



VIESSMANN

WALL-MOUNTED GAS CONDENSING BOILER

Space Heating or Combi Boiler
Ideal for Condominiums and Single-Family Homes
VITODENS 100-W



**Delivering peace of mind
for generations to come**

The all new Vitodens 100 offers the perfect combination of value, quality and Viessmann technology.

▶ The new Vitodens: Peace of mind through future-proof design. The perfect combination of value, quality and Viessmann technology. ▶



The Vitodens 100-W offers a reliable, compact solution for heating and on-demand domestic hot water (B1KE)

Equipped with a Viessmann stainless steel heat exchanger for lasting performance and reliability, plus a fully modulating Matrix Plus cylinder gas burner, the Vitodens 100-W wall-mounted condensing boiler is the perfect combination of value, quality and Viessmann technology.

Its compact design, zero clearance to combustibles and extremely quiet operation make the Vitodens 100-W an ideal choice for even the smallest spaces. Plus, with a limited residential lifetime warranty, you can be sure your investment will deliver long-lasting value.

**Vitodens 100-W:
Outstanding Versatility**

The Vitodens 100-W offers the right solution for every demand, including space heating or all-in-one combi options; multiple venting options and boiler software that adjusts automatically for vent length with no added coding; and flexible fuel options, with the ability to switch from natural gas to propane at the push of a button, no conversion kit required.

Installation, service and maintenance are designed to be fast and easy with all pipe connections located at the bottom, and serviceable components easily accessible from the front. The adjustable user interface control panel can be moved easily from bottom to top in order to accommodate different height installations.

Domestic Hot Water To Fit Your Family's Needs

The new Vitodens 100 is available as a B1KE model combi,

offering an outstanding continuous draw rate of up to 4.7 GPM[†] plus added cost savings with the energy-saving on-demand design, or as a B1HE model non-combi boiler.

For more hot water on demand, the B1HE (non-combi) makes an excellent pairing with Vitocell DHW tanks. With an integrated indirect circulator, this combination delivers highly efficient, dependable hot water and space heating for families. A DHW recirculation pump can also be used with a range of scheduling options that match your lifestyle (with regular use, B1HE models).

Save, Learn and Have Peace of Mind From Anywhere

The Vitodens 100-W offers an integrated WiFi interface, which allows the system to connect directly to the internet allowing for seamless integration with the ViCare App for smartphone or tablet. Once ViCare is connected, homeowners can remotely connect to their boiler and utilize on-demand DHW recirculation, DHW scheduling and temperature control, and visualize fuel usage and cost-savings.

With ViCare, homeowners can connect directly to their preferred contractor for scheduled maintenance, preventative service and emergency messages, maximizing reliability and peace of mind that their home's heating is up and running from anywhere.

* On-demand domestic hot water available with Vitodens 100 B1KE models

† B1KE-199 at $\Delta t = 77^{\circ}\text{F}$ (43K). DCW and DHW temperature rise would be proportional. Maximum DHW supply temperature is 140°F (60°C).

**Lambda Pro Plus Combustion Control:
The Heart Of Your Heating**

The proprietary Viessmann modulating Lambda Pro Plus combustion control offers clean combustion, 10:1 turn down ratio and quiet operation with either propane or natural gas, which can be changed at the push of a button.



Low-emission, Viessmann-made Matrix Plus cylinder burner

**Stainless Steel Inox-Radial Heat Exchanger:
Efficient And Reliable**

The Vitodens 100-W is equipped with a stainless steel Inox-Radial heat exchanger. Developed and manufactured by Viessmann, this high-quality stainless steel component maximizes performance and reliability. Plus, the self-cleaning heat exchanger† contributes to the boiler's long service life and dependable performance.

BENEFITS AT A GLANCE

- + Long lasting, reliable performance and outstanding 95% AFUE efficiency with stainless steel Inox-Radial heat exchanger
- + Reduced emission (low-NOx) and 10:1 turn down ratio with fully-modulating stainless steel Matrix Plus cylinder burner
- + Field height adjustable controls for comfortable service operation in any space
- + Compact, lightweight wall-mount design with zero clearance to combustibles
- + Easy installation, service and maintenance with easy access to all servicable components
- + Multiple venting options and advanced software allow for automatic adjustment
- + Easy piping due to two sets of tappings, along with built in pump and diverter
- + Suitable for high altitudes up to 10,000 ft (3000 m) with no power loss and automatic software vent length adjustment
- + Built-in automatic frost protection
- + Reliable on demand domestic hot water (B1KE)
- + Limited lifetime warranty for added peace of mind

Warranty information is available at viessmann-us.com/warranty

† Self-cleaning heat exchanger does not eliminate need for regular servicing.

User-Friendly Control Unit

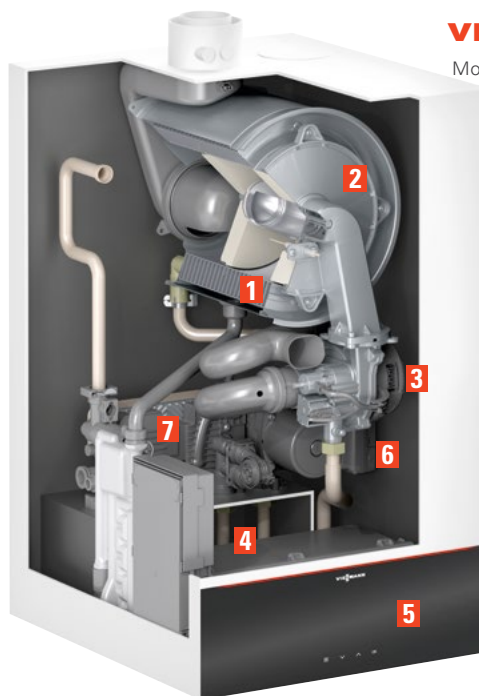
The Vitodens 100-W range of condensing boilers utilizes a simple and easy-to-navigate user interface. The black control panel display offers discrete design and height adjustment of a single zone circuit or multiple zones with standard field installed zone control panel. The control panel features intuitive homeowner dashboards for basic settings and operational insights, as well as advanced dashboards for service and trouble shooting, available in multiple languages.

Helps You Save

Select an easy-to-use room thermostat and utilize the boiler's on-board control, which automatically adjusts the boiler water to outdoor temperatures. This not only boosts fuel savings, but also keeps your home warm and comfortable at all times.

STANDARD EQUIPMENT INCLUDES

- + Wall-mounted condensing boiler
- + Wall bracket mounting kit
- + Safety valve 30 psi and 150 psi (B1KE models)
- + DHW sensor (B1HE models)
- + Pressure gauge
- + Two fill/drain valves
- + Air supply cover
- + Outdoor temperature sensor
- + LPG conversion labeling kit
- + Flexible discharge tubing (condensate)



VITODENS 100-W
Model B1KE-120

- 1 Inox-Radial stainless steel heat exchanger
- 2 Stainless steel Matrix Plus burner and Lambda Pro Plus combustion control
- 3 Burner blower
- 4 Gas and hydronic connections
- 5 Field adjustable lightguide and 3.5" LCD controls display
- 6 Integrated high efficiency boiler and DHW pump
- 7 DHW plate heat exchanger (combi models only)

Actual product may vary from illustrated image

Wall-Hanging Condensing Boiler

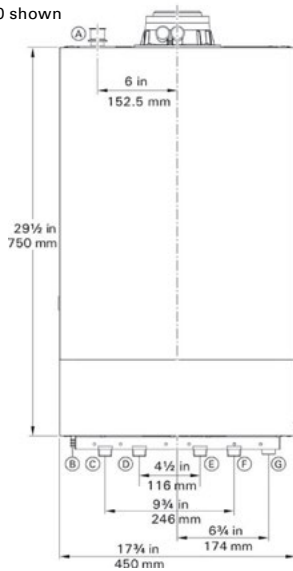
VITODENS 100-W



Viessmann Manufacturing
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Warwick, RI, 02886
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Model 85/120 shown

Front view



Side view



Legend

- Ⓐ Safety valve, pressure gauge connection
- Ⓑ Condensate drain
- Ⓒ Heating system supply
- Ⓓ For B1HE series, DHW tank heating supply
For B1KE series, DHW supply
- Ⓔ For B1HE series, DHW tank heating return
For B1KE series, DCW inlet
- Ⓕ Heating system return
- Ⓖ Fuel gas connection

Vitodens 100-W B1HE, B1KE

| | | B1HE-85 | B1HE-120 | B1HE-150 | B1HE-199 | B1KE-120 | B1KE-199 |
|--|-----------------|---------|----------|----------------|----------|----------|----------|
| CSA Input (NG and LPG) | MBH | 85 | 120 | 150 | 199 | 120 | 199 |
| | kW | 24.9 | 35.2 | 44 | 58.3 | 35.2 | 58.3 |
| CSA Output (NG and LPG)¹ | MBH | 80 | 113 | 141 | 187 | 113 | 187 |
| | kW | 23.4 | 33.1 | 41.3 | 54.8 | 33.1 | 54.8 |
| Net AHRI Rating² | MBH | 70 | 98 | 123 | 163 | 98 | 163 |
| | kW | 20.5 | 28.7 | 36 | 47.8 | 28.7 | 47.8 |
| A.F.U.E. | % | 95 | 95 | 95 | 95 | 95 | 95 |
| Overall Dimensions | | | | | | | |
| Depth | inches | 19.75 | 19.75 | 21.75 | 21.75 | 19.75 | 21.75 |
| | mm | 500 | 500 | 550 | 550 | 500 | 550 |
| Width | inches | 17.75 | 17.75 | 17.75 | 17.75 | 17.75 | 17.75 |
| | mm | 450 | 450 | 450 | 450 | 450 | 450 |
| Height | inches | 33.75 | 33.75 | 39 | 39 | 33.75 | 39 |
| | mm | 859 | 859 | 989 | 989 | 859 | 989 |
| Weight | lbs | 108 | 108 | 179 | 179 | 110 | 190 |
| | kg | 49 | 49 | 81 | 81 | 50 | 86 |
| Boiler Water Content | USG | 1.02 | 1.02 | 2.5 | 2.5 | 1.02 | 2.5 |
| | L | 3.88 | 3.88 | 9.5 | 9.5 | 3.88 | 9.5 |
| Max. Flow Rate⁴ | GPM | 4.8 | 6.2 | 8.8 | 10.6 | 6.2 | 10.6 |
| | L/H | 1090 | 1408 | 1999 | 2408 | 1408 | 2408 |
| Heat Exchanger Surface Area | ft ² | 12.96 | 12.96 | 27.44 | 27.44 | 12.96 | 27.44 |
| | m ² | 1.2 | 1.2 | 2.55 | 2.55 | 1.2 | 2.55 |
| Maximum Operating Pressure (max. allowable working pressure) at 210°F (99°C) | psig | 45 | 45 | 60 | 60 | 45 | 60 |
| | bar | 3 | 3 | 4 | 4 | 3 | 4 |
| Minimum/Maximum Gas Supply Pressure³ | | | | | | | |
| Natural Gas | "w.c. | | | 4 / 14 | | | |
| LPG | "w.c. | | | 10 / 14 | | | |
| Boiler Water Temperature | | | | | | | |
| Space Heating (steady state) | °F (°C) | | | 68-180 (20-82) | | | |
| DHW Tank Heating | °F (°C) | | | 194 (90) | | | |
| DHW Heating | °F (°C) | | | 194 (90) | | | |
| Fixed High Limit (FHL) | °F (°C) | | | 210 (99) | | | |
| Boiler Connections | | | | | | | |
| Gas Supply Connection | NPTF (female) | | | ¾ inch | | | |
| Pressure Relief Valve | NPTF (female) | | | ¾ inch | | | |
| Boiler Heating Supply and Return | NPTM (male) | ¾ inch | ¾ inch | 1 inch | 1 inch | ¾ inch | 1 inch |
| DHW Tank Heating Supply/Return | NPT | ¾ inch | ¾ inch | 1 inch | 1 inch | - | - |
| DHW Heating (combi) | NPTM (male) | - | - | - | - | ¾ inch | 1 inch |
| Drain Valve | (male thread) | | | ¾ inch | | | |
| Boiler Flue Gas Connection | Ø in | | | 3 | | | |
| | Ø mm | | | 80 | | | |

1 Output based on 140°F (60°C), 120°F (49°C) system supply / return temperature.

2 Net AHRI rating based on piping and pick-up allowance of 1.15.

3 If the gas supply pressure exceeds the maximum gas supply pressure value, a separate gas pressure regulator must be installed upstream of the heating system.

4 See "System Flow Rates" on page 11 of product Technical Data Manual

