



IONIC WALL MOUNTED COMMERCIAL BOILERS: CB 299, CB 399, CB 470 & CB 500

Triangle Tube 1240 Forest Parkway, Suite 100, West Deptford, NJ 08066
USA Telephone: 856.228.8881 | customerservice@triangletube.com

JOB NAME: _____

DATE: _____

LOCATION: _____

ENGINEER: _____

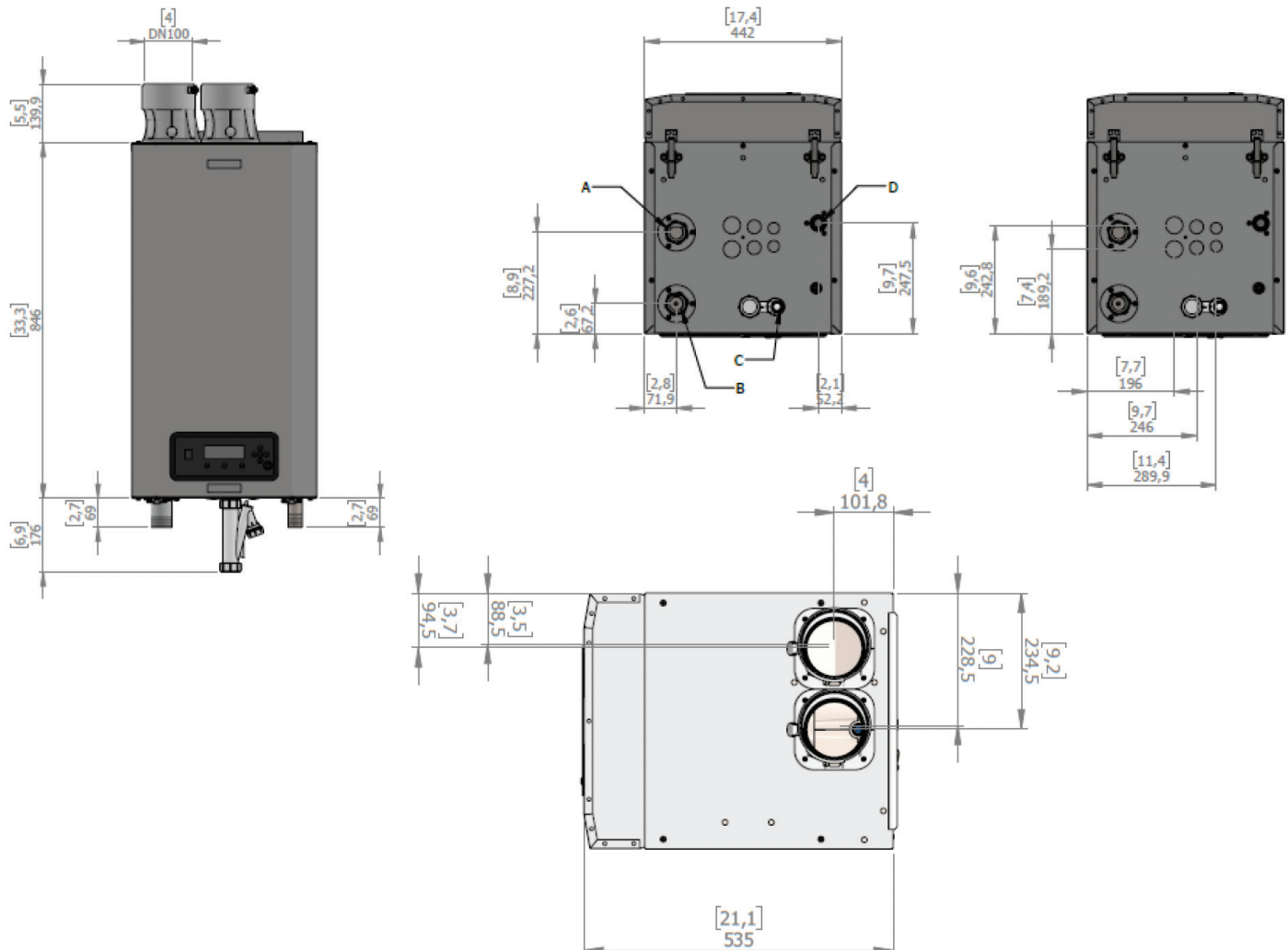
WHOLESALE: _____

MODEL NUMBER: _____

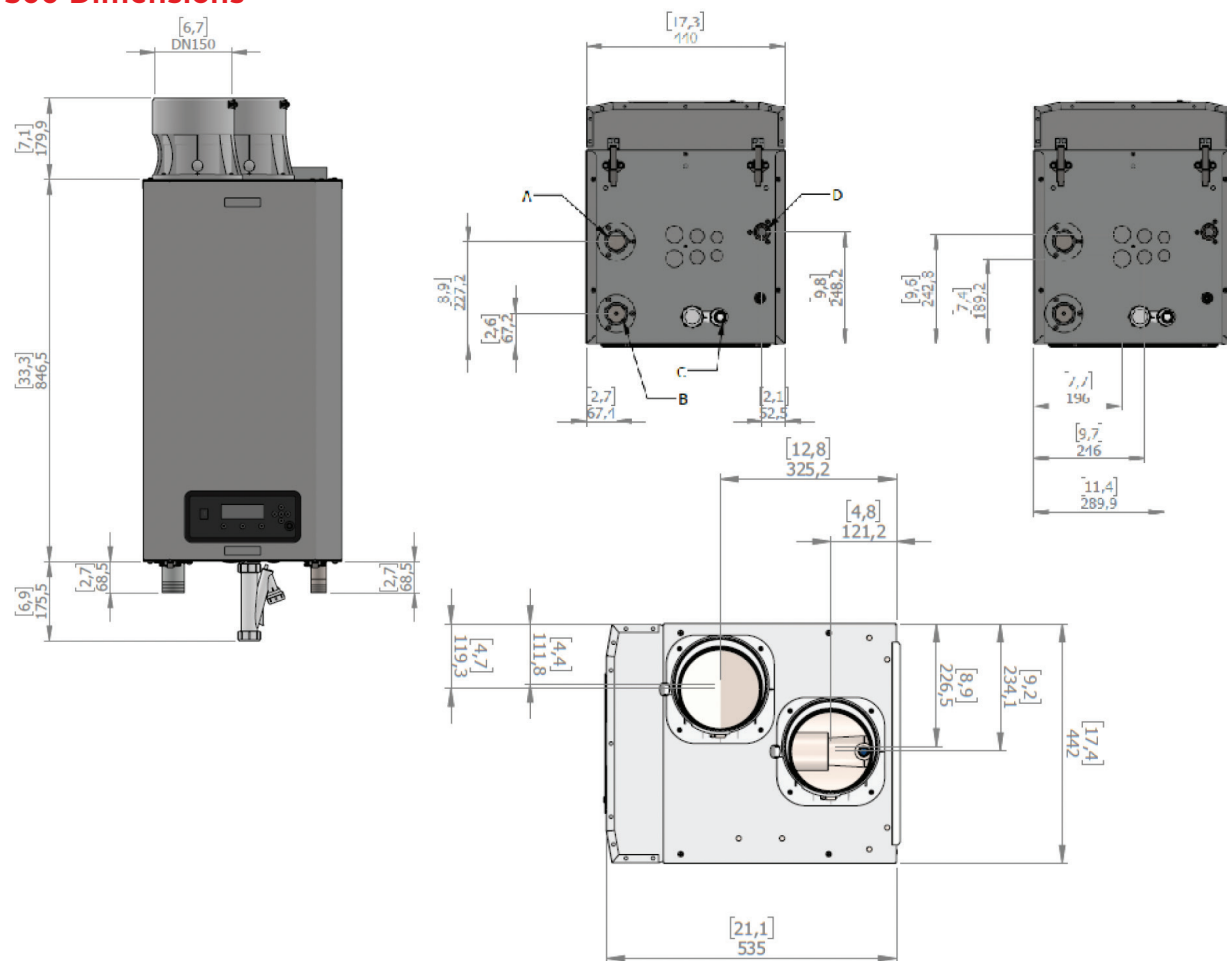
GAS TYPE: _____

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	Min Input MBH	Max Input MBH	Output, MBH	Maximum Supply Temp., F	Net AHRI Rating Water, MBH	AFUE %	Thermal Efficiency, %	Thermal, Efficiency, %
	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

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

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



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
	2 Circulators relay kit 3 Circulators relay kit
	ASME CSD-1 kit option 1 (Flow switch + manual reset high limit)
	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

