



**CHANGYI**

# Instrument Valve

**PATENT NO. : ZL92214460.5/ ZL98229671.1**

Sichuan Changyi Oil and Gas Gathering Transportation Equipment Company ( Hereinafter called Sichuan Changyi ) owns more than 20 years of experience in manufacturing instrument valves. the company developed high-sealing globe valve in 1992 and was rewarded continuously with proprietary intellectual property right and national patent in 1998 . With continuous innovation , New products are upgraded with following characteristics :

- ★ Adopt hard and soft sealing to valve diaphragm and valve seat with zero medium leakage and longer service life . The static-pressure service life is extended to 12,000 times compared with 6,000 times from similar competitors. It 's able to replace the needle globe valves without changing connection size and structure of traditional needle globe valves .
- ★ Replace the traditional PTFE packing with O rings , which features easy open and prevent valve from external leakage caused by loosened gland nut . By virtue of such improvement in packing structure, the service pressure of instrument valves is improved from 32MPa to 70MPa.
- ★ Nice appearance and compact structure under CNC machining process .
- ★ Be replaceable of the similar imported valves with high traceability and high quality.

## Main Parameter

PN : 1.6 ~ 70.0MPa , 150CLASS ~ 2500CLASS , 10000PSI。

DN : DN3 ~ DN25 , 1/8" ~ 1"。

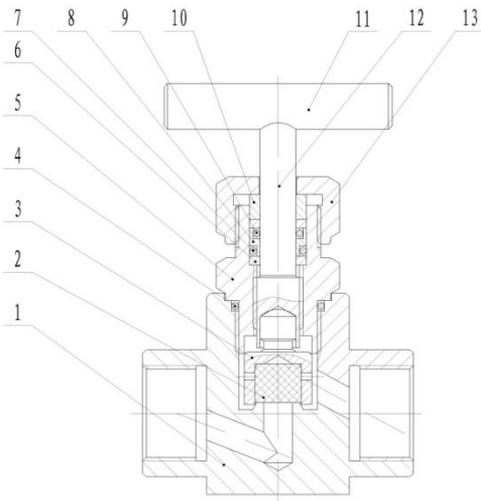
Temperature : N:-20 ~ 200°C , H :≤400°C , L: -101 ~ 200°C。

Medium : NG, OIL etc Without any corrosion 。

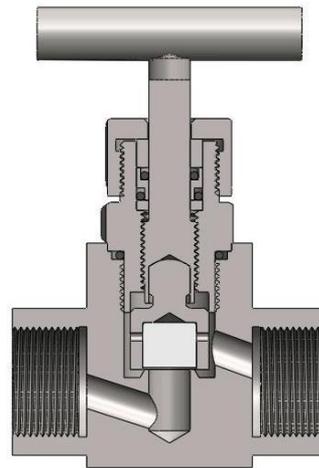
Sealing of Diaphragm : Dual seal ( high sealing ) 、 Taped seal ( Needle valve ) 。

Body : 45、 ASTM A105、 ASTM A350 LF2、 ASTM A182 304/316/316L、 Hastelloy C, etc.。

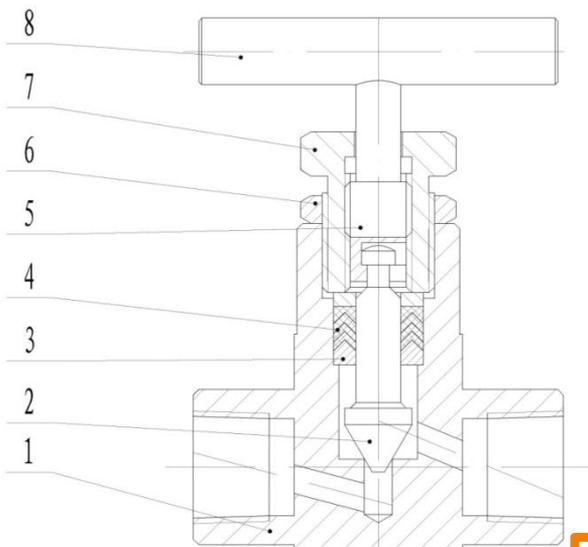
# Structure Characteristics



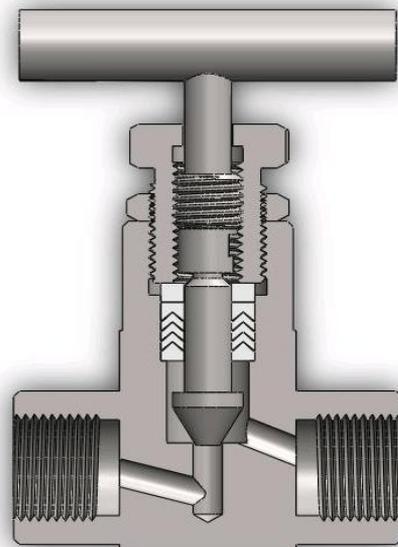
**High Seal Instrument Valve  
(Soft + Hard Seal)**



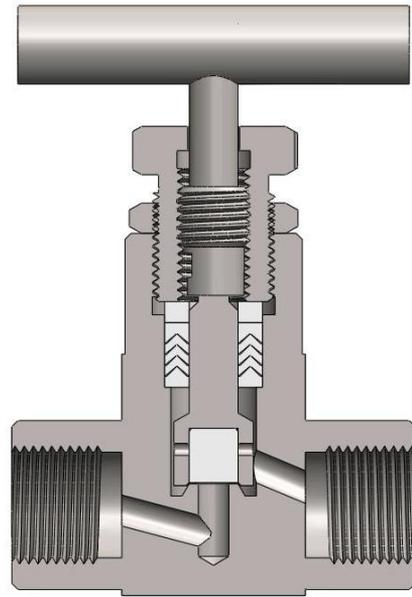
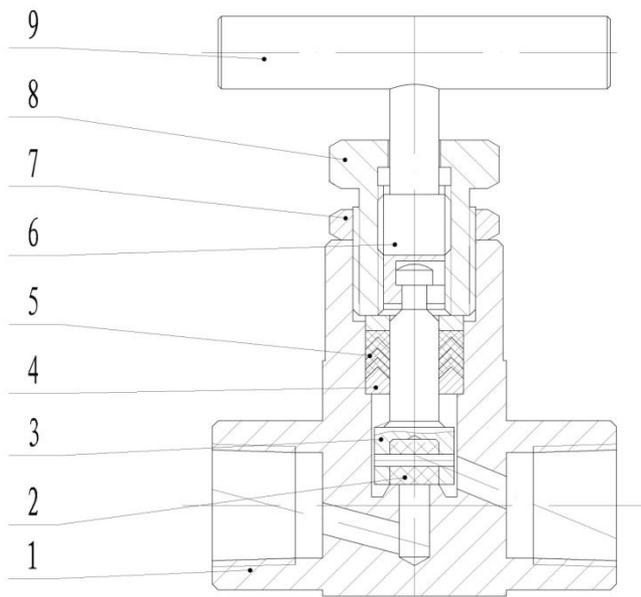
PN : 1.6 ~ 42.0MPa  
 Temperature : -20 ~ 200°C  
 Medium : NG, OIL etc without any corrosion.  
 Feature : zero leakage of diaphragm under main soft seal with auxiliary hard seal ; The static-pressure service life is extended from 6,000 times to 12.000 times.



**High Temperature  
Instrument Valve ( Hard Seal )**



PN : 1.6 ~ 20.0MPa Temperature : ≤400°C  
 Medium : High -Temperature Medium  
 Feature : Adopt soft graphite as padding material, intensified with 316L metal mesh, to improve packing pressure resistance and service life. It is the rising stem without rotating structure to effectively protect stem from wear to the padding material, and extend valve life. The wire ring is additional configured for the gland nut to avoid the padding due to years of use.



**Low Temperature  
Instrument Valve ( Hard+Soft Seal )**

PN : 1.6 ~ 42.0MPa  
 Temperature : -101 ~ 200°C  
 Medium : NG, OIL etc without any  
 corrosion.

**Feature:**

Having adopted PTFE packing and dovetail groove structure design, they have more excellent sealing performance. Having adopted hard and flexible double seals and employed the flexible seal as the primary seal for the disc, they can realize zero leakage of disc, and the service life under static-pressure is extended from 6,000 times to 12,000 times.

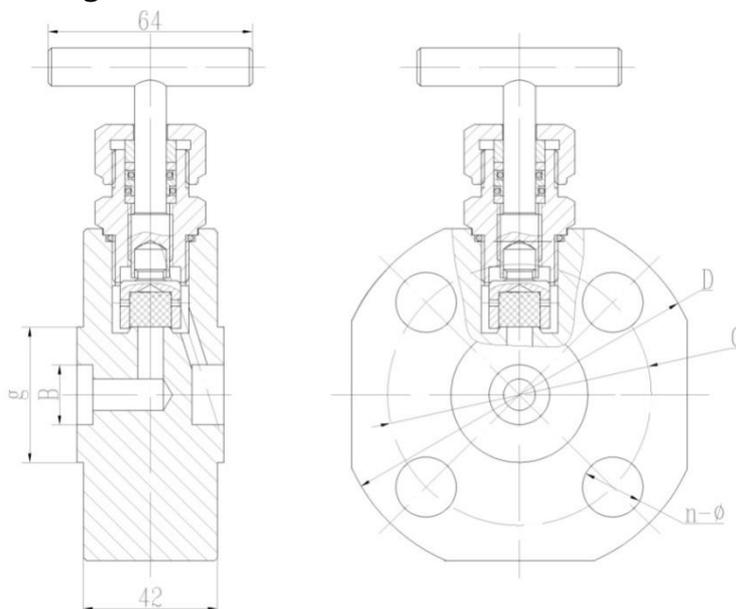
Installation

- Instrument valve



**CHANGYI**

(K)CYYJ1-FL-FL Globe Valve (Flanged)



Pressure Class	Size	Inlet Connect	Outlet Connect.	Installation Size				
				D	C	g	B	N-φ
150CLASS	1/2"	Flange	Flange	90	60.3	34.9	13	4-φ16
300CLASS	1/2"	Flange	Flange	95	66.7	34.9	13	4-φ16
600CLASS	1/2"	Flange	Flange	95	66.7	34.9	13	4-φ16
900CLASS	1/2"	Flange	Flange	120	82.6	34.9	13	4-φ23
1500CLAS S	1/2"	Flange	Flange	120	82.6	34.9	13	4-φ23
150CLASS	3/4"	Flange	Flange	100	69.9	42.9	19	4-φ16
300CLASS	3/4"	Flange	Flange	115	82.6	42.9	19	4-φ18
600CLASS	3/4"	Flange	Flange	115	82.6	42.9	19	4-φ18
900CLASS	3/4"	Flange	Flange	130	88.9	42.9	17	4-φ23
1500CLAS S	3/4"	Flange	Flange	130	88.9	42.9	17	4-φ23

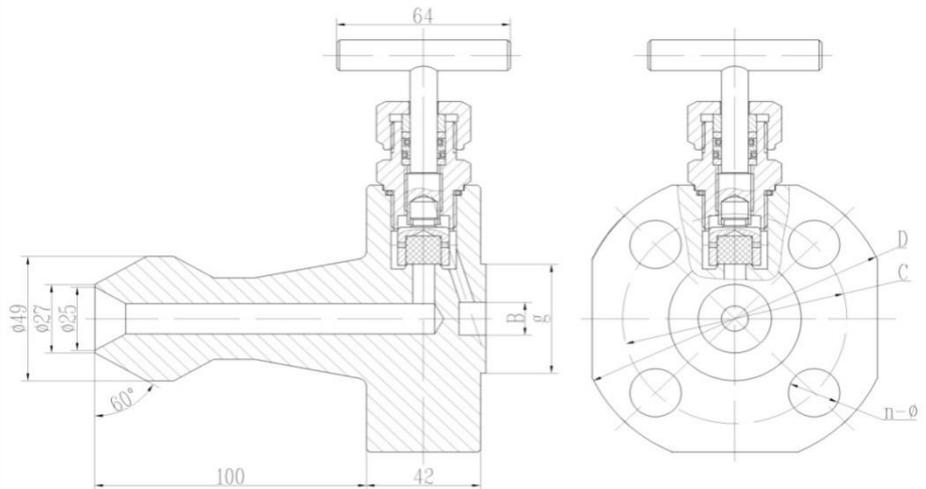
①The valve is usually used as the primary valve of instrument pipes, and both inlet and outlet adopt the standard ASME B16.5 flange connection, and is convenient for the replacement and disassembly when it's damaged after long-term service. The valve features with compact structure, nice appearance ,convenient installation and long service.

②The flange size mentioned above is American Standard, and it's available to place the customized order.

③ Please mark out "k" when there is high anti-sulfur need .



## (K)CYYBF1-SW-FL Integrated Globe Valve (Weldolet Type)



Pressure Class	Size	Inlet conn.	Outlet Conn.	Installation Size				
				D	C	g	B	N-φ
150CLASS	1/2"	3/4" Weldolet	Flange	90	60.3	34.9	13	4-φ16
300CLASS	1/2"			95	66.7	34.9	13	4-φ16
600CLASS	1/2"			95	66.7	34.9	13	4-φ16
900CLASS	1/2"			120	82.6	34.9	13	4-φ23
1500CLASS	1/2"			120	82.6	34.9	13	4-φ23
150CLASS	3/4"			100	69.9	42.9	19	4-φ16
300CLASS	3/4"			115	82.6	42.9	19	4-φ18
600CLASS	3/4"			115	82.6	42.9	19	4-φ18
900CLASS	3/4"			130	88.9	42.9	17	4-φ23
1500CLASS	3/4"			130	88.9	42.9	17	4-φ23

① The valve is usually used as the primary valve of instrument pipes, adopts 3/4" integrated weldolet of the inlet for welding with the main pipeline, and apply the standard ASME B16.5 flange connection for the outlet. The welding end adopts elongated design and central necking to effectively avoid the transmission of heat to the upper seal of the valve body during welding. The valve features of compact structure, aesthetic appearance and convenient installation and service.

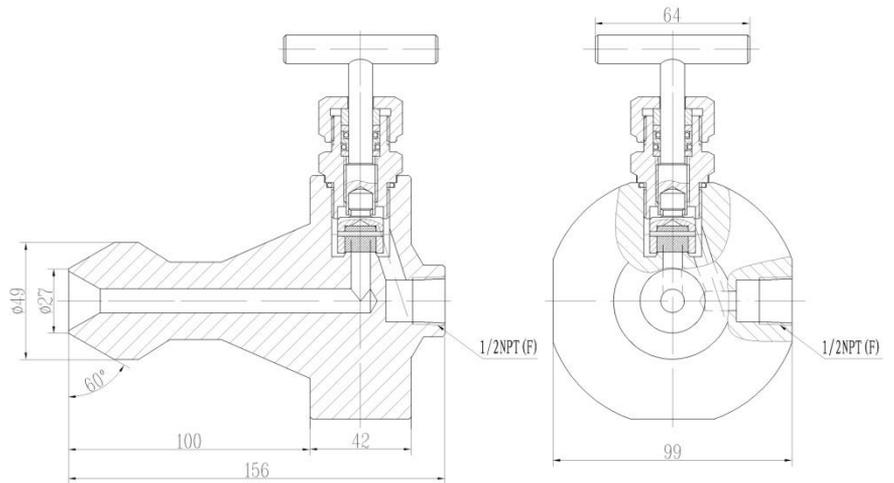
② The flange size mentioned above is American Standard, and it's available to place the customized order.

③ Please mark out "k" when there is high anti-sulfur need.



**CHANGYI**

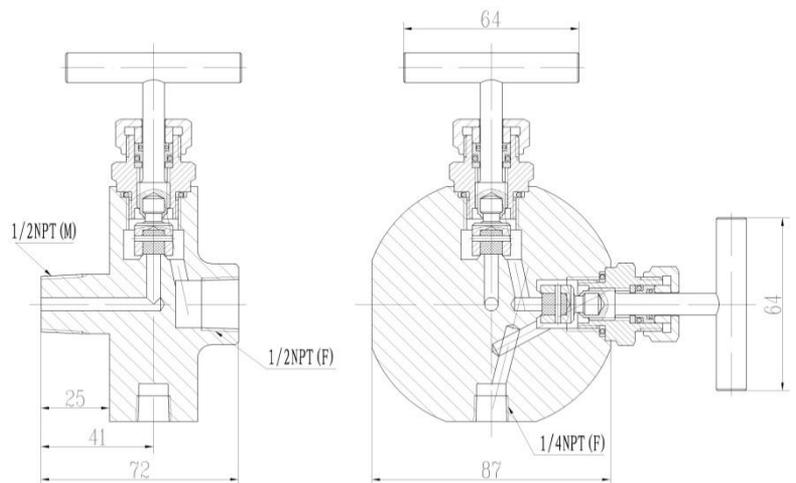
## (K)CYYBF1-SW-2NF Integrated Globe Valve (weldolet type)



Pressure Class : 150LB ~ 2500LB 、 1.6MPa ~ 70.0MPa、 10000PSI

- ① The valve is usually used as the primary valve of instrument pipes with 3/4" inlet whose integrated weldolet is welded with main pipeline; the outlet is coupled by two 1/2NPT(F) threads. The welding end adopts elongated design and central necking to effectively avoid the transmission of heat to the upper seal of the valve body during welding process.
- ② It's available to have customized design and manufacture from customer .
- ③ It's able to design 3 outlets .

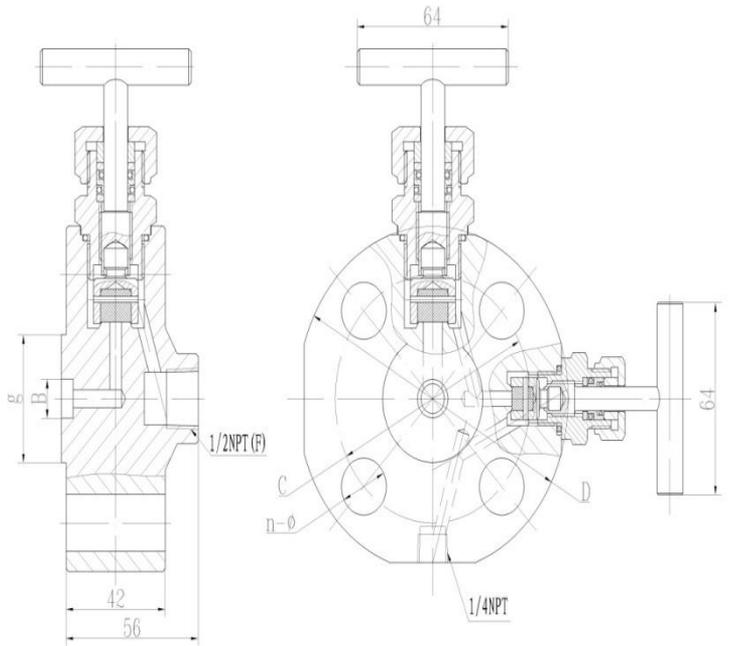
## (K)CYYBF2-NW-NF Double-Valve Globe Valve (Threaded Type)



Pressure Class : 150LB ~ 2500LB 、 1.6MPa ~ 70.0MPa、 10000PSI

- ① The valve is usually used as double -valve of instrument pipes, adopts 1/2NPT(M) to inlet and 1/2NPT(F) to outlet . The sampling and tapping connector are coupled by 1/4NPT(F).
- ② It's available to have customized design and manufacture from customer.
- ③ Please mark out "k" when there is high anti-sulfur need .

(K)CYYBF2-FL-NF Double-Valve Globe Valve (Flange Type)



Pressure Class	Size	Inlet conn.	Outlet Conn.	Installation Size				
				D	C	g	B	N-φ
150CLASS	1/2"	Flange	Thread	90	60.3	34.9	13	4-φ16
300CLASS	1/2"			95	66.7	34.9	13	4-φ16
600CLASS	1/2"			95	66.7	34.9	13	4-φ16
900CLASS	1/2"			120	82.6	34.9	13	4-φ23
1500CLAS S	1/2"			120	82.6	34.9	13	4-φ23

① The valve is usually used as double -valve of instrument pipes; the inlet adopts the standard ASME B16.5 flange connection .The outlet adopts 1/2NPT(F) connection .The sampling /tapping connector are coupled by 1/4NPT(F).

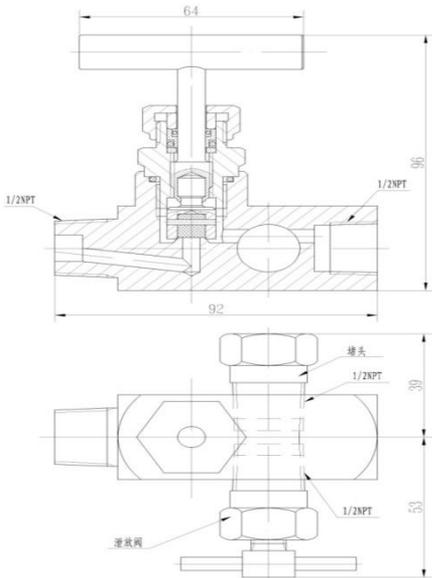
②It's available to have customized design and manufacture from customer.

③ Please mark out "k" when there is high anti-sulfur need .



**CHANGYI**

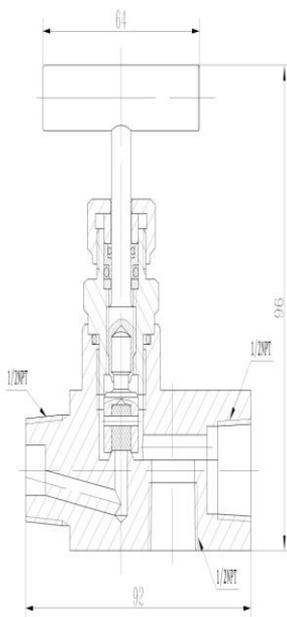
(K)GMJ31F/H Globe Valve (Female Thread, with Relief Valve, Calibration Nozzle, Plug )



Pressure Class	Inlet Thread	Outlet Thread	Note
150 ~ 2500CLASS 1.6 ~ 70.0MPa 10000PSI	1/2NPT(M)	1/2NPT(F)	It's available to have the customized manufacture.

- ①The inlet adopts 1/2NPT(M) connection. The outlet adopts 1/2NPT(F); The valve owns compact structure and nice appearance .
- ②It's available to have customized design and manufacture from customer.
- ③ Please mark out "k" when there is high anti-sulfur need .

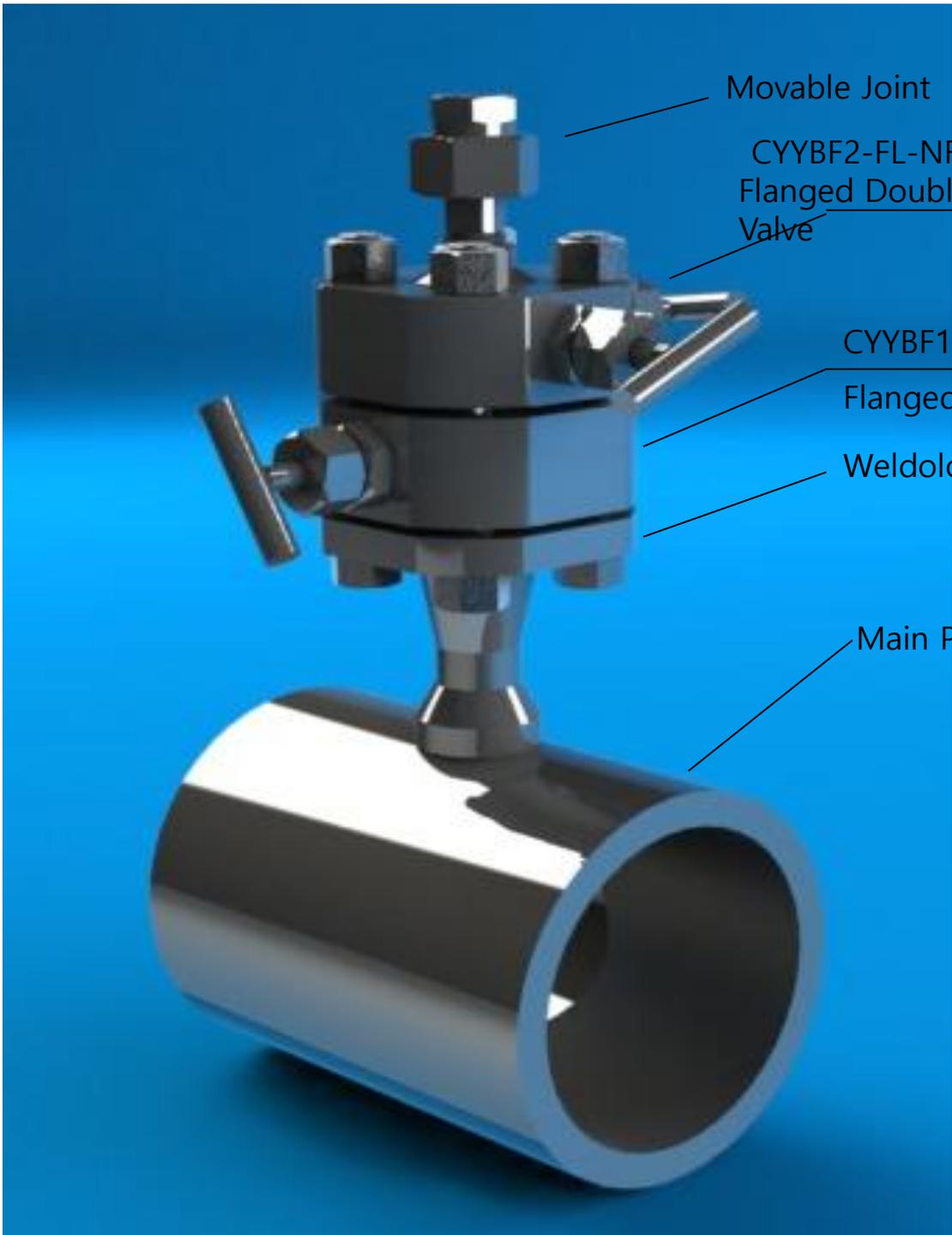
(K)GMJ31F/H Globe Valve (F/M Thread) (Double Outlets )



Pressure Class	Inlet Thread	Outlet Thread	Note
150 ~ 2500CLASS 1.6 ~ 70.0MPa 10000PSI	1/2NPT(M)	1/2NPT(F)	customized design and manufacture is available .

- ①The valve is with double outlets ; inlet adopts 1/2NPT(M) connection and the outlet adopts two 1/2NPT(F) connection.
- ② Please mark out "k" when there is high anti-sulfur need .





Movable Joint

CYYBF2-FL-NF

Flanged Double Valve

CYYBF1-FL-FL

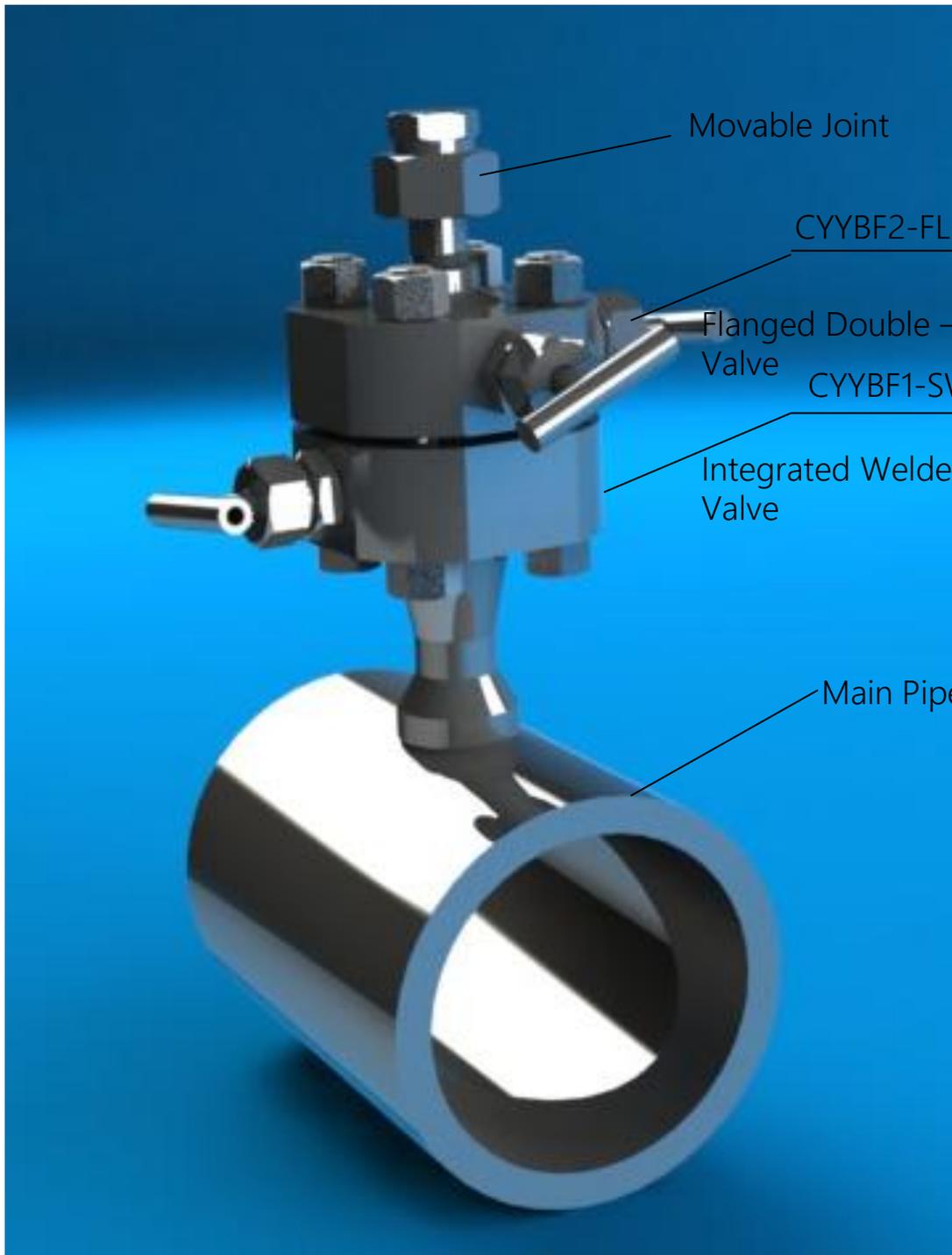
Flanged Globe Valve

Weldlot Flange

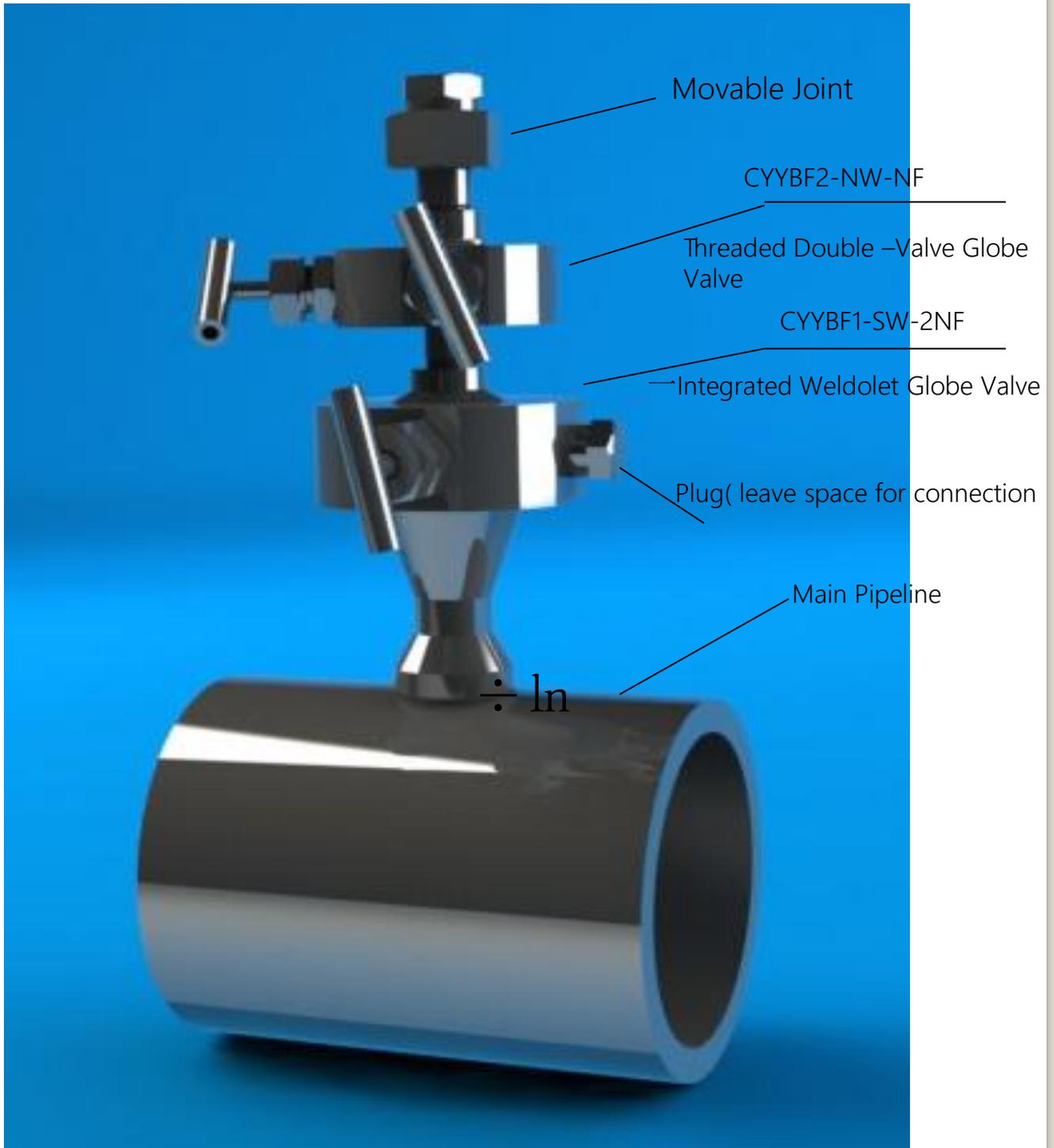
Main Pipeline

# Installation Instruction one





## Installation Instruction Two



## Installation Instruction Three



GMJ31F/H

F/M Threaded Globe Valve  
(instrument valve, plug and  
calibration Nozzle)

CYYBF1-SW-2NF

Integrated Glove Valve

Main Pipeline

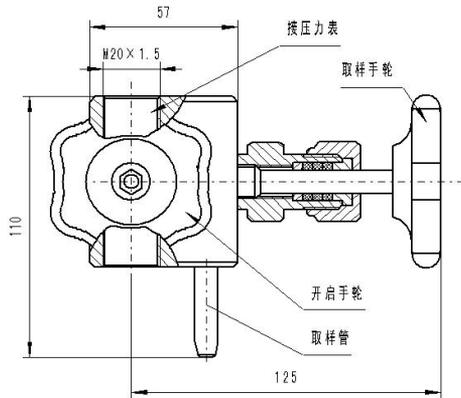
## Installation Instruction Four



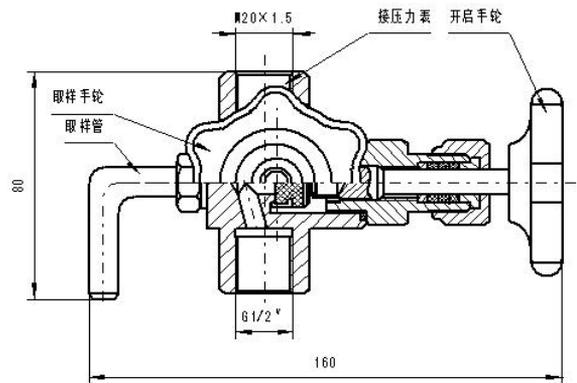


# High Seal Globe Valve

## GMQJ11F/H/ GMQJ11F/H — II High Seal Globe Valve for Sampling



GMJ11F/H

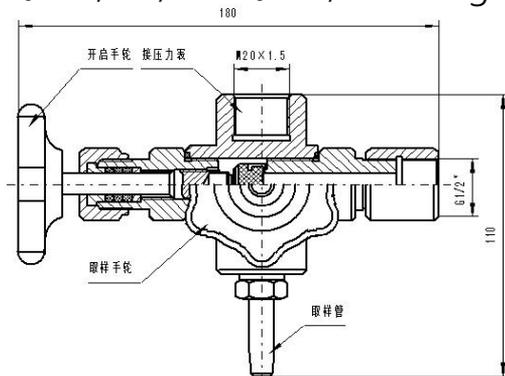


GMJ11F/H—II

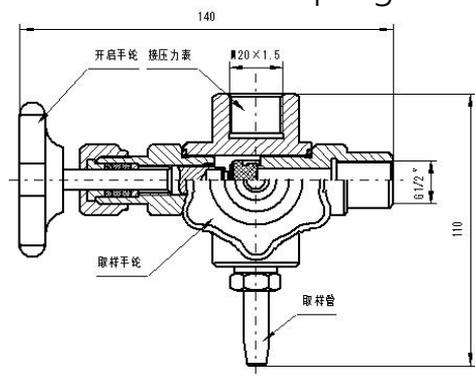
PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	T
1.6~50.0	15	M20×1.5 G <sup>1/2</sup> " ZG <sup>1/2</sup> " NPT1/2 "	M20×1.5 NPT 1/2"	Water, Purified NG, High Sulfur Gas, Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMQJ14F/H /GMQJ14F/H- II High Seal Globe Valve for Sampling



GMJ14F/H

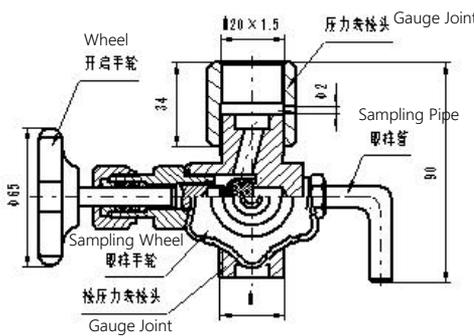


GMJ14F/H—II

PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	T
1.6~50.0	15	M20×1.5 G <sup>1/2</sup> " ZG <sup>1/2</sup> " NPT1/2 "	M20×1.5 NPT 1/2"	Water, Purified NG, High Sulfur Gas, Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

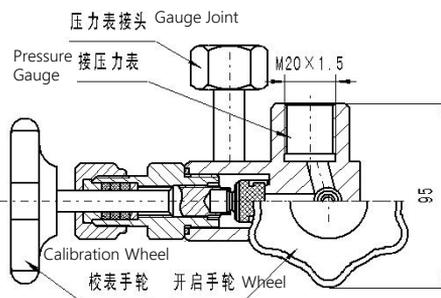
## GMQJ21F/H II High Seal Globe Valve for Sampling



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	T
1.6~50.0	5	M20×1.5 G <sup>1</sup> / <sub>2</sub> " ZG <sup>1</sup> / <sub>2</sub> " NPT 1/2"	M20×1.5 NPT 1/2"	Water, Purified NG, High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

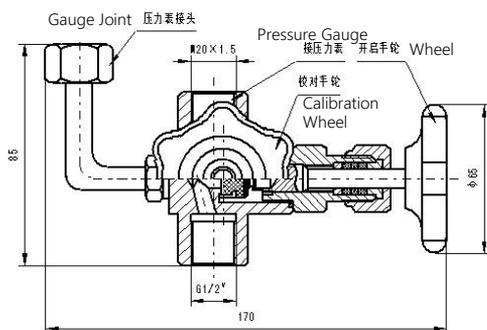
## GMJ34F/H II High Multifunctional Seal Globe Valve for Sampling



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	T
1.6~50.0	5	M20×1.5 G <sup>1</sup> / <sub>2</sub> " ZG <sup>1</sup> / <sub>2</sub> " NPT 1/2"	M20×1.5 NPT 1/2"	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

## GMJ36F/H/ GMJ34F/H II Multifunctional High Seal Globe Valve for Sampling

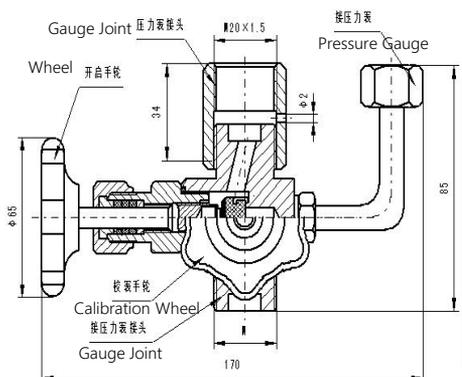
The device of Relief and pressure gauge are installed in order to ensure the realization of universal function .



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	T
1.6 ~ 50.0	5	M20×1.5 G <sup>1</sup> / <sub>2</sub> " ZG <sup>1</sup> / <sub>2</sub> " NPT 1/2"	M20×1.5 NPT 1/2"	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customize d design.

## GMJ26F/H Multifunctional High Seal Glove Double -Valve

This valve is attached with vent joint and gauge joint to ensure the all-in-one function.

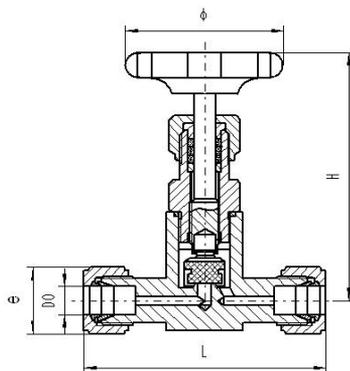


PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6 ~ 50.0	5	M20×1.5 G <sup>1</sup> / <sub>2</sub> " ZG <sup>1</sup> / <sub>2</sub> " NPT 1/2"	M20×1.5 NPT 1/2"	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMJ91F/H High Seal Ferrule Glove Valve

Valve adopts ferrule connection to ensure the zero medium leakage under high pressure.

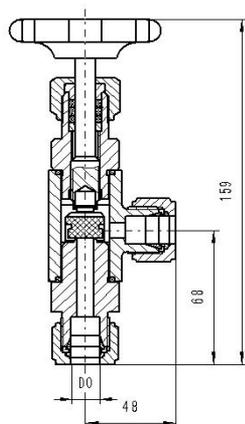


PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium
1.6~50.0	6	14	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
	8	16		
	10	18		
	15	22		
	15	25		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMJ94F/H High Seal Ferrule Glove Valve

Valve adopts ferrule connection to ensure the zero medium leakage under high pressure.

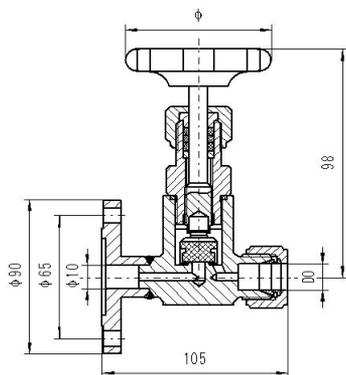


PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium
1.6~50.0	6	14	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
	8	16		
	10	18		
	15	22		
	15	25		

Please mark out "k" when there is high anti-sulfur need .  
It's available to offer customized design and manufacture.

## GMJJ·BY<sub>1</sub>F/H High Seal Glove Valve for sampling pressure

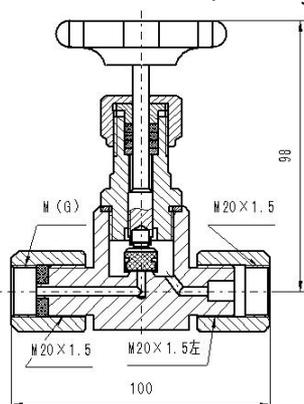
Valve adopts flange inlet and ferrule outlet to ensure the zero medium leakage under high pressure.



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium
1.6~42.0	3~6	12	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
		14		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

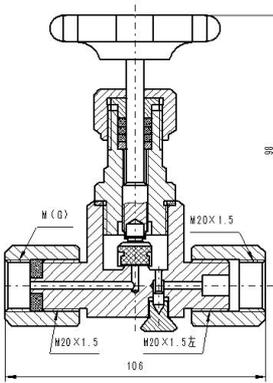
## GMJJ·M<sub>1</sub>F/H High Seal Glove Valve for Gauge



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	3~6	M20×1.5 (left)	M20×1.5	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
		G <sup>1</sup> / <sub>2</sub> "			

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMJJ M<sub>8</sub>F/H High Seal Globe Valve for Gauge



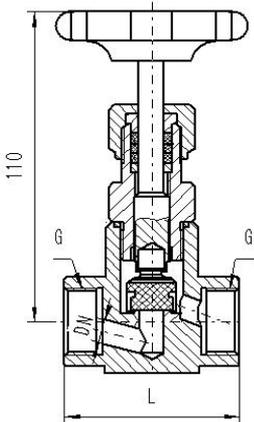
PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	3~6	G <sup>1/2</sup> " M20×1.5 (左)	M20×1.5	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.



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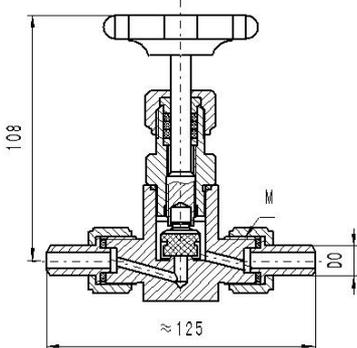
## GMJ11F/H High Seal Globe Valve (Female Thread)



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	6	G <sup>1/8</sup> "	G <sup>1/8</sup> "	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
	8	G <sup>1/4</sup> "	G <sup>1/4</sup> "		
	10	G <sup>3/8</sup> "	G <sup>3/8</sup> "		
	15	G <sup>1/2</sup> "	G <sup>1/2</sup> "		
	20	G <sup>3/4</sup> "	G <sup>3/4</sup> "		
	25	G1"	G1"		

Please mark out "k" when there is high anti-sulfur need .  
It's available to offer customized design and manufacture.

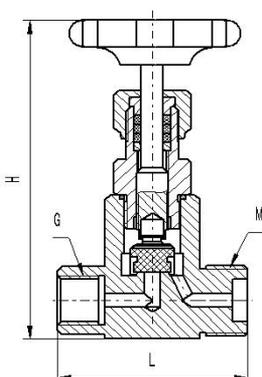
## GMJ 2 1 F/H High Seal Globe Valve (Male Thread)



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Medium	T
1.6~50.0	6	M20×1.5	M20×1.5	14	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customize d design.
	8	M24×1.5	M24×1.5			
	10	M27×1.5	M27×1.5			
	15	M30×1.5	M30×1.5			
	20	M33×1.5	M33×1.5			
	25	M42×1.5	M42×1.5			

Please mark out "k" when there is high anti-sulfur need .  
It's available to offer customized design and manufacture.

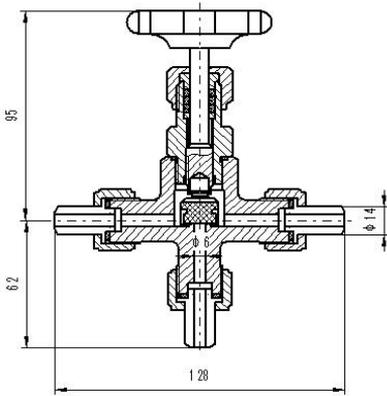
## GMJ 3 1 F/H High Seal Globe Valve (Male and Female Thread)



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	6	M20×1.5	M20×1.5	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
		M27×1.5	M27×1.5		
		G <sup>1/2</sup> "	G <sup>1/2</sup> "		
	8	G <sup>3/4</sup> "	G <sup>3/4</sup> "		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMJ 2 6 F/H High Seal Globe Tee Valve (Male Thread)

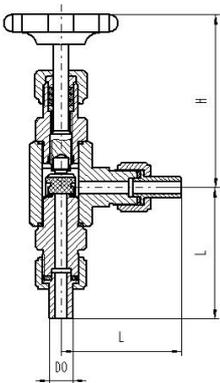


PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium
1.6~50.0	6	14	Water, Purified NG, High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
	8	16		
	10	18		
	15	22		
	20	25		
	25	33		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.



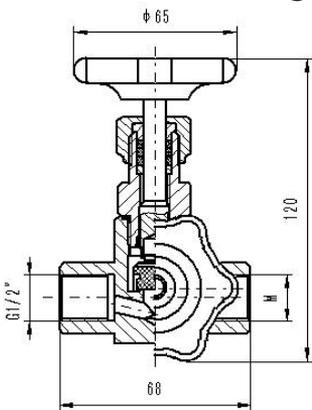
## GMJ 2 4 F/H High Seal Angle Globe Valve (Male Thread)



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium
1.6~50.0	6	14	Water, Purified NG, High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
	8	16		
	10	18		
	15	22		
	20	25		
	25	33		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

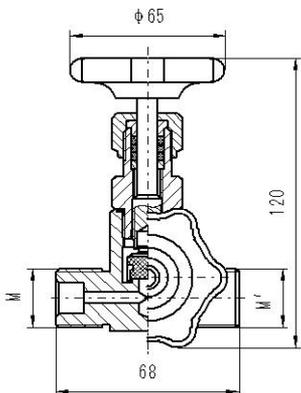
## GMJ 1 9 F/H High Seal Tee Valve for Gauge



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	15	G <sup>1/2</sup> " M20×1.5	M20×1.5	Water, Purified NG、 High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

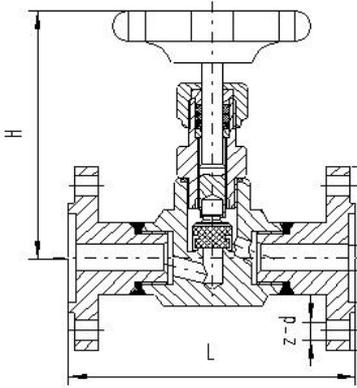
## GMJ 2 9 F/H High Seal Tee Valve for Gauge



PN ( MPa )	DN ( mm )	Inlet Conn.	Outlet Conn	Medium	Temperature
1.6~50.0	10	G <sup>3/8</sup> "	G <sup>3/8</sup> "	Water, Purified NG, High Sulfur Gas、 Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customize design.
	15	G <sup>1/2</sup> "	G <sup>1/2</sup> "		
	20	G <sup>3/4</sup> "	G <sup>3/4</sup> "		
	25	G1"	G1"		

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMJ 4 1 F/H High Seal Globe Valve (Flange Type)

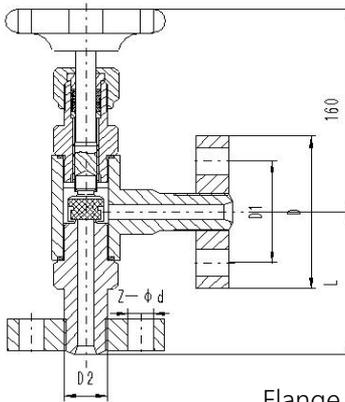


DN	(Mpa)						Medium	Temperature
	1.6	2.5	4.0	6.3	10.0	16.0		
10	L	L	L	L	L	L	Water, Purified NG, High Sulfur Gas, Oil, etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
15								
20								
25								

Flange Standard : JB/T79-94 , It's available to offer customized design and manufacture.



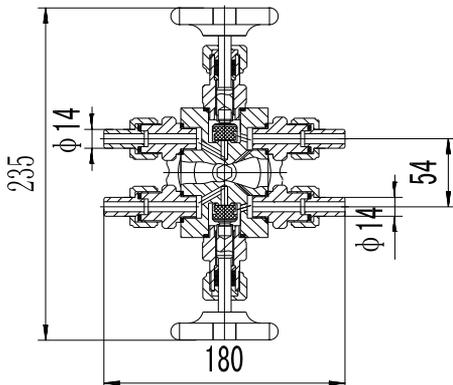
## GMJ 4 4 F/H High Seal Globe Valve ( Angle Flange Type)



DN	(Mpa)								Medium	Temperature
	16.0		25.0		32.0		42.0			
3、6	L	L1	L	L1	L	L1	L	L1	Water, Purified NG, High Sulfur Gas, Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.
10										
15										
20										
25										

Flange Standard JB/T2769-92 / It's available to offer customized design and manufacture.

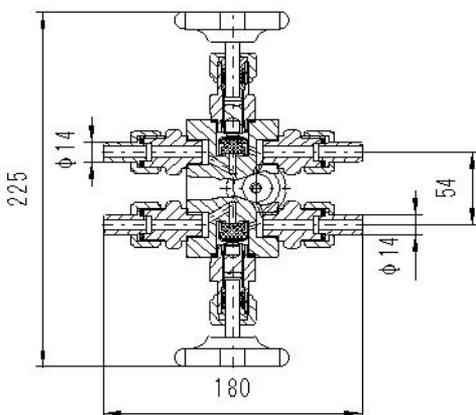
## GMJ 2 3 S A High Seal Tee Valve for Flow meter



PN ( MPa )	DN ( mm )	Inlet Conn.	Medium	Temperature
1.6~50.0	5	φ14	Water, Purified NG, High Sulfur Gas, Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.

## GMQFF<sub>3</sub> High Seal Balance Valve for Flow meter



PN ( MPa )	DN ( mm )	Inlet Conn.	Medium	Temperature
1.6~50.0	5	φ14	Water, Purified NG, High Sulfur Gas, Oil ,etc	t≤200°C ( if t > 200°C ,it's available to have customized design.

Please mark out "k" when there is high anti-sulfur need . / It's available to offer customized design and manufacture.