



Active Chilled Beam - ACB40

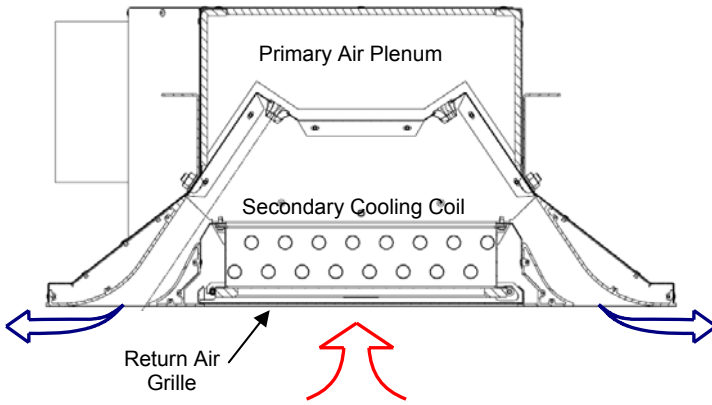
Dadanco ACB40 2-way Active Chilled Beams incorporate new patented technologies to deliver a breakthrough for higher energy efficiency perimeter and centre zone air conditioning using lower air quantities.

Dadanco Active Chilled Beams provide efficient, effective and whisper-quiet air conditioning for almost any application.



Dadanco Pty Ltd Participates in the ECC programme for Active Chilled Beams

Check ongoing validity of the certificate: www.eurovent-certification.com



ACB40 incorporates 2-way supply air discharge with one piece perforated return air grille and a single horizontal secondary cooling coil



Advantages of Active Chilled Beams

- Dadanco Active Chilled Beams supply cooling, heating and the outdoor air required for ventilation in the conditioned space.
- Compact dimensions and intrinsically smaller duct sizes offer real savings in ceiling space requirements for HVAC new construction and refurbishment projects.
- Fan power is dramatically reduced. The low primary air quantity is treated by the AHU and distributed at low pressure. The primary air is typically only 30% of the total air supplied by Dadanco Active Chilled Beams due to the use of efficient induction technology.
- Secondary air is induced over the secondary heat exchanger, delivering localized cooling, for NO FAN ENERGY REQUIREMENT
- ACB40 Active Chilled Beams provide 2-way supply air distribution for perimeter or internal zone applications
- ACB40 Active Chilled Beams are designed for 'Lay-In' installation in ceiling tile systems or in plasterboard ceilings with builders' ceiling frames
- ACB40 Active Chilled Beams deliver more cooling capacity using less treated air than any all-air system.
- Active Chilled Beams offer 2-stage capacity control through control of secondary water flow separate from primary air control.
- Noise radiated from Dadanco Active Chilled Beams is very low...
- Active Chilled Beams require minimal maintenance (no moving parts).

Application Data – ACB40

COOLING	40 to 200 W/m ²
LENGTH	Nominal 600 x 1200mm grille to suit standard suspended ceiling tile systems or plasterboard ceilings. Unit lengths from 600mm to 1800mm available on request for any application
FEATURES	Side or End entry primary air connections
HEIGHT	281mm
INSULATION	Thermal insulation for the primary air plenum is standard
GRILLE	2-way discharge supply air grille with one piece hinged centre return air grille
CONTROLS	ACB40 units can be controlled individually or in groups of units

APPLICATIONS:

Dadanco Active Chilled Beam ACB40 is suited for perimeter or internal zone in-ceiling installations in:

- Office Buildings
- HVAC New Construction & Refurbishment Projects
- Hospitals, Healthcare Facilities & Laboratories
- Schools and Institutional Buildings
- Airports

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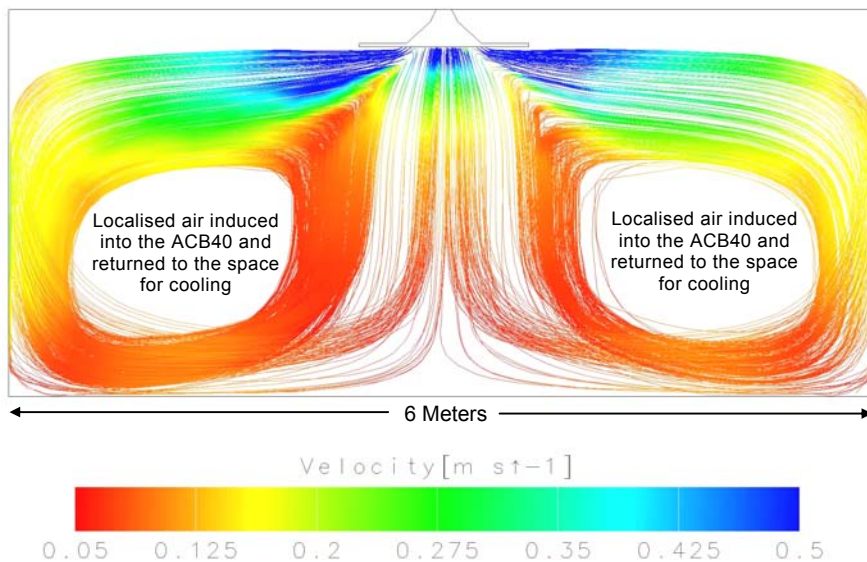
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Typical ACB40 Air Distribution

The 2-way discharge air flow characteristics of Active Chilled Beam ACB40, created by the induction of secondary air through the centre of the unit, produces a unique air flow pattern resulting in thorough purging of air in the occupied space compared to most conventional all-air diffusion characteristics.

Entrainment of secondary air from within the conditioned space reduces the potential for cross-contamination between different zones within the building.

Relatively low terminal velocities can be maintained in the conditioned space.



ACB40 2-Way discharge Active Chilled Beam efficiently purges air in the space

Eurovent Certified Product to Rating Standard EN15116

General Product Technical Data

ACB40 2-Way Discharge Active Chilled Beam				
	ACB40-0450	ACB40-1050	ACB40-1350	ACB40-1650
Nominal Grille Face Size:	600 x 600mm	600 x 1200mm	600 x 1500	600 x 1800mm
Nominal Active Coil Length	450mm	1050mm	1350mm	1650mm
Primary Air Range $\leq 125\text{Pa}$:	10 ~ 25 L/s	20 ~ 48 L/s	25 ~ 65 L/s	30 ~ 79 L/s
Nominal Cooling Capacity Range:	397 ~ 715 Watts	861 ~ 1616 Watts	796 ~ 1892 Watts	978 ~ 2353 Watts
Configuration:	2-Pipe only	2-Pipe or 4-Pipe	2-Pipe or 4-Pipe	2-Pipe or 4-Pipe

NOTE: Nominal cooling capacities based on 2-pipe cooling coil @ 24°C room air, 12°C primary air, 14°C Entering Secondary Water Temperature and Secondary Water Flow Rate to achieve average Leaving Water Temperature of 17°C ($\Delta T = 3^\circ\text{C}$) or minimum water flow = 0.03 L/s.

Primary Air Pressure $\leq 125\text{Pa}$.

Different performance results can be achieved for varying secondary water flow rates, entering water temperatures, primary air conditions and primary air pressures.

For selections at conditions and unit sizes other than those above please contact DADANCO for further assistance.

New Technologies

Dadanco's Starline™ multi-lobe high performance induction nozzles and superior fluid dynamics design are combined into Dadanco ACB40 Active Chilled Beams for improved performance and lower noise characteristics.

Rather than relying on natural convection as with passive chilled beams, Dadanco ACB40 Active Chilled Beams use primary air to deliver ventilation air and induce secondary room air through the secondary cooling coil within the unit, delivering enhanced performance in one simple ceiling mounted package.

All Dadanco Active Chilled Beams utilize modern Computational fluid dynamics (CFD) analysis in product design and development.

DISCLAIMER

While every effort is made to ensure the details contained herein are kept up to date, in the interests of ongoing product development, Dadanco reserves the right to alter the information without notice

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