

Date: May 28, 2024

Project: Green Township Police Department

Project Number: 23103.00

Company Name: Pepper Construction of Ohio  
100 Williams Street  
Cincinnati, OH 45215

If enclosures are not as noted,  
please inform us immediately.

Attention To: Dan Bonacci

If checked below, please  
 Acknowledge receipt of enclosure  
 Return enclosures to us

**We Transmit:**

- Herewith
- Under Separate Cover
- In Accordance With
- Other: \_\_\_\_\_

**For Your:**

- Approval
- Information
- Distribution to Parties
- Review and Comment
- Use
- Record
- Other: \_\_\_\_\_

Copies	Date	Description	Action Needed
1	05/28/24	233423-1.0_HVAC Power Ventilators_Product Data_240528msa klh	Reviewed; No Exceptions

**Remarks:**

Copies to: file

By: Sean Bostater

EF-1, EF-3 PAGE 6  
 EF-2 PAGE 14  
 EF-4 PAGE 22  
 EF-5 PAGE 28  
 EF-6 PAGE 35  
 EF-7, EF-8 PAGE 43  
 EF-9 PAGE 49  
 EF-10 PAGE 53  
 SEF-1 PAGE 60  
 SF-1 PAGE 66

- Reviewed
- Reviewed & Revisions Noted
- Revise & Resubmit
- Other \_\_\_\_\_

Review is for general conformance and design concept. Contractor is responsible for dimensions, quantities, coordination with other trades, techniques of construction and performance of work in a safe and satisfactory manner. Review does not relieve Contractor from responsibility for errors or deviations from contract requirements. Notations do not authorize an extra cost.

sbostater 5/28/2024

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Signature Date

**MSA DESIGN**

See response from Christine Shea from KLH below



Kohrs Lonnemann Heil Engineers, Inc.

Fort Thomas Office  
1538 Alexandria Pike, Suite 11  
Ft. Thomas, KY 41075  
859-442-8050 telephone  
859-442-8058 fax

## Product Data

<b>Project Name:</b>	Green Township - Police Station, Cincinnati, OH	<b>Submittal Code:</b>	233423.00-PD-00	<b>REV:</b> 00
<b>Document Set:</b>	Bid/Construction			
<b>KLH Project #:</b>	25019.01-Bid	<b>Received Date:</b>	05/22/2024	
<b>Section Name:</b>	HVAC Power Ventilators			
<b>Section Number:</b>	233423.00			
<b>Submitted By:</b>	MSA Design			
<b>Authored By:</b>	Pepper Construction			
<b>Client Name:</b>	MSA Design			

SUBMITTAL REVIEW

No Exceptions

By: Christine E. Shea      Date: 05/28/2024

ENGINEER'S REVIEW IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. COMMENTS DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR REMAINS RESPONSIBLE FOR ACCURACY OF QUANTITIES, DIMENSIONS, DETAILS AND COORDINATION WITH OTHER TRADES.

### General

1.1 No exceptions noted.

### End of Submittal Review

233423-1.0\_HVAC Power Ventilators\_Product Data\_240522pc.pdf - TEST

Note: Review is for general conformance only. Submittal reviews featuring the "No Exceptions" designation shall not be interpreted as permission to deviate from the contract. Modifications to the contract are based on express written request and approval and submittal reviews do not satisfy this requirement.

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**Cincinnati Office**

100 Williams St.  
 Cincinnati, Ohio 45215  
 Phone: (513) 563-7700 Fax: (513) 952-9059

**Submittal Item**

Project Name: Green Township Police/Administrative Buildings  
 Project No.: 2001634  
 Project No. Arch:  
 Project No. Owner:  
 Project Location: 6200 Harrison Avenue, Cincinnati, Ohio 45247  
 Print Date: 5/22/2024

**Number:** 230000-008

**To:** Sean Bostater

**From:** Dan Bonacci

<b>Description:</b>	HVAC Fans
<b>Revision:</b>	0000
<b>Type:</b>	Product Data
<b>Status:</b>	For Approval
<b>CSI:</b>	23 34 00

<b>Date Due:</b>	
<b>Date Required On Site</b>	
<b>Required By Date:</b>	06/05/2024
<b>Date Returned To Sub:</b>	
<b>Copies:</b>	0

Signed: \_\_\_\_\_  
 Brian Frey

**Pepper Construction**  
 Tomorrow Transformed

<input checked="" type="checkbox"/> <b>REVIEWED FOR APPROVAL</b> <input type="checkbox"/> <b>REVIEWED AS NOTED FOR APPROVAL</b> <input type="checkbox"/> <b>FOR RECORD</b>	Review of this shop drawing does not relieve the Architect, Engineer or Subcontractor of their contractual design responsibilities. Pepper Construction's review is not, nor is it responsible for, an engineering or architectural analysis of design elements, load or dimension calculations, or similar matters. The Subcontractor is responsible to furnish additional material or work as required by the Contract and review of these documents, as well as dimensions to be confirmed and correlated at the job site.
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**JOB:** Green TwnShp PD    **BY:** Brian Frey    **DATE:** 5/22/2024

**SUBMITTAL#** 230000-008                      **Rev #** 0

# ***SUBMITTAL***

**Job Name:** Police Department Green Township

**Engineer:** KLH Engineering

**Contractor:** Mechanical Optimizers

**Elevation: (ft)** 499

**Date:** 5/21/2024

**Submitted By:** Josh Wolfe

**Email:** jwolfe@eapnet.com

**Phone:** (513)489-9494

EAP INC - 370

3930 VIRGINIA AVE

CINCINNATI, OH 45227

US

Phone: (513)489-9494

Fax: (513)489-6448

Email Address: jwolfe@eapnet.com

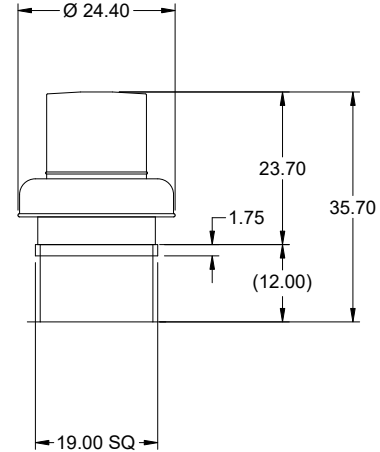
## **SUBMITTAL NOTES:**

Fan Submittals



P.O. Box 410 Schofield, WI 54476 (715) 359-6171 FAX (715) 355-2399 [www.greenheck.com](http://www.greenheck.com)

**Model: G-098-VG**  
Direct Drive Centrifugal Roof Exhaust Fan



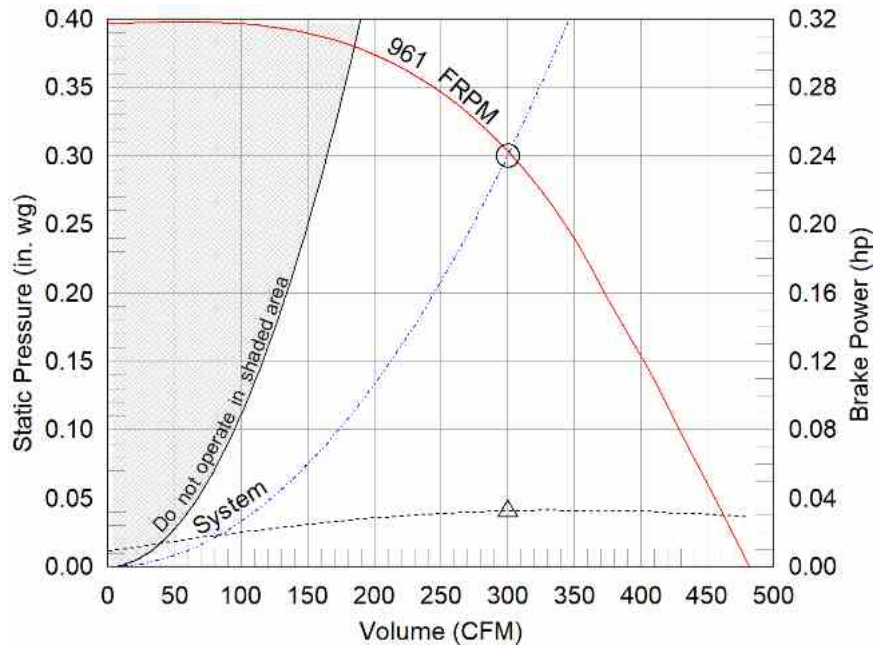
Dimensional	
Quantity	2
Weight w/o Acc's (lb)	36
Weight w/ Acc's (lb)	43
Weight w/ Acc's and Curb (lb)	59
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	300
Actual Volume (CFM)	300
Total External SP (in. wg)	0.3
Fan RPM	961
Operating Power (hp)	0.03
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	2,815
Static Eff. (%)	44

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	313

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	208/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	1.7
Min. Circuit Ampacity (MCA)	2
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	66	64	61	54	50	45	38	35	57	46	4.2



## Model: G-098-VG

Direct Drive Centrifugal Roof Exhaust Fan

Tags: EF-1 EF-3

### 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  
Birdscreen: Galvanized, nom. 84% Free Area  
Conduit Chase Qty 1  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-12X12, Gravity Operated, Not Coated,  
Nominal Size

### Selected Sub Marks

See individual submittals for full details  
GPI-19-G12

***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.***

# Disconnect Switch

## Enclosure Rating: NEMA-1

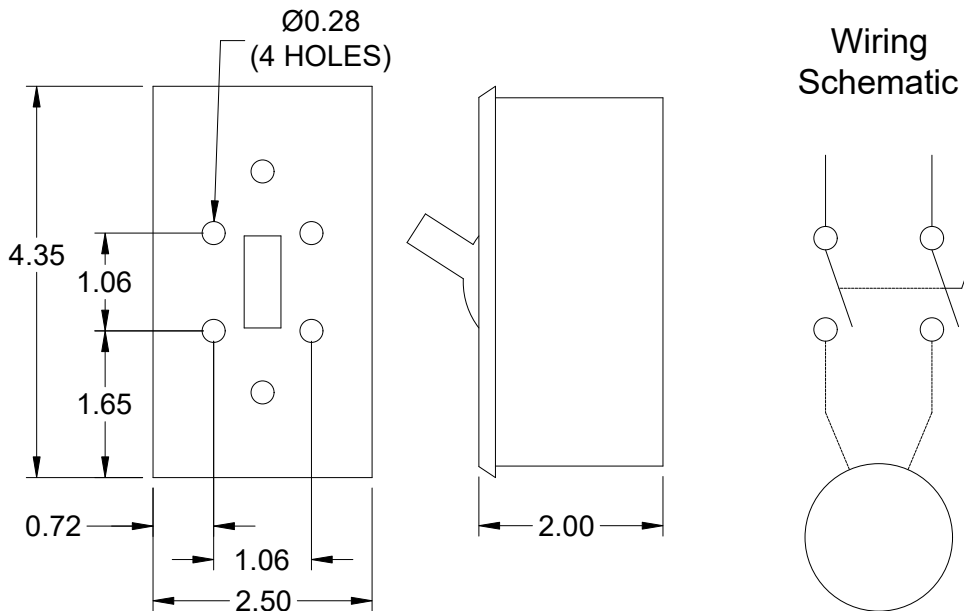
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/4 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	2	Rating:	2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

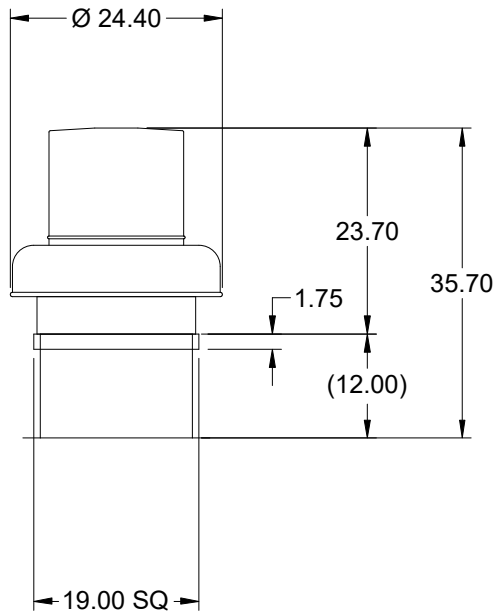
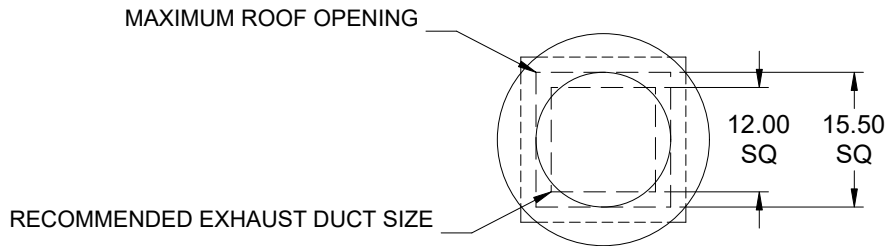
### Electrical Drawing Details



Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Direct Drive Centrifugal Roof Exhaust Fan



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.  
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

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

Notes: All dimensions shown are in units of in..

# Vari-Green Motor & Control Options

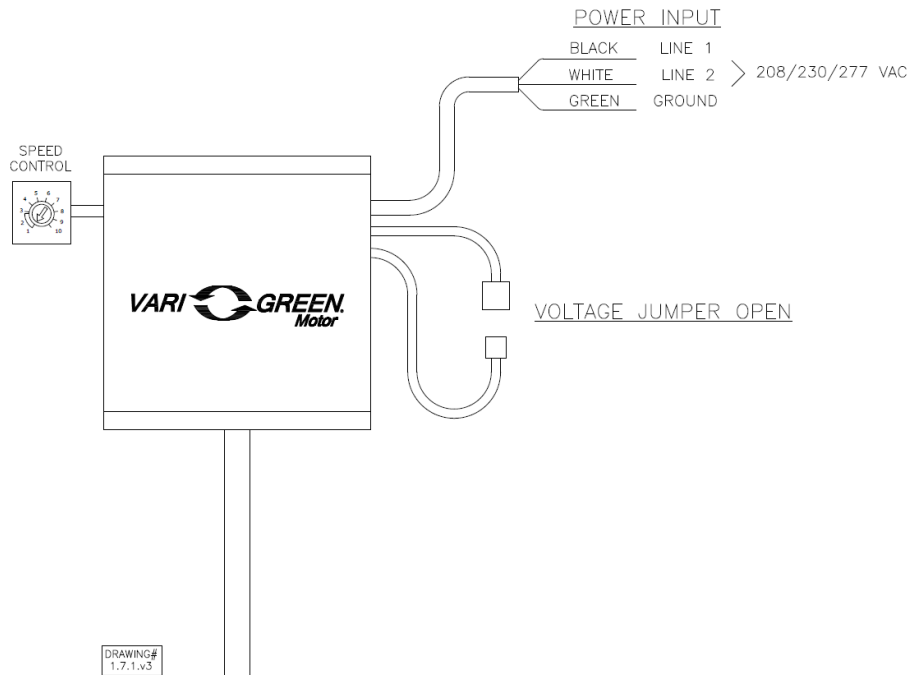
An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%. Vari-Green motors feature a soft-start and inherent thermal and current protection built into each unit. Inrush current at start up is eliminated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

### Motor Configuration

Input Voltage: 208  
Speed Reference: Dial on Motor  
Permanent Dial: Yes

### Control Configuration

Control Type: Dial on Motor  
Transformer: None



# Horizontal Mount Exhaust Damper

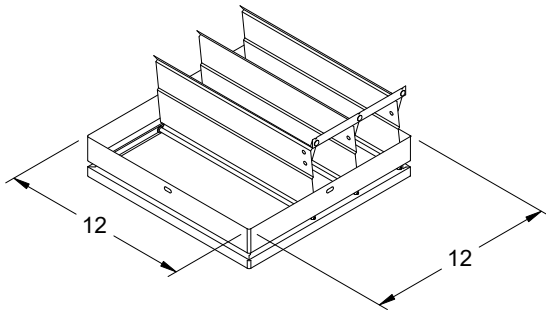
Model: BD-100

## Standard Construction Features:

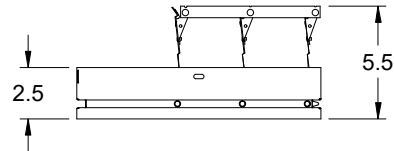
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed of fiberglass reinforced nylon



Greenheck Fan Corporation certifies that the models BD-100 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.



DAMPER



TYP. SECTION VIEW

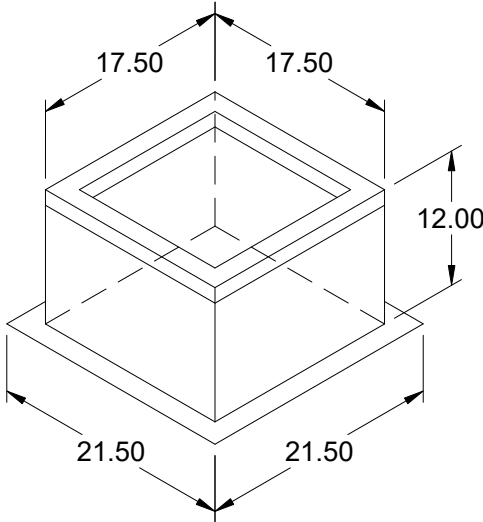
Notes: All dimensions shown are in units of in.

## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to some ratings only.



**Model: GPI**

**Roof Curb**

Tags:

EF-1 EF-3

**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
	2	GPI-19	Nominal	1.5	16	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.)
12	19	19	17.5	17.5	14	14	18	18

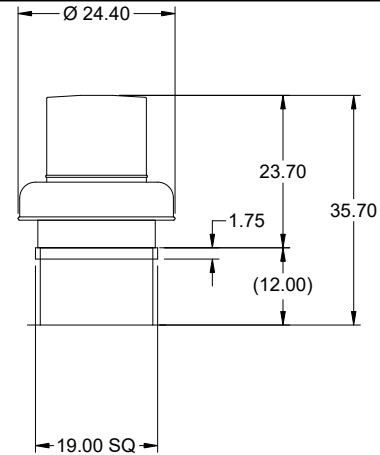
\*May not be applicable

**Accessories**

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

**Model: G-100-VG**  
Direct Drive Centrifugal Roof Exhaust Fan

Previously: G-103-VG



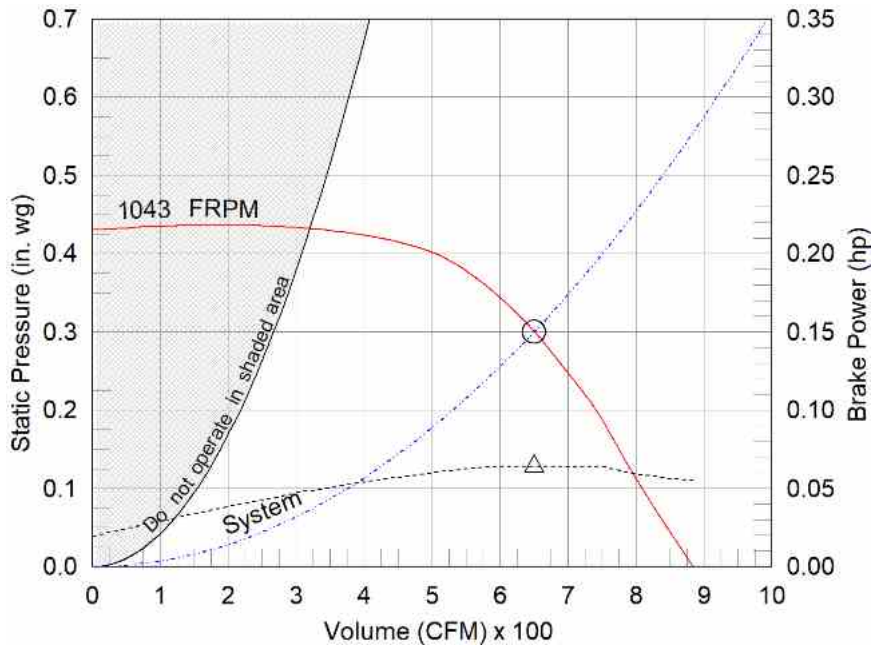
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	36
Weight w/ Acc's (lb)	43
Weight w/ Acc's and Curb (lb)	59
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	650
Actual Volume (CFM)	650
Total External SP (in. wg)	0.3
Fan RPM	1043
Operating Power (hp)	0.06
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	3,037
Static Eff. (%)	48

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	722

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	208/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	1.7
Min. Circuit Ampacity (MCA)	2
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	68	65	64	56	48	46	40	32	59	48	4.7



## Model: G-100-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  
Birdscreen: Galvanized, nom. 84% Free Area  
Conduit Chase Qty 1  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-12X12, Gravity Operated, Not Coated, Nominal Size

#### Selected Sub Marks

See individual submittals for full details  
GPI-19-G12

***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.***

# Disconnect Switch

## Enclosure Rating: NEMA-1

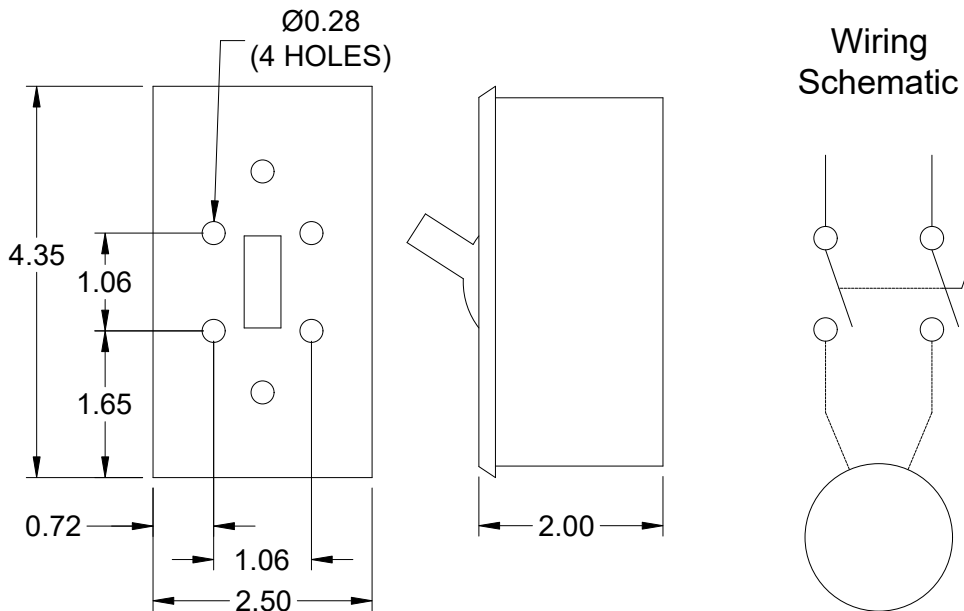
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/4 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	2	Rating:	2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

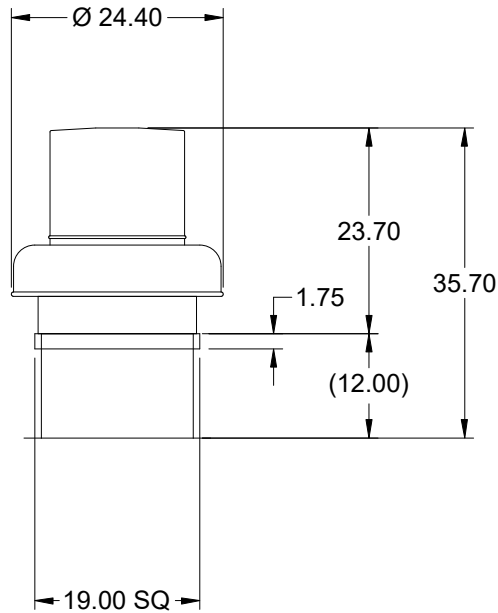
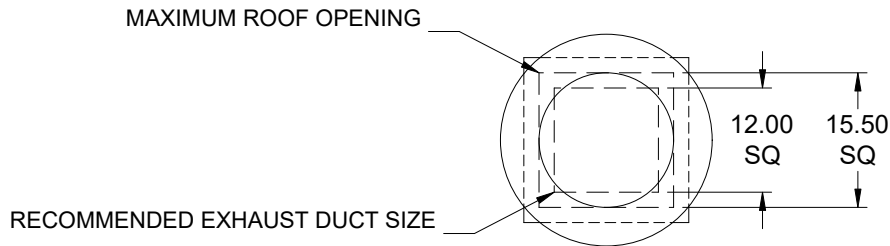
### Electrical Drawing Details



Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Direct Drive Centrifugal Roof Exhaust Fan



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.  
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

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

Notes: All dimensions shown are in units of in..

# Vari-Green Motor & Control Options

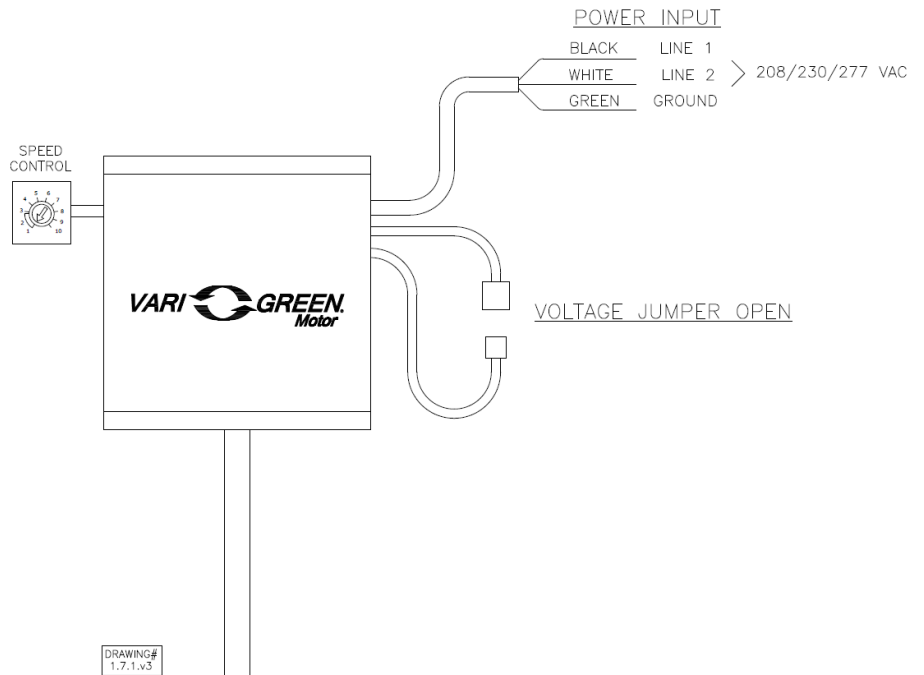
An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%. Vari-Green motors feature a soft-start and inherent thermal and current protection built into each unit. Inrush current at start up is eliminated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

### Motor Configuration

Input Voltage: 208  
Speed Reference: Dial on Motor  
Permanent Dial: Yes

### Control Configuration

Control Type: Dial on Motor  
Transformer: None



# Horizontal Mount Exhaust Damper

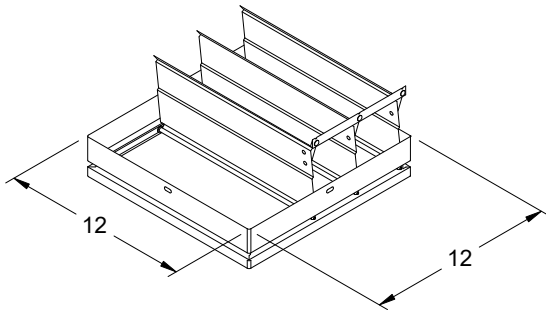
Model: BD-100

## Standard Construction Features:

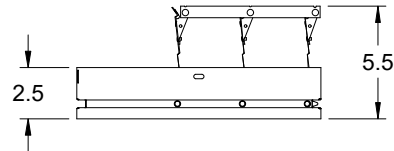
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed of fiberglass reinforced nylon



Greenheck Fan Corporation certifies that the models BD-100 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.



DAMPER



TYP. SECTION VIEW

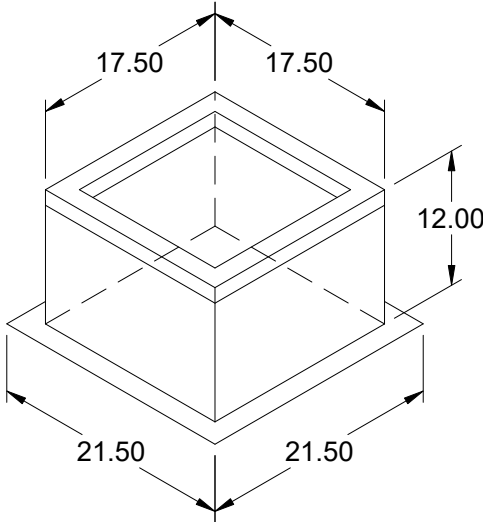
Notes: All dimensions shown are in units of in.

## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to some ratings only.



## 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	16	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.)
12	19	19	17.5	17.5	14	14	18	18

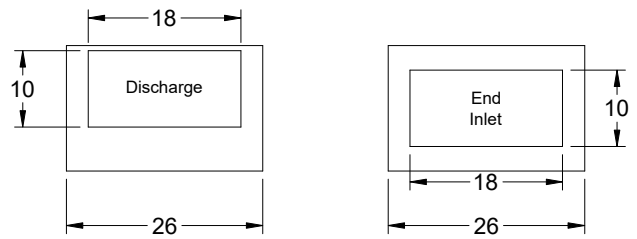
\*May not be applicable

#### Accessories

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

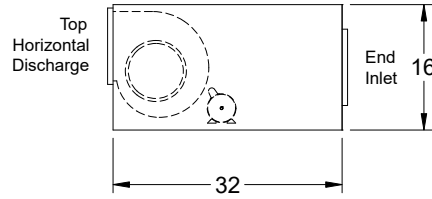
**Model: BCF-108-10**  
Belt Drive Cabinet Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	132
Weight w/ Acc's (lb)	145
Max T Motor Frame Size	56



DISCHARGE VIEW

INLET VIEW

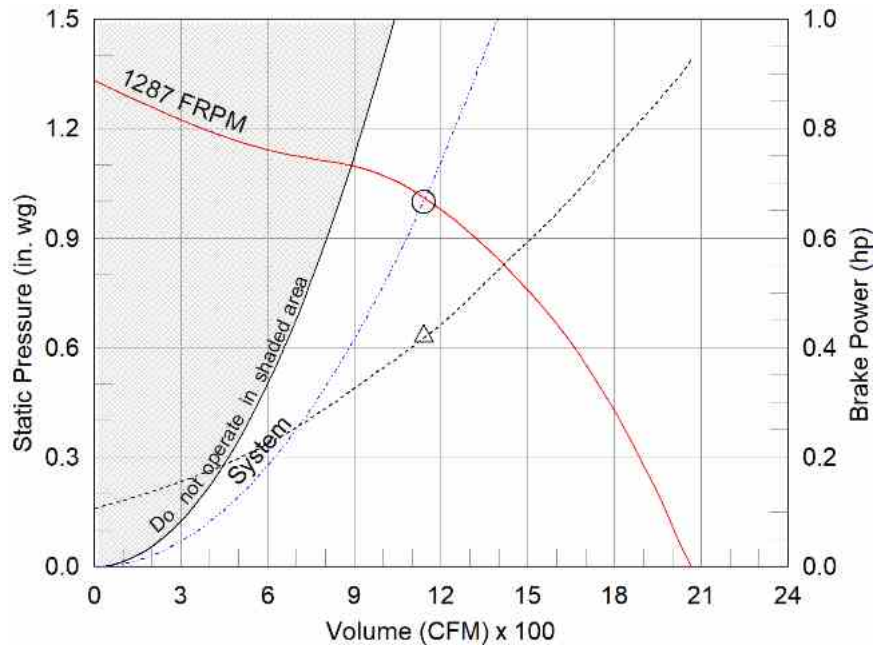


ELEVATION VIEW

Performance	
Requested Volume (CFM)	1,140
Actual Volume (CFM)	1,140
Total External SP (in. wg)	1
Fan RPM	1287
Operating Power (hp)	0.42
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	9.2
Tip Speed (ft/min)	2,875
Static Eff. (%)	47

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	912

Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	4.6
Min. Circuit Ampacity (MCA)	5.75
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA



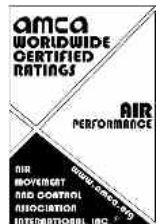
- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- ..... Brake horsepower curve

**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 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	74	68	69	63	63	61	58	54	68	57	8.5



## Model: BCF-108-10

### Belt Drive Cabinet Fan

#### Standard Construction Features:

- Galvanized steel housing - Hinged access panel on sizes (106, 206, 107, 207), bolted access panels on all larger sizes - Motor and drive frame isolated on shock mounts - Inlet and outlet duct connection flanges - Ball bearing motors - Fan shafts mounted in ball bearing pillow blocks - Adjustable motor pulley - Fan shaft pulley - Static free belts - Corrosion resistant fasteners

#### Selected Options & Accessories:

UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-1, Toggle,  
Junction Box Mounted & Wired  
Fan: Spring, Hanging, 1 Inch Isolator PN: 850344, Incl. 4 isolators and 4 brackets  
Discharge: Top Horizontal  
Unit Warranty: 1 Yr (Standard)

# Disconnect Switch

## Enclosure Rating: NEMA-1

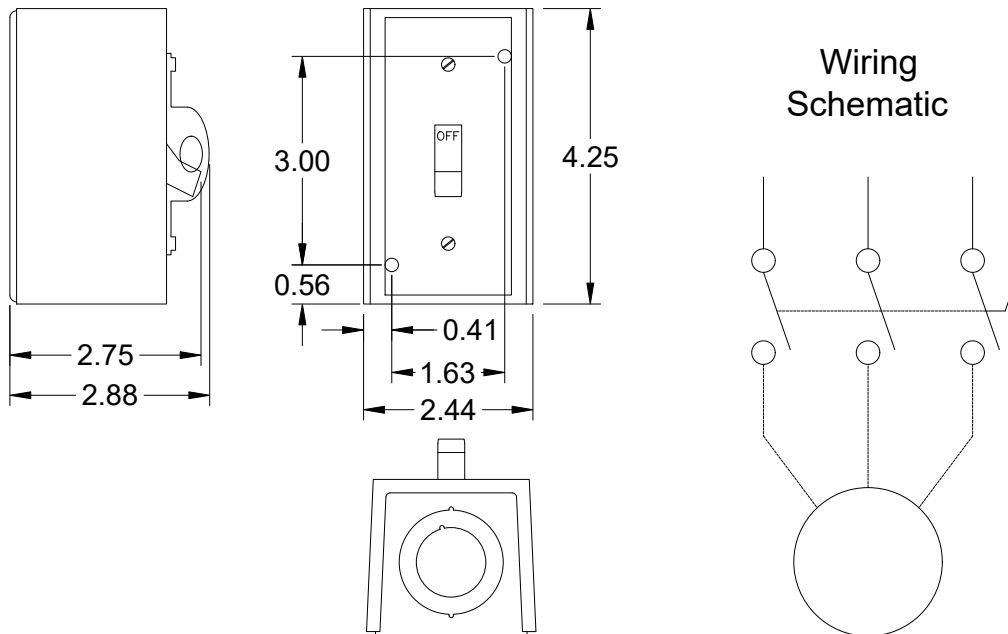
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

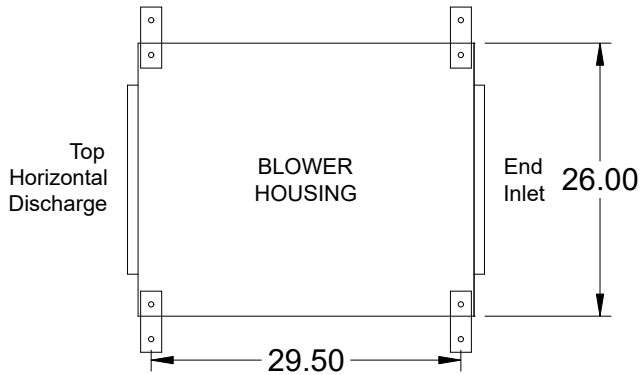
Type:	Toggle	Motor Size:	1 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Square D	Cycle:	60	Amperage:	30	CSA Approved:	Yes
Overload Protection:	None	Phase:	3	Switch Pole(s):	3	Rating:	10 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

### Electrical Drawing Details

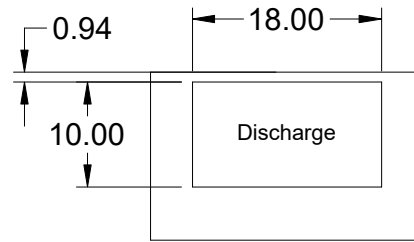


Notes: All dimensions shown are in units of in.

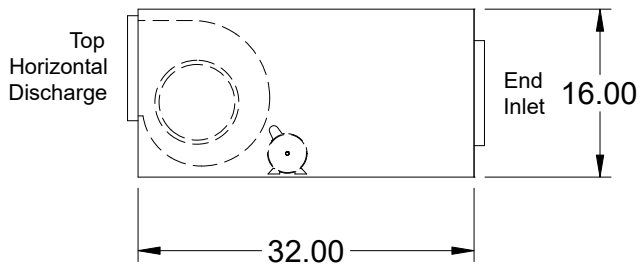
Assembly Drawing  
Type: Belt Drive Cabinet Fan



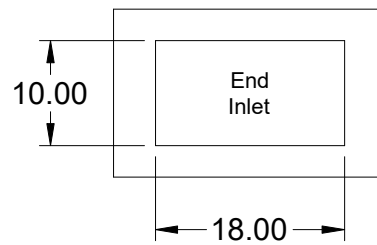
PLAN VIEW



DISCHARGE VIEW



ELEVATION VIEW



INLET VIEW

Notes: All dimensions shown are in units of in..

# Fan Isolator

Type: Spring, Hanging, 1 Inch

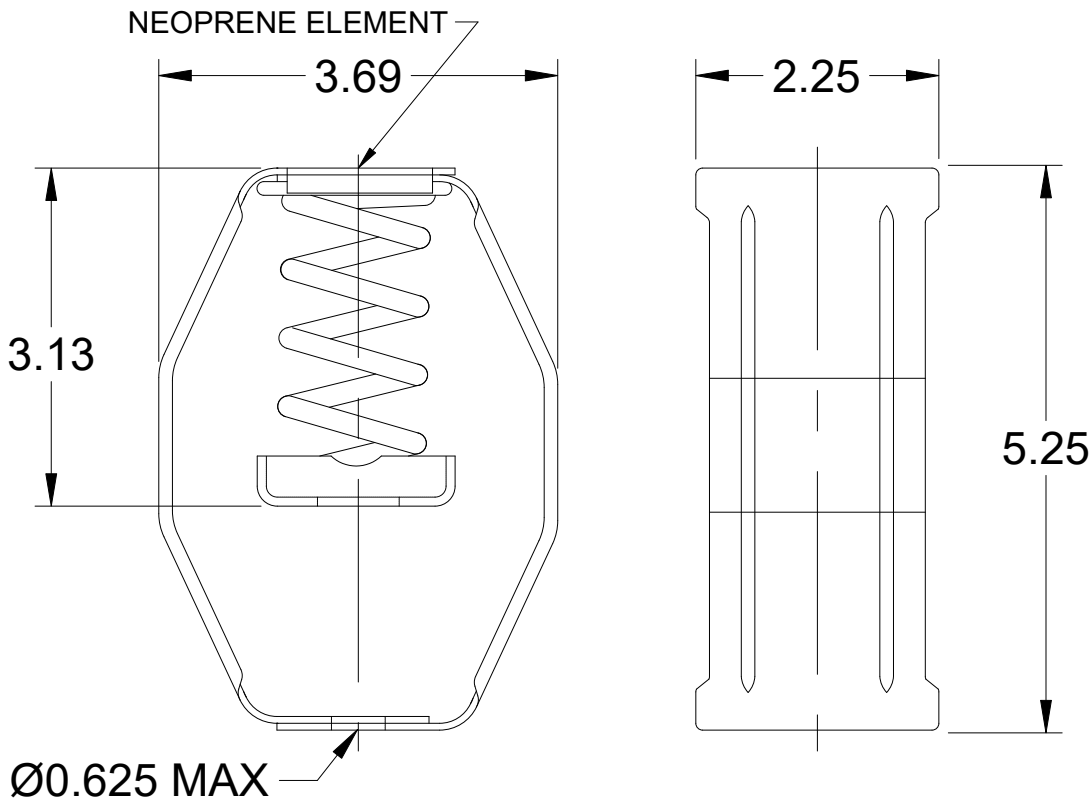
## Standard Construction Features:

The spring hanging isolator is designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. To assure stability, the spring element has a minimum lateral stiffness of 1.0 times the rated vertical stiffness. The hanger will allow a support rod misalignment through a 30 degree arc and the isolation brackets will carry a 500% overload without failure. The isolator has an epoxy powder coated bracket and spring coil which is color coded according to the load capacity and has a noise isolation pad, all which is assembled into a stamped or welded hanger bracket. This part number includes 4 isolators.

## Isolator Configuration

Description:	SH-1-70	Color:	Green
Manufacturer:	Kinetics Noise Control	Mounting:	Hanging
Load Capacity:	70 lb	Kit Part Number:	850344
Deflection at Full Load:	1.36	Selection Deflection (in.):	0.64

## Spring, Hanging, 1 Inch Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.

## AMCA

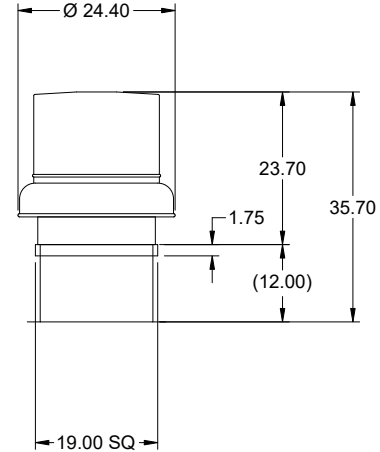


AMCA Licensed for Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only. Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

**Model: GB-098-4**  
Belt Drive Centrifugal Roof Exhaust Fan

Previously: GB-081-4



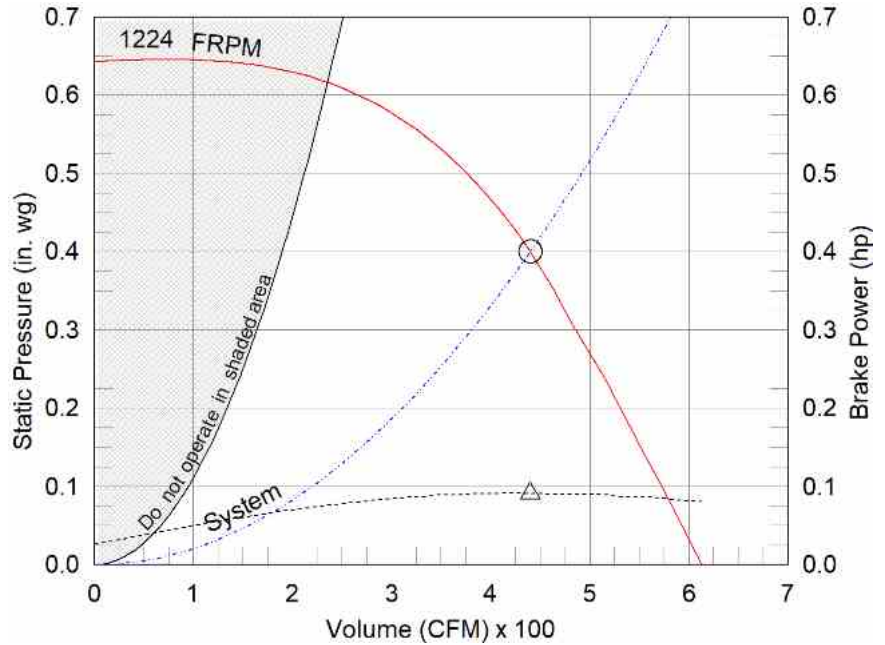
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	61
Weight w/ Acc's (lb)	68
Weight w/ Acc's and Curb (lb)	84
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	440
Actual Volume (CFM)	440
Total External SP (in. wg)	0.4
Fan RPM	1224
Operating Power (hp)	0.09
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	25.6
Tip Speed (ft/min)	3,586
Static Eff. (%)	41

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	458

Motor	
Motor Included	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	208/60/1
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	3.2
Min. Circuit Ampacity (MCA)	4
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	70	68	60	56	51	45	41	64	52	6.4



## Model: GB-098-4

### Belt Drive Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Birdscreen - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Sizes 141 and larger have internal Lifting lugs

#### Selected Options & Accessories:

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  
Birdscreen: Galvanized, nom. 84% Free Area  
Conduit Chase Qty 1  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-12X12, Gravity Operated, Not Coated, Nominal Size

#### Selected Sub Marks

See individual submittals for full details  
GPI-19-G12

# Disconnect Switch

## Enclosure Rating: NEMA-1

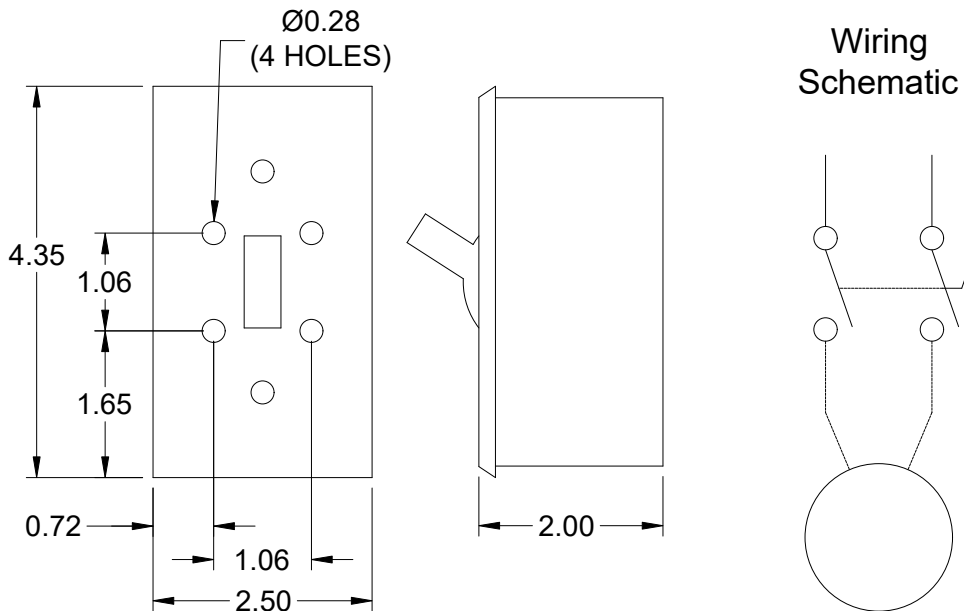
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/4 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	2	Rating:	2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

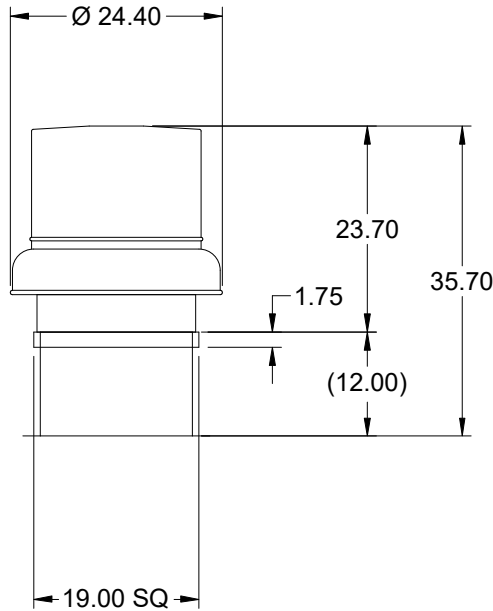
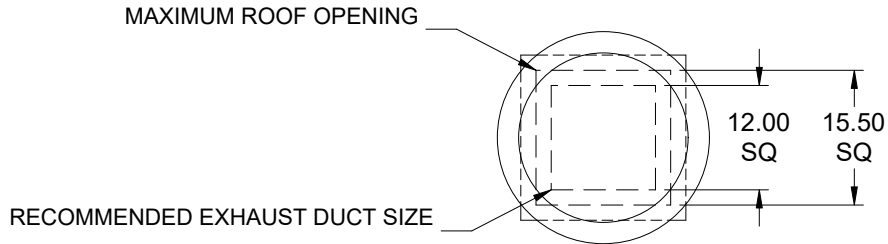
### Electrical Drawing Details



Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Belt Drive Centrifugal Roof Exhaust Fan



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.  
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

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

Notes: All dimensions shown are in units of in..

# Horizontal Mount Exhaust Damper

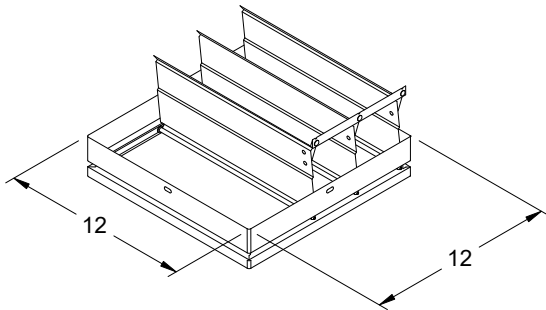
Model: BD-100

## Standard Construction Features:

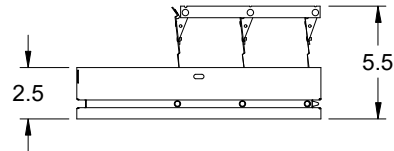
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed of fiberglass reinforced nylon



Greenheck Fan Corporation certifies that the models BD-100 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.



DAMPER



TYP. SECTION VIEW

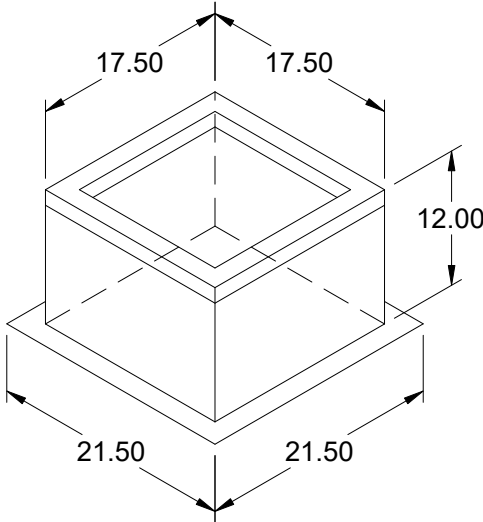
Notes: All dimensions shown are in units of in.

## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to some ratings only.



## 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	16	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.)
12	19	19	17.5	17.5	14	14	18	18

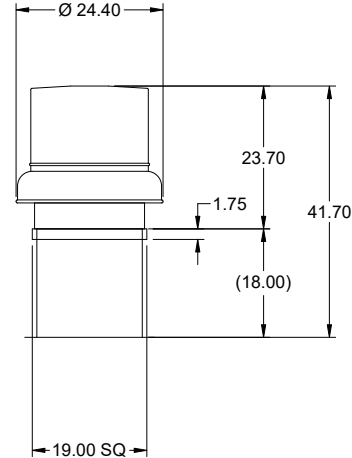
\*May not be applicable

#### Accessories

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

**Model: GB-098-4**  
Belt Drive Centrifugal Roof Exhaust Fan

Previously: GB-081-4



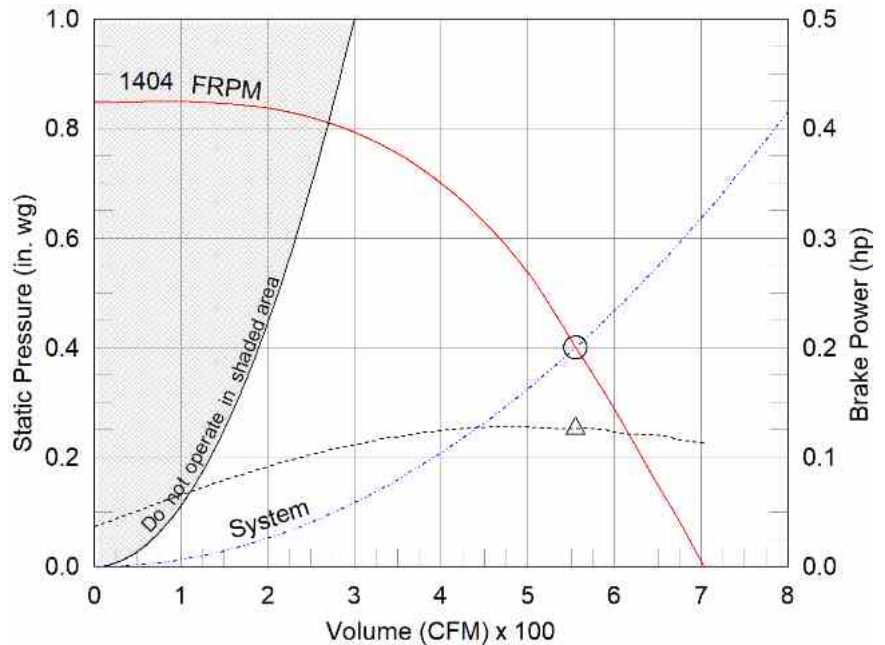
OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	61
Weight w/ Acc's (lb)	68
Weight w/ Acc's and Curb (lb)	96
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	555
Actual Volume (CFM)	555
Total External SP (in. wg)	0.4
Fan RPM	1404
Operating Power (hp)	0.13
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	19.7
Tip Speed (ft/min)	4,113
Static Eff. (%)	35

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	578

Motor	
Motor Included	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	208/60/1
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	3.2
Min. Circuit Ampacity (MCA)	4
Max. Overcurrent Protection (MOP)	15
Short Circuit Current Rtg (SCCR)	5 kA



- △ 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	76	74	72	64	60	56	49	45	68	56	8.3



## Model: GB-098-4

### Belt Drive Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Birdscreen - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Sizes 141 and larger have internal Lifting lugs

#### Selected Options & Accessories:

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  
Birdscreen: Galvanized, nom. 84% Free Area  
Conduit Chase Qty 1  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-12X12, Gravity Operated, Not Coated, Nominal Size

#### Selected Sub Marks

See individual submittals for full details  
GPI-19-12-G18

# Disconnect Switch

## Enclosure Rating: NEMA-1

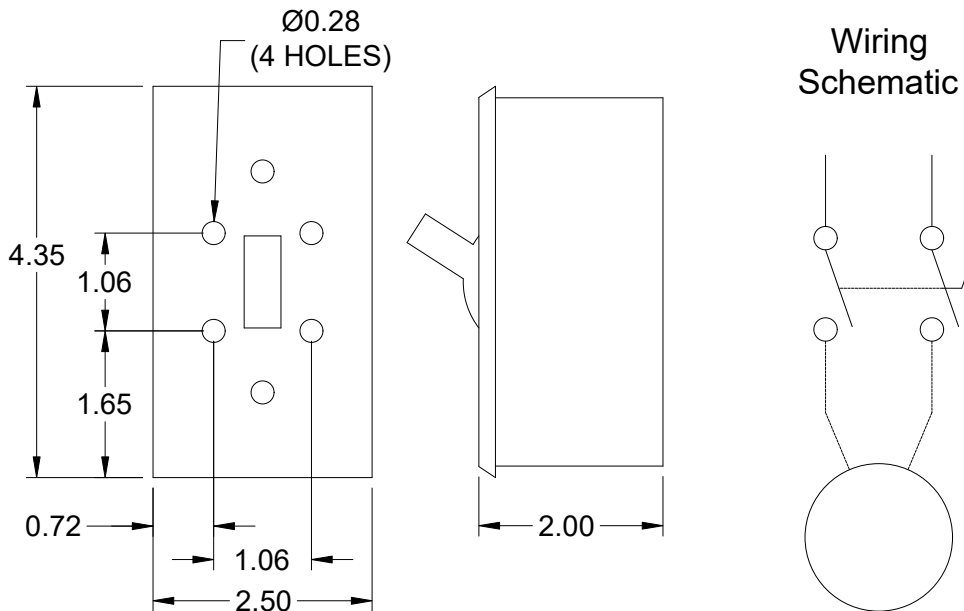
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/4 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	2	Rating:	2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

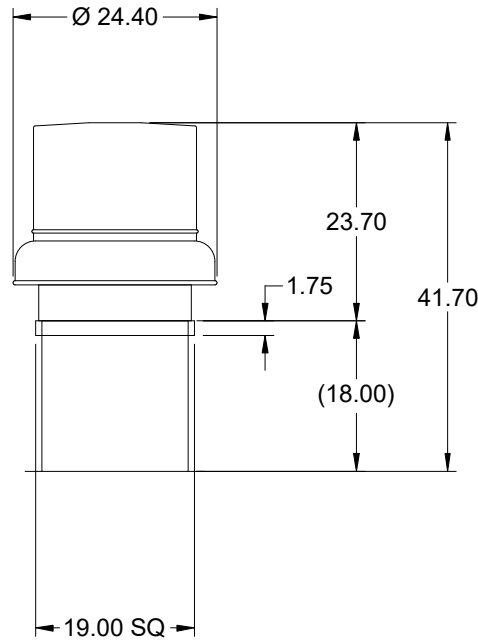
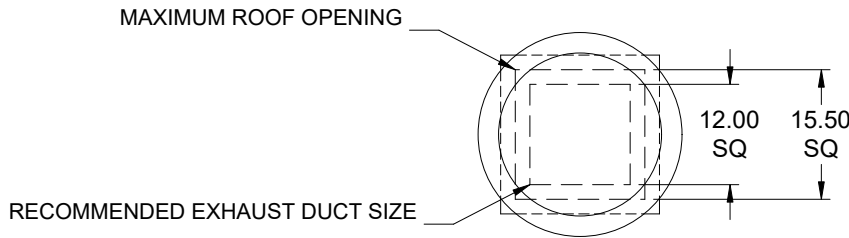
### Electrical Drawing Details



Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Belt Drive Centrifugal Roof Exhaust Fan



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.  
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

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

Notes: All dimensions shown are in units of in..

# Horizontal Mount Exhaust Damper

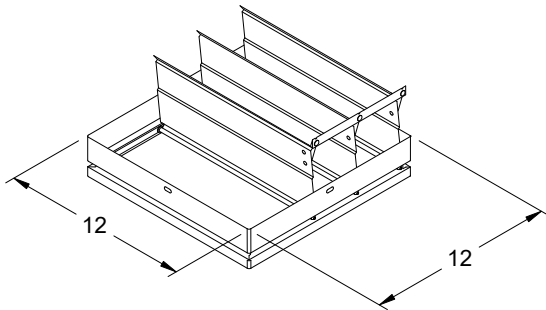
Model: BD-100

## Standard Construction Features:

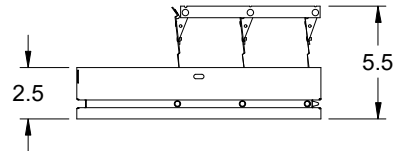
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed of fiberglass reinforced nylon



Greenheck Fan Corporation certifies that the models BD-100 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.



DAMPER



TYP. SECTION VIEW

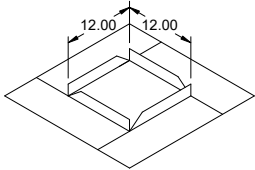
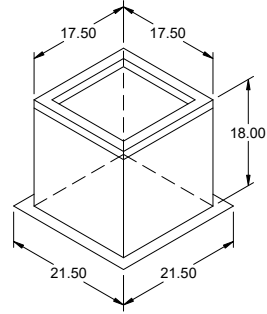
Notes: All dimensions shown are in units of in.

## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to some ratings only.



## 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	27	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.)
18	19	19	17.5	17.5	14	14	18	18

\*May not be applicable

#### Damper Tray

Damper Tray Width (in.)	Damper Tray Length (in.)
12	12

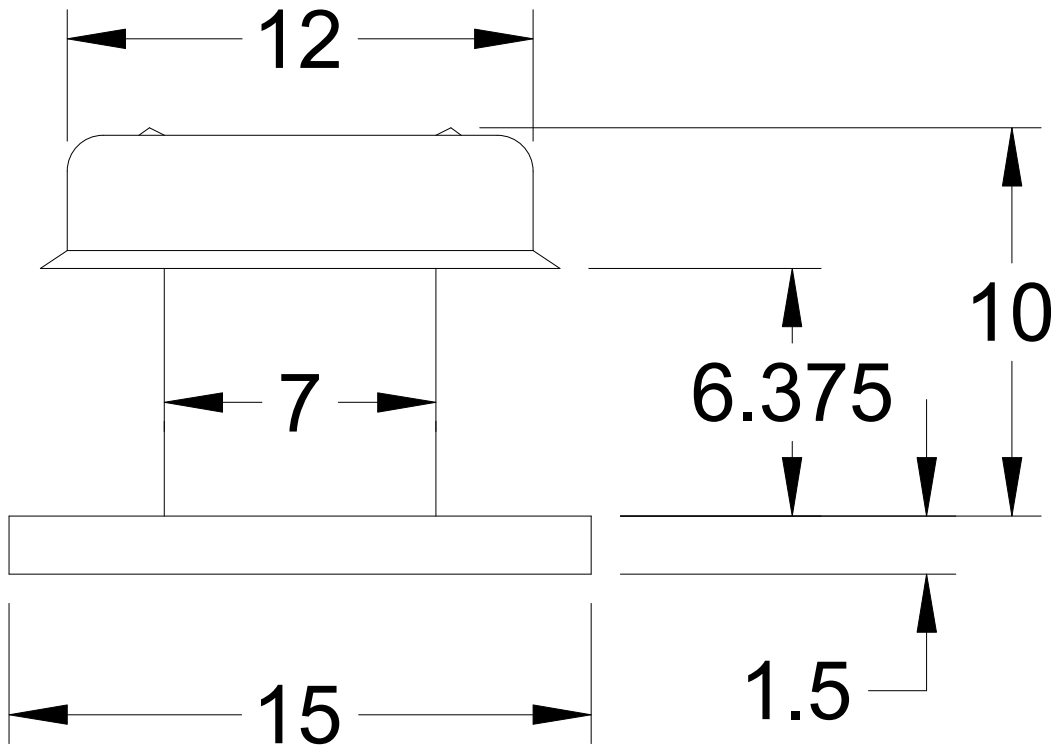
#### Accessories

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

RCC-7

Standard Construction Features:

- Weathertight aluminum construction
- Integral birdscreen
- Built in curb cap.



Notes: All dimensions shown are in units of in.

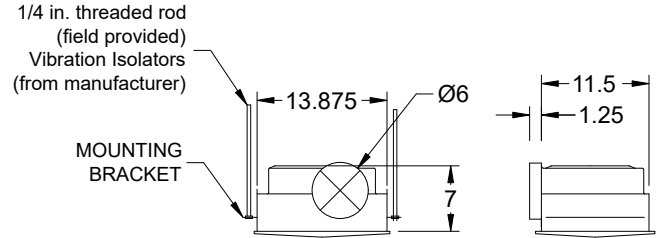
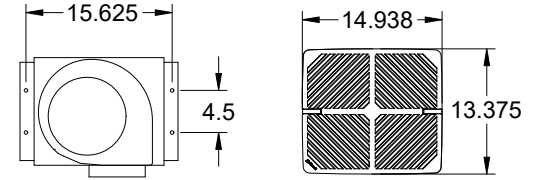
**Model: SP-B110**  
Ceiling Exhaust Fan

**Standard Construction Features:**

- Corrosion resistant galvanized steel scroll and housing - White designer non-yellowing grille - Round outlet duct collar with integral backdraft damper - Single inlet forward curved wheel - Plug type disconnect - Adjustable mounting brackets

**Selected Options & Accessories:**

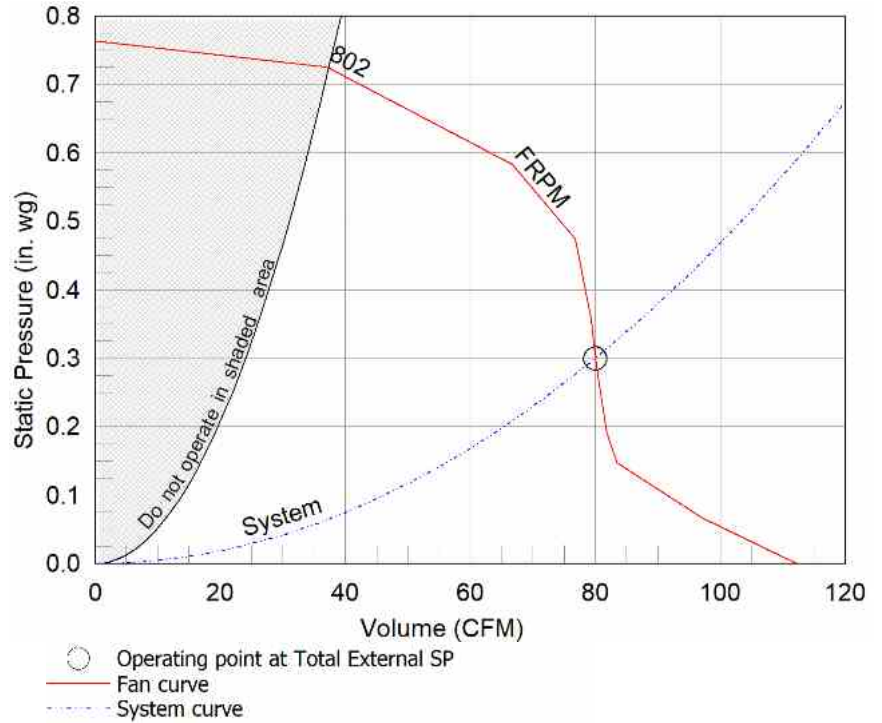
Motor rated for continuous use  
 Motor with Thermal Overload  
 Motor with CSA Approval  
 Motor with 40 Degree C Ambient Temperature  
 UL/cUL 507 Listed - Electric Fan  
 Solid State Speed Control, 6 Amp, Shipped Loose  
 1 Function Switch, Single Pole Rocker (PN: 872243), Shipped Loose  
 Round Duct Connection  
 Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose  
 Adjustable easy installation mounting bracket  
 Standard Grille  
 Polypropylene Wheel Material  
 Can Be Used to Comply with: ASHRAE 62.2 and Washington State Energy Code



Dimensional	
Quantity	2
Weight w/o Acc's (lb)	10
Weight w/ Acc's (lb)	13

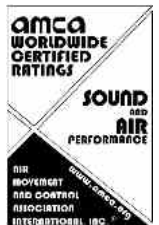
Performance	
Requested Volume (CFM)	80
Actual Volume (CFM)	80
Total External SP (in. wg)	0.3
Fan RPM	802
* FLA (A)	1.15
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Sones	0.9

Motor	
Motor Mounted	Yes
** Input Watts (W)	80
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP



**Notes:**

All dimensions shown are in units of in.  
 \*FLA is approximate and will vary slightly with the motor.  
 Sones - calculated using AMCA 301 at 5 ft  
 \*\* Wattage is shown at free air.  
 \*\* Wattage is approximate and may vary between motors.

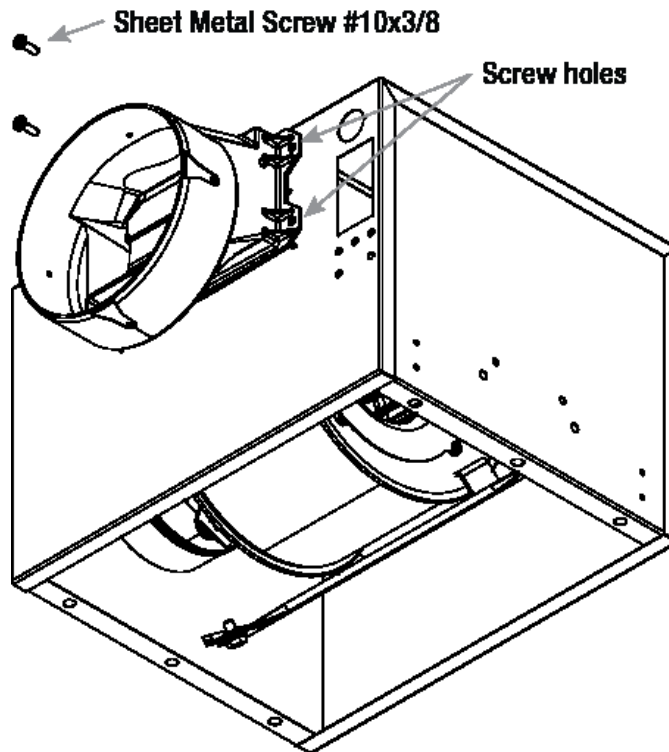


# Round Duct Connector

Model: RDC

## Standard Construction Features:

-Constructed of Polypropylene - Replaces the square discharge duct connector and damper using the existing mounting holes



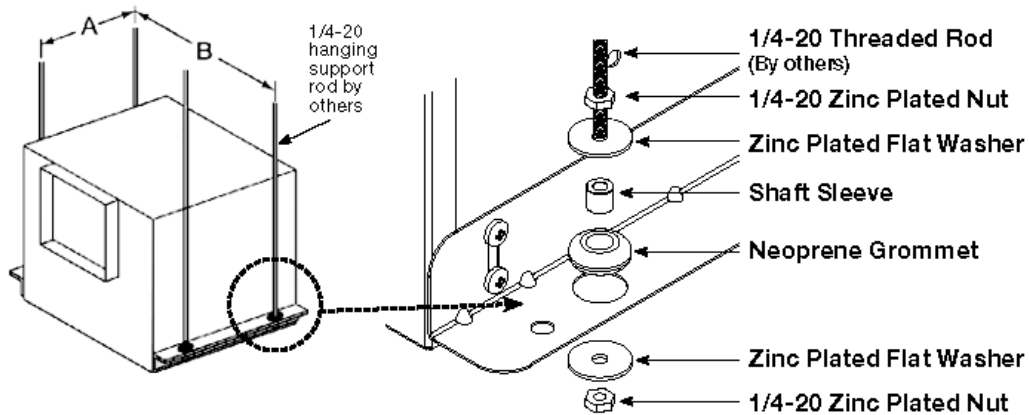
Notes: All dimensions shown are in units of in.

# Isolation Kit

Type: Hanging

## Standard Construction Features:

- Neoprene vibration isolation for hanging installation - Kit includes four isolators and all hardware necessary for mounting one unit except for the 0.25 in. x 20 in. threaded rod to be supplied by others - Fan mounting brackets include prepunched mounting holes for ease of installation



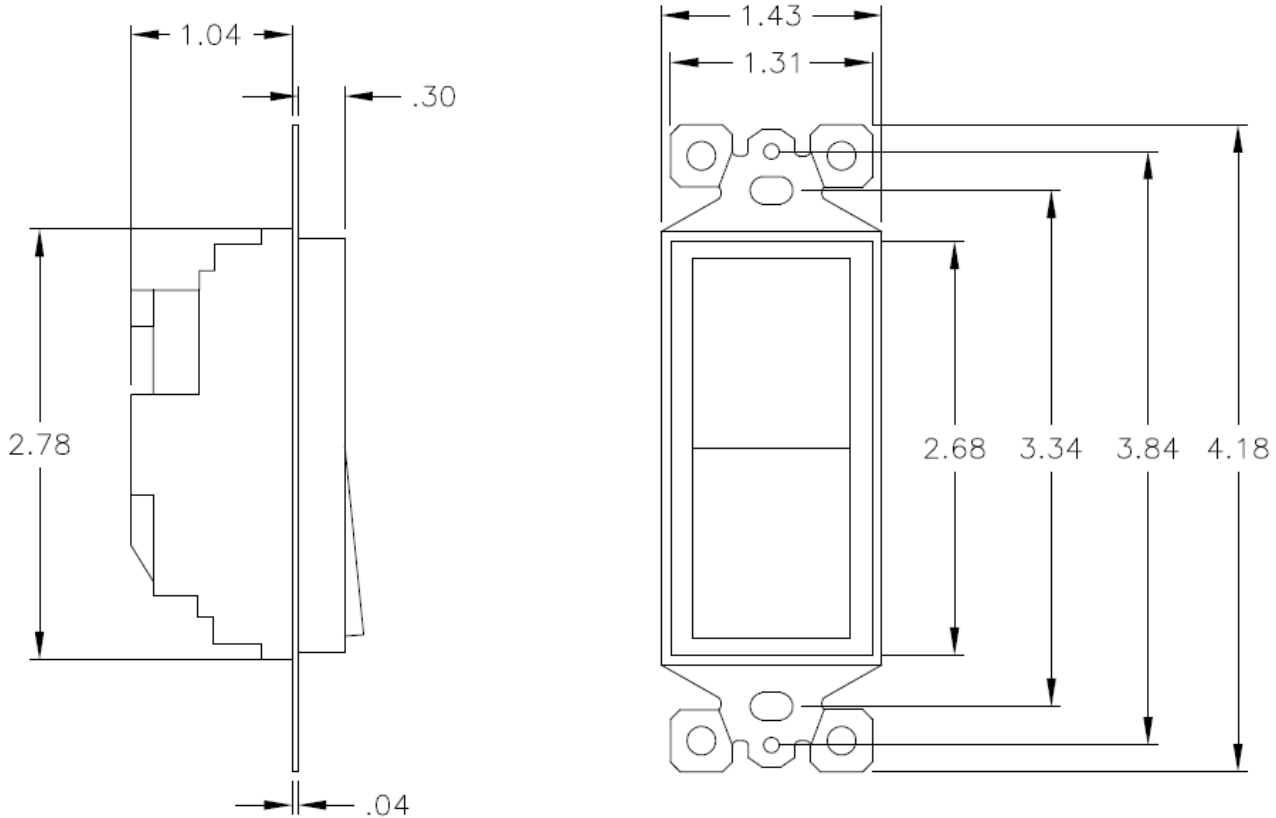
Unit Size	A	B
B50-B200	4 1/2 (114)	15 5/8 (397)
A50-A190	5 1/2 (140)	14 5/8 (371)
A200-A390	6 3/4 (171)	15 1/2 (394)
A410, A510, A710, A780	9 1/4 (235)	19 5/8 (498)
A700	5 1/2 (140)	25 1/8 (638)
A900 - A1050, A1410 - A1550	9 1/4 (235)	25 3/8 (645)
A1750, A2150	9 1/4 (235)	36 3/4 (933)
A3600	9 1/4 (235)	48 5/8 (1235)
All dimensions shown in inches (millimeters).		

Description	Qty
Neoprene Grommets	4
1 x 32 Zinc Plated Nuts	8
Zinc Plated Flat Washers	8
3/8 x 3/16 Shaft Sleeves	4

**Manual Switch**  
Model: 1 Function

**Standard Construction Features:**

Single pole rocker switch assembly with plate cover, rated for 120/277V, 15A, UL Listed.



Notes: All dimensions shown are in units of in.

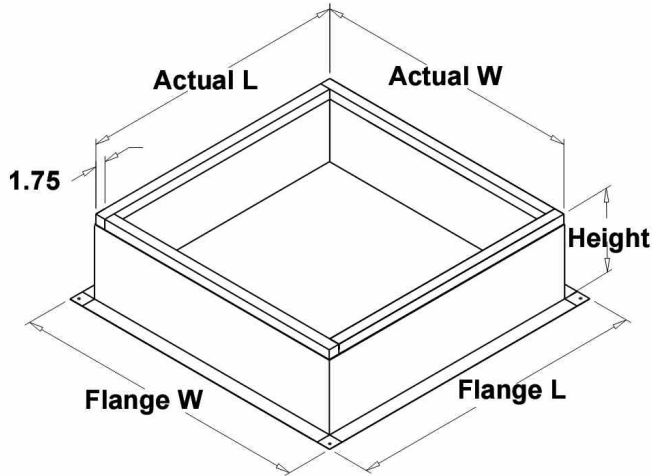
## AMCA



AMCA Licensed for Sound and Air Performance Without Appurtenances (Accessories). Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The watt ratings shown are at free air. The sound ratings shown are for loudness values in spherical sones at 5 ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical sone levels. The AMCA Certified Ratings Seal applies to some ratings only.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.



## 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

ID#	Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Made
10-1		2	GPI-14-G18	Nominal	1.5	22	Yes	No Preference

#### Dimensions

ID#	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.)
10-1	18	14	14	12.5	12.5	9	9	13	13

\*May not be applicable

#### Accessories

ID#	Material	Security Bars	Liner	Insulation (in.)	Insulation R Value
10-1	Galvanized	No	No	1	R4.3

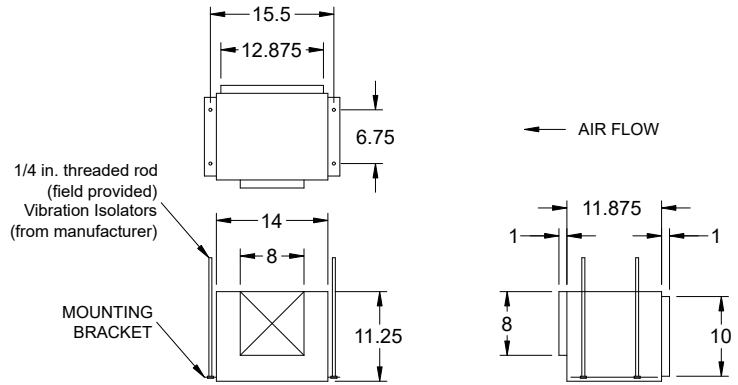
**Model: CSP-A390**  
Inline Cabinet Fan

**Standard Construction Features:**

- Corrosion resistant galvanized steel scroll and housing - Sound absorbing insulation - Rectangular inlet and outlet duct collar - Outlet with integral spring loaded back draft damper - Double inlet forward curved wheel - Plug type disconnect - Adjustable mounting brackets - Field rotatable discharge

**Selected Options & Accessories:**

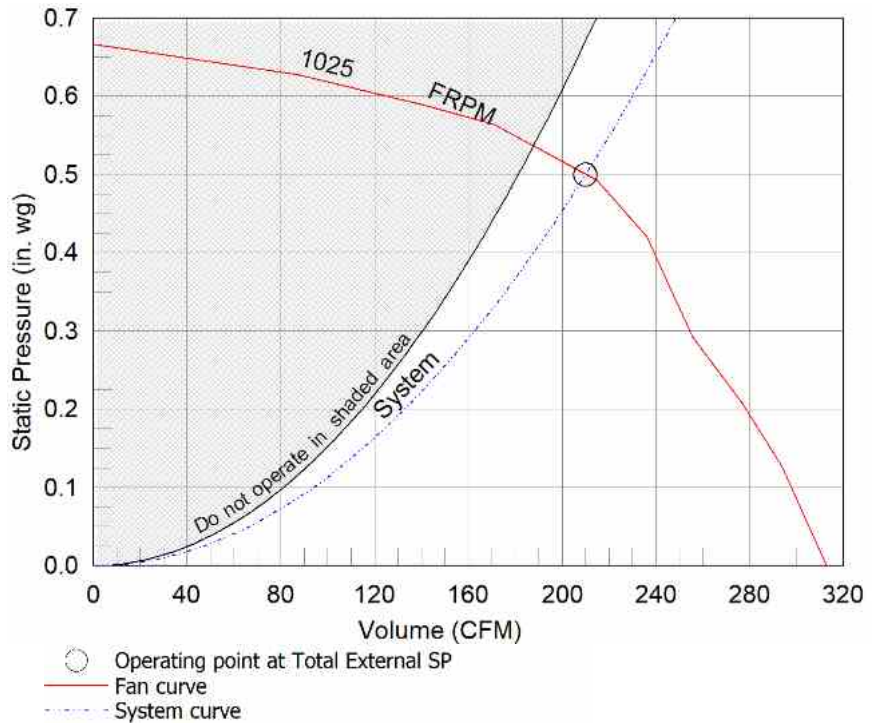
- Motor rated for continuous use
- Motor with Thermal Overload
- Motor with CSA Approval
- Motor with 40 Degree C Ambient Temperature
- UL/cUL 507 Listed - Electric Fan
- Solid State Speed Control, 6 Amp, Shipped Loose
- 1 Function Switch, Single Pole Rocker (PN: 872243), Shipped Loose
- Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
- Adjustable easy installation mounting bracket
- Polypropylene Wheel Material



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	23
Weight w/ Acc's (lb)	26

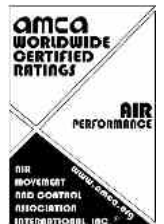
Performance	
Requested Volume (CFM)	210
Actual Volume (CFM)	210
Total External SP (in. wg)	0.5
Fan RPM	1025
* FLA (A)	1.42
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Sones	2.0

Motor	
Motor Mounted	Yes
** Input Watts (W)	51
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP



**Notes:**

- All dimensions shown are in units of in.
- \*FLA is approximate and will vary slightly with the motor.
- Sones - calculated using AMCA 301 at 5 ft
- \*\* Wattage is approximate and may vary between motors.

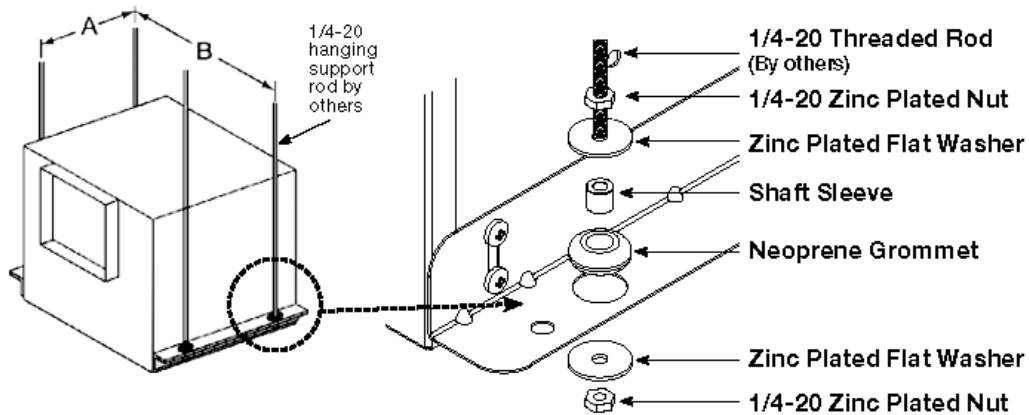


# Isolation Kit

Type: Hanging

## Standard Construction Features:

- Neoprene vibration isolation for hanging installation - Kit includes four isolators and all hardware necessary for mounting one unit except for the 0.25 in. x 20 in. threaded rod to be supplied by others - Fan mounting brackets include prepunched mounting holes for ease of installation



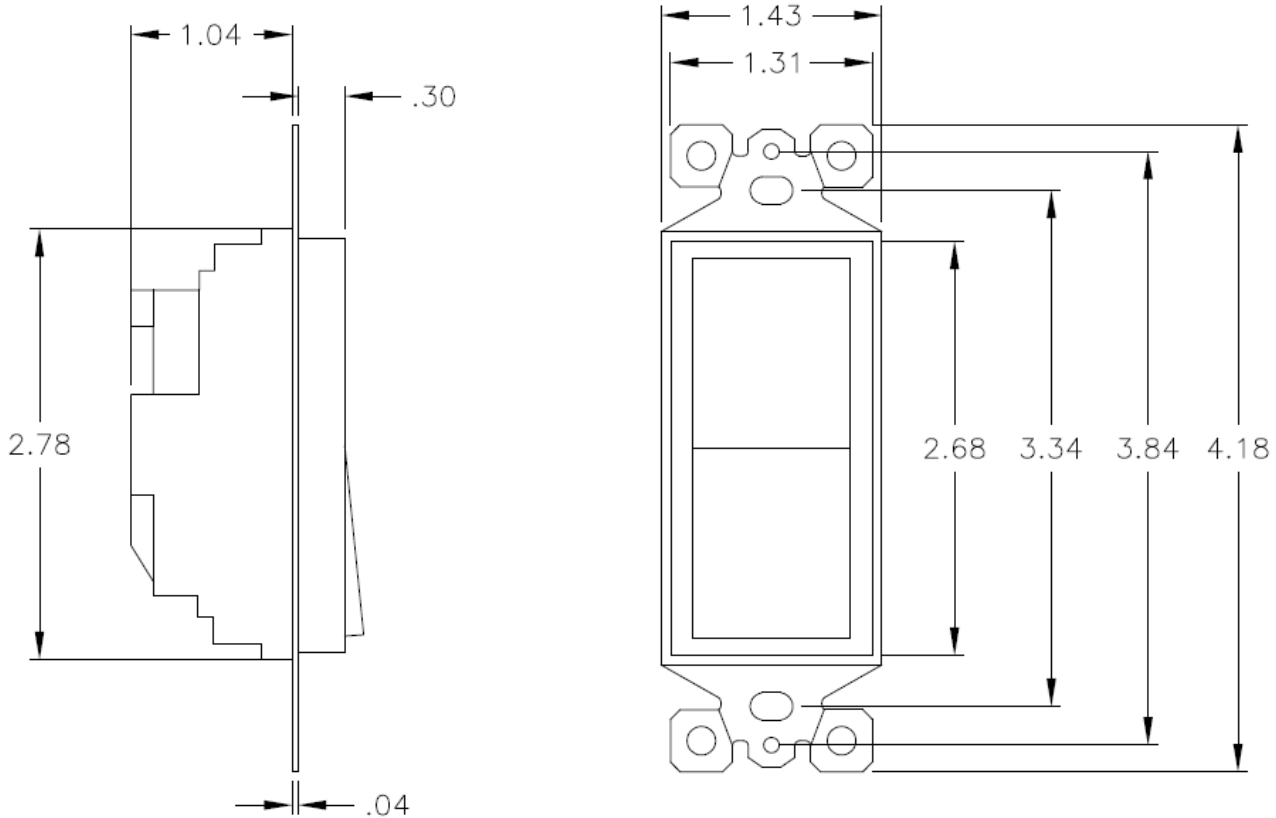
Unit Size	A	B
B50-B200	4 1/2 (114)	15 5/8 (397)
A50-A190	5 1/2 (140)	14 5/8 (371)
A200-A390	6 3/4 (171)	15 1/2 (394)
A410, A510, A710, A780	9 1/4 (235)	19 5/8 (498)
A700	5 1/2 (140)	25 1/8 (638)
A900 - A1050, A1410 - A1550	9 1/4 (235)	25 3/8 (645)
A1750, A2150	9 1/4 (235)	36 3/4 (933)
A3600	9 1/4 (235)	48 5/8 (1235)
All dimensions shown in inches (millimeters).		

Description	Qty
Neoprene Grommets	4
1 x 32 Zinc Plated Nuts	8
Zinc Plated Flat Washers	8
3/8 x 3/16 Shaft Sleeves	4

**Manual Switch**  
Model: 1 Function

**Standard Construction Features:**

Single pole rocker switch assembly with plate cover, rated for 120/277V, 15A, UL Listed.



Notes: All dimensions shown are in units of in.

## AMCA



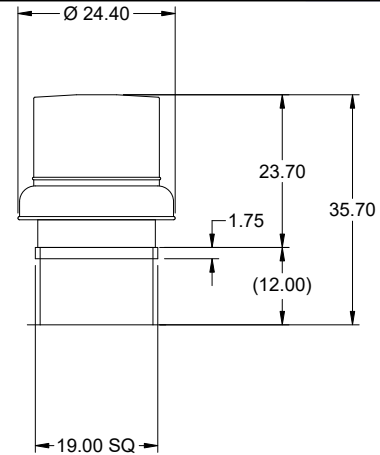
AMCA Licensed for Air Performance Without Appurtenances and Accessories. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings seal applies to air performance ratings only. Performance certified is for installation type D: Ducted inlet, Ducted outlet. Performance ratings include the effects of a backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are for loudness values in spherical sones at 5 ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type D: ducted inlet spherical sone levels. Ratings do not include the effects of duct end correction. Ratings are based on 10 ft. of insulated duct.

The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances or accessories, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.

**Model: GB-097-3**  
**Belt Drive Centrifugal Roof Exhaust Fan**

Previously: GB-071-3



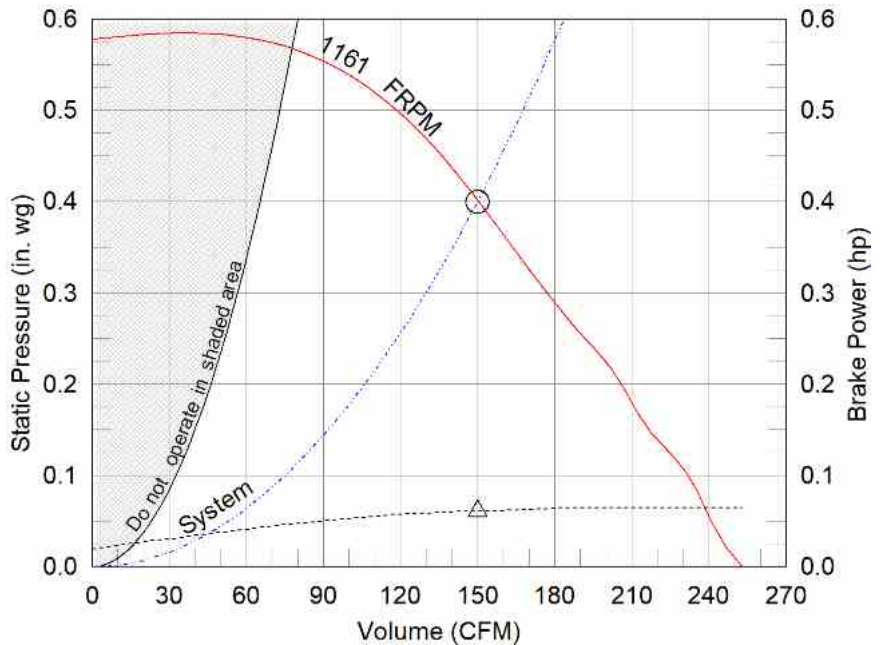
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	64
Weight w/ Acc's (lb)	71
Weight w/ Acc's and Curb (lb)	87
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	15.5 x 15.5

Performance	
Requested Volume (CFM)	150
Actual Volume (CFM)	150
Total External SP (in. wg)	0.4
Fan RPM	1161
Operating Power (hp)	0.06
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	38.1
Tip Speed (ft/min)	3,400
Static Eff. (%)	25

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	156

Motor	
Motor Included	Yes
Size (hp)	1/3
Voltage/Cycle/Phase	208/60/1
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	4
Min. Circuit Ampacity (MCA)	5
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	68	66	66	56	52	44	40	36	60	49	5.1



## Model: GB-097-3

### Belt Drive Centrifugal Roof Exhaust Fan

#### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Curb cap with prepunched mounting holes - Motor and drives isolated on shock mounts - Birdscreen - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Bearings meet or exceed temperature rating of fan - Static resistant belts - Corrosion resistant fasteners - Sizes 141 and larger have internal Lifting lugs

#### Selected Options & Accessories:

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  
Birdscreen: Galvanized, nom. 84% Free Area  
Conduit Chase Qty 1  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-12X12, Gravity Operated, Not Coated,  
Nominal Size

#### Selected Sub Marks

See individual submittals for full details  
GPI-19-12-G12

# Disconnect Switch

## Enclosure Rating: NEMA-1

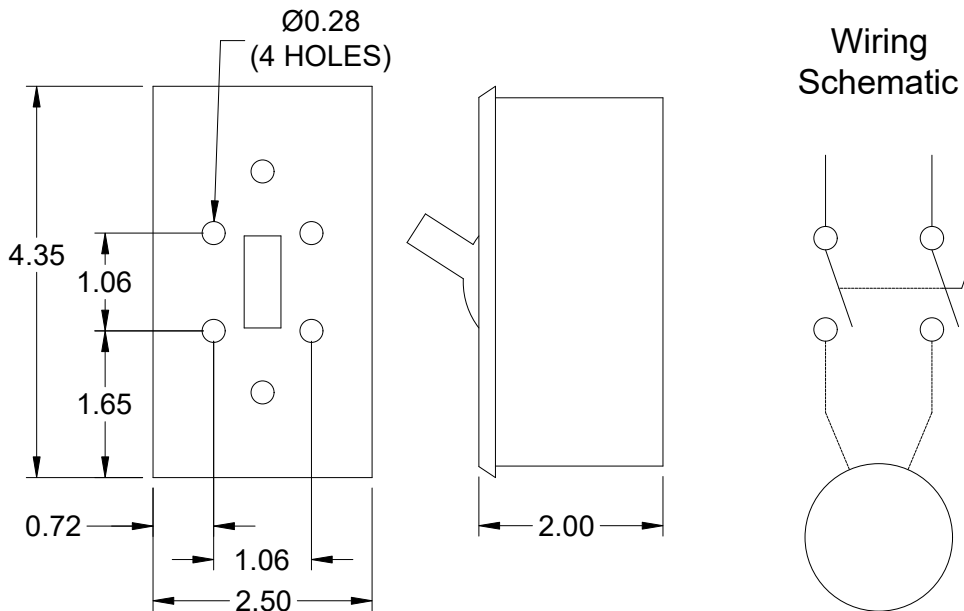
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

Type:	Toggle	Motor Size:	1/3 hp	Voltage:	208	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	2	Rating:	2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

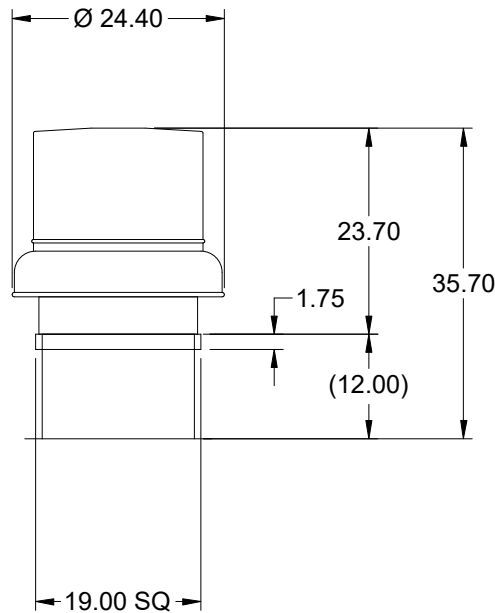
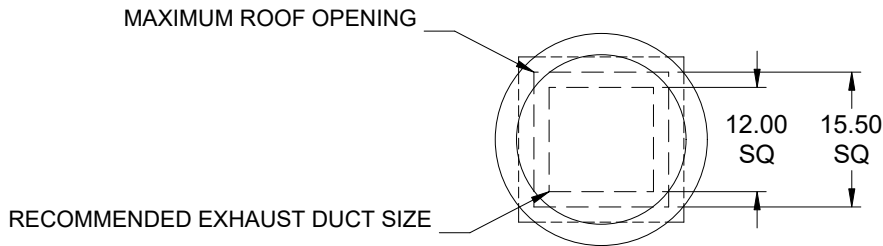
### Electrical Drawing Details



Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Belt Drive Centrifugal Roof Exhaust Fan



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.  
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

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

Notes: All dimensions shown are in units of in..

# Horizontal Mount Exhaust Damper

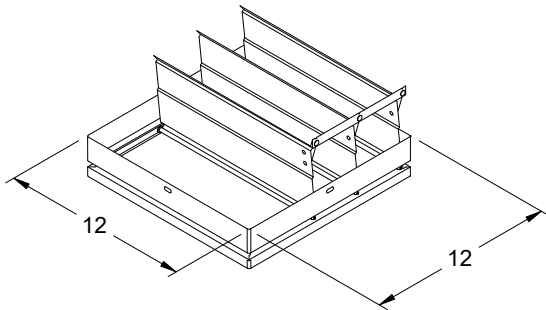
Model: BD-100

## Standard Construction Features:

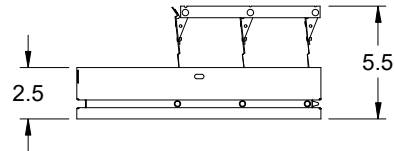
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed of fiberglass reinforced nylon



Greenheck Fan Corporation certifies that the models BD-100 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.



DAMPER



TYP. SECTION VIEW

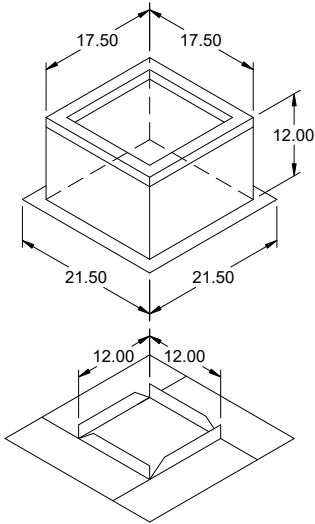
Notes: All dimensions shown are in units of in.

## AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to some ratings only.



## 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	16	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.)
12	19	19	17.5	17.5	14	14	18	18

\*May not be applicable

#### Damper Tray

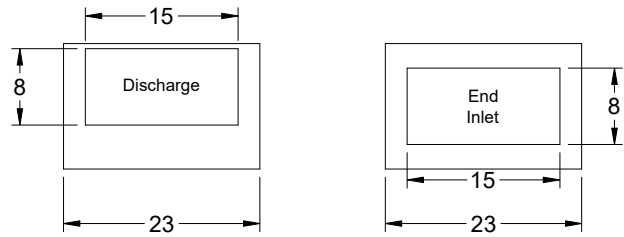
Damper Tray Width (in.)	Damper Tray Length (in.)
12	12

#### Accessories

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

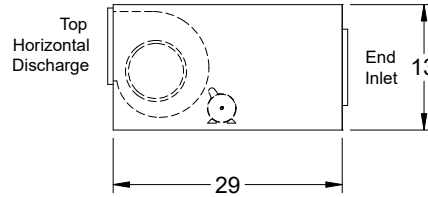
**Model: BCF-107-5**  
Belt Drive Cabinet Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	104
Weight w/ Acc's (lb)	115
Max T Motor Frame Size	56



DISCHARGE VIEW

INLET VIEW

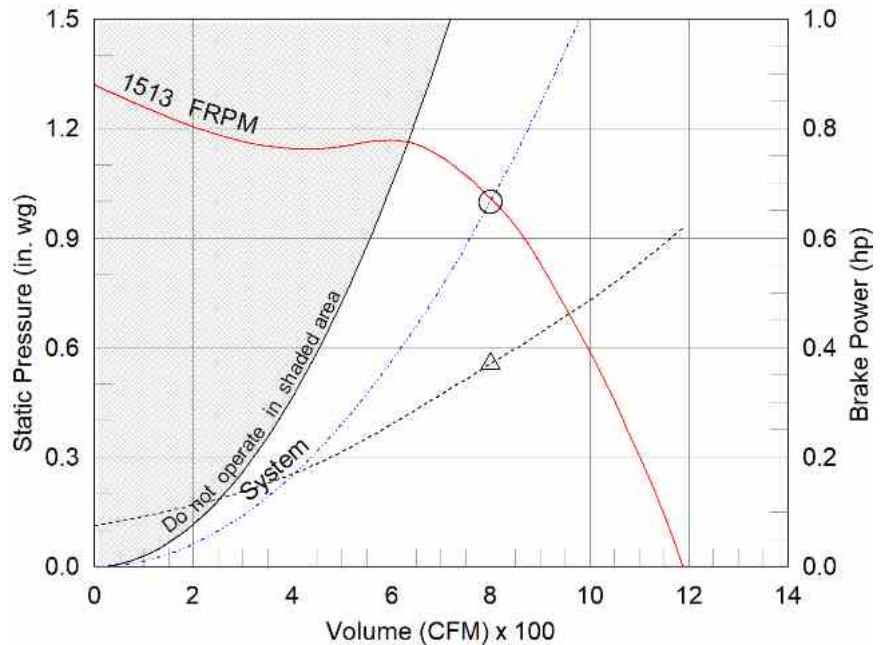


ELEVATION VIEW

Performance	
Requested Volume (CFM)	800
Actual Volume (CFM)	800
Total External SP (in. wg)	1
Fan RPM	1513
Operating Power (hp)	0.37
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	9.8
Tip Speed (ft/min)	2,959
Static Eff. (%)	38

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	964

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	9.8
Min. Circuit Ampacity (MCA)	12.25
Max. Overcurrent Protection (MOP)	25
Short Circuit Current Rtg (SCCR)	5 kA



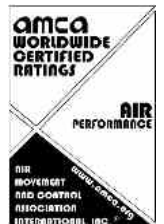
- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

**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 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	86	75	66	64	64	61	59	57	70	58	10.9



## Model: BCF-107-5

### Belt Drive Cabinet Fan

#### Standard Construction Features:

- Galvanized steel housing - Hinged access panel on sizes (106, 206, 107, 207), bolted access panels on all larger sizes - Motor and drive frame isolated on shock mounts - Inlet and outlet duct connection flanges - Ball bearing motors - Fan shafts mounted in ball bearing pillow blocks - Adjustable motor pulley - Fan shaft pulley - Static free belts - Corrosion resistant fasteners

#### Selected Options & Accessories:

UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-1, Toggle,  
Junction Box Mounted & Wired  
Fan: Spring, Hanging, 1 Inch Isolator PN: 850343, Incl. 4 isolators and 4 brackets  
Discharge: Top Horizontal  
Unit Warranty: 1 Yr (Standard)

# Disconnect Switch

## Enclosure Rating: NEMA-1

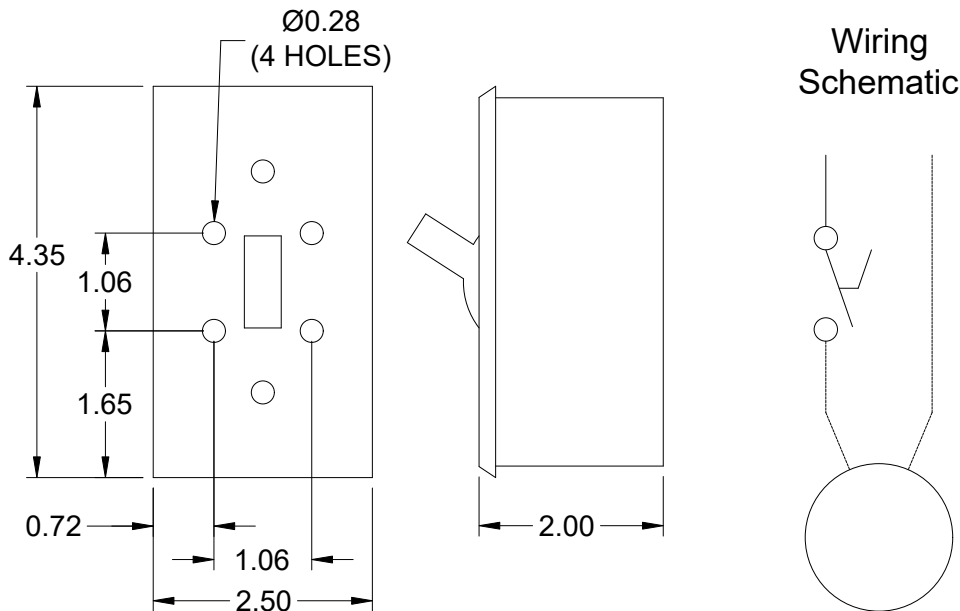
### Standard Construction Features:

Enclosure constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dust. This enclosure meets the rod entry and the indoor corrosion protection design tests. The rod entry test is intended to simulate incidental contact with enclosure equipment. Enclosure is equipped with provision to lockout in the off position with customer supplied lock.

### Disconnect Switch Configuration

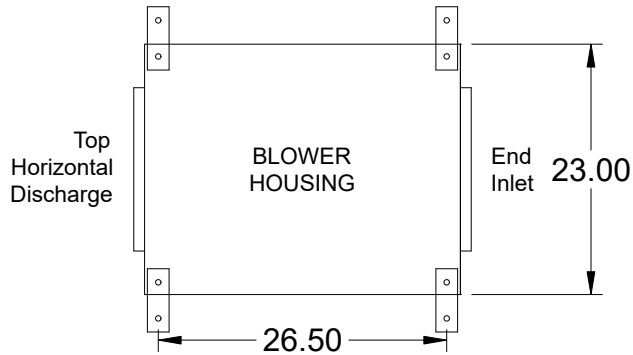
Type:	Toggle	Motor Size:	1/2 hp	Voltage:	115	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	15	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	1	Rating:	1/2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

### Electrical Drawing Details

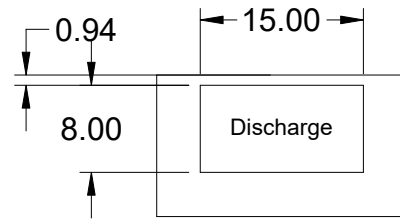


Notes: All dimensions shown are in units of in.

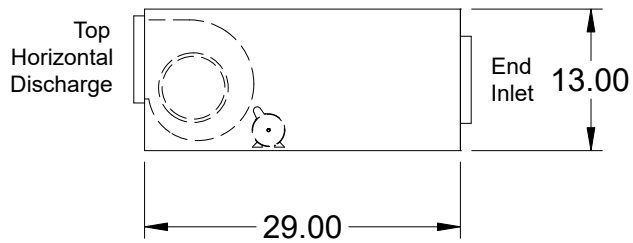
**Assembly Drawing**  
Type: Belt Drive Cabinet Fan



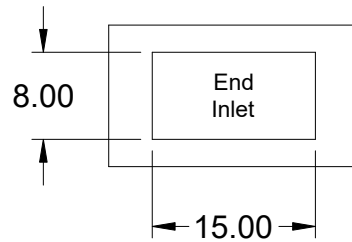
PLAN VIEW



DISCHARGE VIEW



ELEVATION VIEW



INLET VIEW

Notes: All dimensions shown are in units of in..

# Fan Isolator

Type: Spring, Hanging, 1 Inch

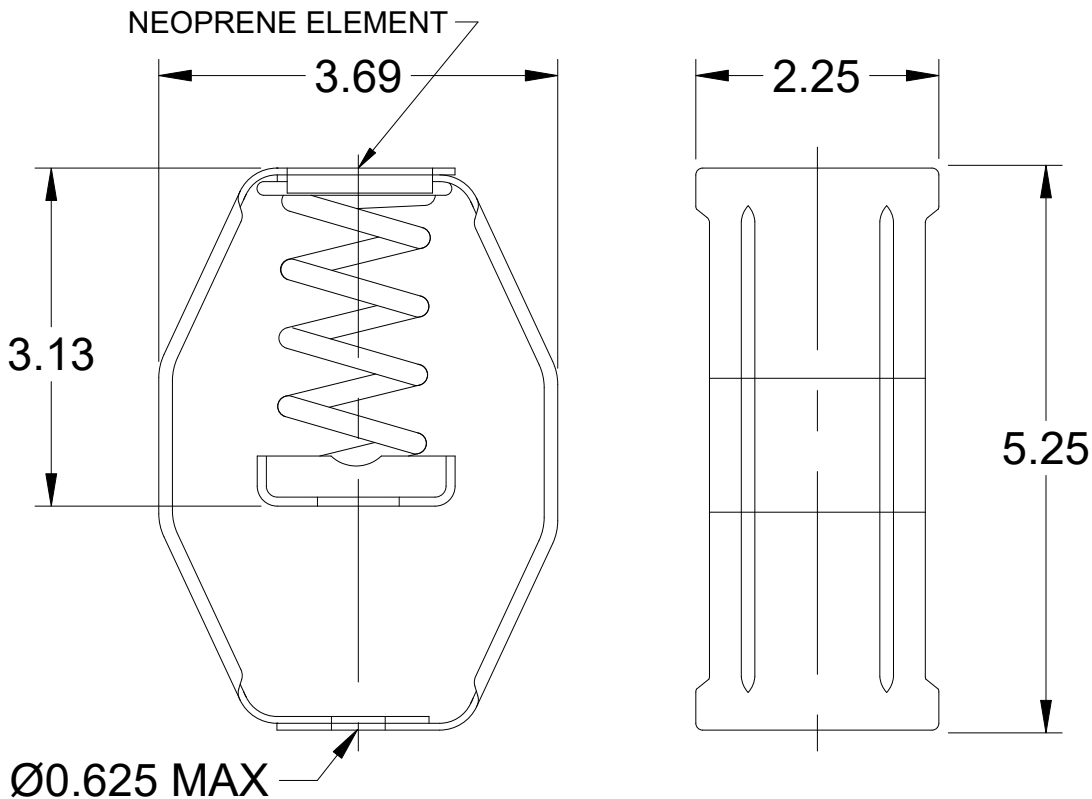
## Standard Construction Features:

The spring hanging isolator is designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. To assure stability, the spring element has a minimum lateral stiffness of 1.0 times the rated vertical stiffness. The hanger will allow a support rod misalignment through a 30 degree arc and the isolation brackets will carry a 500% overload without failure. The isolator has an epoxy powder coated bracket and spring coil which is color coded according to the load capacity and has a noise isolation pad, all which is assembled into a stamped or welded hanger bracket. This part number includes 4 isolators.

## Isolator Configuration

Description:	SH-1-35	Color:	Blue
Manufacturer:	Kinetics Noise Control	Mounting:	Hanging
Load Capacity:	35 lb	Kit Part Number:	850343
Deflection at Full Load:	1.52	Selection Deflection (in.):	1.13

## Spring, Hanging, 1 Inch Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.

## AMCA

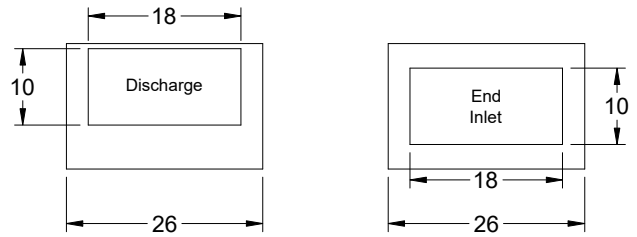


AMCA Licensed for Air Performance. Power rating (BHP/kW) includes transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only. Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (BHP/kW) includes transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

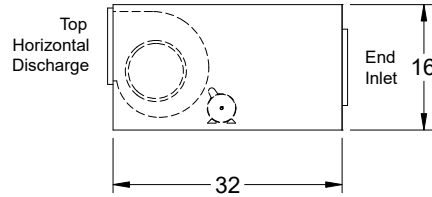
**Model: BCF-108-5**  
Belt Drive Cabinet Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	122
Weight w/ Acc's (lb)	133
Max T Motor Frame Size	56



DISCHARGE VIEW

INLET VIEW

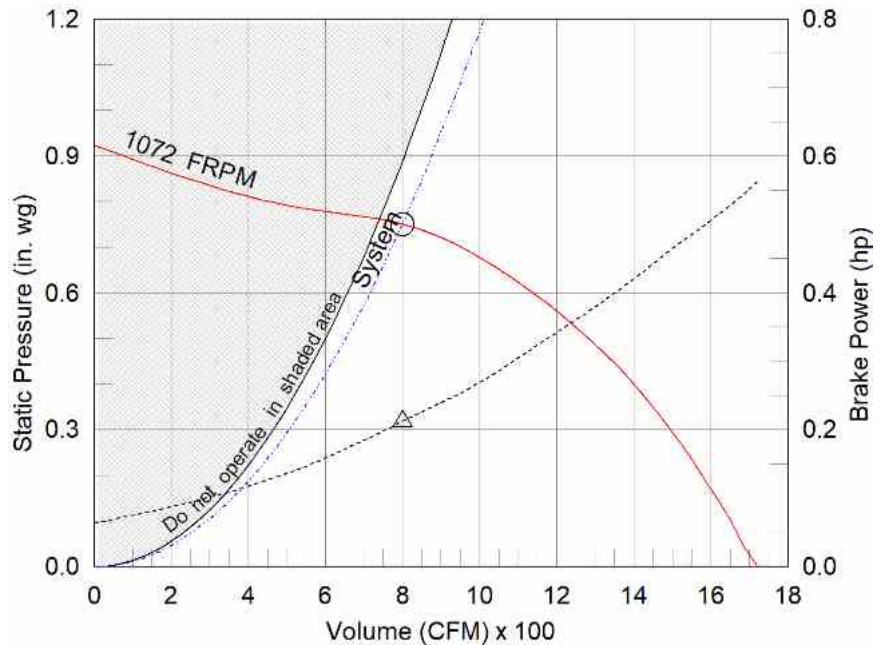


ELEVATION VIEW

Performance	
Requested Volume (CFM)	800
Actual Volume (CFM)	800
Total External SP (in. wg)	0.75
Fan RPM	1072
Operating Power (hp)	0.21
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Drive Loss (%)	13.7
Tip Speed (ft/min)	2,394
Static Eff. (%)	52

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	640

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1725
Efficiency Rating	Standard
Windings	1
NEC FLA* (Amps)	9.8
Min. Circuit Ampacity (MCA)	12.25
Max. Overcurrent Protection (MOP)	25
Short Circuit Current Rtg (SCCR)	5 kA



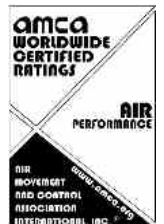
- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- System curve
- Brake horsepower curve

**Notes:**

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\*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.  
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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 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	64	63	60	61	57	53	50	65	53	6.8



## Model: BCF-108-5

### Belt Drive Cabinet Fan

#### Standard Construction Features:

- Galvanized steel housing - Hinged access panel on sizes (106, 206, 107, 207), bolted access panels on all larger sizes - Motor and drive frame isolated on shock mounts - Inlet and outlet duct connection flanges - Ball bearing motors - Fan shafts mounted in ball bearing pillow blocks - Adjustable motor pulley - Fan shaft pulley - Static free belts - Corrosion resistant fasteners

#### Selected Options & Accessories:

UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-1, Toggle,  
Junction Box Mounted & Wired  
Fan: Spring, Hanging, 1 Inch Isolator PN: 850343, Incl. 4 isolators and 4 brackets  
Discharge: Top Horizontal  
Unit Warranty: 1 Yr (Standard)

# Disconnect Switch

## Enclosure Rating: NEMA-1

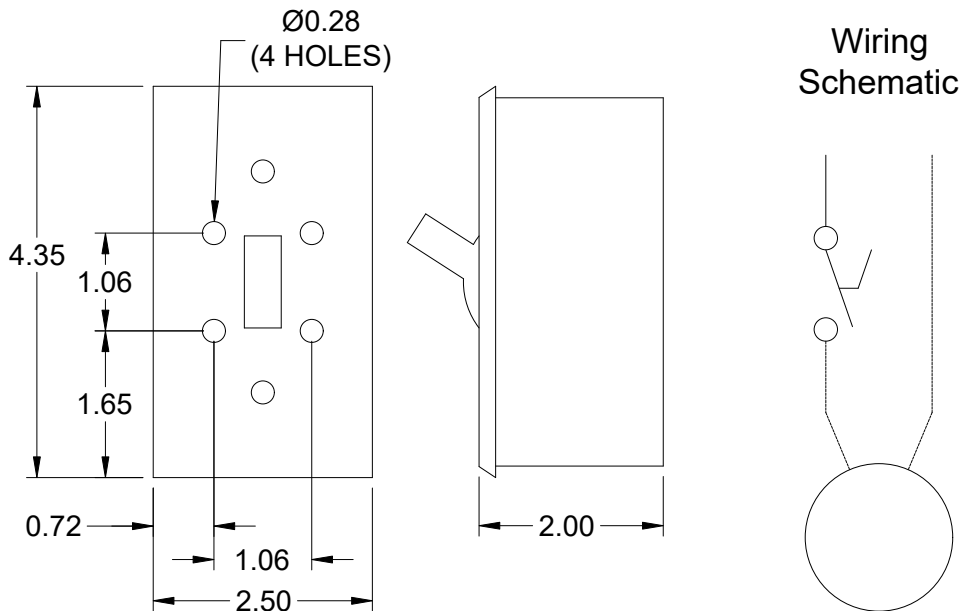
### Standard Construction Features:

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### Disconnect Switch Configuration

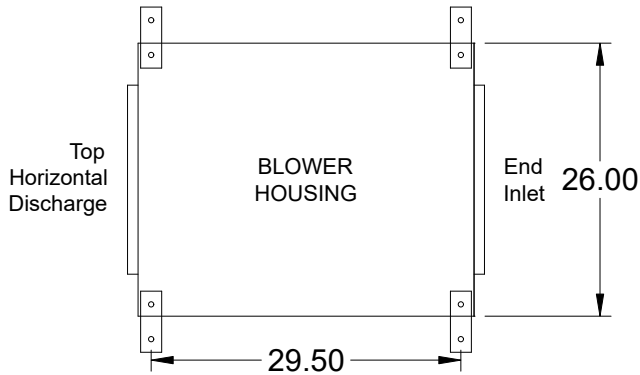
Type:	Toggle	Motor Size:	1/2 hp	Voltage:	115	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	15	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	1	Rating:	1/2 hp
Junction Box Mtg.:	Mounted and Wired	RPM:	1725	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

### Electrical Drawing Details

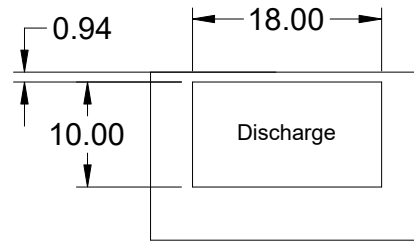


Notes: All dimensions shown are in units of in.

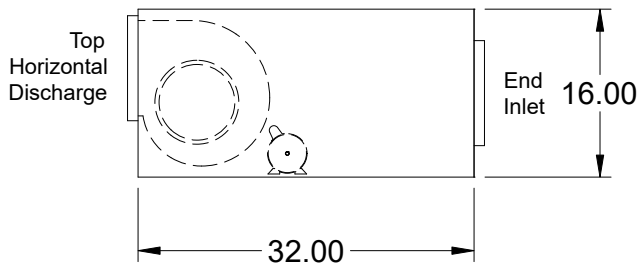
Assembly Drawing  
Type: Belt Drive Cabinet Fan



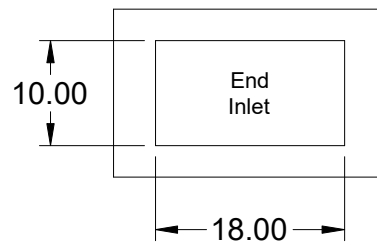
PLAN VIEW



DISCHARGE VIEW



ELEVATION VIEW



INLET VIEW

Notes: All dimensions shown are in units of in..

# Fan Isolator

Type: Spring, Hanging, 1 Inch

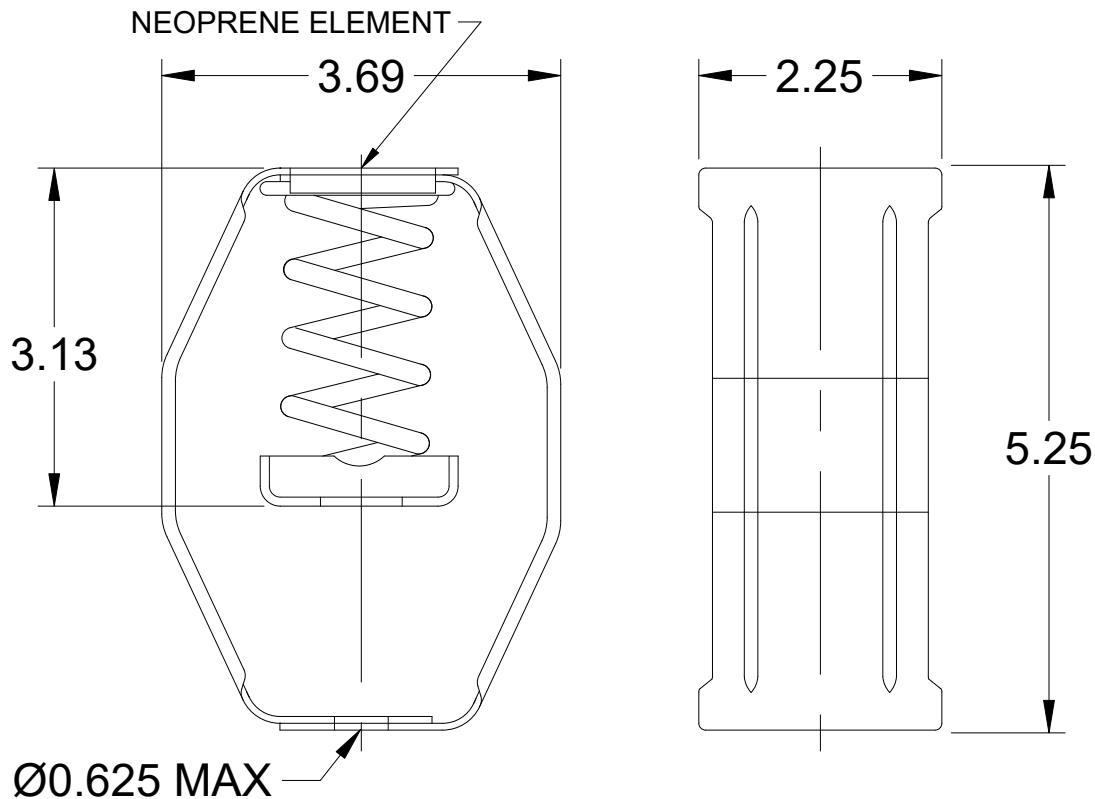
## Standard Construction Features:

The spring hanging isolator is designed to reduce the transmission of vibration and noise produced by suspended equipment and piping. To assure stability, the spring element has a minimum lateral stiffness of 1.0 times the rated vertical stiffness. The hanger will allow a support rod misalignment through a 30 degree arc and the isolation brackets will carry a 500% overload without failure. The isolator has an epoxy powder coated bracket and spring coil which is color coded according to the load capacity and has a noise isolation pad, all which is assembled into a stamped or welded hanger bracket. This part number includes 4 isolators.

## Isolator Configuration

Description:	SH-1-35	Color:	Blue
Manufacturer:	Kinetics Noise Control	Mounting:	Hanging
Load Capacity:	35 lb	Kit Part Number:	850343
Deflection at Full Load:	1.52	Selection Deflection (in.):	0.59

## Spring, Hanging, 1 Inch Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.

## AMCA



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