

SUBMITTAL COVER SHEET



Date: **August 4, 2024**

Job Name: **Christian Brothers Automotive – Maineville**

Customer: **Greater Comfort Heating**

Engineer/Consultant: **Brian Chandler**

Manufacturer: **Greenheck Fans**

Submitted By: **Jason Schulte**

The attached submittals are provided for: **X** **APPROVAL** **RECORD**

Greenheck - Fans

Please review the attached submittals on the fans.

Please provide (1) set of approved submittals prior to release for record.

Please verify items below:

EF-1,2,5 PAGE 3
EF-3,4 PAGE 9
SF-1,2,3,4 PAGE 17

1. All quantities and sizes
2. Finishes
3. Accessories

Respectfully Submitted,

Jason Schulte
513-332-2095 office

SUBMITTAL

Job Name: Christian Brothers Automotive - Maineville

Architect: ID Studio

Engineer: Brian Chandler

Contractor: Greater Comfort Heating

Elevation: (ft) 499

Date: 8/03/2024

Submitted By: Jason Schulte

Email: jschulte@eapnet.com

Phone: (513)332-2095

EAP INC - 370

3930 VIRGINIA AVE

CINCINNATI, OH 45227

US

Phone: (513)489-9494

Fax: (513)489-6448

Email Address: jschulte@eapnet.com



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

Model: SP-A125

Ceiling Exhaust Fan

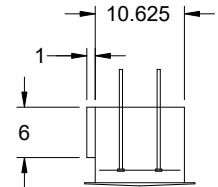
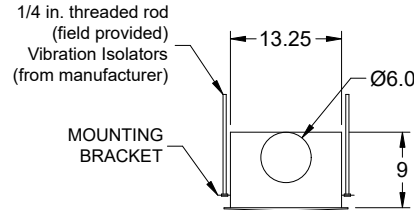
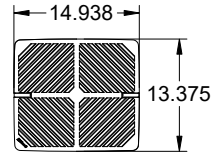
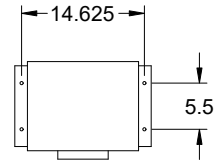
Tags: EF-1 EF-2 EF-5

Standard Construction Features:

- Corrosion resistant galvanized steel scroll and housing - Sound absorbing insulation - White designer non-yellowing grille - Outlet duct collar with integral spring loaded backdraft damper - Double inlet forward curved wheel - Plug type disconnect - Adjustable mounting brackets - Field rotatable discharge

Selected Options & Accessories:

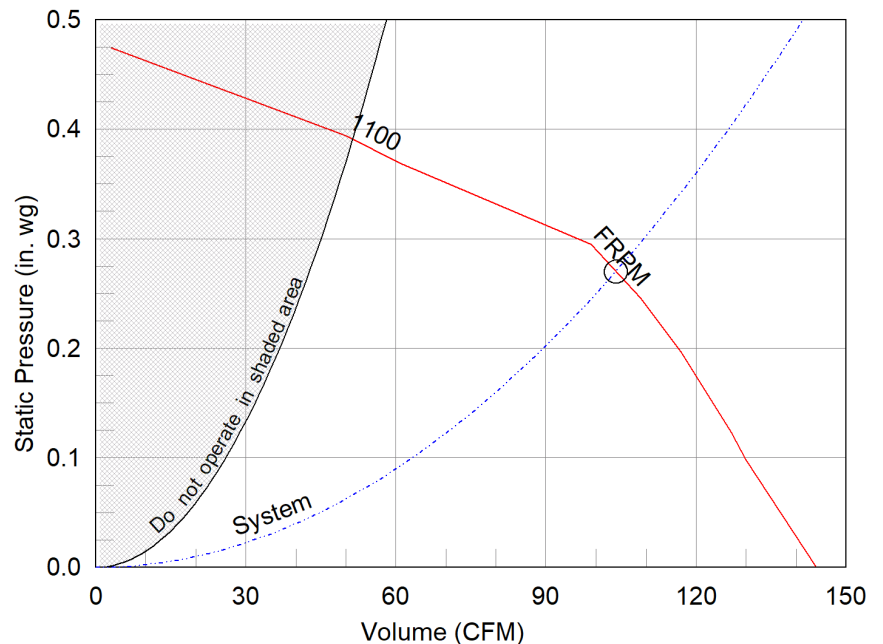
Motor rated for continuous use
Motor with Thermal Overload
Motor with CSA Approval
Motor with 40 Degree C Ambient Temperature
UL/cUL 507 Listed - Electric Fan
Roof Cap, Curb Mounted, (PN: RCC-7) Shipped Loose
1 Function Switch, Single Pole Rocker (PN: 872243), Shipped Loose
Round Duct Connector, (PN: RDC-6) Shipped Loose
Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
Adjustable easy installation mounting bracket
Energy Star Certified
Standard Grille
Polypropylene Wheel Material
Can Be Used to Comply with: ASHRAE 62.2, California Title 24, and Washington State Energy Code



Dimensional	
Quantity	3
Weight w/o Acc's (lb)	17
Weight w/ Acc's (lb)	27
Weight w/ Acc's and Curb (lb)	49

Performance	
Requested Volume (CFM)	100
Actual Volume (CFM)	104
Total External SP (in. wg)	0.27
Fan RPM	1100
* FLA (A)	0.18
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Sones	0.7

Motor	
Motor Mounted	Yes
** Input Watts (W)	21
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP



- Operating point at Total External SP
- Fan curve
- - - System curve

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.

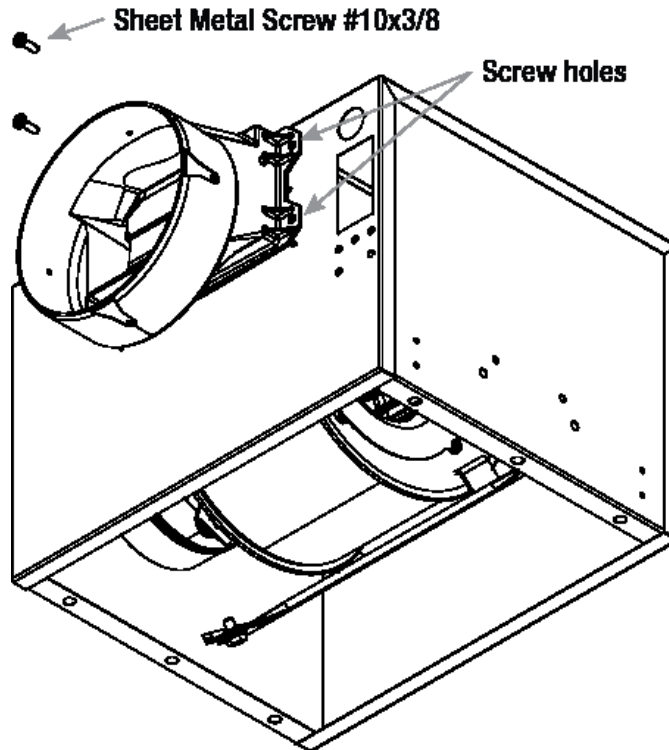


Round Duct Connector

Model: RDC

Standard Construction Features:

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



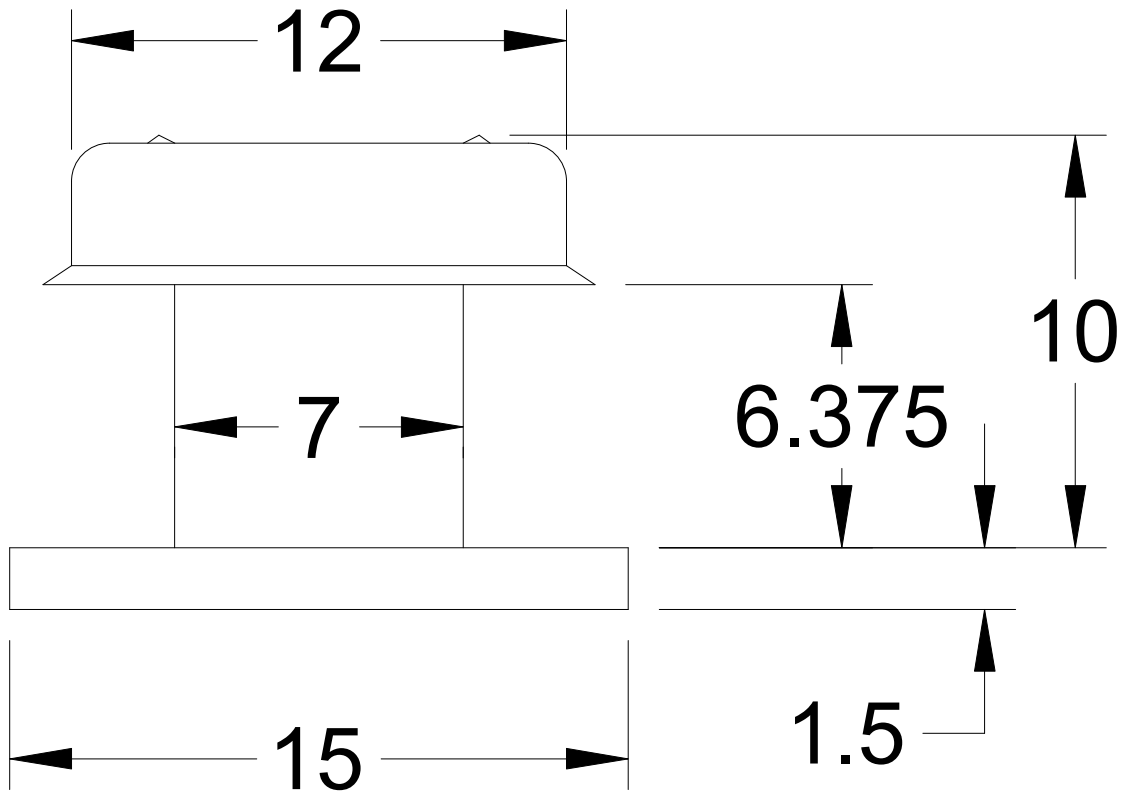
Notes: All dimensions shown are in units of in.

Discharge Accessory

Type: Roof Cap Curb

Standard Construction Features:

- Weathertight aluminum construction - Integral birdscreen - Built-in curb cap - Requires roof curb



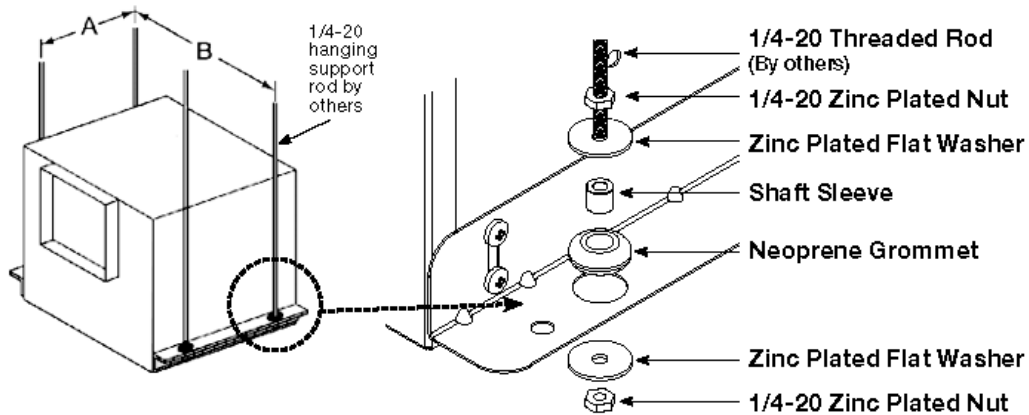
Notes: All dimensions shown are in units of in.

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



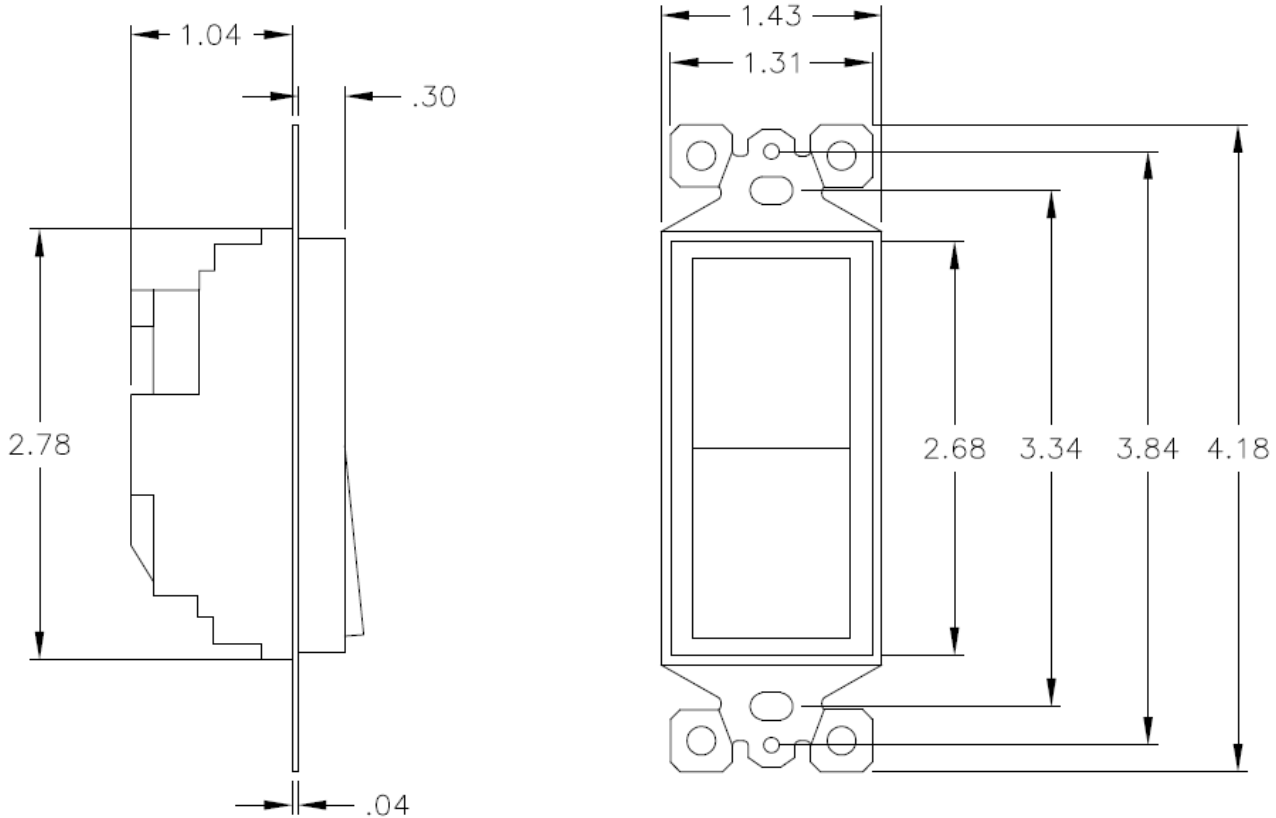
Unit Size	A	B
B50-B200	4 1/2 (114)	15 5/8 (397)
A50-A190	5 1/2 (140)	14 5/8 (371)
A200-A390	6 3/4 (171)	15 1/2 (394)
A410, A510, A710, A780	9 1/4 (235)	19 5/8 (498)
A700	5 1/2 (140)	25 1/8 (638)
A900 - A1050, A1410 - A1550	9 1/4 (235)	25 3/8 (645)
A1750, A2150	9 1/4 (235)	36 3/4 (933)
A3600	9 1/4 (235)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

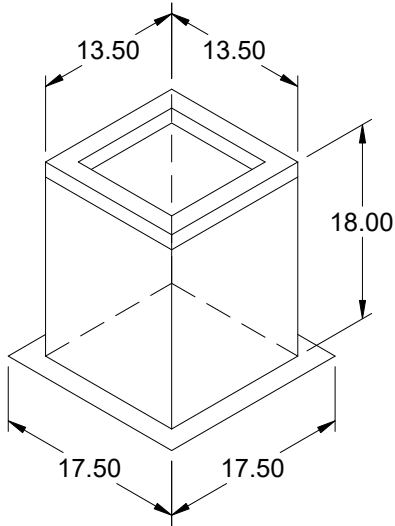
Manual Switch
Model: 1 Function

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.



Model: GPI

Roof Curb

Tags:

EF-1 EF-2 EF-5

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
	3	GPI-15	Nominal	1.5	22	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	15	15	13.5	13.5	10	10	14	14

*May not be applicable

Accessories

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

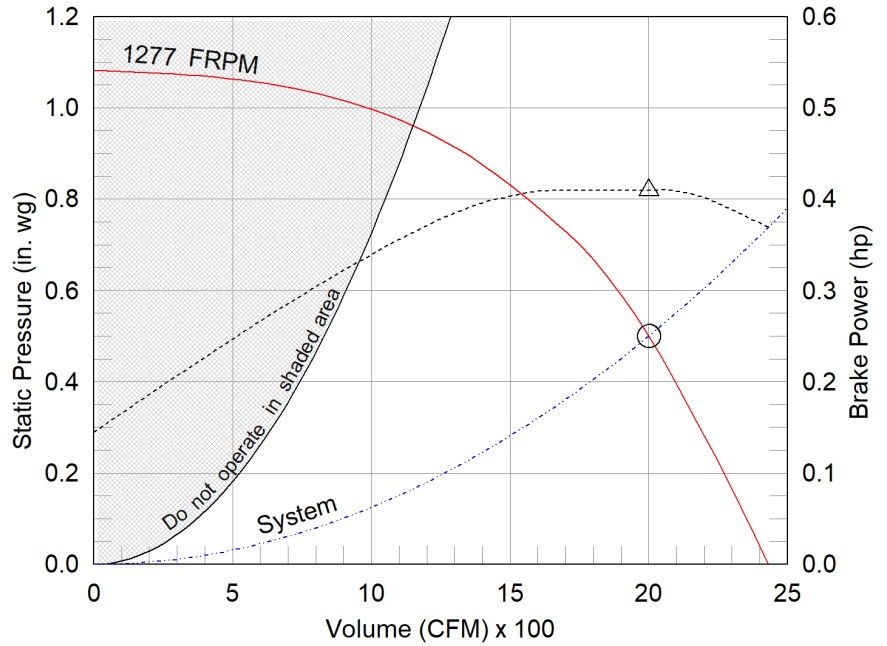
Model: SQ-140-VG
Direct Drive Centrifugal Inline Fan

Dimensional	
Quantity	2
Weight w/o Acc's (lb)	67
Weight w/ Acc's (lb)	119
Optional Damper (in.)	20 x 20

Performance	
Requested Volume (CFM)	2,000
Actual Volume (CFM)	2,000
Total External SP (in. wg)	0.5
Fan RPM	1277
Operating Power (hp)	0.41
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	4,867
Static Eff. (%)	38

Misc Fan Data	
Fan Eff. Index (FEI)	
Outlet Velocity (ft/min)	738

Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1500
Windings	1
FLA (Amps)	8.8
Min. Circuit Ampacity (MCA)	11
Max. Overcurrent Protection (MOP)	20
Short Circuit Current Rtg (SCCR)	5 kA



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

Nameplate Model: SQ-140-VG-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	71	72	78	71	65	63	60	57	74	62	11.6
Radiated	74	73	74	66	57	48	42	41	68	57	8.1

Notes:

All dimensions shown are in units of in.
*Please consult factory for actual motor amp draw
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



Model: SQ-140-VG

Direct Drive Centrifugal Inline Fan

Tags: EF-3 EF-4

Greenheck model SQ Mixed Flow meets or exceeds legacy centrifugal models SQ/BSQ in performance and features. SQ Mixed flow is an approved equal and can be considered a direct replacement for these models.

Standard Construction Features:

- Galvanized steel housing - Backward inclined composite (sizes 60-95) or aluminum (sizes 97-160) wheel - Two bolted access panels - Integral duct connection flanges - Ball bearing motors (sizes 97-160 and all vari-green motors), sleeve bearing motors (sizes 60-95) - Corrosion resistant fasteners

Selected Options & Accessories:

Motor - Vari-Green EC motor

Control - Vari-Green Dial on Exterior of Fan Housing, Mounted and Wired
UL/cUL 705 Listed - "Power Ventilators"

Junction Box Mounted and Wired

Switch, NEMA-1, Toggle, Shipped Separate,
Aluminum Wheel Material

Motor Cover

Fan: Neoprene Hanging Isolator PN: 855837, Incl. 4 isolators and 4 brackets

Damper Shipped Loose, Inline, VCD-23-OB-20X20, Not Coated

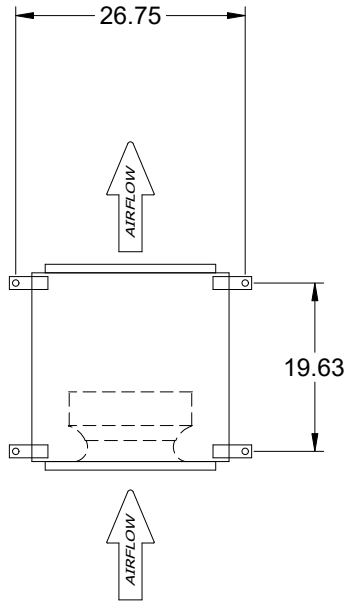
Damper Actuator (GJD226.1), 115 VAC Actuated

End Switch

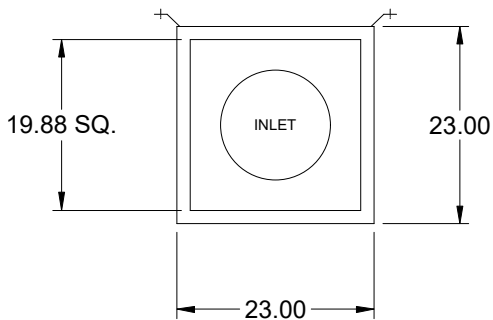
Unit Warranty: 1 Yr (Standard)

SQ-140-VG

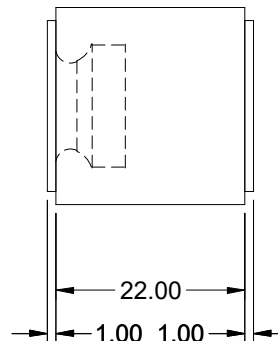
Direct Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

Notes: All dimensions shown are in units of in.

Disconnect Switch

Enclosure Rating: NEMA-1

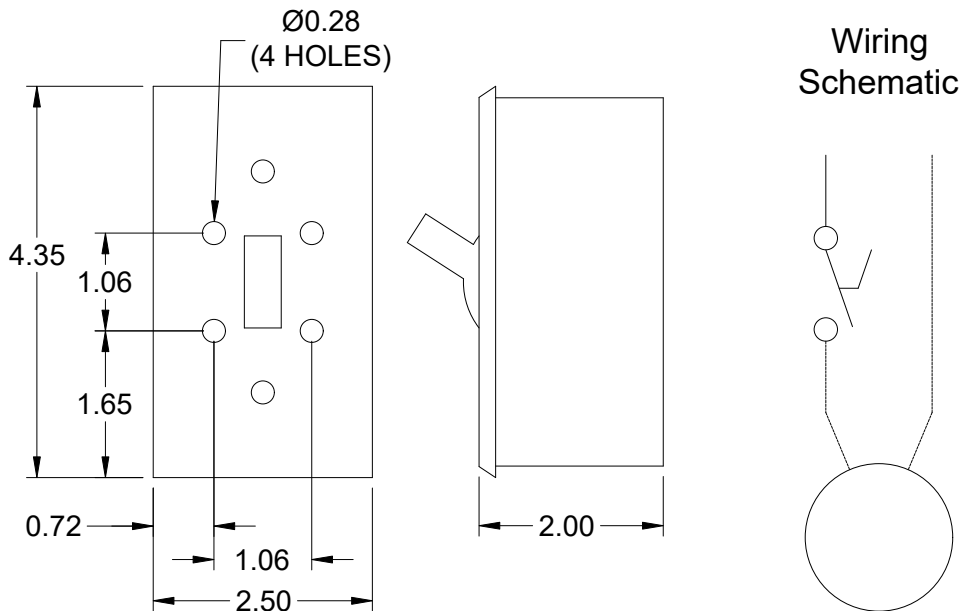
Standard Construction Features:

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.

Disconnect Switch Configuration

Type:	Toggle	Motor Size:	3/4 hp	Voltage:	115	UL Listed:	Yes
Manufacturer:	Pass and Seymour	Cycle:	60	Amperage:	20	CSA Approved:	Yes
Overload Protection:	None	Phase:	1	Switch Pole(s):	1	Rating:	1 hp
Junction Box Mtg.:	Ship Separate	RPM:	1500	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped Separate						

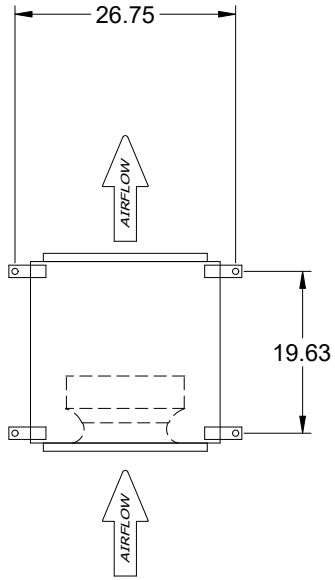
Electrical Drawing Details



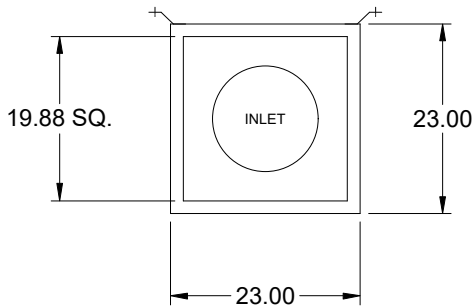
Notes: All dimensions shown are in units of in.

Assembly Drawing

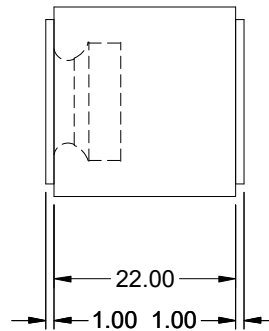
Type: Direct Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

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. Motor accepts a 0-10VDC control signal along with a 24V source to power controls in the motor. Motor is operable in the 2-10VDC range and off while in the 0-1.9VDC range. 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.

An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the fan housing 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.

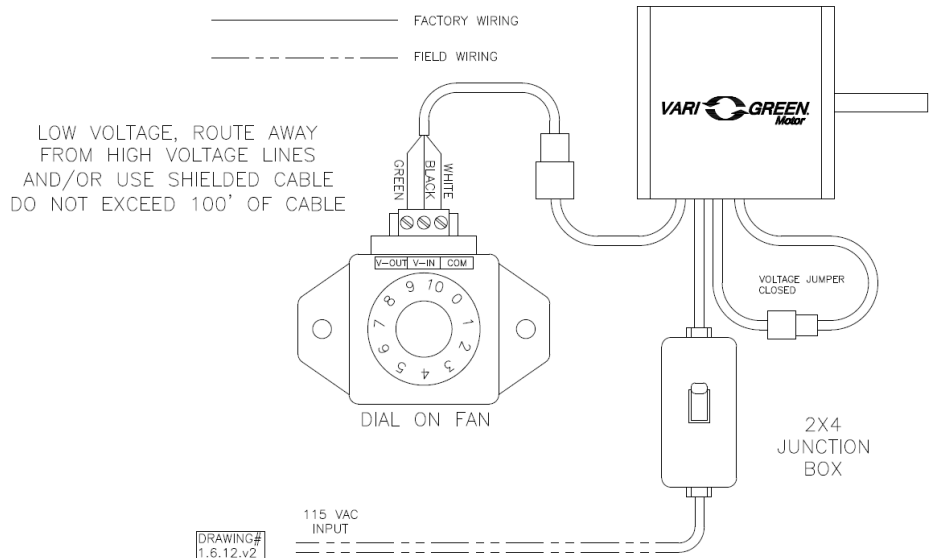
Motor Configuration

Input Voltage: 115
Speed Reference: 0-10VDC
Permanent Dial: No
Balance Dial Included: N/A

Control Configuration

Control Type: Dial on Fan
Transformer: None

Vari-Green



Control Damper

Model: VCD-23

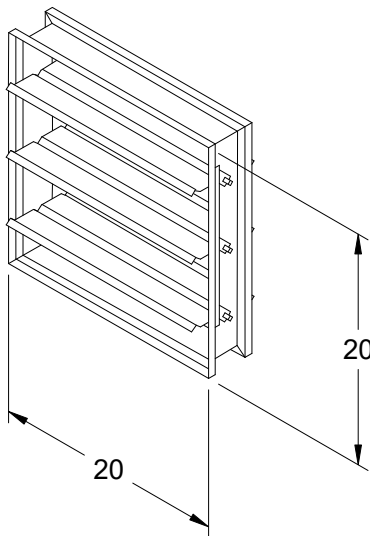
Standard Construction Features:

- Model VCD-23 is a well built low leakage control damper for automatic control or manual balancing applications - Galvanized 16 ga channel frame - Galvanized blades with reinforcements - Side mounted steel linkage is concealed in the frame to prevent additional pressure drop - Axles are steel and 0.5 in. dia.- Synthetic axle bearings - Width and height furnished approximately 0.25 in. undersized - Field wiring is required to individual components

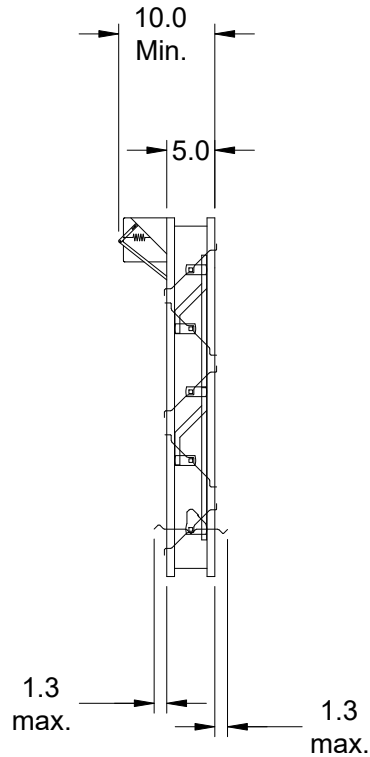
Damper Configuration:

Actuator Type: 115 VAC

End Switch: Yes



DAMPER



TYP. SECTION VIEW

Notes: All dimensions shown are in units of in.
Width And height furnished approximately 0.25 in. undersize

Fan Isolator

Type: Neoprene Hanging

Standard Construction Features:

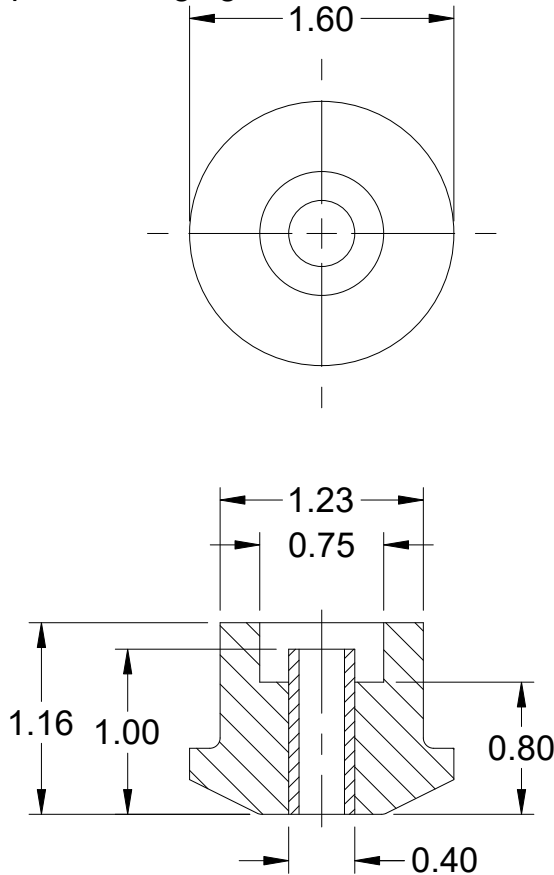
The neoprene hanging isolator is molded in oil resistant neoprene. The isolator is corrosion resistant and has a non-skid ribbed neoprene on the base plate. It has a compact design to provide isolation against shocks and vibrations and to reduce structure noise.

This part number includes 4 isolators.

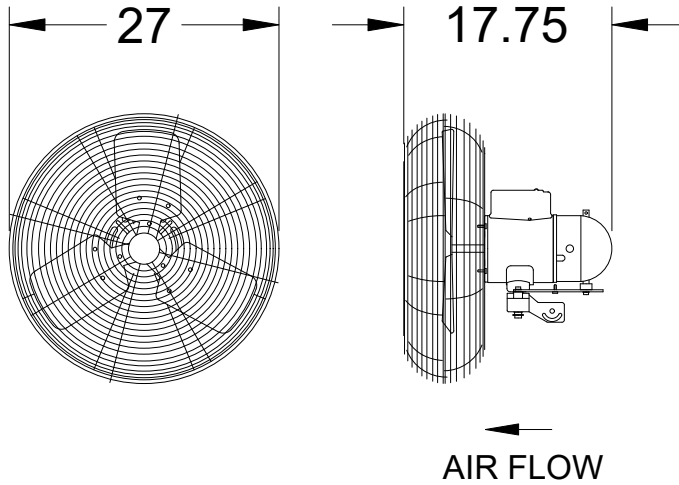
Isolator Configuration

Description:	855837	Color:	Black
Manufacturer:	Ebco	Mounting:	Hanging
Load Capacity:	162 lb	Kit Part Number:	855837
Deflection at Full Load:	0.05		

Neoprene Hanging Deflection - Vibration Isolator



Notes: All dimensions shown are in units of in.



**ICO-24-B5-J1
Air Circulators**

Application & Design

Designed for cooling workers in factories, warehouses, manufacturing facilities and garages where humid and demanding conditions exist. High efficiency corrosion resistant propellers. Circulators feature two-speed motors and a vertical tilt/locking adjustment for directional flow. Wire guards are zinc-plated and comply with OSHA Standard 1910.212 (1/2-inch max opening).

UL/cUL Listed 507

Performance Range: 4,460 CFM to 6,400 CFM

Summary

Qty.
4

Construction Features

Impeller Material	Airflow (High/Low) (CFM)	Air Velocity @ 20 ft (ft/min)	Air Velocity @ 40 ft (ft/min)	Air Velocity @ 60 ft (ft/min)	Sound Level (Sones)	RPM
Aluminum	6,400/4,460	410/325	185/145	80/60	24	1075/750

Motor

Size (hp)	V/C/P	Encl.	Operating Amps	Operating Watts	Motor Part Number
0.5	115/60/1	TEAO	4.65/3.31	490/360	315024