

Solution Partner of Valve Automation

KB SERIES

Battery Device Operated Valve Actuator



BOV

Battery Device Operated Valve Actuator

The BOV (Battery Device Operated Valve Actuator) is a semi-automatic valve operator that combines the power of a battery tool with a gear reducer, enabling easy and convenient operation (opening and closing) of manually operated valves, dampers, and other field-installed equipment.



* Patent Registration	: 10-2725141
* Utility Model Registration	: 20-0498386
* Design Registration	: 30-1326066 30-1326067 30-1326072
* Trademark Application	40-2024-0121137

Advantages

The BOV consists of a Battery Device (power source), a Bracket and Arm that connect to the valve, and a Drive Reducer with Handwheel Bracket that transmits power to the valve handwheel. It provides the following advantages.

- Operates independently without external power sources such as air or electricity.
- Installs directly onto existing valves without modification (uses the existing handwheel).
- Provides a cost-efficient alternative to pneumatic or electric actuators.
- Enables semi-automation of both new and in-service manual valves.
- Compatible with both multi-turn and quarter-turn valve types.
- Maintains reliable operation even under high-temperature or high-pressure conditions.

Model Line Up

» Drive Reducer Type



[SB]



[MB / LB]



[MH / LH]

» Battery Device Type



[Standard Type]



[Two-Stage Gear Type]

Applicable Valve



[Gate Valve]



[Globe Valve]



[Butterfly Valve / Damper]



[Ball Valve / Plug Valve]

[Direct Mounting]

[Gear Box Mounting]

Specifications

» Speed-Torque and Operating Time Table

Model	Rating			Maximum		
	Torque [Nm]	Speed [RPM]	Time [Sec]	Torque [Nm]	Speed [RPM]	Time [Sec]
SBN	40	65	500	70	60	240
MHT / MBT	160	20	400	240	18	240
LHN / LBN	100	40	350	140	35	180
LHT / LBT	180	18	300	260	16	150

- ※ All data are based on fully charged battery conditions and may vary with ambient temperature and site conditions.
- ※ Maximum allowable stem diameter for through-stem valves: 34 mm (MH Type) / 42 mm (LH Type).
- ※ Maximum applicable handwheel diameter: 1000 mm.

» SPECIFICATION

Operating Temperature Range	The operating ambient temperature range of the actuator is -20 °C to +70 °C (-4 °F to +158 °F).
Noise Level	Below 80 dB at a distance of 1 meter
Lubrication	Grease Moly(EP2 type)
Materials	Aluminium Alloy
Surface Treatment	Anodizing : 10 micron min

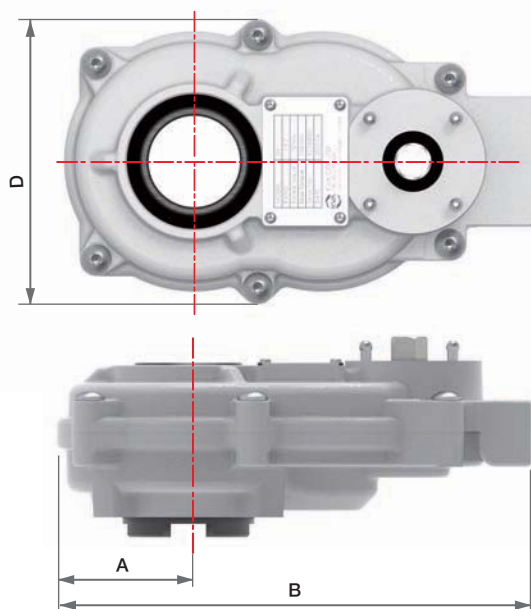
» Applicable Models by Valve Size (Based on Gate Valve ANSI Class 150)

Description SIZE(inch)	Bare Stem Torque [Nm]	Gear box Ratio	Number of Turns [rev]	Operating Torque [Nm]	Applicable Model	Operating Time [sec]	Operating Cycles
3	18		18	18	SBN	15	50
4	26		22	26	SBN	20	40
5	32		28	32	MHN	35	25
6	42		27	42	MHN	35	20
8	60		35	60	MHN	45	15
10	100		43	100	LHN	60	9
12	140		45	140	LHN	65	6
14	165	1 : 3.25	162	50	MBN	205	4
16	225	1 : 3.5	168	65	MBN	215	3
18	280	1 : 3.5	195	80	MBN	250	3
20	355	1 : 4	245	90	MBN	325	2
24	535	1 : 4	292	135	LBN	425	1
26	695	1 : 5	392	140	LBN	570	0.7
28	800	1 : 5	420	160	LBT	680	0.6
30	925	1 : 6	550	185	LBT	850	0.5
32	1020	1 : 6	580	170	LBT	950	0.4

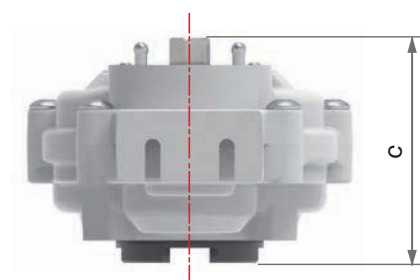
- ※ Bare Stem Torque values are based on $\Delta P = 10 \text{ kgf/cm}^2$.
- ※ Operating time and cycle counts are measured under fully charged battery conditions and may vary with ambient temperature and site conditions.
- ※ One operating cycle is defined as a full close-to-open operation.

Size

» MH, LH

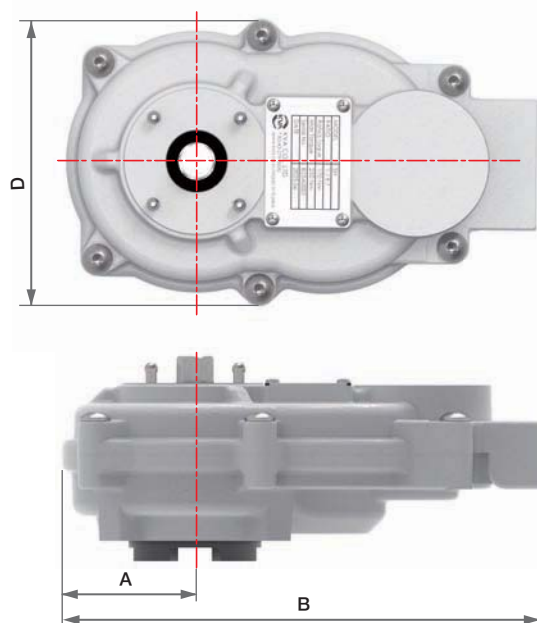


Model \ Dimensions	A	B	C	D
MH	156	216	93	132
LH	181	253	103	152

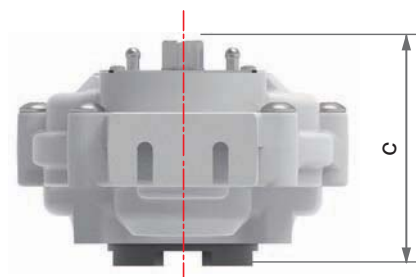


※ The above dimensions may vary depending on specifications and options.
For detailed dimensional data, please refer to the approval drawings.

» SB, MB, LB



Model \ Dimensions	A	B	C	D
SB	105	147	95	97
MB	156	216	93	132
LB	181	253	103	152



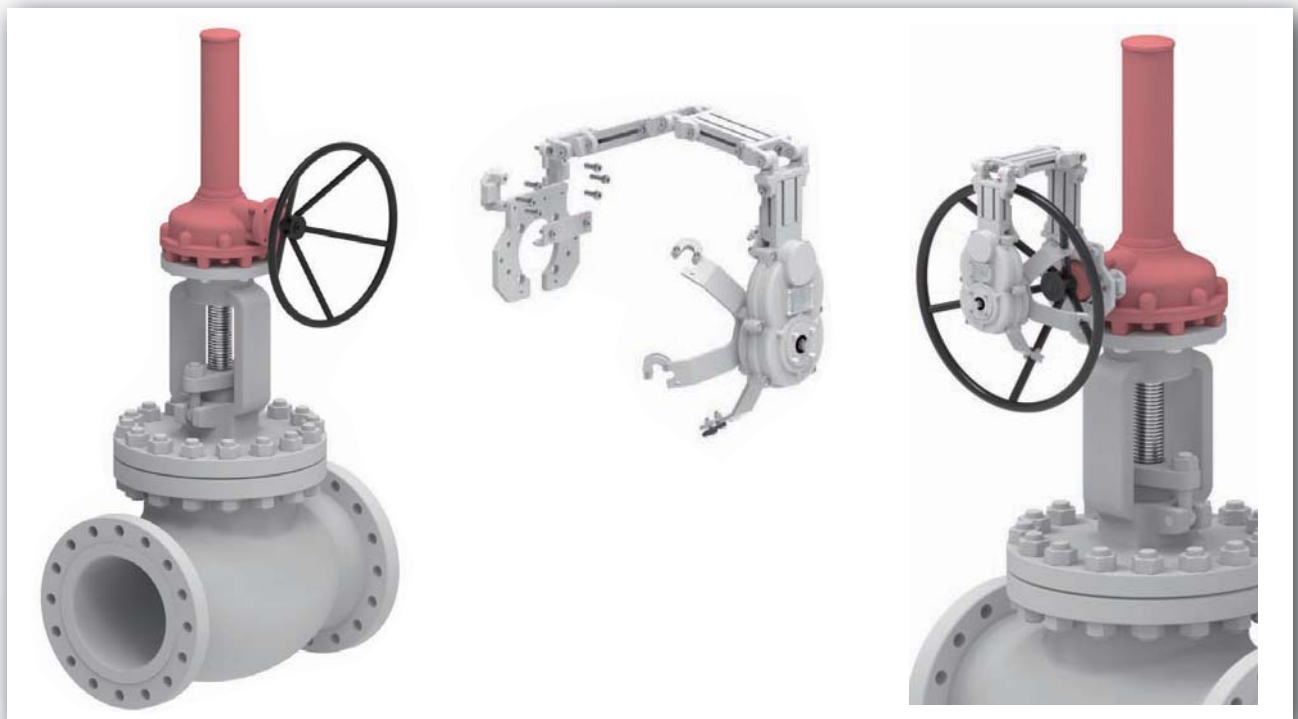
※ The above dimensions may vary depending on specifications and options.
For detailed dimensional data, please refer to the approval drawings.

Installation

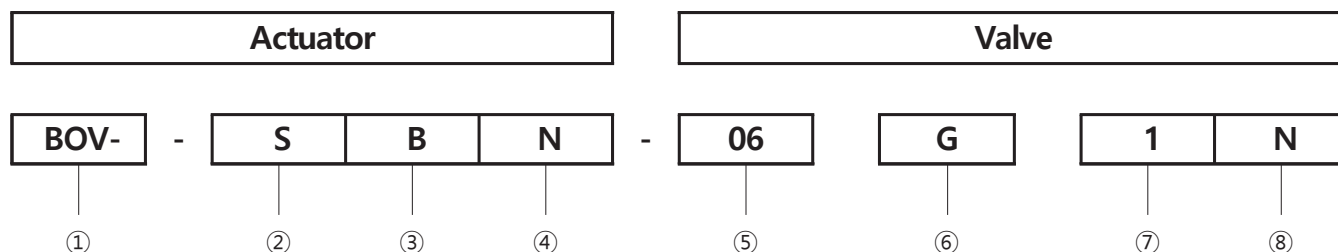
» Direct Mounting(Hole Type)



» Gear Box Mounting(Blank Type)



MODEL SELECTION GUIDE



① Series

BOV : Battery Device Operated Valve Actuator

② Model

S : 0~70Nm

M : 0~240Nm

L : 0~280Nm

③ Drive Reducer Type

H : Hole Type

B : Blank Type

④ Battery Device Type

N : Standard Type

T : Two-Stage Gear Type

⑤ Valve Size

01 : 1"(25A)

02 : 2"(50A)

...

40 : 40"(1000A)

...

⑥ Valve Type

G : GATE

L : GLOBE

B : BALL

U : BUTTERFLY

P : PLUG

E : Others

⑦ Valve Rating

1 : ANSI 150 (JIS 10K)

2 : ANSI 300 (JIS 20K)

3 : ANSI 600 (JIS 30K)

4 : ANSI 900

5 : ANSI 1500

6 : ANSI 2500

7 : 기타

⑧ Gear Box Type

N : Not Applicable

V : BEVEL

W : WORM

S : SPUR



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KE-SERIES(MOV)



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