thermoplan
Swiss Quality Coffee Equipment

Black&White|4c

Technical Manual

TROUBLESHOOTING

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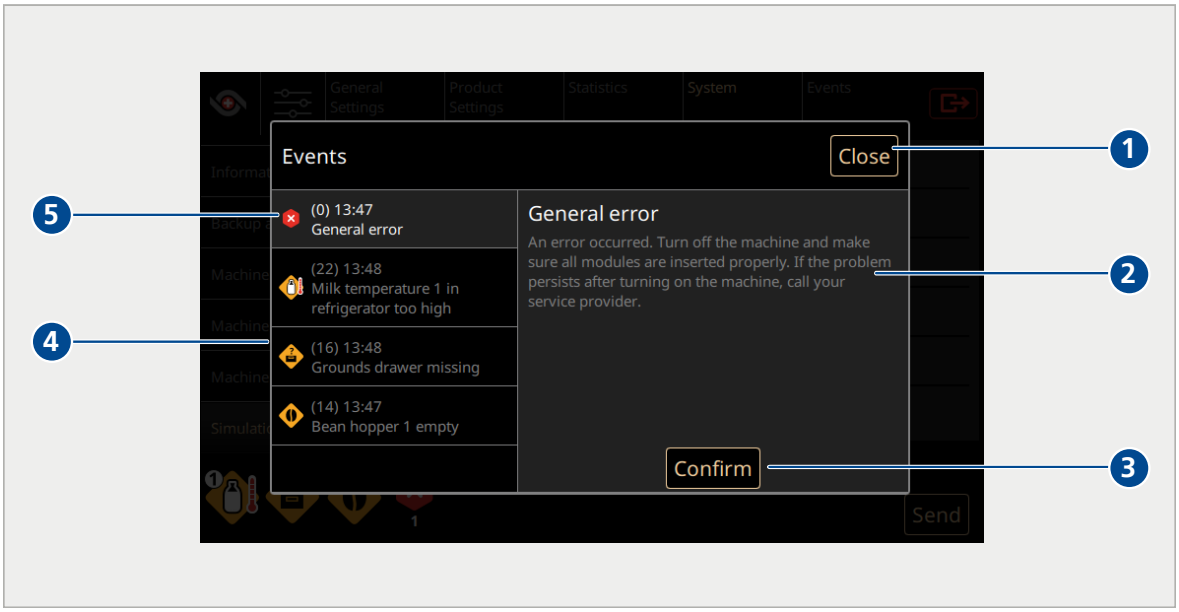
1 Overview of Event Message

The indications and error messages are shown on the product screen at the bottom left.

Details regarding the messages can either be shown by pressing the corresponding symbol or in the "error messages" menu in the machine menu.

Critical errors are shown without having to select.

If the errors have been rectified, the corresponding error message disappears.



1	Close message	4	List of Events
2	Message details	5	Event Symbol/Event No. /Time of the Occurrence/Brief Description
3	Confirm message		

2 List of the Warning and Error Messages

No.	Meaning/cause	Description/Solution	Regarding the Module
0	General Errors	• An error has occurred. ▶ Switch off the coffee machine and ensure that all the modules are correctly inserted. • If the errors are not specified in detail, they are considered as general errors. For details check the error logbook.	General
2	Boiler controller error	• Boiler controller has detected an error. ▶ Switch off the coffee machine and ensure that all the modules are correctly inserted. ▶ Switch on the coffee machine again. ▶ Check the connection to the NTC. ▶ Check the NTC. Possibly, the NTC is faulty.	Hydraulics
4	Boiler not ready	• The boiler is heating up. Possibly, some products are not available. ▶ Wait until the boiler has heated up.	Hydraulics
5	Cold start rinsing required	• Cold start rinsing is required to ensure that the boiler is filled with enough water. ▶ Make sure that the coffee machine is connected to the water connection. ▶ Press 'Boiler Flush'.	Hydraulics
6	The boiler is rinsed	• The boiler is rinsed. • Product serving is possible when the process has been completed.	Hydraulics
9	Status manager error	• Status manager has detected an error. ▶ Restart the coffee machine. ▶ Check the error logbook. ▶ Switch off coffee machine. ▶ Ensure that all modules are installed correctly. ▶ Switch on the coffee machine again. ▶ Switch off the coffee machine and check the connections to the modules/sensors/Reed switches/NTCs. ▶ Switch on the coffee machine again.	General
11	Bean container 1 (2) is missing	• Bean hopper is not detected. ▶ Insert the bean hopper correctly. ▶ Check the Reed contact for the bean hopper. Possibly, the Reed contact has been interrupted.	Chassis
16	Grounds container is missing	• Grounds container is missing. ▶ Insert the grounds drawer correctly.	Chassis

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No.	Meaning/cause	Description/Solution	Regarding the Module
		▶ Check the Reed contact of the grounds drawer. Possibly, the Reed contact has been interrupted.	
18	Grounds container almost full	• Grounds container is almost full. ▶ Empty grounds container as soon as possible.	Chassis
19	Grounds container full	• Grounds container is full. ▶ Empty grounds container. ▶ Keep grounds drawer outside the coffee machine for several seconds so that the message no longer appears.	Chassis
21	Milk temperature 1 in the refrigerator high	• Milk temperature in the refrigerator is high. ▶ Check the milk temperature on the refrigerator display. ▶ Check the milk temperature in the refrigerator. ▶ Check that the refrigerator is functioning correctly. ▶ Check the milk NTC.	Refrigerator
22	Milk temperature 1 in the refrigerator too high	• Milk temperature in the refrigerator too high. ▶ Replace the milk in the refrigerator with fresh, cold milk. ▶ Check the milk temperature in the refrigerator. ▶ Check that the refrigerator is functioning correctly. ▶ Check the milk NTC.	Refrigerator
24	Milk quantity 1 low	• Milk quantity is low. ▶ Top up with fresh, cold milk.	Refrigerator
25	Milk quantity 1 empty	• Milk container is empty. ▶ Top up with fresh, cold milk. ▶ Check the level sensor on the milk tube.	Refrigerator
27	Cleaning recommended	• Cleaning will soon be required. • Products cannot be served during cleaning. • The cleaning process can now be started.	General
28	Cleaning required	• Cleaning is required. • Products cannot be served during cleaning. • The cleaning process can now be started.	General
29	Product serving cancelled	• Product serving has been cancelled by the user.	General
30	Brewing piston error	• An error has occurred in the brewing chamber. The brewing chamber cannot move to the correct position. ▶ Restart the coffee machine. ▶ Switch off the coffee machine and ensure that the mechanics module is correctly inserted. ▶ Switch on the coffee machine again.	Mechanics

No.	Meaning/cause	Description/Solution	Regarding the Module
		▶ Switch off the coffee machine and check the connection to the brewing chamber motor. ▶ Switch on the coffee machine again. ▶ Switch off the coffee machine and test the function of the brewing chamber motor. ▶ Switch on the coffee machine again.	
31	Communication error	• A communication error has occurred. The coffee machine was probably manipulated while switched on and then not restarted. ▶ Restart the coffee machine.	Software
32	Component Error	• A component error has occurred. ▶ Restart the coffee machine. ▶ Check the error logbook. ▶ Switch off the coffee machine and ensure that all modules are inserted correctly and that all sensors/Reed switches/NTCs are working correctly. ▶ Switch on the coffee machine again.	General
33	Configuration error	• A configuration error has occurred. An attempt is being made to install outdated or faulty software on the device. ▶ Restart the coffee machine and check for the correct software version. ▶ Restart the installation.	Software
34	Water flow error	• No water flow can be ascertained. ▶ Check the water connection. ▶ Perform a manual rinsing.	Chassis
35	Brewing chamber empty	• Brewing chamber has not filled sufficiently after grinding. Possibly, the set coffee quantity for the selected product is too low, the bean hopper is empty or the grinder is clogged. ▶ Fill the bean hopper. ▶ Ensure that the bean hopper fastening is closed. ▶ Check the set coffee quantity. ▶ Check grinders. ▶ Switch off the coffee machine and check the mechanics module. ▶ Switch on the coffee machine again.	Mechanics
36	Excessive coffee quantity	• Brewing chamber could not be closed after grinding. Possibly, the set coffee quantity for the selected product is excessive or there is a fundamental problem with the brewing chamber. ▶ Check the set coffee quantity.	Mechanics

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No.	Meaning/cause	Description/Solution	Regarding the Module
		▶ Check the brewing chamber.	
37	Milk 1 empty while serving the product	• Product serving was cancelled. There is not enough milk in the milk container to complete the product serving. ▶ Top up with fresh, cold milk. ▶ Check the milk tube (milk tube in the milk container).	Refrigerator
38	Safety interruption	• A safety interruption was carried out while serving the product. Possibly, the grounds drawer or the bean hopper has been removed while serving the product. ▶ Check that the grounds drawer and bean hopper are positioned correctly. ▶ Restart the serving the product. ▶ Check the safety Reeds.	Chassis
44	Error chassis fan	• A malfunction of the chassis fan has been detected.	Chassis
10000	Machine starts	• Coffee machine starts. ▶ Make sure that the grounds drawer and the bean hopper are correctly inserted so that the coffee machine can start up.	-
10003	Restart successfully completed	• Restart was successfully completed. The system immediately uses the new configuration.	-
10004	Cleaning started	• Cleaning has been started.	-
10005	Error during the cleaning start	• Cleaning could not be started. Possibly, an attempt has been made to start cleaning while dispensing the product. ▶ Restart cleaning.	Software
10006	Cleaning completed	• Cleaning has been completed.	-
10007	Cleaning cancelled by the user	• Cleaning was cancelled by the user during the initiation.	-
10008	Cleaning error	• An error has occurred during cleaning. Possibly, a cleaning tablet has disintegrated during cleaning or the grounds drawer was removed during cleaning. ▶ Restart cleaning.	Chassis
10009	UI config. error	• User interface has detected an error in a configuration file. A pre-set output value has been used and the system can possibly continue to be used. ▶ Check the error logbook. ▶ Update software.	Software
10010	Backup/recovery error	• An error has occurred during the backup or recovery. The corresponding process was not successful.	Software

No.	Meaning/cause	Description/Solution	Regarding the Module
		▶ Check the USB flash drive (correctly inserted). ▶ Perform the backup/recovery again.	
10011	Recovery not successful	• Recovery was not successful. Possibly the USB flash drive was removed during the recovery process or the coffee machine was switched off. ▶ Check the USB flash drive (correctly inserted). ▶ Perform the backup/recovery again.	Software
10012	Critical error in the GUI configuration	• User interface has detected a critical error during the processing of a configuration file. The system cannot run. ▶ Replace base board.	Software/ Chassis
10013	Error while starting the machine control system	• User interface could not start the coffee machine control system properly. ▶ Restart the coffee machine.	Software
10014	Product registration error	• User interface could not complete the product registration properly. ▶ Check the error logbook. ▶ Check the product configuration.	Software

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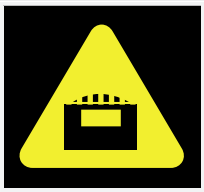
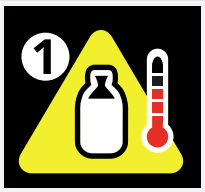
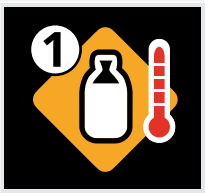
3 List of Warning and Error Symbols

Icon	Meaning/cause
	information
	Warning
	Error
	Serious error
	Cleaning recommended
	Cleaning required
	Grounds container almost full
	Grounds container full

Icon	Meaning/cause
	Grounds container is missing
	Bean container is missing
	Bean container 1 is missing
	Bean container 2 is missing
	Milk temperature high
	Milk temperature too high
	Milk level low
	Milk is empty
	Error chassis fan

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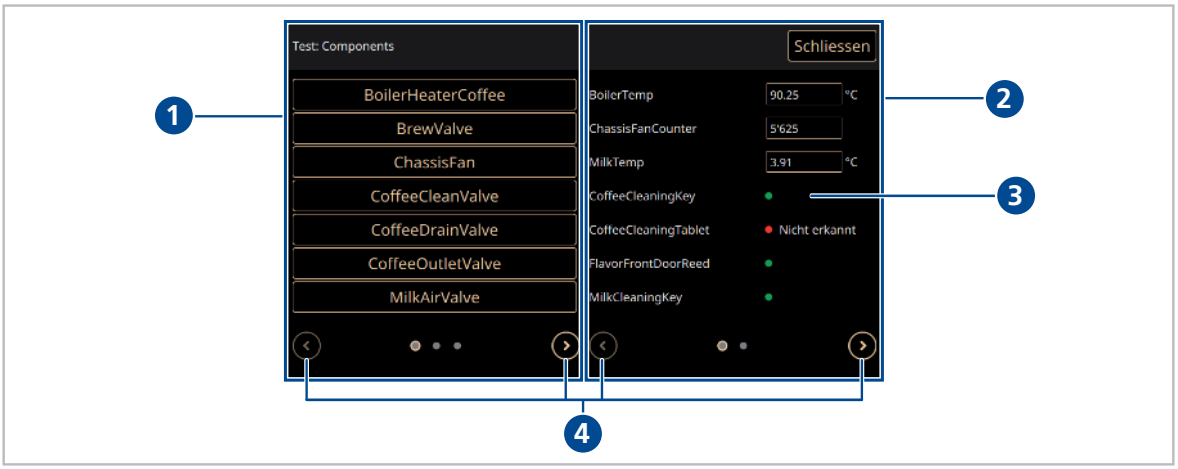
4 Performing Machine Tests

4.1 Components

The component test is intended for the manual testing of various individual components.



1 Left-hand actuator

2 Right sensor

3 Green: Is detected
Red: Is not detected

4 Scroll function

Functional unit	Function
BoilerHeaterCoffee	▶ Keep pressed. ⇨ The boiler temperature increases. **Attention:** The boiler temperature is not monitored. The indicator must not exceed 97 °C, otherwise the coffee machine will be damaged!
BrewValve	▶ Press to test the brew valve. ⇨ A click can be heard.
ChassisFan	▶ Press to test the chassis fan. ⇨ The counter on the chassis fan counter counts up.
CoffeeCleanValve	▶ Press to test the coffee clean valve. ⇨ A click can be heard.
CoffeeDrainValve	▶ Press to test the coffee drain valve. ⇨ A click can be heard.
CoffeeOutletValve	▶ Press to test the coffee outlet valve. ⇨ A click can be heard.
MilkAirValve	▶ Press to test the milk air valve. ⇨ A click can be heard.
MilkBackrinseValve	▶ Press to test the milk back rinse valve. ⇨ A click can be heard.
MilkColdValve	▶ Press to test the milk cold valve. ▶ A click can be heard.

Functional unit	Function
MilkDrainValve	▶ Press to test the milk drain valve. ⇨ A click can be heard.
MilkGateValve	▶ Press to test the milk gate valve. ⇨ A click can be heard.
MilkLoopValve	▶ Press to test the milk loop valve. ⇨ A click can be heard.
MilkOutletValve	▶ Press to test the milk outlet valve. ⇨ A click can be heard.
MilkRinseValve	▶ Press to test the milk rinse valve. ⇨ A click can be heard.
TeaValve	▶ Press to test the tea valve. On ⇨ A click can be heard.
WaterModuleValve	▶ Press to test the water inlet valve. ⇨ A click can be heard.
BoilerTemp	• The current boiler temperature is displayed. See BoilerHeaterCoffee.
ChassisFanCounter	• The revolutions of the chassis fan are displayed.
MilkTemp	• Current milk temperature is displayed.
CoffeeCleaningKey	• Coffee cleaning key used is detected.
CoffeeCleaningTablet	• Coffee cleaning tablets used are detected.
FlavourFrontDoorReed	• Syrup drawer of the flavour module is detected.
MilkCleaningKey	• The milk cleaning key used is detected.
MilkCleaningTablet	• Milk cleaning tablets used are detected.
MilkLevelEmpty1	• Milk is detected (milk sensor refrigerator).
MilkLevelLow1	• Low milk level is detected (milk sensor refrigerator).
PowderFrontDoorReed	• Front cover of the powder module is detected.
SafetyReedBeanHopper1	• Bean hopper 1 is detected.
SafetyReedBeanHopper2	• Bean hopper 2 is detected.
SafetyReedGroundsDrawer	• Grounds drawer is detected.

4.2 Advanced

The advanced component test is intended for manually testing various functional units.

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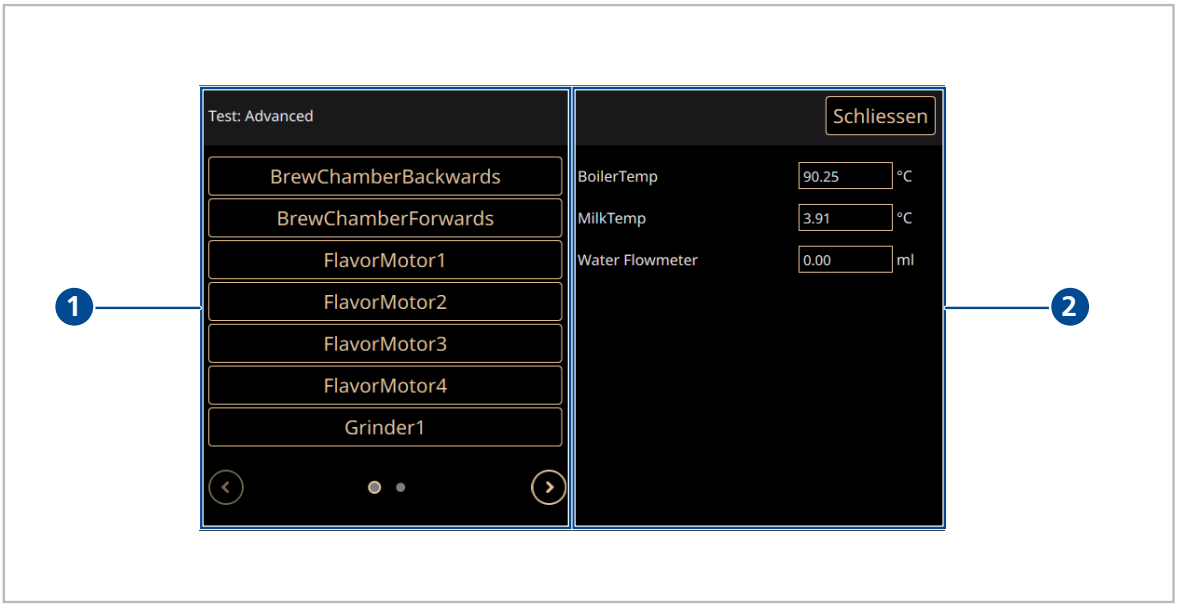

1 Test 2 Sensor

Functional unit	Function
BrewChamberBackwards	▶ Keep pressed to move the brewing chamber backwards.
BrewChamberForwards	▶ Keep pressed to move the brewing chamber forwards.
FlavourMotor1	▶ Keep pressed to activate syrup pump 1.
FlavourMotor2	▶ Keep pressed to activate syrup pump 2.
FlavourMotor3	▶ Keep pressed to activate syrup pump 3.
FlavourMotor4	▶ Keep pressed to activate syrup pump 4.
Grinder1	▶ Keep pressed to grind with the hand grinder in the brewing chamber.
Grinder2	▶ Keep pressed to grind with the right grinder in the brewing chamber.
MilkPump	▶ Keep pressed to activate the milk pump. ⇨ System rinsing in progress.
PowderMixer	▶ Keep pressed to activate the powder mixer.
PowderMotor	▶ Keep pressed to activate motor in the powder module.
WaterPump	▶ Keep pressed to activate the water pump. ⇨ The Water Flowmeter parameter increases.
Water Flowmeter	• Water flow is detected. See WaterPump.

4.3 Screen Test

▶ Select *System > Machine Tests*.

▶ Tap on start symbol to start the screen test.

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