

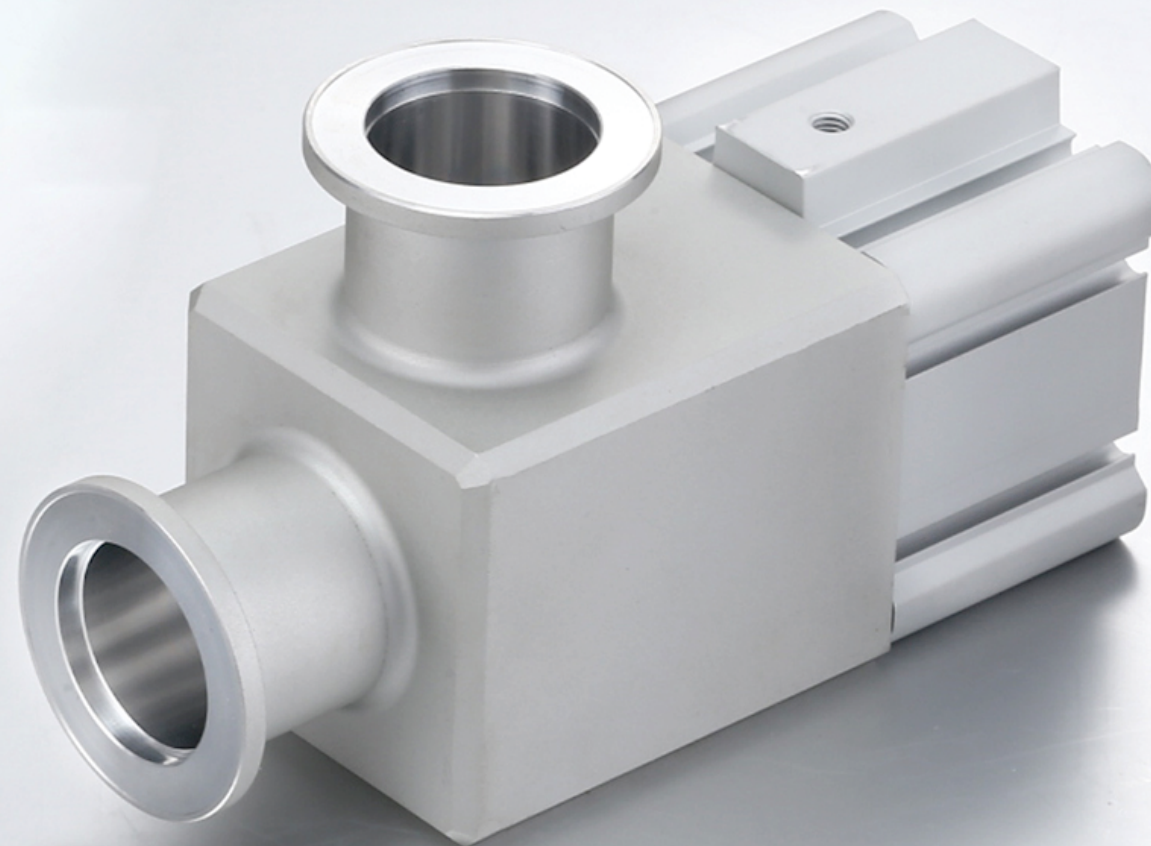


## EXL Series High Vacuum Angle Valve

The High Vacuum Angle Valve is a type of vacuum valve sealed with a FKM shaft seal for connecting or cutting off airflow in a vacuum system. The working principle is to use the compressed air as the power, change the direction of the air path through the directional valve, thus drive the opening and closing movement of the cylinder driving valve.

At present, the High Vacuum Angle Valve is highly used in vacuum pipeline, and the suitable medium is mainly non-corrosive gas and pure air. This valve is specifically used in chemical industry, metallurgy, electronics, aerospace, aviation, materials, atomic energy, biomedicine, space exploration and other high-tech fields.

High Vacuum Angle Valve has the advantages of smooth operation, short opening and closing time, large flow conductance, reliable sealing, long life span, safe and reliable performance, etc. It is one of the first selected valves for vacuum equipment automation.







EXLA

High Vacuum Angle Valve (Normally Closed/Bellows Seal)



Product Feature

- EXLA High Vacuum Angle Valve adopts a normally closed, single action design to achieve a constant pressure seal, thus it can be used in complex client designs without leakage.
- The high extruded unibody aluminum alloy body provides high strength, high hardness and high corrosion resistance for extended service life.
- The stainless steel bellows with long service life insulates the internal O-ring of the valve body in a vacuum environment, meeting the high vacuum requirement.
- All imported FKM seals meet the design requirements of high quality and long life
- Pilot ports in four directions are available.
- The whole series are made of copper-zinc free materials, which can meet the high standard of lithium battery, semiconductor and other industries.

How to order?

Series Code	Flange Size	Indicator and Pilot Port Direction		Magnet No.
EXLA: Normally Closed/ Bellows Seal High Vacuum Angle Valve	25 40 50	Code	Indicator	Pilot port direction
		Blank	Without indicator	Flange side
		A	with indicator	Flange side
		F		Left flange surface
		G		Rear flange surface
		J		Right flange surface
		K		Left flange surface
		L	Without indicator	Rear flange surface
		M		Right flange surface

Blank: Without magnet  
S: With magnet

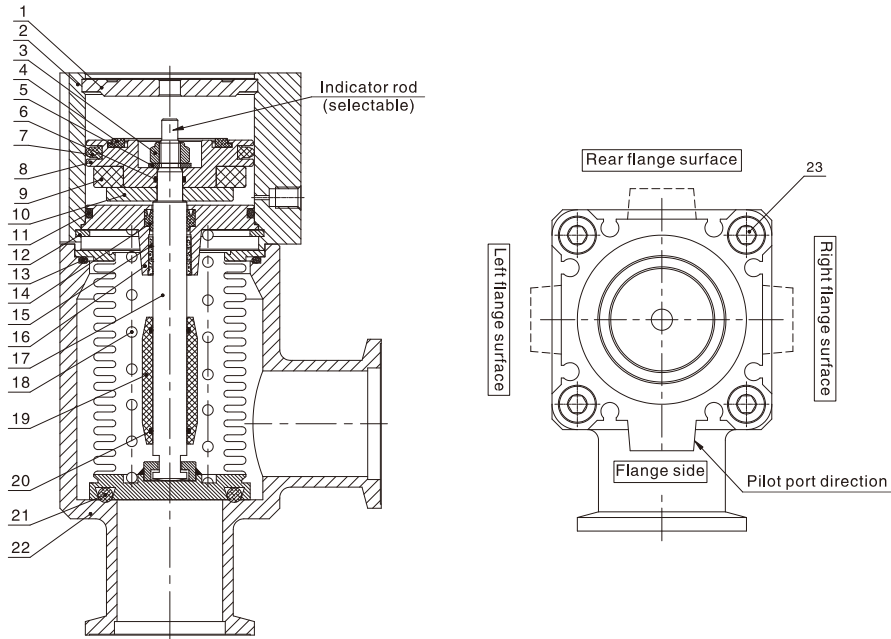
**Order Example:** EXLA Series High Vacuum Angle Valve, flange size 40, with indicator, pilot port direction to the right side of the flange surface, with magnetic, its ERP code :EXLA40J-S.

Specifications

Model		25	40	50
Valve Type		Normally closed (Pressurize to open, Spring seal)		
Working Fluid		Inert gas under vacuum		
Working Pressure Pa(abs)		1x10 <sup>-6</sup> ~to atmospheric pressure		
Working Temperature(° C )		5~60		
Conductance(L/s)①		14	45	80
Leakage(Pa · m <sup>3</sup> /s)	Internal	For standard seal material (FKM): 1.3 x 10 <sup>-10</sup> at normal temperature, excluding gas permeation.		
	External	For standard seal material (FKM): 1.3 x 10 <sup>-11</sup> at normal temperature, excluding gas permeation		
Flange Type		KF(NW)		
Principal Materials		Body: Aluminum alloy, Bellows:SUS316L, Chief part: Stainless steel, FKM (Standard seal material)		
Surface Treatment		External: Hard anodized Internal: Raw material		
Pilot Pressure [MPa(G)]		0.4~0.7		
Pilot Port Size		M5X0.8	G1/8	
Weight (kg)		0.59	1.24	1.86

① Conductance is the value for the elbow with the same dimensions.

Internal Structure

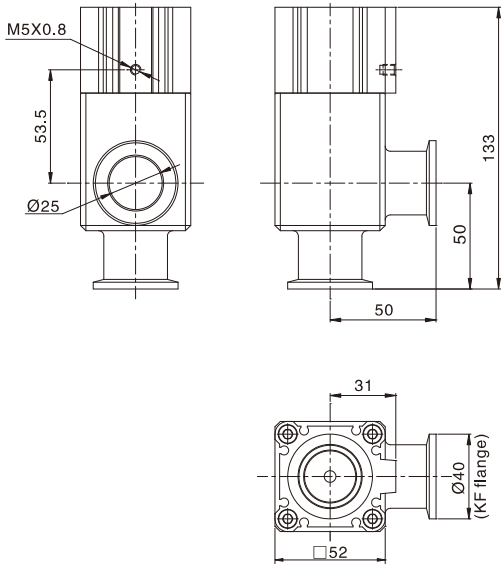


No.	Part Name	Materials
1	Rear cover	Aluminum Alloy
2	Barrel	Aluminum Alloy
3	Nut	Stainless Steel
4	Anti-bump cushion	TPU
5	Flat washer	Stainless Steel
6	O-ring	FKM
7	Piston seal	FKM
8	Piston	Aluminum Alloy
9	Integral magnet	Plastic
10	Blocking plate	Aluminum Alloy
11	O-ring	FKM
12	C type retainer ring	spring steel
13	O-ring	FKM
14	Piston rod seal	FKM
15	Group lubricated bearing	composite material
16	Head cover	Aluminum Alloy
17	Bellows combination	Stainless Steel
18	Spring	SWC
19	Stop block	PTFE
20	O-ring	FKM
21	O-ring	FKM
22	Valve body	Aluminum Alloy
23	Hexagon socket head cap screws	SUS304

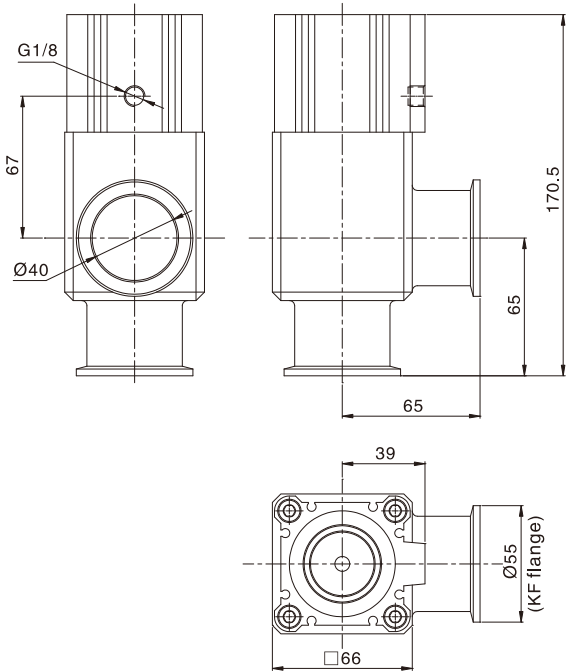


Dimensions

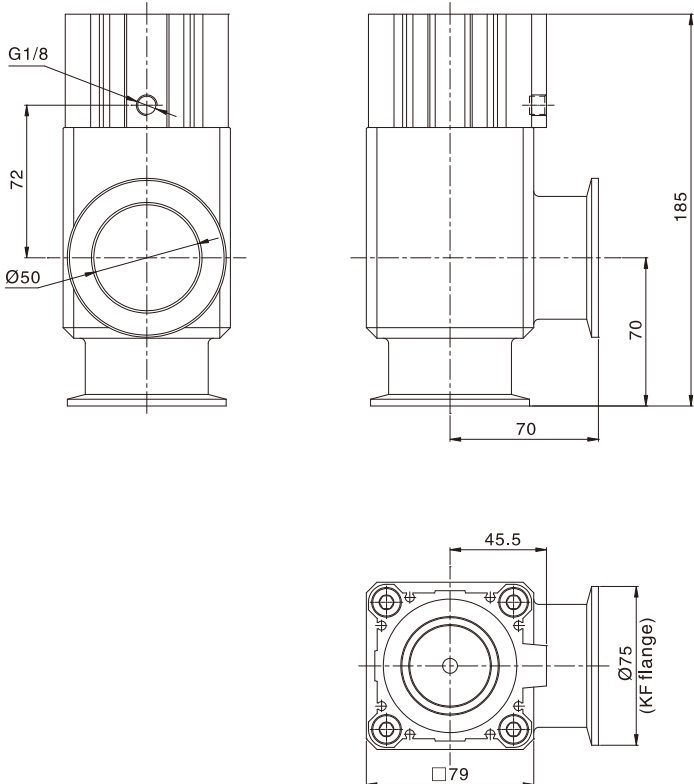
EXLA25A



EXLA40A



EXLA50A



EXLC

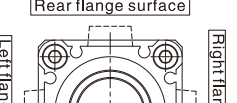
High Vacuum Angle Valve(Double Acting/Bellows Seal)



Product Feature

- EXLC High Vacuum Angle Valve adopts double acting design and achieves sealing function through the inlet and outlet holes at both ends of the cylinder.
- The high extruded unibody aluminum alloy body provides high strength, high hardness and high corrosion resistance for extended service life.
- The stainless steel bellows with long service life insulates the internal O-ring of the valve body in a vacuum environment, meeting the high vacuum requirement.
- All imported FKM seals meet the design requirements of high quality and long life
- Pilot ports in four directions are available.
- The whole series are made of copper-zinc free materials, which can meet the high standard of lithium battery, semiconductor and other industries.

How to order?

Series Code	Flange Size	Indicator and Pilot Port Direction	—	Magnet No.										
EXLC: Double Acting/Bellows Seal High Vacuum Angle Valve	25 40 50	<table><tr><th>Code</th><th>Pilot port direction</th></tr><tr><td>blank</td><td>Flange side</td></tr><tr><td>K</td><td>Left flange surface</td></tr><tr><td>L</td><td>Rear flange surface</td></tr><tr><td>M</td><td>Right flange surface</td></tr></table>	Code	Pilot port direction	blank	Flange side	K	Left flange surface	L	Rear flange surface	M	Right flange surface		Blank: Without magnet S: With magnet
Code	Pilot port direction													
blank	Flange side													
K	Left flange surface													
L	Rear flange surface													
M	Right flange surface													

**Order Example:** EXLC Series High Vacuum Angle Valve, flange size 50, with indicator, pilot port direction to the left side of the flange surface, with magnetic, its ERP code :EXLC50K-S.

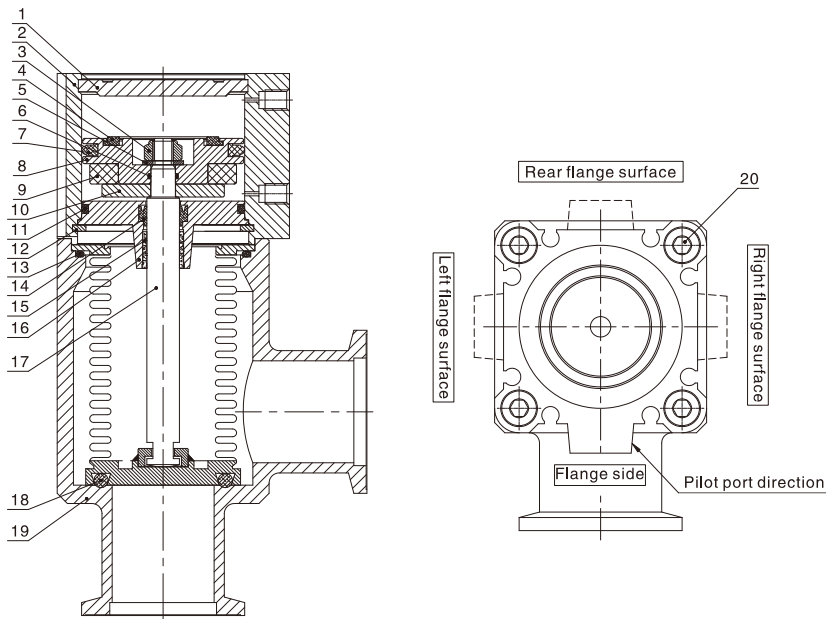
Specifications

Model		25	40	50
Valve Type		Double action(pressure to open and close)		
Working Fluid		Inert gas under vacuum		
Working Pressure Pa(abs)		1x10 <sup>-6</sup> to atmospheric pressure		
Working Temperature(° C)		5~60		
Conductance(L/s)①		14	45	80
Leakage(Pa · m <sup>3</sup> /s)	Internal	For standard seal material (FKM): 1.3 x 10 <sup>-10</sup> at normal temperature, excluding gas permeation.		
	External	For standard seal material (FKM): 1.3 x 10 <sup>-11</sup> at normal temperature, excluding gas permeation		
Flange Type		KF(NW)		
Principal Materials		Body: Aluminum alloy, Bellows:SUS316L, Chief part: Stainless steel, FKM (Standard seal material)		
Surface Treatment		External: Hard anodized Internal: Raw material		
Pilot Pressure [MPa(G)]		0.3~0.6		0.4~0.6
Pilot Port Pize		M5X0.8	G1/8	
Weight (kg)		0.56	1.16	1.76

①Conductance is the value for the elbow with the same dimensions.



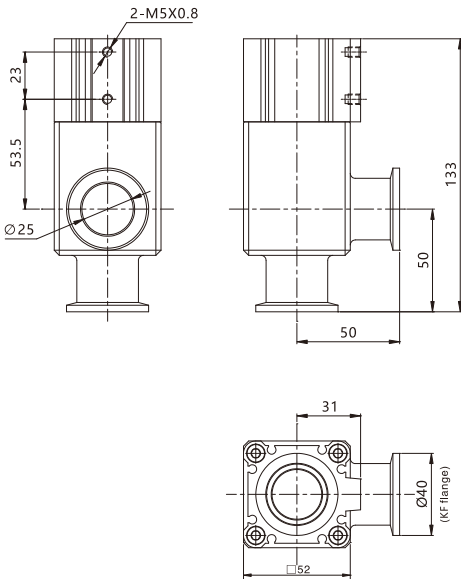
Internal Structure



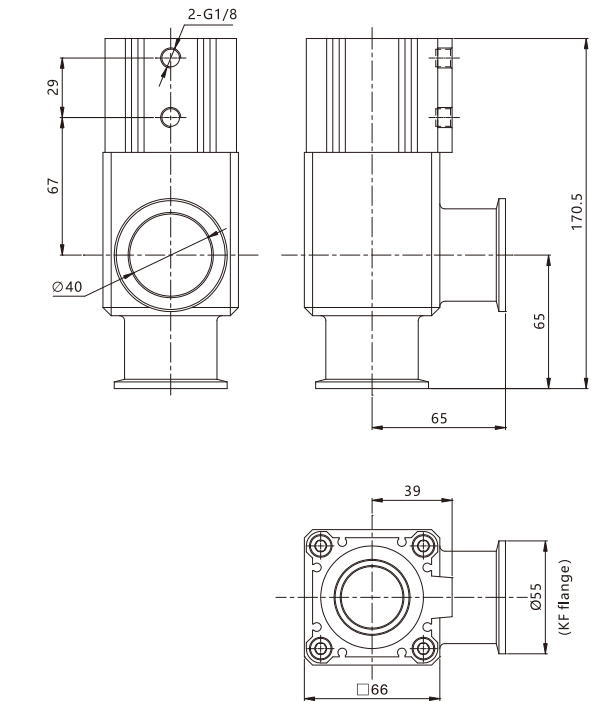
No.	Part Name	Materials
1	Rear cover	Aluminum alloy
2	Barrel	Aluminum alloy
3	Nut	Stainless steel
4	Anti-bump cushion	TPU
5	Flat washer	Stainless steel
6	O-ring	FKM
7	Piston seal	FKM
8	Piston	Aluminum alloy
9	Integral magnet	Plastic
10	Blocking plate	Aluminum alloy
11	O-ring	FKM
12	C type retainer ring	Spring steel
13	O-ring	FKM
14	Piston rod seal	FKM
15	Group lubricated bearing	Composite material
16	Head Cover	Aluminum alloy
17	Bellows combination	Stainless steel
18	O-ring	FKM
19	Valve body	Aluminum alloy
20	Hexagon socket head cap screws	SUS304

Dimensions

EXLC25



EXLC40



EXLC50

