

Micro-perforated duct for HVAC & SEFFC

DESCRIPTION:

In this data sheet there is an example of MICRO FIRE's application in a shopping centre.

The requirement is to have a single duct, due to layout constraints, for both HVAC systems (Air Treatment - Heating/Cooling) and for use in case of smoke extraction - UNI 9494-2 - Appendix G.

QUICK SIZING:

- 29.000 m³/h required airflow for HVAC
- 75.000 m³/h airflow for SEFFC smoke extraction

QUICK SELECTION FOR AIR TREATMENT:

- Double throw: approx. 240-260 m³ per linear meter
- Single throw: approx. 120-130 m³ per linear meter

Diameter	MAX AIR FLOW - HVAC	MAX AIR FLOW - SMOKE EXTRACTION
mm	m ³ /h	m ³ /h
350	1.100 - 1.471	2.596 - 3.635
400	1.582 - 1.922	3.391 - 4.748
450	2.000 - 2.432	4.292 - 6.009
500	2.472 - 3.003	5.299 - 7.418
550	3.000 - 3.633	6.411 - 8.976
600	3.560 - 4.324	7.630 - 10.682
650	4.180 - 5.074	8.955 - 12.537
700	4.847 - 5.885	10.386 - 14.540
750	5.560 - 6.756	11.922 - 16.691
800	6.330 - 7.687	13.565 - 18.991
850	7.150 - 8.678	15.313 - 21.439
900	8.000 - 9.729	17.168 - 24.035
950	9.000 - 10.839	19.128 - 26.780
1000	9.890 - 12.011	21.195 - 29.673

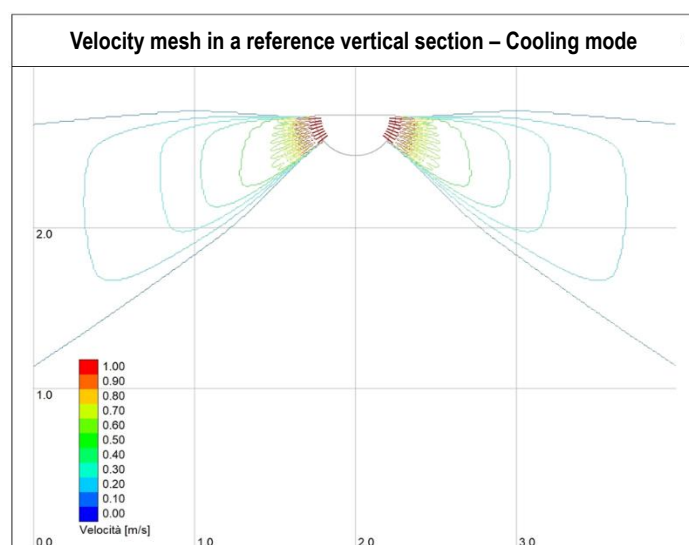
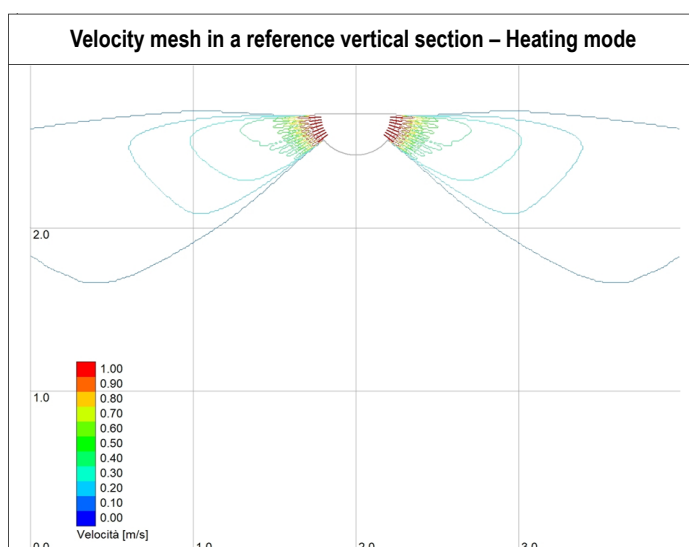
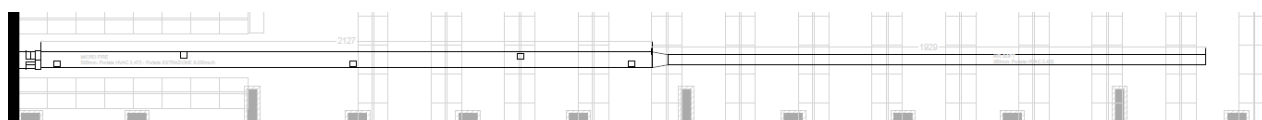
Select n.12 micro-perforated ducts with an airflow capacity of 2.416 m³/h (HVAC) and 6.250 m³/h (Smoke extraction).

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SIZING OF THE MICRO-PERFORATED DUCT FOR HVAC:

Air distribution in the environment is more uniform compared to traditional systems with diffusers or grilles. Moreover, by drastically reducing stratification, the system's startup and operating times are significantly decreased. The diffusers do not require insulation.

Duct 500mm - 350mm



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TECHNICAL DRAWING

