

Chemtrol® continues its 60 year tradition of providing solutions for harsh industrial environments with the introduction of a sturdy line of PVC and CPVC butterfly valves.

MODEL C BUTTERFLY VALVE

INDUSTRIAL PLASTICS

APPLICATIONS

- Water & waste water treatment
- Chemical Processing
- Swimming pools, aquariums, theme parks
- Pharmaceutical
- Marine & corrosive environments

MATERIALS & CONSTRUCTION

- PVC or CPVC
- Heavy-duty EPDM & FKM o-ring seals
- Stainless steel backed PTFE lined bushings
- Stainless steel stem

DESIGN CRITERIA

- Bolt hole pattern compatible with Class 150 ASME B16.5, BS 1560-3 class 150, ISO 7005-3 PN 10, and DIN EN 1092-2 PN 10
- Built-in o-ring face-seals require no gaskets between mating flanges
- Lever operator through 8", 10" only available with bare stem or gear operator
- Corrosion-resistant high performance gear operator for 2 ½"-8", cast iron gear operator for 10", all water tight construction



Chemtrol® offers dependable products that work in the most demanding environments. With this latest introduction, Chemtrol expands its offering to include valve options through 10" for PVC and CPVC Schedule 80 piping systems.

- The valves use proven technologies that withstand a multitude of demanding applications. They have been tested extensively with shell and seat tests at 133% the rated pressure.
- Select a manual operated valve with either a sturdy coated metal handle or a corrosion-resistant, high performance gear operator, or specify an actuated valve with electric or pneumatic actuation.

AHEAD OF THE FLOW®

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Product Specifications

As with all other thermoplastic piping components, the maximum pressure rating for Chemtrol Model C Butterfly valves, is related to temperature as per Figure 1.

Figure 1

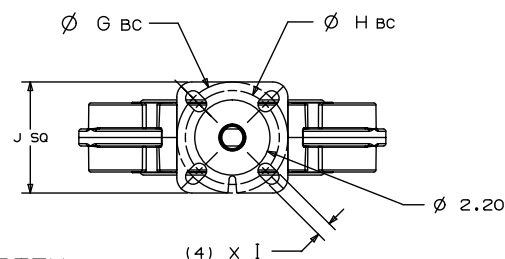
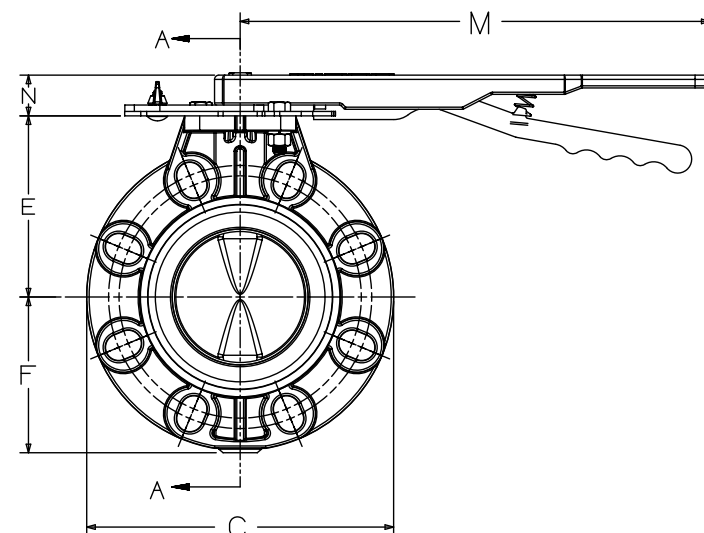
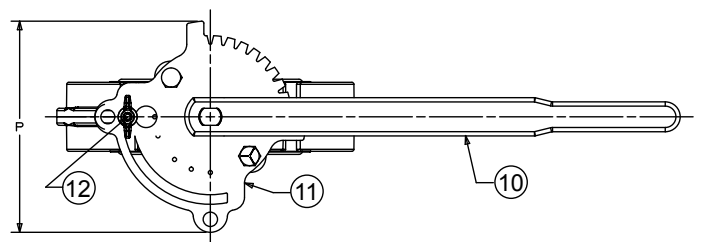
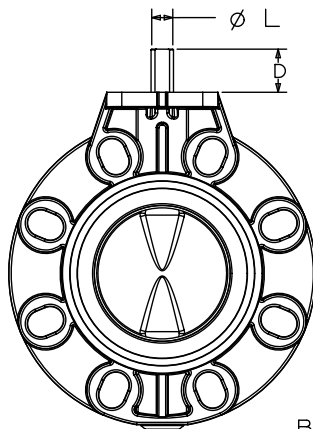
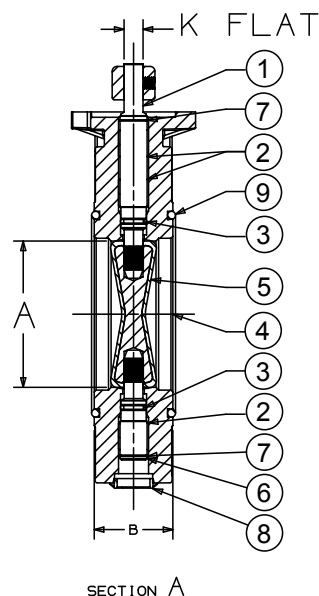
Maximum Operating Pressure (psi) vs. Temperature			Operating Stem Torque IN-LBS						
Operating Temperature (°F)	PVC	CPVC	Valve Size NPS	50 PSIG		100 PSIG		150 PSIG	
				CLOSE	OPEN	CLOSE	OPEN	CLOSE	OPEN
100	150	150	2 1/2	44.4	48	51.6	60	56.4	60
110	135	140	3	51.6	39.6	60	48	72	60
120	110	130	4	120	120	152.4	128.4	180	135.6
130	75	120	6	236.4	123.6	248.4	171.6	327.6	188.4
140	50	110	8	204	171.6	248.4	180	348	219.6
150	N.R.	100	10	951.6	332.4	1098	558	1164	681.6
160	N.R.	90							
170	N.R.	80							
180	N.R.	70							
190	N.R.	N.R.							
200	N.R.	N.R.							
250	N.R.	N.R.							
280	N.R.	N.R.							

N.R. Not Recommended and NOT WARRANTED by manufacturer.

Cv TABLE MODEL C BUTTERFLY VALVE GPM/1.0 PSI ΔP									
VALVE SIZE NPS	DEGREE OPEN								
	10°	20°	30°	40°	50°	60°	70°	80°	90° FULL
2 1/2	0	0	5.5	20.4	35.5	63.4	101	161.8	183.5
3	0	0.7	13.8	36.8	58.7	95.7	154	280.2	312
4	0	0.9	24.3	68.6	128	208.5	338.5	535.3	585.6
6	0	27.7	124.2	220.9	340.1	580.7	854.7	1226.3	1357.8
8	2.8	87	209.8	372.6	648.1	1013.1	1484.1	2353.4	2860
10	6	87.6	340	679	1068.9	1719.2	2724.8	4349.9	5013

Product Specifications

PART	MATERIAL
1. Upper Stem	416 Stainless Steel
2. Bushings (3)	Stainless Steel backed PTFE
3. O-ring Stem Seal (2)	EPDM or FKM
4. Body	CPVC or PVC
5. Disk	EPDM or FKM Encapsulated Ductile Iron
6. Lower Stem	416 Stainless Steel
7. Retaining Ring (2)	304 Stainless Steel
8. Plug	LDPE (Polyethylene)
9. Face O-Ring (2)	EPDM or FKM
10. Handle w/ Lever	Malleable Iron with Epoxy Coating
11. Throttle Plate	Zinc Plated Steel
12. Position Lock	Zinc Plated Steel



WEIGHTS & DIMENSIONS

Valve Size	A	B	C	D	E	F	G	H	I	J	K	L	M	Handle N	P	Approx. ¹ Wt./Lbs."
2 1/2	2.44	1.81	7.16	1.28	4.13	3.67	3.25	2.75	0.44	3.25	0.37	0.50	10.50	1.19	6.19	
3	2.86	1.81	7.72	1.21	4.41	3.96	3.25	2.75	0.44	3.25	0.37	0.50	10.50	1.19	6.19	
4	3.83	2.06	8.98	1.26	5.30	4.56	3.25	2.75	0.44	3.25	0.50	0.66	10.50	1.19	6.19	
6	5.75	2.20	11.21	1.28	7.09	5.73	3.25	2.75	0.44	3.25	0.56	0.78	13.75	1.23	6.19	
8	7.73	2.36	13.60	1.36	7.99	6.95	3.25	2.75	0.44	3.25	0.56	0.78	13.75	1.23	6.19	
10	9.56	2.68	16.44	1.34	9.84	8.34	5.00	4.01	0.56	4.75	0.75	1.06	Gear Operator Only			

¹ Operator not included in weight

Weight is for PVC

Chemtrol® Figure Numbers

Seat Material	Type Valve	PVC	CPVC
EPDM	No Operator	W45BG-E-0	W51BG-E-0
	With Lever Handle ¹	W45BG-E-3	W51BG-E-3
	With Gear Operator	W45BG-E-5	W51BG-E-5
FKM ²	No Operator	W45BG-V-0	W51BG-V-0
	With Lever Handle ¹	W45BG-V-3	W51BG-V-3
	With Gear Operator	W45BG-V-5	W51BG-V-5

¹ 10" not available with lever handle

² 2 ½" not available with FKM seals

Product Specifications

Chemtrol® Model C Wafer Style Butterfly Valve

Scope: This specification establishes the manufacturing requirements for PVC and CPVC Butterfly Valves intended for use in industrial, commercial, and residential pressure-piping systems for non-corrosive or mildly corrosive applications, where the service temperature does not exceed 140°F for PVC or 180°F for CPVC.

Materials: The body shall be manufactured from a PVC or CPVC compound that meets the requirements of Cell Class 12454 polyvinyl chloride or Cell Class 23447 chlorinated polyvinyl chloride as outlined in ASTM D1784.

The disc shall be manufactured of ductile iron as specified in ASTM A536 with EPDM or FKM encapsulation.

The upper and lower shaft shall be manufactured from 416 stainless steel as specified in ASTM A582.

The O-ring seal material shall be manufactured from EPDM or FKM.

The bearing shall be manufactured from PTFE-coated stainless steel backed split design.

The handle is of malleable iron with epoxy coating. The throttling index plates are made of zinc-plated steel.

Valve Design: Valve body shall be of the wafer design for ease on installation and maintenance and shall be compatible with bolt hole pattern Class 150 ASME B16.5, BS 1560-3 class 150, ISO 7005-3 PN 10, and DIN EN 1092-2 PN 10.

The shaft is splined to lock into the disc to ensure positive rotation. The shaft is guided by PTFE-coated bearings to protect against deflection. Disc position is indicated by the shaft, when the handle is removed.

Laying length is compatible with MSS SP-67 narrow (W-1) and ISO 5752 short.

Markings: Valves shall be clearly marked with the manufacturer's name or trademark, nominal size, material designation, ASTM number or equivalent symbol indicating compliance with applicable standards, country of origin, and pressure rating. Valves additionally bear the ANSI/NSF 61 for PVC and CPVC with EPDM or ANSI/NSF 372 for PVC and CPVC with FKM certification mark, (verifying approval for the conveyance of water).

Performance: Valve shall be rated bubble-tight at 150 psi 73°F non-shock water service.

Installation: Installation and operation shall be as specified by the manufacturer's printed instructions.