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GGC VALVE SERIES

Gate Valve Series
Globe Valve Series
Check Valve Series

www.vmvvalve.com

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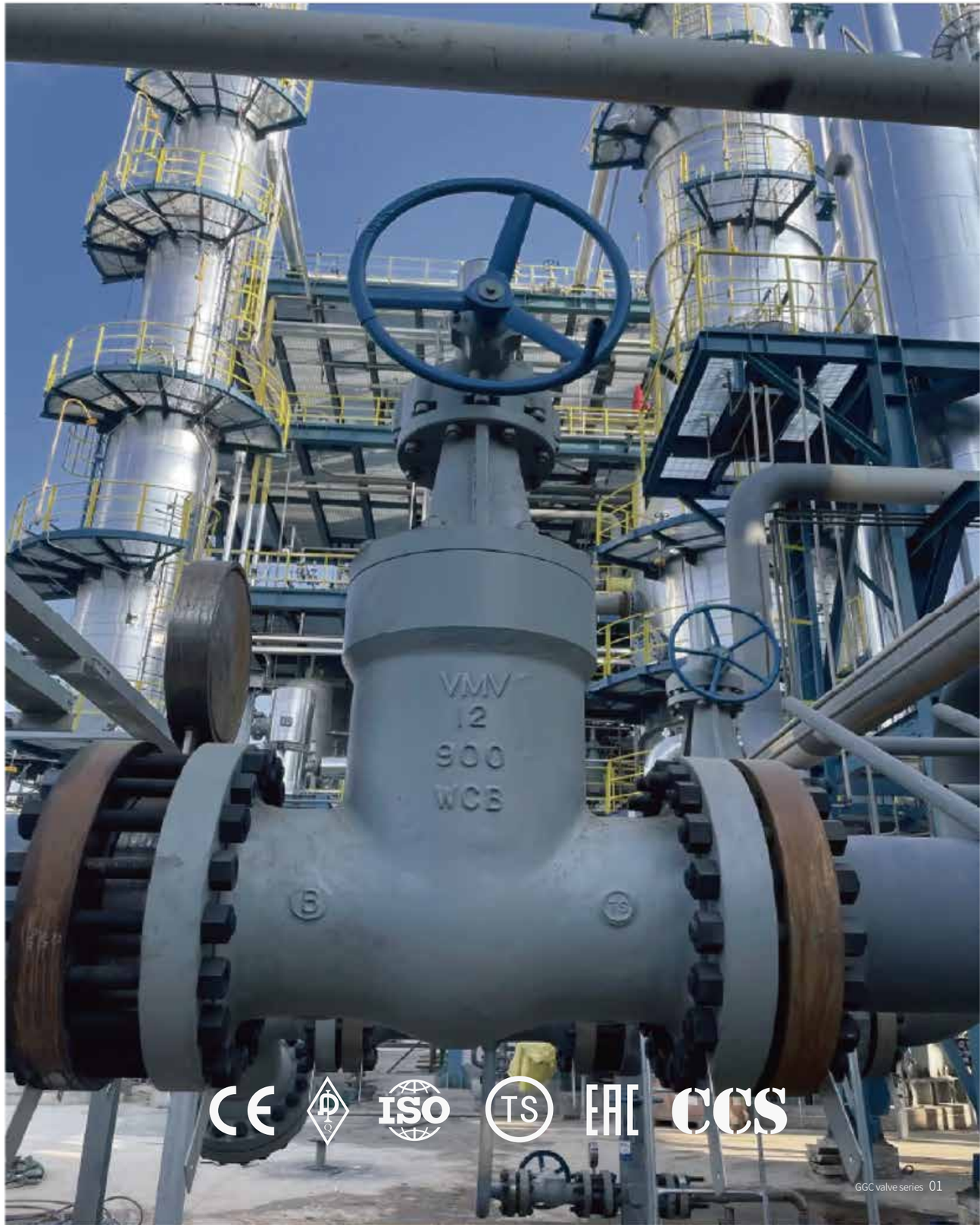


VMV®

GGC VALVE SERIES

Gate Valves | Globe Valves | Check Valves

“Let our Valves create Maximum Value” ---This is what the brand VMV stands for .

ZHEJIANG NEWTON FLUID CONTROL CO.,LTD. was committed to providing comprehensive solutions for steam and thermal energy systems.

Our products include bellows sealed valve series, steam trap series, control valve series and GGC valve series.

Not just products service, but from the site survey, energy saving diagnosis, full range of product development, project landing, operation monitoring to from system solutions, all follow the principle of sustainable development.

Our plant covers an area of 75,000 m², the laboratory covers 2,000 m², the factory has realized intelligent workshop management, including robot production line, intelligent CNC machine center, welding robots, three-dimensional warehouse, dust free workshop, high and low temperature test laboratory, etc.

We have also qualified with CE PED 0036, ISO9001, ISO14001, ISO45001, EAC, TS A1, CCS certificates etc.

ZHEJIANG NEWTON FLUID CONTROL CO.,LTD.

VMV GGC valves are widely used in petrochemical, metallurgical, pharmaceutical, electric power and other industries, because of high quality materials, high precision manufacturing process and superior sealing performance, to meet the needs of high temperature, high pressure, corrosive media and other complex conditions.

High-precision CNC vertical lathe

Through precision processing technology, we control the processing accuracy of valves at the micrometer level (um), ensuring that large-diameter valves can still meet strict sealing requirements under harsh working conditions.

We achieve consistency in part dimensions through high-precision manufacturing technology, enabling the components of large-diameter valves to have efficient interchangeability. High-level processing capabilities not only enhance the assembly efficiency of products but also significantly reduce maintenance and replacement costs.

Highefficiency sealing
Stable performance

350 employees 75000m² Area

37 engineers 2000m² laboratory

Machining Center Workshop 1

Machining Center Workshop 2

CNC Workshop

CNC Vertical Workshop Corner

Intelligent Three-Dimensional Warehouse

There are 3000 storage locations, which can accommodate about 3600 tons of materials, with a total height of 24 meters.

It improves the space utilization rate and batching efficiency. Through automation technology and precise control algorithms, it realizes the intelligent management of material storage and scheduling.

Each workshop has a corresponding track, which can accurately locate the location of goods according to the WMS/WCS system, accurately discharge the warehouse, and improve efficiency.

Quality Control Equipment

X-ray Inspection Equipment
VMV has its own Ir-92 radiographic source for radiographic testing (RT) of castings with wall thicknesses from 0.100 inches to 2-1/2 inches to verify the integrity of the casting raw material.

PMI Equipment
We are able to perform rapid chemical analysis of incoming raw materials and assembled parts to prove that the materials used are produced and assembled to standard specifications.

Magnetic Particle Testing
VMV has magnetic particle testing equipment that can perform random testing on standard products, or test ferromagnetic materials when customers require magnetic particle testing certification.

Penetration Testing
VMV has the personnel and materials to perform penetrant testing using either solvent removable or water washable techniques.
Nondestructive testing personnel are certified by the American Society for Penetrant Testing (ASNT).

Flow Resistance Cycle Test
VMV product design verification uses a complete laboratory test cycle. The test is carried out at the maximum design pressure, and the number of valve cycles increases from 3000 to 5000 times, which takes more than four months.

Three-Coordinate Measuring Machine
The test is a high-precision device that accurately detects the geometric size and shape of the object through the three-dimensional coordinate system, which is widely used in the quality control of the manufacturing industry.

Metrology Laboratory
VMV has developed calibration and verification systems for all the equipment used in its facilities. This ensures our ability to track, measure, control products and comply with international standards.

Fire Testing Facilities
VMV has the facilities to perform fire testing in accordance with API requirements. This test exposes the valve to flames at 1400 to 1800 °F (761 to 980 °C) to verify proper sealing of the valve.

Slow Fugitive Emissions Testing
This test is performed when a customer requires a Slow Fugitive Emissions certification. VMV laboratory has its own LFE test equipment capable of measuring concentrations below 20 ppm in static and mechanical conditions at ambient temperature or under thermal cycling.

Ultrasonic Testing Equipment
Using ultrasonic techniques, VMV can detect sub-surface defects in materials and evaluate castings and forgings that cannot be radiographed. VMV also use this equipment to measure wall thickness on castings and forgings.

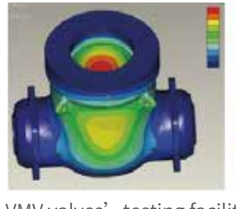
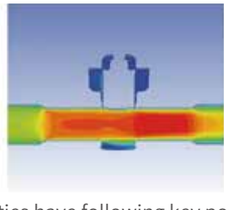
Tensile Test Equipment
VMV use this equipment to verify the mechanical properties of materials used for manufacturing. VMV will test samples randomly even if we receive MTRs from suppliers and foundries.

Hardness Testing Equipment
In laboratory and workshop testing, VMV uses hardness testing equipment such as Rockwell B, C Brinell or Vickers hardness testers to ensure specifications are met.

Design and development

Lean Design and Rigorous Testing

Newton's gate valves, globe valves and check valves are developed using advanced 3D design and analysis software, combined with finite element analysis (FEA) and computational fluid dynamics (CFD) technology to fine-tune product design and ensure that performance and reliability reach industry-leading levels.


VMV valves' testing facilities have following key points:

High temperature gas testing: ensure reliable operation under extreme temperature conditions.

Durability and cycle testing: verify stability in long-term use.

Seismic testing: evaluate safety in earthquake conditions.

Pipe end load testing: verify the ability of the valve to withstand loads in the installed position.

Vacuum testing: ensure sealing performance under low pressure conditions.

Fugitive emission testing: meet the sealing requirements of environmental regulations.



Material Selection

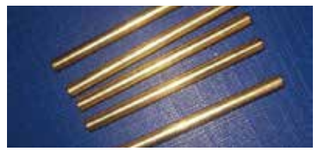
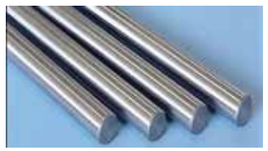
Regarding material selection, the features of the fluid, pressure, and operating temperature should be comprehensively considered. VMV has many years of experience in special materials such as duplex stainless steel, super duplex steel, Hastelloy, Inconel, nickel based alloys, etc. Besides, standard forged steel and cast steel are also commonly used materials of VMV engineers. According to the specific requirements of customers, other materials can also be considered and provided.

For internal components, such as valve seat rings and gates or discs, in addition to the requirements of pressure drop and operating temperature range, corrosion-resistant and wear-resistant materials must be selected. VMV valves improve the performance of valve seat components by surfacing Stellite alloys, while using hardened stainless steel to provide higher corrosion resistance.

The following table lists the materials commonly used in VMV gate valves, globe valves, and check valves, which are generally suitable for applications under severe conditions.

Material	Casting (ASTM standard)	Forging (ASTM standard)
Carbon steel	A216 Gr. WCB	A105
Stainless steel	A351 Gr. CF8 / CF8M	A182 F304/A182 F316
Duplex Steel	A890 Gr. 4A	A182 F51
Super Duplex Steel	A890 Gr. 5A / Gr. 6A	A182 F53 / F55
Inconel	A494 CM6MC	Alloy625

*Other materials available upon request.

Gate valve, Globe valve and Check valve - ASME Class 900 to Class 2500

They fully complies with the ASME B16.34 standard.

All valves adopt pressure-sealing designs and are combined with innovative technologies, significantly enhancing performance and device safety.

In addition, these valves can provide products that comply with ISO and TS standard as required, meeting the diverse needs of global customers.

Integrated Body-yoke Design

VMV's gate valves and globe valves feature an integrated cast yoke design, ensuring a high-strength connection between the operating mechanism and the yoke. The one-piece cast yoke is precision-machined, mounted on the valve body neck, and forms an exact fit with the valve stem and operating mechanism. This maintains stable alignment of the stem and mechanism even under high-load conditions, ensuring long-term reliable operation.

Pressure-Sealed Bonnet Structure

VMV's high-pressure valves feature a pressure-sealed bonnet design that leverages the pipeline medium's pressure to create a highly reliable body-bonnet seal. The higher the pressure, the more effective the sealing. The bonnet is pre-tensioned by a split pressure ring and secured with bolts and pressure plates, ensuring dependable sealing under low-pressure conditions while simplifying component disassembly during maintenance. Disassembly holes are incorporated into the valve body to facilitate removal and servicing of the segmented pressure ring.

Welded Sealing Seat Ring

VMV's gate valves and check valves employ a welded seat ring process, securely fusing the seat ring to the valve body. This effectively eliminates potential leakage paths between the seat ring and valve body while preventing loosening caused by temperature fluctuations or vibration, ensuring long-term stable operation.

Channel Design

VMV's gate valves, globe valves, and check valves adhere strictly to full-bore standard designs with optimized flow paths and rational wall thicknesses, significantly improving fluid passage efficiency. Gate valves are also available in reduced-bore configurations to meet diverse application requirements.

Hardened Alloy Wear Component

The discs, seats and upper seals (applicable to gate valves and globe valves) of VMV valves are hardened with Stellite 6 or equivalent hard alloy materials. The thickness of the hardened layer reaches 1.6 millimeters, meeting industry standards and ensuring the long lifespan and trouble-free operation of the valves under harsh working conditions.

GGC VALVE SERIES

Gate Valves | Globe Valves | Check Valves

Actuation Options

All gate valves and globe valves can be equipped with various actuators.VMV Newton maintains close partnerships with many world-leading actuator manufacturers, offering a wide range of interchangeable actuation solutions:

- Bevel Gear-Handwheel
- Electric Actuators
- Pneumatic Actuators
- Hydraulic Actuators

Honors and Qualifications

VMV has also qualified with CE PED 0036, ISO9001, ISO14001, IS045001, EAC, TS A1, CCS certificates

Casting Gate Valve, Globe Valve, and Check Valve

Valve Size			2”	2.5”	3”	4”	5”	6”	8”	10”	12”	14”	16”	18”	20”	24”	26”	28”	30”	32”	36”	40”	42”	48”	52”	56”	60”	64”
API 600&ASME B16.34 Bolted bonnet valve	Gate valve	150	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		300	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		600	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		900	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
		1500	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		2500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
	Globe valve	150	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
		300	●	●	●	●	●	●	●	●	●	●	●	●	●													
		600	●	●	●	●	●	●	●	●	●	●	●	●														
		900	●	●	●	●	●	●	●	●	●	●	●															
		1500	●	●	●	●	●	●	●	●	●	●																
		2500	●	●	●	●	●	●	●	●	●																	
	Check valve	150	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		300	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		600	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		900	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●								
		1500	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		2500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
API 600&ASME B16.34 Pressure sealed valve	Gate valve	600	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		900	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		1500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
		2500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
	Globe valve	600	●	●	●	●	●	●	●	●	●	●	●	●														
		900	●	●	●	●	●	●	●	●	●	●	●															
		1500	●	●	●	●	●	●	●	●	●	●																
		2500	●	●	●	●	●	●	●	●	●	●																
	Check valve	600	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		900	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
		1500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
		2500	●	●	●	●	●	●	●	●	●	●	●	●	●	●												

Remarks:

1. The structural length complies with the standards BS2080, ASME B16.10, or ISO 5752
2. The flange type and size comply with the standard ASME B16.5
3. The structure and dimensions of the butt welding end comply with the standard ASME B16.25
4. Inspection and testing shall comply with standard API598 or BS EN 12266
5. Valves over 64 inches are manufactured according to Newton standards

Casting Gate Valve, Globe Valve, and Check Valve

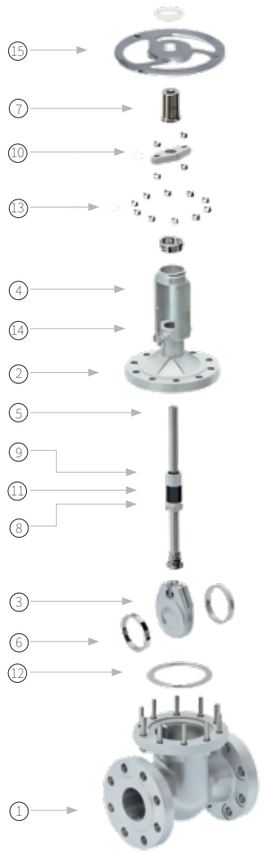
Valve Size			1/4’	3/8’	1/2’	3/4’	1’	1 1/4’	1 1/2’	2’
Threaded connection and welded connection (regular type)	Gate valve	800		●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
	Globe valve	800		●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
	Check valve	800		●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
Threaded connection and welded connection （Full bore type）	Gate valve	800	●	●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
	Globe valve	800	●	●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
	Check valve	800	●	●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
Bonnet RTJ connection Bonnet self-sealing	Gate valve	1500			●	●	●		●	●
		2500			●	●	●		●	●
	Globe valve	1500			●	●	●		●	●
		2500			●	●	●		●	●
	Check valve	1500			●	●	●		●	●
		2500			●	●	●		●	●
Bonnet welding connection Bonnet self-sealing	Gate valve	2500			●	●	●		●	●
	Globe valve	2500			●	●	●		●	●
	Check valve	2500			●	●	●		●	●
Integral end flange Pressure bolt connection	Gate valve	150			●	●	●		●	●
		300			●	●	●		●	●
		600			●	●	●		●	●
	Globe valve	150			●	●	●		●	●
		300			●	●	●		●	●
		600			●	●	●		●	●
	Check valve	150			●	●	●		●	●
		300			●	●	●		●	●
		600			●	●	●		●	●
Integral end flange Bonnet RTJ connection Bonnet self-sealing	Gate valve	1500			●	●	●		●	●
	Globe valve	1500			●	●	●		●	●
	Check valve	1500			●	●	●		●	●
Y-type bonnet welding connection Bonnet RTJ connection Bonnet self-sealing	Globe valve	800		●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
		2500	●	●	●	●	●	●	●	●
	Check valve	800		●	●	●	●	●	●	●
		1500	●	●	●	●	●	●	●	●
		2500	●	●	●	●	●	●	●	●

GATE VALVE Series

2" - 36" DN15-DN1000
Class 150 - Class 2500 PN16-PN160

Gate valve is a highly efficient shut-off valve widely used in pipeline systems requiring bidirectional flow. Its core design lies in a wedge-shaped gate that slides vertically to control fluid flow, hence the name 'gate valve.' When fully open, the wedge gate completely retracts from the flow path, creating an unobstructed straight-through passage for the medium. This design significantly reduces fluid turbulence and pressure loss, making it ideal for applications demanding stable flow rates and strict pressure drop control.

It should be noted that gate valves are primarily designed for on/off service and are unsuitable for throttling applications. Prolonged operation in a partially open position may cause localized erosion and wear of the wedge gate and valve seat, compromising sealing integrity and service life. Thus, gate valves are better suited for scenarios requiring full opening or closing, rather than frequent flow regulation.



Item	Description	Carbon Steel	Carbon Steel (Low Temp.)	Alloy Steel	Stainless Steel
1	Body	A 216 Gr. WCB	A 352 Gr. LCB	A 217 Gr. C5	A 351 Gr. CF8M
2	Bonnet	A 216 Gr. WCB	A 352 Gr. LCB	A 217 Gr. C5	A 351 Gr. CF8M
3	Wedge	A 216 Gr. WCB + ER410	A 352 Gr. LCB + ER308	A 217 Gr.C5+ ER410	A 351 Gr. CF8M
4	Yoke	A 216 Gr. WCB	A 352 Gr.LCB	A 217 Gr. C5	A 351 Gr. CF8M
5	Stem	A 182 Gr. F6a	A 182 Graph. F304	A 182 Gr. F6a	A 182 Gr. F316
6	Seat Ring	A 105 + Stellite	A 182 Gr. F304	A 182 Gr. F6a + Stellite	–
7	Stem Nut	B 148 /A 439 Gr. D2	B 148 /A 439 Gr. D2	B 148 /A 439 Gr. D2	B 148/A 439 Gr. D2
8	Backseat	A182 Gr. F6a	A182 Gr. F304	A 182 Gr. F6a	–
9	Gland	A 105	A 105	A 182 Gr. F6a	A 182 Gr. F316
10	Gland Flange	A 105	A 105	A 105	A 182 Gr. F304
11	Stem Packing	Graphite	Graphite	Graphite	Graphite
12	Gasket (Class 150)	SS304 / Graphite	SS304 / Graphite	SS304 / Graphite	SS316 / Graphite
12	Gasket (Class 300)	Spw SS304 / Graphite	Spw SS304 / Graphite	Spw SS304 / Graphite	Spw SS316 / Graphite
12	Gasket (Class 600)	Spw SS304 / Graphite	Spw SS304 / Graphite	Spw SS304/ Graphite	Spw SS316 / Graphite
12	Gasket (Class 900)	RJ SS304	RJ SS304	RJ SS304	RJ SS316
12	Gasket (Class 1500)	RJ SS304	RJ SS304	RJ SS304	RJ SS316
12	Gasket (Class 2500)	RJ SS304	RJ SS304	RJ SS304	RJ SS316
13	Bonnet Bolt & Nut	A 193 Gr.B7 /A 194 Gr.2H	A320 Gr. L7 /A194 Gr. 7	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H(1)
14	Eye Bolt & Nut	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H
15	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

Low flow resistance: When fully open, the valve body channel is straight through, with extremely low flow resistance of the medium, suitable for high flow Speed pipeline.

Reliable sealing: Soft sealed gate valves can achieve zero Leakage, hard sealed gate valve is resistant to high temperature and high pressure.

Bidirectional flow: Symmetrical on both sides of the gate, the medium can Bidirectional flow, unrestricted installation direction.

Long use life: No friction between the gate and valve seat during opening and closing
Wipe (the gate completely disengages from the channel after opening) Small wear and tear.

Petrochemical industry: Crude oil and refined oil pipelines.

Power industry: High temperature and high pressure steam system.

Water system: Tap water, sewage treatment (commonly used) Concealed stem gate valve).

Shipbuilding: seawater pipeline (corrosion-resistant material)

Valve Body and Bonnet

The valve body and bonnet are made of high-quality castings, and then undergo precision machining to avoid stress concentration. The valve body of the gate valve adopts a straight-through passage design to ensure minimal turbulence and flow resistance. Whether it is a bolted bonnet or a pressure-sealed bonnet design, the valve body is equipped with guide slots to accommodate the wedge during the opening or closing process of the valve.
The bonnet can be either one-piece (with an integrally formed yoke) or two-piece depending on the valve size. This design ensures a perfect alignment with the valve body, thus enabling precise opening and closing.

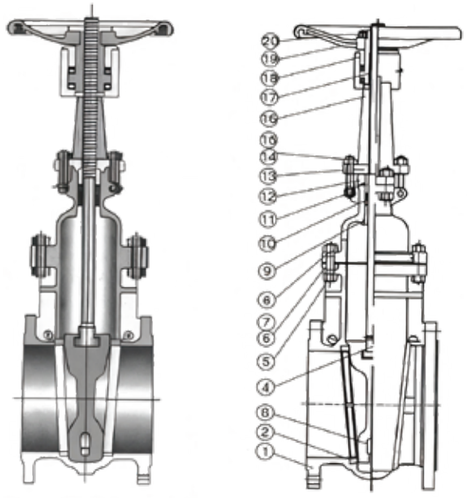
Backseat

The backseat of all Newton gate valves and globe valves are thread connection on the bonnet, or for pressure-sealed valves, they are welded to the bonnet.The material of the hard-facing In the pressure-sealed structure, The sealing surface of the backseat is usually made of Stellite 6 or equivalent material.

Valve stem

The stem of the Newton gate valve is manufactured using integral forging technology, with ASME threads, precision machined and smoothed to reduce friction. In gate valves, the connection between the valve stem and the wedge block is a "T-shaped structure" that prevents the valve stem from detaching from the gate during operation. The design on the valve stem includes a conical protruding surface, which presses the valve stem protrusion onto theback sealing seat when the valve is fully opened, forming an back sealing.

Cast Steel Wedge Gate Valve



Part Name

1	Body	11	Pin
2	Seat	12	Packing gland
3	Wedge	13	Packing plate
4	Stem	14	Eye Bolt
5	Gasket	15	Nut
6	Nut	16	Yoke
7	Bolt	17	Stem nut
8	Bonnet	18	Bearing gland
9	Backseat	19	Handwheel
10	Packing	20	Lock nut

DIN Standard Pressure Testing (MPa) (Body WCB)

Nominal Pressure	Back Seal test	Shell strength testing	High pressure sealing testing	Low pressure sealing testing
1.6	1.76	2.4	1.76	
2.5	2.75	3.75	2.75	
4.0	4.4	6.0	4.4	0.6
6.4	7.04	9.6	7.04	
10.0	11.0	15.0	11.0	

ANSI Standard Pressure Testing (MPa) (Body WCB)

Pressure (Class)	Back Seal test	Shell strength testing	High pressure sealing testing	Low pressure sealing testing
150	2.2	3.0	2.2	
300	5.65	7.7	5.6	
600	11.2	15.3	11.2	0.6
900	16.8	23	16.8	
1500	28.1	38.3	28.1	
2500	46.8	63.8	46.8	

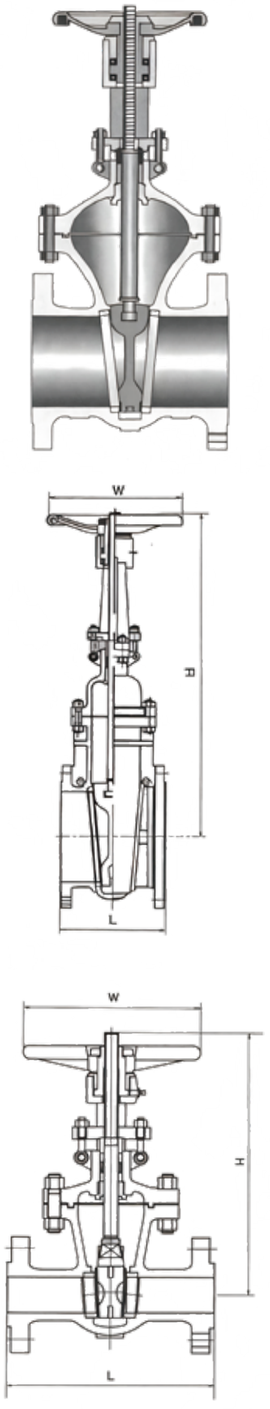
Main Part Materials

Part Name	Carbon Steel		Alloy steel			Stainless steel				
Body	A216 WCB	A352 LCB	A217 WC6	A217WC9	A217 WC5	A351 CF8	A351 CF8M	A351 CF3	A51 CF3M	CD3MN
Seat	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 WC5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Wedge	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	F51
Stud	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
Nut	A194 2H	A194 7	A194 7	A194 7	A194 7	A1948	A194 8M	A194 8	A194 8M	A194 8M
Yoke	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Backseat	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	F51
Packing gland	A276 410	A276 304	A278 304	A276 304	A276 304	A276 304	A276 316	A276 304	A276 316	F51
Packing plate	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN

Note: 1. All parts of the valve are made of materials that comply with ASTM standards;

2. The above is the VMV standard configuration. If the customer has special requirements, VMV can select materials according to their working conditions.

Cast Steel Wedge Gate Valve



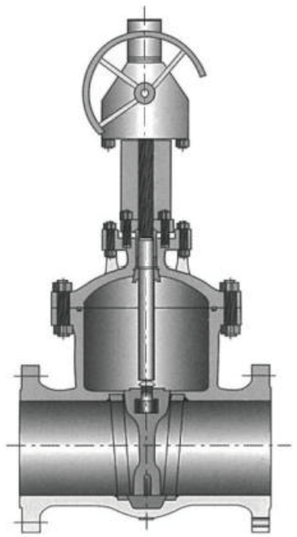
Main dimension and weight CLASS 150

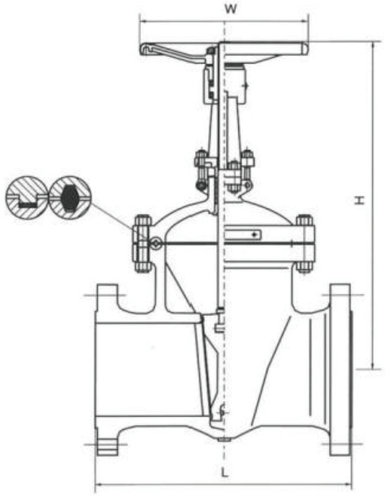
Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	178	191	216	340	250	-	-	12.4	20
2-1/2	65	190	203	241	370	250	-	-	17	30
3	80	203	216	282	403	280	-	-	23	33
4	100	229	242	305	447	300	-	-	34.5	49
5	125	254	267	381	525	300	-	-	60	60
6	150	267	280	403	600	350	-	-	85	75
8	200	292	305	419	746	400	-	-	125	120
10	250	330	343	457	900	400	1240	310	138	205
12	300	356	369	502	1056	500	1460	460	200	290
14	350	381	394	572	1187	600	1600	460	276	400
16	400	406	419	610	1345	600	1830	460	396	511
18	450	432	445	660	1487	600	2025	460	491	650
20	500	457	470	711	1630	680	2225	460	650	789
24	600	508	521	813	1931	800	2625	530	1018	1200
26	650	559	-	864	-	-	2876	530	-	-
28	700	610	-	914	-	-	3174	610	1492	1800
30	750	610	-	914	-	-	3406	610	1703	2560
32	800	660	-	965	-	-	3515	610	2127	3060
36	900	711	-	1016	-	-	3920	610	2563	3500

CLASS 300

Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	216	232	216	340	250	-	-	27.5	24
2-1/2	65	241	257	241	370	250	-	-	40	36
3	80	282	298	282	412	280	-	-	54	47
4	100	305	321	305	450	300	-	-	80	69
5	125	381	397	381	575	350	-	-	194	89
6	150	403	419	403	618	400	-	-	202	123
8	200	419	435	419	760	450	-	-	226	196
10	250	457	473	457	937	500	1275	310	354	333
12	300	502	518	52	1090	600	1494	460	558	440
14	350	762	778	762	1265	700	1639	530	736	710
16	400	838	854	838	1370	700	1830	530	966	950
18	450	914	930	914	1510	800	2110	530	1259	1405
20	500	991	1010	991	1710	800	2295	530	1540	720
24	600	1143	1165	1143	-	-	2676	610	2658	2770
26	650	1245	1270	1245	-	-	-	-	-	-
28	700	1346	1371	1346	-	-	3178	610	4264	3312
30	750	1397	1422	1397	-	-	3396	610	5403	4100
32	800	1524	1552	1524	-	-	3700	610	6600	5200
36	900	1727	1755	1727	-	-	4115	610	7900	6700

Cast Steel Wedge Gate Valve





Main Dimension and Weight

CLASS 600

Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	292	295	292	375	250	—	—	54	39
2-1/2	65	330	333	330	405	250	—	—	84	52
3	80	356	359	356	463	300	—	—	116	88
4	100	432	435	432	550	350	—	—	209	114
6	150	559	562	559	715	500	958	310	329	285
8	200	660	663	660	888	600	1140	460	592	413
10	250	787	790	787	995	600	1375	460	937	650
12	300	838	841	838	1140	700	1551	460	1401	800
14	350	889	892	889	1275	700	1713	600	1773	1140
16	400	991	994	991	—	—	2008	600	2215	1700
18	450	1092	1095	1092	—	—	2140	600	2952	2268
20	500	1194	1200	1194	—	—	2360	600	3862	2850
24	600	1397	1407	1397	—	—	2840	600	5505	3500

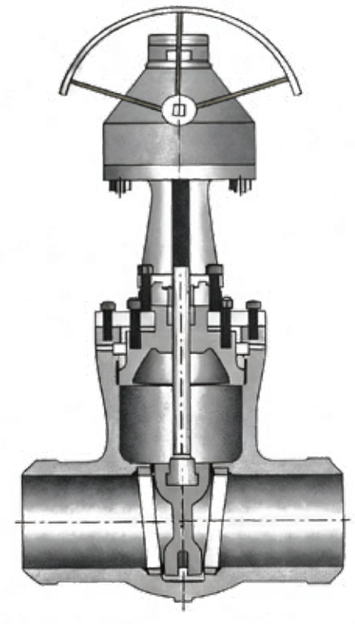
CLASS 900

Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N. m	Kg
2	50	368	371	368	470	300	—	—	122	72
2-1/2	65	419	422	419	512	350	—	—	170	101
3	80	381	384	381	515	350	—	—	224	130
4	100	457	460	457	615	400	—	—	338	197
6	150	610	613	610	834	600	1000	310	553	404
8	200	737	740	737	875	600	1130	460	946	650
10	250	838	841	838	1040	650	1520	460	1376	850
12	300	965	968	965	1150	700	1720	460	2159	1177
14	350	1029	1039	1029	—	—	1795	600	2508	1500
16	400	1130	1140	1130	—	—	1908	600	3419	1920

CLASS 1500

Size		L	L1	L2	H	W	H1	W1	T	WT (RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N. m	Kg
2	50	368	371	368	462	300	—	—	167	85
2-1/2	65	419	422	419	512	350	—	—	280	130
3	80	470	473	470	550	400	—	—	385	170
4	100	546	549	546	752	550	940	460	590	304
6	150	705	711	705	—	—	1166	460	1100	646
8	200	832	842	832	—	—	1370	460	1685	1100
10	250	991	1001	991	—	—	1550	600	2906	1600
12	300	1130	1146	1130	—	—	1800	600	4188	2106
14	350	1257	1276	1257	—	—	2200	600	5222	2700
16	400	1384	1406	1384	—	—	2550	600	6504	3500

Pressure Self Sealing Wedge Gate Valve



Main Dimension and Weight

CLASS 600

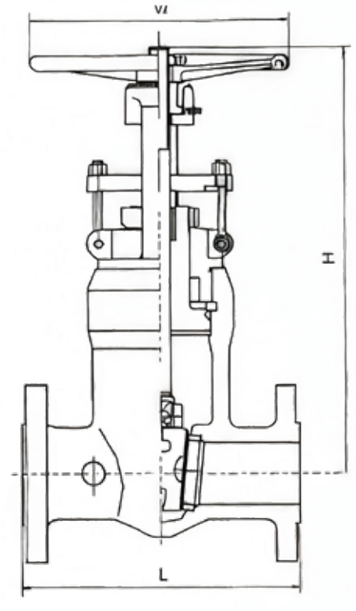
Size		L	L1	L2	L2 Long structure	H	W	H1	W1	T	WT (RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	N. m	Kg
2	50	368	371	216	368	482	300	—	—	122	50
2-1/2	65	419	422	254	419	525	300	—	—	170	74
3	80	381	384	305	381	598	350	—	—	224	90
4	100	457	460	356	457	675	400	—	—	338	110
6	150	610	613	508	610	928	600	1035	310	553	195
8	200	737	740	660	737	—	—	1190	460	946	505
10	250	838	841	787	838	—	—	1480	530	1376	745
12	300	965	968	914	965	—	—	1560	530	2159	1060
14	350	1029	1039	991	1029	—	—	1775	600	2508	1410
16	400	1130	1140	1092	1130	—	—	2010	600	3419	1960

CLASS 1500

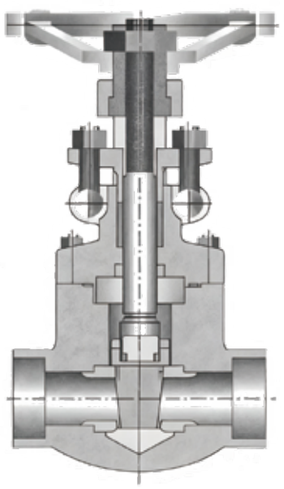
Size		L	L1	L2	L2 Long structure	H	W	H1	W1	T	WT (RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	N. m	Kg
2	50	368	371	216	368	550	350	—	—	167	50
2-1/2	65	419	422	254	419	554	350	—	—	280	74
3	80	470	473	305	470	675	400	—	—	385	90
4	100	546	549	406	546	750	450	1033	460	560	158
6	150	705	711	559	705	—	—	1155	460	1100	350
8	200	832	841	711	832	—	—	1440	600	1685	690
10	250	991	1000	864	991	—	—	1580	600	2906	1030
12	300	1130	1146	991	1130	—	—	1770	600	4188	1460
14	350	1257	1276	1067	1257	—	—	1820	600	5222	1810
16	400	1384	1406	1194	1384	—	—	1960	600	6504	2760

CLASS 2500

Size		L	L1	L2	L2 Long structure	H	W	H1	W1	T	WT (RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	mm	N. m	Kg
2	50	451	454	279	451	535	350	—	—	288	60
2-1/2	65	508	514	330	508	563	350	—	—	420	100
3	80	578	584	368	578	680	350	910	310	594	110
4	100	673	683	457	673	742	550	1000	460	1000	200
6	150	914	927	610	914	—	—	1140	460	1530	530
8	200	1022	1038	762	1022	—	—	1380	600	2200	750
10	250	1270	1292	914	1270	—	—	1670	600	3400	1610
12	300	1422	1445	1041	1422	—	—	1995	600	4600	3010
14	350	—	—	1118	—	—	—	2291	600	6200	3410
16	400	—	—	1245	—	—	—	2470	600	7500	4210



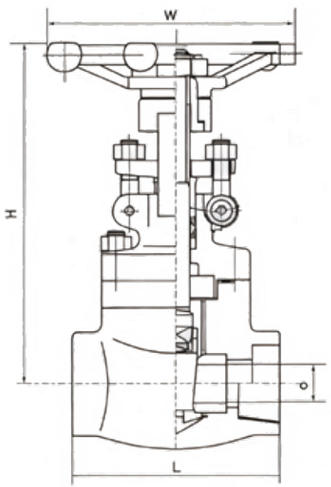
Forged Steel Threaded, Socket Weld Gate Valve



Main Dimension and Weight

CLASS 150~800

Size				L (mm)	W (mm)	H Open (mm)	WT(Kg)	
inch		mm						
Reduced bore	Full bore	Reduced bore	Full bore				Reduced bore	Full bore
1/4	—	8	—	79	100	166	2.2	—
3/8	1/4	10	—	79	100	166	2.2	2.2
1/2	3/8	15	10	79	100	166	2.2	2.2
3/4	1/2	20	15	92	100	169	2.2	2.2
1	3/4	25	20	111	125	193	4.7	4.3
1-1/4	1	32	25	120	160	236	5.9	5.9
1-1/2	1-1/4	40	32	120	160	146	6.9	6.9
2	1-1/2	50	40	140	180	283	11.1	11.1
—	2	—	50	178	200	330	—	15.2



CLASS 900~1500

Size		Class rating	L (mm)	W (mm)	H Open (mm)	WT(Kg)	
inch	mm					B.B	W.B
1/4	8	900	79	100	166	2.2	—
		1500	111	125	197	4.6	4.7
3/8	10	900	79	100	166	2.2	—
		1500	111	125	197	4.3	4.4
1/2	15	900	92	100	169	2.2	—
		1500	111	125	197	4.2	4.3
3/4	20	900	111	125	193	4.3	—
		1500	111	125	197	4.0	4.2
1	25	900	120	160	230	5.9	—
		1500	120	160	218	6.3	6.6
1-1/4	32	900	120	160	246	6.9	—
		1500	120	160	237	8.7	8.8
1-1/2	40	900	140	180	283	11.1	—
		1500	140	180	274	12.1	12.5
2	50	900	178	200	330	15.2	—
		1500	178	200	320	17.2	17.2

B. B-bolted valve bonnet W.B-welded valve bonnet

Forged steel flange, butt weld gate valve

Main Dimension and Weight

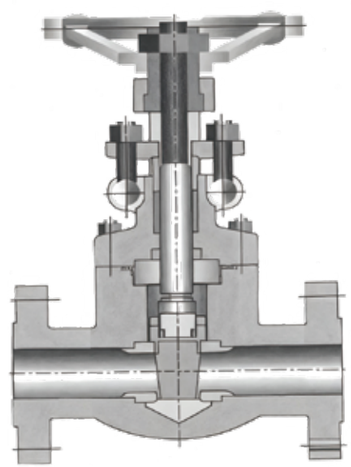
CLASS 150~600

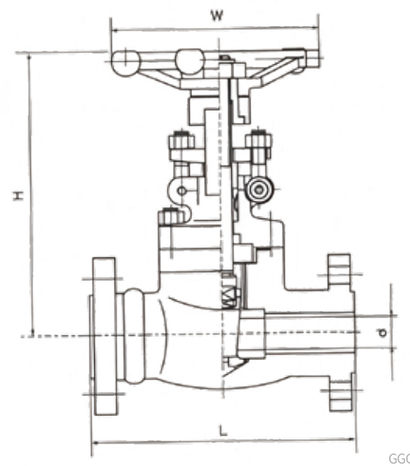
Size		Class rating	L (mm)	L1 (mm)	L2 (mm)	HOpen(mm)		W(mm)		WT(Kg)	
inch	mm					Reduced Bore	Full Bore	Reduced Bore	Full Bore	Reduced Bore	Full Bore
1/2	15	150	108	119	108	169	169	100	100	4.5	5
		300	140	151	140					4.8	5.2
		600	165	163.5	165					5.9	5.9
3/4	20	150	117	130	117	169	193	100	125	5.2	6.1
		300	152	165	152					6.2	6.3
		600	190	190	190					7.4	7.5
1	25	150	127	140	127	193	230	125	160	8.2	8.4
		300	165	178	165					9.3	8.6
		600	216	216	216					10.4	10.2
1-1/4	32	150	140	153	138	230	246	160	160	11.5	14.3
		300	178	191	178					14	14.5
		600	229	229	229					16.2	16.7
1-1/2	40	150	165	178	165	246	283	160	180	12.5	15.4
		300	190	203	191					15.5	15.6
		600	241	241	241					17.5	17.4
2	50	150	178	191	178	283	330	180	200	20.3	22.7
		300	216	232	216					23.4	22.8
		600	292	295	292					28.3	28.7

CLASS 900~1500

Size		L	L1	L2	H Open	W	WT(Kg)	
inch	mm	(mm)	(mm)	(mm)	(mm)	(mm)	B. B	W. B
1/2	15	216	216	216	197	125	6.9	7.2
3/4	20	229	229	224	197	125	11.2	11.5
1	25	254	254	254	224	160	12.8	15.6
1-1/4	32	279	279	279	237	160	16	16.2
1-1/2	40	305	305	305	276	180	21	22.6
2	50	368	371	368	320	200	27.1	28.2

B. B-bolted valve bonnet W.B-welded valve bonnet

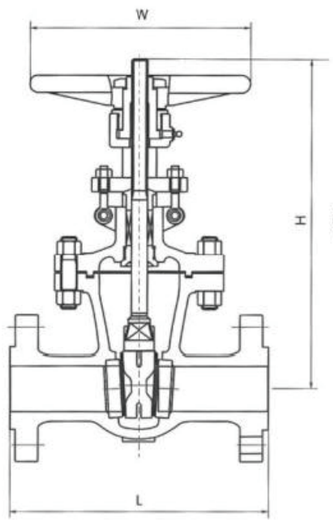


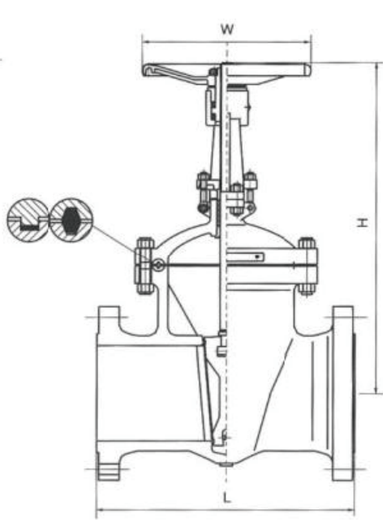


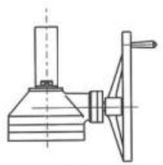
DIN Cast Steel Gate Valve

Main Dimension and Weight

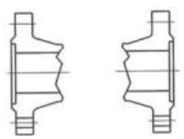
PN16 PN25						PN40					PN64 PN100							
Size	L	H	W	WT (PN16)	WT (PN25)	Size	L	H	W	WT	Size	L	H (PN64)	W (PN64)	H (PN100)	W (PN100)	WT (PN64)	WT (PN100)
mm	mm	mm	mm	Kg	Kg	mm	mm	mm	mm	Kg	mm	mm	mm	mm	mm	mm	Kg	Kg
50	**250**	358	240	24	25	50	250	370	280	25	50	250	470	280	490	360	37	50
65	**270**	373	240	26	28	65	280	394	280	38	65	280	496	320	540	400	53	62
80	**280**	435	280	40	40	80	310	455	300	48	80	310	558	320	572	400	67	80
100	**300**	500	300	50	50	100	350	550	320	67	100	350	653	350	680	400	90	100
125	**325**	614	320	66	75	125	400	636	400	101	125	400	738	400	744	560	140	160
150	**350**	674	360	90	105	150	450	706	400	135	150	450	820	400	830	560	192	220
200	**400**	818	400	140	170	200	550	859	460	213	200	550	980	460	1000	560	318	350
250	**450**	969	460	200	216	250	650	1016	560	375	250	650	1050	560	1080	600	470	520
300	**500**	1145	560	280	290	300	750	1200	640	500	300	750	1370	640	1208	640	670	730
350	**550**	1280	640	411	445	350	850	1340	640	700	350	850	1450	720	1490	720	875	955
400	**600**	1452	640	560	685	400	950	1495	720	1100	400	950	1620	800	—	—	1450	—
450	**650**	1541	720	870	940	450	1050	1581	800	1610	500	1150	2000	950	—	—	1850	—
500	**700**	1676	720	1000	1200	500	1150	1710	800	1880	600	1350	—	—	—	—	—	—
600	**800**	1874	800	1200	1350	600	1350	2035	950	3100								
700	**900**	2083	800	1600	2000													
800	**1000**	2400	920	2100	3000													
900	**1100**	2950	920	3115	4100													
1000	**1200**	3245	920	4200	5080													



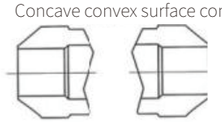




DN350 and above are standard equipped.
DN150-300 can be chosen



Concave convex surface connection



Butt welding connection

With Bypass Non-rising Stem Gate Valve

Buried Extended Stem Gate Valve

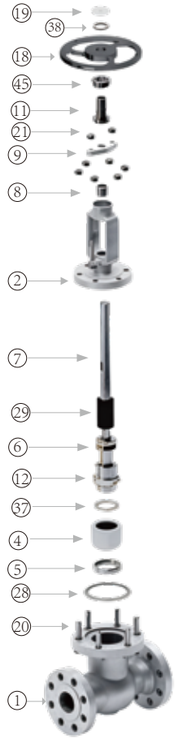
ANSI Standard Gate Valve

Globe Valves Series

2" - 28" DN15-DN800
Class 150- Class 2500 PN16-PN160

All globe valves operate on the "port - closure" principle.
The globe valve is designed with a "port - closure" mechanism, which means that the fluid passes through a specific opening (different from the general flow passage in a gate valve). The control of the fluid is achieved by a disc or plug installed on the valve stem within this area.

Although globe valves lack the straight - through and unobstructed flow passage design of gate valves, they have two significant advantages: regulation performance and suitability for high - frequency use.
Regulation Performance: Globe valves is superior for the regulation function because it allows the fluid to flow out evenly around the perimeter of the valve seat, rather than "cutting" the fluid through a narrow area to restrict the flow rate like gate valves.
Suitability for High - Frequency Use: This design is suitable for working conditions with frequent operations and offers better durability and reliability.



Item	Description	Carbon Steel	Carbon Steel (Low Temp.)	Alloy Steel	Stainless Steel
1	Body	A 216 Gr. WCB	A 352 Gr. LCB	A 217 Gr.C5	A 351 Gr. CF8M
2	Bonnet	A 216 Gr. WCB	A 352 Gr. LCB	A 217 Gr.C5	A 351 Gr. CF8M
4	Disc	A105 + ER 410	A 182 Gr. F304	A 217 Gr. C5 + ER 410	A 351 Gr. CF8M
5	Seat Ring	A105 + Stellite	A 182 Gr. F304	A182 Gr. F6a + Stellite	–
6	Backseat	A182 Gr. F6a	A 182 Gr. F304	A182 Gr. F6a	–
7	Stem	A182 Gr. F6a	A 182 Gr. F304	A182 Gr. F6a	A 182 Gr. F316
8	Gland	A 105	A 105	A182 Gr. F6a	A 182 Gr. F316
9	Gland Flange	A 105	A 105	A 105	A 182 Gr. F304
11	Stem Nut	B 148 /A 439 Gr. D2	B 148 /A 439 Gr. D2	B 148/A 439 Gr. D2	B 148/ A 439 Gr. D2
12	Disc Nut	A 182 Gr. F6a	A 182 Gr. F304	A 182 Gr. F6a	A 182 Gr. F316
18	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
19	Handwheel Nut	Steel	Steel	Steel	Steel
20	Bonnet Bolt & Nut	A 193 Gr.B7 /A 194 Gr.2H	A320 Gr. L7/A194 Gr. 7	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H(1)
21	Eye Bolt & Nut	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H
28	Gasket (Class 150)	SS304/ GraphiteSpw	HSS304 / Graphite	SS304 /Graphite	SS316/Graphite
28	Gasket (Class 300)	SS304 / GraphiteSpw	Spw SS304 / Graphite	Spw SS304 / Graphite	Spw SS316/Graphite
28	Gasket (Class 600)	SS304 / Graphite	Spw SS304 / Grahite	Spw SS304 / Graphite	Spw SS316/Graphite
28	Gasket (Class 900)	RJ SS304	RJ SS304	RJSS304	RJ SS316
28	Gasket (Class 1500)	RJ SS304	RJSS304	RJSS304	RJ SS316
28	Gasket (Class 2500)	RJ SS304	RJ SS304	RJ SS304	RJ SS316
29	Stem Packing	Graphite	Graphite	Graphite	Graphite
37	Thrust Washer	A 182 Gr. F6a	A 182 Gr. F304	A 182 Gr. F6a	A 182 Gr. F316
38	Washer	Steel	Steel	Steel	Steel
42	Grub Screw	A 193 Gr. B7	A 193 Gr. B7	A 193 Gr. B7	A 193 Gr. B7
45	Lock Nut	Steel	Steel	A 182 Gr. F6a	A 182 Gr. F316

Excellent Regulation Performance The stroke between the disc and seat allows precise flow control, suitable for throttling and regulation.
Superior Sealing Soft seals achieve zero leakage (e.g PTFE seals), while hard seals withstand high temperatures and pressures.
Easy Maintenance The cover is removable and the disc and seat are easy to replace or grind.
High-Pressure Resistance High structural strength,suitable for high-pressure systems (e.g boiler feed water valves, power station valves).
Petrochemical Industry Used to regulates flow of oils and chemicals (Oil refinery, chemical plant).
Power Sector Boiler feed water systems, steam pipelines (high-temperature, high-pressure globe valves).
Pharmaceutical/Food Industry Sanitary-grade globe valves (316L material, quick-install clamp connections).
Refrigeration Systems Ammonia and Freon globe valves (low-temperature sealing design).

Stem
The valve stem of the Newton(VMV) globe valve is manufactured by integral forging, with ASME threads. It is machined and smoothed to reduce friction.

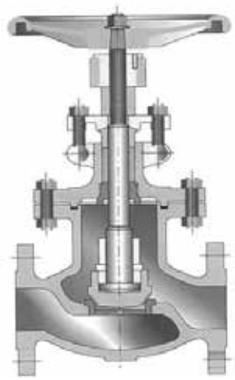
Body&Bonnet Gasket
The design of the body&bonnet gasket varies depending on the pressure class of the valve:
· 150LB to 600LB
A circular pad connection is used, and graphite or spiral - wound gaskets are used as sealing materials.
· 900LB and above
A ring - joint connection is used.

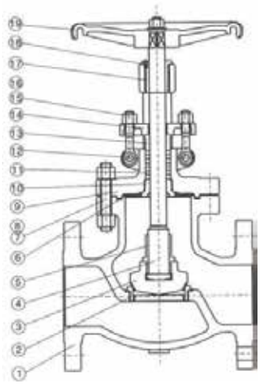
Pressure-Sealed Design
Sealing is achieved by the internal pressure of the pipeline acting on the sealing gasket. The most commonly sealing material is high-purity graphite, which is located between the valve body and the valve body fixing ring.

Valve Body and Bonnet
The valve body and bonnet are made of high-quality castings and then precision-machined, with an emphasis on avoiding stress concentration.
The bonnet can be either one-piece (with an integrally formed bracket) or two-piece depending on the valve size. This design ensures perfect alignment with the valve body, enabling precise opening and closing.

The valve body design of the globe valve takes into account the same characteristics as the gate valve. In larger valve sizes or high-pressure working conditions, the disc is guided to reduce vibration and improve sealing performance.

Cast Steel Globe Valve





Part Name

1	Body	11	Packing
2	Seat	12	Pin
3	Disc	13	Packing Gland
4	Stem	14	Packing Plate
5	Disc Cover	15	Slipknot Screw
6	Gasket	16	Nut
7	Nut	17	Stem Nut
8	Bolt	18	Screw
9	Bonnet	19	Handwheel
10	Back Seat		

ANSI Standard Pressure Testing (MPa)(Body WCB)

Pressure (Class)	Back Seal test	Shell Strength Testing	High Pressure Sealing Testing	Low Pressure Sealing Testing
150	2.2	3.0	2.2	0.6
300	5.6	7.7	5.6	
600	11.2	15.3	11.2	
900	16.8	23	16.8	
1500	28.1	38.3	28.1	

DIN Standard Pressure Testing (MPa)(Body WCB)

Nominal Pressure	Back Seal test	Shell Strength Testing	High Pressure Sealing Testing	Low Pressure Sealing Testing
1.6	1.76	2.4	1.76	0.6
2.5	2.75	3.75	2.75	
4.0	4.4	6.0	4.4	
6.4	7.04	9.6	7.04	
10.0	11.0	15.0	11.0	

Main Part Materials

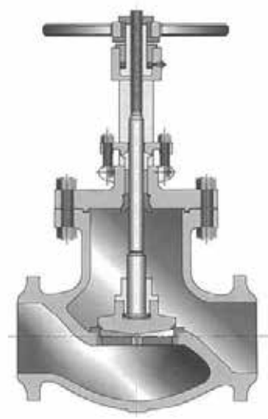
Part Name	Carbon Steel		Alloy Steel			Stainless Steel				
Body	A216 WCB	A352 LCB	A217 WC6	A217WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Bonnet	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Stem	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	F51
Bolt	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
Nut	A194 2H	A194 7	A194 7	A194 7	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M
Back Seat	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	F51
Packing Gland	A276 410	A276 304	A278 304	A276 304	A276 304	A276 304	A276 316	A276 304	A276 316	F51
Packing Plate	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN

Note: 1. All parts of the valve are made of materials that comply with ASTM standards;
2. The above is the VMV standard configuration. If the customer has special requirements, VMV can select materials according to their working conditions.

Cast Steel Globe Valve

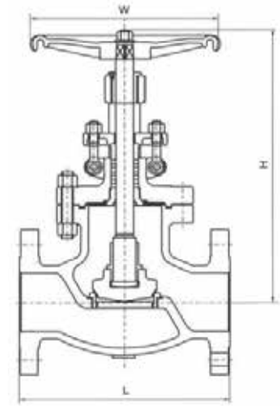
CLASS 150

Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2-1/2	65	216	229	216	362	250	—	—	50	29
3	80	241	254	241	385	280	—	—	72	34
4	100	292	305	292	450	320	—	—	115	54
5	125	356	369	356	475	320	—	—	170	72
6	150	406	419	406	537	400	—	—	225	93
8	200	495	508	495	*707	*450	760	310	427	185
10	250	622	635	622	*788	*560	997	460	671	268
12	300	698	711	698	*875	*560	1047	460	1127	400
14	350	787	800	787	—	—	1400	600	1324	650
16	400	914	927	914	—	—	1698	600	1750	1113



CLASS 300

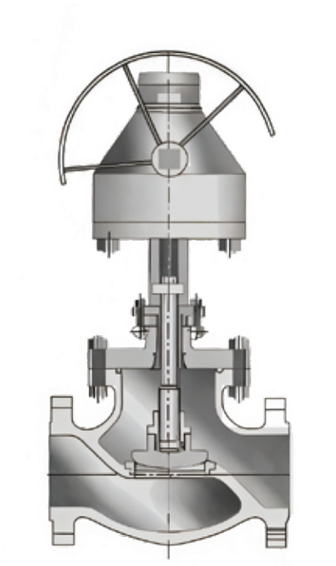
Size		L	L1	L2	H	W	H1	W1	T(RF)	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	267	283	267	345	220	—	—	52	28
2-1/2	65	292	308	292	377	250	—	—	90	36
3	80	318	334	318	405	280	—	—	137	50
4	100	356	372	356	470	320	—	—	236	75
5	125	400	416	400	620	450	—	—	390	140
6	150	444	460	444	*708	*405	836	460	556	200
8	200	559	575	559	*777	*500	814	460	1003	287
10	250	622	638	622	*935	*560	1006	460	1962	510
12	300	711	727	711	*1058	*600	1320	600	3465	720



CLASS 600

Size		L	L1	L2	H	W	H1	W1	T(RF)	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	292	295	292	*408	*280	—	—	135	32
2-1/2	65	330	333	330	*458	*320	—	—	230	45
3	80	356	359	356	*568	*350	—	—	306	62
4	100	432	435	432	*685	*450	770	460	578	139
6	150	559	562	559	*901	*560	1027	460	1427	342
8	200	660	663	660	*913	*600	1086	460	2457	483
10	250	787	790	787	*1160	*700	1380	600	4608	870
12	300	838	841	838	*1227	*760	1663	600	8420	1067

Cast Steel Globe Valve

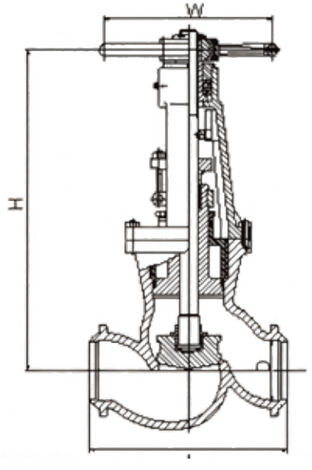


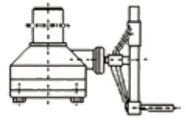
CLASS 900

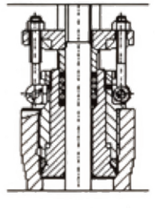
Size		L	L1	L2	H	W	H1	W1	T	WT(RF)
inch	mm	mm	mm	mm	mm	mm	mm	mm	N.m	Kg
2	50	368	371	368	*535	*350	—	—	153	58
2-1/2	65	419	422	419	*630	*400	—	—	250	92
3	80	381	384	381	*675	*350	875	460	315	144
4	100	457	460	457	*780	*500	820	460	673	225
6	150	610	613	610	*936	*600	1003	460	1787	502
8	200	737	740	737	*1051	*700	1257	600	3557	720

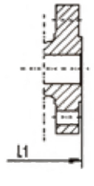
CLASS 1500

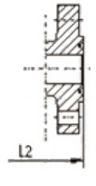
NPS	IN	2"	2-1/2"	3"	4"	6"	8"	10"	14"
DN	MM	50	65	80	100	150	200	250	350
L-L1	IN	14.5	16.5	18.5	21.5	27.75	32.75	39	49.5
(RF-BW)	MM	368	419	470	546	705	832	991	1257
L2 (RTJ)	IN	14.62	16.62	18.62	21.62	28	33.13	3938	50.25
	MM	371	422	473	549	711	842	1000	1276
W	IN	14	14	20	22	24	24	3938	47.25
	MM	350	350	500	560	610	610	1000	1200
H	IN	24.4	25.2	32.9	33.7	48.4	70.9	78.78	106
	MM	619	641	835	857	1230	1800	2000	2692
WT (FF)	KG	84	116	143	236	918	1764	2680	4300
WT(BW)	KG	58	62	128	168	781	1502	2280	3600







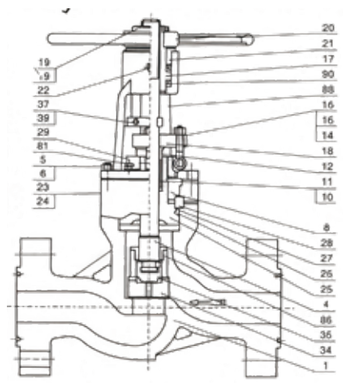




Pressure Self-Sealing Globe Valve

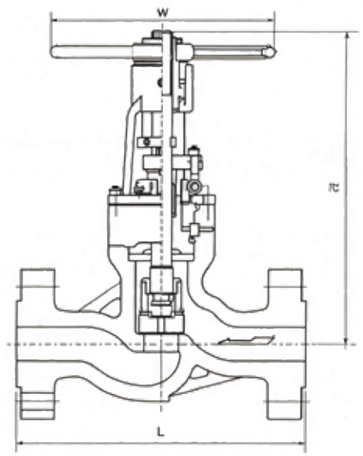
List of Typical Parts Materials

Item	WCB	WC6	WC9	CF8	CF3M	CE3MN
1	A216 WCB	WC6	WC9	CF8	CF3M	CE3MN
4	A182 F6a	A182 F6a	A182 F6a	A182 F304	F316L	F53
5	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8M	A194 B8M
6	A1942H	A1944	A1944	A1948	A1948M	A1938M
8	A105	F11	F22	A182 F304	A182 F316L	A182 F53
10	Flexible graphite					
11	A182 F6a	A182 F6a	A182 F6a	A182 F304	F316L	F53
12	A182 F6a	A182 F6a	A182 F6a	A182 F304	F316L	F53
13	A216 WCB	A2166	A2169	A182 CF8	A182 CF3M	A182 CE3MN
14	A193 B7	A193 B16	A193 B16	A193 B8	Flexible graphite	ble graphite
15	A1942H	A1947	A1947	A1948	A1948M	A1948M
16	1035	1035	1035	304	304	304
17	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2
18	1035	1035	1035	1035	1035	1035
19	SS	SS	SS	SS	SS	SS
20	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB
21	1035	1035	1035	SS	SS	SS
22	Finished Product					
23	304	304	304	304	304	304
24	304	304	304	304	304	304
25	A216 WCB	A216 WC6	A216 WC9	CF8	CF3M	CE3MN
26	Flexible graphite					
27	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F316L	A182 F53
28	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316L	A182 F53
29	A216 WCB	A216 WCB	A216 WCB	CF8	CF8	CF8
30	40Cr	40Cr	40Cr	40Cr	40Cr	40Cr
31	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8
33	A216 WCB	A216 WC6	A216WC6	CF8	CF3M	CF3MN
34	A105	A182 F11	A182 F22	A182 F304	A182 F316L	A182 F53
35	A105	A182 F11	A182 F22	A182 F304	A182 F316L	A182 F53
36	1035	F11	F22	A182 F304	A182 F316L	A182 F53
37	1035	1035	1035	SS	SS	SS
38	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8M



Note：The spacer rings are installed when required by the customer.

Pressure Self-Sealing Globe Valve

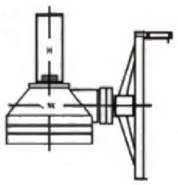


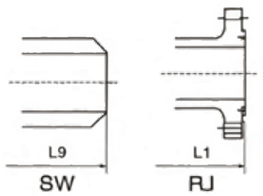
CLASS 900

Specification (NPS)		Structure Length (mm)		Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)	Weight (Kg)
in	L	L2	L1	H	W		
2	368	216	371	590	350	41	68
2-1/2	419	254	422	650	350	41	68
3	381	305	384	697	350	41	68
4	457	356	460	768	500	90	124
6	610	508	613	825	460	261	346
8	737	660	740	990	460	437	600
10	838	787	841	1186	460	727	929
12	965	914	968	1320	460	1030	1324
14	1029	991	1039	1524	914	1534	2009

CLASS 1500

Specification (NPS)		Structure Length (mm)		Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)	Weight (Kg)
in	L	L1	L2	H	W		
2	368	371	216	590	350	47	75
2-1/2	419	422	254	680	406	47	75
3	470	473	305	778	450	79	115
4	546	549	406	685	460	151	208
6	705	711	559	933	711	367	503
8	832	842	711	1193	914	626	852
10	991	1001	864	1270	600	1163	1533
12	1130	1146	991	1447	600	1835	2390





CLASS 2500

Specification (NPS)		Structure Length (mm)		Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)	Weight (Kg)
in	L	L1	L2	H	W		
2	451	454	279	760	450	74	117
2-1/2	508	524	330	495	406	74	117
3	578	584	368	603	460	114	195
4	673	683	457	685	460	140	260
6	914	927	610	971	460	459	770
8	1022	1038	762	1200	914	767	1238
10	1270	1292	914	1416	1066	1320	2222
12	1422	1444	1041	1524	1066	1905	3310

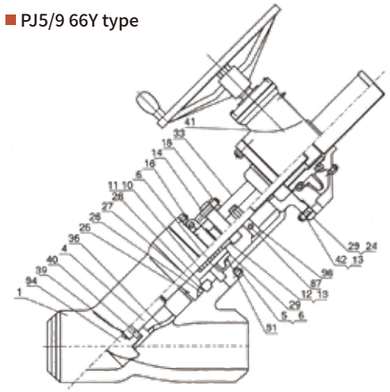
Y type Pressure Self-Sealing Globe Valve

List of Typical Parts Materials

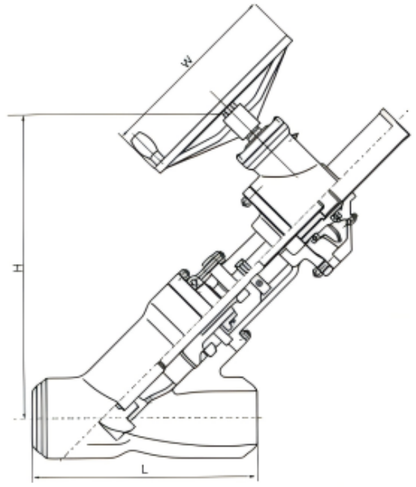
Item	WCB	C5	WC6	CF8	CF8M
1	A216 WCB	A217 C5	A217WC6	A351 CF8	A351 CF8M
4	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316
5	A193 B7	A19316	A19316	A193 B8	A193 B8M
6	A194 2H	A194 7	A194 7	A194 8	A194 8M
8	A105	A182 F5	A182 F11	A182 F304	A182 F316
10	Gasket				
11	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F316
12	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F316
13	A216 WCB	C5	WC6	A351 CF8	A351 CF8M
14	A193 B7	A19316	A19316	A193 B8	A193 B8M
15	A194 2H	A194 7	A194 7	A194 8	A194 8M
16	1035	1035	1035	304	304
23	304	304	304	304	304
24	304	304	304	304	304
25	A105	A182 F5	A182 F11	A182 F304	A182 F316
26	304+Flexible graphite				
27	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F316
28	A182 F6a	A182 F5	A182 F11	A182 F304	A182 F316
29	A216 WCB	A216 C5	A216 WC6	A351 CF8	A351 CF8M
31	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8M
33	A216 WCB	C5	A216 WC6	A351 CF8	A351 CF8M
34	A105	A182 F5	A182 F11	A182 F304	A182 F316
36	A105	F5	F11	F304	F316
37	1035	1035	1035	1035	1035
38	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8M
39	A105+STL	F5+STL	F11+STL	304+STL	316+STL
40	410	410	410	304	316
41	Finished Product				
42	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8M
43	A194 2H	A194 7	A194 7	A194 8	A194 8M

Note：The spacer rings are installed when required by the customer.

■ PJ5/9 66Y type



Y type Pressure Self-Sealing Globe Valve



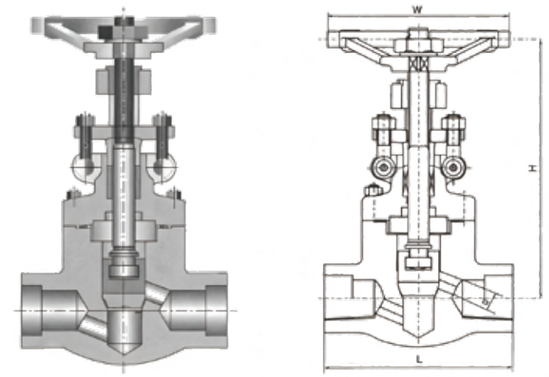
CLASS 600

Specification (NPS)	Structure Length(mm)	Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)	Specification (NPS)	Structure Length(mm)	Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)
in	L	H	W		in	L	H	W	
6-8	584	684	711	372	10x8x10	584	684	711	408
10	711	899	914	830	12x10x12	711	899	914	918
12	813	1157	1219	1161	14x12x14	813	1157	1219	1281
14	813	1157	1219	1161	16x14x16	813	1157	1219	1281
16	1041	1965	1219	2527	18x16x18	1041	1965	1219	2778

CLASS 900

Specification (NPS)	Structure Length(mm)	Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)	Specification (NPS)	Structure Length(mm)	Centre-height (mm)	Handwheel Diameter(mm)	Weight (Kg)
in	L	H	W		in	L	H	W	
6	705	1028	711	367	8x6x8	705	1028	711	367
8	762	1356	711	709	10x8x10	762	1356	711	675
10	921	1615	914	1318	12x10x12	921	1615	914	1305
12	1041	1977	1219	1795	14x12x14	1041	1977	1219	1845
14	1092	1977	1219	1795	16x14x16	1092	1977	1219	1845
16	1372	2276	1219	3495	18x16x18	1372	2276	1219	3600
18	1600	2492	1829	3550	20x18x20	1600	2492	1829	3600
20	1384	2819	1829	4446	22x20x22	1384	2819	1829	5850

Forged Steel Threaded, Socket Welded Globe valve



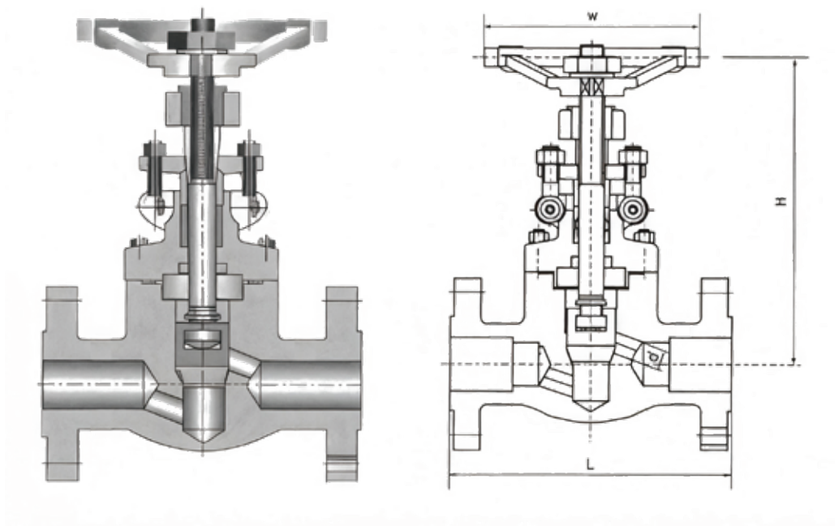
CLASS 150~800

Size				L (mm)	W (mm)	H Open (mm)	Weight(Kg)	
inch		mm						
ReducedBore	Full Bore	Reduced Bore	Full Bore				Reduced Bore	Full Bore
1/4		8		79	100	153	1.9	
3/8	1/4	10	8	79	100	153	1.9	2.1
1/2	3/8	15	10	79	100	158	1.9	2.1
3/4	1/2	20	15	92	100	192	2.1	2.3
1	3/4	25	20	111	125	252	3.3	3.6
1-1/4	1	32	25	120	160	252	7.5	7.8
1-1/2	1-1/4	40	32	152	160	289	7.5	8.2
2	1-1/2	50	40	172	180	330	11.4	12.0
	2		50	200	240	370		150

CLASS 900~1500

Size				L (mm)	W (mm)	H Open (mm)	Weight(Kg)	
inch		mm						
Reduced Bore	Full Bore	Reduced Bore	Full Bore				Reduced Bore	Full Bore
1/4		8		111	100	207	2.0	
3/8	1/4	10	8	111	100	207	2.2	2.0
1/2	3/8	15	10	111	100	207	2.4	2.2
3/4	1/2	20	15	111	100	207	3.8	2.4
1	3/4	25	20	130	125	240	4.2	3.8
1-1/4	1	32	25	152	160	258	8.0	4.2
1-1/2	1-1/4	40	32	172	160	290	13.2	8.0
2	1-1/2	50	40	220	180	337	16.8	13.2
	2		50	235	200	354		16.8

Forged Steel Globe Valve With Integral Flange



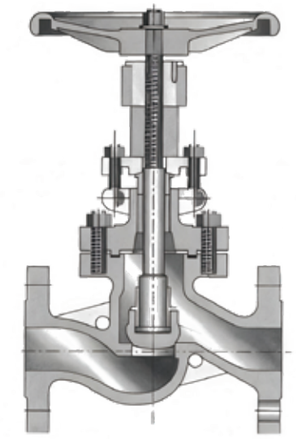
CLASS 150~600

Size		Pressure	L	L1	H Open(mm)		W(mm)		WT(Kg)	
inch	mm	LB	(mm)	(mm)	Reduced Bore	Full Bore	Reduced Bore	Full Bore	Reduced Bore	Full Bore
1/2	15	150	108	108	158	163	100	100	4.5	6.9
		300	152	152					4.8	7.7
		600	165	165					5.6	7.8
3/4	20	150	117	117	163	193	100	125	6.9	9.8
		300	178	178					7.7	11.3
		600	190	190					7.8	12.5
1	25	150	127	127	193	250	125	160	9.8	13.5
		300	203	203					11.1	16.8
		600	216	216					12.5	17.5
1-1/4	32	150	140	140	250	250	160	160	13.5	19.5
		300	216	216					16.8	21.2
		600	229	229					17.0	23.5
1-1/2	40	150	165	165	250	291	160	180	19.5	28.5
		300	229	229					21.2	32.6
		600	241	241					23.5	38.5
2	50	150	203	203	291	312	180	200	28.0	30.3
		300	267	267					32.6	35.0
		600	292	292					38.8	42.2

DIN Cast Steel Globe Valve

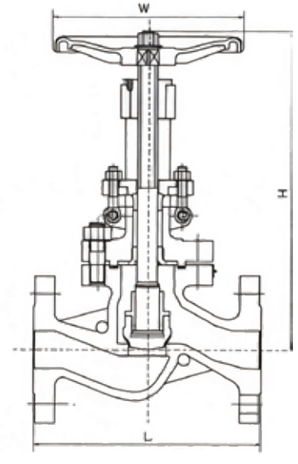
Main Size & Weight

PN16 PN25						PN40				
Size	L	H	W	WT (PN16)	WT (PN25)	Size	L	H	W	WT
mm	mm	mm	mm	Kg	Kg	mm	mm	mm	mm	Kg
50	230	350	240	18	20	50	230	373	20	2
65	290	370	280	24	26	65	290	408	280	33
80	310	400	280	30	36	80	310	436	280	43
100	350	415	320	40	50	100	350	480	320	59
125	400	460	360	62	88	125	400	588	360	91
150	480	510	400	106	118	150	480	611	400	122
200	600	710	400	130	170	200	600	720	400	195
250	730	786	450	261	290					
300	850	925	500	380	420					



PN64 PN100							
Size	L	H (PN64)	W (PN64)	H (PN100)	W (PN100)	WT (PN64)	WT (PN100)
mm	mm	mm	mm	mm	mm	Kg	Kg
50	300	410	280	425	30	35	38
65	340	450	320	465	320	52	58
80	380	485	360	485	400	63	69
100	430	537	400	548	400	84	93
125	50	631	40	645	450	150	165
150	550	646	450	650	450	210	225
200	650	813	500	820	500	313	370

Note:Larger sizes can be customized.



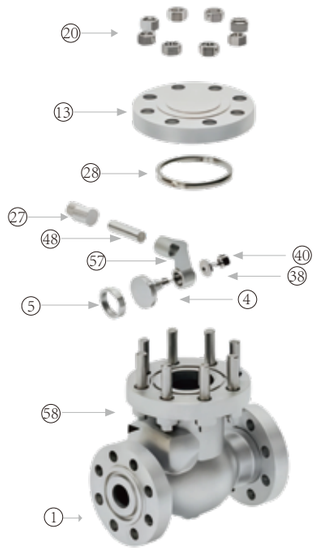
Check Valve Series

2" - 36" DN15-DN800
Class 150 - Class 2500 PN16-PN100

The main function of check valve is to control fluid flow in one direction while preventing reverse flow. Check valve is self-actuated and designed to prevent fluid from flowing back into the system.

Main application:
- Prevent fluid from flowing back into the Pipeline.
- Prevent fluid from flowing back into the pump

Working Principle:
- When the fluid flows, it pushes the valve disc or valve ball to move in one direction, thereby opening the valve.



Item	Description	Carbon Steel	Carbon Steel (Low Temp.)	Alloy Steel	Stainless Steel
1	Body	A 216 Gr. WCB	A 352 Gr. LCB	A 217 Gr. C5	A 351 Gr. CF8M
4	Disc	A105 + ER 410	A 182 Gr. F304	A 182 Gr. F6a	A 182 Gr.F316
5	Seat Ring	A105 + Stellite	A 182 Gr. F304	A 182 Gr. F6a + Stellite	–
13	Cover	A 216 Gr.WCB /A 515 Gr.70	A 352 GrLCB/A 182 Gr.F304	A 217 Gr. C5	A 351 Gr. CF8M
20	Cover Bolt & Nut	A 193 Gr.B7 /A 194 Gr.2H	A 320 Gr.L7 /A 194 Gr.7	A 193 Gr.B7 /A 194 Gr.2H	A 193 Gr.B7 /A 194 Gr.2H(1)
27	Bracket Stud & Nut	A 193 Gr.B8 / A 194 Gr.8	A 193 Gr.B8 /A 194 Gr.8	A 193 Gr.B8 / A 194 Gr.8	A 193 Gr.B8M /A 194 Gr.8M
28	Gasket	SPW S.S.304 / Graphite	SPW S.S.304 /Graphite	SPW S.S.304 / Graphite	SPW S.S.316 /Graphite
38	Washer	AISI 410	AISI 304	AISI 410	AISI 316
40	Disc Nut	AISI 304	AISI 304	AISI 304	AISI 316
48	Hinge Pin *	A182 Gr. F6a	A182 Gr. F304	A182 Gr. F6a	A 182 Gr. F316
50	Split Pin	AISI 304	AISI 304	AISI 304	AISI 316
57	Hinge	A 216 Gr.WCB /A 515 Gr.70	A 352 Gr. LCB	A 217 Gr. C5	A 351 Gr. CF8M
58	Hinge Bracket	A 216 Gr.WCB /A 515 Gr.70	A 352 Gr. LCB	A 217 Gr. C5	A 351 Gr. CF8M

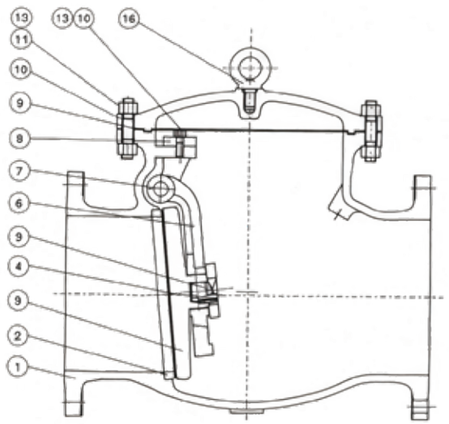
Automatic opening and closing: It opens by the pressure of the medium and closes automatically when there is reverse flow.
Prevent backflow: Avoid damage to pumps, compressors and other equipment due to medium backflow.
Simple structure: No actuator, easy to maintenance.
Various types available: Suitable for different working conditions (such as horizontal/vertical installation, high/low flow rate).

Pump outlet: To prevent water from flowing back when the pump stops and protect the pump impeller.
Compressed air system: Prevent equipment failure caused by the backflow of compressed air.
Petrochemical pipelines: Prevent medium mixing (such as the feeding system of reactor).
Boiler feed water system: High-temperature and high-pressure check valve (such as for power stations).

Body and Bonnet Gaskets
The design of the body and bonnet gaskets varies depending on the pressure rating:
150 to 600 LB: using round gasket connections, graphite or spiral wound gaskets as sealing materials.
900LB and above: using ring-shaped connection gaskets.
Pressure-sealed design.
The seal is achieved by using the internal pressure of the pipeline to act on the gasket. The most commonly used sealing material is high-purity graphite, which is located between the valve body and the valve body retaining ring.

Body and Bonnet
The valve body and bonnet are made of high-quality castings and then precision machined to avoid stress concentration.

Cast steel swing check valve



Main Parts

1	Body	11	Nut
2	Seat	12	Stud
3	Disc	13	Bolt
4	Screws	14	Spring washer
5	Valve disc cover	15	Lifting ring
6	Swing arm		
7	Pin		
8	Pivot pin		
9	Gasket		
10	Upper seal seat		

ANSI Standard Pressure Test (MPa) Material:WCB

Pressure (Class)	Shell Strength Test	High Pressure Seal Test	Low Pressure Seal Test
150	3.0	2.2	0.6
300	7.7	5.6	
600	15.3	11.2	
900	23.0	16.8	
1500	38.3	28.1	
2500	63.8	46.8	

DIN Standard Pressure Test (MPa) Material:GS-C25

Nominal Pressure	Shell Strength Test	High Pressure Seal Test	Low Pressure Seal Test
1.6	2.4	1.76	0.6
2.5	3.75	2.75	
4.0	6.0	4.4	
6.4	9.6	7.04	
10.0	15.0	11.0	

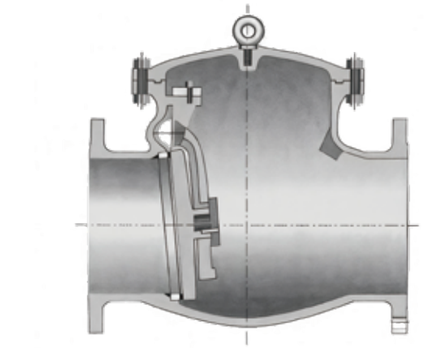
Material	Cast Steel		Alloy Steel			Stainless Steel				
Body	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3 MN
Bonnet	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Disc	A105	LF2	F11	F22	F5	A182 F304	F316	F304L	F316L	F51
Pin	A270 410	A276 410	A276 410	A270 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	F51
Forked Member	A216 WCB	A352 LCB	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	CD3MN
Stud	A193 B7	A320 L7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
Nut	A194 2H	A194 7	A194 7	A194 7	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M

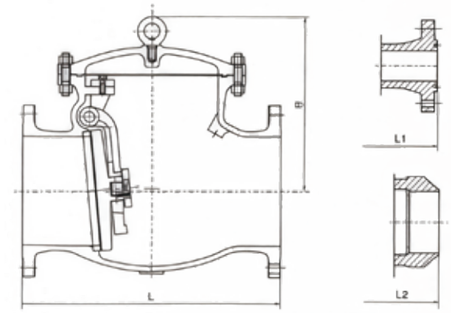
Cast steel swing check valve

Main Dimensions and Weight

CLASS 150

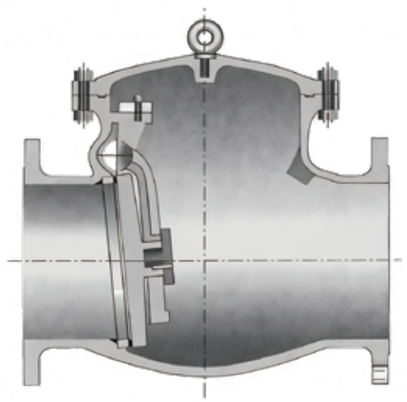
Size		L	L1	L2	H	WT(RF)
inch	mm	mm	mm	mm	mm	Kg
2	50	203	216	203	150	17
2-1/2	65	216	229	216	160	20
3	80	241	254	241	190	25
4	100	292	305	292	259	40
5	125	330	343	330	277	67
6	150	356	369	356	304	93
8	200	495	508	495	375	134
10	250	622	635	622	417	199
12	300	698	711	698	478	305
14	350	787	800	787	540	370
16	400	864	877	864	620	542
18	450	978	991	978	690	750
20	500	978	991	978	720	900
24	600	1295	1308	1295	871	1200
30	750	1524		1524	1005	2190

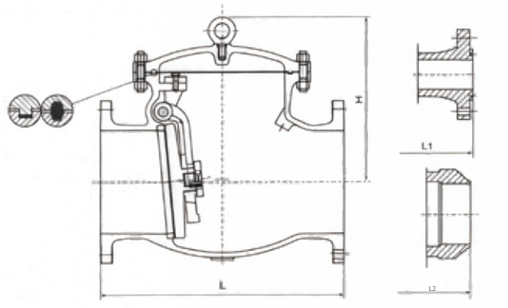




CLASS 300							CLASS 600						
Size		L	L1	L2	H	WT(RF)	Size		L	L1	L2	H	WT(RF)
inch	mm	mm	mm	mm	mm	Kg	inch	mm	mm	mm	mm	mm	Kg
2	50	267	283	267	175	23	2	50	292	295	292	185	28
2-1/2	65	292	308	292	225	37	2-1/2	65	330	333	330	227	32
3	80	318	334	318	230	46	3	80	356	359	356	235	49
4	100	356	372	356	265	71	4	100	432	435	432	297	86
5	125	400	416	400	305	100	5	125	508	511	508	340	165
6	150	444	460	444	325	130	6	150	559	562	559	385	185
8	200	533	549	533	399	202	8	200	660	663	660	444	365
10	250	622	638	622	440	296	10	250	787	790	787	500	557
12	300	711	727	711	462	458	12	300	838	841	838	542	670
14	350	838	854	838	571	583	14	350	889	892	889	670	944
16	400	864	880	864	659	754	16	400	991	994	991	715	1300
18	450	978	994	978	676	935	18	450	1092	1095	1092	786	1760
20	500	1016	1035	1016	742	1155	20	500	1194	1200	1194	845	2200
24	600	1346	1368	1346	910	1408	24	600	1397	1407	1397	1024	3350

Cast steel swing check valve





Main Dimensions and Weight — CLASS 900

Size		L	L1	L2	H	WT(RF)
inch	mm	mm	mm	mm	mm	Kg
2	50	368	371	368	210	58
2-1/2	65	419	422	419	260	76
3	80	381	384	381	285	100
4	100	457	460	457	340	140
6	150	610	613	610	424	294
8	200	737	740	737	545	700
10	250	838	841	838	590	744
12	300	965	968	965	676	870
14	350	1029	1039	1029	740	1254
16	400	1130	1140	1130	800	1800

CLASS 1500

Size		L	L1	L2	H	WT(RF)
inch	mm	mm	mm	mm	mm	Kg
2	50	368	371	368	210	66
2-1/2	65	419	422	419	255	84
3	80	470	473	470	285	123
4	100	546	549	546	355	196
6	150	705	711	705	470	481
8	200	832	842	832	561	824
10	250	991	1001	991	675	1252
12	300	1130	1146	1130	840	1440
14	350	1257	1276	1257	950	1745
16	400	1384	1406	1384	1107	2500

Note:Larger sizes can be customized.

Pressure self-sealing check valve

Main Dimensions and Weight — CLASS 900

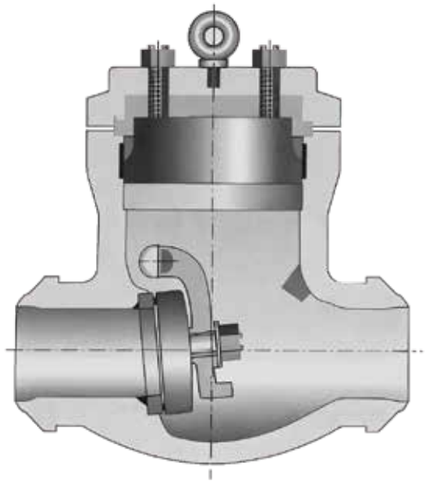
Size		L	L1	L2	L2 Long structure	H	WT(RF)
inch	mm	mm	mm	mm	mm	mm	Kg
2	50	368	371	216	368	251	25
2-1/2	65	419	422	254	419	260	35
3	80	381	384	305	381	265	46
4	100	457	460	356	457	318	68
6	150	610	613	508	610	400	170
8	200	737	740	660	737	477	460
10	250	838	841	787	838	568	700
12	300	965	968	914	965	661	1020
14	350	1029	1039	991	1029	685	1220
16	400	1130	1140	1092	1130	743	1350

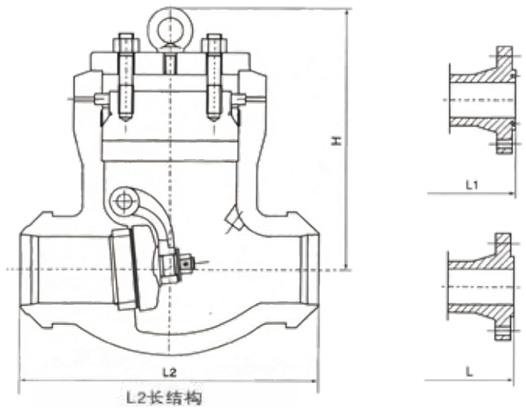
CLASS 1500

Size		L	L1	L2	L2 Long structure	H	WT(RF)
inch	mm	mm	mm	mm	mm	mm	Kg
2	50	368	371	216	368	251	26
2-1/2	65	419	422	254	419	285	36
3	80	470	473	305	470	321	50
4	100	546	549	406	546	342	80
6	150	705	711	559	705	438	290
8	200	832	842	711	832	513	490
10	250	991	1001	864	991	624	750
12	300	1130	1146	991	1130	699	1110
14	350	1257	1276	1067	1257	770	1415
16	400	1384	1406	1194	1384	850	1605

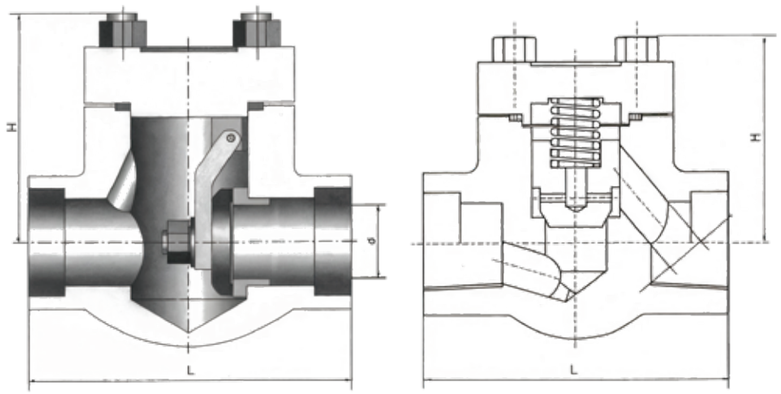
CLASS 2500

Size		L	L1	L2	L2 Long structure	H	WT(RF)
inch	mm	mm	mm	mm	mm	mm	Kg
2	50	451	454	279	451	250	62
2-1/2	65	508	514	330	508	280	85
3	80	578	584	368	528	321	100
4	100	673	683	457	673	372	165
6	150	914	927	610	914	473	460
8	200	1022	1038	762	1022	599	900
10	250	1270	1292	914	1270	650	1300
12	300	1422	1445	1041	1422	705	1800
14	350	–	–	1118	–	790	2450
16	400	–	–	1245	–	870	3200





Forged Steel Swing/Lift/Screw/Socket Weld Check Valve



Main Dimensions and Weight

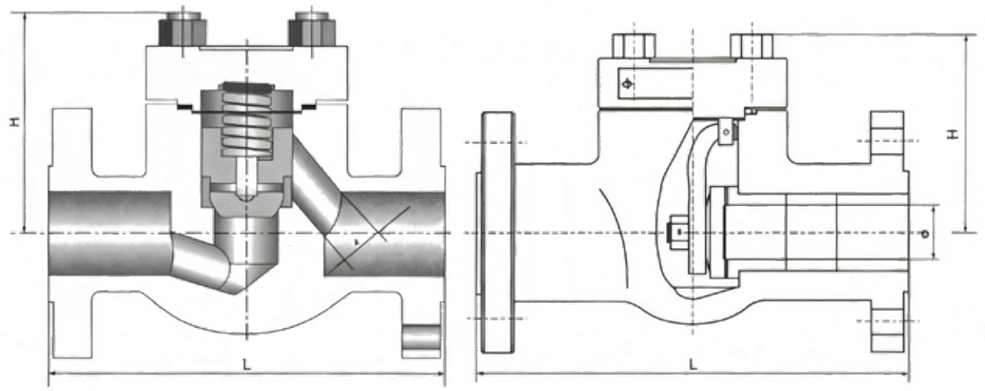
CLASS 150~800

Size				L(mm)		H(mm)		Weight(Kg)	
inch		mm		Lift	Swing	Lift	Swing	Lift	Swing
Reduced Bore	Full Bore	Reduced Bore	Full Bore	Type	Type	Type	Type	Type	Type
1/4		8		79	79	61	61	1.1	1.0
3/8	1/4	10	8	79	79	61	61	1.2	1.1
1/2	3/8	15	10	79	79	61	61	1.3	1.2
3/4	1/2	20	15	92	92	61	61	1.4	1.3
1	3/4	25	20	111	111	78	78	2.3	1.9
1-1/4	1	32	25	120	120	84	84	3.9	3.4
1-1/2	1-1/4	40	32	152	120	103	101	5.6	4.5
2	1-1/2	50	40	172	140	118	120	8.9	7.3
	2		50	200	170	132	133	12.5	10.0

CLASS 900~1500

Size				L(mm)		H(mm)		Weight(Kg)	
inch		mm		Lift	Swing	Lift	Swing	Lift	Swing
Reduced Bore	Full Bore	Reduced Bore	Full Bore	Type	Type	Type	Type	Type	Type
1/4		8		111		79	79	3.0	3.0
3/8	1/4	10	8	111	111	79	79	3.1	3.1
1/2	3/8	15	10	111	111	79	79	3.2	3.2
3/4	1/2	20	15	111	111	79	79	3.4	3.6
1	3/4	25	20	130	111	97	97	4.8	4.3
1-1/4	1	32	25	152	120	104	105	6.9	6.1
1-1/2	1-1/4	40	32	172	140	120	120	10.7	8.8
2	1-1/2	50	40	220	140	139	140	14.6	12.6
	2		50		162				

Forged Steel Swing/Lift/Flange Check Valve

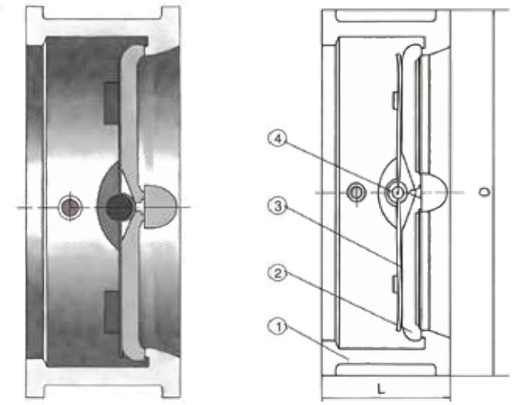


Main Dimensions and Weight

CLASS 150~600

Size		Pressure	L	H(mm)				Weight(Kg)			
		LB	(mm)	Lift Type		Swing Type		Lift Type		Swing Type	
inch	mm			Reduced Bore	Full Bore	Reduced Bore	Full Bore	Reduced Bore	Full Bore	Reduced Bore	Full Bore
1/2	15	150	108	61	61	61	61	2.6	3.4	2.5	3.3
		300	152					2.7	3.7	2.6	3.6
		600	165					3.0	4.0	2.9	4.3
3/4	20	150	117	61	78	61	78	3.4	4.4	3.3	4.8
		300	178					3.7	4.7	3.6	5.1
		600	190					4.0	5.8	4.3	6.2
1	25	150	127	78	84	78	84	4.4	8.2	4.8	7.0
		300	203					4.7	8.8	5.1	7.4
		600	216					5.8	9.5	6.2	7.7
1-1/4	32	150	140	84	103	84	101	8.2	8.9	7.0	7.5
		300	216					8.8	9.6	7.4	7.9
		600	229					9.5	10.1	7.7	9.3
1-1/2	40	150	165	108	118	101	120	8.9	12.0	7.5	11.3
		300	229					9.6	13.7	7.9	11.7
		600	241					10.1	15.6	9.3	13.2
2	50	150	203	118	132	120	133	12.6	14.3	11.3	13.6
		300	267					13.7	17.8	11.7	16.8
		600	292					15.6	24.6	13.2	20.5

Wafer Double Disc Check Valve



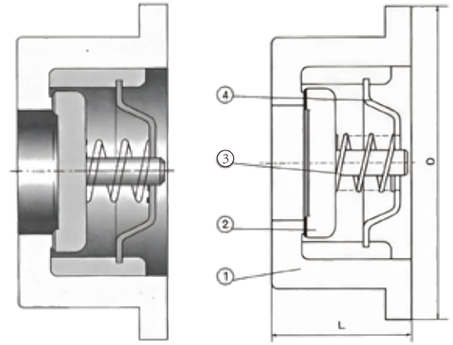
Main Parts	Material
1 Body	WCB、CF8、CF8M、CF3、CF3M
2 Disc	WCB、CF8、CF8M、CF3、CF3M
3 Spring	INCONEL、17-7PH
4 Shaft	F6a、304、316、304L、316L、17-7PH

Main Dimensions and Weight

CLASS 150~1500

Size	Class 150			Class 300			Class 600			Class 900			Class 1500		
	L	D	WT	L	D	WT	L	D	WT	L	D	WT	L	D	WT
inch	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg
2	60	103	2	60	110	3	60	110	4	70	140	8	70	140	8
2-1/2	67	122	3	67	128	4	67	128	5	83	162	11	83	162	11
3	73	135	4	73	147	6	73	147	8	83	165	14	83	172	19
4	73	173	6	73	179	8	79	191	11	102	204	20	102	207	26
5	86	195	8	86	214	15	105	239	20	110	245	30	110	252	51
6	98	220	13	98	249	18	136	264	26	159	286	42	159	280	68
8	127	277	25	127	305	31	165	318	55	206	356	84	206	350	130
10	146	337	39	146	359	51	213	398	95	241	432	145	248	433	210
12	181	407	54	181	420	77	229	455	140	292	495	220	305	518	384
14	184	448	80	222	483	117	273	490	223	356	518	350	356	576	550
16	191	512	117	232	537	190	305	562	360	384	572	470	384	639	635
18	203	547	138	264	594	200	362	610	395	451	635	605			
20	219	604	163	292	652	265	368	680	518	451	695	820			
24	222	715	331	318	772	410	438	786	836	495	835	1050			
28	305	773	380												
30	305	824	423												
32	305	878	560												

Wafer Lift Check Valve



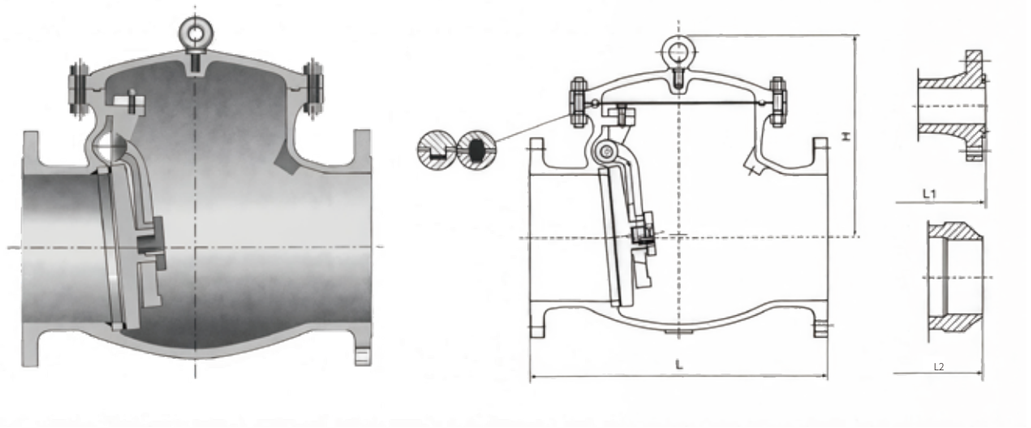
Main Parts	Material
1 Body	WCB、CF8、CF8M、CF3、CF3M
2 Disc	WCB、CF8、CF8M、CF3、CF3M
3 Spring	INCONEL、17-7PH
4 Spring seat	F6a、304、316、304L、316L、17-7PH

Main Dimensions and Weight

CLASS 150~900

Size	Class 150			Class 300			Class 600			Class 900		
	L	D	WT	L	D	WT	L	D	WT	L	D	WT
inch	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg	mm	mm	Kg
1/2	25	46	0.28	25	52	0.3	25	52	0.4	25	62	0.6
3/4	31.5	56	0.42	31.5	65	0.46	31.5	65	0.8	31.5	69	0.9
1	35.5	65	0.56	35.5	72	0.6	35.5	72	1.0	35.5	77	1.2
1-1/4	40	74	0.75	40	81	0.8	40	81	1.3	40	87	1.5
1-1/2	45	84	1.3	45	94	1.5	45	94	1.8	45	97	2.0
2	56	103	2.1	56	110	2.4	56	110	2.8	56	140	5.5
2-1/2	63	122	2.8	63	128	3.0	63	128	4	63	162	7.5
3	71	135	3.6	71	147	4.0	71	147	6	71	165	8
4	80	173	4.8	80	179	5.5	80	191	11	80	204	14
5	110	195	12	110	214	13	110	239	25	110	245	27
6	125	220	17	125	249	22	125	264	32	125	286	41
8	160	277	29	160	305	36	160	318	52	160	356	76

DIN Standard Cast Steel Swing Check Valve



Main Dimensions and Weight

PN16 PN25					PN40				PN64 PN100					
Size	L	H	WT (PN16)	WT (PN25)	Size	L	H	WT	Size	L	H (PN64)	H (PN100)	WT (PN64)	WT (PN100)
mm	mm	mm	kg	Kg	mm	mm	mm	Kg	mm	mm	mm	mm	Kg	Kg
50	**230**	165	22	22	50	230	180	27	50	300	190	190	32	43
65	**290**	180	26	30	65	290	195	33	65	340	207	213	45	48
80	**310**	190	33	35	80	310	205	37	80	380	220	240	48	72
100	**350**	208	39	52	100	350	220	56	100	430	260	270	72	108
125	**400**	230	57	73	125	400	248	85	125	500	318	316	108	130
150	**480**	270	80	103	150	480	270	110	150	550	297	365	155	217
200	**600**	95	135	175	200	533	350	140	200	650	357	420	218	341
250	**730**	348	175	196	250	622	40	20	250	75	40	40	341	472
300	**850**	390	260	285	300	711	40	32	300	900	465	50	472	620
350	**980**	430	360	388	350	838	518	400	350	1025	514	550	627	880
400	**1100**	468	496	520	400	864	50	50	400	1150	56	60	882	1105
500	**1250**	525	588	641	500	1016	618	650						

16" 600LB Check Valve

24'' 900LB ANSI Standard Check Valve

High Pressure Check Valve

Low-temp. Gate Valve

Product Features

The valve parts in contact with the medium are strictly low-temperature treated according to the requirements of the specification before finishing to ensure that the valve parts can fully withstand the expansion and contraction caused by temperature change, and the structure of the valve seat part will not be permanently deformed due to temperature changes.

Adopt long-necked bonnet structure to protect stuffing box.

Use a gate structure that can maintain a reliable seal regardless of temperature changes, such as a gate valve with an flexible gate and a Spreader gate.

The upper sealing seat is welded with CoCrW and create a certain hardness difference between the sealing surfaces to avoid the damage.

The valve seat and gate sealing surface cladding with CoCrW.-Adopt pressure relief hole structure to prevent abnormal pressure rise in the middle cavity.

The surface of the valve stem is nitrided and hardened to prevent surface damage during the opening and closing of the valve from affecting the sealing performance.

The packing can be selected as low-leakage packing according to user’ s requirements and meets environmental protection requirements.

Welding sleeves can be customized if needed.

Insulation board (drip board) can be customized if needed.

1、Design standard:

BS 6364	Cryogenic valves
MESCSPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

2、End connection:

ASME B16.5	Pipe flanges and flange fittings
ASME B16.25	Butt welding end

3、Test and inspection:

API598	Technical conditions for cryogenic valves
BS 6364	Technical conditions for cryogenic steel valve castings
MESC SPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

Low-temp. Gate Valve

Main parts material

Parts name	Material						
	-46℃		-101℃	-196℃			
Body	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CF8M A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bonnet	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CFBM A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bracket	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304			
Valve stem nut	ASTM A439-D2						
Pressure plate	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LCB A350-LF2	ASTM A351-CF8 A182-F304			
Handwheel	Malleable Cast Iron						
Sleeve	ASTM A276 304		ASTM A276 304				
Gasket	Class300~600LB, Stainless steel spiral wound gasket Class900~1500LB,Metal gasket						
Packing	Flexible graphite						
Gland	Carbon steel		ASTM A276 304				
Handwheel nut	Carbon steel		ASTM A276 304				
Stud	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				
Nut	ASTM A194 4	ASTM A3204	ASTM A194 8				
Eyebolts	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				

Product range

Nominal size:1/2"--36"(DN15-900)

Pressure:ANSI/ASME150Lb-1500Lb(PN16-PN25)

Applicable temperature:-29 to -196°C

Operation mode: handle, gear, electric actuator, pneumatic actuator.

Low-temp. Globe Valve

Product Features

The valve parts in contact with the medium are strictly low-temperature treated according to the requirements of the specification before finishing to ensure that the valve parts can fully withstand the expansion and contraction caused by temperature change, and the structure of the valve seat part will not be permanently deformed due to temperature changes.

Adopt long-necked bonnet structure to protect stuffing box.

Use conical disc that can maintain a reliable seal regardless of temperature changes.

The upper sealing seat is welded with CoCrW and create a certain hardness difference between the sealing surfaces to avoid the damage.

The valve seat and disc sealing surface cladding with CoCrW.

The surface of the valve stem is nitrided and hardened to prevent surface damage during the opening and closing of the valve from affecting the sealing performance.

The packing can be selected as low-leakage packing according to user’ s requirements and meets environmental protection requirements.

Welding sleeves can be customized if needed.

Insulation board (drip board) can be customized if needed.

1、Design standard:

BS 6364	Cryogenic valves
MESCSPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

2、End connection:

ASME B16.5	Pipe flanges and flange fittings
ASME B16.25	Butt welding end

3、Test and inspection:

API598	Technical conditions for cryogenic valves
BS 6364	Technical conditions for cryogenic steel valve castings
MESC SPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

Low-temp. Globe Valve

Main parts material

Parts name	Material						
	-46°C		-101°C	-196°C			
Body	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CF8M A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bonnet	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CFBM A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bracket	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304			
Valve stem nut	ASTM A439-D2						
Pressure plate	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LCB A350-LF2	ASTM A351-CF8 A182-F304			
Handwheel	Malleable Cast Iron						
Sleeve	ASTM A276 304		ASTM A276 304				
Gasket	Class300~600LB,Stainless steel spiral wound gasket Class900~1500LB,Metal gasket						
Packing	Flexible graphite						
Gland	Carbon steel		ASTM A276 304				
Handwheel nut	Carbon steel		ASTM A276 304				
Stud	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				
Nut	ASTM A194 4	ASTM A3204	ASTM A194 8				
Eyebolts	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				

Product range

Nominal size:1/2"--36"(DN15-900)

Pressure:ANSI/ASME150Lb-1500Lb(PN1.6-PN25)

Applicable temperature:-29 to -196°C

Operation mode: handle, gear, electric actuator, pneumatic actuator.

Low-temp. Check Valve

Product Features

The valve parts in contact with the medium are strictly low-temperature treated according to the requirements of the specification before finishing to ensure that the valve parts can fully withstand the expansion and contraction caused by temperature change, and the structure of the valve seat part will not be permanently deformed due to temperature changes.

The valve seat and disc sealing surface cladding with CoCrW.

Adopt the built-in bracket structure to avoid the leakage of the medium at low temperature;

Welding sleeves can be customized if needed.

1、Design standard:

BS 6364	Cryogenic valves
MESCSPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

2、End connection:

ASME B16.5	Pipe flanges and flange fittings
ASME B16.25	Butt welding end

3、Test and inspection:

API598	Technical conditions for cryogenic valves
BS 6364	Technical conditions for cryogenic steel valve castings
MESC SPE 77/200	Valve specifications for cryogenic media
ISO 15848	Fugitive emission test for valves

Low-temp. Check Valve

Main parts material

Parts name	Material						
	-46°C		-101°C	-196°C			
Body	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CF8M A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bonnet	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CFBM A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Bracket	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CF8M A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Rocker Arm	ASTM A352-LCB A350-LF2	ASTM A352-LCC	ASTM A352-LC3 A350-LF3	ASTM A351-CF8 A182-F304	ASTM A351-CFBM A182-F316	ASTM A351-CF3 A182-F304L	ASTM A351-CF3M A182-F316L
Stud	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				
Nut	ASTM A194 4	ASTM A3204	ASTM A194 8				
Eyebolts	ASTM A193 L7	ASTM A320 L7	ASTM A193 B8				

Product range

Nominal size:1/2"–36"(DN15-900)

Pressure:ANSI/ASME150Lb-1500Lb(PN1.6-PN25)

Applicable temperature:-29 to -196°C