

*one source, one responsibility*

Barcol-Air (UK) Ltd manufactures air distribution systems and temperature control and automation systems.

## VARIABLE AIR VOLUME SYSTEMS

Variable air volume (VAV) systems provide fresh air for medium to large-sized buildings, with high cooling/heating load requirements. The systems can handle a diverse range of loads, have low turndown ratios, and run at high efficiency levels with low running costs. All are suitable for use with BMS and Lonworks system.

**Standard VAV terminals** suitable for rectangular (>1m<sup>3</sup>/s) or circular ducting. Integral sound attenuator. Large units are used for delivering fresh air to the floors and fan coil / chilled ceiling systems.

**Ceiling induction VAV terminals** are suitable for rectangular ducting, have internal sound attenuator and operate without a fan or filters. Can handle normal or low primary air temperatures. Operate as standard VAV units with heating and cooling, but can be used to induce void air to mix with the primary air. With no maintenance required, they can be used they can fully replace a fan-assisted unit as a smaller, cheaper and more flexible system.

**Fan assisted VAV terminals** are suitable for rectangular ducting and feature reheat coils and sound attenuator sections. They have 24-hour fans and filters, and with higher maintenance and running costs than other VAV systems, are suitable for high load areas with low temperature primary air.

## CONSTANT AIR VOLUME SYSTEMS

Constant air volume systems are used for medium to large buildings to supply regulated fresh air to multiple zones, as well as extract used air. They are primarily used as part of a fan coil system, to provide guaranteed fresh air volumes to specific fan coil units. They are pressure independent, can be placed anywhere in the system and used with any BMS.

## FAN COIL SYSTEMS

Type FC/FA units are low-noise, high efficiency fan coil units for use in all types of building and with all control types. Suitable for water-side and air-side applications, they can be configured in several ways depending on how the primary is to be supplied. Full information on sound levels, power levels, pressures, volumes and air outputs can be provided. Barcol-Air has also carried out energy analysis on the four most common systems configurations.

## PRESSURE CONTROL SYSTEMS

Pressure / air flow measuring systems allow flexibility in an air conditioning system, and are of particular value in multi-floor, multi-tenant buildings. The system's air flow and pressure can be precisely controlled throughout the building to suit occupancy levels, and the BMS can be programmed to show how much air has been used over any given time, allowing precise billing for each tenant.

## TECHNICAL DATA

### Variable air volume systems

All systems: close control to within 0.5-1° C

Standard terminals: primary air 12° C, at up to 11° C primary turndown ratio 50%.

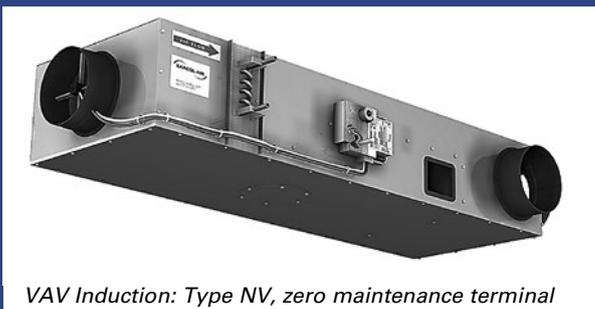
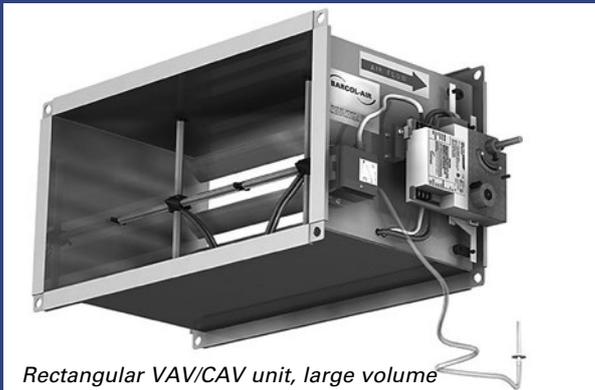
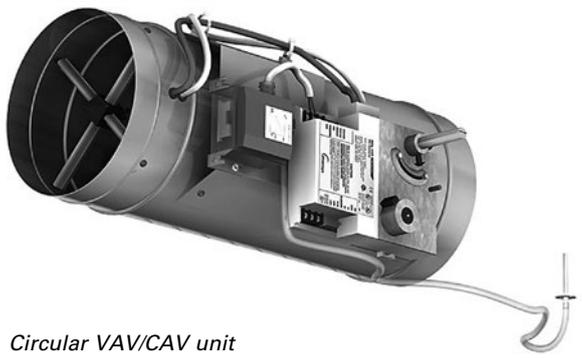
Induction terminals: primary air 8° C or above, primary turndown ratio 25%.

Fan-assisted terminals: primary air 7° C or upwards, at up to 11° C primary inlet turndown ratio 15%.

## TECHNICAL SUPPORT

Since the company supplies both air distribution and control and automation technology, its engineers have greater understanding of air conditioning systems as a whole, rather than only air distribution products.

Barcol-Air has full laboratory mock-up facilities for testing and demonstration



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