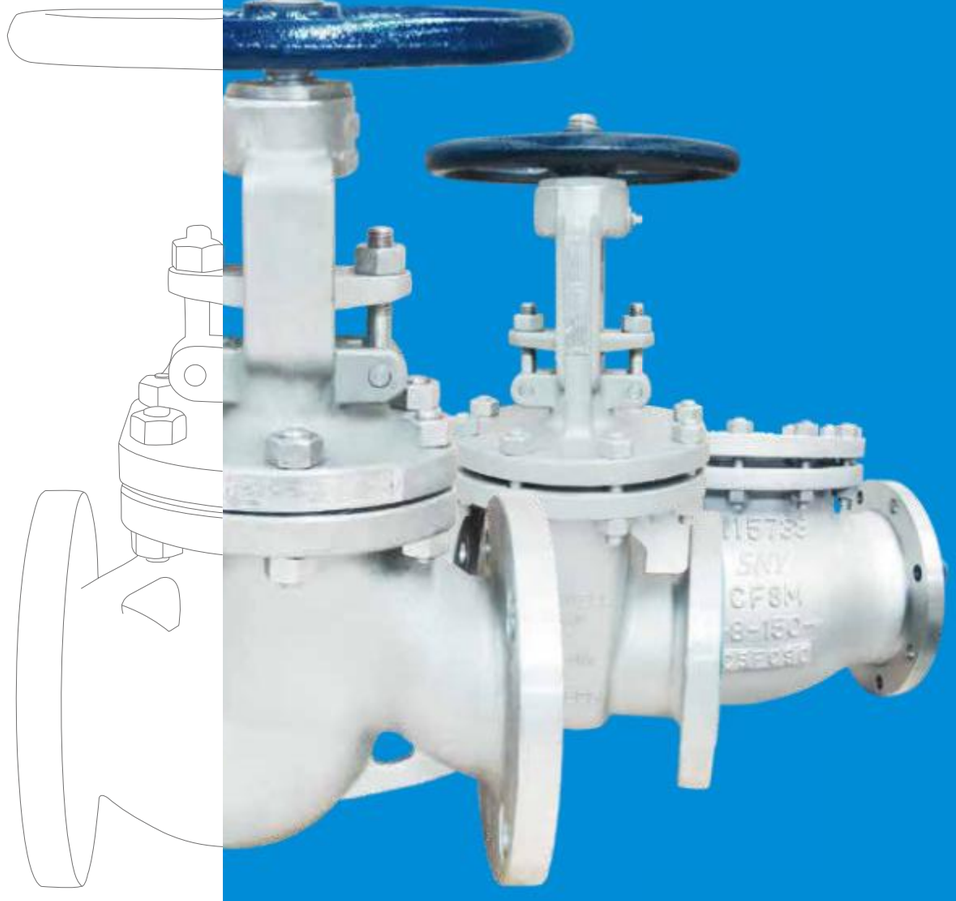
www.**snyvalve**.com.cn

SNY VALVE (YANCHENG) CO., LTD.

Add: No.36, South Taishan Road, Yancheng Economic-Technological Development Zone, Yancheng, Jiangsu Province, P.R.China
Tel: 86-515-89902217 86-515-81602566
Fax: 86-515-89902217
E-mail: sny@snyvalve.com.cn
Web: www.snyvalve.com.cn

API 603/ ASME B16.34

STAINLESS STEEL VALVE



www.**snyvalve**.com.cn

SNY VALVE (YANCHENG) CO., LTD
Rev. No.: E1-SSV-2020

CONTENTS

01 COMPANY PROFILE

03 QUALIFICATION & CERTIFICATE
QUALITY CONTROL

05 TECHNICAL INNOVATION
TECHNOLOGY PATENT

07 INTRODUCTION OF FOUNDRIES
PRODUCTION EQUIPMENT

09 INDUSTRY APPLICATIONS
FIGURE NUMBERS

14 STAINLEESS STEEL GATE VALVE

18 STAINLEESS STEEL GLOBE VALVE

22 STAINLEESS STEEL CHECK VALVE

25 ENGINEERING DATA

COMPANY PROFILE

SNY Valve (Yancheng) Co., Ltd. is committed to providing global customers with reliable and complete range of solution for engineering valve. Established in 2003 with CNY 150 million registered capital, SNY VALVE is a national high-tech comprehensive enterprise which integrating valve R&D manufacturing and sales. SNY VALVE headquarters is located in Yancheng city with two manufacturing workshops. We have sales centers in Yancheng, Suzhou and Beijing. SNY VALVE covers an area of over 100,000 sq. meters with more than 300 sets of production, test & inspection facilities. SNYVALVE has established long-term cooperative relations with many large enterprises at home and abroad, been approved by many end users and EPC companies, and products export to middle east, Europe, America, etc.

Main Products

SNY VALVE products are widely applied in oil, gas, petroleum refining, petrochemical, power, mining, metallurgy, LNG shipbuilding and other industries. Our product range are NPS 1/4~60 inch (DN6~DN1500), Class150~2500 (PN16~PN420). Our mainly products are gate valves, globe valves, check valves, ball valves, API6D valve, and we are actively developing special valves used for severe service such as cryogenic, ultra-high temperature and high corrosion. Products are designed according to standards of ANSI, ASTM, API, BS, JIS, DIN, GB, ISO, MSS, etc., and design temperature from -196 to 650 Deg.C. Material are available of carbon steel, stainless (including duplex and super duplex), and other alloys steel (low alloy, nickel-based alloy, Inconel, Monel, Hastelloy),etc.

Technical Strength

SNY VALVE has a first-class technology research and development team, and we have nearly 100 of all kinds of patents and copyrights. Company are capable of physical & chemical analysis, mechanical performance testing, NDT, impact test at ambient temperature and low temperature, hardness testing, metallographic analysis, coordinate measuring, valve torque testing, valve life testing, high-temperature & cryogenic testing, etc., products have been certified through fire safe, fugitive emission, TAT tests.

HEADQUARTERS

Established in 2003
Area: 34,000 ㎡
Located in Tinghu District, Yancheng City.

THE SECOND FACTORY

Established in 2006
Area: 58,000 ㎡
Located in Yancheng E&T development zone, Yancheng City.

SUZHOU BRANCH

Located in Suzhou Industrial Zone, Suzhou branch is the global sales & marketing center of SNY VALVE, which plays a comprehensive role in market promotion, sales, and set up distribution system.

BEIJING BRANCH

Located in Beijing International Business Center, Beijing branch is the domestic sales & marketing center of SNY VALVE, and plays a comprehensive role in market promotion, sales, and set up distribution system.

Environment, Health & Safety

Quality, health, safety and environment management have top priority in our growth plans and all our endeavors. SNY VALVE is committed to providing a safe, healthy and positive working environment for our employees and those under our care. SNY VALVE has established management policy and action guidelines regarding environmental issues. We view "harmony with nature" and "sustainable development" as integral to the pursuit of our business.

Social Responsibility

Constantly taking social responsibility, SNY VALVE has set up “SNY Scholarship” through cooperating with local university for aiding excellent students in straitened circumstance.

QUALIFICATION & CERTIFICATE

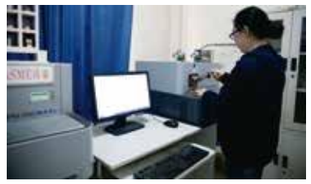
SNY VALVE is committed to provide the highest possible quality industrial valves at the most cost effective way to customers worldwide. We have been certified with ISO9001, ISO14001, OHSAS18001, CE/PED, API6D, API602, API600,ABS, CU-TR,TS,and obtained API607 /API 6Fa fire safe approvals.

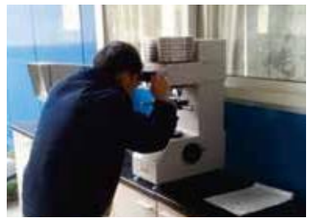
QUALITY CONTROL

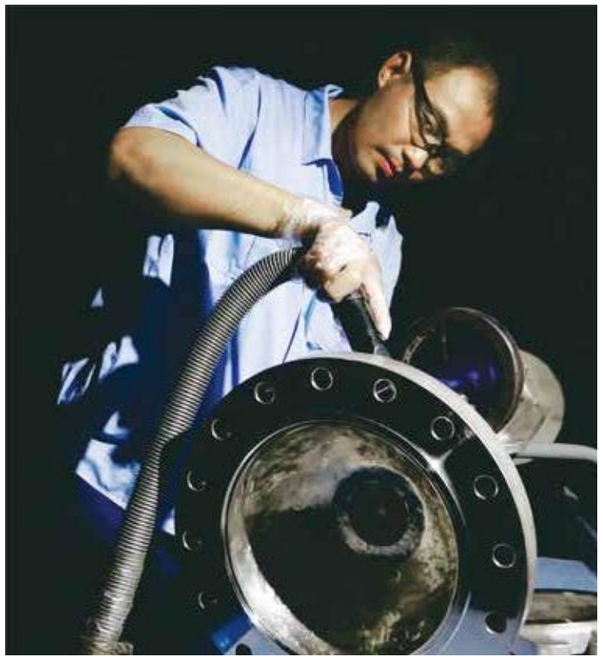
SNY VALVE has been certified with ISO 9001 & API Spec. Q1 for quality management system.
SNY quality assurance and quality control capabilities are followed and implemented based on global standards.
We have
· State-of-the-art Quality Control Test Center
· In-house Non-destructive Test Equipment & ASNT Certified Personnel
· Pressure Test Equipment
· Special Testing Equipment for Product Validation

Raw material quality is ensured by a stringent vendor qualification system. By NDT (Radiographic Test, Magnetic Particle Test, Penetrant Test & Ultrasonic Test), Positive Martial Identification (PMI), Tensile Test, and Hardness Test to evaluate samples & small lot production, as well as surveillance audits and sample check to ensure the compliance as per customers' requirements.

Valves manufactured at SNY valves are 100% pressure-tested. The product design has been validated through various special testing as per applicable industry standards such as Fire Safe Test, Low Temperature Test, Cryogenic Test, Vacuum Test, Fugitive Emission Test, High Pressure Gas Test, Elevated Temperature Test and so on.





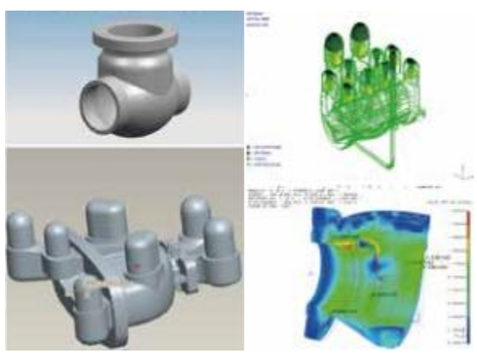


SNY VALVE always focus on technical innovation. It has one province technique center and one cryogenic ball valve engineering center. Technical team utilizes the most advanced computer technology to improve the existing products and develop the new products. Up to now, SNY VALVE possesses more than 90 patents.

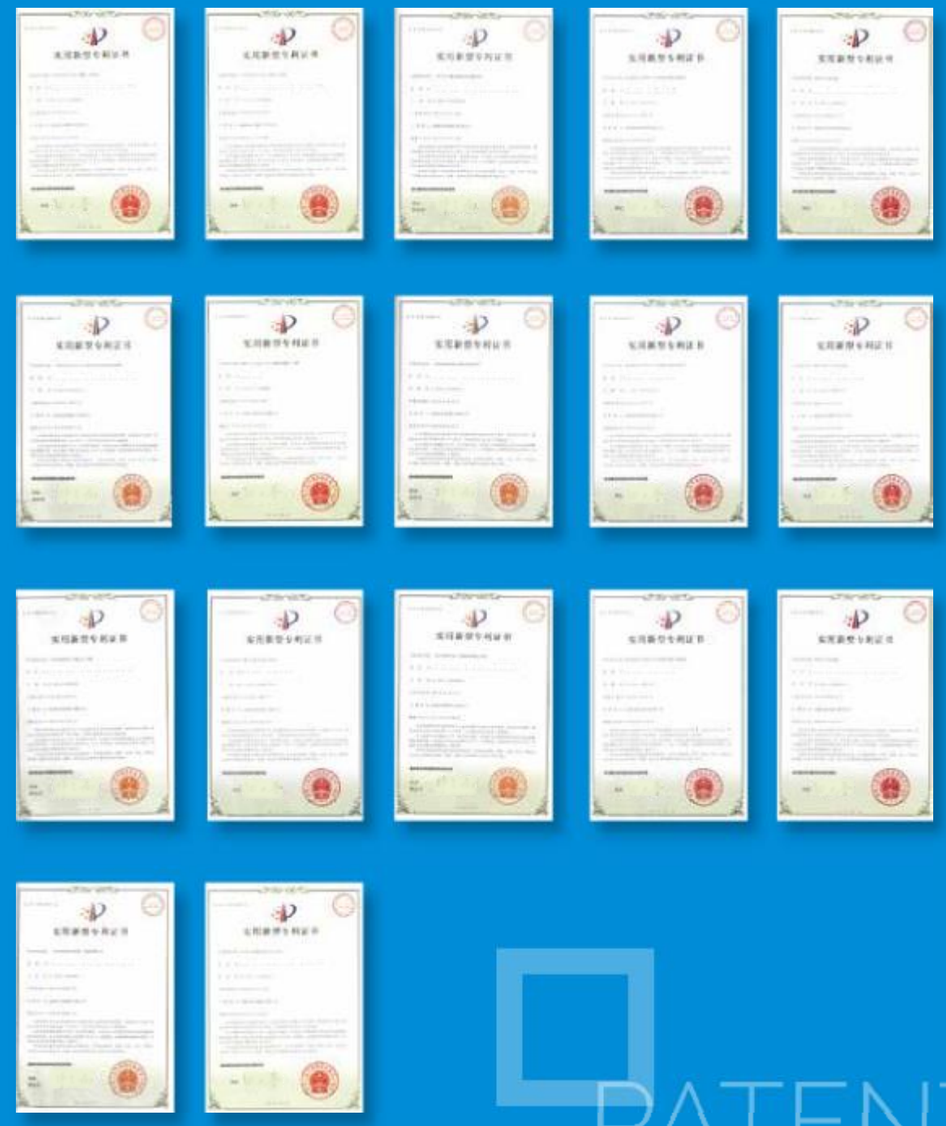
SNY VALVE design philosophy is to develop a safe and cost-efficient valve. Through the latest software of 3D, CAD & Solid works, engineer is available to fictitiously check and verify if the parts & valves can be assembled precisely before they are actually made, which can speed up the development process & saves the costs.

SNY VALVE technical personnel are always ready to offer on-line or on-site technical training and support for all of our customers.

TECHNICAL INNOVATION



TECHNOLOGY PATENT



PATENT

INTRODUCTION OF FOUNDRIES

SNY VALVE realizes the casting quality is the most important to valve life, safety of personnel and environment, especially in the high temperature and high pressure applications. So our strict customers always audit the foundries at first from our approved suppliers before order execution.

SNY VALVE has established unique strategic supply chain management system. We have strategically foundries and one own foundry. They each have a full set of quality inspection facilities, such as spectrometer, NDT and PMI inspection, etc.

FACTORY MANAGEMENT & FACILITIES

SNY VALVE organically integrates the advanced manufacturing equipment and the staffs. By using the most advanced hardware and software, centralizing the production resources, increasing our efficiency and continuously improving the process control, we are able to meet or exceed the different requirement of customers. Company implement 6S management onsite to reduce waste and improve process control. Advanced management software such as K/3 (ERP) & OA (Collaborative Management Software) play an important role in SNY VALVE. Synchronized supervision & management are performed through the whole manufacturing process to improve productivity & efficiency. Our business philosophy is: stable & reliable quality, on-time delivery and reasonable price.

SNY VALVE have more than 300 sets(units) equipment, such as CNC machining Center, CNC lathes, CNC boring-milling machine, general lathes, large-scale vertical lathe, sphere grinders, plasma overlaying welding equipment and heat treatment equipment, etc.
CNC machining Center is Japanese FANUC 0I-MD NC, and the three-way coupling is from Germany S+J/R+W, which realizes the automatic continuous milling of plane, groove, bevel, and a variety of linear processing, and ensure the accuracy of ball.

INDUSTRY APPLICATIONS

- Oil & Gas Pipeline
- Refinery
- Petrochemical
- Power
- Chemical
- LNG & LPG
- Mining
- Metallurgy
- Aerospace
- Water Treatment
- Offshore Engineering

Figure Numbers

	Nominal Size	Valve Type	Nominal Pressure	End Connection	Operation	Special Requirement	Body Material	Trim	Special Material
Example:	A	B	C	D	E	F	G	H	I
	8	G A P	1	R	B	G A	C F 3 M	T 1 0	N C

Explanation: NPS 8, Cast Stainless Steel Rising Stem Gate Valve, Class 150, RF Flanged End, Bare Stem, No Machining on Raised Face, Body Material CF3M, Trin No.10, NACE Requirement

A Norminal Size

1	NPS1	8	NPS8	D25	DN25	D200	DN200
1 1/4	NPS1 1/4	10	NPS10	D32	DN32	D250	DN250
1 1/2	NPS1 1/2	12	NPS12	D40	DN40	D300	DN300
2	NPS2	14	NPS14	D50	DN50	D350	DN350
2 1/2	NPS2 1/2	16	NPS16	D65	DN65	D400	DN400
3	NPS3	18	NPS18	D80	DN80	D450	DN450
4	NPS4	20	NPS20	D100	DN100	D500	DN500
5	NPS5	22	NPS22	D125	DN100	D550	DN550
6	NPS6	24	NPS24	D150	DN150	D600	DN600

C Norminal Pressure

0	Class125	-2.5	PN(DIN)2.5	-20	PN(ANSI)20
1	Class150	-6	PN(DIN)6	-50	PN(ANSI)50
3	Class300	-10	PN(DIN)10	-110	PN(ANSI)110
4	Class400	-16	PN(DIN)16	-150	PN(ANSI)150
6	Class600	-25	PN(DIN)25	-260	PN(ANSI)260
8	Class800	-40	PN(DIN)40	-420	PN(ANSI)420
9	Class900	-63	PN(DIN)63		
15	Class1500	-100	PN(DIN)100		
25	Class2500				

B Valve Type

GAS Cast Stainless Steel Rising Stem Gate Valve
LBS Cast Stainless Steel Globe Valve
CKS Internal Hinge Pin Swing Stainless Steel Check Valve
CES External Hinge Pin Swing Stainless Steel Check Valve

D End Connection

R RF Flanged
J RTJ Flanged
F FF Flanged
B** Butt-welding(** is the pipe norminal size or can be described as OD*Wall Thickness)
S Socket-welding
N NPT

E Operation

DefaultLever/Handle/Handwheel
G Gearbox
E Electric Actuator
Note: check valve is default
B Bare Stem
P Pneumatic Actuator
H Hydraulic Actuator

G Body Material

CF8	A351	CF8
CF8M	A351	CF8M
CF3	A351	CF3
CF3M	A351	CF3M

F Special Requirement

BW belleville spring at packing bolt shall be anti-loosening
CE valves exported to EU, and shall be CE marked
CH closure member (gate/wedge/disc) with pressure relief hole
CW** sprocket, ** is the dimension from the stem center or gearbox input shaft to the bottom of the chain link
LN** non-standard face to face/end to end dimension, ** is the dimension data
FN no machining on raised face
SH Shell requirement

H Trim

In accordance with API 600. Other materials are available upon request

I Special Material

B8M(2)/8M	bolt&nut material is B8M(2)&8M
B8M/8M	bolt&nut material is B8M&8M
B8M/8MA	bolt&nut material is B8M&8MA
NC	NACE Requirement

Design Features

Stainless steel series valves include stainless steel gate valve, stainless steel globe valve and stainless steel check valve;
The wall thickness of this series of valves is strictly in accordance with the API 603 standard and is thinner than the conventional API 600 design;
The valve seat ring and upper seal seat of this series of valves are all designed by the body;
The advantages of this series of valves are: compact structure, light weight and light opening and closing.

Engineering valve technology solution leader

PART 1

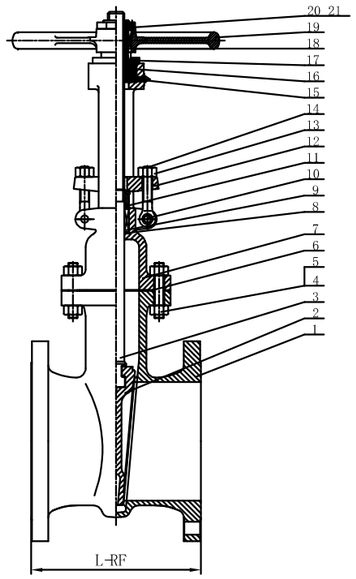
SNY VALVE

Design Standard	
Basic Design	API603/ASME B16.34
Face to Face/End to End	ASME B16.10
End Flange	ASME B16.5
Butt-welding End	ASME B16.25
Pressure-temperature Rating	ASME B16.34
Inspection and Testing	API 598

Stainless Steel Gate Valve

1. Flexible wedge for easy opening and closing the valve.
2. Integral metal seat to ensure abrasion-resistance, a reliable sealing and and longer service life.
3. Packing gland and gland flange are split designed to ensure the concentricity of stem. Stuffing box is qualified designed to meet API 624 type testing.
4. Stem head is integral forged and connected to the wedge though the T slot to realize a reliable strength.
5. Integrated backseat bonnet to ensure good sealing of stuffing box.
6. Fugitive emission qualified packing is applied.

General Assembly Drawing



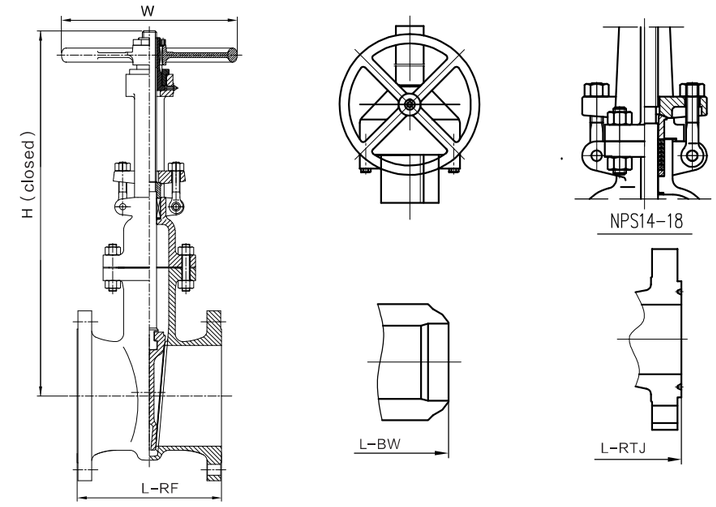
Material of Construction

Part No.	Part Name	Material
1	Body	ASTM A351 GR. CF8M ①
2	Wedge	ASTM A351 GR. CF8M②
3	Stem	ASTM A182 F316
4	Stud	ASTM A193 GR. B8
5	Nut	ASTM A194 GR. 8
6	Gasket	PTFE
7	Bonnet	ASTM A351 GR. CF8M
8	Packing Washer	ASTM A276 Type 316 PTFE
9	Packing	PTFE
10	Pin	ASTM A276 Type 304
11	Packing Gland	ASTM A276 Type 316
12	Gland Flange	ASTM A351 GR. CF8
13	Nut	ASTM A193 GR. B8
14	Eyelt Bolt	ASTM A194 GR. 8
15	Grease Fitting	Carbon Steel (galvanized)
16	Stem Nut	ASTM A439 GR. D-2
17	Gland	ASTM A276 Type 304
18	Key	Carbon Steel
19	The Handwheel	ASTM A47
20	The hand wheel nut	ASTM A276 Type 304
21	Screw	ASTM A270 Type 304

① Integral seat, optional hard-faced with stellite 6 or equivalent (HF).
② Wedge, optional hard-faced with stellite 6 or equivalent (HF).

Stainless Steel Gate Valve

Dimension & Weight



CLASS 150

Size		L-RF		L-BW		L-RTJ		W		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb
2	50	177	7.00	216	8.50	191	7.50	178	7.01	306	12.05	16	35
2 1/2	65	191	7.50	241	9.50	203	8.00	178	7.01	315	12.40	20	43
3	80	203	8.00	283	11.10	216	8.50	178	7.01	349	13.74	24	53
4	100	229	9.00	305	12.00	241	9.50	228	9.00	427	16.81	39	86
6	150	267	10.50	403	15.90	279	11.00	279	11.00	562	22.13	63	139
8	200	292	11.50	419	16.50	305	12.00	355	14.00	737	29.02	114	251
10	250	330	13.00	457	18.00	343	13.50	406	16.00	900	35.43	190	419
12	300	356	14.00	502	19.80	368	14.50	457	18.00	1040	40.94	250	551
14	350	381	15.00	572	22.50	394	15.50	508	20.00	1173	46.18	336	741
16	400	406	16.00	610	24.00	419	16.50	560	22.05	1308	51.50	442	974
18	450	432	17.00	660	26.00	445	17.50	640	25.20	1457	57.36	548	1208

CLASS 300

Size		L-RF/BW		L-RTJ		W		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	mm	in	kg	lb
2	50	216	8.50	232	9.12	178	7.01	590	23.23	18	40
2 1/2	65	241	9.50	257	10.12	178	7.01	332	13.05	24	53
3	80	282	11.12	298	11.74	229	9.00	348	13.70	36	79
4	100	305	12.00	321	12.62	254	10.00	425	16.73	54	119
6	150	403	15.87	419	16.50	356	14.00	574	22.60	103	227
8	200	419	16.50	435	17.12	406	16.00	772	30.39	187	412
10	250	457	18.00	473	18.62	508	20.00	934	36.77	305	672
12	300	502	19.75	517	20.37	508	20.00	1080	42.52	434	957

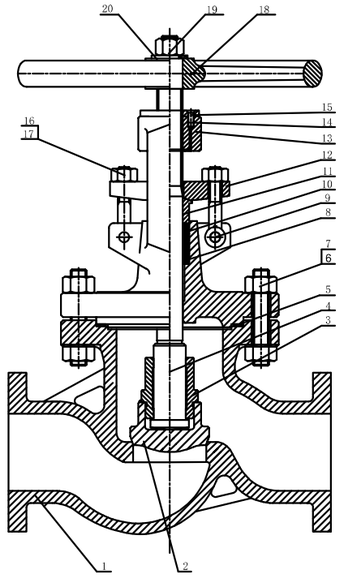
PART 2

Design Standard	
Basic Design	API603/ASME B16.34
Face to Face/End to End	ASME B16.10
End Flange	ASME B16.5
Butt-welding End	ASME B16.25
Pressure-temperature Rating	ASME B16.34
Inspection and Testing	API 598

Stainless Steel Globe Valve

1. Conical disc match to the conical surface of the seat for a reliable sealing.
2. Integral metal seat to ensure abrasion-resistance, a reliable sealing and and longer service life.
3. Optional impact handwheel.
4. Short stroke when opening & shut off and compact structure.
5. Fugitive emission qualified packing.

General Assembly Drawing

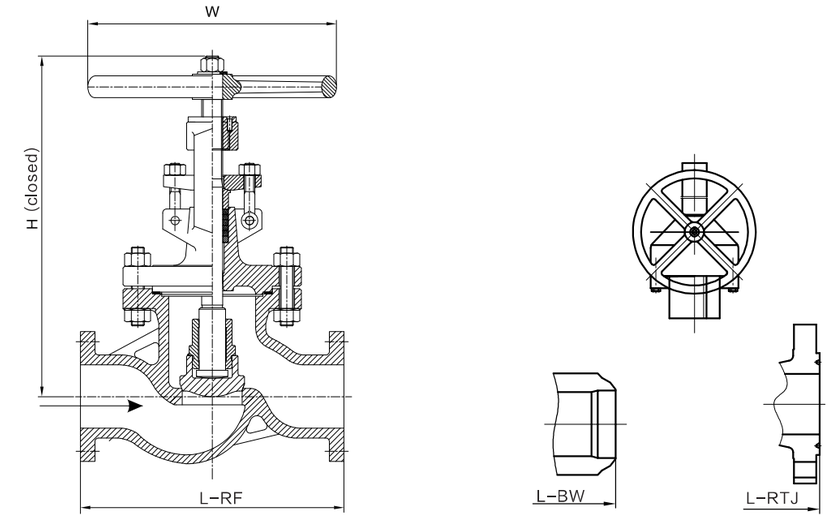


Material of Construction

Part No.	Part Name	Material
1	Body	ASTM A351 GR.CF8M①
2	Disc	ASTM A351 GR.CF8M②
3	Disc Lock Nut	ASTM A276 Type 316
4	Stem	ASTM A182 F316
5	Gasket	SS316 + Graphite
6	Bonnet Stud	ASTM A193 GR.B8
7	Bonnet Stud Nut	ASTM A194 GR.8
8	Packing Washer	ASTM A276 Type 316
9	Eye Bolt Pin	ASTM A276 Type 304
10	Packing	Graphite
11	Gland	ASTM A276 Type 316
12	Gland Flange	ASTM A351 GR.CF8
13	Bonnet	ASTM A351 GR. CF8M
14	Stem Nut	ASTM A439 D-2
15	Screw	ASTM A276 Type 304
16	Eyebolt Nut	ASTM A193 GR.B8
17	Eyebolt	ASTM A194 GR.8
18	Handwheel	ASTM A47
19	Handwheel Nut	ASTM A274 Type 304
20	Handwheel Washer	ASTM A274 Type 304

① Integral seat, optional hard-faced with stellite 6 or equivalent (HF).
② Disc, optional hard-faced with stellite 6 or equivalent (HF).

Dimension & Weight

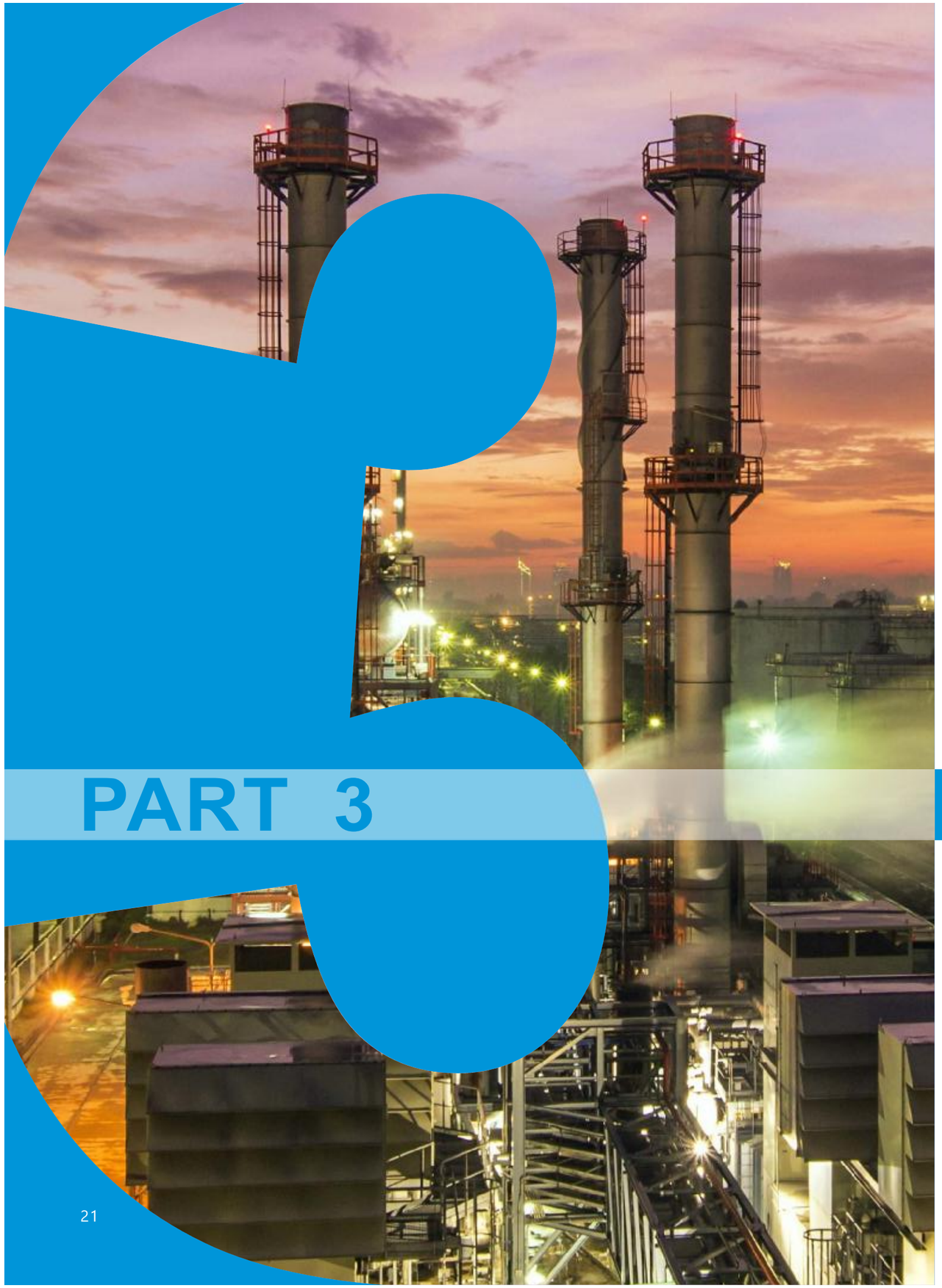


CLASS 150

Size		L-RF/BW		L-RTJ		W		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	mm	in	kg	lb
2	50	203	8.00	216	8.50	200	7.87	286	11.26	15	32
3	65	241	9.50	254	10.00	250	9.84	376	14.80	25	55
4	80	292	11.50	305	12.00	300	11.81	433	17.05	41	90
6	150	406	16.00	419	16.50	350	13.78	472	18.58	68	149

CLASS 300

Size		L-RF/BW		L-RTJ		W		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	mm	in	kg	lb
2	50	266	10.50	283	11.12	200	7.87	287	11.30	19	41
3	65	318	12.50	333	13.12	300	11.81	386	15.20	36	78
4	80	356	14.00	371	14.62	350	13.78	458	18.03	59	129
6	150	445	17.50	460	18.12	450	17.72	496	19.53	111	245



PART 3

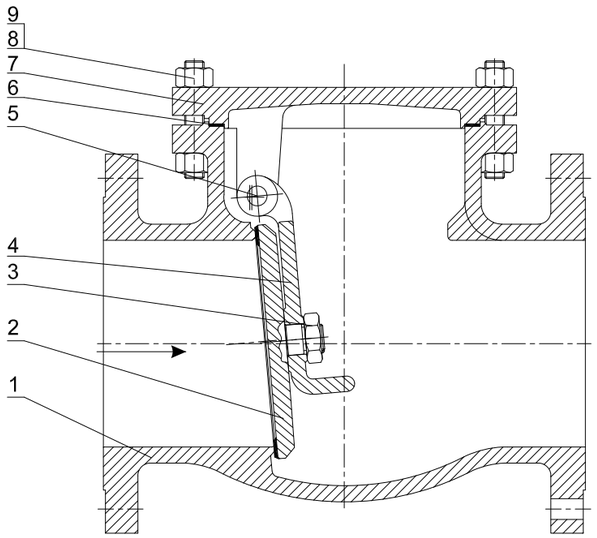
Design Standard

Basic Design	API603/B16.34
Face to Face/End to End	ASME B16.10
End Flange	ASME B16.5
Butt-welding End	ASME B16.25
Pressure-temperature Rating	ASME B16.34
Inspection and Testing	API 598

Stainless Steel Check Valve

1. Optional swing or lift type of disc.
2. Optional anti-rotation disc.
3. Integral metal seat to ensure abrasion-resistance, a reliable sealing and and longer service life.
4. Internal design of hinge pin connecting with hinge to avoid external leakage and ensure reliability in service.

General Assembly Drawing



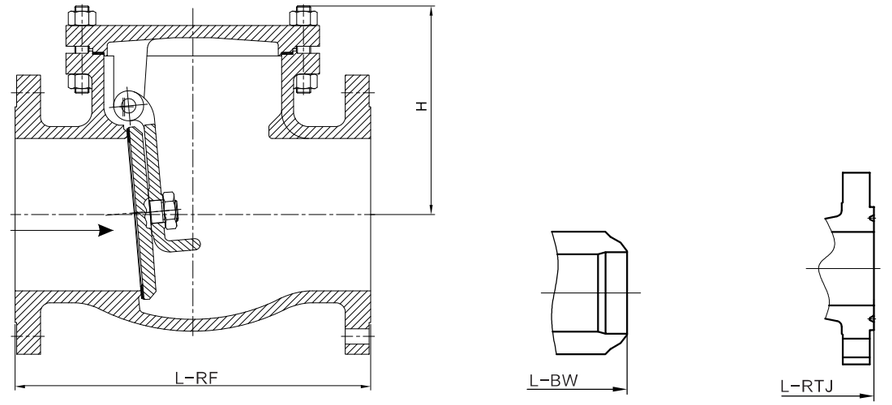
Material of Construction

Part No.	Part Name	Material
1	Body	ASTM A351 GR.CF8M +HF
2	Disc	ASTM A351 GR.CF8M +HF
3	Disc Lock Nut	ASTM A276 Type 316
4	Hinge	ASTM A351 GR.CF8M
5	Hinge Pin	ASTM A276 Type 316
6	Gasket	PTFE
7	Cover	ASTM A351 GR.CF8M
8	Stud	ASTM A193 GR.B8
9	Nut	ASTM A194 GR.8

HF: Hard-faced with stellite 6 or equivalent。

Stainless Steel Check Valve

Dimension & Weight



CLASS 150

Size		L-RF/BW		L-RTJ		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	kg	lb
2	50	203	8.00	216	8.50	126	4.96	12	25
2 1/2	65	216	8.50	229	9.00	142	5.59	16	35
3	80	241	9.50	254	10.00	149	5.87	19	41
4	100	292	11.50	305	12.00	165	6.50	34	75
6	150	356	14.00	368	14.50	208	8.19	59	130
8	200	495	19.50	508	20.00	257	10.12	113	249
10	250	622	24.50	635	25.00	359	14.13	221	487
12	300	699	27.50	711	28.00	397	15.63	320	705

CLASS 300

Size		L-RF/BW		L-RTJ		H		Approx Weight	
NPS	DN	mm	in	mm	in	mm	in	kg	lb
2	50	267	10.50	283	11.12	127	5.00	14	31
2 1/2	65	292	11.50	308	12.12	142	5.59	22	49
3	80	318	12.50	333	13.12	149	5.87	36	79
4	100	356	14.00	371	14.62	164	6.46	46	100
6	150	445	17.50	460	18.12	218	8.58	88	194
8	200	533	21.00	549	21.62	273	10.75	180	397
10	250	622	24.50	638	25.12	388	15.28	289	637

Operating Torque

Stainless Steel Gate Valve

NPS	Material	CLASS 150		CLASS 300	
		N · m	Ft · Lbs	N · m	Ft · Lbs
1	CF8M	10.67	7.88	/	/
11/2	CF8M	13.03	9.61	/	/
2	CF8M	15.97	11.78	23.38	17.25
21/2	CF8M	17.63	13.00	26.75	19.73
3	CF8M	18.57	13.70	35.21	25.97
4	CF8M	26.3	19.40	57.52	42.43
6	CF8M	48.66	35.90	142.6	105.18
8	CF8M	93.85	69.22	262.67	193.75
10	CF8M	154.38	113.87	405.97	299.44
12	CF8M	219.88	162.18	613.27	452.35
14	CF8M	289.33	213.41	/	/
16	CF8M	411.16	303.27	/	/
18	CF8M	531.62	392.12	/	/

Stainless Steel Globe Valve

NPS	Material	CLASS 150		CLASS 300	
		N · m	Ft · Lbs	N · m	Ft · Lbs
2	CF8M	15.38	11.34	26.45	19.51
3	CF8M	33.73	24.88	70.41	51.93
4	CF8M	59.09	43.58	125.2	92.35
6	CF8M	115.96	85.53	334.8	246.95

Note: Due to quick development of products, the data in our catalogue may be updated. SNY reserves the right to change the design, material, or specification without notice and free of obligation to furnish or install such changes on products previously sold.

PRODUCT WARRANTY

SNY offer the product warranty within 18 months from the date of shipment or 12 months after installation,whichever occurs first.