

## Heating with Gas



# Modern Gas Heating

With fluctuating energy prices and a growing concern for the environment, it pays to modernize your outdated gas-fired boiler. You will save money, and the environment too.



At approximately 40%, domestic heating accounts for the greatest proportion of energy consumption and most CO<sub>2</sub> emissions.

By replacing an outdated heating system with a modern solution, you can significantly improve energy utilization – reducing fuel consumption as well as harmful greenhouse gas emissions.

## Reduce unnecessary waste

There are an estimated 20 million homes in the United States with heating systems 20 years of age or older<sup>†</sup>. For most of them, a significant share of energy and money go to waste unnecessarily every year due to outdated technology and an improperly sized system. Along with wasting energy, these boilers contribute to climate change by needlessly releasing harmful CO<sub>2</sub> emissions.

By replacing an outdated system with a high-efficiency gas-fired condensing boiler, a homeowner can expect to save as much as 30%\* on their annual heating bills. This not only results in significant cost savings, but also environmental savings with reduced CO<sub>2</sub> emissions.

## A modern solution

With the Vitodens 100 and Vitodens 200 Series, we offer a complete line of high-efficiency, gas-fired condensing boilers. Equipped with a corrosion-resistant stainless steel Inox-Radial heat exchanger, our Vitodens Series boilers can safely operate at extremely low boiler water temperatures. For you, this greater energy utilization translates into reduced heating costs as well as a smaller environmental footprint. Plus, our Vitodens 200 Series gas-fired condensing boiler comes ready for the future by automatically adjusting to all gas types – including conditioned biogas.

## It doesn't stop there

Our extensive product portfolio lets you take efficiency and energy savings a step further. Reduce your energy costs by integrating domestic hot water production with your heating boiler, and manage the entire system with one of our control solutions. Or put the sun to work for you by adding a solar thermal package. With the entire system from one source, you don't have to compromise: total system performance and additional energy savings go hand-in-hand (find out more on pages 8/9).

The Vitodens 200 gas-fired condensing boiler is prepared for the use of conditioned biogas.



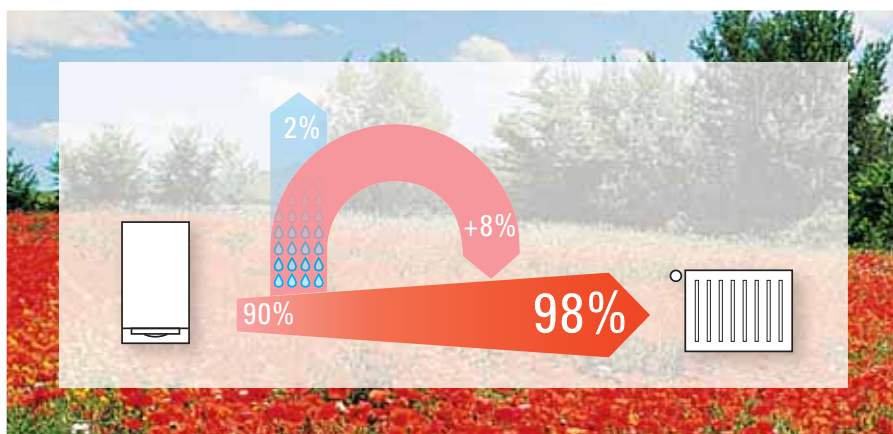
<sup>†</sup>2005 Residential Energy Consumption survey by the Energy Information Administration.  
\* A condensing boiler and an outdoor reset control with a proper heat loss calculation.

## Advanced Condensing Technology

A gas-fired condensing boiler is one of the most economical and clean ways to generate heat and can reduce your monthly heating bills, as well as your environmental footprint.

Condensing technology not only utilizes the heat from the combustion of gas, but also the unused heat that would escape up the chimney with a conventional heating system. Condensing boilers achieve excellent efficiency by extracting almost all of the heat contained in the flue gases and converting it into additional heating energy. To do this, Viessmann condensing boilers are equipped with a corrosion-resistant, stainless steel Inox-Radial heat exchanger, which cools the flue gases before they are routed into the chimney. By doing this, the water vapor contained within the gases is deliberately condensed, and the additional heat released is transferred into the heating system.

By choosing a condensing boiler with an unbeatably high efficiency of up to 98%, you will not only benefit from reduced monthly bills, but will also make an active contribution towards protecting the climate and the environment.



Viessmann condensing technology can achieve efficiencies of up to 98%. Through the condensation of the water vapor contained in the flue gas, additional heat is extracted from the flue gas and added back into the heating system. This increases efficiency and lowers your heating costs and environmental impact.

### Save money with a modern, gas-fired condensing boiler



#### Energy savings

**13% (\$154 p.a.)**  
of space heating gas

#### Cost savings (over 15 years)\*

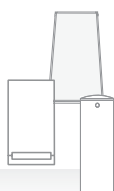
**\$ 3,600**

#### CO<sub>2</sub> savings (over 15 years)

**11.5 t**



### Increase your savings with a solar domestic hot water system



#### Additional energy savings

**60% (\$136 p.a.)**  
of DHW gas

#### Additional cost savings (15 years)\*\*

**\$ 3,200**

#### Additional CO<sub>2</sub> savings (over 15 years)

**12 t**



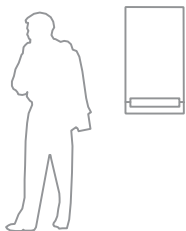
Savings shown in USD.

† 2005 Residential Energy Consumption Survey by the Energy Information Administration.

\* Based on 83 MMBTU/p.a. (830 therms/2350m³) space heating load required (83% to 96% efficiency) at an average price of \$0.40/m³ (\$1.13/therm). Calculations include a 5% rise in energy prices per year.

\*\* Based on 24 MMBTU/p.a. (240 therms/657m³) average annual household consumption for direct-fired hot water tank, 20 years of age at average gas price of \$0.40/m³ (\$1.13/therm).

Calculations include a 5% rise in energy prices per year.



# VITODENS 100

The perfect mix of performance, quality and versatility.  
Gas-fired wall-mounted condensing boiler, 37 - 118 MBH



The Vitodens 100 is ENERGY STAR® qualified and EcoLogo certified. By choosing the Vitodens 100, you are helping to promote cleaner air and a healthier environment.



Stainless steel Inox-Radial heat exchanger

## Every home. Every budget.

With its excellent efficiency and outstanding price/performance ratio, the Vitodens 100 is the perfect mix of performance and value. Its compact design, zero clearance to combustibles and extremely quiet operation make the Vitodens 100 an ideal choice even in the smallest spaces. Plus, with a residential lifetime warranty you can be sure your investment will deliver long-lasting, efficient performance year after year.

## Continuous efficiency

Stainless steel is the best choice for long-term efficiency and reliability. That's why the Vitodens 100 is equipped with a stainless steel Inox-Radial heat exchanger and MatriX cylinder burner. Developed and manufactured by Viessmann, these high-quality stainless steel components deliver continuous reliability and permanently high condensing efficiency. Plus, the "self-cleaning" heat exchanger contributes to the boiler's long service life and reliable performance.

## Outstanding versatility

The Vitodens 100 offers the right solution for every demand – from multiple venting options to fuel flexibility (NG or LP) right out of the box. Plus, 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. You'll save time and money with fast service and maintenance calls.

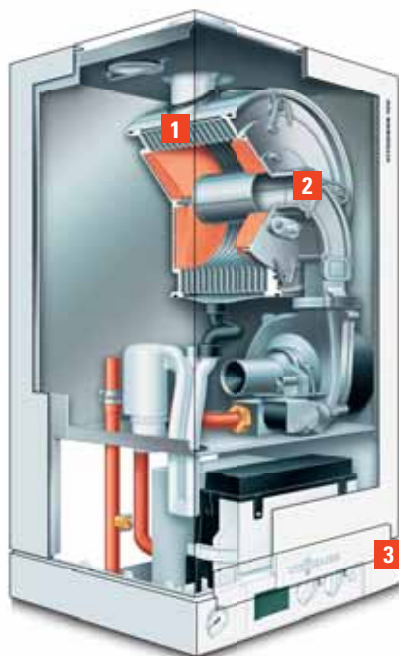
## Helps you save

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

**New**

## On-demand DHW with optional CombiPLUS Kit

With the new CombiPLUS Kit add on-demand domestic hot water (DHW) to your new Vitodens 100 space heating boiler and say goodbye to your DHW tank. Enjoy DHW at the snap of your fingers all day long with an outstanding flow rate of up to 3.6 GPM<sup>†</sup>, *plus* added cost savings with the energy-efficient on-demand indirect-fired design.



- 1** Inox-Radial heat exchanger
- 2** Modulating Matrix cylinder burner
- 3** On-board boiler control

<sup>†</sup>At a 63 °F maximum temperature rise with Vitodens 100, WB1B-35.  
<sup>‡</sup>Certified to NSF/ANSI 372 for Low Lead Content.





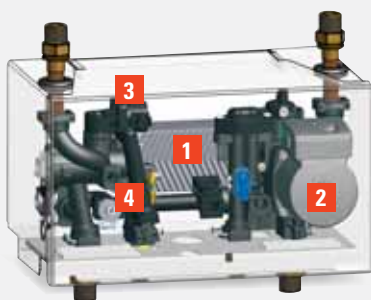
Product may not be exactly as shown.



New

### Optional CombiPLUS Kit

Slightly bigger than a large shoe box, the CombiPLUS Kit installs underneath or beside the boiler and requires only minimal piping and electrical connections. Featuring stainless steel heat exchanger, pressure bypass valve, DHW temperature and flow sensors, 3-speed pump, 3-way diverting valve, and Low Lead Content Certification<sup>†</sup>, the CombiPLUS Kit provides reliable, high-quality DHW day after day.



- 1 Stainless steel plate-type heat exchanger
- 2 3-speed DHW and space heating pump
- 3 3-way diverting valve
- 4 Water hammer arrestor

### Specifications

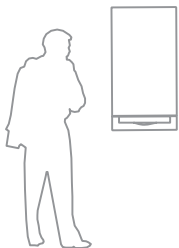
- Viessmann made SA240 316Ti stainless steel Inox-Radial heat exchanger constructed to CSA B51 and ASME Section IV
- Viessmann made stainless steel MatriX cylinder burner
- 2 models from 37 to 118 MBH
- A.F.U.E. rating of 95.2% on all models
- Ideal for any home and budget
- Suitable for altitude levels of up to 10,000 ft. / 3,000 m.

For technical data, see page 10.

### Benefits at a glance

- Lasting performance with proven Viessmann stainless steel Inox-Radial heat exchanger.
- Low-emission combustion thanks to the Viessmann stainless steel MatriX cylinder burner for natural gas or propane.
- Versatile on-board boiler control interfaces with most external controls - Integrated 0-10V and OpenTherm® communication ability.
- Energy saving outdoor temperature sensor standard.
- Greater venting flexibility with vent length up to 200' and multiple venting options.
- Easy installation and service with pipe connections located at the bottom and serviceable components accessible from the front.
- Extremely quiet operation - quieter than most refrigerators.
- Limited lifetime warranty in residential applications.
- Expandable with CombiPLUS Kit for energy-efficient on-demand DHW.

New

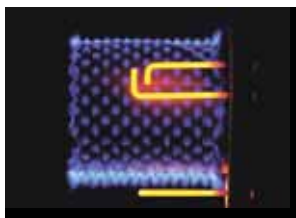


# VITODENS 200

Industry-leading condensing technology for ultimate performance, reliability and comfort.  
Gas-fired wall-mounted condensing boiler, 31 to 370 MBH



The Vitodens 200 is ENERGY STAR® qualified and EcoLogo certified. By choosing the Vitodens 200, you are helping to promote cleaner air and a healthier environment.



Low-emission MatriX cylinder burner

## Intelligent combustion control

The Vitodens 200 is ready for the future thanks to its intelligent Lambda Pro combustion management system, which automatically adapts combustion to changing gas qualities and operating conditions. Even if the gas composition fluctuates or the gas type is changed, Lambda Pro quickly adjusts the boiler for maximum efficiency at the new conditions. This unique function becomes increasingly important as gas supplies vary in quality and heating value.

With your new Vitodens 200 operating at the highest efficiency at all times, your monthly heating bills will be significantly reduced without compromising your warmth, comfort and reliability.

## Efficient by design

At the core of the high-efficiency Vitodens 200 is the Viessmann stainless steel Inox-Radial heat exchanger and MatriX cylinder burner. Together, they allow the greatest amount of heat extraction to be achieved with minimal loss (see page 5 for more information). This equates into an unbeatable efficiency of 98% at full modulation.

## Comfort control

The powerful Viessmann Vitotronic control provides user-friendly management of the entire heating system and ensures economical performance and maximum comfort at all times. The outdoor reset function automatically adapts the boiler operating temperature to the changing outdoor temperature. This reduces fuel consumption without compromising your warmth and comfort. Plus, with system control for multiple zone space and DHW heating, the Vitotronic offers even greater heating flexibility without additional external controls.

## Your environmental choice

The Vitodens 200 is your efficient and environmentally-friendly choice for all applications. The low-emission MatriX cylinder burner guarantees clean, low-NOx combustion, while Lambda Pro ensures the highest efficiency at all times. With the Vitodens 200 you can actively contribute to protecting the environment, while protecting your wallet too.

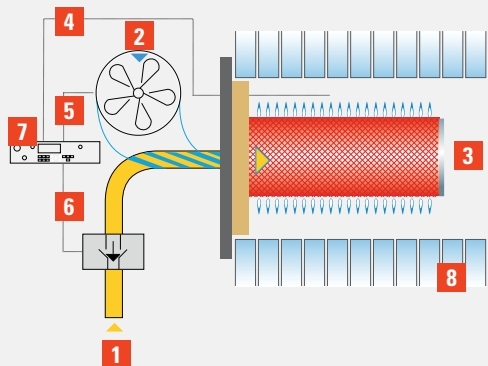


- 1** Inox-Radial heat exchanger
- 2** Modulating MatriX cylinder burner
- 3** Vitotronic on-board system control



### What is Lambda Pro?

By continuously monitoring the flame quality of the Matrix cylinder burner, the Lambda Pro combustion management system can ensure maximum efficiency by automatically adjusting the gas and combustion air ratio. Without any manual adjustments or conversions, the Vitodens 200 always performs at optimal efficiency.



- |                          |                      |
|--------------------------|----------------------|
| 1 Gas supply             | 5 Air signal         |
| 2 Combustion air         | 6 Gas signal         |
| 3 Matrix cylinder burner | 7 Vitotronic control |
| 4 Flame signal           | 8 Heat exchanger     |

### Specifications

- Viessmann made SA240 316Ti stainless steel Inox-Radial heat exchanger constructed to CSA B51 and ASME Section IV
- Viessmann made stainless steel Matrix cylinder burner
- 7 models from 31 to 370 MBH (single-boiler installation)
- A.F.U.E. rating of 96.1% (models WB2B 19-80)
- Premium boiler suitable for all applications
- Suitable for altitude levels of up to 10,000 ft. / 3,000 m.

For technical data, see page 10.

### Benefits at a glance

- Best value with leading technology and the most standard features.
- Fast installation and reduced maintenance with Lambda Pro - Industry-first intelligent combustion management system.
- Lasting performance with proven Viessmann stainless steel Inox-Radial heat exchanger.
- Low-emission combustion with Viessmann stainless steel Matrix cylinder burner for natural gas or propane.
- Powerful and user-friendly Viessmann Vitotronic on-board multi-function outdoor reset boiler and system control.
- Greater venting flexibility with vent length up to 180' and multiple venting options.
- Extremely quiet operation - quieter than most refrigerators.
- Limited lifetime warranty in residential applications.

# Solar Heating – Hot Water, Naturally.

Solar thermal systems are ideal for integration with your new gas-fired condensing boiler and can lower your energy costs even further.



Vitosol 200-F flat plate solar collectors.

By integrating a high-performance solar thermal system, solar energy is used to heat or preheat your home's domestic hot water (DHW), and in some cases, supplement your space heating. Depending on the size of the solar system, you can offset your DHW heating costs by as much as 60% and reduce your CO<sub>2</sub> emissions by up to 1 ton/year.

## How it works

The transfer fluid inside the high-performance solar collectors is heated by solar radiation. The fluid is pumped to a heat exchanger immersed in the storage tank where the heat is transferred to the drinking water or heating circuit. The cooled transfer fluid is then routed back to the solar collectors and the cycle is repeated.

## High performance solar systems

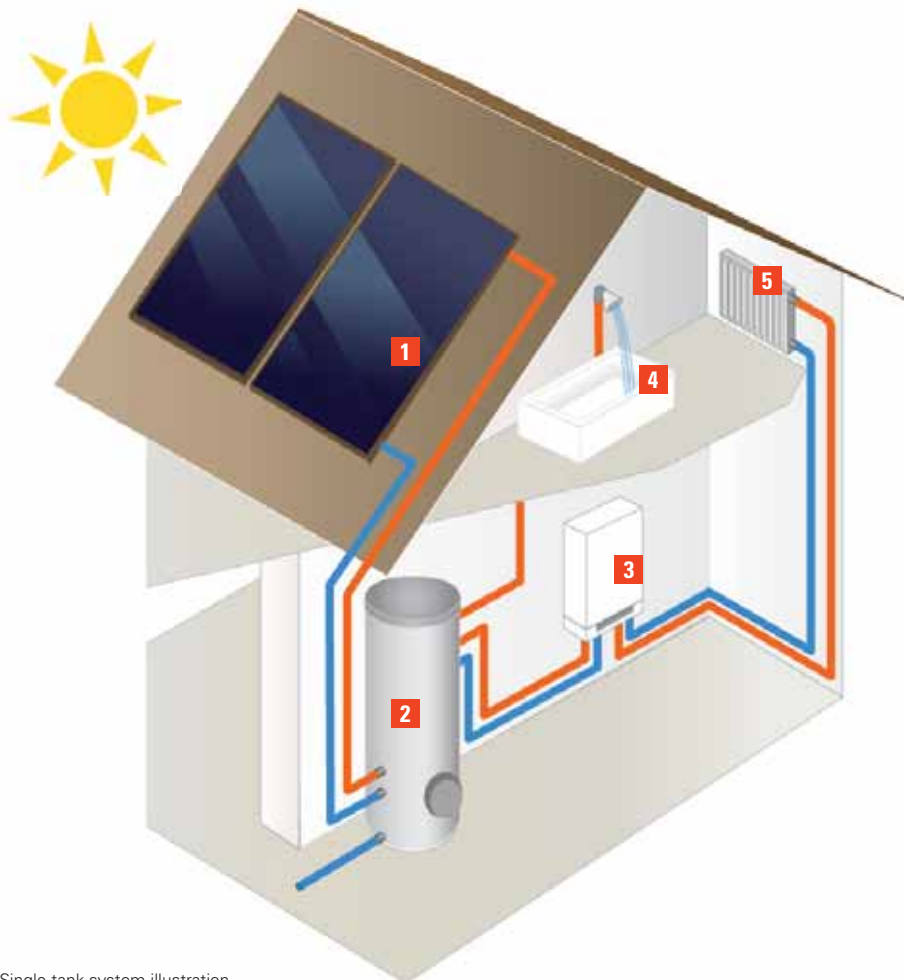
Built on more than 30 years of experience, our high-performance flat plate and vacuum tube solar collectors and system components deliver superior year-round performance in a variety of applications. Plus, for residential installations, we offer complete solar system packages that simplify ordering and installation.

## Integration with an indirect-fired hot-water tank

If your home uses a hot water based heating system, you have the option of an integrated single-tank system (see illustration on page 8 and description on page 9). Using a dual-coil storage tank, both the solar collectors and gas-fired condensing boiler contribute to DHW production.

## Integration with a direct-fired hot water tank

If your home does not use a hot water based heating system, you can still easily integrate solar into your existing DHW heating system. The solar collectors heat water in a dedicated, single-coil storage tank, which feeds into your home's existing DHW tank or instantaneous hot water heater. By preheating, your system will require less energy, saving you money and reducing your environmental footprint.



Single-tank system illustration.

- 1 High-performance solar thermal collectors
- 2 Dual-coil storage tank
- 3 High-efficiency gas-fired condensing boiler
- 4 Reliable supply of domestic hot water
- 5 Hot water space heating system



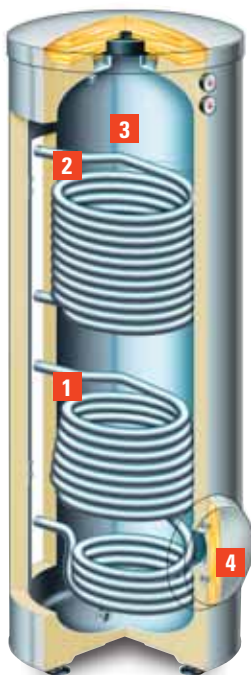
# Hot Water for Less

Let your new gas-fired condensing boiler heat your home's domestic hot water and save up to 50%.\*

Integrating indirect-fired domestic hot water (DHW) heating with your gas-fired condensing boiler can save as much as 50% in operating costs when compared to conventional direct-fired hot water production. Our complete line of DHW storage tanks offers high-quality construction and fast recovery rates for an abundant supply of DHW at all times. Plus, with thick thermal insulation, your DHW is guaranteed to stay hot. In addition to vertical and horizontal DHW storage tanks, choose from economical enamel-lined or premium stainless steel construction for a variety of applications.

## Your economical choice

The Vitocell 100 Series meets all demands for comfortable and economical DHW heating. With steel construction, Ceraprotect enamel coating and a magnesium anode, the Vitocell 100 ensures operational reliability and a long service life. Single-coil tanks are available in 4 sizes from 42 to 120 USG. Dual-coil tanks for use in solar thermal applications are available in 2 sizes, 79 and 120 USG.



## Your premium choice

Vitocell 300 tanks are made from corrosion-resistant, high-alloy stainless steel to satisfy the most stringent hygiene standards. With its premium-quality construction, the Vitocell 300 offers long-term, reliable operation and comes with a lifetime warranty. Vitocell 300 tanks meet the stringent standards required to carry the Environmental Choice logo. Single-coil tanks are available in 7 sizes from 42 to 120 USG. Dual-coil tanks are available in 2 sizes, 79 and 120 USG.



## Solar hot water heating

Our dual-coil solar tank allows both the solar collectors and gas-fired condensing boiler to produce your home's DHW. Solar heat is transferred using the lower coil, while back-up heat is supplied by the heating boiler, as required, via the upper coil (see illustration). By using solar energy to help generate your home's DHW, you can further lower your heating bill without compromising your hot water supply (see page 3).

## Dual-coil solar tank

- 1 Lower-coil: Heat is transferred from the solar collectors to the tank water
- 2 Upper-coil: Additional heat supplied by the high-efficiency boiler
- 3 Stainless steel construction (Vitocell 300)
- 4 Clean-out opening

\*When compared to a conventional direct-fired domestic hot water storage tank.

# Technical Specifications



## Vitodens 100 wall-mounted condensing boiler



<b>Model</b>	WB1B	<b>26</b>	<b>35</b>
<b>Rated input</b>	MBH	37-91	37-118
<b>Efficiency</b>	% A.F.U.E.	95.2%	95.2%
<b>Altitude Levels</b>	ft.	up to 10,000	up to 10,000
<b>Dimensions</b> (inches)	Depth	14 1/8	14 1/8
	Width	15 3/4	15 3/4
	Height	28 1/2	28 1/2
<b>Weight</b>	lbs	78	78



## Optional Combi**PLUS** Kit for on-demand DHW



<b>Connected to Model</b>	WB1B	<b>26</b>	<b>35</b>
<b>DHW Supply Temperature</b>	°F / °C	140/60	140/60
<b>Continuous Draw Rate</b>	USG/h	156†	216†
<b>Dimensions</b> (inches)	Depth	9.8	9.8
	Width	17	17
	Height	8.7	8.7
<b>Weight</b>	lbs	25	25
<b>Min./Max. distance between boiler and CombiPLUS</b>	Inches	11.5/36	11.5/36

† At a 63 °F maximum temperature rise.



## Vitodens 200 wall-mounted condensing boiler



<b>Model</b>	WB2B	<b>19</b>	<b>26</b>	<b>35</b>	<b>45</b>	<b>60</b>	<b>80</b>	<b>105</b>
<b>Rated input</b>	MBH	31-67	31-93	31-125	60-160	60-212	104-285	104-370
<b>Efficiency*</b>	% A.F.U.E.	96.1%	96.1%	96.1%	96.1%	96.1%	96.1%	94.5%*
<b>Altitude Levels</b>	ft.	up to 10,000						
<b>Dimensions</b> (inches)	Depth	14	14	14	15	15	21	21
	Width	17 3/4	17 3/4	17 3/4	19	19	19	19
	Height	33 1/2	33 1/2	33 1/2	33 1/2	33 1/2	33 1/2	33 1/2
<b>Weight</b>	lbs	102	102	102	155	155	225	225

\* CSA thermal and combustion efficiency ANSI Z.21.13/CSA 4.9

# Viessmann - The Company

## Viessmann - climate of innovation

The Viessmann brand promise concisely expresses all that we hope to achieve. It is our key brand message and, together with our brand label, an identifying feature throughout the world. "Climate of innovation" is a promise on three levels: It is a commitment to a culture of innovation. It is a promise of high product utilization and, at the same time, an obligation to protect the environment.

## Comprehensive range of products and services for all fuel types

Viessmann is one of the leading international manufacturers of heating systems and, with its comprehensive range of products and services, offers individual solutions of efficient systems for all applications and fuel types. As an environmental pioneer, the company has been supplying particularly efficient and clean heating systems for decades.

## Acting in a sustainable manner

For Viessmann, to take responsibility, means a commitment to act in a sustainable way. This means bringing ecology, economy and social responsibility into harmony with each other, ensuring that current needs are satisfied without limiting the basis for life for the generations to come.

## Efficiency program

With our efficiency program, Viessmann shows that the political goals set for 2020 with regard to climate and energy can already be achieved today with commercially available technology.

This project demonstrates:

- Environmental protection
- Efficiency with resources
- Securing manufacturing sites for the future

As a result, fossil fuels have been cut by 40 percent and CO<sub>2</sub> emissions reduced by a third.



## Deutscher Nachhaltigkeitspreis

Deutschlands nachhaltigste Marke 2011

Viessmann won the German Sustainability Award 2011 for its commitment to climate protection and efficient use of resources.



For the particularly efficient utilization of energy through the innovative heat recovery center at the company's main site in Allendorf/Eder, Viessmann was rewarded with the Energy Efficiency Award 2010.

## Viessmann Werke GmbH & Co. KG

### Company details

- Established in: 1917
- Employees: 9600
- Group turnover: \$2.4 billion USD
- Export share: 55 percent
- 16 factories in Germany, France, Canada, Poland, Hungary, Austria, Switzerland and China
- Sales organization in 37 countries
- 120 sales offices worldwide
- 3 service providers

### Performance spectrum

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

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