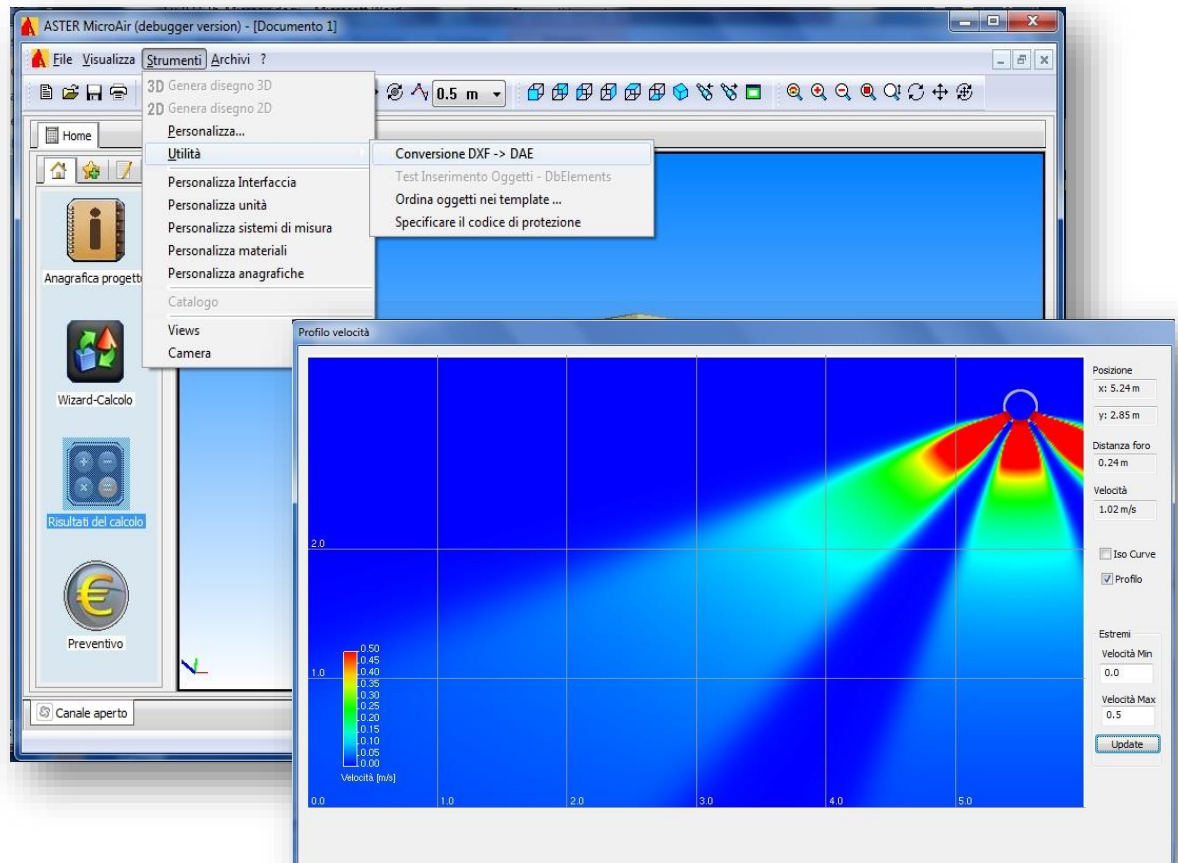




ASTER MICROAIR

CALCULATION OF HIGH INDUCTION PERFORATED METALLIC AND TEXTILE DUCTS FOR HEATING AND COOLING



01/01/2022

ASTER MICROAIR Presentation

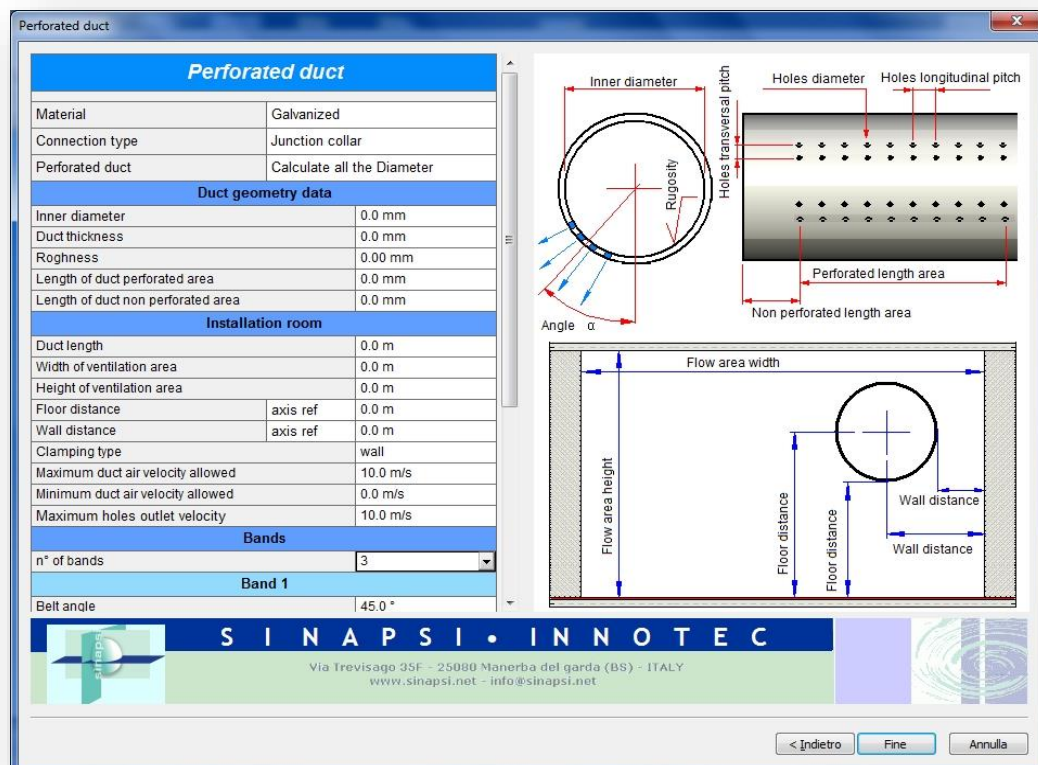
ASTER® Microair, developed by Sinapsi Innotec Srl, is powerful software environment that perform **calculation of indoor air distribution** coming from high induction perforated metallic and fabric, circular and semi-circular ducts for Heating and Cooling; **bill of material with quotation** and automatic **export of DXF for the development of perforated sheet metal**. It has a functional WIZARD that with a few simple steps guide to the dimensioning of the diameters of ducts, number and position of the diameter holes. Results calculations and outputs are shown in reports and with air speed maps in the environment. ASTER® Microair is specially designed for the specific needs of manufacturers Company of air distribution systems and components and is personalized with the characteristic data of the Company productions, diameters, materials, logos, images. It is available in Italian, English, French and other languages on request

ASTER MICROAIR

DESCRIPTIONS OF MAIN FEATURES

TECHNICAL CALCULATION

Through a simple wizard that guides the user through the various steps, ASTER® Microair perform the calculation of indoor air distribution coming from high induction perforated metallic and fabric, circular and semi-circular duct ducts for Heating and Cooling. This is based on the number of holes stripes, angle positioning, to the number, diameter and the pitch of the holes according to the speed profile to a fixed distance.



Input data required by the software

Air data to be entered to inlet duct

- air flow rate
- available prevalence
- air temperature
- Relative humidity

Thermoigrometric data to be entered

- reference height from the floor and maximum permissible air speed at that height.
- Room temperature
- room relative humidity

Dimensional data of the duct and the environment

- length of the duct
- width of the zone influence of the duct
- duct distance from to the floor, referred to the axis or to the edge of the duct
- available standardized diameters of the ducts
- position of the holes (phased parallel rows, staggered parallel rows etc.)
- distance of holes
- distances between adjacent rows
- angle between the plane containing the axis of the holes and the vertical plane

BUDGET AND DXF MODULE

ASTER ® Microair, customized with company data, enables the user to automatically generate a bill of materials, components and accessories and thus allows to issue a quotation plant

ASTER ® Microair has a tool for automatic export of DXF for the development of perforated sheet metal, both for laser cutting for punching with notching

The screenshot shows the 'Offer' window with a table of items and a 'RESULTS' table. A red arrow points to a diagram of a perforated duct.

Code	Manufacturer	Description	U.M.	Q.ty	Price	Amount	Disc.%	Amount
DUCT Ø 300 Galvanized 1,5 m	Generic	DUCT Ø 300 Galvanized 1,5 m		7,00	0,00	0,00	0,00	0,00
DUCT Ø 300 Galvanized 1,1 m	Generic	DUCT Ø 300 Galvanized 1,1 m		1,00	0,00	0,00	0,00	0,00

Description	U.M.	Valeur									
Chauffage :											
Section :	U	Sect. 1	Sect. 2	Sect. 3	Sect. 4	Sect. 5	Sect. 6	Sect. 7	Sect. 8	Sect. 9	Sect. 10
Distance de la Section	[m]	0,000	0,8	1,657	2,514	3,371	4,229	5,086	5,943	6,800	7,943
Pression statique	[Pa]	44,19	44,68	45,19	45,69	46,16	46,61	47,03	47,42	47,77	48,15
Pression totale	[Pa]	50,60	50,27	49,96	49,70	49,48	49,29	49,15	49,03	48,94	48,86
Vitesse dans le conduit	[m/s]	3,316	3,098	2,863	2,627	2,390	2,151	1,911	1,670	1,429	1,105
Vitesse Trou Bande #1	[m/s]	6,337	6,372	6,408	6,443	6,477	6,509	6,538	6,565	6,589	6,616
Vitesse Trou Bande #2	[m/s]	6,337	6,372	6,408	6,443	6,477	6,509	6,538	6,565	6,589	6,616
Vitesse Trou Bande #3	[m/s]	6,337	6,372	6,408	6,443	6,477	6,509	6,538	6,565	6,589	6,616
Vitesse Trou Bande #4	[m/s]										
Vitesse Trou Bande #5	[m/s]										

Output data of budget module and dxf

Output data of budget module	Data for the export development sheet
<ul style="list-style-type: none"> Window with bill of elements and Budget Feature on the management of codes in the quotation window, filters on product families, management of special elements Detailed budget reports and prt list in RTF format, customizable by the user Prints of the budget, part list and Trade Conditions 	<ul style="list-style-type: none"> in the window is active the export of DXF with notching and with the two reference dimensions in the same window it's possible to change the perforated and not perforated stretch. Output of the sheet files with the possibility to manage staggered rows of holes Management of an offset for the perforated area of duct

Aster Microair basic customization:

Aster Microair has a basic customization in the technical reports and trademark includes inserting commercial logos for 1 Corporate brand (Brand) in software and RTF reports

Data input related to1 PRODUCT LINE (same brand) UP TO 50 ITEMS , see technical notes refined at order confirmation

RESULTS AND OUTPUTS

The result of the calculation will provide the table of available diameters of the duct with relative state of the verification

Calculation results of pressure, speed and temperature in the duct are presented in the xy graphs

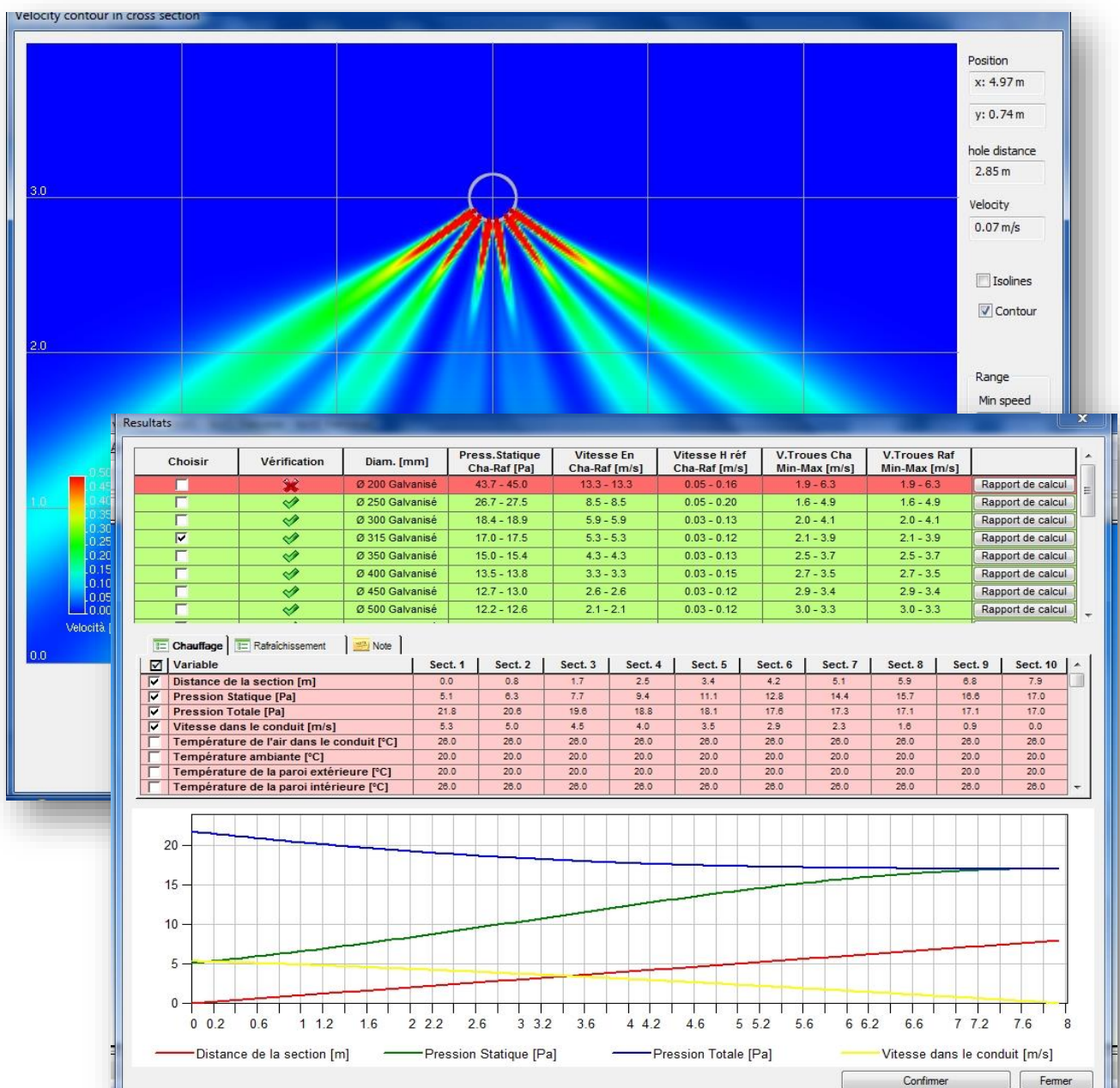
The status of the verification is indicated positive for solutions that comply the conditions required by the project:

Air flow rate $Q = Q_{\text{required}}$

Static pressure inlet \leq available static pressure

Indoor air speed V_a must be $V_{\text{min}} < V_a < V_{\text{max}}$

Air speed in duct $V_c \leq V_{\text{cmax}}$



PRICE LIST 2022

ANNUAL LICENSE	PRICE €
<p>Aster® Microair-[Cod. MAirBus019_R1_en] Software for calculation of indoor air distribution coming from high induction perforated metallic and fabric, circular and semi-circular ducts for Heating and Cooling; bill of material with quotation and automatic export of DXF for the development of perforated sheet metal</p> <p>INCLUDES</p> <p>technical support on the use of Software by e-mail, upgrades throughout the year if issued</p> <p>Basic Customization with Company diameters range, corporate brands, calculation reports with logo</p> <p>User Manuals. User registration in our database as authorized users of programs with id.code</p> <p>LANGUAGE: ENGLISH Brand: 1 brand</p> <p>License: Package of 1 license+1 license Portable PC same user-> 12 months fixed term - not transferable(*)</p>	<p>FIRST YEAR</p> <p>2.400,00</p> <p>(SECOND consecutive year disc 20% 1.920,00)</p>
<p>PRICE</p>	<p>€ 2.400,00 + VAT</p>
<p>OPTIONAL</p> <p>Advanced Customization of files and reports (optional) per day (€ 450,00)</p> <p>Technical Course: half day, at Headquarters Sinapsi Innotec or by ZOOM; includes training on use of the software and data entry> (€ 400,00) (Max 3 people at course)</p> <p>Notes: General Terms and Conditions at the bottom of the document</p> <p>VAT excluded</p>	

(*)The count of 12 months activation of the Software Microair license start from delivery of the software link in the basic neutral version. At the end of the activation period the software is deactivated permanently; the software can be reactivated by request and payment of the new annual fee. The discount for the second year is valid for renewal confirmed within one month before of the expiry of the first year. Renewals of Annual Licenses required in subsequent periods to maturity will have the price of the first year.

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