refresh. The FAD is available in 4", 5", and 6" diameters. The damper motor is controlled by 24 Volts AC. Damper motor electrical connections operate with a input of 24 VAC, Common, G (blower call from air handler) and output of 0-5 VDC. Each kit comes equipped with an outside air hood that comes with a 1/2" mesh screen.

### CONSTRUCTION

Damper material is constructed of 28 gage galvanized steel. Duct material is constructed of 26 gage galvanized steel.

### CONTROLS

Damper motor control shall be a wall or duct mounted potentiometer with variable position control for damper opening allowing a certain percentage of fresh air from 0-100%.

### WARRANTY

The damper carries a 5-year limited warranty against damage due to defects in materials or workmanship.

## Operational Data

	Unit	Value
Available sizes	Inch	4, 5, 6
Damper motor electrical rating	VAC	24
Damper motor amperage - operating	VA	2.6
Damper motor amperage - holding	VA	0.7
Damper motor electrical connections - input	VAC	24
Damper motor electrical connections - output	VDC	0-5

**Fresh Outside Air Calculation Methods**

There are two methods that can be used to determine the amount of outside air needed for your residence or small commercial building. One method is determined based upon number of people that will be within the space in question, the second method is an overall air change rate. Both methods should be calculated and the method that yields the largest amount should be used. Here is an example of utilizing both methods:

**Method 1 - Outside air determined by number of people**

Based on ASHRAE standards, a rate of 15 CFM/ person should be provided. Any amount of air being exhausted by kitchen exhaust hoods and bathroom exhaust fans should be accounted for also.

**Residence Scenario**

The following is an example of the necessary information that will need to be collected:

- ▶ 4 People @ 15 CFM/person
- ▶ 2 Bathroom Exhaust Fans @ 20 CFM each
- ▶ 1 Kitchen Exhaust Hood @ 25 CFM

**OA needed:**

$(4 \text{ people} * 15 \text{ CFM/person}) + (2 * 20 \text{ CFM}) + (1 * 25 \text{ CFM}) = \mathbf{125 \text{ CFM}}$

**Method 2 - Outside air determined by number of air changes**

Based on ASHRAE standards, a rate of 0.35 air changes should be provided.

**Residence Scenario**

The following is an example of the necessary information that will need to be collected:

- ▶ 2,000 ft2 with 8 ft ceiling
- ▶  $OA \text{ CFM} = \frac{AC / (\text{hr}) * \text{Volume of Space}}{60}$

**OA needed:**

$(2,000 * 8 * 0.35) / 60 = \mathbf{93.3 \text{ CFM}}$

Based on this example 125 CFM should be designed as this is the higher calculated value. Please note these values are determined by ASHRAE standards. The local codes may differ from the ASHRAE standards and all local codes should always be referenced and followed.

**Fresh Outside Air Damper Replacement Parts**

Bosch Part Number	Description
7738002930	Wall Mounted Manual Controller
7738002931	Hooded outdoor intake louver- 4"
7738002932	Hooded outdoor intake louver- 5"
7738002933	Hooded outdoor intake louver- 6"
7738002934	24 VAC Actuator Damper Motor

Typical Outdoor Air Intake Installation

