**NOV 2018 VERSION 2.0** 

4200 SERIES FIRE HYDRANT DIAPHRAGM VALVE



# 4200 SERIES FIRE HYDRANT DIAPHRAGM VALVE



### **PRODUCT DETAILS**

Manufactured from high quality materials enabling use with fresh, brackish or seawater, all our valves are fully compliant with BS5041 part 1 (1987). Knowsley SK Ltd's 4200 series of Fire Hydrant Diaphragm Valves consist of a corrosion-resistant gunmetal body, an Viton / Kevlar diaphragm, and a weir upon which the diaphragm closes the valve.





#### We know fire. We know safety. We know you.

Established in 1896, Knowsley SK Ltd. has an enviable reputation for manufacturing quality fire fighting equipment and systems for high value asset protection that can be relied upon when danger strikes.

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part of



4200 SERIES FIRE HYDRANT DIAPHRAGM VALVE



## **GENERAL DESCRIPTION**

The Knowsley 4200 series is a range of weir type diaphragm valves designed specifically for use in firefighting applications. They are available in both bibnose and horizontal configuration and are supplied as standard with flanged inlet connections although other types are available upon request. The valve consists of a gunmetal body, a fire resistant Viton / Kevlar seal and a seat upon which the diaphragm closes the valve. The diaphragm is compressed using a plunger which does not come into contact with the firewater flow and thus eliminates the possibility of leakage around the operating spindle. An indicator cap is fitted to each valve to show the valve position.

The benefits of using diaphragm valves are:

- Leak-tight shut off
- Zero stem leakage
- Low turbulence flow
- Low Maintenance
- Self-draining

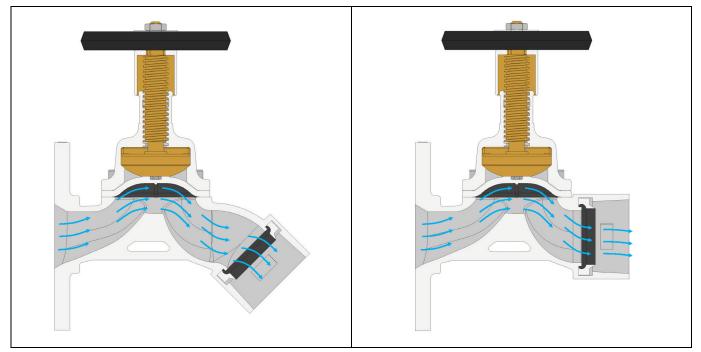


Figure 1 Diagram showing the flow path and self-draining design of both Bibnose and horizontal types.

## PRESSURE RATING

- Design Pressure: 18.0 barg\*
- Body Test Pressure: 24.0 barg
- Seat Test Pressure: 16.0 barg

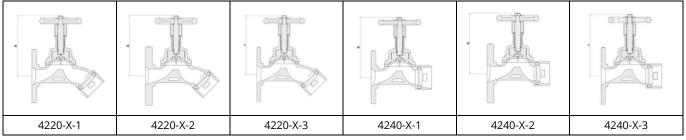
\*When fitted with instantaneous couplings the outlet pressure must be limited to 16.0 barg as defined by BS336.



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#### **VALVE CONFIGURATIONS**



## **VALVE DATA**

Table 1 Valve Data

Model	Orientation	Inlet Size /Type	Outlet Size / Type	Open (mm) A	Closed (mm) A	Weight (kg)	Maximum Rated Working Pressure
4220-X-1	Bibnose	3"150lb ASME flange FF	2 ½" instantaneous female to BS336	218	189	11.9	232 psig (16 barg)
4220-X-2	Bibnose	3"300lb ASME flange FF	2 ½" instantaneous female to BS336	218	189	14.5	232 psig (16 barg)
4220-X-3	Bibnose	M80 PN16 BS 5404 FF flange	2 ½" instantaneous female to BS336	218	189	11	232 psig (16 barg)
4240-X-1	Horizontal	3"150lb ASME flange FF	2 ½" instantaneous female to BS336	218	189	11.1	232 psig (16 barg)
4240-X-2	Horizontal	3"300lb ASME flange FF	2 ½" instantaneous female to BS336	218	189	13.8	232 psig (16 barg)
4240-X-3	Horizontal	M80 PN16 BS 5404 FF flange	2 ½" instantaneous female to BS336	218	189	10.3	232 psig (16 barg)

## **APPROVALS**

Loss Prevention Certification Board (LPCB) Approved FM Approved

## **SPARE PARTS**

Please contact our dedicated spares department at **spares@knowsleysk.co.uk** for the components listed below for the 4200 Series Valve.

Note that valve components are common to all four models. Refer to Figure 2 for Item locations.

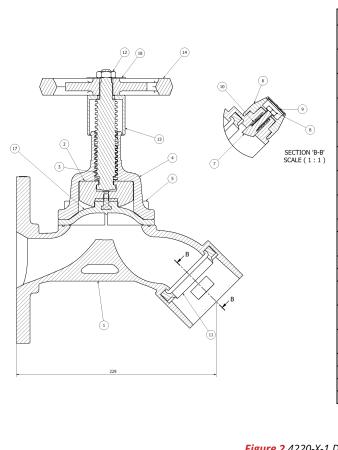
Winged Cam Assembly (Comprising Items 6-10)

- Item 11 Instantaneous Washer
- Item 17 Diaphragm



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ITEM	DESCRIPTION	MATERIAL			
1	MAIN HOUSING	GUNMETAL BSEN 1982 CC491K-GS (BS 1400 LG2)			
2	PLUNGER DISK	GUNMETAL BSEN 1982 CC491K-G (BS 1400 LG2)			
3	SPINDLE	BRASS BS EN 12164 CW721R (BS 2874 CZ114)			
4	VALVE COVER	GUNMETAL BSEN 1982 CC491K-GS (BS 1400 LG2)			
5	METRIC SOCKET HEAD CAPSCREWS	STAINLESS STEEL A4			
6	WINGED CAM	BRASS BS EN 12164 CW617N (BS 2872 CZ122)			
7	CONNECTOR BOLT	BRASS BS EN 12164 CW617N (BS 2872 CZ122)			
8	SELF LOCKING NUT	BRASS BS EN 12164 CW614N (BS 2874 CZ121)			
9	RUNNER BUTTON	WHITE POLYTHENE			
10	CONNECTOR SPRING	PHOS BRONZE BS EN 12165 CW617R (BS2873 PB 102)			
11	INSTANTANEOUS WASHER	EPDM TO BS 2752 2003			
12	LOCK NUT	STAINLESS STEEL 316			
13	INDICATOR CAP	BRASS BS EN 12164 CW721R (BS 2874 CZ114)			
14	HANDWHEEL	CAST IRON BS EN 1561 EN-GIL-220 (BS 1452 GR 220)			
15	FLANGE EDGE IDENTIFICATION LABEL	STAINLESS STEEL 316			
16	HAMMER DRIVE SCREW	STAINLESS STEEL 304			
17	DIAPHRAGM	VITON / KEVLAR			
18	KSK ID LABEL	ALUMINIUM			
19	INFORMATION DISK	ALUMINIUM			

Figure 2 4220-X-1 Diaphragm Valve



