PRECESS VACUUM®
普瑞赛思 · Company

工业应用真空阀门

R&D · SEMI · Solar · FPD · Medical

Company Introduction

Founded in 2019 Years – Located Beijing city, the capital of China. Global footprint China, Singapore and Korea, PRECESS is a developer of high-performance vacuum valve, weld bellows and vacuum components. With the innovation and engineering excellence is the driving force of PRECESS' technology solutions and services. Customization on PRECESS product signifies our strong focus to provide customers solutions without compromise.

普瑞赛思 ® brand provides full portfolio of vacuum products in China.

Semiconductor BU – Control valve, transfer valve, ATM door, gate valve, pendulum valve, angle valve.

Solar & Display BU – Control valve, large transfer valve, ATM Door, pendulum valve, gate valve.

GVA and R&D BU – UHV gate valve and angle valve.

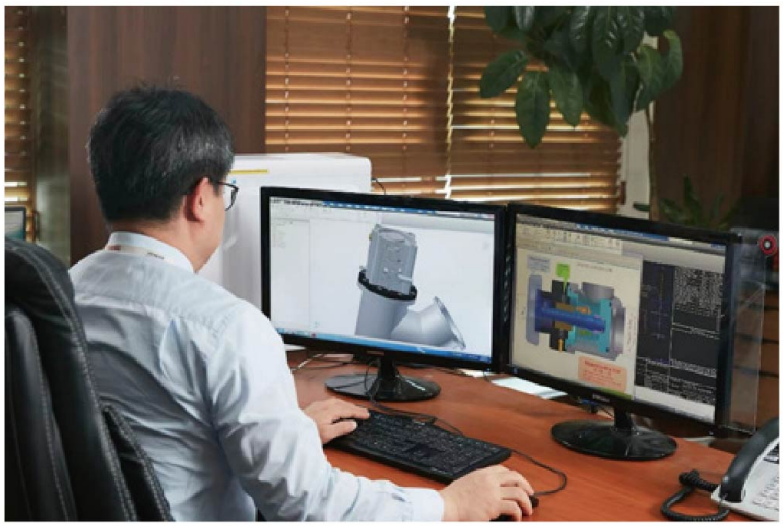
Our strength is the wide range of our product portfolio which comprises approximately 100 vales series with more than 1,500 customized and 1,000 standard products, high steady quality, short lead time, high experienced team. We have solutions for all vacuum levels from sub-atmospheric to extremely high vacuum (XHV).

Aim to be the world best, full portfolio of vacuum valve solution – Control valve, transfer valve, ATM door, gate valve, protection gate valve, pendulum valve, angle valve.

We focus on vacuum technology as our key competence. From the beginning, our approach was to work very closely with our customers. We have a deep knowledge of their industries, needs and expectations and develop new products accordingly. This is our passion for technology innovation.

Applications of our valve are semiconductor process, solar & display, industrial and R&D. Custom options include heating, water cooling, specialty coatings and seals.

After-sales service. Our service team is highly experienced and utilized well-established, proven process.



Product Portfolio – Valve Manufacturing

Manufacturing of vacuum valve

Manufacturing Environment

Form-die & Zig

We pride in our metal mold design, but also various types and sizes of metal molds. Among metal molds and ZIGs, welded metal bellows' sheet pressing metal molds require precise design, manufacture and management.

We are able to predict quality decline by recording and managing the number and time period of production according to the metal mold's serial number.

By taking proactive measures against these predictions, we are further able to preventquality problems. Because this is directly linked to the product's quality, price and competitiveness, only our experts are delegated the task of design and management.

Purity of Cleaning

Quality management regarding cleaning is treated equally with leakage as a critical quality point (CQP).

The aftertreatment processing of electrolytic polishing perfects, the purification of points not visible or touchable.

We have installed 2 systems (total 6 tanks) and D.I watering facilities as ultrasonic cleaners.

Purity of D.I. Water

We use hot D.I. water and ultrasonic cleaning system to block possibility of contamination-related defects.

Cleaning processing is applied to all the products we manufacture. For ultrasonic cleaning, products are separated by level of contamination into 6 different cleaning tanks.

We offer solution to various outgassing problems. Electrolytic polishing solution that has remained in gaps over time leaks or corrodes the interior, causing contamination and defects.

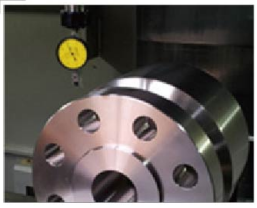
Type	Basis	Toc	UF	Absolute
0.22um	Standard	Standard	Standard	Standard
254/185nm UV Lamp	—	Standard	—	Standard
MW 5000 UF filter	—	—	Standard	Standard
Water Quality	—	—	—	—
Resistivity (at 25C)	18.2	18.2	18.2	18.2
TOC	5-10ppb	1-5ppb	5-10ppb	1-5ppb
Edotoxin(Progens)	—	—	—	—
Bacteria	<1cfu/mm	<1cfu/mm	<1cfu/mm	<1cfu/mm
Particles(0.2um)	<1/mm	<1/mm	<1/mm	<1/mm

Product Portfolio – Valve Manufacturing

Manufacturing of vacuum valve

Accuracy of Machining

Vacuum valve is our core product. We create, we machine process them with accuracy and precision as our principle. Our product parts meet the promised standard of excellence with our clients.



Management of Material

We have the quality of raw material, ratio of constituents and purity inspection. Especially, for the most important material of the welded bellows AM350, hastelloy-C, inconel and other special alloys, in case of durability and corrosion resistance, components ratios, purity we manufactured. It has a decisive influence on the quality of the finished product. We are responsible for quality control through periodic material. By doing this, to guarantee the quality of products, corrosion resistance, service life and reliability.

Accuracy of Welding

To minimize deformation from welding, we use optimal ZIG. Products requiring high precision are processed a secondary machining to correct for any deviation from the target measurement. In UHV and HV environment, we use the back bead welding process to manufacture vacuum pipes.

To prevent oxidation and minimize outgassing, we weld only after nitrogen charging.

Condition of Inside Welding

We check the interior welding status, which is the most important part of vacuum pipe quality control. We focus not only on the exterior condition of our products but also the interior, which directly affect product performance.

Back bead

Autogenous

Fillet

VC*P-* KC**

Pneumatic Double Acting

Flange type : ISO-F

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VC*P-* JF**

Pneumatic Double Acting

Flange type : JIS-VF

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VC*P-*CF**

Pneumatic Double Acting

Flange type : Conflat(CF)

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VC*M-*KC**

Manually Operation

Flange type : ISO-F

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VC*M-*JF**

Manually Operation

Flange type : JIS-VF

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VC*M-*CF**

Manually Operation

Flange type : Conflat(CF)

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Manual & Precautions

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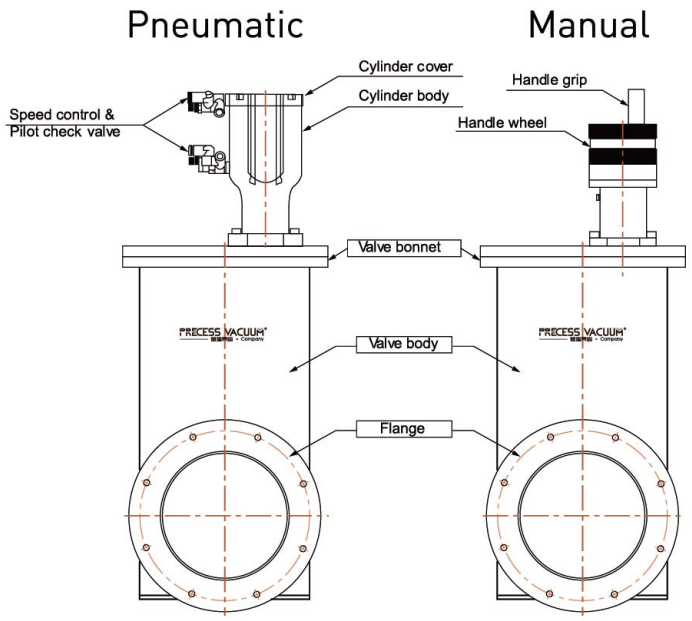
HV Gate Valve Specification

Port Size	40,63,100,160(150),200,250,320(300)	
Port Flange	ISO-F, ISO, CF, JIS-VF	
Actuation	Pneumatic & Manually	
Materials	Body	304 Stainless steel
	Seal plate(DISK)	304 Stainless steel
	Actuator	Aluminum (Anodized)
	DISK Seal(O-ring)	FKM (Note-1)
	Bonnet Seal	FKM (Note-1)
Bellows	Material	Standard / AM350 Stainless steel
	Type	Welded Metal Bellows
Pressure range	DN63 – 200	1 x 10^{-8} mbar to 1.6 bar
	DN250 – 320	1 x 10^{-8} mbar to 1.2 bar
Leak tightness		＜1.0 X 10^{-10} Pa . M3 /s He
Differential pressure	DN63 – 200	Max. 1.6 bar across valve disk
	DN250 – 320	Max. 1.2 bar across valve disk
Operating temperature of valve body		150℃
Operating temperature of actuator		80℃
Actuator	Pneumatic	Double Acting cylinder & w/pilot check valve
	Manual	Hand wheel
Required CDA pressure		0.5 ~ 0.7 Mpa
CDA connection port size		Rc1/8" ~ Rc 1/2"(PT)
Mounting Position		Any direction
Life cycle		100,000 Cycles
Position sensor		Auto switch / (DC24V / 5~50mA)

Note-1 : kalrez® of Dupont, Chemraz® of Green Tweed, Gasket and others are available

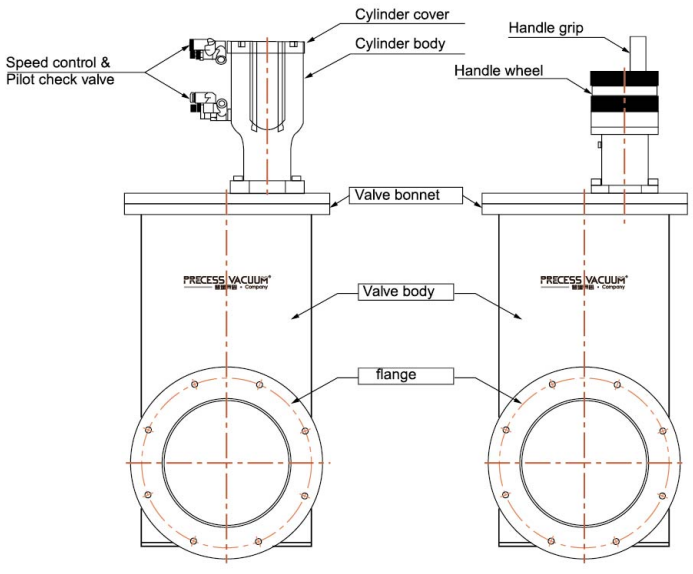


UHV Gate Valve Specification

Port Size	40,63,100,160(150),200,250,320(300)	
Port Flange	ISO-F, ISO, CF, JIS-VF	
Actuation	Pneumatic & Manually	
Materials	Body	304 Stainless steel
	Seal plate(DISK)	304 Stainless steel
	Actuator	Aluminum (Anodized)
	DISK Seal(O-ring)	FKM (Note-1)
	Bonnet Seal	Metal gasket
Bellows	Material	Standard AISI 316L (1.4404)
	Type	Welded Metal Bellows
Leak tightness		＜5.0X 10^{-11} Pa . M3 /s He
Pressure range	DN63 – 200	1 x 10^{-10} mbar to 1.6 bar
	DN250 – 320	1 x 10^{-10} mbar to 1.2 bar
Differential pressure	DN63 – 200	Max. 1.6 bar across valve disk
	DN250 – 320	Max. 1.2 bar across valve disk
Operating temperature of valve body		200℃
Operating temperature of actuator		200℃
Actuator	Pneumatic	Double Acting cylinder & w/pilot check valve
	Manual	Hand wheel
Required CDA pressure		0.5 ~ 0.7 Mpa
CDA connection port size		Rc1/8" ~ Rc 1/2"(PT)
Mounting Position		Any direction
Life cycle		50,000 Cycles
Position sensor		Auto switch / (DC24V / 5~50mA)

Note-1 : Kalrez® of Dupont, Chemraz® of Green Tweed, Gasket and others are available

Pneumatic Manual



CIRCULAR GATE VALVE SPECIFICATION

MODEL TYPE & SIZE

	V	C	S	P	–	1	0	0	K	C	*EXAMPLE
Model	**V**										Vacuum valve
Type		**C**									Circular gate valve
Bonnet Sealing			**S**								O-ring gasket
			G								Metal gasket (OFHC)
Operation				**P**							Double Acting (Pneumatic)
				M							Manual operation
Size						**1**	**0**	**0**			Port size
Flange Specification									**K**	**C**	ISO-F (Tapped)
									C	**F**	ISO-CF (Tapped)
									J	**F**	JIS-VF (Tapped)

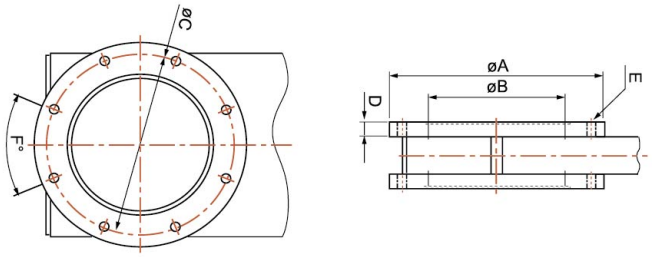
Specification				KC	CF	JF	Operation
Size Chart	0	4	0	NW40KF	CF2.75"	N/A	Pneumatic & Manual
	0	6	3	ISO63-F	CF4.5"	N/A	
	1	0	0	ISO100-F	CF6"	JIS VF100	
	1	6	0	ISO160-F	CF8"	JIS VF150	
	2	0	0	ISO200-F	CF10"	JIS VF200	
	2	5	0	ISO250-F	CF12"	JIS VF250	
	3	2	0	ISO320-F	CF14"	JIS VF300	Only Pneumatic

	040	063	100	160	200	250	320
◆=(ISO-K, ISO-F)	040	063	100	160	200	250	320
◇=(JIS)	N/A	N/A	100	150	200	250	300
●=ISO-CF	2.75	4.5	6	8	10	12	14
VC*P	◆●	◆●	◆◇●	◆◇●	◆◇●	◆◇●	◆◇●
VC*M	◆●	◆●	◆◇●	◆◇●	◆◇●	◆◇●	◆◇●

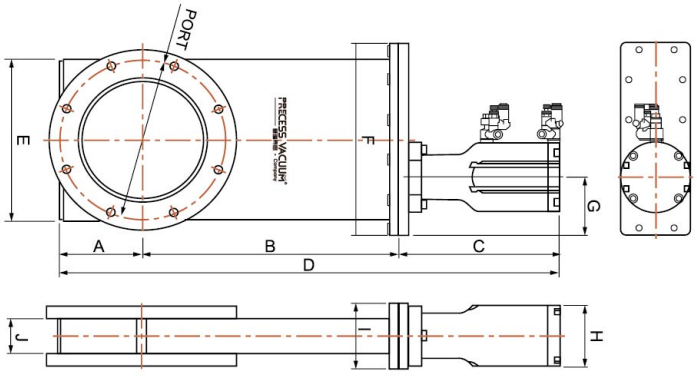
PORT SPECIFICATION

		Pneumatic (D.A.)	Manual
ISO-KF ISO-F	NW40KF	VC*P-040KC	VC*M-040KC
	ISO63-F	VC*P-063KC	VC*M-063KC
	ISO100-F	VC*P-100KC	VC*M-100KC
	ISO160-F	VC*P-160KC	VC*M-160KC
	ISO200-F	VC*P-200KC	VC*M-200KC
	ISO250-F	VC*P-250KC	VC*M-250KC
	ISO320-F	VC*P-320KC	VC*M-320KC
ISO-CF	CF2.75"	VC*P-040CF	VC*M-040CF
	CF4.5"	VC*P-063CF	VC*M-063CF
	CF6"	VC*P-100CF	VC*M-100CF
	CF8"	VC*P-160CF	VC*M-160CF
	CF10"	VC*P-200CF	VC*M-200CF
	CF12"	VC*P-250CF	VC*M-250CF
	CF14"	VC*P-320CF	VC*M-320CF
JIS-VF	JIS VF100	VC*P-100JF	VC*M-100JF
	JIS VF150	VC*P-150JF	VC*M-150JF
	JIS VF200	VC*P-200JF	VC*M-200JF
	JIS VF250	VC*P-250JF	VC*M-250JF
	JIS VF300	VC*P-300JF	N/A

Model code	VC*P-*** KC
Shaft sealing	Welded metal bellows
FLANGE	ISO-F

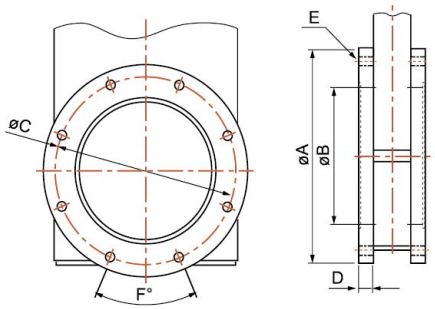


Size	A	B	C	D	E	F
040KF	Ø55	Ø38	N/A	12.7	N/A	N/A
063KC	Ø130	Ø63.5	Ø110	12	4~M8	90°
100KC	Ø165	Ø100	Ø145	12	8~M8	45°
160KC	Ø225	Ø145	Ø200	16	8~M10	45°
200KC	Ø285	Ø190	Ø260	16	12~M10	30°
250KC	Ø335	Ø245	Ø310	16	12~M10	30°
320KC	Ø425	Ø305	Ø395	22	12~M12	30°

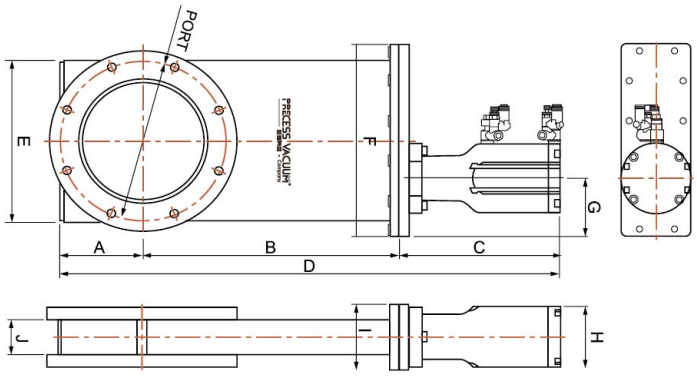


Size		A	B	C	D	E	F	G	H	I	J
040	**Ø38**	38.5	103.5	109.5	251.5	69.5	92	30.5	52	50	27
063	**Ø63.5**	52.5	142	133.5	328	99.5	132	43	64	64	32.5
100	**Ø100**	74.5	223	160.5	458	140	184	61	64	82	40
160	**Ø145**	99	305	190	594	190	230	68	77	82	42
200	**Ø190**	121.5	389.5	227	738	239	279	76	94	82	42
250	**Ø245**	149	489	273	911	294	334	95	124	89	48
320	**Ø305**	188	590	277	1055	368	410	105	124	94	49.6

Model code	VC*P-*** JF
Shaft sealing	Welded metal bellows
FLANGE	JIS-VF

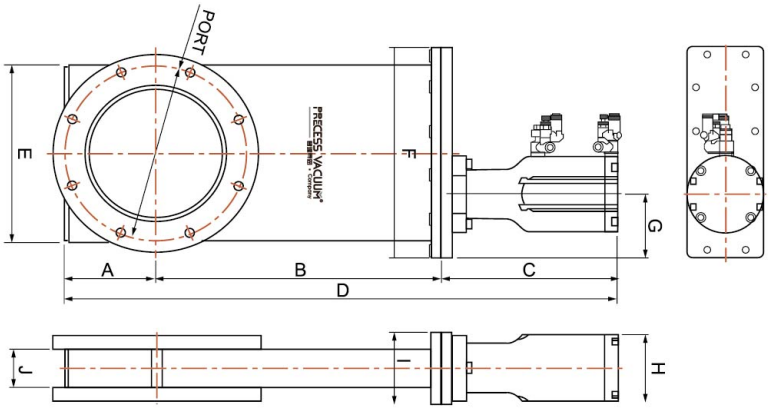


Size	A	B	C	D	E	F
100JF	Ø185	Ø100	Ø160	12	8~M10	45°
150JF	Ø235	Ø145	Ø210	16	8~M10	45°
200JF	Ø00	Ø190	Ø270	16	8~M12	45°
250JF	Ø350	Ø245	Ø320	18	12~M12	30°
300JF	Ø400	Ø305	Ø370	22	12~M12	30°

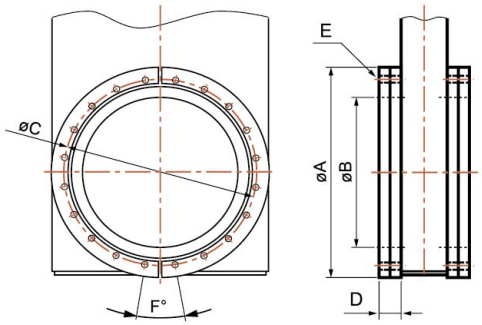


Size		A	B	C	D	E	F	G	H	I	J
040	Ø38	38.5	103.5	109.5	251.5	69.5	92	30.5	52	50	27
063	Ø63.5	52.5	142	133.5	328	99.5	132	43	64	64	32.5
100	Ø100	74.5	223	160.5	458	140	184	61	64	82	40
160	Ø145	99	305	190	594	190	230	68	77	82	42
200	Ø190	121.5	389.5	227	738	239	279	76	94	82	42
250	Ø245	149	489	273	911	294	334	95	124	89	48
320	Ø305	188	590	277	1055	368	410	105	124	94	49.6

Model code	VC*P-*** CF
Shaft sealing	Welded metal bellows
FLANGE	CF

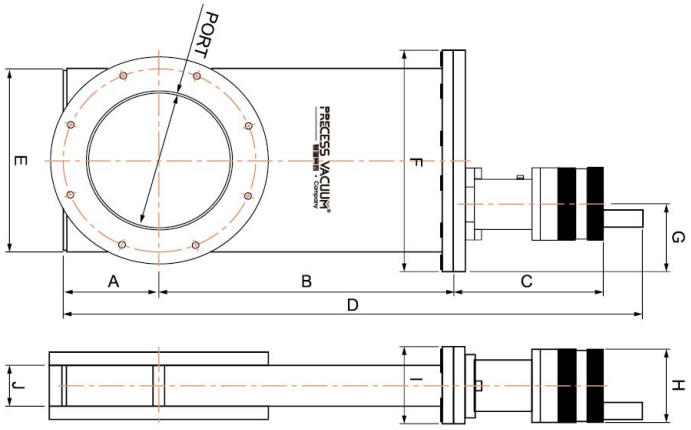


Size		A	B	C	D	E	F	G	H	I	J
040	Ø38	38.5	103.5	109.5	251.5	69.5	92	30.5	52	50	27
063	Ø63.5	52.5	142	133.5	328	99.5	132	43	64	64	32.5
100	Ø100	74.5	223	160.5	458	140	184	61	64	82	40
160	Ø145	99	305	190	594	190	230	68	77	82	42
200	Ø190	121.5	389.5	227	738	239	279	76	94	82	42
250	Ø245	149	489	273	911	294	334	95	124	89	48
320	Ø305	188	590	277	1055	368	410	105	124	94	49.6

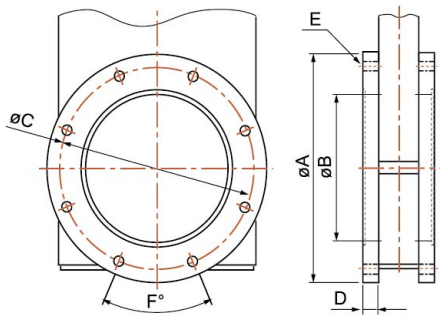


Size	A	B	C	D	E	F
040CF	Ø70	Ø38	Ø58.7	12.7	6~M6	60°
063CF	Ø114	Ø63.5	Ø92.1	17.5	8~M8	45°
100CF	Ø152	Ø100	Ø130.3	20	8~M8	45°
160CF	Ø203	Ø145	Ø181	22	20~M8	18°
200CF	Ø253	Ø190	Ø231.8	22	24~M8	15°
250CF	Ø305	Ø245	Ø284	28	32~M8	11.25°
320CF	Ø355.6	Ø305	Ø325.4	28	30~M8	12°

Model code	VC*M-*** KC
Shaft sealing	Welded metal bellows
FLANGE	ISO-F

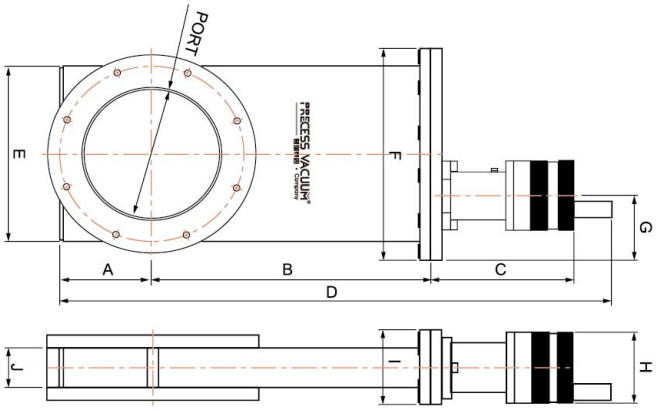


Size		A	B	C	D	E	F	G	H	I	J
040	Ø38	38.5	103.5	86	268.7	69.5	92	30.5	48	38	25.4
063	Ø63.5	52.5	142	94	329.5	99.5	132	43	64	64	32.5
100	Ø100	74.5	223	143	482	140	184	61	95	82	40
160	Ø145	99	305	154.5	599.2	190	230	68	79	82	42
200	Ø190	121.5	389.5	194.5	746.5	239	279	76	109	82	42
250	Ø245	149	489	226.5	905.2	294	334	95	117	89	48



Size	A	B	C	D	E	F
040KF	Ø55	Ø38	N/A	12.7	N/A	N/A
063KC	Ø130	Ø63.5	Ø110	12	4~M8	90°
100KC	Ø165	Ø100	Ø145	12	8~M8	45°
160KC	Ø225	Ø145	Ø200	16	8~M10	45°
200KC	Ø285	Ø190	Ø260	16	12~M10	30°
250KC	Ø335	Ø245	Ø310	16	12~M10	30°
320KC	Ø425	Ø305	Ø395	22	12~M12	30°

Model code	VC*M-*** JF
Shaft sealing	Welded metal bellows
FLANGE	JIS-VF



Size		A	B	C	D	E	F	G	H	I	J
040	Ø38	38.5	103.5	86	268.7	69.5	92	30.5	48	38	25.4
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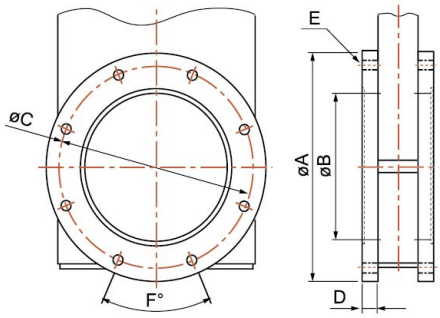
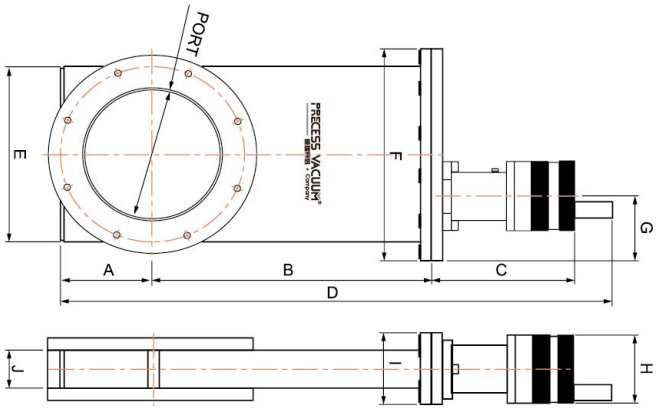
160	Ø145	99	305	154.5	599.2	190	230	68	79	82	42
200	Ø190	121.5	389.5	194.5	746.5	239	279	76	109	82	42
250	Ø245	149	489	226.5	905.2	294	334	95	117	89	48
320	Ø305	188	590	277	1055	368	410	105	124	94	49.6

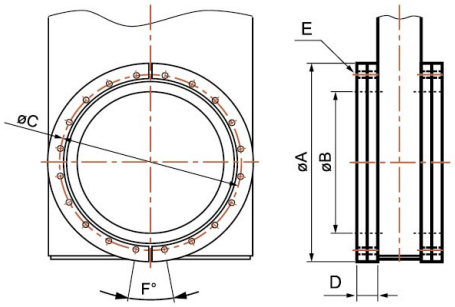


Size	A	B	C	D	E	F
100JF	Ø185	Ø100	Ø160	12	8~M10	45°
150JF	Ø235	Ø145	Ø210	16	8~M10	45°
200JF	Ø300	Ø190	Ø270	16	8~M12	45°
250JF	Ø350	Ø245	Ø320	18	12~M12	30°
300JF	Ø400	Ø305	Ø370	22	12~M12	30°
250CF	Ø305	Ø245	Ø284	28	32~M8	11.25°
320CF	Ø355.6	Ø305	Ø325.4	28	30~M8	12°

Model code	VC*M-*** CF
Shaft sealing	Welded metal bellows
FLANGE	CF



Size		A	B	C	D	E	F	G	H	I	J
040	Ø38	38.5	103.5	86	268.7	69.5	92	30.5	48	38	25.4
063	Ø63.5	52.5	142	94	329.5	99.5	132	43	64	64	32.5
100	Ø100	74.5	223	143	482	140	184	61	95	82	40
160	Ø145	99	305	154.5	599.2	190	230	68	79	82	42
200	Ø190	121.5	389.5	194.5	746.5	239	279	76	109	82	42
250	Ø245	149	489	226.5	905.2	294	334	95	117	89	48
320	Ø305	188	590	277	1055	368	410	105	124	94	49.6



Size	A	B	C	D	E	F
040CF	Ø70	Ø38	Ø58,7	12.7	6~M6	60°
063CF	Ø114	Ø63.5	Ø92.1	17.5	8~M8	45°
100CF	Ø152	Ø100	Ø130.3	20	8~M8	45°
160CF	Ø203	Ø145	Ø181	22	20~M8	18°
200CF	Ø253	Ø190	Ø231.8	22	24~M8	15°
250CF	Ø305	Ø245	Ø284	28	32~M8	11.25°
320CF	Ø355.6	Ø305	Ø325.4	28	30~M8	12°

VLAP/VLBP

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 22

Double Acting

Size range	063~320
Bellows	316L, AM350
Fuction	Common

PAGE 22

VLSP

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Common

PAGE 23

Double Acting

Size range	063~320
O-ring	FKM (others)
Fuction	Common

PAGE 23

VLAS/VLBS

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 24

Single Acting(N.C)

Size range	063~160
Bellows	316L, AM350
Fuction	Common

PAGE 24

VLSS

Single Acting(N.C)

Size range	016~050
O-ring	FKM (others)
Fuction	Common

PAGE 25

VLAM

Manual Acting

Size range	016~050
Bellows	316L
Fuction	Common

PAGE 26

Manual Acting

Size range	063~160
Bellows	316L
Fuction	Common

PAGE 26

VLAP/VLBP[CF]

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 27

Double Acting

Size range	063,100~160
Bellows	316L, AM350
Fuction	Common

PAGE 27

VLAS/VLBS[CF]

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 28

Single Acting(N.C)

Size range	063,100~160
Bellows	316L, AM350
Fuction	Common

PAGE 28

VLAM[CF]

Manual Acting

Size range	016~050
Bellows	316L
Fuction	Common

PAGE 29

Manual Acting

Size range	063,100~160
Bellows	316L
Fuction	Common

PAGE 29

VLAD/VLBD

Double Acting

Size range	040~050
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 30

Double Acting

Size range	063~100
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 30

Double Acting

Size range	160~250
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 30

VLAT/VLBT

Single actiong(N.C)

Size range	040~050
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 31

Single actiong(N.C)

Size range	063~100
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 31

Single actiong(N.C)

Size range	160
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 31

VLAX/VLBX

Single actiong(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Soft pumping

PAGE 32

VLSD

Double Acting

Size range	040~050
O-ring	FKM (others)
Fuction	Soft pumping

PAGE 33

Double Acting

Size range	063~100
O-ring	FKM (others)
Fuction	Soft pumping

PAGE 33

Double Acting

Size range	160~250
O-ring	FKM (others)
Fuction	Soft pumping

PAGE 33

VLST

Single actiong(N.C)

Size range	040~050
O-ring	FKM (others)
Fuction	Soft pumping

PAGE 34

VLAQ/VLBQ

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 35

Double Acting

Size range	063~100
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 35

VLSQ

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Heater mounting

PAGE 36

Double Acting

Size range	063~100
O-ring	FKM (others)
Fuction	Heater mounting

PAGE 36

VLAR/VLBR

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 37

VLAH/VLBH

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Actuator protection

PAGE 38

Double Acting

Size range	063~160
Bellows	316L, AM350
Fuction	Actuator protection

PAGE 38

VLAK/VLBK

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 39

Double Acting

Size range	063~100
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 39

VLAP/VLBP-G

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 40

Double Acting

Size range	063~320
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 40

VLSP-G

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

PAGE 41

Double Acting

Size range	063~320
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

PAGE 41

VLAS/VLBS-G

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 42

Single Acting(N.C)

Size range	063~160
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 42

VLSS-G

Single Acting(N.C)

Size range	016~050
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

PAGE 43

VLAW/VLBW

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Bonnet metal seal

PAGE 51

Double Acting

Size range	063
Bellows	316L, AM350
Fuction	Bonnet metal seal

PAGE 51

VLAY/VLBY

Single actiong(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Bonnet metal seal

PAGE 52

Single actiong(N.C)

Size range	063
Bellows	316L, AM350
Fuction	Bonnet metal seal

PAGE 52

VLAZ

Manual action

Size range	016~050
Bellows	316L
Fuction	Bonnet metal seal

PAGE 53

Manual action

Size range	063
Bellows	316L
Fuction	Bonnet metal seal

PAGE 53

VLAL

Manual acting

Size range	016~050
Bellows	316L
Fuction	Lock type

PAGE 54

VLAF

Manual acting

Size range	016~050
Bellows	316L
Fuction	Open rate Display

PAGE 55

VYAA

Manual acting

Size range	16
Bellows	316L
Fuction	All metal type

PAGE 56

VLAV/VLBV

Single actiong(N.C)

Size range	025~050
Bellows	316L, AM350
Fuction	Exclusive semicon-ductor

PAGE 57

VYAP/VYBP

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 58

Double Acting

Size range	063~250
Bellows	316L, AM350
Fuction	Common

PAGE 58

VYSP

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Common

PAGE 59

Double Acting

Size range	063~250
O-ring	FKM (others)
Fuction	Common

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VYAS/VYBS

Single actiong(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 60

Single actiong(N.C)

Size range	063~160
Bellows	316L, AM350
Fuction	Common

PAGE 60

VYSS

Single Acting(N.C)

Size range	016~050
O-ring	FKM (others)
Fuction	Common

PAGE 61

VYAM

Manual Acting

Size range	016~050
Bellows	316L
Fuction	Common

PAGE 62

Manual Acting

Size range	063~160
Bellows	316L
Fuction	Common

PAGE 62

VYAP/VYBP[CF]

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 63

Double Acting

Size range	063,100~160
Bellows	316L, AM350
Fuction	Common

PAGE 63

VYAS/VYBS[CF]

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Common

PAGE 64

Single Acting(N.C)

Size range	063~160
Bellows	316L, AM350
Fuction	Common

PAGE 64

VYAM[CF]

Manual Acting

Size range	016~050
Bellows	316L
Fuction	Common

PAGE 65

Manual Acting

Size range	063,100~160
Bellows	316L
Fuction	Common

PAGE 65

VYAQ/VYBQ

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 66

Double Acting

Size range	063~100
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 66

VYSQ

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Heater mounting

PAGE 67

Double Acting

Size range	063~100
O-ring	FKM (others)
Fuction	Heater mounting

PAGE 67

VYAR/VYBR

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 68

VYAH/VYBH

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Actuator protection

PAGE 69

Double Acting

Size range	063, 100~160
Bellows	316L, AM350
Fuction	Actuator protection

PAGE 69

VYAK/VYBK

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 70

Double Acting

Size range	063~100
Bellows	316L, AM350
Fuction	Heater mounting

PAGE 70

VYAP/VYBP-G

Double Acting

Size range	016~050
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 71

Double Acting

Size range	063~250
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 71

VYSP-G

Double Acting

Size range	016~050
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

PAGE 72

Double Acting

Size range	063~250
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

PAGE 72

VYAS/VYBS-G

Single Acting(N.C)

Size range	016~050
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 73

Single actiong(N.C)

Size range	063~160
Bellows	316L, AM350
Fuction	Solenoid v/v mounting

PAGE 73

VYSS-G

Single actiong(N.C)

Size range	016~050
O-ring	FKM (others)
Fuction	Solenoid v/v mounting

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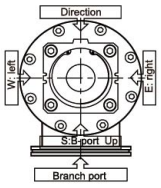
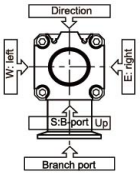
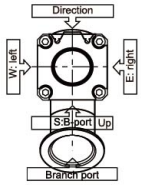
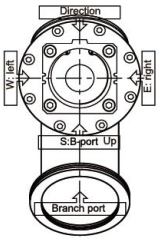
Manual & Precautions

PAGE 81~82

How to Order

Valve VⒶⒷⒸ - ① ② - ③ - ④ - ⑤⑥ - (⑦) **Model** VLAP - □□□ □□-□□ - □ - □□

Series	Ⓐ Body shape	VLⒷⒸ	L	L-type(Angle valve) 304SS Body
		VYⒷⒸ	Y	Y-type(Inline valve) 304SS Body
	Ⓑ Stem Seal	VⒶAⒸ	A	316L Bellows STEM Seal
		VⒶBⒸ	B	AM350 Bellows STEM Seal
		VⒶSⒸ	S	O-Ring STEM Seal
	Ⓒ Operation type	VⒶⒷP	P	Double Acting (Pneumatic)
		VⒶⒷS	S	Single Acting (N.C.)
		VⒶⒷM	M	Manual operation
		VⒶⒷQ	Q	Double Acting, w/Heater (Pneumatic)
		VⒶⒷR	R	Single Acting, w/Heater (N.C.)
		VⒶⒷH	H	Double Acting, Heating model(Pneumatic)
		VⒶⒷK	K	Double Acting, Heating model, w/Heater(Pneumatic)
		VLⒷD	D	Double Acting, w/Soft start bypass valve(Pneumatic)
		VLⒷT	T	Single Acting, w/Soft start bypass valve(N.C.)
		VLⒷX	X	Single Acting, w/Soft start integrated valve(N.C.)
		VLⒷW	W	Bonnet gasket seal type, Double Acting (Pneumatic)
		VLⒷY	Y	Bonnet gasket seal type, Single Acting (N.C.)
		VLⒷZ	Z	Bonnet gasket seal type, Manual operation

Port flange	Valve size	①	□□□	016	025	040	050	063	080	100	160	200	250	320
	Flange Spec.	②	□□ Specific	KF		KQ		KC		CF		JF		
				ISO-KF		ISO-K		ISO-F		ISO-CF		JIS VF		
	Seal material (Disc, Bonnet, Stem)	③ (Note 1)	□□	N1	ED	S1	FS	R1	R2	R3	P1	P2	U1	
				FKM	NBR	EPDM	VMQ	FFKM	Chemraz®	Chemraz®	Chemraz®	Kalrez®	Kalrez®	ULTIC ARMOR®
									SS592	SS630	SSE38	4079	9100	UA4640
				In case of FFKM (FS), please specify a separate material.										
	CDA port position	④ (Note 2)	□ Branch port Lower part	None				E		S		W		
				Rear				Right		Left		Same Direction		
														
	Sensor	⑤	□	0				1				2		
				None				1 EA				2 EA		
		⑥	□	C		N		P				H		
				W8H(TPC)		W9HN(TPC)		W9HP(TPC)				D-*****(SMC)		
	Solenoid or Heater Mounting	⑦	(G) or (W)	G: Mounting Solenoid valve(Applicable Model) / W:Heater exclude (Not installed)										
	Valve	(Note 3)		VLAP- / VLBP- / VLAS- / VLBS- / VLAD- / VLBD- / VLAT- / VLSP- / VLSS- / VLBT- / VYAP- / VYAS- / VYBP- / VYBS- / VYSP- / VYSS-										

Modified special		( )	※Please consult our technical department.									
w/Solenoid Valve Spec.		size range	016	025	040	050	063	080	100	160	200	250	320
Single acting	[VⒶⒷS]	Solenoid Valve Spec.	RDV412-5DZ-01				RDS301-5DZ-01A			(Note 4)	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01								RDS5120-5DZ-03		
Solenoid valve maker: TPC / Electric power: DC24V													
w/Heater Spec.		size range	016	025	040	050	063	080	100	160	200	250	320
Type: Silicon Rubber Heater			25W	25W	30W	45W	70W	90W	150W		Not Available		
Temperature Max.: Amb.~150℃ / TC.sensor control: K-Type / Electric power: AC220V													

(Note 1) For standard products, use sealing material of vacuum secretion as a FKM (flammable O-ring).
Chemraz® is a registered trademark of Greene Tweed & Co. Kalrez® is a registered trademark of E.I. du Pont de Nemours and Company.
ULTIC ARMOR® is a registered trademark of NIPPON VALQUA INDUSTRIES, LTD.
(Note 2) Applies only to the double and single operating valves (except VABM-series)
(Note 3) Specifications that are partially changed in standards or standards other than standard products can be specially designed to meet the customer's needs, so please consult with them.
(Note 4) Solenoid valve specification: RDS301-5DZ-02A

No.	Standard Valve model 52 Series (Angle/Inline) (ISO-KF, ISO-K, ISO-F, JIS-VF, CF)	Size range (Available)										
		16	25	40	50	63	80	100	160	200	250	320
1	VL(A/B)P -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	●	●	●
2	VL(A/B)S -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	×	×	×
3	VLAM -□□□ □□ -□□ -( )	●	●	●	●	●	●	●	●	×	×	×
4	VL(A/B)H -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
5	VL(A/B)K -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	×	×	×	×
6	VL(A/B)D -□□□ □□ -□□ -□□ -( )	×	×	●	●	●	●	●	●	●	●	×
7	VLSD -□□□ □□ -□□ -□□ -( )	×	×	●	●	●	●	●	●	●	●	×
8	VLST -□□□ □□ -□□ -□□ -( )			●	●	●	●	●	●	×	×	×
9	VL(A/B)T -□□□ □□ -□□ -□□ -( )	×	×	●	●	●	●	●	●	×	×	×
10	VL(A/B)X -□□□ KF -□□ -□□ -( )	●	●	●	●	×	×	×	×	×	×	×
11	VLSP -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	●	●	●
12	VLSS -□□□ KF -□□ -□□ -(G)	●	●	●	●	×	×	×	×	×	×	×
13	VL(A/B)Q -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	×	×	×	×
14	VLSQ -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	×	×	×	×
15	VL(A/B)R -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	×	×	×	×
16	VY(A/B)P -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	●	●	×
17	VY(A/B)S -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	×	×	×
18	VYAM -□□□ □□ -□□ -( )	●	●	●	●	●	●	●	●	×	×	×
19	VY(A/B)H -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	●	×	×	×
20	VY(A/B)K -□□□ □□ -□□ -□□ -( )	●	●	●	●	●	●	●	×	×	×	×
21	VYSP -□□□ □□ -□□ -□□ -(G)	●	●	●	●	●	●	●	●	●	●	×
22	VYSS -□□□ KF -□□ -□□ -(G)	●	●	●	●	×	×	×	×	×	×	×
23	VL(A/B)P -□□□ CF -□□ -□□ -(G)	●	●	●	●	●	×	●	●	×	×	×
24	VL(A/B)S -□□□ CF -□□ -□□ -(G)	●	●	●	●	●	×	●	●	×	×	×
25	VLAM -□□□ CF -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
26	VL(A/B)H -□□□ CF -□□ -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
27	VL(A/B)W -□□□ CF -□□ -□□ -( )	●	●	●	●	●	×	×	×	×	×	×
28	VL(A/B)Y -□□□ CF -□□ -□□ -( )	●	●	●	●	●	×	×	×	×	×	×
29	VLAZ -□□□ CF -□□ -( )	●	●	●	●	●	×	×	×	×	×	×
30	VY(A/B)P -□□□ CF -□□ -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
31	VY(A/B)S -□□□ CF -□□ -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
32	VYAM -□□□ CF -□□ -( )	●	●	●	●	●	×	●	●	×	×	×
33	VLAL -□□□ □□ -□□ -□□ -( )	●	●	●	●	×	×	×	×	×	×	×
34	VLAF -□□□ □□ -□□ -□□ -( )	●	●	●	●	×	×	×	×	×	×	×
35	VLAF -□□□ □□ -□□ -□□ -( )	●	×	×	×	×	×	×	×	×	×	×
36	VL(A/B)V -□□□ □□ -□□ -□□ -( )	×	●	●	●	×	×	×	×	×	×	×

Specification

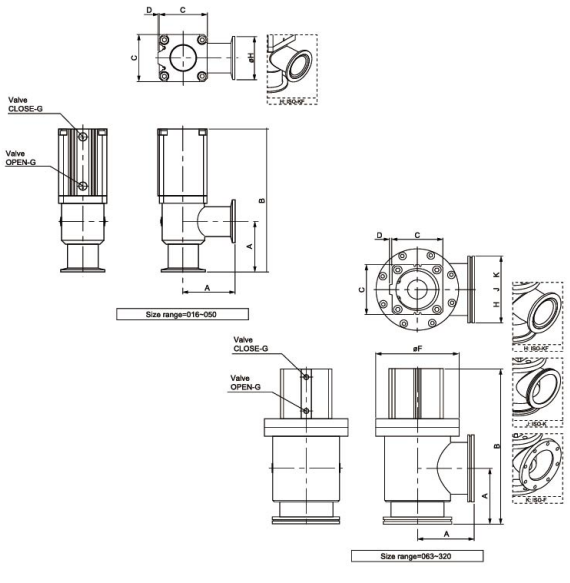
VL[A/B]P series			Vacuum Angle Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	●
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	●
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)				14	42	95	150	250	520	1,430	3,180	5,150	6,480
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size										PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)			22.5	45	100	185	210	400	940	1,490	2,700	6,000
Open stroke			14	14	18	25	30	35	40	60	95	110	150
Seal distance (A-Value)				50	65	70	88	90	108	138	178	208	250

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

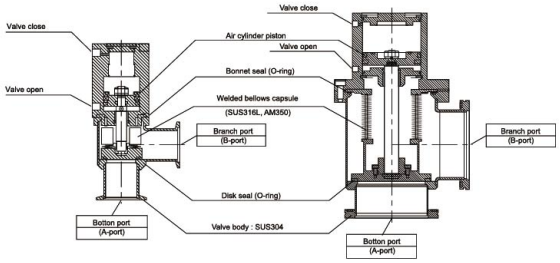
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250	320
A	40	50	65	70	88	90	108	138	178	208	250
B	138.5	146.5	184	205	244	257.5	302.5	415	520.5	611	737
C	48	48	60	69	77	77	98	117	117	142	178
D	3	3	2	2	5	5	5	6.5	6.5	11	10
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318	Ø410
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290	Ø370
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335	Ø425

Dimensional drawing



Internal detail



Specification

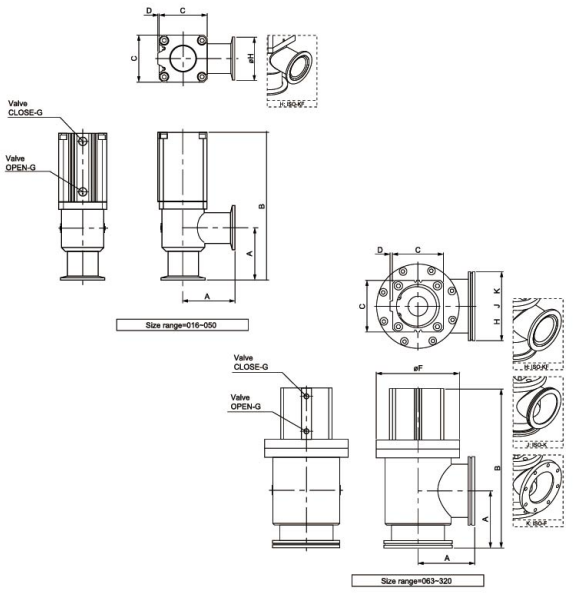
VLSP series			Vacuum Angle Valve / Double Acting										
			O-Ring STEM seal (S: FKM/Standards)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	●
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	1,430	3,180	5,150	6,480
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	110	400	940	1,490	2,700	6,000
Open stroke			14	14	18	25	30	35	40	60	95	110	150
Seal distance (A-Value)				50	65	70	88	90	108	138	178	208	250

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

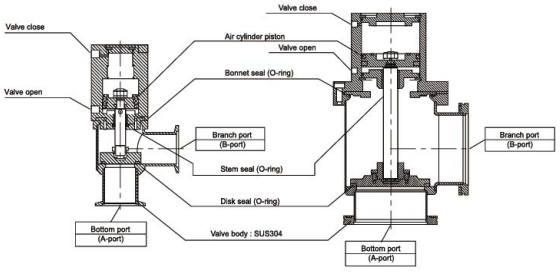
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250	320
A	40	50	65	70	88	90	108	138	178	208	250
B	138.5	146.5	184	205	244	257.5	302.5	415	520.5	611	737
C	48	48	60	69	77	77	98	117	117	142	178
D	3	3	2	2	5	5	5	6.5	6.5	11	10
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318	Ø410
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290	Ø370
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335	Ø425

Dimensional drawing



Internal detail



Specification

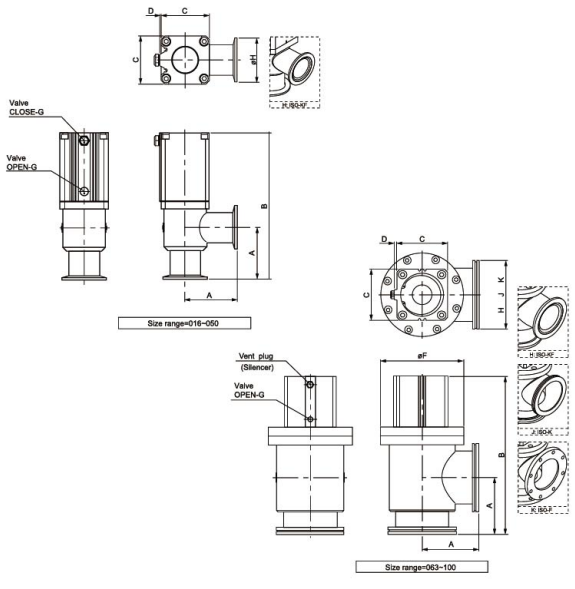
VL(A/B)S series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)				14	42	95	150	250	520	1,430	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	470	-	-	-
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Seal distance (A-Value)				50	65	70	88	90	108	138	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close), The close side port has a silencer installed

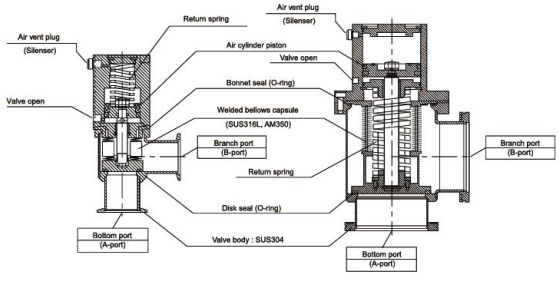
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	40	50	65	70	88	90	108	138
B	138.5	146.5	184	205	244	257.5	302.5	415
C	48	48	60	69	77	77	98	117
D	3	3	2	2	5	5	5	6.5
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

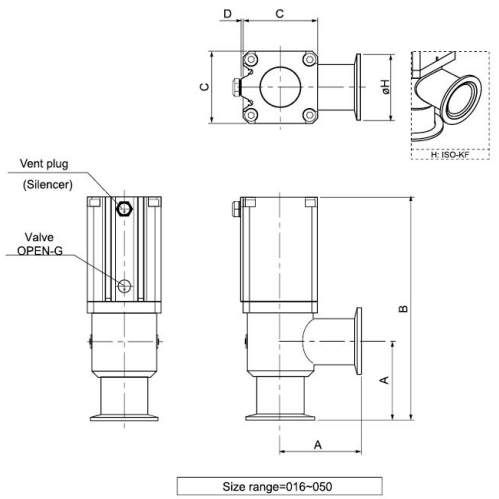
VLSS series			Vacuum Angle Valve / Single Acting(N.C.)										
			O-ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	×	×	×	×	×	×	×
	ISO-K	KQ	×	×	×	×	×	×	×	×	×	×	×
	ISO-F	KC	×	×	×	×	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)				14	42	88	95	-	-	-	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	-	-	-	-	-	-	-
Open stroke			14	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			40	50	65	70	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close), The close side port has a silencer installed

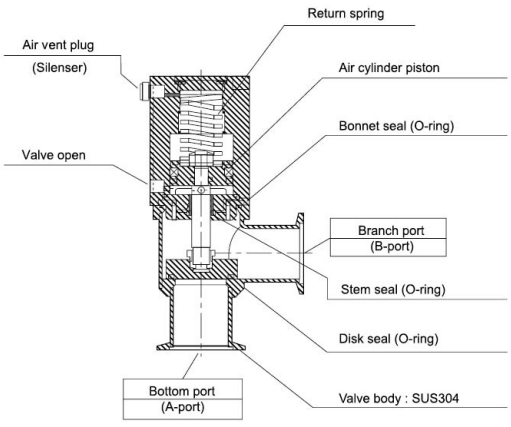
External dimension table

SIZE	16	25	40	50
A	40	50	65	70
B	138.5	146.5	184	205
C	48	48	60	69
D	3	3	2	2
F	-	-	-	-
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75
J	-	-	-	-
K	-	-	-	-

Dimensional drawing



Internal detail



Specification

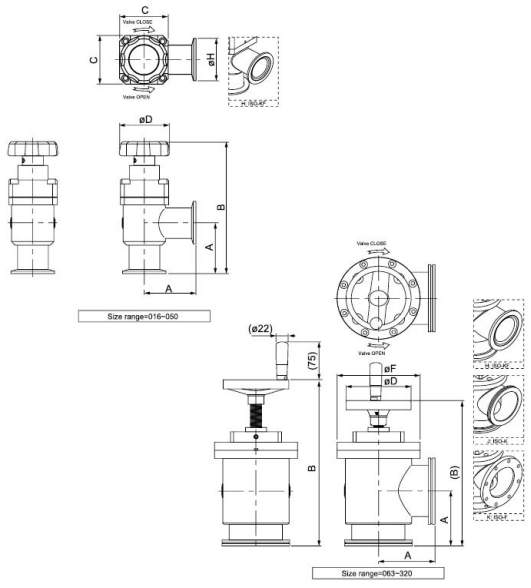
VLAM series			Vacuum Angle Valve / Manually										
			Bellows STEM seal (A: SUS316L)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Manual acting										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	1,430	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Number of Handle rotation			7	7	9	12.5	7.5	9	10	12			
Seal distance (A-Value)			40	50	65	70	88	90	108	138	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

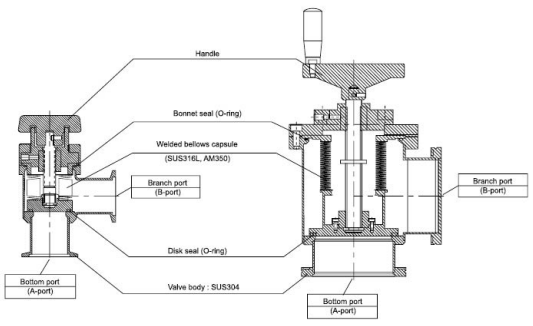
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	40	50	65	70	88	90	108	138
B	135.5	143.5	170	188.5	264	280.5	325.5	459
C	48	48	60	69	-	-	-	-
D	Ø63	Ø63	Ø63	Ø63	Ø100	Ø100	Ø125	Ø200
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

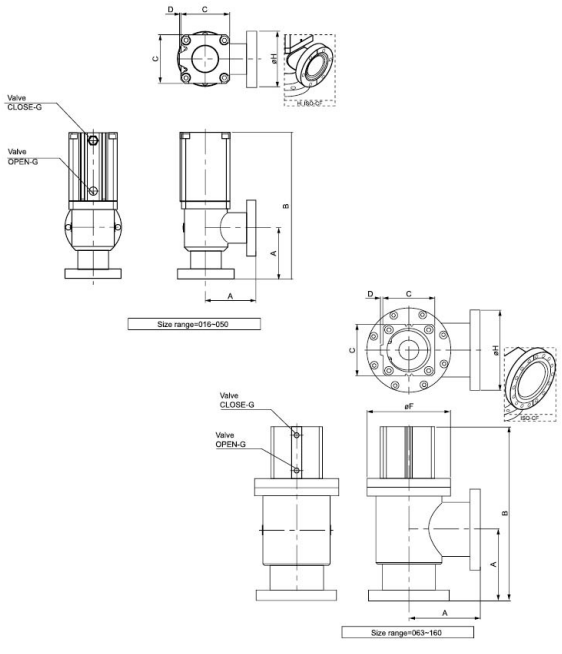
VL[A/B]P-CF series			Vacuum Angle Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7.4	14	44	88	125	-	415	1,180	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	400	940	-	-	-
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Seal distance (A-Value)			38	50	63	75	105	-	135	167	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

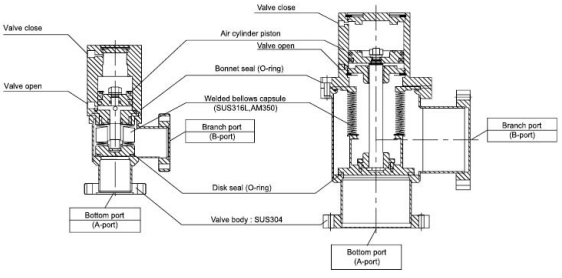
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	38	(50)	63	(75)	105	-	135	167
B	136.5	146.5	182	210	261	-	329.5	444
C	48	48	60	69	77	-	98	117
D	3	3	2	2	5	-	5	6.5
F	-	-	-	-	Ø119	-	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

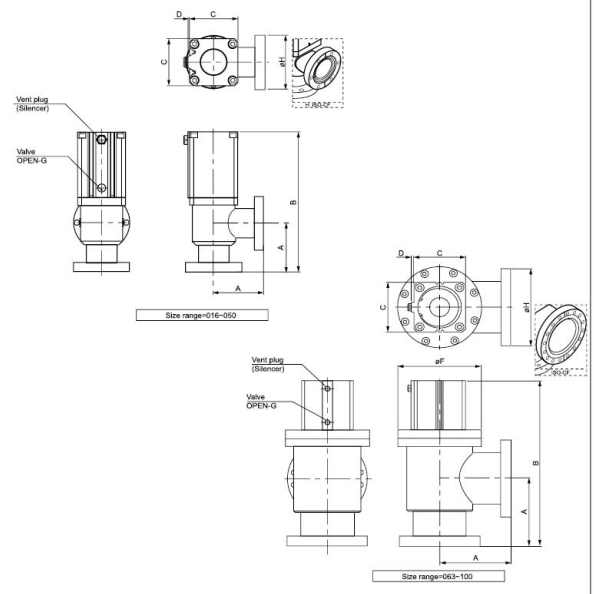
VL(A/B)S-CF series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10-6 ~ to atmospheric pressure										
Conductance L / s (Note 1)			7.4	14	44	88	125	-	415	1,180	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	-	200	470	-	-	-
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Seal distance (A-Value)			38	50	63	75	105	-	135	167	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close), The close side port has a silencer installed

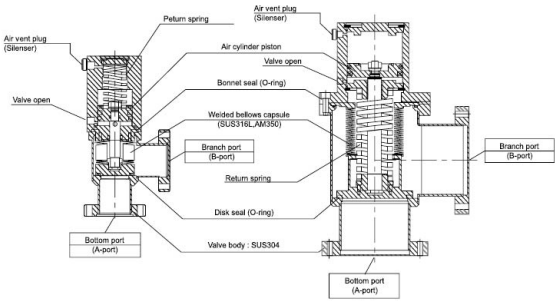
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	38	(50)	63	(75)	105	-	135	167
B	136.5	146.5	182	210	261	-	329.5	471
C	48	48	60	69	77	-	98	142
D	3	3	2	2	5	-	5	11
F	-	-	-	-	Ø119	-	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

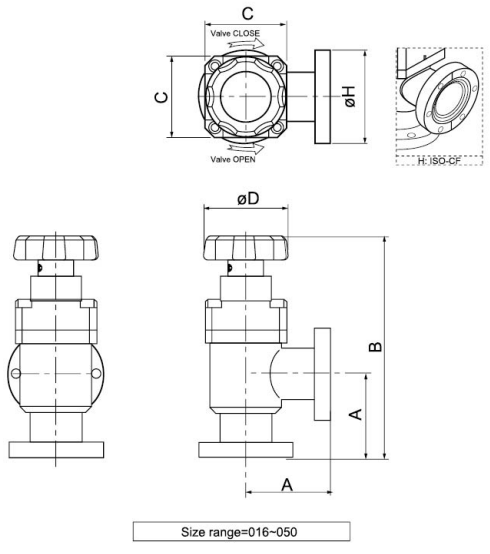
VLAM-CF series			Vacuum Angle Valve / Manually										
			Bellows STEM seal (A: SUS316L)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Manual acting										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s [Note 1]			7.4	14	44	88	125	-	415	1,180	-	-	-
Leakage Pa·m³/s		Inside	Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
		Outside	Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Number of Handle rotation			7	7	9	12.5	7.5	-	10	12	-	-	-
Seal distance (A-Value)			38	50	63	75	105	-	135	167	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

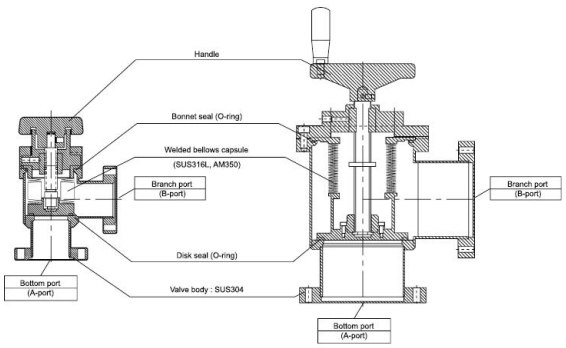
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	38	(50)	63	(75)	105	-	135	167
B	136.5	146.5	182	210	261	-	329.5	444
C	48	48	60	69	-	-	-	-
D	Ø63	Ø63	Ø63	Ø63	Ø100	-	Ø125	Ø200
F	-	-	-	-	Ø119	-	Ø159	Ø208
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

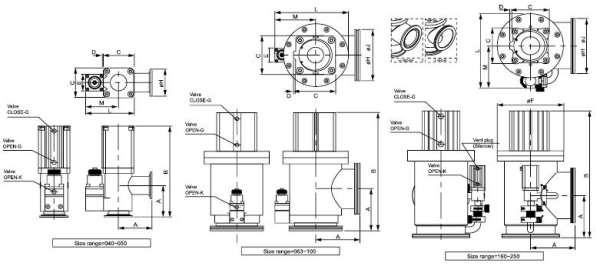
VL(A/B)D series			Vacuum Angle Valve / Double Acting / w/Soft-Roughing valve										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	CF	×	×	●	●	●	●	●	●	×	×	×
	ISO-K		×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			-	-	42	95	150	250	520	1,430	3,180	5,150	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)		cc(mL) (Note 2)	-	-	45	100	185	210	400	940	1,490	2,700	-
Open stroke			-	-	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)			-	-	65	70	88	90	108	138	178	208	-
Soft Roughing Valve Specification(N.C.)			-	-	BPSV	BPSV	BPSV	BPSV	BPSV	NW16	NW25	NW40	
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")					PT 1/8"(Rc1/8")			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

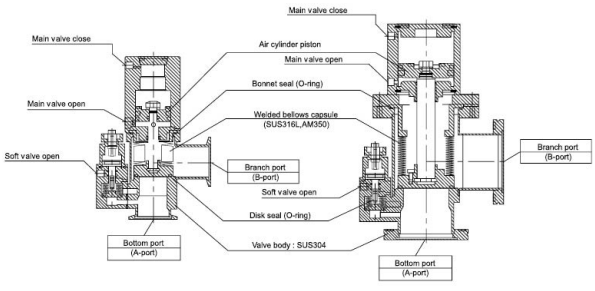
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	-	-	65	70	88	90	108	138	178	208
B	-	-	184	205	244	257.5	302.5	415	520.5	611
C	-	-	60	69	77	77	98	117	117	142
D	-	-	2	2	5	5	5	6.5	6.5	11
E	-	-	35	35	35	35	35	-	-	-
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	-	-	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
L	-	-	94	102.5	134.5	140.5	179	244	308	390
M			64	68	75	81	99.5	140	180	230

Dimensional drawing



Internal detail



Specification

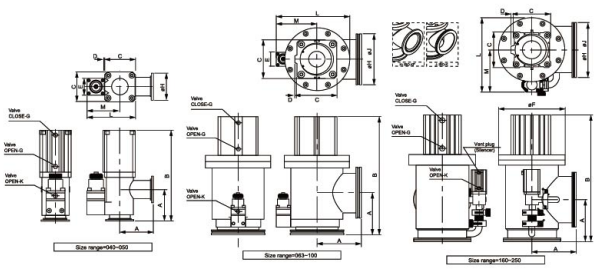
VL(A/B)Tseries			Vacuum Angle Valve / Single Acting / w/Soft-Roughing valve										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	×	×	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			-	-	42	95	150	250	520	1,430	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")					PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)		cc(mL) (Note 2)	-	-	45	100	185	210	400	940	-	-	-
Open stroke			-	-	18	25	30	35	40	60	-	-	-
Seal distance (A-Value)			-	-	65	70	88	90	108	138	-	-	-
Soft Roughing Valve Specification(N.C.)			-	-	BPSV	BPSV	BPSV	BPSV	BPSV	NW16			
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")					PT 1/8"(Rc1/8")			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

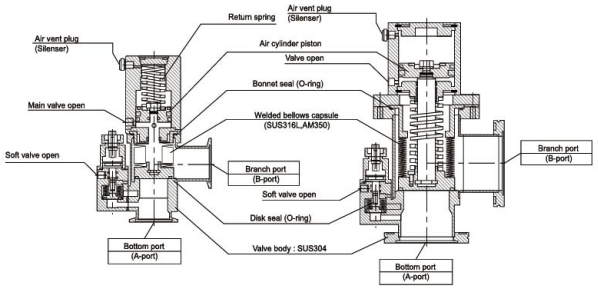
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	-	-	65	70	88	90	108	138
B	-	-	184	205	244	257.5	302.5	415
C	-	-	60	69	77	77	98	117
D	-	-	2	2	5	5	5	6.5
E	-	-	35	35	35	35	35	-
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
G	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"
H	-	-	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
L	-	-	94	102.5	134.5	140.5	179	244
M	-	-	64	68	75	81	99.5	140

Dimensional drawing



Internal detail



Specification

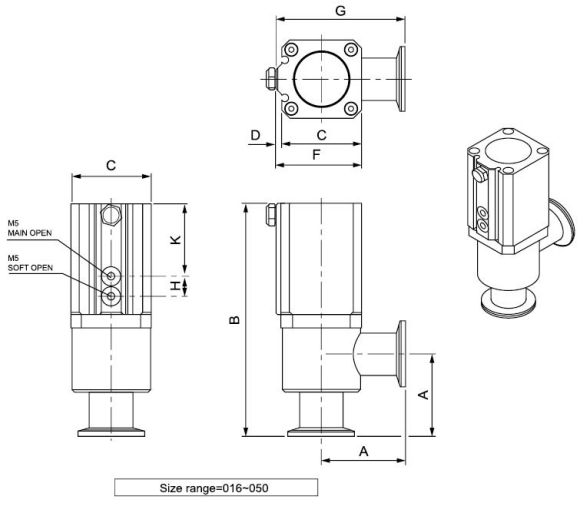
VL(A/B)X series			Vacuum Angle Valve / Single Acting(N.C.) w/Soft valve(N.C.) integrated type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange 규격	ISO-KF	KF	●	●	●	●	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	-	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			M5				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		M5				-	-	-	-	-	-	-
Open stroke			12	12	23	49	-	-	-	-	-	-	-
Seal distance (A-Value)			14	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			40	50	65	70	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close), The close side port has a silencer installed

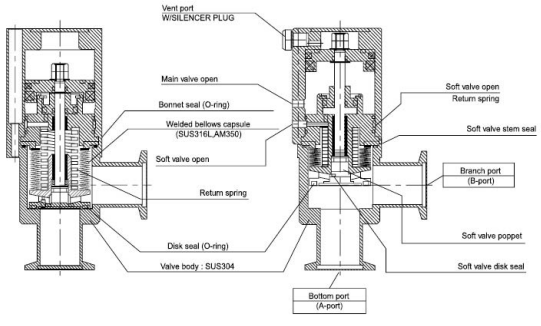
External dimension table

SIZE	16	25	40	50
A	40	50	65	70
B	132	142	184	194
C	48	48	60	69
D	3	3	2	2
F	51	51	62	71
G	64	74	95	104.5
H	12	12	12	12
J	-	-	-	-
K	44.5	44.5	49.5	57

Dimensional drawing



Internal detail



Specification

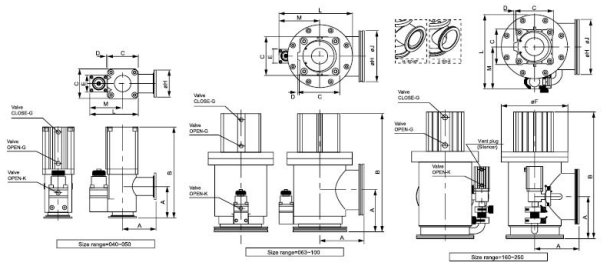
VLSD series			Vacuum Angle Valve / Double Acting / w/Soft-Roughing valve										
			O-ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	×	×	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			-	-	42	95	150	250	520	1,430	3,180	5,150	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")				PT 3/8"(Rc3/8")				
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		-	-	45	100	185	210	400	940	1,490	2,700	-
Open stroke			-	-	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)			-	-	65	70	88	90	108	138	178	208	-
Soft Roughing Valve Specification(N.C.)			-	-	BPSV	BPSV	BPSV	BPSV	BPSV	NW16	NW25	NW40	
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")				PT 1/8"(Rc1/8")				

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

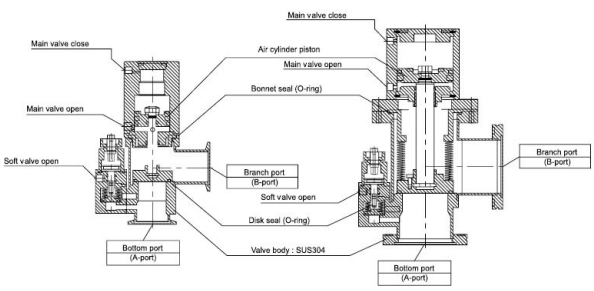
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	-	-	65	70	88	90	108	138	178	208
B	-	-	184	205	244	257.5	302.5	415	520.5	611
C	-	-	60	69	77	77	98	117	117	142
D	-	-	2	2	5	5	5	6.5	6.5	11
E	-	-	35	35	35	35	35	-	-	-
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	-	-	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
L	-	-	94	102.5	134.5	140.5	179	244	308	390
M	-	-	64	68	75	81	99.5	140	180	230

Dimensional drawing



Internal detail



Specification

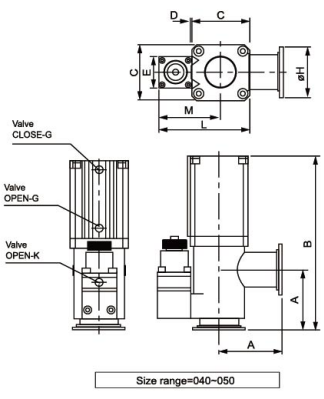
VLST series			Vacuum Angle Valve / Single Acting / w/Soft-Roughing valve										
			O-Ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	×	×	●	●	×	×	×	×	×	×	×
	ISO-K	KQ	×	×	×	×	×	×	×	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			-	-	42	95	-	-	-	-	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")								
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		-	-	45	100	-	-	-	-	-	-	-
Open stroke			-	-	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			-	-	65	70	-	-	-	-	-	-	-
Soft Roughing Valve Specification(N.C.)			-	-	BPSV	BPSV							
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			-	-	PT 1/8"(Rc1/8")								

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

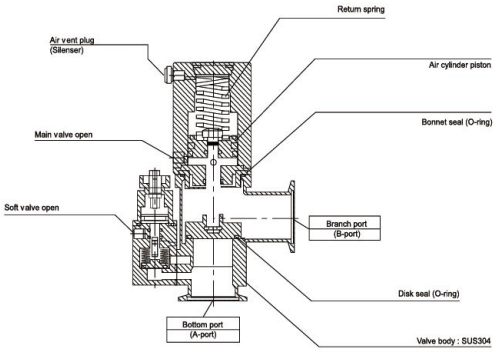
External dimension table

SIZE	16	25	40	50
A	-	-	65	70
B	-	-	184	205
C	-	-	60	69
D	-	-	2	2
E	-	-	35	35
F	-	-	-	-
G	-	-	PT 1/8"	PT 1/8"
H	-	-	Ø55	Ø75
J	-	-	-	-
K	-	-	PT 1/8"	PT 1/8"
L	-	-	94	102.5
M	-	-	64	68

Dimensional drawing



Internal detail



Specification

VL($\frac{A}{B}$)Q series			Vacuum Angle Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			40	50	65	70	88	90	108	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

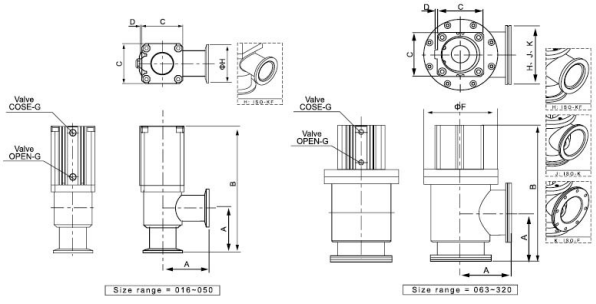
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

▶If heater is not included (not installed), type "W" at the end of model name

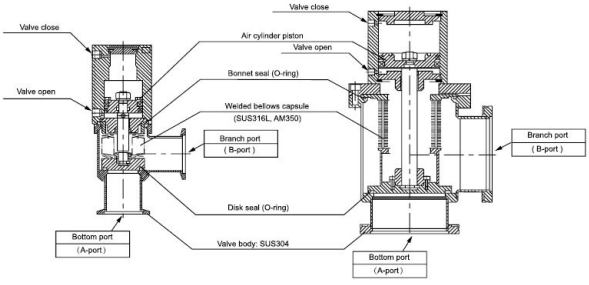
External dimension table

SIZE	16	25	40	50	63	80	100
A	40	50	65	70	88	90	108
B	138.5	146.5	184	205	244	257.5	302.5
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

VLSQ series			Vacuum Angle Valve / Double Acting										
			O-Ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			40	50	65	70	88	90	108	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

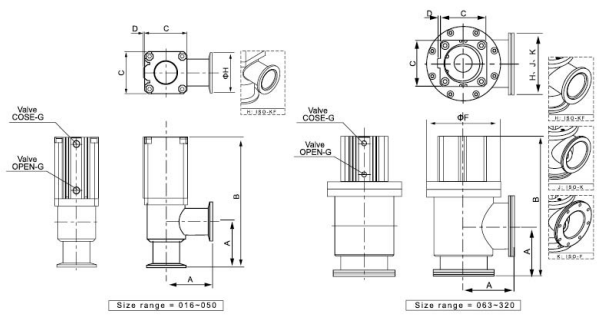
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

▶If heater is not included (not installed), type "W" at the end of model name

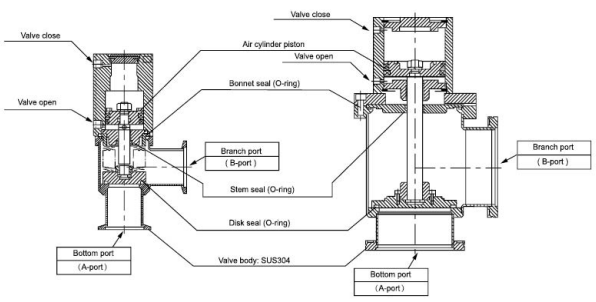
External dimension table

SIZE	16	25	40	50	63	80	100
A	40	50	65	70	88	90	108
B	138.5	146.5	184	205	244	257.5	302.5
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

VL(A/B)R series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			40	50	65	70	88	90	108	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

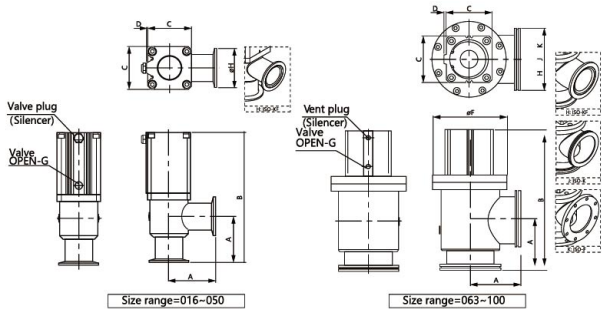
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close), The close side port has a silencer installed

▶If heater is not included (not installed), type "W" at the end of model name

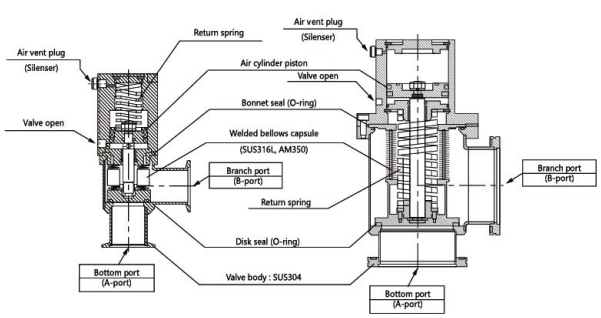
External dimension table

SIZE	16	25	40	50	63	80	100
A	40	50	65	70	88	90	108
B	138.5	146.5	184	205	244	257.5	302.5
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

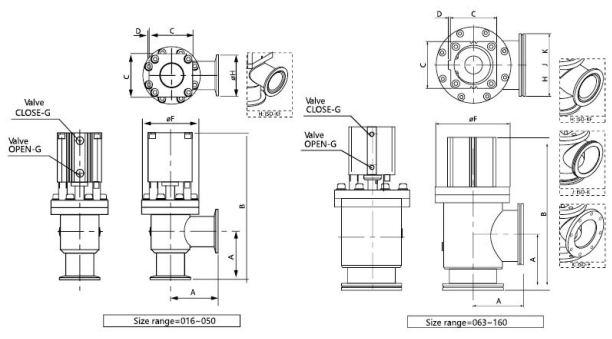
VL(A/B)H series			Vacuum Angle Valve / Double Acting / Bakable type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	×	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	×	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	×	●	●	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	-	520	1,430	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	400	940	-	-	-
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Seal distance (A-Value)			40	50	65	70	88	-	108	138	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

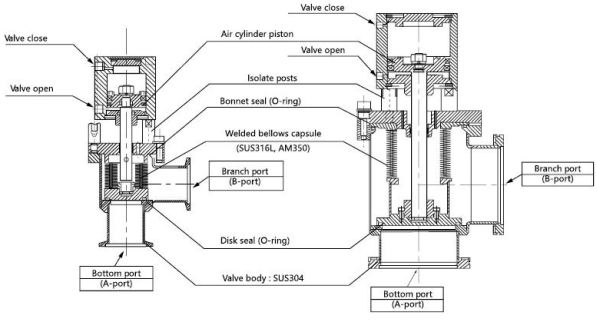
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	40	50	65	70	88	-	108	138
B	151.5	159.5	199.5	224	274	-	332.5	460
C	48	48	60	69	77	-	98	117
D	3	3	2	2	5	-	5	6.5
F	Ø61	Ø61	Ø78	Ø89	Ø109	-	Ø159	Ø206
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	-	Ø134	Ø190
J	-	-	-	-	Ø95	-	Ø130	Ø180
K	-	-	-	-	Ø130	-	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

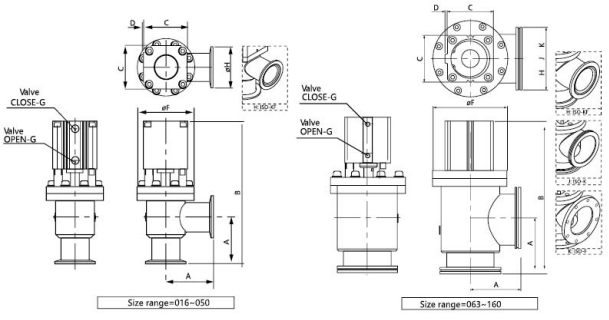
VL(A/B)K series			Vacuum Angle Valve / Double Acting / Bakable type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	×	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	×	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	×	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	-	520	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	400	-	-	-	-
Open stroke			14	14	18	25	30	-	40	-	-	-	-
Seal distance (A-Value)			40	50	65	70	88	-	108	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

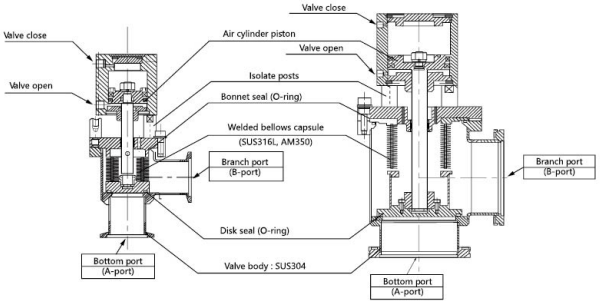
External dimension table

SIZE	16	25	40	50	63	80	100
A	40	50	65	70	88	-	108
B	151.5	159.5	199.5	224	274	-	332.5
C	48	48	60	69	77	-	98
D	3	3	2	2	5	-	5
F	Ø61	Ø61	Ø78	Ø89	Ø109	-	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	-	Ø134
J	-	-	-	-	Ø95	-	Ø130
K	-	-	-	-	Ø130	-	Ø165

Dimensional drawing



Internal detail



Specification

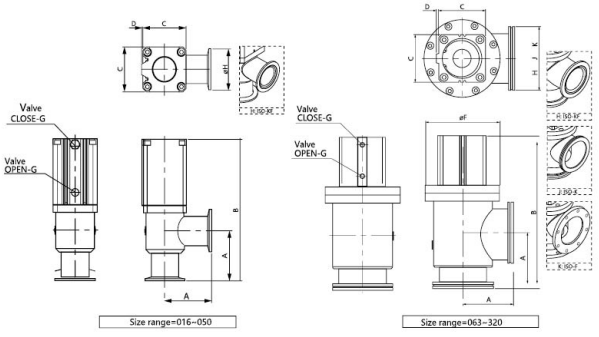
VL(A/B)P-G series			Vacuum Angle Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	●
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	●
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	1,430	3,180	5,150	6,480
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	6,000
Open stroke			14	14	18	25	30	35	40	60	95	110	150
Seal distance (A-Value)			40	50	65	70	88	90	108	138	178	208	250
w/Solenoid Valve Spec.	SIZE		016	025	040	050	063	080	100	160	200	250	320
Single acting	[VⒶⒷS]		RDV412-5DZ-01				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

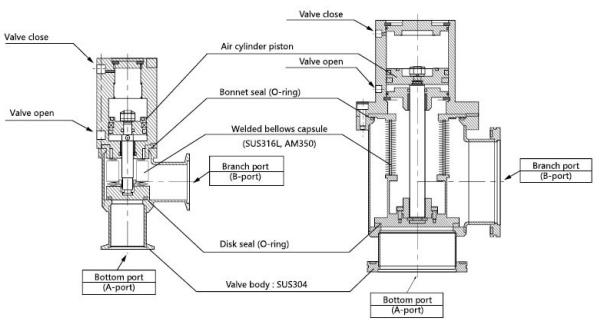
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250	320
A	40	50	65	70	88	90	108	138	178	208	250
B	138.5	146.5	184	205	244	257.5	302.5	415	520.5	611	737
C	48	48	60	69	77	77	98	117	117	142	178
D	3	3	2	2	5	5	5	6.5	6.5	11	10
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318	Ø410
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290	Ø370
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335	Ø425

Dimensional drawing



Internal detail



Specification

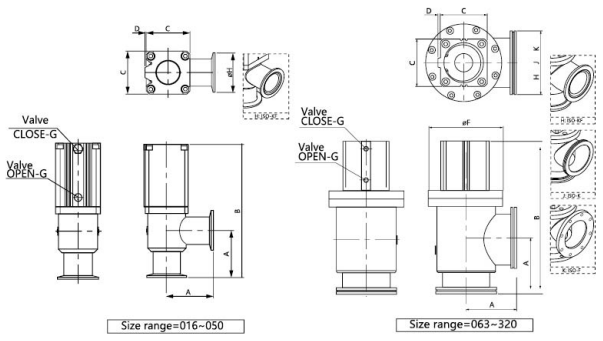
VLSP-G series			Vacuum Angle Valve / Double Acting										
			O-Ring STEM seal (S: FKM)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange 규격	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	●
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	●
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	1,430	3,180	5,150	6,480
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	6,000
Open stroke			14	14	18	25	30	35	40	60	95	110	150
Seal distance (A-Value)			40	50	65	70	88	90	108	138	178	208	250
w/Solenoid Valve Spec.	SIZE		016	025	040	050	063	080	100	160	200	250	320
Single acting	[VⒶⒷS]		RDV412-5DZ-01a				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

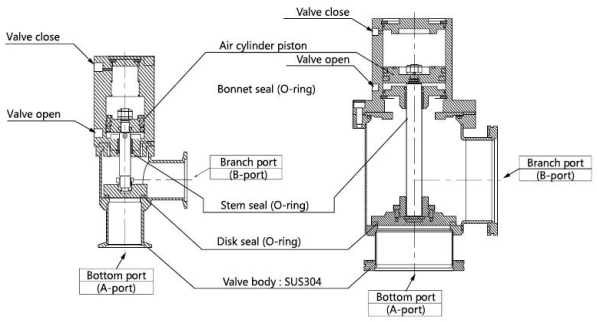
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250	320
A	40	50	65	70	88	90	108	138	178	208	250
B	138.5	146.5	184	205	244	257.5	302.5	415	520.5	611	737
C	48	48	60	69	77	77	98	117	117	142	178
D	3	3	2	2	5	5	5	6.5	6.5	11	10
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318	Ø410
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290	Ø370
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335	Ø425

Dimensional drawing



Internal detail



Specification

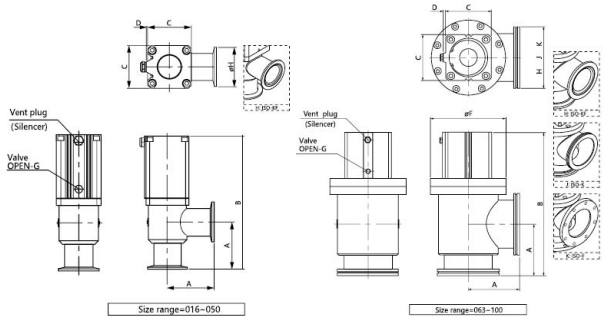
VL(A/B)S-G series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	150	250	520	1,430	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	470	-	-	-
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Seal distance (A-Value)			40	50	65	70	88	90	108	138	-	-	-
w/Solenoid Valve Spec.	SIZE		016	025	040	050	063	080	100	160	-	-	-
Single acting	[VⒶⒷS]		RDV412-5DZ-01				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

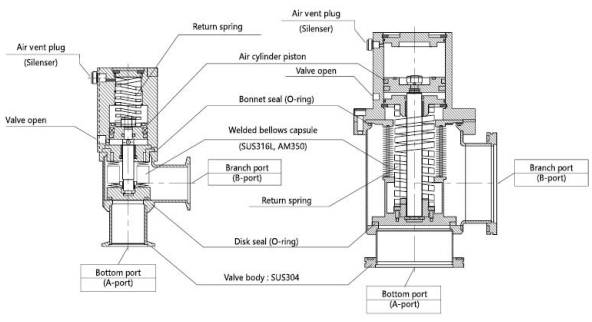
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	40	50	65	70	88	90	108	138
B	138.5	146.5	184	205	244	257.5	302.5	415
C	48	48	60	69	77	77	98	117
D	3	3	2	2	5	5	5	6.5
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

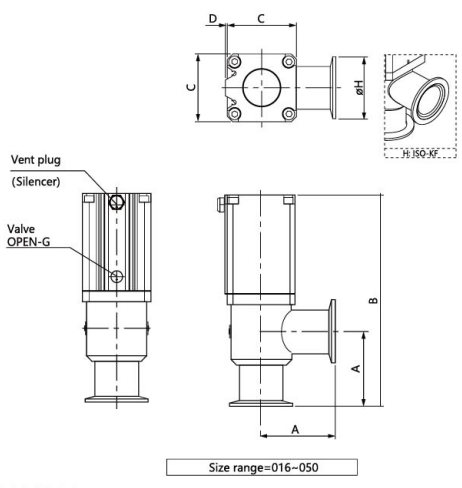
VLSS-G series			Vacuum Angle Valve / Single Acting(N.C.)										
			O-ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	×	×	×	×	×	×	×
	ISO-K	KQ	×	×	×	×	×	×	×	×	×	×	×
	ISO-F	KC	×	×	×	×	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	-	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	-	-	-	-	-	-	-
Open stroke			14	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			40	50	65	70	-	-	-	-	-	-	-
w/Solenoid Valve Spec.	SIZE		016	025	040	050	-	-	-	-	-	-	-
Single acting	[VⒶⒷS]		RDV412-5DZ-01										
Double acting	[VⒶⒷP]		DS2120-5HZ-01										

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

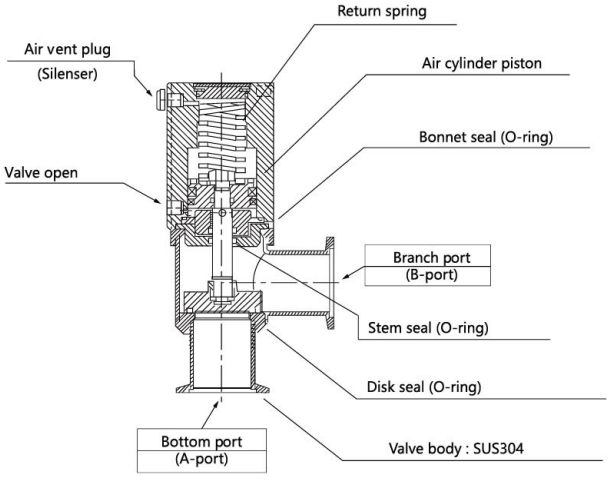
External dimension table

SIZE	16	25	40	50
A	40	50	65	70
B	138.5	146.5	184	205
C	48	48	60	69
D	3	3	2	2
F	-	-	-	-
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75
J	-	-	-	-
K	-	-	-	-

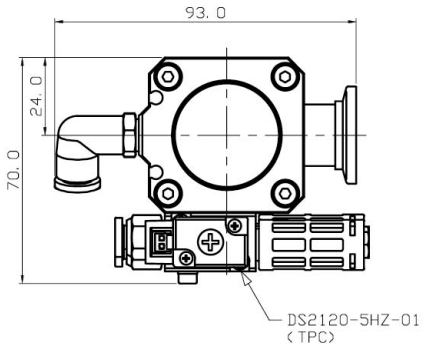
Dimensional drawing

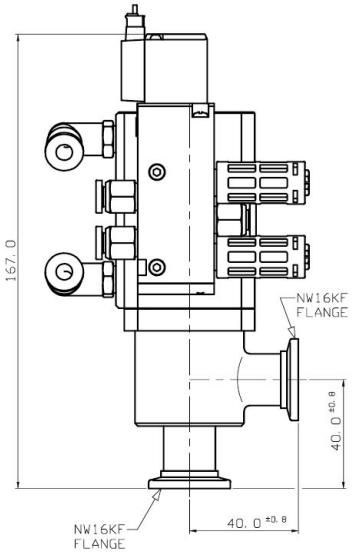


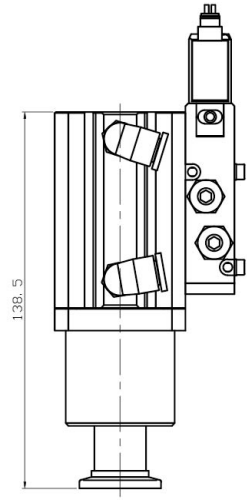
Internal detail



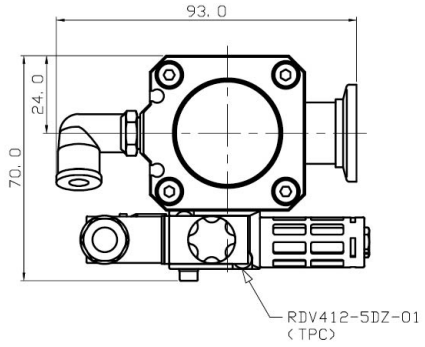
G Type Dimension(ANGLE)

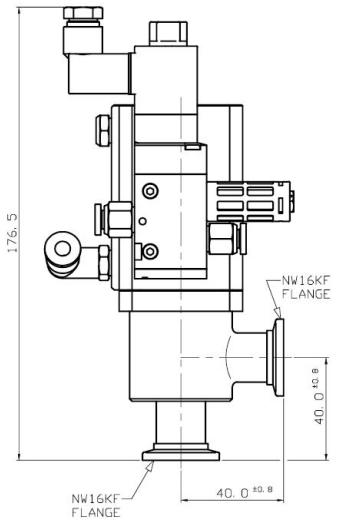


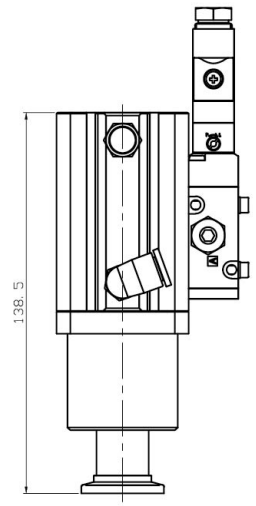




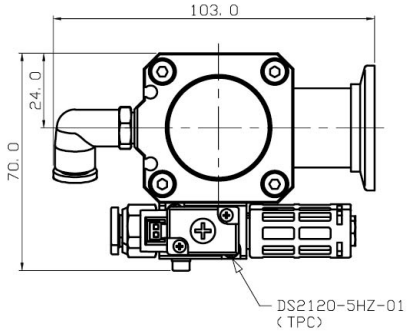
Double acting / NW16KF

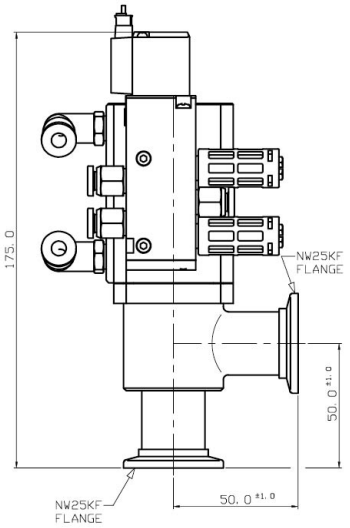


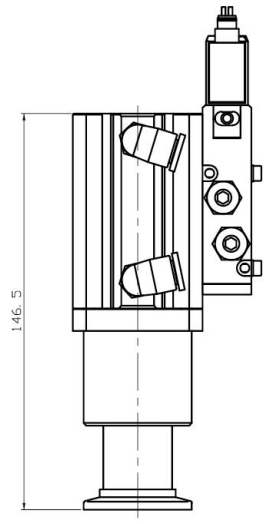




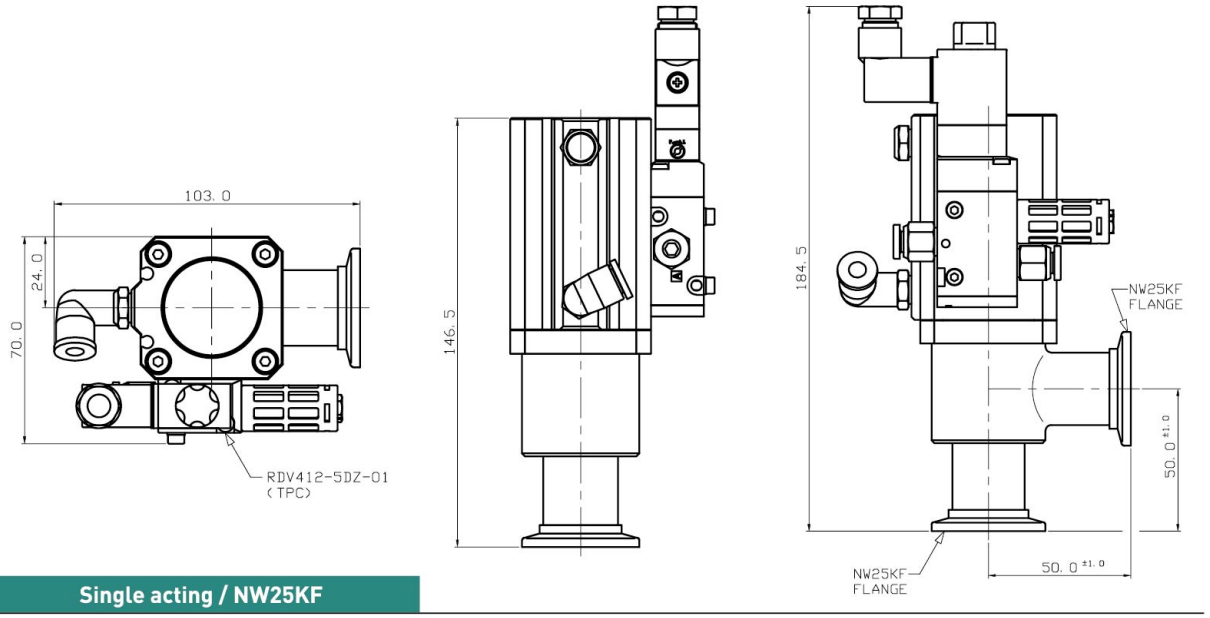
Single acting / NW16KF



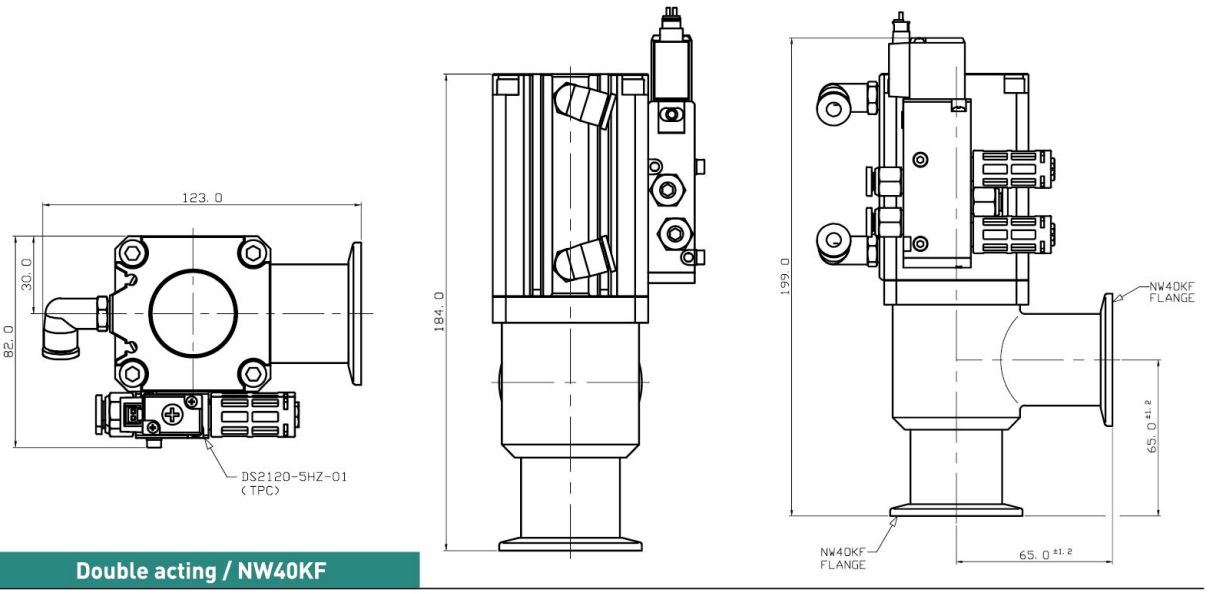




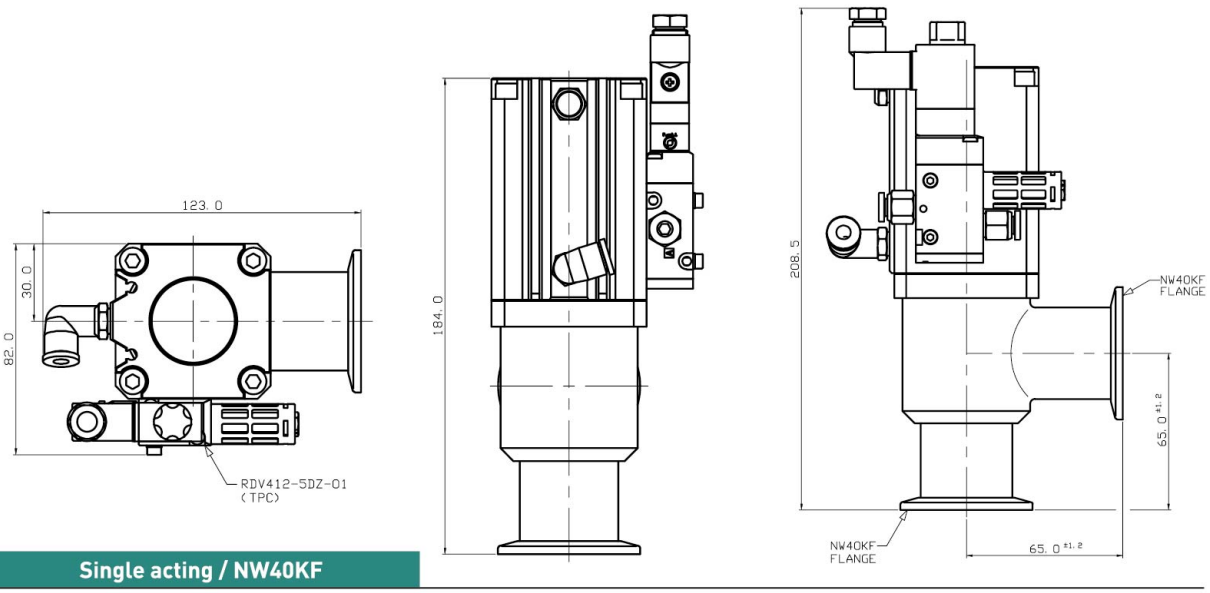
Double acting / NW25KF



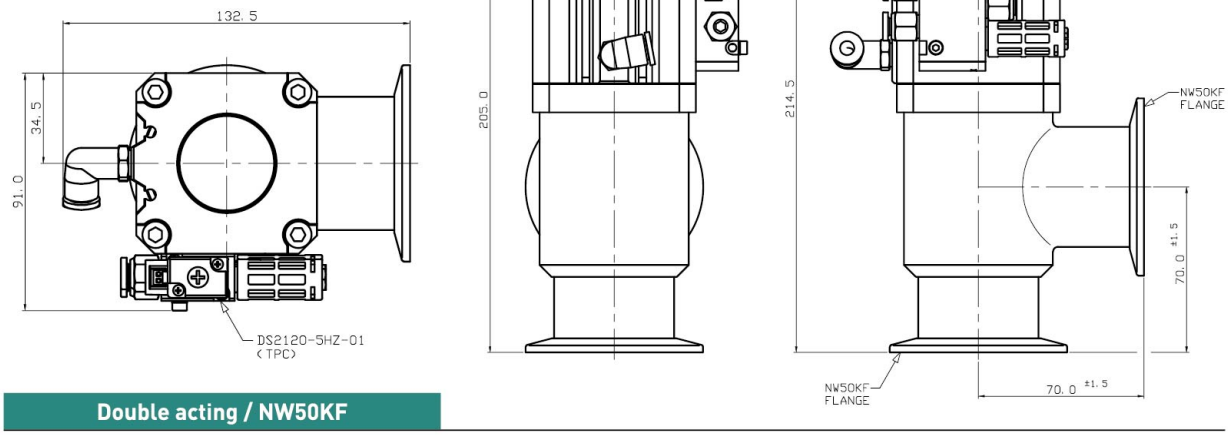
Single acting / NW25KF



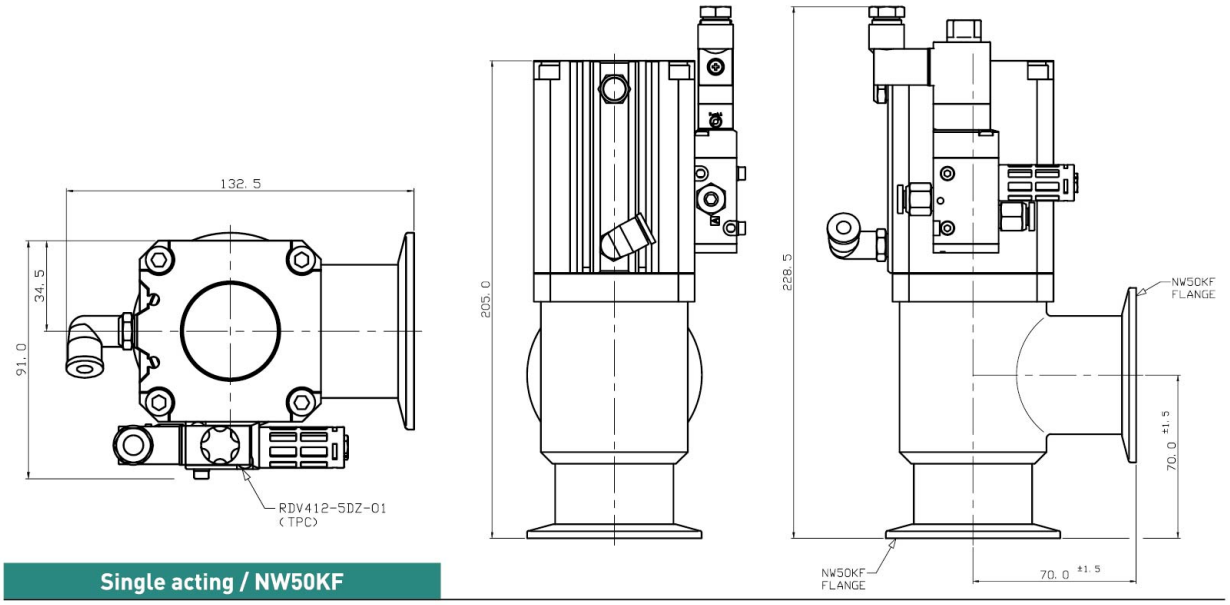
Double acting / NW40KF



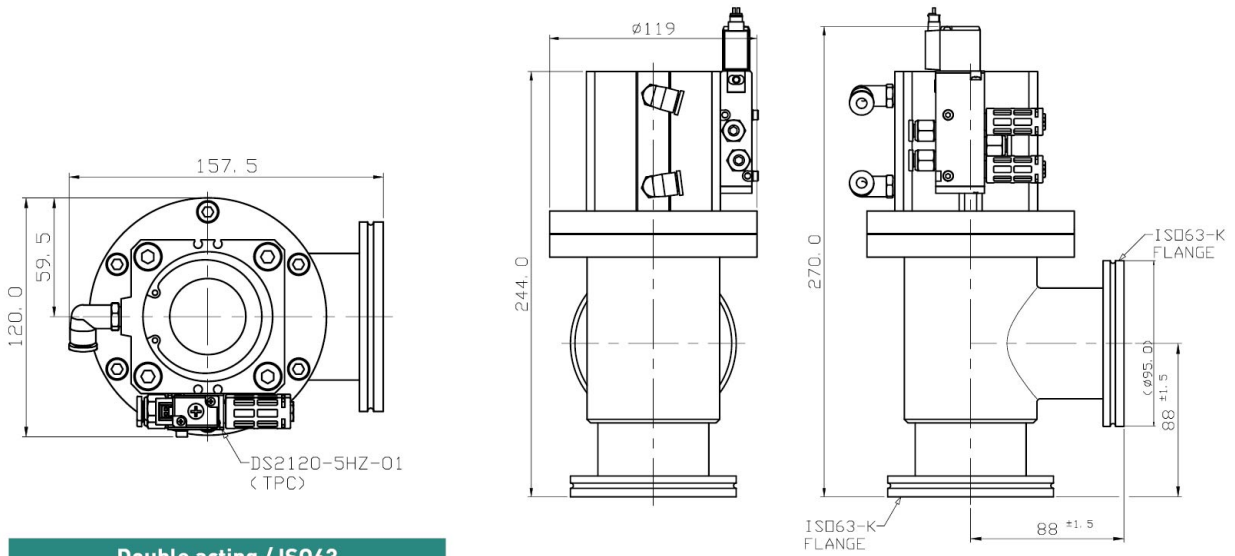
Single acting / NW40KF



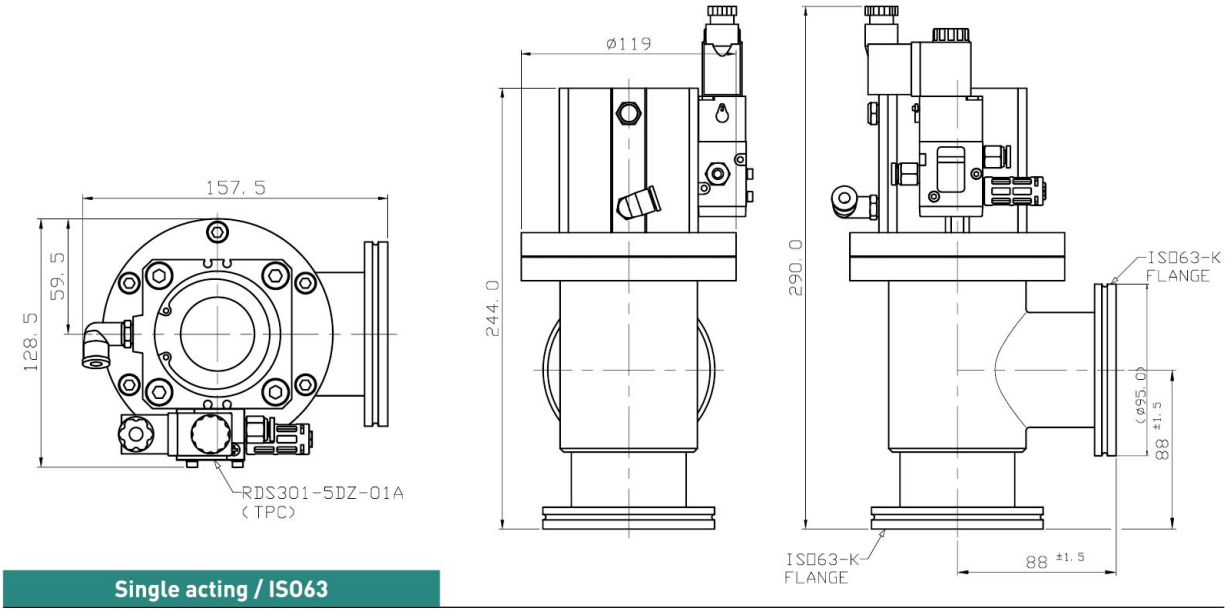
Double acting / NW50KF



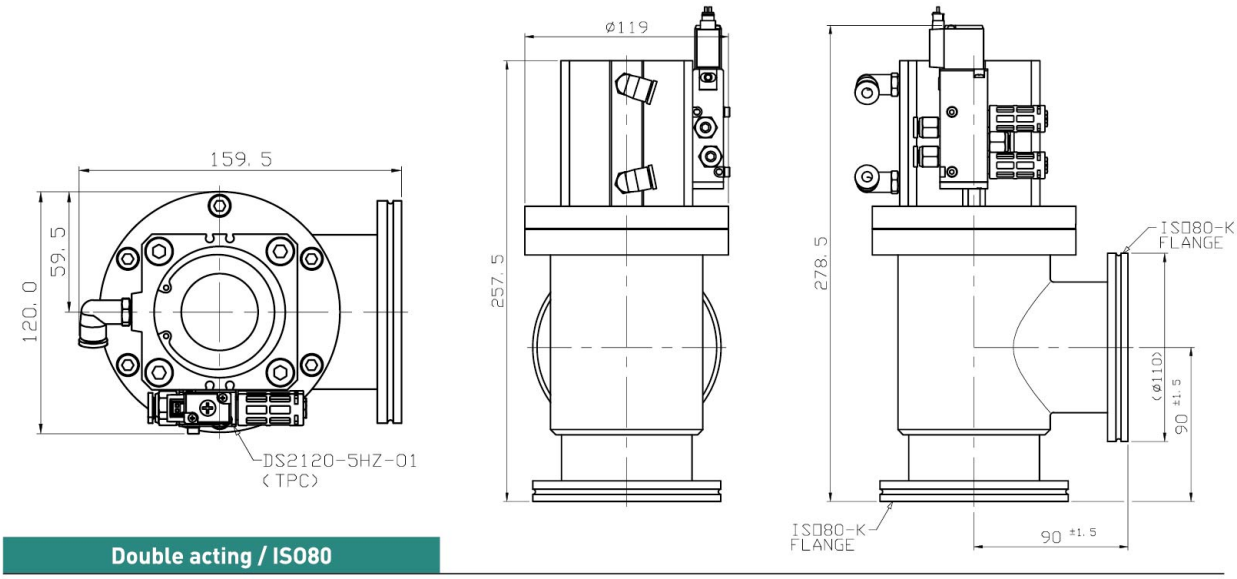
Single acting / NW50KF



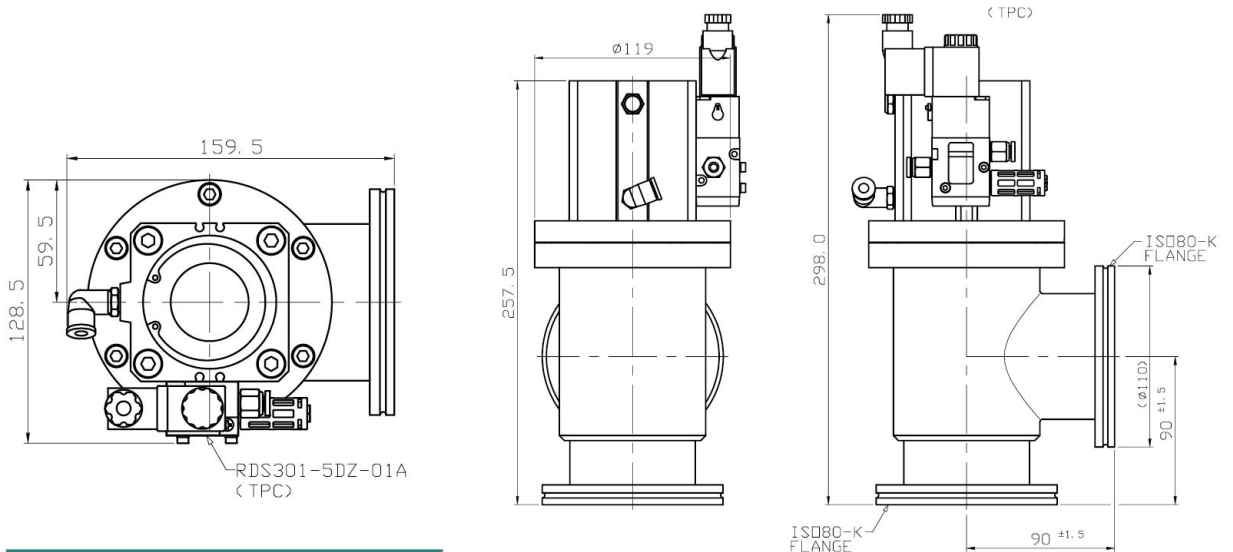
Double acting / ISO63



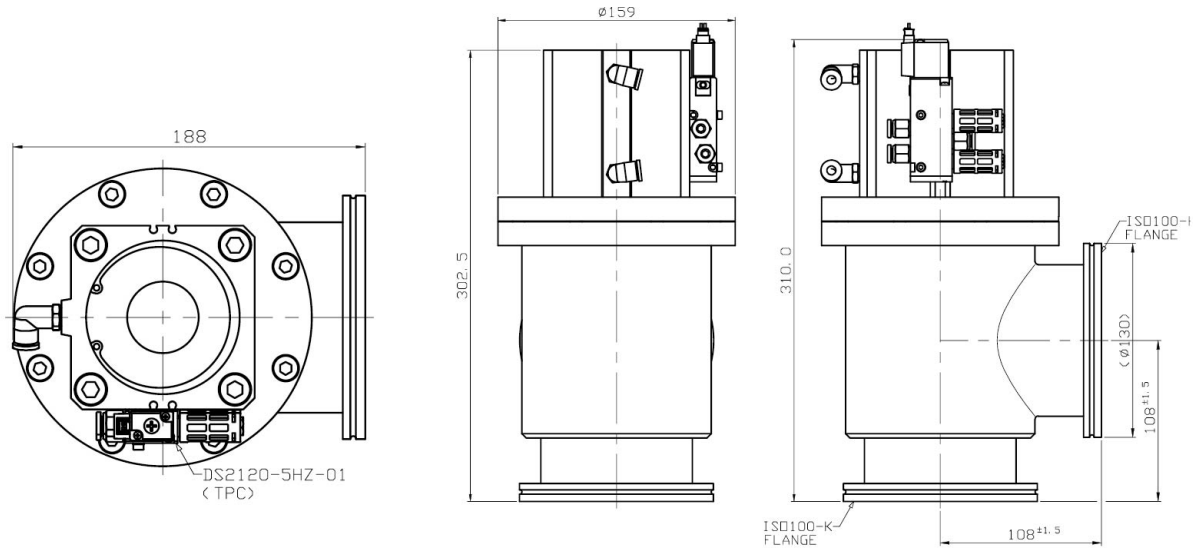
Single acting / ISO63



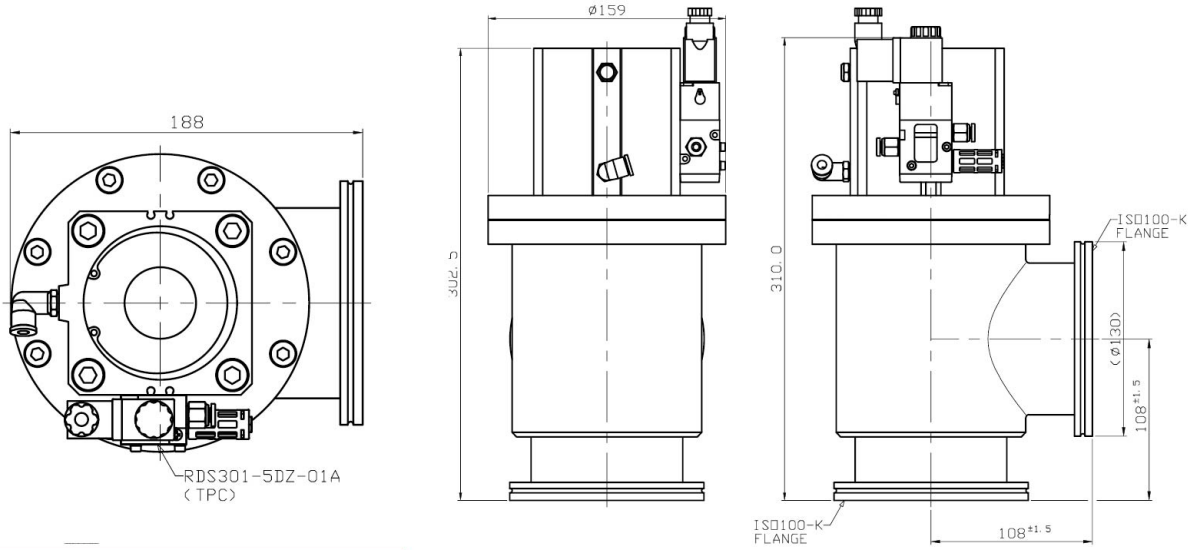
Double acting / ISO80



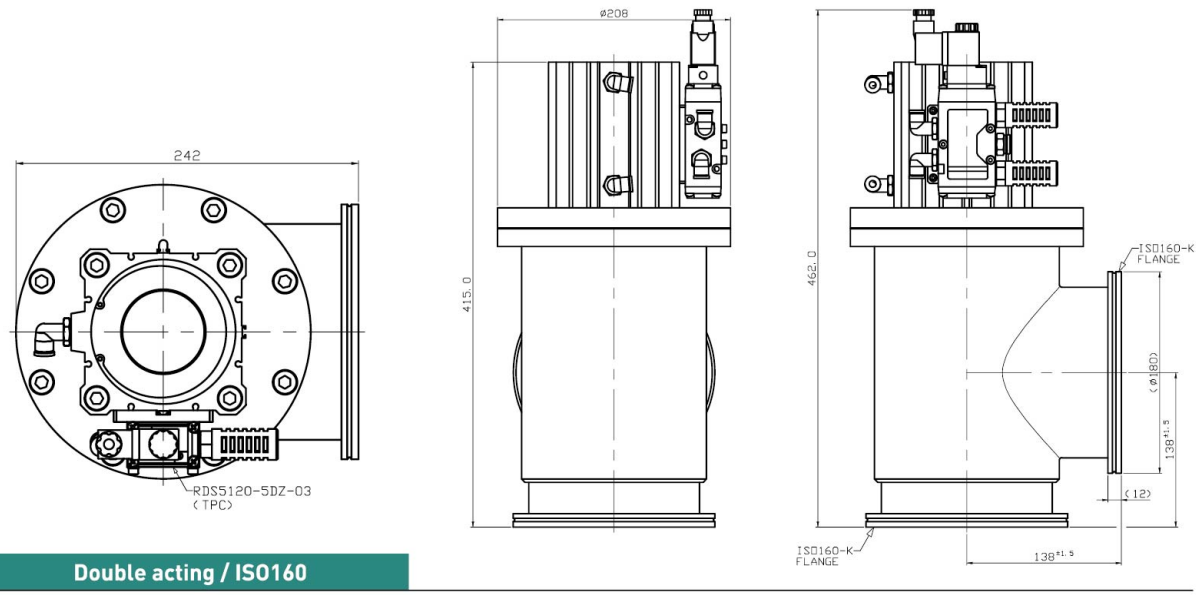
Single acting / ISO80



Double acting / ISO100

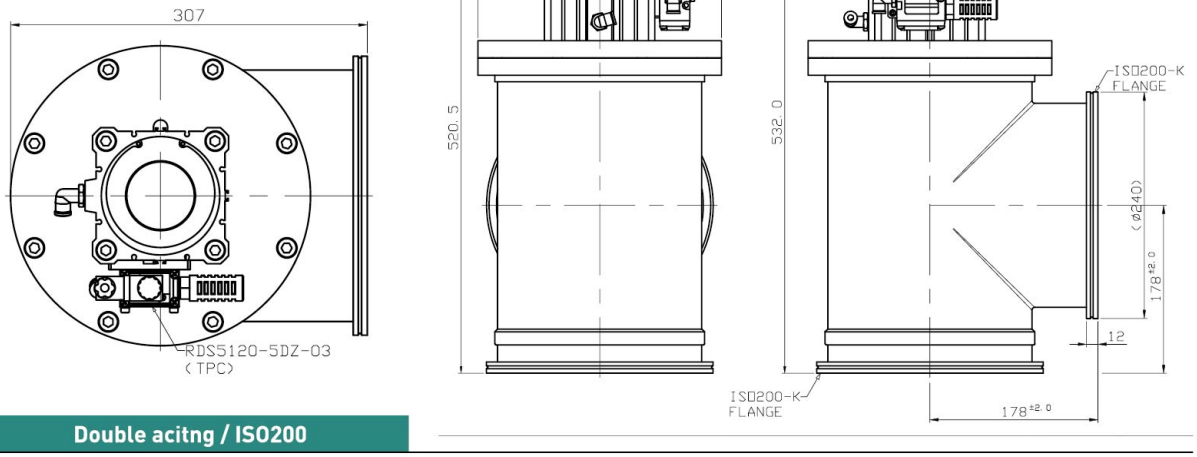


Single acting / ISO100

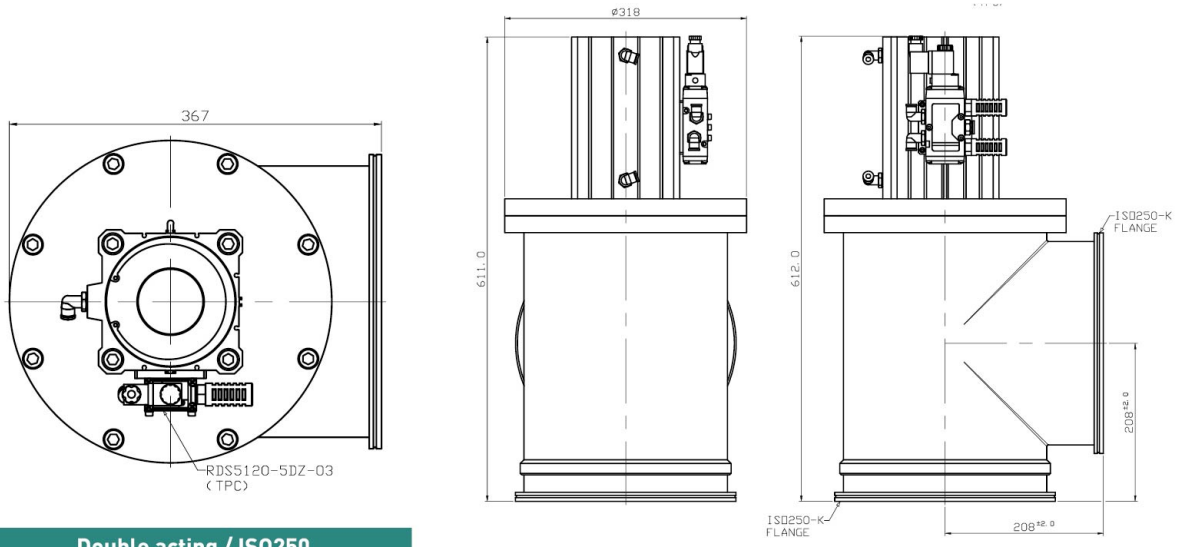


Double acting / ISO160

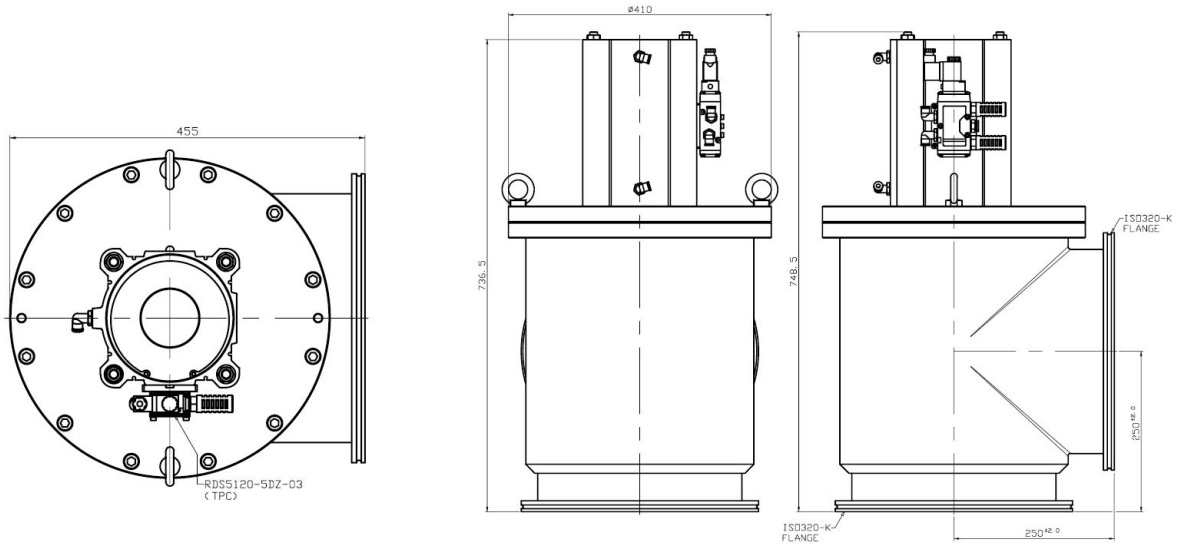
Single acting / ISO160



Double acitng / ISO200



Double acting / ISO250



Double acting / ISO320

Specification

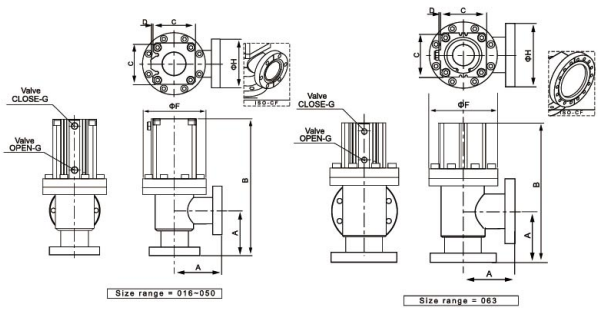
VL(A/B)W series			Vacuum Angle Valve / Double Acting / Bonnet metal seal type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	×	×	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	×	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			5	13	42	75	145	-	-	-	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal), OFHC Bonnet seal										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	-	-	-	-	-
Open stroke			14	14	18	25	30	-	-	-	-	-	-
Seal distance (A-Value)			54.6	54.6	65	86.4	90.5	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

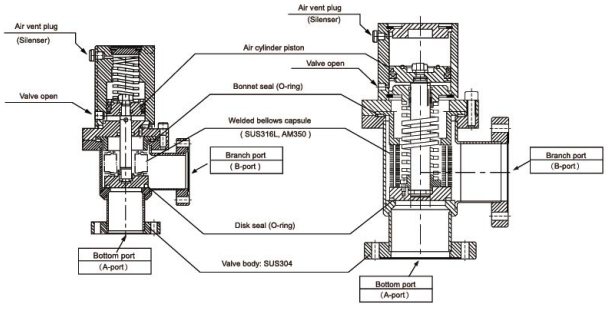
External dimension table

SIZE	16	25	40	50	63
A	54.6	54.6	65	86.4	90.5
B	164	162	197	233	247
C	48	48	60	69	77
D	3	3	2	2	5
F	Ø72	Ø72	Ø88	Ø99	Ø119
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3

Dimensional drawing



Internal detail



Specification

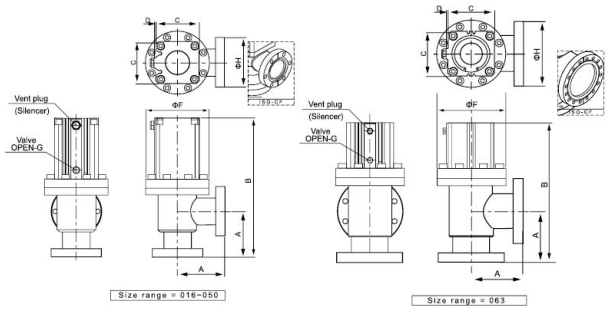
VL(A/B)Y series			Vacuum Angle Valve / Single Acting(N.C.) / Bonnet metal seal type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	×	×	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			5	13	42	75	145	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal), OFHC Bonnet seal										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	-	-	-	-	-	-
Open stroke			14	14	18	25	30	-	-	-	-	-	-
Seal distance (A-Value)			54.6	54.6	65	86.4	90.5	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close), The close side port has a silencer installed

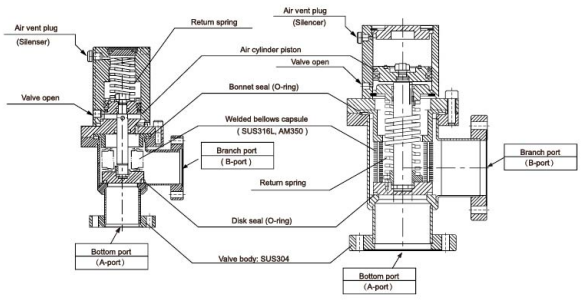
External dimension table

SIZE	16	25	40	50	63
A	54.6	54.6	65	86.4	90.5
B	164	162	197	233	247
C	48	48	60	69	77
D	3	3	2	2	5
F	Ø72	Ø72	Ø88	Ø99	Ø119
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3

Dimensional drawing



Internal detail



Specification

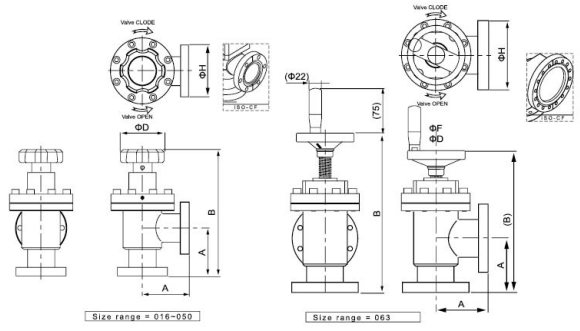
VLAZ series			Vacuum Angle Valve / Manually / Bonnet metal seal type										
			Bellows STEM seal (A: SUS316L)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	×	×	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	×	×	×	×	×
Valve Actuating type			Manual acting										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			5	13	42	75	145	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal), OFHC Bonnet seal										
Open stroke			14	14	18	25	30	-	-	-	-	-	-
Number of Handle rotation			7	7	9	12.5	7.5	-	-	-	-	-	-
Seal distance (A-Value)			54.6	54.6	65	86.4	90.5	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

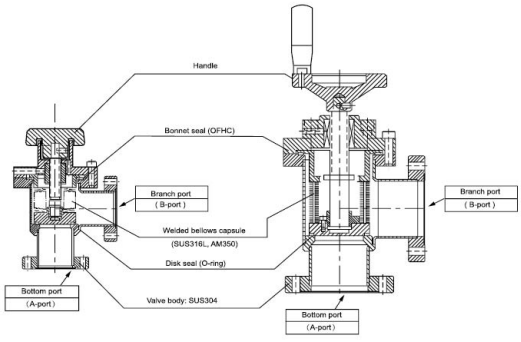
External dimension table

SIZE	16	25	40	50	63
A	54.6	54.6	65	86.4	90.5
B	164	162	197	233	247
C	Ø63	Ø63	Ø63	Ø63	Ø100
D	Ø72	Ø72	Ø88	Ø99	Ø119
F	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
G	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3

Dimensional drawing



Internal detail



Specification

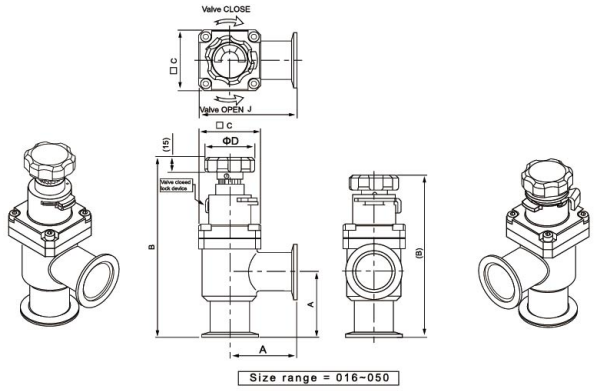
VLAL special		Vacuum Angle Valve / Manually Closed Lock type										
		Bellows STEM seal (A: SUS316L)										
Valve port	SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF CF	●	●	●	●	×	×	×	×	×	×	×
Valve Actuating type		Manual acting										
Feature		Closed Locking mechanism (Safety device) Ratchet lever release unlock										
Fluid		Vacuum in an inert gas system										
Operating temperature ℃		⩽120										
Operating pressure Pa (Abs)		1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)		7	14	42	95	-	-	-	-	-	-	-
Leakage $Pa\cdot m^3/s$	Inside	Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside	Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material		Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Open stroke		14	14	18	25	-	-	-	-	-	-	-
Number of Handle rotation		7	7	9	12.5	-	-	-	-	-	-	-
Seal distance (A-Value)		40	50	65	70	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

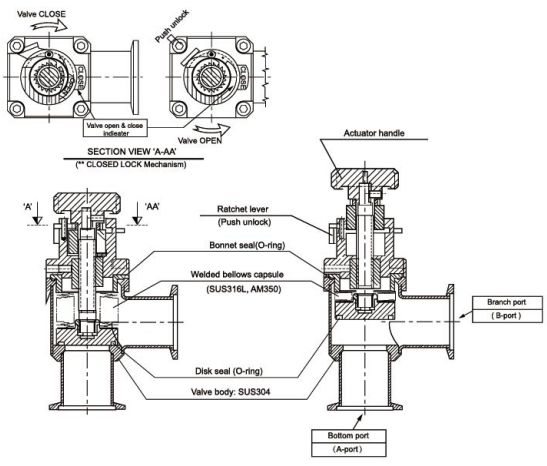
External dimension table

SIZE	16	25	40	50
A	40	50	65	70
B	143.5	151.5	179	206
(B)	129.5	137.5	161	181
C	48	48	60	69
D	Ø48	Ø48	Ø48	Ø48
H	Ø30	Ø40	Ø55	Ø75
J	64	74	95	104.5
K	-	-	-	-

Dimensional drawing



Internal detail



Specification

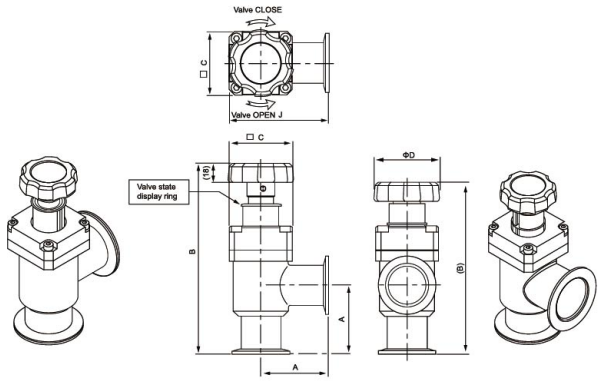
VLAF special			Vacuum Angle Valve / Manually Open rate display type										
			Bellows STEM seal (A: SUS316L)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	×	×	×	×	×	×	×
Valve Actuating type			Manual acting										
Feature			Manual operation valve for visually checking the degree of opening of the valve										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			7	14	42	95	-	-	-	-	-	-	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Open stroke			14	14	18	25	-	-	-	-	-	-	-
Number of Handle rotation			7	7	9	12.5	-	-	-	-	-	-	-
Seal distance (A-Value)			40	50	65	70	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

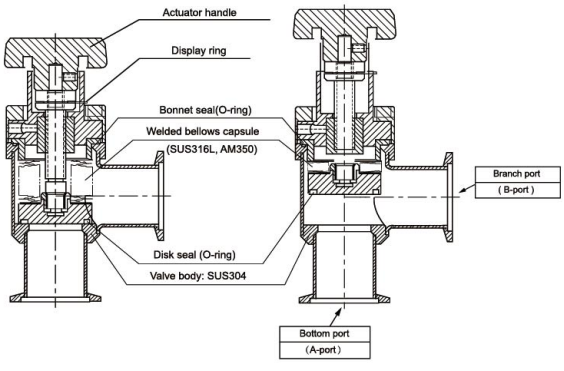
External dimension table

SIZE	16	25	40	50
A	40	50	65	70
B	142	150	180.5	198.5
[B]	128	136	162.5	173.5
C	48	48	60	69
D	Ø63	Ø63	Ø63	Ø63
H	Ø30	Ø40	Ø55	Ø75
J	64	74	95	104.5
K	-	-	-	-

Dimensional drawing



Internal detail

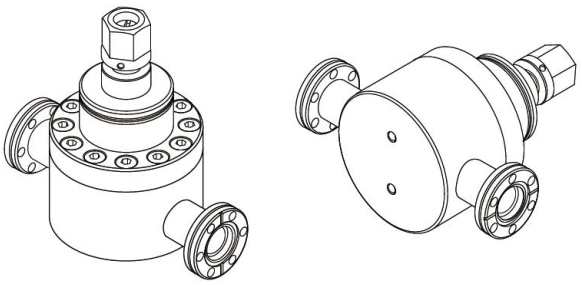


Specification

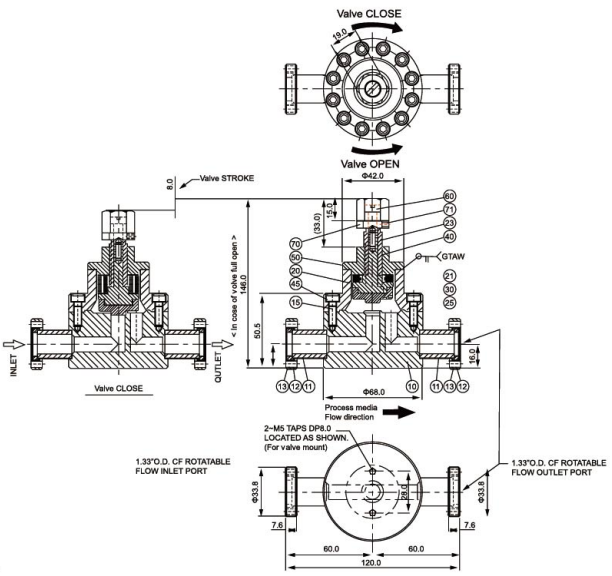
VYAA- special			All Metal Vacuum Inline Valve / Manually
			Bellows STEM seal (A: SUS316L)
Flange Standards	ISO-CF	CF	CF 1.33"
Valve Actuating type			Manual acting
Fluid			Vacuum in an inert gas system
Operating temperature ℃			⩽200
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure
Conductance L / s (Note 1)			Standard material (C1100) 1.0×10^{-11} at room temperature (excluding gas permeation)
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)
	Outside		Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal), C-1100
Open stroke			7.5mm
Number of Handle rotation			5 Turn
Torque			Max. 3.0 N·m
Life cycles			1,000 cycle
Seal distance (A-Value)			120mm

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

Dimensional drawing



Internal detail



Specification

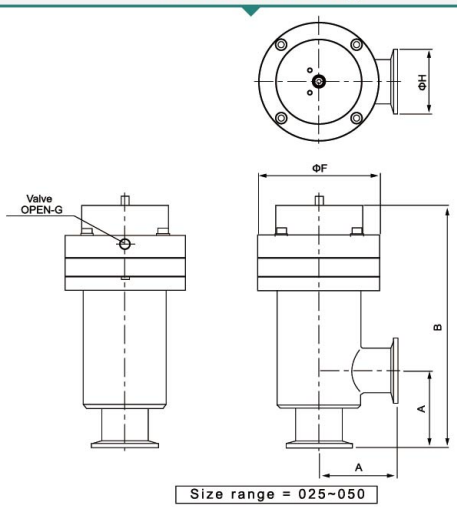
VLBV series			Vacuum Angle Valve / Single Acting(N.C.) / Heating model										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	×	●	●	●	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			-	14	42	95	-	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		-	12	23	49	-	-	-	-	-	-	-
Open stroke			-	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			-	50	65	70	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close), The close side port has a silencer installed

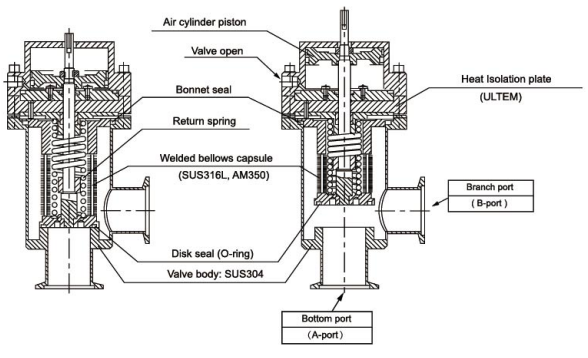
External dimension table

SIZE	16	25	40	50
A	-	50	65	70
B	-	182	206	253
F	-	Ø88.4	Ø100.6	Ø122
G	-	PT 1/8"	PT 1/8"	PT 1/8"
H	-	Ø40	Ø55	Ø75

Dimensional drawing



Internal detail



Specification

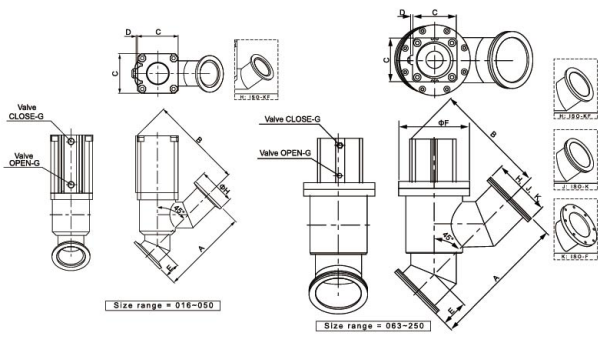
VY(A/B)P series			Vacuum Inline Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	×
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	106	152	304	778	1,640	2,630	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	-
Open stroke			14	14	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)			101.6	106.7	130	117.8	210	250	305	420	560	650	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

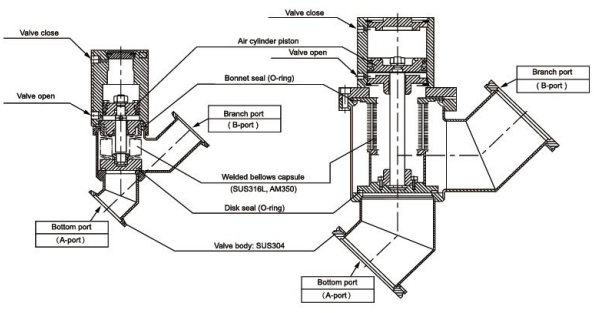
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	101.6	106.7	130	117.8	210	250	305	420	560	650
B	111.5	111	138.5	162	191	209	256	352	448	543
C	48	48	60	69	77	77	98	117	117	142
D	3	3	2	2	5	5	5	6.5	6.5	11
E	16.3	18.7	21.5	27.5	40	50	60	90	120	132
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335

Dimensional drawing



Internal detail



Specification

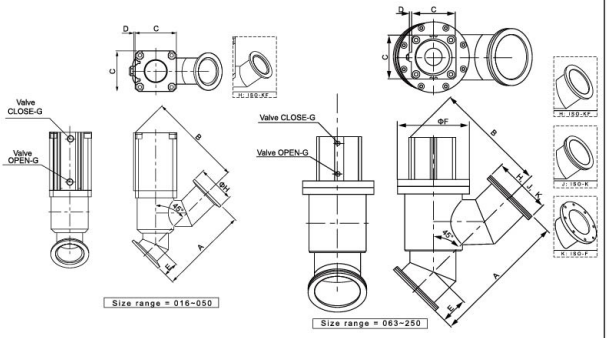
VYSP series				Vacuum Inline Valve / Double Acting										
				O-Ring STEM seal (S: FKM)										
Valve port		SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF		KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K		KQ	×	×	×	×	●	●	●	●	●	●	×
	ISO-F		KC	×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type				Double acting cylinder										
Fluid				Vacuum in an inert gas system										
Operating temperature ℃				⩽120										
Operating pressure Pa (Abs)				1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)				4.6	11	35	62	106	152	304	778	1,640	2,630	-
Leakage Pa·m³/s		Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
		Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material				Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)				0.4~0.7										
Operation Port Port Size				PT 1/8"(Rc1/8")							PT 1/8"(Rc1/8")			
Compressed air consumption(@0.5MPa)		cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	-
Open stroke				14	14	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)				101.6	106.7	130	117.8	210	250	305	420	560	650	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

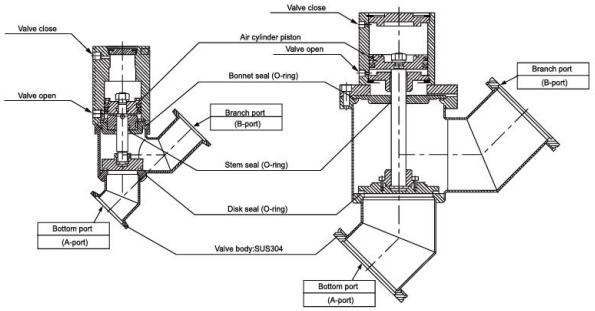
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	101.6	106.7	130	117.8	210	250	305	420	560	650
B	111.5	111	138.5	162	191	209	256	352	448	543
C	48	48	60	69	77	77	98	117	117	142
D	3	3	2	2	5	5	5	6.5	6.5	11
E	16.3	18.7	21.5	27.5	40	50	60	90	120	132
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335

Dimensional drawing



Internal detail



Specification

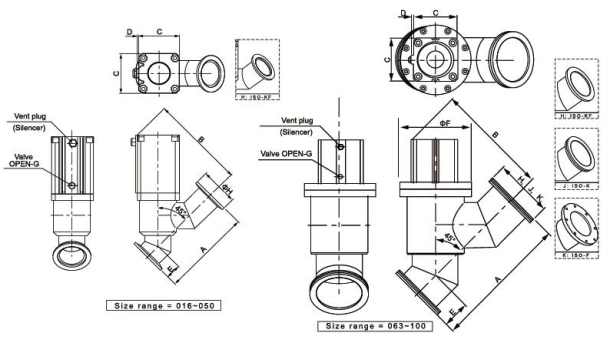
VY(A/B)S series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	106	152	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 1/8"(Rc1/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	470	-	-	-
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	220	250	305	420	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close), The close side port has a silencer installed

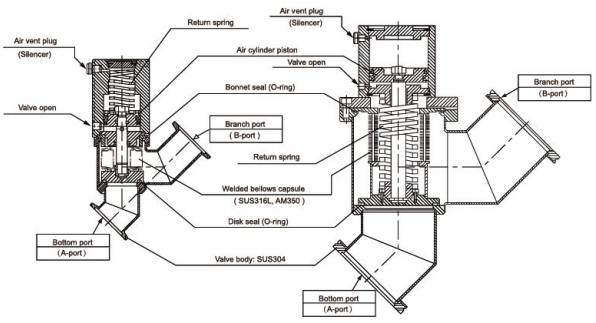
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	106.7	130	117.8	210	250	305	420
B	111.5	111	138.5	162	191	209	256	352
C	48	48	60	69	77	77	98	117
D	3	3	2	2	5	5	5	6.5
E	16.3	18.7	21.5	27.5	40	50	60	90
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

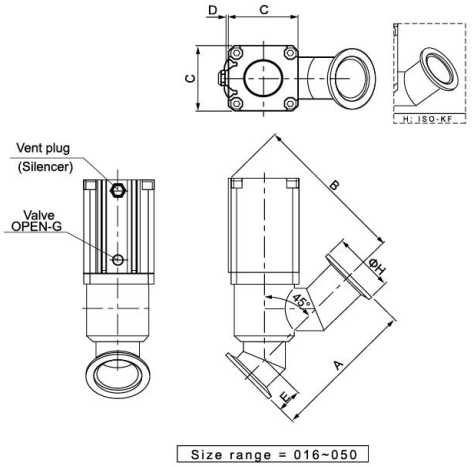
VYSS series			Vacuum Inline Valve / Single Acting(N.C.)										
			O-ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	×	×	×	×	×	×	×
	ISO-K	KQ	×	×	×	×	×	×	×	×	×	×	×
	ISO-F	KC	×	×	×	×	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	-	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	-	-	-	-	-	-	-
Open stroke			14	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	-	-	-	-	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close), The close side port has a silencer installed

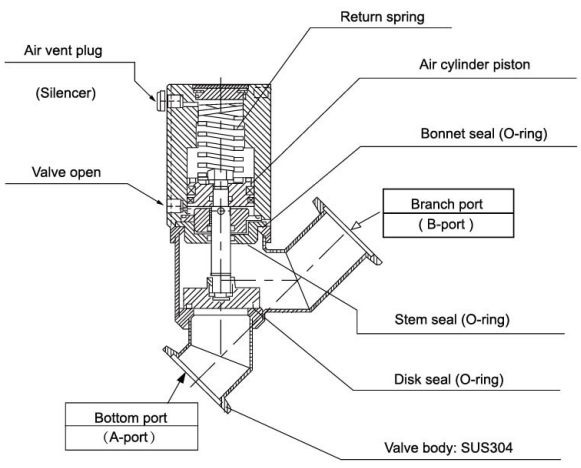
External dimension table

SIZE	16	25	40	50
A	101.6	106.7	130	117.8
B	111.5	111	138.5	162
C	48	48	60	69
D	3	3	2	2
F	-	-	-	-
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75
J	-	-	-	-
K	-	-	-	-

Dimensional drawing



Internal detail



Specification

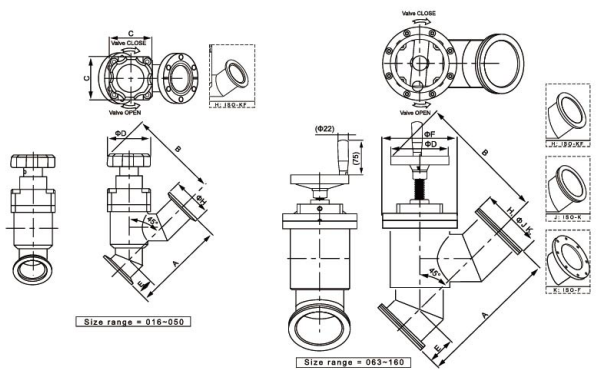
VYAM series			Vacuum Inline Valve / Manually										
			Bellows STEM seal (A: SUS316L)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Manual acting										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	106	152	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Number of Handle rotation			7	7	9	12.5	7.5	9	10	12	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	210	250	305	420	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

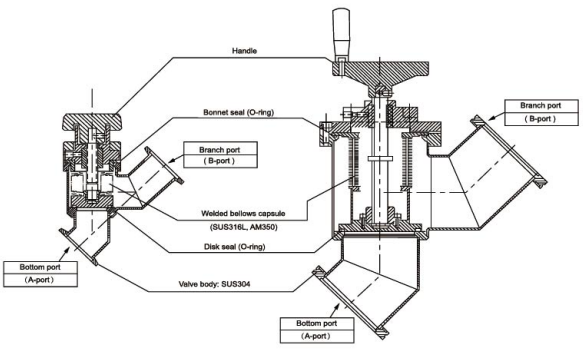
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	106.7	130	117.8	210	250	305	420
B	110	110	125	145	209	229	277	406
C	48	48	60	69	-	-	-	-
D	Ø63	Ø63	Ø63	Ø63	Ø100	Ø100	Ø125	Ø200
F	16.3	18.7	21.5	27.5	40	50	60	90
G	-	-	-	-	Ø119	Ø119	Ø159	Ø208
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

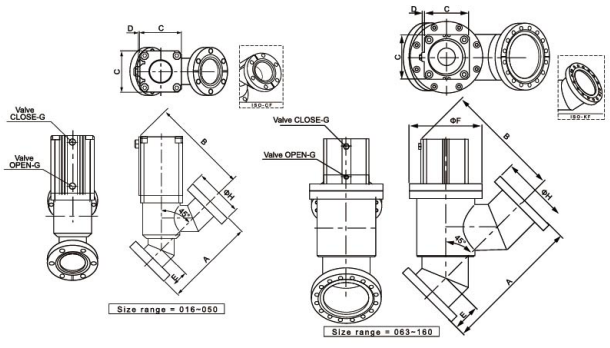
VY(A/B)P-CF series			Vacuum Inline Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	106	-	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 1/8"(Rc1/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	400	940	-	-	-
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Seal distance (A-Value)			101.6	127	130	180	211	-	306	421.4	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close)

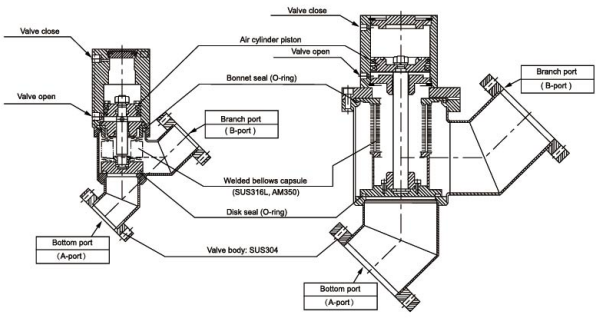
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	127	130	180	211	-	306	421.4
B	111.5	111	138.5	162	191	-	256	352
C	48	48	60	69	77	-	98	117
D	3	3	2	2	5	-	5	6.5
E	16.3	34	29.5	38.5	40.5	-	60.5	90.7
F	-	-	-	-	Ø119	-	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

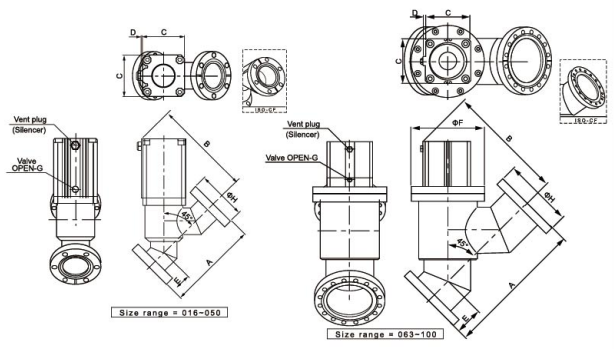
VY(A/B)S-CF series			Vacuum Inline Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	-	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 1/8"(Rc1/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	185	-	400	940	-	-	-
Open stroke			14	14	18	25	94	-	200	470	-	-	-
Seal distance (A-Value)			101.6	127	130	180	211	-	306	421.4	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.
(Note 2) One stroke condition. (Open & Close), The close side port has a silencer installed

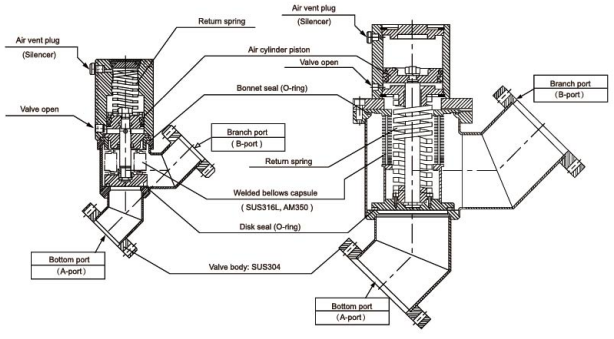
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	127	130	180	211	-	306	421.4
B	111.5	111	138.5	162	191	-	256	375
C	48	48	60	69	77	-	98	142
D	3	3	2	2	5	-	5	11
E	16.3	34	29.5	38.5	40.5	-	60.5	90.7
F	-	-	-	-	Ø119	-	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

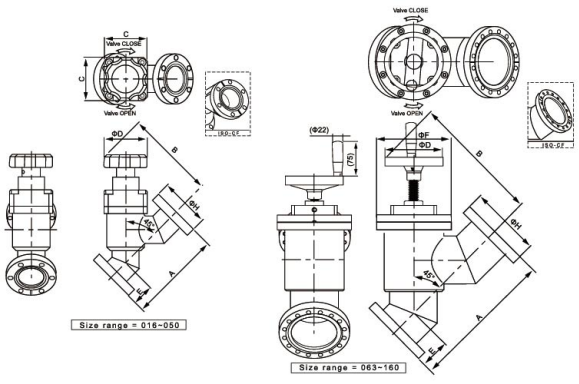
VYAM-CF series			Vacuum Inline Valve / Manually										
			Bellows STEM seal (A: SUS316L)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-CF	CF	●	●	●	●	●	×	●	●	×	×	×
			1.33CF	2.12CF	2.75CF	3.38CF	4.5CF	×	6.0CF	8.0CF	×	×	×
Valve Actuating type			Manual acting										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10-6 ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	-	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10-10 at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10-11 at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Number of Handle rotation			7	7	9	12.5	7.5	-	10	12	-	-	-
Seal distance (A-Value)			101.6	127	130	180	211	-	306	421.4	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension.

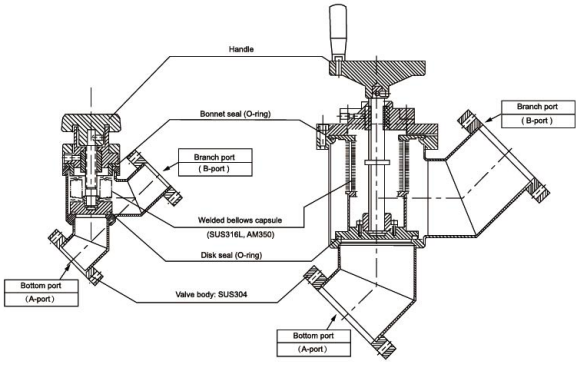
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	106.7	130	117.8	210	-	305	420
B	110	110	125	145	209	-	277	406
C	48	48	60	69	-	-	-	-
D	Ø63	Ø63	Ø63	Ø63	Ø100	-	Ø125	Ø200
F	16.3	18.7	21.5	27.5	40	-	60	90
G	-	-	-	-	Ø119	-	Ø159	Ø208
H	Ø33.8	Ø54	Ø69.9	Ø85.7	Ø114.3	-	Ø152.4	Ø203.2

Dimensional drawing



Internal detail



Specification

VY(A/B)Q series			Vacuum Inline Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	152	304	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	210	250	305	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

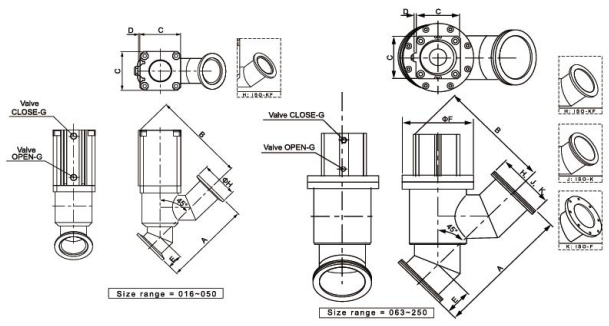
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

▶If heater is not included (not installed), type "W" at the end of model name

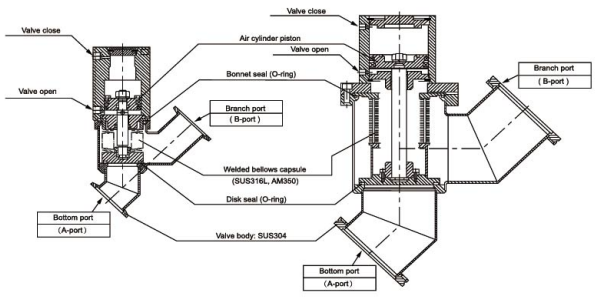
External dimension table

SIZE	16	25	40	50	63	80	100
A	101.6	106.7	130	117.8	210	250	305
B	111.5	111	138.5	162	191	209	256
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
E	16.3	18.7	21.5	27.5	40	50	60
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

VYSQ series			Vacuum Inline Valve / Double Acting										
			O-Ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	152	304	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	210	250	305	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

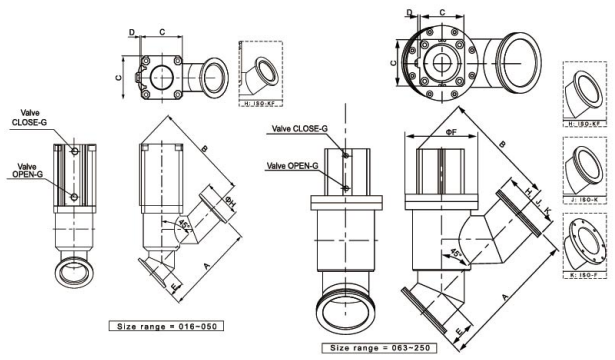
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

▶If heater is not included (not installed), type "W" at the end of model name

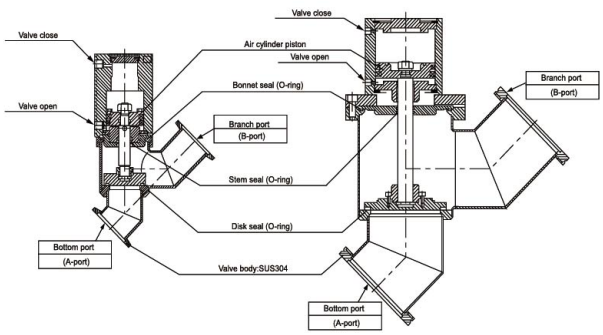
External dimension table

SIZE	16	25	40	50	63	80	100
A	101.6	106.7	130	117.8	210	250	305
B	111.5	111	138.5	162	191	209	256
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
E	16.3	18.7	21.5	27.5	40	50	60
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

VY(A/B)R series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	152	304	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")										
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	-	-	-	-
Open stroke			14	14	18	25	30	35	40	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	117.8	210	250	305	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

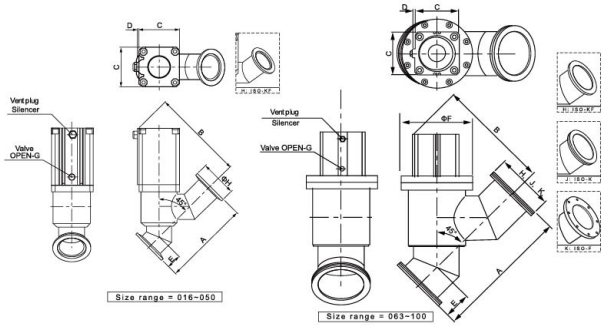
(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

▶If heater is not included (not installed), type "W" at the end of model name

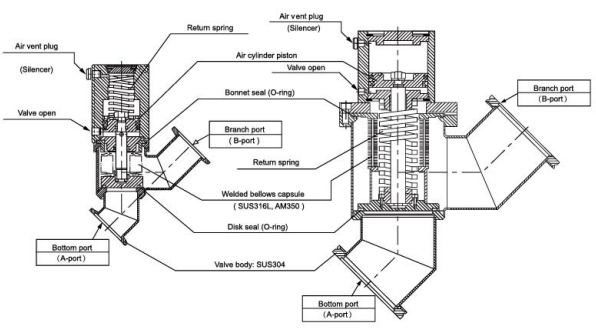
External dimension table

SIZE	16	25	40	50	63	80	100
A	101.6	106.7	130	117.8	210	250	305
B	111.5	111	138.5	162	191	209	256
C	48	48	60	69	77	77	98
D	3	3	2	2	5	5	5
E	16.3	18.7	21.5	27.5	40	50	60
F	-	-	-	-	Ø119	Ø119	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134
J	-	-	-	-	Ø95	Ø110	Ø130
K	-	-	-	-	Ø130	Ø145	Ø165

Dimensional drawing



Internal detail



Specification

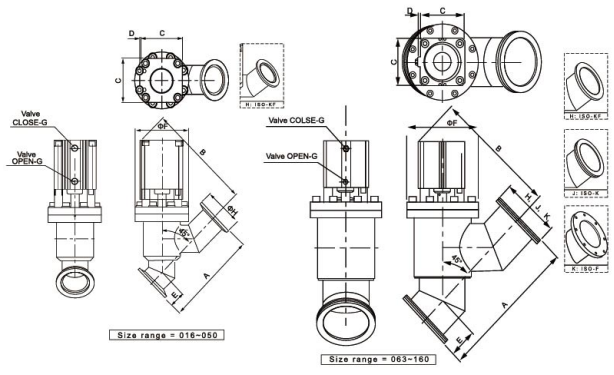
VY(A/B)H series			Vacuum Inline Valve / Double Acting / Bakable type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	×	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	×	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	×	●	●	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽150 (Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10-6 ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	-	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10-10 at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10-11 at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)		cc(mL) (Note 2)	22.5	22.5	45	100	185	-	400	940	-	-	-
Open stroke			14	14	18	25	30	-	40	60	-	-	-
Seal distance (A-Value)			101.6	106.7	130	177.8	210	-	305	420	-	-	-

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

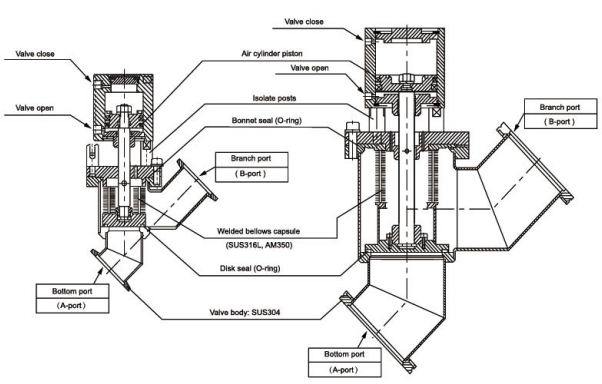
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	106.7	50	177.8	210	-	350	420
B	121	120.5	149.5	175.5	212.5	-	277	384
C	48	48	60	69	77	-	98	117
D	3	3	2	2	5	-	5	6.5
E	Ø61	Ø61	Ø78	Ø89	Ø109	-	Ø159	Ø206
F	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	-	Ø134	Ø190
J	-	-	-	-	Ø95	-	Ø130	Ø180
K	-	-	-	-	Ø130	-	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

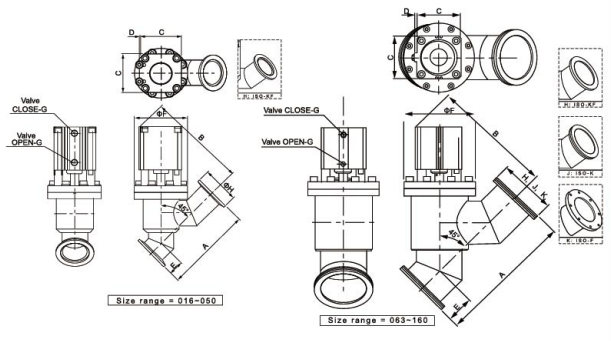
VY(A/B)K eries			Vacuum Inline Valve / Double Acting / Bakable type										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	×	●	×	×	×	×
	ISO-K	KQ	×	×	×	×	●	×	●	×	×	×	×
	ISO-F	KC	×	×	×	×	●	×	●	×	×	×	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤150(Actuator: Max.60℃)										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	-	304	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	-	400	-	-	-	-
Open stroke			14	14	18	25	30	-	40	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	177.8	210	-	305	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	-	-	-	-
Type: Silicon Rubber Heater Jacket	Electric Capacity		25W	25W	30W	45W	70W	90W	150W	Not Available			
Temperature Max.: Amb.~150℃ / TC.sensor													
Control: K-Type / Electric power: 220VAC													

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

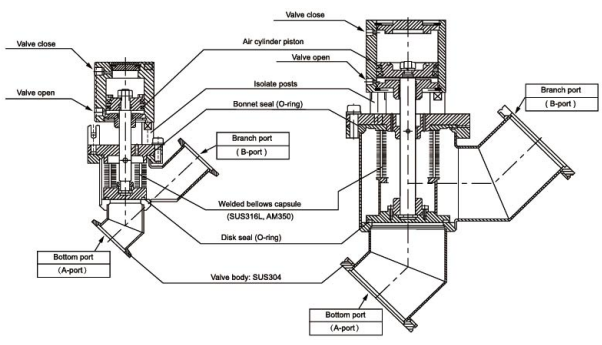
External dimension table

SIZE	16	25	40	50	63	80	100
A	101.6	106.7	130	177.8	210	-	350
B	121	120.5	149.5	175.5	212.5	-	277
C	48	48	60	69	77	-	98
D	3	3	2	2	5	-	5
F	Ø61	Ø61	Ø78	Ø89	Ø109	-	Ø159
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	-	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	-	Ø134
J	-	-	-	-	Ø95	-	Ø130
K	-	-	-	-	Ø130	-	Ø165

Dimensional drawing



Internal detail



Specification

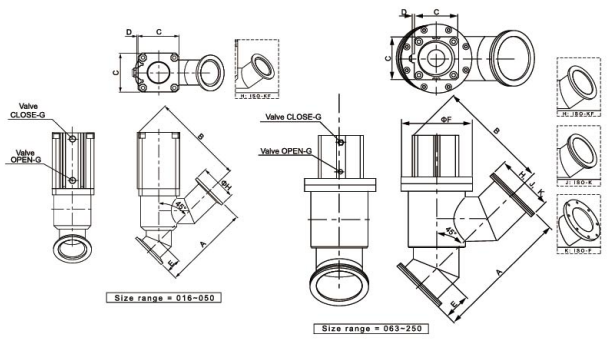
VY(A/B)P-G series			Vacuum Inline Valve / Double Acting										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	×
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	10	35	62	106	152	304	778	1,640	2,630	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	-
Open stroke			14	14	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)			101.6	106.7	130	177.8	210	250	305	420	560	650	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	160	200	250	-
Single acting	[VⒶⒷS]		RDV412-5DZ-01				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

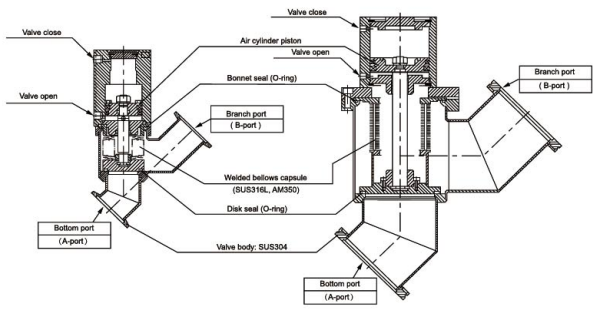
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	101.6	106.7	130	117.8	210	250	305	420	560	650
B	111.5	111	138.5	162	191	209	256	352	448	543
C	48	48	60	69	77	77	98	117	117	142
D	3	3	2	2	5	5	5	6.5	6.5	11
E	16.3	18.7	21.5	27.5	40	50	60	90	120	132
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335

Dimensional drawing



Internal detail



Specification

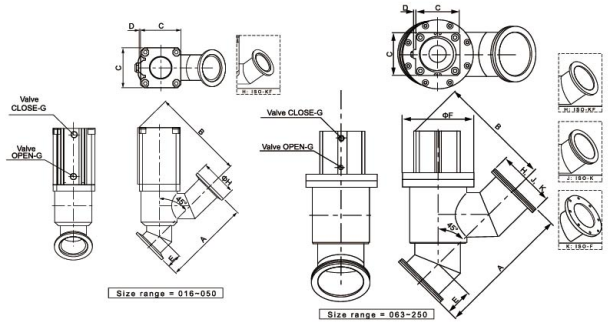
VYSP-G series			Vacuum Inline Valve / Double Acting O-Ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	●	●	×
	ISO-F	KC	×	×	×	×	●	●	●	●	●	●	×
Valve Actuating type			Double acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	00	35	62	106	152	304	778	1,640	2,630	-
Leakage $Pa\cdot m^3/s$	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		22.5	22.5	45	100	185	210	400	940	1,490	2,700	-
Open stroke			14	14	18	25	30	35	40	60	95	110	-
Seal distance (A-Value)			101.6	106.7	130	177.8	210	250	305	420	560	650	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	160	200	250	320
Single acting	[VⒶⒷS]		RDV412-5DZ-01				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶⒷP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

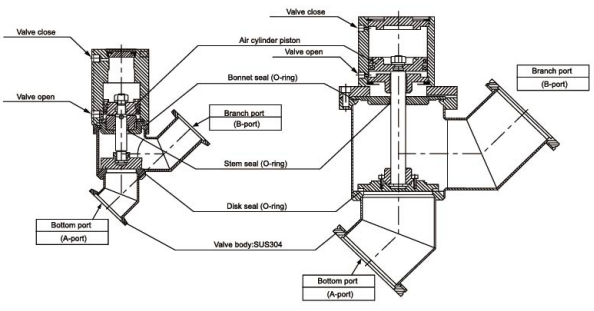
External dimension table

SIZE	16	25	40	50	63	80	100	160	200	250
A	101.6	106.7	130	117.8	210	250	305	420	560	650
B	111.5	111	138.5	162	191	209	256	352	448	543
C	48	48	60	69	77	77	98	117	117	142
D	3	3	2	2	5	5	5	6.5	6.5	11
E	16.3	18.7	21.5	27.5	40	50	60	90	120	132
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208	Ø258	Ø318
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"	PT 3/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190	-	-
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180	Ø240	Ø290
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225	Ø285	Ø335

Dimensional drawing



Internal detail



Specification

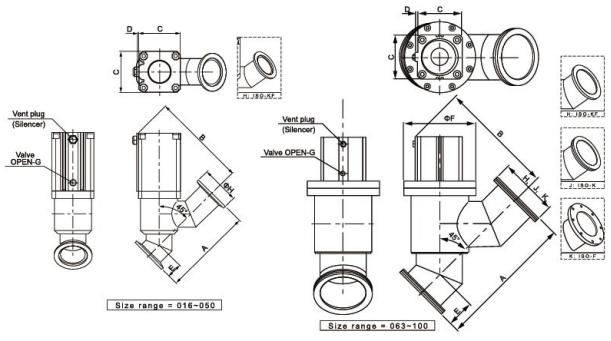
VY(A/B)S-G series			Vacuum Angle Valve / Single Acting(N.C.)										
			Bellows STEM seal (A: SUS316L / B: AM350)										
Valve port		SIZE	16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	●	●	●	●	×	×	×
	ISO-K	KQ	×	×	×	×	●	●	●	●	×	×	×
	ISO-F	KC	×	×	×	×	●	●	●	●	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			⩽120										
Operating pressure Pa (Abs)			1×10^{-6} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	106	152	304	778	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")							PT 3/8"(Rc3/8")			
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	94	110	200	470	-	-	-
Open stroke			14	14	18	25	30	35	40	60	-	-	-
Seal distance (A-Value)			101.6	106.7	130	177.8	210	250	305	420	-	-	-
w/Heater Spec.	Size		016	025	040	050	063	080	100	160	-	-	-
Single acting	[VⒶBS]		RDV412-5DZ-01				RDS301-5DZ-01A			[Note 3]	Not Available		
Double acting	[VⒶBP]		DS2120-5HZ-01							RDS5120-5DZ-03			

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)
(Note 3) Solenoid valve specification: RDS301-5DZ-02A

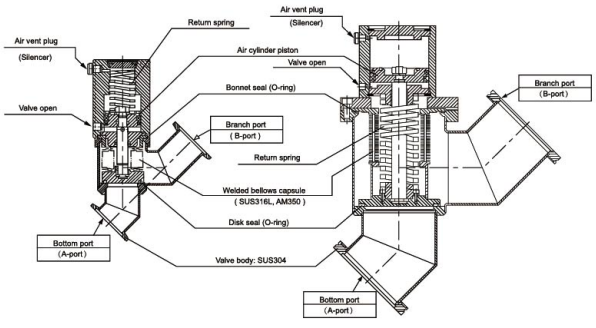
External dimension table

SIZE	16	25	40	50	63	80	100	160
A	101.6	106.7	130	117.8	210	250	305	420
B	111.5	111	138.5	162	191	209	256	352
C	48	48	60	69	77	77	98	117
D	3	3	2	2	5	5	5	6.5
E	16.3	18.7	21.5	27.5	40	50	60	90
F	-	-	-	-	Ø119	Ø119	Ø159	Ø208
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"	PT 3/8"
H	Ø30	Ø40	Ø55	Ø75	Ø95	Ø114	Ø134	Ø190
J	-	-	-	-	Ø95	Ø110	Ø130	Ø180
K	-	-	-	-	Ø130	Ø145	Ø165	Ø225

Dimensional drawing



Internal detail



Specification

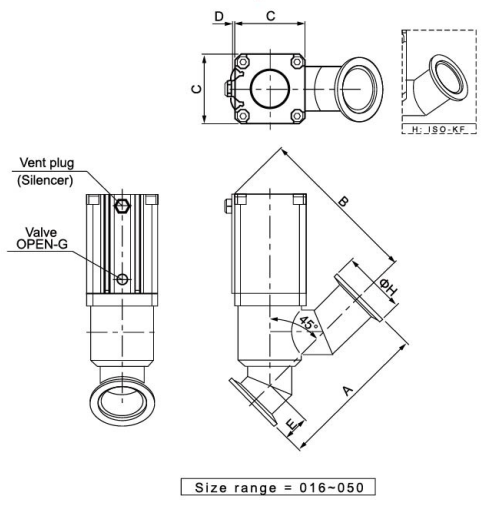
VYSS-G series			Vacuum Inline Valve / Single Acting(N.C.)										
			O-ring STEM seal (S: FKM)										
Valve port	SIZE		16	25	40	50	63	80	100	160	200	250	320
Flange Standards	ISO-KF	KF	●	●	●	●	×	×	×	×	×	×	×
	ISO-K	KQ	×	×	×	×	×	×	×	×	×	×	×
	ISO-F	KC	×	×	×	×	×	×	×	×	×	×	×
Valve Actuating type			Single acting cylinder										
Fluid			Vacuum in an inert gas system										
Operating temperature ℃			≤120										
Operating pressure Pa (Abs)			1×10^{-5} ~ to atmospheric pressure										
Conductance L / s (Note 1)			4.6	11	35	62	-	-	-	-	-	-	-
Leakage Pa·m³/s	Inside		Standard material (FKM) 1.0×10^{-10} at room temperature (excluding gas permeation)										
	Outside		Standard material (FKM) 1.0×10^{-11} at room temperature (excluding gas permeation)										
Main material			Body: SUS304, Bellows: (SUS316L / AM350) Main parts: SUS304, AL-6061, FKM (Standard seal)										
Operating pressure MPa (G)			0.4~0.7										
Operation Port Port Size			PT 1/8"(Rc1/8")				-	-	-	-	-	-	-
Compressed air consumption(@0.5MPa)	cc(mL) (Note 2)		12	12	23	49	-	-	-	-	-	-	-
Open stroke			14	14	18	25	-	-	-	-	-	-	-
Seal distance (A-Value)			101.6	106.7	130	177.8	-	-	-	-	-	-	-
w/Heater Spec.	Size		016	025	040	050	-	-	-	-	-	-	-
Single acting	[VⒶⒷS]		RDV412-5DZ-01										
Double acting	[VⒶⒷP]		DS2120-5HZ-01										

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. **(Note 2)** One stroke condition. (Open & Close)

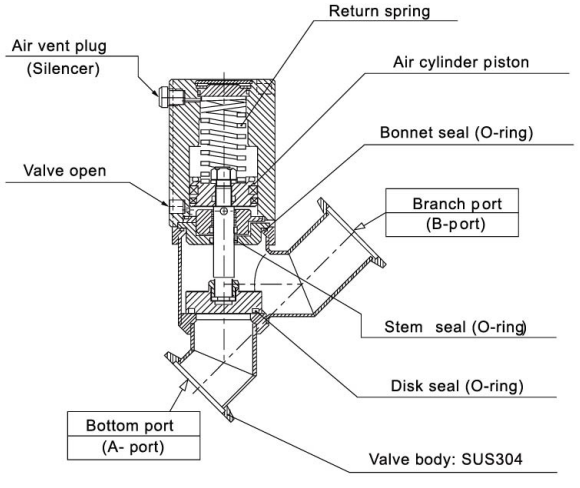
External dimension table

SIZE	16	25	40	50
A	101.6	106.7	130	117.8
B	111.5	111	138.5	162
C	48	48	60	69
D	3	3	2	2
F	-	-	-	-
G	PT 1/8"	PT 1/8"	PT 1/8"	PT 1/8"
H	Ø30	Ø40	Ø55	Ø75
J	-	-	-	-
K	-	-	-	-

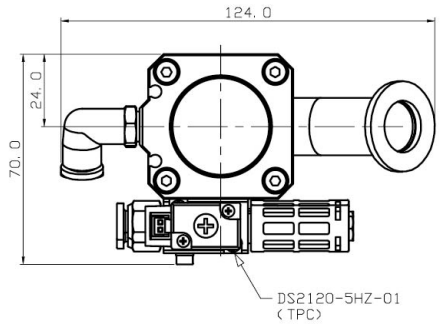
Dimensional drawing

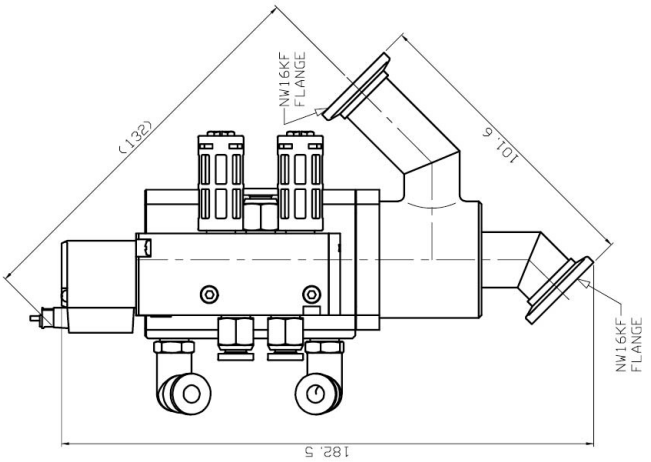


Internal detail

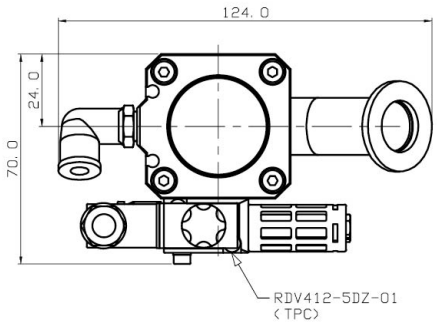


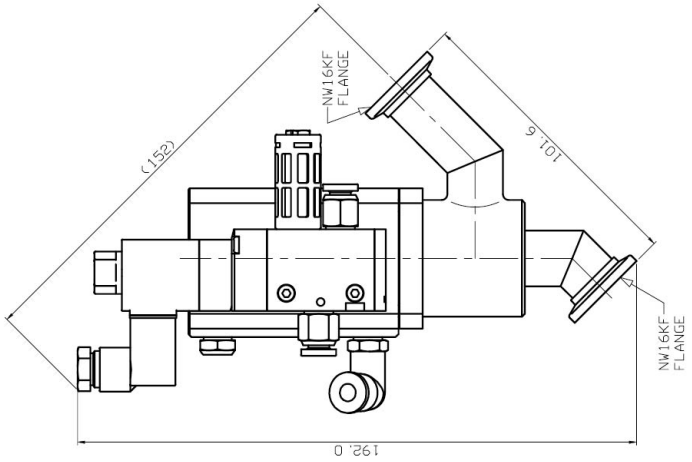
G Type Dimension(INLINE)



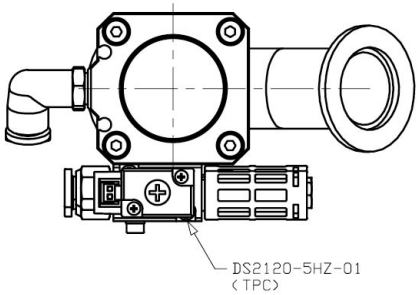


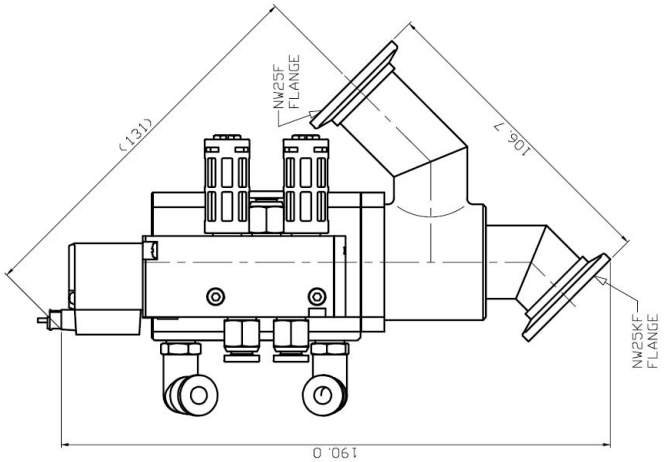
Double acting / NW16KF



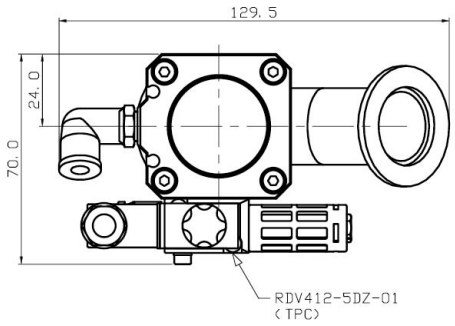


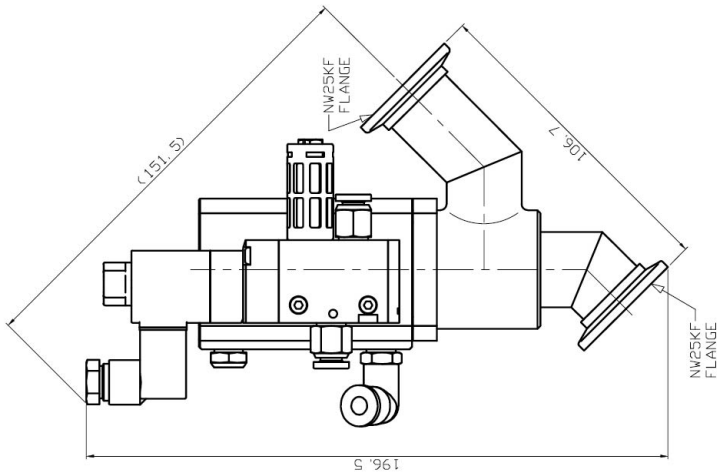
Single acting / NW16KF



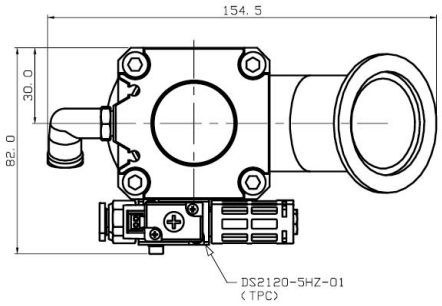


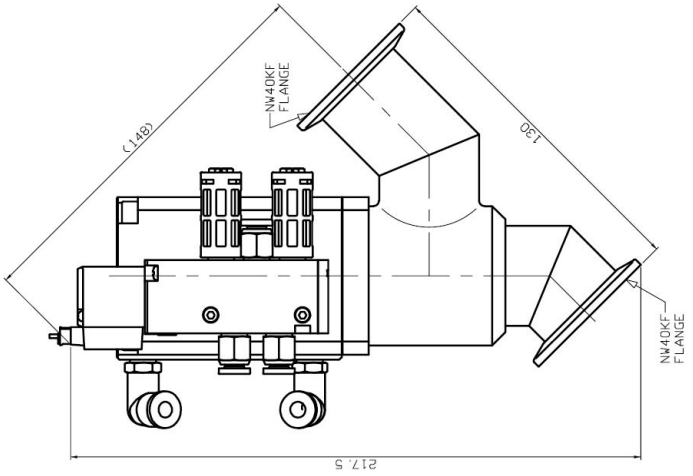
Double acting / NW25KF



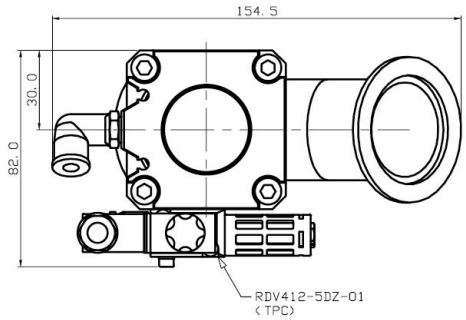


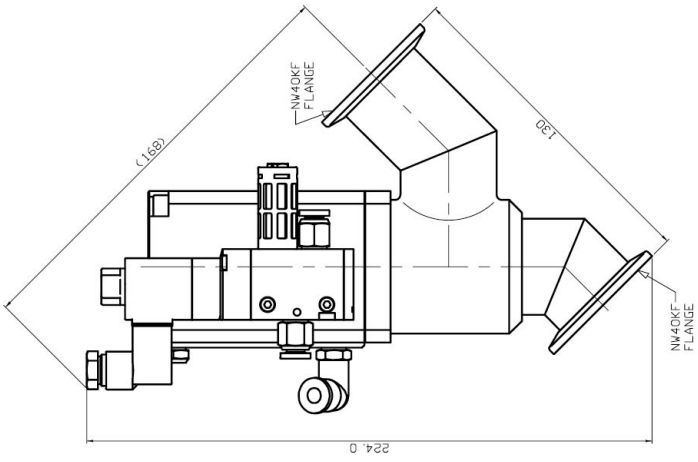
Single acting / NW25KF



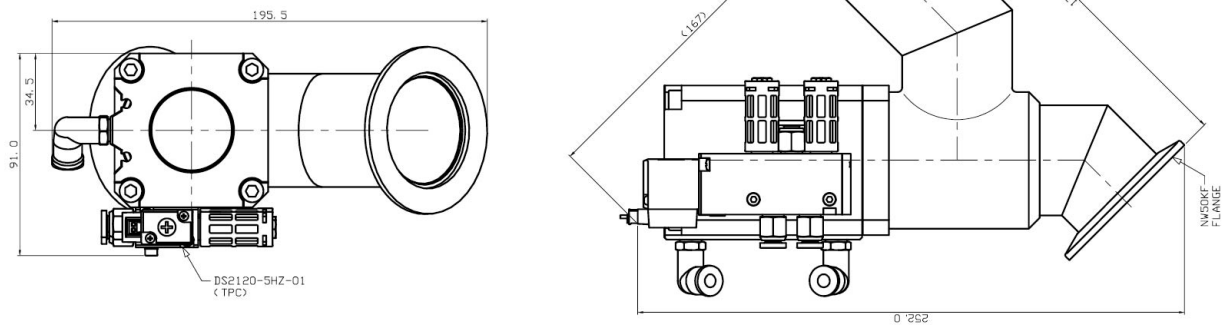


Double acting / NW40KF

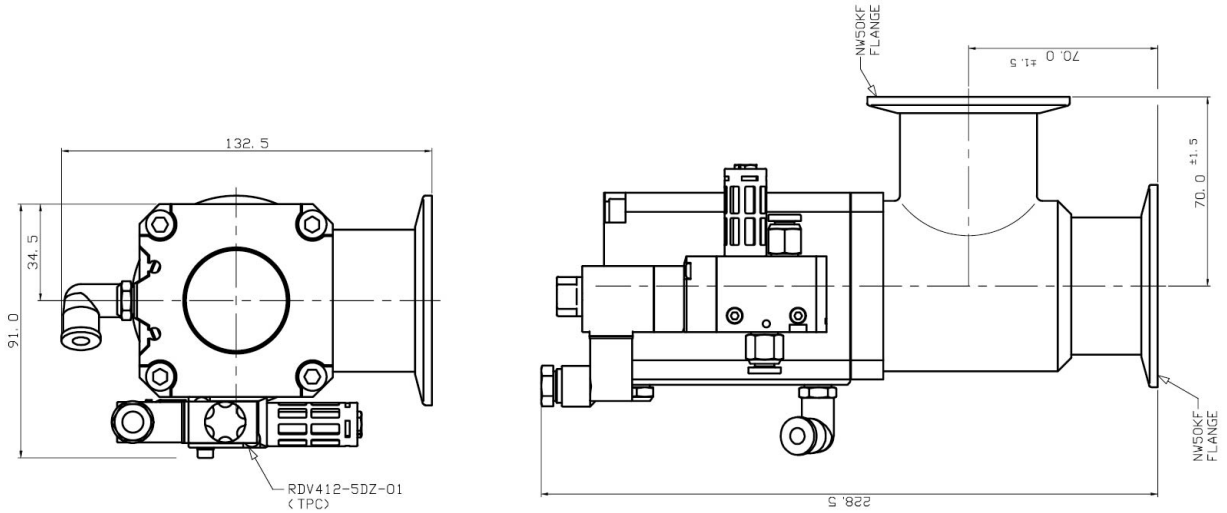




Single acting / NW40KF



Double acting / NW50KF



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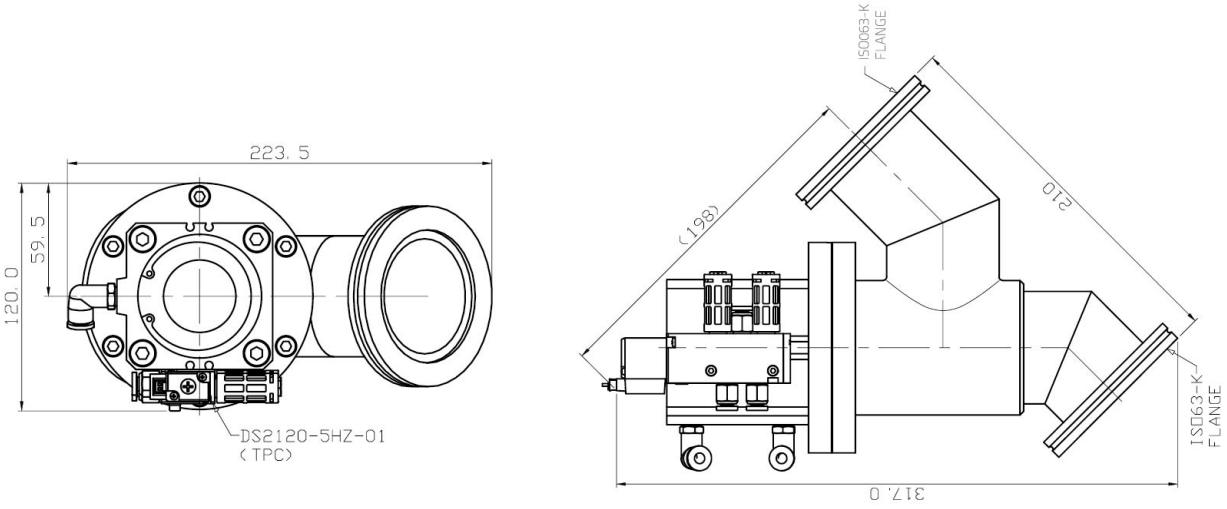
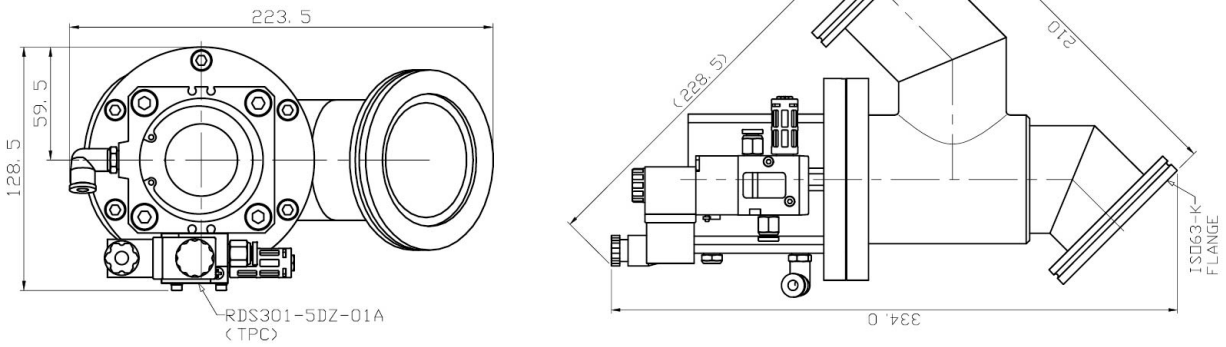


Double acting / ISO63



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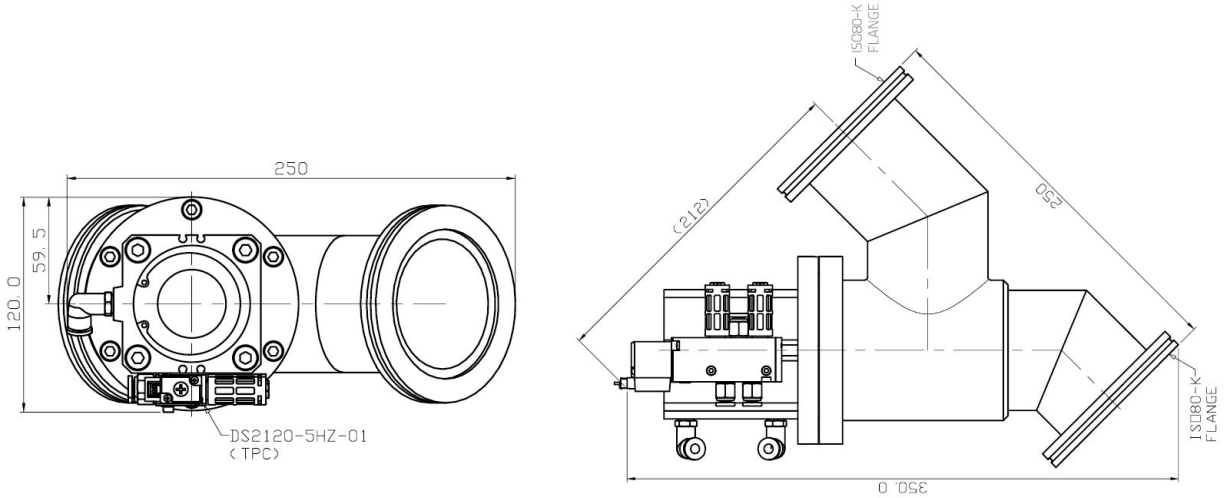

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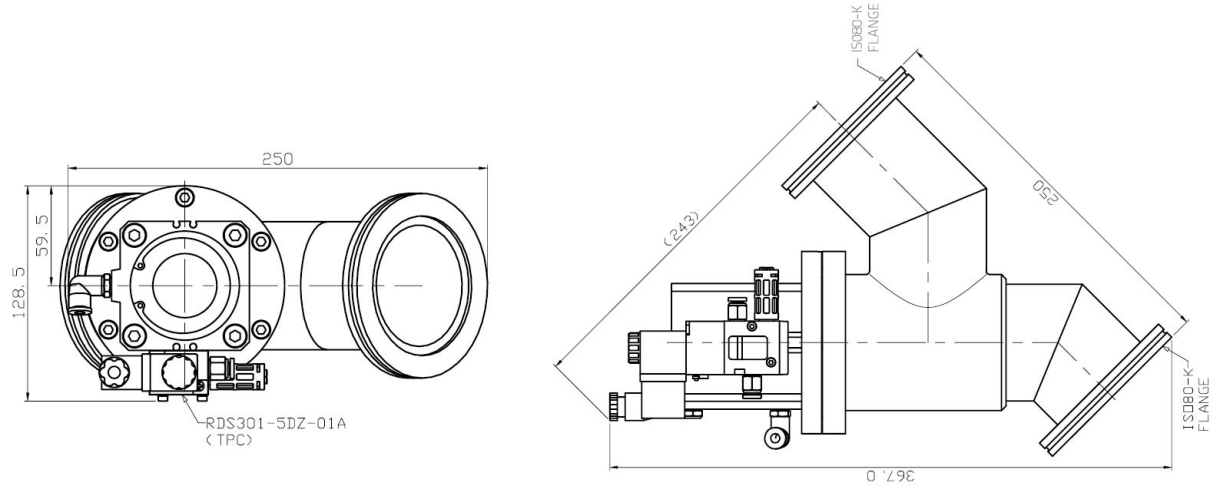

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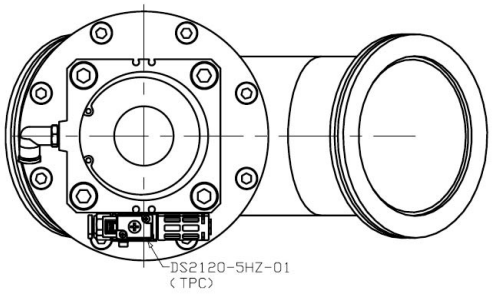

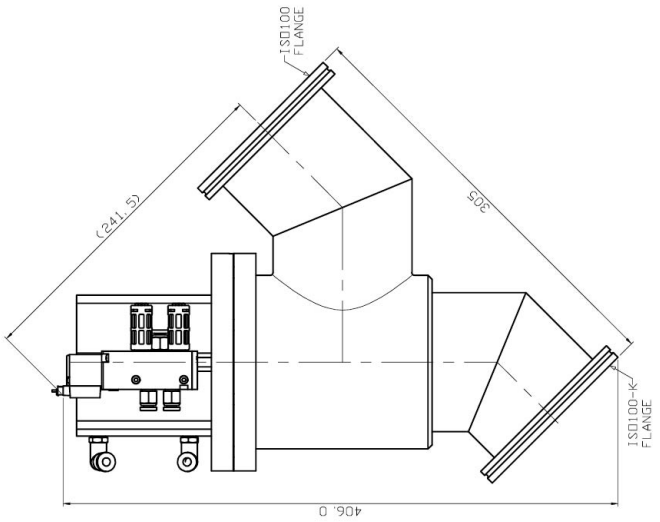

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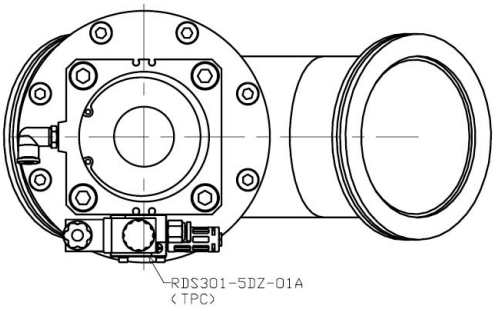

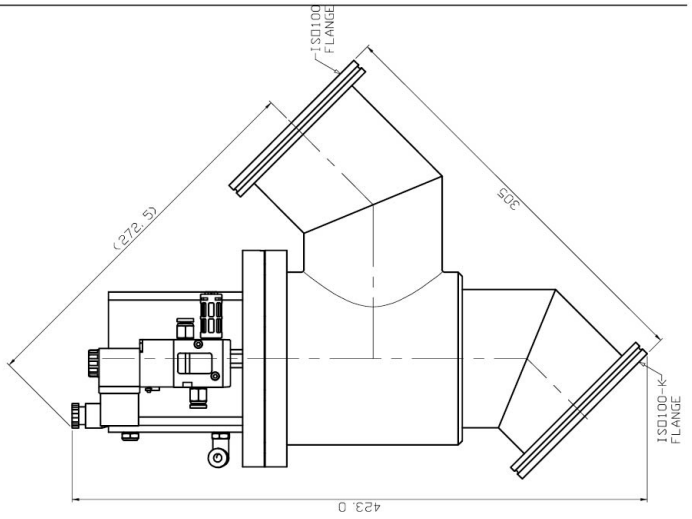

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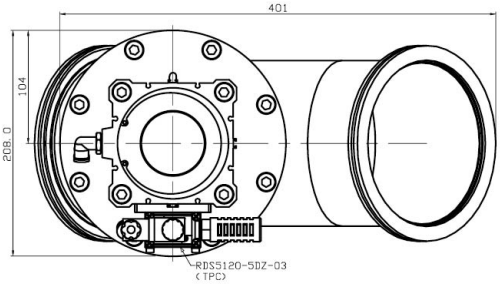
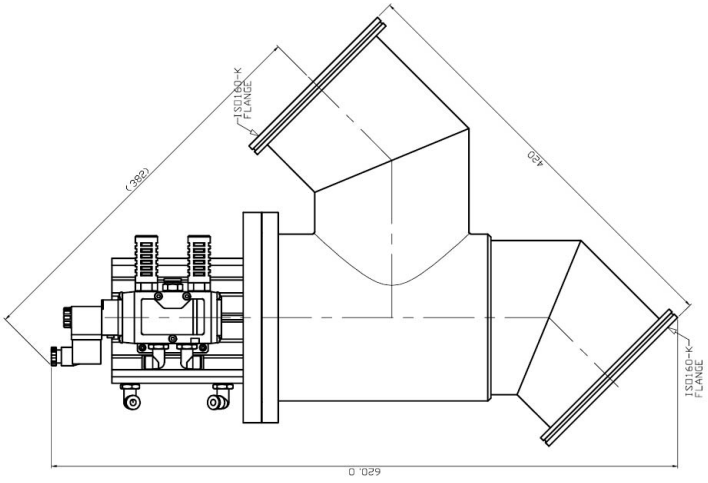
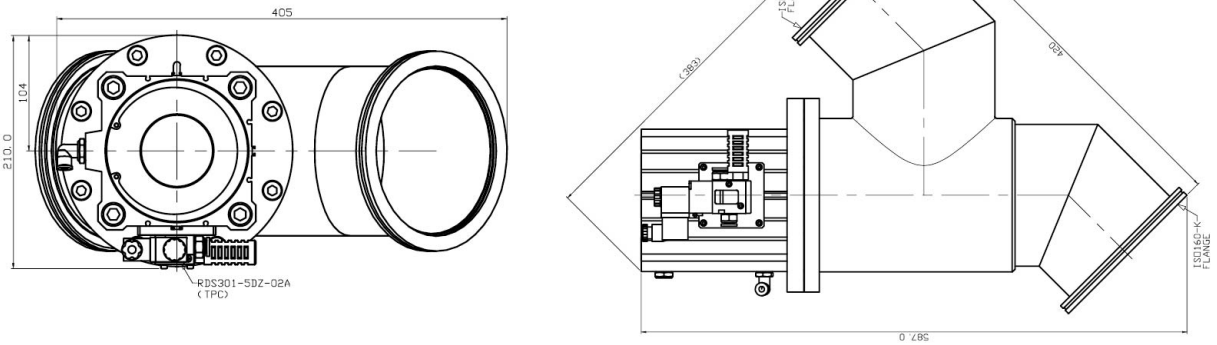
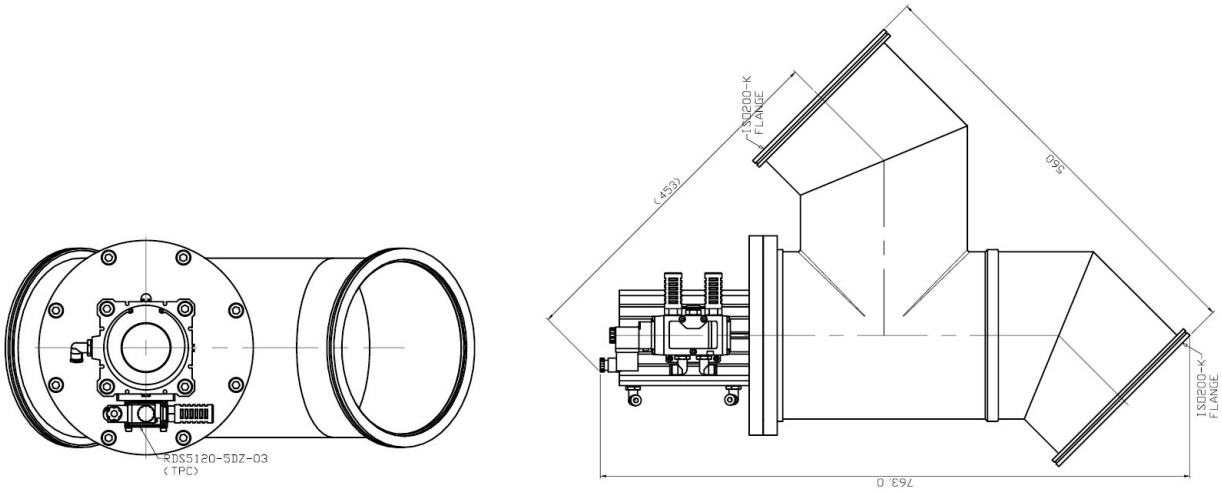




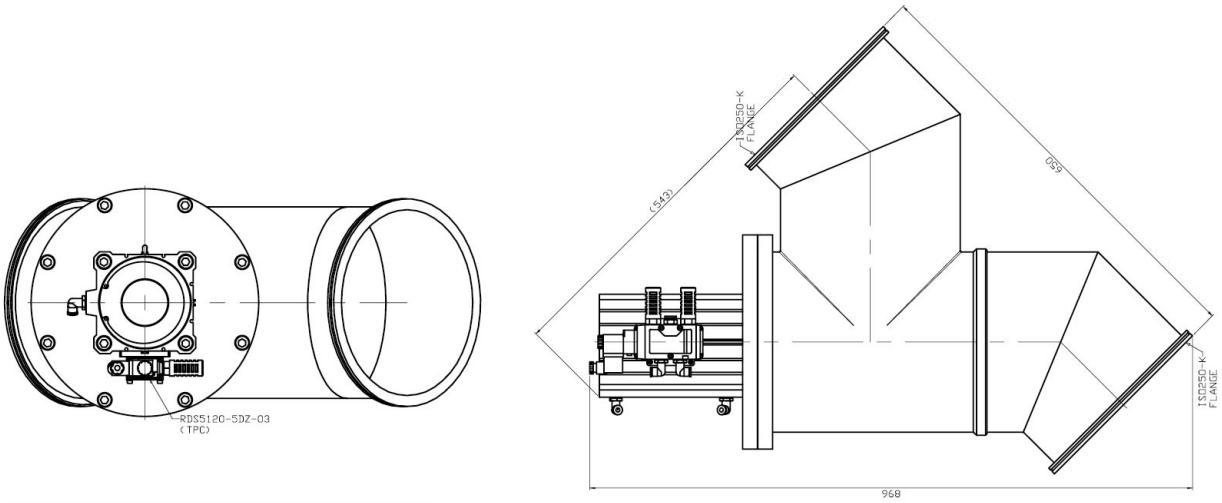
Double acting / ISO160



Single acting / ISO160



Double acting / ISO200



Double acting / ISO250

Manual and precaution

① Safety

①-① Be sure to read this manual.

①-② The precautions shown here are intended to prevent harm and damage to you and others by using the product safely and correctly. These items are divided into three categories: [Danger], [Warning], and [Caution] to specify the size and extent of damage or damage. All of them are important for safety, so please observe the international standard [ISO / IEC] and other safety regulations. This chapter should be read and understood by those who use this product at all stages of use of this product. Failure to read this manual may result in property damage. Be sure to read the manual.

Danger

Serious danger

Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

Warning

Moderate risk

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Caution

Low intensity hazard

Indicates that incorrect handling may result in minor or moderate injury.

Notice

Notice

Indicates if unavoidable, causing property loss

Warning

① The system designer will determine the suitability of our products.

Since this product has a variety of conditions used, the determination of suitability should be made by the system designer after technical analysis and, if necessary, testing. The performance and safety assurance of the system is the responsibility of the person who determines the suitability of the system.

② Please treat our products with a sufficient knowledge and experience.

- This product can not be guaranteed the safety when handling incorrectly.
- Those who have sufficient knowledge and experience in assembly and operation maintenance of machinery and equipment.

③ Please do not disassemble the machine-handling equipment or the machine until safety is confirmed.

- Inspection and maintenance of machinery and equipment should be carried out only after confirming measures to prevent falls or prevent runaway of driven objects.
- When disconnecting the product, check the above safety precautions and shut off the energy source and the power supply to the equipment.
- When restarting the machine, be sure to check the safety.

④ Do not use under the following conditions and environments. If unavoidable, please contact us after taking appropriate action to ensure safety.

- Used in conditions or circumstances other than those specified, outdoors or in areas where direct sunlight affects.
- Use is expected to have a significant impact on people or property, especially in applications where safety is required. property, especially in applications where safety is required.

② Personal Eligibility

Warnings for non-qualified personnel

- Improper handling may result in injury or property damage.
- Only persons with certain training qualifications may perform the tasks described in this manual.

③ Safety label indication

Label	Marking position on valve
	Protective film covering valve openings
	Valve body or actuation part

④ Common safety considerations

④-① Usage Precautions

④-①-① Common precautions

4-1-1-1 Valve body material is SUS304, bellows is SUS316L, seal material is FKM. For other materials, you can select optional items. Please check the materials used and use a gas-free gas.

4-1-1-2 The operating pressure, piping material, and fitting heat resistance temperature should be suitable for the operating temperature.

4-1-1-3 Keep the temperature of the auto switch at 60 ° C or less.

4-1-1-4 When using with heater attached, measures should be taken to prevent overheating.

4-1-1-5 When attaching a solenoid valve, keep the temperature of the solenoid valve at 50℃ or less.

④-①-② Precautions on valve selection

4-1-2-1 For large diameter valves, O-ring seal is recommended for improved durability for high vacuum valves used in the main exhaust line.

4-1-2-2 Consider the size, length and flow characteristics of the solenoid valves for operation when managing the responsiveness of the valves.

4-1-2-3 Observe the specified operating pressure.

4-1-2-4 The operating piston seal and bellows seal are in direct contact with the atmosphere. Please consult with us about the circumstances in which the particles are a problem because they may be introduced.

④-①-③ Installation notes

4-1-3-1 Please install this so that excessive vibration or impact is not applied. If the vibration continues, the durability may be reduced.

4-1-3-2 When attaching the heater, be careful not to damage the insulation of the leads and connections.

4-1-3-3 Be sure to secure the leadwire with sufficient curvature so that excessive force is not applied.

4-1-3-4 If the valve is heated, keep the body parts other than the bonnet.

4-1-3-5 When attaching the heater, do not touch the valve with bare hands during heater heating as the valve is hot. Causes burns.

4-1-3-6 If the environment is highly humid, keep the packaging until just before installation.

4-1-3-7 Do not install excessive force on the flange.

④-①-④ Installation Precautions

4-1-4-1 Please install after Flange Seal surface and O-ring should be cleaned with ethanol.

4-1-4-2 Please do not scratch the flange seal.

4-1-4-3 Exhaust direction : In some cases, the exhaust direction is free during operation, but the durability of exhaust flow is reduced. Install to vent to the bellows. This means that the bellows face towards the pump. Conversely, installation may cause sudden impact on the bellows, resulting in bellows damage and rapid degradation of life (except warranty).

④-①-⑤ Maintenance and inspection

4-1-5-1 When removing foreign matter inside, be careful not to damage each part.

4-1-5-2 Replace the bonnet unit when it is close to its service life.

4-1-5-3 If damage is expected even before the service life, please maintenance and inspection promptly.

4-1-5-4 Please use our standard parts for maintenance parts. Refer to the structural drawing, replacement parts, and maintenance parts list.

4-1-5-5 When attached valve, Install the O-ring so that it does not twist.

Warranty and Disclaimer

① The warranty period for our products is within one year from the commencement of use or within 1.5 years after delivery, whichever comes first.

② This product has an operation count, operating distance, and replacement parts so please contact us if needs.

③ In case of failure or damage due to the responsibility of our company during the warranty period, we will provide only replacement parts or necessary parts, and we will not bear any additional loss.

④ Other damages caused by the failure of our products are not covered by the warranty.

⑤ The warranty period of the vacuum pads can not be applied within one year from the use start date.

⑥ Since the vacuum pad is a consumable item, the warranty period is one year after delivery.
However, if it is caused by wear or rubber material deterioration caused by using a vacuum pad even during the warranty period, it will not be covered by the product warranty.

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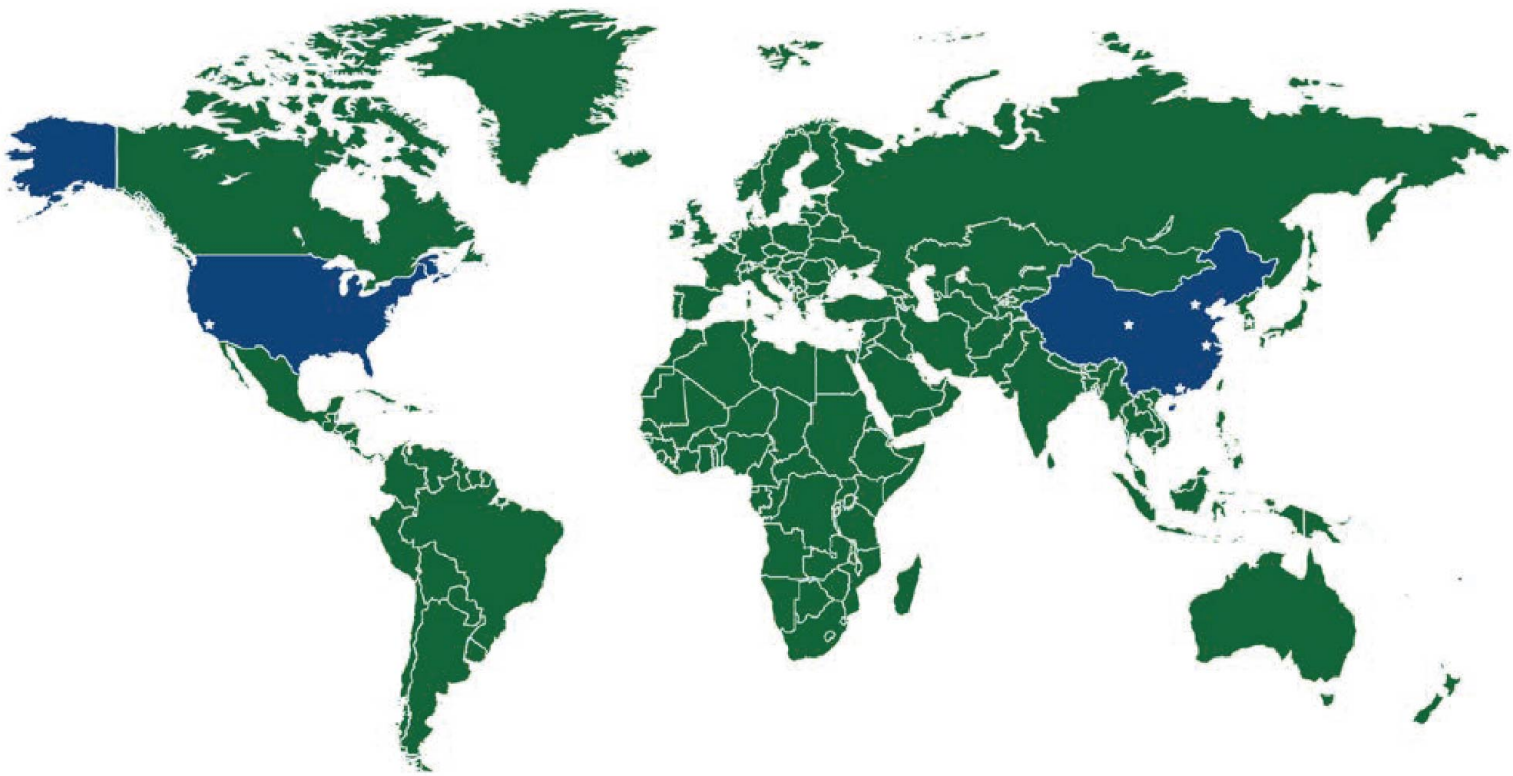

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