

Gvp

GEMINI

GROUP OF COMPANIES

Resilient seated
Centric Butterfly Valves
Size: NPS 1 ½" – 24" /
DN 40 – DN 600
SERIES-100



DAVSGEMINI
Valves Pvt. Ltd.

End to End Solutions in Automation & Process Industries

Application

Water, Fuel, Gas, Oil, Cement
O.E.M

Flow shut-off or regulation functions in the sectors including water supply treatment distribution, sewage & irrigation.

Working Condition

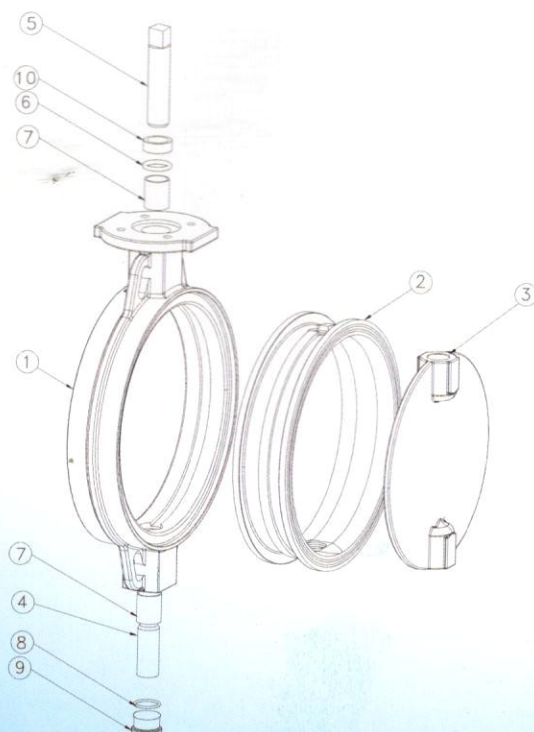
Temperature	-30°c to + 220° (Depend on MOC)
Allowable Pressure (PS)	
10 Bar	DN300 (12") to DN600 (24") at ambient Temp.
16 Bar	DN40 (1-1/2") to DN250 (10") at ambient Temp.

Certification

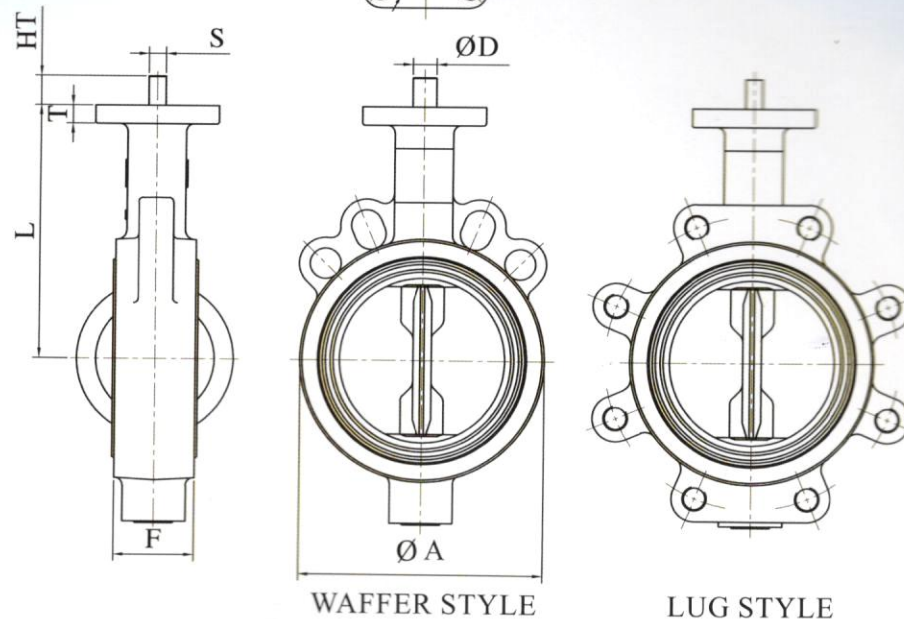
System Certification	ISO 9001:2008
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Design

Centric wafer and Lug type rubber seated butterfly valve	DN40 (1.5") to DN600 (24")
Design & Manufacturing standard	API609 / BS EN 593 / ASME B-16.34 / MSS SP67 / EN12516-1 & 2.
Face to Face Standard	API 609-Cat. A / DIN 3202-K1 / BSEN 558-20 / ISO 5752-20 / MSS SP-67-W1
Testing Standard	EN12266-Part 1 / API 598
Top Flange Standard (Actuator Mounting)	EN ISO 5211.
Flange Drilling Standard	ASME 16.5 / EN 1092 / BS:10 / IS 1538 / AWWA C207 / IS 6392 / JIS.
Protection Standard	EN 13463 – 1
Seat Leakage	Zero Leak, Tight Shut off class VI
Flow Direction	Bi-Direction
Paint & Finish	DAVSGEMINI Standard Paint (Blue)



10	Nylon Bush	1
09	End Nut	1
08	'O' Ring (End Nut)	1
07	Duro Bush	2
06	'O' Ring (Drive shaft)	1
05	Drive Shaft	1
04	Stub Shaft	1
03	Flapper	1
02	Seal Ring	1
01	Body	1
Sr.	Description	Qty.



Dimention Details (in mm)

Valve Size	ØA	F	L	HT	T	S	F1	F2	Lug Bolting Data		
									PCD	No. of Heles	Threads Class - 2B
40mm / 1.5"	42	33	110	16	10	9	F05	F07	98.4	4	1/2" - 13UNC
50mm / 2"	52.5	43	120	16	10	9	F05	F07	120.7	4	5/8" - 11UNC
65mm / 2.5"	68	46	140	16	10	9	F05	F07	139.7	4	5/8" - 11UNC
80mm / 3"	82	46	140	16	10	9	F05	F07	152.4	4	5/8" - 11UNC
100mm / 4"	106	52	151	19	12	11	F07	-	190.5	8	5/8" - 11UNC
125mm / 5"	127	56	180	22	12	14	F07	-	215.9	8	3/4" - 10UNC
150mm / 6"	156	56	195	22	12	14	F07	F10	241.3	8	3/4" - 10UNC
200mm / 8"	205	60	235	22	15	17	F10	F12	298.5	8	3/4" - 10UNC
250mm / 10"	260	68	270	30	16.5	22	F10	F12	362.0	12	7/8" - 10UNC
300mm / 12"	302	78	290	39	16.5	22	F10	F12	431.8	12	7/8" - 10UNC
350 mm / 14"	350	78	340	39	20	27	F10	F14	476.3	12	1" - 8UNC
400mm / 16"	385	102	375	39	20	27	F10	F14	539.8	16	1" - 8UNC
450mm / 18"	435	114	406	45	27	-	F14	F16	577.9	16	1 1/8" - 8UN
500mm / 20"	484	127	440	45	27	-	F14	F16	635.0	20	1 1/8" - 8UN
600mm / 24"	580	154	492	65	27	-	F18	-	749.3	20	1 1/4" - 8UN

Pressure Rating in Bars & Torques in Nm

Pressure in Bars	1.5"	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
4	4.4	5.0	15	18	22.0	55.0	70.0	90.0	154.0	220.0	341.0	413.0	645.0	900.0	1150.0
8	5.0	5.5	16	19	30.0	55.0	77.0	95.0	189.0	245.0	415.0	540.0	903.0	1230.0	1600.0
10	5.0	6.0	16	20	35.0	55.0	80.0	98.0	195.0	300.0	460.0	590.0	995.0	1440.0	1780.0
16	5.5	8.0	18	25	42.0	65.0	90.0	120	223.0	369.0	523.0	630.0	1153.0	1800.0	2180.0

Material of Construction

Body

Cast iron ASTM A 126 Class B

Ductile iron ASTM A536 Grade 65-45-12

Carbon steel ASTM A 216 WCB

Disc

Nylon coated ductile iron ASTM A 536 Grade 65-45-12

DI ASTM A536 Grade 65-45-12 + Aroxy coated

316 stainless Steel ASTM A 351 Grade CF8M Stem

Stem

410 Stainless Steel ASTM A479 Type 410

316 Stainless Steel ASTM A276 Type 316

Carbon Steel BS 970

ASTM A564 17-4-PH TYPE 630

Seat Temperature Range

Seat Type	Temperature Range	
	Min.	Max.
EPDM	-13°F (-25°C)	302°F (150°C)
BUNA-N	-13°F (-25°C)	212°F (100°C)
White BUNA -N	-13°F (-25°C)	212°F (100°C)
Viron / FKM	23°F (-5°C)	392°F (200°C)
Silicone	-55°F (-50°C)	356°F (180°C)

Seat

EPDM - Food Grade

Buna-N - Food Grade

White Buna -N - Food Grade

Viton* / FKM - Food Grade

Silicone

Pressure Rating

For bi-directinal bubble tight shut off and full vacuum

Inch	DN	PSIG	BARG
2" - 12"	50-300	175	12
2" - 24"	50-600	150	10
2" - 24"	50-600	50	3.5
2" - 12"	50-300	230	16
2" - 12"	50-300	285	Class 150

*Optional, contact factory for details.

Dead-End Service

Without a downstream flange installed, the dead-end pressure ratings are equal to the values stated above.

Types of Operating Butterfly Valve



Manual Hand Lever Operated

Valves up to 8" can be supplied with lever handles for manual operation. Optional accessories for hand-lever operation can be provided for various flow control requirement. Pad locking can also be provided for preventing unauthorized operation in butterfly valve.

Manual Hand Gear Box Operated

Valves up to size 24" can be direct mounted with gear operators for manual operation. Gear operators can also be attached with chain wheel operators for opening or closing valves located on pipelines at high elevation.



Pneumatic Actuator Operated

All valves can be direct mounted with pneumatic actuator or electrical actuator and accessories for complete automation options such as fail open/close & positioner controlled. Valves can be mounted with manual overrides in butterfly valves.

**PTFE Seated Double
Centric Butterfly Valves**
Size: NPS 2" – 24" / DN 50 – DN 600
SERIES - 200

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Application

Water, Fuel, Gas, Oil, Cement
O.E.M

Flow shut-off or regulation functions in the sectors including
water supply treatment distribution, sewage & irrigation.

Working Condition

Temperature	-30°c to + 280° (Depend on MOC)
Allowable Pressure (PS)	0 TO 20 Bar0 TO 20 Bar - DN50 (2") to DN600 (24") at ambient Temp.

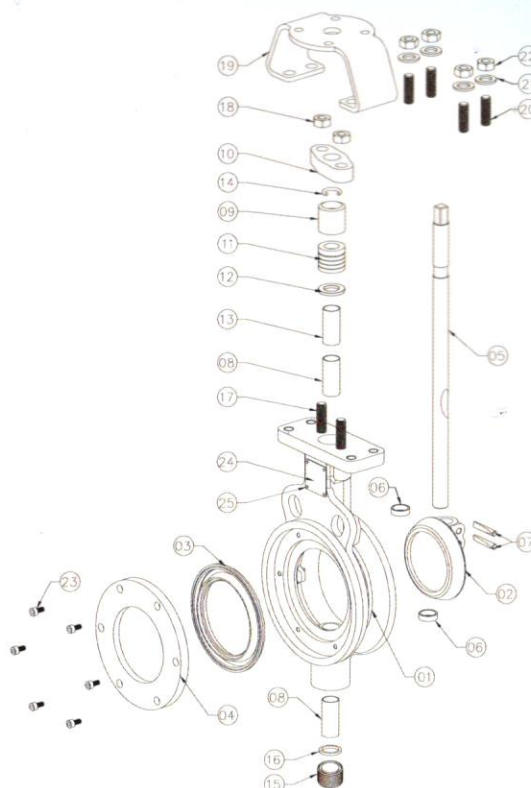
Certification

System Certification	ISO 9001:2008
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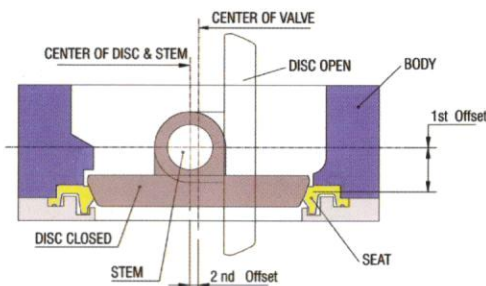
Double eccentric wafer and Lug type PTFE seated butterfly valve	DN50(2") to DN600 (24")
Design & Manufacturing standard	API609-CAT-B / BS EN 593 / ASME b-16.34 / MSS SP67 / EN12516-1 & 2.
Face to Face Standard	API 609-Cat. B / DIN 3202-K1 / BSEN 558-20 / ISO 5752-20 / MSS SP-67-W1
Testing Standard	EN12266-Part 1 / API 598 EN ISO 5211.
Top Flange Standard (Actuator Mounting)	ASME 16.5 / EN 1092 / BS:10 / IS 1538 / AWWA C207/
Flange Drilling Standard	IS 6392 / JIS.
Protection Standard	EN 13463 – 1
Seat Leakage	Zero Leak, Tight Shut off class VI
Flow Direction	Bi-Direction & Uni-direction
Paint & Finish	DAVSGEMINI Standard Paint (Blue)

EXPLODED VIEW AND PART LIST

25	Drive Screw	SS
24	Name Plate	SS 304
23	SHC Screw	SS 316
22	Hex Nut	ASTM A 194 Gr. B8
21	Spring Washer	Spring Steel
20	Stud (Bracket)	ASTM A 139 Gr B8M
19	Bracket	Carbon Steel / Stainless Steel
18	Hex Nut	SS316
17	Gland Stud	SS316
16	Gasket (Bottom)	PTFE
15	End Nut	Carbon Stell / Stainless Steel
14	Snap Ring	Spring Steel
13	Bush (Body)	PTFE
12	Base Ring	SS316
11	Chevron Packing	PTFE
10	Gland Flange	Carbon steel
09	Gland	SS410 / SS316
08	Du Bearing	MS + PTFE
07	Disc Pin	17 - 4 PH / SS316
06	Disc Spacer	SS316
05	Stem	SS 316 / 17-4PH
04	Retainer Ring	ASTM A216 Gr. WCB ASTM A351 Gr. WCB
03	Seat	PTFE / RPTFE
02	Disc	ASTM A315 Gr. CF8 / CF8M
01	Body	ASTM A216 Gr. WCB
Sr. No.	Description	Material

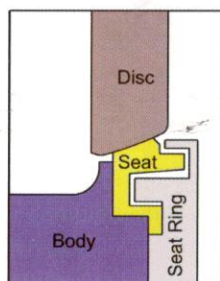


Seat Design



Double Disc Design

The offset disc produces a cam - like action, pulling the disc from the seat. This action reduces seat wear and eliminates seat deformation when the disc is in the open position. The disc does not contact the seat when the valve is in the open condition, therefore, seat service life is extended and touques are reduced. As the valve closes, the cam-like action converts the rotary motion of the disc to a linear type motion effectively pushing the disc in to the seat.

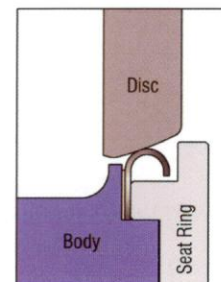


Teflon Seat

Teflon Seat : Flexible lip seat design retains its original shape and maintain a seal against the disc regardless of the flow direction.

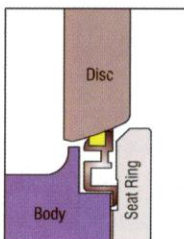
Metal Seat

Metal Seat : Flexible metal seat offers a very high sealing capacity with low leakage rates. The mechanical properties and the shape of the metal seat allows it to flex and maintain a constant positive sealing against



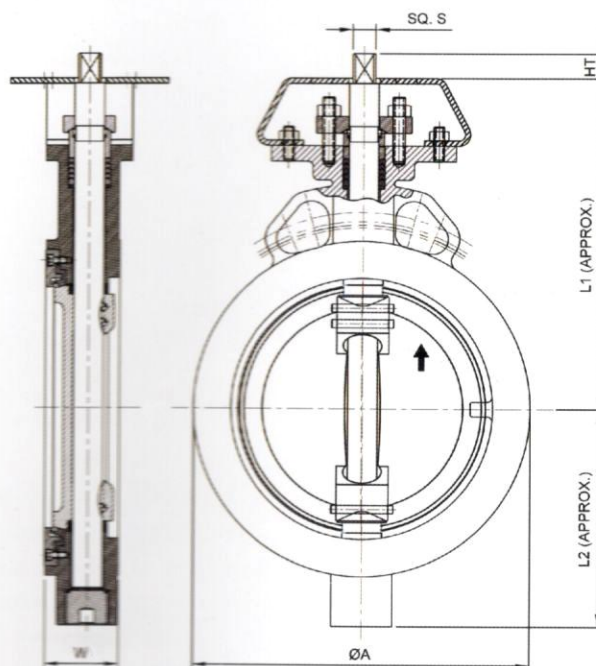
Seat Fire Safe Seat

During and after fire, when the resillient material has been partially or completely destroyed, the metal seat ring provides a positive seal by remaining in constant contact with the disc in either direction of media flow.



Codes and Standards

General design and manufacturing : API 609
Catagory B / MSS - Sp - 68 / EN 593
Inspectional and Testing : API 598 / MSS - SP - 63 / EN 12266 - 1 / AISI / FCI 70 -2
Fire safe testing : API 607 / ISO 10497 / EN 12266-2
Pressure temperature rating : ASME 8 16.34 / BS EN 12516-1

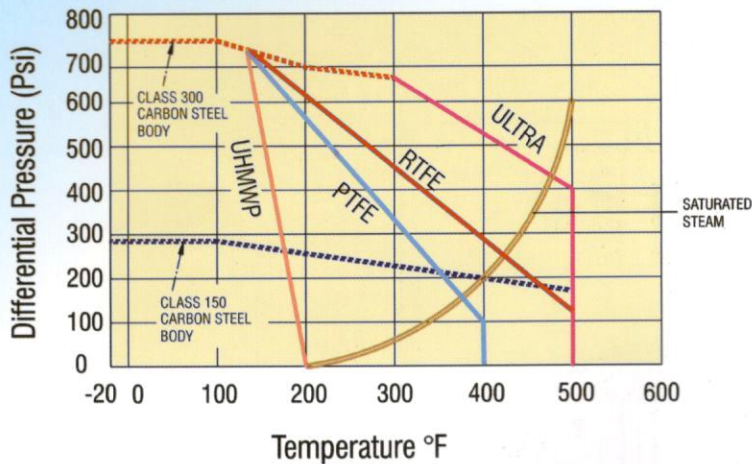


Dimention Details (in mm)

Valve Size	ØA	W	L1	L2	HT	S	F1	F2	Lug Bolting Data		
									PCD	No. of Heles	Threads Class - 2B
50mm / 2"	92	43	185	70	16	9	F05	F07	120.7	4	5/8" - 11UNC
65mm / 2.5"	105	46	194	75	16	9	F05	F07	139.7	4	5/8" - 11UNC
80mm / 3"	127	48	205	80	18	11	F05	F07	152.4	4	5/8" - 11UNC
100mm / 4"	157	54	232	112	18	11	F07	-	190.5	8	5/8" - 11UNC
125mm / 5"	187	57	248	132	40	14	F07	-	215.9	8	3/4" - 10UNC
150mm / 6"	216	57	260	155	40	14	F10	F12	241.3	8	3/4" - 10UNC
200mm / 8"	270	64	290	175	20	17	F10	F12	298.5	8	3/4" - 10UNC
250mm / 10"	324	71	320	210	24	22	F10	F12	362.0	12	7/8" - 10UNC
300mm / 12"	381	81	380	245	24	22	F10	F12	431.8	12	7/8" - 10UNC
350mm / 14"	415	92	405	265	30	27	F12	F16	476.3	12	1" - 8UNC
400 mm / 16"	476	102	445	325	40	36	F12	F16	539.8	16	1" - 8UNC
500mm / 20"	587	127	525	330	40	36	F12	F16	635.0	20	1 1/8" - 8UN
600mm / 24"	685	154	655	380	60	46	F12	F16	749.3	20	1 1/4" - 11UNC

Pressure Rating in Bars & Torques in Nm

Pressure in Bars	2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	20"	24"
4	13	14	23	29	55	32	98	170	215	320	420	630	980
10	18	22	35	49	80	50	135	229	325	425	559	970	1600
20	22	31	68	85	118	88	210	332	480	625	880	1975	2550



Special Applications

Ultra Seat

An engineered fluorochemical polymer that is rated for 50° OF. Excellent for handling aggressive fluids at high pressures. Ultra is recommended for extended service in hostile environments involving chemical, thermal and mechanical stress. Ultra has excellent thermal stability and is ideal for steam, hot gases and a variety of process chemicals where service can be also be subject to pressure cycling.

Nace Service

All valves conform to NACE MRO 103 standard. These valves are well suited for oil and gas industry applications requiring resistant materials to sulfide stress cracking.

Oxygen

Valves for critical gaseous oxygen service are specially prepared, cleaned, inspected, assembled and tested to ensure removal of all burrs, sharp edges, dirt, hydrocarbon oil grease and other contaminants.

Vacuum

Standard valves are rated for tight shut-off of vacuum to 2×10^{-6} torr.

Operators



All valves can be direct mounted with pneumatic actuators or electric actuators and accessories for complete automation options such as fail open / close and positioner controlled. Valves can be mounted with manual overrides



Valves up to size 24" can be direct mounted with gear operations for manual operation. Gear operators can also be attached with chain Wheel operators for opening or closing valves located on pipelines at high elevators.



Valves up to 6" for class 150 and up to 4" for class 300 can be supplied with lever handles for manual operations. Optional accessories for hand lever operation can be provided for various flow control requirements. Pad locking can also be provided for preventing unauthorized operation.

Manufactured By :-

Office Sale -

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