

Gas Condensing Technology
VITOCROSSAL 300, CA3B

VIESSMANN



A practical approach to innovation

With its unique synthesis of proven Viessmann technology and innovative features, the Vitocrossal 300, CA3B takes a bold step forward while retaining the superior Viessmann quality you know and trust. The boiler combines unparalleled flexibility with maximum efficiency, making it your ideal choice for a new installation or economical retrofit in multi-family, commercial or light industrial applications.

Viessmann technology from top to bottom

Our fully-modulating pre-mix cylinder burners feature a wide modulation and combined burner turndown ratio of up to 15:1, precisely matching the load to provide, efficient, clean, quiet, and environmentally friendly operation. The burners come fully assembled and installed for ease of commissioning.

The SA240 316Ti stainless steel Inox-Lamellar heat exchanger surface provides maximum heat extraction while maintaining a compact size. Its smooth, corrosion-resistant surfaces allow condensate to simply run off – a “self-cleaning” process that ensures continuous condensing efficiency, reduced maintenance costs and longevity. The 160 psi pressure rating allows for this unit to be installed in almost any building.

Viessmann combines these technologies in the Vitocrossal 300, CA3B to achieve outstanding thermal efficiencies over 96% on all models and deliver exceptional performance and reliability at an attractive price.

Progressive design features

The Vitocrossal 300, CA3B can operate with a low inlet gas pressure of only 4 inches of water column (NG) eliminating the need for gas boosters without any derations regarding boiler output. With extremely low water pressure drop, the heat exchangers are ideal for variable primary systems and eliminating the need for a dedicated boiler pump. The boiler’s large water content reduces wasteful burner cycling which increases system efficiency and overall durability.

User-friendly control system

The Vitotronic 300, GW6C control system is an advanced digital boiler and system control with outdoor reset function that ensures reliable, efficient performance of the entire heating system. The Vitotronic 300 GW6C will modulate stages and rotate burners to meet the heating systems load. The control will regulate supply water temperature for one high temperature circuit, two mixing valve circuits and one DHW circuit with the standard control package.

A versatile solution

The Vitocrossal 300, CA3B offers a solution for almost every application, such as, multiple venting options and seamless integration into building management systems (BMS). The Vitocrossal 300, CA3B comes fully assembled and easy to install, even in older buildings with narrow entrances and small mechanical rooms. Suitable for high altitude operation up to 10,000 feet, the sky is the limit for the Vitocrossal 300, CA3B.

Multiple-boiler systems

The built-in Vitotronic 300 GW6C cascade control system is simple to control and automatically stages burners and rotates boilers to match the heating loads up to 12,000 MBH. For larger systems, in addition to these features, Viessmann offers custom boiler controls for virtually unlimited capacities and additional options such as real time system loading, VFD pump outputs, BTU metering and efficiency trending.

Dual Fuel: Switch from Natural Gas (NG) to LP

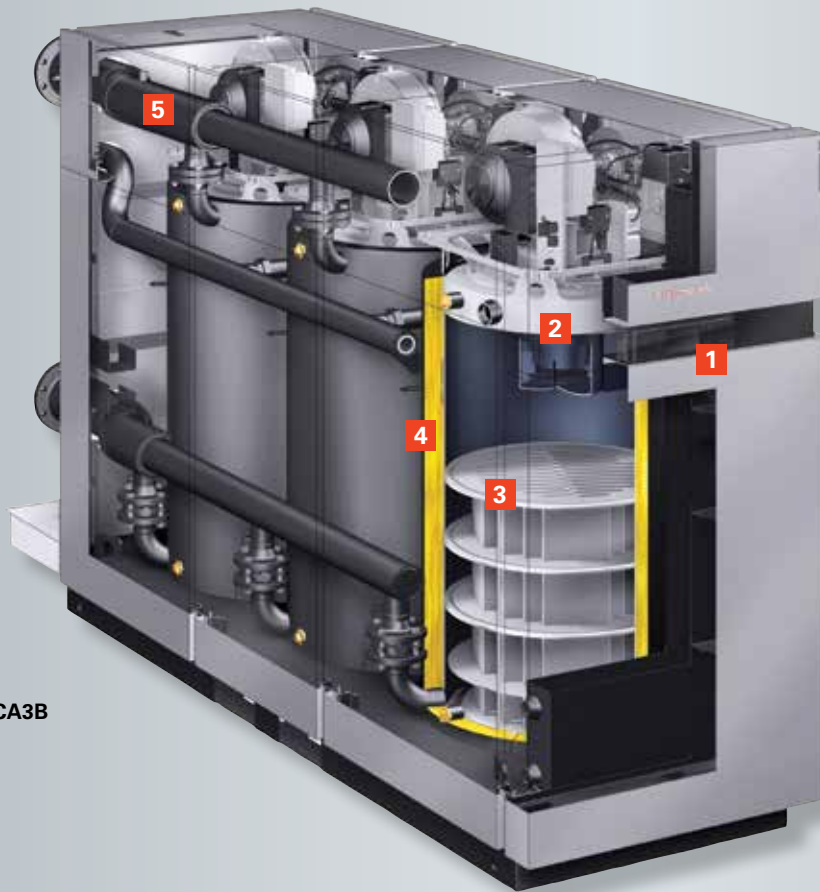
Dual Fuel is a feature that maintains normal operation in critical care applications such as nursing homes, hospitals, educational institutions, industrial operations and more. The Vitocrossal 300 CA3B provides the ability to easily switch from Natural Gas (NG) to LP at the simple turn of a key.



Vitotronic 300, GW6C control system



Dual Fuel enables easy changeover from NG to LP at the simple turn of a key



Vitocrossal 300, CA3B

- 1 Vitotronic 300, GW6C control system
- 2 Fully-modulating pre-mix cylinder burner
- 3 Inox-Lamellar heat exchanger surfaces
- 4 Highly effective thermal insulation
- 5 Wide water passageways with low pressure drop

Specifications

- Certified BTS 2000 $\geq 96\%$
- Single inputs from 250 up to 6,000 MBH
- Cascade system inputs up to 90,000 MBH
- ASME CSD-1 compliant



SA240 316Ti Stainless Steel
Inox-Lamellar heat exchanger



Low-emission fully-modulating
pre-mix cylinder burner

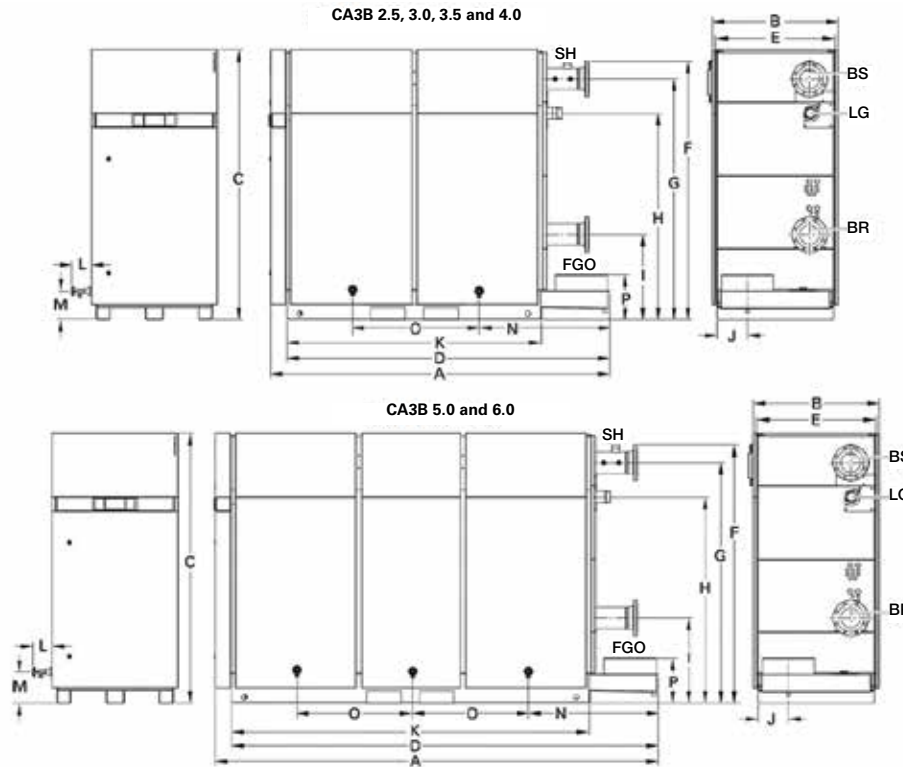
Benefits at a glance

- **NEW** Easy-to-remove front door allows for reduced clearances and simplifies installation in smaller spaces.
- **NEW** Easy changeover from NG to LP at the simple turn of a key (Dual Fuel boiler models only)
- **NEW** Burners and supply header can be easily removed to facilitate transportation through smaller doorways
- Low emissions and quiet operation from fully-modulating Viessmann pre-mix cylinder burners (up to 3)
- Total burner modulation turndown ratio of up to 16:1 precisely matches building load
- The fully assembled boiler simplifies installation and commissioning
- Flexibility for venting through sidewall or chimney applications up to 198 ft (equivalent length) for sealed combustion or room air dependent.
- Common venting up to four boilers*
- Low inlet gas pressure capability as low as 4" W.C. (NG) for compatibility with a range of supply pressures and no deration regarding boiler output
- Large water content extends burner run time and reduces cycling
- No dedicated boiler pump required due to extremely low water pressure drop through heat exchanger and no minimum flow requirement
- Vitotronic 300 GW6C can be used as a single boiler control or as a cascade primary/secondary control system
- Seamless integration with building management systems

* in accordance with local codes and regulations of authorities having jurisdiction

Technical Specifications

Vitocrossal 300, CA3B Gas-fired Condensing Boiler



Dimensions			
Boiler Model	2.5 and 3.0	3.5 and 4.0	5.0 and 6.0
A	88 ¼	99 ½	136
B	34	39 ½	39 ½
C*	78 ¼	84	84
D	85 ½	96 ½	133
E	31 ½	37	37
F*	73 ¾	79	5.0 - 79 ½ 6.0 - 79 ¾
G*	69 ¼	74 ½	5.0 - 79 ¼ 6.0 - 74 ¼
H*	55 ½	55 ½	55 ½
I*	26 ¼	26 ¼	26 ¼
J	12 ¼	9 ¾	9 ¾
K	71 ½	79 ¾	111 ¼
L	6	6	6
M*	11 ¼	11 ¼	11 ¼
N	35	40	44
O	28 ¾	32 ¼	32 ¼
P*	14	14	14

* Heights do not include the concrete pad or seismic brackets.
Seismic brackets will add 2 ¾ inches.

Legend

SH	Safety header
BS	Boiler supply
NG	Natural gas connection
BR	Boiler return
FGO	Flue gas outlet (vent pipe connection)

Vitocrossal 300, CA3B

Model		2.5	3.0	3.5	4.0	5.0	6.0
Maximum Input	MBH	2500	3000	3500	4000	5000	6000
Minimum Input	MBH	250	300	300	400	300	400
Net AHRI Rating	MBH	2089	2506	2924	3342	4178	5013
Combustion Efficiency	%	94.1*	94.1*	94.1*	94.1*	94.1*	94.1*
Thermal Efficiency	%	96.1*	96.1*	96.1*	96.1*	96.1*	96.1*
Weight Complete with the burners, control, thermal insulation and jacketing	lbs	4233	4233	4696	4806	6261	6894
Boiler Water Content	USG	108	108	151	143	227	218
Heat exchanger surface	ft ²	142.7	142.7	170.2	192.5	244.1	288.8
Maximum Operating Pressure	PSI	160	160	160	160	160	160
Boiler Water temperature maximum	°F	210	210	210	210	210	210
Adjustable high limit (AHL) range space heating (steady state)	°F	203	203	203	203	203	203
Gas valve connection (NG)	Ø inches	2.5	2.5	2.5	2.5	3	3
Boiler heating supply and return	Ø inches	4	4	4	4	4	6
Boiler Flue gas connection	Ø inches	10	10	12	12	16	16
Optional Common Combustion Air Supply connection	Ø inches	10	10	12	12	16	16
Power Consumption at max input NG	Amp	20	20	20	20	20	20

* Tested to ANSI/AHRI standard 1500 Performance Rating of Commercial Space Heating Boilers / DOE Test Procedure 81 FR 89276 / U.S. Standards ANSI Z21.13/CSA 4.9 / AHRI, BTS-2000 Testing Standard Method to determine the efficiency of Commercial Heating Boilers.



Technical information subject to change without notice.

9442732-01 2018 Printed in USA

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