Gate Valves

SERIES 771H OS&Y GROOVE x GROOVE
SERIES 772H NRS GROOVE x GROOVE
SERIES 771F OS&Y GROOVE x FLANGE
SERIES 772F NRS GROOVE x FLANGE
SERIES 773 WALL POST INDICATOR
SERIES 774 UPRIGHT POST INDICATOR

The Series 771H OS&Y and Series 771F OS&Y gate valves are used when positive shut off is required and a quick visual indicator of open/closed position is required. The Series 772H NRS and Series 772F NRS gate valves are typically used for shut-off service where the valve is operated remotely, such as when the valve is behind a wall or buried. Series 772H NRS and Series 772F NRS gate valves are offered with optional wall (Series 773) or upright (Series 774) post indicators.


SERIES 771H


SERIES 772H


SERIES 774


SERIES 771F


SERIES 772F


SERIES 773

MATERIAL SPECIFICATIONS

Series 771 OS & Y and 772 NRS Gate Valves

Body: Ductile iron conforming to ASTM A-536 grade 65-45-12

Body Gasket: EPDM

Body Bolts: Plated Steel w/ Plastic Covers

Handwheel:

OS & Y Yoke (Series 771 only): Ductile iron conforming to ASTM A-536 grade 65-45-12

Bonnet: Ductile iron conforming to ASTM A536 grade 65-45-12

Bonnet/Body Coating: Fusion bonded Epoxy coating

Gate: Cast iron, EPDM coated

Gate Nut: Bronze, conforming to ASTM B62

Stem: Brass, ASTM B16

Continued on page 2.

JOB/OWNER
System No. _____
Location _____

CONTRACTOR
Submitted By _____
Date _____

ENGINEER
Spec Sect _____ Para _____
Approved _____
Date _____

Gate Valves

SERIES 771H OS&Y GROOVE x GROOVE
SERIES 772H NRS GROOVE x GROOVE
SERIES 771F OS&Y GROOVE x FLANGE
SERIES 772F NRS GROOVE x FLANGE
SERIES 773 WALL POST INDICATOR
SERIES 774 UPRIGHT POST INDICATOR

MATERIAL SPECIFICATIONS

Continued from page 1

O-Ring Seals: EPDM

Optional:

- **Indicator Post Flange:** Ductile iron conforming to ASTM A-536 grade 65-45-12 available for NRS valves only

Series 773 & 774 Indicators

Target Frame: Bronze conforming to ASTM B62

Window: Polycarbonate

Series 773 Wall Post Indicator:

Body: Cast iron conforming to ASTM A-126-B

Operating Stem: Bronze conforming to ASTM B62

Operating Rod: Carbon steel

Series 774 Upright Indicators:

Body: Cast iron conforming to ASTM A-126-B

Extension Sleeve: Cast iron conforming to ASTM A-126-B

CERTIFICATIONS/LISTINGS

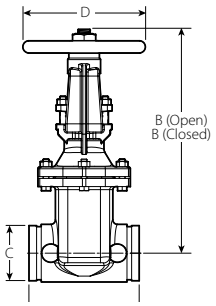
Inches DN	Series 771H		Series 772H		Series 771F		Series 772F	
	cULus	FM	cULus	FM	cULus	FM	cULus	FM
2½ DN65	250 psi 1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
76.1 mm	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
3 DN80	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
4 DN100	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
165.1 mm	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
6 DN150	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
8 DN200	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
10 DN250	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa
12 DN300	250 psi/1725 kPa	250 psi/1725 kPa	250 psi/1725 kPa	–	250 psi/1725 kPa	–	250 psi/1725 kPa	–
14 DN350	250 psi/1725 kPa	–	250 psi/1725 kPa	–	250 psi/1725 kPa	–	250 psi/1725 kPa	–
16 DN400	250 psi/1725 kPa	–	250 psi/1725 kPa	–	250 psi/1725 kPa	–	250 psi/1725 kPa	–

Gate Valves

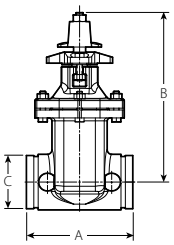
SERIES 771H OS&Y GROOVE x GROOVE
SERIES 772H NRS GROOVE x GROOVE
SERIES 771F OS&Y GROOVE x FLANGE
SERIES 772F NRS GROOVE x FLANGE
SERIES 773 WALL POST INDICATOR
SERIES 774 UPRIGHT POST INDICATOR

DIMENSIONS

Series 771H OS&Y and Series 772H
Grooved x Grooved

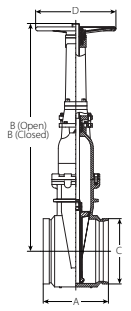


SERIES 771H

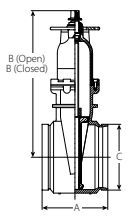


SERIES 772H

Size		Dimensions – Inches/mm						Approx. Weight Each Lbs./kg	
Nomial Size Inches DN	Actual Outside Dia. Inches mm	A	Series 771H Height B Closed	Series 771H Height B Open	Series 772H Height B	C	D	Series 771H	Series 772H
2½ DN65	2.88 73.0	7.500 190.5	16.18 411	18.74 476	11.02 280	2.88 73	7.87 200	31.5 14.3	22.05 10
76.1 mm	3.00 76.1	7.500 190.5	16.18 411	19.18 487.1	11.02 280	3.00 76.1	7.87 200	31.5 14.3	22.05 10
3 DN80	3.50 88.9	7.992 203	17.09 434	20.34 514	12.21 310	3.50 88.9	7.87 200	39.3 17.8	29.77 13.5
4 DN100	4.50 114.3	9.016 229	18.11 460	22.05 560	13.58 345	4.50 114.3	10.24 260	55.4 25.1	39.69 18
165.1 mm	6.50 165.1	10.512 267	23.90 607	30.40 772.1	17.13 435	6.50 165.1	12.40 315	104.8 47.5	81.13 36.8
6 DN150	6.63 168.3	10.512 267	23.90 607	29.80 757	17.13 435	6.63 168.3	12.40 250	104.8 47.5	81.13 36.8
8 DN200	8.63 219.1	11.496 292	28.59 726	36.46 926	20.12 511	8.63 219.1	14.76 375	174.0 78.9	134.49 61
10 DN250	10.75 273	12.992 330	35.04 890	44.88 1140	24.02 610	10.75 273	16.38 416	262.4 119	194.00 88
12 DN300	12.75 323.9	14.016 356	40.12 1019	51.93 1319	27.68 703	12.75 323.9	17.52 445	392.9 178.2	310.41 140.8



SERIES 771H



SERIES 772H

Size		Dimensions – Inches/mm						Approx. Weight Each Lbs./kg	
Nomial Size Inches DN	Actual Outside Dia. Inches mm	A	Series 771H Height B Closed	Series 771H Height B Open	Series 772H Height B	C	D	Series 771H	Series 772H
14 DN350	14.000 355.6	15.00 381	53.00 1346	66.75 1695	32.50 826	14.00 356	19.63 498	586.0 266	492.0 223
16 DN400	16.000 406.4	16.00 406	55.88 1419	71.63 1819	36.00 914	16.00 406	19.63 498	776.0 352	667.0 307

Gate Valves

SERIES 771H OS&Y GROOVE x GROOVE
SERIES 772H NRS GROOVE x GROOVE
SERIES 771F OS&Y GROOVE x FLANGE
SERIES 772F NRS GROOVE x FLANGE
SERIES 773 WALL POST INDICATOR
SERIES 774 UPRIGHT POST INDICATOR

WARRANTY

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

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.

⚠ WARNING

- **Read and understand all instructions before attempting to install any Victaulic products.**
- **Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**
- **Wear safety glasses, hardhat, and foot protection.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

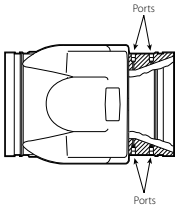
- **These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.**
- **The installer shall understand the use of this product and why it was specified for the particular application.**
- **The installer shall understand common industry safety standards and potential consequences of improper product installation.**
- **It is the system designer's responsibility to verify suitability of materials for use with the intended fluid media within the piping system and external environment.**
- **The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on materials to confirm system life will be acceptable for the intended service.**

Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

10.92 3003 REV G UPDATED 04/2021

Victaulic® Venturi Check Valve and Flow Measuring Kit Series 779

08.10



1.0 PRODUCT DESCRIPTION

Available Sizes

- 4 – 12"/DN100 – DN300
- Grooved end connections

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) to full rated pressure. See section 5.0 Performance for more information.
- Working pressure dependent on size of pipe, and valve size

Operating Temperature Range

- Dependent on seat selection from section 3.0

Function

- Check valve with hydrodynamic inlet profile that provides a natural venturi
- Drilled, tapped and plugged inlets, ready to receive the flow measuring kit
- Single-disc mechanism incorporates a spring-assisted feature for non-slamming operation

Application

- Can be installed horizontally or vertically (with flow in the upward direction)
- Allows direct connection to Victaulic Vic-300™ MasterSeal™ butterfly valves or Series 377 *Vic-Plug* valves

2.0 CERTIFICATION/LISTINGS

UK CA CE

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

08.10 1537 Rev K Updated 08/2022

3.0 SPECIFICATIONS – MATERIAL

Series 779 Venturi Check Valve and Flow Measuring Kit

Valve Body: Ductile iron conforming to ASTM A536, Grade 65-45-12, painted black enamel. Ductile iron conforming to ASTM A395, Grade 65-45-15, is available upon special request.

Disc Coating: (specify choice)

Victaulic EPDM
EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to + 110°C. NOT RECOMMENDED FOR PETROLEUM SERVICES OR STEAM SERVICES.

Victaulic Nitrile
Nitrile (Orange color code). Temperature range -20°F to +180°F/-29°C to +82°C. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/60°C. NOT RECOMMENDED FOR HOT WATER SERVICES OR STEAM SERVICES.

Victaulic Fluoroelastomer
Fluoroelastomer (Blue color code). Temperature range +20°F to +300°F/–7°C to +149°C. NOT RECOMMENDED FOR HOT WATER SERVICES OR STEAM SERVICES

Disc: Ductile iron conforming to ASTM A536, Grade 65-45-12, fully encapsulated in EPDM, Nitrile or Fluoroelastomer. (Reference Disc Coating listed above.)

Shaft: Type 316 stainless steel.

Spring: Type 302/304 stainless steel.

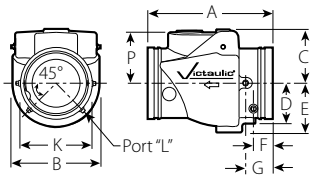
Shaft Plug: Carbon steel zinc plated to ASTM B633.

Flow Measuring Kit (Hardware is same for all sizes):

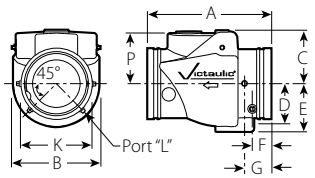
- Extension nipples
- Bronze access valves
- Quick disconnect for meter connection (per ISO 7241-1 Series B)

4.0 DIMENSIONS

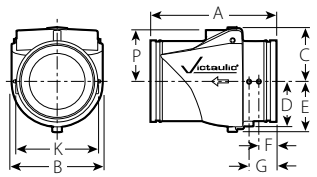
Series 779 Venturi Check Valve and Flow Measuring Kit



Typical 4"/DN100



Typical 5 – 6"/139.7 mm – DN150



Typical 8 – 12"/DN200 – DN300

Size		Dimensions									Weight
Nominal inches DN	**Actual Outside Diameter** inches mm	**E-E** **A** inches mm	**B** inches mm	**C** inches mm	**D** inches mm	**E** inches mm	**F** inches mm	**G** inches mm	**K** inches mm	**P** inches mm	**Approximate (Each)** lb kg
4[1] DN100	4.500 114.3	9.63 245	5.88 149	3.88 99	2.75 70	3.50 89	1.50 38	2.38 60	4.50 114	3.50 89	16.0 7.3
5[1]	5.563 141.3	10.50 267	6.75 171	4.50 114	4.25 108	4.25 108	1.65 42	2.38 60	5.88 149	4.08 104	20.0 9.1
DN125[1]	5.500 139.7	10.50 267	6.75 171	4.50 114	4.25 108	4.25 108	1.65 42	2.38 60	5.88 149	4.08 104	20.0 9.1
6[1] DN150	6.625 168.3	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	1.58 40	2.68 68	6.68 170	4.75 121	28.0 12.7
	6.500* 165.1	11.50 292	8.00 203	5.00 127	4.50 114	4.50 114	1.58 40	2.68 68	6.68 170	4.75 121	28.0 12.7
8[2] DN200	8.625 219.1	14.00 356	9.88 251	6.06 154	5.06 129	5.68 144	1.75 44	3.25 83	8.88 226	5.75 146	40.0 18.1
10[2] DN250	10.750 273.0	17.00 432	12.00 305	7.12 181	6.00 152	6.68 170	1.82 46	3.94 100	10.94 278	6.94 176	100.0 45.4
12[2] DN300	12.750 323.9	19.50 495	14.00 356	8.06 205	6.91 176	7.68 195	1.82 46	3.32 84	12.82 326	7.93 201	140.0 63.5

[1] Port "L" located 45° off centerline of valve body. Port sizes are ⅛" NPT.

[2] Both ports on centerline of valve body. Port sizes are ⅛" NPT.

5.0 PERFORMANCE

Series 779 Venturi Check Valve and Flow Measuring Kit

Size		Maximum Working Pressure
Nominal inches DN	**Actual Outside Diameter** inches mm	psi kPa
4 DN100	4.500 114.3	365 2500
5	5.563 141.3	365 2500
DN125	5.500 139.7	365 2500
6 DN150	6.625 168.3	365 2500
	6.500 165.1	365 2500
8 DN200	8.625 219.1	365 2500
10 DN250	10.750 273.3	300 2100
12 DN300	12.750 323.9	300 2100

NOTE

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Working Pressure may be increasted to 1 ½ times the figures shown

5.1 PERFORMANCE

Series 779 Venturi Check Valve and Flow Measuring Kit

Formulas for C_v/K_v Values:

C_v/K_v values for flow of water at +60°F/+16°C are shown in the table below.

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

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

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 (m^3/hr)
ΔP = Pressure Drop (Bar)
K_v = Flow Coefficient

Size		(Full Open) **Cv** **Kv**
Nominal inches DN	**Actual Outside Diameter** inches mm	
4 DN100	4.500 114.3	390 337
5	5.563 141.3	700 606
DN125	5.500 139.7	707 606
6 DN150	6.625 168.3	1000 865
	6.500 165.1	1000 865
8 DN200	8.625 219.1	1800 1557
10 DN250	10.750 273.0	3000 2595
12 DN300	12.750 323.9	4200 3633

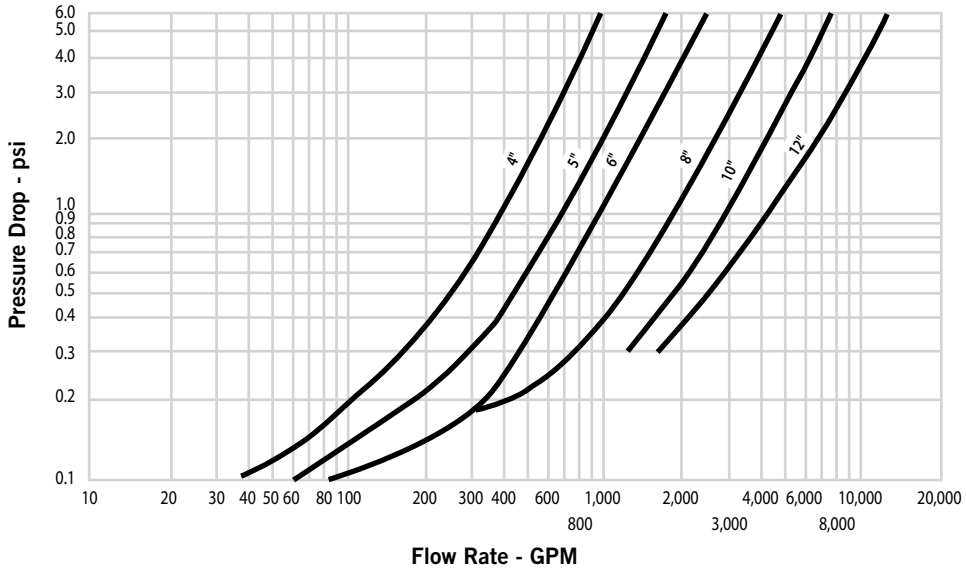
NOTES

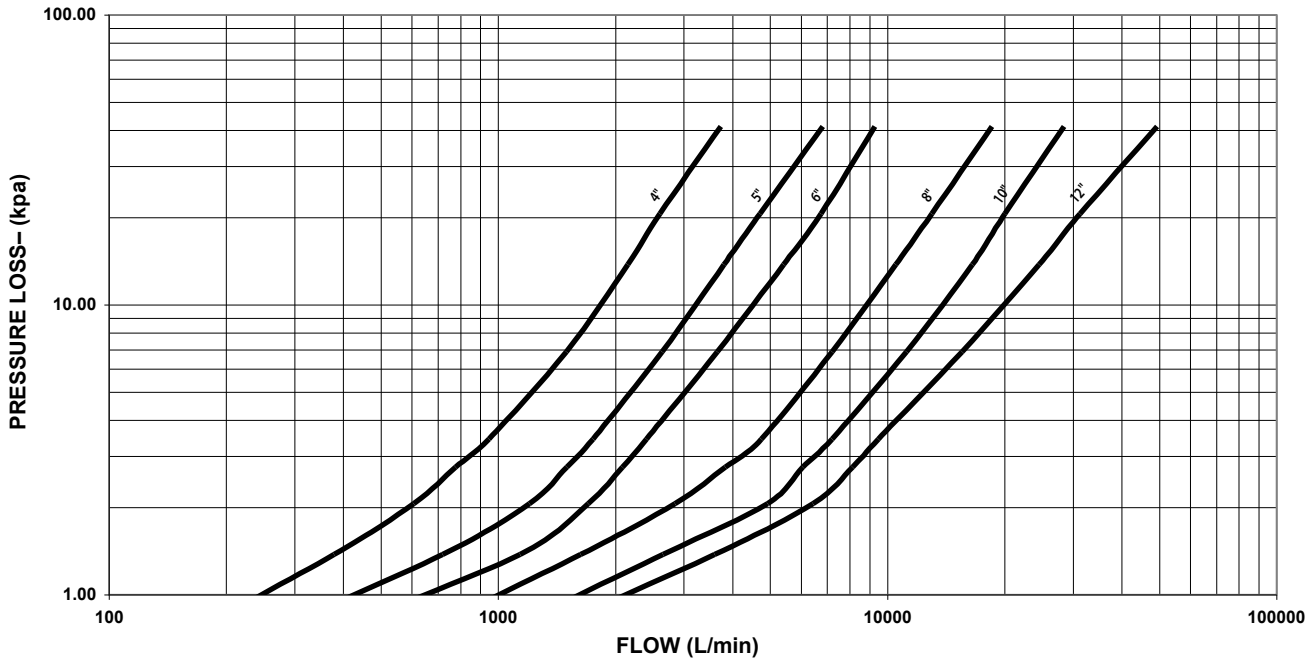
- Placement of check valves too close to sources of unstable flow will shorten the life of the valve and potentially may damage the system. To extend valve life, valves should be installed a reasonable distance downstream from pumps, elbows, expanders, reducers or other similar devices. Sound piping 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 eight (8) feet per second. Distances less than three (3) diameters are not recommended and will violate the Victaulic product warranty
- Use this method for determining the overall pressure drop due to frictional losses through the valve. These are not to be used for flow measurement at the venturi. Values used for flow measurement can be found on page 6.

5.1 PERFORMANCE (CONTINUED)

Series 779 Venturi Check Valve and Flow Measuring Kit

Flow Characteristics





NOTE

- Use this method for determining the overall pressure drop due to frictional losses through the valve. These are not to be used for flow measurement at the venturi. Values used for flow measurement can be found on page 6.

5.2 PERFORMANCE

Series 779 Venturi Check Valve and Flow Measuring Kit

Tables for calculating flow rates based on venturi differential pressure measurements.

4"/100 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.16	4.4	3	119	1.65	45.8	10	397
1.1	1.1	0.91	450	11.4	11.4	3.0	1502.8
0.28	7.7	4	159	2.38	66.0	12	476
1.9	1.9	1.22	602	16.4	16.4	3.7	1801.9
0.61	16.9	6	238	3.28	90.9	14	556
4.2	4.2	1.83	901	22.6	22.6	4.3	2104.7
1.11	30.8	8	320	4.28	118.7	16	635
7.6	7.6	2.44	1211	29.6	29.5	4.9	2403.7

5"/125 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.20	5.5	3	186	2.23	61.8	10	624
1.4	1.4	0.91	704	15.4	15.4	3.05	2362
0.35	9.7	4	249	3.13	86.8	12	744
2.4	2.4	1.22	942	21.6	21.6	3.66	2816
0.76	21.0	6	372	4.25	117.8	14	868
5.2	5.2	1.83	1408	29.3	29.3	4.27	3285
1.40	38.8	8	499				
9.7	9.7	2.4	1889				

6"/150 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.12	3.3	3	270	1.39	38.5	10	901
0.8	0.8	0.91	1022	9.6	9.6	3.05	3410
0.27	7.5	4	360	2.0	55.5	12	1081
1.9	1.9	1.22	1363	13.8	13.8	3.66	4092
0.51	14.1	6	540	2.78	77.1	14	1261
3.5	3.5	1.83	2044	19.2	19.2	4.27	4773
0.88	24.4	8	720	3.6	99.8	16	1441
6.1	6.1	2.44	2725	24.8	24.8	4.88	5454

8"/200 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.10	2.7	3	471	1.05	29.1	10	1559
0.7	0.7	0.91	1783	7.2	7.2	3.05	5901
0.17	4.7	4	623	1.55	43.0	12	1871
1.2	1.2	1.22	2358	10.7	10.7	3.66	7082
0.38	10.5	6	936	2.08	57.7	14	2182
2.6	2.6	1.83	3543	14.3	14.3	4.27	8259
0.68	18.8	8	1247	3.45	95.6	18	2800
4.7	4.7	2.44	47	23.8	23.8	5.49	10598

10"/250 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.13	3.6	3	741	1.36	37.7	10	2457
0.9	0.9	0.91	2805	9.4	9.4	3.05	9300
0.23	6.4	4	983	1.96	54.4	12	2948
1.6	1.6	1.22	3721	13.5	13.5	3.66	11158
0.49	13.6	6	1474	2.70	74.8	14	3440
3.4	3.4	1.83	5579	18.6	18.6	4.27	13020
0.88	24.4	8	1966	3.50	97.1	16	4000
6.1	6.1	2.44	7441	24.1	24.1	4.88	15140

12"/300 mm

ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.	ΔP PSI kPa	ΔP In. H_2O kPa	Velocity Ft./Sec m/s	Flow GPM L/min.
0.08	2.2	2	697	1.12	30.9	8	3438
0.6	0.6	0.61	2638	2.7	7.7	2.44	13013
0.18	5.0	3	1046	1.80	50.0	10	4298
1.2	1.2	0.91	3959	12.4	12.4	3.05	16266
0.33	9.1	4	1396	2.67	74.1	12	5157
2.3	2.3	1.22	5284	18.4	18.4	3.66	19519
0.71	19.7	6	2092				
4.9	4.9	1.83	7918				

6.0 NOTIFICATIONS

⚠ WARNING

- **Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.**
- **Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.**
- **Wear safety glasses, hardhat, and foot protection.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

7.0 REFERENCES

I-100: Victaulic Field Installation Handbook

Installation Manual.

GATE VALVES

Series 371 Open Stem and Yoke (OS&Y) Gate Valve
Series 372 Non-Rising Stem (NRS) Gate Valve
Series 771 OS&Y Gate Valves
Series 772 NRS Gate Valves
Series W371 AGS OS&Y Gate Valve
Series W372 AGS NRS Gate Valve

- **VICTAULIC GATE VALVES ARE NOT DESIGNED FOR THROTTLING SERVICES.**
- Verify that there is adequate clearance around the valve for operating and maintenance activities.
- The valve can be mounted in vertical and horizontal runs. For horizontal pipe, the valve shall be installed with the stem in the vertical "UP" position (handwheel pointing upward).
- Verify that proper pipe supports are in place to prevent strain on the valve. The piping shall be laid out so that no thrust or bending forces act on the valve body during operation.
- DO NOT use a Victaulic Gate Valve as a support for the piping system.
- Verify that the piping is aligned and supported properly before attempting to install the valve.
- When painting a piping system, DO NOT apply paint to the stem and bolts/nuts.
- DO NOT stand on or use the handwheel as a support point.
- DO NOT over-torque the handwheel to force the valve into the "OPEN" or "CLOSED" position. Refer to the "Torque Limitations" table on the following page.
- When directly connecting a Victaulic End Cap to a Victaulic Gate Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized. If the gate valve is opened and then closed unknowingly while the end cap is attached, the space between the gate and end cap will be filled and pressurized. A sudden release of energy can occur if the end cap is removed while the space behind it is pressurized. **PRESSURE SHALL BE VENTED THROUGH THE END CAP'S BALL VALVE BEFORE ATTEMPTING TO REMOVE THE CAP.**

⚠ DANGER

- **When directly connecting a Victaulic End Cap to a Victaulic Gate Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized.**
- **Pressure shall be vented through the end cap's ball valve before attempting to remove the cap.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

Handling

- The valve shall remain in the "CLOSED" position during handling.
- To prevent damage to the seats and sealing surfaces of the valve body, the plastic shipping caps shall remain in place until the time of installation.
- Verify that proper lifting equipment is available for handling larger, heavier valve sizes. Lift the valve by placing straps around the body. **DO NOT lift or suspend the valve by the handwheel.**

Storage

- Victaulic strongly recommends indoor storage of the valve. If outdoor storage is required, the valve shall be stored in the original shipping container and then covered completely with a weatherproof tarp.
- The shipping caps shall remain in place to prevent debris from entering the valve body during storage.
- The valve shall remain in the "CLOSED" position during storage.

GATE VALVES (CONTINUED)

Installation

NOTICE
• **To prevent a Victaulic Gate Valve from rotating in the system, Victaulic recommends installing the valve with at least one Victaulic Rigid Coupling. If two Victaulic Flexible Couplings are used, additional support may be required to prevent valve rotation.**

1. Prior to installation, check the valve for any damage. DO NOT use the valve if any damage is present.
2. Remove the plastic shipping caps from the valve body. To prevent damage to the sealing surfaces of the valve body, DO NOT use any sharp instruments to remove the shipping caps.
3. Verify that the valve is in the “CLOSED” position.
4. Follow the instructions in this handbook for the applicable coupling.
5. Place the system into service after all installation requirements have been met.

Operation

1. Operate the valve by turning the handwheel in the counter-clockwise direction (top view) to the “OPEN” position, then by turning the handwheel in the clockwise direction (top view) to the “CLOSED” position. Repeat this process several times to verify proper operation. **NOTE:** When the valve is in the fully “OPEN” position, turn the handwheel a quarter turn in the clockwise direction to prevent the stem/threads from locking up due to thermal expansion.

Torque Limitations

Nominal Pipe Size inches/DN	Actual Pipe Outside Diameter inches/mm	Maximum Torque to Reach Fully "OPEN" Position or Fully "CLOSED" Position
2½	2.875 73.0	38 ft-lbs 52 N•m
DN65	3.000 76.1	38 ft-lbs 52 N•m
3 DN80	3.500 88.9	38 ft-lbs 52 N•m
4 DN100	4.500 114.3	65 ft-lbs 88 N•m
DN125	5.500 139.7	106 ft-lbs 144 N•m
	6.500 165.1	106 ft-lbs 144 N•m
6 DN150	6.625 168.3	106 ft-lbs 144 N•m
8 DN200	8.625 219.1	180 ft-lbs 244 N•m
10 – 12 DN250 – DN300	10.750 – 12.750 273.0 – 323.9	300 ft-lbs 407 N•m
14 – 16 DN350 – DN400	14.000 – 16.000 355.6 – 406.4	400 ft-lbs 545 N•m

Inspection

Inspect the valve on a frequency required by the building owner or their representative.

1. Verify that there is no leakage from the gland. If necessary, tighten the nuts at the gland flange evenly by alternating sides. Tighten the nuts ONLY to the point where leakage stops. Overtightening the packing can make the valve difficult to operate.
2. If the handwheel becomes loose, open the valve by turning the handwheel one to two turns in the counterclockwise direction, then tighten the handwheel nut.

CHECK VALVES

NOTICE

- **To prevent a Victaulic Check Valve from rotating in the system, Victaulic recommends installing the valve with at least one Victaulic Rigid Coupling. If two Victaulic Flexible Couplings are used, additional support may be required to prevent valve rotation.**

- When installing a Victaulic Check Valve into the piping system, follow the instructions in this handbook for the applicable coupling.
- DO NOT use a Victaulic Check Valve as a support for the piping system.
- Placement of check valves too close to sources of unstable flow will shorten the life of the valve and may potentially damage the system. To extend valve life, valves should be installed a reasonable distance downstream from pumps, elbows, expanders, reducers, or other similar devices. Sound piping practices dictate a minimum of five times the pipe diameter for general use. Distances between three and five diameters are allowable, provided the flow velocity is less than 8 feet per second/2.4 meters per second. Distances less than three diameters are not recommended and will violate the Victaulic product warranty. **NOTE:** These distances do not apply to fire protection installations.

Series 416 and 816 Stainless Steel Check Valves

- Series 416 and 816 Stainless Steel Check Valves can be installed either vertically (flow up) or horizontally with the arrow on the body pointing in the correct direction of flow through the pipeline.
- Series 416 and 816 Stainless Steel Check Valves CAN be connected directly to flanged components with Style 441, 741/841, and 743 Flange Adapters.

Series 712, 712S, and 713 Swing Check Valves

- Series 712, 712S, and 713 Swing Check Valves shall be installed with the arrow on the body pointing in the correct direction of flow through the pipeline.
- Series 712, 712S, and 713 Swing Check Valves SHOULD NOT be installed vertically.
- Series 712, 712S, and 713 Swing Check Valves CAN be connected directly to flanged components with Style 441, 741/841, and 743 Flange Adapters.

Series 716 and 716H Check Valves

- Series 716/716H Check Valves can be installed either vertically (flow up) or horizontally with the arrow on the body pointing in the correct direction of flow through the pipeline.
- Series 716/716H Check Valves CAN be connected directly to flanged components with Style 441, 741/841, and 743 Flange Adapters.
- To aid in lifting the valve during installation, an eye bolt is provided on 10 – 12-inch/DN250 – DN300 sizes of Series 716 Check Valves. **DO NOT use the eye bolt as a support for the piping system.**

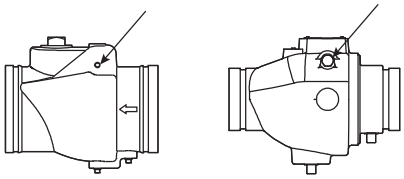
Series 717, 717H, 717R, and 717HR FireLock™ Check Valves

- Series 717, 717H, 717R, and 717HR FireLock™ Check Valves can be installed either vertically (flow up) or horizontally with the arrow on the body pointing in the correct direction of flow through the pipeline.
- Style 741/841 and Style 744 *Vic-Flange* Adapters can be installed on either end of a Series 717, 717H, 717R, or 717HR FireLock™ Check Valve.

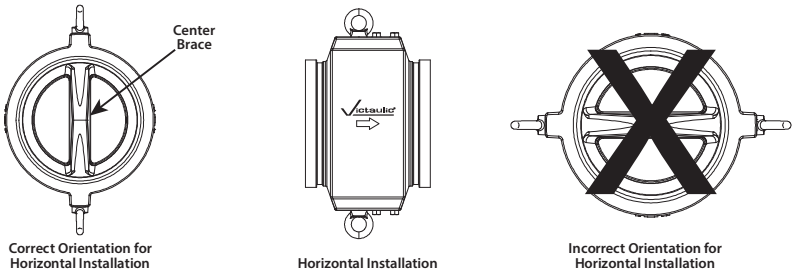
Series 779 Venturi Check Valve

- Series 779 Venturi Check Valves can be installed either vertically (flow up) or horizontally with the arrow on the body pointing in the correct direction of flow through the pipeline.

For Series 716/716H Check Valves, Series 717/717H/717R/717HR FireLock™ Check Valves, and Series 779 Venturi Check Valves: The bushing or pipe plug that retains the shaft/disc shall be located at the top of the valve in horizontal installations (refer to the drawings to the right).

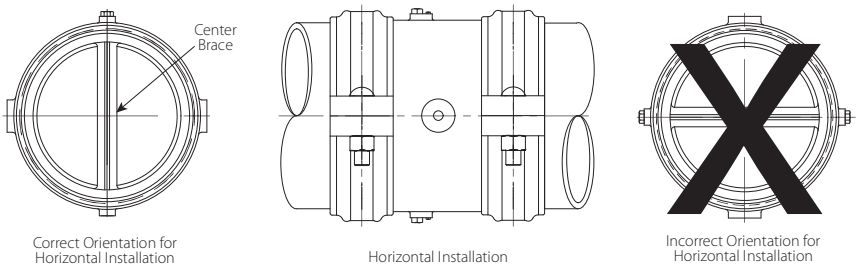


Series 415 Double-Disc Check Valve



- To aid in lifting the valve during installation, an eye bolt is provided on 6-inch/DN150 and larger sizes of Series 415 Double-Disc Check Valves. **DO NOT use the eye bolt as a support for the piping system.**
- Series 415 Double-Disc Check Valves can be installed either vertically (flow up) or horizontally with the arrow on the body pointing in the correct direction of flow through the pipeline.
- For horizontal installations, the center brace inside the Series 415 Double-Disc Check Valve shall be in the vertical position, as shown above. Failure to install the valve in the proper orientation will cause improper operation.
- Series 415 Double-Disc Check Valves CAN be connected directly to flanged components with Style 441, 741/841, and 743 Flange Adapters.
- When connecting a Series 415 Double-Disc Check Valve to a butterfly valve, a pipe spool is required between the two valves to prevent disc interference.
- When a Series 415 Double-Disc Check Valve is placed near a butterfly valve, orient the center brace/disc shaft of the Series 415 at right angles to the butterfly valve's stem. Failure to do so will cause uneven and unstable flow through the Series 415, resulting in noise and reduced valve life.

Series W715 AGS Double-Disc Check Valve



- Series W715 AGS Double-Disc Check Valves can be installed either vertically (flow up) or horizontally.
- For horizontal installations, the center brace inside the Series W715 AGS Double-Disc Check Valve shall be in the vertical position, as shown above. Failure to install the valve in the proper orientation will cause improper operation.
- Series W715 AGS Double-Disc Check Valves CAN be connected directly to flanged components with Style W741 AGS *Vic-Flange* Adapters.
- When connecting a Series W715 AGS Double-Disc Check Valve to an AGS Butterfly Valve, a pipe spool is required between the two valves to prevent disc interference.
- When a Series W715 AGS Double-Disc Check Valve is placed near an AGS Butterfly Valve, orient the center brace/disc shaft of the Series W715 at right angles to the butterfly valve's stem. Failure to do so will cause uneven and unstable flow through the Series W715, resulting in noise and reduced valve life.

BALL VALVES

- **VICTAULIC BALL VALVES ARE NOT DESIGNED FOR THROTTLING SERVICES.**
- When installing a Victaulic Ball Valve into the piping system, follow the instructions in this handbook for the applicable coupling. For threaded valves, follow standard threading practices for proper installation.
- DO NOT use a Victaulic Ball Valve as a support for the piping system.
- When directly connecting a Victaulic End Cap to a Victaulic Ball Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized. If the Victaulic Ball Valve is opened and then closed unknowingly while the end cap is attached, the space between the ball and end cap will be filled and pressurized. A sudden release of energy can occur if the end cap is removed while the space behind it is pressurized. **PRESSURE SHALL BE VENTED THROUGH THE END CAP'S BALL VALVE BEFORE ATTEMPTING TO REMOVE THE CAP.**

⚠ DANGER

- **When directly connecting a Victaulic End Cap to a Victaulic Ball Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized.**
- **Pressure shall be vented through the end cap's ball valve before attempting to remove the cap.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

Handling

- The valve shall remain in the "OPEN" position during handling.
- Verify that proper lifting equipment is available for handling larger, heavier valve sizes. Lift the valve by placing straps around the body. **DO NOT lift or suspend the valve by the handle plate, lock plate, or handle.**

Storage

- Victaulic strongly recommends indoor storage of the valve. If outdoor storage is required, the valve shall be stored in the original shipping container and then covered completely with a weatherproof tarp.
- The valve shall remain in the "OPEN" position during storage. The valve shall not be stored in a partially-open position.
- The valve shall be stored with the stem in the vertical "UP" position (handwheel pointing upward).

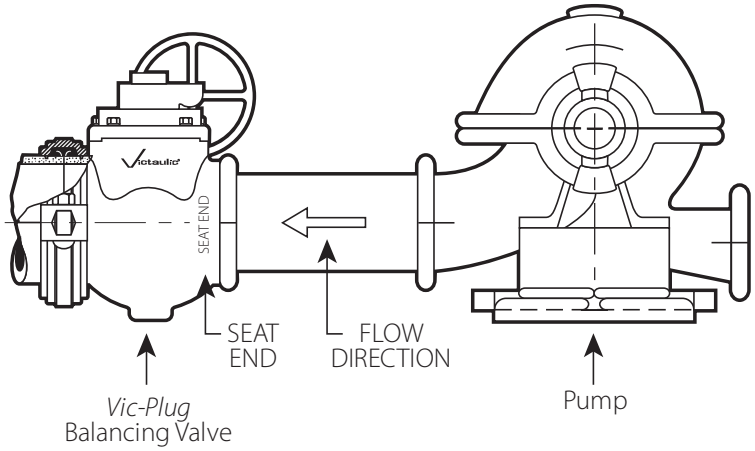
PLUG VALVES

Series 365 *Vic-Plug* AWWA Plug Valve

- Refer to the operation and maintenance manual supplied with the Series 365 Plug Valve for detailed information regarding valve installation, accessory installation, and maintenance requirements.
- DO NOT use a Series 365 as a support for the piping system.

Series 377 *Vic-Plug* Balancing Valve

- The Series 377 *Vic-Plug* Balancing Valve is an eccentric, grooved-end plug valve designed specifically for throttling services.
- Refer to the operation and maintenance manual supplied with the Series 377 *Vic-Plug* Balancing Valve for detailed information regarding valve installation, accessory installation, and maintenance requirements.
- For 3 – 12-inch/DN80 – DN300 sizes, the Victaulic Style 307 Transition Coupling is available to directly connect the Series 377 to grooved-end steel and other NPS pipe. For installing these sizes of *Vic-Plug* valves into a piping system, follow the instructions for the Style 307 Transition Coupling contained in the I-300 Field Installation Handbook, which can be downloaded at victaulic.com.



Series 377 Vic-Plug Balancing Valves shall be installed with the seat upstream (closest to the pump discharge)

- DO NOT use a Series 377 as a support for the piping system.
- When directly connecting a Victaulic End Cap to a Victaulic Plug Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized. If the plug valve is opened and then closed unknowingly while the end cap is attached, the space between the plug and end cap will be filled and pressurized. A sudden release of energy can occur if the end cap is removed while the space behind it is pressurized. **PRESSURE SHALL BE VENTED THROUGH THE END CAP'S BALL VALVE BEFORE ATTEMPTING TO REMOVE THE CAP.**

⚠ DANGER

- **When directly connecting a Victaulic End Cap to a Victaulic Plug Valve, use only a tapped end cap with a ball valve that can be opened to verify if the system is depressurized.**
- **Pressure shall be vented through the end cap's ball valve before attempting to remove the cap.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

UL Certificate.

UL Product iQ®

HMRZ.EX6085 - Gate Valves

Gate Valves

See General Information for Gate Valves

VICTAULIC CO EX6085
4901 KESSLERSVILLE RD
EASTON, PA 18040-6714 USA

Pattern	Model	Size, in.	End Configuration	Rated Pressure, psig
NRS	772H	2.5,3,4,6,8,10, 12, 14, 16	GRV By GRV	250
NRS	772F	2.5,3,4,6,8,10, 12, 14, 16	FLG By GRV	250
OS&Y	771H	2.5,3,4,6,8,10, 12, 14, 16	GRV By GRV	250
OS&Y	771F	2.5,3,4,6,8,10, 12, 14, 16	FLG By GRV	250
OS&Y	771H	2.5, 2.5 (76.1mm), 3,4, 6 (165.1mm), 6, 8, 10	GRV By GRV	250
OS&Y	771F	2.5, 2.5 (76.1mm), 3, 4, 6 (165.1mm), 6, 8, 10	FLG By GRV	250
NRS	772H	2.5, 2.5 (76.1mm), 3, 4, 6 (165.1mm), 6, 8, 10	GRV By GRV	250
NRS	772F	2.5, 2.5 (76.1mm), 3, 4, 6 (165.1mm), 6, 8, 10	FLG By GRV	250
OS&Y	771A	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12	Flanged, Grooved, Flanged by Grooved	300
NRS	772A	2.5	Flanged, Grooved, Flanged by Grooved	300
NRS	772A	3	Flanged, Grooved, Flanged by Grooved, Mechanical Joint, Flanged by Mechanical	300
NRS	772A	4, 6, 8, 10, 12	Flanged, Grooved, Mechanical Joint, Flange/Mechanical Joint	300
NRS	772A	4, 5, 6, 8, 10, 12	Grooved by Grooved	300

Last Updated on 2018-11-13

UL Product iQ®

HMER.EX3059 - Check Valves

Check Valves

VICTAULIC CO
4901 KESSLERSVILLE RD
EASTON, PA 18040-6714 United States

EX3059

View model for additional information

Swing, Model(s): 717, 717H, 717HR, 717R, 718, 718

Last Updated on 2023-02-27

FM Certificate.

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FM Approvals
Member of the FM Global Group

Valves | Water Control Valves (OS&Y and NRS Gate Valves) | Gate Valves, Outside Screw and Yoke

Model 771H

Model 771H Resilient Seated Gate Valves. Available with or without an indicator post flange. Rated Working Pressure of 300 psi (2070 kPa) unless otherwise noted below. Available with the end connections listed below.

Product Specification

Model No	Valve Size		End Connection
	in	(mm)	
771H	2 1/2, 3, 4, 6, 8, 10	(65, 80, 100, 150, 200, 250, 76.1, 165.1)	Groove × Groove

Details

Class of Work : 1120 - OS&Y and NRS Gate Valves

Approval Standard : FM 1120, 1130 - Fire Service Water Control Valves (OS&Y and NRS Type Gate Valves)

Certification Type : FM Approved

Listing Country : United States of America

Category : Gate Valves, Outside Screw and Yoke

Company

Victaulic Company
4901 Kesslersville Rd, Easton, Pennsylvania 18040
United States of America
http://victaulic.com

Previous Approvals.

OWNER	CONSULTANT	CONTRACTOR
هاند العالمية للفنادق والمنتجعات السياحية HAND INTERNATIONAL HOTELS & RESORTS	تصميم - إشراف - إدارة مشاريع	Azeidk شركة أزيدك لأجهزة السلامة

PROJECT NAME: Platinum Park	LOCATION: Taif

MATERIAL SUBMITTAL / APPROVAL SHEET

☑ NEW SUBMITTAL	☐ RE-SUBMITTAL	SUBMITTAL DATE: 18/03/2023	SUBMITTAL NO.: MS-Mech-FF-06	REV.: 00

PURPOSE OF SUBMITTAL ☑ FOR APPROVAL ☐ FOR COMMENTS ☐ FOR INFORMATION

DISCIPLINE: ☑ MECHANICAL ☑ Firefighting ☐ CIVIL ☐ ELECTRICAL ☐ H. V. A. C. ☐ PLUMBING ☐ OTHERS... *Specify:* Fire Fighting

MATERIAL NAME:	Fire Fighting Valve	ORIGIN:	USA
BOQ. REFERENCE:		MANUFACTURER/SUPPLIER:	Victaulic
SPECS. REF.:		SUPPLIER:	
DRAWING REF.:		MATERIAL DELIVERY PERIOD:	Stock
LOCATION:	Taif	MATERIAL REQUIRED AT SITE:	
QUANTITY:		SAMPLE ATTACHMENT:	
B. S. REFERENCE:		CERTIFICATE ATTACHMENT:	

WARRANTY FROM THE MANUFACTURER / SUPPLIER:

CONTRACTORS REMARKS (if any:)

CONSULTANTS COMMENTS:

CONTRACTOR		CONSULTANT	
NAME:	Mohamed Rabea	NAME:	
POSITION:	Mechanical Engineer	POSITION:	Consultant Engineer
SIGNATURE:		SIGNATURE:	
DATE:	12/03/2023	DATE:	

APPROVAL STATUS: ☑ A MATERIAL APPROVED ☐ B APPROVED WITH COMMENTS ☐ C MATERIAL REJECTED

RECEIVED BY: (CONSULTANT)	SIGNATURE:	RECEIVED BY: (CONTRACTOR)	SIGNATURE:
	DATE: March - 22nd - 2023		DATE: