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Your Single Source For All Your HVAC Needs

Control Dampers



Balancing Dampers



Counterbalanced and Backdraft Dampers



GENERAL PRODUCTS CATALOG - DAMPERS

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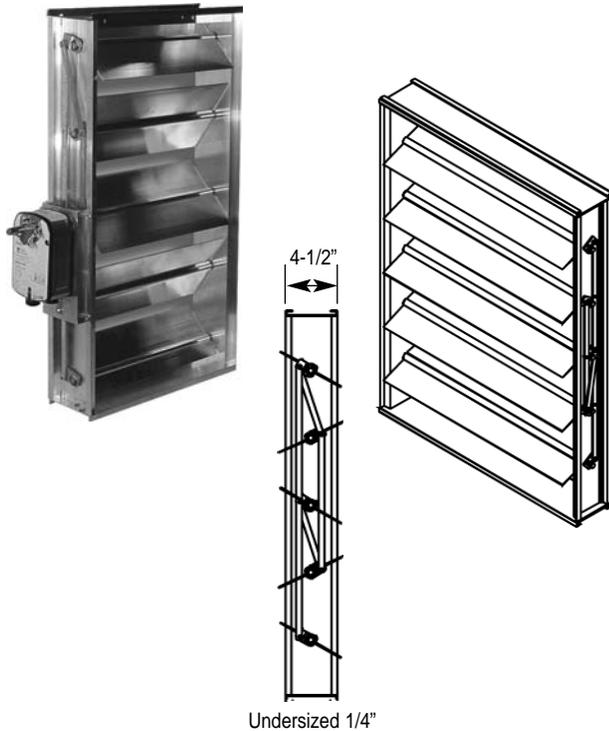
1st Edition
Product Code #900-0123

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August 2011

Model FDCB (Opposed Blade) FDHB (Parallel Blade)

Aluminum Low Leakage Control Dampers



▼ Standard Specifications

Frame: .081 extruded aluminum

Blades: .125 extruded aluminum

Bearings: bronze oilite

Linkage: *concealed in frame

Axles: 1/2"Ø cast zinc with thrust bushing

Control Shaft: 1/2" x 6" long outboard support bearing supplied with all single section dampers for field mounted actuators. Factory-installed jackshaft supplied with all multi-section dampers.

Leakage Performance

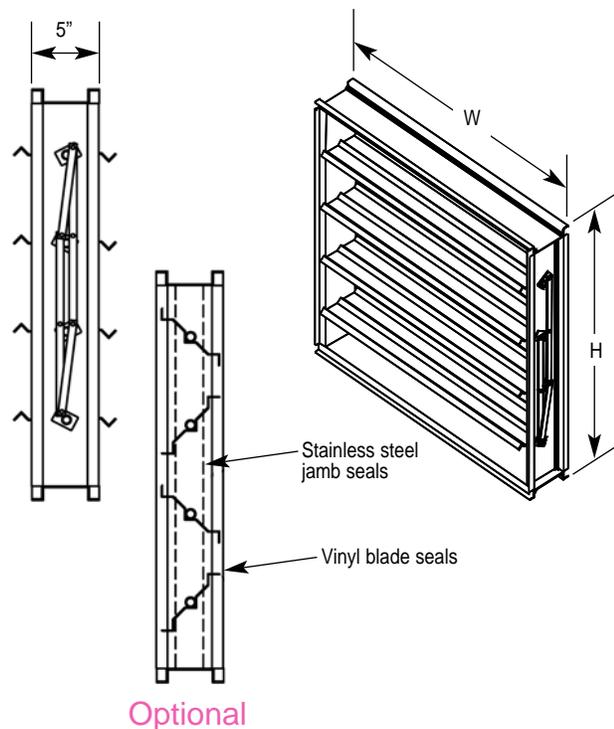
Leakage - L/s/m² (ft³/min/ft²)

Damper Width x Height	1 in. w.g. Class	4 in. w.g. Class	8 in. w.g. Class
12" x 12"	3.6 (Class 1A)	7.6 (Class 1A)	10.3 (Class 1A)
36" x 36"	0.5 (Class 1A)	5.6 (Class 1A)	20.8 (Class 1A)

Note: At 1" w.g. 12" x 12" damper leaks 3.6 cfm per square foot.
Note: At 1" w.g. 36" x 36" damper leaks 0.5 cfm per square foot.
Note: Blade and jamb seals are required to meet the leakage rates shown above.

Model FDNB (Opposed Blade) FDQB (Parallel Blade)

Galvanized 3V Blade Control Dampers



▼ Standard Specifications

Frame: roll formed galvanized steel

Blades: 4" - 7" wide, 16 gauge galvanized steel

Bearings: nylon

Linkage: concealed in frame

Axles: 3/8" square plated steel

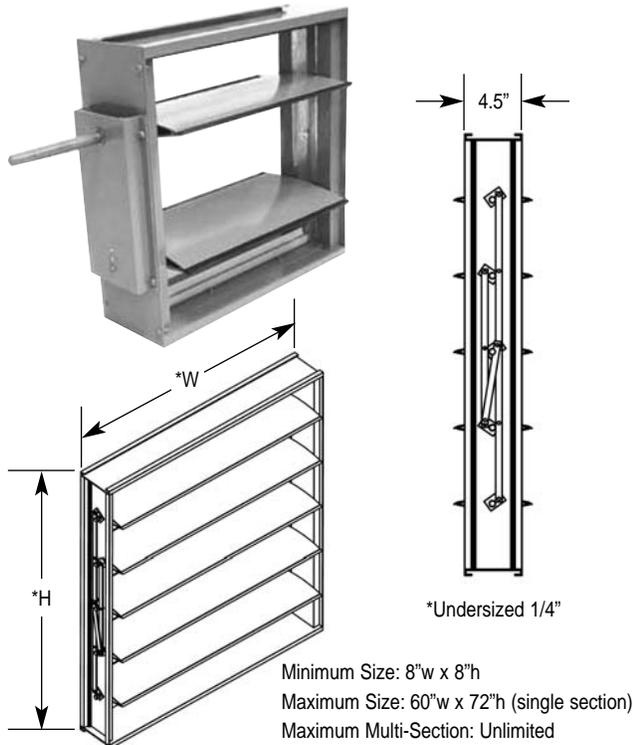
Control Shaft: Ø1/2" x 4-1/2" long shaft supplied with all single section dampers for field mounted actuators. Factory-installed jackshaft supplied with all multiple section dampers.

Leakage Performance

Damper Width x Height	1 in. w.g. Class	4 in. w.g. Class	8 in. w.g. Class	*Torque (per sq. ft.)
36" x 36"	Class III	Class III	Class III	5.55 lbs-in

*Torque applied to hold damper in closed position.

**Model FAAA (Opposed Blade)
FABA (Parallel Blade)**
Aluminum Airfoil Blade Control Dampers



▼ **Standard Specifications**

- Frame:** .081 extruded aluminum (6063-T5)
- Blades:** hollow airfoil with .375" thick end nose (6063-T5) extruded aluminum
- Extended Shaft:** 1/2" diameter
- Bearing:** bronze oilite
- Linkage:** concealed in frame
- Pivot Axels:** zinc with thrust bushings
- Blade Seals:** removable EPDM (250°F)
- Jamb Seals:** stainless steel (compression)

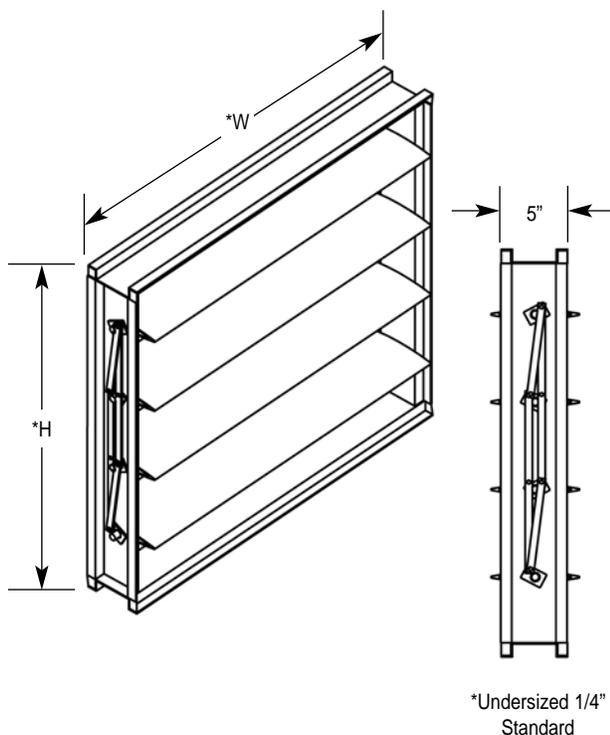
Options

- Insulated Blades (Foam Filled Blades)

Leakage Performance (Forward Flow)

Damper Width x Height	1 in. w.g. Class	4 in. w.g. Class
12" x 12"	Class I	Class II
24" x 24"	Class I	Class I
36" x 36"	Class I	Class I
12" x 48"	Class III	Class III
48" x 12"	Class I	Class I
60" x 36"	Class II	Class II

**Model FACA (Opposed Blade)
FADA (Parallel Blade)**
Galvanized Airfoil Blade Control Dampers



▼ **Standard Specifications**

- Frame:** rollformed galvanized steel
- Blades:** 5"-7" wide galvanized steel airfoil (double skin construction of 14 ga equivalent thickness)
- Extended Shaft:** 1/2" diameter
- Bearing:** nylon
- Linkage:** concealed in frame
- Axels:** zinc plated
- Blade Seals:** PVC (175°F)
- Jamb Seals:** stainless steel (compression)

Options

- Insulated Blades (1/2" Fiberglass)

Leakage Performance (Forward Flow)

Damper Width x Height	1 in. w.g. Class	4 in. w.g. Class	8 in. w.g. Class
12" x 12"	Class I	Class II	Class II
24" x 24"	Class I	Class I	Class I
36" x 36"	Class II	Class II	Class II
12" x 48"	Class III	Class III	Class II
48" x 12"	Class I	Class I	Class I
60" x 36"	Class II	Class II	Class II

Model FAEA

Model FAEA is an ideal manual balancing damper for duct up to 36" x 12".



▼ Standard Specifications

Frame: .081" aluminum, 4-1/2" deep

Blades: .125" aluminum

Bearing: nylon 6/6

Hand Quadrant: 1/2" cast zinc

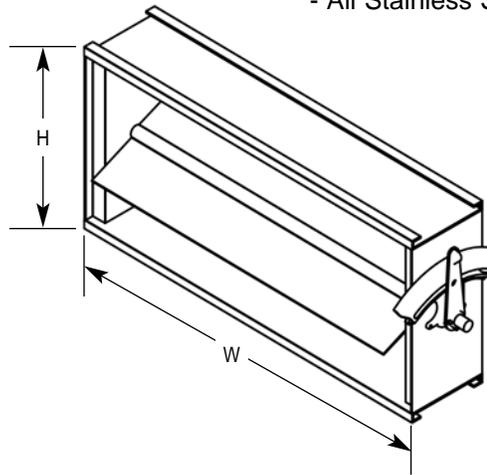
Maximum Velocity: 2000 fpm

Variations

- 2" Stand Off Quadrant
- All Stainless Steel including Quadrant

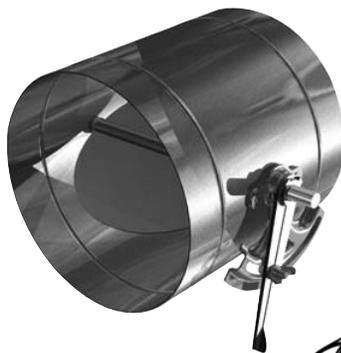


Undersized
approx. 1/4"



Model FAFA

The model FAFA is a G-90 galvanized steel damper with factory mounted heavy duty locking hand quadrant designed especially for manual balancing applications. It is easy to install, seal and becomes part of the duct work.



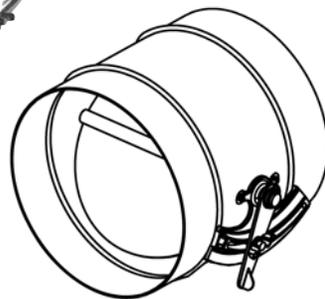
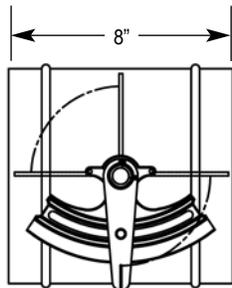
▼ Standard Specifications

Shaft: 1/2" round solid aluminum (thru 30")

3/4" round solid steel (32" thru 40")

Bearing: molded sythetic nylon 6/6

Diameter	Length	Body & Blade
4 - 10"	8"	20 ga.
12 - 18"	8"	20 ga.
20 - 30"	8"	20 ga.
32 - 40"	8"	18 ga.

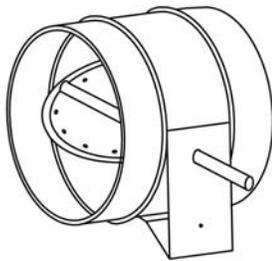
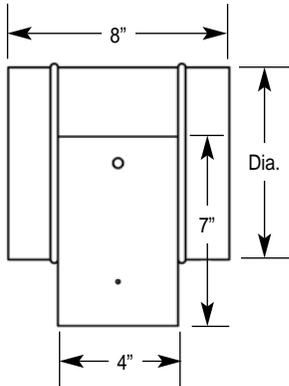


MODEL FAFA

Approx. 1/8" O.D. Undersized

Model FAHA

Round Control Dampers



MODEL FAHA
Approx. 1/8" O.D. Undersized

▼ **Standard Specifications**

Shaft:

1/2" round solid aluminum (thru 30")
3/4" round solid steel (32" thru 46")

Bearing:

Bronze oilite (175°F)

Blade Seals:

Crosslinked closed cell (200°F)

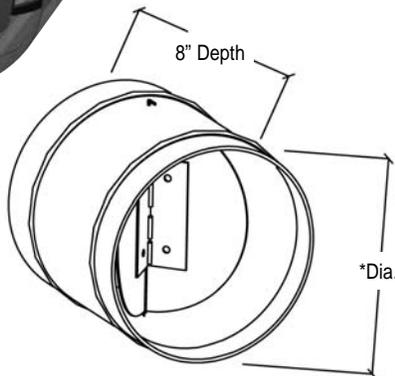
Mounting Plate:

20 ga. galvanized steel

Diameter	Length	Body & Blade
4 - 10"	8"	24 ga.
12 - 18"	8"	20 ga.
20 - 30"	8"	20 ga.
32 - 46"	8"	18 ga.

Model FAJA

Round Butterfly Backdraft Dampers



MODEL FAJA
Approx. 1/8" Undersized

▼ **Standard Specifications**

EDPM rubber gasket in closed position for minimum leakage

Aluminum spring loaded butterfly damper (.025" alum. blades)

Requires .04 to .08 inches w.c. to begin to open

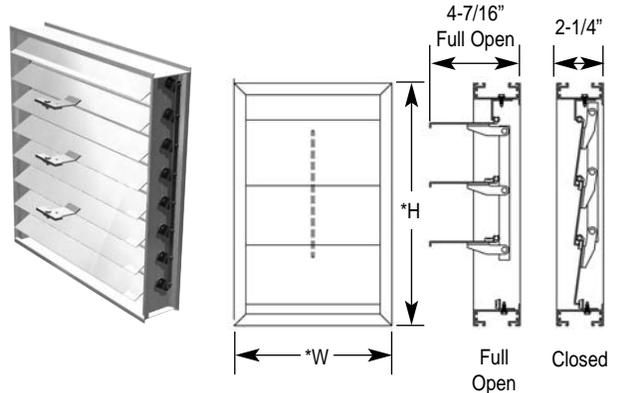
May be installed in any position

Sizes Available

4", 5", 6", 7", 8", 9", 10", 12", 14", 16" & 18"

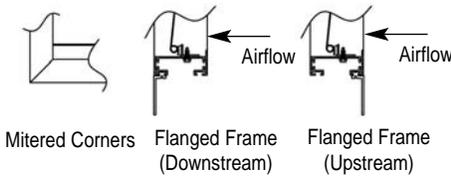
Dimensions		Maximum Velocity (FPM)
Diameter	Length	
4 - 10"	8"	2200
12 - 18"	8"	1900

Model FAKA (Aluminum)

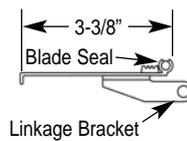


*W & H dimensions are approx. 1/4" undersized.

Frame Detail



Blade Detail



The FAKA is a vertical or horizontal mounted backdraft damper that is designed to allow airflow and prevent reverse airflow.

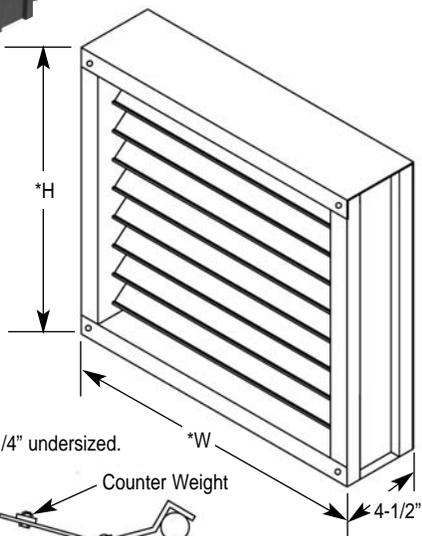
Ratings

Pressure: 3.5" w.g.
Velocity: 4000 fpm
Temperature: 180°F

Standard Specifications

Frame: .060" thick extruded alum.
Blades: .060" thick extruded alum. w/counterbalance weights
Blade Seal: EPDM rubber
Linkage: 1/2" x 1/8" aluminum bar (in airstream)
Axes: zinc plated steel
Brushings: nylon

Model FAMA (Galvanized) FANA (304 S.S.) FAPA (316 S.S.)



*Standard 1/4" undersized.

Ratings

Pressure: 4" w.g. - differential pressure
Velocity: 4000 fpm
Temperature: 180°F

Standard Specifications

Frame: 16 ga. galvanized steel
Blades: 16 ga. gal. steel w/counterbalance weights
Linkage: zinc plated concealed
Axes: 1/2" diameter cast zinc & steel
Blade Seal: PVC (180°F)
Bearings: bronze oilite

Size Limitations

Minimum Size: 6"w x 6"h
Maximum Single Section Size: 48"w x 48"h
Multiple Panel Maximum Size: unlimited

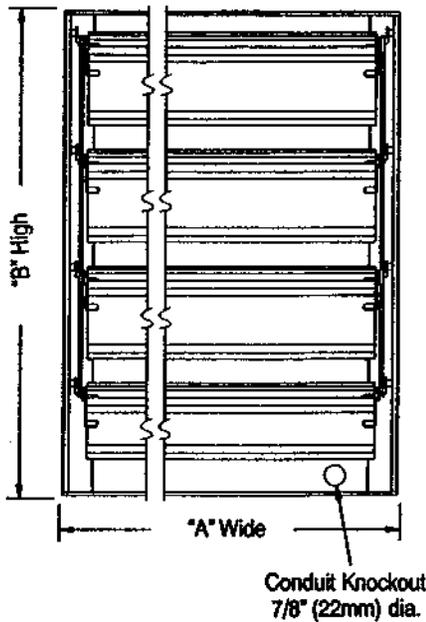
Damper Performance

Damper Width	Max. Back Pressure	Max. System Velocity	Leakage*		Blades Start to Open	Blades Fully Open
			% of Max. Flow	CFM/Sq. Ft.		
48" (1219)	4.0" w.g.	4000 FPM	.61	15		
36" (914)	8.0" w.g.	4000 FPM	.6	15	** .01"	** .05"
24" (610)	12.0" w.g.	4000 FPM	.72	18	w.g.	w.g.
12" (305)	16.0" w.g.	4000 FPM	1	24		

*Leakage information based on pressure differential of 1" w.g. tested per AMCA Std. 500.

**Set at least resistant to open.

**Model JDHAA (Backdraft Damper)
JDHAM (Motorized Damper)**



▼ **Standard Specifications**

Frame: .036" (1.6mm) 6063T6 aluminum

Blades: 24 gauge aluminum with double stiffening breaks

Finish: mill aluminum

Bearings: self lubricating nylon

Blade Pivots: 3/16" (5mm) plated steel

Linkage: galvanized steel; double linkage for width exceeding 20" (508mm)

Seals: felt between blades and polyurethane sponge at sill

Maximum Panel Size: 50"w x 72"h (1270mm x 1829mm)

Maximum Velocity: 1500 FPM (8 M/S)

Maximum Differential Pressure: 1" WG (250 N/M²)

Maximum Temperature: Damper 250°F (95°C); Motor 130°F (55°C)

The JDHAA and JDHAM dampers can be installed either vertically or horizontally.

DAMPER QUICK SHIP

All models of Carnes dampers (except models JDHAA and JDHAM) are available on a 6 day and 10 day quick ship.

LQS6 Lover and Damper 6 Day Quick Ship

LQS10 Lover and Damper 10 Day Quick Ship

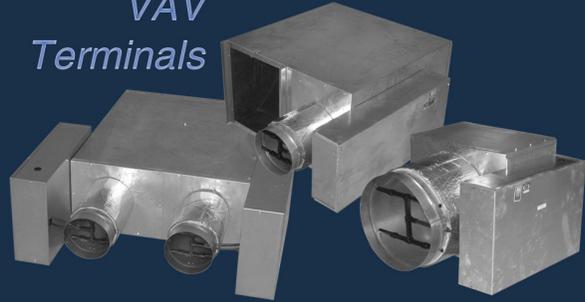
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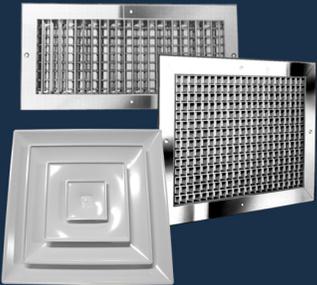
Vents & Fans



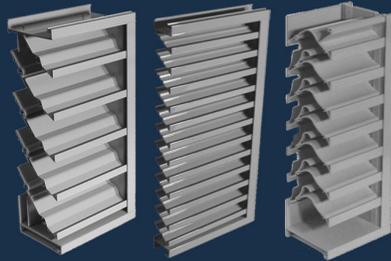
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