

Ventilation and smoke extract solutions for data centres



F400 smoke
exhaust



High-performance
in airtightness
and insulation



Motorised
hatch



Energy
efficiency





SODECA provides industrial ventilation, smoke exhaust, staircase pressurisation, indoor air quality improvement and climate control solutions using air curtains for commercial and industrial applications.



SODECA has grown by seeking the best way forward, always innovating and providing the best customer service, while respecting the environment and remaining committed to energy savings. It would therefore like to be a part of the change and focus on a sustainable model.

The environmental management system of the production plant at SODECA's headquarters is certified to **ISO 14001 by Bureau Veritas**, thereby endorsing its environmental performance and the continuous improvement resulting from measures implemented to mitigate the environmental impact of its activities. At SODECA, sustainable solutions are integrated into its business strategy by using clean energy in production, reducing emissions and working to reduce waste generation.





SAFETY FOR CRITICAL INFRASTRUCTURE: DATA CENTRES AND BESS

The growth of data centres and BESS is increasing ventilation and safety requirements.

The high concentration of power generates significant thermal loads and, in the event of a fire caused by high temperatures or battery failures, facilities must be equipped to limit damage, protect critical infrastructure and help ensure service continuity.

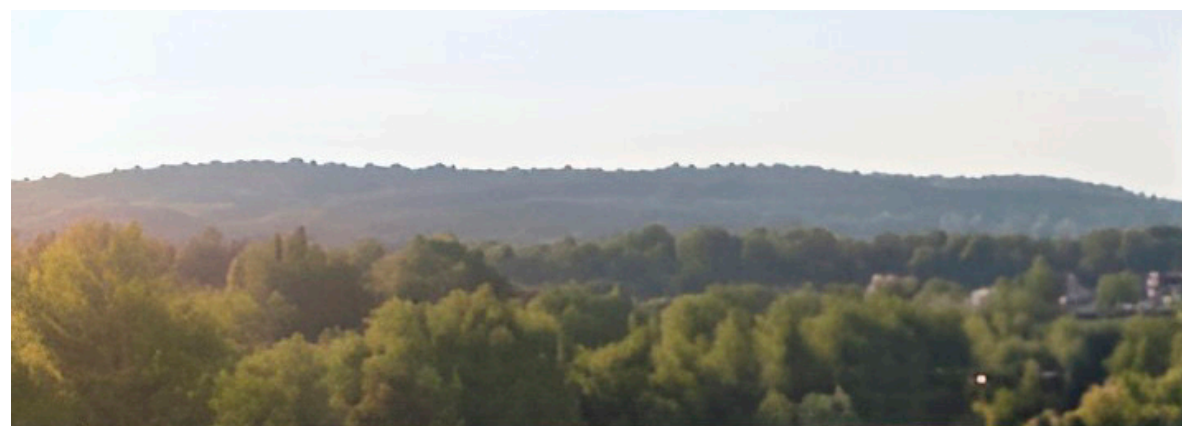
For these demanding infrastructures, SODECA offers ventilation solutions and F400-certified smoke exhaust units, designed to protect the infrastructure and help ensure service continuity in the event of a fire.





Smoke exhaust in data centres requires solutions that ensure not only safety in the event of a fire, but also a high level of airtightness during normal operation.

F400 units with motorised hatches reduce air leakage and energy losses, helping to maintain optimal conditions within the facilities. In the event of a fire, the hatches open automatically to allow smoke exhaust.



THE IMPORTANCE OF SMOKE EXHAUST AT DATA CENTRES

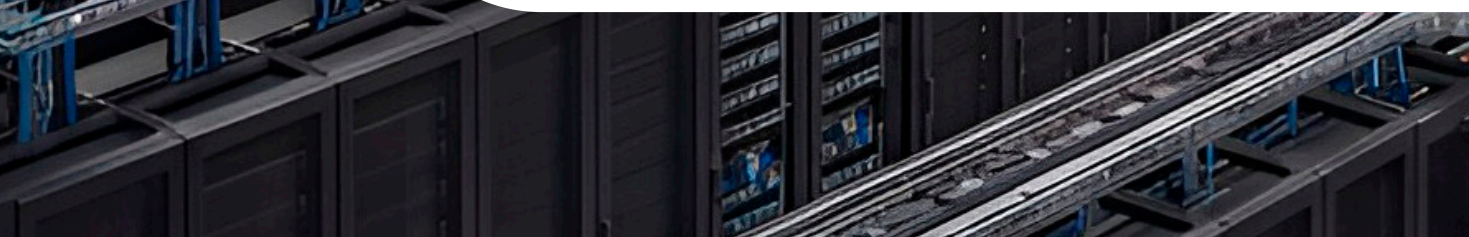
Ensuring safety in data centres is essential for to protect critical infrastructure and ensure service continuity in the event of any incident.

Ventilation solutions for smoke exhaust with motorised hatches extract smoke and combustion gases, limit their spread and maintain safer conditions for emergency services.





In the event of a fire, smoke is one of the main risk factors in a data centre, given that it reduces visibility, hampers emergency response efforts and can compromise critical equipment and infrastructure long before the flames reach other areas of the facility.



SMOKE EXHAUST SOLUTIONS WITH MOTORISED HATCHES

The high concentration of power and the continuous operation of data centres make adequate ventilation essential to maintain optimal operating conditions.

Energy efficiency

Optimising airflow reduces energy consumption and operating costs, thereby improving the overall performance of the data centre

F400 certification

Tested and certified for smoke exhaust in the event of a fire, in accordance with standard EN 12101-3



Motorised hatch

The hatch remains closed, ensuring thermal insulation, and opens automatically when the smoke extract system is activated

Airtightness

Completely airtight units to prevent thermal leakage from the interior of the building

Thermal insulation

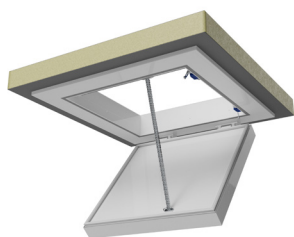
It reduces the risk of condensation and protects the system against changes in temperature and humidity

VENTILATION SOLUTIONS

F400-certified ventilation solutions in accordance with EN 12101-3 for daily ventilation and smoke extraction in the event of a fire in data centres.



THT/WALL-F



FRIDGE/FLAP



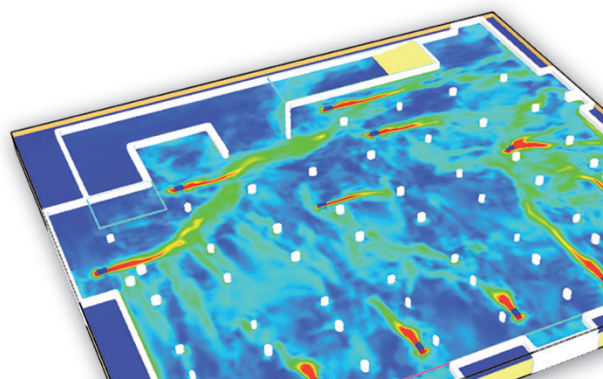
HATCH/HP



THT/CL

CFD simulations

CFD simulations to analyse the behaviour and spread of smoke in the event of a fire, allowing the effectiveness of the smoke exhaust system in data centres to be assessed.



RISK OF EXPLOSION AND GAS ACCUMULATION



In addition to the risk of fire, there are hazards such as battery overheating and the potential generation of flammable gases, including hydrogen leaks in certain storage technologies.

Data centres are increasingly incorporating battery-based systems which, under certain conditions, can create potentially hazardous atmospheres.

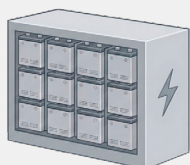
The accumulation of gases in confined spaces can create explosive atmospheres, making it essential to have ventilation and extract systems capable of ensuring effective air renewal and preventing hazardous concentrations.

Battery systems



UPS

Uninterruptible power supply

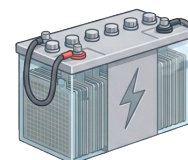


BESS

Energy storage

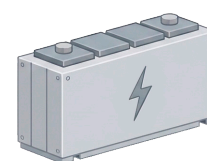
Lead-acid batteries

They can release **hydrogen** during charging or as a result of a fault.



Lithium-ion batteries

A **thermal runaway** can cause the release of flammable and toxic gases, increasing the risk of fire and, under certain circumstances, explosion.

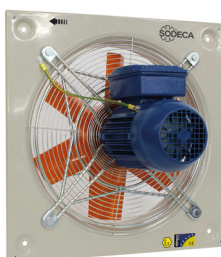


VENTILATION SOLUTIONS FOR EXPLOSIVE ATMOSPHERES

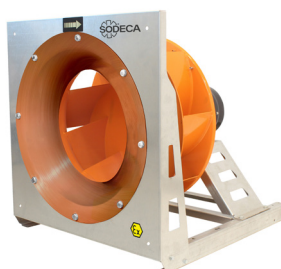
ATEX-certified ventilation solutions in accordance with EN 14986:2017 for safe use in Zone 1 (Category 2) and in compliance with Directive 2014/34/EU.



HCDF



HC/ATEX



PF/ATEX



HCT/ATEX



CMP/ATEX



CMR/ATEX



THT/CL/ATEX

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