

2009 IFGC Proposed Code Amendments 03

RBC101.1 SHORT TITLE. This section will be known and cited as the Fuel Gas Code.

RBC101.1.1 SCOPE. The Fuel Gas Code shall apply to the installation of fuel-gas piping systems, fuel-gas utilization equipment and related accessories in accordance with Sections RBC305.2.1 through RBC305.2.4 of this Code.

RBC101.1.2 Piping systems. These regulations cover piping systems for natural gas with an operating pressure of 125 pounds per square inch gauge (psig) (862 kPa gauge) or less, and for LP-gas with an operating pressure of 20 pounds per square inch (psig) (140 kPa gauge) or less, except as provided in Section 402.6.1 of the International Fuel Gas Code, 2009 Edition. Coverage shall extend from the point of delivery to the outlet of the equipment shutoff valves. Piping systems requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation and maintenance.

RBC101.1.3 Gas Utilization Equipment. Requirements for gas utilization equipment and related accessories shall include installation, combustion and ventilation air and venting and connections to piping systems.

RBC101.1.4 Systems and Equipment outside the Scope. This code shall not apply to the following:

1. Portable LP-gas appliances and *equipment* of all types that is not connected to a fixed fuel *piping* system.
2. Installation of farm appliances and *equipment* such as brooders, dehydrators, dryers and irrigation *equipment*.
3. Raw material (feedstock) applications except for *piping* to special atmosphere generators.
4. Oxygen-fuel gas cutting and welding systems.
5. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen and nitrogen.
6. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms and natural gas processing plants.
7. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by, or used in, chemical reactions.
8. LP-gas installations at utility gas plants.
9. Liquefied natural gas (LNG) installations.
10. Fuel gas *piping* in power and atomic energy plants.

11. Proprietary items of *equipment*, apparatus or instruments such as gas-generating sets, compressors and calorimeters.

12. LP-gas *equipment* for vaporization, gas mixing and gas manufacturing.

13. Temporary LP-gas *piping* for buildings under construction or renovation that is not to become part of the permanent *piping* system.

14. Installation of LP-gas systems for railroad switch heating.

15. Installation of hydrogen gas, LP-gas and compressed natural gas (CNG) systems on vehicles.

16. Except as provided in Section 401.1.1, gas *piping*, meters, gas pressure regulators and other appurtenances used by the serving gas supplier in the distribution of gas, other than undiluted LP-gas.

17. Building design and construction, except as specified herein.

18. *Piping* systems for mixtures of gas and air within the flammable range with an operating pressure greater than 10 psig (69 kPa gauge).

19. Portable fuel cell appliances that are neither connected to a fixed *piping* system nor interconnected to a power grid.

RBC101.2 CODE ADOPTED BY REFERENCE.

There is hereby adopted by reference the International Fuel Gas Code of the International Code Council, 4051 West Flossmore Road, Country Club Hills, IL 60478-5795, 2009 Edition. Three (3) copies of the Code are now filed in the office of the Clerk of the Jurisdiction and may be inspected during regular business hours. The above Code is being adopted as if set out at length except the following sections, which deleted. expressly

1. Chapter 1, Administration
2. Chapter 7, Gaseous Hydrogen Systems

RBC101.4 ADDITIONS AND MODIFICATIONS.

The adopted Code is subject to the following additions and modifications:

RBC101.3.2 Section 303.3. Delete items 3 and 4, amend item 5, add item 6.

303.3 Prohibited locations. Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage closets or surgical rooms, or in a space that opens only into such rooms or spaces, except where the installation complies with one of the following:

1. The *appliance* is a direct-vent *appliance* installed in accordance with the conditions of the listing and the manufacturer's instructions.
2. Vented room heaters, wall furnaces, vented decorative appliances, vented gas fireplaces, vented gas fireplace heaters and decorative appliances for

installation in vented solid fuel-burning fireplaces are installed in rooms that meet the required volume criteria of Section 304.5.

5. The *appliance* is installed in a room or space that opens only into a bedroom or bathroom, and such room or space is used for no other purpose and is provided with a solid weather-stripped door equipped with an *approved* self-closing device. All *combustion air* shall be taken directly from the outdoors in accordance with Section 304.6, or other adjacent spaces meeting indoor combustion air requirements in Section 304.5.

6. The appliance is installed in a room or space that opens only into a bedroom or bathroom, and such room or space is used for no other purpose, the door to the bedroom or bathroom is fully louvered, the door to the appliance room is fully louvered, all combustion air may be taken from indoors in accordance with Section 304.5.

RBC101.2.1 Section 304.7.3. Add item 4 as follows:

4. The outdoor opening may connect to the cold air return plenum if it is located within 12 feet (3,657.6 mm) of the furnace blower when sized at 1 square inch per 5,000 BTU/hr (1 cm² per 227 W) of the total input rating of all gas utilization equipment.

RBC101.2.2 Section 305.8. Add an exception as follows:

Exception: A floor-mounted doorstop, permanently attached to the building structure with non-removable bolt/screw heads, may be used to maintain clearance to a combustible door.

RBC101.2.3 Section 306.4. Add exception 3 as follows:

3. Access to appliances in under floor spaces shall not be through a garage unless the access is provided with a solid weather-stripped door equipped with an approved self-closing device, and all combustion air is taken from outdoors.

RBC101.3.29 Section 401.5.1. Insert a new section as follows:

401.5.1 Elevated gas pressure pipe

Identification. Gas piping systems on or in the structure with elevated pressure, shall be identified with labels marked medium or high pressure fuel gas every 10 feet.

RBC101.3.30 Section 402.5

Add the following exception.

Exception:

When minimum pressure required for proper appliance operation is unavailable, then the design pressure loss under maximum probable flow conditions, from the point of delivery to the inlet connection of the equipment, shall not exceed those shown in Tables 402.4(1) through 402.4(35) of the International Fuel Gas Code, 2009.

RBC101.2.4 Section 403.4.3. Delete and replace with the following:

403.4.3 Copper and brass. Copper and brass piping shall not be used on natural gas systems.

RBC101.3.3 Section 403.5.2 Delete and replace with the following:

403.5.2 Copper and brass tubing. Copper and brass tubing shall not be used on natural gas systems.

RBC101.2.5 Section 403.11. Delete item 3. and replace with the following:

3. Compression type mechanical joints are prohibited.

RBC101.2.6 Section 404.3. Delete and replace with the following:

404.3 Piping in Concealed Locations.

Portions of a piping system installed in a concealed location shall not have unions, tubing fittings, bushings or compressions couplings.

RBC101.2.7 Section 404.9 Add the following:

Underground piping systems shall be installed using only listed Polyethylene Plastic or Corrugated Stainless Steel.

Exceptions:

1. Metallic tubing (type L copper) may be used in underground LP gas systems
2. Metallic piping may be used in underground systems with prior approval.

RBC101.2.8 Section 404.10. Delete "12 inches (304.8 mm)" and replace with "18 inches (457.2 mm)".

RBC101.2.9 Section 404.10.1 Delete.

RBC101.2.10 Section 406.1.2. Delete the second paragraph and replace with the following:

Minor repairs and additions are not required to be pressure tested provided that the piping is accessible, limited to a maximum of eight joints and has a total developed length no greater than 10 feet (3,048 mm).

RBC101.2.11 Section 406.4. Delete and replace with the following:

406.4 Test pressure. Test pressure shall be tested in accordance with this section

406.4.1 Test pressure measure. The gas piping shall stand a pressure of not less than 10

pounds per square inch (69 kPa) gage. Test pressures shall be held for a length of time satisfactory to the code official but not less than 15 minutes, with no perceptible drop in pressure. For welded piping, the test pressure shall be at least 60 pounds per square inch (414 kPa) and shall be continued for a length of time satisfactory to the code official but not less than 30 minutes. These tests shall be made using air, carbon dioxide or nitrogen pressure only and shall be made in the presence of the code official. Necessary apparatus for conducting tests shall be furnished by the permit holder. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than three times the test pressure.

RBC101.2.12 Section 406.6.5. Disconnected piping inspection. When existing piping is disconnected from the source of supply (gas meter removed, etc.) in a R-3 occupancy for more than one (1) calendar year, the piping shall be retested in accordance with the requirements of Section 406.4 of the International Fuel Gas Code, 2003 Edition. When existing piping is disconnected from the source of supply (gas meter removed, etc.) in any occupancy other than R-3 for more than six (6) months, the piping shall be retested in accordance with the requirements of Section 406.4 of the International Fuel Gas Code, 2003 Edition.

RBC101.2.13 Section 408. Delete.

RBC101.3.50 Section 410.3.1. Add the following: Vent piping located inside a structure, shall be rigid metallic pipe complying with Section 403.4 of the International Fuel Gas Code 2009 Edition.

RBC101.3.57 Section 416 Delete.

RBC101.2.14 Table 503.4. Delete "single wall metal pipe" throughout the Table.

RBC101.2.15 Section 503.5.3. Delete the exception and add the following:

Masonry chimney flues serving listed gas appliances with drafts hoods, Category I appliances, and other gas appliances listed for use with Type B vent shall be lined with a chimney lining system specifically listed for use only with such appliances. The liner shall be installed in accordance with the liner manufacturer's instructions and the terms of the listing. A permanent identifying label shall be attached at the point where the connection is to be made to the liner. The label shall read: "This chimney liner is for appliances that burn gas only. Do not connect to solid or liquid fuel-burning appliances or incinerators."

Exception: When replacing an existing draft hood appliance, a chimney lining system is not required to be installed in an existing approved masonry chimney that serves two or more draft hood appliances provided that the existing chimney flue is inspected and deemed safe for the intended appliance.

RBC101.2.16 Section 503.5.6.1. Delete the exception.

RBC101.2.17 Section 503.7. Delete and replace with the following:

503.7 Single-wall Metal Pipe. Single-wall metal pipe vents are prohibited.

RBC101.2.18 Section 503.10.2.2. Delete the exception.

RBC101.2.19 Section 504.2.9. Delete the 2nd and 3rd paragraphs and items 1 through 6.

RBC101.2.20 Section 504.3.14. Delete "Table 504.2(1) or 504.2(2)" and replace with "Table 504.3(1) or 504.3 (2) of the International Fuel Gas Code, 2009 Edition."

Section 504.3.20. Delete the 2nd and 3rd paragraphs and items 1 through 5.

RBC101.2.21 Section 602.4. Insert a new section as follows:

602.4 Glass Doors. Fireplace openings containing decorative gas appliances shall be equipped with glass doors or automatic dampers.

RBC101.2.22 Section 603. Delete and replace with the following:

603 Log Lighters. Log lighters are prohibited.

RBC101.2.23 Section 609. Delete and replace with the following:

609 Floor Furnaces. Floor furnaces are prohibited.

RBC101.2.24 Section 621.2. Delete and replace with the following:

Unvented room heaters shall not be used in a dwelling unit.

RBC101.2.25 Section 634. Delete.

