



Certificate of Product Ratings

AHRI Certified Reference Number: 5527466

Date: 6/15/2016

†Status: Active

Product: Commercial Boiler Heating Equipment

Model Number: CM2-186

Manufacturer: VIESSMANN MANUFACTURING COMPANY, INC.

Trade/Brand name: VIESSMANN

Rated as follows in accordance with Department of Energy (DOE) Boiler test procedures as published in the latest edition of the Code of Federal Regulations, 10 CFR Part 431 and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Combustion Efficiency:	95.0 %
Thermal Efficiency:	97.0 %

The following data is for reference only and is not certified by AHRI:

Material:	Stainless Steel
Location:	Indoor
Fuel Type:	Natural Gas; Propane Gas
Input:	663 MBTUH
Gross Output:	643 MBTUH
Ignition Type:	Intermittent/Electronic Ignition
Heating Medium:	Water
Draft Type:	Forced Draft
CO2:	9.5

* Ratings followed by an asterisk (*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate.

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CERTIFICATE VERIFICATION

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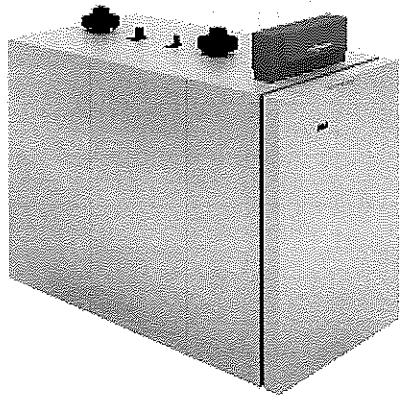


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Boiler Data



VITOCROSSAL 200

CM2 Series

Full product manuals:

-  Technical Data Manual
-  Installation Instructions
-  Operating Instructions
-  Service Instructions
-  Common Venting System Manual

1.0 Technical Data for CM2-186

Input *1	663 MBH	194 kW
Minimum input *1	133 MBH	39 kW
Output *2	643 MBH	188 kW
Net AHRI rating	559 MBH	164 kW
Combustion efficiency *2	95 %	
Thermal efficiency *2	97 %	
Overall dimensions		
Overall length (e)	73 inches	1852 mm
Overall width (c) including insulation	36½ inches	930 mm
Overall height (a) including control unit *3	66 inches	1676 mm
Concrete boiler base		
Length	40 inches	1005 mm
Width	31 inches	800 mm
Thickness	4 inches	100 mm
Weight		
Boiler body	503 lbs	228 kg
Complete with burner, control & thermal insulation	726 lbs	329 kg
Boiler water content		
Heat exchanger surface water cooled	81 USG	306 L
Max. operating temperature	73.2 sq. ft.	6.8 sq. m
Max. operating pressure	190 °F	88 °C
	75 psig	517 kpa
Boiler connections		
Boiler supply (BS) and return (BR) ANSI flanges	2½ inches	65 mm
Safety supply	1¼ inches	32 mm
Boiler drain	1 inch	
Condensate drain	¾ inch	

Vent pipe

Internal diameter	8 inches	201 mm
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Flue gas values

Temperature (at a return temperature of 86°F / 30°C)

– At rated input	136 °F	58 °C
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– At partial load	95 °F	35 °C
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Temperature (at a return temperature of 140°F / 60°C)

– At rated input	167 °F	75 °C
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Mass flow rate of flue gas

– At rated input	593 lbs/h	269 kg/h
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– At partial load	198 lbs/h	90 kg/h
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Pressure at boiler flue outlet at rated input	0.28 " w.c.	70 Pa
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Notes:

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

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

*3 Add 1¼ in. (40 mm) when using seismic mounts (optional accessory).

1.1 Technical Data for Cylinder Burner for CM2-186

Burner version	Modulating	
Voltage	120 V	
Frequency	60 Hz	

Power consumption

– At maximum input	225 Watts
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– At minimum input	51 Watts
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Dimensions

Length	17¾ inches	450 mm
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Total length	23½ inches	595 mm
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Length with burner hood	20 inches	510 mm
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Width	21¼ inches	550 mm
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Height	19 inches	480 mm
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Weight

Burner with combination valve & burner hood	73 lbs	33 kg
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Minimum gas supply pressure

Natural gas	4 " w.c.	996 Pa
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Liquid propane gas	10 " w.c.	2491 Pa
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Maximum gas supply pressure

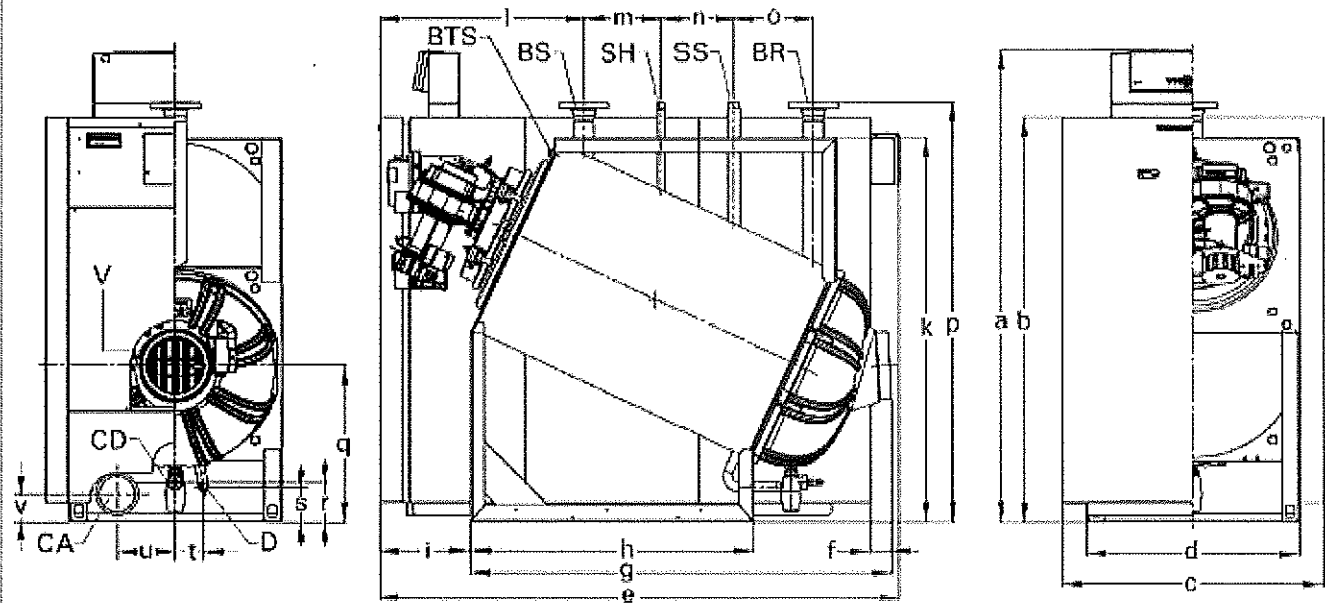
Natural gas	14 " w.c.	3487 Pa
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Liquid propane gas	14 " w.c.	3487 Pa
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Gas connection	1 inch NPT
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1.2 Dimensional Drawings

Boiler Rear, Side and Front Views



Dimensions

a	66"	1676 mm
b	56½"	1438 mm
c	36½"	930 mm
d	30"	760 mm
e	73"	1852 mm
f (flue pipe projection at the back)	3"	75 mm
g	59"	1500 mm
h (foot length)	39½"	1005 mm
i (distance from front face of cover to front supporting foot)	12¾"	323 mm
k	53¾"	1365 mm
l (distance from front face of cover to centre of boiler supply connection)	28¾"	729 mm
m	10¾"	275 mm
n	10"	255 mm
o	11¼"	284 mm
p	58¾"	1493 mm
q	22"	558 mm
r	5½"	142 mm
s	5"	126 mm
t	4"	100 mm
u	8"	207 mm
v	4"	100 mm

Legend

BR	Boiler return
BS	Boiler supply
BTS	Boiler water temperature sensor
CA	Combustion air pipe connection
CD	Condensate drain
D	Drain
SH	Female connection ½ in. for pressure gage
SS	Safety supply; pressure relief valve, air vent, low water cut-off
V	Vent pipe connection