

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 16:1, precisely matching the load to provide 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% 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. With extremely low water pressure drop, the heat exchangers are ideal for variable primary systems 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 input and rotate boilers to meet the heating system's 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

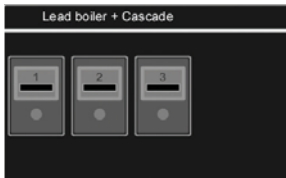
The Vitocrossal 300, CA3B offers a solution for almost every application, such as, multiple venting options and seamless integration into building management systems (BMS). The Vitocrossal 300, CA3B comes fully assembled and easy to install, even in older buildings with narrow entrances and small mechanical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

### Multiple-boiler systems

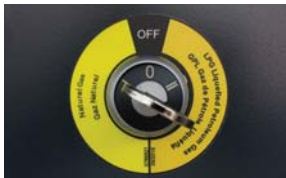
The built-in Vitotronic 300 GW6C cascade control system is simple to control and automatically stages burners and rotates boilers to match the heating loads up to 16,000 MBH. For larger systems, in addition to these features, Viessmann offers custom controls for virtually unlimited cascaded capacities and additional options such as real time system loading, variable speed pump control, BTU metering and efficiency trending.

### Dual Fuel: Switch from NG to LP

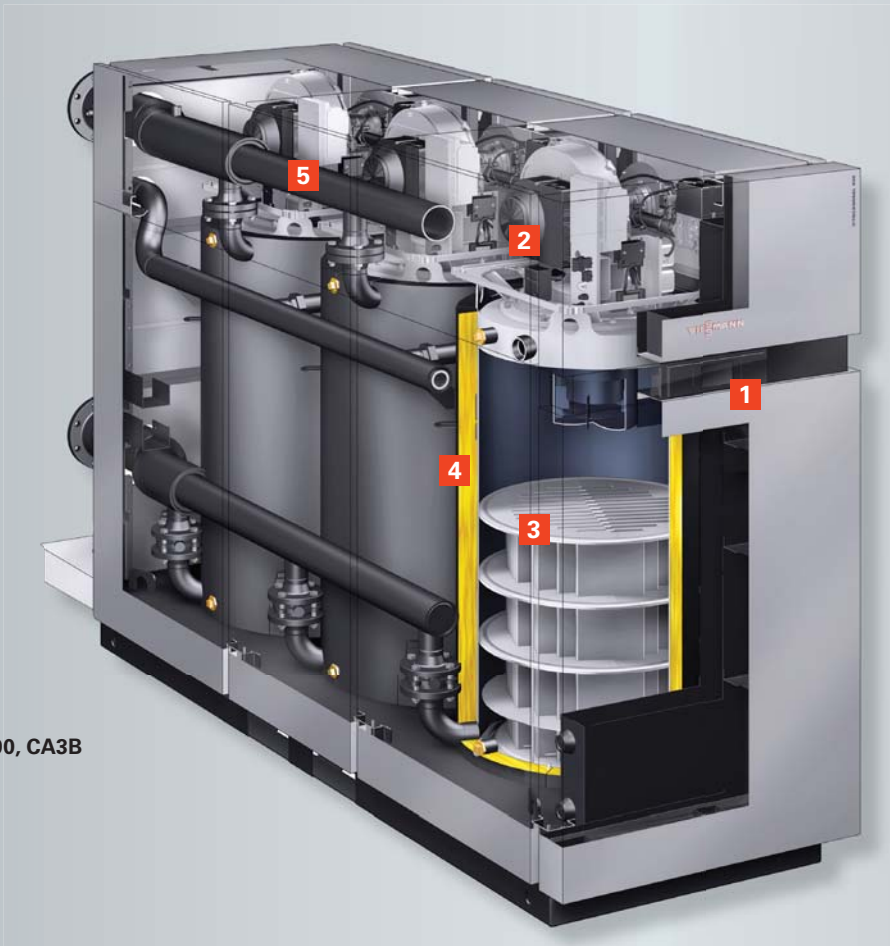
Dual Fuel is a feature that maintains normal operation in critical care applications, such as hospitals, nursing homes, educational facilities, industrial operations and more. The Vitocrossal 300, CA3B provides the ability to easily switch from Natural Gas (NG) to Liquid Propane (LP) with a simple turn of a key. The quick and seamless changeover from one gas type to the other ensures mechanical operations continue without interruption.



Vitotronic 300, GW6C control system



Dual Fuel models enable quick and easy changeover from NG to LP with a simple turn of a key

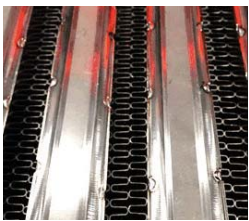


Vitocrossal 300, CA3B

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

### Specifications

- Thermal efficiencies of 96%†
- Single inputs from 250 up to 6,000 MBH
- Cascade system inputs of > 90,000 MBH (with Vitocontrol-S)
- ASME CSD-1 compliant



SA240 316Ti Stainless Steel  
Inox-Lamellar heat exchanger



Low-emission fully-modulating  
pre-mix cylinder burner

### Benefits at a glance

- 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 load per boiler
- The fully assembled boiler simplifies installation and commissioning
- Easy-to-remove front door allows for reduced clearances and simplifies installation in smaller spaces
- Flexibility for venting through the sidewall or chimney applications and combustion air options of sealed combustion or room dependent
- Common venting up to four boilers
- Easy changeover from NG to LP with a simple turn of a key (Dual Fuel models)
- Low inlet gas pressure capability as low as 4" w.c. (NG) for compatibility with a range of supply pressures
- 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
- 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
- Burners and supply header can be easily removed to facilitate transportation through smaller doorways

† Tested to ANSI/AHRI standard 1500 Performance Rating of Commercial Space Heating Boilers, BTS-2000. Technical information subject to change without notice.

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## Technical Data



### Vitocrossal 300, CA3B gas-fired condensing boiler

Model	CA3	2.5	3.0	3.5	4.0	5.0	6.0
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*
Minimum Input (NG)	MBTu	250	300	300	400	300	400
Maximum Input (NG)	MBTu	2500	3000	3500	4000	5000	6000
Output	MBTu	2402	2883	3363	3844	4805	5766
Maximum Operating Pressure	psig	160	160	160	160	160	160
Power Requirements †		120V/1Ph	120V/1Ph	120V/1Ph	120V/1Ph	208V/3Ph	208V/3Ph

#### CA3B Single Fuel (SF)

##### Overall Dimensions assembled

Width	inches	34	34	39 1/2	39 1/2	39 1/2	39 1/2
Height	inches	78 3/4	78 3/4	84	84	84	84
Length	inches	88 3/4	88 3/4	99 1/2	99 1/2	136	136
Dry Weight (burner, control, insulation and jacketing)	lbs	4233	4233	4696	4806	6261	6894
Boiler Water Content	USG	108	108	151	143	227	218
Heat Exchanger Surface ft. <sup>2</sup>	ft. <sup>2</sup>	142.7	142.7	170.2	192.5	244.1	288.8
Flue Outlet Size	dia	10	10	12	12	16	16

#### CA3B Dual Fuel (DF)

##### Overall Dimensions assembled

Width	inches	39 3/8	39 3/8	39 3/8	39 3/8	39 3/8	39 3/8
Height	inches	84	84	84	84	84	84
Length	inches	99 1/2	99 1/2	99 1/2	99 1/2	136	136
Dry Weight (burner, control, insulation and jacketing)	lbs	4641	4641	4751	4861	6325	6958
Boiler Water Content	USG	158	158	151	143	227	218
Heat Exchanger Surface ft. <sup>2</sup>	ft. <sup>2</sup>	147.9	147.9	170.2	192.5	244.1	288.8
Flue Outlet Size	dia	12	12	12	12	16	16

† Other options available. See technical data manual for details.

\*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.

