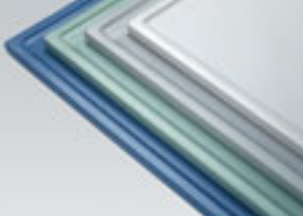




FRIDURIT® premium laboratory benchtops made from Technical Ceramics

Technical description

August 2005

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

1.	_____	General	
1.1	_____	Benchtops made from Technical Ceramics	page 3
1.2	_____	Order codes and cutting signs	page 3
2.	_____	Technical details	
2.1	_____	Formats and edge profiles to DIN 12916	page 4
2.2	_____	Glaze colours	page 5
2.3	_____	Apertures	page 5
2.4	_____	Bores	page 5
2.5	_____	Raised edges / spillover weir	page 6
2.6	_____	Edge sections and cutouts	page 6
2.7	_____	Drainage grooves	page 6
2.8	_____	Arrangements at corners / mitre cuts	page 6
3.	_____	Laboratory sinks	
3.1	_____	Standard sinks	page 7
3.2	_____	Underfixed sinks	page 9
3.3	_____	Sit on sinks	page 11
4.	_____	Accessories	page 11
5.	_____	Notes on installation	
5.1	_____	Four-point support	page 12
5.2	_____	Joints	page 12
5.3	_____	Installation of sinks	page 13
6.	_____	Specifications	
6.1	_____	premium laboratory benchtops	page 14
6.2	_____	Laboratory sinks	page 15

1.1 Laboratory benchtops made from Technical Ceramics

We deliver:

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
- multiple colours
- 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

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. 2000 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

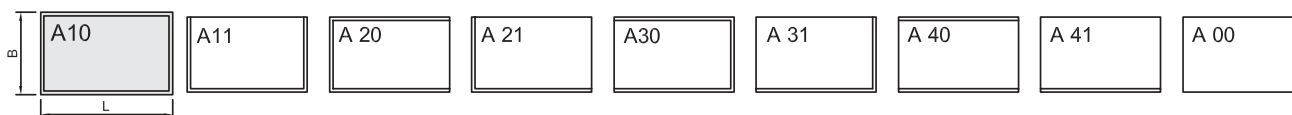
Apertures and edges can be either glazed or cut (= unglazed).

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

2.1 Formats and edge profiles to DIN 12916

Maximum measurements for one FRIDURIT® premium laboratory benchtop made from Technical Ceramics are 900 x 2000 mm. Any intermediate lengths and widths are available.

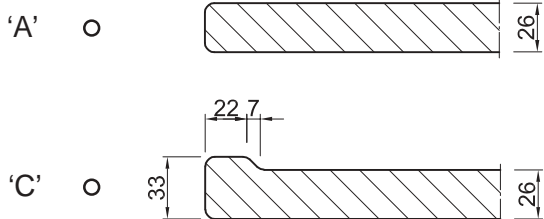
Examples of benchtop formats to DIN 12916 with ceramic marine edge on various sides:



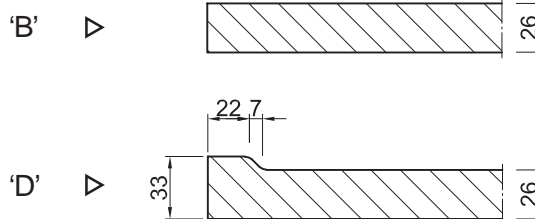
These benchtop formats include the standard edge profiles 'A' to 'D'.

Standard edge profiles

glazed

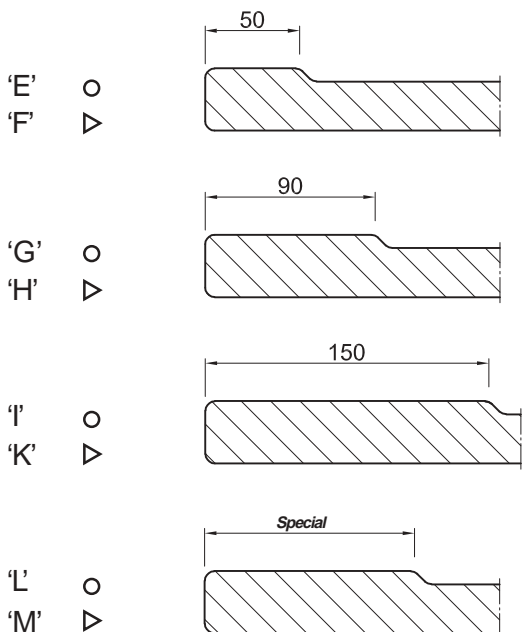


cut

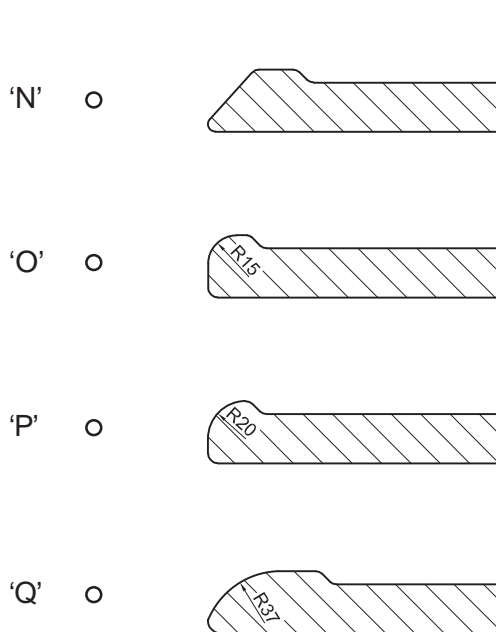


Others

glazed or cut



glazed



2.2 Glaze colours

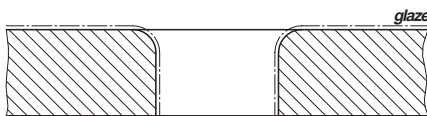
A wide range of colours as well as the availability of other colours to special order means FRIDURIT® premium benchtops made from Technical Ceramics can satisfy the most exacting ergonomic and aesthetic demands. Standard glaze colours:

Name	Description	Order code	Name	Description	Order code
anthracite	similar to RAL 7043	Z	pearl	similar to RAL 9002	P
grey blue	similar to RAL 5014	B	pure white	similar to RAL 9010	R
diamond grey	---	X	stone grey	similar to RAL 7030	S
grand canyon	russet	G	terracotta	similar to RAL 8017	T
light grey	similar to RAL 7035	L	titan grey	---	W

Benchtops are also available speckled. More glaze colours are available. Colour samples are available on request.

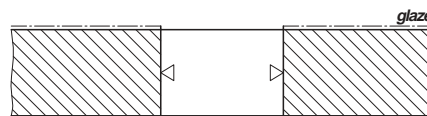
2.3 Apertures

2.3.1 Glazed apertures



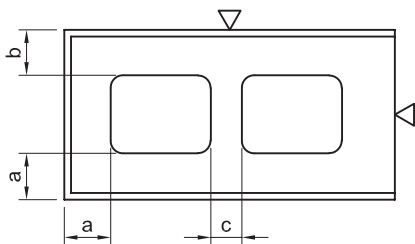
Cross section of a glazed aperture

2.3.2 Cut apertures (unglazed)



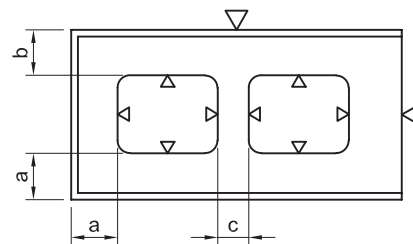
Cross section of an unglazed aperture

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



Minimum distance with glazed apertures:

- a: min. 150 mm
(glazed aperture - glazed edge)
- b: min. 70 mm
(glazed aperture - cut edge)
- c: min. 100 mm
(glazed aperture - glazed aperture)



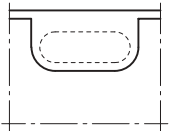
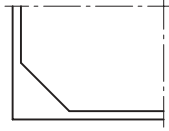
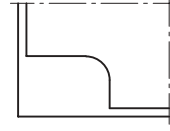
minimum distance with unglazed apertures:

- a: min. 50 mm
(cut aperture - glazed edge)
- b: min. 50 mm
(cut aperture - cut edge)
- c: min. 100 mm
(cut aperture - cut aperture)

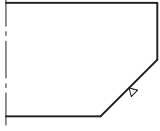
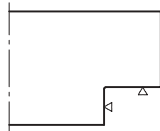
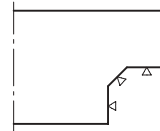
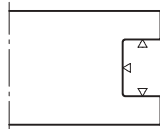
2.4 Bores

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

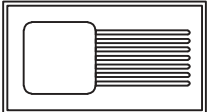
2.5 Raised edges / spillover weir

Drawing	Description
	E01 e.g. for underfixed cup sinks or bore for fittings
	E02 diagonal
	E03 e.g. for underfixed cup sinks or bore for fittings

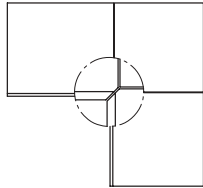
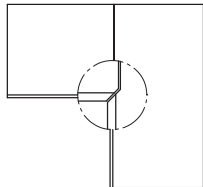
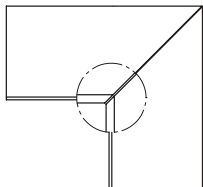
2.6 Edge sections

Drawing	Description
	S01 glazed or cut
	S02 glazed or cut
	S03 cut
	S04 cut

2.7 Drainage grooves

Drawing	Description
	R01 length of grooves max. 500 mm

2.8 Arrangements at corners/ mitre cuts

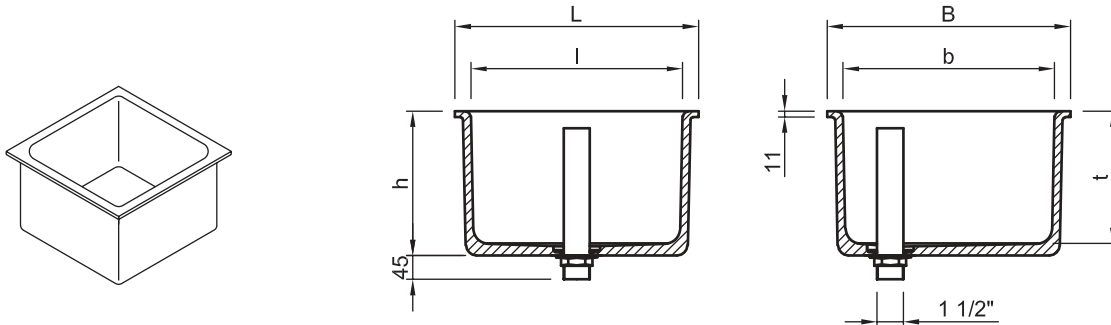
Drawing	Description
	2 x G01 3 pieces with 2 mitre cuts
	G01 and G02 2 pieces with 2 mitre cuts
	2 x G01 2 pieces with 45° cuts

3.1.1 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 1/2" and conform to DIN 12915.

Internal dims.			External dims.				Weight	Order code
l	b	t	L	B	h	S	kg	
400	400	250	460 ^{±3}	460 ^{±3}	273	11	25	VBES442●
500	400	250	560 ^{±3}	460 ^{±3}	273	11	26	VBES542●

● = colour code
(see page 5)



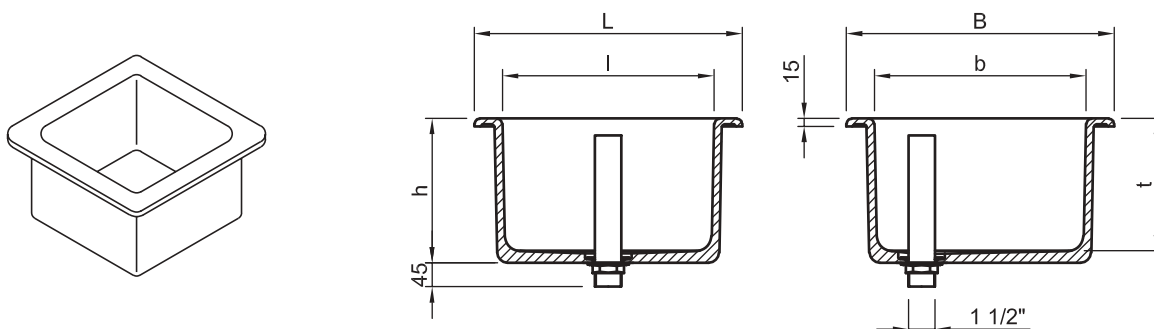
with standpipe

3.1.2 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 1/2" 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	VBPE442●
500	400	250	610	510	273	27	VBPE542●

● = colour code
(see page 5)



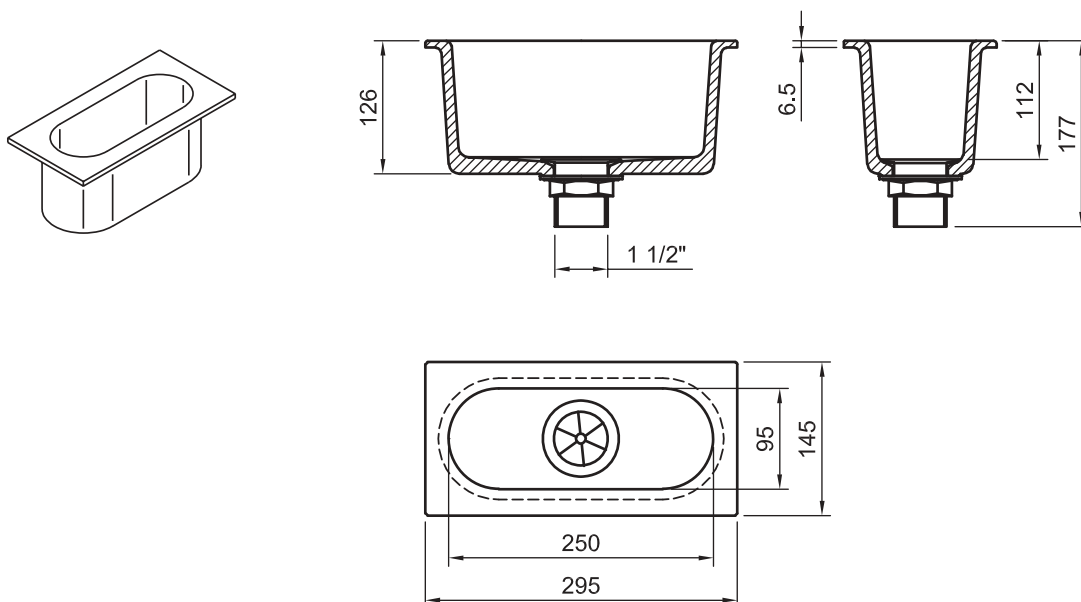
with standpipe

3.1.3 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 ^{±3}	145 ^{±3}	126	2	VBPM291●

● = colour code
(see page 5)



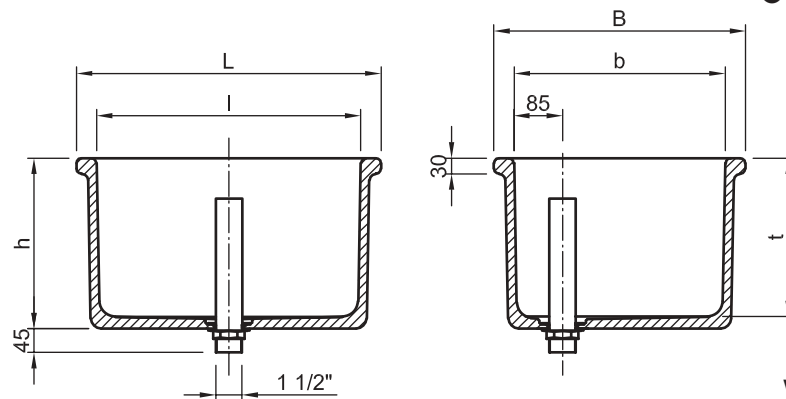
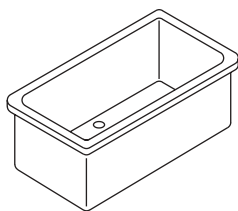
3.2.1 Underfixed sinks

FRIDURIT® underfixed sinks made from Technical Ceramics are glazed sinks to be fitted under benchtops. They have a PE-outlet 1 ½" and conform to DIN 12915. The positioning of FRIDURIT® underfixed sinks in the benchtop is subject to the benchtop supplier's recommendations.

without overflow

Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
400	400	250	476	476	272	26	VBPS442●-OUE
500	400	300	576	476	322	35	VBPS543●-OUE
600	400	300	676	476	322	38	VBPS643●-OUE
800	400	300	876	476	322	57	VBPS843●-OUE

● = colour code
(see page 5)

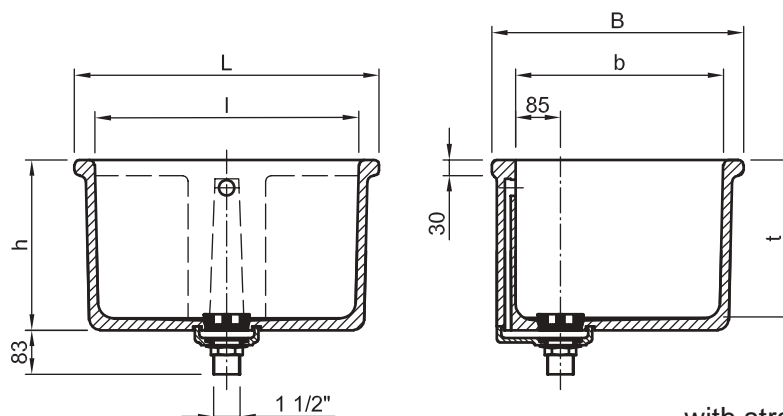
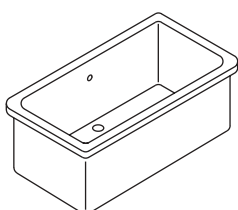


with standpipe

with overflow

Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
350	350	300	420	420	322	28	VBPS333●
400	400	250	476	476	272	28	VBPS442●
500	400	300	576	476	322	37	VBPS543●
600	400	300	676	476	322	40	VBPS643●
800	400	300	876	476	322	59	VBPS843●

● = colour code
(see page 5)



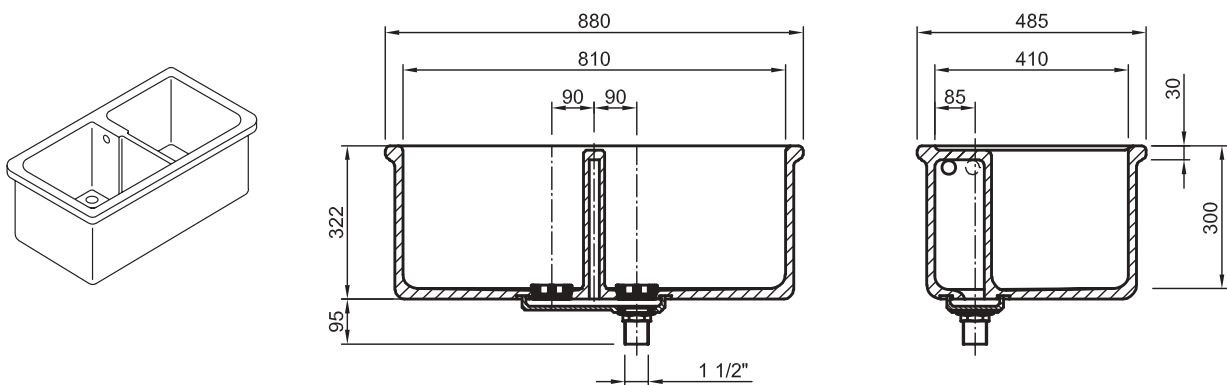
with strainer and plug

3.2.2 Underfixed double sinks with overflow

FRIDURIT® underfixed double sinks made from Technical Ceramics are glazed sinks to be fitted under benchtops. They have a PE-outlet 1 ½" and conform to DIN 12915. The positioning of FRIDURIT® underfixed sinks in the benchtop is subject to the benchtop supplier's recommendations.

Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
810	410	300	880	485	322	65	VBPD843●

● = colour code
(see page 5)



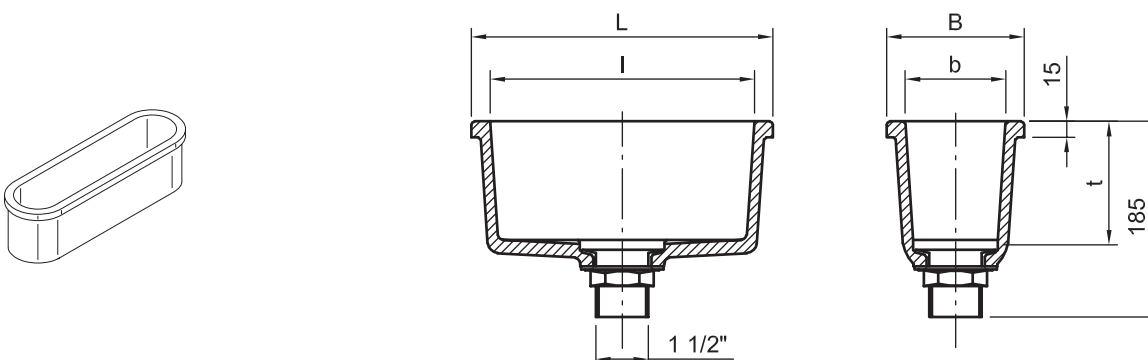
with 2 strainers and 2 plugs

3.2.3 Underfixed cup sinks

FRIDURIT® underfixed cup sinks made from Technical Ceramics are glazed sinks to be fitted under benchtops. They have a PE-outlet 1 ½" and conform to DIN 12915.

Internal dims.			External dims.			Weight kg	Order code
l	b	t	L	B	h		
∅ 105	---	112	∅ 135	---	125	1.5	VBPA111●
250	95	112	280	130	125	3	VBPA291●
410	95	112	445	130	125	4	VBPA491●
250	250	142	295	295	155	5.5	VBPA221●

● = colour code
(see page 5)

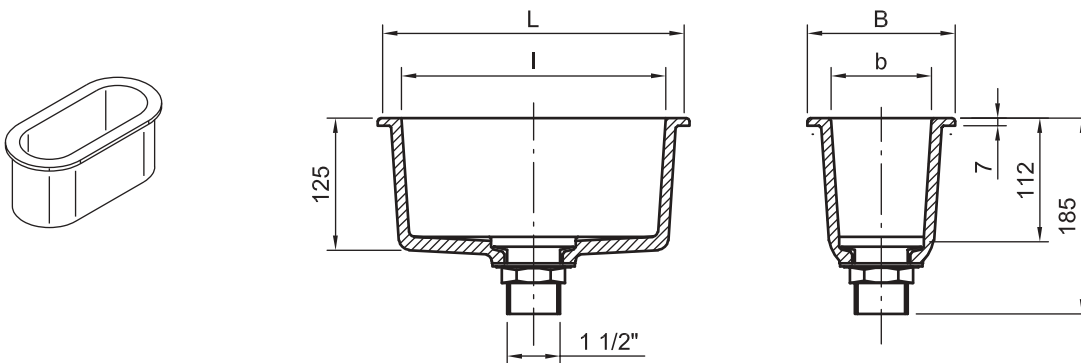


3.3 Sit on cup sinks

FRIDURIT® sit on cup sinks made from Technical Ceramics are glazed sinks to be fitted in benchtops. They have a PE-outlet 1 ½" 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	VBPE111●
250	95	112	294	140	125	3	VBPE291●

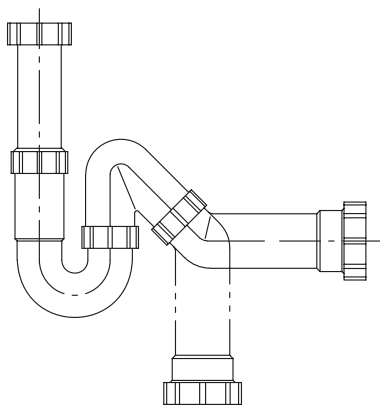
● = colour code
 (see page 5)



4. Accessories

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.



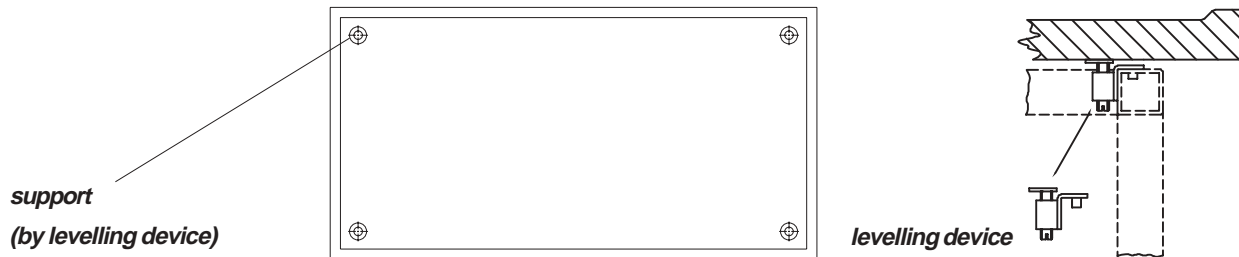
PE-outlet horizontal or vertical
 outlet: compression fitting DN 50
 connection: 1 ½" x 100

Order code: BZS 001

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.

5.1 Four-point support

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



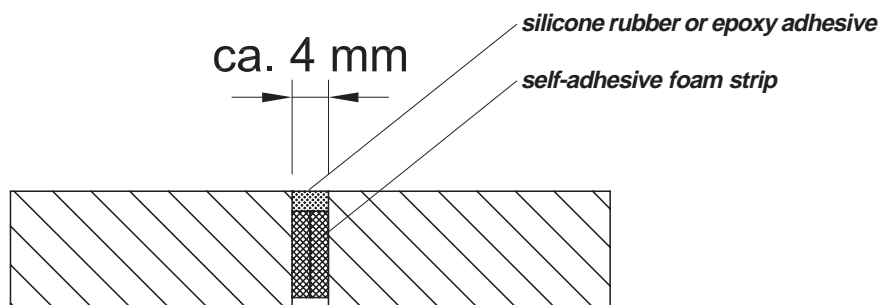
The breaking load (P) of the benchtop depends on the width (B) and length (L) of the benchtop:
$$P \text{ (in kg)} = 1.600 \times B/L$$

5.2 Joints

There are two ways of sealing joints between FRIDURIT® full-size laboratory benchtops:

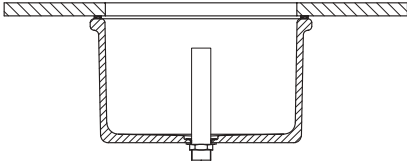
- a) flexible with silicone rubber
- b) curing, e.g. with an epoxy adhesive

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 Installation of sinks

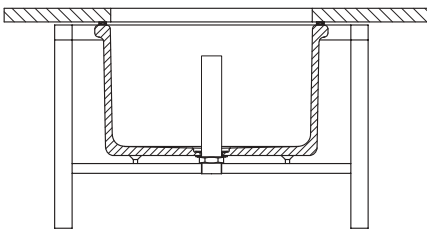
5.3.1 Underfixed sinks



The sink can be permanently bonded to the FRIDURIT® full-size laboratory benchtop, e.g. with an epoxy adhesive.

The advantages:

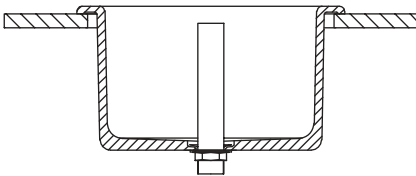
- no support required; only in case of extreme use is a support recommended. Details on request.
- stiffening of the benchtop



The joint between the sinks and the FRIDURIT® full-size laboratory benchtop can be filled with a flexible sealant such as silicone rubber. A support is then required for the sink, and there is no stiffening of the benchtop.

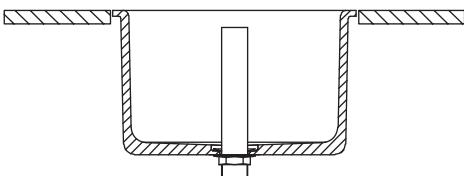
Advantage: dismantling is easier

5.3.2 Sit on sinks



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

5.3.3 Flush mounted sinks



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

6.1 Specification

premium laboratory benchtops

1. Material

FRIDURIT® premium 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.

2. Construction

FRIDURIT® premium full-size laboratory benchtops are one-piece and self-supporting. They can be supplied with integral continuous marine edges in accordance with DIN 12916.

FRIDURIT® premium laboratory benchtops are supplied with a ceramic glaze.

Glaze colours according to our range of colours.

3. Combining benchtops

Maximum measurements for one FRIDURIT® premium full-size laboratory benchtop are 900 x 2000 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® premium full-size laboratory benchtop.

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

For further details see FRIDURIT® price list.

6.2 Specification

Laboratory sinks for premium laboratory 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® **underfixed sinks** are available as:

- cup sinks with PE-outlet
- sinks:
 - a) without overflow, with PE-outlet and standpipe
 - b) with integrated ceramic overflow, PE-outlet, loose plastic strainer and plug

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

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

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

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

3. Installation

The positioning of FRIDURIT® underfixed, 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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