

NCB-H High Capacity Water Tube Condensing Combi-boilers



The highest selling brand
of condensing combi-boilers
takes home heating and
DHW to new heights

NaviLink™ and Wi-Fi remote
control system...available as
an add-on accessory.



NCB-H NAVIEN CONDENSING WATER TUBE HIGH CAPACITY COMBI-BOILERS

Aim high with Navien...
High efficiency, High output,
High performance,
all in one compact combi

- **Highest** DHW maximum BTUs in residential combi-boilers... up to 210,000 per hour
- **Highest** DHW flow rate @ 70°F rise... up to 5.4 GPM
- **Highest** number of BTU sizes for the North American residential combi-boiler market
- **Highest** residential combi DHW TDR...15:1
- **Highest** residential combi heating TDR... up to 11:1*
- **Highest** number of built-in zone controls for valves or pumps... up to three
- **Highest** full lineup 2" venting lengths... up to 65 feet
- **Highest** number of cascade capable units with NPE tankless water heaters... up to 15
- **High altitude certification**... up to 10,100 feet (NG or LP)
- **Lowest minimum fire BTU** for residential combi-boilers... as low as 10,700

*Based on NCB-250/150H.



 **AFUE 95.0%**

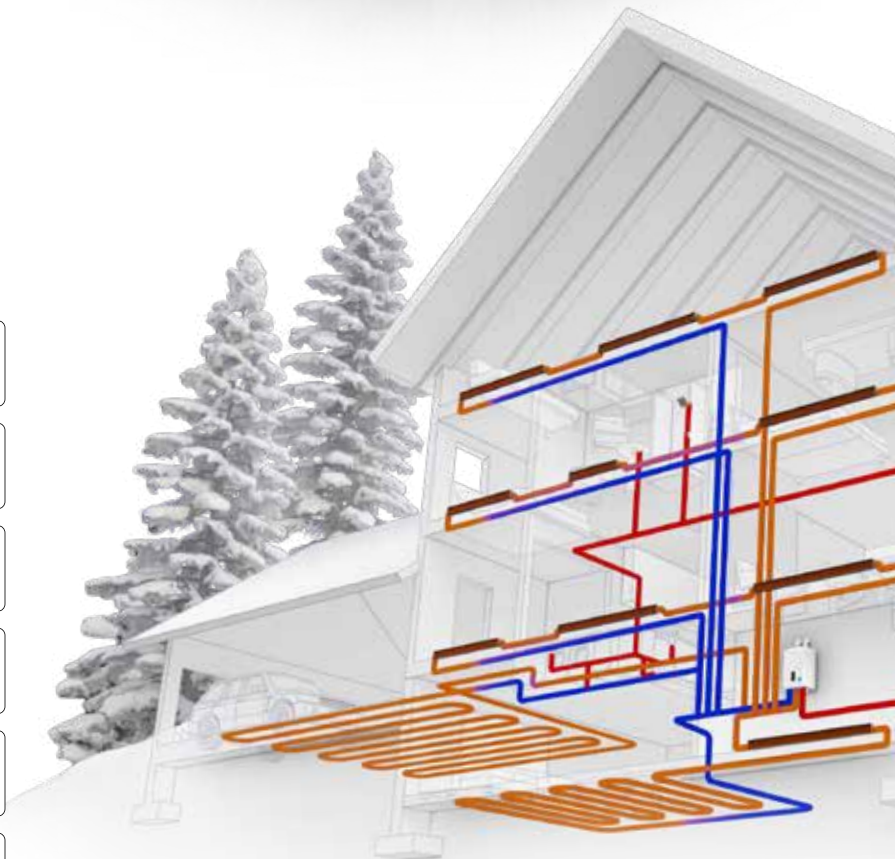
DUAL SS HX FOR HEATING & SEPARATE SS HX FOR DHW

TDR UP TO 11:1 HTG 15:1 DHW

2" VENT UP TO 65 FEET & 1/2" GAS UP TO 24 FEET

NG-LP-NG HIGH ALTITUDE FIELD GAS CONVERTIBLE

5 MODELS FOR ANY SIZE HOME



T H E L E A D E R I N C O N D E N S I N G T E C H N O L O G Y

Navien NCB-H...leading the way with the complete combi package and no compromises

Navien's innovation and technological advancements have done it again. The new NCB-H is taking combi performance to the highest levels. As the competition tries to get closer, Navien ingenuity keeps advancing their lead.

NCB-250/150H versus other 150,000 BTU combi-boilers

Highest Maximum DHW Turndown Ratio

NCB-250/150H	15:1
COMPETITOR A	10:1
COMPETITOR B	8:1

Highest Gallons Per Minute @ 70°F Rise

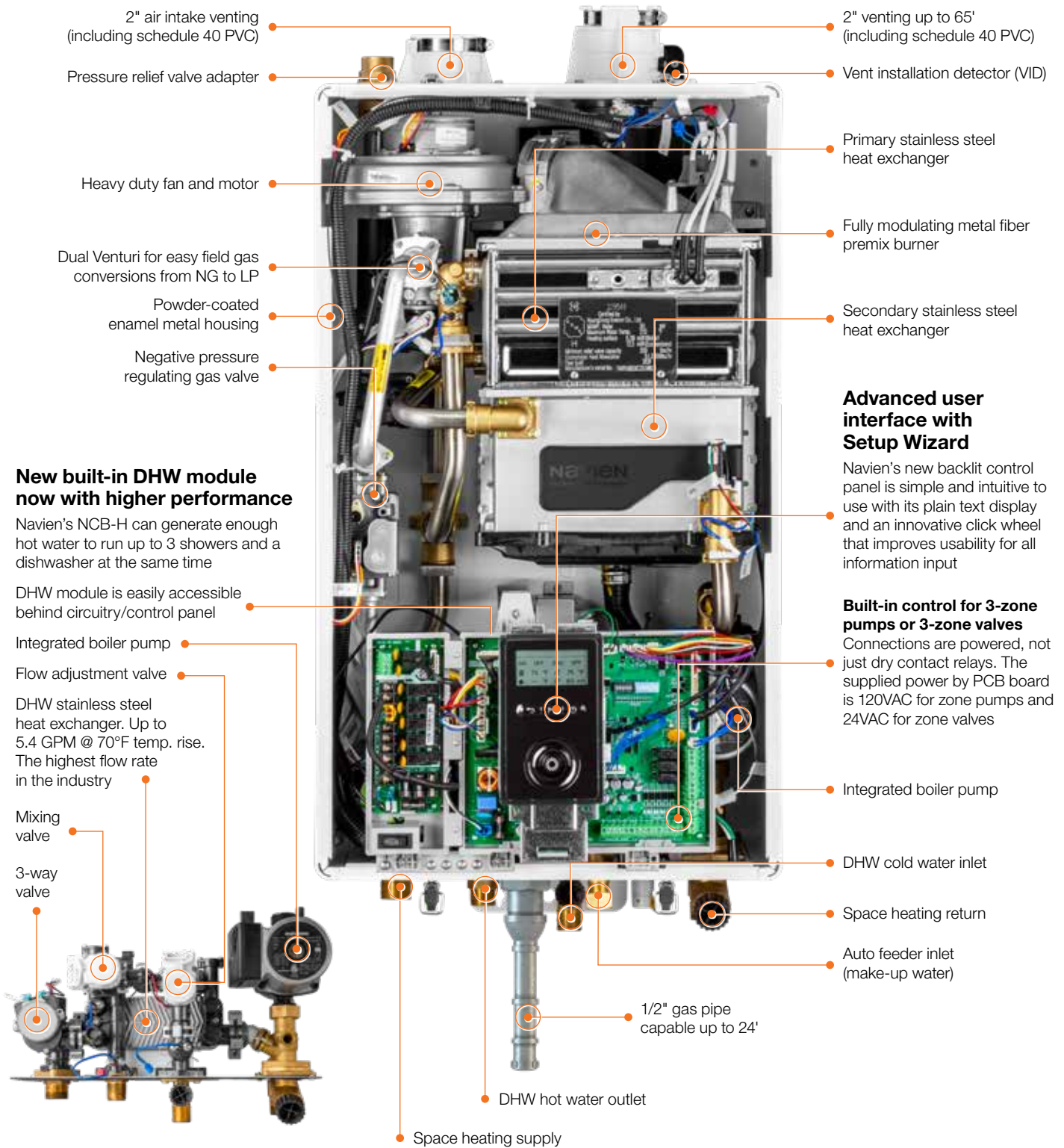
NCB-250/150H	5.4
COMPETITOR A	4.0
COMPETITOR B	3.9

Lowest Minimum Fire BTU

NCB-250/150H	14,000
COMPETITOR A	15,000
COMPETITOR B	19,000

HEATING UP TO 150,000 BTU/H
DHW UP TO 210,000 BTU/H

COMPARE THESE ADVANTAGES AND SEE WHY NCB-H COMBIS ARE THE RIGHT FIT FOR SMALL AND LARGE HOMES





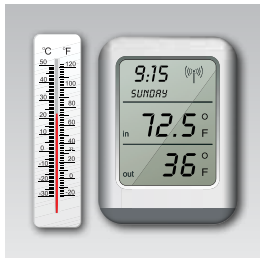
Dual inputs of up to 150,000 BTU/H for heating and 210,000 BTU/H for DHW

Satisfies all the space heating and domestic hot water requirements of most typical large homes.



2" PVC venting and 1/2" gas pipe capability

Save time and effort in retrofit application with 2" PVC venting up to 65' or up to 150' with 3" venting. 1/2" gas lines for up to 24' also speeds up installations.



TDR 15:1 for DHW and up to 11:1 for heating

The sophisticated gas flow control system provides a high turndown ratio, reducing energy waste and excessive boiler cycling and enhances temperature control for DHW.



Expanded DHW capability

For increased domestic hot water flow demand, the NCB-H can be cascaded with up to 15 NPE units.



Space saving and light weight design

Navien's sleek wall-hung combi-boilers occupy 80% less space than traditional floor standing boilers and tank water heaters.



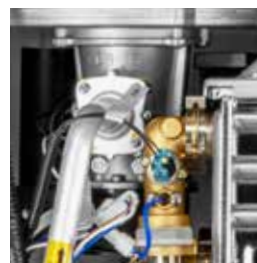
Easy access to DHW module and valves

All components of DHW module including water feed valve, flow adjustment valve, mixing valve and cartridge-style 3-way valve are right behind circuit board for easy serviceability.



Dual stainless steel heat exchangers for heating and separate SS flat plate heat exchanger for DHW

DHW heat exchanger delivers up to 5.4 GPM at 70°F temperature rise, the highest flow rate in the industry.



Dual Venturi and field gas convertibility

Dual Venturi system creates better combustion control and turndown ratio. Field gas convertibility is easy with orifice conversion kits for NG high altitude (5,400–10,100 ft.) and LP (up to 10,100 ft.) included with NCB-H Series combi-boilers.



5 NCB-H models for any size home

Available in NCB-190/060H, NCB-190/080H, NCB-240/110H, NCB-240/130H, NCB-250/150H, giving you multiple options to match any size house, apartment, condo... big or small.

MORE REASONS TO CHOOSE NCB-H FOR YOUR NEXT APPLICATION

NaviLink®

Optional Wi-Fi control

This add-on accessory enables remote access from smartphones or tablets for temperature, usage data and diagnostics on NCB-H models.



NaviLink
PBCM-AS-001



NaviLink Lite
PBCM-AS-002

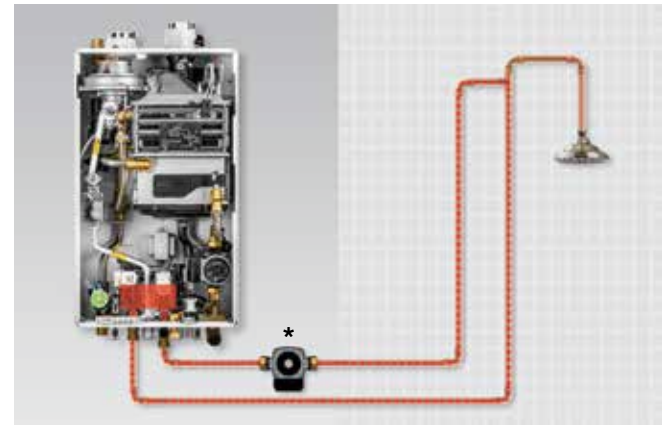


HotButton®

Optional DHW activation

At the push of a button, the HotButton hot water system activates the domestic hot water heat exchanger to heat water in the supply lines to provide hot water only when it's needed.

PZZZ-00046



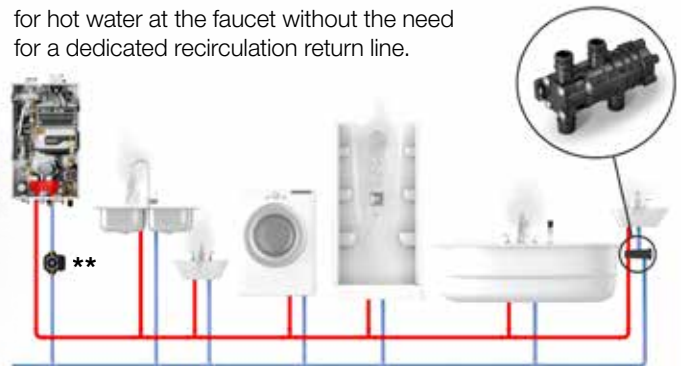
*A dedicated recirculation line and external recirc pump are necessary and not included. See installation manual for details.



NaviCirc™

Optional recirculation valve for NCB-H combi-boilers

NaviCirc is a simple plumbing device that uses the existing hot and cold water lines to reduce the wait time for hot water at the faucet without the need for a dedicated recirculation return line.



PFFW-SXX-001, NaviCirc Kit: 30022965A.

**External recirc pump and check valves not included.



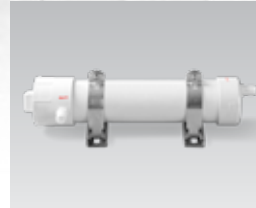
NCB-H combi-boiler accessories



NaviClean magnetic filtration system

Removes higher levels of iron oxides, sludge and debris with powerful magnetic filter.

GXXX001727



Light commercial neutralizer

Light commercial condensate neutralizer for up to 6 units (1 NCB-H and up to 5 NPE's).

GXXX001324

Replacement media for light commercial neutralizer

GXXX001328



PeakFlow S Scale Prevention System

GPWC110001AC001

PeakFlowS Replacement Filter

GWFC110GD001



Residential neutralizer (V2)

Residential condensate neutralizer for NCB-H series units designed to neutralize the condensate of one unit.

GXXX002212

Replacement media for residential neutralizer

GXXX001323



SmartZone+ pump controller

Zone pump controller designed to work with NCB-H series units allowing control from 4 to 6 zone pumps. Adding the SmartZone control will also allow expansion of the built in NCB-H zoning.

2 Zones: PFMZ-02P-001

3 Zones: PFMZ-03P-001

4 Zones: PFMZ-04P-001

6 Zones: PFMZ-06P-001



Cascade cable

Cascade with up to 15 NPE-A/S tankless water heaters.

GXXX000546



Universal temperature sensor

Designed to sense supply, return or tank water temperature. Works with all NCB-H series combi-boilers.

GXXX001769



Common vent collar kit

Required for common venting the NCB-H with one or more NPE tankless water heaters.

30014367B

Includes cascade cable (GXXX000546), common vent collar damper and VID jumper cable.



Ready-Link® rack base (V3) and add-on rack(s)

Base (V3)

GFFMKDIZUS-005

Add-on (V3)

GFFMKDIZUS-006

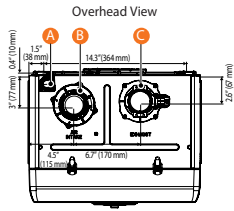


Combi-boiler primary manifold kit

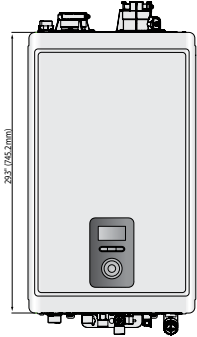
This package includes new stainless steel manifold, isolation valves with gaskets, PRV/air vent/LWCO adapter tree, air vent, threaded connection adapter with clip and LWCO plug.

30026576B

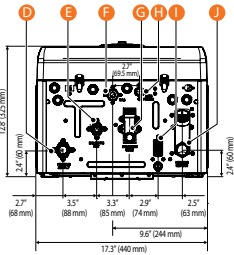
Dimensions Ratings



Front View



Supply Connections



Connection Size

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

Model Number ¹	Navien Condensing Boiler Space Heating Ratings				Other Specifications		
	Heating Input (BTU/H)		Heating Capacity ² (BTU/H)	Net AHRI Rating, Water ³ (BTU/H)	AFUE ² (%)	Water Pressure	Water Connection Size (Supply, Return)
	Min	Max					
NCB-190/060H	11,000	60,000	56,000	49,000	95.0	12–30 psi	1" NPT
NCB-190/080H	11,000	80,000	74,000	64,000			
NCB-240/110H	13,000	110,000	102,000	89,000			
NCB-240/130H	13,000	130,000	120,000	104,000			
NCB-250/150H	14,000	150,000	138,000	120,000			

¹ Ratings are the same for natural gas models converted to propane use.
² Based on U.S. Department of Energy (DOE) test procedures.
³ 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.

Model Number	Navien Condensing Boiler Domestic Hot Water Ratings		Other Domestic Hot Water Specifications				
	Input Ratings (BTU/H)		Water Pressure PSI	Minimum Flow Rate GPM (L/m)	Flow Rate 45°F (25°C) Temp Rise GPM (L/m)	DHW Connection Size	
	Min	Max				Supply	Return
NCB-190/060H	10,700	160,000	15–150	0.5 (1.9)	6.4 (24.2)	3/4" NPT	3/4" NPT
NCB-190/080H							
NCB-240/110H							
NCB-240/130H							
NCB-250/150H	14,000	210,000					

Specifications

Item		NCB-190/060H NCB-190/080H	NCB-240/110H NCB-240/130H	NCB-250/150H
Dimensions		17.3" W x 29.3" H x 12.8" D		
Boiler weight	Empty	87 lbs (40 kg)	96 lbs (44 kg)	
	With water	93 lbs (42 kg)	102 lbs (46 kg)	
Installation type		Indoor wall-hung		
Venting type		Forced draft direct vent		
Ignition		Electronic ignition		
Natural gas supply pressure (from source)		3.5" to 10.5" WC		
Propane gas supply pressure (from source)		8.0" to 13.5" WC		
Natural gas manifold pressure		-0.01" WC to -0.31" WC	-0.06" WC to -0.24" WC	-0.06" WC to -0.26" WC
Propane gas manifold pressure		-0.04" WC to -0.33" WC	-0.06" WC to -0.26" WC	-0.06" WC to -0.28" WC
Gas connection size		3/4" NPT		
Power supply	Main supply	120V AC, 60Hz		
	Maximum power consumption	Up to 15 amperes		
Materials	Casing	Cold-rolled carbon steel		
	Heat exchangers	Stainless steel		
Venting	Exhaust	2" or 3" PVC, CPVC, approved polypropylene 2" or 3" special gas vent type BH (Class III, A/B/C)		
	Intake	2" or 3" PVC, CPVC, polypropylene 2" or 3" special gas vent type BH (Class III, A/B/C)		
	Vent clearance	0" to combustibles		
Safety devices		Flame Rod, APS, Ignition operation detector, water temperature high limit switch, exhaust temperature high limit sensor, water pressure sensor, burner high limit fuse, vent installation detector		

DHW flow rates

DHW Temp Rise °F (°C)	DHW Flow Rates GPM (L/m)		
	NCB-190/060H NCB-190/080H	NCB-240/110H NCB-240/130H	NCB-250/150H
35 (19)	8.2 (31.1)	10.4 (39.5)	10.8 (40.9)
40 (22)	7.2 (27.3)	9.0 (34.1)	9.5 (35.8)
45 (25)	6.4 (24.2)	7.9 (30.0)	8.4 (31.8)
50 (28)	5.8 (21.8)	7.2 (27.3)	7.6 (28.6)
55 (31)	5.2 (19.8)	6.6 (25.0)	6.9 (26.0)
60 (33)	4.8 (18.2)	6.0 (22.7)	6.3 (23.8)
67 (37)	4.3 (16.3)	5.4 (20.4)	5.6 (21.4)
70 (39)	4.1 (15.6)	5.1 (19.3)	5.4 (20.4)
77 (43)	3.7 (14.2)	4.7 (17.8)	4.9 (18.6)
80 (44)	3.6 (13.6)	4.5 (17.0)	4.7 (17.9)
85 (47)	3.4 (12.8)	4.2 (15.9)	4.4 (16.8)
90 (50)	3.2 (12.1)	4.0 (15.1)	4.2 (15.9)
100 (56)	2.9 (10.9)	3.6 (13.6)	3.8 (14.3)

Temp settings

Item	Temperature Range °F (°C)	Remarks
Space Heating	Supply 77–185 (25–85)	Actual supply and return temperatures vary depending on the selected outdoor reset curve.
	Return 68–158 (20–70)	
DHW	86–140 (30–60)	

Model transition

Discontinued NCB-E	New NCB-H
NCB-150E DHW: 12,000–120,000 BTU/H HTG: 60,000 BTU/H	→ NCB-190/060H DHW: 10,700–160,000 BTU/H HTG: 60,000 BTU/H
NCB-180E DHW: 14,000–150,000 BTU/H HTG: 80,000 BTU/H	→ NCB-190/080H DHW: 10,700–160,000 BTU/H HTG: 80,000 BTU/H
NCB-210E DHW: 18,000–180,000 BTU/H HTG: 100,000 BTU/H	→ NCB-240/110H DHW: 13,300–199,900 BTU/H HTG: 110,000 BTU/H
NCB-240E DHW: 18,000–199,900 BTU/H HTG: 120,000 BTU/H	→ NCB-240/130H DHW: 13,300–199,900 BTU/H HTG: 130,000 BTU/H
AN INDUSTRY FIRST	
NCB-250/150H DHW: 14,000–210,000 BTU/H HTG: 150,000 BTU/H	

Warranty

Residential Single Family Use Only	
Heat exchanger	10 year
Parts*	5 year
Labor	1 year

*Includes DHW flat plate HX.
 Navien reserves the right to change specifications at any time without prior notice. Please refer to www.NavienInc.com to verify you have the most current information.



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THE LEADER IN CONDENSING TECHNOLOGY