

NFB700-C Series

 **navien**

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NEW NFB700-C Commercial Condensing Fire Tube Boilers

High capacity, energy-efficient
heating solutions for commercial applications



Introducing the NFB700-C commercial fire tube boilers

The NFB700-C combines advanced fire tube, stainless steel heat exchanger technology, with robust safety and flexible installation features. It's durable, eco-friendly design is a smart, cost-effective choice for large scale heating applications.



Lower operating costs with outstanding thermal efficiency of 97.5%*.



Advanced gas control system reduces energy waste and excessive boiler cycling.



Advanced patented stainless steel fire tube heat exchanger.



Smart controls with 10.1" color touch display and built-in Wi-Fi connectivity.



NG to LP field convertible and dual Venturi for consistent air-to-gas ratio.



Capable of cascading up to 8 boilers and common venting up to 4 boilers.



Low NOx at less than 20ppm.



Proven controls and technology in boiler capacity up to 1,000 MBH.

*Based on U.S. Department of Energy (DOE) test procedures.

Patented stainless steel fire tube heat exchanger

Navien's ASME-certified, "H" stamped stainless steel fire tube heat exchangers are in-house designed and built by the latest in robotic and automated technology to maximize quality.

Pre-mix burner, easy to remove and service.

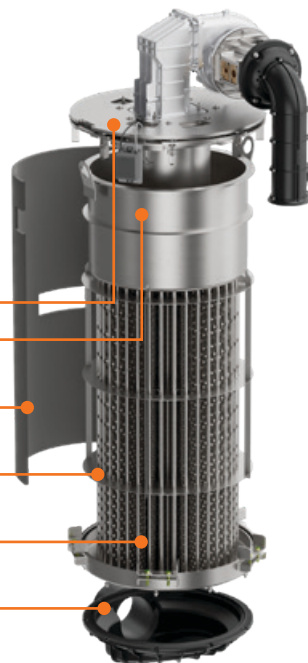
Advanced heat exchanger design transfers heat evenly from top to bottom, reducing hot spots.

Included insulation on the heat exchanger exterior to reduce thermal losses and improve efficiency.

New diaphragm design optimizes water flow and improves performance.

Dimpled fire tubes increase structural strength and enhances heat transfer rates.

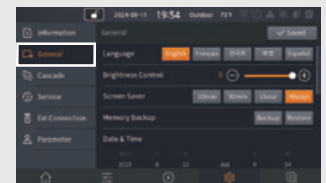
Non-metallic drain pan prevents corrosion from acidic condensate.



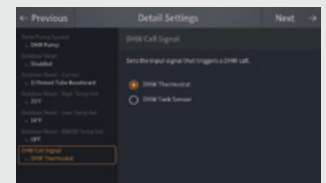
10.1" touchscreen control panel with intuitive setup software



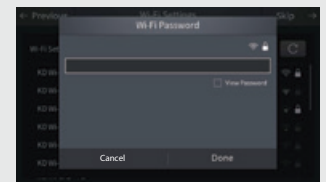
Navien Startup Wizard makes navigating through the setup operations and troubleshooting simple.



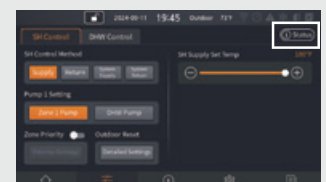
Set your language, date, time, and temperature easily with a tap on the screen.



Customize your system with pump settings, outdoor reset/curves, outdoor high/low temperature and WWSD functions.



WiFi mobile app, and QR code for registration are all built into the system.



The extensive clear text service feedback also helps troubleshoot most issues.

An inside look at the NFB700-C

Hinged side and top access panels.

Time-saving serviceability without the hassle of removing and replacing panel screws.

Navien's advanced combustion system

offers a consistent burn across a wide range of gas pressures, resulting in maximum performance down to 3.5" of water column on natural gas, and 8" on propane.

Smart controls.

All system setup, operations and troubleshooting available at your fingertips with the 10.1" color display panel, intuitive text information makes everything easier.

Built-in hardware connections for a boiler pump and 4 zone pumps.

All integrated into the NFB700-C circuit board, including DHW priority zone and air handler. Connections for BMS systems using the gateway accessory.

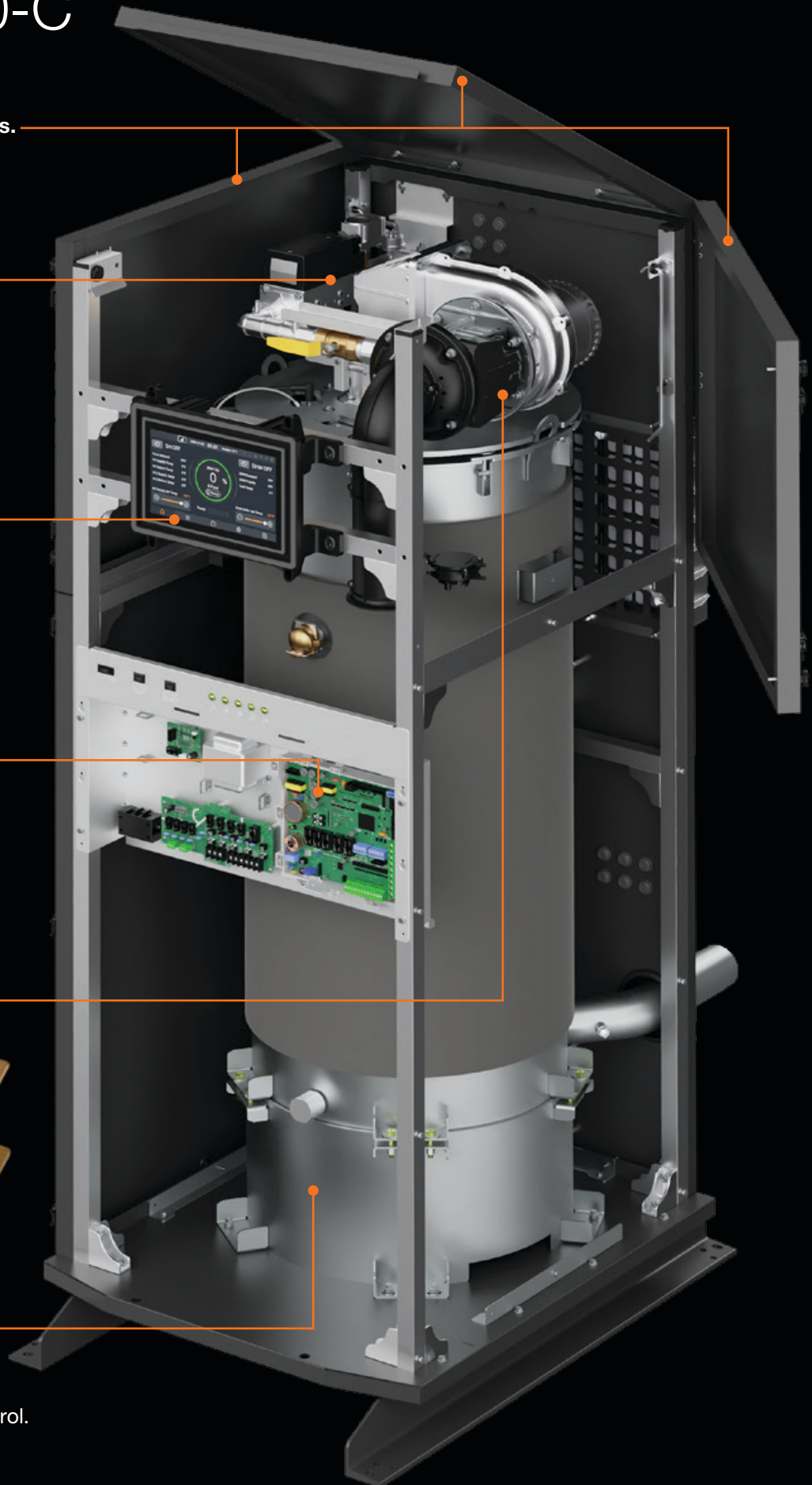
Dual Venturi and field gas convertibility.

Dual Venturi system creates better combustion control and turn down ratio.

Easy field gas convertibility from NG to LP and high altitude. Conversion kits included with every NFB700-C boiler.

Patented stainless steel heat exchanger.

Navien designed and built with vertically integrated manufacturing for better quality control.



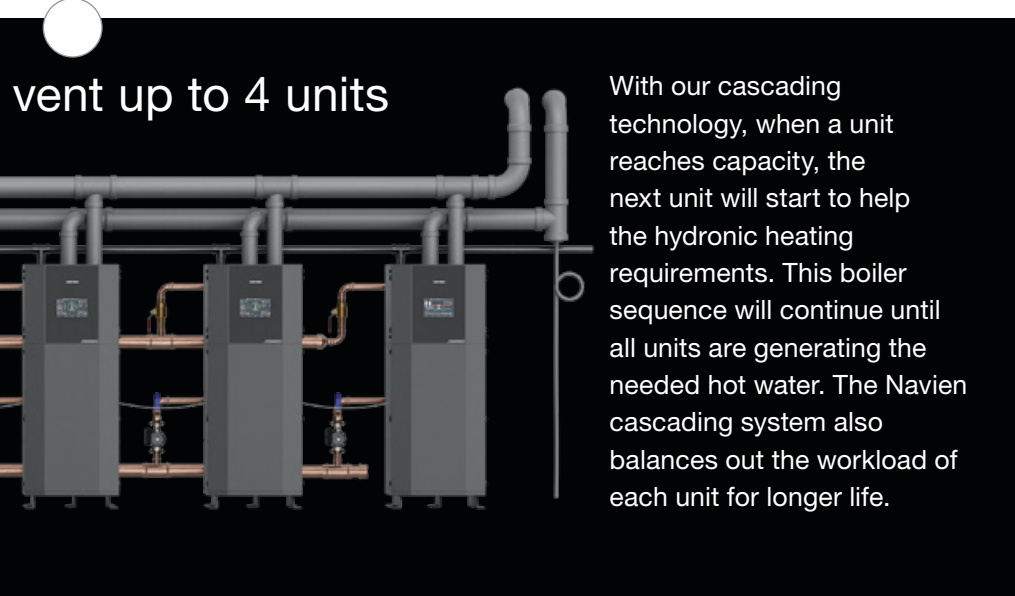
A great solution for new and retrofit

The NFB700-C boiler series is an extension of the Navien condensing high-efficiency commercial fire tube boiler lineup

These new compact high-performance models include 4 additional capacities, from 500 MBH up through 1,000 MBH in a single boiler. With capacity and installation flexibility on one or multiple units, these new boilers are the perfect solution for new construction and replacement applications in small and larger commercial buildings.



commercial heating applications



Customer support and advanced training makes Navien a smart choice for your next commercial heating application

Besides supplying the most innovative and energy efficient systems for residential and commercial applications, Navien provides extensive field support, webinars and training events for builders, architects and contractors. Our full-time customer support network provides quick answers to installation and operational questions.



NFB700-C is the total package

Included parts



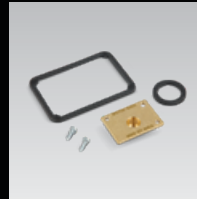
Air Vent



Pressure Relief Valve
(50 psi)



Propane
Conversion Kit
for High Elevation



Natural Gas
Conversion Kit
for High Elevation



Universal Temperature
Sensor & Bulbwell Kit



Outdoor Temperature
Sensor and Cable



Temperature and
Pressure Gauge



Vent Support Kit



Condensate Trap Kit



Flue Gas Vent Kit

Accessories



Universal
Temperature Sensor
GXXX001769



Cascade Cable
GXXX000546



Common Vent Damper
4": GXXX002990
6": GXXX002991



Standard Commercial
Condensate Neutralizer Tank
GXXX002366



Extra Large Condensate
Neutralizer Tank
for Cascade Systems
GXXX002367



Modbus/BACnet
Gateway &
Power Adapter
GXXX001932



LonWorks Gateway
Power Adapter
GXXX001933



Zone Controllers
2 Zones: PFMZ-02P-001
3 Zones: PFMZ-03P-001
4 Zones: PFMZ-04P-001
6 Zones: PFMZ-06P-001

Navien certification summary

Product Approvals	NFB700-500C	NFB700-600C	NFB700-800C	NFB700-1000C
CSA	Yes	Yes	Yes	Yes
SCAQMD 1146.2 (NOx, <20 ppm)	Yes	Yes	Yes	Yes
ASME	Yes "H" stamp	Yes "H" stamp	Yes "H" stamp	Yes "H" stamp
AHRI number	217547744	217547745	217547746	217547747
Energy Star	Yes	Yes	Yes	Yes
CRN	xxx	xxx	xxx	xxx

NFB700-C is easy to install and easy to maintain

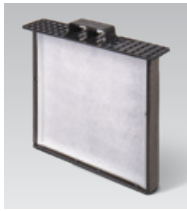
Built-in low water cutoff (LWCO) sensor

prevents boiler operation when water level is insufficient, protecting heat exchanger from overheating.

Fully modulating metal fiber pre-mix burner.

Heavy duty air intake filter.

Easy access commercial grade air filter for cleaning and replacement.



Air intake.

Gas connection.

Heating supply.

Patented stainless steel fire tube heat exchanger.

Heating return.

Multiple venting options.

Low exhaust gas temperatures allow use of PVC, CPVC, stainless steel, rigid/flexible polypropylene and venting, reducing installation time & costs.

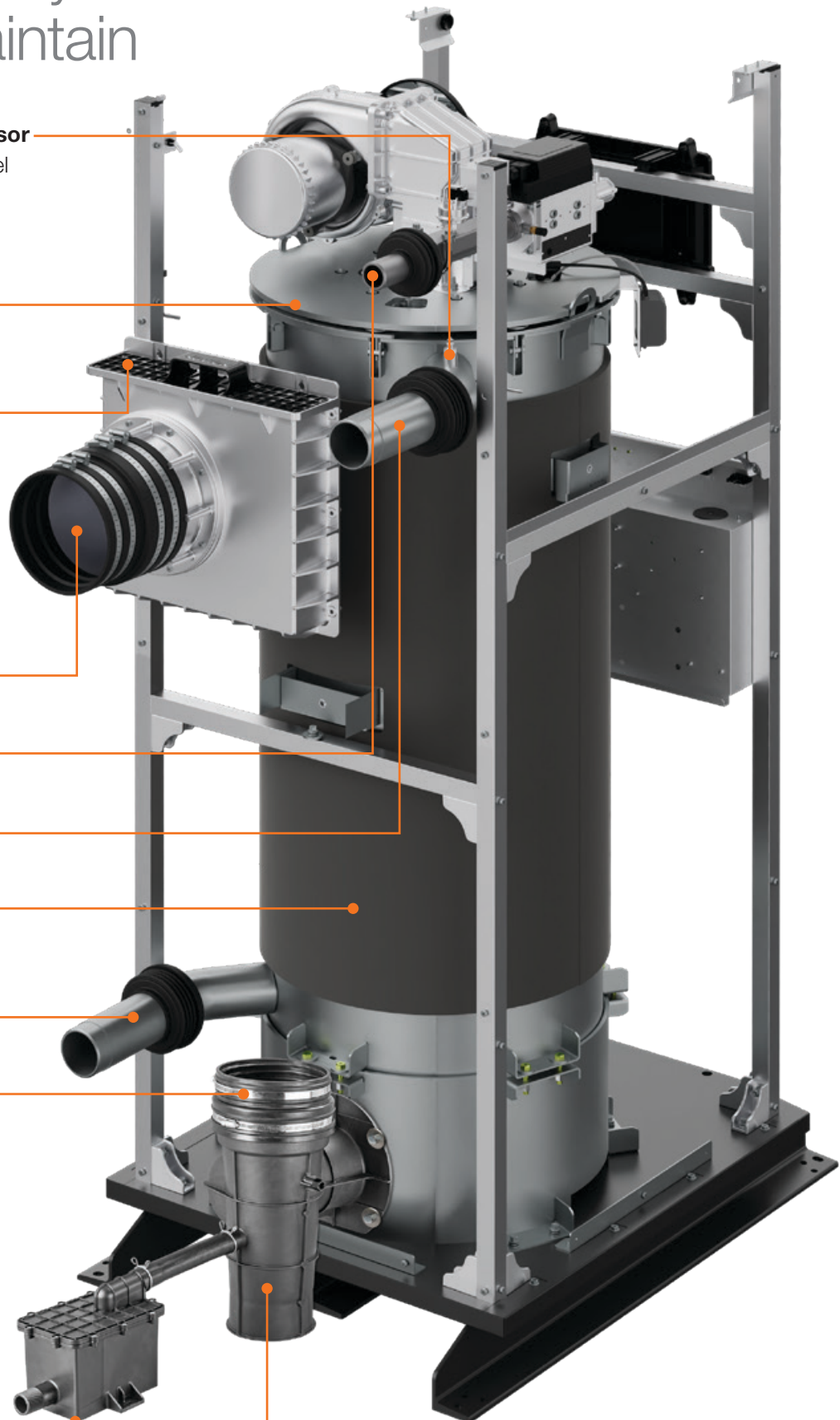


Factory-supplied condensate trap

with condensate hose, tapping screws and anchors.

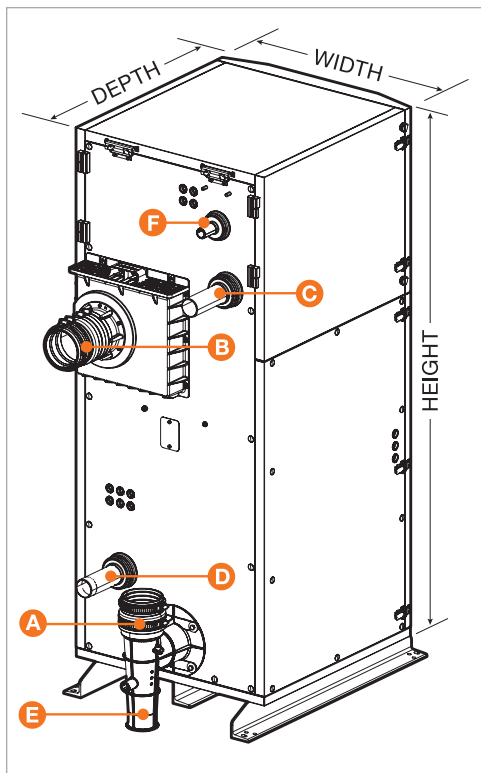
Exhaust flue gas vent kit.

NFB700-500/600C units can use 4" venting up to 150'.
NFB700-800/1000C units can use 6" venting up to 150'.



Dimensions

Model	Depth in (mm)	Width in (mm)	Height in (mm)
NFB700-500C NFB700-600C	31.0 (787)	28.3 (719)	72.1 (1831)
NFB700-800C NFB7000-1000C	33.0 (838)	28.3 (719)	73.3 (1863)



Supply connections

Description	NFB700-500C NFB700-600C	NFB700-800C NFB700-1000C
A Exhaust gas vent	4 in	6 in
B Air intake	4 in	6 in
C Heating supply	2 in	2.5 in
D Heating return	2 in	2.5 in
E Condensate outlet	1 in	1 in
F Gas connection	1 in	1.25 in

Warranty

Coverage Table for Heat Exchanger & Parts Only	
Commercial	
Heat exchanger	10 years
Parts	3 years

Navien's warranty (which may be changed without prior notice) is subject to the terms and conditions found at www.navieninc.com/warranties.

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.

We are @Navieninc everywhere



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Temperature setting range

Item	Temperature Setting Range	Remarks
Space heating	Supply	77–190°F (25–88°C)
	Return	68–158°F (20–70°C)
		Actual supply and return temperatures vary depending on the selected outdoor reset curve.

General specifications

Item	NFB700-500C	NFB700-600C	NFB700-800C	NFB700-1000C
Dimensions	28.3 in (W) x 31.0 in (D) x 72.1 in (H)		28.3 in (W) x 33.0 in (D) x 73.3 in (H)	
Boiler weight	622 lb (282 kg)		750 lb (340 kg)	
Boiler weight with water	843 lb (382 kg)		1059 lb (480 kg)	
Installation type	Floor standing			
Venting type	Forced draft direct vent			
Ignition	Electronic ignition			
Natural gas supply pressure (from source)	3.5 in-10.5 in WC			
Propane gas supply pressure (from source)	8.0 in-13.0 in WC			
Natural gas manifold pressure	-0.01 to -0.3 in WC		-0.01 to -0.5 in WC	
Propane gas manifold pressure	-0.01 to -0.3 in WC		-0.01 to -0.2 in WC	
Gas connection size	1 in NPT		1.25 in NPT	
Power supply	Main supply	120 V AC, 60 Hz		
	Maximum power consumption	Less than 12 amperes		
Materials	Casing	Cold-rolled carbon steel		
	Heat exchangers	Stainless steel		
Venting	Exhaust	4 in PVC, CPVC, approved polypropylene, approved stainless steel 4 in special gas vent Type BH (Class III, A/B/C)	6 in PVC, CPVC, approved polypropylene, approved stainless steel 6 in special gas vent Type BH (Class III, A/B/C)	
	Intake	4 in PVC, CPVC, polypropylene, stainless steel 4 in special gas vent Type BH (Class III, A/B/C)	6 in PVC, CPVC, polypropylene, stainless steel 6 in special gas vent Type BH (Class III, A/B/C)	
Safety devices	Flame rod, APS, ignition operation detector, water temperature high limit sensor, exhaust temperature high limit sensor, LWCO (low water cut off), high gas pressure switch, low gas pressure switch			
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.

Space heating specifications

Navien Commercial Condensing Boiler Space Heating Ratings						Other Specifications		
Model number ¹	Heating input (MBH)		Gross output ² (MBH)	Net AHRI rating water ³ (MBH)	Thermal efficiency ² (%)	Boiler water content (Gal)	Water pressure (PSI)	Water connection size Min. Max (Supply return)
	Min.	Max.						
NFB700-500C	40	499	487	423	97.5	26.5	12–160	2 in NPT
NFB700-600C	40	599	584	508				
NFB700-800C	66	799	779	677		37.0	12–160	2.5 in NPT
NFB700-1000C	66	999	974	847				

¹Ratings are the same for natural gas models converted to propane use.

²Based on U.S. Department of Energy (DOE) test procedures.

³The 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 system, etc.