



# Dampers, Shutters & Louvers



## AUTO EXHAUST DAMPER MODEL 411

Models 411 are a non-flanged horizontal mount exhaust backdraft damper. The frame is galvanized steel with aluminum blades. The blades have a felt seal on the leading edge for quiet closing and better protection from the weather. Spring assisted to allow blades to open quickly. Ideal for use in roof curbs, duct work, or wall collars when using a fan or power roof ventilator. Only available for horizontal mount exhaust applications.



Sizes available – 8" W x 8" H to 30" W x 30" H.

Maximum free area velocity – 2,000 fpm.

### FEATURES

#### Frame

- Frame is Galvanized Steel.
- Conduit knockout provided for ease of electrical hook up.
- Easy to motorize. (order 411611 motor pack)
- 2" deep frame.

#### Blades

- Blades are 26 gauge Mill Finish Aluminum
- Blades open freely to allow full opening and closing.
- Felt seal on leading edge of blades for quiet closing and better protection from the weather.
- Nylon bushings and stainless steel pivot pins
- Tie rod attached to all blades for simultaneous opening.
- Spring assist to allow blades to open quickly.

#### Ratings

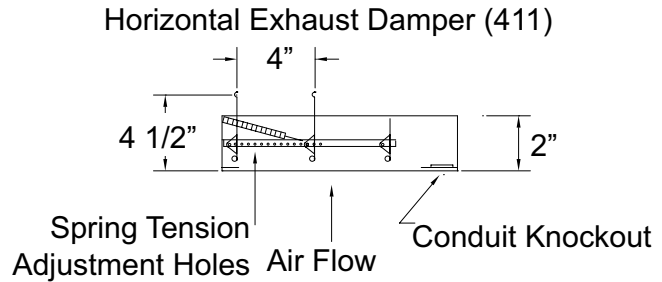
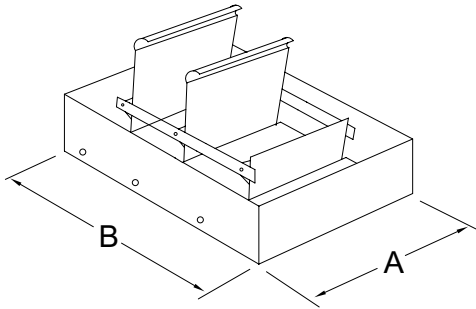
- Maximum recommended velocity is 2000 FPM Pressure- 1.0 in w.g - differential pressure
- Temperature -40°F to 180°F

#### Options

- Motor packs.



# AUTO EXHAUST DAMPER MODEL 411



## STANDARD SIZES Dimensions in Inches

Part No.	Overall Frame Dimensions (W x H)	Free Area Dimensions (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	Est. Shipping Weight (lbs)
411008	7.75 x 7.75	6.125 x 7.25	.42	.31	2
411009	8.75 x 8.75	6.50 x 7.25	.53	.33	2.5
411010	9.75 x 9.75	7.125 x 8.25	.66	.41	2.5
411011	10.75 x 10.75	8.50 x 9.25	.80	.55	3
411012	11.75 x 11.75	9.125 x 10.25	.96	.65	3.50
411014	13.75 x 13.75	11.125 x 12.25	1.51	.95	4
411016	15.75 x 15.75	13.125 x 14.25	2.19	1.30	4
411018	17.75 x 17.75	15.125 x 16.25	2.44	1.71	4.5
411019	18.75 x 18.75	16.125 x 17.25	2.71	1.93	4.5
411020	19.75 x 19.75	17.125 x 18.25	3.29	2.17	5
411022	21.75 x 21.75	19.125 x 20.25	3.59	2.69	5
411024	23.75 x 23.75	21.125 x 22.25	3.92	3.26	6
411026	25.75 x 25.75	23.125 x 24.25	4.60	3.89	7
411028	27.75 x 27.75	25.125 x 26.25	5.35	4.58	7.5
411030	29.75 x 29.75	27.125 x 28.25	6.15	5.32	8

**Note:** Dimensions are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## Optional 411611 Motor Pack Specifications

Motor Pack Part Number	Power Supply Required	Running AMPS	Stall Torque	Lead Length	Installed Unit Dimension		
					H	W	D
411611	115/230V, 60 Hz	.11/.07	77 in. lbs.	6"	8.5	4.5	7.375

## AUTO EXHAUST DAMPER MODEL 611

Models 611 are a non-flanged horizontal mount exhaust backdraft damper. The frame is galvanized steel with aluminum blades. The blades have a felt seal on the leading edge for quiet closing and better protection from the weather. Spring assisted to allow blades to open quickly. Ideal for use in roof curbs, duct work, or wall collars when using a fan or power roof ventilator. Only available for horizontal mount exhaust applications.



Sizes available – 34" W x 34" H to 48" W x 48" H.

Maximum free area velocity – 2,250 fpm.

### FEATURES

#### Frame

- Frame is Galvanized Steel.
- Conduit knockout provided for ease of electrical hook up.
- Easy to motorize. (order 411611 motor pack)
- 2" deep frame.

#### Blades

- Blades are 26 gauge Mill Finish Aluminum with galvanized reinforcement strip.
- Blades open freely to allow full opening and closing.
- Felt seal on leading edge of blades for quiet closing and better protection from the weather.
- Nylon bushings and stainless steel pivot pins
- Tie rod attached to all blades for simultaneous opening.

#### Ratings

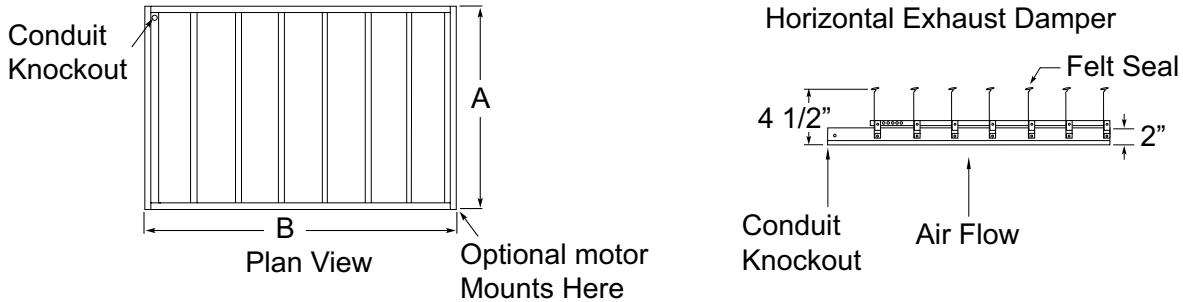
- Maximum recommended velocity is 2250 FPM Pressure- 1.0 in w.g - differential pressure
- Temperature -40°F to 180°F

#### Options

- Motor packs.



# AUTO EXHAUST DAMPER MODEL 611



## STANDARD SIZES Dimensions in Inches

Part No.	Overall Frame Dimensions (W x H)	Free Area Dimensions (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	Number of Panels	Est. Shipping Weight (lbs)
611034	33.75 x 33.75	31.125 x 32.25	7.91	6.97	1	15
611035	34.75 x 34.75	31.125 x 33.25	8.39	7.19	1	16
611036	35.75 x 35.75	33.125 x 34.25	8.88	7.88	1	17
611040	39.75 x 39.75	37.125 x 38.25	10.97	9.86	1	19.5
611048	47.75 x 47.75	45.125 x 46.25	15.83	14.49	1	26

**Note:** Dimensions are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## Optional 411611 Motor Pack Specifications

Motor Pack Part Number	Power Supply Required	Running AMPS	Stall Torque	Lead Length	Installed Unit Dimension		
					H	W	D
411611	115/230V, 60 Hz	.11/.07	77 in. lbs.	6"	8.5	4.5	7.375

## AUTOMATIC WALL SHUTTER-SINGLE PANEL MODEL 502

The Model 502 is a rear flanged low velocity gravity exhaust shutter. The frame is galvanized steel with mill finish aluminum blades. The blades have a felt seal on the leading edge for quiet closing and better protection from the weather. Ideal for use with direct drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only.

Sizes available – 10" W x 10" H to 24" W x 24" H.

Maximum free area velocity – 2,000 fpm.



### FEATURES

#### Frame

- 20 gauge galvanized steel.
- Tog-L-Loc and tabbed corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunch oblong mounting holes.

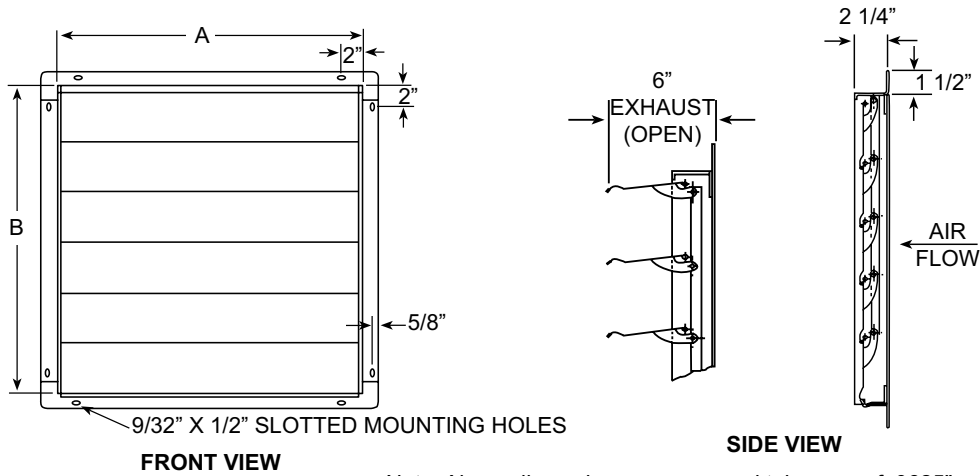
#### Blades

- 26 gauge 3105 mill finish aluminum.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins and rivets
- Nylon bushings.

#### Ratings

- Maximum recommended velocity is 2,000 FPM
- Temperature - -40 F to 180 F

# AUTOMATIC WALL SHUTTER-SINGLE PANEL MODEL 502



## STANDARD SIZES Dimensions in Inches

Part No.	Panel Size (A x B)	Est. Shipping Weight (lbs)
502010	10 x 10	3.5
502012	12 x 12	4
502016	16 x 16	5.5
502020	20 x 20	7
502024	24 x 24	9.5

## AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL 556

The Model 556 is a rear flanged general purpose exhaust shutter. The frame is galvanized steel with mill finish aluminum blades. The blades have a galvanized reinforcement strip across the top of each blade for added strength and counter balancing efficiency. The blades have a felt seal on the leading edge for quiet closing and better protection from the weather. Ideal for use with direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only.



Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 2,500 fpm.

### FEATURES

#### Frame

- .037 gauge galvanized steel.
- Tog-L-Loc and tabbed corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunch oblong mounting holes.
- Easy to motorize (optional motor pack model EAS).

#### Blades

- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

#### Ratings

- Maximum recommended velocity is 2,500 FPM of free area
- Temperature - -40 F to 180 F

#### Options

- Motor packs



EAS1232MTR

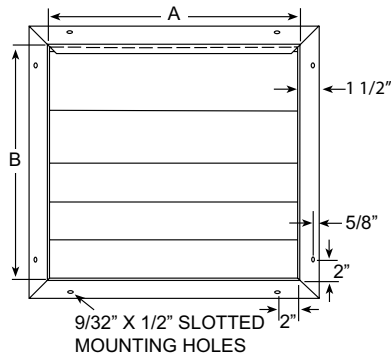


EAS3850MTR

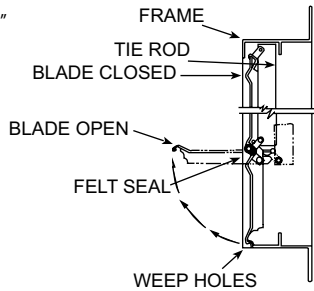


# AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL 556

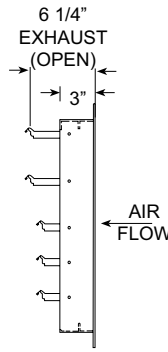
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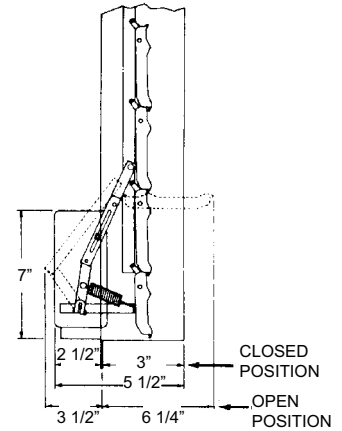
FRONT VIEW



SIDE VIEW



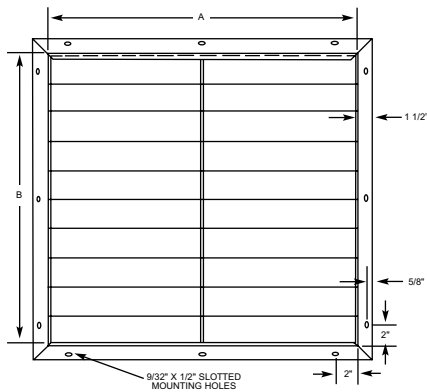
\*Side view of shutter frame and installed motor pack



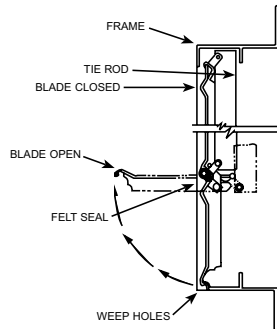
\*Maximum operating dimensions

Note: Above dimensions + or - normal tolerance of .0625"

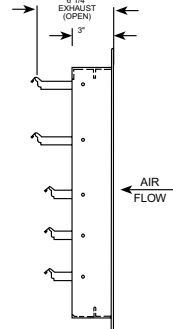
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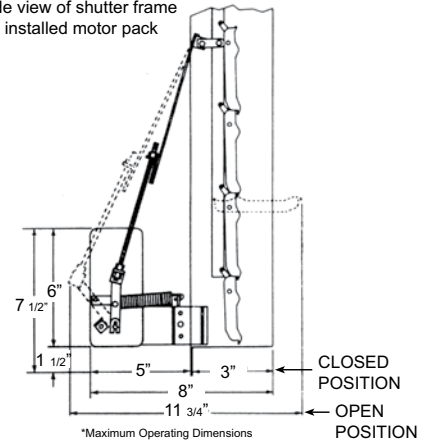
FRONT VIEW



SIDE VIEW



\*Side view of shutter frame and installed motor pack



\*Maximum Operating Dimensions

Note: Above dimensions + or - normal tolerance of .0625"

## STANDARD SIZES

### Dimensions in Inches

Part No.	Inside Frame Dimensions (W x H)	Overall Frame Dimensions (W x H)	Required Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	No. of Panels	Est. Shipping Weight (lbs)
556012	12 x 12	15 x 15	12.5 x 12.5	1.00	.79	1	4.5
556016	16 x 16	19 x 19	16.5 x 16.5	1.78	1.44	1	6.5
556020	20 x 20	23 x 23	20.5 x 20.5	2.78	2.28	1	8.5
556024	24 x 24	27 x 27	24.5 x 24.5	4.00	3.32	1	11
556030	30 x 30	33 x 33	30.5 x 30.5	6.25	5.16	1	15
556036	36 x 36	39 x 39	36.5 x 36.5	9.00	7.44	1	19
556042	42 x 42	45 x 45	42.5 x 42.5	12.25	10.25	2	29
556048	48 x 48	51 x 51	48.5 x 48.5	16.00	12.92	2	35.5

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## Optional EAS Motor Pack Specifications

Motor Pack Part No.	Power Supply Required	Running AMPS	Stall Torque	Damper Panels	Lead Length
EAS1232MTR	115/230V, 60 Hz	.11/.07	77 ins. lbs.	Single	6"
EAS3850MTR	115/230V, 60 Hz	.11/.07	77 ins. lbs.	Double	6"

# AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL EAS-RF

The Model EAS is a rear flanged exhaust shutter for areas where corrosion may be a problem. The frame and blades are mill finish aluminum. The blades have a galvanized reinforcement strip across the top of each blade for added strength and counter balancing efficiency. The blades have a felt seal on the leading edge for quiet closing and better protection from the weather. Ideal for use with direct-drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only.



Sizes available – 12” W x 12” H to 48” W x 48” H.

Maximum free area velocity – 2,500 fpm.

## FEATURES

### Frame

- .062 mill finish 6063T5 or T6 extruded aluminum.
- Welded and/or staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.
- Easy to motorize (optional motor pack model EAS).

### Blades

- 26 gauge 3105 mill finish aluminum.
- Galvanized reinforcement strip across top of blade for added strength and counter balancing and efficiency.
- Felt seal on leading edge of blade for tight closure and quiet operation.
- Flanged ends of blades provide additional weather seal protection.
- Center-mounted galvanized steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.
- Counter balanced blades allow shutter to be mounted vertically to 45 degrees.

### Ratings

- Maximum recommended velocity is 2,500 FPM Temperature - -40 F to 180 F

### Options

- Motor packs



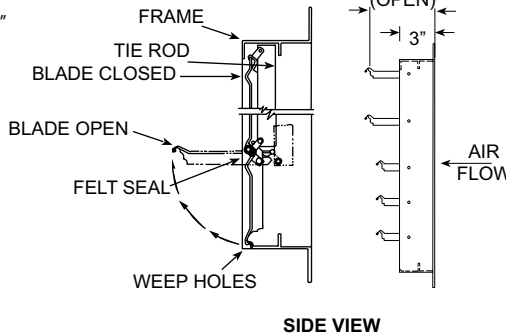
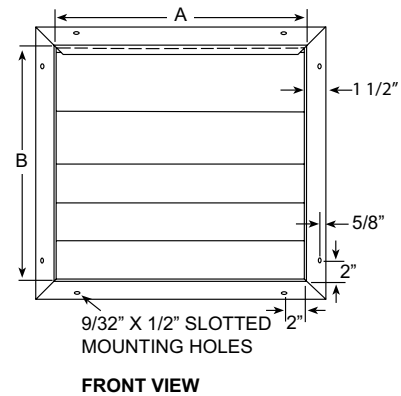
EAS1232MTR



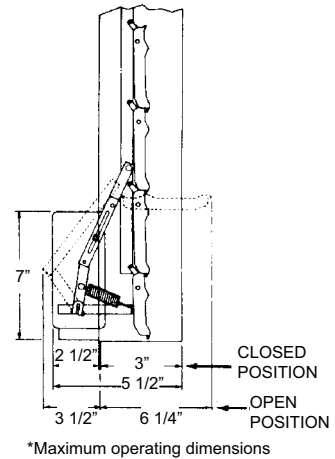
EAS3850MTR

# AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL EAS-RF

## Single Panel

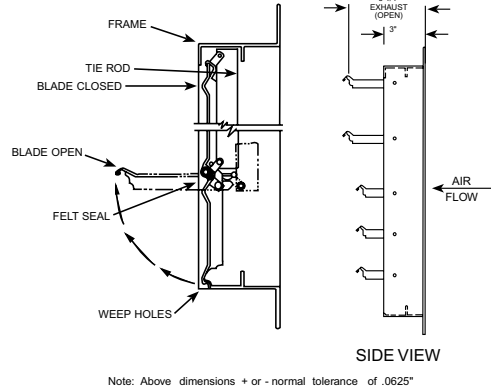
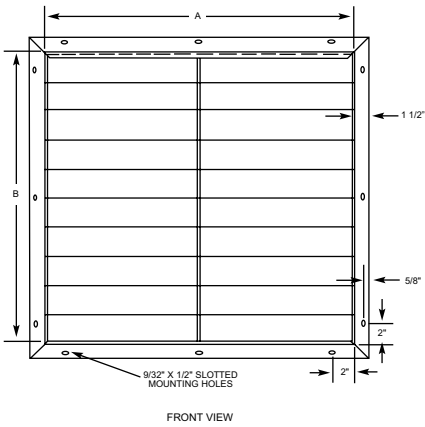


\*Side view of shutter frame and installed motor pack

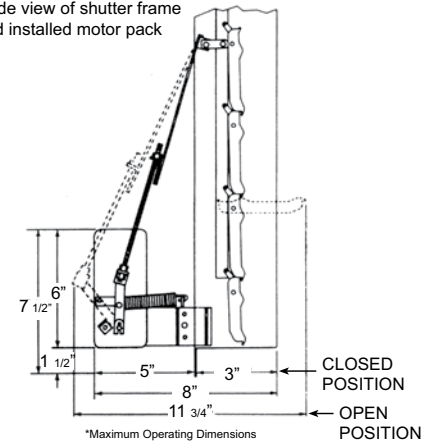


Note: Above dimensions + or - normal tolerance of .0625"

## Double Panel



\*Side view of shutter frame and installed motor pack



Note: Above dimensions + or - normal tolerance of .0625"

## STANDARD SIZES

### Dimensions in Inches

Part No.	Inside Frame Dimensions (W x H)	Overall Frame Dimensions (W x H)	Required Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	No. of Panels	Est. Shipping Weight (lbs)
EAS12-RF	12 x 12	15 x 15	12.5 x 12.5	1.00	.79	1	4.5
EAS16-RF	16 x 16	19 x 19	16.5 x 16.5	1.78	1.44	1	6.5
EAS20-RF	20 x 20	23 x 23	20.5 x 20.5	2.78	2.28	1	8.5
EAS24-RF	24 x 24	27 x 27	24.5 x 24.5	4.00	3.32	1	11
EAS30-RF	30 x 30	33 x 33	30.5 x 30.5	6.25	5.16	1	15
EAS36-RF	36 x 36	39 x 39	36.5 x 36.5	9.00	7.44	1	19
EAS42-RF	42 x 42	45 x 45	42.5 x 42.5	12.25	10.25	2	23
EAS48-RF	48 x 48	51 x 51	48.5 x 48.5	16.00	12.92	2	27.5

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula: MD[A+B+ (N x C)]/144. Free Area x FPM = CFM; actual performance may vary.

## Optional EAS Motor Pack Specifications

Motor Pack Part No.	Power Supply Required	Running AMPS	Stall Torque	Damper Panels	Lead Length
EAS1232MTR	115/230V, 60 Hz	.11/.07	77 ins. lbs.	Single	6"
EAS3850MTR	115/230V, 60 Hz	.11/.07	77 ins. lbs.	Double	6"

## AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL EAS-HDGS

The Model EAS-HDGS is a rear flanged exhaust shutter for applications that require higher velocities. The frame and blades are mill finish extruded aluminum with stainless steel tie rods. Ideal for use with direct drive or belt-driven exhaust fans. Recommended for vertical mount exhaust applications only.

Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 3,250 fpm.

### FEATURES

#### Frame

- .062 mill finish 6063T5/6 extruded aluminum.
- Staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.

#### Blades

- .080 mill finish 6063T5/6 extruded aluminum.
- Stainless steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel pivot screws, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.

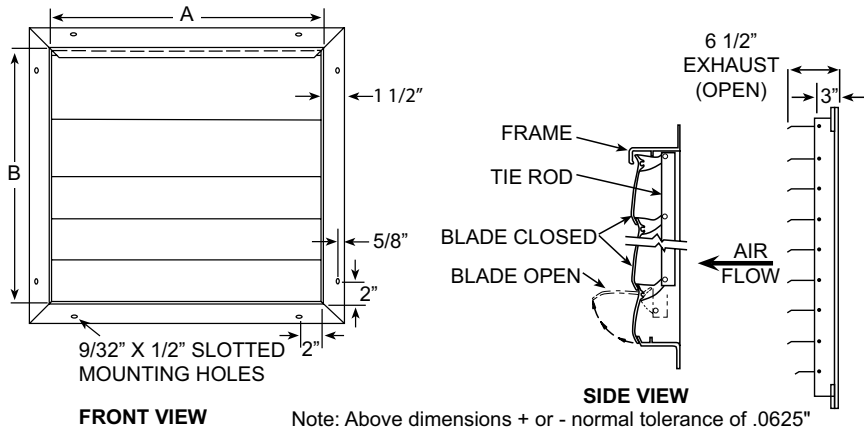
#### Ratings

- Maximum recommended velocity is 3,250 FPM
- Temperature - -40 F to 180 F

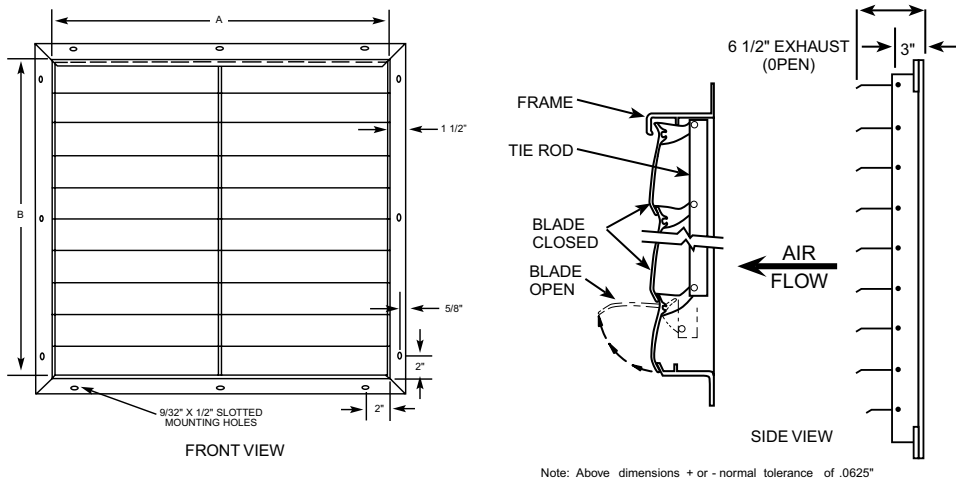


# AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL EAS-HDGS

## Single Panel



## Double Panel



## STANDARD SIZES

### Dimensions in Inches

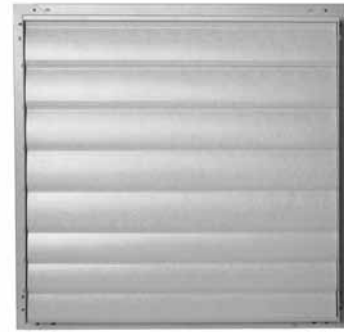
Part No.	Inside Frame Dimensions (W x H)	Overall Frame Dimensions (W x H)	Required Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	No. of Panels	Est. Shipping Weight (lbs)
EAS-HDGS12	12 x 12	15 x 15	12.5 x 12.5	1.00	.79	1	6
EAS-HDGS16	16 x 16	19 x 19	16.5 x 16.5	1.78	1.44	1	8
EAS-HDGS20	20 x 20	23 x 23	20.5 x 20.5	2.78	2.28	1	12
EAS-HDGS24	24 x 24	27 x 27	24.5 x 24.5	4.00	3.32	1	15
EAS-HDGS30	30 x 30	33 x 33	30.5 x 30.5	6.25	5.16	1	20
EAS-HDGS36	36 x 36	39 x 39	36.5 x 36.5	9.00	7.07	1	26
EAS-HDGS42	42 x 42	45 x 45	42.5 x 42.5	12.25	10.25	2	31
EAS-HDGS48	48 x 48	51 x 51	48.5 x 48.5	16.00	12.92	2	40

Note: Dimension are approximate due to normal tolerances in the manufacturing process.  
 Estimated Free Area calculation is based upon the following formula:  $MD[A+B+ (N \times C)]/144$ .  
 Free Area x FPM = CFM; actual performance may vary.

## AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL FGS

The Model FGS is a rear flanged exhaust shutter for areas where corrosion is a known problem.

The frame and blades are a heavy duty fiberglass pultrusion with stainless steel tie rods. Ideal for use with direct-drive or belt-driven exhaust fans in chemical plants and poultry/swine confinement operations. Recommended for vertical mount exhaust applications only.



Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 2,500 fpm.

### FEATURES

#### Frame

- Fiberglass pultrusion.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.

#### Ratings

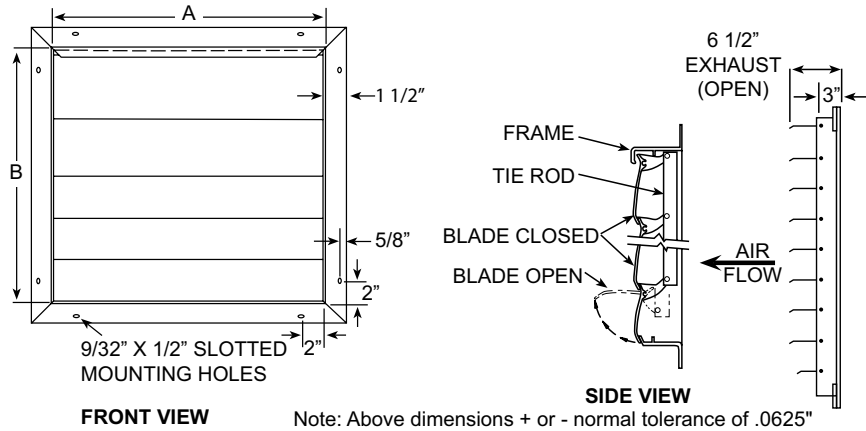
- Maximum recommended velocity is 2,500 FPM Temperature - -40 F to 180 F

#### Blades

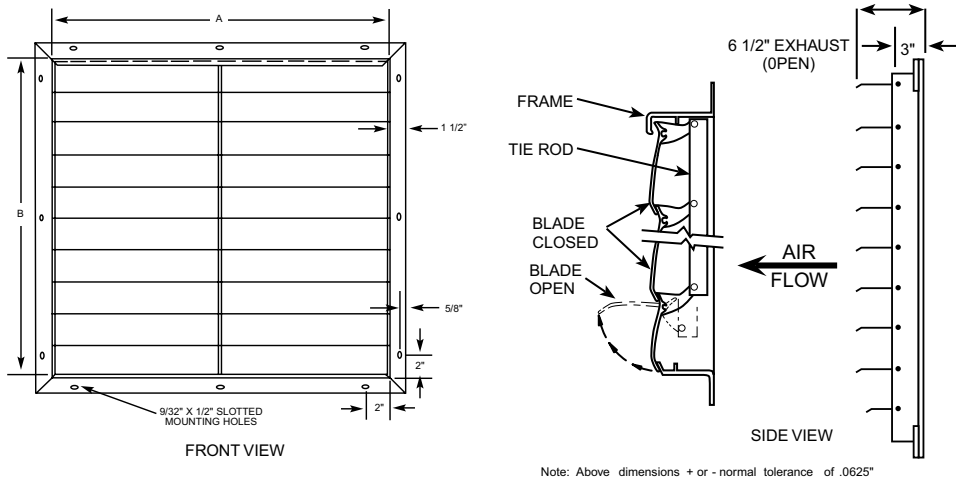
- Fiberglass pultrusion.
- Center-mounted stainless steel tie-rod connects blades for uniform opening and closing.
- 304 stainless steel screws, pins, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing.

# AUTOMATIC WALL SHUTTER-SINGLE OR DOUBLE PANEL MODEL FGS

## Single Panel



## Double Panel



## STANDARD SIZES

### Dimensions in Inches

Part No.	Inside Frame Dimensions (W x H)	Overall Frame Dimensions (W x H)	Required Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	No. of Panels	Est. Shipping Weight (lbs)
FGS12	12 x 12	15 x 15	12.5 x 12.5	1.00	.79	1	5.5
FGS16	16 x 16	19 x 19	16.5 x 16.5	1.78	1.44	1	6
FGS20	20 x 20	23 x 23	20.5 x 20.5	2.78	2.28	1	8.5
FGS24	24 x 24	27 x 27	24.5 x 24.5	4.00	3.32	1	11
FGS30	30 x 30	33 x 33	30.5 x 30.5	6.25	5.16	1	15
FGS36	36 x 36	39 x 39	36.5 x 36.5	9.00	7.44	1	20
FGS42	42 x 42	45 x 45	42.5 x 42.5	12.25	10.25	2	28
FGS48	48 x 48	51 x 51	48.5 x 48.5	16.00	12.92	2	35

Note: Dimension are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+ (N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## AUTOMATIC WALL SHUTTER- MODEL 304SS

The Model 304SS is a rear flanged exhaust shutter for areas that require extreme corrosion resistance. The frame and blades are 304 stainless steel with stainless steel tie rods and hardware. Ideal for use with direct-drive or belt-driven exhaust fans in chemical plants and food processing operations. Recommended for vertical mount exhaust applications only.

Sizes available – 12" W x 12" H to 36" W x 36" H.

Maximum free area velocity – 2,500 fpm.



### FEATURES

#### Frame

- .039 min. gauge 304 stainless steel.
- Welded frame provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunch oblong mounting holes.

#### Blades

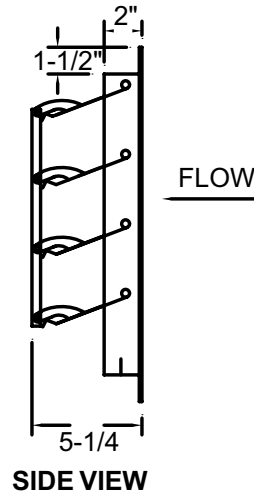
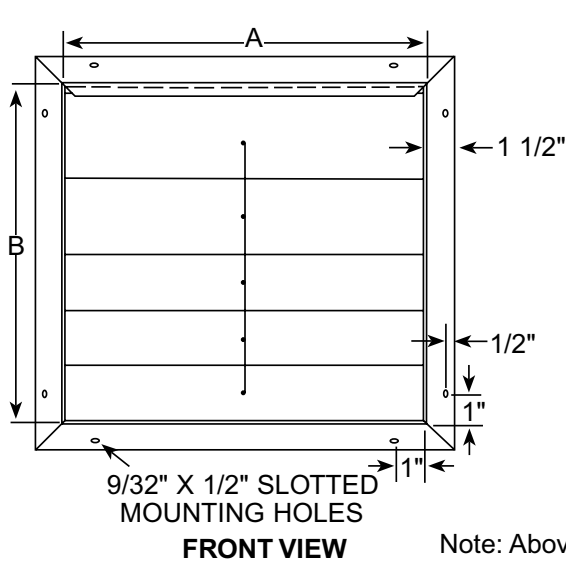
- .016 gauge 304 stainless steel.
- Stainless steel reinforcement rod fasten blades to frame for added strength.
- Center-mounted stainless steel tie-rod connects blades for uniform opening and closing on face of the unit.
- 304 stainless steel rods, rivets and bushings.
- Opens freely to allow full 90 degree opening and closing

#### Ratings

- Maximum recommended velocity is 2,500 FPM
- Temperature - -40 F to 180 F



# AUTOMATIC WALL SHUTTER- MODEL 304SS



Note: Above dimensions + or - normal tolerance of .0625"

## STANDARD SIZES Dimensions in Inches

Part No.	Inside Frame Dimensions (W x H)	Overall Frame Dimensions (W x H)	Required Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	No. of Panels	Est. Shipping Weight (lbs)
304SS12	12 x 12	15 x 15	12.5 x 12.5	1.00	.82	1	4.5
304SS16	16 x 16	19 x 19	16.5 x 16.5	1.78	1.51	1	6
304SS20	20 x 20	23 x 23	20.5 x 20.5	2.78	2.41	1	8.5
304SS24	24 x 24	27 x 27	24.5 x 24.5	4.00	3.25	2	11.5
304SS30	30 x 30	33 x 33	30.5 x 30.5	6.25	5.44	2	16
304SS36	36 x 36	39 x 39	36.5 x 36.5	9.00	7.69	2	21

Note: Dimension are approximate due to normal tolerances in the manufacturing process.  
Estimated Free Area calculation is based upon the following formula:  $MD[A+B+ (N \times C)]/144$ .  
Free Area x FPM = CFM; actual performance may vary.

## AUTOMATIC WALL SHUTTER MODEL EASB & EASW

The Models EASB & EASW are rear flanged exhaust shutters for areas where corrosion is a known problem. The frame is painted extruded aluminum with UV stabilized PVC blades with yellow zinc dichromate rods running the full length of the blades. Ideal for direct-drive or belt-driven cone or slant-wall exhaust fans in poultry or swine confinement operations. Recommended for vertical mount exhaust applications only. Available in white or black.



Sizes available – 36", 39", 51", 54" square.

Maximum free area velocity – 1,500 fpm.

### FEATURES

#### Frame

- .080 extruded aluminum painted black or white
- Staked corners provide rigidity and durability.
- Integrated weather stripping incorporated into frame for additional strength and weather protection.
- Prepunched oblong mounting holes.

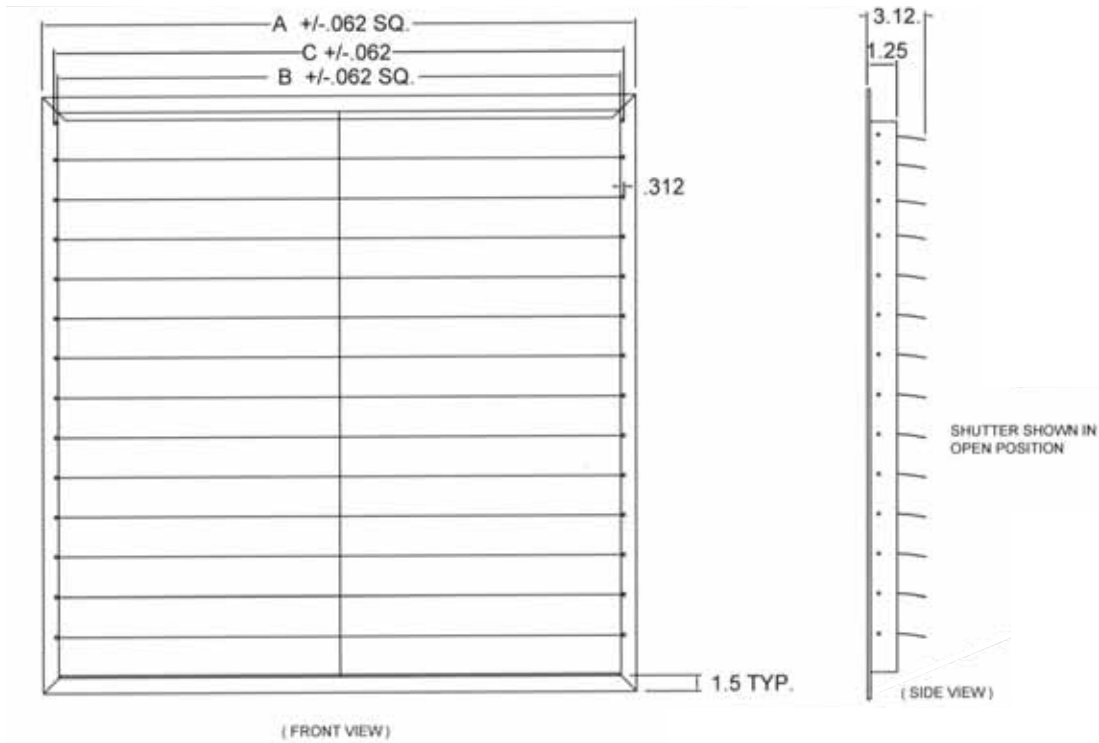
#### Ratings

- Maximum recommended velocity is 1,500 FPM
- Temperature - -40 F to 180 F

#### Blades

- 3" wide black or white PVC blades
- Yellow zinc dichromate rods connect blades for uniform opening and closing
- Opens freely to allow full 90 degree opening and closing

# AUTOMATIC WALL SHUTTER MODEL EASB & EASW



## STANDARD SIZES Dimensions in Inches

Part No.	Overall (A) Frame Dimensions (W x H)	Inside (B) Frame Dimensions (W x H)	Required (C) Hole Opening (W x H)	# of Panels	Est. Shipping Weight (lbs)
EASB36	39 x 39	35.87 x 35.87	36.5 x 36.5	2	12
EASB39	42 x 42	38.87 x 38.87	39.5 x 39.5	2	13.5
EASB51	54 x 54	50.87 x 50.87	51.5 x 51.5	3	19.5
EASB54	57 x 57	53.87 x 53.87	54.5 x 54.5	3	28
EASW36	39 x 39	35.87 x 35.87	36.5 x 36.5	2	12
EASW39	42 x 42	38.87 x 38.87	39.5 x 39.5	2	13.5
EASW51	54 x 54	50.87 x 50.87	51.5 x 51.5	3	19.5
EASW54	57 x 57	53.87 x 53.87	54.5 x 54.5	3	28

Note: Dimension are approximate due to normal tolerances in the manufacturing process.

## EXTRUDED ALUMINUM MOTORIZED DAMPER MODEL AMD

Models AMD are heavy duty motorized volume control dampers. The 1-1/2" flanged frame has welded corners for added strength. The 6" wide blades are center-pivoted for a full 90° rotation with parallel blade action. The stainless steel jamb seals help in keeping out light, air, and moisture. The dampers can be used for exhaust or supply applications and can be mounted in either a vertical or horizontal position; typically walls or curbs. Available in Extruded Aluminum (AMD) comes standard with an internally mounted factory installed 120/240 volt power open / spring close motor with an end switch.



Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 3,500 fpm.

### FEATURES

#### Frame

- 2" deep x 1 1/2" flanged x .125 thick extruded aluminum.

#### Blades

- 6" wide x .080 thick extruded aluminum.  
Parallel Blade Action.

#### Construction

- "TIG" welded frames.

#### Seals

- Stainless Steel Jamb Seals.

#### Tie Rod

- .125 thick extruded aluminum tie rods and blade clips. On-blade type.

#### Bushings

- Nylon

#### Mounting Holes

- 9/32" x 1/2" slotted.

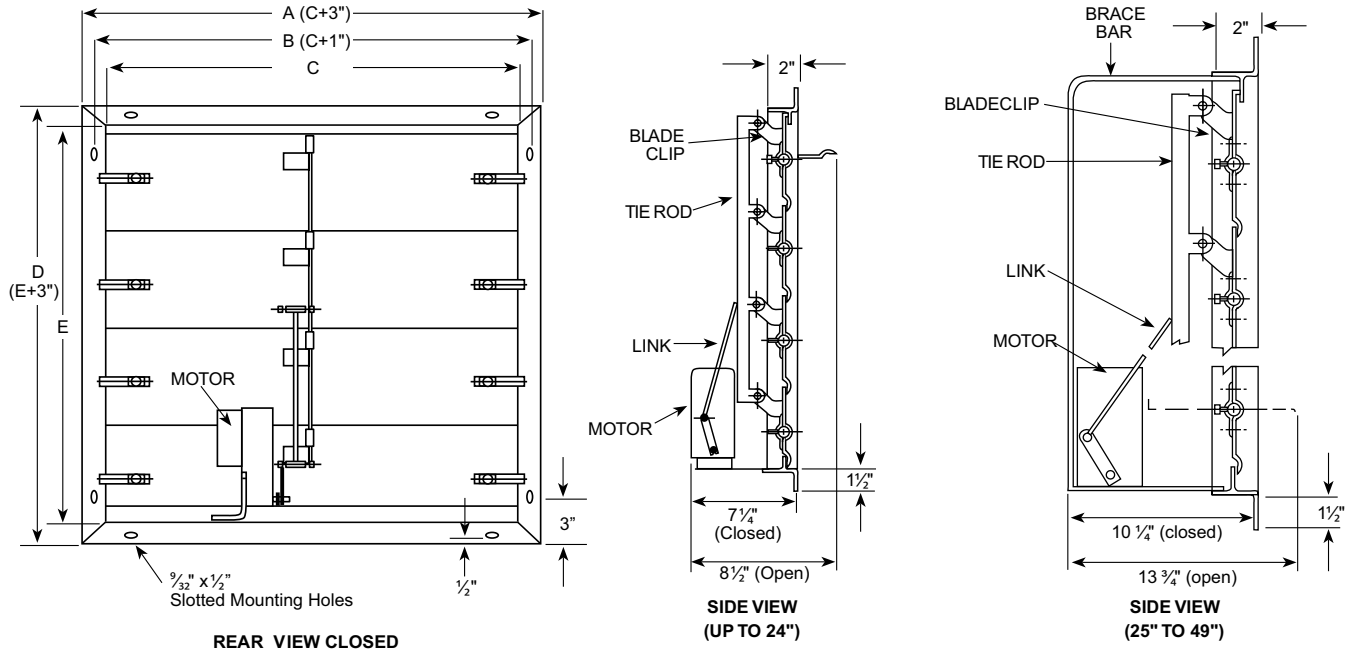
#### Finish

- Mill

#### Performance Criteria:

- 3,500 fpm Maximum Velocity.
- 4" wg Maximum Pressure.
- 122 Degree Maximum Temperature.

# EXTRUDED ALUMINUM MOTORIZED DAMPER MODEL AMD



## STANDARD SIZES

### Dimensions in Inches

Part No.	Overall (A & D) Frame Dimensions (W x H)	Inside (C & E) Frame Dimensions (W x H)	Required (B) Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	Est. Shipping Weight (lbs)
AMD12	15 x 15	12 x 12	13 x 13	1.00	.84	10
AMD16	19 x 19	16 x 16	17 x 17	1.78	1.67	12
AMD20	23 x 23	20 x 20	21 x 21	2.78	2.05	15
AMD24	27 x 27	24 x 24	25 x 25	4.00	3.59	17
AMD30	33 x 33	30 x 30	31 x 31	6.25	5.68	36
AMD36	39 x 39	36 x 36	37 x 37	9.00	8.25	47
AMD42	45 x 45	42 x 42	43 x 43	12.25	11.31	55
AMD48	51 x 51	48 x 48	49 x 49	16.00	14.84	67

**Note:** Dimensions are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## MOTOR SPECS

Motor Manufacturer	Model Number	Power Supply Required	Motor Type	Temperature Range F°
Belimo	TF120-S	120/240 V 50/60 Hz	2 position Spring Return	-22 to 122

## GALVANIZED MOTORIZED DAMPER MODEL GMD

Models GMD are heavy duty motorized volume control dampers. The 1-1/2" flanged frame has welded corners for added strength. The 6" wide blades are center-pivoted for a full 90° rotation with parallel blade action. The stainless steel jamb seals help in keeping out light, air, and moisture. The dampers can be used for exhaust or supply applications and can be mounted in either a vertical or horizontal position; typically walls or curbs. Available Galvanized Steel (GMD) and comes standard with an internally mounted factory installed 120/240 volt power open / spring close motor with an end switch.



Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 3,500 fpm.

### FEATURES

#### Frame

- 2" deep x 1 1/2" flanged x 14 gauge Galvanized Steel.

#### Blades

- 6" wide x 16 gauge Galvanized Steel. Parallel Blade Action.

#### Construction

- "MIG" welded frames.

#### Seals

- Stainless Steel Jamb Seals.

#### Tie Rod

- 11 gauge Galvanized Steel tie rods and blade clips. On-blade type.

#### Bushings

- Brass

#### Mounting Holes

- 9/32" x 1/2" slotted.

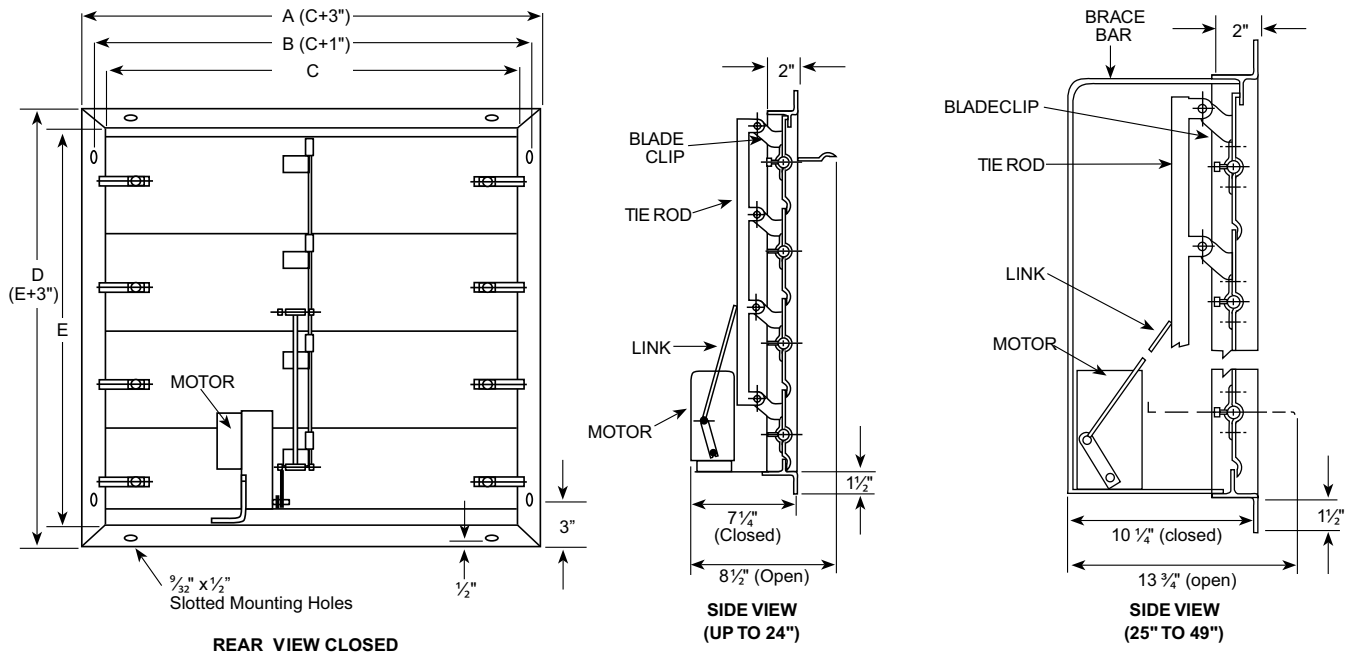
#### Finish

- Galvanized

#### Performance Criteria:

- 3,500 fpm Maximum Velocity.
- 4" wg Maximum Pressure.
- 122 Degree Maximum Temperature.

# GALVANIZED MOTORIZED DAMPER MODEL GMD



## STANDARD SIZES

### Dimensions in Inches

Part No.	Overall (A & D) Frame Dimensions (W x H)	Inside (C & E) Frame Dimensions (W x H)	Required (B) Hole Opening (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	Est. Shipping Weight (lbs)
GMD12	15 x 15	12 x 12	13 x 13	1.00	.84	14
GMD16	19 x 19	16 x 16	17 x 17	1.78	1.67	21
GMD20	23 x 23	20 x 20	21 x 21	2.78	2.05	25
GMD24	27 x 27	24 x 24	25 x 25	4.00	3.59	32
GMD30	33 x 33	30 x 30	31 x 31	6.25	5.68	53
GMD36	39 x 39	36 x 36	37 x 37	9.00	8.25	67
GMD42	45 x 45	42 x 42	43 x 43	12.25	11.31	83
GMD48	51 x 51	48 x 48	49 x 49	16.00	14.84	98

**Note:** Dimensions are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## MOTOR SPECS

Motor Manufacturer	Model Number	Power Supply Required	Motor Type	Temperature Range F°
Belimo	TF120-S	120/240 V 50/60 Hz	2 position Spring Return	-22 to 122

## ALUMINUM MOTORIZED HAT CHANNEL DAMPER MODEL ACD

The Model ACD is an Extruded Aluminum motorized volume control damper. The hat channel frame is 5" wide with 7" wide center-pivoted blades for a full 90° rotation with parallel blade action. The TPV blade and stainless steel jamb seals help in keeping out light, air, and moisture. The dampers can be used for exhaust or supply applications and can be mounted in a vertical or horizontal position; typically walls, curbs, or ductwork. Available in Extruded Aluminum (ACD) and comes standard with an internally mounted factory installed 100-240 volt power open / spring close motor with an end switch.



Sizes available – 12" W x 12" H to 48" W x 48" H.

Maximum free area velocity – 3,500 fpm.

### FEATURES

#### Frame

- 5" x 1" x .100 thick Extruded Aluminum Hat Channel.

#### Blades

- 7" wide x .080 thick extruded aluminum.  
Parallel Blade Action.

#### Seals

- Blade – Extruded TPV (-70°F to +280° F).
- Jamb – Stainless Steel..

#### Tie Rod

- On-blade type.

#### Bushings

- Nylon

#### Finish

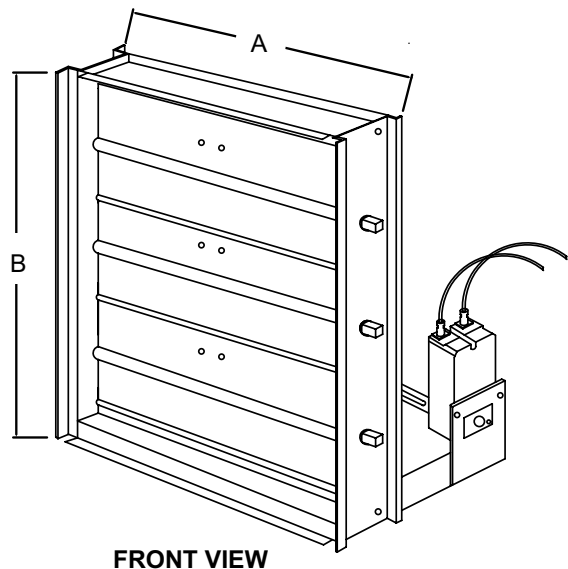
- Mill

#### Performance Criteria:

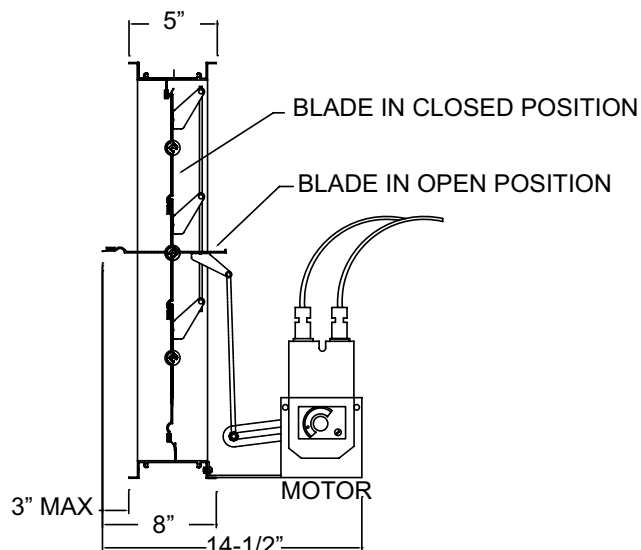
- 3,500 fpm Maximum Velocity.
- 4" wg Maximum Pressure.
- 122 Degree Maximum Temperature.



# ALUMINUM MOTORIZED HAT CHANNEL DAMPER MODEL ACD



FRONT VIEW



SIDE VIEW

## STANDARD SIZES

Dimensions in Inches

Part No.	Overall Frame Dimensions (W x H)	Face Area (Sq. Ft.)	Est. Free Area (Sq. Ft.)	Est. Shipping Weight (lbs)
ACD12	11.75 x 11.75	.96	.37	5
ACD16	15.75 x 15.75	1.73	1.05	7
ACD20	19.75 x 19.75	2.71	2.13	10.5
ACD24	23.75 x 23.75	3.92	3.17	13
ACD30	29.75 x 29.75	6.15	5.11	18.5
ACD36	35.75 x 35.75	8.88	7.56	25
ACD42	41.75 x 41.75	12.11	10.49	34
ACD48	47.75 x 47.75	15.84	13.90	42

**Note:** Dimensions are approximate due to normal tolerances in the manufacturing process. Estimated Free Area calculation is based upon the following formula:  $MD[A+B+(N \times C)]/144$ . Free Area x FPM = CFM; actual performance may vary.

## MOTOR SPECS

Motor Manufacturer	Model Number	Power Supply Required	Motor Type	Temperature Range F°
Belimo	TF120-S	120/240 V 50/60 Hz	2 position Spring Return	-22 to 122

## ALUMINUM FIXED LOUVER MODEL AFL

Models AFL fixed louvers provide good protection from rain and weather at an economical price. The channel frame is 4" deep with K-style nondrainable 45 degree blades. Available in Aluminum (AFL) and comes standard with a birdscreen on the back.

Single panel sizes available: 18" W x 18" H to 48" W x 48" H.

### FEATURES

#### Frame

- 4" deep channel x .060 thick aluminum

#### Blades

- K style, .060 thick Aluminum, positioned at a 45 degree angle and spaced approximately 4" centers.

#### Construction

- Tabbed

#### Birdscreen

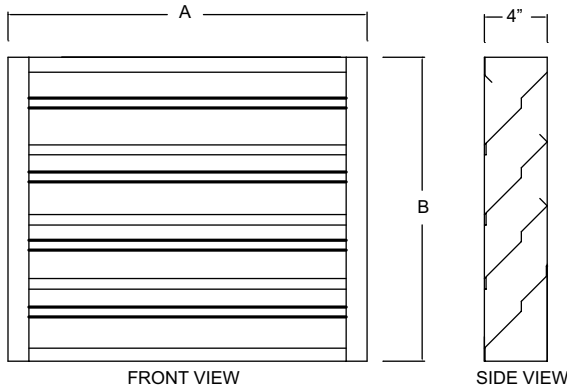
- 1/2" Flattened Aluminum in a removable frame mounted on the interior

#### Finish

- Mill



# ALUMINUM FIXED LOUVER MODEL AFL



NOTE: Above "A" and "B" dimensions are undersized by 1/2" + or - normal tolerance of .0625

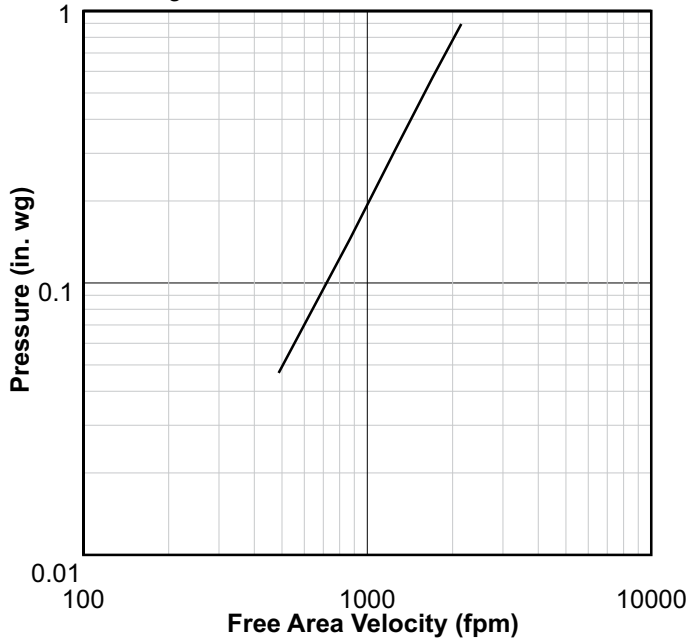
Part No.	Overall Frame Dimensions (W x H) in. inches	Free Area (Sq. ft.)	Est. Shipping Weight (lbs)
AFL18	17.5 x 17.5	.87	8
AFL24	23.5 x 23.5	1.77	14
AFL30	29.5 x 29.5	2.77	20
AFL36	35.5 x 35.5	3.98	26
AFL48	47.5 x 47.5	7.07	40

Note: Estimated free area calculations are based upon AMCA standard 500-L, actual performance may vary.

### Pressure Drop

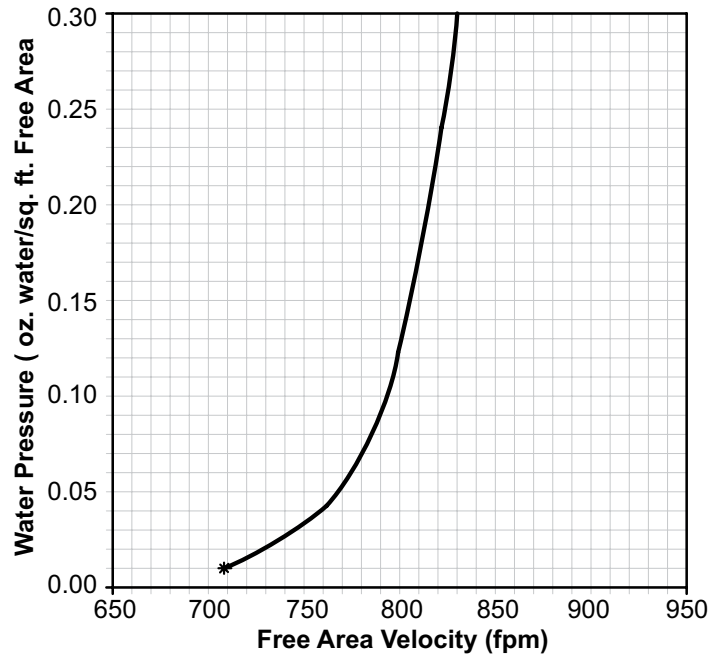
Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" (Intake)

Ratings do not include the effect of a birdscreen



### WATER PENETRATION

Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" for a 15 minute duration



The beginning point of water penetration at .01 oz/sq. ft. is 709 fpm free area velocity.

S&P USA certifies that the Model AFL was tested according to AMCA Standard 500. These tests were performed under certain sets of laboratory conditions. These performance ratings do not guarantee that other environmental conditions may actually occur. Use safety factors when selecting louver sizes based upon performance.

## GALVANEAL STEEL FIXED LOUVER MODEL GFL

Models GFL fixed louvers provide good protection from rain and weather at an economical price. The channel frame is 4" deep with K-style nondrainable 45 degree blades. Available in Galvaneal (GFL) and comes standard with a birdscreen on the back.

Single panel sizes available: 18" W x 18" H to 48" W x 48" H.

### FEATURES

#### Frame

- 4" deep channel x 16 gauge A-60 galvaneal steel

#### Blades

- K style, 16 gauge A-60 galvaneal steel, positioned at a 45 degree angle and spaced approximately 4" centers

#### Construction

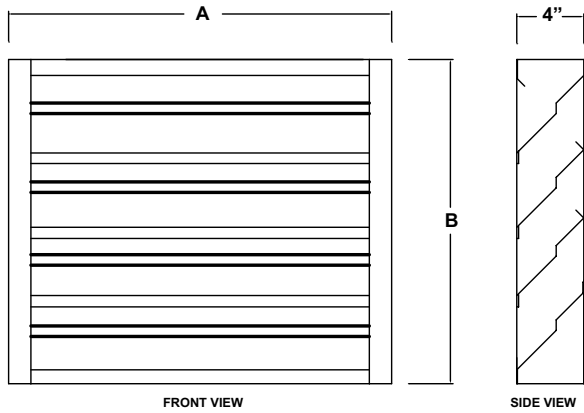
- Tabbed

#### Finish

- Mill



# GALVANEAL STEEL FIXED LOUVER MODEL GFL



NOTE: Above "A" and "B" dimensions are undersized by 1/2" + or - normal tolerance of .0625

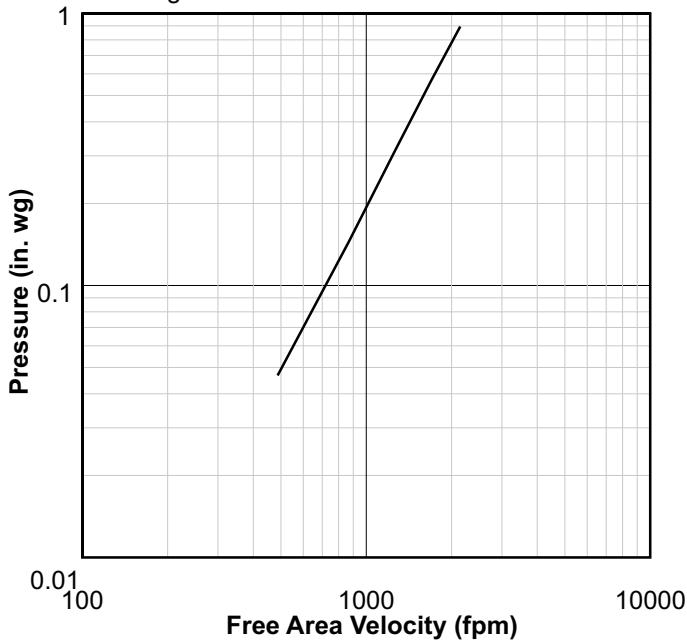
Part No.	Overall Frame Dimensions (W x H) in. inches	Free Area (Sq. ft.)	Est. Shipping Weight (lbs)
GFL18	17.5 x 17.5	.87	18
GFL24	23.5 x 23.5	1.77	30
GFL30	29.5 x 29.5	2.77	45
GFL36	35.5 x 35.5	3.98	60
GFL48	47.5 x 47.5	7.07	100

Note: Estimated free area calculations are based upon AMCA standard 500-L, actual performance may vary.

### Pressure Drop

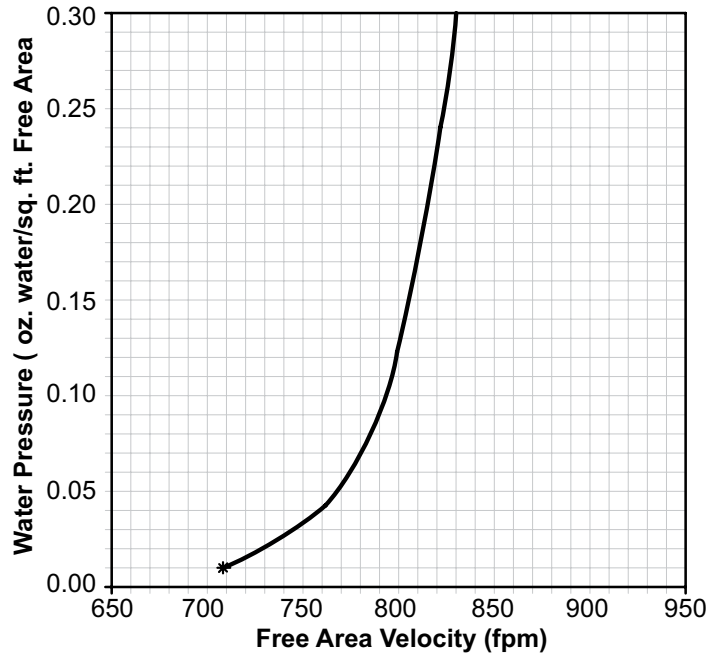
Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" (Intake)

Ratings do not include the effect of a birdscreen



### WATER PENETRATION

Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" for a 15 minute duration



The beginning point of water penetration at .01 oz/sq. ft. is 709 fpm free area velocity.

S&P USA certifies that the Model GFL was tested according to AMCA Standard 500. These tests were performed under certain sets of laboratory conditions. These performance ratings do not guarantee that other environmental conditions may actually occur. Use safety factors when selecting louver sizes based upon performance.

## EXTRUDED ALUMINUM DRAINABLE BLADE FIXED LOUVER MODEL DFL

The Model DFL offers excellent resistance to rain and weather. The drainable blade design channels water away from the blades and down the jambs. This eliminates water cascading from blade to blade. The channel frame is 4" deep with drainable 45 degree blades. This model is only available in extruded aluminum and comes standard with a birdscreen on the back.

Single panels sizes available: 18" W x 18" H to 48" W x 48" H.

### FEATURES

#### Finish

- Mill

#### Frame

- 4" deep channel x .080 thick extruded aluminum

#### Blades

- Drainable style, .080 thick extruded aluminum, positioned at a 45 degree angle and spaced approximately 4" centers

#### Construction

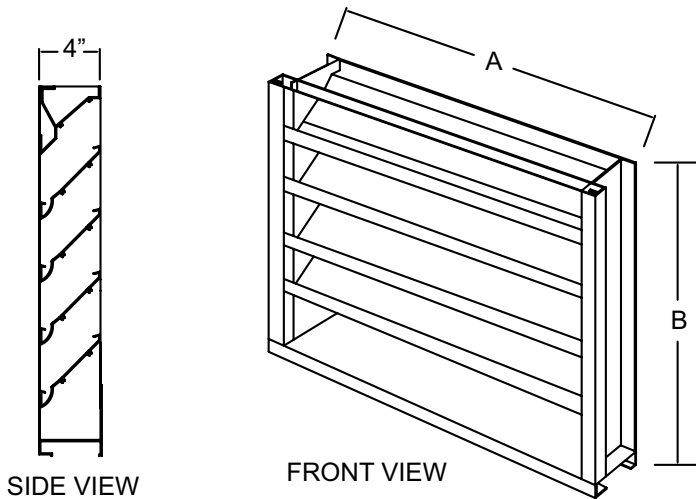
- Screwed

#### Birdscreen

- 1/2" Flattened Aluminum in a removable frame mounted on the interior



# EXTRUDED ALUMINUM DRAINABLE BLADE FIXED LOUVER MODEL DFL



NOTE: Above "A" and "B" dimension are undersized 1/2" + or - normal tolerance of .0625

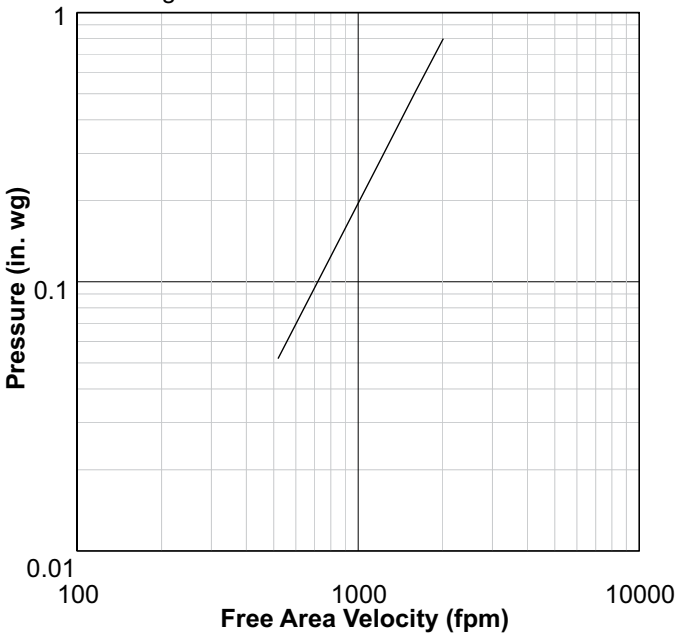
Part No.	Overall Frame Dimensions (W x H) in. inches	Free Area (Sq. ft.)	Est. Shipping Weight (lbs)
DFL18	17.5 x 17.5	.89	10
DFL24	23.5 x 23.5	1.88	14
DFL30	29.5 x 29.5	2.93	22
DFL36	35.5 x 35.5	4.58	28
DFL48	47.5 x 47.5	8.48	47

Note: Estimated free area calculations are based upon AMCA standard 500-L, actual performance may vary.

### Pressure Drop

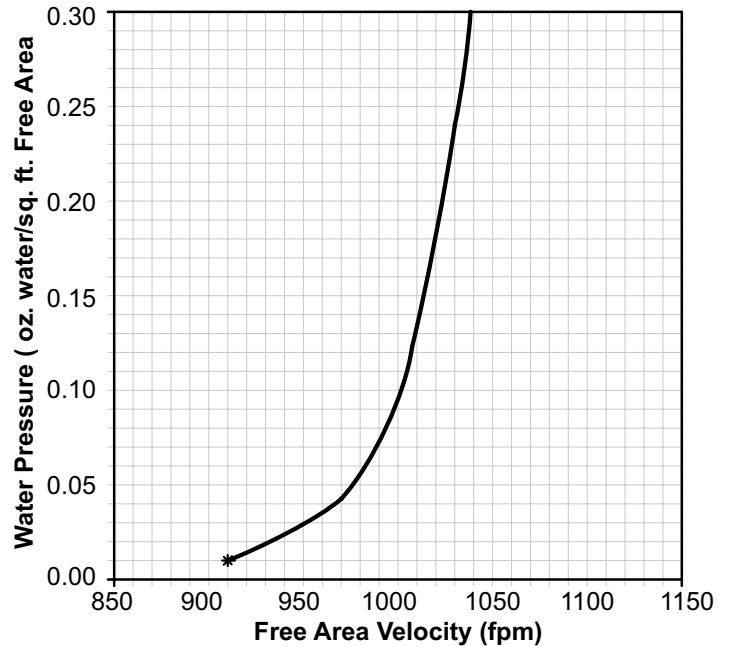
Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" (Intake)

Ratings do not include the effect of a birdscreen



### WATER PENETRATION

Standard Air - .075lbs per cubic foot  
Test size - 48"x 48" for a 15 minute duration



The beginning point of water penetration at .01 oz./sq. ft. is 910 fpm free area velocity.

S&P USA certifies that the Model DFL was tested according to AMCA Standard 500. These tests were performed under certain sets of laboratory conditions. These performance ratings do not guarantee that other environmental conditions may actually occur. Use safety factors when selecting louver sizes based upon performance.

## EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER MODEL ACL

The Model ACL offers superior resistance to rain and weather while also offering you the ability to completely close the opening off if needed. The channel frame is 4" deep with drainable 45 degree fixed blades in the front with adjustable blades with seals for tight shutoff in the back all within one frame. The adjustable rear blades are operated with a thumb screw. This model is only available in extruded aluminum and comes standard with a birdscreen on the interior.

Single panel sizes available: 18" W x 18" H to 48" W x 48" H.

### FEATURES

#### Finish

- Mill

#### Frame

- 4" deep channel x .080 thick extruded aluminum

#### Blades

- Drainable style, .080 thick Extruded Aluminum, positioned at a 45 degree angle and spaced approximately 4" centers.

#### Construction

- Screwed

#### Birdscreen

- 1/2" Flattened Aluminum in a removable frame mounted on the interior

#### Seals

- Extruded TPV

#### Linkage

- On-blade type with a Thumb Screw Operator as standard

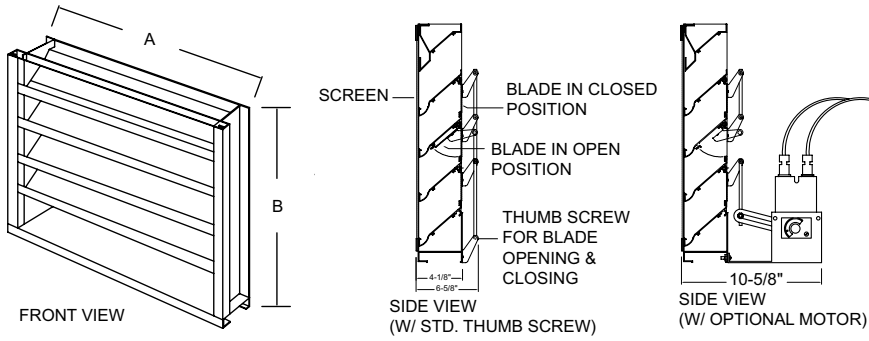
#### Options

The Model MTR-ACL is an optional 100-240 VAC 50/60 Hz power open spring return motor kit. The adjustable rear blades will return to the closed position in the event of loss of power. The motor kit comes pre-assembled for easy installation.





# EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER MODEL ACL



NOTE: Above "A" and "B" dimension are undersized 1/2" + or - normal tolerance of .0625

Part No.	Overall Frame Dimensions (W x H) in. inches	Free Area (Sq. ft.)	Est. Shipping Weight (lbs)
ACL18	17.5 x 17.5	.52	12
ACL24	23.5 x 23.5	1.35	21
ACL30	29.5 x 29.5	2.20	29
ACL36	35.5 x 35.5	3.67	38
ACL48	47.5 x 47.5	7.11	64

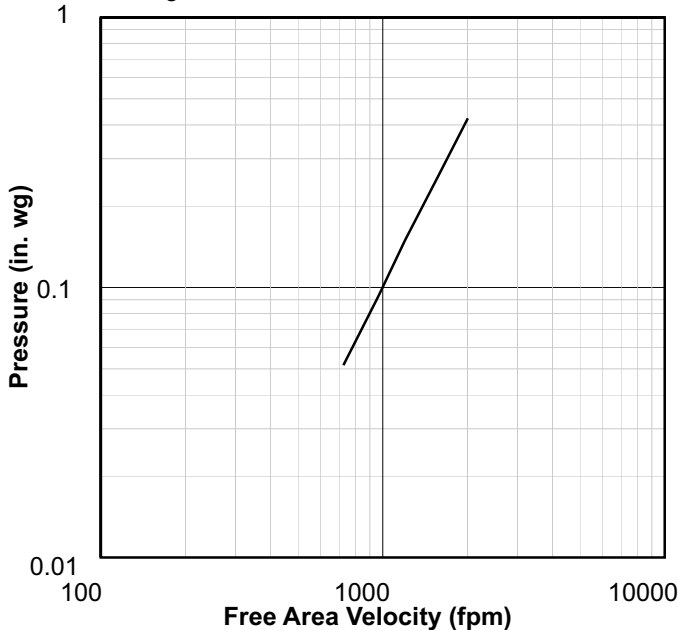
Note: Estimated free area calculations are based upon AMCA standard 500-L, actual performance may vary.

### Pressure Drop

Standard Air - .075lbs per cubic foot

Test size - 48"x 48" (Intake)

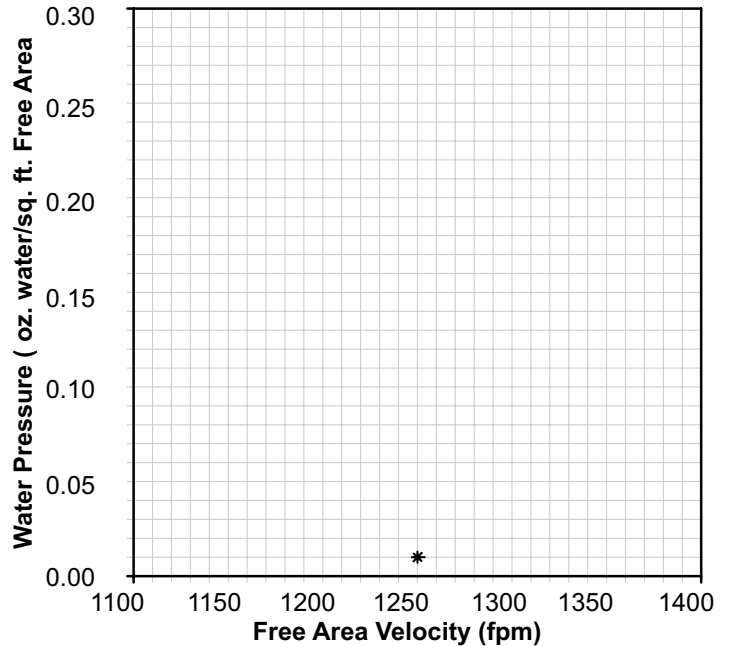
Ratings do not include the effect of a birdscreen



### WATER PENETRATION

Standard Air - .075lbs per cubic foot

Test size - 48"x 48" for a 15 minute duration



The beginning point of water penetration at .01 oz./sq. ft. is 1250 fpm free area velocity.

S&P USA certifies that the Model ACL was tested according to AMCA Standard 500. These tests were performed under certain sets of laboratory conditions. These performance ratings do not guarantee that other environmental conditions may actually occur. Use safety factors when selecting louver sizes based upon performance.

# ALUMINUM DOOR LOUVER MODEL ADL

Models ADL are heavy duty door louvers. The flanged frame has welded and/or staked mitered corners for added strength. The blades are inverted V style spaced on approximately 5/8" centers for maximum privacy. The louvers can be used for the transfer of air through any barrier and are ideal for use with 1-3/8" to 2-1/4" thick wood or metal doors. Available in Extruded Aluminum (ADL) comes standard with color matched #8 x 3/4" Phillips head mounting screws. The Model ADL comes standard with a 204-R1 Clear Anodized Finish.



## FEATURES

### Frame

- .040 thick extruded aluminum

### Blades

- Inverted V style, .040 thick extruded aluminum, spaced approximately 5/8" centers

### Construction

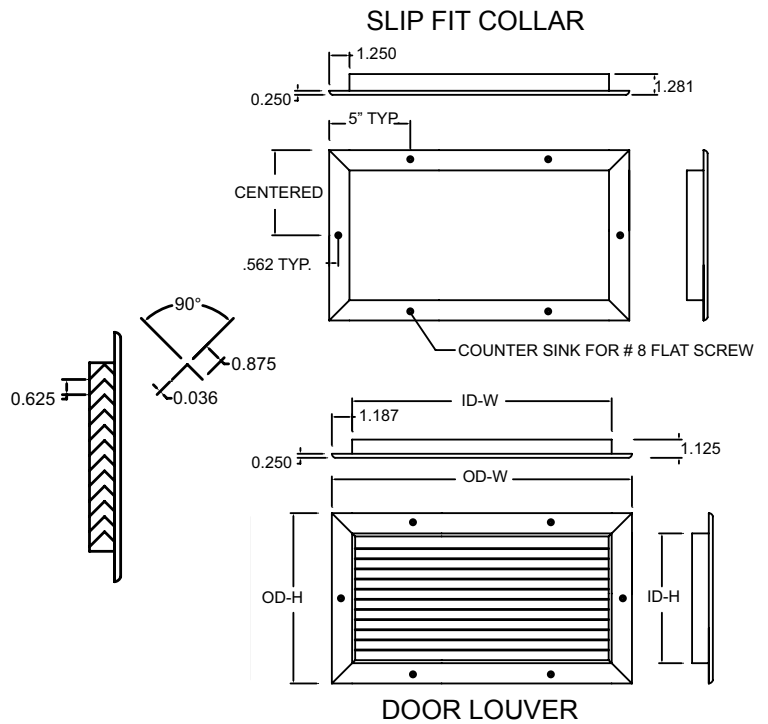
- Mitered and staked corners

### Finish

- 204-R1 Clear Anodized

### Fasteners

- #8 x 3/4" Phillips head screws



## STANDARD SIZES

### Dimensions in Inches

Part No.	Hole Opening		Actual OD		Est. Shipping Weight (lbs)
	W	H	W	H	
ADL10X4	10.5	4.5	12.25	6.125	2
ADL12X12	12.5	12.5	14.25	14.125	4
ADL16X8	16.5	8.5	18.25	10.125	3.5
ADL16X16	16.5	16.5	18.25	18.125	5
ADL20X10	20.5	10.5	22.25	12.125	4.5
ADL20X20	20.5	20.5	22.25	22.125	7
ADL24X12	24.5	12.5	26.25	14.125	5.5
ADL24X24	24.5	24.5	26.25	26.125	9

# STEEL DOOR LOUVER MODEL SDL

Models SDL are heavy duty door louvers. The flanged frame has welded and/or staked mitered corners for added strength. The blades are inverted V style spaced on approximately 5/8" centers for maximum privacy. The louvers can be used for the transfer of air through any barrier and are ideal for use with 1-3/8" to 2-1/4" thick wood or metal doors. Available Painted Steel (SDL) and comes standard with color matched #8 x 3/4" Phillips head mounting screws. The Model SDL comes standard with a Gray Primer Finish.



## FEATURES

### Frame

- 20 gauge cold rolled steel

### Blades

- Inverted V style, 24 gauge cold rolled steel, spaced approximately 5/8" centers

### Construction

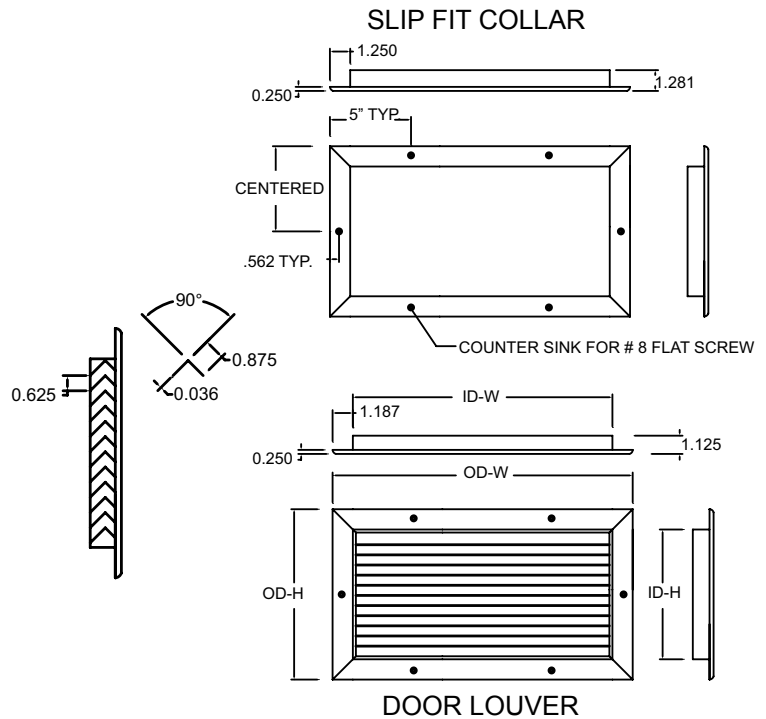
- Mitered and welded corners

### Finish

- Gray primer

### Fasteners

- #8 x 3/4" Phillips head screws



## STANDARD SIZES

### Dimensions in Inches

Part No.	Hole Opening		Actual OD		Est. Shipping Weight (lbs)
	W	H	W	H	
SDL10X4	10.5	4.5	12.25	6.125	3
SDL12X12	12.5	12.5	14.25	14.125	6
SDL16X8	16.5	8.5	18.25	10.125	5
SDL16X16	16.5	16.5	18.25	18.125	7.5
SDL20X10	20.5	10.5	22.25	12.125	6.5
SDL20X20	20.5	20.5	22.25	22.125	10.5
SDL24X12	24.5	12.5	26.25	14.125	8
SDL24X24	24.5	24.5	26.25	26.125	13.5

S&P also has a full range of commercial & industrial fans.

## Centrifugal Roof Ventilators



**Model DB**  
Sizes 6-48  
100 to 28,000 CFM



**Model TXB**  
Sizes 8-48  
250 to 35,000 CFM



**Model RED**  
Sizes 6-15  
40 to 3,000 CFM



**Model LPD**  
Sizes 6-8  
50 to 420 CFM

## Sidewall & Utility Sets



**Model CM**  
Sizes 10-36  
500 to 21,000 CFM



**Model L**  
Sizes 20-72  
3,000 to 85,000 CFM



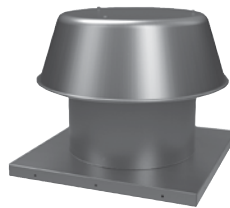
**Model CWD**  
Sizes 7-16  
150 to 3,360 CFM

## Square In-Line Ventilators



**Model SQB**  
Sizes 7-42  
100 to 24,500 CFM

## Gravity Roof Ventilators



**Model RCXII**  
Sizes 8-36  
90 to 10,400 CFM

## Propeller Roof Ventilators



**Model ARE & ARS**  
Sizes 10-20  
270 to 3,100 CFM



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