HVAC for Nuclear Industry



Enabling Wellbeing

Superior HVA Nuclear Indust

Enabling Wellbeing for People

Halton is passionate about indoor environments. With over 50 years of experience, the company offers business-enhancing solutions for safe, comfortable, and energyefficient 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. In this brochure, we present an overview of Halton's superior HVAC products and solutions for Nuclear Industry applications.

Flamgard Calidair is now Halton Wales

Flamgard Calidair is now Halton Wales. The management of Flamgard Calidair agrees and is confident that the arrangement and close cooperation between the companies significantly enhance the business of both organizations as the natural progression to bigger and better things to come.

By reassessing global trends and the development of key markets, Halton has refocused it's strategies in order to maximise positive impact in sustainability and wellbeing, with a particular focus on helping customers and stakeholders to achieve netzero objectives.

Halton has been supplying products to a number of UKAEA and AWE facilities for several decades and has over 40 years of experience in supplying the nuclear industry.

C solutions for ry applications

Halton's Expertise

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.

Halton's HVAC dampers are specifically designed to meet the stringent requirements of nuclear applications, ensuring adherence to the highest standards of safety, reliability, and durability in even the most demanding environments.

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 ISO9001, ISO3834-2, ISO14001, ISO45001, ATEX, CE, and EAC.

Our way of doing business

- 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
- Comprehensive project management & documentation capabilities
- Testing and simulation services
- The well-established but flexible company, offering long-term business relationships and after-sales service
- Holding up-to-date product certifications aligned with industry standards, including advanced certifications known for their demanding compliance criteria (ISO19443)

Towards net-zero oper sustainability in Nucle

Having supplied and overseen the installation of high-integrity dampers for the Chernobyl New Safe Confinement building, supplied to Sellafield for decades and since been awarded a series of contracts for the next-generation Hinkley Point C facility, Flamgard Calidair now Halton Wales has earned a rapidly-growing reputation in the nuclear industry.

Having achieved the ISO19443 certification tailored to the nuclear industry, Halton is part of an exclusive group of only few certified suppliers. This rare achievement highlights Halton's unwavering focus on compliance, innovation and customer trust.

Nuclear power

Nuclear power is an essential part of the energy strategy of countless countries around the world. Nuclear power plants enable countries to generate low-carbon energy.

A good example is a next-generation facility such as Hinkley Point C in Somerset, England, which will be able to support as many as 6 million homes per year. Steps like this are a huge leap towards a country's net-zero objectives, and Halton is ready to support the development of new nuclear facilities on a much wider scale.

Halton contributes to a comprehensive product offering for the nuclear industry. In addition to Halton's high-integrity dampers, nuclear developers and stakeholders can access a huge range of solutions including diffusers, droplet separators and much more.

rations and wider ar Industry sectors

Why choose Halton?

With experience in nuclear decommissioning projects, Halton provides solutions that prioritize safety for onsite staff and other parties in close proximity.

Halton's dampers are designed for various lifespans in classified areas, ranging from 10 to 60 years of operational lifespan. All dampers undergo testing to resist extreme environmental conditions. This includes electromagnetic resistance, seismic resistance, radiation resistance, and chemical leaching safety.

With a strong emphasis on quality control tailored to the nuclear industry, Halton provides dedicated quality assurance, project management, and documentation services.

Scope

- Fire & gas dampers
- Zero leakage dampers
- Smoke dampers
- Non-return & pressure relief dampers
- Shut-off & balancing dampers
- Blast protection dampers

Projects

- Chernobyl Safe Containment Dome
- Hinkley Point C Nuclear Power
- Sellafield Nuclear Site
- ITER Project
- Olkiluoto 3 Nuclear Power Plant
- Several other classified nuclear power plant projects in Middle East and East Asia

High Quality HVAC Products and Solutions for Nuclear Industry

| | DESCRIPTION | BLAST DAMPER | HIGH PRESSURE BLAST DAMPER |
|-------------------------|--|---------------------------------|-------------------------------|
| BLAST PROTECTION | Blast protection in industri- al applications is essential. The primary purpose of blast dampers and valves are to protect people and equipment in case of a blast. Without proper protection, a blast wave penetrates the building through air intakes and outlets in an otherwise hardened structure. ATEX certification is available as an option. | | |
| | | BDH | BLD-01 |
| | DESCRIPTION | H0(H120) FIRE AND GAS DAMPER | E120S FIRE DAMPER |
| VENTILATION FIRE SAFETY | Sudden and uncontrolled fire is not only a life-threatening risk for people and the envi- ronment, but it also creates remarkable additional costs due to the stop of operation or production. Halton pro- vides fire and gas dampers to prevent the progress of fire and gases through ventilation ductworks. ATEX certification is available as an option. | | |
| AB V | | FDH | CFD-01 |
| | DESCRIPTION | BALANCING DAMPER | GASTIGHT SHUT-OFF DAMPER |
| AIRFLOW MANAGEMENT | HVAC ductwork on heavy industry projects consists of a diverse range of dampers products, each serving dif- ferent airflow management functions. Halton manufac- tures an extensive range of dampers for these de- manding applications. ATEX certification is available as an option. | | |
| A | | UTP / CCD | UTA / CCD |

| MEDIUM PRESSURE BLAST DAMPER | BLAST VALVE | BLAST VALVE | |
|---------------------------------|----------------------------------|--|-------------------------|
| | | | BLAST PROTECTION |
| BLD-02 | PV-KK-S | PV-KK-SX | |
| FIRE DAMPER (EI60S) | E120S UNINSULATED FIRE DAMPER | HIGH TEMPERATURE TUNNEL DAMPER | |
| | | | VENTILATION FIRE SAFETY |
| FCE | CFD-01 | CFD-02TM | > |
| GASTIGHT SHUT-OFF DAMPER | ZERO LEAKAGE ISOLATION DAMPER | NON-RETURN AND PRESSURE-RELIEF DAMPER | |
| | | | AIRFLOW MANAGEMENT |
| UTG | CID-01 | BLD / BRD | ¥ |

High Quality HVAC Products and Solutions for Nuclear Industry

| | DESCRIPTION | DROPLET SEPARATORS | OUTDOOR LOUVRES |
|--------------------|---|--------------------------------|-------------------------------------|
| AIR INTAKES | Halton's droplet separators have been designed to pro- tect capital equipment from the damage caused by the salty spray and rainwater, allowing for less mainte- nance and downtime higher equipment efficiency. | | |
| | | DSA | USM |
| | DESCRIPTION | INTEGRATED VAV CHILLED BEAM | VARIABLE AIR VOLUME CHILLED BEAM |
| DNINOI | An energy-efficient, relia- ble and comfortable envi- ronment can be achieved by using the right room air conditioning solutions. Halton offers a variety of air distribution solutions with a variety of options for airflow balance, air temperature, sound level and performance to meet the needs of dif- | | |
| | ferent spaces and environ- ments. | HALTON REX | HALTON REX |
| | DIFFUSERS | GRILLES | VALVES |
| ROOM AIR CONDITION | | | |
| | JDA | AGC | URH |

| | DESCRIPTION | KITCHEN VENTILATION SYSTEMS | KITCHEN AIR HANDLING UNITS |
|---------------------|---|--------------------------------|-------------------------------|
| KITCHEN VENTILATION | Halton has the widest range of solutions for all stages of kitchen ventilation systems, including capture, extraction, discharge of the air and pro- viding the replacement air. Halton's kitchen air handling units have been developed to provide the healthiest fresh air for commercial kitchens while limiting the impact of | | |
| | food production on nearby buildings. | KWF | PST-A |



HEAVYINDUSTRYSOLUTIONS.HALTON.COM



Heavy Industry 3D World

Halton's Heavy Industry 3D World provides users with a real-world visualisation of Halton's product offering while showcasing individual products and linking back to the main Halton website for more information. Users can explore comprehensive offerings through a dynamic 3D experience, discovering products and benefits for applications such as nuclear facilities, power and heat plants, power tunnels and much more. Start exploring at **heavyindustrysolutions.halton.com.** V042025

Europe

Halton Marine Oy Pulttikatu 2 15700 Lahti, Finland Tel. +358 20 792 200 haltonmarine@halton.com

Halton Wales Unit 1, Parc Business Rhyd y Blew, Bryn Serth Road, Ebbw Vale, NP23 5WT

Tel: (+44) 01495 757347 wales-sales.uk@halton.com

Halton Marine, Energy and Infrastructure's sales offices, distributors and agents are listed at **www.halton.com** America

Halton MEI USA 120 Exchange Logistics Park Drive, Unit D Piedmont, SC 29673 The United States of America Tel: +1 855 949 6072

Asia

Halton Ventilation (Shanghai) Co., Ltd. 浩盾通风设备(上海)有限公司 Room 182/186, No 3058, Pusan Road Pudong, Shanghai, 200123 The People's Republic of China Tel. +86 (0)21 6887 4388 Fax +86 (0)21 5868 4568

About us

Halton Marine, Energy and Infrastructure

Halton Marine, one of the world's leading supplier of HVAC for demanding environments develops, manufactures and markets reliable, high-quality ventilation solutions specifically designed for different types of ships, offshore oil & gas, heavy & nuclear industry and offshore wind. Our track record includes deliveries to over 200 major cruise ships, 200 oil & gas projects and 150 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, Haiton operates today in over 35 countries around the world, with annual sales of around €300 million and over 1900 employees. The company has production facilities in Brazil, Canada, China, France, Finland, Germany, Malaysia, the United Kingdom, and the USA.

