



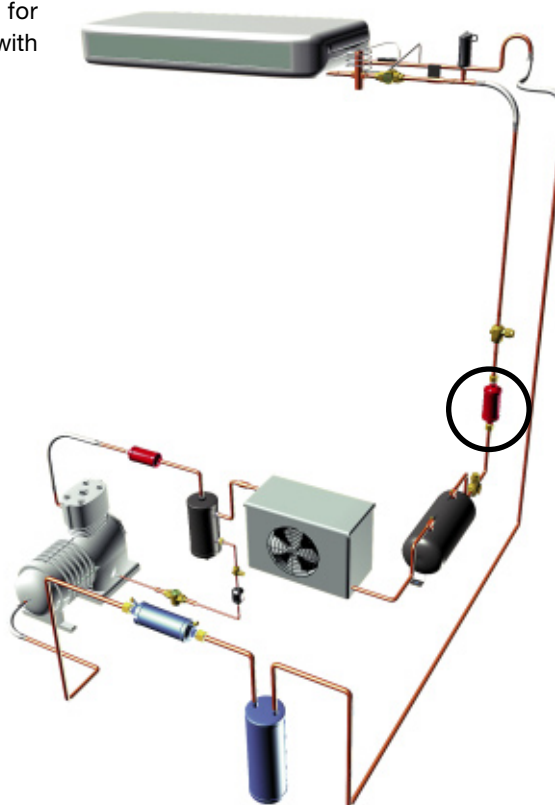
## Bi-directional flow and anti-acid filter driers

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#### ■ Applications

- Refrigerant filtering, drying and acid neutralization for refrigerating and air conditioning installation liquid lines with change over in flow direction, including heat pumps.



#### ■ Functional features

- Products are compatible with HFCs, HCFCs, CFCs, as well as their associated oils and additives. Products are designed for use of non-hazardous refrigerants from group 2 of PED 97/23/EC.
- Product classification in CE categories is performed using the PED 97/23/EC table, corresponding to a volume-based selection.
- Refrigerant flow is possible in both directions, and filtering is ensured whichever the direction.
- Filtering at outlet preventing propagation within the circuit of particles bigger than 12 microns.
- No desorption, even at high temperatures.

#### ■ CARLY advantages

- Bi-flow filter driers with very low pressure drop, thanks to an innovative CARLY patented system, in terms of flow circuiting.
- No risk of discharge of the pollutants trapped inside the filter driers, during change over in flow directions.
- High drying and acid neutralization capacity at all temperatures, thanks to a rigorous selection and a judicious mix of chemical agents present in the filter driers (alumina activated to neutralise the acids and molecular sieves to adsorb moisture).
- Initial drying capacity guaranteed by a 200°C oven drying and airtight sealing.
- A dispenser located at the intake ensures optimal distribution and permanent treatment of the whole refrigerant, inside the filter drier.
- Connections to solder are made of copper-plated steel and allow the use of filler metals with a low silver content; their resistance to pressure is much higher than that of full copper connections.
- GOST certified products.



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### ■ Recommendations

- \* Filter driers are to be mounted on the liquid line, upstream of the pressure relief valve.
- \* Be careful to properly select the solenoid valves located downstream of the filter driers; their oversizing could cause liquid hammer phenomena hindering the filter driers mechanical behaviour; protection of the regulation elements upstream of the evaporator should be performed with FILTRY dirt filters (refer to chapter 8);
- these liquid hammer phenomena can come from other sources, in long-piping installations.
- \* Never install filter driers in an area of the circuit that can be isolated.
- \* Never trap refrigerant in its liquid state (between a check valve and a solenoid valve, for instance).
- \* It is imperative to replace filter driers after each intervention on the installation and at least once a year.
- \* Drier efficiency and refrigerant moisture content should be checked using VCYL or VCYLS liquid sight glasses (refer to chapter 7).
- \* General assembly precautions: refer to chapter 115.

### ■ Selection table

CARLY references	Connections		CARLY references	Connections To solder ODF mm	Refrigerating capacity (kW) <sup>(1)</sup>				Dehydratable refrigerant capacity (kg of refrigerant) <sup>(2)</sup>					
	To screw SAE inch	To solder ODF inch			R22	R134a	R404A R507	R407C R410A	R22 R407C		R134a R410A		R404A R507	
									24°C	52°C	24°C	52°C	24°C	52°C
<b>DDCY 082</b>	1/4				9,0	8,5	6,5	9,0	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 082 S</b>		1/4	<b>DDCY 082 MMS</b>	6	9,0	8,5	6,5	9,0	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 083</b>	3/8				24,0	23,0	17,0	24,5	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 083 S</b>		3/8	<b>DDCY 083 MMS</b>	10	24,0	23,0	17,0	24,5	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 084</b>	1/2				38,0	37,0	30,0	39,5	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 084 S</b>		1/2	<b>DDCY 084 MMS</b>	12	38,0	37,0	30,0	39,5	15,0	14,5	17,0	15,5	14,5	13,5
<b>DDCY 163</b>	3/8				24,5	24,0	18,0	25,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 163 S</b>		3/8	<b>DDCY 163 MMS</b>	10	24,5	24,0	18,0	25,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 164</b>	1/2				41,5	40,0	32,0	43,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 164 S</b>		1/2	<b>DDCY 164 MMS</b>	12	41,5	40,0	32,0	43,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 165</b>	5/8				68,0	66,0	50,0	70,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 165 S/MMS</b>		5/8	<b>DDCY 165 S/MMS</b>	16	68,0	66,0	50,0	70,0	40,0	34,0	50,0	37,0	38,0	31,0
<b>DDCY 305</b>	5/8				70,0	68,0	51,0	72,0	70,0	61,0	80,5	69,0	69,5	56,0
<b>DDCY 305 S/MMS</b>		5/8	<b>DDCY 305 S/MMS</b>	16	70,0	68,0	51,0	72,0	70,0	61,0	80,5	69,0	69,5	56,0
<b>DDCY 307 S</b>		7/8	<b>DDCY 307 MMS</b>	22	110,0	105,0	80,0	115,0	70,0	61,0	80,5	69,0	69,5	56,0

<sup>(1)</sup> Refrigerating capacities according to Standard ARI 710-86 for  $T_o = -15^{\circ}\text{C}$ ,  $T_k = 30^{\circ}\text{C}$  and  $\Delta p = 0.07$  bar.  
If different conditions, refer to correction factors in chapter 112.

<sup>(2)</sup> Dehydratable refrigerant capacity according to Standard ARI 710-86.



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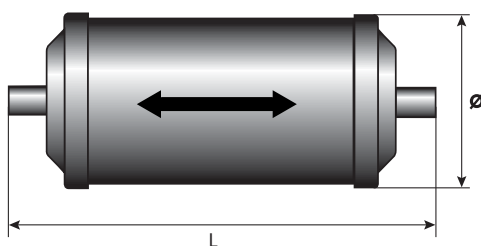
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### ■ Technical features

CARLY references		Connection types <sup>(1)</sup>	Filtering surface (cm <sup>2</sup> )	Desiccants volume (cm <sup>3</sup> )	Dimensions (mm)		Net weight (kg)
					Ø	L	
DDCY 082		1	64	118,0	53	150	0,40
DDCY 082 S	DDCY 082 MMS	2	64	118,0	53	140	0,40
DDCY 083		1	64	118,0	53	156	0,40
DDCY 083 S	DDCY 083 MMS	2	64	118,0	53	140	0,40
DDCY 084		1	64	118,0	53	160	0,50
DDCY 084 S	DDCY 084 MMS	2	64	118,0	53	140	0,50
DDCY 163		1	160	297,7	74	175	0,90
DDCY 163 S	DDCY 163 MMS	2	160	297,7	74	159	0,90
DDCY 164		1	160	297,7	74	179	0,95
DDCY 164 S	DDCY 164 MMS	2	160	297,7	74	159	0,95
DDCY 165		1	160	297,7	74	183	1,00
DDCY 165 S/MMS	DDCY 165 S/MMS	2	160	297,7	74	163	1,00
DDCY 305		1	160	557,7	74	259	1,45
DDCY 305 S/MMS	DDCY 305 S/MMS	2	160	557,7	74	239.5	1,45
DDCY 307 S	DDCY 307 MMS	2	160	557,7	74	259.5	1,45

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



CARLY references	Volume	Maximal working pressure	Working pressure <sup>(1)</sup>	Maximal working temperature	Minimal working temperature	Working temperature <sup>(1)</sup>	CE Category <sup>(2)</sup>
	V (L)	PS (bar)	PS BT (bar)	TS maxi (°C)	TS mini (°C)	TS BT (°C)	
DDCY 082 / 082 S / 082 MMS	0,17	42	10	80	-40	-20	Art3§3
DDCY 083 / 083 S / 083 MMS	0,17	42	10	80	-40	-20	Art3§3
DDCY 084 / 084 S / 084 MMS	0,17	42	10	80	-40	-20	Art3§3
DDCY 163 / 163 S / 163 MMS	0,41	42	10	80	-40	-20	Art3§3
DDCY 164 / 164 S / 164 MMS	0,41	42	10	80	-40	-20	Art3§3
DDCY 165 / 165 S/MMS	0,41	42	10	80	-40	-20	Art3§3
DDCY 305 / 305 S/MMS	0,66	42	10	80	-40	-20	Art3§3
DDCY 307 S / 307 MMS	0,66	42	10	80	-40	-20	Art3§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 97/23/EC (refer to Chapter 0 page 7)



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### ■ Weights and packaging

CARLY references	Unit weight (kg)		Packaging unit	
	With packaging	Without packaging	standard	OEM'S
<b>DDCY 082</b>	0,43	0,40	24	/
<b>DDCY 082 S &amp; MMS</b>	0,43	0,40	24	/
<b>DDCY 083</b>	0,43	0,40	24	/
<b>DDCY 083 S &amp; MMS</b>	0,43	0,40	24	/
<b>DDCY 084</b>	0,53	0,50	24	/
<b>DDCY 084 S &amp; MMS</b>	0,53	0,50	24	/
<b>DDCY 163</b>	0,94	0,90	16	/

CARLY references	Unit weight (kg)		Packaging unit	
	With packaging	Without packaging	standard	OEM'S
<b>DDCY 163 S &amp; MMS</b>	0,94	0,90	16	/
<b>DDCY 164</b>	0,99	0,95	16	/
<b>DDCY 164 S &amp; MMS</b>	0,99	0,95	16	/
<b>DDCY 165</b>	1,04	1,00	16	/
<b>DDCY 165 S/MMS</b>	1,04	1,00	16	/
<b>DDCY 305</b>	1,52	1,45	12	/
<b>DDCY 305 S/MMS</b>	1,52	1,45	12	/
<b>DDCY 307 S/MMS</b>	1,52	1,45	12	/