

+ *DECENTRALISED VENTILATION SYSTEM CUSTOMISABLE*



The smart ventilation solution
Innovative system for controlled natural ventilation

- » Optimal indoor climate in rooms and buildings
- » Can be integrated into already existing master control systems
- » Bus communication between drive and controller
- » Convenient operation using innovative u::Lux buttons

INTELLIGENT + CONVENIENT:

Our ventilation innovations open up fresh perspectives

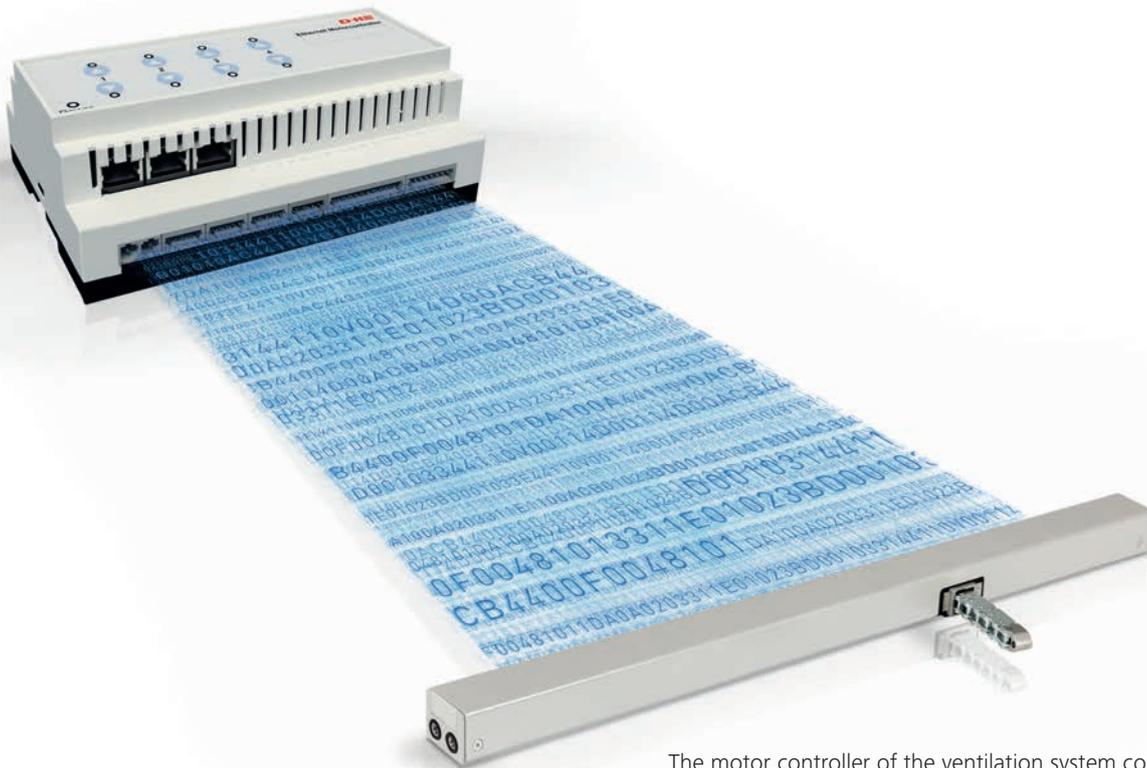
The state-of-the-art alternative to mechanical ventilation

Fan on or window open? We've all wondered this at least once before, and when you're thinking in terms of building ventilation, it really pays to ask this question. This is because there are many hidden advantages to natural ventilation with thermal technology that works like a natural motor, allowing warm, stale air to travel outside via controllable window drives. In other words, this method is more important than most people realise.

After all, you should open your windows regularly, and not just due to lack of oxygen. Pollutants, humidity and fine particles can affect indoor air negatively. The consequences: Poor air causes lack of concentration, headaches and mildew on the walls. Fine particles – which are smaller than one hundredth of a millimetre – lodge themselves in the pulmonary alveoli and can cause cardiac and respiratory illnesses.

The advantages at a glance:

- » Optimal air exchange and a healthy indoor climate even outside of operating times
- » Prevention of damage from humidity and mould formation through continuous dissipation of humidity
- » Night-time cooling of the building's heated thermal masses as needed in the summer months
- » Prevention of overly dry and poor-quality air, which frequently causes health problems in the case of mechanical ventilation (sick-building syndrome)
- » Lower investment costs, significantly lower costs for system technology
- » Lower costs for maintenance and repairs (maintenance-free technology)
- » Reduced energy consumption (going without active cooling and fans)
- » Shorter construction times thanks to fast installation and commissioning
- » Significantly lower space requirements (no distribution shafts or ducts)
- » Lower CO₂ emissions



The motor controller of the ventilation system communicates with the CDC-0252 chain drive, newly developed by D+H, using ACB technology, and forwards information to the user.

The principle of controlled natural ventilation

Our drives open your windows fully automatically. This generates an exchange of warm, stale indoor air with fresh outdoor air. The temperature differences between indoor and outdoor air, the thermal uplift indoors and the wind patterns surrounding the building maintain a continuously healthy, comfortable and pleasant atmosphere in your rooms.

Studies show that air that is rich in oxygen and low in pollutants promotes health and improves quality of life. Whether in hospitals, schools or office spaces: D+H makes room for creativity, productivity and health.

Ventilation made easy: The new system from D+H

The new ventilation system from D+H has been completely re-designed. In the opinion of experts, it is the perfect solution for natural ventilation.

The system consists of five components. One of them is the weather station. It records environmental information and can evaluate up to 11 meteorological data points. Rain and wind sensors are built into the system. There are u::Lux buttons located within the rooms that are connected to the system via Ethernet. Upon request, these buttons provide information about the indoor temperature, room air humidity and carbon dioxide content.

It is possible for you to use these two elements of the decentralised system to create your own custom ventilation strategy. Do you want the windows to close if the wind blows from a certain direction or at a certain force or if it rains? At what CO₂ content level do you want fresh air to start coming in and what sunlight intensity should cause the blinds to close? Do you only want to ventilate in the morning and evening? How far do you want the windows to open for this? You can use our SCS software to configure all of this on the laptop.

CUSTOMISABLE:

Elements suited to any requirement.

1 Ventilation controller



The ventilation controller processes all signals and information from the weather station, u::Lux buttons and the motor controller for effective and efficient ventilation.

2 Motor controller



The motor controller executes the commands of the controller and initiates the opening and closing of the windows, flaps and skylights with perfect positioning. A digital SMI interface can also be used to operate blinds and rolling shutters.

3 Power supply unit



The perfect power supply can be selected with a high-performance power supply unit as needed.

4 u::Lux buttons

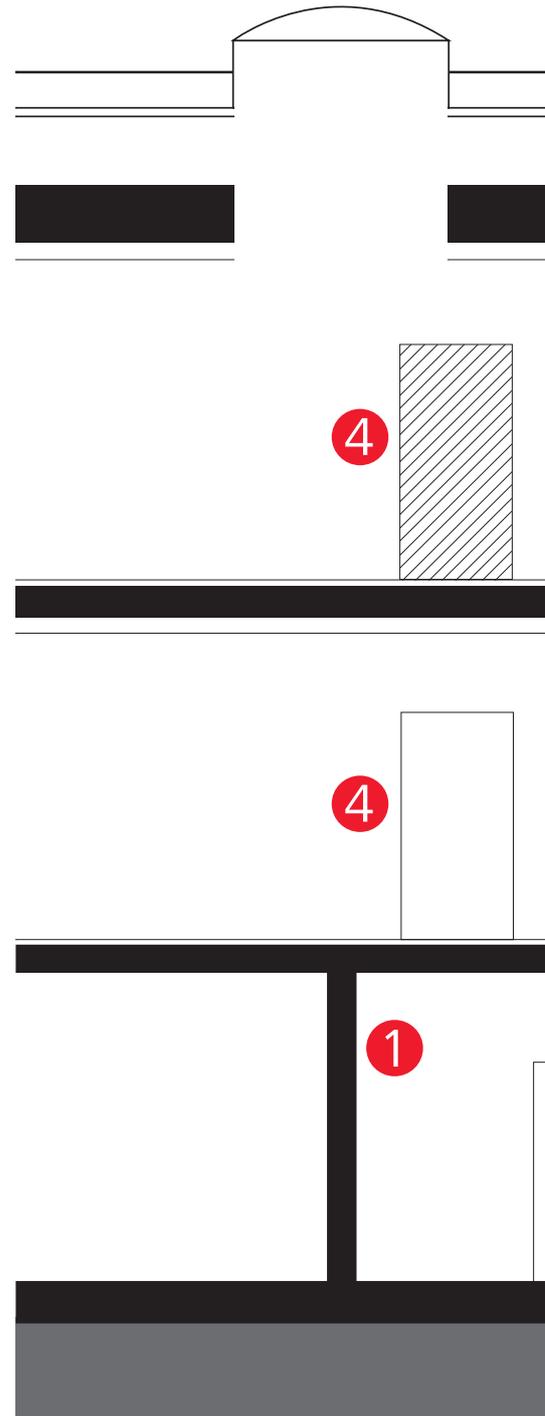


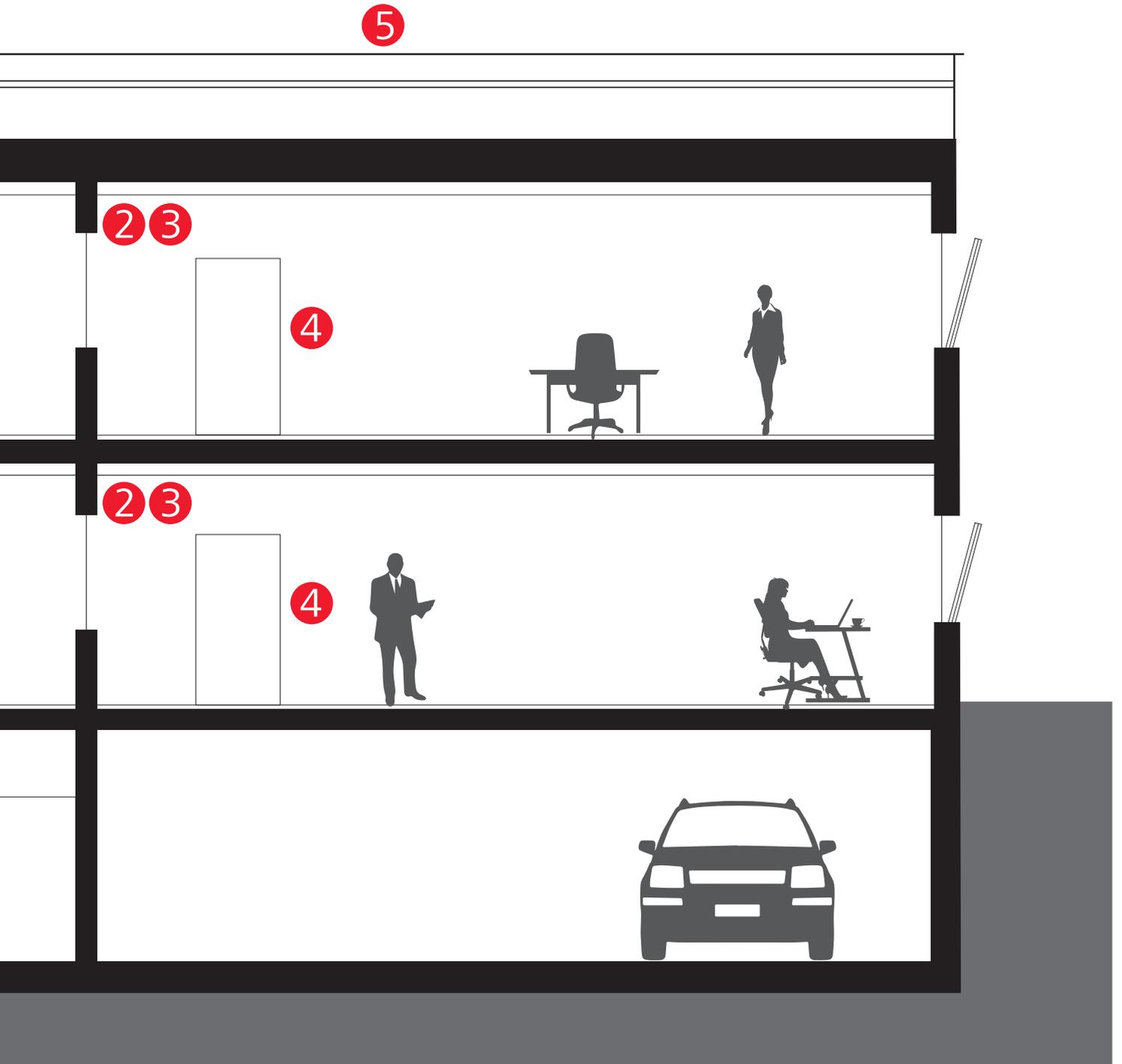
Tactile buttons and a high-resolution display: Using the add-on modules, the u::Lux button records indoor climate data. The user can configure limit values using an intuitive interface and operate the controller by pressing buttons.

5 Weather station



Providing the determined external values: The weather station is located outside of the building and evaluates up to eleven meteorological climate data points. It forwards this information to the ventilation controller.





Ventilation controller

The ventilation controller evaluates all signals and information and forwards corresponding commands to the motor controller. It is available in four different designs.



VCU-C1:

Designed as a compact device, this controller is the only one that does not use a motor controller to control the drives.

- » Powered via 230 V AC
- » Connection of sensors possible
- » Ethernet interfaces for u::Lux buttons and service laptops
- » RS485 interface for the connection to the weather station
- » Up to three zones can be controlled separately

VCU-M1 (20 zones):

- » Operation and configuration using web visualisation / smartphone
- » Up to 20 zones can be controlled separately
- » Powered via 24 V DC
- » Ethernet interface for motor controller
- » RS485 interface for the connection to the weather station
- » KNX communication possible

VCU-M1 (40 zones):

- » Operation and configuration using web visualisation / smartphone
- » Up to 40 zones can be controlled separately
- » Powered via 24 V DC
- » Ethernet interfaces for motor controllers and service laptops
- » RS485 interface for the connection to the weather station
- » KNX communication possible

VCU-MT71:

- » Ventilation controller with integrated touch panel for monitoring and convenient operation of the ventilation system directly on-site
- » Operation and configuration using web visualisation / smartphone
- » Up to 40 zones can be controlled separately
- » Powered via 230 V AC
- » Ethernet interfaces for motor controllers and service laptops
- » RS485 interface for the connection to the weather station
- » KNX communication possible

Components



Motor controller

The motor controller for activating window and blind drives is available in both 24 V and 230 V.

- » Ethernet connection for u::Lux buttons and additional motor controllers
- » Digital and universal inputs and outputs
- » Electric fuse protection of the motor connections
- » Drive current per connection: 24 V version 10 A / 230 V version 2.5 A
- » Connection of SMI and SMI LoVo for blinds are integrated (only 24 V version)
- » Connectible drives: Polarity-changing drives, BSY+ drives, ACB drives (only 24 V version)



Power supply unit

- » Powered via 230 V AC
- » Output: 24 V DC, 20 A
- » Installation type: TS35 top hat rail



u::Lux buttons

Intuitive operation of the ventilation controller

- » Zone-independent activation / control of windows and blinds
- » Configuration of the limit values for CO₂, temperature and air humidity
- » High resolution 2-inch colour display
- » Ethernet interfaces for connection to the ventilation system as well as additional u::Lux button
- » Colour variants: Black and white for the frame and display
- » Add-ons for measuring humidity, temperature and CO₂ available if required



Weather station

Supplies the controller with up to eleven meteorological data points.

- » Wind speed / direction
- » Sun position / brightness
- » Temperature
- » Rainfall
- » Relative / absolute humidity
- » Air pressure
- » GPS data



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