**Hooded Tubeaxial Roof Fans (Filtered Supply)**

**INSTALLATION & ASSEMBLY MANUAL**

**IM-4850FS**

September 2009

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**Fan Sizes/Qty**

<table>
<thead>
<tr>
<th>Panel End Assy, Male</th>
<th>Panel End Assy, Female</th>
<th>Hood Panel</th>
<th>Hood Side Rail Assy</th>
<th>Filter Rail Assy, Long</th>
<th>Filter Rail Assy, Short</th>
<th>Filter Rail</th>
<th>Hood Gusset</th>
<th>Stiffener Angle</th>
<th>Filter Stop Plate</th>
<th>Hood Mount Bar</th>
<th>Filter Size A</th>
<th>Filter Size B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
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<td>21</td>
<td>24</td>
<td>30</td>
<td>36</td>
<td>42</td>
<td>48</td>
<td>54</td>
<td>60</td>
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</tbody>
</table>

- Fan sizes 21 to 36 are shipped fully assembled, unless otherwise specified.
- A minimum of two people are required for assembly. Before starting, review these instructions.
- The following tools are required:
  - Powered screwdriver (preferred), or drill
  - 3/8, 7/16, 1/2, 9/16 wrenches and sockets
  - 5/16" nut driver bit for powered screwdriver
  - Awl, for hole alignment

**Inspect for missing or damaged parts**

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Step 1 – Install Hood Mount Bars, Gussets and Filter Stops

Fasteners (Kit #1):
- Cap Screw, Serrated Flange, 3/8-16 x 0.75
- Hex Nut, Serrated Flange, 3/8-16

A. Assemble Hood Mount Bars and Filter Stop Plates, both sides, using cap screws and nuts.
B. Assemble four Hood Gussets to Hood Mount Bars and fan housing using cap screws and nuts.

Step 2 – Install Filter Channels and Stiffeners

Fasteners (Kit #7):
- Cap Screw, Serrated Flange, 5/16-18 x 0.75
- Hex Nut, Serrated Flange, 5/16-18

A. Assemble two Filter Channels to Hood Mount Bars using cap screws and nuts.
B. Assemble two Stiffener Angles to the Filter Channels using cap screws and nuts.

Step 3 – Install Filter Rail Assemblies

Fasteners (Kit #7):
- Cap Screw, Serrated Flange, 5/16-18 x 0.75
- Hex Nut, Serrated Flange, 5/16-18

A. Assemble two Long Rail Assemblies using cap screws and nuts.
B. Assemble two Short Rail Assemblies using cap screws and nuts.
Step 4 – Install Hood Side Rails
Fasteners (Kit #1):
- Cap Screw, Serrated Flange, 3/8-16 x 1.25
- Hex Nut, Serrated Flange, 3/8-16

A. Install two Hood Side Rail Assemblies to the Hood Mount Bars using cap screws and nuts. Do not fully tighten fasteners. They will be tightened in Step 7.

Step 5 – Install End Assy (Male)
Fasteners (Kit #1):
- Screws, #12

A. Assemble End Panel Assembly (male type) using two #12 screws.

Step 6 – Install Hood Panels
Fasteners (Kit #1):
- Screws, #12

A. Install the Hood Panels using #12 screws.
B. On Sizes 54 and 60, hood clips must be installed at each interlocking rib while installing the panels. Position the Hood Panel in place and reach underneath to slide the clip into place.

For Sizes 54 and 60, install hood clips at each rib.
Step 7 – Install End Assembly (Female)

Fasteners (Kit #1):
Screws, #12

A. Assemble End Panel Assembly (female type) using four #12 screws. On sizes 54 and 60, install hood clips at flange joints.
B. Fully tighten the Hood Mount Bar/Side Rail fasteners from Step 4.

Step 8 – Install Filters

A. Remove both Filter Retainers from End Panels. Retain hardware.
B. Install Filters as shown.
C. Reinstall both Filter Retainers.

Filter Configurations

<table>
<thead>
<tr>
<th>Fan Size</th>
<th>Filter A</th>
<th>P/N</th>
<th>Size</th>
<th>Quantity</th>
<th>Filter B</th>
<th>P/N</th>
<th>Size</th>
<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>21</td>
<td>FILTER2A-LH21</td>
<td>23.81 x 9.75</td>
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<td>FILTER2B-LH21</td>
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<td>FILTER2B-LH24</td>
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<td>60</td>
<td>FILTER2A-LH60</td>
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<td>FILTER2B-LH60</td>
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