General
The Catch-All Filter-Drier should be installed in the liquid refrigerant line immediately ahead of the See-All Moisture & Liquid Indicator, solenoid valve, and thermostatic expansion valve. The drier shell may be installed in any position, but always observe the proper flow direction. A horizontal position is usually most convenient, since any dirt collected on the cores will not drop into the outlet fitting when the cores are removed. Remove the end plate and internal parts before brazing the filter-drier shell into the line. Install in such a manner that sufficient clearance is available in front of the end plate for changing cores. See the table at right for the space required for each model.

Replace any lost or damaged bolt and/or nut from a replaceable core Catch-All Filter-Drier. All bolts and nuts torqued to the proper value are required for proper safe fastening of the end plate and to prevent leakage. Bolts should be torqued to 25-30 ft-lbs on the C-R420, C-480, C-19200 Series, C-30000 and C-40000 Series Catch-Alls. Do not install the Catch-All Filter-Driers where they will be subject to temperatures below -50°F. At these low temperatures the steel shell may be sensitive to impact or stress, and may give unsatisfactory performance.

The “G” STYLE indicates a unit supplied with a 1/4” female pipe thread in the end plate, and a steel pipe plug. This construction permits the user to install the pipe plug or a Schrader type access valve for pressure measurements, or a charging valve for adding refrigerant to the system. If this fitting is used for other purposes, caution must be taken to prevent breakage of the connection. In attaching the pipe threads always use a refrigerant grade thread sealant. ANSI Standard B.120.1 recommends tightening this joint 2-3 turns after finger tight.

Mounting Brackets
Replaceable Core Catch-All Filter-Driers should be supported with one or more mounting brackets so the weight does not strain the liquid line, and vibration is held to a minimum. The various Sporlan mounting brackets designed to fit the shell are shown below. Each bracket is supplied with a bolt, nut, and washer for easy installation.

BRAZING SUGGESTIONS – CAUTION! – Remove all internal parts before brazing the Catch-All into the line.

For C-480 thru C-19200 Series - use A-685 Mounting Bracket
For C-30000 thru C-40000 Series - use A-175-2 Mounting Bracket
For C-R424, C-R425, and C-R427 - use A-175-1 Mounting Bracket

<table>
<thead>
<tr>
<th>Type</th>
<th>Clearance Required (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-R420 Series</td>
<td>6-1/2</td>
</tr>
<tr>
<td>C-480 Series</td>
<td>7-1/2</td>
</tr>
<tr>
<td>C-960 Series</td>
<td>13</td>
</tr>
<tr>
<td>C-1440 Series</td>
<td>18-5/8</td>
</tr>
<tr>
<td>C-19200 Series</td>
<td>24-1/4</td>
</tr>
<tr>
<td>C-30000 Series</td>
<td>25-5/8</td>
</tr>
<tr>
<td>C-40000 Series</td>
<td>32-1/8</td>
</tr>
</tbody>
</table>

Find useful information at the linked website.
Use a torch tip that is large enough to rapidly heat the line size being used. Place a wet cloth on the Catch-All body, direct the flame of the torch away from the shell to protect the coating from deterioration by the heat of brazing. These precautions will maintain the corrosion protection finish and prevent rust in service.

**Installation and Replacement Instructions**

The cores used in replaceable core Catch-All Filter-Driers are shipped in METAL CANS HERMETICALLY SEALED to protect them from contamination by moisture and dirt. The detailed instructions for assembly and changing cores are given on these cans. The following condensed instructions may be used if these cans are not available.

1. Make sure all the refrigerant is pumped out of the Catch-All shell. The appropriate shut-off valves should be tightly closed.

2. Remove the end plate and internal assembly, and clean the internal parts. Remove the activated core from the sealed can using caution when doing so. The metal pull tab and pull strip permit the can to be rolled opened with the key or a pair of pliers. Do not replace the end plate gasket unless it is damaged. When replacement is necessary, select the outer gasket from the set supplied with each core.

3. Insert the assembly in the shell, replace the flange bolts, tighten evenly, using a star pattern, to the recommended torque value, 25-30 ft-lbs for the C-R420 Series, the C-480 thru C-19200 Series, and the C-30000 and C-40000 Series.

4. For C-R424, C-R425, and C-R427 models - do not remove the outlet strainer assembly or gasket. On these models, the core retainer assembly with the spring is the only part that must be removed to change the core.

**CAUTION**

The edge of the shell fits into the gasket groove on the end plate and makes a seal against the gasket to prevent refrigerant leakage. Be careful not to scratch or damage the edge of the shell when changing the cores. If the edge of the shell should become damaged, replace the shell to prevent possible refrigerant leakage.
When to Change Cores
Cores should be changed when they become contaminated, or on a regular maintenance schedule. Disposal of the cores should be handled according to local laws. Cores that become contaminated with solid particles should be changed whenever the pressure drop increases to the point where it reduces system performance. When moisture is the major concern, change the drier cores according to the indication of the See•All Moisture & Liquid Indicator. The cores will remove their maximum amount of moisture and come to equilibrium in approximately one day of operation. When either acid or wax is the major contaminant involved, the cores should be left in the system at least three days to come to equilibrium thereby removing the maximum amount of contaminants.

Many users of replaceable core Catch-Alls will change the cores every Spring and Fall as part of their normal maintenance schedule.

Bypass Installations
For the added convenience of operating the system while changing drier cores, a bypass installation is recommended (see sketch). Valve A would normally be closed which would allow all the refrigerant to flow through the filter-drier. Note that hand valves B and C are required only if it is desired to replace the Catch-All Filter-Drier without pumping down the piping from the receiver. Always pump out the section of the line containing the filter-drier by closing the hand valves A and B (note direction of flow). After isolated section has been pumped out, close valve C, and then change the core. Disposal of the cores should be handled according to local laws. WARNING! Dangerous hydraulic pressures may develop if hand valves B and C are closed and the filter-drier is full of liquid. When liquid is trapped in a section of line, even a slight increase in temperature results in a great increase in internal pressure. Therefore, a pressure relief device is recommended, as indicated.

Replaceable Cores
Cores are dried and individually sealed in hermetic containers. The drier shells are shipped less cores. Cores should be ordered separately, as follows:

**RCW-42**
High Water Capacity Core – Order as separate item – Fits types C-R424, C-R425, and C-R427. Designed specially for use with POE oils. This core should be used on systems that have a ruptured water cooled condenser, or that have been exposed to the atmosphere, or for some reason have a high amount of moisture in the system.

**RC-4864**
Activated Core – Order as separate item – Fits types C-480 thru C-19200 Series shells. This is the standard core suitable for most installations in the liquid or suction line.

**RCW-48**
High Water Capacity Core – Order as separate item – Fits types C-480 thru C-19200 Series shells. Designed specially for use with POE oils. This core should be used on systems that have a ruptured water cooled condenser, or that have been exposed to the atmosphere, or for some reason have a high amount of moisture in the system.

**RCW-4864-HH**
Activated Charcoal Core – Order as separate item – Fits types C-480 thru C-19200 Series shells. This core should be used for wax removal on low temperature R-22 and R-502 systems, and for clean-up of systems that have had a hermetic motor burnout.

**RC-10098**
Activated Core – Order as separate item – Fits types C-30000 and C-40000 Series shells. This core has a high water capacity and should be used on all standard liquid and suction line applications.

**RCW-100**
High Water Capacity Core – Order as separate item – Fits types C-30000 and C-40000 Series shells.
Designed specially for use with POE oils. This core should be used on systems that have a ruptured water cooled condenser, or that have been exposed to the atmosphere, or for some reason have a high amount of moisture in the system.

**RC-10098-HH**
Activated Charcoal Core
– Order as separate item
– Fits types C-30000 and C-40000 Series shells. This core should be used for wax removal on low temperature R-22 and R-502 systems, and for clean-up of systems that have had a hermetic motor burnout.

**Restriction in Large Fitting Sizes**
The diagram at the right shows the construction required in Replaceable Core Catch-Alls having fitting sizes of 2-5/8” ODF and larger. The flow passageway in the drier shell is smaller than the diameter of the fitting. This is necessary to obtain a proper gasket surface for the internal parts. The outlet flow passageway is approximately the same size as the inside diameter of the core. The size of the flow passageway results in a restriction in the larger line sizes. This is not a problem as long as the larger Catch-Alls are selected according to the recommendations in Bulletin 40-10.

**Typical Assembly**
C-30013 thru C-40033-G

**Filter-Drier Type Number**

<table>
<thead>
<tr>
<th>Filter-Drier Type Number</th>
<th>Maximum Rated Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SI Units – kPa</td>
</tr>
<tr>
<td>C-R420 Series</td>
<td>4482</td>
</tr>
<tr>
<td>C-480, C-960, C-1140, C-19200</td>
<td>4482</td>
</tr>
<tr>
<td>C-30000 and C-40000 Series</td>
<td>3447</td>
</tr>
</tbody>
</table>

**WARNING – USER RESPONSIBILITY**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

© 2012 Parker Hannifin Corporation

Sporlan Division, Parker Hannifin Corporation
206 Lange Drive, Washington, MO 63090 USA
phone 636 239 1111 • fax 636 239 9130
www.sporlan.com