Deluge Valve Set
Type FSX–A electric, hydraulic activation

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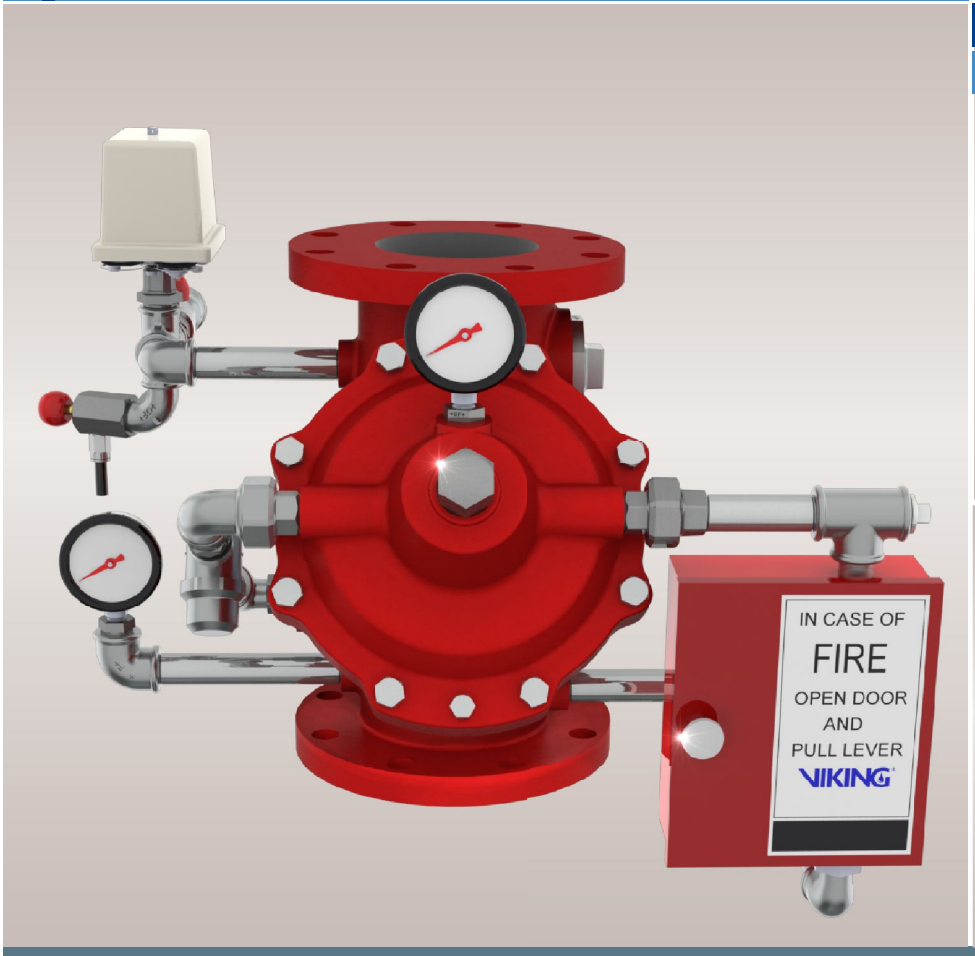
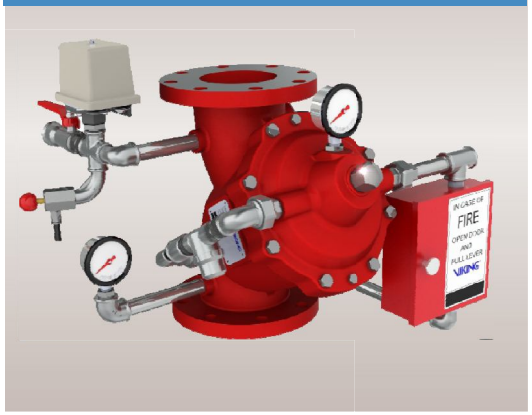
WATER SPRAY EXTINGUISHING SYSTEMS

DELUGE VALVE SET





► Product ► Use ┼ Highlights

► Deluge valve sets are used for water/foam systems with open nozzle. They can be activated by a hydraulic, electrical or manual means.

After activation an accoustic alarm is set off by hydraulically operated water alarm gong, or an electric alarm is transmitted by pressure switch. Additional alarm could be transferred to a permanently manned local.

► Typical application water spray extinguishing systems for:

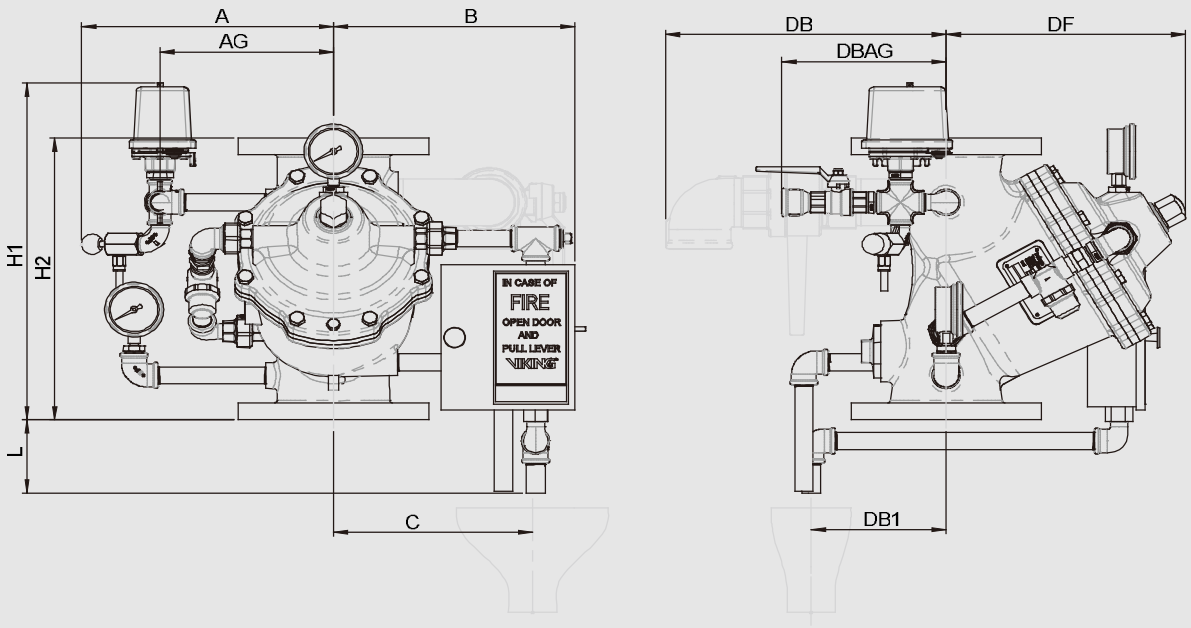
– Protection of machinery
– Industrial presses
– Transformer stations
– Tank system cooling
– Cable ducts
– Recycling systems
– Painting systems
– Theatre stages
– Petrochemical facilities
– Power plants
– Gas storage tanks
– Flammable materials storage

+ Light weight
+ Compact design reduces space requirement
+ Corrosion-resistant internal parts
+ Max. operating pressure: 17.2 bar / 250 PSI
+ Low pressure losses
+ No water hammer due to diaphragm cushioned closing action
+ Suitable for high flow rates
+ Functional and pressure tests of the valve set conducted by the manufacturer
+ Field replaceable diaphragm and seal rubbers
+ Designed to be reset without opening the valve
+ UL-Approval

c UL us LISTED

Deluge Valve Set FSX-A Hydraulic Activation (CONVENTIONAL)

	DN50 2"	DN80 3"	DN100 4"	DN150 6"	DN200 8"
A	310	320	290	320	355
AG	220	220	200	220	250
B	220	270	280	315	415
C	220	225	235	260	305
L	150	120	90	15	10
H1	400	410	420	500	< H2
H2	280	310	350	480	600
DF max.	210	250	280	335	450
DB max.	210	245	330	325	325
DBAG	190	190	190	190	190
DB1	140	150	160	170	180
Dimensions in mm					



MODE OF ACTIVATION

Electric activation

The electric activation of the deluge valve set is accomplished by means of a detection system. Which triggers the solenoid valve in the event of fire. The solenoid valve opens, the pressure in the deluge valve control chamber drops and the nozzle pipe work will be flooded.

Electric activation with PORV

In case of a power failure the PORV valve ensures, that the extinguishing process continues.

Hydraulic activation

As far as the hydraulic activation is concerned, the pilot line is directly connected to the control chamber of the deluge valve. The system pressure of the water supply is permanently applied to the pilot line. Should a pilot sprinkler release, the pressure in the control chamber drops and the deluge valve opens.

Manual activation

All previously mentioned release methods are also equipped with a ball valve inside the emergency release box for manual activation.

Approvals	UL
Nominal diameter	DN50 / 2" , DN80 / 3", DN100 / 4", DN150 / 6", DN200 / 8"
Max. operating pressure	17,2 bar / 250 PSI
Flange connection sizes	ANSI B16.5 CLASS 150 / DIN ISO in acc. with DIN EN 1092
Installation position	Vertical
Medium	fresh water / foam water mixture
Operating temp.	4°C / 39°F up to 60°C / 140°F
Alarm	alarm switch with changeover contact 1 NO contact, 1 NC contact;
Activation	electric 24 V DC 2/2-way solenoid valve / hydraulic activation (Sprinkler) / hand operated
Automatic drain valve	K 2–*K20*

Nominal Diameter		**Schedule 40**	**Equivalent length**		**Δp**		**Q**	
		mm	**m**	**ft**	**bar**	**PSI**	**liter/min**	**GPM**
DN 50	2"	60,3 x 3,91	3,67	12,04	0,18	2,63	594	157
DN 80	3"	88,9 x 5,49	7,77	25,49	0,24	3,54	1310	346
DN100	4"	114,3 x 6,02	16,91	55,48	0,38	5,44	2256	596
DN150	6"	168,3 x 7,11	28,83	94,59	0,40	5,85	5114	1351
DN200	8"	219,1 x 8,18	34,78	114,11	0,35	4,99	8854	2339

Water supply pressure* [p_{min}]:	
2,0 bar / 29,0 PSI at	5 m/s / 16,4 ft/s flow velocity
2,5 bar / 36,0 PSI at	7 m/s / 23,0 ft/s flow velocity
3,0 bar / 43,5 PSI at	8 m/s / 26,2 ft/s flow velocity
3,8 bar / 55,0 PSI at	10 m/s / 32,8 ft/s flow velocity

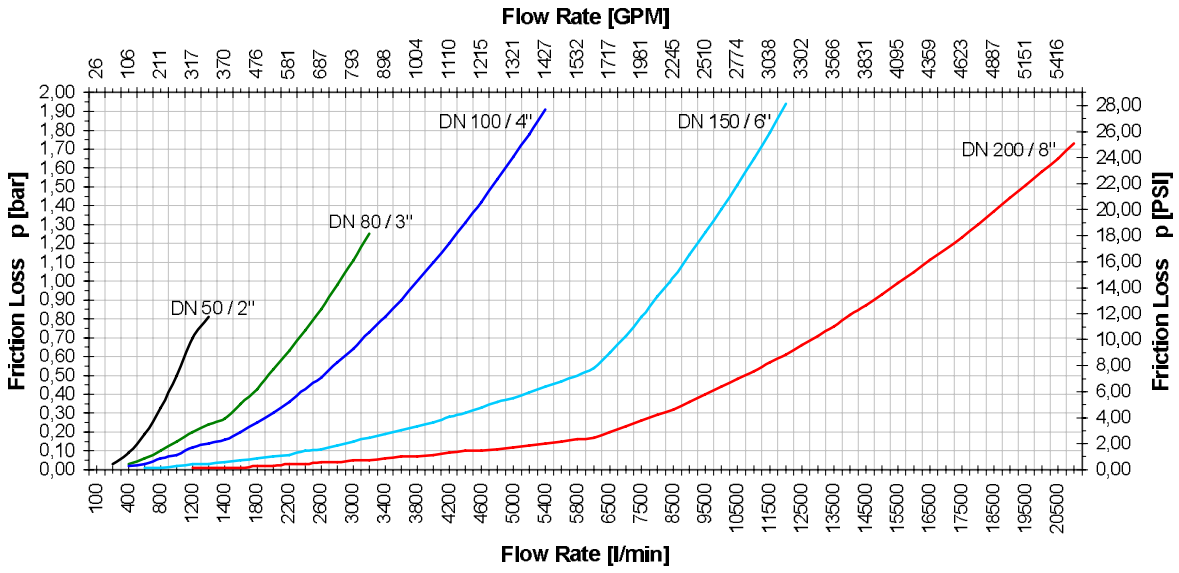
* Required supply pressure when the valve is given to the water operated flow velocity.

Material / Surface of the Deluge valve:	
Housing	ductile iron
Valve seat	brass
Piston rod	stainless steel
Valve disk	brass
Diaphragm	NBR fiber-reinforced
Gaskets	NBR
Finish	RAL 3000 primer & varnish

Nominal Diameter		Schedule 40 mm	V m/s	V ft/s	Q liter/min	Q GPM
DN 50	2"	60,3 x 3,91	10	32,8	1240	328
DN 80	3"	88,9 x 5,49	10	32,8	2802	740
DN100	4"	114,3 x 6,02	10	32,8	4869	1286
DN150	6"	168,3 x 7,11	10	32,8	11128	2940
DN200	8"	219,1 x 8,18	10	32,8	19340	5110

Friction Loss Chart

Graph is for reference purposes



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