

Vacuum Ball Valves

Product Introduction

Vacuum Ball Valves are used on a system's exhaust section.

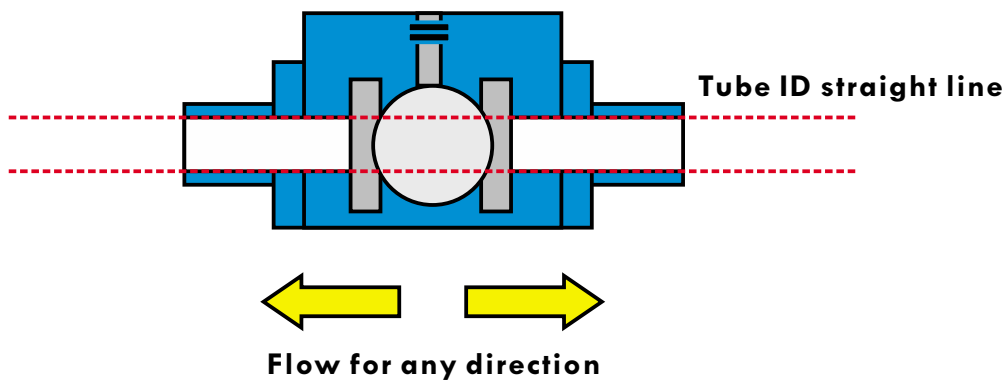
A Ball Valve is designed for handling processing against particles or even powder. The valve's main body uses solid metal or stainless steel to form one piece. The inlet piece and outlet piece are also made by forged metal. The valve can be used in high chemical processes or high temperature environments by using 316L or 316Ti materials.

The valve is also designed for baking purposes. The packing of a ball valve is optional for different materials such as FKM, FFKM, Teflon.

Product Features

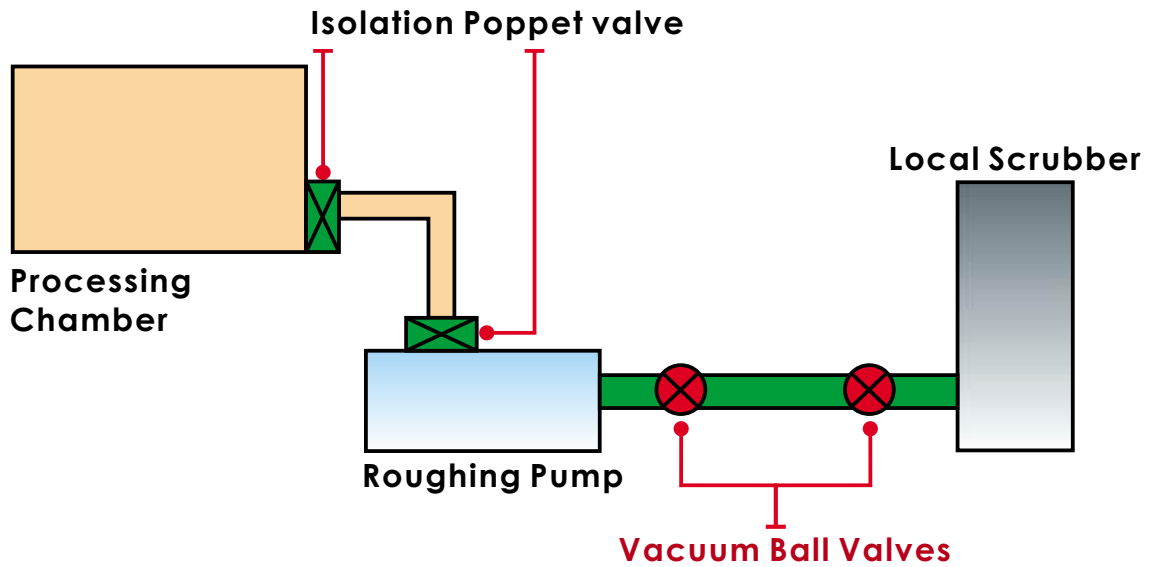
Special features for Vacuum Ball Valves

- Stand for particles, straight through design.
- Three Piece designed valve body, both in CNC and Casting.
- Optional for high chemical resistance.

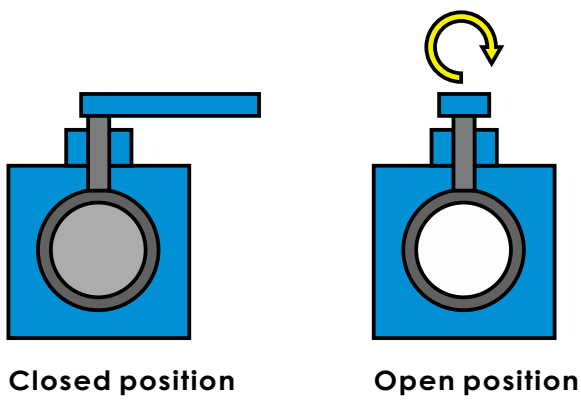


Product's Application

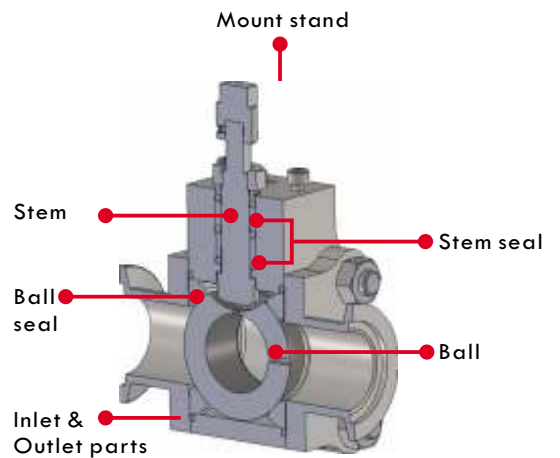
Layout for Processing System
Ball valves are placed Scrubber line



Valve's operation Concept



Parts of valve



Technical Data

Technical Data for Vacuum Ball Valve

	Medium Vacuum	High Vacuum
Feedthrough	FKM o-ring	FKM o-ring
Gate seal	PTFE packing	PTFE packing
Bonnet seal	FKM	FKM
Operate pressure range	4,500 Torr~ 1x10 ⁻⁵ Torr 6,000 mbar~ 1.33x10 ⁻⁵ mbar 600 kpa~ 1.33x10 ⁻⁴ kpa	4,500 Torr~ 1x10 ⁻⁶ Torr 6,000 mbar~ 1.33x10 ⁻⁶ mbar 600 kpa~ 1.33x10 ⁻⁵ kpa
Leak rate	1x10 ⁻⁸ Torr l/s, He 1.33x10 ⁻⁸ mbar l/s, He 1.33x10 ⁻⁷ kpa	1x10 ⁻⁹ Torr l/s, He 1.33x10 ⁻⁹ mbar l/s, He 1.33x10 ⁻⁸ kpa
Cycle life	>30,000 Cycle	
Temperature for Valve body	200°C (392°F) Open and Close	
Temperature for Actuator	150°C 302°F	
Temperature for solenoid / position indicator	80°C 176°F	
Bake Temperature	100°C(212°F) for FKM gate seal	
Valve body material	Casting SUS316/L	CNC machined SUS316/L
Mechanism material	SUS316/L	
Actuator material	Pneumatic version= Aluminum Manual version= SUS304/L Handle with plastic cover	
Mounting position	Any	

Valve operation data

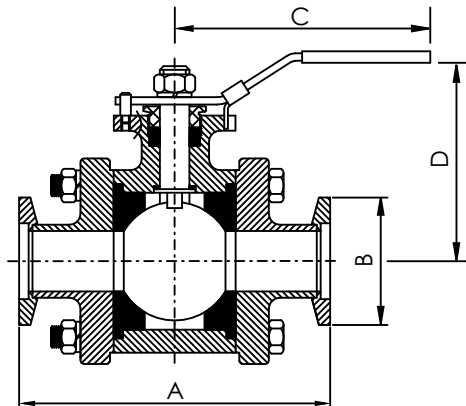
Pneumatic operating pressure	4 bar~8 bar 400 kPa~800 kPa 58 psi~116 psi
Position indicator (Build in for pneumatic version)	Build in visual
Solenoid (optional)	Optional for 24V DC, standard
Failure protection (Build in)	Build in handle hook with manual version (Open/ Close position locked)

Valve's Performance data

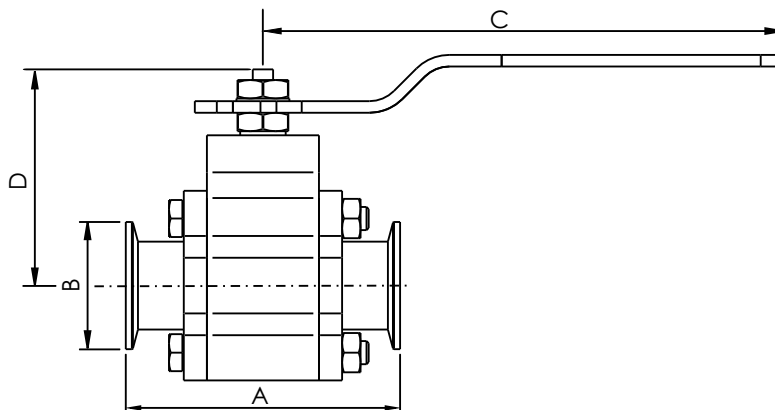
	KF16	KF25	KF40	KF50
Maximum differential pressure against gate	4,500 Torr 6,000 mbar 600 kpa			
Maximum differential pressure at opening	4,500 Torr 6,000 mbar 600kpa			
Pneumatic valve open / close time	2(s)	3(s)	3(s)	4(s)
Valve's Conductance Inline type (Molecular flow)	5(l/s)	12(l/s)	33(l/s)	54(l/s)

Product Order Information

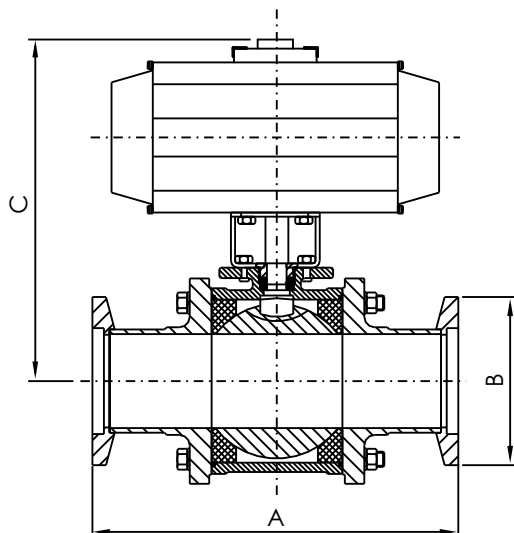
◆ **Figure 1**



◆ **Figure 2**



◆ **Figure 3**



Catalogue PN	Tube OD	Figure	A	B	C	D
MBV-CT-KF16	3/4"	1	110	30	132	58
MBV-CT-KF25	1"	1	122	40	132	62
MBV-CT-KF40	1-1 /2"	1	147	55	175	98
MBV-CT-KF50	2"	1	166	75	175	104

Catalogue PN	Tube OD	Figure	A	B	C	D
MBV-NC-KF16	3/4"	2	88	30	132	53
MBV-NC-KF25	1"	2	100	40	132	57
MBV-NC-KF40	1-1 /2"	2	118	55	175	93
MBV-NC-KF50	2"	2	160	75	175	99

Catalogue PN	Tube OD	Figure	A	B	C
PBV-CT-KF16	3/4"	3	110	30	165
PBV-CT-KF25	1"	3	122	40	170
PBV-CT-KF40	1-1 /2"	3	147	55	200
PBV-CT-KF50	2"	3	166	75	220

Catalogue PN	Tube OD	Figure	A	B	C
PBV-NC-KF16	3/4"	3	88	30	160
PBV-NC-KF25	1"	3	100	40	165
PBV-NC-KF40	1-1 /2"	3	118	55	195
PBV-NC-KF50	2"	3	160	75	215