



The Right Valve Solution



BV704-Series Pneumatic Ball Valve

**Engineered Product
Reference Guide**

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BV704-Series Pneumatic Ball Valve

This pneumatic 3-piece threaded ball valve integrates a quarter-turn pneumatic rotary actuator with a 3-piece full-bore stainless steel ball valve with female threaded ends. The valve body is fabricated from silica sol investment cast stainless steel, adopting a split three-piece bolted construction that allows inline disassembly and maintenance without removing the valve from the pipeline.

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**.

Widely deployed for automatic shut-off, flow switching and remote flow control in food & beverage, pharmaceutical, fine chemical, petroleum, water treatment, power generation, textile and environmental protection industries. Suitable for 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 override, solenoid valve, electro-pneumatic positioner.
- **Actuator body:** Extruded aluminum alloy construction with surface hardening treatment, neat appearance, convenient for installation and transportation.
- **Piston design:** Precision die-cast aluminum pistons ensure precise double-piston symmetry; matched with high-grade O-rings and guide sleeves, they achieve a high torque-to-air pressure ratio, and the dual guide rail design guarantees consistent output torque.
- **Service life:** The piston guide belt adopts large-contact-area self-lubricating reinforced material for low friction, ensuring stable long-cycle operation.
- **Flow performance:** 3-piece full-bore structure delivers low flow resistance (equivalent to a same-length straight pipe); PTFE / PPL elastic soft seats ensure bubble-tight shutoff, smooth operation, fast actuation, suitable for remote control.
- **Safety design:** Built-in anti-static device between valve body and stem; blowout-proof stem with explosion-proof design, suitable for harsh working conditions, with reliable performance and neat appearance.
- **Maintenance:** 3-piece bolted body design with replaceable seal rings, enabling easy in-line disassembly and replacement without removing the valve from the pipeline; in full open/closed position, ball and seat sealing surfaces are isolated from the process medium, avoiding sealing face erosion.

Specification

Model	BV704-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)

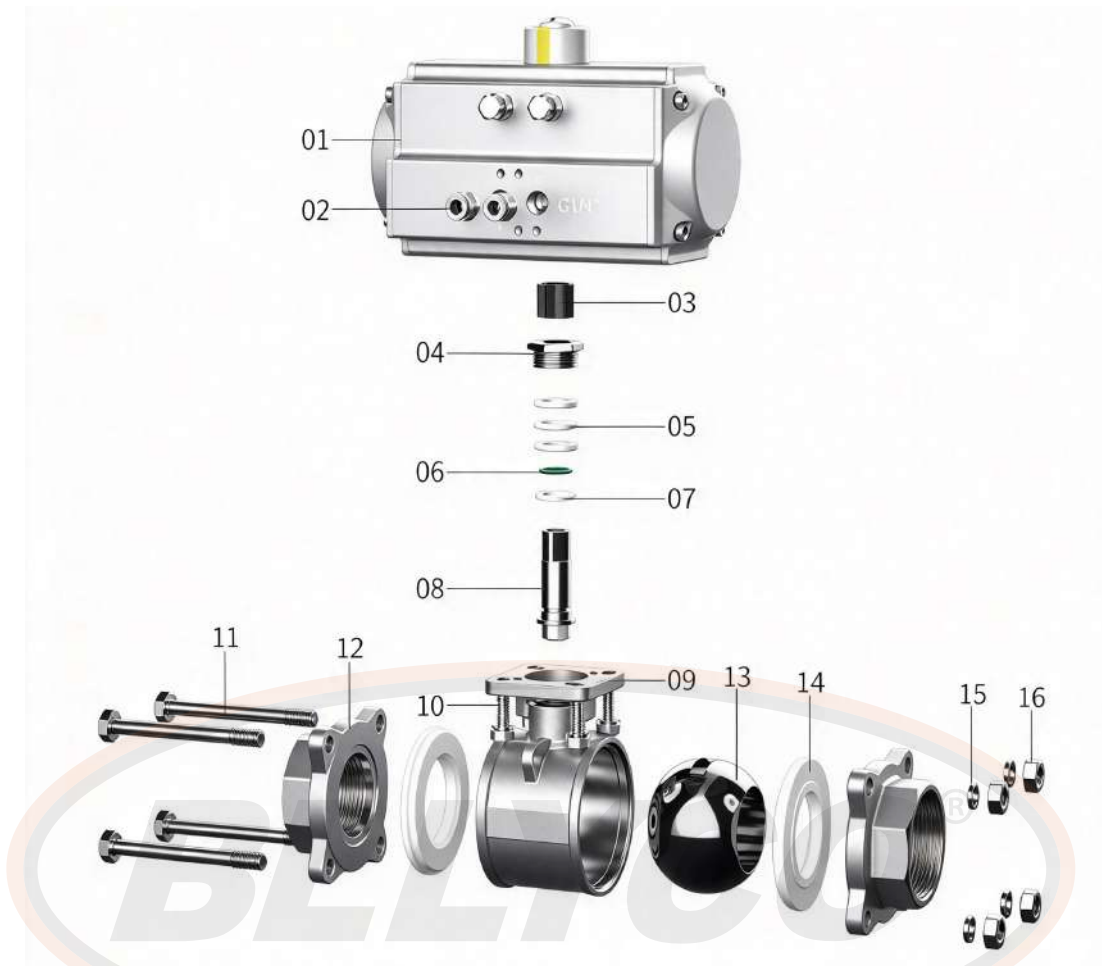
Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Kv (m³/h)	16	31	41	80	142	178	388	672	1172
Cv (US gpm)	18	36	48	93	165	207	450	780	1360

- 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

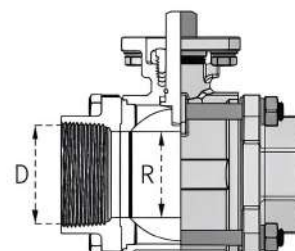
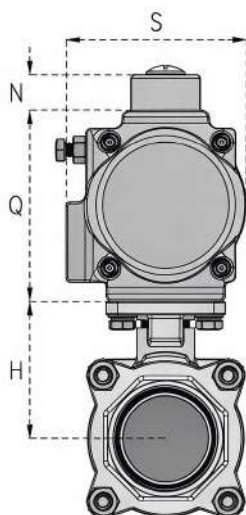
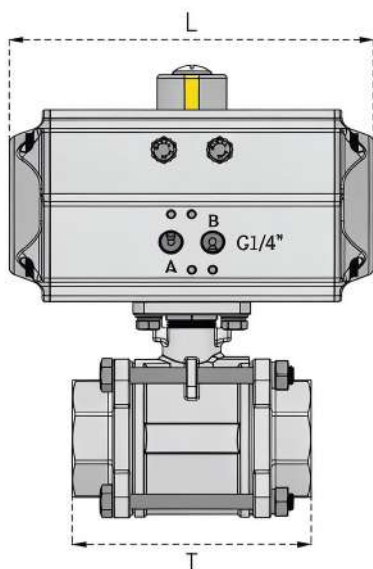
BV704-Series Pneumatic Ball Valve Part Number Key Example: BV704-15-16SP-DA-SLA220		Series	Size	PN	Body Material	Seal Material	Control Type	Pneumatic Options	Voltage
		BV704	- 15	- 16	S	P	- DA	- SLA	220
Series	Code								
BV704	BV704								
Size	Code								
1/2" inch	15								
3/4" inch	20								
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 rotary actuator	Die-cast aluminum alloy
02	2	Air supply fitting	Brass, nickel plated
03	0/1	Octagonal drive bushing	Sintered powder metal
04	1	Gland compression cap	SS304 / SS316
05	3	Stem packing	PTFE / PPL
06	1	O-ring seal	FKM / EPDM
07	1	Stem thrust washer	PTFE
08	1	Valve stem	SS304 / SS316
09	1	Valve body	CF8 / CF8M
10	4	Assembly screw set	SS304
11	4	End cover bolt	SS304
12	2	Body end cover	CF8 / CF8M
13	1	Ball	SS304 / SS316
14	2	Seat ring	PTFE / PPL
15	4	Spring lock washer	SS304
16	4	Hex nut	SS304

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	69	71.5	20	72	44	Rc 1/2"	15
BV703-20	RT020-DA	147	80	71.5	20	72	49	Rc 3/4"	20
BV703-25	RT035-DA	168	88	83	20	88	56	Rc 1"	25
BV703-32	RT035-DA	168	100	83	20	88	61	Rc 1-1/4"	32
BV703-40	RT050-DA	186	110.5	95	20	99.5	73	Rc 1-1/2"	40
BV703-50	RT075-DA	212	136	103	20	108.7	80	Rc 2"	50
BV703-65	RT110-DA	262	168	108.5	20	116.5	98	Rc 2-1/2"	65
BV703-80	RT160-DA	268	194	121.5	20	133	109	Rc 3"	80
BV703-100	RT255-DA	301	240	142	30	155	127	Rc 4"	100
Single acting (SR)									
BV703-15	RT035-SR	168	69	83	20	88	44	Rc 1/2"	15
BV703-20	RT035-SR	168	80	83	20	88	49	Rc 3/4"	20
BV703-25	RT050-SR	186	88	95	20	99.5	56	Rc 1"	25
BV703-32	RT050-SR	186	100	95	20	99.5	61	Rc 1-1/4"	32
BV703-40	RT075-SR	212	110.5	103	20	108.7	73	Rc 1-1/2"	40
BV703-50	RT110-SR	262	136	108.5	20	116.5	80	Rc 2"	50
BV703-65	RT160-SR	268	168	121.5	20	133	98	Rc 2-1/2"	65
BV703-80	RT255-SR	301	194	142	30	155	109	Rc 3"	80
BV703-100	RT435-SR	390	240		30	155	127	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.

No legal claim for alleged breach of this warranty may be filed against BLLYCO unless such action is commenced within one (1) year from the date the cause of action arises.

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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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