

Intelli-Fin™

GAS-FIRED CONDENSING BOILERS



Lochinvar Corporation has been designing, manufacturing and distributing water heating products in USA since 1919 and has built an enviable reputation for reliable, efficient and cost effective water heaters and boilers.



In the UK the company is based in Banbury, ideally located to support its established products with a service which is second to none with Area Sales Managers and a head office staff covering Technical support, Service Technicians, Accounts and General Administration.

Water heating equipment was first sold in the UK under the Lochinvar name in 1976. The "Knight" and "Charger" ranges of direct gas fired Storage Water Heater were among the first of their type to be sold in this country and their popularity has continued to grow due to their suitability for the concept of System Separation and Decentralisation.

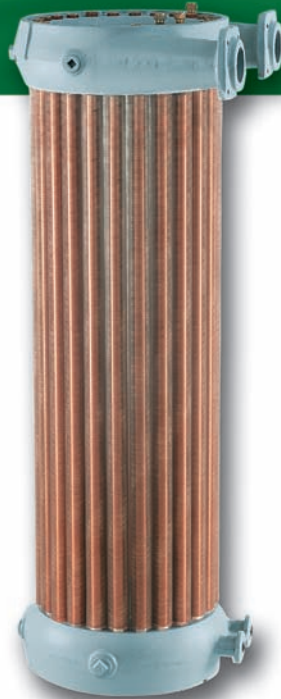
In 1981 Lochinvar introduced Copper-Fin[®] Water Heaters and Boilers and with various models available can offer outputs of up to 568kW. Most recent addition to the Copper-Fin[®] series is Intelli-Fin[™], which has net thermal efficiencies of up to 108% from an incredibly small footprint.

The addition of the Condensa and CP-M Boiler ranges offer further flexibility of choice, offering wall-hung boilers with outputs from 23 to 180kW, all of which offer high levels of efficiency.

All Lochinvar water heaters and boilers have a range of ancillary equipment designed for the specific needs of the UK market, are CE marked and WRAS (Water Research Advisory Service) listed.



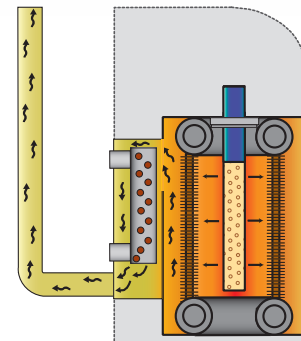
WHY Intelli-Fin[™] ?



The Intelli-Fin[™] range of gas fired, wet recuperative, condensing boilers is the latest addition to Lochinvar's highly successful Copper-Fin[®] series. Copper is one of the most efficient materials to use as a heat exchanger and at the heart of Lochinvar boilers and water heaters lies a copper heat exchanger with a substantial difference – extruded copper fin tubes that offer 9 times the heat absorption of plain tubes. This means a rapid response to heat demand, a major factor in the higher net thermal efficiencies provided.

Intelli-Fin[™] is highly efficient (108% net thermal efficiency), flexible, extremely quiet in operation and 'intelligent' thanks to its integrated control system and dual heat exchanger arrangement.

Intelli-Fin[™] Dual Heat Exchanger Arrangement



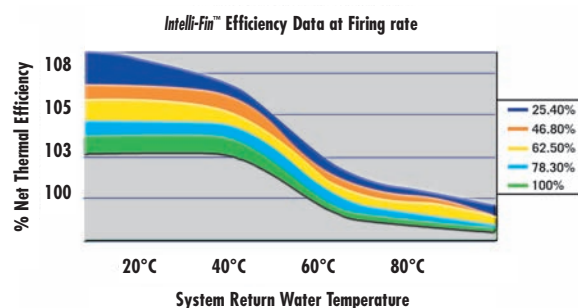
Intelli-Fin[™] dual heat exchanger arrangement creates a heat trap to capture convective heat flow. Trapping this latent heat reduces flue losses, increases efficiency and saves energy.

HIGH THERMAL EFFICIENCIES – LOW NO_x EMISSIONS

Intelli-Fin[™] operates with net thermal efficiencies of up to 108%. As a fully recuperative boiler high efficiencies are achieved even if system return temperature is higher than the optimum.

With Ultra Low NO_x Emissions of 31 mg/kWh Intelli-Fin[™] is environmentally friendly too, meeting the most stringent requirements (class 5) of EN483.

Intelli-Fin[™] EFFICIENCY



10 YEAR HEAT EXCHANGER WARRANTY

VARIABLE FREQUENCY DRIVE

Intelli-Fin[™] is the first boiler in the Copper-Fin[®] series to feature Variable Frequency Drive, which increases thermal efficiencies by supplying precisely the correct amount of gas and air to the burner, minimising 'cycling' and limiting excessive heat. This results in complete combustion thereby increasing kW output, whilst at the same time it also adjusts output to meet demand.

The Variable Frequency Drive allows Intelli-Fin[™] to modulate down to 25% of output responding instantly to any change in system requirements.

3 MODELS

OUTPUTS OF 427, 483 AND 568kW



COMPACT SIZE

Intelli-Fin™ is compact. So compact in fact that the 568kW model has a foot print of just 0.65m². This makes *Intelli-Fin™* boilers ideal for both retrofit and new installations.

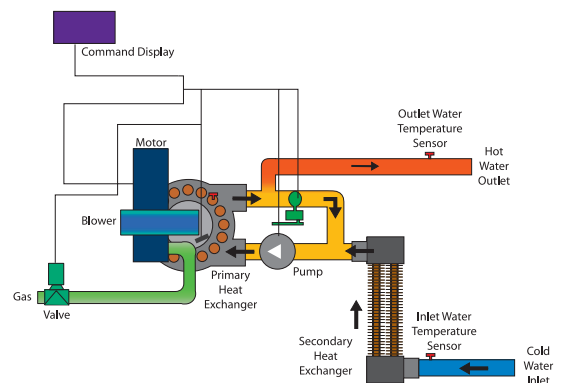
ALCROMESH BURNER WITH 5-YEAR WARRANTY

The aluminium/chromium alloy burner disperses the flame through 360° improving heat transfer. Quiet operation is assured and its durability results in a 5-year warranty.

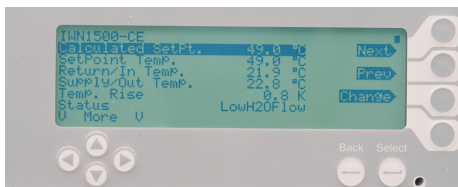


OPERATING FLEXIBILITY

Intelli-Fin™ can operate with a broad range of gas pressure and water temperature situations thanks to its intelligent controls and unique heat exchanger arrangement. This prevents nuisance 'lockout' problems in applications with varying gas pressures as *Intelli-Fin™* can operate under low pressure supply conditions. The dual heat exchanger arrangement preheats return water to control condensate formation. Using a pumped bypass, a portion of the heated supply water is recirculated to raise inlet temperature to a point where condensation on the primary heat exchanger is avoided. In addition, gas and air supply for combustion are also adjusted to ensure sufficient kW output to raise supply water temperature to the prescribed set point.



ADVANCED CONTROLS

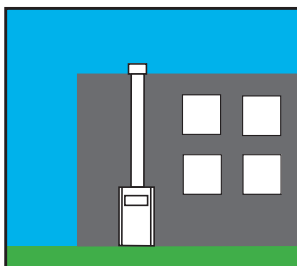


Intelli-Fin™ features advanced controls, which can be interfaced with Building Management Systems it can provide a remarkable amount of information and the ability to adapt for specific applications.

Up to 21 diagnostic points and 6 operational characteristics can be locally or remotely monitored.

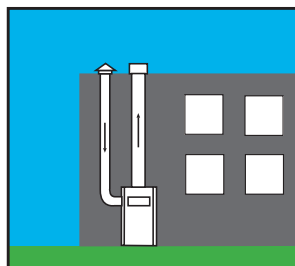
FLUEING OPTIONS

Intelli-Fin™ boilers offer a choice of three flueing options and have extremely small flue diameters. The 586kW model, for example, has a flue diameter of just 200mm - half that of a similar output conventional unit. This makes for real savings in installation costs.



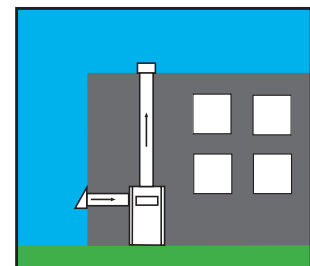
Conventional

Flues vertically using IGE/UP/10 approved flue material.



Vertical Balanced Flue

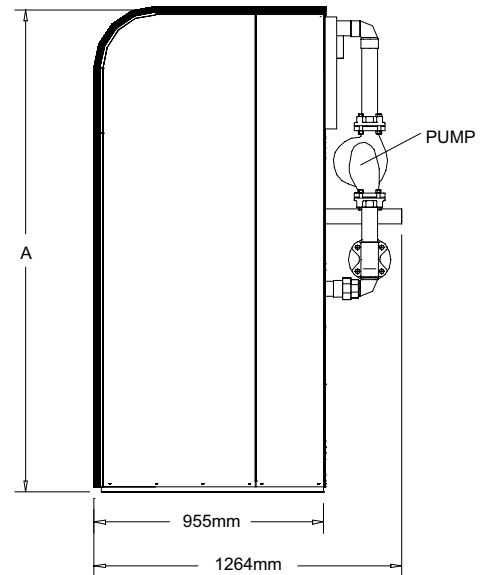
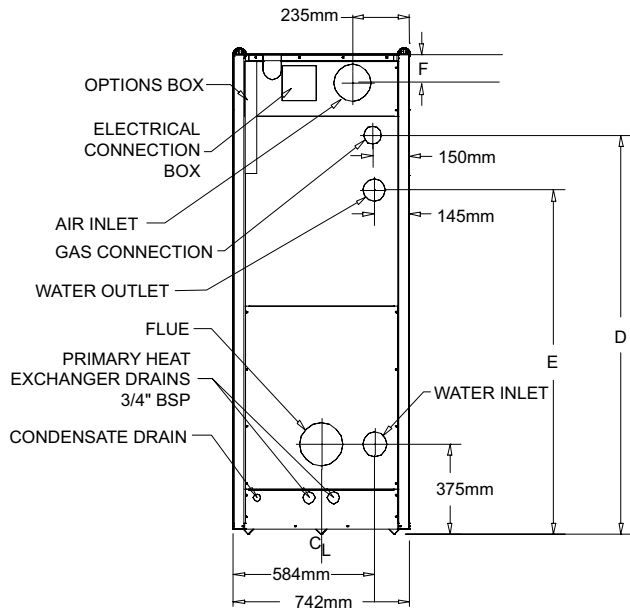
Flues vertically using IGE/UP/10 approved flue material. Directly draws combustion air with runs of 30 metres from the roof top.



Balanced Flue with Horizontal Air Intake

Flues vertically using IGE/UP/10 approved flue material. Directly draws combustion from a side wall with a horizontal run of up to 30 metres.

Intelli-Fin™ BOILER DIMENSIONS & SPECIFICATIONS



Model Number	Input Gross kW	Input (Net) kW	Output kW	A	D	E	F	Air Inlet Size mm	Flue Size mm	Weight kg
IFB1500CE	440	397	427	1720	1340	1035	114	150	150	520
IFB1700CE	498	449	483	1835	1454	1149	114	175	175	545
IFB2000CE	586	528	568	2007	1626	1321	165	200	200	575

All gas connections are 1/2" BSP.

All water connections are 76mm Copper Tube.

Standard Features

- ▼ Up to 108% net Thermal Efficiency
- ▼ 25 - 100% Infinitely Proportional Firing Rate
- ▼ Command Display - 21 Point Diagnostic Control
- ▼ Variable Frequency Drive Fan
- ▼ Digital Temperature Control Accurate to 0.5°C
- ▼ Alcomesh Burner with 5-Year Limited Warranty
- ▼ Ultra Low NO_x Emissions
- ▼ 10.5 bar Working Pressure
- ▼ Gasketless Heat Exchanger Design
- ▼ Fitted Bronze Circulating Pump Mounted and Wired
- ▼ Glass-Lined Water Headers
- ▼ Stainless Steel Combustion Chamber
- ▼ Corrosion Protection on secondary Heat Exchanger
- ▼ Low Gas Pressure Operation
- ▼ Zero Clearance to Combustible Materials
- ▼ Volt-Free Alarm Contacts on any Failure
- ▼ Temperature and Pressure Relief Valve
- ▼ Adjustable High Limit Thermostat with Manual Reset
- ▼ Flow Switch
- ▼ Small Footprint
- ▼ Whisper Quiet Operation
- ▼ Frost Protection
- ▼ Manual Operation Override
- ▼ 4-20 ma Control (Stand alone boilers only)
- ▼ 10 Year Warranty on Heat Exchanger

Monitoring Options

- ▼ Local Monitoring via Personal Computer includes Serial LonTalk Adaptor & Serial Cable
- ▼ Remote Monitoring via Personal Computer includes Serial LonTalk Adaptor, Approved Network Modem and Adaptor Cable

Optional Equipment

- ▼ External Temperature Compensation
- ▼ Neutralisation Kit for Condensate Discharge



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