



Bulletin FX11



## FUMEX

Model: FX  
Upblast Roof Exhausters  
Direct Drive and Belt Drive



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### › Fumex Direct Drive Series

**Model: FX (V/S/R/Q/Q1/Q2)**

- Static pressure up to 1.5 in. wg.
- Flow capacity up to 4,489 CFM
- Fatrap (FT) Option Available on sizes 13, 16, & 18
- High wind construction (-HW) option available.



### › Fumex Standard Duty Belt Drive Series

**Model: FX (B)**

- Static pressure up to 2.5 in. wg.
- Flow capacity up to 21,511 CFM
- Fatrap (FT) Option Available
- Heat & Smoke Removal (-HS) Option Available
- High wind construction (-HW) option available.

### › Fumex High Pressure Belt Drive Series

**Model: FX (BH)**

- Static pressure up to 4 in. wg.
- Flow capacity up to 9,920 CFM
- Fatrap (FT) Option Available
- Heat & Smoke Removal (-HS) Option Available
- High wind construction (-HW) option available.

### › Fumex High Capacity Belt Drive Series

**Model: FMX (B)**

- Static pressure up to 1.5 in. wg.
- Flow capacity up to 31,881 CFM

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### › Fumex Direct & Belt Drive Fans

PennBarry certifies that the Fumex direct drive and belt drive models FX, FXB, FXBH, and FXBHFT 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.



### › Fumex High Capacity Belt Drive Fans

PennBarry certifies that the Fumex belt drive model FMXB 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 comply with the requirements of the AMCA Certified Ratings Program.



### › UL and CSA Certification

Fumex fans carry the UL label, UL 705 (ZACT), File #E28413. Fumex fans with the "Fatrap" option are UL 762 (YZHW) listed under file #MH10684. Fumex fans with the heat and smoke removal option are UL listed under file #MH19473.



Fumex exhausters are also certified by the Canadian Standard Association file #LR13309.



*PennBarry reserves the right to make changes at any time, without notice, to models, construction, specifications, options, availability, etc. This bulletin illustrates the appearance of PennBarry products at the time of publication. To view the latest updates, visit PennBarry at [www.pennbarry.com](http://www.pennbarry.com).*

# Introduction

Fumex



## General Information



Belt Drive Fumex with Fatrap option (above) and Direct Drive Fumex (right).



Direct Drive Fumex Cutaway

### › Fumex Series of Centrifugal Fans

Fumex centrifugal fans are designed for medium to high pressure applications. They can be either roof or wall mounted. While suitable for general ventilation, Fumex fans are specifically designed to discharge contaminated or grease-laden air or fumes up and away from building surfaces. The optional "Fatrap" (UL762) restaurant grease exhaust configuration (see Fatrap Configuration) makes Fumex fans particularly suited for all food service applications and chemical fume hoods. The optional heat and smoke removal configuration (see Smoke Removal) makes Fumex fans particularly suited for heat and smoke control systems. The optional high wind construction makes Fumex Fans particularly suited for high wind hurricane zones. Fumex fans are available in a range of capacities.

Fumex fans feature a weather-resistant seamless spun aluminum housing which provides ample drainage and works in conjunction with a patented wheel design and deeply spun inlets to provide smooth quiet airflow through the ventilator. The centrifugal wheels are aluminum, non-overloading, backward inclined, robotically welded, and dynamically balanced.

### › Fumex Direct Drive Series

#### Model: FX (V/S/R/Q/Q1/Q2)

- Static pressure up to 1.5 in. wg.
- Flow capacity up to 4,489 CFM
- Fatrap (FT) Option Available on sizes 13, 16, & 18
- High wind construction (-HW) option available.

### › Fumex Standard Duty Belt Drive Series

#### Model: FX (B)

- Static pressure up to 2.5 in. wg.
- Flow capacity up to 21,511 CFM
- Fatrap (FT) Option Available
- Heat & Smoke Removal (-HS) Option Available
- High wind construction (-HW) option available.

### › Fumex High Pressure Belt Drive Series

#### Model: FX (BH)

- Static pressure up to 4 in. wg.
- Flow capacity up to 9,920 CFM
- Fatrap (FT) Option Available
- Heat & Smoke Removal (-HS) Option Available
- High wind construction (-HW) option available.

### › Fumex High Capacity Belt Drive Series

#### Model: FMX (B)

- Static pressure up to 1.5 in. wg.
- Flow capacity up to 31,881 CFM

### Features & Benefits

#### › Motor Selection

Both direct drive and belt drive models are available with a wide range of voltages and enclosures (see Motor Selection for a complete listing). Standard belt drive Open Drip Proof (ODP) ball bearing motors are selected using a conservative portion of the NEMA service factor. Standard direct drive ODP motors have Class B insulation and internal overload protection. Overload protection is available as an option on belt drive models. Each size is carefully engineered to match the motor to the wheel capacity.

#### › Internal Wiring

All direct and belt drive models with ODP motors feature a polarized disconnect plug which is factory wired from the motor to the junction box. This provides a positive method of electric shut-off as required by most codes without requiring the traditional disconnect switch. (See Options & Accessories for optional NEMA wiring and disconnect devices.)

#### › Sound Performance

Fumex units deliver outstanding air performance with minimal noise and have the lowest AMCA licensed sound performance in the industry.

#### › Curb Caps (Base)

Curb caps for direct drive and standard duty belt drive models are available in galvanized steel (standard) or aluminum (optional). Curb caps for high capacity belt drive models are available only in aluminum. All curb caps have fully welded corners and are pre-punched to ensure a leak-tight and easy installation.

#### › Forced Motor Cooling

Motors and drive components are located out of the airstream in a separate compartment. A cooling tube between the motor dome and discharge apron enables fresh air to be drawn into the motor housing during fan operation. This positive cooling promotes longer life for motor and drive components.

#### › Easy Maintenance Access

By removing the fasteners, the motor dome lifts off for complete access to all the drive components.

#### › Vibration Isolators

Multidirectional, rubber-in-shear vibration isolators mitigate residual vibration transmission from the unit to the building.

#### › Structural Integrity

Durable housings of spun aluminum have a high strength-to-weight ratio and incorporate a rolled bead for additional strength. There are no welds to break or seams to leak. The heavy-gauge motor mounting platform provides positive rigidity between all components of the power train assembly.

#### › Internal Bracing

Tri-Strut™ supports transfer the weight of the motor mounting platform directly to the curb mounting surface. The aluminum spun housing, therefore, is not used to support any weight. For grease laden applications, there is less surface for grease build-up during normal operation.

#### › Solid Steel Shafts

Sized so the first critical speed is a minimum of 130% of maximum cataloged operating speed, shafts are precision ground, and polished.

#### › Self-Aligning Bearings

Heavy-duty bearings are sized for a minimum L50 life in excess of 200,000 hours of operation. 100% factory tested, they are designed for air handling applications.

#### › Drives and Belts

Pulleys are pre-set to the specified RPM. Cast iron variable pitch pulleys are adjustable, allowing for field balancing based on actual field conditions. All pulleys are sized for at least 150% of the driven horsepower.

#### › Conduit

Both direct and belt drive units include a large 1" nominal conduit chase (not available on heat and smoke removal units; wiring is run via the cooling tubes) for easy installation of wiring from the motor dome to below the curb cap. Fatrap units are factory wired to an external NEMA 3R junction box.

#### › Reverse Venturi

Reverse venturi reduces turbulence and improves distribution of the air as it enters the wheel inlet and is "captured" by the blades.

#### › Wheels

Fumex fans offer patented wheel designs. Carefully matched, highly-tooled venturis enhance the performance of these backward inclined and non-overloading centrifugal wheels. Made of advanced aluminum alloys, the various wheel components provide superior strength and durability, as well as spark resistant construction. The heat and smoke removal configuration utilizes steel construction.

#### › Silent Wheel (Direct Drive)

- Blades' highly curved leading edge provide unsurpassed low sound numbers with excellent air performance.
- Backplate and inlet are stamped for consistency, plus dynamic balancing assure smooth, vibration-free operation.
- Riveted or riveted and welded construction ensure superior dependability over other wheel designs.



#### › Standard Duty, All Welded Wheel

(Standard Duty and High Pressure Belt Drive)

- Blades are curved for improved air performance while increasing their strength and rigidity.
- Backplate and inlet are stamped for consistency. They include a perimeter rim which enhances strength and improves balancing.
- Wheel assembly is robotically welded to provide extremely durable and consistent performance.
- Wheel is dynamically balanced. Balancing weights are mechanically attached to the inside of the rims of both the backplate and wheel inlet. This allows a precise placement of the weights anywhere within a full 360° range on two separate planes, without the possibility of detachment.



# Introduction

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## Options & Accessories

### › Finishes

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

### › Mounting Pedestal

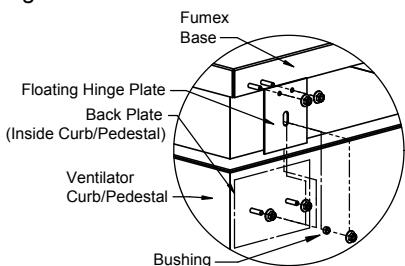
The 12" high mounting pedestal, available in aluminum or galvanized steel, incorporates a removable access panel for easy inspection and service of motor operated backdraft dampers. It provides solid ventilator support and a weather resistant seal that does not injure or disturb flashing. This item should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

### › Hinged Sub-Base

Hinged sub-bases provide access to the curb well for damper service or clean out for grease applications. Constructed with a rust proof hinge arrangement and low height (3 1/2") the assembly is easily manipulated and reduces the impact on overall installation height. This accessory is available for use with most all models for either factory built or existing roof curbs.

### › Floating Hinge Kit

A floating hinge kit is also available for field installation. This assembly connects the exhauster directly to the roof curb and provides the same level of access as the hinged sub-base.



### › 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. However, please note that NFPA 96 installations do not allow the use of bird or insect screens. The requirements of local codes must be reviewed to determine if there are any conflicts.

### › Internal Wiring

NEMA 3R wiring is available for both direct and belt drive models.

### › Backdraft Dampers

Backdraft dampers are available for either gravity or motorized operation (motor kit optional). Dampers feature square galvanized steel frame, multi-leaf, roll formed aluminum blades with nylon bearings. Backdraft dampers should not be used when venting kitchen hoods. NFPA 96 installations do not allow the use of dampers. The requirements of local codes must be reviewed to determine if there are any conflicts.

### › Safety Disconnect Switch

Safety disconnect switches are available to allow positive electrical shut-off and 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 disconnect switches are available for indoor, outdoor, and explosion proof installations. Disconnects are to be field wired by a licensed electrician.



### › Firestat Switch

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



### › Time-Delay Switch

(Selected direct drive models only) The Airminder Model AM12 switch is a UL recognized and CSA certified time-delay relay that operates both the fan and room light to ventilate an area even after the occupants depart. In the "On" position, the Airminder turns the light and fan on immediately. In the "Off" position, the light goes off immediately and the fan is in operation for a period of time as preset from 1 to 60 minutes. Suitable only for 1/3 HP maximum at 120/1/60.



### › Speed Controllers

The Lektro™ controller allows adjustment in speed to a maximum of 50% reduction, which results in a very cost effective means for system balancing. The device can be located under the fan dome to prevent unauthorized tampering or on the wall for ease of operation by the building occupants. (Available on direct drive units with ODP motors and some select TE motors. See reference table under Motor Availability)



### › Automatic Belt Tensioner

The factory mounted Automatic Belt Tensioner accessory eliminates the need for re-tensioning the belt after start-up. It is constructed from 10 gage galvanized steel and incorporates five torsion springs to automatically position the motor and maintain proper belt tension. Additional benefits include reduced belt and pulley wear and simplified belt replacement without tools. The Automatic Belt Tensioner is available for Fumex models FX08B, FX10B, FX12BH, FX13B, FX13BHFT and FX14B with 1/4, 1/2, 3/4, and 1 HP ODP motors. It can also be used with 1.5 HP, 3-phase ODP motors.

### › Spark Resistant Construction

AMCA 'B' construction is available as standard construction on direct drive units and as an option on belt drive units (not available on heat and smoke removal units). If required, an explosion proof motor and disconnect may be selected as options.

### › Wall Mounting

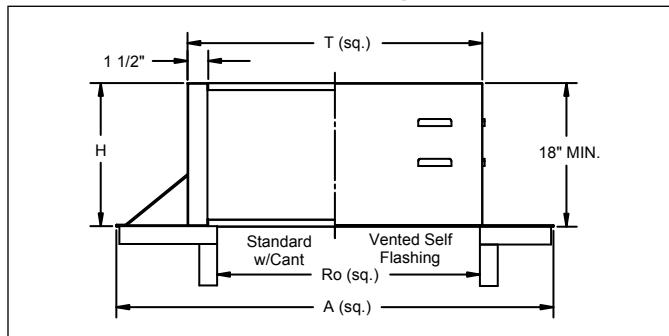
This option is provided as a separate product line, whose models include a "W" prefix. Product line includes models up to size 24, motors up to 2HP, and round bases (not available on heat and smoke removal units).

### › Prefabricated Curb

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, see the latest PennBarry Ventilation Curb brochure. Please note that NFPA 96 installations require a specific curb height. See Fatrap configuration on the next page.

## Options & Accessories

### Fumex Curb Dimensional Drawings

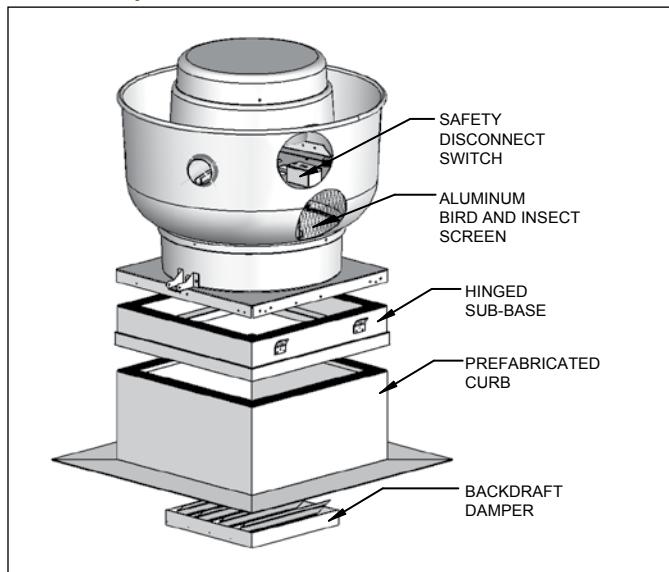


### Fumex Dimensional References

Model	E <sup>(4)</sup> SQ	T <sup>(2)</sup> SQ	A SQ	Ro <sup>(3)</sup> SQ	Damper Size SQ	Galv. Steel Gauge
FX08S/R	18.5	17	25	9	8.75	18
FX10S/R	18.5	17	25	11.5	11.25	18
FX11V/S/R/Q	18.5	17	25	11.5	11.25	18
FX13V/S/R/Q	18.5	17	25	11.5	11.25	18
FX16V/S/R/Q1/Q2	20.5	19	27	16	15.75	18
FX18V	28.5	27	35	20	19.75	18
FX08B to FX14B	24.75	23.25	31.25	16	15.75	18
FX12BH	24.75	23.25	31.25	16	15.75	18
FX13BHFT	24.75	23.25	31.25	16	15.75	18
FX16B and FX18B	28.5	27	35	20	19.75	18
FX18BH	28.5	27	35	20	19.75	18
FX24B	33.5	32	40	25	24.75	18
FX24BH	33.5	32	40	25	24.75	18
FX27B and FX30B	36.5	35	43	28	27.75	18
FX36B	44.5	43	51	36	35.5	18
FMX50B	59	57.5	65.5	50	49.5	18

Standard heights "H" are 8", 12", and 18" including wood nailing. "T" dimension of curb is 1 1/2" less than the dimension of inside base of fan ("E"). "Ro" refers to Roof Opening. "E" dimension is inside base of fan. For FT (Fatrap) units, curbs are cantless, 18" high and optionally vented.

### Fumex Exploded View



### Fatrap Configuration

Fatrap configured fans are ideal for use in commercial kitchens over grilles, charcoal broilers, deep fat fryers, steam tables, ranges, dishwashers, and other appliances. Fumex fans are specially configured for food service applications with the addition of a group of accessories that either meets a requirement or eases installation requirements according to NFPA 96. NFPA 96 "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations" is the generally recognized authority nationwide for restaurant installation requirements. However, local codes may vary.

Included in the units are the following.

- **UL 762 Listing:** Fatrap configured Fumex fans are listed at 400°F — 100°F higher than UL requirements. The high temperature rating is the result of the fan's highly efficient forced motor cooling capability. Three direct drive (sizes 13 – 18) and all belt drive models are listed.
- **Pre-wired Junction Box:** A weather-proof junction box is factory wired and mounted to the housing exterior. An appropriately sized disconnect switch is commonly selected as an additional option. These items meet the code requirements for positive electric shut-off.
- **Grease Collector/Separator Box:** Designed for easy installation, the grease is routed from a single swiveling collection spout to an amply sized durable galvanized steel box, trapping grease and residue, and avoiding discharge onto the roof surface. Additionally, these boxes separate the water from the grease, prolonging the time required between periodic maintenance.

### Additional Fatrap Accessories

**Ventilated Curbs and Pedestals:** For buildings two stories or higher NFPA 96 requires the use of ventilated mounting curbs or pedestals to provide an approved arrangement for connecting a range hood and duct work to the roof fan. PennBarry's ventilated mounting curbs and pedestals, 18" high, comply with that standard when properly installed. Ventilated curbs have a flat mounting flange for fastening directly to the roof deck. This flange should be securely fastened and flashed to ensure weather tightness. Ventilated pedestals are designed to fit on an existing curb. They provide cap flashing when so installed.

**Make-Up Air Units (Suplex):** Fumex fans with the Fatrap configuration can be combined with a PennBarry FS Muffan fan to create an integrated unit called the Suplex. The Fumex handles the required air flow to be exhausted while the Muffan provides an appropriate amount of supply make-up air. The modular design of the Suplex means that just one roof opening is needed for both the exhaust and supply ducts. An insulated shield divides the base to separate the exhaust and make-up air compartments, and prevents heat transfer between hot exhaust air and fresh filtered air. This results in a complete air-tight seal between the hood and exhaust fan.

# Introduction

Fumex



## Options & Accessories

### › Heat & Smoke Removal Configuration

While Fumex fans are commonly used for general ventilation, they are also designed to discharge contaminated or grease-laden air or fumes up and away from building surfaces with the Fatrap option and when equipped with the Heat and Smoke Removal option, this series of fans incorporates features exclusively designed to exhaust heat and smoke in the event of fire. During these emergencies, the fans are designed to operate at the temperature and time limits stated below. To maintain power to these fans during emergencies, special consideration must be made for field power supply. In the event of an emergency, if power is maintained, the units will operate for the times and temperatures indicated, after which they will continue to operate until they are destroyed by the extreme temperature generated during an actual fire, or their roof structure collapses.

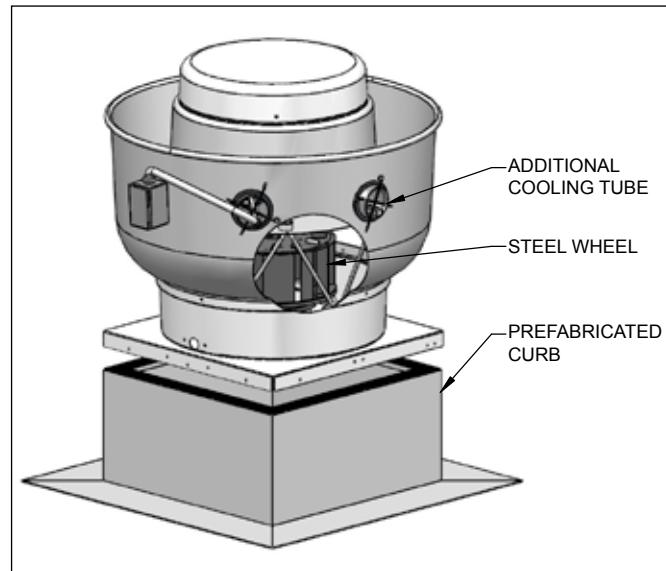
For smoke control systems, Heat and Smoke Removal configured fans are listed per UL for emergency smoke removal, referencing UL705, UL793, Industrial Risk Insurers (IRI), and Southern Building Code Congress International (SBCCI).

The UL standard requires the fan to run at 500°F for 4 hours (IRI) and 1000°F for 15 minutes (SBCCI). PennBarry Heat and Smoke Removal configured Fumex units are listed at 500°F for 4 hours and 1000°F for 1 hour. The additional 45 minutes at 1000°F will buy precious time in the event of a fire.

**Steel Wheel:** The wheel is a standard duty, all welded wheel (standard duty and high pressure belt drive). The blades are curved for improved air performance while increasing their strength and rigidity. The wheel assembly is fully welded to provide extremely durable and consistent performance. The wheel is dynamically balanced. Balancing weights are mechanically attached to the inside of the rims of both the backplate and wheel inlet. This allows a precise placement of the weights anywhere within a full 360° range on two separate planes, without the possibility of detachment.

**Forced Motor Cooling:** Motors and drive components are located out of the airstream in a separate compartment. Two cooling tubes are located between the motor dome and discharge apron which enables fresh air to be drawn into the motor compartment during fan operation. This allows the cooler outside air to wash over the motor and bearings. This positive cooling promotes longer life for the motor and drive components.

### › Fumex Heat & Smoke Removal Option



### › High Wind Construction

High wind construction Fumex fans are specifically designed for high wind hurricane zones (HWHZ). The Fumex models are designed to withstand 150 MPH winds in accordance with Miami-Dade and Florida Building Code standards. The units are 3rd party tested and certified through a 3rd party Professional Engineer (P.E.) to meet these strict standards. Installation details are provided and since there are no tie downs or external braces required for attaching the unit to the roof or curb this makes installation simple and easy. A wide range is offered to meet all of your ventilation needs which includes all belt and direct drive sizes 36 and under.

### Product Certifications:

- Miami-Dade NOA # 08-1202.13
- Florida Product Approval #12339
- Texas Department of Insurance # pending

## Motor Availability

### > NEMA Motor

This chart summarizes the largest allowable NEMA frame sizes for motors used on belt drive models.

### > Largest Available NEMA Frame Size per Model

Model	Max. Frame Size	Model	Max. Frame Size
FX08B	56	FX18B	145T
FX10B	56	FX18BH	145T
FX12BH	56	FX24B	184T
FX13B	56	FX24BH	184T
FX13BHFT	56	FX27B/FX30B	184T
FX14B	56	FX36B	213T
FX16B	145T	FMX50B	215T

**!** At PennBarry's option, large frame motors may be removed after testing and shipped separately. Contact the factory for special application motor availability.

### > Variable Speed Motor Control

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.

### > Direct Drive Motor Availability

The following chart lists the various motor options available for each of the direct drive fan models. Once a fan model is selected, this chart can be used to determine if a suitable motor is available. (If not, another selection may have to be made from the fan performance charts). Look under the nominal RPM heading to determine which fans have 2-speed and 3-speed motors.

### > Direct Drive Motor Availability

Model	Nominal RPM				115 Volts			1 Phase					
	1050 V	1300 S	1550 R	1725 Q	Open Drip Proof	Totally Enclosed	Explosion Proof	Use TE Motors	Open Drip Proof	Totally Enclosed	50 hz	50 C Ambient	Explosion Proof (4)
	-	x	x	-	yes	yes (1)	-		yes (1)	yes (1)	yes (1)	yes (1)	-
	FX08S/R	-	x	x	-	yes	yes (1)		-	-	-	-	-
	FX10S/R	-	x	x	-	yes	yes (1)		-	-	-	-	-
	FX11V/S/R	x	x	x	-	yes	yes (1)		-	-	-	-	-
	FX11Q	-	-	-	x	yes	yes		yes	yes	yes	yes (5)	-
	FX13V/S/R	x	x	x	-	yes	yes (1)		-	-	-	-	-
	FX13Q	-	-	-	x	yes	yes		yes	yes	yes	yes (5)	-
	FX16V/S/R	x	x	x	-	yes	yes (1)		-	-	-	-	-
	FX16Q1	-	-	-	x (3)	yes	-		-	-	-	-	-
	FX16Q2	-	-	-	x	yes	yes		yes	yes	yes	yes (5)	-
	FX18V	x	-	-	-	yes	-		-	-	-	-	-

Model	Nominal RPM				3 Phase					
	1050 V	1300 S	1550 R	1725 Q	Open Drip Proof		Totally Enclosed	50 hz	50 C Ambient	Explosion Proof (4)
	-	x	x	-	-	-	-	-	-	-
	FX08S/R	-	x	x	-	-	-	-	-	-
	FX10S/R	-	x	x	-	-	-	-	-	-
	FX11V/S/R	x	x	x	-	-	-	-	-	-
	FX11Q	-	-	-	x	-	-	-	-	yes (6)
	FX13V/S/R	x	x	x	-	-	-	-	-	-
	FX13Q	-	-	-	x	-	-	-	-	-
	FX16V/S/R	x	x	x	-	-	-	-	-	-
	FX16Q1	-	-	-	x (3)	-	-	-	-	-
	FX16Q2	-	-	-	x	yes	yes	yes	yes	yes (6)
	FX18V	x	-	-	-	-	-	-	-	-

(1) High speed only.; (2) 200 - 240, 380, 415, 460 V; (3) Nominal 1650 RPM; (4) Cls.I, Grp.D, Div. I / Cls. II, Grp.F & G, Div.I., Not available with 50 Hz.; (5) 230 V only. Not available in 200 or 208 V; (6) 230 V and 460 V only.

# Dimensional Information & Performance Data

Fumex | Direct Drive



## FX08, FX10, FX11, & FX13

### › Performance Data Overview

Fumex direct drive models are available with single and multi-speed motors. Multi-speed motors (eg., FX16V/S/R) are designated: V (1050 RPM), S (1300 RPM), and R (1550 RPM). FX18V is an exception, being a single speed motor. Q, Q2 (1725 RPM) and Q1 (1650 RPM) are single speed motors. A single Fumex fan may be suitable for several requirements by a simple wiring change. This feature provides flexibility for a variety of reasons, including energy savings, off hours requirements, future expansion, or unexpected field variations.

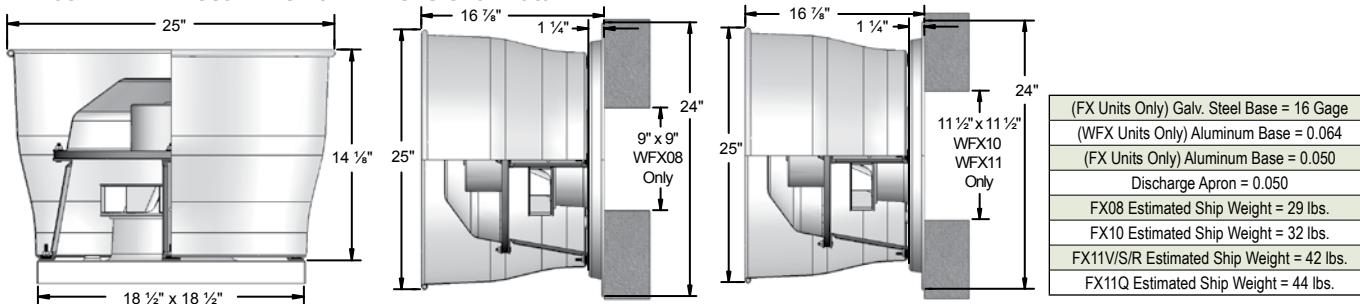
Fumex direct drive models are available in six sizes (8, 10, 11, 13, 16, and 18). Capacities up to 4500 CFM, with static pressures to 1 1/2".

By using Lek-Trol™ variable speed controllers, the high speed flow rate of most models can be reduced by as much as 50%. Do not use Lek-Trol™ on medium or low speed for multi-speed models.

When compared to belt drive models, direct drive fans require less maintenance, have a simpler construction, cost less, and are lighter in weight.

Performances in 50 Hz applications will be less than shown below; consult your local PennBarry representative.

### › FX08 - FX11 Direct Drive Fan Dimensional Data

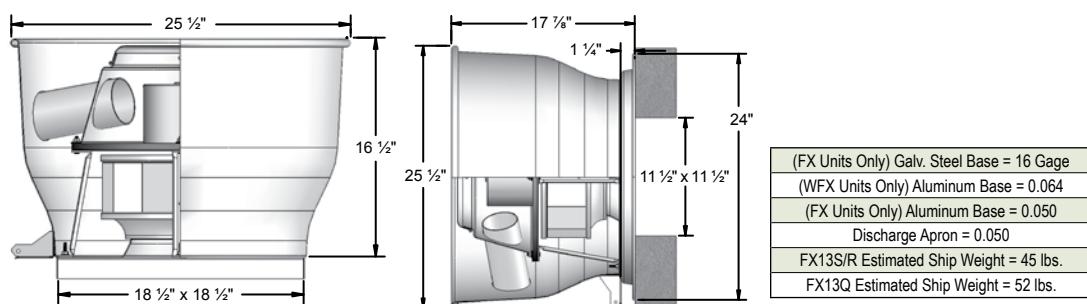


### › FX08 - FX11 Direct Drive Performance Data

Model	Nominal			Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP	
	HP	Max Watts	RPM		CFM	Sones														
FX08S	1/50	44	1300	3361	247	1.3	150	2.0	94	3.2	54	4.3	-	-	-	-	-	-	-	-
FX08R	1/30	55	1550	4007	288	2.4	205	2.9	154	3.5	112	4.4	72	5.2	-	-	-	-	-	-
FX10S	1/25	85	1300	3361	400	3.5	309	3.8	246	4.1	194	4.6	152	5.0	109	5.5	57	6.1	-	-
FX10R	1/12	122	1550	4007	570	6.2	500	6.6	440	6.8	385	6.8	325	6.8	251	6.9	170	7.1	-	-
FX11V	1/25	103	1050	3058	406	1.9	225	2.2	151	3.6	119	4.2	87	4.8	57	5.5	-	-	-	-
FX11S	1/11	142	1300	3786	534	3.9	414	4.2	337	5.1	273	5.9	223	6.2	177	6.5	129	6.9	-	-
FX11R	1/7	199	1550	4514	760	7.6	667	7.4	586	7.6	512	7.9	434	8.9	359	9.6	283	9.6	118	9.7
FX11Q	1/5	255	1725	5024	1034	10.7	959	10.5	883	10.5	804	10.5	722	10.6	631	10.9	538	10.7	313	9.7

See notes on page 9.

### › FX13 Direct Drive Fan Dimensional Data

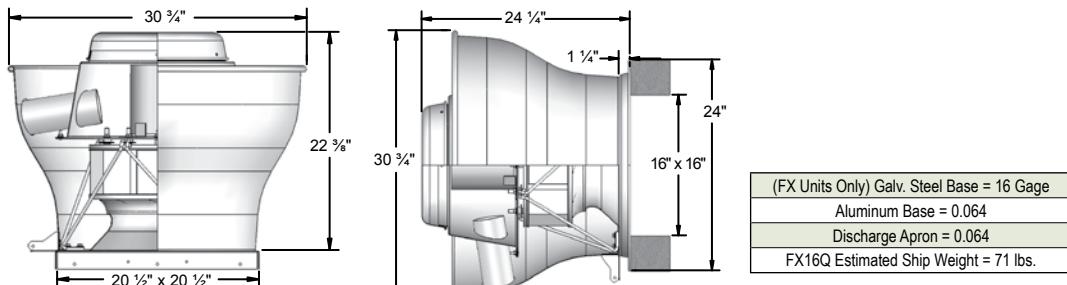


### › FX13 Direct Drive Performance Data

Model	Nominal			Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.250" SP	
	HP	Max Watts	RPM		CFM	Sones																
FX13V	1/20	113	1050	3221	640	4.2	469	2.8	317	2.4	250	3.1	197	3.8	149	4.5	106	5.2	-	-	-	-
FX13S	1/12	148	1300	3988	845	7.4	735	6.4	612	5.2	492	5.0	404	5.3	334	5.7	270	6.1	136	7.0	-	-
FX13R	1/6	188	1550	4755	1057	10.5	980	10.1	908	9.6	825	8.6	733	8.1	646	8.1	561	8.2	376	8.2	144	8.5
FX13Q	1/4	343	1725	5292	1261	13.6	1198	13.0	1143	12.6	1093	12.1	1033	11.7	973	11.2	909	10.8	757	10.1	515	9.6

See notes on page 9.

## › FX16 Direct Drive Fan Dimensional Data

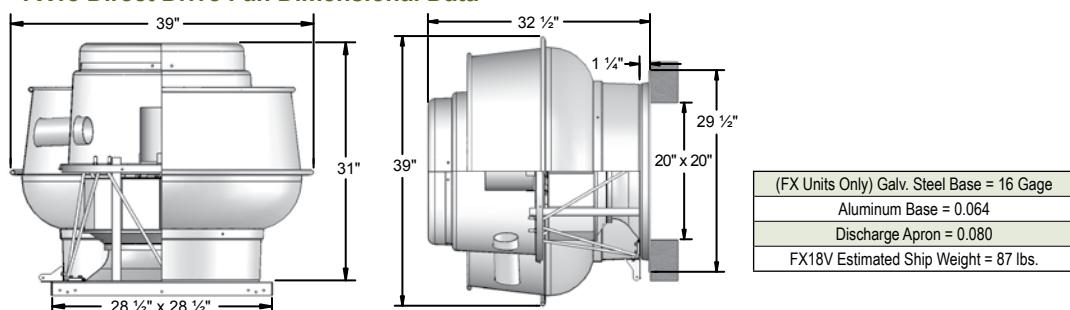


## › FX16 Direct Drive Performance Data

Model	Nominal			Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP	
	HP	Max Watts	RPM		CFM	Sones																		
FX16V	1/6	485	1050	3788	1604	7.9	1358	6.5	1128	5.5	951	5.8	801	6.3	705	6.9	644	7.7	522	9.2	384	9.3	230	9.7
FX16S	1/3	527	1300	4690	1874	10.7	1693	9.5	1514	8.6	1326	8.0	1158	7.6	1023	7.7	913	8.2	735	9.6	572	9.7	379	9.9
FX16R	1/2	590	1550	5592	2140	12.8	1994	11.9	1849	11.0	1709	10.2	1561	9.9	1410	9.6	1269	9.4	1033	9.7	812	11.1	583	10.8
FX16Q1	1/2	715	1650	5953	2531	15.2	2432	14.7	2332	14.2	2232	13.7	2114	13.1	1992	12.5	1868	11.9	1582	11.0	1320	11.5	1001	12.1
FX16Q2	3/4	890	1725	6223	2822	17.1	2753	16.8	2684	16.5	2594	16.1	2501	15.7	2418	15.4	2331	15.1	2119	14.2	1872	14.1	1566	14.2

See notes at bottom of page.

## › FX18 Direct Drive Fan Dimensional Data



## › FX18 Direct Drive Performance Data

Model	Nominal			Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP	
	HP	Max Watts	RPM		CFM	Sones																		
FX18V	3/4	969	1075	6029	4489	21.0	4333	21.0	4177	20.0	4011	19.1	3831	18.1	3652	17.6	3455	17.2	3023	16.5	2431	17.5	1447	20.0

Performance shown is for installation Type A: Free Inlet, Free Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for Installation Type A: Free Inlet Fan Sone Levels. Performance ratings do not include the effects of appurtenances in the air stream.

Fumex fans are only one component of a total system. As such, fan performance is directly affected by the system. It is critical that system designers determine the actual system loss to ensure that the actual flow is specified in the system design.

# Performance Data

Fumex | Direct Drive



## Fan Curves

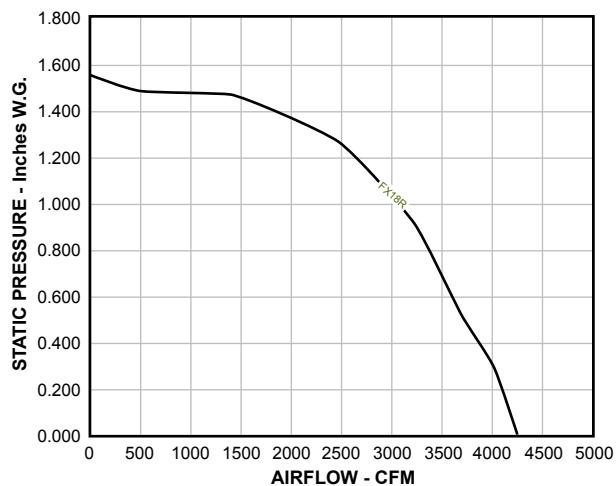
### › Fan Curves

The fan curves illustrated here show the range of capacities available for direct drive units. Each graph shows the performance of several models at one particular nominal speed. Fan curves provide a quick method for selecting a fan unit based on design point requirements.

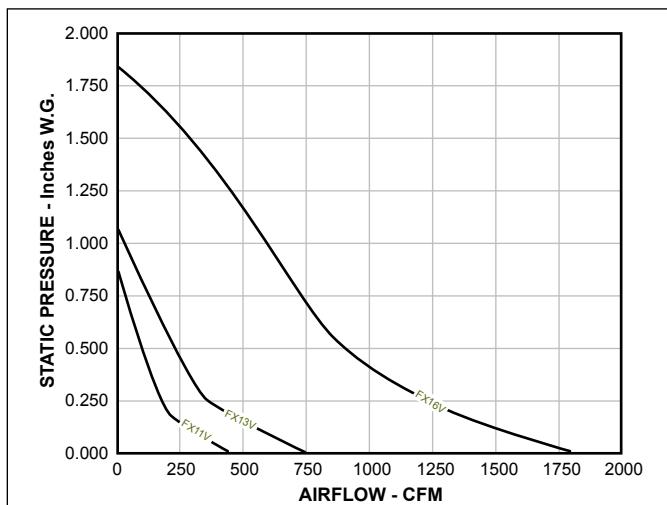
The direct drive performance charts on the previous pages provides the tabular data (CFM and static pressure) used to plot the fan curves. In addition, the horsepower tip speed and sones are tabulated. Since sound is normally an important factor in the selection of a fan, an engineer will usually want to select the "slowest" unit which meets CFM and SP requirements.

Please refer to the Motor Availability section to make sure the motor you select meets your electrical requirements.

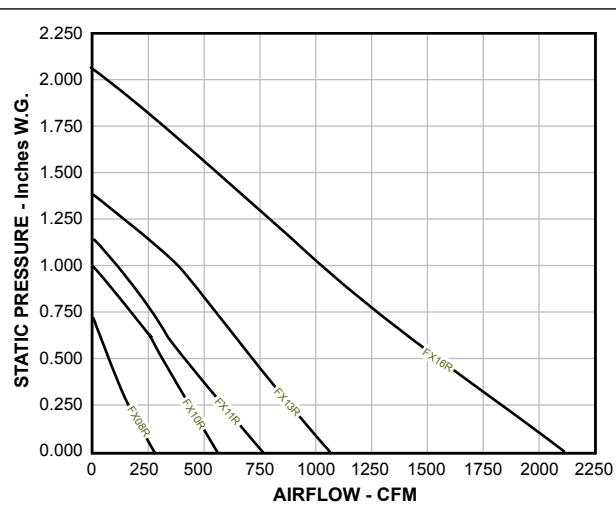
### › Nominal 1075 RPM



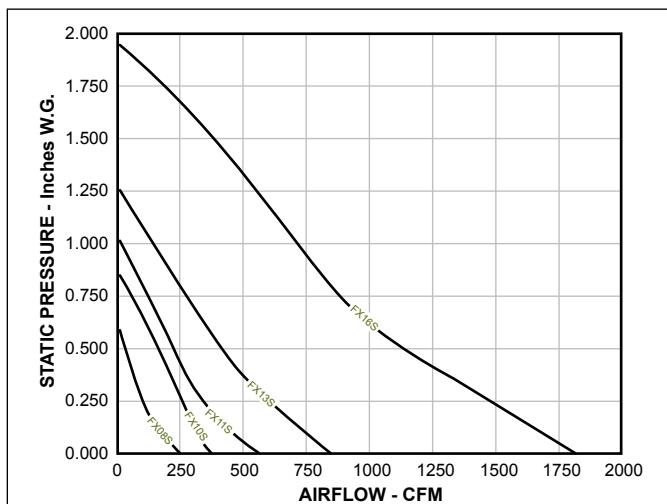
### › Nominal 1050 RPM



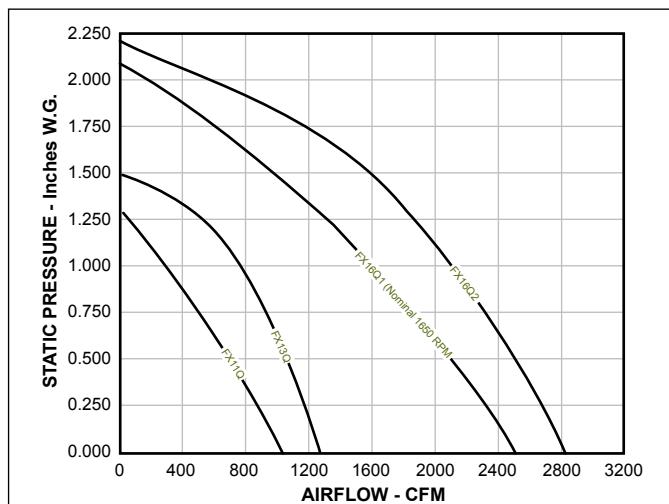
### › Nominal 1550 RPM



### › Nominal 1300 RPM



### › Nominal 1725 RPM



Fumex fans are only one component of a total system. As such, fan performance is directly affected by the system. It is critical that system designers determine the actual system loss to ensure that the actual flow is specified in the system design. Performance shown is for installation Type A: Free Inlet, Free Outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances in the air stream.

## Performance Data & Belt Drive Losses

### › Performance Data

The belt drive models shown on the following pages have sizes and capacities ranging from below 250 CFM to above 30,000 CFM, with static pressures from 0" to 4". All models are available with a wide range of horsepower sizes and RPM's. Two-speed motors are commonly used to enhance this flexibility.

The data provided for each belt drive model includes:

- Elevation Drawing Showing Overall Dimensions
- Fan Curve Graph
- Performance Chart

Each curve graphically displays the range of capacities available for each model, in most cases beyond the specifics shown in the tabular data. The maximum performance afforded by each horsepower is indicated by dashed lines and the RPM is indicated by solid lines.

Some models have graphs that show both shaded and unshaded areas. Selection should be made from the unshaded area only. Shaded areas reflect unstable performance ("surge"), a characteristic typical of backward inclined wheels, and should be avoided. These unstable regions are not shown in the tabular data.

The highest RPM shown for a specific horsepower in the tabular data is the maximum speed that for any point along the performance curve, the BHP will not exceed the available horsepower.

It is important to note that while it is common industry-wide practice to exceed a "nominal" horsepower by using a motor's service factor, PennBarry uses a conservative portion of the service factor, allowing half to remain a true "safety" factor.

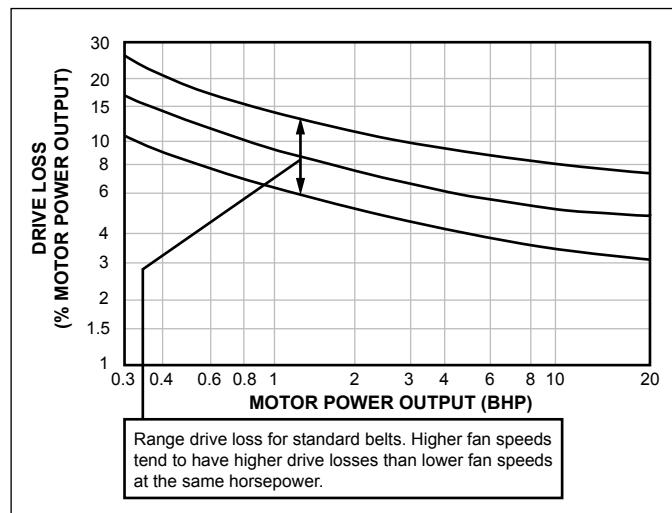
Use the Motor Availability chart (see Motor Selection) to select motor enclosures and voltages which can be installed in the fans.

**Note:** Fumex fans are only one component of a total system. As such, performance is directly affected by the system. It is critical that system designers determine actual system losses to ensure that the actual flow is specified in the system range.

### › Belt Drive Losses

The AMCA Review Committee has developed the chart shown below for the purpose of estimating belt drive losses. To calculate total BHP (including drive losses): Find the BHP of your operating point on the x-axis on the graph below. Follow the vertical line to the curves indicating the range of drive losses. Look at the y-axis on the left and find the drive loss percentage. Calculate the total BHP by adding the drive loss to the operating point BHP. For BHP's below 0.3, use 30%.

### › Drive Loss Reference Chart



**!** For totally enclosed, explosion proof, multi-speed and all 1.0 Service Factor motors, fan BHP plus drive losses should not exceed motor rated HP.

Graph reprinted from AMCA publication 203, with the express written permission from the Air Movement and Control Association, Inc., 30 West University Drive, Arlington Heights, IL 60004-1983.

# Dimensional Information & Performance Data

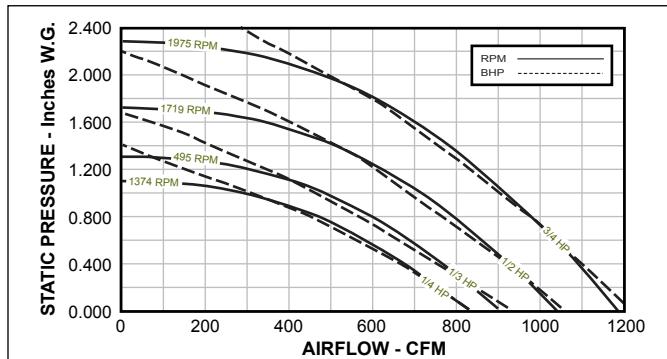
Fumex | Belt Drive



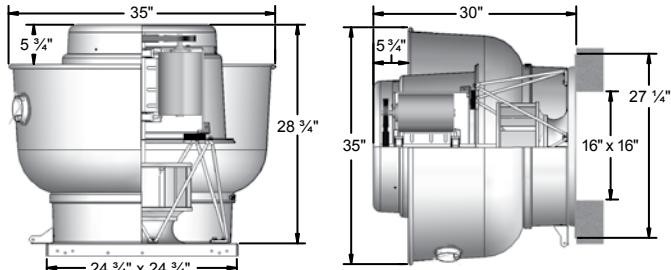
PENN BARRY™

## FX08B

### FX08B Belt Drive Fan Curves



### FX08B Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/2126) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 2085 (1 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 55	Est. Ship Weight = 96 lbs.*

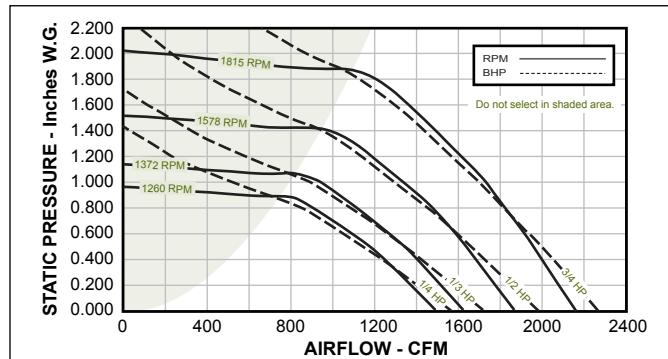
\* Add 8 lbs. for Heat & Smoke option.

### FX08B Belt Drive Fan Performance Data

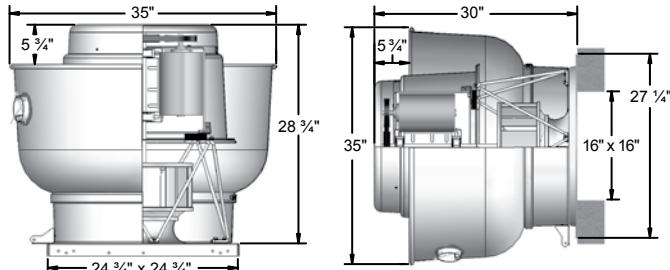
HP	RPM	Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		0.875" SP		1.000" SP		1.125" SP	
			Sones	BHP																		
1/4	350	1191	208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			1.7	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	525	1787	312	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			4.2	0.01	4.2	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	700	2382	416	320	163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			4.5	0.03	4.4	0.03	4.2	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	875	2978	520	447	359	-	231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			5.9	0.06	5.8	0.07	5.6	0.07	5.3	0.07	-	-	-	-	-	-	-	-	-	-	-	-
1/3	1050	3574	624	563	497	-	422	324	-	108	-	-	-	-	-	-	-	-	-	-	-	-
			8.0	0.11	7.9	0.11	7.6	0.12	7.3	0.12	6.9	0.12	6.0	0.10	-	-	-	-	-	-	-	-
	1225	4169	728	677	623	-	564	498	-	421	306	-	-	-	-	-	-	-	-	-	-	-
			10.6	0.17	10.4	0.18	10.2	0.18	9.8	0.18	9.4	0.19	9.0	0.19	8.3	0.18	-	-	-	-	-	-
1/2 HP	1374	4676	817	771	724	-	674	619	-	560	493	-	407	375	-	-	-	-	-	-	-	-
			12.1	0.25	11.9	0.25	11.6	0.25	11.3	0.26	11.0	0.26	10.7	0.27	10.3	0.26	9.9	0.26	9.2	0.24	-	-
	1410	4799	838	793	748	-	700	647	-	591	528	-	455	346	-	-	-	-	-	152	-	-
			12.6	0.27	12.3	0.27	12.1	0.27	11.8	0.27	11.4	0.28	11.1	0.29	10.8	0.29	10.4	0.28	9.9	0.27	9.0	0.23
3/4	1440	4901	856	812	767	-	722	670	-	616	557	-	489	394	-	-	-	-	252	-	-	-
			13.0	0.28	12.7	0.29	12.5	0.29	12.2	0.29	11.8	0.30	11.5	0.30	11.2	0.31	10.9	0.30	10.4	0.29	9.7	0.27
	1470	5003	874	831	787	-	743	693	-	640	584	-	519	437	-	-	-	-	318	-	-	-
			13.4	0.30	13.2	0.31	12.9	0.21	12.6	0.31	12.3	0.32	11.9	0.32	11.6	0.33	11.3	0.32	11.0	0.31	10.3	0.30
	1495	5088	889	846	804	-	760	711	-	660	605	-	543	472	-	-	-	-	366	-	-	-
			13.8	0.32	13.5	0.32	13.3	0.33	13.0	0.33	12.7	0.33	12.3	0.34	11.9	0.34	11.6	0.34	11.4	0.33	10.9	0.32
	1535	5224	912	871	830	-	787	741	-	692	639	-	582	518	-	-	-	-	429	-	-	-
			14.3	0.34	14.0	0.35	13.8	0.35	13.5	0.35	13.2	0.36	12.9	0.37	12.5	0.37	12.1	0.37	11.8	0.37	11.5	0.35
1 HP	1565	5326	930	890	849	-	807	763	-	715	664	-	611	548	-	-	-	-	472	-	-	-
			14.6	0.36	14.4	0.37	14.1	0.37	13.8	0.37	13.5	0.38	13.2	0.39	12.8	0.39	12.5	0.39	12.1	0.39	11.9	0.38
	1595	5428	948	909	869	-	828	785	-	738	689	-	637	578	-	-	-	-	511	-	-	-
			14.9	0.39	14.0	0.39	14.5	0.40	14.2	0.40	13.9	0.40	13.5	0.41	13.2	0.41	12.9	0.42	12.5	0.41	12.3	0.41
	1630	5548	969	930	891	-	851	810	-	764	717	-	667	612	-	-	-	-	551	-	-	-
			15.4	0.41	15.1	0.42	14.9	0.42	14.6	0.42	14.3	0.42	14.0	0.43	13.6	0.44	13.3	0.44	13.0	0.44	12.7	0.44
	1665	5667	990	952	914	-	875	835	-	790	745	-	696	646	-	-	-	-	587	-	-	-
			15.8	0.44	16.0	0.44	15.3	0.45	15.1	0.45	14.8	0.45	14.5	0.46	14.1	0.47	13.8	0.47	13.5	0.48	13.1	0.47
1.5 HP	1695	5769	1008	970	933	-	895	856	-	813	768	-	721	672	-	-	-	-	616	-	-	-
			16.2	0.46	16.0	0.47	15.7	0.47	15.5	0.48	15.2	0.48	14.9	0.48	14.6	0.49	14.2	0.50	13.9	0.50	13.6	0.50
			1022	985	948	-	911	872	-	830	787	-	741	693	-	-	-	-	640	-	-	-
			16.6	0.48	16.4	0.49	16.1	0.49	15.9	0.50	15.6	0.50	15.2	0.50	14.9	0.51	14.6	0.52	14.3	0.52	13.9	0.52
	1755	5973	1043	1007	971	-	934	897	-	857	814	-	770	723	-	-	-	-	674	-	-	-
			17.1	0.51	16.9	0.52	16.7	0.52	16.4	0.53	16.2	0.53	15.8	0.53	15.5	0.54	15.2	0.55	14.8	0.55	14.5	0.56
	1795	6109	1067	1032	997	-	961	924	-	886	844	-	802	757	-	-	-	-	711	-	-	-
			17.7	0.55	17.5	0.56	17.3	0.56	17.0	0.56	16.8	0.56	16.5	0.57	16.2	0.58	15.8	0.58	15.5	0.59	15.2	0.59
2 HP	1830	6228	1088	1053	1019	-	984	948	-	911	870	-	829	786	-	-	-	-	741	-	-	-
			18.3	.58	18.1	0.59	17.8	0.59	17.6	0.60	17.4	0.60	17.1	0.60	16.8	0.61	16.5	0.62	16.2	0.62	15.9	0.63
	1860	6330	1106	1072	1038	-	1003	968	-	933	893	-	853	810	-	-	-	-	766	-	-	-
			18.8	0.61	18.6	0.62	18.4	0.62	18.1	0.63	17.9	0.63	17.6	0.63	17.3	0.64	17.0	0.65	16.7	0.66	16.4	0.66
	1890	6432	1124	1090	1057	-	1023	988	-	953	915	-	875	834	-	-	-	-	791	-	-	-
			19.4	0.64	19.1	0.65	18.9	0.65	18.6	0.66	18.4	0.66	18.1	0.66	17.8	0.67	17.5	0.68	17.2	0.68	17.0	0.69
	1920	6535	1141	1109	1076	-	1042	1008	-	974	937	-	898	858	-	-	-	-	816	-	-	-
			19.8	0.67	19.6	0.68	19.4	0.68	19.1	0.69	18.9	0.69	18.6	0.69	18.3	0.70	18.0	0.71	17.7	0.72	17.4	0.72
2.5 HP	1950	6637	1159	1127	1095	-	1062	1028	-	995	959	-	920	882	-	-	-	-	841	-	-	-
			20	0.70	20	0.71	19.8	0.72	19.6	0.72	19.3	0.72	19.1	0.72	18.8	0.73	18.5	0.74	18.2	0.75	17.9	0.75
			1174	1142	1110	-	1078	1045	-	1012	977	-	939	901	-	-	-	-	861	-	-	-
	1975	6722	21	0.73	20	0.74	20	0.74	20	0.75	19.7	0.75	19.5	0.75	19.1	0.76	18.8	0.77	18.6	0.78	18.3	0.78

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

## › FX10B Belt Drive Fan Curves



## › FX10B Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/1869) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 2085 (1 1/2 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 56	Est. Ship Weight = 96 lbs.*

\* Add 8 lbs. for Heat & Smoke option.

## › FX10B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.125" SP		1.250" SP	
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/4	600	2042	714	5.9 0.02	543	5.7 0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	750	2553	892	6.7 0.05	765	6.6 0.05	596	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	3063	1071	7.3 0.08	968	7.1 0.09	854	696	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1000	3403	1190	8.6 0.11	1097	8.4 0.12	998	874	730	-	-	-	-	-	-	-	-	-	-	-	-	-
	1100	3744	1309	10.4 0.14	1225	10.2 0.15	1136	1042	915	780	-	-	-	-	-	-	-	-	-	-	-	-
	1260	4288	1499	13.5 0.22	1426	13.2 0.23	1352	1271	1187	1076	961	-	-	-	-	-	-	-	-	-	-	-
1/3	1300	4424	1547	13.9 0.24	1476	13.6 0.25	1404	1327	1249	1144	1035	-	-	-	-	-	-	-	-	-	-	-
	1325	4509	1577	14.2 0.25	1507	14.2 0.26	1437	1361	1285	1187	1080	-	-	-	-	-	-	-	-	-	-	-
	1350	4595	1607	14.4 0.27	1538	14.2 0.28	1469	1396	1320	1229	1125	892	-	-	-	-	-	-	-	-	-	-
	1372	4669	1633	14.7 0.28	1565	14.5 0.29	1497	1426	1352	1266	1164	943	-	-	-	-	-	-	-	-	-	-
	1390	4731	1654	15.0 0.29	1587	14.7 0.30	1521	1450	1377	1296	1195	984	-	-	-	-	-	-	-	-	-	-
1/2	1420	4833	1690	15.4 0.31	1624	15.2 0.32	1559	1491	1419	1345	1247	1044	909	-	-	-	-	-	-	-	-	-
	1450	4935	1726	15.9 0.33	1662	15.7 0.34	1597	1531	1461	1391	1298	1100	988	-	-	-	-	-	-	-	-	-
	1475	5020	1755	16.3 0.35	1692	16.1 0.36	1629	1565	1496	1427	1340	1147	1045	-	-	-	-	-	-	-	-	-
	1500	5105	1785	16.7 0.36	1723	16.5 0.38	1661	1599	1531	1463	1382	1193	1096	968	-	-	-	-	-	-	-	-
	1525	5190	1815	17.0 0.38	1754	16.8 0.40	1693	1632	1565	1498	1423	1239	1143	1034	-	-	-	-	-	-	-	-
	1550	5275	1845	17.2 0.40	1785	17.0 0.42	1725	1665	1600	1534	1465	1284	1190	1091	-	-	-	-	-	-	-	-
3/4	1578	5371	1878	17.4 0.42	1819	17.2 0.44	1760	1701	1638	1573	1509	1333	1241	1149	-	-	-	-	-	-	-	-
	1600	5445	1904	17.6 0.44	1846	17.4 0.46	1788	1730	1668	1604	1541	1371	1282	1191	-	-	-	-	-	-	-	-
	1630	5548	1940	17.8 0.47	1883	17.6 0.48	1826	1769	1709	1646	1584	1423	1336	1247	-	-	-	-	-	-	-	-
	1660	5650	1976	18.0 0.49	1920	17.9 0.51	1864	1808	1749	1688	1627	1474	1390	1302	-	-	-	-	-	-	-	-
	1695	5769	2017	18.4 0.53	1962	18.2 0.54	1908	1853	1796	1736	1676	1534	1451	1367	-	-	-	-	-	-	-	-
	1730	5888	2059	18.8 0.56	2005	18.6 0.58	1952	1898	1843	1784	1726	1592	1511	1430	-	-	-	-	-	-	-	-
1765	2101	6007	2101	19.3 0.59	2048	19.2 0.61	1995	1943	1890	1832	1775	1650	1571	1492	-	-	-	-	-	-	-	-
	2130	6092	2078	19.8 0.62	2109	19.6 0.64	2058	2007	1955	1900	1844	1732	1655	1578	-	-	-	-	-	-	-	-
	2160	6177	2130	20.0 0.65	2006	20.0 0.66	1968	1930	196.72	192.73	189.75	182.77	178.78	173.78	-	-	-	-	-	-	-	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

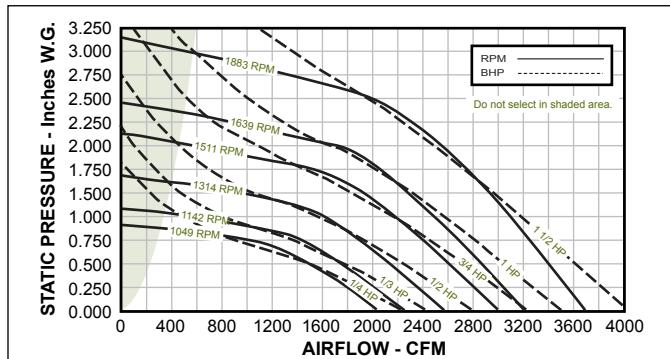
# Dimensional Information & Performance Data

Fumex | Belt Drive

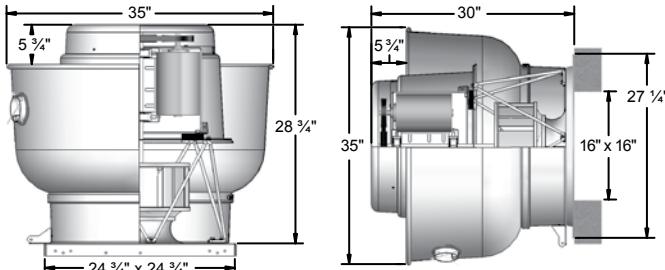

  
PENN BARRY™

## FX12BH

### › FX12BH Belt Drive Fan Curves



### › FX12BH Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/1632) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 2440 (1 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 56	Est. Ship Weight = 109 lbs.*

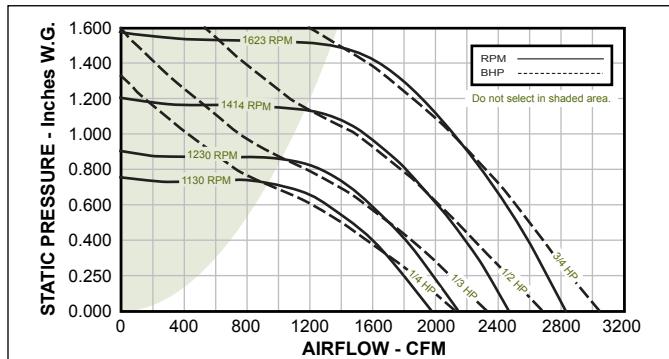
\* Add 8 lbs. for Heat & Smoke option.

### › FX12BH Belt Drive Fan Performance Data

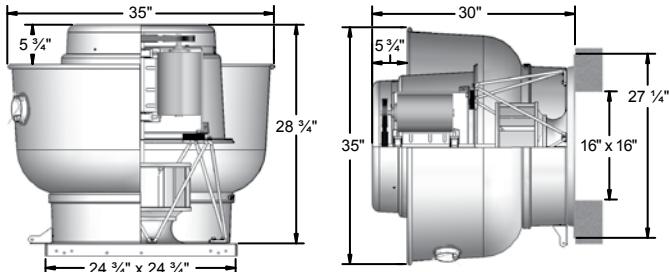
HP	RPM	Tip Speed FPM	0.250" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		2.500" SP			
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP										
1/4	840	3491	1320	7.4 0.13	7.0 0.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	880	3657	1416	8.4 0.14	7.7 0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	920	3824	1509	9.0 0.16	8.4 0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	970	4031	1624	9.2 0.19	8.8 0.21	9.1 0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1049	4360	1801	10.1 0.23	9.8 0.26	10.0 0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/3	1105	4592	1924	10.8 0.27	10.6 0.29	10.6 0.31	10.9 0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1142	4746	2004	11.1 0.29	10.9 0.32	11.0 0.34	11.3 0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1175	4883	2075	11.5 0.32	11.2 0.35	11.2 0.37	11.7 0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/2	1200	4987	2128	11.8 0.34	11.6 0.37	11.4 0.39	12.0 0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1235	5133	2203	12.1 0.37	12.1 0.40	11.8 0.42	12.4 0.43	12.5 0.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1280	5320	2298	12.4 0.40	12.7 0.44	12.4 0.46	12.7 0.48	13.1 0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1314	5461	2369	12.6 0.43	13.1 0.47	12.9 0.50	13.1 0.52	13.6 0.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1340	5569	2423	12.8 0.46	13.4 0.50	13.3 0.53	13.4 0.55	14.1 0.54	14.0 0.36	-	-	-	-	-	-	-	-	-	-	-	-	-		
3/4	1375	5715	2496	13.1 0.49	13.8 0.53	13.8 0.57	13.8 0.59	14.6 0.59	14.6 0.48	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1400	5818	2547	13.2 0.52	14.1 0.56	14.1 0.59	14.2 0.62	14.7 0.63	15.0 0.54	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1435	5964	2620	13.5 0.56	14.5 0.60	14.6 0.64	14.7 0.66	13.4 0.55	15.7 0.63	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1462	6076	2675	13.9 0.59	14.9 0.63	15.0 0.67	15.1 0.69	15.5 0.71	16.2 0.69	16.1 0.51	-	-	-	-	-	-	-	-	-	-	-	-		
	1511	6280	2775	14.7 0.65	15.7 0.69	16.0 0.73	16.0 0.76	16.2 0.78	17.0 0.79	17.0 0.68	-	-	-	-	-	-	-	-	-	-	-	-		
	1540	6400	2835	15.0 0.68	15.9 0.73	16.3 0.77	16.3 0.80	16.5 0.82	17.2 0.83	17.6 0.76	-	-	-	-	-	-	-	-	-	-	-	-		
1	1586	6592	2928	15.5 0.74	16.3 0.79	16.7 0.83	16.8 0.87	16.9 0.89	17.4 0.91	18.4 0.89	18.3 0.73	1593	835	-	-	-	-	-	-	-	-	-	-	
	1600	6650	2957	15.7 0.76	16.4 0.81	16.9 0.85	16.9 0.89	17.1 0.92	17.6 0.93	18.6 0.93	18.5 0.78	1675	964	-	-	-	-	-	-	-	-	-	-	
	1639	6812	3036	16.2 0.81	16.8 0.87	17.3 0.91	17.3 0.95	17.5 0.98	17.9 1.00	18.9 1.00	19.1 0.91	-	-	-	-	-	-	-	-	-	-	-	-	
	1675	6961	3109	16.7 0.87	17.3 0.92	17.8 0.97	17.8 1.01	17.9 1.04	18.2 1.06	19.0 1.07	19.7 1.02	19.6 0.84	-	-	-	-	-	-	-	-	-	-	-	
	1750	7273	3261	18.0 0.98	18.4 1.04	18.8 1.09	18.8 1.14	18.8 1.17	18.8 1.20	19.5 1.22	21.0 1.22	21.0 1.13	21.0 0.89	1448	701	-	-	-	-	-	-	-	-	-
1 1/2	1825	7585	3412	19.4 1.11	19.7 1.17	19.9 1.22	19.9 1.27	19.8 1.31	19.8 1.34	20.0 1.37	21.0 1.38	22.0 1.38	22.0 1.24	1955	1381	-	-	-	-	-	-	-	-	-
	1883	7826	3529	21.0 1.22	21.0 1.28	21.0 1.33	21.0 1.38	21.0 1.43	21.0 1.46	21.0 1.49	21.0 1.51	22.0 1.53	23.0 1.47	2193	1812	-	-	-	-	-	-	-	-	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5' (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for Installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

## › FX13B Belt Drive Fan Curves



## › FX13B Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/1751) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 2202 (1 1/2 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 56	Est. Ship Weight = 110 lbs.*

\* Add 8 lbs. for Heat &amp; Smoke option.

## › FX13B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.375" SP		0.500" SP		0.625" SP		0.750" SP		0.875" SP		1.000" SP		1.250" SP		1.375" SP		
			Sones	BHP																			
1/4	500	1800	874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			6.3	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	650	2340	1137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			7.0	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	800	2880	1399	1052	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			7.6	0.07	7.4	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1/3	978	3521	1710	1452	1284	1026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			11.0	0.13	10.6	0.16	10.2	0.17	9.7	0.17	-	-	-	-	-	-	-	-	-	-	-	-	
	1055	3798	1845	1608	1471	1281	928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			12.7	0.17	12.3	0.20	12.0	0.21	11.5	0.22	10.9	0.21	-	-	-	-	-	-	-	-	-	-	-
	1130	4068	1976	1755	1635	1485	1281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/2	1160	4176	2029	1814	1699	1559	1377	1054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			13.9	0.22	13.4	0.26	13.2	0.27	12.8	0.28	12.2	0.29	11.6	0.28	-	-	-	-	-	-	-	-	-
	1185	4266	2072	1862	1751	1619	1448	1196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			14.3	0.24	13.8	0.27	13.5	0.29	13.1	0.30	12.5	0.31	11.9	0.30	-	-	-	-	-	-	-	-	-
	1210	4356	2116	1911	1804	1679	1519	1303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			14.6	0.25	14.1	0.29	13.9	0.30	13.5	0.32	12.9	0.32	12.3	0.33	-	-	-	-	-	-	-	-	-
1/2	1230	4428	2151	1950	1845	1727	1574	1378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			15.0	0.26	14.4	0.30	14.2	0.32	13.8	0.33	13.3	0.34	12.6	0.34	-	-	-	-	-	-	-	-	-
	1255	4518	2195	1998	1895	1782	1639	1458	1152	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			15.4	0.28	14.8	0.32	14.6	0.34	14.2	0.35	13.6	0.36	13.0	0.37	12.5	0.35	-	-	-	-	-	-	-
	1280	4608	2239	2046	1945	1835	1701	1535	1292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			15.7	0.30	15.2	0.34	14.9	0.35	14.6	0.37	14.0	0.38	13.4	0.39	12.9	0.38	-	-	-	-	-	-	-
	1305	4698	2282	2094	1994	1889	1762	1606	1401	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			16.1	0.31	15.6	0.36	15.3	0.37	15.0	0.39	14.4	0.40	13.8	0.41	13.2	0.41	-	-	-	-	-	-	-
	1330	4788	2326	2142	2044	1942	1823	1676	1493	1130	-	-	-	-	-	-	-	-	-	-	-	-	-
			16.3	0.33	15.8	0.38	15.5	0.39	15.2	0.41	14.7	0.42	14.1	0.43	13.5	0.44	13.2	0.41	-	-	-	-	-
3/4	1355	4878	2370	2190	2093	1995	1883	1746	1573	1314	-	-	-	-	-	-	-	-	-	-	-	-	-
			16.5	0.35	16.0	0.40	15.7	0.41	15.4	0.43	15.0	0.44	14.4	0.45	13.7	0.46	13.4	0.45	-	-	-	-	-
	1375	4950	2405	2228	2132	2037	1931	1796	1636	1413	-	-	-	-	-	-	-	-	-	-	-	-	-
			16.7	0.37	16.2	0.41	15.9	0.43	15.6	0.45	15.3	0.46	14.7	0.47	14.0	0.48	13.6	0.48	-	-	-	-	-
	1400	5040	2449	2275	2181	2089	1985	1858	1708	1516	-	-	-	-	-	-	-	-	-	-	-	-	-
			16.9	0.39	16.4	0.43	16.2	0.45	15.9	0.47	15.5	0.49	15.0	0.50	14.3	0.50	13.8	0.51	-	-	-	-	-
	1414	5090	2473	2302	2208	2118	2015	1892	1747	1568	-	-	-	-	-	-	-	-	-	-	-	-	-
			17.1	0.40	16.6	0.45	16.3	0.47	16.0	0.48	15.7	0.50	15.2	0.51	14.5	0.52	13.9	0.52	-	-	-	-	-
	1445	5202	2527	2360	2269	2180	2082	1968	1834	1671	-	-	-	-	-	-	-	-	-	-	-	-	-
			17.4	0.43	16.9	0.47	16.6	0.49	16.4	0.51	16.0	0.53	15.6	0.54	15.0	0.55	14.3	0.56	-	-	-	-	-
3/4	1470	5292	2571	2408	2317	2230	2135	2028	1903	1749	-	-	-	-	-	-	-	-	-	-	-	-	-
			17.7	0.45	17.2	0.50	16.9	0.52	16.7	0.54	16.3	0.55	15.9	0.57	15.3	0.58	14.6	0.59	-	-	-	-	-
	1495	5382	2615	2455	2366	2280	2188	2088	1965	1821	-	-	-	-	-	-	-	-	-	-	-	-	-
			18.0	0.47	17.6	0.52	17.3	0.54	17.0	0.56	16.7	0.58	16.3	0.60	15.7	0.60	15.1	0.61	14.4	0.59	-	-	-
	1525	5490	2667	2511	2424	2339	2251	2156	2039	1906	-	-	-	-	-	-	-	-	-	-	-	-	-
			18.5	0.50	18.0	0.55	17.7	0.57	17.4	0.59	17.1	0.61	16.8	0.63	16.2	0.64	15.6	0.65	14.7	0.65	-	-	-
	1550	5580	2711	2558	2472	2388	2304	2210	2100	1975	-	-	-	-	-	-	-	-	-	-	-	-	-
			18.9	0.53	18.4	0.58	18.1	0.60	17.8	0.62	17.6	0.64	17.3	0.66	16.7	0.67	16.1	0.68	15.0	0.69	-	-	-
	1575	5670	2755	2604	2520	2437	2356	2264	2160	2043	-	-	-	-	-	-	-	-	-	-	-	-	-
			19.3	0.55	18.9	0.61	18.6	0.63	18.3	0.65	18.0	0.67	17.7	0.69	17.3	0.70	16.7	0.71	15.3	0.72	15.3	0.70	-
	1600	5760	2798	2651	2568	2486	2406	2317	2220	2105	-	-	-	-	-	-	-	-	-	-	-	-	-
			19.6	0.58	19.2	0.63	18.9	0.66	18.6	0.68	18.3	0.70	18.0	0.72	17.6	0.73	17.0	0.74	15.6	0.76	15.5	0.75	-
	1623	5842	2839	2694	2612	2531	2452	2366	2275	2161	-	-	-	-	-	-	-	-	-	-	-	-	-
			19.9	0.60	19.4	0.66	19.2	0.68	18.9	0.70	18.6	0.73	18.3	0.74	18.0	0.76	17.3	0.77	16.0	0.79	15.7	0.79	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

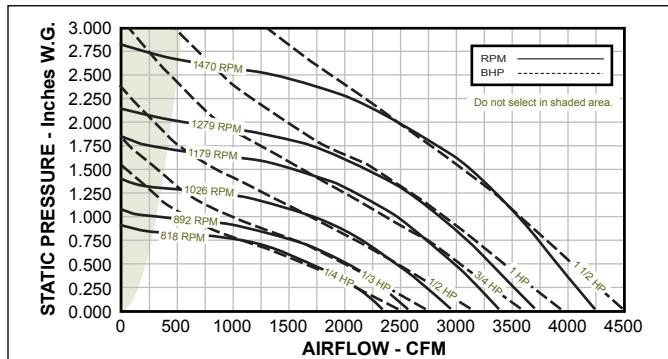
# Dimensional Information & Performance Data

Fumex | Belt Drive

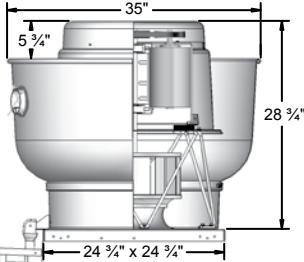

  
PENN BARRY™

## FX13BHFT

### › FX13BHFT Belt Drive Fan Curves



### › FX13BHFT Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/1277) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 1875 (1 1/2 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 56	Est. Ship Weight = 115 lbs.*

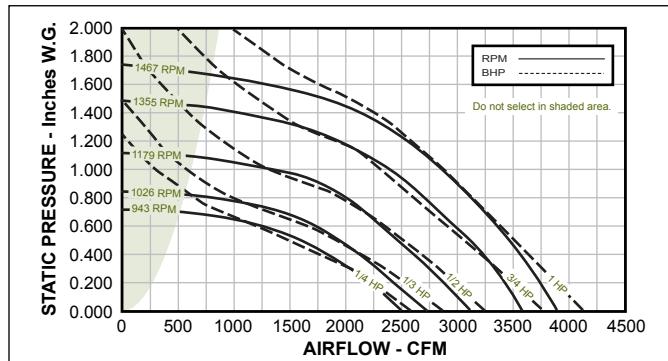
\* Add 8 lbs. for Heat & Smoke option.

### › FX13BHFT Belt Drive Fan Performance Data

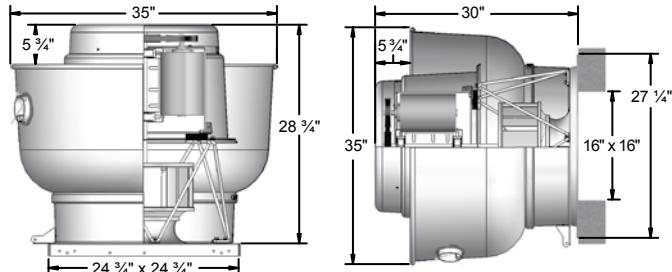
HP	RPM	Tip Speed FPM	0.250" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		2.500" SP		
			Sones	BHP																			
1/4	750	3670	1817		1312		-		-		-		-		-		-		-		-		-
			7.2	0.19	6.7	0.20	-		-		-		-		-		-		-		-		-
	818	4002	2046		1645		915		-		-		-		-		-		-		-		-
1/3	850	4159	2152		1781		1168		-		-		-		-		-		-		-		-
			8.4	0.27	7.9	0.29	7.7	0.28	-		-		-		-		-		-		-		-
	892	4365	2289		1953		1463		-		-		-		-		-		-		-		-
1/2	925	4526	2395		2080		1641		782		-		-		-		-		-		-		-
			9.9	0.35	9.4	0.37	9.0	0.38	8.3	0.30	-		-		-		-		-		-		-
	950	4648	2476		2176		1769		1100		-		-		-		-		-		-		-
	975	4771	2554		2270		1888		1298		-		-		-		-		-		-		-
	1000	4893	2630		2360		2006		1483		-		-		-		-		-		-		-
	1026	5020	2709		2451		2119		1666		739		-		-		-		-		-		-
3/4	1050	5138	2782		2534		2218		1798		1104		-		-		-		-		-		-
			12.3	0.50	11.6	0.53	11.2	0.55	10.8	0.55	10.1	0.48	-		-		-		-		-		-
	1075	5260	2858		2619		2321		1932		1333		-		-		-		-		-		-
	1100	5382	2933		2705		2421		2057		1529		-		-		-		-		-		-
	1125	5505	3008		2788		2518		2177		1708		828		-		-		-		-		-
	1150	5627	3083		2871		2613		2294		1881		1206		-		-		-		-		-
	1179	5769	3169		2967		2723		2422		2038		1471		-		-		-		-		-
1	1200	5872	3232		3036		2802		2510		2150		1636		611		-		-		-		-
			15.2	0.74	14.4	0.77	14.0	0.80	13.6	0.82	13.2	0.82	12.6	0.78	12.0	0.54	-		-		-		-
	1225	5994	3306		3118		2891		2613		2277		1819		1054		-		-		-		-
	1255	6141	3396		3216		2996		2736		2420		2029		1442		-		-		-		-
	1279	6258	3467		3294		3079		2830		2533		2165		1633		569		-		-		-
1 1/2	1300	6361	3529		3362		3151		2911		2631		2278		1797		972		-		-		-
			16.9	0.93	16.0	0.97	15.3	1.00	14.9	1.03	14.6	1.06	14.4	1.04	14.0	0.99	13.6	0.79	-		-	-	
	1325	6483	3603		3442		3237		3007		2737		2411		1978		1351		-		-		-
	1360	6655	3706		3554		3355		3139		2882		2581		2222		1688		680		-		-
	1400	6850	3824		3677		3489		3288		3046		2770		2438		1997		1355		-		-
	1425	6973	3897		3753		3572		3375		3145		2887		2571		2174		1651		493		-
	1450	7095	3972		3829		3684		3462		3241		2992		2697		2349		1849		1028		-
	1470	7193	4032		3889		3720		3532		3318		3075		2793		2463		2006		1345		-
			19.5	1.34	18.7	1.38	17.8	1.42	17.4	1.46	17.1	1.49	16.8	1.51	16.7	1.52	16.6	1.50	16.5	1.43	16.5	1.24	

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for Installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

#### › FX14B Belt Drive Fan Curves



#### › FX14B Belt Drive Fan Dimensional Data



Galv. Steel Base = 16 Gage	Roof/Wall Opening = 16" SQ.	Peak BHP = (RPM/1462) <sup>3</sup>
Aluminum Base = 0.064	Damper Size = 15 3/4" SQ.	Max. RPM = 2085 (1 1/2 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 56	Est. Ship Weight = 112 lbs.*

\* Add 11 lbs. for Heat & Smoke option.

#### › FX14B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.500" SP		0.625" SP		0.750" SP		0.875" SP		1.000" SP		1.250" SP		1.375" SP		1.500" SP				
			Sones	BHP																					
1/4	400	1662	1061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			4.8	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	550	2286	1459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			4.9	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	690	2868	1830	1283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			7.8	0.09	6.9	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	815	3387	2162	1743	673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1/3	10.2	0.14	9.3	0.17	8.0	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	880	3657	2334	1955	1367	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			11.8	0.18	11.1	0.21	9.8	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	943	3919	2502	2154	1673	1230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			13.0	0.22	12.3	0.26	11.0	0.27	10.4	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-		
	975	4052	2586	2253	1812	1480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			13.6	0.25	12.8	0.28	11.5	0.30	11.0	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/2	1000	4156	2653	2330	1914	1615	887	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			14.0	0.26	13.3	0.30	12.0	0.32	11.5	0.32	10.8	0.27	-	-	-	-	-	-	-	-	-	-	-	-	
	1026	4264	2722	2410	2019	1738	1267	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			14.3	0.29	13.7	0.32	12.5	0.35	12.0	0.35	11.4	0.32	-	-	-	-	-	-	-	-	-	-	-	-	
	1050	4364	2785	2483	2110	1850	1504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			14.7	0.31	14.1	0.35	13.0	0.37	12.4	0.37	12.1	0.36	-	-	-	-	-	-	-	-	-	-	-	-	
	1075	4468	2852	2559	2198	1963	1659	838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	1100	4572	2918	2634	2285	2067	1791	1269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			15.8	0.35	15.0	0.39	13.8	0.42	13.3	0.43	13.0	0.43	12.6	0.39	-	-	-	-	-	-	-	-	-	-	
	1130	4696	2998	2724	2388	2189	1933	1593	657	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			16.6	0.38	15.9	0.43	14.6	0.45	14.0	0.46	13.5	0.46	13.3	0.44	13.2	0.33	-	-	-	-	-	-	-	-	
	1160	4821	3077	2812	2490	2309	2072	1786	1147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			17.4	0.41	16.7	0.46	15.6	0.49	14.9	0.50	14.4	0.50	14.2	0.49	13.9	0.44	-	-	-	-	-	-	-	-	
	1179	4900	3128	2867	2553	2377	2157	1889	1394	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1210	5029	3210	2956	2654	2485	2284	2038	1718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.1	0.47	18.4	0.52	17.2	0.55	16.6	0.56	16.1	0.57	15.9	0.57	15.8	0.54	-	-	-	-	-	-	-	-	
	1240	5154	3290	3043	2750	2590	2406	2178	1909	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.4	0.50	18.7	0.55	17.5	0.59	16.8	0.60	16.3	0.61	16.0	0.61	15.9	0.60	-	-	-	-	-	-	-	-	
	1270	5278	3369	3129	2846	2693	2526	2315	2067	812	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.4	0.54	18.7	0.59	17.6	0.63	17.0	0.64	16.5	0.65	16.0	0.65	15.8	0.48	-	-	-	-	-	-	-	-	
	1300	5403	3449	3214	2941	2795	2634	2439	2209	1324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1			19.6	0.58	18.9	0.63	17.9	0.67	17.3	0.69	16.8	0.70	16.2	0.70	15.9	0.70	15.8	0.62	-	-	-	-	-	-	-
	1330	5528	3528	3300	3035	2893	2738	2561	2349	1698	829	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.9	0.62	19.2	0.68	18.3	0.72	17.7	0.73	17.1	0.74	16.6	0.75	16.2	0.75	15.9	0.71	15.9	0.55	-	-	-	-	
	1355	5631	3595	3371	3113	2974	2825	2662	2464	1938	1241	-	-	-	-	-	-	-	-	-	-	-	-	-	
			20.0	0.66	19.6	0.72	18.6	0.76	18.0	0.77	17.5	0.78	17.0	0.79	16.5	0.79	16.1	0.76	16.1	0.67	-	-	-	-	
	1385	5756	3674	3456	3206	3070	2928	2777	2588	2126	1665	817	-	-	-	-	-	-	-	-	-	-	-	-	-
			21.0	0.70	20.0	0.76	19.2	0.80	18.6	0.82	18.0	0.83	17.5	0.85	17.0	0.85	16.3	0.83	16.3	0.79	16.3	0.61	-	-	
1	1405	5839	3727	3512	3268	3134	2997	2848	2670	2235	1893	1054	-	-	-	-	-	-	-	-	-	-	-	-	-
			21.0	0.73	20.0	0.79	19.6	0.84	19.0	0.85	18.5	0.87	17.9	0.88	17.4	0.89	16.6	0.88	16.6	0.79	16.6	0.70	-	-	
	1430	5943	3794	3583	3344	3214	3081	2935	2771	2359	2093	1529	-	-	-	-	-	-	-	-	-	-	-	-	-
			22.0	0.77	21.0	0.84	20.0	0.88	19.7	0.90	19.1	0.91	18.5	0.93	18.0	0.93	17.0	0.93	16.9	0.90	16.9	0.84	-	-	
	1450	6026	3847	3639	3405	3277	3147	3005	2852	2454	2216	1780	-	-	-	-	-	-	-	-	-	-	-	-	-
			22.0	0.81	22.0</td																				

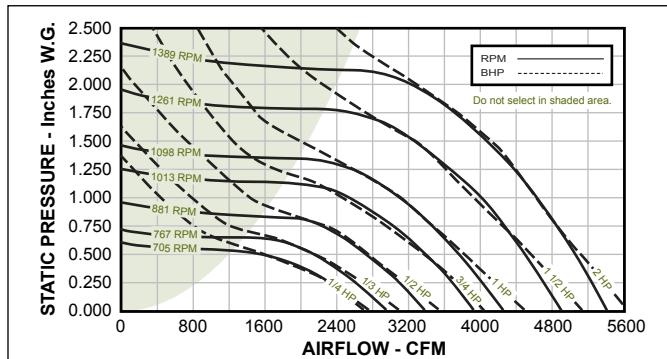
# Dimensional Information & Performance Data

Fumex | Belt Drive

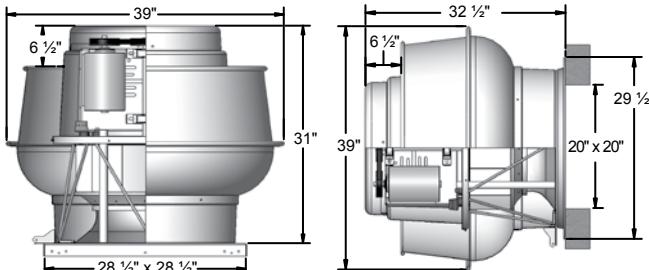

  
PENN BARRY™

## FX16B

### › FX16B Belt Drive Fan Curves



### › FX16B Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof/Wall Opening = 20" SQ.	Peak BHP = (RPM/1095) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 19 3/4" SQ.	Max. RPM = 1755 (3 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 145T	Est. Ship Weight = 144 lbs.*

\* Add 11 lbs. for Heat & Smoke option.

### › FX16B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.250" SP		1.375" SP		1.500" SP		1.750" SP					
			Sones	BHP																						
1/4	500	2446	1999	1280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
			6.0	0.08	5.2	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	609	2979	2435	1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
			8.8	0.15	8.1	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
1/3	660	3229	2639	2213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			9.7	0.19	9.2	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	705	3449	2819	2426	1791	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			10.7	0.23	10.1	0.26	8.1	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1/2	725	3547	2899	2518	1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			11.1	0.25	10.6	0.28	8.6	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	745	3645	2979	2611	2111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			11.6	0.27	11.1	0.30	9.2	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
3/4 HP	767	3752	3067	2712	2247	1770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			12.0	0.30	11.5	0.33	9.8	0.34	8.6	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-			
	800	3914	3199	2862	2434	2109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			12.6	0.34	11.9	0.37	10.5	0.39	9.4	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-			
1	830	4061	3319	2997	2596	2342	1791	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			13.2	0.38	12.4	0.41	11.2	0.43	10.2	0.44	9.2	0.41	-	-	-	-	-	-	-	-	-	-	-	-		
	855	4183	3419	3106	2727	2497	2109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			13.7	0.41	12.9	0.45	11.7	0.47	10.9	0.48	9.8	0.46	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2 HP	881	4310	3523	3219	2862	2645	2352	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			14.3	0.45	13.5	0.49	12.3	0.51	11.6	0.52	10.6	0.52	-	-	-	-	-	-	-	-	-	-	-	-		
	920	4501	3679	3387	3062	2860	2635	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			15.3	0.51	14.4	0.55	13.3	0.57	12.6	0.58	11.9	0.60	-	-	-	-	-	-	-	-	-	-	-	-		
3/4	955	4672	3819	3536	3233	3044	2841	2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			16.3	0.57	15.5	0.61	14.4	0.64	13.7	0.65	13.0	0.66	11.1	0.61	-	-	-	-	-	-	-	-	-	-		
	985	4819	3939	3664	3374	3200	3010	2412	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			17.0	0.63	16.1	0.67	15.0	0.70	14.4	0.71	13.8	0.72	11.8	0.71	-	-	-	-	-	-	-	-	-	-		
1	1013	4956	4051	3783	3505	3344	3160	2678	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			17.5	0.68	16.6	0.72	15.6	0.76	15.0	0.77	14.4	0.78	12.7	0.79	-	-	-	-	-	-	-	-	-	-		
	1045	5112	4179	3918	3653	3506	3329	2930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			18.2	0.75	17.2	0.79	16.2	0.83	15.7	0.84	15.1	0.85	13.7	0.87	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	1070	5235	4279	4023	3768	3626	3459	3092	2287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			18.7	0.81	17.8	0.84	16.8	0.89	16.3	0.90	15.7	0.91	14.4	0.94	12.8	0.86	-	-	-	-	-	-	-	-	-	
	1098	5372	4391	4141	3896	3757	3603	3253	2662	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	1140	5577	4559	4317	4087	3953	3817	3491	3060	2656	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			21.0	0.97	19.9	1.01	19.1	1.07	18.6	1.08	18.1	1.09	16.9	1.11	15.0	1.13	14.1	1.08	-	-	-	-	-	-	-	-
	1180	5773	4719	4484	4267	4138	4009	3704	3352	3069	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			22.0	1.08	21.0	1.12	20.0	1.18	20.0	1.19	19.4	1.20	18.3	1.23	16.8	1.26	15.7	1.24	14.9	1.18	-	-	-	-	-	
2	1220	5969	4879	4652	4440	4321	4196	3913	3594	3397	3093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			23.0	1.19	22.0	1.23	22.0	1.29	21.0	1.31	21.0	1.33	19.5	1.35	18.1	1.38	17.3	1.39	16.2	1.36	-	-	-	-	-	
	1261	6169	5043	4823	4617	4508	4387	4125	3827	3663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			24.0	1.32	23.0	1.36	22.0	1.42	22.0	1.44	21.0	1.46	20.0	1.48	19.2	1.51	18.4	1.53	17.5	1.53	16.4	1.39	-	-	-	
2	1295	6335	5179	4965	4764	4661	4544	4299	4012	3858	3687	3102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			25.0	1.43	24.0	1.47	23.0	1.53	23.0	1.56	22.0	1.57	21.0	1.60	20.0	1.63	19.3	1.65	18.5	1.66	17.0	1.60	-	-	-	-
	1330	6507	5318	5111	4913	4817	4704	4475	4197	4055	3900	3452	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			26.0	1.55	25.0	1.59	24.0	1.65	23.0	1.68	23.0	1.70	22.0	1.73	21.0	1.76	20.0	1.77	19.5	1.79	17.7	1.77	-	-	-	-
2	1365	6678	5458	5256	5063	4969	4864	4641	4380	4244	4100	3751	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			26.0	1.67	25.0	1.72	25.0	1.78	24.0	1.81	24.0	1.83	23.0	1.86	22.0	1.89	21.0	1.90	21.0	1.92	18.8	1.94	-	-	-	-
	1389	6795	5554	5355	5165	5073	4972	4753	4505	4371	4235	3920	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			27.0	1.76	26.0	1.81	25.0	1.87	25.0	1.90	24.0	1.93	23.0	1.96	22.0	1.99	22.0	2.00	21.0	2.02	19.7	2.05	-	-	-	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

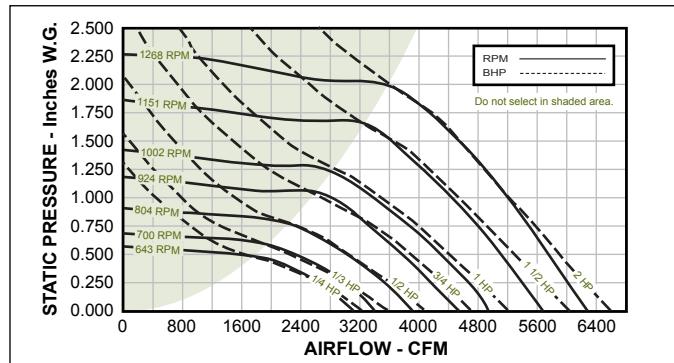


# Dimensional Information & Performance Data

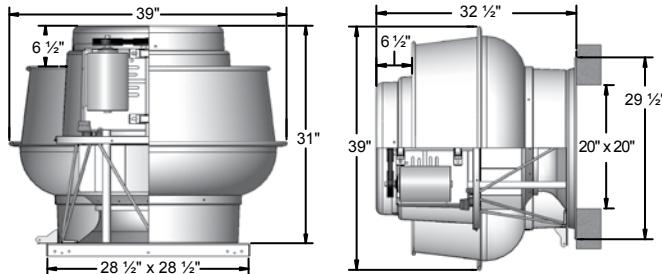
## Fumex | Belt Drive

FX18B

## › FX18B Belt Drive Fan Curves



#### › FX18B Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof/Wall Opening = 20" SQ.	Peak BHP = (RPM/999) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 19 ¾" SQ.	Max. RPM = 1403 (2 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 145T	Est. Ship Weight = 145 lbs.*

\* Add 20 lbs. for Heat & Smoke option.

#### › FX18B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.500" SP		0.625" SP		0.750" SP		1.000" SP		1.250" SP		1.375" SP		1.500" SP		1.750" SP		
			Sones	BHP																			
1/4	400	2121	1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			4.7	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	556	2948	2758	2050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			8.9	0.15	7.9	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	600	3181	2976	2345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1/3	600	3181	10.0	0.18	9.0	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	643	3409	3189	2618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.1	0.23	10.3	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	665	3525	3299	2755	1885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.6	0.25	10.8	0.28	9.8	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1/2	685	3631	3398	2873	2147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	700	3711	12.0	0.27	11.2	0.31	10.4	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			12.3	0.29	11.7	0.33	10.7	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	730	3870	3621	3136	2503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			13.2	0.33	12.6	0.37	11.7	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	760	4029	3770	3309	2716	2328	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	785	4162	3894	3452	2890	2569	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			15.1	0.41	14.7	0.46	13.9	0.48	13.4	0.49	-	-	-	-	-	-	-	-	-	-	-	-	
	804	4262	3988	3559	3021	2710	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			15.9	0.44	15.5	0.49	14.8	0.52	14.3	0.52	-	-	-	-	-	-	-	-	-	-	-	-	
1	840	4453	4167	3759	3261	2968	2640	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			16.7	0.50	16.3	0.56	15.6	0.59	15.1	0.59	14.6	0.59	-	-	-	-	-	-	-	-	-	-	
	870	4612	4316	3922	3454	3179	2891	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			17.2	0.56	16.8	0.61	16.1	0.65	15.6	0.66	15.1	0.66	-	-	-	-	-	-	-	-	-	-	
	900	4771	4464	4084	3643	3385	3108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	924	4899	4584	4212	3794	3548	3279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			18.3	0.67	17.8	0.73	17.1	0.76	16.6	0.78	16.1	0.79	-	-	-	-	-	-	-	-	-	-	
	950	5036	4712	4351	3952	3716	3461	2805	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.2	0.73	18.7	0.79	18.0	0.83	17.4	0.84	16.9	0.86	15.7	0.84	-	-	-	-	-	-	-	-	
	975	5169	4837	4485	4100	3876	3634	3093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	1002	5312	4970	4628	4258	4047	3818	3319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			21.0	0.85	20.0	0.92	19.9	0.96	19.4	0.98	18.9	1.00	17.7	1.01	-	-	-	-	-	-	-	-	
	1040	5513	5159	4829	4479	4285	4067	3595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			22.0	0.95	21.0	1.02	21.0	1.07	20.0	1.09	19.7	1.11	18.5	1.13	-	-	-	-	-	-	-	-	
	1080	5726	5357	5039	4709	4525	4322	3878	3357	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	1120	5938	5556	5249	4937	4759	4574	4156	3709	3364	-	-	-	-	-	-	-	-	-	-	-	-	
			23.0	1.19	23.0	1.26	22.0	1.33	22.0	1.35	21.0	1.36	20.0	1.40	18.9	1.42	18.7	1.39	-	-	-	-	
	1151	6102	5710	5411	5113	4940	4767	4368	3935	3696	-	-	-	-	-	-	-	-	-	-	-	-	
			24.0	1.29	23.0	1.37	23.0	1.44	22.0	1.46	22.0	1.47	21.0	1.51	19.5	1.53	19.2	1.53	-	-	-	-	
	1190	6309	5903	5614	5327	5165	4997	4626	4213	4002	3752	-	-	-	-	-	-	-	-	-	-	-	
			24.0	1.43	24.0	1.51	24.0	1.58	23.0	1.60	23.0	1.62	22.0	1.66	21.0	1.69	20.0	1.70	19.8	1.69	-	-	
	1215	6441	6027	5744	5463	5308	5144	4786	4388	4183	3970	-	-	-	-	-	-	-	-	-	-	-	
	1245	6600	6176	5899	5625	5479	5319	4977	4597	4397	4195	3541	-	-	-	-	-	-	-	-	-	-	-
	1268	6722	6290	6019	5749	5610	5453	5123	4755	4558	4362	3850	-	-	-	-	-	-	-	-	-	-	-
			26.0	1.73	26.0	1.81	25.0	1.89	25.0	1.92	25.0	1.94	24.0	1.99	23.0	2.03	22.0	2.04	22.0	2.05	21.0	2.03	

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

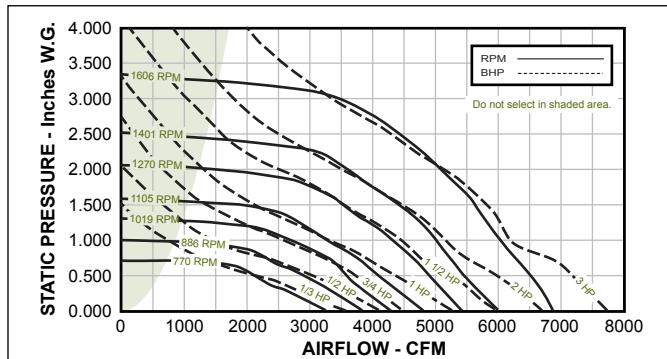
# Dimensional Information & Performance Data

Fumex | Belt Drive

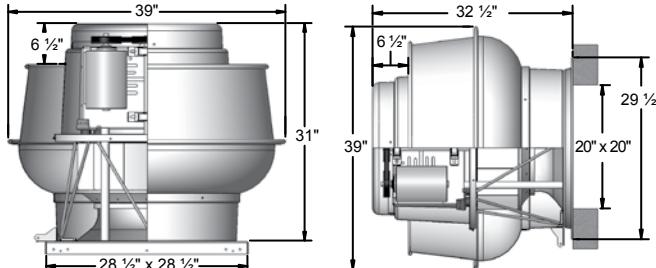
  
PENN BARRY™

## FX18BH

### › FX18BH Belt Drive Fan Curves



### › FX18BH Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof/Wall Opening = 20" SQ.	Peak BHP = (RPM/1106) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 19 3/4" SQ.	Max. RPM = 1870 (3 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 145T	Wall Mounted Max. HP = 2
Est. Ship Weight = 142 lbs.*		

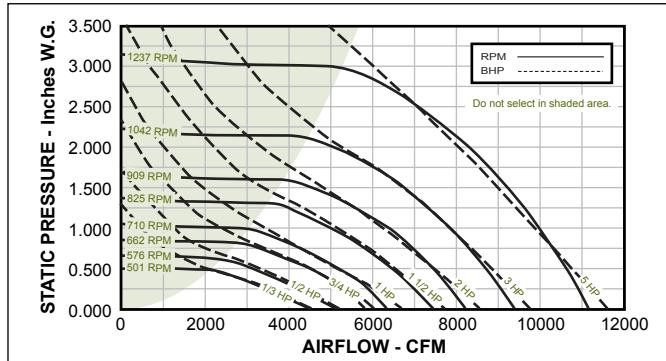
\* Add 20 lbs. for Heat & Smoke option.

### › FX18BH Belt Drive Fan Performance Data

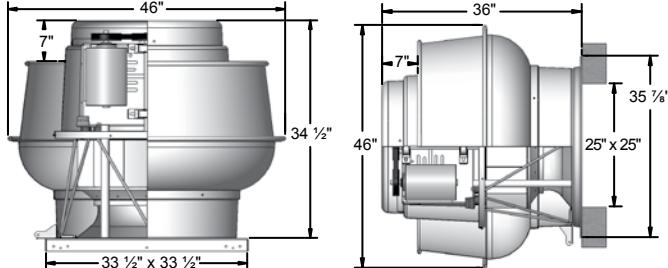
HP	RPM	Tip Speed FPM	0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		2.500" SP		3.000" SP			
			Sones	BHP	Sones	BHP	Sones	BHP																
1/3	770	4082	2308 7.6	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/2	800	4241	2520 7.9	0.37	1622 8.1	0.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	840	4453	2773 8.4	0.42	2108 8.9	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	886	4697	3028 9.4	0.48	2436 9.4	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	915	4851	3186 10.1	0.53	2628 9.9	0.57	1676 10.0	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3/4	970	5142	3475 11.5	0.62	3017 10.7	0.66	2435 11.5	0.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1019	5402	3712 12.4	0.71	3342 11.3	0.75	2786 12.0	0.79	1779 12.1	0.71	-	-	-	-	-	-	-	-	-	-	-	-		
	1065	5646	3932 13.0	0.81	3598 11.9	0.85	3093 12.4	0.89	2515 13.3	0.88	-	-	-	-	-	-	-	-	-	-	-	-		
1	1080	5726	4003 13.2	0.84	3681 12.2	0.88	3200 12.5	0.93	2675 13.6	0.93	-	-	-	-	-	-	-	-	-	-	-	-		
	1105	5858	4121 13.5	0.90	3818 12.6	0.93	3378 12.7	0.98	2884 13.7	1.00	1361 13.4	0.73	-	-	-	-	-	-	-	-	-	-	-	
	1125	5964	4216 13.9	0.94	3926 12.9	0.98	3519 12.8	1.03	3019 13.9	1.06	2151 14.1	0.98	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	1150	6097	4333 14.2	1.00	4061 13.4	1.04	3693 13.0	1.09	3186 14.1	1.13	2575 14.8	1.10	-	-	-	-	-	-	-	-	-	-	-	
	1175	6229	4450 14.7	1.07	4193 14.0	1.11	3850 13.3	1.15	3352 14.3	1.20	2844 15.5	1.19	-	-	-	-	-	-	-	-	-	-	-	
	1200	6362	4570 15.3	1.13	4315 14.5	1.17	3990 13.6	1.22	3525 14.6	1.28	3088 15.7	1.29	1920 15.5	1.11	-	-	-	-	-	-	-	-	-	
	1225	6494	4697 16.1	1.18	4436 15.2	1.24	4129 14.3	1.29	3703 14.9	1.34	3258 16.0	1.37	2544 16.4	1.3	-	-	-	-	-	-	-	-	-	
2	1270	6733	4925 17.0	1.29	4652 16.2	1.38	4376 15.3	1.42	4019 15.3	1.47	3559 16.5	1.52	3081 17.7	1.51	-	-	-	-	-	-	-	-	-	-
	1280	6786	4975 17.1	1.32	4700 16.3	1.41	4430 15.5	1.45	4089 15.4	1.50	3625 16.6	1.56	3188 17.9	1.55	1895 17.3	1.28	-	-	-	-	-	-	-	-
	1335	7077	5251 18.4	1.46	4961 17.2	1.58	4728 16.6	1.63	4424 16.1	1.68	4008 17.1	1.74	3599 18.4	1.77	3051 19.2	1.73	-	-	-	-	-	-	-	-
	1375	7289	5449 19.4	1.57	5150 18.2	1.72	4931 17.6	1.77	4646 17.1	1.82	4290 17.5	1.88	3865 18.8	1.93	2571 20.0	1.93	19.9	1.78	-	-	-	-	-	-
3	1401	7427	5578 20.0	1.64	5272 18.8	1.82	5057 18.2	1.86	4789 17.8	1.91	4471 17.9	1.97	4036 19.1	2.04	3670 20.0	2.05	3073 21.0	1.98	-	-	-	-	-	-
	1440	7634	5770 21.0	1.76	5454 19.8	1.96	5245 19.3	2.01	5002 18.8	2.06	4720 18.7	2.12	4315 19.6	2.19	3933 21.0	2.22	22.0	2.20	22.0	1.98	-	-	-	
	1480	7846	5958 22.0	1.89	5650 21.0	2.11	5436 20.0	2.17	5218 20.0	2.22	4944 19.7	2.28	4598 20.0	2.35	4198 21.0	2.41	3852 23.0	2.41	23.0	2.34	-	-	-	-
	1520	8058	6139 24.0	2.03	5853 22.0	2.24	5627 22.0	2.34	5428 21.0	2.39	5165 21.0	2.45	4876 21.0	2.51	4474 22.0	2.59	3705 23.0	2.61	25.0	2.59	-	-	-	-
3	1560	8270	6321 25.0	2.19	6055 24.0	2.39	5816 23.0	2.52	5623 23.0	2.57	5385 23.0	2.63	5124 22.0	2.69	4759 22.0	2.77	4389 23.0	2.82	25.0	2.83	24.0	1.93	1714	-
	1585	8403	6434 26.0	2.28	6181 25.0	2.48	5934 24.0	2.64	5744 24.0	2.69	5520 23.0	2.75	5264 23.0	2.81	4935 23.0	2.88	4553 24.0	2.96	26.0	2.96	26.0	2.71	2907	-
	1606	8514	6528 27.0	2.37	6286 25.0	2.56	6032 24.0	2.74	5845 24.0	2.79	5634 24.0	2.85	5381 24.0	2.91	5081 24.0	2.98	4700 25.0	3.06	26.0	3.08	26.0	2.95	3378	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for Installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

## › FX24B Belt Drive Fan Curves



## › FX24B Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof/Wall Opening = 25" SQ.	Peak BHP = (RPM/716) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 24 3/4" SQ.	Max. RPM = 1360 (5 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 184T	Wall Mounted Max. HP = 2

Est. Ship Weight = 190 lbs.\*

\* Add 40 lbs. for Heat &amp; Smoke option.

## › FX24B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.250" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		2.500" SP				
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP			
1/4	375	2436	1986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			5.9	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	420	2728	2701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			7.3	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1/3	461	2995	3245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			8.7	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	480	3118	3471	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			9.5	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1/2	501	3255	3717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			10.4	0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	540	3508	4163	2992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			11.9	0.42	10.7	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3/4	576	3742	4543	3557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			12.9	0.51	11.7	0.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	610	3963	4896	4036	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			14.0	0.60	12.9	0.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3/4	640	4157	5203	4433	3236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			14.9	0.69	14.0	0.72	12.8	0.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	662	4300	5421	4709	3676	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			15.5	0.76	14.7	0.79	13.6	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	690	4482	5697	5040	4126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
			16.2	0.85	15.4	0.89	14.3	0.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	718	4664	5972	5367	4542	3116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			16.9	0.95	16.2	1.00	15.1	1.01	13.9	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	755	4905	6332	5791	5049	4070	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			18.2	1.10	17.4	1.16	16.4	1.18	15.3	1.12	-	-	-	-	-	-	-	-	-	-	-	-	-		
	790	5132	6670	6167	5510	4663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			19.7	1.25	19.0	1.32	18.1	1.35	16.9	1.33	-	-	-	-	-	-	-	-	-	-	-	-	-		
2	825	5359	7007	6534	5937	5185	4151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			21.0	1.42	19.9	1.49	19.0	1.53	18.0	1.53	16.8	1.43	-	-	-	-	-	-	-	-	-	-	-	-	
	850	5522	7246	6793	6231	5538	4660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			21.0	1.55	20.0	1.62	19.5	1.67	18.5	1.68	17.5	1.61	-	-	-	-	-	-	-	-	-	-	-	-	
2	880	5717	7532	7103	6580	5939	5165	3845	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			22.0	1.71	21.0	1.79	20.0	1.84	19.3	1.87	18.3	1.83	17.3	1.63	-	-	-	-	-	-	-	-	-	-	
	909	5905	7808	7397	6913	6321	5599	4660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			23.0	1.88	23.0	1.97	22.0	2.03	21.0	2.06	19.6	2.04	18.4	1.92	-	-	-	-	-	-	-	-	-	-	
3	950	6171	8197	7803	7367	6824	6187	5435	4130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			25.0	2.14	25.0	2.23	24.0	2.30	23.0	2.34	22.0	2.35	21.0	2.29	19.3	2.05	-	-	-	-	-	-	-	-	
	985	6399	8527	8148	7736	7236	6655	5973	5102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			28.0	2.37	27.0	2.47	26.0	2.55	25.0	2.60	24.0	2.62	23.0	2.59	22.0	2.45	-	-	-	-	-	-	-	-	
3	1015	6593	8809	8441	8050	7585	7050	6417	5681	4389	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			29.0	2.59	28.0	2.69	27.0	2.78	26.0	2.83	25.0	2.86	24.0	2.86	23.0	2.77	22.0	2.49	-	-	-	-	-	-	
	1042	6769	9062	8705	8330	7896	7390	6795	6123	5217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			29.0	2.80	29.0	2.90	28.0	2.99	27.0	3.05	26.0	3.09	25.0	3.10	24.0	3.04	23.0	2.87	-	-	-	-	-	-	-
5	1100	7146	9605	9267	8927	8539	8076	7568	6985	6327	5393	-	-	-	-	-	-	-	-	-	-	-	-	-	
			30.0	3.28	30.0	3.39	29.0	3.50	28.0	3.57	27.0	3.62	26.0	3.65	25.0	3.64	24.0	3.56	23.0	3.35	-	-	-	-	-
	1150	7470	10071	9749	9424	9065	8656	8197	7669	7085	6427	5428	-	-	-	-	-	-	-	-	-	-	-	-	-
			32.0	3.74	31.0	3.85	30.0	3.96	29.0	4.05	28.0	4.11	27.0	4.16	26.0	4.17	25.0	4.13	25.0	4.02	24.0	3.77	-	-	-
5	1200	7795	10536	10228	9916	9586	9227	8788	8330	7804	7221	6552	-	-	-	-	-	-	-	-	-	-	-	-	-
			34.0	4.23	33.0	4.35	33.0	4.47	32.0	4.57	31.0	4.65	30.0	4.70	29.0	4.73	28.0	4.73	27.0	4.67	26.0	4.53	-	-	-
	1237	8036	10879	10581	10279	9968	9623	9219	8793	8300	7770	7190	-	-	-	-	-	-	-	-	-	-	-	-	-
			36.0	4.63	35.0	4.75	35.0	4.87	34.0	4.99	33.0	5.07	32.0	5.13	31.0	5.18	30.0	5.18	29.0	5.16	28.0	5.08	-	-	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

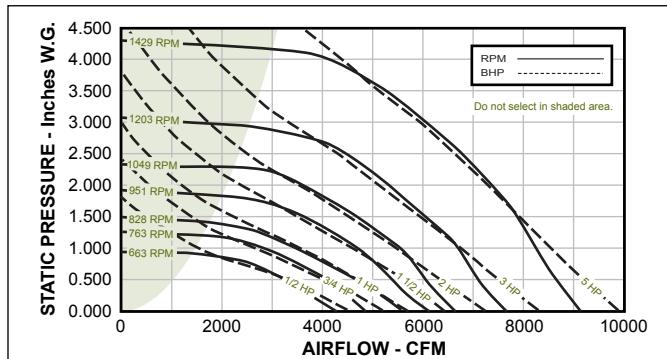
# Dimensional Information & Performance Data

Fumex | Belt Drive

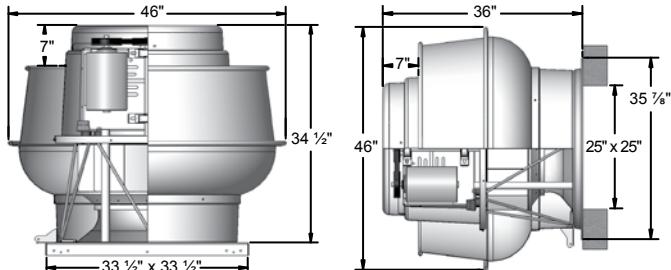


## FX24BH

### › FX24BH Belt Drive Fan Curves



### › FX24BH Belt Drive Fan Dimensional Data



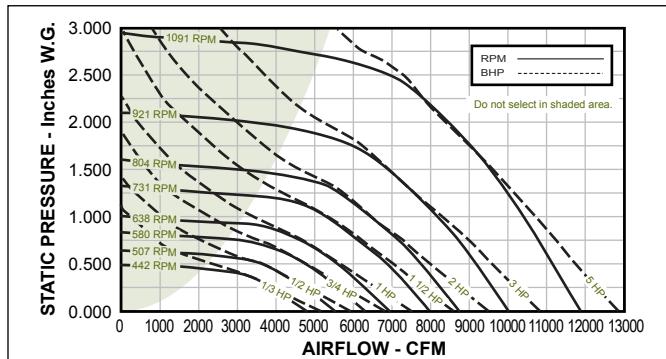
Galv. Steel Base = 14 Gage	Roof Opening = 25" SQ.	Peak BHP = (RPM/827) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 24 3/4" SQ.	Max. RPM = 1620 (5 HP)
Discharge Apron = 0.064	Max. Motor Frame Size = 184T	Wall Mounted Max. HP = 2
Est. Ship Weight = 187 lbs.*		

\* Add 40 lbs. for Heat & Smoke option.

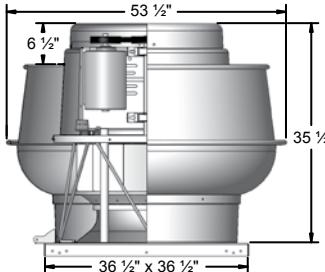
### › FX24BH Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		2.500" SP		3.000" SP		
			Sones	BHP																			
1/2	600	3897	2641	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			8.9	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1/2	663	4306	3231	2472	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			10.0	0.51	10.3	0.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	707	4592	3633	2971	1877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			10.8	0.61	11.0	0.63	10.8	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	725	4709	3774	3142	2264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.1	0.65	11.3	0.67	11.4	0.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	763	4956	4069	3497	2824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.9	0.75	12.0	0.78	12.3	0.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	800	5196	4351	3844	3259	2352	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			12.4	0.86	12.5	0.89	12.6	0.91	12.7	0.85	-	-	-	-	-	-	-	-	-	-	-	-	
1	828	5378	4549	4107	3542	2822	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			12.7	0.94	12.8	0.98	12.9	1.00	13.4	0.98	-	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	855	5553	4736	4357	3796	3180	1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			13.1	1.03	13.1	1.07	13.3	1.10	13.6	1.09	13.3	0.93	-	-	-	-	-	-	-	-	-	-	
1 1/2	886	5755	4950	4607	4083	3546	2740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			13.7	1.13	13.7	1.19	13.7	1.22	14.0	1.23	14.3	1.17	-	-	-	-	-	-	-	-	-	-	
1 1/2	915	5943	5148	4833	4355	3857	3223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			14.7	1.23	14.6	1.30	14.6	1.34	14.6	1.35	14.9	1.33	-	-	-	-	-	-	-	-	-	-	
1 1/2	925	6008	5216	4910	4450	3953	3345	2152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			15.2	1.27	15.0	1.34	15.0	1.38	14.9	1.40	15.0	1.38	14.8	1.20	-	-	-	-	-	-	-	-	
1 1/2	951	6177	5393	5110	4695	4198	3655	2859	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			16.0	1.37	15.7	1.45	15.7	1.49	15.6	1.51	15.5	1.51	15.8	1.43	-	-	-	-	-	-	-	-	
2	990	6430	5657	5403	5056	4560	4107	3503	2353	-	-	-	-	-	-	-	-	-	-	-	-	-	
			16.9	1.53	16.5	1.62	16.5	1.67	16.5	1.70	16.5	1.72	16.7	1.69	16.5	1.48	-	-	-	-	-	-	
2	1019	6619	5856	5605	5288	4831	4384	3851	3096	-	-	-	-	-	-	-	-	-	-	-	-	-	
			17.4	1.66	16.9	1.75	16.9	1.81	16.9	1.85	17.0	1.87	17.2	1.85	17.5	1.76	-	-	-	-	-	-	
2	1049	6814	6063	5813	5522	5115	4667	4203	3597	2447	-	-	-	-	-	-	-	-	-	-	-	-	
			18.0	1.80	17.4	1.89	17.4	1.96	17.4	2.00	17.5	2.03	17.8	2.04	18.3	1.99	17.9	1.75	-	-	-	-	
3	1080	7015	6276	6027	5761	5405	4954	4539	4005	3270	-	-	-	-	-	-	-	-	-	-	-	-	
			18.8	1.95	18.0	2.05	18.0	2.13	18.0	2.18	18.1	2.21	18.4	2.23	18.8	2.20	19.1	2.10	-	-	-	-	
3	1105	7177	6447	6198	5953	5635	5184	4777	4301	2689	2546	-	-	-	-	-	-	-	-	-	-	-	
			19.5	2.08	18.6	2.18	18.6	2.32	18.6	2.32	18.9	2.38	19.3	2.73	19.9	2.31	19.4	2.03	-	-	-	-	
3	1125	7307	6583	6335	6105	5801	5375	4965	4535	4002	3184	-	-	-	-	-	-	-	-	-	-	-	
			20.0	2.19	19.3	2.29	19.1	2.39	19.1	2.44	19.1	2.48	19.3	2.51	19.7	2.51	20.0	2.48	20.0	2.32	-	-	
3	1175	7632	6923	6675	6461	6191	5846	5429	5047	4597	4058	-	-	-	-	-	-	-	-	-	-	-	
			22.0	2.48	21.0	2.58	21.0	2.69	21.0	2.75	21.0	2.80	20.0	2.84	21.0	2.86	21.0	2.85	22.0	2.80	-	-	
3	1203	7814	7122	6864	6655	6407	6105	5690	5311	4924	4425	-	-	-	-	-	-	-	-	-	-	-	
			23.0	2.65	22.0	2.76	21.0	2.86	21.0	2.94	21.0	3.00	21.0	3.04	21.0	3.07	22.0	3.08	22.0	3.04	-	-	
5	1210	7859	7160	6911	6704	6461	6169	5757	5377	5004	4508	2767	-	-	-	-	-	-	-	-	-	-	-
			23.0	2.69	22.0	2.80	21.0	2.91	21.0	2.99	21.0	3.05	21.0	3.09	21.0	3.12	22.0	3.14	22.0	3.10	22.0	2.65	
5	1245	8087	7395	7152	6945	6728	6453	6088	5701	5341	4922	3740	-	-	-	-	-	-	-	-	-	-	-
			24.0	2.92	23.0	3.03	22.0	3.14	22.0	3.24	22.0	3.30	22.0	3.35	22.0	3.39	22.0	3.41	23.0	3.40	24.0	3.21	
5	1275	8281	7597	7359	7151	6954	6688	6368	5977	5624	5270	4244	-	-	-	-	-	-	-	-	-	-	-
			24.0	3.12	23.0	3.24	23.0	3.35	23.0	3.47	23.0	3.53	22.0	3.58	23.0	3.63	23.0	3.65	23.0	3.67	25.0	3.54	
5	1325	8606	7931	7702	7492	7302	7074	6815	6453	6088	5750	4933	-	-	-	-	-	-	-	-	-	-	-
			25.0	3.49	24.0	3.61	24.0	3.73	23.0	3.84	23.0	3.93	23.0	3.99	23.0	4.04	24.0	4.08	24.0	4.10	26.0	4.07	
5	1380	8963	8298	8078	7865	7683	7493	7246	6965	6604	6264	5580	-	-	-	-	-	-	-	-	-	-	-
			27.0	3.92	26.0	4.04	25.0	4.17	25.0	4.29	25.0	4.41	25.0	4.47	25.0	4.53	25.0	4.58	25.0	4.62	26.0	4.64	
5	1429	9282	8623	8411	8198	8019	7843	7624	7384	7065	6717	6086	-	-	-	-	-	-	-	-	-	-	-
			29.0	4.33	28.0	4.46	27.0	4.59	26.0	4.72	26.0	4.84	26.0	4.93	26.0	4.99	26.0	5.05	26.0	5.05	27.0	5.16	

#### › FX27B Belt Drive Fan Curves



#### › FX27B Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof Opening = 28" SQ.	Peak BHP = (RPM/539) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 27 3/4" SQ.	Max. RPM = 1188 (5 HP)
Discharge Apron = 0.080	Max. Motor Frame Size = 184T	Est. Ship Weight = 219 lbs.*

\* Add 55 lbs. for Heat & Smoke option.

#### › FX27B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.125" SP		0.250" SP		0.375" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		2.000" SP																								
			Sones	BHP																																							
1/3	442	3211	4361		3843		3112		-		-		-		-	-		-	-																								
			8.3	0.30	7.7	0.33	7.1	0.33	-		-		-		-	-		-	-																								
	475	3451	4780		4293		3695		2634		-		-		-	-		-	-																								
1/2	507	3683	5120		4710		4213		3530		-		-		-	-		-	-																								
			10.7	0.44	10.1	0.48	9.8	0.50	9.2	0.49	-		-		-		-	-																									
	535	3887	5444		5065		4617		4030		-		-		-	-		-	-																								
3/4	560	4068	4361		4361		4361		4361		-		-		-	-		-	-																								
			12.7	0.59	12.2	0.63	11.7	0.66	11.5	0.67	-		-		-		-	-																									
	580	4214	5960		5628		5234		4785		3159		-		-	-	-	-	-																								
1	600	4359	6188		5870		5498		5076		3889		-		-	-		-	-																								
			14.2	0.71	13.8	0.76	13.4	0.80	13.2	0.82	12.0	0.80	-		-	-	-	-	-																								
	620	4504	6415		6107		5756		5363		4304		-		-	-	-	-	-	-																							
1 1/2	638	4635	6631		6330		5990		5625		4635		-		-	-	-	-	-	-																							
			15.4	0.85	15.0	0.90	14.6	0.94	14.3	0.98	13.5	0.99	-		-	-	-	-	-	-																							
	660	4795	6868		6577		6264		5913		5018		-		-	-	-	-	-	-	-																						
2	685	4976	7150		6869		6578		6248		5461		4209		-		-	-	-	-	-																						
			16.7	1.04	16.4	1.10	16.0	1.15	15.6	1.19	15.0	1.24	13.8	1.17	-		-	-	-	-	-																						
	705	5122	7374		7101		6827		6506		5782		4753		-		-	-	-	-	-	-																					
3	731	5311	7666		7403		7144		6839		6161		5247		-		-	-	-	-	-	-																					
			18.4	1.26	18.1	1.32	17.7	1.38	17.4	1.42	16.7	1.49	15.8	1.48	-		-	-	-	-	-	-																					
	750	5449	7879		7622		7369		7080		6434		5583		4127		-		-	-	-	-	-																				
4	770	5594	8103		7853		7605		7332		6719		5932		4856		-		-	-	-	-	-																				
			19.6	1.46	19.3	1.53	18.9	1.59	18.5	1.64	17.9	1.72	17.3	1.76	16.0	1.67	-		-	-	-	-	-																				
	785	5703	8270		8025		7782		7521		6925		6200		5250		-		-	-	-	-	-	-																			
5	804	5841	8482		8243		8004		7758		7183		6528		5628		-		-	-	-	-	-	-																			
			21.0	1.66	20.0	1.73	19.9	1.80	19.5	1.85	18.8	1.94	18.4	2.00	17.3	1.97	-		-	-	-	-	-	-																			
	830	6030	8772		8540		8308		8080		7534		6910		6092		4830		-		-	-	-	-	-																		
6	865	6284	9161		8938		8716		8497		7988		7415		6706		5853		-		-	-	-	-	-																		
			23.0	2.05	23.0	2.13	22.0	2.21	22.0	2.27	21.0	2.38	20.0	2.46	19.7	2.49	18.6	2.43	-		-	-	-	-	-																		
	895	6502	9493		9278		9063		8851		8372		7840		7239		6421		5162		-		-	-	-	-	-																
7	921	6691	9782		9573		9364		9156		8702		8195		7624		6881		6055		-		-	-	-	-	-																
			26.0	2.46	26.0	2.55	25.0	2.63	25.0	2.71	24.0	2.82	23.0	2.93	23.0	2.99	22.0	2.99	20.0	2.90	-		-	-	-	-																	
	960	6974	10213		10013		9812		9612		9193		8720		8189		7568		6816		-		-	-	-	-	-	-															
8	1000	7265	10655		10463		10270		10078		9691		9239		8757		8221		7523		-		-	-	-	-	-	-	-														
			30.0	3.14	29.0	3.23	29.0	3.32	28.0	3.41	27.0	3.55	26.0	3.67	26.0	3.77	25.0	3.83	24.0	3.88	-		-	-	-	-	-	-															
	1045	7592	11151		10967		10783		10599		10236		9814		9369		8875		8318		-		-	-	-	-	-	-	-	-	-												
9	1091	7926	11658		11482		11305		11129		10780		10395		9981		9531		9039		-		-	-	-	-	-	-	-	-	-	-	-	-									
			34.0	4.05	33.0	4.15	33.0	4.25	33.0	4.35	31.0	4.53	31.0	4.66	30.0	4.80	29.0	4.91	29.0	4.96	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 50' (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

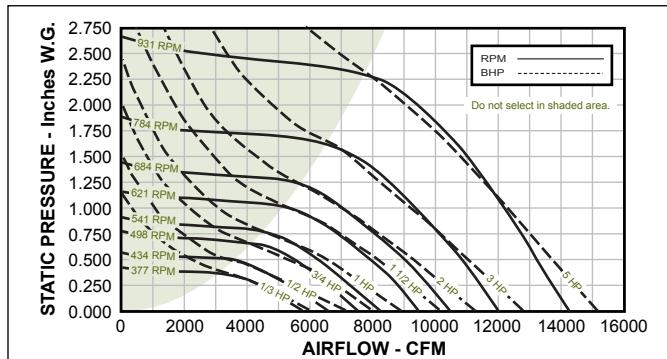
# Dimensional Information & Performance Data

Fumex | Belt Drive

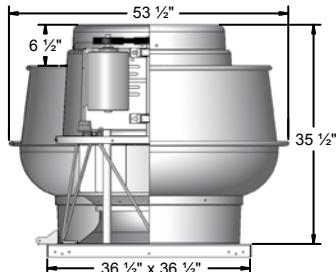

  
PENN BARRY™

## FX30B

### › FX30B Belt Drive Fan Curves



### › FX30B Belt Drive Fan Dimensional Data



Galv. Steel Base = 14 Gage	Roof Opening = 28" SQ.	Peak BHP = (RPM/539) <sup>3</sup>
Aluminum Base = 0.080	Damper Size = 27 3/4" SQ.	Max. RPM = 1188 (5 HP)
Discharge Apron = 0.080	Max. Motor Frame Size = 184T	Est. Ship Weight = 219 lbs.*

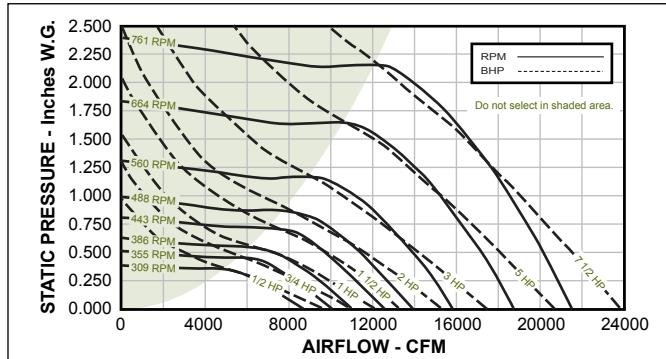
\* Add 65 lbs. for Heat & Smoke option.

### › FX30B Belt Drive Fan Performance Data

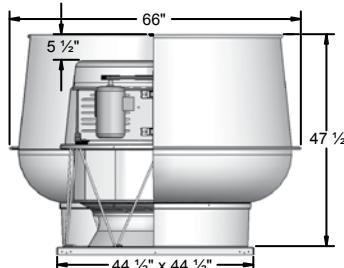
HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.500" SP		1.750" SP		2.000" SP		2.250" SP		
			Sones	BHP																			
1/3	347	2782	5314		3779		-		-		-		-		-		-		-	-		-	
			7.6	0.22	7.2	0.27	-		-		-		-		-		-		-	-		-	
1/3	377	3023	5773		4431		-		-		-		-		-		-		-	-		-	
			8.9	0.28	8.5	0.34	-		-		-		-		-		-		-	-		-	
1/2	400	3207	6125		4899		-		-		-		-		-		-		-	-		-	
			10.1	0.33	9.5	0.40	-		-		-		-		-		-		-	-		-	
1/2	420	3367	6431		5283		-		-		-		-		-		-		-	-		-	
			10.9	0.38	10.2	0.46	-		-		-		-		-		-		-	-		-	
1/2	434	3480	6646		5548		3742		-		-		-		-		-		-	-		-	
			11.6	0.42	10.7	0.50	10.0	0.51	-		-		-		-		-		-	-		-	
3/4	455	3648	6968		5937		4445		-		-		-		-		-		-	-		-	
			12.5	0.49	11.6	0.57	10.8	0.61	-		-		-		-		-		-	-		-	
3/4	480	3848	7350		6377		5078		-		-		-		-		-		-	-		-	
			13.7	0.57	12.8	0.66	11.9	0.71	-		-		-		-		-		-	-		-	
3/4	498	3993	7626		6690		5505		-		-		-		-		-		-	-		-	
			14.6	0.64	13.6	0.74	12.7	0.79	-		-		-		-		-		-	-		-	
1	520	4169	7963		7069		5984		-		-		-		-		-		-	-		-	
			15.6	0.73	14.6	0.83	13.8	0.90	-		-		-		-		-		-	-		-	
1	541	4338	8285		7428		6433		4939		-		-		-		-		-	-		-	
			16.4	0.82	15.4	0.93	14.6	1.00	13.3	1.01	-		-		-		-		-	-		-	
1 1/2	560	4490	8576		7748		6818		5514		-		-		-		-		-	-		-	
			17.1	0.91	16.1	1.02	15.2	1.10	14.1	1.13	-		-		-		-		-	-		-	
1 1/2	595	4770	9112		8333		7491		6397		-		-		-		-		-	-		-	
			18.5	1.09	17.5	1.21	16.5	1.30	15.4	1.35	-		-		-		-		-	-		-	
1 1/2	621	4979	9510		8764		7983		6985		5581		-		-		-		-	-		-	
			19.7	1.24	18.8	1.36	17.8	1.46	16.6	1.53	15.3	1.52	-		-		-		-	-		-	
2	640	5131	9801		9077		8335		7397		6193		-		-		-		-	-		-	
			21.0	1.35	19.6	1.48	18.6	1.59	17.5	1.67	16.2	1.68	-		-		-		-	-		-	
2	665	5332	10184		9488		8776		7930		6835		-		-		-		-	-		-	
			22.0	1.52	21.0	1.79	19.7	1.77	18.7	1.86	17.4	1.89	-		-		-		-	-		-	
2	684	5484	10474		9798		9109		8314		7311		5817		-		-		-	-		-	
			22.0	1.65	21.0	1.79	20.0	1.92	19.4	2.01	18.1	2.06	16.8	1.99	-		-	-	-	-		-	
3	710	5693	10873		10221		9560		8817		7911		6748		-		-		-	-		-	
			23.0	1.85	22.0	1.99	21.0	2.13	20.0	2.23	19.0	2.29	17.7	2.29	-		-	-	-	-		-	
3	730	5853	11179		10545		9905		9199		8347		7299		-		-		-	-		-	
			24.0	2.01	23.0	2.15	22.0	2.30	21.0	2.40	19.9	2.48	18.6	2.50	-		-	-	-	-		-	
3	750	6013	11485		10869		10248		9578		8777		7806		6405		-		-	-		-	
			25.0	2.18	24.0	2.33	23.0	2.49	22.0	2.59	21.0	2.68	19.4	2.71	18.2	2.63	-		-	-		-	
3	770	6174	11792		11191		10588		9953		9202		8305		7144		-		-	-		-	
			26.0	2.36	25.0	2.51	24.0	2.68	23.0	2.78	22.0	2.89	21.0	2.93	19.3	2.91	-		-	-		-	
3	784	6286	12006		11416		10824		10211		9487		8630		7591		-		-	-		-	
			27.0	2.49	26.0	2.64	25.0	2.81	24.0	2.93	23.0	3.04	21.0	3.09	20.0	3.09	-		-	-		-	
5	805	6454	12328		11753		11177		10582		9895		9090		8132		-		-	-		-	
			28.0	2.69	27.0	2.85	26.0	3.03	25.0	3.15	24.0	3.26	23.0	3.33	21.0	3.35	-		-	-		-	
5	840	6735	12863		12313		11761		11196		10566		9844		9011		7982		-	-	-		-
			30.0	3.06	29.0	3.22	28.0	3.41	27.0	3.55	26.0	3.66	25.0	3.76	23.0	3.81	22.0	3.79	-		-	-	
5	880	7055	13476		12951		12424		11889		11322		10674		9918		9049		7955		-		
			31.0	3.52	30.0	3.69	29.0	3.88	28.0	4.04	27.0	4.16	26.0	4.29	25.0	4.35	23.0	4.38	22.0	4.32	-		
5	915	7336	14012		13507		13000		12491		11963		11351		10673		9923		9018		7663		
			33.0	3.96	32.0	4.13	31.0	4.33	30.0	4.52	29.0	4.64	28.0	4.77	27.0	4.87	25.0	4.92	24.0	4.92	23.0	4.74	
5	931	7464	14257		13760		13263		12764		12245		11658		11015		10285		9427		8352		
			34.0	4.17	34.0	4.35	32.0	4.54	31.0	4.75	30.0	4.87	29.0	5.00	28.0	5.11	27.0	5.17	25.0	5.18	24.0	5.11	

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

#### › FX36B Belt Drive Fan Curves



#### › FX36B Belt Drive Fan Dimensional Data



Galv. Steel Base = 12 Gage	Roof Opening = 36" SQ.	Peak BHP = (RPM/384) <sup>3</sup>
Aluminum Base = 0.102	Damper Size = 35 1/2" SQ.	Max. RPM = 810 (7 1/2 HP)
Discharge Apron = 0.080	Max. Motor Frame Size = 213T	Est. Ship Weight = 470 lbs.*

\* Add 110 lbs. for Heat & Smoke option.

#### › FX36B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000" SP		0.250" SP		0.500" SP		0.750" SP		1.000" SP		1.250" SP		1.375" SP		1.500" SP		1.750" SP		2.000" SP	
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP
1/2	269	2619	7603	4897	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	309	3008	5.6 0.25	5.4 0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4	335	3261	8734	6761	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	355	3456	7.2 0.37	6.8 0.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	370	3602	9469	7715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	386	3758	10034	8409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 1/2	405	3943	9.4 0.57	8.7 0.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	420	4089	10458	8912	6306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	443	4313	10911	9441	7253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	465	4527	11448	10054	8198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	488	4751	11872	10531	8875	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	500	4868	12522	11255	9785	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	515	5014	1405	11448	10054	8198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	530	5160	14557	13483	12327	10896	8139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	550	5355	1465	13488	12327	10896	8139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	560	5452	15547	14552	13488	12259	10497	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	580	5647	15829	14855	13810	12627	11008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	600	5841	16395	15460	14449	13354	11922	9624	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	620	6036	16663	15713	14738	13596	12025	10842	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	640	6231	17262	16339	15407	14337	12945	12022	10872	-	-	-	-	-	-	-	-	-	-	-	-	-
6	664	6464	17525	16663	15713	14738	13596	12025	10842	18.7 4.14	-	-	-	-	-	-	-	-	-	-	-	-
	680	6620	18091	17262	16339	15407	14337	12945	12022	10872	-	-	-	-	-	-	-	-	-	-	-	-
7	700	6815	18769	17978	17086	16203	15213	14029	13246	12296	-	-	-	-	-	-	-	-	-	-	-	-
	720	7010	19047	18197	17367	16481	15455	14874	14131	12265	-	-	-	-	-	-	-	-	-	-	-	-
7 1/2	745	7253	19407	18579	17894	17990	17104	16610	16116	14756	12913	-	-	-	-	-	-	-	-	-	-	-
	761	7409	20352	19639	18813	18003	17155	16193	15681	15037	13445	-	-	-	-	-	-	-	-	-	-	-

Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan sones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet sone levels. Performance ratings do not include the effects of appurtenances in the airstream.

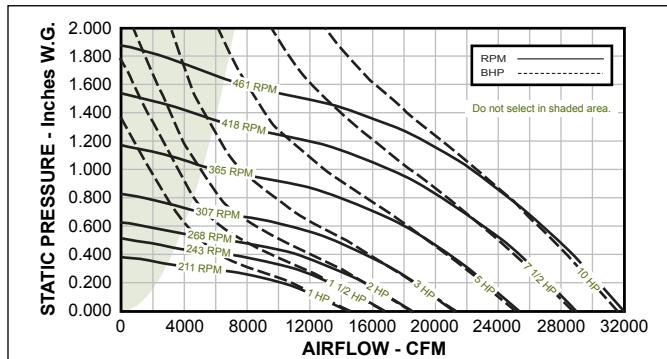
# Dimensional Information & Performance Data

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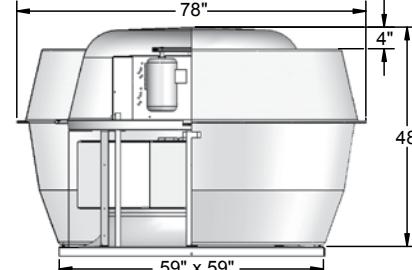


FMX50B

## › FMX50B Belt Drive Fan Curves



#### › FMX50B Belt Drive Fan Dimensional Data



Galv. Steel Base = 12 Gage	Roof/Wall Opening = 50" SQ.	Peak BHP = (RPM/218) <sup>3</sup>
Aluminum Base = 0.125	Damper Size = 49 ½" SQ.	Max. RPM = 480 (10 HP)
Discharge Apron = 0.125	Max. Motor Frame Size = 215T	Est. Ship Weight = 928 lbs.

#### › FMX50B Belt Drive Fan Performance Data

HP	RPM	Tip Speed FPM	0.000		0.125		0.250		0.375		0.500		0.625		0.750		1.000		1.250		1.500		
			Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	
3/4	190	2487	9590	6496	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			6.8	0.580	6.5	0.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3/4	210	2749	10599	10599	7916	3932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			7.7	0.783	7.5	0.706	7.4	0.525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	220	2880	11104	8594	5052	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			8.2	0.900	8.0	0.824	7.8	0.653	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	230	3011	11609	9235	6059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			8.6	1.029	8.4	0.951	8.2	0.789	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	240	3142	12114	9844	6952	2496	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			9.0	1.169	8.9	1.088	8.6	0.935	8.6	0.616	-	-	-	-	-	-	-	-	-	-	-	-	
1 1/2	255	3338	12871	10742	8155	4559	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			9.4	1.402	9.6	1.315	9.1	1.173	9.1	0.924	-	-	-	-	-	-	-	-	-	-	-	-	
2	265	3469	13376	11332	8913	5705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			9.6	1.573	10.0	1.483	9.5	1.347	9.4	1.113	-	-	-	-	-	-	-	-	-	-	-	-	
2	280	3665	14133	12203	10011	7267	3318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			9.8	1.856	10.7	1.760	10.1	1.635	9.7	1.414	9.7	1.026	-	-	-	-	-	-	-	-	-	-	
2	290	3796	14637	12775	10713	8170	4715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			9.8	2.062	11.1	1.962	10.5	1.842	9.8	1.629	9.8	1.298	-	-	-	-	-	-	-	-	-	-	
3	300	3927	15142	13343	11401	9007	5907	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			10.3	2.282	11.6	2.179	11.1	2.065	10.3	1.855	10.3	1.560	-	-	-	-	-	-	-	-	-	-	
3	320	4189	16152	14466	12737	10577	8087	4744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.2	2.770	12.8	2.659	12.3	2.556	11.5	2.354	11.2	2.087	11.2	1.672	-	-	-	-	-	-	-	-	
3	330	4320	16656	15023	13350	11319	8998	5981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			11.7	3.038	13.4	2.923	12.9	2.816	12.1	2.625	11.7	2.365	11.7	2.014	-	-	-	-	-	-	-	-	
5	350	4581	17666	16127	14558	12761	10689	8219	5128	-	-	-	-	-	-	-	-	-	-	-	-	-	
			12.6	3.624	14.6	3.502	14.2	3.388	13.5	3.221	12.6	2.969	12.6	2.651	12.6	2.176	-	-	-	-	-	-	-
5	370	4843	18675	17221	15745	14139	12250	10154	7529	-	-	-	-	-	-	-	-	-	-	-	-	-	
			13.5	4.282	15.7	4.152	15.3	4.031	14.8	3.882	13.8	3.641	13.5	3.343	13.5	2.963	-	-	-	-	-	-	-
5	390	5105	19685	18307	16914	15481	13724	11846	9705	3798	-	-	-	-	-	-	-	-	-	-	-	-	
			14.2	5.015	16.9	4.876	16.4	4.748	15.9	4.622	15.1	4.385	14.2	4.098	14.2	3.754	14.2	2.581	-	-	-	-	-
7.5	400	5236	20189	18846	17489	16096	14446	12643	10643	5311	-	-	-	-	-	-	-	-	-	-	-	-	
			14.6	5.410	16.2	5.269	17.0	5.136	16.4	5.007	15.7	4.788	14.6	4.504	14.6	4.167	14.6	3.121	-	-	-	-	-
7.5	410	5367	20694	19383	18060	16705	15143	13421	11543	6654	-	-	-	-	-	-	-	-	-	-	-	-	
			14.9	5.826	16.9	5.681	17.6	5.545	17.0	5.412	16.2	5.206	15.3	4.929	14.9	4.601	14.9	3.665	-	-	-	-	-
7.5	420	5498	21199	19919	18628	17310	15832	14167	12393	7864	-	-	-	-	-	-	-	-	-	-	-	-	
			15.2	6.263	17.5	6.114	18.1	5.974	17.6	5.838	16.9	5.645	15.8	5.371	15.2	5.051	15.2	4.201	-	-	-	-	-
7.5	430	5629	21704	20454	19193	17910	16514	14904	13199	9007	-	-	-	-	-	-	-	-	-	-	-	-	
			15.5	6.721	18.2	6.569	18.7	6.425	18.2	6.285	17.5	6.107	16.5	5.836	15.5	5.519	15.5	4.704	-	-	-	-	-
7.5	440	5760	22208	20987	19756	18506	17189	15632	13994	10104	4825	-	-	-	-	-	-	-	-	-	-	-	
			15.7	7.201	18.9	7.045	19.2	6.897	18.7	6.754	18.0	6.592	16.6	6.325	15.9	6.012	15.7	5.222	15.7	3.875	-	-	-
10	450	5890	22713	21519	20316	19098	17855	16346	14767	11171	6364	-	-	-	-	-	-	-	-	-	-	-	
			16.0	7.703	19.5	7.544	19.7	7.392	19.2	7.245	18.6	7.100	17.7	6.834	16.5	6.525	16.0	5.762	16.0	4.556	-	-	-
10	460	6021	23218	22049	20874	19686	18471	17041	15513	12119	7638	-	-	-	-	-	-	-	-	-	-	-	-
			16.2	8.228	20.2	8.065	20.2	7.909	19.7	7.759	19.1	7.611	18.3	7.361	17.1	7.056	16.2	6.311	16.2	5.232	-	-	-
10	470	6152	23723	22579	21429	20271	19081	17730	16250	13022	8842	-	-	-	-	-	-	-	-	-	-	-	-
			16.3	8.777	20.8	8.610	20.6	8.450	20.1	8.296	19.5	8.144	18.8	7.913	17.7	7.612	16.3	6.882	16.3	5.897	-	-	-
10	480	6283	24227	23108	21982	20850	19688	18412	16980	13904	9985	4992	-	-	-	-	-	-	-	-	-	-	-
			16.4	9.349	21.5	9.179	21.1	9.015	20.6	8.857	20.0	8.702	19.2	8.490	18.2	8.195	16.4	7.478	16.4	6.525	16.4	4.931	-
10	490	6414	24732	23635	22534	21425	20290	19087	17699	14717	11088	6520	-	-	-	-	-	-	-	-	-	-	-
			17.0	9.945	22.2	9.772	21.8	9.603	21.3	9.442	20.7	9.284	20.0	9.093	19.1	8.803	17.0	8.086	17.0	7.171	17.0	5.743	-
10	496	6493	25035	23951	22864	21768	20650	19490	18119	15199	11733	7381	-	-	-	-	-	-	-	-	-	-	-
			17.3	10.31	22.6	10.140	22.2	9.969	21.7	9.805	21.1	9.645	20.5	9.468	19.6	9.174	17.3	8.464	17.3	7.568	17.3	6.236	-

*Performance shown is for installation type A: Free Inlet, Free Outlet. Power rating (BHP) does not include drive losses. For further information on estimating belt drive losses and motor service factors see page 11. The sound ratings shown are for loudness values in fan zones at 5'0" (1.5m) in a hemispherical free field per AMCA Standard 301. Values shown are for installation Type A: free inlet zone levels. Performance ratings do not include the effects of appurtenances in the airstream.*

**> Model**

FX = Centrifugal Fan  
 WFX = Wall Mounted Centrifugal Fan  
 FMX = High Capacity Centrifugal Fan

**> Unit Size**

08	11	13	16	24	30	50
10	12	14	18	27	36	

**> Drive Type**

D = Direct Drive  
 B = Belt Drive

**> Motor Tap**

Q = 1725 RPM  
 R = 1550 RPM  
 S = 1300 RPM  
 V = 1050 RPM  
 Q1 = 1650 RPM  
 Q2 = 1725 RPM

**> Motor Speed**

1 = Single Speed  
 2 = 2S2W Single & Three Phase  
 3 = 2S1W Three Phase

**> Horse Power**

1/50	1/12	1/5	3/4	3
1/30	1/11	1/4	1	5
1/25	1/7	1/3	1 1/2	7 1/2
1/20	1/6	1/2	2	10

**> Enclosure**

O = Open Drip Proof  
 T = Totally Enclosed  
 E = Explosion Proof  
 X = Special

**> Voltage**

A = 110V	G = 230V	N = 440V
B = 115V	H = 240V	P = 460V
C = 120V	J = 277V	Q = 480V
D = 200V	K = 380V	R = 575V
E = 208V	L = 400V	S = 600V
F = 220V	M = 415V	X = Special

**> Phase**

1 = Single  
 3 = Three

**> Cycle**

5 = 50 Hz  
 6 = 60 Hz

**> Efficiency**

S = Standard  
 H = High Efficiency

**> Paint / Coating**
**Sizes 08 - 36**

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.

**Size 50**

0 = None  
 B = Epoxy\*  
 C = Heresite\*  
 D = Heresite with UV\*  
 Q = Enamel\*  
 X = Special

\* Not available with choice of color.

**> Color**

0 = None  
 50 = Chrome Green  
 53 = Williamsburg Blue  
 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

**> AMCA Spark Rating**

0 = None  
 C = Standard  
 B = Optional

**> 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  
     Operated Damper 115V

**> Screen**

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

**> Roof Curb**

0 = None	K = UCA18	V = UG18
A = UCG8	L = UG12	W = URA12
B = UCG12	M = SA16	Y = URA18
C = UCG18	N = SFG12	1 = URG12
D = UCA8	P = SFG18	10 = SFA8
E = UCA12	Q = SG16	11 = USCG
F = SFA12	R = SRA16	12 = USCA
G = SFA18	S = SRG16	2 = URG18
H = SCG16	T = UA12	4 = UVA18
J = SCA16	U = UA18	5 = UVG18

**> 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

**> No Wooden Nailer**

0 = None  
 N = No Wooden Nailer

**> Curb Paint/Coating**

B = Air Dried Epoxy  
 Q = Enamel

**> Hinged Sub-base**

0 = None  
 H = Hinged Sub-base

**> Mounting Pedestal**

0 = None  
 P = Mounting Pedestal

**> Floating Hinge Kit**

0 = None  
 H = Floating Hinge Kit

**> Aluminum Base**

0 = None  
 A = Aluminum Base

**> Thermal Overload Protection**

0 = None  
 P = Thermal Overload Protection

# Engineering Specifications

Fumex



## Engineering Specifications

### › 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

### › Fatrap

- 0 = None
- F = Fatrap

### › Heat & Smoke Removal

- 0 = None
- HS = Heat & Smoke Removal

### › Wall Mount

- 0 = None
- W = Wall Mount

### › High Pressure Wheel

- 0 = None
- H = High Pressure Wheel

### › High Wind Construction

- 0 = None
- M = Miami Dade Approved

### › Belt Drive Fans

Belt drive centrifugal roof exhaust upblast fan shall be Fumex FX/FMX, manufactured by PennBarry, Richardson, TX 75081. The housing shall be weatherproof, utilize heavy-gauge spun aluminum construction with a large rolled bead for strength, with galvanized (aluminum optional except FMX) base, with rigid galvanized steel internal support structures. Housing shall not provide any of the internal structural support. Large diameter cooling tube shall provide ambient air to flow over motor. Units shall be equipped with an oversized electrical conduit chase through the curb cap and into the motor compartment for ease of wiring (except Explosion Proof). Units shall be prewired to a junction box mounted in the motor compartment and equipped with an electrical disconnect device (except Explosion Proof).

Statically and dynamically balanced backward inclined, centrifugal wheels shall be aluminum, spark-resistant, nonoverloading, and be matched to deeply spun venturis. Motors shall be continuous duty, ball bearing design, permanently lubricated, mounted out of the main airstream, and furnished at the specified voltage, phase, and enclosure. Shafts shall be turned, ground and polished. Heavy duty ball bearings are rated for a minimum L50 life exceeding 200,000 hours. Pulleys shall be adjustable, cast iron, machined, keyed, securely attached, and sized for 150% of the horsepower at its rated maximum speed. Each fan shall bear the AMCA Certified Ratings Seal for Air and Sound Performance (FX) or for Air performance (FMX), and shall be UL (UL Std. 705, UL Std. 762 optional) and CSA listed. If specified (Fatrap option), fan shall additionally provide UL 762 Listing rated at 400° F. (300° F. FMX), motor pre-wired to a weather-proof junction box, and drain connection leading into a grease collector/separator box. If specified (heat and smoke removal option), fan shall additionally provide UL listing rated for 500°F at 4-hours and 1000°F at 1 hour, including steel wheel and additional cooling tube.

### › Direct Drive Fans

Direct drive centrifugal roof exhaust upblast fan shall be Fumex FX, manufactured by PennBarry, Richardson, TX 75081. The housing shall be weatherproof, utilize heavy gauge spun aluminum construction with a large rolled bead for strength, with galvanized (aluminum optional) base, with rigid galvanized steel internal support structures. Housing shall not provide any of the internal structural support. Units shall be equipped with an oversized electrical conduit chase through the curb cap and into the motor compartment for ease of wiring (except Explosion Proof). Units shall be pre-wired to a junction box mounted in the motor compartment and equipped with an electrical disconnect device (except Explosion Proof).

Statically and dynamically balanced backward inclined, centrifugal wheels shall be aluminum, spark-resistant, nonoverloading, and matched to deeply spun venturis. Motors shall be continuous duty, permanently lubricated, multispeed (for applicable models), have thermal overload protection, mounted out of the main airstream, be easily accessible for service, and furnished at the specified voltage, phase and enclosure. Each fan shall bear the AMCA Certified Ratings Seal for Air and Sound Performance, and shall be UL (UL Std. 705, UL Std. 762 optional applicable models) and CSA listed. If specified (Fatrap option), fan shall additionally provide UL 762 Listing rated at 400° F., motor pre-wired to a weather-proof junction box, and drain connection leading into a grease collector/separator box.

### › Product Configuration

Reference PennBarry's selection software to configure a Fumex product today.

## 1-Year Limited Manufacturer Warranty

### › Products Covered

PennBarry Fans and Ventilators (each, a "PennBarry Product")

### › One Year Limited Warranty For PennBarry Products

PennBarry warrants to the original commercial purchaser that the PennBarry Products will be free from defects in material and workmanship for a period of one (1) year from the date of shipment.

### › Exclusive Remedy

PennBarry will, at its option, repair or replace (without removal or installation) the affected components of any defective PennBarry Product; repair or replace (without removal or installation) the entire defective PennBarry Product; or refund the invoice price of the PennBarry Product. In all cases, a reasonable time period must be allowed for warranty repairs to be completed.

### › What You Must Do

In order to make a claim under these warranties:

- You must be the original commercial purchaser of the PennBarry Product.
- You must promptly notify us, within the warranty period, of any defect and provide us with any substantiation that we may reasonably request.
- The PennBarry Product must have been installed and maintained in accordance with good industry practice and any specific PennBarry recommendations.

### › Exclusions

These warranties do not cover defects caused by:

- Improper design or operation of the system into which the PennBarry Product is incorporated.
- Improper installation.
- Accident, abuse or misuse.
- Unreasonable use (including any use for non-commercial purposes, failure to provide reasonable and necessary maintenance as specified by PennBarry, misapplication and operation in excess of stated performance characteristics).
- Components not manufactured by PennBarry.

### › Limitations

- In all cases, PennBarry reserves the right to fully satisfy its obligations under the Limited Warranties by refunding the invoice price of the defective PennBarry Product (or, if the PennBarry Product has been discontinued, of the most nearly comparable current product).
- PennBarry reserves the right to furnish a substitute or replacement component or product in the event a PennBarry Product or any component of the product is discontinued or otherwise unavailable.
- PennBarry's only obligation with respect to components not manufactured by PennBarry shall be to pass through the warranty made by the manufacturer of the defective component.

### › General

The foregoing warranties are exclusive and in lieu of all other warranties except that of title, whether written, oral or implied, in fact or in law (including any warranty of merchantability or fitness for a particular purpose).

PennBarry hereby disclaims any liability for special, punitive, indirect, incidental or consequential damages, including without limitation lost profits or revenues, loss of use of equipment, cost of capital, cost of substitute products, facilities or services, downtime, shutdown or slowdown costs.

The remedies of the original commercial purchaser set forth herein are exclusive and the liability of PennBarry with respect to the PennBarry Products, whether in contract, tort, warranty, strict liability or other legal theory shall not exceed the invoice price charged by PennBarry to its customer for the affected PennBarry Product at the time the claim is made.

*Inquiries regarding these warranties should be sent to: PennBarry, 1401 North Plano Road, Richardson, TX 75081*

# Other PennBarry Products

## Centrifugal Products



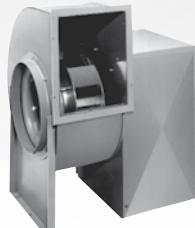
› **Domex**  
Centrifugal  
Roof Exhaustors



› **Fumex**  
Kitchen Hood Centrifugal  
Roof Exhaustors



› **Zephyr**  
Ceiling and Inline Fans



› **Dynamo**  
Centrifugal Blowers



› **Centrex Inliner**  
Centrifugal Inline Fan



› **LC Dynafan**  
Low Contour Centrifugal  
Roof Exhaustors

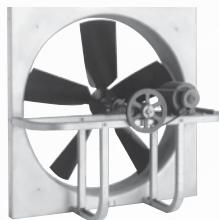


› **ESI**  
Efficient Silent  
Inline Fan



› **Fume Exhaust**  
Curb Mounted  
Centrifugal Fans

## Axial | Gravity Products



› **Breezeway**  
Propeller Wall Fan



› **Hi-Ex**  
Power Roof Ventilator



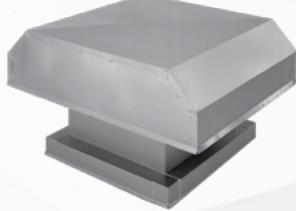
› **Tubeaxial**  
Inline Fans



› **Vaneaxial**  
Inline Fans



› **Powered Arette**  
Axial Roof Ventilators



› **Arette**  
Gravity Intake/Relief Hood



› **Domex Axial**  
Axial Roof Ventilators



› **Axcentrix**  
Bifurcator Fan