

## CATCH-ALL SEALED TYPE

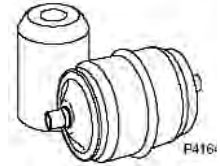
The universal acceptance of the **Catch-All Filter Drier** is due to its unique molded porous core, consisting of a blend of highly effective desiccants. The quality features built into it assure years of service on any refrigeration system.

**MOISTURE** — The **Catch-All Filter Drier** removes moisture from the refrigerant by adsorbing and retaining it deep within the desiccant granules.

**FOREIGN MATTER** — The **Catch-All Filter Drier** will filter out scale, solder particles, carbon, sludge, dirt, or any other foreign matter with negligible pressure drop. Fine particles that would go through an ordinary strainer are removed down to a minimum size in one pass filtration. The large filtering area of the **Catch-All Filter Drier** core permits it to collect a large amount of dirt without plugging up.

**OIL SLUDGE AND VARNISH** — Even the best refrigeration oils break down to produce varnish, sludge, and organic acids. Only the **Catch-All Filter Drier** is capable of removing these products of oil decomposition.

**ACID** — The **Catch-All Filter Drier** is unexcelled in acid removal ability. The hydrochloric, hydrofluoric, and various organic acids are adsorbed and held by the desiccant in a manner similar to the adsorption of moisture. Tests have demonstrated that the **Catch-All Filter Drier** will remove over 10 times as much acid as the desiccant used in most driers. This ability, along with its excellent ability to clean up the oil, is responsible for the excellent field performance in cleaning up severely contaminated systems. **SPECIAL APPLICATIONS** — A special “HH” core **Catch-All Filter Drier** is available to remove wax which frequently causes difficulty on low temperature Refrigerant 22 and 502 systems. For cap tube systems, use the C-032-CAP or CW-032-CAP Catch-All which has fittings suitable for attaching to any size capillary tube. **Remember...It's not how much moisture you remove from a refrigeration system that counts, it's how little moisture is left**



## SEALED TYPE – Liquid Line and Suction Line SPECIFICATIONS

LIQUID LINE TYPE		SUCTION LINE TYPE	CONNECTION SIZE (in.)	VOLUME OF DESICCANT (cu in.)	OVERALL LENGTH (in.)		SOLDER SOCKET DEPTH (in.)	DIAMETER of BODY (in.)
SAE Flare	ODF Solder	ODF Solder			SAE Flare	ODF Solder		
C-032	C-032-S	—	1/4	3	4.19	3.81	0.38	1.75
C-033	C-033-S	—	3/8		4.69	3.88		
C-052	C-052-S	—	1/4	5	4.75	4.19	0.38	2.44
—	C-0525-S	—	5/16		—	4.38		
C-053	C-053-S	—	3/8	5.19	4.31	0.44	2.62	
C-082	C-082-S	—	1/4	5.62	5.12	0.38		
—	C-0825-S	—	5/16	—	5.31	0.44		
C-083	C-083-S	—	3/8	6.06	5.25	0.44		
C-084	C-084-S	C-084-S-T-HH	1/2	6.31	5.44	0.50		
C-162	C-162-S	—	1/4	16	6.25	5.75	0.38	3.00
—	C-1625-S	—	5/16		—	5.94		
C-163	C-163-S	—	3/8	6.75	5.88	0.44		
C-164	C-164-S	C-164-S-T-HH	1/2	6.94	6.00	0.50		
C-165	C-165-S	C-165-S-T-HH	5/8	7.25	6.31	0.62		
—	—	C-166-S-T-HH	3/4	—	6.75	0.62		
—	C-167-S	C-167-S-T-HH	7/8	—	6.93	0.75		
C-303	C-303-S	—	3/8	30	9.69	8.88	0.44	3.00
C-304	C-304-S	—	1/2		9.88	9.00		
C-305	C-305-S	C-305-S-T-HH	5/8	10.19	9.25	0.62		
—	C-306-S	C-306-S-T-HH	3/4	—	9.65	0.62		
—	C-307-S	C-307-S-T-HH	7/8	—	9.80	0.75		
—	C-309-S	C-309-S-T-HH	1-1/8	—	9.75	0.96		
C-413	—	—	3/8	41	9.56	—	0.50	3.50
C-414	C-414-S	—	1/2		9.94	9.05		
C-415	C-415-S	—	5/8	10.25	9.35	0.62		
—	C-417-S	C-417-S-T-HH	7/8	—	9.81	0.75		
—	C-419-S	C-419-S-T-HH	1-1/8	—	9.75	0.90		
—	—	C-437-S-T-HH	7/8	48	—	10.34	0.75	4.75
—	—	C-439-S-T-HH	1-1/8		—	10.62		
—	—	C-4311-S-T-HH	1-3/8	—	10.94	1.00		
—	—	C-4313-S-T-HH	1-5/8	—	10.94	1.06		
—	C-607-S	C-607-S-T-HH	7/8	60	—	16.00	0.75	3.00
—	C-609-S	C-609-S-T-HH	1-1/8		—	16.00		
COMPACT STYLE		C-144-S-TT-HH	1/2	14	—	4.14	0.50	4.44
		C-145-S-TT-HH	5/8		—	4.38	0.66	
		C-146-S-TT-HH	3/4		—	4.83	0.66	
		C-147-S-TT-HH	7/8		—	4.97	0.75	
		C-149-S-TT-HH	1-1/8		—	4.93	0.96	

Listed by Underwriters Laboratories Inc. – Guide SMGT-File No. SA-1756A& B. Maximum Rated Pressure of 650 psi, except for the C-140 Series which has a maximum pressure of 450 psi.

## CATCH-ALL REPLACEABLE CORE TYPE



*Catch-All* THE PERFECT FILTER-DRIER

The rugged construction of the Replaceable Core Catch-All has proven itself in the field for many years. The design features include:

1. The famous **molded porous core** for maximum contaminant removal. The core cannot swell, powder, or pack—assuring ease of installation and removal;
2. The **bolt and nut attachment** of the end plate provides simple and trouble free installation;
3. The **internal** construction gives a one piece assembly and assures proper core alignment;
4. A **complete line** of fitting sizes — all with copper fittings;
5. **No plastic parts** are used — all internal parts are plated steel;
6. A **corrosion resistant powder paint** protects the exterior of the shell.

## REPLACEABLE CORE TYPE

TYPE	CONNECTIONS (in) ODF Solder	NUMBER OF CORES	CORE PART NO	VOLUME OF DESICCANT (cu in)	MOUNTING BRACKETS	OVERALL LENGTH (in)
C-485,C-485-G	5/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.15
C-485-T	5/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.15
C-487,C-487-G	7/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.30
C-487-T	7/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.30
C-489-T,C-489-G	1-1/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.50
C-4811-T,C-4811-G	1-3/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.60
C-4813-T,C-4813-G	1-5/8	1	RCW-48, RC-4864, or RC-4864-HH	48	A-685	9.60
C-967,C-967-G	7/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	14.84
C-967-T	7/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	14.84
C-969,C-969-G	1-1/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	15.04
C-969-T	1-1/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	15.04
C-9611-T,C-9611-G	1-3/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	15.14
C-9613-T,C-9613-G	1-5/8	2	RCW-48, RC-4864, or RC-4864-HH	96	A-685	15.14
C-1449,C-1449-G	1-1/8	3	RCW-48, RC-4864, or RC-4864-HH	144	A-685	20.58
C-1449-T	1-1/8	3	RCW-48, RC-4864, or RC-4864-HH	144	A-685	20.58
C-14411,C-14411-G	1-3/8	3	RCW-48, RC-4864, or RC-4864-HH	144	A-685	20.68
C-14411-T	1-3/8	3	RCW-48, RC-4864, or RC-4864-HH	144	A-685	20.68
C-14413-T,C-14413-G	1-5/8	3	RCW-48, RC-4864, or RC-4864-HH	144	A-685	20.68
C-19211,C-19211-G	1-3/8	4	RCW-48, RC-4864, or RC-4864-HH	192	A-685	26.22
C-19211-T	1-3/8	4	RCW-48, RC-4864, or RC-4864-HH	192	A-685	26.22
C-19213,C-19213-G	1-5/8	4	RCW-48, RC-4864, or RC-4864-HH	192	A-685	26.22
C-19213-T	1-5/8	4	RCW-48, RC-4864, or RC-4864-HH	192	A-685	26.22
C-30013,C-30013-G	1-5/8	3	RCW-100, RC-10098, or RC-10098-HH	300	A-175-2	26.22
C-30013-T	1-5/8	3	RCW-100, RC-10098, or RC-10098-HH	300	A-175-2	27.94
C-30017-T,C-30017-G	2-1/8	3	RCW-100, RC-10098, or RC-10098-HH	300	A-175-2	28.06
C-40017,C-40017-G	2-1/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	28.06
C-40017-T	2-1/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	34.56
C-40021-T,C-40021-G	2-5/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	34.57
C-40025-T,C-40025-G	3-1/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	34.44
C-40029-T,C-40029-G	3-5/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	34.81
C-40033-T,C-40033-G	4-1/8	4	RCW-100, RC-10098, or RC-10098-HH	400	A-175-2	35.12

### OPTIONAL SECONDARY FILTER – ORDER SEPARATELY

Filter Part No.	Description	Quantity Required
FS-480 FS-960 FS-1440 FS-19200	Filter for C-480 Series Shell	1

Compressors,  
Chillers, Condensers

Motors

Electrical

Heating  
Components

Indoor Air  
Quality

Thermostats

Oils &  
Chemicals

Accessories, Supplies  
& Commodities

Tools &  
Instruments

Refrigeration

## CATCH-ALL FILTER DRIERS

### LIQUID LINE RATINGS AND SELECTION RECOMMENDATIONS

TYPE	SURFACE FILTERING AREA	RATINGS AT ARI STANDARD CONDITIONS										SELECTION RECOMMENDATIONS (Tons)									
		Water Capacity-Drops										Refrigerant Flow Capacity**									
		Refrigerant 22		Refrigerant 134a		Refrigerant 404A/507		Refrigerant 407C		Refrigerant 410A		Refrigerant Flow Capacity** (Tons at 1 psi ΔP)									
		60 PPM	60 PPM	50 PPM	50 PPM	50 PPM	50 PPM	50 PPM	50 PPM	50 PPM	50 PPM	22	134a	404A/507	407C	410A	Commercial & Low Temperature Equipment		Air Conditioning Field Replacement or Field Built Up Systems		
75° F	125° F	75° F	125° F	75° F	125° F	75° F	125° F	75° F	125° F	75° F	125° F	75° F	125° F	75° F	125° F	12 & 134a	22	404A, 502 & 507	12 & 134a	22, 407C & 410A	
C-032	9	61	50	67	48	71	58	52	17	27	20	1.5	1.3	1.0	1.3	1.4	1/4	1/4	1/4	1/2	1/2
C-032-CAP																					
C-032-S																					
C-032-F																					
C-032-FM																					
C-033												3.5	3.2	2.3	3.2	3.4					
C-033-S	3.8	3.5	2.6	3.5	3.7																
C-052	15	146	119	158	114	169	138	123	40	63	48	2.1	1.9	1.4	1.9	2.0	1/3	1/3	1/3	3/4 thru 1	3/4 thru 2
C-052-S																					
C-052-F																					
C-052-FM																					
C-0525-S												3.4	3.1	2.3	3.1	3.3					
C-053												4.1	3.8	2.7	3.8	4.0					
C-053-S	4.7	4.3	3.1	4.3	4.5																
C-082	21	240	196	261	188	279	227	202	65	104	78	2.1	1.9	1.4	1.9	2.0	1/2 thru 1-1/2	1/2 thru 1-1/2	1/2 thru 1	3/4 thru 2	1 thru 2
C-082-S																					
C-0825-S																					
C-083												3.7	3.3	2.4	3.3	3.5					
C-083-S												4.5	4.2	3.0	4.2	4.4					
C-084												5.2	4.7	3.4	4.7	5.0					
C-084-S	8.7	7.9	5.9	8.0	8.5																
C-162	33	346	297	396	285	424	345	307	100	158	119	2.1	1.9	1.4	1.9	2.0	1 thru 2	1-1/2 thru 3	3/4 thru 2	1 thru 5	1-1/2 thru 5
C-162-S																					
C-1625-S																					
C-163												3.7	3.3	2.4	3.3	3.5					
C-163-S												4.5	4.2	3.0	4.2	4.4					
C-164												5.2	4.7	3.4	4.7	5.0					
C-164-S	10.1	9.3	6.8	9.3	9.8																
C-165	11.0	10.1	7.3	10.1	10.7																
C-165-S	13.8	12.6	9.2	12.7	13.4																
C-303	53	696	567	756	545	809	658	586	189	302	227	4.6	4.2	3.0	4.2	4.4	3 thru 5	3 thru 5	2 thru 5	3 thru 7-1/2	4 thru 10
C-303-S												5.3	4.7	3.4	4.7	5.0					
C-304												10.1	9.3	6.8	9.3	9.8					
C-304-S												11.0	10.1	7.3	10.1	10.7					
C-305												14.9	13.6	9.9	13.7	14.5					
C-305-S												16.9	15.5	11.3	15.5	16.4					
C-307-S	21.6	19.8	14.4	19.9	21.0																
C-414	67	936	713	1017	733	1088	885	788	254	407	305	11.5	10.5	7.6	10.5	11.1	5 thru 10	5 thru 12	5 thru 10	5 thru 12	7-1/2 thru 15
C-414-S												12.4	11.4	8.3	11.4	12.1					
C-415												15.8	14.5	10.6	14.6	15.4					
C-415-S												17.5	16.1	11.8	16.2	17.1					
C-417-S												22.1	20.3	14.8	20.4	21.5					
C-419-S												24.3	22.3	16.3	22.4	23.7					
C-607-S	29.1	26.6	19.5	26.8	28.4																
C-609-S	33.2	30.4	22.3	30.7	32.4																

\*The filtration area is equal to the core surface area plus the large internal surface available for depth filtration.

†20 drops = 1 gram = 1cc.

\*\*Based on 86 F liquid line temperature and a refrigerant flow of 3.1 pounds per minute per ton of Refrigerant 134a; 2.9 pounds per minute per ton of Refrigerant 22; 3.9 pounds per minute per ton for Refrigerant 404A; 2.9 pounds per minute per ton for Refrigerant 407C; 2.8 pounds per minute per ton for Refrigerant 410A and 4.1 pounds per minute per ton for Refrigerant 507. Ratings in accordance to ARI Standard 710.

NOTES:

1. R-12 water capacity values are approximately 15 percent greater than R-134a. R-502 water capacities are similar to R-404A and R-507.
2. The variation in flow ratings of filter-driers having the same size core and shell is caused by the difference in connecting sizes used.

## CATCH-ALL SUCTION LINE FILTER DRIER RECOMMENDATIONS FOR CLEAN-UP AFTER BURNOUT AND NEW SYSTEMS

### SEALED TYPE

TYPE NUMBER	CONNECTIONS (in.) ODF Solder	Number of Cores	CORE PART NO	LENGTH (in.)	SOLDER SOCKET DEPTH (in.)	WIDTH (in.)	SYSTEM CAPACITY IN HORSEPOWER				
							Refrigerant 22 & 407C		Refrigerant 12, 134a, 404A, 502 & 507		
							Permanent Installation with Cores	Temporary Installation Cores for Cleanup; Filter Elements after Cleanup	Permanent Installation with Cores	Temporary Installation Cores for Cleanup; Filter Elements after Cleanup	
SEALED TYPE	C-084-S-T-HH	1/2	Sealed Type Filter Driers	Sealed Type Filter Driers	5.44	0.50	2.62	1	Select these types on basis of permanent installation	1/2	Select these types on basis of permanent installation
	C-164-S-T-HH	1/2			6.00	0.50	3.00	2		1	
	C-165-S-T-HH	5/8			6.31	0.62					
	C-166-S-T-HH	3/4			6.75	0.62	3.00	3		2	
	C-167-S-T-HH	7/8			6.93	0.75					
	C-305-S-T-HH	5/8			9.25	0.62	3.00	5		3	
	C-306-S-T-HH	3/4			9.65	0.62					
	C-307-S-T-HH	7/8			9.80	0.75	3.50	7-1/2		4	
	C-309-S-T-HH	1-1/8			9.75	0.96					
	C-417-S-T-HH	7/8			9.81	0.75	4.75	10		5	
	C-419-S-T-HH	1-1/8			9.75	0.96					
	C-437-S-T-HH	7/8			10.34	0.75	3.00	5		3	
	C-439-S-T-HH	1-1/8			10.74	0.96					
	C-4311-S-T-HH	1-3/8			10.94	1.00	4.44	2		1	
	C-4313-S-T-HH	1-5/8			10.94	1.06					
	C-607-S-T-HH	7/8			16.00	0.75	4.44	3		2	
	C-609-S-T-HH	1-1/8			16.00	0.96					
	SEALED TYPE COMPACT STYLE	C-144-S-TT-HH			1/2	RC-10098-HH or RC-10098	RC-10098-HH or RC-10098	4.14		0.50	
C-145-S-TT-HH		5/8	4.38	0.62							
C-146-S-TT-HH		3/4	4.83	0.69							
C-147-S-TT-HH		7/8	4.97	0.75							
C-149-S-TT-HH		1-1/8	4.93	0.96							
C-30013-G		1-5/8	3	RC-10098-HH or RC-10098	RC-10098-HH or RC-10098			30	60	20	30
C-30017-G	2-1/8										
C-40017-G	2-1/8										
C-40021-G	2-5/8										
C-40025-G	3-1/8										
C-40029-G	3-5/8										
C-40033-G	4-1/8										

\*See page for RSF shells.

### CATCH-ALL SUCTION LINE FILTER DRIER SELECTION INSTRUCTIONS

Selection of the proper Catch-All Suction Line Filter Drier will depend upon the intended usage. Either the "Permanent Installation with Cores" or "Temporary Installation Cores for Cleanup; Filter Elements after Cleanup" column may be used. When the **best possible system protection** is desired, the "Permanent with Cores" column should be used for selection. These recommendations are made on the basis of a low pressure drop, and as a result the cores can be left in the shell for maximum drying and acid removal when the system returns to normal operation delivering its full rated capacity.

An alternate selection that is satisfactory and less

**expensive** is to install cores temporarily for cleanup, and then remove these cores and install filter elements after cleanup. Because of the larger system capacity, the pressure drop through the temporarily installed cores will be somewhat larger than normal, but still within the limits. After cleanup, the use of filter elements will assure a minimum pressure drop when the system is in normal operation. The low pressure drop through the filter elements assures maximum energy savings during normal operation. Cleanup of the system can be accomplished with either the standard core (RC-10098) or the charcoal core (RC-10098-HH).

### SIGNIFICANCE OF THE PART NUMBER

The letters and numerals in the Catch-All part number each have a significance. The "C" indicates Catch-All, and "CW" indicates the High Water Capacity Catch-All. The **FIRST TWO OR THREE DIGITS** indicate cubic inches of desiccant. The **LAST ONE OR TWO DIGITS** indicate fitting size in eighths. For sealed models, a "-S" following the last digit indicates solder fittings, and **NO LETTER** indicates a flare fitting. Replaceable core models (C-420 and larger) only have solder connections and the "-S" is omitted.

Examples: C-083 is 8 cu. in. and 3/8 in. flare, C-309-S is 30 cu. in. and 1-1/8 in. solder, C-19213 is 192 cu. in. and 1-5/8 in. solder.

Other suffix letters indicate special qualities. For example:

"-T" indicates a pressure tap consisting of a Schrader type access valve on the inlet end of the Catch-All.

"-HH" indicates a charcoal style core for wax removal and cleanup after a hermetic motor burnout.

## SPORLAN - REPLACEABLE CORES AND PLEATED FILTER ELEMENTS



Cores for replaceable core type filter-driers are molded with 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

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

**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 shell. **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. This core should be used for wax removal, and for clean-up of systems that have had a hermetic motor burnout.

**RPE-48-BD** - Filter Element - Order as 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. In cleaning up a system after a hermetic motor burnout, cores should be used first. After clean-up, the filter element should be installed.

**RC-10098** - Activated Core - Order as a separate item - Fits types C-30,000 and C-40,000 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-30,000 and C-40,000 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-30,000 and C-40,000 Series Shells. This core should be used for wax removal, and for clean-up of systems that have had a hermetic motor burnout.

**RPE-100** - Filter Element - Order as separate item - Fits types C-30,000 and C-40,000 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.

### HH STYLE CATCH-ALL FOR WAX REMOVAL

#### HH STYLE CATCH-ALL FOR WAX REMOVAL

U.S. PATENT NUMBER 3,407,617

Small amounts of wax are often a problem on **low temperature systems.** Even well engineered systems frequently contain minute quantities of wax which are sufficient to clog expansion valve screens or cause sticking of the valve. Sporlan has developed a special blend of desiccants including activated charcoal which removes small amounts of wax in the liquid line before this wax can cause trouble at the expansion valve. These Catch-All Filter Driers have been very successful in correcting trouble jobs in the field.

By installing HH Style Catch-All Filter Driers in the liquid line of all low temperature systems these wax problems can be entirely prevented. In addition to their wax removal ability, these filter driers will remove all of the other harmful contaminants that the standard filter driers remove.

The following **Catch-All Filter Driers** are available with the HH core to meet the needs of low temperature systems. **For dimensions, refer to the specifications for standard filter driers or consult Bulletin 40-10.**

PART NO.	CONNECTIONS (in.)	PART NO.	CONNECTIONS (in.)
C-052-HH	1/4 SAE Flare	C-303-HH	3/8 SAE Flare
C-082-HH	1/4 SAE Flare	C-304-HH	1/2 SAE Flare
C-083-HH	3/8 SAE Flare	C-304-S-HH	1/2 ODF Solder
C-162-HH	1/4 SAE Flare	C-305-HH	5/8 SAE Flare
C-163-HH	3/8 SAE Flare	C-305-S-HH	5/8 ODF Solder
C-163-S-HH	3/8 ODF Solder	C-414-HH	1/2 SAE Flare
C-164-HH	1/2 SAE Flare	C-415-HH	5/8 SAE Flare
C-164-S-HH	1/2 ODF Solder	C-417-S-HH	7/8 ODF Solder
C-165-HH	5/8 SAE Flare	RC-4864-HH	Replaceable Core
C-165-S-HH	5/8 ODF Solder	RC-10098-HH	