GENERAL INFORMATION
The filter frame kit covers 2 – 5 Ton packaged units. Ensure that kit received is correct kit for application. The filter frame kit may be used for downflow or horizontal air flow and with or without an economizer. The kit accommodates a 1” or 2” thick air filter.

TABLE 1: Kit Model Numbers

<table>
<thead>
<tr>
<th>MODEL</th>
<th>EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1-1FF0601</td>
<td>AC 2 – 3.5 Ton</td>
</tr>
<tr>
<td></td>
<td>HP 2 – 3 Ton</td>
</tr>
<tr>
<td>S1-1FF0602</td>
<td>AC 4 – 5 Ton</td>
</tr>
<tr>
<td></td>
<td>HP 3.5 – 5 Ton</td>
</tr>
</tbody>
</table>

1. The following list details the parts included in this kit. Inspect the kit to ensure that all listed parts are included.

TABLE 2: Kit Parts (See Figure 1.)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Top Filter Frame</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Bottom Filter Frame</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>Side Rail</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>Filter Retainer Bracket</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>#10 X 1/2” Hex Head Screw</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>#10 X 1/2” self-tapping Hex Head Screw</td>
</tr>
</tbody>
</table>

NORMAL INSTALLATION

NOTICE
If Downflow Economizer is being Installed in the unit, do not accomplish the Normal Installation procedures. Instead, accomplish the Secondary Installation procedures at the end of this document.

NOTICE
The Normal Installation procedures are to be used when a downflow economizer is not in place. The Normal Installation procedures can also be used with horizontal flow economizers, when filter access panel is unobstructed. A 1” or 2” filter can be used in accordance with the Normal Installation.

Install filter and frame kit as follows:
1. Verify that power to unit is off.
2. Remove filter access panel from unit. See Figures 2 and 9.

3. Place bottom of filter frame in mounting position with larger end to right toward compressor block off panel. Insert downward flange into drain pan ledge for support. See Figure 3.

FIGURE 2: Filter Access Panel

FIGURE 3: Filter Frame in Mounting Position.
4. Assemble top piece of filter frame to left side rail by sliding side rail into U channel of top filter frame, and install top screw as shown in Figure 4.

5. Place lower part of left side rail against filter frame bottom as shown in Figures 1 and 5. Install screw securing left side rail onto filter frame bottom piece.

6. Assemble top piece of filter frame to right side rail by sliding side rail into U channel of top filter frame, and install top screw. Place lower part of right side rail against filter frame bottom as shown in Figures 1 and 6. Install screw securing right side rail onto filter frame bottom piece.

7. Locate two anchor holes in right side rail so that holes can be used as a template on compressor block off panel. See Figure 1.

8. Install two 1/2" long self-tapping #10 screws, and secure the right side rail of the filter frame to the compressor block off panel as shown in Figure 7.

Notice:
The filter frame should be snug within the unit. There should be no visible gaps present between perimeter of filter frame and unit.

Warning:
Drilling into the compressor compartment should be avoided due to danger of drilling into and puncturing any nearby refrigerant lines. To anchor right side rail of filter frame to the compressor block off panel, self-tapping screws should be used.

Notice:
Step 7 is to be completed only on units which are not shipped with a factory installed filter frame assembly. If a factory installed filter frame is present, existing holes should be used for attaching the filter frame to the compressor block off panel.

Warning:
Verify clearance for screw locations behind compressor block off panel before installing screws.
9. Install one or both “L” brackets (provided with kit). Verify thickness of filter being used. For normal Installation, use a 1” or 2” filter.
   a. For 1” filter, use first “L” bracket to support filter from behind and second “L” bracket to support filter from front.
   b. For 2” filter only, use one “L” bracket to support filter from behind. Secure each end of “L” bracket to filter frame (bottom) with mount screw. See Figure 8.

10. Use a standard off-the-shelf air filter for both large and small filter frame sizes. Check filter for correct airflow rating from Table 3.

11. Install filter access panel on unit. See Figures 2 and 9.

12. Return to the unit Installation Manual to finish accomplishing unit installation procedures.

### TABLE 3: Filter Usage

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Unit Tonnage</th>
<th>Filter Opening Size</th>
<th>Minimum Air Velocity Rating Feet/Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC/HP</td>
<td>2 Ton</td>
<td>20 X 20</td>
<td>288</td>
</tr>
<tr>
<td>AC/HP</td>
<td>2.5 Ton</td>
<td>20 X 20</td>
<td>360</td>
</tr>
<tr>
<td>AC/HP</td>
<td>3 Ton</td>
<td>20 X 20</td>
<td>432</td>
</tr>
<tr>
<td>AC</td>
<td>3.5 Ton</td>
<td>20 X 20</td>
<td>504</td>
</tr>
<tr>
<td>HP</td>
<td>3.5 Ton</td>
<td>20 X 30</td>
<td>336</td>
</tr>
<tr>
<td>AC/HP</td>
<td>4 Ton</td>
<td>20 X 30</td>
<td>384</td>
</tr>
<tr>
<td>AC/HP</td>
<td>5 Ton</td>
<td>20 X 30</td>
<td>480</td>
</tr>
</tbody>
</table>

### Secondary Installation (When Downflow Economizer Installed)

**NOTICE**

If a downflow economizer is being installed in the unit, the downflow economizer blocks access through the filter access opening which normally allows filter change out for the unit. The Normal Installation procedure in the first part of this document can not be accomplished because the downflow economizer must be installed before the filter frame is installed. The Secondary Installation procedure is accomplished by installing the filter frame through the horizontal duct opening on the back of the unit.

Install filter and frame kit as follows:

1. Verify that power to unit is off.
2. Remove the horizontal duct cover from the back of the unit. See Figures 2 and 9.
3. If the unit was not shipped with a factory installed filter frame, omit step 3, and continue procedure starting with step 4. If the unit was shipped with a factory installed filter frame, remove the filter frame from the unit before downflow economizer is installed. Remove filter frame as follows:
   a. Remove two mount screws from the right side rail of filter frame. See Figures 1 and 7.
   b. Remove attachment screw from right side rail and filter frame bottom piece.
   c. Remove screw from top piece of filter frame and right side rail. Slide right side rail out from U channel of top filter frame, and remove right side rail from unit.
   d. Remove attachment screw from left side rail and filter frame bottom piece.
   e. Remove left side rail and filter frame top piece as an assembly from the unit.
   f. Remove bottom of filter frame from unit.

4. Install the downflow economizer in accordance with the kit installation instructions that come with the downflow economizer. Refer to 1199083-UAI.

5. After downflow economizer is installed, assemble the filter frame parts in the unit through the horizontal duct opening as follows:
   a. Place bottom of filter frame in mounting position with larger end to right toward compressor block off panel. Insert downward flange into drain pan ledge for support. See Figure 3.
   b. With parts outside the unit, assemble top piece of filter frame to left side rail by sliding side rail into U channel of top filter frame, and secure the two parts together by installing the top screw as shown in Figure 4. Inside the unit, place lower part of left side rail against filter frame bottom as shown in Figures 1 and 5. Install screw securing left side rail onto filter frame bottom piece.
   c. Assemble top piece of filter frame to right side rail by sliding side rail into U channel of top filter frame, and install top screw. Place lower part of right side rail against filter frame bottom as shown in Figures 1 and 6. Install screw securing right side rail onto filter frame bottom piece.

6. Install both “L” brackets (provided with kit). Verify thickness of filter being used. For “Secondary Installation,” use only a 1” filter.
   • For 1” filter, use first “L” bracket to support filter from behind and second “L” bracket to support filter from front. See Figure 8.

7. Install a standard off-the-shelf air filter for both large and small filter frame sizes. Check filter for correct airflow rating from Table 3.

8. Install the horizontal duct cover on the back of the unit. See Figure 9. The horizontal duct cover access is now the filter access opening on any unit that has a downflow economizer.

9. Return to the unit Installation Manual to finish accomplishing unit installation procedures.

**WARNING**

- Verify that no part of filter frame is in the path of the economizer dampers when they are in motion. Any contact with moving parts will cause heavy damage to the unit.
- Drilling into the compressor compartment should be avoided due to danger of drilling into and puncturing any nearby refrigerant lines. To anchor right side rail of filter frame to the compressor block off panel, self-tapping screws should be used.
- Verify clearance for screw locations behind compressor block off panel before installing screws.

**NOTICE**

- The filter frame should be snug within the unit. There should be no visible gaps present between perimeter of filter frame and unit.

- Locate the two anchor screw holes in right side rail. If unit was shipped without a factory installed filter frame assembly, use the two anchor holes as a template on compressor block off panel. Install two 1/2” long self-tapping #10 screws, and secure the right side rail of the filter frame to the compressor block off panel. See Figure 7.

- A 1” filter only must be used in installations with downflow economizers. A 2” filter can not be used.

- With a downflow economizer installed, any filters used must be able to be installed and removed through the horizontal duct opening. If a one piece filter can not be fit through the horizontal duct opening, a combination of smaller filters may be used to cover the filter opening width. It is recommended to use two 10x20 inch filters for small filter frames and three 10x20 inch filters for large filter frames.