

Design module with the Coandă effect

EFFETTO



Comfort and design in perfect harmony

Galletti introduces EFFETTO, the design module for air intake and diffusion designed to complement the reliability and comfort of ACQVARIA and ACQVARIA i hydronic cassette units (600x600 mm model).

EFFETTO breaks with standard hydronic cassette units, going far beyond the classic ABS grille with adjustable fins, and presents a design module that takes advantage of the Coandă effect.

Galletti's Advanced Design Unit has created an Italian-made hydronic cassette unit with a minimalist, streamlined design that can be incorporated into the style of any space, even in terms of colour.

EFFETTO is not just about aesthetics but also comfort, as it has been designed to optimise air diffusion thanks to the Coandă effect.

EFFETTO's Dibond metal panel is comprised of a sandwich of aluminium and polyethylene.

The fine metallic finish is combined with the insulating properties of polyethylene to prevent condensation. The steel intake grille creates a single surface with the panel, thus enhancing the overall subtlety of the product. The filter can be easily removed for maintenance operations.

The air duct is made of black RAL 9005 polystyrene for a perfect colour match, and its geometry is designed to optimise the air flow in the room.

The brightness of the aluminium allows the grille to adapt to any situation, while keeping the milled edge of the panel, which outlines its shape, clearly visible, even in low light conditions. The module, detached from the ceiling, interacts with all the elements and light sources in the room.

EFFETTO is the perfect choice to ensure a smooth, streamlined appearance to the space to be air-conditioned.

AVAILABLE VERSIONS

Three colour versions are available: brushed natural aluminium, white RAL 9010, and black RAL 9005. Black is also used for all the components of the internal and technological structure in order to create a shadow effect on the surrounding surfaces, making the panel appear to float in the air.



Grey - natural brushed aluminium



White - RAL 9010

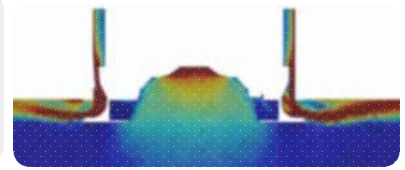


Black - black RAL 9005

COMPUTATIONAL FLUID DYNAMICS SIMULATIONS

AIR DUCT

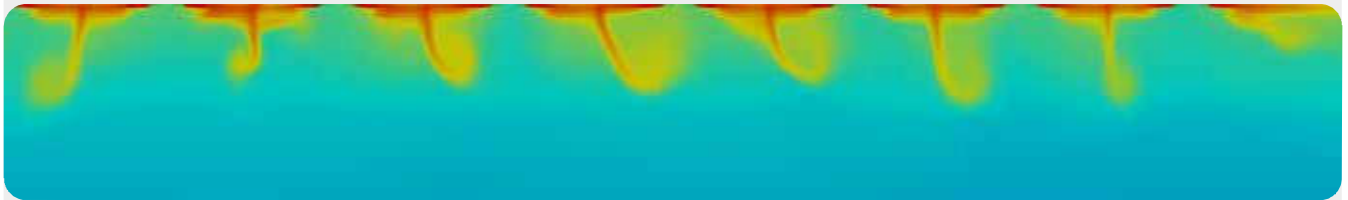
Computational fluid dynamics (CFD) simulations have made it possible to study the diffusion of air in interiors in order to make the most of the Coandă effect: the air flow reaches the ceiling without passing directly over the occupant, thus preventing localised discomfort.
Cross-section of the EFFETTO module with air flows highlighted.



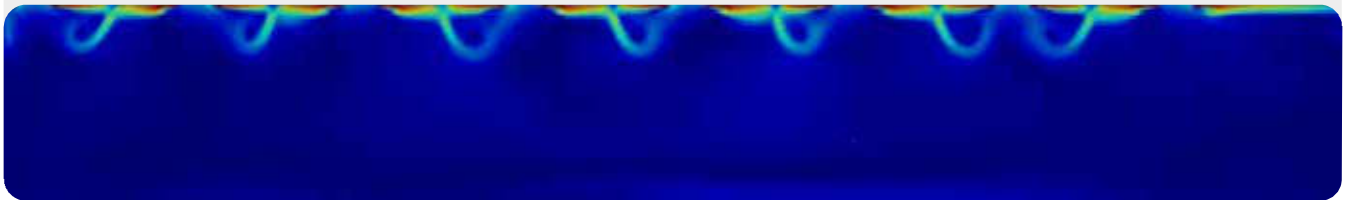
HEATING CASE STUDY

In CFD simulations we evaluated a space used as a restaurant that can accommodate about 100 people equipped with 9 ACQVARIA hydronic cassette units with EFFETTO module. The design summer conditions are: outdoor air temperature 5 °C, room setpoint temperature 20 °C.
Standard UNI EN ISO 7730 identifies indices that define situations of temperature and humidity discomfort: Floor temperature; Highly uneven vertical temperatures; Draughts; Predicted Mean Vote.

AIR TEMPERATURE FIELD



AIR SPEED FIELD



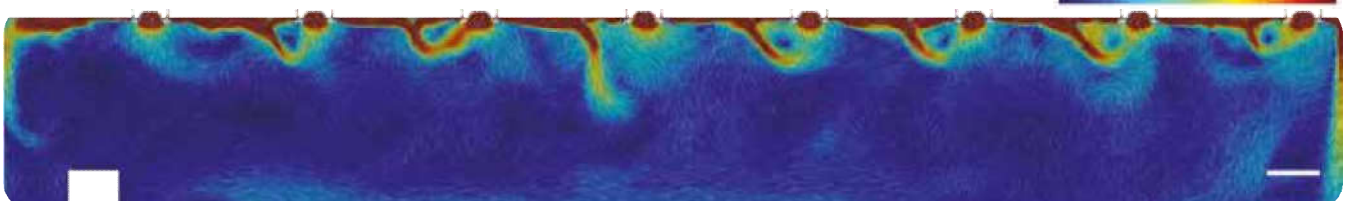
COOLING MODE CASE STUDY

In CFD simulations we evaluated a space used as a restaurant that can accommodate about 100 people equipped with 9 ACQVARIA hydronic cassette units with EFFETTO module. The design summer conditions are: outdoor air temperature 33 °C, room setpoint temperature 26 °C.
The geometry of the black polystyrene conveyors was designed with the help of CFD simulations and experimental verifications at the R&D laboratories Galletti.
The aim was to ensure that the air jet touches the ceiling and walls without ever directly hitting the occupant through the Coandă effect. The air distribution in the room is homogeneous, the left zone has a higher than average air temperature because it is adjacent to the kitchen.

AIR TEMPERATURE FIELD



AIR SPEED FIELD



CONCLUSIONS

All the comfort indices taken into consideration confirmed that the temperature and humidity comfort conditions are guaranteed even in the presence of air stratification in the areas near the ceiling, which is a common occurrence during the heating season.

Design module with the Coandă effect - EFFETTO



EFFETTO *AirClissi*

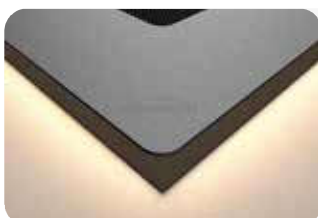
EFFETTO AIRCLISSI



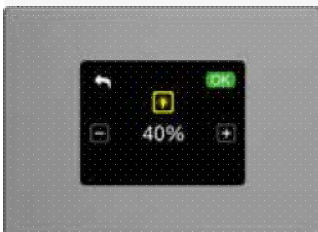
Often hydronic indoor units are evaluated on the basis of a single criterion: their technical performance. Undoubtedly, thermodynamic and acoustic performance are very important, but only if they are part of a broader comprehensive concept. Today, the hydronic indoor unit must be considered equally with all the other furnishings in the space to be air-conditioned: a platform capable of interacting with the layout of the environment and the people who live in it. This interaction is now even stronger, with a novel emotional dimension for hydronic cassette units: light.

EFFETTO has now been combined with AirClissi to become the first Coandă effect illuminated module in the field of hydronic cassette units: air and light come together to create a unique design. EFFETTO AirClissi is a new Galletti product that takes the concept of the hydronic cassette unit to an unprecedented aesthetic level, where light is the new star of the show.

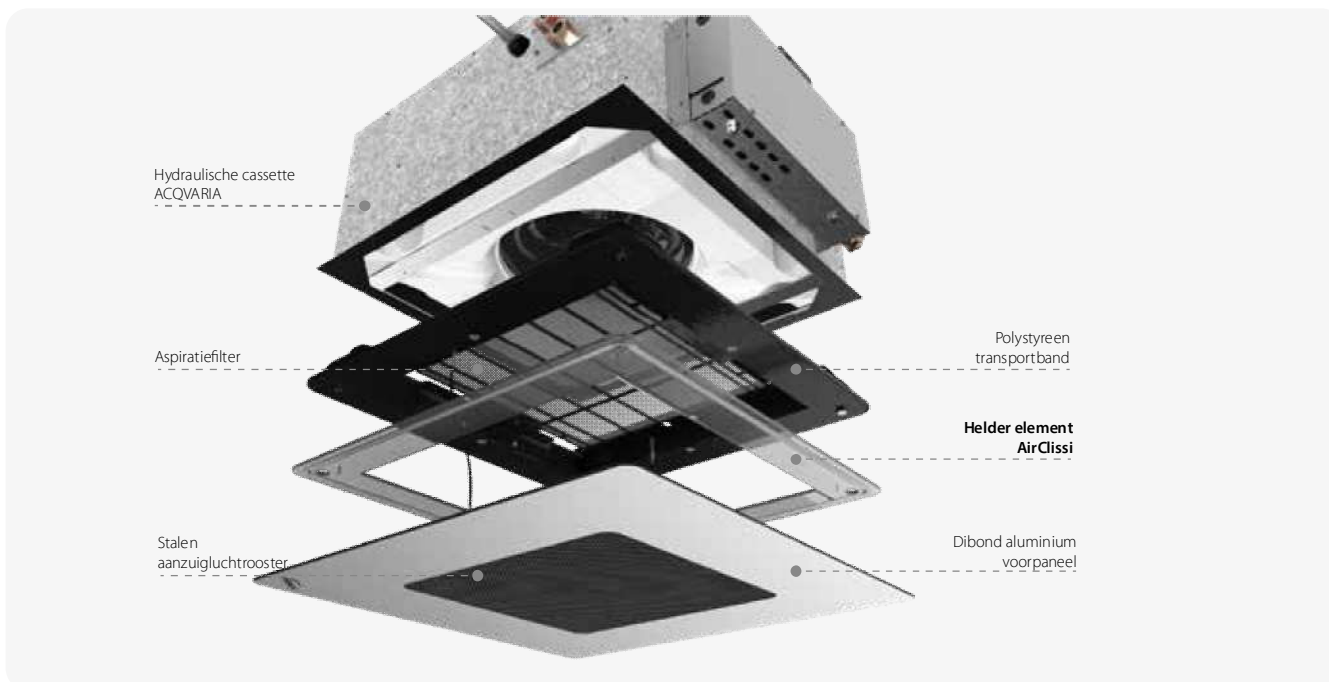
AVAILABLE VERSIONS



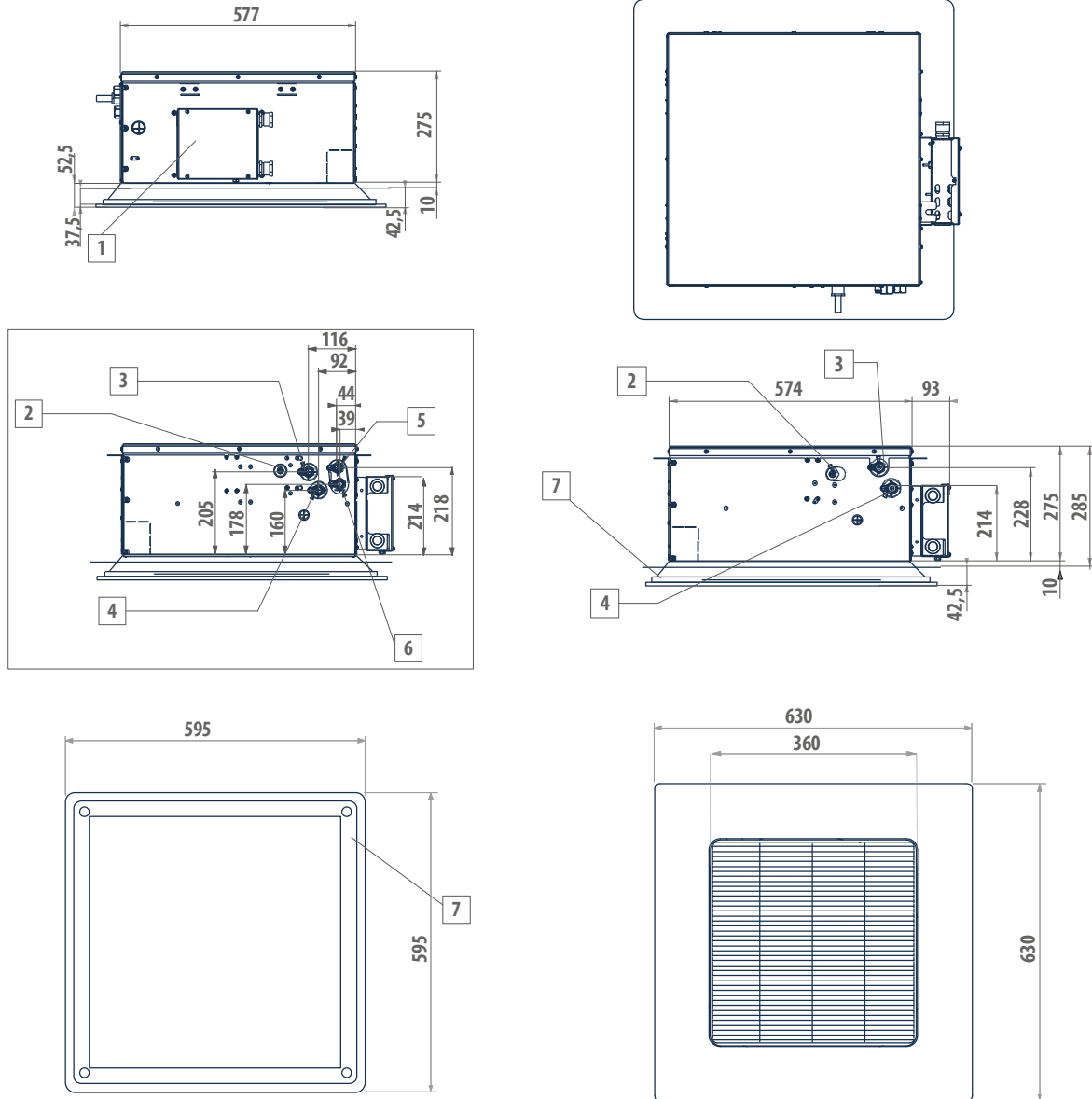
AirClissi illuminated modules are available in warm 3000 K and neutral 4000 K light. These 2 colours are compatible with Grey, White, and Black EFFETTO.



The light intensity can be regulated by means of the EVO microprocessor controller. A single device gives you full control over the temperature and humidity conditions of the space and now also over its lighting. The Casambi app turns your smartphone into a flexible remote control for adjusting AirClissi's light intensity. Its extreme elegance is achieved through combining minimal lines and character, the Dibond material, and light.



DIMENSIONAL DRAWINGS

ACQVARIA 10-20-30-35 + EFFETTO + AirClissi


ACQVARIA	kg
AQ10Q0B0 - AQ10Q1B0 - AQ10Q0BB - AQ10Q1BB	23 + 2,5
AQ20Q0B0 - AQ20Q1B0 - AQ20Q0BB - AQ30Q0B0 - AQ30Q1B0 - AQ30Q0BB - AQ30Q1BB	24 + 2,5

LEGEND

1	Electric box
2	Condensate discharge \varnothing 10
3	Water outlet \varnothing 1/2" female gas
4	Water inlet \varnothing 1/2" female gas
5	Water outlet \varnothing 1/2" DF female gas
6	Water inlet \varnothing 1/2" DF female gas
7	AirClissi panel (optional)