

## CHAPTER 16 – DUCT SYSTEMS - AMENDMENTS

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The ninth edition building code became first effective on October 20, 2017 and, with a shortened concurrency period, the new code came into full force and effect on January 1, 2018.

The new, ninth edition code is based on modified versions of the following *2015 International Codes as published by the International Code Council (ICC)*.

- The International Building Code (IBC);
- International Residential Code (IRC);
- International Existing Building Code (IEBC);
- International Mechanical Code (IMC);
- International Energy Conservation Code (IECC);
- International Swimming Pool and Spa Code (ISPSC);
- Portions of the International Fire Code (IFC).

Massachusetts amends these code fairly significantly to accommodate for unique issues in the commonwealth. This package of amendments revises the IRC only. Please see base code amendments for changes to other listed codes that comprise the ninth edition.

Please remember that the Massachusetts amendments posted on-line are *unofficial versions* and are meant for convenience only. Official versions of the Massachusetts amendments may be purchased from the State House Bookstore @ [Shop the Bookstore](#) and any of the I-Codes may be purchased from the International Code Council (ICC) @ [iccsafe.org](http://iccsafe.org).

Additionally, the ICC publishes transition documents that identify changes from the 2009 to the 2015 I-Codes for those who may have interest.

- [International Building Code \(IBC\) Transition](#)
- [International Residential Code \(IRC\) Transition](#).

*Note: The residential code is part of the overall building code, which is referred to as 780 CMR. It is considered to be Chapter 51 in the overall code, which is why you will see reference to 780 CMR Chapter 51 in the amendments. The residential code is applicable to detached one- and two-family dwellings, multiple-family dwellings (townhouses) not more than three stories in height above the grade plane and/or their accessory structures not more than three stories in height above grade. See the base code for other building types.*

51.00: continued

## Chapter 14: HEATING AND COOLING EQUIPMENT

**M1401.6** Add section and associated subsections as follows:

**M1401.6 Used Solid Fuel-burning Appliances.** Used solid fuel-burning appliances that predate the listing requirements set forth in 780 CMR 51.00 may be utilized but the installation of such appliances shall otherwise conform to the requirements of 780 CMR 51.00, as applicable, and such installations shall be inspected by the building official (or fire official in such towns that utilize the fire official for such inspection purposes).

**M1401.6.1 Clearances to Combustibles.** In the absence of listed clearances and floor protection requirements, used solid fuel-burning appliances shall be installed in accordance with the clearances of 780 CMR 51.00.

**M1401.6.2 Floor Protection General.** Floor protection listing requirements for a used appliance shall be met. In the absence of listing requirements, solid fuel-burning appliances shall have floor protection that is noncombustible material applied to the combustible or noncombustible floor area underneath and extending in front, to the sides and to the rear of a heat producing appliance, and have the necessary thermal conductivity to satisfy the floor protection requirements of the appliance. Various "hearth rugs," "mats," "tile board," "hearth board" and similar products sold as floor protectors may be noncombustible but may not satisfy thermal conductivity requirements of this section.

**M1401.6.2.1 Floor Protection Requirements.** Floor protection requirements shall be:

1. four inches (102 mm) of millboard having a thermal conductivity  $k = 0.84$  (Btu)(inch)/(ft<sup>2</sup>)(hour)(°F);
  2. a noncombustible floor protector of the same overall thermal conductivity in (1.);
- or
3. approved by a registered design professional.

**Exception:** If existing floor protection can be demonstrated to have been adequate for a previous installation of a used solid fuel-burning appliance, then such floor protection shall be allowed. If calculations demonstrate that the existing floor protection has a thermal conductivity lower than that set by this section, then the existing floor protection may be maintained.

**M1414.1** Revise the section as follows:

**M1414.1 General.** Fireplace stoves shall be listed, labeled and installed in accordance with the terms of the listing. Fireplace stoves shall be tested in accordance with UL 737. Also see Chapter 10 of 780 CMR 51.00 for detailed guidance on solid fuel-burning appliances.

**Chapter 15: EXHAUST SYSTEMS** (no amendments)

**Chapter 16: DUCT SYSTEMS**

**M1601.3** Replace the section as follows:

**M1601.3 Duct Insulation Materials.** Duct insulation shall conform to the following requirements and the requirements of Chapter 11 of 780 CMR 51.00.

**M1601.4** Replace the section as follows:

**M1601.4 Installation.** Duct installation shall comply with Subsections M1601.4.1 through M1601.4.7 and the requirements of Chapter 11 of 780 CMR 51.00.

51.00: continued

**M1601.4.6** Revise the first paragraph of the subsection as follows:

**M1601.4.6 Duct Insulation.** Duct insulation shall be installed in accordance with the following requirements and the requirements of Chapter 11 of 780 CMR 51.00. Where conflict exists between the requirements of this section and Chapter 11 of 780 CMR 51.00, the requirements set forth in Chapter 11 of 780 CMR 51.00 shall govern.

#### **Chapter 17: COMBUSTION AIR**

**M1701.1** Revise the section as follows:

**M1701.1 Scope.** Solid fuel-burning appliances shall be provided with combustion air in accordance with the appliance manufacturer's installation instructions. Oil-fired appliances shall be provided with combustion air in accordance with 527 CMR: *Board of Fire Prevention Regulations*. The methods of providing combustion air in this chapter do not apply to fireplaces, fireplace stoves and direct vent appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in accordance with Chapter 24 of 780 CMR 51.00.

#### **Chapter 18: CHIMNEY AND VENTS**

**M1801.1** Delete the last sentence in the paragraph.

**M1801.11** Delete the exception to requirement 1.

**M1801.12** Add the following exception to the subsection:

**Exception:** Unless common connection is allowed by 248 CMR: *Board of State Examiners of Plumbers and Gas Fitters* or 527 CMR: *Board of Fire Prevention Regulations*. If allowed, the common flue shall be of such size to serve all appliances connected if such appliances were operated simultaneously. Note that 248 CMR and 527 CMR are enforced by gas inspectors and the heads of fire departments, respectively.

#### **Chapter 19: SPECIAL APPLIANCES, EQUIPMENT AND SYSTEMS (no amendments)**

#### **Chapter 20: BOILERS AND WATER HEATERS (no amendments)**

#### **Chapter 21: HYDRONIC PIPING**

**M2101.3** Revise the subsection as follows:

**M2101.3 Protection of Potable Water.** The potable water system shall be protected from backflow in accordance with the provisions of the Department of Environmental Protection and/or the local water purveyor, as applicable.

#### **Chapter 22: SPECIAL PIPING AND STORAGE SYSTEMS**

Delete all sections of CHAPTER 22 and replace with the following:

**M2201 SPECIAL PIPING AND STORAGE SYSTEMS.** Special laws, regulations, or both include requirements for oil tanks, piping, fittings, connections, installation, and oil pumps and valves. Refer to M.G.L. c. 148, § 13, M.G.L. c. 148, § 37, 527 CMR: *Board of Fire Prevention Regulations*, 522 CMR: *Board of Boiler Rules*, and EPA regulations. See also 780 CMR 51.00 for tank structural design.

#### **Chapter 23: SOLAR THERMAL ENERGY SYSTEMS**

**M2301.1** Add two notes to the end of the section as follows:

**NOTES:**

1. Additional requirements for boilers and other pressure vessels may be found in M.G.L. c. 146 and 522 CMR: *Board of Boiler Rules*, as applicable.