KYOCERA

FRIDURIT® FUME SCRUBBERS

Reliable exhaust air cleaning at
laboratory fume cupboards

www.kyocera-solutions.de

FRIDURIT® LABORATORY TECHNOLOGY FOR LABORATORY PERFECTION

FRIDURIT is a leading brand for laboratory work surfaces, for decentralised exhaust air and waste-water treatment. All our products are developed with our customers in mind. We look at customers individually to ensure that we supply the solution that exactly meets their needs.

All over the world, hundreds of companies and institutions work with over 1,600 installed units. At the end of the day it's trust that counts!

FOR THE ENVIRONMENT AND YOUR SAFETY THE CLEAN SOLUTION

Laboratory operators have great responsibility: Health protection and staff safety aspects as well as the preservation of material values are of vital importance.

Fully-automatic exhaust air cleaning at the source of emission.

Extreme care must be taken when working with contaminated laboratory emissions such as those produced in fume cupboards and where hazardous substances are used. In addition, national environmental protection legislation along with general legislation requires that laboratory emissions are cleaned with a maximum degree of absorption of aggressive and toxic gases.

FRIDURIT fume scrubbers keep you on the right side of the law: They meet the legal requirements for adherence to limit values placed on vaporous and gaseous inorganic substances, for minimising emissions from laboratory fume cupboards (Guidelines for laboratories, DGUV Information 213-850) as for preventing the formation of poisonous gases in case of fire. The FRIDURIT fume scrubber also satisfies the recommendation for cleaning exhaust air directly at the fume cupboard in accordance with EN 14175-7.
Our product supplies lasting support in preserving your building substance – and this with minimal power and water consumption and the use of recyclable materials. A high degree of absorption efficiency minimises the threat of corrosion in technical ventilation components such as fans and fire dampers.

The FRIDURIT fume scrubber keeps you well ahead for the future. This investment increases for example the LEED Green Building Score, especially due to the fact that the FRIDURIT manufacturing process fulfils all ISO standards for general process management (ISO 9001:2008), for adherence to environmental aspects (ISO 14001:2004) and for implementing an energy management system (ISO 50001:2011).

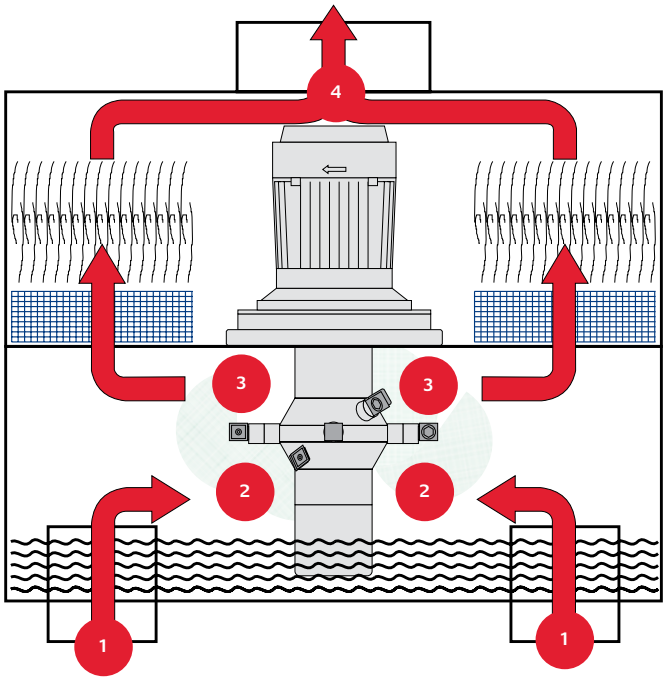
COMPACT DESIGN
HIGHEST ABSORPTION EFFICIENCY

FRIDURIT fume scrubbers work according to a highly efficient absorption principle that has been developed and optimised during numerous practical tests. Intelligent air ducts make low air resistance inside the system possible. This means that the size of ventilation components – and as a result the energy costs for the entire system – can be kept to a minimum.

FUME SCRUBBER TYPES

FRIDURIT fume scrubbers are available in four types. Built-in types can be easily integrated in laboratory fume cupboards.

In case of low ceilings or when connecting up to two fume cupboards there are types available that can be installed as free-standing units either beside the fume cupboard or in an adjoining room. For treating the chemically contaminated waste-water from the fume scrubber, a FRIDURIT neutralisation unit can be installed.



THE FUNCTIONAL PRINCIPLE

1 The contaminated exhaust air is suctioned directly into the absorption room through noxious gas tubes.

2 Intensive scrubbing of the pollutants in the scrubbing liquid spray, which is produced by the spray wheel, takes place there.

3 Absorption is optimised and the residual liquid is separated by means of agglomerators and droplet separators.

4 The purified waste-air is led into the downstream duct system through the clean air connector.

THE FUNCTIONAL PRINCIPLE

The patented spray wheel leads to maximum absorption efficiency at low differential pressures.

Synthetic fabrics specially developed and manufactured for the application ensure minimum moisture content in the waste air and thus provide the highest possible degree of efficiency.

ECONOMICAL.
EFFICIENT. SUSTAINABLE.
IN A NUTSHELL

Sustained development and viability are the maxims for using FRIDURIT fume scrubbers. We have been a reliable partner to our customers for more than 20 years, ensuring smooth implementation of your requirements.

Simple operation and reliable service worldwide.

FRIDURIT fume scrubbers are hallmarked by the following:

- Highest degree of absorption efficiency of up to 97 % despite compact design.
- Approx. 30 % less air resistance than when using comparable equipment.
- Significantly lower investment and operating costs than central cleaning systems.
- The units can be mounted in the fume cupboard, beside the fume cupboard or in an adjoining room.
- Extremely simple operator guidance in 4 different languages.
- Spray function remains in operation during the fully automatic exchange of scrubbing liquid. Work in the fume cupboard can continue without interruption.
- The level of pollutants in the scrubbing liquid can be measured and used for controlling scrubbing liquid exchange.
- A comprehensive range of accessories, e. g. fans, ventilation components or special control units, allow for individual system adjustments to respective application.
- The system has been optimised for the use of process water as scrubbing liquid. The addition of hazardous substances, such as sodium hydroxide can be avoided.
- Materials that come in contact with media are largely resistant to chemicals, separable according to type and are recyclable.
- A well-organised service network together with numerous trade partners both at home and abroad provide support for any maintenance and repairs needed.
- Sanitary, electrical and ventilation connections are constantly improved in cooperation with our customers.
- Each FRIDURIT fume scrubber is checked for functionality as well as for adherence to internal quality criteria prior to dispatch.
- Spare parts are generally available for the entire lifetime of the units. Constant care is taken that newly-developed parts are compatible with those used so far.
- In order to reduce interfaces, control, operation and measurement technology are combined to a single unit.
- The operating module included in the scope of supply allows easy operation of the fume scrubber from the fume cupboard.
- If no central unit is available for the chemically contaminated waste-water from the fume scrubber, the FRIDURIT neutralisation unit will take on this task.

FOR LABORATORY PERFECTION

FRIDURIT Laboratory Technology is a business section of KYOCERA Fineceramics Solutions GmbH. Laboratory benchtops and sinks made of Technical Ceramics, as well as fume scrubbers and neutralisation units are designed, manufactured and sold under the brand name FRIDURIT.

FRIDURIT laboratory benchtops and sinks made of Technical Ceramics have been tried and tested for a great many years and in a wide variety of laboratory environments. They are hallmarked by their extreme resilience, individual design and lasting good looks.

Due to its exceptional material density FRIDURIT Technical Ceramics is more scratch-resistant than all other materials used in benchtops and has a pore-free surface.

FRIDURIT has years of experience in decentralized waste-air treatment at the laboratory fume cupboard itself as well as neutralisation of acid and alkaline waste-water directly at the source of emission. Treatment of harmful substances from water and air at source ensures efficient work processes, preservation of the building substance and protection of the environment.

FRIDURIT stands for leading know-how in materials and innovative environmental technologies. Due to their extreme durability and suitability for recycling FRIDURIT products make a major contribution to sustainable manufacturing.

INNOVATIVE SOLUTIONS FOR THE GLOBAL MARKET

INNOVATIONS FOR MORE THAN 150 YEARS

With more than 150 years of experience in ceramic manufacturing, we offer a range of innovative solutions for many industries: system components for high technology applications in electrical and sensor technology, mechanical engineering, analytical technology, medical and semiconductor technology as well as laboratory technology. In the field of ceramic-to-metal assemblies we possess international leading know-how.

SPECTRUM OF INNOVATIVE SOLUTIONS

We see ourselves as a partner in the development of high-performance ceramic solutions, which give our customers added value and ensure their technological advantages. Our team advise comprehensive on the selection of ceramic materials, product design and project execution - from the development stage over the prototype fabrication to the serial.

PARTNER OF A POWERFUL COMMUNITY

Founded in 1863 in Mannheim as brickyard, known as “Deutsche Steinzeug” and later as “Friedrichsfeld GmbH”, the business area Ceramics continued its successful development. Since September 2019, we are part of the KYOCERA Corporation, a world-leading ceramic and technology company.

KYOCERA Fineceramics Solutions GmbH is a specialist company for products made of non-corroding and wear-resistant materials.

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