

# PARASOL™ - Application Guide

Comfort modules for conference rooms and offices



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# A solution for every need

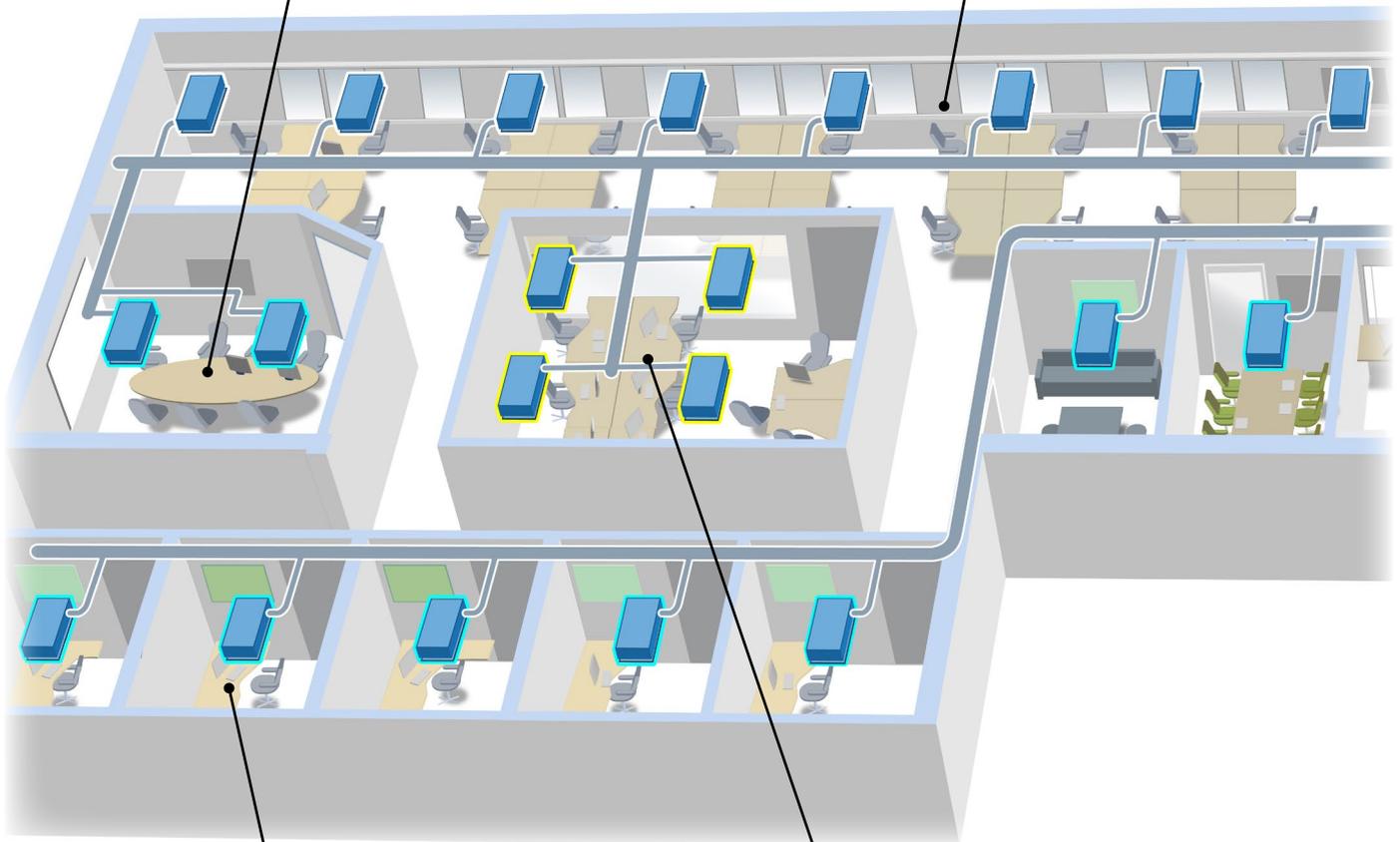
The figure below is an example of how you can use different Parasol products in the same building to meet the different needs and requirements. Selection of products for the different rooms can vary depending on the criteria.

## Medium-sized conference room with medium occupancy

System type: Demand-controlled airflow  
Product: ADAPT Parasol x 2  
(1 master and 1 slave)

## Open-plan office with high occupancy

System type: Constant airflow  
Product: PARASOL x 8



## Office with low occupancy

System type: Demand-controlled airflow  
Product: ADAPT Parasol x 1 per room

## Large office with medium occupancy

System type: Demand-controlled airflow  
Product: PARASOL VAV x 4



PARASOL



PARASOL VAV



ADAPT PARASOL

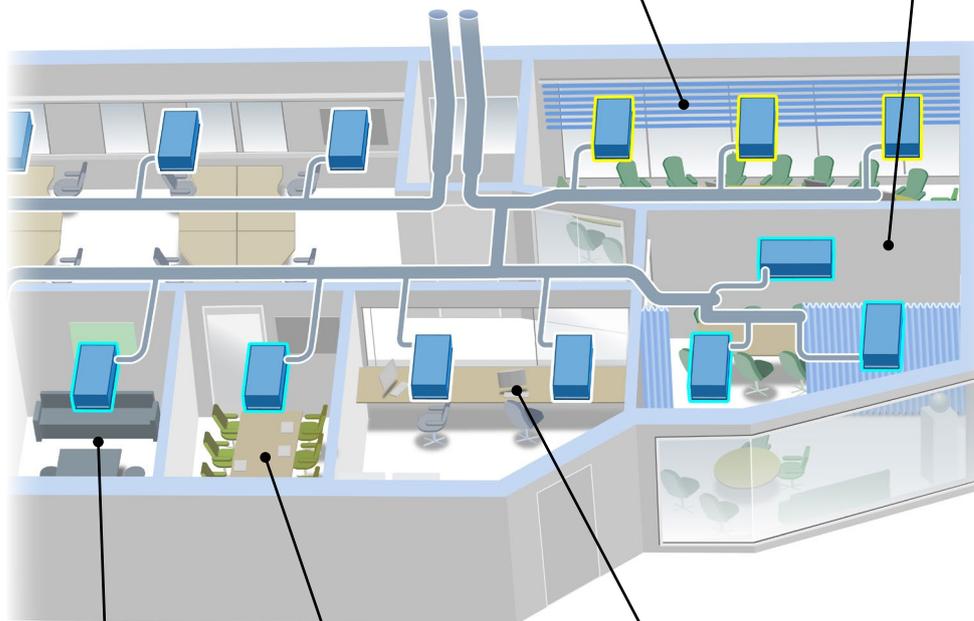
# A solution for every need

**Large conference room with extensible partition wall and medium occupancy**

System type: Demand-controlled airflow  
Product: ADAPT Parasol x3 (Master)

**Large conference room with medium occupancy**

System type: Demand-controlled airflow  
Product: PARASOL VAV x 3 (1 master and 2 slaves)



**Manned reception with high occupancy**

System type: Constant airflow  
Product: PARASOL x 2

**Small conference room with medium occupancy**

System type: Demand-controlled airflow  
Product: ADAPT Parasol x 1 (Master)

**Small conference room with low occupancy**

System type: Demand-controlled airflow  
Product: ADAPT Parasol x 1 (Master)

# PARASOL

## Technical solutions

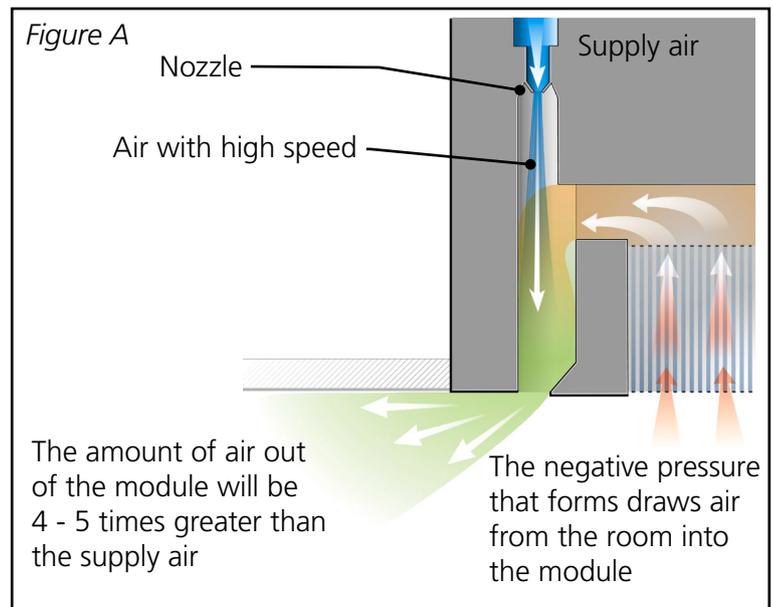
	PARASOL	PARASOL VAV	ADAPT Parasol
<b>Type of ventilation system</b>			
▶ Constant airflow (CAV)	✓		
▶ Demand-controlled airflow (VAV/DCV)		✓	✓
<b>Flexible air distribution with high comfort</b>			
▶ Four-way air distribution with low air velocity in the occupied zone.	✓	✓	✓
▶ Low noise level thanks to well-optimised nozzles and via a central fan.	✓	✓	✓
▶ ADC (Anti Draught Control) on all four sides of the product.	✓	✓	✓
▶ Adjustable air volume via nozzles on all four sides of the product.	✓	✓	✓
▶ Demand-controlled variable airflow regulation through the integrated air damper.		✓	✓
<b>Easy installation and start-up</b>			
▶ For easy installation in various types of suspended ceiling systems, the product can be supplied in different modular dimensions, adapted to different markets and suspended ceiling systems.	✓	✓	✓
▶ Easy installation, reduced risk of damage to the product and a better working environment thanks to a compact unit.	✓	✓	✓
▶ Complete product with factory fitted components and accessories.	✓	✓	✓
<b>Flexibility for future conversions</b>			
▶ The unit's work airflow range can be changed using the adjustable nozzles.	✓	✓	✓
▶ Control equipment can be retrofitted on each unit for individual control of a large room to be converted into several separate smaller rooms.	✓	✓	
▶ Individual control is available on each unit if a large room needs to be converted into several separate smaller rooms.			✓
<b>Adapted control system</b>			
▶ Temperature regulation on a product level via control equipment, for example, Conductor W1 or Luna (accessory).	✓		
▶ The temperature and airflow regulation via control equipment Conductor VAV (accessory).		✓	
▶ The temperature and airflow regulation via integrated control equipment.			✓
▶ Master - Slave connection, maximum 8 units (all units in the room must be of the same size and have the same nozzle setting).		✓	
▶ Master - Slave connection, maximum 10 units (all units in the room can be of a different size and have a different nozzle setting).			✓
▶ Can be connected to a BMS system; for example, WISE, Swegon's own system for demand-controlled products.		✓	✓
▶ Airflow control and reporting of airflows on a room level to BMS system.		✓	
▶ Airflow control and reporting of airflows on both unit and room levels to BMS system.			✓
▶ Integrated control equipment including temperature sensor, setpoint selector switch and occupancy sensor.			✓
<b>Energy saving through automatic operating modes</b>			
▶ Automatic and variable regulation of airflows for the operating mode Absence, Occupancy and Max. flow		✓	✓
▶ Automatic regulation of temperature levels for different operating modes; Absence, Occupancy, Holiday, Night cooling (via Modbus RTU) and Emergency mode (via Modbus RTU)		✓	✓
<b>Models and sizes</b>			
▶ Variant A: Supply air with waterborne cooling.	✓	✓	✓
▶ Variant B: Supply air with waterborne cooling and heating from a coil.	✓	✓	✓
▶ Variant C: Supply air.	✓		
▶ Variant X: Supply air with waterborne cooling from a coil and electrical heating.	✓		✓
▶ 600 x 600 mm and 1200 x 600 mm in a normal flow model.	✓	✓	✓
▶ 600 x 600 mm with PlusFlow (high flow model).		✓	✓
▶ 1200 x 600 mm with PlusFlow (high flow model).	✓	✓	✓
<b>Accessories</b>			
▶ Control equipment CAV including temperature sensor and setpoint selector switch.	✓		
▶ Control equipment VAV including temperature sensor and setpoint selector switch.		✓	
▶ Carbon dioxide (CO <sub>2</sub> ) sensor		✓	✓
▶ Air quality (VOC) sensor			✓
▶ Valves and thermal actuator for cooling and heating	✓	✓	✓
▶ Condensation sensor	✓	✓	✓

# Uses natural motors

This is how PARASOL uses the natural motors

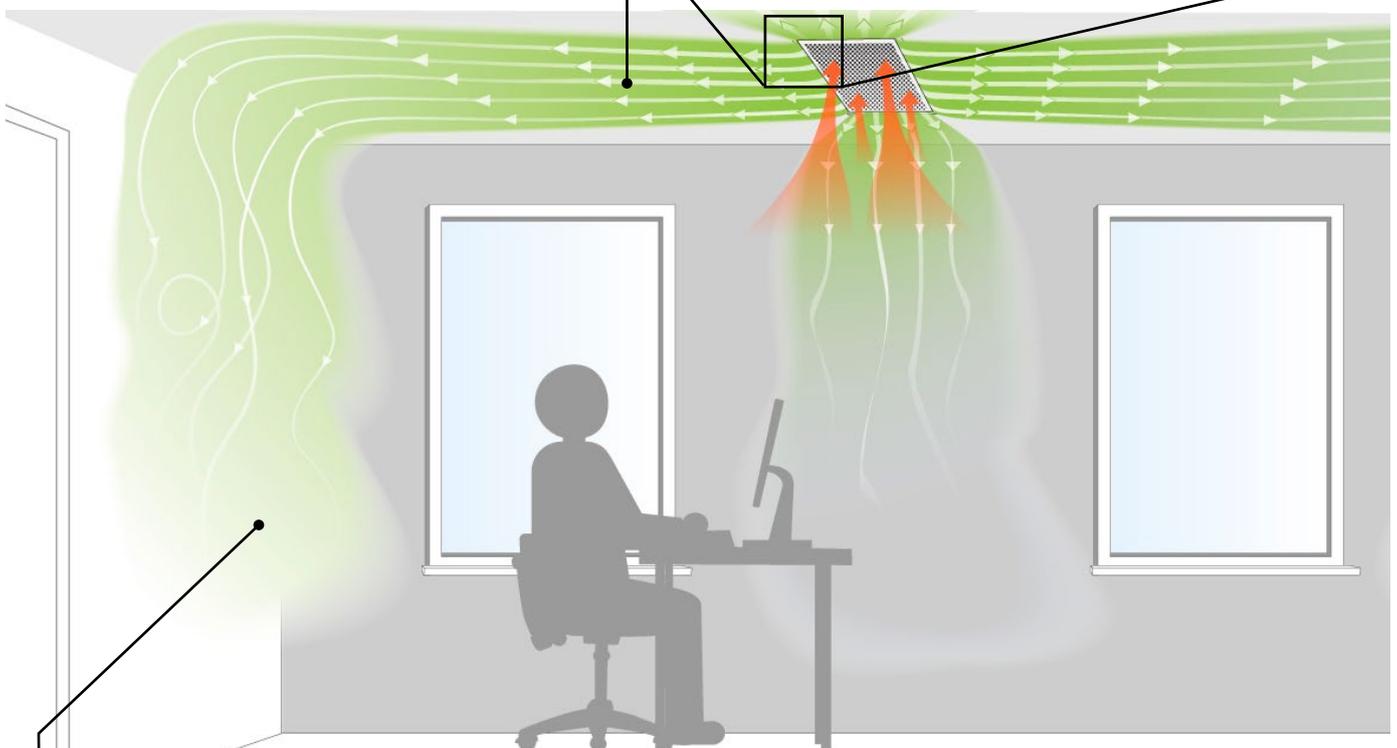
## The induction principle and Coanda effect

The figure below illustrates the induction principle (*Figure A*) and the Coanda effect (*Figure B*).

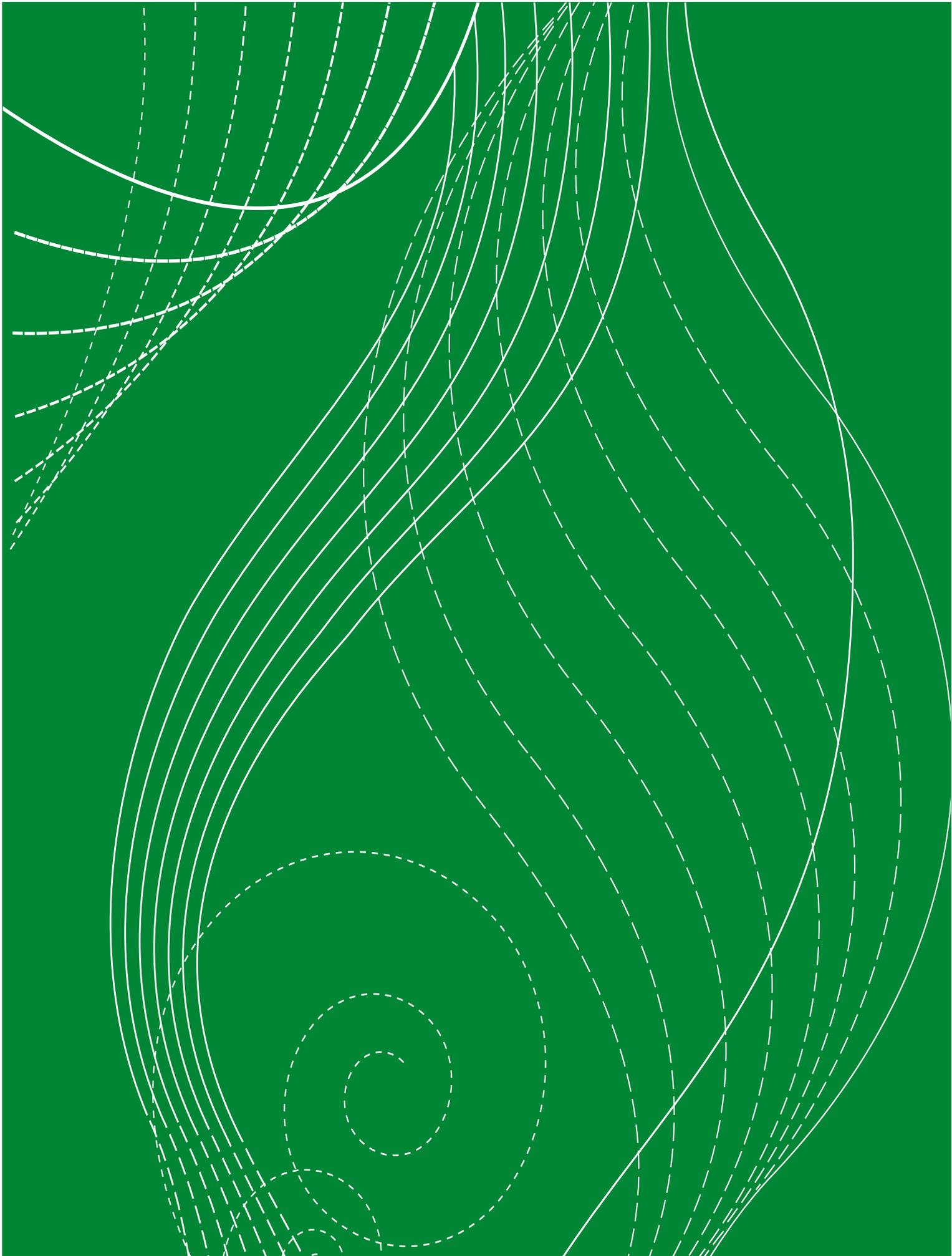


*Figure B*

Thanks to the negative pressure, the air follows the ceiling instead of falling straight down when it leaves the module



When the air reaches the occupied zone, it has attained a temperature and speed that reduces the risk of draughts



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