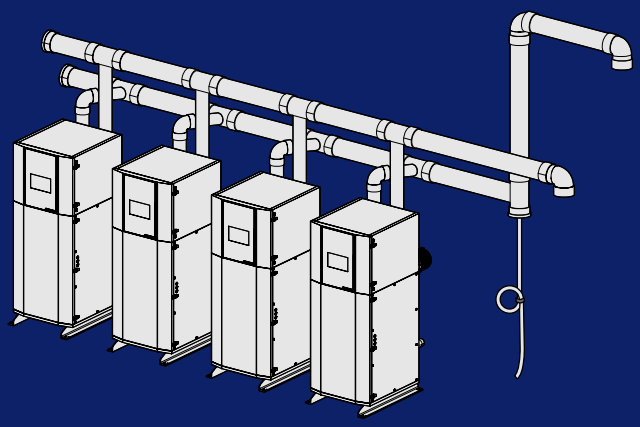
NAVIEN
The Leader in Condensing Technology

Common Vent System Installation Manual

NFB700 Commercial Condensing Boilers

Model

NFB700-500C
NFB700-600C
NFB700-800C
NFB700-1000C



Keep this manual near this boiler for future reference whenever maintenance or service is required.

⚠ WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

The installation must conform with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/ NFPA 54 and/or CSA B149.1, ANSI/ASME CSD-1, Natural Gas and Propane Installation Code.

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1. Safety Information

The following safety symbols are used in this manual. Read and follow all safety instructions in this manual precisely to avoid unsafe operating conditions, fire, explosion, property damage, personal injury, or death.

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, could result in severe injury or death.

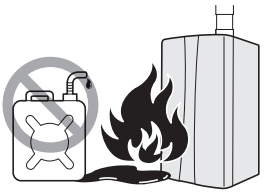
⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in property damage.

⚠ DANGER



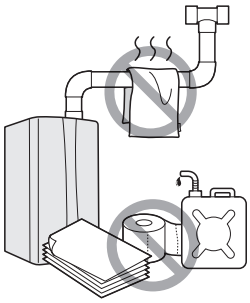
If you smell gas:

- Do not try to light any appliance.
- Do not touch any electrical switches or use landline phones.
- From a neighbor's phone, call your gas provider and follow their instructions.
- If you cannot reach your gas provider, call the fire department.

Do not use or store flammable products, such as gasoline, solvents, or adhesives in the same room or area as the boiler.

- The boiler has a main burner flame that can turn on at any time and can ignite flammable vapors. Vapors from flammable liquids can explode and catch fire, causing death or severe burns.
- Vapors cannot be seen and are heavier than air. They can travel long distances along the ground and can be carried from other rooms to the main burner flame by air current.
- Keep all flammable products far away from the boiler and store them in approved containers. Keep the containers closed tightly and out of the reach of children and pets.

⚠ WARNING



- **Do not store hazardous or flammable substances near the vent termination.**
- **Do not use unapproved replacement or accessory heater parts.**
  Doing so may result in improper or dangerous operation and will void the manufacturer's warranty.
- **Do not place anything in or around the vent terminals, such as a clothes line, that could obstruct the air flow in or out of the boiler.**
- **Do not combine the common vent with existing vents, chimneys, or the vent pipes connected to other types of water heaters, boilers, or appliances.**
- **Carefully follow all the installation instructions in the manual to avoid any personal and/or property damage.**
  Improperly installed common vent system may result in property damage or serious injury.
- **This product is a Category IV gas appliance.**
  Use only PVC or CPVC venting materials that satisfy Category IV venting requirements as well as schedule 40/80 specifications. Approved polypropylene and stainless steel vent is also compatible.
- **Do not install the water heaters or boilers in negative pressure conditions.**
- **Do not install the water heaters, boilers, venting, and vent terminals in areas that have contaminated air.**
  Doing so may cause operational problems.
- **Do not mix different model units within one common vent system. Model types of all the boilers in a common vent system must be identical.**

⚠ CAUTION

- Examine all components for possible shipping damage prior to installation.
- Use direct air vent installations only to avoid back drafting cold air through the boilers.
- The system must vent directly to the outside of the building and use outside air for combustion.
- Venting should be as direct as possible with a minimum number of pipe fittings.
- Create an airtight seal at each joint in the exhaust and intake air pipes from the boiler collar to the vent termination.
- Set the temperature setting to the same value on all water heaters or boilers that are sharing a common vent system.
- Ensure that all water heaters or boilers in the same system share the same intake and exhaust vent lines.
- Never reduce the vent diameter in the direction of exhaust flow.
- When using direct venting, maintain the following venting clearances, as required by **ANSI Z21.10.3 and the National Fuel Gas Code, ANSI Z223.1/NFPA 54**.
- Proper joint construction is essential for a safe installation. Follow these instructions exactly as written.
- This venting system must be free to expand and contract. This venting system must be supported in accordance with these instructions.
- Check for restricted vent movement through walls, ceilings, and roof penetrations.
- Different manufacturers have different joint systems and adhesives. Do not mix pipe, fittings, or joining methods from different manufacturers.

2. Common Vent System Information

2.1 About the Common Vent System

The Navien Common Vent System* provides an easy way to install the vent system for up to 4 Navien NFB700-C boilers. By sharing the main intake and exhaust vent pipes, effective system venting is available with less venting materials and minimal number of penetrations on the walls or roof.

* Independently tested and approved by CSA

Read all safety messages and carefully follow the guidelines in this manual when installing a common vent system for the NFB700-C boilers.

⚠ WARNING

Improper venting of the boilers can result in excessive levels of carbon monoxide, which can lead to severe personal injury or death. **The boilers must be vented in accordance with the "Venting of Equipment" section of the latest edition of the ANSI Z223.1/NFPA 54 National Fuel Gas Code in the USA, as well as all applicable local building codes and regulations.** Follow all instructions and guidelines when venting the boilers. Venting should be performed only by a licensed professional.

2.1.1 Guidelines for a Common Vent System

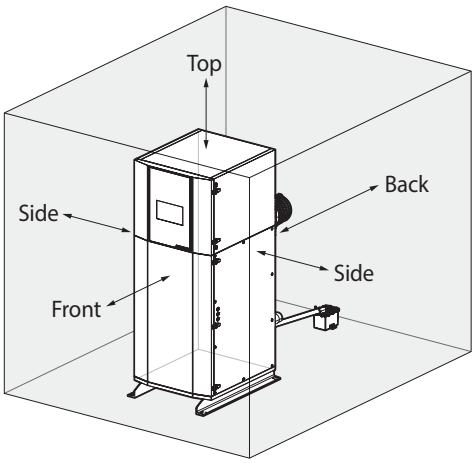
⚠ CAUTION

- To ensure the correct operation of the common vent system,
  - a cascade communication cable **MUST** be installed between all units in the common vent system by the installer.
  - backflow vent dampers must be installed in the exhaust duct of each boiler unit.
  - **use direct vent systems** (with separate intake and exhaust vent) or **indirect vent** (combustion air drawn from room) systems.
- Do not mix different model units within one common vent system. Model types of all the boilers in a common vent system must be identical.
- This manual covers the installation of a common vent system for **NFB700-C boilers only**.

To ensure the safe and correct installation of the common vent system, carefully follow the instructions and guidelines.

- Check to see if all contents are included in the package (refer to the "Included Items" on page 10).
- A maximum of 4 NFB700-C boilers may be connected to one common vent system. In a cascade system that has more than 4 boilers, use 2 common vent systems, or consult Navien.
- Use only the PVC cements specified in this manual when connecting pipes, joints, or elbows.
- Position the boilers as close as possible to the vent termination.
- Install a new vent system with this appliance. If an existing vent system is reused, thoroughly inspect it for punctures, cracks, or blockages prior to connecting it to the boiler unit.
- Horizontal vent pipe runs must be supported every 4 feet (1.2 m) (minimum). All vertical vent pipe runs must be supported every 6 feet (1.8 m) (minimum). Support the vent pipe with hangers at regular intervals or as required by local codes.
- Install a common vent damper for each boiler unit. Use only the dampers specified in this manual.
- To avoid moisture and frost build-up and to maintain clearances to openings on adjacent homes, 45° elbows, 90° elbows, or tees may be attached to the end of the termination vent pipe to direct the exhaust plumes away from buildings, as long as the total allowable vent lengths, maximum number of elbows, and distances to air intake restrictions are observed.
- If the boilers will be installed in areas where snow is known to accumulate, protect the vent termination from blockage. Ensure that the vent termination is at least 12 in (305 mm) above ground, 12 in (305 mm) above the highest anticipated snow level, or as required by local codes, whichever is greater. Snow removal may be necessary to maintain clearance.
- The vent for this appliance shall not terminate over public walkways; or near soffit vents or crawl space vents or where condensate or vapor could create a nuisance or hazard or cause property damage; or where condensate or vapor could cause damage or could be detrimental to the operation of regulators, relief valves, or other equipment.
- Common vent installations for use with natural gas and propane are only approved for up to 4,500 ft.

Clearance Chart for Common Vent Applications



Clearance from:	Indoor Installation
Top	24 in (610 mm) minimum
Back	24 in (610 mm) minimum
Front	30 in (762 mm) minimum
Sides	24 in (610 mm) minimum

General and Local Standards Information

When installing and operating the common vent system, the following standards and regulations must be complied with and adhered to:

- Local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54.
- Appliance manufacturer's Installation Instructions.
- Regulations on the supervision of construction.
- Statutory provisions.
- Installation and service work must be carried out by licensed professionals only.

Risk Guidelines

- Ensure that all common vent system components are manufactured and installed in accordance with local standards, regulations, and safety engineering rules.
- To avoid risk, the common vent system must be installed and used only for the original purpose described in this manual.
- Defects or damages found in a common vent system must be addressed and repaired immediately.
- For roof or chimney modifications, refer to the relevant industrial safety regulations.
- Work on roofs and facades is dangerous. Comply with all relevant regulations.

Cutting and Assembling Common Vent System Components

Standard tools are suitable for the cutting and assembly of common vent system components. Follow the guidelines listed below when working with the components.

- When cutting vent components, ensure that the cuts are straight. Chamfer and deburr all edges before installing the components.
- All vent joints must be fully tightened.
- Before operating the system, ensure that the installed vent system is clean and free of debris.
- Ensure that the vent system is rigidly supported according to the manual's instructions.

Selecting Vent Pipe Materials

Venting requirements differ in the US and Canada. Consult the following chart or the most recent edition of ANSI Z223.1/NFPA 54 or CAN/CGA B149.1, as well as all applicable local codes and regulations when selecting vent pipe materials. Do not use cellular core PVC (ASTM F891), cellular core CPVC, or Radel® (polyphenolsulfone) for the exhaust vent.

Locale	Recommended Vent Materials
USA	• PVC/CPVC Schedule 40 or 80 (Solid Core) • UL1738 approved PVC or CPVC • Approved Polypropylene (PP) • Approved Stainless Steel (SS)
Canada*	• Type BH Special Gas Vent Class IIA (PVC) • Type BH Special Gas Vent Class IIB (CPVC) • Type BH Special Gas Vent Class IIC (Polypropylene/ Stainless Steel)

* For installation in Canada, field-supplied plastic vent piping must comply with CAN/CGA B149.1 (latest edition) and be certified to the Standard For Type BH Gas Venting Systems, ULC-S636. Components of this listed system must not be interchanged with other vent systems or unlisted pipes or fittings. All plastic components and specified primers and glues of the certified vent system must be from a single system manufacturer and must not be intermixed with another system manufacturer's parts.
The supplied vent connector is certified as part of the boiler.

The following **polypropylene** vent components are approved for use with this appliance:

Centrotherm

- 12" Diameter
  - ISBT120636
  - ISTC12
  - ISVL126
  - ISEL1287
- 8" Diameter
  - ISBT080636
  - ISTC08
- 6" Diameter
  - ISVL066
  - ISEL0645
  - ISAGL0606

Vent Pipe Pitch and Supports

For the horizontal section of the common vent, slope the pipe downward toward the closest condensate drain at a rate of ¼" per foot (2% slope).

Note For polypropylene or stainless steel vent pipes, follow the vent manufacturer's instructions for the required slope.

Connecting Pipes with Cement

⚠ WARNING

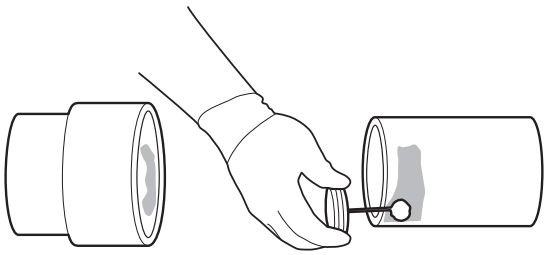
Do not mix components from different systems. The vent system may fail and harmful flue products may leak into the living space. Mixing of venting materials will void the warranty and certification of the appliance.

⚠ CAUTION

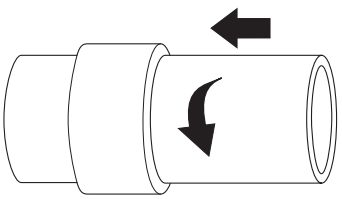
The vapors from primers and solvent cements can make you dizzy and are dangerous to your health. Ensure that the work area is well ventilated, or wear an approved organic vapor respirator when working with primers and solvent cements.

To connect the vent pipes using cement:

1. Spread an even layer of solvent cement on the inside of the pipe fitting and the outside of the pipe.



2. Align the pipe with the pipe fitting and twist the pipe a quarter turn as you insert it into the fitting. Twisting the pipe spreads the solvent cement evenly to ensure a solid joint.



3. Hold the pipe and pipe fitting together for about 15 seconds until the cement sets.

Note

- Use approved solvent type cement for the proper vent materials.
- Use solvent type cement only.
- Check the date of manufacture before using the cement. Ensure that cement was not manufactured more than 2 years prior to using it.
- Ensure that the inside of the pipe fitting and the outside of the pipe, where cement will be applied, is clean.
- Apply an even layer of cement over all mating surfaces.
- Use primer in temperatures lower than 32°F (0°C).
- Use solvent cement in room temperatures higher than 32°F (0°C).
- Installing vent pipe with cement in cold ambient temperatures can result in longer cure times.

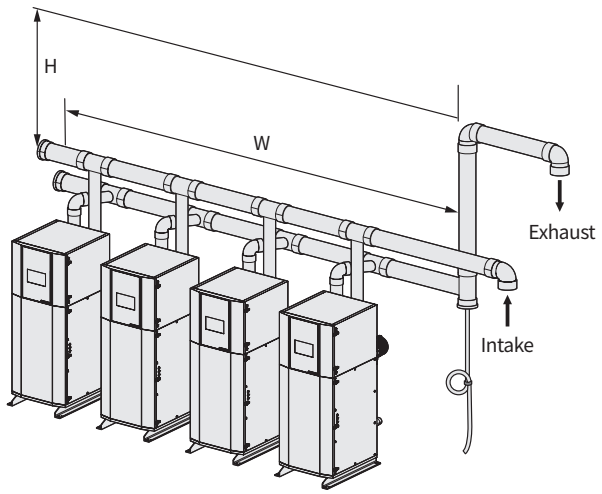
⚠ DANGER

Be careful not to apply force or impact to pipes after making connections. An impact may break the bond and harmful gas might leak inside the room.

2.1.2 Determining the Length of a Common Vent System

Follow the instructions listed below to determine the length of a common vent.

1. Add the MBH input ratings for each unit in the cascading system to determine the total MBH rating.
2. Determine the total length (L) of the common vent, which consists of the horizontal width (W) and the vertical height (H): Total length (L) = W + H.



Common Vent Elbow Equivalent Length

Reduce the maximum vent length accordingly for each elbow used:

- Each 90° elbow equates to 5 linear feet of vent
- Each 45° elbow equates to 3 linear feet of vent

Note Each boiler's connector length is not counted in common vent length calculations.

Common Vent Length Table [Total Length (L) = W + H]

Common Vent Length for NFB700-C Boilers

Total Load (MBH)	Model	Maximum Vent Length			
		Diameter			
	NFB700-500C	6"	8"	10"	12"
998	2	96	170	266	N/A
1,497	3	N/A	113	177	256
1,996	4	N/A	N/A	133	192

Total Load (MBH)	Model	Maximum Vent Length			
		Diameter			
	NFB700-600C	6"	8"	10"	12"
1,198	2	80	142	220	N/A
1,797	3	N/A	95	147	212
2,396	4	N/A	N/A	110	159

Total Load (MBH)	Model	Maximum Vent Length		
		Diameter		
	NFB700-800C	8"	10"	12"
1,598	2	106	165	238
2,397	3	N/A	110	159
3,196	4	N/A	N/A	119

Total Load (MBH)	Model	Maximum Vent Length		
		Diameter		
	NFB700-1000C	8"	10"	12"
1,998	2	75	132	168
2,997	3	N/A	88	127
3,996	4	N/A	N/A	95

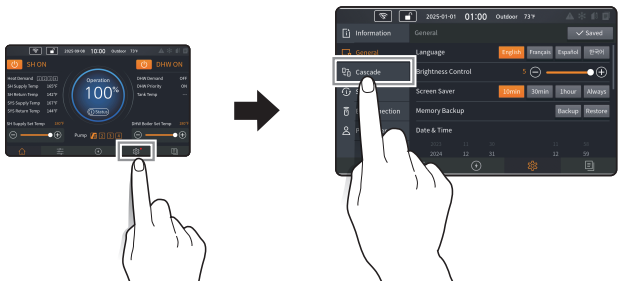
2.2 Setting Up the Common Vent System

⚠ DANGER

Incorrect settings may lead to severe personal injury, death, or property damage.

Refer to the following figures when setting the common vent type.

1. Tap the Set button ( ) > **Cascade**.



2. Set the vent type to "Common" or "Individual" by referring to the following table.

Item	Description
Vent type	Set the ventilation type. • Setting range: Common/Individual • Default: Individual

Note For more information on the vent type settings, refer to the "Configuring a Cascade System" section in the Installation & Operation Manual.

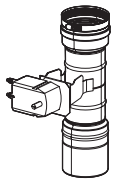
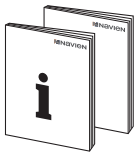
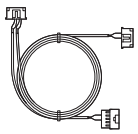
2.3 Navien Common Vent Damper (Back-draft Damper)

The Navien common vent damper prevents backflow (back-draft) at the exhaust vent while the boiler unit operates.

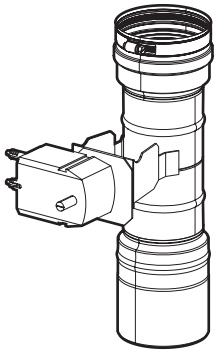
By closing the exhaust vent as soon as the combustion cycle ends, the Navien common vent damper retains heat in the system for longer periods. This improves the system's thermal efficiency.

Note When using a common vent in a cascade system, backflow devices are required to prevent exhaust from entering the building.

Included Items

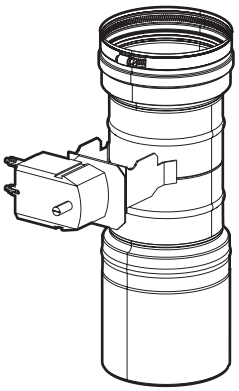
Common Vent Damper	
Installation Manual	
Ready-Link communication cable	

Specifications



<NFB700-500C/600C>

Part Name	Common Vent Damper Kit
Part NO.	GXXX002990
Vent Diameter	4"
Material	AL 29-4C



<NFB700-800C/1000C>

Part Name	Common Vent Damper Kit
Part NO.	GXXX002991
Vent Diameter	6"
Material	AL 29-4C

3. Installing the Common Vent System

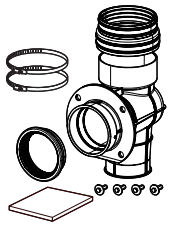
3.1 Starting the Common Vent System

3.1.1 Installing the Flue Gas Vent Kit

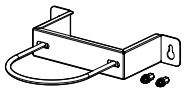
To install the flue gas vent kit and vent support kit on the boiler:

Note Before installation, ensure all components are included in the kit packages (Flue Gas Vent Kit and Vent Support Kit).

Flue Gas Vent Kit

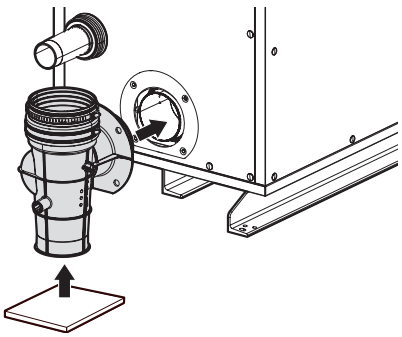


Vent Support Kit

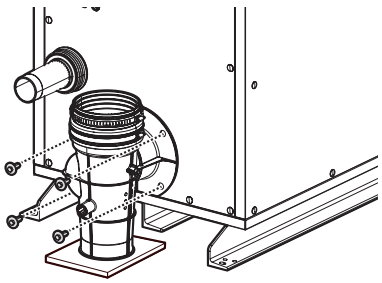


1. Connect the vent adapter to the drain pan outlet, and then place the rubber pad under the adapter.

   Note
   - Ensure that vent gasket and 2 clamps are assembled onto the vent adapter before installing it.
   - Ensure the vent exhaust tee is properly supported. Uneven floors may require additional support or shims.

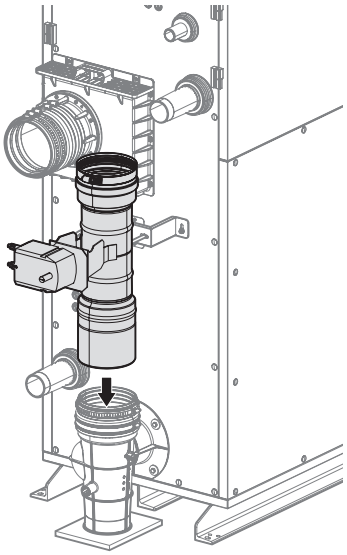


2. Tighten the 4 screws (torque: 50 kgf·cm, 3.5 ft·lbs) on the vent adapter to securely attach the adapter to the drain pan outlet.

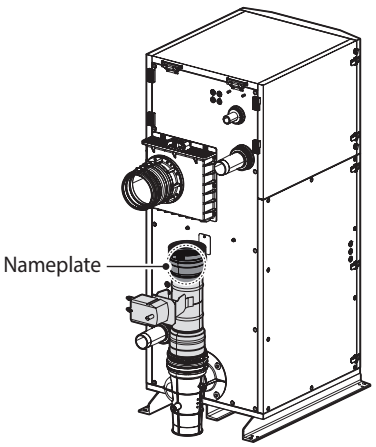


3.1.2 Connecting the Pipe to the Damper

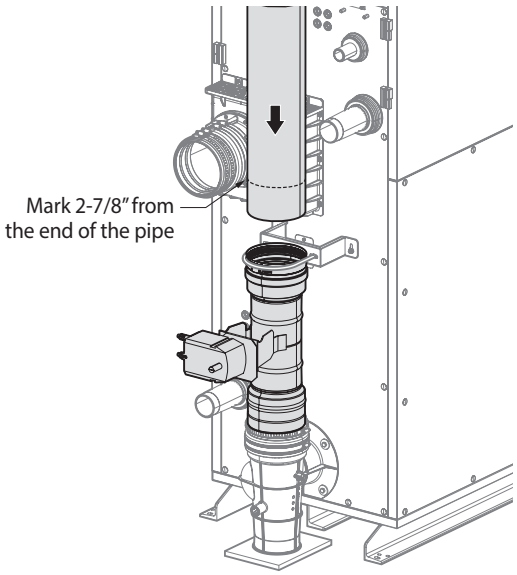
1. Insert the damper into the flue gas vent adapter.



Note Make sure to check the installation orientation when installing the damper. Check the direction arrow on the damper nameplate.



2. Measure 2-7/8″ from the end of the vent pipe, then draw a mark at that distance.

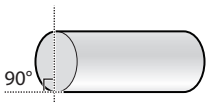


3. Insert the vent pipe into the damper to start the vent run. Make sure to completely slide the vent into the collar until the end makes contact with the bottom of the socket.

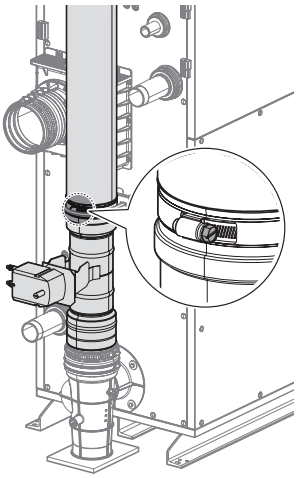
Note Verify that 2-7/8″ of the pipe has been completely inserted into the collar and that the mark is no longer visible.

⚠ WARNING

Ensure that the vent pipe is properly beveled prior to installation and that the pipe is fully connected to the exhaust gas vent fitting. Failure to properly bevel and install the pipe can lead to gasket failure and flue gas leakage, which may result in serious injury or death.



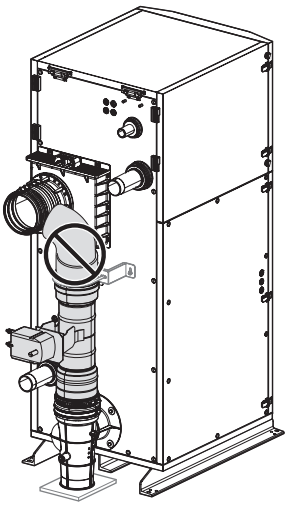
4. Tighten the clamp with a screwdriver to properly seal the joint.



⚠ WARNING

NEVER start the vent run with a **street elbow** at the vent collar to prevent serious injury or death. Using an elbow directly at the collar will not allow for a tight seal between the appliance and the vent pipe.

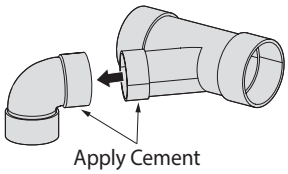
ALWAYS use a length of straight pipe when starting the vent run.



Note The length of vent pipe from the unit to the common vent main trunk pipe must not exceed 20′ of equivalent length.

3.1.3 Assembling the Wye Joint

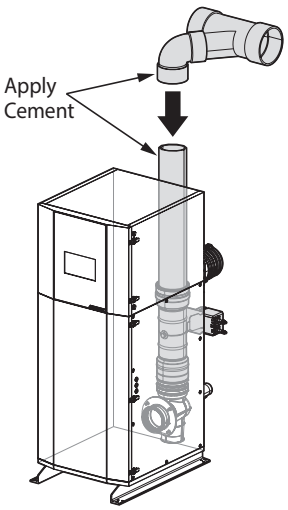
1. Assemble the hub wye, reducer, and the 90º elbow into the common vent. You can also use the hub reducing wye and the 90º elbow to assemble the common vent. Apply the proper solvent cement to the mating surfaces.



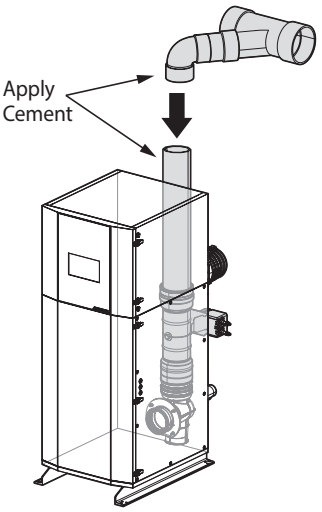
Hub Reducing Wye and 90˚ Elbow

Note Multiple reducers can be used to allow proper connection of 4" or 6" vent pipe to the common vent system.

2. Assemble the wye joint or wye assembly to the vent pipe. Apply solvent cement to the mating surfaces.



Hub Wye Assembly



Hub Reducing Wye Assembly

Note The options shown here are only examples. The setup you choose will vary based on the installation location, local building codes, and other factors. The installer is responsible for all equipment and detailing required by local codes.

⚠ DANGER

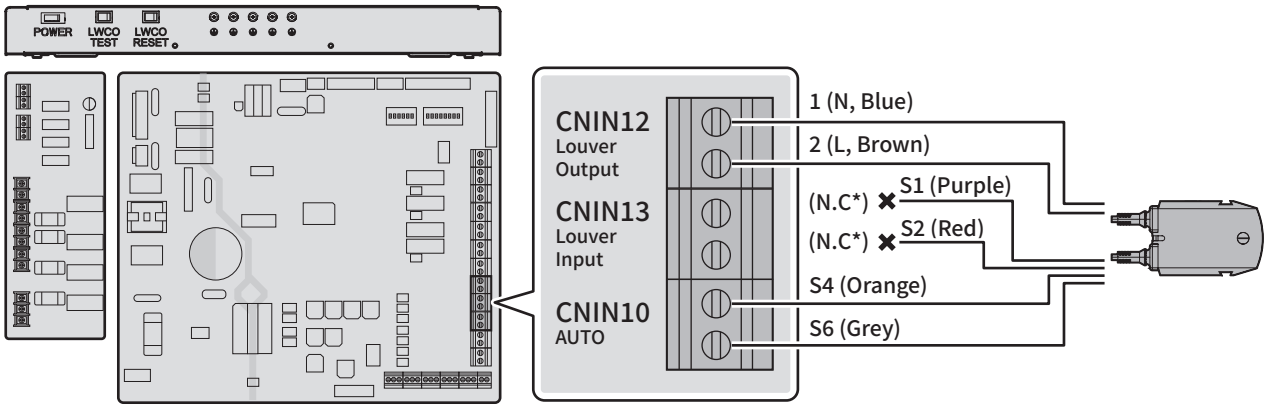
If the connections leak, harmful flue gas may cause personal injury or death. After completing the installation and filling the boiler with water, turn on the boiler and test for leaks using a bubble test kit. After applying the soap solution, bubbles will form on the connection if any leaks exist.

3.1.4 Wiring the Damper

The Common Vent Damper used in the NFB700-C is a motor-driven device. Follow the instructions below to connect the wiring between the NFB700-C controller and the damper motor.

After wiring the damper motor, make sure to check that the damper opens and closes properly when operating the boiler.

Wiring Diagram - Common Vent Damper System



* The cables labeled S1 and S2 (marked as N.C.) are not connected to the PCB. Insulate the cable ends with electrical tape.

Note

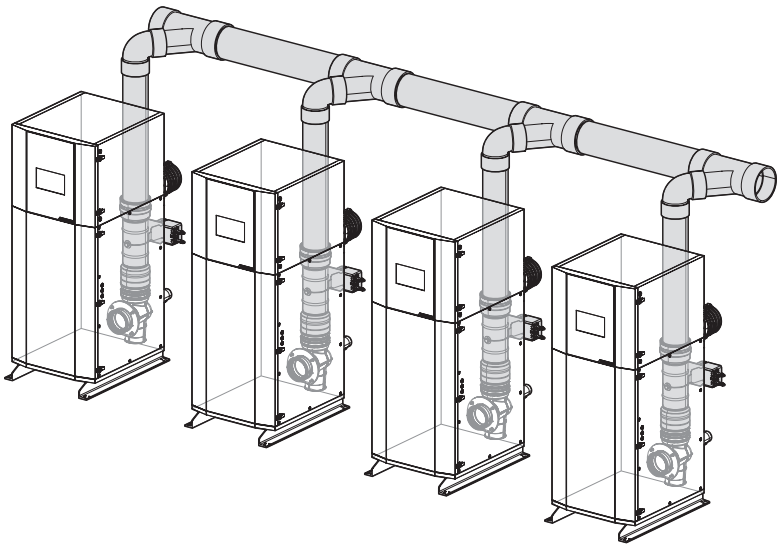
- AC Power Wiring: Connect Louver Output terminal (**CNIN12**) to Motor Terminal #1 (blue) and #2 (brown).
- Motor Status Feedback Wiring: Connect AUTO terminal (**CNIN10**) to Motor Terminal #S4 (orange) and #S6 (grey).
- The damper motor is connected using dry contact terminals.

3.2 Connecting and Terminating the Vent Pipe

Refer to the following example to install the common vent system. The installation area should be measured to ensure that sufficient space is available to install the boilers and the common vent system. Ensure that the common vent system is installed near the boilers while satisfying all clearance requirements that are specified in this manual as well as the Installation Manuals supplied with the boilers.

3.2.1 Connecting the Main Pipe Runs to Wye Joint or Wye Assembly

After connecting the wye joint or wye assembly, connect the main trunk pipe to each side of the wye joint or wye assembly. Each trunk pipe is connected to the other wye joint or wye assembly. Refer to "Connecting Pipes with Cement" on page 7 for more information.

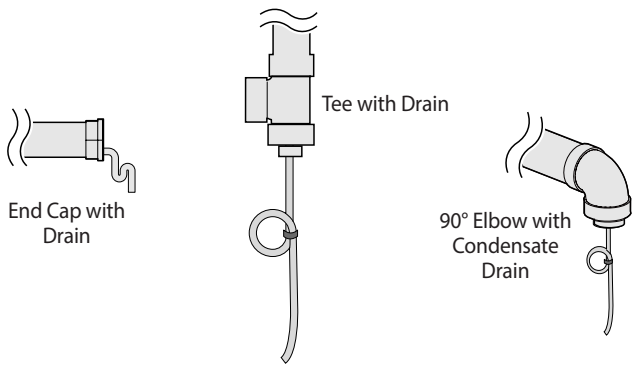


Note

- The pipe branch that connects the individual appliance to the common vent trunk must be within 20 equivalent feet.
- It is recommended to install the exhaust vent pipe end connected to the trunk pipe at a 45˚ angle in relation to the exhaust direction. (The exhaust resistance increases if connected to the trunk pipe at a 90˚ angle.)

3.2.2 Applying Fittings to Main Pipe Open Ends

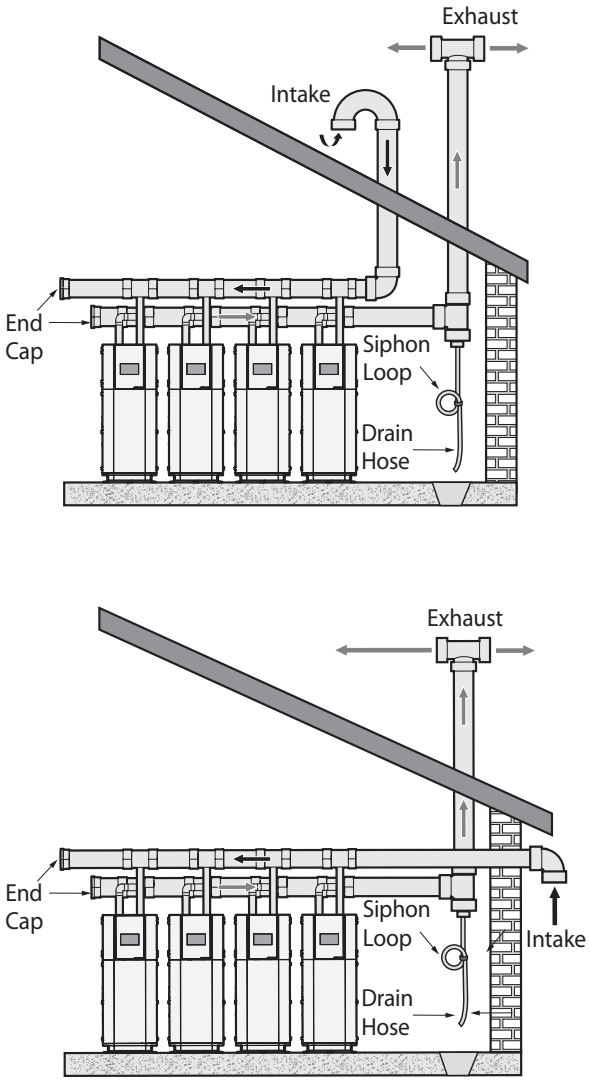
End caps, pipe elbows or tee joints can be used at the open ends of the intake and exhaust vent manifold. Refer to the following installation examples that depict how the parts are fitted at the end of the common vent system piping. For additional examples of common vent intake and exhaust terminations, refer to "3.3 Installing a Condensate Drain Hose" on page 16 and "4.1 Common Vent Termination Clearances" on page 17.



Note The illustration is intended for reference purposes only.

3.3 Installing a Condensate Drain Hose

Refer to the following examples to install a condensate drain hose (field supplied) to the common vent system. The condensate drain hose prevents condensate or rain from entering the exhaust system and gathering above the common vent damper.



To install a condensate drain to the cascade system:

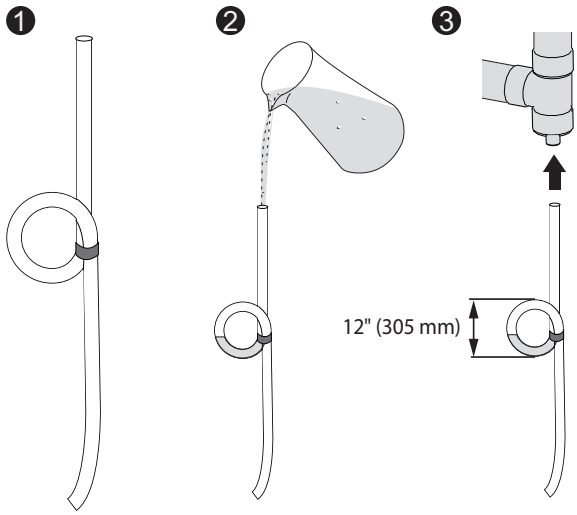
1. Form a loop with a drain hose and fix it with a tie.

   Note

   - Use at least a 1" diameter hose with a 12" diameter loop as a trap.
   - While shaping the hose, do not bend the hose excessively. The hose will be deformed and the flow will be restricted if the hose is bent in sharp angles.
   - Do not fix the hose too tight when tying the hose to form the loop. The hose will be deformed and the flow will be restricted if the tie is too tight.

2. Prime the loop using tap water.

3. Install the hose to the cascade system and direct the end of the hose to a drain.



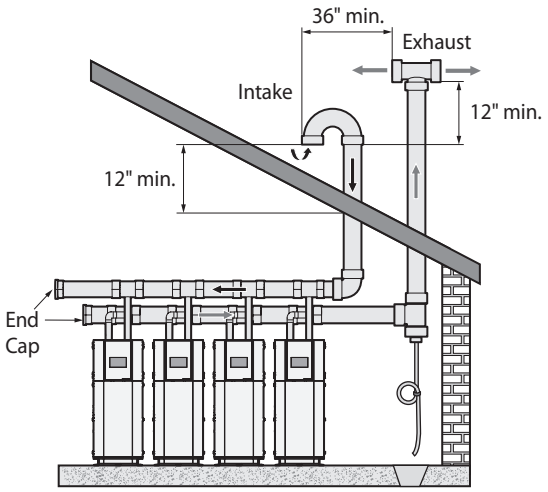
⚠ WARNING

After installing the condensate drain hose, check the loop again to ensure that the prime water is not spilled. The loop (siphon) must be primed with water before running the system to prevent toxic exhaust gas from leaking into the installation site.

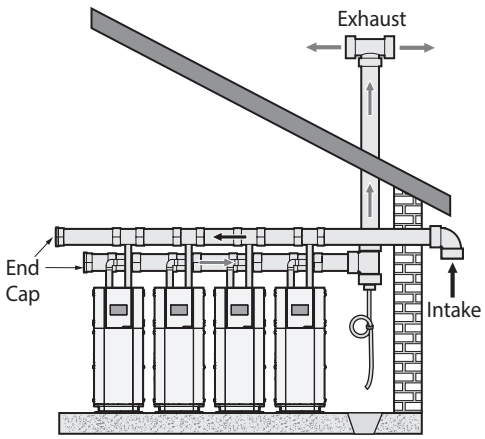
4. Common Vent Clearances

4.1 Common Vent Termination Clearances

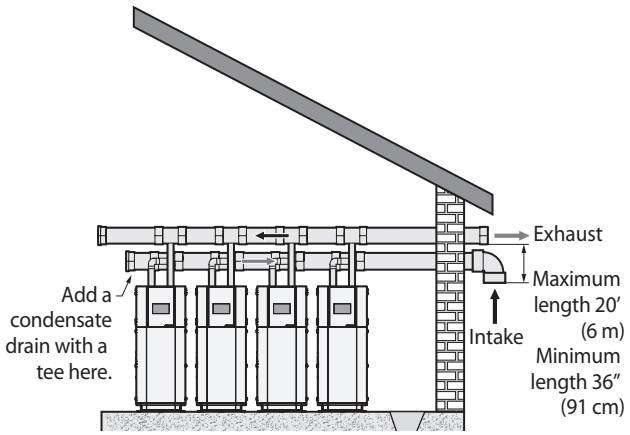
4.1.1 Direct Vent Application – Vertical Installation

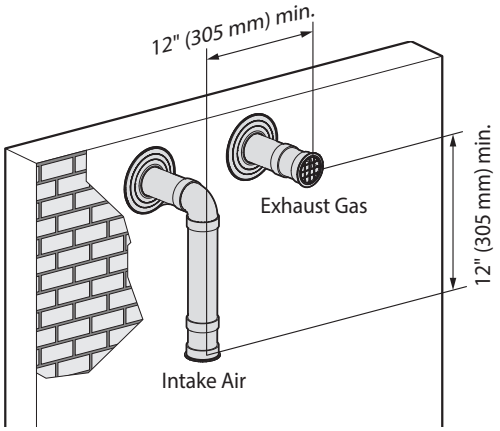


4.1.2 Venting Intake and Exhaust to Different Locations



4.1.3 Direct Vent Application – Horizontal Installation

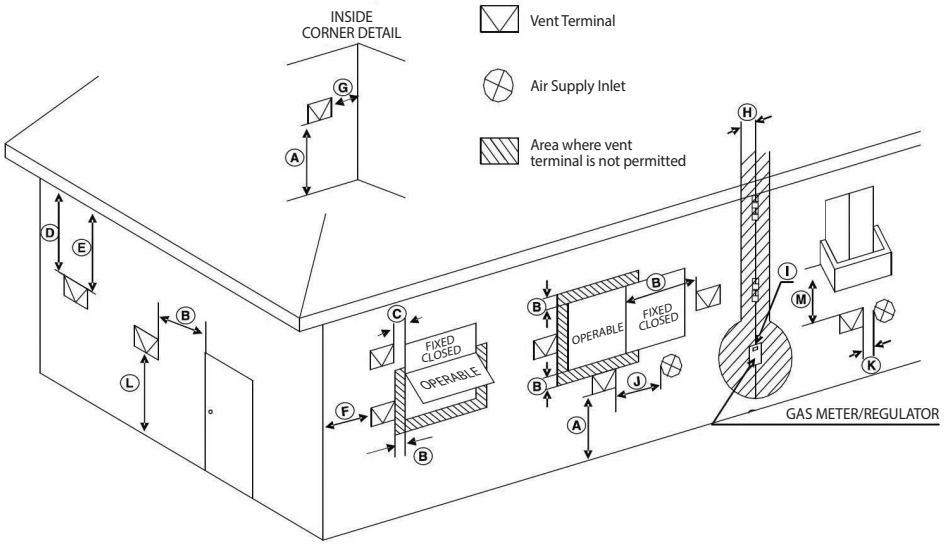




Note

- The illustration is intended for reference purposes only.
- Direct the exhaust away from any building openings.
- During cold weather, the temperature of the exhaust will be much warmer than the ambient air. Therefore, you will see water vapor being produced at the termination.

4.2 Exhaust Vent Termination Clearances (For Direct Vent)



Ref	Description	Canadian Direct Vent Installations[1]	US Direct Vent Installations[2]
A	Clearance above grade, veranda, porch, deck, or balcony	12 in (30 cm)	12 in (30 cm)
B	Clearance to window or door that may be opened	36 in (91 cm)	48 in (120 cm) below or to side of opening; 12 in (30 cm) above opening
C	Clearance to permanently closed window	0 in (0 cm)[5]	0 in (0 cm)[5]
D	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 ft (61 cm) from the center line of the terminal	Equal or greater than soffit depth [4 5]	Equal or greater than soffit depth [4 5]
E	Clearance to unventilated soffit	3 ft (91 cm)*	3 ft (91 cm)*
F	Clearance to outside corner	2 ft (61 cm)*	2 ft (61 cm)*
G	Clearance to inside corner	12 in (30 cm)*	12 in (30 cm)*
H	Clearance to each side of center line extended above meter/regulator assembly	3 ft (91 cm) within a height 15 ft (4.57 m) above the meter/regulator assembly	3 ft (91 cm) within a height of 15 ft (4.6 m)*
I	Clearance to service regulator vent outlet	3 ft (91 cm)	3 ft (91 cm)*
J	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	36 in (91 cm)	48 in (120 cm) below or to side of opening; 12 in (30 cm) above opening

Ref	Description	Canadian Direct Vent Installations[1]	US Direct Vent Installations[2]
K	Clearance to a mechanical air supply inlet	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally
L	Clearance above paved sidewalk or paved driveway located on public property	7 ft (2.13 m)†	7 ft (2.13 m)†
M	Clearance under veranda, porch deck, or balcony	12 in (30 cm)‡	12 in (30 cm) - open on 3 sides*

1 In accordance with the current CSA B149.1 Natural Gas and Propane Installation Code
2 In accordance with the current ANSI Z223.1/NFPA 54 National Fuel Gas Code
3 If locally adopted installation codes specify clearances different than those illustrated, then the most stringent clearance shall prevail.
4 Soffit with 12" depth requires a minimum of 12" vertical clearance from the termination (36" soffit requires a minimum of 36" vertical clearance).
5 In the areas where corrosion and discoloration of building materials can occur, a minimum clearance of 12" shall apply.
† A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.
‡ Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.
* Suggested clearances by the manufacturer. If the clearances required by local codes are different from those from the table above, the greater clearance should apply.

5. Installation Checklist

After installing the boilers and the common vent system, review the following checklist to ensure that the system has been properly installed. If you have additional questions or need assistance with the installation, contact Technical Support at 1-800-519-8794 or 1-949-420-0420, or refer to the technical support section of Navien's website (www.navieninc.com).

The boiler system	**Yes**	**No**
Have you referred to the operation and installation manual that are supplied with the Navien boilers or boiler units for correct installation?		
Is there sufficient clearance around the boilers?		
Does the installation comply with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54?		
Did you check that the cascade communication cable is properly installed?		
Front panel & DIP switch settings	**Yes**	**No**
Did you verify that the appropriate front panel settings are selected for the cascade configuration?		
Did you verify that the correct DIP switch settings are selected for the altitude/elevation for the installation location?		
The common vent system	**Yes**	**No**
Have the correct venting parts been installed and have you followed the installation instructions in this manual?		
Did you verify that the vent system does not exceed the maximum equivalent length?		
Does the installation comply with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54?		
Did you check that all vent components are secure and fully engaged?		
Did you check that the vent is sloped downward toward the nearest condensate drain at a rate of ¼" per foot (2° slope)? **Note** For polypropylene or stainless steel vent pipes, follow the vent manufacturer's instructions for the required slope.		
Did you check that there are no obstructions to the intake or exhaust vent air flow?		
Did you properly support the vent termination?		
Did you install end caps/termination caps on the exhaust and intake pipes?		
Did you check the venting for leaks?		
Is the vent termination at least 12 in (30 cm) above the exterior grade?		
Did you ensure that sufficient make-up air is available?		
Hand-over procedures	**Yes**	**No**
Did you explain the importance of not blocking the vent termination fittings or air intake to the customer?		
Did you explain the operation of the boilers, safety guidelines, maintenance, and warranty to the customer?		
Have the system and appliance installation instructions been attached to the system or provided to the customer?		

6. Warranty Information

Navien Limited Warranty

Effective Terms

This 10 year limited warranty on the heat exchange, and 3 year limited warranty on parts ("Warranty") covers defects in materials or workmanship when the Navien NFB700-C Boiler ("Product") is installed by a properly licensed plumber or contractor, and installed in strict compliance with the Installation & Operations manual procedures, subject to the terms within this Warranty document. Improper installation or use that causes or contributes to the claimed defect or failure will void this Warranty. This Warranty runs from date of installation and extends to the original purchaser and subsequent owners, but only while the Product remains at the site of the original installation. This Warranty includes a limited warranty as set forth below.

What is Covered?

Subject to the foregoing terms, Navien will repair or replace the covered Product or any part or component that is defective in materials or workmanship for a period of three (3) years in regard to parts and ten (10) years in regard to the heat-exchanger. All labor expenses will be an out-of-pocket expense and are not covered under the Warranty. All repair parts must be genuine Navien parts. All repairs and replacements must be performed by an individual or servicing company that is properly licensed to do the type of repair.

During the applicable warranty period, replacement of the Product or components may be authorized by Navien only. Navien does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of the Product or its components. If it is determined that repair or replacement of a part, under warranty, is not possible, the Product will be replaced with a new Product having at least the same BTU capacity as the product at issue. The replacement component or product will be warranted only for the unexpired portion of the applicable warranty period for the original component or Product.

Warranty Coverage Table	
Commercial and Residential Terms	
Labor	None
Parts	3 Years
Heat Exchanger	10 Years

How do I get service?

You must contact the original installer of your Product. Your installer will need to contact Navien to report the issue. If the original installer cannot be identified or you no longer choose to use that service provider, you may choose any service provider who is properly licensed to complete the necessary repair. The installer and/or service provider must comply with Navien's warranty service and return policy procedures as available on Navien's website including contacting Navien's Technical Support Department at (800) 519-8794, option 2, prior to commencing any service.

Proof of the date of installation must be provided to Navien. At Navien's request, the defective Product or part must be returned to Navien. When the Product is installed in new construction, the date of installation shall be established as the date upon which the end-user takes title to the real property. If proof of the installation date is unavailable, then six months after the date of manufacture will be used. Failure to follow Navien's service procedures may result in denial of warranty coverage.

What is not covered?

Navien's Limited Warranty shall be void in the event of an occurrence of any of the following:

- Improper installation, including but not limited to, installation in violation of applicable rules, laws or building codes, inadequate water quality, condensate damage, improper venting, incorrect gas type, water pressure, absence of a drain pan, improper conversion from Natural Gas source to Propane, reinstallation at another location, etc.
- Accident, abuse or misuse including but not limited to installation for non-recommended uses, failure to follow or comply with the User's Operational Manual, etc.
- Improper maintenance including but not limited to, scale buildup, vent blockage, failure to maintain, etc.
- Modification, alteration, addition of non-approved components, or misapplication of the Product in any manner.
- Any damage caused by local adverse conditions, including but not limited to (i) water quality that falls outside the parameters set forth in the Installation & Operations Manual, and (ii) other conditions such as hard water deposits, lime or mineral buildup, corrosive atmospheric conditions, or alterations in the smell or taste of water that cause or contribute to damage or failure of the Product.
- Damage or problems caused by gas flow issues, electrical surges, flooding, fire, freezing, abnormal external temperature, force majeure, riot, act of war, or any acts of God.
- Performance problems caused by improper sizing of the boiler, the gas supply line, the venting connection, combustion air openings, electric service voltage, wiring, fusing or any other components, parts or specifications.
- Vibration and noise unless caused by a defect in materials or workmanship. Any other causes other than defects in materials or workmanship.

- Operating the Product at water temperature outside the factory calibrated temperature limits and/or exceeding the maximum setting of the high limit control.
- Subjecting the heat exchanger to pressures or firing rates greater or lesser than those shown on the rating plate or removal of or alteration to the rating plate.
- Installation at any location outside the 50 States of the United States, the District of Columbia, and Canada.
- Improper conversion from natural gas to liquid propane gas or liquid propane gas to natural gas or attempt to operate with a type of gas not specified for the boiler.
- Accidental or intentional damage.

This Limited Warranty applies only to Products purchased new from Navien or through an authorized Navien distributor or sales channel. Products acquired through unauthorized sellers, including online marketplaces or other channels where the Product's origin or authorized distribution cannot be verified, may not be eligible for warranty coverage.

Warranty Limitations

EXCEPT AS EXPRESSLY PROVIDED HEREIN, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THE DESCRIPTION OF THE WARRANTY HEREIN AND FURTHER NAVIEN SHALL NOT BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES THAT MAY ARISE, INCLUDING LOST PROFITS, DAMAGE TO A PERSON OR PROPERTY, LOSS OF USE, INCONVENIENCE, OR LIABILITY ARISING FROM IMPROPER INSTALLATION, SERVICE OR USE OF THE PRODUCT. ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS ARISING UNDER STATE LAW ARE LIMITED IN DURATION TO THE PERIOD OF COVERAGE PROVIDED BY THIS WARRANTY, UNLESS THE PERIOD PROVIDED BY STATE LAW IS LESS.

No one is authorized to make any other warranties on behalf of Navien.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or how long an implied warranty lasts, so the above limitation may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Memo

Notes

Common Vent System Installation Manual

NFB700 Commercial Condensing Boilers

Getting Service

If your boiler requires service, you have several options for getting service:

- Contact Technical Support at 1-800-519-8794 or on the website: www.navieninc.com.
- For warranty service, always contact Technical Support first.
- Contact the technician or professional who installed your boiler.
- Contact a licensed professional for the affected system (for example, a plumber or electrician).

When you contact Technical Support, please have the following information at hand:

- Model number
- Serial number
- Date purchased
- Installation location and type
- Error code, if any appears on the front panel display.

Version: 1.0 (October, 2026)

800.519.8794 | www.navieninc.com
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