

# LINEA

Low Discharge Roof Exhausters

PRODUCT GUIDE



PENNBARRY™

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# INTRODUCTION, FEATURES & BENEFITS

## Linea Roof Exhausters

The PennBarry Linea is a high quality, low silhouette, centrifugal roof exhauster. This completely self-contained powered ventilating unit is ready for easy installation on a variety of factory-built and field-built curbs. The most significant factor that sets the PennBarry Linea apart from conventional roof ventilators is its low-line extruded aluminum housing. Crisp, clean lengths of full width blades are mitered at the corners and welded on the underside to present a clear, unbroken sweep. In addition to its clean appearance, the louver blade is designed to reduce friction and turbulence of exhausting air. The shape of the extrusion is based on aerodynamic as well as structural and weatherproof principles. Each Linea is proportioned for low discharge velocity.

Blade design and spacing have been coordinated through the large selection of unit sizes to afford maximum discharge area on all four sides as well as maximum weather protection.

Centrifugal roof exhausters are most sensitive at the point of air entry. Many manufacturers use fan wheels originally developed for utility sets and other purposes. However, there is no substitute for correct components used in their proper application. PennBarry's centrifugal wheels are specifically designed for roof exhauster use. They feature an extended inlet opening and are statically and dynamically balanced to promote quieter operation. The Linea drive assembly is suspended on rubber mountings which sound condition the Linea against vibration. All wheels are backward inclined and non-overloading. They are constructed of durable and spark resistant aluminum. This feature promotes longer bearing life and reduces motor starting torque.



*Belt Drive Linea*

### Direct Drive Units

Model: LF (VC / SC / RC)

- Static pressure up to 1.5" wg.
- Flow capacity up to 2,123 CFM

### Belt Drive Units

Model: LF (BC)

- Static pressure up to 1.5" wg.
- Flow capacity up to 19,400 CFM

# CERTIFICATIONS & LISTINGS



## AMCA Certification

PennBarry certifies that the Linea models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



## cULus Certification

Linea roof exhausters carry the UL label,

UL705 (ZACT/ZACT7), file #E28413.

# OPTIONS, ACCESSORIES, & MOTOR SELECTION

## Backdraft Dampers

Backdraft dampers are available for either gravity or motorized operation (motor kit optional). Dampers feature square galvanized steel frames and multi-leaf, roll formed aluminum blades with nylon bearings.

## Hinged Sub-Base

Hinged sub-bases provide access to the curb well for damper service. Constructed with a rust proof hinge arrangement and low height (3 ½”), the assembly is easily manipulated and reduces the impact on overall installation height. This accessory is available for use with most models for either factory built or existing roof curbs.

## Prefabricated Curbs

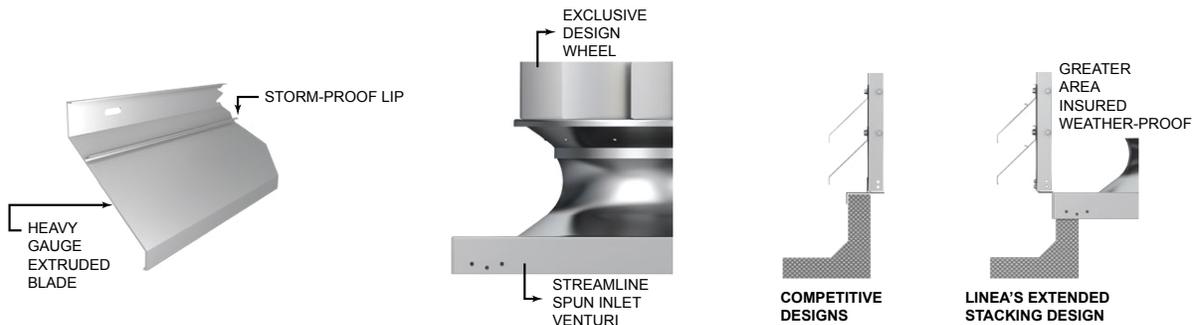
A variety of sizes of prefabricated roof curbs are available. Galvanized steel unibeam curbs are the most popular. For a complete listing of all curb types and sizes available, please consult the latest PennBarry Curb brochure.

## Aluminum Bird and Insect Screen

Bird screens are available for all direct and belt drive models. An aluminum insect screen with a smaller mesh than the standard bird screen is also available.

## Safety Service Switch

Safety service switches are available to allow positive electrical shut-off and encourage safety. Switches are factory mounted when factory wiring is requested. Wiring is only run from the motor to the junction box. (Factory wiring of explosion proof applications is not available.) A wide range of Nema rated enclosures with service switches are available for indoor, outdoor, and explosion proof installations. Service switches are to be field wired by a licensed electrician.



## Speed Controllers

PennBarry offers Lek-Trol™ solid state controllers to alter the high speed of most direct drive motors by as much as 50%. If variable speed is required, check the Lek-Trol™ availability table below to verify that controllers exist for the fan model selected. Remember Lek-Trol™ controllers are currently only available for direct drive motors including all standard Open Drip Proof (ODP) 60 Hz motors. Not all totally enclosed motors are currently available with variable speed control. Inverter rated motors suitable for use with variable frequency drives can be supplied for belt drive models. Contact your local PennBarry representative for availability.

## Available Lek-Trol™ Speed Controls

Model	60 Hz					50 Hz		
	ODP	Totally Enclosed				Totally Enclosed		
	115V	115V	200V	208V	230V	110V	220V	240V
LF06VC	-	-	-	-	-	-	-	-
LF06SC	-	-	-	-	-	-	-	-
LF06RC	LT30	LT20	-	-	-	-	-	-
LF12VC	-	-	-	-	-	-	-	-
LF12SC	-	-	-	-	-	-	-	-
LF12RC	LT50	LT50	-	-	-	-	-	-

Lek-Trols™ indicated for multi-speed models (eg., LF12V/S/RC) are applicable only for the high speed. Do not use on low or medium speed for multi-speed models. Items noted with (-) are not applicable.

# OPTIONS, ACCESSORIES, & MOTOR SELECTION

## Firestat

Firestat switch automatically disconnects the unit when the temperature of the air being exhausted exceeds a preset rating.

## Coatings

Coatings such as Polyester Powder Coat, Epoxy Powder Coat, Phenolic Epoxy Powder Coat, and others are available. See the coatings brochure for details.

## Transformers

To meet local requirements, 277V transformers are available for all direct drive units. The transformers are step-down and will step the voltage down to 120V. Shipped loose for field installation.

## Stainless Steel Shaft

If another material is desired for the motor shaft, stainless steel shafts are available for selection.

## Stainless Steel Hardware

If another material is desired for the unit's hardware, stainless steel hardware is available for selection.

## Spare Belt

One or two extra sets of spare belts are available for selection.

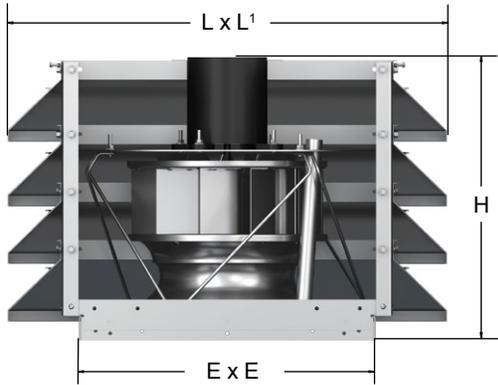
## Pedestals

The 12" high mounting pedestal, available in aluminum or galvanized steel, incorporates a removable access panel for easy inspection and service of motor operated backdraft dampers. It provides solid ventilator support and a weather resistant seal that does not injure or disturb flashing.

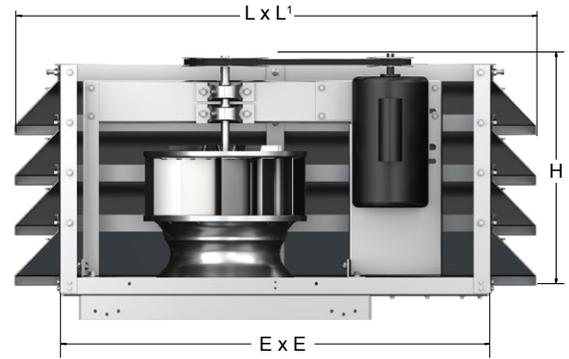
## Variable Frequency Drives

Variable frequency drives (VFDs) are designed to meet performance requirements while increasing efficiency. By varying the fan motor input frequency and voltage, the VFD controls the motor speed and torque, helping to improve productivity and lower energy consumption. The VSC and VSA are ideal for both new and retrofit fan applications. Shipped loose and separately.

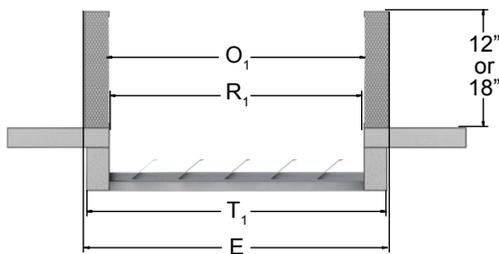
# DIMENSIONS | DIRECT & BELT DRIVE



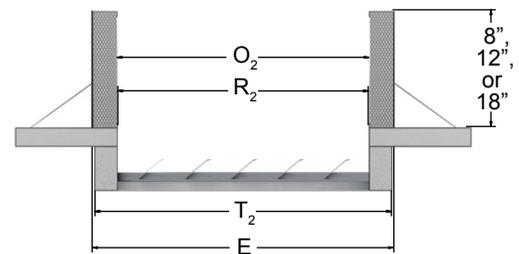
Direct Drive



Belt Drive



Self Flashing Curb



Fabricated Unibeam Curb

## Direct Drive

Model	Unit Dimensions				Self-Flashing Curb			Fabricated Unibeam Curb			Est. Ship Wt.
	L	L <sup>1</sup>	H	E	R <sub>1</sub>	O <sub>1</sub>	T <sub>1</sub>	R <sub>2</sub>	O <sub>2</sub>	T <sub>2</sub>	
LF06VC/SC/RC	27	29	15	18 ½	9	14	17	9	14	17	80
LF12VC/SC/RC	29	31	20	20 ½	11 ½	16	19	11 ½	16	19	95

Dimensions in inches. Weight in pounds.

## Belt Drive

Model	Unit Dimensions				Self Flashing Curb			Fabricated Unibeam Curb			Est. Ship Wt.
	L	L <sup>1</sup>	H	E	R <sub>1</sub>	O <sub>1</sub>	T <sub>1</sub>	R <sub>2</sub>	O <sub>2</sub>	T <sub>2</sub>	
LF12BC	33	45	19	24 1/2	16 1/4	21	24	16 1/4	20	23	215
LF20BC	37	49	23	28 1/2	20	25	28	20	24	27	250
LF24BC	42	60 1/2	23	33 1/2	25	30	33	25	29	32	385
LF30BC	45	63	27 1/2	36	28	32 1/2	35 1/2	28	31 1/2	34 1/2	520
LF40BC	53	79	31 1/2	44 1/2	36	41	44	36	40	43	675

Dimensions in inches. Weight in pounds.

Model	RO	Damper Size	Max. Frame Size
LF12BC	16" sq	15 ¾" sq	143T
LF20BC	20" sq	19 ¾" sq	145T
LF24BC	25" sq	24 ¾" sq	182T
LF30BC	28" sq	27 ¾" sq	213T
LF40BC	36" sq	35 ½" sq	215T

# LF FAN SELECTIONS

## Model

LF = Linea Low Discharge Roof Exhauster

## Construction

<b>Model</b> LF = Linea Low Discharge Roof Exhauster	<b>Unit Size</b> 06, 12, 20, 24, 30, 40	<b>Drive Type</b> D = Direct Drive B = Belt Drive
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## Motor

<b>Motor Tap</b> RC = 1050 RPM SC = 1300 RPM VC = 1550 RPM  <b>Motor Speed</b> 1 = Single Speed 2 = 2S2W 1800/1200 3 = 2S1W 1800/900  <b>Horse Power</b> See selection software.	<b>Enclosure</b> O = Open Drip Proof T = Totally Enclosed E = Explosion Proof X = Special  <b>Voltage</b> See selection software.	<b>Phase</b> 1 = Single 3 = Three  <b>Cycle</b> 5 = 50 Hz 6 = 60 Hz  <b>Efficiency</b> S = Standard H = High Efficiency
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# LF FAN SELECTIONS

## Options and Accessories

### Paint / Coating

0 = None  
F = Epoxy Powder Coat\*  
G = Epoxy Powder Coat with UV\*  
H = Hi-Temp Powder Coat\*  
J = Non-stick Powder Coat\*  
K = Phenolic Powder Coat\*  
L = Phenolic Powder Coat with UV\*  
N = Polyester Powder Coat  
X = Special  
\* Not available with choice of color.

### Color

0 = None  
50 = Chrome Green  
55 = Pale Green  
56 = Dove Gray  
61 = White  
63 = Oxford Beige  
65 = Dover White  
66 = Desert Tan  
70 = Black  
73 = Smoke Gray  
77 = Brick Red  
79 = Peppercorn  
81 = Pale Brown  
83 = Chocolate Brown  
85 = Timeless Bronze  
94 = Charcoal  
X = Special

### Damper

0 = None  
BDD = Gravity Backdraft Damper  
MD1 = Gravity Backdraft Damper 115V  
MD2 = Gravity Backdraft Damper 230V  
MD4 = Gravity Backdraft Damper 460V  
ED1 = Explosion Proof Motor

### Screen

0 = None  
B = Bird Screen  
S = Insect/Bird Screen

### Roof Curb

See selection software.

### Slope

0 = None S = Single  
D = Double

### Metal Liner

0 = None  
L = Metal Liner

### Damper Holding Plate

0 = None  
P = Damper Holding Plate

### Neoprene Gasket

0 = None  
G = Gasket

### Wooden Nailer

0 = None  
W = Wooden Nailer

### Curb Paint / Coating

0 = None  
B = Air Dried Epoxy

### Hinged Sub-base

0 = None  
H = Hinged Sub-base

### Mounting Pedestal

0 = None  
P = Mounting Pedestal

### Thermal Overload Protection

0 = None  
P = Thermal Overload Protection

### Disconnect Switch

0 = None  
1 = NEMA 1 Disconnect Switch  
3R = NEMA 3R Disconnect Switch  
4 = NEMA 4 Disconnect Switch  
7 = NEMA 7 Disconnect Switch  
9 = NEMA 9 Disconnect Switch

### Internal Wiring

0 = None  
1 = NEMA 1 Internal Wiring  
3R = NEMA 3R Internal Wiring

### Transformer

0 = None  
T = Transformer

### Speed Controller

0 = None  
L = Loose  
M = Mounted

### Firestat Switch

0 = None  
F = Firestat Switch

# PENNBARRY PRODUCT SOLUTIONS



## Commercial

- Roof & wall exhaust centrifugal fans
- Ceiling, wall, & inline centrifugal fans
- Roof supply centrifugal fans
- Square & round centrifugal fans
- Wall mounted axial fans
- Hooded roof axial fans
- Upblast roof axial fans
- Gravity ventilators
- Roof curbs



## Industrial

- Freestanding centrifugal fans
- Industrial & material handling fans
- Tubular centrifugal inline fans
- Mixed flow centrifugal fans
- Plug & plenum fans
- Wall mounted propeller fans
- Tube axial fans
- Vane axial fans
- Bifurcator fans
- Lab exhaust



## Kitchen ventilation

- Make-up air units
- Exhaust fans



## Energy recovery

- Outdoor units
- Indoor units

PennBarry is proud to be your preferred manufacturer of commercial and industrial fans and blowers. Learn how PennBarry can assist you in your next application by contacting your PennBarry Representative or visiting us on the web at [www.pennbarry.com](http://www.pennbarry.com)

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PennBarry reserves the right to make changes at any time, without notice, to models, construction, specifications, options and availability. This document illustrates the appearance of PennBarry products at the time of publication. View the latest updates on the PennBarry website.

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