

HE20 Matrix—Spray Eliminator

Lemon Sherbet Ltd presents a novel approach that enables system builders to integrate advanced droplet separation technology directly into their own filtration systems.

This innovative design simplifies implementation while delivering exceptional water removal and long term reliability.

By incorporating Lemon Sherbet's proven vane technology, system builders can achieve superior performance without compromising on pressure loss.



Product shown—HE20 Matrix in ABS

HE20 Matrix—Spray Eliminator

The HE20 Matrix spray eliminator is a high performance inertial vane separator designed for integration into intake filter housings.

The unique profile of the vane gives exceptional droplet separation coupled with extremely low pressure loss, whilst occupying just 65mm of depth.

Features and benefits

- Exceptional droplet elimination for rain, fog and sea spray
- Independently tested to EN13030:2001, achieving >99% droplet removal
- Very low pressure loss
- Cost effective
- Produced to your required size
- Long life

Materials of construction

Vanes (1.2mm thickness)

- Aluminium 6063T6
- ABS PA757K

Vanes (0.6mm thickness)

- Stainless steel 316L
- Stainless steel 304L

Tie rods

- Stainless steel 316L/304L
- Aluminium 6063T6

Spacers

- Polyamide

End spacers

- Aluminium
- Stainless steel
- Polyamide

End nuts

- Stainless A4 (316)
- Aluminium

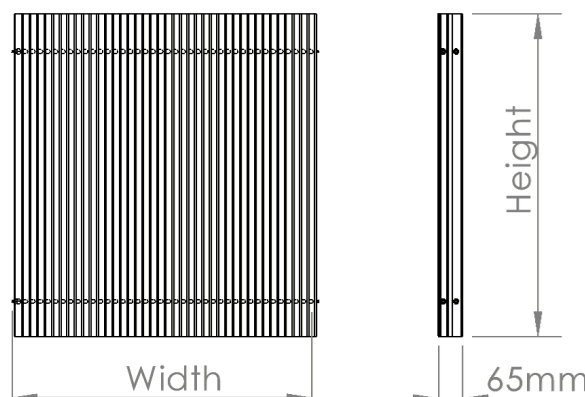
Installation

The HE20 Matrix is designed to be installed within an existing housing. The matrix must be installed with the vanes running vertically, and with a clearance to the underside of 20mm to allow for adequate drainage.

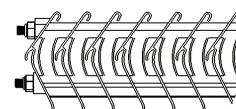
When ordering the HE20 matrix, the height and width of each module must be specified. The depth of 65mm is fixed.

The dimensions are subject to a manufacturing tolerance of +/-2mm.

There is a 20mm no filtration zone at the edges of the matrix, where the designer must install blanking plates / angles to prevent any bypass.



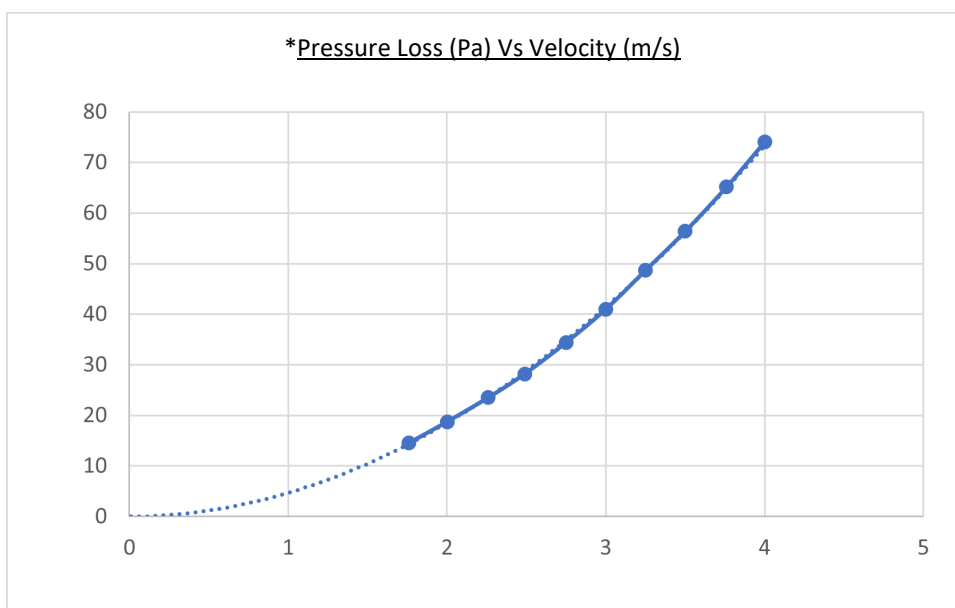
The maximum module dimensions are 2200mm wide and 3500mm high.



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Airflow

Performance

Pressure Loss



*Pressure loss based on matrix face velocity

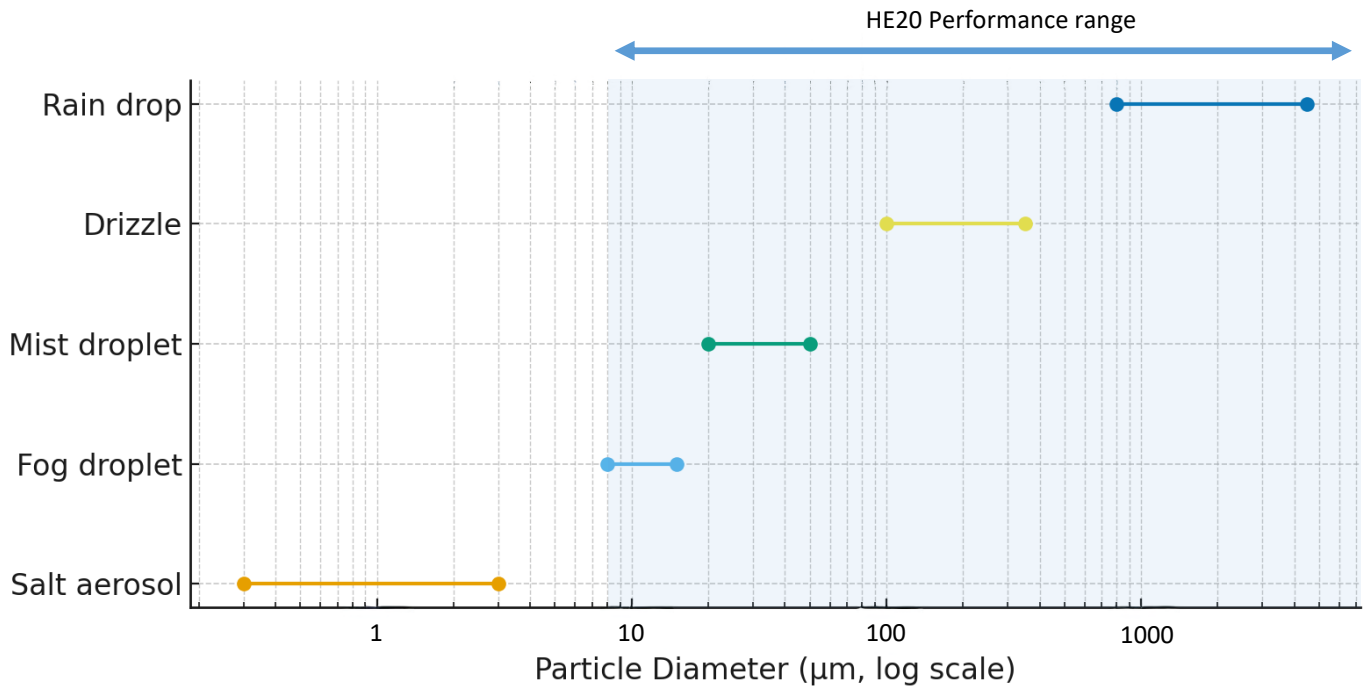
Excellent water removal performance

Simulated Rainfall 75 (+10% / -0%) mm/hr
 Wind Speed 13 m/s

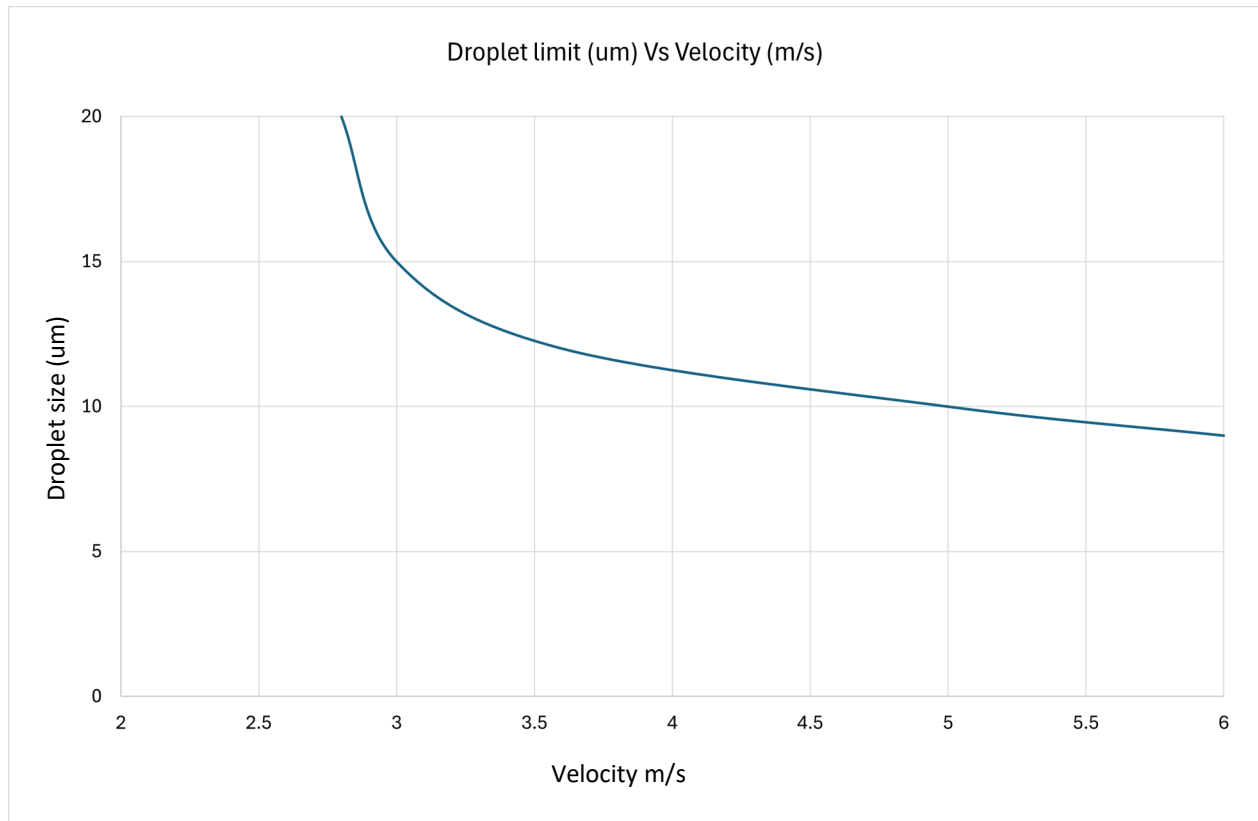
Ventilation Rate		Water Flow Rates		Effectiveness %
Volume m ³ /s	Velocity m/s	Supply l/h	Penetrated l/h	
0.00	0.00	97.2	0.13	99.8
0.17	0.50	97.2	0.22	99.7
0.34	1.00	97.2	0.21	99.7
0.51	1.50	97.2	0.14	99.8
0.68	2.00	97.2	0.14	99.8
0.85	2.50	97.2	0.16	99.8
1.02	3.00	97.2	0.18	99.8
1.19	3.50	97.2	0.17	99.8

Wind driven water penetration vs face velocity, in accordance with BS EN13030:2001

Small droplet performance



Fractional Efficiency



**The droplet limit is the minimum droplet size where 100% removal is achieved