

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL

VIBRATION ISOLATOR DIMENSIONAL DATA

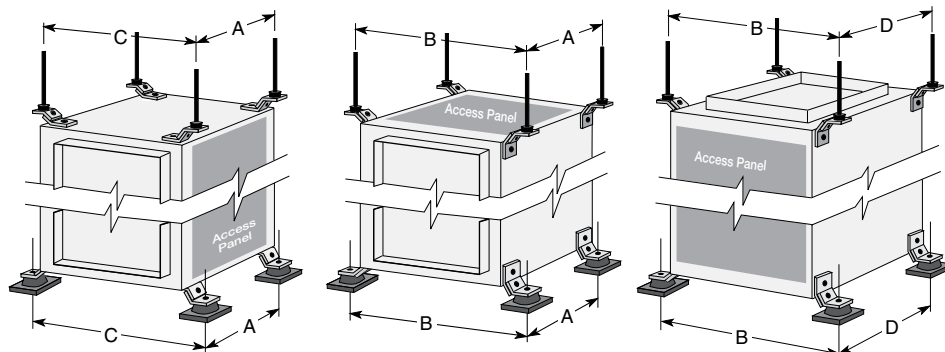


Fig. 1

Unit Size	A	B	C	D
70-80-90	18 $\frac{5}{8}$	19 $\frac{3}{4}$	17 $\frac{1}{2}$	11 $\frac{7}{8}$
100	18 $\frac{5}{8}$	21 $\frac{3}{4}$	19 $\frac{1}{2}$	13 $\frac{3}{8}$
120	18 $\frac{5}{8}$	23 $\frac{3}{4}$	21 $\frac{1}{2}$	15 $\frac{1}{8}$
130-130HP	18 $\frac{5}{8}$	25 $\frac{3}{4}$	23 $\frac{1}{2}$	17 $\frac{7}{8}$
140-140HP	19 $\frac{5}{8}$	27 $\frac{3}{4}$	25 $\frac{1}{2}$	19 $\frac{1}{8}$
160-160HP	23 $\frac{1}{2}$	31	28 $\frac{1}{2}$	22 $\frac{1}{8}$
180-180HP	25 $\frac{1}{2}$	33	28 $\frac{3}{8}$	22 $\frac{3}{4}$
200-200HP	29 $\frac{1}{4}$	37	32 $\frac{3}{8}$	26 $\frac{1}{8}$
240-240HP	31 $\frac{5}{8}$	44	39 $\frac{3}{8}$	33 $\frac{3}{8}$
300-300HP	35	51	46 $\frac{3}{8}$	40 $\frac{7}{8}$
360-360HP	39 $\frac{1}{4}$	57	52 $\frac{3}{8}$	46 $\frac{3}{8}$
420	47 $\frac{1}{4}$	63	58 $\frac{3}{8}$	52 $\frac{3}{4}$

All dimensions are in inches.

DIMENSIONAL DATA

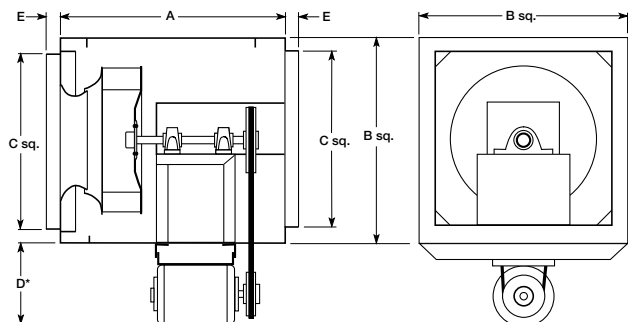


Fig. 2

Unit Size	A	B	C	D*	E	Material Thickness (ga.)	Approx. Unit Weight (lbs.)
70-80-90	21	15	11 $\frac{7}{8}$	9	1	20	75
100	21	17	13 $\frac{3}{8}$	9	1	20	85
120	21	19	15 $\frac{1}{8}$	9	1	20	95
130-130HP	21	21	17 $\frac{1}{8}$	9	1	20	110
140-140HP	22	23	19 $\frac{1}{8}$	9	1	18	140
160-160HP	26	26	22 $\frac{1}{8}$	11	1	18	160
180-180HP	28	28	23 $\frac{3}{8}$	11	1 $\frac{1}{2}$	18	190
200-200HP	32	32	27 $\frac{1}{8}$	13	1 $\frac{1}{2}$	18	220
240-240HP	34	39	34 $\frac{1}{8}$	13	1 $\frac{1}{2}$	18	320
300-300HP	38	46	41 $\frac{1}{8}$	13	1 $\frac{1}{2}$	16	420
360-360HP	42	52	47 $\frac{1}{8}$	13	1 $\frac{1}{2}$	16	600
420	50	58	53 $\frac{1}{8}$	13	1 $\frac{1}{2}$	14	720

All dimensions are in inches. *May vary depending on motor size.

DUCT LENGTH

The inlet and outlet duct length should be approximately two to three wheel diameters long before and after the fan to achieve cataloged performance.

SIDE DISCHARGE

Make sure discharge is orientated in the same direction as originally ordered, performance will change with different discharge positions. Refer to Fig. 3 for proper side discharge definition. Refer to the CAPS program or consult factory for performance corrections.

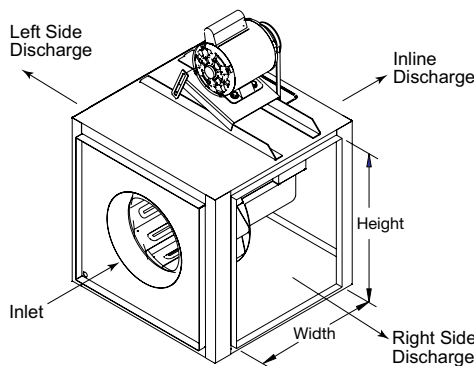


Fig. 3

Side Discharge Duct Openings

Unit Size	Width	Height
70-80-90	11 $\frac{1}{8}$	11 $\frac{1}{8}$
100	13 $\frac{3}{8}$	13 $\frac{3}{8}$
120	15 $\frac{1}{8}$	15 $\frac{1}{8}$
130-130HP	17 $\frac{1}{8}$	17 $\frac{1}{8}$
140-140HP	19 $\frac{1}{8}$	19 $\frac{1}{8}$
160-160HP	22 $\frac{1}{8}$	22 $\frac{1}{8}$
180-180HP	23 $\frac{3}{8}$	23 $\frac{3}{8}$
200-200HP	27 $\frac{1}{8}$	27 $\frac{1}{8}$
240-240HP	28 $\frac{3}{8}$	34 $\frac{1}{8}$
300-300HP	31 $\frac{1}{8}$	41 $\frac{1}{8}$
360-360HP	32 $\frac{3}{8}$	37 $\frac{1}{8}$
420	34 $\frac{1}{8}$	43 $\frac{1}{8}$

All dimensions are in inches.

INSTALLATION

Move fan to desired location and determine position of access panels and motor. Make sure inlet and outlet have at least 2.5 times the wheel diameter (duct diameter) before any obstructions like an elbow or transaction. Attach the fan to a suitable framework as specified, (hanging or base vibration isolators are recommended). See chart below for dimensions of vibration isolator centerlines (Fig. 1). See Fig. 2 for physical dimensions.

The motor's amperage and voltage ratings must be checked for compatibility to supply voltage prior to final electrical connection. Electrical lead in wires are then connected to the factory supplied safety disconnect switch. All wiring must conform to local and national codes.

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the unit. Failure to comply with instruction could result in personal injury and/or property damage!

Upon receiving unit, check for any damage and report it immediately to the shipper. Also check to see that all accessory items are accounted for.

PRE START-UP CHECKS

Check all fasteners for tightness. The wheel should rotate freely and be aligned as shown in Fig. 4. Wheel position is preset and the unit is test run at the factory. Movement may occur during shipment, and realignment may be necessary. Centering can be accomplished by loosening the bolts holding the inlet (venturi) panel and repositioning. Wheel and inlet cone overlap can be adjusted by loosening the set screws in the wheel and moving the wheel to the desired position.

WHEEL OVERLAP DIMENSIONS

Model	G
70 – 160	1/4 inch
180 – 240	3/8 inch
300 – 420	1/2 inch

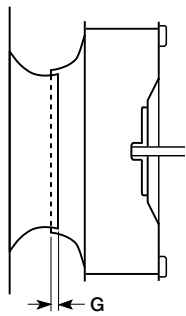


Fig. 4

WHEEL ROTATION

Direction of wheel rotation is critical. Reversed rotation will result in poor air performance, motor overloading and possible burnout. Check wheel rotation (all XIB fans have CW wheel rotation when viewed from top of fan) by momentarily energizing the unit. Rotation should be clockwise as shown in Fig. 5 and correspond to the rotation decal on the unit.

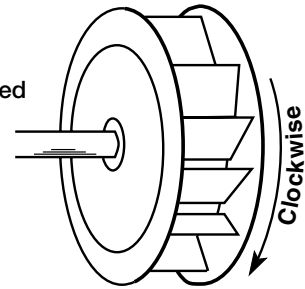


Fig. 5

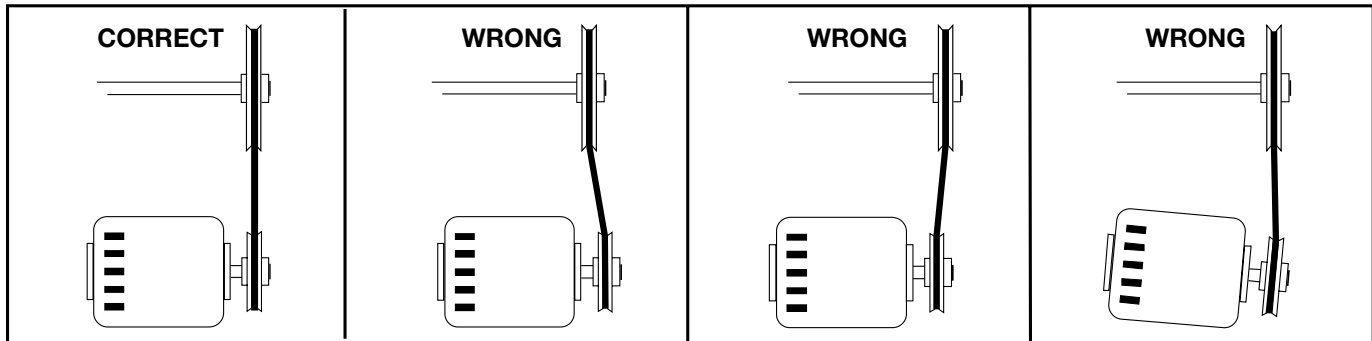
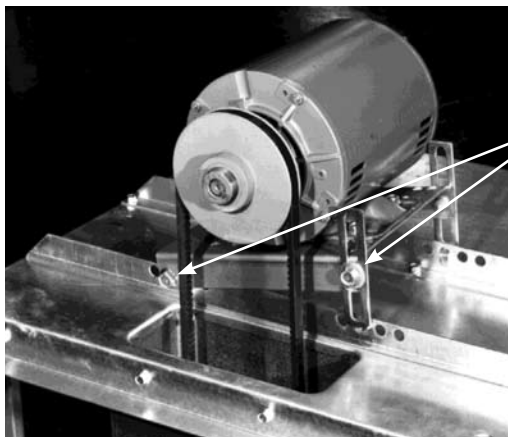


Fig. 6

If adjustments are made, it is very important to check the pulleys for proper alignment. Misaligned pulleys lead to excessive belt wear, vibration, noise and power loss. (See Fig. 6)

Belt tension can be adjusted by loosening four fasteners (marked "R", Fig. 7) on the drive frame. For all XIB units, the motor plate slides on the slotted adjusting arms (see Fig. 7). Belt tension should be adjusted to allow 1/64 inch of deflection per inch of belt span. For example, a 15 inch belt span should have 15/64 inch (or about 1/4 inch) of deflection with moderate thumb pressure at mid-point between pulleys (See Fig. 8). Overtightening will cause excessive bearing wear and noise. Too little tension will cause slippage at startup and uneven wear.



(R)

NOTE:
Identical fasteners on
opposing side must
also be loosened.

Fig. 7

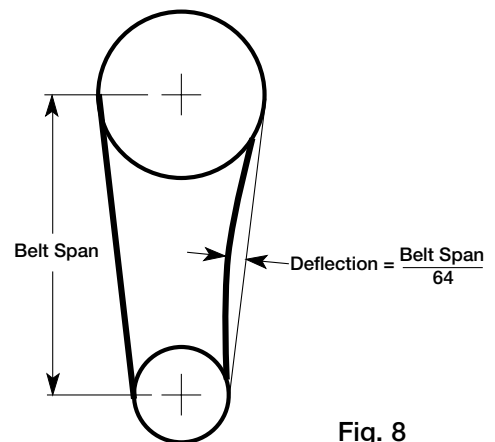


Fig. 8

The adjustable motor pulley is factory set for the RPM specified. Speed can be increased by closing or decreased by opening the adjustable motor sheave. Two groove variable pitch pulleys must be adjusted an equal number of turns open or closed. Any increase in speed represents a substantial increase in the horsepower required by a unit. Motor amperage should always be checked to avoid serious damage to the motor when speed is varied.

MAINTENANCE

Belts tend to stretch after a period of time. They should be checked periodically for wear and tightness. When replacing belts, use the same type as supplied with the unit. Matched belts should always be used on units with multigroove pulleys. For belt replacement, loosen the tensioning device far enough to allow removal of the belt by hand. Do not force belts on or off. This may cause cords to break, leading to premature belt failure. Once installed, adjust belts as shown in “Pre-Starting Checks.”

Shaft bearings can be classified in two groups: relubricating and non-relubricating. All bearings on standard Model XIB fans are factory lubricated and require no further lubrication under normal use (between -20°F and 180°F in a relatively clean environment). Units installed in hot, humid or dirty locations should be equipped with special bearings. These bearings will require frequent lubrication. Caution should be employed to prevent overpacking or contamination. Grease fittings should be wiped clean. The unit should be in operation while lubricating. Extreme care should be used around moving parts. Grease should be pumped in very slowly until a slight bead forms around the seal. A high grade lithium base grease is recommended.

Motor maintenance is generally limited to cleaning and lubrication (where applicable). Cleaning should be limited to exterior surfaces only. Removing dust buildup on motor housing ensures proper motor cooling. Greasing of motors is only intended when fittings are provided. Many fractional motors are permanently lubricated and should not be lubricated further. Motors supplied with grease fittings should be greased in accordance with manufacturer’s recommendations. Where motor temperatures do not exceed 104°F (40°C), the grease should be replaced after 2000 hours of running time as a general rule.

Wheels require very little attention when moving clean air. Occasionally, oil and dust may accumulate causing imbalance. When this occurs, the wheel and housing should be cleaned to ensure smooth and safe operation.

The unit should be made non-functional when cleaning the wheel or housing (fuses removed, disconnect locked off, etc.).

All fasteners should be checked for tightness each time maintenance checks are performed prior to restarting unit.

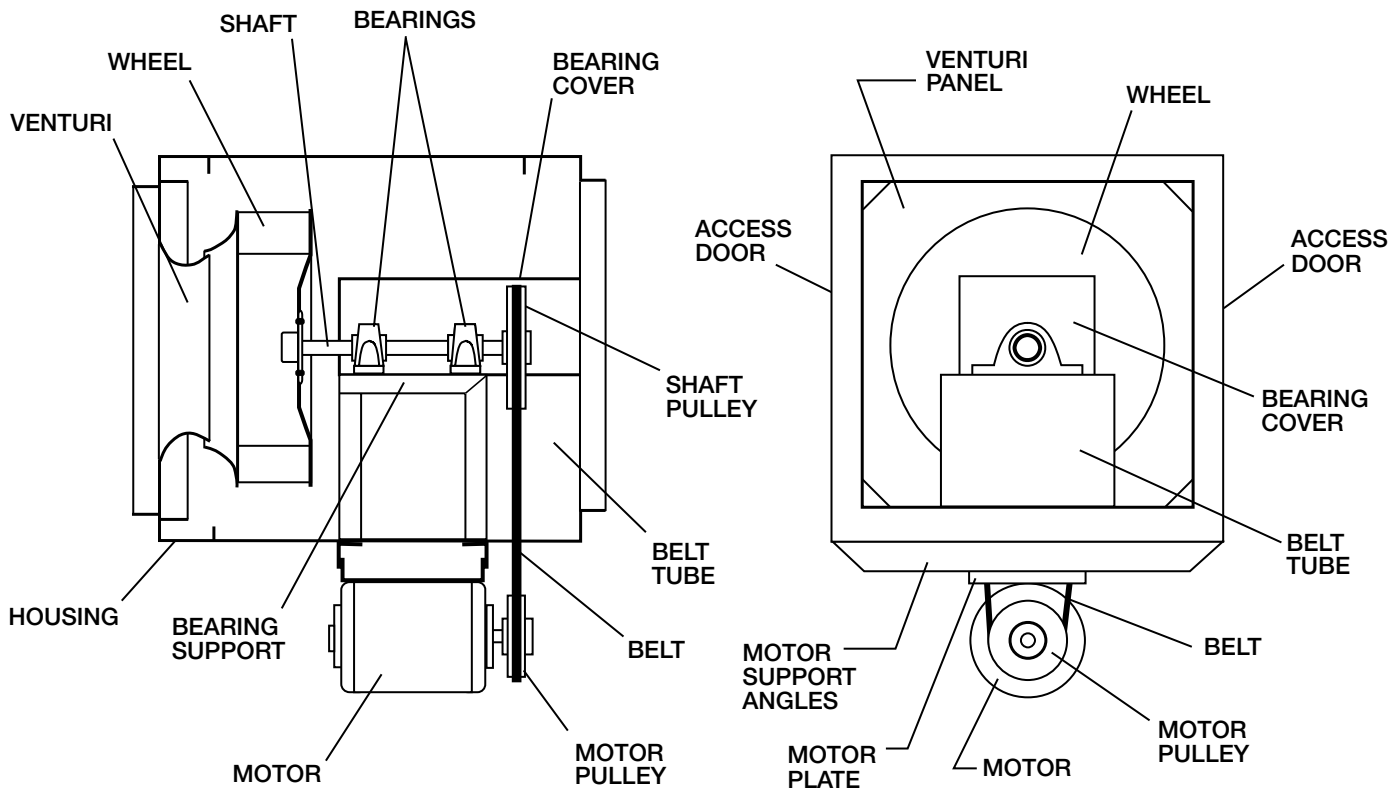
A proper maintenance program will help these units deliver years of dependable service.

TROUBLESHOOTING

NOTE: Before taking any corrective action, make certain unit is not capable of operation during repairs.

Problem	Cause	Corrective Action
Reduced Airflow	System resistance too high.	Check system for proper operation of backdraft or control dampers, obstruction in ductwork, etc.
	Unit running backwards.	Correct as shown in Fig. 5.
	Excessive dirt build up on wheels.	Clean wheel.
	Improper wheel alignment.	Center wheel on inlets.
Excessive Noise or Vibration	Bad bearings.	Replace.
	Belts too tight or too loose.	Refer to Fig. 8 and adjust tension.
	Wheel improperly aligned and rubbing.	Center wheel on inlets. See Fig. 4.
	Loose drive or motor pulleys.	Align and tighten. See Pre-Start-Up Checks.
	Foreign objects in wheel or housing.	Remove objects, check for damage or unbalance.
	Unbalance of wheel caused by excessive dirt and grease build up.	Remove build up.

PARTS LIST



NOTE

Each fan bears a manufacturer's nameplate with model number and serial number embossed. This information will assist the local Accurex representative and the factory in providing service and replacement parts.

CAUTION!

A fan manufactured with explosion resistant motors does not certify the entire unit to be explosion proof. Refer to UL Listing Mark for the fans approved usage.

WARRANTY

Accurex warrants this equipment to be free from defects in material and workmanship for a period of one year from the date of purchase. Any units or parts which prove to be defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Accurex prove defective during this period, they should be returned to the nearest authorized motor service station. Accurex will not be responsible for any removal or installation costs.

As a result of our commitment to continuous improvement, Accurex reserves the right to change specifications without notice.



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