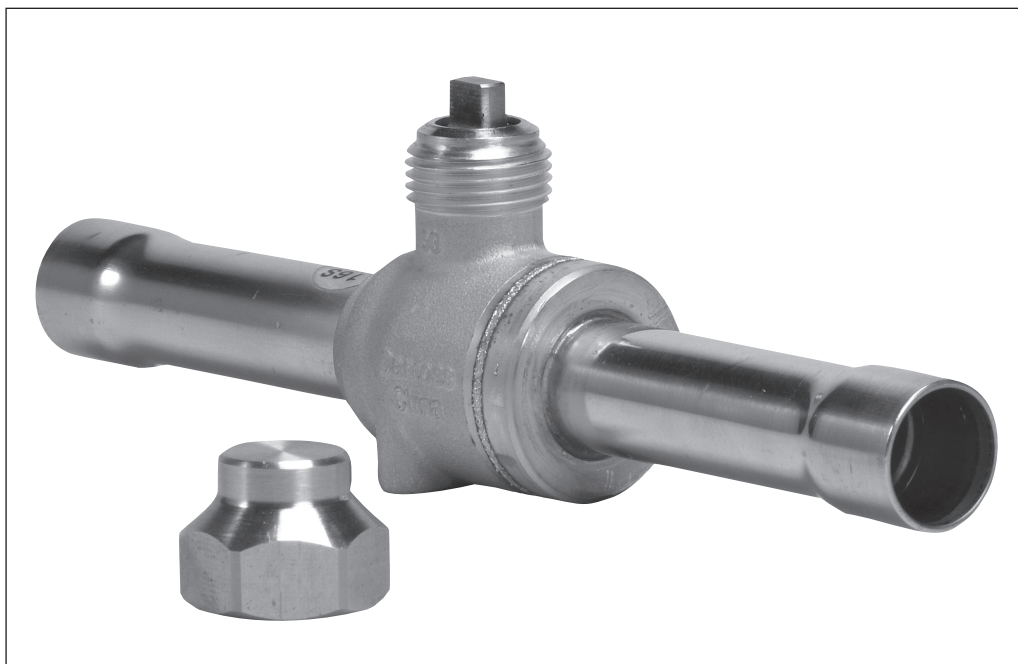




Ball valves, type GBC

Introduction



Danfoss ball valves, type GBC, are manually operated shut-off valves suitable for applications where bi-directional flow is a requirement.

GBC valves are approved for applications in liquid, suction, and hot gas lines in refrigeration and air-conditioning systems.

GBC valves offer maximum tightness across the seat and seal, with minimum pressure drop.

These ball valves give maximum flow in the fully open position. They are designed for operation within a broad temperature range and are approved for use with any fluorinated refrigerant. They may be used in applications using high pressure refrigerants including R-410A.

GBC valves are equipped with a one-piece seal cap to prevent tampering.

Features

- Slimline body – easier to install and service
- ¼ turn from fully open to fully closed.
- Rotation stops at fully open and fully closed positions.
- Indicator on spindle top shows degree of opening.
- Bi-flow – valve orientation is not an issue.
- Precision laser welded construction.
- Burst-proof spindle design.
- Valve seal of low friction, tight-sealing modified PTFE Teflon®.
- Drilled and tapped for panel mounting.

Technical data

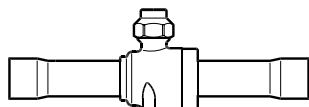
Refrigerants	CFC, HCFC, HFC
Temperature range	-40 → +300°F (-40 → +150°C)
Max. working pressure (PS/MWP)	653 psig (45 bar)
Max. test pressure	943 psig (65 bar)
Approvals	

*Safety and environmental requirements

Ordering

The product range consists of two valve types: one with and one without access port. Both versions can be supplied in inch or

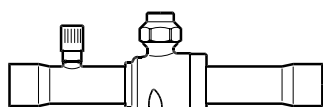
millimetre sizes from 1/4 in. to 3 1/8 in. (6 mm to 54 mm). All valves have holes for panel mounting.



GBC without access port

GBC without access port

Type	Solder ODF connection		C _v value *) [gal/min]
	[in.]	Code no.	
GBC 6s	1/4	009G7020	9
GBC 10s	3/8	009G7021	25
GBC 12s	1/2	009G7022	47
GBC 16s	5/8	009G7023	62
GBC 18s	3/4	009G7024	90
GBC 22s	7/8	009G7025	124
GBC 28s	1 1/8	009G7026	229
GBC 35s	1 3/8	009G7027	356
GBC 42s	1 5/8	009G7028	533
GBC 54s	2 1/8	009G7029	990
Restricted flow			
GBC 67s	2 5/8	009G7036	1082
GBC 79s	3 1/8	009G7037	980



GBC with access port

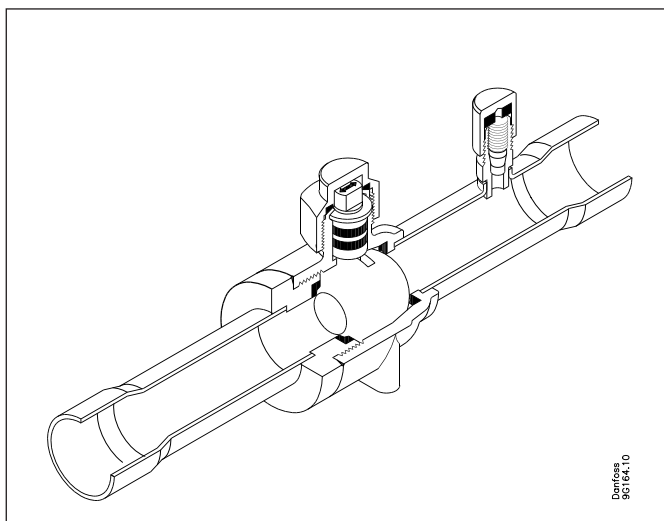
GBC with access port

Type	Solder ODF connection		C _v value *) [gal/min]
	[in.]	Code no.	
GBC 6s	1/4	009G7050	9
GBC 10s	3/8	009G7051	25
GBC 12s	1/2	009G7052	47
GBC 16s	5/8	009G7053	62
GBC 18s	3/4	009G7054	90
GBC 22s	7/8	009G7055	124
GBC 28s	1 1/8	009G7056	229
GBC 35s	1 3/8	009G7057	356
GBC 42s	1 5/8	009G7058	533
GBC 54s	2 1/8	009G7059	990
Restricted flow			
GBC 67s	2 5/8	009G7066	1082
GBC 79s	3 1/8	009G7067	980

*) CFD calculated values (Computational Fluid Dynamics)

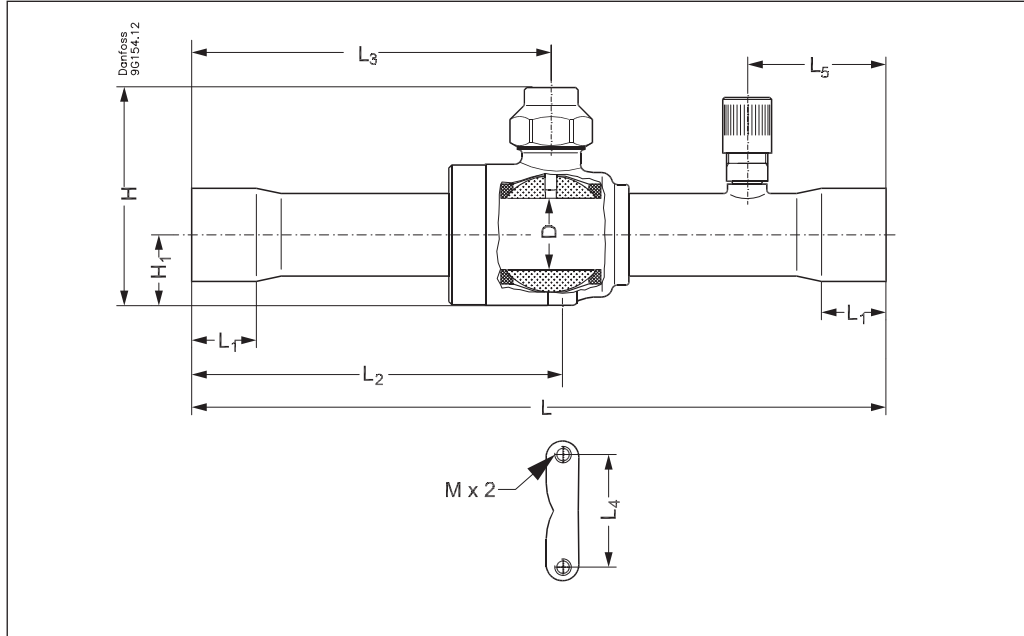
Construction

1. Connection
2. Laser-welded valve body
3. Ball seat (modified PTFE)
4. Valve adapter
5. Stainless steel ball
6. Double spindle O-ring seal (chloroprene)
7. Cap O-ring seal (chloroprene)
8. Seal cap
9. Spindle
10. Support gasket
11. Access port cap
12. Seal gasket
13. Schraeder valve



Direct port gives maximum flow with minimum pressure drop across the valve.

Dimensions and weights



Type	Conn [in.]	H [in.]	H1 [in.]	L [in.]	L1 [in.]	L2 [in.]	L3 [in.]	L4 [in.]	L5 [in.]	M [in.]	D [in.]	d [in.]	Weight (lbs)
GBC-6S	1/4"	1.96	0.59	5.43	0.27	2.91	2.83	0.87	1.22	M4 x 0.027	0.55	0.06	0.44
GBC-10S	3/8"	1.96	0.59	5.43	0.31	2.91	2.83	0.87	1.22	M4 x 0.027	0.55	0.06	0.44
GBC-12S	1/2"	1.96	0.59	6.30	0.39	3.35	3.27	0.87	1.22	M4 x 0.027	0.55	0.06	0.44
GBC-16S	5/8"	1.96	0.59	6.30	0.47	3.35	3.27	0.87	1.22	M4 x 0.027	0.55	0.06	0.44
GBC-18S	3/4"	2.44	0.75	7.28	0.55	3.90	3.78	1.18	1.46	M4 x 0.027	0.75	0.06	0.88
GBC-22S	7/8"	2.44	0.75	7.28	0.70	3.90	3.78	1.18	1.46	M4 x 0.027	0.75	0.06	0.88
GBC-28S	1 1/8"	2.95	0.98	8.19	0.79	4.41	4.25	1.50	1.73	M4 x 0.027	1.00	0.06	1.98
GBC-35S	1 3/8"	3.46	1.18	9.88	0.98	5.35	5.12	1.89	1.73	M4 x 0.39	1.26	0.06	3.09
GBC-42S	1 5/8"	4.01	1.38	11.06	1.14	5.94	5.71	2.17	2.20	M4 x 0.39	1.50	0.06	4.85
GBC-54S	2 1/8"	4.84	1.81	12.00	1.34	6.67	6.18	2.91	2.20	M4 x 0.39	1.97	0.06	9.26
GBC-67S	2 5/8"	4.84	1.81	12.00	1.46	6.67	6.18	2.91	2.20	M4 x 0.39	1.97	0.06	9.70
GBC-79S	3 1/8"	4.84	1.81	12.00	1.65	6.67	6.18	2.91	2.20	M4 x 0.39	1.97	0.06	9.92

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