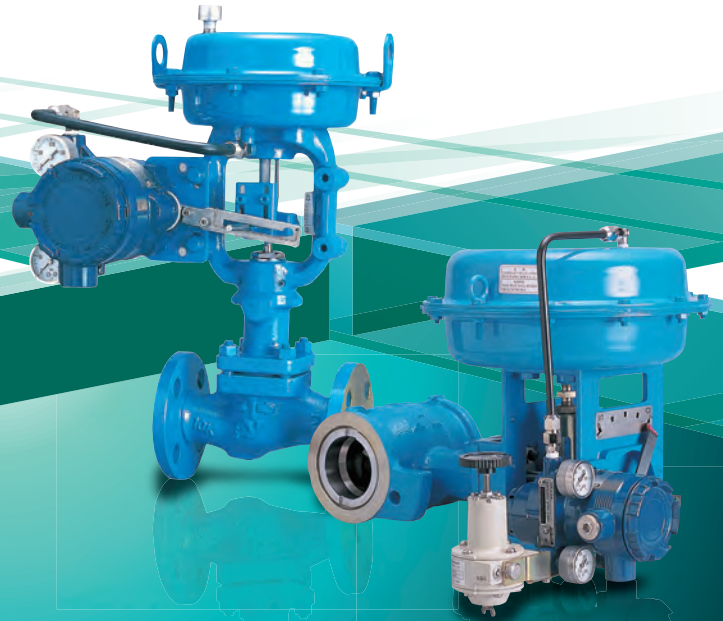




Industrial Control Valves

Selection Guide



For control valves, count on azbil.

We have extensive experience in process automation at home and abroad.

In 1936 we made the first domestically manufactured control valve, and for over 80 years since we have been supplying a variety of products for process automation workplaces in Japan and around the world.

The technological know-how we accumulated through abundant experience at customers' work sites informed the development of the 1000 series, V series, CV3000 series, and the CV3000 Alphaplus™ series, and has been used to bring about improved performance and reliability in our general-purpose control valves.

In addition to products for general-purpose use, we have developed products designed for specific applications, such as high or low temperatures, very high pressures, corrosion resistance, and abrasion resistance.

To add value to customers' operations by increasing maintenance efficiency, reducing plant running costs, etc., we acted promptly to make our valve positioners "smart." Planning efficient valve maintenance is easy if the SVP3000 Alphaplus Series Smart Valve Positioner is connected to the Valstaff™ control valve maintenance support system. We now offer this new method for increasing the operating life of control valves.

As a comprehensive supplier of control valves, the azbil Group continuously strives to add value to customers' operations in various ways.



Chemical plants



Petrochemical plants



Thermal power stations



Oil refineries

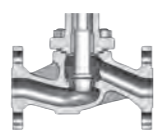

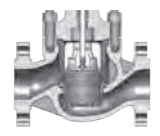
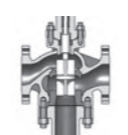







Steel mills



Selection of Control Valve

Select the **appropriate valve**.

General-purpose valves	Single seated valves Basic and most versatile type of control valve  Model No. AGVB, AGVM (Alphaplus series), ACT (NEW-10 III), HLS, HTS, HLC, HSC (CV3000 series) P 6	Angle/3-way valves	Angle valves For high differential pressure, slurry, or flashing service  Model No. HAV, HAH, HAF, HAL, VAU P 10
	Cage valves, Double seated valves, and Low-noise valves For heavy-duty, high pressure and high differential pressure service  Model No. ADVB, ADVM (Alphaplus series), AC2, ACP, HCB, HPC, ACN, HCN, VDN P 8		3-way valves Fluid mixing/separating by a single valve  Model No. AMT, HDT P 10
	Rotary valves For processes requiring high capacity and wide control range  Model No. VFR P 10		Corrosion-resistant or abrasion-resistant valves For operations and clean processes requiring corrosion-resistance or abrasion-resistance  Model No. VDD, VNP, HIT, HIC, HMC P 12
Large-port and high-flow valves	Butterfly valves For high flow and low load operations  Model No. VBL, VBM, VBH, VBS Please contact us.	Special purpose valves	Valves for the electric power market For power generation facilities and special applications  Model No. EGVM, EAVM, EGVT, EGWV, EGVD, EAVD Please contact us.
	Motorized valves For fluid control without a compressed air supply  Model No. AGVB, AGVM, HLS, HTS, HCB, ACT, VFR P 12		

Select the **actuator type**.

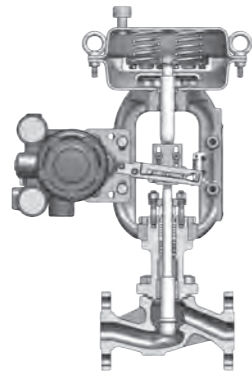
Diaphragm actuators General-purpose, most frequently used type of actuator Model No. HA, HL, PSA1~4, VA P 14	Cylinder actuators For high-pressure, large-port valves Model No. PSA6/7, DAP, GOM P 14
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Select the **accessories**.

Positioners Selected according to the operating conditions, including input signal, actuator, and atmospheres (waterproof, explosion-proof). Model No. AVP (Alphaplus series), HTP, VPE, VPP, VPR P 16	Air lock valve, pilot valve If the air supply malfunctions these devices secure (lock) the valve position and control pneumatic circuit switchover. Model No. IL201, IL211, VF02/03/04 P 18
Regulators with filter Using KZ03 as the basic model number, select low/high pressure type, connection type, etc. Model No. KZ03, AW40 P 17	Solenoid valves If needed, this device controls switchover of the pneumatic circuit (signals or supply pressure) with electric signals (on-off). Model No. J320, 8320 P 18
Volume booster Used to make the pneumatic actuator operate more quickly or to reduce the delay of pneumatic signals. Model No. IL100 P 17	Limit switches Added to the actuator in order to produce electric signals corresponding to the valve position (open/closed). Model No. VCL5000, VCX7000, LX7000 P 18

- Single seated valves
- Cage valves, Double seated valves, Low-noise valves
- Rotary valves
- Angle valves
- 3-way valves
- Corrosion-resistant or abrasion-resistant valves
- Motorized valves
- Actuators
- Accessories
- Special purpose valves

Structural drawing



Top guided single seated control valve

AGVB/AGVM

Size: 1/2" to 4"
 AGVB: ANSI/JPI 150, JIS10K
 AGVM: ANSI/JPI 300, JIS16K to 30K

Flanged: RF, FF

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, 316SS, 316SS with Stellite, 316LSS, 316LSS with Stellite

Temperature range: -196 to 400°C

Leakage performance: Class IV, IV-S1, VI

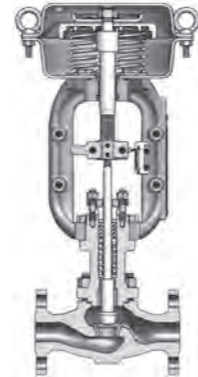
Cv range: 0.1 to 200

Range ability: 20:1 to 50:1 (option 75:1)

Application: General-use process for petrochemical and chemical plant

Option: Low leakage packing system

Specification sheet No.: SS2-AGV200-0001



Small-port single seated control valve

HLS/HLC

Size: 1/2" to 1"
 ANSI/JPI 150 to 600
 JIS10K to 30K

Flanged: RF, FF, RJ

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, 316SS, 316SS with Stellite, 316LSS, 316LSS with Stellite, 329J1SS

Temperature range: -196 to 566°C

Leakage performance: Class IV, IV-S1, V, VI

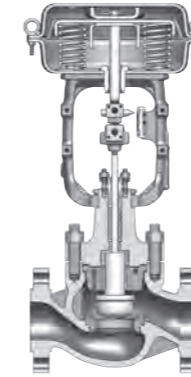
Cv range: 0.01 to 14

Range ability: 20:1 to 50:1 (option 75:1)

Application: General-use process for petrochemical and chemical plant

Option: Bellow seal bonnet, steam jacket

Specification sheet No.: SS2-8113-0200/0210



Top guided single seated control valve

HTS/HSC

Size: 1-1/2" to 8"
 ANSI/JPI 150 to 600
 JIS10K to 30K

Flanged: RF, FF, RJ

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, 316SS, 316SS with Stellite, 316LSS, 316LSS with Stellite, 329J1SS

Temperature range: -196 to 566°C

Leakage performance: Class IV, IV-S1, V, VI

Cv range: 10 to 700

Range ability: 50:1 (option 75:1)

Application: General-use process for petrochemical and chemical plant

Option: Bellow seal bonnet, steam jacket

Specification sheet No.: SS2-8113-0300/0310

Structural drawing



Top guided single seated control valve

VST

Size: 5", 10", 12"
 ANSI/JPI 150 to 600
 JIS10K to 30K

Flanged: RF, FF, RJ

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, 316SS, 316SS with Stellite, 316LSS, 316LSS with Stellite

Temperature range: -101 to 520°C

Leakage performance: Class IV, IV-S1, V, VI

Cv range: 99 to 1440

Range ability: 30:1

Application: General-use process for petrochemical and chemical plant

Option: —

Specification sheet No.: SS2-8110-0300



Top guided high pressure single seated control valve

HPS

Size: 1" to 3"
 ANSI/JPI 900 to 2500
 JIS63K

Flanged: RF, RJ

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, 316SS, 316SS with Stellite

Temperature range: -5 to 566°C

Leakage performance: Class IV

Cv range: class 1500 or less: 0.25 to 110

class 2500: 0.25 to 75

50:1 (option 75:1)

Application: High temperature and high pressure steam of boiler and turbine unit for power plant and private power generation

Option: —

Specification sheet No.: SS2-8113-0400



High-pressure service top guided single seated control valve

VST

Size: 4", 5", 6"
 ANSI/JPI 900 to 2500
 JIS63K

Flanged: RF, RJ

Welded: SW, BW

Carbon steel

Stainless steel

Trim material: 440CSS, SUS304 with Stellite

Temperature range: 0 to 520°C

Leakage performance: Class IV

Cv range: class 1500 or less: 56 to 315

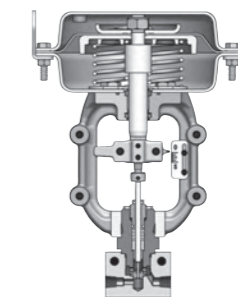
class 2500: 39 to 210

30:1

Application: High temperature and high pressure steam of boiler and turbine unit for power plant and private power generation

Option: —

Specification sheet No.: SS2-8110-0400



Micro-flow control valve

VSM

Threaded: NPT (Rc) 1/4", 1/2" Flanged: 1/2", 3/4", 1"
 ANSI/JPI 150 to 2500
 JIS10K to 63K

Threaded: Rc, NPT

Flanged: RF, RJ

Stainless steel

Solid Stellite

Temperature range: -30 to 400°C

Leakage performance: Class IV

Cv range: 0.001 to 0.63

Range ability: 20:1 to 30:1

Application: Needle type plug

Option: Addition process of chemical and perfume

Specification sheet No.: SS2-8110-0600

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves


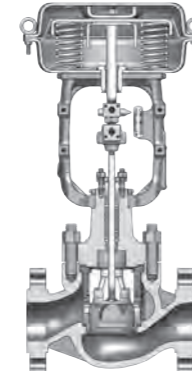
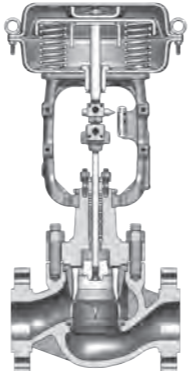
Motorized valves

Actuators


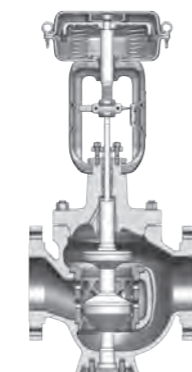
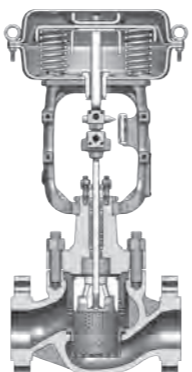
Accessories

Special purpose valves

Structural drawing

		
Low leakage pressure balanced cage type control valves	Pressure-balanced cage type control valve	Pressure-balanced cage type control valve
AC2	ACP	HCB
6" to 24"	1-1/2" to 8"	1-1/2" to 8"
ANSI/JPI 150 to 600 JIS10K to 30K	ANSI/JPI 150 to 600 JIS10K to 40K	ANSI/JPI 150 to 600 JIS10K to 40K
Flanged : RF, RJ Welded : BW	Flanged : RF, FF, RJ Welded : SW, BW	Flanged : RF, FF, RJ Welded : SW, BW
Carbon steel Stainless steel	Carbon steel Stainless steel	Carbon steel Stainless steel
A351CF8M, SCS14A A351CF8M, SCS14A with Stellite SCS24	A351CF8M A351CF8M with Stellite SCS24	SCS24 SCS14A with Stellite or Atomloy treatment SCS16A, SCS16A with Stellite
—	-196 to 400°C	-196 to 566°C
Class V	Class IV	Class II, III, VI
179 to 5920	10 to 795	11 to 850
50:1	50:1 (option 75:1)	50:1 (option 75:1)
• Flexible metal seat structure • high differential pressure process which needed low leakage performance	General-use process for petrochemical and chemical plant	General-use process for petrochemical and chemical plant
—	—	Bellows type bonnet, steam jacket
SS2-AC2001-0100	SS2-ACP100-0100	SS2-8113-1100

Structural drawing

		
Cage type double seated control valve	Top & bottom guided double seat control valve	Low-noise cage type control valve
VDC	ADVB/ADVM	ACN
5", 10", 12"	6" to 12"	1-1/2" to 8"
ANSI/JPI 150 to 600 JIS10K to 40K	ADVB: ANSI/JPI 150, JIS10K ADVM: ANSI/JPI 300, JIS16K to 30K	ANSI/JPI 150 to 600 JIS10K to 40K
Flanged : RF, FF, RJ	Flanged : RF	Flanged : RF, FF, RJ Welded : SW, BW
Carbon steel Stainless steel	Carbon steel Stainless steel	Carbon steel Stainless steel
SCS24 SCS14A with Stellite or Atomloy treatment SCS16A, SCS16A with Stellite	316SS, 316SS with Stellite 630SS	A351CF8M, A351CF8M with Stellite
-195 to 600°C	-45 to 400°C	-196 to 400°C
Class II, VI	Class IV	Class IV
99 to 1440	215 to 1580	11 to 580
30:1 (option 50:1)	50:1	50:1
General-use process for petrochemical and chemical plant	• Top & bottom guided double seat structure • Hydrocarbon process for refinery and petrochemical plant	• Multi-hole type 2-stage cage guided with seal ring • Noise reduction of compressed fluid (ex. steam, air, gases etc.)
Bellows type bonnet, steam jacket	—	—
SS2-8110-1100	SS2-ADV100-0100	SS2-ACN100-0100

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves




Corrosion-resistant or abrasion-resistant valves




Motorized valves

Actuators

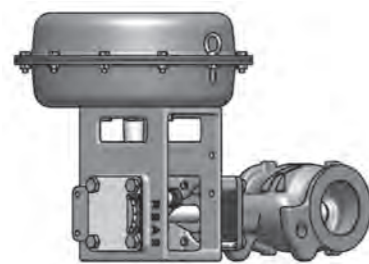
Accessories

Special purpose valves

		
Low-noise cage type control valve	Large sized pressure balanced cage type control valve	Pressure balanced high-pressure cage type control valves
HCN	ALVB/ALVM	HPC
1-1/2" to 8"	14" to 20"	1-1/2" to 8"
ANSI/JPI 150 to 600 JIS10K to 40K	ALVB: ANSI/JPI 150, JIS10K ALVM: ANSI/JPI 300, JIS20K	ANSI/JPI 900 to 2500 JIS63K
Flanged : RF, FF, RJ Welded : SW, BW	Flanged : RF	Flanged : RF, RJ Welded : SW, BW
Carbon steel Stainless steel	Carbon steel Stainless steel	Carbon steel
SCS24 SCS14A, SCS14A with Stellite, SCS14A with Atomloy treatment	SCS24	SCS24 304SS with Atomloy treatment 304SS with Stellite and Atomloy treatment
-196 to 566°C	-5 to 200°C	-5 to 566°C
Class III	Class IV	Class III
11 to 580	1440 to 3970	Class 1500 or less : 12 to 700 Class 2500 : 12 to 520
25:1	50:1	50:1 (option 75:1)
• Multi-hole type 2-stage cage guided • Noise reduction of compressed fluid (ex. steam, air, gases etc.)	• Seal ring structure • General-use process for petrochemical and chemical plant	High temperature and high pressure steam of boiler and turbine unit for power plant and private power generation
—	—	—
SS2-8113-1100	SS2-ALV100-0100	SS2-8113-1200

		
High pressure service cage type double seated control valves	Low-noise cage type double seated control valve	High pressure service low-noise cage type double seated control valve
VDC	VDN	VDN
4", 5", 6"	10", 12"	1-1/2" to 12"
ANSI/JPI 900 to 2500 JIS63K	ANSI/JPI 150 to 600 JIS10K to 40K	ANSI/JPI 900 to 2500 JIS63K
Flanged : RF, RJ Welded : SW, BW	Flanged : RF, FF, RJ	Flanged : RF, FF, RJ Welded : SW, BW
Carbon steel Stainless steel	Carbon steel Stainless steel	Carbon steel Stainless steel
SCS24 SCS14A, SCS14A with Stellite, SCS14A with Atomloy treatment SCS16A, SCS16A with Stellite	—	—
0 to 520°C	-195 to 600°C	0 to 520°C
Class II, III	—	—
Class 1500 or less : 56 to 315 Class 2500 : 39 to 210	600 to 860	Class 1500 or less : 14 to 820 Class 2500 : 10 to 580
30:1 (option 50:1)	25:1	30:1
High temperature and high pressure steam of boiler and turbine unit for power plant and private power generation	• Multi-hole type 3-stage cage guided • Noise reduction of compressed fluid (ex. steam, air, gases etc.)	• Multi-hole type 3-stage cage guided • Noise reduction of compressed fluid (ex. steam, air, gases etc.)
—	—	—
SS2-8110-0400	SS2-8110-1300	SS2-8110-1400

Structural drawing



Eccentric rotary control valve (FloWing™)

VFR

Size	1" to 4"
Pressure rating	ANSI/JPI 150, 300, 600* JIS10K, 20K, 30K*, 40K* * Size 2 in. or less
End connection	Wafer Flanged : RF
Body material	Carbon steel Stainless steel
Trim material	SCS24 SCS14, SCS14 with Stellite
Temperature range	-60 to 350°C
Leakage performance	Class IV
Cv range	5.6 to 250
Range ability	100:1
Application	• High rangeability • powder or high viscosity service
Option	Multi-hole plate for anti-cavitation and low noise
Specification sheet No.	SS2-VFR100-0200

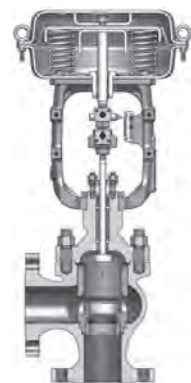


Eccentric rotary control valve (FloWing™)

VFR

Size	6" to 12"
Pressure rating	ANSI/JPI 150, 300 JIS10K, 20K
End connection	Wafer Flanged : RF
Body material	Carbon steel Stainless steel
Trim material	SCS24 SCS14, SCS14 with Stellite
Temperature range	-60 to 350°C
Leakage performance	Class IV
Cv range	240 to 1900
Range ability	100:1
Application	• High rangeability • Powder or high viscosity service • High differential pressure service
Option	Multi-hole plate for anti-cavitation and low noise
Specification sheet No.	SS2-VFR100-0100

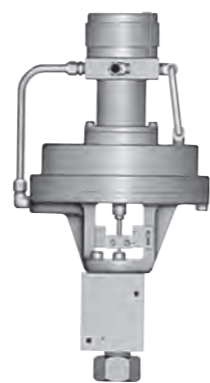
Structural drawing



Ceramic trim angle control valve

HAF

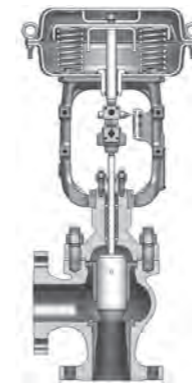
Size	1" to 4"
Pressure rating	ANSI/JPI 150 to 600 JIS10K to 40K
End connection	Flanged : RF, FF, RJ
Body material	Carbon steel Stainless steel
Trim material	Cyaron ceraic, silicon carbide ceramic
Temperature range	0 to 425°C
Leakage performance	Class IV
Cv range	4 to 175
Range ability	30:1
Application	Hard slurry service
Option	—
Specification sheet No.	SS2-8113-2620



Super-high pressure angle control valve

VAU

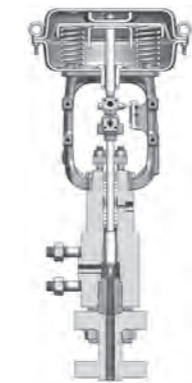
Size	Please contact us
Pressure rating	Max. pressure : 343MPa
End connection	Please contact us
Body material	Stainless steel
Trim material	Solid Stellite
Temperature range	0 to 100°C
Leakage performance	Class IV
Cv range	0.003 to 0.006 (ON-OFF 0.062)
Range ability	—
Application	Super high pressure and micro-flow control in Low density polyethylene plant
Option	—
Specification sheet No.	SS2-8110-2800



Venturi throat type angle control valve

HAV

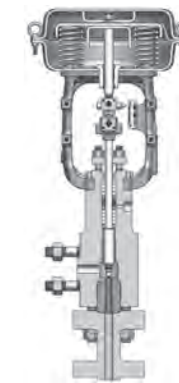
Size	1" to 6"
Pressure rating	ANSI/JPI 150 to 600 JIS10K to 40K
End connection	Flanged : RF, FF, RJ
Body material	Carbon steel Stainless steel
Trim material	440CSS 316SS, 316SS with Stellite 316LSS, 316LSS with Stellite
Temperature range	-50 to 425°C
Leakage performance	Class IV
Cv range	1 to 395
Range ability	50:1 (option 75:1)
Application	Slurry, high viscosity, flushing service
Option	Bellows type bonnet, steam jacket
Specification sheet No.	SS2-8113-2600



High pressure service angle control valve

HAH

Size	3/4" to 1-1/2"
Pressure rating	ANSI 2500
End connection	Flanged : RF, RJ
Body material	Forged carbon steel Stainless steel
Trim material	440CSS 316SS with Stellite
Temperature range	0 to 425°C
Leakage performance	Class IV
Cv range	0.33 to 9
Range ability	30:1 (option 50:1)
Application	Abrasion service of high temperature and high pressure
Option	—
Specification sheet No.	SS2-HAH100-0100



Labyrinth trim angle control valve

HAL

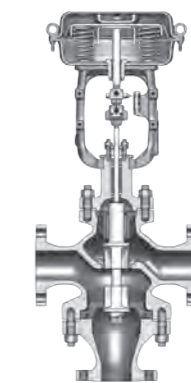
Size	3/4" to 1-1/2"
Pressure rating	ANSI/JPI 900 to 2500
End connection	Flanged : RF, RJ
Body material	Forged carbon steel Stainless steel
Trim material	440CSS
Temperature range	0 to 425°C
Leakage performance	Class IV
Cv range	0.33 to 9
Range ability	30:1 (option 50:1)
Application	Labyrinth trim structure
Option	Bellows type bonnet, steam jacket
Specification sheet No.	SS2-8110-1100



Three way control valve

AMT

Size	1" to 6"
Pressure rating	ANSI/JPI 150, 300 JIS10K to 30K
End connection	Flanged : RF, FF
Body material	Carbon steel Stainless steel
Trim material	316SS, 316SS with Stellite 316LSS, 316LSS with Stellite
Temperature range	-17 to 350°C
Leakage performance	Class IV
Cv range	6.3 to 360
Range ability	30:1
Application	• Mixing of fluid • Diverting of low pressure fluid
Option	—
Specification sheet No.	SS2-AMT100-0100



Three way control valve for diverting service

HDT

Size	3" to 6"
Pressure rating	ANSI/JPI 150, 300 JIS10K, 20K
End connection	Flanged : RF, FF
Body material	Carbon steel Stainless steel
Trim material	316SS, 316SS with Stellite 316LSS, 316LSS with Stellite
Temperature range	0 to 425°C
Leakage performance	Class IV
Cv range	70 to 270
Range ability	30:1
Application	Diverting of fluid
Option	—
Specification sheet No.	SS2-HDT100-0100

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves

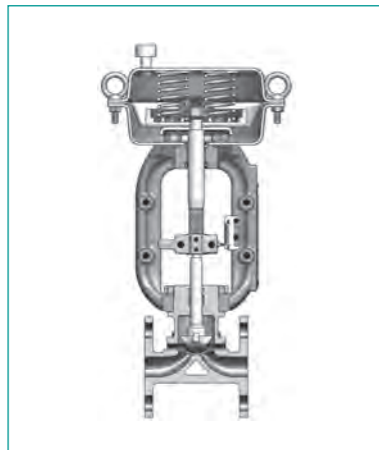
Motorized valves

Actuators

Accessories

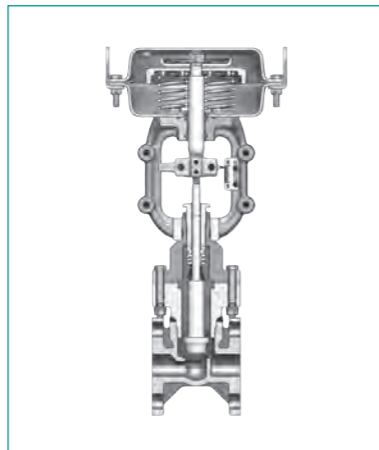
Special purpose valves

Structural drawing



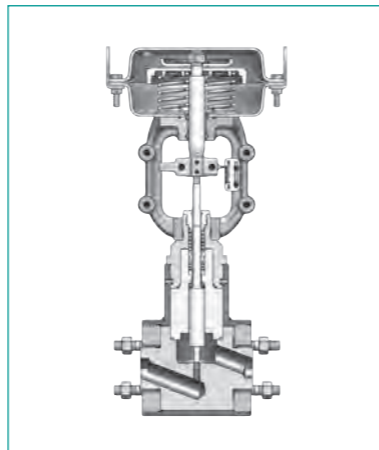
Weir diaphragm control valve

Valve type	VDD
Model No.	
Size	1/2" to 4"
Pressure rating	ANSI 150 JIS10K
End connection	Flanged : RF (equivalent), FF
Body material	Body : FC200, lining : hard natural rubber, chloroprene Body : FCD-S, lining : PFA, ETFE Body : SCS13
Trim material	Diaphragm : natural rubber, chloroprene, PTFE, EPDM
Temperature range	-5 to 140°C
Leakage performance	Class VI
Cv range	3 to 295
Range ability	20:1
Application	• corrosion service as acid and alkaline • Slurry service
Option	—
Specification sheet No.	SS2-8110-0530



Rigid PVC/polypropylene body single seated control valve

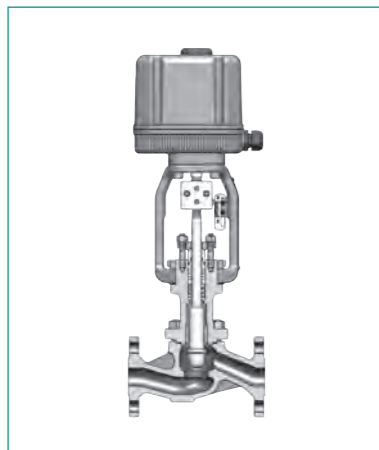
Valve type	VNP
Model No.	
Size	3/4" to 4"
Pressure rating	ANSI/JPI 150 JIS5K to 10K
End connection	Flanged : FF (RF)
Body material	Rigid PVC, polypropylene
Trim material	PTFE, glass-reinforced PTFE, rigid PVC, polypropylene
Temperature range	0 to 80°C
Leakage performance	Class IV
Cv range	1 to 35
Range ability	20:1 to 30:1
Application	corrosion service as acid and alkaline
Option	—
Specification sheet No.	SS2-8190-0100



Corrosion-resistant PTFE body control valve

Valve type	HIT
Model No.	
Size	3/4" to 2"
Pressure rating	ANSI 150 JIS10K
End connection	Stud bolts type
Body material	Body : PTFE Casing : 304SS
Trim material	PTFE
Temperature range	0 to 140°C
Leakage performance	Class IV
Cv range	1 to 35
Range ability	20:1 to 30:1
Application	corrosion service as acid and alkaline
Option	—
Specification sheet No.	SS2-8110-1100

Structural drawing



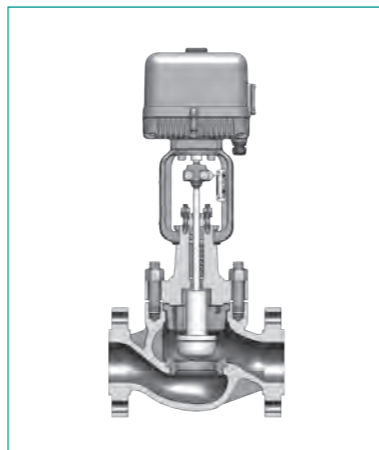
Electric top guided single seated control valve

Valve type	AGVB/AGVM
Model No.	
Size	1/2" to 2"
Pressure rating	AGVB : ANSI/JPI 150, JIS10K AGVM : ANSI/JPI 300, JIS16K to 30K
End connection	Flanged : RF, FF Welded : SW, BW
Body material	Carbon steel Stainless steel
Trim material	440CSS 316SS, 316SS with Stellite 316LSS, 316LSS with Stellite
Temperature range	-196 to 400°C
Leakage performance	Class IV, VI
Cv range	0.1 to 50
Range ability	20:1 to 50:1 (option 75:1)
Application	flow control of saturated vapor, cold and hot water, etc.
Option	Low leakage gland packing system
Specification sheet No.	SS2-AGV200-0300



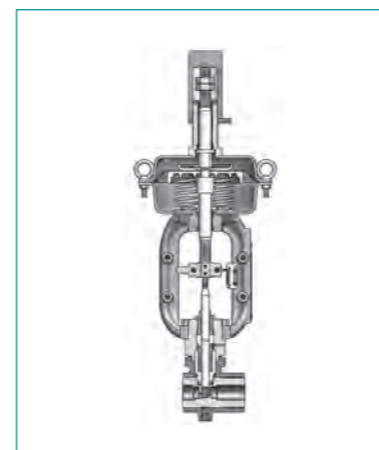
Electric small-port single seated control valve

Valve type	HLS
Model No.	
Size	1/2" to 1"
Pressure rating	ANSI/JPI 150 to 600 JIS10K to 30K
End connection	Flanged : RF, FF, RJ Welded : SW, BW
Body material	Carbon steel Stainless steel
Trim material	440CSS 316SS, 316SS with Stellite 316LSS, 316LSS with Stellite 329J1SS
Temperature range	-196 to 566°C
Leakage performance	Class IV, VI
Cv range	0.01 to 14
Range ability	20:1 to 50:1 (option 75:1)
Application	flow control of saturated vapor, cold and hot water, etc.
Option	Explosion-proof motor (Please contact us.)
Specification sheet No.	SS2-8114-0200



Electric top guided single seated control valve

Valve type	HTS
Model No.	
Size	1-1/2" to 8"
Pressure rating	ANSI/JPI 150 to 600 JIS10K to 30K
End connection	Flanged : RF, FF, RJ Welded : SW, BW
Body material	Carbon steel Stainless steel
Trim material	440CSS 316SS, 316SS with Stellite 316LSS, 316LSS with Stellite 329J1SS
Temperature range	-196 to 566°C
Leakage performance	Class IV, VI
Cv range	10 to 700
Range ability	50:1 (option 75:1)
Application	flow control of saturated vapor, cold and hot water, etc.
Option	Explosion-proof motor (Please contact us.)
Specification sheet No.	SS2-8114-0300



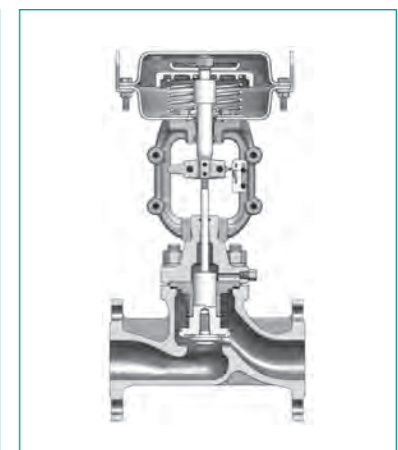
Corrosion-resistant type small size ceramic control valve

Valve type	HMC
Model No.	
Size	1"
Pressure rating	Max. pressure : 1960kPa
End connection	Wafer
Body material	Body : 99% Aluminum ceramic, silicon carbide ceramic Casing : ductile cast iron, stainless steel
Trim material	99% Aluminum ceramic, silicon carbide ceramic
Temperature range	0 to 200°C
Leakage performance	Less than 2.0% of maximum valve capacity
Cv range	1 to 4
Range ability	30:1
Application	Hard slurry service as flue-gas desulfurization, drainage, dissolving pulp slurry, and alumina refining unit
Option	—
Specification sheet No.	SS2-8193-0310



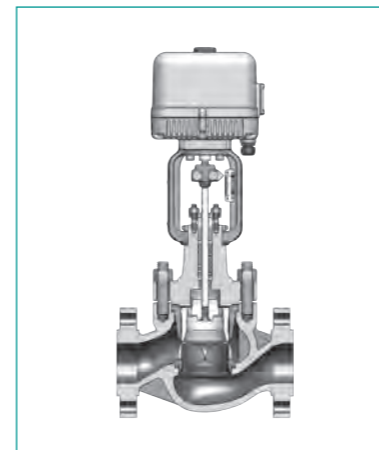
Corrosion/abrasion-resistant type ceramic control valve

Valve type	HIC
Model No.	
Size	1" to 3"
Pressure rating	Max. pressure : 1960kPa
End connection	Wafer
Body material	Body : 99% Aluminum ceramic, silicon carbide ceramic Casing : ductile cast iron, stainless steel
Trim material	99% Aluminum ceramic, silicon carbide ceramic
Temperature range	0 to 200°C
Leakage performance	Less than 1.0 to 1.5% of maximum valve capacity
Cv range	13 to 120
Range ability	30:1
Application	Hard slurry service as flue-gas desulfurization, drainage, dissolving pulp slurry, and alumina refining unit
Option	—
Specification sheet No.	SS2-8193-0300



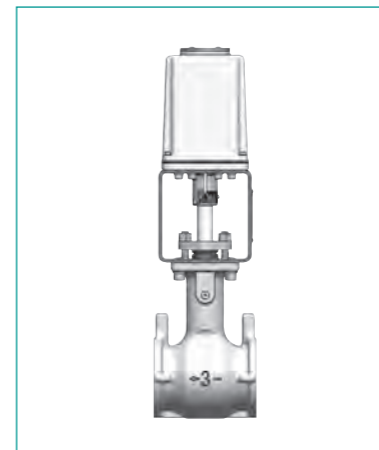
BIOBATCH valve

Valve type	VSB
Model No.	
Size	20 to 100mm
Pressure rating	JIS10K
End connection	Flanged : RF
Body material	Stainless steel
Trim material	316SS
Temperature range	0 to 200°C
Leakage performance	—
Cv range	9 to 148
Range ability	20:1 to 30:1
Application	• Clean process as pharmaceuticals and semiconductor • Batch control of fermentation process
Option	—
Specification sheet No.	SS2-8190-0500



Electric pressure-balanced cage type control valve

Valve type	HCB
Model No.	
Size	1-1/2" to 8"
Pressure rating	ANSI/JPI 150 to 600 JIS10K to 30K
End connection	Flanged : RF, FF, RJ Welded : SW, BW
Body material	Carbon steel Stainless steel
Trim material	SCS24 SCS14A, SCS14A with Stellite, SCS14A with Atomloy treatment
Temperature range	-196 to 566°C
Leakage performance	Class II, III, VI
Cv range	11 to 850
Range ability	50:1 (option 75:1)
Application	flow control of saturated vapor, cold and hot water, etc.
Option	Explosion-proof motor (Please contact us.)
Specification sheet No.	SS2-8114-1100



Electric eccentric rotary control valve (FlowWing™)

Valve type	VFR
Model No.	
Size	1" to 12"
Pressure rating	ANSI/JPI 150, 300, 600* JIS10K, 20K, 30K*, 40K
End connection	Wafer Flanged : RF
Body material	Carbon steel Stainless steel
Trim material	SCS24 SCS14A with Stellite
Temperature range	-60 to 350°C
Leakage performance	Class IV
Cv range	5.6 to 250
Range ability	100:1
Application	• High rangeability • powder or high viscosity service
Option	Multi-hole plate for anti-cavitation and low noise
Specification sheet No.	SS2-8130-0110

* Size 2" or less

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves

Motorized valves

Actuators

Accessories

Special purpose valves

Structural drawing

Valve type

Model No.

Action

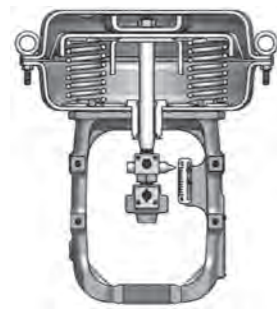
Stroke

Manual operator

Air supply

Detailed data sheet

Features



Multispring diaphragm motor

HA2 to HA4

Direct and reverse action
25 to 75mm

Side mounted handwheel, top mounted handwheel
140 to 390kPa {1.4 to 4.0kgf/cm²}

No.SS2-8213-0500

- Single action
- Compact, lightweight



Multispring diaphragm motor

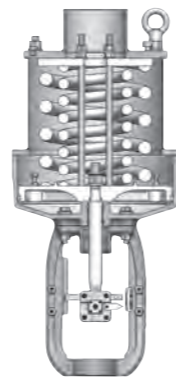
PSA1 to PSA4

Direct and reverse action
14.3 to 38mm

Side mounted handwheel, top mounted handwheel
140 to 390kPa {1.4 to 4.0kgf/cm²}

No.SS2-PSA200-0100

- Single action
- Compact, lightweight



Spring piston cylinder

PSA6R

Reverse action
20 to 100mm

Side mounted handwheel
260 to 500kPa {2.6 to 5kgf/cm²}

No.SS2-PSA100-0100

- Single action
- Compact, high power



High power spring cylinder

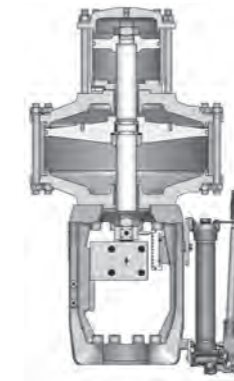
PSA7R

Reverse action
50 to 100mm

Side mounted handwheel
400kPa {4kgf/cm²}

No.SS2-PSA100-0100

- Single action
- High power, low supply pressure



Springless piston cylinder

DAP

Direct and reverse action
50 to 100mm

Hydraulic manual handle
200 to 700kPa

No.SS2-DAP100-0100

- Double action
- Compact, high power



Spring diaphragm motor

VA5

Direct and reverse action
100mm

Side mounted handwheel, top mounted handwheel
140 to 270kPa {1.4 to 2.8kgf/cm²}

No.SS2-8210-0100

- Single action

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves

Motorized valves

Actuators

Accessories

Special purpose valves

Structural drawing

Valve type

Model No.

Action

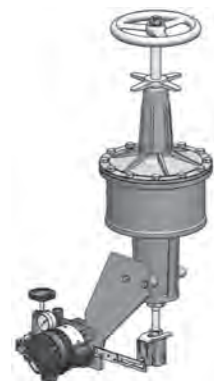
Stroke

Manual operator

Air supply

Detailed data sheet

Features



Spring piston cylinder

GOM83S to GOM124S

Direct action
75 to 100mm

With manual handwheel
140kPa {1.4kgf/cm²}

No.SS2-8210-0200

- Single action
- Compact, long stroke



Springless piston cylinder

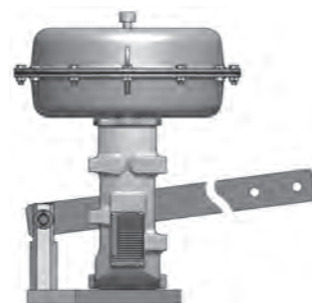
GOM64LM to 154LM

Direct and reverse action
50, 100mm

With or without handwheel
200kPa {2.0kgf/cm²}

No.SS2-8210-0200

- Double action
- Compact, long stroke



Multispring lever diaphragm motor

HL2 to HL4

Direct and reverse action
—

140 to 390kPa {1.4 to 4.0kgf/cm²}

No.SS2-8213-0510

- Single action
- Compact, lightweight



Springless piston cylinder

GOM44L to GOM1510L

Direct and reverse action
100 to 250mm

With or without handwheel
200kPa {2.0kgf/cm²}

No.SS2-8210-0200

- Double action
- Compact, long stroke

Picture



Smart ESD Device 700 Series
AVP77*/78*/79*

Input signal	4 to 20mADC, 0 to 20mADC, 0/24VDC
Stroke range	10 to 100mm (Linear), to 90° (Rotary)
Air supply pressure	140 to 700kPa {1.4 to 7.0 kgf/cm ² }
Ambient temperature	-40 to +80°C
Detailed data sheet	No.SS2-AVP772-0100

- Single action/ Double action
- Partial Stroke Test (PST)
- Local User Interface (LUI) : Liquid crystal display and push buttons
- Certified for SIL (Safety Integrity Level) 3 Capable



Smart Valve Positioner 700 Series
AVP701/702/703

Input signal	4 to 20mADC, FOUNDATION Fieldbus
Stroke range	10 to 100mm (Linear), to 90° (Rotary)
Air supply pressure	140 to 700kPa {1.4 to 7.0kgf/cm ² }
Ambient temperature	-40 to +80°C
Detailed data sheet	No.SS2-AVP702-0100/SS2-AVP703-0100

- Single action/Double action
- Valve signature and Stop Response Test
- Valve position transmitter function
- Communication : HART®7, FOUNDATION Fieldbus ITK6.1



Smart Valve Positioner 300 Series
AVP300/301/302

Input signal	4 to 20mADC, split range setting available
Stroke range	10 to 100mm (Linear), to 90° (Rotary)
Air supply pressure	140 to 700kPa {1.4 to 7.0kgf/cm ² }
Ambient temperature	-40 to +80°C
Detailed data sheet	No.SS2-AVP300-0100

- Single action/Double action
- Compact, high performance, multifunctional
- Valve position transmitter function
- Easy zero/span adjustments, wide applicability

Picture



Double action, pneumatic positioner
VPP02/03

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	14 to 100mm
Air supply pressure	200 to 690kPa {2.0 to 7.0kgf/cm ² }
Ambient temperature	-30 to +80°C
Detailed data sheet	No.SS2-8310-0300

- For use with high-pressure actuators



Smart Valve positioner for rotary valve
SVX

Input signal	4 to 20mADC, split range setting available
Stroke range	to 90° (Rotary)
Air supply pressure	140 to 700kPa
Ambient temperature	-40 to +80°C
Detailed data sheet	No.SS2-SVX100-0100

- Single action/Double action
- Communication : HART®
- Easy zero/span adjustments



Pneumatic positioner
HTP

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	6 to 100mm
Air supply pressure	140 to 390kPa {1.4 to 4.0kgf/cm ² }
Ambient temperature	-25 to +60°C
Detailed data sheet	No.SS2-8310-0200

- Single action
- Multipurpose

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves

Motorized valves

Actuators

Accessories

Special purpose valves

Picture



Smart Valve Positioner 200 Series
AVP200/201/202

Input signal	4 to 20mADC, split range setting available
Stroke range	10 to 100mm (Linear), to 90° (Rotary)
Air supply pressure	140 to 700kPa {1.4 to 7.0kgf/cm ² }
Ambient temperature	-40 to +80°C
Detailed data sheet	No.SS2-AVP200-0100

- Single action/Double action
- Anti-Vibration capabilities
- Valve position transmitter function
- Easy zero/span adjustments, wide applicability



Pneumatic positioner
VPR

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	60°
Air supply pressure	340 to 490kPa {3.5 to 5.0kgf/cm ² }
Ambient temperature	-20 to +70°C
Detailed data sheet	No.SS2-8310-0500

- Single action
- For small actuators on FloWing valves



Pneumatic positioner
VPP08

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	14 to 100mm
Air supply pressure	350 to 690kPa {3.6 to 7.0kgf/cm ² }
Ambient temperature	-30 to +80°C
Detailed data sheet	No.SS2-8310-0600

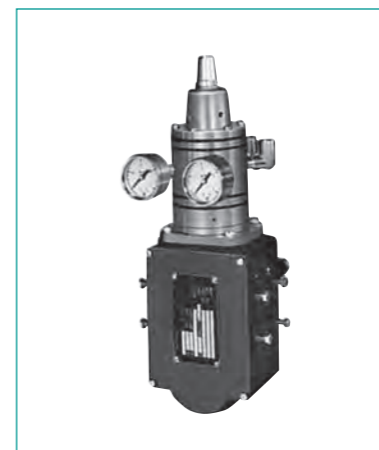
- Single action
- For use with high-pressure actuators



Pneumatic positioner
VPE

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	6 to 25mm
Air supply pressure	140 to 390kPa {1.4 to 4.0kgf/cm ² }
Ambient temperature	-20 to +70°C
Detailed data sheet	No.SS2-8310-0400

- Single action
- Multipurpose for small actuators



Double action, pneumatic positioner
GOP

Input signal	20 to 98, 20 to 60, 60 to 98kPa {0.2 to 1.0, 0.2 to 0.6, 0.6 to 1.0kgf/cm ² }
Stroke range	19 to 50mm
Air supply pressure	200kPa {2.0kgf/cm ² }
Ambient temperature	0 to +70°C
Detailed data sheet	No.SS2-8310-0200

- For G-O-Motors



Air pressure regulator with filter
KZ03-2/-3

Input signal	Primary : Max.970kPa {9.9kgf/cm ² }
Stroke range	Secondary : 12 to 390kPa {0.12 to 4.0kgf/cm ² }
Air supply pressure	12 to 690kPa {0.12 to 7.0kgf/cm ² }
Ambient temperature	-30 to +80°C
Detailed data sheet	No.SS2-5190-0700

- Supplies clean, dry air under constant pressure

Structural drawing

Valve type

Model No.

- Input signal
- Stroke range
- Air supply pressure
- Ambient temperature
- Detailed data sheet

Features



Booster relay

IL100

Supply air pressure : Max.970kPa
Inlet and outlet air pressure : Max.690kPa
Inlet and outlet air pressure ratio : 1:1

-5 to 60°

No.SS2-CVG100-0100

- Increasing the operation speed of the pneumatic actuator



Limit switch

VCL5001/LX7000/VCX7000

VCL5001 : Center-neutral limit switch
Explosion-Proof Switches Compliant with IEC Standards (de II CT6)
LX7000 : Vertical explosion-proof switches
VCX7000 : 2-point detection explosion-proof switches

-10 to 60°C

VCL5001 : No.SS2-CVG900-0200
LX7000 : No.SS2-CVG900-0400
VCX7000 : No.SS2-CVG900-0300

- Verifying the fully opened or fully closed position of control valve



Solenoid valve

ASCO 3-way solenoid valve

Structure : Water-proof, flame proof (d2G4)
Power supply : 100VAC, 200VAC 50Hz-60Hz

-20 to +50°C

No.SS2-CVG100-0200

- For on/off switching or as emergency shut-off unit
- Many other types are available



Air lock relay

VF02

MAX.690kPa [7kgf/cm²]

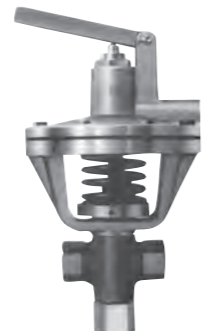
20 to 200kPa [0.2 to 2.0kgf/cm²]

120 to 290kPa [1.2 to 3.0kgf/cm²]

-30 to +80°C

No.SS2-8310-0800

- In case of air pressure failures, relay maintains at the pre-failure level the air pressure to the actuator



Pneumatic relay (with manual reset)

VF03

490kPa [5kgf/cm²] or less

20 to 98kPa [0.2 to 1.0kgf/cm²] [MAX.250kPa [2.6kgf/cm²]]

40 to 80kPa [0.4 to 0.8kgf/cm²]

-30 to +80°C

No.SS2-8310-0800

- Combines compact 3-way on/off valve and diaphragm motor with reset mechanism
- For specialized on/off switching with both automatic and manual operations



Pneumatic relay

VF04

490kPa [5kgf/cm²] or less

20 to 98kPa [0.2 to 1.0kgf/cm²] [MAX.250kPa [2.6kgf/cm²]]

40 to 80kPa [0.4 to 0.8kgf/cm²]

-30 to +80°C

No.SS2-8310-0800

- Combines 3-way on/off valve used to switch signal air lines based on balance between supply pressure on upper diaphragm and force of preset spring

Structural drawing

Valve type

Model No.

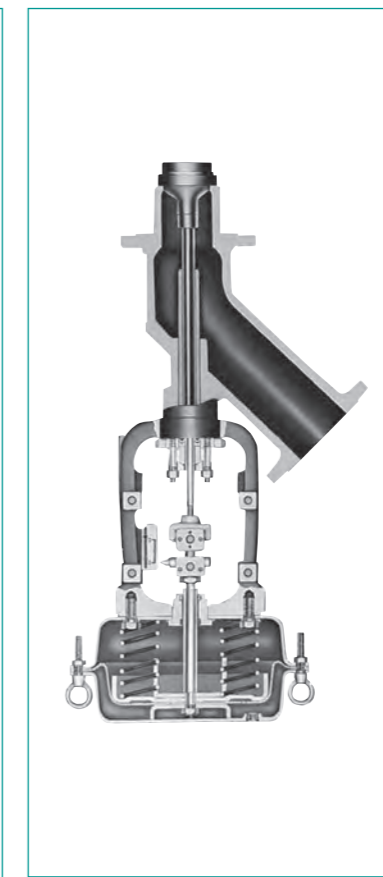
- Input signal
- Stroke range
- Air supply pressure
- Ambient temperature
- Detailed data sheet

Features



Cage Valve for LNG (20 in.)

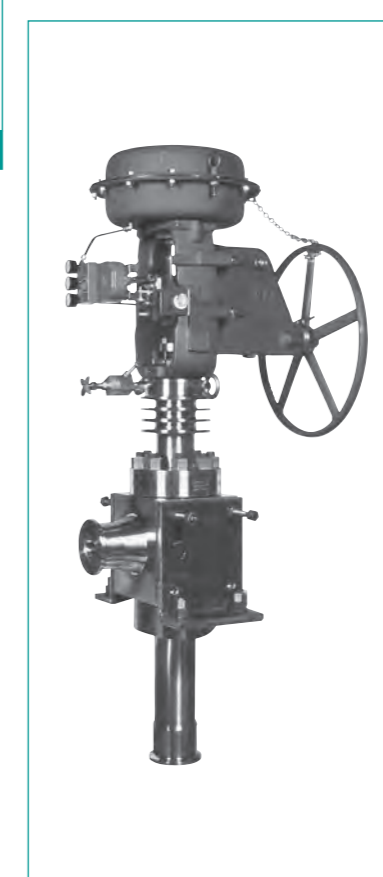
VDC



Bottom Plug Valve

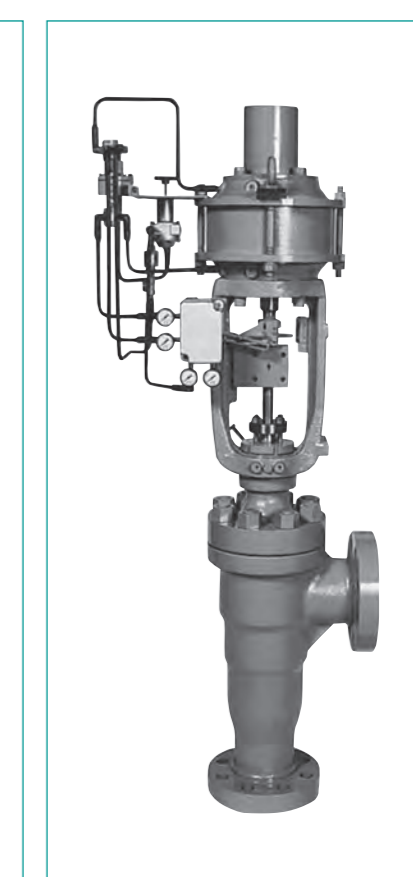


Super low-temperature Valve for Liquid Hydrogen



Let-down Valve for Coal Liquefaction

VAZ



Minimum Flow Valve for Pumps

EAVM

Single seated valves

Cage valves, Double seated valves, Low-noise valves

Rotary valves

Angle valves

3-way valves

Corrosion-resistant or abrasion-resistant valves

Motorized valves

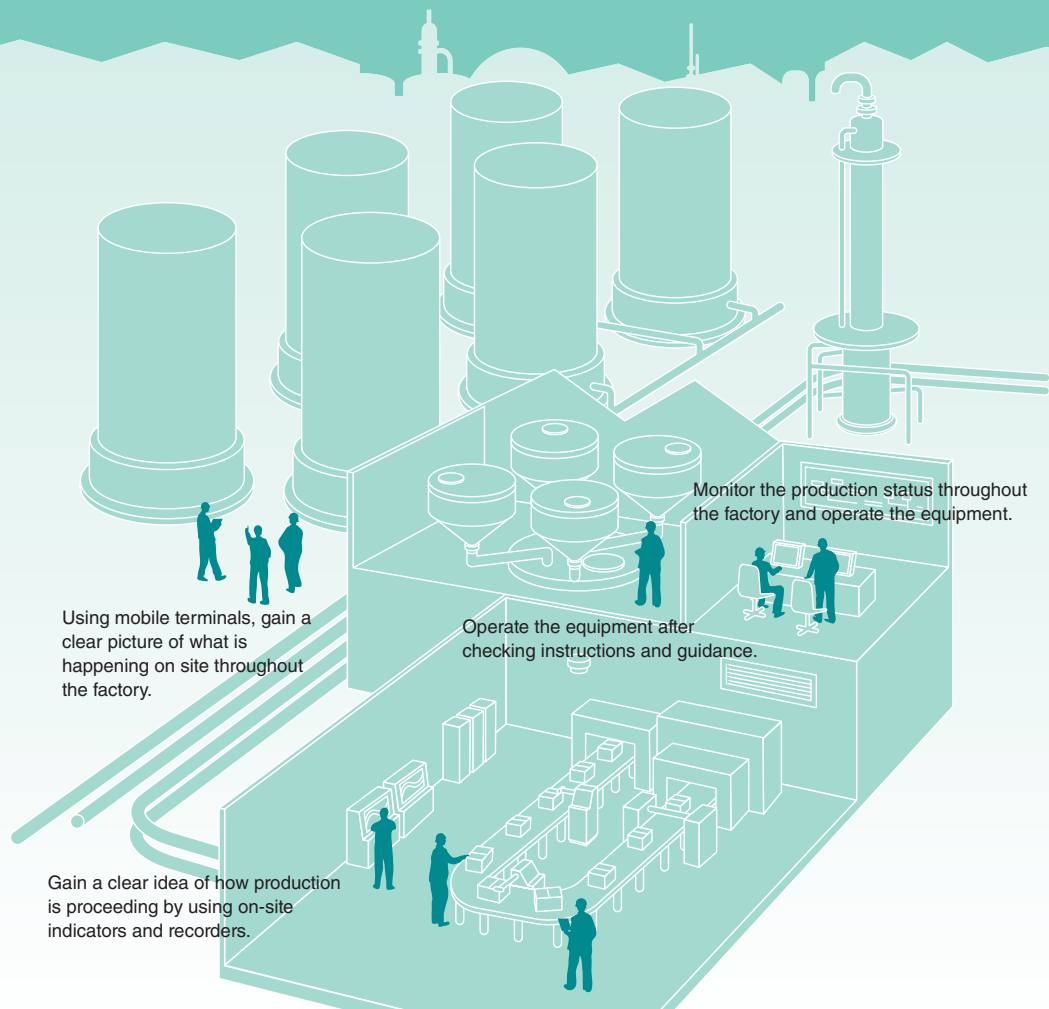
Actuators

Accessories

Special purpose valves

We create value together with customers at their site through *human-centered automation*.

We solve issues in a wide array of industries, from oil refining, chemical, iron and steel, pulp and paper to automobiles, electrical/electronic, semiconductor, and foods and beverages, through the provision of products, solutions, instrumentation, engineering and maintenance service to support optimal operation of the customers' facilities throughout their lifecycle. Collaborating with people involved in production, we develop advanced measurement and control technologies, and strive to realize a production site where workers can develop their own skills in safety, thus creating new value for our customers.



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Azbil Corporation Advanced Automation Company

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