



CONTROLLED AIR, INC.

12009 Tramway Drive • Cincinnati, Ohio 45241

PROJECT: Liberty Collective

LOCATION: Liberty Township, OH

CUSTOMER: Bachman's

ENGINEER:

EQUIPMENT: Loren Cook Fans

**SUBMITTED BY: MATT TEPE
CONTROLLED AIR INC.
12009 TRAMWAY DRIVE
CINCINNATI, OH 45241**

PHONE: 513-769-0290
FAX: 513-769-6633
matt.tepe@controlled-air.com

DATE: 6/26/2024



COOK



MARK: EF-1

PROJECT: LIBERTY COLLECTIVE

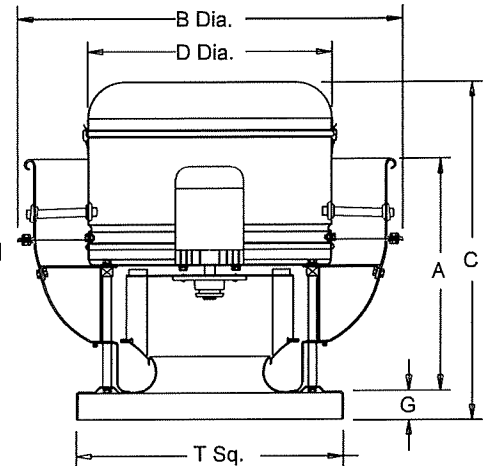
DATE: 6/26/2024

ACRUH-EC

**Upblast Centrifugal Exhaust Ventilator
Electronically Commutated Vari-Flow® Motor
Roof Mounted/Direct Drive**

STANDARD CONSTRUCTION FEATURES:

All aluminum housing - Backward inclined all aluminum wheel - Two piece top cap with stainless steel quick release latches - (size 101 - 150) - Welded curb cap corners - Birdscreen - Permanently lubricated ball bearing electronically commutated motor - Corrosion resistant fasteners - Transit tested packaging.



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	Speed Control
1	165RH16DEC	1600	1.40	1493	554	n/a(<1HP)	EC

Altitude (ft): 1004 Temperature (F): 70

Motor Information

RPM	Volts/Ph/Hz	Enclosure
1650	115/1/60	OPEN -EC



Motor is electronically/thermally protected.

Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
76	74	80	75	67	69	65	60	77	65	14.1

- Distance from Sound source 5 ft

Accessories:

- FAN MOUNTED SPEED CONTROL DISCONNECT NEMA 1 PRE-WIRED
- ROOF CURB RCG 22 13.5H -C-T+N

Dimensions (inches)

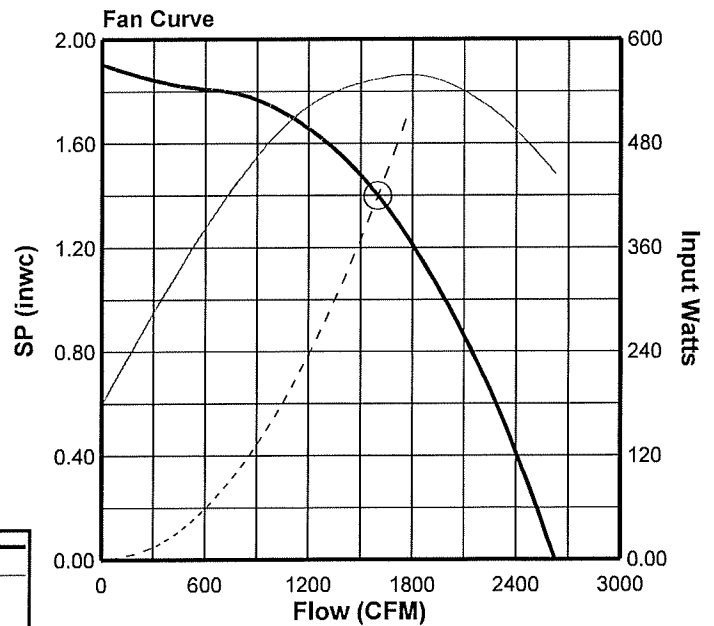
A	20-15/16
B	34-11/16
C	27-3/4
D	23-13/16
G	2
T Sq.	24
Roof Open. Sq.*	19-1/2

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	119	Unit	94
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* Roof opening size for curbs supplied by Cook only.

***Includes fan, motor & accessories.





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ACRUH-EC

Performance

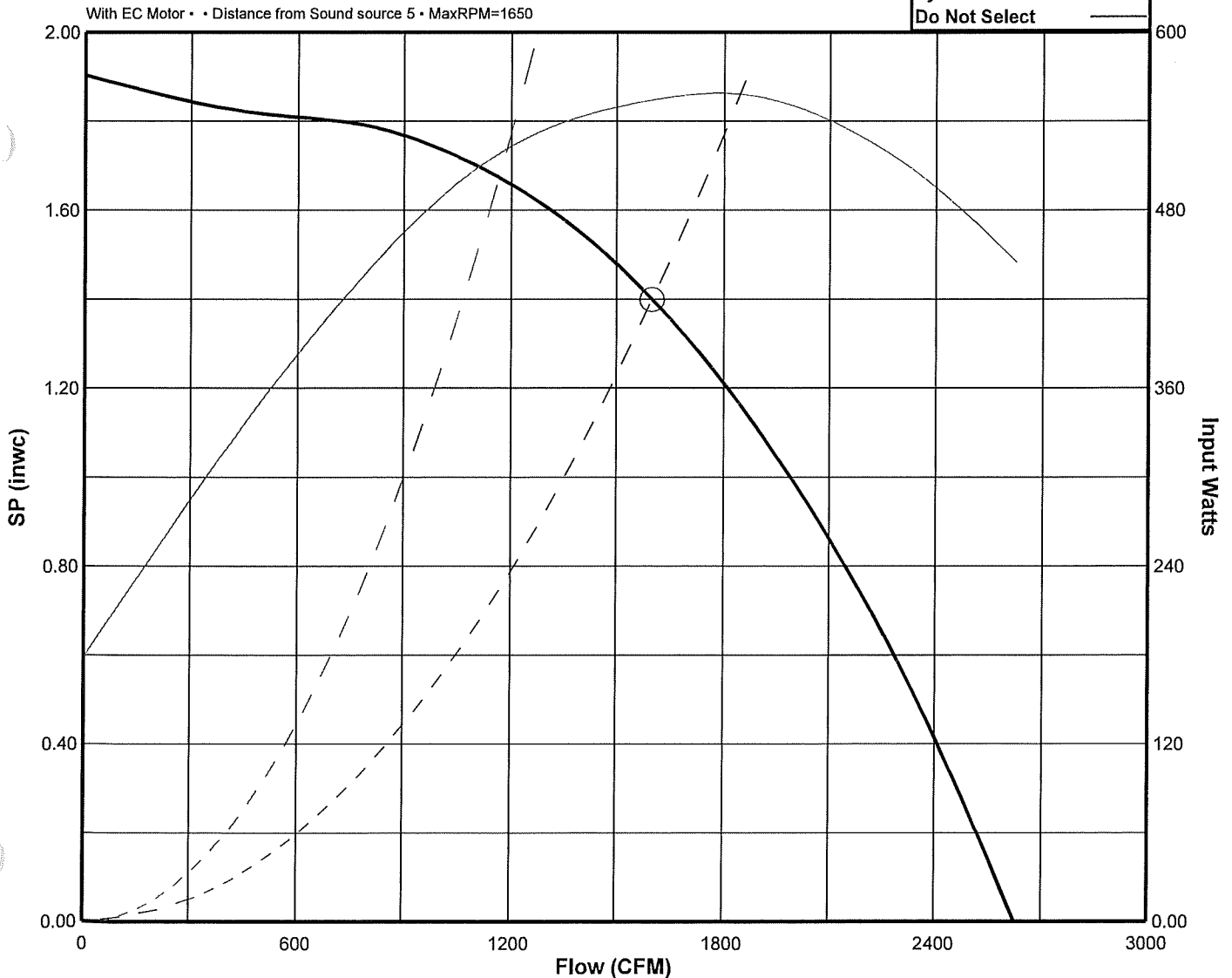
Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	OVEL (fpm)	TSPD (fpm)	SE	Temp (°F)	ALT (ft)
165RH16DEC	1600	1.40	1493	554	n/a(<1HP)	596	6449	59%	70	1004

Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
76	74	80	75	67	69	65	60	77	65	14.1

Fan Curve Legend

CFM vs SP	—
CFM vs Watts	—
Point of Operation	○
System Curve	—
Do Not Select	—





COOK



MARK: EF-2,3

PROJECT: LIBERTY COLLECTIVE

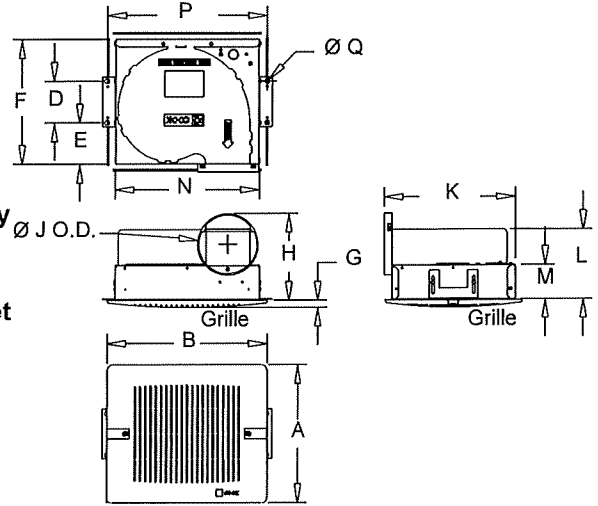
DATE: 6/26/2024

GEMINI Vari-Flow®

Ceiling Fans
100 Series

STANDARD CONSTRUCTION FEATURES:

Forward curved injection molded polypropylene fan wheel - Injection molded flame resistant fan housing with round outlet duct - 22 ga. galvanized steel inlet box - Isolation mounted motor, mounted to one piece galvanized stamped steel integral motor mount/inlet - Permanently lubricated electronically commutated variable speed motor with built-in electronic overload protection and disconnect plug - Field wiring compartment with receptable - Adjustable prepunched mounting bracket - White, high impact styrene injection molded grille - Shipped in ISTA certified transit tested packaging



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Nominal RPM	Input Watts	Speed Control
2	GCVF-180	100	.570	1082	21	EC

Altitude (ft): 1004 Temperature (F): 70

Motor Information

Its/Ph/Hz	Nameplate Amps
115/1/60	1.2

Motor is electronically/thermally protected.



Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
49	53	55	55	54	50	46	42	58	47	3.0

- Distance from Sound source 5 ft

Accessories:

- WHITE PLASTIC GRILLE
- INTEGRAL BD DAMPER
- TYPE P INTERNAL CTRL
- RC-75 SET(4) - ISOLATORS

Dimensions (inches)

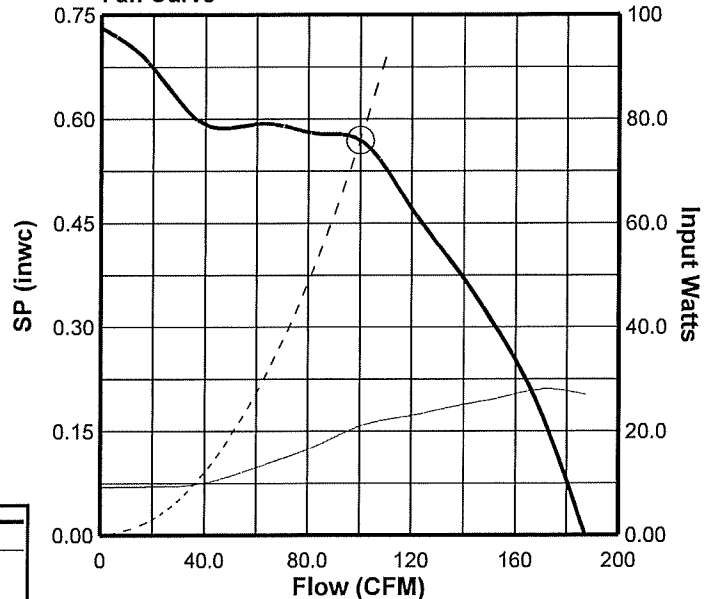
A Plastic	13-1/4	H	8-3/8
B Plastic	15-1/2	J O.D.	5-15/16
A Steel	13-1/2	K	12-3/4
B Steel	15-1/2	L	6-11/16
A Aluminum	13-3/4	M	3-1/4
B Aluminum	15-1/2	N	14
D	4	P	15-1/2
E	4	Q	1/2
F	12		
G	5/8		

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	22	Unit	19
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***Includes fan, motor & accessories.

Fan Curve



Fan Curve Legend

CFM vs SP	—
CFM vs Watts	- - -
Point of Operation	○
System Curve	—



COOK



MARK: EF-2,3
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DATE: 6/26/2024

GEMINI Vari-Flow®

Performance

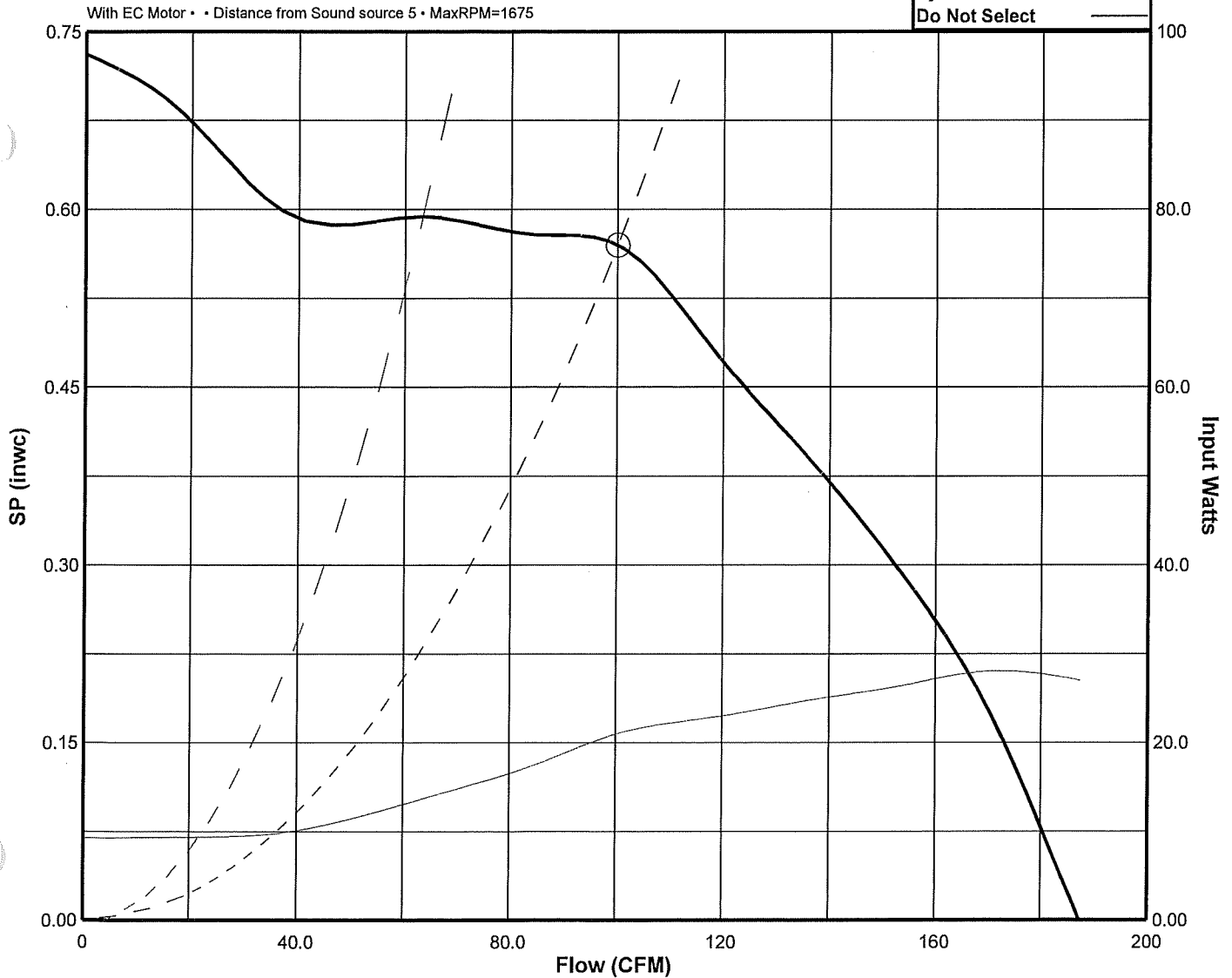
Catalog Number	Flow (CFM)	SP (inwc)	Nominal RPM	Input Watts	OVEL (fpm)	TSPD (fpm)	SE	Temp (°F)	ALT (ft)
GCVF-180	100	.570	1082	21	510	2161	40%	70	1004

Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
49	53	55	55	54	50	46	42	58	47	3.0

Fan Curve Legend

CFM vs SP	—
CFM vs Watts	- - -
Point of Operation	○
System Curve	—
Do Not Select	—





COOK

GEMINI

Ceiling Fans 100 Series

STANDARD CONSTRUCTION FEATURES:

Forward curved injection molded polypropylene fan wheel - Injection molded flame resistant fan housing with round outlet duct - 22 ga. galvanized steel inlet box - Isolation mounted motor, mounted to one piece galvanized stamped steel integral motor mount/inlet - Permanently lubricated 2-speed motor with built-in thermal overload protection and disconnect plug - Field wiring compartment with receptacle - Adjustable prepunched mounting bracket - White, high impact styrene injection molded grille - Shipped in ISTA certified transit tested packaging.

Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Nominal RPM	Input Watts	Speed Control
2	GC-188	200	.530	1377	96	FSC

Altitude (ft): 1004 Temperature (F): 70

Motor Information

Volts/Ph/Hz	Nameplate Amps
115/1/60	1

Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
59	62	67	64	59	54	52	47	65	54	5.5

- Distance from Sound source 5 ft

Accessories:

WHITE PLASTIC GRILLE
FAN SPEED CONTROLLER 5A 120V PREWIRED
INTEGRAL BD DAMPER
RC-75 SET(4) - ISOLATORS

Fan Curve Legend

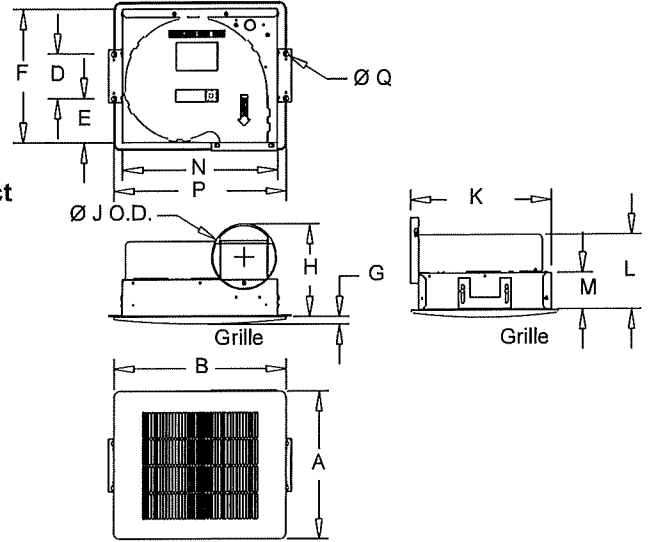
CFM vs SP	—
CFM vs Watts	—
Point of Operation	○
System Curve	—



MARK: EF-4,5

PROJECT: LIBERTY COLLECTIVE

DATE: 6/26/2024



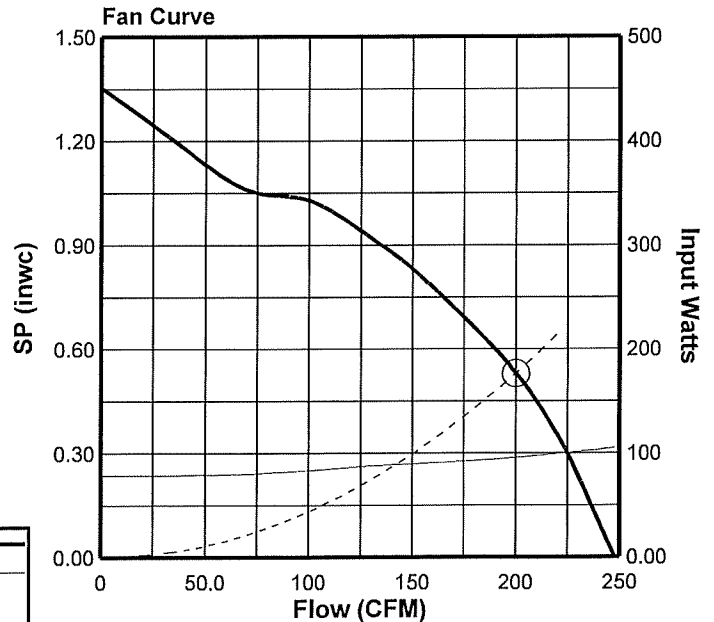
Dimensions (inches)

A Plastic	13-1/4	M	3-1/4
B Plastic	15-1/2	N	14
D	4	P	15-1/2
E	4	Q	1/2
F	12		
G	5/8		
H	8-3/8		
J O.D.	5-15/16		
K	12-3/4		
L	6-11/16		

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	20	Unit	17
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***Includes fan, motor & accessories.





COOK



MARK: EF-4,5
PROJECT: LIBERTY COLLECTIVE
DATE: 6/26/2024

GEMINI

Performance

Catalog Number	Flow (CFM)	SP (inwc)	Nominal RPM	Input Watts	OVEL (fpm)	TSPD (fpm)	SE	Temp (°F)	ALT (ft)
GC-188	200	.530	1377	96	1020	2750	43%	70	1004

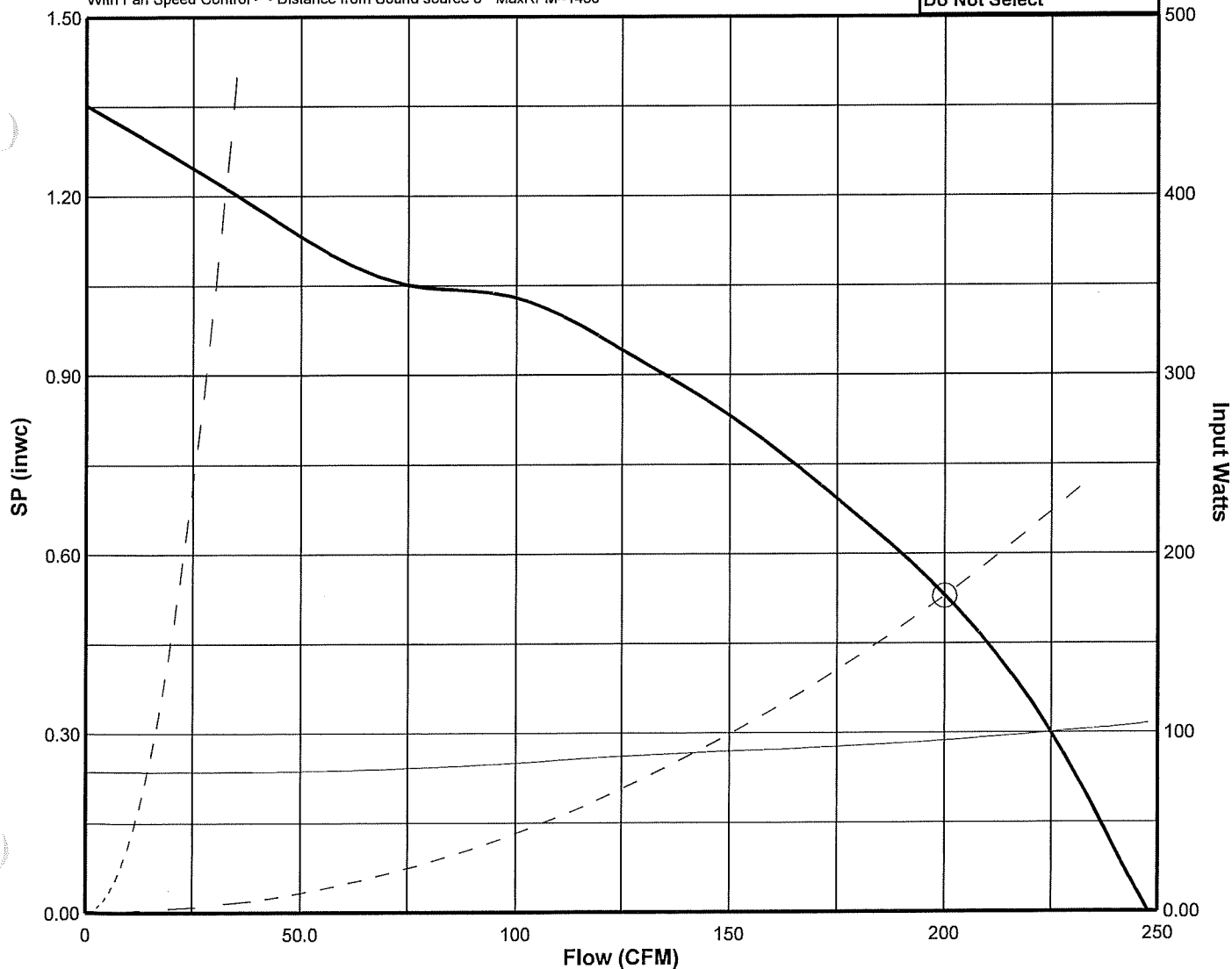
Sound Data Inlet Sound Power by Octave Band

1	2	3	4	5	6	7	8	LwA	dBA	Sones
59	62	67	64	59	54	52	47	65	54	5.5

Fan Curve Legend

CFM vs SP	—
CFM vs Watts	—
Point of Operation	○
System Curve	—
Do Not Select	—

With Fan Speed Control • Distance from Sound source 5 • MaxRPM=1450





COOK

MARK: CAP

PROJECT: LIBERTY COLLECTIVE

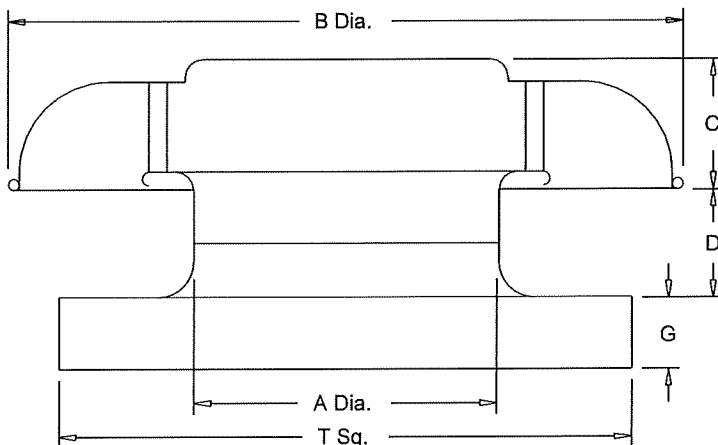
DATE: 6/26/2024

PR

Spun Aluminum Intake/Relief Ventilator

STANDARD CONSTRUCTION FEATURES:

All aluminum construction - Anti-backdraft flange - Five year warranty.



Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)
2	16 PR	917	.050

Altitude (ft): 1004 Temperature (F): 70

Accessories:

- BD-22 DAMPER
- ROOF CURB RCG 26 13.5H -C+T+N
- BIRDSCREEN

Dimensions (inches)

A Dia.	16-1/2
B Dia.	27-3/4
C	5-1/16
D	5-1/2
G	2
T Sq.	28
Roof Open.	23-1/2

NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	72	Unit	66
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***Includes accessories.



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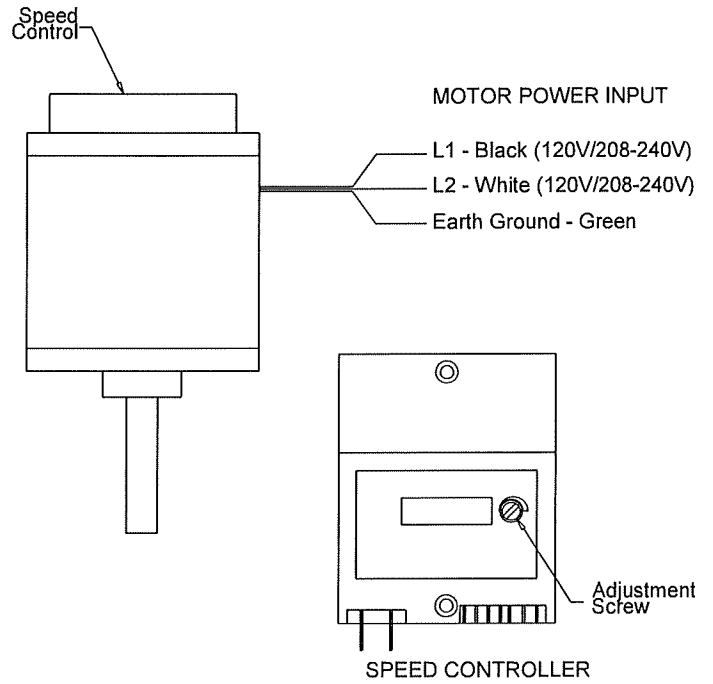
PROJECT: LIBERTY COLLECTIVE

DATE: 6/26/2024

Speed Control

**Internal Speed Control
Electronically Commutated (EC) Motor
Type N**

STANDARD CONSTRUCTION FEATURES:
Some motors come with a factory programmed maximum RPM for specific applicaitons - Integral potentiometer with slotted screw for speed adjustment.



Dimensions (inches)

Mark	Qty	Description
-1	1	OPEN -1HP - 115V/1 PH/ 60 1725/0000 -EC



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RCG

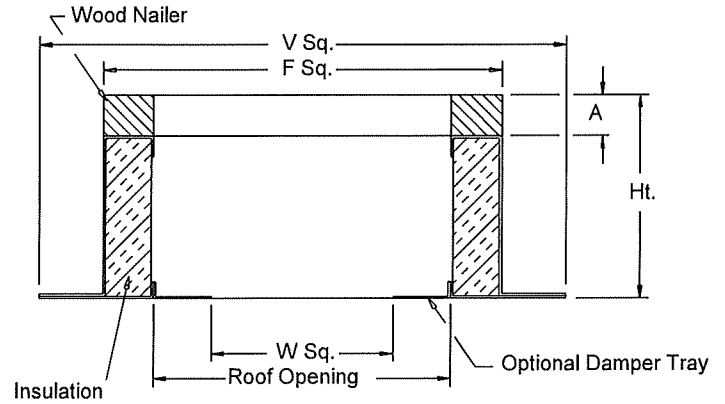
Galvanized Steel Roof Curb

STANDARD CONSTRUCTION FEATURES:

18 gauge galvanized steel - 1-1/2",
 3 lbs. density thermal and acoustical insulation - Continuously welded corners - Wood nailer.

Options:(As noted below*)

- 1) No wood nailer (deduct 1-1/2" for actual height).
- 2) Damper tray.
- 3) Liner.
- 4) Gasket on wood nailer.
- 5) Lorenized coating.
- 6) Enamel coating.
- 7) Burglar bars.



Dimensions (inches)

Mark	Qty	Description	Ht	Options*	A	F Sq.	V Sq.	W Sq.	Roof Opening
RF-1	1	RCG 22	13.5	-	1-1/2	22-1/2	26-1/2	15-3/4	19-1/2
CAP	2	RCG 26	13.5	2;	1-1/2	26-1/2	30-1/2	19-3/4	23-1/2

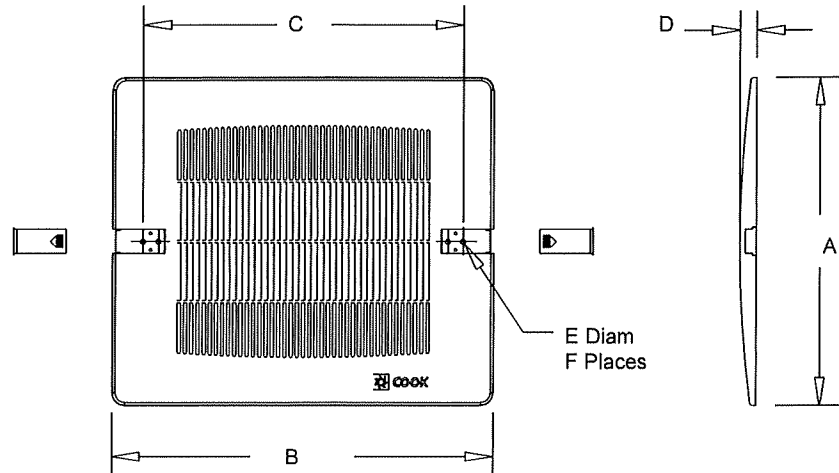


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GEMINI PLASTIC GRILLE



Dimensions (inches)

Mark	Qty	Description	A	B	C	D	E Diam	F Places
-2,3	2	WHITE PLASTIC GRILLE	13-1/4	15-1/2	13	1/4	1/4	4
EF-4,5	2	WHITE PLASTIC GRILLE	13-1/4	15-1/2	13	1/4	1/4	4



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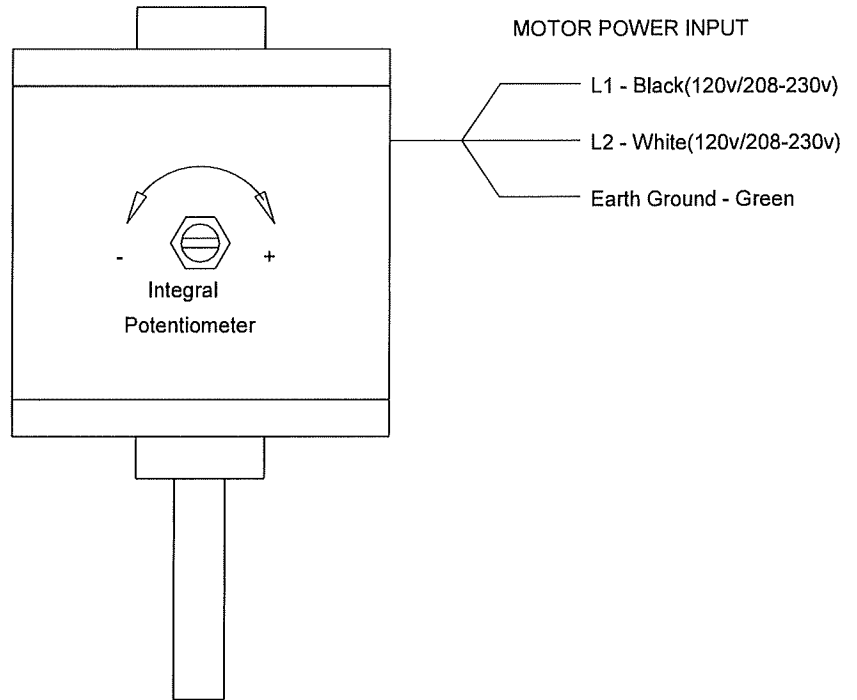
DATE: 6/26/2024

Speed Control

Internal Speed Control
Electronically Commutated (EC) Motor
Type P

STANDARD CONSTRUCTION FEATURES:

Integral potentiometer with slotted screw
for speed adjustment.



Dimensions (inches)

Mark	Qty	Description
-2,3	2	TYPE P INTERNAL CTRL

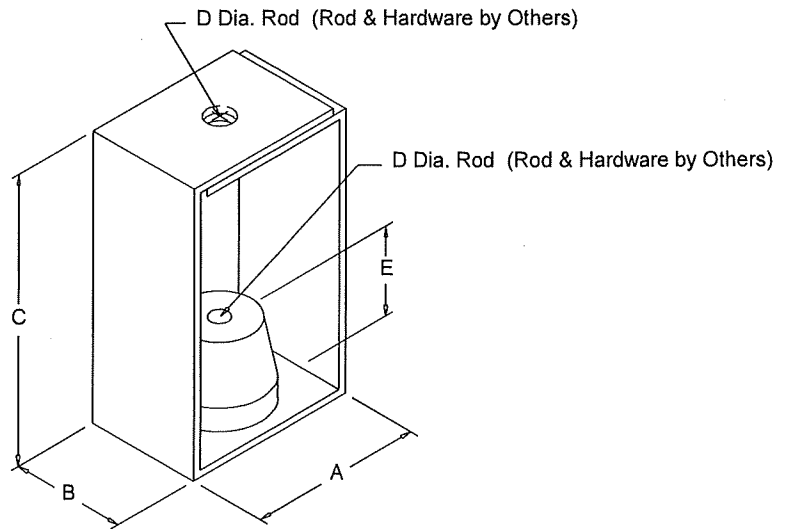


RIS CEILING

Rubber-In-Shear Isolator Ceiling Mounted

NOTE:

Dimensions are for informational purposes only - Not for construction.



Dimensions (inches)

Mark	Qty	Description	A	B	C	D	E
-2,3	2	RC-75 SET(4)	2.15	1.50	2.72	0.38	0.45
EF-4,5	2	RC-75 SET(4)	2.15	1.50	2.72	0.38	0.45



COOK

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BD

Gravity Backdraft Damper

STANDARD CONSTRUCTION FEATURES:

.020 Aluminum blades - .060 aluminum frame -
Aluminum hinge pins - Nylon bushings.

Notes:

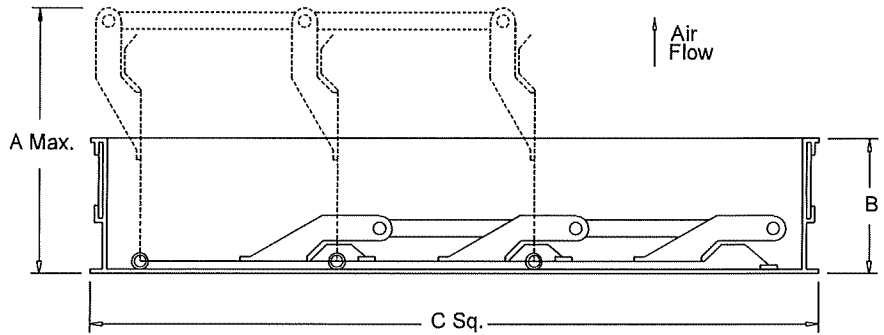
Max. operating temperature 200 Deg F (95 Deg C).

Max. discharge velocity 2000 fpm.

Sizes 36 thru 60 are shipped as 2 panels.

Sizes 66 and 78 are shipped as 6 panels.

These may require assembly.



Dimensions (inches)

Mark	Qty	Description	A Max.	B	C Sq.	# Panels
P	2	BD-22 DAMPER	5-3/16	1-7/8	21-3/4	1