



COMMISSIONING REPORT

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VISIT DATE: _____

INSTALLATION DATE: _____

BOILER MODEL: _____

NEW INSTALL OR REPLACEMENT: _____

BOILER SIZE: _____

CASCADE INSTALLATION: ☐ YES ☐ NO

TTP SALES REP: _____

FUEL SOURCE (NG OR LP): _____

INSTALLER: _____

INSTALLATION COMPANY: _____

COMPANY CONTACT: _____

CONTACT NAME: _____

CUSTOMER NAME: _____

CITY, STATE: _____

PHONE NUMBER: _____

[illegible]

General Set-Up

Is an air separator installed in the system?

☐ YES ☐ NO ☐ N/A

Is a dirt trap installed in the system?

☐ YES ☐ NO ☐ N/AIs a system sensor installed?
(boilers only)☐ YES ☐ NO ☐ N/A

Comments:

Is a supply sensor installed?
(water heaters only)☐ YES ☐ NO ☐ N/A

Is a storage tank sensor installed?

☐ YES ☐ NO ☐ N/A**Safety and Interlock Circuit**Is a carbon monoxide detector/alarm
installed in the boiler room?☐ YES ☐ NO ☐ N/AIs the carbon monoxide detector/alarm
connected to building fire alarm system?☐ YES ☐ NO ☐ N/AIs the carbon monoxide detector/alarm
connected to the relay interlock on boiler
safety circuit?☐ YES ☐ NO ☐ N/AIs the manual reset operational?
(must verify with test)☐ YES ☐ NO ☐ N/AIs the low water cut off operational?
(must verify with test)☐ YES ☐ NO ☐ N/A

Comments:

Is the high gas pressure switch set correctly
and operational? (must verify with test)☐ YES ☐ NO ☐ N/AIs the low gas pressure switch set correctly
and operational? (must verify with test)☐ YES ☐ NO ☐ N/AIs the flow switch set correctly and
operational? (must verify with test)☐ YES ☐ NO ☐ N/AIs the vent damper installed correctly?
(must verify with test)☐ YES ☐ NO ☐ N/AIs an individual gas pressure
regulator installed?☐ YES ☐ NO ☐ N/A

Hydraulic Set-Up

Is the circulator sized correctly?
(include make and model)

Are the 0-10v/relays controlling the
circulator correctly?

☐ YES ☐ NO ☐ N/A

Complete the following sections on
water quality:
(please refer to product manual)

A. Water hardness:

B. Water PH:

C. Water Chlorides:

D. Water TDS:

Has glycol been used in the system?
(autofill or manual fill)

Glycol %:

Is the external low water cut off operational?
(must verify with test)

A. Type/brand:

B. Percentage:

Have any water treatment chemicals
been added?

A. Type/brand:

B. Amount used in gallons:

Is there an autofill on the system?

Condensate Drain

Inside diameter of drain piping.

Is there a definite air gap between the
condensate trap and the connection to
drain pipe?

☐ YES ☐ NO ☐ N/A

Total drop in height from boiler to drain
piping exit point?

Any additional trap points?

☐ YES ☐ NO ☐ N/A

Perform PH test and register PH value.

Condensate neutralizer installed?

☐ YES ☐ NO ☐ N/A

Venting

What is the venting material?

Indoor or outdoor combustion air?

If indoor, please complete the following:

A. Upper louver size:

B. Lower louver size:

Are the louvers fixed or motorized?

If they are motorized, are they interlocked with the boilers?

Combustion Air

Length: _____ Diameter: _____

Venting

Length: _____ Diameter: _____

Number of 30's, 45's, 60's and 90's

Combustion Air	Venting
30's <input type="checkbox"/> _____	<input type="checkbox"/> _____
45's <input type="checkbox"/> _____	<input type="checkbox"/> _____
60's <input type="checkbox"/> _____	<input type="checkbox"/> _____
90's <input type="checkbox"/> _____	<input type="checkbox"/> _____

Are the terminations rooftop or sidewall?

Distance between terminations?

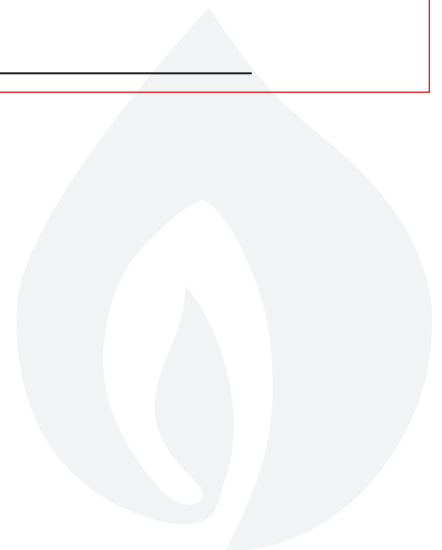
Is common venting installed?

If yes, is an exhaust fan being used?

Length sloped at X degrees?

Distance from closest wall?

Distance from roof?



Air Intake

Common air intake system?

☐ YES ☐ NO ☐ N/A

If yes, how many air intakes are joined?

Air intake (under) pressure?

Possibility of dust/chemicals drawn into air intake?

☐ YES ☐ NO ☐ N/A

If yes, of which kind?

Distance from Flue outlet (top of chimney) vertical:

Distance from Flue outlet (top of chimney) horizontal:

Is there a condensate drain installed to the common flue system?

Flue outlet pressure (on top of boiler)

Electronics & Power SupplyVersion Burner Controller Hardware:
(see §3.2 for location)

Version Burner Controller Firmware:
(see §3.2 for location)

Is ground connected to building
grounding system?☐ YES ☐ NO ☐ N/A

Voltage incoming (Hot to Neutral) (V):

Voltage measured between Ground and
Neutral (V):

Total amperage switched by the Boiler
Control is below 3.5 A or 400 W? (A):



Gas Supply

Type of gas:

Is the gas isolation valve installed according to installation manual?

☐ YES ☐ NO ☐ N/A

Which diameter gas isolation valve is installed?

Gas piping (inside) diameter:

Gas piping material (if possible specify mark/type)

Gas piping flexible?

☐ YES ☐ NO ☐ N/A

Is there a secondary gas pressure regulator before the boiler?

☐ YES ☐ NO ☐ N/A

If YES what is the length of the gas piping in between?

If YES what is the brand & model?

Three Phase Table Information – CB/WH 4000F

	AMPERAGE			VOLTAGE		
	L1	L2	L3	L1 – L2	L2 – L3	L1 – L3
Blower Motor Low Fire						
Blower Motor High Fire						

Ionic Wall - Combustion Table Low NOx

O₂ and CO₂ values for maximum and minimum load, where NO_x values are less than 20 ppm at 3% O₂.

Gas Type	Boiler Type	O ₂ / CO ₂ [%]	
		High Fire	Low Fire
Natural Gas	CB 299W, CB 399W	5.3 / 8.8	5.3 / 8.8

Allowed tolerances are O₂ ± 0.2 and CO₂ ± 0.1
 All values measured without front door.
 REMARK 1: Appliances will be derated with these settings. To compensate, maximum fan speed can be set to a higher value. The minimum fan speed does not need to be changed for Low NO_x.



Ionic Floor - Combustion Table Low NOx

It is possible to adapt the boiler / water heater to Low NOx operation with the following settings:

- For CB/WH 1250F and CB/WH 2000F, below settings result in less than 20 ppm NOx at 3%O₂
- For CB/WH 3000F and CB/WH 4000F, below settings result in less than 9 ppm NOx at 3%O₂

Gas Type	Appliance Type	O ₂ [%] (±0.2%)		CO ₂ [%] (±0.1%)	
		Max Input	Min Input	Max Input	Min Input
Natural Gas	1250F	6.3	7.2	8.1	7.6
	2000F	6.3	7.2	8.1	7.6
	3000F	7.5	8.3	7.5	7.1
	4000F	7.5	8.3	7.5	7.1

The settings, necessary to operate at Low NOx, result in lower input rates. To restore the input, the maximum fan speed can be adapted:

GAS TYPE	APPLIANCE TYPE	MAX. FAN SPEED LOW NOx	MAX. FAN SPEED STANDARD
Natural Gas	1250F	5700	5300
	2000F	4600	4300
	3000F	4400	4150
	4000F	6000	5200

You can adapt the maximum fanspeed at parameter 92 on the PB screen:

1. From status screen PB, press MENU button once.
2. Press UP/DOWN ↑ ↓ to select “Settings” and press ENTER ↵
3. Press UP/DOWN ↑ ↓ to select “Boiler Settings” and press ENTER ↵
4. Enter the installer password by pressing UP/DOWN ↑ ↓ and LEFT ← / RIGHT →.
5. Press UP/DOWN ↑ ↓ to select “Boiler parameters” and press ENTER ↵
6. Press UP/DOWN ↑ ↓ to select parameter “(92) Fan Speed Maximum” and press ENTER ↵
7. Press UP/DOWN ↑ ↓ to adapt the fan speed according above table and press ENTER ↵

To return to the status screen, press ESCAPE ⏏ or MENU ≡ 4 times, or RESET ⏏ once.

The minimum fanspeed does not need to be changed for Low NOx.

Ionic Wall - Combustion Table

Gas Type	Boiler Type	O ₂ / CO ₂ [%]	
		High Fire	Low Fire
Natural Gas	CB 299W, CB 399W, CB 500W	4.7 / 9.2	4.7 / 9.2
	CB 470W	5.3 / 8.8	5.3 / 8.8
Propane ³⁾⁴⁾	CB 299W, CB 399W, CB 470W, CB 500W	5.0 / 10.4	6.4 / 9.5

Allowed tolerances are O₂ ± 0.2 and CO₂ ± 0.1
 1) All values measured without front door.
 2) The CB 470 has NOx emissions < 20 ppm at 3% O₂ with these settings.
 3) For propane: a conversion kit (orifice) has to be mounted, see 19.4.
 4) For propane: fan speeds must be changed, see 19.4

Ionic Floor - Combustion Table

Table: O₂ / CO₂ values for maximum and minimum load. O₂ settings are leading; CO₂ settings are reference values.

Attention: The O₂ difference between High Fire and Low Fire should be minimal as mentioned in the table below, independent of the allowed tolerance. Eg. 6.5 – 5.2, the difference must be min. 1.3% O₂

Gas Type	Appliance Type	O ₂ [%] (±0.2%)		CO ₂ [%] (±0.1%)	
		Max Input	Min Input	Max Input	Min Input
Natural Gas	1250F	5.2	6.5	8.8	8.1
	2000F	5.2	6.5	8.8	8.1
	3000F	4.7	6.5	9.1	8.1
	4000F	4.7	6.5	9.1	8.1
Propane	1250F	6.0	7.8	9.8	8.6
	2000F	6.0	7.8	9.8	8.6
	3000F	5.4	6.9	10.2	9.2
	4000F	5.4	6.9	10.2	9.2