



## FRIDURIT® Fume Scrubbers

Reliable exhaust air cleaning at  
laboratory fume cupboards

[www.friatec.de](http://www.friatec.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.

The satisfaction of our customers is of great importance to us. This is our best reference and proof of the high quality of our solutions. Our service is not only limited to supplying the product. We accompany you even during the planning phase to ensure that the device is integrated optimally into your ventilation system. This guarantees easy assembly and installation as well as functional reliability.





**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 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



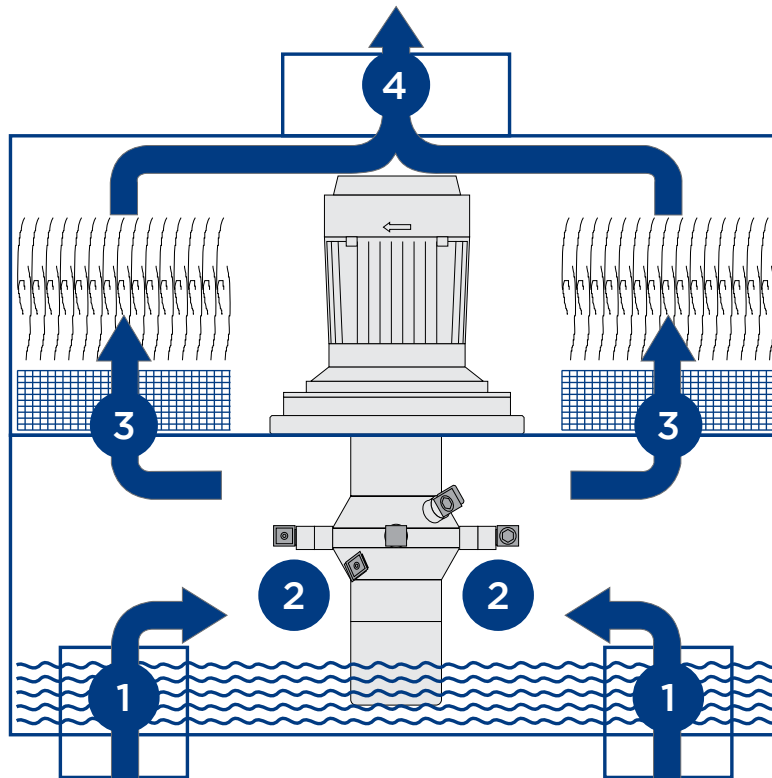
FRIDURIT fume scrubbers are available in four types. Built-in types can be easily integrated in laboratory fume cupboards.



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 to operate and largely language-independent due to intuitive operation.
- 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.

# FRIDURIT® LABORATORY TECHNOLOGY **FOR LABORATORY PERFECTION**

You place high demands on your products and services in terms of quality. You have every right to pass these demands on to us, and we know that excellent work, research and manufacturing are only possible in an excellent working 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 building.

We offer you:

## **TECHNICAL CERAMICS**

- Laboratory benchtops
- Laboratory sinks

## **POLYPROPYLENE**

- Laboratory benchtops
- Laboratory sinks

## **ENVIRONMENTAL EQUIPMENT**

- Fume scrubbers
- Neutralisation units

# FRIATEC

## **INNOVATIVE SOLUTIONS FOR THE GLOBAL MARKET**

### **INNOVATIONS FOR MORE THAN 150 YEARS**

The company was founded in 1863 in Mannheim, Germany, as a brickyard and succeeded in developing its first pathbreaking innovation, chemical stoneware, in 1888. Numerous new developments followed. Among other things, the company started in the mid of the past century processing plastics and combined modern and traditional materials when producing chemical devices and facilities. The following years were characterised by the expansion in the core business and the opening up of more and more new business segments. As Deutsche Steinzeug and later as Friedrichsfeld GmbH, the company, which has been operating under the name FRIATEC AG since 1993, continuously developed to become an internationally active, diversified company.

### **SPECTRUM OF INNOVATIVE SOLUTIONS**

As such, FRIATEC AG today offers a spectrum of innovative solutions for many industries, e.g. jointing technology for pipe systems, products for water-carrying building services, special pumps for aggressive, volatile or explosive media, but also ceramic components which are used in laboratory and electrical engineering but also in medical engineering. With its sophisticated solutions, FRIATEC AG is not only among the most well-known and well-established companies in the metropolitan region Rhine-Neckar but is also one of the global market leaders of its industry.

### **PARTNER OF A POWERFUL COMMUNITY**

Since 2003, FRIATEC AG has been a member of the ALIAXIS group of companies with headquarters in Brussels. ALIAXIS is the worldwide largest producer of plastic pipe systems for the construction industry, the industry and utilities.

**FRIATEC AG is a specialist  
company for products made  
of non-corroding and  
wear-resistant materials.**

# *Aliaxis*

UTILITIES & INDUSTRY

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