

**sicco**

Desiccators and Drying Cabinets

by **BOHLENDER**



## Desiccators and Drying Cabinets

- » stable
- » functional
- » custom-made

**Dear Customer,**



Bohlender is further emphasizing its commitment to producing a high quality range of desiccators with the introduction of the SICCO brand.

Changing of our brand name is combined with a new product design that improves the appearance and usability of the complete range; the new look retains well known product features.

We take pride in the high quality of our manufacturing process that ensures long product life and ease of use. And the team behind the new brand is unchanged which means you can continue to rely on Bohlender's well-known expertise and outstanding service in the future.

Take a look at the new SICCO catalogue and see for yourself. I am sure you will find that the new SICCO range will set the standard for desiccators in the lab and in industry; I look forward to hearing your comments.

Best regards,

A handwritten signature in blue ink, consisting of a large, stylized 'V' followed by a cursive 'B' and 'H'.

**Volker Bohlender**

Managing Director



### 4 Company

### 6 Made to measure

For storing or drying dust and humidity sensitive products with silica gel.



### 7 Desiccators for drying /storage

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For storing reactive substances.



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For long-term storing.



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For storing electronic parts in a neutral atmosphere.



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For rapid drying of substances and storing without oxygen and carbon dioxide.



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## Worth knowing.

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Robust construction, appealing design, sophisticated functionality: SICCO desiccators and drying cabinets leave nothing to be desired. That's BOHLENDER experience and know how gained from more than 30 years of delivering safe storage systems for sensitive items and materials .

We have always set high quality standards; all design, development and manufacturing are done in house by BOHLENDER professionals.

**SICCO – built for those who expect more.**

### **Extra flexibility.**

Depending on the kind of material, the quantity and how long you would like to store it, your requirements for a desiccator or a drying cabinet may change. Your needs set our benchmarks. Having design and production in house makes it possible efficiently to meet your requirements. We are sure you will find a suitable desiccator in our extensive product range. If not we can make custom units; we need a brief specification and our design department will start work to meet all your requirements.

### **Extra expertise.**

We listen to our customers! Desiccators and drying cabinets are part of Bohlender's product range since 1977. And since 1998, we have been manufacturing them in house. Based on your feedback, our products are continuously improved and adapted to meet your requirements. Should you have any questions or requests, our professional staff will give you expert advice. Who knows more about drying cabinets and desiccators than the manufacturer?



#### Extra service.

Some enquiries are urgent. To meet customer needs we keep the majority of our products in stock. Our efficient, well-established workflow systems assure rapid shipment of your order whether it is for desiccators, drying cabinets or accessories. Waiting times and unnecessary downtime can be prevented. You have no time to lose? We are here to help.

#### Extra reliability.

Valuable items or sensitive substances require reliable and safe storage. SICCO desiccators and drying cabinets are consistently designed and built for security and longevity. We use solid, shock resistant aluminium frames and high-quality, unbreakable acrylic panels which optionally are available either as antistatic or UV radiation resistant. Consistent, high quality inhouse manufacturing by our highly qualified staff complement a comprehensive quality assurance system. This results in desiccators and drying cabinets which are top of the class.

#### Extra features.

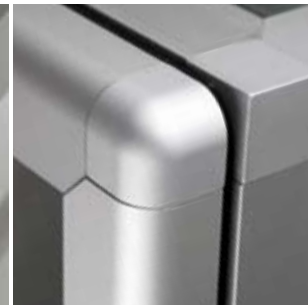
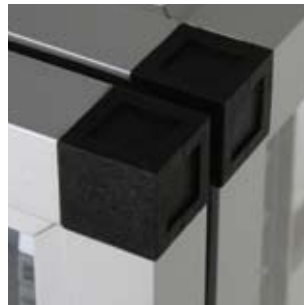
Our goal is that you are completely satisfied using our products just as we enjoy developing and producing them. The special appeal of SICCO desiccators and



drying cabinets stems from the many well-thought details and unique features such as our innovative, magnetic locking system "One-Touch-Door". The door closes tightly but can easily be opened and closed with a light touch.

## Made to measure.

6



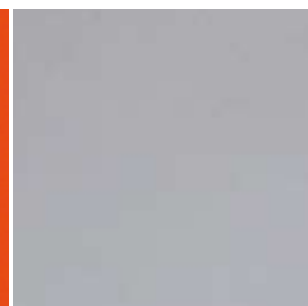
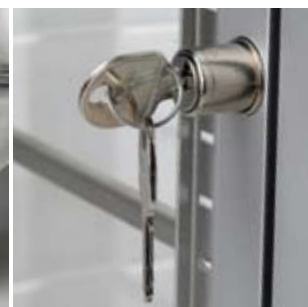
Many extras and special requests are already part of the standard SICCO product range. For special applications not currently available in our standard range we offer custom design and manufacturing.

If you have a special request, discuss your idea with our professionals; they will give advice and support during the design and specification process. Your idea will become a reality and will be produced to meet your requirements even for single unit orders. All we need is a drawing (a sketch is sufficient) and some brief details.

Call us at: **+49 (0) 93 46-92 86-0**. Or simply complete the attached form for custom enquiries including your contact details and return it by fax or e-mail. We will contact you to discuss further details and will then provide you with a free quotation.

### Checklist for your custom desiccator:

- » Describe the desiccator required.
- » Which are the critical outer or inner dimensions?
- » Specify which materials will be stored in the desiccator.
- » Which kind of acrylic panels do you need?
- » How many shelves do you need?
- » What will be the maximum weight/ load? Per shelf? Per desiccator?
- » Do you need accessories (e. g. cylinder lock, gas fill, etc.)?
- » State quantities.
- » What is the budgetary price range per desiccator?



## SICCO Desiccators for drying / storage

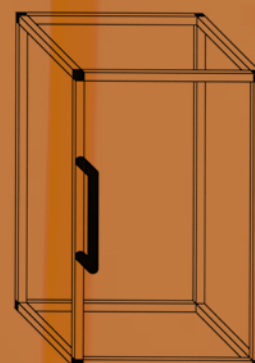
7

SICCO Desiccators are designed for storing or drying humidity sensitive products using silica gel. The tight fitting door protects the contents from contamination from the atmosphere. The controlled environment

inside the desiccators is ideal for storing reference materials, retained samples, metallographic specimens, tobacco and DNA samples.

### Feature Summary

- » Reinforced aluminium frame with acrylic panels
- » Door with magnetic catch and circular rubber seal
- » Non slip rubber feet or four casters (two of the casters with brakes)
- » Easy to read electronic hygrometer
- » Variable height shelves made of acrylic glass, stainless steel or aluminium
- » Telescopic shelves
- » Desiccant tray
- » Star-Desiccators include silica gel

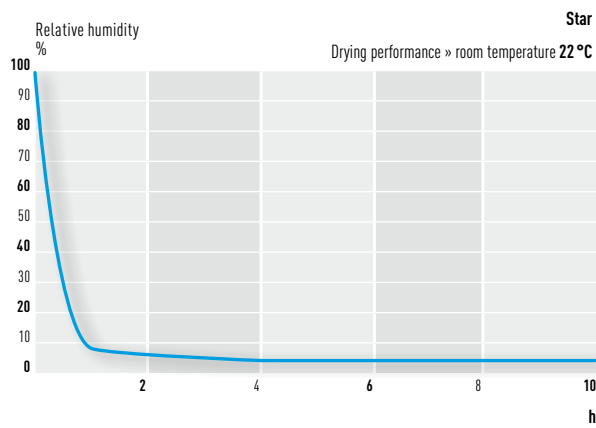


Performance at a glance.

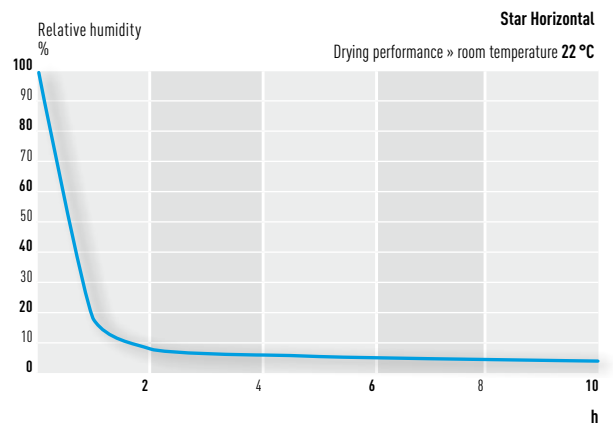
**DRYING PERFORMANCE**

**Test procedure:**

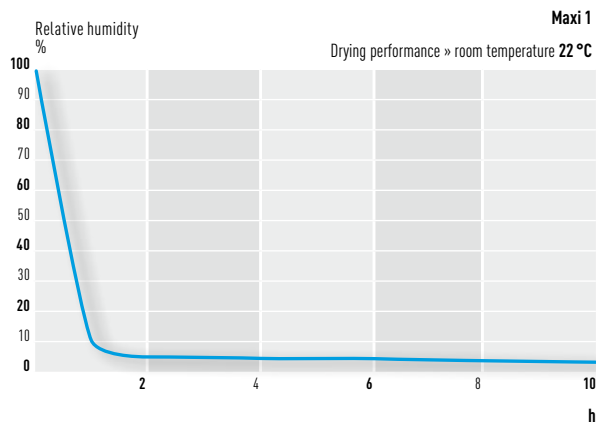
A relative humidity of approx. 100 % is simulated in a desiccator. In the bottom of the desiccator there is a tray with 500 g of silica gel. The door is closed and is airtight. The curve shows relative humidity v time.



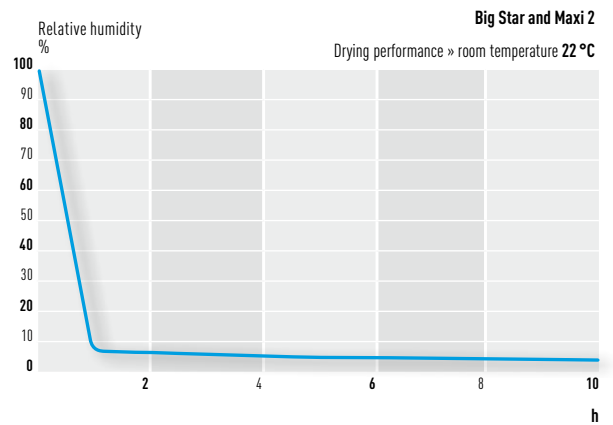
Relative humidity of below 10 % after approx. one hour.



Relative humidity of below 10 % after almost two hours.



Relative humidity of below 10 % after little more than one hour.



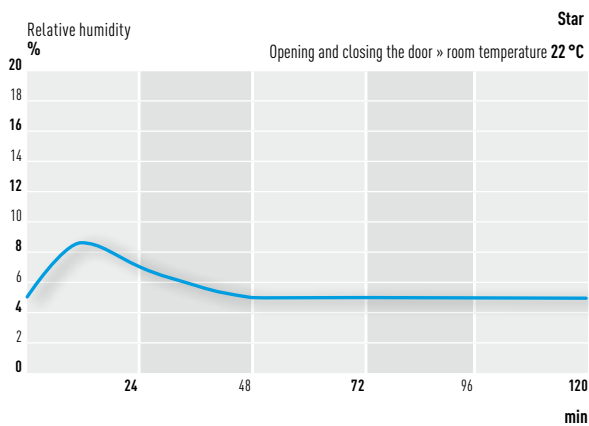
Relative humidity of below 10 % after approx. one hour.

## OPENING AND CLOSING THE DOOR

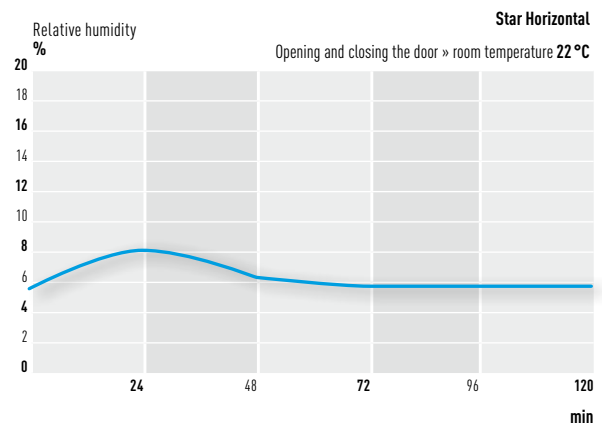
### Test procedure:

A desiccator with three shelves is loaded with approx. 30 beakers. A relative humidity of max. 7% is maintained inside the desiccator. On one shelf and at the bottom of the desiccator there is one tray (350 x 240 mm) with 500 g of silica gel.

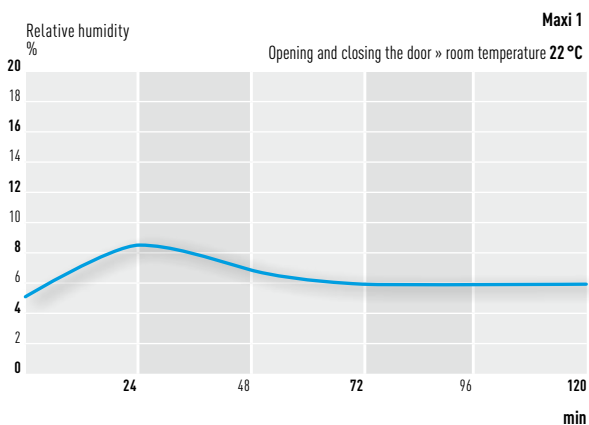
Then the airtight door is opened for 10 seconds and then closed. The curve shows the development of humidity.



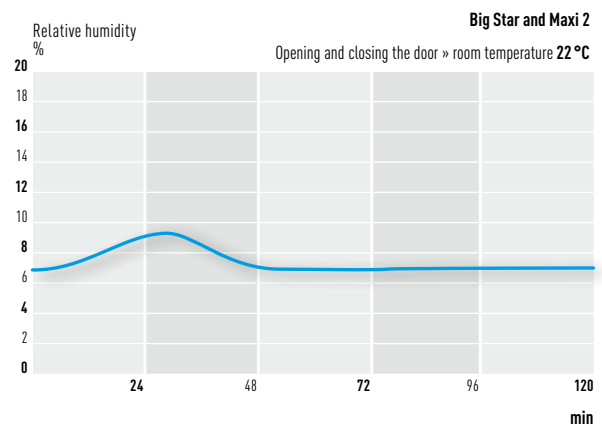
The initial value is attained after approx. 48 minutes.



The initial value is attained after approx. 58 minutes.



The initial value is attained after approx. 72 minutes.



The initial value is attained after approx. 48 minutes.

### SICCO Star-Desiccator

Panels:	Material:	Temperature resistance:	Use:	Stand:
clear	PMMA	-20 °C to +70 °C	normal pressure	rubber feet

**Specification:**

including four shelves made of acrylic glass, tray, hygrometer and desiccant, usable with up to 26 shelves, stackable

<b>Cat. No.:</b>	<b>V 1871-07</b>
<b>Overall dimensions*</b> W x H x D mm	310 x 525 x 375
<b>Usable interior space</b> W x H x D mm	260 x 480 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7
<b>Maximum all-over load per shelf</b> kg	10
<b>Total all-over load</b> kg	30



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### SICCO Star-Desiccator Horizontal

Panels:	Material:	Temperature resistance:	Use:	Stand:
clear	PMMA	-20 °C to +70 °C	normal pressure	rubber feet

**Specification:**

including two shelves made of acrylic glass, tray, hygrometer and desiccant, usable with up to 13 shelves, stackable, door opens forward

<b>Cat. No.:</b>	<b>V 1899-07</b>
<b>Overall dimensions*</b> W x H x D mm	525 x 340 x 375
<b>Usable interior space</b> W x H x D mm	480 x 260 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7
<b>Maximum all-over load per shelf</b> kg	1,5
<b>Total all-over load</b> kg	30

**Applications:**

especially suitable for wide products such as A3 sheets or conductor boards.



**Add. accessories**

Pages 31–34.

\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

## SICCO Maxi 1-Desiccator

Panels: clear	Material: PMMA	Temperature resistance: -20 °C to +70 °C	Use: normal pressure	Stand: casters
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### Specification:

including four shelves made of stainless steel, tray and hygrometer, usable with up to 34 shelves

<b>Cat. No.:</b>	<b>V 1852-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Usable interior space</b> W x H x D mm	495 x 1030 x 540
<b>Usable volume</b> liters	280
<b>Total volume</b> liters	300
<b>Weight</b> kg/approx.	30
<b>Maximum all-over load per shelf</b> kg	30
<b>Total all-over load</b> kg	160



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## SICCO Maxi 2-Desiccator

Panels: clear	Material: PMMA	Temperature resistance: -20 °C to +70 °C	Use: normal pressure	Stand: casters
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### Specification:

two chambers, two doors, each chamber usable with up to 17 shelves, including two shelves per chamber, two trays and two hygrometers

<b>Cat. No.:</b>	<b>V 1853-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Usable interior space</b> W x H x D mm	495 x 500 x 540 per chamber
<b>Usable volume</b> liters	140 per chamber
<b>Total volume</b> liters	150 per chamber
<b>Weight</b> kg/approx.	34
<b>Maximum all-over load per shelf</b> kg	30
<b>Maximum all-over load</b> kg	80 per chamber
<b>Total all-over load</b> kg	160



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### Drying properties

Please read our information on pages 8-9.



### SICCO Big-Star-Desiccator

Panels:	Material:	Temperature resistance:	Use:	Stand:
clear	PMMA	-20 °C to +70 °C	normal pressure	rubber feet

**Specification:**

including two shelves made of stainless steel, tray and hygrometer, usable with up to 17 shelves, stackable

<b>Cat. No.:</b>	<b>V 1896-07</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 560 x 580
<b>Usable interior space</b> W x H x D mm	495 x 500 x 540
<b>Usable volume</b> liters	140
<b>Total volume</b> liters	150
<b>Weight</b> kg/approx.	18
<b>Maximum all-over load per shelf</b> kg	30
<b>Total all-over load</b> kg	80



### SICCO Star-Desiccator Protect

Panels:	Material:	Temperature resistance:	Use:	Stand:
orange	PMMA	-20 °C to +70 °C	normal pressure	rubber feet

**Specification:**

including four shelves made of acrylic glass, tray, hygrometer and desiccant, usable with up to 26 shelves, stackable, orange acrylic panels reduce light incidence

<b>Cat. No.:</b>	<b>V 1879-07</b>
<b>Overall dimensions*</b> W x H x D mm	310 x 525 x 375
<b>Usable interior space</b> W x H x D mm	260 x 480 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7
<b>Maximum all-over load per shelf</b> kg	10
<b>Total all-over load</b> kg	30

**Applications:**

especially suitable for the storage of light-sensitive substances



**Add. accessories**

Pages 31–34.

\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

## SICCO Mini-Desiccator

Panels: **clear**      Material: **Polystyrene**      Temperature resistance: **-35 °C to +70 °C**      Use: **normal pressure**

### Specification:

three versions (one, two or three chambers), immersible door, including desiccant

<b>A</b>	<b>Artikel-Nr. MINI 1 chamber:</b>	<b>V 1850-01</b>
	<b>Overall dimensions*</b> W x H x D mm	235 x 175 x 210
	<b>Usable interior space</b> W x H x D mm	210 x 110 x 180 per chamber
	<b>Usable volume</b> liters, approx.	4,5 per chamber
	<b>Total volume</b> liters, approx.	4,5 per chamber
	<b>Weight</b> kg	0,8
	<b>Total all-over load</b> kg	5
<b>B</b>	<b>Artikel-Nr. MINI 2 chambers:</b>	<b>V 1850-02</b>
	<b>Overall dimensions*</b> W x H x D mm	235 x 340 x 210
	<b>Usable interior space</b> W x H x D mm	210 x 110 x 180 per chamber
	<b>Usable volume</b> liters, approx.	4,5 per chamber
	<b>Total volume</b> liters, approx.	4,5 per chamber
	<b>Weight</b> kg	1,6
	<b>Total all-over load</b> kg	5
<b>C</b>	<b>Artikel-Nr. MINI 3 chambers:</b>	<b>V 1850-03</b>
	<b>Overall dimensions*</b> W x H x D mm	235 x 505 x 210
	<b>Usable interior space</b> W x H x D mm	210 x 110 x 180 per chamber
	<b>Usable volume</b> liters, approx.	4,5 per chamber
	<b>Total volume</b> liters, approx.	4,5 per chamber
	<b>Weight</b> kg	2,5
	<b>Total all-over load</b> kg	5

### Applications:

ideal for small parts, very handy



## SICCO Unix-Desiccator

Panels: <b>tinted</b>	Material: <b>PS</b>	Temperature resistance: <b>-35 °C to +70 °C</b>	Use: <b>normal pressure</b>
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**Specification:**

attachable in height and width, including two removable shelves and desiccant, usable with up to nine shelves, door closes by latching

<b>Cat. No.:</b>	<b>V 1856-01</b>
<b>Overall dimensions*</b> W x H x D mm	250 x 250 x 180
<b>Usable interior space</b> W x H x D mm	225 x 215 x 160
<b>Usable volume</b> liters, approx.	8,5
<b>Total volume</b> liters, approx.	9
<b>Weight</b> kg/approx.	1,7
<b>Maximum all-over load per shelf</b> kg	3
<b>Total all-over load</b> kg	9



\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

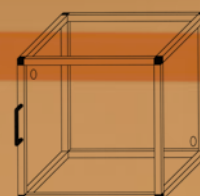
## SICCO Desiccators for gas filling

Gas filling SICCO Desiccators provide ideal conditions for the safe and secure storing of poisonous chemicals. Inert gas like nitrogen can be introduced as soon as the

door is closed tightly. Compared to the ambient air the inert gas does not react with the stored substances.

### Feature Summary

- » Reinforced aluminium frame with acrylic panels
- » Door with magnetic catch, circular rubber seal, the Super-Star-Desiccator includes a cylinder lock
- » Non-slip rubber feet or four casters (two of the casters with brakes)
- » Extra large electronic hygrometer
- » Variable height shelves made of acrylic glass, stainless steel or aluminium
- » Telescopic shelves
- » Two connections for gas filling with quick couplings
- » Non-return valve and hose



### SICCO Super-Star-Desiccator

Panels: <b>clear</b>	Material: <b>PMMA</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>rubber feet</b>
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**Specification:**

including four shelves made of acrylic glass, hygrometer, tray, desiccant and hose with quick coupling for gas filling, usable with up to 26 shelves, lockable

<b>Cat. No.:</b>	<b>V 1875-07</b>
<b>Overall dimensions*</b> W x H x D mm	310 x 525 x 375
<b>Addi. place requirement for coupling</b> mm	150 per panel
<b>Usable interior space</b> W x H x D mm	260 x 480 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7,1
<b>Maximum all-over load per shelf</b> kg	10
<b>Total all-over load</b> kg	30
<b>Bore diameter of quick coupling</b> mm	Ø 6
<b>Bore diameter in panels</b> mm	Ø 16,5 – upper left front side lower right back side
<b>Length of tubing</b> in m	5



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### SICCO Super-Maxi 1-Desiccator

Panels: <b>clear</b>	Material: <b>PMMA</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>casters</b>
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**Specification:**

including four shelves made of stainless steel, hygrometer, tray and hose with quick coupling for gas filling, usable with up to 34 shelves

<b>Cat. No.:</b>	<b>V 1932-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Addi. place requirement for coupling</b> mm	150 per panel
<b>Usable interior space</b> W x H x D mm	495 x 1030 x 540
<b>Usable volume</b> liters	280
<b>Total volume</b> liters	300
<b>Weight</b> kg/approx.	30
<b>Maximum all-over load per shelf</b> kg	30
<b>Total all-over load</b> kg	160
<b>Bore diameter of quick coupling</b> mm	Ø 6
<b>Bore diameter in panels</b> mm	Ø 16,5 – upper left front side lower right back side
<b>Length of tubing</b> in m	5



\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

## SICCO Super-Maxi 2-Desiccator

Panels: <b>clear</b>	Material: <b>PMMA</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>casters</b>
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### Specification:

two chambers, two doors, usable with up to 17 shelves per chamber, including two shelves made of stainless steel per chamber, two trays, two hygrometers and hose with quick coupling for gas filling.

<b>Cat. No.:</b>	<b>V 1933-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Addi. place requirement for coupling</b> mm	150 per panel
<b>Usable interior space</b> W x H x D mm	495 x 500 x 540 per chamber
<b>Usable volume</b> liters	140 per chamber
<b>Total volume</b> liters	150 per chamber
<b>Weight</b> kg/approx.	34
<b>Maximum all-over load per shelf</b> kg	30
<b>Maximum all-over load</b> kg	80 per chamber
<b>Total all-over load</b> kg	160
<b>Bore diameter of quick coupling</b> mm	Ø 6 per chamber
<b>Bore diameter in panels</b> mm	Ø 16,5 – upper left front side per chamber lower right back side per chamber
<b>Length of tubing</b> in m	5





## SICCO Automatic-Desiccators

With automatic drying that can maintain a constant humidity of between 20% and 30%, SICCO Automatic Desiccators are suitable for long-term storage. Even frequent opening of the door is compensated automa-

tically. They are the ideal solution for storing reference samples, electronics, photo equipment, papers, valuable cultural assets and much more.

### Feature Summary

- » Reinforced aluminium frame with acrylic panels
- » Door with magnetic catch and circular rubber seal
- » Non-slip rubber feet or four casters (two of the casters with locking device)
- » Easily readable electronic hygrometer
- » Variable height shelves made of acrylic glass, stainless steel or aluminium
- » Telescopic shelves
- » Automatic drying
- » Constant low interior humidity between 20% and 30%



Performance at a glance.

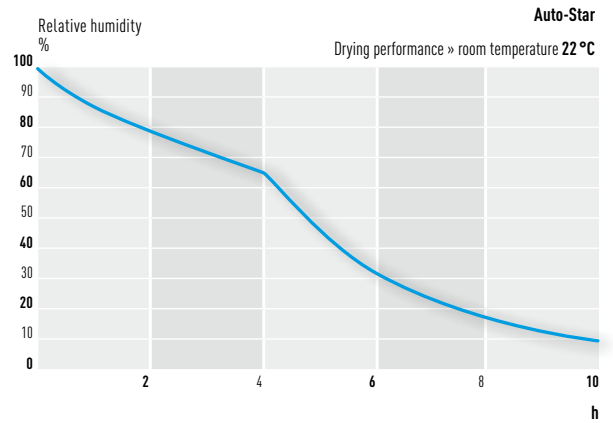
### DRYING PERFORMANCE

**Test procedure:**

After a pre drying period of 10 minutes, a humidity of 100 % is simulated in an Automatic-Desiccator. The desiccator is switched on, the door remains closed tightly until the end of the test. The curves show relative humidity v time.

**Results:**

After only 10 minutes, the relative humidity inside the desiccator is down to 10 % due to automatic drying. Frequent controls are not necessary. The storage space is bigger since it is not necessary to use silica gel and process errors are avoided.



Relative humidity of below 30 % after little more than 6 hours

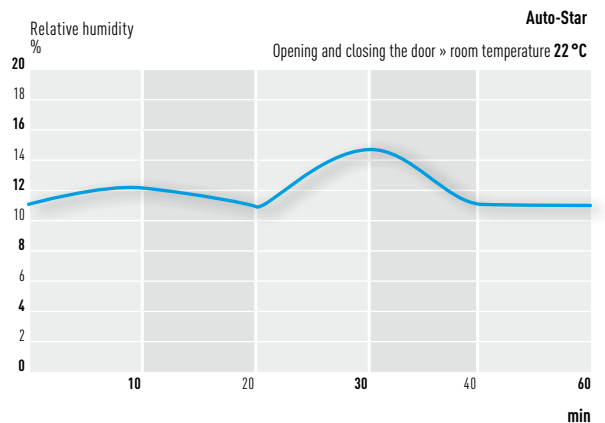
### OPENING AND CLOSING THE DOOR

**Test procedure:**

An Automatic-Desiccator with three shelves is loaded with six bottles of 1.5 litres capacity on the two lower shelves. In addition, there are 12 beakers on the upper shelf. A relative humidity of 13% is produced in the desiccator. The airtight door is opened for 10 seconds and closed. The curves show the relative humidity v time.

**Results:**

The humidity falls to the initial value of 13 % after a short period of time. Application errors that may occur with silica gel are avoided.



The initial value is attained after approx. 40 minutes.

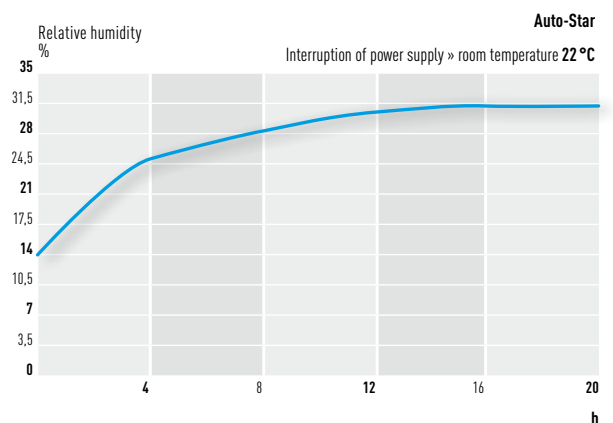
### INTERRUPTION OF POWER SUPPLY

**Test procedure:**

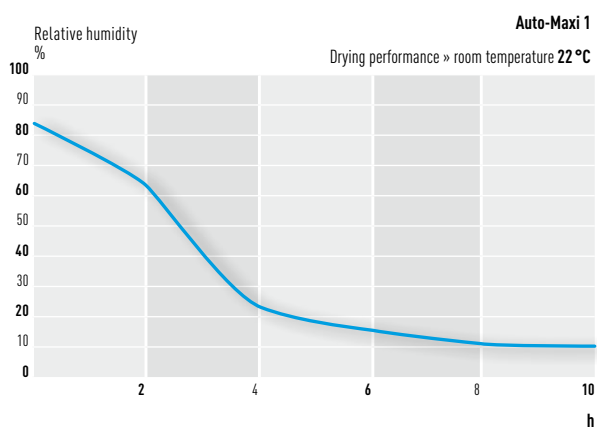
An Automatic-Desiccator with three shelves is loaded with six bottles of 1.5 litres capacity on the two lower shelves. In addition, there are 12 beakers on the upper shelf. A relative humidity of 13 % is produced in the desiccator. Then the desiccator is switched off at a room temperature of 22 °C. The curves shows relative humidity v time.

**Results:**

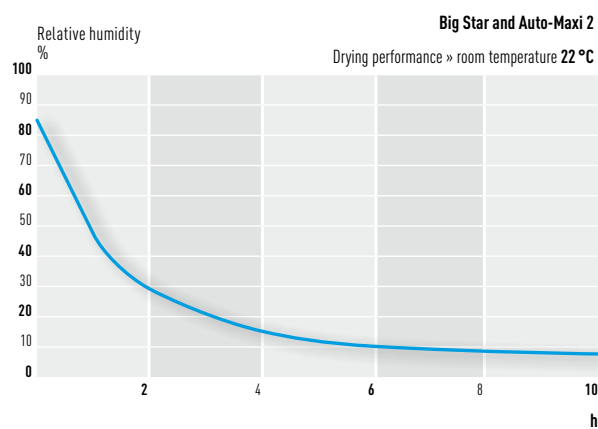
A significant increase of humidity is only noticeable after several hours. This means that the contents of the desiccator remain safe even if the power supply is interrupted.



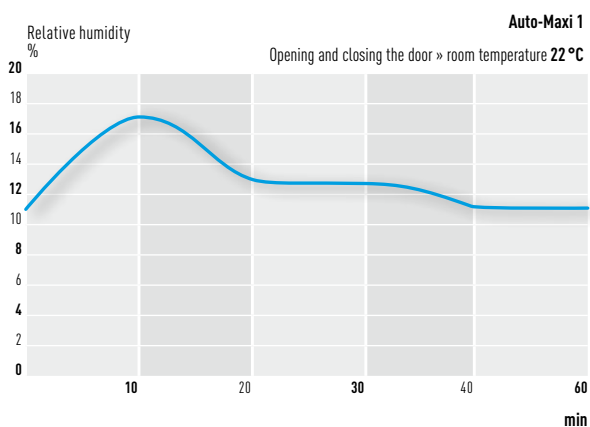
Only 15 % of increase within 20 hours.



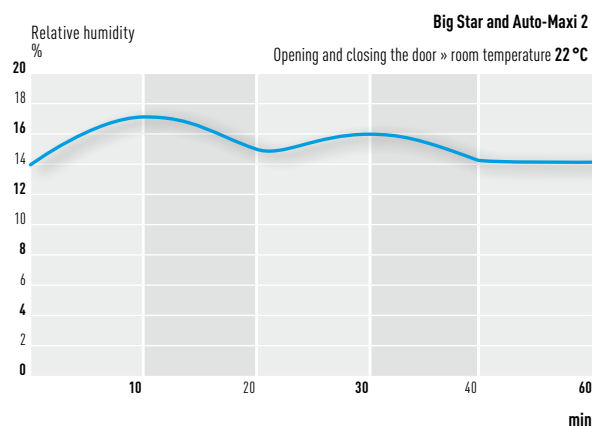
Relative humidity of below 30 % after little more than 3,5 hours.



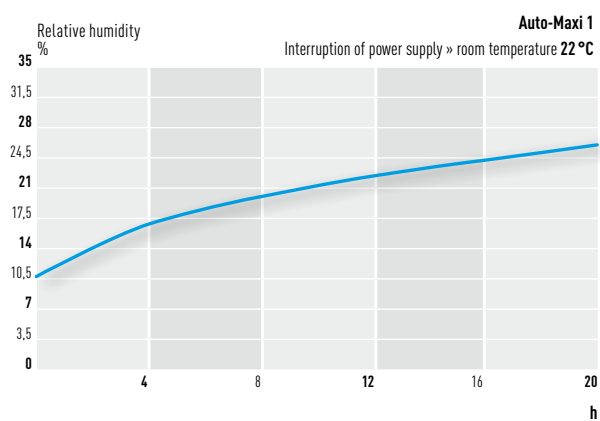
Relative humidity of below 30 % after approx. 2 hours



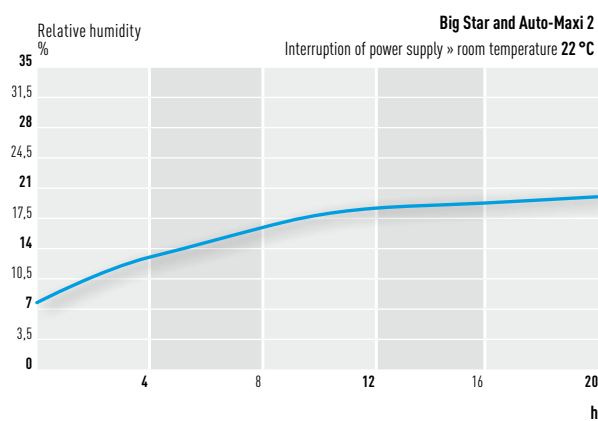
The initial value is attained after approx. 40 minutes



The initial value is attained after approx. 40 minutes



Only 18 % of increase within 20 hours



Only 15 % of increase within 20 hours.

### SICCO Auto-Star-Desiccator

Panels: <b>clear</b>	Material: <b>PMMA</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>rubber feet</b>
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**Specification:**

including four shelves made of acrylic glass and hygrometer, usable with up to 26 shelves, stackable

<b>Cat. No.:</b>	<b>V 1877-07</b>
<b>Overall dimensions*</b> W x H x D mm	310 x 525 x 375
<b>Excess length of drying unit</b> mm	60 back side
<b>Usable interior space</b> W x H x D mm	260 x 480 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7,3
<b>Maximum all-over load per shelf</b> kg	10
<b>Total all-over load</b> kg	30



**BESTSELLER**

### SICCO Auto-Maxi 1-Desiccator

Panels: <b>clear</b>	Material: <b>PMMA</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>casters</b>
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**Specification:**

including four shelves made of stainless steel and hygrometer, usable with up to 34 shelves

<b>Cat. No.:</b>	<b>V 1914-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Excess length of drying unit</b> mm	100 back side
<b>Usable interior space</b> W x H x D mm	495 x 1030 x 540
<b>Usable volume</b> liters	280
<b>Total volume</b> liters	300
<b>Weight</b> kg/approx.	31
<b>Maximum all-over load per shelf</b> kg	30
<b>Total all-over load</b> kg	160



**Add. accessories**

Pages 31–34.

\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

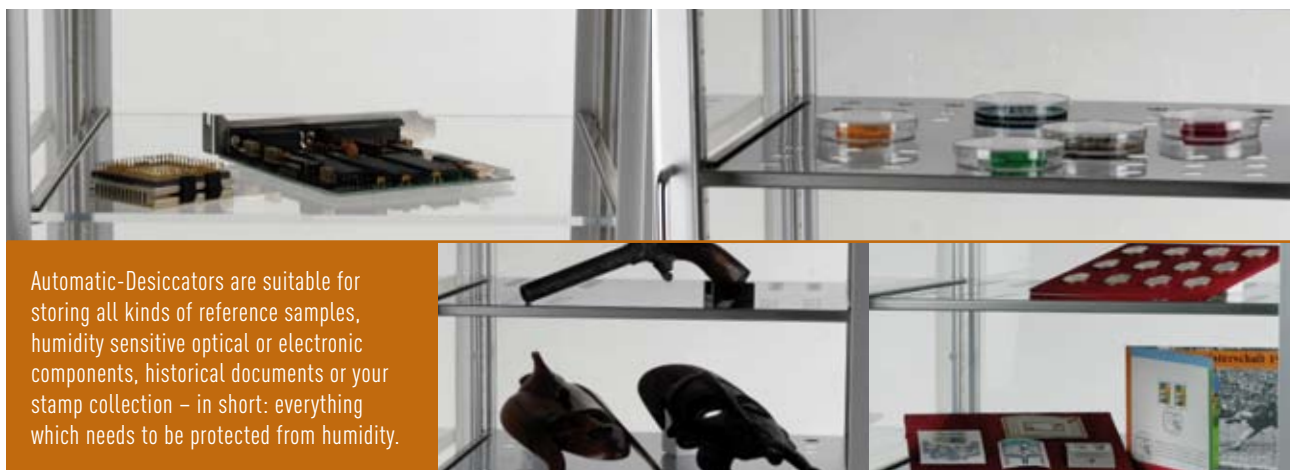
## SICCO Auto-Maxi 2-Desiccator

Panels: clear	Material: PMMA	Temperature resistance: -20 °C to +70 °C	Use: normal pressure	Stand: casters
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### Specification:

two chambers, two doors, usable with up to 17 shelves per chamber, including two shelves made of stainless steel per chamber, two trays and two hygrometers

<b>Cat. No.:</b>	<b>V 1916-01</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Excess length of drying unit</b> mm	100 back side
<b>Usable interior space</b> W x H x D mm	495 x 500 x 540 per chamber
<b>Usable volume</b> liters	140 per chamber
<b>Total volume</b> liters	150 per chamber
<b>Weight</b> kg/approx.	35
<b>Maximum all-over load per shelf</b> kg	30
<b>Maximum all-over load</b> kg	80 per chamber
<b>Total all-over load</b> kg	160



Automatic-Desiccators are suitable for storing all kinds of reference samples, humidity sensitive optical or electronic components, historical documents or your stamp collection – in short: everything which needs to be protected from humidity.

### Drying properties

Please read our information on pages 20–21.





# SICCO Antistatic-Desiccators

SICCO Antistatic-Desiccators can protect electronic components against humidity and airborne particulate. Electrostatic charges are discharged by a grounding cable and a charge neutral atmosphere is produced

inside the desiccator. Antistatic-Desiccators are mainly used for temporary storage of components for electronic products.

## Feature Summary

- » Reinforced aluminium frame with antistatic acrylic panels
- » Door with magnetic catch and circular rubber seal
- » Non-slip rubber feet or four casters (two of the casters with brakes)
- » Easily readable electronic hygrometer
- » Variable height shelves made of aluminium or stainless steel
- » Telescopic shelves
- » Connection for grounding cable
- » Tray for desiccant
- » Star-Desiccators include silica gel



### SICCO Star-Desiccator Antistatic

Panels: <b>bluish</b>	Material: <b>PC ESDV</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>rubber feet</b>
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**Specification:**

including four shelves, tray, hygrometer and desiccant, usable with up to 26 shelves; all materials used can discharge electrostatic charging by means of a grounding cable which can be connected on the back side (connecting thread M6)

<b>Cat. No.:</b>	<b>V 1910-07</b>
<b>Overall dimensions*</b> W x H x D mm	310 x 525 x 375
<b>Usable interior space</b> W x H x D mm	260 x 480 x 330
<b>Usable volume</b> liters	42
<b>Total volume</b> liters	45
<b>Weight</b> kg/approx.	7
<b>Maximum all-over load per shelf</b> kg	10
<b>Total all-over load</b> kg	30



### SICCO Maxi 1-Desiccator Antistatic

Panels: <b>bluish</b>	Material: <b>PC ESDV</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>casters</b>
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**Specification:**

including four shelves made of stainless steel, tray and hygrometer, usable with up to 34 shelves; all materials used can discharge electrostatic charging by means of a grounding cable which can be connected on the back side (connecting thread M6)

<b>Cat. No.:</b>	<b>V 1922-07</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Usable interior space</b> W x H x D mm	495 x 1030 x 540
<b>Usable volume</b> liters	280
<b>Total volume</b> liters	300
<b>Weight</b> kg/approx.	30
<b>Maximum all-over load per shelf</b> kg	30
<b>Total all-over load</b> kg	160



\*Overall dimensions are indicated as follows: width including hinge, height starting from base, depth without handle

## SICCO Maxi 2-Desiccator Antistatic

Panels: <b>bluish</b>	Material: <b>PC ESDV</b>	Temperature resistance: <b>-20 °C to +70 °C</b>	Use: <b>normal pressure</b>	Stand: <b>casters</b>
--------------------------	-----------------------------	--	--------------------------------	--------------------------

### Specification:

two chambers, two doors, usable with up to 17 shelves per chamber, including two shelves made of stainless steel per chamber, two trays and two hygrometers; all materials used can discharge electrostatic charging by means of a grounding cable which can be connected on the back side (connecting thread M6)

<b>Cat. No.:</b>	<b>V 1923-07</b>
<b>Overall dimensions*</b> W x H x D mm	560 x 1150 x 580
<b>Usable interior space</b> W x H x D mm	495 x 500 x 540 per chamber
<b>Usable volume</b> liters	140 per chamber
<b>Total volume</b> liters	150 per chamber
<b>Weight</b> kg/approx.	34
<b>Maximum all-over load per shelf</b> kg	30
<b>Maximum all-over load</b> kg	80 per chamber
<b>Total all-over load</b> kg	160



**Add. accessories**  
Pages 31-34.



## SICCO Vacuum-Desiccators

SICCO Vacuum-Desiccators are suitable for storing sensitive products in a vacuum. The vacuum inside the desiccator ensures rapid drying of the stored products.

These systems allow storage in an oxygen and carbon dioxide free environment and are, for example, suitable for storage of semiconductor samples.

### Feature Summary

- » Clear acrylic panels, interior is visible from all sides
- » Circular silicone seal
- » Non-slip rubber feet
- » Variable height shelves
- » Vacuum gauge (0-760 mm of mercury)
- » Vacuum up to  $10^{-4}$  Torr
- » Two needle valves with O.D. 9.0 mm



## SICCO Vacuum-Desiccator

Panels:	Material:	Temperature resistance:	Use:	Stand:
crystal clear	PMMA	-20 °C to +70 °C	Vacuum up to 10 <sup>-4</sup> Torr	rubber feet

**Specification:**

solid walls of 25 mm thickness, circular silicone gasket, vacuum gauge, V 1880-04 including two shelves, usable with up to three shelves, V 1880-08 and V 1880-12 including each four shelves, usable with up to each eight shelves

<b>A</b>	<b>Cat. No. Vacuum 1:</b>	<b>V 1880-04</b>
	<b>Overall dimensions*</b> W x H x D mm	300 x 350 x 300
	<b>Excess length of valves + vacuum gauge</b> mm	100
	<b>Usable interior space</b> W x H x D mm	250 x 260 x 250
	<b>Usable volume</b> liters, approx.	16
	<b>Total volume</b> liters, approx.	16
	<b>Weight</b> kg/approx.	15
	<b>Maximum all-over load per shelf</b> kg	9
	<b>Total all-over load</b> kg	30
<b>B</b>	<b>Cat. No. Vacuum 2:</b>	<b>V 1880-08</b>
	<b>Overall dimensions*</b> W x H x D mm	300 x 450 x 300
	<b>Excess length of valves + vacuum gauge</b> mm	100
	<b>Usable interior space</b> W x H x D mm	250 x 360 x 250
	<b>Usable volume</b> liters, approx.	22
	<b>Total volume</b> liters, approx.	22
	<b>Weight</b> kg/approx.	18
	<b>Maximum all-over load per shelf</b> kg	9
	<b>Total all-over load</b> kg	40
<b>C</b>	<b>Cat. No. Vacuum 3:</b>	<b>V 1880-12</b>
	<b>Overall dimensions*</b> W x H x D mm	310 x 560 x 310
	<b>Excess length of valves + vacuum gauge</b> mm	100
	<b>Usable interior space</b> W x H x D mm	250 x 460 x 250
	<b>Usable volume</b> liters, approx.	29
	<b>Total volume</b> liters, approx.	29
	<b>Weight</b> kg/approx.	27
	<b>Maximum all-over load per shelf</b> kg	9
	<b>Total all-over load</b> kg	50



**Add. accessories**

Pages 31–34.

\*Overall dimensions are indicated without hinges and valves; height is measured starting from base

## SICCO Accessories for desiccators

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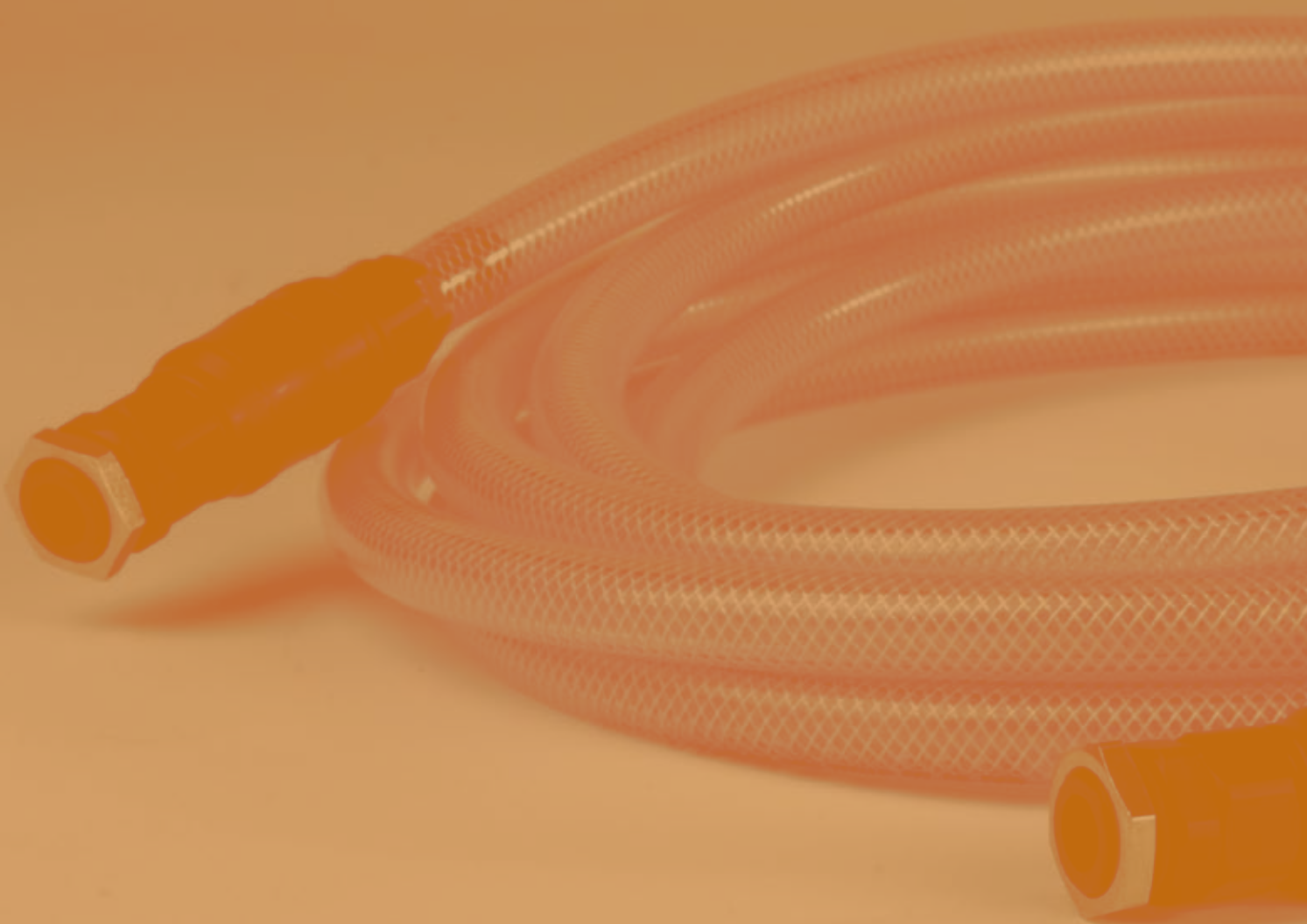
On the following pages you can find practical accessories which will help you to adapt your SICCO Desiccators to your application.

Increase space for your humidity sensitive products by using additional shelves or drawers.

Monitor the exact conditions inside the desiccators with a hygrometer or a humidity-temperature probe with USB-interface.

Hoses, trays, desiccant?  
Just take a look at following pages!

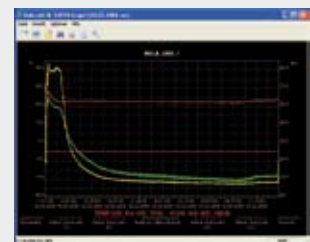
Of course you will receive all this in the usual SICCO high quality.



Product description <i>Dimensions : width x height x depth</i>	Material / special features	Weight	Suitable for:	Cat. No.:		
<b>Shelves</b>						
320 x 4 x 258 mm; including two rails	PMMA, transparent rails made of aluminium	approx. 420 g including rails	Star-Desiccators (except Horizontal)	V 1860-67		
474 x 4 x 320 mm; including two rails	PMMA, transparent rails made of aluminium	approx. 735 g including rails	only Star-Desiccator Horizontal	V 1860-72		
320 x 2 x 258 mm; with 12 bores Ø 10 mm including two rails	stainless steel, usable up to 150 °C rails made of aluminium	approx. 1.305 g including rails	Star-Desiccators (except Horizontal)	V 1860-51		
320 x 2 x 258 mm; including two rails	aluminium	approx. 490 g including rails	Star-Desiccators (except Horizontal)	V 1860-55		
515 x 0,8 x 495 mm with 36 bores Ø 20 mm including two rails	stainless steel, usable up to 150 °C rails made of aluminium	approx. 1.800 g including rails	Maxi-Desiccators Big-Star-Desiccators	V 1860-02		
<b>Drawers</b>						
<b>NEW</b>	Drawer and collecting tray in one; handle bar on lower side; can be filled with bulk material, big surface provides quicker drying of desiccator content, can be put into oven for regeneration of silica gel.					
	235 x 80 x 320 mm including two rails max. collecting capacity 1.5 liters	welded stainless steel; max. all-over load: 12 kg; height as collecting tray: 20 mm	approx. 1.200 g including rails	Star-Desiccators (except Horizontal)	V 1950-08	
	472 x 120 x 515 mm including two rails max. collecting capacity 3.5 liters	welded stainless steel; max. all-over load: 30 kg; height as collecting tray: 15 mm	approx. 3.300 g including rails	Maxi-Desiccators and Big-Star-Desiccators	V 1951-08	
	472 x 180 x 515 mm including two rails max. collecting capacity 4.5 liters	welded stainless steel; max. all-over load: 30 kg; height as collecting tray: 20 mm	approx. 4.100 g including rails	Maxi-Desiccators and Big-Star-Desiccators	V 1951-16	

Product description Dimensions : width x height x depth	Material / special features	Weight	Suitable for:	Cat. No.:	
<b>Trays</b>					
270 x 15 x 210 mm for 400 g Silica gel	melamine	183 g	Star-Desiccators	V 1861-07	
350 x 40 x 240 mm for 1.500 g Silica gel	melamine	515 g	all Maxi-Desiccators and Big-Star-Desiccator	V 1861-21	
<b>Desiccant</b>					
Silica gel with colour indicator from orange to dark brown and black (does not contain cobalt-II- chloride)	Grain size 2.0-5.0 mm, loss after drying <= 4 %	360 g		V 1895-04	
		720 g		V 1895-08	
<b>Hygrometers</b>					
Electr. Thermo-Hygrometer with max-min function; 52 x 15 x 39 mm; including LR 44 button cell, fastener and fastening screws	Measuring ranges: Temperature -10 to +60 °C Humidity 10-99 % r.h. Max. measuring error: ± 1 °C at -10 to +50 °C ± 5 % r.h. at 25-75 % r.h. and 0-50 °C	30 g	Star-Desiccators, Maxi-Desiccators	V 1863-07	
Electr. Thermo-Hygrometer with max-min function,; large display 110 x 20 x 95 mm; including battery 1,5 V AAA, fastening material	Measuring ranges: Temperature -10 to +60 °C Humidity 10-99 % r.h. Max. measuring error: ± 1 °C at -10 to +50 °C ± 5 % r.h. at 25-75 % r.h. and 0-50 °C	171 g	Star-Desiccators, Maxi-Desiccators	V 1866-07	
<b>NEW</b>	Hygrometer for continuous measurement of humidity, dew point and temperature, with optical LED alarm, long-run stable, sturdy, maintenance-free, humidity sensor insured to condensation, calculation of dew point td, indication of maximum and minimum values				
120 x 40 x 89 mm; including battery, calibration report resolution 0.1% r.h. / 0.1 °C, measuring cycle 18 seconds	Measuring range: -10 to +70 °C, ± 0,5 °C +2 to 98 % r.h., ± 2 % -40 to +70 °C td durability 8736 h	168 g	Star-Desiccators, Maxi-Desiccators	V 1859-08	

Product description Dimensions : width x height x depth	Material / special features	Weight	Suitable for:	Cat. No.:
<b>Humidity-Temperature Probe with USB-Interface</b>				
<b>NEW</b>	<p>Combined temperature and humidity probe which can be directly driven by a PC by means of USB interface in handle, wide measuring range, high resolution, very good linearity and durability, calculation and indication of dew point, absolute humidity, vapor pressure, saturated vapor pressure and enthalpy, tabulated measured values, data are recorded on hard disk, humidity is measured with a long-term stable, capacitive polymer sensor, for monitoring store rooms in food production industry, quality control or HVAC technology, humidity measuring systems for custom projects, microcontroller applications, for Windows or Linux</p>			
	<p>Combined temperature and humidity probe, including carry case and Windows-software for measured value display and data recording as well as USB plug type A, 1.1 or 2.0 compatible</p>	<p>Dimensions of stainless steel tube Ø 12 x 125 mm and sintering filter,</p> <p>Measuring range: 0-100% r.h. ± 2 % and -40 to 80 °C, ± 0.5 K Humidity: 0.01% r.h. Temperature: 0.01 K</p>	100 g	Star-Desiccators Maxi-Desiccators
<b>USB-Data Logger</b>				
<b>NEW</b>	<p>Compact data logger with built-in lithium battery for recording temperature and humidity. The stored data can be read out via USB interface and charted with the included software or exported for further processing with other programs (e.g. Excel). For recording of 16.000 measurements of temperature and humidity.</p>			
	<p>130 x 30 x 25 mm Reacting frequency: 2 / 5 / 10 / 30 seconds, 1 / 5 / 10 / 30 minutes, 1 / 2 / 3 / 6 / 12 / 24 hours</p> <p>software for Windows 98/2000/XP/Vista, lithium battery (lifespan approx. 1 year for recording intervals of 5 sec or 2.5 years for intervals of 10 sec), wall bracket, operating instructions on CD</p>	<p>Measuring ranges: Temperature: -40 to +70 °C, ± 1 °C Response time approx. 20 s</p> <p>Relative humidity: 0-100 % RH, ± 3 % Response time approx. 5 s</p> <p>Accuracy of dew point (at 25 °C and 40-100 % RH): ± 2 °C Resolution: 0.1 °C / 0.1 % RH</p>	20 g	Star-Desiccators Maxi-Desiccators
<b>Hoses</b>				
<p>PVC hose for introduction of gas, including two quick couplings made of POM and non-return valve.</p>	<p>PVC Fibre hose I.D. 9 mm x O.D. 15 mm</p>	5 m Length	Super-Star-Desiccators, Super-Maxi 1 and Super-Maxi 2 -Desiccators	V 1864-01



## PMMA

coll: acrylic glass  
also known under the tradename  
Plexiglas® of company  
Evonik Röhm GmbH

Synthetic, thermoplastic material;  
Break proof and impact resistant;  
Very good surface, shiny;  
Good resistance to dilute acids and alkali,  
limited resistance to organic solvents;  
Flammable properties similar to  
hardwood;  
Very low production of smoke if burnt;  
Gases emitted when burning are neither  
toxic nor corrosive;  
Usable up to approx. +70 °C

Volume resistivity:  $>10^{15} \Omega/\text{cm}$ ,  
test specification DIN VDE 0303,  
Surface resistivity:  $5 \times 10^{13} \Omega$ ,  
test specification DIN VDE 0303, part 3;  
Transmittance tD65: ~92 %,  
test specification DIN 5036, part 3

## PMMA orange

Properties: see above;

tD65 = transmittance according to  
DIN 5036 at standard illuminant D65  
(daylight, approx 6500 K, DIN 5033): 42 %  
aD65 = absorbance according to  
DIN 5036: 52 %

## Polycarbonate

PC-ESC is made of transparent, two side  
coated permanent static dissipative  
material. The dissipative property reduces  
particle attraction and the generation of  
electrostatic fields. Complies with  
EN 61340-5-1 and ANSI/ESD S20.20-1999

Electrical properties :

Surface resistance  $R_s$   $10^5$ – $10^7 \Omega$   
(EN 61340-2-3)

Point to point resistance  $R_p$   $10^4$ – $10^6 \Omega$   
(EN 61340-2-3)

Resistance to ground  $R_g$   $10^4$ – $10^6 \Omega$   
(EN 61340-2-3)

## Relative humidity

Percentage ratio between water vapor  
pressure and saturated water vapor pres-  
sure over a clear and even water surface.  
On this basis it is easy to evaluate how  
quickly evaporation will proceed or how  
large is the danger of condensation. The  
quantity of water vapor which would be  
needed for saturation increases with  
increasing temperature. Similarly the  
relative humidity of a given air mass falls  
with increasing temperature. Temperature  
is therefore an important factor in asses-  
sing relative humidity and condensation.

## Silica gel

Silica gel is a colourless amorphous  
silicic acid with a gel-like consistency. It  
has a large inner surface area. It is very  
hygroscopic and can be used as gelling  
agent, filtering or absorption material  
and desiccant. Normally coupled with an  
indicator, silica gel changes colour as  
soon as it absorbs water; the gel remains  
pourable and dimensionally stable even in  
saturated condition. It can be regenerated  
on a metallic sieve or on a baking tray at  
approx. 90–110 °C (a microwave oven is  
not suitable for regeneration!).

## Dew point

The dew point is the temperature at which  
water vapour starts to condense.



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BIC: SOLADES1TBB