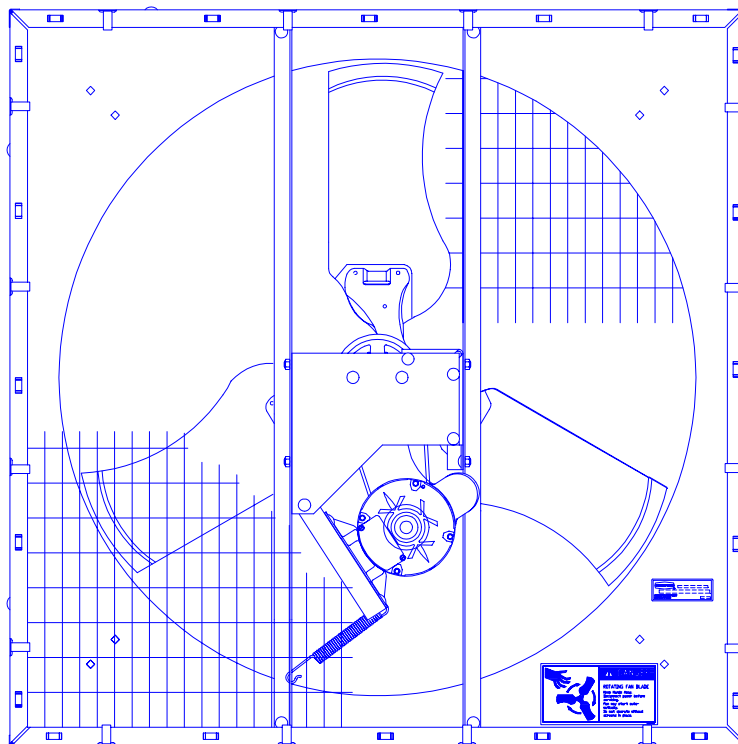


36" & 48" E-Z Fan

Assembly & Installation Manual

(Belt Drive • Standard & Deep Box)



MV1431-5 3/97

Chore-Time Warranty

Chore-Time Equipment warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement.

Conditions and limitations:

1. The product must be installed and operated in accordance with instructions published by Chore-Time or warranty will be void.
2. Warranty is void if all components of a system are not supplied by Chore-Time.
3. This product must be purchased from and installed by an authorized Chore-Time dealer or certified representative thereof, or the warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under this warranty.
5. This warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this warranty.

Chore-Time shall not be liable for any consequential or special damage which any purchaser may suffer or claim to have suffered as a result of any defect in the product. "Consequential" or "special damages" as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

THIS WARRANTY CONSTITUTES CHORE-TIME'S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

**CHORE-TIME EQUIPMENT, A Division of CTB, Inc.
P.O. Box 2000, Milford, Indiana 46542-2000 U.S.A.**

Support Information

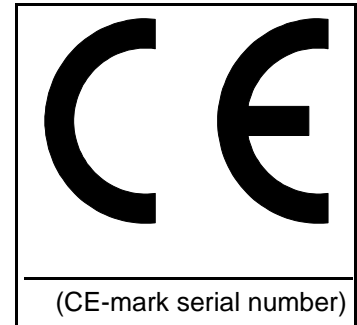
The Chore-Time E-Z Fans are designed to be used as circulating or exhaust fans. The E-Z Fans may be shipped unassembled to save on shipping charges. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury and/or death.

This manual is designed to provide comprehensive planning, installation, wiring, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personal, installer, and consumer (end user).

IMPORTANT: CE stands for *certified Europe*. It is a standard which equipment must meet or exceed in order to be sold in Europe. CE provides a benchmark for safety and manufacturing issues. CE is required only on equipment sold in Europe.

Chore-Time Equipment recognizes CE Mark and pursues compliance in all applicable products. Please fill in the CE-Mark serial number in the blank space provided for future reference.

Please include the name and address of your Chore-Time Distributor and installer.



Please fill in the following information about your fans. Keep this manual in a clean, dry place for future reference.

Distributor's Name _____

Distributor's Address _____

Distributor's Phone _____ **Date of Purchase** _____

Installer's Name _____

Installer's Address _____

Installer's Phone _____ **Date of Installation** _____

System Specifications _____

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*Legend: C = Customer (end user), D = Distributor (sales), I = Installer of equipment

Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals.

Chore-Time equipment is designed to be installed and operated as safely as possible...however, hazards do exist. Using the equipment for purposes other than specified in this manual may cause personal injury or damage to the equipment.

SIGNAL WORDS

Signal words are used in conjunction with the safety-alert symbol to identify the severity of the warning.

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

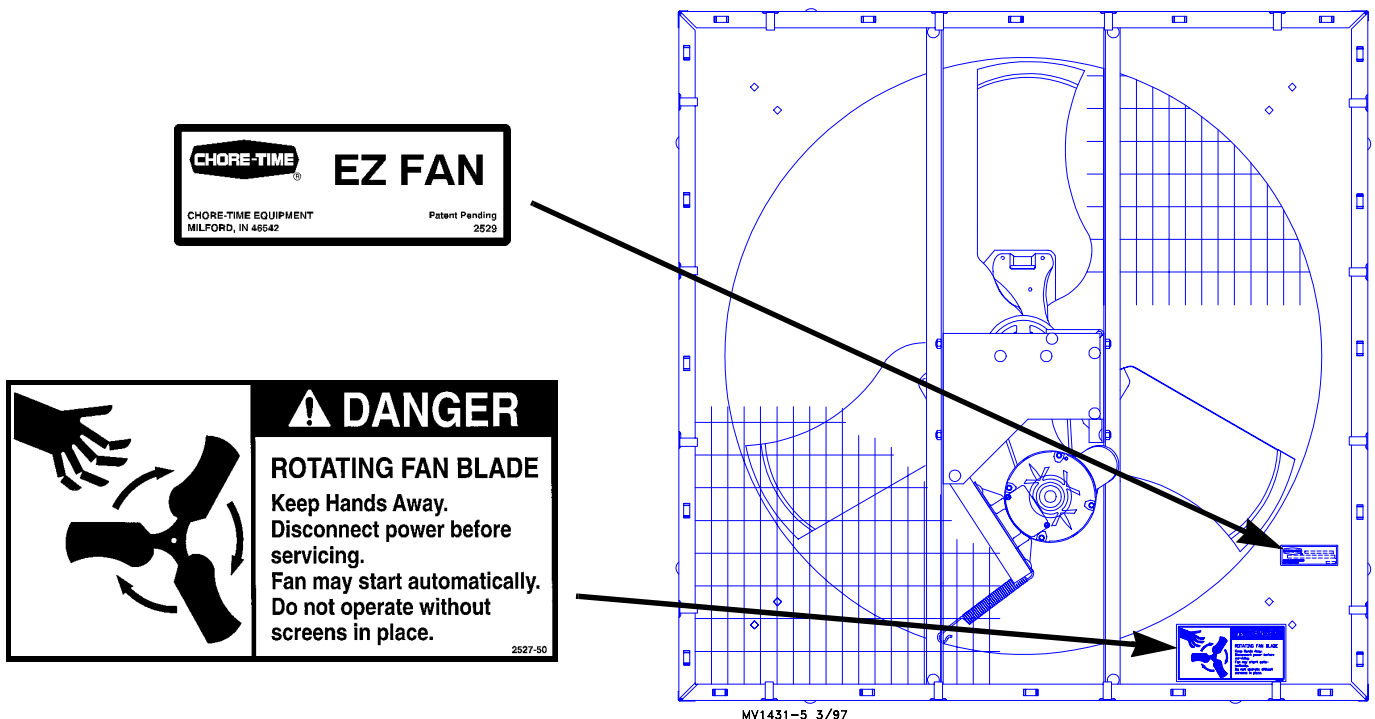
 **DANGER**

 **WARNING**

 **CAUTION**

This diagram shows the proper location of the safety decal (DANGER--ROTATING FAN BLADE) as shipped from the factory. Replace damaged or missing decals. Make sure the decals may be easily seen at all times.

If the fan is purchased unassembled, the Chore-Time Fan Assembly Part Number Decal will be packed with this instruction manual. Make sure the decal location shown below is clean and dry. Remove the backing of the decal and affix it to the Fan Shroud.



Technical Information

Motor choices and specifications are provided in the Parts List section of this manual. See page 14 Fan Motor specifications.

Important

Chore-Time Equipment strongly recommends that a good alarm system should be installed in confinement buildings to warn of power failure and high temperature.

Chore-Time Equipment also recommends that an alternate power source be available for confinement buildings in case of power failure.

E-Z Fan Options

The E-Z Fan may be ordered assembled or unassembled (knock-down).

If the Fan is to be suspended from the ceiling, the Slant Wall Kit is not used. If the Fan is to be installed in a side wall, the Slant Wall Kit may be used.

There are a variety of Motors available for the E-Z Fans. See the motor specifications chart in the parts list section of this manual.

The E-Z Fans may be ordered with standard width Side Panels or Deep Box Side Panels. The standard width Side Panels are 12-1/2" (31.8 cm) or 15-3/4" (40.0 cm), respectively, for the 36" and 48" Fans. The Deep Box Side Panels are 21" (53.3 cm) wide.

Tools Required

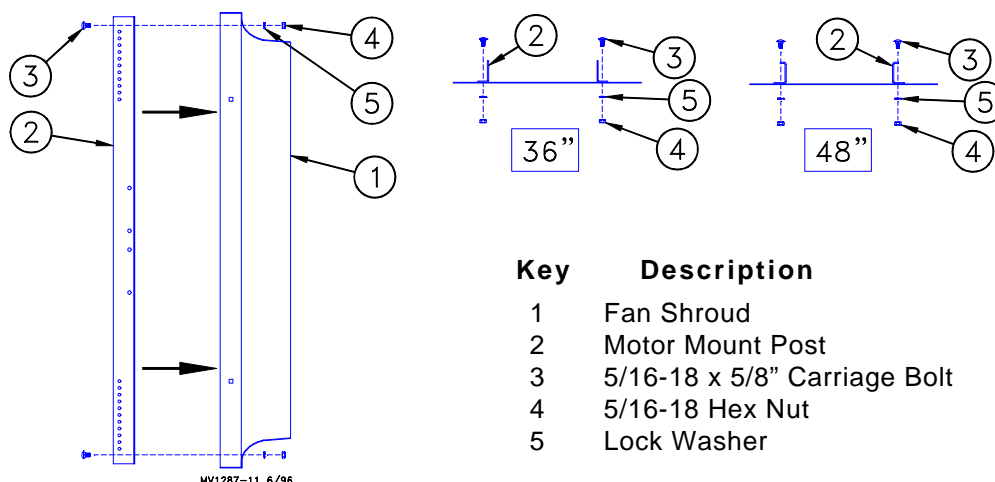
- Regular Screwdriver
- 1/2" Open End Wrench or Socket Wrench with 1/2" Socket
- Adequate Size & Quantity of Electrical Wire
- 5/16" Open End Wrench or a 12 Point 3/8" Socket and Ratchet
- Hammer
- Wire Cutters & Strippers
- 5/16" Hex Key Wrench

Fan Assembly Procedure

Unassembled Fans

Secure the Motor Mount Post to the Fan Shroud using the 5/16-18 x 5/8" carriage bolts and hex nuts provided in the Hardware Package

The Motor Mount Post must be installed as shown in **Figure 1**.



Installation Note:

Many of the graphics provided reflect the standard Side Panels. Side Panels for the Deep Box Fans look similar, only wider.

Key Description

- | | |
|---|------------------------------|
| 1 | Fan Shroud |
| 2 | Motor Mount Post |
| 3 | 5/16-18 x 5/8" Carriage Bolt |
| 4 | 5/16-18 Hex Nut |
| 5 | Lock Washer |

Figure 1. Motor Mount Installation (side view).

The Side Panels for the Box Fans are identical. The Panels lock together by inserting the tabs of one Panel into the slot in the end of another Panel. See the detail in **Figure 2**.

Orienting the Side Panels as shown in **Figure 2**, assemble the Side Panels together around the Shroud using the 5/16-18 hardware provided.

Note: 36" Fans use (2) bolts, washers, and nuts per side. 48" Fans use (3) bolts, washers, and nuts per side.

Use a hammer to carefully bend the corner tabs over to secure the Side Panels together.

Orient the Shroud with the Shroud Drain Holes at the bottom of the Fan. Remove the (2) knockouts from the bottom Side Panel for water drainage.

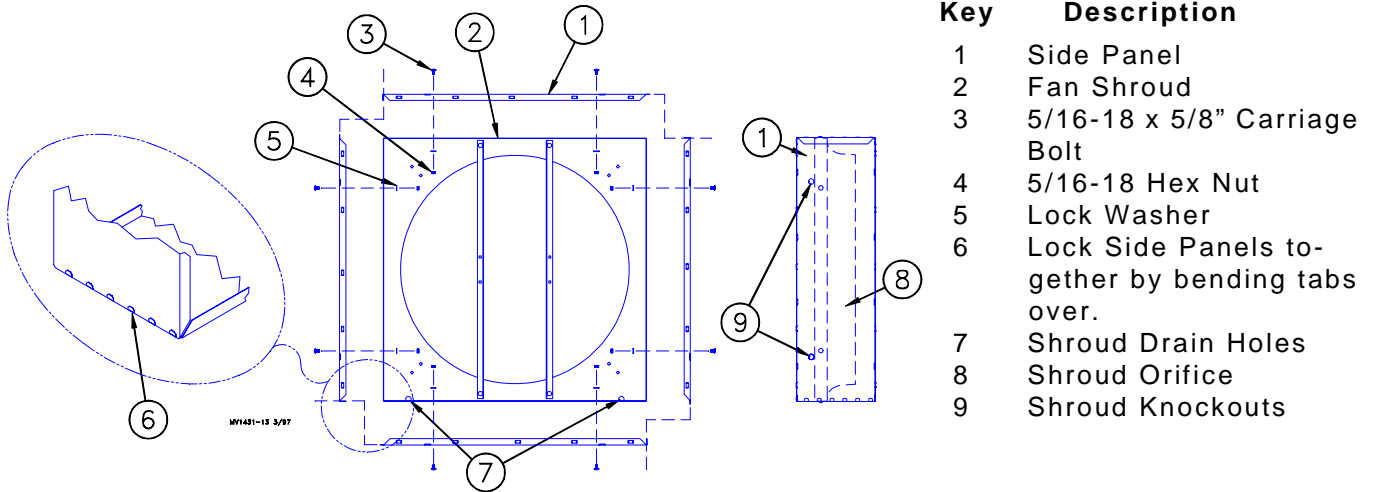


Figure 2. Side Panel Assembly (top view).

Note: The E-Z Fans may be ordered with or without the Motor.

Secure the Module Assembly and Motor between the Motor Support Posts, as shown in **Figure 3**. Hardware is included in the Hardware Package.

If your Fans do not have factory-included motors, set the Motor on the Module Assembly and secure in place with the 5/16-18 x 5/8 carriage bolts, 5/16" lock washers, and 5/16-18 hex nuts, as shown in **Figure 3**.

The Motor is mounted in the rear set of holes.

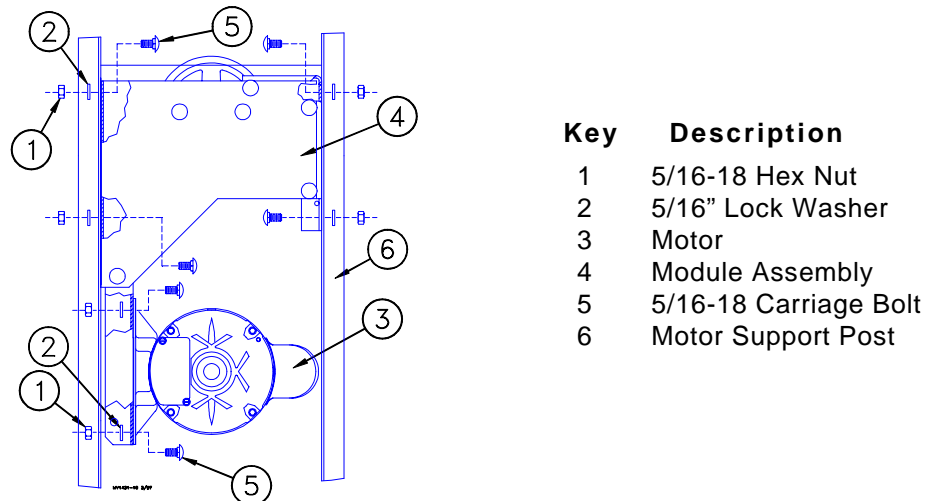


Figure 3. Fan Module and Motor installation.

Install the Motor Sheave on the Motor Shaft. The outside edge of the Motor Sheave should be flush with the end of the Motor Shaft. See **Figure 4**.

Align the Fan Shaft Sheave with the Motor Sheave and tighten the set screws. The Sheaves must be aligned so that the Belt will track straight.

Install the Belt Tensioning Spring between the Motor Mount Post and the Motor Support Plate. Install Belt Tensioning Spring in the fifth and sixth hole from the bottom of the Motor Mount Post. See detail in **Figure 4**.

Install Belt around the sheaves.

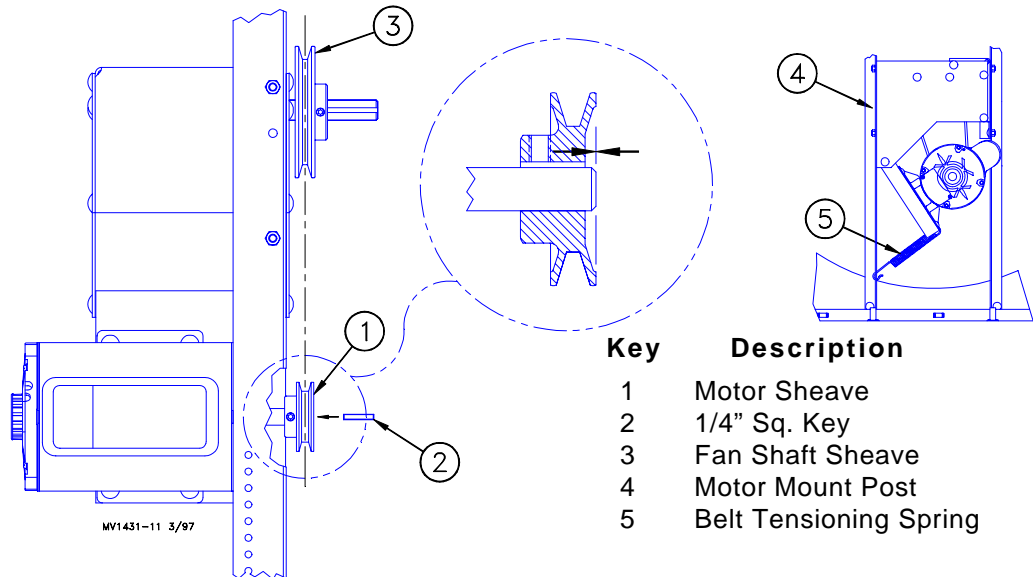


Figure 4. Motor Sheave Installation (side view).

Slide the Blade Assembly onto the shaft. The Hub of the Fan Blade should be flush with the end of the Shaft. See **Figure 5**. Apply grease or an anti-seize compound to the Fan Shaft before mounting the Fan Blade.

Insert key into keyway on shaft.

Tighten the set screw(s) using a 5/16" open end wrench (or 12 point 3/8" socket and ratchet).

Torque the set screws to approximately 150 in./lbs.

See the decal placement instructions on page 4.

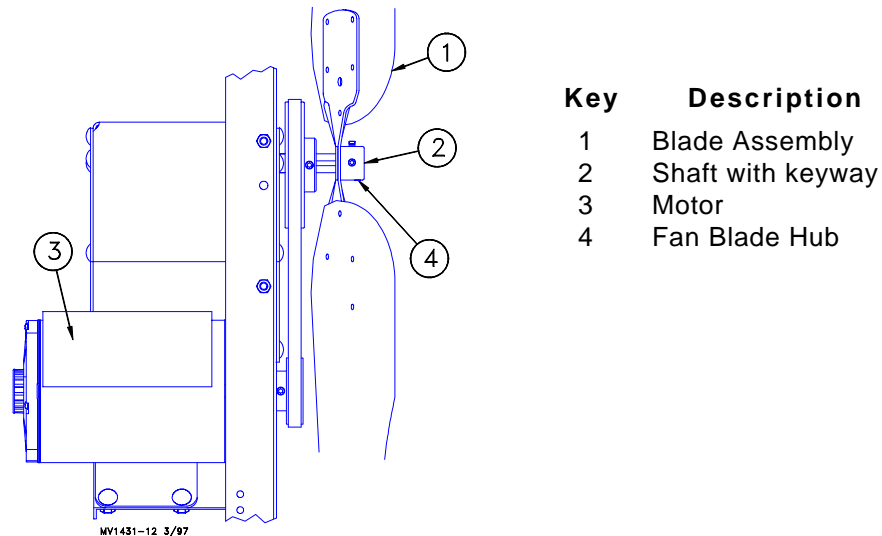


Figure 5. Blade Assembly Installation (side view).



DANGER: Wire Screen(s) MUST be installed to prevent serious injury or death.

Position the front Screen over the front of the fan.

Note: Make sure the natural bow of the Screen is away from the fan (to avoid blade interference).

Install (4) Wire Clips on each side to secure the Screen to the Panels. See **Figure 6**.

Box Fan Installations: The rear Screen is cut out to accommodate the motor. Position the rear Screen over the back of the fan. Install (4) Wire Clips on each side to secure the Screen to the Panels. See **Figure 6**.

Slant Wall Fan Installations: The Shutter will be used in place of the Rear Screen.

Note: A Rear Screen is not included in the Slant Wall Fan Kit.

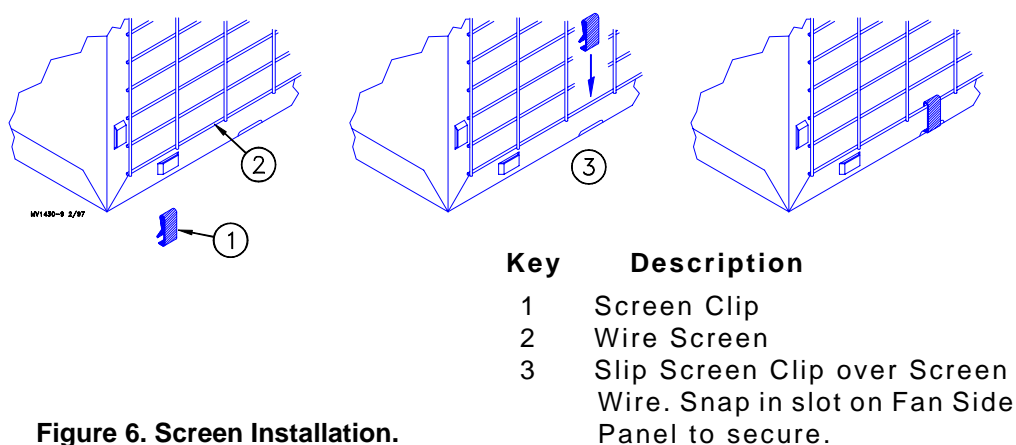


Figure 6. Screen Installation.

Fan Assembly Procedure

Factory Assembled Fans

The Motor on your Factory Assembled Fan was installed in position for ease of shipping. The Motor will need to be removed and reinstalled in the rear set of holes on the Motor Support Plate. See **Figure 3**, page 6.

Align the Fan Shaft Sheave with the Motor Sheave and tighten the set screws. The Sheaves must be aligned so that the Belt will track straight.

Install the Belt Tensioning Spring between the Motor Mount Post and the Motor Support Plate. Install Belt Tensioning Spring in the fifth and sixth hole from the bottom of the Motor Mount Post. See detail in **Figure 4**, page 7.

Install Belt around the sheaves.

If your fan was ordered as an assembled Box Fan, the Rear Screen is wire tied to the Front Screen. Cut the wire ties and install the Rear Screen to the back of the Fan as shown in **Figure 6**.

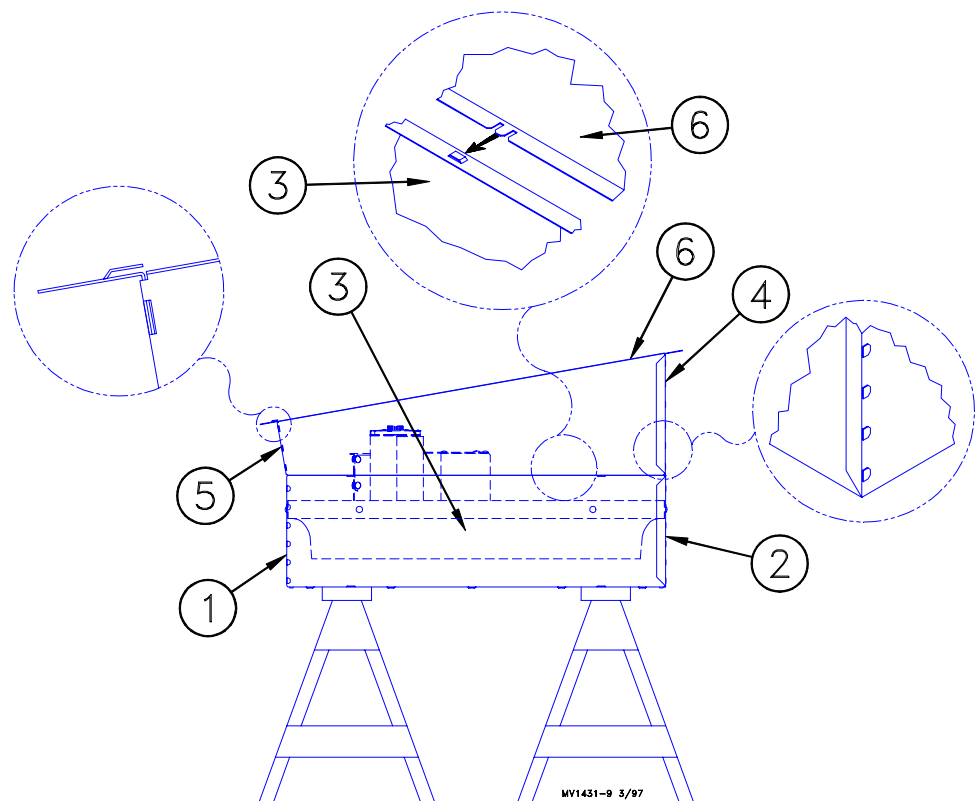
Slant Wall Kit Assembly (Optional)

If the Fan Assembly is to be installed in a side wall, the E-Z Fan Slant Wall Housing Kit may be assembled and installed.

Refer to **Figure 7** for assembly information.

1. Lay assembled fan on work surface (with the motor end up).
2. Set the Slant Wall Bottom Panel in place on the Fan Assembly. Secure the Bottom Panel to the Fan Assembly by inserting the tabs into the bridges, as shown in the detail in **Figure 7**.
3. Set the Slant Wall Side Panels in place on the Fan Assembly. The Slant Wall Side Panels are also secured to the Fan Assembly by inserting the tabs into the bridges, as shown in the detail in **Figure 7**.
4. Set the Slant Wall Top Panel in place on the Fan Assembly. Secure the Top Panel to the Fan Assembly by inserting the tabs into the bridges, as shown in the detail in **Figure 7**.
5. The Slant Wall Panels are designed to lock together similar to the Fan Assembly Panels.

Use a hammer to carefully bend the corner tabs over to secure the Slant Wall Panels together.



Key	Description
1	Bottom of Fan Assembly
2	Top of Fan Assembly
3	Fan Side Panel
4	Slant Wall Housing Top Panel
5	Slant Wall Housing Bottom Panel
6	Slant Wall Housing Side Panel

Figure 7. Slant Wall Housing Assembly (side view).

Lock the Slant Wall Kit on the Box Fan by bending the tabs in the Slant Wall Panels into the bridges of the Box Fan Panels as shown in **Figure 8**.

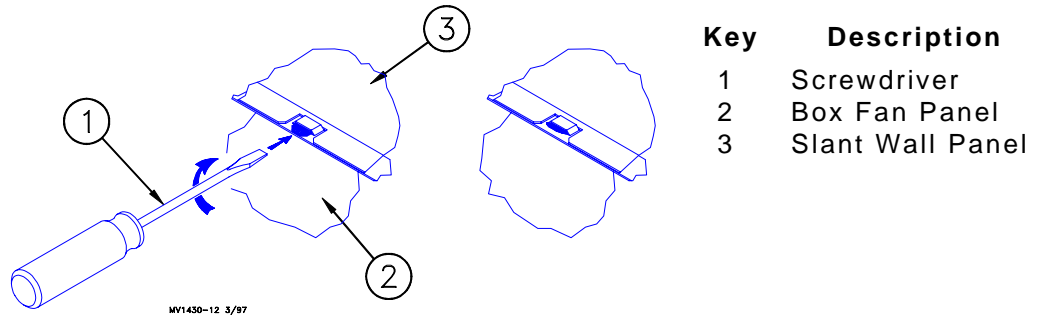


Figure 8. Slant Wall Lock Tab.

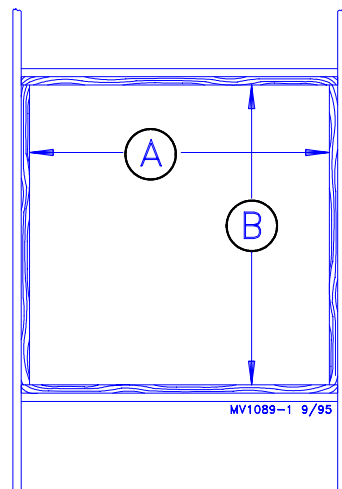
Fan Installation

The E-Z Fan may be installed in a wall or suspended from the ceiling. For installations with the fan suspended from the ceiling, refer to **Figure 12**.

Side Wall Installations:

Build fan framing out of 2" (50 mm) lumber (not supplied). The required wall opening is provided in the chart below. See **Figure 9**.

Allow a minimum 4" spacing between framed openings for adjacent Slant Wall Fans to allow clearance for the Slant Wall Fans 2" mounting flange.



Dimension (minimum)	A	B
36" Box Fan	42-1/4" (107.3 cm)	42-1/4" (107.3 cm)
36" Box Fan w/Slant Wall Kit	43" (109.2 cm)	43" (109.2 cm)
48" Box Fan	54-5/8" (138.7 cm)	54-5/8" (138.7 cm)
48" Box Fan w/Slant Wall Kit	55" (139.7 cm)	55" (139.7 cm)

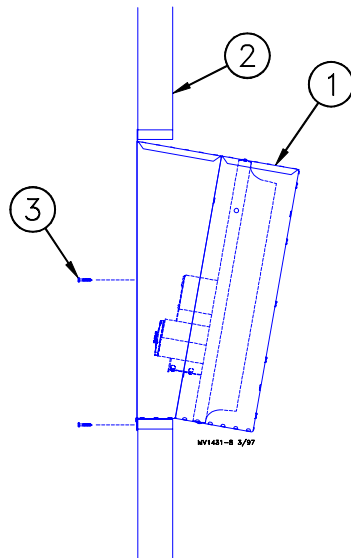
Figure 9. Framing Diagram (front view).

Fan Assembly without Slant Wall Housing: Insert the Fan Assembly in the framed opening in the side wall. If an Aluminum Shutter is to be installed, the fan must be recessed in from the outside edge of the framed opening approximately 1/2" (13 mm). Secure the Fan Assembly to the framed opening (hardware not supplied).

Make sure the Shutter can open and close freely.

Fan Assembly with Slant Wall Housing: Insert the Fan Assembly and Slant Wall Housing through the framed opening in the side wall. Center the Slant Wall Housing in the framed opening, left to right. Allow the Slant Wall Housing to set on the bottom of the framed opening.

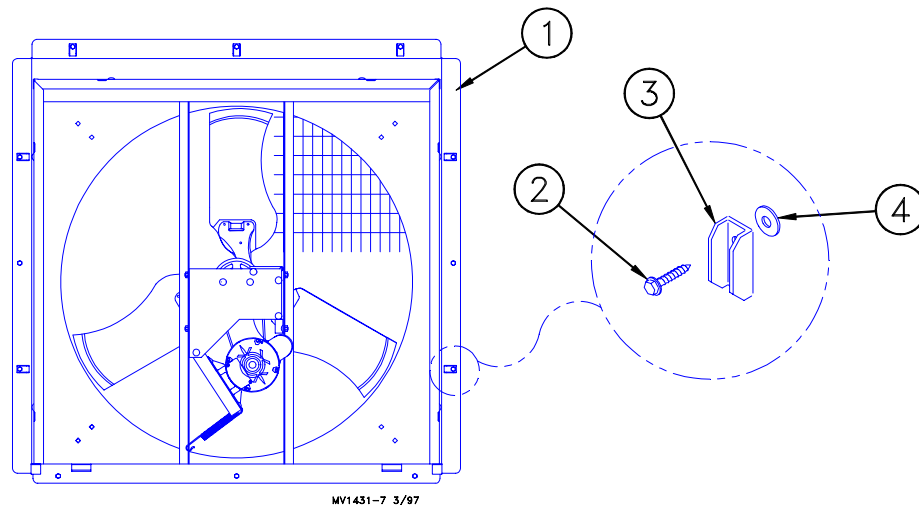
Secure the Slant Wall Housing to the framed opening, using (1) 1/4" x 1-3/4" Lag Screw through the middle hole on each side and (3) 1/4" x 1-3/4" Lag Screws across the bottom panel. See **Figure 10**. Lag Screws are supplied in the Hardware Package.



Key	Description
1	Fan and Slant Wall Housing Assembly
2	Side Wall of Building
3	1/4" x 1-3/4" Lag Screws (5 used)

Figure 10. Fan installation (side view).

Install the Shutter Clips, as shown in **Figure 11**, in the remaining holes on the sides and top of the Slant Wall Kit. The Shutter Clips need to be tight, but loose enough to be turned.



Key	Description
1	Slant Wall Housing
2	1/4 x 1-3/4" Lag Screw
3	Shutter Clip
4	Nylon Flat Washer

Figure 11. Shutter Clip installation (front view).

Suspended Fan Installations:

Replace Items 9 - 11 from both sides of the top of the fan with the suspension components, Items 1 - 7, as shown in **Figure 12**. Discard Items 9 - 11.

The 36" E-Z Fan Assembly weighs approximately 120 lbs. (43.1 kg). The ceiling, rafters, or trusses must be capable of bearing the required weight.

The 48" E-Z Fan Assembly weighs approximately 175 lbs. (70.3 kg). The ceiling, rafters, or trusses must be capable of bearing the required weight.

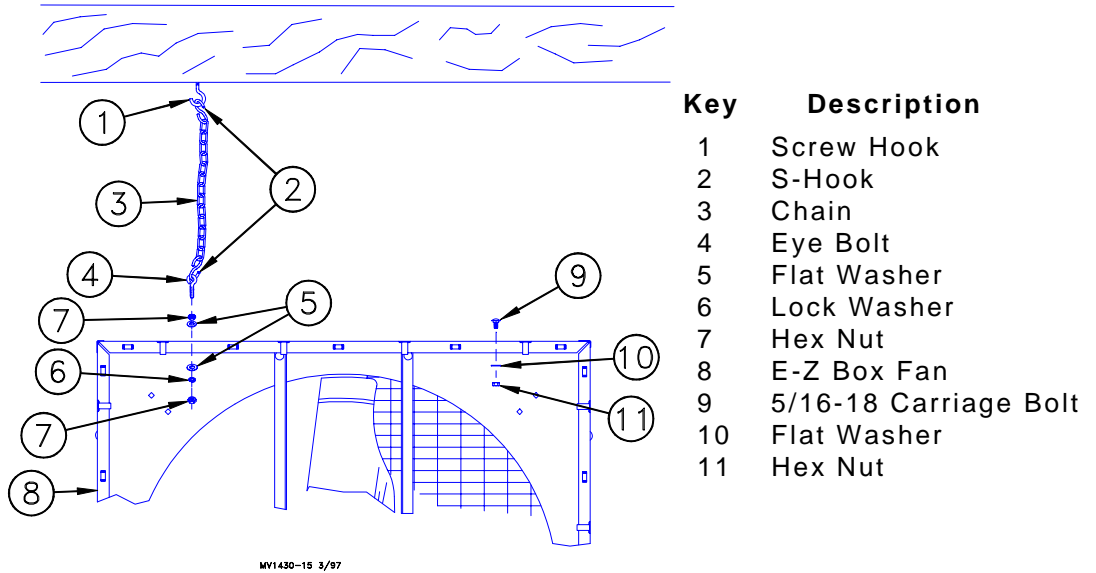


Figure 12. Suspending the Fan (front view).

Wiring:

See wiring diagram on Motor for Motor electrical connections. Follow local, state and national electric codes for wiring.

Install an electric disconnect within reach of each Fan.

Slant Wall Fans: Route the motor cord (not supplied) toward the upper left corner of fan and attach the cord to the top panel using the 3/8" cord clip mounted in the 1/4" hole in the top panel. See **Figure 13**.

Important: If an Aluminum Shutter will be installed, route the motor cord through the Rubber Grommet.

Box Fans: The motor cord will route through the Rear Screen.

Some installations may require an exit hole for the motor cord be drilled in the side of the Shroud. These installations must have electrical wires routed through conduit to protect them from damage.

Note: Make sure the conduit or wires do not interfere with the Fan Blades or Shutter operation.

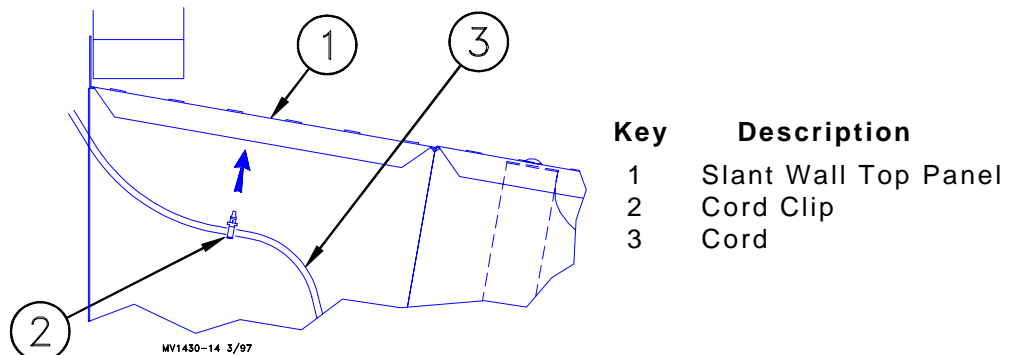


Figure 13. Installing Cord Clip.

Shutter Installation

Install the Grommet in the corner of the Aluminum Shutter only. See **Figure 14**. For fans with plastic shutters, cut a 3/8" slot in the upper left flange of the shutter to route the cord through when the shutter is installed. See detail in **Figure 14**. The Slant Wall Bottom Panel is designed to hold the Shutter. Slide the bottom of the Shutter into position in the Bottom Panel of the Slant Wall kit, lean the Shutter back and lock it in place by rotating the Shutter Clips. See **Figure 14**.

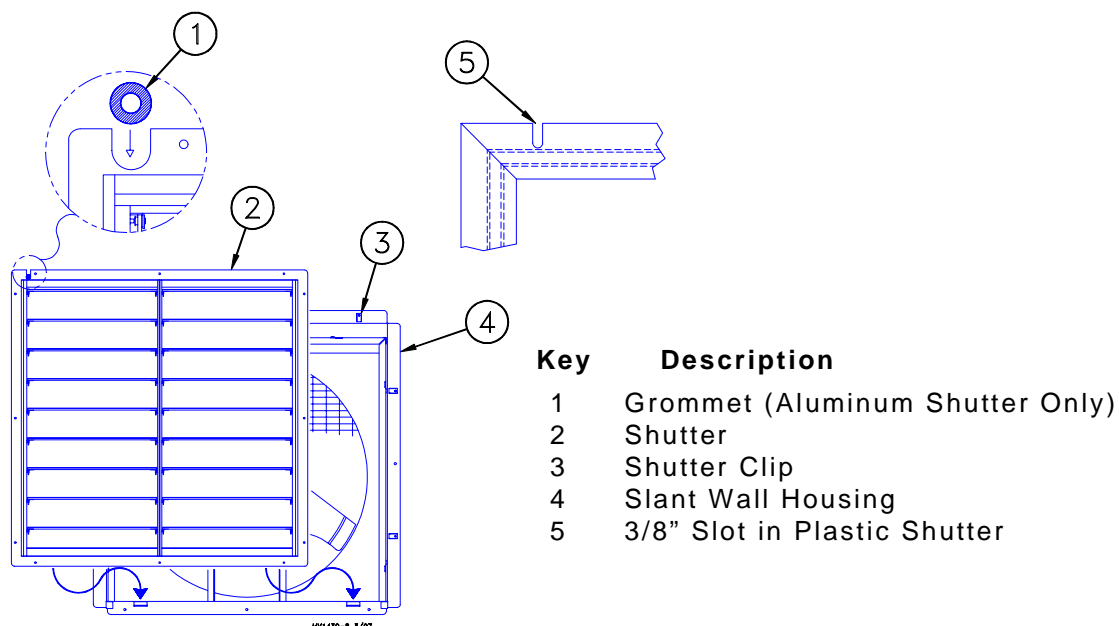


Figure 14. Shutter Installation (front view).

MAINTENANCE:

Service and maintenance of fans should be done only by a qualified technician.

DISCONNECT POWER PRIOR TO MAINTAINING OR CLEANING THE FAN!
The fan may start automatically causing serious injury or death.



Keep the fan clean for maximum life and best performance. Do not spray water on Fan Shaft Bearings.

Periodically check the V-Belt. If necessary, adjust the spring tension to prevent the belt from slipping. The spring should be stretched to an overall length of 6" to 7" for proper belt tension.

Two options are available for V-Belt replacement. The first option is to use Red Link V-Belt (see parts list), which does not require disassembly of the fan. The second option is to use a black V-Belt (see parts list), which requires removal of the Fan Blade or Fan Shaft.

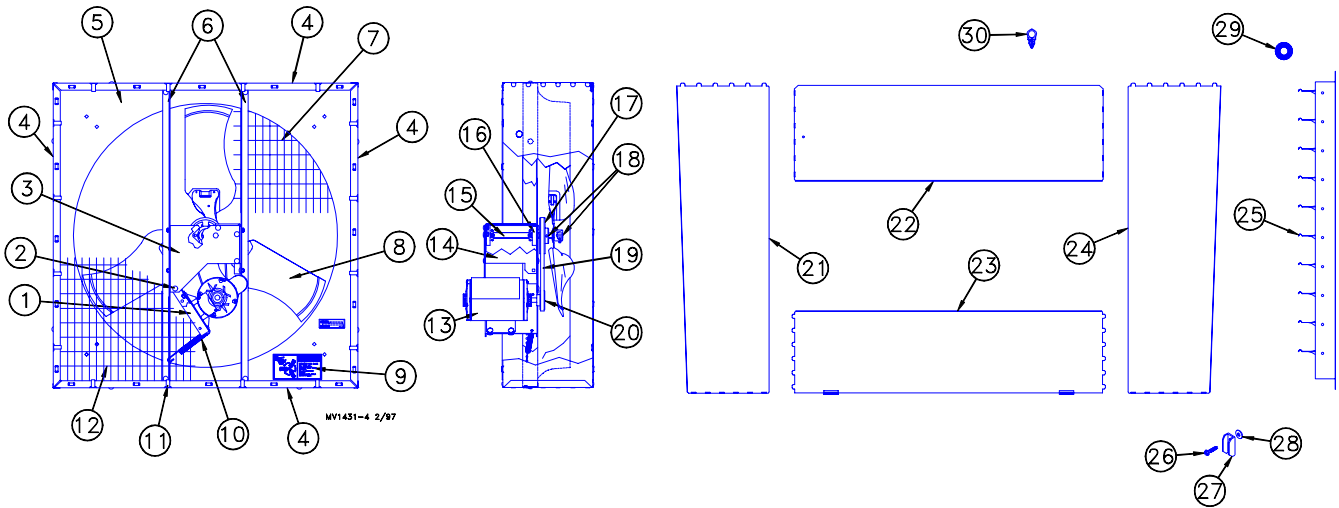
The Motor and Fan Shaft Bearings are permanently lubricated. Grease Zerks are provided on the Fan Shaft Bearings for installations where relubrication is needed. Relubrication is required whenever water comes in contact with the Fan Shaft Bearings. Slowly rotate the Fan Shaft as bearing is filled with Grease. Use only high quality lithium soap base grease and clean all dirt from Zerk before applying grease.

Belt Drive Box Fans

Fan Description		Assembled Fans	Unassembled Fans	Electrical Specs.					
		Fan P/N +	Fan P/N +	Voltabe	HZ	Phase	HP	Motor P/N	Motor Sheave P/N
36" Belt Drive E-Z Fans	Box	39017-3620	39008-3620	115/230	60	1	1/2	39331	4906
		39017-3630	39008-3630	230	50	1	1/2	39332	8773
		39017-3640	39008-3640	208-230/460	60	3	1/2	4714	4906
		39017-3650	39008-3650	220-240/380-415	50	3	1/2	38556	8773
	Slant Wall	38791-362X	38798-362X	115/230	60	1	1/2	39331	4906
		38791-363X	38798-363X	230	50	1	1/2	39332	8773
		38791-364X	38798-364X	208-230/460	60	3	1/2	4714	4906
		38791-365X	38798-365X	220-240/380-415	50	3	1/2	38556	8773
48" Belt Drive E-Z Fans	Box	38434-4820	38779-4820	115/230	60	1	1	39317	35333
		38434-4830	38779-4830	230	50	1	1	39317	8773
		38434-4840	38779-4840	208-230/460	60	3	1	36143	35333
		38434-4850	38779-4850	220-240/380-415	50	3	1	36142	24697
		38434-4860	38779-4860	230/380-415	60	3	1	36142	35333
	Deep Box	38437-4820	38780-4820	115/230	60	1	1	39317	35333
		38437-4830	38780-4830	230	50	1	1	39317	8773
		38437-4840	38780-4840	208-230/460	60	3	1	36143	35333
		38437-4850	38780-4850	220-240/380-415	50	3	1	36142	24697
		38437-4860	38780-4860	230/380-415	60	3	1	36142	35333
	Slant Wall	38787-482X	38794-482X	115/230	60	1	1	39317	35333
		38787-483X	38794-483X	230	50	1	1	39317	8773
		38787-484X	38794-484X	208-230/460	60	3	1	36143	35333
		38787-485X	38794-485X	220-240/380-415	50	3	1	36142	24697
		38787-486X	38794-486X	230/380-415	60	3	1	36142	35333
	Deep Slant Wall	38788-482X	38795-482X	115/230	60	1	1	39317	35333
		38788-483X	38795-483X	230	50	1	1	39317	8773
		38788-484X	38795-484X	208-230/460	60	3	1	36143	35333
		38788-485X	38795-485X	220-240/380-415	50	3	1	36142	24697
		38788-486X	38795-486X	230/380-415	60	3	1	36142	35333

+ Replace "X" in fan P/N with "1" for an aluminum shutter, or "2" for a plastic shutter
 Slant wall fans include, a box fan, slant wall kit, and shutter

Belt Drive E-Z Box Fans



36" Fans

Item	Description	Part No.
1	Motor Mount	38895
2	Module Bushing	38896
3	Module Bracket	38893
4	36" Fan Panel	36006
5	36" Fan Shroud	5538
6	Motor Mount Post	37209
7	Wire Screen	29046
8	36" Fan Blade	29736
9	Danger Decal	2527-50
10	Spring	7551
11	Screen Clip	38891
12	Wire Inlet Screen	39114
13	Motor	See Chart
14	Module Bracket Support	38894
15	Fan Shaft	38535
16	3/4" Bore Bearing	38536
17	5" Sheave	27737
18	3/16" Square Key	2112-1
19	Black V-Belt (AX28)	39316
20	Red Link V-Belt (2.33' Req'd)	30374
20	Motor Sheave	See Chart
21*	36" S. W. L.H. Side Panel	39013-1
22*	36" S. W. Top Panel	39011
23*	36" S. W. Bottom Panel	39012
24*	36" S. W. R.H. Side Panel	39013-2
25	36" Aluminum Shutter	38259
	36" Plastic Shutter	38027
26*	1/4 x 1-3/4 Lag Screw	39217
27*	Shutter Clip	36729
28*	Nylon Washer	4856
29*	Grommet	7256
30*	Cord Clip	7242

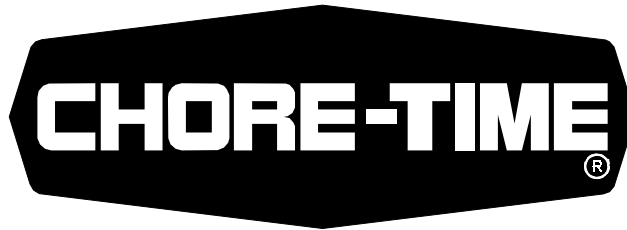
* These items included in 36" Slant Wall Kit Part Number 39018.

48" Fans

Item	Description	Part No.
1	Motor Mount	38895
2	Module Bushing	38896
3	Module Bracket	38893
4	48" Fan Panel (15-3/4" deep)	38391
	48" Fan Panel (21" deep)	38438
5	48" Fan Shroud	37583
6	Motor Mount Post	38390
7	Wire Screen	6023-22
8	48" Fan Blade	28140
9	Danger Decal	2527-50
10	Spring	7551
11	Screen Clip	38891
12	Wire Inlet Screen (1 Phase)	38435
	Wire Inlet Screen (3 Phase)	39083
13	Motor	See Chart
14	Module Bracket Support	38894
15	Fan Shaft	34723
16	1" Bore Bearing	36362
17	8-1/4" Sheave	35009
18	1/4" Square Key	2419-2
19	Black V-Belt (AX35)	4468
	Red Link V-Belt (3' Req'd)	30374
20	Motor Sheave	See Chart
21*	48" S. W. L.H. Side Panel	38449-1
22*	48" S. W. Top Panel	38447
23*	48" S. W. Bottom Panel	38448
24*	48" S. W. R.H. Side Panel	38449-2
25	48" Aluminum Shutter	38260
	48" Plastic Shutter	38029
26*	1/4 x 1-3/4 Lag Screw	39217
27*	Shutter Clip	36729
28*	Nylon Washer	4856
29*	Grommet	7256
30*	Cord Clip	7242

* These items included in 48" Slant Wall Kit Part Number 38446.

***THANK-YOU for purchasing a Chore-Time
36" or 48" Belt Drive E-Z Fan.***



Made to work.

Built to last.™

Revisions to this Manual

Page No

Description of Change

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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