

# Ball valve type GBC

## Introduction



Ball valve GBC is a manual, two-position bi-directional shut-off valve for use in liquid, suction and hot gas lines in refrigeration, freezing and air conditioning plant.

GBC gives minimum external leakage, maximum flow with fully open valve, and maximum tightness with closed valve.

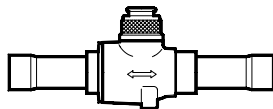
## Features

- Flow with no pressure drop
- One quarter turn from fully open to fully closed valve
- Rotation stop for fully open and fully closed valve
- Marking on spindle top indicates whether valve is closed or open
- Bi-directional flow, i.e. the valve can be installed independently of the flow direction
- Designed for HFC refrigerants
- Bracket mounting
- "Hermetically" welded construction
- Valve seat of special teflon
- Patented stuffing box
- Burst-proof spindle design
- Labyrinth seal around spindle

## Technical data

Refrigerants	Allfluorinated types
Temperature of medium	-40 → +150°C
Ambient temperature	-50 → +80°C
Max. working temperature PB	35 bar
Max. pressure p'	46 bar
Approvals	UL, CSA

## Ordering



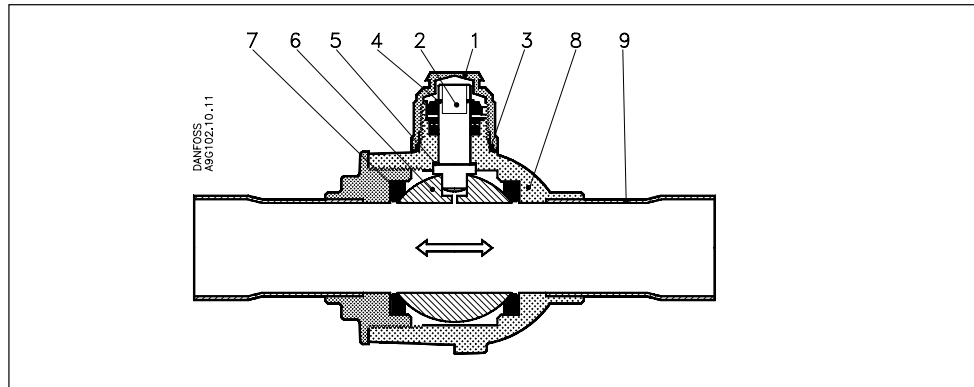
Type	Inch-connection Solder ODF		Millimeter-connection Solder ODF		Ball dia d <sup>1)</sup> mm
	in.	Code no.	mm	Code no.	
GBC 6s	1/4	<b>9G4020</b>	6	<b>9G4030</b>	12.5
GBC 10s	3/8	<b>9G4021</b>	10	<b>9G4031</b>	12.5
GBC 12s	1/2	<b>9G4022</b>	12	<b>9G4032</b>	12.5
GBC 16s	5/8	<b>9G4023</b>	16	<b>9G4023</b>	12.5
GBC 18s	3/4	<b>9G4024</b>	18	<b>9G4035</b>	19.0
GBC 22s	7/8	<b>9G4025</b>	22	<b>9G4025</b>	19.0
GBC 28s	1 1/8	<b>9G4026</b>	28	<b>9G4033</b>	25.0
GBC 35s	1 3/8	<b>9G4027</b>	35	<b>9G4027</b>	32.0
GBC 42s	1 5/8	<b>9G4028</b>	42	<b>9G4034</b>	38.0
GBC 54s	2 1/8	<b>9G4029</b>	54	<b>9G3029</b>	51.0

<sup>1)</sup> The flow area in GBC is equal to or larger than the internal diameter of the pipe connection. Therefore the valve capacity can be rated equal to the pipe line capacity.

## Ball valve, type GBC

### Construction

1. Seal cap
2. Spindle
3. Gasket
4. O-rings
5. Slide ring
6. Chromed ball
7. Valve seat
8. Valve body
9. Extended end

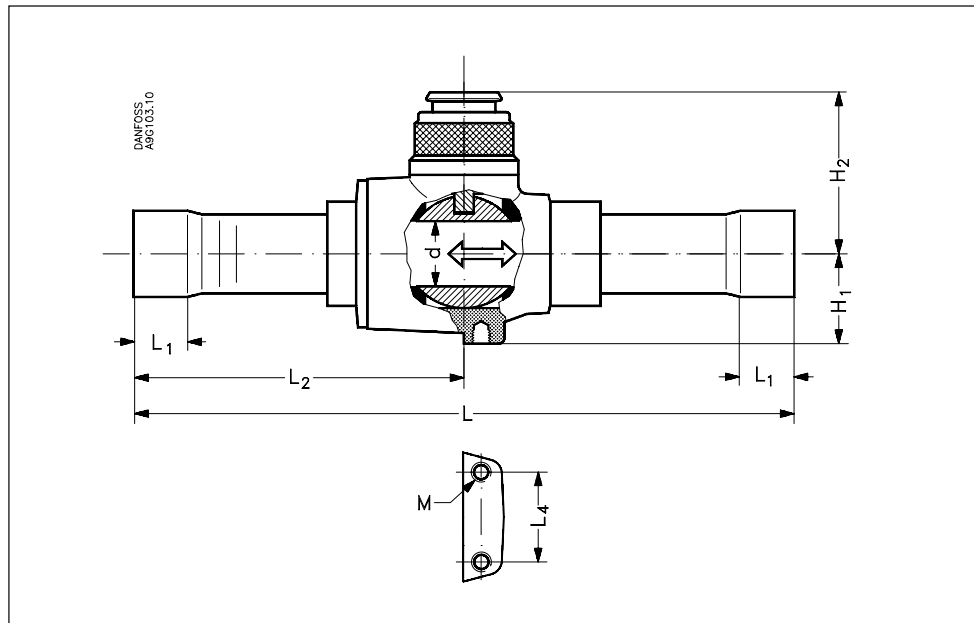


The direct flow gives maximum through-put with minimum pressure drop across valve. The combination of a "hermetically" welded valve body 8, seating ring 7, two O-rings 4, and seal cap 1 with gasket 3 gives absolute minimum leakage.

Because the valve is bi-directional, when it is used in a liquid line, liquid will become trapped in the ball chamber when the valve is closed.

Therefore the following condition must always be ensured:  $t_{\text{liquid}} \geq t_{\text{ambient}}$ .

### Dimensions and weights



Type	Connection		H <sub>1</sub> mm	H <sub>2</sub> mm	L mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	M	Ø d mm	Weight kg
	in.	mm									
GBC 6s	1/4	6	20.5	39	165	7	82	18	M4 × 0.7	12.5	0.5
GBC 10s	3/8	10	20.5	39	165	8	82	18	M4 × 0.7	12.5	0.5
GBC 12s	1/2	12	20.5	39	165	12	82	18	M4 × 0.7	12.5	0.5
GBC 16s	5/8	16	20.5	39	165	12	82	18	M4 × 0.7	12.5	0.5
GBC 18s	3/4	18	25	44	184	15	92	25	M4 × 0.7	19.0	0.8
GBC 22s	7/8	22	25	44	184	15	92	25	M4 × 0.7	19.0	0.8
GBC 28s	1 1/8	28	33	63	216	23	108	25	M4 × 0.7	25.0	1.5
GBC 35s	1 3/8	35	39	70	235	24	118	34	M6 × 1.0	32.0	2.2
GBC 42s	1 5/8	42	45	75	254	28	127	34	M6 × 1.0	38.0	3.4
GBC 54s	2 1/8	54	59	97	289	30	145	34	M6 × 1.0	51.0	6.4