

Specialist in air distribution products

Throughout the world, Barcol-Air BV is involved in the sales and development of high-quality products and systems, both for air distribution and control technology. The design of an optimum thermal indoor climate for today's modern building and working environment, forms the base of Barcol-Air's philosophy. Barcol-Air BV is the only air distribution manufacturer in Europe that also supplies its own temperature control and automation systems. This unique "one source, one responsibility" concept gives value for money to the client and confidence to the design team.

Climate Laboratory

Barcol-Air's goal is to create an indoor climate which offers the optimum in terms of comfort. Barcol-Air's Climate Chamber and laboratory, in Purmerend in the Netherlands, is designed to help achieve and prove today's high levels of engineering required by comfort and energy conscious clients.

Years of experience

Our parent company, Barber-Colman, already had access to extensive testing facilities since 1938. Barcol-Air's Climate Laboratory complies with the latest standards such as ISO 7726 and ISO 7730. The Climate Laboratory, with a floor area of more than 80m² and 4 meters height, enables full scale installation designs to be tested. This gives the client complete confidence with regard to thermal comfort and efficient operation of the air distribution and control equipment before the actual installations phase is started.

Real time data acquisition

The Climate Laboratory is equipped with a highly advanced data processing system. This system is capable of presenting air temperature and velocity but also comfort parameters such as PMV, PPD and DR in a unique real-time "visual" picture of the test mock-up.

Acoustic Laboratory

Barcol-Air has built a reverberation room for pre-design sound testing of products and systems. This enables Barcol-Air to test products and systems for thermal indoor climate as well as sound production and absorption.

Demonstration room

Barcol-Air's demonstration room has been arranged to show the variety in air distribution products in combination with state of the art LON and BACNET controls based on Internet Technology.

Specials

For specific applications, beyond our standard program, Barcol-Air's engineers will design the solution for your requirement. Barcol-Air has a proven list of more than 2500 installed special applications.



**Induction VAV boxes,
for optimum comfort & energy efficient system**

Barcol-Air B.V.

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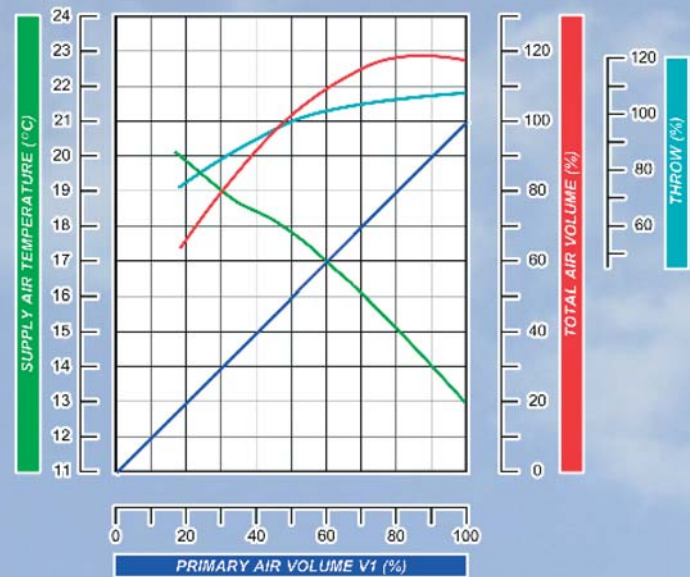
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Induction VAV Boxes Optimum indoor climate & Energy efficient system

Conventional VAV Systems have proven in the past to be very efficient in providing an optimal indoor climate. However the latest standards and requirements for energy efficiency and human comfort make it more and more difficult to design conventional VAV systems in new buildings. From an energy point of view, the minimum air volume should be turned down to the minimum fresh air requirements. However, these low air volumes could cause "cold air dumping" and lack of air movement in the room, resulting in occupants discomfort which results in less productivity.



Benefits of Induction VAV:

- Up to 100W/m2, without losing comfort
- Cooling, heating and ventilation done by one unit
- Perfect flush of the room, also with partial loads, no cold air dumping
- Little space required; small size boxes, relative (30%) small AHU's and ductwork due to 10-12°C primary air
- Standard diffusers with reliable performance can be used
- No humidity problems due to low primary air temperature
- Low noise level; terminal unit including sound attenuator
- Automatic air flow adjustment when loads are changing
- 1.25 mm galvanized steel casing prevents breakout noise and reduces risk torsion during installation
- Floccross air flow sensor, flow direction independent, centre averaging, amplified signal and very accurate ($\pm 2.5\%$)
- Possibility to pre-fit and pre-calibrate the controls (plug and play)
- Low maintenance, no fan, no filter, no fins in recirculated air

VAV Boxes with controls Compatible with any BMS system



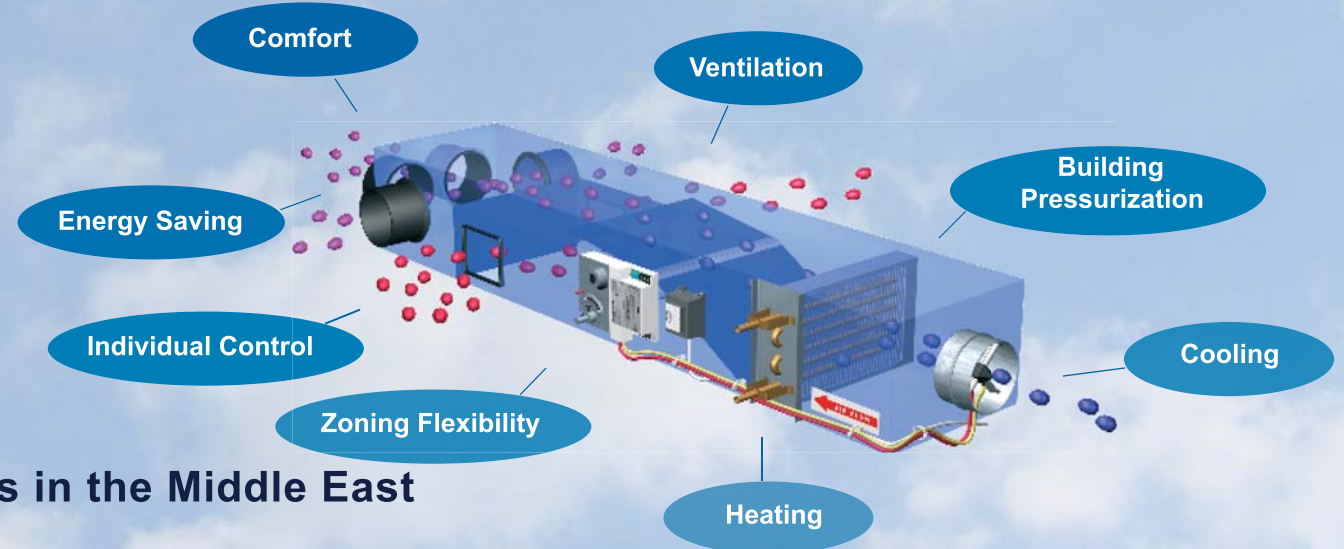
Bacnet (or) Lon controls (open protocol)

- Pre-fitted
- Pre-wired
- Pre-calibrated
- Pre-tested

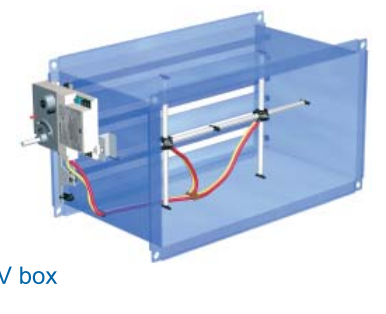
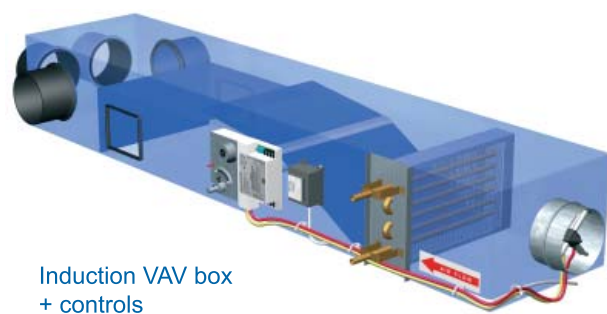
PLUG & PLAY
Works with any 3rd party BMS

Benefits of VAV boxes with Pre-Fitted Controls:

- Single source
- Single responsibility
- No delay in deliveries
- Easy integration with BMS
- Open protocol: Lon / Bacnet
- No coordination
- Single service responsibility



More than 20,000 installations in the Middle East



Financial Harbour Bahrain



Main Gate Building Financial Centre Dubai



Media City Dubai



Takreer Atheer Head Quarter Abu Dhabi



Flower Centre Dubai



Shangri-La Hotel Dubai



West Bay Office Tower Doha Qatar



Business Park Dubai