

GPY+ Associates Engineering Inc.

MECHANICAL SHOP DRAWINGS

PROJECT: York Region Administrative
Centre – Interior Fit-up
Package ‘D’

17250 Yonge Street,
Newmarket, Ontario
L3R 0T5

Reviewed	<input checked="" type="checkbox"/>	Reviewed as Modified	<input type="checkbox"/>
Not Reviewed	<input type="checkbox"/>	Revise and Resubmit	<input type="checkbox"/>

This review is for conformance with the general design intent only and does not change the intent of the Contract Documents. Responsibility for errors or omissions in the shop drawings, details, co-ordination and dimensioning remains solely with the Contractor.

GPY+ Associates Engineering Inc.

Name: Grant Youdelis

Date: December 16, 2024

PROJECT NO.: GPY-9920

Shop Drawing No.:	M-4
Product:	Fans
Supplier:	Greenheck

Comments:

- 1. No comments noted.



SUBMITTAL

TO: GPY + Associates Engineering Inc. – ATTN: Sherwin Reyes
PROJECT: York Region, Administration Building Package D Renovations
ADDRESS: 17250 Yonge Street, Newmarket, ON
INCLUDED: Mechanical Shop Drawing – Supply Fans
SPEC DIV: 23 30 00

From: Trisect Construction Corporation
7-4020A Sladeview Crescent
Mississauga, ON L5L 6B1
Tom Butkovic / Ivan Lulic / Jay Cowie

The shop drawings included below have been:

- ☒ REVIEWED
- ☐ REVIEWED AS NOTED
- ☐ RESUBMIT
- ☐ REJECTED

Review of this submission is for compliance with the general intent of the contract. This review does not relieve the Sub-Contractor, Trade Contractor, Supplier or Manufacturer of the responsibility of meeting all requirements of the contract documents. Any deviation from the contract documents initiated by the Sub-Contractor, Trade Contractor, Supplier or Manufacturer shall be at his sole risk and responsibility. QUANTITIES AND DETAIL DIMENSIONS ARE THE SUBCONTRACTORS OR SUPPLIERS' RESPONSIBILITY. VERIFY THE DATA WITH FIELD DIMENSIONS AND CONDITIONS.

Per: Tom Butkovic	Dated: November 19/2024
Final review to be received by: G. Bruce Stratton Architects	





54 Audia Court, Unit 2
Concord, ON L4K 3N5
(905)-738-1400

Submittal 24-277-004

PROJECT NAME	PROJECT ADDRESS	DATE SUBMITTED
YORK REGION VARIOUS PROJECTS 24-277	17250 Young Street Newmarket, ON	Nov 13, 2024

TO	FROM
Tom Butkovic	PAUL LEDDY
COMPANY	COMPANY
TRISECT CONSTRUCTION	Consult Mechanical Inc.
EMAIL	EMAIL
tbutkovic@trisectionconstruction.com	paul.l@consultmechanical.com
ADDRESS	ADDRESS
4020A SLADEVIEW cRESCENT, UNIT 7 MISSISSAUGA, ON L5L 6B1 JOB: 1300 INSLINGTON SUITE 103	54 Audia Court, Unit 2 Concord, ON L4K 3N5

Title

Supply Fans

Description

Supply Fan Tag BF-1.1 Greenheck Model SQ-130-VG
Supply Fan Tag BF-2.1 Greenheck Model SQ-120-VG
Supply Fan Tag BF-3.2 Greenheck Model CSP-A700-VG
Supply Fan Tag BF-4.1 Greenheck Model SQ-120-VG
Supply Fan Tag BF-4.2 Greenheck Model CSP-A510-VG

Package Items

SPEC	SUBSECTION	ITEM	TYPE
M101	M101	Fresh Air Supply Fan Schedule	Shop Drawings

SUBMITTAL

Job Name: **YORK REGION ADMIN CENTRE,RFTC-652-22,17250 YONGE**

Engineer: *

Elevation: (ft) 568

Date: 11/13/2024

Submitted By: Amanda Stennett

Email: astennett@ehpricesales.com

Phone: (905)660-0066

E H PRICE LIMITED

571 CHRISLEA ROAD UNIT 3

WOODBIDGE, ON L4L 8A2

CA

Phone: (905)669-8988

Fax: (905)660-9121

Email Address: astennett@ehpricesales.com



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

Model: SQ-130-VG

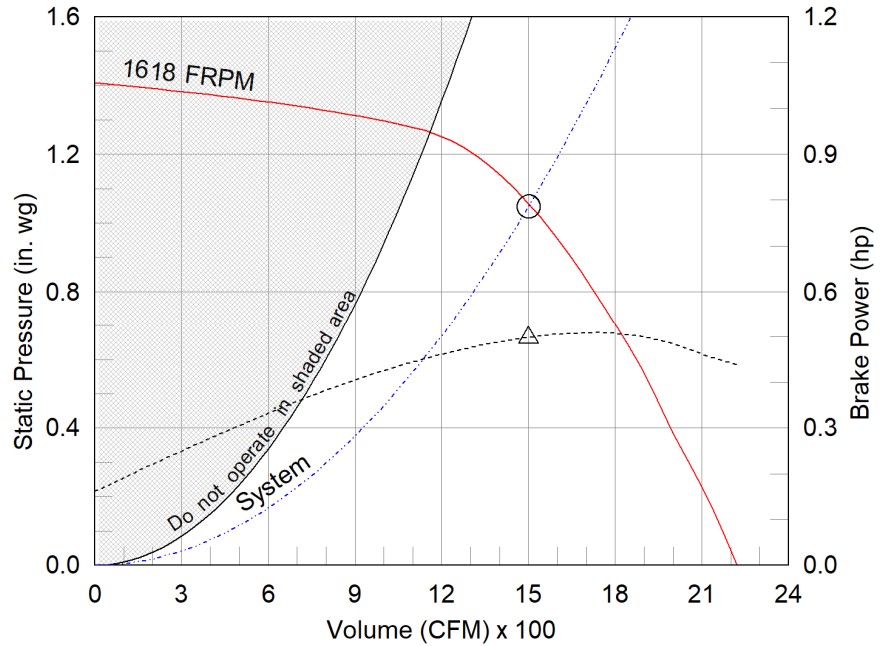
Direct Drive Centrifugal Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	59
Weight w/ Acc's (lb)	77

Performance	
Requested Volume (CFM)	1,500
Actual Volume (CFM)	1,500
Total External SP (in. wg)	1.048
Fan RPM	1618
Operating Power (hp)	0.5
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	5,559
Static Eff. (%)	50

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	685

Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
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-130-VG-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	73	78	80	74	66	65	61	56	76	65	13.3
Radiated	72	73	71	64	55	46	42	44	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: SQ-130-VG

Direct 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 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

Provided motor meets the motor efficiency requirements set forth in 2024 Title 24/California

UL/cUL 705 Listed - "Power Ventilators"

Junction Box Mounted and Wired

Switch, NEMA-1, Toggle, Shipped Separate

Aluminum Centrifugal Wheel

Insulated Housing - 1 in. Thick: Fan Housing

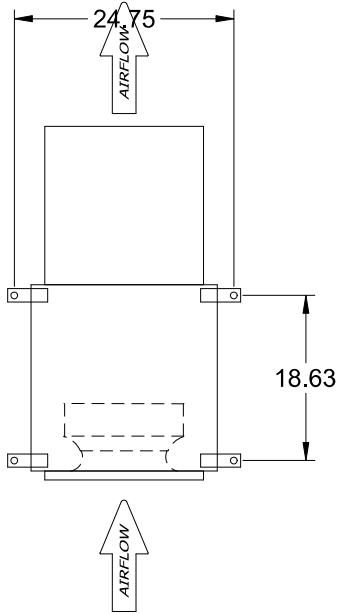
Motor Cover

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

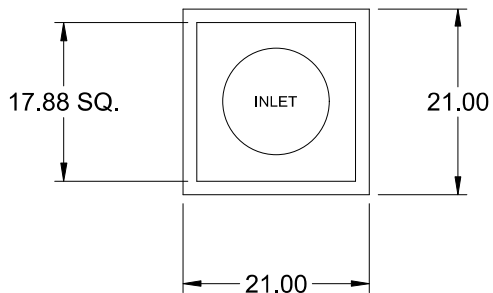
Unit Warranty: 1 Yr (Standard)

SQ-130-VG

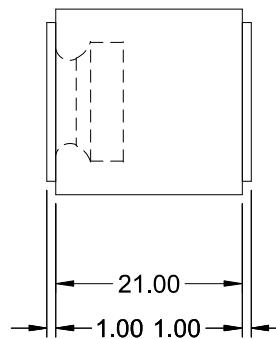
Direct Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

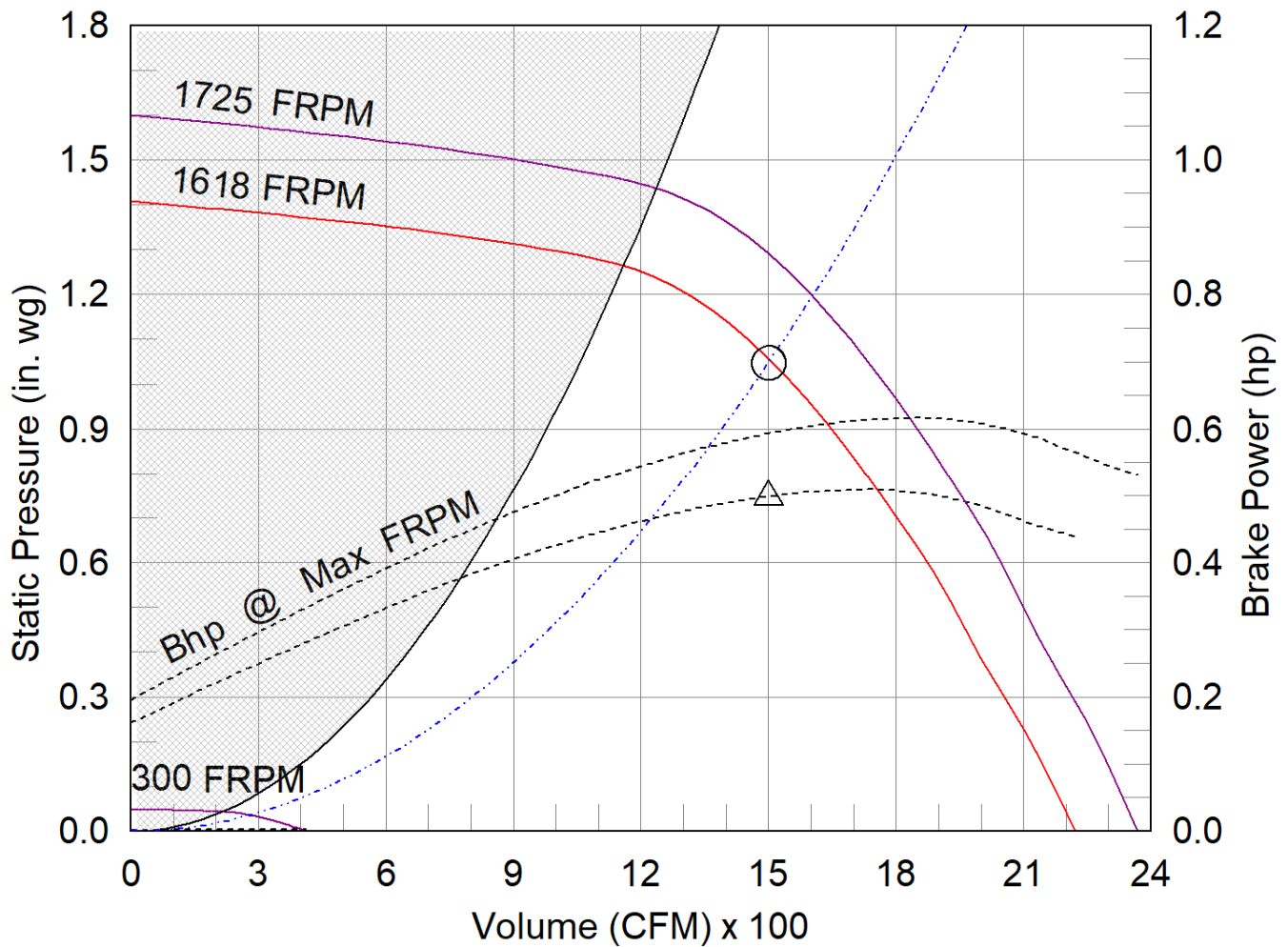
Notes: All dimensions shown are in units of in.

SQ-130-VG

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
1,500	1,500	1.048	1618	0.5



- △ Operating Bhp point
- Operating point at Total External SP
- Construction Limit
- Fan curve
- Min FRPM
- System curve
- Brake horsepower curve

Model: SQ-120-VG

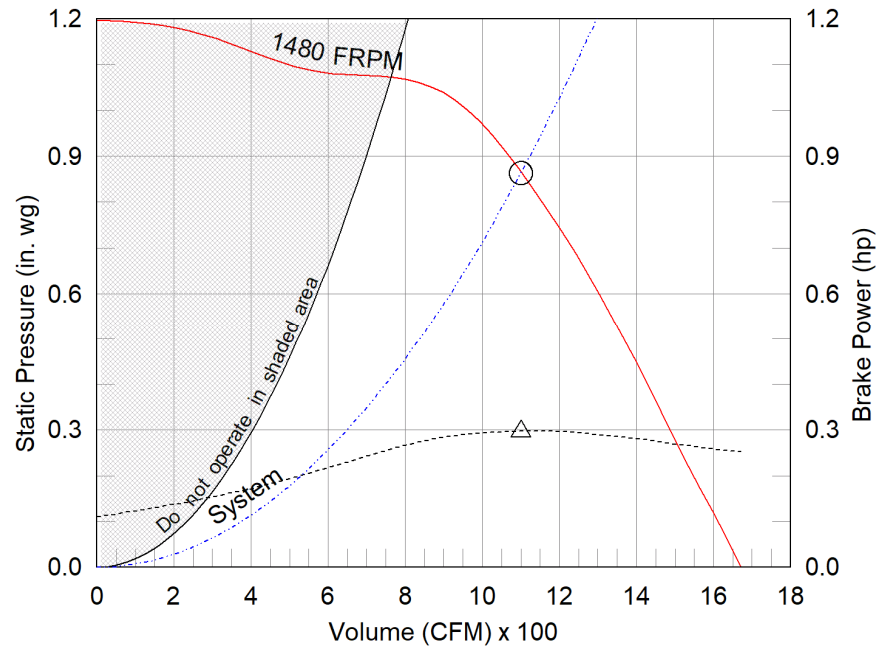
Direct Drive Centrifugal Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	51
Weight w/ Acc's (lb)	69

Performance	
Requested Volume (CFM)	1,100
Actual Volume (CFM)	1,100
Total External SP (in. wg)	0.863
Fan RPM	1480
Operating Power (hp)	0.3
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	5,086
Static Eff. (%)	50

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	ODP
Motor RPM	1725
Windings	1
FLA (Amps)	6.4
Min. Circuit Ampacity (MCA)	8
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: SQ-120-VG-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	72	69	70	70	63	59	55	50	70	59	8.9
Radiated	71	64	60	60	53	41	36	37	60	48	4.6

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: SQ-120-VG

Direct 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 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

Provided motor meets the motor efficiency requirements set forth in 2024 Title 24/California

UL/cUL 705 Listed - "Power Ventilators"

Junction Box Mounted and Wired

Switch, NEMA-1, Toggle, Shipped Separate

Aluminum Centrifugal Wheel

Insulated Housing - 1 in. Thick: Fan Housing

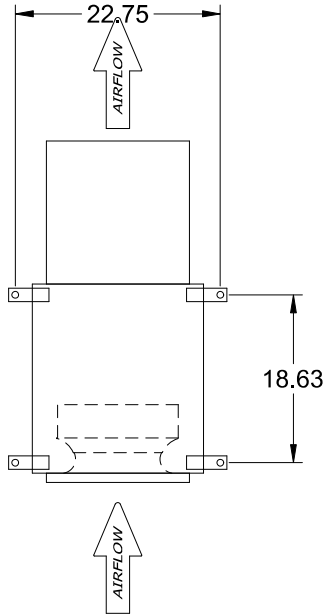
Motor Cover

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

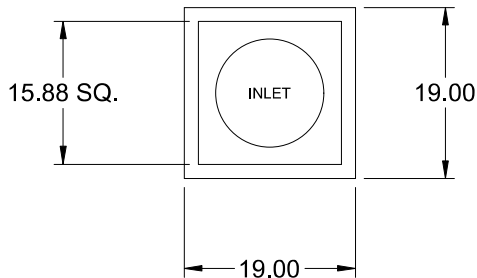
Unit Warranty: 1 Yr (Standard)

SQ-120-VG

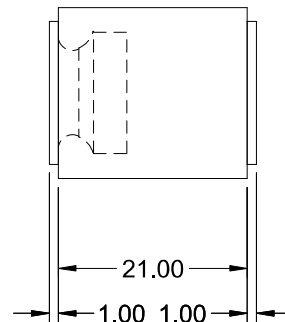
Direct Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

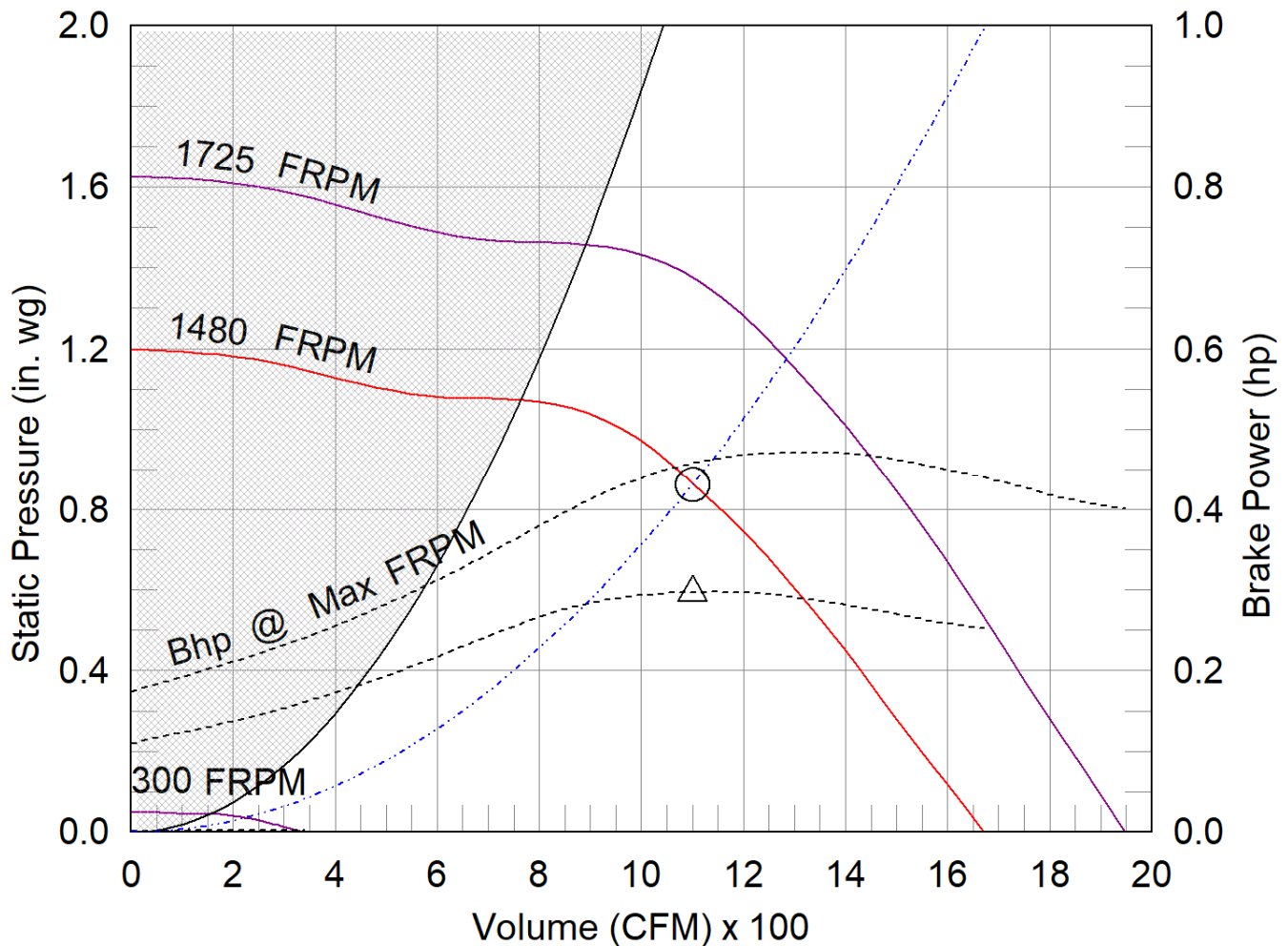
Notes: All dimensions shown are in units of in.

SQ-120-VG

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
1,100	1,100	0.863	1480	0.3



- △ Operating Bhp point
- Operating point at Total External SP
- Construction Limit
- Fan curve
- Min FRPM
- ... System curve
- Brake horsepower curve

Model: CSP-A700-VG

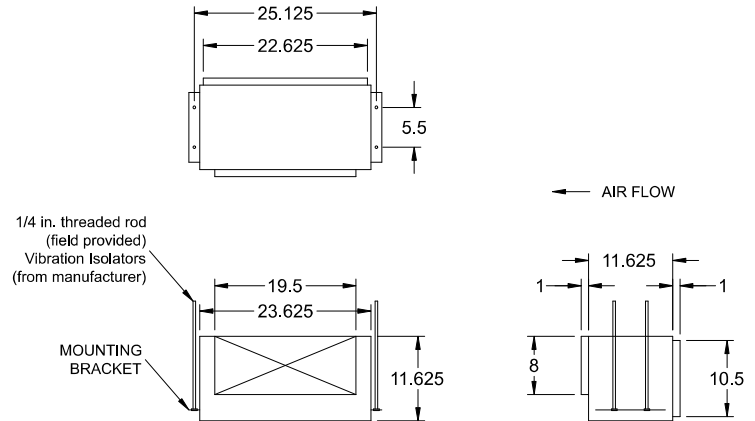
Inline Cabinet Fan

Standard Construction Features:

- Galvanized steel housing - Sound absorbing insulation - Outlet duct collar with integral spring loaded back draft damper - Forward curved wheel - Plug type disconnect - Adjustable mounting brackets - Square duct connection - Dual galvanized steel scroll design - Field rotatable discharge

Selected Options & Accessories:

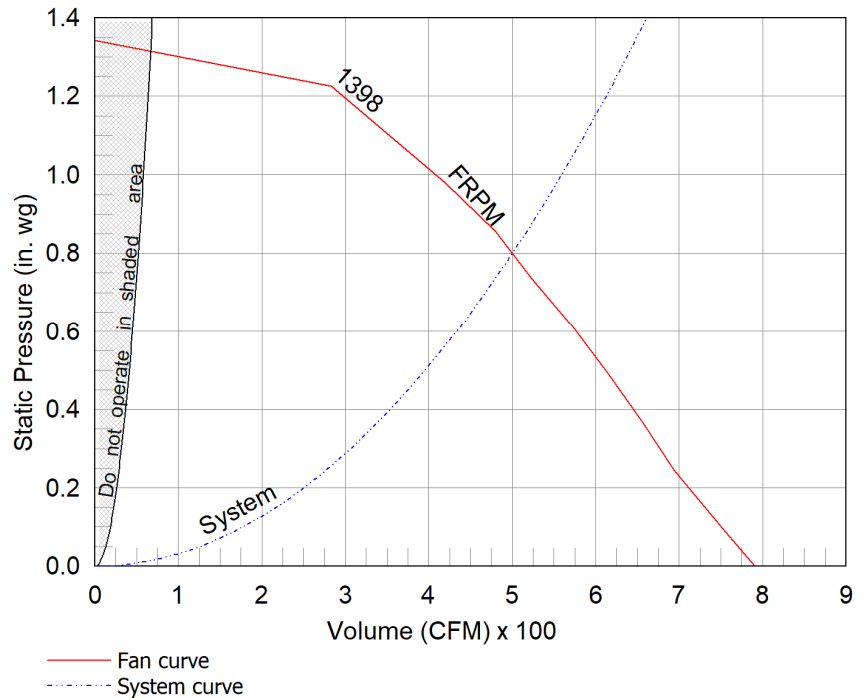
Motor rated for continuous use
Motor - Vari-Green EC motor w/Mounted Potentiometer Dial
UL/cUL 507 Listed - Electric Fan
Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
Adjustable easy installation mounting bracket
Polypropylene Wheel Material



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	39
Weight w/ Acc's (lb)	40

Performance	
Requested Volume (CFM)	500
Actual Volume (CFM)	500
Total External SP (in. wg)	0.8
Fan RPM	1398
* FLA (A)	4.1
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Sones	2.0

Motor	
Motor Mounted	Yes
** Input Watts (W)	145
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Control Input Voltage	7.6



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.

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	55	54	55	44	44	41	44	36	52	37	2.0

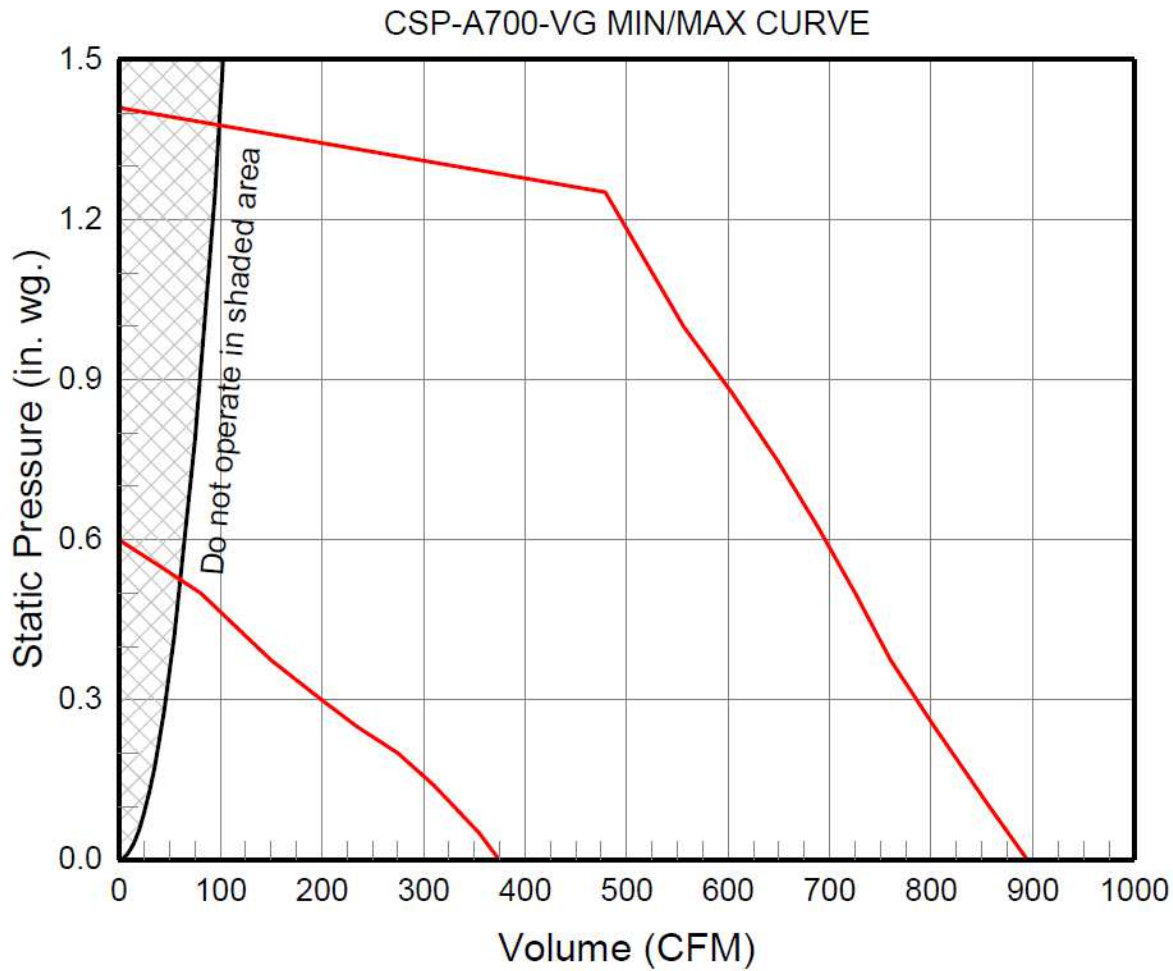


CSP-A700-VG

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
500	500	0.8	1398	0.19



Model: SQ-120-VG

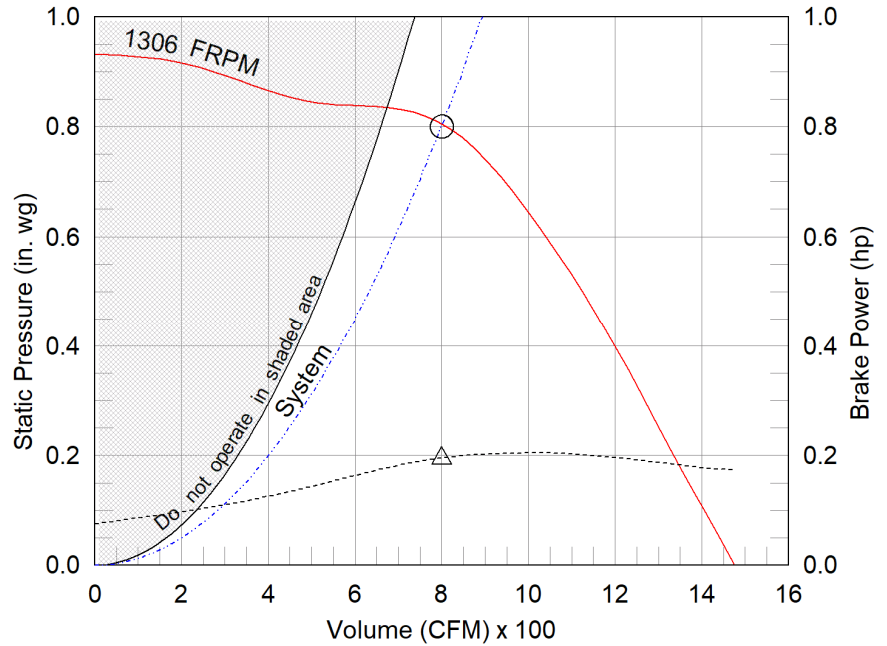
Direct Drive Centrifugal Inline Fan

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	51
Weight w/ Acc's (lb)	69

Performance	
Requested Volume (CFM)	800
Actual Volume (CFM)	800
Total External SP (in. wg)	0.8
Fan RPM	1306
Operating Power (hp)	0.19
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	4,488
Static Eff. (%)	52

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	465

Motor	
Motor Mounted	Yes
Size (hp)	1/2
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1725
Windings	1
FLA (Amps)	6.4
Min. Circuit Ampacity (MCA)	8
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: SQ-120-VG-X

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	70	68	67	66	59	55	51	46	66	55	7.2
Radiated	69	62	57	56	48	37	32	33	56	45	3.6

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: SQ-120-VG

Direct 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 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

Provided motor meets the motor efficiency requirements set forth in 2024 Title 24/California

UL/cUL 705 Listed - "Power Ventilators"

Junction Box Mounted and Wired

Switch, NEMA-1, Toggle, Shipped Separate

Aluminum Centrifugal Wheel

Insulated Housing - 1 in. Thick: Fan Housing

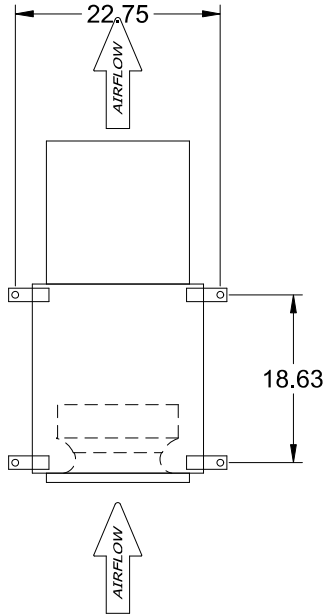
Motor Cover

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

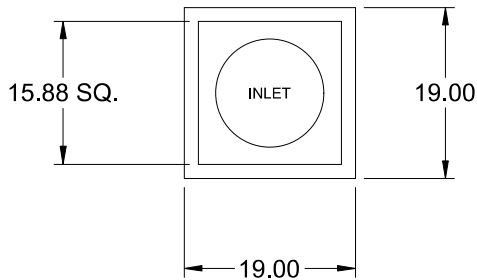
Unit Warranty: 1 Yr (Standard)

SQ-120-VG

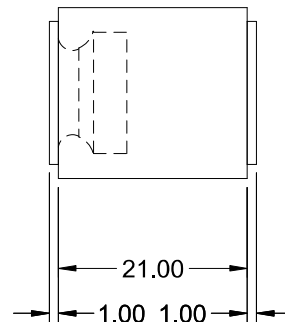
Direct Drive Centrifugal Inline Fan



TOP VIEW



END VIEW



SIDE VIEW

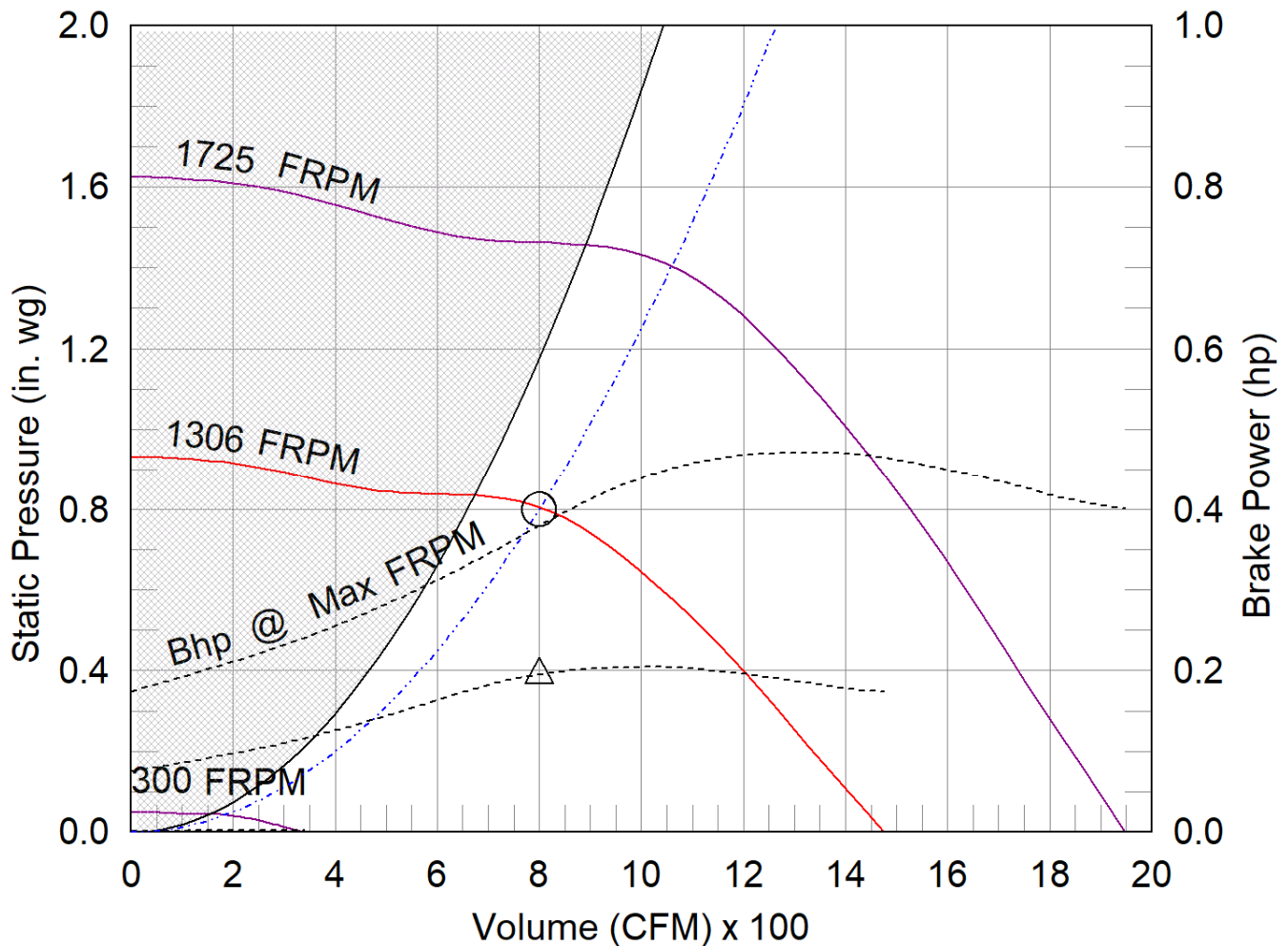
Notes: All dimensions shown are in units of in.

SQ-120-VG

Min/Max Fan Curve

Performance

Requested Volume (CFM)	Actual Volume (CFM)	Total External SP (in. wg)	Fan RPM	Operating Power (hp)
800	800	0.8	1306	0.19



- △ Operating Bhp point
- Operating point at Total External SP
- Construction Limit
- Fan curve
- Min FRPM
- ... System curve
- Brake horsepower curve

Model: CSP-A510-VG

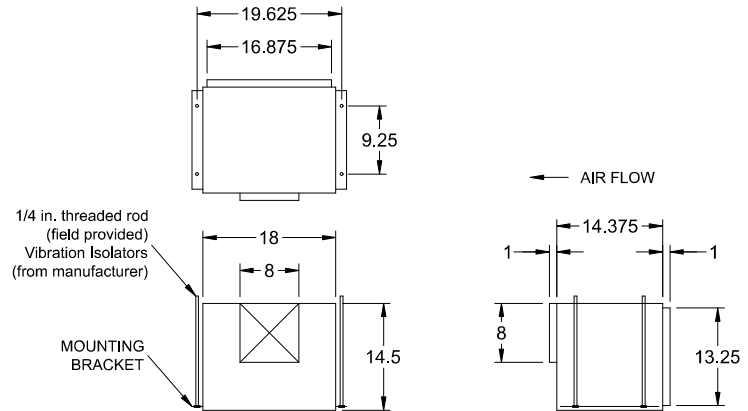
Inline Cabinet Fan

Standard Construction Features:

- Galvanized steel housing - Sound absorbing insulation - Outlet duct collar with integral back draft damper - Forward curved wheel - Plug type disconnect - Adjustable mounting brackets - Square duct connection - Field rotatable discharge

Selected Options & Accessories:

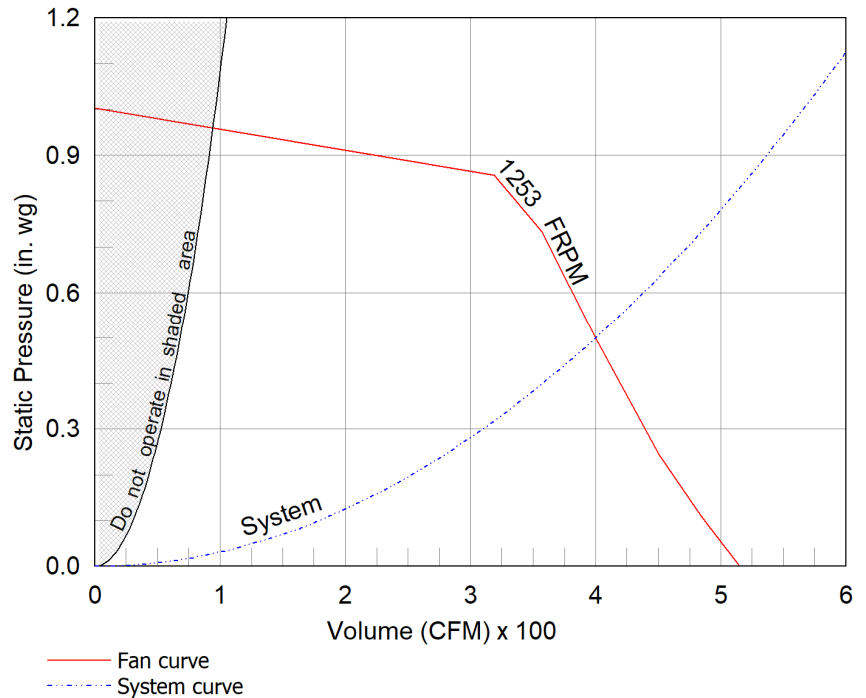
Motor rated for continuous use
Motor - Vari-Green EC motor w/Mounted Potentiometer Dial
UL/cUL 507 Listed - Electric Fan
Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
Adjustable easy installation mounting bracket
Polypropylene Wheel Material



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	36
Weight w/ Acc's (lb)	37

Performance	
Requested Volume (CFM)	400
Actual Volume (CFM)	400
Total External SP (in. wg)	0.5
Fan RPM	1253
* FLA (A)	2.45
Elevation (ft)	568
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Sones	1.1

Motor	
Motor Mounted	Yes
** Input Watts (W)	103
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Control Input Voltage	7.4



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.

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	54	57	54	40	30	24	28	26	48	33	1.1

