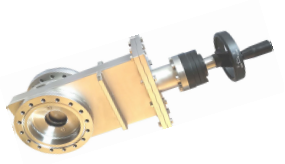
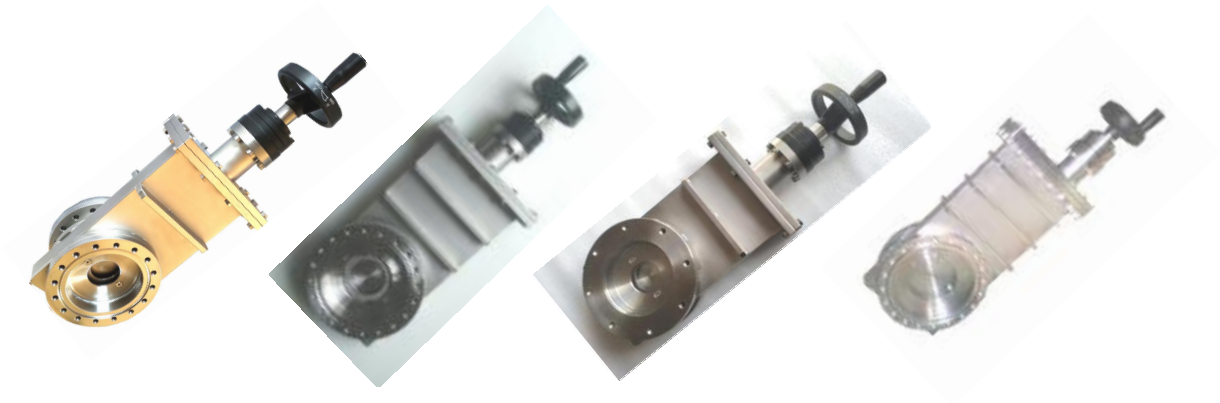
High vacuum manual gate valve
Instructions for use






High/Ultra-High Vacuum Manual Gate Valve



1. Overview:

The plug valve can be used to cut off or connect airflow in high vacuum and ultra-high vacuum, and is used to separate pumps and systems or vacuum chambers. It is one of the important components in vacuum systems. It is widely used in various fields of electronics, metallurgy, coating, scientific research and vacuum technology.

2. Structural features:

The valve has a compact structure, and the thickness and overall length are minimized to make installation more convenient and require less space. Because the internal surface area is small, the vacuum can be drawn faster. The valve is suitable for clean air and non-corrosive gases. The valve can be installed in any direction.

The valve is a stainless steel shell as a whole, and most of the internal moving structures are assembled with stainless steel parts, which are more corrosion-resistant than aluminum. The spring bars and bearings are also made of stainless steel. The flange seal is sealed with fluoro rubber rings or wire seals, and the valve plate seal is fluoro rubber. The moving structure uses welded stainless steel bellows to achieve the displacement of the valve plate. The multi-point double ball structure valve plate is more evenly stressed and can be reversely sealed to the atmosphere. The black drive part is an over-force clutch device to prevent excessive force from damaging the transmission components after reaching the end.

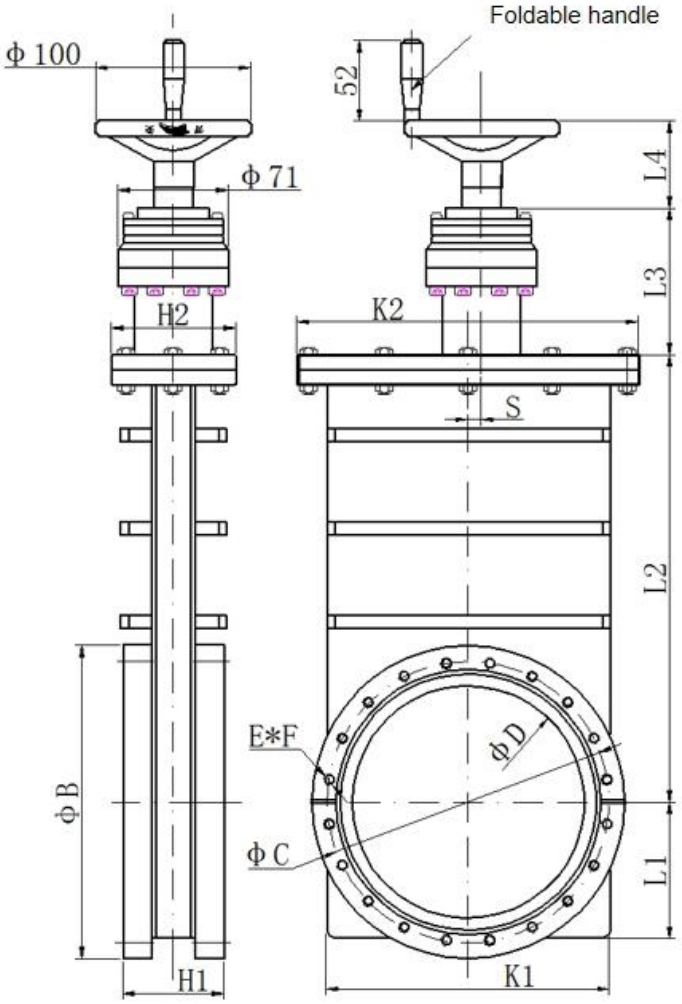
3. Performance indicators:

- Valve body leakage rate: <1*10-8pa.l/s (rubber ring flange valve body leakage rate: <1*10-7pa.l/s)
- Scope of use: 6*10E-8Pa-1*10E5Pa (rubber ring seal 6*10E-7Pa-1*10E5Pa)
- Baking temperature: valve body <200℃ (in valve open state), hand wheel and valve body connection <80℃
- Number of turns required to open or close the valve: DN63-DN150 about 9 turns, DN200-DN250 about 11 turns
- Installation position: arbitrary
- Installation direction: It is recommended that the valve plate seal face the pump or high vacuum side
- Pressure difference on both sides of the valve plate opening: <2000Pa

4. Materials of each part:

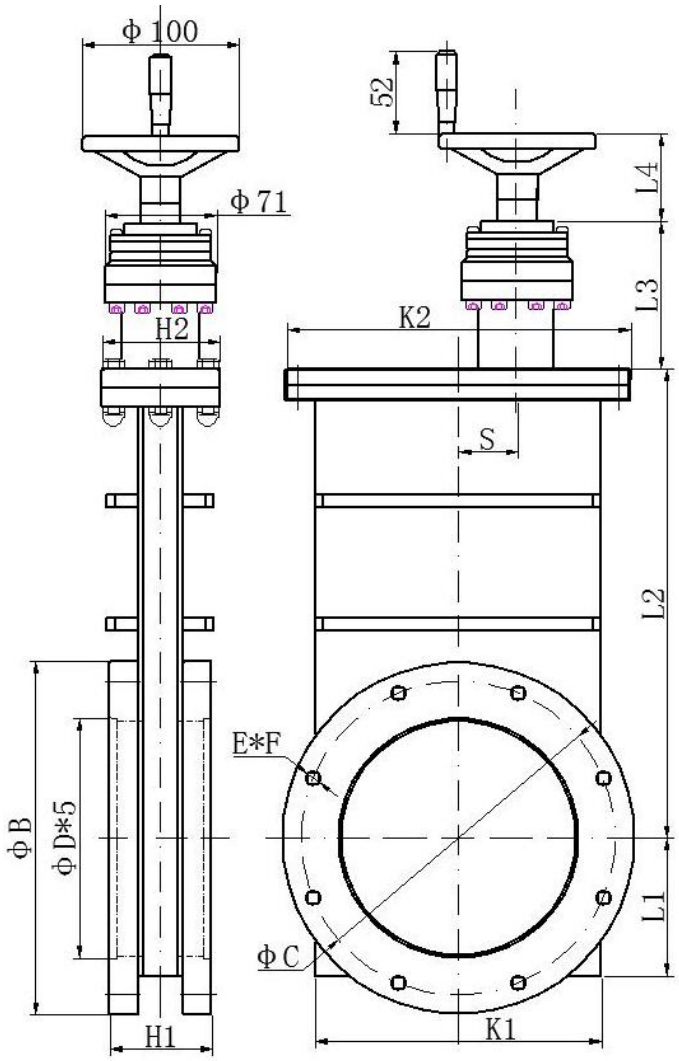
- Valve body: SUS304
- Valve core: SUS304; Bearing 440C; Rubber ring fluororubber
- Transmission part: 6061 aluminum after oxidation treatment
- Transmission shaft seal: 316 welded bellows
- Handwheel: cast aluminum paint, laser engraved mark

5. Installation size:



DN63-250 High vacuum manual knife edge flange gate valve dimensions					
DN	63	100	150	200	250
H1	65			75	80
H2	79				
L1	49	69	88	122	145
L2	164	217	289	365	439
L3	95			115	
L4	56			75	
K1	112	141	182	235	290
K2	150	175	220	270	320
S	0	0	8.5	15	17.5
B	114	152	202	253	305
C	92.1	130.2	181.1	231.9	284
D	63	100	150	200	250
E*F	8*M8	16*M8	20*M8	24*M8	32*M8
Thread depth	15				

6. Rubber ring flange installation dimensions



XF63-259 High vacuum manual hook nail flange gate valve dimensions					
DN	63	100	150	200	250
H1	65			80	
H2	79				
L1	49	69	88	122	145
L2	164	217	289	365	439
L3	95			115	
L4	56			75	
K1	112	141	182	235	290
K2	150	175	220	270	320
S	0	0	8.5	15	17.5
B	130	165	225	285	335
C	110	145	220	260	310
D	110	145	200	260	310
E*F	4*M8	8*M8	8*M10	12*M10	12*M10
Thread depth	10				

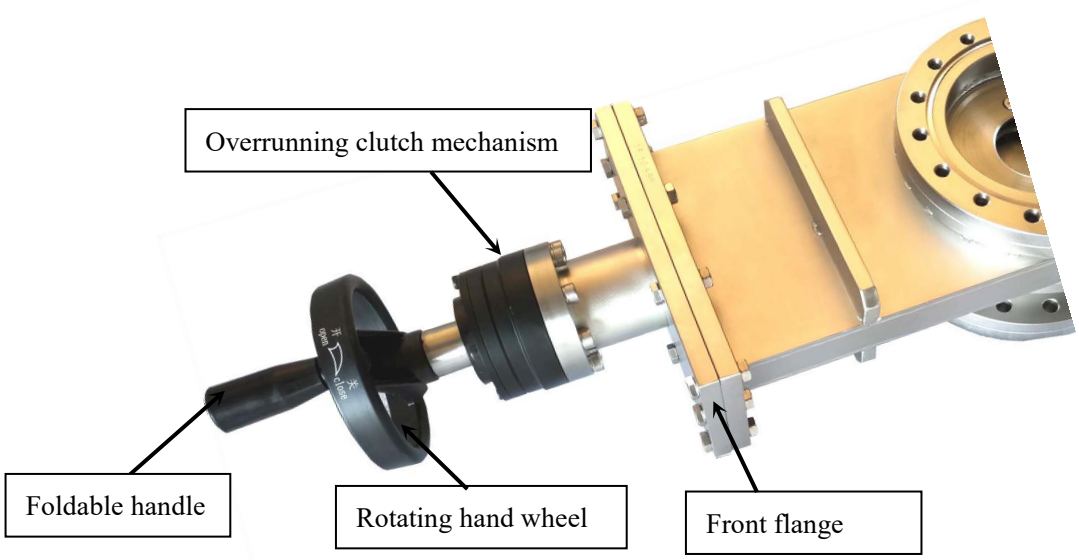
7. Installation and Use

7.1 Installation

Before installation, please check whether the gate valve is damaged during transportation.

Test whether the valve is opened and closed normally in the atmosphere as follows:

1. Pull out the handwheel handle and enter the positioning hole perpendicular to the first wheel. Rotate the first wheel counterclockwise. The valve plate slowly opens from the closed state until the valve plate is completely withdrawn into the valve housing, indicating that the valve is opened normally; similarly, rotate the handwheel valve clockwise and slowly close it until the sealing ring is closed, indicating that the valve is closed normally.
2. This valve is equipped with an overrunning clutch device to prevent damage to the transmission or internal mechanism due to excessive force. This structure is only used for protection against misoperation. It is recommended not to use this protection when the valve is in normal use.
3. After several opening and closing experiments, it can be judged whether the valve opens and closes normally. After cleaning according to vacuum requirements, it can be installed in the equipment.



7.2 Notes

- **Do not open the gate valve when there is vacuum on one side and atmosphere on the other side!**
- **If there is a problem with the gate valve, you should contact the manufacturer first and the manufacturer will guide you on how to solve it. The user will be responsible for any losses caused by disassembling the gate valve without the manufacturer's consent.**