



### SAVING MOTHER EARTH

The burning of fossil fuels is the main contributor to Global warming. Buildings consume 50% of all this energy produced and the conventional air conditioning in turn takes up to 70% this energy produced. Become an energy smart building today by adopting our sustainable & innovative solutions.

The Passive Displacement Ventilation System is a highly cost effective way to cool your buildings. Not only does PDV substantially reduce your operating cost, maintenance is kept low and the system is virtually noise free.

Call us now for an obligation free consultation.

#### For Sales Enquires:

Address:

Block 164 Kallang  
Way, #04-33  
Singapore 349248

Telephone: +65 6425 5282  
Facsimile : +65 6841 3565

Email: [sales@twenty80.sg](mailto:sales@twenty80.sg)



twenty80 Pte Ltd



*Passive  
Displacement  
Ventilation*

# Sustainable solutions that work for your business.

INNOVATION IS THE ABILITY TO SEE CHANGE AS AN OPPORTUNITY

We are a niche player who gives our clients focused attention.  
We seek to better understand our clients' needs & to deliver professional and timely services

## CFD SIMULATION

Air flows downward in the cavity and floats up by stack effect. This cools the space and temperature can be lowered to 20°C.

One of our most prized innovations is the Passive Displacement Ventilation system (PDV). PDV presents itself as an opportunity for building owner and operators to cool their buildings at substantially reduced electricity cost without the hefty re-construction and capital costs.

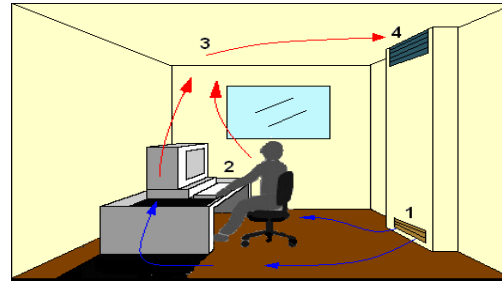


Illustration of Passive Displacement Ventilation System

## A tomorrow's Air Conditioning System

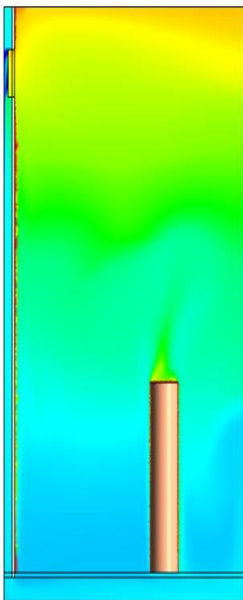
### How It Works

PDV relies on the natural convection of heat transfer without the need for mechanical fans to deliver the chilled air to the end user. Chilled air produced by the cooling coils is caused to sink to the floor and as the heat load in the room is removed, the air becomes warmer. By taking advantage of the natural buoyancy of warm air, stratification is achieved across the height of the room.

### Benefits

Due to the relatively low velocity of the supply air, undesirable draft is eliminated, leading to greater occupant comfort. The absence of mechanical fans implies that acoustics standard can be greatly enhanced and maintenance cost kept at a minimum. Most importantly, the stratification of air achieved across the height of the room would result in a reduction of cooling load leading to smaller equipment sizes and lower operating costs.

Temperature  
(Plane 1)  
27.0  
24.7  
22.5  
20.2  
18.0  
[C]



## OUR TRACK RECORDS

- ✓ Bodynits @ Changi
- ✓ BSD @ Tradehub 21
- ✓ 3M Woodlands (Singapore)
- ✓ ANDES Appraisal @ Tradehub 21
- ✓ Furama Riverfront Hotel



## TESTIMONIAL

### 3M WOODLANDS (SINGAPORE).

*With the Passive Displacement Ventilation System, there is no need to use mechanical fans to supply the cold air. Savings generated can be channeled towards enhancing facilities and benefiting staff.*

Mr. KB TAY  
Associate Engineer

"The ultimate test of man's conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard."

— **Gaylord Nelson**  
former governor of Wisconsin, co-founder of Earth Day