memmert

Waterbaths

PRECISION AND SAFETY BROUGHT TO THE POINT.

memmert

37.0 °C

38.0 °C

set

WATERBATH W

MADE IN GERMANY.

Uniquely precise and reliable.

Of course always at the right temperature

Since in 1947 the first Memmert hot air steriliser has left our facilites, we have pursued one essential goal in the development of our thermostatic ovens and thermostatic baths: controlled atmosphere. Inseparably linked to this are reliability, optimum temperature homogeneity and stability, user friendliness and an outstanding price/performance ratio.

It is the modern control technology which makes Memmert's waterbaths unparalleled in precision. At least 2-fold over-temperature protection guarantees optimum safety for all baths. You can combine programme start delay and hold time, for baths of the Excellent class even setpoint-dependent. Made by professionals for professionals.

Waterbath Basic WNB
Waterbath Excellent WNE
Waterbath Excellent with circulating pump WPE

Model sizes WNB, WNE:
7 / 10 / 14 / 22 / 29 / 45

Model size WPE:
45

+10 °C to +95 °C and boiling stage
(WPE: only with pump switched off)

WATERBATH W Memmert waterbaths W are unparalleled in terms of precision, safety and comfort. In the Excellent version, they are perfectly suited for professional applications in quality management and for technical guidelines and standards.

Safety functions of the Memmert Waterbaths

WATERBATHS BASIC WNB

2-stage safety through relay switch-off close to the setpoint (approx. +10 °C) and mechanical temperature limiter TB at +135 °C
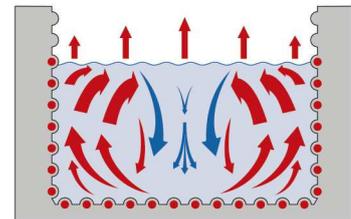
WATERBATHS EXCELLENT WNE, WPE

relay switch-off close to the setpoint (approx. +10 °C) and mechanical temperature limiter TB at +135 °C

additional electronic temperature controller TWW as standard or alternatively temperature limiter TWB adjustable in the setup

Dual-use heating design

The tank does not contain any heating elements liable to corrode or attract lime deposits. Fully protected against moisture and yet close to the tank contents, the heating is located underneath deep-drawn and easy-to-clean ribs. This form of construction generates natural turbulence and therefore better temperature distribution in the bath (see sketch). Heating from three sides ensures optimal temperature uniformity. At 95 °C water temperature the deviation over the entire bath is less than 0.36 °C!

optimal temperature uniformity

Water level control

Where an almost constant water level is required, each thermostatic bath can optionally be fitted with a level control device. The bath is connected by hoses to the mains water system and is continuously supplied drop-wise with additional water. An overflow permits maintaining two different water levels.

Two baths in one

The optional electronically controlled shaking device for waterbaths is available in two versions for different bath sizes (requires gable cover). It converts the models from size W14 upwards into an adjustable-speed shaking bath with horizontal movement from 35 to 160 strokes per minute. An electronic blockage protection switches off the motor within fractions of a second on a sudden overload.

PELTIER COOLING UNIT CDP115 Worldwide only from Memmert! The innovative Peltier cooling unit CDP115 enables you to work exactly at temperatures below room temperature and puts an end to unwieldy external cooling units. Space-saving, environmentally friendly and precise in its temperature control, it fits on the smallest as well as on the largest Memmert waterbath! Your benefits: Compact design, user-friendly snap-on technology and exact controllability down to ±0.1 K.
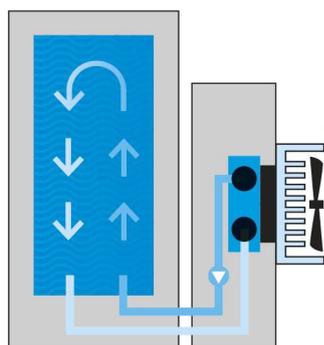
Cooling with Peltier – sustainable and energy-saving

If constant set temperatures close to ambient are required in the waterbath, Peltier elements cool down the tempering medium in a way that is economical, eco-friendly and precise.

- No gases or fluids (coolants) required
- Quiet and smooth-running
- High control precision
- Saves valuable space in the laboratory

A cooling unit for all Memmert waterbaths!

The CDP115 extends the working temperature range of the Memmert waterbaths. It can be fitted to all appliances from 7 to 45 litres in capacity, quickly and without technical knowledge. Simply hang it onto the flaps of the gable cover hinge, and that's it! The water is continually circulated via two Norpren tubes, cooling it down. Simultaneous use of the SV shaking device is not a problem.

Fluid circulation

Safety and precision are involved, as always!

The cooling unit CDP115 has its own main switch. The temperature is controlled via the electronic controller of the waterbath and achieves an impressive precision of ±0.1 K. A frost protection unit we have developed switches off the cooling element if there is too little fluid flow, thus protecting the Peltier flow-through cooler from freezing. After the disruption has been cleared up, the frost protection switch resets automatically.

Average cooling speed

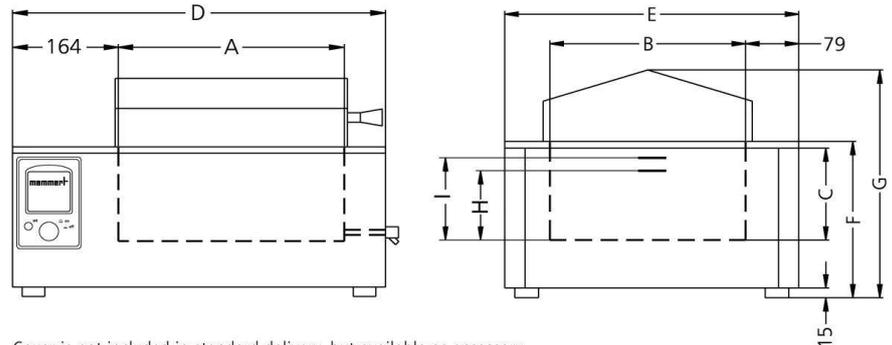| Filling volumes / bath size	Average cooling down speed*
7 litres / WN...7	14.1 K/h
10 litres / WN...10	9.9 K/h
14 litres / WN...14	7.1 K/h
22 litres / WN...22	4.5 K/h
29 litres / WN...29	3.4 K/h
45 litres / WN...45	2.2 K/h

* At a room temperature of +20 °C

Waterbaths WNB, WNE, WPE

according to DIN 12876-3, EN 61010, EN 61010-1 (IEC 61010-1), EN 61010-2-010

Standard units are safety-approved and bear the test marks: CE EHC EMC

Interior: deep-drawn, laser-welded stainless steel interior, material 1.4301, with integrated large-area heating system on three sides (no disturbing fittings)

Housing: textured stainless steel, material 1.4301

Connection: mains cable with plug (German type)

Installation: 4 feet

Cover is not included in standard delivery, but available as accessory.

Model sizes/Description				7	10	14	22	29	45
Stainless steel interior	Contents	approx. l		7	10	14	22	29	45
	Length	(A)	mm	240	350			590	
	Width	(B)	mm	210		290		350	
	Height	(C)	mm		140		220	140	220
Textured stainless steel exterior	Width	(D)	mm	356		436		516	
	Height (with flat cover)	(E1)	mm		238		296	238	296
	Height (with gable cover)	(E2)	mm		337	347	405	343	401
	Depth	(F)	mm	468		578		818	
	Liquid level min.	(H)	mm		97		177	105	177
	Liquid level max.	(I)	mm		120		200	120	200
Temperature	Working temperature range	°C		at least 5 (WNB/WNE) 15 (WPE) above ambient to +95 and additional boiling stage (WPE only with pump switched off)					
	Setting temperature range	°C		+10 to +95 and boiling stage					
	Temperature variation	K		+/- 0.1					
	Temperature distribution	K		+/- 0.25					+/- 0.3
Further data	Electrical load at 230 V, 50/60 Hz / 115 V, 50/60 Hz, WPE: 50 Hz	approx. W		1200		1800	2000	2400	2800
	CDP115: Dimensions of casing height/width/depth	approx. mm		185/450/200					
	CDP115: Electrical load at 230 V/115 V, 50/60 Hz	max. W		160					
	CDP115: Effective cooling capacity	W		115					
	CDP115: Pumping capacity of circulation pump for coolant	ml/Min		600					
	Portable stainless steel rack for 10 baby food bottles, maximum capacity each bath	max.		-	1	2	-	4	-
	Bath capacity - number of racks: models 10/14/22 width of bath working area less 20 mm : width of the racks models 29/45 length of bath working area less 20 mm : width of the racks			●					
Packing data	Net weight (with one cover option)	approx. kg		11	13	15	17	24	26
	Gross weight in Triwall carton	approx. kg		16	19	21	23	31	33
	Length	approx. mm		570		670		910	
	Width	approx. mm		450		530		610	
	Height	approx. mm		420	380	400	460	400	460
Order No. Waterbaths				WNB7	WNB10	WNB14	WNB22	WNB29	WNB45
WNB = Waterbath, natural circulation, temperature controller BASIC				WNE7	WNE10	WNE14	WNE22	WNE29	WNE45
WNE = Waterbath, natural circulation, temperature controller EXCELLENT WPE = Waterbath, pump circulation, temperature controller EXCELLENT				-	-	-	-	-	WPE45

Options	7	10	14	22	29	45
Voltage 115 V, 50/60 Hz			X2			
Water level control			L3			
Works calibration certificate +37 °C			D00123			

Accessories	7	10	14	22	29	45
Stainless steel gable cover, also suitable for shaking device (14/22 and 29/45) and Peltier cooling device CDP115	B02641	B02642	B02643	B02643	B04390	B04390
Flat stainless steel cover with openings and concentric ring sets; 1 opening, Ø 147 mm	B02680	-	-	-	-	-
Flat stainless steel cover with openings and concentric ring sets; 3 openings, Ø 107 mm	-	B02681	-	-	-	-
Flat stainless steel cover with openings and concentric ring sets; 6 openings, Ø 87 mm		-	B02682	B02682	-	-
Flat stainless steel cover with openings and concentric ring sets; 8 openings, Ø 107 mm			-	-	B02684	B02684
Flat stainless steel cover with openings and concentric ring sets; 4 openings, Ø 147 mm			-	-	B02685	B02685
Flat stainless steel cover with openings and concentric ring sets for Peltier cooling CDP115; 1 opening, Ø 147 mm	B24372	-	-	-	-	-
Flat stainless steel cover with openings and concentric ring sets for Peltier cooling CDP115; 3 openings, Ø 107 mm	-	B24373	-	-	-	-
Flat stainless steel cover with openings and concentric ring sets for Peltier cooling CDP115; 6 openings, Ø 87 mm		-	B04552	B04552	-	-
Flat stainless steel cover with openings and concentric ring sets for Peltier cooling CDP115; 8 openings, Ø 107 mm			-	-	B04462	B04462
Perforated bottom shelf, reversible for 2 heights (30 or 60 mm), stainless steel	E02893	E02894	E02895	E02895	E02896	E02896
Portable stainless steel rack for 10 baby food bottles	-	E02066	E02066	-	E02066	-
Peltier-cooling device CDP115 for waterbaths for temperatures below ambient from +10 °C, Voltage 230 V, 50/60 Hz, or 115 V, 60 Hz (please state in case of order). Please do not forget to order the installation and connection set!			CDP115			
Installation and connection set for Peltier cooling device CDP115 (incl. mounting bars for all different bath sizes)			B02770			
Shaking device for waterbaths incl. support frame, shaking frequency 35 - 160 strokes per minute (horizontal back/forth movement), requires gable cover. Please do not forget to order the support basket!	-	-	SV1422	SV1422	SV2945	SV2945
Support basket with perforated mounting shelf (stainless steel) with grid perforations to take clips for conical flasks (use of test tube racks not possible)	-	-	B48182	B48182	B04397	B04397
Clip for 100 ml flask, 18 flasks max.			-	-	B02692	B02692
Clip for 100 ml flask, 12 flasks max.			B02692	B02692	-	-
Clip for 200 ml flask, 14 flasks max.			-	-	B02693	B02693
Clip for 200 ml flask, 6 flasks max.			B02693	B02693	-	-
Clip for 300 ml flask, 14 flasks max.			-	-	B02694	B02694
Clip for 300 ml flask, 6 flasks max.			B02694	B02694	-	-
Clip for 500 ml flask, 8 flasks max.			-	-	B02695	B02695
Clip for 500 ml flask, 5 flasks max.			B02695	B02695	-	-
Rack for shaking device for 216 test tubes Ø 14.5 mm			-	-	B04399	B04399
Rack for shaking device for 110 test tubes Ø 14.5 mm			B02778	B02778	-	-
Rack for shaking device for 180 test tubes Ø 18 mm			-	-	B04400	B04400
Rack for shaking device for 90 test tubes Ø 18 mm			B02779	B02779	-	-
Rack for shaking device for 54 test tubes Ø 32 mm			-	-	B04401	B04401
Rack for shaking device for 25 test tubes Ø 32 mm			B02780	B02780	-	-
Test tube racks, 56 holes (7x8), Ø 18 mm each; bath capacity: 1 rack	B02781	-	-	-	-	-
Test tube racks, 24 holes (3x8), Ø 18 mm each; bath capacity: 2 racks	B02783	-	-	-	-	-
Test tube racks, holes 2-row racks, 40 holes, Ø 10 mm each, width 42 mm	-	E02028	E02028	E02028	E02028	E02028
Test tube racks, holes 2-row racks, 40 holes, Ø 12 mm each, width 41 mm	-	E02013	E02013	E02013	E02013	E02013
Test tube racks, holes 2-row racks, 24 holes, Ø 14.5 mm each, width 45 mm	-	E02014	E02014	E02014	E02014	E02014
Test tube racks, holes 2-row racks, 24 holes, Ø 18 mm each, width 50 mm	-	E02022	E02022	E02022	E02022	E02022
Test tube racks, holes 2-row racks, 20 holes, Ø 21 mm each, width 57 mm	-	E02032	E02032	E02032	E02032	E02032
Test tube racks, holes 2-row racks, 12 holes, Ø 32 mm each, width 81 mm	-	E02034	E02034	E02034	E02034	E02034
Test tube racks, holes 3- row racks, 60 holes, Ø 10 mm each, width 50 mm	-	E02046	E02046	E02046	E02046	E02046
Test tube racks, holes 3- row racks, 60 holes, Ø 12 mm each, width 57 mm	-	E02049	E02049	E02049	E02049	E02049
Test tube racks, holes 3- row racks, 36 holes, Ø 14.5 mm each, width 60 mm	-	E02039	E02039	E02039	E02039	E02039
Test tube racks, holes 3- row racks, 36 holes, Ø 18 mm each, width 71 mm	-	E02019	E02019	E02019	E02019	E02019
Test tube racks, holes 3- row racks, 30 holes, Ø 21 mm each, width 82 mm	-	E02043	E02043	E02043	E02043	E02043
Test tube racks, holes 4-row racks, 80 holes, Ø 10 mm each, width 66 mm	-	E02057	E02057	E02057	E02057	E02057
Test tube racks, holes 4-row racks, 80 holes, Ø 12 mm each, width 75 mm	-	E02060	E02060	E02060	E02060	E02060
Test tube racks, holes 4-row racks, 48 holes, Ø 14.5 mm each, width 86 mm	-	E02056	E02056	E02056	E02056	E02056
Test tube racks, holes 4-row racks, 48 holes, Ø 18 mm each, width 97 mm	-	E02051	E02051	E02051	E02051	E02051
Test tube racks, holes 4-row racks, 40 holes, Ø 21 mm each, width 110 mm	-	E02061	E02061	E02061	E02061	E02061
IQ/OQ document with device-specific works test data for one free-selectable temperature value, incl. temperature distribution survey at Memmert for 9 measuring points to DIN 12876.2. 305 € for further temperature values			D00125			

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Jan-2022

MODEL VARIANTS – MODERN CONTROL TECHNOLOGY

Push and turn – intuitive operation of the control

In the Basic versions an electronic PID controller ensures that the selected temperature is accurately reached and maintained. The multi-functional fuzzy-supported PID control on the Excellent versions guarantees maximum security. Two high-grade platinum sensors are responsible for temperature control and for monitoring temperature and level. Like a climbing team on a rope they communicate with each other and ensure uninterrupted fault-free temperature control; the high-grade 4-wire circuit guarantees uncorrupted transmission of measurements.

The result can readily be seen behind the easy-clean glass window: all essential settings and operating states are clearly displayed.

BASIC version WNB	EXCELLENT version WNE / WPE

① **Normal operation**
Press the SET key, select the setpoint temperature

② **Delayed switch-on**
Go home in the evening; in the morning the bath is already at temperature.
From 0 to 99:59 hrs (Excellent: 999 hrs) setting accuracy: 1 minute

③ **Programmable hold time**
Select to the nearest minute how long the waterbath should hold the temperature.
From 0 to 99:59 hrs (Excellent: 999 hrs) setting accuracy: 1 minute

④ **Visual alarm**
If the setpoint temperature is exceeded by more than 10 °C the monitor relay permits emergency operation, indicated visually by the flashing alarm signal. If the factory-set maximum temperature is exceeded the mechanical temperature limiter TB switches off the heating permanently and the alarm symbol is on continuously.

⑤ **Electronic overtemperature protection**
Set the monitoring temperature with 0.1 °C accuracy up to 10 °C above nominal temperature. If there should be a fault, you can choose in setup through standard function selection between continuation of the procedure (TWW) or abort (TWB).

⑥ **Level**
This flashes on low liquid level. At the same time there is an audible alarm and the heating is switched off automatically.

⑦ **Audible signals**
There is a brief beep at programme end and also as input acknowledgement. On overtemperature and low liquid level there is an audible signal together with a visual alarm.

⑧ **Circulating pump** (WPE45 only)
The circulating pump in the WPE45 optimises the thermal uniformity of the large water volume!

⑨ **Hold period**
Start of hold period only after reaching the setpoint.

⑩ **Recalibration facility**
Excellent quality assurance on standardised or documented material tests through +/-5 K recalibration facility on the controller.

ACCESSORIES INFORMATION

Racks for models with shaking device

The maximum number of test tube racks of equal width in your waterbath is calculated as follows:
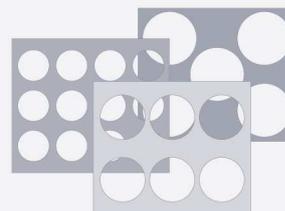
W10/14/22:
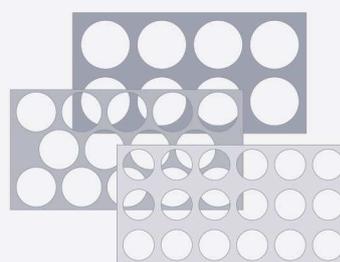Width of the bath container less 20 mm: width of the rack

W29/45:
Length of the bath container less 20 mm: width of the racks

Mounting shelves

W14/22:
12 flasks 100 ml or 6 flasks 200/300 ml or 5 flasks 500 ml

W29/45:
18 flasks 100 ml or 14 flasks 200/300 ml or 8 flasks 500 ml

Stainless steel cover

Stainless steel flat cover with openings and concentric ring sets

Stainless steel gable cover, also suitable for shaking device (SV14/22 and SV29/45) or Peltier cooling unit CDP115

Peltier cooling unit CDP115 for waterbath

Portable stainless steel rack

for 10 baby bottles

Shaking device for waterbath

Support basket with perforated mounting shelf (stainless steel)

with grid perforations to take clips for conical flasks

Shelf reversible

60 mm

30 mm

for 2 heights (30 or 60 mm)

Subject to technical modifications. All dimensions in mm.

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