NTI LATITUDE™ SERIES

COMMERCIAL CONDENSING BOILER & VOLUME WATER HEATER

SUBMITTAL SHEET

PROJECT NAME _____ DATE _____

LOCATION _____ CONTRACTOR _____

ENGINEER _____ REP _____

PRODUCT FEATURES

- Capacity range from 400-2000MBH (1500-2000 MBH available in 2027)
- Boiler & volume water heater
- Certified to ANSI Z21.13/CSA 4.9 & ANSI Z21.10.3/CSA 4.3
- 316L Stainless Steel Water Tube 160 PSI
- ASME H-stamped as a heating boiler
- Maximum operating pressure 160 psi
- Floor mounted
- Zero clearance to combustibles (clearances required for service)
- Modulating burner, 10:1 turndown ratio
- Certified as Direct Vent or for use with indoor combustion air
- Sealed cabinet with integrated air-filter
- Caster wheels for easier transportation
- 7 in. touch screen display
- High energy ignition transformer (spark ignition)
- Integrated Flow Switch (UL353 certified & CSD-1 compliant)
- Integrated High & Low Gas Pressure Switches (CSD-1 compliant)
- On/off power switch
- 120VAC convenience outlet
- Wi-Fi remote connectivity embedded
- Integrated 3-Zone controller (3x CH inputs & outputs)
- DHW zone input (tank thermostat or sensor)
- Outdoor and 2x Auxiliary temperature sensor inputs
- 0-10V input for external temperature or burner power control
- Boiler, DHW and 2x Auxiliary pump outputs
- Variable speed pump output (0-10V / PWM)
- Boiler power output signal (0-10V)
- Alarm contact

CONTROL FEATURES

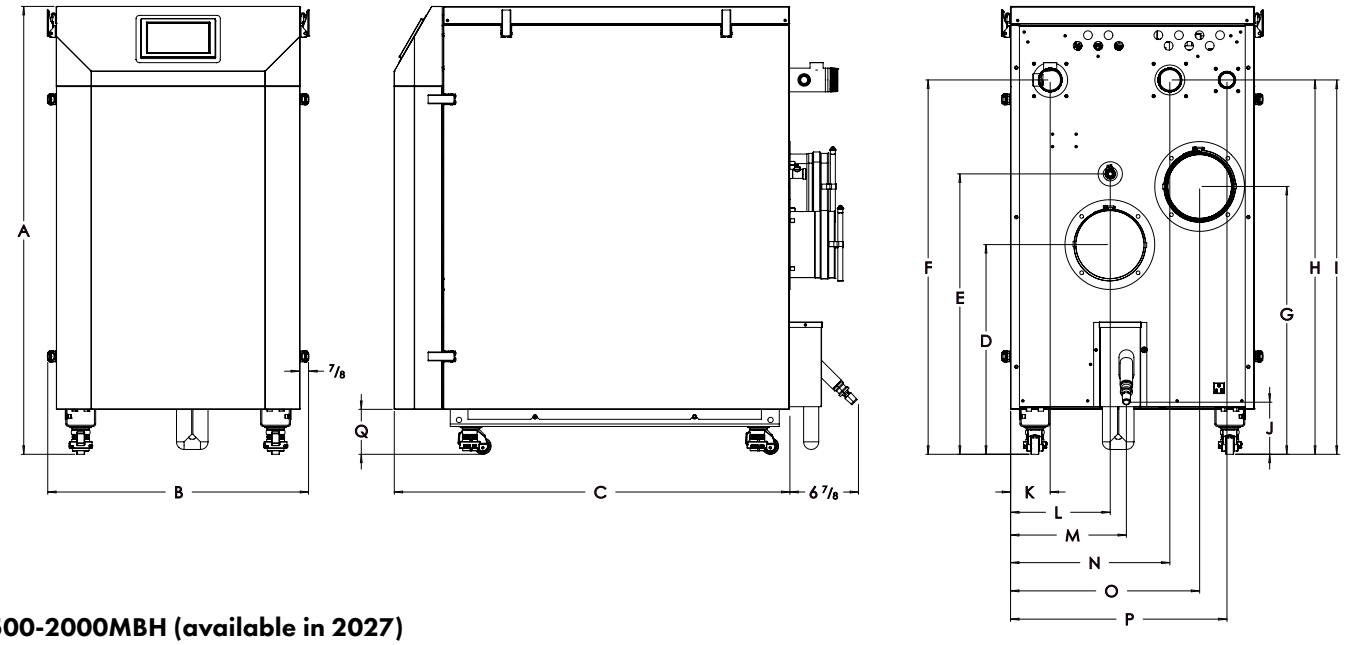
- Integral microprocessor safety control – flame and temperature safeguard
- Fully adjustable burner test mode
- AUTO CH boiler temperature adjustment/reset (based on outdoor and/or indoor temperature or T-stat cycles)
- Adjustable reset curve (min-T/max-T/slope/offset)
- Adjustable reset temperature boost
- Summer/Winter changeover (WWSD)
- Integrated programmable T-stat x 3 (with optional NTI Room Sensors)
- Freeze protection (on/off settable)
- Settings backup & restore options
- Cascade up to 8 boilers
- Manual mode operation (pumps/fan/alarm)
- Boiler statistics
- Lockout, error and warning history
- Internet outdoor temperature via WiFi connection
- Adjustable delta-T control (w/ variable speed pump)
- Adjustable high limit (CSD-1 compliant)
- DHW recirculation with adjustable schedule
- Buffer tank charging function
- 3 independently adjustable CH zones
- Adjustable CH zone priority logic
- Adjustable DHW/CH priority switching logic
- Anti-legionella function
- Adjustable system pump activation logic
- Adjustable CH anti-cycle function
- Adjustable maintenance schedule/warning
- Optional NTI 3-Zone Pump/Valve Controller (expands zone control up to six – each independently adjustable)
- Optional NTI Room Sensor

FACTORY SUPPLIED ITEMS

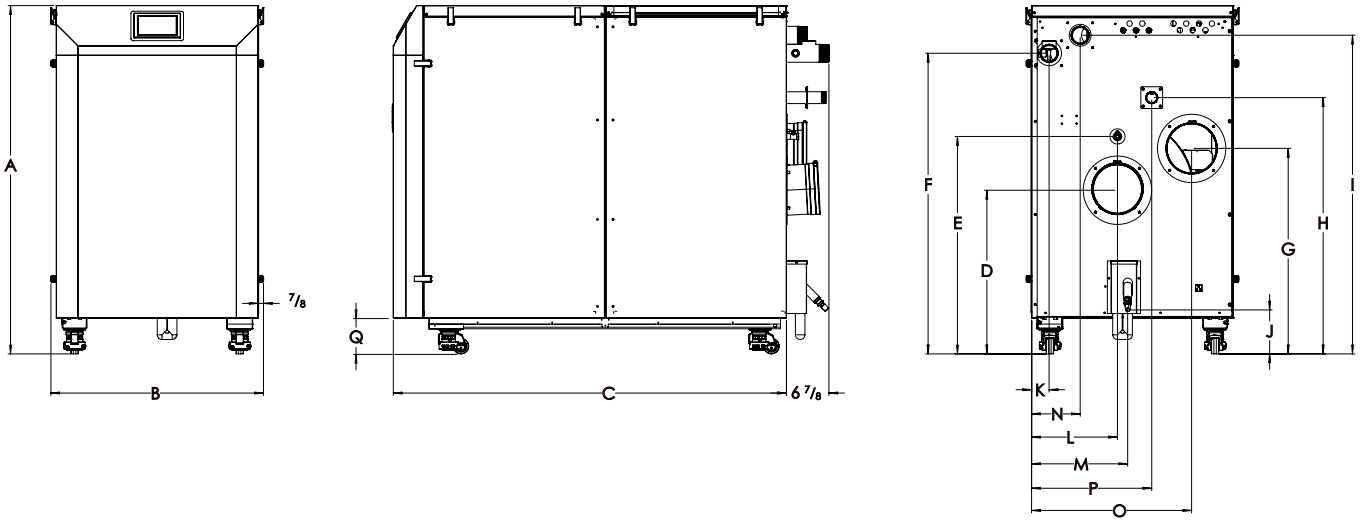
- Outdoor & system sensors
- 50 psi ASME pressure relief valve (boiler) or 150 psi ASME pressure & temperature relief valve (water heater)
- Pressure & temperature gauge
- LP conversion kit
- Vent screens

PRODUCT DIMENSIONS

400-1000MBH



1500-2000MBH (available in 2027)



NCW-XXX	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
400-500	44.9	26.2	31.6	21.0	28.1	37.5	26.9	37.5	37.5	5.25	4.0	10.0	11.6	16.0	19.0	21.1	4.5
650			39.6														
800	45.4		42.4	21.5	21.5	38	27.3	38	38	5.75						21.7	4.9
1000			47.2														
1500	56	34.3	55.1	26.3	35	48.4	33.1	39.5	51.3	7.2	2.0	13.8	15.5	7.8	25.8	18.9	5.75
2000			63.3					41.2								19.3	

PRODUCT SPECIFICATIONS

Model		NCW400	NCW500	NCW650	NCW800	NCW1000	NCW1500	NCW2000
Installation		Indoor, Floor Mounted, Fully Condensing						
Minimum / Maximum input (BTU/hr)[1]		39,000 / 399,000	50,000 / 500,000	65,000 / 650,000	80,000 / 800,000	100,000 / 1,000,000	150,000 / 1,500,000	200,000 / 2,000,000
Heating Capacity[1, 2] (MBH)		387	485	630	776	970	1,455	1,940
Net AHRI Rating, Water (MBH) [2]		337	422	548	675	843	1265	1687
Water Heater Only	Thermal Efficiency (%)	98						
	Recovery Rating (US Gal./hr)	475	594	772	950	1188	1781	2375
	Standby Loss (BTU/hr)	N/A					345	547
Flue System		Category II, Category IV, Sealed Combustion Direct Vent, Non-Direct Vent						
Air Intake Vent Length		0 - 150 feet						
Exhaust Vent Length		6 - 150 feet						
Exhaust Vent Size		4"		6"			8"	
Approved Exhaust Vent Materials[3]		PVC, CPVC, PP, Stainless Steel						
Gas Supply Pressure	NG	3.5" to 10.5" WC						
	LP	8" to 13" WC						
Power Supply		120V, 60 Hz, less than 12A (400-1500) | less than 16A (2000)						
Ignition System		Direct Electronic Spark Ignition / Flame Rectification						
Burner System		Premixed Fuel Modulation / Stainless Steel Burner						
Gas Valve System		Air Ratio Valve						
Approx. Water Content (gallons)		3.8	4.3	5.6	6.6	8.1	12.9	16.25
Setpoint Temperature Range		50 - 190°F						
Water Pressure (PSI)	Heat Exchanger MAWP (Max. Allowable Working Pressure)	160						
	Pressure Relief Valve	50 (boiler) | 150 (water heater)						
Control Panel / Main Controller		AristonThermo Display / AristonThermo ACP Control						
Connection Sizes (NPT)	Supply / Return	2"					2 1/2"	
	Gas Inlet	3/4"	1"	1 1/4"			1 1/2"	
Materials	Cabinet	Painted Steel						
	Heat Exchanger	316L Stainless Steel Water Tube						
Safety Devices		Flame Rectifier Probe, Temperature Limit Control (210°F), Water Pressure Sensor, Freeze Protection, Blocked Condensate Pressure Switch, Condensate Trap, Flue Temperature High Limit Sensor (210°F) Blocked Vent Pressure Switch, Flow Switch						

NOTES:
1 Listed Input and Output Ratings are at minimum vent lengths at an altitude of 0 - 2000 ft. Numbers will be lower with longer venting and/or altitudes greater than 2000 ft.
2 Ratings based on standard test procedures prescribed by the US Department of Energy.
3 This appliance requires a special venting system when installed as Category IV. Use only the vent materials and methods detailed in these installation instructions.

**All data for NG, LP Conversion Kit included

100% CHECKED AND TESTED
Every single NTI product undergoes a rigorous internal process of automated quality, efficiency and safety tests before coming to you.