

## Submittal #233416-1.0 - Product Data – Centrifugal HVAC Fans 233416 - CENTRIFUGAL HVAC FANS

<b>Revision</b>	0	<b>Submittal Manager</b>	Matthew Crawford (Megen Construction Company)
<b>Status</b>	Open	<b>Date Created</b>	Jul 21, 2025
<b>Issue Date</b>		<b>Spec Section</b>	233416 - CENTRIFUGAL HVAC FANS
<b>Responsible Contractor</b>	Feldkamp Enterprises, Inc	<b>Received From</b>	Heather Wyatt (Feldkamp Enterprises, Inc)
<b>Received Date</b>		<b>Submit By</b>	
<b>Final Due Date</b>	Jan 1, 2026	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Data
<b>Submittal Package</b>			
<b>Approvers</b>	Matthew Crawford (Megen Construction Company), Tanya Tedesco (Motz Engineering), Brian Trettenero (Motz Engineering), Jessica Scholl (MSA Architects), Brad Sir Louis (MSA Architects)		
<b>Ball in Court</b>	Tanya Tedesco (Motz Engineering), Brian Trettenero (Motz Engineering)		
<b>Distribution</b>	Jeff Williams (Megen Construction Company), Stacy Beck (Megen Construction Company), Jessica Scholl (MSA Architects), Christopher Todd (Megen Construction Company), Brad Sir Louis (MSA Architects)		
<b>Description</b>	Please see attached centrifugal HVAC fans for your review and approval.		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					233416 - Centrifugal HVAC Fans.pdf
Matthew Crawford		Dec 11, 2025	Dec 11, 2025	Approved	<a href="#">233416 - Centrifugal HVAC Fans.pdf (Current)</a>
Tanya Tedesco	Dec 11, 2025	Dec 25, 2025		Pending	
Brian Trettenero	Dec 11, 2025	Dec 25, 2025		Pending	
Jessica Scholl		Jan 1, 2026		Pending	
Brad Sir Louis		Jan 1, 2026		Pending	

# C546B - Princeton Athletic Facilities Renovation

11080 Chester Road  
CINCINNATI, Ohio 45246  
United States

**Megen**  
Construction

**Megen Construction**  
11130 Ashburn Road  
Cincinnati, Ohio 45240  
United States  
(513) 742-9191

**Title**  
Product Data – Centrifugal HVAC Fans

**Submittal Manager**  
Matthew Crawford

**Spec Section**  
233416 - CENTRIFUGAL HVAC FANS

**Type**  
Product Data

Number	Rev
233416-1	0

## Description

Please see attached centrifugal HVAC fans for your review and approval.

<b>Megen Construction Company, Inc.</b> <b>Project: Millikin Locker/Weight Room</b> <b>Job# C-545B</b>	
Reviewed	
Submittal No:	<u>233416-1</u>
Reviewed By:	<u>Matt Crawford</u>
Date:	<u>12/11/25</u>
<p>This submittal has been reviewed for compliance with contract documents unless otherwise noted herein. This review does not constitute nor does it assume design responsibility nor does it relieve the trade contractor/supplier from complying with the contract requirements, coordinating their work with other trade contractors and verifying field dimensions.</p>	

<b>SHOP DRAWINGS</b>	
<input checked="" type="checkbox"/> Reviewed	<input type="checkbox"/> Furnish as Corrected
<input type="checkbox"/> Rejected	<input type="checkbox"/> Revise and Resubmit
<small>This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the job site; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the work of all trades; and for performing all work in a safe and satisfactory manner.</small>	
<small>Note: Errors in shop drawings or undue delays in making corrections are not an acceptable excuse for changing delivery dates from imperfect fabrication.</small>	
<b>MOTZ CONSULTING ENGINEERS, INC.</b>	
By: <u>Jeff Haynay</u>	Date: <u>12/17/2025</u>



**Feldkamp Enterprises**  
 3642 Muddy Creek Rd  
 Cincinnati, Ohio 45238  
 P: (513) 347-4500

**Project: 1351 Princeton Athletic Facility**  
 1100 Viking Way  
 Cincinnati, Ohio 45246

## Submittal #23 34 16-1.0 - Centrifugal HVAC Fans 23 34 16 - Centrifugal HVAC Fans

<b>Revision</b>	0	<b>Submittal Manager</b>	Heather Wyatt (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises)
<b>Status</b>	Open	<b>Date Created</b>	Jul 24, 2025
<b>Issue Date</b>		<b>Spec Section</b>	23 34 16 - Centrifugal HVAC Fans
<b>Responsible Contractor</b>	Controlled Air, Inc.	<b>Received From</b>	Patrick Tepe (Controlled Air, Inc. )
<b>Received Date</b>		<b>Submit By</b>	
<b>Final Due Date</b>	Dec 1, 2025	<b>Lead Time</b>	
		<b>Cost Code</b>	
<b>Location</b>		<b>Type</b>	Product Information
<b>Submittal Package</b>			
<b>Manufacturer</b>	Loren Cook		
<b>Approvers</b>	Heather Wyatt (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Matt Crawford (Megen Construction)		
<b>Ball in Court</b>	Heather Wyatt (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises)		
<b>Distribution</b>	Jack Rahn (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Josh Zins (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Brian Linblad (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Jonathan Vogelpohl (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Matt Flower (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Kelly Jones (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Frank Izzo (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Rob Bush (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), David Doremus (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Shawn Heeney (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises), Jason Hageman (Marsden Mechanical L.L.C. d/b/a/ Feldkamp Enterprises)		
<b>Description</b>	2.01 MANUFACTURERS A ACME Engineering and Manufacturing Corporation B Carnes, a division of Carnes Company Inc C Loren Cook Company D PennBarry, Division of Air System Components E Rosenberg USA, Inc F Twin City Fan & Blower		

### Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Patrick Tepe		Nov 19, 2025	Nov 14, 2025	Submitted	
Heather Wyatt	Nov 14, 2025	Nov 17, 2025		Pending	
Matt Crawford		Dec 1, 2025		Pending	



# COOK

# SUBMITTAL

**PROJECT:** PRINCETON ATHLETICS ALTERNATE #5

**CONTRACTOR:** Feldkamp Enterprises

**SUBMITTED BY:** Patrick Tepe  
Controlled Air, Inc  
Cincinnati, OH 45241

**E-MAIL:** [patrick.r.tepe@controlled-air.com](mailto:patrick.r.tepe@controlled-air.com)

**DATE:** 11/12/2025

**\* STARTERS, VFDS, T'STATS, ETC BY OTHERS UNLESS NOTED OTHERWISE. \***





# COOK



MARK: EF-5, MAF-1

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

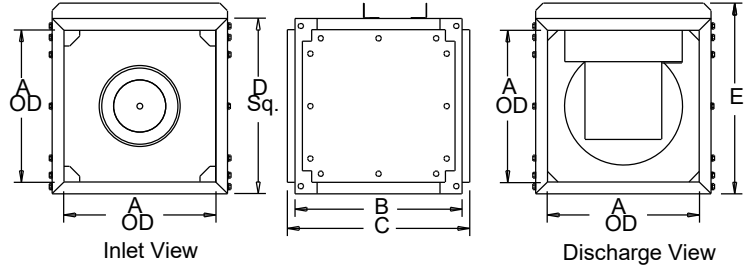
DATE: 11/12/2025

## SQND-EC

**Centrifugal Square Inline  
Direct Drive  
Electronically Commutated Vari-Flow® Motor**

**STANDARD CONSTRUCTION FEATURES:**

All aluminum wheel - Galvanized steel housing - Three removable access doors - Closed cell neoprene gasketing - Inlet and discharge duct collars - Universal mounting feet - Permanently lubricated electronically commutated motor - Power rated in Input Watts - Transit tested packaging.



### Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	Speed Control
2	120SQN17DEC	1000	.625	1444	201	n/a(<1HP)	EC

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

### Motor Information

HP	RPM	Volts/Ph/Hz	Enclosure
1/2	1725	115/1/60	OPEN -EC



Motor is electronically/thermally protected.

### Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA	Sones
Inlet	66	68	72	65	60	57	53	48	68	56	8.1
Outlet	74	72	70	66	66	63	55	48	70	59	9.1

- Distance from Sound source 5 ft

### Accessories:

- FAN MOUNTED SPEED CONTROL DISCONNECT NEMA 1 PRE-WIRED
- FILTER BOX W/MERV 13
- SC-35 SET(4) - ISOLATORS

### Dimensions (inches)

A	16
B	20
C	22
D Sq.	18-7/16
E	20

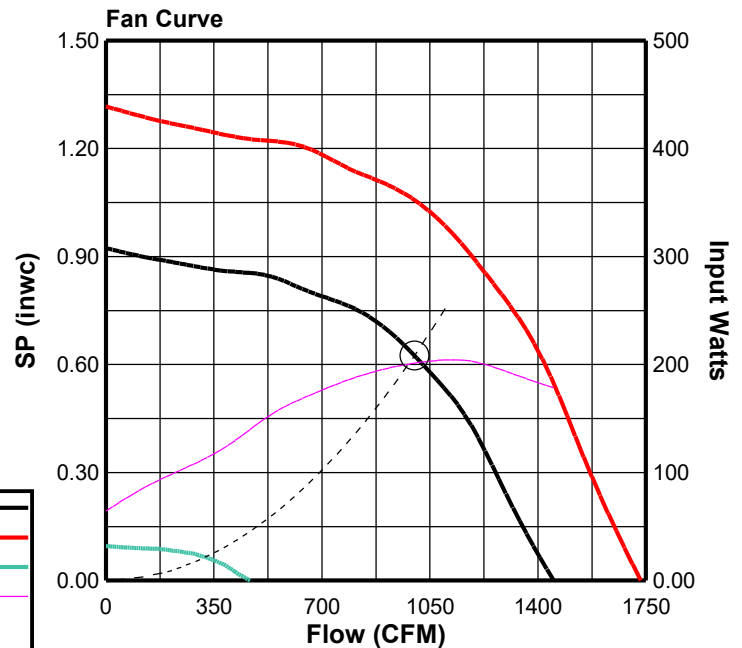
NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	182	Unit	116
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\*\*\*Includes fan, motor & accessories.

### Fan Curve Legend

CFM vs SP (1444)	—
100% EC (1725)	—
Min EC (465)	—
CFM vs Watts	—
Point of Operation	○
System Curve	- - -





# COOK



MARK: EF-5, MAF-1

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

## SQND-EC

### Performance

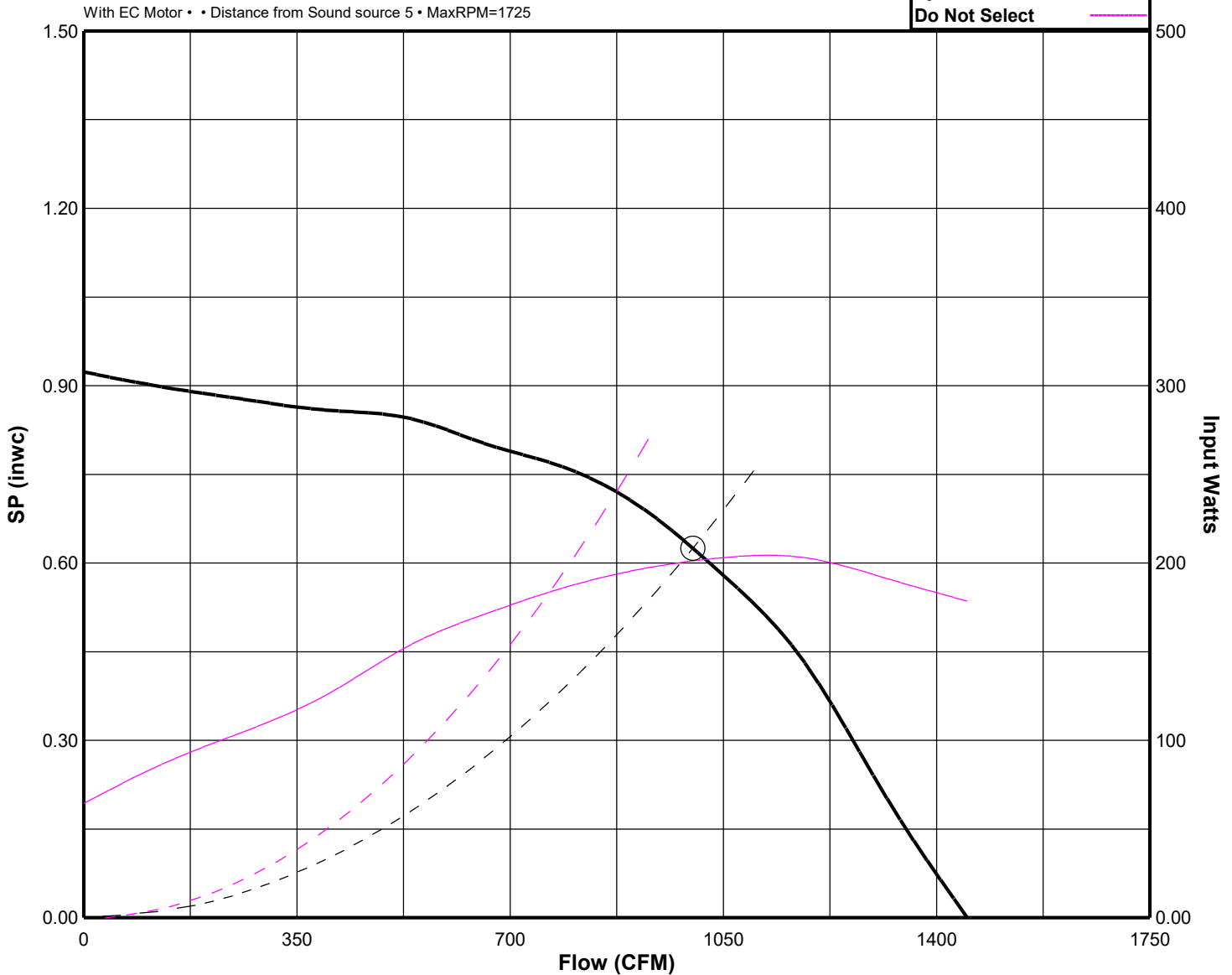
Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	OVEL (fpm)	TSPD (fpm)	SE	Temp (°F)	ALT (ft)
120SQN17DEC	1000	.625	1444	201	n/a(<1HP)	562	4536	46%	70	1004

### Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA	Sones
Inlet	66	68	72	65	60	57	53	48	68	56	8.1
Outlet	74	72	70	66	66	63	55	48	70	59	9.1

### Fan Curve Legend

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





# COOK

## SQND-EC

MARK: EF-5, MAF-1

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

### AMCA License Information



Loren Cook Company certifies that the 120SQN17DEC 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 B: free inlet, ducted outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound power level ratings shown are in decibels, referred to 10(-12) watts calculated per AMCA Standard 301. Values shown are for inlet Lwi, LwiA and outlet Lwo, LwoA sound power levels for installation type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.



The sound ratings shown are loudness values in hemispherical sones at 5 ft. in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation type B: free inlet, ducted outlet hemispherical sone levels. Outlet ratings do not include the effect of duct end correction. The dBA levels shown have been calculated for a distance of 5 ft in a hemispherical free field. The AMCA Certified Ratings Seal applies to Octave Bands and LwA only. Sone ratings and dBA levels are not AMCA International licensed.



# COOK



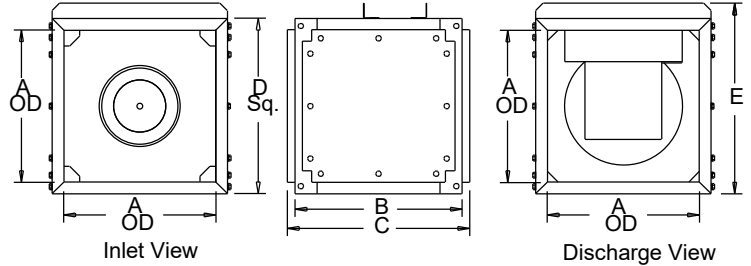
MARK: EF-6
PROJECT: PRINCETON ATHLETICS ALTERNATE #5
DATE: 11/12/2025

## SQND-EC

**Centrifugal Square Inline  
Direct Drive  
Electronically Commutated Vari-Flow® Motor**

### STANDARD CONSTRUCTION FEATURES:

All aluminum wheel - Galvanized steel housing - Three removable access doors - Closed cell neoprene gasketing - Inlet and discharge duct collars - Universal mounting feet - Permanently lubricated electronically commutated motor - Power rated in Input Watts - Transit tested packaging.



### Performance

Qty	Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	Speed Control
1	90SQN17DEC	200	.500	1477	48	n/a(<1HP)	EC

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

### Motor Information

HP	RPM	Volts/Ph/Hz	Enclosure
1/6	1725	115/1/60	OPEN -EC



Motor is electronically/thermally protected.

### Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA	Sones
Inlet	61	64	66	59	54	50	46	42	62	50	5.6
Outlet	80	70	68	61	58	52	47	43	65	53	7.2

- Distance from Sound source 5 ft

### Accessories:

- FAN MOUNTED SPEED CONTROL DISCONNECT NEMA 1 PRE-WIRED
- FILTER BOX W/MERV 13
- SC-35 SET(4) - ISOLATORS

### Dimensions (inches)

A	12
B	15
C	17
D Sq.	14
E	15-9/16

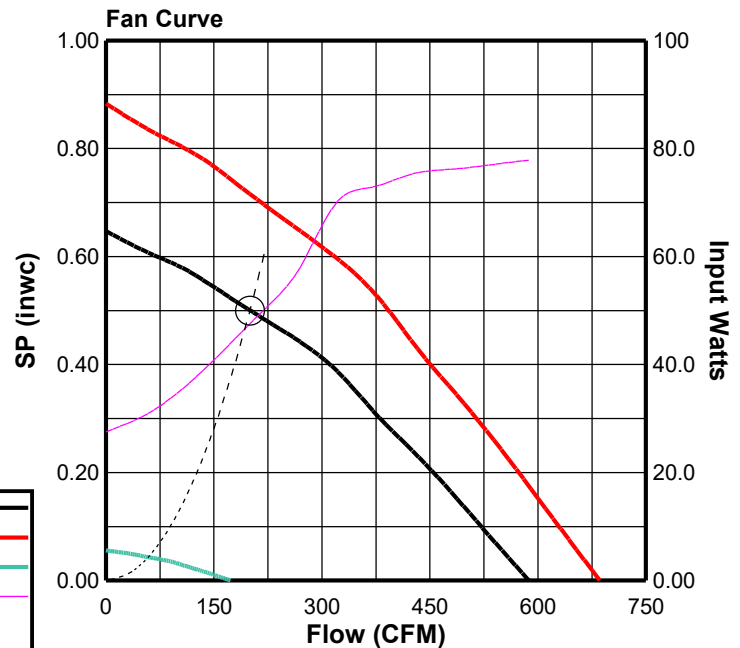
NOTE: Accessories may affect dimensions shown.

Weight(lbs)***	Shipping	91	Unit	87
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\*\*\*Includes fan, motor & accessories.

### Fan Curve Legend

CFM vs SP (1477)	—
100% EC (1725)	—
Min EC (435)	—
CFM vs Watts	—
Point of Operation	○
System Curve	---





# COOK



MARK: EF-6

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

## SQND-EC

### Performance

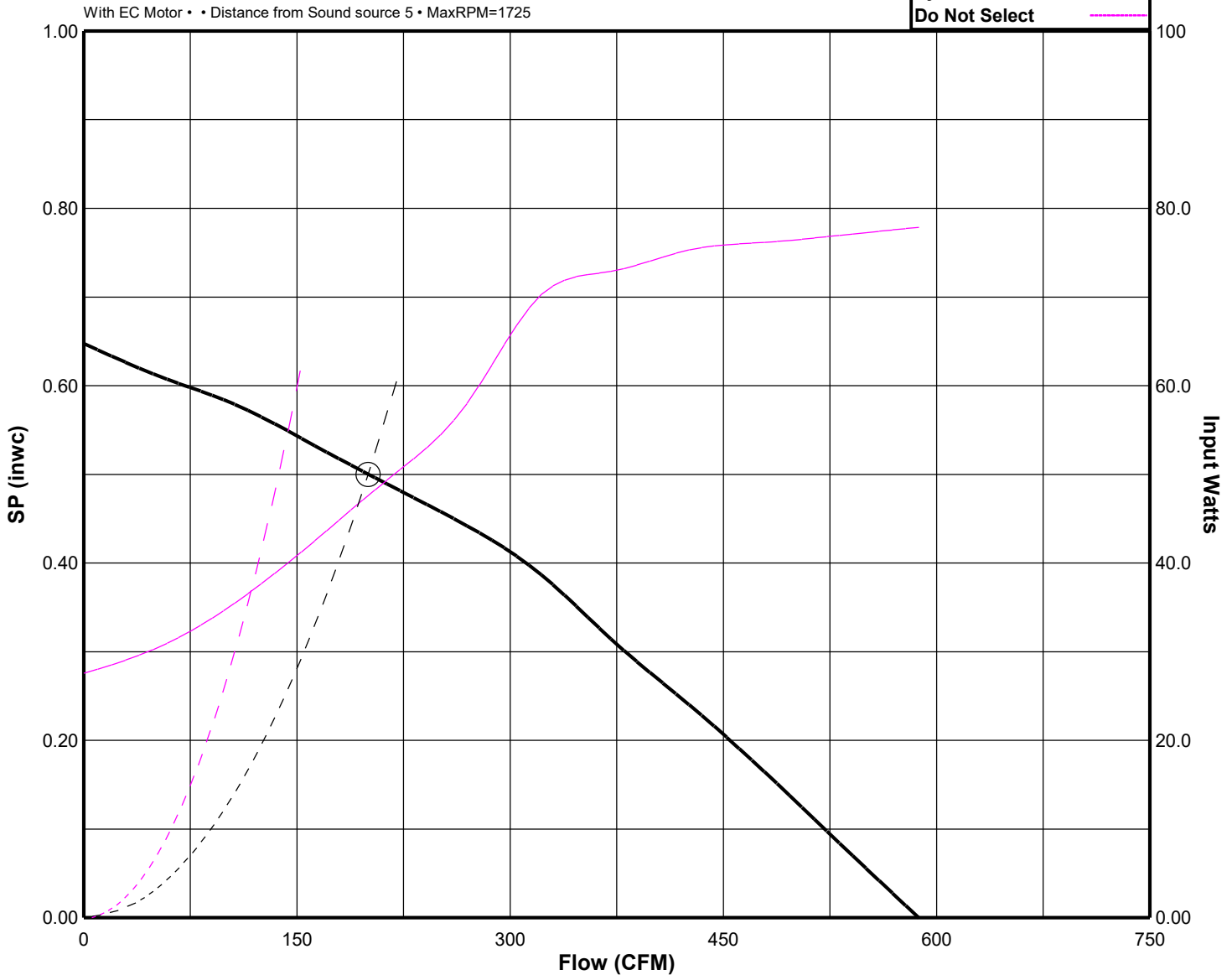
Catalog Number	Flow (CFM)	SP (inwc)	Fan RPM	Input Watts	FEG	OVEL (fpm)	TSPD (fpm)	SE	Temp (°F)	ALT (ft)
90SQN17DEC	200	.500	1477	48	n/a(<1HP)	200	3480	31%	70	1004

### Sound Data Sound Power by Octave Band

	1	2	3	4	5	6	7	8	LwA	dBA	Sones
Inlet	61	64	66	59	54	50	46	42	62	50	5.6
Outlet	80	70	68	61	58	52	47	43	65	53	7.2

### Fan Curve Legend

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





# COOK

## SQND-EC

MARK: EF-6

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

### AMCA License Information



Loren Cook Company certifies that the 90SQN17DEC 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 B: free inlet, ducted outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound power level ratings shown are in decibels, referred to 10(-12) watts calculated per AMCA Standard 301. Values shown are for inlet Lwi, LwiA and outlet Lwo, LwoA sound power levels for installation type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.



The sound ratings shown are loudness values in hemispherical sones at 5 ft. in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation type B: free inlet, ducted outlet hemispherical sone levels. Outlet ratings do not include the effect of duct end correction. The dBA levels shown have been calculated for a distance of 5 ft in a hemispherical free field. The AMCA Certified Ratings Seal applies to Octave Bands and LwA only. Sone ratings and dBA levels are not AMCA International licensed.



# COOK

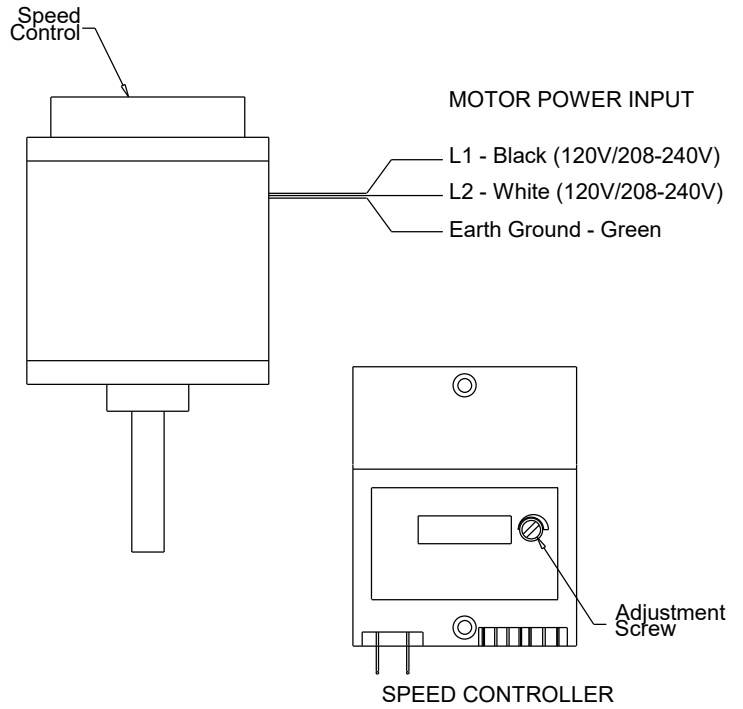
PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

## 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
EF-5, MAF-1	2	OPEN -1/2HP - 115V/1 PH/ 60 1725/0000 -EC



## FILTER BOX

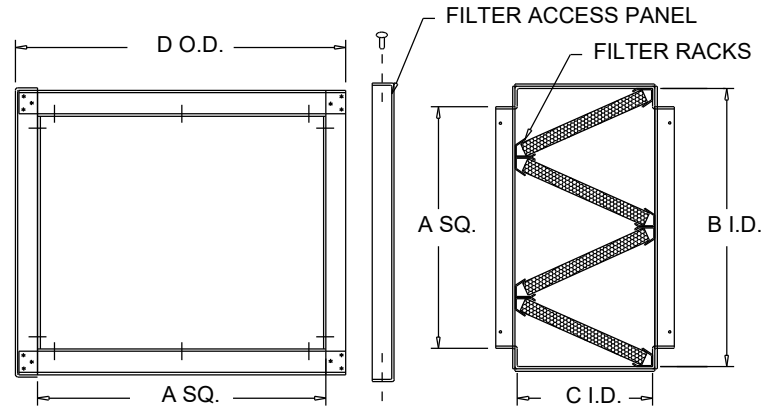
### SQN/SQN-HP

#### STANDARD CONSTRUCTION FEATURES:

Galvanized steel housing - Removable access panel - Closed cell neoprene gasket added where filter contacts housing for a more positive seal - Integral duct collars - Washable 2 inch aluminum filters.

#### Options:

Standard size MERV 8, 13, and 14 filters are also available. - Lorenized coating.



#### Dimensions (inches)

Mark	Qty	Description	A SQ.	B	C	D	Filter Information
EF-5, MAF-1	2	FILTER BOX W/MERV 13	16-1/4	18-1/4	24-1/2	19-5/8	(2)20x25x2
EF-6	1	FILTER BOX W/MERV 13	12-1/4	14-1/4	22-1/2	15-5/8	(1)16x25x2



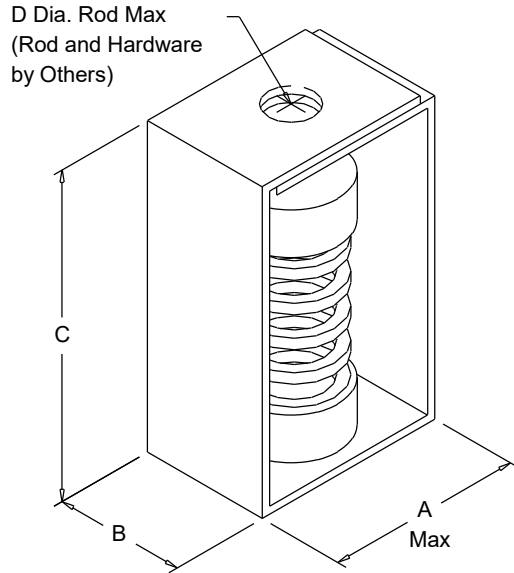
# COOK

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

DATE: 11/12/2025

## SPRING CEILING

Housing Spring  
Spring Isolator  
Ceiling Mounted



### Dimensions (inches)

Mark	Qty	Description	A	B	C	D Dia.	Rated Deflection
EF-5, MAF-1	2	SC-35 SET(4)	2-5/32	1-1/2	3-15/32	1/2	1.03
EF-6	1	SC-35 SET(4)	2-5/32	1-1/2	3-15/32	1/2	1.03



# COOK

PROJECT: PRINCETON ATHLETICS ALTERNATE #5

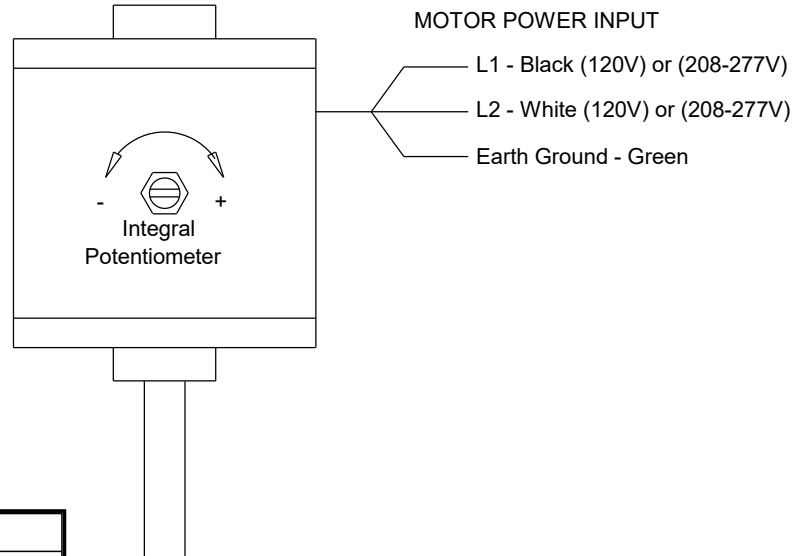
DATE: 11/12/2025

## Speed Control

Internal Speed Control  
Electronically Commutated (EC) Motor  
Type M1

### STANDARD CONSTRUCTION FEATURES:

Integral potentiometer with slotted screw for speed adjustment.



### Dimensions (inches)

Mark	Qty	Description
EF-6	1	OPEN -1/6HP - 115V/1 PH/ 60 1725/0000 -EC



# COOK

MARK: EF-6
PROJECT: PRINCETON ATHLETICS ALTERNATE #5
DATE: 11/12/2025

## Limited Warranty

Loren Cook Company warrants that your Loren Cook fan was manufactured free of defects in materials and workmanship, to the extent stated herein. For a period of one (1) year after date of shipment, we will replace any parts found to be defective without charge, except for shipping costs which will be paid by you.

This warranty is granted only to the original purchaser placing the fan in service.

This warranty is void if the fan or any part thereof has been altered or modified from its original design or has been abused, misused, damaged or is in worn condition or if the fan has been used other than for the uses described in the company manual. This warranty does not cover defects resulting from normal wear and tear.

To make a warranty claim, notify Loren Cook Company, General Offices, 2015 East Dale Street, Springfield, Missouri 65803-4637, explaining in writing, in detail, your complaint and referring to the specific model and serial numbers of your fan. Upon receipt by Loren Cook Company of your written complaint, you will be notified, within thirty (30) days of our receipt of your complaint, in writing, as to the manner in which your claim will be handled. If you are entitled to warranty relief, a warranty adjustment will be completed within sixty (60) business days of the receipt of your written complaint by Loren Cook Company.

This warranty gives only the original purchaser placing the fan in service specifically the right. You may have other legal rights which vary from state to state.

For fans provided with motors, the motor manufacturer warrants motors for a designated period stated in the manufacturer's warranty. Warranty periods vary from manufacturer to manufacturer. Should motors furnished by Loren Cook Company prove defective during the designated period, they should be returned to the nearest authorized motor service station. Loren Cook Company will not be responsible for any removal or installation costs.