NAVIEN

QuickFacts

NCB700 Series



Condensing Combi-boilers

Product Features

- 96% AFUE high-efficiency condensing.
- Up to 5.4 GPM @ 70°F temperature rise for DHW.
- Cascade capable with NPE-2 tankless water heaters for expanded DHW capacity.
- Dual inputs of up to 150,000 BTU/h for heating and 210,000 BTU/h for DHW.
- Built-in Wi-Fi offers remote controling, monitoring, and over-the-air updates when paired with the NaviLink app.
- Built-in zone control board that can directly connect and manage up to 4 zone pumps or up to 3 zone valves.

Heating Input Ranges

Model	Heating (BTU/h)	DHW (BTU/h)
NCB700-190/060	11,000–60,000	10,700–160,000
NCB700-190/080	11,000–80,000	
NCB700-240/110	13,000–110,000	13,300–199,900
NCB700-240/130	13,000–130,000	
NCB700-250/150	14,000–150,000	14,000–210,000

Temperature Range Settings

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

Applications

Air Handler	Closed Loop Hydronic Heating Systems
For NCB700 technical drawings of specific installations and requirements please visit Navieninc.com	

Ratings & Specifications

	NCB700-190/060	NCB700-190/080	NCB700-240/110	NCB700-240/130	NCB700-250/150
	Product Approvals				
CSA	Yes	Yes	Yes	Yes	Yes
SCAQMD 1146.2 (NOx, <20 ppm)	Yes	Yes	Yes	Yes	Yes
Low lead (<0.25%, DHW only)	Yes	Yes	Yes	Yes	Yes
ASME "H" Stamp	Yes	Yes	Yes	Yes	Yes
AHRI Number	218432600	218432601	218432602	218432603	218432604
Energy Star	Yes	Yes	Yes	Yes	Yes
	Space Heating Ratings				
AFUE, %	96.0	96.0	96.0	96.0	96.0
Heating Capacity, BTU/h	56,000	74,000	102,000	120,000	138,000

Warranty

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

*Includes DHW flat plate HX.

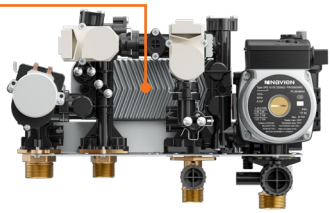
New RAL adapter. Convenient, time-saving RAL assembly, which includes the pressure relief valve, air vent, and a fitting for an LWCO is standard with all the NCB700 Combi-boilers.

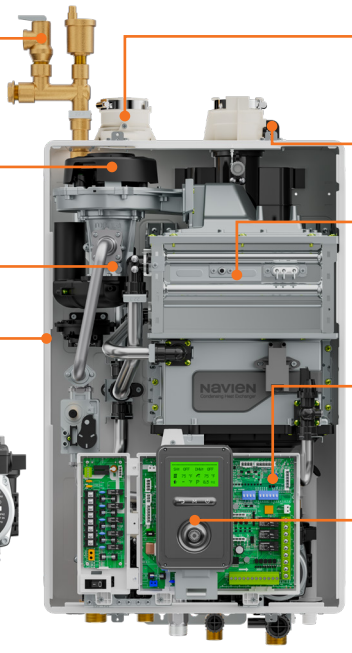
New enhanced fan and motor. The fan/motor has added anti-vibration to run quieter and is more powerful for longer vent lengths.

New dual venturi motor. The stronger stepper motor gives added performance and durability.

Smaller design. The new compact NCB700 is now 2" shorter for more installation flexibility.

Lower profile DHW module. The redesign of the DHW module has reduced the height, giving the contractor easier access and serviceability.





New external air intake filter. Check and clean intake vent filter screen of debris, without opening the cabinet.

Vent installation detector (VID). Added safety during installation and service.

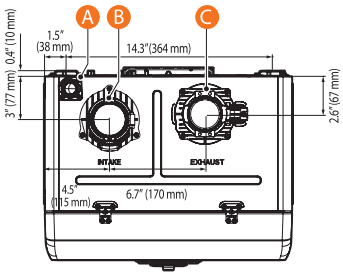
New dual heat exchanger design with added durability and performance. Our dual stainless steel heat exchangers feature an enhanced tube design for improved heat transfer.

Advanced connectivity. Wi-Fi modules are integrated into the control, allowing direct connection to a smartphone or tablet with the NaviLink App.

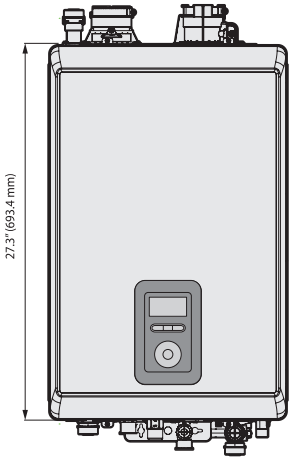
User-friendly interface control panel with Set-Wizard software. This backlit controller with plain text display and click wheel is simple and intuitive.

Dimensions

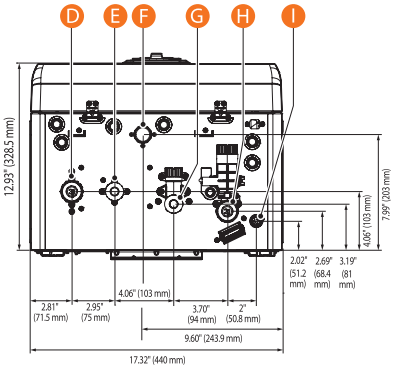
Overhead View



Front View



Supply Connections



		Connection Size
A	RAL Adapter Connection	–
B	Air Intake	Φ 2"
C	Exhaust Gas Vent	Φ 2"
D	Heating Supply	Φ 1"
E	Domestic Hot	Φ 3/4"
F	Gas Connection	Φ 3/4"
G	Domestic Cold	Φ 3/4"
H	Heating Return	Φ 1"
I	Condensate Outlet	Φ 1/2"

Ratings & Specifications

Navien Condensing Boiler Space Heating Ratings					Other Specifications	
Model Number[1]	Heating Input (BTU/h) Min	Heating Input (BTU/h) Max	Heating Capacity[2] (BTU/h)	Net AHRI Rating Water[3] (BTU/h)	AFUE[2] (%)	Water Pressure	Water Connection Size (Supply, Return)
NCB700-190/060	11,000	60,000	56,000	49,000	96.0	12–30 psi	1" NPT
NCB700-190/080	11,000	80,000	74,000	64,000			
NCB700-240/110	13,000	110,000	102,000	89,000			
NCB700-240/130	13,000	130,000	120,000	104,000			
NCB700-250/150	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.

Domestic Hot Water Specifications						
Item		NCB700-190/060	NCB700-190/080	NCB700-240/110	NCB700-240/130	NCB700-250/150
Input ratings	Min	10,700	10,700	13,300	13,300	14,000
	Max	160,000	160,000	199,900	199,900	210,000
Water pressure		15–150 psi				

Item		Specifications		
		NCB700-190/060 NCB700-190/080	NCB700-240/110 NCB700-240/130	NCB700-250/150
Dimensions		17.3" W x 27.3" H x 12.8" D		
Boiler weight	Empty	78 lbs (37 kg)	83 lbs (40 kg)	
	With water	82 lbs (39 kg)	88 lbs (42 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		-0.02" WC to -0.39" WC	-0.02" WC to -0.16" WC	-0.02" WC to -0.18" WC
Propane gas manifold pressure		-0.04" WC to -0.42" WC	-0.02" WC to -0.20" WC	-0.02" WC to -0.22" 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), 2" or 3" stainless steel		
	Intake	2" or 3" PVC, CPVC, polypropylene 2" or 3" special gas vent type BH (Class III, A/B/C), 2" or 3" stainless steel		
	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, vent installation detector		
Certifications				

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.

DHW Temp Rise	DHW Flow Rates GPM (L/m) NCB700-190/060 NCB700-190/080	NCB700-240/110 NCB700-240/130	NCB700-250/150
35°F (19°C)	8.2 (31.1)	10.4 (39.5)	10.8 (40.9)
40°F (22°C)	7.2 (27.3)	9.0 (34.1)	9.5 (35.8)
45°F (25°C)	6.4 (24.2)	7.9 (30.0)	8.4 (31.8)
50°F (28°C)	5.8 (21.8)	7.2 (27.3)	7.6 (28.6)
55°F (31°C)	5.2 (19.8)	6.6 (25.0)	6.9 (26.0)
60°F (33°C)	4.8 (18.2)	6.0 (22.7)	6.3 (23.8)
67°F (37°C)	4.3 (16.3)	5.4 (20.4)	5.6 (21.4)
70°F (39°C)	4.1 (15.6)	5.1 (19.3)	5.4 (20.4)
77°F (43°C)	3.7 (14.2)	4.7 (17.8)	4.9 (18.6)
80°F (44°C)	3.6 (13.6)	4.5 (17.0)	4.7 (17.9)
85°F (47°C)	3.4 (12.8)	4.2 (15.9)	4.4 (16.8)
90°F (50°C)	3.2 (12.1)	4.0 (15.1)	4.2 (15.9)
100°F (56°C)	2.9 (10.9)	3.6 (13.6)	3.8 (14.3)

NAVIEN ON

Turning on endless possibilities in hot water technology. NAVIEN ON learns the system's DHW usage patterns to optimize recirculation and pre-heat scheduling. This maximizes energy efficiency, minimizes wastewater, and delivers endless hot water only when you want it.

Accessories and components are subject to change or discontinuation without notice. Images are for illustrative purposes only and actual products may vary based on current vendor availability. Navien reserves the right to substitute equivalent accessories or components from alternative vendors as necessary.

For the most up-to-date product information and current accessory availability, please visit navieninc.com or contact your local Navien representative.

To learn more about the NCB700 Combi-boilers:

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