

XFS SERIES EXHAUST SHUTTER FANS

For use in garages, sheds, workshops and more!



FRONT VIEW

Canarm's **XFS series** wall exhaust fans are ideal for commercial applications. They feature smooth, quiet, reliable, maintenance free operation. Available in 12" to 36" sizes - fans are single, 2 or 3 speeds with OFF and come complete with a 9' cord and grounded plug. The fans have a durable steel construction with powder coat black finish and quiet, aluminum shutters with tie bar to maximize airflow. Installation is easy - simply mount the fan with 4 screws, plug it in and turn it on!



FEATURES

- Smooth, quiet, reliable, maintenance free operation.
- Available in 12" to 36" sizes.
- 12" and 16" models are 3 speed
- 20" to 30" models are 2 speed.
- 36" model is single speed.
- Durable steel construction with powder coat black finish.
- Swept back, high efficiency, low noise blade design.
- Shutters have a small magnet to prevent flapping and provide a superior seal.
- Quiet, aluminum shutters with tie bar to maximize airflow.
- Strong powder coated OSHA guarding inside.
- ETL certified
- Euro design outside rotor motor for higher efficiency.
 - Totally enclosed with sealed ball bearings
 - Pull chain speed control
 - 9 foot cord with 115 volt, 3-prong plug
- Fans shipped totally assembled.

SPECIFICATIONS

| MODEL | FAN SIZE | MOTOR HP | SPEED | VOLTS | NET WEIGHT | FAN RPM | CFM at 1/8" SP | HIGH SPEED SOUND LEVEL dB(A) | MAX AMPS | MAX AMBIENT TEMP |
|--------|----------|----------|-------|-------|------------|----------------|----------------|------------------------------|-----------------|------------------|
| XFS12 | 12" | 1/12 | 3 | 115 | 19 lbs | 1600/1420/1150 | 1100/900/800 | 58 | 0.8 / 0.8 / 0.7 | 90°C/194°F |
| XFS16 | 16" | 1/8 | 3 | 115 | 27 lbs | 1630/1450/1330 | 2300/2000/1800 | 58 | 2.0 / 1.8 / 1.6 | 74°C/158°F |
| XFS20 | 20" | 1/4 | 2 | 115 | 40 lbs | 1140/1050 | 3300/2900 | 68 | 2.3 / 2.0 | 70°C/158°F |
| XFS24 | 24" | 1/2 | 2 | 115 | 56 lbs | 1140/1070 | 4700/3800 | 72 | 5.0 / 4.3 | 70°C/158°F |
| *XFS30 | 30" | 1/2 | 2 | 115 | 72 lbs | 1080/980 | 6400/5000 | 71/68 | 4.9/4.3 | 70°C/158°F |
| *XFS36 | 36" | 1 | 1 | 115 | 88 lbs | 970 | 10500 | 76 | 7.2 | 70°C/158°F |



Tie bar aluminum shutters

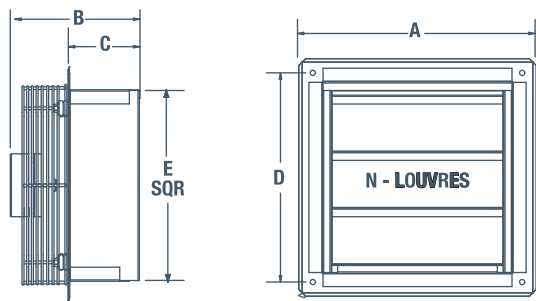


Pull chain switch

DIMENSIONS

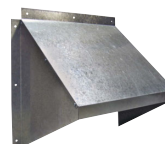
Note: Dimensions subject to change

| MODEL | A X A SQUARE | B | C | D (c/c) | E SQR | N (# OF LOUVRES) | FRAMING | CARTON DIMENSIONS | | |
|--------|--------------|---------|----|---------|---------|------------------|-----------|-------------------|--------|--------|
| | | | | | | | | Length | Height | Width |
| XFS12 | 16 7/8" | 8 3/8" | 5" | 14 7/8" | 13 1/2" | 3 | 14" x 14" | 20" | 20" | 12" |
| XFS16 | 20 7/8" | 9 1/2" | 5" | 18 7/8" | 17 1/2" | 4 | 18" x 18" | 25" | 25" | 13" |
| XFS20 | 24 7/8" | 9 1/2" | 5" | 22 7/8" | 21 1/2" | 5 | 22" x 22" | 28" | 28" | 13" |
| XFS24 | 28 7/8" | 11 1/8" | 5" | 26 7/8" | 25 1/2" | 6 | 26" x 26" | 32" | 32" | 15" |
| *XFS30 | 34 7/8" | 12 1/2" | 5" | 32 7/8" | 31 1/2" | 7 | 34" x 34" | 38" | 38" | 15.75" |
| *XFS36 | 40 7/8" | 14 1/2" | 5" | 38 7/8" | 37 1/2" | 8 | 40" x 40" | 44" | 44" | 17" |



ACCESSORIES

Optional galvanized weather hood.



| OPTIONAL WEATHER HOOD | |
|-----------------------|---------|
| FAN SIZES | HOOD # |
| 12" | GH-XF12 |
| 16" | GH-XF16 |
| 20" | GH-XF20 |
| 24" | GH-XF24 |

XFS SERIES EXHAUST SHUTTER FANS



To determine the proper XFS Fan for your applications, use the following formula.

Number of cubic feet in room / Number of minutes per air change = Required CFM Capacity

EXAMPLE: A general office, (see chart) which requires an air change every ten minutes, would require the following fan capacity.

If office is 100' x 40' x 10' = 40,000 cubic ft; 40,000 cubic ft / 10 minutes per air change = 4000 Required CFM

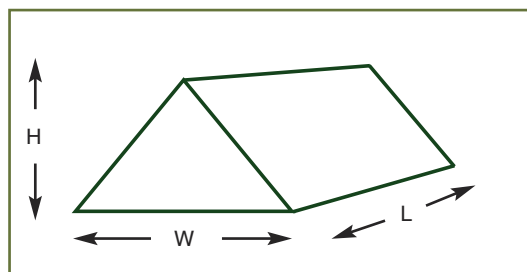
From the chart, you would select a fan that is rated at 4000 CFM at 1/8" S.P. (Static Pressure)

| Application | Minutes per Air Change | Application | Minutes per Air Change | Application | Minutes per Air Change | Application | Minutes per Air Change |
|---------------|------------------------|------------------|------------------------|----------------|------------------------|------------------|------------------------|
| Assembly Hall | 7 | Church | 15 | Foundry | 4 | Pressing Room | 1 |
| Attic | 2 | Classroom | 6 | Garage | 5 | Projection Booth | 2 |
| Auditorium | 10 | Dance Hall | 5 | General Office | 10 | Summer Cooling | 1 |
| Barber Shop | 6 | Department Store | 6 | Gymnasium | 8 | Toilet | 3 |
| Basement | 8 | Dry Cleaning | 5 | Laundry | 2 | Transformer Room | 1 |
| Battery Room | 4 | Engine Room | 6 | Locker Room | 3 | Warehouse | 12 |
| Boiler Room | 1 | Factory | 6 | Machine Shop | 8 | Welding Shop | 2 |
| Bowling Alley | 5 | Forge Room | 3 | Plating Room | 3 | | |

ATTIC VENTILATION

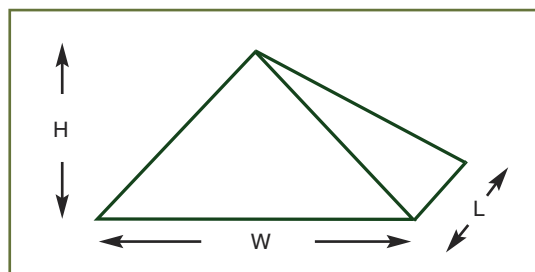
CAUTION!

Attic temperatures can get very high and exceed the high temperature protection device, shutting down the fan if there is not enough air change to keep the attic at a temperature below 120 °F.



Gabled Roof

$$\text{Volume} = L \times W \times 1/2 H$$



Pyramidal Roof

$$\text{Volume} = L \times W \times 1/3 H$$

Recommended air changes in an attic are about 2-3 minutes per air charge (MIN/AC) to keep the temperatures down. (2 minutes in southern climates and 3 minutes in northern climates.)

$$\text{Using 2 minutes, required exhaust CFM} = \frac{\text{Total Volume}}{2 \text{ MIN/AC}}$$

This provides your required CFM of the exhaust fan, BUT there must be enough venting to supply fresh air to the attic space. A good rule of thumb is 1.5 ft² for every 1000 CFM of airflow.

Example:

Southern Climate $\frac{6000 \text{ ft}^3}{2} = 3000 \text{ CFM}$
Use XFS20

Southern climate inlet opening = $3000 \times \frac{1.5}{1000} = 4.5 \text{ ft}^2$

Northern Climate $\frac{6000 \text{ ft}^3}{3} = 2000 \text{ CFM}$
Use XFS16

Northern climate inlet opening = $2000 \times \frac{1.5}{1000} = 3 \text{ ft}^2$