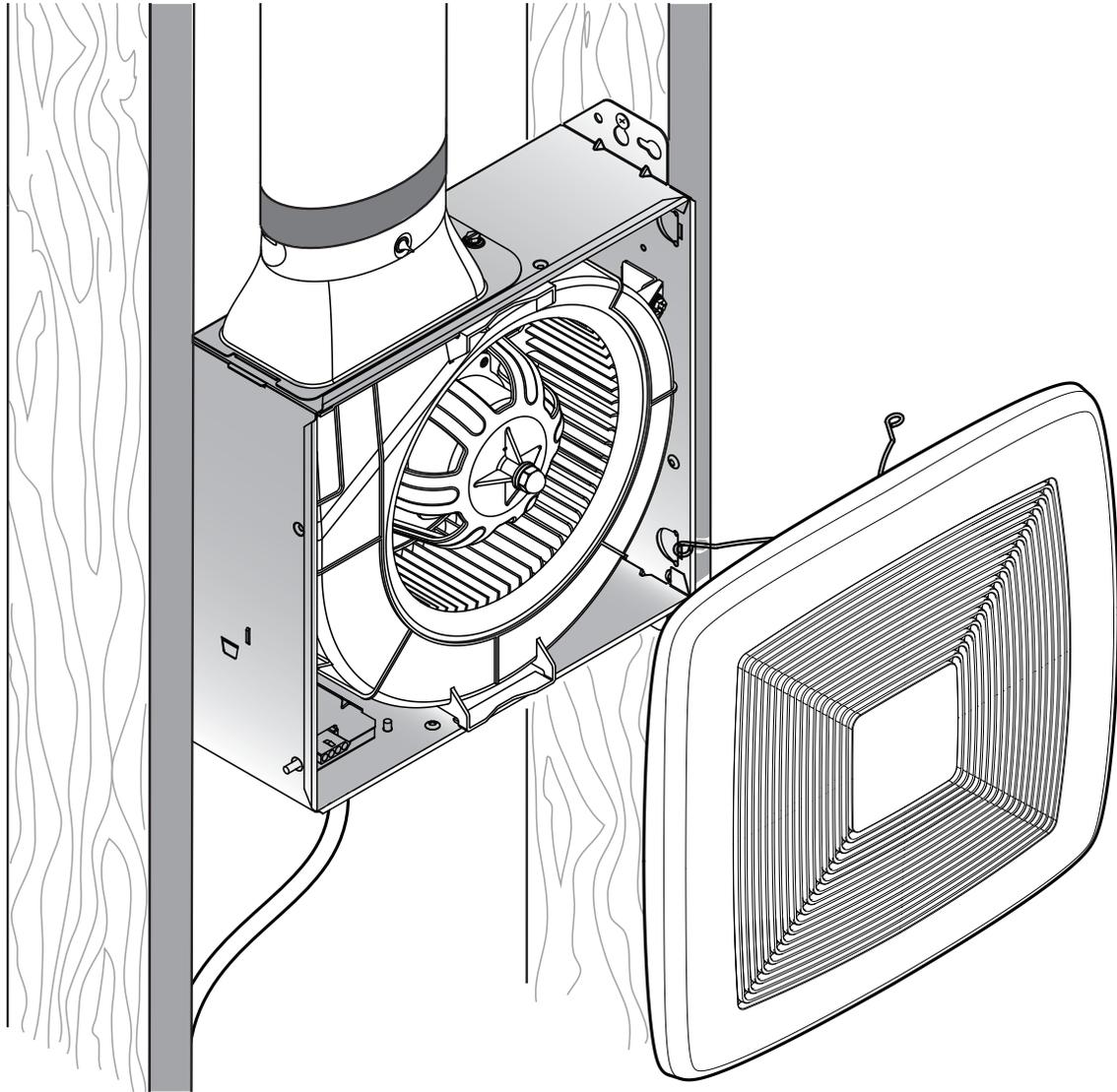




## READ AND SAVE THESE INSTRUCTIONS

Installer: leave this guide with homeowner.

### T080LP ENERGY STAR® Lo Profile Ventilation Fan INSTALLATION GUIDE



**Easy installation**

#### Table of Contents

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**WARNING**

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. Acceptable for use over a tub or shower (in the ceiling only) when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
8. This unit must be grounded.

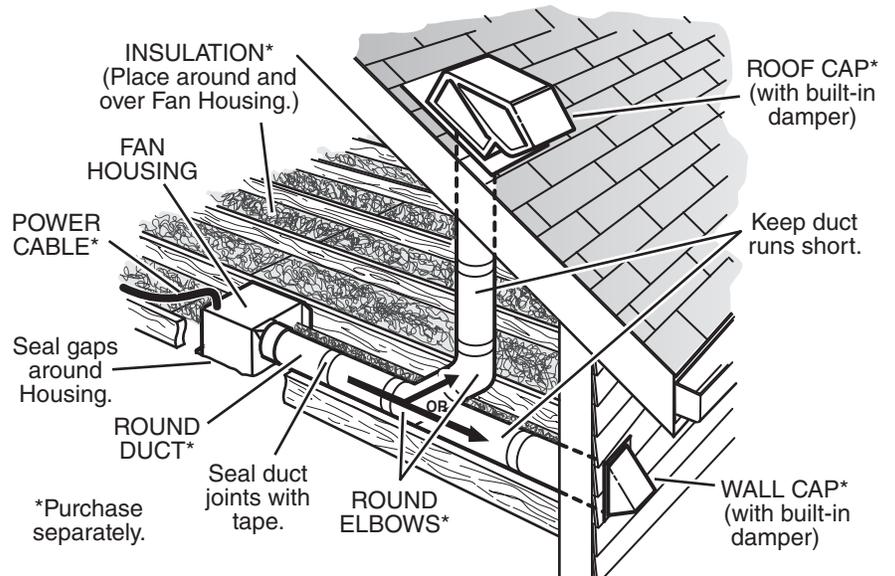
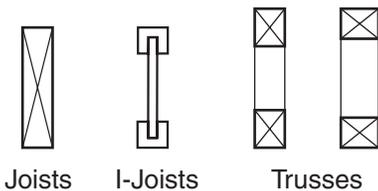
**CAUTION**

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. When installed in a wall or sloped ceiling, the duct connector must point up.
3. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
4. Please read specification label on product for further information and requirements.



**Typical Installation**

- Attaches to 2" x 4" or greater wall studs or ceiling joists.



CEILING INSTALLATION SHOWN

The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

4-inch round rigid metal duct is recommended for best performance.

## Installation

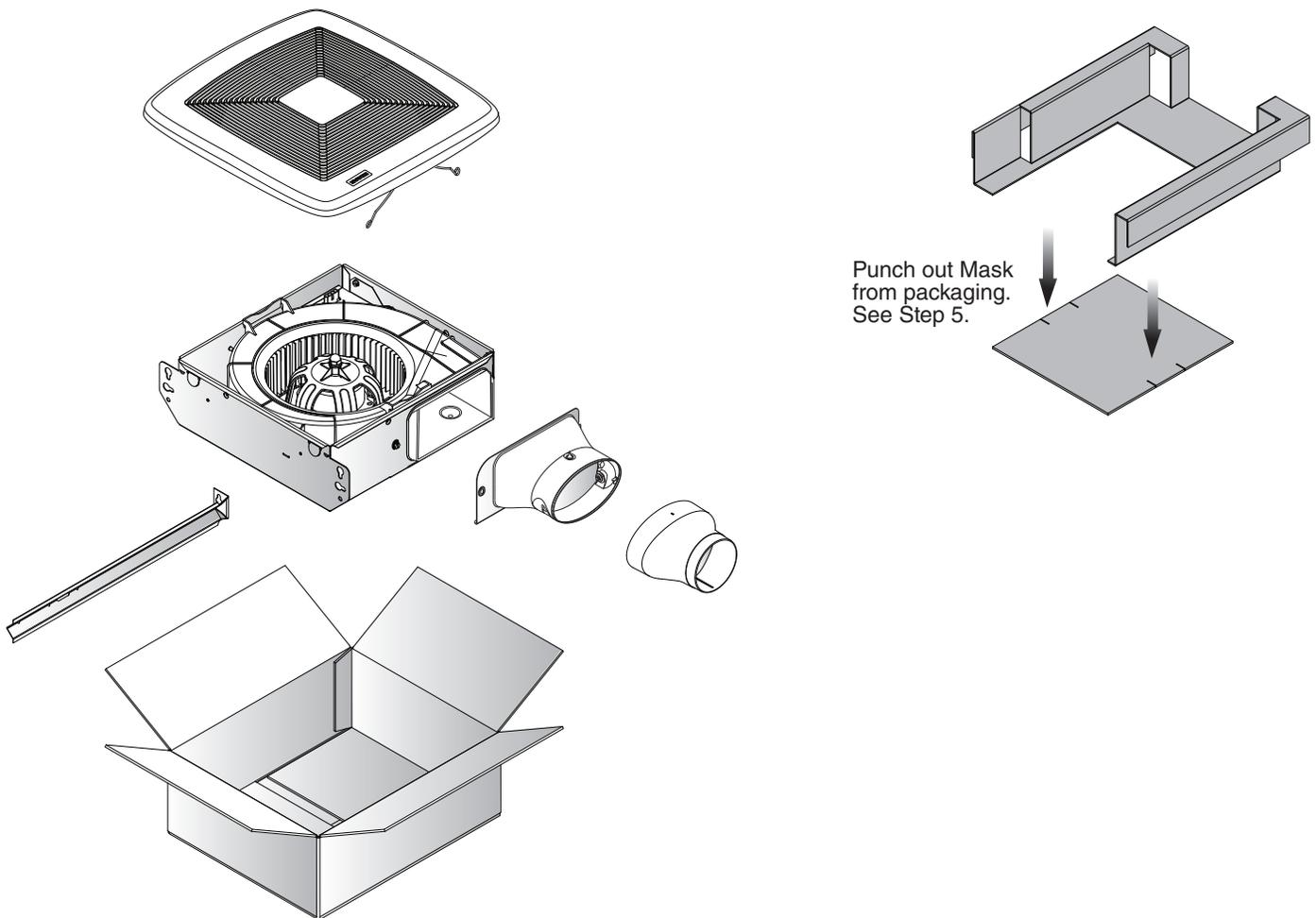
### Tools needed

- Power screwdriver with a Phillips bit
- Phillips screwdriver
- Wire insulation stripper
- Wire cutter

### Materials needed

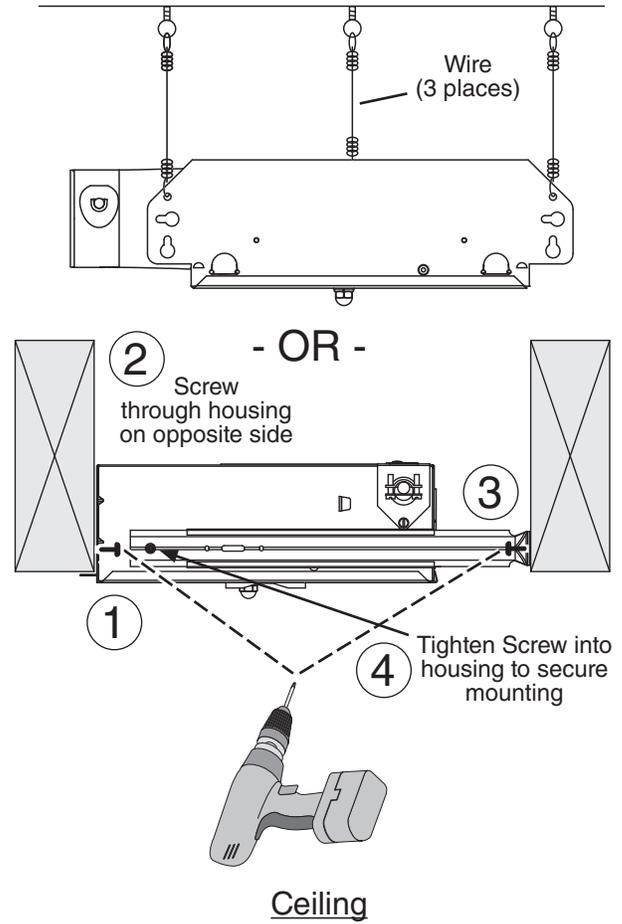
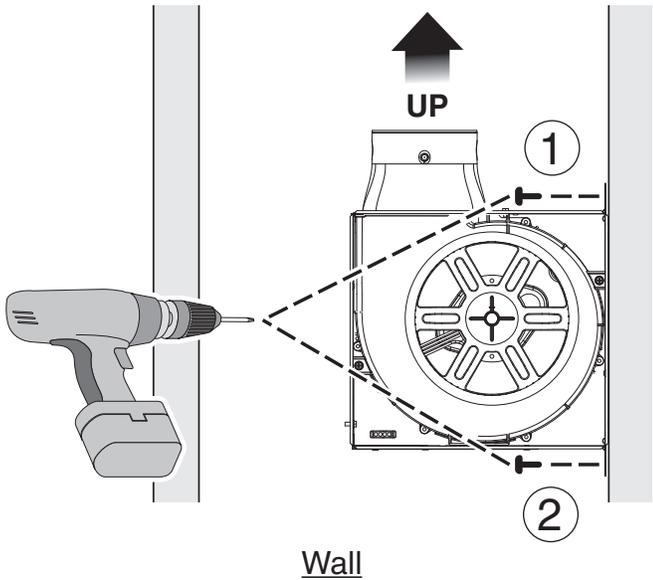
- 4" round metal ducting recommended for best performance. Use of other ducting is acceptable but may impact performance.
- Roof cap or wall cap (built-in damper recommended)
- Tape to seal duct connections
- Drywall screws, sheet metal screws or wire
- Electrical wiring and supplies per local code requirements

## 1 Remove from Packaging

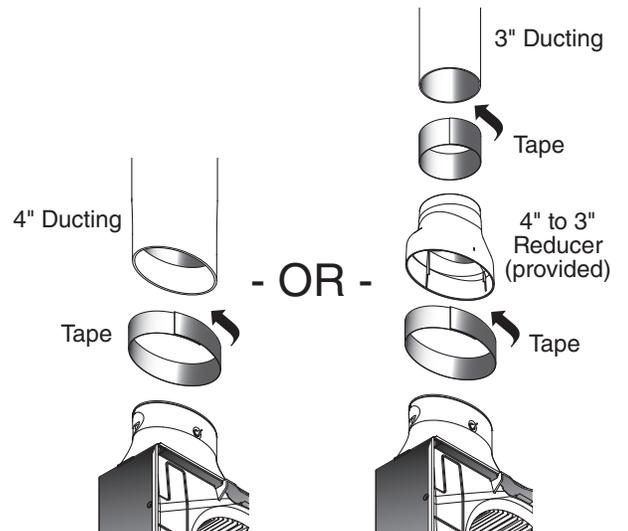
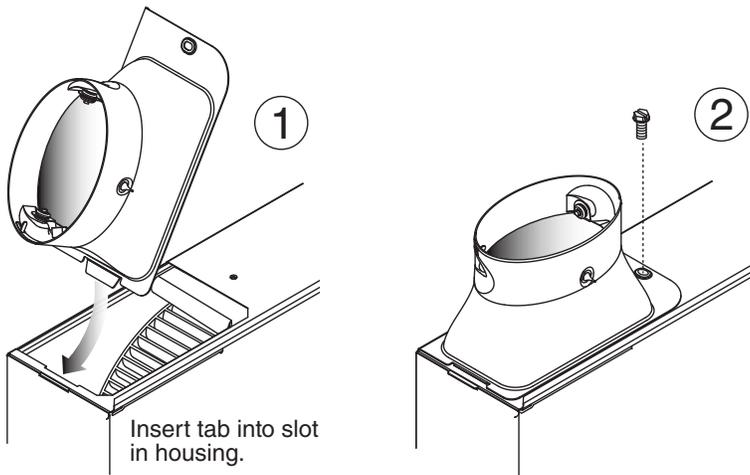


# Installation

## 2 Install in Wall or Ceiling



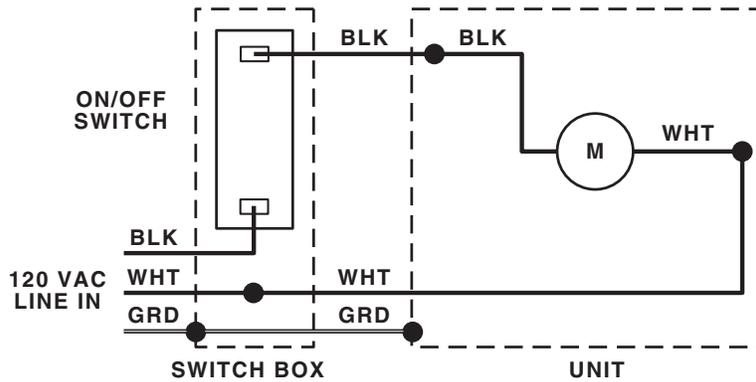
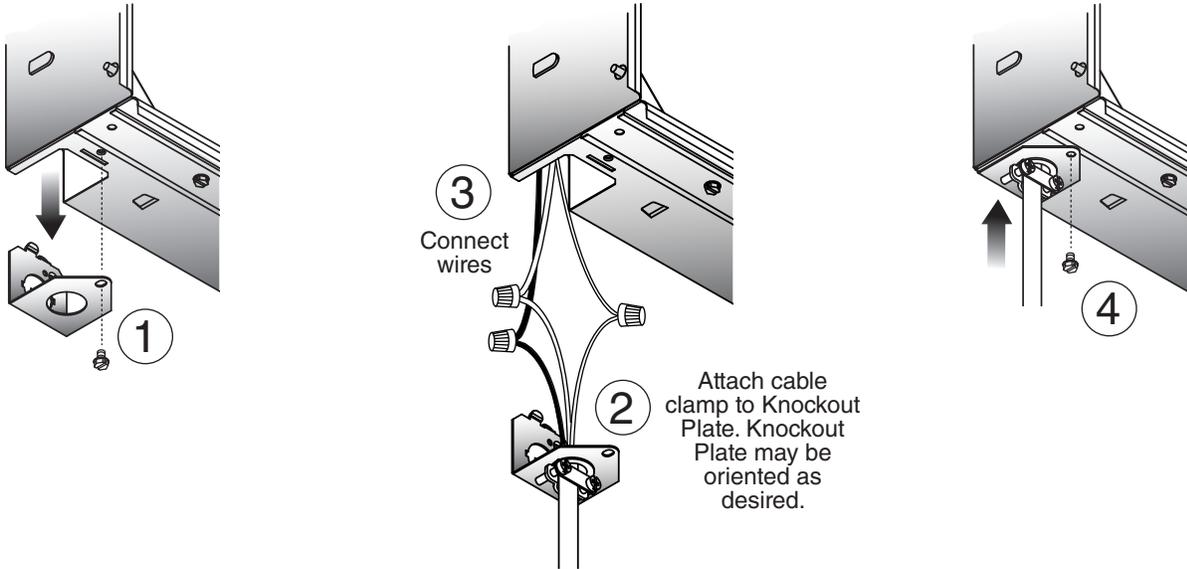
## 3 Install Ducting



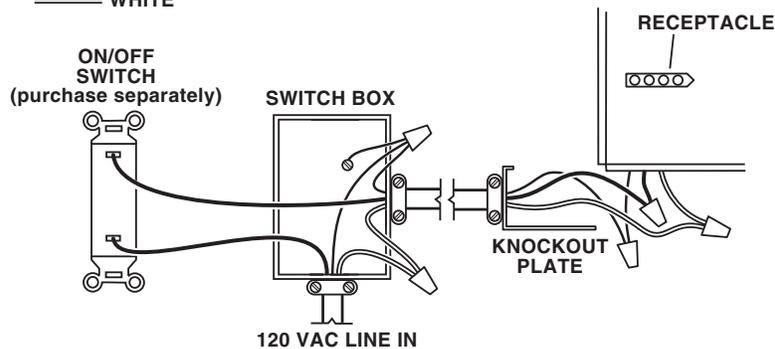
# Installation

## 4 Connect Wires

- Run 120VAC electrical wiring to the installation location.
- Use proper UL-approved connectors to secure wiring to the Knockout Plate.
- Connect wires as shown in wiring diagram.

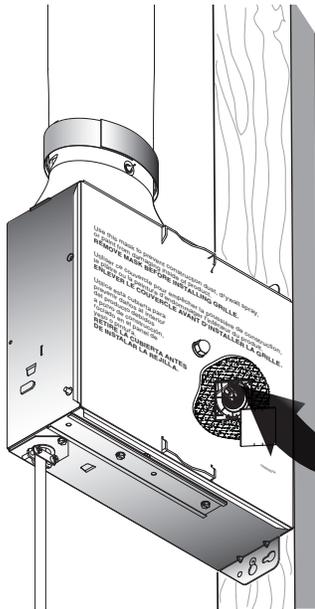


— BLACK — GROUND (green or bare)  
= WHITE



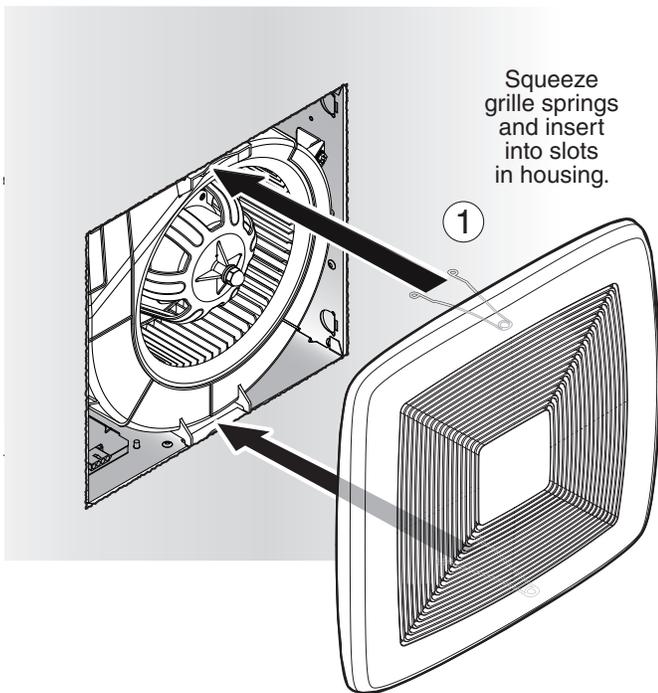
## Installation

### 5 Insert Mask and Finish Wall or Ceiling

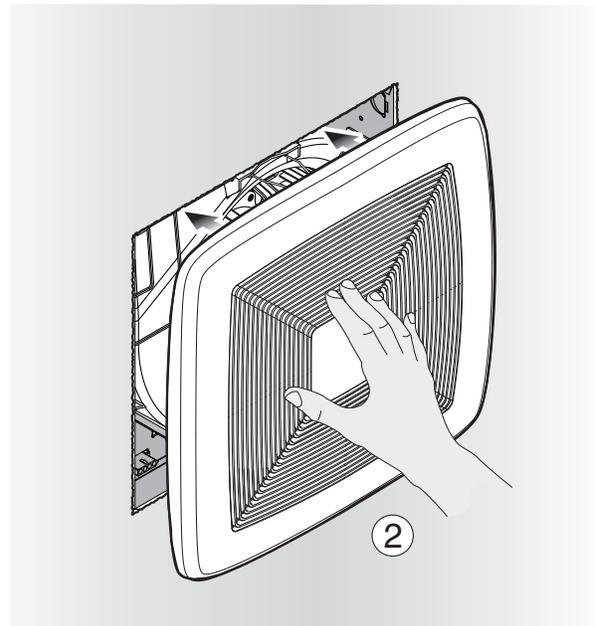


Mask protects unit during construction. Remove before installing Grille.

### 6 Install Grille



Squeeze grille springs and insert into slots in housing.



## Operation

### To Operate Fan

Use an ON/OFF switch or speed control to operate this ventilator.

**WARNING**  Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

## Cleaning and Maintenance

### To Clean

For quiet and efficient operation, long life and attractive appearance, remove Grille and vacuum interior of unit with a dusting brush attachment.

The Motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noises, replace the Motor.

## Troubleshooting

### Symptom: The fan does not run.

- Check for an open fuse or circuit breaker in the building's service panel.
- Check that the plug-in connection for the Motor is seated firmly in place.
- Check that the Blower Wheel spins freely.

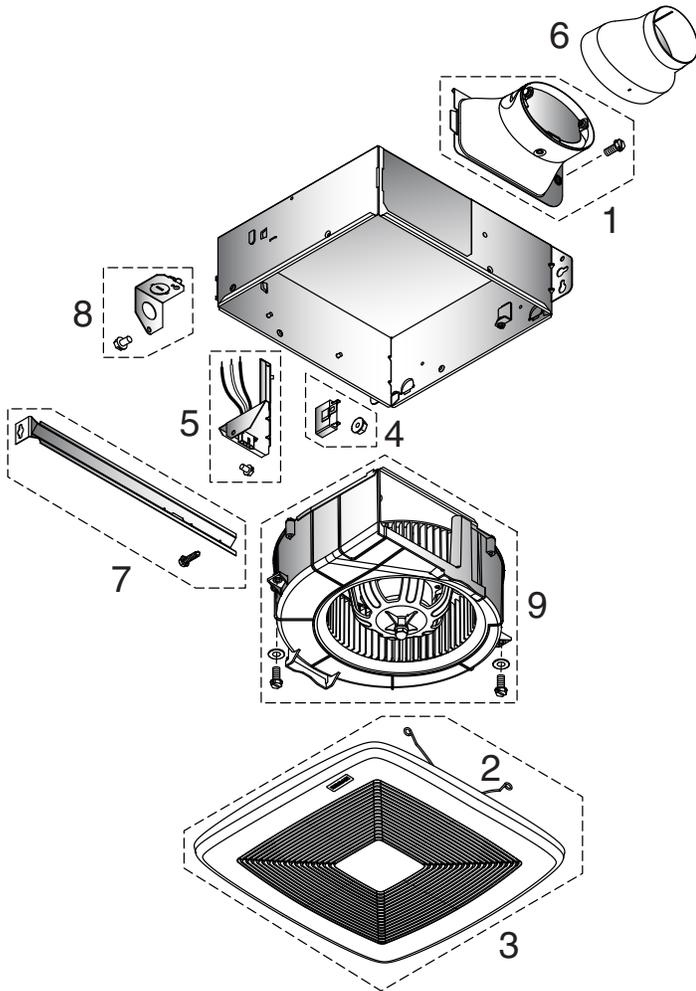
### Symptom: The fan runs erratically.

- Check that the Blower Wheel is firmly attached to the Motor shaft and both spin freely.

### Symptom: The fan seems noisy.

- Check that the back draft damper in the fan's Duct Connector pivots freely. Screws used to attach the ducting to the Duct Connector may be preventing the damper from opening.
- Check that the back draft damper in the wall or roof cap pivots freely. These dampers are sometimes mistakenly painted shut or obstructed by bird and insect debris.

## Service Parts



Key No.	Part No.	Description
1	77001277	Duct Connector Assembly
2	79140014	Grille Spring (2 included)
3	97021088	Grille Assembly (includes 2 grille springs)
4	77001297	Capacitor
5	77001298	Wire Panel Assembly
6	79110158	4" to 3" Reducer
7	77001299	Hanger Bar
8	77001300	Knockout Plate
9	97020043	Blower Assembly

Order replacement parts by Part No., not by Key No.

## Warranty

### Limitation of Warranties and Claims

Seller warrants to the original purchaser that the goods sold hereunder shall be free from defects in workmanship and material under normal use and service (except in those cases where the materials are supplied by the buyer) for a period of one year from the date of original installation or eighteen (18) months from the date of shipment, whichever occurs first. The liability of seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, F.O.B. factory and at seller's discretion) for any part or parts which are returned by buyer during such period provided that:

- a. seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- b. the defective unit is returned to seller, transportation charges prepaid by buyer;
- c. payment in full has been received by seller for said products;
- d. seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

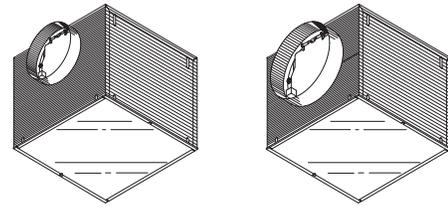
No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)

**TWIN CITY FAN & BLOWER | WWW.TCF.COM**

5959 Trenton Lane N | Minneapolis, MN 55442 |

Phone: 763-551-7600 | Fax: 763-551-7601

# IN-LINE VENTILATORS • 120V



## READ AND SAVE THESE INSTRUCTIONS

### WARNING

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. To reduce the risk of fire, use only metal ductwork.
8. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Interrupter) - protected branch circuit.
9. Never place a switch where it can be reached from a tub or shower.
10. This unit must be grounded.

### CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. **If ventilator is installed in an unconditioned space (such as an attic):** Surround the ventilator with thermal insulation - to minimize possible condensation.
4. Please read specification label on product for further information and requirements.

### TABLE OF CONTENTS

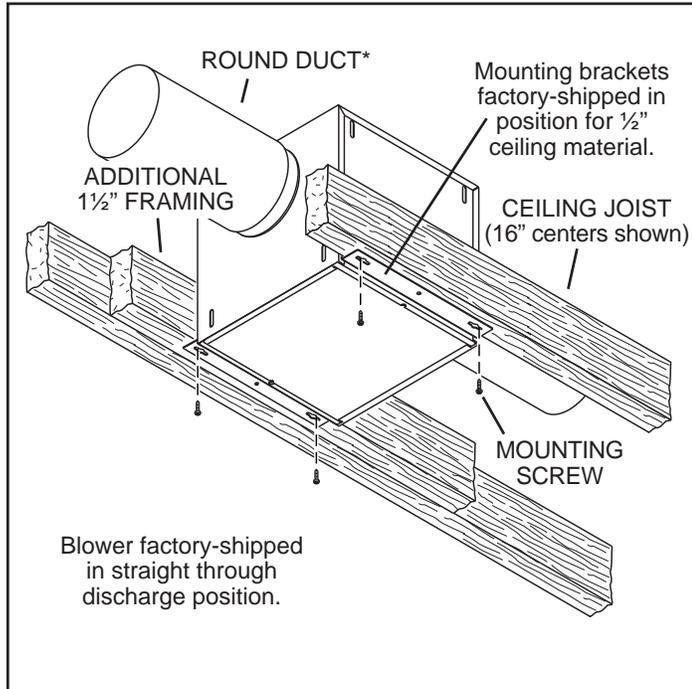
This manual is divided into sections as follows:

- **“TYPICAL INSTALLATION”**  
This section shows a common installation in new and existing, frame construction.
  - Mounting (new construction)
  - Mounting (existing construction)
  - Wiring
  - Ducting (straight through blower discharge)
- **“MOUNTING OPTIONS”**
- **“WIRING OPTIONS”**
  - Wiring Plate Position
- **“DUCTING OPTIONS”**
  - Blower Discharge Positions
  - Ducting (right angle blower discharge)
- **“USE AND CARE”**
- **“SERVICE PARTS”**
- **“WARRANTY”**

**Installer: Leave this manual with the homeowner.  
Homeowner: Use and Care information on page 3.**

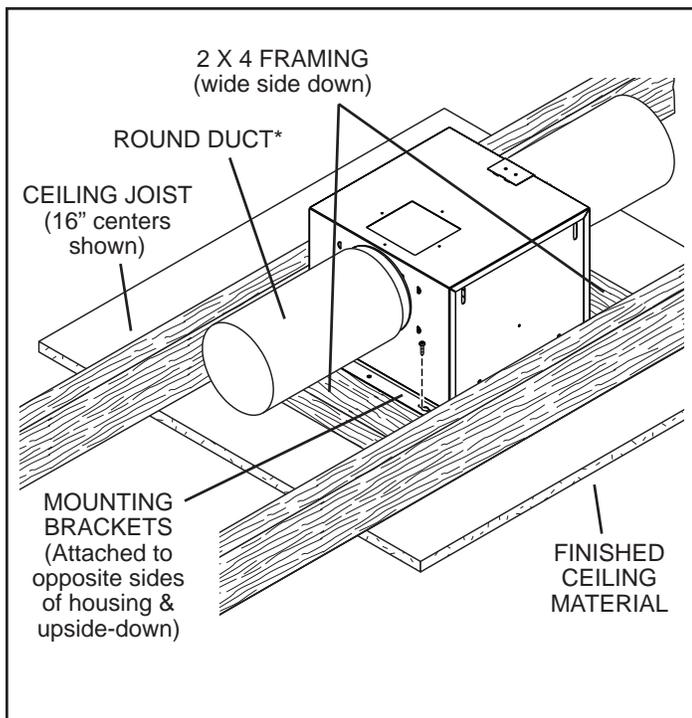
## TYPICAL INSTALLATION

### MOUNTING (*New Frame Construction*)



Factory-shipped unit installed in new construction.

### MOUNTING (*Existing Frame Construction*)

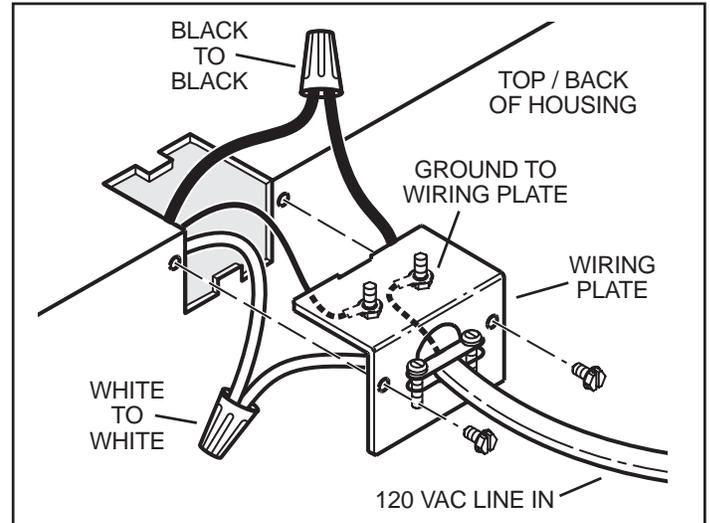


Factory-shipped unit installed in existing construction.

\* T100L & T150L use 6" round duct.  
T200L, T250L & T300L use 8" round duct.

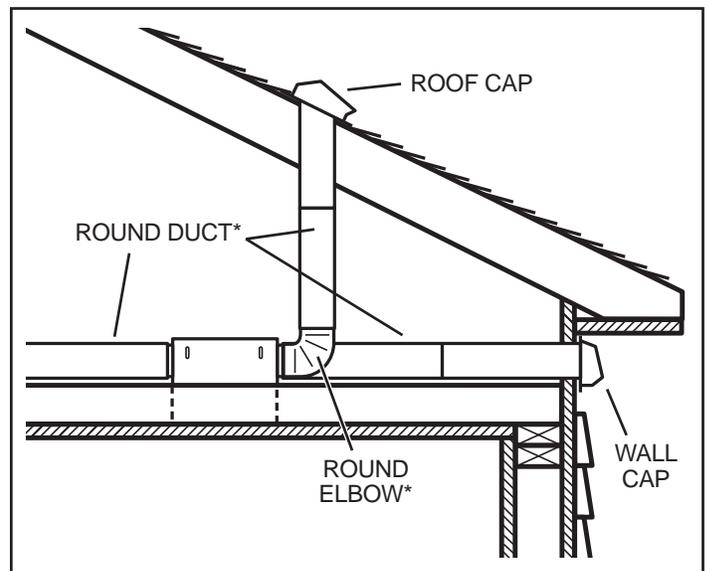
## TYPICAL INSTALLATION

### WIRING



Ventilator can be wired from outside of housing.  
Use UL approved connectors to wire per local codes.

### DUCTING (*Horizontal blower discharge*)



Two ways to connect ductwork to a factory-shipped unit.

\* T100L & T150L use 6" round duct.  
T200L, T250L & T300L use 8" round duct.

### IMPORTANT:

#### **Remove shipping tape from damper**

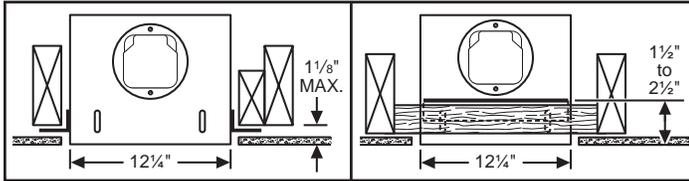
Remove the shipping tape from the damper flap and make sure that damper flap opens and closes freely inside the ductwork. Use duct tape to make ductwork connections secure and air-tight.

#### **Remove shipping ring from blower inlet**

Remove the shipping ring from the blower inlet before operating the ventilator.

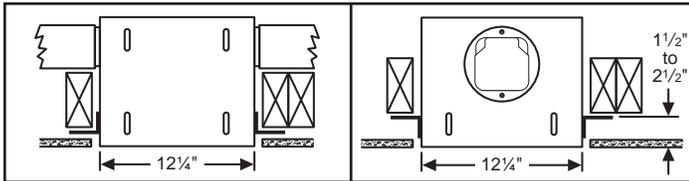
## MOUNTING OPTIONS

¼-20 hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.



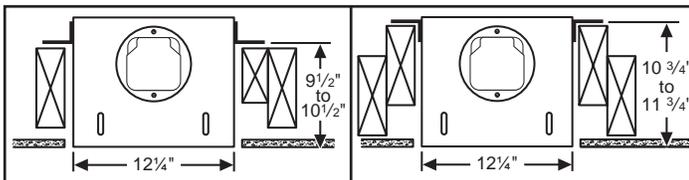
Mounting brackets in factory-shipped position. (Outlet parallel to joists.) (New construction)

Mounting brackets flipped over and mounted to outlet sides of housing. (Outlet parallel to joists.) (Existing construction)



Mounting brackets mounted to outlet sides of housing. (Outlet perpendicular to joists.) (New construction)

Mounting brackets flipped over to give approx. 1" more clearance. (Outlet parallel to joists.) (New construction)

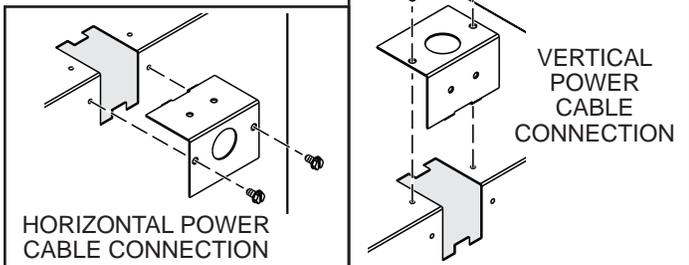


Mounting brackets mounted to top of sides of housing. (Outlet parallel to joists.) (New or existing construction)

Mounting brackets flipped over and mounted to top of sides of housing. (Outlet parallel to joists.) (New or existing construction)

## WIRING OPTIONS

### WIRING PLATE POSITION

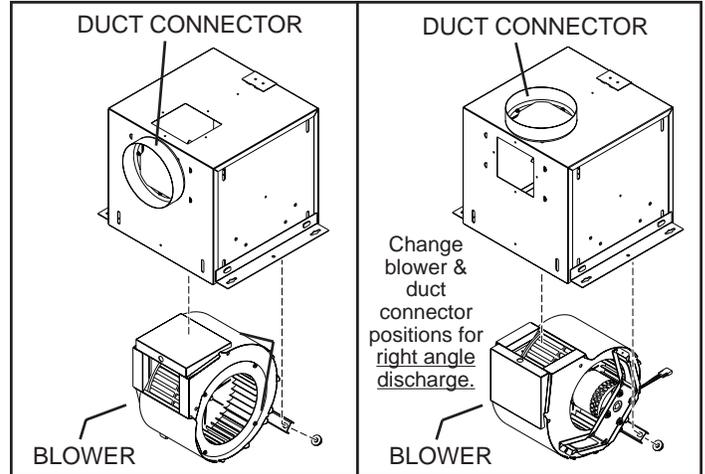


HORIZONTAL POWER CABLE CONNECTION

VERTICAL POWER CABLE CONNECTION

## DUCTING OPTIONS

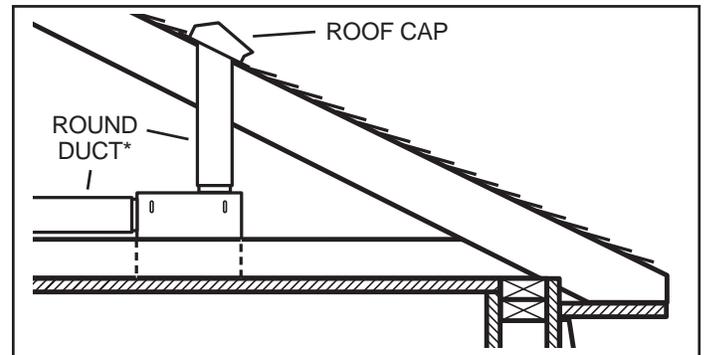
### BLOWER DISCHARGE POSITIONS



Blower and duct connector in straight through discharge position (factory shipped).

Blower and duct connector in right angle discharge position.

### DUCTING (Right angle blower discharge)



Typical ductwork connection to a ventilator converted to right angle discharge.

\* T100L & T150L use 6" round duct.  
T200L, T250L & T300L use 8" round duct.

## USE AND CARE

Ventilator is designed for continuous operation. If desired, it may be controlled using an on/off switch or an electronic, variable speed control. Follow wiring instructions packed with control, and adhere to all local and state codes, and the National Electrical Code.

**WARNING:** To reduce the risk of electric shock, disconnect from power supply before servicing.

**To clean blower assembly:** Remove access panel, unplug blower from housing, remove blower mounting nuts, and carefully remove blower from housing. Use appropriate vacuum attachment or a soft cloth and mild soap or detergent to clean blower discharge area and wheel. **DO NOT ALLOW WATER TO ENTER MOTOR.** Make sure blower assembly is completely dry before reinstalling.

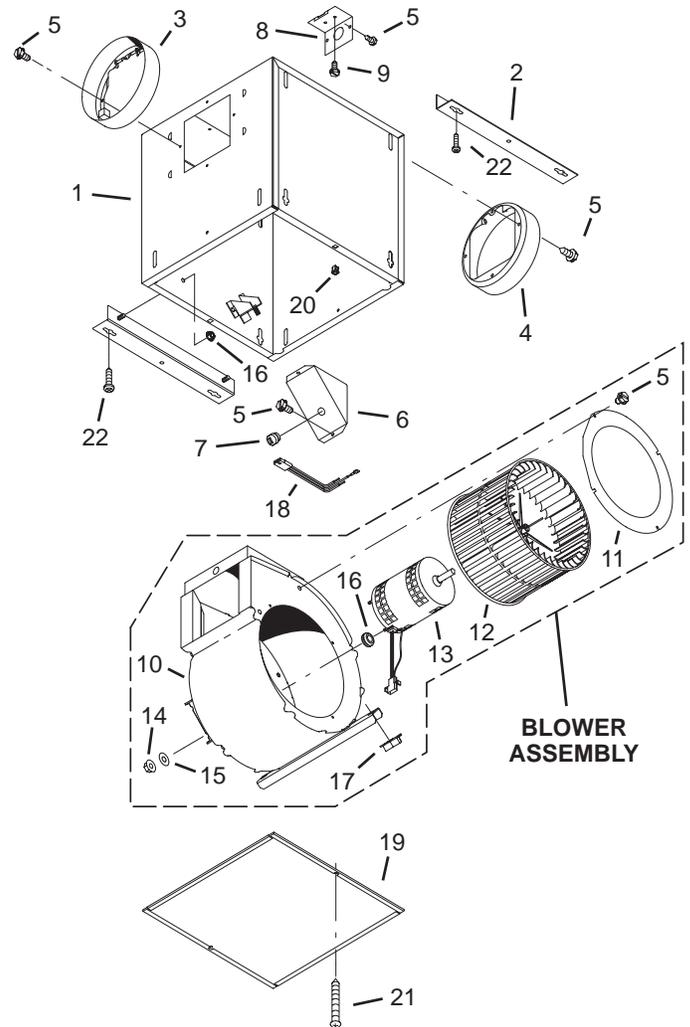
Motor is permanently lubricated. Do not oil or disassemble motor.

## SERVICE PARTS

KEY NO.	PART NO.	DESCRIPTION
1	97014735	Housing Assembly (T100L & T150L)
	97014736	Housing Assembly (T200L, T250L & T300L)
2	97014728	Mounting Bracket (2 req.)
3	97014760	Damper Assembly (6" dia.)
	97014761	Damper Assembly (8" dia.)
4	99390098	Duct Connector (6" dia.)
	99390099	Duct Connector (8" dia.)
5	99150415	Screw, 8-18 x 1/4 (12 req.)*
6	98005513	Wire Box Cover
7	99400035	Strain Relief Bushing
8	98005512	Wiring Plate
9	99150471	Ground Screw, 10-32 x 1/2 (2 req.)
10	97014774	Scroll Assembly (T100L & T150L)
	97014775	Scroll Assembly (T200L, T250L & T300L)
11	98009399	Inlet Ring
12	99110805	Blower Wheel
13	99080481	Motor (T100L)
	99080482	Motor (T150L)
	99080483	Motor (T200L)
	99080484	Motor (T250L)
	99080485	Motor (T300L)
14	99260558	Lock Nut, 8-32 (4 req.)*
15	99250959	Washer (4 req.)*
16	99100491	Grommet (4 req.)
		Blower Assembly, Complete (Includes Key Nos. 5 & 10-16)
	97014800	(T100L)
	97014801	(T150L)
	97014802	(T200L)
	97014803	(T250L)
	97014804	(T300L)
17	99260477	Nut, 1/4-20 (6 req.)*
18	97006039	Wire Harness
19	98009417	Access Panel
20	99420470	Cover Nut (2 req.)
21	99150472	Cover Mounting Screw (2 req.)
22	99150591	Screw, 10-16 x 7/8 (4 req.)*

Order replacement parts by PART NO. - not by KEY NO.  
\* Standard hardware - may be purchased locally.

## SERVICE PARTS



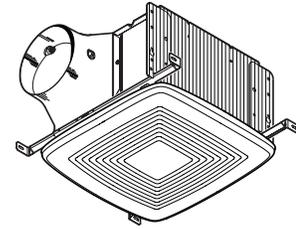
## WARRANTY

### Limitation of Warranties and Claims

Seller warrants to the original purchaser that the goods sold hereunder shall be free from defects in workmanship and material under normal use and service (except in those cases where the materials are supplied by the buyer) for a period of one year from the date of original installation or eighteen (18) months from the date of shipment, whichever occurs first. The liability of seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, F.O.B. factory and at seller's discretion) for any part or parts which are returned by buyer during such period provided that:

- seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- the defective unit is returned to seller, transportation charges prepaid by buyer.
- payment in full has been received by seller or said products; and
- seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)



## READ AND SAVE THESE INSTRUCTIONS

### WARNING

#### TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit (ceiling installation only).
8. This unit must be grounded.

### CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. This product is designed for installation in ceilings up to a 12/12 pitch (45 degree angle). Duct connector must point up. **DO NOT MOUNT THIS PRODUCT IN A WALL.**
3. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
4. Please read specification label on product for further information and requirements.

## CLEANING & MAINTENANCE

For quiet and efficient operation, long life, and attractive appearance - lower or remove grille and vacuum interior of unit with the dusting brush attachment.

The motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noises, replace the blower assembly (includes motor and impeller).

## OPERATION

Use an on/off switch or speed control to operate this ventilator. See "Connect Wiring" for details. Use of speed controls other than the Broan Models 78V and 78W may cause a motor humming noise.

#### Limitation of Warranties and Claims

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- a. seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- b. the defective unit is returned to seller, transportation charges prepaid by buyer;
- c. payment in full has been received by seller for said products;
- d. seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. **THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)

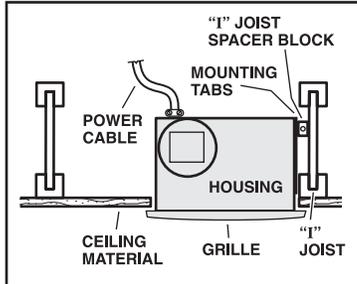
**TWIN CITY FAN & BLOWER | WWW.TCF.COM**

5959 Trenton Lane N | Minneapolis, MN 55442 |  
Phone: 763-551-7600 | Fax: 763-551-7601

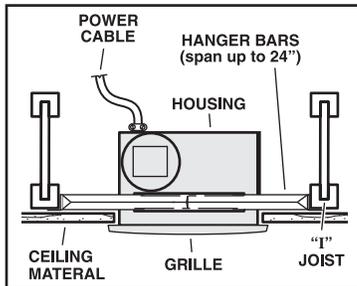
# TYPICAL INSTALLATIONS

## Housing mounted to I-joists.

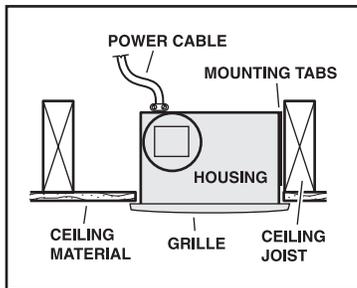
Use I-joist spacer block (provided).



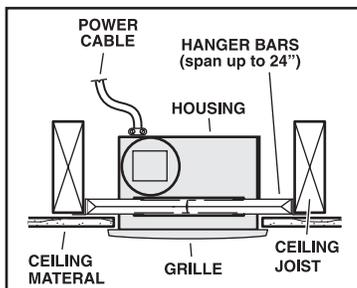
## Housing mounted anywhere between I-joists using hanger bars.



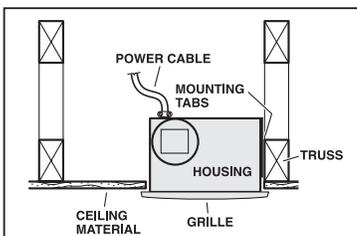
## Housing mounted to joists.



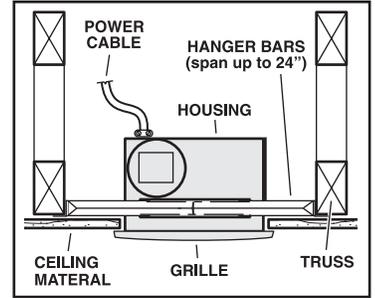
## Housing mounted anywhere between joists using hanger bars.



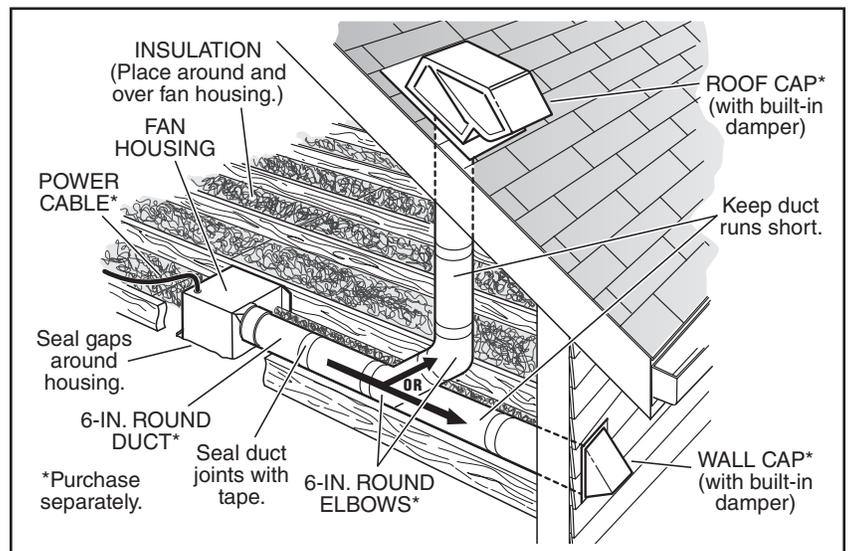
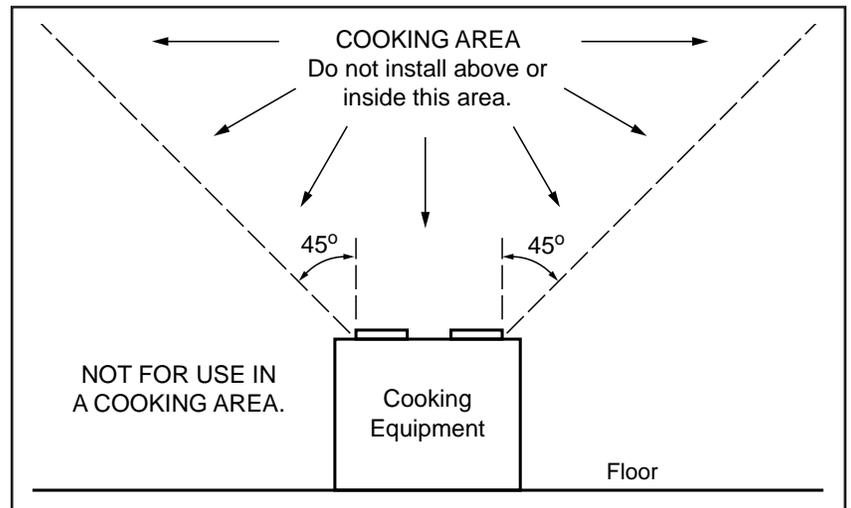
## Housing mounted to truss.



Housing mounted anywhere between trusses using hanger bars.



# PLAN THE INSTALLATION

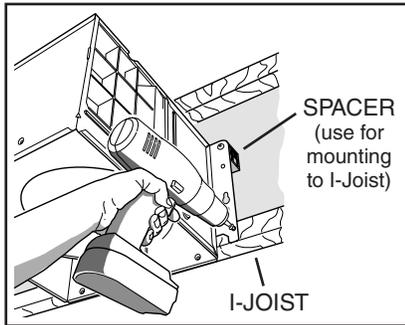


The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

## INSTALL HOUSING & DUCT

### 1a. Mount housing to joist.

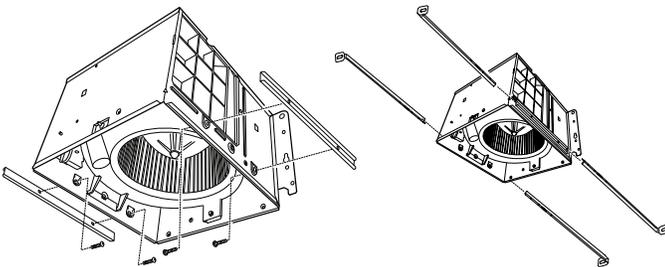
Hold housing in place so that bottom edge of housing will be flush with finished surface of ceiling. For 1/2" thick ceiling



material, position bottom of each mounting flange flush with the bottom of joist. The housing mounts with four (4) screws or nails. Screw or nail housing to joist through lowest holes in each mounting flange, then through highest holes. NOTE: Mounting to I-JOIST (shown) requires use of SPACERS (included) between the highest hole of each mounting flange and the I-joist.

OR

### 1b. Mount housing anywhere between trusses, joists, or I-joists using hanger bars.

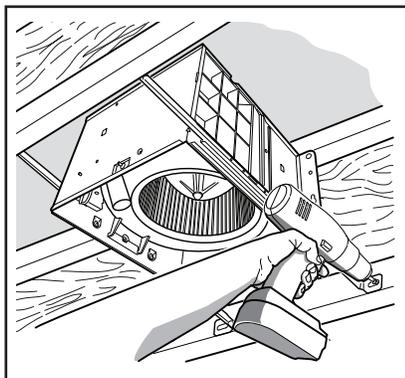


Sliding hanger bars are provided to allow for accurate positioning of housing anywhere between framing. They can be used on all types of framing (I-joist, standard joist, and truss construction) and span up to 24".

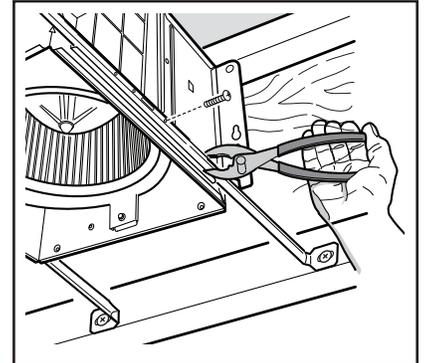
Attach the MOUNTING CHANNELS to the housing using the SCREWS supplied.

Extend HANGER BARS to the width of the framing.

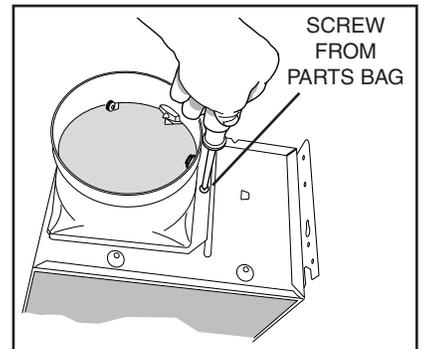
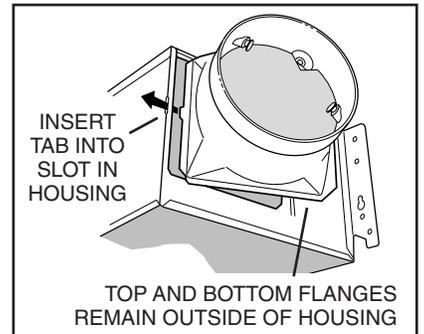
Hold housing in place so that bottom edge of housing will be flush with finished surface of ceiling. For 1/2" thick ceiling material, position bottom of each mounting flange flush with bottom of joist.



To ensure a noise-free mount: Secure hanging bars together with SCREWS and use a pliers to crimp mounting channels tightly around hanger bars.

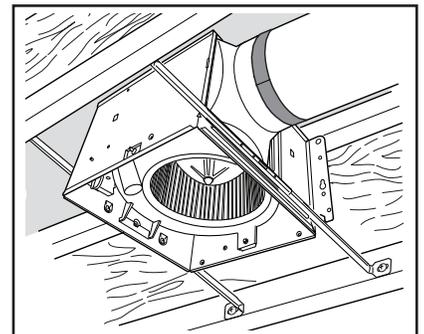


### 2. Attach damper/duct connector.

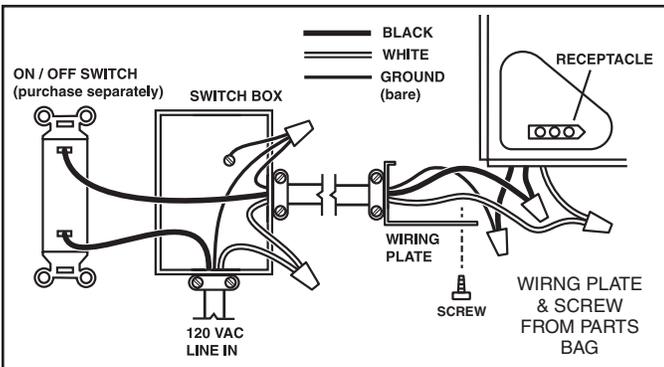
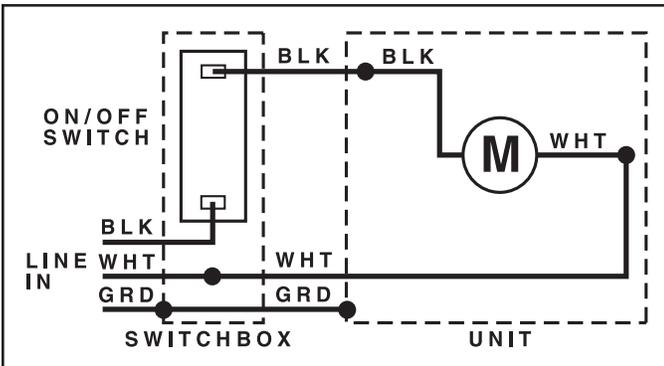


### 3. Install 6-inch round ductwork.

Connect 6-inch round ductwork to damper / duct connector. Run ductwork to a roof cap or wall cap. Tape all ductwork connections to make them secure and air tight.



## CONNECT WIRING



### 4. Connect electrical wiring.

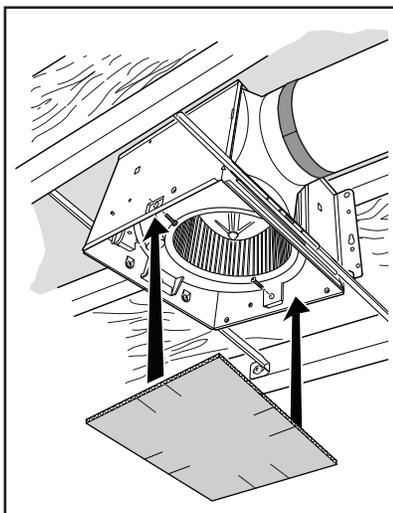
Run 120 VAC house wiring to installation location. Use proper UL approved connector to secure house wiring to wiring plate. Connect wires as shown in wiring diagrams.

## INSTALL MASK & FINISH CEILING

### 5. Insert mask and finish ceiling.

Tape mask into housing. Mask protects unit during construction. Remove before installing grille.

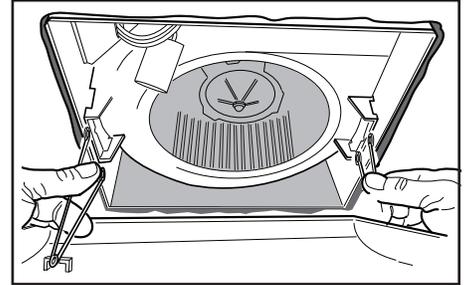
Install ceiling material. Cut out around housing.



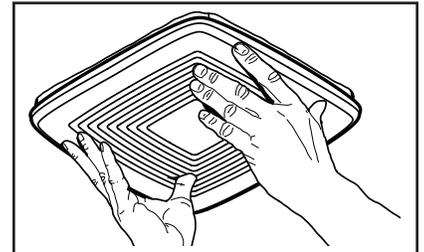
## INSTALL GRILLE

### 6. Attach grille to housing.

Squeeze grille springs and insert them into tabs on each side of housing.



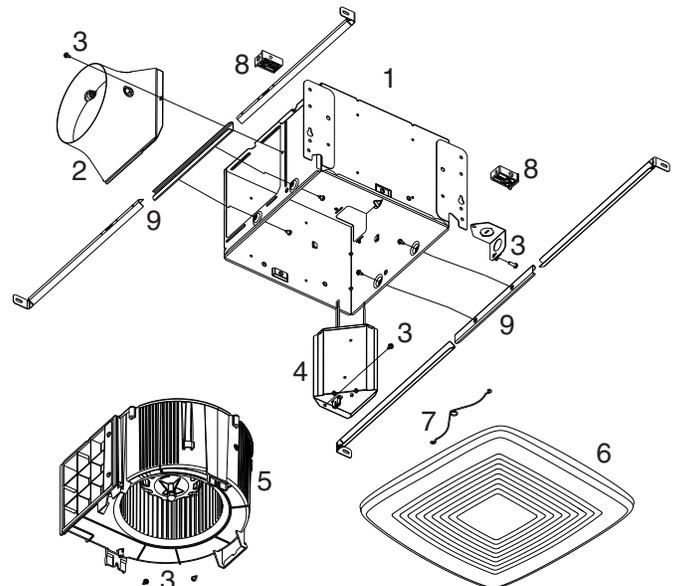
### 7. Push grille against ceiling.



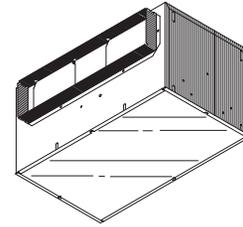
## SERVICE PARTS

Key No.	Part No.	Description
1	97020009	Housing
2	97018331	Duct Connector
3	97018721	Parts Bag (includes wiring plate & all screws)
4	97018447	Wire Panel/Harness Assembly
5	97020011	Blower Assembly
6	97021087	Grille Assembly (includes key no. 7)
7	99140208	Grille Spring (2 req'd)
8	97018014	Spacer (2 supplied)
9	97020013	Hanger Bar Kit

Order service parts by "Part No." - not by "Key No."



# IN-LINE VENTILATORS • 120V



## READ AND SAVE THESE INSTRUCTIONS

### WARNING

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. To reduce the risk of fire, use only metal ductwork.
8. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Interrupter) - protected branch circuit.
9. Never place a switch where it can be reached from a tub or shower.
10. This unit must be grounded.

### CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. **If ventilator is installed in an unconditioned space (such as an attic):** Surround the ventilator with thermal insulation - to minimize possible condensation.
4. Please read specification label on product for further information and requirements.

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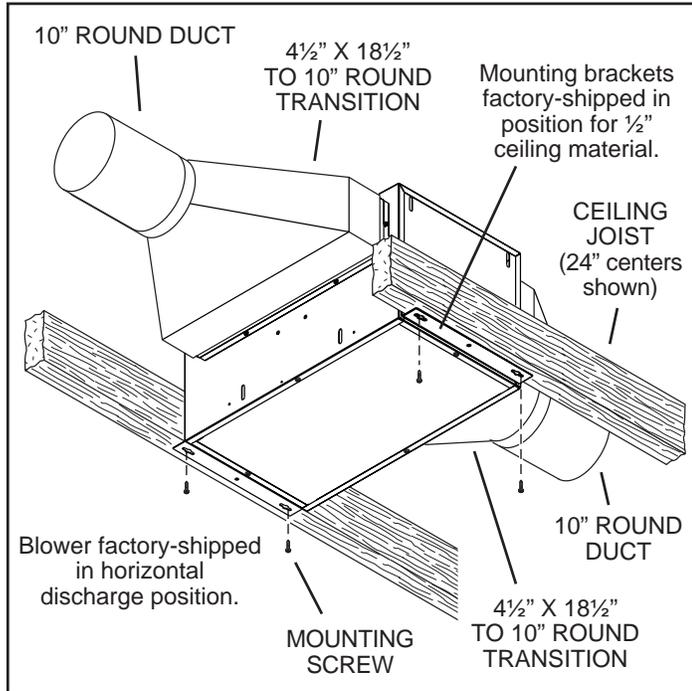
This manual is divided into sections as follows:

- **“TYPICAL INSTALLATION”**  
This section shows a common installation in new and existing, frame construction.
  - Mounting (new construction)
  - Mounting (existing construction)
  - Wiring
  - Ducting (straight-through blower discharge)
- **“MOUNTING OPTIONS”**
- **“WIRING OPTIONS”**
  - Wiring Plate Position
- **“DUCTING OPTIONS”**
  - Blower Discharge Positions
  - Ducting (right angle blower discharge)
- **“USE AND CARE”**
- **“SERVICE PARTS”**
- **“WARRANTY”**

**Installer: Leave this manual with the homeowner.  
Homeowner: Use and Care information on page 3.**

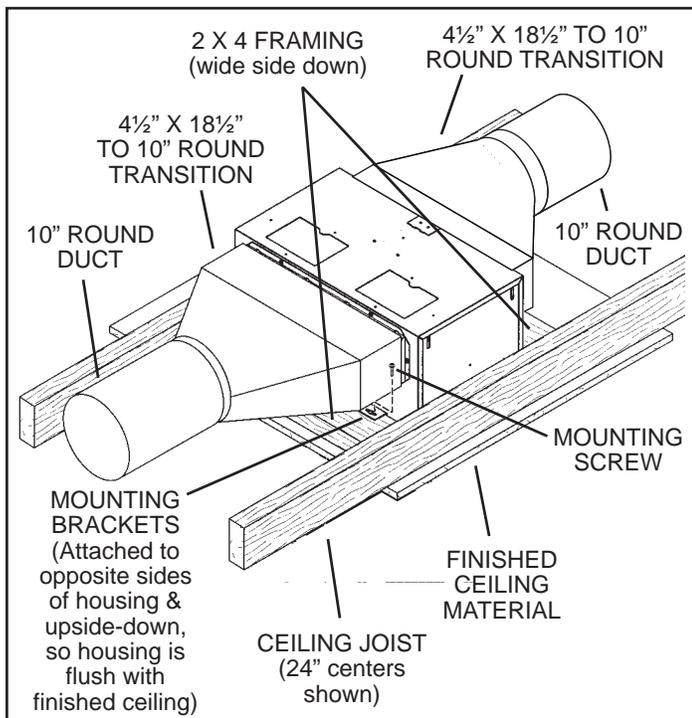
## TYPICAL INSTALLATION

### MOUNTING (*New Frame Construction*)



*Factory-shipped unit installed in new construction.*

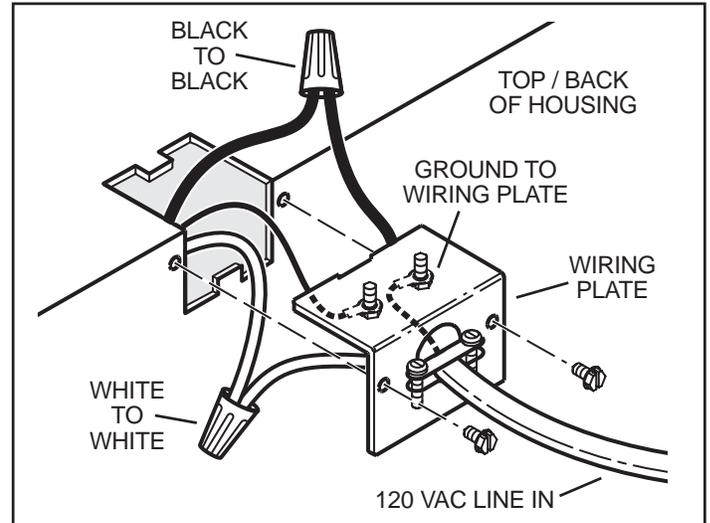
### MOUNTING (*Existing Frame Construction*)



*Factory-shipped unit installed in existing construction.*

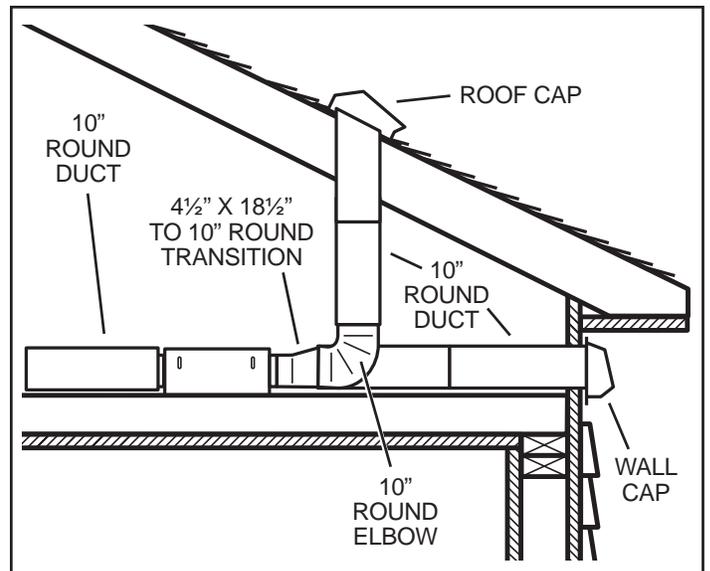
## TYPICAL INSTALLATION

### WIRING



*Ventilator can be wired from outside of housing.  
Use UL approved connectors to wire per local codes.*

### DUCTING (*Straight-through blower discharge*)

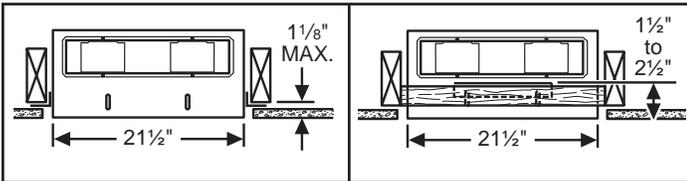


*Two ways to connect ductwork to a factory-shipped unit.*

**NOTE:** Make sure the shipping tape is removed from the damper flap and that damper flap opens and closes freely inside the ductwork. Use duct tape to make ductwork connections secure and air-tight.

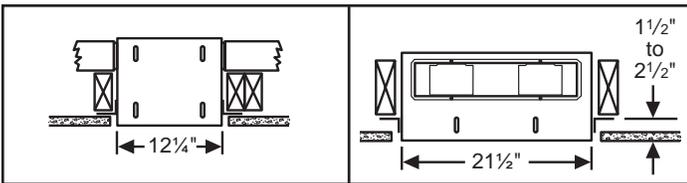
## MOUNTING OPTIONS

¼-20 hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.



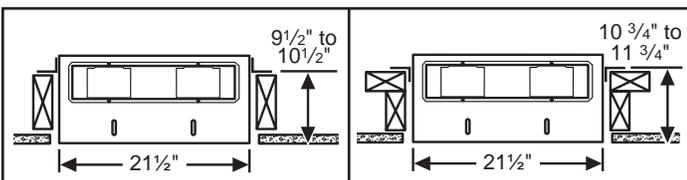
Mounting brackets in factory-shipped position. (Outlet parallel to joists.) (New construction)

Mounting brackets flipped over and mounted to outlet sides of housing. (Outlet parallel to joists.) (Existing construction)



Mounting brackets mounted to outlet sides of housing. (Outlet perpendicular to joists.) (New construction)

Mounting brackets flipped over to give approx. 1" more clearance. (Outlet parallel to joists.) (New construction)

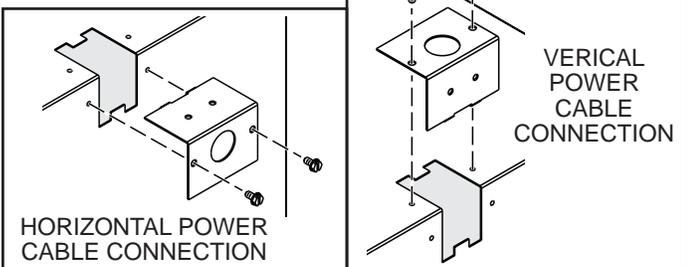


Mounting brackets mounted to top of sides of housing. (Outlet parallel to joists.) (New or existing construction)

Mounting brackets flipped over and mounted to top of sides of housing. (Outlet parallel to joists.) (New or existing construction)

## WIRING OPTIONS

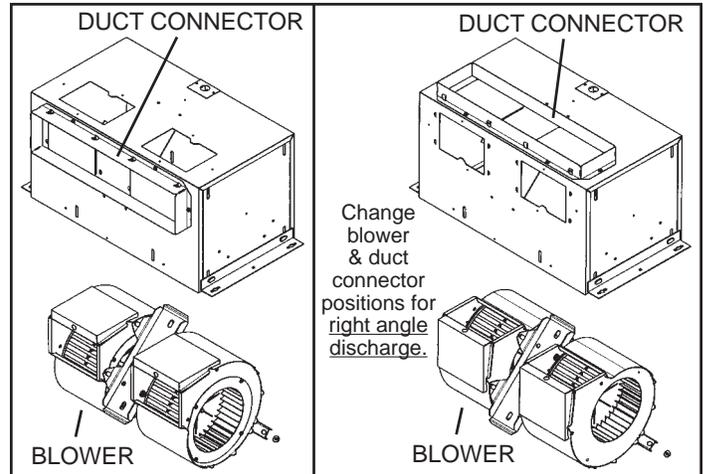
### WIRING PLATE POSITION



Wiring plate mounts to side or top of housing.

## DUCTING OPTIONS

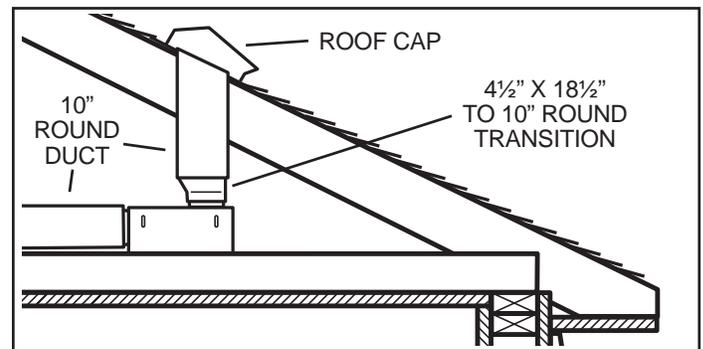
### BLOWER DISCHARGE POSITIONS



Blower and duct connector in straight-through discharge position (factory shipped).

Blower and duct connector in right-angle discharge position.

### DUCTING (Right angle blower discharge)



Typical ductwork connection to a ventilator converted to right angle discharge.

## USE AND CARE

Ventilator is designed for continuous operation. If desired, it may be controlled using an on/off switch or a solid-state, variable speed control. Follow wiring instructions packed with control, and adhere to all local and state codes, and the National Electrical Code.



**WARNING: To reduce the risk of electric shock, disconnect from power supply before servicing.**

**To clean blower assembly:** Remove access panel, unplug blower from housing, remove blower mounting nuts, and carefully remove blower from housing. Use appropriate vacuum attachment or a soft cloth and mild soap or detergent to clean blower discharge area and wheel. **DO NOT ALLOW WATER TO ENTER MOTOR.** Make sure blower assembly is completely dry before reinstalling.

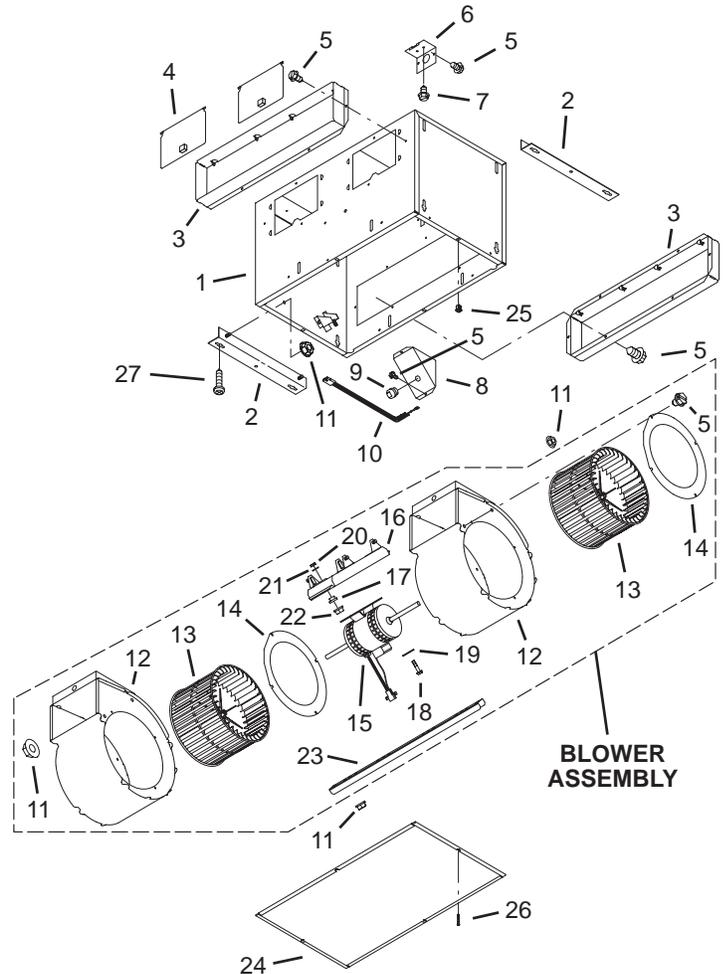
Motor is permanently lubricated. Do not oil or disassemble motor.

## SERVICE PARTS

KEY NO.	PART NO.	DESCRIPTION
1	97014744	Housing Assembly
2	97014728	Mounting Bracket (2 req.)
3	98009449	Duct Connector (2 req.)
4	97014822	Damper Flap Assembly (2 req.)
5	99150415	Screw, 8-18 x 1/4 (18 req.)*
6	98005512	Wiring Plate
7	99150471	Ground Screw, 10-32 x 1/2 (2 req.)
8	98005513	Wire Box Cover
9	99400035	Strain Relief Bushing
10	97006039	Wire Harness
11	99260477	Nut, 1/4-20 (12 req.)*
12	97014745	Scroll Assembly (2 req.)
13	99110805	Blower Wheel, (2 req.)
14	98009399	Inlet Ring (2 req.)
15	99080486	Motor (T400L)
	99080487	Motor (T500L)
	99080488	Motor (T700L)
16	97014794	Motor Mounting Bracket
17	99100497	Rubber Isolator (4 req.)
18	99160380	Screw, 10-24 x 7/8 (4 req.)*
19	99250399	Washer (4 req.)*
20	99260306	Nut, Hex 10-24 (4 req.)*
21	99250254	Washer (4 req.)*
22	93260456	Nut, Hex Flange 3/8-16
23	98009461	Scroll Mounting Channel
---	-----	Blower Assembly, Complete (Includes Key Nos. 5 & 11-23)
	97014817	(T400L)
	97014819	(T500L)
	97014821	(T700L)
24	98009464	Access Panel
25	99420470	Access Panel Nut (4 req.)
26	99150472	Access Panel Mounting Screw (4 req.)
27	99150591	Screw, 10-16 x 7/8 (4 req.)

Order replacement parts by PART NO. - not by KEY NO.  
\* Standard hardware - may be purchased locally.

## SERVICE PARTS



## WARRANTY

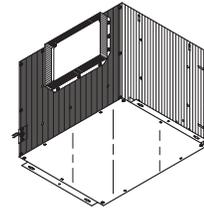
### Limitation of Warranties and Claims

Seller warrants to the original purchaser that the goods sold hereunder shall be free from defects in workmanship and material under normal use and service (except in those cases where the materials are supplied by the buyer) for a period of one year from the date of original installation or eighteen (18) months from the date of shipment, whichever occurs first. The liability of seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, F.O.B. factory and at seller's discretion) for any part or parts which are returned by buyer during such period provided that:

- seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- the defective unit is returned to seller, transportation charges prepaid by buyer.
- payment in full has been received by seller or said products; and
- seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)

# IN-LINE VENTILATORS • 120V



## READ AND SAVE THESE INSTRUCTIONS

### WARNING

#### TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. To reduce the risk of fire, use only metal ductwork.
8. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Interrupter) - protected branch circuit.
9. Never place a switch where it can be reached from a tub or shower.
10. This unit must be grounded.

### CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. **If ventilator is installed in an unconditioned space (such as an attic):** Surround the ventilator with thermal insulation - to minimize possible condensation.
4. Please read specification label on product for further information and requirements.

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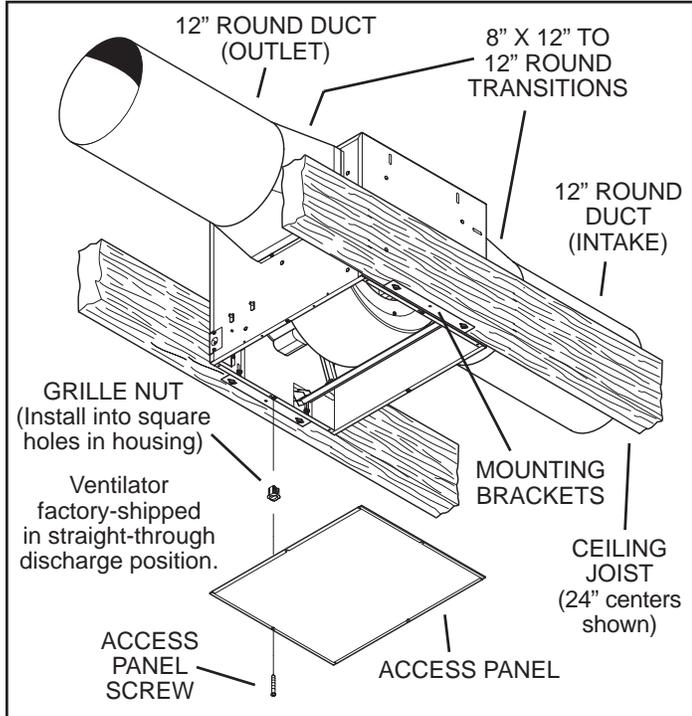
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**Installer: Leave this manual with the homeowner.**  
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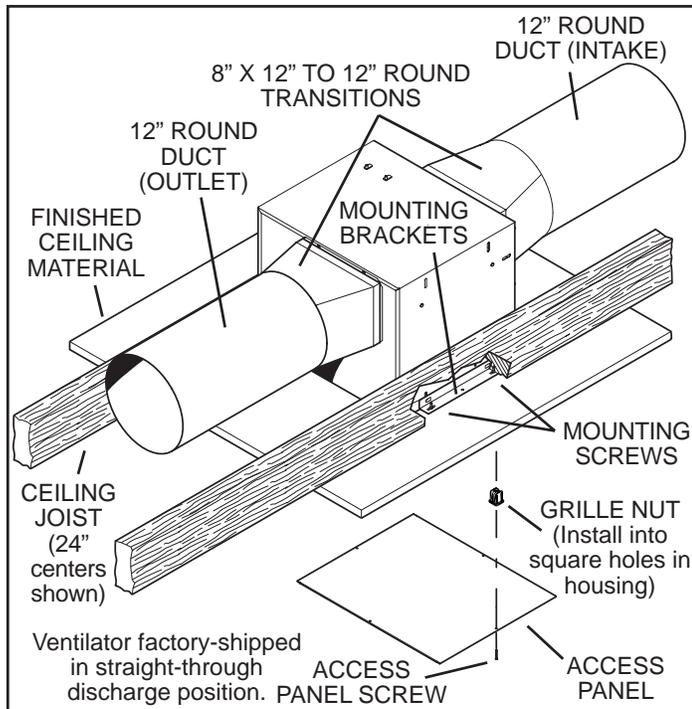
## TYPICAL INSTALLATION

### MOUNTING (*New Frame Construction*)



Factory-shipped unit installed in new construction.

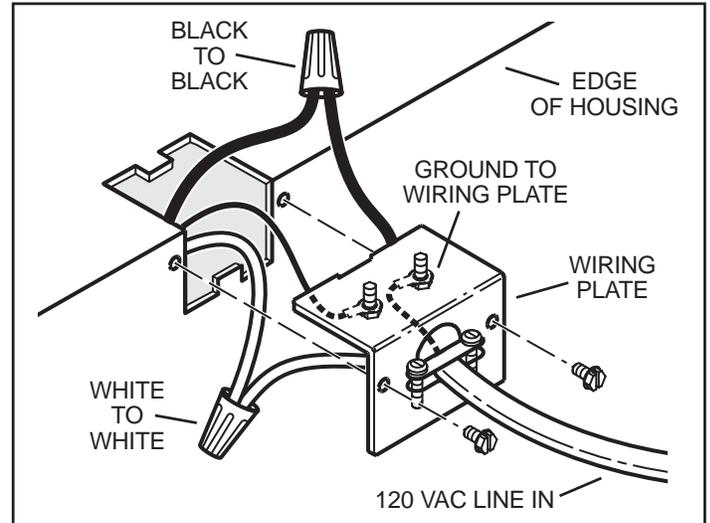
### MOUNTING (*Existing Frame Construction*)



Factory-shipped unit installed in existing construction.

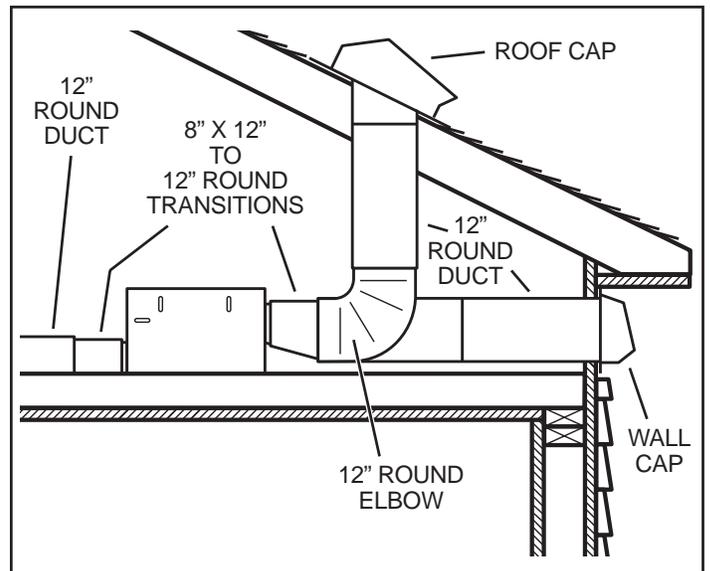
## TYPICAL INSTALLATION

### WIRING



Ventilator can be wired from outside of housing. Use UL approved connectors to wire per local codes.

### DUCTING (*Straight-through blower discharge*)



Two ways to connect ductwork to a factory-shipped unit.

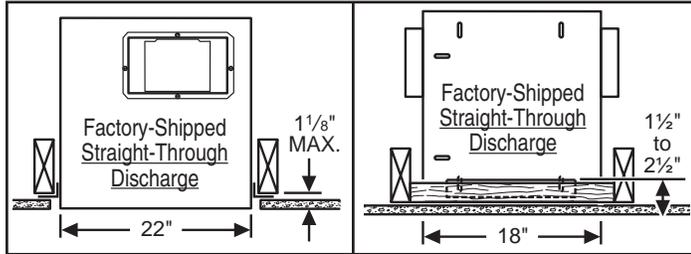
### IMPORTANT:

#### **Remove shipping tape from damper**

Remove the shipping tape from the damper flap and make sure that damper flap opens and closes freely inside the ductwork. Use duct tape to make ductwork connections secure and air-tight.

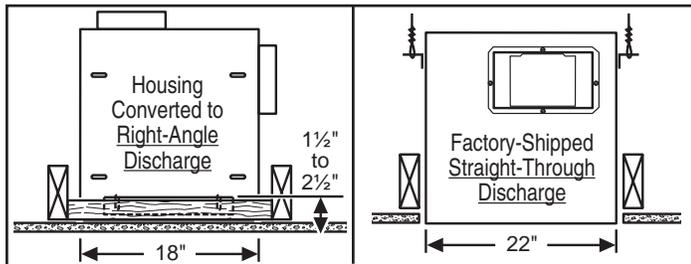
## MOUNTING OPTIONS

¼-20 hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.



Mounting brackets in factory-shipped position, mounted directly to joists. (Outlet parallel to joists.) (New construction)

Mounting brackets flipped over and mounted to additional framing. (Outlet perpendicular to joists.) (New or Existing construction)

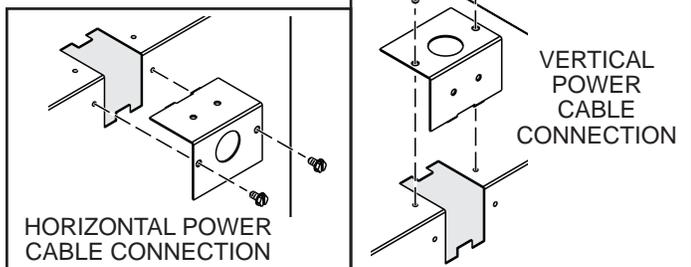


Mounting brackets flipped over and mounted to additional framing. (Outlet vertical.) (New or Existing construction)

Mounting brackets flipped over and mounted to top of housing. Housing secured with cables. (Outlet parallel to joists.) (New or Existing construction)

## WIRING OPTIONS

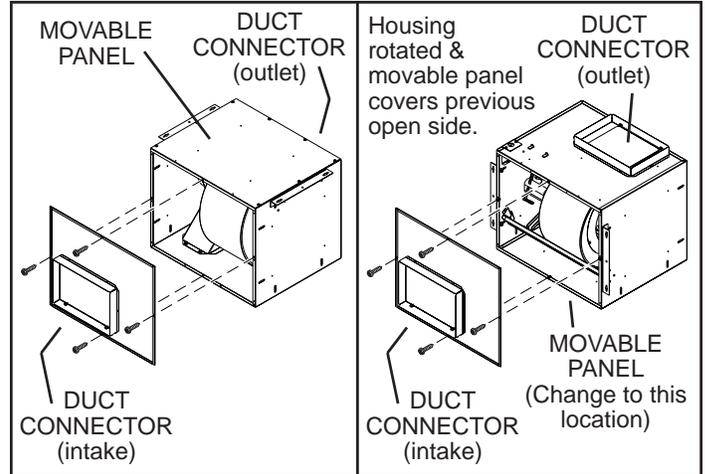
### WIRING PLATE POSITION



Wiring plate mounts to side or top of housing.

## DUCTING OPTIONS

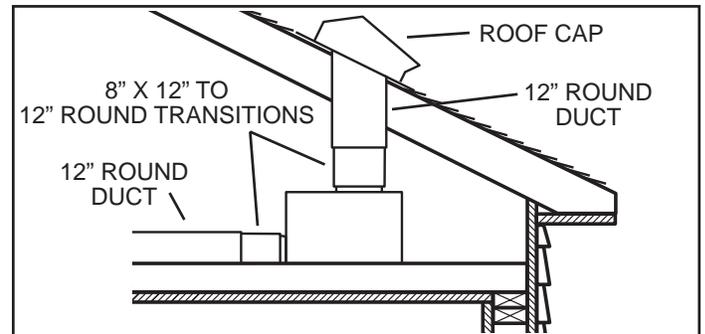
### BLOWER DISCHARGE POSITIONS



Ventilator shown in straight-through discharge position (factory shipped).

Ventilator shown in right-angle discharge position (change movable panel to new location as shown).

### DUCTING (Vertical blower discharge)



Typical ductwork connection to a ventilator converted to right-angle discharge.

## USE AND CARE

Ventilator is designed for continuous operation. If desired, it may be controlled using an on/off switch or a solid-state, variable speed control. Follow wiring instructions packed with control, and adhere to all local and state codes, and the National Electrical Code.

**⚡ WARNING: To reduce the risk of electric shock, disconnect from power supply before servicing.**

**To clean blower assembly:** Remove access panel, unplug blower from housing, remove blower mounting nuts, and carefully remove blower from housing. Use appropriate vacuum attachment or a soft cloth and mild soap or detergent to clean blower discharge area and wheel. **DO NOT ALLOW WATER TO ENTER MOTOR.** Make sure blower assembly is completely dry before reinstalling.

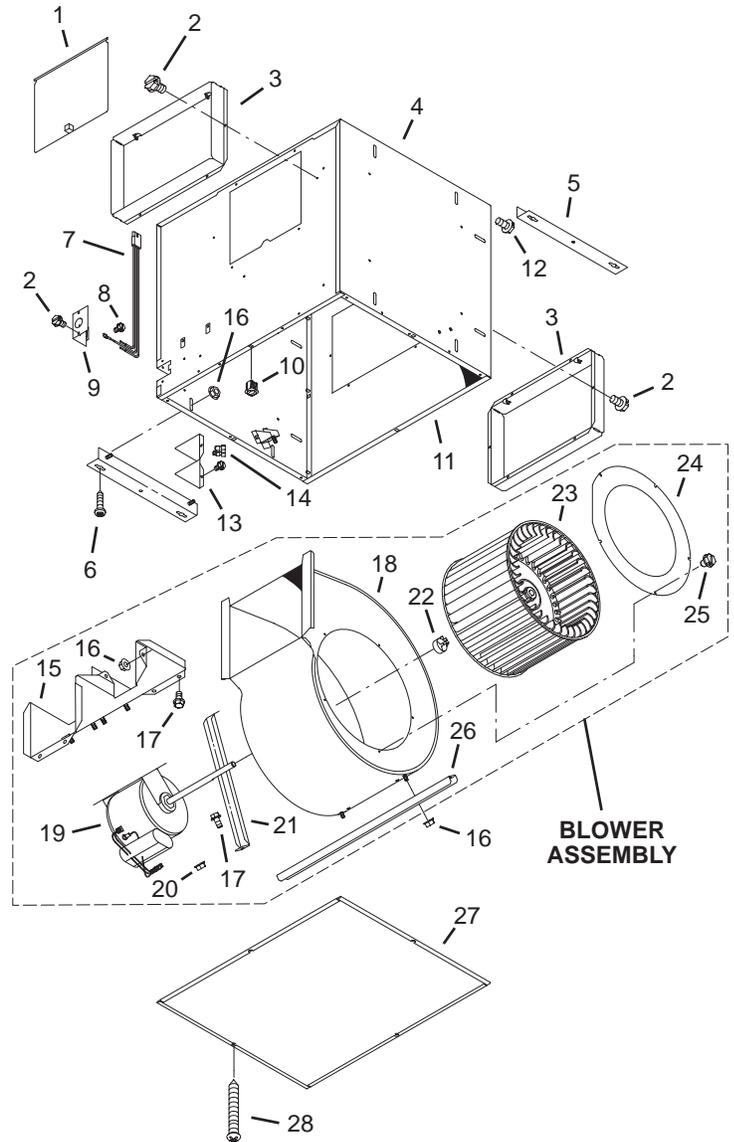
Motor is permanently lubricated. Do not oil or disassemble motor.

## SERVICE PARTS

KEY NO.	PART NO.	DESCRIPTION
1	97014853	Damper Flap
2	99150415	Screw, #8B x 1/4" (16 req.)
3	98009520	Duct Connector (2 req.)
4	97014784	Housing Assembly
5	97014728	Mounting Bracket (2 req.)
6	99150591	Mounting Screw (4 req.)
7	97006142	Wiring Harness
8	99150471	Ground Screw, #10-32 x 1/2" (2 req.)
9	98005512	Wiring Adapter Plate
10	99420470	Access Panel Nut (4 req.)
11	98009531	Movable Housing Panel
12	93150487	Screw, #10-24 x .375" (8 req.)
13	98005513	Outlet Box Cover
14	99400035	Strain Relief Bushing
15	97014788	Motor Bracket
16	99260477	Whiz Nut, 1/4"-20* (11 req.)
17	99200202	Screw, 1/4"-20 x 1/2" (5 req.)
18	97014785	Blower Scroll
19	99080490	Motor (T900L)
	99080491	Motor (T1500L)
20	93260447	Nut, Hex Flange 5/16-18* (5 req.)
21	98009516	Support Bracket
22	99680019	Wheel Clamp
23	99020274	Blower Wheel (Includes Key No. 22)
24	98009514	Inlet Ring
25	99150417	Screw, #8-18 x 1/4" (5 req.)
26	98009513	Scroll Support Channel
+	97014848	Blower Assembly Complete (T900L) (Includes Key Nos. 15 thru 26)
+	97014849	Blower Assembly Complete (T1500L) (Includes Key Nos. 15 thru 26)
27	98009532	Access Cover
28	99150472	Access Cover Screw (4 req.)

Order replacement parts by PART NO. - not by KEY NO.  
 \* Standard hardware - may be purchased locally.  
 + Not shown assembled.

## SERVICE PARTS



## WARRANTY

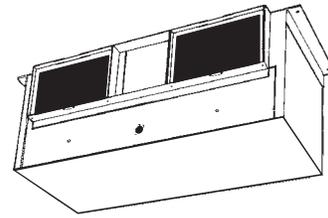
### Limitation of Warranties and Claims

Seller warrants to the original purchaser that the goods sold hereunder shall be free from defects in workmanship and material under normal use and service (except in those cases where the materials are supplied by the buyer) for a period of one year from the date of original installation or eighteen (18) months from the date of shipment, whichever occurs first. The liability of seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, F.O.B. factory and at seller's discretion) for any part or parts which are returned by buyer during such period provided that:

- seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- the defective unit is returned to seller, transportation charges prepaid by buyer.
- payment in full has been received by seller or said products; and
- seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)

# IN-LINE CABINET VENTILATORS



## READ AND SAVE THESE INSTRUCTIONS

### WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

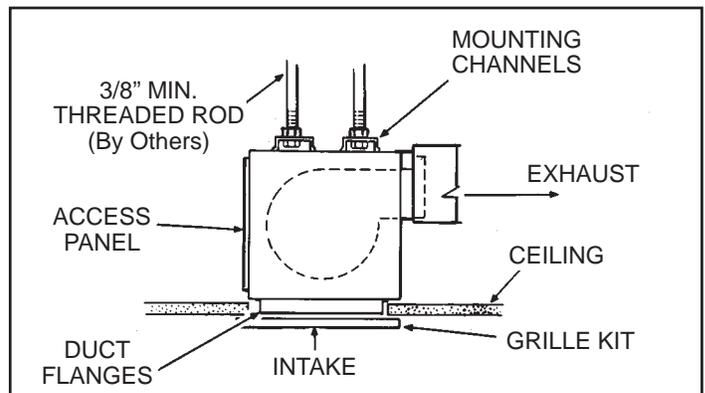
1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. This unit must be grounded.

### CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. Please read specification label on product for further information and requirements.

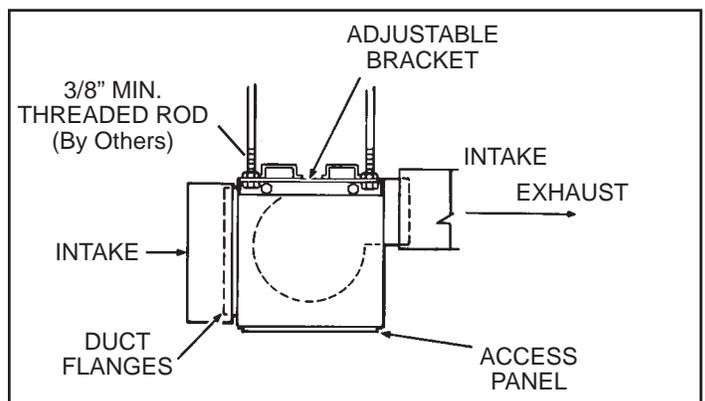
### PLAN INSTALLATION

#### MOUNTING (*Right-angle Discharge*)



*Factory shipped ready to be installed as a ceiling ventilator with right-angle discharge.*

#### MOUNTING (*In-line Configuration*)

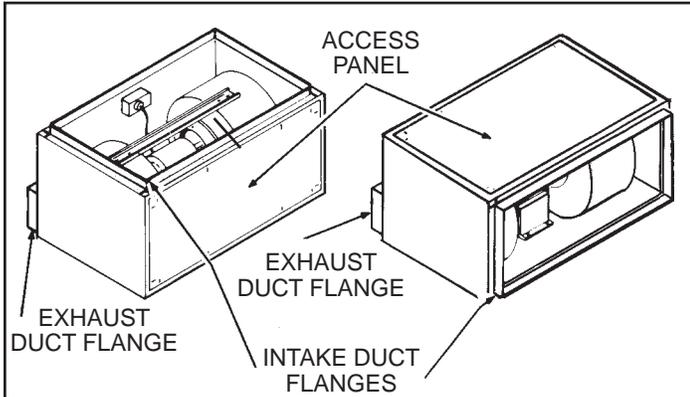


*Converted for in-line applications.*

**Installer: Leave this manual with the homeowner.  
Homeowner: Use and Care information on page 3.**

## PLAN INSTALLATION (cont.)

### Converting from Right-Angle to Inline



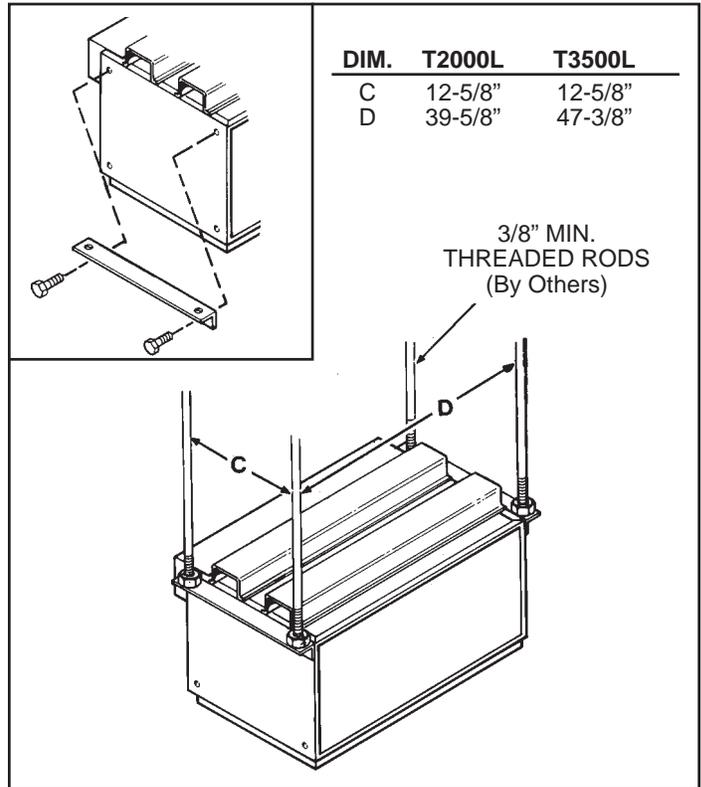
Remove and reverse duct flanges and access panel positions on housing.

For correct intake and exhaust duct size, see Table 1.

TABLE 1

MODEL	INTAKE DUCT SIZE	EXHAUST DUCT SIZE
T2000L	12-3/8" x 35-3/4"	7-3/4" x 33-3/4"
T3500L	14-1/2" x 43-1/2"	9-3/4" x 41-3/8"

## MOUNTING OPTIONS

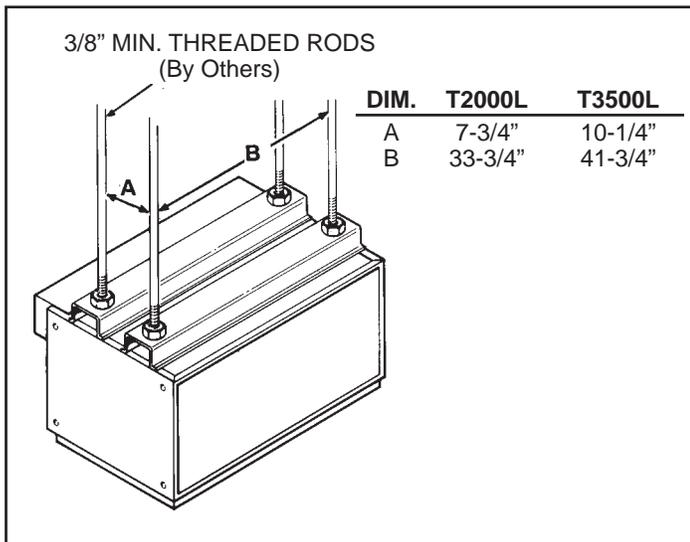


Mounting with threaded rod through adjustable mounting brackets located at top of housing.

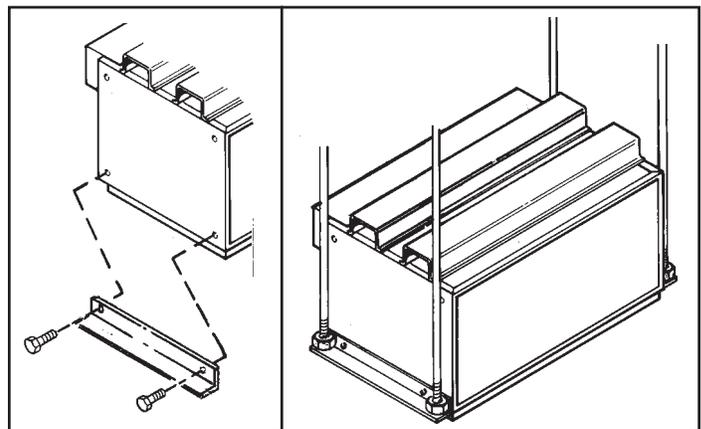
## MOUNTING OPTIONS

Provide solid support to minimize sound levels. There are two basic mounting methods for these units.

Mounting brackets can be bolted to housing ends in a variety of configurations. Use screws and nuts provided in parts bag.



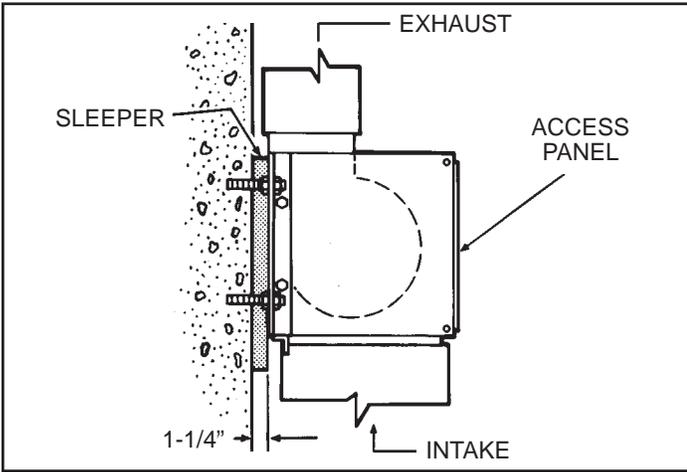
Typical mounting with threaded rod through mounting channels on top of housing.



Mounting with threaded rods through adjustable mounting brackets located at bottom of housing.

If installing unit as a ceiling ventilator, make sure that either duct flanges or housing will be flush with finished ceiling. Duct flanges may be removed and discarded if they interfere with a ceiling installation.

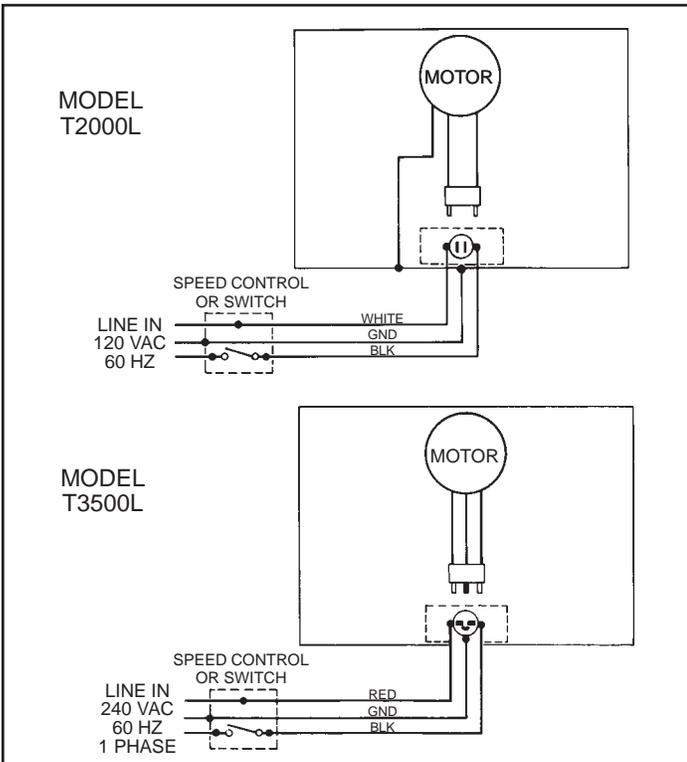
## MOUNTING OPTIONS



Typical wall mounting with 3/8" threaded fasteners (by others) through mounting brackets.

## ELECTRICAL CONNECTIONS

Connect electrical power cable to housing with proper connector for type of cable used. Provide 6" leads inside wiring box.

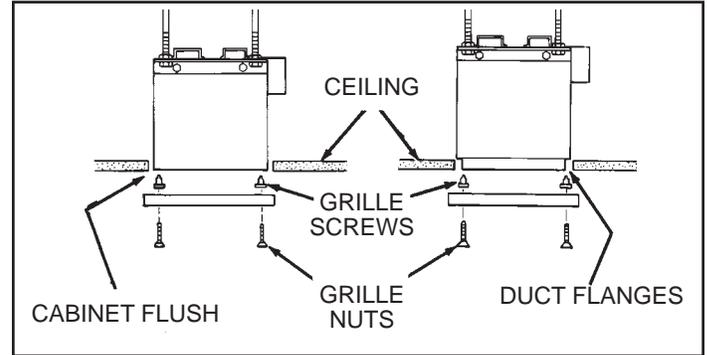


## ACCESSORIES

MODEL	DAMPER KIT	GRILLE KIT	SPEED CONTROL	VIBRATION HANGER
T2000L	D100	G102	72V / 72W	V104
T3500L	D101	G103	75V	V104

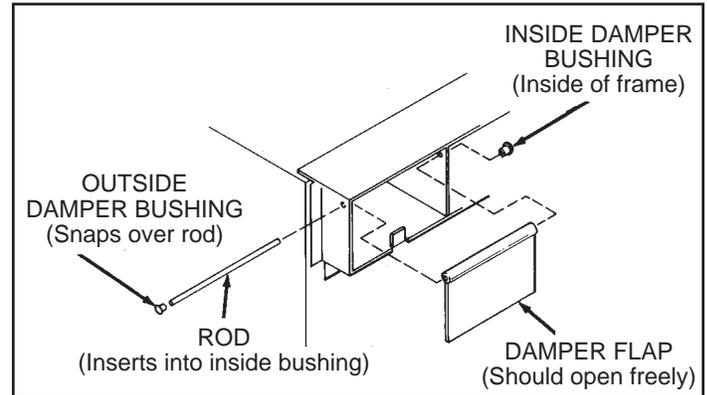
## ACCESSORY INSTALLATIONS

If ventilator will discharge directly outside, install a damper kit to prevent backdrafts. A grille kit is available for applications where ventilator is installed with direct or remote room air intake.



Snap screw bushings into square openings around intake opening. Install grille with screws provided.

**NOTE:** If duct flanges around intake opening interfere with installation, remove them. Make sure that housing is flush with finished ceiling when ventilator is mounted.



Install damper flap using rod provided.

## USE AND CARE

Ventilator is designed for continuous operation. If desired, it may be controlled using an on/off switch or a solid-state, variable speed control. Follow wiring instructions packed with control, and adhere to all local and state codes, and the National Electrical Code.



**WARNING:** To reduce the risk of electric shock, disconnect from power supply before servicing.

**To clean grille:** Use appropriate vacuum attachment or remove grille and clean with a soft cloth and mild soap or detergent. Dry grille thoroughly before reinstalling.

**To clean blower assembly:** Remove either access panel or ceiling grille. Unplug blower assembly. Provide safe support for blower assembly. Remove blower mounting screws and lift blower assembly out of housing. Gently vacuum housing and blower motor. Vacuum or gently wash blower wheels and housings. **DO NOT ALLOW WATER TO ENTER MOTOR.** Make sure blower assembly is completely dry before reinstalling. Replace blower assembly in housing and plug assembly in. Replace grille and/or access panel.

Motor is permanently lubricated. Do not oil or disassemble motor.

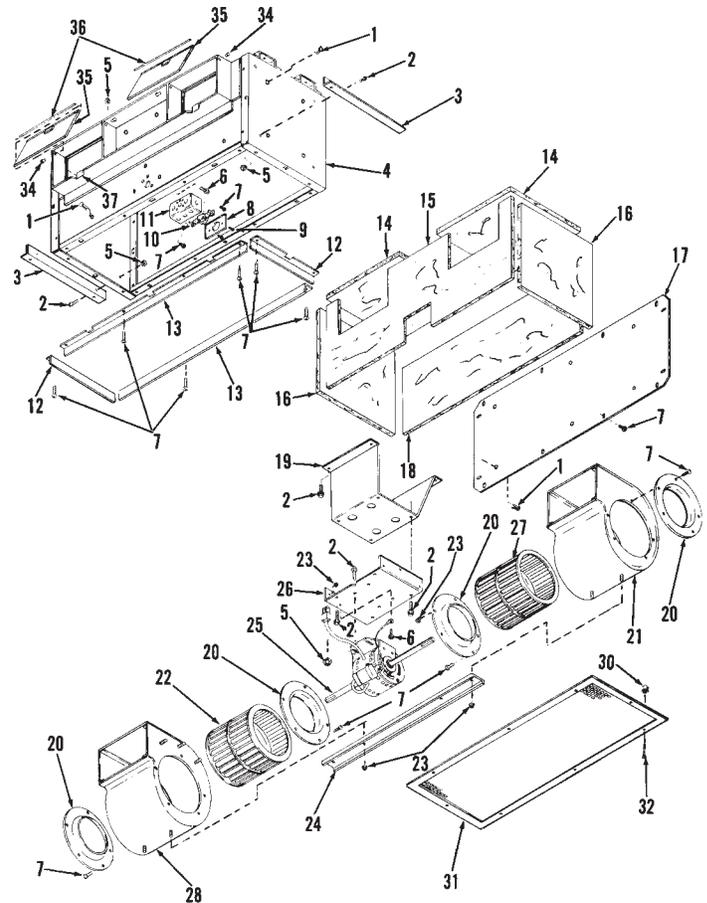
## SERVICE PARTS

KEY NO.	MODEL T2000L PART NO.	QTY.	MODEL T3500L PART NO.	QTY.	DESCRIPTION
1	99420466	27	99420466	27	Insulation Clip
2	99170261	16	99170261	18	#5/16 - 18 x 1/2 Serrated Hex Head Screw
3	98006462	2	98006462	2	Mounting Bracket
4	97008107	1	97008108	1	Cabinet Body
5	93260447	12	93260447	14	#5/16 - 18 Lock Nut
6	99150471	2	---	--	#10-32 x 1/2 Green Ground Screw
7	99150490	42	99150490	44	#10B x 3/8 Serrated Pan Head Screw
8	99270658	1	99270658	1	Outlet Box Cover
9	99160319	2	99160319	2	#6-32 x 3/8 Machine Screw
10	99270656	1	99270657	1	Receptacle
11	99270659	1	99270659	1	Outlet Box
12	98006364	2	98006376	2	Duct Inlet Flange - short
13	98006363	2	98006375	2	Duct Inlet Flange - long
14	99500335	2	99500339	2	Bottom Panel
15	99500333	1	99500337	1	Back Panel
16	99500334	2	99500338	2	End Panel
17	98006699	1	98006700	1	Access Panel
18	99500336	1	99500340	1	Access Panel
19	97007450	1	97007451	1	Blower Platform
20	98006475	4	98006476	4	Venturi Ring
21	97007453	1	97007455	1	Right Hand Scroll
22	99020172	1	99020174	1	Blower Wheel - clockwise
23	99260477	10	99260477	12	1/4-20 Lock Nut
24	98006365	1	98006377	1	Blower Support Channel
25	99080194	1	99080195	1	Motor
26	98006381	1	98006382	1	Motor Platform
27	99020173	1	99020175	1	Blower Wheel - counter-clockwise
28	97007452	1	97007454	1	Left Hand Scroll
29	G-102	1	G-103	1	Grille Kit (contains Key Nos. 30, 31 & 32)
30	99420470	8	99420470	8	Grille Nut
31	98006477	1	98006478	1	Grille
32	99150472	8	99150472	8	#8-18 x 1 1/4 Grille Screw
33	D-100	1	D-101	1	Damper Kit (contains Key Nos. 34, 35, 36 & 37)
34	99100379	4	99100379	4	Damper Bushing
35	98006479	2	98006480	2	Damper Flap
36	98006481	2	98006472	2	Damper Rod
37	99760002	2	99760002	2	Damper Flap Magnet
**	97007448	1	97007448	1	Parts Bag (contains 4 ea. of Key Nos. 2 & 5)

Order replacement parts by PART NO. - not by KEY NO.

\*\* Not Shown

## SERVICE PARTS



## WARRANTY

### Limitation of Warranties and Claims

Seller warrants to the original purchaser that the goods sold hereunder shall be free from defects in workmanship and material under normal use and service (except in those cases where the materials are supplied by the buyer) for a period of one year from the date of original installation or eighteen (18) months from the date of shipment, whichever occurs first. The liability of seller under this warranty is limited to replacing, repairing, or issuing credit (at cost, F.O.B. factory and at seller's discretion) for any part or parts which are returned by buyer during such period provided that:

- seller is notified in writing within ten (10) days following discovery of such defects by buyer, or within ten (10) days after such defects should reasonably have been discovered, whichever is less;
- the defective unit is returned to seller, transportation charges prepaid by buyer.
- payment in full has been received by seller or said products; and
- seller's examination of such unit shall disclose to its satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, act of God, or accident.

No warranty made hereunder shall extend to any seller product whose serial number is altered, effaced or removed. Seller makes no warranty, express or implied, with respect to motors, switches, controls, or other components of seller's product, where such components are warranted separately by their respective manufacturers. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable to buyer for indirect, incidental collateral, or consequential damages of any kind. (BUYER'S FAILURE TO PAY THE FULL AMOUNT DUE WITHIN SIXTY (60) DAYS OF DATE OF INVOICE SHALL OPERATE TO RELEASE SELLER FROM ANY AND ALL LIABILITY OR OBLIGATION ARISING PURSUANT TO ANY WARRANTY, EXPRESS OR IMPLIED, WHETHER STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, MADE IN CONNECTION WITH ANY CONTRACT FORMED HEREUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTACT.)