



Soluzioni Impianti Condizionamento Isolamenti Termici

## High Induction Micro-perforated ducts



### Functioning

The principle of micro-perforated ducts operation is called induction, this phenomenon occurs when the air flow is coming out of the supply duct holes, dragging the circulating air which mixes itself, obtaining the comfortable temperature and air speed required in the environment.

We design and build through the help of special software high induction micro-perforated ducts specific to each situation, environment or particular climate demand. Our system is able to maximize the distribution and treatment of air even when the characteristics related to temperature change, as in summer and winter.

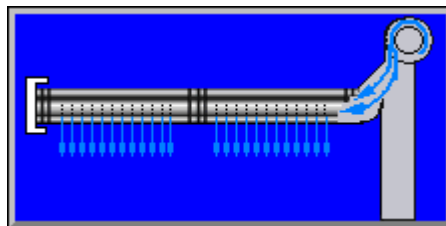
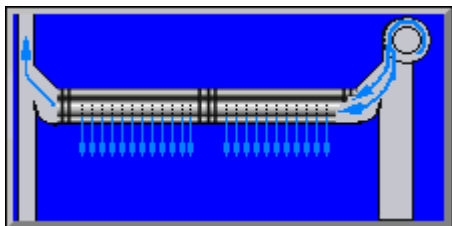


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### Benefits of Micro-perforated ducts system

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Saving of management costs and improved efficiency: the induction system puts more air volumes in motion in addition to those released into the environment; it makes diffusion more homogeneous; compared to a system with nozzles or diffusers, this allows to minimize the phenomenon of stratification together with the times of commissioning and maintenance of the system; the micro-perforated duct does not require insulation; the supplied pipe, opened and closed later on site, makes transport on site much cheaper.

Comfort: an optimally sized system is able to spread the air evenly throughout the room with low speeds at man's height, avoiding annoying drafts and keeping the constant temperature in the environment.

The eye wants its part: the different materials that can be used as aluminum, stainless steel, galvanized and pre-painted sheet metal and the absence of vents make the system much more linear and part of furniture in environments such as offices, warehouses, supermarkets and shops.

Speed of installation: thanks to the junction folder system with metal straps the assembly will be faster and easier, there are no vents to install and no maintenance needs.



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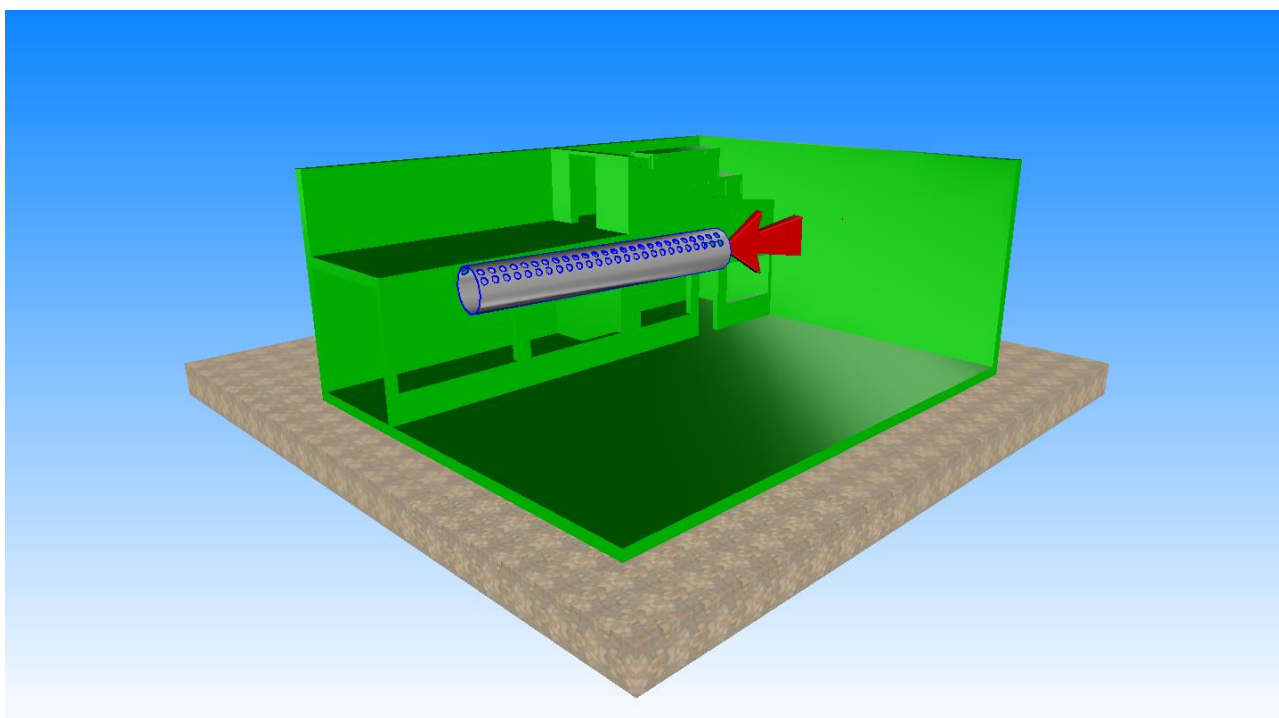


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### Micro-perforated duct Design

Development and design of the Micro-perforated ducts has begun in the offices of our headquarters. Every building, environment, request of air conditioning or placement of duct installation is a separate system.

For optimal result we start from the type of building in which we operate to the required temperature and the ideal comfort speed. Through special software we calculate basing on multiple characteristics of our system (duct installation position, volumetric flow rate, static pressure, duct input temperatures, temperature required in summer /winter, ideal air speed) the ideal solution for the system to built.



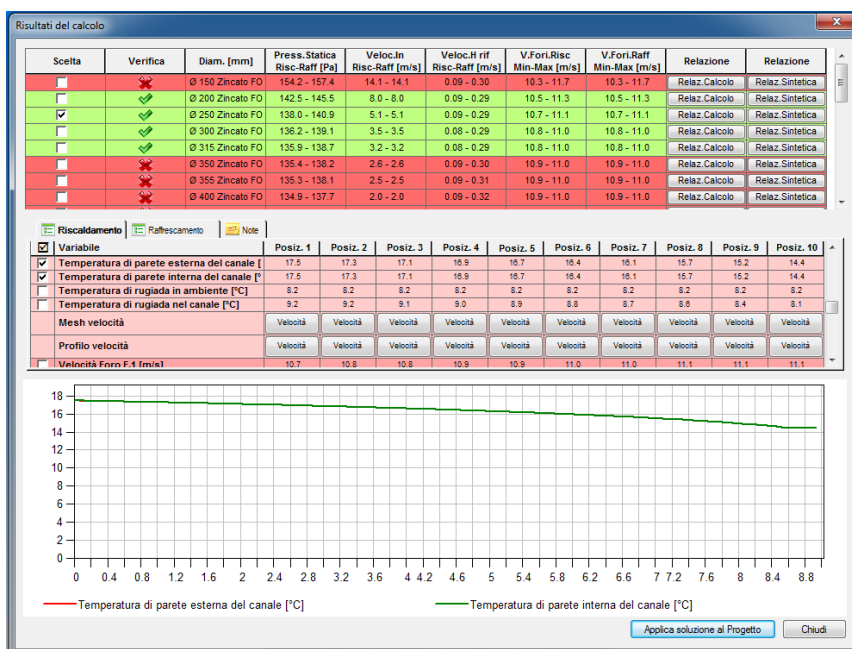
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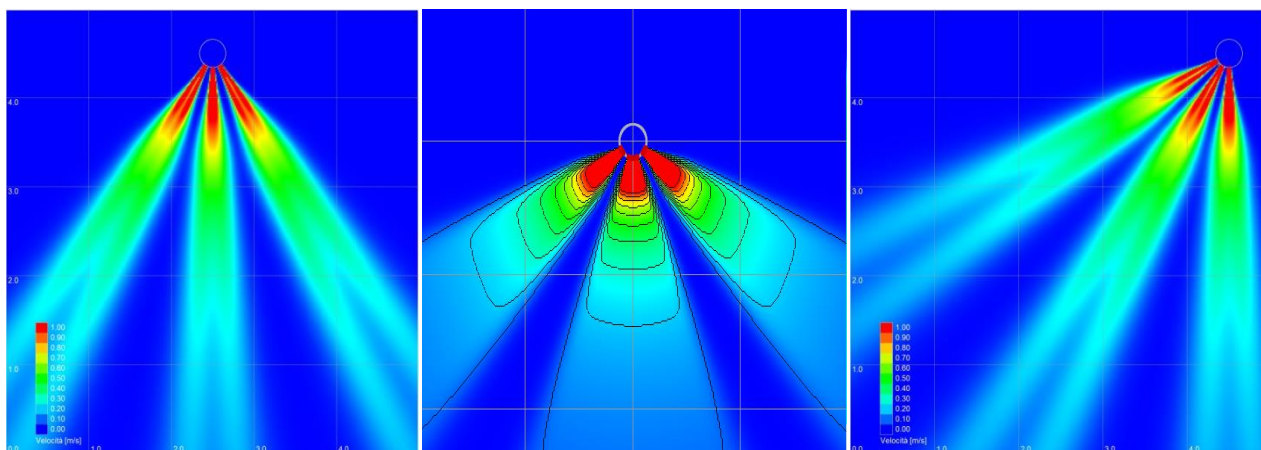
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We check the duct diameter required by the specifications or choosing the best solution for greater efficiency, in this way we monitor the air behavior in each space of the duct.



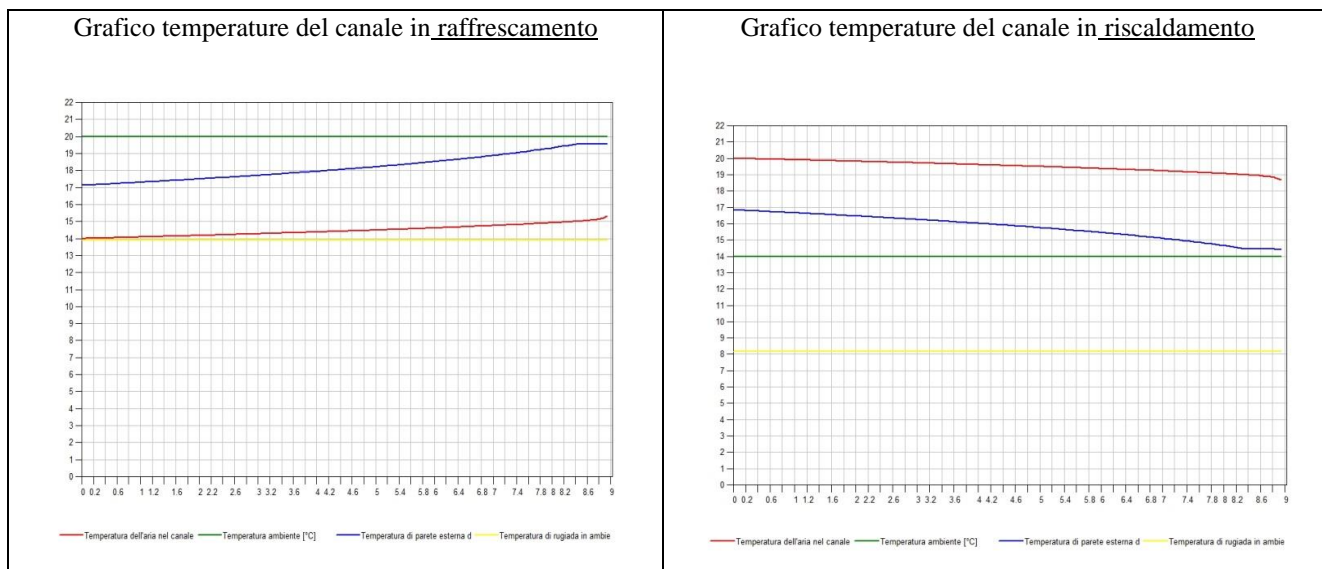
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To facilitate proper mixing we apply multiple drilling options in the duct by choosing direction and air penetration.



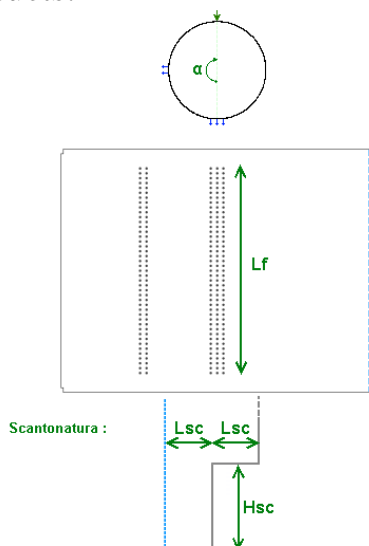
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Once the solution is applied to the project, we develop a calculation report on the behavior of each individual band of the pipelines, and we attach it to the supply document.



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We develop CAD model of the single tube perimeter and proceed with the construction of the diffuser ducts.







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### Production

After defining diameter of the pipe, types of holes, quantity and right angle we proceed to the construction of the duct, working directly from coils.



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The duct is building in tubes with folders on both sides to be assembled by metal ties during mounting; the height varies from 1000mm to 1500mm. The hose is supplied already closed or open preformed and arranged on pallets one inside the other, to reduce transport space. In this case we provide rivets and special seal for closure at the place of installation.

To keep the pipe intact from scratches or dirt every single pipe is equipped with adhesive film.

In addition to the micro-perforated duct we provide all accessories such as plugs, curves, reductions, caps, staff collars, etc..



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## Table of weights and developments

Material: Galvanized sheet				Material: Stainless			
Spess.	Diametro	Sviluppo	Kg/ml	Spess.	Diametro	Sviluppo	Kg/ml
0,6	150	505,00	2,58	0,8	150	505,00	3,17
0,6	200	662,00	3,38	0,8	200	662,00	4,16
0,6	250	819,00	4,18	0,8	250	819,00	5,14
0,6	300	976,00	4,98	0,8	300	976,00	6,13
0,6	315	1023,00	5,22	0,8	315	1023,00	6,42
0,8	350	1133,00	7,53	0,8	350	1133,00	7,12
0,8	355	1148,70	7,64	0,8	355	1148,70	7,21
0,8	400	1290,00	8,58	0,8	400	1290,00	8,10
0,8	450	1447,00	9,62	0,8	450	1447,00	9,09
0,8	500	1604,00	10,67	0,8	500	1604,00	10,07
0,8	550	1761,00	11,71	0,8	550	1761,00	11,06
0,8	560	1792,40	11,92	0,8	560	1792,40	11,26
0,8	600	1918,00	12,75	0,8	600	1918,00	12,05
0,8	630	2012,00	13,38	0,8	630	2012,00	12,64
0,8	650	2075,00	13,80	0,8	650	2075,00	13,03
0,8	700	2232,00	14,84	0,8	700	2232,00	14,02
0,8	715	2279,00	15,16	0,8	715	2279,00	14,31
0,8	750	2389,00	15,89	0,8	750	2389,00	15,00
1,0	800	2546,00	21,00	0,8	800	2546,00	15,99
1,0	850	2703,00	22,30	0,8	850	2703,00	16,97
1,0	900	2860,00	23,60	0,8	900	2860,00	17,96
1,0	950	3017,00	24,89	0,8	950	3017,00	18,95
1,0	1000	3174,00	26,19	0,8	1000	3174,00	19,93



## Soluzioni Impianti Condizionamento Isolamenti Termici

Material: Aluminium				Materiale: Rame			
Spess.	Diametro	Sviluppo	Kg/ml	Spess.	Diametro	Sviluppo	Kg/ml
1,0	150	505,00	1,36	0,8	150	505,00	3,64
1,0	200	662,00	1,79	0,8	200	662,00	4,77
1,0	250	819,00	2,21	0,8	250	819,00	5,90
1,0	300	976,00	2,64	0,8	300	976,00	7,03
1,0	315	1023,00	2,76	0,8	315	1023,00	7,37
1,0	350	1133,00	3,06	0,8	350	1133,00	8,16
1,0	355	1148,70	3,10	0,8	355	1148,70	8,27
1,0	400	1290,00	3,48	0,8	400	1290,00	9,29
1,0	450	1447,00	3,91	0,8	450	1447,00	10,42
1,0	500	1604,00	4,33	0,8	500	1604,00	11,55
1,0	550	1761,00	4,75	0,8	550	1761,00	12,68
1,0	560	1792,40	4,84	0,8	560	1792,40	12,91
1,0	600	1918,00	5,18	0,8	600	1918,00	13,81
1,0	630	2012,00	5,43	1,0	630	2012,00	18,03
1,0	650	2075,00	5,60	1,0	650	2075,00	18,59
1,0	700	2232,00	6,03	1,0	700	2232,00	20,00
1,0	715	2279,00	6,15	1,0	715	2279,00	20,42
1,0	750	2389,00	6,45	1,0	750	2389,00	21,41
1,0	800	2546,00	6,87	1,0	800	2546,00	22,81
1,0	850	2703,00	7,30	1,0	850	2703,00	24,22
1,0	900	2860,00	7,72	1,0	900	2860,00	25,63
1,0	950	3017,00	8,15	1,0	950	3017,00	27,03
1,0	1000	3174,00	8,57	1,0	1000	3174,00	28,44

Prepainted sheet has a 5% increase of weight.



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