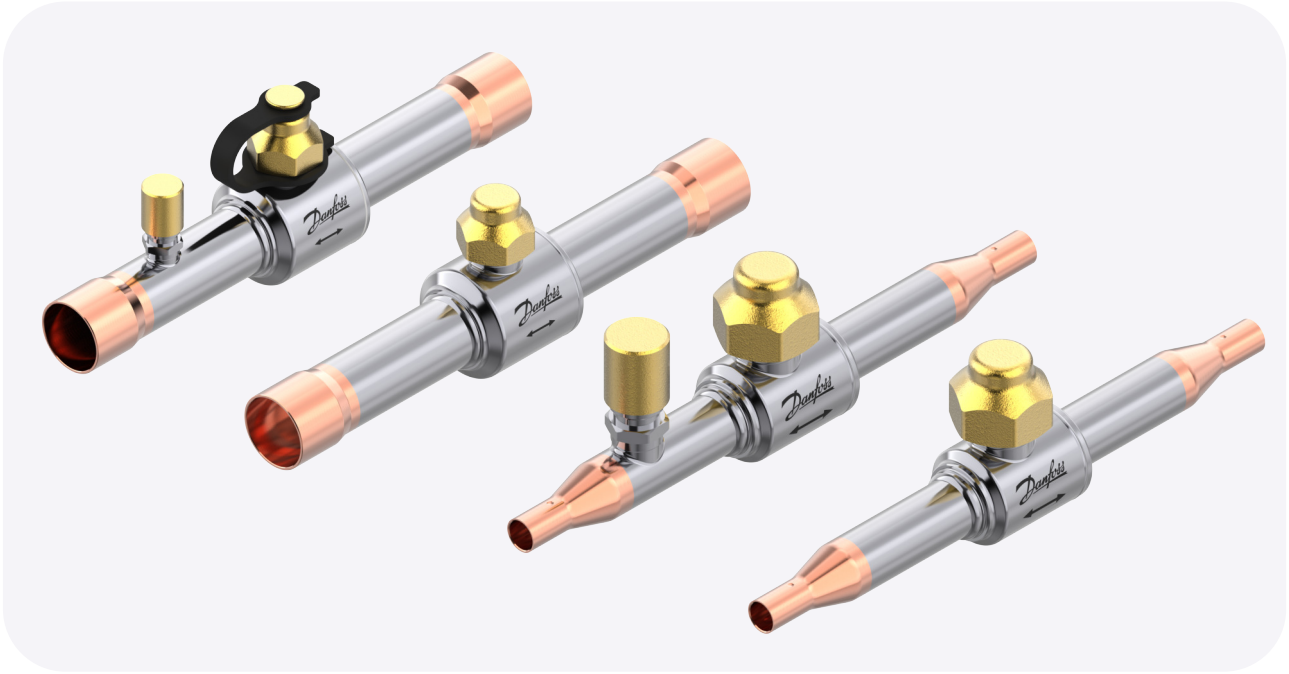
New GBC L ball valves

50 bar for A1, A2L, A3

A streamlined portfolio with upgraded performance



Application

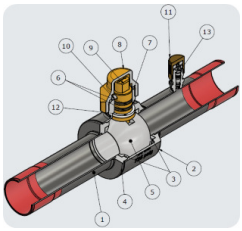
The GBC L ball valve is engineered to enhance the efficiency, safety, and cost-effectiveness of servicing refrigeration and air conditioning systems. By allowing quick and reliable shut-off of the line, it enables technicians to isolate specific sections of the system without having to drain the entire refrigerant charge. This not only speeds up maintenance and repair work but also reduces the risk of refrigerant loss, improves workplace safety, and lowers overall service costs.

In practical applications, the GBC L ball valve is strategically installed before and after key components such as filter driers, compressors, heat exchangers, and other vital equipment. This placement ensures that each component can be individually isolated for inspection, replacement, or repair, minimizing downtime and disruption to system operation. Whether used in commercial, industrial, or HVACR applications, the GBC L ball valve provides a dependable solution for improving serviceability and extending the lifespan of system components.

Design and dimensions

The GBC L ball valve is designed with versatility and durability in mind, offering a range of features to meet diverse refrigeration and air conditioning system requirements. Its bi-flow and bi-insulation capability allows refrigerant flow in both directions, enhancing installation flexibility. Available in sizes from 6 to 28s, the valve can be supplied with or without an access port to suit different service needs. Connection options include ODF/ODF, ODF/ODM, and ODM/ODM, providing compatibility with various piping configurations.

Constructed with a stainless steel tube featuring partial copper plating, the GBC L ensures strength, corrosion resistance, and reliable brazing performance. It is rated for a maximum working pressure (MWP) of 50 bar and designed for long-term operation in temperatures ranging from -40°C to +150°C. The valve maintains the same lay-in length as the existing GBC 45 and GBC E 49 bar models, simplifying replacement and retrofit projects.

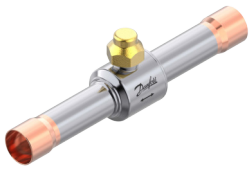


Engineered to cover most A1, A2L, and A3 refrigerants with the same models, the GBC L offers broad refrigerant compatibility. For use with R600, R600a, and R1270 in combination with PAO or mineral oils, a Product Change Request (PCR) is required to ensure safe and compliant operation. These design features make the GBC L a robust, adaptable, and service-friendly solution for modern HVACR systems.

Index	Component	Index	Component	Index	Component
1	Tube	6	O-ring	11	Access port cap
2	Valve body	7	Cap seal	12	Guide ring
3	Ball seat	8	Cap	13	Schrader valve
4	Valve tail	9	Stem		
5	Ball	10	Pin		

Available Sizes	**Stainless steel:** 6 mm to 28 mm (with or without access port)
Lay-in Length	Same as GBC 45 and GBC E 49 bar models
Internal Volume	~0.72 L (GBC 12L) to ~2.88 L (GBC 28L)
Weight	~0.13 kg (GBC 12L) / ~0.315 kg (GBC 18L) / ~0.567 kg (GBC 28L)
Housing materials	Stainless steel tube with partial copper plating
Maximum Working Pressure (MWP)	50 bar / 725 psig
Operating Temperature Range	-40°C to +150°C (long-term)
Refrigerant Compatibility	Most A1, A2L, A3 refrigerants; PCR required for R600, R600a, R1270 with PAO/mineral oils

Design benefits



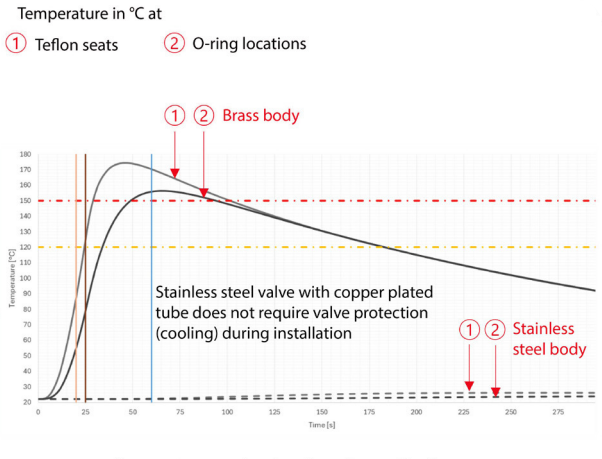
- Higher strength and tightness through robust design and advanced laser welding technology.
- Wide temperature capability – suitable for long-term use up to 150°C.
- Harsh environment resistance – proven performance in marine applications with:
  - 2,000-hour salt spray test compliance
  - 10-day ammonia ambient test compliance
- Copper-plated tube for easy, reliable brazing with customer piping.
- No cooling protection required during installation, simplifying service and reducing time.
- Streamlined portfolio with reduced complexity.
  - Single 50 bar range combining previous 45 bar and 49 bar models.
  - Product codes reduced from over 130 to fewer than 100.
  - Same lay-in length as existing GBC 45 and GBC 49 bar models for easy replacement.

Delivering high performance and reliability in a single enhanced range that streamlines GBC 45 and GBC 49 bar, from size 6 to 28s, into one solution.

Installation

The GBC L ball valve is designed for easier, safer, and faster installation, reducing downtime and simplifying on-site work.

Due to the low thermal conductivity of its stainless steel housing, no additional cooling is required during brazing, while the copper-plated tube ensures smooth and reliable brazing with customer piping for a secure, high-quality connection.



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Product code numbers
GBC L solder ODF/ODF, stainless steel connections

Table: GBC L solder ODF/ODF, stainless steel connections

Type	Size	Connection	Connection tolerance	H	H1	L	L1	L2	L3	L4	L5	D	d	Weight	Code no.	
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	without access port	with access port
GBC 6L	¼ in.	6.35	+0.065/+0.155	41	31	139	7	56	56	71	32	11.1	1.5	0.1	009L8620	009L8650 009L8350
	6 mm	6.00													009L8630	009L8660
GBC 10L	3⁄8 in.	9.52		41	31	139	9	56	56	71	32	11.1	1.5	0.1	009L8621	009L8651 009L8351
	10 mm	10.00													009L8631	009L8661
GBC 12L	½ in.	12.70		41	31	161	10	67	67	82	32	11.1	1.5	0.1	009L8622	009L8652 009L8352
	12 mm	12.00													009L8632	009L8662
GBC 16L	5⁄8 in.	16.00		48	35	161	12	65	66	81	33	14.0	1.5	0.2	009L8623	009L8653 009L8353
	16 mm															
GBC 18L	¾ in.	19.05		57	39	185	17	74	74	93	40	19.0	1.5	0.3	009L8624	009L8654 009L8354
	18 mm	18.00													009L8635	009L8665
GBC 22L	7⁄8 in.	22.22	+0.075/+0.185	57	39	185	17	74	74	93	40	19.0	1.5	0.3	009L8625	009L8655 009L8365
	22 mm															
GBC 25L	1 in.	25.40		77	54	208	19	83	82	105	–	25.5	1.5	0.6	009L8680	–
GBC 28L	1 1⁄8 in.	28.58		77	54	208	20	83	82	105	47	25.5	1.5	0.6	009L8626	009L8656 009L8366
	28 mm	28.00													009L8633	009L8663

- The thread of access port: 7/16–20UNF
- The thread of schrader valve: 5 V1 DIN7756/DIN7757

Coolselector®2 features unbiased calculations for the selection of refrigeration and air conditioning components based on the user's requirements or based on standard operating conditions. **Click here to try it.**