

Key Operation Ball Valves



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Key Operation Ball Valve (a ball valve that can be opened or closed with Master Key) was first developed by BMT in 2007. Key Operation Ball Valve is secured against undesired manipulation that can lead to massive system failures, leakage of hazardous gases or fluids, ultimately, catastrophic damages and losses.



Features

- The valve can only be operated inserting Master Key into the handle.
- Applicable to various types of valves such as ball, needle, diaphragm, and bellows valves.
- Accidents caused by inadvertent or unauthorized operation can be prevented.
- Ideal to use in areas populated or opened to unauthorized individuals, preventing accidents resulted from undesired manipulation.

Options

- **Standard type:** The locking function works at both open and closed positions as the Master Key is taken out from the handle.
- **Open-Free type:** At fully-opened position, it is impossible to close the valve without the insertion of the key. Suitable for systems where the stop of flow from inadvertent or unauthorized manipulation may lead to catastrophic results.
- **Close-Free Type:** At fully-closed position, it is impossible to open the valve without the insertion of the key. Suitable for systems where the start of fluid flow from inadvertent or unauthorized may lead to catastrophic results.

High Pressure Key Operation Ball Valves

SBVL360 Series

Features

- Locking handle in On and Off positions
- High flow capacity in a compact design
- Low operating torques
- Positive handle stops
- Variety of End connections



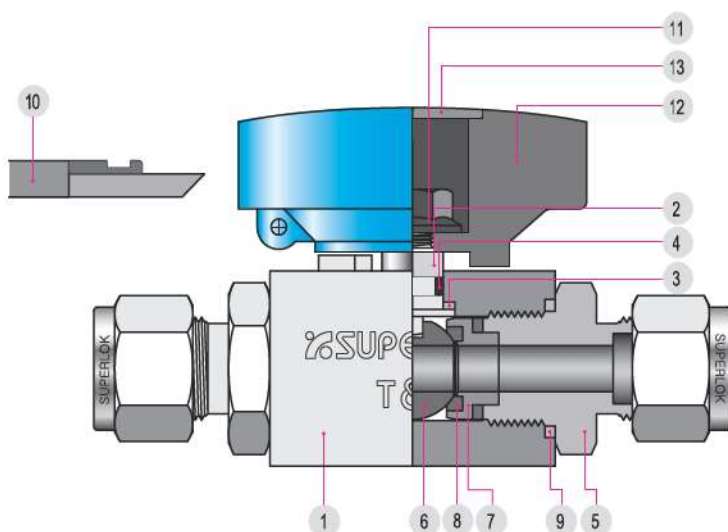
Specifications

- Pressure rating: 6000psig (413bar) @70 °F(21 °C) with standard PCTFE seat
- Temperature rating: -65 to 350 °F (-54 to 177 °C) with standard PCTFE seat
- Body material: 316 stainless steel
- Port connections: 1/4 to 3/4 in. and 6 to 25mm

Testing

- Each and every valve is tested with nitrogen at 1000psig (69bar).
- Valve have max allowable leak rate of 0.1 cm³/min
- Shell testing is performed on demand.

Materials of Construction



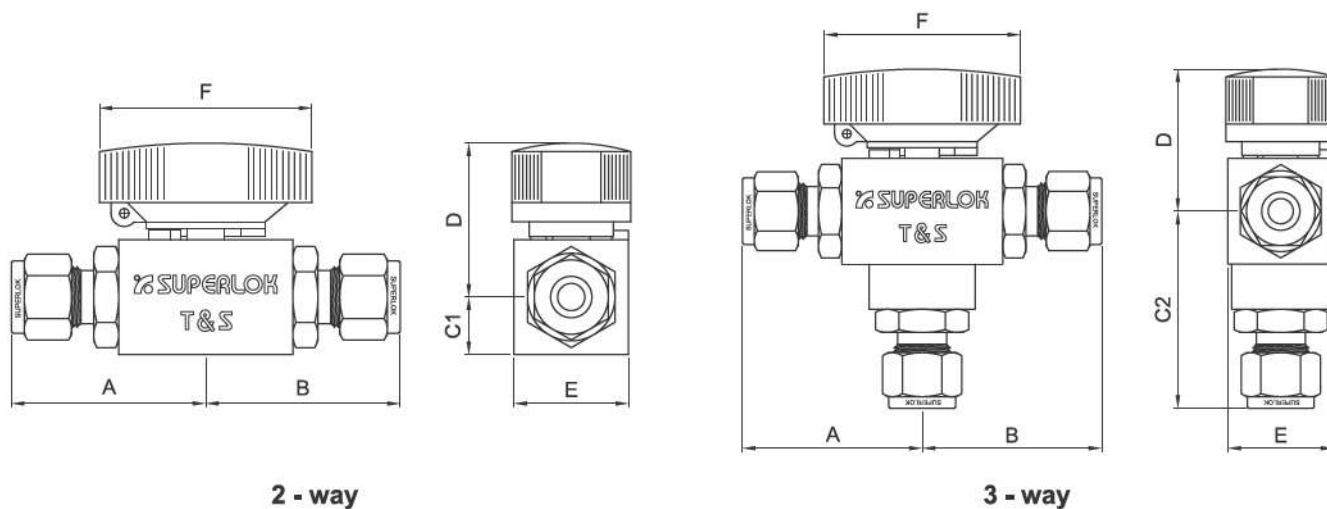
No.	Component	Material Grade ASTM Specification
*1	Body	A276-316 / A351-CF8M
*2	Stem	SS316 / A276
*3	Thrust Washer	PEEK
*4	O-Ring	NBR
*5	End Connector	A276-316
*6	Ball	A276-316
*7	Seal Retainer	A276-316
*8	Ball Seal	PCTFE
*9	Connector Seal	PTFE
10	Master Key	Zinc
11	Nut	Stainless Steel
12	Handle	Aluminum
13	Handle Cap	Aluminum

* Wetted components

- Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

Table of Dimensions

SBVL360



2 - way

3 - way

Part No.		Orifice	Cv	End Connection	Dimensions						
					A	B	C1	C2	D	E	F
SBVL3601 or SBVL36013	S6M	4.8	1.04	6mm SUPERLOK	43.8	43.8	12.0	43.8	33.7	24.0	42.0
	S4			1/4" SUPERLOK	43.8	43.8		43.8			
	F2N			1/8" FEMALE NPT	34.0	34.0		34.0			
	M4N			1/4" MALE NPT	40.2	40.2		40.2			
SBVL3602 or SBVL36023	S8M	6.4	2.34	8mm SUPERLOK	45.2	45.2	13.5	53.2	36.2	27.0	50.0
	S10M			10mm SUPERLOK	46.0	46.0		54.0			
	S6			3/8" SUPERLOK	45.7	45.7		53.7			
	F4N			1/4" FEMALE NPT	38.4	38.4		46.4			
	M4N			1/4" MALE NPT	41.1	41.1		49.1			
	M6N			3/8" MALE NPT	41.1	41.1		49.1			
SBVL3603 or SBVL36023	S12M	9.5	5.57	12mm SUPERLOK	59.2	59.2	16.0	69.2	41.5	32.0	60.0
	S16M	10.3	6.42	16mm SUPERLOK	59.2	59.2		69.2			
	S8			1/2" SUPERLOK	59.4	59.4		69.4			
	S12			3/4" SUPERLOK	59.2	59.2		69.2			
	F6N			3/8" FEMALE NPT	49.5	49.5		59.5			
	F8N			1/2" FEMALE NPT	54.6	54.6		64.6			
	M8N			1/2" MALE NPT	56.4	56.4		66.4			

- Dimensions and Drawings are for reference only and are subject to change without prior notice.

- Unless otherwise specified, all dimensions are in millimeters.

- Sizes, pressure classes, and end connections not listed are available upon request.

- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Technical Data

Temperature and Pressure Rating

Seat Material	Temperature Rating	Pressure Rating @ 100°F (38°C)		Pressure Rating @ Max. Temperature	
		Stainless Steel	Brass	Stainless Steel	Brass
PCTFE	-65 to 300°F (-54 to 148°C)	6000psig (413 bar)	3000psig (207 bar)	1000psig@300°F (68.9bar@148°C)	700psig@300°F (48bar@200°C)
PEEK	-65 to 450°F (-54 to 232°C)	6000psig (413 bar)	3000psig (207 bar)	700psig@400°F (48bar@200°C)	
PTFE	-65 to 300°F (-54 to 148°C)	1500psig (103 bar)	1500psig (103 bar)	250psig@300°F (17.2bar@148°C)	

Ordering Information

Example : **SBVL 3602 - S6 - PE - RD - OT**

1
2 3
4
5
6

1. Valve Series

2-Way

- ☐ SBVL3601
- ☐ SBVL3602
- ☐ SBVL3603

3-Way

- ☐ SBVL36013
- ☐ SBVL36023
- ☐ SBVL360233

2. End Connection

- ☐ S = SUPERLOK Tube Fitting
- ☐ F = Female Thread
- ☐ M = Male Thread

3. End Connection Size

Tube O.D Designator

Tube OD (inch)	1/4		3/8		1/2		3/4	
Designator	4		6		8		12	
Tube OD (mm)	6	8	10	12	16	20		
Designator	6M	8M	10M	12M	16M	20M		

Pipe Thread Designator

Size (inch)	1/4	3/8	1/2	3/4
Screw BSPT	4R	6R	8R	12R
Screw NPT	4N	6N	8N	12N

4. Handle Color

- ☐ (Blank) = PCTFE
- ☐ PE = PEEK
- ☐ PT = PTFE

5. Handle Color

- ☐ (Blank) = Blue (Standard)
- ☐ RD = Red
- ☐ BK = Black

6. Valve Type*

- ☐ (Blank) = Standard Type
- ☐ OT = Open Free Type
- ☐ CT = Close Free Type
- ☐ ST = Special Type

* Please refer to page 2 for the valve types.

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.



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COMPONENTS (BMT PATENTED)

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