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Vacuum Gate Valves



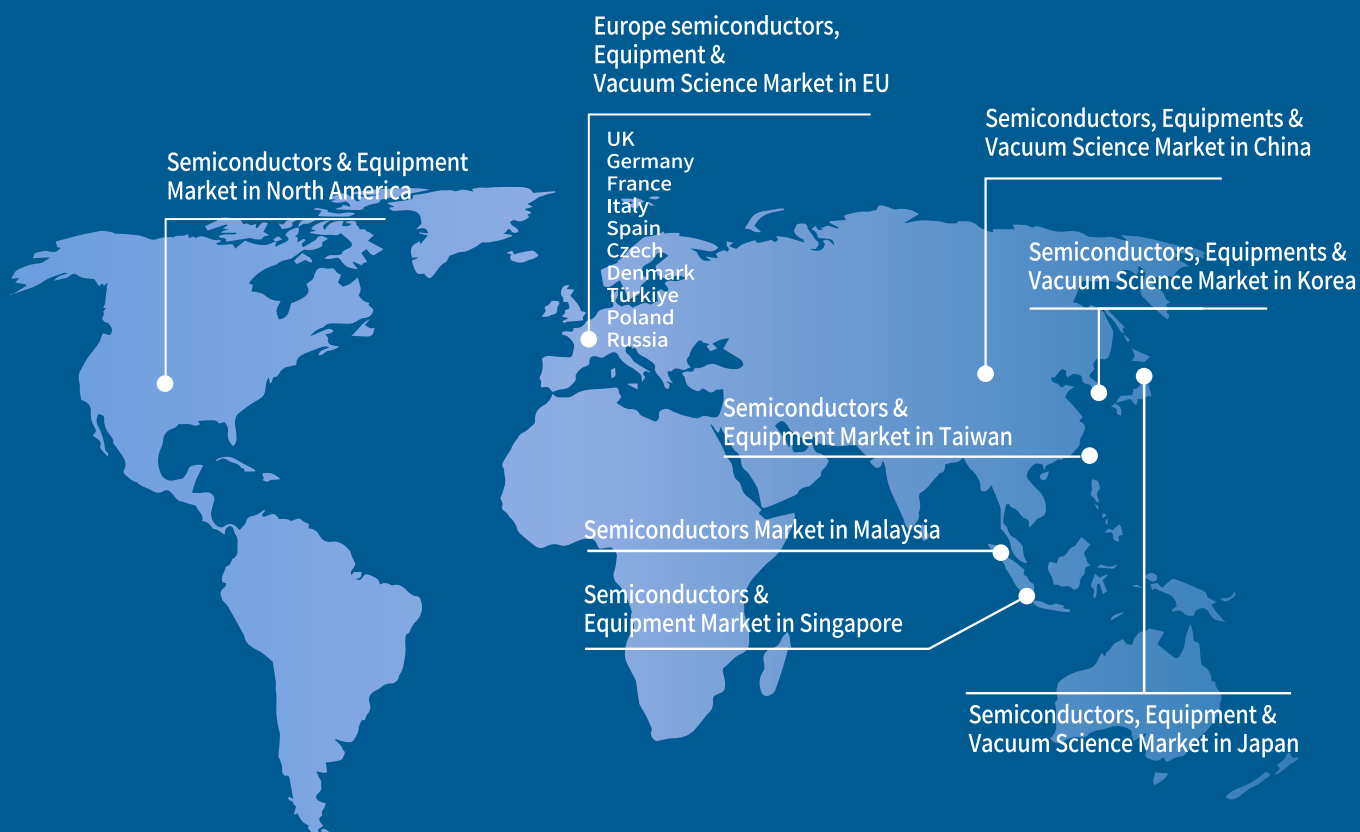
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Enlargement Semiconductor & Semiconductor
Equipment Markets. Strengthen Global
Competitiveness by Expanding Overseas
Market



Global Network »



Ordering number

SP Ordering Number Configurator for Reference only

SPGV	2.5	- P	CFU	M	S	- 0	0	1	1	- 4	- 1
Valve Type	Size	Actuator	Flange	Thread	Material	Position indicator	Solenoid	Disk O-ring	Bonnet O-ring	Fitting size (Air tube)	Option
SPGV(Gate valve) SP3P(3rd Position) SPHI(Heater inserted) SPHU(Heating Jacket) SPPGV(Protection) SPAV(Aluminum)	1.5 2.5 3 4 5 6 8 10 12~50	P=Pneumatic M=Manual	CF CFU NW /ISO ASA/ ANSI JIS (VF or VG)	M=Metric U=Unify	S=STS304 L=STS316L A=Aluminum	0=No position sensor 1=Magnetic Reed Switch Sensor 2=Limit switch	0=No Sol v/v 1=24VDC 2=AC110V 3=AC220V	1=FKM 2=Karlez 3=EPDM 4=FFKM	1=FKM 2=Karlez 3=EPDM 4=FFKM 5= Cu Gasket	0=no use 4=4pi 6=6pi 1/4=1/4pi	1=Check valve 2=Lock Function 3=Port Inserted

※ If you want 3rd position gate valve with flange and size ISO100, ordering number : SP3P4-PISO(For the 3rd position gate valve, only the pneumatic type is available.)

※ The number after the thread is optional, and you can write it directly in the PO or write a longer ordering numbers in the example above.

※ Production is available up to 50 inches.

Transfer Valve for Ordering Number

SPTV	-	32*222	I	-	0	0	A	S	-	4	-	0
Valve Type	Size	Motion	Position indicator	Solenoid	Body Material	Disk Blade Material	Fitting size (Air tube)	O-ring				
SPTV (Transfer valve)	32*222 46*236 50*336 56*496	I=I motion L=L motion D = Door	0=No Indicator 1=Magnetic reed	0=No Sol v/v 1=24VDC 2=AC110V 3=AC220V	A=AL6061 S=SUS304	A=AL6061 S=SUS304	0=no use 4=4pi 6=6pi 1/4=1/4pi	0=FKM I=FFKM				

APC(Control system, Butterfly, Pendulum) Gate valve Ordering Number

SPCS	4	ISO	S	M	S	1	1	-	R2	1	B
Valve Type	Size	Flange	Sealing type(BV Only)	Thread	Material	Disk O-ring	Bonnet O-ring	User interface	Sensor	Additional function	
SPCS (Control system)	1.5 (DN40) 2 (DN50)	ISOKF ISO F	S : Sealing N : Non-sealing	M : Metric U : Unify	S : STS 304 L : STS316L	1 : FKM 2 : FFKM	1 : FKM 2 : FFKM	R2 : RS232 (Own protocol) R4 : RS485 (Own protocol)	1 : sensor 2 : Dual sensor	B : Basic version H : PFO	
SPBV (Butterfly Valve)	2.5 (DN63) 4 (DN100)	JIS(VF) JIS(VG)				3 : EPDM 4 : Kalrez	3 : EPDM 4 : Kalrez	LO : Logic (Analog) EC : EtherCat			
SPPD (Pendulum Valve)	6 (DN160) 8 (DN200) 10 (DN250) 12 (DN320)	ASA CF CFU(UHV)				5 : Cu gasket	5 : Cu gasket	DN : Device Net			

All-Metal Gate valve Ordering Number

SPAMGV	2.5	- P	CF	M	S	- 0	0	M	C	- 4
Valve Type	Size	Actuator	Flange	Thread	Material	Position indicator	Solenoid	Disk Seal	Bonnet Seal	Fitting size
SPAMGV (All-Metal Gate Valve)	1.5 2.5 4 6 8	Pneumatic Manual	CF	M : Metric U : Unify	L : STS316L	0=No position sensor 1=Magnetic Reed Switch Sensor 2=Limit switch	0=No Sol v/v 1=24VDC 2=AC110V 3=AC220V	M: Metal Seal	C: Cu Gasket	No use 4=4pi 6=6pi

ALL-METAL VALVE

- ▶ Body and Gate Material: Stainless Steel(316L)
- ▶ Applications:
 - UHV isolation in research and industry
 - Application in the accelerator industry and nuclear fusion



Technical Specifications

GATE SEAL TYPE	ALL-METAL GATE VALVE
Operation	Manual / Pneumatic
Flange Sizes(ID)	1.5"~ 8"
Feedthrough	Welded Bellows
Flange Type	ISO-CF
Gate Seal	Metal
Bonnet Seal	Metal (Cu)
Response Time	≤ 2 sec
Operate Pressure Range	XHV to 2 bar (abs)
Differential Pressure at opening	≤ 500 mbar
Differential Pressure on the Gate	≤ 2 bar
Leak rate	$< 1 \times 10^{-9}$ mbar ℓ /sec
Cycles until first Service	10,000
Temperature for Valve Body	≤ 200°C
Temperature for Actuator	≤ 80°C
Materials	Body & Mechanism: STS316L Actuator: STS316L, AL6061
Mounting Position	Any
Operating Pressure(N2)	4 ~ 8 bar

HEATING PENDULUM VALVE

- ▶ Body Material: Aluminum or Hard Anodized
- ▶ Compact Design
- ▶ Integrated pressure controller with stepper motor
- ▶ Applications
Any other process that requires pressure control and isolation



Specifications

GATE SEAL TYPE		PENDULUM VALVE
Operation		Stepper Motor
Flange Size (ID)		4"~ 12"
Flange Type		ISO-F, JIS
Gate Seal		Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal		Viton O-Ring
Response Time		3/4(12"5/6) sec
Differential Pressure at opening		≤ 10 mbar
Differential Pressure on the Gate		≤ 1.2 bar
Leak rate	Aluminum	1 x 10 ⁻³ mbar ℓ/sec
	Hard Anodized Aluminum	1 x 10 ⁻⁴ mbar ℓ/sec
Operate Pressure Range	Aluminum	1x10 ⁻⁸ mbar to 1200 mbar (abs)
	Hard Anodized Aluminum	1x10 ⁻⁶ mbar to 1200 mbar (abs)
Cycles until first service		Pressure Control 1,000,000 / Closing, Opening 200,000
Temperature for Valve Body		≤ 120°C Standard, 150 & 200°C Optional
Temperature for Actuator		≤ 60°C
Materials		Aluminum or Hard Anodized
Mounting Position		Any
Interface		Analog, RS232, RS485, Device Net, EtherCat

BUTTERFLY VALVE

- ▶ Body Material : Aluminum or Stainless Steel
- ▶ Compact Design
- ▶ Integrated Controller High Performance
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications : Pressure control for semiconductors and industrial process



■ Specifications

GATE SEAL TYPE	BUTTERFLY VALVE
Operation	Stepper Motor
Flange Size(ID)	Sealing: 1.5" ~ 10" Non Sealing: 1.5" ~ 10"
Flange Type	Any
Gate Seal	FKM(Viton)
Bonnet Seal	FKM(Viton)
Response Time	0.39 sec
Operate Pressure Range	1×10^{-8} mbar to 1200 mbar (abs)
Leak rate	1×10^{-9} mbar ℓ /sec
Cycles until First Service	250,000
Temperature for Valve Body	$\leq 150^{\circ}\text{C}$
Temperature for Actuator	$\leq 80^{\circ}\text{C}$
Materials	Body & Mechanism: STS304 Actuator: STS304
Mounting Position	Any
Interface	Analog, RS232, RS485, DeviceNet, EtherCat



CONTROL SYSTEM GATE VALVE

- ▶ Body Material : Stainless Steel
- ▶ Compact Design
- ▶ Integrated pressure controller with stepper motor
- ▶ Applications: Any other process that requires pressure control and isolation



■ Specifications

GATE SEAL TYPE	CONTROL SYSTEM GATE VALVE
Operation	Stepper Motor
Flange Size(ID)	1.5" ~ 12"
Feedthrough	Rotary Feedthrough
Flange Type	ISO, CF, JIS
Gate Seal	FKM(Viton)
Bonnet Seal	FKM(Viton)
Response Time	≤ 2 sec
Operate Pressure Range	1 x 10 ⁻⁸ mbar to 1.4 bar
Differential Pressure at Opening	≤ 30mbar
Differential Pressure on the Gate	≤ 1.4 bar
Leak rate	1 x 10 ⁻⁹ mbar ℓ/sec
Cycles until First Service	1,000,000
Temperature for Valve Body	≤ 150°C
Temperature for Actuator	≤ 35°C
Materials	Body: STS304 Mechanism: STS304, STS420
Mounting Position	Any
Operating Pressure(N2)	4 ~ 7 bar
Interface	Analog, RS232, RS485, Device Net, EtherCat

CONTROL SYSTEM HEATING GATE VALVE

- ▶ Body Material : Stainless Steel
- ▶ Compact Design
- ▶ Integrated pressure controller with stepper motor
- ▶ Applications: Any other process that requires pressure control and isolation

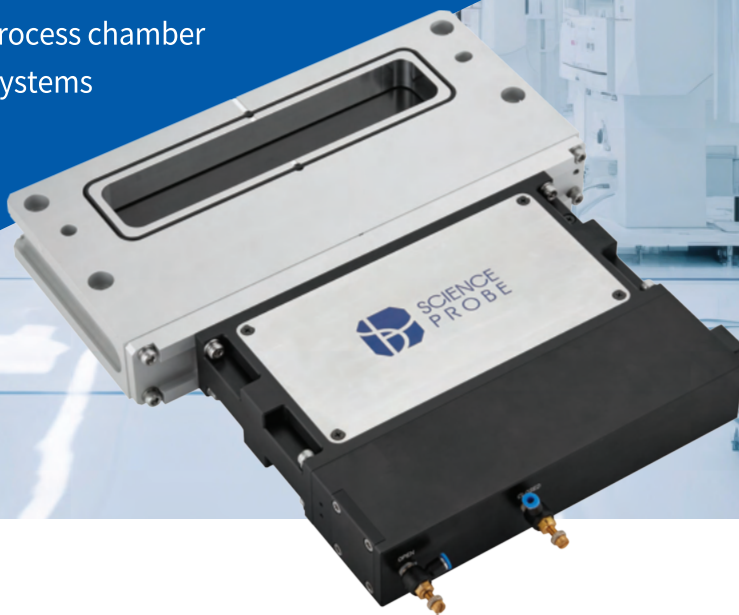


■ Specifications

GATE SEAL TYPE	CONTROL SYSTEM HEATING GATE VALVE
Operation	Stepper Motor
Flange Size(ID)	1.5" ~ 12"
Feedthrough	Rotary Feedthrough
Flange Type	ISO, CF, JIS
Gate Seal	FKM(Viton)
Bonnet Seal	FKM(Viton)
Response Time	≤ 2 sec
Operate Pressure Range	1 x 10 ⁻⁸ mbar to 1.4 bar
Differential Pressure at Opening	≤ 30mbar
Differential Pressure on the Gate	≤ 1.4 bar
Leak rate	1 x 10 ⁻⁹ mbar ℓ/sec
Cycles until First Service	1,000,000
Temperature for Valve Body	≤ 200°C
Temperature for Actuator	≤ 35°C
Materials	Body: STS304 Mechanism: STS304, STS420
Mounting Position	Any
Operating Pressure(N2)	4 ~ 7 bar
Interface	Analog, RS232, RS485, Device Net, EtherCat

TRANSFER VALVE (I-MOTION)

- ▶ Body Material : Aluminum or Stainless Steel
- ▶ Compact Design
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications: Transfer and process chamber isolation in semiconductor systems for less than 450mm wafers



Specifications

GATE SEAL TYPE	TRANSFER VALVE(I-MOTION)
Operation	Pneumatic
Flange Size (ID)	32 X 222 / 46 X 236 / 50 X 336 / 56 X 496
Flange Type	ISO, JIS, ASA
Feedthrough	Welded Bellows
Gate Seal	Vulcanized Seal
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	1 x 10 ⁻⁸ mbar to 1200 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	≤ 1200 mbar
Leak rate	Stainless : < 1 x 10 ⁻⁹ mbar ℓ/sec Aluminum : < 1 x 10 ⁻⁹ mbar ℓ/sec
Cycles until first service	≥ 2,000,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 200 °C
Materials	Stainless Steel304, Al6061 Anodizing
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

TRANSFER VALVE (L-MOTION)

- ▶ Body Material : Aluminum or Stainless Steel
- ▶ Compact Design
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications : Transfer and process chamber isolation in semiconductor systems for less than 450mm wafers



■ Specifications

GATE SEAL TYPE	TRANSFER VALVE(L-MOTION)
Operation	Pneumatic
Flange Size (ID)	32 X 222 / 46 X 236 / 50 X 336 / 56 X 496
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Vulcanized Seal
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	1 x 10 ⁻⁸ mbar to 1200 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	≤ 1200 mbar
Leak rate	Stainless : < 1 x 10 ⁻⁹ mbar ℓ/sec Aluminum : < 1 x 10 ⁻⁹ mbar ℓ/sec
Cycles until first service	≥ 1,000,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 200 °C
Materials	Stainless Steel304, Al 6061 Anodizing
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

HV GATE VALVE

- ▶ Low Particle by Ceramic Ball Mechanism
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications: Pump isolation

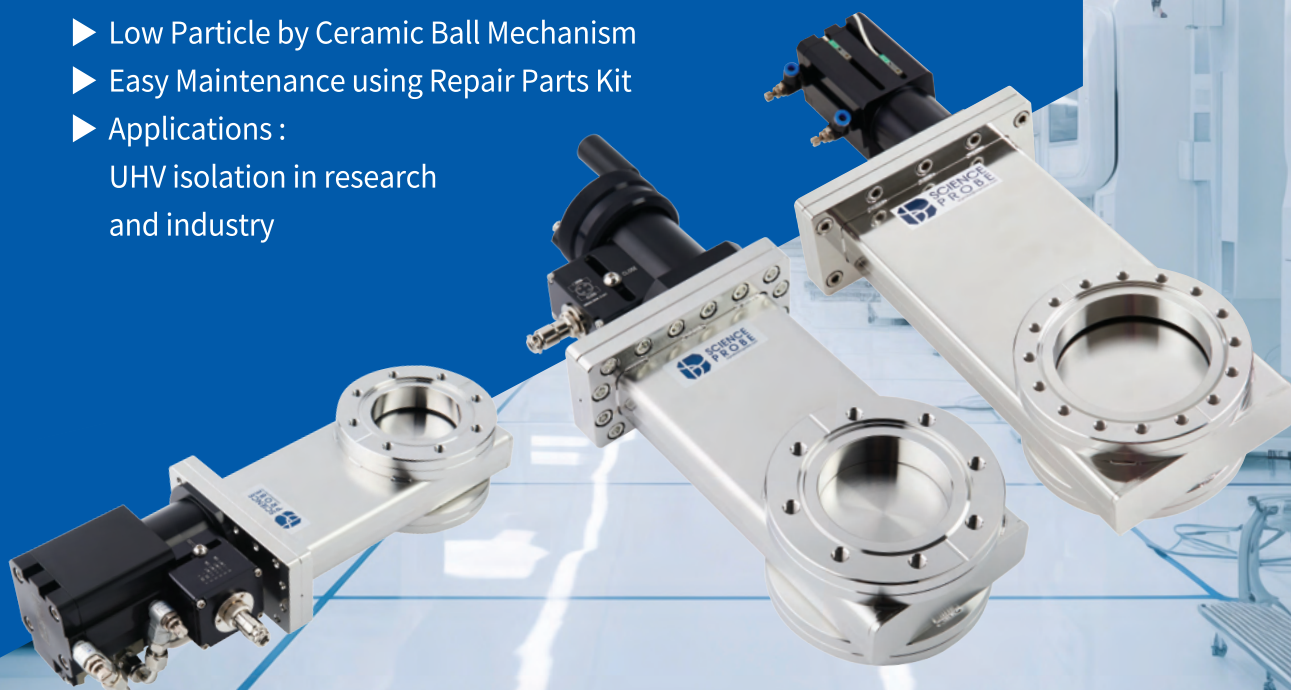


■ Specifications

GATE SEAL TYPE	HV GATE VALVE
Operation	Manual / Pneumatic
Flange Size (ID)	Manual: 1.5" ~ 12" / Pneumatic: 1.5" ~ 50"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	4" ~ 6": 1×10^{-10} mbar to 1400 mbar 8" ~ 14": 1×10^{-10} mbar to 1200 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	1.5" ~ 6": ≤ 1400 mbar / 8" ~ 14" ≤ 1200 mbar
Leak rate	$< 1 \times 10^{-10}$ mbar ℓ/sec
Cycles until first service	250,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 150 °C
Materials	Body (Stainless Steel304 or 316L) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

UHV GATE VALVE

- ▶ Low Particle by Ceramic Ball Mechanism
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications :
UHV isolation in research
and industry



Specifications

GATE SEAL TYPE	UHV GATE VALVE
Operation	Manual/ Pneumatic
Flange Size (ID)	1.5" ~ 12"
Flange Type	CF
Feedthrough	Welded Bellows (AM350 or STS316L)
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Cu Gasket
Response Time	≤ 2 sec
Operate Pressure Range	1.5" ~ 6": 1x10 ⁻¹⁰ mbar to 1400mbar 8" ~ 12": 1x10 ⁻¹⁰ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	1.5" ~ 6": ≤ 1400 mbar / 8" ~ 12" ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 250 °C
Temperature for Actuator	≤ 150°C
Temperature for Position Indicator	~ 150°C
Materials	Body (Stainless Steel304 or 316L) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

SPECIAL GATE VALVE

- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Wire up Solenoid Valve & Position Sensor to 15 Pin D-Sub Connector
- ▶ Limit Switch
- ▶ Lock Function
- ▶ Speed Controller & Solenoid Valve(2 Port+ N2 Port) are connected by Stainless Steel Tube (60)
- ▶ Applications: Pump isolation, High level of process by product in the gas stream

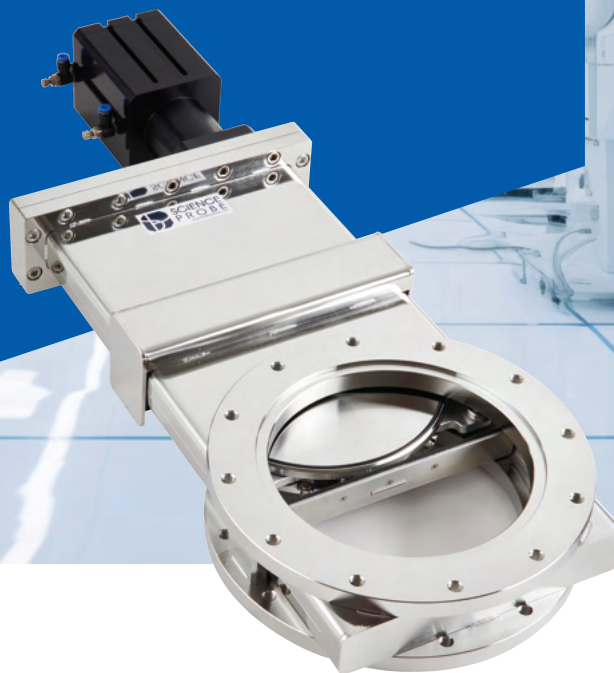


■ Specifications

GATE SEAL TYPE	SPECIAL GATE VALVE
Operation	Pneumatic
Flange Size (ID)	2.5" ~ 12"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 0.3 sec ~ 2 sec
Operate Pressure Range	4" ~ 6": 1x10 ⁻¹⁰ mbar to 1400mbar 8" ~ 12": 1x10 ⁻¹⁰ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	4" ~ 6": ≤ 1400 mbar / 8" ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	250,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 60°C
Bake Temperature	≤ 150 °C
Materials	Body (Stainless Steel304) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

SHIELD GATE VALVE

- ▶ Less than 1 mm gap between valve body and blocker
- ▶ Prevents in flow gas(powder) into inside of valve body
- ▶ Applications: Pump isolation, High level of process by product in the gas stream



Specifications

GATE SEAL TYPE	SHIELD GATE VALVE
Operation	Manual/ Pneumatic
Flange Size (ID)	2.5" ~ 10"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	2.5" ~ 6": 1x10 ⁻¹⁰ mbar to 1400mbar 8" ~ 10": 1x10 ⁻¹⁰ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	2.5" ~ 6": ≤ 1400 mbar / 8" ~ 10" ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 150 °C
Materials	Body (Stainless Steel304) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

3rd POSITION GATE VALVE

- ▶ 3 Position Function
 - Valve Open, Valve Close, 3rd POSITION
- ▶ Equipment can read valve state through connect to 9 Pin D-Sub of the Valve
- ▶ Manual and Pneumatic valve combination
- ▶ Applications: Any other process that requires pressure control



■ Specifications

GATE SEAL TYPE	3rd POSITION GATE VALVE
Operation	Pneumatic
Flange Size (ID)	2.5" ~ 12"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	2.5" ~ 6": 1x10 ⁻¹⁰ mbar to 1400mbar 8" ~ 12": 1 x10 ⁻¹⁰ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	2.5" ~ 6": ≤ 1400 mbar / 8" ~ 12": ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 60°C
Bake Temperature	≤ 150 °C
Materials	Body (Stainless Steel304) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

MULTI POSITION GATE VALVE

- ▶ Multi-position gate valves are essential in applications like the semiconductor industry where pressure & conductance are required
- ▶ Full open and close positions are controlled using a pneumatic solenoid valve with a position transmitter
- ▶ All position controls are operated by a controller
- ▶ Able to operate the remote controller by the interface



■ Specifications

GATE SEAL TYPE	MULTI POSITION GATE VALVE
Operation	Pneumatic
Flange Size (ID)	2.5" ~ 12"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	2.5" ~ 6": 1x10 ⁻¹⁰ mbar to 1400mbar 8" ~ 10": 1x10 ⁻¹⁰ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	2.5" ~ 6": ≤ 1400 mbar / 8" ~ 10" ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 60°C
Bake Temperature	≤ 150 °C
Materials	Body (Stainless Steel304) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

HEATING GATE VALVE

- ▶ Heater inserted
- ▶ Heating Controller
- ▶ Applications :
Process with by products
such as powder, gas



■ Specifications

GATE SEAL TYPE	HEATING GATE VALVE
Operation	Manual / Pneumatic
Flange Size (ID)	1.5" ~ 1.2"
Flange Type	ISO, JIS, ASA, CF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 2 sec
Operate Pressure Range	1.5" ~ 6": 1 x 10 ⁻¹⁰ mbar to 1400 mbar 8" ~ 12": 1 x 10 ⁻¹⁰ mbar to 1200 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	1.5 " ~ 6": ≤ 1400 mbar / 8" ~ 14" ≤ 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 200 °C
Materials	Body (Stainless Steel304) / Actuator (Al 6061 Anodizing)
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

ALUMINUM GATE VALVE LIMIT SWITCH TYPE

- ▶ Proof of performance in mass production process equipment
- ▶ Consist of semi-permanent ceramic ball and leaf spring
- ▶ Applications : Suited to demanding purifier process and pipe line



Specifications

GATE SEAL TYPE	ALUMINUM GATE VALVE
Operation	Manual / Pneumatic
Flange Size (ID)	1.5" ~ 10"
Feedthrough	Shaft
Flange Type	ISO
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	≤ 3 sec
Operate Pressure Range	1 x 10 ⁻¹⁰ mbar to 1200 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	≤ 1200 mbar
Leak rate	< 1x10 ⁻⁹ mbar ℓ/sec
Cycles until first service	100,000
Temperature for Valve Body	≤ 120 °C
Temperature for Actuator	≤ 60°C
Bake Temperature	≤ 150 °C
Materials	Body & Mechanism: Al 6061
	Actuator: Al 6061
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

EMERGENCY GATE VALVE

- ▶ The valve features an automatic shut-off function if the main power supply (CD24V) is interrupted or if the operating pressure drops below 0.45 MPa."
- ▶ A bypass function is also available, allowing the user to force the valve open manually



■ Specifications

GATE SEAL TYPE	EMERGENCY GATE VALVE
Operation	Pneumatic
Flange Size (ID)	4" ~ 10"
Feedthrough	Welded Bellows
Flange Type	ISO, CF, JIS
Gate Seal	FKM(Viton)
Bonnet Seal	FKM(Viton)
Response Time	≤ 2 sec
Operate Pressure Range	1x10 ⁻⁸ mbar to 1200mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	≤ 1200 mbar
Pressure range	1 x 10 ⁻⁸ mbar to 1200 mbar
Leak rate	< 1x10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	100,000
Temperature for Valve Body	≤ 120°C
Temperature for Actuator	≤ 60 °C
Materials	Body: STS304, Al 6061 Anodizing
	Mechanism: STS304, Al 6061 Anodizing
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

TRIPLE PREVENTION GATE VALVE

- ▶ Triple Prevention Function
- ▶ Valve Controller (1CH~ 4CH)
- ▶ Applications :
Process with by products such as powder and gas in semiconductor line Prevent back stream



■ Specifications

GATE SEAL TYPE	TRIPLE PREVENTION GATE VALVE
Operation	Pneumatic
Flange Size (ID)	1.5" ~ 10"
Flange Type	ISO, KF
Feedthrough	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring
Bonnet Seal	Viton O-Ring
Response Time	≤ 0.3 sec ~ 0.6 sec
Operate Pressure Range	1.5" ~ 6": 1 x 10 ⁻¹⁰ mbar to 1400 mbar 8" ~ 10": 1 x 10 ⁻¹⁰ mbar to 1200 mbar
Differential pressure on the gate	1.5 " ~ 6": ≤1400 mbar / 8" ~ 10" ≤ 1200 mbar
Leak rate	< 1 x 10 ⁻¹⁰ mbar ℓ/sec
Cycles until first service	200,000
Temperature for Valve Body	≤ 200 °C
Temperature for Actuator	≤ 80°C
Bake Temperature	≤ 150 °C
Materials	Stainless Steel304, AL606 I Anodizing
Mounting Position	Any
Operating Pressure (N2)	4 ~ 7 bar

LARGE GATE VALVE

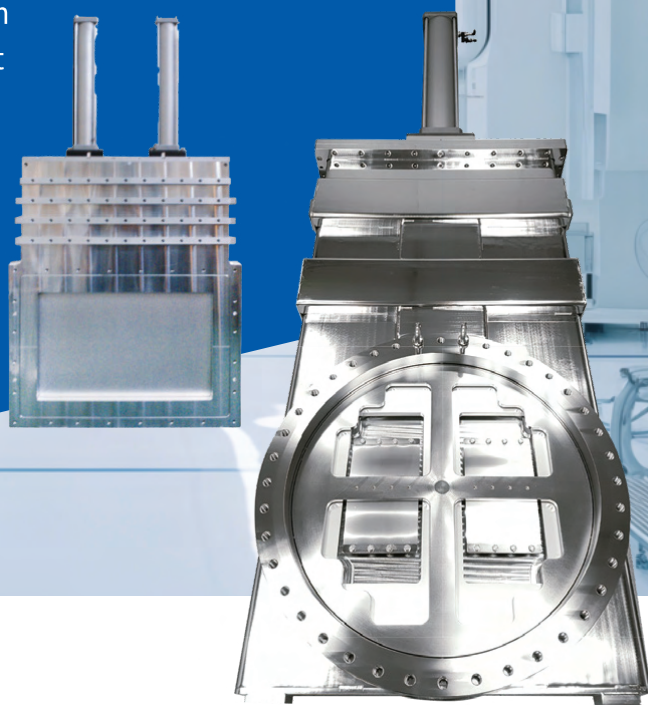
CUSTOMIZED LARGE VALVE

Large gate VALVE

- ▶ Low Particle by Ceramic Ball Mechanism
- ▶ Easy Maintenance using Repair Parts Kit
- ▶ Applications : Isolation valve for research and industry

Customized large valve

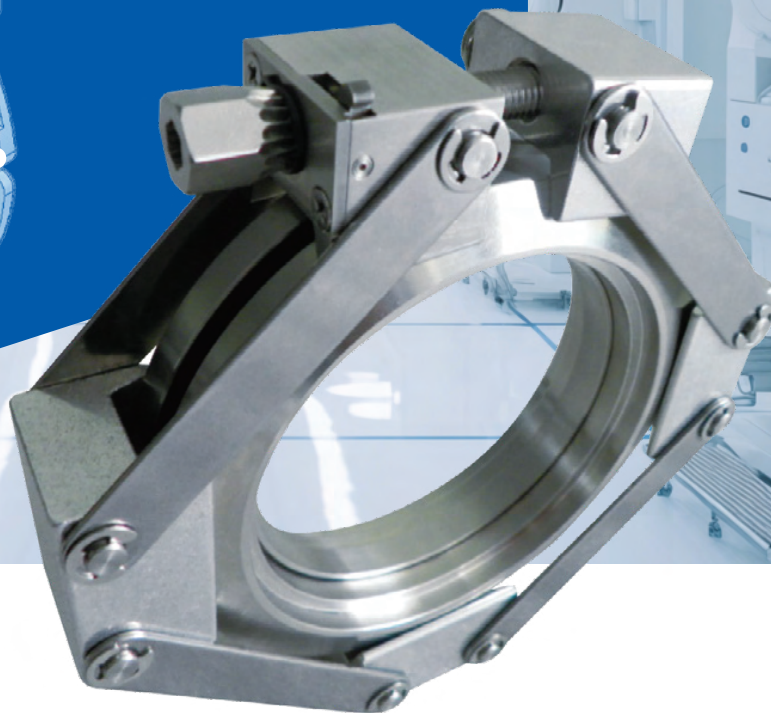
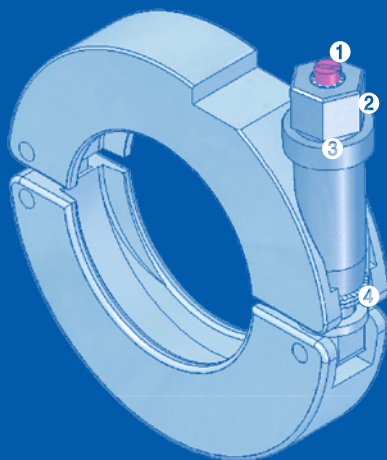
- ▶ Customized Order Made
- ▶ Applications : Large coating systems



■ Specifications

GATE SEAL TYPE	LARGE GATE VALVE / CUSTOMIZED LARGE TRANSFER VALVE
Operation	Pneumatic
Flange Size (ID)	1.5" ~ 50" / 80 X 500 / 100 X 400 / 200 X 1800 / 650 x 1050, etc
Flange Type	ISO, JIS, ASA / Customized
Feedthrough	Viton O-Ring / Welded Bellows / O-Ring Seal
Gate Seal	Viton O-Ring / Kalrez O-Ring / EPDM
Bonnet Seal	Viton O-Ring
Response Time	Adjustable / ≤ 2 sec
Operate Pressure Range	1×10^{-8} mbar to 1000 mbar
Differential pressure at opening	≤ 30 mbar
Differential pressure on the gate	≤ 1000 mbar
Leak rate	$< 1 \times 10^{-9}$ mbar ℓ /sec / $< 5 \times 10^{-9}$ mbar ℓ /sec
Cycles until first service	10,000 ~ 100,000 / 10,000 ~ 200,000
Temperature for Valve Body	≤ 150 °C / ≤ 200 °C
Temperature for Actuator	≤ 80 °C
Bake Temperature	≤ 200 °C
Materials	Stainless Steel304, AL6061 Anodizing / Stainless Steel304, A5083~A7075
Mounting Position	Any
Operating Pressure (N2)	6 ~ 8 bar

CLAMP



Product Characteristic



① Fool Proof Device

Visually identifiable when fastening
Apply the device



② Position Lock Device

Development of technology to
prevent loosening of 12 tooth
screws at 3 points



③ Slip Prevention nut

Slip processing to improve
workability when rotating by hand

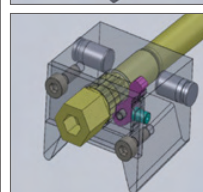
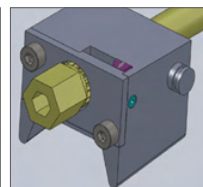
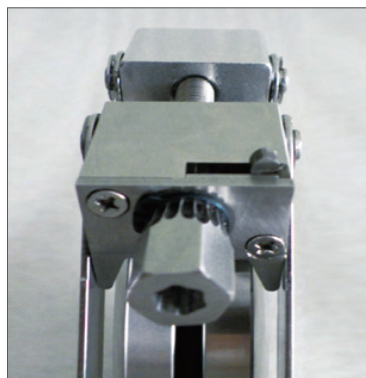


④ Slip Prevention washer

First locking effect by fastening
washer to prevent slipping

Available Sizes:
NW25, NW40, NW50

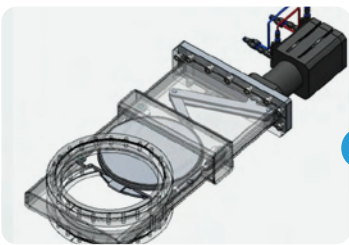
Lock Chain Clamp View



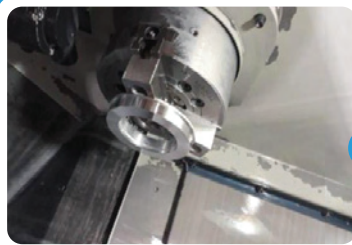
In LOCK state, LOCK state is maintained while being
shunted, and no reverse rotation is performed

Available Sizes :
NW63, NW80, NW100, NW125, NW160

VACUUM GATE VALVES



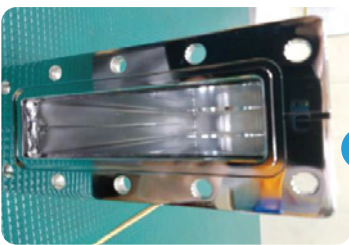
Design



Machining



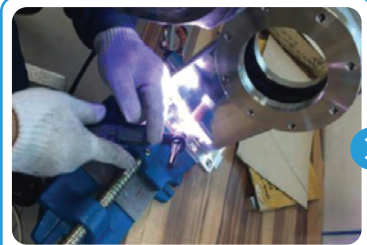
Measurement



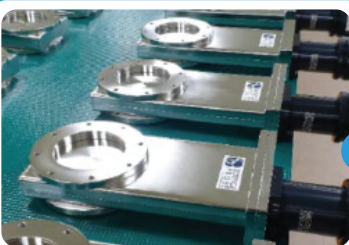
Surface Treatment



Brazing



Tig Welding



Assembly



Leak Test



Packing

