



COMPASS

High Efficiency Gas-Fired Condensing Boiler

SUBMITTAL SHEET

I - General Specifications

II - Product Specifications

Project Name		Date	
Location			
Engineer			
Contractor		Rep	

I - GENERAL SPECIFICATIONS

Product Features	
	Certified to ANSI Z21.13 / CSA 4.9 Gas-fired Boiler Standard
	SA-240 S43932 Chromium Stainless Steel Fire Tube Heat Exchanger
	ASME "H" stamped boiler, designed and constructed in compliance with the ASME Boiler and Pressure Vessel Code Section IV
	Maximum operating pressure 50 psi
	Floor mounted
	Zero clearance to combustibles <i>(clearances required for service)</i>
	Modulating burner, 10:1 turndown ratio
	Certified as Direct Vent (sealed combustion) or for use with indoor combustion air
	Sealed cabinet
	High energy ignition transformer <i>(spark ignition)</i>
	Built-in water pressure bypass <i>(guarantees minimum water flow)</i>
	Low water pressure sensor
	Integrated ECM boiler circulator
	Integrated 3-way valve <i>(diverts between DHW & CH demands)</i>
	Integrated Condensate Trap
	Setup Wizard
	Two 120 VAC outputs for external circulators <i>(DHW/CH)</i>
	DHW zone input <i>(tank thermostat or sensor)</i>
	Two dry contact inputs for CH and 2 dry contact outputs for zone control
	WiFi remote connectivity embedded
	Outdoor temperature sensor input <i>(or access weather via WiFi connection)</i>
	Adjustable flue temperature limit
	Field reversible left or right hand connections

Control Features	
	Integral micro processor safety control - flame safeguard and temperature
	BURNER TEST Mode - for combustion setup
	PURGE cycle - for air purging
	AUTO function (outdoor/indoor reset) -resets boiler temperature depending on outdoor and/or room temperature
	Adjustable reset curve <i>(slope/parallel shift)</i>
	Adjustable reset temperature boost
	Summer/Winter changeover <i>(MWS)</i>
	Integrated programmable T-stat x 2 <i>(with optional NTI Room Sensors)</i>
	Freeze protection
	Factory settings restore option
	Cascade up to 8 Compass/TRX/FTVN-series boilers
	Adjustable ignition delay timer
	Manual mode operation <i>(pump/fan/diverter)</i>
	Boiler statistics
	Lockout and error history
	Optional 0-10V / 4-20mA input clip-in module <i>order code: 3319457</i>
	Optional NTI 3-Zone Pump/Valve Controller <i>order code: 3260184</i>
	Optional Room Sensor <i>order code: 3319455</i>

Factory Supplied Items	
	10K thermistor outdoor sensor
	30 psi ASME pressure relief valve
	Pressure and temperature gauge
	LP conversion kit
	Vent screens





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Specifications		UNITS	NC085	NC110	NC150	NC199	NC110C	NC150C	NC199C
Capacity	Input Rating CH ¹	MBH	8.5-85	11-110	15-150	19.9-199	11-110	15-150	19.9-199
	Input Rating DHW ¹								
	Heating Capacity ^{1 2}		79	101	138	184	101	138	184
	Net AHRI Rating, Water ²		69	88	120	160	88	120	160
	Modulation (turndown)		10:1						
Performance	AFUE	%	96	95					
Temp Range	Ambient	°F(°C)	33-104 (0.6-40)						
	Boiler Setpoint		68-179 (20-82)						
	DHW Setpoint (Indirect)		104-149 (40-65)						
	DHW Setpoint (Combi)		97-140 (36-60)						
Pressure	Max Water Central Heating	PSI	50						
	Max Water DHW		N/A			150			
	Heat Exchanger MAWP		50						
	Pressure Relief Valve		30						
	Gas Supply NG		3.5-10.5						
	Gas Supply LP		8-13						
Heat Exchanger	Material		SA-240 S43932 Chromium Stainless Steel						
	Type		ASME Fire Tube						
DHW Flow	34Deg F Rise	GPM	N/A				5.8	7.9	10.5
	45Deg F Rise						4.5	6.1	8.2
	77Deg F Rise						2.6	3.6	4.8
Connections	Water (Heating)	In	1-1/4" Male NPT						
	Water (DHW)		3/4" Male NPT						
	Gas		3/4" Male NPT						
	Vent Connection (from factory)	In	3						
Venting Length ³	2" Min-Max Exhaust	Ft	6-100						
	2" Min-Max Inlet		0-100						
	3" Min-Max Exhaust		6-150						
	3" Min-Max Inlet		0-150						
Vent System ³	Type		Cat IV, Sealed Combustion, Direct Vent, Power Vent						
	Materials Allowed ⁴		PVC/CPVC/PP						
Electrical	Power Supply	V/hz/ph/a	120/60/1//less than 12						
	Main Controller	Type	Ariston LCD Display & GalEvo2-NA Control						
Volume	Water Content	Gallons	1.4	2.5	3.3	2	2.6	3.4	

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 and certified to ANSI Z21.13/CSA 4.9

³ The Compass requires a special venting system. Use only the vent materials and methods detailed in these installation instructions.

⁴ It is permissible to use SS vent material, however, only PVC/CPVC/PP can be directly inserted into the appliance adapters.





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Specifications		UNITS	NC085	NC110	NC150	NC199	NC110C	NC150 C	NC199C
Weight	Approx "Full" Boiler	Lbs.	169	184	202	172	187	204	
	Shipping		168	178	189	170	180	191	
Dimensions	Width	In	19-7/8						
	Height		49						
	Depth		24-5/8						
Min Clearances	Front	In	18						
	Top		24						
	Sides		24 with connections; 6 without connections						
	Back		0						
	Bottom		0						
	Flue Pipe		1						
System	Ignition	Type	Direct Electronic Spark/Flame Rectification						
	Burner		Premixed Full Modulation/Stainless Steel Burner						
	Gas Valve		Air Ratio Valve						
Cabinet	Material		Painted Steel						
	Safety Devices		Flame Rectifier Probe, Temperature Limit Control (190°F), Water Pressure Sensor (Min. 8 PSI), Freeze Protection, Condensate Trap, Flue Temperature High Limit Sensor (199°F), Blocked Condensate Pressure Switch, Blocked Vent Pressure Switch						





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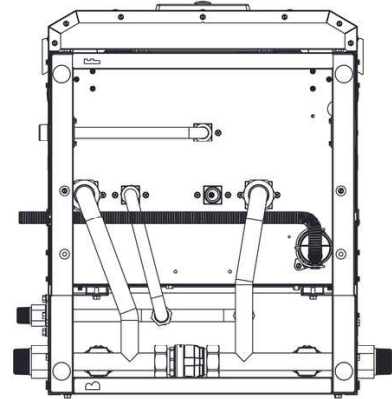
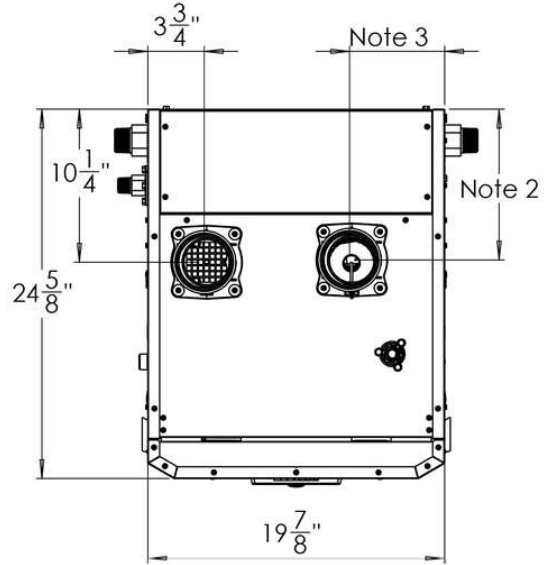
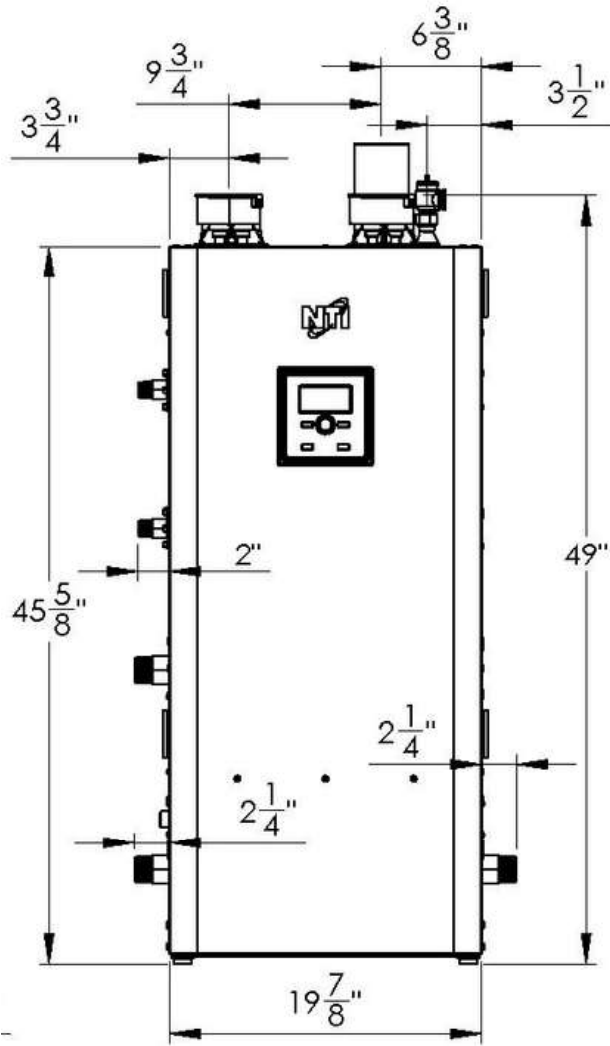
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II - PRODUCT DIMENSIONS

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Note 2	NC085-110 = 11" NC150-199 = 10-1/4"
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Note 3	NC085-110 = 6" NC150-199 = 6-3/8"
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