

Operating manual





Translation of the original operating manual

www.memmert.com



About this manual

Purpose and target audience

This manual describes the design, function, transport, operation and maintenance of accessories for WTB water baths. It is intended for use by trained personnel of the owner, who have the task of operating and/or maintaining the respective accessories. If you are asked to work on the accessories, read this manual carefully before starting. Familiarise yourself with the safety regulations. Only carry out work described in this manual for the respective accessories. If there is something you do not understand, or certain information is missing, ask your manager or contact the manufacturer. Do not do anything without authorisation.

Versions

Several accessories of different sizes and functions are available. The functions described in this manual refer to the latest firmware version. Due to individual sizes, illustrations in this manual may be slightly different to the actual appearance.

Other documents that you must observe:

- the general operating manual for all water baths WTB
- for service and repair work, observe the separate service manual

Storage and resale

This operating manual is part of the accessories and must always be stored so that persons to work with the respective accessories have access to them. The owner's responsibility is to ensure that persons who work or are to work with the respective accessories are informed of where these operating manual are located. We recommend that you always keep them in a protected place near the accessories. Make sure that the operating manual is not damaged by heat or humidity. If an accessory is resold or transported and then set up again at a different location, the operating manual must remain with it. The current version of this operating manual in PDF format is also available for download from http://www.memmert.com/

Manufacturer address and customer service

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1. Safety

1.1 Terms and signs used

In this manual and on the appliance itself, certain common terms and signs are used to warn you of possible dangers or to give you hints that are important in avoiding injury or damage. Observe and follow these notes and regulations to avoid accidents and damage. These terms and signs are explained below.

1.1.1 Terms used

A DANGER	warns of a dangerous situation that leads directly to death or serious (irreversible) injuries.
A WARNING	warns of a dangerous situation that might le ad to death or serious injuries.
	warns of a dangerous situation that might lead to mo derate or minor injuries.
NOTICE	warns of material damage

1.1.2 Signs used

Symbol	Meaning	Symbol	Meaning
	General warning sign - Observe operating manual		Gases / vapours
4	Danger of electric shock		Danger of explosion
	Flammable substance warning		Caution: hot steam
	Caution: hot		Disconnect the mains plug
	Observe information in separate manual	(Marine)	Use gloves



1.2 Product safety and dangers

The accessories are technically sophisticated, manufactured using high-quality materials and tested for many hours in the factory. They reflect the state of the art and comply with recognised technical safety regulations. However, there are still risks involved, even when the appliances are used as intended. These are described below.

DANGER



WARNING

WARNING

Danger due to electric shock.

Penetration of liquid into the appliance can cause electric shocks and short circuits.

- Protect the appliance from splashing water.
- Switch off the appliance and disconnect the mains plug before cleaning and maintenance work.
- The appliance must not be cleaned and disinfected wet. Allow the appliance to dry completely before putting it back into operation.

When loading the appliance with an unsuitable chamber load, poisonous or explosive vapours or gases may be produced. This could cause the appliance to explode, and persons could be severely injured or poisoned. The appliance may only be loaded with materials / test objects that do not emit any poisonous or explosive vapours when heated up.

Depending on operation, the surfaces of the appliance and the chamber load may still be very hot after the appliance is switched off. Touching these surfaces can cause burns. Wear heat-resistant protective gloves or wait until the appliance cools down before touching.

1.3 Requirements of the operating personnel

The accessories may only be operated and maintained by persons who are of legal age and have been instructed accordingly. Personnel who are to be trained, instructed or who are undergoing general training may only work with the appliance under the contin-



uous supervision of an experienced person. Repairs may only be performed by qualified electricians. The regulations in the separate service manual must be observed.

1.4 Responsibility of the owner

The owner of the appliance

- is responsible for the flawless condition of the appliance and for it being operated in accordance with its intended use;
- is responsible for ensuring that persons who are to operate or service the appliance are qualified to do this, have been instructed accordingly and are familiar with the operating manual at hand;
- must know about the applicable guidelines, requirements and operational safety regulations, and train staff accordingly;
- is responsible for ensuring that unauthorised persons have no access to the appliance;
- is responsible for ensuring that the maintenance plan is adhered to and that maintenance work is properly carried out;
- has to ensure that the appliance and its surroundings are kept clean and tidy, for example through corresponding instructions and inspections;
- is responsible for ensuring that personal protective clothing is worn by operating personnel, e.g., work clothes, safety shoes and protective gloves.

1.5 Applied directives and standards

CE

EU Declaration of Conformity for the appliance can be found at the end of the document and online at:

www.memmert.com/de/downloads/downloads/eu-konformitaetserklaerung

Under the REACH regulation, Memmert provides the information on chemical substances in Memmert appliances online at

https://www.memmert.com/de/reach-rohs/

1.6 Changes and alterations

The accessories may be used only in connection with a Memmert water bath WTB.

The accessories must not be converted or modified without authorisation. No parts may be added or inserted which have not been approved by the manufacturer.

Unauthorised modifications or changes to the appliance will void any manufacturer's responsibility regarding the CE conformity of the product.

The manufacturer is not liable for any damage, danger or injuries that result from unauthorised changes or alterations, or from non-compliance with the provisions in this manual.

1.7 Behaviour in case of malfunctions and irregularities

The accessories may only be used in a flawless condition. If you, as the operator, notice irregularities, malfunctions or damage, immediately turn off the accessories and inform



your superior.

1.8 Switch off in an emergency

Press the main switch on the respective accessories. This disconnects the appliance from the power supply at all poles.

Illustration	Accessories
	Watherbath - WTB
	Pumping device - CPM650

2. Sloping and flat lids

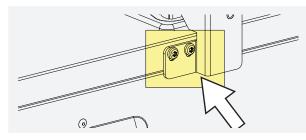
A CAUTION	You may suffer bruising injuries to your hands. Always wear protective gloves. Do not let the mounted slanted or flat lid of the water bath fall shut.
	Note that the slanted or flat lid heats up to the temperature control liquid temperature during operation.

2.1 Sloping lid

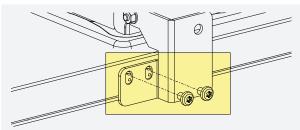
To avoid unwanted evaporation of the temperature control liquid and to achieve the most even temperature distribution possible, the appliance should always be operated with the slanted lid closed. The shape of the lid ensures that condensate does not drip into the chamber load.



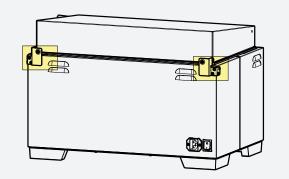
2.1.1 Assembly



1. Loosen the blind plugs at the fastening points (left + right) for the lid on the water bath.



2. Remove the dummy plug and store it.



- 3. Put on the fastening bracket of the cover and fix it with screws.
- $\label{eq:constraint} \textbf{4. Tighten screws and check that the lid fits tightly.}$



2.2 Flat lid

The flat lid, available as an accessory, can be used to place test flasks on the surface of the temperature control liquid. By removing or inserting rings, the recesses are adapted to the piston size. The rings may only be inserted or removed when they have cooled down.

Water bath size	Stainless steel flat lid	Stainless steel special flat lid
WTB6 WTB11		
	B48804	B48807
WTB15 WTB24		
	B48805	B48808
WTB35 WTB50		
	B48806	B48809

Test tube racks 3.

The test tube racks differ in the number and diameter of the individual bores. They are hooked into the water bath from above. The test tube racks may only be inserted or removed when they have cooled down.

Ø Bores	WTB6 / WTB11	WTB15 / WTB24	WTB35 / WTB50
	34 bores	58 bores	74 Bores
ø10mm			
	B48822	B48823	B50656
	30 bores	58 bores	66 Bores
ø12mm			
	B48824	B48825	B50657
	26 Bores	45 Bores	58 bores
ø14.5mm			
	B48826	B48827	B50658
	22 bores	38 Bores	50 Bores
4.0	B48828	B48829	B50659
ø18mm	33 Bores	57 Bores	75 Bores
	B48834	B48835	B50662

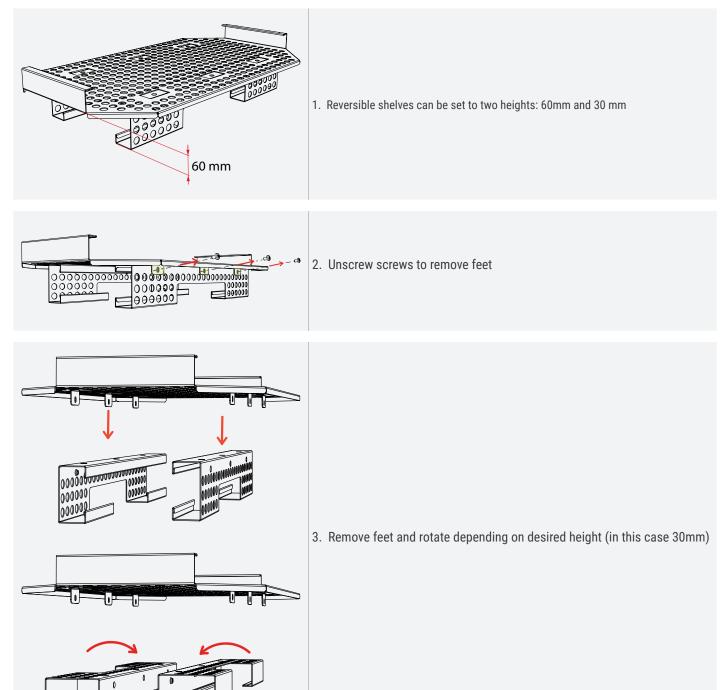


4. Shelf reversible

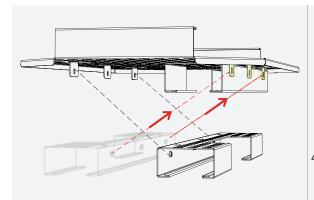
Maximum loading of the waterbaths with reversible shelf

Size WTB	Maximum Loading
WTB 6/11	12 kg
WTB 15/24	25 kg
WTB 35/50	50 kg

Conversion of reversible shelf

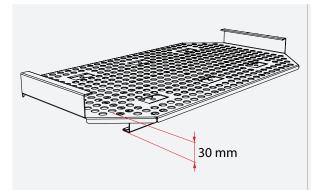






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4. Position rotated feet on holders of floor grate and fix with screws

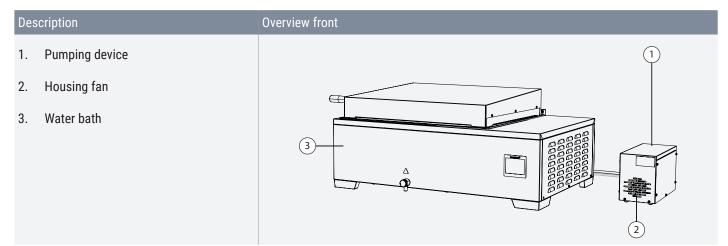


5. Reversible shelf now has a height of 30 mm

5. Pumping device CPM

5.1 Assembly and description

5.1.1 Design



5.1.2 Description

brief technical description

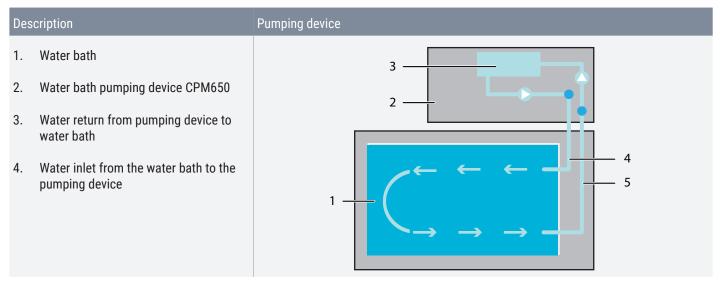
By using a pumping device, the water can circulate in the tub. The delivery volume is 1.2 litres per minute.

NOTICE

The temperature control of the WTB water bath is optimised for standing water. The operation of a CPM650 circulation pump may require readjustment of the temperature control, as flowing water has a higher heat transfer coefficient than standing water. See the general operating manual for the WTB water bath.

NOTICE

A warranty of the installed pump is only given when using the pumping device up to 80°C water temperature. If the pumping equipment is used at temperatures above 80°C, no warranty can be claimed if damage occurs or a defect to the pump.





5.1.3 Intended use

The Memmert circulation pump is intended exclusively for use with a Memmert water bath WTB. It is used for the internal circulation of the temperature control medium in the water bath.

5.1.4 Use not in accordance with the intended purpose

The circulation pump is used exclusively for internal circulation in the water bath and is not intended for temperature control of external circuits. The circulation pump must be used only for pumping water and must not be operated with other liquids.

5.1.5 Material

This pumping device complies with the current requirements of the RoHS Directive. You can find more information on this and material compliance on our homepage.

https://www.memmert.com/de/downloads/

Components	Material
Circulating pump housing	Stainless steel 1.4301 - ASTM 304
Screws and hinges	Stainless steel 1.4301 - ASTM 304
Silicone tube	Silicone - Shore A translucent

The chamber load for the appliance must be carefully checked for chemical compatibility with the materials mentioned.

5.1.6 Electrical equipment

- Operating voltage and current consumption: See name plate or technical data
- Protection class I, i.e. operating insulation with PE conductor in accordance with EN 60664-1
- Protection type IP 20 acc. to EN 60 529
- Interference suppression acc. to EN 55011 class B
- Appliance fuse: Fuse F15H250V

5.1.7 Connections and interfaces

This appliance is intended for operation on an electrical power system with a system impedance Zmax at the point of transfer (service line) of a maximum of 0.292 Ohm. The operator must ensure that the appliance is operated only on an electrical power system that meets these requirements. If necessary, you can ask your local energy supply company what the system impedance is. When connecting, observe the country-specific regulations (e.g. in Germany DIN VDE 0100 withFI protective circuit).

5.1.8 Designation (nameplate)

Des	scription	Overview
1.	Type designation	
2.	Operating voltage	1
3.	Protection type	2 ~ 230 V 50 Hz 0,43 A 43 W 7
4.	CE conformity	3
5.	Address of manufacturer	4CE
6.	Disposal note	5
7.	Connection / power ratings	Äußere Rittersbacher Str. 38 Made in Germany
8.	Appliance number	

5.1.9 Technical data - Pumping device

Zubehör			CPM650
Dimensions	Length	mm	296
	Width	mm	140
	Height	mm	180
electrical data	Conveyance volume	l/min	1,2
	Operating voltage	V	230
	Power	W	43
	Current consumption 230V/50 Hz	А	0,43
Packaging material	Net weight	kg	2,8
	Gross weight (in cardboard box)	kg	3,7
	Width	cm	47
	Height	cm	42
	Depth	cm	22



5.1.10 Ambient conditions

Ambient temperature	+5 °C to 40 °C
Air humidity	max. 80 % rh (non-condensing)
Overvoltage category	Ш
Pollution degree	2
Altitude of installation	max. 2,000 m above sea level
Maximum mains voltage fluctuations	AC 230 (+/- 10 %)

- The appliance may only be used in enclosed areas and under the ambient conditions listed below
- The appliance may not be used in areas where there is a risk of explosion. The surrounding air must not contain any explosive dusts, gases, vapours or gas-air mixtures. The appliance is not explosion-proof.
- Heavy dust production or aggressive vapours in the vicinity of the appliance could lead to sedimentation in the interior and, as a consequence, could result in short circuits or damage to electrical parts. For this reason, sufficient measures to prevent large clouds of dust or aggressive vapours from developing should be taken.

5.1.11 Scope of delivery and required accessories

- Pumping device
- Installation and connection set (consisting of inlet and outlet pipe, two hinges)



5.2 Delivery, Transport and Setting Up

5.2.1 Safety

	WARNING	
		Condensation in the electrical components may cause short circuits. After transport- ing or storing the appliance under humid conditions, remove it from its packaging and let it ventilate for at least 24 hours in normal ambient conditions. Do not connect the appliance to the mains power during this time.
	CAUTION	
		You may suffer crushing injuries to your hands when transporting and setting up the appliance. Always wear protective gloves.
5.2.2	Delivery/unpacking	 The accessories are packed in a cardboard box Do not unpack the accessories until they are in their installation location to avoid damage Carefully cut open the cardboard packaging along one edge.
5.2.3	Product control	

- Check the delivery note to ensure that the scope of delivery is complete
- Check the accessories for damage

If you notice deviations from the scope of delivery, damage or irregularities, do not put the accessories into operation, but inform the carrier and the manufacturer's factory.

5.2.4 Disposing of packaging material

Dispose of the packaging material (cardboard, wood, foil) in accordance with the applicable disposal regulations for the respective material in your country

5.2.5 Setting up

A WARNING



A CAUTION



A CAUTION



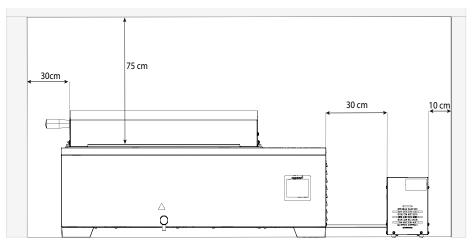
The tube is supplied in a predefined length. This is possibly too long. Please make sure that the hoses do not hang down. You could get caught during operation and be scalded or burned by the heated temperature control medium.

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The appliance may fall from the installation location due to unevenness and injure you or someone else. Always place the appliance on an even, load-bearing and non-slip surface.

The surfaces of the appliance can overheat during operation and overheat heat-sensitive surfaces in close proximity to the appliance. Always place the appliance on a heat-resistant surface and maintain the specified clearance around the appliance.

The distance between the wall and the rear of the appliance must be at least 30 cm. The clearance from the ceiling must not be less than 75 cm and the side clearance from walls or nearby appliances must not be less than 10 cm. Sufficient air circulation in the vicinity of the appliance must be guaranteed at all times.





5.2.6 Installation options pumping device

The pumping device can be placed either next to or behind the water bath . When placing the pumping device, take care not to kink the hoses.

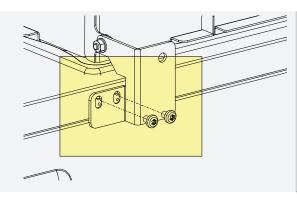
When setting up the pumping unit, make sure that

- the specified wall distances are observed.
- the hoses of the pumping device to the water bath are cut as short as possible.

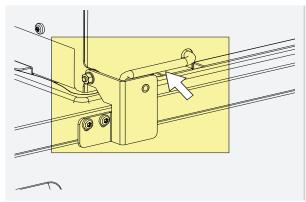
NOTICE

Determine the installation location before you install the pumping device in the water bath. The water bath and pumping device may only be transported individually.

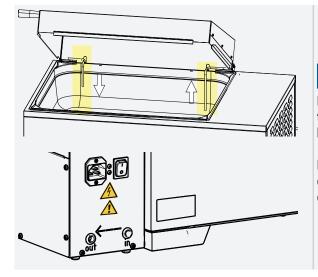
5.2.7 Installation pumping device



1. Attach brackets for the pipe connection to the back of the water bath.



2. Attach the pipe connections to the brackets and hang them in the water bath.

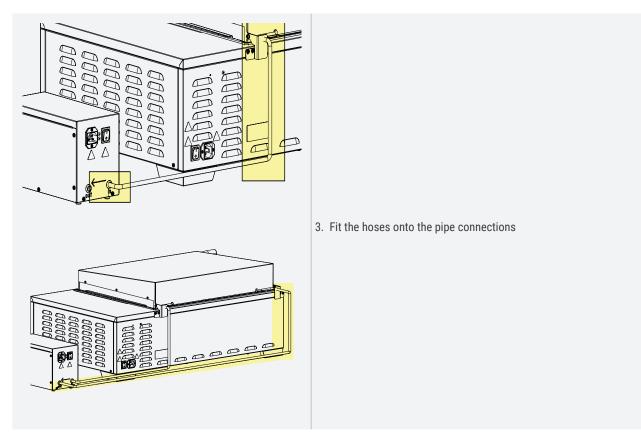


NOTICE

Pump connection IN (suction line): Attach the tube to the long pipe connection on the water bath, as this is where the water is conveyed from the water bath to the pumping device.

Pump connection OUT (pressure line): Attach the tube to the short pipe connection on the water bath, as this is where the water from the pump is conveyed back to the water bath.





5.3 Putting into operation

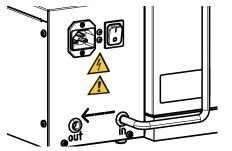
i There must not be any coarse-grained particles in the water bath. This could damage the pumping device.

5.3.1 Putting into operation for the first time

NOTICE

When putting the appliance into operation for the first time, do not leave it unattended until it has reached a steady state.

5.3.2 Connect the appliance to the power supply



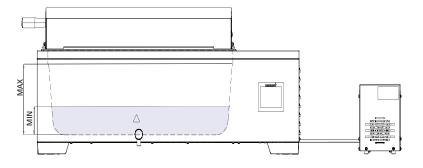
Place the power cable so that

- it does not represent a trip hazard
- it cannot come into contact with any hot parts
 - it is easily accessible at all times and can be pulled off quickly, for example in case of interference or an emergency

5.3.3 Filling the water bath

NOTICE

To operate the pumping device, a minimum filling level of 70 mm is necessary. When filling and charging the water bath, please pay attention to the maximum filling height, which must not be exceeded.



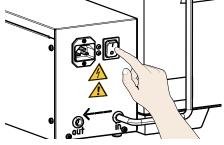
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5.4 Operation and control



During operation of the pumping device, individual components may heat up. Touching its surface can cause burns. Use temperature-resistant protective gloves.

5.4.1 Switching on appliance



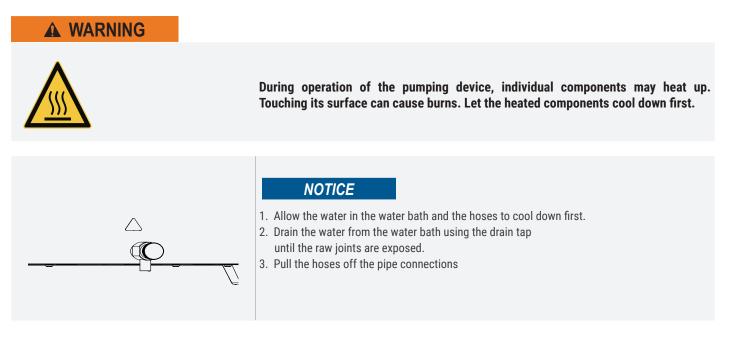
Press main switch on the back of the appliance.

The pumping capacity of the pumping device is constant and cannot be regulated. While switched on, the pumping device operates at a steady rate. The temperature is controlled via the setting on the water bath.

5.4.2 Function test

To check that the unit is pumping, pull off the suction tube from the tube suspender and place a finger on it to test for suction. If there is no suction effect: See chapter Faults, warning and error messages.

5.5 Dismantling the hoses



5.6 Faults, Warning & Error Messages



During operation of the pumping device, individual components may heat up. Touching its surface can cause burns. Use temperature-resistant protective gloves.

Description	Cause	Action
CPM cannot be switched off	Main switch defective	 Disconnect the mains plug Contact customer service
Tempering medium circulates little or not at all	Water level too lowPump defective	 Monitor water level Contact customer service

5.7 Cleaning and decontamination

5	
A DANGER	
	 Danger due to electric shock. Penetration of liquid into the appliance can cause electric shocks and short circuits. Protect the appliance from splashing water. Before cleaning and maintenance work, switch off the appliance and disconnect the mains plug. The appliance must not be cleaned and disinfected wet. Allow the appliance to
	dry completely before putting into operation again.
	Danger of cuts due to sharp edges. Always wear gloves when working on the appliance.
5.7.1 Cleaning	
Interior and metal surfaces	
	Conventional stainless steel cleaning agents can be used to clean the metal surfaces of the pump unit. Make sure that no rusting objects come into contact with the stain- less steel housing. Rust deposits can lead to an infection of the stainless steel. If rust spots appear due to contamination, the affected areas must be cleaned and polished immediately.
Plastic parts	
	Do not clean plastic parts with abrasive or solvent-based cleaning agents.
5.7.2 Decontamination	
	Skin and eye contact with decontaminants may cause irritation of the hands and eyes or allergic reactions and chemical burns.
	 Wear chemical-resistant gloves during decontamination. For correct application, follow the instructions for use on the respective container of the decontamination agent
	Memmert appliances can become contaminated by loading infectious substances or by environmental influences at the place of installation. All parts of the affected appliance must be decontaminated both before sending to our service and before disposing of the appliance.
	• For decontamination, we recommend commercially available decontaminants based on isopropanol or ethanol.
	If you have any questions about using a decontamination agent for decontaminating Memmert appliances, please contact our service department.

After cleaning and decontamination, ventilate the installation site and allow the appliance to dry completely.

5.8 Repairs and service

A DANGER Image: A Danger due to electric shock. Penetration of liquid into the appliance can cause electric shocks and short circuits. Protect the appliance from splashing water. Before cleaning and maintenance work, switch off the appliance and disconnect the mains plug. The appliance must not be cleaned and disinfected wet. Allow the appliance to dry completely before putting into operation again. Image: A WARNING Live components may be exposed once the covers have been removed. Touching these can lead to an electric shock. Disconnect the mains plug before removing any covers. Work on the electrical system must only be performed by qualified electricians. Repairs and service work are described in a separate service manual.

- 5.9 Storage and disposal
- 5.9.1 Storage

The accessories may only be stored under the following conditions:

- in a dry and enclosed, dust-free room
- frost-free
- disconnected from the power supply

Before storage, empty the hoses of the pumping device.

5.9.2 Disposal



This product is subject to Directive 2012/19/EC on Waste Electrical and Electronic Equipment (WEEE) of the European Parliament and of the Council of Ministers. This appliance was placed on the market after 13 August 2005 in countries which have already integrated this Directive into their national laws. It may not be disposed of in normal household waste. For disposal, please contact your dealer or the manufacturer. Any appliances that are infected, infectious or contaminated with materials hazardous to health are excluded from return. Please also observe all other regulations applicable in this context.

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6. Attachment

6.1 CE declarations of conformity Pumping device CPM650

.07	темпе
EC Dec	laration of Conformity
Manufacturar's same and address:	Nammart Cashill - Ca. V/C
Manufacturer's name and address:	Memmert GmbH + Co. KG Äussere Rittersbacherstraße 38 D-91126 Schwabach Germany
Product:	Peltier-cooling device
Туре:	CDP115
Nominal voltage:	Including all accessories AC 230 V 50/60 Hz, alternative AC 115 V 50/60 Hz
This product complice with the provi	sizes of the directive
This product complies with the provi	2006/42/EG
DIRECTIVE 2006/42/EC OF THE	EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast)
Full compliance with the standard below above-mentioned EC Directive:	proves the conformity of the designated product with the essential protection requirements of the
EN ISO 12100:2010	
The designated product is in conform	nity with the European EMC-Directive
	2014/30/EU
	including amendments
Council Directive of 03 May 1989	on the approximation of the laws of the Member States relating to electromagnetic compatibility
Full compliance with the standards listed the above-mentioned EC Directive:	below proves the conformity of the designated product with the essential protection requirements of
EN 61326-1:2013	
	on above corresponds to the directive 2011/65/EC of the European Parliament and the tion of the use of certain hazardous substances in electrical and electronic equipment.
Schwabach, 08.05.2023	
Legally binding signature of the issuer:	
a. Mifa-	happe
Christiane Riefler-Karpa, managing direct	-

This declaration certifies compliance with the above mentioned directives but does not include a property assurance. The safety note given in the product documentation which are part of the supply, must be observed.

Pumping device CPM650 WTB accessory

Accessory guide D49169 Last updated 05/2023 englisch

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