

## ThermoMixers



## BlockThermostats



## Suction Systems



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## Discover the HLC product range as your reliable partner in the lab:

Control Panel



Program up to 9 complete programs with 30 program steps and temperature curves in total.

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ThermoMixers



All-in-one: Heating, cooling and mixing with one single unit – the ThermoMixers support your applications.

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Accurate heating and cooling of samples – with the simple Heating-Thermostat or the flexible cooling unit with two blocks.

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Select the appropriate exchangeable blocks from 30 different ones.

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## 15 years of experience in laboratory technology and life science – specialists in passion

DITABIS in Pforzheim, Germany, develops, produces and distributes specialized systems for you – partners in the laboratory, chemistry, medical, industry and life sciences sector. Our field of activity consists of research and development, production of instruments as well as OEM cooperation and direct sales.



### **Extensive industry experience**

For more than 15 years, our engineers and scientists have been available as competent partners in the conception, development and production of your projects.



### **Flexible and customer-oriented**

Small and agile: benefit from the flexibility of a small company and capture the market quickly and with customized systems. Short communication channels and intensive cooperation result in highly efficient processes.



### **Perfect all-around care**

For customer-specific demands in specific market segments, DITABIS is the perfect partner for integrated solutions. Electronic engineers, design engineers and software developers, scientists and product managers keep an eye on the market optimization of the products. With well-known partners, several successful projects have been realized and established in the market.

Our in-house production staff attaches great importance to extensive final testing pursuant to international quality standards.

# Control Panel – from simply practical to highly flexible

## Two versions – suitable for every application

HLC by DITABIS ThermoMixers and BlockThermostats can be operated with a high level of user-friendliness – depending on whether a simple or a complex application is performed. Control the complete process with only five key segments and configure your application exactly as you require.

### Touch panel

The technically up-to-date, stylish and high quality touch panel significantly enhances handling and cleaning of the devices and sets new standards for the design of laboratory devices.



Further colours  
upon request:



## Simply practical – Easy Control

No complex process sequences required? Then Easy Control is your perfect partner for the simple and quick handling of your samples. Select whether the set value or the actual value is to be displayed. The shaking frequency can be set easily and quickly by means of the scaled slider.

### Parameters for programming

Process time hours	0-19 h
Process time minutes	0-59 min
Set temperature	+3°C up to + 130°C
Shaking frequency (at MHR 11)	200 to 1.500 1/min

With the timer, the process time can be set up to 19 h and 59 minutes. The selected time starts when the set value is reached and the heater switches off at the end of the selected time.



# Control Panel – from simply practical to highly flexible

## Infinite possibilities – Smart Control

Program up to 9 complete programs with 30 program steps and temperature curves in total – exactly tailored to your application. The application variety is rounded out by the short mix function, e.g. for vortexing as well as interval shaking with flip effect. The direction of rotation is switchable by the software.

HLC by DITABIS speaks your language: the intuitive menu navigation is available in German or English.

Constant overview of your process at any time: with the detailed information on the display you always have an overview of the following values:

24,7 °C	SP: 37,0 °C	» Actual and set temperature
0 1/min	SP: 1300 1/min	» Actual and set shaking frequency
time:	100% Short-Mix	» Actual and set time
not started	Program	» Program number, cycle, step
	SP: endless	

### Parameters for programming

Program no.	1-9
Number of cycles	1-9
Program steps	30
Progress time hours	0-99 h / infinite
Progress time minutes	0-59 min
Set temperature	-10°C up to + 135°C
Rise time	0-99 min
Shaking frequency	200 up to 1500 1/min
Interval shaking, standstill (pause)	0.0 - 9.9 min
Interval shaking, mixing	0-9 sec

Navigate through the intuitive menu with only five key elements and adjust the 10 parameters to your application—this comfort is unsurpassable.



# Heating & Cooling ThermoMixers



## Flexible

30 different exchangeable blocks for your applications. No suitable one there? We are willing to make you special blocks at a reasonable price.



## Precise

Highest accuracy: high temperature accuracy ( $\pm 0.1^{\circ}\text{C}$ ), quickest tempering times and even temperature distribution.

## Reliable

Stable construction: the robust housing as well technology are a guarantee for a stable value and reliability.



## Modern


The stylish and high quality touch panel enhances handling and cleaning of the devices.

## Diverse

Use up to 9 programs with 30 program steps in total, timer, interval shaking & short mix function as well as a broad range of shaking frequencies.

## Market Check: Your Advantages\*

**x3** More than three times as many standard blocks

 Average largest tempering range

**25%** Quickest cooling speed: 25 % quicker!

\* Status as of July 2011, refers to currently available and relevant competitor products. Errors and alterations excepted.



## Cooling ThermoMixer MKR 13

Art. no. 980123001



» Cools twice as fast as competitors

### Technical specifications

Temperature operation range	Amb -16°C ... +100°C
Temperature adjustable range	-10°C ... +105°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 6°C / Min. from +41°C: approx. 5°C / Min.
Average cooling time	up to +20°C: approx. 7°C / Min. below +20°C: approx. 3°C / Min.
Shaking frequency	200-1500 1/ Min.
Orbit	3 mm orbital
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	1 exchangeable block
Weight (with block / blocks)	approx. 9 kg
Electrical heating/ cooling power	130 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps, short mix, interval shaking

## Cooling ThermoMixer MKR 23

Art. no. 980223001



» Unique in the world: cooling and mixing with 2 blocks  
» Save time, space and money by means of double capacity

### Technical specifications

Temperature operation range	Amb -11°C ...+70°C
Temperature adjustable range	0°C...+80°C
Accuracy/ resolution	+/- 0,3°C / 0,1°C
Average heating time	up to +40°C: approx. 5°C / Min. from +41°C: approx. 4°C / Min.
Average cooling time	up to +20°C: approx. 5°C / Min. below +20°C: approx. 2°C / Min.
Shaking frequency	200-1200 1/ Min.
Orbit	3 mm orbital
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	2 exchangeable blocks
Weight (with block / blocks)	approx. 10 kg
Electrical heating/ cooling power	200 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps, short mix, interval shaking

## Heating Thermomixer MHR 13

Art. no. 980423001



» Highest accuracy: max. 0.1°C deviation

### Technical specifications

Temperature operation range	Amb +3°C ...+130°C
Temperature adjustable range	0°C...+135°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 6°C / Min. from +41°C: approx. 5°C / Min.
Shaking frequency	200-1500 1/ Min.
Orbit	3 mm orbital
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	1 exchangeable block
Weight (with block / blocks)	approx. 6 kg
Electrical heating power	200 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps, short mix, interval shaking

## Heating ThermoMixer MHR 23

Art. no. 980523001



» Our bestseller: universally applicable

### Technical specifications

Temperature operation range	Amb +3°C ...+130°C
Temperature adjustable range	0°C...+135°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 5°C / Min. from +41°C: approx. 4°C / Min.
Shaking frequency	200-1500 1/ Min.
Orbit	3 mm orbital
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	2 exchangeable blocks
Weight (with block / blocks)	approx. 8 kg
Electrical heating power	350 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps, short mix, interval shaking



## Heating ThermoMixer MHR 11

Art. no. 980323001



» Best price-performance ratio of all available mixers

### Technical specifications

Temperature operation range	Amb +3°C ...+130°C
Temperature adjustable range	0°C...+135°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 6°C / Min. from +41°C: approx. 5°C / Min.
Shaking frequency	200-1500 1/ Min.
Orbit	3 mm orbital
Dimensions (W x D x H)	160 x 300 x 110 / 160 mm
Capacity	1 exchangeable block
Weight (with block / blocks)	approx. 5 kg
Electrical heating power	200 W
Electrical supply	230 V, 50 Hz

Easy Control: Timer 19h 59min, slider for shaking frequency

## Heating ThermoMixer MHL 23

Art. no. 980623001



» Linear shaking movement for maximum mixing  
» Unbeatable for very small sample volumes

### Technical specifications

Temperature operation range	Amb +3°C ...+130°C
Temperature adjustable range	0°C...+135°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 5°C / Min. from +41°C: approx. 4°C / Min.
Shaking frequency	200-1300 1/ Min.
Orbit	3 mm reciprocal
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	2 exchangeable blocks
Weight (with block / blocks)	approx. 8 kg
Electrical heating power	350 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps, short mix, interval shaking

# Heating & Cooling BlockThermostats



## Flexible

30 different exchangeable blocks for your applications. No suitable one there? We are willing to make you special blocks at a reasonable price.



## Precise

Highest accuracy: high temperature accuracy ( $\pm 0.1^\circ\text{C}$ ), quickest tempering times and even temperature distribution.

## Reliable

Stable construction: the robust housing as well technology are a guarantee for a stable value and reliability.



## Market Check: Your Advantages\*



Highest attainable accuracy guaranteed



Most detailed display indication



More than 7 times more programming possibilities

## Diverse

Use up to 9 programs with 30 program steps in total in english and german, process time up to 99h.

## Modern

The stylish and high quality touch panel enhances handling and cleaning of the devices.

\* Status as of July 2011, refers to currently available and relevant competitor products. Errors and alterations excepted.

## Cooling BlockThermostat TK 23

Art. no. 980823001



### >> Cooling and heating with double capacity

#### Technical specifications

Temperature operation range	Amb -16°C ...+90°C
Temperature adjustable range	-10°C...+95°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 5°C / Min. from +41°C: approx. 4°C / Min.
Average cooling time	up to +20°C: approx. 5°C / Min. below +20°C: approx. 2°C / Min.
Dimensions (W x D x H)	220 x 345 x 145 / 195 mm
Capacity	2 exchangeable blocks
Weight (with block / blocks)	approx. 8,5 kg
Electrical heating/ cooling power	130 W
Electrical supply	230 V, 50 Hz

Smart Control: 30 program steps

## Heating BlockThermostat TH 21

Art. no. 980923001



### >> The basic model with excellent performance

#### Technical specifications

Temperature operation range	Amb +3°C ...+130°C
Temperature adjustable range	0°C...+135°C
Accuracy/ resolution	+/- 0,1°C / 0,1°C
Average heating time	up to +40°C: approx. 6°C / Min. from +41°C: approx. 5°C / Min.
Dimensions (W x D x H)	160 x 300 x 110 / 160 mm
Capacity	2 exchangeable blocks
Weight (with block / blocks)	approx. 3,5 kg
Electrical heating power	350 W
Electrical supply	230 V, 50 Hz

Easy Control: Timer 19h 59min

## Exchangeable blocks for ThermoMixers and BlockThermostats

Select the one applicable for you from more than 30 different exchangeable blocks. Quick and simple handling: they are simply inserted on the heating and cooling unit and fixed. The blocks are suitable for all ThermoMixers and BlockThermostats listed in this catalogue.



**No suitable one there for your application? Do not hesitate to contact us; we will prepare a cost-effective offer for any special block.**

Phone: +49 (0) 7231 - 29 863 23/ Email: sales@ditabis.de

	Article no.	Article description
For micro tubes	800010800	BM 02 for 96 x 0,2 ml tapered and 8 tube strips
	800010900	BM 05 for 38 x 0,5 ml tapered
	800011000	BM 15 for 24 x 1,5 ml tapered
	800011100	BM 20 for 24 x 2,0 ml parallel
For test tubes	800011500	BP 10 for 24 x D=10,3 mm, 46 mm deep, round bottom, insulating top
	800011600	BP 12 for 24 x D=12 mm, 20 mm deep, flat bottom
	800011700	BP 15 for 24 x D=15 mm, 30 mm deep, flat bottom
	800011800	BP 16 for 24 x D=16,5 mm, 46 mm deep, round bottom, insulating top
	800014200	BP 17.0 for 24 x D=16,5 mm, 30 mm deep, flat bottom
	800016100	BP 19.2 for 24 x D=18,7 mm, 25 mm deep, flat bottom
	800015200	BP 23.0 for 12 x D=22,5 mm, 56 mm deep, flat bottom
	800016000	BP 23.5 for 12 x D=23,0 mm, 56 mm deep, flat bottom
	800011900	BP 28 for 8 x D=27,5 mm, 40 mm deep, flat bottom
For centrifugal tubes	800012200	BZ 15 for "Falcon" tubes 14 x 15 ml, with insulating top
	800012300	BZ 50 for "Falcon" tubes 6 x 50 ml, with insulating top
For PCR plates	800010400	BC 96 for 96-Well "V" bottom
	800010300	BC 84 for 384-Well
For microtiter plates	800012000	BV 96 for 96 x Round- or "V" bottom
	800010600	BF 96 for Flat bottom
For Deep-Well plates	800010500	BD 96 for 96 Deep-Well plates
For other application	800011200	BN 10 for 36 rectangular cuvettes 12,5 mm outside
	800012100	BW 01 as Tempering tub for Deep-Well plates, stacked titer plates and other items, incl. insulating top and removal device
	800014100	SO 10.4 for 24 x D=10,4 mm, 180 mm deep
	800012600	SO 12.0 for 24 x 12ml items
	800012700	SO 20.5 for 12 x 20ml items
For own manufacturing	800010700	BM 00 without drillings, 25 mm high
	800011300	BO 37 without drillings, 37 mm high
	800011400	BO 50 without drillings, 50 mm high
For slides	800012400	BY 12 for 12 Slides for hybridation

## Accessories for ThermoMixers & BlockThermostats

These accessories are suitable for all ThermoMixers and BlockThermostats listed in this catalogue.



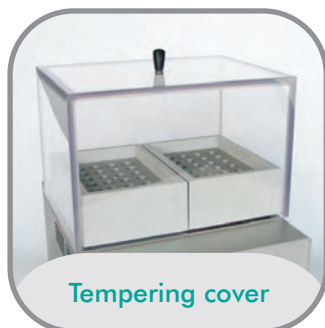
- » Additional insulation provided by cover
- » Quicker and more even tempering of the samples

Article no.	Article description
800012800	BI 01 Insulating top



- » For blocks with micro tubes or test plates
- » Aluminum plates quickly reach the block temperature and prevent condensation

Article no.	Article description
800012900	BA 24 for Block BM 02 - 20
800013000	BA 96 for Block Bl. BC 84, BC 94, BF 96, BV 96



- » Especially for high tubes
- » Reduces the influence of the surrounding temperature

Article no.	Article description
800013800	BT 01 Tempering cover for units with one block
800013900	BT 02 Tempering cover for units with two blocks



- » Connection to HLC by DITABIS cooling units (220 W)
- » For blocks of micro tubes (BM 02 - 20) & PCR plates (BC 96)
- » Parallel heating of the block for even quicker cooling and heating and prevention of condensation

Article no.	Article description
800012500	BH 10 Heating top



- » Simple tool for the loading of test tubes outside the block

Article no.	Article description
800013100	BR 05 Assembly rack for tubes 0.5 ml
800014300	BR 15 Assembly rack for tubes 1.5 and 2.0 l

# Vacuum Suction Systems



## Safe

Work without worries: the **safety filter** prevents the leaking of liquids and a **hose bracket** fixes hose and pipette.

## Multi-user option

**Maximum extension:** usable for up to **four users at the same time** by connecting more bottles and handles.

## Autoclavable

Polypropylene **bottle for 2 or 4 liters** available with **fast lock clutches & ventilation insert** for autoclaving.

## Automatic

**Very quiet** membrane pump which **automatically switches on and off**, 250 to 100 mbar abs. final vacuum adjustable, suction capacity of 4-30 l/min.

## Precise

**Fine adjustment** with the handle: regulation of the suction speed as well as starting and stopping the pump.

## Market Check: Your Advantages

**25%** Averagely **25 % higher pump capacity**

**x2** Final vacuum **twice as powerful**

**Unique:** connection of **four handles possible**





## Automatic Suction System AA 02 / 04 and AA 24

» High suction power, automatic, simply good



### Components

- » Membrane vacuum pump (30 l/min air, 100 mbar abs.)
- » 2 l or 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose
- » Handle

Dimensions: 160 x 230 x 470 mm (2 l bottle) / 530 mm (4 l bottle)

Electric power output: 100W

Power supply: 230V, 50 Hz

### Article no. Article description

981323101	AA 02 Suction system with 2 l bottle
981323001	AA 04 Suction system with 4 l bottle



### Standard for 2 users: components AA 24

- » Membrane vacuum pump (30 l/min air, 100 mbar abs.)
- » 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose
- » 2 Handles
- » Y-distributor

Dimensions: 160 x 230 x 530 mm

Electric power output: 100W

Power supply: 230V, 50 Hz

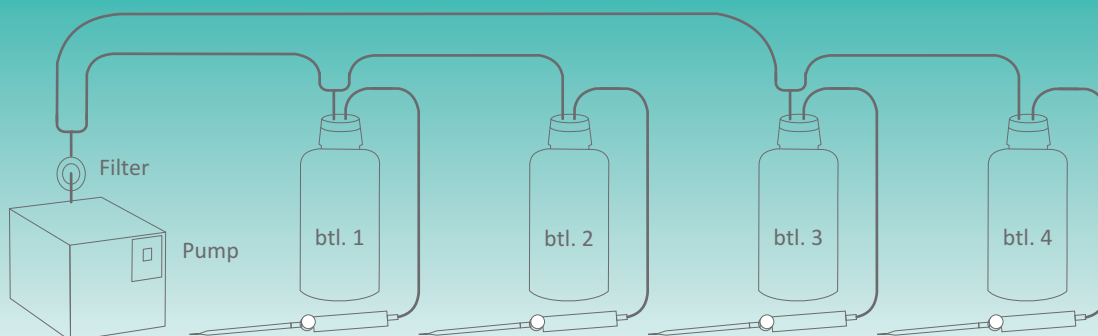
30l /min (air)

100 mbar abs.

### Article no. Article description

981323201	AA 24 Suction system with 4 l bottle, 2 handles
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Extend the automatic suction systems to up to four workplaces and reduce the costs per user!



## Suction System AC 02 / 04



15l /min air

100 mbar abs.

» **Powerful pump at a favorable price**

### Components

- » Membrane vacuum pump (15 l/min air, 100 mbar abs.)
- » 2 l or 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose

Dimensions: 160 x 230 x 470 mm (2 l bottle) / 530 mm (4 l bottle)

Electric power output: 100W

Power supply: 230V, 50 Hz

### Article no. Article description

981423101	AC 02 Suction system with 2 l bottle
981423001	AC 04 Suction system with 4 l bottle

## Absaugsystem AZ 02/04



4l /min (air)

250 mbar abs.

» **Best price-performance ratio**

### Components

- » Membrane vacuum pump (4 l/min air, 250 mbar abs.)
- » 2 l or 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose

Dimensions Pump: 85 x 165 x 65 mm

Electric power output: 100W

Elektr. Anschluss: 230V, 50 Hz

### Article no. Article description

981523101	AZ 02 Suction system with 2 l bottle
981523001	AZ 04 Suction system with 4 l bottle

## Suction Systems AE & AK for Vacuum Connection in the Laboratory



» Enjoy the benefits without the pump

### Components AE 02/ 04

» 2 l or 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose

### Components AK 02/ 04

» 2 l or 4 l bottle incl. fast lock clutches, filter, ventilation insert & 3 m silicone hose

» Bottle holder

» Handle

Article no.	Article description
900015400	AE 02 Suction system with 2 l bottle
900015500	AE 04 Suction system with 4 l bottle
900014800	AK 02 Suction system with 2 l bottle
900014900	AK 04 Suction system with 4 l bottle

## Accessories for Suction Systems

### Bottles / Bottle Accessories

Article no.	Article description
800014600	AL 02 Spare bottle 2 l with fast lock clutches <sup>1</sup>
800014700	AL 04 Spare bottle 4 l with fast lock clutches
800010100	AS 02 Bottle holder for 2 l bottle <sup>2</sup>
800010200	AS 04 Bottle holder for 4 l bottle
100021028	AW 01 Hose clip
800015900	AY 01 Y-Distributor for connecting several collection units
800015800	AV 03 Safety filter (packing unit = 3 pieces)
800014400	AD 02 Cover for bottle 2 l with fast lock clutches
800014500	AD 04 Cover for bottle 4 l with fast lock clutches



1, 2

Suction Systems

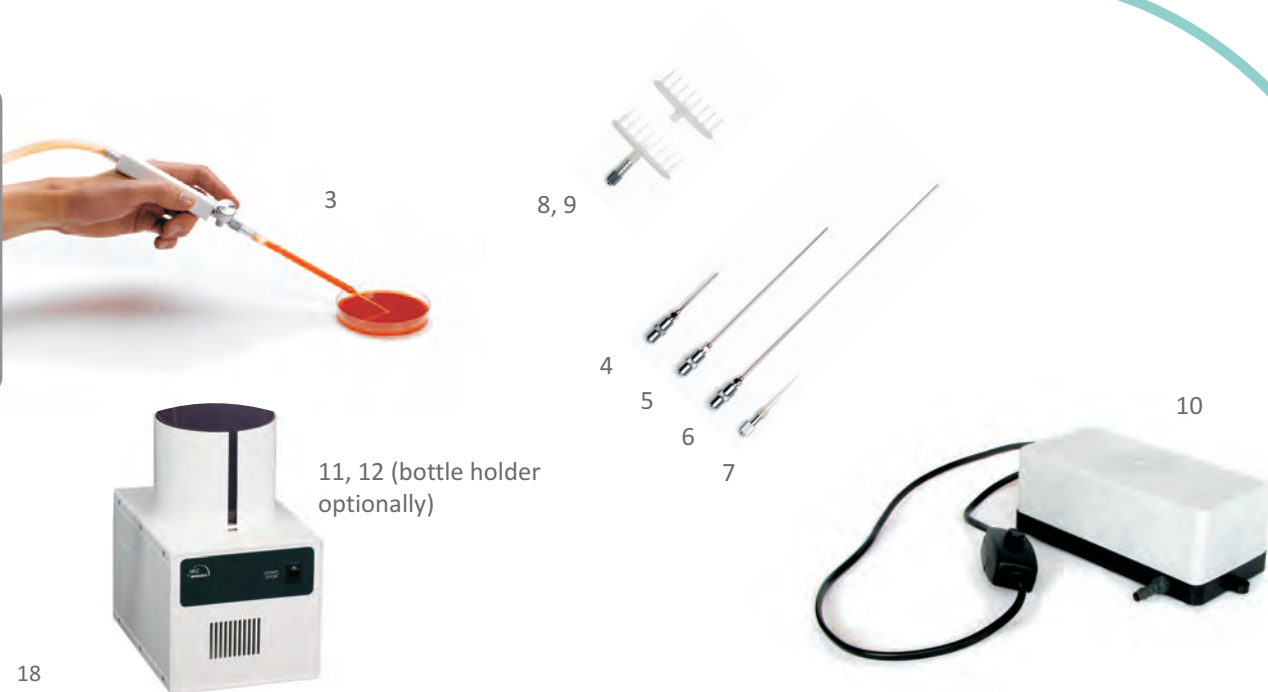
# Accessories for Suction Systems

## Handles / Adapters

Article no.	Article description
800013200	AH 01 Handle with flow control <sup>3</sup>
800013300	AR 05 Stainless steel suction adapter, length 60 mm <sup>4</sup>
800013400	AR 15 Stainless steel suction adapter, length 150 mm <sup>5</sup>
800013500	AR 25 Stainless steel suction adapter, length 200 mm <sup>6</sup>
800013600	AR 40 Suction adapter for yellow pipette tips <sup>7</sup>
800013700	AR 48 Adapter w. suction rake, 8-channel, autoclavable <sup>8</sup>
800015600	AR 58 Suction rake, 8-channel, as spare part <sup>9</sup>

## Pumps and Foot Switches

Article no.	Article description
800015300	AP 04 Membrane vacuum pump <sup>10</sup> Suction capacity: 4l/ min (air) Final vacuum: 250 mbar abs
800015000	AP 15 Membrane vacuum pump <sup>11</sup> Suction capacity: 15l/ min (air) Final vacuum: 100 mbar abs
800015100	AP 30 Membrane vacuum pump <sup>12</sup> Suction capacity: 30l/ min (air) Final vacuum: 100 mbar abs
800014000	AF 01 Foot switch for switching the pump on and off





### Microarray Scanner MArS for all Biochip applications

The easy to use fluorescence scanner saves lab time by running up to **4 slides in one scan job**. The **one-mouse-click operation** for routine applications is based on predefined scan protocols including data analysis algorithms; optionally **triggered by barcode reading**.

**Maximum flexible scan protocols** provide high quality and efficiency for your individual research applications.

#### Software „SpotScout Pro“

**Enables the automatic evaluation of a wide range of biochip formats** by using powerful algorithms for automatic grid finding and providing efficient quality control.

#### MARs Verification Kit

To allow **routine quality checks** of MArS the Verification Kit offers different test modules as Gain Verification, Focus Verification, Autofluorescence and Noise Control.

**To learn more about this affordable and reliable scanner system visit [www.ditabis.com](http://www.ditabis.com).**



### Imaging Plate Scanner Micron for TEM applications

**Imaging Plates: the almost ideal electron detector** for a broad range of applications as **low dose cryo (biological or beam sensitive samples)**, **high resolution TEM imaging for weak phase contrast samples**, **material science** or **diffraction pattern**.

#### Technical specifications

##### » Readout pixels

Max. 6000 x 5000 at 15.0  $\mu\text{m}$  (nominal pixel size)

##### » A/D-conversion

True linear, 2 channels of 16 bit at different gains, 20 bit comb.

##### » Dynamic range

Linear 6 orders of magnitude

##### » Effective imaging area

80 x 90 mm

**Interested? Contact our specialists under Tel. +49 (0) 7231 - 29 863 00 or visit our website [www.ditabis.com](http://www.ditabis.com).**

# Made in Germany

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