EcoCharger
Storage-type
Gas-fired
Water Heaters

- Recovery rates from 540 to 2100 litres/hour
- Fully modulating pre-mix burner
- Efficiencies of up to 98%
- Low NOx emissions ≤37mg/kWh
- Integral Controls
- Factory-fitted Correx non sacrificial protection system
EcoCharger Water Heaters

EcoCharger is a range of fully condensing gas-fired water heaters, available in 7 models, with storage capacities ranging from 220 to 488 litres, and hot water recovery rates from 540 to 2100 litres per hour, based upon a temperature rise of 50°C.

Designed on the principles of low storage, and fast hot water recovery, EcoCharger water heaters are suitable for a wide range of commercial and industrial applications. The use of condensing technology enables EcoCharger water heaters to operate at high efficiencies and can help to save on energy consumption and carbon emissions. They are suitable for use on natural gas or lpg and have ultra-quiet operation.

Coil-Type Heat Exchanger Design
EcoCharger water heaters are designed with a premix, down-fired, Low NOx burner and a coil-type heat exchanger design. This helps to ensure that heat transfer takes place in the upper part of the storage vessel, and in the lower part of the storage vessel, towards the end of the heat exchanger, the temperature of the gases reduce and condensation occurs.

This design also helps to minimise problems caused by scale formation in hard water areas. Any scale present will form in the hot area of the vessel/heat exchanger and will drop into the cold base of the storage vessel. A small collection of scale at the base of the unit will not have an adverse effect upon performance or efficiency, unlike other water heaters where the burner is situated at the base. Any scale build-up at the base of the unit can be easily removed via the cleanout opening during periodical maintenance.

The negative influence of scale on water heater efficiency is significantly lower with an EcoCharger when compared to alternative gas water heater products, and a thorough maintenance regime will provide end users with high levels of operational efficiency and maximum life time expectancy.

Integral controls
EcoCharger can easily be connected to a BMS system, and incorporates its own on-board controls, which can be viewed on the display fascia or remotely when using the BMS/control interface ancillary option. The controls include the following functions:

• Temperature control – up to 80ºC
• Weekly programme
• Anti-legionellae programme
• Fault logging
• Volt-free contact

Heatpak space heating ancillary module
The EcoCharger water heater can also provide up to 40kW of heating capacity, when using the Heatpak ancillary module. This option is particularly suitable on buildings, which are subject to high peak demands on hot water, but lower, constant demands for space heating. Typical applications would be Sports changing facilities and Shower blocks on Caravan/Camping sites.
EcoCharger water heaters can be installed with a range of flue types including:

- Room sealed concentric
- Room sealed parallel (twin pipe)
- Traditional conventional flue

The ability to install long flue runs (up to 100m equivalent on twin pipe systems) provides a great deal of siting and installation flexibility. For further information refer to the EcoCharger Flue Assemblies and Ancillaries document, which is available at www.lochinvar.ltd.uk
**Technical Specification**

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<tr>
<td>Nominal Input (Net) kW</td>
<td>29.4</td>
<td>30.5</td>
<td>47.8</td>
<td>57.9</td>
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<td>Gas Flow Rate (Natural Gas) m³/hr</td>
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<td>3.2</td>
<td>5.0</td>
<td>6.0</td>
<td>8.3</td>
<td>10.1</td>
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<tr>
<td>Nominal Output kW</td>
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<td>61.5</td>
<td>85.7</td>
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**Efficiency and NOx Data**

- **Seasonal Efficiency (Building Regulations Gross CV) %** 96 98 96 95 97 95 95
- **Maintenance consumption value MJ/M** 459.9 515.1 515.1 515.1 733.2 733.2 733.2
- **Maintenance consumption value kW/24Hr** 6.7 6.7 6.7 6.7

**Efficiency Data - ErP and Energy Label**

- **Ecodesign Energy Label rating** A A A A N/A N/A N/A
- **Water Heater efficiency %** 91 91 91 90 93 93 92
- **NOx Emissions** NOx emission (Weighted)@0% O2 mg/kWh 24 32 36 37 34 36 37

**General Data**

- **Recovery Rate @ 44°C l/hr** 610 640 990 1200 1700 2000 2400
- **Recovery Rate @ 50°C l/hr** 540 570 870 1100 1500 1800 2100
- **Recovery Rate @ 56°C l/hr** 480 510 780 930 1300 1600 1900
- **Dimensions (Height) mm** 1390 1925 1925 1925 2060 2060 2060
- **Dimensions (Width) mm** 705 705 705 705 900 900 900
- **Dimensions (Diameter) mm** 705 705 705 705 900 900 900
- **Storage Capacity litres** 220 374 374 374 488 488 488
- **Weight (Empty) kg** 177 214 214 214 405 405 405
- **Weight (Full) kg** 397 588 588 588 968 968 968
- **Hot Outlet Connection (Inches) BSP** R1 ½ R1 ½ R1 ½ R1 ½ R1 ½ R1 ½ R1 ½
- **Cold Feed Connection (Inches) BSP** R1 ½ R1 ½ R1 ½ R1 ½ R1 ½ R1 ½ R1 ½
- **Gas Connection (Inches) BSP** R % R % R % R % R % R % R %
- **Electrical Requirements** 230V /1Ph/ 50Hz
- **Power Consumption (Peak) W** 45 45 75 115 95 145 240
- **Sound Power Level LWA(db)** 46 47 55 59 54 59 62
- **Nominal Flue Gas Temperature °C** 45 50 60 65 50 55 60
- **Max Outlet Temperature °C** 80 80 80 80 80 80 80
- **Maximum Working Pressure bar** 8 8 8 8 8 8 8

**Ancillary Options**

- Heatpak space heating module
- Remote interface display (BMS interface)
- Unvented kits
- Concentric, Twin pipe and Conventional flue ancillaries

**Metal Base**

A metal base is supplied as standard with models ECH87-480GCE, ECH106-480GCE and ECH129-480GCE, and is available as an optional ancillary with all other models.

**Ancillary Options**

- Heatpak space heating module
- Remote interface display (BMS interface)
- Unvented kits
- Concentric, Twin pipe and Conventional flue ancillaries

Energy Label, Product Fiche and ErP Data Table are available at www.lochinvar.ltd.uk

For further information on the EcoCharger gas-fired condensing Water Heater, including ICM & User Instructions and our full Warranty Terms and Conditions, please visit our website: www.lochinvar.ltd.uk