



# QuickFacts

## NCB-E Series Combi-boilers

### Ratings & Specifications

	Model			
	NCB-150E	NCB-180E	NCB-210E	NCB-240E
	<b>Product Approvals</b>			
<b>CSA</b>	Yes	Yes	Yes	Yes
<b>SCAQMD 1146.2</b> (NOx, <20 ppm)	Yes	Yes	Yes	Yes
<b>Low lead</b> (<0.25%, DHW only)	Yes	Yes	Yes	Yes
<b>ASME</b>	Yes "H" stamp	Yes "H" stamp	Yes "H" stamp	Yes "H" stamp
<b>AHRI Number</b>	8580769	8580770	8580771	8580772
<b>Energy Star</b>	Yes	Yes	Yes	Yes
	<b>Space Heating Ratings</b>			
<b>AFUE, %</b>	95.0	95.0	95.0	95.0
<b>Heating Capacity, MBH</b>	56	75	94	112

### Gas Input Ranges

Model	Heating (BTU/H)	DHW (BTU/H)
NCB-150E	12,000–60,000	12,000–120,000
NCB-180E	14,000–80,000	14,000–150,000
NCB-210E	18,000–100,000	18,000–180,000
NCB-240E	18,000–120,000	18,000–199,900

### Warranty

Type	Labor	Parts	Heat Exchanger
Residential single family use only	1 year	5 year*	10 year

\*Includes DHW flat plate HX.  
For complete details please refer to the full warranty at [NavienInc.com](http://NavienInc.com).

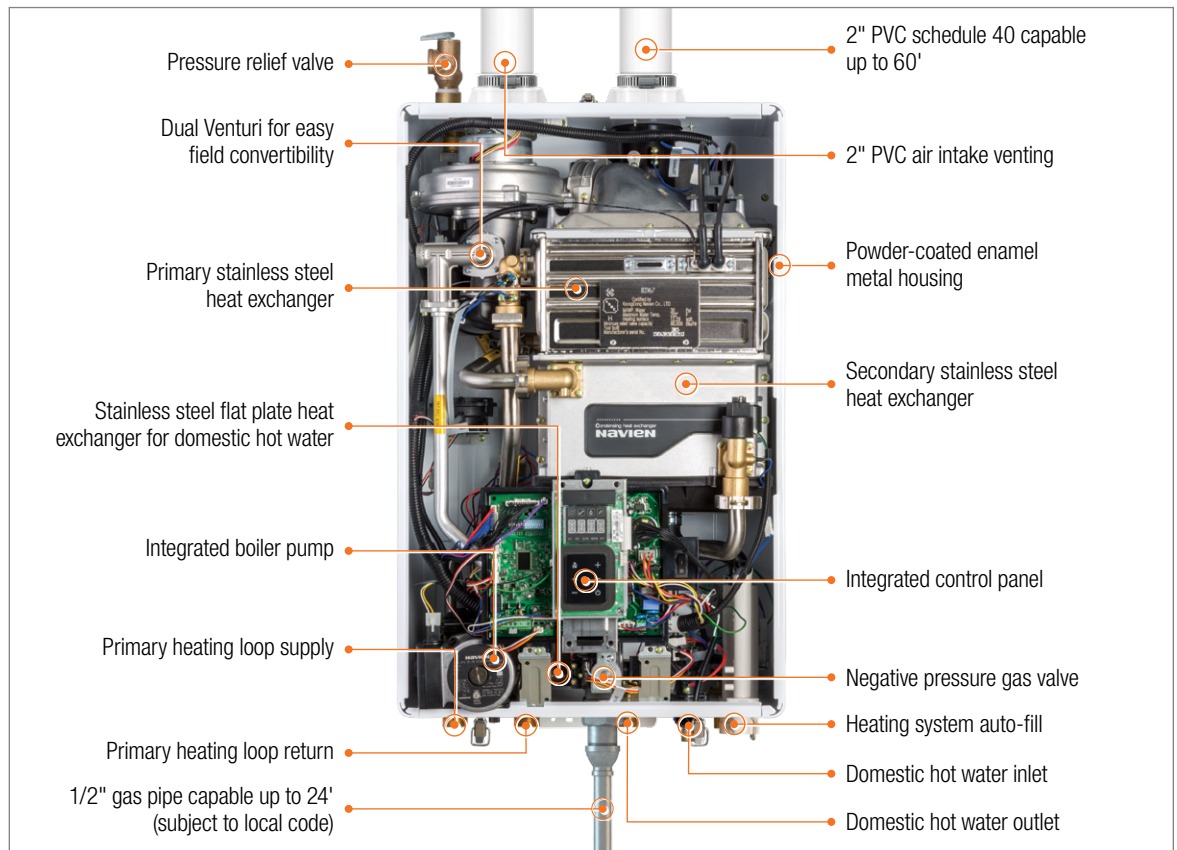
### Applications

Air Handler	Hydronic Heating		
	Hydronic fan coils	Baseboard radiators	Radiant floors
For NCB/NCB-E technical drawings of specific installations and requirements, please visit <a href="http://NavienInc.com">NavienInc.com</a>			

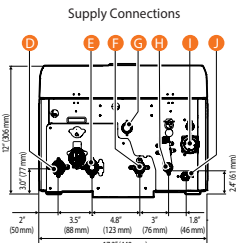
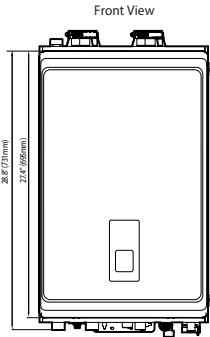
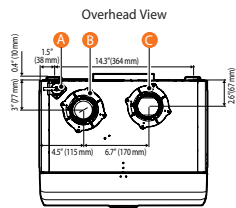
### Product Features

- TDR UP TO 6:1 HTG 11:1 DHW**
- 2"–3" VENTING LONG DISTANCES**
- HTG & DHW 120k BTU/h 199k BTU/h**
- NG OR LP FIELD GAS CONVERTIBLE**
- AFUE 95.0%**

### NCB-E: The Inside Story



## Dimensions



**Connection Size**

A	Pressure Relief Valve Adapter	Ø 3/4"
B	Air Intake	Ø 2"
C	Exhaust Gas Vent	Ø 2"
D	Heating Supply Outlet	Ø 1"
E	Heating Return Inlet	Ø 1"
F	DHW Hot Water Outlet	Ø 3/4"
G	Gas Supply Inlet	Ø 3/4"
H	DHW Cold Water Inlet	Ø 3/4"
I	Condensate Outlet	Ø 1/2"
J	Auto Feeder Inlet	Ø 1/2"

## Ratings & Specifications

Model Number <sup>1</sup>	Navien Combination Boiler Space Heating Ratings					Other Specifications	
	Heating Input (MBH)		Heating Capacity <sup>2</sup> (MBH)	Net AHRI Rating Water <sup>3</sup> (MBH)	AFUE <sup>2</sup> %	Water Pressure	Water Connection Size (Supply, Return)
	Min	Max					
NCB-150E	12	60	56	49	12-30 psi	1" NPT	
NCB-180E	14	80	75	65			
NCB-210E	18	100	94	82			
NCB-240E	18	120	112	97			

<sup>1</sup> Ratings are the same for natural gas models converted to propane use.

<sup>2</sup> Based on U.S. Department of Energy (DOE) test procedures.

<sup>3</sup> The net AHRI water ratings shown are based on a piping and pickup allowance of 1.15.

Consult Navien before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

Specifications					
Item		NCB-150E	NCB-180 / NCB-180E	NCB-210 / NCB-210E	NCB-240 / NCB-240E
Gas input	Space heating	12,000–60,000 (BTU/H)	14,000–80,000 (BTU/H)	18,000–100,000 (BTU/H)	18,000–120,000 (BTU/H)
	Domestic hot water	12,000–120,000 (BTU/H)	14,000–150,000 (BTU/H)	18,000–180,000 (BTU/H)	18,000–199,900 (BTU/H)
Flow rate (DHW)	77°F (43°C) Temp Rise	2.6 GPM (9.8 L/m)	3.4 GPM (12.9 L/m)	4.0 GPM (15.1 L/m)	4.5 GPM (17.0 L/m)
Dimensions		17"(W) x 28"(H) x 12"(D)	17"(W) x 28"(H) x 12"(D)	17"(W) x 28"(H) x 12"(D)	17"(W) x 28"(H) x 12"(D)
Weight		66 lbs (30kg)	74 lbs (34kg)	84 lbs (38kg)	84 lbs (38kg)
Installation type		Indoor wall-hung			
Venting type		Forced draft direct vent			
Ignition		Electronic ignition			
Water pressure (Hydronic/DHW)		12–30 PSI/15–150 PSI			
Natural gas supply pressure (from source)		3.5" –10.5" WC			
Propane gas supply pressure (from source)		8.0" –13.5" WC			
Natural gas manifold pressure (min/max)		-0.08" WC / -0.34" WC	-0.07" WC / -0.66" WC	-0.05" WC / -0.36" WC	-0.06" WC / -1.20" WC
Propane gas manifold pressure (min/max)		-0.08" WC / -0.30" WC	-0.07" WC / -0.62" WC	-0.10" WC / -0.66" WC	-0.03" WC / -0.98" WC
Minimum flow rate (DHW)		0.5 GPM (1.9 L/m)			
Connection sizes	Heating supply/return	1" NPT			
	DHW inlet/outlet	3/4" NPT			
	Gas inlet	3/4" NPT			
	Auto feeder	1/2" NPT			
	Condensate outlet	1/2" NPT			
Power supply	Main supply	120V AC, 60Hz			
	Maximum power consumption	200W (up to 2 amperes)			
Materials	Casing	Cold rolled carbon steel			
	Heat exchangers	Primary/secondary heat exchanger: stainless steel DHW heat exchanger: stainless steel			
Venting	Exhaust	2" or 3" PVC, CPVC, PP, SS 2" or 3" special gas vent type BH (Class II, A/B/C)			
	Intake	2" or 3" PVC, CPVC, PP, SS 2" or 3" special gas vent type BH (Class II, A/B/C)			
	Vent clearances	0" to combustibles			
Safety devices	Flame rod, aps, gas valve operation detector, ignition operation detector, water temperature high limit switch, exhaust temperature high limit sensor				

Navien reserves the right to change specifications at any time without prior notice. Please refer to NavienInc.com to verify you have the most current information.

## Accessories

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