

Commercial Condensing Boilers

VITODENS® 200, Cascade Systems

VITOCROSSAL® 200, CM2

VITOCROSSAL® 300, CA3B



Vitodens 200 Cascade System

Cascade MBH Side: 160 - 4,240 MBH
Cascade: up to 8 boilers,



Vitocrossal 200, CM2

Single Boiler: 663 - 2,245 MBH
Cascade: up to 8 boilers.



Vitocrossal 300, CA3B

Single Boiler: 2,500-6,000 MBH
Cascade: Project Specific



VITODENS® 200, Cascade Systems

Prefabricated multiple boiler system with Vitodens 200-W gas-fired condensing boilers. Rated input: up to 4,240 MBH

The Vitodens 200-W cascade systems are ideal for small or difficult-to-access boiler rooms or facilities with narrow halls and stairwells. These cascade systems offer flexible installation with multiple manifold configurations: wall-mounted, floor standing, corner or back-to-back. A right or left-mount low-loss header acts as hydraulic break and helps eliminate air and debris.

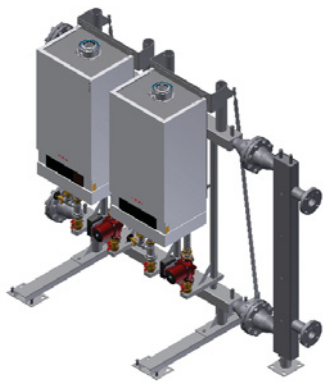
The Vitodens 200-W Cascade System packages include: primary loop manifold, primary/secondary flow decoupler (low loss header), boiler pumps, condensation neutralization kit, boiler plant cascade control, and floor mounted boiler installation kit.



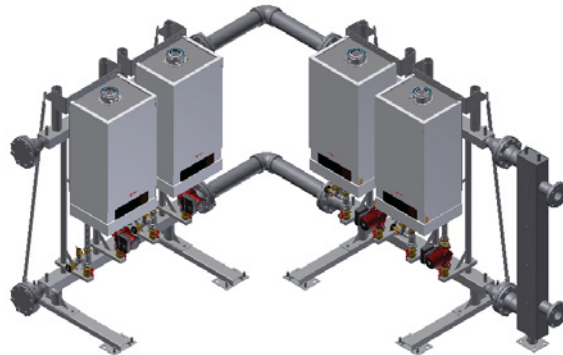
Technical Data

| Model | B2HB | | | | B2HA | | | |
|-----------------------------------|----------------|------------|------------|------------|------------|-------------|-------------|--|
| | 160 | 199 | 285 | 311 | 352 | 399 | 530 | |
| Min.- Max. Input (single boiler)* | MBH 32 - 160 | 32 - 199 | 71 - 285 | 71 - 311 | 71 - 352 | 113 - 399 | 113 - 530 | |
| Min.- Max. Input (multiple of 8)* | MBH 32 - 1,280 | 32 - 1,592 | 71 - 2,280 | 71 - 2,488 | 71 - 2,816 | 113 - 3,192 | 113 - 4,240 | |
| Weight (single boiler) | lbs 210 | 210 | 194 | 194 | 194 | 298 | 298 | |

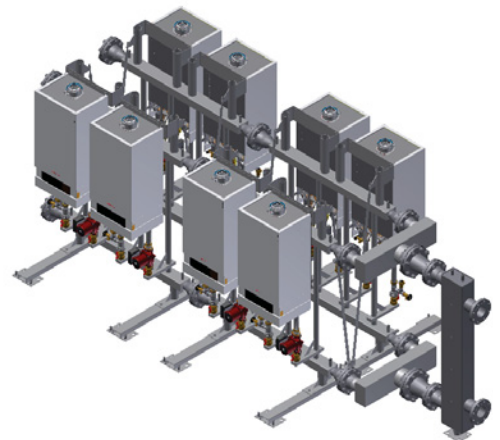
* Input based on natural gas



2-boiler cascade system



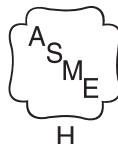
4-boiler cascade system in corner configuration



8-boiler cascade system in back-to-back configuration



Energy Verified



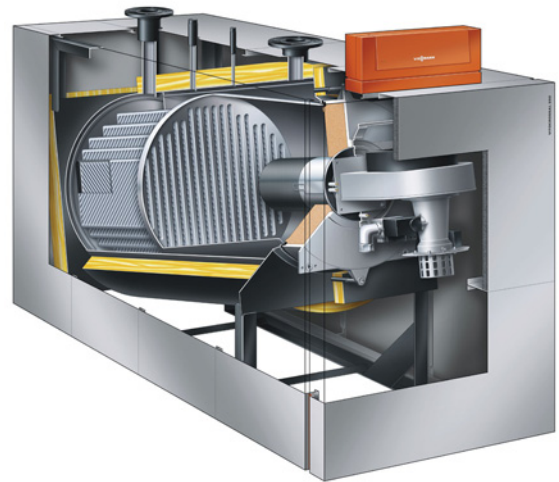
Technical information subject to change without notice.

VITOCROSSAL® 200, CM2

Gas-fired condensing boiler with fully-modulating pre-mix cylinder burner and 316Ti stainless steel fire-tube heat exchanger. Rated input: 133 to 2,245 MBH (single) / 17,960 MBH (cascade)

Benefits of this product include:

- Low inlet gas pressure capability as low as 4" w.c. (NG) provides compatibility with a range of supply pressures
- Burner modulation range of 5:1 allows to precisely match the load in combination with high water mass design of the boiler
- Optional low NOx certified by SCAQMD Natural Gas Models available
- All models are certified by AHRI



Technical Data

| Model | | CM2-186 | CM2-246 | CM2-311 | CM2-400 | CM2-500 | CM2-620* |
|--|------------------|---------|---------|---------|---------|---------|----------|
| Combustion Efficiency* | % | 95 | 95 | 95 | 95.1 | 95.1 | 95.1 |
| Thermal Efficiency* | % | 97 | 97 | 97 | 95 | 95 | 95 |
| Minimum Input (NG) | MBH | 131 | 175 | 222 | 287 | 358 | 450 |
| Maximum Input (NG) | MBH | 663 | 878 | 1,112 | 1,445 | 1,800 | 2,245 |
| Output† | MBH | 643 | 851 | 1,078 | 1,372 | 1,710 | 2,132 |
| Net AHRI Rating | MBH | 559 | 740 | 937 | 1,193 | 1,487 | 1,854 |
| Overall Dimensions† | | | | | | | |
| Width | in. | 36 ½ | 36 ½ | 36 ½ | 42 ¾ | 42 ¾ | 44 ¾ |
| Height | in. | 66 | 66 | 66 | 65 ¾ | 65 ¾ | 68 ¾ |
| Length | in. | 73 | 73 | 73 | 89 ½ | 95 ¾ | 100 ¾ |
| Weight (Dry weight of single boiler, complete with the burner, control and insulation) | lbs. | 726 | 759 | 792 | 1,495 | 1,662 | 1,929 |
| Boiler Water Content | USG | 81 | 77 | 74 | 104 | 112 | 131 |
| Heat Exchanger Surface Area | ft. ² | 72.9 | 98.8 | 121.5 | 166.6 | 208.6 | 234 |
| Maximum Operating Pressure | psig | 75 | 75 | 75 | 75 | 75 | 75 |
| Flue Outlet Size (Internal Diameter) | in. | 8 | 8 | 8 | 10 | 10 | 10 |
| Power Consumption | W | 225 | 278 | 368 | 540 | 700 | 900 |

* Tested to AHRI Testing Standard Method to Determine Efficiency of Commercial Space Heating Boilers, BTS-2000.

** All products on this table are certified to meet or exceed SCAQMD standards with the exception of CM2-620.

CM2-620TX is certified.

† Includes boiler with burner, boiler panels, thermal insulation, boiler control unit and electrical connection box. Note:

For high altitude installations (5,000 to 10,000 ft.), the input will have an altitude de-rating of 15% for 5,000 ft. and 18% for 10,000 ft.

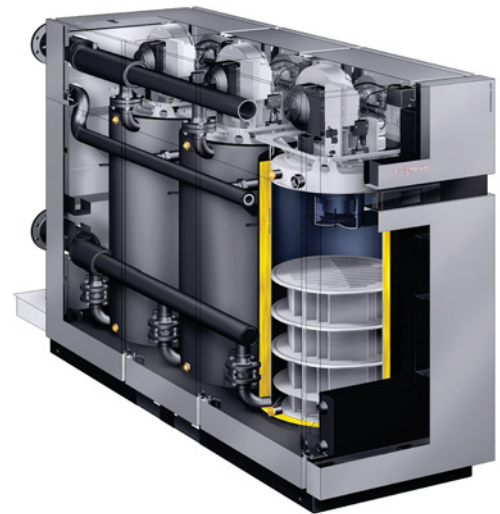


VITOCROSSAL® 300, CA3B

CA3B Series high-efficiency, gas-fired condensing boilers with multiple burner design. The Inox-Lamellar fire-tube style heat exchangers of the CA3B boilers are made of 316Ti grade Stainless Steel. Rated input: 2,500 to 6,000 MBH

Benefits of this product include:

- Low inlet gas pressure capability as low as 4" w.c. (NG) provides compatibility with a range of supply pressures
- Dual Fuel models offer easy changeover from NG to LP with a simple turn of a key
- Low emissions and quiet operation from fully-modulating Viessmann pre-mix cylinder burners (up to 3)
- Can be disassembled and reassembled* (Refer to Viessmann's technical CA3B Disassembly and Reassembly instructions)



Technical Data

| Model | | 2.5 | 3.0 | 3.5 | 4.0 | 5.0 | 6.0 |
|----------------------------|---------|-------|-------|-------|-------|-------|-------|
| Minimum Input (NG) | MBH | 250 | 300 | 300 | 400 | 300 | 400 |
| Minimum Input (LPG) | MBH | 495 | 495 | 495 | 660 | 495 | 660 |
| Maximum Input | MBH | 2,500 | 3,000 | 3,500 | 4,000 | 5,000 | 6,000 |
| Output | MBH | 2402 | 2883 | 3363 | 3844 | 4805 | 5766 |
| 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 |
| Maximum Operating Pressure | psig | 160 | 160 | 160 | 160 | 160 | 160 |
| Power Requirements | Voltage | 120 | 120 | 120 | 120 | 208† | 208† |
| | Phase | 1 | 1 | 1 | 1 | 3 | 3 |
| | Hz | 60 | 60 | 60 | 60 | 60 | 60 |
| | Amp. | 20 | 20 | 20 | 20 | 20 | 20 |

| CA3B Single Fuel (SF) | | | | | | | |
|---|------------------|-------|-------|-------|-------|-------|-------|
| Overall Dimensions Assembled | | | | | | | |
| Width | in. | 34 | 34 | 39 ½ | 39 ½ | 39 ½ | 39 ½ |
| Height | in. | 78 ¾ | 78 ¾ | 84 | 84 | 84 | 84 |
| Length | in. | 88 ¾ | 88 ¾ | 99 ½ | 99 ½ | 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. ² | ft. ² | 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 | in. | 39 ¾ | 39 ¾ | 39 ¾ | 39 ¾ | 39 ¾ | 39 ¾ |
| Height | in. | 84 | 84 | 84 | 84 | 84 | 84 |
| Length | in. | 99 ½ | 99 ½ | 99 ½ | 99 ½ | 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. ² | ft. ² | 147.9 | 147.9 | 170.2 | 192.5 | 244.1 | 288.8 |
| Flue Outlet Size | dia | 12 | 12 | 12 | 12 | 16 | 16 |

* 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.

† Requires 208Y/120VAC - 3 phase - 60 Hz - 4 wire (L1, L2, L3, N, G) power supply.

