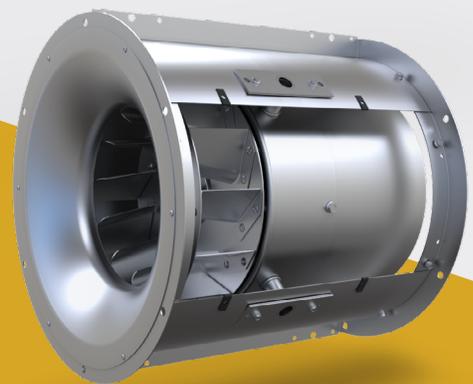


ROUND CENTREX

Centrifugal Inline Fans

PRODUCT GUIDE



PENNBARRY™

TABLE OF CONTENTS

INTRODUCTION	3
CERTIFICATIONS & LISTINGS	3
FEATURES & BENEFITS	4
OPTIONS & ACCESSORIES	5-6
DIMENSIONAL DATA DIRECT DRIVE	7
DIMENSIONAL DATA BELT DRIVE	8
ROUND CENTREX FAN SELECTIONS	9-10

INTRODUCTION

Centrex REX Centrifugal Inline Fans

REX Inline fans are widely used in round ducts as clean air boosters in both supply and exhaust systems where the installation of conventional blowers is impractical. Their compact design gives designers an excellent alternative to conventional blowers.

As an integral part of a ventilation system layout, REX Inline fans can be installed either horizontally, vertically or at any angle determined by the duct work. Removable gasket-sealed panels enable easy access to the fan interior. Direct drive motors are isolated from the airstream. Belt drive motors are mounted on the outside housing and can be positioned at any angle to avoid existing building obstructions. Optional motor covers are available as belt guards.

REX Inline fans feature durable aluminum construction, which works in conjunction with a patented wheel design and deeply spun inlets to provide smoother flow through the ventilator. The centrifugal wheels are aluminum, non-overloading, backwardly inclined, robotically welded, and dynamically balanced.



Direct Drive Centrex REX

Direct Drive Units

- Static pressure up to 1.5" wg.
- Flow capacity up to 2,290 CFM



Belt Drive Centrex REX

Belt Drive Units

- Static pressure up to 3.5" wg.
- Flow capacity up to 22,054 CFM

CERTIFICATIONS & LISTINGS



Centrex REX Centrifugal Inline Fans

PennBarry certifies that the Centrex REX 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 comply with the requirements of the AMCA Certified Ratings Program.



cULus Certification

Centrex REX fans carry the UL label, UL705, (ZACT/ZACT7), file #E28413.



WARNING

To fulfill our obligations towards Article 33, in accordance to European REACH Regulation No 1907/2006 EC, we hereby inform you that this article contains the following Substances of Very High Concern mentioned on the Candidate list:

- Lead

FEATURES & BENEFITS

Internal Wiring

All models with ODP motors are wired to an appropriate external junction box. An appropriately sized service switch is available. The initial electrical connection does not require the removal of any access panels.

Direct Drive Application

The direct drive Centrex is available in sizes from 8 through 12. Nationally known motors are available in all speeds. The direct drive Centrex features motor compartment cooling to prolong motor life. The entire operating assembly is floated on tubular supports. Efficient aluminum, backward inclined wheels give the Centrex a quiet efficiency unmatched by competitive models.

Belt Drive Application

Sizes from 12 through 33 are available in the belt drive Centrex. Belt drive models provide an almost infinite variation of capacity across the entire range of operation. Motors and drive pulleys are mounted on the Centrex exterior so they are readily accessible. Furthermore, the REX's versatile design allows for mounting at a variety of angles. When unit positioning necessitates motor mounting to the side of the unit, PennBarry recommends motors up to 2 HP. Selection of a higher HP motor may void warranty. Adjustable pitch pulleys are standard, for speed and capacity adjustment on the spot.

An extra, deep spun inlet venturi mates with a spun bottom wheel inlet plate. This smooth inlet condition ensures high capacity even at higher static pressures. The Centrex inlet was actually patterned after the calibrated nozzles specified by AMCA for air movement testing. All of these design features, coupled with low outlet velocities, mean low operating noise levels with smooth, efficient airflow.

Aluminium Wheels

The "heart" of the Centrex exhauster is its aluminum wheel. The wheel construction is spark-proof and non-corroding, and produces reduced, motor starting torque and long bearing life. In sizes REX08, REX10 and REX12, specially designed high volume wheels are provided. All testing and rating is done in an AMCA approved laboratory.

Support Angles

Support angles are fastened to the casing and designed for horizontal blower suspension from rod hangers. Vibration hangers are recommended.



OPTIONS & ACCESSORIES

Casing Bracket

Casing brackets are fastened to casing at inlet or outlet flange and provide for vertical airflow. Brackets are to be fastened to the fan casing in the field.

Backdraft Dampers

Opposed blade backdraft dampers are available for gravity operation. Dampers feature square galvanized steel frames and multi-leaf, roll formed aluminum blades with nylon bearings.



Extended Lube Lines

Installing extended lube lines helps to reduce maintenance costs by enabling lubrication of shaft bearings without requiring disassembly of the fan.

Finishes

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

Firestat Switch

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

Spare Belt

An extra set of one or two spare belts is an available selection.

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.

Vibration Isolators

A variety of isolation devices for floor mounting are available, including flex pads and rubber in shear or spring isolators. These can be used in conjunction with support angles (standard) or support channels (optional).

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.

Companion Inlet Flange

An extra pair of companion flanges is available for use on duct work when the Centrex is connected to a duct by a transition section. The flanges fit the fan to the transitions and guarantee proper sizing.

Safety Service Switches

Safety service switches are available to allow positive electrical shut-off and safety. Wiring is only run from the motor to the junction box. (Factory wiring for 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.

OPTIONS & ACCESSORIES

Support Legs

Securely bolted to casing rings, support legs provide a stable method for supporting blower units from the ceiling, floor, or wall. Legs are to be fastened to the fan casing in the field.



Fan Guards

Inlet guards or outlet guards are available when required. Such safety guards are made of expanded metal attached to the fan casing. Front and rear guards are recommended whenever the fan is mounted within 7 feet of an occupied space (OSHA requirements) and otherwise unprotected (by duct work, for example).



Motor Covers

Illustrated below is the complete motor and drive cover for belt-driven units. These are optional accessories and are available to provide safe operating conditions where dictated. This motor and drive cover can serve as an OSHA belt guard.

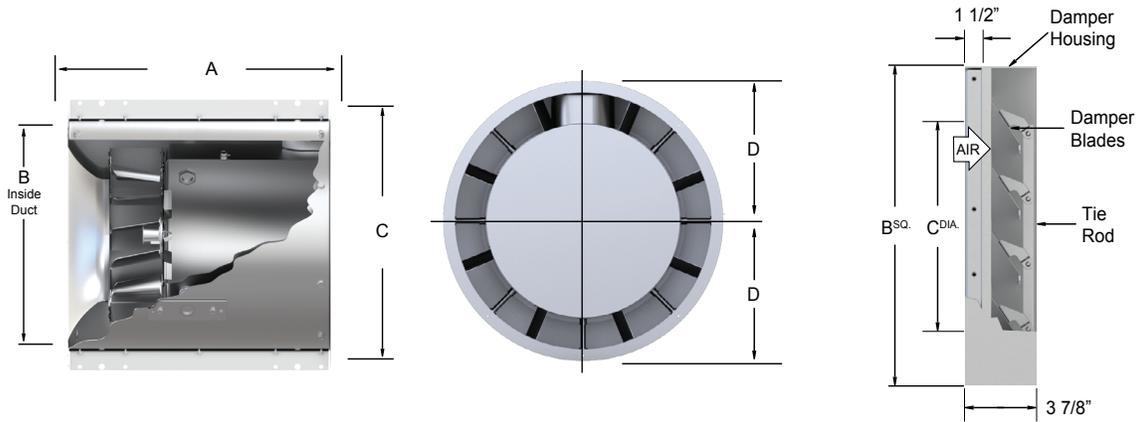


Lek-Trol™ Controller Options

PennBarry's solid state Lek-Trol™ lets you "tune-in" to the precise air volume needed. Adjust fan speed with a turn of the dial. Attractive, variable speed switch provides ON-OFF control and permits air movement adjustment from 100% of capacity to 50%. Lek-Trols are available for use with direct drive Centrex units.

Model LT30 (2.5 Amps) (115/1/50-60)	Model LT40 (10 Amps) (115/1/50-60)	Model LT50 (6 Amps) (115/1/50-60)	Model LT35 (5 Amps) (230/1/50-60)
REX08V, REX08R, REX08Q, REX10V, REX10T	REX10Q, REX12Q	REX12T	REX12Q

DIMENSIONAL DATA | DIRECT DRIVE

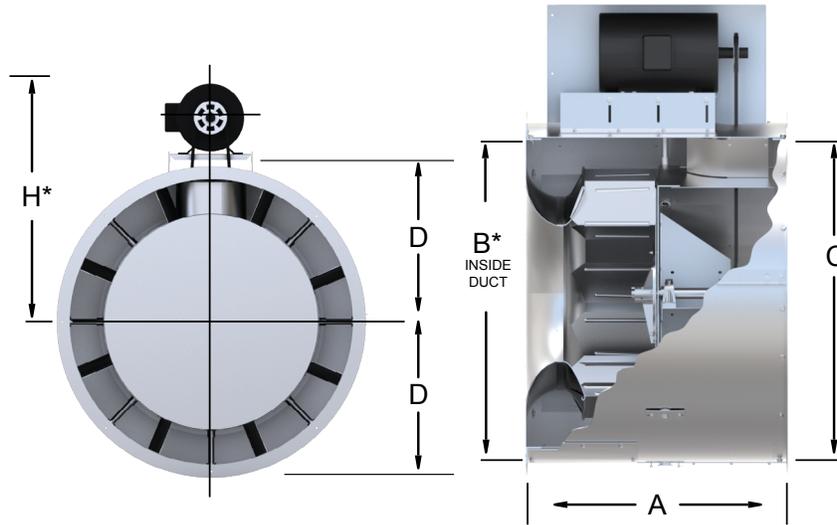


Direct	Belt	BSQ.	CDIA.
REX08	-	16 1/4	12 7/8
REX10	-	20	14 1/2
REX12	REX12B	22 1/2	19
-	REX14B	28	23
-	REX22B	35 3/4	33 1/4
-	REX27B	43 3/4	40 1/2
-	REX33B	54 3/4	49 1/2

All direct driven Centrex units are pre-wired at the factory.

Model	A	B	C	D	Ship Wt.
REX08	16 1/2	12 7/8	15 5/8	7 13/16	25
REX10	21	14 1/2	17 1/4	8 5/8	35
REX12	22	19	21 3/8	10 11/16	50

DIMENSIONAL DATA | BELT DRIVE



Belt Drive Centrex REX

Model	A	B	C	D	H*	Approximate Ship Weight (LBS.)
REX12B	23	19	21 3/8	10 11/16	23 11/16	72
REX14B	25	23	25 3/8	12 11/16	25 1/2	98
REX22B	32	33 1/4	35 5/8	17 13/16	33	175
REX27B	36	40 1/2	43 1/4	21 5/8	41	325
REX33B	38	49 1/2	52 3/4	26 3/8	46	525

*Maximum for open motors and highest HP available for that size. All dimensions in inches.

Model	Wheel Size	Inlet and Outlet
REX12B	Diameter = 13.50" Circumference = 3.53"	Inside Diameter = 19" Fan Outlet Area = 1.97 sq. ft.
REX14B	Diameter = 16.50" Circumference = 3.53"	Inside Diameter = 23" Fan Outlet Area = 2.88 sq. ft.
REX22B	Diameter = 24.50" Circumference = 6.41"	Inside Diameter = 33.25" Fan Outlet Area = 6.03 sq. ft.
REX27B	Diameter = 30.50" Circumference = 7.98"	Inside Diameter = 40.50" Fan Outlet Area = 8.94 sq. ft.
REX33B	Diameter = 36.50" Circumference = 9.55"	Inside Diameter = 49.50" Fan Outlet Area = 13.36 sq. ft.

ROUND CENTREX FAN SELECTIONS

Model

REX = Round Centrifugal Inline Fan

Construction

<p>Application Flow (CFM) <enter value></p> <p>Application Static Pressure (inwg) <enter value></p> <p>Drive Type B = Belt D = Direct</p>	<p>Fan RPM <####></p> <p>Unit Size 8, 10, 12, 14, 22, 27, 33</p>
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Motor

<p>Efficiency</p> <p>S = Standard P = Premium</p> <p>Horsepower</p> <p>0.040 = 1/25 0.083 = 1/12 0.100 = 1/10 0.167 = 1/6 0.250 = 1/4 0.333 = 1/3 0.500 = 1/2 0.750 = 3/4 01.00 = 1 01.50 = 1 1/2 02.00 = 2 03.00 = 3 05.00 = 5 07.50 = 7 1/2 10.00 = 10 15.00 = 15 X = Special</p> <p>Motors and Drives</p> <p>F = Factory mounted L = Less motor less drive M = Less motor with drive</p>	<p>Motor Enclosure</p> <p>0 = None 1 = TE w/Overload 2 = TE w/o Overload 3 = ODP w/Overload 4 = ODP w/o Overload 5 = EXP C2D1 X = Special</p> <p>Motor Tap</p> <p>0 = None Q = 1725 PM (Q2) R = 1550 RPM (RA) T = 1140 RPM (TA) V = 1050 RPM (VA)</p>	<p>Voltage/Phase/Cycle</p> <p>B = 110V/1PH/50HZ* C = 115V/1PH/60HZ D = 120V/1PH/60HZ* F = 208V/1PH/60HZ G = 208V/3PH/60HZ H = 220V/1PH/50HZ* J = 220V/3PH/50HZ* K = 230V/1PH/60HZ L = 230V/3PH/60HZ M = 240V/1PH/50HZ* N = 240V/3PH/50HZ* P = 277V/1PH/60HZ*# Q = 380V/3PH/50HZ* R = 380V/3PH/60HZ* S = 400V/3PH/50HZ* T = 415V/3PH/50HZ* U = 440V/3PH/50HZ* V = 460V/3PH/60HZ W = 480V/3PH/60HZ* X = Special Y = 575V/3PH/60HZ</p> <p>* Non-standard offering subject to longer lead times and price adjustment</p> <p># 277V applications require a transformer</p>
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ROUND CENTREX FAN SELECTIONS

Electrical Accessories

Controllers

- 0 = None
- 1 = Lek-Trol SCR speed controller (mounted)
- 2 = Lek-Trol SCR speed controller (loose)
- V = VFD (belt drive only)
Note: VFD can be ordered separately

Disconnect and ITW*

- 0 = None
- 1 = NEMA 1 ITW only
- 3 = NEMA 3R / 4 ITW only
- A = NEMA 1 - loose
- B = NEMA 1 - mounted
- C = NEMA 1 - mounted and wired

- D = NEMA 3R - loose
- E = NEMA 3R - mounted
- F = NEMA 3R - mounted and wired
- G = NEMA 4 - loose
- H = NEMA 4 - mounted
- J = NEMA 4 - mounted and wired
- N = NEMA 7 - loose
- Q = NEMA 9 - loose
- X = Special
* ITW - Internal wiring not provided on explosion proof motors

Switches / Sensors

- 0 = None
- F = Firestat switch

Options and Accessories

Construction Accessories

- 0 = None
- C = Casing bracket

Damper

- 00 = None
- BB = Opposed blade backdraft damper
- X = Special

Extended Lube Lines

- 0 = None
- L = Extended lube lines

Flange/Companion Flange Kit

- 0 = None
- 6 = Companion inlet and outlet flange kit*
* Companion flange includes flange

Guard/Screen

- 0 = None
- N = Inlet guard
- T = Inlet and outlet guard
- U = Outlet Guard

Paint/Coating

- 0 = None
- F = Epoxy powder coat (light gray)
- G = Epoxy powder coat with UV protection (gray)

- K = Phenolic epoxy powder coat (gray)
- L = Phenolic epoxy powder coat with UV protection (gray)
- N = Polyester powder coat*
- X = Special
* Colors only available in Polyester Powder Coat

Paint Color*

- 00 = None
- 50 = Chrome green
- 55 = Pale green
- 56 = Dove gray (PPC standard)
- 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
* Colors only available for polyester powder coat

Spare Belt(s)

- 0 = None
- 1 = 1 spare set
- 2 = 2 spare set

Support Legs

- 0 = None
- 1 = Support legs

Vibration

- 0 = None
- 1 = Rubber in shear floor
- 2 = Rubber in shear hanger
- 3 = Floor flex pads
- 4 = Spring floor
- 5 = Spring hanger

Weather/Motor Cover

- 0 = None
- C = Weather/motor cover

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

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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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