



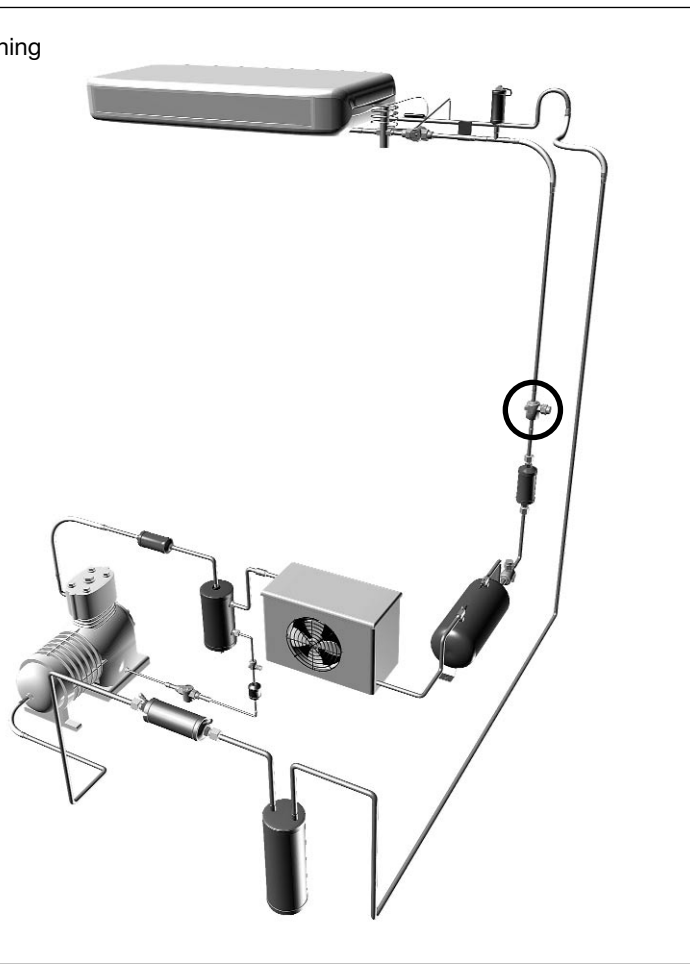
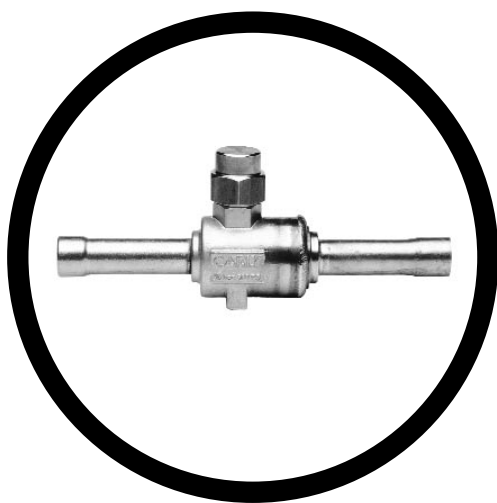
# Ball valves

## → VBCY

10/04

### ■ Applications

- Secure and airtight fastening of refrigerating and air conditioning installation line.



### ■ 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 performed using the PED 97/23/EC table, corresponding to a nominal diameter-based selection.
- Integral flow with no pressure drop, with slight diameter restrictions for some models (refer to the technical features table on pages 61.2 and 61.3).
- Bi-flow ball valves that can be installed in all positions.
- Stainless steel balls, with a hole for pressure equalization.
- 11 models with die-cast brass body (from 1/4" to 7/8" and from 6 to 22 mm).
- 10 models with lined steel body (from 1" 1/8 to 3" 1/8 and from 28 to 80 mm) and with anticorrosive protection varnish.

### ■ CARLY advantages

- **Quick quarter turn opening and closing, with built-in rotation limiter.**
- **Reinforced air-tightness of the inspection rod with two Neoprene® O-rings for the brass valves and a PTFE gland nut for the steel valves.**
- **Internal air-tightness performed by two PTFE double reach seats, set in the centre of the valve body.**
- **Flat area at the base of the control connection, that allows full safety loosening of the protection plug.**
- **Protection plug with PTFE gasket and a safety orifice to prevent accidental ejection.**



## Ball valves

### → VBCY

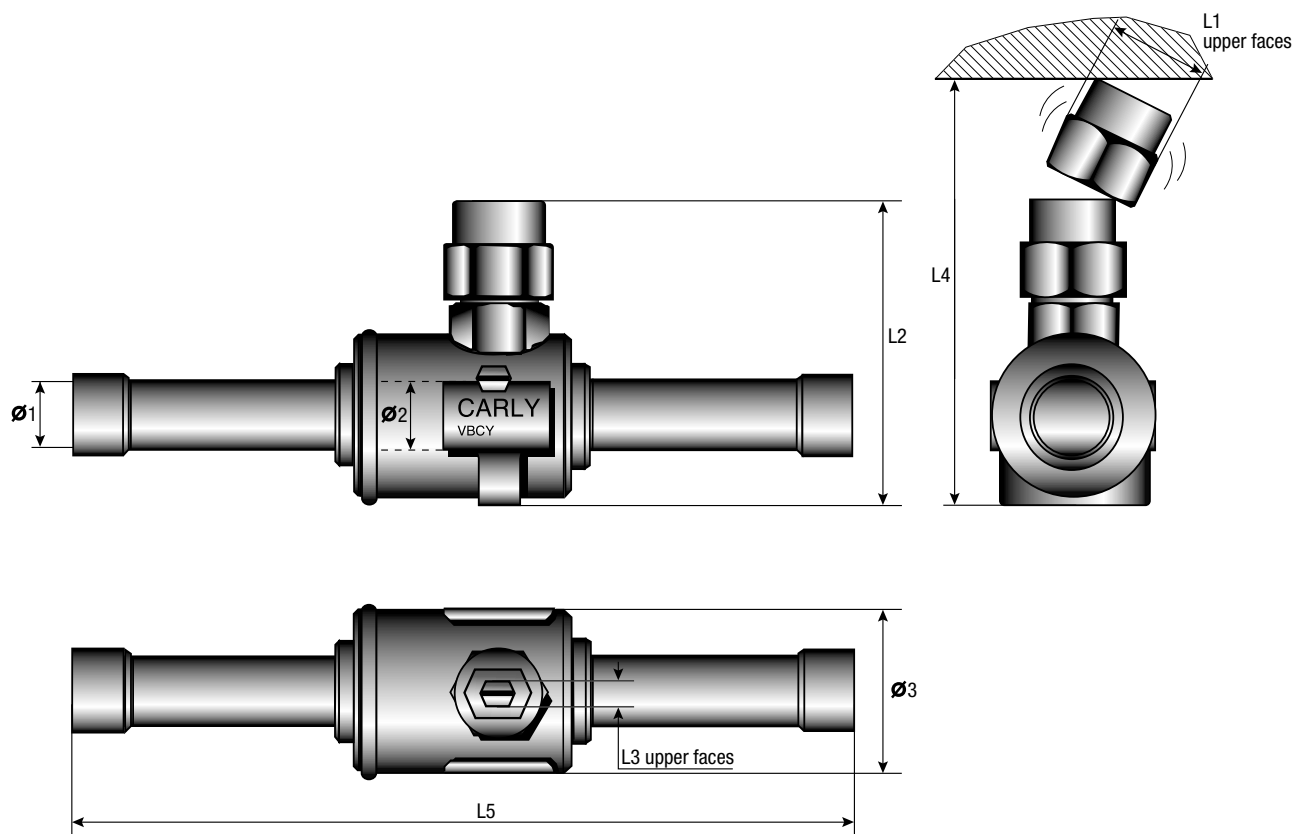
10/04

#### ■ Recommendations

- \* The ball valves can be mounted on the suction, discharge, liquid and oil lines.
- \* The brazing of valves can be performed without removal.
- \* During the brazing operation, the valves must remain in the open position.
- \* In order to not deteriorate seat air-tightness, the inspection rod's intermediate positions, between opening and full closing, are forbidden.
- \* Slightly re-tighten the steel valves gland nut during each maintenance operation.
- \* The recommended tightening torques of the gland nut gasket are:
  - VBCY 9 S/MMS: 16 N.m
  - VBCY 11 and 13 S/MMS: 20 N.m
  - VBCY 17, 21 and 25 S/MMS: 25 N.m
- \* General assembly precautions: refer to chapter 115.

#### ■ Technical features of VBCY brass ball valves

CARLY references	Connections to solder ODF inch	Ø1 mm	CARLY references	Connections to solder ODF mm	Ø1 mm	Dimensions (mm)						Net weight (kg)	
						Ø2	Ø3	L1 upper faces	L2	L3 upper faces	L4		L5
<b>VBCY 2 S</b>	1/4	6.4	<b>VBCY 2 MMS</b>	6	6.1	8	28	22	49	5	70	123	0.24
<b>VBCY 3 S</b>	3/8	9.6	<b>VBCY 3 MMS</b>	10	10.1	8	28	22	49	5	70	123	0.26
<b>VBCY 4 S</b>	1/2	12.8	<b>VBCY 4 MMS</b>	12	12.1	14	36	22	62	5	80	145	0.40
<b>VBCY 5 S/MMS</b>	5/8	16.1	<b>VBCY 5 S/MMS</b>	16	16.1	14	36	22	62	5	80	149	0.45
<b>VBCY 6 S</b>	3/4	19.2	<b>VBCY 6 MMS</b>	18	18.1	14	36	22	62	5	80	153	0.48
<b>VBCY 7 S</b>	7/8	22.3	<b>VBCY 7 MMS</b>	22	22.1	20	48	27	74	6	100	192	0.80





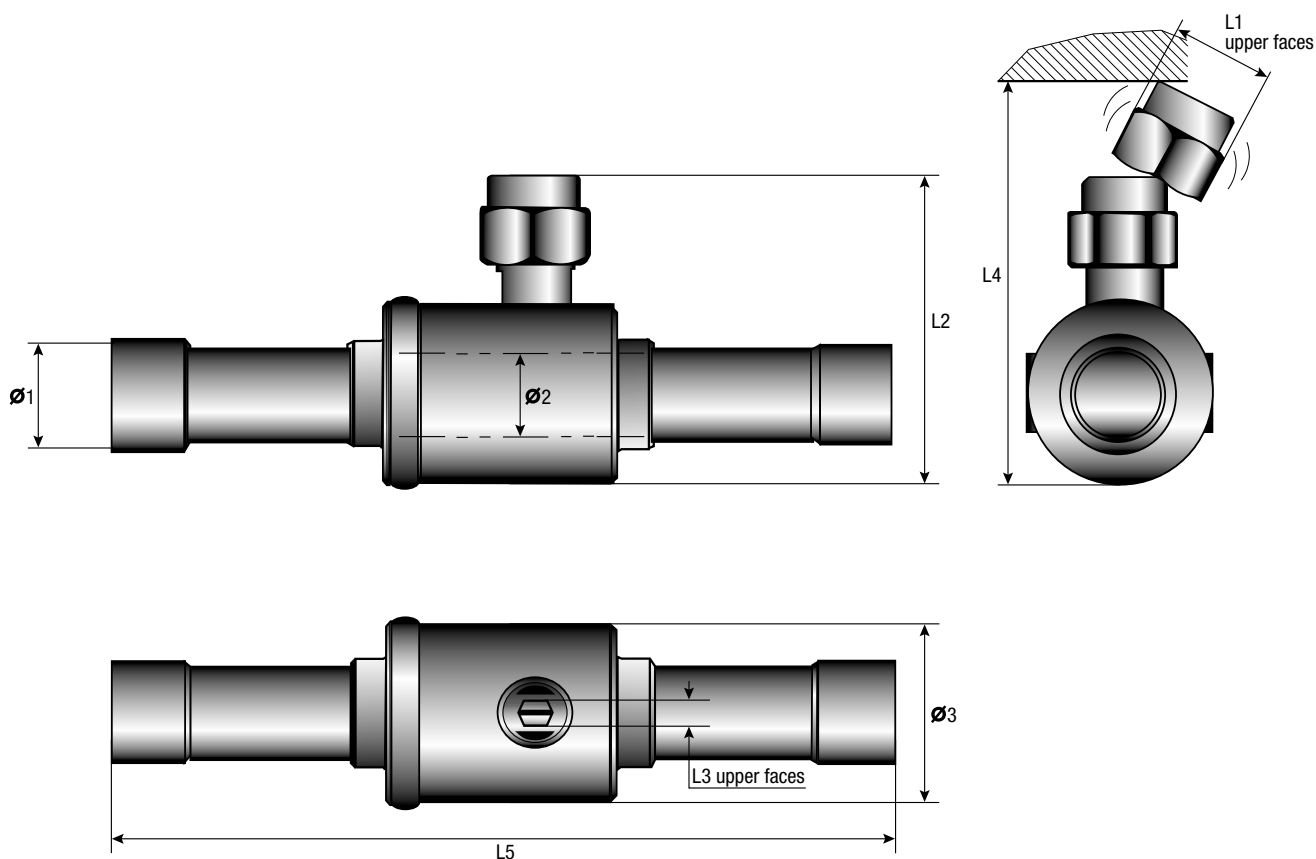
# Ball valves

## → VBCY

10/04

### ■ Technical features of VBCY steel ball valves

CARLY references	Connections to solder ODF inch	Ø1 mm	CARLY references	Connections to solder ODF mm	Ø1 mm	Dimensions (mm)							Net weight (kg)
						Ø2	Ø3	L1 upper faces	L2	L3 upper faces	L4	L5	
<b>VBCY 9 S</b>	1 1/8	28.7	<b>VBCY 9 MMS</b>	28	28.1	26	56	30	95.5	6	125	244.0	1.40
<b>VBCY 11 S/MMS</b>	1 3/8	35.1	<b>VBCY 11 S/MMS</b>	35	35.1	38	76	30	115.5	6	130	292.5	2.50
<b>VBCY 13 S</b>	1 5/8	41.4	<b>VBCY 13 MMS</b>	42	42.1	38	76	30	115.5	6	130	292.5	2.60
<b>VBCY 17 S/MMS</b>	2 1/8	54.1	<b>VBCY 17 S/MMS</b>	54	54.1	51	97	42	154.0	8	188	318.3	4.70
<b>VBCY 21 S</b>	2 5/8	66.8	<b>VBCY 21 MMS</b>	67	67.1	51	97	42	154.0	8	188	338.3	4.95
<b>VBCY 25 S</b>	3 1/8	79.5	<b>VBCY 25 MMS</b>	80	80.1	51	97	42	154.0	8	188	358.3	5.30





# Ball valves

## → VBCY

10/04

### ■ Technical features

CARLY references	Nominal diameter	CARLY references	Nominal diameter	Maximal working pressure	Working pressure (1)	Maximal working temperature	Minimal working temperature	Working temperature (1)	CE Category(2)
	DN (inch)		DN (mm)	PS (bar)	PS BT (bar)	TS maxi (°C)	TS mini (°C)	TS BT (°C)	
VBCY 2 S	1/4	VBCY 2 MMS	6	35	10	120	-40	-20	Art3§3
VBCY 3 S	3/8	VBCY 3 MMS	10	35	10	120	-40	-20	Art3§3
VBCY 4 S	1/2	VBCY 4 MMS	12	35	10	120	-40	-20	Art3§3
VBCY 5 S/MMS	5/8	VBCY 5 S/MMS	16	35	10	120	-40	-20	Art3§3
VBCY 6 S	3/4	VBCY 6 MMS	18	35	10	120	-40	-20	Art3§3
VBCY 7 S	7/8	VBCY 7 MMS	22	35	10	120	-40	-20	Art3§3
VBCY 9 S	1 1/8	VBCY 9 MMS	28	35	10	120	-40	-20	Art3§3
VBCY 11 S/MMS	1 3/8	VBCY 11 S/MMS	35	35	10	120	-40	-20	I
VBCY 13 S	1 5/8	VBCY 13 MMS	42	35	10	120	-40	-20	I
VBCY 17 S/MMS	2 1/8	VBCY 17 S/MMS	54	35	10	120	-40	-20	I
VBCY 21 S	2 5/8	VBCY 21 MMS	67	35	10	120	-40	-20	I
VBCY 25 S	3 1/8	VBCY 25 MMS	80	35	10	120	-40	-20	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 diameter, according to PED 97/23/EC (refer to chapter 0 page 7).

### ■ Spare parts

CARLY references	Description	Types	Quantity
CY 10850000	Plug for inspection rod	2 S/MMS to 6 S/MMS before 2002	1
CY 10850005	Plug for inspection rod	2 S/MMS to 6 S/MMS	1
CY 10850010	Plug for inspection rod	7 S/MMS before 2002	1
CY 10850015	Plug for inspection rod	7 S/MMS to 9 S/MMS (brass)	1
CY 10800020	Plug for inspection rod	9 S/MMS (steel) to 13 S/MMS	1
CY 10800030	Plug for inspection rod	17 S/MMS to 25 S/MMS	1
CY 15560030	Gasket for inspection rod plug	2 S/MMS to 6 S/MMS before 2002	1
CY 15560085	Gasket for inspection rod plug	2 S/MMS to 6 S/MMS	1
CY 15560040	Gasket for inspection rod plug	7 S/MMS before 2002	1
CY 15560050	Gasket for inspection rod plug	7 S/MMS to 9 S/MMS (brass) 9 S/MMS (steel) to 13 S/MMS	1
CY 15560055	Gasket for inspection rod plug	17 S/MMS to 25 S/MMS	1