

HVAC for Heavy Industry





How HVAC can in industrial enviro

Enabling Wellbeing for people

Halton is passionate about indoor environments. With 50 years of experience, the company offers business-enhancing solutions for safe, comfortable, and energy-efficient environments for companies that value the wellbeing and productivity of their customers and personnel.

HVAC can play a vital role in improving safety by providing good thermal conditions and protecting against hazards in the production process.

Quality

Designing and selecting equipment should always be done according to the operating environment. The HVAC installation should always maintain the designed performance level. New technologies that are utilizing automation enable a supervision and monitoring system that adds value to the operators. Type approvals from the major classification societies and worldwide references are solid proof about the product quality. A reliable manufacturer has also paid attention to certifications like ISO 9001, ISO3834-2, ISO 14001, OHSAS 18001, ATEX, CE, and EAC.

Our way of doing things

- Halton production emphasizes tailoring, which means that solutions can be adapted for each customer's specific needs
- Own manufacturing in 9 countries
- Flexible, high-tech production with certified welders and short delivery times
- Comprehensive project management
- Testing and simulation services
- The well-established but flexible company, offering long-term business relationships and after-sales service

maintain safety environments

Halton's Expertise

Protecting people against hazards in demanding industrial environments

Gas leakage in production

Through a well-managed HVAC, it is possible to consider the following things.

1. Securing the Temporary Refuge room with a good HVAC system
 - Creating overpressure for the TR room to restrict the gas leakage into the room. This can be done with an intelligent HVAC solution.
2. Isolating the TR room and the HVAC ducting in case of gas detection
 - Knowing the available reaction time in case of gas leakage
 - Fast closing of the HVAC ducting with an efficient shut-off damper is mandatory
 - Low leakage of a shut-off damper is a necessity

Blast protection

The building should be protected against a possible blast to avoid blast progression into the building via the HVAC system. It is highly important to define the possible forces of the blast, choose the correct and sufficiently sized blast protection equipment, and install the equipment correctly into the HVAC system.

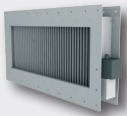
Fire risk

A fire can ignite during the production process even if all precautions have been taken. Fire and gas dampers installed in HVAC ducts have a significant role in preventing the progression of fire, smoke, and gases. As smoke and other toxic gases can be more dangerous than the fire itself, it is important that the chosen fire damper also prevents smoke and gas from spreading.

HVAC solutions for Heavy Industry

Designed for demanding environments

Droplet separators



Halton droplet separators are designed for demanding applications where reliability and easy installation are essential. The separator vanes are designed to restrict the passage of moisture, salt spray, and rainwater e.g. into HVAC systems or engine room intakes.

Compatible with:

- Air handling units
- Production and support processes
- Gas turbines, power generation, and back-up power
- Power and heat plants

Outdoor louvres

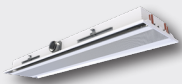


Halton outdoor louvres are effective in preventing rainwater, snow, and objects e.g. from entering the ductwork. Louvres can be used as a primary air intake or as an exhaust air diverter in engine or machine rooms and HVAC equipment rooms for air management.

Compatible with:

- Air handling units
- Production and support processes
- Gas turbines, power generation, and back-up power
- Power and heat plants

Chilled beams



Halton chilled beams are well suited for office and other facilities where silent operation and next-level air distribution comfort are preferred. Chilled beams combine air supply with cooling or heating. The main principle of the beam is the induction of room air caused by the supply air. The operating costs of the system are substantially lower than with any mechanical HVAC solution.

Compatible with:

- Offices and other facilities

The central vacuum cleaning system



Halton central vacuum cleaning system (CVC) improves indoor air quality significantly by removing detrimental micro-dust efficiently from indoor spaces without circulating it back to the indoor air as traditional vacuum cleaners do. The various benefits of the CVC system are not just promoting sustainability, but contributing to employee satisfaction, wellbeing, and performance as well.

Compatible with:

- Offices and other facilities
- Production and support processes

Diffusers



Halton's product range contains a large variety of diffusers for various applications from commercial buildings to industrial spaces. Halton diffusers are available for ceiling, floor, and wall mounting. The plenum category covers diffuser and grille plenums that ensure the proper function of the terminal unit. Products are openable and cleanable, promoting a hygienic environment.

Compatible with:

- Offices and other facilities

Grilles

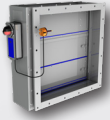


Halton's product range contains a large variety of grilles for various applications and all installation cases in production and office spaces. Halton grilles are openable and cleanable, promoting a hygienic environment.

Compatible with:

- Offices and other facilities
- Production and support processes

CE-marked fire and smoke dampers



Halton CE-marked fire dampers, smoke control dampers, and fire valves are designed specifically for industrial spaces. Halton FCE fire dampers are CE-marked according to EN 15650:2010 and tested according to EN 1366-2 standard. The FCE fire dampers are the first robust multiblade type fire dampers with an EI60-S fire rating and up to 3 mm thick frame. The FCE fire dampers are used to prevent fire and smoke spreading through ducting.

Compatible with:

- Regular buildings
- Production and support processes

ATEX approved dampers



Halton offers a wide range of ATEX approved dampers: BDH, BLD, BRD, FCE, FDA, FDB2, FDH, FDL, FDO, FEX, PV-KK, UTA, UTG, and UTT.

Compatible with:

- Production and support processes
- Power and heat plants

Fire and gas dampers



Halton fire and gas dampers prevent the spread of fire, smoke, and gas between fire zones. Halton Marine A0(A60) fire damper range includes the most widely sold marine fire and gas damper in the world as well as the new FDA fire and gas damper that has been designed specifically for industrial facilities.

Compatible with:

- Offshore platforms
- Production and support processes
- Oil refineries

Blast dampers

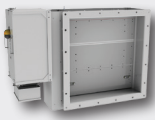


Halton blast dampers are designed for demanding industrial facilities to protect the ventilation systems against destructive blast forces. In case of an explosion, the pressure wave closes the blades and stops the wave from entering the building. By doing so, blast damper protects components, equipment, and human beings inside the building.

Compatible with:

- Regular buildings
- Production and support processes
- Power and heat buildings

Gastight dampers



Halton gastight dampers are available as rectangular and circular models with different materials, pneumatic and electrical actuators, and performance options. Halton UTA damper fulfils the requirement of leakage class 3 (EN1751:2014) for size $\geq 150 \times 150$ mm. Classification of casing leakage EN 1751 class C. UTA dampers can be supplied with connection pieces for round duct.

Compatible with:

- Production and support processes
- Power and heat plants

Non-return and pressure relief dampers

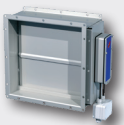


Halton BLD non-return dampers prevent backflow and protect the fan and other system components against pressure. Halton BRD pressure relief dampers regulate overpressure in designated areas and vent excess pressure e.g. in applications of gaseous fire fighting systems.

Compatible with:

- Production and support processes

Shut-off dampers



Halton shut-off dampers are used to shut off air intake and exhaust ducts. Dampers can also be used to balance airflow rates even in high-pressure ductwork. Different tightness classes are available. Closed damper leakage classes are available from 1 to 4 (EN1751:2014) according to the need.

Compatible with:

- Production and support processes
- Gas turbines, power generation, and back-up power
- Power and heat plants

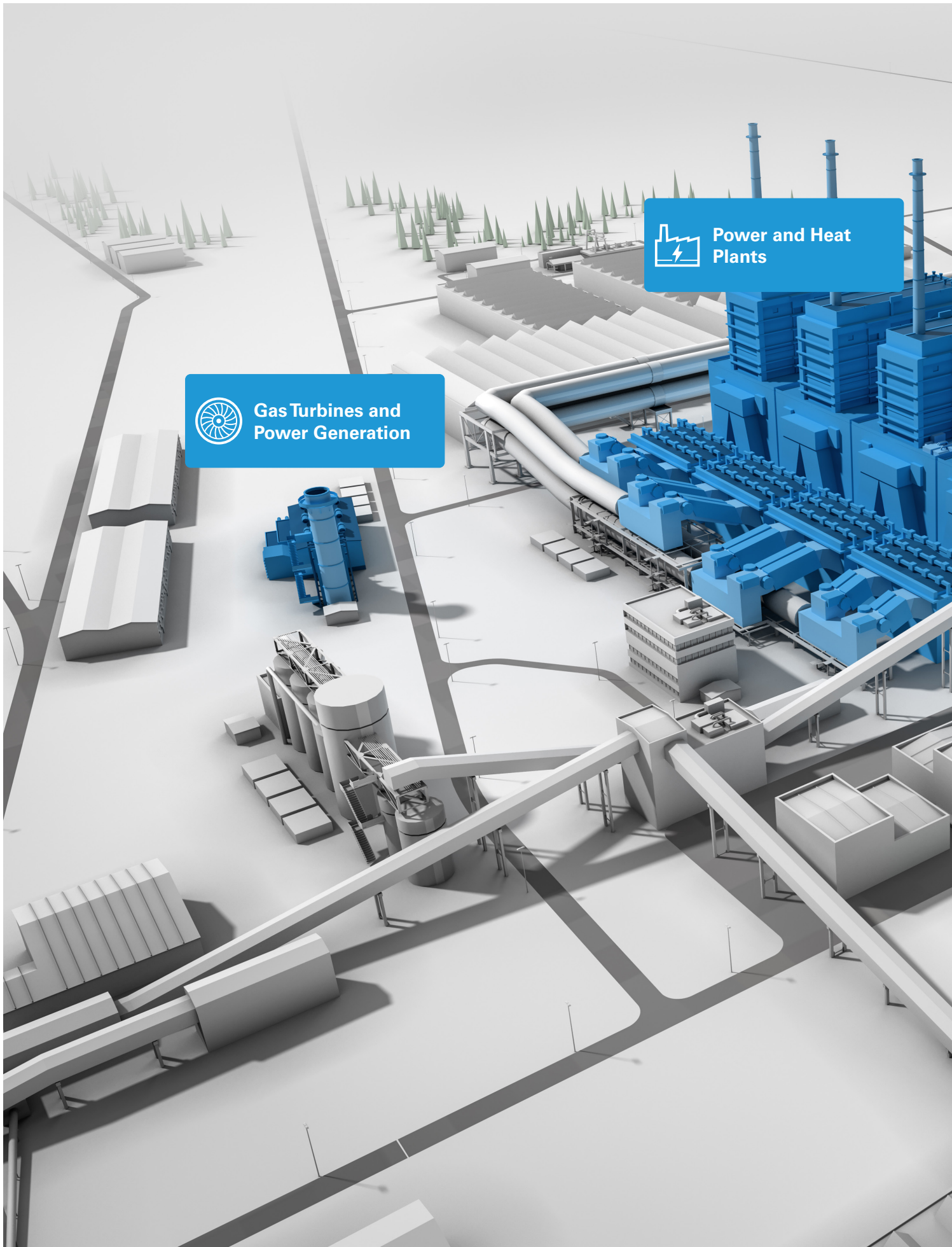
Balancing dampers




Halton balancing dampers are used to adjust or control airflow rates even in high-pressure ductworks. When necessary, dampers can be used to shut-off the ventilation ducts. The product category covers different tightness classes. Available in different materials and frame thicknesses.

Compatible with:

- Production and support processes



 **Gas Turbines and Power Generation**

 **Power and Heat Plants**



Production and Support Processes

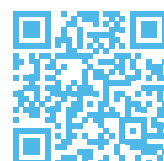


Offices and Other Facilities



Air Handling Units

Visit our 3D world and learn more about the products at heavyindustrysolutions.halton.com



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About us

Halton Marine

Halton Marine, one of the world's leading suppliers of marine HVAC, develops, manufactures and markets reliable, high-quality ventilation solutions specifically designed for different types of ships, offshore oil & gas, heavy industry and offshore wind. Our track record includes deliveries to over 150 major cruise ships, 200 oil & gas projects and 100 naval vessels.

Halton Group

Halton Group specializes in indoor environment solutions, ranging from public and commercial buildings to foodservice facilities. Founded in Finland in 1969, Halton operates today in over 35 countries around the world, with annual sales of €220 million and over 1600 employees. The company has production facilities in Brazil, Canada, China, France, Finland, Germany, Malaysia, the United Kingdom, and the USA.