

Shaking Water Baths THERMOLAB®

GFL®



■ "Precision in series" - a synonym for a specialised range of four Shaking Water Baths that are in use all over the world



Quality built on Tradition

Users in research labs, standard and special labs for medicine, science and industry throughout the world have been profiting from the precision and dependability of our products for more than 45 years, all of which comply with valid European standards and bear the CE mark.

In the future, the success of a product spectrum of laboratory devices that meet the toughest demands on material, functioning and design will continue to be ensured by experience of every-day use in detail, ongoing technical advances and an excellent quality approach.

The phrase „Quality built on Tradition“ encompasses more than just the sum of impressive product innovations. It is also an expression of our corporate policy, which includes a high degree of ready-and-waiting service as our primary customer-friendly service goal.

This applies to all of the GFL laboratory products that are produced exclusively at our plant in Germany - Deep Freezers, Shakers, Incubators, Water Stills, Water Baths or Shaking Water Baths alike.



Secure future

A vested quality demand in accordance with international standards is documented for all GFL laboratory products with the certification to DIN EN ISO 9001:2008, promoting more trust in the permanent high quality level of our products.

In addition to the continuous optimisation of ongoing production processes, the ISO obligation also calls for the commitment to quality awareness of our employees and the continuous development and rapid implementation of preventive measures to ensure quality assurance at a high level.





Specialists for special demands

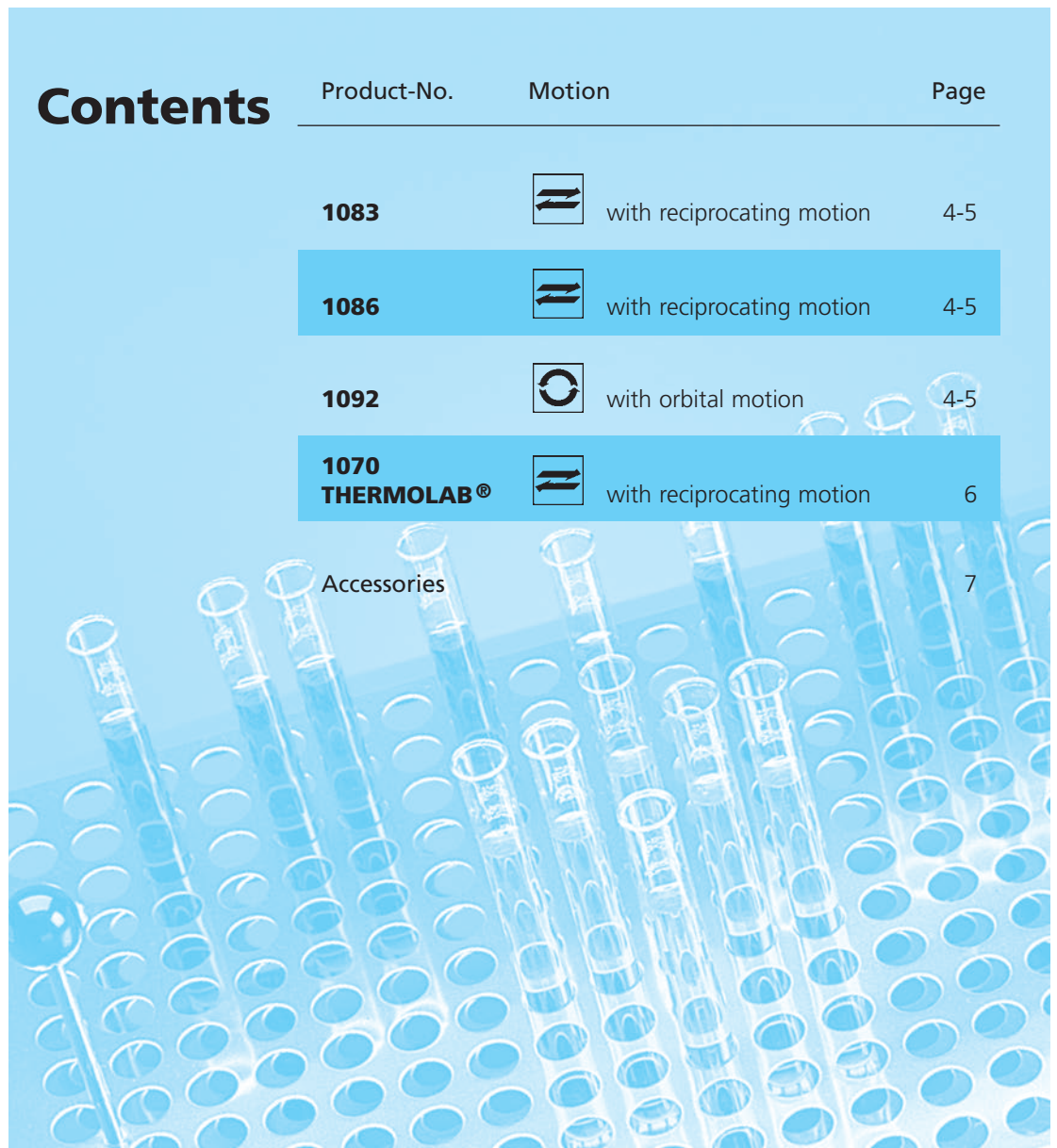


The product range of GFL Shaking Water Baths comprises four models, all of them specialised in different work processes. Models 1083 / 1086 are designed for reciprocating motions, model 1092 for orbital motions. Shaking Water Bath 1070, with the patented brand name

THERMOLAB[®], has four individually heatable basins and satisfies the most sophisticated demands, too. GFL Shaking Water Baths are in use all over the world. They are regarded as highly reliable, with a superb performance and they are maintenance-free. All units carry the CE mark.

The accessories to accommodate a variety of vessels can be easily and safely fixed in their shaking devices. The accessories shown in this brochure are not part of the standard scope of supply. The right of constructional modifications is reserved. Special makes are possible.

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Shaking Water Baths by GFL are untiring

■ Precision in series

GFL Shaking Water Baths are regarded as untiring all-purpose experts.

Our product range is designed for precise heating-up processes and, simultaneously, gentle mixing or vigorous shaking.

Models 1083, 1086 (with reciprocating motion) and 1092 (with orbital motion) are equipped with digital display of temperature and, according to the specifications, with digital display of shaking frequency and a cooling coil.



1083

Technical Data

Temperature range:

approx. 5 °C above ambient to +99.9 °C

with water level regulator 1919: approx.

3 °C above tap water temperature to +99.9 °C

Temperature constancy (temporal): $\pm 0,1$ °C

Shaking motion: reciprocating,
with on / off switch

Shaking amplitude: 22 mm

Exterior dimensions (W x D x H):

715 x 520 x 330 mm

Net / gross weight: 28 / 32 kg

Packing volume: approx. 0.29 m³

■ Order No. 1083

Specifications and Features

- ▶ Microprocessor-controlled temperature regulation ensures fast heating up to the set temperature and an excellent temperature constancy: ± 0.1 °C, temporal
- ▶ Optimum temperature distribution throughout the whole bath interior
- ▶ Temperature display and setting digitally via LED display, in 0.1 °C increments. Fast and exact setting, exact reproducibility of the preset temperature
- ▶ Electronic monitoring of the temperature controller. In case of a fault, the cause is displayed on the LED.
- ▶ Over-temperature cut-out: electronic, 4 °C above set temperature, and electro-mechanical > 130 °C
- ▶ Constant shaking frequency, independent of load, even when in continuous operation
- ▶ Maintenance-free and durable shaking device, electronically controlled and continuously settable shaking motion, gentle start-up. In models 1083 and 1086, the shaking device is guided on corrosion-resistant special ball bearings.
- ▶ Easily removable shaking rack
- ▶ Bath interior and shaking rack made of stainless steel
- ▶ No dripping back of condensate into the vessels due to double-walled insulating lid with interior camber
- ▶ Drain cock to empty the bath

Applications

Whenever exactly reproducible temperatures are required for shaking tasks, our Shaking Water Baths are used by standard and research laboratories. Their scope of applications comprises incubations, fermentations, homogenisations, chemical and biochemical reactions, enzyme and tissue studies.

all-purpose experts

1092

Technical Data

Temperature range:

approx. 5 °C above ambient to +80 °C

with water level regulator 1919: approx.

3 °C above tap water temperature to +80 °C

Temperature range: +10 °C to +80 °C

Cooling coil: built-in as standard, for connection to the water mains or to an external recirculating chiller

Temperature constancy (temporal): ±0,1 °C**Shaking motion:** orbital, with on / off switch**Shaking amplitude:** 14 mm**Shaking frequency display:** digital-LED**Exterior dimensions (W x D x H):**

635 x 505 x 400 mm

Net / gross weight: 35 / 40 kg**Packing volume:** approx. 0.34 m³

■ **Order No. 1092**



1086

Technical Data

Temperature range:

approx. 5 °C above ambient to +99.9 °C

with water level regulator 1919: approx.

3 °C above tap water temperature to +99.9 °C

Temperature range: +10 °C to +99.9 °C

Cooling coil: built-in as standard, for connection to the water mains or to an external recirculating chiller

Temperature constancy (temporal): ±0,1 °C**Shaking motion:** reciprocating, with on / off switch**Shaking amplitude:** 22 mm**Shaking frequency display:** digital-LED**Exterior dimensions (W x D x H):**

715 x 520 x 330 mm

Net / gross weight: 30 / 34 kg**Packing volume:** approx. 0.29 m³

■ **Order No. 1086**



Additional technical data of models 1083 / 1086 / 1092

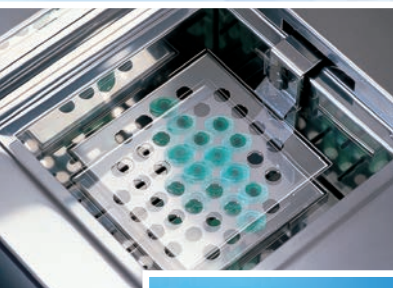
Interior dimensions (W x D x H): 450 x 300 x 160 mm**Volume of bath interior:** approx. 20 litres**Working height (incl. lid):** 190 mm**Max. water level above shaking cage / tray:** 105 mm / 90 mm**Shaking frequency:** from 10 - 250 rpm**Over-temperature cut-out:** electronic, 4 °C above set temperature, and electro-mechanical > 130 °C**Housing:** corrosion-resistant, made of electrolytically galvanised sheet steel, powder-coated**Electrical connection:** 230 V / 50...60 Hz / 1.5 kW *
* Other voltages on request

1070

Individual and special

THERMOLAB[®], a quadothermal Shaking Water Bath with reciprocating motion, possesses an exceptional individuality in the market. It disposes of four separate basins in which different sample vessels can be heated independently of each other, or which four different users can use at the same time - saving both working space and time.

Height-adjustable sample holder with rack for reaction vessels of 1.5-2.0 ml



Double-walled lid with inner camber have insulating capacity and prevent dripping back of condensate into the vessels

Specifications and Features

- ▶ Microprocessor-controlled temperature regulation ensures fast heating up to the individually set temperature and an excellent temperature constancy: ± 0.1 °C temporal
- ▶ Electronic monitoring of the temperature controller. In case of a fault, the cause is displayed on the LED.
- ▶ Bath interior and shaking rack are made of stainless steel
- ▶ Maintenance-free and durable shaking device, electronically controlled and continuously settable shaking motion, gentle start-up.
- ▶ With the use of optional racks or directly on the sample holders, all kinds of vessels from μ l to ml used in laboratories, microtiter plates, cyler tubes, Western Blot vessels, centrifuge tubes, ampoules and bottles can be fixed.

Technical Data

Temperature range:
approx. 5 °C above ambient to 99.9 °C

Temperature setting and display: digital-LED

Over-temperature cut-out:
electronic 4 °C above set temperature, and electro-mechanical > 130 °C

Shaking motion: reciprocating, with on / off switch

Shaking frequency: from 2 - 50 rpm

Shaking amplitude: 22 mm

Working height: 80 mm

Sample holders, height-adjustable: 32 mm

Dimensions sample holders: 128 x 128 mm

Interior dimensions (W x D x H) per basin:
175 x 175 x 100 mm

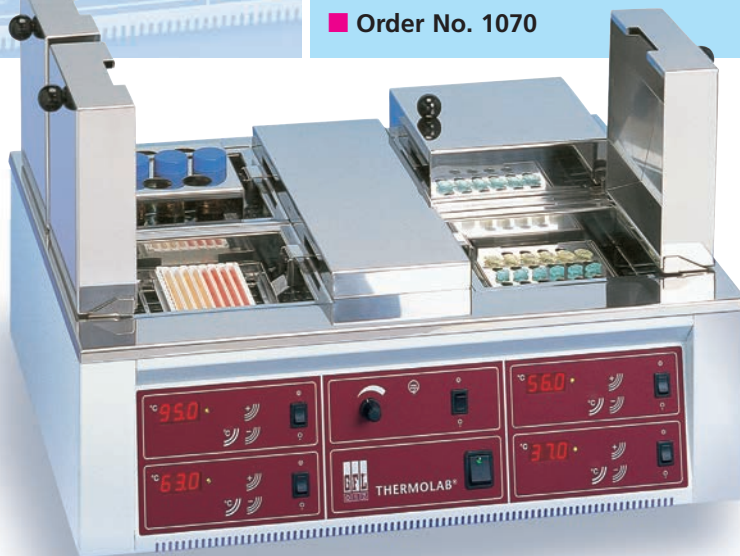
Exterior dimensions (W x D x H):
625 x 556 x 270 mm

Electrical connection:
230 V / 50...60 Hz / 1,3 kW

Net / gross weight: 28 / 36 kg

Packing volume: approx. 0.34 m³

■ **Order No. 1070**



Applications

THERMOLAB[®] is universally applicable in standard, research and specialised laboratories; for example for all temperature-dependent reactions, for incubations of reagents and solutions, Enzyme-Immuno-Essays, Western-Blots, Reverse Dot Blots, for hybridisations at four different temperatures, for stringent washing processes with variable temperatures, Restriction Enzyme Digestions, Proteinase-K Digestions, DNA Elution, T 7 Sequenase Sequencing, for thawing processes and incubations of cultures or for polymerase chain reactions (PCR).

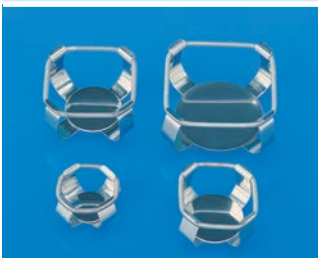
Shaking Water Baths 1083 / 1086 / 1092



Order No. 3960

Shaking Tray

made of stainless steel, with holes to accept clamps for Erlenmeyer flasks and other accessories. The tray has two handles that reach above the water's surface, for easy inserting and removing from the bath

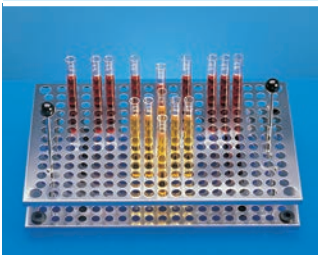


Clamps for Erlenmeyer flasks

made of stainless steel, to screw onto shaking tray 3960, supplied complete with fixing material

- Order No. 3983 for 25 ml flasks (52*)
- Order No. 3984 for 50 ml flasks (33*)
- Order No. 3985 for 100 ml flasks (22*)
- Order No. 3986 for 200 ml flasks (15*)
- Order No. 3987 for 250-300 ml flasks (13*)
- Order No. 3988 for 500 ml flasks (10*)
- Order No. 3989 for 1000 ml flasks (6*); raised lid required, price on request

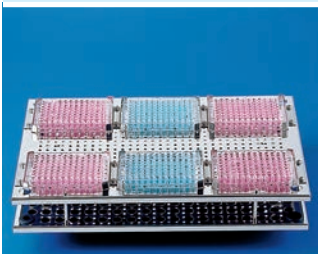
* maximum quantity of clamps per shaking tray



Test Tube Racks

made of stainless steel, with two handles that reach above the water's surface, for easy inserting and removing from the bath

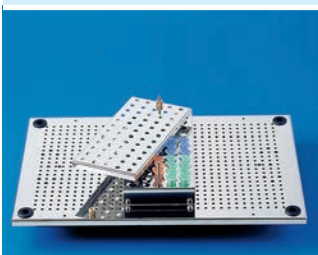
- Order No. 3920 for max. 243 tubes, Ø 16/17 mm, max. length 180 mm
- Order No. 3921 for max. 63 tubes, Ø 31 mm
- Order No. 3922 for max. 372 tubes, Ø 12 mm, max. length 180 mm



Order No. 3923

Rack

made of stainless steel, raised tray, with 6 holding frames for test plates

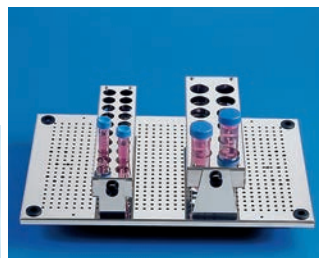


Holder for 58 reaction vessels

1.5 - 2.0 ml, with float protection, made of stainless steel, can be screwed onto tray 3960

Order No. 3926 max. 3 holders per tray

Accessories



Test Tube Racks

made of stainless steel. The holding device can be tilted by an angle of 90 ° and is equipped with springs for secure support. It can be screwed onto shaking tray 3960

- Order No. 3924 for example for Falcon tubes 15 ml, for max. 20 tubes Ø 12-17 mm, max. 4 racks per tray
- Order No. 3925 for example for Falcon tubes 50 ml, for max. 12 tubes Ø 25-29 mm, max. 3 racks per tray



Adjustable Water Level Regulator

to maintain a desired level of water (1083 / 1086 / 1092) and to cool Shaking Water Bath 1083 (from approx. 3 °C above tap water temperature)

Order No. 1919

THERMOLAB® 1070

Racks



for test tubes 50 ml
with 7 bore holes of 31 mm Ø each
Order No. 1710



for test tubes 15 ml
with 19 bore holes of 17 mm Ø each
Order No. 1711



for reaction vessels 1.5 - 2.0 ml
with 32 bore holes of 12 mm Ø each
Order No. 1712

1083 / 1086 / 1092 / 1070



Water Bath Protection Agent

ProAquaTop prevents the formation of algae, bacteria and mould. **Please use biocides safely. Always read labels and product information before use.**

Highly efficient: only 4 ml per litre of water. A necessary change of water is indicated by fading of the blue colouration.
3 Packing units:

- Order No. 1910 for 1 bottle / Contents 200 ml
- Order No. 1911 for 3 bottles / Contents 3 x 200 ml
- Order No. 1912 for 6 bottles / Contents 6 x 200 ml



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