Virtual Engineer: Sporlan Division

Catch-Alls and Suction Filters

Contents

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Catch-All Filter-Driers are used for system contamination control or compressor protection. They can be used in liquid line and suction line applications. Suction Filters are used for compressor protection in suction line applications. Catch-All Filter-Driers remove moisture, foreign matter, acids, sludge, and varnish from a system. The Catch-All shell utilizes an exclusive filter-within-a-filter construction, and the optional replaceable secondary filter offers unsurpassed filtration efficiencies without compromising the Catch-All's ability to hold a large amount of foreign material.

Refer to Bulletin 40-10 for more information on Sporlan Catch-All Filter-Driers and Suction Filters.

Sizing in Virtual Engineer

Inputting Sizing Information

Refrigerant is the type of refrigerant the system is operating with, by ASHRAE R-number designation.

Evaporator Temperature is the saturated temperature at evaporator or suction pressure. Virtual Engineer will allow Liquid Temperature to be less than the Evaporator Temperature.

Suction Vapor Temperature is the temperature of the suction vapor entering the compressor. Virtual Engineer will not allow Suction Vapor Temperature to be less than Evaporator Temperature.

Liquid Temperature is the liquid refrigerant temperature at the inlet of the expansion valve.

Line Capacity is the cooling capacity the Catch-All or Suction Filter carries.

Filter Size is the size of the Catch-All or Suction Filter in cubic inches.

Line Size is the liquid or suction line outside diameter (OD).

Enter the required information into the left pane of the sizing tool. As information is entered, Virtual Engineer will filter products meeting that criteria in the right pane. When you have entered the required information, valid products will be available to compare in the right pane. All valid products are included to compare by default. You may uncheck any product you don't wish to compare.

Getting Results and Comparing Choices

Click the "Compare" button at the top of the right pane to be taken to the Compare Table. The Compare Table will display the results of the selection, and the values input. The best selection within each compared product will be highlighted. The Compare Table will also show other selections within the compared products.

Click the "Select Columns" button at the upper left corner of the Compare Table to select what values you would like to appear in the Compare Table. Below is a quick explanation of the columns that can be selected for the Catch-All and Suction Filter tools:

- **Description:** The series that the Catch-All or Suction Filter belongs to
- **Fitting Type:** The style of the connection, ex. Outside Diameter Female (ODF), Flare (SAE), Flange
- **Pressure Drop:** Reduction of pressure across the Catch-All or Suction Filter
- **Pressure Tap:** Does the Catch-All or Suction Filter have a pressure tap?
- **Charcoal Core:** Does the Catch-All or Suction Filter have an activated carbon core?

- **Capillary Tube Specialty:** Does the Catch-All or Suction Filter have a capillary tube specialty?
- **Build Type:** Is the selection a sealed model or replaceable core model?
- **Maximum Rated Pressure:** The maximum working pressure of the valve in ambient conditions
- **Flow Rate:** Liquid or vapor mass flow rate
- **Vapor Volume:** Specific vapor volume entering the Suction Filter or Catch-All
- **Warnings:** Any warnings associated with the selection, such as a high or low loading condition, will display here.

After selecting columns, you can click and drag the column header to change the order of the columns. You can also click the ▼ in the column headers to further narrow or sort your results.

Click the "Group by Series" button at the top of the Compare Table to group the results by the valve family they belong to. Click the button again to ungroup.

Click the "Close" button below the Compare Table or the X in the upper right corner of the screen to close the Compare Table and return to the input screen.

Configuring a Part and Saving Results

In the second column of the Compare Table, there are two buttons that can appear: "Configure" or "Select."

Click the "Configure" button next to the desired series to be taken to its eConfigurator. The eConfigurator can be used to configure a part according to your unique system. The eConfigurator will give an item number that can be used to purchase your part. Click the "Save" button to save your configuration and return to Virtual Engineer's dashboard. The configured part will appear in your system.

If a "Select" button appears next to the desired series, then there is no eConfigurator currently available for that product, and the series will be selected without any configuration.

Click the "Export" button at the upper right corner of the Compare Table to save your results as an Excel spreadsheet.

Click the blue page icon in the "RPT" column of the Compare Table to generate a summary report of your inputs and choices. If the part was configured using an eConfigurator, the item number will also appear in the summary report. This report can be downloaded as a PDF and printed as needed.