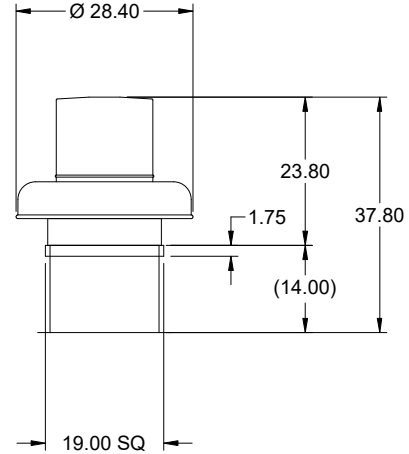


Model: G-130-VG

Direct Drive Centrifugal Roof Exhaust Fan



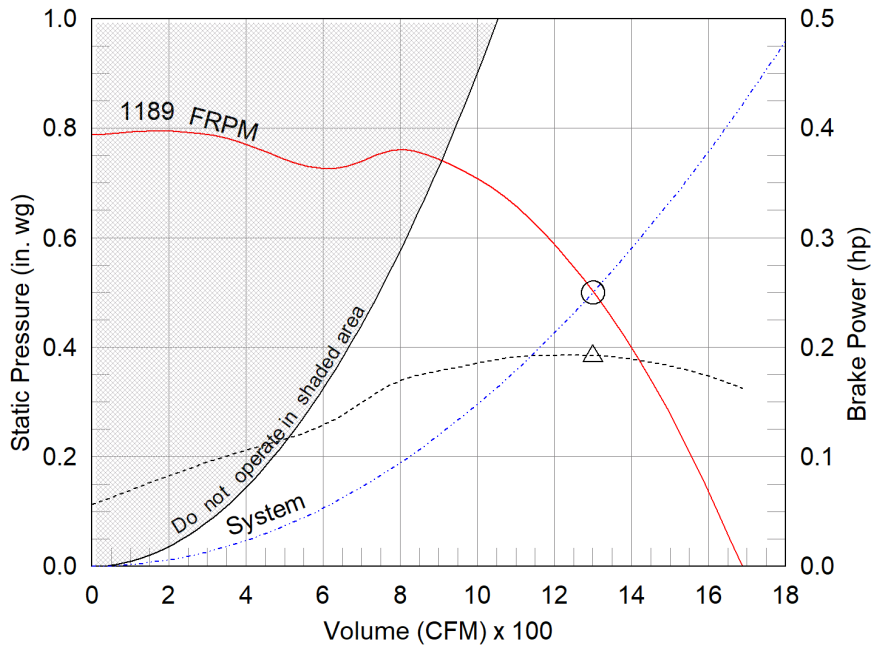
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	45
Weight w/ Acc's (lb)	50
Weight w/ Acc's and Curb (lb)	70
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	1,300
Actual Volume (CFM)	1,300
Total External SP (in. wg)	0.5
Fan RPM	1189
Operating Power (hp)	0.19
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	4,087
Static Eff. (%)	53

Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	1,161

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1550
Efficiency Rating	High
Windings	1
FLA (Amps)	6.4
Min. Circuit Ampacity (MCA)	8
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Notes:

All dimensions shown are in units of in.
 *NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory.
 MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
 LwA - A weighted sound power level, based on ANSI S1.4 dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
 Sones - calculated using ANSI/AMCA 301 at 5 ft

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	72	73	74	68	63	61	54	48	71	59	9.5



Model: G-130-VG

Direct Drive Centrifugal Roof Exhaust Fan

Standard Construction Features:

- Aluminum housing - Backward inclined composite (sizes 60-95) or aluminum (sizes 97-300) wheel - Aluminum curb cap with prepunched mounting holes - Birdscreen - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

Selected Options & Accessories:

Motor - Vari-Green EC motor
Control - Dial for balancing
Standard Curb Cap Size - 19 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle,
Junction Box Mounted & Wired in weather-protected motor compartment
Foam Curb Seal (Factory Applied)
Birdscreen: Galvanized, nom. 84% Free Area
Aluminum Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)

Selected Sub Marks

See individual submittals for full details
GPI-19-G14

The Vari-Green Motor included in this order has a 'Multi-Voltage' ability. The red wire on the motor is called a 'Voltage Doubler', and when it is connected the motor can be powered by 115V.

If the Red wire is disconnected, then the motor can be powered with 208-230/277V. The motor will leave the factory with the voltage doubler wired per the order.

Vari-Green Motor & Control Options

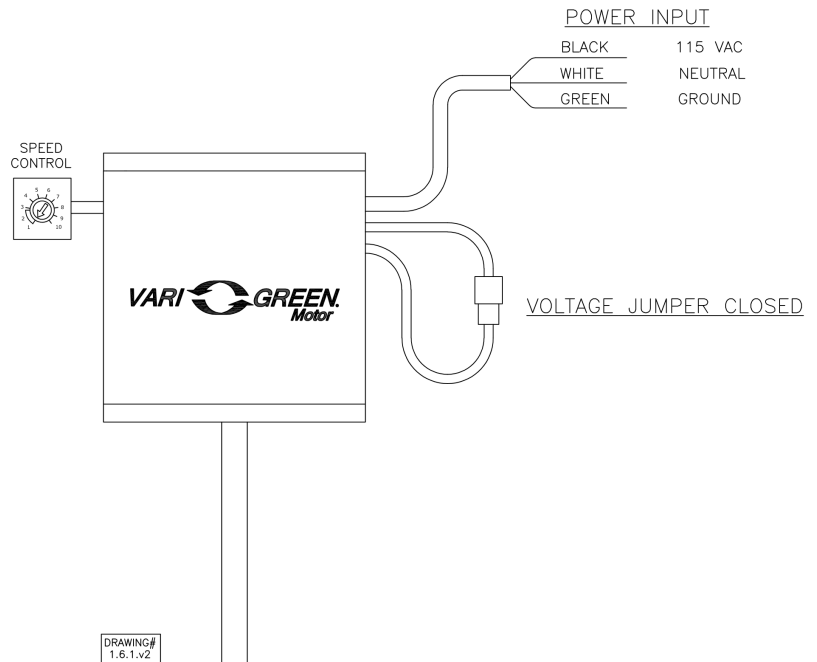
An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%. Vari-Green motors feature a soft-start and inherent thermal and current protection built into each unit. Inrush current at start up is eliminated and the motor will automatically reduce speed or turn off if overloaded or it becomes too hot.

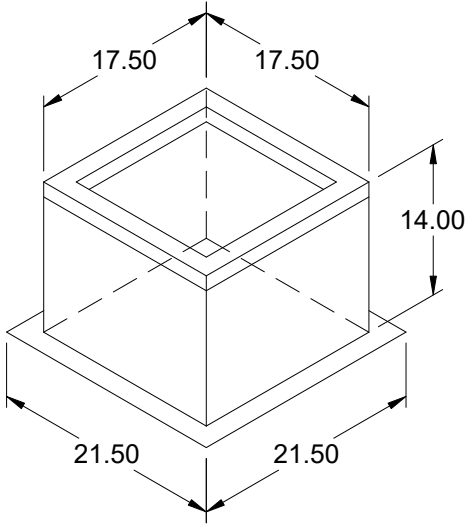
Motor Configuration

Input Voltage: 115
Speed Reference: Dial on Motor
Permanent Dial: Yes

Control Configuration

Control Type: Dial on Motor
Transformer: None





Model: GPI

Roof Curb

Standard Construction Features:

- Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of either 18 ga galvanized steel or 0.064 in. aluminum - Straight Sided without a cant - 2 in. mounting flange - 3 lb density insulation - Height - Available from 12 in. to 42 in. as specified in 0.5 in. increments. Notes: - The maximum roof opening dimension should not be greater than the "Actual" top outside dimension minus 2 in.. - The minimum roof opening dimension should be at least 2.5 in. more than the damper dimension or recommended duct size. - The Roof Opening Dimension may or may not be the same as the Structural Opening Dimension. - Damper Tray is optional and must be specified. Tray size is same as damper size. - Security bars are optional and must be specified. Frames and gridwork are all 12 ga steel.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPI-19	Nominal	1.5	21	Yes	No Preference

Dimensions

Curb Height (in.)	Nominal Outside Width (in.)	Nominal Outside Length (in.)	Actual Outside Width (in.)	Actual Outside Length (in.)	Actual Inside Width (in.)	Actual Inside Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
14	19	19	17.5	17.5	14	14	18	18

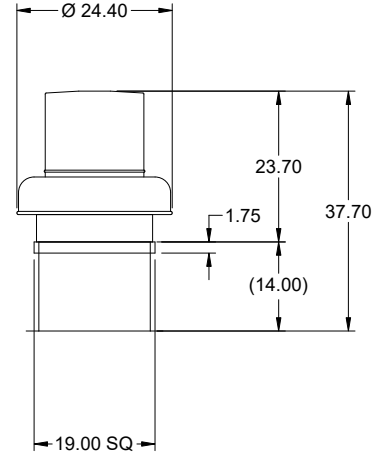
*May not be applicable

Accessories

Material	Security Bars	Liner	Insulation (in.)	Insulation R Value
Galvanized	No	No	1	R4.3

Model: G-099-VG

Direct Drive Centrifugal Roof Exhaust Fan



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	36
Weight w/ Acc's (lb)	41
Weight w/ Acc's and Curb (lb)	62
Standard Curb Cap Size (in.)	19 x 19
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	800
Actual Volume (CFM)	800
Total External SP (in. wg)	0.5
Fan RPM	1439
Operating Power (hp)	0.15
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	4,216
Static Eff. (%)	43

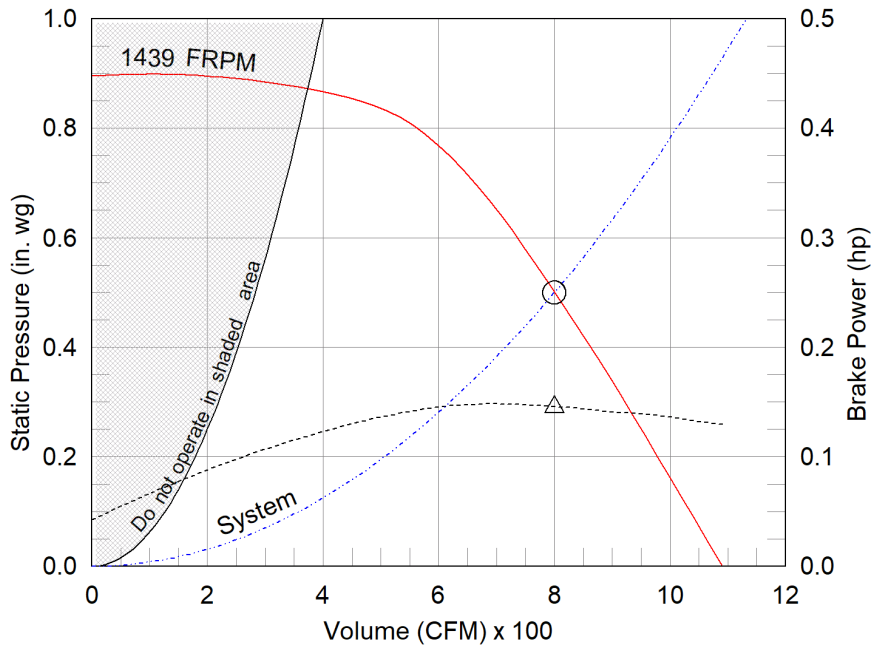
Misc Fan Data	
Fan Energy Index (FEI)	-
Outlet Velocity (ft/min)	833

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	2.85
Min. Circuit Ampacity (MCA)	4
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	72	75	75	67	62	60	55	49	70	59	9.6

OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Notes:

All dimensions shown are in units of in.
*NEC FLA, MCA and MOP are for reference only – based on tables 430.248 or 430.25 of National Electric Code 2020. Actual motor FLA may vary, for sizing thermal overload, consult factory.
MCA and MOP values shown only account for the motor, not accessories (damper actuator, field supplied VFD, etc).
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using ANSI/AMCA 301 at 5 ft



Model: G-099-VG

Direct Drive Centrifugal Roof Exhaust Fan

Standard Construction Features:

- Aluminum housing - Backward inclined composite (sizes 60-95) or aluminum (sizes 97-300) wheel - Aluminum curb cap with prepunched mounting holes - Birdscreen - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

Selected Options & Accessories:

Motor - Vari-Green EC motor
Control - Dial for balancing
Standard Curb Cap Size - 19 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle,
Junction Box Mounted & Wired in weather-protected motor compartment
Foam Curb Seal (Factory Applied)
Birdscreen: Galvanized, nom. 84% Free Area
Aluminum Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)

Selected Sub Marks

See individual submittals for full details
GPI-19-G14

The Vari-Green Motor included in this order has a 'Multi-Voltage' ability. The red wire on the motor is called a 'Voltage Doubler', and when it is connected the motor can be powered by 115V.

If the Red wire is disconnected, then the motor can be powered with 208-230/277V. The motor will leave the factory with the voltage doubler wired per the order.

Vari-Green Motor & Control Options

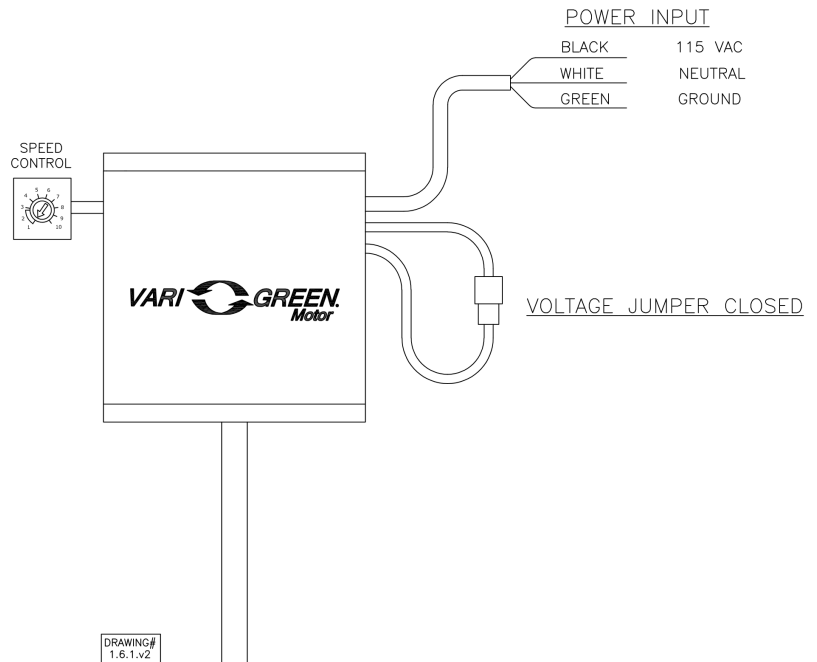
An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%. Vari-Green motors feature a soft-start and inherent thermal and current protection built into each unit. Inrush current at start up is eliminated and the motor will automatically reduce speed or turn off if overloaded or it becomes too hot.

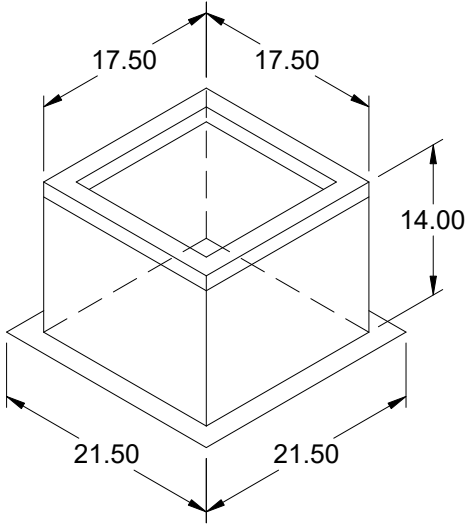
Motor Configuration

Input Voltage: 115
Speed Reference: Dial on Motor
Permanent Dial: Yes

Control Configuration

Control Type: Dial on Motor
Transformer: None





Model: GPI

Roof Curb

Standard Construction Features:

- Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of either 18 ga galvanized steel or 0.064 in. aluminum - Straight Sided without a cant - 2 in. mounting flange - 3 lb density insulation - Height - Available from 12 in. to 42 in. as specified in 0.5 in. increments. Notes: - The maximum roof opening dimension should not be greater than the "Actual" top outside dimension minus 2 in.. - The minimum roof opening dimension should be at least 2.5 in. more than the damper dimension or recommended duct size. - The Roof Opening Dimension may or may not be the same as the Structural Opening Dimension. - Damper Tray is optional and must be specified. Tray size is same as damper size. - Security bars are optional and must be specified. Frames and gridwork are all 12 ga steel.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPI-19	Nominal	1.5	21	Yes	No Preference

Dimensions

Curb Height (in.)	Nominal Outside Width (in.)	Nominal Outside Length (in.)	Actual Outside Width (in.)	Actual Outside Length (in.)	Actual Inside Width (in.)	Actual Inside Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
14	19	19	17.5	17.5	14	14	18	18

*May not be applicable

Accessories

Material	Security Bars	Liner	Insulation (in.)	Insulation R Value
Galvanized	No	No	1	R4.3

DFD-150X12 1 1/2 hour dynamic rated fire damper with 12.000 in. integral sleeve

APPLICATION & DESIGN

Model DFD-150X12 is approved for use in walls, floors and partitions with fire resistance ratings less than 3 hours. UL 555 classifies dynamic rated fire dampers for use in HVAC systems that are operational in the event of fire.

DAMPER RATINGS

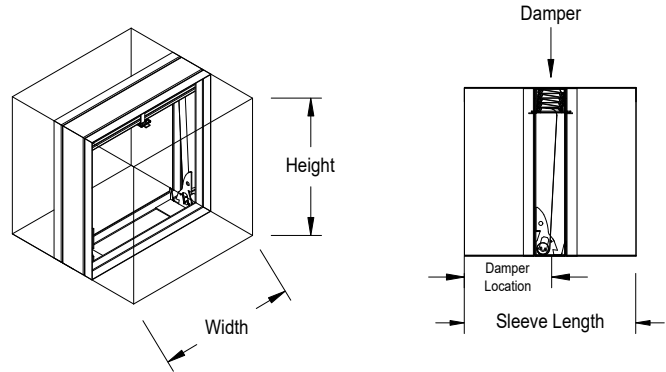
Fire Rating: 1 1/2 hours
Dynamic Closure Rating
Maximum Velocity: 4,000 ft/min vertical mount only, up to 24 in. x 24 in.; 2,000 ft/min vertical or horizontal mount on all sizes
Maximum Pressure: 4 in. wg

PRODUCT DETAILS

Frame: Galvanized Steel
Frame Depth: 3.688
Blade: Galvanized Steel
Closure Device: Fusible Link
Closure Temp: 165 F
Velocity: 2,000 ft/min
Sizing: Nominal

OPTIONS & ACCESSORIES

Transition: A
Retaining Angle Mounting: Loose
Union Label: No Preference



- This drawing shows a general damper configuration and is not intended to depict the exact configuration of all dampers in this submittal.
- Damper is furnished approximately 0.250 in. undersize.
- Access doors that are smaller than 12.000 in. x 12.000 in. supplied on dampers with internal actuators or fusible links are intended for visual inspection.
- Installation instructions available at www.greenheck.com.

CODES APPROVED

- This model meets the requirements for fire dampers established by:
- UL Classified (U.S. and Canada) Standard UL 555 (Listing #R13317)
 - National Fire Protection Association NFPA Standard 80,90A & 101
 - IBC: International Building Codes
 - California State Fire Marshal: CSFM listing # 3225-981:102



SUMMARY

ID #	TAG	QTY	WIDTH	HEIGHT	CONFIGURATION			
					Sections Wide:	Sections High:	Blade Stack:	Sleeve Length:
3-1		2	14.000 in.	10.000 in.	1	1	1.530 in.	12.000 in.
					Sleeve Thickness: 22 ga	Damper Location: 6.000 in.	Mounting: Vertical	Ret. Angle Quantity: 2
					Ret. Angle Size: 1.5			

DFD-150X12 1 1/2 hour dynamic rated fire damper with 12.000 in. integral sleeve

APPLICATION & DESIGN

Model DFD-150X12 is approved for use in walls, floors and partitions with fire resistance ratings less than 3 hours. UL 555 classifies dynamic rated fire dampers for use in HVAC systems that are operational in the event of fire.

DAMPER RATINGS

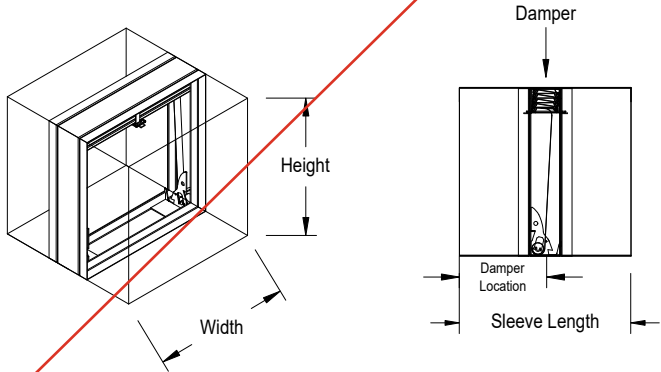
Fire Rating: 1 1/2 hours
Dynamic Closure Rating
Maximum Velocity: 4,000 ft/min vertical mount only, up to 24 in. x 24 in., 2,000 ft/min vertical or horizontal mount on all sizes
Maximum Pressure: 4 in. wg

PRODUCT DETAILS

Frame: Galvanized Steel
Frame Depth: 3.688
Blade: Galvanized Steel
Closure Device: Fusible Link
Closure Temp: 165 F
Velocity: 2,000 ft/min
Sizing: Nominal

OPTIONS & ACCESSORIES

Transition: A
Retaining Angle Mounting: Loose
Union Label: No Preference



This drawing shows a general damper configuration and is not intended to depict the exact configuration of all dampers in this submittal.
Damper is furnished approximately 0.250 in. undersize.
Access doors that are smaller than 12.000 in. x 12.000 in. supplied on dampers with internal actuators or fusible links are intended for visual inspection.
Installation instructions available at www.greenheck.com.

CODES APPROVED

This model meets the requirements for fire dampers established by:
 • UL Classified (U.S. and Canada) Standard UL 555 (Listing #R13317)
 • National Fire Protection Association NFPA Standard 80,90A & 101
 • IBC: International Building Codes
 • California State Fire Marshal: CSFM listing # 3225-981:102



SUMMARY

ID #	TAG	QTY	WIDTH	HEIGHT	CONFIGURATION			
					Sections Wide:	Sections High:	Blade Stack:	Sleeve Length:
4-2		3	12.000 in.	12.000 in.	1	1	1.700 in.	12.000 in.
					Sleeve Thickness:	Damper Location:	Mounting:	Ret. Angle Quantity:
					22 ga	6.000 in.	Vertical	2
					Ret. Angle Size:			
					1.5			

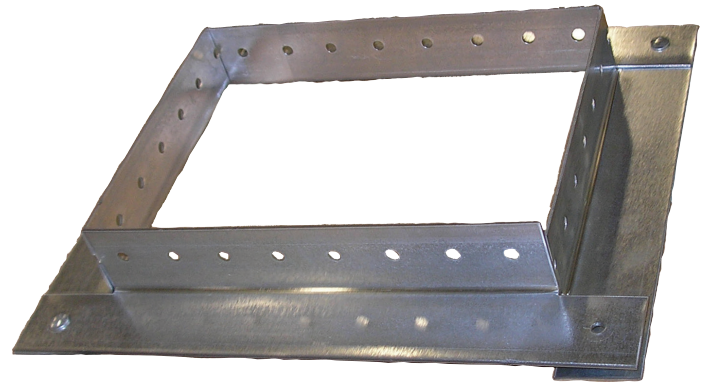
Application

Greenheck's one piece retaining angle, the POC (literally named for being a "Piece of Cake") makes damper installation a breeze. The POC angle is designed by fastening four pieces together to form one piece. When installed the angles simply wraps around the sleeve of the damper and is fastened in place.

Retaining angles for 1½ hour rated fire and combination fire smoke dampers with a width and height 48 in. (1219mm) or less must be a minimum of 20 ga. (1mm) steel. Retaining angles for all 3 hour rated dampers and all dampers with a width or height greater than 48 in. (1219mm) must be a minimum of 16 ga. (1.5mm).

If the damper width plus damper height is less than or equal to 44 inches (1117mm), then the POC angles ship in one piece. If damper width plus damper height is greater than 44 in. (1117mm), the POC angle ships in two pieces.

The POC retaining angles meets the requirements of UL 555 and UL 555S.



Retaining angle as shipped from the factory.

The four sides are connected together by rivets in three corners allowing for easy installation.

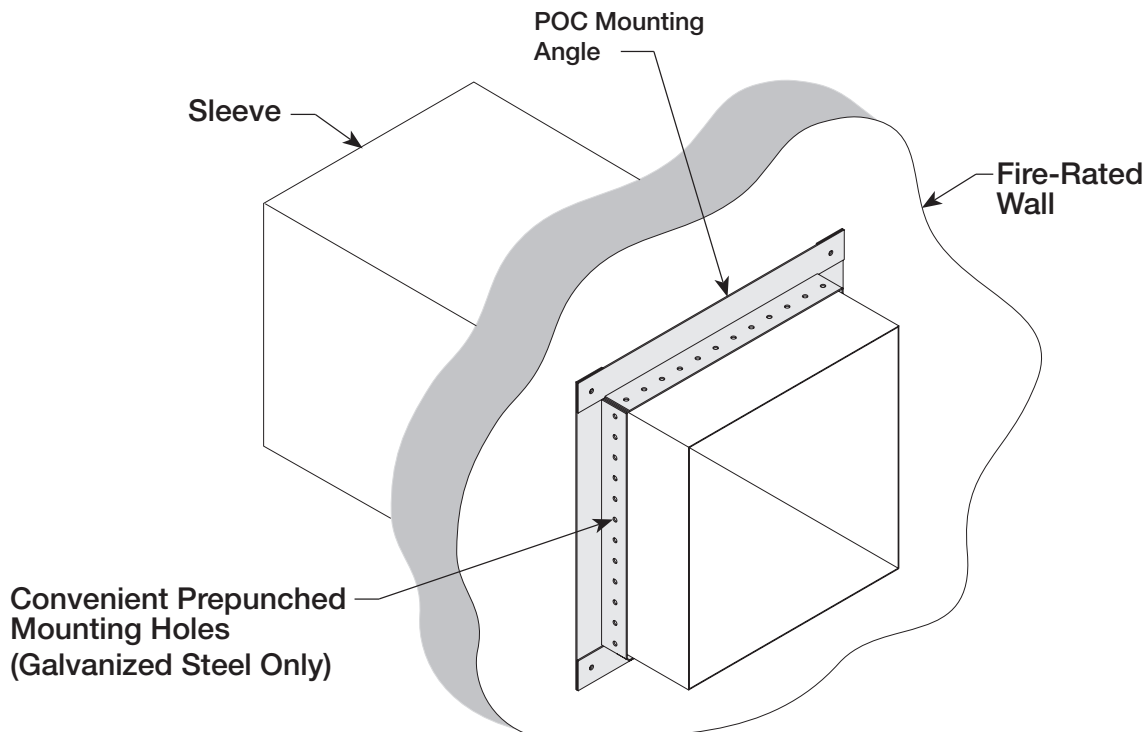
Construction

Material

20 ga. (1mm) or 16 ga. (1.5mm) galvanized steel

Sizes

1½ in. x 1¼ in. (38mm x 32mm) or 2½ x 1½ in. (64mm x 38mm) for sizes greater than 48 inches (1219mm)



Retaining angle as mounted in the field.

The POC angle wraps around the sleeve. The factory provides pre-punched mounting holes to further simplify installation. SS retaining angles are provided without pre-punched mounting holes.

Available Retaining Angle Options:

Model Description

- **Loose** - Angle(s) ships unattached to the damper. (DFD series , FD Series, FSD series, VCD series)
- **Wrapped** - Angle is wrapped around the damper sleeve and tied together. (DFD series , FD Series, FSD series)

