

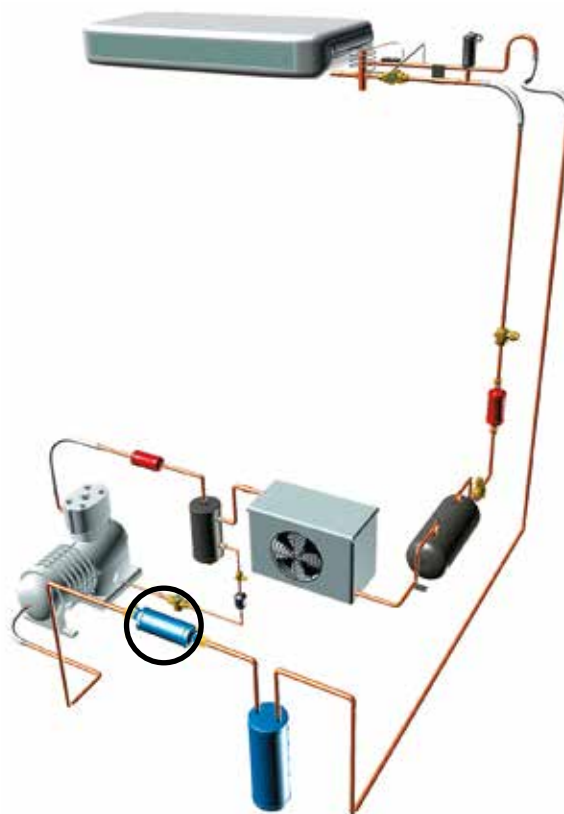


Cleaning filters for suction line (permanent use, with and without automatic bypass)

→ FACY

■ Applications

- Permanent refrigerant filtering, compressor and regulation element protection in refrigerating and air conditioning installations.
- Recommended use after commissioning, during circuit decontamination and refrigerant regeneration operations, and after the burn-out of a compressor.
- Particularly recommended for sealed groups, their automatic bypass system prevents a major drop in suction pressure.



■ Functional features

- Products are compatible with HCFCs, HFCs, HFOs, CO₂, 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, contact CARLY technical department.
- External steel body hermetically sealed with paint to ensure a high resistance to corrosion
- Product classification in CE categories is performed using the PED 2014/68/EU table, corresponding to a volume-based selection.
- Filtering at outlet preventing propagation within the circuit of particles bigger than 10 microns, with a very low pressure drop.
- Presence of a permanent magnet at the intake of the filters, for steel metallic particle trapping.
- 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 millimeters (MMS)



Possible customization on demand:

- Specific connections (O-RING, ORFS, ...)

■ CARLY advantages

- Maximal working pressure: 46 bar.
- Two access valves allow measurement of the filters' pressure drop, to check filter saturation.
- Permanent treatment until saturation and regular refrigerant distribution, through a tubular felt core, that creates a lower depression than in the connection piping.
- Internal automatic bypass system in case of filter blocking.
- Very economical cleaning process without loss of time, because the installation is still running during the operation.
- Environmental protection and refrigerants savings because, according to the refrigerants pollution level, using those cleaning filters allows the reuse of the refrigerant after its cleaning up.
- The copper-plated steel connections up to a diameter of 3/4" to be welded facilitate the brazing and allow using filler metals with a low silver percentage.



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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 CO₂ applications are also developed in

chapter 115 – **GENERAL ASSEMBLY PRECAUTIONS**.

■ Recommendations specific to the FACY Cleaning filters

- Cleaning filters are to be mounted on the suction line between the evaporator outlet and the compressor.
- On reversing cycle installations, FACY cleaning filters should always be installed between the inversion valve and the compressor.
- Never use these cleaning filters on the oil line; in such a case, use HCYF oil filters, or HYDROIL filter driers for POE oils (refer to chapters 45 and 47).
- Pay attention to the filters' assembly order, because the automatic bypass operation depends on the refrigerant direction indicated on the filter tag.
- In the event of compressor burnout, the cleaning and pollution control procedure is described in the FACY cleaning filter chapter (refer to chapter 15).
- FACY cleaning filters used for these operations are perfectly interchangeable with FACY filters; therefore, they can be temporarily mounted instead of FACY filters.
- Closely monitor the pressure drops using the access valves, in order to prevent shortage of the refrigerant vapour required to cool the compressor engine.
- Upon saturation or when the bypass system is used, filters have to be replaced.
- The replacement of the cleaning filters is imperative when the pressure drop measured in the filter is too large. As a precaution, CARLY recommends this operation at least once a year.
- Make sure that the piping can support, without deformation, the weight of the filter drier; otherwise, plan the attachment of the filter drier with a clamp on a stable part of the installation.



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■ Selection table

CARLY references	Connections		CARLY references	Connections	Refrigerating capacity kW ⁽¹⁾				
	To screw SAE inch	To solder ODF inch			To solder ODF mm	R22 R407F R407C R448A R449A R452A	R134a R513A R450A R1234ze	R410A	R1233zd
FACY 283	3/8				5,6	5,1	8,2	0,8	6,3
FACY 284	1/2				9,3	8,6	13,7	1,3	10,5
FACY 285	5/8				21,0	19,3	30,9	2,9	23,8
FACY 285 S/MMS		5/8	FACY 285 S/MMS	16	21,0	19,3	30,9	2,9	23,8
FACY 286 S		3/4	FACY 286 MMS	18	30,1	27,6	44,2	4,2	34,0
FACY 287 S/MMS		7/8	FACY 287 S/MMS	22	37,8	34,7	55,5	5,3	42,7
FACY 289 S		1 1/8	FACY 289 MMS	28	48,2	44,3	70,9	6,7	54,5
FACY 489 S		1 1/8	FACY 489 MMS	28	57,2	52,6	84,1	8,0	64,7
FACY 4811 S/MMS		1 3/8	FACY 4811 S/MMS	35	69,6	64,0	102,3	9,7	78,7
FACY 4813 S		1 5/8	FACY 4813 MMS	42	76,1	70,0	111,9	10,7	86,1

⁽¹⁾ Refrigerating capacities according to Standard ARI 730-2001 for To = 4.4 °C, Tk = 32 °C.

⁽²⁾ Refrigerating capacities Qn for Tk = - 10 °C and To = - 40 °C. If different conditions, refer to correction factors in chapter 112.

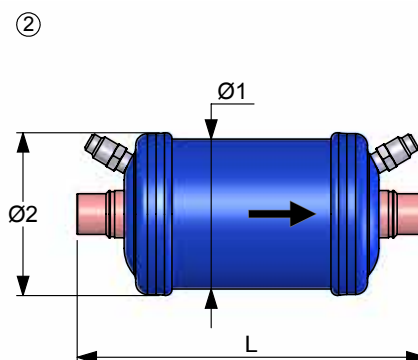
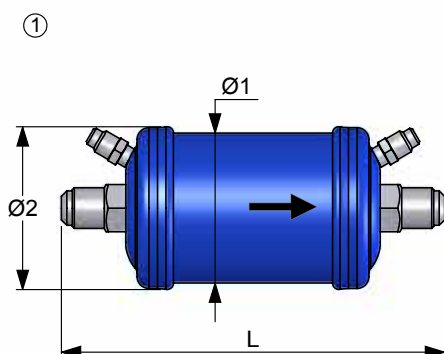
If different conditions, refer to correction factors in chapter 112.

Nota: the diameter of connections must not be inferior to the diameter of the main pipe.

■ Technical features

CARLY references	Connection types ⁽¹⁾	Drawing Nb	Filtering surface cm ²	Dimensions mm		
				Ø1	Ø2	L
FACY 283	1	1	150	70	76	226
FACY 284	1	1	150	70	76	230
FACY 285	1	1	150	70	76	234
FACY 285 S/MMS	2	2	150	70	76	214
FACY 286 S	FACY 286 MMS	2	150	70	76	220
FACY 287 S/MMS	2	2	150	70	76	234
FACY 289 S	FACY 289 MMS	3	150	70	76	244
FACY 489 S	FACY 489 MMS	3	356	89	96	317
FACY 4811 S/MMS	3	2	356	89	96	337
FACY 4813 S	FACY 4813 MMS	3	356	89	96	337

⁽¹⁾ Chapter «Connection features and drawings» (refer to chapter 114).





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■ Technical features

CARLY references	Volume	Maximal working pressure	Working pressure ⁽¹⁾	Maximal working temperature	Minimal working temperature	Working temperature ⁽¹⁾	CE Category ⁽²⁾	
								V L
FACY 283	0,58	46	15	80	-40	-30	Art4§3	
FACY 284	0,58	46	15	80	-40	-30	Art4§3	
FACY 285	0,58	46	15	80	-40	-30	Art4§3	
FACY 285 S/MMS	0,58	46	15	80	-40	-30	Art4§3	
FACY 286 S	FACY 286 MMS	0,58	46	15	80	-40	-30	Art4§3
FACY 287 S/MMS		0,59	46	15	80	-40	-30	Art4§3
FACY 289 S	FACY 289 MMS	0,60	46	15	80	-40	-30	Art4§3
FACY 489 S	FACY 489 MMS	1,39	46	15	80	-40	-30	I
FACY 4811 S/MMS		1,40	46	15	80	-40	-30	I
FACY 4813 S	FACY 4813 MMS	1,42	46	15	80	-40	-30	I

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

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

■ Weights and packaging

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
FACY 283	0,94	0,90	1
FACY 284	0,99	0,95	1
FACY 285	1,04	1,00	1
FACY 285 S/MMS	1,04	1,00	1
FACY 286 S & MMS	1,04	1,00	1
FACY 287 S/MMS	1,04	1,00	1
FACY 289 S & MMS	1,14	1,10	1
FACY 489 S & MMS	1,77	1,70	1
FACY 4811 S/MMS	1,97	1,90	1
FACY 4813 S & MMS	2,07	2,00	1