



Product Data

Project Name:	Factory 52 - Market Hall - Innovation Hub	Submittal Code:	233423.00-PD-01	REV:	00
Document Set:	Bid/Construction				
KLH Project #:	22552.01-Bid	Received Date:	02/11/2022		
Section Name:	HVAC Power Ventilators				
Section Number:	233423.00				
Submitted By:	HGC Construction Co.				
Authored By:	Cincinnati Air Conditioning				
Client Name:	MSA Design				

SUBMITTAL REVIEW

No Exceptions

By: Jennifer C. Adamec Date: 02/15/2022

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.

EF-1

- 1.1 No exceptions to submitted Greenheck fan G-120-B.
- 1.2 No exceptions to accessories including VCD control damper and roof curb.

End of Submittal Review

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 performing his 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.

Alex Spencer
2/21/2022

Signature
Date

MSA DESIGN

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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HGC Construction Co.
 2814 Stanton Avenue
 Cincinnati, Ohio 45206
 P: (513) 861-8866
 F: (513) 861-7878

Project: 121507 F52: Food Innovation Hub GMP
 02
 2750 Park Ave.
 Norwood, Ohio 45212

Submittal #233423-23A.26.1 - F52: Food Innovation Hub - HVAC Power Ventilators - SD 233423 - HVAC Power Ventilators

Revision	1	Submittal Manager	Kiley Sunderhaus (HGC Construction Co.)
Status	Open	Date Created	Feb 11, 2022
Issue Date	Feb 11, 2022	Spec Section	233423 - HVAC Power Ventilators
Responsible Contractor	Cincinnati Air Conditioning Co	Received From	Ken Wietmarschen (Cincinnati Air Conditioning Co)
Received Date		Submit By	Nov 30, 2021
Final Due Date	Feb 19, 2022	Lead Time	
		Cost Code	
Location		Type	Product Data
Approvers	Kiley Sunderhaus (HGC Construction Co.), Admin (KLH Engineers), Alex Spencer (MSA Architects)		
Ball in Court	Admin (KLH Engineers)		
Distribution	Greg Roach (HGC Construction Co.), Kevin Gilbert (HGC Construction Co.), Michael Collins (J.S. Held)		
Description	Revised per bulletin #1 changes		

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					Revised F52 Food Hub Power Ventilator Submittals for approval, per Bulletin #1, 2-11-22.pdf
Kiley Sunderhaus	Feb 11, 2022	Feb 11, 2022	Feb 11, 2022	Submitted	Revised F52 Food Hub Power Ventilator Submittals for approval, per Bulletin #1, 2-11-22.pdf (Current)
Admin	Feb 11, 2022	Feb 19, 2022		Pending	
Alex Spencer		Feb 19, 2022		Pending	

121507 - F52: Food Innovation Hub GMP 02

2750 Park Ave.
Norwood, Ohio 45212
United States



HGC Construction Co.
2814 Stanton Avenue
Cincinnati, Ohio 45206
United States
(513) 861-8866

Title	Submittal Manager
F52: Food Innovation Hub - HVAC Power Ventilators - SD	Kiley Sunderhaus

Spec Section	Type
233423 - HVAC Power Ventilators	Product Data

Number	Rev
233423-23A.26	1

Description
Revised per bulletin #1 changes

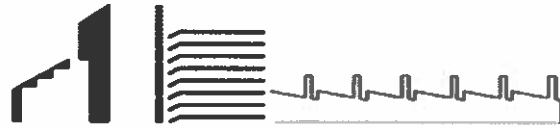


2814 STANTON AVENUE, CINCINNATI, OH 45206

Reviewed by Kiley Sunderhaus

Reviewed – No Exceptions Noted
 Reviewed – Exceptions Noted
 Exceptions Noted – Revise and Resubmit

This print has been reviewed as to general layout but does not relieve the subcontractor of responsibility under the contract documents. Detailed dimensions and proper integration of equipment and/or materials are the responsibility of the subcontractor.



Cincinnati Air Conditioning

Submittal Cover Sheet

Factory 52 Food Innovation Hub

4590 Beech Street
Norwood, Ohio 45212

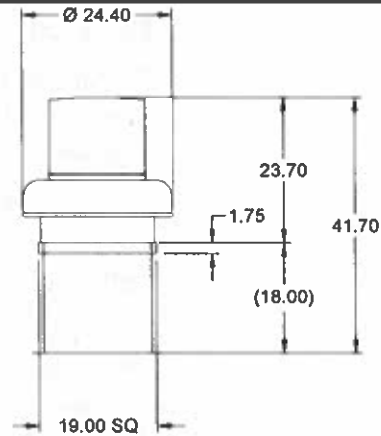
Architect: MSA Design
Engineer: KLH Engineering
HVAC: Cincinnati Air Conditioning
Item: Power Ventilators, PER BULLETIN #1 (EF #1 ONLY)
Spec. # 233423

Cincinnati Air Conditioning Co.
Submitted for Approval
Job #C-6047
Date: 2/11/2022
Signed: <u>A. Kenneth Wietmarschen</u> PM Name

Model: G-120-B

Direct Drive Centrifugal Roof Exhaust Fan

Previously: G-123-B



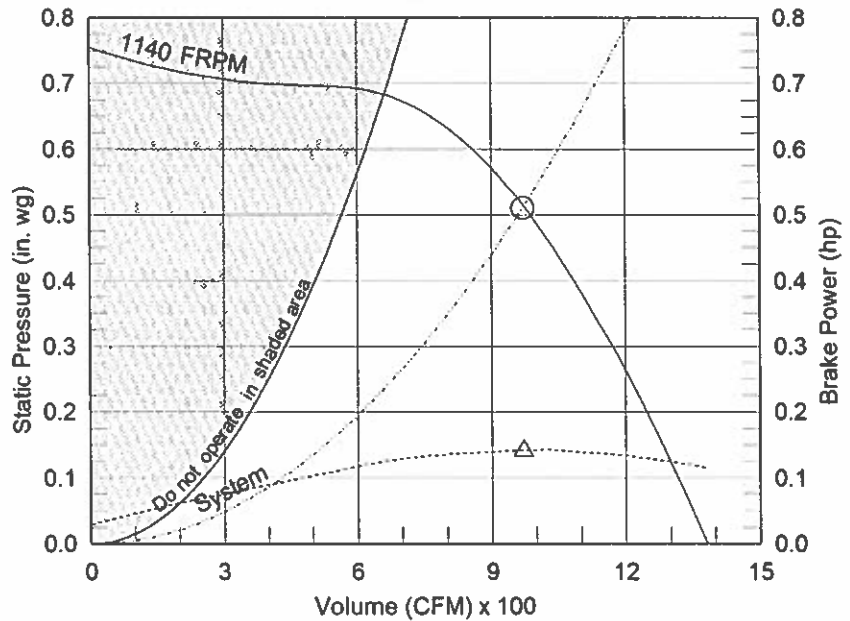
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	48
Weight w/ Acc's (lb)	75
Weight w/ Acc's and Curb (lb)	102
Max T Motor Frame Size	56
Standard Curb Cap Size (in.)	19 x 19
Optional Damper (in.)	12 x 12
Roof Opening (in.)	14.5 x 14.5

Performance	
Requested Volume (CFM)	960
Actual Volume (CFM)	971
Total External SP (in. wg)	0.511
Fan RPM	1140
Operating Power (hp)	0.14
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	3,898
Static Eff. (%)	55

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	1,044

Motor	
Motor Mounted	Yes
Size (hp)	1/6
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1140
Efficiency Rating	Standard
Windings	1
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

Static Pressure Calculations

External SP	0.5 in. wg
Direct Drive RPM Adjustment	0.011 in. wg
Total External SP	0.511 in. wg

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	67	73	72	65	58	56	51	49	67	56	8.0

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 ANSI/AMCA 301 at 5 ft



Model: G-120-B

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:

Standard Curb Cap Size - 19 Square
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle, Shipped with Unit
Junction Box Mounted & Wired
Birdscreen: Galvanized, nom. 84% Free Area
Unit Warranty: 1 Yr (Standard)
Damper Shipped Loose, VCD-20-PB-12X12, Not Coated
Damper Actuator (TFB120), 115 VAC Actuated

Selected Sub Marks

See individual submittals for full details
GPI-19-G18

Disconnect Switch

Enclosure Rating: NEMA-1

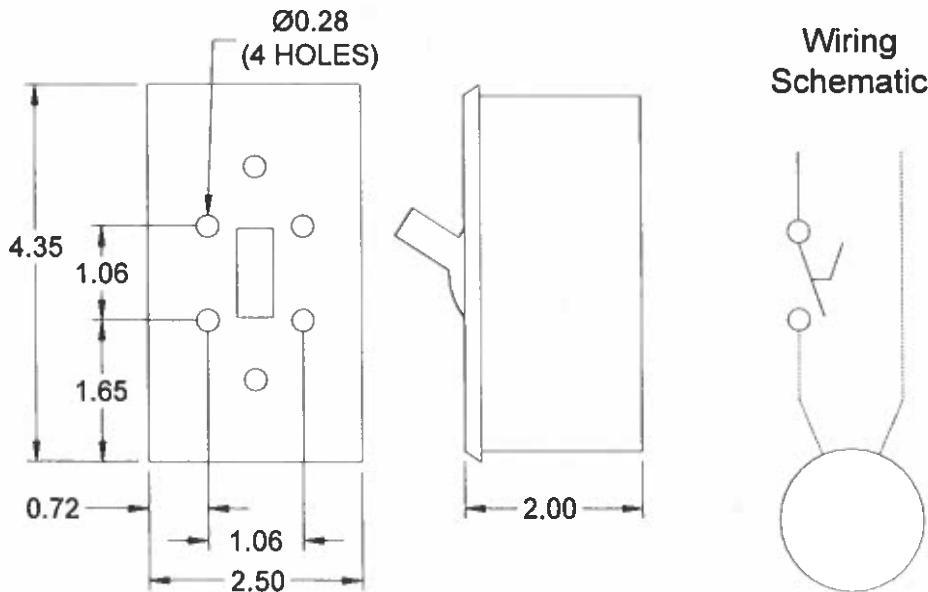
Standard Construction Features:

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:	1/6 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:	1140	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

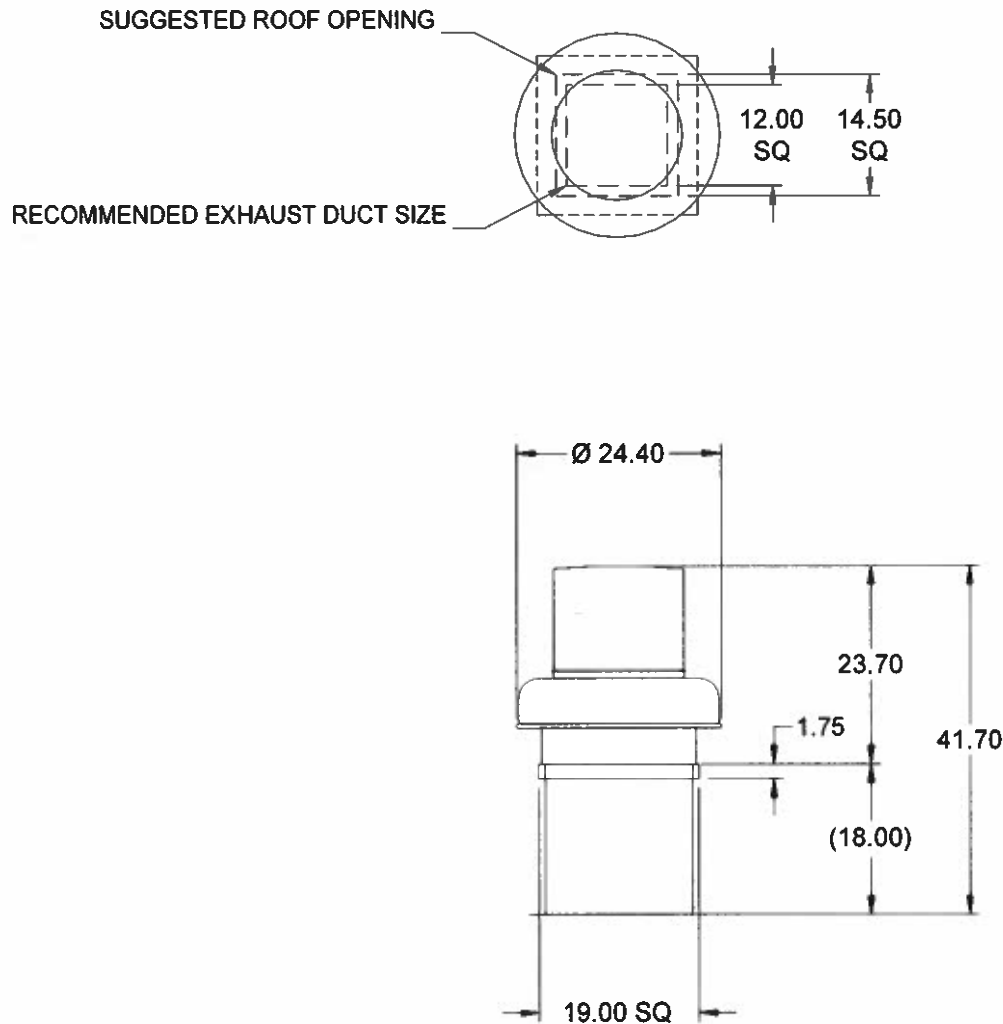
Electrical Drawing Details



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..

Control Damper

Model: VCD-20

Standard Construction Features:

- Model VCD-20 is a well built general purpose damper for automatic control or manual balancing applications - Galvanized 16 ga channel frame - Galvanized blades with reinforcements - Side mounted steel linkage is out of airstream - 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: No

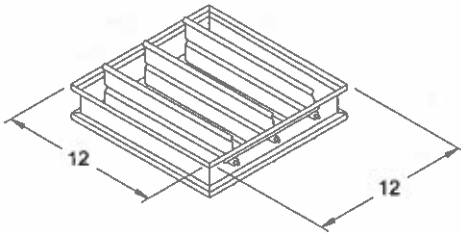
Actuator Configuration:

Manufacturer: Belimo Jackshaft Quantity: 0

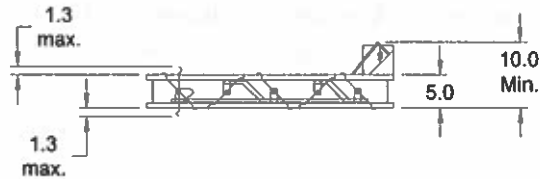
Model: TFB120

Mounting: Internal

Quantity: 1



DAMPER



TYP. SECTION VIEW

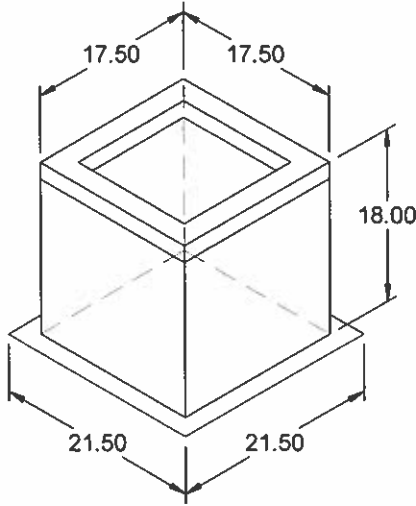
Notes: All dimensions shown are in units of in.
Width And height furnished approximately 0.25 in. undersize

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) does not include 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 sone 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. 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	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.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18	19	19	17.5	17.5	14	14	21.5	21.5	18	18

*May not be applicable

Accessories

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

