
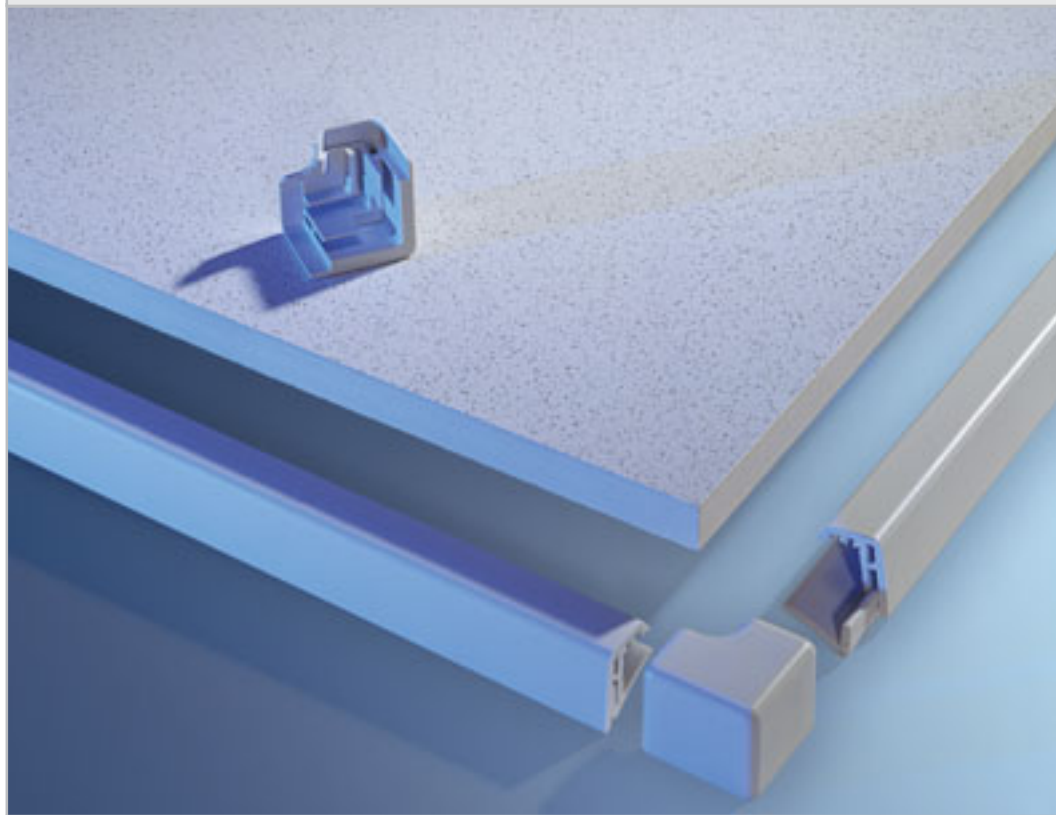
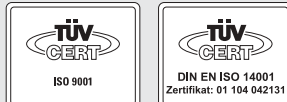


# FRIDURIT® modular laboratory benchtops made from Technical Ceramics

## Technical description

August 2005

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<p><i>Safety and competence for successful laboratory projects</i></p>	

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## 1.1 Laboratory benchtops made from Technical Ceramics

### Highest safety levels:

- highest resistance to virtually all chemicals
- permanently closed surface
- extreme wear resistance
- high impact and scratch resistance
- non-combustible

### Aesthetic and ergonomic:

- pleasing design
- smooth surface
- odourless
- long-lasting good looks
- easy to clean

### Experience and competence:

- well-known supplier of laboratory benchtops and sinks
- many diverse projects supplied worldwide

### The strength of FRIDURIT® modular:

- attractive price-performance ratio
- quick availability

Our technical specifications are based on the current DIN, EN and ISO norms.

## 1.2 Order codes and cutting signs

### Order codes

Please provide the following measurements with each order:

- width (max. 900 mm) and length (max. 1800 mm) of the benchtop
- the colour
- the edge profile including cutting signs of each side

Please state as well:

- size and position of sinks
- size and position of bores

The best way to give us the measurements is to make a sketch or drawing.

### Cutting signs

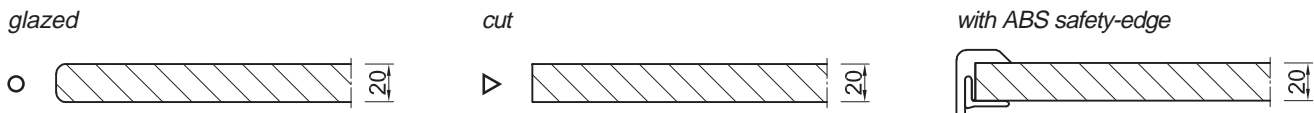
Edges can be either glazed or cut, i.e. unglazed. For the ABS safety edge all edges of the modular benchtop are cut. Apertures are only available unglazed.

Cutting signs:           ○ or without cutting sign = glazed  
                              ▽ = cut (unglazed)

## 2.1 Design parameters

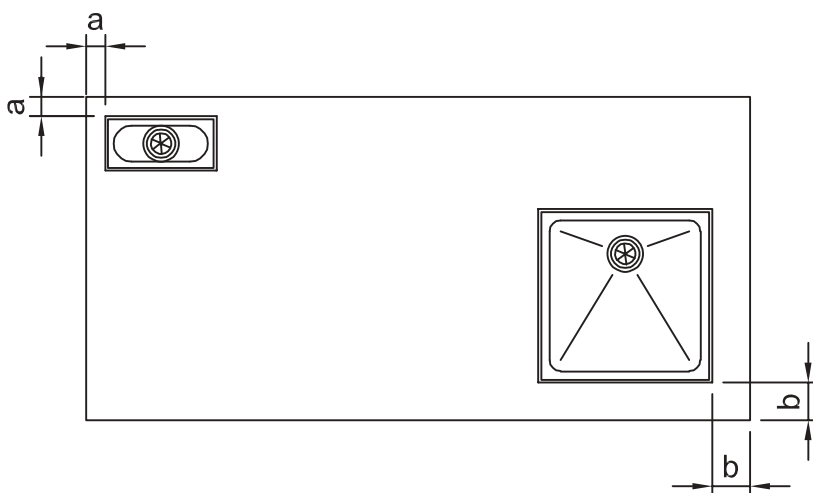
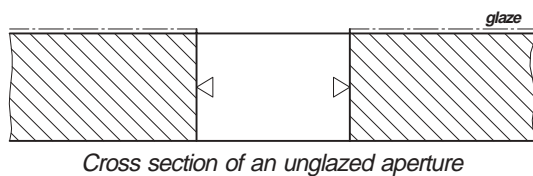
- worktop thickness: 20 mm
- maximum measurements: 900 x 1800 mm. Any intermediate lengths and widths are available.
- standard colour of the worktop: light grey with black speckles (similar to RAL 7035), other colours on request
- colour of ABS safety-edge and corner piece: light grey unicoloured (similar to RAL 7035)

## 2.2 Edge profiles



## 2.3 Apertures

The apertures can be anywhere in the benchtop taking into account the smallest possible distance to the edge and aperture. All apertures are unglazed.



### Minimum distance

- with cup sinks:  
a: min. 50 mm
- with sinks:  
b: min. 100 mm

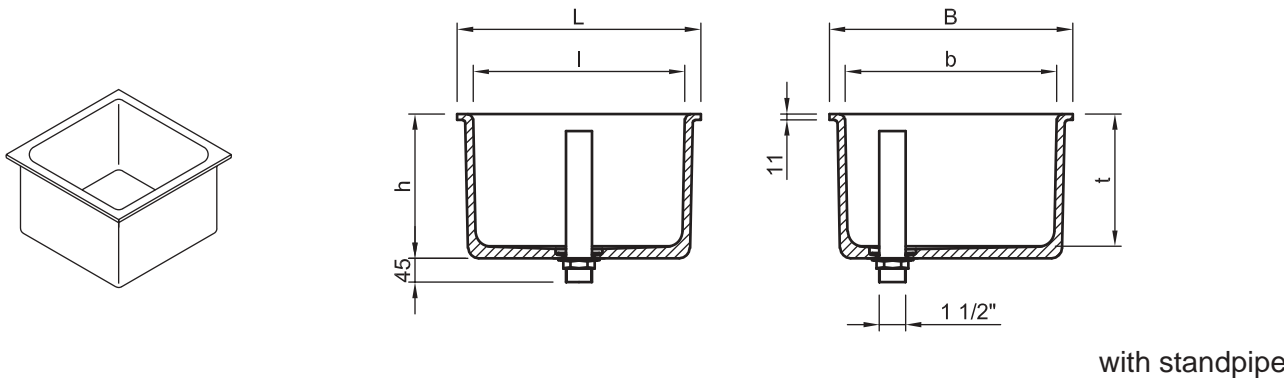
## 2.4 Bores

Unglazed bores, e.g. for fittings, can be made anywhere in the benchtop. Various diameters between 4 - 205 mm are available, others on request.

### 3.1 Universal sinks without overflow

FRIDURIT® universal sinks without overflow made from Technical Ceramics are glazed sinks to be fitted either as **flush mounted or underfixed** sink. They have a PE-outlet 1 ½" and conform to DIN 12915.

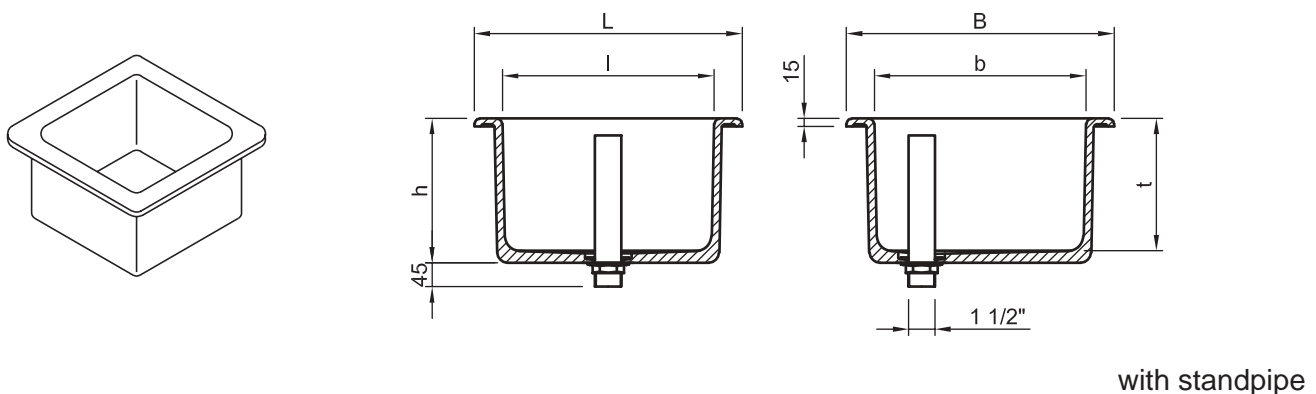
Internal dims.			External dims.				Weight	Order code
l	b	t	L	B	h	S	kg	
400	400	250	460 <sup>±3</sup>	460 <sup>±3</sup>	273	11	25	VBES442L
500	400	250	560 <sup>±3</sup>	460 <sup>±3</sup>	273	11	26	VBES542L



### 3.2 Sit on sinks without overflow

FRIDURIT® sit on sinks without overflow made from Technical Ceramics are glazed sinks to be fitted in benchtops. They have a PE-outlet 1 ½" and conform to DIN 12915.

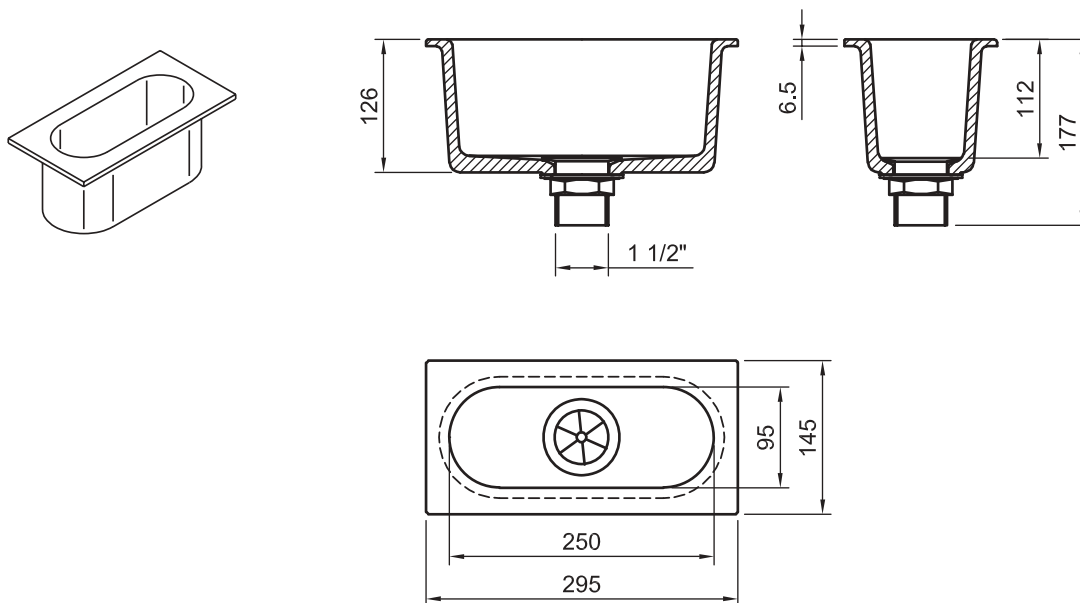
Internal dims.			External dims.			Weight	Order code
l	b	t	L	B	h	kg	
400	400	250	510	510	273	26.5	VBPE442L
500	400	250	610	510	273	27	VBPE542L



### 3.3 Universal cup sinks

FRIDURIT® universal cup sinks made from Technical Ceramics are glazed sinks to be fitted either as **flush mounted, sit on or underfixed** sink. They have a PE-outlet 1 1/2" and conform to DIN 12915.

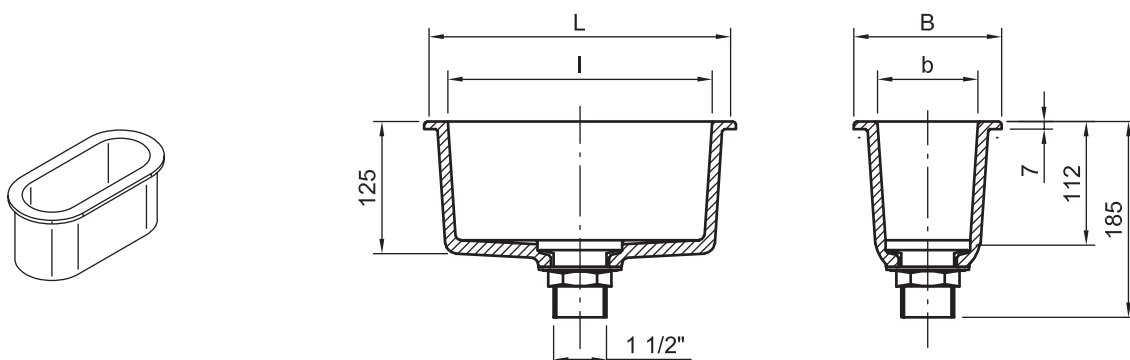
Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
250	95	112	295 <sup>±3</sup>	145 <sup>±3</sup>	126	2	VBPM291L



### 3.4 Sit on cup sinks

FRIDURIT® sit on cup sinks made from Technical Ceramics are glazed sinks to be fitted in benchtops. They have a PE-outlet 1 1/2" and conform to DIN 12915.

Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
∅ 105	---	112	∅ 140	---	125	1.5	VBPE111L
250	95	112	294	140	125	3	VBPE291L



## 4.1 ABS safety edge with 90° corner piece

### ABS safety edge according to DIN 12916

The cost efficient solution for work protection and safety in general and school laboratories.

- colour light grey similar to RAL 7035
- joint free up to 2.5 m in length
- can be installed using a combination of clamping and glueing to provide a waterproof joint between safety edge and benchtop.
- easy assembling and disassembling
- can be assembled on site
- simple glueing process using sealant/ adhesive technology
- simple assembly tools

### 90° corner piece made from ABS

The optimal, simple corner solution for the ABS safety edge. No complicated mitre cuts necessary.

Simple assembly using the same clamping technique as the safety edge.

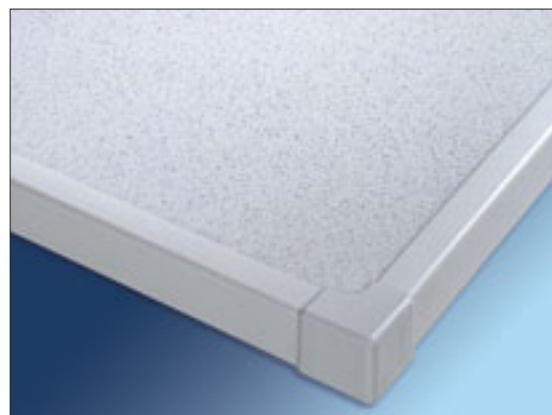
Dimensions:  
45 x 45 x 35 mm



The synthetic material ABS is a copolymer of Acrylonitrile and Styrene on Butadiene (**A**crylonitrile-**B**utadiene-**S**tyrene).

The major characteristics of ABS are:

- non-toxic and taint free
- exceptional resistance to accidental damage
- corrosion resistance
- abrasion resistance
- easy to joint
- recyclable

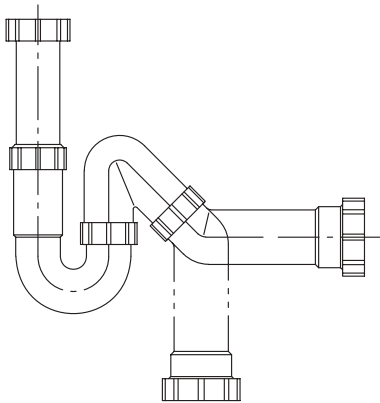


## Advantages of ABS

- **Toughness and durability:**  
The Butadiene constituent of ABS affords exceptional resistance to accidental damage, a benefit which it retains even at sub zero temperatures.
- **Abrasion resistance:**  
ABS offers good resistance to abrasion and erosion from aggressive substances.
- **Smooth surface:**  
Easy to decontaminate.
- **Easy assembly:**  
to FRIDURIT® modular laboratory benchtops using a combination of clamping and glueing.
- **Resistance:**  
ABS is highly resistant to acids, alkalines and solvents commonly found in laboratories and schools.  
Please note: The resistance always depends on individual use and conditions. Therefore a detailed and exact resistance guarantee cannot be given.

## 4.2 P-trap

Polyethylene P-trap (stench trap) provides simple, reliable connections between drainage system and PE-outlet 1 ½" thread connection. Easy adaption and cleaning due to screw connection.



PE-outlet horizontal or vertical  
outlet: compression fitting DN 50  
connection: 1 ½" x 100

Order code: BZS 001

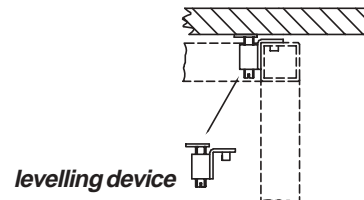
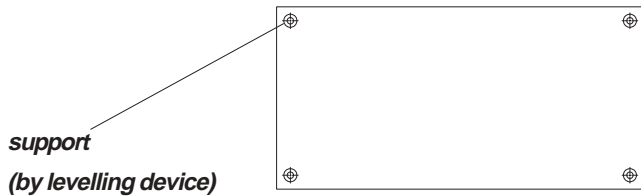
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The specifications of our products are based on extensive technical development and on the results of stringent tests. We have experience in diverse areas of application over many years with FRIDURIT® Technical Ceramics. However, the user is responsible for checking our specifications and recommendations as to his own application and, if necessary, confirming the suitability by conducting his own tests. We reserve the right to make technical alterations.

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## 5.1 Four-point support

The self-supporting FRIDURIT® laboratory benchtop needs only to be supported near each corner. It is best to mount the benchtop on levelling devices, since this allows them to be levelled and aligned very simply and quickly.



The breaking load (P) of the benchtop depends on the width (B) and length (L) of the benchtop:

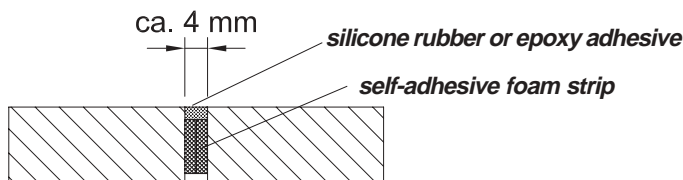
$$P \text{ (in kg)} = 1.000 \times B/L$$

## 5.2 Joints

There are two ways of sealing joints between FRIDURIT® modular laboratory benchtops:

- a) flexible with silicone rubber
- b) curing, e.g. with an epoxy adhesive

We recommend using a self-adhesive foam strip or something similar as joint filler and spacer; this keeps the joints uniform and protects the edges during installation.

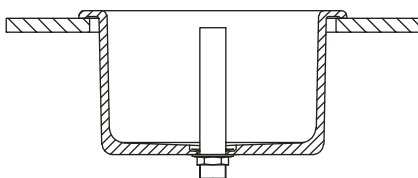


## 5.3 ABS safety edge

For notes on installing the ABS safety edge please see separate assembling instruction.

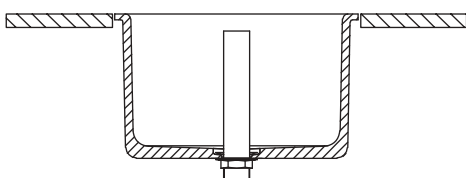
## 5.4 Installation of sinks

### 5.4.1 For sit on sinks



Fitted in the FRIDURIT® full-size laboratory benchtop and sealed with silicone.

### 5.4.2 For flush mounted sinks



Installed flush with the FRIDURIT® full-size laboratory benchtop.

## 6.1 Specification

### modular laboratory benchtops

#### 1. Material

FRIDURIT® modular laboratory benchtops are made from technical ceramics.

Flexural strength and resistance to pressure according to DIN 28 062, Material 1.1.4 (chemical-technical stoneware).

Visible surfaces have a ceramic glaze coating. Glaze colours according to our range of colours.

The ABS safety edge and the 90° corner piece are made from the synthetic material ABS by extrusion and injection moulding respectively. The characteristics of ABS are its high durability, abrasion resistance and toughness. The smooth surface is easy to decontaminate.

#### 2. Colour

FRIDURIT® modular benchtops:

glaze colour light grey (similar to RAL 7035) with black speckles

ABS safety edge and 90° corner piece:

light grey (similar to RAL 7035), unicoloured

#### 3. Construction

Maximum measurements for one FRIDURIT® modular full-size laboratory benchtop are 900 x 1800 mm allowing a formation of laboratory working surfaces with few joints. Any intermediate length is available.

Unglazed bores, e.g. for fittings, can be made anywhere in the FRIDURIT® modular full-size laboratory benchtop.

Unglazed apertures for laboratory sinks and cup sinks made from Technical Ceramics are possible, taking into account the benchtop supplier's recommendations.

The ABS safety edge and the 90° corner piece are installed using a combination of clamping and glueing. The ABS safety edge is available joint free up to 2.5 m in length.

## 6.2 Specification

### Laboratory sinks for modular benchtops

#### 1. Material

FRIDURIT® laboratory sinks are made from technical ceramics.

Flexural strength and resistance to pressure according to DIN 28 062, Material 1.1.4 (chemical-technical stoneware).

Visible surfaces have a ceramic glaze coating. Glaze colours according to our range of colours.

#### 2. Type

FRIDURIT® **sit on sinks** are available as:

- cup sinks with PE-outlet
- sinks without overflow, with PE-outlet, with standpipe

FRIDURIT® **flush mounted sinks** are available as:

- cup sinks with PE-outlet
- sinks without overflow, with PE-outlet, with standpipe

#### 3. Installation

The positioning of FRIDURIT® flush-mounted and sit on sinks in the benchtop is subject to the benchtop supplier's recommendations.

**FRIDURIT® system solutions**  
**To protect the environment and the laboratory**  
**- and for your safety**



**FRIDURIT® Laboratory benchtops and sinks**

- **made from Technical Ceramics**  
 Highest resistance to virtually all chemicals commonly used in the laboratory. Scratch and abrasion proof surface, non combustible and 100% recyclable.
- **made from Polypropylene**  
 Resistant to breakage, welded with no joints and easy to clean. The ideal surface for microbiological laboratories.

**FRIDURIT® Fume scrubber**

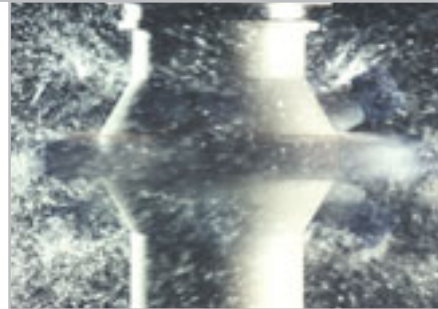
Absorbs inorganic contaminants in the waste air from the laboratory safely and reliably. A mature solution to the problem.

**FRIDURIT® Neutraliser unit**

For safe neutralisation of laboratory effluent. Fully automatic, quiet and reliable.

**FRIDURIT® Fume filter**

For the adsorption of organic solvents in waste air from the laboratory. Environmental protection thought through to the end.



**FRIATEC Aktiengesellschaft - FRIDURIT® Laboratory Technology**

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