

SERIES 7800

Check Valves

For use in Grooved-End Piping Systems

The Gruvlok Series 7800 Check Valve is a compact, cost effective valve offering low pressure-drop, non-slam performance. The Series 7800 Check Valve assembly is lighter and faster to install, and costs less than flanged and wafer valve assemblies.

In the fully open position the Series 7800 swing clapper is held tightly against the valve body, out of the flow stream, to provide maximum flow area and prevention of clapper flutter. The clapper design produces quick, non-slam closure before flow reversal can occur, while meeting FM requirements for an anti-water hammer valve rating.

Each valve is hydrostatically tested for leak tightness to 500 PSI. The clapper-seat design permits leak free sealing of back pressures in service conditions ranging from 300 PSI (20.7 bar) to as low as 1 PSI (0.07 bar) (head pressure: 28").

PERFORMANCE:

Pressure Rating:

Commercial Applications - Sizes 2" thru 12" inclusive, 300 psi (20.7 bar) maximum working pressure.



For Listings/Approval Details and Limitations, visit our website at www.anvilint.com or contact an Anvil® Sales Representative.

MATERIAL SPECIFICATIONS

BODY: Ductile iron conforming to ASTM A 536, Grade 65-45-12

COATING: Rust inhibiting paint on exterior and interior – color: orange enamel

CLAPPER: 2" - 5" Type 304 or 302 stainless steel to ASTM A 167
6"-12" Ductile iron conforming to ASTM A 536, Grade 65-45-12

CLAPPER FACING:

- Grade E EPDM:** -40° to 230°F (-40° to 110°C) Service Temperature Range Recommended for water service, dilute acids, alkaline, oil-free air and many chemical services.
NOT FOR USE IN PETROLEUM SERVICES.
- Grade T Nitrile:** -20° to 180°F (-29° to 80°C) Service Temperature Range Recommended for petroleum products, air with oil vapors, vegetable oils and mineral oils.
NOT FOR USE IN HOT WATER SERVICES.

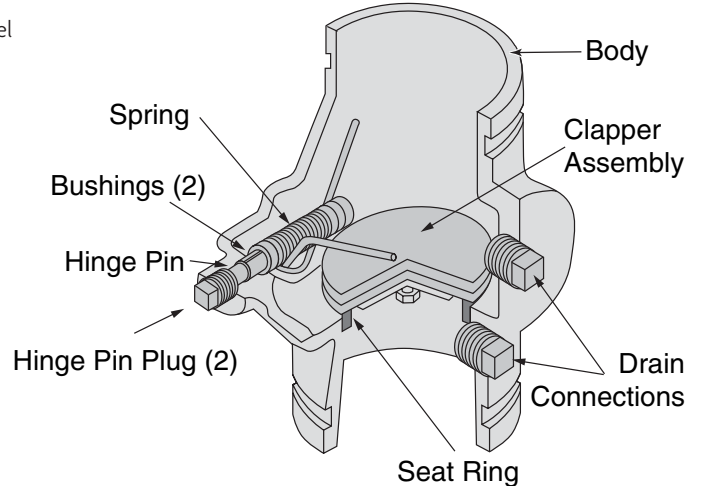
SEAT RING: Type 304 stainless steel to ASTM A 123, ASTM A 213, ASTM A 312 or ASTM A 269

SPRING: Type 302 stainless steel to ASTM A 313

HINGE PIN: Type 304 or 302 stainless steel to ASTM A 580

HINGE PIN BUSHINGS: Sintered bronze to ASTM B 438

HINGE PIN PLUGS & DRAIN PLUGS: Cast iron to ASTM A 126 Class A



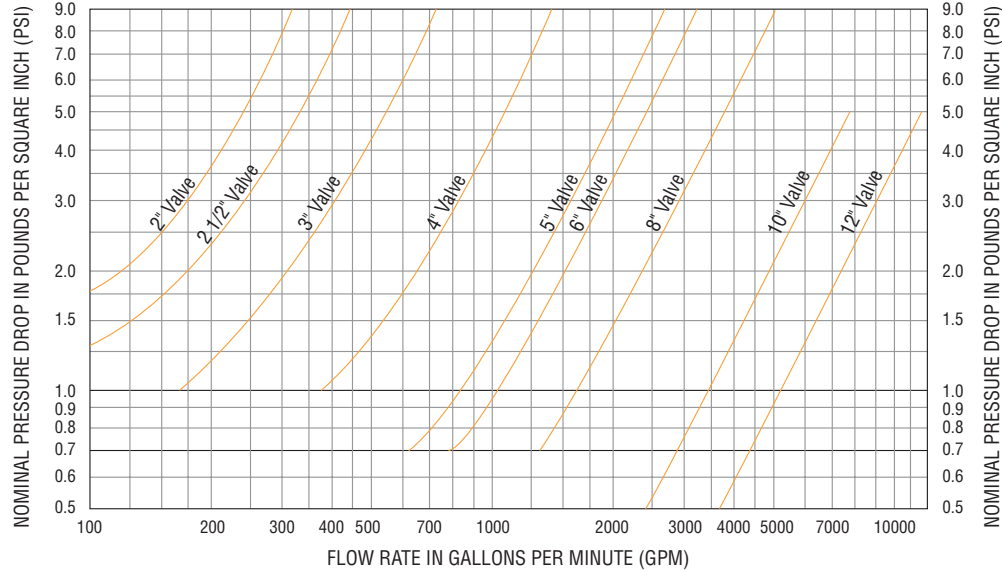
PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

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Friction Loss Series 7800 Check Valve (Water at 65°F)



FLOW DATA:

The approximate friction losses, based on the Hazen and Williams formula, expressed in equivalent length of pipe is given below. The friction losses have been calculated on the basis of flow rates typically used with each size valve.

FLOW DATA - FRICTION LOSS (FT. OF PIPE)							
Valve Size	O.D.	C=100			C=120		
		Sch. 10	Sch. 30	Sch. 40	Sch. 10	Sch. 30	Sch. 40
<i>In./mm</i>	<i>In./mm</i>	<i>Ft./m</i>	<i>Ft./m</i>	<i>Ft./m</i>	<i>Ft./m</i>	<i>Ft./m</i>	<i>Ft./m</i>
2	2.375	10	—	8	14	—	11
<i>50</i>	<i>60.3</i>	<i>3.0</i>	—	<i>2.4</i>	<i>4.3</i>	—	<i>3.4</i>
2½	2.875	14	—	10	20	—	15
<i>65</i>	<i>73.0</i>	<i>4.3</i>	—	<i>3.0</i>	<i>6.1</i>	—	<i>4.6</i>
3	3.500	17	—	12	23	—	17
<i>80</i>	<i>88.9</i>	<i>5.2</i>	—	<i>3.7</i>	<i>7.0</i>	—	<i>5.2</i>
4	4.500	17	—	13	23	—	18
<i>100</i>	<i>114.3</i>	<i>5.2</i>	—	<i>4.0</i>	<i>7.0</i>	—	<i>5.5</i>
5	5.563	14	—	11	20	—	15
<i>125</i>	<i>141.3</i>	<i>4.3</i>	—	<i>3.4</i>	<i>6.1</i>	—	<i>4.6</i>
6	6.625	23	—	19	33	—	26
<i>150</i>	<i>168.3</i>	<i>7.0</i>	—	<i>5.8</i>	<i>10.1</i>	—	<i>7.9</i>
8	8.625	35	32	30	50	45	43
<i>200</i>	<i>219.1</i>	<i>10.7</i>	<i>9.8</i>	<i>9.1</i>	<i>15.2</i>	<i>13.7</i>	<i>13.1</i>
10	10.750	28	25	24	40	36	34
<i>250</i>	<i>273.1</i>	<i>8.5</i>	<i>7.6</i>	<i>7.3</i>	<i>12.2</i>	<i>11.0</i>	<i>10.4</i>
12	12.750	31	28	26	44	39	37
<i>300</i>	<i>323.9</i>	<i>9.4</i>	<i>8.5</i>	<i>7.9</i>	<i>13.4</i>	<i>11.9</i>	<i>11.3</i>

IMPORTANT NOTE:

Check valve life may be shortened and system damage may occur if check valves are installed too close to a source of unstable flow. Check valves must be installed at a reasonable distance away from pumps, elbows, expanders, reducers or other similar devices. Sound piping practices dictate a minimum of five (5) times the pipe diameter for general use. Distances between three (3) and five (5) diameters are allowable provided the flow velocity is less than 8 feet per second. Distances less than 3 diameters are not recommended.

This valve may be installed vertically or horizontally. In a horizontal installation, the hinge pin is to be located on top.

Not for use in copper systems.

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SERIES 7800 CHECK VALVES (ORDERING INFORMATION)					
Sample Part Number 4" 7811—>	4"	78	1	1	X
	Size	Series	Clapper Facing Material	Body Finish	Special Configuration
	2" - 12"	78 - 7800	1 - EPDM (Std) 2 - Nitrile (Std)	1 - Painted (Std)	2 - Other*

* Contact an Anvil representative for more information.

MATERIAL SPECIFICATIONS

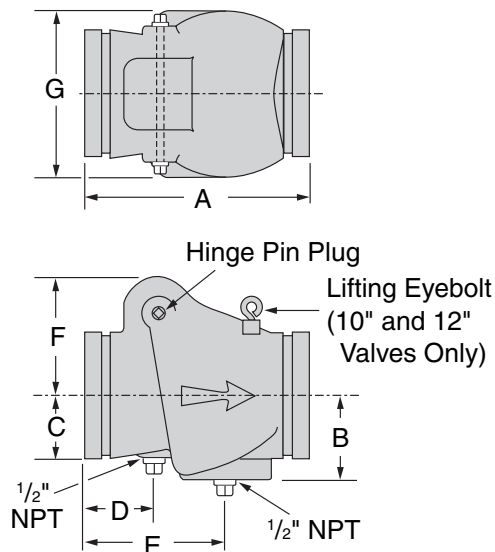


FIGURE 7800 CHECK VALVE									
Nominal Size	O.D.	Nominal Dimensions							Approx. Wt. Ea.
		A	B	C	D	E	F	G	
In./DN(mm)	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	In./mm	Lbs./Kg.
2	2.375	6 ³ / ₄	2 ³ / ₈	1 ⁷ / ₁₆	1 ³ / ₄	4 ¹ / ₂	3 ³ / ₁₆	4 ³ / ₈	7.5
50	60.3	171	60	36	44	114	81	111	3.4
2 ¹ / ₂	2.875	7 ¹ / ₄	2 ⁷ / ₁₆	1 ⁹ / ₁₆	1 ³ / ₄	3 ¹³ / ₁₆	3 ⁵ / ₈	4 ¹ / ₂	10.5
65	73.0	184	61	39	44	96	92	114	4.8
3	3.500	7 ³ / ₄	2 ⁵ / ₈	2	1 ³ / ₁₆	4 ¹ / ₁₆	3 ¹¹ / ₁₆	4 ¹⁵ / ₁₆	11.5
80	88.9	197	67	51	46	103	93	125	5.2
4	4.500	8 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₄	2 ¹ / ₂	5 ¹ / ₁₆	4 ¹ / ₄	6	13.5
100	114.3	206	79	57	64	128	108	152	6.1
5	5.563	9 ³ / ₄	3 ¹ / ₂	2 ³ / ₄	2 ⁷ / ₁₆	5 ¹³ / ₁₆	4 ⁵ / ₈	6 ³ / ₄	19.0
125	141.3	248	89	70	61	147	117	171	8.6
6	6.625	12 ³ / ₄	4 ¹ / ₄	3 ⁵ / ₁₆	3 ³ / ₈	6 ¹ / ₄	6 ³ / ₄	8 ¹ / ₂	33.5
150	168.3	324	108	84	79	159	171	216	15.2
8	8.625	14 ³ / ₄	5 ¹ / ₁₆	3 ¹⁵ / ₁₆	4	5 ¹⁵ / ₁₆	8	10 ¹ / ₄	59.0
200	219.1	365	128	100	102	150	203	260	26.8
10	10.750	18	6 ⁵ / ₁₆	4 ¹⁵ / ₁₆	4 ⁹ / ₁₆	6 ⁷ / ₈	9 ⁹ / ₁₆	12 ¹¹ / ₁₆	130.0
250	273.1	457	160	125	115	175	233	322	59.0
12	12.750	21	7 ⁵ / ₁₆	6	5 ¹ / ₁₆	7 ¹ / ₄	10 ³ / ₈	14 ³ / ₄	183.0
300	323.9	533	185	152	128	184	264	375	83.0