

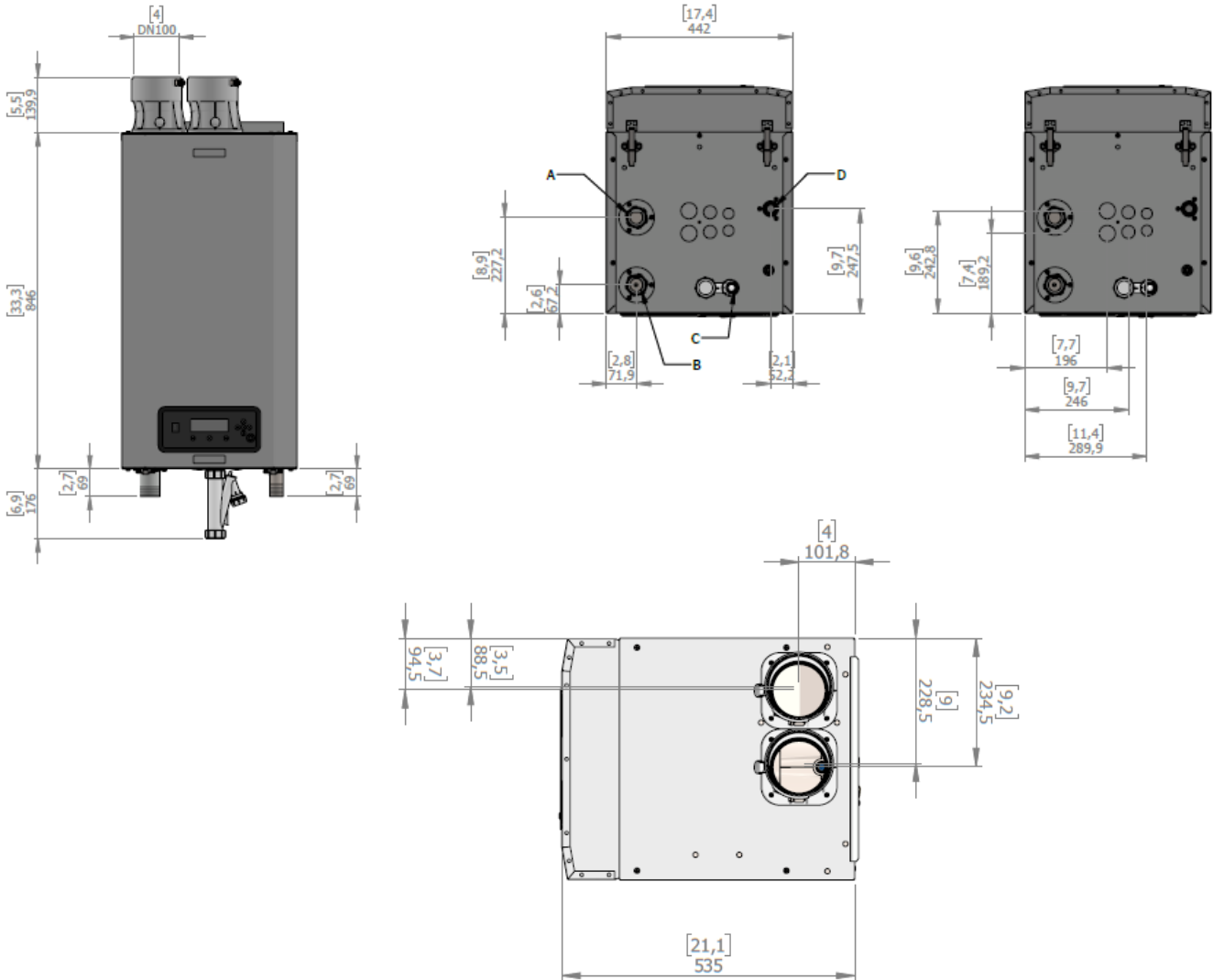


Ionic Submittal Sheet
Model
CB 299W
CB 399W
CB 470W
CB 500W

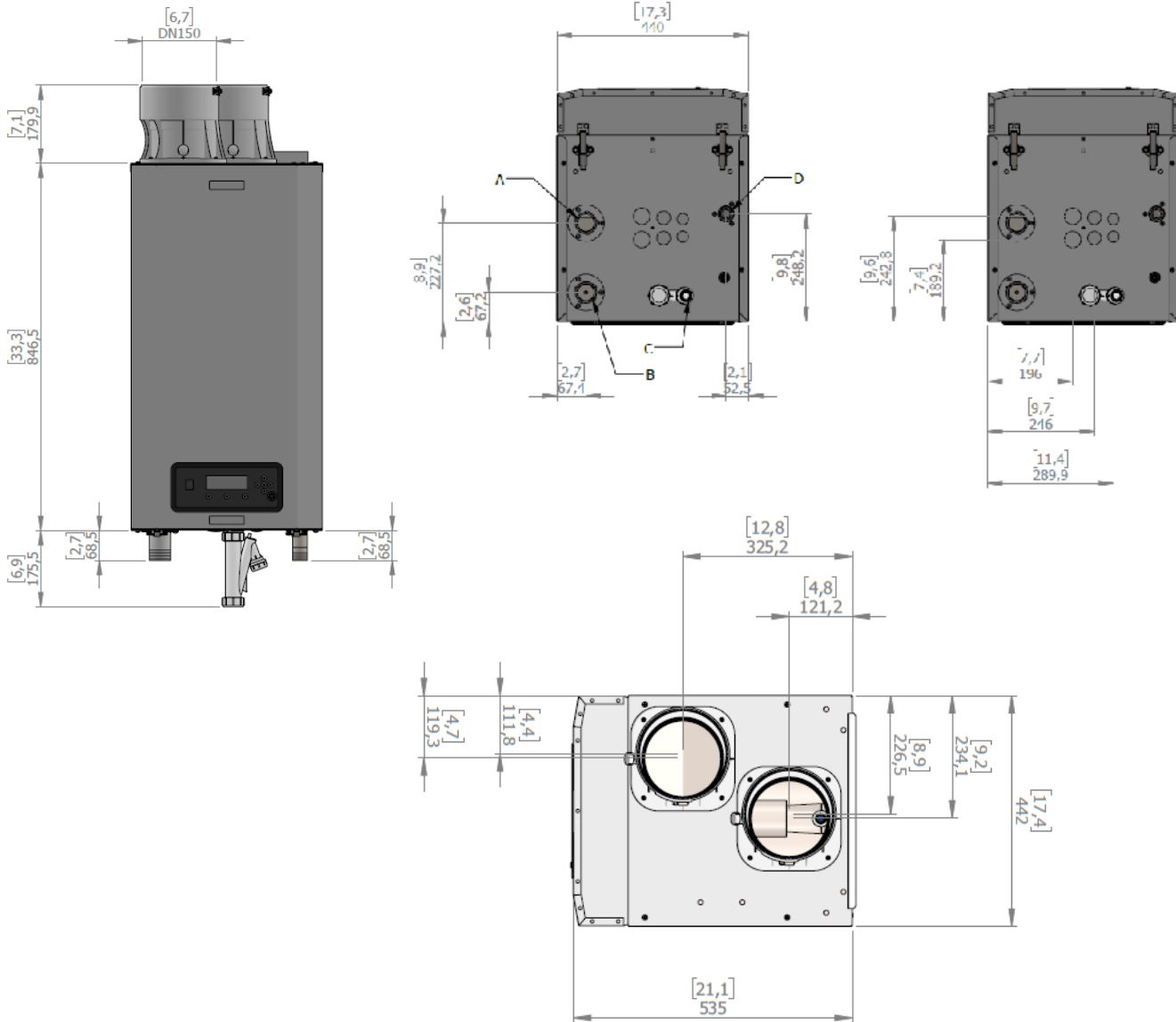
Ionic Water Tube Commercial Boilers

Job Name:	Date:
Location:	Model No.:
Engineer:	Gas Type:
Wholesaler:	Contractor:

CB 299/399 Dimensions



CB 470/500 Dimensions



Dimensions and Specifications

Product Selection	Model Number	S/R Water Vic. Conn.	Gas Conn. NPT	Vent Conn.	Vent Length	Height	Width	Depth	Weight lbs
	CB 299W	1-1/2"	1"	4"	200'	33-1/3"	17-1/3"	21-1/5"	174
	CB 399W	1-1/2"	1"	4"	121'	33-1/3"	17-1/3"	21-1/5"	183
	CB 470W	1-1/2"	1"	6"	200'	33-1/3"	17-1/3"	21-1/5"	187
	CB 500W	1-1/2"	1"	6"	200'	33-1/3"	17-1/3"	21-1/5"	187

Ionic Water Tube Commercial Boiler Performance Data

Product Selection	Model Number	Input, MBH		Output, MBH	Maximum Supply Temp., F	Net AHRI Rating Water, MBH	AFUE %	Thermal Efficiency, %	Combustion Efficiency, %
		Min	Max						
	CB 299W	46	299	289	194	238	95.1%	-	-
	CB 399W	72	399	381	194	329	-	95.5%	95.4%
	CB 470W	83	470	453	194	394	-	95.6%	95.1%
	CB 500W	83	500	475	194	413	-	95.1%	94.5%

Standard Features and Equipment

- ✓ Fold out panel with boiler control and display
- ✓ Graphic LCD display with easy to use controls
- ✓ On/Off Power Switch
- ✓ Laptop computer connection
- ✓ Supply and Return water temperature sensors
- ✓ Integrated pressure sensor
- ✓ Flue gas temperature sensor
- ✓ Burner door temperature sensor
- ✓ Rear wall thermal fuse
- ✓ Integrated flue gas check valve (non-return valve)
- ✓ Full stainless steel heat exchanger
- ✓ Premix burner
- ✓ Internal automatic air vent with drain connection
- ✓ Integrated low water cutoff
- ✓ Condensate trap
- ✓ External ignition transformer connection



Boiler and External Controls

- ✓ Large backlit LCD with full text information programming and errors
- ✓ Modbus connection standard
- ✓ 0-10 VDC remote flow temperature set point control
- ✓ 0-10 VDC remote boiler power output
- ✓ Bacnet module for remote access available

Cabinet

- ✓ Removable stainless steel side panels for easy access
- ✓ Compact design with small footprint
- ✓ Light weight design for wall hung applications (187lbs)
- ✓ Narrow width of 17.4 inches

Data Logging

- ✓ Real time and date clock
- ✓ Days of operation
- ✓ Successful ignition attempts
- ✓ Ignition failures
- ✓ Flame failures
- ✓ Up to 48 readable lockout errors
- ✓ Hours since last service
- ✓ Hours until next service
- ✓ Total days of boiler operation

Low Voltage Connections

- ✓ Outdoor temperature sensor
- ✓ System temperature sensor
- ✓ DHW temperature sensor
- ✓ Modbus
- ✓ Cascade connection
- ✓ On/Off thermostat or OpenTherm
- ✓ 0-10V VDC input
- ✓ Flow switch DHW
- ✓ PWM pump control
- ✓ External low water cut off
- ✓ Gas pressure switch
- ✓ Universal safety contact set 1 & 2

High Voltage Connections

- ✓ Boiler pump
- ✓ System pump
- ✓ DHW pump
- ✓ DHW twv (3-way valve)
- ✓ Alarm

Additional Features

- ✓ Two level frost protection
- ✓ Short cycle protection
- ✓ Adjustable minimum & maximum power
- ✓ Temperature boost function
- ✓ Multiple levels of security
- ✓ PWM control for variable speed pumps
- ✓ Domestic hot water priority time control
- ✓ Selectable priority for domestic hot water or heating

Cascade

- ✓ Integrated cascade control
- ✓ Cascade control of up to 16 boilers
- ✓ Remote operation and heat demand indication from each boiler
- ✓ Four cascade power program modes
- ✓ Boiler sequencing and rotation control
- ✓ Following boilers fully operational on failure of lead boiler

Accessories

	External flow temperature sensor
	Indirect tank temperature sensor
	PC software+interface cable for programming boiler
	BACNET module
	Propane conversion kit
	Air filter kit
	Gas pressure kit
	0-10V Modulating circulator signal converter
	1 Circulator relay kit 2 Circulators relay kit 3 Circulators relay kit
	ASME CSD-1 kit option 1 (Flow switch + manual reset high limit)
	ASME CSD-1 kit option 2 (Option 1 + high + low gas pressure switches)
	Low water cutoff
	Fixed speed high efficiency circulator
	Fixed speed standard efficiency circulator
	Variable speed high efficiency circulator
	75 psi relief valve 3/4"
	85 psi relief valve 3/4"
	Neutralizer 400MBH - 7000MBH

