



## Type-55 IS Butterfly Valve

### Standard Features

- Face to face dimension conforms to ISO 5752 short pattern for metal valves
- Powdercoated cast ductile iron body for corrosion resistance
- Highly corrosion resistant PTFE disc and PTFE seat are the only parts in contact with the process media
- Stainless steel stem is non-wetted, isolated from the media, and has full engagement thru the entire length of the valve body and disc
- High CV value achieved with strong, thin disc
- Class VI bubble tight shut-off
- Lever handle features 19 position throttling plate and factory padlock provision
- Plasgear™ engineered resin enclosure gear-operator with stainless steel trim
- Top flange conforms to ISO 5211 for actuation mounting

### Options

- Pneumatic or electric actuation with accessories
- 2" square nut on valve stem or Plasgear™ operator handwheel shaft
- Stem extensions
- Chain operators (Plasgear™ type only)
- Manual limit switch (Lever or Plasgear™ types)
- Speed Handle™ for Plasgear™ operator

### Caution

- Never remove valve from pipeline under pressure.
- Always wear protective gloves and goggles.

### Specifications

- Sizes:** 2" – 16"
- Models:** Wafer Style
- Operators:** Lever: 2" – 5"  
Gear: 2" – 16"
- Bodies:** Powdercoat finish Ductile Cast Iron (FCD-S)
- Discs:** PTFE
- Seats:** PTFE backed with Neoprene®† backing
- Stems:** Stainless steel 304

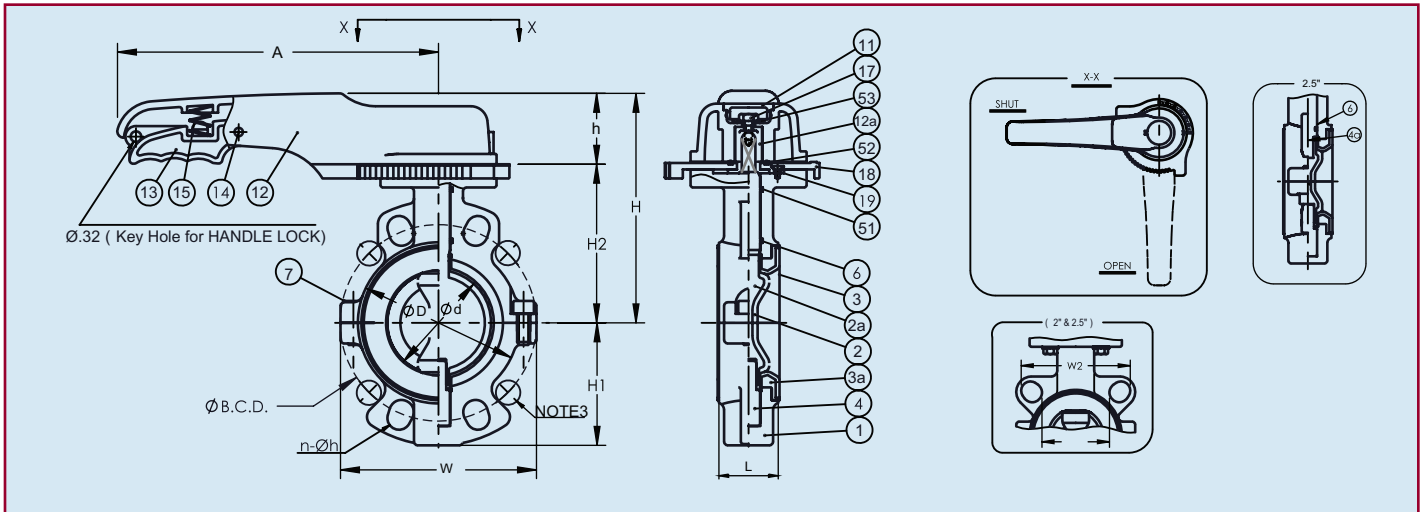
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### Parts List (Lever: Sizes 2" – 5")

PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	Ductile Cast Iron (FCD-S)*
2	Disc	1	PTFE
2a	Inserted Metal of Disc	1	Stainless Steel (SUS304)
3	Seat	1	PTFE
3a	Seat Cushion	1	CR
4a	Stem (A)	1	Stainless Steel (SUS304)
4b	Stem (B)	1	Stainless Steel (SUS304)
6	O-Ring (A)	1	EPDM
7	Bolt (A)	2	Stainless Steel (SUS304)
11	Cap	1	PP
12	Handle	1	PP
12a	Handle Insert Metal	1	Stainless Steel (SUS316)
13	Handle Lever	1	PPG
14	Pin	1	PPG
15	Spring	1	Stainless Steel (SUS304)
17	Bolt (C)	1	Stainless Steel (SUS304)
18	Locking Plate	1	PPG
19	Screw (A)	4	Stainless Steel (SUS304)
51	O-Ring (B)	1	EPDM
52	O-Ring (C)	1	EPDM
53	Rubber + Washer	1	Stainless Steel (SUS304) + EPDM

\*With powdercoat finish.





## Dimensions (Sizes 2" – 5") (in.)

Nominal Size		ANSI Class 150											W	W1	W2	A
		d	C	n	h	D	L	H	H1	H2	H3					
2"	50mm	2.17	[4.75]	2 (4)	[0.75]	3.54	1.69	6.34	2.40	4.13	2.20	4.57	2.60	4.17	8.66	
2-1/2"	65mm	2.56	[5.50]	2 (4)	[0.75]	0.43	1.81	6.93	3.15	4.72	2.20	5.75	3.07	4.76	8.66	
3"	80mm	3.15	[6.00]	- (4)	[0.75]	4.92	1.81	7.09	3.74	4.88	2.20	5.98	-	-	9.84	
4"	100mm	3.94	7.50	4 (8)	0.75	6.06	2.05	7.72	4.06	5.51	2.20	6.85	-	-	9.84	
5"	125mm	4.92	8.50	4 (8)	0.88	7.13	2.20	9.25	4.72	6.54	2.72	8.11	-	-	12.60	

Note 1: Dimensions "L" is equivalent to ISO-5752 Short Pattern Face to Face deimsnion for metal valves.

Note 2: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

Note 3: These show the bolt hole position for 3" (80mm)

## Cv Values

Nominal Size		CV values
Inches	mm	
2"	50	100
2-1/2"	65	230
3"	80	285
4"	100	600
5"	125	940
6"	150	1500
8"	200	2500
10"	250	4200
12"	300	7800
14"	350	9200
16"	400	12800

## Weight (lbs.)

Nominal Size		Lever	Gear
Inches	mm		
2"	50	6.61	11.02
2-1/2"	65	8.82	13.23
3"	80	9.92	14.33
4"	100	13.23	17.64
5"	125	23.15	25.35
6"	150	-	31.97
8"	200	-	50.71
10"	150	-	73.85
12"	300	-	101.41
14"	350	-	125.66
16"	400	-	169.76

## Vacuum Service Pressure vs. Temp.

Nominal Size		Inches of Mercury
Inches	mm	
2"	50	-29.92
2-1/2"	65	-29.92
3"	80	-29.92
4"	100	-29.92
5"	125	-29.92
6"	150	-29.92
8"	200	-29.92
10"	250	-29.92
12"	300	-29.92
14"	350	-29.92
16"	400	-29.92

Nominal Size		psi
Inches	mm	
2" - 12"	50 - 200	150
14" - 16"	350 - 400	100

## Troubleshooting

### What if fluid still flows when valve is closed?

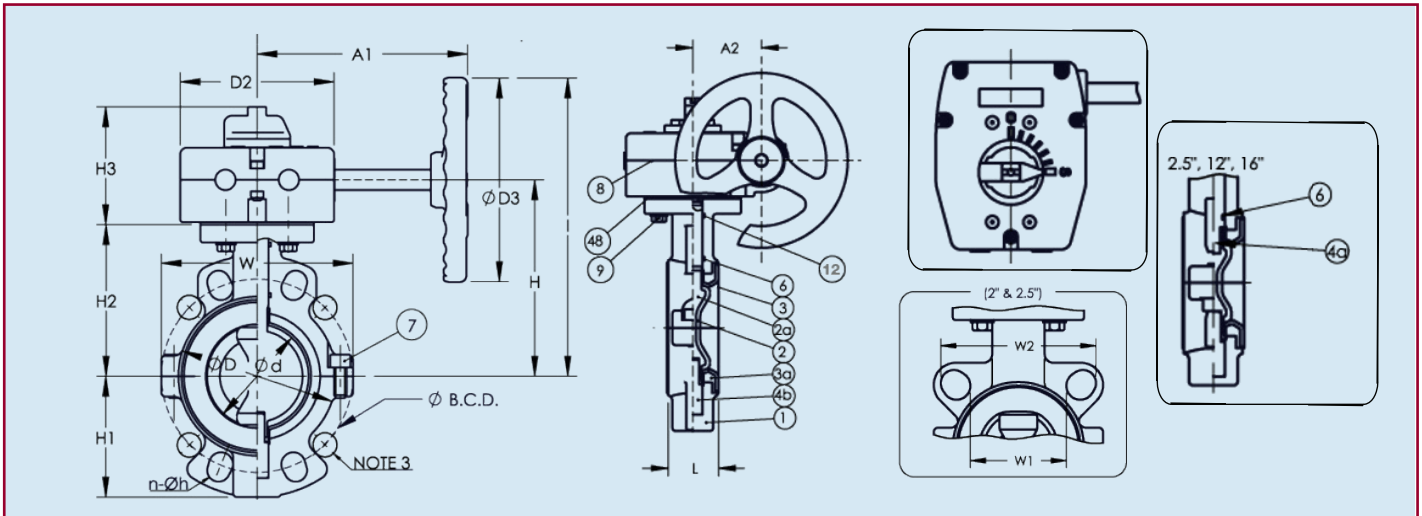
1. Make sure lever or gear is in a fully closed position (gear type may require travel stop adjustment).
2. Liner is damaged or worn. Replace liner.
3. Disc is damaged or abraded. Change disc.
4. Foreign material is caught between seat and disc. Remove the substance.
5. Mating flange bolts either overtightened or unevenly tightened. Retighten properly.

### What if fluid leaks outside between seat and mating flange?

1. Seat damage. Change seat.
2. Mating flange bolts not tightened to proper torque or unevenly tightened. Retighten to the appropriate torque.

### What if valve does not operate smoothly?

1. Foreign material is caught between disc and seat. Remove the material and clean.
2. Lever or gearbox is damaged. Replace.
3. Mating flange bolts overtightened. Retighten.



## Dimensions (Sizes 2" – 16") (in.)

Nominal Size	ANSI Class 150					D	D2	D3	L	H	H1	H2	H3	I	W	W1	W2	A1	A2
	d	C	n	h	h														
2"	50mm	2.17	[4.75]	2 [4]	[0.75]	3.54	4.80	6.30	1.69	5.31	2.40	3.94	3.62	8.46	4.57	2.60	4.17	6.57	2.52
2-1/2"	65mm	2.56	[5.50]	2 [4]	[0.75]	4.33	4.80	6.30	1.81	5.91	3.15	4.53	3.62	9.06	5.75	3.07	4.41	6.57	2.52
3"	80mm	3.15	[6.00]	- [4]	[0.75]	4.92	4.80	6.30	1.81	6.06	3.74	4.69	3.62	9.21	5.98	-	-	6.57	2.52
4"	100mm	3.94	7.50	4 [8]	0.75	6.06	4.80	6.30	2.05	6.69	4.06	5.31	3.62	9.84	6.85	-	-	6.57	2.52
5"	125mm	4.92	8.50	4 [8]	0.88	7.13	4.80	6.30	2.20	7.60	4.73	6.22	3.62	10.75	8.11	-	-	6.57	2.52
6"	150mm	5.91	[9.50]	4 [8]	[0.88]	8.31	4.80	6.30	2.20	8.27	5.39	6.89	3.62	11.42	9.29	-	-	6.57	2.52
8"	200mm	7.52	11.75	4 [8]	0.88	9.96	4.80	6.30	2.36	9.45	6.42	8.07	3.62	12.60	11.42	-	-	6.57	2.52
10"	250mm	9.65	14.25	4 [12]	1.00	12.60	4.80	6.30	2.68	10.83	7.87	9.45	3.62	16.73	13.39	-	-	6.57	2.52
12"	300mm	11.02	17	4 [12]	1.00	14.61	7.40	11.81	3.07	13.27	9.06	11.61	4.25	19.17	16.14	-	-	10.71	3.90
14"	350mm	12.99	18.75	4 [12]	1.12	16.38	7.40	11.81	3.62	14.25	10.04	12.60	4.25	20.16	18.11	-	-	10.71	3.90
16"	400mm	14.96	[21.25]	4 [16]	[1.12]	18.74	7.40	11.81	4.02	15.43	11.42	13.78	4.25	21.34	20.94	-	-	10.71	3.90

Note 1: Dimensions "L" is equivalent to ISO-5752 Short Pattern Face to Face dimension for metal valves.

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Note 3: These show the bolt hole position for 3" (80mm)

## Parts List (Gear: Sizes 2" – 16")

PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	Ductile Cast Iron (FCD-S)*
2	Disc	1	PTFE
2a	Inserted Metal of Disc	1	Stainless Steel (SUS304)
3	Seat	1	PTFE
3a	Seat Cushion	1	CR
4a	Stem (A)	1	Stainless Steel (SUS304)
4b	Stem (B)	1	Stainless Steel (SUS304)
6	O-Ring (A)	1	EPDM
7	Bolt (A)	-	Stainless Steel (SUS304) 2" - 5" (2), 6" - 16" (4)
8	Gear Box	1	Plasgear™
9	Bolt (B)	4	Stainless Steel (SUS304)
48	Gasket (C)	1	EPDM
51	O-Ring (B)	1	EPDM

\*With powdercoat finish.

## Sample Specification

Type-55 IS Butterfly valves shall feature a powder coat finish cast ductile iron body with PTFE disc and seat. The PTFE seat shall be Neoprene backed for chemical resistance and flexibility over a wide range of temperatures. The face to face dimensions of the valve shall conform to ISO 5752 short pattern wafer style. Valves shall feature a 304 SS stem with full engagement thru the valve body and disc. Valves 2" – 5" shall feature a lever handle with 19 position throttling plate and trigger padlock provision. Valves 2" – 16" feature gear operators which shall be worm gear design, self-locking Plasgear™ as manufactured by Asahi/America Inc. Valves shall be rated to 150psi from -5°F thru 210°F sizes 2" – 12" and 100psi from -5°F thru 210°F sizes 14" and 16", as manufactured by Asahi/America Inc.