

°LAUDA



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THE NEW PRODUCT LINE - HYDRO

Laboratory water, shaking water, vaporization water and tissue float baths

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3	Shaking water baths
4	Vaporization water baths
5	Tissue float bath
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OVERVIEW

Four types of Hydro water baths

1. WATER BATH



H 16 water bath

- Non-circulating and circulating water baths
- Shaking water baths

2. SHAKING WATER BATH



H 20 SW shaking water bath

OVERVIEW

Four types of Hydro water baths

3. VAPORIZATION WATER BATH



H 6 V vaporization water bath



H 5 V vaporization water bath



H 19 V vaporization water bath

4. TISSUE FLOAT BATH



H 2 P tissue float bath

UNIVERSAL WATER, SHAKING WATER BATHS FOR THE LABORATORY

High-quality, safe and user-friendly



Applications:

- Bacteriological examinations
- Molecular biology
- Demulsibility studies
- Processing chemical reactions
- Thawing
- Metallurgical analysis
- Incubation of microbiological assays
- Warming Reagents
- Environmental studies
- Food processing (QC)
- Water quality research
- Cytochemistry



2 WATER BATHS

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HYDRO WATER BATHS

Product features

- 6 model sizes (4 L to 41 liters volume)
- Heating capacity up to 1.5 kW
- Temperature range: +25 ... 100 °C (boiling mode)
- Temperature stability: ± 0.1 K
- Programmable timer: up to 999 hrs, 59 mins
- Three timer functions
 - Switch-on delay
 - Operating time after expiry of switch-on delay or continuous operation
 - Operating time after expiry of switch-on delay and reaching the set point temperature or continuous operation.



H 16 water bath

HEATING CONCEPT

Homogeneous bath temperature

Heating element is located directly under the sieve plate

→ homogeneous temperature distribution in the bath

Heating capacity is adapted to the bath size

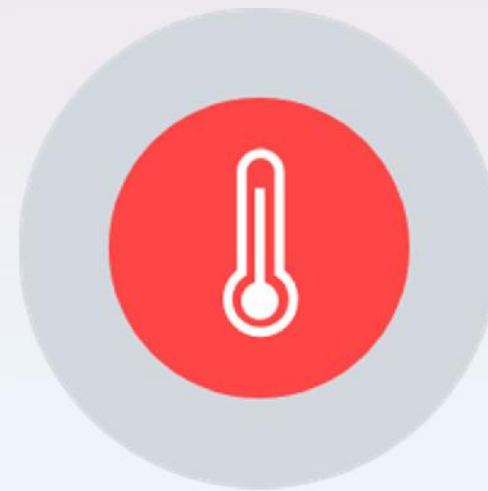
→ Set temperature is rapidly reached

Overtemperature safety sensor

→ Prevention of overheating

Calibration of the controller by reference thermometer

→ Optimal temperature accuracy



CONTROLLER

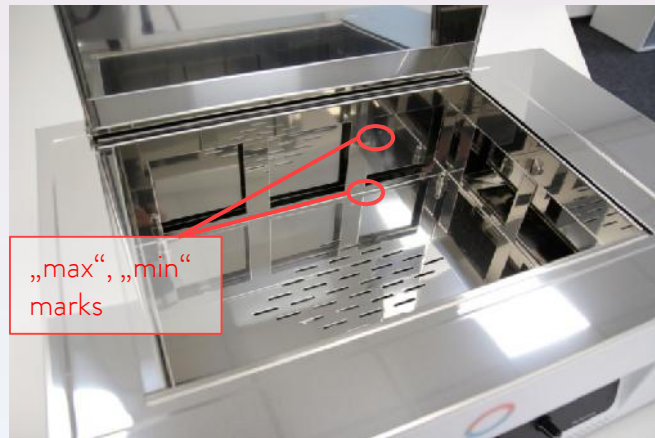
Self-explanatory, easy operation



- Large high-contrast TFT display (3.5")
- Membrane keypad with four softkeys
- Menu-guided operation
- Enhanced visual and audible alarms for more sample safety
- Temperature display either in °C or °F
- Backward-inclined operation elements → Protection of electronics from dripping water and dirt.

OPERATION

Easy to handle from filling to cleaning



Bath interior

FILLING

- All water baths are provided with a sieve plate as standard. → no racks necessary: flasks, containers can be placed directly on the sieve plate.
- Max. mark → no overflow

CLEANING

- Drain valve at the rear side → convenient emptying
- Easy removal of the sieve plate for cleaning



Drain valve at the rear side of the device.

NO DRIPPING BACK OF CONDENSATE

Double-walled lid with inner curvature



Arched insulating lid

- reduces heat loss and
- prevents condensate from dripping back into the samples.

SAFETY FUNCTIONS

2-fold temperature protection

- Electronic monitoring of the temperature controller
- In case of a failure: The cause is shown on the display, the bath heating is switched off
- Optical and acoustic alarm in case of water shortage, over-/under-temperature as well as sensor break/short circuit
- Two independently operating temperature fuses (electronic over-temperature alarm and water low-level protection)



HIGH-QUALITY PROCESSING COMBINED WITH MODERN DESIGN

Highest demands on technology, function, material and design



- Welded bath tank
- Bath interior (heating element, cover, lid and sieve plate) made of stainless steel
- Corrosion proof exterior housing made of electrolytically galvanised sheet steel, powder-coated

MADE BY LAUDA-GFL

GFL is a synonym for highest quality and durability

GFL Technology

Made by GFL – Gesellschaft für Labortechnik mbH

- All GFL products are renowned for their durability, reliability and long life
- All products are low maintenance or maintenance free.
- In case of malfunction, easy accessibility and thus interchangeability of all components

TECHNICAL DATA OF THE WATER BATHS

According to DIN 12876 standard

		H 4	H 8	H16	H22	H 24	H 41
Working temp. range	°C	+25 ... 100					
Temperature stability	±K	0.1					
Heater power	kW	0.5 kW	1.0 kW	1.5 kW	1.5 kW	1.5 kW	1.5 kW
Bath volume	L	4	8	16	22	24	41
Bath opening (WxD)/ Bath depth	mm	245x100/ 165	245x200/ 165	400x245/ 165	400x245/ 225	600x245/ 165	410x296/ 335
Usable depth	mm	115	115	115	180	115	285
Dimensions (WxDxH)	mm	340x290x275	340x395x275	500x440x275	500x440x345	700x440x275	510x490x476
Weight	kg	9.2	9.3	13.3	15.0	17.2	21.2

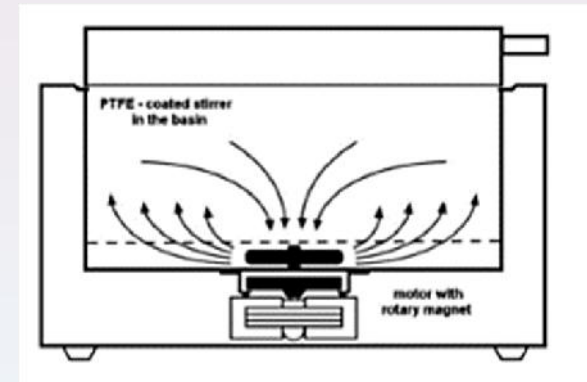
HYDRO CIRCULATING WATER BATHS

The product option “Agitation” is available for two types

- Two model sizes (8 L and 16 liters volume) with circulating system
→ Optimal temperature uniformity in the whole bath

ALL OTHER PRODUCT FEATURES OF THE WATER BATHS REMAIN UNCHANGED:

- Heating capacity up to 1.5 kW
- Temperature range: +25 ... 100 °C (boiling mode)
- Temperature stability: ± 0.1 K
- **Temperature homogeneity: ± 0.2 K**
- Programmable timer, up to 999 hrs, 59 mins
- Three timer functions
 - Switch-on delay
 - Operating time after expiry of switch-on delay or continuous operation
 - Operating time after expiry of switch-on delay and reaching the set point temperature or continuous operation.



An electric motor with rotary magnet is flanged to the bath floor, whose torque is transmitted to a PTFE coated stirring magnet in the bath

TECHNICAL DATA OF THE CIRCULATING WATER BATHS

According to DIN 12876 standard

		H 8 A*	H 16 A*
Working temp. range	°C	+25 ... 100	
Temperature stability	±K	0.1	
Heater power	kW	1.0 kW	1.5 kW
Bath volume	L	8	16
Bath opening / Bath depth	mm	245x200 / 165	400x245 / 165
Usable depth	mm	115	115
Dimensions (WxDxH)	mm	340x395x275	500x440x275
Weight	kg	9.3	13.3

*A - agitation



3 SHAKING WATER BATHS

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HYDRO SHAKING WATER BATHS

Product features

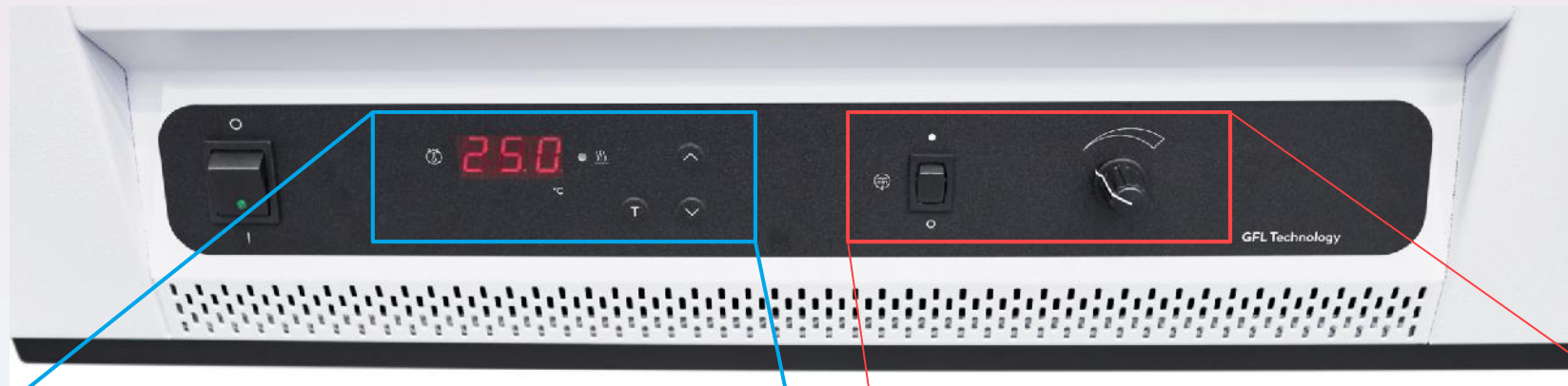
- 3 models specialized for different operating modes
 - H 20 S and H 20 SW with oscillating shaking motion
 - H 20 SOW with orbital shaking motion
- Built-in cooling coil for applications below ambient temperature (H 20 SW + H 20 SOW as a standard scope of supply)
- Heating capacity: 1.5 kW
- Temperature range: +10 ... 99.9 °C
- Temperature stability: ± 0.1 K (temporal at 50 °C)



Image: H 20 S shaking water bath

CONTROLLER

Heating, shaking or heating and shaking



Temperature setting (on the left side)

- Easy-to-read LED display
- Membrane keypad with concise symbols
- 2-finger operation → protection of unintentional modification
- Digital set point adjustment

Frequency setting of the movement (on the right side)

- Shaking motion on/off control
- Freely adjustable electronic speed controller to control the shaking motion

SHAKING DEVICE

Maintenance-free and low-wear shaking mechanism

- Constant shaking frequency, independent of load, even at continuous operation
- Gentle start-up
- Corrosion-resistant special ball bearings
→ Maintenance-free and durable
- Simple removal of the shaking rack for easy cleaning

Only for H 20 SW:

- Display of the actual speed via an LED display



Image: H 20 S shaking water bath

NO DRIPPING BACK OF CONDENSATE

Double-walled lid with inner curvature



Arched insulating lid

- reduces heat loss and
- prevents condensate from dripping back into the vessels.

Cover frame

- Condensate channel in the cover frame
let's condensate run back into the bath

Material

- Bath interior, insulating lid und cover
made of stainless steel
- Corrosion proof exterior housing

TECHNICAL DATA

According to DIN 12876 standard

		H 20 S	H 20 SW	H 20 SOW
Working temp. range	°C	+25 ... 99.9	+25 ... 99.9	+25 ... 80
Working temp. range with water cooling	°C	--	10 ... 99.9	10 ... 80
Temperature stability	±K	0.1		
Heater power	kW	1.5 kW		
Bath volume	L	20		
Bath opening (WxDxH)	mm	450x300x160	450x300x160	450 x 300 x 155
Shaking motion		oscillating	oscillating	orbital
Shaking frequency	rpm	10 – 250		
Shaking amplitude	mm	22	22	14
Dimensions (WxDxH)	mm	715x520x330	715x520x330	632 x 500 x 390
Net/gross weight	kg	28 / 32	30 / 34	35 / 40

HIGH-QUALITY SHAKING WATER BATHS

High-quality, safe and maintenance-free

- Technology
 - Welded bath tank
 - Shaking device mounted on special ball bearings
 - Low-wear mechanics
 - Optimum safety functions (electronic monitoring, two independent over-temperature protection measures)
- Function
 - Optimum temperature distribution throughout the whole bath interior
 - Overload-protected AC motor for shaking device
 - Marked with CE mark
- Design
 - Modern and pleasant design





4 VAPORIZATION WATER BATHS

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HYDRO VAPORIZATION WATER BATHS

Product features

- 5 model sizes (5 L to 19 liters volume)
- Heating capacity up to 1.5 kW
- Temperature range: +25 ... 100 °C (boiling mode)
- Temperature stability: ± 3 K
- Temperature adjustment via rotary knob with temperature scale
- Number of openings (1 to 8)
 - All openings are provided with hole covers
 - All hole covers consist of a multi-piece ring set and are removable
 - Multi-piece ring set made of heat resistant plastic
- Adjustable water level regulator as standard



H 9 V vaporization water bath



H 11 V vaporization water bath

HYDRO VAPORIZATION WATER BATHS

For gentle multiple steaming work from columns, Erlenmeyer flasks or beakers

Removable square cover plate
(W 265 mm x D 265 mm)



H 5 V vaporization water bath



H 6 V vaporization water bath

A support rod of 600 mm length, 12 mm diameter is behind each opening



H 9 V vaporization water bath

- Corrosion proof exterior housing made of electrolytically galvanised sheet steel, powder-coated
- Bath interior, heating element, frame with openings and 2-part perforated floor plate above the heating element are made of stainless steel.

HYDRO VAPORIZATION WATER BATHS

For the protected use in fume hoods (digestories)

- All constructive parts of the housing as well as the heating element are made of stainless steel.



H 11 V vaporization water bath



H 19 V vaporization water bath

TECHNICAL DATA OF THE VAPORIZATION WATER BATHS

According to DIN 12876 standard

		H 5 V	H 6 V	H 9 V	H 11 V	H 19 V
Working temp. range	°C	+25 ... 100				
Temperature stability	±K	3				
Heater power	kW	1.0 kW	1.0 kW	1.5 kW	1.5 kW	1.5 kW
Bath volume max.	L	5	5.3	8	10.5	18.4
Number of openings		1	4	6	6	8
Ø of the openings min. / max.	mm	32.5 / 173.5	32.5 / 112.5	32.5 / 112.5	32.5 / 92.5	32.5 / 92.5
Dimensions (WxDxH)	mm	342x400x180	682x232x190	982x232x190	450x300x155	690x300x155
Net / gross weight	kg	8.1 / 9.4 kg	12.4 / 13.6 kg	17.0 / 18.5 kg	5.7 / 7.0 kg	7.9 / 9.1 kg



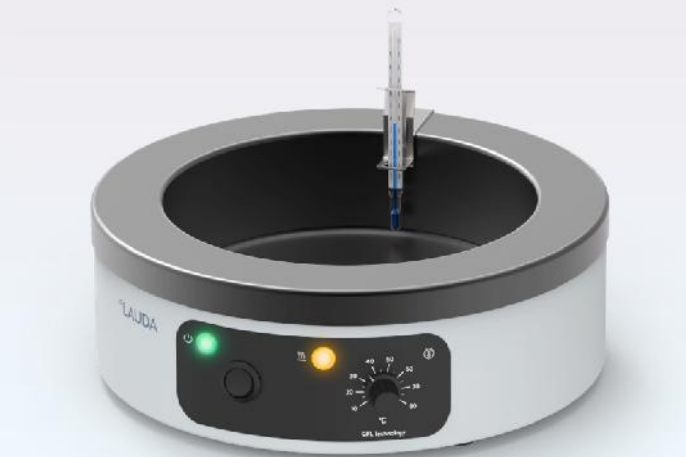
5 TISSUE FLOAT BATH

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HYDRO TISSUE FLOAT BATH

For stretching and drying cut tissues in histological, pathological, chemical, clinical + bacteriological labs

- 1 model size (2 L liters volume)
- Heating capacity: 0.3 kW
- Temperature range: +25 ... 80 °C
- Temperature stability: ± 0.5 K
- Bath size/depth: $\varnothing 200$ mm / 60 mm
- Temperature adjustment via rotary knob with temperature scale
- Temperature indication by control thermometer at the bath edge
- Aluminium bath interior, black anodised



1 | 2 P tissue float bath



6 AVAILABILITY

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DESIGNATION DEVICE TYPES

Concept from Aqualine and ECO transferred to Hydro consequently



A – Circulating water bath “A- Agitation”

S – Shaking water bath

V – Vaporization water bath

P – Tissue float baths

W – with water cooling

○ – orbital shaking motion

OVERVIEW OF HYDRO DEVICE TYPES

Devices also available with different mains plugs

Order number	Device type	Filling volume	Heating power	Power supply
L002900	H 4	4 L	0.5 kW	230 V; 50/60 Hz
L002901	H 8	8 L	1.0 kW	230 V; 50/60 Hz
L002902	H 16	16 L	1.5 kW	230 V; 50/60 Hz
L002903	H 22	22 L	1.5 kW	230 V; 50/60 Hz
L002904	H 24	24 L	1.5 kW	230 V; 50/60 Hz
L002905	H 41	41 L	1.5 kW	230 V; 50/60 Hz
L002906	H 8 A	8 L	1.0 kW	230 V; 50/60 Hz
L002907	H 16 A	16 L	1.5 kW	230 V; 50/60 Hz
L002908	H 20 S	20 L	1.5 kW	230 V; 50/60 Hz
L002909	H 20 SW	20 L	1.5 kW	230 V; 50/60 Hz
L002910	H 20 SOW	20 L	1.5 kW	230 V; 50/60 Hz

These device types are equipped with an CEE7/7 angled, "Schuko" (EU) plug

The following plugs are also available

- BS1363 angled (UK)
- NBR 14136, BR/3/20 (BR)
- AS/NSZ 3112, SAA/3/15 (AUS)
- SEV 1011, SEV 5934/2, T23 (CH)
- GB2099 (CN)

OVERVIEW OF HYDRO DEVICE TYPES

Devices also available with different mains plugs

Order number	Device type	Filling volume	Heating power	Power supply
L003066	H 5 V	5 L	1.0 kW	230 V; 50/60 Hz
L003067	H 6 V	5.3 L	1.0 kW	230 V; 50/60 Hz
L003068	H 9 V	8 L	1.5 kW	230 V; 50/60 Hz
L003069	H 11 V	10.5 L	1.5 kW	230 V; 50/60 Hz
L003070	H 19 V	18.4 L	1.5 kW	230 V; 50/60 Hz
L003071	H 2 P	2 L	0.3 kW	230 V; 50/60 Hz

These device types are equipped with an CEE7/7 angled, "Schuko" (EU) plug

The following plugs are also available

- BS1363 angled (UK)
- NBR 14136, BR/3/20 (BR)
- AS/NSZ 3112, SAA/3/15 (AUS)
- SEV 1011, SEV 5934/2, T23 (CH)
- GB2099 (CN)

OVERVIEW OF HYDRO DEVICE TYPES

US voltage

Order number	Device type	Filling volume	Heating power	Power supply
L002911	H 4	4 L	0,5 kW	115 V; 60 Hz
L002912	H 8	8 L	1,0 kW	115 V; 60 Hz
L002913	H 16	16 L	1,5 kW	115 V; 60 Hz
L002914	H 22	22 L	1,5 kW	115 V; 60 Hz
L002915	H 24	24 L	1,5 kW	115 V; 60 Hz
L002916	H 41	41 L	1,5 kW	115 V; 60 Hz
L002917	H 8 A	8 L	1,0 kW	115 V; 60 Hz
L002918	H 16 A	16 L	1,5 kW	115 V; 60 Hz
L002919	H 20 S	20 L	1,5 kW	115 V; 60 Hz
L002920	H 20 SW	20 L	1,5 kW	115 V; 60 Hz
L002921	H 20 SOW	20 L	1,5 kW	115 V; 60 Hz

These device types are equipped with a NEMA 5-15P (USA) plug

OVERVIEW OF HYDRO DEVICE TYPES

US voltage

Order number	Device type	Filling volume	Heating power	Power supply
L003072	H 5 V	5 L	1.0 kW	115 V; 60 Hz
L003073	H 6 V	5.3 L	1.0 kW	115 V; 60 Hz
L003074	H 9 V	8 L	1.5 kW	115 V; 60 Hz
L003075	H 11 V	10.5 L	1.5 kW	115 V; 60 Hz
L003076	H 19 V	18.4 L	1.5 kW	115 V; 60 Hz
L003077	H 2 P	2 L	0.3 kW	115 V; 60 Hz

These device types are equipped with a NEMA 5-15P (USA) plug

OVERVIEW OF HYDRO DEVICE TYPES

Japanese voltage

Order number	Device type	Filling volume	Heating power	Power supply
L002922	H 4	4 L	0,5 kW	100 V; 50/60 Hz
L002923	H 8	8 L	1,0 kW	100 V; 50/60 Hz
L002924	H 16	16 L	1,5 kW	100 V; 50/60 Hz
L002925	H 22	22 L	1,5 kW	100 V; 50/60 Hz
L002926	H 24	24 L	1,5 kW	100 V; 50/60 Hz
L002927	H 41	41 L	1,5 kW	100 V; 50/60 Hz
L002928	H 8 A	8 L	1,0 kW	100 V; 50/60 Hz
L002929	H 16 A	16 L	1,5 kW	100 V; 50/60 Hz
L002930	H 20 S	20 L	1,5 kW	100 V; 50/60 Hz
L002931	H 20 SW	20 L	1,5 kW	100 V; 50/60 Hz
L002932	H 20 SOW	20 L	1,5 kW	100 V; 50/60 Hz

These device types are equipped with a NEMA 5-15P (USA) plug

OVERVIEW OF HYDRO DEVICE TYPES

Japanese voltage

Order number	Device type	Filling volume	Heating power	Power supply
L003078	H 5 V	5 L	1.0 kW	100 V; 50/60 Hz
L003079	H 6 V	5.3 L	1.0 kW	100 V; 50/60 Hz
L003080	H 9 V	8 L	1.5 kW	100 V; 50/60 Hz
L003081	H 11 V	10.5 L	1.5 kW	100 V; 50/60 Hz
L003082	H 19 V	18.4 L	1.5 kW	100 V; 50/60 Hz
L003083	H 2 P	2 L	0.3 kW	100 V; 50/60 Hz

These device types are equipped with a NEMA 5-15P (USA) plug

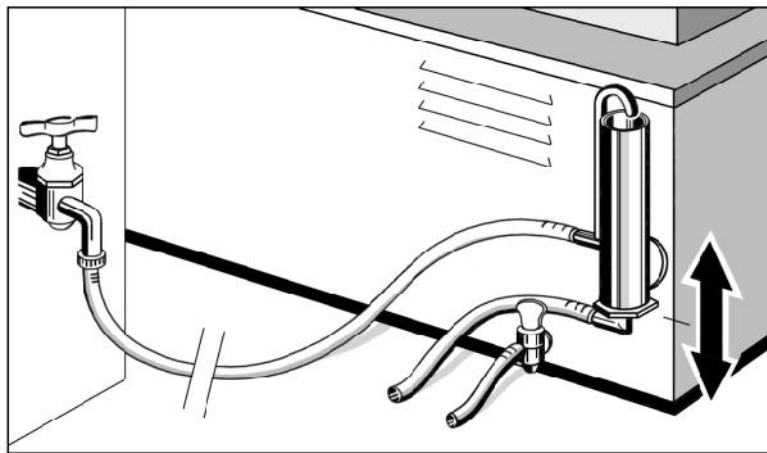
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7 ACCESSORIES

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WATER LEVEL CONTROL FOR ALL BATHS

Allows unattended continuous operation



Water level regulator - Cat. No.: A000024

available as accessory

- Water loss (through evaporation) is compensated and thus water level is kept constant.
- Operation of the bath below ambient temperature at a minimum of approx. 3 °C above tap water temperature

ACCESSORIES

Universal applicable in all water baths

Cat. No.	A000015	A000016	A000017	A000022
Device types	 Rack with 20 openings Ø18 mm	 Rack with 5 openings Ø 31 mm	 Rack with 20 openings Ø 13 mm	 Milk bottle rack with 12 openings Ø56 mm
H 4	max. 2 racks	max. 2 racks	max. 2 racks	--
H 8 (A)	max. 4 racks	max. 4 racks	max. 4 racks	max. 1 racks
H 16 (A) + H 22	max. 8 racks	max. 8 racks	max. 8 racks	max. 2 racks
H 24	max. 12 racks	max. 12 racks	max. 12 racks	max. 3 racks
H 41	max. 9 racks	max. 9 racks	max. 9 racks	max. 2 racks

ACCESSORIES

Suitable for shaking water baths



Shaking tray Cat. No.: A000023

Shaking tray made of stainless steel, perforated, to accommodate clamps for Erlenmeyer flasks of 25 ml to 500 ml*



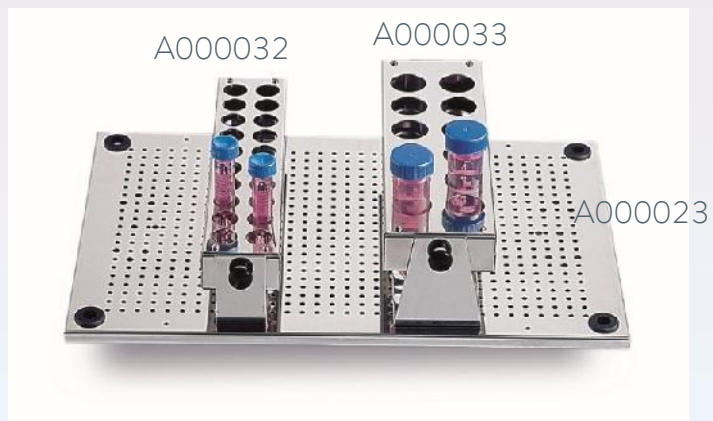
Clamps for Erlenmeyer flasks of 25 ml to 500 ml*
Cat. No.: A000025- A000031

* When using Erlenmeyer flasks with 500 ml a raised lid for H 20 S and H 20 SW is necessary.

Cat. No.: A000038

ACCESSORIES

Suitable for shaking water baths



Stainless steel test tube rack for max. 20 (12) Falcon tubes,
15 ml (50 ml)

Cat. No.: A000032 (Cat. No.: A000033)



Stainless steel test tube rack with 243 openings
Ø16/17 mm

Cat. No.: A000018

ACCESSORIES

Suitable for all water baths

Water additive: Algizide Aquastab

- Highly effective algicide increases lifetime of filling water and hinders bio-fouling
- Reduction of contamination with bacteria and growth of fungi

Content	Cat. No.
100 ml	LZB 929
1 L	LZB 429
5 L	LZB 129

ACCESSORIES

Suitable for vaporization water bath H 5 V and tissue float bath H 2 P



Support rod for vaporization bath H 5 V
316 mm long, Ø12 mm

Cat. No.: A000039



Dust guard lid made of aluminum, black anodised
Suitable for tissue float bath H 2 P

Cat. No.: A000040



8 SUMMARY

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SUMMARY

New product features, reliable and safe technology

NEW

- Hydro replaces Aqualine water baths
- In addition to simple water baths, Hydro also includes the following device categories: Circulating water baths, shaking water baths, vaporization water baths and one tissue float bath
- Numerous additional functions such as programmable timer and extended equipment: drain valve, TFT display

RELIABLE + SAFE

- GFL Technology, robust and reliable from one of the most competent and reknown manufacturers in the field of laboratory equipment
- Robust thanks to stainless steel inner body
- Comprehensive security functions
- Maintenance-free

PRICE

- Competitive price and excellent price-performance ratio