

BIOBATCH Valves

Model VSB

OVERVIEW

BIOBATCH Valves (Model VSB) have been designed specifically for bio-batch processes, which require highly reliable control valves. The valves offer a “State of the art” high seal feature, which completely prevents the ingress of germs. To prevent the mother liquid being entrapped, settled, and carbonized by the heat of sterilizing steam, the valve body is designed so that it causes no entrapping of liquid and the bellows are designed in sommath wave configuration. The valves are also highly washable. Employing reinforced PTFE seat for the valve plug, the VSB valves are resistant to heat cycles caused by charging of materials, hot water washing, and steam sterilization. The VSB valves compare very favorably over regular Saunders valves. The overall dimensions and weights of the VSB valves are approximately one-half of the regular Saunders valves, substantially economizing the installation spaces and facilitating installation and maintenance work.

SPECIFICATIONS

Body

Type

Globe valve, straight-through bottom-flat type

Nominal size

20, 25, 40, 50, 80, 100 mm

Pressure rating

Maximum working pressure: 490 kPa {5 kgf/cm²}

Operating temperature

0 to 200°C

End connection

Flanged end, RF (JIS B2210-1984)

Material

SCS13A

Bonnet

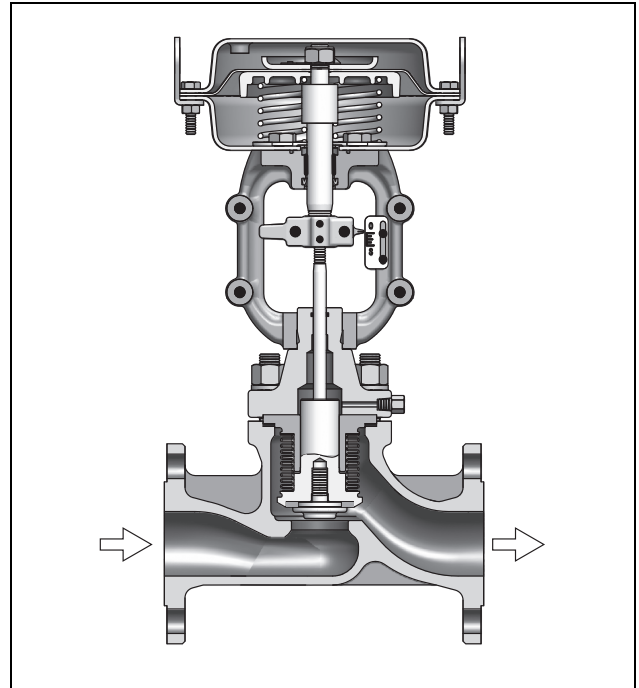
Plain bonnet, glandless type (0 to 200°C)

Gasket

Flat gasket SUS316

Reinforced PTFE (V7020)

Note) PTFE: Polytetrafluoroethylene



Trim

Type

Single seated, quick-opening

Seat : Integrated to valve body

Bellows : Plug bellows type

Externally pressurised, formed, double bellows

Material

SUS316 (Bellows : SUS316L, Plug seat : Reinforced PTFE)

Actuator

Type

Single acting diaphragm actuator

Action

Direct or reverse action

Diaphragm

Cloth embedded chloroprene rubber

Supply pressure

340 kPa {3.5 kgf/cm²}

Air connection

Rc1/4 internal thread

Ambient temperature

-30 to 70°C

Valve action

Air-to-close (Direct action actuator is combined.)
 Air-to-open (Reverse action actuator is combined.)

Optional accessories

Solenoid valve

Water-proof or TIIS explosion-proof (d2G4)

Pressure regulator with filter

Model KZ03 (with 40 mm dia. pressure gauge)

Note) For the optional items, refer to the specification sheets and installation drawing of respective accessories.

Performance

Allowable differential pressure

490 kPa {5.0 kgf/cm²}

Leakage specification

Liquid : Zero
 Air : Leakage less than

$$0.5 \text{ cc} \times \left(\frac{\text{Nominal size (mm)}}{25\text{mm}} \right) / \text{min}$$

at the test condition of 490 kPa {5.0 kgf/cm²} differential pressure.

Finish

Blue (Munsell 10B5/10) or silver, or other specified colors.

Table 1 Cv value and travel

Nominal size (mm)	20	25	40	50	80	100
Rated Cv value	9	10	30	38	88	148
Actuator Model No.	PSK1D, R	PSK1D, R	PSK1D, R	PSK1D, R	HA3D, R	HA3D, R
Rated travel (mm)	6		10		15	19

Table 2 External dimensions and weights

Nominal size (mm)	A (mm)	E (mm)	H (mm)	B (mm)	φB (mm)	Weight (kg)
20	184	80	373	230	218	13
25	184	80	377	230	218	14
40	222	106	389	230	218	21
50	254	120	389	230	218	22
80	298	138	613	363	350	56
100	352	161	631	363	350	74

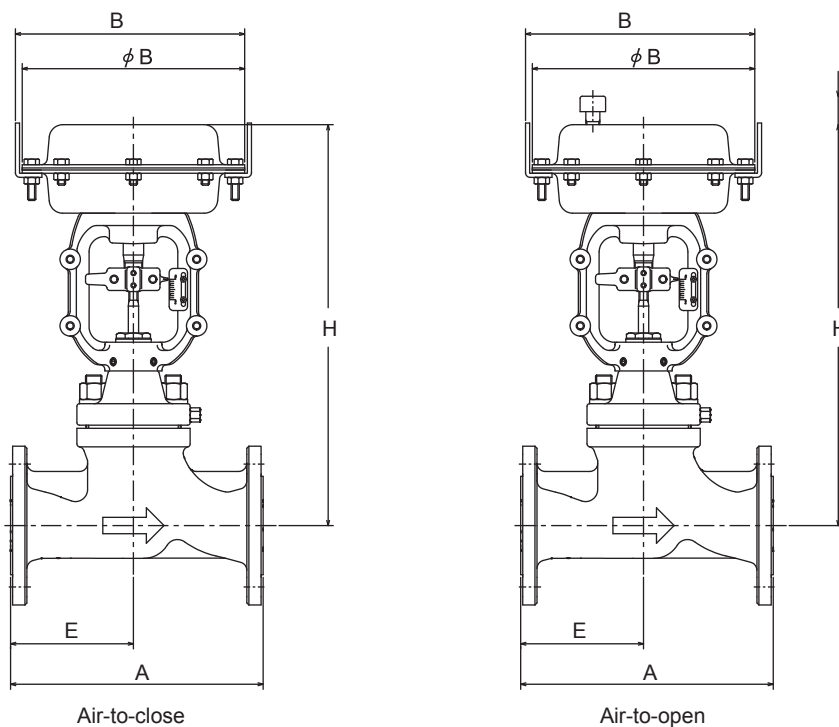


Figure 1 External dimensions

Ordering information

When ordering, please specify:

- 1) Model number: VSB
- 2) Connections size
- 3) Type of action (direct or reverse)
- 4) Options (Solenoid valve, etc.)
- 5) Whether cleaning treatment is required or not.
- 6) Type of fluid
- 7) Normal flow and maximum required flow
- 8) Pressure of fluid, and differential pressure between upstream and downstream sides of valve (When valve is full open and fully closed).
- 9) Temperature and specific gravity of fluid
- 10) Whether slurry is involved or not.

Please, read 'Terms and Conditions' from following URL before the order and use.

<http://www.azbil.com/products/bi/order.html>

Specifications are subject to change without notice.

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6th edition: Aug. 2015

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