





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

**Project: 122015 Seger Natatorium**  
 7400 Cornell Road  
 Montgomery, Ohio 45242

## Submittal #1.0 - 233423 Exhaust Fan & Air Devices

<b>Revision</b>	0	<b>Submittal Manager</b>	Brian Frey (HGC Construction Co.)
<b>Status</b>	Forwarded for Review	<b>Date Created</b>	Apr 5, 2023
<b>Issue Date</b>	Apr 5, 2023	<b>Spec Section</b>	
<b>Responsible Contractor</b>	TP Mechanical - Cincinnati	<b>Received From</b>	Brad Williams (TP Mechanical - Cincinnati)
<b>Received Date</b>	Apr 4, 2023	<b>Submit By</b>	Apr 15, 2023
<b>Final Due Date</b>	Apr 15, 2023	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Data
<b>Approvers</b>	Mary King (SHP)		
<b>Ball in Court</b>	Mary King (SHP)		
<b>Distribution</b>	Jerry Dirr (SHP), David Beiersdorfer (HGC Construction Co.), Justin Barth (HGC Construction Co.), Brian Frey (HGC Construction Co.), Brian Ellis (HGC Construction Co.)		
<b>Description</b>	Exhaust Fan and Air Device Product Data		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					<a href="#">233423 Exhaust Fan &amp; Air Devices.pdf</a>
Mary King	Apr 5, 2023	Apr 15, 2023		Pending	

<input checked="" type="checkbox"/>	<b>Reviewed</b>	Fabrication/Installation may be undertaken. Reviewed does not authorize changes to the Contract Sum or Contract Time.
<input type="checkbox"/>	<b>Reviewed as Noted</b>	
<input type="checkbox"/>	<b>Revise and Resubmit</b>	Fabrication and/or Installation MAY NOT be undertaken. In resubmitting limit corrections to items marked.
<input type="checkbox"/>	<b>Rejected</b>	
Reviewed neither extends nor alters any contractual obligations of the Architect or Contractor. 312 Plum Street Suite 700 Cincinnati, OH 45202		
By: Elizabeth Heinbach		Date: 4/12/2023

## SUBMITTAL DATA

**Project:** Sycamore Seger Pool Renovation  
**Bid Category :** Plumbing & HVAC  
**Project No.:** A1000978  
**TP Tab No.:**  
**Construction Manager:** HGC Construction  
**Architect/Engineer:** SHP  
**Submittal For:** Exhaust Fans and Air Devices  
**Specification #:** Per Schedule on M000.0  
**Manufacturer:** Greenheck  
**Project Manager:** Brad Williams

The attached submittal data has been reviewed by TP Mechanical Contractors for compliance with the Architect/Engineer's specifications and plan schedule for this project.

In order to maintain the project schedule, we request that this submittal be returned to TP Mechanical Contractors **within 7 days.**

**NOTE: Material cannot be released without Architect/Engineer's approval of submittal.**

*(Please place stamp of approval here)*

<b>Build Every Day</b>	SHOP DRAWINGS / SUBMITTAL REVIEW	
	HGC CONSTRUCTION	
<input checked="" type="checkbox"/> Reviewed	<input type="checkbox"/> Revise and Resubmit	
<input type="checkbox"/> Reviewed with Changes Noted	<input type="checkbox"/> Rejected	
BY <u>Brian Frey</u>	DATE <u>4/5/2023</u>	
SUBMITTAL # <u>1</u>	SPEC <u>233423-1</u>	
RESPONSIBLE CONTRACTOR <u>TP Mecahnical</u>		
<small>Corrections or comments made relative to submittals during this review do not relieve the subcontractor from compliance with the requirements of the drawings and specifications. This check is for review of general conformance with the plans and specifications only. Approvals are subject to subcontractor's performance within the confines of the contract documents. Review of the dimensions will not serve to relieve the subcontractor of contractual responsibility for any deviation from the contract requirements. The subcontractor is responsible for conforming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of other trades and performing his work in a safe and satisfactory manner. THIS REVIEW DOES NOT INDICATE NOR IMPLY ANY APPROVAL OF CHANGES TO TIME OR CHANGES IN COST</small>		

<u>X</u>	PRODUCT DATA
	DRAWINGS
<u>3/2/23</u>	DATE SUBMITTED
	DATE RESUBMITTED
T. P. MECHANICAL CONTRACTORS	
BY <u>Brad Williams</u> TLJ	
This drawing or brochure has been checked to quality or proper components only. Approval of this drawing or brochure shall not relieve the supplier of responsibility for accuracy or dimensions of full compliance with plans and specifications and purchase order.	

# ***SUBMITTAL***

*Job Name:* **Sycamore HS Segar Natatorium**

*Engineer:* SHP

*Contractor:* TP Mechanical

*Elevation: (ft)* 499

*Date:* 2/21/2023

*Submitted By:* Josh Wolfe

EAP INC

3930 VIRGINIA AVE

CINCINNATI, OH 45227

US

Phone: (513)489-9494

Fax: (513)489-6448

Email Address: [jwolfe@eapnet.com](mailto:jwolfe@eapnet.com)

**SUBMITTAL NOTES:**

Fan Submittal



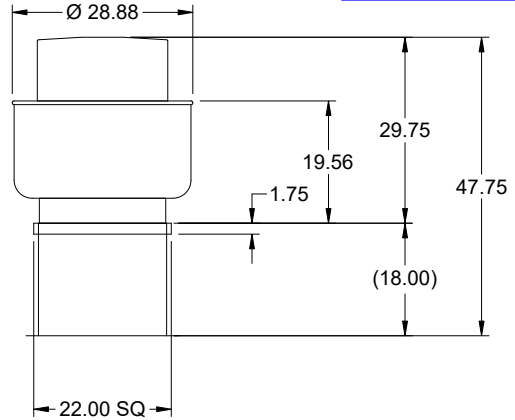
P.O. Box 410 Schofield, WI 54476 (715) 359-6171 FAX (715) 355-2399 [www.greenheck.com](http://www.greenheck.com)

**Model: CUE-140-VG**

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Previously: CUE-141-VG

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	68
Weight w/ Acc's (lb)	76
Weight w/ Acc's and Curb (lb)	108
Standard Curb Cap Size (in.)	22 x 22
Optional Damper (in.)	16 x 16
Roof Opening (in.)	18.5 x 18.5

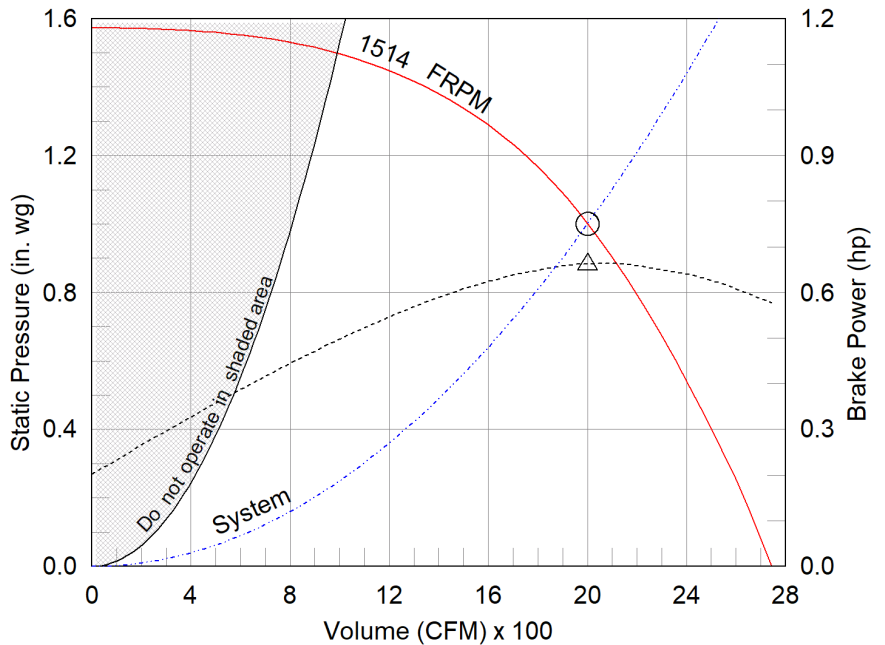


OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Performance	
Requested Volume (CFM)	2,000
Actual Volume (CFM)	2,000
Total External SP (in. wg)	1
Fan RPM	1514
Operating Power (hp)	0.66
Elevation (ft)	499
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074
Tip Speed (ft/min)	5,799
Static Eff. (%)	48

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	1,163

Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1550
Efficiency Rating	High
Windings	1
FLA (Amps)	8.8
Min. Circuit Ampacity (MCA)	11
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	72	70	81	74	66	59	60	56	76	64	12.4



## Model: CUE-140-VG

Direct Drive Upblast Centrifugal Roof Exhaust Fan

### Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - 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 - 22 Square  
UL/cUL 705 Listed - "Power Ventilators"  
Switch, NEMA-1, Toggle, Shipped with Unit  
Junction Box Mounted & Wired  
Foam Curb Seal (Factory Applied)  
Birdscreen: Stainless Steel, nom. 85% Free Area  
Unit Warranty: 1 Yr (Standard)  
Damper Shipped Loose, BD-100-PB-16X16, Gravity Operated, Not Coated

### Selected Sub Marks

See individual submittals for full details  
GPI-22-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.***

# Disconnect Switch

Enclosure Rating: NEMA-1

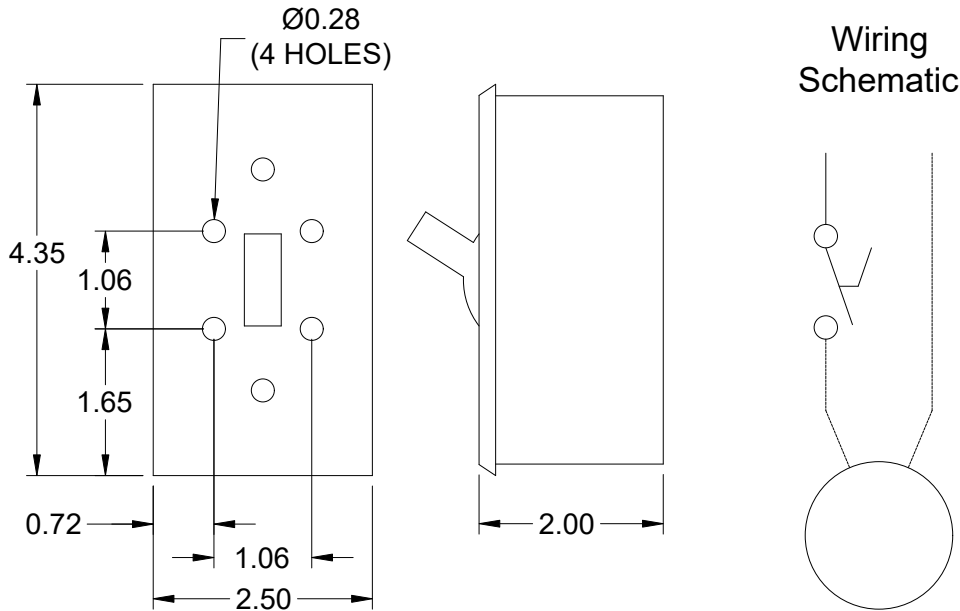
**Standard Construction Features:**

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.:	Mounted and Wired	RPM:	1550	Exp. Resist. Wiring:	None		
Switch Mounting:	Shipped With Unit						

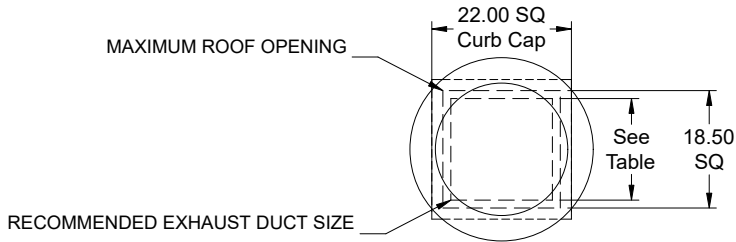
Electrical Drawing Details



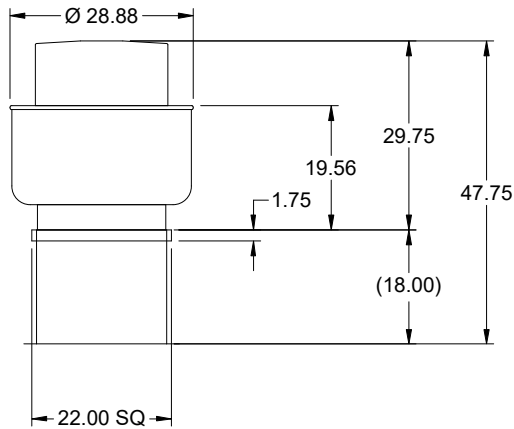
Notes: All dimensions shown are in units of in.

# Assembly Drawing

Type: Direct Drive Upblast Centrifugal Roof Exhaust Fan



DUCT TYPE	SIZE
STANDARD	16 SQ
FIRE-WRAPPED	12 SQ



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

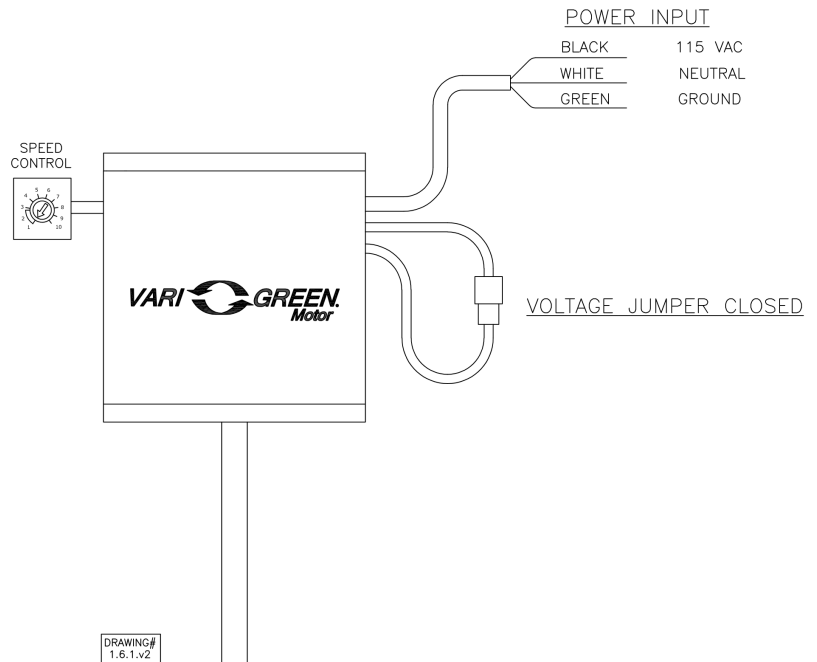
An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%. Vari-Green motors feature a soft-start and inherent thermal and current protection built into each unit. Inrush current at start up is eliminated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

### Motor Configuration

Input Voltage: 115  
Speed Reference: Dial on Motor  
Permanent Dial: Yes

### Control Configuration

Control Type: N/A  
Transformer: None



# Horizontal Mount Exhaust Damper

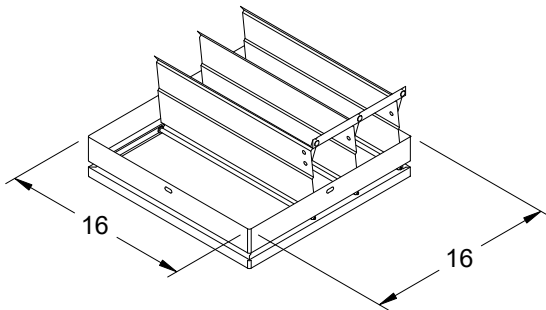
Model: BD-100

## Standard Construction Features:

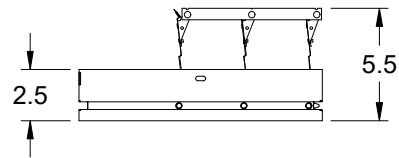
- Model BD-100 is a horizontal mount exhaust damper (air flow up) and is constructed of 24 ga galvanized steel with pre-punched mounting holes
- Damper blades are 0.016 in. roll formed aluminum with vinyl seals on the closing edge, and spring assisted for ease of opening
- Axle/bearing is constructed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

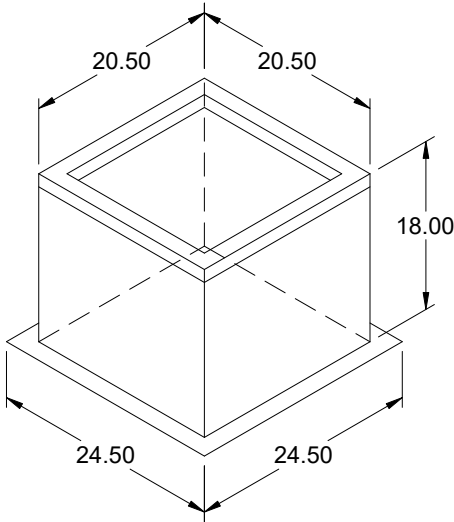
Notes: All dimensions shown are in units of in.

## 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) 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-22	Nominal	1.5	32	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	22	22	20.5	20.5	17	17	24.5	24.5	21	21

\*May not be applicable

#### Accessories

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

