

# Butterfly Valves

## Series 7A2



### Approvals/Listings:



Series 7A2 butterfly valves are designed for pressures ranging from vacuum to 300 psi/2065 kPa. They feature a narrow profile disc design with a smooth, coated inner body which combine for superior flow characteristics. This combination results in low break-away torque, reducing gear operator and actuator sizing and costs. Standard polyphenylene sulfide blend (PPS) coating accommodates a wide variety of severe services. The dual-seal disc provides bubble-tight sealing in both directions without added valve modifications or cost. Series 7A2 valves are NSF certified per ANSI NSF-61-G for cold 73°F/23°C potable water service.

The disc features an EPDM coating for water service to +230°F/+110°C. The Series 7A2 butterfly valve is available with a manual handle or a gear operator.

### Tapped Outlets

Series 7A2 valves can be ordered with optional 3/4" NPT tapped outlets, two upstream and two downstream of the disc. Locations of these ports are detailed by the diagrams on page 2 and 3. Tapped port locations are capable of including two 3/4" FNPT ports on each side of the valve (up to four total). The 6"/150 mm size valve comes standard with four tapped ports.

#### Job/Owner

System No.	
Location	

#### Contractor

Submitted By	
Date	

#### Engineer

Spec Section	
Paragraph	
Approved	
Date	

**Material Specifications:**

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**Body:**

Ductile iron conforming to ASTM A-395, grade 65-45-15, and ASTM A-536, grade 65-45-12, coated with polyphenylene sulfide blend.

**Disc:**

Ductile iron conforming to ASTM A-536, EPDM coating.

**Disc Coating: (specify choice)**

Grade "E" EPDM

EPDM (Green color code). Temperature range -30°F to +230°F/ -34°C to +110°C. Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. NOT RECOMMENDED FOR PETROLEUM SERVICES.

**Stem Bearings:**

Teflon with stainless steel backing

**Stem Nuts:**

Type 416 Stainless Steel

**O-Ring:**

EPDM

**Plugs for Optional Ports:**

Bronze, C89833 per ASTM B584 or C65100 per ASTM B98

**Bracket:**

Carbon steel, painted

**Operator: (specify choice)**

**2 ½ – 8" / 65 – 200mm:** Manual lever lock/ininitely variable handle

**2 ½ – 10" / 65 – 250mm:** Manual gear operator with handwheel

**Optional:** Memory Stop

**Optional:** Chain Wheel

**Electric actuator:**

Sizing of actuator is dependent on service. Contact Victaulic for details.

**Pneumatic actuator:**

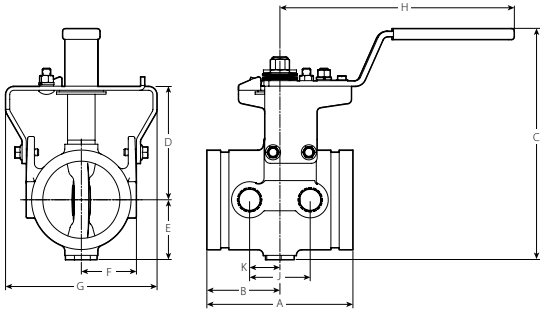
Sizing of actuator is dependent on service. Contact Victaulic for details.

**NOTE:** When connecting Series 7A2 butterfly valves to Style 741 or Style 743 Vic-Flange® adapters, please contact Victaulic.

<sup>1</sup> Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

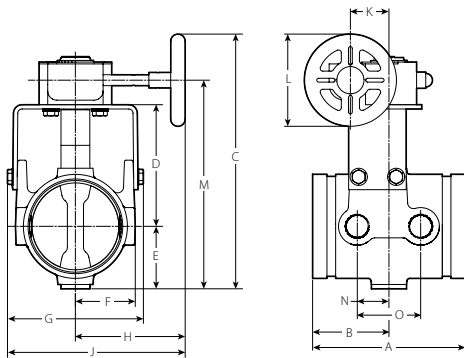
**Dimensions**

With Lever Lock/Infinitely Variable Handle



Nominal Size	Actual Outside Diameter	Dimensions										Approx. Weight Each	
		A	B	C	D	E	F	G	H	J	K		
inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lbs. kg
2½ 65	2.875 73.0	6.00 152	3.00 76	7.48 190	3.92 100	1.80 46	1.78 45	4.21 107	7.16 182	2.25 57	1.13 29	1.13 29	6.4 2.9
3 80	3.500 88.9	6.25 159	3.13 80	8.12 206	4.22 107	2.14 54	2.10 53	4.21 107	7.16 182	2.56 65	1.28 33	1.28 33	7.2 3.3
4 100	4.500 114.3	6.63 168	3.32 84	10.46 266	5.15 131	2.71 69	2.60 66	6.88 175	10.60 269	2.75 70	1.38 35	1.38 35	12.8 5.8
6 150	6.625 168.3	7.00 178	3.50 89	12.36 314	6.15 156	3.61 92	3.60 91	7.79 198	12.10 307	3.33 85	1.67 42	1.67 42	23.0 10.4
8 200	8.625 219.1	8.00 203	4.00 102	15.53 395	7.93 201	5.00 127	5.05 128	10.10 257	16.10 409	3.69 94	1.84 47	1.84 47	51.0 23.1

With Gear Operator



Nominal Size	Actual Outside Diameter	Dimensions														Approx. Weight Each
		A	B	C	D	E	F	G	H	J	K	L	M	N	O	
inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lbs. kg
2½ 65	2.875 73.0	6.00 152	3.00 76	8.78 223	3.92 100	1.80 46	1.79 45	3.77 96	4.76 121	6.65 169	1.67 42	4.00 102	6.78 172	1.13 29	2.25 57	9.4 4.2
3 80	3.500 88.9	6.25 159	3.13 80	9.42 239	4.22 107	2.14 54	2.10 53	4.33 110	4.76 121	6.93 176	1.67 42	4.00 102	7.42 189	1.28 33	2.56 65	9.4 4.2
4 100	4.500 114.3	6.63 168	3.32 84	11.05 281	5.28 134	2.71 69	2.60 66	6.08 154	4.76 121	7.80 198	1.67 42	4.00 102	9.05 230	1.38 35	2.75 70	10.2 4.6
6 150	6.625 168.3	7.00 178	3.50 89	13.96 355	6.75 171	3.61 92	3.60 91	7.79 198	7.20 183	11.10 282	1.97 50	5.00 127	11.46 292	1.67 42	3.33 85	15.8 7.1
8 200	8.625 219.1	8.00 203	4.00 102	17.69 449	7.94 202	5.00 127	5.05 128	10.10 257	8.86 225	13.91 353	2.36 60	6.50 165	14.44 367	1.84 47	3.69 94	26.0 11.7
10 250	10.750 273.0	10.00 254	5.00 127	20.02 509	8.68 221	5.84 148	6.10 155	12.20 310	8.98 228	15.08 383	2.36 60	8.00 203	16.02 407	2.83 72	5.66 144	54.0 24.3

**Performance:**

The chart expresses the frictional resistance of Victaulic Series 7A2 in equivalent feet/meters of straight pipe.

Valve Size			Valve Size		
Nominal Diameter	Actual Outside Diameter	Equivalent of Pipe	Nominal Diameter	Actual Outside Diameter	Equivalent of Pipe
inches mm	inches mm	feet meters	inches mm	inches mm	feet meters
2 1/2 65	2.875 73.0	5 1.6	6 150	6.625 168.3	8 2.5
3 80	3.500 88.9	5 1.6	8 200	8.625 219.1	11 3.4
4 100	4.500 114.3	12 3.7	10 250	10.750 273	12 3.7

**C<sub>v</sub>/K<sub>v</sub> Values:**

C<sub>v</sub>/K<sub>v</sub> values for flow of water at +60°F/+16°C are shown in the table below. For additional details contact Victaulic.

**Formulas for C<sub>v</sub> and K<sub>v</sub> values**

$\Delta P = Q^2/C_v^2$

$\Delta P = Q^2/K_v^2$

$Q = C_v \times \sqrt{\Delta P}$

$Q = K_v \times \sqrt{\Delta P}$

Where:

Where:

Q = Flow (GPM)

Q = Flow (m<sup>3</sup>/h)

ΔP = Pressure Drop (psi)

ΔP = Pressure Drop (bar)

C<sub>v</sub> = Flow Coefficient

K<sub>v</sub> = Flow Coefficient

**Valve Torque Requirements:**

Series 7A2 valves have low torque requirements for operating the valve. This results in less manual effort, smaller gear operators or smaller actuators to open and close the valve.

Valve Size		Torque – Inch Pounds/Newton Meters					
Nominal Size inches mm	Actual Outside Diameter inches mm	*Differential Pressure – psi/Bar					
		50/3	100/7	150/10	200/14	232/16	300/21
2 1/2 65	2.875 73.0	100 11.0	120 14.0	140 16.0	160 18.0	170 19.0	200 23.0
3 80	3.500 88.9	150 17.0	170 19.0	190 22.0	210 24.0	230 26.0	260 29.0
4 100	4.500 114.3	220 25.0	250 28.0	280 32.0	310 35.0	330 37.0	370 42.0
6 150	6.625 168.3	410 46.0	470 53.0	540 61.0	600 68.0	640 72.0	730 83.0
8 200	8.625 219.1	540 61.0	680 77.0	820 93.0	950 107.0	1040 118.0	1230 139.0

**Installation**

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

**Note**

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

**Warranty**

Refer to the Warranty section of the current Price List or contact Victaulic for details.

**Trademarks**

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