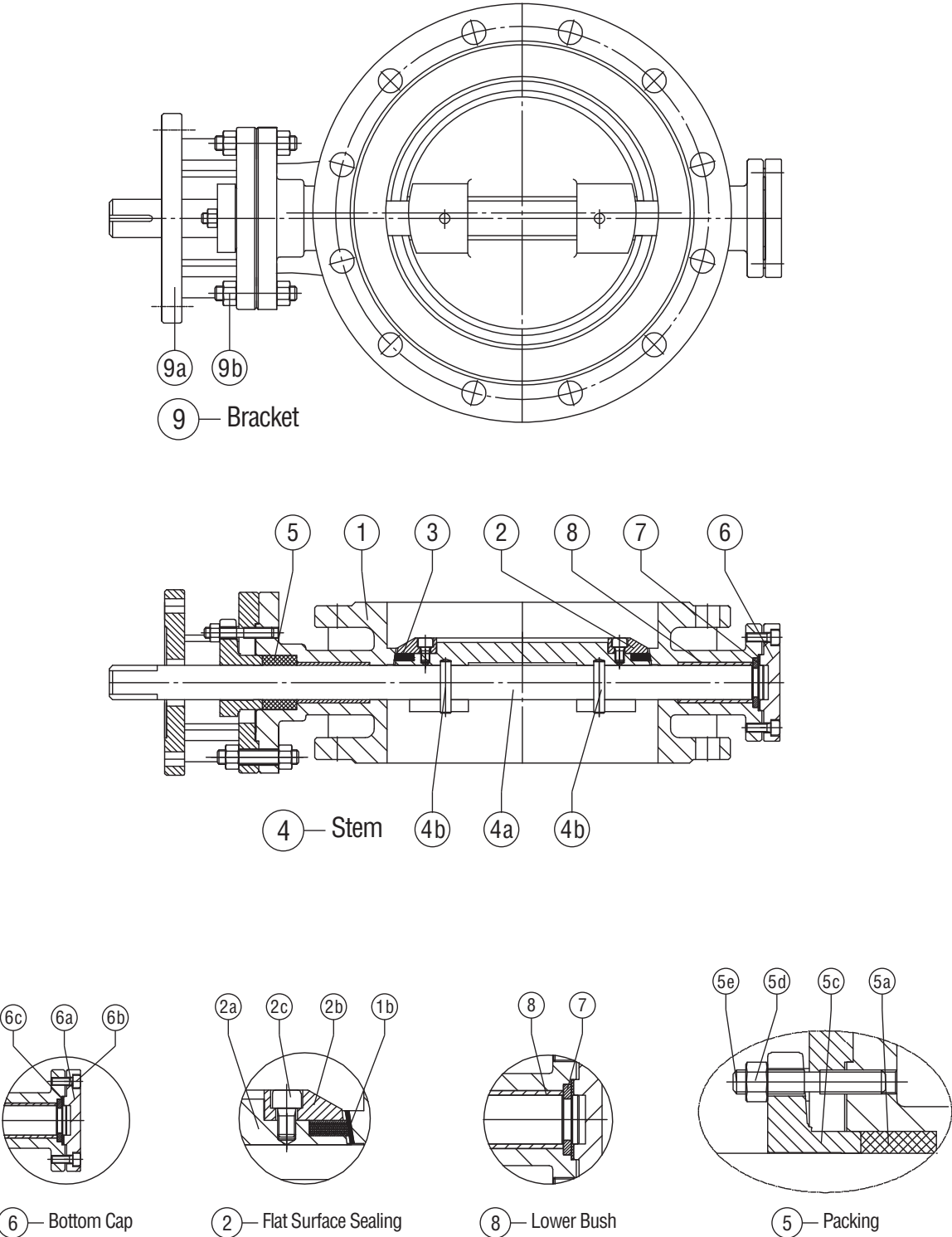


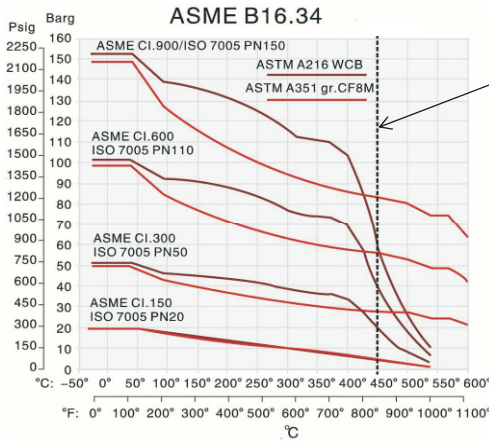
Details of basic and optional parts



Material list according to ASTM standard

item	Part name	Material list	Material list
1a	Body	ASTM A216 WCB	ASTM A351 CF8
1b	Body seat	Overlay 13%Cr / Stellite	Integral Body / Overlay Stellite
2a	Disc	ASTM A216 WCB	ASTM A351 CF8
2b	Seat protection ring	ASTM A105	M A351 CF8
2c	Hex.socket screw	Stainless steel A2	Stainless steel A2
2d	FIRE – SAFE Gasket	AISI 304 + Graphite	AISI 304 + Graphite
3a	Multi-layer seal ring	AISI 304 + Graphite	AISI 304 + Graphite
4a	Stem	ASTM A182 420	ASTM A182 F304
4b	Dowel pin	ASTM A105	AISI 304
5a	Packing	Graphite	Graphite
		PTFE (RPTFE)	PTFE (RPTFE)
5c	Packing gland	ASTM A216 WCB	ASTM A351 CF8
5d	Nut	ASTM A194 2H	ASTM A194 B
5e	Bolt	ASTM A193 B7	ASTM A193 B8
6a	Botton cup	ASTM A105	ASTM A182 F304
6b	Hex.socket screw	Carbon steel	Stainless steel
6c	Gasket	AISI 304 + Graphite	AISI 304 + Graphite
7	Retainer Ring	ASTM A182 F6a	ASTM A182 F304
8a	Bush	SF-1B	AISI 304
		AISI 316	*****
9a	Bracket	ASTM A216 WCB	ASTM A216 WCB
9b	Bracket nut	ASTM A193 B7	ASTM A193 B8
Options available upon request			
Lubrication			
5h	Lantern ring	AISI 410	AISI 304
5m	Plug valve	Stainless steel	AISI 304
Live loading Packing			
5n	Belleville spring	Stainless steel or spring steel nickel plated	
Fire – Safe design			
2d	Gasket	AISI 304 + Graphite	AISI 304 + Graphite
Hard sealing design			
3a	Hard sealing ring	ASTM A182 F304	ASTM A182 F304
New seat ring design (up to 250℃)			
1d	O – ring	NBR / VITON	NBR / VITON
1c	New seat ring	ASTM A182 F304	ASTM A182 F304

Pressure and temperature graph

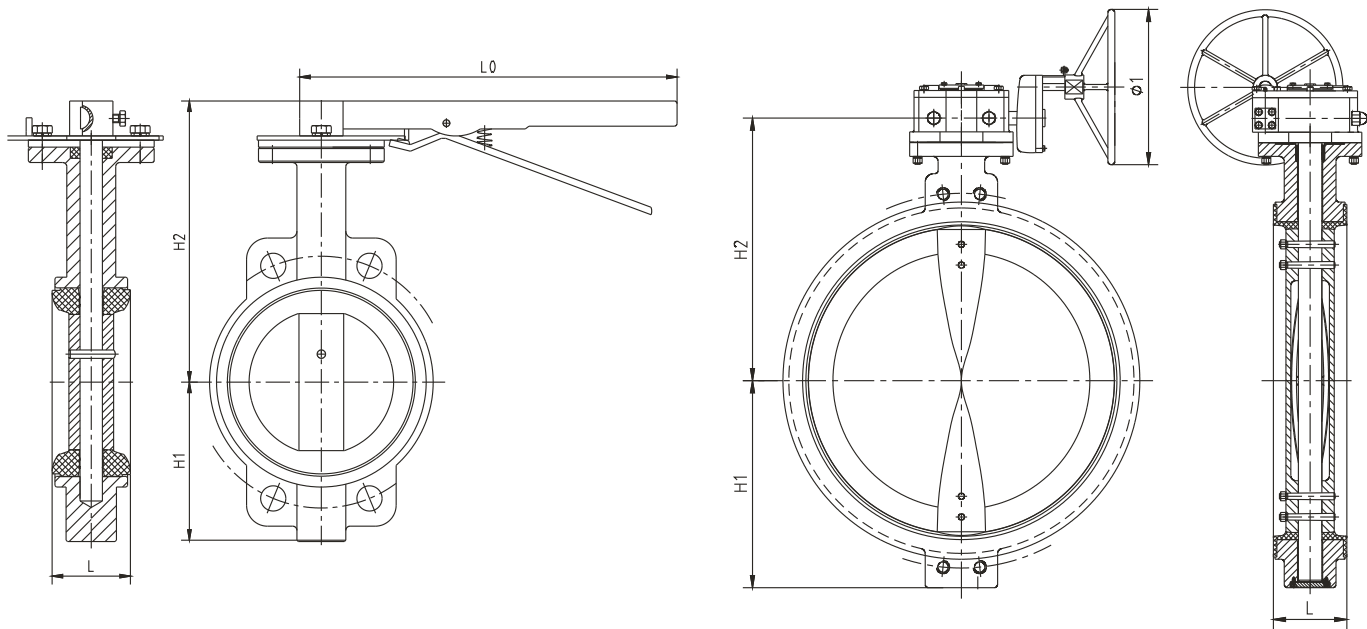


Max. applicable temperature for the basic model.

Cast Steel Bolted Bonnet Valves

CCPV

Materials of Construction: Wafer Type Central Line Butterfly Valves



Products Specification

Valve Name	Soft Seat Butterfly Valve
Pressure Class	PN10-PN16
Valve Nominal Size	DN50–DN1500
Design Standard	EN593
Test Standard	EN12266
Connection Standard	EN1092
Valve Actuator	Lever, Worm Gear
Valve Connection	Wafer
Valve Structure	Central Line
Water, Air, Oil, Gas, Steam, etc	

Products Main Parts List

Item	Part Name	Part Material						
		CI	DI	CS	CS CF8	CS CF8M	CF8	CF8M
1	Body	CI	DI	WCB	WCB	WCB	CF8	CF8M
2	Disc	CI	DI	WCB	CF8	CF8M	CF8	CF8M
3	Stem	416	416	420	F304	F316	F304	F316
4	Seat	NBR / EPDM / Viton						
5	Stem Packing	PTFE						
6	Operator	Part						

CCPV

Cast Steel Bolted Bonnet Valves

Wafer Type Central Line Butterfly Valves • PN 10

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO–No.
2"(DN50)	43	165	82	275		10	130	F07
2 1/2"(DN65)	46	175	88	275		18	230	F07
3"(DN80)	46	180	97	275		25	340	F07
4"(DN100)	52	200	114	280		30	648	F07
5"(DN125)	56	215	127	290		80	1250	F07
6"(DN150)	56	235	140	290		110	1830	F10
8"(DN200)	60	280	174	390		190	3400	F10
8"(DN200)	60	286	174		300	190	3400	F10
10"(DN250)	68	275	200		300	360	5270	F10
12"(DN300)	78	320	225		300	760	7590	F12
14"(DN350)	78	360	240		355	820	10332	F12
16"(DN400)	102	410	300		500	1180	13727	F14
18"(DN450)	114	455	325		500	1320	17372	F16
20"(DN500)	127	510	360		600	2077	21447	F16
24"(DN600)	154	535	430		600	4200	30884	F16
28"(DN700)	165	620	470		700	4800	42038	F25
30"(DN750)	190	645	520		700	6200	48258	F25
32"(DN800)	190	705	580		700	8000	54900	F25
36"(DN900)	203	760	600		760	11000	69490	F25
40"(DN1000)	216	735	655		760	13800	80420	F25
48"(DN1200)	254	930	790		800	18920	123600	F30
56"(DN1400)	279	1110	920		800	24500	202480	F35
60"(DN1500)	279	1165	975		800	29360	232400	F35

Products Description(DN50~600)

- Central line butterfly valve hold real bi–direction seal effort.
- Valve max working pressure :10Bar.
- Valve Seat is soft ring, can be replaced.
- Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- There are 10 lock position for handle.
- As per client's requirement, For CI, DI, CS body valve, Disc can't be coated with some material.

Products Description(DN700~1500)

- Central line butterfly valve hold real bi–direction seal effort.
- Valve max working pressure : 10Bar.
- Valve Seat is fixed on body, can't be replaced.
- Pin connection for disc and stem, make sure operation smooth.
- Advice large size disc material is Stainless steel.

Cast Steel Bolted Bonnet Valves



Wafer Type Central Line Butterfly Valves • PN 16

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO-No.
2"(DN50)	43	165	82	275		10	130	F07
2 1/2"(DN65)	46	175	88	275		18	230	F07
3"(DN80)	46	180	97	275		25	340	F07
4"(DN100)	52	200	114	280		30	648	F07
5"(DN125)	56	215	127	290		80	1250	F07
6"(DN150)	56	235	140	290		110	1830	F10
8"(DN200)	60	280	174	390		190	3400	F10
8"(DN200)	60	286	174		300	190	3400	F10
10"(DN250)	68	275	200		300	360	5270	F10
12"(DN300)	78	320	225		300	760	7590	F12
14"(DN350)	78	360	240		355	820	10332	F12
16"(DN400)	102	410	300		500	1180	13727	F14
18"(DN450)	114	455	325		500	1320	17372	F16
20"(DN500)	127	510	360		600	2077	20105	F16
24"(DN600)	154	535	430		600	4200	28952	F16
28"(DN700)	165	620	470		700	4800	42038	F25
30"(DN750)	190	645	520		700	6200	48258	F25
32"(DN800)	190	705	580		700	8000	54900	F25
36"(DN900)	203	760	600		760	11000	69490	F25
40"(DN1000)	216	735	655		760	13800	80420	F25
48"(DN1200)	254	930	790		800	18920	123600	F30
56"(DN1400)	279	1110	920		800	24500	202480	F35
60"(DN1500)	279	1165	975		800	29360	232400	F35

Products Description(DN50~600)

- 1. Central line butterfly valve hold real bi-direction seal effort.
- 2. Valve max working pressure :10Bar.
- 3. Valve Seat is soft ring, can be replaced.
- 4. Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- 5. There are 10 lock position for handle.
- 6. As per client's requirement, For CI, DI, CS body valve, Disc can't be coated with some material.

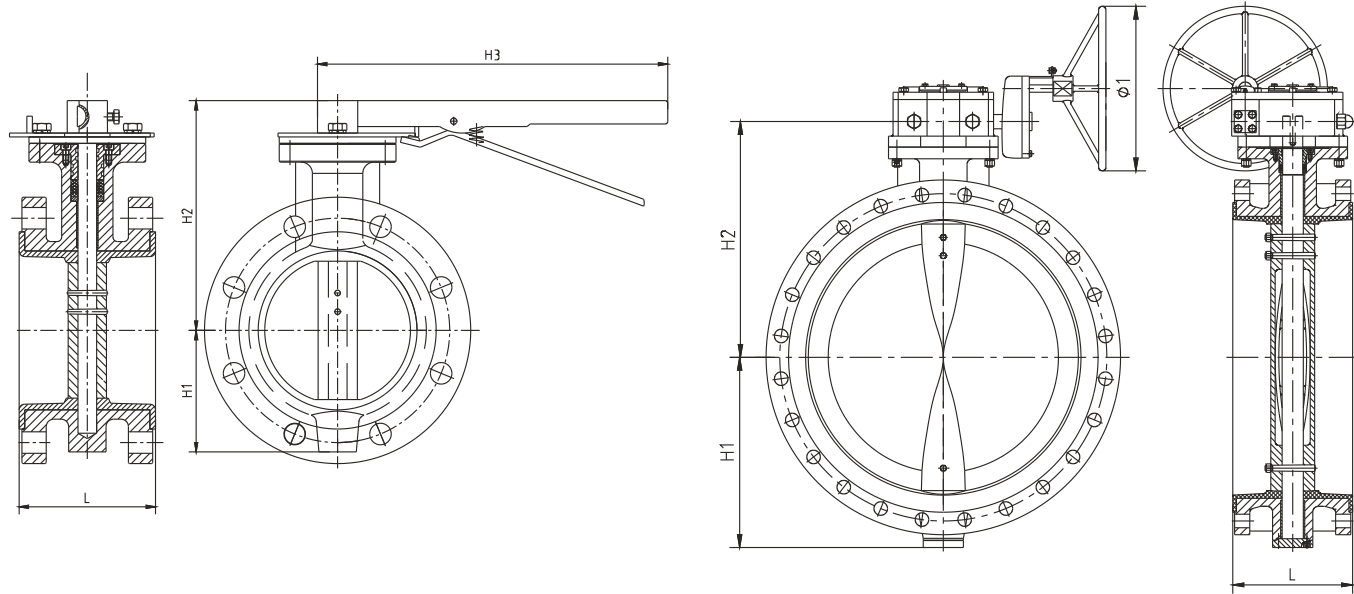
Products Description(DN700~1500)

- 1. Central line butterfly valve hold real bi-direction seal effort.
- 2. Valve max working pressure : 10Bar.
- 3. Valve Seat is fixed on body, can't be replaced.
- 4. Pin connection for disc and stem, make sure operation smooth.
- 5. Advice large size disc material is Stainless steel.



Cast Steel Bolted Bonnet Valves

Materials of Construction: Flange Type Central Line Butterfly Valves



Products Specification

Valve Name	Soft Seat Butterfly Valve
Pressure Class	PN10-PN16
Valve Nominal Size	DN50–DN1800
Design Standard	EN593
Test Standard	EN12266
Connection Standard	EN1092
Valve Actuator	Lever, Worm Gear
Valve Connection	Double Flange
Valve Structure	Central Line
Water, Air, Oil, Gas, Steam, etc	

Products Main Parts List

Item	Part Name	Part Material						
		CI	DI	CS	CS CF8	CS CF8M	CF8	CF8M
1	Body	CI	DI	WCB	WCB	WCB	CF8	CF8M
2	Disc	CI	DI	WCB	CF8	CF8M	CF8	CF8M
3	Stem	416	416	420	F304	F316	F304	F316
4	Seat	NBR / EPDM / Viton						
5	Stem Packing	PTFE						
6	Operator	Part						

Cast Steel Bolted Bonnet Valves

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Flange Type Central Line Butterfly Valves • PN 10

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO-No.
2"(DN50)	108	150	65	275		10	130	F07
2½"(DN65)	112	165	80	275		18	230	F07
3"(DN80)	114	172	100	275		25	340	F07
4"(DN100)	127	178	114	280		30	648	F07
5"(DN125)	140	210	122	290		80	1250	F07
6"(DN150)	140	235	130	290		110	1830	F10
8"(DN200)	152	266	155	390		190	3400	F10
8"(DN200)	152	275	155		300	190	3400	F10
10"(DN250)	165	280	200		300	360	5270	F10
12"(DN300)	178	395	218		300	760	7590	F12
14"(DN350)	190	413	255		355	820	10332	F12
16"(DN400)	216	415	280		500	1180	13727	F14
18"(DN450)	222	450	305		500	1320	17372	F16
20"(DN500)	229	490	380		600	2077	21447	F16
24"(DN600)	267	550	445		600	4200	30884	F16
28"(DN700)	292	620	470		700	4800	42038	F25
30"(DN750)	318	645	520		700	6200	48258	F25
32"(DN800)	318	705	580		700	8000	54900	F25
36"(DN900)	330	760	600		760	11000	69490	F25
40"(DN1000)	410	735	655		760	13800	80420	F25
48"(DN1200)	470	930	790		812	18920	123600	F30
56"(DN1400)	530	1110	920		812	24500	202480	F35
60"(DN1500)	530	1165	975		812	29360	232400	F35
64"(DN1600)	610	1295	1010		914	65000	278700	F35
72"(DN1800)	670	1475	1115		914	75000	352760	F40

Products Description(DN50~600)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : less than 12Inch is 20Bar, other is 16Bar.
- Valve Seat is soft ring, can be replaced.
- Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- There are 10 lock position for handle.
- As per client's requirement, For CI, DI, CS body valve, Disc can't be coated with some material.

Products Description(DN700~1800)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : 10Bar.
- Valve Seat is fixed on body, can't be replaced.
- Pin connection for disc and stem, make sure operation smooth.
- Advice large size disc material is Stainless steel.

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Cast Steel Bolted Bonnet Valves

Flange Type Central Line Butterfly Valves • PN 16

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO-No.
2"(DN50)	108	150	65	275		10	130	F07
2½"(DN65)	112	165	80	275		18	230	F07
3"(DN80)	114	172	100	275		25	340	F07
4"(DN100)	127	178	114	280		30	648	F07
5"(DN125)	140	210	122	290		80	1250	F07
6"(DN150)	140	235	130	290		110	1830	F10
8"(DN200)	152	266	155	390		190	3400	F10
8"(DN200)	152	275	155		300	190	3400	F10
10"(DN250)	165	280	200		300	360	5270	F10
12"(DN300)	178	395	218		300	760	7590	F12
14"(DN350)	190	413	255		355	820	10332	F12
16"(DN400)	216	415	280		500	1180	13727	F14
18"(DN450)	222	450	305		500	1320	17372	F16
20"(DN500)	229	490	380		600	2077	20105	F16
24"(DN600)	267	550	445		600	4200	28952	F16
28"(DN700)	292	620	470		700	4800	42038	F25
30"(DN750)	318	645	520		700	6200	48258	F25
32"(DN800)	318	705	580		700	8000	54900	F25
36"(DN900)	330	760	600		760	11000	69490	F25
40"(DN1000)	410	735	655		760	13800	80420	F25
48"(DN1200)	470	930	790		812	18920	123600	F30
56"(DN1400)	530	1110	920		812	24500	202480	F35
60"(DN1500)	530	1165	975		812	29360	232400	F35
64"(DN1600)	610	1295	1010		914	65000	278700	F35
72"(DN1800)	670	1475	1115		914	75000	352760	F40

Products Description(DN50~600)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : less than 12Inch is 20Bar, other is 16Bar.
- Valve Seat is soft ring, can be replaced.
- Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- There are 10 lock position for handle.
- As per client's requirement, For CI, DI, CS body valve, Disc can't be coated with some material.

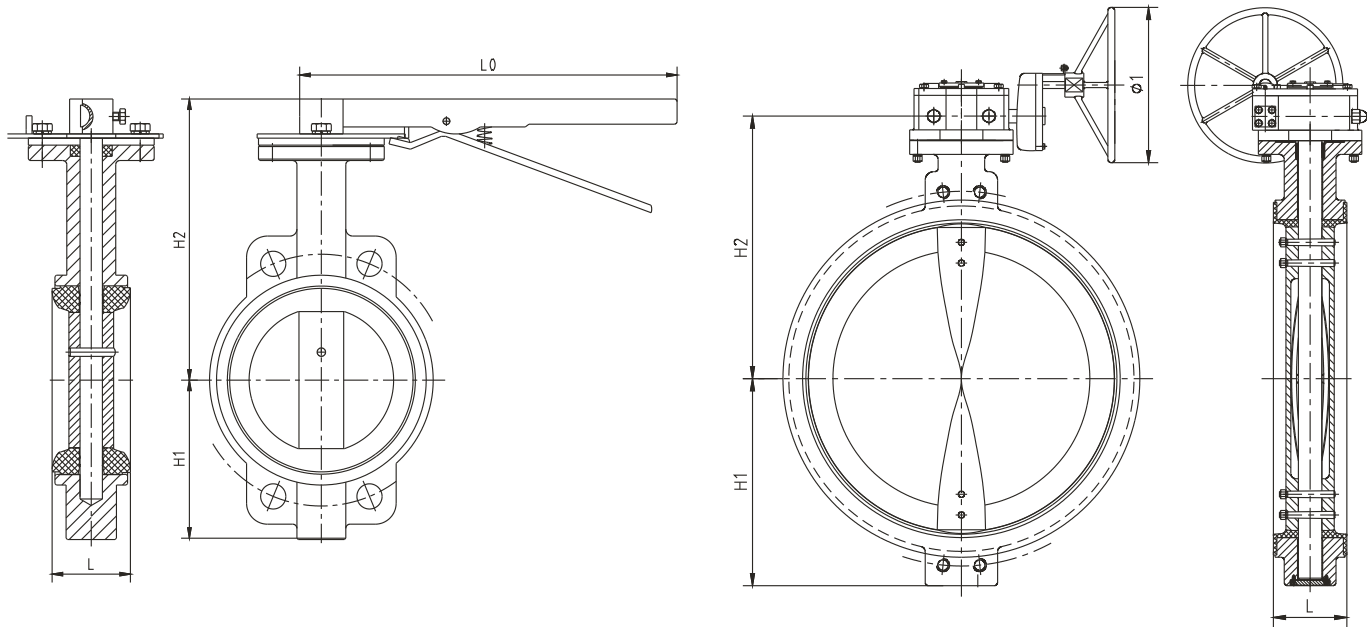
Products Description(DN700~1800)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : 10Bar.
- Valve Seat is fixed on body, can't be replaced.
- Pin connection for disc and stem, make sure operation smooth.
- Advice large size disc material is Stainless steel.

Cast Steel Bolted Bonnet Valves

CCPV

Materials of Construction: Wafer Type Central Line Butterfly Valves



Products Specification

Valve Name	Soft Seat Butterfly Valve
Pressure Class	150Lb
Valve Nominal Size	2"-60"
Design Standard	API609
Test Standard	API 598
Connection Standard	ASME B16.5
Valve Actuator	Lever, Worm Gear
Valve Connection	Wafer
Valve Structure	Central Line
Water, Air, Oil, Gas, Steam, etc	

Products Main Parts List

Item	Part Name	Part Material						
		CI	DI	CS	CS CF8	CS CF8M	CF8	CF8M
1	Body	CI	DI	WCB	WCB	WCB	CF8	CF8M
2	Disc	CI	DI	WCB	CF8	CF8M	CF8	CF8M
3	Stem	416	416	420	F304	F316	F304	F316
4	Seat	NBR / EPDM / Viton						
5	Stem Packing	PTFE						
6	Operator	Part						

CCPV

Cast Steel Bolted Bonnet Valves

Wafer Type Central Line Butterfly Valves • ANSI Class 150

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO-No.
2"(DN50)	43	165	82	275		10	130	F07
2 1/2"(DN65)	46	175	88	275		18	230	F07
3"(DN80)	46	180	97	275		25	340	F07
4"(DN100)	52	200	114	280		30	648	F07
5"(DN125)	56	215	127	290		80	1250	F07
6"(DN150)	56	235	140	290		110	1830	F10
8"(DN200)	60	280	174	390		190	3400	F10
8"(DN200)	60	286	174		300	190	3400	F10
10"(DN250)	68	275	200		300	360	5270	F10
12"(DN300)	78	320	225		300	760	7590	F12
14"(DN350)	78	360	240		355	820	10332	F12
16"(DN400)	102	410	300		500	1180	13727	F14
18"(DN450)	114	455	325		500	1320	17372	F16
20"(DN500)	127	510	360		600	2077	21447	F16
24"(DN600)	154	535	430		600	4200	30884	F16
28"(DN700)	165	620	470		700	4800	42038	F25
30"(DN750)	190	645	520		700	6200	48258	F25
32"(DN800)	190	705	580		700	8000	54900	F25
36"(DN900)	203	760	600		760	11000	69490	F25
40"(DN1000)	216	735	655		760	13800	80420	F25
48"(DN1200)	254	930	790		812	18920	123600	F30
56"(DN1400)	279	1110	920		812	24500	202480	F35
60"(DN1500)	279	1165	975		812	29360	232400	F35

Products Description(DN50~600)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : less than 12Inch is 20Bar, other is 16Bar.
- Valve Seat is soft ring, can be replaced.
- Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- There are 10 lock position for handle.
- As per client's requirement, For CI, DI, CS body valve, Disc can be coated with some material.

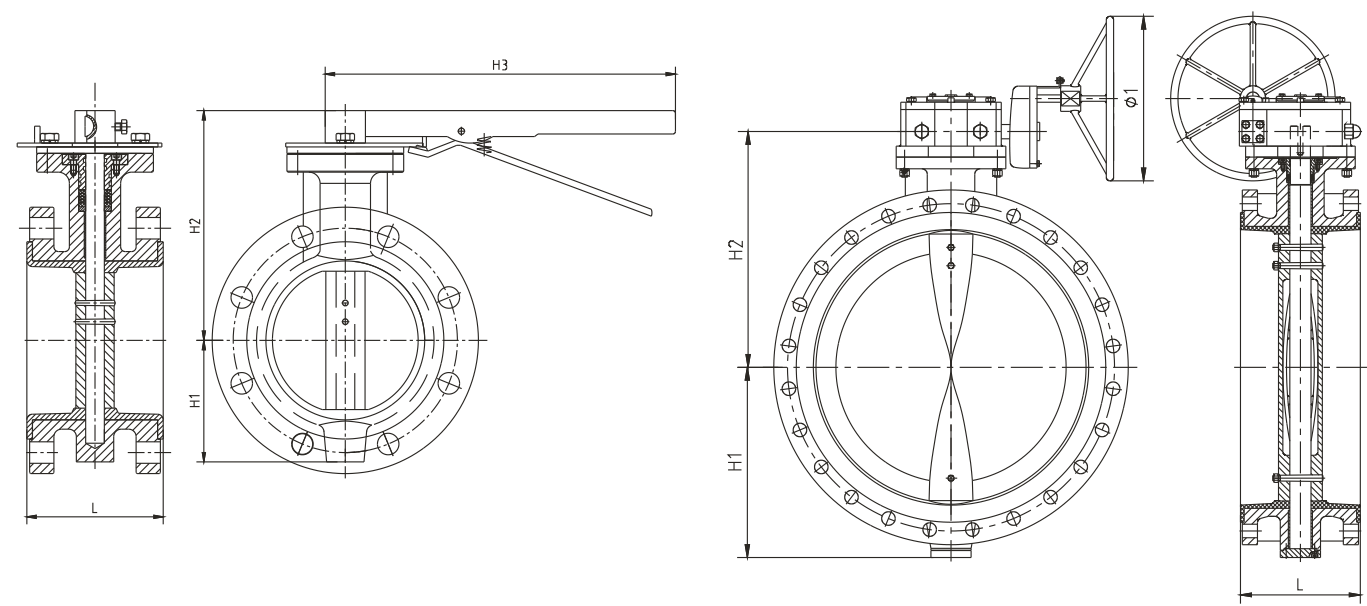
Products Description(DN700~1500)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : 10Bar.
- Valve Seat is fixed on body, can't be replaced.
- Pin connection for disc and stem, make sure operation smooth.
- Advice large size disc material is Stainless steel.

Cast Steel Bolted Bonnet Valves

CCPV

Materials of Construction: Flange Type Central Line Butterfly Valves



Products Specification

Valve Name	Soft Seat Butterfly Valve
Pressure Class	150Lb
Valve Nominal Size	2"-60"
Design Standard	API609
Test Standard	API 598
Connection Standard	ASME B16.5
Valve Actuator	Lever, Worm Gear
Valve Connection	Double Flange
Valve Structure	Central Line
Water, Air, Oil, Gas, Steam, etc	

Products Main Parts List

Item	Part Name	Part Material						
		CI	DI	CS	CS CF8	CS CF8M	CF8	CF8M
1	Body	CI	DI	WCB	WCB	WCB	CF8	CF8M
2	Disc	CI	DI	WCB	CF8	CF8M	CF8	CF8M
3	Stem	416	416	420	F304	F316	F304	F316
4	Seat	NBR / EPDM / Viton						
5	Stem Packing	PTFE						
6	Operator	Part						

CCPV

Cast Steel Bolted Bonnet Valves

Flange Type Central Line Butterfly Valves • ANSI Class 150

Dimension

Nominal Diameter (mm)	Face to Face Length	Height from Pipe Center (mm)	Height from Pipe Center to Bottom(mm)	Handle Length (mm)	Hand wheel Diameter (mm)	Torque (N.M)	Cv	Top Flange ISO-No.
2"(DN50)	108	150	65	275		10	130	F07
2 1/2"(DN65)	112	165	80	275		18	230	F07
3"(DN80)	114	172	100	275		25	340	F07
4"(DN100)	127	178	114	280		30	648	F07
5"(DN125)	140	210	122	290		80	1250	F07
6"(DN150)	140	235	130	290		110	1830	F10
8"(DN200)	152	266	155	390		190	3400	F10
8"(DN200)	152	275	155		300	190	3400	F10
10"(DN250)	165	280	200		300	360	5270	F10
12"(DN300)	178	395	218		300	760	7590	F12
14"(DN350)	190	413	255		355	820	10332	F12
16"(DN400)	216	415	280		500	1180	13727	F14
18"(DN450)	222	450	305		500	1320	17372	F16
20"(DN500)	229	490	380		600	2077	21447	F16
24"(DN600)	267	550	445		600	4200	30884	F16
28"(DN700)	292	625	500		700	4800	42038	F25
30"(DN750)	318	645	520		700	6200	48258	F25
32"(DN800)	318	695	572		700	8000	54900	F25
36"(DN900)	330	740	617		760	11000	69490	F25
40"(DN1000)	410	825	710		760	13800	80420	F25
48"(DN1200)	470	930	790		800	18920	123600	F30
56"(DN1400)	530	1100	895		800	24500	202480	F35
60"(DN1500)	530	1165	975		800	29360	232400	F35

Products Description(DN50~600)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : less than 12Inch is 20Bar, other is 16Bar.
- Valve Seat is soft ring, can be replaced.
- Disc and Stem connection, there are two kinds: Without pin, Pin connection.
- There are 10 lock position for handle.
- As per client's requirement, For CI, DI, CS body valve, Disc can be coated with some material.

Products Description(DN700~1500)

- Central line butterfly valve hold real bi-direction seal effort.
- Valve max working pressure : 10Bar.
- Valve Seat is fixed on body, can't be replaced.
- Pin connection for disc and stem, make sure operation smooth.
- Advice large size disc material is Stainless steel.