

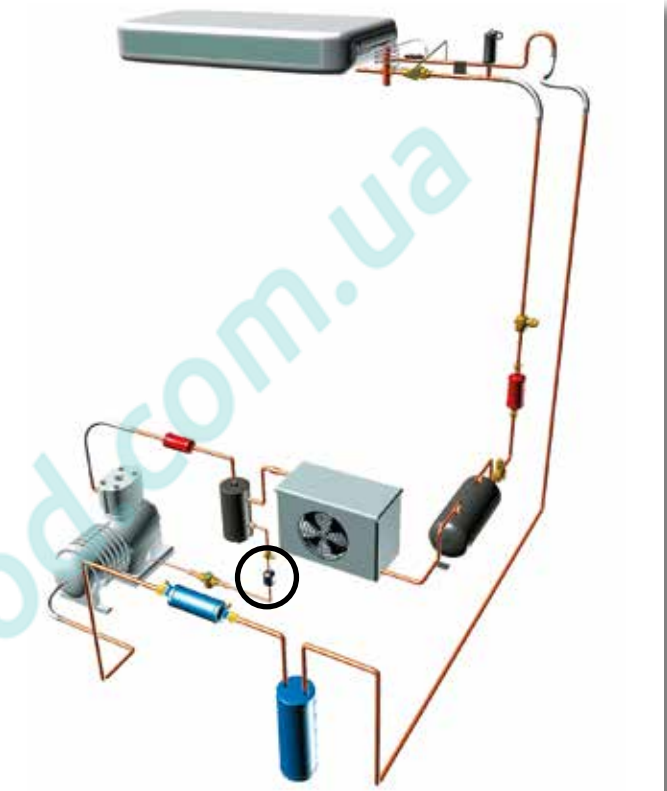


## Oil filters

### → HCYF

#### ■ Applications

- Oil filtering on the oil return line to the compressor sumps of refrigerating and air conditioning installations.
- These filters are required for the good operation of oil level regulators and compressors. It protect them from any contaminants that could damage them (metallic chips, filings, oxides, sludge, etc...).



#### ■ Functional features

- Products are compatible with CFCs, HCFCs, HFCs, CO<sub>2</sub>, as well as with their associated oils and additives. Products are designed for use of non-hazardous refrigerants from group 2 of PED 2014/68/EU. To use CARLY components with fluids of the hydrocarbon group 1 – Propane R290, Butane R600, Isobutane R600a, Propylene R1270 – with HFOs and transcritical CO<sub>2</sub> and for a RANKINE organic cycle application, contact CARLY technical department.
- Product classification in CE categories is performed using the PED 2014/68/EU table, corresponding to a volume-based selection. Hermetically sealed outer steel enclosure with paint to ensure a high resistance to corrosion.
- Filtrating core made of stainless steel mesh cloth.
- Filtering efficient at 160 microns.
- Several types of connections are possible on standard products:
  - To be screwed type SAE
  - To be brazed for tubes in inches (S)
  - To be brazed for tubes in millimetres (MMS).



#### **Possible customization on demand :**

- Specific connections (O-RING, ORFS,...)
- Connections to braze, 100 % copper
- Aluminium casings and unions (weight optimisation)
- Stainless steel casings and unions (resistance to corrosion and at low temperatures)
- Lower filtration threshold
- Filtering surface of the core, more or less important according to the specificities of the machine.

#### ■ CARLY advantages

- Maximum working pressure: 46 bar, may be used on high pressure oil return systems.
- Very large filtering surface areas for very low pressure drop.
- Presence of a permanent magnet located at the inlet of the filter, ensuring the immediate “trapping” of all steel particles.
- Very large range of filters: 6 different models.
- Connections to solder are made of copper-plated steel and allow to use brazing alloys with a low silver percentage; their resistance to pressure is much higher than the full copper connections.



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### ■ Warning

Before selecting or installing any component, please refer to the chapter 0 - **WARNING**.

### ■ General assembly precautions

The installation of a component in a refrigeration system by a skilled professional, requires some precautions:

- Some are specific to each component, and in this case, they are specified in the

**RECOMMENDATIONS SPECIFIC** part defined hereafter ;

- Other are general to all CARLY components, they are presented in the chapter 115 – **GENERAL ASSEMBLY PRECAUTIONS**.

- The recommendations relating to the CARLY components for the subcritical CO<sub>2</sub> applications are also developed in chapter 115 – **GENERAL ASSEMBLY PRECAUTIONS**.

### ■ Recommendations specific to the oil filters HCYF

- The oil filters are to be mounted on the oil return line, between the oil separator and the oil level regulator, as close as possible to the latter.
- The direction of oil flow, indicated by an arrow on the filter tag and by an “IN” sticker next to the inlet connection, must imperatively be respected.
- The degree of clogging of the filters must be regularly checked, ensuring that the oil return is correct in the crankcases

of compressors; oil filters must be imperatively replaced at the first sign of clogging.

- It is highly recommended to install downstream oil filter an oil sight glass HCYVP (refer to chapter 48) in order to visually check the presence and the condition of the oil.
- HCYF oil filter only ensures mechanical filtering of solid contaminants; to ensure an optimal protection of the oil level

regulators and of the compressors operating with highly hydrophilous POE oils, it is imperative to use an HYDROIL filter drier for POE oils: refer to chapter 47.

- Make sure that the piping can support without deformation the weight of the oil filter; otherwise, plan the attachment of the oil filter with a clamp on a stable part of the installation.



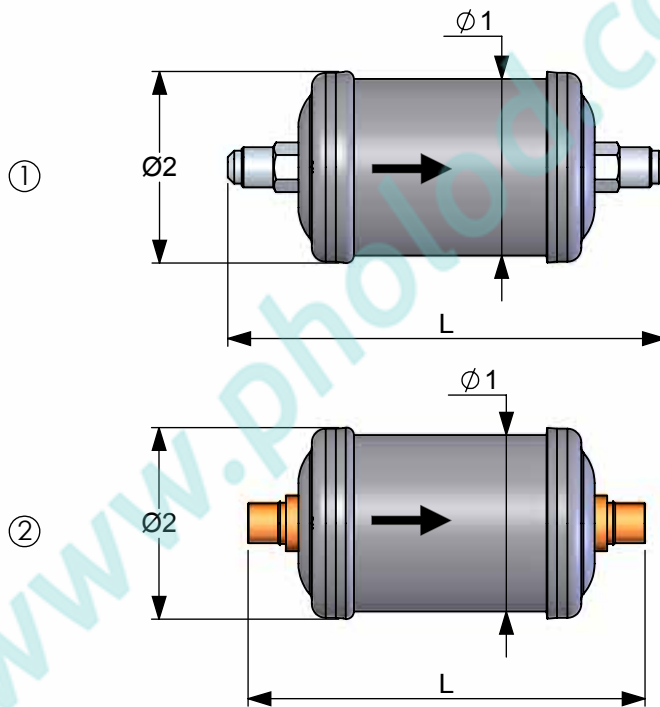
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### ■ Technical features

CARLY references	Connections To screw SAE inch	Connections To solder ODF inch	CARLY references	Connections To solder ODF mm	Connections types <sup>(1)</sup>	Drawing Nb	Filtering surface cm <sup>2</sup>	Dimensions mm		
								Ø1	Ø2	L
HCYF 52	1/4				1	1	70	50	55	121
HCYF 53	3/8				1	1	70	50	55	127
HCYF 53 S		3/8	HCYF 53 MMS	10	2	2	70	50	55	112
HCYF 83	3/8				1	1	121	89	96	140
HCYF 84	1/2				1	1	121	89	96	144

<sup>(1)</sup> Chapter "Connection features and drawings" (refer to chapter 114).



CARLY references	Volume V L	Maximal working pressure PS bar	Working pressure <sup>(1)</sup>		Maximal working temperature TS maxi °C	Minimal working temperature TS mini °C	Working temperature <sup>(1)</sup> TS BT °C	CE Category <sup>(2)</sup>
			PS	BT				
HCYF 52	0,11	46	15	120	-40	-30	Art4§3	
HCYF 53	0,11	46	15	120	-40	-30	Art4§3	
HCYF 53 S	HCYF 53 MMS	0,11	46	15	120	-40	-30	Art4§3
HCYF 83	0,50	46	15	120	-40	-30	Art4§3	
HCYF 84	0,50	46	15	120	-40	-30	Art4§3	

<sup>(1)</sup> The working pressure is limited to the PS BT value when working temperature is lower than or equal to TS BT value.

<sup>(2)</sup> Classification by volume, according to PED 2014/68/EU (refer to chapter 0).



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### ■ Weights and packaging

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
HCYF 52	0,28	0,25	24
HCYF 53	0,28	0,25	24
HCYF 53 S & MMS	0,28	0,25	24
HCYF 83	0,78	0,75	6
HCYF 84	0,83	0,80	6

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