Gas Condensing Technology

VITODENS® 100-W

Space Heating and On-Demand DHW with Combi boiler

VIESSMANN®
climate of innovation®

Inspections Division
Date: 02/27/18

Heating Systems

Industrial Systems

Refrigeration Systems

Vitodens 100-W – 21 to 125 MBH
Space Heating and On-Demand DHW with Combi boiler

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Stainless steel, Viessmann-made Inox-Radial heat exchanger

Low-emission, Viessmann-made MatriX cylinder burner

Backlit LCD touchscreen

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

Reliable and consistent performance
Stainless steel is the best choice for long-term reliability. That's why the Vitodens 100-W 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 maximize performance and reliability. Plus, the "self-cleaning" heat exchanger contributes to the boiler's long service life and dependable performance.

Outstanding versatility
The Vitodens 100-W 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.

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.

User-friendly touchscreen control unit
The Vitodens 100-W gas condensing boilers are controlled by the new, one hand touchscreen control with enhanced programming. The backlit LCD touchscreen display offers excellent readability even under poor lighting conditions.

On-demand DHW with Vitodens 100-W, B1KA Combi boiler
High-efficiency domestic hot water (DHW) and space heating are now combined in the new Vitodens 100-W, B1KA Combi boiler. Say goodbye to your DHW tank and experience reliable hot water all day long with an outstanding flow rate of up to 3.7 GPM†, plus added cost savings with the energy-saving on-demand indirect-fired design. Installation is easy with the new Combi boiler as the stainless steel heat exchanger, pressure bypass valve, DHW temperature and flow sensors, 3-speed pump and 3-way diverting valve are built-in to form one compact, lightweight, space saving unit.

Capacities (NG Inputs) Btu/h

Optimized load matching with up to 7:1 turndown ratio

† At a 69 °F maximum temperature rise with Vitodens 100, B1KA 35

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Vitodens 100-W,
B1KA Combi boiler

1. Stainless steel Inox-Radial heat exchanger
2. Modulating MaxtriX cylinder burner
3. Integral heating expansion tank (B1KA Combi boiler only)
4. Variable speed combustion fan for quiet and economical operation
5. Integrated pump
6. Plate heat exchanger for convenient DHW heating (B1KA Combi boiler only)
7. Backlit LCD touchscreen

Benefits at a glance — Vitodens 100-W, B1HA

- Fits any home and budget with high performance at an attractive price
- Outstanding efficiency of 95% A.F.U.E. on all models
- Fully-modulating input eliminates energy waste
- Lasting performance with proven Viessmann stainless steel Inox-Radial heat exchanger constructed to CSA B51 and ASME Section IV
- Low-emission combustion with fully-modulating Viessmann stainless steel MatriX cylinder burner for natural gas or propane; factory calibrated
- User-friendly backlit LCD touchscreen boiler control with vent length up to 200' and multiple venting options; rigid and flexible PP(s) vent options
- Suitable for altitude levels of up to 10,000 ft. / 3,000 m
- Simple to install and service with 4 pipe hydronic connection design with built-in primary pump and diverter valve
- Extremely quiet operation; quieter than most refrigerators
- Limited lifetime warranty in residential applications
- Ideal application for apartments, condos, cottages, single-family homes, or installs where space is at a premium

Benefits — Vitodens 100-W, B1KA Combi boiler

- All the benefits of a Vitodens 100-W boiler, plus built-in on-demand domestic hot water (DHW) – no need for an additional storage tank
- DHW at the snap of your fingers all day long! Up to 3.7 GPM†
- Optimized load matching with up to 6:1 turndown ratio
- Energy-saving and low-cost, on-demand indirect-fired DHW production
- Conforms to NSF/ANSI 372 for Low Lead Content
- Quality you can count on! Stainless steel heat exchanger, built-in pressure bypass and 150 psig working pressure rating (on DHW side only)
- Reliable and consistent DHW supply with built-in DHW temperature and flow sensors
- Complete space / DHW heating management by boiler control, powerful built-in 3-speed pump and diverting valve

Technical Specifications

Vitodens 100-W B1HA, B1KA

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Front view Side view

Top view

Dimensions

a	¼″ - both sides of the boiler
b	15 ¾″
c	2 ⅝″
d	27 ½″
e	4 ⅞″
f	6″
g	15 ¾″
h	5″
i	9 ⅜″ minimum
j	1 ⅛″
k	7 ⅞″
l	3 ⅛″
m	2 ¼″

Vitodens 100-W, B1HA series and B1KA Combi boiler

Legend

A Condensate drain, plastic hose Ø 0.87″
B Boiler water supply, NPT ¾″ (male thread)
C Gas connection, NPT ¾″ (male thread)
D Boiler water return, NPT ¾″ (male thread)
E Combustion air opening for double pipe system
F Combustion air opening for coaxial system
G - For B1HA series, DHW tank heating supply
- For B1KA combi, DHW
H - For B1HA series, DHW tank heating return
- For B1KA combi, DCW
I Opening for pressure relief valve

Legend

Ⓐ - DHW tank heating supply for B1HA boilers
- DHW for B1KA boiler
Ⓑ - DHW tank heating return for B1HA boilers
- DCW for B1KA boiler

BWR Boiler water return
BWS Boiler water supply
BD Boiler drain
BF Boiler fill
GC Gas connection
PRV Pressure relief valve
PG Pressure gauge
VC Venting connection
TG Temperature gauge
* Field supplied

Standard boiler equipment includes

- wall-mount boiler and installation fittings c/w 30 psig relief valve
- pressure gauge
- gas shut-off valve
- two fill/drain valves
- all mounting hardware
- outdoor temperature sensor
- tank temperature sensor (B1HA)
- DHW 150 psi relief valve (B1KA)

Vitodens 100-W B1HA, B1KA

Vitodens		B1HA	B1HA	B1KA
Model		**26**	**35**	**35**
Maximum Input (NG)	MBH	94	125	125
Minimum input (NG)	MBH	21	21	21
NET AHRI Rating	MBH	76	101	101
AFUE	%	95	95	95
Overall Dimensions				
Depth	inches	15.75	15.75	15.75
Width	inches	15.75	15.75	15.75
Height	inches	30.25	30.25	30.25
Weight	lbs	79.4	79.4	90
Boiler water content	USG	1.02	1.02	1.02
Heat exchanger surface	ft^2	12.96	12.96	12.96
Maximum operating pressure	psig	45	45	45
Minimum gas supply pressure				
Natural Gas	″w.c.	4	4	4
LPG	″w.c.	10	10	10
Boiler water temperature maximum	°F	176	176	176
Adjustable high limit (AHL) range space heating (steady state)	°F	86-176	86-176	86-176
Boiler connections				
Gas valve connection	NPTM	¾	¾	¾
Boiler heating supply and return	NPTM	¾	¾	¾
Boiler flue gas connection	Ø inches	2 ⅜	2 ⅜	2 ⅜
Combustion air suppy connection				
2-Pipe	Ø inches	2 ⅜	2 ⅜	2 ⅜
Coaxial	Ø inches	4	4	4

± At a 69° maximum temperature rise

ENERGY STAR Energy Verified

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Technical information subject to change without notice.
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