

Gas condensing technology
VITODENS 100-W RANGE

VIESSMANN
climate of innovation





Viessmann Headquarters, Allendorf (Eder), Germany

High Efficiency Gas Condensing Boilers

Condensing technology	from page 4
Key features	from page 6
Control technology	from page 8
The comprehensive product range from Viessmann	from page 10



Leading heating technology from Europe's largest brand - manufactured in Germany's most sustainable factory

Established in 1917, Viessmann draws on more than 90 years of experience in the development and manufacture of heating systems and due to its high commitment to quality, it is Europe's single largest brand in heating technology. Viessmann is a third generation family business and as such is able to hold true to its principles of innovation, efficiency and sustainability; which is a significant reason behind Viessmann's continuing success.

Viessmann's domestic product range has been built around a long established reputation for high quality commercial heating systems. Viessmann has utilised its extensive knowledge and expertise to develop domestic heating products that define the quality benchmark for other brands. Viessmann manufactures all of its own products and most controllers to ensure that the drive for quality remains throughout the entire range and that there are additional benefits from combining its heating technologies. Viessmann produces and sells products in the following sectors: high efficiency boilers, both domestic and commercial; solar thermal flat plate and tube collectors and PV panels; air source and ground source heat pumps; biomass boilers; and CHP units for commercial and domestic use, using a number of fuels including biogas.

However the principles of innovation, efficiency and sustainability don't only apply to products, but extend to all areas of the business. Viessmann's head office and production facility in Allendorf, Germany, was restructured in 2007 and energy use was aligned with European climate change goals, of a 20% reduction in energy usage and CO₂ emissions and a transfer of 20% of energy production into renewables, by 2020. In 2009, under the umbrella of the 'Efficiency Plus' project, Viessmann achieved its goal of saving 40% of oil, gas and electricity through the use of renewable energy while at the same time reducing CO₂ emissions by a third. Almost all measures to improve efficiency and renewable substitution were achieved with commercially available products made by members of the Viessmann Group; whether these were Solar panels, CHP units, Oil or Biomass boilers.

As a result of our efforts, Viessmann has been presented with the 2009 German Sustainability Award, Deutscher Nachhaltigkeitspreis in the category "Most Sustainable Production facility" for the main factory in Allendorf where high efficiency gas boilers for the UK are manufactured. This award honours the company's achievement of combining economic success with social responsibility and environmental conservation. Hence Viessmann products contribute to reducing the carbon footprint of UK homes even before they are installed.



**German
Sustainability Award**

Germany's Most Sustainable
Production 2009



**Efficiency
Plus**



Viessmann heating equipment: Committed to the environment

Condensing technology offers the greatest potential for conserving fossil fuels in the heating sector.

A crucial element of the EC Directive regarding "integrated pollution prevention and control" (IPPC Directive) of 30th October 1996 is the stipulation to apply the "best available technology" (BAT) in all new systems, and since 2007, also in all existing systems.

Viessmann feels a traditional obligation to the basic requirement of using the best technology available while aiming to protect the environment to the best of its ability. As the generation of heating energy accounts for 40 percent of all European energy consumption, the best technology available for this has a significant influence on resources and environmental protection. The following examples reflect this:

Condensing technology offers the greatest energy utilisation

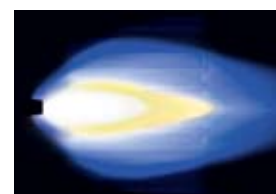
Condensing technology for oil and gas currently offers the highest energy utilisation with seasonal efficiencies (to DIN) of up to 98 percent. Compared to other technologies for generating heat, this substantially reduces the consumption of fossil fuels. In this process, additional heat is obtained from the flue gas through condensation. This makes

particularly high demands of the heating surface material and design. All Viessmann condensing boilers for gas or oil are therefore equipped with stainless steel heating surfaces/heat exchangers.

Fossil oil and gas may only be available for a limited time now, but Viessmann condensing technology is futureproof, because bio-oil and biogas from sustainable materials can gradually replace crude oil and natural gas. Today, all Viessmann condensing boilers are already prepared for admixtures of bio-oil and biogas.

Lambda Pro Control guarantees constant combustion quality

Even if the gas quality varies, a Viessmann gas condensing boiler runs efficiently and reliably. This is ensured by monitoring with Lambda Pro Control. The probe sits directly in the flame to measure the combustion quality, and if there are any deviations, it immediately adjusts the gas volume electronically. This keeps combustion permanently stable and clean whilst maintaining efficiency, even if biogas or LPG is added. Please check which models this is available on.



The Compact blue flame burner for oil and the Matrix gas burner (bottom) ensure maximum energy efficiency and extremely clean combustion.

Key features



MatriX cylinder burner ensures extremely clean combustion

The Vitodens 100-W Combination, System and Open vent boilers benefit from the latest Viessmann technology, including the Viessmann manufactured stainless steel Inox-Radial heat exchanger and MatriX cylinder burner.

Weather Compensation – Great for gas bills

With the increasing cost of fuel, boiler efficiency is becoming more and more important. The only way to improve the efficiency of a good quality condensing boiler is to add weather compensation controls.

The Vitodens 100-W range are designed to work with optional weather compensation controls, to achieve additional fuel savings of up to 12% – meaning huge savings every year, for a small initial outlay (System models must be installed as a 4-pipe system).

The controls work by monitoring the outside air temperature and adjusting your radiator temperature to suit. This keeps the heating water return temperature as low as possible, meaning that the boiler can condense more. This proactive mechanism means that the boiler burns as much fuel as it needs – but no more – to achieve the desired room temperature.

People inside the building will experience a constant temperature and won't even notice that the temperature outside has changed – but they will notice a significant reduction of their gas bills!

Good news for architects and specifiers – the weather compensation feature adds 2-3% to the boiler's SEDBUK efficiency when using SAP (Standard Assessment Procedure).

To understand more about the benefits of weather compensation and how it works, download our Weather Compensation brochure from www.viessmann.co.uk

Inox-Radial Heat Exchanger

Stainless steel is, without doubt, the best material for primary heat exchangers in condensing boilers. One of the unique design features of all Vitodens boilers is the Inox-Radial heat exchanger made from high grade stainless steel.

Designed for long-term reliability, high performance and self cleaning. We are so confident in our heat exchanger that we guarantee it for 10 years against corrosion.

Modulating pre-mix MatriX cylinder burner

Developed by Viessmann, the MatriX cylinder burner distributes heat cleanly and efficiently.

The Vitodens 100-W range is fitted with the MatriX cylinder burner, to achieve a modulation range of 1:3 and extremely low emissions.

The secret of the MatriX cylinder burner is its stainless steel mesh. The metered air-gas mixture is evenly distributed and the fine mesh and large surface area ensure that the gas leaves the mesh at low velocity, resulting in hundreds of tiny flames rather than one big one. Nitrogen Oxide production is kept to a minimum as the gas burns almost without flame, thanks to the complete pre-mixing of air and gas.

AquaBloc

The AquaBloc combines all hydraulic components into one compact unit, to make all serviceable parts easily accessible from the front of the boiler, cutting down on servicing time and cost.

Designed for reduced flow noises, with large cross section diameters and improved pipe design, the unit includes a compact heat exchanger, flow sensor and adjustable bypass HV/HR. The Grundfos pump can be electronically adjusted to a higher speed (Combination only).

Hot water output

The Vitodens 100-W Combination boilers can achieve a flow rate of up to 14.3 litres/min at a temperature rise of 35°C (35 kW).

Boiler control options

In addition to the weather compensation controls, the Vitodens 100-W range have a full range of time switches and thermostats, including wireless thermostats which mean that there is no need for Part P connection.

Accessories

There are more accessories than ever available for this range of boilers. These include pre-piping and pipe cover kits, plume kit, mounting brackets and a full range of flueing options for room sealed or open flued operation.

Conversion to LPG

The Vitodens 100-W range can run on either Natural Gas or LPG. For LPG operation a simple conversion kit is all that is needed, so even if mains gas isn't available, everyone can still benefit from the outstanding efficiency of the Vitodens 100-W.

Compatibility with solar

As a manufacturer of the full range of renewable energy technologies all Viessmann boilers are 100% compatible with solar thermal panels.

The Vitodens 100-W has the added advantage of boiler suppression, when using Viessmann solar panels and a dual coil cylinder. This means that the hot water system will always take advantage of solar power, whenever solar energy is available and the boiler will only fire to 'top up' the heating process when absolutely necessary – resulting in significant fuel savings.

A range of cylinders is available from Viessmann, including solar, dual coil cylinders.

Comprehensive warranty

The Vitodens 100-W range, Combi, System and Open Vent boilers, come with a 5 Year comprehensive warranty as standard. The unique InoX-Radial stainless steel heat exchanger is guaranteed for 10 years against corrosion.



InoX-Radial heat exchanger is designed to be self cleaning



Compact enough to fit in a standard kitchen cupboard, or sleek enough to hang on it's own.

Controls

Viessmann boilers have the added benefit of advanced control technology.

Viessmann controls are easy to install, maintain and operate and benefit from fault logging and diagnostic systems. They switch easily between Winter and Summer settings and some models have useful short cuts, including holiday, party and economy settings. All Vitodens boilers will operate with Viessmann and non-Viessmann external controls.

One control system for all boilers

All Viessmann boilers, whether wall mounted units, small freestanding boilers or larger boilers – are all controlled by one Vitotronic. That means: common parts throughout the entire boiler range, standardised assembly steps and only a few universal spare parts. This substantially simplifies installation, maintenance and service.

The innovative Viessmann modular design combines the basic chassis and function units to create various control unit versions – in each case matching the boiler and the individual requirements.

Weather Compensation

Weather compensation controls are a great, low cost way to make a boiler operate more efficiently. They can save up to 12% of annual fuel bills – that's on top of the big savings that you get from changing to a condensing boiler. For more details see the Key features on page 6.

Vitotrol 100 control system for Vitodens 100-W range

Thermostat

- Vitotrol 100 room thermostat. Basic room thermostat with switched output (two-point output) (a)
- Vitotrol 100 UTA RF wireless programmable room thermostat. Analogue 7 day, one channel clock (c)
- Vitotrol 100 UTDB RF2 wireless programmable room thermostat. Digital 7 day, two channel clock with large LCD display and rotary selector for adjusting permanent comfort, permanent set back and frost protection (d)

Timer

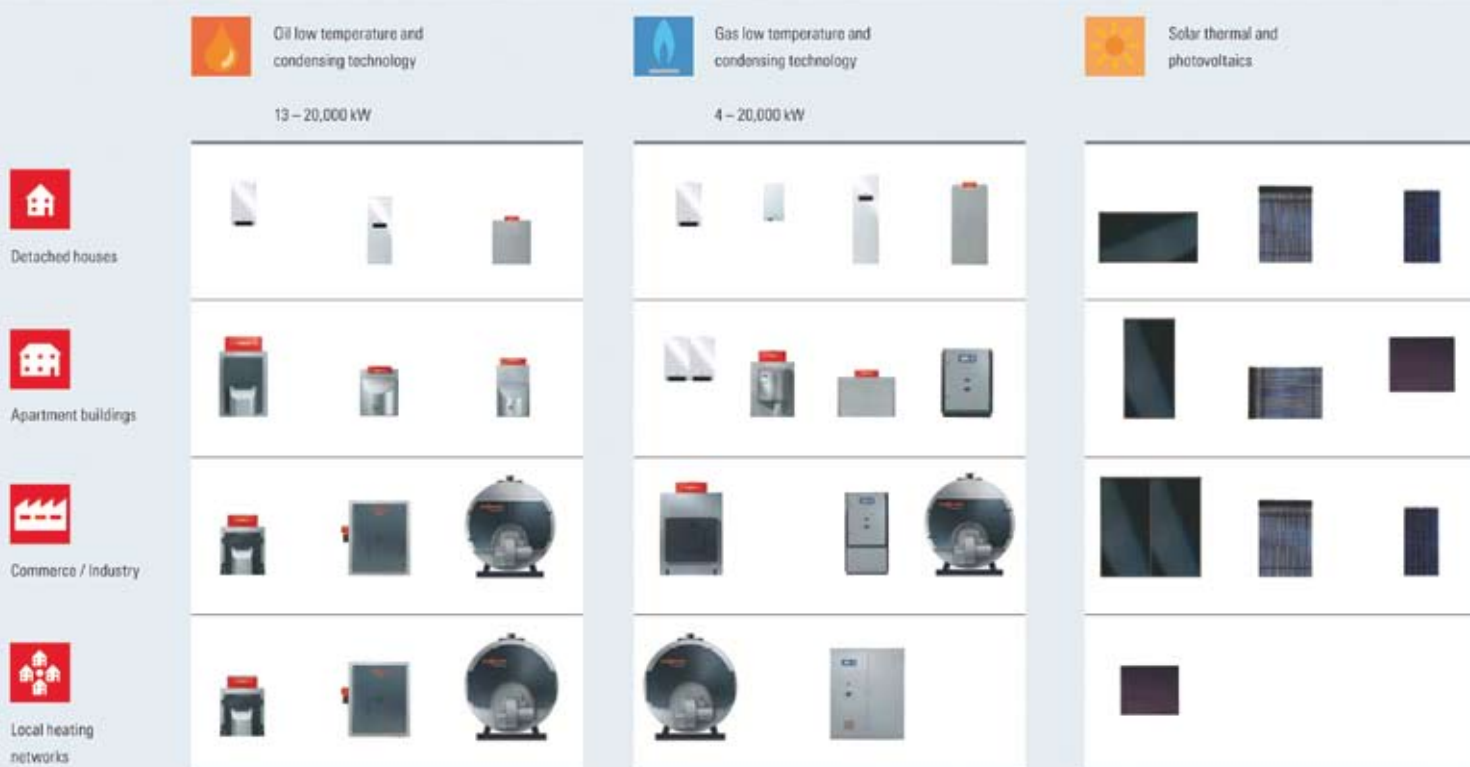
- Analogue plug-in clock for operation with Vitotrol 100 room thermostat. Single channel plug-in time switch. Heating program selector switch with switched output for 24 hour programmable heating operation (e)
- Digital plug-in clock for operation with Vitotrol 100 room thermostat. Two channel plug-in time switch for heating and DHW. 7 day programming, with up to 42 switching programs and adjustable holiday program (b)

Control guide

Description	Vitodens 100-W Open vent	Vitodens 100-W Combi/System	Part no.
Vitotrol 100 room thermostat a)	■ Optional: Digital time switch	■ Optional: Timer Weather compensation	7141709
Vitotrol 100 UTA room thermostat - analogue 24hr		■ Optional: Timer	7170149
Analogue timer switch (plug-in) 24 hour programmer e)		■ Optional: Room thermostat Weather compensation	7296062
Vitotrol 100 UTDB programmable room thermostat - 7 day single channel		■	Z007691
Vitotrol 100 UTDB RF2 wireless programmable room thermostat - 7 day 2 channel d)	■	■	Z007693
Digital time switch (plug-in) 7 day 2 channel b)	■ Optional: Room thermostat	■ Optional: Room thermostat Weather compensation	7296063
Vitotrol 100 UTA wireless room thermostat 1 channel 24 hour plug in analogue receiver c)	■ Optional: Weather compensation	■ Optional: Weather compensation	7296064
Weather compensation outdoor sensor		■	Z006506
Weather compensation outdoor sensor kit (including control box)	■		Z007933

■ Product only compatible with these Vitodens ranges





Individual solutions with efficient systems

Futureproof heating systems for all energy sources and applications

The comprehensive Viessmann product range

The comprehensive product range from Viessmann offers individual solutions with efficient systems for all applications and all energy sources. As environmental pioneers, the company has, for decades, been supplying efficient and clean heating systems for oil and gas, solar thermal and photovoltaic systems and heat generators for sustainable fuels and heat pumps.

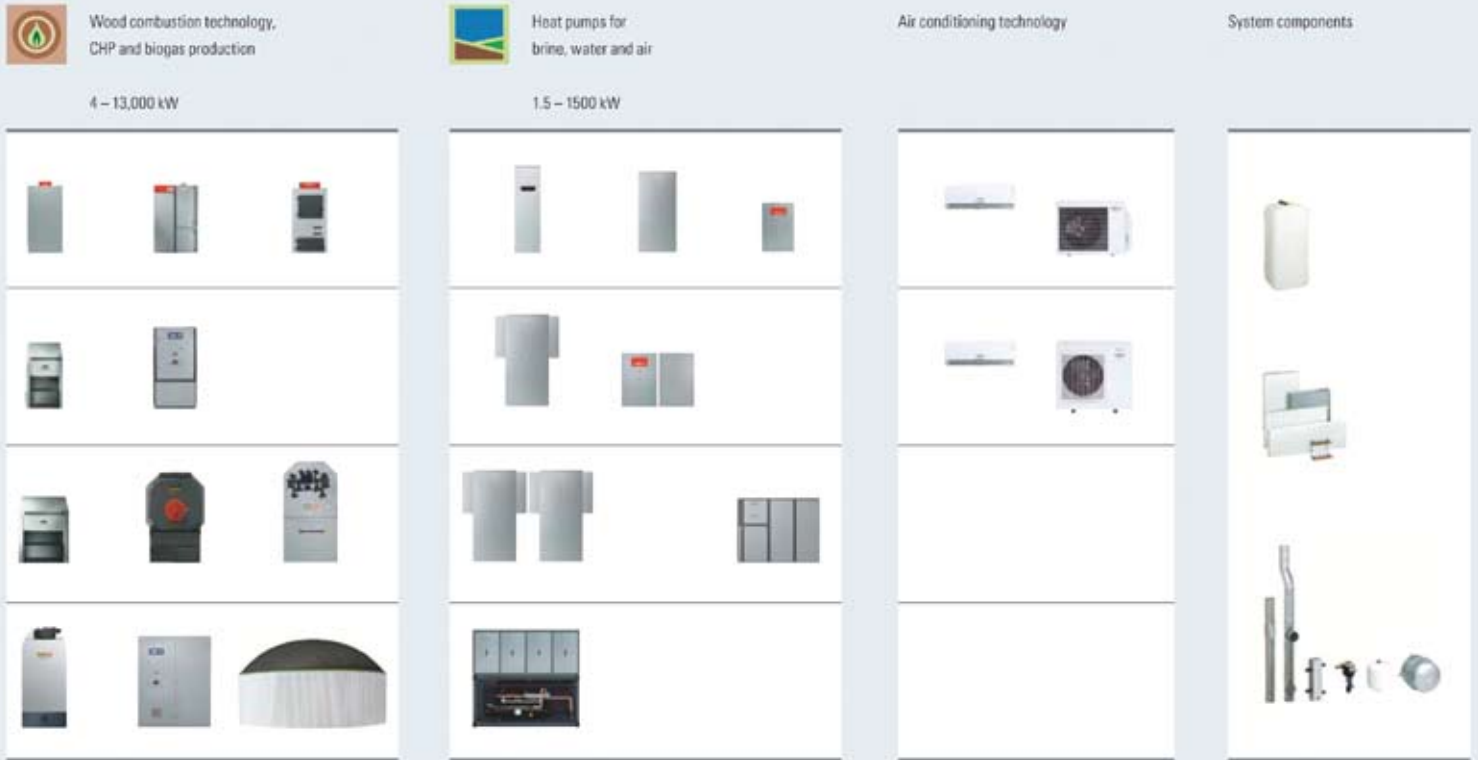
The comprehensive product range from Viessmann also offers superior technology and sets new benchmarks. With its high energy efficiency, our range helps to save heating costs and is always the right choice where the environment is concerned.

At Viessmann, protecting the environment and natural resources has already been enshrined in the company's principles.

Viessmann develops and produces innovative heating systems, which demonstrate top quality, energy efficiency and a long service life. Many of these products have become milestones of heating technology.

Individual and efficient

Viessmann offers the right heating system for any demand – wall mounted or floorstanding, in individual combinations – all are futureproof and economical. And whether for detached or semi-detached homes, large residential buildings, commercial/industrial use or for local heating networks; for modernising existing properties or new build – they are always the right choice.



The comprehensive product range from Viessmann: Individual solutions with efficient systems for all energy sources and applications.

Key performers

The Viessmann Group sets the technological pace for the heating industry. This is what the Viessmann name represents, and also what the names of the subsidiaries in the Group represent, as they are founded on the same pioneering spirit and power of innovation.

The company offers the following:

- Condensing technology for oil and gas
- Solar thermal and photovoltaic systems
- Heat pumps
- Wood combustion systems
- CHP modules
- Biogas plants
- Services

Viessmann is extremely specialised in all these market segments, yet at the same time the company has a crucial advantage over specialist suppliers: Viessmann understands heating technology as a systematic whole and offers unbiased advice on technology and fuel type. This guarantees the best solution for every application.

Viessmann Group

VIESSMANN

KWT

KOB

MAWERA

ESS

BIOFERM

Schmack

Carbotech

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP
Tel: 01952 675000
Fax: 01952 675040
www.viessmann.co.uk



Efficiency Plus

A combination of savings in fossil fuels through improved efficiency (generation and consumption), with sensible substitution through renewables at the Viessmann head office in Germany; the Efficiency Plus project has enabled us to save 40 percent of oil, gas and power, whilst at the same time reducing CO₂ emissions by a third.

Viessmann was presented with the German Sustainability Award in the category "Most Sustainable Production 2009" and the Energy Efficiency Award 2010.

For more information please visit www.effizienz-plus.de/en

Your trade partner: