Easy installation

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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.

NOT FOR USE IN A COOKING AREA
Do not install above or inside this area

Typical Installation

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

Joists  I-Joists  Trusses

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

Punch out Mask from packaging. See Step 5.
Installation

2 Install in Wall or Ceiling

- OR -

Wall

2 Screw through housing on opposite side

3 Tighten screw into housing to secure mounting

Ceiling

4" to 3" Reducer (provided)

3" Ducting

3 Tape

4" Ducting

2 Tape

Insert tab into slot in housing.

3 Install Ducting

- OR -

- OR -

3 Tape

4" to 3" Reducer (provided)

3" Ducting

3 Tape

4" Ducting

2 Tape

Wall

UP

1 2

1 Insert tab into slot in housing.
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.

Attach cable clamp to Knockout Plate. Knockout Plate may be oriented as desired.
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

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

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 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.)
WARNING

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

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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), 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.

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

**MOUNTING (New Frame Construction)**

- **Blower** factory-shipped in straight through discharge position.
- **Additional 1 1/2" Framing**
- **Ceiling Joist** (16" centers shown)
- **Mounting Brackets** factory-shipped in position for 1/2" ceiling material.
- **Mounting Screw**

Factory-shipped unit installed in new construction.

**WIRING**

- **Black to Black**
- **Ground to Wiring Plate**
- **White to White**
- **120 VAC Line In**

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

**DUCTING (Horizontal blower discharge)**

- **Roof Cap**
- **Round Duct**
- **Round Elbow**
- **Wall Cap**

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.

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

\( \frac{3}{4}-20 \) hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.

DUCTING OPTIONS

BLOWER DISCHARGE POSITIONS

WIRING OPTIONS

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.
**MODELS**

- T100L
- T150L
- T200L
- T250L
- T300L

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**SERVICE PARTS**

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>97014735</td>
<td>Housing Assembly (T100L &amp; T150L)</td>
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<td>2</td>
<td>97014736</td>
<td>Housing Assembly (T200L, T250L &amp; T300L)</td>
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<td>3</td>
<td>97014728</td>
<td>Mounting Bracket (2 req.)</td>
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<td>4</td>
<td>97014760</td>
<td>Damper Assembly (6&quot; dia.)</td>
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<td>5</td>
<td>97014761</td>
<td>Damper Assembly (8&quot; dia.)</td>
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<td>6</td>
<td>99390099</td>
<td>Duct Connector (6&quot; dia.)</td>
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<td>7</td>
<td>99150415</td>
<td>Screw, 8-18 x ¼ (12 req.)*</td>
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<td>8</td>
<td>98005513</td>
<td>Wire Box Cover</td>
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<td>9</td>
<td>9800035</td>
<td>Strain Relief Bushing</td>
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<td>10</td>
<td>97014774</td>
<td>Scroll Assembly (T100L &amp; T150L)</td>
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<td>11</td>
<td>98009399</td>
<td>Inlet Ring</td>
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<td>12</td>
<td>99110805</td>
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<td>Cover Mounting Screw (2 req.)</td>
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<td>21</td>
<td>99150591</td>
<td>Screw, 10-16 x 7/8 (4 req.)*</td>
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</tbody>
</table>

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

* Standard hardware - may be purchased locally.

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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 or said products; and
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, 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 HEREBUNDER. BUYER AGREES THAT SUCH FAILURE TO PAY SHALL CONSTITUTE A VOLUNTARY WAIVER OF ANY AND ALL SUCH WARRANTIES ARISING PURSUANT TO SUCH CONTRACT.)

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TWIN CITY FAN & BLOWER, 5959 Trenton Lane, Minneapolis, MN 55442

99042949B
READ AND SAVE THESE INSTRUCTIONS

WARNING

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

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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.
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

Do not install above or inside this area.

NOT FOR USE IN A COOKING AREA.

Keep duct runs short.

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.
**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.

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<td>97018331</td>
<td>Duct Connector</td>
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<td>97018721</td>
<td>Parts Bag (includes wiring plate &amp; all screws)</td>
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<td>4</td>
<td>97018447</td>
<td>Wire Panel/Harness Assembly</td>
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<tr>
<td>5</td>
<td>97020011</td>
<td>Blower Assembly</td>
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<tr>
<td>6</td>
<td>97021087</td>
<td>Grille Assembly (includes key no. 7)</td>
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<tr>
<td>7</td>
<td>99140208</td>
<td>Grille Spring (2 req’d)</td>
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<td>8</td>
<td>97018014</td>
<td>Spacer (2 supplied)</td>
</tr>
<tr>
<td>9</td>
<td>97020013</td>
<td>Hanger Bar Kit</td>
</tr>
</tbody>
</table>

Order service parts by “Part No.” - not by “Key No.”

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**CONNECT 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 MASK & FINISH CEILING**

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   Tape mask into housing. Mask protects unit during construction. Remove before installing grille.
   Install ceiling material. Cut out around housing.
WARNING

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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.

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

**MOUNTING** *(New Frame Construction)*

- 10" ROUND DUCT
- 4½" X 18½" TO 10" ROUND TRANSITION
- Mounting brackets factory-shipped in position for ½" ceiling material.
- Ceiling joist (24" centers shown)
- 10" ROUND DUCT
- 4½" X 18½" TO 10" ROUND TRANSITION
- Blower factory-shipped in horizontal discharge position.
- Mounting screw

Factory-shipped unit installed in new construction.

**MOUNTING** *(Existing Frame Construction)*

- 2 X 4 FRAMING (wide side down)
- 4½" X 18½" TO 10" ROUND TRANSITION
- Mounting brackets (Attached to opposite sides of housing & upside-down, so housing is flush with finished ceiling)
- Ceiling joist (24" centers shown)
- 10" ROUND DUCT
- Mounting screw
- Finished ceiling material

Factory-shipped unit installed in existing construction.

**WIRING**

- Black to Black
- Ground to wiring plate
- White to White
- 120 VAC Line In

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

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

- 10" ROUND DUCT
- 4½" X 18½" TO 10" ROUND TRANSITION
- Roof cap
- 10" ROUND ELBOW
- 10" Round cap

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

3/8-20 hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.

DUCTING OPTIONS

BLOWER DISCHARGE POSITIONS

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.) (Existing construction)

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)

WIRING OPTIONS

WIRING PLATE POSITION

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

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>PART NO.</th>
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<td>Damper Flap Assembly (2 req.)</td>
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Order replacement parts by PART NO. - not by KEY NO.
* Standard hardware - may be purchased locally.

## 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 or said products; and

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.)
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.

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

**MOUNTING (New Frame Construction)**

- 12" ROUND DUCT (OUTLET)
- 8" X 12" TO 12" ROUND TRANSITIONS
- MOUNTING BRACKETS
- CEILING JOIST (24" centers shown)
- ACCESS PANEL SCREW
- Ventilator factory-shipped in straight-through discharge position.

**WIRING**

- WHITE TO WHITE
- BLACK TO BLACK
- GROUND TO HOUSING
- 120 VAC LINE IN
- Ventilator can be wired from outside of housing. Use UL approved connectors to wire per local codes.

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

- 8" X 12" TO 12" ROUND TRANSITIONS
- MOUNTING BRACKETS
- FINISHED CEILING MATERIAL
- MOUNTING SCREWS
- GRILLE NUT (Install into square holes in housing)
- ACCESS PANEL SCREW
- Ventilator factory-shipped in straight-through discharge position.

**MOUNTING (Existing Frame Construction)**

- 12" ROUND DUCT (OUTLET)
- 8" X 12" TO 12" ROUND TRANSITIONS
- MOUNTING BRACKETS
- MOUNTING SCREWS
- CEILING JOIST (24" centers shown)
- ACCESS PANEL SCREW
- ACCESS PANEL

**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

¾-20 hex nuts secure mounting brackets to housing. Loosen and re-tighten or remove and replace nuts as necessary for desired mounting bracket position.

DUCTING OPTIONS

BLOWER DISCHARGE POSITIONS

WIRING OPTIONS

DUCTING (Vertical blower 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

<table>
<thead>
<tr>
<th>KEY NO.</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<td>99150591</td>
<td>Mounting Screw (4 req.)</td>
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<td>28</td>
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<td>Access Cover Screw (4 req.)</td>
</tr>
</tbody>
</table>

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

* Standard hardware - may be purchased locally.
+ Not shown assembled.

---

## 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 or said products; and

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, special, 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 CONTRACT.)

TWIN CITY FAN & BLOWER, 5959 Trenton Lane, Minneapolis, MN 55442

99042955B
**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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>INTAKE DUCT SIZE</th>
<th>EXHAUST DUCT SIZE</th>
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<tbody>
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<td>T2000L</td>
<td>12-3/8&quot; x 35-3/4&quot;</td>
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<tr>
<td>T3500L</td>
<td>14-1/2&quot; x 43-1/2&quot;</td>
<td>9-3/4&quot; x 41-3/8&quot;</td>
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</table>

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.

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.
**MODELS • T2000L • T3500L**

**MOUNTING OPTIONS**

![Diagram of mounting options](image)

*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.

**ACCESSORY INSTALLATIONS**

If ventilator will discharge directly outside, install 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.

**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.

**ACCESSORIES**

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<th>MODEL</th>
<th>DAMPER KIT</th>
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**MODELS** • T2000L • T3500L

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

**Not Shown**

## 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 or said products; and

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.

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