

FireLock® Check Valves

Series 717 Check Valve

Series 717H High Pressure Check Valve



10.08



Series 717H
High Pressure Check Valve
(2 – 3"/DN50 – DN80)



Series 717
(2 ½ – 3 ½/73 mm – DN80)



Series 717
(4 – 12"/DN100 – DN300)

1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 3"/DN50 – DN80 (Series 717H)
- 2 ½ – 12"/73 mm – DN300 (Series 717)

Pipe Material

- Carbon Steel, Schedule 10, Schedule 40. For use with alternative material please contact Victaulic.

Maximum Working Pressure

- Up to 365 psi/2517 kPa/25 bar
- Working pressure dependent on pipe size, valve size and approval requirements.

Application

- Designed for use in Fire Protection systems.
- Prevents back flow.
- Single-disc mechanism incorporates a spring-assisted feature for non-slamming operation.
- Can be installed either vertically (flow upwards only) or horizontally.
- Valve body cast with arrow indicator to assist with proper valve orientation.
- Optional upstream and downstream pressure taps included on select sizes. See Section 3.0.
- Provided with grooved ends.
- Rated for ambient temperature use in fire protection systems.

Available End Connections

- Victaulic Original Groove System (OGS) standard groove

2.0 CERTIFICATION/LISTINGS



ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.



2.0 CERTIFICATION/LISTINGS

Approvals/Listings

Series 717H

Size		Approval/Listing Service Pressures				
Nominal inches DN	Actual Outside Diameter inches mm	cULus psi kPa	FM psi kPa	LPCB psi kPa	VdS psi kPa	CCCf psi kPa
2 DN50	2.375 60.3	365 2517	365 2517	365 2517	363 2500	N/A
2½	2.875 73.0	365 2517	365 2517	365 2517	N/A	363 2500
DN65	3.000 76.1	365 2517	365 2517	365 2517	363 2500	363 2500
3 DN80	3.500 88.9	365 2517	365 2517	365 2517	363 2500	363 2500

Series 717

Size		Approval/Listing Service Pressures				
Nominal inches DN	Actual Outside Diameter inches mm	cULus psi kPa	FM psi kPa	LPCB psi kPa	VdS psi kPa	CCCf psi kPa
2½	2.875 73.0	250 1725	N/A	N/A	N/A	N/A
DN65	3.000 76.1	250 1725	N/A	N/A	232 1600	N/A
3 DN80	3.500 88.9	250 1725	N/A	N/A	232 1600	N/A
4 DN100	4.500 114.3	365 2517	365 2517	365 2517	363 2500	363 2500
DN125	5.500 139.7	365 2517	365 2517	365 2517	363 2500	363 2500
5	5.563 141.3	365 2517	365 2517	365 2517	N/A	N/A
6 DN150	6.500 165.1	365 2517	365 2517	365 2517	N/A	363 2500
6 DN150	6.625 168.3	365 2517	365 2517	365 2517	363 2500	N/A
8 DN200	8.625 219.1	365 2517	365 2517	348 2400	247 1700	363 2500
10 DN250	10.750 273.0	250 1725	250 1725	250 1725	N/A	232 1600
12 DN300	12.750 323.9	250 1725	250 1725	250 1725	N/A	N/A

3.0 SPECIFICATIONS – MATERIAL

Body:

Ductile Iron conforming to ASTM A536, Grade 65-45-12.

Body Coating:

Series 717H Body: Black Paint

Series 717H Endface: Electroless Nickel conforming to ASTM B733

Series 717 (2 ½ – 3"/73mm – DN80): PPS Coating

Standard: Series 717 (4 – 12"/DN100 – DN300): Black Paint

Optional: Series 717 (4 – 12"/DN100 – DN300): PPS Coating

Body Seat:

Series 717H: Nitrile O-ring installed into an Electroless Nickel plating conforming to ASTM B733

Series 717 (2 ½ – 3"/73 mm – DN80): PPS Coated Ductile Iron

Series 717 (4 – 12"/DN100 – DN300): Ductile Iron with Electroless Nickel plating conforming to ASTM B733

Disc Seal or Coating: (specify choice¹)

Nitrile (Series 717H only)

EPDM

NOT COMPATIBLE FOR PETROLEUM SERVICES.

Discs:

Series 717H: CF8M Cast Stainless Steel

Series 717 (2 ½ – 3"/73 mm – DN80): Aluminum bronze with elastomer seal

Series 717 (4 – 12"/DN100 – DN300): Elastomer encapsulated disc.

Shaft:

Series 717H: Brass

Series 717 (2 ½ – 3"/73 mm – DN80): Type 416 Stainless Steel

Series 717 (4 – 12"/DN100 – DN300): Type 316 Stainless Steel

Spring:

Type 302/304 Stainless Steel

Shaft Plug:

Series 717H: Carbon Steel Zinc Plated

Series 717: Carbon Steel Zinc Plated

Pipe Plug:

Series 717H: Carbon Steel Zinc Plated

Series 717: Carbon Steel Zinc Plated

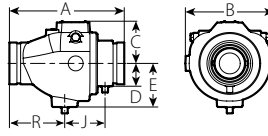
Optional Pressure Taps:

Series 717H: Available on all sizes

Series 717: Available on sizes 4 – 12"/DN100 – DN300

4.0 DIMENSIONS

Series 717H

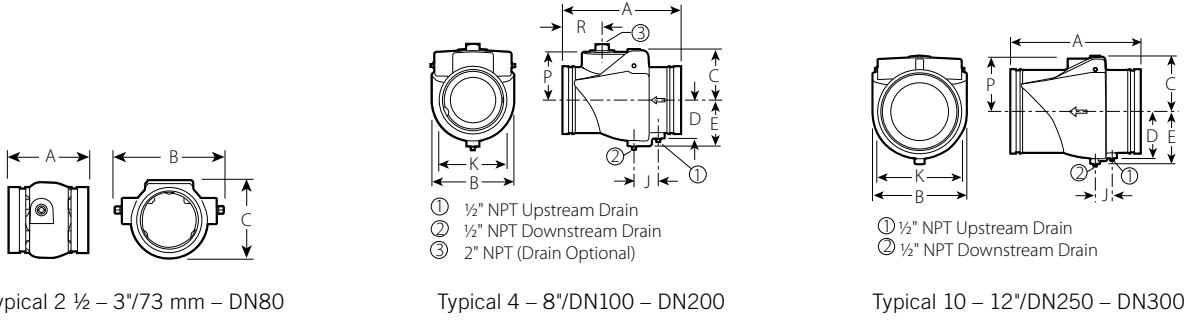


Typical 2 – 3"/50 – 80 mm

Size		Dimensions						Weight
Nominal inches DN	Actual Outside Diameter inches mm	E to E A inches mm	B inches mm	C inches mm	E inches mm	J inches mm	R inches mm	Approx. (Each) lb kg
2 DN50	2.375 60.3	8.66 220	6.46 165	3.23 83	3.02 77	2.80 72	4.25 108	10.7 4.9
2½	2.875 73.0	9.37 238	6.94 177	3.31 85	3.40 87	3.38 86	4.38 112	13.8 6.3
DN65	3.000 76.1	9.37 238	6.94 177	3.31 85	3.40 87	3.38 86	4.38 112	13.8 6.3
3 DN80	3.500 88.9	9.62 244	7.44 189	3.53 90	3.65 93	3.38 86	4.63 118	20.0 9.1

4.1 DIMENSIONS

Series 717



Size		Dimensions									Weight
Nominal inches DN	Actual Outside Diameter inches mm	E to E A inches mm	B inches mm	C inches mm	E inches mm	J inches mm	K inches mm	P inches mm	R inches mm	Approx. (Each) lb kg	
2½	2.875	3.88	4.26	3.57	–	–	–	–	–	3.6	
	73.0	99	109	91	–	–	–	–	–	1.6	
DN65	3.000	3.88	4.26	3.57	–	–	–	–	–	3.6	
	76.1	99	108	91	–	–	–	–	–	1.6	
3 DN80	3.500	4.25	5.06	4.17	–	–	–	–	–	4.5	
	88.9	108	129	106	–	–	–	–	–	2.0	
4 DN100	4.500	9.63	6.00	3.88	3.50	2.00	4.50	3.50	3.35	20.0	
	114.3	245	152	99	89	51	114	89	85	9.1	
DN125	5.500	10.50	6.80	4.50	4.17	2.15	5.88	4.08	3.98	27.0	
	139.7	267	173	114	106	55	149	104	101	12.2	
5	5.563	10.50	6.80	4.50	4.17	2.15	5.88	4.08	3.98	27.0	
	141.3	267	173	114	106	55	149	104	101	12.2	
6	6.500	11.50	8.00	5.00	4.50	2.38	6.67	4.73	3.89	38.0	
	165.1	292	203	127	114	60	169	120	99	17.2	
DN150	6.625	11.50	8.00	5.00	4.50	2.38	6.67	4.73	3.89	38.0	
	168.3	292	203	127	114	60	169	120	99	17.2	
8 DN200	8.625	14.00	9.88	6.06	5.65	2.15	8.85	5.65	5.75	64.0	
	219.1	356	251	154	144	55	225	144	146	29.0	
10 DN250	10.750	17.00	12.00	7.09	6.69	2.15	10.92	6.73	–	100.0	
	273.0	432	305	180	170	55	277	171	–	45.4	
12 DN300	12.750	19.50	14.00	8.06	7.64	2.51	12.81	7.73	–	140.0	
	323.9	495	356	205	194	64	325	196	–	63.5	

5.0 PERFORMANCE

Flow Characteristics

The charts below express the flow of water at 60°F/16°C through valve.

Formulas for Cv/Kv values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

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

Where:

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

C_v = Flow Coefficient

$$\Delta P = \frac{Q^2}{K_v^2}$$

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

Where:

Q = Flow (m³/hr)

ΔP = Pressure Drop (Bar)

K_v = Flow Coefficient

Series 717H

Size		Flow Characteristics
Nominal inches DN	Actual Outside Diameter inches mm	Full Open C _v K _v
2	2.375	160
DN50	60.3	138
2½	2.875	215
	73.0	186
DN65	3.000	215
	76.1	186
3	3.500	315
DN80	88.9	272

Series 717

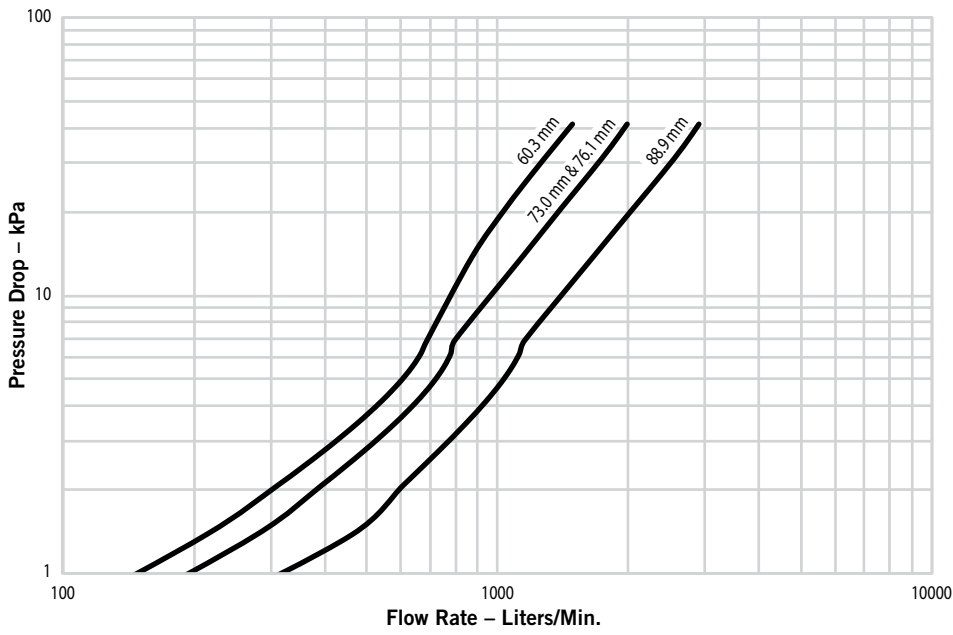
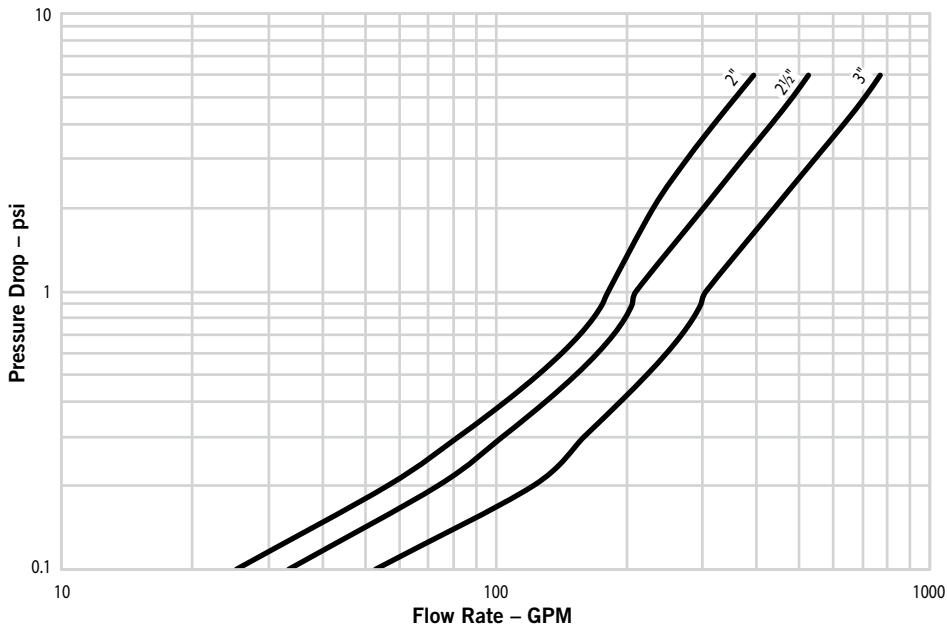
Size		Flow Characteristics
Nominal inches DN	Actual Outside Diameter inches mm	Full Open C _v K _v
2½	2.875	140
	73.0	121
DN65	3.000	140
	76.1	121
3	3.500	250
DN80	88.9	216
4	4.500	390
DN100	114.3	337
DN125	5.500	700
	139.7	606
5	5.563	700
	141.3	606
	6.500	1000
	165.1	865
6	6.625	1000
DN150	168.3	865
8	8.625	1800
DN200	219.1	1557
10	10.750	3000
DN250	273.0	2595
12	12.750	4200
DN300	323.9	3633

5.0 PERFORMANCE (CONTINUED)

Flow Characteristics

The charts below express the flow of water at 60°F/16°C through valve.

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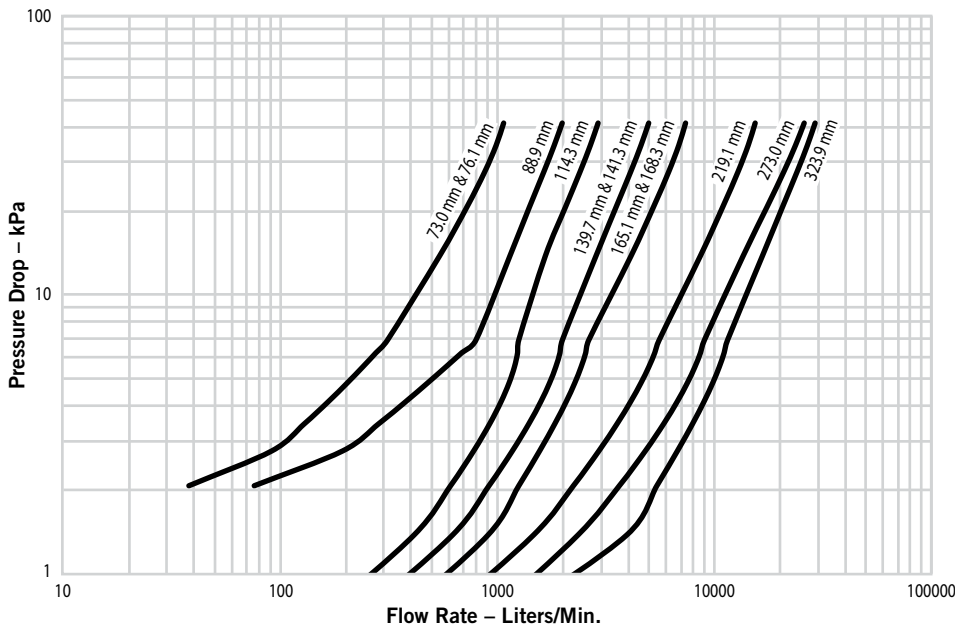
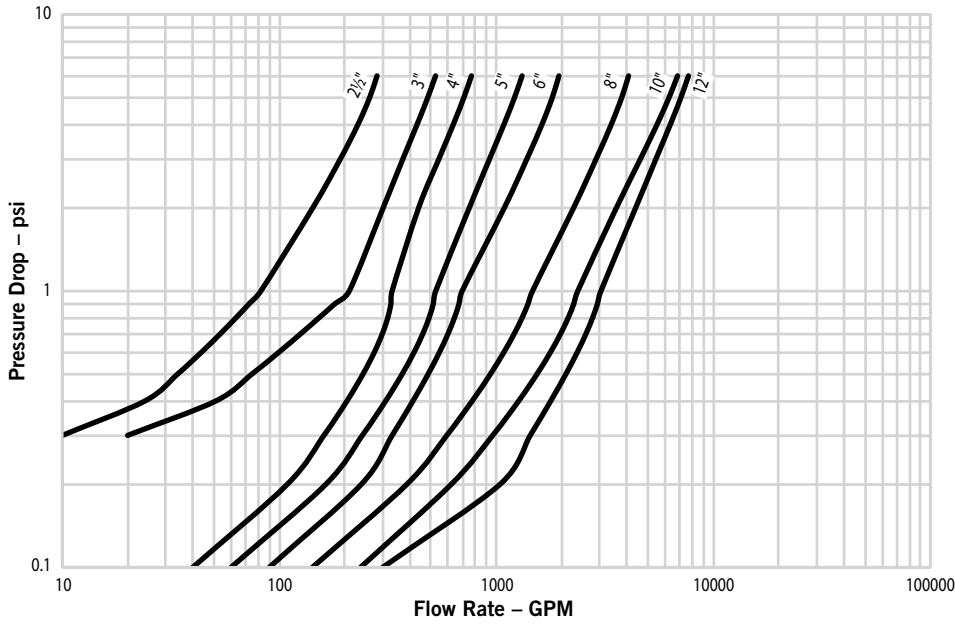


5.1 PERFORMANCE

Flow Characteristics

The charts below express the flow of water at 60°F/16°C through valve.

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6.0 NOTIFICATIONS

WARNING



- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.

7.0 REFERENCE MATERIALS

[05.01: Seal Selection Guide](#)

[10.01: Regulatory Approval Reference Guide](#)

[29.01: Terms and Conditions/Warranty](#)

[I-100: Field Installation Handbook](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

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

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