De Dietrich BOILERS — Gas 310/610 ECO Boiler Codes

Gas 310/610 ECO Operating Mode (X □□)

During normal operation the code display shows the status (position in cycle) of the boiler, with the 🌡 display indicating the actual flow temperature. The digits or letters in the code display have the following meaning:

□□ = Actual flow temperature

| Code Window Display	🌡 Display Window	Code Window Description
0	□□	Standby, there is no heat demand
1	□□	Pre-ventilation (pre-purge time 30 seconds, post purge time 3 seconds)
2	□□	Trial for ignition
3	□□	Burner firing and flame detected
4	□□	N/A
5	□□	Waiting mode, start-up check, air sensor LDs sufficient pressure
6	□□	Control Stop (burner off + post purge) a) Flow temperature T1 > set point + 9˚F/5˚C b) Flow temperature T1 > desired set point modulating control + 9˚F/5˚C c) Flow temperature T1 > parameter 1 d) Difference flow T1 and return T2 > 18˚F/10˚C (factory setting), starting condition is ≤ 18˚F/10˚C
7	□□	End of heating demand, pump post purge. During cycling prevention delay-time the boiler will remain in state 7 and will not react to heat demand.
8	□□	N/A
b	□□	Shut-off mode (see section 12.4)
H	□□	Forced full load (HIGH)
L	□□	Forced part load (LOW)
t	□□	Gas leakage control
C	□c	Burner cooling

Gas 310/610 ECO User Level Setting Mode ($X.$ □□)

Setting mode is used to change various settings to suit individual requirements. The required code is selected by pressing the ⇕ key until 1 appears in the code window (solid digit and solid dot). Select the required code with the ▷▷▷ key. Now press the (+) key to increase a setting or the (-) key to decrease a setting. Press the ← to start the new setting. The new value will flash twice in the 🌡 window to confirm the setting.

Code Window Display	🌡 Display Window & Description	Setting Range and Explanation
1.	Flow temperature set point (see section 13.1.1)	68 - 94 = 68 - 194 (20 to 90 ˚C) boiler operating limit set point, also maximum setting if external control is used.
2.	Pump post purge setting (see section 13.1.2)	00 = Pump post purge = 10 seconds 01 - 15 = Pump run-on in minutes 99 = Pump operates continuously
A.	Boiler control setting (see section 13.1.3)	Control mode (modulating, On/Off, etc....)

Code Window Display	🌡 Display Window	Desription
A	21	On/Off and High/Low
	31	Modulate on internal (P1) flow temperature set-point
	41	External 0-10V analog signal temperature set-point
	51	External 0-10V analog signal output %

⚠ WARNING! ⚠

The system boiler water must comply with recommended water quality. Consult water quality manual or the factory. Failure to comply will render the warranty null and void!

Acidity level (untreated water)	7-9 pH
Acidity level (treated water)	7-8.5 pH
Conductivity	≤ 800µS/cm (at 25˚C)
Chlorides	≤ 150 mg/l

Please note: The glycol must be approved for use with cast aluminum heat exchanger by the glycol supplier. Do not use more than a 40% glycol mixture.

Gas 310/610 Boiler Shut-off Codes (b XX)

During shut-off, code window displays b and the 🌡 window indicates the shut-off code.

⚠ Important! Shut-off is a normal boiler operating function and does not represent a boiler failure. However, this may indicate a system problem or an incorrect parameter setting. The shut-off code has a timeout and when the condition returns to normal, the boiler will resume normal operation. If the shut-off code repeats, this indicates a boiler/system problem. Contact a service company or DDR Americas Inc. for assistance.

Example: b 88 = Boiler has been disabled by BMS/BAS or X29.5 & X29.6 terminals are open.

Gas 310/610 Boiler Failure Lockout Codes (X XX)

Requires user intervention, manual reset of control. When a failure code is displayed, both the code window and the 🌡 window will flash alternately.

X = Actual operating condition of the boiler.

Prior to resetting the control, ensure the external safety controls (LWCO & Hi Limit) are not the cause of the fault. The external safety controls must first be reset and then the boiler control. ALWAYS record the lockout code in a log book.

⚠ Warning! Do not reset the boiler control until you can identify and have resolved the problem. Unresolved problems could cause personal injury or damage to the boiler and controls. Only reset the boiler control ONCE, if the problem persists contact a service company.

Consult manual for Failure/Lockout Code meanings.