

Nummer:	824 P 12 01	Seite:	1 / 1	HYGROMATIK CLIMATE CONTROL SYSTEMS
Verantw. Fachbereich:	Technik	Fachlich geprüft:	Rt	
Erstellt am:	01.11.2016	Freigegeben:	01.11.2016 - KI	

Prüfbericht für Dampfbefeuchter FLE Inspection protocol for steam humidifier FLE

Gerätetyp / Unit type: FLE15-TSPA-AE10

1. Technische Daten/ Technical data:

Seriennummer / Serial number	2402126	☒
Heizspannung / Heating voltage	415 V	☒
Nennstrom / Rated current	16,2 A	☒
Steuerspannung / Control voltage	230V~ separat	☒

2. Optische Prüfung / Optical check:

Elektrodenkabel Zylinder / Cable electrodes cylinder		☒
Wasser Zulaufgruppe / Water inlet group	Standard / Standard	☒
Wasser Ablaufgruppe / Water outlet group	Standard / Standard	☒
Schlauchschellen / Hose clamps		☒
Festsitz der Komponenten / Fixation of components		☒
Leitungsanschlüsse angezogen / Wiring fastened		☒
Erdung des Gerätes / Earthing of unit		☒
Elektronik Platine / Electronic board	Stecker gesteckt / Connectors plugged	☒

3. Technische Prüfung / Technical check:

Steuerschalter (Betrieb)/ Main switch (Operation)		☒
Steuerschalter (Abpumpen) / Main switch (blow down)		☒
Softwareversion / Software version	SW-14113	☒
Displayversion / Display version	SW-33100	☒
Datensatz / Dataset	FLE15-TSPA-AE10	☒
Displayfunktionen / Display functions		☒
Eingangsstufen / Input stages		☒
Sicherheitskette / Safety interlock		☒
Ansteuerung / Control	1-stufig / 1-step	☒
Strom / Current	17 A 19,2 A	☒
Zylindervollstand / Cylinder full		☒
Uhrzeit / Clock	24.07.2024 09:42	☒
Basisrelais / Base relay	Licht 1 \ Light 1	☒
Erweiterung 1 / Extension 1	ST02: Duftstoff 1 / Essence 1 ST03: Ablüfter 1 / Exhaust_fan 1 ST04: Zulüfter 1 / Supply_fan 1	☒
Interne Zähler / Internal counter	zurückgesetzt / reseted	☒
Zylindervollstand / Cylinder full	montiert / mounted	☒

4. Elektr. Sicherheitsprüfung nach VDE / Electr. safety test acc. to VDE:

Isolation EN 60335 / Insulation EN 60335	☒
Schutzleiterprüfung / Grounding cables (12V / 25A)	☒

5. Anlagen / Attachments:

Typen- und Bezeichnungsschilder / Labels	☒
Bedienungsanleitung / Manual	☒
Befestigungssatz / Mounting kit	☒

6. Optionen / Options:

	B-0605233; CN-07-10110; WD-04-10011	☒
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7. Monteur / Assembler: Kuh/Ro

Datum / Date: 24.07.2024

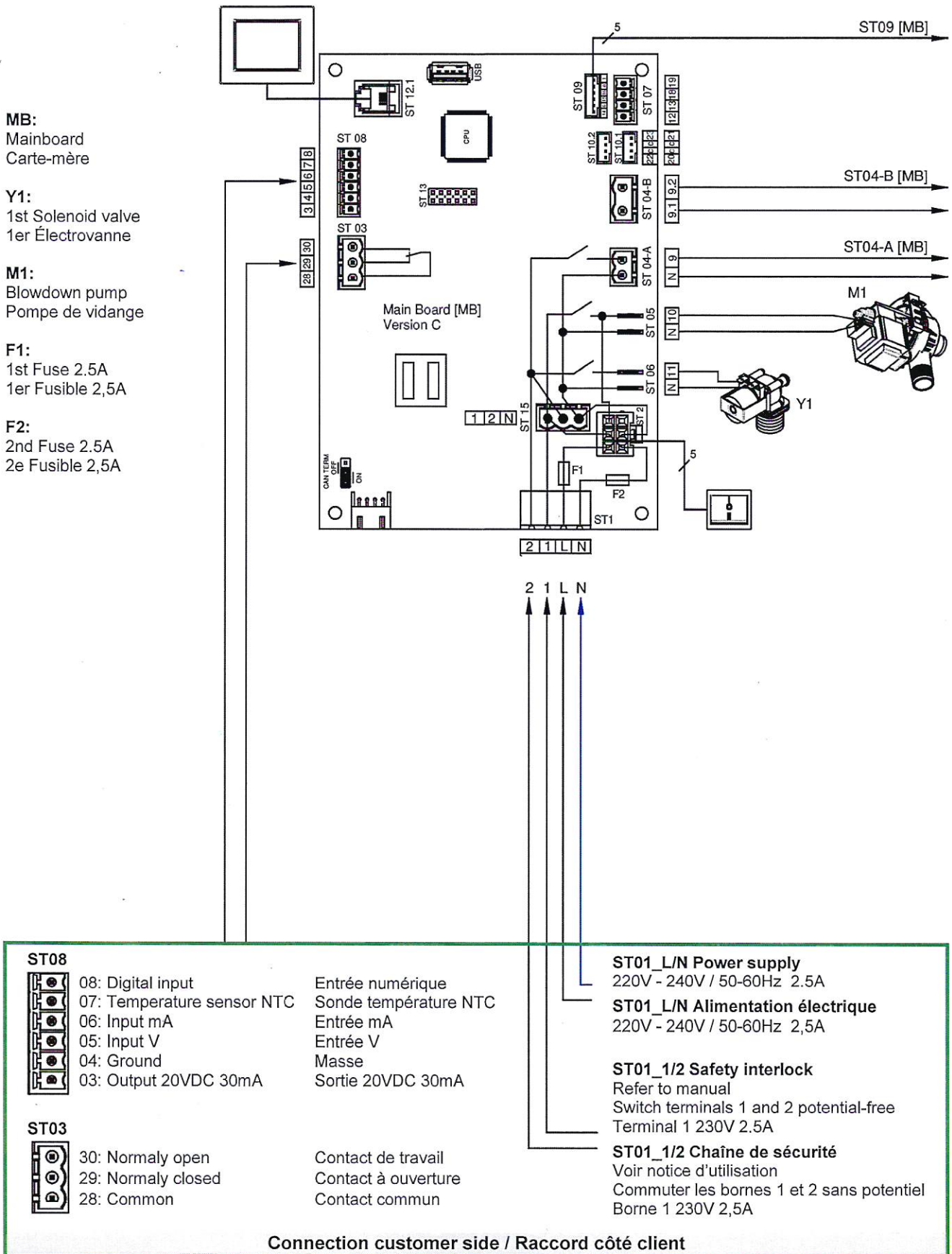
8. Prüfer / Examiner:

Ne

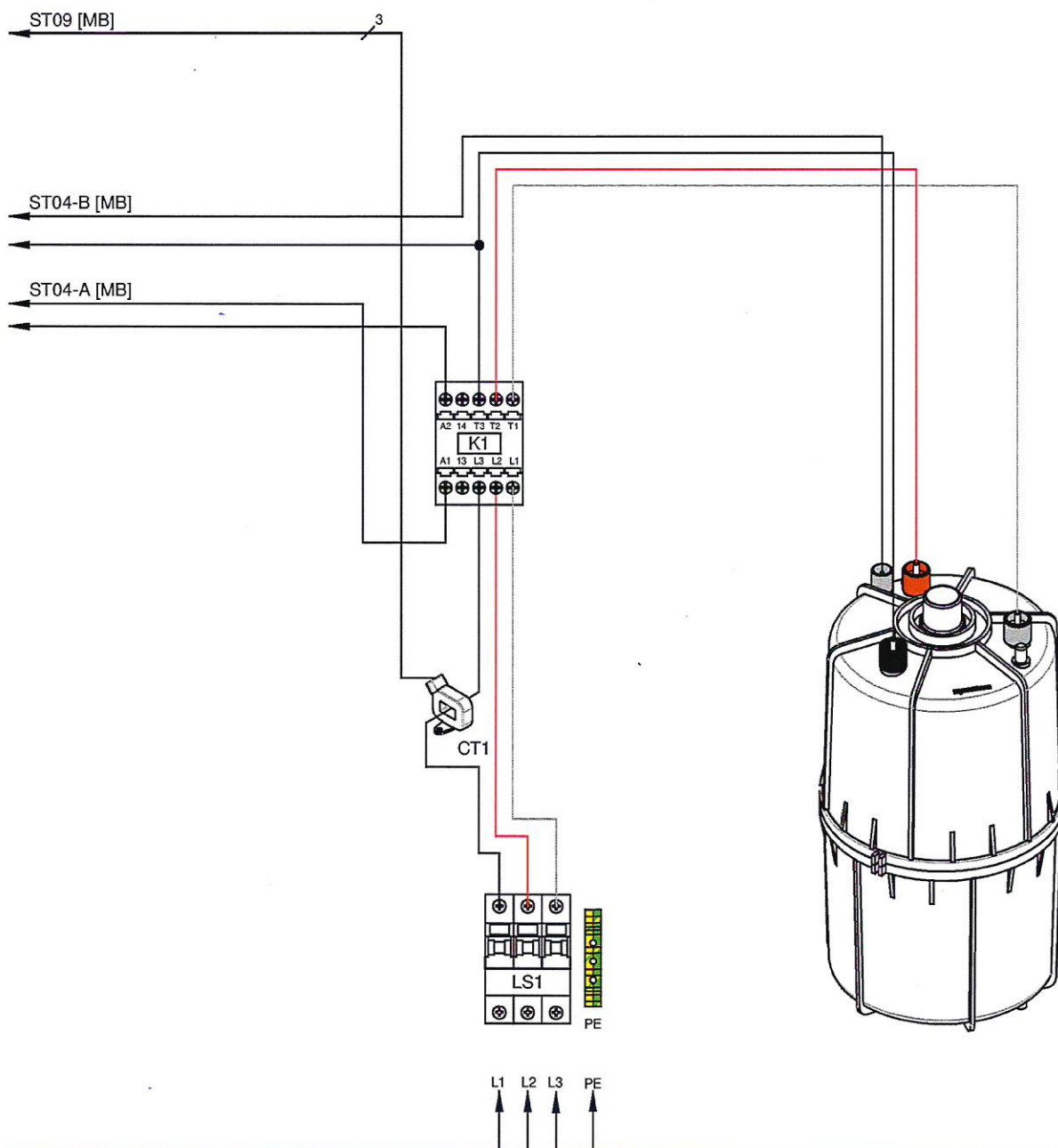
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Datum / Date: 24.07.2024

FLE15-TSPA-AE10



FLE15-TSPA-AE10



Power supply: 380V - 415V / 3 max. 11.2kW
Alimentation électrique: 380V - 415V / 3 max. 11,2kW

Connection customer side / Raccord côté client

K: Main contactor or relay
CT: Current transducer
LS1: Circuit breaker B20.0A

Contacteur principal ou relais
Transformateur de mesure annulaire
Disjoncteur B20,0A

230V steam bath option with 4 relays

Application

The beneficial effect of a steam bath is not only caused by the steam itself. It is the sum of the sensory impressions of humidity, temperature, essence and lighting that makes up the overall experience. With the 230V steam bath option, the HygroMatik FlexLine can do much more than "just generate steam" and becomes the central "wellness generator".

The extension board offers three additional relays, which can be easily parameterized via the comfortable touch screen user interface of the generator control. Together with the basic relay of the main board, it is possible to activate or deactivate the exhaust fan, the supply fan, the lighting and the essence dosage as required. In addition, there is a further connection option for an additional temperature sensor which, due to algorithms integrated in the controller, can be used both for averaging (for larger or elongated baths) and for deviation monitoring (double safety). Since the corresponding connections on the device are all connected to a terminal, this option offers a particularly simple connection option for a steam bath experience that is as safe as it is relaxing.

Functional description

Relays are used to switch the functions light, essence, exhaust fan and supply fan. These relays switch 230V on request of the TSPA controller to control the respective component.

The base relay on the motherboard is used to switch the light.

The relay extension is required for the 3 additional relays. This is plugged into the main board as part of the option. The relays of the expansion board are used to control the exhaust fan, supply fan and essence.

In addition to the 3 additional relay outputs, the expansion board also enables the connection of a 2nd temperature sensor and the use of an additional digital input.

The 2nd temperature sensor enables functions such as averaging and temperature monitoring. Details can be found in the respective data sheets.

The digital input of the relay board enables further functions such as ECO, steam surge, steam release and timer functions to be combined with the digital input of the main board.

The 4 relay connections, the safety chain and the temperature sensor of the motherboard are connected to the terminal for a simple on-site connection.

Parameter setting

Settings can be made directly on the generator using the 3.5" touch display. The parameters can be found in the respective areas of the main menu of the TouchSPA control.



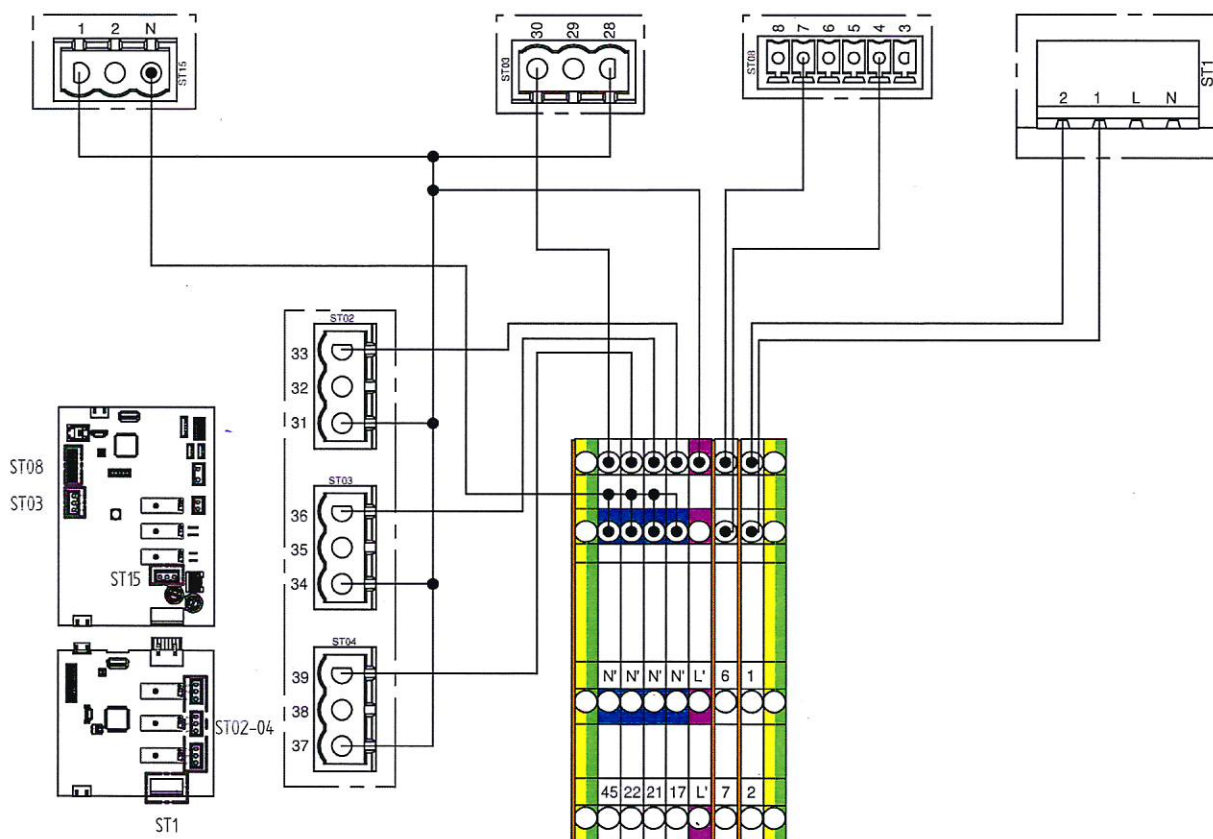
23 Assignment_main_relay	Light 1



1 Assignment_relay ST02	Essence 1
2 Assignment_relay ST03	Exhaust fan 1
3 Assignment_relay ST04	Supply fan 1

This document is only valid in conjunction with the operating instructions for the control of the unit. Obey all safety notes for use of HygroMatik units. You will find the safety notes in chapter 1 and 2 of the user manual delivered with the unit.

Wiring diagram



Connection of the DS Option

The on-site components are connected directly to the terminal block of the DS option. The assignment is shown in the following table.

Temperature sensors	6 and 7
Safety interlock	1 and 2
Light	45, N', PE
Supply fan	22, N', PE
Exhaust fan	21, N', PE
Essence	17 (switching output), L' (continuous voltage), N', PE

Power

The 230V loads are supplied via the internal fuse [2,5A] of the control board. Thus a maximum power of 400VA is available. The sum of all loads must not exceed the maximum power.

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Connecting of the essence pump

The assignment of generator terminals to essence pump terminals is shown in the following table.

Article number	B-2604091			
Modell	EP230			
Description	230VAC Impulse	230VAC	N'	PE
Terminals steam generator	17	L'	N'	PE
Terminals pump	3	2	1	PE

Internal wiring

The schematic shows the complete DS option. All connections are led to a terminal block. The individual taps are as follows:

Main board plug ST15: Power supply of the components to be switched

Main board plug ST03: Relay for light control

Main board plug ST01: Safety interlock

Main board plug ST08: Temperature sensor

Extension board plug ST02: Relay for essence control

Extension board plug ST03: Relay for exhaust fan

Extension board plug ST04: Relay for supply fan

Individual adaptation

The factory-prepared assignment of the function can be adapted to the customer's requirements. If, for example, no supply fan is to be used but a second essence pump is to be used, this can be set.



3 Assignment_relay ST04	Essence 2
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SuperFlush

Application

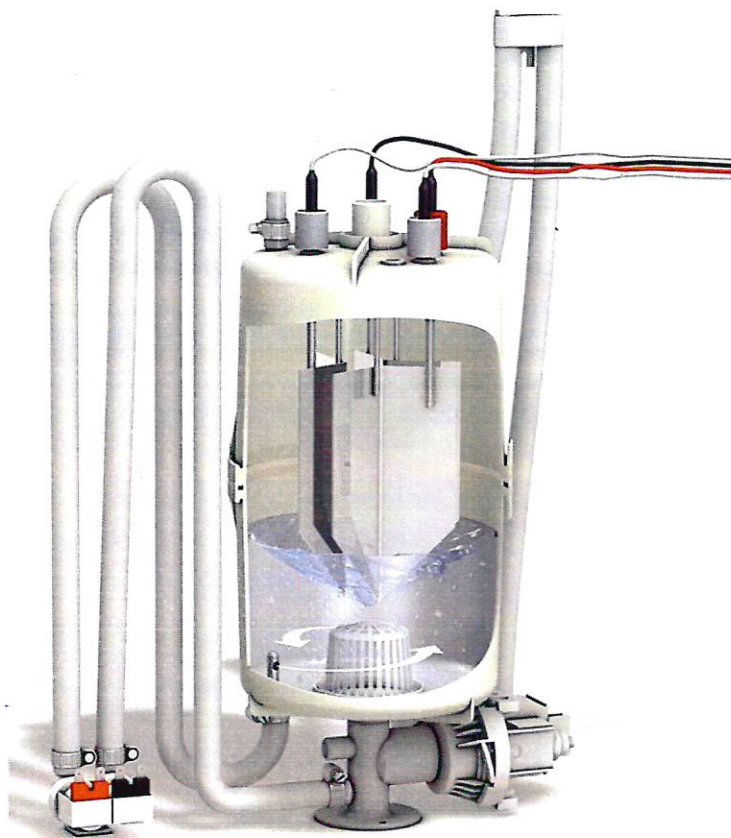
When tap water is heated, chemical processes produce smaller or larger amounts of mineral deposits, depending on the water hardness, which remain in the steam cylinder and sooner or later make maintenance necessary. The optional built-in Superflush rinsing system can significantly increase the discharge of slurry mineral deposits and thus extend the operating time between maintenance intervals.

Functional description

A nozzle - inserted in the bottom part of the cylinder - is connected to an additional water inlet valve. This solenoid valve is operated in parallel to the blowdown pump. During blowdown the Superflush causes a rotation of the cylinder water. Deposits are whirled up and smaller particles are removed from the cylinder by the blowdown pump.

Technical data

Supply water pressure: 1-10bar / 14,5-145psiSupply water line: DN12 (3/8")



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Spare parts

If you need the solenoid valve as a spare part, you can order it with the following part no. at HygroMatik or your service partner:

Unit type	Ident no.
SLE02-10, SLH03-09, FLE05-10, FLH03-09, MSE	WF-03-00012
SLE15-30, SLH15-25, FLE15-25, FLH15-25	WF-04-00012
SLE45-65, SLH40-50, FLE30-130, FLH30-100	WF-06-00012



When replacing the valve, please note that the 2nd outlet of the solenoid valve (right, red marking on hose and cable) must be connected to the cylinder flushing connection at the bottom of the cylinder. The left output has to be connected to the cylinder base.

If you need the steam cylinder as a spare part, please indicate when ordering that you need a cylinder with SuperFlush nozzle or indicate the serial number of your device.

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Ersatzteilliste

Für FLE15-TSPA-AE10 mit der Seriennummer 2402126

[illegible]

Aufbauskitze

Für FLE15-TSPA-AE10 mit der Seriennummer 2402126

Position 2 besteht aus: 2.1, 2.2, 2.3

Position 3 besteht aus: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6

Position 21 besteht aus: 21.1, 21.2, 21.3, 21.5, 21.6

