



CAR PARK VENTILATION SYSTEM | HC PS

Car parks are often part of multi-story residential buildings. In addition to a healthy indoor climate, safety is a significant concern in car parks. During daily use, our energy-efficient ventilation and detection systems ensure a safe and comfortable environment.

In the event of an emergency, such as a fire, our systems quickly alert occupants and facilitate their safe evacuation from the car park. Additionally, ventilation can be adjusted providing the fire brigade clear visibility on the fire.

A properly designed and certified car park ventilation system - when correctly installed, commissioned, tested, and maintained - guarantees the safety of individuals in this car park, both during regular use and in case of an emergency.

- Ventilation to remove harmful exhaust fumes
- Heat and smoke management in case of a fire
- Detection of CO, NO₂ and LPG
- Fire detection and evacuation systems
- Comprehensive control systems
- In-house assembly, installation, service & maintenance
- Renovation by replacing with up-to-date & energy-efficient systems
- CCV certification in accordance with applicable standards

HC PS | CAR PARK VENTILATION SYSTEM - T +31 (0)416 650 075 | WWW.HCPS.EU

STAIRWELL PRESSURISATION SYSTEM | HC TS

In the event of a fire in multi-story residential buildings, it is crucial to provide a smoke-free escape route through which building occupants can safely exit the premises.

With the HC TS stairwell pressurisation system, escape routes (and stairwells) are kept smoke-free in the event of a fire. The system combines three disciplines into one system: fire safety, air distribution and control technology.

Stairwell pressurisation systems are required for high rise buildings > 70 meters and mid-rise buildings if the escape route deviates from regulations. In both cases, the certified pressurisation system serves as an equivalent solution to the Dutch Building Decree or Bbl (Building Regulations).

At HC TS, the pressurisation systems are entirely designed, installed and programmed by our in-house team. As a result, HC TS serves as a comprehensive supplier of stairwell pressurisation systems. By applying modern techniques, fully integrated safety systems are offered, ensuring operational reliability.

- Smoke-free stairwells in high rise and mid-rise buildings
- Highly flexible and fully programmable
- Complete solution from design to service & maintenance
- Fully autonomous system
- Adapting and certifying existing pressurisation installations
- CCV certification in accordance with applicable standards

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HC GROEP & STACKED HOUSING

OUR SOLUTIONS FOR MID AND HIGH RISE BUILDINGS



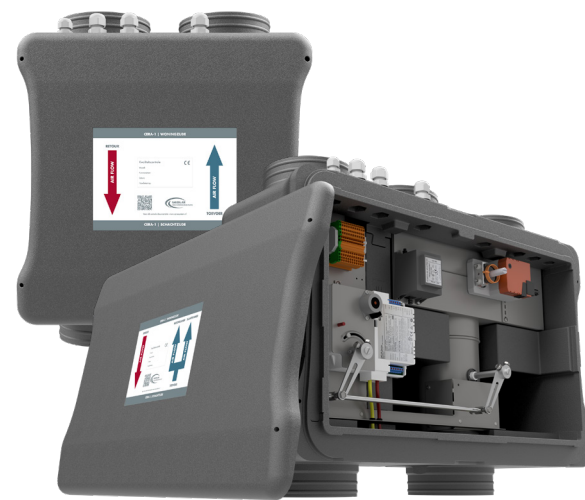
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CERA VENTILATION SYSTEM | BARCOL-AIR

CERA - Central Energy Recovery Airflow - is a total ventilation concept especially designed for multi-story residential buildings. The system autonomously provides the legally required amount of fresh air based on local CO₂ measurements within the dwelling. It also manages the extraction of indoor air. The core component of the system is the CERA unit, which is installed in the individual homes.

Depending on project requirements, the units can be configured as 1- or 2-zone units. These units are collectively connected to a central air handling unit with a heat recovery unit located on the roof or in the plant room. This design ensures that the system "behind the scenes" is both maintenance-free and extremely quiet. The fans, filters and heat recovery unit are all integrated into the central air handling unit. This configuration results in the CERA ventilation system using 30% to 50% less energy, compared to conventional systems.

- Automatic CO₂-based regulation
- Additional demand control with pulse switches and humidity sensors
- Maintenance-free and low-noise system
- Compact plug & play installation
- Available for airflows of 275 m³/h, 400 m³/h and 750 m³/h
- Available as 1- and 2-zone variant
- Central balanced ventilation (type D, supply & return in balance)
- Central heat recovery and decentralised controls
- Minimal energy consumption (f-ctrl 0.4 for CERA 2-zone system)
- Beneficial for BENG calculations (energy performance requirements for buildings)
- Suitable for both new construction and renovation projects



BARCOL-AIR | AIR DISTRIBUTION & CONTROLS - T +31 (0)299 689 300 | WWW.CERA-SYSTEEM.NL

CONTROL TECHNOLOGY | HC RT

By connecting the CERA-units to a building management system (BMS), remote monitoring application via a bus cable is possible. Resulting in a solution that will quickly pay for itself during operation.

For multi-story residential buildings, HC RT offers a standardised integrated solution for all components within the CERA ventilation system. This includes the Liberty air handling unit and all components in the air ducts (such as fire dampers, measurement and control stations, CERA units and coolers/reheaters). All sensors for air quantity, temperature, humidity, CO₂ levels, smoke detectors etc., are integrated into our control technology solution.

Building owners can easily monitor the actual energy performance of their building based on the collected data. Maintenance teams can use the visualisation to identify faults.

In addition to component visualisation, maintenance intervals can be set and function retention tests and reports can be automated. The HC RT standard control technology solution enhances the benefits of the CERA total ventilation concept: "maintenance-free behind the scenes."

- Remote adjustment of (CERA) software and setpoints
- Air handling unit monitoring and ventilation system energy performance
- Visualisation and fault notifications of components
- Entry of component maintenance intervals
- Automated function retention tests and reporting



HC RT | SYSTEM INTEGRATOR - T +31 (0)299 689 300 | WWW.HCRT.NL



1. CONTROL PANEL | 2. AIR HANDLING UNIT | 3. STAIRWELL PRESSURISATION SYSTEM | 4. RETURN VALVE | 5. HYGROSTATE | 6. CO₂-SENSOR
7. SWITCH | 8. FIRE DAMPER | 9. CERA-UNIT TYPE 2 | 10. CERA-UNIT TYPE 1 | 11. SUPPLY VALVE | 12. CAR PARK VENTILATION SYSTEM

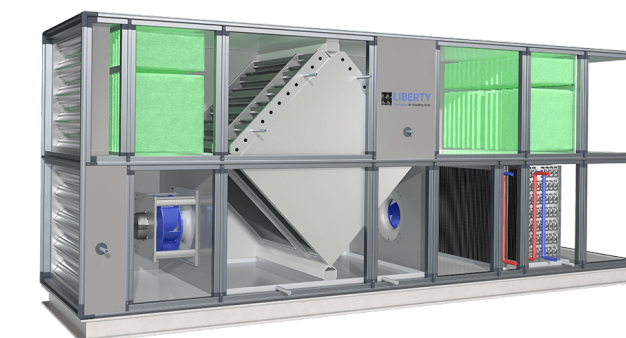
LIBERTY AIR HANDLING UNIT | ROSENBERG

In the Netherlands, Rosenberg manufactures fully composite air handling units of the Liberty type, with the cabinet wall construction meeting the highest corrosion resistance category: CX Extreme.

This unique, fully composite cabinet wall construction results in low maintenance costs and a low weight, making the Liberty air handling unit particularly suitable for use in multi-story residential buildings.

The sustainable, energy-efficient and unique CERA design is characterised by the high efficiency of both the heat recovery unit and the fans, with exceptionally low internal resistance.

- Very low life cycle cost due to the unique CERA design
- Payback period of less than 2 years, complete report available
- The best possible BENG calculation
- Very low maintenance costs for the air handling unit
- Corrosion resistant cabinet walls
- Low roof load due to lightweight composite construction
- Includes a bypass valve for cooling in the summer nights
- Complete, plug & play delivery, thanks to integration with the HC RT control technology solution for the CERA system
- Includes functional testing with warranty direct from our Rosenberg manufacturing facility
- Very sustainable Dutch product



ROSENBERG | FANS & CLIMATE TECHNOLOGY - T +31 (0)30 274 8282 | WWW.ROSENBERG.NL

FIRE SAFETY | INTERLAND TECHNIEK

With the introduction of the new NEN-EN 6075:2020, future requirements will also be placed on smoke passage resistance (SPR). To meet these SPR requirements, fire dampers must not only be thermally controlled (e.g., using a 72°C fusible link) but also be able to respond to (cold) smoke. This necessitates an adaptation of the current range of fire-resistant components in a ventilation system.

Most fire dampers can be equipped with a spring return motor (or magnet control) to meet Sa/S200 requirements. Smoke detection is typically carried out with smoke detectors in the room; a smoke sensor in the duct is not necessary but can serve as an alternative. Often, smoke detectors control the fire damper via the fire panel.

Motorised fire dampers are usually connected to a controller and/or building management system.

QUICK AND EASY INSTALLATION

Within the HC Groep, we provide products that comply with this new standard. We have a range of circular fire dampers with a 60-minute fire resistance rating. These are equipped with a thin damper blade and come standard with a special mounting collar.

This ensures a very straightforward and time-saving installation since the necessary opening does not need to be fireproofed by a specialised company.



INTERLAND TECHNIEK | CLIMATE CONTROL - T +31 (0)416 317 830 | WWW.INTERLANDTECHNIEK.NL