

HB-Therm[®] CLEAN-5

Cleaning Unit

Product Information 2021-10



Cleaning Unit Clean-5

Aside from reducing flow, impurities lead to a degradation in heat transfer, and thus to a deterioration in performance.

Clean-5 removes corrosion and scale in moulds, temperature control units and hoses, and provides extended protection in storage.

It offers easy and ecological operation, prompts the user to add the respective amounts of agent, and then automatically continues its work.

...for channels to become nicely clean

Higher process reliability

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

Longer service life

- Less component failures
- Removes corrosion and scale in the mould

...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 amounts of the required agents
- Integrated logbook tracks the cleaning process
- Easy front-side sampling
- Recording of data via USB and analysis in Excel

Tu 2021-02-23, 14:38		HB-THERM	
Cleaning	✓	Warning ▶ Add agent	
Neutralisation	✓	Please add 217 g or 146 ml neutralisation agent DOS N720.	
Before Conservation	✓	> Continue by pressing [OK]	
Rinsing	1/3 00:09		
Preservation			
Finishing			
Cleaning effectiveness	8.4		
Main line pressure	1.5 bar		
Filling volume tank	8.0 L		
		1 Rinsing	
		1 Neutralisation	

...cleans, rinses and conserves

Intensive cleaning

- Efficiently releases deposits with automatic flow reversal
- Cleans only as long as necessary

Thoroughly neutralizes and rinses

- Multiple rinsing with automated filling and draining

Sustained protection

- Conserves the cleaned surfaces
- No corrosion of moulds in storage

...safe, reliable and low on maintenance

Fully automated process monitoring

- Tracks the cleaning success

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

- Uses only as much agent as necessary
- Neutralises the cleaning liquid before draining



Standard Equipment

Hydraulics	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)
Functions	Automatic filling and draining Automatic neutralisation of cleaning agent Conservation without disassembling Automatic dosing calculation of required agents Automatic rinsing function without disassembling Automatic flow reversal for cleaning, rinsing and conservation Mixing function of the manually added agents
Monitoring / Safety	Monitoring of the cleaning success Safe handling through configuration and naming of agents Easy monitoring of the pH value (Accessories: Test kit or pH meter) Lockable and abrasion resistant castors (PUR)
Command / Display	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 Display of cleaning success in L/min Display of date and time Visual and acoustic alarms; volume adjustable Operating hours counter and service interval display Integrated logbook for test results, average use, dilution and alarms Data input password protected
Interface	USB-Connection (Host/Device) for software updates, parameter transfer and data recording

Additional Equipment

ZK Keyboard-protection	Transparent flap over display and controls
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Technical Specifications

Cleaning unit	Type	HB-CL
	Housing size	
Pump	sealless, stainless; 0,5 kW; 30 L/min; 52 m	2M
Additional equipment	Keyboard-protection	
Mains voltage	400 V (380–415 V), 50 Hz; 3LPE	405
	400 V (380–415 V), 60 Hz (50/60 Hz); 3LPE	406
	210 V (200–220 V), 50 Hz; 3LPE	215
	210 V (200–220 V), 60 Hz (50/60 Hz); 3LPE	216
	460 V (440–480 V), 60 Hz; 3LPE	466

Ordering example: HB-CL2-2M-ZK, 405, English

● Standard specification ○ Optional

General Technical Data

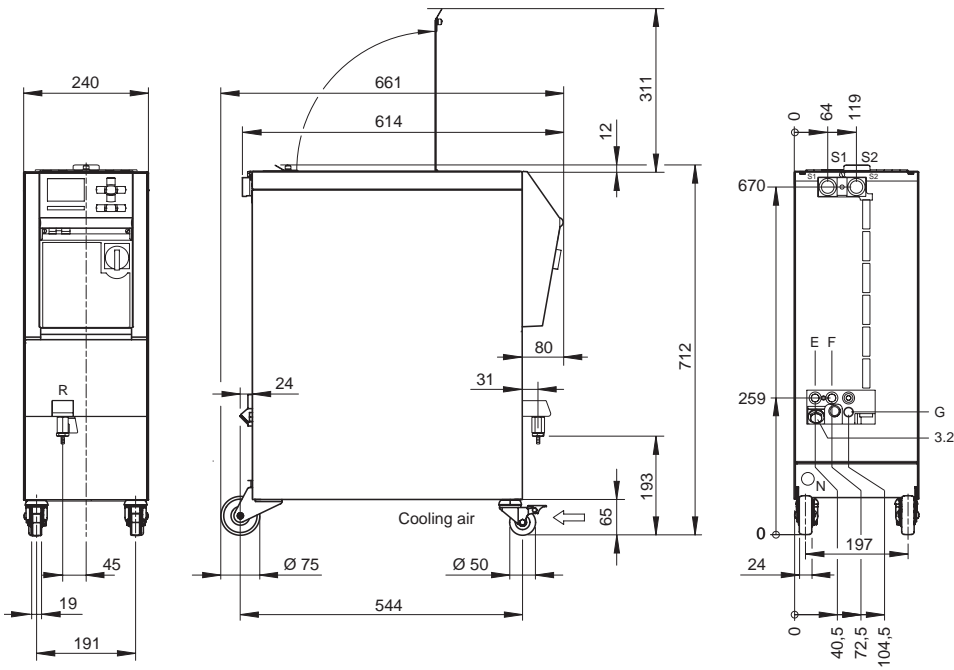
Power connection	Mains cable to unit	2,5 mm ² 3LPE, 4 m (plug on request)
	Connected load; maximum fusing	0,6 kW; 3x16 A
Dimensions	Height	712 mm
	Width	240 mm
	Depth	661 mm
Weight max.		56 kg
Tank utilization capacity		23,8 L
Connection 1, 2	Thread	G ³ / ₄
	Resistance	10 bar, 80 °C
Connection, fresh water inlet	Pressure	2–5 bar
	Thread	G ³ / ₈
	Resistance	10 bar, 60 °C
Connection, discharge water outlet	Thread	G ³ / ₈
	Resistance	10 bar, 80 °C
Drain	Thread	G ³ / ₈
Environment	Temperature range	5–40 °C
	Relative 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 IEC 63000, EN 60204-1, EN 60335-1, EN IEC 61000-6-2, EN IEC 61000-6-4, EN ISO 12100, EN ISO 13732-1
Certification/Approval		CE (compliance with relevant CE directives)

Interface



Dimensions

Housing size 2, scale 1:15



- | | | |
|---------------------|--------------------------|------------------------------|
| S1 Connection 1 | F Discharge water outlet | R Water sampling (Test) |
| S2 Connection 2 | G Drain | 3.2 Filter fresh water inlet |
| E Fresh water inlet | N Mains connection cable | |

Cleaning

The Clean-5 cleaning unit cleans, flushes and preserves circuits of moulds, water temperature control units and hoses. The automated flow reversal optimises cleaning success. Flushing and preservation prepare the circuits for new use or damage-free storage. Requests for the addition of the required amounts of cleaning, neutralisation and preservation agents are signalled by the unit. The cleaning process as well as the filling, flushing and draining cycles are performed automatically by the unit.

Initial Situation

- Corrosion and scaling in the circuit



Cleaning

- Automatic filling
- Addition of cleaning agent
- Cleaning with automatic flow reverse
- Dirt accumulation in filter basket
- Monitoring of the cleaning success
- Automatic circuit evacuation



Neutralisation (tank)

- Addition of neutralising agent
- Neutralisation of the tank medium
- Automatic draining of the tank

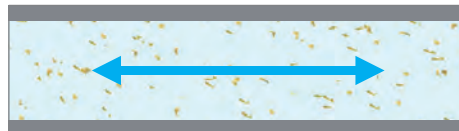
Pre-preservation

- Automatic filling
- Addition of pre-preservation agent
- Pre-preservation with automatic flow reverse
- Automatic draining (circuit and tank)



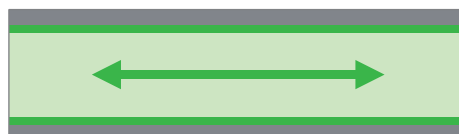
Rinsing

- Automatic filling
- Rinsing with automatic flow reverse
- Automatic draining (circuit and tank)
- Multiple programmable repetition



Conservation

- Automatic filling
- Addition of preserving agent
- Conservation with automatic flow reverse
- Optional circuit evacuation
- Automatic draining of the tank



Necessary Agents

HB-Therm cooperates with partners and provides advice for the procurement of the preferred agents for cleaning, neutralisation, treatment and preservation. Trade and application are subject to national regulations.

More information: Accessories Program (D8064-EN)



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