



The Right Valve Solution



BV703-Series Pneumatic Ball Valve

**Engineered Product
Reference Guide**

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BV703-Series Pneumatic Ball Valve

This pneumatic 2-piece threaded ball valve is assembled with a quarter-turn pneumatic actuator and stainless steel 2-piece female threaded ball valve. The valve body is silica sol investment cast stainless steel, adopting split two-piece structure and locked by threaded connection.



Two seat material options for different temperature & media:

- **PTFE seat:** -20°C ~ +150°C, for clean water, hot water, oil products, weak acid & alkali, solvent and other low/medium-temperature non-abrasive clean fluids.
- **PPL (Polyphenylene filled PTFE) seat:** -18°C ~ +250°C, for saturated steam, thermal oil, high-temperature oil and high-temperature corrosive clean fluids.

It is driven by compressed air. On-off control is standard; modulating control with 4~20mA signal is available with **optional positioner**.

Commonly deployed for automatic cut-off, switching and remote flow control in food & beverage, pharmaceutical, fine chemical, petroleum, water treatment, power, textile and environmental protection industries. It fits process piping, utility lines, heating & heat transfer circuits, CIP cleaning loops and general automated fluid systems.

Sizes

- | | | |
|------------------|--------------------|--------------------|
| • DN15 1/2" inch | • DN32 1-1/4" inch | • DN65 2-1/2" inch |
| • DN20 3/4" inch | • DN40 1-1/2" inch | • DN80 3" inch |
| • DN25 1" inch | • DN50 2" inch | • DN100 4" inch |

Features

- **Optional accessories:** Limit switch, air filter regulator, handwheel actuator, solenoid valve, valve positioner.
- **Actuator body:** Extruded aluminum alloy construction with surface hardening treatment, neat appearance, convenient for installation and transportation.
- **Piston design:** Precision die-cast aluminum piston ensures accurate double-piston symmetry; matched with high-quality O-rings and guide sleeves, it achieves high torque-to-air pressure ratio, and double guide rail design guarantees constant output torque.
- **Service life:** Piston guide belt adopts large-contact-area, self-lubricating reinforced material for low friction, to ensure stable long-cycle operation.
- **Flow performance:** Low flow resistance (equivalent to same-length straight pipe); PTFE / PPL elastic soft seal ensures tight shutoff, easy operation, fast on-off, suitable for remote control.
- **Safety design:** Built-in anti-static device between body and stem; stem anti-blowout explosion-proof design, suitable for harsh working conditions, with reliable quality and neat appearance.
- **Maintenance:** Simple structure, movable seal rings for easy disassembly and replacement; in full open/closed position, ball and seat sealing surfaces are isolated from medium, avoiding sealing face erosion.

Specification

Model	BV703-Series	
Valve body material	CF8	
Actuator material	Aluminum alloy	
Valve ball material	SS304	
Seal material	PTFE	PPL
Connection type	Female BSPT (Rc)	
Nominal pressure	PN16 (16 bar)	
Operating pressure range	-0.9 ~ 16 bar	
Vacuum rating	Suitable for rough vacuum down to -0.9 bar (g)	
Applicable media	Water, gas, oil and other fluids	
Operation fluid viscosity	Below 50 cSt	
Operating temperature	PTFE : -20 ~ 150 °C	
	PPL : -18 ~ 250 °C	
Ambient Temperature	-20 ~ 70 °C	
Actuation type	Pneumatic	
Actuator protection	IP65	
Control type	Double acting (DA)	
	Single acting (SR), air to open (ATO)	
	Single acting (SR), air to close (ATC)	
Air supply pressure for control	3 ~ 8 bar	
NAMUR solenoid valve interface (VDI/VDE 3845)	2 × G1/4"	
Pneumatic options & accessories	Single Solenoid Valve: Power on to open/close, power off reset (air supply required)	
	Double Solenoid Valve: Dual coil, latching, hold position on power loss (air supply required)	
	Limit Switch Box: Remote valve position feedback	
	Air Filter: Air purification & pressure stabilization	
	Electro-Pneumatic Positioner: 4 ~ 20 mA / 0 ~ 5 V / 0 ~ 10 V modulating control	
	Pneumatic Positioner: 0.2 ~ 1.0 bar pneumatic modulating control	
	Manual Override: Emergency manual operation	
Country of origin	China	
HS Code	8481804090	

Flow Coefficient (Kv / Cv)

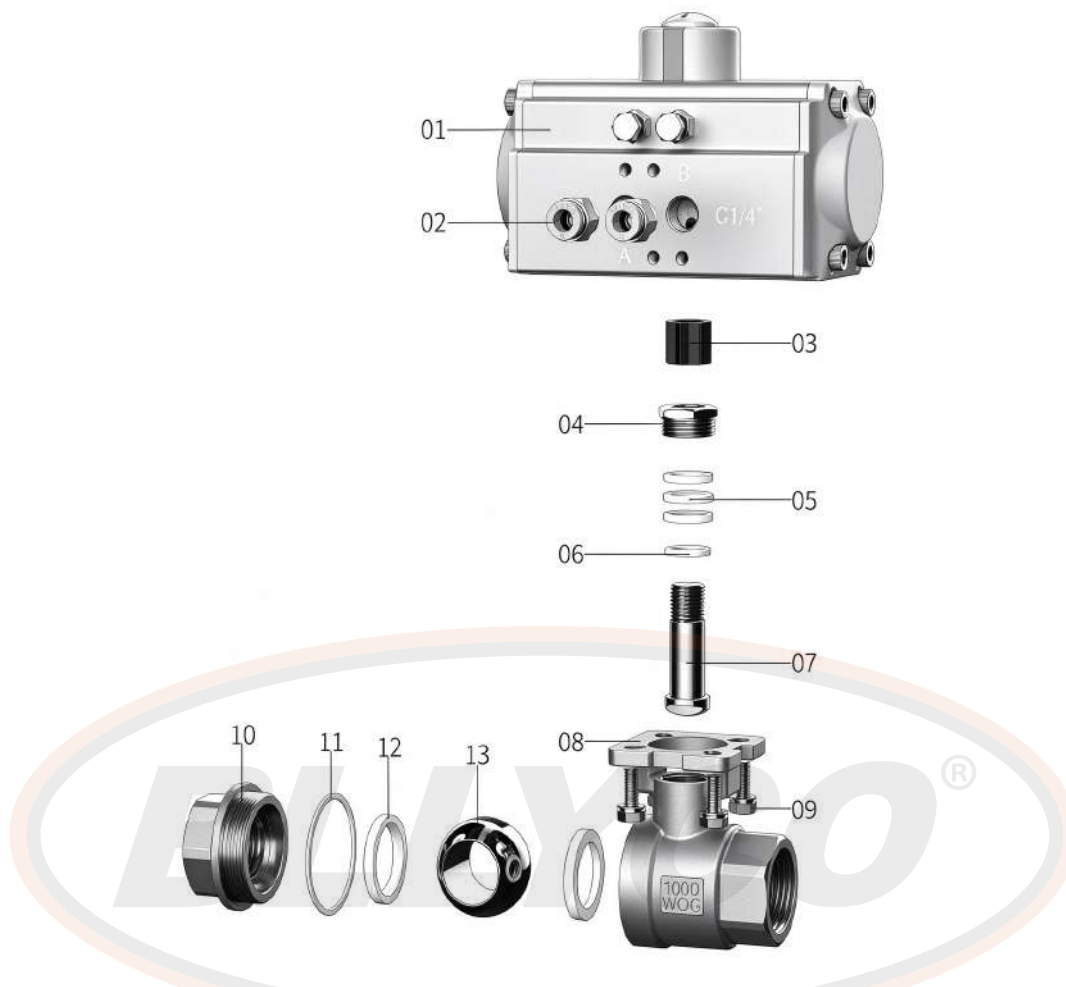
Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Kv (m³/h)	16	31	41	80	142	178	388	672	1172
Cv (US gpm)	18	36	48	93	165	207	450	780	1360

- Kv: Metric flow coefficient (m³/h, $\Delta P = 1$ bar)
- Cv: US flow coefficient (US gpm, $\Delta P = 1$ psi)
- $Cv \approx Kv \times 1.156$, values rounded for reference only.

Part Number Key

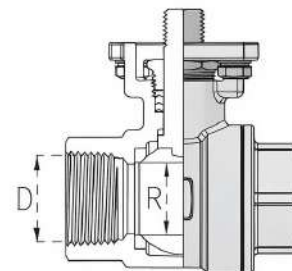
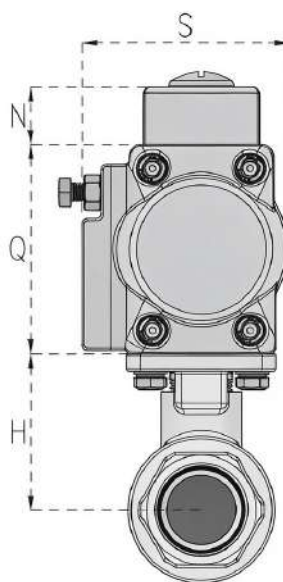
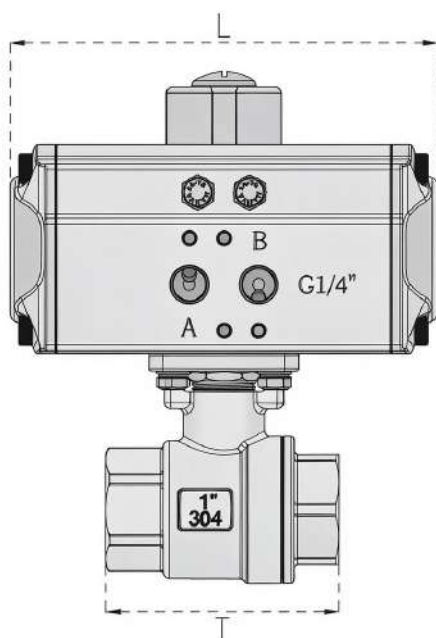
BV703-Series Pneumatic Ball Valve Part Number Key Example: BV703-15-16SP-DA-SLA220		Series	Size	PN	Body Material	Seal Material	Control Type	Pneumatic Options	Voltage
		BV703	- 15	- 16	S	P	- DA	- SLA	220
Series	Code								
BV703	BV703								
Size	Code								
1/2" inch	15								
3/4" inch	20								
1" inch	25								
1-1/4" inch	32								
1-1/2" inch	40								
2" inch	50								
2-1/2" inch	65								
3" inch	80								
4" inch	100								
PN	Code								
PN16	16								
Body Material	Code								
CF8	S								
CF8M	C								
Seal Material	Code								
PTFE	P								
PPL	F								
Control Type	Code								
Double Acting	DA								
Air to Open	AO								
Air to Close	AC								
Pneumatic Options	Code								
Single Solenoid Valve	S								
Double Solenoid Valve	D								
Limit Switch Box	L								
Air Filter	A								
Electro-Pneumatic Positioner	E								
Pneumatic Positioner	P								
Manual Override	M								
Supply Voltage	Code								
24V DC	24								
220V AC	220								

Bill of Materials



Item	Qty	Part	Main Material
01	1	Pneumatic actuator	Die-cast aluminum alloy
02	2	Air connection	Copper plating
03	0/1	Octagonal bushing	Powder metallurgy
04	1	Pressing cap	SS304 / SS316
05	3	Packing	PTFE / PPL
06	1	Thrust washer	PTFE
07	1	Valve shaft	SS304 / SS316
08	1	Valve body	CF8 / CF8M
09	4	Screw set	SS304
10	1	Side cover	CF8 / CF8M
11	1	Side cover gasket	PTFE / PPL
12	2	Seat insert	PTFE / PPL
13	1	Ball	SS304 / SS316

Dimensions



Model	Matching Actuator	Dimensioning code			Pressure : 16 bar			Unit : mm	
		L	T	S	N	Q	H [®]	D	R
Double acting (DA)									
BV703-15	RT020-DA	147	62	71.5	20	72	38	Rc 1/2"	15
BV703-20	RT020-DA	147	71	71.5	20	72	44	Rc 3/4"	20
BV703-25	RT020-DA	147	85	71.5	20	72	55	Rc 1"	25
BV703-32	RT035-DA	168	95	83	20	88	61	Rc 1-1/4"	32
BV703-40	RT050-DA	186	106	95	20	99.5	71	Rc 1-1/2"	40
BV703-50	RT075-DA	212	120	103	20	108.7	85	Rc 2"	50
BV703-65	RT110-DA	262	144	108.5	20	116.5	107	Rc 2-1/2"	65
BV703-80	RT160-DA	268	168	121.5	20	133	113	Rc 3"	80
BV703-100	RT255-DA	301	203	142	30	155	135	Rc 4"	100
Single acting (SR)									
BV703-15	RT035-SR	168	62	83	20	88	38	Rc 1/2"	15
BV703-20	RT035-SR	168	71	83	20	88	44	Rc 3/4"	20
BV703-25	RT035-SR	168	85	83	20	88	55	Rc 1"	25
BV703-32	RT050-SR	186	95	95	20	99.5	61	Rc 1-1/4"	32
BV703-40	RT075-SR	212	106	103	20	108.7	71	Rc 1-1/2"	40
BV703-50	RT110-SR	262	120	108.5	20	116.5	85	Rc 2"	50
BV703-65	RT160-SR	268	144	121.5	20	133	107	Rc 2-1/2"	65
BV703-80	RT255-SR	301	168	142	30	155	113	Rc 3"	80
BV703-100	RT435-SR	390	203	152	30	172	135	Rc 4"	100

Limited Warranty

BLLYCO (Bolaikong Technology (Wuxi) Co., Ltd.) warrants the products described herein to be free from defects in material and workmanship under normal use and service conditions for a period of one (1) year from the date of shipment.

BLLYCO's sole obligation under this warranty is limited to repairing or replacing the defective product, at BLLYCO's discretion, after inspection confirms the defect. A prerequisite for this warranty obligation is that the defective product must be returned to BLLYCO for inspection within three (3) months after the defect is discovered. Parts and labor for such repair or replacement of confirmed defective products shall be provided free of charge.

This warranty does NOT apply to any of the following cases:

- (a) Components or products not manufactured by BLLYCO;
- (b) Products damaged due to abuse, negligence, accident, or misapplication;
- (c) Products modified, disassembled or repaired by parties other than BLLYCO or its authorized service providers;
- (d) Routine maintenance work and replacement of consumable / wearing parts.

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NOTE: Product selection and installation shall be performed by qualified personnel. The user is responsible for verifying product suitability for process medium, pressure, temperature and service conditions. Improper selection, installation or operation may cause equipment damage or personal injury.

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