



in Partnership with



M2G

Intelligent Individual Boiler Load Control



What is the **M2G**

The M2G cloud solution is an advanced intelligent boiler load optimisation controller that optimises and visualises the efficiency of each boiler, plant room and estate.



How does it work?

By measuring the boiler system demand / load via two digital temperature sensors on the flow and return pipe work and by the adaptive algorithms the M2G will measure and calculate the boiler load profile, this will in turn inhibit the burner firing cycle based on the temperature gradient over time.

This will ensure that **the boiler does not fire unnecessarily for light load conditions** or conditions of standing losses from the boiler. **Thus saving energy and maximising boiler efficiency at all times.**

The M2G interface/interlocks in the following way:

a) Your boiler(s)

The M2G is wired in series with the existing boiler thermostat circuit, ensuring that existing boiler thermostat set point (temperature) is always maintained and controlled. In all cases, the primary safety controls of the burner/boiler are not compromised or interrupted.

b) Your BMS (Building Management System)

The M2G system can be interfaced with all types of BMS/ BEMS strategies and is non-intrusive to the building's controls and preset comfort levels.

c) Your existing boiler house controls:

The M2G will work with and complement existing controls such as: Weather Compensation, Heating Optimisers Controls and Boiler Sequencing Controls.

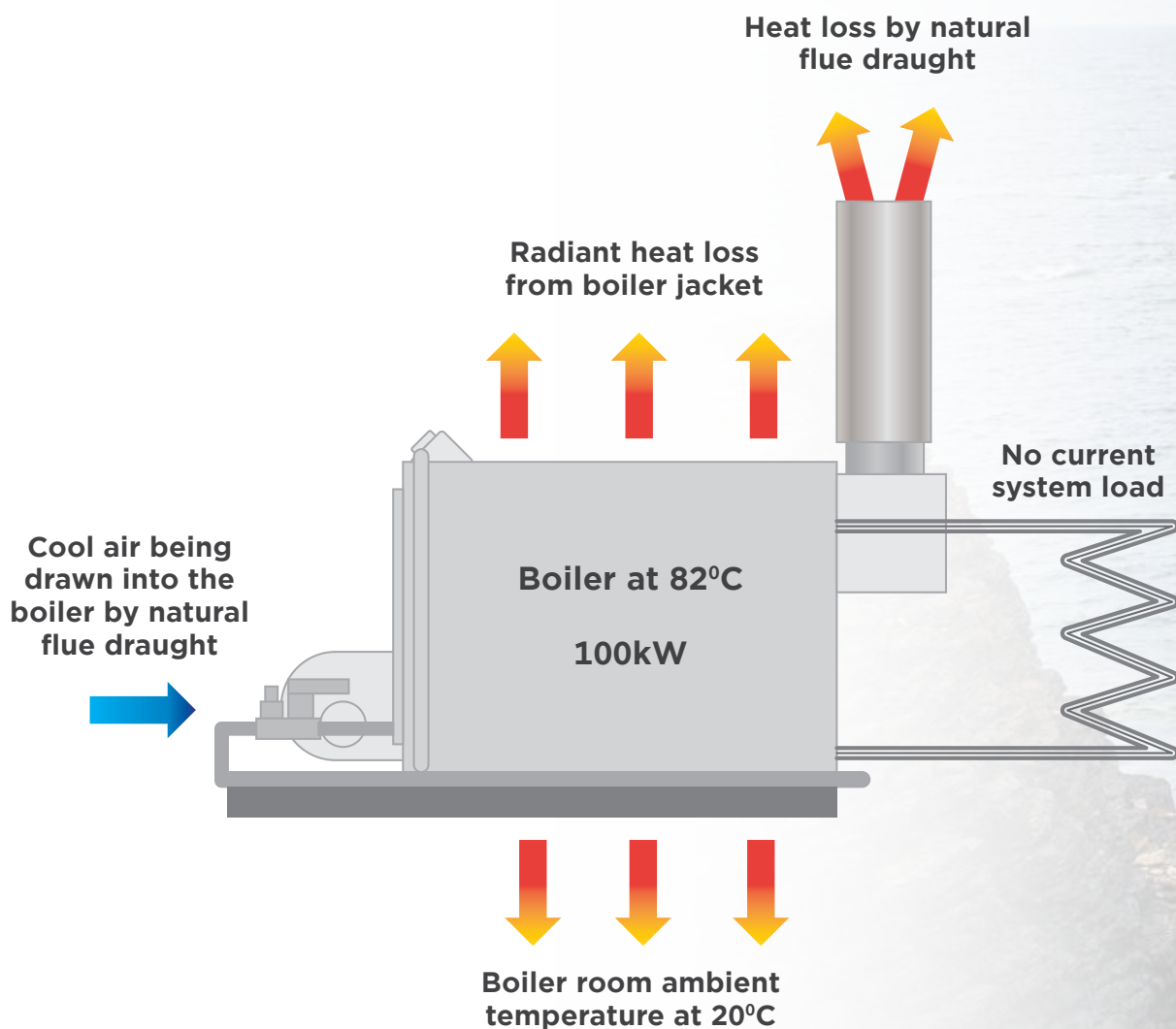
M2G

Digital temperature sensors installation:

The M2G measures the boiler flow and return temperatures individually on each boilers, these are a surface mount method that is completely non intrusive to the system pipe work. The sensors are fixed mechanically and system "drain down" is not required.

What is boiler dry cycling?

- All boilers waste heat, even modern boilers. This is known as “standing losses”.
- Boilers often fire to recover these standing losses only.
- This is known as “boiler dry cycling”.
- Average savings delivered are around 12%.



M2G Cloud - Unique in the market

Visible Savings Dashboard in real time
Savings & Analytics for new and
existing installations.

Military Grade encrypted GSM
transmission. No client network
complexities

Directly address the 92% of non-
electrical energy consumption
attributed to space heating / hot
water in commercial buildings



Delivering for all Stakeholders



Suitable Applications:

Suitable for low temperature hot water boilers, fired with high/low forced draught burners, single stage, two stage and most modulating burners, with gas and oil firing applications.

Suitable for atmospheric boilers, using the above firing methods.



M2G Cloud Connect Solution: Delivering visible savings analytics to new and existing installations

M2G Cloud technology delivers real time visible savings and analytics for new and existing installations. Military grade encrypted GSM transmission removes security complexities associated with client's LAN networks and directly address the 92% of non-electrical energy consumption attributed to Space heating and Hot water in commercial buildings and venues.

| Make the
saving real

M2G Cloud Visible Savings

The dashboard indicates Firing, Carbon, and kWh reductions.
Client's real time site data dashboard showing:

Reduction in kWh visual (Day 24hrs)

Daily View: (24hr @10/09/21 16:00)

- Savings = 14%
- Carbon savings = 363 KgCo2e (70,999 KgCo2e since install)



Visibly delivering a 14% saving in the last 24 hours to this client.

Instant access to Daily, Weekly, Monthly, or Annual savings on individual boilers or building clusters anywhere in the World.

Report using one click.



Take back control of your plant efficiency



The opportunity finally exists, to review your current plant and control systems objectively. Identify and solve new or persistent issues once and for all and of course, implement and measure new efficiency initiatives to further reduce environmental impact and achieve your emission targets.

We highlight where your plant could increase efficiency, offer solutions with actions and can partner you throughout implementation.

The Big picture

M2G cloud-based acquisition data can also facilitate, via API, integration into your Energy Bureau / dashboard services for use for AI analytics.

M2G Cloud connect will deliver energy savings, energy reporting and forensic plant analysis solutions to directly address and accelerate the delivery of your carbon reduction commitments for all your stakeholders.



**Simply and visibly accelerate
your plant efficiency**

M2G C10

Forensic Objective Efficiency

- M2G Cloud savings dashboard
- Identification of efficiency opportunities
- Boiler plant operation status and control
- Boiler's Firing Status
- Confirm control and scheduled settings
- Boiler cycling firing periods
- Thermodynamic response
- Boiler temperatures / set points and reactions
- Boiler temperature set point differentials
- BMS boiler plant strategy validation
- Boiler sequencing performance
- Identification of boiler standing losses
- Burner modulation performance
- Heat transfer rates
- Operational building load performance
- Boiler hydraulics - flow rates
- Boiler sequencing select lead boiler performance
- Boiler faults - lockouts indications
- Confirmation of boiler "part load" operation
- Boiler hydraulics performance



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Delivering Every Second of Every Day

Deliver, energy savings, visible reporting and forensic plant analysis solutions

Directly, address and accelerate your carbon reduction commitments

Benefit, all organisational stakeholders



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Delivering savings every second of every day



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