



REVERSIBLE HEAT PUMP FILTER-DRIERS

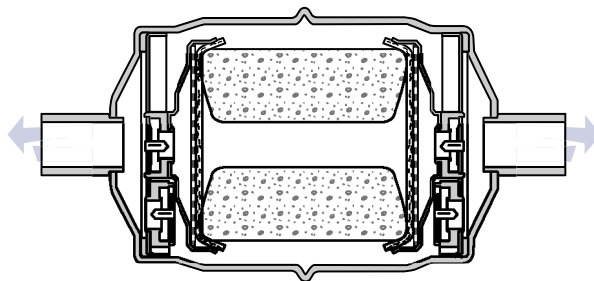
DESIGN BENEFITS —

- A short overall length for easy installation.
- Drier operates in either flow direction with low pressure drop.
- Proven metal check valves used in construction — no synthetic materials.
- The Sporlan dependable molded core used for maximum filtration ability. When the flow direction reverses, dirt already collected remains in the filter-drier.
- A carefully engineered blend of desiccants for maximum water capacity and acid removal ability. The HPC-160-HH Series also has the HH style core with activated charcoal which offers maximum ability to remove oleoresin and other reactive chemical constituents in the lubricant.
- Same rugged construction as used in the Catch-All.

APPLICATION — These filter-driers are *easy to install* — even on compact units — because they are designed for installation in the reversing liquid line. The smaller HPC-100 Series, using the standard Catch-All core, is designed specifically for new installations and for use on OEM equipment. The HPC-160-HH Series uses a larger core which includes activated charcoal for maximum performance in removing all types of contaminants that might be found in a hermetic motor burnout, or in a highly contaminated field system.

The HPC-100 Series is recommended for new installations and system clean-up on HFC refrigerant systems. For HFC system clean-up, a compact style suction line filter-drier is recommended (see page 29) in addition to an HPC-100 Series Catch-All.

While intended for use in the reversing liquid line, these driers can be used in the reversing gas line, providing the system size does not exceed one ton. Since heat pump systems can operate in the winter



at very low evaporator temperatures, problems with wax can occur. The HPC-160-HH Series Filter-Driers, with the charcoal style core, will remove wax and prevent problems with the expansion device.

In cleaning up a system *after a hermetic motor burnout*, follow the same general principles used on standard air conditioning systems. Always remove driers on the unit at the time of burnout. Test a sample of lubricant from the burned out compressor to see if a suction line filter-drier should be used in addition to a new liquid line drier. The HPC style reversible filter-driers can be used in the reversing liquid line, or the driers originally on the units can be replaced with similar standard Catch-All Filter-Driers.

CONSTRUCTION — Both filter-driers consist of one core in a shell with two check valves at either end. These check valves control the flow so filtration occurs on the outside of the core, regardless of the flow direction. The HPC driers do not release the dirt collected in one mode when the flow direction reverses. The *reliable check valves* used in these filter-driers have passed the most rigid OEM testing — no synthetic materials are used. These check valves have been thoroughly proven in field systems over a period of many years. They function well even in the presence of solid contaminants.

SPECIFICATIONS — FOR NEW INSTALLATIONS AND HFC SYSTEM USE

TYPE NUMBER	CONNECTION SIZE Inches	SELECTION RECOMMEND. Tons	DIMENSIONS		FLOW CAPACITY Tons at 1 psi ΔP			WATER CAPACITY						LIQUID CAPACITY Ounces (wt.) @ 100°F											
			OVER- ALL LENGTH Inches	DIA. Inches	REFRIGERANT																				
					R-22	R-407C	R-410A	R-22 Drops at 60 ppm		R-407C Drops at 80 ppm*		R-410A Drops at 80 ppm*		R-22	R-407C	R-410A									
								75°F	125°F	75°F	125°F	75°F	125°F												
HPC-103	3/8 Flare	1 thru 5	6.75	3.0	3.4	3.1	3.3	215	176	211	105	171	105	12.2	10.7	10.6									
HPC-103-S	3/8 Solder		5.88																						
HPC-104	1/2 Flare		6.94		4.5	4.1	4.4																		
HPC-104-S	1/2 Solder		6.00																						

SPECIFICATIONS — FOR CLEAN-UP AFTER BURNOUT

TYPE NUMBER	CONNECTION SIZE Inches	SELECTION RECOMMENDATIONS Tons	DIMENSIONS		FLOW CAPACITY R-22 Tons at 1 psi ΔP	WATER CAPACITY Refrigerant 22 Drops at 60 ppm		LIQUID CAPACITY Ounces (wt.) R-22 @ 100°F
			OVERALL LENGTH Inches	DIAMETER Inches		75°F	125°F	
HPC-163-HH	3/8 Flare	1 thru 5	7.78	3.0	3.7	93	81	14.5
HPC-163-S-HH	3/8 Solder		6.92					
HPC-164-HH	1/2 Flare		7.95		4.0			
HPC-164-S-HH	1/2 Solder		7.07					
HPC-165-HH	5/8 Flare		8.28		4.9			
HPC-165-S-HH	5/8 Solder		7.35					

HPC-100 Series — Core volume is 10 cubic inches. Core surface filtering area is 18 sq. inches. Maximum rated pressure is 650 psig.

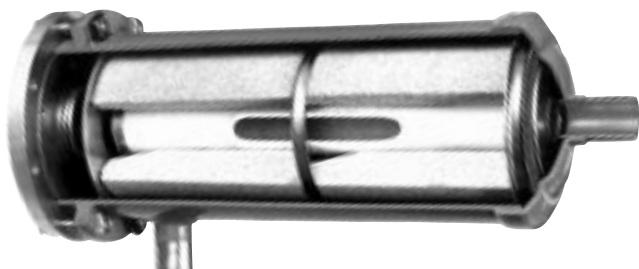
HPC-160-HH Series — Core volume is 14 cubic inches. Core surface filtering area is 26 sq. inches. Maximum rated pressure is 500 psig.

UL and UL_C Listed — Guide-SMGT-File No. SA-1756A & B.

*As of this printing, ARI has not established an EPD for R-407C and R-410A.

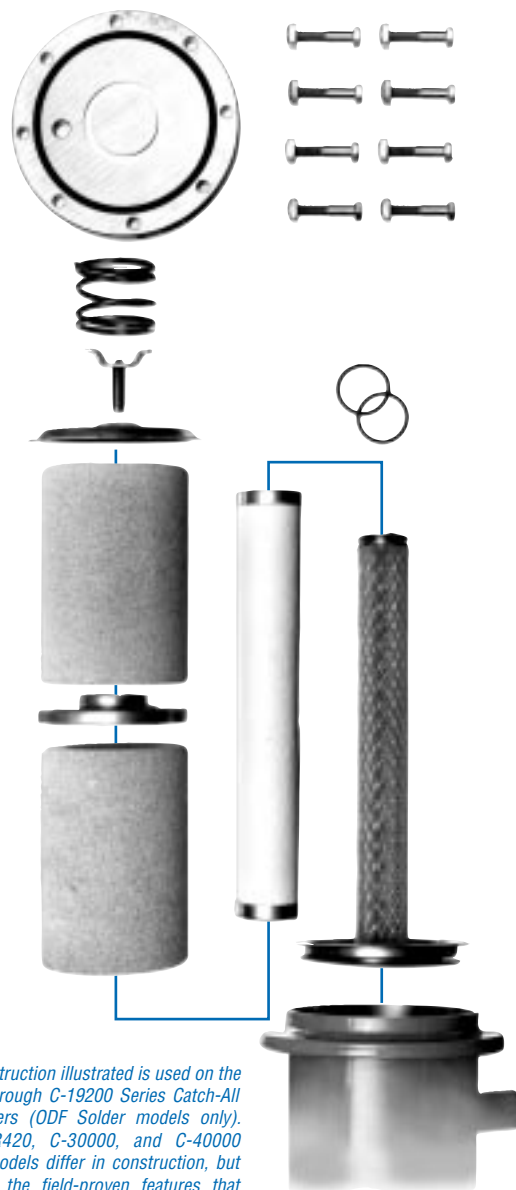
Catch-All®

REPLACEABLE CORE TYPE



■ DESIGN FEATURES

- The Catch-All shell utilizes an **exclusive filter-within-a-filter construction**. The new internal assembly, when used with Sporlan molded cores, provides maximum water capacity, excellent acid removal characteristics, the ability to remove products of lubricant decomposition, and outstanding filtration. The **optional replaceable secondary filter** offers unsurpassed filtration efficiencies without compromising the Catch-All's ability to hold a large amount of foreign material. The assembly is designed so the cores remove larger sized particles while the secondary filter removes microscopic particles. This unique construction aggressively filters particles circulating in a refrigerant system.
- The shell design offers **flexibility**. The new internal assembly can be used with or without the secondary filter. The type of filtration needed depends upon the system requirements or application. Using the assembly **without** the secondary filter offers the same time tested, field-proven, filtration characteristics expected in a Catch-All Filter-Drier.
- The internal construction is designed to improve **ease of assembly**. The molded cores simply slide over the center tube, followed by spacer plates (if applicable). The outlet plate is fastened to the assembly by a wing screw. With the addition of a spring, the resulting assembly is easy to install and remove.
- The seal gasket prevents solid contaminants from bypassing the filter. The assembly is held tight against the gasket by a spring. **O-rings** are used with the secondary filter to provide a tight seal.
- The internal parts are plated steel – no plastic parts.
- The **bolt and nut attachment** of the endplate allows for simple, trouble-free installation. The nuts lock against the side of the shell for ease in tightening. Other designs, using cap screws threaded into the flange ring, run the risk of twisting off the head of the screw making removal difficult.
- **Copper fittings** are excellent for fast easy soldering. Fittings are pre-sized for proper fit, and suitable for use with soft solder, silver solder, Sil-Fos, or Phos-Copper. The fittings are brazed to



The construction illustrated is used on the C-480 through C-19200 Series Catch-All Filter-Driers (ODF Solder models only). The C-R420, C-30000, and C-40000 Series models differ in construction, but maintain the field-proven features that have been used successfully for many years.

the shell with a high temperature brazing alloy so they never loosen during the brazing operation on the job.

- A **complete line of fitting sizes** are available with solder connections from 1/2" to 4-1/8" ODF - and pipe connections from 1/2" to 2".
- Heavy steel shells provide **high bursting strength** and are listed by Underwriters' Laboratories Inc.
- The shell exterior uses an **epoxy powder coating to prevent corrosion** even under the most adverse conditions.



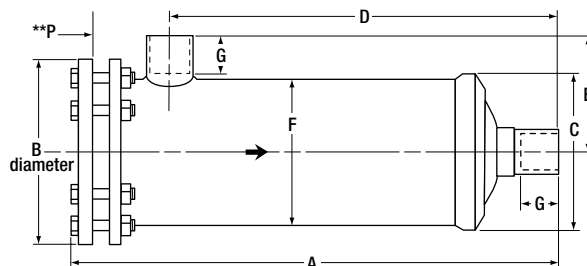
SPECIFICATIONS

REPLACEABLE CORE TYPE

Maximum Rated Pressure of 500 psi



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LISTED



TYPE	CONNEC- TIONS Inches ODF Solder	OPTIONAL SECONDARY FILTER***	NO. OF CORES OR FILTER ELEMENTS	CORE PART NO.	VOLUME OF DESICCANT Cu. In.	FILTER ELEMENT PART NO.	MOUNTING BRACKETS	SHELL DIMENSIONS Inches							NET WEIGHT Lbs.	SHIPPING WEIGHT Lbs.	
								A	B	C	D	E	F	G			**P
*C-R424	1/2	--	1	RCW-42	42	--	A-175-1	9.00			6.76	2.81		.50	6.50	5-1/2	6-1/2
*C-R425	5/8							9.06	4.75	--	6.94	2.69	3.50	.62			
*C-R427	7/8							9.44			7.25	3.03	.75				
C-485	5/8	FS-480	1		48	RPE-48-BD	A-685	9.15			5.92	3.50		.50	7.50	10	12
C-485-G	5/8							9.15			5.92	3.50	.50				
C-487	7/8							9.30			6.07	3.72	.75				
C-487-G	7/8							9.30	6.00	5.00	6.07	3.72	4.75	.75			
C-489-G	1-1/8							9.50			6.37	3.78	.91				
C-4811-G	1-3/8							9.60			6.37	3.94	.97				
C-4813-G	1-5/8							9.60			6.37	3.97	1.09				
C-967	7/8	FS-960	2	RCW-48, RC-4864, or RC-4864-HH	96	RPE-48-BD	A-685	14.84			11.61	3.72		.75	13.00	14	16
C-967-G	7/8							14.84			11.61	3.72	.75				
C-969	1-1/8							15.04			11.81	3.78	.91				
C-969-G	1-1/8							15.04	6.00	5.00	11.81	3.78	4.75	.91			
C-9611-G	1-3/8							15.14			11.91	3.94	.97				
C-9613-G	1-5/8							15.14			11.91	3.97	1.09				
C-1449	1-1/8	FS-1440	3		144	RPE-48-BD	A-685	20.58			17.35	3.78		.91	18.62	17	20
C-1449-G	1-1/8							20.58			17.35	3.78	.91				
C-14411	1-3/8							20.68			17.45	3.94	.97				
C-14411-G	1-3/8							20.68	6.00	5.00	17.45	3.94	.97				
C-14413-G	1-5/8							20.68			17.45	3.97	1.09				
C-19211	1-3/8	FS-19200	4		192	RPE-48-BD	A-685	26.22			22.99	3.94		.97	24.25	20	23
C-19211-G	1-3/8							26.22			22.99	3.94	.97				
C-19213	1-5/8							26.22			22.99	3.97	4.75	1.09			
C-19213-G	1-5/8							26.22	6.00	5.00	22.99	3.97	1.09				
C-19217-G	2-1/8										22.43	4.65		1.34			
C-30013	1-5/8	--	3		300	RPE-100	A-175-2	27.94			23.88	5.12		1.12	25.62	36	40
C-30013-G	1-5/8							27.94	7.50	6.25	23.88	5.12	6.00	1.12			
C-30017-G	2-1/8							28.06			24.00	5.12	1.25				
C-40017	2-1/8	--	4	RC-10098, or RC-10098-HH	400	RPE-100	A-175-2	34.56			30.50	5.31		1.38	32.12	43	47
C-40017-G	2-1/8							34.56			30.50	5.31	1.38				
C-40021-G	2-5/8							34.75			30.56	5.38	1.50				
C-40025-G	3-1/8							34.44	7.50	6.25	29.81	5.06	6.00	1.75			
C-40029-G	3-5/8							34.81			30.06	5.50	2.00				
C-40033-G	4-1/8							35.12			29.81	5.62	2.19				

NPT PIPE CONNECTIONS

C-484-P C-966-P C-1448-P C-19212-P	1/2 3/4 1 1-1/2	--	1 2 3 4	RCW-48, RC-4864, or RC-4864-HH	48 96 144 192	RPE-48-BD	A-685	9.08 14.67 20.42 25.85	6.00	5.00	5.85 11.44 17.19 22.62	3.41 3.48 3.66 3.76	4.75	--	7.50 13.00 18.62 24.25	10 14 17 20	12 16 20 23
C-40016-P	2	--	4	RCW-100, RC-10098, or RC-10098-HH	400	RPE-100	A-175-2	34.44	7.50	6.25	30.38	4.38	6.00	--	32.12	46	51

UL and UL_C Listed. — Guide-SMGT-File No. SA-1756A & B.

*Underwriters' Laboratories listed for 400 psi maximum rated pressure.

***P" Dimension is the pull space required to change core.

***Optional Secondary Filter must be purchased separately. O-rings (p/n 621-025) are supplied with each secondary filter, but can be purchased separately. The secondary filter cannot be used if the shell is installed in the suction line.

TYPE NUMBERS WITH G SUFFIX indicate that unit is supplied with 1/4" female pipe connection in the flange plate and pipe plug. If the unit is intended for liquid line service an angle charging valve for system charging purposes can be installed in place of the pipe plug. If the unit is used in the suction line for

clean-up after burnout, then insert a Schrader type access valve to serve as a pressure tap. Angle charging and Schrader type access valves are available from your Sporlan wholesaler.

TYPE NUMBERS WITH P SUFFIX indicates female threaded pipe connections.



CORES / ELEMENTS

■ REPLACEABLE CORES and FILTER ELEMENTS

Order Separately

Cores for replaceable core type filter-driers are molded of exactly the same desiccants that are used in the popular sealed filter-driers.

Cores are individually packed in *metal cans*, fully activated, and hermetically sealed against moisture and dirt.

Filter elements are dried and packed in individual sealed metal cans. This method of packaging prevents the element from picking up moisture from the atmosphere.

Detailed *instructions* are printed on each can. Each can contains a “*triple gasket*” consisting of a new endplate gasket, an endplate gasket for certain competitive filter-driers, and a core gasket where desired. See the specifications on Page 18 for the number of cores required for each type drier.

RCW-42 — High Water Capacity Core — Order as separate item— Fits ONLY shell types C-R424, C-R425, and C-R427. **Designed specially for use with POE lubricants.** 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 and Replaceable Suction Filter (RSF) shells. This is the standard core suitable for liquid and suction line applications.

RCW-48 — High Water Capacity Core — Order as separate item— Fits types C-480 thru C-19200 Series shells and Replaceable Suction Filter (RSF) shells. **Designed specially for use with POE lubricants.** 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-HH — Activated Charcoal Core — Order as separate item—Fits types C-480 thru C-19200 Series shells and Replaceable Suction Filter (RSF) shells. This core should be used for wax removal on low temperature systems, and for clean-up of systems that have had a hermetic motor burnout.

RPE-48-BD — Filter Element — Order as a separate item—Fits types C-480 thru C-19200 Series shells and Replaceable Suction Filter (RSF) shells. This element should be used in RSF shells installed in the suction line to obtain the lowest possible pressure drop after cores were used for system clean-up.

RC-10098 — Activated Core — Order as separate item—Fits types C-30000 and C-40000 Series shells. This is the standard core suitable for 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 lubricants.** 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 systems, and for clean-up of systems that have had a hermetic motor burnout.

RPE-100 — Filter Element — Order as a separate item—Fits types C-30000 and C-40000 Series shells. This filter element should be used in the suction line to obtain the lowest possible pressure drop after cores were used for system clean-up.



Sporlan Cores and Filter Elements can replace drier shells made by most other drier manufacturers.

UNIT NET WEIGHTS and CARTON SHIPPING WEIGHTS

PART NUMBER	REPLACEABLE CORES			FILTER ELEMENTS	
	RCW-42	RC-4864, RCW-48, & RC-4864-HH	RC-10098, RCW-100 & RC-10098-HH	RPE-48-BD	RPE-100
No. Per Carton	10	12	6	12	6
Shipping Weight - Lbs.	19	28	28	13	9
Net Weight - Lbs. Ea.	1.5	1.9	4.2	0.8	1.1
Core Dimensions - O.D. x Length Inches	3.18 x 6.00	3.74 x 5.50	4.80 x 6.47	3.70 x 5.50	4.80 x 6.47