



## Anti-acid filter driers with liquid sight glass

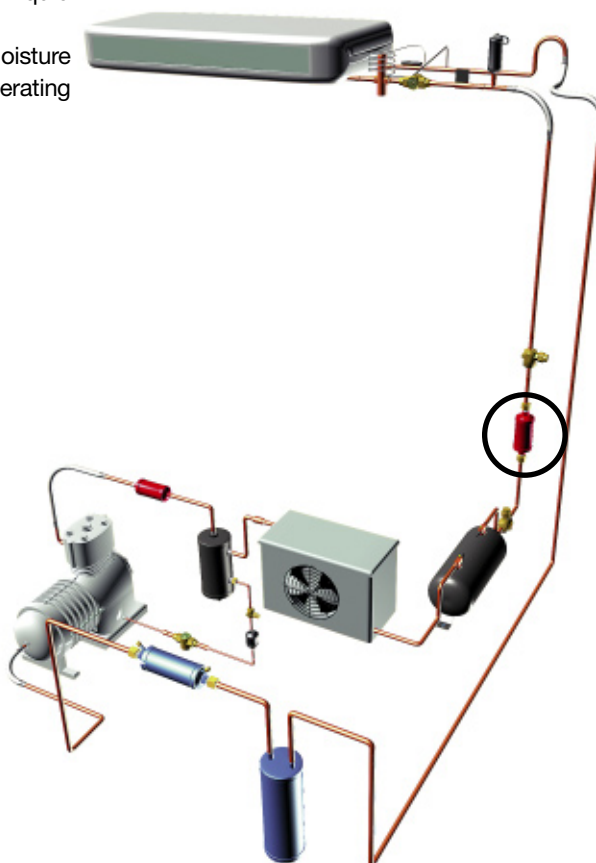
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### → TSGY

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#### ■ Applications

- Filtering and drying of refrigerants and acid neutralization for liquid lines of refrigerating and air conditioning installations.
- Immediate and direct monitoring of flow, condition or moisture content of the refrigerant in its liquid or diphasic phase in refrigerating and air conditioning installations.



#### ■ Functional features

- Products are compatible with HFCs, HCFCs, CFCs, as well as with 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 done with the PED 97/23/EC table, corresponding to a volume-based selection.
- Filtering at outlet preventing propagation within the circuit of particles bigger than 12 microns.
- No desorption, even at a high temperature.
- Visualisation of refrigerant through glass.
- A moisture indicator sensitive to moisture and resistant to acids is positioned under the glass.
- Moisture presence is characterised by a modification of the indicator colour; this modification is reversible.
- The sight glasses die-cast brass body guarantees perfect resistance to corrosion.

#### ■ CARLY advantages

- Great drying and acid neutralization capacity at all temperatures, thanks to a rigorous selection and a judicious mix of the chemical agents present in the filter driers (activated alumina in order 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.
- The large size of the glass and the absence of a central hygroscopic tip ensure excellent visibility.
- The sealed design and the seaming principle of the chosen glass ensure perfect airtightness.
- Two product fitted and tested in a factory, warranty of quality.
- GOST certified products.



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#### ■ Recommendations

- \* Filter driers are to be mounted on the liquid line between the receiver and the expansion element.
- \* The refrigerant flow direction is indicated by an "in" mark in the inlet shell of the filter drier and by an arrow on the filter drier tag. It must be necessarily respected.
- \* Be careful to properly select the solenoid valves located downstream of the filter driers; their over-sizing could cause liquid hammer phenomena hindering the filter driers' mechanical behaviour; protection of regulation elements located upstream of the evaporator should be performed with FILTRY dirt filters (refer to chapter 8); these liquid hammer phenomena can originate from other sources, in long-piping installations.
- \* Never install the filter driers in an area of the circuit that can be isolated.
- \* Never trap a refrigerant in its liquid state (between a check valve and a solenoid valve, for instance).
- \* Filter driers replacement is imperative after each intervention on the installation, and at least once a year.
- \* Filter drier efficiency and refrigerant moisture content should be checked by the sight glass.
- \* The indication of moisture presence is quick; in return, the moisture indicator indicates the return to normal situation a few hours only after implementation of a drying system.
- \* General assembly precautions: refer to chapter 115.

#### ■ Selection table: Male/male connections to screw

CARLY references	Flare connections SAE inch	Refrigerating capacity (kW) <sup>(1)</sup>				Dehydratable refrigerant capacity (kg of refrigerant) <sup>(2)</sup>					
		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>TSGY 052</b>	1/4	8,5	8,0	6,0	8,5	9,5	9,0	11,5	10	9,5	8,0
<b>TSGY 082</b>	1/4	9,0	8,5	6,5	9,0	15,0	14,5	16,5	15	14,5	13,5
<b>TSGY 083</b>	3/8	24,0	23,0	17,0	24,5	15,0	14,5	16,5	15	14,5	13,5
<b>TSGY 163</b>	3/8	24,5	24,0	18,0	25,0	40,0	34,0	50,0	37	38,0	31,0
<b>TSGY 164</b>	1/2	41,5	40,0	32,0	43,0	40,0	34,0	50,0	37	38,0	31,0

<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.

Example of selection of the anti-acid filter drier with sight glasses TSGY, report to chapter 1.4 of the DCY technical documentation.



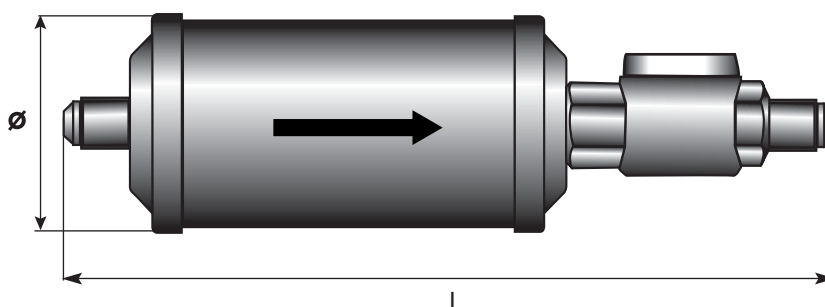
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### ■ Technical features

CARLY references	Filtering surface (cm <sup>2</sup> )	Desiccants volume (cm <sup>3</sup> )	Dimensions (mm)		Net weight (kg)
			Ø	L	
TSGY 052	52	81,5	53	171	0,45
TSGY 082	52	130,0	53	199	0,55
TSGY 083	52	130,0	53	213	0,60
TSGY 163	102	321,6	74	233	1,10
TSGY 164	102	321,6	74	239	1,20



### ■ 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)	PS (bar)	PS BT (bar)	TS maxi (°C)	TS mini (°C)	TS BT (°C)	
TSGY 052	0,12	42	10	80	-40	-20	Art3§3
TSGY 082	0,16	42	10	80	-40	-20	Art3§3
TSGY 083	0,17	42	10	80	-40	-20	Art3§3
TSGY 163	0,40	42	10	80	-40	-20	Art3§3
TSGY 164	0,42	42	10	80	-40	-20	Art3§3

(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 97/23/EC (refer to Chapter 0 page 7).



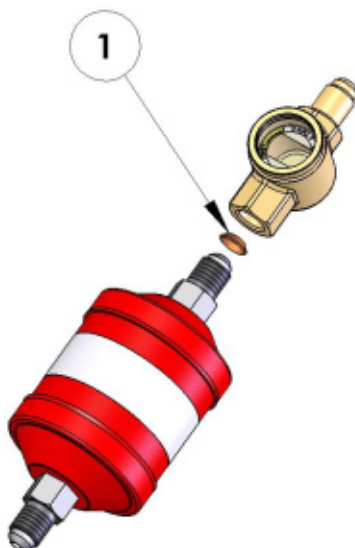
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#### ■ Spare parts

CARLY references	Part N°	Description	Types	Quantity
CY 15590015	1	Set of 25 guided taper copper gaskets for 1/4" SAE (flare) connections	TSGY 052	1
			TSGY 082	
CY 15590025	1	Set of 25 guided taper copper gaskets for 3/8" SAE (flare) connections	TSGY 083	1
			TSGY 163	
CY 15590035	1	Set of 25 guided taper copper gaskets for 1/2" SAE (flare) connections	TSGY 164	1



#### ■ Weights and packaging

CARLY references	Unit weight (kg)		Packaging unit	
	With packaging	Without packaging	standard	OEM'S
TSGY 052	0,48	0,45	24	/
TSGY 082	0,62	0,55	24	/
TSGY 083	0,67	0,60	12	/
TSGY 163	1,14	1,10	12	/
TSGY 164	1,24	1,20	12	/