



How do you display a breath of fresh air?

That was the challenge set by DADANCO when the company was contemplating staging a display at ARBS 2002 (March 25-27).

The peak industry expo was chosen to launch the company's latest development of its patented nozzle technology that greatly improves the performance of air conditioning systems. The new range of active plenum- type diffusers, marketed under the trade name INFFUSER, was leading the charge at a display that turned more than heads.

The stand featured rotating illuminated "cobras" as they were affectionately known at the exhibition that displayed the new technology in its best light.

Graphic design consultants Zynke Design, a partner of DADANCO for more than five years, designed and managed the development and construction of the display.

The cobras concept emerged as Zynke tackled the problem of displaying and illuminating the technology in such a way as to show what it looked like from the outside, as well as "the smarts" of what was going on behind the grille.

The ingenious design won DADANCO one of only three awards handed out for the best displays at the exhibition: Best Shell Scheme design for an 18sq.m and above area.



"We were inundated with visitors and enquiries, mostly generated by the visual appeal of the display, but that's what it's for, and because of that, we don't approach something like this lightly," DADANCO Managing Director Vladimir Petrovic said.

"We attach great importance to exhibiting at ARBS. It lets a company like ours reach a large proportion of the target market, and the impressions visitors leave with may turn to your benefit in the future."

At ARBS Dadanco releases new "drop-in" solutions to IAQ problems

ARBS 2002 saw the release of a new range of DADANCO INFFUSERS –active plenum- type diffusers that can more than double air distribution from existing air conditioning systems.

The INFFUSER provides a 'drop-in', cost-effective solution to air-conditioning problems affecting existing in-house systems. The product range is equally suited to new installations where it can be used to reduce design air quantities, resulting in reduced fan-operating power requirements.

DADANCO Managing Director Vladimir Petrovic said the INFFUSER series was the latest application of the company's revolutionary nozzle technology.

"DADANCO nozzle technology greatly increases secondary air entrainment and reduces primary air demands," he said.

"The INFFUSER range enables entrainment of secondary air back into the INFFUSER, effectively doubling the room air change rate and greatly improving indoor air quality (IAQ). More importantly, it allows us to use lower primary air supply temperature effectively and efficiently. *(continued next page)*

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"By replacing existing diffusers with DADANCO INFFUSERS, building managers can improve airflow and IAQ with very low capital expenditure and alteration to buildings, offices and HVAC infrastructure."

Mr Petrovic said a classic situation for contractors or maintenance engineers was where the infrastructure of an in-house system was sound and in good working order but was not dealing with current space loads because of old technology at the air distribution end.

"In the past this may have been dealt with by ripping out the system and installing a completely new one, which is an expensive and time-consuming exercise," he said.

"DADANCO INFFUSER technology uses the existing infrastructure to feed the high-efficiency active plenum diffuser units to increase entrainment of secondary air and reduce the demand on the supply system, without changing the existing ductwork or fans."

"Not only is this a cost-effective solution in terms of capital expenditure and system down time, it has the ongoing benefit of reducing energy costs over the system's operating life."

"Noise radiated from the INFFUSER range is very low, and will help the system achieve lower than recommended space noise levels."

Mr Petrovic said the INFFUSER solution could be applied to systems of all sizes, from single-floor to high-rise buildings.

For more information about DADANCO INFFUSER or DADANCO technology; phone (08) 8359 3326, e-mail info@dadanco.com.au, fax (08) 8359 2106, or hit www.dadanco.com

At last ... A Solution to Low-temperature VAV Applications.

Using conventional design concepts and new energy-saving technology, DADANCO has developed an enhancement for the VAV system that can be used in new buildings or for upgrading existing buildings suffering poor indoor air quality (IAQ).

DADANCO INFFUSER ENHANCED VAV system

DADANCO INFFUSER technology has been designed to make the most of variable air volume air conditioning design concepts to generate greatly improved airflow and lower energy consumption. DADANCO INFFUSER ENHANCED VAV system can be designed into a new building based on traditional design concepts or applied as a retrofit solution to existing buildings.

Less space – taller ceiling

The INFFUSER range of Active Plenum Diffusers requires significantly less primary air quantities at low temperature: approximately 40% of that required for operation of most traditional VAV or other all-air systems. Lower air requirement translates into smaller plant rooms – about half the usual size – and smaller ducts for on-floor air distribution. This means lower space requirements for mechanical plant rooms, and smaller ceiling spaces, allowing higher floor to ceiling dimensions.

More lettable area

Requirement to reticulate less air around the building is translated to smaller risers, shafts and

on-floor plant rooms. DADANCO INFFUSER ENHANCED VAV system therefore returns more net lettable area back to the building owners.

Low energy consumption – Five Star air conditioning

By lowering air reticulation requirements, DADANCO INFFUSER ENHANCED VAV system substantially reduces fan energy consumption and greenhouse gas emissions – by around 40% in most applications. Recent developments of the technology have generated energy savings of up to 68% in monitored tests.

Inffuser Solutions

DADANCO INFFUSER incorporates leading edge, patented, technology to deliver a breakthrough in air conditioning design.

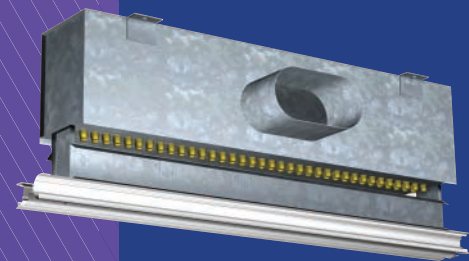
The INFFUSER provides efficient, effective and whisper-quiet air distribution for all areas of the building, supplying air movement that complies with the latest world's best practice air conditioning system design.

DADANCO INFFUSERS deliver supply air quantities of up to three times the volume of primary air supplied to the Inffuser, resulting in significant improvements in air distribution and enhanced design efficiency for modern HVAC applications.

INFFUSER solutions are suitable for all HVAC applications where

- a) lower primary air quantities are desirable without sacrificing air delivery to the space; or as,
- b) 'drop-in' replacements for problem areas that require improved air distribution not available from existing designs and HVAC infrastructure.

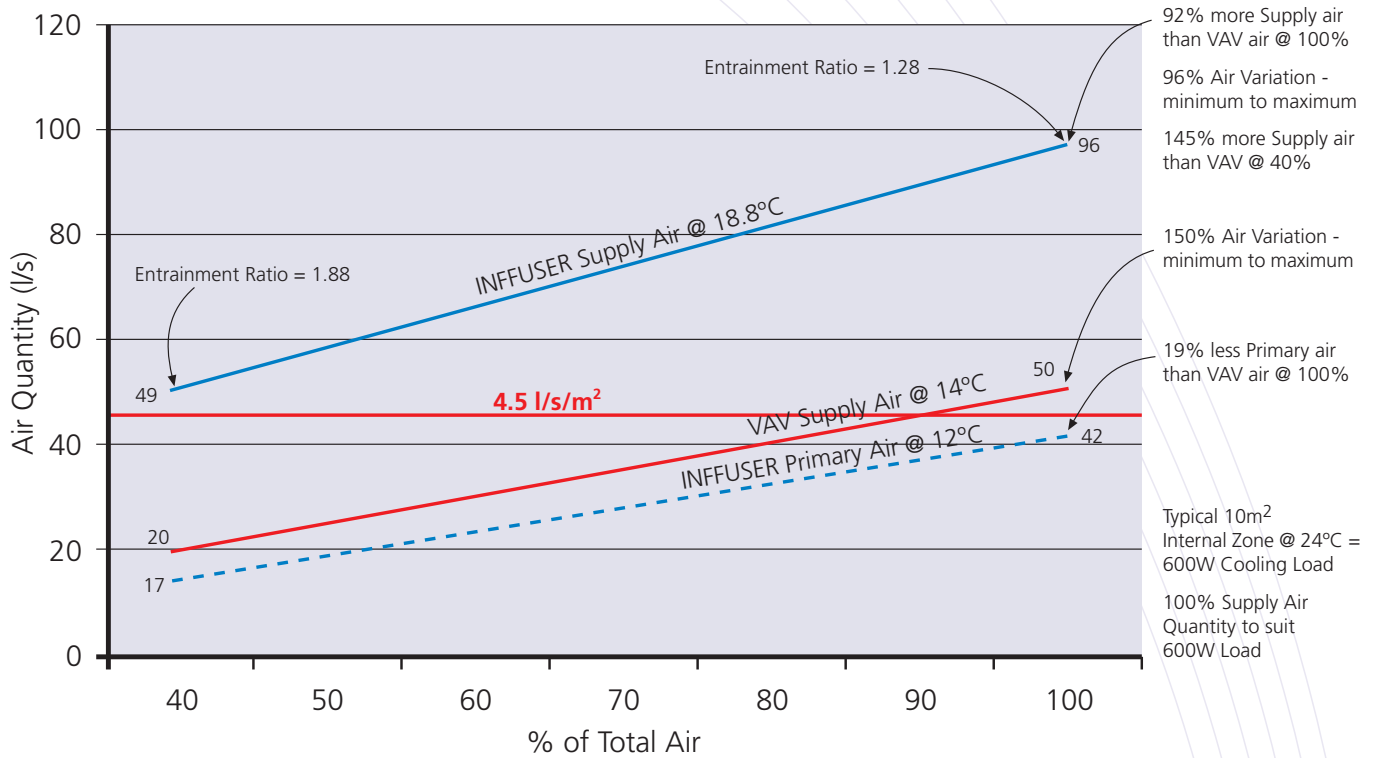
IDL20 Linear Slot Inffuser



2-way linear slot design with radiussed diffusion element for improved coanda effect and low noise.

Ideal for internal zone installations, and as an alternative solution to 'Moduline' VAV system replacements.

CONVENTIONAL VAV vs DADANCO INFFUSER ENHANCED VAV



Improved IAQ

The DADANCO INFFUSER range of Active Plenum Diffusers effectively more than doubles the room air circulation rate and greatly improves IAQ. Efficient diffuser face designs enhance the Coanda effect to better distribute air in the conditioned space.

Superior air circulation – happy tenants

DADANCO INFFUSER eliminates potential for dumping of cold air and increases air circulation rate, providing a better indoor environment for tenants. DADANCO INFFUSER ENHANCED VAV system eliminates inherent performance issues of most VAV systems – low air circulation at part load conditions.

Building Net Present Value goes up and up

Long-term benefits for building owners and developers using DADANCO technologies are realised on both sides of financial statements. Capital value is improved by having a higher quality building with more space to let, and with happier tenants, rental income is more secure. Expenditure is reduced though having a low maintenance system with reduced energy costs.

No maintenance

DADANCO INFFUSER has no moving parts and requires no maintenance.



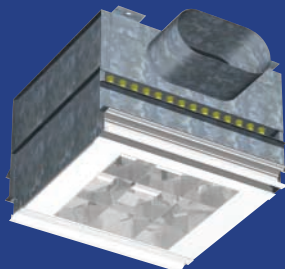
IDS45 / IDS60 Square Ceiling Inffuser

4-way conventional square louvre faced diffuser with high efficiency induction plenum.

Available in both 450 and 600mm square diffuser for T-bar 'Lay-in' and surface mount installations for rigid ceilings.

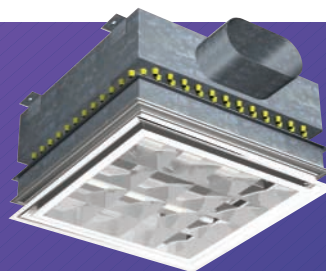
Conditioned return air ceiling plenum and return air from conditioned space variations.

IDLB2-60 2-way Light Air Boot



2-way discharge radslotted 600mm square half-tile lay-in diffuser built to accept many standard commercial lighting fixtures.

Designed to accommodate the most popular high efficiency T-5 & T-8 half-tile light fixtures. Also available with plain egg-crate and perforated-metal centre inserts where lighting is not required in the diffuser.

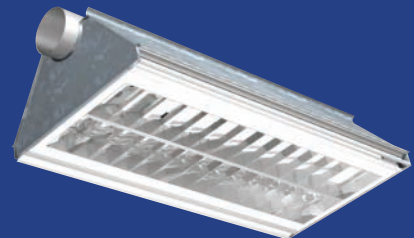


IDLB4-60 4-way Light Air Boot

4-way discharge radslotted 600mm square half-tile lay-in diffuser built to accept many standard commercial lighting fixtures.

Designed to accommodate the most popular high efficiency T-5 & T-8 half-tile light fixtures. Also available with plain egg-crate and perforated-metal centre inserts where lighting is not required in the diffuser.

IDLT1200 / IDLT1350 Full Tile Light Troffer



2-way discharge radslotted full-tile lay-in diffuser built to accept many standard commercial full-length lighting fixtures.

Available in 600 x 1200mm and 450 x 1350mm configurations to suit most common suspended tile ceiling grids.

Designed to accommodate the most popular high efficiency T-5 & T-8 half-tile light fixtures. Also available with plain egg-crate or perforated-metal centre inserts where lighting is not required in the diffuser.

Technology Upgrade Results in 5-star Rating

Colonel Light Centre, a 10- storey public service building in the Adelaide CBD, underwent an HVAC upgrade aimed at increasing system capacity and improving energy efficiency in line with the Cities for Climate Protection Scheme.



Colonel Light Centre, Adelaide

Project Scope:

- 1) Remove existing all-air system and replace with Dadanco induction technology solutions, retaining existing on-floor ductwork infrastructure and spatial constraints.
- 2) Increase system cooling performance by +20% to meet modern occupancy loads.
- 3) Increase energy efficiency and reduce HVAC operating costs.

Solution:

Replace existing system with a combination of Dadanco product solutions.

- STARLINE perimeter terminal units in building perimeter.
- Active Chilled Beam units in high-cooling load internal zones.
- INFFUSER active plenum diffusers in passive moderate load internal zones.

Result:

- 1) Cooling Capacity requirement satisfied with increase of over 20%.
- 2) HVAC air handling equipment reduced in size to easily fit existing plantrooms.
- 3) HVAC energy rating increased from 3 Star to 5 Star rating.

	Before	After
HVAC energy consumption	474 MJ/m ² annum	117 MJ/m ² annum
HVAC-related CO ₂ emissions	125kg CO ₂ /m ² annum	31kg CO ₂ /m ² annum
Greenhouse rating	3 Star	5 Star

This building was used as a case study to launch the "Building Greenhouse Rating Scheme" by former Federal Minister for the Environment & Heritage, Senator Robert Hill.

As a result of the successful refurbishment of the mezzanine level, the remainder of the building is to undergo similar refurbishment and system modernisation.

For more information, contact Dadanco or visit our website at www.dadanco.com

Major projects completed in Australia

Colonel Light Centre, Adelaide
State Library, Adelaide
CAPITA Building, Adelaide
CAPITA Building, Perth
JOHNSON & JOHNSON Building, Sydney
AUSTRALIA SQUARE, Sydney
MLC Building, Brisbane
CML Building, Sydney
AMP Building, Adelaide
TOGA CENTRE, Sydney
COLLINS WALES PLACE, Melbourne
Rail Centre, Brisbane
Nauru House, Melbourne
15 Adelaide Street, Brisbane
17 Castlereagh Street, Sydney
Queensland Performing Arts Centre, Brisbane
MLC Building, Brisbane
ST JAMES Building, Sydney
385 Bourke Street, Melbourne
Walsh Bay Pier 8 & 9, Sydney
Sydney Adventist Hospital, Sydney
Cadbury Schweppes IT Centre, Melbourne

Major projects completed overseas

United World College, Singapore
Robertson Walk Club, Singapore
Boots The Chemist HQ, Nottingham, UK
American School, Singapore
National Mutual House, Auckland, NZ
HILTON Hotels (Colombo - Sri Lanka)
University of Edinburgh, Scotland
Raffles Hotel, Singapore



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