

Elastomer Seated Butterfly Valves



BODY TYPE: Type 57 α /56/75 Wafer: 1-1/2" – 24"
 Type 57LIS Lug: 3" – 8"
 Type 57IS Narrow Wafer: 3" – 8"

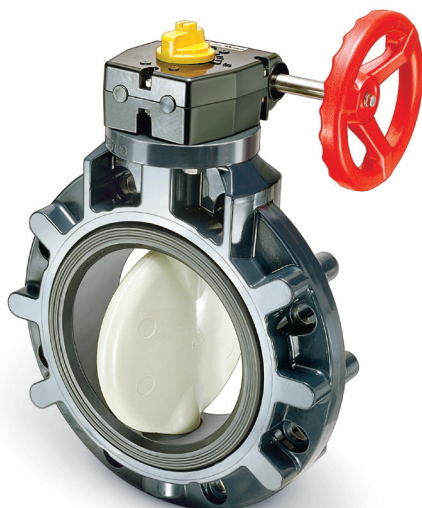
MATERIALS: Body: PVC, PP, PVDF, PDCPD¹
 Disc: PP (standard), PVC, PVDF

SEAT & O-RINGS: EPDM, FKM (Viton®)²

CRN
Registered
Consult Chemline



Lever Operated



Gear Operated

Chemline elastomer seated butterfly valves have a successful history of over 40 years and have replaced metal valves in many difficult process applications. Type 57 α body, disc and seat are designed to offer excellent flow characteristics and low closing torques. Stem torques are unaffected by excessive flange bolt torques. Valves up to 16" have corrosion resistant FRP gear operators. Top flange and shaft dimensions are to ISO 5211 standard for easy mounting of actuators. A large selection of body, disc and seat materials permit these valves into a wide range of on/off and throttling control applications in lines up to 24" size.

Features

Compact and Light Weight

High Corrosion Resistance

- Solid plastic body and disc
- Polypropylene hand levers up to 8"
- FRP gear operators up to 16"

Abrasion Resistant

- Solid plastic disc
- PVDF disc available for high abrasion resistance

Easy Actuator Mounting

- Valves up to 16" have standard ISO 5211 top flange and shaft dimensions

Easily Installed

- Full bolt hole circle makes installation and alignment easy

Better Sealing

- Spherical disc/seat seal design offers effective sealing at lower stem torques, and long life for the seat

Better Flow

- Streamlined disc offers higher C_v values

Protection against Flange Bolt Over Tightening

- Body gussets and new seat design prevent excessive flange bolt torques from affecting valve stem torques

Narrow Body Type 57IS

- Direct replacement for ISO 5752 short pattern metal butterfly valves 3" to 8"

¹ PDCPD=Polydicyclopentadiene.

² Other materials are available.

³ Type 57 α PVC valves are certified under NSF/ANSI Standard 61 for contact with drinking water.

Elastomer Seated Butterfly Valves



materials selection  = standard construction

WAFER BODY VALVES

Size	Valve Type	Body				Disc			Seat ¹			Manual Operators	
		PVC	PP	PVDF	PDCPD	PP	PVC	PVDF	EPDM	FKM (Viton®)	Nitrile	Lever	Gear
1-1/2"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
2"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
2-1/2"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
3"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
4"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
5"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
6"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
8"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
8"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
10"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	X	✓
12"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	X	✓
14"	57α	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	X	✓
16"	56	X	✓	✓	✓	✓	X	✓	✓	✓	✓	X	✓
18"	75	X	✓	✓	✓	✓	X	✓	✓	✓	✓	X	✓
20"	75	X	✓	✓	✓	✓	X	✓	✓	✓	✓	X	✓
24"	75	X	✓	✓	✓	✓	X	✓	✓	✓	✓	X	✓

Note: Type 75 was formerly referred to as TB Series.

LUG BODY VALVES²

Size	Valve Type	Body				Disc			Seat ¹			Manual Operators	
		PVC	PP	PVDF	PDCPD	PP	PVC	PVDF	EPDM	FKM (Viton®)	Nitrile	Lever	Gear
3"	57LIS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
4"	57LIS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
5"	57LIS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
6"	57LIS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
8"	57LIS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓

NARROW WAFER BODY VALVES³

Size	Valve Type	Body				Disc			Seat ¹			Manual Operators	
		PVC	PP	PVDF	PDCPD	PP	PVC	PVDF	EPDM	FKM (Viton®)	Nitrile	Lever	Gear
3"	57IS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
4"	57IS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
5"	57IS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
6"	57IS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
8"	57IS	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓

¹ Other available elastomer seats are: Nitrile (NBR), FKM-F (special "Viton®" for concentrated acids) and FKM-C (special "Viton®" for chlorines).

² Lug body valves are also available 1-1/2" to 2-1/2" and 10" to 24". Consult Chemline.

³ Narrow body valves have ISO 5752 short pattern face-to-face dimensions, allowing field replacement of corroded metal body valves.

Elastomer Seated Butterfly Valves



WORKING PRESSURES PSI

NET WEIGHTS¹ LB.

Size	Valve Type	PVC Body/PP Disc			PP Body/PP Disc		PVDF Body/PVDF Disc/FKM(Viton®)				Body/Disc		
		0-50°C 32-122°F	60°C 140°F	83°C 181°F	-20-60°C -4-140°F	80°C 176°F	-20-60°C -4-140°F	79°C 175°F	100°C 212°F	121°C 250°F	PVC/ PP	PP/ PP	PVDF/ PVDF
1-1/2"	57α	150	70	30	150	105	150	105	90	75	2.9	2.4	3.1
2"	57α	150	70	30	150	105	150	105	90	75	3.3	2.6	3.7
2-1/2"	57α	150	70	30	150	105	150	105	90	75	3.7	3.1	4.2
3"	57α 57LIS 57IS	150	70	30	150	105	150	105	90	75	4.2	3.5	4.9
4"	57α 57LIS 57IS	150	45	30	150	105	150	105	90	75	5.5	4.4	6.4
5"	57α 57LIS 57IS	150	45	30	150	105	150	105	90	75	10.8	8.8	12.6
6"	57α 57LIS 57IS	150	45	30	150	105	150	105	90	75	12.8	10.1	15.2
8"	57α 57LIS 57IS	150	40	20	150	90	150	90	75	60	20.5	16.3	24.3
8"	57α 57LIS 57IS	150	40	20	150	90	150	90	75	60	23.6	19.6	27.6
10"	57α 57LIS 57IS	150	40	20	150	90	150	90	75	60	32.4	26.9	41.0
12"	57α 57LIS 57IS	112	30	15	112	60	112	60	45	30	61.7	52.9	76.1
14"	57α	112	30	7	112	60	112	60	45	30	66.6	58.0	81.1

WORKING PRESSURES PSI

NET WEIGHTS¹ LB.

Size	Valve Type	PDCPD Body/ PP Disc			PDCPD Body/ PVDF Disc/FKM(Viton®)				PP Body/ PP Disc		PVDF Body/ PVDF Disc/FKM(Viton®)				Body/Disc		
		0-50°C 32-122°F	60°C 140°F	83°C 181°F	0-30°C 32-86°F	60°C 140°F	80°C 176°F	100°C 212°F	-20-60°C -4-140°F	80°C 176°F	-20-60°C -4-140°F	79°C 175°F	100°C 212°F	121°C 250°F	PDCPD/ PP	PDCPD/ PVDF	PVDF/ PVDF
16"	56	110	90	15	110	90	45	30	90	45	90	45	30	15	79.4	103	101
18"	75	110	90	15	110	90	45	30	75	45	70	45	30	15	140.	221	227
20"	75	110	90	15	110	90	45	30	50	45	50	30	20	15	170.	252	273
24"	75	110	90	15	110	90	45	30	50	45	50	30	20	15	251.	309	346

Note: Type 75 was formerly referred to as TB Series.

¹Weights are for valves excluding lugs.

Cv VALUES VS. DISC ANGLE

BOLT TORQUES

Size	15°	30°	45°	60°	75°	90°	Recommended Flange Bolt Torques Foot-Lbs.
1-1/2"	0	3.6	14.2	30.5	49.7	71.	15
2"	0	6.0	24.	51.6	84.	120.	17
2-1/2"	0	12.5	50.	108.	175.	250.	17
3"	0	15.0	60.	129.	210.	300.	22
4"	0	23.5	94.	202.	329.	470.	22
5"	0	41.5	166.	357.	581.	830.	30
6"	0	55.	220.	473.	770.	1,100.	30
8"	0	125.	500.	1,075.	1,750.	2,500.	41
10"	0	193.	772.	1,660.	2,702.	3,860.	41
12"	0	285.	1,140.	2,451.	3,990.	5,700.	44
14"	0	322.	1,288.	2,769.	4,508.	6,440.	44
16"	0	300.	2,277.	4929.	6,822.	8,340.	58
18"	0	392.	2,973.	6436.	8,908.	10,890.	58
20"	0	506.	3,838.	8309.	11,501.	14,060.	72
24"	0	666.	5,051.	10,934.	15,133.	18,500.	72

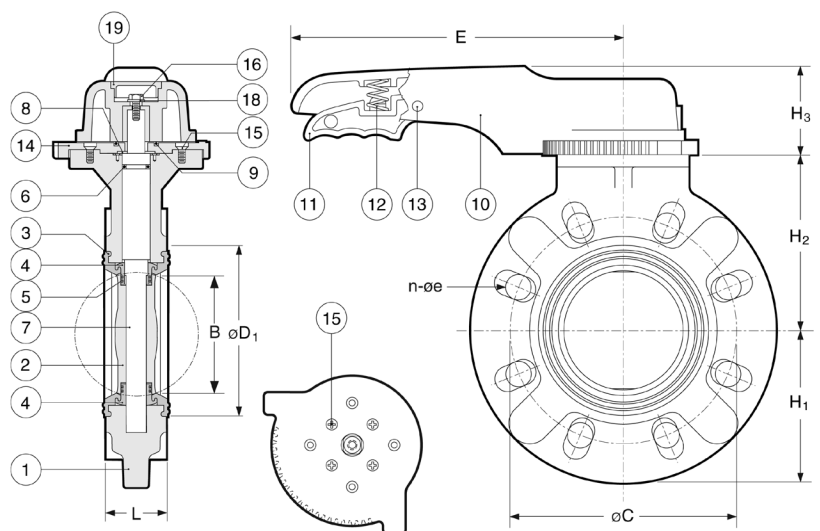
Type 57 α Butterfly Valves 1-1/4" to 14"



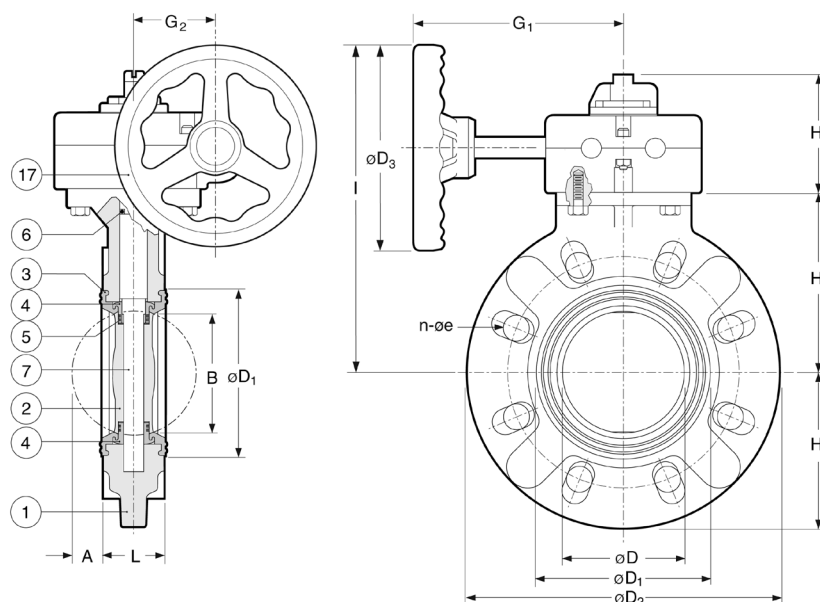
engineered for superior performance



Type 57 α Butterfly Valves 1-1/4" to 14"



1-1/2" – 8" Lever Operated



8" to 14" Gear Operated

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PVC, PP PVDF, PDCPD ¹
2	Disc	1	PP, PVC, PVDF
3▲	Seat	1	EPDM, FKM (Viton®)
4	Seat Bushing	2	PP, PVC, PVDF
5▲	Bushing O-Ring	4	EPDM, FKM (Viton®)
6▲	Shaft O-Ring	1	EPDM, FKM (Viton®)
7	Shaft	1	403 SS
8	Shaft Retainer	1	PP
9▲	Plate O-Ring	1	EPDM, FKM (Viton®)
10	Hand Lever	1	PP
11	Trigger	1	PPG
12	Spring	1	304 SS
13	Pin	1	PPG
14	Position Lock Plate	1	PPG
15	Plate Screw	4	304 SS
16	Hand Lever Bolt	1	304 SS
17	Gear Operator	1	FRP housing, PP handwheel & 304 SS shaft
18	Handle Lever Washer	1	304 SS
19	Hand Lever Cap	1	PPG

¹ PDCPD=Polydicyclopentadiene.

DIMENSIONS INCHES

Size	L	A	B*	C	n	e	D	D ₁	D ₂	D ₃	E/G ₁	G ₂	H ₁	H ₂	H ₃	I
1-1/2"	1.54	0.12	0.87	3.88	4	0.62	1.77	2.80	5.91	–	8.7	–	3.0	3.9	2.2	–
2"	1.65	0.28	1.46	4.75	4	0.75	2.20	3.19	6.50	–	8.7	–	3.3	4.3	2.2	–
2-1/2"	1.81	0.46	2.03	5.50	4	0.75	2.72	3.74	7.28	–	8.7	–	3.6	4.7	2.2	–
3"	1.81	0.61	2.43	6.00	4	0.75	3.03	4.13	8.31	–	9.8	–	4.2	5.3	2.2	–
4"	2.20	0.91	3.36	7.50	8	0.75	4.02	5.28	9.37	–	9.8	–	4.7	5.9	2.2	–
5"	2.60	1.24	4.36	8.50	8	0.88	5.08	6.65	10.35	–	12.6	–	5.2	6.6	2.7	–
6"	2.80	1.56	5.20	9.51	8	0.88	5.91	7.48	11.22	–	12.6	–	5.6	7.2	2.7	–
8" Lever	3.43	2.13	6.87	11.75	8	0.88	7.68	9.53	13.39	–	15.8	–	6.7	8.4	2.7	–
8" Gear	3.43	2.13	6.87	11.75	8	0.88	7.68	9.53	13.39	6.3	6.6	2.5	6.7	8.1	3.6	12.64
10"	4.41	2.72	8.80	14.25	12	1.00	9.84	11.89	16.57	6.3	6.6	2.5	8.3	9.5	3.6	14.02
12"	5.08	3.43	10.79	17.00	12	1.00	11.93	14.17	19.21	11.8	9.5	3.9	9.6	11.7	4.3	19.29
14"	5.08	4.37	12.85	18.75	12	1.12	13.82	15.47	21.22	11.8	9.5	3.9	10.6	12.8	4.3	20.35

*B=Minimum inside diameter (I.D.) of mating pipe. If I.D. of pipe is B dimension or less, the inside of pipe must be chamfered or spacers provided. Consult Chemline.

Type 56/75 Series Butterfly Valves 16" to 24"



New PDCPD bodies have full thickness design

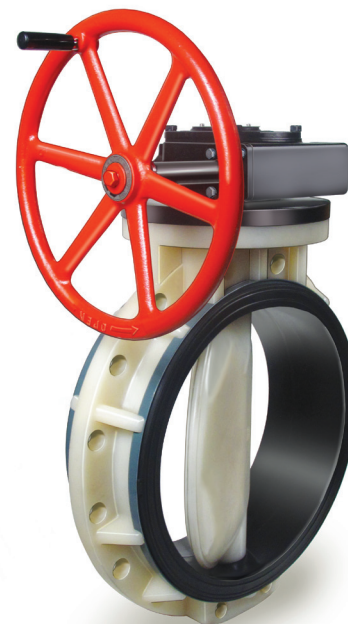
- Prevents excessive compression of seat if flange bolts are over torqued



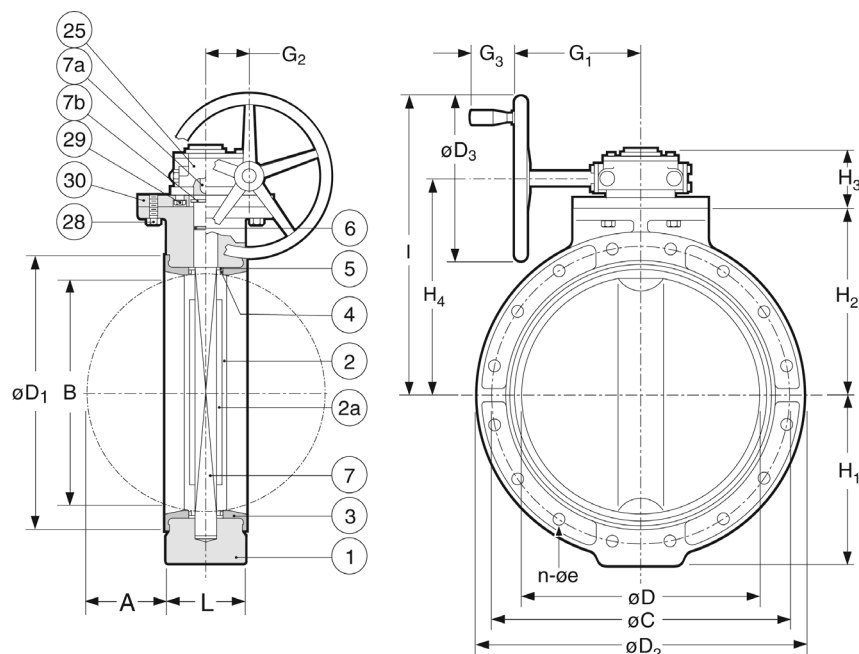
16" Type 56
with PDCPD body, PP disc



18" to 24" Type 75
with PDCPD body, PP disc



18" to 24" Type 75
with PVDF body, PVDF disc



Drawing body detail is for PDCPD version. Detail for PP and PVDF body versions are slightly different. Consult Chemline.

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PDCPD ¹ , PP, PVDF
2	Disc	1	PP, PVDF
2a	Disc Insert	1	Carbon Steel
3▲	Seat	1	EPDM, FKM (Viton®)
4▲	Large Disc O-Ring	2	EPDM, FKM (Viton®)
5▲	Small Disc O-Ring	2	EPDM, FKM (Viton®)
6▲	Shaft O-Ring	1	EPDM, FKM (Viton®)
7	Shaft	1	403 SS
7a	Shaft Key	1	Carbon Steel
7b	Snap Ring	1	304 SS
17	Gear Operator ²	1	Cast Aluminum Epoxy Coated
28	Bolt	4	304 SS
29	Bolt	4	304 SS
30	Gear Operator Stand	1	400 SS

¹ PDCPD=Polydicyclopentadiene.

² Gear Operator for 16" only is FRP with PP hand wheel and 304 SS shaft.

DIMENSIONS INCHES

Size	Type	L	A	B*	C	n	e	D	D ₁	D ₂	D ₃	G ₁	G ₂	G ₃	H ₁	H ₂	H ₃	I
16"	56	6.65	4.67	14.53	21.25	16	1.12	15.98	18.50	24.41	11.81	10.7	3.9	—	12.4	13.8	4.3	21.3
18"	75	7.05	5.38	16.34	22.75	16	1.26	17.80	20.67	26.18	16.14	12.6	4.3	3.4	13.2	14.6	5.5	25.6
20"	75	7.48	6.15	18.29	25.00	20	1.26	19.76	22.64	28.35	16.14	12.6	4.3	3.4	14.4	15.8	5.5	26.8
24"	75	8.23	7.76	22.27	29.50	20	1.38	23.74	27.01	32.01	16.14	12.6	4.3	3.4	16.7	18.3	5.5	29.3

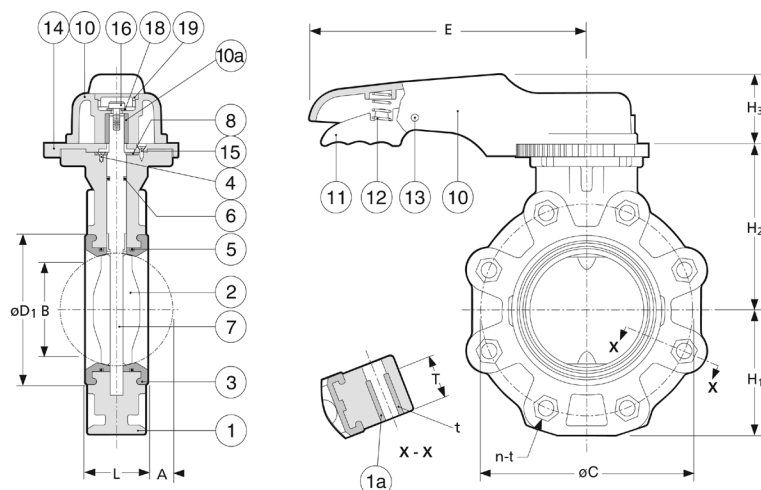
*B=Minimum inside diameter (I.D.) of mating pipe. If I.D. of pipe is B dimension or less, the inside of pipe and must be chamfered or spacers provided. Consult Chemline. **Note:** Type 75 was formerly referred to as TB Series.

Type 57LIS LUG Body Butterfly Valves 3" to 8"

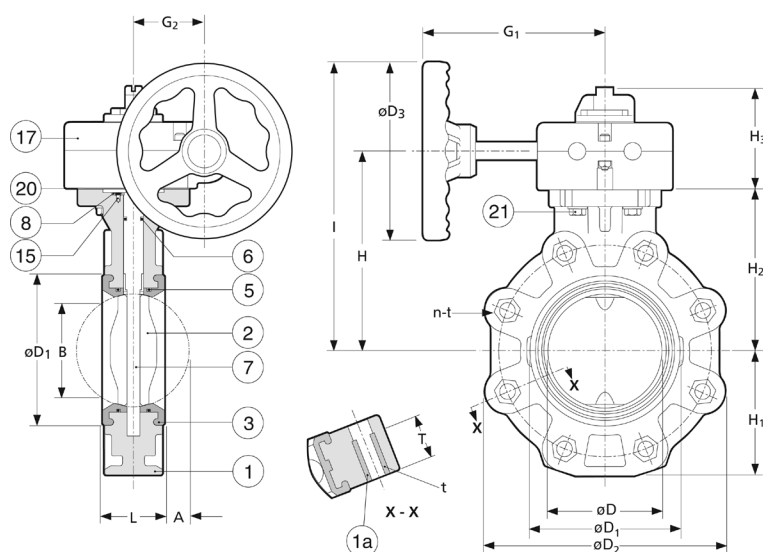


Features

- 304 SS or 316 SS lugs
- Rated for full line pressure
- Sizes: 3", 4", 6" and 8"
- Narrow wafer body design¹



3" – 8" Lever Operated



8" Gear Operated

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PVC
1a	Lug	4/8 ²	304SS, 316SS
2	Disc	1	PP
3▲	Seat	1	EPDM, FKM (Viton®)
5▲	Stabilizing Ring	2	304 SS
6▲	Shaft O-Ring	1	EPDM, FKM (Viton®)
7	Shaft	1	403 SS
8	Shaft Retainer	1	PP
10	Hand Lever	1	PP
11	Trigger	1	PPG
12	Spring	1	316 SS
13	Pin	1	PPG
14	Position Lock Plate	1	PPG
15	Plate Screw	4	304 SS
16	Hand Lever Bolt	1	304 SS
17	Gear Operator	1	FRP housing, handwheel & SS hardware
18	Hand Lever Washer	1	304 SS
19	Hand Lever Cap	1	PPG

² 4 pieces 2", 8 pieces 4" to 8".

DIMENSIONS INCHES

Size	L ¹	A	B*	C	n	D	D ₁	D ₂	D ₃	E/G ₁	G ₂	H ₁	H ₂	H ₃	I	T	t Thread
3"	1.73	0.65	2.80	6.00	4	3.03	4.13	7.28	–	9.8	–	3.8	5.3	2.2	–	1.26	5/8-11 UNC
4"	2.05	1.00	3.46	7.50	8	4.02	5.28	8.50	–	9.8	–	4.4	5.9	2.2	–	1.52	5/8-11 UNC
6"	2.20	1.86	5.49	9.51	8	5.91	7.48	10.67	–	12.6	–	5.6	7.2	2.7	–	1.57	3/4-10 UNC
8" Lever	2.36	2.66	7.31	11.75	8	7.68	9.53	12.76	–	15.8	–	6.6	8.4	2.7	–	1.57	3/4-10 UNC
8" Gear	2.36	2.66	7.31	11.75	8	7.68	9.53	12.76	6.3	6.6	2.5	6.6	8.1	3.6	12.64	1.57	3/4-10 UNC

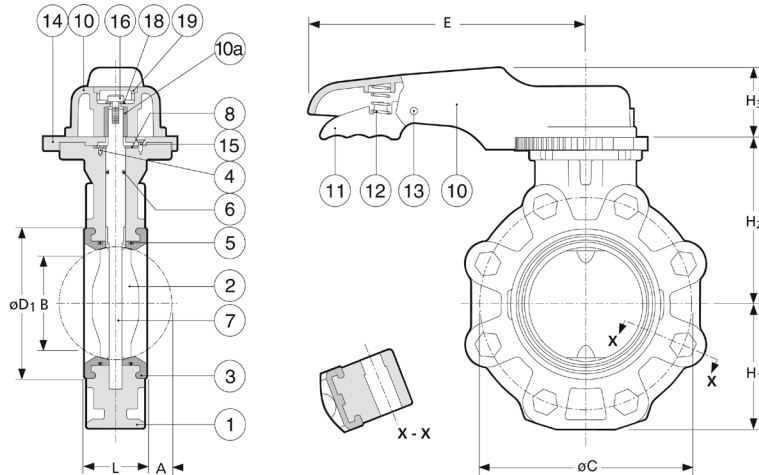
¹ For replacement of ISO 5752 short pattern metal butterfly valves *B=Minimum inside diameter (I.D.) of mating pipe. If I.D. of pipe is B dimension or less, the inside of pipe must be chamfered or spacers provided. Consult Chemline.

Type 57IS Narrow Wafer Body Butterfly Valves

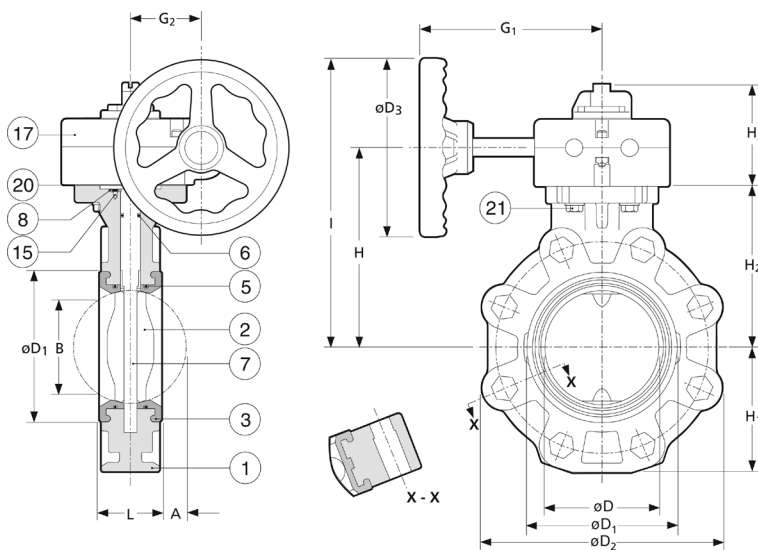


Features

- Narrow Wafer Body valves have ISO 5752 short pattern face-to-face dimensions allowing field replacement of corroded metal body valves.
- Sizes: 3", 4", 6" and 8"



3" to 8" Lever Operated



8" Gear Operated

PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1	Body	1	PVC
2	Disc	1	PP
3▲	Seat	1	EPDM FKM (Viton®), Nitrile
4	Retaining Screw	4	304 SS
5▲	Retaining Ring	2	Stainless Steel
6▲	Shaft O-Ring	1	EPDM FKM (Viton®), Nitrile
7	Shaft	1	403 SS
8	Shaft Retainer	1	PP
10	Hand Lever	1	PP
10a	Hand Lever Insert	1	316 SS
11	Trigger	1	PPG
12	Spring	1	304 SS
13	Pin	1	PPG
14	Position Lock Plate	1	PPG
15	Plate Screw	4	304 SS
16	Hand Lever Bolt	1	304 SS
17	Gear Operator	1	FRP housing, PP handwheel & 304SS shaft
18	Handle Lever Washer	1	304 SS
19	Hand Lever Cap	1	PP
20	Gasket	1	EPDM
21	Gear Operator Bolt	4	304 SS

DIMENSIONS INCHES

Size	L	A	B*	C	n	D	D ₁	D ₂	D ₃	E/G ₁	G ₂	H ₁	H ₂	H ₃	I
3"	1.73	0.65	2.80	6.00	4	3.03	4.13	7.28	—	9.8	—	3.8	5.3	2.2	—
4"	2.05	1.00	3.46	7.50	8	4.02	5.28	8.50	—	9.8	—	4.4	5.9	2.2	—
6"	2.20	1.86	5.49	9.51	8	5.91	7.48	10.67	—	12.6	—	5.6	7.2	2.7	—
8" Lever	2.36	2.66	7.31	11.75	8	7.68	9.53	12.76	—	15.8	—	6.6	8.4	2.7	—
8" Gear	2.36	2.66	7.31	11.75	8	7.68	9.53	12.76	6.3	6.6	2.5	6.6	8.1	3.6	12.64

* B=Minimum inside diameter (I.D.) of mating pipe. If I.D. of pipe is B dimension or less, the inside of pipe must be chamfered or spacers provided. Consult Chemline.

Elastomer Seated Butterfly Valves



options + accessories



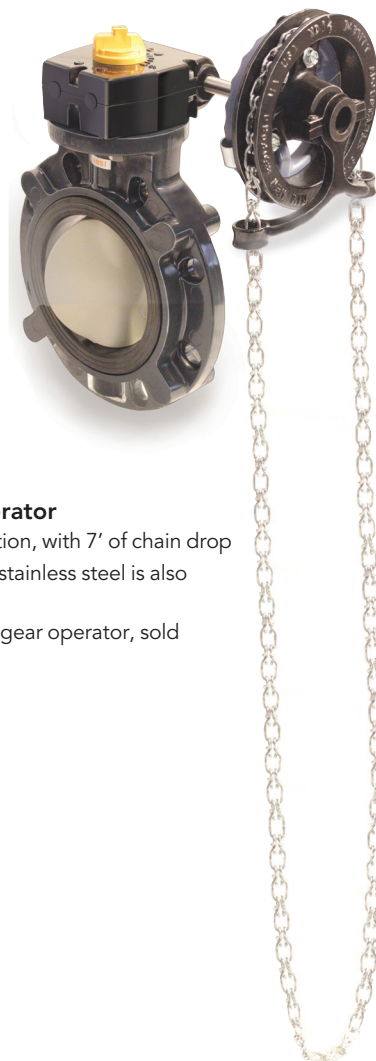
Shaft Extensions

- Different materials and lengths are available
- Several designs:
 - with no housing for indoors
 - with waterproofed PVC housing for indoors or outdoors
 - with stainless steel housing for buried services



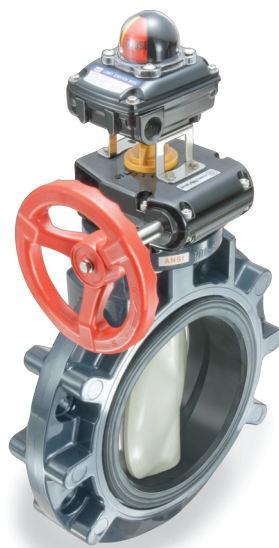
Optional Lock-out Handle & Hasp

- To prevent unauthorized operation of the valve during maintenance shut-downs
- Padlocks go through holes in hasp



Chain Wheel Operator

- For overhead operation, with 7' of chain drop
- Cast iron standard, stainless steel is also available
- Requires the use of gear operator, sold separately



Limit Switches

- Available for lever and gear operated valves
- Electrical feedback of manual valve position
- NEMA 4X enclosure, position indicator beacon, 2x SPDT switches, stainless steel hardware

OTHER ACCESSORIES

- **Gear Operator** on 1-1/2" to 6"
- **Locking Capability** on gear operators
- **Municipal Operating Nut** for buried service

OPTIONS

- Different seats
- Different material shafts

Elastomer Seated Butterfly Valves



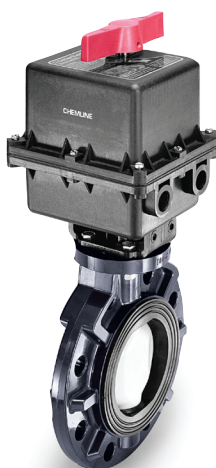
electric + pneumatic actuation

Pneumatic and Electric Actuators

- A complete range of actuators and control accessories are available, mounted to valves using PPG plastic brackets and 304 stainless steel couplings. Refer to separate data sheets.



A Series Electric



Q Series Electric



V Series Electric



PA, PG, P3 and PP Series Pneumatic

ORDERING EXAMPLE

Chemline Butterfly Valves Type 57α 1-1/2" to 14": 57 Type 56 16": 56 Type 75 18" to 24": 75 Type 57LIS 3" to 8": 57LIS Type 57IS 3" to 8": 57IS				57	A	060	B	E	L
Body	A – PVC	B – PP	K – PVDF	D – PDCPD ¹					
Size	015 – 1-1/2"	020 – 2"	025 – 2-1/2"	030 – 3"	040 – 4"	050 – 5"	060 – 6"	080 – 8"	
	100 – 10"	120 – 12"	140 – 14"	160 – 16"	180 – 18"	200 – 20"	240 – 24"		
Disc	B – PP	K – PVDF	A – PVC						
Seat	E – EPDM	V – FKM (Viton®)	B – Nitrile	F – FKM-F (Viton®) ²	C – FKM-C (Viton®) ¹				
Operator	L – Hand Lever	G – Gear Operator							

Example: Chemline Type 57α Butterfly Valve, PVC body, 6", with PP disc, EPDM seat, hand lever.

¹PDCPD=Polydicyclopentadiene. ²FKM-F is special "Viton" for concentrated acids and FKM-C is special "Viton" for chlorines.