

## Description

The FIRE KILL™ low pressure, fine water spray deluge system Model N-pipe Type 2V was created for the protection of many different applications. This datasheet covers the use of Model N-pipe Type 2V in large indoor spaces where biomass feedstock (mainly wood) is stored in potentially large piles.



The Model N-pipe Type 2V system has been designed with a modular approach in mind, which lowers the time required when designing and installing the system and makes it easier to incorporate into existing locations.

To further ease installation, the systems utilize Model N-Pipe Type 2V of ordinarily 6 m in length. Each 6 m length of N-pipe is fitted with 12 low pressure fine water spray nozzles (Model BM-1-28 nozzles) designed specifically for the location size. Two nozzle pairs are installed for every meter in a 90° V-shape formation with 0.5 meters to each pipe end. Model N-pipe Type 2V systems are installed in parallel rows covering the entire enclosure, either in a total flooding design where all pipes are connected to the same riser pipe, or in zones where each zone of N-pipe Type 2V is connected to a zone deluge valve.

## Tests and Applications

N-pipes Type 2V has been tested to an extensive list of different protocols. To proof its use as biomass storage area protection system, N-pipes Type 2V has been successfully tested to DFL test method 90329-3 with amendments 150225-2, both designed accordingly to CEN/TS 14972 annex B.

Based on the testing the N-pipes Type 2V can protect dry or wet feedstock material typical with sizes less than 150mm in any dimension and stored in piles up to 8m height.

The feedstock mainly consists of clean wood residues from forestry or other wood processing activities, including bark, chips, sawdust, and shavings; and recycled wood.

## Technical data

General description		
Minimum water pressure	4 bar	
Maximum water pressure	16 bar	
K-factor 6,0m N-pipe (metric)	33.6 (l/min/√bar)	
K-factor per micro nozzle	2.8 (l/min/√bar)	
Nominal flow at min pressure	67.2 l/min	
Drop size	DV <sub>90</sub> < 300 μm	
Application		
Nozzle Spacing on N-pipe (max)	1.0 m	
Installation height over wood piles	Min	4,0 m
	Max	10,0 m
N-Pipe spacing (Parallel)	3,0 m	

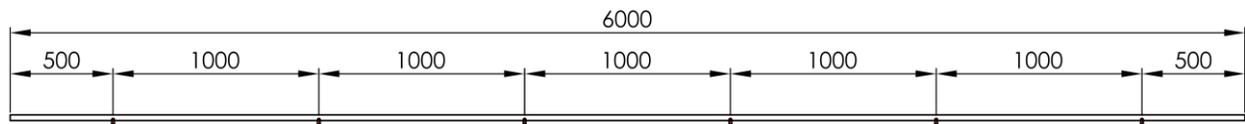
Specific description	
Pipe Dimensions	Ø28x1.2mm
Weight	1.45 kg
Pipe material	SS AISI 316L
Micro Nozzle material	SS AISI 304 or SS 316L
Pipe for press fittings	28mm
Hydraulic system	
Design area	4 zones (min. 90m <sup>2</sup> coverage per zone) or 360m <sup>3</sup>
System operation time	> 90 min
Water density	3,7 mm/min
Related products	
Control Valve	C-EL
Filter	Model F

## Approvals

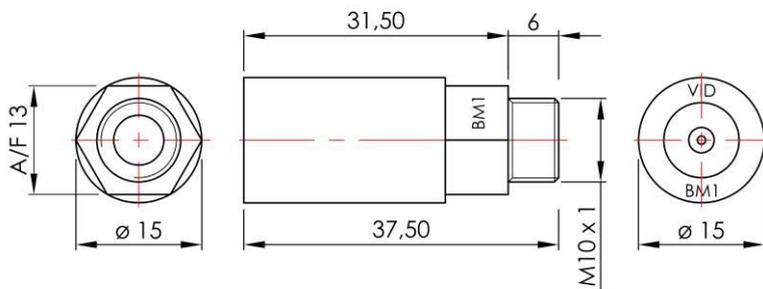
The N-Pipe system holds third party acceptance from Zürich Insurance and has been tested to an DFL test protocol.

## Typical design

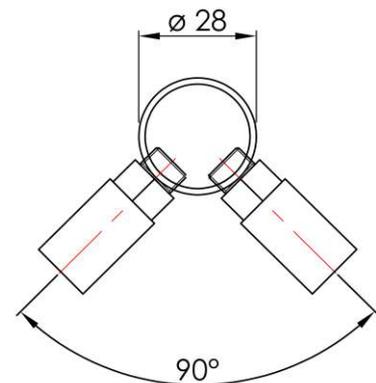
N-Pipe 2V



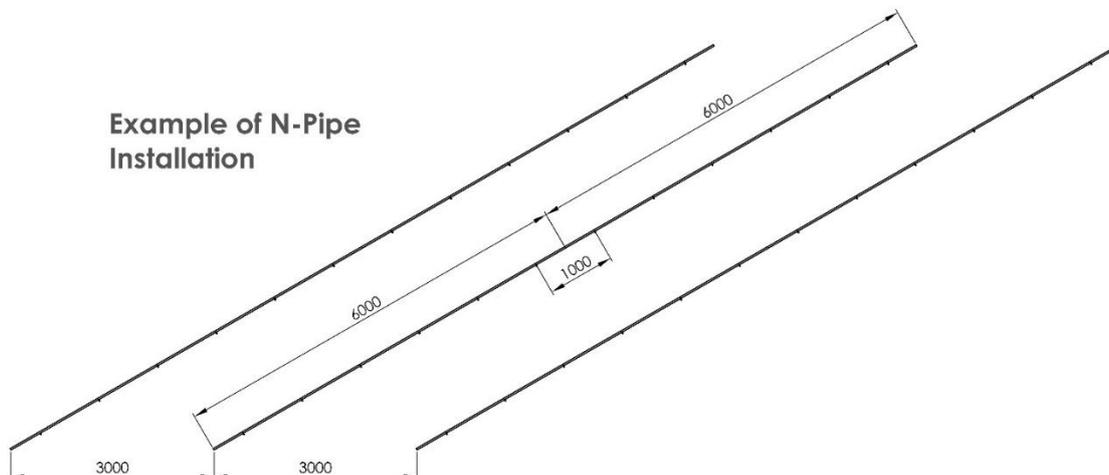
Nozzle



Side View N-Pipe 2V



Typical installation



**Example of N-Pipe Installation**

## Contact

For further information on FIRE KILL™ products, please contact our sales department at [Sales@vidfirekill.com](mailto:Sales@vidfirekill.com)

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