

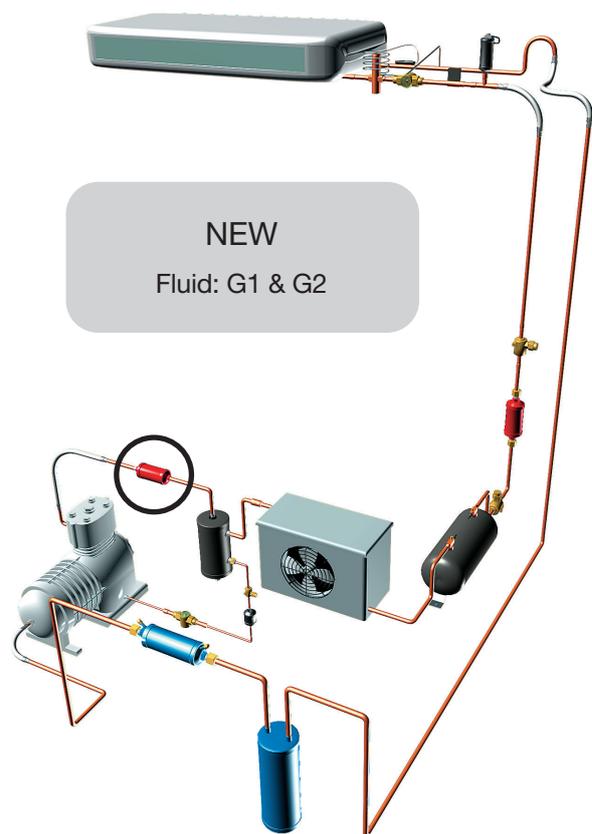


## Discharge line mufflers

### → SCY

#### ■ Applications

- Reduction of noise caused by gas pulses in the discharge lines of refrigerating and air conditioning installations. Those pulses generally come from reciprocating compressors or screw compressors. The mufflers have no effect on the mechanical vibrations transmitted to the pipes by the compressors; this is the role of the vibration eliminators EVCYAC or EVCYDEAC.



#### ■ Functional features

- Products are compatible with HCFCs, HFCs, HC, HFOs, 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.
- 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.

#### Possible customization on demand :

- Specific connections (O-RING, ORFS, ...)
- Aluminium casing and connections (weight optimisation)
- Stainless steel casings and connections (resistance to corrosion and at low temperature)

#### ■ CARLY advantages

- Maximal working pressure: 46 bar.
- Design allows coverage of a wide range of frequencies.
- Discharge line muffler mounting is possible in vertical and horizontal positions. There is no oil trap whichever the position. The refrigerant can flow in both directions.
- Excellent distribution of the refrigerant in its gaseous phase, with minimum pressure drop.
- The copper-plated steel connections up to a diameter of 3/4"-18 mm facilitate the brazing and allow using brazing alloys 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 ;

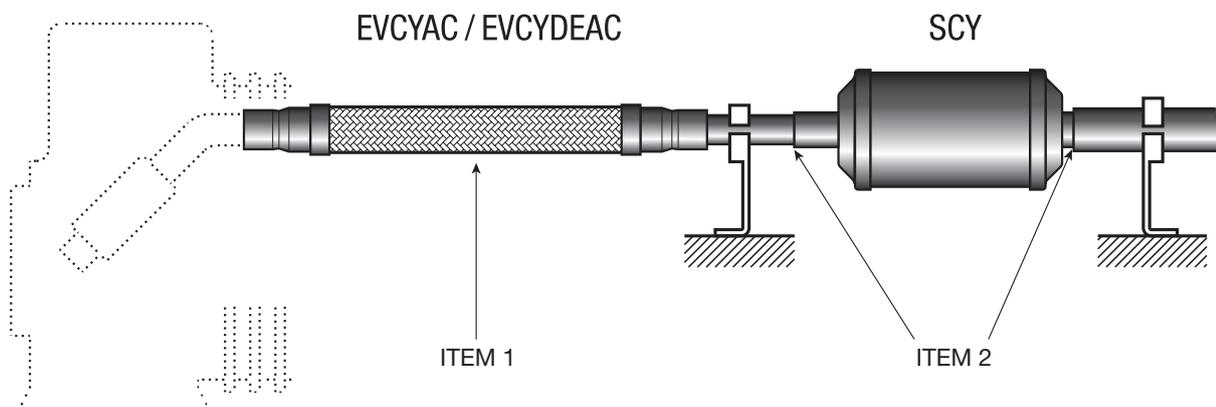
- Other are general to all CARLY components, they are presented in the chapter 115 – **GENERAL ASSEMBLY PRECAUTIONS**.

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

### ■ Recommendations specific to SCY mufflers

- The discharge line mufflers are to be mounted on the discharge gas line between the compressor and the condenser; the muffler's connections diameter must correspond to the discharges pipes diameter.
- The optimum muffler position will be determined according to your installation's features, by getting in touch with your distributor or with CARLY's technical services.
- It is recommended to perform an inner connection at the intake point, and an outer connection at the muffler outlet point (refer to drawing below, item 2).
- In case of vertical assembling, it is recommended not to place the muffler just over the compressor.
- Provide for efficient clamping before the intake and after the outlet of the mufflers (refer to drawing below).
- For increased efficiency, it is imperative

to install, upstream of the discharge mufflers, that is to say between the muffler and the compressor, an EVCYAC standard or EVCYDEAC double-effect vibration eliminator (see drawing below, item 1 and to chapters 22 & 23).





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### ■ Selection table: Group 2 fluids (A1, A2L)

CARLY references	Connections To solder ODF pouce	CARLY references	Connections To solder ODF mm	Refrigerating capacity kW <sup>(1)</sup>				Refrigerating capacity kW Subcritical CO <sub>2</sub> <sup>(2)</sup>		
				R22 R407C R507 R404A R452A	R407F R410A	R1234ze R450A R513A R134a	R1233zd	0 °C	- 20 °C	- 40 °C
SCY 30 S	3/8	SCY 30 MMS	10	7,5	9,0	5,7	1,5	20,9	16,3	12,8
SCY 40 S	1/2	SCY 40 MMS	12	13,5	16,2	10,3	2,7	38,2	29,8	23,4
SCY 50 S/MMS	5/8	SCY 50 S/MMS	16	22,0	26,4	16,7	4,4	61,9	48,2	37,8
SCY 60 S	3/4	SCY 60 MMS	18	31,5	37,8	23,9	6,3	92,8	72,3	56,7
SCY 70 S/MMS	7/8	SCY 70 S/MMS	22	43,5	52,2	33,1	8,7	132,4	103,1	80,9
SCY 90 S	1 1/8	SCY 90 MMS	28	68,0	81,6	51,7	13,6	243,3	189,6	148,7
SCY 110 S/MMS	1 3/8	SCY 110 S/MMS	35	108,0	129,6	82,1	21,6	409,2	318,8	250,1
SCY 130 S	1 5/8	SCY 130 MMS	42	152,0	182,4	115,5	30,4	648,2	505,0	396,2
SCY 170 S/MMS	2 1/8	SCY 170 S/MMS	54	260,0	312,0	197,6	52,0	Refrigerating capacities Q <sub>n</sub> for T <sub>k</sub> = + 10 °C For T <sub>k</sub> = 0 °C Q <sub>0</sub> = Q <sub>n</sub> - 22 %, For T <sub>k</sub> = - 10 °C Q <sub>0</sub> = Q <sub>n</sub> - 41 %, For T <sub>k</sub> = - 20 °C Q <sub>0</sub> = Q <sub>n</sub> - 56 %.		
SCY 210 S	2 5/8	SCY 210 MMS	67	398,0	477,6	302,5	79,6			
SCY 250 S	3 1/8	SCY 250 MMS	80	565,0	678,0	429,4	113,0			

<sup>(1)</sup> Refrigerating capacities for To = 4 °C, Tk = 32 °C and Δp = 0,21 bar.  
If different conditions, refer to correction factors in chapter 112.

<sup>(2)</sup> Nota: the diameter of connections must not be inferior to the diameter of the main pipe.

### ■ Selection table: Group 1 fluids (A2, A2L, A3)

CARLY references	Connections To solder ODF inc	CARLY references	Connections To solder ODF mm	Refrigerating capacity kW <sup>(1)</sup>							R32	
				R142B R600 R600a R601 R601a	R429A R1234yf R512A R415B	R510A R436A R435A R441A	R436B R152A R430A R406A	R413A R415A R411B R143A	R444A R443A R418A R444B	R290 R433A R431A R455A		R432A R454C R454A
SCY 30 S	3/8	SCY 30 MMS	10	4,3		5,8			7,5		2,8	10,9
SCY 40 S	1/2	SCY 40 MMS	12	7,8		10,4			13,5		5,0	19,6
SCY 50 S/MMS	5/8	SCY 50 S/MMS	16	12,6		16,9			22,0		8,1	31,9
SCY 60 S	3/4	SCY 60 MMS	18	18,1		24,2			31,5		11,7	45,7
SCY 70 S/MMS	7/8	SCY 70 S/MMS	22	25,0		33,5			43,5		16,1	63,1
SCY 90 S	1" 1/8	SCY 90 MMS	28	39,1		52,3			68,0		25,2	98,6
SCY 110 S/MMS	1" 3/8	SCY 110 S/MMS	35	62,1		83,1			108,0		40,0	156,6
SCY 130 S	1" 5/8	SCY 130 MMS	42	87,4		116,9			152,0		56,2	220,4
SCY 170 S/MMS <sup>(2)</sup>	2" 1/8	SCY 170 S/MMS <sup>(2)</sup>	54	149,4		200,0			260,0		96,2	377,0
SCY 210 S <sup>(2)</sup>	2" 5/8	SCY 210 MMS <sup>(2)</sup>	67	228,7		306,2			398,0		147,3	577,1
SCY 250 S <sup>(2)</sup>	3" 1/8	SCY 250 MMS <sup>(2)</sup>	80	324,7		434,6			565,0		209,1	819,3

<sup>(1)</sup> Refrigerating capacities for To = 4 °C, Tk = 32 °C and Δp = 0,21 bar.  
If different conditions, refer to correction factors in chapter 112.

<sup>(2)</sup> G1 on demand.



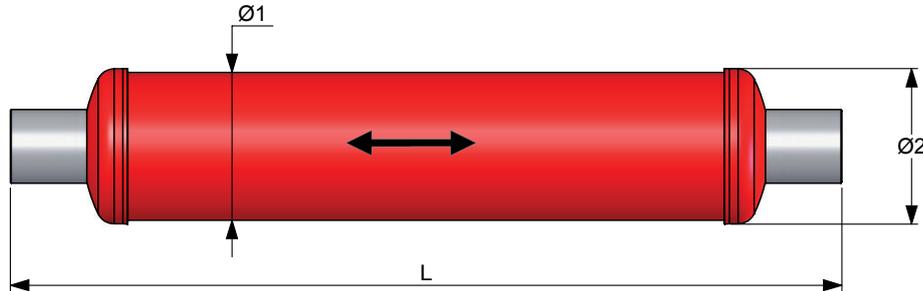
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### ■ Technical features

CARLY references		Connections types <sup>(1)</sup>	Dimensions mm		
			Ø1	Ø2	L
SCY 30 S	SCY 30 MMS	2	50	55	161
SCY 40 S	SCY 40 MMS	2	50	55	161
SCY 50 S/MMS		2	50	55	165
SCY 60 S	SCY 60 MMS	2	89	96	168
SCY 70 S/MMS		2	89	96	182
SCY 90 S	SCY 90 MMS	3	89	96	282
SCY 110 S/MMS		3	89	96	302
SCY 130 S	SCY 130 MMS	3	89	96	302
SCY 170 S/MMS		3	121	128	675
SCY 210 S	SCY 210 MMS	3	152	156	624
SCY 250 S	SCY 250 MMS	3	152	156	871

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



CARLY references		Volume V	Working Pressure				Working Temperature <sup>(1)</sup>			CE Category <sup>(2)</sup>	
Connections To solder ODF inch	Connections To solder ODF mm		L	maximal G2 bar	BT G1 bar	BT G2 <sup>(1)</sup> bar	BT G1 <sup>(1)</sup> bar	maximal TS maxi °C	minimal TS mini °C	BT TS BT °C	With fluides G2 : A1 & A2L
SCY 30 S	SCY 30 MMS	0,20	46,0	46,0	34,0	34,0	120	-40	-10	Art 4.3	Art 4.3
SCY 40 S	SCY 40 MMS	0,20	46,0	46,0	34,0	34,0	120	-40	-10	Art 4.3	Art 4.3
SCY 50 S/MMS		0,20	46,0	46,0	34,0	34,0	120	-40	-10	Art 4.3	Art 4.3
SCY 60 S	SCY 60 MMS	0,56	46,0	46,0	34,0	34,0	120	-40	-10	Art 4.3	Art 4.3
SCY 70 S/MMS		0,57	46,0	46,0	34,0	34,0	120	-40	-10	Art 4.3	Art 4.3
SCY 90 S	SCY 90 MMS	1,10	46,0	43,0	34,0	30,0	120	-40	-10	I	I
SCY 110 S/MMS		1,10	46,0	43,0	34,0	30,0	120	-40	-10	I	I
SCY 130 S	SCY 130 MMS	1,16	46,0	43,0	34,0	30,0	120	-40	-10	I	I
SCY 170 S/MMS <sup>(3)</sup>		5,60	46,0	-	34,0	-	120	-40	-10	II	-
SCY 210 S <sup>(3)</sup>	SCY 210 MMS	8,00	46,0	-	34,0	-	120	-40	-10	II	-
SCY 250 S <sup>(3)</sup>	SCY 250 MMS	12,57	46,0	-	34,0	-	120	-40	-10	II	-

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

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

<sup>(3)</sup> Models available with G1 on request.



## Discharge line mufflers

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#### ■ Weights and packaging

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
SCY 30 S & MMS	0,38	0,35	24
SCY 40 S & MMS	0,38	0,35	24
SCY 50 S/MMS	0,38	0,35	24
SCY 60 S & MMS	1,02	0,95	6
SCY 70 S/MMS	1,12	1,05	6
SCY 90 S & MMS	1,57	1,50	6

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
SCY 110 S/MMS	1,72	1,65	6
SCY 130 S & MMS	1,82	1,75	6
SCY 170 S/MMS	6,55	6,20	1
SCY 210 S & MMS	10,25	9,85	1
SCY 250 S & MMS	14,10	13,70	1