

Datasheet

Deluge system for Biomass storage areas.

Model: N-pipe Type 2V



Description

The VID 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 a long 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 consist of clean wood residues from forestry or other wood processing activities, including bark, chips, sawdust, and shavings; and recycled wood.

Contact

For further information on the N-Pipes or similar nozzles, please contact our sales department at Sales@vidaps.dk



Overall Technical Data		
Application	Biomass storage areas	
General Stats		
Minimum water pressure	4 bar	
Maximum water pressure	16 bar	
K-factor 6m N-pipe Type 2V (metric)	33.6 (l/min/√bar)	
K-factor per micro nozzle	2.8 (l/min/√bar)	
Nominal flow at minimum water pressure	67.2 l/min	
Drop size	DV ₉₀ < 300 μm	
Application		
Nozzle Spacing on N-pipe (max)	1 m	
N-pipe spacing (parallel)	3 m	
Installation height over wood piles	Min	4.0 m
	Max	10 m
Specific Stats		
Pipe Dimensions	Ø25x1.2mm or Ø28x1.2mm	
Weight	1.45 kg	
Pipe material	AISI 316L	
Micro Nozzle material	AISI304 or AISI 316L	
Pipe ends	3/4" male/female ends or	
	28mm Open ends prepared for press fittings	
Hydraulic System		
Design area	4 zones (min. 90m ² coverage per zone) or 360m ³	
Water density (area 3m x 6m)	3.7 mm/min	
System operation time	> 90 min	
Related Products		
Name	Model	
Control Valve	C-EL deluge valves	