

SUBMITTAL

Job Name:

Location:

Contractor:

Engineer:

Spec Section:

Date:

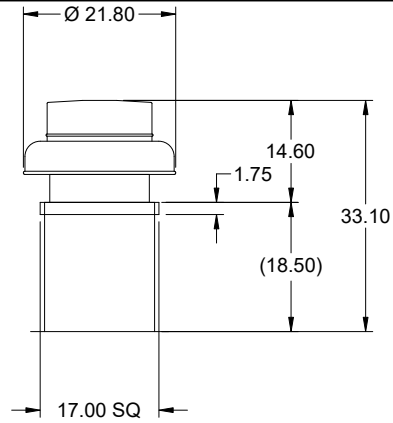
SW&Co. #:

Submitted By:

Stan Weaver & Company
4255 Emerson Street
Jacksonville, FL 32207
(904) 398-9933
(904) 398-9922 (FAX)

Model: G-090-VG

Direct Drive Centrifugal Roof Exhaust Fan



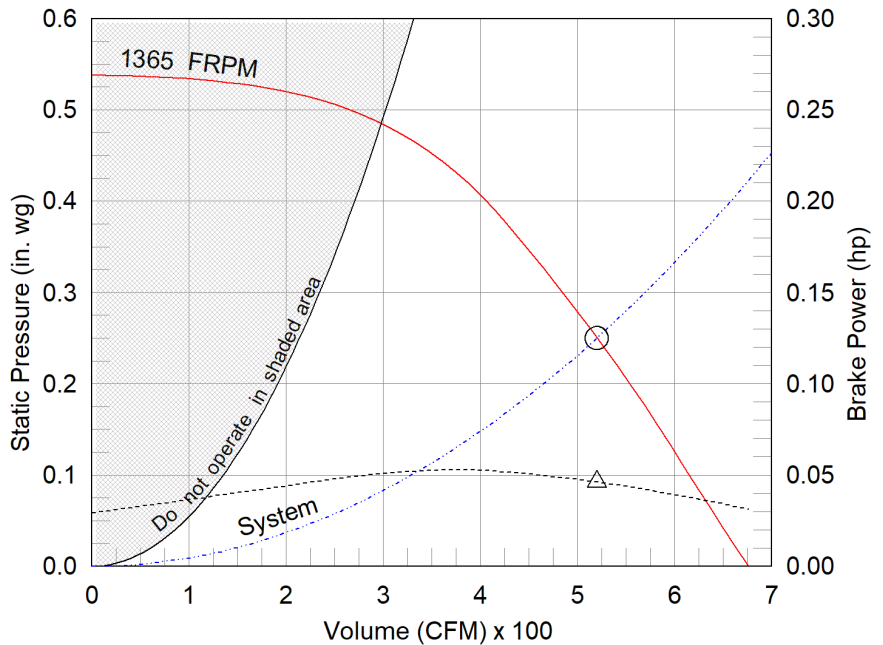
OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	25
Weight w/ Acc's (lb)	53
Weight w/ Acc's and Curb (lb)	84
Standard Curb Cap Size (in.)	17 x 17
Optional Damper (in.)	10 x 10
Roof Opening (in.)	13.5 x 13.5

Performance	
Requested Volume (CFM)	520
Actual Volume (CFM)	520
Total External SP (in. wg)	0.25
Fan RPM	1365
Operating Power (hp)	0.05
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	3,886
Static Eff. (%)	44

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	743

Motor	
Motor Mounted	Yes
Size (hp)	1/10
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	1.38
Min. Circuit Ampacity (MCA)	2
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	68	68	65	58	54	53	50	43	62	51	5.9



Model: G-090-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:

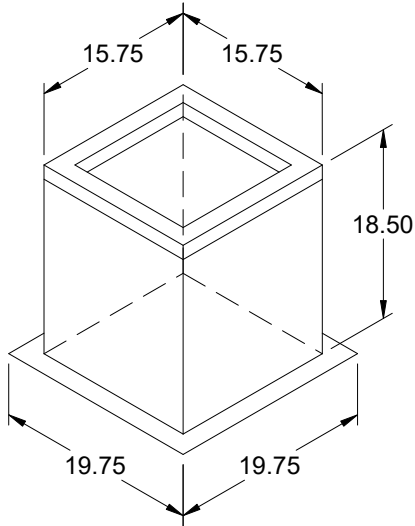
Motor - Vari-Green EC motor
Control - Dial for balancing
Standard Curb Cap Size - 17 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-4X, Toggle,
Junction Box Mounted & Wired
High Wind Rated (+/- 150 PSF Rating)
Florida Product Approval #FL13225.1 & Miami-Dade NOA #22-0606.03
Birdscreen: Galvanized, nom. 84% Free Area
Composite Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)
Damper Shipped Loose, VCD-43-PB-10X10, Not Coated, Nominal Size
Damper Actuator (TFB120-S), 115 VAC Actuated
End Switch

Selected Sub Marks

See individual submittals for full details
GPF-17-G18

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.



Model: GPF

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. or 5 in. mounting flange - 1 in. thick 3 lb density insulation - Height - Available from 8 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. Gridwork is welded to the frame and the frame is welded to the curb.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPF-17	Nominal	1.25	31	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.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18.5	17	17	15.75	15.75	12.25	12.25	19.75	19.75	16	16

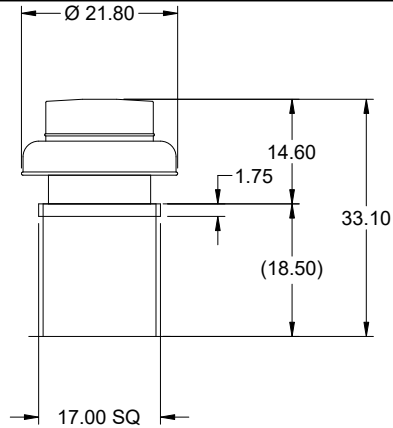
*May not be applicable

Accessories

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

Model: G-080-VG

Direct Drive Centrifugal Roof Exhaust Fan



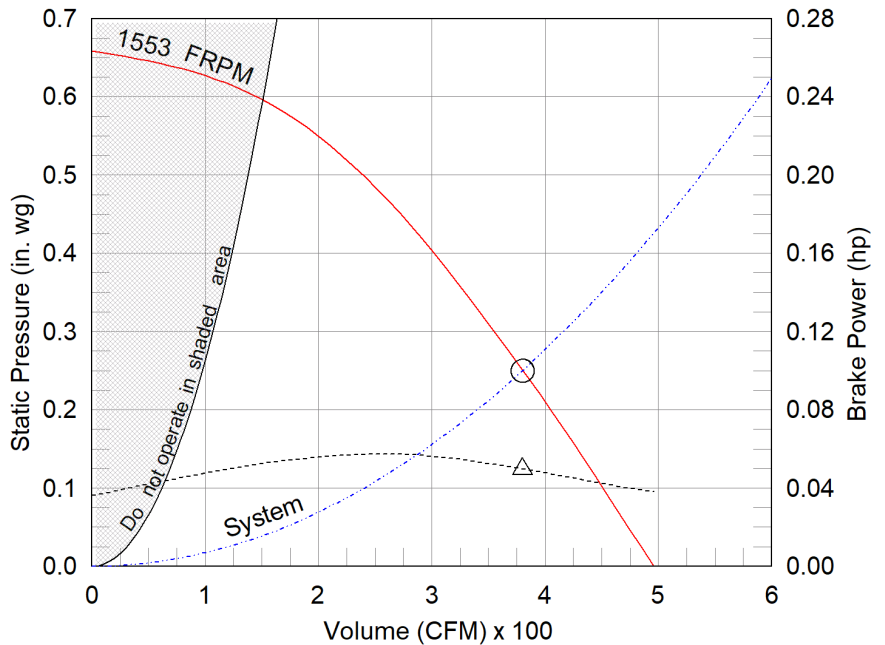
OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	24
Weight w/ Acc's (lb)	52
Weight w/ Acc's and Curb (lb)	83
Standard Curb Cap Size (in.)	17 x 17
Optional Damper (in.)	10 x 10
Roof Opening (in.)	13.5 x 13.5

Performance	
Requested Volume (CFM)	380
Actual Volume (CFM)	380
Total External SP (in. wg)	0.25
Fan RPM	1553
Operating Power (hp)	0.05
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	4,421
Static Eff. (%)	30

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	950

Motor	
Motor Mounted	Yes
Size (hp)	1/10
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	1.38
Min. Circuit Ampacity (MCA)	2
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	65	73	69	60	60	57	53	46	66	55	7.3



Model: G-080-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:

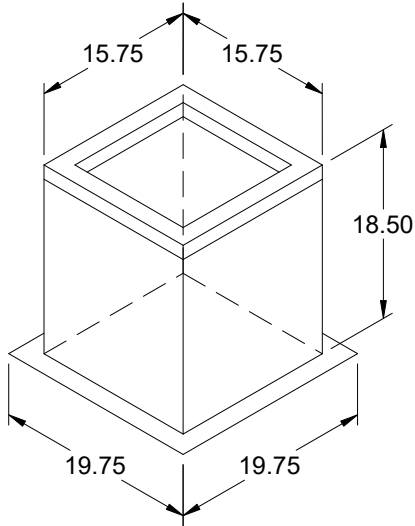
Motor - Vari-Green EC motor
Control - Dial for balancing
Standard Curb Cap Size - 17 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-4X, Toggle,
Junction Box Mounted & Wired
High Wind Rated (+/- 150 PSF Rating)
Florida Product Approval #FL13225.1 & Miami-Dade NOA #22-0606.03
Birdscreen: Galvanized, nom. 84% Free Area
Composite Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)
Damper Shipped Loose, VCD-43-PB-10X10, Not Coated, Nominal Size
Damper Actuator (TFB120-S), 115 VAC Actuated
End Switch

Selected Sub Marks

See individual submittals for full details
GPF-17-G18

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.



Model: GPF

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. or 5 in. mounting flange - 1 in. thick 3 lb density insulation - Height - Available from 8 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. Gridwork is welded to the frame and the frame is welded to the curb.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPF-17	Nominal	1.25	31	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.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18.5	17	17	15.75	15.75	12.25	12.25	19.75	19.75	16	16

*May not be applicable

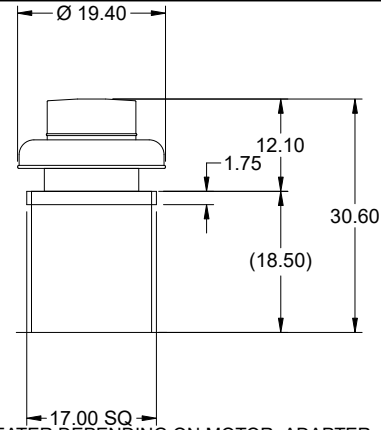
Accessories

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

Model: G-060-VG

Direct Drive Centrifugal Roof Exhaust Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	16
Weight w/ Acc's (lb)	42
Weight w/ Acc's and Curb (lb)	73
Standard Curb Cap Size (in.)	17 x 17
Optional Damper (in.)	8 x 8
Roof Opening (in.)	13.5 x 13.5

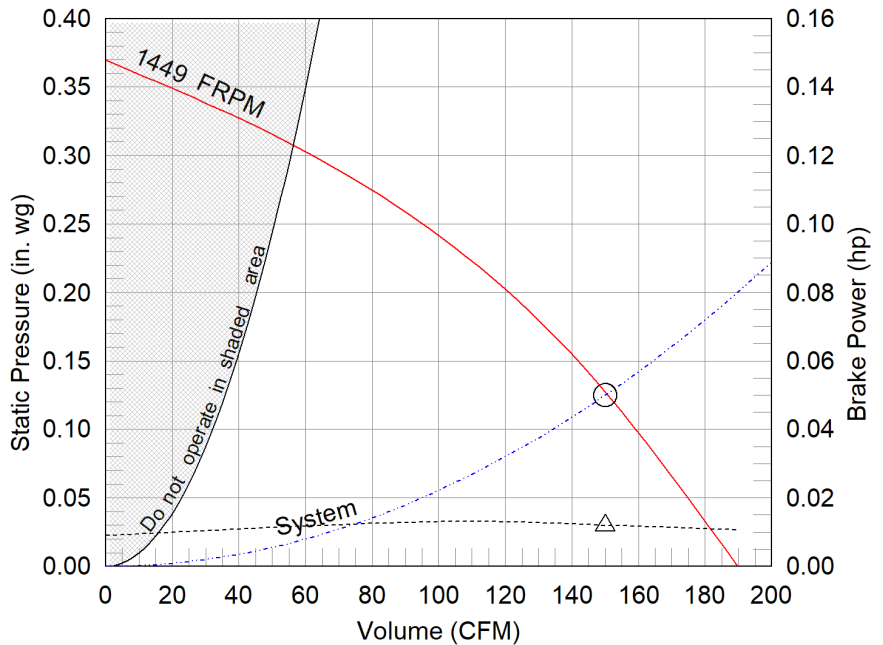


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Performance	
Requested Volume (CFM)	150
Actual Volume (CFM)	150
Total External SP (in. wg)	0.125
Fan RPM	1449
Operating Power (hp)	0.01
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	3,083
Static Eff. (%)	25

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	789

Motor	
Motor Mounted	Yes
Size (hp)	1/15
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	1.3
Min. Circuit Ampacity (MCA)	2
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	57	61	58	48	48	48	39	31	55	43	3.3



Model: G-060-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

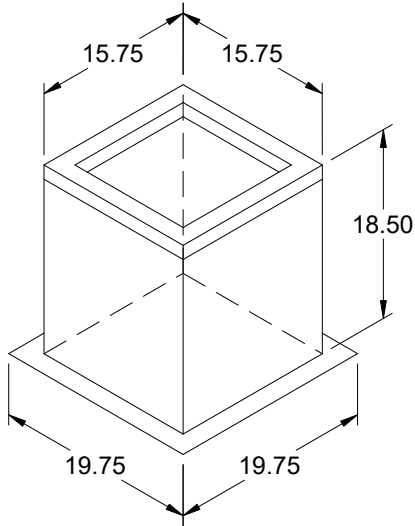
Selected Options & Accessories:

Motor - Vari-Green EC motor with Dial ONLY (Not capable for field conversion to 0-10)
Control - Dial for balancing
Standard Curb Cap Size - 17 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-4X, Toggle,
Junction Box Mounted & Wired
High Wind Rated (+/- 150 PSF Rating)
Florida Product Approval #FL13225.1 & Miami-Dade NOA #22-0606.03
Birdscreen: Galvanized, nom. 84% Free Area
Composite Wheel Material
Conduit Chase Qty 1
Unit Warranty: 1 Yr (Standard)
Damper Shipped Loose, VCD-43-PB-8X8, Not Coated, Nominal Size
Damper Actuator (TFB120-S), 115 VAC Actuated
End Switch

Selected Sub Marks

See individual submittals for full details
GPF-17-G18

The Vari-Green Motor included in this order has a 'Multi-Voltage' ability. This motor has the ability to accept 115V or 208-230V Single Phase power. The motor has an auto switch and does not require the user to change anything for the listed voltages.



Model: GPF

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. or 5 in. mounting flange - 1 in. thick 3 lb density insulation - Height - Available from 8 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. Gridwork is welded to the frame and the frame is welded to the curb.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPF-17	Nominal	1.25	31	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.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18.5	17	17	15.75	15.75	12.25	12.25	19.75	19.75	16	16

*May not be applicable

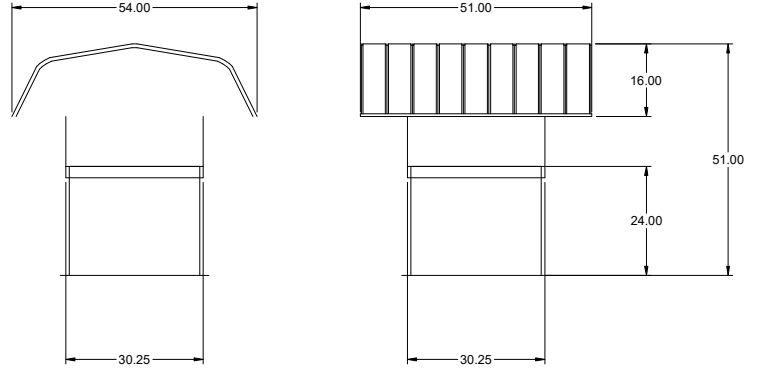
Accessories

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

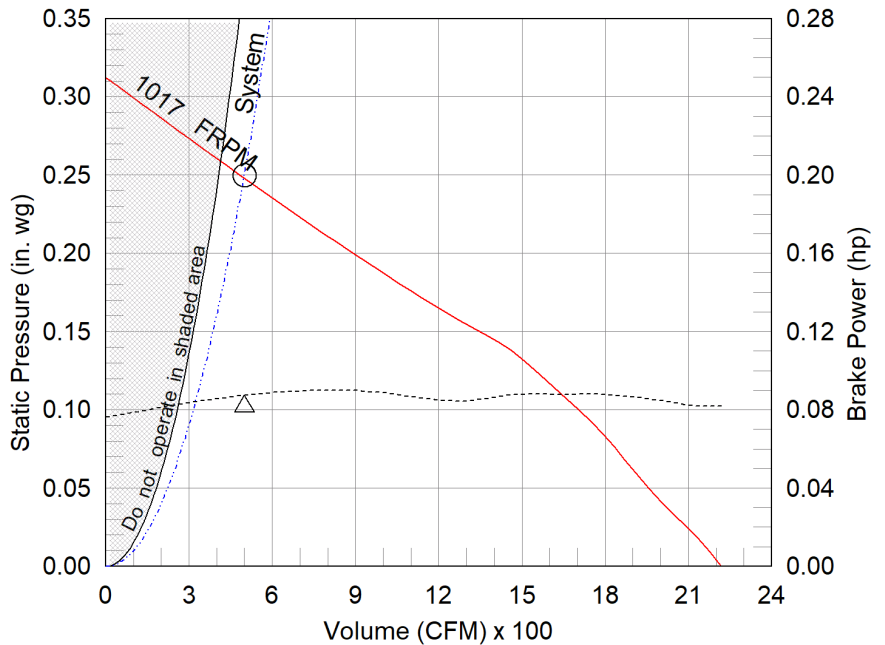
Model: RCE3-20-313-VG

Propeller Hooded Roof Direct Drive Exhaust Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	165
Weight w/ Acc's (lb)	202
Weight w/ Acc's and Curb (lb)	274
Optional Damper (in.)	20 x 20
Roof Opening (in.)	22.5 x 22.5



Performance	
Requested Volume (CFM)	500
Actual Volume (CFM)	500
Total External SP (in. wg)	0.25
Fan RPM	1017
Operating Power (hp)	0.08
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	5,326
Static Eff. (%)	24



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

Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	115/60/1
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	High
Windings	1
FLA (Amps)	10.3

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	70	69	65	64	60	57	53	48	66	54	7.1

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



Model: RCE3-20-313-VG

Propeller Hooded Roof Direct Drive Exhaust Fan

Standard Construction Features:

- Base and hoods of galvanized steel - Drive frames and fan panels of fabricated steel - Wire mesh birdscreens - Ball bearing motors - Cast aluminum airfoil blade propeller - Corrosion resistant fasteners - Due to shipping size limitations, hoods will be shipped knocked down. Hood assembly requires no special tools or training. Complete illustrated assembly and installation instructions are packed with each fan.

Selected Options & Accessories:

Hood

Motor - Vari-Green EC motor

Control - Dial for balancing

UL/cUL 705 Listed - "Power Ventilators"

Switch, NEMA-4X, Toggle,

Junction Box Mounted & Wired

High Wind Rated (+/- 40 PSF Rating)

Florida Product Approval #FL12917.1 & Miami-Dade NOA #21-1122.09

Cast Aluminum Propeller

Aluminum Construction

Unit Warranty: 1 Yr (Standard)

Damper Shipped Loose, VCD-43-PB-20X20, Not Coated

Damper Actuator (TFB120-S), 115 VAC Actuated

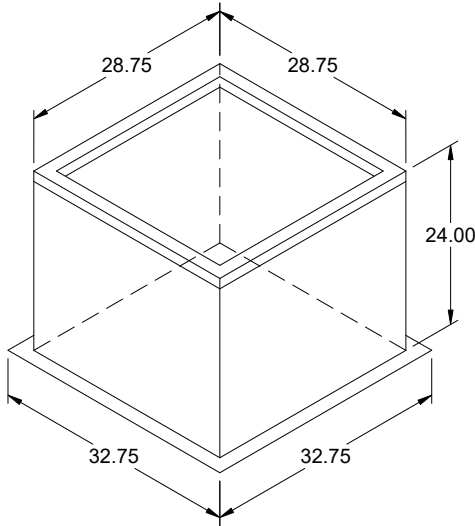
End Switch

Selected Sub Marks

See individual submittals for full details

GPF-30-G24

The Vari-Green Motor included in this order can operate on 115V single phase power only.



Model: GPF

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. or 5 in. mounting flange - 1 in. thick 3 lb density insulation - Height - Available from 8 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. Gridwork is welded to the frame and the frame is welded to the curb.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled	Union Label
	1	GPF-30	Nominal	1.25	72	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.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
24	30	30	28.75	28.75	25.25	25.25	32.75	32.75	29	29

*May not be applicable

Accessories

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

Performance	
Quantity	1
Volume (CFM)	1,600
Total External SP (in. wg)	4
Operating Power (hp)	1.76
Required Power (hp)	1.76
Fan RPM	3169
Max Fan RPM	3,371
Oper. Frequency (Hz)	60
Elevation (ft)	33
Start-up Temp.(F)	70
Operating Temp.(F)	70

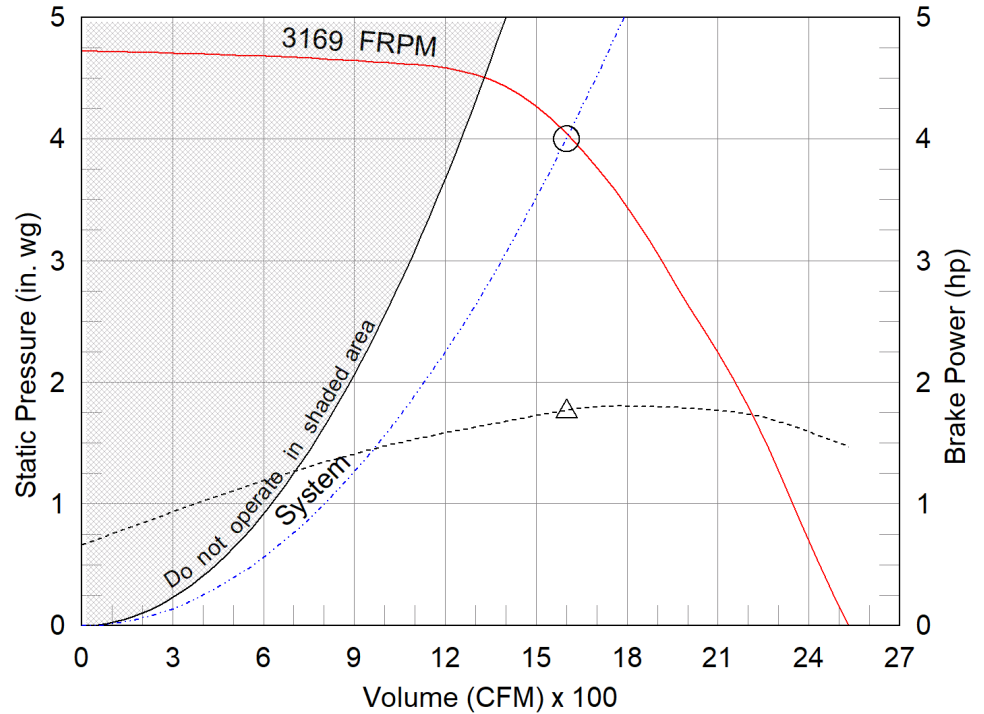
Fan Configuration	
Size	10
Wheel Type	BI
Arrangement	10
Drive Type	Belt
Rotation	CW
Discharge Position	UB
Construction Type	Welded Scroll
Spark Resistance	None
Scroll Material	Steel
Wheel Material	Aluminum
Inlet Cone Material	Steel
Pedestal Material	Steel

Equipment Weights	
Fan (LMD)(lb)	93
Motor/Drive (lb)	49
Accessories (lb)	21

Misc Fan Data	
Fan Energy Index (FEI)	1.21
Outlet Velocity (ft/min)	2,177
Static Efficiency (%)	60
Tip Speed (ft/min)	8,710

Motor and Drives	
Motor	Included
Size (hp)	2
RPM	3600
Enclosure	TEFC
V/C/P	208/60/3
Frame Size	145T
Max Frame Size	145
Location	Centered
Pulley Type	Constant
Drive Loss (%)	5.0
Drives	Standard
Drive Service Factor	1.5

Model: USF-10
Universal Single Width Fan
Operating Performance



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

Nameplate Model: USF-10-3-B5-00-01-01



Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	88	79	76	83	77	76	73	67	84	72	20

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: USF-10

Universal Single Width Fan

Standard Construction Features:

HOUSING: Class 0, I, and II feature Perma-Lock construction on sizes 4 - 49 and continuously welded on sizes 54 - 73 and all class III fans - Unit support angles with pre-punched mounting holes - Adjustable motor plate - Corrosion resistant fasteners - Inlet collars - Punched outlet flange standard (except for downblast - DB) on class 0, I, and II sizes 33 - 73 and all class III fans - all steel parts are processed through a multi-stage cleaning and pre-treatment and then finished with a high performance powder coating.

BEARINGS, SHAFT, AND WHEEL: Air handling quality, self-aligning, ball bearing in pillow block housing - Polished, solid steel shafts - Centrifugal wheel

Selected Options & Accessories:

NEMA Premium Efficient Motor - meets NEMA Table 12-12

Motor VFD Rated without Shaft Grounding Protection

Motor with Class B or Greater Insulation

Standard Drives

Finish - Coated

Coating - Permatecor, Concrete Gray-RAL 7023, Mill Finish on Aluminum Components

Switch - NEMA-3R, Toggle, For Indoor or Outdoor Use, Mounted and Wired

Direct Mount Isolators, Isolator-Spring, Restrained, 1 Inch, Indoor / Outdoor Use, Base Coating - N/A

Rotation - CW

Bearings - L(10) Life of 80k Hours

Housing - Welded Scroll

Discharge Position - UB

UL/cUL-705 - Power Ventilators

Polished Steel Shaft

Access Door - Bolted

Damper, Outlet Volume, HCD-120, Galv. Blade, 9.6 x 11.1, Parallel, 24 VAC, NEMA-4, w/ Mill Finish

Drain Connection - 1" Pipe Thread w/Plug

Extended Lube Lines - Nylon

Inlet Connection, Slip Fit

Outlet Flange, Punched

High Wind Rated (+/- 90 PSF Rating)

Miami-Dade NOA#22-0729.06

Texas Department of Insurance Product Evaluation RV-112

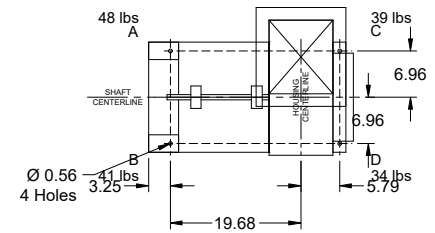
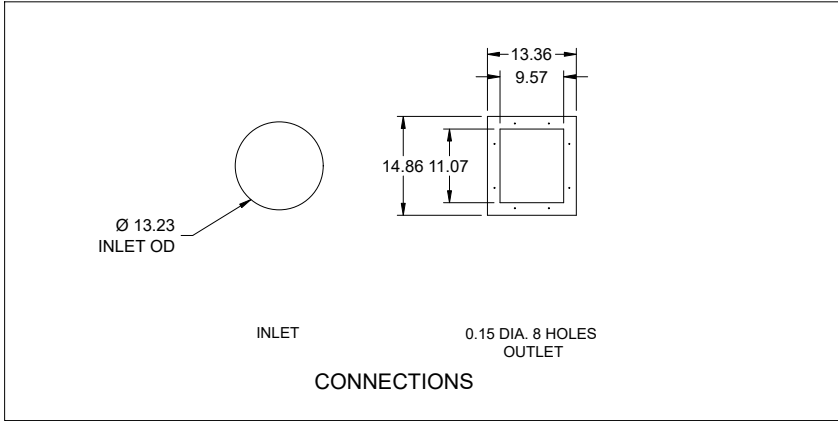
Weatherhood - Steel

Motor Starter

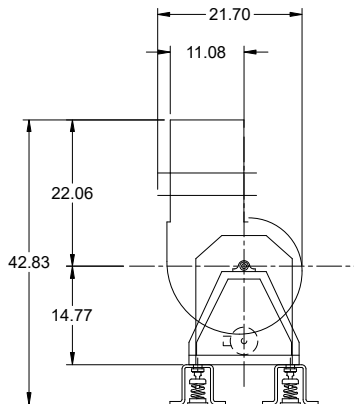
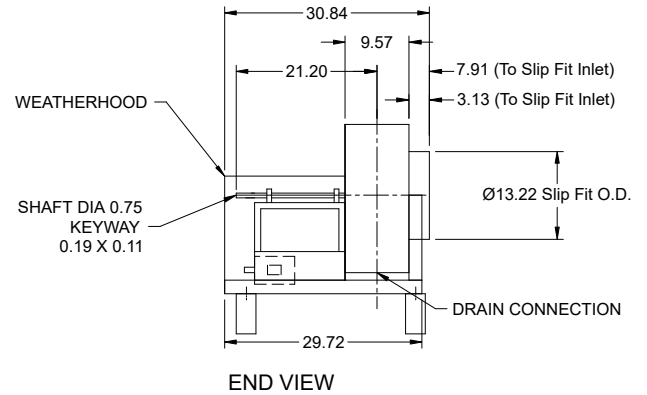
Unit Warranty: 1 Yr (Standard)

Model: USF-10

Universal Single Width Fan



FAN FOOTPRINT



SIDE VIEW

*SIDE VIEW IS VIEWED FROM DRIVE SIDE

*FANS ARE SUBJECT TO ±.125 INCH TOLERANCE

*DUE TO CONTINUAL IMPROVEMENTS DIMENSIONS MAY CHANGE

*OUTLET DIMENSION SHOWS FAN WITH DAMPER OPERATING CLEARANCE

Notes: All dimensions shown are in units of in.

Isolators

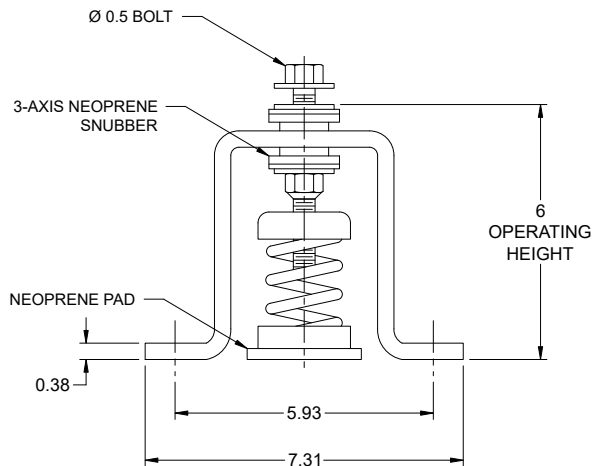
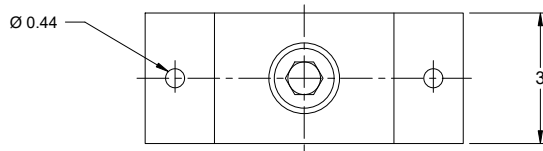
Type: Spring, Restrained, 1 Inch

Standard Construction Features:

Designed for horizontal and vertical restraint. Housings can be bolted or welded to supporting structure. Housings may be used for blocking during installation. Springs are color coded or identified to indicate load capacity. Neoprene pad for noise reduction.

Fan Configuration

Model:	USF-10	Discharge Position:	UB
Arrangement:	10	Class:	N/A
Rotation:	CW	Motor Frame Size:	145T
Motor Position:	Centered	Isolator/Deflection:	Spring, Restrained, 1 Inch
Isolator Color A:	Green	Isolator Color B:	Green
Isolator Color C:	Green	Isolator Color D:	Green
Isolator Description:	FHS-1-70	Isolator Manufacturer:	Kinetics



Notes: All dimensions shown are in units of in.

Motor Starter Advanced Control with SMARTSTART™

Qty: 1 Model: MSAC-3R-9/J-G8-40

Standard Construction Features:

NEMA and IEC, dual-rated contactor – HOA keypad – Hand, off, auto, run and fault lights – Conduit plate knockouts – Solid-state, electronic overload – Stall protection – Locked rotor trip – Max start time monitoring – Overload out of calibration protection – Adjustable power failure restart mode – 3 inputs for remote control; 12-250V direct voltage input, N.O.dry contact and fireman’s override – 2 output relays; motor status and fault alarm – Damper actuator control, 24VDC, 30VA max – Damper limit switch input - UL, cUL

Motor Starter Configuration:

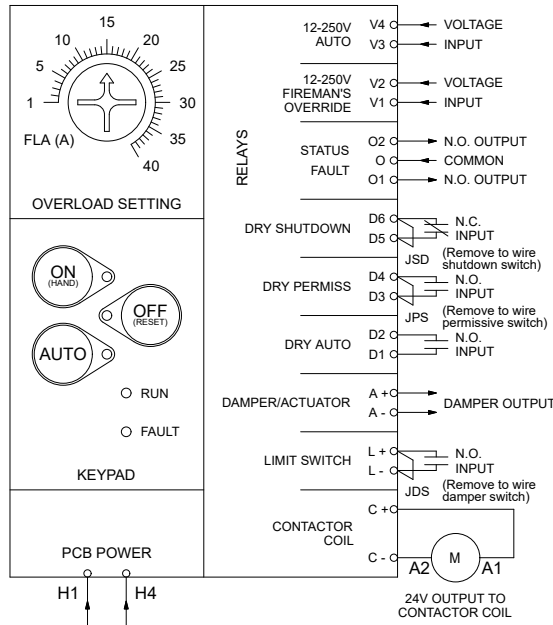
Series:	Type:	Enclosure:	Material:	HP:	Power:	Nema Size:
MSAC	Combination	NEMA-3R	16 Ga Steel	2	208/60/3	00

Contactor	NEMA Size	Rated Operational Voltage	Rated Insulation Voltage	Rated Thermal Current 3 ϕ (0 \leq 55 C) [HP]			
				200V	240V	460V	500V
MRC-9	00	690V	1000V	2	3	5	7.5

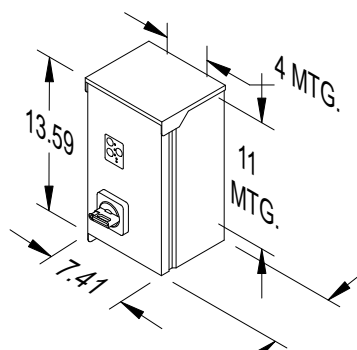
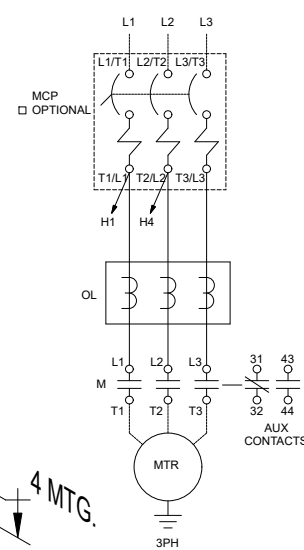
Overload	Trip Class	OL Reset	OL Type	FLA Range	Phase Unbalance	Phase Loss
MSAC	10 or 20	Manual or Auto	Electronic Thermal	1-40A	Trip in 3 sec @ 25%	Trip in 3 sec

Disconnect Part Number	Rated Operational Current [A]	Magnetic Release Operating Current [A]	Protection Degree	Max Short Circuit Current [KAIC]		
				200/240V	480V	600V
CMS-32HI-8	8	104	IP20	100	65	25

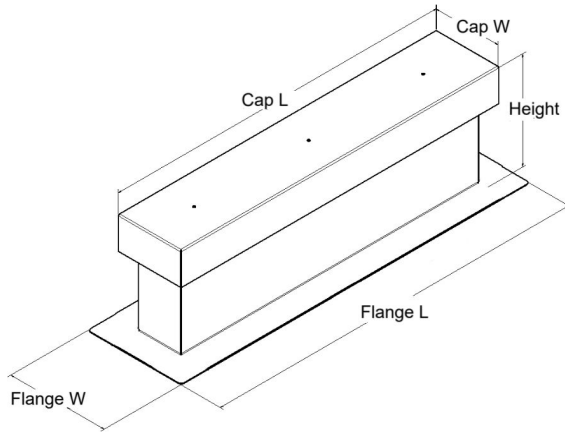
MSAC CONTROL WIRING



MSAC STARTER POWER WIRING 200-600 VAC INPUT



Notes: All dimensions shown are in units of in.



Model: GESI

Flat or Pitched Roof Equipment Support

Standard Construction Features:

- Welded construction (see Material Note) - Wood nailer - Flashing cap. NOTES: - MAXIMUM design load of 400 lb per isolator. MATERIAL NOTE: - If Length <= 44 OR Height <= 12: Galvanized is 18 ga and Aluminum is 0.064 in. - If Length > 44 OR Height > 12: Galvanized is 16 ga and Aluminum is 0.080 in.

Dimensions

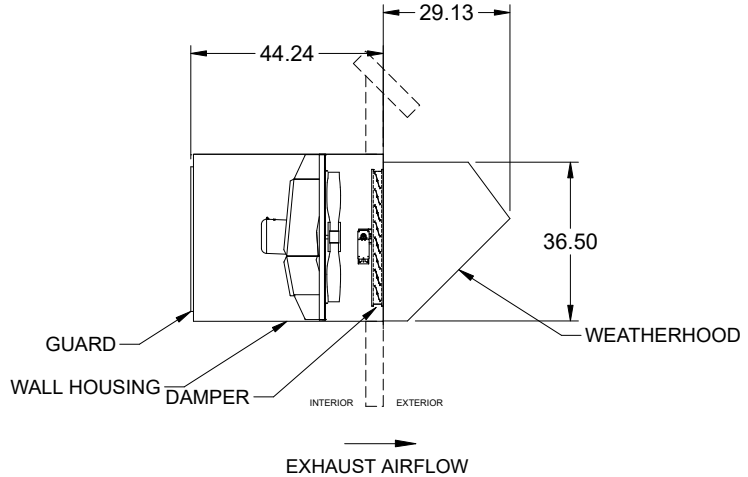
ID#	Tag	Qty	Width (in.)	Length (in.)	Height (in.)	Flange Width (in.)	Flange Length (in.)	Cap Width (in.)	Cap Length (in.)
4-1	(Multiple)	2	3.5	36	24	7.5	40	5	37.5

Accessories

ID#	Material	Pitch (in.)	Pitch Run	Sizing
4-1	Galvanized	None	Long Side	Actual

Model: AER-30

Sidewall Direct Drive Fan
Motor Access From Int. of Bldg.

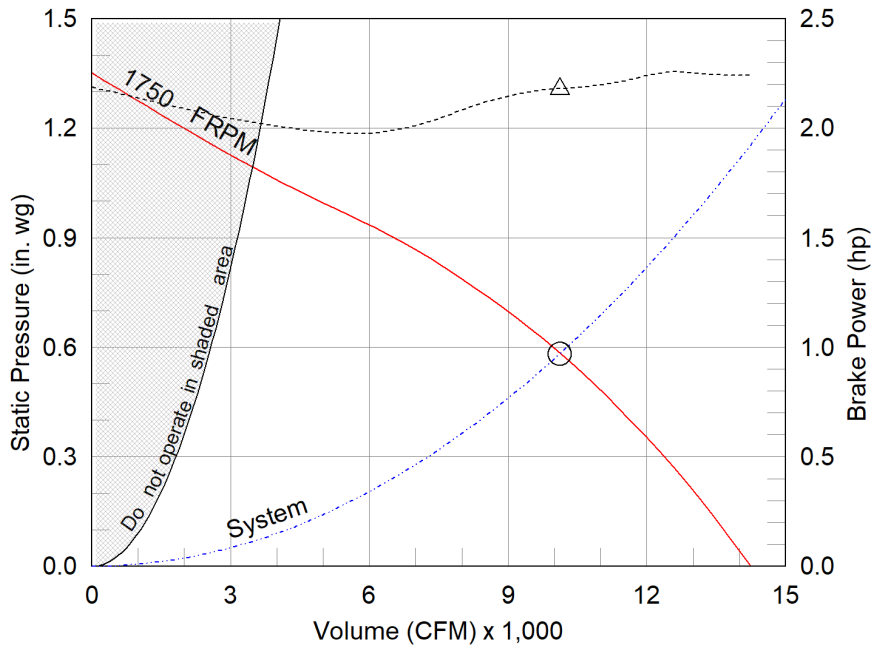


Dimensional	
Quantity	1
Weight w/o Acc's (lb)	124
Weight w/ Acc's (lb)	382
Max T Motor Frame Size	184
Optional Damper (in.)	32 x 32
Wall Opening (in.)	39.75 x 39.75

Performance	
Requested Volume (CFM)	10,000
Actual Volume (CFM)	10,119
Total External SP (in. wg)	0.583
Fan RPM	1750
Operating Power (hp)	2.18
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	13,802
Static Eff. (%)	43

Misc Fan Data	
Fan Eff. Index (FEI)	1.29
Outlet Velocity (ft/min)	2,011

Motor	
Motor Mounted	Yes
Size (hp)	2
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1750
Efficiency Rating	Standard
Windings	1



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

Static Pressure Calculations

External SP	0.25 in. wg
Direct Drive RPM Adjustment	0.014 in. wg
Damper	0.056 in. wg
Wall Housing	0.116 in. wg
Weatherhood	0.147 in. wg
Total External SP	0.583 in. wg

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
The motor provided on this fan is inverter ready and meets NEMA MG1 Part 31.4.4.2



Nameplate Model: AER-30-03-0313

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	87	91	95	94	93	90	84	79	97	85	44

Model: AER-30

Sidewall Direct Drive Fan

Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Cast aluminum airfoil blade propeller - Ball bearing motors - Corrosion resistant fasteners

Selected Options & Accessories:

Motor VFD Rated without Shaft Grounding Protection
UL/cUL 705 Listed - "Power Ventilators"
Airflow Direction: Exhaust
Long Wall Hsg, Flush Exterior, w/OSHA Grd., Factory Installed
Motor Access: From Int. of Bldg.
Mounting Style - Flush
Switch, NEMA-1, Toggle,
Junction Box Mounted & Wired
Weatherhood, Galvanized 45 deg. with Bird Screen, Shipped Loose From Factory
Unit Warranty: 1 Yr (Standard)
Damper Shipped Loose, VCD-43-PB-32X32, Not Coated
Damper Actuator (MS4109F1210), 115 VAC Actuated
End Switch

Selected Sub Marks

See individual submittals for full details
MSAC-3R-9/J-G8-40

Motor Starter Advanced Control with SMARTSTART™

Qty: 1 Model: MSAC-3R-9/J-G8-40

Standard Construction Features:

NEMA and IEC, dual-rated contactor – HOA keypad – Hand, off, auto, run and fault lights – Conduit plate knockouts – Solid-state, electronic overload – Stall protection – Locked rotor trip – Max start time monitoring – Overload out of calibration protection – Adjustable power failure restart mode – 3 inputs for remote control; 12-250V direct voltage input, N.O.dry contact and fireman’s override – 2 output relays; motor status and fault alarm – Damper actuator control, 24VDC, 30VA max – Damper limit switch input - UL, cUL

Motor Starter Configuration:

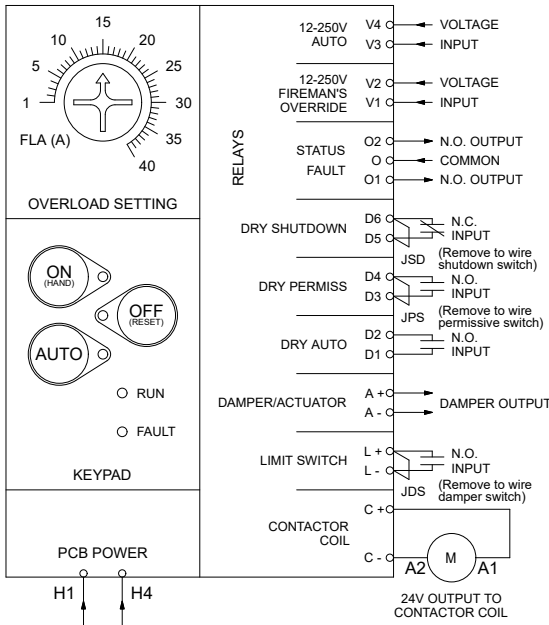
Series:	Type:	Enclosure:	Material:	HP:	Power:	Nema Size:
MSAC	Combination	NEMA-3R	16 Ga Steel	2	208/60/3	00

Contactor	NEMA Size	Rated Operational Voltage	Rated Insulation Voltage	Rated Thermal Current 3 ϕ (0 \leq 55 C) [HP]			
				200V	240V	460V	500V
MRC-9	00	690V	1000V	2	3	5	7.5

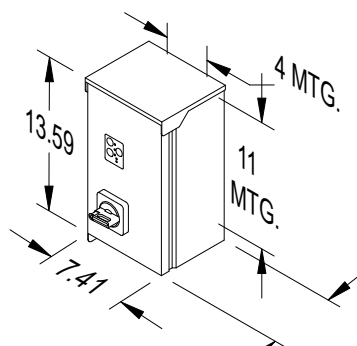
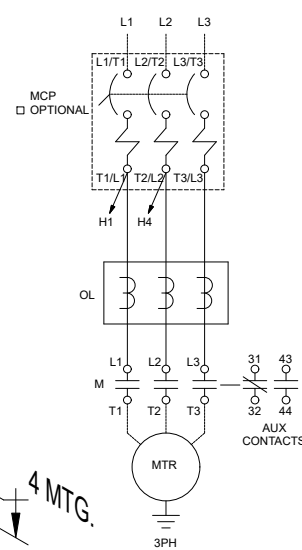
Overload	Trip Class	OL Reset	OL Type	FLA Range	Phase Unbalance	Phase Loss
MSAC	10 or 20	Manual or Auto	Electronic Thermal	1-40A	Trip in 3 sec @ 25%	Trip in 3 sec

Disconnect Part Number	Rated Operational Current [A]	Magnetic Release Operating Current [A]	Protection Degree	Max Short Circuit Current [KAIC]		
				200/240V	480V	600V
CMS-32HI-8	8	104	IP20	100	65	25

MSAC CONTROL WIRING



MSAC STARTER POWER WIRING 200-600 VAC INPUT



Notes: All dimensions shown are in units of in.

Model: BSQ-80

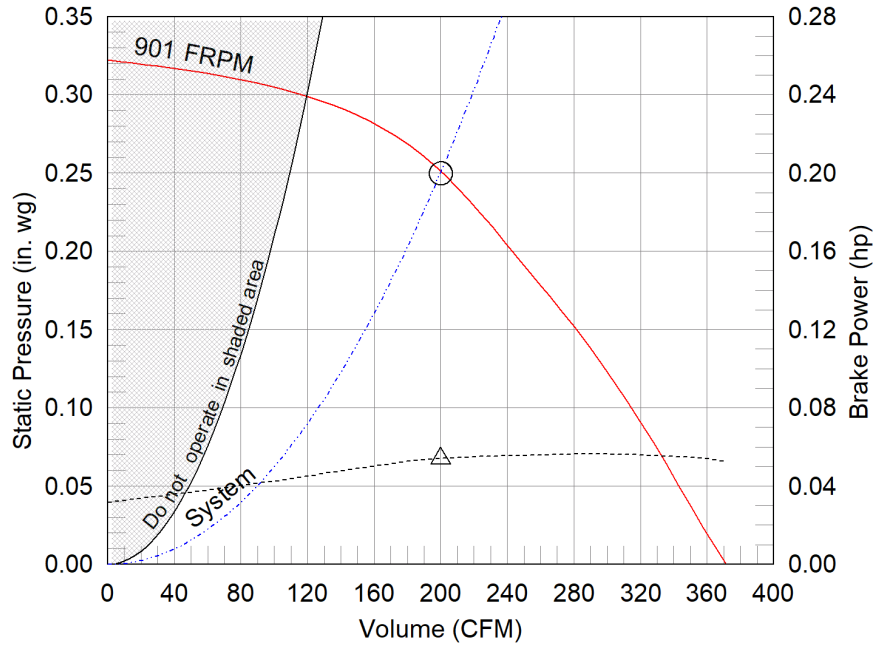
Belt Drive Centrifugal Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	86
Weight w/ Acc's (lb)	117
Max T Motor Frame Size	145
Optional Damper (in.)	12 x 12

Performance	
Requested Volume (CFM)	200
Actual Volume (CFM)	200
Total External SP (in. wg)	0.25
Fan RPM	901
Operating Power (hp)	0.05
Elevation (ft)	33
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Drive Loss (%)	44.8
Tip Speed (ft/min)	2,639
Static Eff. (%)	26

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	204

Motor	
Motor Mounted	Yes
Size (hp)	1/4
Voltage/Cycle/Phase	115/60/1
Enclosure	EXP
Motor RPM	1725
Windings	1
NEC FLA* (Amps)	5.8
Min. Circuit Ampacity (MCA)	7.25
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

Nameplate Model: BSQ-80

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	79	76	61	57	49	46	40	35	63	51	6.5
Radiated	80	78	55	51	44	40	34	31	64	52	6.2

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



Model: BSQ-80

Belt Drive Centrifugal Inline Fan

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 aluminum wheel - Two bolted access panels - Integral duct connection flanges - Ball bearing motors - Adjustable motor pulley - Adjustable motor plate - Fan shaft mounted in ball bearing pillow blocks - Static free belts - Corrosion resistant fasteners

Selected Options & Accessories:

Grip Notch Belt(s)

UL/cUL 705 Listed - "Power Ventilators"

Switch, NEMA-7 and 9, Toggle, Shipped with Unit,

Motor Cover

Fan: Spring, Hanging, 1 Inch Isolator PN: 850343, Incl. 4 isolators and 4 brackets

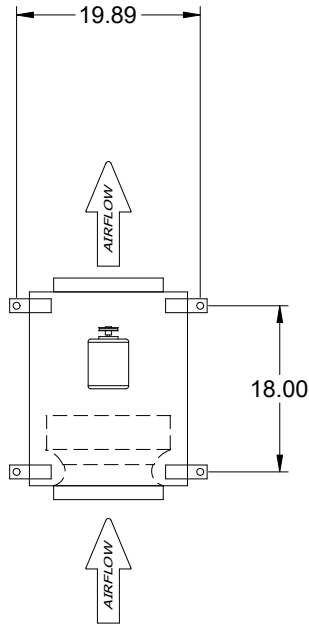
Aluminum Bearing Cover

Unit Warranty: 1 Yr (Standard)

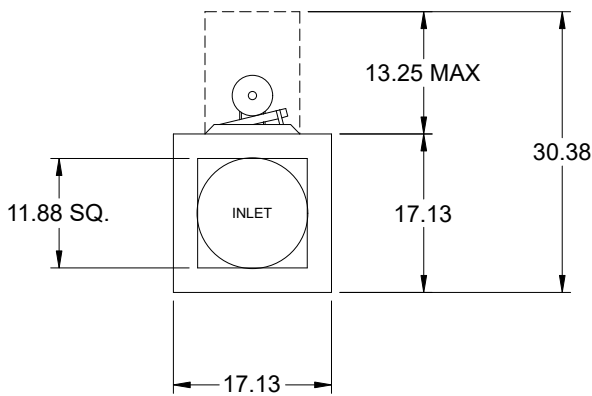
Damper Shipped Loose, Inline, BD-330-PB-12X12, Gravity Operated, Not Coated

BSQ-80

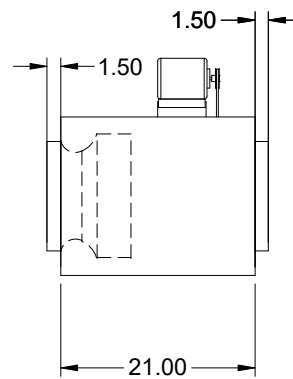
Belt Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

Notes: All dimensions shown are in units of in.