NOTE: 2 & 3 speed fans are not setup to be hard wired. You will need to cut the power supply cord and connect directly to the black (hot), white (neutral), and green (ground) wires inside the cord if you want to hard wire them.

- VARIABLE SPEED FANS ONLY -
Wiring information for each variable speed fan is located on a sticker on the motor.

If you will be hard wiring one of our variable speed fans, make note of the black, white, and green wire connections before disconnecting the power supply cord, and make sure the wire used to hard wire the fan is connected to the same terminals.

Our ½” watertight wiring connectors or ½” flexible conduit connectors can be screwed directly to any of the variable speed fan motors. Flexible conduit and connectors are included in our vent system wiring kit or can be purchased separately.

14 gauge or thicker wire is recommend when wiring the fan and any other venting supplies purchased from us.

The picture to the left shows optimal fan and shutter placement in a greenhouse. The exhaust fan should be mounted near the peak so that it is exhausting the hottest air in the greenhouse. The intake shutters should be mounted on the opposite end of the greenhouse so that the cooler fresh air travels across the entire structure minimizing hot spots.

**Exhaust Fan Installation**

1. Select a location on the greenhouse to insert the fan.
2. Draw an outline of the area to be cut in the plastic panel. Dimensions for fans are included with these instructions.
3. Use a drill or a razor to create an opening large enough to insert a fine saw blade inside the outlined area of the wall panel.
4. Cut out the remainder of the outlined area with the saw, and repeat for each shutter and/or fan.

5. Fasten the fan frame to the greenhouse frame. DO NOT mount the fan to the covering because it will not support the fan’s weight. You can make mounting brackets if needed out of 1/8” thick 1” x 1” aluminum angle available at most hardware stores.

6. Insert the fan into the opening cut in the plastic panel and attach the mounting brackets to the greenhouse. The fan should be mounted so that the louvers open to the outside of the greenhouse.

Exhaust Fan & Intake Shutter Dimensions

<table>
<thead>
<tr>
<th>Fan Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>Opening Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12”</td>
<td>15”</td>
<td>15”</td>
<td>12 1/8”</td>
<td>12 1/8”</td>
<td>6”</td>
<td>3”</td>
<td>1/8”</td>
<td>2”</td>
<td>12 1/4” sq.</td>
</tr>
<tr>
<td>16”</td>
<td>19”</td>
<td>19”</td>
<td>16 1/8”</td>
<td>16 1/8”</td>
<td>6”</td>
<td>3”</td>
<td>1/8”</td>
<td>2”</td>
<td>16 1/4” sq.</td>
</tr>
<tr>
<td>20”</td>
<td>23”</td>
<td>23”</td>
<td>20 1/8”</td>
<td>20 1/8”</td>
<td>6”</td>
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</tr>
<tr>
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<td>3”</td>
<td>1/8”</td>
<td>2”</td>
<td>24 1/4” sq.</td>
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</table>

Variable Speed Fan Dimensions

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<td>1/8”</td>
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<td>2”</td>
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<td>24 1/8”</td>
<td>24 1/8”</td>
<td>2 1/8”</td>
<td>5 3/4”</td>
<td>1/8”</td>
<td>2”</td>
<td>24 1/4” sq.</td>
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</tbody>
</table>

3 Speed Fan Dimensions

<table>
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<tr>
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<th>C</th>
<th>D</th>
<th>E</th>
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<td>2”</td>
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<td>1/8”</td>
<td>2”</td>
<td>16 1/4” sq.</td>
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<td>20 1/8”</td>
<td>2”</td>
<td>5 1/4”</td>
<td>1/8”</td>
<td>2”</td>
<td>20 1/4” sq.</td>
</tr>
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<td>1/8”</td>
<td>2”</td>
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</table>
**WIRING DIAGRAMS:**

### Basic Wiring

- Power Source
- White
- Black
- Thermostat
- Exhaust Fan

### Adding Fan Speed Control

- Power Source
- White
- Black
- Black
- Thermostat
- Fan Speed Control
- Exhaust Fan

### Adding Shutter Motors

- Power Source
- White
- Black
- Thermostat
- Black
- White
- Fan Speed Control
- Exhaust Fan
- Shutter Motor
- Black
- White
- Shutter Motor

**IMPORTANT:** Fan Speed Control must be installed only on the wire to the fan, not to the shutter motors.

*FOR YOUR PROTECTION, ALL ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED ELECTRICAL CONTRACTOR.*