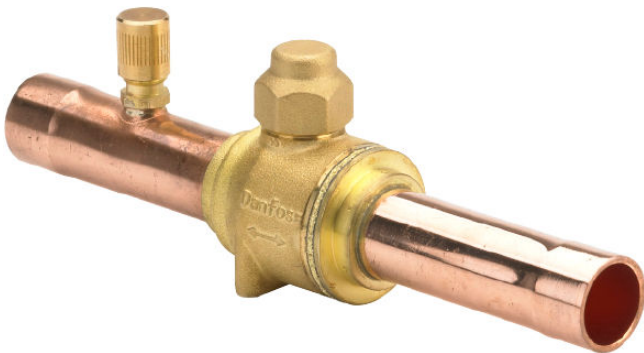


Data Sheet

# Shut-off ball valve Type **GBC**

Version 2



Danfoss shut-off ball valves, type GBC, are manually operated shut-off valves for refrigeration systems, in order to open and to shut off inner flow path by operating the valve spindle.

The GBC valves are used in liquid, suction and hot gas lines in refrigeration and air conditioning systems.

The GBC bi-directional ball valves can be delivered with or without external access port.

The valves have one-piece wire seal cap to prevent unintentional cap removal or tampering between services.

**Features:**

- ¼ turn from fully open to fully closed
- Rotation stops at fully open and fully closed positions
- Ball status indicator on spindle top indicating open or closed position
- Double O-ring stem seal design
- Customized brass material ensures consistent performance under aggressive environment
- Rupture proof, internally-loaded spindle design ensures safe operation under extreme pressures
- Bi-directional flow, valve orientation is unimportant
- Full port construction to match line size
- Drilled and tapped for panel mounting
- Versions with access port helps in reducing cost if service of the system is necessary
- One-piece seal cap for safety purpose complies with European Safety Directive EN 378 (Safety and environmental requirements)

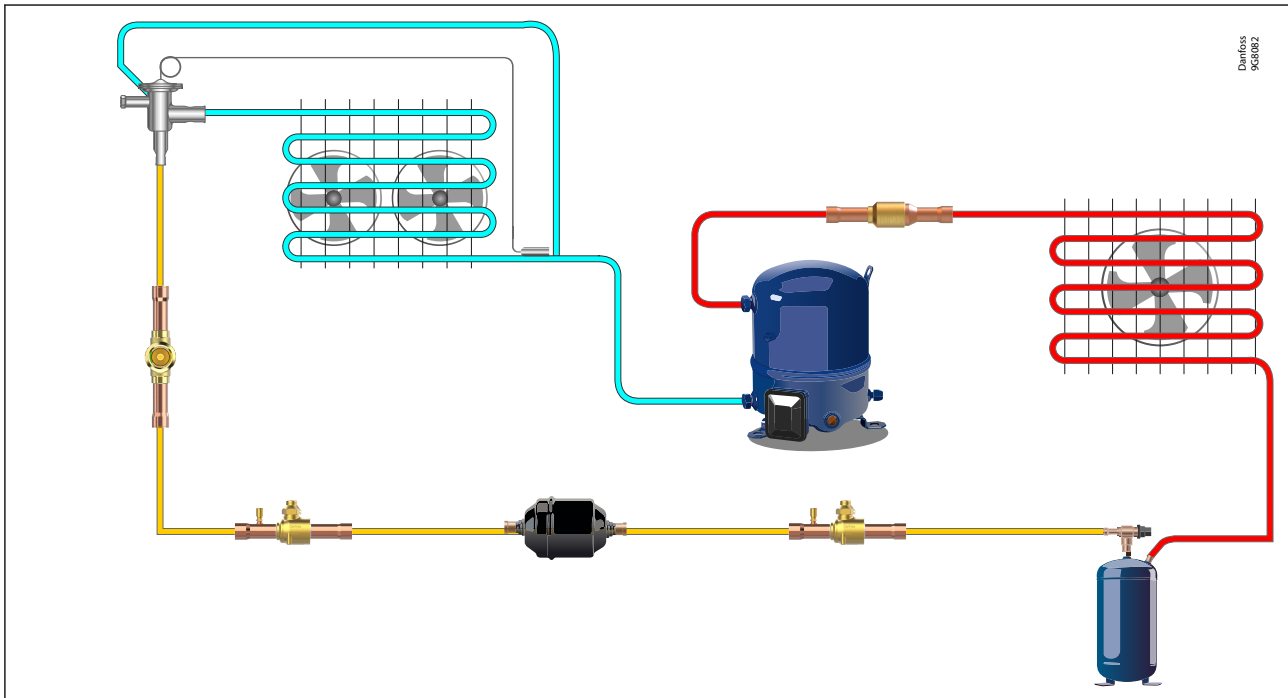
## Applications

### Application

Typical applications for GBC valves are:

- Cold room
- Chiller
- Heat pump
- Transport refrigeration

Figure 1: Application Diagram



Media

Table 1: Refrigerants

Valve type	Max. working pressure (PS/MWP)	Refrigerants	Approval
GBC 6s-28s	45 bar / 650 psig	R134a, R22/R407C, R290, R404A/R507, R407A, R407F, R407H, R410A, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R513A, R515B, R516A, R1234ze(E), R1234yf	PED, UL, EAC, UA
GBC 35s-79s	45 bar / 650 psig	R134a, R22/R407C, R404A/R507, R407A, R407F, R407H, R410A, R448A, R449A, R449B, R450A, R452A, R513A, R515B, R1234ze(E) R452B, R454A, R454B, R454C, R455A, R516A, R1234yf	PED, UL, EAC, UA UL, EAC, UA
GBC 6s E-28s E	49 bar / 710 psig	R134a, R22/R407C, R290, R32, R404A/R507, R407A, R407F, R407H, R410A, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R513A, R515B, R516A, R1234ze(E), R1234yf	PED, UL, EAC, UA
GBC 35s E-79s E	49 bar / 710 psig	R134a, R22/R407C, R32, R404A/R507, R407A, R407F, R407H, R410A, R448A, R449A, R449B, R450A, R452A, R452B, R454A, R454B, R454C, R455A, R513A, R515B, R516A, R1234ze(E), R1234yf	PED, UL, EAC, UA

Table 2: Refrigerant oil

Features	Type
Refrigerant oil	POE, PAG (PVE, PAO)

**NOTE:**

1. For a complete list of approved refrigerants, visit <http://store.danfoss.com/> and search for individual code numbers, where refrigerants are listed as part of product details.
2. This product is approved for R290, R32, R452B, R454A, R454B, R454C, R455A, R516A, R1234ze(E), R1234yf by ignition source assessment in accordance to standard EN ISO 80079-36.
3. GBC is only can be used in the temperature below 80 °C/176 °F for oil free application. For higher temperature for oil free application, please contact Danfoss.
4. R32 can only be used for 49bar GBC E.

**Product specification**

**Technical data**

Table 3: Technical data

Technical data	GBC	GBC E
Max. working pressure	45 bar / 650 psig	49 bar / 710 psig
Media temperature range	-40 – 100 °C / -40 – 212 °F for long term use >100 – 150 °C / >212 – 300 °F for short term use	-40 – 100 °C / -40 – 212 °F For use in high temperature application, please consult Danfoss.
Environmental transport/storage temperature and humidity	-40 – 65 °C / -40 – 150 °F Air humidity: RH≤95%	
Flow direction	Bi flow	

**Identification**

Relevant product data is available on the product and box label. An example of a box label and product label are shown, including an explanation of the content.

Figure 2: Box label



Figure 3: Product label



Table 4: Product and label text

Position	Inscription	Explanation
Box label; Product label	Shut-off ball valve	Product name
Box label	GBC 6s E	Product type
Box label	009L9020	Code number for ordering
Box label	Straightway	Direction
Box label	1/4 in ODF	Connection size and type
Box label; Product label	MWP/MAP: 49 bar/710 psig	Max. working pressure in bar and psig
Box label	BE4320B	Code for production place and time (BE = Wuqing, week 43, year 2020, weekday B = Tuesday)
Box label; Product label	COT Max. 100 °C/212 °F	Max. temperature
Box label; Product label	MADE IN CHINA	Manufacturing site acc. to EN standards
Box label	EAN code	Barcode for individual code no. identification according to EAN standard
Box label; Product label	Additional information: Relevant approval authority logos	

**Design and materials**

The shut off valves with ball are bi flow manual valves capable of ensuring a minimum internal loss when closed and a low pressure drop when open. The GBC valves can be installed in liquid, suction and hot gas lines in refrigeration and air conditioning systems. The design of the ball valves guarantees the pressure balance with the valve closed, it allows two directions fluid flow and prevents the danger of explosion and rejection of the operating spindle.

Direct flow gives maximum through-flow with minimum pressure drop across valve. The combination of laser-welded valve body (2) and valve tail (4), ball seat/seal (3), double O-ring seal in spindle (6), and cap seal (7) provides the best tightness.



## Shut-off ball valve, Type GBC

Figure 4: Design and materials

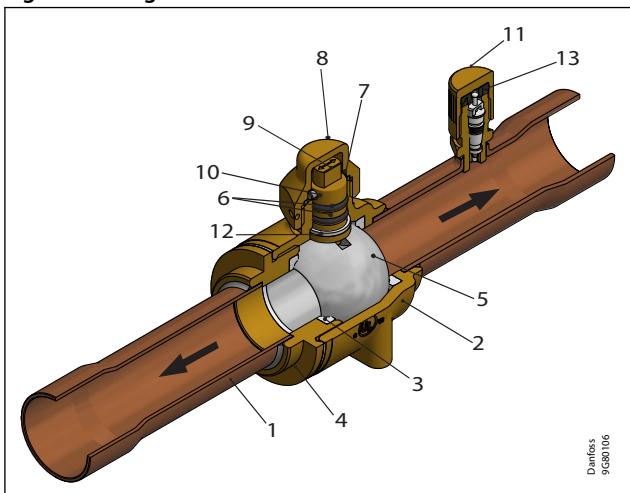


Table 5: Design and materials

Position	Description	Material
1	Connection tube	Copper
2	Valve body	Brass
3	Ball seat	PTFE
4	Valve tail	Brass
5	Ball	Stainless steel
6	Double O-ring seal in spindle	CR rubber
7	Cap seal	PTFE
8	Seal cap	Brass
9	Spindle	Brass
10	Pin	Stainless steel
11	Access port cap	Brass
12	Guide ring	PTFE
13	Schrader valve	Stainless steel

## Dimensions

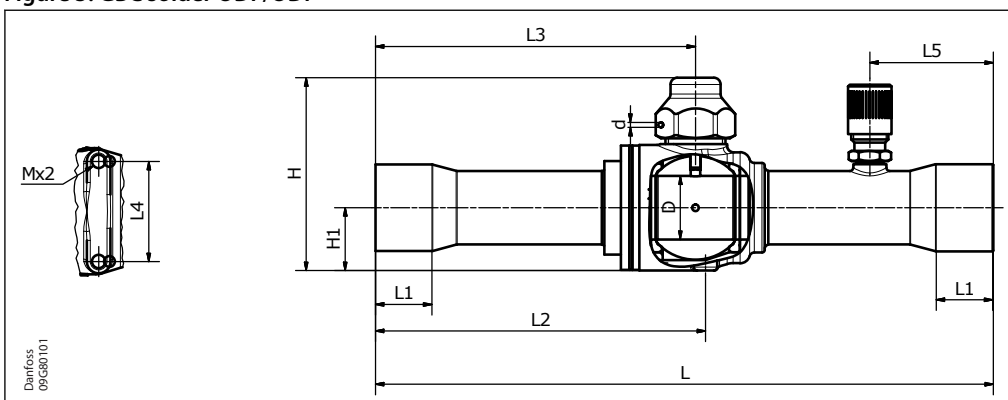
We have chosen to show dimensions of the major versions.

You will find downloadable dimension drawings for individual code numbers on Danfoss store as part of the Visuals tab for individual code numbers.

Weights also differ depending on the design of the individual code numbers. Weights are available as part of the technical data for individual code numbers on Danfoss store.

### GBC solder ODF/ODF, copper connections

Figure 5: GBC solder ODF/ODF



## Shut-off ball valve, Type GBC

**Table 6: GBC solder ODF/ODF, copper connections**

Type	Size	Con- nec- tion	Con- nection tolerance	H	H1	L	L1	L2	L3	L4	L5	M	D	d	Weigh [kg]	Code no.	
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		without access port	with ac- cess port
GBC 6s	1/4 in.	6.35	+0.065/+0.155	43	12	139	7	73	73	17	31	M3 × 0.5	11.1	1.5	0.1	009L7020	009L7050
	M4 × 0.7											009L9020				009L9050	
	M3 × 0.5	009L7030										009L7060					
	M4 × 0.7	009L9030										009L9060					
GBC 10s	3/8 in.	9.52		43	12	139	9	73	73	17	31	M3 × 0.5	11.1	1.5	0.1	009L7021	009L7051
	M4 × 0.7	009L9021										009L9051					
	M3 × 0.5	009L7031										009L7061					
	M4 × 0.7	009L9031										009L9061					
GBC 12s	10 mm	10.00	43	12	161	10	84	84	17	31	M3 × 0.5	11.1	1.5	0.1	009L7022	009L7052	
	M4 × 0.7	009L9022									009L9052						
	M3 × 0.5	009L7032									009L7062						
	M4 × 0.7	009L9032									009L9062						
GBC 16s	1/2 in.	12.70	50	15	161	12	86	84	22	31	M3 × 0.5	14.0	1.5	0.2	009L7023	009L7053	
	12 mm	12.00									M4 × 0.7				009L9023	009L9053	
GBC 18s	5/8 in.	16.00	58	19	185	14	99	96	30	37	M4 × 0.7	19.0	1.5	0.4	009L7024	009L7054	
	16 mm	16.00									M4 × 0.7				009L9024	009L9054	
GBC 22s	18 mm	18.00	58	19	185	14	99	96	30	37	M4 × 0.7	19.0	1.5	0.4	009L7035	009L7065	
	7/8 in.	22.22									M4 × 0.7				009L9035	009L9065	
GBC 28s	22 mm	22.22	58	19	185	17	99	96	30	37	M4 × 0.7	19.0	1.5	0.4	009L7025	009L7055	
	1 1/8 in.	28.58									M4 × 0.7				009L9025	009L9055	
GBC 35s	28 mm	28.00	80	25	208	20	112	108	38	44	M4 × 0.7	25.5	1.5	0.9	009L7026	009L7056	
	1 3/8 in.	35.00									M4 × 0.7				009L9026	009L9056	
GBC 42s	35 mm	35.00	89	30	251	25	136	130	48	44	M6 × 1.0	32.0	1.5	1.4	009L7033	009L7063	
	1 5/8 in.	41.28									M6 × 1.0				009L9033	009L9063	
GBC 54s	42 mm	42.00	110	35	281	29	151	145	55	56	M6 × 1.0	38.0	1.5	2.2	009L7027	009L7057	
	2 1/8 in.	54.00									M6 × 1.0				009L9027	009L9057	
GBC 67s	54 mm	54.00	131	46	305	34	167	157	74	56	M6 × 1.0	50.0	1.5	4.2	009L7028	009L7058	
	2 5/8 in.	66.70									M6 × 1.0				009L9028	009L9058	
GBC 79s	42 mm	42.00	110	35	281	29	151	145	55	56	M6 × 1.0	38.0	1.5	2.2	009L7034	009L7064	
	2 1/8 in.	54.00									M6 × 1.0				009L9034	009L9064	
GBC 79s RP	54 mm	54.00	131	46	305	34	167	157	74	56	M6 × 1.0	50.0	1.5	4.4	009L7029	009L7059	
	2 5/8 in.	66.68									M6 × 1.0				009L9029	009L9059	
GBC 79s RP	2 5/8 in.	66.70	149	55	343	38	188	172	84	72	M6 × 1.0	60.5	1.5	5.8	009L7959	009L7960	
	3 1/8 in.	79.38									M6 × 1.0				009L9959	009L9960	
GBC 79s RP	3 1/8 in.	79.38	169	65	416	38	230	214	86	80	M6 × 1.0	73.5	1.5	9.1	009L7980	009L7981	
	2 5/8 in.	66.68									M6 × 1.0				009L9980	009L9981	
GBC 79s RP	3 1/8 in.	79.38	131	46	305	37	167	157	74	56	M6 × 1.0	50.0	1.5	4.4	009L7036	009L7066	
	3 1/8 in.	79.38									M6 × 1.0				009L7037	009L7067	

### RP: Reduced Port

The thread of access port: 7/16-20UNF

## Shut-off ball valve, Type GBC

The thread of schrader valve: 5 V1 DIN7756/DIN7757

### GBC solder ODF/ODM, copper connections

Figure 6: GBC solder ODF/ODM

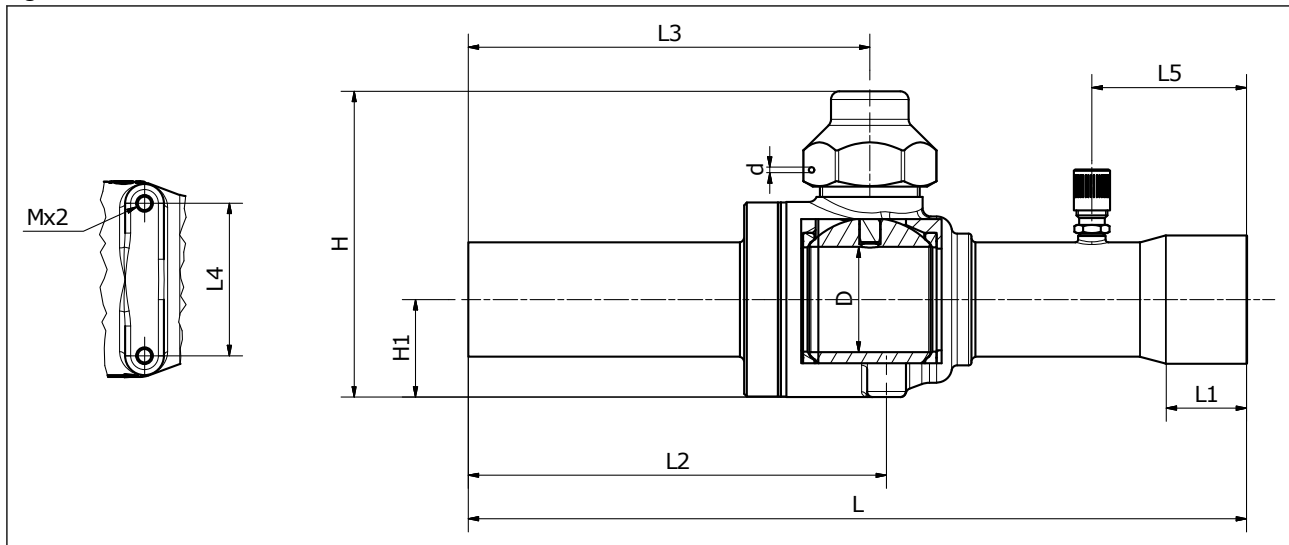


Table 7: GBC solder ODF/ODM, copper connections

Type	Size	Con- nec- tion [mm]	Connection tolerance [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	M [mm]	D [mm]	d [mm]	Weight [kg]	Code no.	
																without access port	with access port
GBC 16s	5/8 in.	ODF: 16	ODF: +0.065/+0.155	50	15	161	12	86	84	22	31	M4 × 0.7	14.0	1.5	0	009L7043	009L7084
	16 mm	ODM: 15.88	ODM: -0.04/+0.04														
GBC 22s	7/8 in.	ODF: 22.22	ODF: +0.075/+0.185	58	19	201	17	86	83	30	-	M4 × 0.7	19	2	0	009L7000	-
	22 mm	ODM: 22	ODM: -0.08/+0.08														
GBC 28s	1 1/8 in.	28.58	ODF: +0.075/+0.185	79	25	228	20	112	108	38	-	M4 × 0.7	25.5	1.5	0.9	009L7001	-
	1 1/8 in.		ODM: -0.12/+0.12	80	25	208	20	112	108	38	44	M4 × 0.7	25.5	1.5	0.9	-	009L7097
GBC 35s	1 3/8 in.	35.00	ODF: +0.09/+0.23 ODM: -0.15/+0.15	89	30	280	25	136	130	48	-	M6 × 1.0	32.0	1.5	1	009L7002	-
	1 3/8 in. 35 mm			89	30	251	25	136	130	48	44	M6 × 1.0	32.0	1.5	1	-	009L7098
GBC 42s	1 5/8 in.	41.28	ODF: +0.09/+0.23 ODM: -0.15/+0.15	110	35	295	29	151	145	55	-	M6 × 1.0	38.0	1.5	2.2	009L7003	-
				110	35	281	29	151	145	55	56	M6 × 1.0	38.0	1.5	2.2	-	009L7099
GBC 54s	2 1/8 in. 54 mm	54.00	ODF: +0.09/+0.23 ODM: -0.1/+0.1	131	46	305	34	167	157	74	56	M6 × 1.0	50.0	1.5	4	-	009L7069
GBC 67s	2 5/8 in.	66.70	ODF: +0.1/+0.33 ODM: -0.16/+0.07	149	55	346	38	191	175	84	72	M6 × 1.0	60.5	1.5	5.8	-	009L7958
GBC 79s	3 1/8 in.	79.38	ODF: +0.1/+0.33 ODM: -0.16/+0.07	168	65	406	38	220	204	86	80	M6 × 1.0	73.5	1.5	9.1	009L7969	009L7970

The thread of access port: 7/16-20UNF

The thread of schrader valve: 5 V1 DIN7756/DIN7757

GBC solder ODM/ODM, copper connections

Figure 7: GBC solder ODM/ODM, copper connections

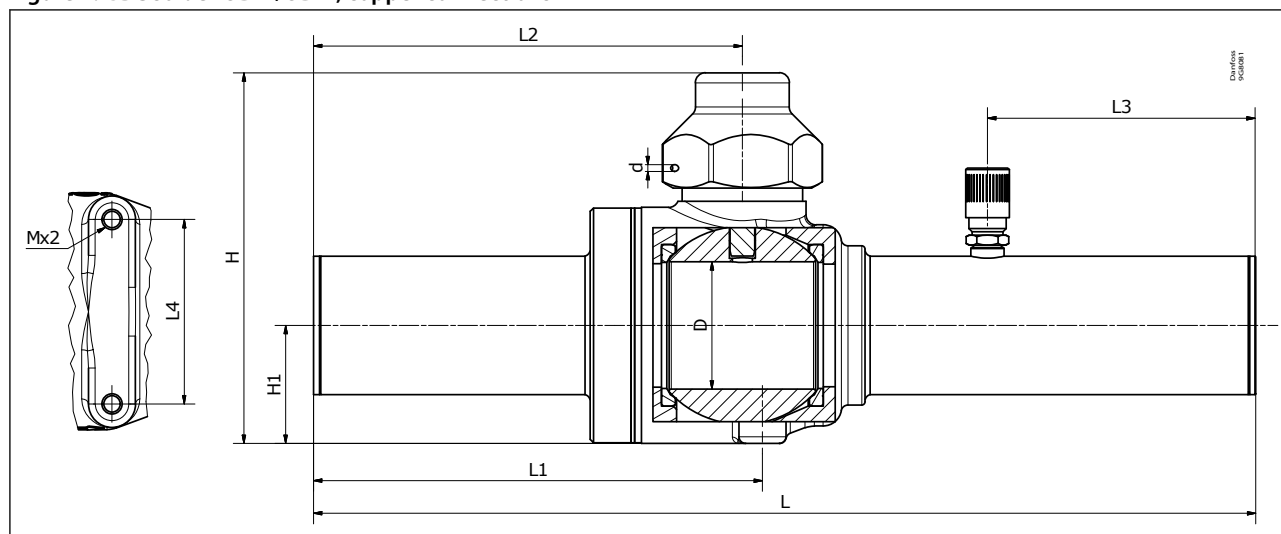


Table 8: GBC solder ODM/ODM, copper connections

Type	Size	Con- nec- tion [mm]	Connection tolerance [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	M [mm]	D [mm]	d [mm]	Weight [kg]	Code no.	
															without access port	with access port
GBC 28s	1 1/8	28.58	-0.12/+0.05	79	25	208	104	100	56	38	M4x0.7	25.5	1.5	0.9	-	009L7100
GBC 42s	1 5/8	41.28	-0.15/+0.06	110	35	281	134	128	80	55	M6x1.0	38.0	1.5	2.4	-	009L7101
GBC 54s	2 1/8	54.00		131	46	305	151	141	81	74	M6x1.0	50.0	1.5	4.3	-	009L7102
GBC 67s	2 5/8	66.70	-0.16/+0.07	149	55	305	153	137	78	84	M6x1.0	60.5	1.5	5.6	-	009L7103
GBC 79s	3 1/8	79.38		168	65	410	220	204	106	86	M6x1.0	73.5	1.5	9.0	-	009L7104

The thread of access port: 7/16-20UNF

The thread of schrader valve: 5 V1 DIN7756/DIN7757

**Connections**

Standard GBC, GBC E versions can be provided with straightway, connection types solder ODF/ODF or ODF/ODM or ODM/ODM in a wide variety of connection sizes. Solder versions are with extended ends copper connections.

For details on availability, see [Ordering](#).

### Connection diagrams

Type	Inlet	Outlet	connections	Inch connections
GBC	Solder ODF	Solder ODF	6 mm x 6 mm 10 mm x 10 mm 12 mm x 12 mm 16 mm x 16 mm 18 mm x 18 mm 22 mm x 22 mm 28 mm x 28 mm 35 mm x 35 mm 42 mm x 42 mm 54 mm x 54 mm	¼ x ¼ in ⅜ x ⅜ in ½ x ½ in ⅝ x ⅝ in ¾ x ¾ in ⅞ x ⅞ in 1 ⅛ x 1 ⅛ in 1 ⅜ x 1 ⅜ in 1 ⅝ x 1 ⅝ in 2 ⅛ x 2 ⅛ in 2 ⅝ x 2 ⅝ in 3 ⅛ x 3 ⅛ in
GBC	Solder ODF	Solder ODM	16 mm x 16 mm 22 mm x 22 mm 35 mm x 35 mm 54 mm x 54 mm	⅝ in x ⅝ in ⅞ x ⅞ in 1 ⅛ x 1 ⅛ in 1 ⅜ x 1 ⅜ in 1 ⅝ x 1 ⅝ in 2 ⅛ x 2 ⅛ in 2 ⅝ x 2 ⅝ in 3 ⅛ x 3 ⅛ in
GBC	Solder ODM	Solder ODM	54 mm x 54 mm	1 ⅛ x 1 ⅛ in 1 ⅝ x 1 ⅝ in 2 ⅛ x 2 ⅛ in 2 ⅝ x 2 ⅝ in 3 ⅛ x 3 ⅛ in
GBC E	Solder ODF	Solder ODF	6 x 6 mm 10 x 10 mm 12 x 12 mm 16 x 16 mm 18 x 18 mm 22 x 22 mm 28 x 28 mm 35 x 35 mm 42 x 42 mm 54 x 54 mm	¼ x ¼ in ⅜ x ⅜ in ½ x ½ in ⅝ x ⅝ in ¾ x ¾ in ⅞ x ⅞ in 1 ⅛ x 1 ⅛ in 1 ⅜ x 1 ⅜ in 1 ⅝ x 1 ⅝ in 2 ⅛ x 2 ⅛ in 2 ⅝ x 2 ⅝ in 3 ⅛ x 3 ⅛ in

## Shut-off ball valve, Type GBC

### Ordering

GBC/GBC E code numbers described in this data sheet are standard code numbers, i.e. made to stock. Besides code numbers made to stock GBC/GBC E is also made to order.

Make to order options include:

- Mechanical connection type
- Mechanical connection size
- Access port size

Multipack contains several items, individually packed, so that customers can purchase 1 item and receive all relevant documentation.

### GBC solder ODF/ODF, copper connections

Figure 8: GBC without access port, solder ODF/ODF

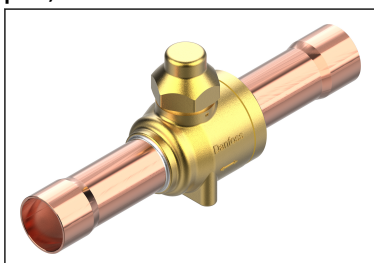


Figure 9: GBC with access port, solder ODF/ODF

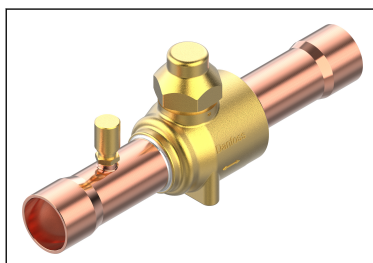


Table 9: GBC solder ODF/ODF, copper connections

Type	Code no.		Connection Solder ODF × ODF		Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv <sup>(1)</sup> [gal/min]	Multi pack Qty/ pack	Max. working pressure: PS/MWP	Media temperature range <sup>(2)</sup>	PED category [Fluid Group 1]	PED category [Fluid Group 2]
	without access port	with access port	[in.]	[mm]							
GBC 6s	009L7020	009L7050	1/4	-	1.83	2.12	30	45 bar / 650 psig	-40 °C – 100°C / -40 °F – 212°F for long term use >100°C-150°C / >212°F - 300°F for short term use	Art. 4.3	Art. 4.3
	009L7030	009L7060	-	6	1.83	2.12	30				
GBC 10s	009L7021	009L7051	3/8	-	8.04	9.29	30				
	009L7031	009L7061	-	10	8.04	9.29	30				
GBC 12s	009L7022	009L7052	1/2	-	13.17	15.22	30				
	009L7032	009L7062	-	12	13.17	15.22	30				
GBC 16s	009L7023	009L7053	5/8	16	15.66	18.10	25				
GBC 18s	009L7024	009L7054	3/4	-	21.93	25.35	25				
	009L7035	009L7065	-	18	21.93	25.35	25				
GBC 22s	009L7025	009L7055	7/8	22	33.34	38.54	25				
GBC 28s	009L7026	009L7056	1 1/8	-	62.25	71.96	5				
	009L7033	009L7063	-	28	62.25	71.96	5				
GBC 35s	009L7027	009L7057	1 3/8	35	92.76	107.23	5				
GBC 42s	009L7028	009L7058	1 5/8	-	134.76	155.78	4				
	009L7034	009L7064	-	42	134.76	155.78	4				
GBC 54s	009L7029	009L7059	2 1/8	54	240.11	277.57	2				
GBC 67s	009L7959	009L7960	2 5/8	-	367.38	424.69	1				
GBC 67s RP	009L7036	009L7066	2 5/8	-	203.12	234.81	2				
GBC 79s	009L7980	009L7981	3 1/8	-	528.87	611.37	1				
GBC 79s RP	009L7037	009L7067	3 1/8	-	171.89	198.70	2				
									-		Cat. I

<sup>(1)</sup> Calculated based on fluid dynamic equations. RP: Reduced Port

<sup>(2)</sup> For short term use in high temperature application, please consult Danfoss.

## Shut-off ball valve, Type GBC

### GBC solder ODF/ODM, copper connections

Figure 10: GBC without access port, solder ODF/ODM

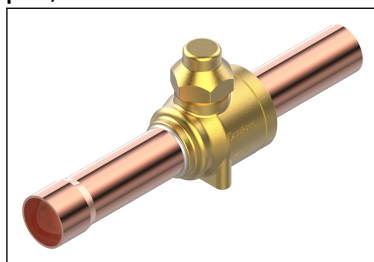


Figure 11: GBC with access port, solder ODF/ODM

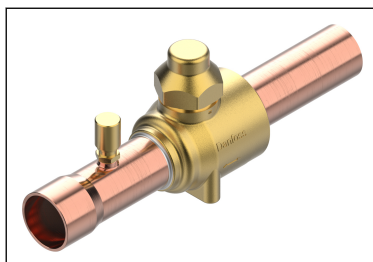


Table 10: GBC solder ODF/ODM, copper connections

Type	Code no.		Connection Solder ODF/ODM		Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv (1) [gal/min]	Multi pack Qty/ pack	Max. working pressure: PS/MWP	Media temperature range <sup>(2)</sup>	PED category [Fluid Group 1]	PED category [Fluid Group 2]
	without access port	with access port	[in.]	[mm]							
GBC 16s	009L7043	009L7084	5/8	16	15.66	18.10	25	45 bar / 650 psig	-40 °C – 100°C / -40 °F – 212°F for long term use >100°C-150°C / >212°F - 300°F for short term use	Art. 4.3	Art. 4.3
GBC 22s	009L7000	-	7/8	22	33.34	38.54	5				
GBC 28s	009L7001	009L7097	1 1/8	-	62.25	71.96	5				
GBC 35s	009L7002	009L7098	1 3/8	35	92.76	107.23	7002: 4 7098: 5				
GBC 42s	009L7003	009L7099	1 5/8	-	134.76	155.78	4		-40 °C – 100°C / -40 °F – 212°F for long term use >100°C - 121°C / >212°F - 250°F for short term use	-	Cat. I
GBC 54s	-	009L7069	2 1/8	54	240.11	277.57	2				
GBC 67s	-	009L7958	2 5/8	-	367.38	424.69	1				
GBC 79s	009L7969	009L7970	3 1/8	-	528.87	611.37	1				

<sup>(1)</sup> XCalculated based on fluid dynamic equations.

<sup>(2)</sup> For short term use in high temperature application, please consult Danfoss.

### GBC solder ODM/ODM, copper connections

Figure 12: GBC with access port, solder ODM/ODM

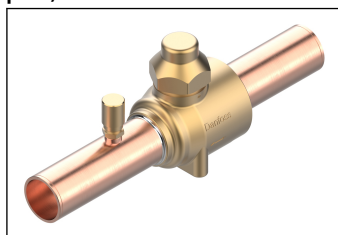


Table 11: GBC solder ODM/ODM, copper connections

Type	Code no.		Connection Solder ODM/ODM		Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv (1) [gal/min]	Multi pack Qty/ pack	Max. working pressure: PS/MWP	Media temperature range <sup>(2)</sup>	PED category [Fluid Group 1]	PED category [Fluid Group 2]
	without access port	with access port	[in.]	[mm]							
GBC 28s	-	009L7100	1 1/8	-	62.25	71.96	5	45 bar / 650 psig	-40 °C – 100°C / -40 °F – 212°F for long term use >100°C-150°C / >212°F - 300°F for short term use	Art. 4.3	Art. 4.3
GBC 42s	-	009L7101	1 5/8	-	134.76	155.78	4				
GBC 54s	-	009L7102	2 1/8	54	240.11	277.57	2		-40 °C – 100°C / -40 °F – 212°F for long term use >100°C - 121°C / >212°F - 250°F for short term use	-	Cat. I
GBC 67s	-	009L7103	2 5/8	-	367.38	424.69	1				
GBC 79s	-	009L7104	3 1/8	-	528.87	611.37	1				

<sup>(1)</sup> Calculated based on fluid dynamic equations.

<sup>(2)</sup> For short term use in high temperature application, please consult Danfoss.

### GBC E solder ODF/ODF, copper connections

Figure 13: GBC E without access port, solder ODF/ODF

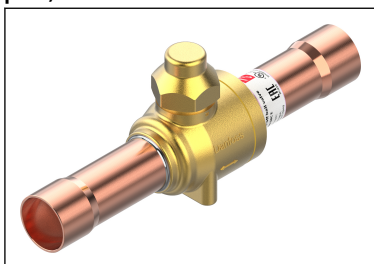


Figure 14: GBC E with access port, solder ODF/ODF

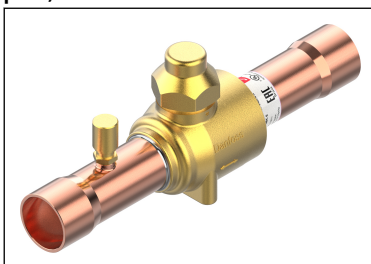


Table 12: GBC E solder ODF/ODF, copper connections

Type	Code no.		Connection Solder ODF × ODF		Kv <sup>(1)</sup> [m <sup>3</sup> /h]	Cv (1) [gal/min]	Multi pack Qty/ pack	Max. working pressure: PS/MWP	Media temperature range <sup>(2)</sup>	PED category [Fluid Group 1]	PED category [Fluid Group 2]
	without access port	with access port	[in.]	[mm]							
GBC 6s E	009L9020	009L9050	1/4	-	1.83	2.12	25	49 bar / 710 psig	-40 °C - 100 °C / -40 °F - 212 °F For high temperature application, please consult Danfoss	Art. 4.3	Art. 4.3
	009L9030	009L9060	-	6	1.83	2.12	25				
GBC 10s E	009L9021	009L9051	3/8	-	8.04	9.29	25				
	009L9031	009L9061	-	10	8.04	9.29	25				
GBC 12s E	009L9022	009L9052	1/2	-	13.17	15.22	25				
	009L9032	009L9062	-	12	13.17	15.22	25				
GBC 16s E	009L9023	009L9053	5/8	-	15.66	18.10	25				
	009L9024	009L9054	3/4	-	21.93	25.35	25				
GBC 18s E	009L9035	009L9065	-	18	21.93	25.35	25				
	009L9025	009L9055	7/8	22	33.34	38.54	25				
GBC 28s E	009L9026	009L9056	1 1/8	-	62.25	71.96	5				
	009L9033	009L9063	-	28	62.25	71.96	5				
GBC 35s E	009L9027	009L9057	1 3/8	35	92.76	107.23	5				
	009L9028	009L9058	1 5/8	-	134.76	155.78	4				
GBC 42s E	009L9034	009L9064	-	42	134.76	155.78	4				
	009L9029	009L9059	2 1/8	54	240.11	277.57	2				
GBC 67s E	009L9959	009L9960	2 5/8	-	367.38	424.69	1	Cat. II	Cat. I		
GBC 79s E	009L9980	009L9981	3 1/8	-	528.87	611.37	1				

<sup>(1)</sup> Calculated based on fluid dynamic equations.

<sup>(2)</sup> For use in high temperature application above 100 °C, please consult Danfoss.

### Spare parts

Figure 15: Seal cap kit

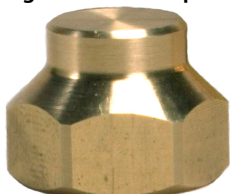


Table 13: Seal cap kit

Type	Valve connection size		Industrial pack (pcs)	Code no. for 009Gxxxx series	Code no. for 009Lxxxx 45 bar series	Code no. for 009Lxxxx 49 bar series
	[in]	[mm]				
GBC 6s - GBC 12s	1/4 - 1/2	6 - 12	6	009G7210	009L7209	009L7210
GBC 16s - GBC 22s	5/8 - 7/8	16 - 22	6		009L7210	
GBC 28s - GBC 35s	1 1/8 - 1 3/8	28 - 35	4	009G7211	/	009L7211
			3	/		
GBC 42s - GBC 79s	1 5/8 - 3 1/8	42 - 79	4	009G7212	/	009L7212
			3	/		



## Shut-off ball valve, Type GBC

Figure 16: Bracket kit



Table 14: Bracket kit

Type	Valve connection size		Industrial pack (pcs)	Code no. for 009Gxxxx series	Code no. for 009Lxxxx 45 bar series	Code no. for 009Lxxxx 49 bar series
	[in]	[mm]				
GBC 6s - GBC 12s	¼ – ½	6 – 12	12	009G7084	009G7089	009G7084
GBC 16s	5/8	16	12		009G7084	
GBC 18s - GBC 22s	¾ – 7/8	18 – 22	12		009G7085	
GBC 28s	1 1/8	28	10		009G7086	
GBC 35s	1 3/8	35	5		009G7087	
GBC 42s	1 5/8	42	4		009G7088	

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**Table 15: Certificates, declarations, and approvals**

File name	Document type	Document topic	Approval authority
Д-DK.PA01.B.02567_19	EAC Declaration	MD	EAC RU
Д-DK.БЛ08.B.02139_19	EAC Declaration	PED	EAC RU
033F4001	Manufacturers Declaration	PED	Danfoss
033F4002	EU Declaration	PED	Danfoss
033F4006	Manufacturers Declaration	China RoHS	Danfoss
033F4010	Manufacturers Declaration	RoHS	Danfoss
033F4017	Manufacturers Declaration	EN ISO 14903:2017 Level A1	Danfoss
LLC CDC EURO-TYSK UA.1O146.D.00078-19	UA Declaration	PED	LLC CDC EURO TYSK - Ukraine
LLC CDC EURO-TYSK UA.TR.089.1122.04-19	Pressure - Safety Certificate	PED	LLC CDC EURO TYSK - Ukraine
UL SA7200	Mechanical - Safety Certificate	UL	UL

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