

- ▶ Our goal is Global Network Build
- ▶ Enlargement Semiconductor & Semiconductor Equipment Markets
- ▶ Strengthen Global Competitiveness by Expanding Overseas Market



# Vacuum Gate VALVES

## SCIENCE PROBE Products

- . HV Gate Valves
- . UHV Gate Valve
- . Special Gate Valve
- . Shield Gate Valve
- . 3rd(Multi) Position Gate Valve
- . Heating Gate Valve
- . Double Provention Gate Valve
- . Gate Valve Control System
- . Large Gate Valve
- . Transfer Valve
- . Customized Slit Valve
- . 3 Way Hot Valve



Made in Korea



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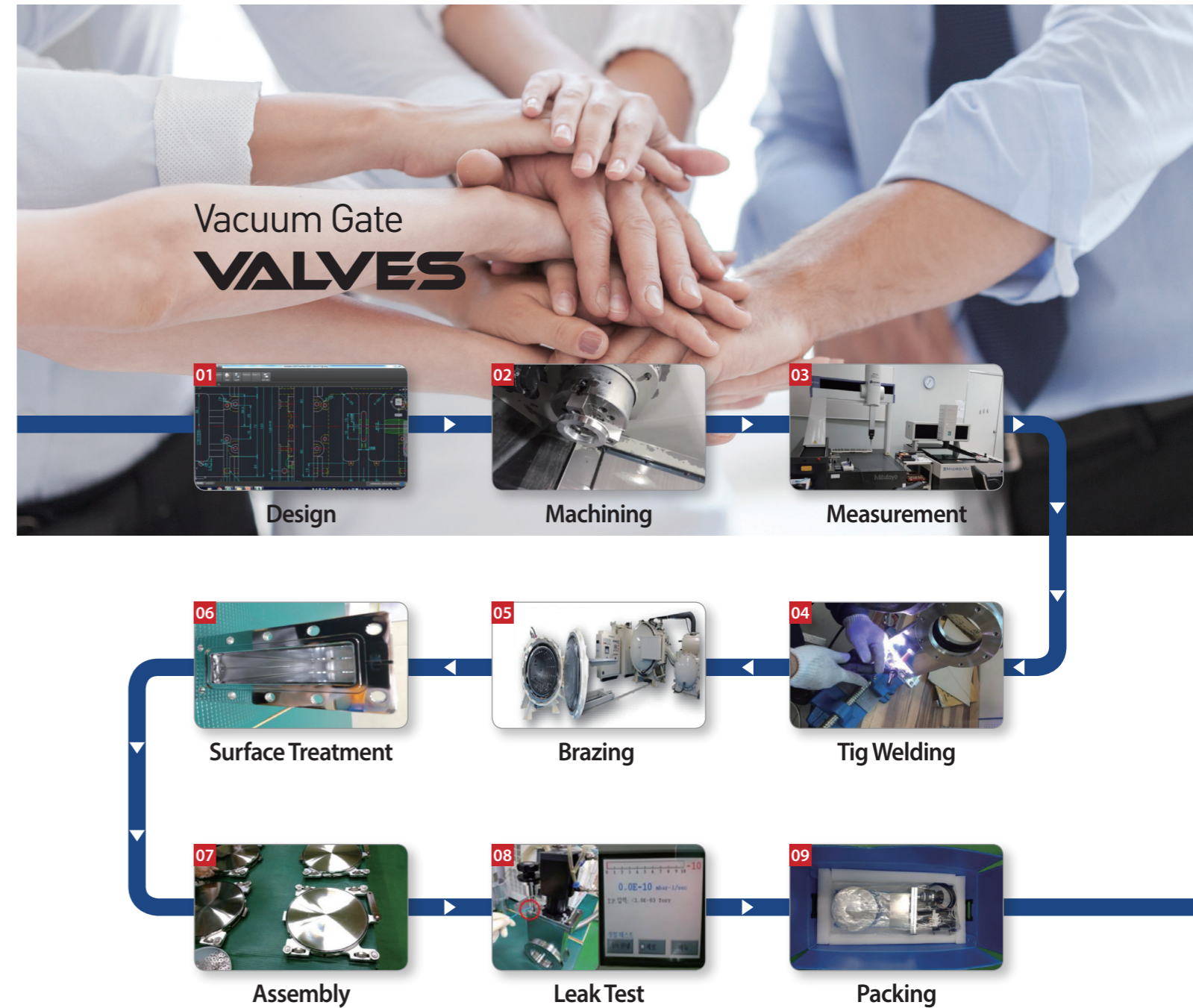
Made in Korea



# Ordering Numbers for Circular Gate Valves

Port	Flange	Bonnet Seal	Actuator	Ordering No.	Port	Flange	Bonnet Seal	Actuator	Ordering No.								
1.5"	CF2.75 (ICF70)	Gasket	Pneumatic	SPGV1.5-PCFU	8"	CF10" (ICF253)	Gasket	Pneumatic	SPGV8-PCFU								
		O-ring		SPGV1.5-PCF			O-ring		SPGV8-PCF								
	NW 40 KF	O-ring	SPGV1.5-PKF	ASA 8 ANSI		O-ring	SPGV8-PISO										
		Gasket	SPGV1.5-MCFU	JIS 200 VF		O-ring	SPGV8-PASA										
CF2.75 (ICF70)	O-ring	Manual	SPGV1.5-MCF	SHIELD		O-ring	SPGV8-PJIS										
			SPGV1.5-MKF	SHIELD		O-ring	SPGV8-PSH										
2"	NW 50 KF	O-ring	Pneumatic	SPGV2-PKF		3rd Position	O-ring		Manual	SPGV8-3P							
		O-ring		Manual		SPGV2-MKF	PROTECTION			O-ring	SPGV8-PGV						
2.5"	CF4.5" (ICF114)	Gasket	Pneumatic	SPGV2.5-PCFU		CF10" (ICF253)	Gasket		Manual	SPGV8-MCFU							
		O-ring		SPGV2.5-PCF			O-ring			SPGV8-MCF							
		O-ring		SPGV2.5-PISO	ASA 8 ANSI		O-ring	SPGV8-MISO									
		O-ring		SPGV2.5-PASA	JIS 200 VF		O-ring	SPGV8-MASA									
	NW 63 ISO	O-ring	Pneumatic	SPGV2.5-PASA	SHIELD	O-ring	SPGV8-MJIS										
				SHIELD	O-ring	SPGV8-MSH											
				3rd Position	O-ring	SPGV2.5-PSH	3rd Position	O-ring	SPGV10-PCFU								
				SPGV2.5-3P	CF12" (ICF305)	Gasket	Pneumatic	SPGV10-PCF									
	CF4.5" (ICF114)	O-ring	Manual	SPGV2.5-MCFU	NW 250 ISO	O-ring		SPGV10-PISO									
	O-ring	SPGV2.5-MCF	ASA 10 ANSI	O-ring	SPGV10-PASA												
	NW 63 ISO	O-ring	SPGV2.5-MISO	JIS 250 VF	O-ring	SPGV10-PJIS											
	ASA 2.5 ANSI	O-ring	SPGV2.5-MASA	SHIELD	O-ring	SPGV10-PSH											
SHIELD	O-ring	SPGV2.5-MSH	3rd Position	O-ring	SPGV10-3P												
3"	NW 80 ISO	O-ring	Pneumatic	SPGV3-PISO	PROTECTION	O-ring		Manual	SPGV10-PGV								
		O-ring		SPGV3-PSH	CF12" (ICF305)	Gasket			SPGV10-MCFU								
	O-ring	SPGV3-3P		NW 250 ISO	O-ring	SPGV10-MCF											
	O-ring	Manual		SPGV3-MISO	ASA 10 ANSI	O-ring			SPGV10-MISO								
4"	CF6" (ICF152)	Gasket	Pneumatic	SPGV4-PCFU	CF12" (ICF305)	Gasket	Manual	SPGV10-MASA									
		O-ring		SPGV4-PCF		SHIELD		O-ring	SPGV10-MJIS								
		O-ring		SPGV4-PISO		3rd Position		O-ring	SPGV10-MSH								
		O-ring		SPGV4-PASA		NW 250 ISO		O-ring	SPGV12-PCFU								
	JIS 100 VF	O-ring	Pneumatic	SPGV4-PJIS	CF14" (ICF356)	Gasket	Pneumatic	SPGV12-PCF									
				SPGV4-PSH	NW 320 ISO	O-ring		SPGV12-PISO									
				SPGV4-3P	ASA 12 ANSI	O-ring		SPGV12-PASA									
				SPGV4-MCFU	JIS 300 VF	O-ring		SPGV12-PJIS									
	CF6" (ICF152)	O-ring	Manual	SPGV4-MCF	SHIELD	O-ring		SPGV12-PSH									
				SPGV4-MISO	3rd Position	O-ring		SPGV12-3P									
				SPGV4-MASA	CF16.5"	O-ring	SPGV14-PCF										
				SPGV4-MJIS	JIS 350 VF	O-ring	SPGV14-PJIS										
5"	NW 125	O-ring	Pneumatic	SPGV5-PISO	16"	JIS 400 VF	O-ring	Pneumatic	SPGV16-PJIS1								
		O-ring		Manual		SPGV5-MISO	O-ring		SPGV16-PJIS2								
6"	CF8" (ICF203)	Gasket	Pneumatic	SPGV6-PCFU	18"	JIS 450 VF	O-ring	Pneumatic	SPGV18-PJIS								
		O-ring		SPGV6-PCF		20"	JIS 500 VF		O-ring	Pneumatic	SPGV20-PJIS						
		O-ring		SPGV6-PISO			22"		JIS 550 VF		O-ring	Pneumatic	SPGV22-PJIS				
		O-ring		SPGV6-PASA					24"		JIS 600 VF		O-ring	Pneumatic	SPGV24-PJIS		
		O-ring		SPGV6-PJIS							30"		JIS 750 VF		O-ring	Pneumatic	SPGV30-PJIS
		O-ring		SPGV6-PSH									Special Size & Type Available !!				
	O-ring	SPGV6-3P															
	O-ring	SPGV6-PGV															
	O-ring	SPGV6-MCFU															
	O-ring	SPGV6-MCF															
	O-ring	SPGV6-MISO															
	O-ring	SPGV6-MASA															
O-ring	SPGV6-MJIS																
O-ring	SPGV6-MSH																

# Field Compositions



# Ordering Numbers for Transfer Valves

Flange (mm)	Aluminum	Stainless Steel
32 x 222	SPTV 32-222A	SPTV 32-222S
46 x 236	SPTV 46-236A	SPTV 46-236S
50 x 336	SPTV 50-336A	SPTV 50-336S
56 x 500	SPTV 56-500A	SPTV 56-500S

Gate Seal Type	HV GATE VALVE	UHV GATE VALVE	SPECIAL GATE VALVE	SHIELD GATE VALVE	3rd(Multi) POSITION GATE VALVE	HEATING GATE VALVE	GATE VALVE CONTROL SYSTEM	LARGE GATE VALVE	TRANSFER VALVE	CUSTOMIZED LARGE TRANSFER VALVE	3 WAY HOT VALVE	DOUBLE PREVENTION GATE VALVE
Pictures												
Characteristics	<ul style="list-style-type: none"> <li>Low Particle by Ceramic Ball Mechanism</li> <li>Easy Maintenance using Repair Parts Kit</li> </ul>	<ul style="list-style-type: none"> <li>Low Particle by Ceramic Ball Mechanism</li> <li>Easy Maintenance using Repair Parts Kit</li> </ul>	<ul style="list-style-type: none"> <li>Easy Maintenance using Repair Parts Kit</li> <li>Wire up Solenoid Valve &amp; Position Sensor to 15 Pin D-Sub Connector</li> <li>Speed Controller &amp; Solenoid Valve(2 Port + N2 Port) are connected by Stainless Steel Tube [φ6]</li> <li>NW25 Angle Valve Mounted</li> </ul>	<ul style="list-style-type: none"> <li>Less than 1mm gap between valve body and blocker</li> <li>prevents inflow gas[powder] into inside of valve body</li> </ul>	<ul style="list-style-type: none"> <li>3 Position Function - Valve Open, Valve Close, 3rd POSITION</li> <li>Equipment can read valve state through connect to 9 Pin D-Sub of the Valve</li> </ul>	<ul style="list-style-type: none"> <li>Heating Function using Jacket or Others</li> <li>Heating Controller</li> </ul>	<ul style="list-style-type: none"> <li>Body Material : Stainless Steel</li> <li>Compact Design</li> <li>Position Indication</li> <li>Valve with Servo Motor</li> <li>Monitor displays the position</li> </ul>	<ul style="list-style-type: none"> <li>Low Particle by Ceramic Ball Mechanism</li> <li>Easy Maintenance using Repair Parts Kit</li> </ul>	<ul style="list-style-type: none"> <li>Body Material : Aluminum or Stainless Steel</li> <li>Compact Design</li> <li>Easy Maintenance using Repair Parts Kit</li> </ul>	<ul style="list-style-type: none"> <li>Customized Order Made</li> </ul>	<ul style="list-style-type: none"> <li>Cartridge Heating Control type</li> <li>Heating Jacket Mountable</li> <li>Temp Controller</li> </ul>	<ul style="list-style-type: none"> <li>Double Prevention Function</li> <li>Valve Controller (1CH ~ 4CH)</li> </ul>
Operation	Manual / Pneumatic	Manual / Pneumatic	Pneumatic	Manual / Pneumatic	Pneumatic	Manual / Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Rotary Ball Type	Pneumatic
Flange Size (ID)	1.5" ~ 14"	1.5" ~ 14"	4" ~ 8"	2.5" ~ 12"	2.5" ~ 12"	2.5" ~ 14"	2.5" ~ 16"	16" ~ 30"	32 x 222 46 x 236 50 x 336 56 x 500	80*500 100*400 200*1800 650*1050, etc	KF40 - 50	4" ~ 10"
Flange Type	ISO, JIS, ASA, CF	CF	ISO, JIS, ASA, CF	ISO, JIS, ASA, CF	ISO, JIS, ASA, CF	ISO, JIS, ASA, CF	ISO, JIS, ASA, CF	ISO, JIS, ASA		Customized	KF	ISO, KF
Feedthrough	Welded Bellows	Welded Bellows	Welded Bellows	Welded Bellows	Welded Bellows	Welded Bellows	Servo Motor	Viton O-Ring	Welded Bellows	Welded Bellows O-Ring Seal	O-Ring Seal	Welded Bellows
Gate Seal	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Viton O-Ring / Kalrez O-Ring	Vulcanized Seal	Viton O-Ring / Kalrez O-Ring	Viton O-Ring	Viton O-Ring / Kalrez O-Ring
Bonnet Seal	Viton O-Ring	Cu Gasket	Viton O-Ring	Viton O-Ring	Viton O-Ring	Viton O-Ring	Viton O-Ring	Viton O-Ring Seal	Viton O-Ring	Viton O-Ring	Viton O-Ring	Viton O-Ring
Response Time	≤ 2 Sec	≤ 2 Sec	≤ 0.3 Sec	≤ 2 Sec	≤ 2 Sec	≤ 2 Sec			≤ 2 Sec			≤ 0.3 Sec
Operate Pressure Range	1×10-10 torr to 1.4 bar	1×10-10 torr to 1.4 bar	1×10-10 torr to 1.4 bar	1×10-10 torr to 1.4 bar	1×10-10 torr to 1.4 bar	1×10-10 torr to 1.4 bar	1×10-8 torr to 1.4 bar	1×10-8 torr to 1 bar	1×10-8 torr to 1.2 bar	1×10-8 torr to 1 bar		1×10-10 torr to 1.4 bar
Differential pressure on the gate	1.5" ~ 14" ≤ 1.4 bar 16" ~ 22" ≤ 1 bar	≤ 1.4 bar	≤ 1.4 bar	≤ 1.4 bar	≤ 1.4 bar	≤ 1.4 bar	≤ 1.4 bar	≤ 1 bar	≤ 1.2 bar	≤ 1 bar		≤ 1.4 bar
Leak rate	< 1×10-10 torr l/sec	< 1×10-10 torr l/sec	< 1×10-10 torr l/sec	< 1×10-10 torr l/sec	< 1×10-10 torr l/sec	< 1×10-10 torr l/sec	< 5×10-9 torr l/sec	< 1×10-9 torr l/sec	Stain Less : < 1×10-9 torr l/sec Aluminum : < 1×10-5 torr l/sec	< 5×10-9 torr l/sec	< 1×10-8 torr l/sec	< 1×10-10 torr l/sec
Cycles until first service	250,000	200,000	250,000	250,000	200,000	200,000	200,000	10,000 ~ 100,000	1,000,000	10,000 ~ 200,000	30,000	200,000
Temperature for Valve Body	≤ 200 °C	≤ 200 °C	≤ 200 °C	≤ 200 °C	≤ 200 °C	≤ 200 °C	≤ 150 °C	≤ 150 °C	Stainless Steel ≤ 200 °C Aluminum ≤ 150 °C	≤ 200 °C	≤ 180 °C	≤ 200 °C
Temperature for Actuator	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C
Bake Temperature	≤ 150 °C	≤ 200 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C	≤ 150 °C
Materials	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , AL6061 Anodizing	Stainless Steel304 , A5083-A7075	Stainless Steel304 , AL6061	Stainless Steel304 , AL6061 Anodizing
Mounting Position	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any
Operating Pressure (N2)	4~7kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	6~8kgf/cm2	4~7kgf/cm2	4~7kgf/cm2	1.5~7kgf/cm2	4~7kgf/cm2

Clamp

**Product Characteristic**

- 1 Foot Proof Device

Visually identifiable when fastening Apply the device

➤

- 2 3 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