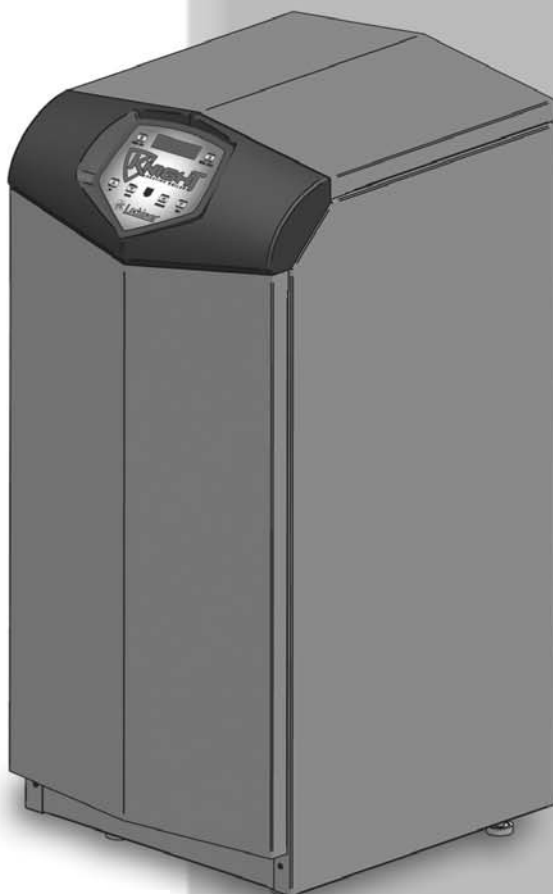




Installation & Operation Manual

Models: 80 - 285

Starting Serial #H07H10040039



⚠ WARNING

This manual must only be used by a qualified heating installer / service technician. Read all instructions, including this manual and the Knight Boiler Service Manual, before installing. Perform steps in the order given. Failure to comply could result in severe personal injury, death, or substantial property damage.



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Save this manual for future reference.

3 General venting

Table 3D Concentric Vent Kit Equivalent Vent Lengths

Model	Kit Number	Equivalent Vent Length
80 - 210	CVK3003	3 feet
285	CVK3007	3 feet

Removing from existing vent

Follow the instructions in Section 1, page 12 of this manual when removing a boiler from an existing vent system.

Vent and air piping

Vent and air system:

NOTICE

Installation must comply with local requirements and with the National Fuel Gas Code, ANSI Z223.1 for U.S. installations or CSA B149.1 for Canadian installations.

You must also install air piping from outside to the boiler air intake adapter. The resultant installation is direct vent (sealed combustion).

You may use any of the vent/air piping methods covered in this manual. Do not attempt to install the Knight boiler using any other means.

⚠ WARNING

DO NOT mix components from different systems. The vent system could fail, causing leakage of flue products into the living space. Use only approved stainless steel, PVC or CPVC pipe and fittings. For PVC/CPVC use with primer and cement specifically designed for the material used.

Vent, air piping and termination:

The Knight boiler vent and air piping can be installed through the roof or through a sidewall. Follow the procedures in this manual for the method chosen. Refer to the information in this manual to determine acceptable vent and air piping length.

Optional room air

NOTICE

Optional room air is intended for commercial applications. Combustion air piping to the outside is recommended for residential applications.

Commercial applications utilizing the Knight boiler may be installed with a single pipe carrying the flue products to the outside while using combustion air from the equipment room. In order to use the room air venting option the following conditions and considerations must be followed.

- The unit **MUST** be installed with the appropriate room air kit (Table 3E).
- The equipment room **MUST** be provided with properly sized openings to assure adequate combustion air. Please refer to instructions provided with the room air kit.

- There will be a noticeable increase in the noise level during normal operation from the inlet air opening.
- Using the room air kit makes the unit vulnerable to combustion air contamination from within the building. Please review Section 1, Prevent Combustion Air Contamination, to ensure proper installation.
- Vent system and terminations must comply with the standard venting instructions set forth in this manual.

⚠ WARNING

When utilizing the single pipe method, provisions for combustion and ventilation air must be in accordance with Air for Combustion and Ventilation, of the latest edition of the National Fuel Gas Code, ANSI Z223.1, in Canada, the latest edition of CGA Standard B149 Installation Code for Gas Burning Appliances and Equipment, or applicable provisions of the local building codes.

Table 3E Optional Room Air Kit

Model	Kit Number
80 - 210	KIT30052
285	KIT30053

Air contamination

Pool and laundry products and common household and hobby products often contain fluorine or chlorine compounds. When these chemicals pass through the boiler, they can form strong acids. The acid can eat through the boiler wall, causing serious damage and presenting a possible threat of flue gas spillage or boiler water leakage into the building.

Please read the information given in Table 1A, page 11, listing contaminants and areas likely to contain them. If contaminating chemicals will be present near the location of the boiler combustion air inlet, have your installer pipe the boiler combustion air and vent to another location, per this manual.

⚠ WARNING

If the boiler combustion air inlet is located in a laundry room or pool facility, for example, these areas will always contain hazardous contaminants.

⚠ WARNING

To prevent the potential of severe personal injury or death, check for areas and products listed in Table 1A, page 11 before installing the boiler or air inlet piping.

If contaminants are found, you **MUST**:

- Remove contaminants permanently.
- OR—
- Relocate air inlet and vent terminations to other areas.