

§ 3280.703

means, flashing, and ceiling plate, located in and above the roof of a manufactured home.

Sealed combustion system appliance means an appliance which by its inherent design is constructed so that all air supplied for combustion, the combustion system of the appliance, and all products of combustion are completely isolated from the atmosphere of the space in which it is installed.

Water heater means an appliance for heating water for domestic purposes.

[40 FR 58752, Dec. 18, 1975. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 52 FR 4586, Feb. 12, 1987; 58 FR 55015, Oct. 25, 1993; 78 FR 73987, Dec. 9, 2013]

§ 3280.703 Minimum standards.

Heating, cooling and fuel burning appliances and systems in manufactured homes shall be free of defects, and shall conform to applicable standards in the following table unless otherwise specified in this standard. (See § 3280.4) When more than one standard is referenced, compliance with any one such standard shall meet the requirements of this standard.

APPLIANCES

Heating and Cooling Equipment, Second Edition, with 1999 revisions—UL 1995, 1995.
Liquid Fuel-Burning Heating Appliances for Manufactured Homes and Recreational Vehicles, Seventh Edition, with 1997 revisions—UL 307A-1995.
Fixed and Location-Dedicated Electric Room Heaters, Second Edition, with 1998 revisions—UL 2021-1997.
Electric Baseboard Heating Equipment, Fourth Edition, with 1998 revisions—UL 1042-1994.
Electric Central Air Heating Equipment—UL 1096-Fourth Edition-1986 with revisions July 16, 1986, and January 30, 1988.
Gas Burning Heating Appliances for Manufactured Homes and Recreational Vehicles, Fourth Edition, with 1998 revisions—UL 307B-1995.
Gas Clothes Dryers Volume 1, Type 1 Clothes Dryers—ANSI Z21.5.1/-CSA 7.1-M99—1999 with Addendum Z21.5.1a-1999.
Gas Fired Absorption Summer Air Conditioning Appliances—ANSI Z21.40.1/CGA 2.91-M961996.
Gas-Fired Central Furnaces (Except Direct Vent System Central Furnaces)—ANSI Z21.47-1990 with Addendum Z21.47a-1990 and Z21.47b-1992.
Decorative Gas Appliances for Installation in Solid Fuel Burning Fireplaces—RADCO

24 CFR Ch. XX (4-1-23 Edition)

DS-010-91 (incorporated by reference, see § 3280.4).

Household Cooking Gas Appliances—ANSI Z21.1-2000.

Refrigerators Using Gas Fuel—ANSI Z21.19-1990, with Addendum ANSI Z21.19a-1992 and Z21.19b-1995.

Gas Water Heaters—Volume 1, Storage Water Heaters with Input Ratings of 75,000 BTU per hour or Less—ANSI Z21.10.1-1998 with Addendum Z21.10.1a-2000.

Household Electric Storage Tank Water Heaters, Tenth Edition—UL 174-1996, with 1997 revisions.

FERROUS PIPE AND FITTINGS

Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless—ASTM A53-93.

Standard Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines—ASTM A539-1999.

Pipe Threads, General Purpose (Inch)—ANSI/ASME B1.20.1-1983.

Welding and Seamless Wrought Steel Pipe—ANSI/ASME B36.10-1979.

NONFERROUS PIPE, TUBING, AND FITTINGS

Standard Specification for Seamless Copper Water Tube—ASTM B88-93.

Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service—ASTM B280-95a.

Connectors for Gas Appliances—ANSI Z21.24/CGA 6.10-M97-1997.

Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves—ANSI Z21.15/CGA 9.1-M97-1997.

Standard for Gas Supply Connectors for Manufactured Homes—IAPMO TSC 9-1997.

Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tubes—ASTM B251-93.

Standard Specification for Seamless Copper Pipe, Standard Sizes—ASTM B42-93.

MISCELLANEOUS

Factory-Made Air Ducts and Air Connectors, UL 181, Ninth Edition, April 4, 1996, with revisions through May 15, 2003 (incorporated by reference, see § 3280.4).

Standard for Safety Closure Systems for use with Rigid Air Ducts and Air Connectors, UL 181A, 1994, with 1998 revisions.

Standard for Safety Closure Systems for use with Flexible Air Ducts and Air Connectors, First Edition—UL 181B, 1995, with 1998 revisions.

Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service, and Marine Use, Sixth Edition—UL 109-1997, with 2001 revisions.

Pigtails and Flexible Hose Connectors for LP-Gas, Seventh Edition—UL 569, 1995 with 2001 revisions.

Roof Jacks for Manufactured Homes and Recreational Vehicles, Eighth Edition—UL 311, 1994, with 1998 revisions.

Relief Valves for Hot Water Supply Systems, ANSI Z21.22-1999, (incorporated by reference, see § 3280.4).

Automatic Gas Ignition Systems and Components—ANSI Z21.20 with Addendum Z21.20a-2000.

Automatic Valves for Gas Appliances—ANSI Z21.21/CSA 6.5-2000.

Gas Appliance Thermostats—ANSI Z21.23-93 (incorporated by reference, see § 3280.4).

Gas Vents, Ninth Edition—UL 441, 1996 with 1999 revisions.

Standard for the Installation of Oil-Burning Equipment, NFPA 31-01 (incorporated by reference, see § 3280.4).

National Fuel Gas Code—NFPA 54-2002/ANSI Z223.1-2002.

Warm Air Heating and Air Conditioning Systems, NFPA 90B, 1996 Edition.

Liquefied Petroleum Gas Code, NFPA 58-2001 Edition.

Flares for Tubing—SAE-J533b-1992.

Factory-Built Chimneys for Residential Type and Building Heating Appliances, Ninth Edition—UL 103, 1995, with 1999 revisions.

Factory-Built Fireplaces, Seventh Edition—UL 127-1996, with 1999 revisions.

Solid-Fuel Type Room Heaters, Fifth Edition—UL 1482, 1995, with 2000 revisions.

Fireplace Stoves, Eighth Edition, with 2000 revisions—UL 737, 1996.

Unitary Air-Conditioning and Air-Source Heat Pump Equipment—ANSI/ARI 210/240-89.

AGA Requirements for Gas Connectors for Connection of Fixed Appliances for Outdoor Installation, Park Trailers, and Manufactured (Mobile) Homes to the Gas Supply—No. 3-87.

[58 FR 55015, Oct. 25, 1993, as amended at 70 FR 72046, Nov. 30, 2005; 78 FR 73987, Dec. 9, 2013]

§ 3280.704 [Reserved]

§ 3280.705 Gas piping systems.

(a) *General.* The requirements of this section shall govern the installation of all fuel gas piping attached to any manufactured home. The gas piping supply system shall be designed for a pressure not exceeding 14 inch water column ($\frac{1}{2}$ psi) and not less than 7 inch water column ($\frac{1}{4}$ psi). The manufacturer shall indicate in his written installation instructions the design pressure limitations for safe and effective operation of the gas piping system. None of the requirements listed in this section shall apply to the piping sup-

plied as a part of an appliance. All exterior openings around piping, ducts, plenums or vents shall be sealed to resist the entrance of rodents.

(b) *Materials.* All materials used for the installation, extension, alteration, or repair of any gas piping system shall be new and free from defects or internal obstructions. It shall not be permissible to repair defects in gas piping or fittings. Inferior or defective materials shall be removed and replaced with acceptable material. The system shall be made of materials having a melting point of not less than 1,450 F, except as provided in § 3280.705(e). They shall consist of one or more of the materials described in § 3280.705(b) (1) through (4).

(1) Steel or wrought-iron pipe shall comply with ANSI Standard B36.10-1979, Welded and Seamless Wrought Steel Pipe. Threaded brass pipe in iron pipe sizes may be used. Threaded brass pipe shall comply with ASTM B43-91, Standard Specification for Seamless Red Brass Pipe, Standard Sizes.

(2) Fittings for gas piping shall be wrought iron, malleable iron, steel, or brass (containing not more than 75 percent copper).

(3) Copper tubing must be annealed type, Grade K or L, conforming to the Standard Specification for Seamless Copper Water Tube, ASTM B88-93, or must comply with the Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Service, ASTM B280-1995. Copper tubing must be internally tinned.

(4) Steel tubing must have a minimum wall thickness of 0.032 inch for tubing of $\frac{1}{2}$ inch diameter and smaller and 0.049 inch for diameters $\frac{1}{2}$ inch and larger. Steel tubing must be in accordance with ASTM Standard Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines, ASTM A539-1999, and must be externally corrosion protected.

(5) Corrugated stainless steel tubing (CSST) systems must be listed and installed in accordance with ANSI/IAS LC-1-1997, Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST) (incorporated by reference, see § 3280.4), and the requirements of this section.