



GAS CONDENSING BOILER

A Practical Approach To Innovation

VITOCROSSAL 300, CA3B



Gas condensing boiler with fully-modulating pre-mix cylinder burner for commercial, multi-family, and light industrial applications.

2500 to 6000 MBH

With its unique synthesis of proven technology and innovative features, the Vitocrossal 300, CA3B takes a bold step forward while retaining the superior Viessmann quality you know and trust.



The Vitocrossal 300, CA3B offers gas-fired condensing technology with fully-modulating pre-mix cylinder burner.

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. This matches the load to provide clean, quiet and environmentally friendly operation. The burners come fully assembled and installed for ease of commissioning.

The SA240 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, creating 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.

With the Vitocrossal 300, CA3B, Viessmann offers outstanding thermal efficiencies over 96% and delivers 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 low water pressure drop, the heat exchangers are ideal for variable primary systems and eliminate the need for a dedicated boiler pump. The boiler’s large water content reduces wasteful burner cycling, thereby increasing system efficiency and overall durability.

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, which makes it easy to install, even older buildings with narrow entrances or small mechanical rooms. Suitable for high altitude operation of up to 10,000 feet, the sky's the limit for the Vitocrossal 300, CA3B.

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 (must be pre-ordered).



Low-emission fully-modulating pre-mix cylinder burner

SPECIFICATIONS

- + Certified BTS 2000 >96%
- + Single inputs from 250 up to 6,000 MBH
- + Cascade system inputs up to 48,000 MBH with external Vitocontrol-S
- + ASME CSD-1 compliant

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 15:1 precisely matches load per boiler
- + The fully assembled boiler simplifies installation and commissioning
- + Flexibility for venting through the sidewall or chimney applications up to 100 ft. (equivalent length) and combustion air options of sealed combustion or room dependent
- + Common venting up to four boilers*
- + Gas fuel flexibility (NG/LPG/Dual Fuel**)
- + 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 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
- + 0-10 VDC temperature setpoint input



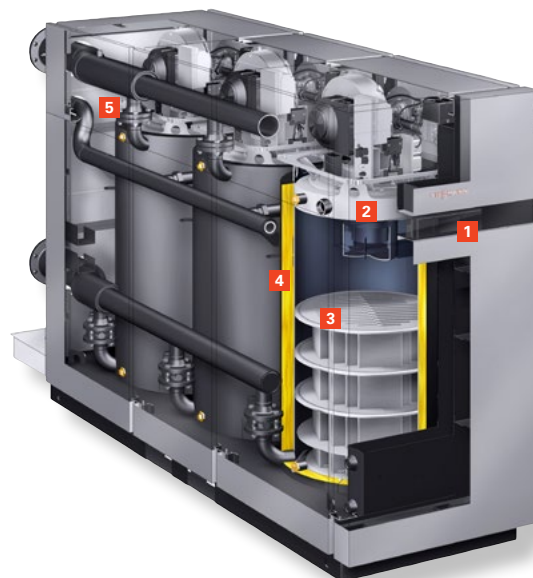
Vitotronic 300, GW6C control system

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 system's load. The standard control package will regulate supply water temperature for one high temperature circuit, two mixing valve circuits, and one DHW circuit.

Multiple-boiler systems

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



VITOCROSSAL 300

- 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

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VITOCROSSAL 300, CA3B

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Model	CA3B	CA3B 2.5	CA3B 3.0	CA3B 3.5	CA3B 4.0	CA3B 5.0	CA3B 6.0
Maximum Input	MBH	2500	3000	3500	4000	4000	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*
Output*	MBH	2400	2880	3360	3840	4800	5760
Overall Dimensions (Including insulation & jacketing)							
Width	inches	34	34	39.5	39.5	39.5	39.5
Height (Does not include boiler pad or seismic brackets)	inches	78.75	78.75	84	84	84	84
Depth (Length)	inches	88.75	88.75	99.5	99.5	136	136
Weight (Including burners, controls, insulation & jacketing)	lbs	4233	4233	4696	4806	6261	6894
Boiler Water Content	USG	108	108	151	143	227	218
Minimum Heat Exchanger Surface	ft. ²	142.7	142.7	170.2	193.5	244.1	288.8
Maximum Operating Pressure	PSI	160	160	160	160	160	160
Fixed Water Temperature Limit	°F	210	210	210	210	210	210
Adjustable Water Temperature Limit	°F	203	203	203	203	203	203
Boiler Water Supply/Return ANSI Flanges	ø inches	4	4	4	4	4	6
Gas Supply Connection (NG)	ø inches	2.5	2.5	2.5	2.5	3	3
Flue Gas Outlet Size ID	ø inches	10	10	12	12	16	16
Combustion Air Supply Size ID	ø inches	10	10	12	12	16	16
Power Supply	V / PH / Hz	120 / 1 / 160	120 / 1 / 160	120 / 1 / 160	120 / 1 / 160	208 / 3 / 60	208 / 3 / 60
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.

LEGEND

- (A) Supply header
- (B) Return header
- (C) Vitotronic 300 GW6C
- (D) Common supply water temperature limit switch 210°F (99°C)
- (E) Common flue gas temperature limit switch
- (F) Boiler section automatic motorized isolation valve
- (G) Flue gas collector cleanout and inspection port
- (H) Air vent
- (I) Viessmann cylinder burner (1 per section)
- (J) 160 psi maximum operating pressure
- (K) Boiler drains
- (L) Low water cutoff
- (M) Pressure and temperature gauge
- (N) Pressure relief valve
- (O) Boiler heat exchanger

