

# EVO S

## 50kW

# 5 YEAR WARRANTY\*



Available in outputs of 50, 70, 95, 115 and 135kW, EVO S combines the latest stainless steel heat exchanger technology with straightforward installation and maintenance. 50 - 95kW models can be easily converted to run on LPG.

### FEATURES & BENEFITS

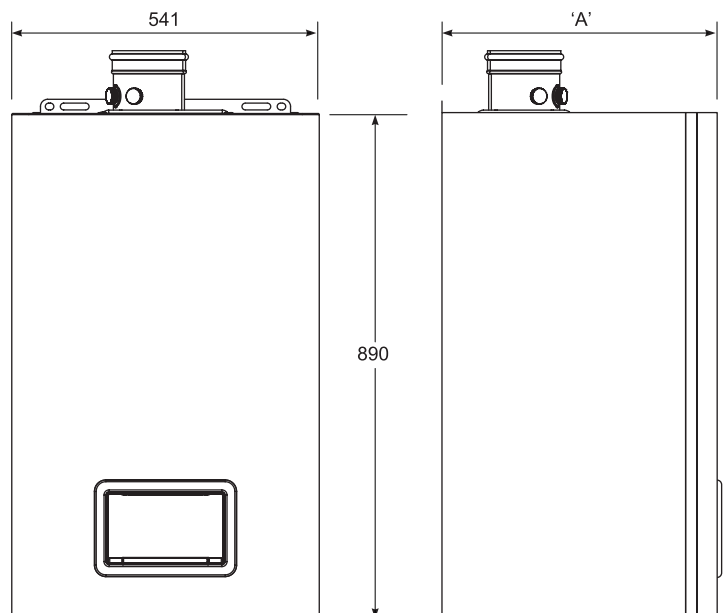
- Stainless steel heat exchanger
- Up to 108.9% net efficiency (fully condensing)
- High 5:1 turndown
- Compact - one width & height for easy siting
- Low height frame and header kits (under 2.2m to top of flue header)
- Simple to maintain using quick release internal water and gas couplings
- NOx <40mg/kWh (Class 6)
- Simple controls interface with large backlit display including integrated sequence control
- Must be installed with a low loss header
- Easily converted to LPG via controls

### DIMENSIONS & CLEARANCES

BOILER	DIM A
50	477

The following minimum clearances must be maintained for operation and servicing:

- ↑ TOP: **DEPENDENT ON FLUE**
- ↔ SIDES: **250mm**
- FRONT: **800mm**
- ↓ BOTTOM: **890mm**



# EVO S 50kW

## TECHNICAL SPECIFICATIONS



### GENERAL

Dry Weight	KG	60
Boiler Dimensions	mm	890 (H) x 541 (W) x 477 (D)
Boiler Clearances	mm	Front: 800 Side: 250 Below: 890
SEDBUK 2009	%	89.2
Seasonal Efficiency	%	96.13
Gas Pressure (Nat Gas) Min / Nominal / Max	mbar	17 / 20 / 25
Gas Pressure (LPG) Nominal	mbar	37.5

### BURNER PRE MIX

Fuel	(Type G20)	Natural Gas
	(Type G31)	Propane Gas / LPG
Fuel Consumption (Nat Gas)	m³/h	6.1
Fuel Consumption (LPG)	m³/h	2.4
Flame Protection		Ionisation
Ignition		Spark
Boiler Output (Mean 70°C) Min / Max	kW	11.5 / 56.4
Boiler Output (Mean 40°C) Max	kW	61
Boiler Input (Gross cv)	kW	64.4
Gas Inlet Size		G1"
Noise emission @1m: @maximum modulation	dB(A)	59.7
Noise emission @1m: @minimum modulation	dB(A)	35.8
NOx Emissions at 0% O <sub>2</sub>	mg/kWh	35
NOx Rating		Class 6

### HYDRAULICS

Hydraulic Resistance (11°C ΔT)	mbar	1157
Hydraulic Resistance (20°C ΔT)	mbar	350
Hydraulic Resistance (25°C ΔT)	mbar	224
Nominal Flow Rate (11°C ΔT)	l/s	1.2
Nominal Flow Rate (20°C ΔT)	l/s	0.7
Nominal Flow Rate (25°C ΔT)	l/s	0.5
Max Flow Temperature	°C	85
Min Working Pressure	bar	1
Max Working Pressure	bar	4
Condensate Connection	mm	24
Flow & Return Size		G1¼"
Water Content	litres	5

### FLUE/AIR INLET

Flue Size	mm	80/125 Concentric or Open Flue
Flue Gas Volume (Nat Gas)	m³/h	79
Flue Gas Volume (LPG)	m³/h	77
Flue Gas Temperature 80/60 (Nat Gas)	°C	76
Flue Gas Temperature 80/60 (LPG)	°C	78
O/F Max Counter Pressure Diff (Nat Gas)	Pa	200
B/F Max Counter Pressure Diff (Nat Gas)	Pa	200
O/F Max Counter Pressure Diff (LPG)	Pa	200
B/F Max Counter Pressure Diff (LPG)	Pa	200

### ELECTRICAL

Electrical Supply		230V - 50Hz
Power Consumption	W	96
Modulating Input	V/dc	0-10V or OpenTherm
Fuse Rating	A	4
Insulation Class IP		IP24D

### CONTROL OPERATION

On/Off 0-10V DC	Yes
OpenTherm	Yes
High Limit Protection	Yes
Low Water Protection	Yes
Volt Free Common Alarm	Yes
Boiler Run Indication	Yes

### OPTIONAL EXTRAS

Multiple Boiler Low Height Frame & Header Kits	Yes
Modulating Sequencer Kit	Yes
Programmable Room Thermostat Kit	Yes
Outside Sensor Kit	Yes
Tank Sensor Kit	Yes
Room Sensor Kit	Yes



\*5 year warranty subject to Terms and Conditions. 5 years parts and labour warranty available subject to being commissioned by Ideal Boilers.

# GET A QUOTE

W: [IDEALCOMMERCIALBOILERS.COM](http://IDEALCOMMERCIALBOILERS.COM)  
E: [commercial@idealboilers.com](mailto:commercial@idealboilers.com)  
T: 0844 5436060

## OVERVIEW

The boilers must be fully automatically controlled, wall mounted, fanned, super-efficient condensing appliances utilising an aluminium silicon alloy heat exchanger and be suitable for connection to fully pumped open vented or sealed water systems.

## CONTROLS

The condensing boilers must have connectivity for common types of BMS. Additional modules may be used for 0-10v, volt free BACnet, LONWorks and MODBus gateways. Where no BMS is present a modulating sequencer must be available.

The boiler must be fully modulating with a 5:1 turndown ratio and have control features enabling set point adjustment, heating circuit control of one constant temperature and one DHW circuit or 2 constant temperature circuits, and safety lock out parameters including fault diagnosis for both boiler and external components such as sensors or pumps.

Boiler capabilities must include, with the use of external components, frost protection, weather or room compensation and system pump control.

## FLUE

The condensing boilers must be suitable for use with a room sealed flue or open flue applications including C13, C33 and B23 classifications. The combined flue outlet and air inlet must be situated on the top of the boiler.

## HYDRAULIC

The condensing boiler must be and be suitable for connection to fully pumped open vented or sealed water systems. All hydraulic connections including flow return and condensate drain must be located on the bottom of the boiler. Hydraulic connections must be uniform across the outputs available in the range to ensure ease of installation and maintenance in mixed output cascades. The boiler must have a maximum operating pressure of 4 bar and be suitable for heating and indirect hot water systems.

## DIMENSIONS

The condensing boiler range must have a universal compact width and height across the range to ensure mixed output cascades maintain the same universal configuration. Maximum permitted wall area of 0.49m<sup>2</sup>.

## MOUNTING

The condensing boilers can be installed either on the wall or into a prefabricated floor mounted frame. Wall brackets must be located at the top of the boiler and visible from the front to aid installation.

## EFFICIENCY

The condensing boilers are capable of high seasonal efficiencies with a minimum requirement of 96.02% and low NOx emissions no greater than 36mg/kWh.

50 and 70kW models must have a Seasonal Space Heating Energy Efficiency of A.

## APPROVALS

The boiler must be tested and certified to; EN 483, EN 677, PREN 15420, BSEN 15417, BSEN 656, BSEN 60335-2-102, BSEN 55014-1 and BSEN 55014-2 for use with Natural Gas & LPG. Boilers are certified to meet the requirements of the EC Gas Appliance Directive, Boiler Efficiency Directive, EMC and Low Voltage Directive.

The manufacturer must be ISO 9001 accredited.

## SPECIFICATION

- The boiler will be capable of flow rates for common systems using 11°C to 20°C temperature differentials.

## CASCADE

The boiler must be configurable up to 4 boilers (max 540kW) in cascade using a prefabricated frame and header kit.

## WARRANTY

The boiler must be available with a 5 year warranty.