

# HB-THERM<sup>®</sup>

## TREAT-5

### Water Treatment Unit

Product Information 2018-10



## Water Treatment Unit Treat-5

Unsuitable water in the temperature control circuit promotes scaling and corrosion, thus raising maintenance costs and risking premature failures. The risk increases for water temperatures above 140 °C, rotary feedthroughs, or small channel cross sections.

Treat-5 supplies temperature control units with system water of defined quality.

It provides easy and ecological operation. After initially adding the conditioning agent it works automatically and prompts the user periodically for checking.

### *...for channels to remain nicely clean*

Prevents the consequences of poor water quality

- Reduces failures, wear and maintenance to a minimum
- Longer lifespan for the mould

Higher process reliability

- Perfect heat transfer between medium and mould
- Precise temperature control
- No blocked circuits

### *...easy, intelligent and convenient*

Simple operation

- Well-arranged menus in 21 languages
- Intuitive navigation
- Interactive user guidance allows use without prior knowledge
- On-the-spot instructions at the push of a button

Bright display

- Easily legible with high contrast
- Free choice of display windows and values

Convenient functions

- Calculates the exact amount of the required agent
- Easy instruction to monitor the system water quality
- Integrated logbook tracks the treatment process
- Easy front-side sampling
- Recording of data via USB and analysis in Excel

Tu 2018-09-04, 14:38		HB-THERM	
Main line pressure	2.3 bar	Warning ▶ Maintenance medium	
Filling volume tank	12.7 L	Periodic maintenance medium is due.	
Level tank	53 %	Please check medium with test kit,	
Remain. time maint. medium	364 h	input results, start analysis or postpone	
Op. time since maint. medium	636 h	by 3 days maintenance medium by	
Hours run	2742 h	cancelling.	
Temperature tank	34.2 °C	Result corrosion	168
		Result pH Value	8.2
		Start analysis	✓
Normal operation		Normal operation	
1		1	
		Filling vol.	12.7 L
		Pressure	2.3 bar



### *...safe, reliable and low on maintenance*

Durable construction

- Solely non-corroding materials in the hydraulic circuit
- Sealless pump in stainless steel
- Medium-separated ultrasonic fill-level measurement
- Easy-to-remove filter cage

### *...easy on the environment*

- Reduced consumption of water and agent by reusing the system water
- Pump runs only as long as necessary

### Standard Equipment

<b>Hydraulics</b>	Hydraulic circuit made of non-corroding materials Sealless pump in stainless steel Medium-separated ultrasonic fill level measurement Shut-off valve on front panel for sampling Removable filter basket (mesh size 0,2 mm)
<b>Functions</b>	Automatic stand-by mode for pump Automatic draining Automatic dosing calculation of required agents Periodic prompt to review the protective effect
<b>Monitoring / Safety</b>	Safe handling through configuration and naming of agents Automatic fill level monitoring Easy monitoring of the pH value (Accessories: Test kit or pH meter) Lockable and abrasion resistant castors (PUR)
<b>Command / Display</b>	TFT-Colour display 3,5" with interactive user guidance in 21 languages Help button with context sensitive information Large choice of display windows and values Hours run counter and display of date and time Visual and acoustic alarms; volume adjustable Integrated logbook for test results, average use, dilution and alarms Data input password protected
<b>Interface</b>	USB-Connection (Host/Device) for software updates, parameter transfer and data recording

### Additional Equipment

<b>ZB</b>	<b>Connection for alarm and external control</b>	Alarm using potential-free contact (rating max. 250 VAC, 4 A) Unit ON/OFF using potential-free contact 1 socket Harting Han 7D (male), connecting cable 6 m with plug included
<b>ZD</b>	<b>Interface DIGITAL</b>	Serial data interface 20 mA, RS-232 or RS-422/485 Various protocols selectable: Arburg, Billion, Bühler, Dr. Boy, Engel, Ferromatik Milacron, Haitian, KraussMaffei, Negri Bossi, Stork, Sumitomo Demag, Wittmann Battenfeld, Zhafir 2 sockets Sub-D 25 pin (female)
<b>ZK</b>	<b>Keyboard-protection</b>	Transparent flap over display and controls
<b>ZW</b>	<b>Automatic filling</b>	Automatic filling using connection for fresh water inlet

### Technical Specifications

Water treatment unit	Type		HB-TR
	Housing size		<b>2</b>
<b>Pump</b>	sealless, stainless; 0,5 kW; 30 L/min, 52 m	<b>2M</b>	●
<b>Additional equipment</b>	Connection for alarm and external control	<b>ZB</b>	○
	Interface DIGITAL	<b>ZD</b>	○
	Keyboard-protection	<b>ZK</b>	○
	Automatic filling	<b>ZW</b>	○
<b>Mains voltage</b>	400 V (380–415 V), 50 Hz; 3LPE	<b>405</b>	●
	400 V (380–415 V), 60 Hz (50/60 Hz); 3LPE	<b>406</b>	○
	210 V (200–220 V), 50 Hz; 3LPE	<b>215</b>	○
	210 V (200–220 V), 60 Hz (50/60 Hz); 3LPE	<b>216</b>	○
	460 V (440–480 V), 60 Hz; 3LPE	<b>466</b>	○

Ordering example: **HB-TR2-2M-ZD-ZW, 405, English**

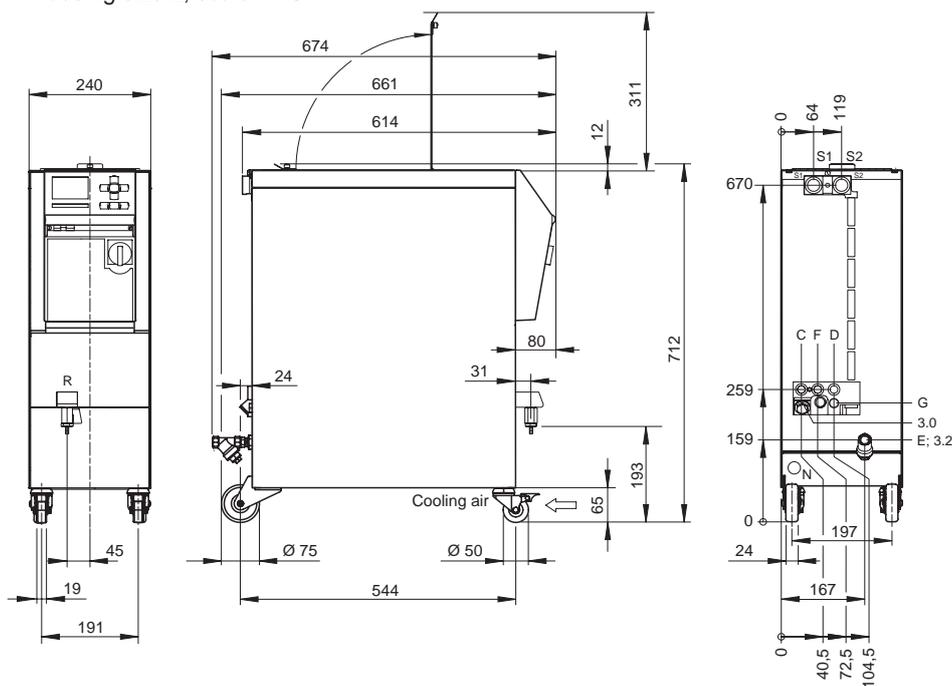
● Standard specification    ○ Optional

## General Technical Data

Power connection	Mains cable to unit	2,5 mm <sup>2</sup> 3LPE, 4 m (plug on request)
	Connected load; maximum fusing	0,6 kW; 3x16 A
Dimensions	Height	712 mm
	Width	240 mm
	Depth	661 mm
Weight max.		55 kg
Tank utilization capacity		23,8 L (max. 4 units, dependent on volume of system water)
Connection main and return line	Thread	G $\frac{3}{4}$
	Resistance	10 bar, 100 °C
Connection fresh water inlet (additional equipment <b>ZW</b> )	Pressure	2–5 bar
	Thread	G $\frac{3}{8}$
	Resistance	10 bar, 60 °C
Connection discharge water outlet	Thread	G $\frac{3}{8}$
	Resistance	10 bar, 80 °C
Connection cooling water	Pressure	2–5 bar
	Thread	G $\frac{3}{8}$
	Resistance	10 bar, 80 °C
Drain	Thread	G $\frac{3}{8}$
Environment	Temperature	5–40 °C
	Humidity	35–85 % RH (non-condensing)
Colour	Cover	RAL 7035 (glossy light grey), RAL 5012 (glossy light blue)
	Control panel	RAL 7012 (basalt grey)
	Access cover	RAL 7021 (glossy black grey)
Protection class		IP 44
Standards		EN 12953-6, EN 50581, EN 60204-1, EN 60335-1, EN 61000-6-2, EN 61000-6-4, EN ISO 12100, EN ISO 13732-1
Certification/Approval		CE (compliance with relevant CE directives)

## Dimensions

Housing size 2, scale 1:15



- |                       |                          |                          |
|-----------------------|--------------------------|--------------------------|
| S1 Main line          | D Cooling water outlet   | G Drain                  |
| S2 Return line        | E Fresh water inlet      | N Mains connection cable |
| C Cooling water inlet | F Discharge water outlet | R Water sampling (Test)  |

## Interfaces



- |                                |
|--------------------------------|
| 3.0 Filter cooling water inlet |
| 3.2 Filter fresh water inlet   |

# Water Treatment

Mobile units for water treatment are designed for use specifically in situations where higher demands are made on water quality for particular applications. These can be e.g. water temperatures in the range over 140 °C, rotary feedthroughs with critical sealing elements or small cooling channel cross sections. Impurities in the circulation system or corrosion on moulds reduce the heat transfer, and thus diminish the performance of the unit.

The purpose of water treatment is to:

- Ensure that no more corrosion, scaling and biological deposits can occur
- Filter out particles released from encrustation or accumulations of sludge

## Procedure

Mixing phase

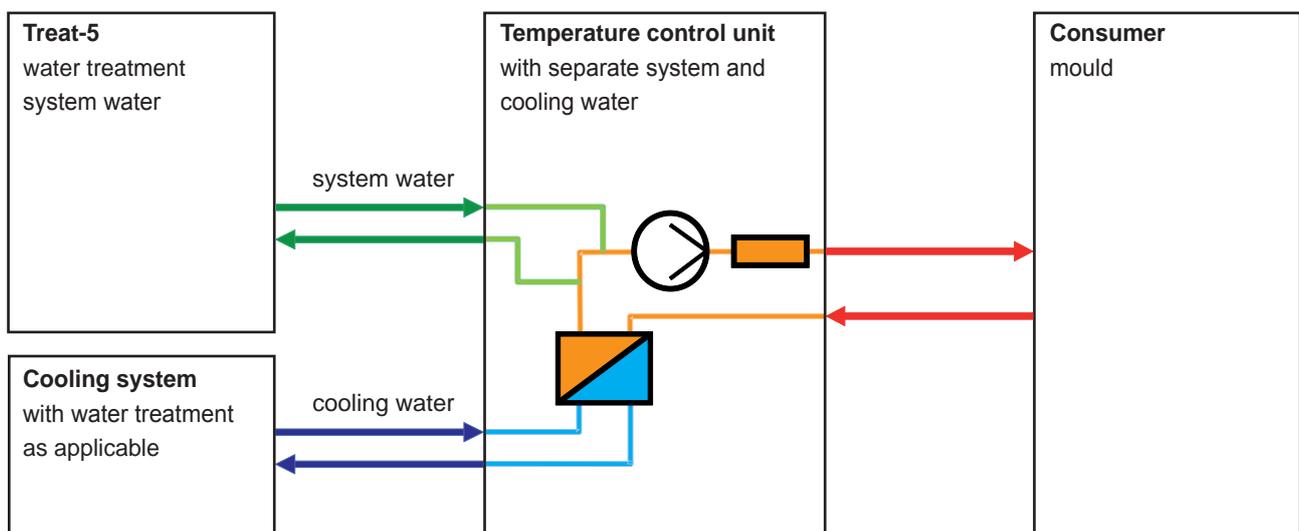
- Filling with fresh water (ideally with softened water)
- Addition of conditioning agent

Standard operation

- System water supply for temperature control units
- Pump in stand-by when no supply water is needed
- Reutilisation of system water after mould evacuation

Control of water quality

- Periodic prompt to review the protective effect



## Necessary Agents

HB-Therm cooperates with partners and provides advice for the procurement of the preferred agents for treatment. Trade and application are subject to national regulations. More information → Accessories Program (D8064-EN)

# HB-THERM®

## Temperature Control Technology

### **HB-Therm worldwide.**

HB-Therm is one of the leading manufacturers of temperature control units worldwide. Since 1967 HB-Therm AG has been developing and producing innovative temperature control technology to the highest quality standards. With its comprehensive know-how and motivated workforce, the company has succeeded in becoming the technology leader in its sector.

This Swiss family enterprise employs around 150 staff and has established itself as a systems supplier offering seamless customer support from machine design through to a complete after-sales service. Production is exclusively in St. Gallen. Own subsidiaries (Sales & Service) in Germany and France as well as 40 other national agencies are representing HB-Therm around the globe.

The company's quality and environmental management system is based on the continual improvement of all activities and processes and is certified to ISO 9001/14001. All its products and services are based on a philosophy of offering „Swiss-made“ quality to customers.

### **Customer service. Included.**

With our sales and marketing network service we can offer comprehensive expert advice and assistance in:

- Optimum temperature control process
- Determination of the specification of the product and advice regarding functionality
- Electrical and hydraulic connections
- Data interfaces
- Heat transfer medium
- Servicing of the equipment

Our experts are always available for support when questions of specialist requirements or applications arise or when putting the equipment into operation, or for the operational training of your staff.

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