FLOWTORQ®

www.flowtorq.in

Process Valves

Technical Product Catalogue

Gate, Globe Check, Ball, Butterfly, Plug and Other Valves

GeM Government e Marketplace

MSME MICRO, SMALL & MEDIUM ENTERPRISES OUR STRENGTH

Ministry of MSME, Govt. of India

ISO 9001:2015

INTERNATIONAL ACCREDITATION FORUM IAF

FLOWTORQ ENGINEERING (INDIA) PVT. LTD

info@flowtorq.in | info.flowtorq@gmail.com

91-8007405198

INTRODUCTION

Flowtorq™ is emerging as one of the best valve manufacturer of industrial valves in India.
The foremost valve manufacturer company located in near Mumbai. We are engaged in design, manufacturing, testing and selling of all types of Industrial valves. Our customer base includes end users in oil & gas, chemical plants, petrochemical plants, power, cement / mining, steel and other inudstires including food processing.
Secondly, we have gained vast experience in valve design & manufacturing with latest standards.
Accordingly updated industrial trends makes us one among best Valve manufacturer and supplier in pan India market.
We constantly look for technology upgrades in valves and put extra efforts in design and development of more optmized designs. Addtions to our systems like Process management and Value Engineering has given us an edge above the rest in current competition. All our work process is handled with ERP enabled environment, so that every single record is traceable.

Generally our product range includes Gate, Globe, Check, Ball, Butterfly and Plug valves.
Latest additions in our range are gas pipeline valves, polypropylene applications valves, fuel transportation pipeline valves and cryogenic service valves, hot service valves, etc. Flowtorq's Emergency shutdown valves ESD valves applications has gained worldwide trust. With combination of rotary pneumatic reliable valves and actuators manufactured by us. Thus, we have gained reputation as a key technology and cutomised solutions provider to the market. Our products comply to all international requirements and standards like **ISO**, **API**, **ASME**, **ANSI**, **BS EN**, etc.

This catalgoue provides a comprehensive guide to our products, technical specifications, material specifications and applicable design, manufacturing and testing standards. The dimensional specifications are latest as per standards but however could be updated or changed as per revesions in standards or manufacturers own standards anytime without prior information. All dimensions mentioned are in "mm" unless stated otherwise.

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CERTIFICATES

Certificate of Registration

(Quality Management System)

QFS MANAGEMENT SYSTEMS LLP

This is to Certify that the Quality Management System of

FLOWTORQ ENGINEERING (INDIA) PRIVATE LIMITED

189-FIRDOUS COMPLEX, R. NO. 201, KHANDUPADA ROAD, 4TH NIZAMPURA, BHIWANDI- 421302, DIST. THANE, MAHARASHTRA, INDIA

Has been found to be of the Quality Management System Standard

ISO 9001:2015

This certificate is valid for the following product or service range:
DESIGN AND MANUFACTURING OF PIPELINE VALVES, ACTUATORS, PROCESS EQUIPMENT AND ENGINEERING CONSULTANCY SERVICES FOR OIL AND GAS, PETROCHEMICAL, PEB STRUCTURES AND CHEMICAL INDUSTRIES

Certificate Number: IS/2009FN/2347
1st Surv. Due on: 25.08.2021
Initial Date of Certification: 26.09.2020
2nd Surv. Due on: 25.08.2022
Date of Certificate: 26.09.2020
Date of Expiry: 25.09.2023

Director:
Date: 26.09.2020

IAF MLA
IAS ACCREDITED MSCB 118

The validity of certificate is subject to regular surveillance audit on before above mentioned dates and its only valid after successful surveillance with continuation letter issued by QFS. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of assessment and surveillance regarding the standard named above and QFS terms and conditions

QFS MANAGEMENT SYSTEMS LLP
Reach us: 8390794999
www.qfscerts.com
email: admin@qfscerts.com
This Certificate remains the property of QFS

भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small and Medium Enterprises

UDYAM
REGISTRATION CERTIFICATE

Our small hands to make you LARGE

UDYAM REGISTRATION NUMBER	UDYAM-MH-33-0013018
NAME OF ENTERPRISE	M/S FLOWTORQ ENGINEERING (INDIA) PRIVATE LIMITED
TYPE OF ENTERPRISE	MICRO (MICRO During Previous Financial Year)
MAJOR ACTIVITY	MANUFACTURING
SOCIAL CATEGORY OF ENTREPRENEUR	GENERAL
NAME OF UNIT(S)	S.No. 1 Bhiwandi
OFFICIAL ADDRESS OF ENTERPRISE	Flat/Door/Block No. 201 · Name of Premises/ Building: Firdous Complex · Village/Town: Bhiwandi · Block: ·· · Road/Street/Lane: khandupada Road · City: Bhiwandi · State: MAHARASHTRA · District: THANE · Pin: 421302 · Mobile: 9867605146 · Email: ··
DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE	24/09/2020
DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS	24/09/2020
NATIONAL INDUSTRY CLASSIFICATION CODE(S)	1: NIC 2 Digit: 25 - Manufacture of fabricated metal products, except machinery and equipment · NIC 4 Digit: 2512 - Manufacture of tanks, reservoirs and containers of metal · NIC 5 Digit: 25122 - Manufacture of metal reservoirs, tanks and similar containers · Activity: Manufacturing 2: NIC 2 Digit: 28 - Manufacture of machinery and equipment n.e.c. · NIC 4 Digit: 2813 - Manufacture of other pumps, compressors, taps and valves · NIC 5 Digit: 28132 - Manufacture of other pumps, compressors, taps and valves etc. · Activity: Manufacturing 3: NIC 2 Digit: 71 - Architectural and engineering activities; technical testing and analysis · NIC 4 Digit: 7110 - Architectural and engineering activities and related technical consultancy · NIC 5 Digit: 71100 - Architectural and engineering activities and related technical consultancy · Activity: Services
DATE OF UDYAM REGISTRATION	24/09/2020

In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME.

Disclaimer: This is computer generated statement, no signature required. Printed from https://udyamregistration.gov.in & Date of printing : 21/10/2021

For any assistance, you may contact:

1. District Industries Centre: THANE (MAHARASHTRA)
2. MSME-DI: MUMBAI (MAHARASHTRA)

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प्रपत्र आठवीं - 2
Form TG - 2

भारत सरकार
Government of India
व्यापार चिन्ह रजिस्ट्री
Trade Marks Registry
व्यापार चिन्ह अधिनियम, 1999
Trade Marks Act, 1999
व्यापार चिन्ह के रजिस्ट्रीकरण का प्रमाणपत्र, धारा 23 (2), नियम 56 (1)
Certificate of Registration of Trade Mark, Section 23 (2), Rule 56 (1)

क्रमांक No. 2764053

Trade Mark No. 4792312 Date: Date 23/12/2020 वर्ग Cl. No. 1983

Certified that Trade Mark / a representation is annexed hereto has been registered in the name(s) of :-
FLOWTORQ ENGINEERING (INDIA) PRIVATE LIMITED, 201,firdous complex,bhiwandi,189 khandupada road,bhiwandi,maharashtra,thane,421302, THE TRADEMARK ACT - 1999, (Body Incorporate)

In Class 6 Under No. 4792312 as of the date 23 December 2020 in respect of

Common metals and their alloys, ores; Metal materials for building and construction; Transportable buildings of metal; Non-electric cables and wires of common metal; Small items of metal hardware; Metal containers for storage or transport; Safes

Sealed at my direction, this 05th day of June , 2021

Trade Marks Registry MUMBAI

Registrar of Trademarks

CERTIFICATE NO: DIPP69118

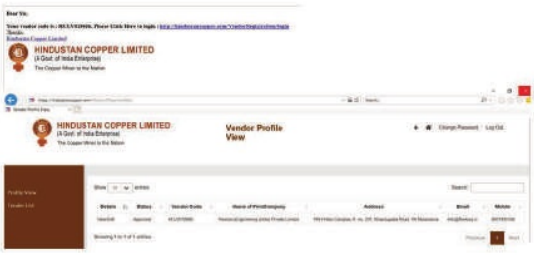
#startupindia

CERTIFICATE OF RECOGNITION

This is to certify that FLOWTORQ ENGINEERING (INDIA) PRIVATE LIMITED *incorporated as a Private Limited Company on 24-08-2020, is recognized as a startup by the Department for Promotion of Industry and Internal Trade. The startup is working in 'Design' Industry and 'Industrial Design' sector as self-certified by them.*

30-09-2020 DATE OF ISSUE

25-08-2030 VALID UPTO



HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)

HINDUSTAN COPPER LIMITED
(A Govt. of India Enterprise)

Vendor Profile View

GeM Government e Marketplace · CE · MSME Ministry of MSME, Govt. of India · IAF · ISO 9001:2015

GATE VALVES - CAST STEEL GATE VALVES

Gate valves are most efficient On-Off valves with bi-directional flow. It houses a wedge sliding in a flow passageway in order to start or stop the flow or process medium. One of the best characteristics of gate valves is its straight and un-obstructed passage in the "full open" position. This happens when the wedge is lifted entirely out of the passageway. Therefore, gate valves are characterized by a minimum pressure drop and flow turbulence when in operation. Since, gate valves are good for applications with these two factors, gate valves are not recommended for applications for control and modulation.
These are purely designed and standardized for on/off applications.

DESIGN STANDARD	
Bolted Bonnet Gate Valve	API 600/ISO 10434 & ASME B16.34
Pressure Seal Gate Valve (Long & Short pattern)	ASME B16.34
API 603 Gate Valve	API 603
Through Conduit Gate Valve	API 6D
Cryogenic Gate	API 600 / BS 1873 & BS 6364
Face to Face / End to End Dimensions	ASME B16.10 / ISO 5752
End Flanged dimensions	ASME B16.5 / ISO 7005-1, ASME B16.47-A&B,MSS SP- 44 & API 605
Butt-weld End dimensions	ASME B16.25
Valve inspection & testing	API 600 / ISO 10434 & ISO 5208, EN 17266
Pressure - Temperature rating	ASME B16.34

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598 / ISO 5208	API 598 / ISO 5208

API 600 TRIM CHART			
API 600TRIM №	**Nominal TRIM**	**Stem / Backseat**	**Seating Surface Body / Wedge**
1	F6	13Cr	13Cr
2	304	18Cr-8Ni	18Cr-8Ni
3	F310	25Cr-20Ni	25Cr-20Ni
4	Hard F6	13Cr	Hard 13Cr
5	Hardfaced	13Cr	Co-Cr A
5A	Hardfaced	13Cr	Ni-Cr
6	F6 and Cu-Ni	13Cr	13Cr and Cu-Ni
7	F6 and Hard F6	13Cr	13Cr and Hard 13Cr
8	F6 and Hardfaced	13Cr	13Cr and Co-Cr A
8A	F6 and Hardfaced	13Cr	13Cr and Ni-Cr
9	Monel	Ni-Cu Alloy	Ni-Cu Alloy
10	316	18Cr-8Ni-Mo	18Cr-8Ni-Mo
11	Monel and Hardfaced	Ni-Cu Alloy	Ni-Cu Alloy and Trim 5 or 5A
12	316 and Hardfaced	18Cr-8Ni-Mo	18Cr-8Ni-Mo and Trim 5 or 5A
13	Alloy 20	19Cr-29Ni	19Cr-29Ni
14	Alloy 20 and Hardfaced	19Cr-29Ni	19Cr-29Ni and Trim 5 or 5A
15	Hardfaced	18Cr-8Ni	Co-CRr A
16	Hardfaced	18Cr-8Ni-Mo	Co-CRr A
17	Hardfaced	18Cr-10Ni-Cb	Co-CRr A
18	Hardfaced	19Cr-29Ni	Co-CRr A

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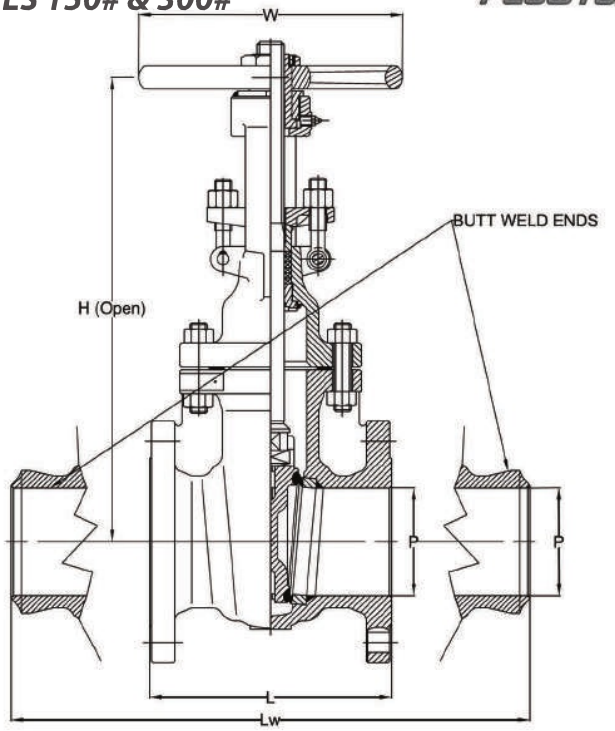
GATE VALVES - CAST STEEL GATE VALVES 150# & 300#



150#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	178	216	386	200	17
65 (2½")	190	241	435	200	27
80 (3")	203	282,5	483	250	33
100 (4")	229	305	587	250	48
125 (5")	254	381	673	300	65
150 (6")	267	403	767	300	78
200 (8")	292	419	955	350	120
250 (10")	330	457	1146	450	176
300 (12")	356	502	1328	500	260
350 (14")	381	572	1519	460*	380 (*)
400 (16")	406	610	1721	460 (*)	530 (*)
450 (18")	432	660	1900	460 (*)	620 (*)
500 (20")	457	711	2116	610 (*)	810 (*)
550 (22")	483	762	2315	610 (*)	1050 (*)
600 (24")	508	813	2480	610 (*)	1150 (*)
650 (26")	559	-	2700	610 (*)	1380 (*)
700 (28")	610	-	2975	610 (*)	1980 (*)
750 (30")	610	-	3102	610 (*)	2200 (*)
900 (36")	711	-	3668	710 (*)	2800 (*)

(Code-SS)

300#					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	216	216	417	200	24
65 (2½")	241	241	460	250	35
80 (3")	283	283	526	250	49
100 (4")	305	305	650	250	69
125 (5")	381	381	694	300	92
150 (6")	403	403	824	350	130
200 (8")	419	419	987	450	208
250 (10")	457	457	1192	500	333
300 (12")	502	502	1431	560	536
350 (14")	762	762	1559	460 (*)	699 (*)
400 (16")	838	838	1758	460 (*)	1010 (*)
450 (18")	914	914	1942	610 (*)	1205 (*)
500 (20")	991	991	2145	610 (*)	1720 (*)
550 (22")	1092	1092	2340	610 (*)	1920 (*)
600 (24")	1143	1143	2526	610 (*)	2580 (*)

(Code-SS)

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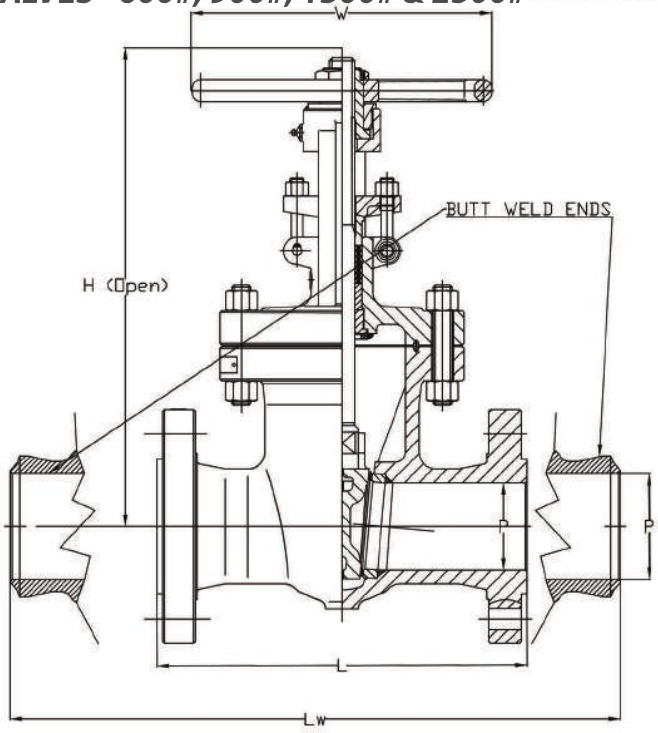
GATE VALVES - CAST STEEL GATE VALVES - 600#, 900#, 1500# & 2500#



600GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	292	292	427	250	33
65 (2½")	330	330	473	250	58
80 (3")	356	356	538	300	63
100 (4")	432	432	657	350	131
125 (5")	508	508	770	400	182
150 (6")	559	559	872	500	253
200 (8")	660	660	1101	560	413
250 (10")	787	787	1279	720	623
300 (12")	838	838	1486	610 (*)	784 (*)
350 (14")	889	889	1643	610 (*)	1288 (*)
400 (16")	991	991	1798	610 (*)	1820 (*)
450 (18")	1092	1092	2101	610 (*)	2150 (*)
500 (20")	1194	1194	2259	710 (*)	2540 (*)
550 (22")	1295	1295	2405	760 (*)	2800 (*)
600 (24")	1397	1397	2545	760 (*)	3350 (*)

(Code-SS)

1500GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	368	368	574	350	117
65 (2½")	419	419	700	400	175
80 (3")	470	470	806	450	240
100 (4")	546	546	887	560	337
125 (5")	673	673	995	560	485
150 (6")	705	705	1079	305 (*)	680
200 (8")	832	832	1370	610 (*)	1228 (*)
250 (10")	991	991	1520	760 (*)	2218 (*)
300 (12")	1130	1130	1651	760 (*)	3260 (*)
350 (14")	1257	1257	1825	760 (*)	3990 (*)
400 (16")	1384	1384	1995	760 (*)	5420 (*)

(Code-SS)

900GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	368	368	547	300	90
65 (2½")	419	419	700	350	110
80 (3")	381	381	648	400	123
100 (4")	457	457	729	450	148
125 (5")	559	559	890	500	280
150 (6")	610	610	1041	560	420
200 (8")	737	737	1260	460 (*)	650 (*)
250 (10")	838	838	1590	610 (*)	1160 (*)
300 (12")	965	965	1795	610 (*)	1700 (*)
350 (14")	1029	1029	2025	760 (*)	2300 (*)
400 (16")	1130	1130	2170	760 (*)	2750 (*)
450 (18")	1219	1219	2345	760 (*)	3120 (*)
500 (20")	1321	1321	2610	760 (*)	3550 (*)

(Code-SS)

2500GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	451	451	595	400	155
65 (2½")	508	508	675	450	215
80 (3")	578	578	750	560	285
100 (4")	673	673	805	610	405
125 (5")	794	794	1010	610	715
150 (6")	914	914	1200	460 (*)	1050 (*)
200 (8")	1022	1022	1346	610 (*)	1700 (*)
250 (10")	1270	1270	1500	760 (*)	2950 (*)
300 (12")	1422	1422	1700	760 (*)	4120 (*)
350 (14")	1575	1575	1950	760 (*)	5790 (*)

(Code-SS)

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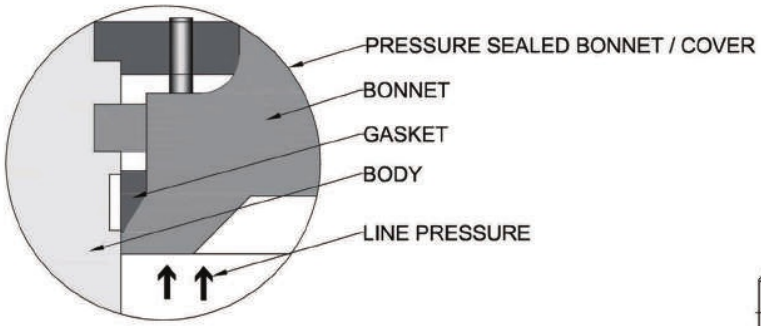
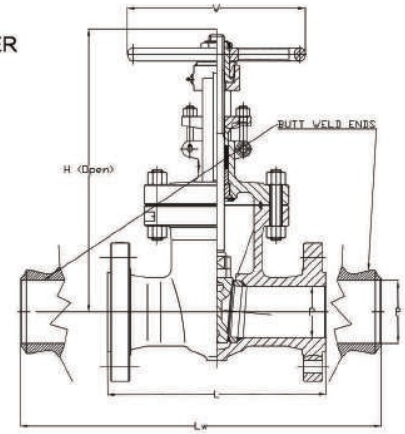
GATE VALVES - *PRESSURE SEALED GATE VALVES*

FLOWTORQ Pressure Seal Gate Valves are best suited for high pressure applications like steam, liquid, catalytic reformers, hydrocrackers and other tough services. For High pressure, High temperature applications, Pressure seal gate valves continue to cater a wide range of industries with a safest, leakage free, pressure holding service. In opposition to bolted-bonnet valves, internal pressure applied to a pressure seal valve forces the sealing parts into more tighter contact—the higher the internal pressure, the tighter the seal. Afterwards the line pressure provides extra force to seal the gasket. Thus, as line pressure increases, the chances for leakage through the body-bonnet joint is less.





900GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	368	368	547	300	90
65 (2½")	419	419	700	350	110
80 (3")	381	381	648	400	123
100 (4")	457	457	729	450	148
125 (5")	559	559	890	500	280
150 (6")	610	610	1041	560	420
200 (8")	737	737	1260	460 (*)	650 (*)
250 (10")	838	838	1590	610 (*)	1160 (*)
300 (12")	965	965	1795	610 (*)	1700 (*)
350 (14")	1029	1029	2025	760 (*)	2300 (*)
400 (16")	1130	1130	2170	760 (*)	2750 (*)
450 (18")	1219	1219	2345	760 (*)	3120 (*)
500 (20")	1321	1321	2610	760 (*)	3550 (*)

(Code-SS)

1500GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	368	368	574	350	117
65 (2½")	419	419	700	400	175
80 (3")	470	470	806	450	240
100 (4")	546	546	887	560	337
125 (5")	673	673	995	560	485
150 (6")	705	705	1079	305 (*)	680
200 (8")	832	832	1370	610 (*)	1228 (*)
250 (10")	991	991	1520	760 (*)	2218 (*)
300 (12")	1130	1130	1651	760 (*)	3260 (*)
350 (14")	1257	1257	1825	760 (*)	3990 (*)
400 (16")	1384	1384	1995	760 (*)	5420 (*)

(Code-SS)

2500GTV					
DN (inch)	L	Lw	A	H	WEIGHT (Kg) Approx
50 (2")	451	451	595	400	155
65 (2½")	508	508	675	450	215
80 (3")	578	578	750	560	285
100 (4")	673	673	805	610	405
125 (5")	794	794	1010	610	715
150 (6")	914	914	1200	460 (*)	1050 (*)
200 (8")	1022	1022	1346	610 (*)	1700 (*)
250 (10")	1270	1270	1500	760 (*)	2950 (*)
300 (12")	1422	1422	1700	760 (*)	4120 (*)
350 (14")	1575	1575	1950	760 (*)	5790 (*)

(Code-SS)

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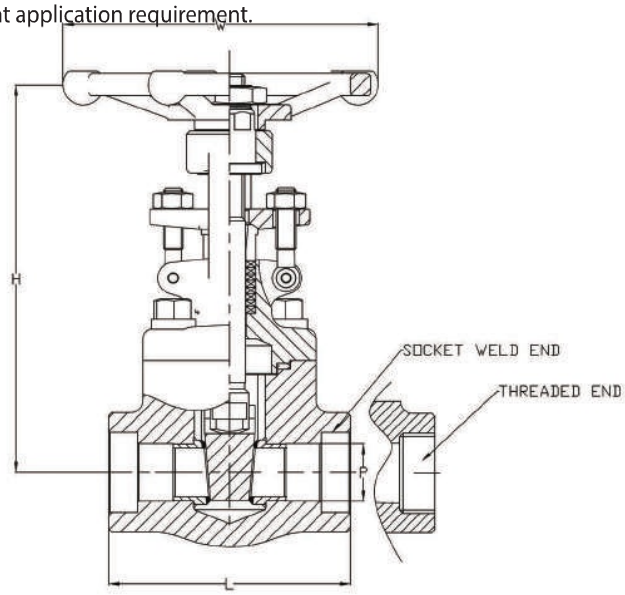
GATE VALVES - FORGED STEEL GATE VALVES - 800#, 1500# & 2500#

Socket Weld / Threaded Ends

FLOWTORQ Forged Steel gate valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement.



Design and Manufacturing Standard	API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

800# - Socket Weld					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	87	92	106	127	142
H	152	158	189	239	288
P	9.5	12.7	17.5	28.6	36.5
W	96	96	96	150	150
Weight (kg)	1.6	1.9	3	6.1	9.8

1500# - Socket Weld				
Size	1/2"	3/4"	1"	1 1/2"
L	92	106	127	142
H	158	189	239	288
P	9.5	12.7	17.5	28.6
W	96	96	150	150
Weight (kg)	2.2	3.5	7.5	11.6

2500# - Socket Weld				
Size	1/2"	3/4"	1"	
L	106	127	142	
H	189	239	288	
P	7	12.5	15.5	
W	96	150	150	
Weight (kg)	4.1	8.4	13	

(Code-AHV)

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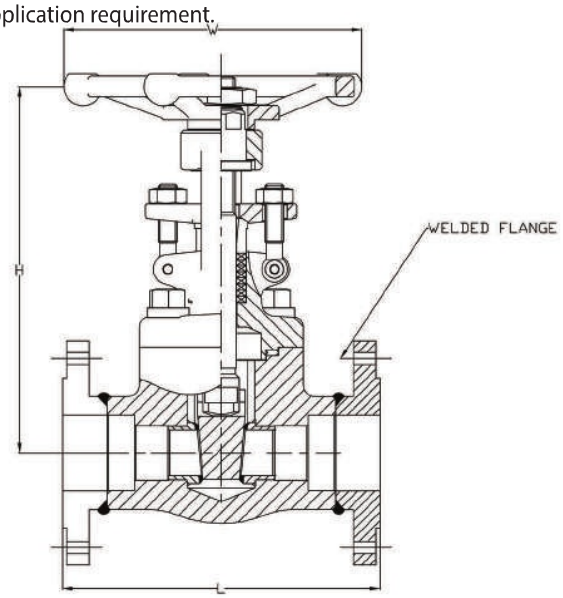
GATE VALVES - FORGED STEEL GATE VALVES - 150#, 300# & 600#

Welded Flange Ends

FLOWTORQ Forged Steel gate valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement.



Design and Manufacturing Standard	API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

150# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	108	117	127	165	178
H	152	158	189	239	288
P	9.5	12.7	17.5	28.6	36.5
W	96	96	96	150	150
Weight (kg)	2.2	2.9	4.4	7.9	12

300# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	140	152	165	190	216
H	152	158	189	239	288
P	9.5	12.7	17.5	28.6	36.5
W	96	96	96	150	150
Weight (kg)	2.4	3.1	4.6	8.1	12.2

600# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	165	190	216	241	292
H	152	158	189	239	288
P	9.5	12.7	17.5	28.6	36.5
W	96	96	96	150	150
Weight (kg)	2.6	3.3	4.8	8.3	12.5

(Code-AHV)

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GLOBE VALVES - CAST STEEL GLOBE VALVES

Globe valves work on the basis of port vs disc / plug flow opening percentage. It means that fluid passes through a specific opening which is varibale because of the contour design of plug or disc. Due to this design, there is not a fixed passageway like gate valve. The opening can be increased or decresed to control the flow by vertical movement of stem. These valves are generally designed with the terminology of equal percentage, quick opening and closing and linear tyoe of characteristics. These characteristics define the opening % vs the downstream flow %.

DESIGN STANDARD	
Bolted Bonnet Globe Valve	BS 1873 & ASME B16.34
Pressure Seal Globe Valve (Long & Short pattern)	ASME B16.34
Face to Face / End to End Dimensions	ASME B16.10 / ISO 5752
End Flanged dimensions	ASME B16.5 / ISO 7005-1, ASME B16.47-A&B MSS SP- 44 & API 605
Butt-weld End dimensions	ASME B16.25
Valve inspection & testing	BS1873, ISO 5208, BS 6755, EN 17266
Pressure - Temperature rating	ASME B16.34

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		*MSS SP-55*
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598 / ISO 5208	API 598 / ISO 5208

API 600 TRIM CHART			
API 600TRIM Nº	**Nominal TRIM**	**Stem / Backseat**	**Seating Surface Body / Wedge**
1	F6	13Cr	13Cr
2	304	18Cr-8Ni	18Cr-8Ni
3	F310	25Cr-20Ni	25Cr-20Ni
4	Hard F6	13Cr	Hard 13Cr
5	Hardfaced	13Cr	Co-Cr A
5A	Hardfaced	13Cr	Ni-Cr
6	F6 and Cu-Ni	13Cr	13Cr and Cu-Ni
7	F6 and Hard F6	13Cr	13Cr and Hard 13Cr
8	F6 and Hardfaced	13Cr	13Cr and Co-Cr A
8A	F6 and Hardfaced	13Cr	13Cr and Ni-Cr
9	Monel	Ni-Cu Alloy	Ni-Cu Alloy
10	316	18Cr-8Ni-Mo	18Cr-8Ni-Mo
11	Monel and Hardfaced	Ni-Cu Alloy	Ni-Cu Alloy and Trim 5 or 5A
12	316 and Hardfaced	18Cr-8Ni-Mo	18Cr-8Ni-Mo and Trim 5 or 5A
13	Alloy 20	19Cr-29Ni	19Cr-29Ni
14	Alloy 20 and Hardfaced	19Cr-29Ni	19Cr-29Ni and Trim 5 or 5A
15	Hardfaced	18Cr-8Ni	Co-CRr A
16	Hardfaced	18Cr-8Ni-Mo	Co-CRr A
17	Hardfaced	18Cr-10Ni-Cb	Co-CRr A
18	Hardfaced	19Cr-29Ni	Co-CRr A

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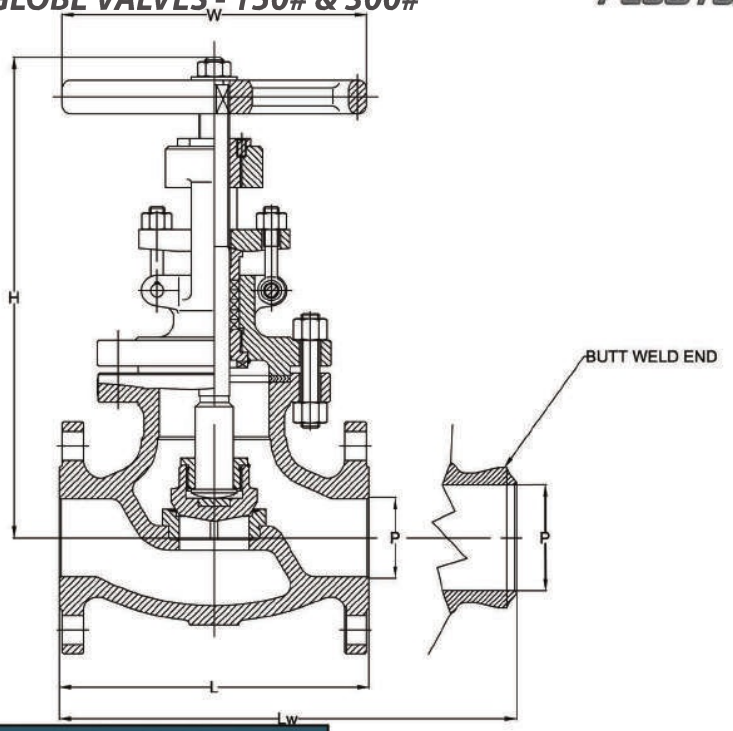
GLOBE VALVES - CAST STEEL GLOBE VALVES - 150# & 300#



150#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	203	203	341	200	22
65 (2½")	216	216	367	250	29
80 (3")	241	241	375	250	40
100 (4")	292	292	483	300	64
125 (5")	356	356	537	300	77
150 (6")	406	406	517	350	105
200 (8")	495	495	590	400	154
250 (10")	622	622	754	450	288
300 (12")	698	698	941	640	507
350 (14")	787	787	1085	640	520
400 (16")	914	914	1250	460 (*)	810 (*)

(Code-SS)

300#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	267	267	349	200	31
65 (2½")	292	292	376	250	43
80 (3")	318	318	430	250	57
100 (4")	356	356	486	350	86
125 (5")	400	400	560	400	130
150 (6")	444	444	618	450	168
200 (8")	559	559	937	560	280
250 (10")	622	622	949	640	385
300 (12")	711	711	995	460 (*)	671 (*)

(Code-SS)

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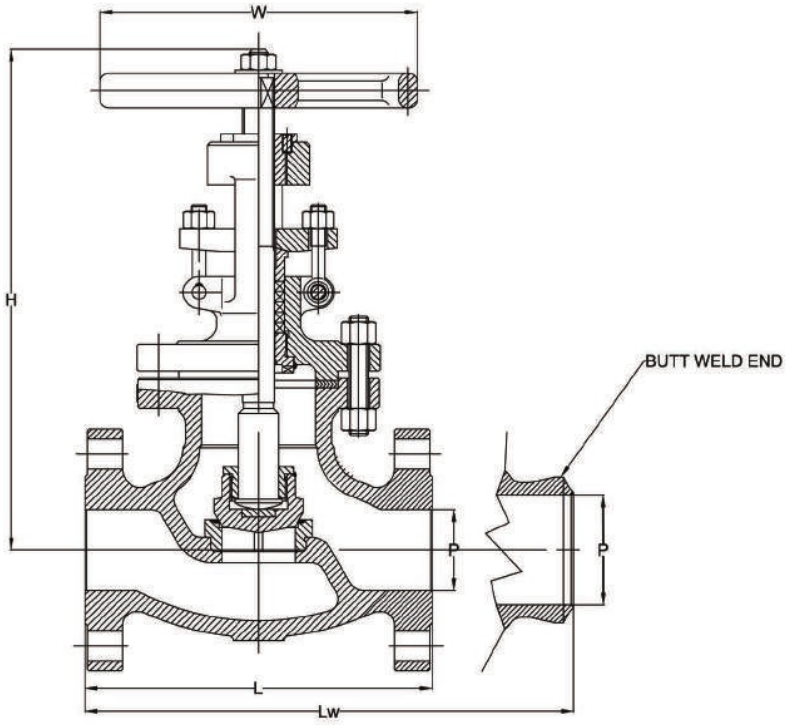
GLOBE VALVES - CAST STEEL GLOBE VALVES - 600#, 900#, 1500# & 2500#



600#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	292	292	425	250	35
65 (2½")	330	330	502	300	48
80 (3")	356	356	521	350	73
100 (4")	432	432	620	450	117
125 (5")	508	508	756	500	245
150 (6")	559	559	886	560	327
200 (8")	660	660	932	460 (*)	482 (*)
250 (10")	787	787	1040	610 (*)	700 (*)
300 (12")	838	838	1280	760 (*)	900 (*)

(Code-SS)

1500#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	368	368	592	350	112
65 (2½")	419	419	605	450	175
80 (3")	470	470	692	450	228
100 (4")	546	546	907	460 (*)	336 (*)
~~125 (5")~~	~~673~~	~~673~~	~~965~~	~~560 (*)~~	~~585 (*)~~
150 (6")	705	705	1015	610 (*)	822 (*)
200 (8")	832	832	1145	610 (*)	960 (*)

(Code-SS)

900#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	368	368	478	350	105
65 (2½")	419	419	550	350	120
80 (3")	381	381	614	450	131
100 (4")	457	457	789	560	218
150 (6")	610	610	886	460 (*)	452 (*)
200 (8")	737	737	932	610 (*)	710 (*)

(Code-SS)

2500#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	451	451	635	350	135
65 (2½")	508	508	690	450	270
80 (3")	578	578	745	460	335
100 (4")	673	673	975	560 (*)	510 (*)
~~125 (5")~~	~~794~~	~~794~~	~~1025~~	~~610 (*)~~	~~730 (*)~~
150 (6")	914	914	1105	610 (*)	995 (*)
200 (8")	1022	1022	1225	610 (*)	1185 (*)

(Code-SS)

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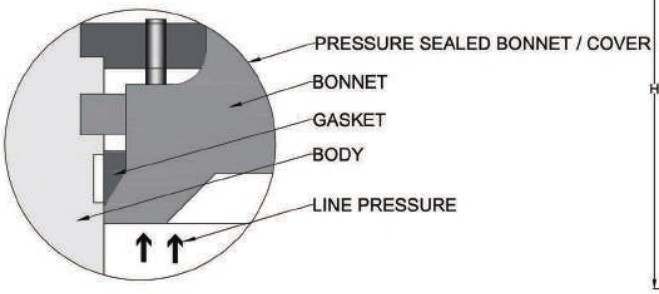
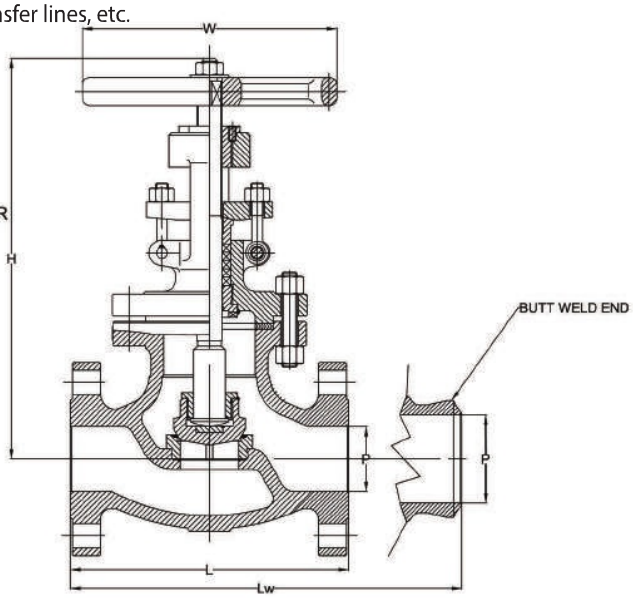
GLOBE VALVES - *PRESSURE SEALED GLOBE VALVES*

Likewise Pressure Sealed Gate Valves, FLOWTORQ Pressure Seal Globe Valves are best suited for high pressure applications like steam, liquid, catalytic reformers, hydrocrackers and other tough services. For High pressure, High temperature applications, Pressure seal globe valves continue to cater a wide range of industries with a safest, leakage free, pressure holding service. In opposition to bolted-bonnet valves, internal pressure applied to a pressure seal valve forces the sealing parts into more tighter contact—the higher the internal pressure, the tighter the seal. Afterwards the line pressure provides extra force to seal the gasket. Thus, as line pressure increases, the chances for leakage through the body-bonnet joint is less. Pressure Sealed Globe Valves provide easy modulation and control option in contrast with on-off type gate valves. Hence, could be easily used in high pressure gas transmission main lines, bypass lines, transfer lines, etc.





900#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	368	368	478	350	105
65 (2½")	419	419	550	350	120
80 (3")	381	381	614	450	131
100 (4")	457	457	789	560	218
150 (6")	610	610	886	460 (*)	452 (*)
200 (8")	737	737	932	610 (*)	710 (*)

(Code-SS)

1500#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	368	368	592	350	112
65 (2½")	419	419	605	450	175
80 (3")	470	470	692	450	228
100 (4")	546	546	907	460 (*)	336 (*)
~~125 (5")~~	~~673~~	~~673~~	~~965~~	~~560 (*)~~	~~585 (*)~~
150 (6")	705	705	1015	610 (*)	822 (*)
200 (8")	832	832	1145	610 (*)	960 (*)

(Code-SS)

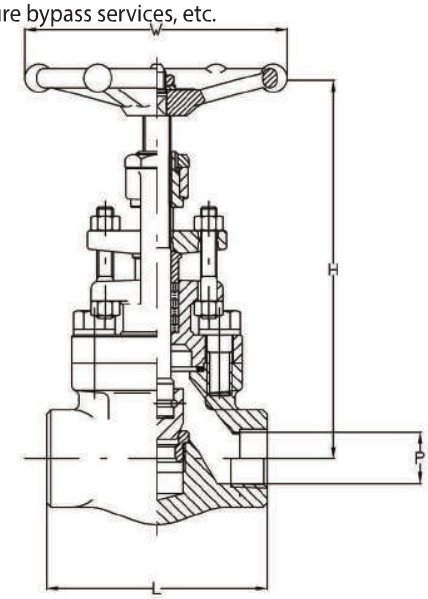
2500#					
DN (inch)	L	Lw	H	W	WEIGHT (Kg) Approx
50 (2")	451	451	635	350	135
65 (2½")	508	508	690	450	270
80 (3")	578	578	745	460	335
100 (4")	673	673	975	560 (*)	510 (*)
~~125 (5")~~	~~794~~	~~794~~	~~1025~~	~~610 (*)~~	~~730 (*)~~
150 (6")	914	914	1105	610 (*)	995 (*)
200 (8")	1022	1022	1225	610 (*)	1185 (*)

(Code-SS)

GLOBE VALVES - FORGED STEEL GLOBE VALVES - 800#, 1500# & 2500#

Socket Weld / Threaded Ends

FLOWTORQ Forged Steel globe valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel globe valves can be ideal in high pressure modulation and control application services, high pressure bypass services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

800# - Socket Weld					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	87	92	106	127	142
H	147	149	182	208	245
P	9	12	17	25	29
W	96	96	96	150	150
Weight Kg	1.6	1.9	3	6.1	9.8

1500# - Socket Weld				
Size	1/2"	3/4"	1"	1 1/2"
L	92	106	127	142
H	158	194	222	263
P	8	9	14	25
W	96	96	150	150
Weight Kg	2.2	3.5	7.5	11.6

2500# - Socket Weld				
Size	1/2"	3/4"	1"	
L	106	127	142	
H	194	222	263	
P	7	8	12	
W	96	96	150	
Weight Kg	4	8.6	13.3	

(Code-AHV)

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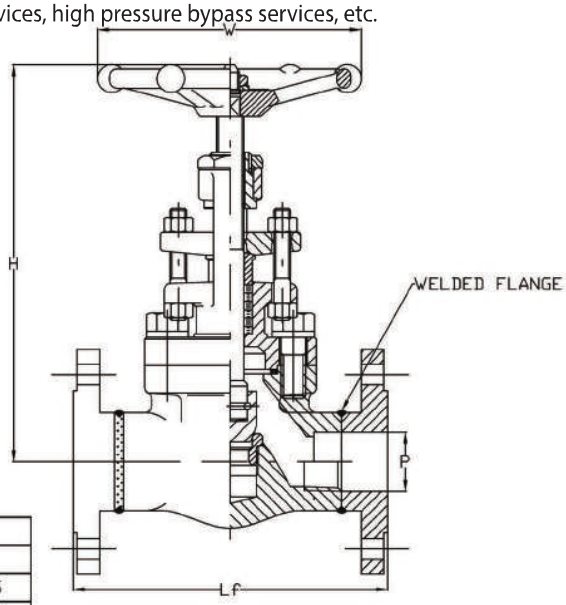
GLOBE VALVES - FORGED STEEL GLOBE VALVES - 150#, 300# & 600#

Welded Flange Ends

FLOWTORQ Forged Steel globe valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel globe valves can be ideal in high pressure modulation and control application services, high pressure bypass services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

150# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	108	117	127	165	203
H	153	158	194	222	263
P	9	12	17	25	29
W	96	96	96	150	150
Weight Kg	2.2	2.9	4.4	7.9	12

300# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	152	178	293	229	267
H	153	158	194	222	263
P	9	12	17	25	29
W	96	96	96	150	150
Weight Kg	2.4	3.1	4.6	8.1	12.2

600# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	165	190	216	241	292
H	153	158	194	222	263
P	9	12	17	25	29
W	96	96	96	150	150
Weight Kg	2.6	3.3	4.8	8.3	12.5

(Code-AHV)

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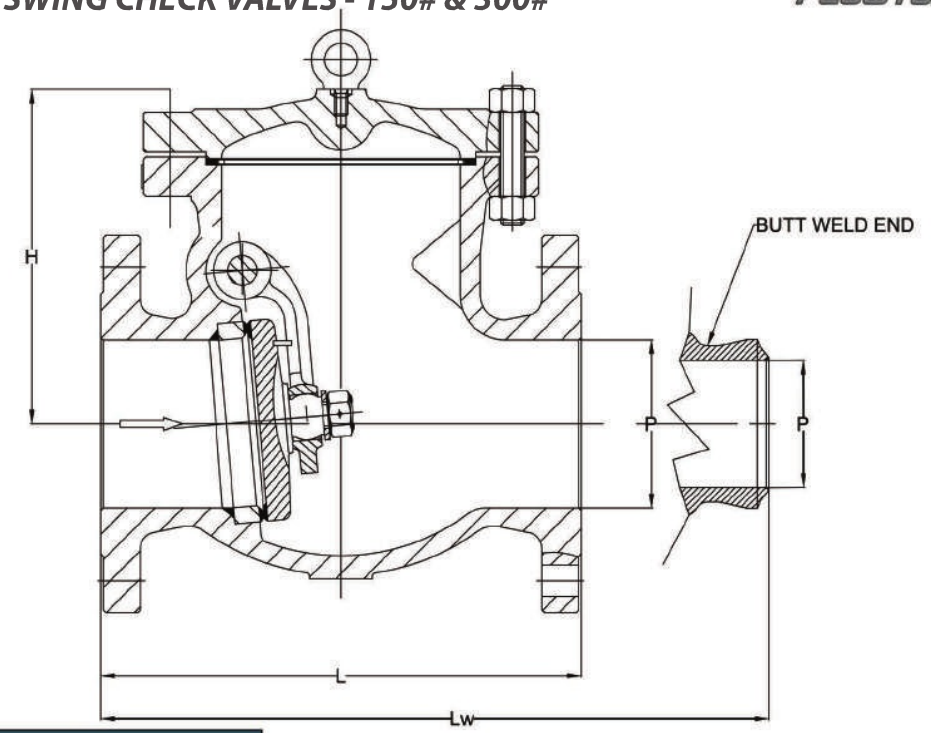
CHECK VALVES - SWING CHECK VALVES

Check Valves come in various designs such as Swing Check, Lift Check (Piston type), Dual Plate, Tilting Disc and Non-Slam types. The basic application for all check valves are totally opposite to all the other valves. It is it prevents the back flow of process fluid. Typically the closure member is the disc which is either self operated by gravity and force by the back flow or either by a spring which forces the disc or plates to rest on body seats thereby sealing and preventing the back flow. Swing check valves are most widely used followed by lift check valves and dual plate check valves.

DESIGN STANDARD		
Bolted Bonnet Swing Check Valve	BS1868 & ASME B16.34 & API 6D	
Pressure Seal Swing Check Valve (Long & Short pattern)	ASME B16.34	
Face to Face / End to End Dimensions	ASME B16.10 / ISO 5752	
End Flanged dimensions	ASME B16.5 / ISO 7005-1, ASME B16.47-A&B MSS SP- 44 & API 605	
Butt-weld End dimensions	ASME B16.25	
Valve inspection & testing	BS1868 & ISO 5208 & BS6755	
Pressure - Temperature rating	ASME B16.34	
TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598 / ISO 5208	API 598 / ISO 5208

API 600 TRIM CHART			
API 600TRIM Nº	Nominal TRIM	Stem / Backseat	Seating Surface Body / Wedge
1	F6	13Cr	13Cr
2	304	18Cr-8Ni	18Cr-8Ni
3	F310	25Cr-20Ni	25Cr-20Ni
4	Hard F6	13Cr	Hard 13Cr
5	Hardfaced	13Cr	Co-Cr A
5A	Hardfaced	13Cr	Ni-Cr
6	F6 and Cu-Ni	13Cr	13Cr and Cu-Ni
7	F6 and Hard F6	13Cr	13Cr and Hard 13Cr
8	F6 and Hardfaced	13Cr	13Cr and Co-Cr A
8A	F6 and Hardfaced	13Cr	13Cr and Ni-Cr
9	Monel	Ni-Cu Alloy	Ni-Cu Alloy
10	316	18Cr-8Ni-Mo	18Cr-8Ni-Mo
11	Monel and Hardfaced	Ni-Cu Alloy	Ni-Cu Alloy and Trim 5 or 5A
12	316 and Hardfaced	18Cr-8Ni-Mo	18Cr-8Ni-Mo and Trim 5 or 5A
13	Alloy 20	19Cr-29Ni	19Cr-29Ni
14	Alloy 20 and Hardfaced	19Cr-29Ni	19Cr-29Ni and Trim 5 or 5A
15	Hardfaced	18Cr-8Ni	Co-CRr A
16	Hardfaced	18Cr-8Ni-Mo	Co-CRr A
17	Hardfaced	18Cr-10Ni-Cb	Co-CRr A
18	Hardfaced	19Cr-29Ni	Co-CRr A

CHECK VALVES - SWING CHECK VALVES - 150# & 300#



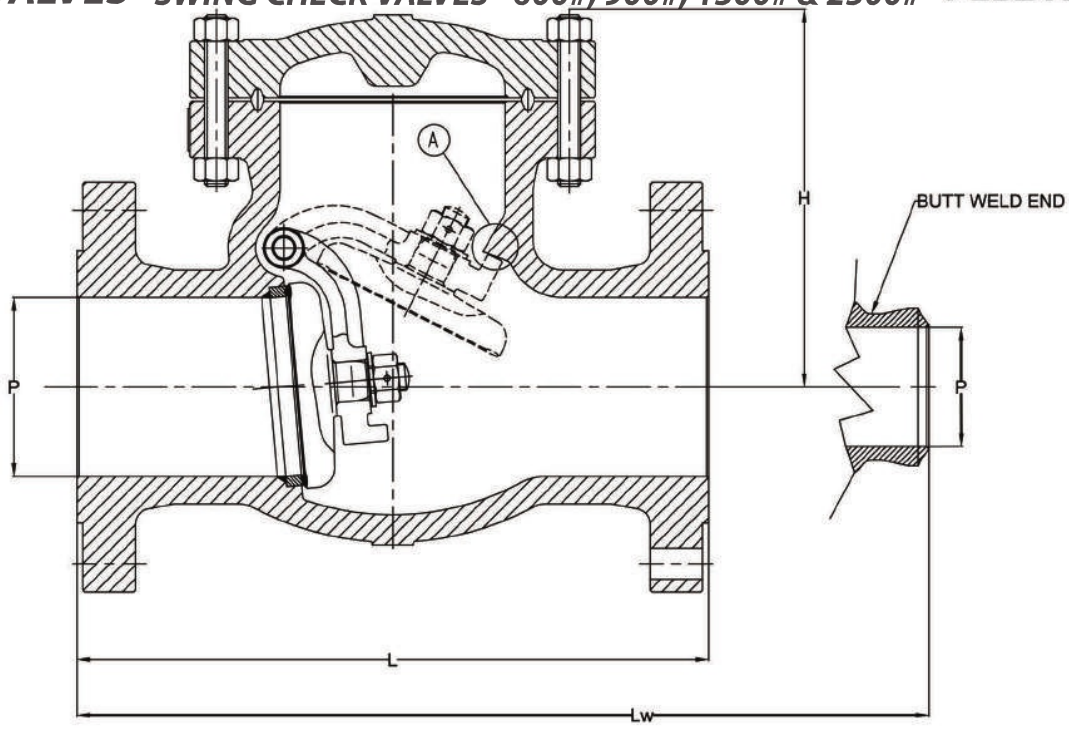
150#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	203	203	135	17
65 (2½")	216	216	155	21
80 (3")	241	241	168	29
100 (4")	292	292	235	42
125 (5")	330	330	249	59
150 (6")	356	356	277	68
200 (8")	495	495	339	118
250 (10")	622	622	398	197
300 (12")	698	698	525	302
350 (14")	787	787	553	372
400 (16")	914	914	584	570
450 (18")	978	978	668	665
500 (20")	978	978	712	900
550 (22")	1067	1067	725	1100
600 (24")	1295	1295	740	1359
650 (26")	1295	1295	780	1850
700 (28")	1448	1448	810	2000
750 (30")	1524	1524	1050	2400
900 (36")	1956	1956	1390	3380

(Code-SS)

300#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	267	267	158	21
65 (2½")	292	292	167	35
80 (3")	318	318	188	43
100 (4")	356	356	259	60
125 (5")	400	400	281	85
150 (6")	444	444	319	131
200 (8")	533	533	401	213
250 (10")	622	622	483	384
300 (12")	711	711	555	449
350 (14")	838	838	585	680
400 (16")	864	864	615	840
450 (18")	978	978	643	1025
500 (20")	1016	1016	681	1180

(Code-SS)

CHECK VALVES - SWING CHECK VALVES - 600#, 900#, 1500# & 2500#



600#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	292	292	197	26
65 (2½")	330	330	207	45
80 (3")	356	356	231	68
100 (4")	432	432	281	90
125 (5")	508	508	319	140
150 (6")	559	559	362	200
200 (8")	660	660	437	360
250 (10")	787	787	490	673
300 (12")	838	838	528	875
350 (14")	889	889	572	944
400 (16")	991	991	660	1220

(Code-SS)

1500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	265	76
65 (2½")	419	419	275	93
80 (3")	470	470	290	140
100 (4")	546	546	385	232
125 (5")	673	673	430	362
150 (6")	705	705	470	490
200 (8")	832	832	625	990

(Code-SS)

900#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	240	76
65 (2½")	419	419	250	86
80 (3")	381	381	260	98
100 (4")	457	457	320	145
125 (5")	559	559	350	175
150 (6")	610	610	382	259
200 (8")	737	737	530	565

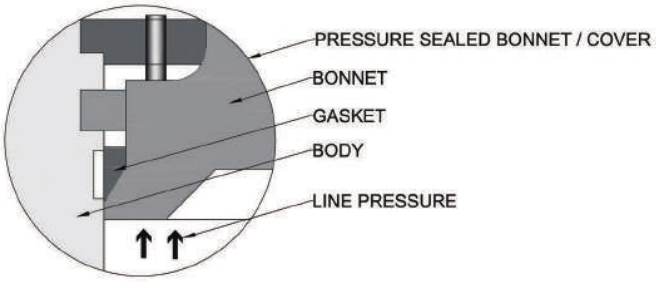
(Code-SS)

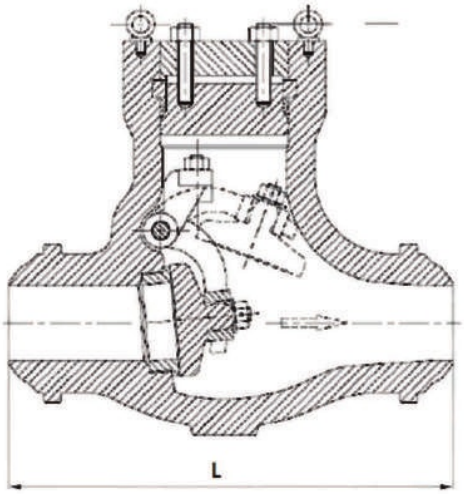
2500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	451	451	315	100
65 (2½")	508	508	345	185
80 (3")	578	578	380	225
100 (4")	673	673	410	370
125 (5")	794	794	495	595
150 (6")	914	914	560	805
200 (8")	1022	1022	695	1320

(Code-SS)

CHECK VALVES - PRESSURE SEALED SWING CHECK VALVES

Likewise Pressure Sealed Gate & Globe Valves, FLOWTORQ Pressure Sealed Check Valves are best suited for high pressure applications like steam, liquid, catalytic reformers, hydrocrackers and other tough services. For High pressure, High temperature applications, Pressure seal globe valves continue to cater a wide range of industries with a safest, leakage free, pressure holding service. In opposition to bolted-cover valves, internal pressure applied to a pressure seal valve forces the sealing parts into more tighter contact—the higher the internal pressure, the tighter the seal. Afterwards the line pressure provides extra force to seal the gasket. Thus, as line pressure increases, the chances for leakage through the body-cover joint is less.





900#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	240	76
65 (2½")	419	419	250	86
80 (3")	381	381	260	98
100 (4")	457	457	320	145
125 (5")	559	559	350	175
150 (6")	610	610	382	259
200 (8")	737	737	530	565

(Code-SS)

1500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	368	368	265	76
65 (2½")	419	419	275	93
80 (3")	470	470	290	140
100 (4")	546	546	385	232
125 (5")	673	673	430	362
150 (6")	705	705	470	490
200 (8")	832	832	625	990

(Code-SS)

2500#				
DN (inch)	L	Lw	H	WEIGHT (Kg) Approx
50 (2")	451	451	315	100
65 (2½")	508	508	345	185
80 (3")	578	578	380	225
100 (4")	673	673	410	370
125 (5")	794	794	495	595
150 (6")	914	914	560	805
200 (8")	1022	1022	695	1320

(Code-SS)

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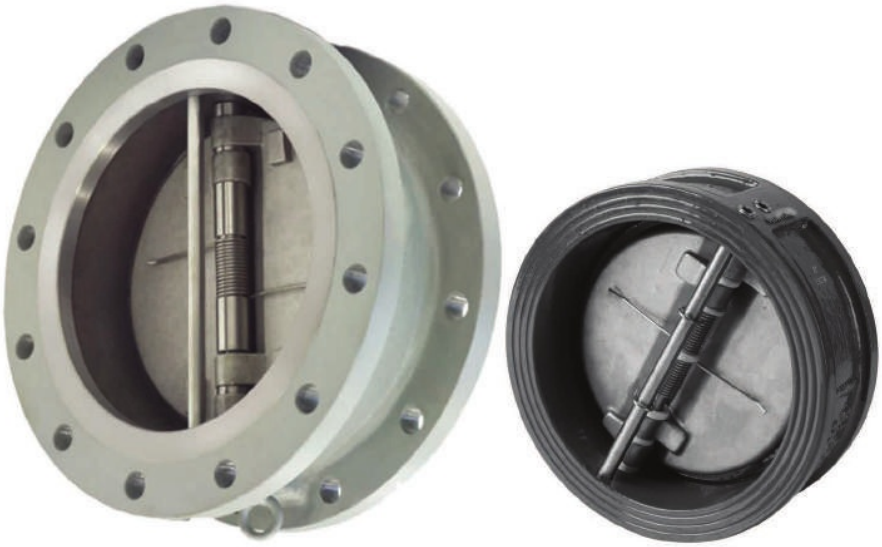
CHECK VALVES - DUAL PLATE CHECK VALVES

Comparatively llighter in weight and compact in construction with swing check valves, Dual Plate Check Valves provide cutting edge technology and application in oil & gas, petrochemical, chemical, power and other process industries. It houses two separate discs hinged to a stem (hinge pin) and forced by a spring for closing while on other hand force of service medium serves to open. Ideal for backflow prevention, pump outlet, prevent gravitational drainage, etc.



DESIGN STANDARD	
Dual Plate Check Valve	API594, ASME B16.34 & API 6D
Face to Face / End to End Dimensions	API594, ASME B16.5, ASME B16.47
Valve inspection & testing	API598
Pressure - Temperature rating	ASME B16.34

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598	API 598

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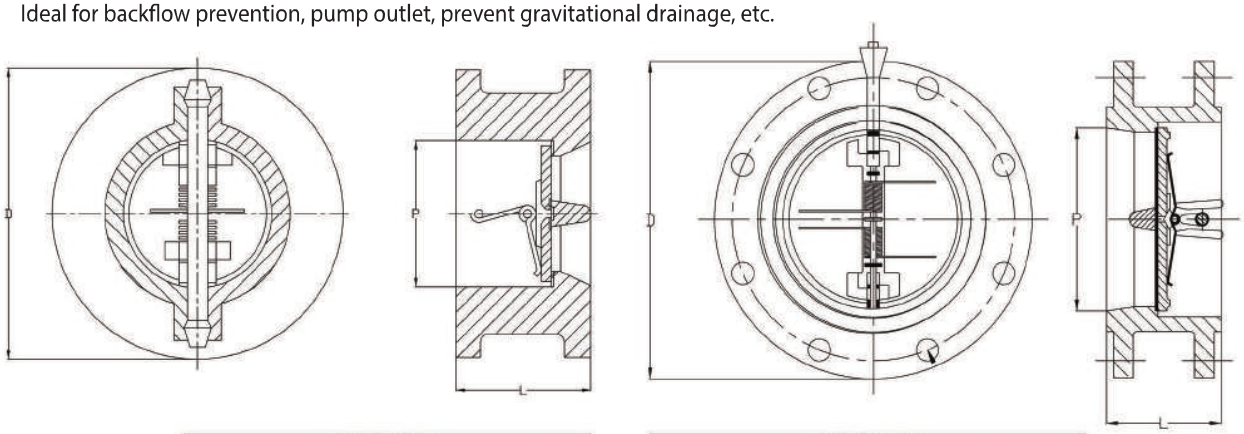
CHECK VALVES - DUAL PLATE CHECK VALVES

Comparatively llighter in weight and compact in construction with swing check valves, Dual Plate Check Valves provide cutting edge technology and application in oil & gas, petrochemical, chemical, power and other process industries. It houses two separate discs hinged to a stem (hinge pin) and forced by a spring for closing while on other hand force of service medium serves to open. Ideal for backflow prevention, pump outlet, prevent gravitational drainage, etc.



150# - Wafer Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	105	60	2.4
65 (2½")	73	124	67	4.3
80 (3")	89	137	73	5.7
100 (4")	114	175	73	7.5
125 (5")	141	197	86	12
150 (6")	168	222	98	16
200 (8")	219	279	127	33
250 (10")	273	340	146	50
300 (12")	324	410	181	79
350 (14")	356	451	184	93
400 (16")	406	514	191	159
450 (18")	457	549	203	178
500 (20")	508	606	219	234
600 (24")	610	718	222	740
650 (26")	660	773	222	692
700 (28")	711	832	305	835
750 (30")	762	883	305	665
800 (32")	813	940	356	1197

(Code - SV)

150# - Flange Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	165	60	7.4
65 (2½")	73	191	67	7.4
80 (3")	89	210	73	8.4
100 (4")	114	229	73	13.5
125 (5")	141	254	86	16
150 (6")	168	279	98	22
200 (8")	219	343	127	44
250 (10")	273	406	146	86
300 (12")	324	483	181	100
350 (14")	356	533	184	127
400 (16")	406	597	191	162
450 (18")	457	635	203	190
500 (20")	508	699	219	254
600 (24")	610	813	222	403
650 (26")	660	870	222	482
700 (28")	711	927	305	543
750 (30")	762	984	305	696
800 (32")	813	1060	356	855

(Code - SV)

300# - Wafer Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	111	60	3
65 (2½")	73	130	67	5
80 (3")	89	149	73	7
100 (4")	114	181	73	9
125 (5")	141	216	86	14
150 (6")	168	251	98	18
200 (8")	219	308	127	37
250 (10")	273	362	146	55
300 (12")	324	422	181	87
350 (14")	356	486	222	103
400 (16")	406	540	232	175
450 (18")	457	597	264	196
500 (20")	508	654	292	258
600 (24")	610	775	318	383
650 (26")	660	835	318	814
700 (28")	711	903	318	762
750 (30")	762	953	368	919
800 (32")	813	1006	368	732

(Code - SV)

300# - Flange Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	165	60	10
65 (2½")	73	191	67	10
80 (3")	89	210	73	11
100 (4")	114	254	73	18
125 (5")	141	279	86	21
150 (6")	168	318	98	29
200 (8")	219	381	127	58
250 (10")	273	445	146	112
300 (12")	324	521	181	130
350 (14")	356	584	222	166
400 (16")	406	648	232	211
450 (18")	457	711	264	247
500 (20")	508	775	292	331
600 (24")	610	914	318	524
650 (26")	660	972	318	627
700 (28")	711	1035	318	706
750 (30")	762	1092	368	905
800 (32")	813	1149	368	1112

(Code - SV)

600# - Wafer Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	111	60	4
65 (2½")	73	130	67	6
80 (3")	89	149	73	9
100 (4")	114	194	79	11
125 (5")	141	241	105	17
150 (6")	168	267	136	22
200 (8")	219	321	165	45
250 (10")	273	400	213	66
300 (12")	324	457	229	105
350 (14")	356	492	273	124
400 (16")	406	565	305	210
450 (18")	457	613	362	236
500 (20")	508	683	368	310
600 (24")	610	791	438	460
650 (26")	660	867	438	977
700 (28")	711	915	438	915
750 (30")	762	968	505	1103
800 (32")	813	1024	505	879

(Code - SV)

600# - Flange Type

DN (inch)	P	D	L	WEIGHT (Kg) Approx
50 (2")	60	60	165	13
65 (2½")	73	67	191	13
80 (3")	89	73	210	15
100 (4")	114	79	273	24
125 (5")	141	105	330	28
150 (6")	168	136	356	38
200 (8")	219	165	419	76
250 (10")	273	213	508	146
300 (12")	324	229	559	169
350 (14")	356	273	603	216
400 (16")	406	305	686	275
450 (18")	457	362	743	322
500 (20")	508	368	813	431
600 (24")	610	438	940	682
650 (26")	660	438	1016	816
700 (28")	711	438	1073	918
750 (30")	762	505	1130	1177
800 (32")	813	505	1194	1446

(Code - SV)

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CHECK VALVES - *WAFER CHECK VALVES*

More lighter in weight and even compact than dual plate check valves, Wafer Check Valves are typically employed for low pressure applications in oil & gas, petrochemical, chemical, power and other process industries. A single circular body and circular disc hinged to body with bolts / welded. Very ideal solution for applications where space constraints and weight constraints are critical. Can be used in vertical & horizontals orientations.

DIMENSIONS								
Size				D				
DN	Inch	P	L	PN10	PN16	BS10D	BS10E	ANSI 150#
25	1"	14	16	72	72	69	69	64
40	1.5"	22	19	93	93	86	86	83
50	2"	30	19	108	108	97	97	102
65	2.5"	40	19	128	128	110	110	121
80	3"	52	19	143	143	129	129	134
100	4"	71	19	163	163	161	161	172
125	5"	93	19	193	193	193	193	194
150	6"	114	19	219	219	218	215	220
200	8"	157	28.5	274	274	274	272	277
250	10"	195	28.5	329	329	335	335	337
300	12"	230	38	379	385	385	383	407
350	14"	270	44.5	438	444	446	446	448
400	16"	310	51	489	496	496	496	512
450	18"	360	60.5	538	555	559	559	545
500	20"	406	63.5	593	616	616	616	602
600	24"	490	70	695	733	727	724	714

(Code-SV)

DESIGN STANDARD	
Check Valve	ASME B16.34 & API 6D
Face to Face / End to End Dimensions	API6D, ASME B16.34
Valve inspection & testing	API598
Pressure - Temperature rating	ASME B16.34

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598	API 598

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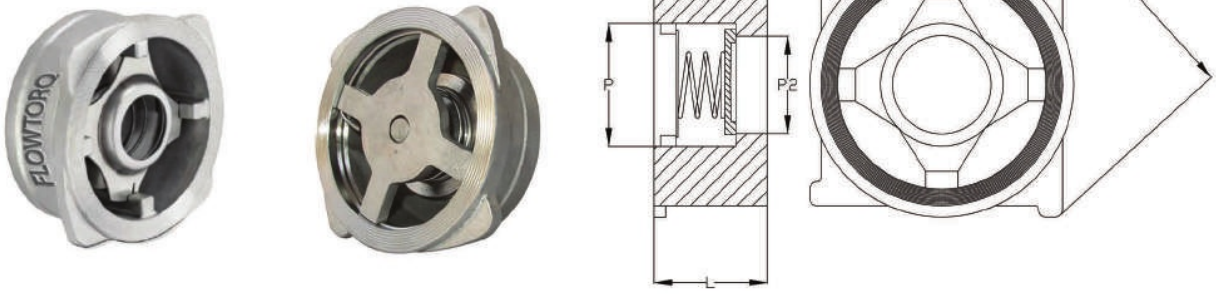
CHECK VALVES - SPRING LOCADED DISC CHECK VALVES

A development with a combination of Dual Plate Check Valve and Wafer Type Check Valve, Spring Loaded Disc Check Valves houses a disc which is loaded against body by spring force. The body houses the spring, disc, stopper pins and screwed part as a retainer. Suited for high pressure and low pressure applications in oil & gas, petrochemical, chemical, power and other process industries. Ideal solution for applications where space constraints and weight constraints are critical. Can be used in vertical, horizontals and angular orientations as well.



Upto - 20 Bar						
Size						
DN	Inch	P	P2	L	A	D
15	1/2"	29	15	19	60	38
20	3/4"	36	20	19	70	45
25	1"	44	25	2	80	56
32	1.25"	55	32	28	90	65
40	1.5"	66	40	31	98	74
50	2"	77	50	40	112	85
65	2.5"	98	65	46	141	107
80	3"	111	80	50	151	122
100	4"	130	100	60	181	142
125	5"	161	125	90	215	170
150	6"	190	150	105	255	202
200	8"	250	200	140	320	261

(Code - AZV)

DESIGN STANDARD	
Check Valve	ASME B16.34, Mnfr's Std
Face to Face / End to End Dimensions	API6D, ASME B16.34, Mnfr's Std
Valve inspection & testing	API598, BS 5146
Pressure - Temperature rating	ASME B16.34

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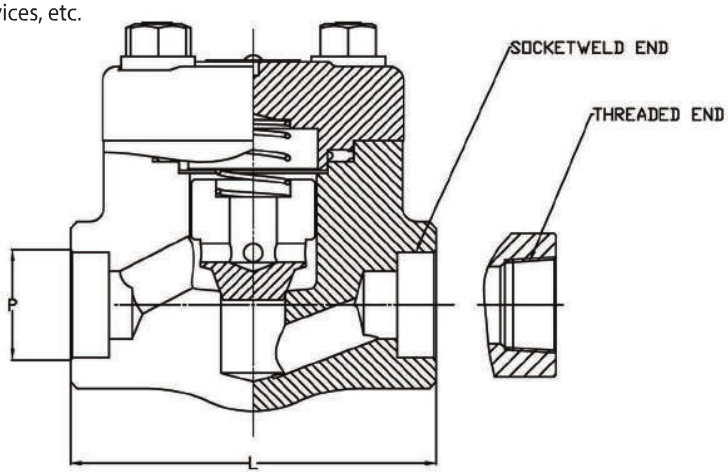
CHECK VALVES - FORGED STEEL LIFT CHECK VALVES - 800#, 1500# & 2500#. Socket Weld / Threaded Ends

FLOWTORQ Forged Steel lift check valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel check valves can be ideal back flow prevention, counter flow services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

800# - Socket Weld					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	87	92	106	127	142
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	1	1.3	2.2	4.7	8.2

1500# - Socket Weld				
Size	1/2"	3/4"	1"	1 1/2"
L	92	106	127	142
H	56	66	86	104
P	8	9	14	25
Weight Kg	1.5	2.5	5.6	9

2500# - Socket Weld				
Size	1/2"	3/4"	1"	
L	106	127	142	
H	66	86	104	
P	7	8	12	
Weight Kg	2.9	6.4	10.8	

(Code-AHV)

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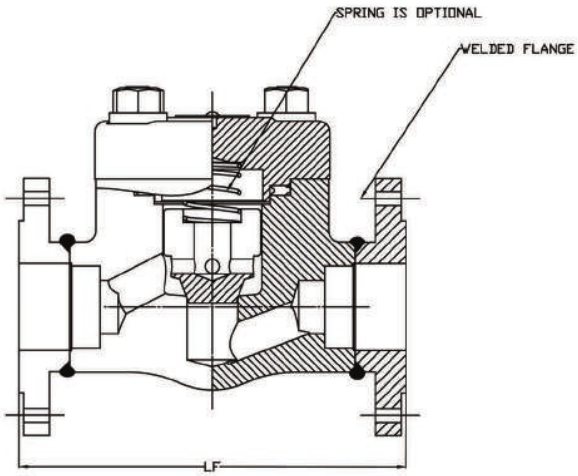
CHECK VALVES - FORGED STEEL LIFT CHECK VALVES - 150#, 300# & 600#. Welded Flange Ends

FLOWTORQ Forged Steel lift check valves are manufatured with highest quality steel forgings. Forged form valves are used widely in high pressure applications in smaller sizes like 1/4" to 2" in ratings upto 4500#. Usually are manufactured in socket welded, threaded and welded flanged types as per client application requirement. Forged Steel check valves can be ideal back flow prevention, counter flow services, etc.



Design and Manufacturing Standard	BS5352
Testing Standard	API598
Face to Face Standard	ANSI B 16.11 / ANSI B 16.5
End Connections	NPT, Socket Weld / Flanged

150# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	108	117	127	165	203
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.2	2.9	4.4	7.9	12

300# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	152	178	293	229	267
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.4	3.1	4.6	8.1	12.2

600# - Welded Flange					
Size	1/2"	3/4"	1"	1 1/2"	2"
L	165	190	216	241	292
H	53	56	66	86	104
P	9	12	17	25	29
Weight Kg	2.6	3.3	4.8	8.3	12.5

(Code-AHV)

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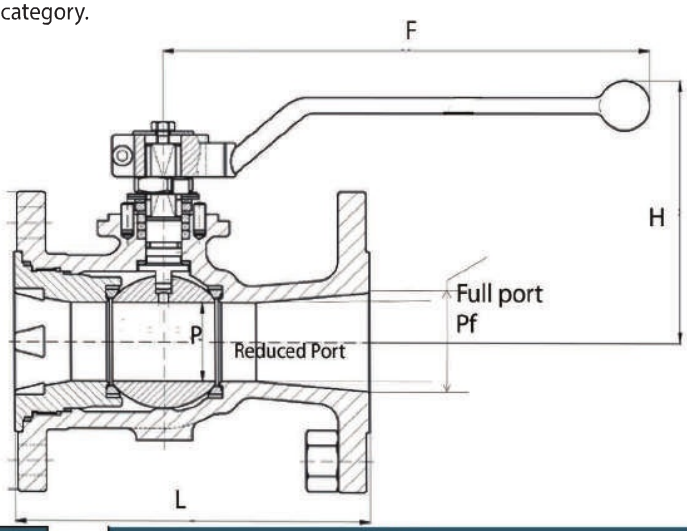
BALL VALVES - 1 PIECE BALL VALVES - 150# & 300#

FLOWTORQ make 1 Piece design Ball Valves comes in cast single piece body in screwed, threaded and flanged types. A single body houses ball, stem, seats and retainers wherever applicable. Ball Valves are ideal in tight shut off applications in high pressure as well as low pressure services. 1 piece ball valves are designed and manufactured for limited sizes and are inexpensive as compared to other variants in its category.



150#					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	108	90	164	1.6
3/4"	20	118	90	164	2.1
1"	25	127	95	164	2.7
1.1/4"	32	140	95	210	4.8
1.1/2"	40	165	100	210	5.1
2"	50	178	125	213	7.9
2.1/2"	65	191	140	213	14.3
3"	80	203	175	348	25.9
4"	100	229	195	445	43.8
6"	150	267	269	495	77
8"	200	292	320	698	114
10"	250	330	405	698	230

(Code - GEN)
Weights mentioned are approximate nearest

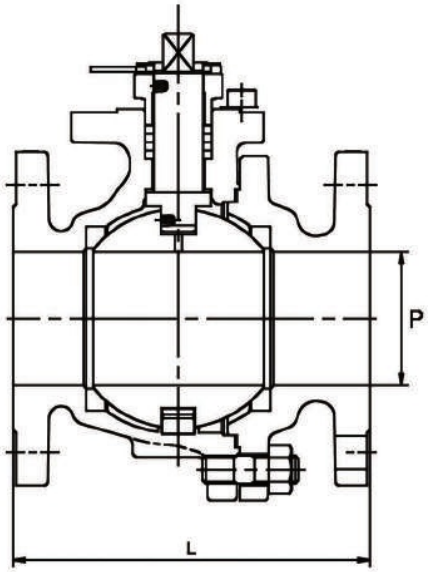
300#					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	140	90	164	1.6
3/4"	20	152	90	164	2.1
1"	25	165	101	164	4.1
1.1/4"	32	178	110	210	6
1.1/2"	40	190	117	210	8.2
2"	50	216	134	213	10.9
2.1/2"	65	241	149	213	21.4
3"	80	282	189	348	28.9
4"	100	305	195	445	70
6"	150	403	257	495	110
8"	200	419	329	698	129
10"	250	457	380	698	148

(Code - GEN)
Weights mentioned are approximate nearest

Design and Manufacturing Standard	BS5351, API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.10
End Connections	BSP, BSPT, NPT

BALL VALVES - 2 PIECE BALL VALVES - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged , Butt Welded and Screwed* Ends

FLOWTORQ make 2 Piece design Ball Valves comes in cast two piece body in screwed, threaded and flanged types. A main body houses ball, stem and 1 seat whereas the side piece or adaptor houses 1 seat and sometimes, some portion of ball. And retainers wherever applicable. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These ball valves are also designed and manufactured with extended stem for hot and cold applications. 2 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 piece design for similar size and class variant.



DESIGN & TESTING STANDARD
Design as per BS5351, ASME B16.34 & ISO 17292
ISO 5211 Top flange
FIRE SAFE as per BS API 607
Pressure testing according, API 598 & ISO 5208
Face to Face as per ASME B16.10 / ASME B16.34
RF, RTJ End Connection as per ASME B16.5
Butt Weld as per ASME B16.25
NPT / SW as per relevant standards

TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		*MSS SP-55*
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Aplicable valve
Chemical Analysis	ASTM E350	Aplicable Standard
Mechanical Properties	ASTM A370	Aplicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598 / ISO 5208	API 598 / ISO 5208

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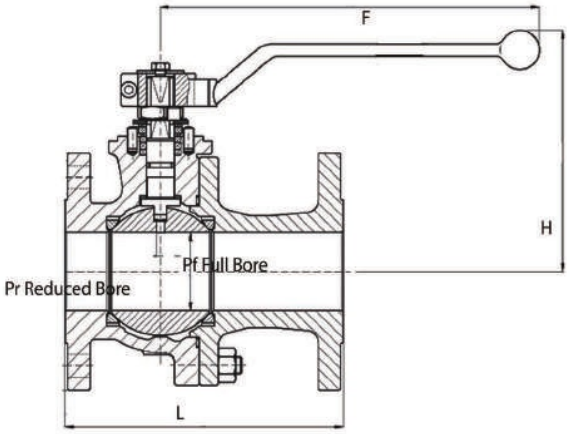
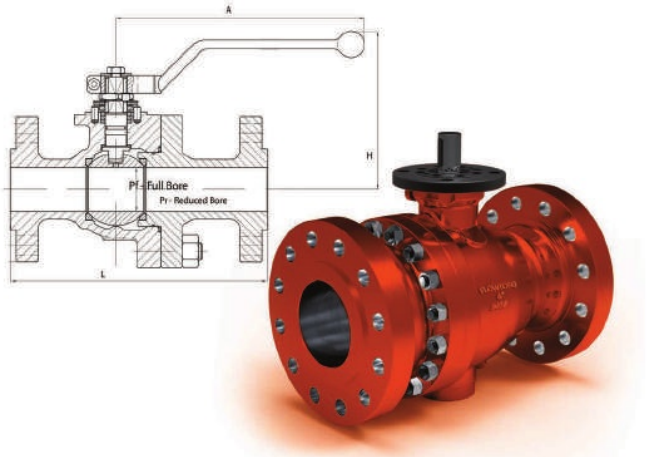
BALL VALVES - 2 PIECE BALL VALVES - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged , Butt Welded and Screwed* Ends

FLOWTORQ make 2 Piece design Ball Valves comes in cast two piece body in screwed, threaded and flanged types. A main body houses ball, stem and 1 seat whereas the side piece or adaptor houses 1 seat and sometimes, some portion of ball. And retainers wherever applicable. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These ball valves are also designed and manufactured with extended stem for hot and cold applications. 2 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 piece design for similar size and class variant.





150# - FULL BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	108	110	164	2
3/4"	20	117	117	164	3
1"	25	127	129	164	3.5
1.1/2"	40	165	148	213	8
2"	50	178	155	348	11
2.1/2"	65	190	169	445	16
3"	80	203	207	495	23
4"	100	229	231	698	38
6"	150	394	298	868	88
8"	200	457	352	Gear Operated	155
10"	250	533	499		175
12"	300	610	585		295
14"	350	686	656		580
16"	400	762	770		750

(Code - PV-10", 10"<-GEN)

150# - REDUCE BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	9.5	108	81	164	2
3/4"	15	117	98	164	2.5
1"	20	127	101	164	3
1.1/2"	32	165	117	210	5.2
2"	40	178	134	210	8
2.1/2"	52				
3"	49	203	149	348	14.5
4"	76	229	189	445	26
6"	102	267	227	495	45
8"	152	292	264	Gear Operated	77
10"	203	330	307		114
12"	254	356	342		230
14"	305				
16"	337				

(Code - PV-10", 10"<-GEN)

300# - FULL BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	140	110	164	3
3/4"	20	152	117	164	4
1"	25	165	129	164	5
1.1/2"	40	190	148	213	11
2"	50	216	155	213	14
2.1/2"	65	241	180	213	30
3"	80	283	207	445	32
4"	100	305	231	495	52
6"	150	151	298	698	94
8"	200	502	443	Gear Operated	157
10"	250	568	510		263
12"	300	648	610		480
14"	350	762	664		655
16"	400	838	777		890

(Code - PV-10", 10"<-GEN)

300# - REDUCE BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	9.5	140	81	164	2
3/4"	15	152	98	164	2.5
1"	20	165	101	164	4.5
1.1/2"	32	190	117	210	8.5
2"	40	216	134	210	11
2.1/2"	52	241	177	213	28
3"	49	283	149	348	21.5
4"	76	305	189	445	29
6"	102	403	227	495	70
8"	152	419	264		115
10"	203				
12"	254				
14"	305				
16"	337				

(Code - PV-10", 10"<-GEN)

600# - FULL BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	165	111	164	5.5
3/4"	20	190	117	164	8
1"	25	216	119	210	10
1.1/2"	40	241	137	347	19
2"	50	292	180	445	29
2.1/2"	65	330	295	210	58
3"	80	356	228	698	42
4"	100	432	245	698	78
6"	150	559	400	Gear Operated	192
8"	200	660	472		329
10"	250	787	548		460
12"	300	838	680		570

(Code - J)

600# - REDUCE BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	9.5	165	89	164	5
3/4"	15	190	111	164	8
1"	20	216	117	210	9
1.1/2"	32	241	119	347	15
2"	40	292	137	348	25
2.1/2"	52	330	270	210	40
3"	49	356	201	695	30
4"	76	432	228	695	64

(Code - J)

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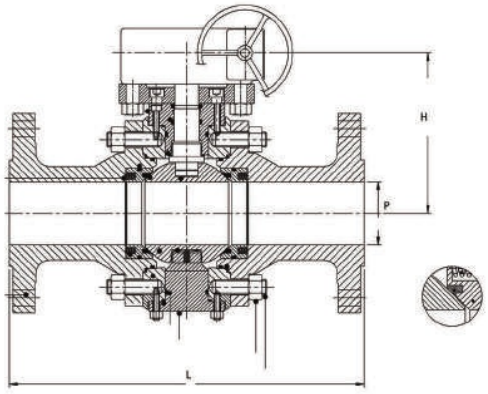
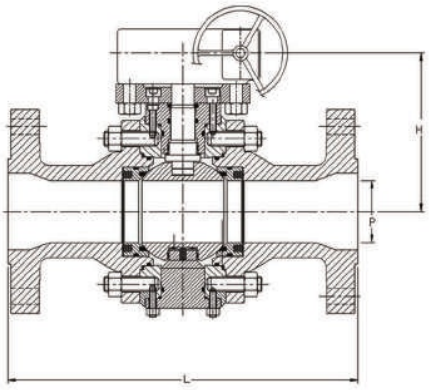
BALL VALVES - 3 PIECE BALL VALVES - - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged & Butt Welded Ends

FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, threaded and flanged types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily.These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.





150# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	108	89	164	4.5
3/4"	20	118	98	164	6.8
1"	25	127	108	164	7
1.1/2"	40	165	127	210	9
2"	50	178	152	213	24
2.1/2"	65	191	178	213	28
3"	80	203	190	348	47
4"	100	229	229	445	86
6"	150	267	279	495	191
8"	200	292	343	Gear Operated	357
10"	250	330	406		529
12"	300	610	822		794
14"	350	686	894		1120
16"	400	762	962		1473
18"	450	864	1138		1860
20"	500	914	1187		2589
22"	550				
24"	600	1067	1291		4302

(Code - PV-10", 10"<-GEN)

150# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	9.5	108	51	164	3
3/4"	15	118	72	164	4.5
1"	20	127	88	164	5
1.1/2"	32	165	100	210	6
2"	40	178	123	213	8.5
2.1/2"	52	191	145	213	17
3"	49	203	152	348	66
4"	76	229	189	445	75
6"	102	267	221	495	115
8"	152	292	242	Gear Operated	205
10"	203	330	278		375
12"	254	610	822		565
14"	305	686	894		825
16"	337	762	962		1250
18"	387	864	1138		1820
20"	438	914	1187		2450
22"					
24"	589	1067	1291		2790

(Code - PV-10", 10"<-GEN)

300# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	140	95	164	6
3/4"	20	152	117	164	9
1"	25	165	124	164	10
1.1/2"	40	190	155	210	17
2"	50	216	165	213	28
2.1/2"	65	241	190	213	38
3"	80	282	209	348	61
4"	100	305	254	445	100
6"	150	403	317	495	217
8"	200	419	381	Gear Operated	387
10"	250	457	444		610
12"	300	648	822		882
14"	350	762	894		1296
16"	400	838	962		1687
18"	450	914	1138		2057
20"	500	991	1187		2872
22"	550				
24"	600	1143	1272		5525

(Code - PV-10", 10"<-GEN)

300# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	9.5	140	88	164	5.5
3/4"	15	152	101	164	8
1"	20	165	108	164	9
1.1/2"	32	190	120	210	15
2"	40	216	138	213	25
2.1/2"	52	241	177	213	32
3"	49	282	200	348	65
4"	76	305	244	445	85
6"	102	403	289	495	135
8"	152	419	357	Gear Operated	225
10"	203	457	421		385
12"	254	648	681		650
14"	305	762	822		995
16"	337	838	894		1460
18"	387	914	962		1925
20"	438	991	1138		2450
22"					
24"	488	1143	1187		3250

(Code - PV-10", 10"<-GEN)

600# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	50	292	225	210	33
2.1/2"	65	330	295	210	58
3"	80	356	296	250	75
4"	100	432	339	250	136
6"	150	559	547	250	300
8"	200	660	621	Gear Operated	561
10"	250	787	727		828
12"	300	838	841		1238
14"	350	889	905		1532
16"	400	991	994		2137
18"	450	1092	1109		2595
20"	500	1194	1158		3454
22"	550				
24"	600	1397	1293		6250

(Code - J)

600# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	40	292	201	210	30
2.1/2"	52	330	270	210	40
3"	49	356	225	250	45
4"	76	432	296	250	96
6"	102	559	339	250	179
8"	152	660	547	Gear Operated	291
10"	203	787	621		612
12"	254	838	727		827
14"	305	889	841		1076
16"	337	991	905		1292
18"	387	1092	994		1678
20"	438	1194	1109		2220
22"					
24"	488	1397	1158		3119

(Code - J)

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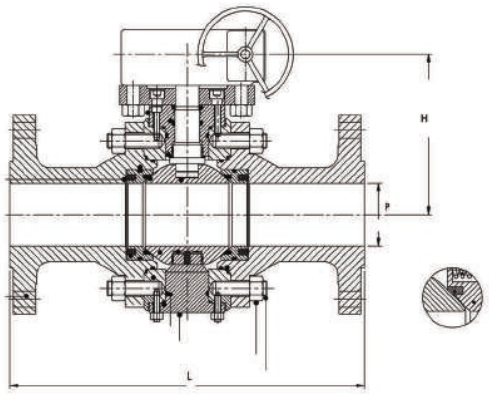
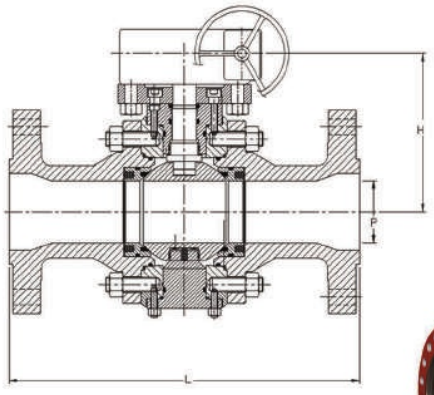
BALL VALVES - 3 PIECE BALL VALVES - - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged & Butt Welded Ends

FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, threaded and flanged types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily.These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.





900# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	50	368	221		52
2.1/2"	65	419	295		75
3"	80	381	277		80
4"	100	457	321		170
6"	150	610	594		390
8"	200	737	686	Gear Operated	640
10"	250	838	792		1070
12"	300	965	873		1610
14"	350	1029	926		1760
16"	400	1130	998		2240
18"	450	1219	1094		3000
20"	500	1321	1179		4360

(Code - J)

900# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	40	368	275		40
2.1/2"	52	419	295		55
3"	49	381	221		62
4"	76	457	277		105
6"	102	610	321		201
8"	152	737	594	Gear Operated	436
10"	203	838	686		735
12"	254	965	792		1200
14"	305	1029	873		1795
16"	337	1130	926		2105
18"	387	1219	998		2720
20"	438	1321	1094		4050

(Code - J)

1500# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	50	368	275		51
2.1/2"	65	419	295		90
3"	80	473	293		98
4"	100	549	361		175
6"	150	711	637		491
8"	200	841	737	Gear Operated	785
10"	250	1000	841		1464
12"	300	1146	964		2259

(Code - J)

1500# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	40	368	250		50
2.1/2"	52	419	270		65
3"	49	473	236		75
4"	76	549	293		115
6"	102	711	361		315
8"	152	841	637		603
10"	203	1000	737	Gear Operated	876
12"	254	1146	841		1691

(Code - J)

2500# - FULL BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	50	454	275		110
2.1/2"	65	508	335		210
3"	80	584	333		215
4"	100	683	401		385
6"	150	927	712		840
8"	200	1038	851		1435

(Code - J)

2500# - REDUCE BORE

Size (P)					
IN.	MM	L	H	F	Weight (kg)
2"	40	451	295		85
2.1/2"	52	508	300		180
3"	49	584	275		213
4"	76	683	333		250
6"	102	927	401		520
8"	152	1038	712		1000

(Code - J)

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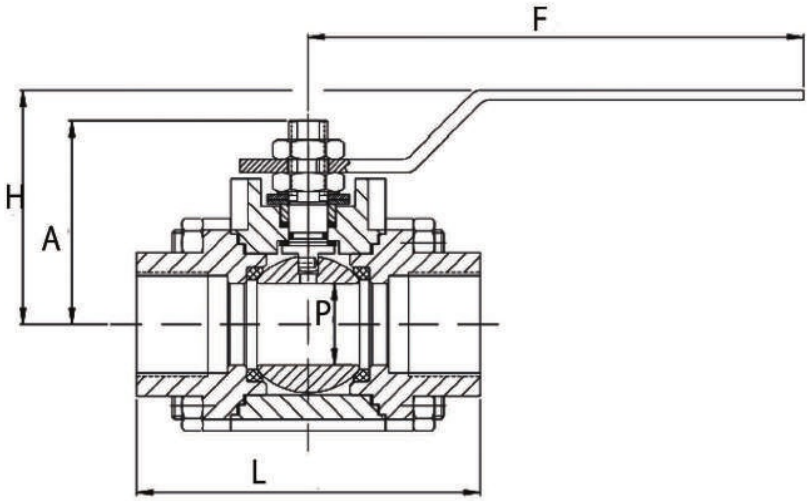
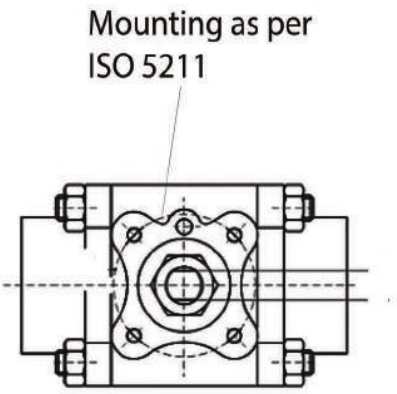
BALL VALVES - 3 PIECE BALL VALVES - 150# & 800#

Socket weld / Threaded Ends

FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, socket weld & threaded types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily.These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.





150#					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	90	58	155	3.5
3/4"	20	95	70	160	4.5
1"	25	100	44	160	5
1.1/2"	40	120	44	178	6
2"	50	130	46	178	10

(Code - PV)

800#					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/2"	15	68	43	115	4
3/4"	20	79	54	122	5
1"	25	95	68	153	6
1.1/2"	40	117	98	178	7
2"	50	130	122	178	11

(Code - PV

Design and Manufacturing Standard	BS5351, API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.11, Mnfr's Std.
End Connections	BSP, BSPT, NPT, Socket Weld

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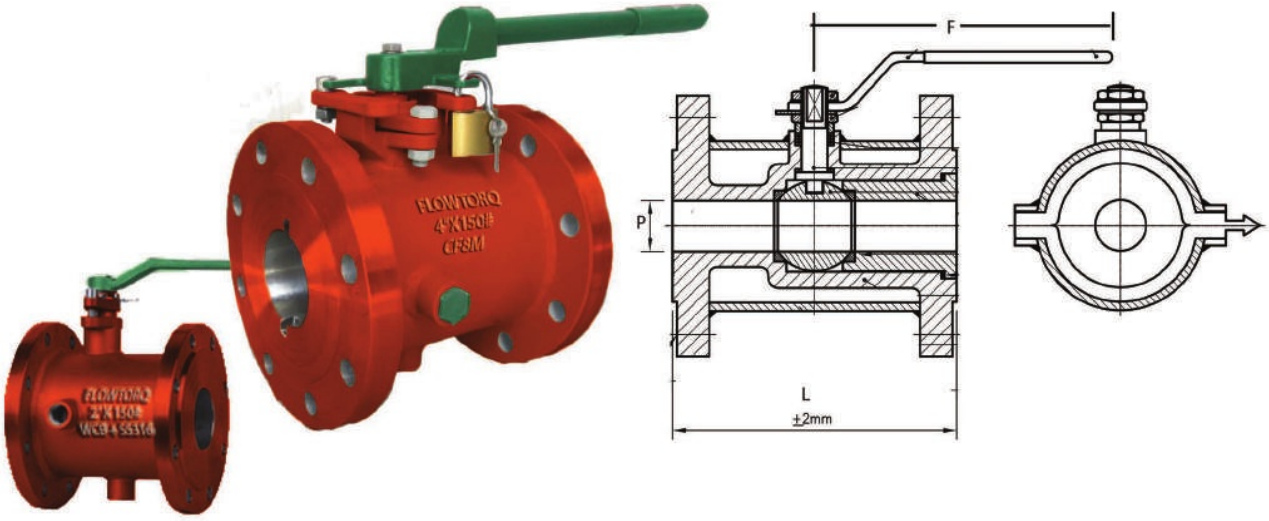
BALL VALVES - JACKETED BALL VALVES

Check Valves come in various designs such as Swing Check, Lift Check (Piston type), Dual Plate, Tilting Disc and Non-Slam types. The basic application for all check valves are totally opposite to all the other valves. It is it prevents the back flow of process fluid. Typically the closure member is the disc which is either self operated by gravity and force by the back flow or either by a spring which forces the disc or plates to rest on body seats thereby sealing and preventing the back flow. Swing check valves are most widely used followed by lift check valves and dual plate check valves.



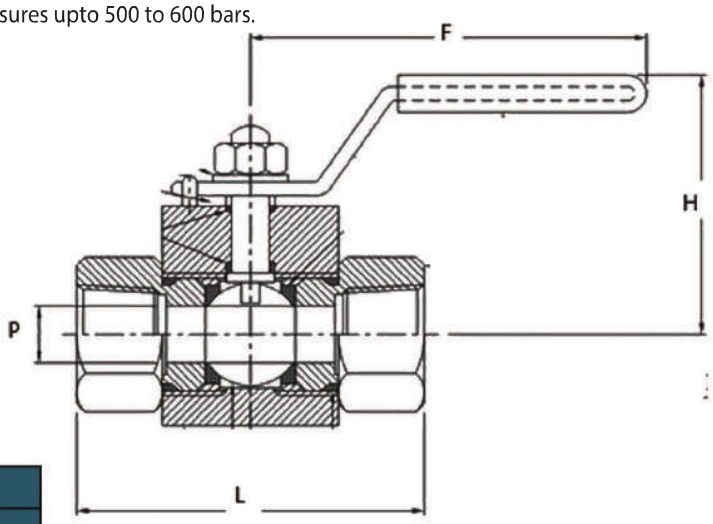
150# - FULL BORE					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1" X 1.1/2"	25	127	128	164	6
1.1/2" X 2"	40	165	153	164	10
2" X 2.1/2"	50	178	175	164	15
2.1/2" X 3"	65	190	199	213	20
3" X 4"	80	203	232	348	28

(Code - SM) For 300# & Above, On Request

Design and Manufacturing Standard	BS5351
Testing Standard	API598
Face to Face Standard	ANSI B 16.10
End Connections	ANSI B16.5

BALL VALVES - HIGH PRESSURE BALL VALVES

High Pressure Ball Valves are designed for high pressure applications like hydrauic, steam, utilities, etc. Made out of forged carbon steel or stainless steel (304,316 Grades), these mini ball valves are available in threaded and socket weld ends. Usually are manually operated and can serve pressures upto 500 to 600 bars.



Upto 500 Bar			
Size (P)			
IN.	MM	Pressure	Flow
1/4" BSP	7	500 BAR	30 LPM
3/8" BSP	10	500 BAR	50 LPM
1/2" BSP	15	500 BAR	70 LPM
3/4" BSP	20	350 BAR	120 LPM
1" BSP	25	350 BAR	180 LPM
1¼" BSP	32	315 BAR	220 LPM
1½" BSP	40	315 BAR	300 LPM
2" BSP	50	315 BAR	500 LPM

(Code - ATF)

Upto 500 Bar					
Size (P)					
IN.	MM	L	H	F	Weight (kg)
1/8"	4	71	91	110	0.52
1/4"	6	71	91	110	0.49
3/8"	10	73	96	110	0.65
1/2"	13	83	99	110	0.77
3/4"	20	95	106	180	1.47
1"	25	112	116	180	2.23
1.1/4"	85	110	145	305	4.15
1.1/2"	96	130	155	305	5.54
2"	112	140	173	305	8.85

(Code - ATF)

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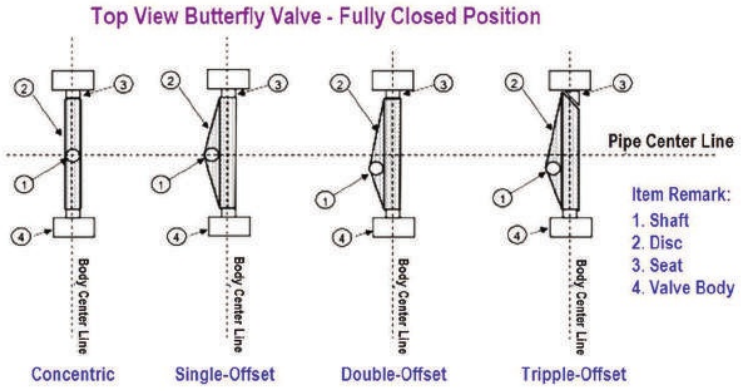
FLOWTORQ make Butterfly valves are generally preferred because they cost less than other valve designs, and are lighter weight so they need less support. Operation is similar to that of a ball valve, which allows for quick shut off. The disc is positioned in the center of the pipe. A shaft or stem passes through the disc to an actuator on the outside of the valve. Rotating the actuator turns the disc either parallel or perpendicular to the flow. Unlike a ball valve, the disc is always present within the flow, so it induces a pressure drop, even when open.

It is from a family of valves called quarter-turn valves. In operation, the valve is fully open or closed when the disc is rotated a quarter turn. The "butterfly" is a metal disc mounted on a rod. When the valve is closed, the disc is turned so that it completely blocks off the passageway. When the valve is fully open, the disc is rotated a quarter turn so that it allows an almost unrestricted passage of the fluid. The valve may also be opened incrementally to throttle flow.



Single-Offset - The shaft is offset from its body center line.

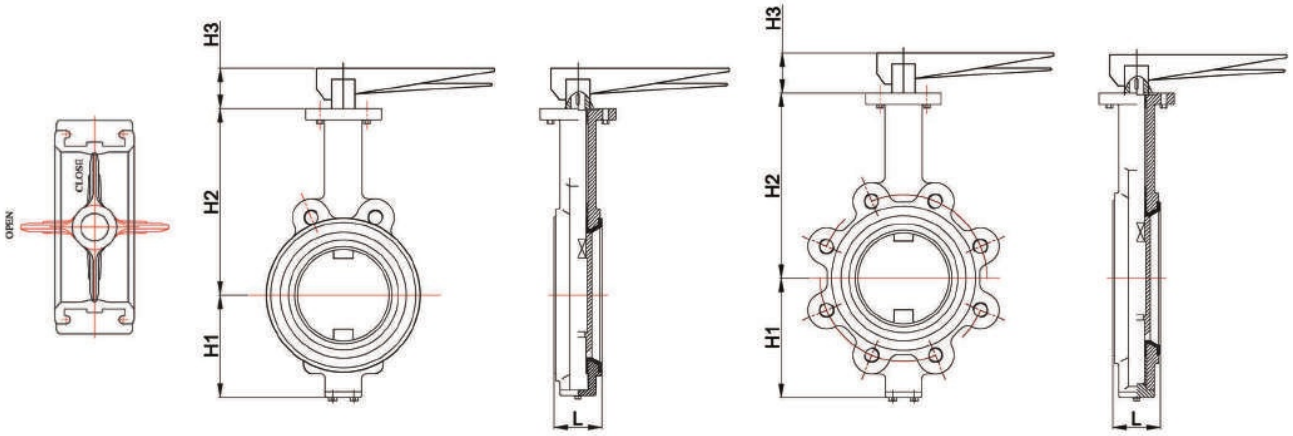
Double-Offset - The shaft is offset from its body center line + shaft offset from pipe center line.

Tripple-Offset - The shaft is offset from its body center line + shaft offset from pipe center line + conical offset shape in its seal and dics connection.

DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

BUTTERFLY VALVES - CENTERLINE TYPE

The concentric butterfly valve is a standard or a general use butterfly valve. The shaft is located in the center of the disc. During opening or closing, there are some parts of the disc that always in-contact or rubbing the seat.This arrangement will make the seat experience friction each time the valve is operating. In a typical application, this concentric butterfly valve is limited to class 150 due to its seat design.



Upto 150#, PN10 - Wafer & Lug Type							
SIZE						WEIGHT (APPROX.) (kg)	
inch	mm	L	H1	H2	H3	Wafer	Lug
1.5"	40	40	54	120	33	2.5	3.4
2"	50	43	68	130	33	3	3.4
2.5"	65	46	77	138	33	4	4
3"	80	46	84	157	33	4.5	4.8
4"	100	52	105	170	33	5	6.9
5"	125	56	120	186	33	6.5	10.6
6"	150	56	135	200	33	8	11.4
8"	200	60	183	237	33	12.5	15.9
10"	250	68	223	286	50	19.5	26
12"	300	78	255	314	50	30.5	38.2
14"	350	78	280	340	50	55	60
16"	400	102	310	378	60	70	92
18"	450	114	350	400	60	95	108
20"	500	127	380	440	80	128	151
22"	550	142	396	485	80	180	245
24"	600	154	448	510	80	222	266
26"	650	165	463	530	80	265	320
28"	700	165	500	580	110	295	350
30"	750	190	520	590	110	350	430
32"	800	190	565	630	110	430	600
36"	900	203	670	700	150	600	720
40"	1000	216	725	750	150	720	805
44"	1100	216	780	840	150	805	862
48"	1200	254	860	900	150	860	940
52"	1300	280	920	970	180	940	1121
56"	1400	280	970	1010	180	1100	1429
64"	1600	360	1120	1160	180	1450	1842
72"	1800	360	1210	1270	200	1850	2250

(Code -SVE)

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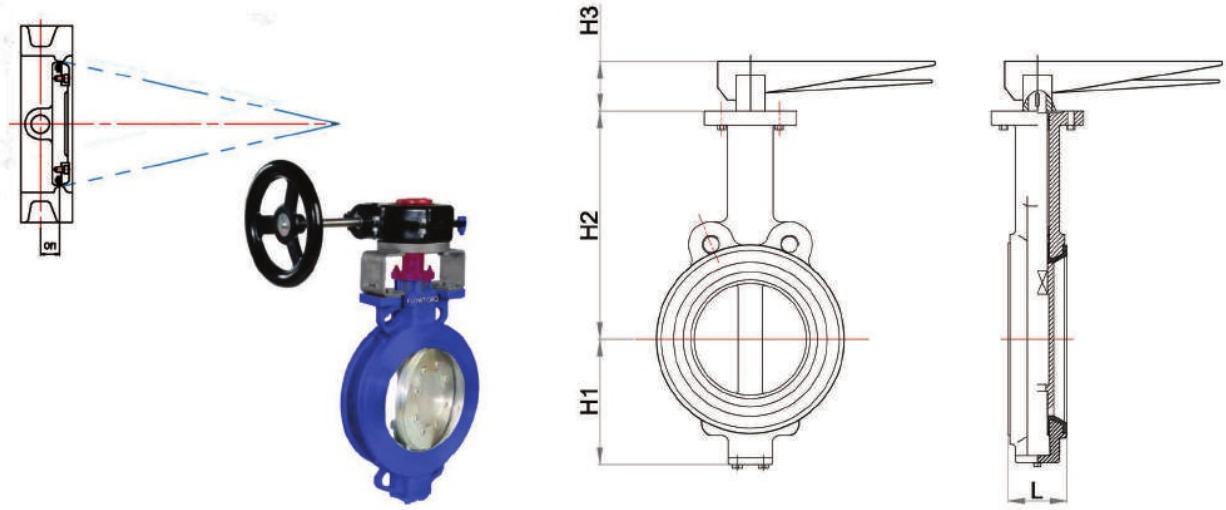
BUTTERFLY VALVES - HIGH PERFORMANCE SINGLE OFFSET

FLOWTORQ make High Performance Butterfly valves are "Single Offset" design. Although, are similar to ceterline type, a typical difference is that the centre of rotation is moved back from the centreline of the valve disc. The seat and seal are designed conically and on centre. This design relies on a frictional, interference seal and so is applicable only to soft seated valves.



SIZE		L		WAFER TYPE			WEIGHT (APPROX.) (kg)
inch	mm	#150	#300	H1	H2	H3	Wafer
2"	50	43	43	60	180	35	4.5
2.5"	65	46	46	70	180	35	5.5
3"	80	48	48	75	185	35	9
4"	100	54	54	100	200	35	10
5"	125	57	57	110	215	35	13
6"	150	57	59	130	235	35	17
8"	200	64	73	150	255	50	26
10"	250	71	83	245	300	50	40
12"	300	81	92	285	320	50	68
14"	350	92	117	342	440	80	93
16"	400	102	133	380	460	80	121
18"	450	114	149	402	492	120	144
20"	500	127	159	432	552	120	160
22"	550	154	159	465	572	120	228
24"	600	154	181	510	610	120	284
26"	650	165	-	540	630	120	327
28"	700	165	-	570	665	120	388
30"	750	190	-	595	695	140	462
32"	800	190	-	640	740	140	607
36"	900	203	-	705	800	140	860
40"	1000	216	-	675	865	140	1180
44"	1100	254	-	830	925	170	1460
48"	1200	254	-	890	990	170	1800
56"	1400	280	-	950	1160	180	2045
64"	1600	360	-	1100	1260	180	2570
72"	1800	360	-	1200	1370	200	2895
80"	2000	400	-	1275	1450	220	3120

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

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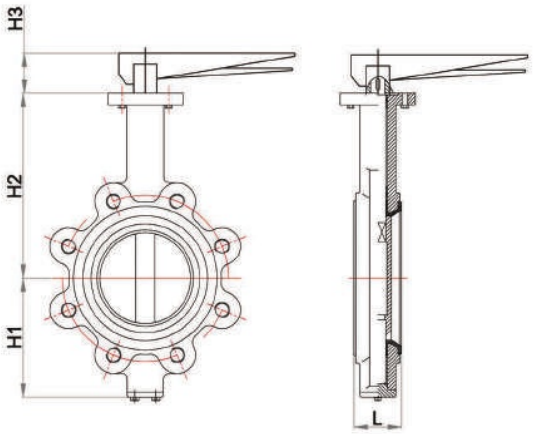
BUTTERFLY VALVES - HIGH PERFORMANCE SINGLE OFFSET

FLOWTORQ make High Performance Butterfly valves are "Single Offset" design. Although, are similar to ceterline type, a typical difference is that the centre of rotation is moved back from the centreline of the valve disc. The seat and seal are designed conically and on centre. This design relies on a frictional, interference seal and so is applicable only to soft seated valves.



SIZE		L		LUG TYPE			WEIGHT (APPROX.) (kg)
inch	mm	#150	#300	H1	H2	H3	Lug
2"	50	43	43	115	182	45	6
2.5"	65	46	46	130	200	45	7
3"	80	48	48	140	215	45	11
4"	100	54	54	160	232	45	12
5"	125	57	57	185	245	45	16
6"	150	57	59	190	260	45	21
8"	200	64	73	220	292	65	32
10"	250	71	83	270	353	65	48
12"	300	81	92	300	372	65	82
14"	350	92	117	342	440	80	112
16"	400	102	133	380	460	80	146
18"	450	114	149	402	492	120	173
20"	500	127	159	432	552	120	192
22"	550	154	159	465	572	120	274
24"	600	154	181	510	610	120	341
26"	650	165	-	540	630	120	393
28"	700	165	-	570	665	120	466
30"	750	190	-	595	695	140	555
32"	800	190	-	640	740	140	729
36"	900	203	-	705	800	140	1032
40"	1000	216	-	675	865	140	1416
44"	1100	254	-	830	925	170	1752
48"	1200	254	-	890	990	170	2160
56"	1400	280	-	950	1160	180	2454
64"	1600	360	-	1100	1260	180	3084
72"	1800	360	-	1200	1370	200	3474
80"	2000	400	-	1275	1450	220	3744

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

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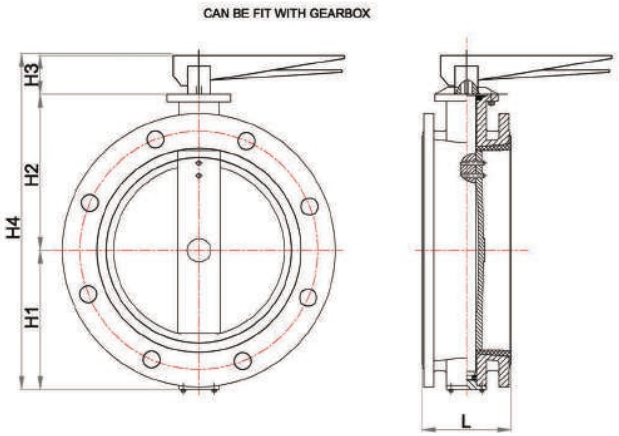

SIZE		L		DOUBLE FLANGE TYPE			WEIGHT (APPROX.) (kg)	
inch	mm	#150	#300	H1	H2	H3	150#	300#
2"	50	108	108	115	182	45	7	11
2.5"	65	112	112	130	200	45	9	15
3"	80	114	180	140	215	45	12	21
4"	100	127	190	160	232	45	18	30
5"	125	140	190	185	245	45	23	38
6"	150	140	210	190	260	45	31	52
8"	200	152	230	220	292	65	47	78
10"	250	165	250	270	353	65	67	112
12"	300	178	270	300	372	65	103	172
14"	350	190	290	342	440	80	146	243
16"	400	216	310	380	460	80	176	293
18"	450	222	330	402	492	120	222	370
20"	500	229	350	432	552	120	268	446
22"	550	229	350	465	572	120	396	660
24"	600	267	390	510	610	120	413	688
26"	650	267	410	540	630	120	524	874
28"	700	292	430	570	665	120	538	897
30"	750	292	450	595	695	140	832	1386
32"	800	318	470	640	740	140	1076	1793
36"	900	330	510	705	800	140	1590	2651
40"	1000	410	550	675	865	140	2124	3540
44"	1100	410	550	830	925	170	2453	4088
48"	1200	470	630	890	990	170	2732	4553
56"	1400	280	950	950	1160	180	3206	5343
64"	1600	360	1100	1100	1260	180	3734	6223
72"	1800	360	1200	1200	1370	200	4463	7439
80"	2000	400	1275	1275	1450	220	5218	8697

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

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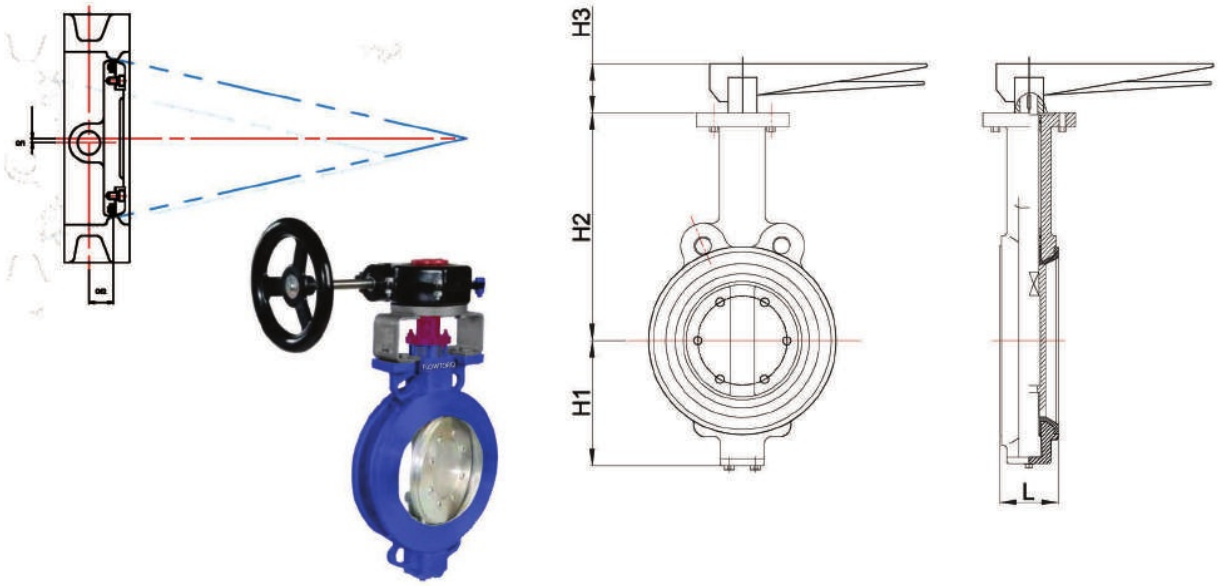
BUTTERFLY VALVES - DOUBLE OFFSET TYPE

FLOWTORQ make Double offset butetrfly valves have an added advantage and own benefits for medium critical applciations. The centre of rotation is moved from the centerline of the valve body. The seat and seal design remains conical and on centre. This design again relies on a frictional, interference seal, but the length of rotation over which this friction occurs is reduced, allowing a larger range of process resistant seat materials to be used. However these materials must be relatively soft or highly elastic to prevent "jamming".



SIZE			WAFER TYPE			WEIGHT (APPROX.) (kg)
inch	mm	L	H1	H2	H3	Wafer
2"	50	44	71	141	55	6
2.5"	65	44	81	142	60	7
3"	80	44	84	154	60	11
4"	100	52	96	160	60	12
5"	125	62	124	194	70	16
6"	150	62	144	207	70	21
8"	200	84	171	235	70	32
10"	250	91	205	240	70	48
12"	300	101	278	342	110	82
14"	350	114	306	357	110	112
16"	400	114	338	384	110	146

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

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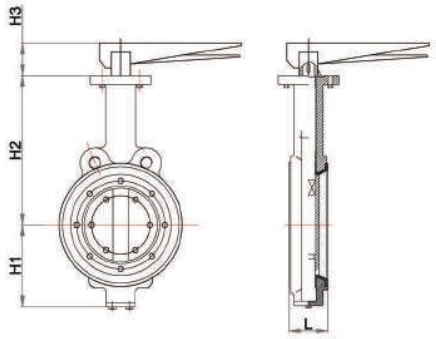
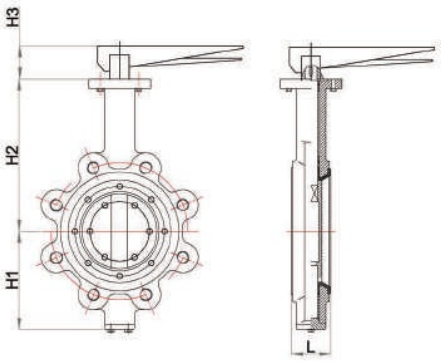
BUTTERFLY VALVES - TRIPLE OFFSET TYPE

FLOWTORQ make Triple offset butetrfly valves are an ideal solution for most critical high pressure applications. The centreline of the cone is rotated away from the valve centreline resulting in an ellipsoidal pro□le and providing the third offset. With this geometry, seat seal interference is completely eliminated ensuring long sealing life. The result is a torque seated, process pressure aided FRICTIONLESSseal. The geometry allows the body seat to be used as the closed limit stop, aiding operator adjustment. The Triple Offset design is ideally suited to metal seated valves providing bubble-tight performance on high temperature, high pressure and Firesafe applications.



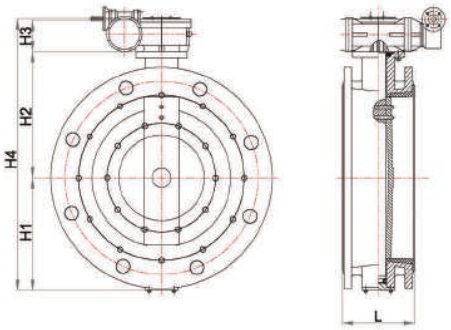
SIZE		L			150#		
inch	mm	Wafer	Lug	Flange	H1	H2	H3
4"	100	54	54	127	160	190	45
5"	125	57	57	140	185	210	45
6"	150	57	57	140	190	230	45
8"	200	64	64	152	220	260	60
10"	250	71	71	165	270	310	60
12"	300	81	81	178	300	350	75
14"	350	92	92	190	342	385	75
16"	400	102	102	216	380	440	100
18"	450	114	114	222	402	480	100
20"	500	127	127	229	432	495	100
24"	600	154	154	267	510	560	100
26"	650	165	165	267	540	630	100
28"	700	165	165	292	570	660	150
30"	750	190	190	292	595	690	150
32"	800	190	190	318	640	730	150
36"	900	203	203	330	705	800	150
40"	1000	216	216	410	675	860	150
44"	1100	240	240	410	830	925	180
48"	1200	254	254	470	890	990	180

(Code -SVE)



SIZE		L			300#		
inch	mm	Wafer	Lug	Flange	H1	H2	H3
4"	100	54	54	190	170	210	45
5"	125	59	59	210	190	220	45
6"	150	61	61	210	220	250	45
8"	200	73	73	230	245	300	60
10"	250	83	83	250	290	340	60
12"	300	92	92	270	315	380	75
14"	350	117	117	290	360	400	75
16"	400	133	133	310	390	480	100
18"	450	149	149	330	430	510	100
20"	500	159	159	350	470	570	100
24"	600	182	182	390	540	640	100
26"	650	182	182	410	570	660	100
28"	700	210	210	430	630	710	150
30"	750	210	210	450	660	740	150
32"	800	210	210	470	680	770	150
36"	900	227	227	510	750	840	150
40"	1000	245	245	550	770	870	150
44"	1100	305	305	550	880	965	180
48"	1200	308	308	630	920	1020	180

(Code -SVE)



DESIGN STANDARD	
DESIGN STANDARD	ISO 5752, API 609, BS 5155, ASME B16.34
Face to Face / End to End Dimensions	BS 5155, API 609, ISO 5752, MSS SP67
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	ANSI B16.5, PN6, PN10, PN16, BS10 D & E

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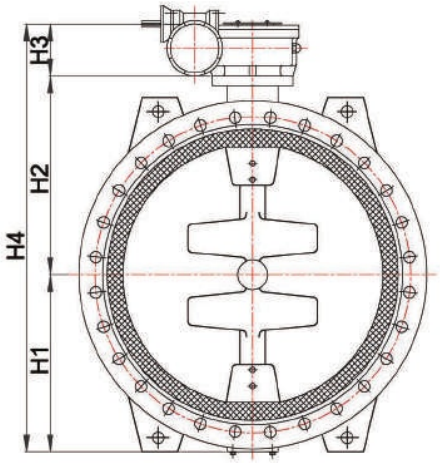
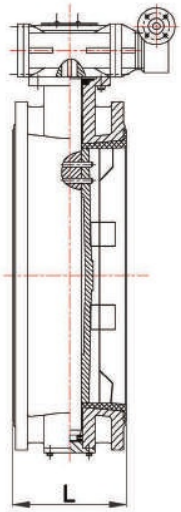
BUTTERFLY VALVES - WATER APPLICATIONS

FLOWTORQ make Butterfly Valves specialised for Water applications are typically available up to very large sizes. These are designed as per AWWA standards along with API & IS Standards. Typically are centerlined design and heavier in construction to sustain water pressure and hammer. Can be supplied in lever, gear operated handwheel and electric actuator configurations.





Upto 150#, PN10 - Wafer Type						
SIZE						WEIGHT (APPROX.) (kg)
inch	mm	L	H1	H2	E	Wafer
2"	50	43	115	210	66	7.2
3"	80	64	145	250	66	10
4"	100	64	162	265	66	39
6"	150	76	192	300	66	46
8"	200	89	209	317	80	50
10"	250	114	254	365	80	72
12"	300	114	278	414	120	81
14"	350	127	324	465	120	102
16"	400	140	349	495	120	128
18"	450	152	402	540	120	170
20"	500	152	427	608	120	198
22"	550	170	470	620	120	222
24"	600	178	502	663	203	308
28"	700	229	537	703	203	380
30"	750	230	575	750	203	570
32"	800	241	605	765	203	730
36"	900	300	682	830	203	880
40"	1000	300	752	958	203	1040
44"	1100	350	800	1000	203	1195
48"	1200	350	865	1080	203	1410
52"	1300	350	920	1140	203	1780
54"	1350	350	940	1200	270	2100
56"	1400	390	956	1261	270	2400
60"	1500	390	1050	1310	270	2800
64"	1600	440	1120	1380	270	3500

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	AWWA C-504, BS 5155
Face to Face / End to End Dimensions	BS 5155, ISO 5752, AWWA C-504
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	BS4504 PN10, PN16, ANSI B 16.1 Cl. 125 LB, BS 16.5 Cl. 150 LB, AWWA C-207 Class D & E, ISO 2531 PN10, PN16

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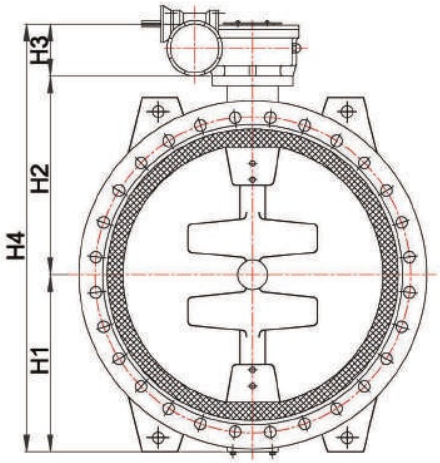

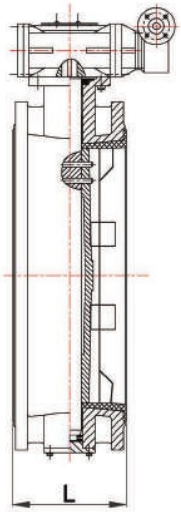

Upto 150#, PN10 - Flange Type						
SIZE						WEIGHT (APPROX.) (kg)
inch	mm	L	H1	H2	E	Flange
2"	50	43	115	210	66	9.5
3"	80	64	145	250	66	15
4"	100	127	162	265	66	52
6"	150	127	192	300	66	61
8"	200	153	209	317	80	68
10"	250	203	254	365	80	99
12"	300	203	278	414	120	110
14"	350	203	324	465	120	134
16"	400	203	349	495	120	170
18"	450	203	402	540	120	230
20"	500	203	427	608	120	266
22"	550	203	470	620	120	298
24"	600	203	502	663	203	410
28"	700	203	537	703	203	758
30"	750	305	575	750	203	980
32"	800	305	605	765	203	1180
36"	900	305	682	830	203	1395
40"	1000	305	752	958	203	1588
44"	1100	305	800	1000	203	1890
48"	1200	381	865	1080	203	2385
52"	1300	381	920	1140	203	2800
54"	1350	381	940	1200	270	3250
56"	1400	381	956	1261	270	3705
60"	1500	457	1050	1310	270	4675
64"	1600	457	1120	1380	270	5200

(Code -SVE)

DESIGN STANDARD	
DESIGN STANDARD	AWWA C-504, BS 5155
Face to Face / End to End Dimensions	BS 5155, ISO 5752, AWWA C-504
Valve inspection & testing	API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI
Pressure - Temperature rating	ASME B16.34
Flange Standards	BS4504 PN10, PN16, ANSI B 16.1 Cl. 125 LB, BS 16.5 Cl. 150 LB, AWWA C-207 Class D & E, ISO 2531 PN10, PN16

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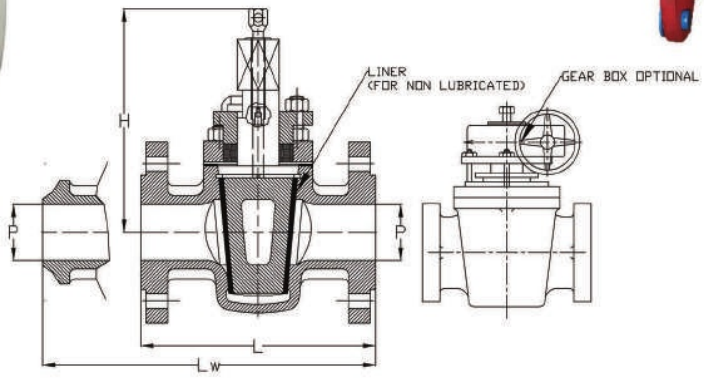
PLUG VALVES - CAST STEEL PLUG VALVES

Plug valves are valves with cylindrical or conically tapered "plugs" which can be rotated inside the valve body to control flow through the valve. The plugs in plug valves have one or more hollow passageways going sideways through the plug, so that fluid can flow through the plug when the valve is open. Plug valves are simple and often economical. Pluf Valves are available in Lubricated and Non-Lubricated Types. Our range is only of Non-Lubricated Type.



150#				
DN (inch)	L	H	W	WEIGHT (Kg) Approx
25 (1")	140	125	280	13
40 (1.5")	165	158	280	15
50 (2")	178	114	305	17
65 (2½")	203	120	457	27
80 (3")	203	127	457	33
100 (4")	229	154	762	48
150 (6")	267	241	Gear	78
200 (8")	292	279	Gear	120
250 (10")	330	317	Gear	176
300 (12")	356	330	Gear	260
350 (14")	381	381	Gear	380

(Code-RSI)

300#				
DN (inch)	L	H	W	WEIGHT (Kg) Approx
50 (2")	216	114	305	26
65 (2½")	283	120	457	41
80 (3")	283	127	457	50
100 (4")	305	154	762	72
150 (6")	403	196	Gear	97
200 (8")	419	241	Gear	117
250 (10")	457	279	Gear	180
300 (12")	502	317	Gear	264
350 (14")	762	330	Gear	390

(Code-RSI)

DESIGN STANDARD	
Plug Valve	API 599
Face to Face / End to End Dimensions	ASME B16.10
Valve inspection & testing	API598
Pressure - Temperature rating	ASME B16.34
Flange Standard	ANSI B16.5

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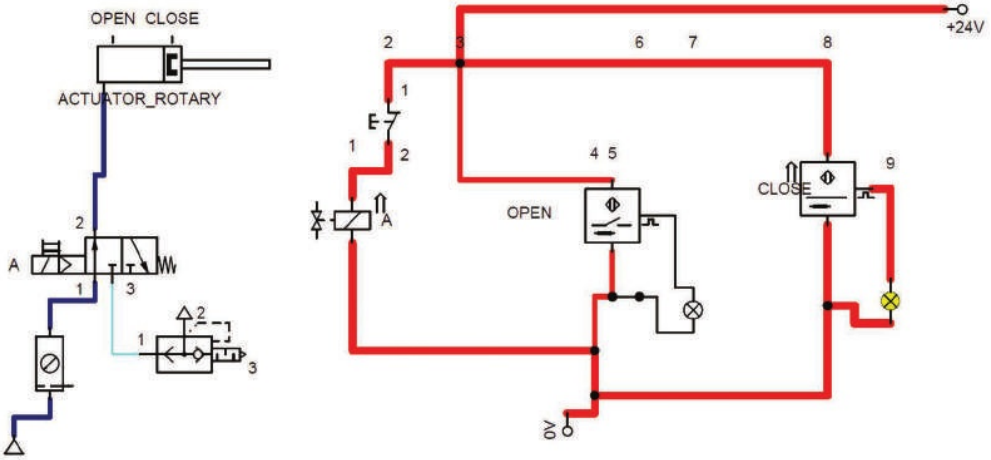
EMERGENCY SHUTDOWN VALVES

A shutdown valve (emergency shutdown valve, ESV, ESD, or ESDV) is an actuated valve designed to prevent the flow of hazardous fluid upon the detection of a dangerous event. This provides protection against possible harm to people, equipment or the environment. Shutdown valves form a part of a security instrumented system. Shutdown valves are primarily related to the oil & gas and chemical industries although other industries can also require this sort of protection system.

A safety shutoff valve should be fail-safe, that's close upon failure of any element of the input system (such as temperature controllers, steam pressure controllers), atmospheric pressure, fuel pressure, current from a flame detector, or current from other safety devices like low tide cutoff, and high cutoff. A blowdown valve (BDV) is another sort of shutdown valve designed to depressurize a pressure vessel by directing vapour to a flare, vent or blowdown stack in an emergency.
BDVs fail-safe to the open position upon failure of the system.

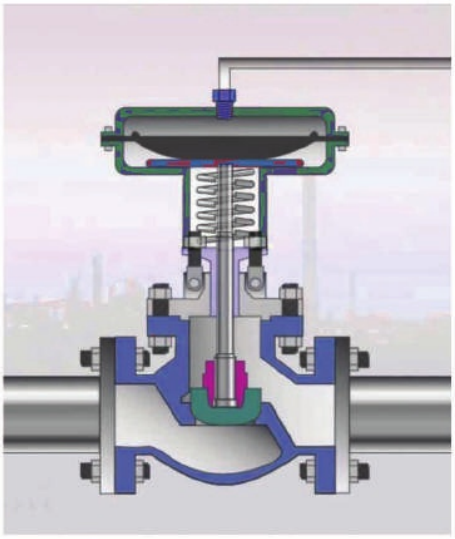


CONTROL VALVES - *FLOW & PRESSURE CONTROL VALVES*

A control valve may be a valve wont to control fluid flow by varying the dimensions of the flow passage as directed by a sign from a controller. This permits the direct control of flow and therefore the consequential control of process quantities like pressure, temperature, and liquid level. In automatic control terminology, an impact valve is termed a "final control element". The opening or closing of automatic control valves is typically done by electrical, hydraulic or pneumatic actuators. Normally with a modulating valve, which may be set to any position between fully open and fully closed, valve positioners are wont to make sure the valve attains the specified degree of opening. Air-actuated valves are commonly used due to their simplicity, as they only require a compressed gas supply, whereas electrically-operated valves require additional cabling and switch gear, and hydraulically-actuated valves required high supply and return lines for the hydraulic fluid.

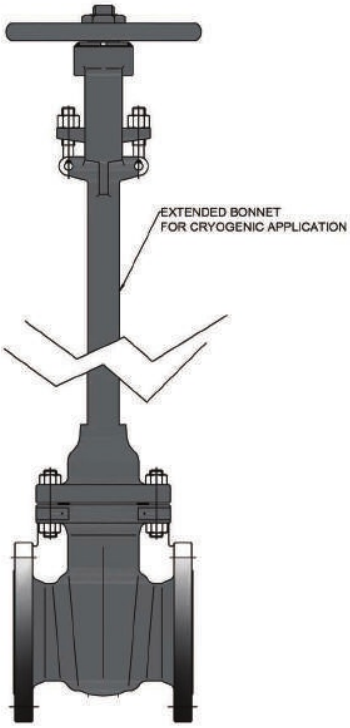
An automatic control valve consists of three main parts during which each part exist in several types and designs:

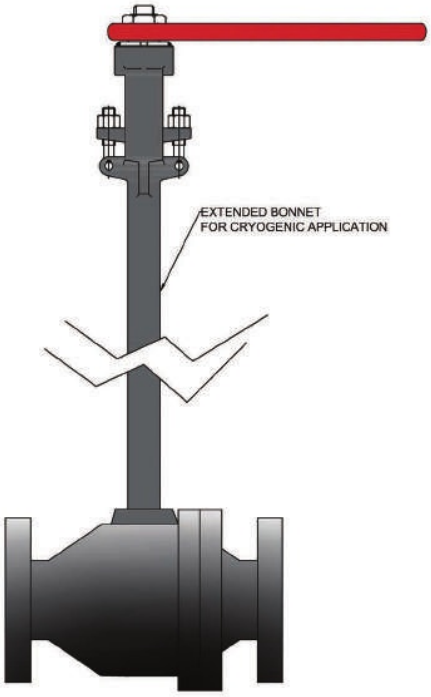
Valve actuator - which moves the valve's modulating element, like ball or butterfly.
Valve positioner - Which ensures the valve has reached the specified degree of opening.
This overcomes the issues of friction and wear.
Valve body - during which the modulating element, a plug, globe, ball or butterfly, is contained.
Accessories - Check Valves, Air Locks, Solenoids to drive the actuator and other supporting functions.



CRYOGENIC VALVES - *LOW TEMPERATURE SERVICE VALVES*

Generally, a cryogenic valve could be ay type of valve like a cryogenic gate valve, cryogenic ball valve, etc. These valves are specially designed and manufactured for use in Low temperature and Cryogenic temperature services. These low temperatures could be around -196 degC approximately. Typically for applciations in LNG, Cryogenic air separation plants, chiller applications and liquid gases storage tank farms. These valves include special design and construction, specially selected and treated materials for body and parts and specific soft sealing materials to work perfectly in such low temperature service.





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ACTUATED VALVES - PNEUMATIC AND ELECTRIC OPERATED VALVES

Flowtorq designs and manufactures high quality and reliability valves which are operated by pneumatic and electric actuators. Pneumatic actuators are scotch-yoke, rack and pinion type and rotart vane type (one manufactured by Flowtorq). Electric actuators are for on-off duty, modulating duty, etc. The actuators are generally connected to DCS of a process plant to send and recieve signal to operate and feedback.

ELECTRICAL (MOTORIZED) ACTUATED VALVES RANGE:
Gate Valves, Globe Valves, Ball Valves, Plug Valves, Butterfly Valves, etc. Actuator makes: Rotork, AUMA, Limitorque, CAIR - AIRA, PNEUTORK, NEWTORK

PNEUMATIC ACTUATED VALVES RANGE:
Gate Valves, Globe Valves, Ball Valves, Plug Valves, Butterfly Valves, etc. Actuator makes: Rotork, AUMA, Limitorque, BIFFI, FLOWTORQ, CAIR - AIRA, PNEUTORK, etc. Options and Accessories : Limit Switch, Feedback, Positioner, Indicator, Quick Shuttoff / Open, Solenoid Valves, Spring Return Units, Fail Safe, Manual Overrides, etc.

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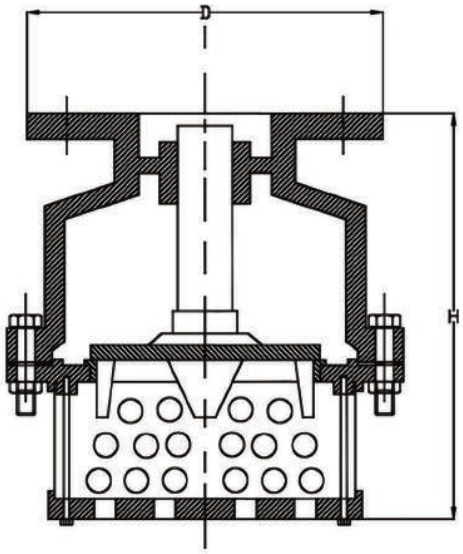
FOOT VALVES - CAST FOOT VALVES

Foot valves are basically used in suction lines. A foot valve is a type of check valve that is typically installed at a pump or at the bottom of a pipe line (hence the name). Foot valves act like ball check valves, but have an open end with a shield or screen over it to block debris from entering the line

150#			
DN (inch)	D	H	P
50 (2")	152	155	49
80 (3")	190	168	80
100 (4")	229	207	100
125 (5")	254	260	125
150 (6")	279	288	148
200 (8")	343	338	199
250 (10")	406	485	249
300 (12")	483	555	300
350 (14")	533	660	348

(Code-PV)



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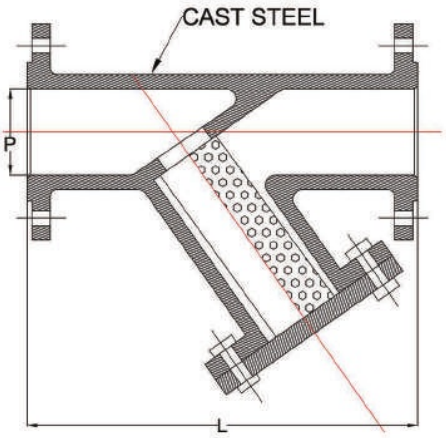
STRAINERS - Y- TYPE STRAINERS - CAST & FABRICATED

Y-Strainers are devices for mechanically removing unwanted solids from liquid, gas or steam lines by means of a perforated or wire mesh straining element. They are used in pipelines to protect pumps, meters, control valves, steam traps, regulators and other process equipment. These are extensively used in pumping stations and are generally installed in suction side of pump (before pump). Flowtorq Y Type strainers are cast and fabricated types.

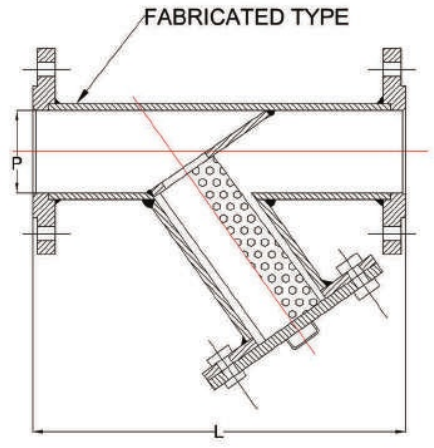


Cast - 150#		
DN (inch)	L	P
25 (1")	127	25
40 (1.5")	165	39
50 (2")	203	49
65 (2½")	216	64.9
80 (3")	241	80
100 (4")	292	100
125 (5")	356	125
150 (6")	406	148
200 (8")	495	199
250 (10")	622	249
300 (12")	698	300
350 (14")	787	348

(Code-AZV)

Fabricated - 150#		
DN (inch)	L	P
25 (1")	127	25
40 (1.5")	165	39
50 (2")	203	49
65 (2½")	216	64.9
80 (3")	241	80
100 (4")	292	100
125 (5")	356	125
150 (6")	406	148
200 (8")	495	199
250 (10")	622	249
300 (12")	698	300
350 (14")	787	348
400 (16")	914	398
450 (18")	977	447
500 (20")	977	499
600 (24")	1205	596

(Code-AZV)



DESIGN STANDARD	
Strainer	ASME B16.34, Mnfr's Std
Face to Face / End to End Dimensions	ANSI B16.5 / B16.10
Pressure - Temperature rating	ASME B16.34

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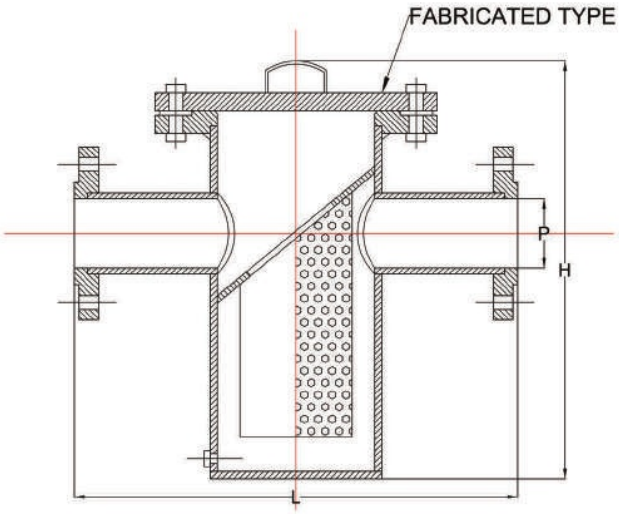
STRAINERS - T- TYPE STRAINERS - FABRICATED

T-Strainers are devices for mechanically removing unwanted solids from liquid, gas or steam lines by means of a perforated or wire mesh straining element. They are used in pipelines to protect pumps, meters, control valves, steam traps, regulators and other process equipment. These are extensively used in pumping stations and are generally installed in suction side of pump (before pump). Flowtorq T Type strainers are available in fabricated type.



FABRICATED			
DN (inch)	L	H	P
50 (2")	260	300	49
80 (3")	300	315	80
100 (4")	330	350	100
125 (5")	400	400	125
150 (6")	400	425	148
200 (8")	465	550	199
250 (10")	515	700	249
300 (12")	575	850	300
350 (14")	680	900	348
400 (16")	750	1000	394
450 (18")	850	1100	449
500 (20")	1000	1200	500
600 (24")	12000	1300	599

(Code-AZV)

DESIGN STANDARD	
Strainer	ASME B16.34, Mnfr's Std
Face to Face / End to End Dimensions	ANSI B16.5 / ANSI B16.10
Pressure - Temperature rating	ASME B16.34

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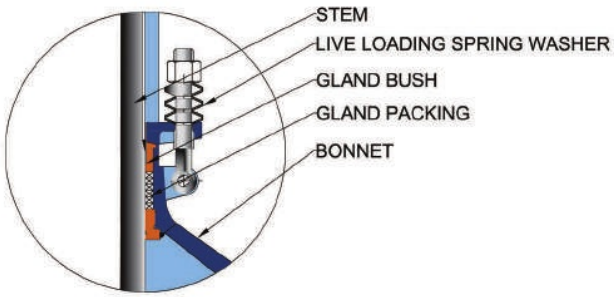
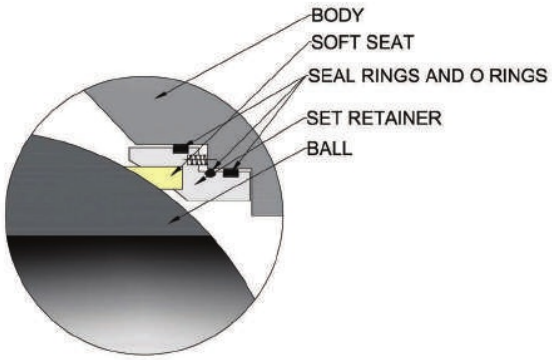
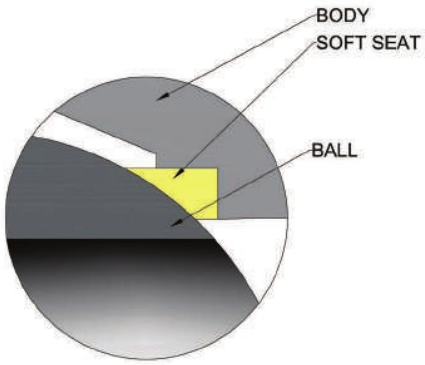
Live Loaded Valves - Flowtorq's Live Loaded valves are an ideal solution for low emission, VOC services and Fugitive Emission Services. These valves are specially designed and manufactured with special packings from well known sealing material manufacturers like John Crane, Garlock, etc. These valves can also be used in high temperature, chlorine service, gaseous hydrocarbon services, cryogenic and other volatile substances applications. High quality Belleville Spring Washers are used to fix gland bush with gland tightening bolts. These helps to maintain gland pressure on gland packings to eliminate periodic wear and compensate in prevention of leakage.



Metal Seated Valves - The key advantage of metal seated valves when compared to soft seated valves is that they can withstand high temperatures and severe service conditions. Metal seats can stand up to extreme flashing, hydraulic shock, abrasive process fluid, and high temperatures up to and exceeding 1,000° F. They are also ideal for high erosion or corrosion applications. Another important factor is that metal seats can be hardened by specialized coatings.



Soft Seated Valves - Soft seats are typically composed of thermoplastic components like PTFE. These valves are appropriate for applications in which chemical compatibility is crucial, and in situations where having the tightest seal is important. Soft seats, however, aren't suitable for processing abrasive or dirty fluids. These valves are known to break down under conditions like these, resulting in a leaky valve. Complications introduced by soft seated valves are related to the fact that they don't stand up to applications that challenge their service limits.



MATERIAL SPECS

CHEMICAL COMPOSITION	ASTM CAST	ASTM FORGED
CARBON STEEL		
0.30/.035 % MAX	A216-WCB†	A105/A106
0.25/0.35 % MAX	A216-WCC	A105N
LOW TEMPERATURE STEEL		
0.30 % MAX	A352-LCB†	A350-LF2 Cl.1
0.5 Ni	A352-LCC	
0.5 Mo	A352-LC1	
2 Ni	A352-LC2	
3 Ni	A352-LC2-1*	
3.5 Ni	A352-LC3	A350-LF3 Cl.1
4.5 Ni	A352-LC4*	
9 Ni	A352-LC9*	
ALLOY STEEL		
0.5 Mo	A217-WC1	A182-F1
0.6 Cr - Ni-0.2 Mo	A487-4C*	
0.75 Cr - 0.75 Ni - 1 Mo	A217-WC5	
1 Cr - 0.5 Mo		A182-F12 Cl.2
1.25 Cr - 0.5 Mo	A217-WC6	A182-F11 Cl.2
1.25 Cr - 0.5 Mo	A217-WC11	
2.25 Cr - 1 Mo	A217-WC9	A182-F22 Cl.3
3 Cr - 1 Mo	A182-F21	
5 Cr - 0.5 Mo	A217-C5	A182-F5a
9 Cr - 1 Mo	A217-C12	A182-F9
9 Cr - 1 Mo-0.2 V	A217-C12A	A182-F91
STAINLESS STEEL		
13 Cr	A217-CA15	A182-F6A
13 Cr - 4 Ni		A182-F6NM
13 Cr - 4 Ni - 0.7 Mo	A351-CA6NM*	
18 Cr - 8 Ni	A351-CF10M	A182-F304H
18 Cr - 8 Ni with Molybdenum		A182-F316H
18 Cr - 8 Ni with Titanium		A182-F321
18 Cr - 8 Ni with Titanium		A182-F321H
18 Cr - 8 Ni with Columbium	A351-CF8A	A182-F347H
19 Cr - 9 Ni	A351-CF8	A182-F304
19 Cr - 10 Ni Low Carbon	A351-CF3	A182-F304L
19 Cr - 10 Ni - 2 Mo	A351-CF8M	A182-F316
19 Cr - 10 Ni - 2 Mo Low Carbon	A351-CF3M	A182-F316L
19 Cr - 9 Ni - Cb	A351-CF8C	A182-F347
DUPLEX STEEL		
19-22 Cr 27.5-30.5 Ni 2-3 Mo	A351-CN7M	B473*(Alloy 20)
24-26 Cr 7-10 Ni 4 Mo N/V	A351-CD4MCu	A182-F53
18-21 Cr 9-13 Ni 3-4 Mo	A351-CG8M*	(AISI 317)
19.5-20.5 Cr 17.5-19.5 Ni 6-7 Mo	A351-CK3MCuN	A182-F44
24.5-26.5 Cr 4.7 Ni 1.7-2.2 Mo	A890-1A*	A182-F50*
21-23.5 Cr 4.5-6.5 Ni 2.5-3.5 Mo	A890-4A*/A351-CD3MN	A182-F51
24-26 Cr 6-8 Ni 4-5 Mo	A890-5A*/A351-CD4MCu*	A182-F53
24-26 Cr 6.5-8.5 Ni 2-4 Mo	A995-CD3MWCuN/6A	A182-F55
25 Cr 20 Ni		A182-F310H

DESCRIPTION	UNS GRADE	FORGING	CASTING	BARSTOCK
Carbon steel	K30504	A105	A216 WCB	A105
Low-temp. carbon	K03011	A350 LF2	A352 LCB	A350 LF2
High-yield steel	K03014	A694 F60	-	A694 F60
3-1/2 nickel steel	K32025	A350 LF3	A352 LC3	A350 LF3
5 chrome, 1/2 moly	K41545	A182 F5	A217 C5	A182 F5
1 1/4 chrome, 1/2 moly	K11597	A182 F11	A217 WC6	A739 B11
2 1/4 chrome moly, 1 moly	K21590	A182 F22	A217 WC9	A739 B22
9 chrome, 1 moly	K90941	A182 F9	A217 WC6	A182 F9
13 chrome	S41000	A182 F6A	A351 CA15	A276 or A479 410
304	S30400	A182 F304	A351 CF8	A276 or A479 304
304L	S30403	A182 F304L	A351 CF3	A276 or 479 304L
316	S31600	A182 F316	A351 CF8M	A276 or A479 316
316L	S31603	A182 F316L	A351 CF3M	A276 or A479 316L
317L	S31703	A182 F317L	A351 CG8M	A276 or 479 317L
321	S32100	A182 F321	-	A276 or A479 321
347	S34700	A182 F347	A351 CF8C	A276 or A479 347
17-4pH	S17400	A564 630	A564 630	-
Alloy 400	N04400	B564 N04400	A494 M35-1	B164 N04400
Alloy K500	N05500	-	-	B865 N05500
Alloy 800	N08800	B564 N08810	-	B408 N08800
Alloy 825	N08825	-	-	B425 N08825
Alloy 600	N06600	B564 N06600	A494 CY40	B166 N06600
Alloy 625	N06625	B564 N06625	A494 CW6MC	B446 N06625
Alloy B2	B10665	B564 N10665	A494 N 12MV	B335 N10665
Alloy C	N10002	-	A494 CW6M	-
Alloy C22	N06022	B574 N06022	A494 CX2MW	B574 N06022
Alloy C276	N10276	B564 N10276	A494 CW12 MW	B574 N10276
22% duplex	S13803	A182 F51	A890 Gr. 4A	A276 or A479 S31803
25% duplex	S32750 or 32760	A182 F53	A890 Gr. 6A	A276/479 S32750 or 60
2545MO	S31254	A182 F44	A351 CK3MCuN	A182 F44
904L	N08904	B625 N08904	-	B649 N08904
Titanium	R50400	B381 F2	B367 C2	B348 Gr. 2

NOTES: _____

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ASSURANCE FOR SUPERIOR QUALITY PRODUCTS

Quality is the performance of our product as per the commitment made by us to our customers. Such commitment is either explicit or implicit i.e. in terms of written contract or in terms to the QUALITY MANAGEMENT expectation of our customer. The performance of the product is concerned with the ultimate function and service which the product must provide to the final consumer. Our product is known as a quality product only because it satisfies various criteria for its functioning for the end user. In addition to the physical criteria, there is also a service and time factor to quality. The same quality of physical performance should be available over a reasonable period of time. Hence time is also unnecessary aspect of quality. Quality is an important dimension of production and operations management. It is not sufficient to produce products or services in the right quantity and at right time; it is important to ensure that the items and services manufactured are of the right quality.

Here at Flowtorq, quality of product and services are taken care of to ensure correct things move the right way by implementing the right Quality Management & Process Control.

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