

FWE200DH

Extractive scattered light dust measuring device
Water back purge WBP

SICK
Sensor Intelligence.



Beschriebenes Produkt

Product name: FWE200DH
Option: Water back purge WBP

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Original document

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1 Important information

1.1 About this document

This Addendum is only complete in combination with the Operating Instructions of the FWE200DH measuring system. Availability and knowledge of the Operating Instructions of the FWE200DH are assumed.

These Instructions apply to FWE200DH equipped with the water back purge WBP at the factory.

The valid Operating Instructions (OI) contain basic information on safety, measuring procedure, design, function and usage of the measuring system and its components and therefore only supplementary information is provided where necessary to understand the function. This Addendum is therefore only to be used in conjunction with the valid Operating Instructions.



NOTE:

Always read the Operating Instructions before starting work! Be sure to observe all safety and warning information in the Operating Instructions!

1.2 Main hazards

Observe the following hazards in addition to those described in the Operating Instructions.



WARNING: Health risk due to leaking measuring gas

During maintenance work on the sample gas probe there is the possibility of leaking of potentially hazardous measuring gas.

- ▶ Take suitable protective measures according to the hazard potential evaluated by the operator.
 - ▶ Wear personal protective equipment.
-



WARNING: Health risk due to formation of new compounds

New compounds may be formed during heating in the thermal cyclone due to the process gas composition.

- ▶ The respective ignition temperature must be taken into account for each potentially arising substance compound. The heater temperature of the thermal cyclone and the heated extraction hose may have to be limited accordingly.

Example ammonium nitrate:

During start-up, the operating temperature of the heating tapes must be set to max. 220 °C; the sample gas temperature (TGas2) should not exceed 140 °C. Set the thermostat safety switch-off to 240 °C.

- ▶ Other substance mixtures may require different heating band temperatures.
-








NOTE:

The operator must ensure that no leaks occur in the system.
The operator is responsible for assessing possible hazards through leaks.

1.3 Symbols and document conventions

1.3.1 Warning symbols

Symbol	Description
	Hazard (general)
	Hazard by voltage
	Health hazard (general)
	Hazard through hot surfaces
	Explosion hazard

1.3.2 Warning levels and signal words

DANGER

Risk or hazardous situation which *will* result in severe personal injury or death.

WARNING

Risk or hazardous situation which *could* result in severe personal injury or death.



CAUTION

Hazard or unsafe practice which could result in personal injury or property damage.

NOTICE

Hazard which *could* result in property damage.

1.3.3 Information symbols

Symbol	Description
	Important technical information for this product
	Important information on electric or electronic functions

1.4 Intended use

Purpose of device components

The FWE200DH measuring system is used exclusively for continuous measurement of dust concentrations in wet gases. In some applications in this area of application, deposits can occur which can constrict or clog the lines and components carrying the sample gas (e.g. in the production of fertilizers or glass wool). The equipment variant of the FWE200DH has a water back purge unit. This ensures that recurring water purging of the lines and components carrying the sample gas dissolves water-soluble deposits and flushes these back into the sample gas duct.



NOTE: Wear personal protective equipment

Appropriate protective devices and personal protective equipment must be available in sufficient quantity and must be used by the personnel in accordance with the respective hazard potential.

Correct use

- Use the device only as described in this Addendum. The manufacturer bears no responsibility for any other use.
- Observe all measures necessary for conservation of value, e.g., for maintenance and inspection and/or transport and storage.
- Do not remove, add or modify any components to or on the device unless described and specified in the official manufacturer information. Otherwise
 - the device could become dangerous.
 - the manufacturer's warranty becomes void.

Restrictions of use

- The use of the FWE200DH measuring system is not allowed in areas with fire hazards or potentially explosive atmospheres.

1.5 Responsibility of user

1.5.1 General information



NOTE: Responsibility for system safety

The person setting the system up is responsible for the safety of the system in which the device is integrated.

Designated users

The FWE200DH measuring system may only be installed and operated by skilled technicians who, based on their technical training and knowledge as well as knowledge of the relevant regulations, can assess the tasks given and recognize the hazards involved.

Special local requirements

Observe the local laws, regulations and company internal operating instructions applicable at the installation location.

Retention of documents

Keep the Operating Instructions belonging to the measuring system as well as equipment documentation onsite for reference at all times. Pass the respective documentation on to any new owner when selling the measuring system.

2 Product description

2.1 Characteristics and function

The water back purge WBP is an option of the FWE200DH measuring system.

Water purging is carried out regularly during the control cycle. This runs every 8 hours according to the factory settings. The cycle time can be changed using SOPAS ET (see FWE200DH Operating Instructions). The water flow dissolves deposits mechanically, salt deposits dissolve in the water and are flushed into the flue gas duct.

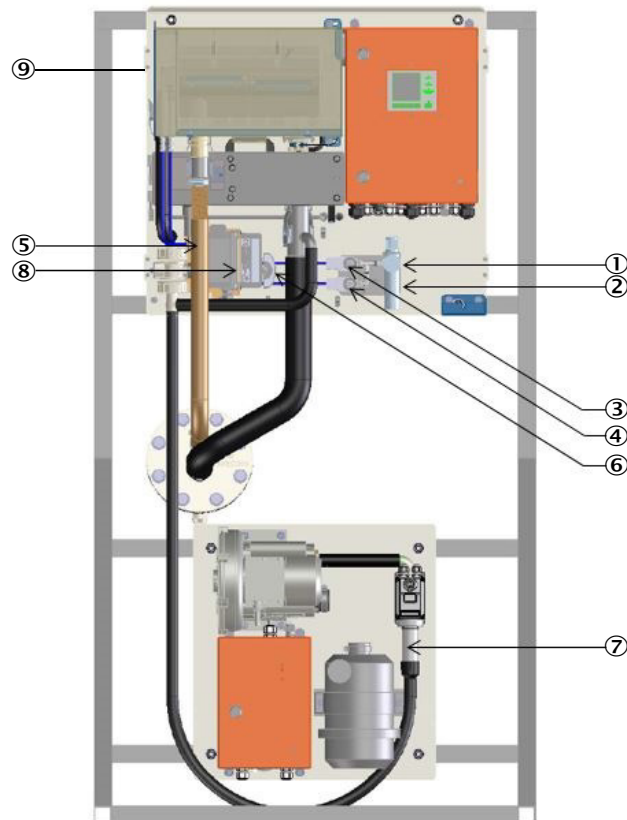
2.2 Device components

The following components are additionally installed or prepared at the factory for the FWE200DH with water back purge WBP:

- Pressure regulator with manometer and water filter
- Water connection, customer interface G¼ inch inside thread
- Valve 1
- Valve 2
- Ball valve
- Connecting hoses
- Purge air heater (optional, must be ordered separately)
- Heated extraction hose (optional, must be ordered separately)
- WBP swirl chamber cover for water back purging

Fig. 1: Auxiliary components FWE200DH

- ① Pressure regulator
- ② Water connection
- ③ Valve 1
- ④ Valve 2
- ⑤ Ball valve
- ⑥ Connection hoses
- ⑦ Purge air heater (optional)
- ⑧ Heated extraction hose (optional)
- ⑨ WBP swirl chamber cover for water back purging



**NOTE:**

Optional extension with heated extraction hose and purge air heater are already provided for in the FWE200DH with water back purge WBP, the electrical connections required for this are prepared. However, the heated extraction hose and/or the purge air heater itself must be ordered separately if required (see “Optional components”, page 27).

**NOTICE:**

The measuring system must be mounted decoupled from the duct in order to prevent damage caused by mechanical vibrations.

2.2.1 Purge air heater

The purge air heater installed on the SLV7 blower unit serves to preheat the purge air required to operate the ejector and for water back purging.

When mixing the cool purge air with the hot process gases, increased crystallization of salts may occur in the measuring nozzle, resulting in constriction or blockage because the water content condenses during rapid cooling of the process gas.

To prevent condensate failure, the purge air can be heated with a purge air heater to such an extent that this effect is suppressed.

Fig. 2: Purge air heater

**NOTE:**

The use of the purge air heater is not allowed in areas with fire hazards or potentially explosive atmospheres!

**NOTE:**

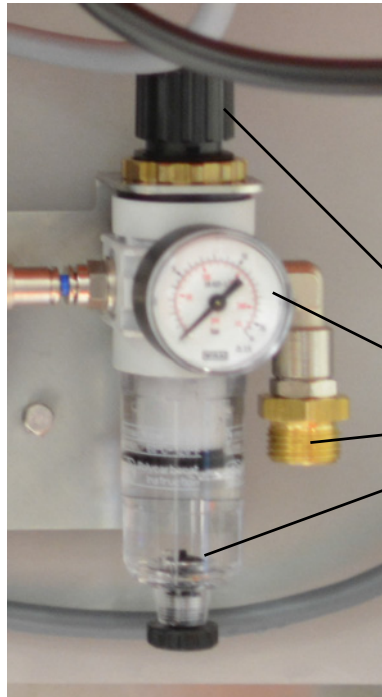
Please observe the operating instructions of the purge air heater on the product-CD.

2.2.2 Pressure regulator

The recommended water pressure for the purging is 3 barg. The water temperature must not exceed 60 °C. A minimum pressure of 2 barg should be maintained. The system pressure must not exceed 6 barg otherwise the leak tightness of the solenoid valves cannot be guaranteed.

To adjust the pressure, pull the control knob on the pressure reducer upwards out of the lock. Set the desired purging pressure. The integrated water filter serves to filter coarse residues and/or limescale deposits from the supplied water.

Fig. 3: Pressure regulator



- ① Control valve for setting the purging pressure
- ② Pressure indicator for purging pressure
- ③ Water connection G $\frac{1}{4}$ inch
- ④ Water filter with drain nozzle

2.2.3 Heated extraction hose

The heated extraction hose serves to preheat the sample gas when, for example, the heater temperature or surface temperature in the thermal cyclone has to be reduced due to the application. Furthermore, this prevents the sample gas cooling down between the sample gas probe and measuring system.

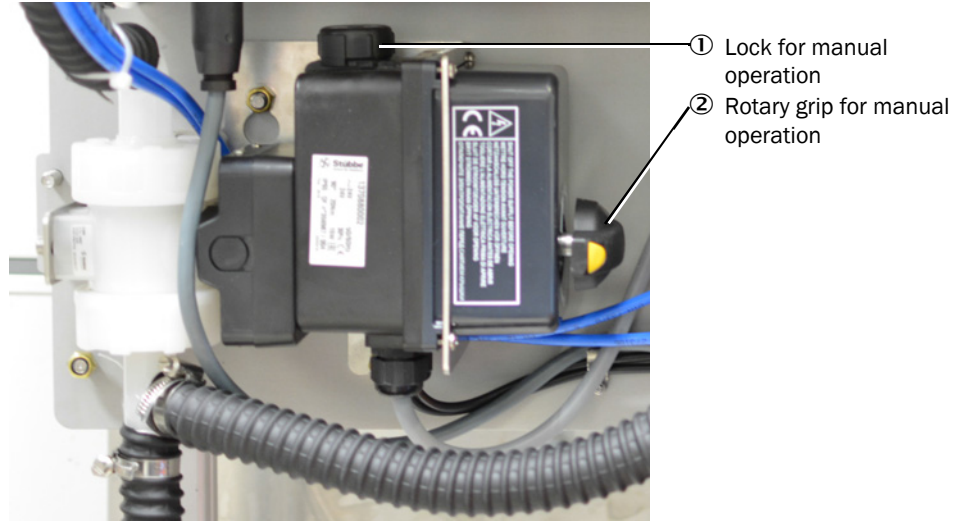
Fig. 4: Heated extraction hose



2.2.4 Water valves and ball valve

The water valves and the ball valve can be operated in the corresponding SOPAS ET menu to check that they are functioning correctly.

Fig. 5: Ball valve



2.2.5 Water connection provided by operator

The operator is responsible for providing the purging water up to the water connection of the FWE200DH WBP. A water connection with ¼ inch thread on the 90° bend of the pressure reducer serves as interface between the purging water connection provided by the operator and the device. Observe local regulations when connecting to the drinking water network. Prescribed non-return devices or similar must be provided by the operator on site. It is recommended to lay a flexible connecting line to the system so that vibrations do not cause damage. Observe requirements for frost protection of the connection line.



NOTE:

Observe relevant national regulations for handling drinking water. Take suitable measures to prevent a return feed into the drinking water network.



NOTE:

The operator must take suitable measures to avoid freezing of the flushing water provided up to the defined interface. The water temperature must be kept above freezing point up to the feed point.



NOTE:

The purging water provided must have a temperature below 60 °C and be free from limescale and suspended particles, and the water pre-filtered when necessary.



CAUTION:

Observe the prescribed water pressure of the water supply of 3...10 barg. The water pressure after the pressure regulator should be 2...6 barg, otherwise the device could be damaged.

2.2.6 Water connections on WBP swirl chamber cover

Check the proper water flow into the swirl chamber after maintenance work (cleaning). Feed the water so that no splash residues are distributed in the swirl chamber and all the water always flows into the respective purging branch.

Fig. 6: Side view, swirl chamber



- ① Control opening to check water dosage in the swirl chamber
- ② Water connections, valves 1 and 2
- ③ Purge air connection for direct feed into the swirl chamber



WARNING: Risk of scalding

Hot liquid can escape from the swirl chamber (thermal cyclone) when opened.
 ► Allow the device to cool down.

3 Commissioning / configuring



WARNING: Hot gases may escape

Risk of burns from escaping hot gases.

- ▶ Open inlets of gas-carrying parts must be closed during device installation, assembly and commissioning to prevent leakage.
- ▶ Suitable protective measures against any escaping sample gas must be taken.
- ▶ Personal protective equipment must be worn.

3.1 Temperature setting of the heating bands

The heating band settings (see “Main hazards”, page 4) must first be made in the software settings. The application-related settings must then be made in the control unit. For this purpose, it is necessary to locate the heating band setting in the control unit and make the setting with a slotted screwdriver.

Fig. 7: Heating band settings, SOPAS ET (Parameters / System Parameters)

Heater settings				
Connected	Maximal Temperature	Function	Fix value	Maximal power
<input checked="" type="checkbox"/> Heater1	280 °C	<input type="checkbox"/> Fix value on	0 %	700 W
<input checked="" type="checkbox"/> Heater2	350 °C	<input type="checkbox"/> Fix value on	0 %	700 W
<input type="checkbox"/> Heater3	230 °C	Control with Temp. Sensor	0 %	0 W
<input type="checkbox"/> Heater4	230 °C	Control with Temp. Sensor	0 %	0 W
Set power for emergency state				10 %

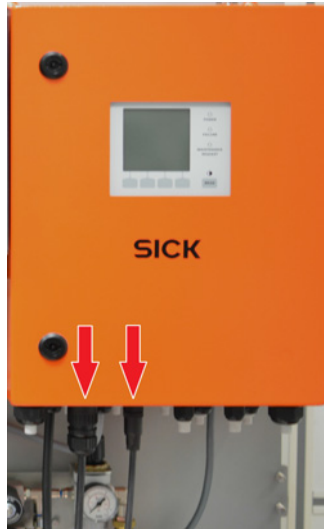
Fig. 8: Heating band settings on control unit



3.2 Connecting the heated extraction hose (optional)

The option of connecting a heated extraction hose is prepared at the factory for the FWE200DH with water back purge WBP. The electrical connection is made using the plug connector on the control unit. The power voltage supply and temperature sensor must be connected.

Fig. 9: Power voltage and temperature sensor connection

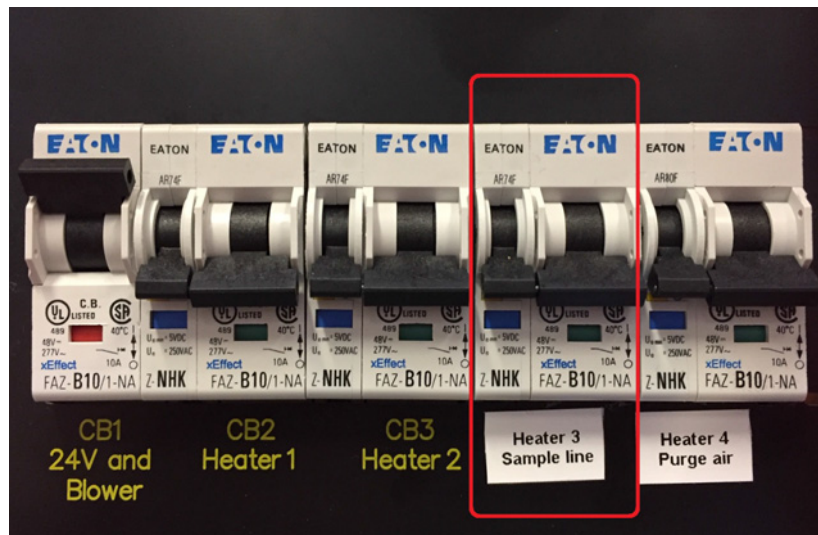


The heated extraction hose is controlled and regulated using the electronics in the FWE200DH. Temperatures can be configured using SOPAS ET. The power supply line to the plug connector is connected to the terminal for “Heater3” in the control unit.

The temperature sensor of the heated extraction hose is displayed as THeizer3 and is connected to T_Heat3 on the printed circuit board.

Electronic protection is provided by the “CB4” circuit breaker in the control unit.

Fig. 10: CB4 fuse for the heated extraction hose (Heater3)



3.3 Connecting the purge air heater

**NOTE:**

Observe the warnings in the Operating Instructions of the purge air heater.

**WARNING: Fire and explosion hazard through purge air heater**

Risk of life during use of air heaters.

- ▶ Fire and explosion hazard due to improper installation and use of air heaters, especially in the vicinity of flammable materials and explosive gases.

**WARNING: Risk of burns through purge air heater**

Heating element and nozzle will become hot during operation.

- ▶ Allow the device to cool down.
- ▶ Do not direct hot air jet at people or animals.

**NOTICE: Observe nominal voltage**

The nominal voltage indicated on the device must correspond to the power voltage, otherwise the device can be damaged.

IEC/EN 61000-3-11; $Z_{\max} = 0.065\Omega + j 0.040\Omega$

**NOTICE: Atmospheric conditions**

Protect the device from moisture and humidity.

The option of connecting a heated extraction hose is prepared at the factory for the FWE200DH with water back purge WBP. The purge air heater is controlled using the MCU control unit of the FWE200DH. The power supply line to the purge air heater must be connected to the terminals for “Heater4” in the control unit.

Fig. 11: Purge air heater with accessories for mounting on SLV7



Fig. 12: Power cable for purge air heater connection in the control unit

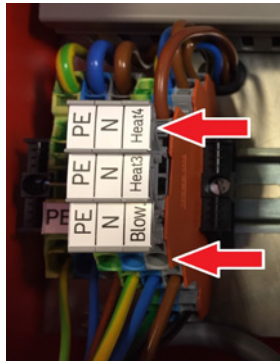


Fig. 13: SLV7 with purge air heater installed on the base plate



Electrical protection is provided by the “CB5” circuit breaker in the control unit.

Fig. 14: CB5 fuse for the purge air heater





NOTE:

The control unit of the FWE200DH only serves to control the power supply of the purge air heater and emergency shutdown in case of a fault.



NOTE:

Operation of the purge air heater without air flow is not permitted. For this reason, the power supply is only released when the following conditions are fulfilled:

- The purge air supply runs without faults
- Flow present in the measuring system
- No malfunctions present in the measuring system

The purge air heater is switched off automatically when a malfunction occurs.

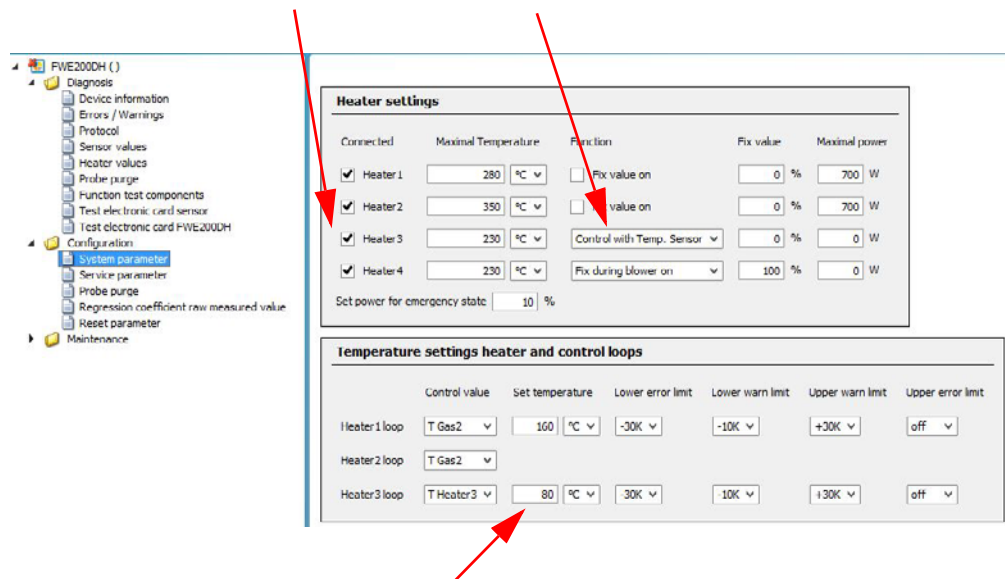
3.4 Setting parameters

The SOPAS ET operating program is necessary to configure the water back purge function. Installation and operation are described in the FWE200DH Operating Instructions.

3.4.1 Activating temperature control / heated extraction hose

To activate the temperature control for the heated extraction hose, activate heater 3 (in the SOPAS ET menu: FWE200DH/Configuration/System parameter) and set as function: “Control with Temp. Sensor” (see “Activating temperature control”, page 16).

Fig. 15: Activating temperature control



The desired default temperature for the heated extraction hose can be set in the temperature settings in the menu for heating circuit. The default value set at the factory setting is 80 °C, the maximum temperature 120 °C.



NOTE:

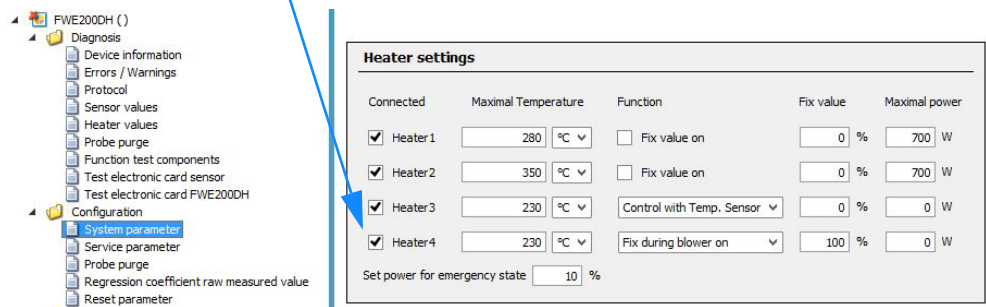
The internal heating hose self-fuse triggers at 205 °C and operation is switched off automatically.

3.4.2 Configuring the purge air heater

The operating behavior can be configured in SOPAS ET. It is only possible to switch between “Deactive”, continuous operation (fixed value during blower on) and operation only during the control cycle (fixed value during purging).

Selection is made using the “Heater settings” menu in SOPAS ET. The default setting is continuous operation and connection to Heater4.

Fig. 16: Heater settings in SOPAS ET



The purge air temperature is controlled directly on the purge air heater. The factory setting of the purge air temperature is configured to 90 °C. The red regulator is locked in this position with a seal sticker. The purge air temperature can therefore only be modified by destroying the seal sticker, but this should only be done with great care. Protection against unintentional adjustment of the regulator must then be replaced.



CAUTION:

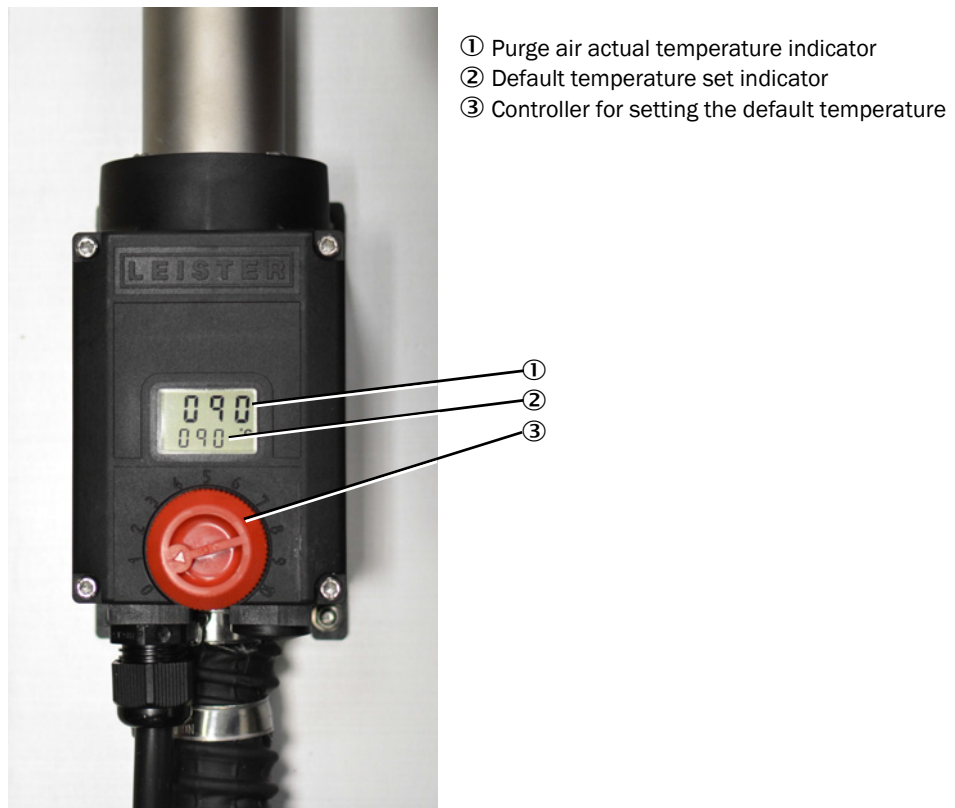
The maximum temperature should not exceed 120 °C, otherwise damage to the system and purge air hoses is to be expected.



NOTE:

The purge air temperature should only be changed under compliance with all relevant safety instructions and knowledge of potential dangers. If the purge air temperature on the purge air heater is changed, protection against unintentional adjustment of the controller must be provided again.

Fig. 17: Purge air heater



Further setting options and error messages are explained in the Operating Instructions of the purge air heater.



NOTE:

The Operating Instructions for the purge air heater can be found on the supplied product CD.

3.4.3 Standard configuration flowchart

The water back purge sequence can be configured in the SOPAS ET operating program using the SOPAS ET menu: FWE200DH/Configuration/Probe purge.

Standard sequence set at the factory

- Start control cycle.
 - Function check DHSP200.
 - Output of control values DHSP200 on analog output.
 - Water purging cycle starts automatically.
- 1 DHSP200 moves to protected position.
 - 2 Blower output set to 100%.
 - 3 Valve 2 for purging the measuring cell and feedback line opens (approx. 30 s).
 - 4 Valve 2 closes.
 - 5 Ball valve opens and directs purge air flow directly into the swirl chamber.
 - 6 Valve 1 for purging the sample line opens (approx. 30 s).
 - 7 Valve 1 closes.
 - 8 Blower dries the system.
 - 9 Ball valve closes (normal measuring operation).
 - 10 Wait until Tgas2 (sample gas) has reached the default temperature.
 - 11 End of water purging, system returns to measuring operation.

Fig. 18: SOPAS ET Menu Water Purge Configuration

Water probe purge			
Step	Action	Wait after start of action	Remarks
1	Set Blower on (100%)	10 s	
2	Waiting...	10 s	
3	Open Valve 2	30 s	
4	Close Valve 2	1 s	
5	Open ball valve	10 s	
6	Open Valve 1	30 s	
7	Close Valve 1	1 s	
8	Set Blower on (60%)	10 s	
9	Waiting...	30 s	
10	Close ball valve	10 s	
11	Wait for TGas2	600 s	
12	Nothing to do	0 s	
13	Nothing to do	0 s	
14	Nothing to do	0 s	
15	Nothing to do	0 s	
16	Nothing to do	0 s	
17	Nothing to do	0 s	
18	Nothing to do	0 s	
19	Nothing to do	0 s	
20	Nothing to do	0 s	

4 Maintenance

4.1 General information

This chapter only describes additional maintenance work to be carried out.

Maintenance work on the FWE200DH remains identical with the water back purge function fitted and must continue to be carried out at the specified intervals. Details can be found in the regular device Operating Instructions.

Before carrying out maintenance work, set the measuring system to “Maintenance” mode (see FWE200DH Operating Instructions).

In addition, the on-site water supply must be switched off.

Additional maintenance work for systems with water back purging

Interval	Work to be performed
1 week	Visual inspection for leaks
6 months	Replacing the water filter
	Checking the spray pattern

Check the connection piece for the extraction hose on the swirl chamber for deposits.



NOTE:

Observe the relevant safety regulations as well as safety notices (see “Responsibility of user”, page 6) during all work.



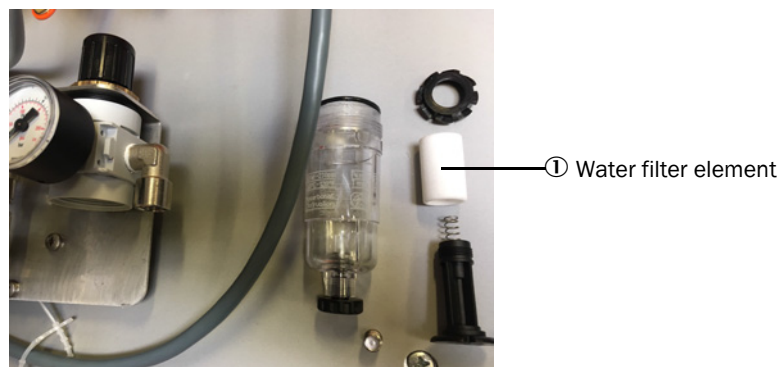
NOTE:

- ▶ Do not damage any device parts during maintenance work.
- ▶ Switch off water supply during maintenance work
- ▶ Do not interrupt the purge gas supply.

4.2 Replacing the water filter

The water filter must be checked for contamination during regular maintenance of the FWE200DH. Replace the filter when there is visible contamination (see “Spare parts / consumables”, page 27).

Fig. 19: Water filter dismantled



4.3 Leak test of the water circuit

Leak tightness must be checked regularly because leaks in the area of the solenoid valves influence measuring accuracy.

For this purpose, leak tightness must be checked with a visual inspection during weekly maintenance. Check the pipework for traces of escaping water.

Leak tightness of the solenoid valves must be checked during half-yearly maintenance.

Proceed as follows:

- 1 Set the FWE200DH to “Maintenance” mode (see FWE200DH Operating Instructions).
- 2 Login as “Authorized Operator” (see FWE200DH Operating Instructions).
- 3 Close solenoid valves (see “SOPAS ET-Menu Diagnosis/Probe purge”, page 22). Start manual operation (open/close valves manually).
- 4 Remove solenoid valve hoses directly from the plug connector.
- 5 Check whether water escapes at the solenoid valves.
- 6 Reset “Maintenance” mode. Put the measuring system back into operation.

Fig. 20: SOPAS ET-Menu Diagnosis/Probe purge

Diagnosis

- Device information
- Errors / Warnings
- Protocol
- Sensor values
- Heater values
- Probe purge**
- Function test components
- Test electronic card sensor
- Test electronic card FWE200DH

Configuration

- Maintenance

Probe purge

Start probe purching Probe purge

Step	Action	wait for ...	Purge valve1	Purge valve2	Ball valve	Blower
0	End purge	0 s	Opened	Opened	Opened	On
p Gas start	0.00 hPa					
p Gas end	0.00 hPa					

Check cycle flush manual controlled

Start probe purge manual controlled Probe purge

- Purge valve1 Opened
- Purge valve2 Opened
- Ball valve Opened Closed
- Blower on

4.4 Checking the spray pattern

The effect of water back purging can be reduced by contamination or damage in the area of the swirl chamber. For this reason the spray pattern must be checked regularly.

Proceed as follows:

- 1 Set device to Maintenance mode.
- 2 Remove the plug of the WBP swirl chamber cover (see [“Sealing plug on WBP swirl chamber cover”, page 23](#)).
- 3 Illuminate swirl chamber with suitable light source.
- 4 Trigger the control cycle and check the water back purge function (see [“Water purging function test”, page 23](#)).
- 5 Put the device back into operation.

If the spray pattern is not correct or does not hit the correct points, clean and check the pipes of the WBP swirl chamber cover and readjust when necessary. If this does not solve the problem, replace the WBP swirl chamber cover (see [“Spare parts / consumables”, page 27](#)).

Fig. 21: Sealing plug on WBP swirl chamber cover



Fig. 22: Water purging function test



5 Malfunction messages

Malfunctions



NOTICE:
Malfunctions can cause damage to the device.

The following malfunction messages are displayed on the control unit, the message is displayed with further information as full text in the SOPAS ET operating program.

Message	Significance	Possible cause	Measure
CB4	<ul style="list-style-type: none"> Fuse CB4 of the heated extraction hose has triggered or has been manually deactivated. 	<ul style="list-style-type: none"> Current too high or manually deactivated. 	<ul style="list-style-type: none"> Check power circuit for short circuit. Check power consumption. Switch fuse back on.
CB5	<ul style="list-style-type: none"> Fuse CB5 of the purge air heater has triggered or has been manually deactivated. 	<ul style="list-style-type: none"> Current too high or manually deactivated. 	<ul style="list-style-type: none"> Check power circuit for short circuit. Check current consumption. Switch fuse back on.
Water purging configuration	<ul style="list-style-type: none"> Water purging not activated. 	<ul style="list-style-type: none"> Hardware activation not completed or software key not entered. 	<ul style="list-style-type: none"> Enter software key or contact SICK Service.
THeiz3 control	<ul style="list-style-type: none"> Heater 3 control deviation. 	<ul style="list-style-type: none"> Temperature or other control value not reached. 	<ul style="list-style-type: none"> Check fuse. Check nominal temperature. Check settings.
THeiz4 control	<ul style="list-style-type: none"> Heater 4 control deviation. 	<ul style="list-style-type: none"> Temperature or other control value not reached. 	<ul style="list-style-type: none"> Check fuse. Check nominal temperature. Check settings.
Tmax Heiz3	<ul style="list-style-type: none"> Maximum temperature set reached. 	<ul style="list-style-type: none"> Temperature reached. Limit value set too low. Flow rate too low. 	<ul style="list-style-type: none"> Temperature reached. Limit set too low. Flow rate too low.
Tmax Heiz4	<ul style="list-style-type: none"> Maximum temperature set reached. 	<ul style="list-style-type: none"> Temperature reached. Limit value set too low. Flow rate too low. 	<ul style="list-style-type: none"> Adapt limit value.

6 Repair work



NOTE:

Repair work may only be carried out by trained personnel. Put on personal protective equipment according to the potential danger.

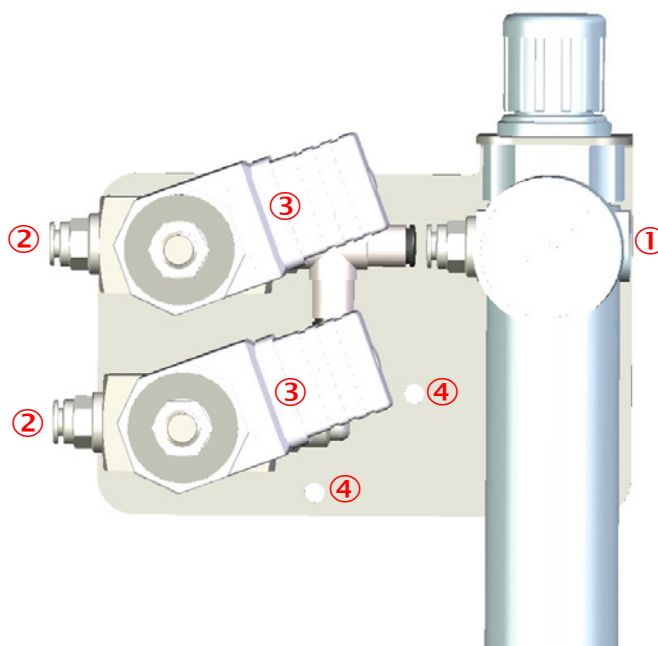
6.1 Replacing the WBP control block

If there is a defect in the components of the WBP control block, it must be completely replaced.

► WBP control block, Part No.: 2106005

Fig. 23: WBP control block

- ① Pressure reducer
- ② Solenoid valves
- ③ Solenoid valve connectors
- ④ Separator bolts



Worksteps to replace the WBP control block:

- Turn the water off.
- Disconnect water hose on pressure reducer ①.
- Disconnect water hoses from solenoid valves ②.
- Disconnect solenoid valve plugs ③.
- Loosen two separator nuts ④. Remove the complete WBP control block.
- Fit the new WBP control block in reverse sequence.
- Make sure the plugs of the solenoid valves and water hoses are connected in the correct connections. The connections are color coded to simplify this.

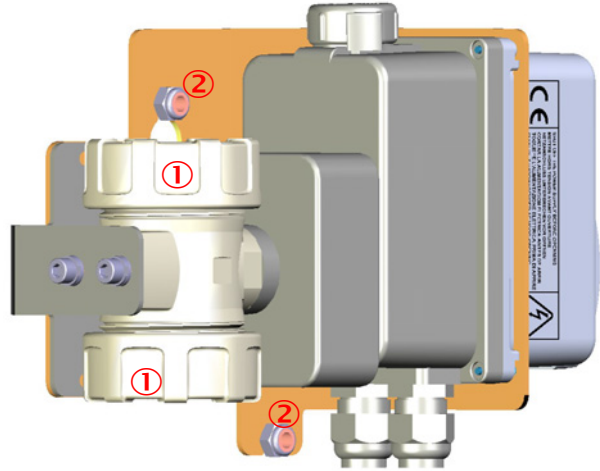
6.2 Replacing the WBP ball valve

Replace the WBP ball valve when it is leaking or otherwise defective.

► WBP ball valve Part No.: 2106071

Fig. 24: WBP ball valve

- ① Hose fitting
- ② Base plate mounting



Worksteps to replace the WBP ball valve:

- 1 Loosen both screw fittings 1 (2×) on the WBP ball valve. Remove hose connections.
- 2 Loosen the solenoid valve plugs on the WBP control block (see “WBP control block”, page 25).
- 3 Disconnect the plug in the control cabinet. Disconnect the individual lines.
- 4 Loosen the two screws of base plate 2 (2×). Remove the WBP ball valve.
- 5 Screw the new WBP ball valve with base plate to the two fixing points.
- 6 Connect the solenoid valves. Pay attention to the color coding.
- 7 Lead the connecting line into the control cabinet. Connect the plug to the connecting terminal according to the wiring diagram (see FWDE200DH Operating Instructions).
- 8 Check the function of the WBP ball valve by checking the spray pattern (see “Checking the spray pattern”, page 23).

7 Technical data

Water back purge requirements	
Water quality	Drinking water or purified process water (without limescale and solid residues) Provide a pre-filter if necessary.
Water pressure	Feed with 3...10 barg
Water temperature	Max. 60 °C
Purging pressure	3 barg (min. 2 barg, max. 6 barg)
Water flow rate	Flow rate during purging 5 liters/min
Water requirement	Approx. 5...20 liters per purge process (depending on configuration)
Purging duration	Approx. 3...4 minutes
Purging processes	Standard 3 purges per day (configurable using a control cycle interval)
Power input	
Purge air heater	Max. 1 kW
Heated extraction hose	Max. 0.3 kW

7.1 Optional components

Designation	Part No.
Heated extraction hose 230 V, hose 1400 mm, heat sheath 1100 mm	2082195
Heated extraction hose 115 V, hose 1400 mm, heat sheath 1100 mm	2094377
Purge air heater 230 V with accessories for assembly on SLV7 base plate	2105688
Purge air heater 115 V with accessories for assembly on SLV7 base plate	2106812

7.2 Spare parts / consumables

Designation	Part No.
WBP control block WBP: 2× solenoid valves incl. hose connection and pressure reducer with filter and base plate	2106005
Hose set: 2 m blue hose	2106006
WBP swirl chamber cover incl. baffle plate	2106007
WBP ball valve connection set; connection for purge air hose at top and bottom of WBP ball valve (material: PTFE)	2106008
WBP ball valve WBP: Incl. line for control cabinet and 2× solenoid valve plugs	2106071
Water filter	5340636

Fig. 25: Spare part WBP control block 2106005.

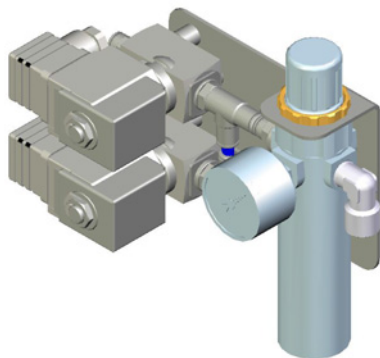


Fig. 26: Spare part hose set 2106006

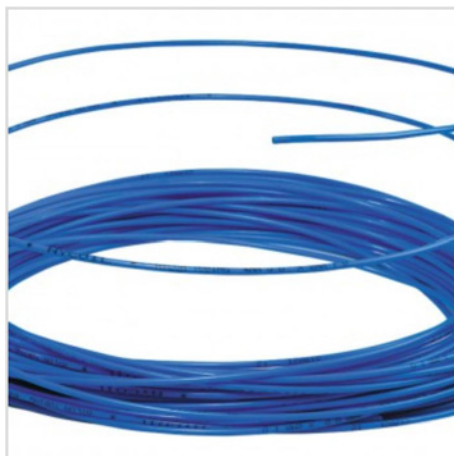


Fig. 27: Spare part WBP swirl chamber cover 2106007

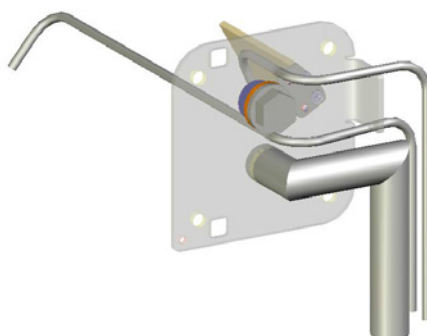


Fig. 28: Spare part WBP ball valve connection set 2106008

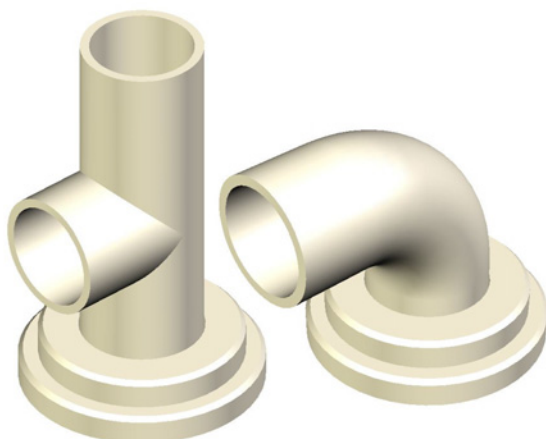
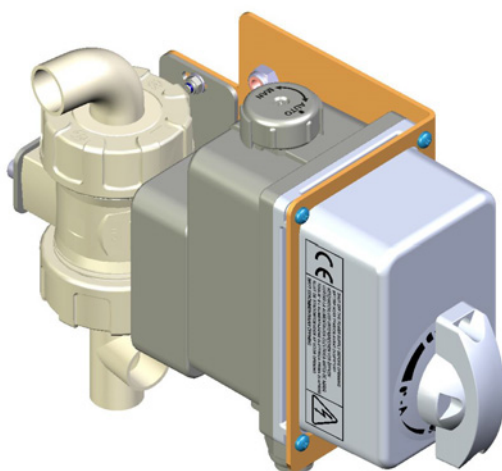


Fig. 29: Spare part WBP ball valve 2106071



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