

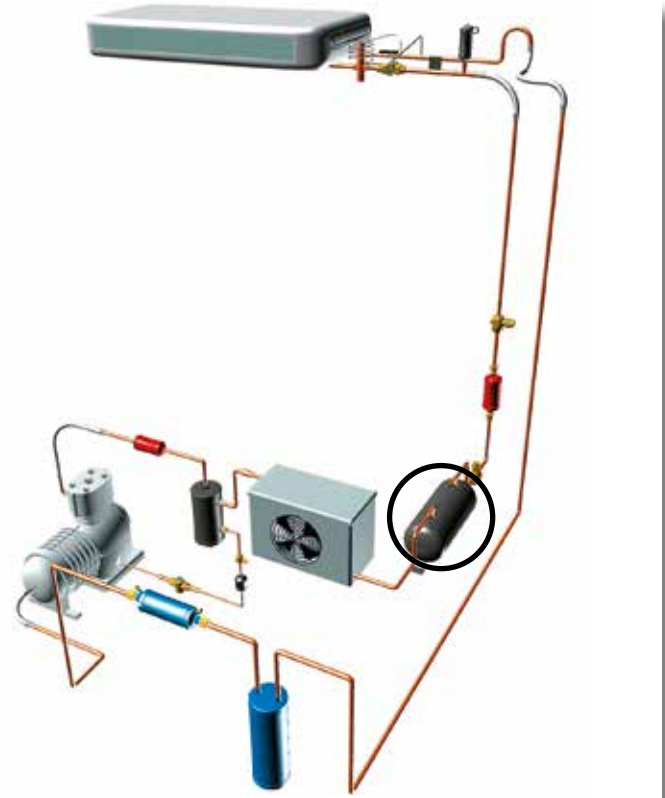


Liquid receivers

→ RLHCY (horizontal) / RLVCY (vertical)

■ Applications

- Liquid receivers ensure the compensation of refrigerant volume variations in refrigerating and air conditioning installations.
- These volume variations are due to fluctuations generated by various operating temperatures at various seasons, and to the opening and closing sequences of the expansion valve, which fills - or not - the evaporator with its refrigerant.
- Liquid receivers also allow storage of the whole installation's refrigerant, for maintenance or breakdown service.



Customized product



Standard product

■ Functional features

- Products are compatible with CFCs, HCFCs, HFCs, 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 – Propane R290, Butane R600, Isobutane R600a, Propylene R1270 – with HFOs and transcritical CO₂ 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.
- They have fasteners adapted to their volume and their weight.
- The receivers are supplied without valve (see paragraph “Spare parts” page 31.7)
- From the 9-litre model and on, receivers come with a 3/8” NPT boss for mounting of safety elements such as safety valves.



Customization possible on demand:

- Bi-flow receiver for applications such as heat pumps
- Dimensions, volumes, connections, pressure point for safety valve, support brackets
- Body and connections in stainless steel (better resistance to corrosion and to very low temperature).
- Exchanger to keep temperature stable for CO₂.

■ CARLY advantages

- Maximum working pressure from 42 to 46 bar.
- They offer both following connection possibilities :
 - Outside of the connections to screw.
 - Inside of the connections to braze.
- A wide range of accessories is available:
 - Rotalock stop valves, with connections to screw or to braze.
 - Rotalock connections with possibility of diameter reductions and with connections to braze.
- The liquid receiver are delivered perfectly clean deshydrated.



Liquid receivers

→ RLHCY (horizontal) / RLVCY (vertical)

■ 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**.

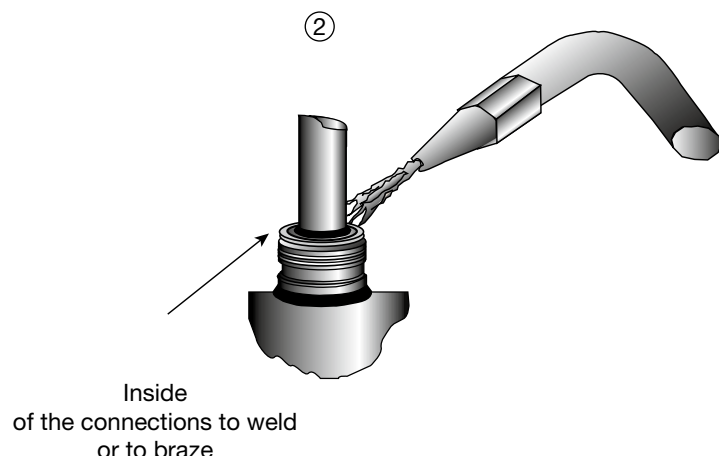
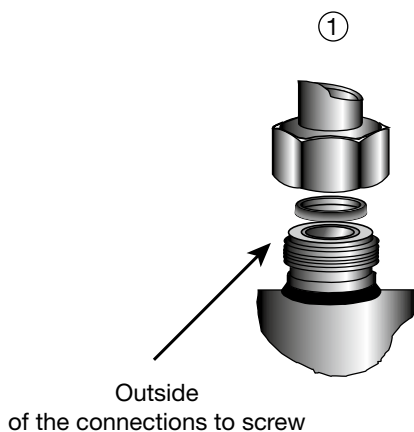
■ Recommendations specific to the liquid receivers RLHCY and RLVCY

- Liquid receivers are to be mounted after the condenser
- For optimal operation, special attention should be paid to the receivers' level: RLHCY receivers should be perfectly horizontal and RLVCY should be perfectly vertical.
- Comply with the direction of the refrigerant flow; the inlet connection is tagged "IN"
- If sizing of the receivers is performed on the basis of the total refrigerant load, it is imperative to select receivers with an

internal volume 20 % bigger, so that the gas reserve is always above the liquid level.

- In case of an outside installation, it is recommended to protect the receiver against corrosion, low external temperatures and solar radiation.
- In accordance with the regulations, provide safety switch devices to limit the pressure.
- For operation with CO₂ at low temperature, provide additional insulation.

- The CARLY company declines any responsibility if any modifications, repairs are made by the user / buyer.
- The connections of the water cooled condensers CONDOR have an external screw thread (sketch 1) allowing the assembly of isolating valves or Rotalock connections, and an internal bore (sketch 2) allowing the brazing of a pipe.
- In order to avoid risk of frost and condensation on the receivers, it is recommended to insulate them thermally.



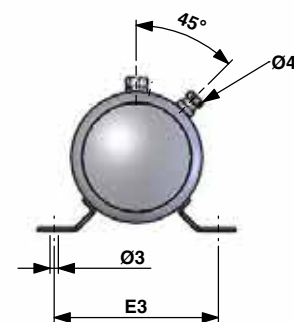
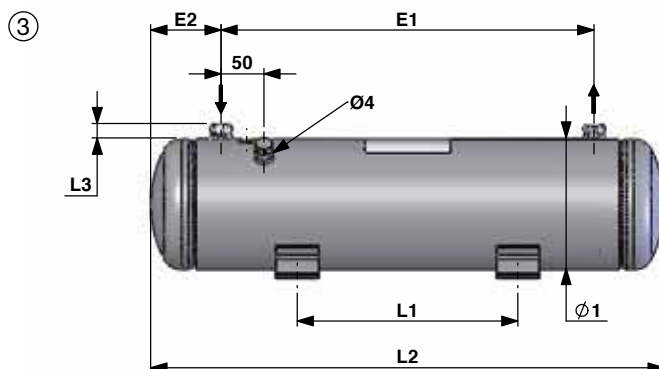
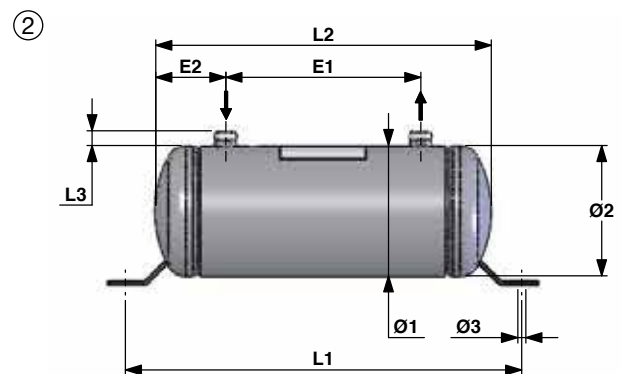
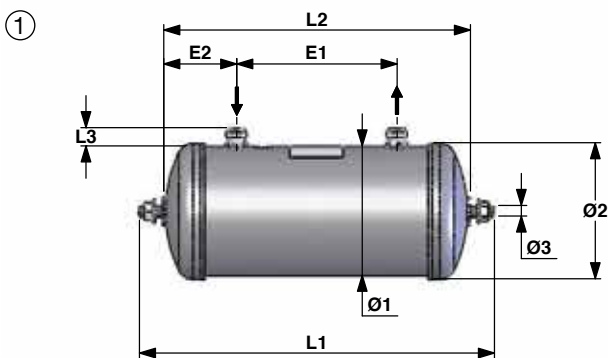


Liquid receivers

→ RLHCY (horizontal)

■ Technical features

CARLY references	Outside of connections to screw UNF inch	Inside of connections to solder inch	Drawing No	Dimensions mm									
				Ø1	Ø2	L1	L2	E1	E2	E2	Ø3	L3	Ø4 NPTF inch
RLHCY 15	3/4	1/4	1	88,9	95	343	298	210	44	/	M10	17,0	/
RLHCY 25	3/4	3/8	1	121,0	128	332	287	150	68	/	M10	17,0	/
RLHCY 30	3/4	3/8	1	121,0	128	368	323	186	68	/	M10	17,0	/
RLHCY 45	3/4	3/8	2	152,4	156	376	304	145	80	/	2 x Ø 10,5 x 9,5	17,0	/
RLHCY 60	1	1/2	2	152,4	156	459	387	228	80	/	2 x Ø 10,5 x 9,5	17,0	/
RLHCY 75	1	1/2	2	152,4	156	557	485	328	79	/	2 x Ø 10,5 x 9,5	17,0	/
RLHCY 90	1	1/2	3	152,4	156	258	595	436	80	192	4 x Ø 10,5 x 9,5	17,0	3/8
RLHCY 120	1 1/4	5/8	3	152,4	156	389	726	567	82	192	4 x Ø 10,5 x 9,5	22,5	3/8
RLHCY 150	1 1/4	3/4	3	168,3	172	352	746	582	82	200	4 x Ø 10,5 x 9,5	22,5	3/8
RLHCY 200	1 1/4	3/4	3	168,3	172	600	994	830	82	200	4 x Ø 10,5 x 9,5	22,5	3/8
RLHCY 250	1 1/4	3/4	3	168,3	172	750	1242	1078	109	200	4 x Ø 10,5 x 9,5	22,5	3/8
RLHCY 300	1 1/4	3/4	3	219,1	224	402	909	691	112	220	4 x Ø 10,5 x 9,5	22,5	3/8
RLHCY 400	1 3/4	1 1/8	3	219,1	224	690	1202	979	112	220	4 x Ø 10,5 x 9,5	22,5	1/2
RLHCY 500	1 3/4	1 1/8	3	219,1	224	800	1491	1268	112	220	4 x Ø 10,5 x 9,5	22,5	1/2
RLHCY 600	1 3/4	1 1/8	3	323,9	330	455	857	559	149	320	4 x Ø 10,5 x 9,5	22,5	1/2
RLHCY 700	1 3/4	1 1/8	3	323,9	330	605	1007	709	149	320	4 x Ø 10,5 x 9,5	22,5	1/2





Liquid receivers

→ RLHCY (horizontal)

■ 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	
RLHCY 15	1,6	46	15	100	-40	-30	I
RLHCY 25	2,8	46	15	100	-40	-30	I
RLHCY 30	3,1	46	15	100	-40	-30	I
RLHCY 45	4,4	45	15	100	-40	-30	I
RLHCY 60	6,0	46	15	100	-40	-30	II
RLHCY 75	7,6	46	15	100	-40	-30	II
RLHCY 90	9,1	46	15	100	-40	-30	II
RLHCY 120	11,4	46	15	100	-40	-30	II
RLHCY 150	15,0	46	15	100	-40	-30	II
RLHCY 200	20,0	46	15	100	-40	-30	II
RLHCY 250	25,0	46	15	100	-40	-30	III
RLHCY 300	30,0	45	15	100	-40	-30	III
RLHCY 400	40,0	45	15	100	-40	-30	III
RLHCY 500	50,0	45	15	100	-40	-30	III
RLHCY 600	60,0	42	15	100	-40	-30	III
RLHCY 700	70,0	42	15	100	-40	-30	III

⁽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 diameter, according to PED 2014/68/EU (refer to chapter 0).

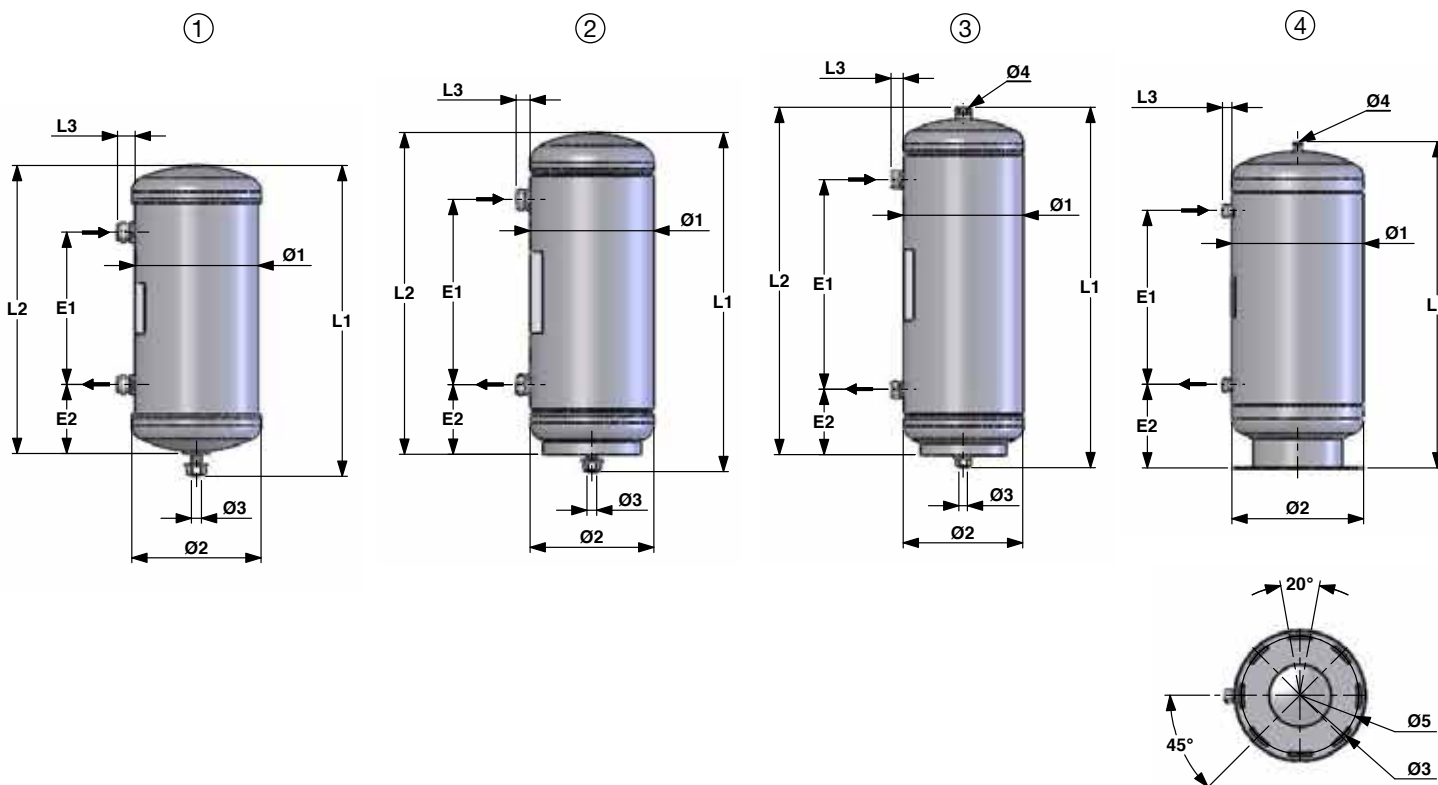


Liquid receivers

→ RLVCY (vertical)

■ Technical features

CARLY references	Outside of connections to screw UNF inch	Inside of connections to solder inch	Drawing No	Dimensions mm									
				Ø1	Ø2	L1	L2	E1	E2	Ø5	Ø3	L3	Ø4 NPTF inch
RLVCY 09	3/4	1/4	1	88,9	95	218	195	110	44	/	M10	17,0	/
RLVCY 15	3/4	1/4	1	88,9	95	318	295	210	44	/	M10	17,0	/
RLVCY 20	3/4	1/4	1	101,6	109	286	264	140	63	/	M10	17,0	/
RLVCY 25	3/4	3/8	1	121,0	128	306	284	150	68	/	M10	17,0	/
RLVCY 30	3/4	3/8	1	121,0	128	342	320	186	68	/	M10	17,0	/
RLVCY 40	3/4	3/8	1	121,0	128	442	420	286	68	/	M10	17,0	/
RLVCY 45	3/4	3/8	2	152,4	156	329	308	145	83	/	M12	17,0	/
RLVCY 60	1	1/2	2	152,4	156	412	391	228	83	/	M12	17,0	/
RLVCY 75	1	1/2	2	152,4	156	510	489	328	82	/	M12	17,0	/
RLVCY 90	1	1/2	3	168,3	172	507	487	295	89	/	M12	17,0	3/8
RLVCY 120	1 1/4	5/8	3	168,3	172	622	603	410	89	/	M12	22,5	3/8
RLVCY 150	1 1/4	3/4	4	219,1	224	569	/	280	154	190	8 x Ø 10,2	22,5	3/8
RLVCY 200	1 1/4	3/4	4	219,1	224	719	/	430	154	190	8 x Ø 10,2	22,5	3/8
RLVCY 250	1 1/4	3/4	4	219,1	224	836	/	547	154	190	8 x Ø 10,2	22,5	3/8
RLVCY 300	1 1/4	3/4	4	323,9	330	534	/	160	205	290	8 x Ø 10,2 x 50	22,5	3/8
RLVCY 400	1 3/4	1 1/8	4	323,9	330	670	/	296	205	290	8 x Ø 10,2 x 50	22,5	1/2
RLVCY 500	1 3/4	1 1/8	4	323,9	330	802	/	428	205	290	8 x Ø 10,2 x 50	22,5	1/2
RLVCY 600	1 3/4	1 1/8	4	323,9	330	934	/	560	205	290	8 x Ø 10,2 x 50	22,5	1/2
RLVCY 700	1 3/4	1 1/8	4	323,9	330	1086	/	709	206	290	8 x Ø 10,2 x 50	22,5	1/2





Liquid receivers

→ RLVCY (vertical)

■ 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	
RLVCY 09	1,0	46	15	100	-40	-30	Art4§3
RLVCY 15	1,6	46	15	100	-40	-30	I
RLVCY 20	1,8	46	15	100	-40	-30	I
RLVCY 25	2,8	46	15	100	-40	-30	I
RLVCY 30	3,1	46	15	100	-40	-30	I
RLVCY 40	4,2	46	15	100	-40	-30	I
RLVCY 45	4,4	45	15	100	-40	-30	I
RLVCY 60	6,0	46	15	100	-40	-30	II
RLVCY 75	7,6	46	15	100	-40	-30	II
RLVCY 90	9,2	46	15	100	-40	-30	II
RLVCY 120	11,5	46	15	100	-40	-30	II
RLVCY 150	15,7	45	15	100	-40	-30	II
RLVCY 200	20,9	45	15	100	-40	-30	II
RLVCY 250	25,0	45	15	100	-40	-30	III
RLVCY 300	29,6	42	15	100	-40	-30	III
RLVCY 400	40,0	42	15	100	-40	-30	III
RLVCY 500	50,0	42	15	100	-40	-30	III
RLVCY 600	60,0	42	15	100	-40	-30	III
RLVCY 700	70,0	42	15	100	-40	-30	III

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

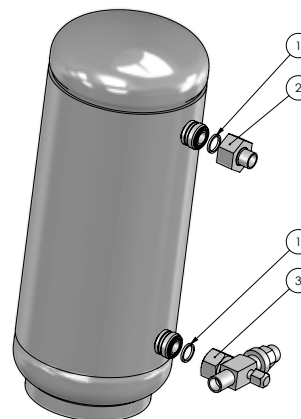
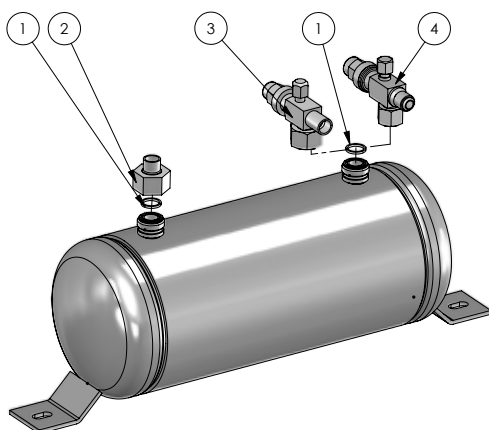
⁽²⁾ Classification by diameter, according to PED 2014/68/EU (refer to chapter 0).



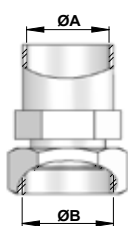
Liquid receivers

→ RLHCY (horizontal) / RLVCY (vertical)

■ Spare parts



RLHCY / RLVCY	CARLY references	Part N°	Gasket for ROTALOCK connections and valves inch
09 --> 45	CY 15580100	1	3/4
120 --> 300	CY 15580120	1	1 1/4
400 --> 700 < 03/2014	CY 15580120	1	1 1/4
60 --> 90	CY 15580140	1	1
400 --> 700 > 04/2014	CY 15580160	1	1 3/4



RLHCY / RLVCY	CARLY references	Part N°	ROTALOCK connection	
			ØA outlet ODF connection inch	ØB fixing UNF connector inch
09 --> 45	CY 17400000	2	1/4	3/4
09 --> 45	CY 17400010	2	3/8	3/4
60 --> 90	CY 17400020	2	1/2	1
120 --> 300	CY 17400035	2	5/8	1 1/4
400 --> 700 < 03/2014	CY 17400035	2	5/8	1 1/4
120 --> 300	CY 17400040	2	7/8	1 1/4
400 --> 700 < 03/2014	CY 17400040	2	7/8	1 1/4
120 --> 300	CY 17400050	2	1 1/8	1 1/4
400 --> 700 < 03/2014	CY 17400050	2	1 1/8	1 1/4
400 --> 700 > 04/2014	CY 17400055	2	7/8	1 3/4
400 --> 700 > 04/2014	CY 17400060	2	1 1/8	1 3/4
400 --> 700 > 04/2014	CY 17400065	2	1 3/8	1 3/4

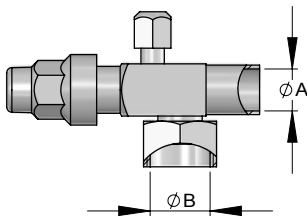


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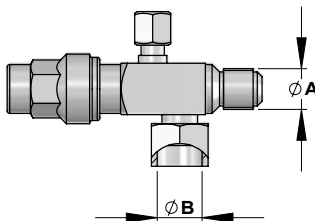
Liquid receivers

→ RLHCY (horizontal) / RLVCY (vertical)

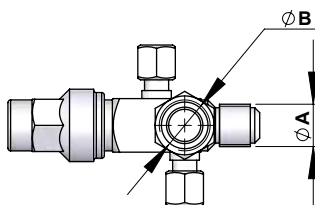
■ Spare parts



RLHCY / RLVCY	CARLY references	Part N°	ROTALOCK valve with connection to solder	
			ØA outlet ODF valve inch	ØB fixing UNF valve inch
09 --> 45	CY 19700080	3	1/4	3/4
09 --> 45	CY 19700110	3	3/8	3/4
60 --> 90	CY 19700120	3	1/2	1
60 --> 90	CY 19700130	3	5/8	1
120 --> 300	CY 19700135	3	5/8	1 1/4
400 --> 700 < 03/2014	CY 19700135	3	5/8	1 1/4
120 --> 300	CY 19700160	3	7/8	1 1/4
400 --> 700 < 03/2014	CY 19700160	3	7/8	1 1/4
120 --> 300	CY 19700170	3	1 1/8	1 1/4
400 --> 700 < 03/2014	CY 19700170	3	1 1/8	1 1/4
400 --> 700 > 04/2014	CY 19700175	3	7/8	1 3/4
400 --> 700 > 04/2014	CY 19700180	3	1 1/8	1 3/4
400 --> 700 > 04/2014	CY 19700185	3	1 3/8	1 3/4



RLHCY / RLVCY	CARLY references	Part N°	ROTALOCK valve with connection to screw	
			ØA outlet SAE valve pouce	ØB fixing UNF valve pouce
09 --> 45	CY 19700090	4	1/4	3/4
60 --> 90	CY 19700140	4	1/2	1



RLHCY / RLVCY	CARLY references	Part N°	ROTALOCK valve with connection to screw	
			ØA outlet SAE valve pouce	ØB fixing UNF valve pouce
09 --> 45	CY 19700097	4	3/8	3/4



Liquid receivers

➔ RLHCY (horizontal) / RLVCY (vertical)

■ Weights and packaging

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
RLHCY 15	1,90	1,55	1
RLHCY 25	3,41	3,11	1
RLHCY 30	3,86	3,56	1
RLHCY 45	5,95	5,55	1
RLHCY 60	7,40	6,80	1
RLHCY 75	8,73	8,13	1
RLHCY 90	10,00	9,40	1
RLHCY 120	12,40	11,80	1
RLHCY 150	16,60	16,00	1
RLHCY 200	20,60	20,00	1
RLHCY 250	25,20	23,00	1
RLHCY 300	31,74	29,54	1
RLHCY 400	39,94	37,74	1
RLHCY 500	47,90	45,70	1
RLHCY 600	57,70	55,50	1
RLHCY 700	63,60	62,40	1

CARLY references	Unit weight kg		Packaging number of pieces
	With packaging	Without packaging	
RLVCY 09	1,50	1,10	1
RLVCY 15	2,15	1,75	1
RLVCY 20	2,87	2,47	1
RLVCY 25	3,36	3,11	1
RLVCY 30	3,51	3,16	1
RLVCY 40	4,36	4,26	1
RLVCY 45	5,85	5,55	1
RLVCY 60	7,10	6,80	1
RLVCY 75	8,48	8,13	1
RLVCY 90	10,35	10,00	1
RLVCY 120	10,60	10,10	1
RLVCY 150	19,65	19,15	1
RLVCY 200	24,27	23,67	1
RLVCY 250	28,92	28,32	1
RLVCY 300	34,80	34,00	1
RLVCY 400	42,10	41,30	1
RLVCY 500	50,60	49,40	1
RLVCY 600	57,20	56,00	1
RLVCY 700	64,70	63,50	1