

TROUBLE SHOOTER



2200i™ 1100i™ 600i™ FOCUS™ QUMULUS™ 800iC™ 1500iC™

ERROR	EXPLANATION	POSSIBLE SOLUTION
E1	Mains voltage failure - auto-reset	Check power supply and fuses, transformer connections.
E2	Low fluid message - auto-reset	Install new fluid container. Note: low fluid, does not mean empty, but low.
E3	Fire alarm activated - auto-reset	If there is or has been 12V on FIRE-terminals. Reset fire alarm.
E4	Battery voltage too low - auto-reset	Batteries need a recharge - or changing. Should an E4 show up without batteries installed, the PCB must be replaced.
E5	Battery charge tried for 24 hours without success	Change batteries or alternatively try to recharge with an external charger.
E6	Battery failed in load test	Change batteries.
E7	Temperature on PCB too high	Check if there is ventilation (fresh air) around the machine. The temperature in the housing might be too high to cool down the PCB. Max. temperature is 70°C.
E8	Temperature on PCB too low	Temperature in the room and around the Fog Cannon™ is too low. When the machine is cold and PCB temperature lower than 5°C it cannot start up. Possible solution is to heat up the room so that the temperature of the printed circuit board exceeds 5°C.

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E9	Temperature on thermal sensor too high (or there is bad connection)	<p>To check the function of the thermal sensor, you must disconnect the sensor, take it out, connect the 2 wires to a voltmeter (must be capable of measuring mV). Try carefully to heat the tip of the sensor with a lighter or similar. It should be possible to measure a voltage of between 10 and 15 mV.</p> <p>Also check that the sensor is properly connected to the terminals, or alternatively fasten the wires.</p> <p>Green to + and white to central terminal. - terminal is not used. If the E9 continuously shows up: By cold machine; change PCB - By warm machine; change sensor. Also check that there is no short circuit from sensor wire running to ground.</p> <p>Sometimes, after several short test launches in a row, the E9 error can appear. The reason for this may be overheating of the nozzle end. In this case, the machine must cool down before it can fire again.</p>
E10	Temperature on thermal sensor too low (after initial heating)	<p>Check thermal overload fuse on the end of heating element. There is a reset pin in the middle of the thermal fuse.</p> <p>Check fuse F3 on the PCB. If heating failure occurs, you can check the resistance in the heating cartridge.</p> <p>Switch off the main power. Pull out the 4-pole plug next to the glass fuses. Use an Ohm meter and measure between the white and the brown wire.</p> <p style="text-align: right;"><i>(Continues)</i></p>

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E10	Temperature on thermal sensor too low (after initial heating)	<p>The resistance shall be approx.:</p> <p>FOQUS™: 81 Ohm QUMULUS®: 53 Ohm 600i™: 53 Ohm 1100i™: 41 Ohm 2200i™: 33 Ohm 800i C™: 53 Ohm 1500i C™: 41 Ohm</p> <p>Note that the values can fluctuate 2-3 Ohm.</p> <p>Be sure that there is full passage/connection through the thermal overload fuse.</p> <p>Check thermal sensor - green wire to + (plus) and white wire to - (minus). Check that the connection is OK. Test the sensor by taking out the sensor and its wires. Heat up the tip of the sensor (with a lighter or similar) while a voltmeter is connected. It shall be possible to measure a value of 10-15 mV.</p> <p>If the machine should be warm, but with an E10 fault telling that it is cold, there may be a loose connection inside the sensor. Then change the sensor.</p> <p>There may also be an error on PCB. Then change the PCB.</p>

ERROR	EXPLANATION	POSSIBLE SOLUTION
E12	Pump time out	<p>Fluid container empty, change container.</p> <p>Fluid container not connected. If the machine has not produced fog for a long time (1 year or more) the pump can be blocked. In this case it can help to knock a little on the end of the pump while it is activated.</p> <p>Note: an E12 error needs a reset on reset button 4 seconds.</p>
E13	The build-in 12 V supply overloaded	<p>Too much extra equipment connected to the 12V supply or there is a short cut in connected equipment.</p> <p>Remove the overload or repair the short cut.</p> <p>If you cannot wake up the 12 Volt supply after a reset - change the PCB.</p>
E14	Error in load test circuit	<p>Check the white ceramic resistance (next to the beeper) - it might have lost or broken its connection to the PCB.</p> <p>Repair the soldering or change the PCB.</p>
E17	No fluid container detected	<p>Install fluid container and the wire. Check on the PCB. Change to a new fluid container. Replace the PCB.</p>
E18	Wrong fluid container detected	<p>Replace the fluid container with a correct type.</p>
E19	Fluid level too low to run detected	<p>Replace the fluid container.</p>
E22	Fluid container empty	<p>The fluid container has less than one discharge left. Replace the fluid container.</p>

ADDITIONAL INFORMATION

Battery test	<p>The machine will carry out a regular battery test every 24 hours.</p> <p>Before installing new batteries, you can make your own battery test either with a professional battery tester - it should show a voltage >12,3V and a capacity >0,8 Ah. Or alternatively use a voltmeter.</p> <p>Measure the voltage to >12.3V. Connect a 20-21 Watt lamp - this should illuminate bright and clear for a minimum of 10 seconds and the voltage should at the same time not be lower than 11V.</p> <p>If lower than 11V the capacity is down to "bad conditioned battery" and you will soon get the message E6 (battery failed in load test).</p> <p>After the test, the voltage shall increase again to more than 12V.</p> <p>Well-charged and well-conditioned, the battery will have a voltage of 12,5 to 12,8V.</p>
E4, E5 and E6: When installing new batteries	<p>Please be aware that batteries are of lead acid type. This type of battery cannot be stored for more than 3-4 months. When installing a new battery that already has been stored too long you will in many cases get a new "battery error" shortly after. Check that new batteries are well charged and in good condition.</p>
External LED's	<p>During normal function the LED's are only visible when the DIS input is powered 12V or all fog time DIP-switches 2, 3, 4 are in off position.</p> <p>The green light will flash while heating. When the machine is ready there will be a constant green light.</p> <p>Yellow light means low fluid or the flat cable not connected to the fluid container.</p> <p>Red light is error signal.</p> <p>Read the error code in IntelliCloud™, with IntelliSuite™ or on the display on the PCB.</p>
Beeper	<p>The beeper will sound when an error occurs or when fluid is low.</p> <p>The beep frequency does not refer to a specific error. The beeper makes sounds 1 time/sec. the first minute, after which it sounds 1 time/min.</p> <p>If there is connection to external equipment, the beeper can be disconnected.</p>
Reset	<p>E1 to E4 and E22 have an automatic reset. Other errors must be manually reset after repair/service.</p> <p>Alternatively, you can always make a manual reset by pressing the reset button for 4 seconds.</p>



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