Description

The FIRE KILL™ Low Pressure Water Mist Atrium System Model APS is a system utilizing very small open water mist nozzles integrated in stainless steel pipes, designed specifically for the protection of atriums and other such large rooms. The system is a horizontal deluge system and is designed to blend into the building structure for esthetic appearance. The system comes in different versions for different size atriums, and can cover up to 13m into the atrium from the installation point, only using 10 bar water pressure. The system is supplied as prefabricated 6 meter stainless steel pipe designed for 6 open nozzles. The design saves cost on fittings as well as reduces the risk of getting impurities into the pipe when installing the system.

Technical data

General Description				
Atrium System Type	A	B	C	D
Minimum water pressure (bar)	5	6	10	6
Maximum working pressure (bar)	16	16	16	16
K-factor 6m pipe (metric (l/t/√bar))	37	52	62	26
Flow 6m pipe (L/min)	83	127	196	64
Drop size	DN90 < 300 µm			
Application				
Coverage Area from one side installation (m)	6 x 8	6 x 10	6 x 13	6 x 5
Installation height	3 m – 7 m (Type A – C, Min 1,5 m below ceiling)			50 mm below ceiling
Length and ceiling height of atrium	Unlimited			
Max Atrium Width with installation on two walls	16m	20m	26m	10m
System Stats & Dimensions				
Standard Pipes	6m SS316 ø28x1.2mm with open ends for press fitting connection.			
Standard Finishes	Stainless steel look			
Other Finishes	RAL colors on nozzles			
Hydraulic System				
Water density (mm/m2)	2	2,3	2,6	2,3
Design area and system operation time	As for sprinklers installed in similar hazard groups			
Related Products				
Name	Model			
Nozzle Extensions (For hidden applications)	Custom length & ø10 mm			
Control valve	Model C-EL			
Flame detector	Deflametec			
Filter	Model F			

Water demand

The demand of water shall be calculated based on either 4 or 3 zones as shown below.

4 Zones to be calculated

3 Zones to be calculated
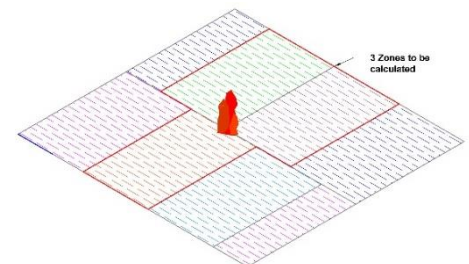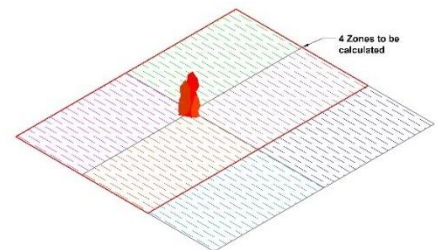
Installation

As the atrium system is a deluge system it is designed to operate several nozzles at one time. The atrium area should therefore be divided up into the zones needed, and for each zone one length of the Atrium System should be installed. The length of the system will depend on the specified atrium zone length.

For every zone one control valve should be installed between the pump system and the atrium pipe system to open for water to flow into the Atrium system. To activate the system a double knock detection system should be used. One detector to localize the fire and one extra to confirm the fire exists. More information regarding detection systems and control valves can be supplied on request.


Smoke detector, common

Flame detector, zone

Zone valve. C-EL
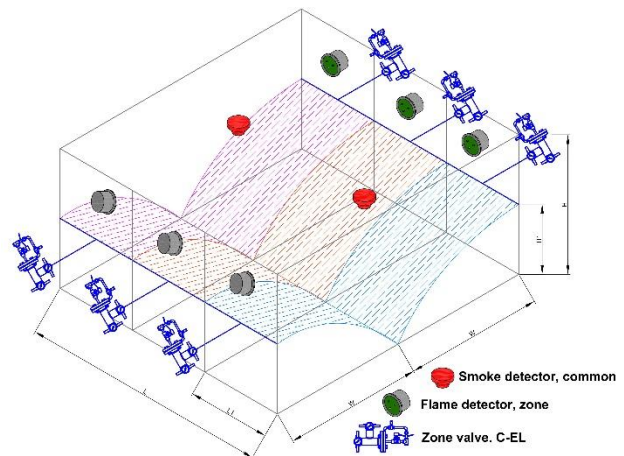
Length (L)	Unlimited		Number and type of nozzles each 6 meter pipe			
Height (H)	Unlimited		Nozzle type	32-45A	40-15A	50-15A	60-15A
Width (W)	Type A	8 meter	Nozzle position	Face down	Face up	Face up	Face up
	Type B	10 meter	Type A	3 pcs	3 pcs		
	Type C	13 meter	Type B	3 pcs		3 pcs	
	Type D	5 meter	Type C	3 pcs			3 pcs
Nozzle height (H1)	3 meter to 7 meter		Type D	6 pcs			
Zone length (L1)	Unlimited						

Caution

The Atrium System consists of fragile components and should be handled with care as not to compromise any of the components.

Dropped or otherwise damaged nozzles should not be installed.
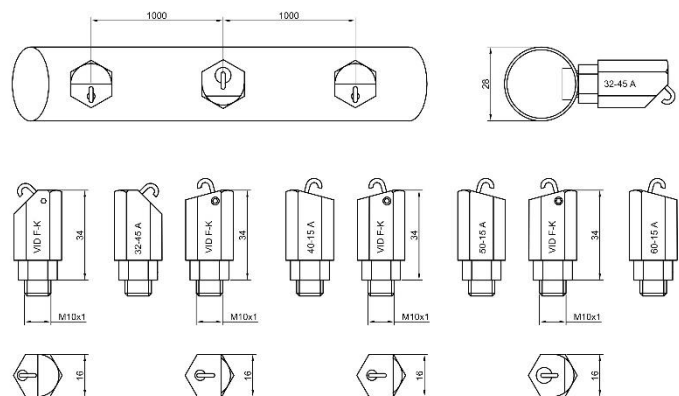
Contact

For further information on FIRE KILL™ products, please contact our sales department at Sales@vidfirekill.com

Nozzles

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