

Chapter 12: Mechanical Administration

General Comments

Chapter 12 provides regulations for the administration of the mechanical provisions of the code. Though this may be the smallest chapter in the code, it is very important in that it defines the application of the mechanical provisions to both existing and new construction. It also relates this chapter to the administrative provisions in Chapter 1.

Section M1201 addresses this set of mechanical regulations' relationship with Chapter 1 and the validity of the standards that are referenced. Section M1202 provides the applicability to existing mechanical systems. While the code mainly deals with new systems, this section indicates that some existing situations may fall under the requirements in the chapter.

Purpose

A set of mechanical regulations is intended to be adopted as a legally enforceable document that can safeguard health, safety, property and public welfare. Such regulations cannot be effective without adequate provisions for their administration and enforcement. The official charged with the administration and enforcement of mechanical regulations has a great responsibility, and with this responsibility goes authority. No matter how detailed the mechanical regulations may be, the building official must, to some extent, exercise judgment in determining code compliance. She or he has the responsibility to establish that the homes in which the citizens of the community reside are designed and constructed to be reasonably free from hazards associated with the presence and use of mechanical equipment, appliances and systems.

SECTION M1201 GENERAL

M1201.1 Scope. The provisions of Chapters 12 through 24 shall regulate the design, installation, maintenance, *alteration* and inspection of mechanical systems that are permanently installed and used to control environmental conditions within buildings. These chapters shall also regulate those mechanical systems, system components, *equipment* and *appliances* specifically addressed in this code.

❖ This section lists the chapters in the code that regulate mechanical systems. It indicates that the design, installation, and maintenance of mechanical equipment used to control the environmental conditions within the building are regulated by these chapters. It also states that other mechanical systems specifically addressed within these chapters are so regulated. Other provisions in the code reference the *International Mechanical Code*[®] (IMC[®]) and the *International Fuel Gas Code*[®] (IFGC[®]). This regulates virtually all mechanical systems and equipment within a dwelling in some form or another.

M1201.2 Application. In addition to the general administrative requirements of Chapter 1, the administrative provisions

of this chapter shall also apply to the mechanical requirements of Chapters 13 through 24.

❖ This section makes reference to the administrative requirements of Chapter 1 to include those administrative provisions and make them applicable to the mechanical chapters.

SECTION M1202 EXISTING MECHANICAL SYSTEMS

M1202.1 Additions, alterations or repairs. *Additions, alterations, renovations or repairs* to a mechanical system shall conform to the requirements for a new mechanical system without requiring the existing mechanical system to comply with all of the requirements of this code. *Additions, alterations or repairs* shall not cause an existing mechanical system to become unsafe, hazardous or overloaded. Minor *additions, alterations or repairs* to existing mechanical systems shall meet the provisions for new construction, unless such work is done in the same manner and arrangement as was in the existing system, is not hazardous, and is *approved*.

❖ Major alterations or additions to existing mechanical systems must comply with the provisions of the code.

However, the code does not require existing systems to be upgraded to comply with new requirements unless the alteration or addition renders the existing system unsafe, overloaded or hazardous.

Minor additions, alterations or repairs to existing mechanical systems may be made following the same manner and arrangement as was found for the existing systems, as long as the work does not render the existing and new system unsafe, hazardous or overloaded. The building official has to make a judgement call on the extent of the addition, alteration or repair and determine whether the work is “minor,” thereby allowing the use of the provisions of the old code, or that it is “major,” thereby requiring the new work to be in compliance with the new code. Only when the new work makes the existing system overloaded, unsafe or hazardous does the building official need to require bringing the existing system up to the new provisions of the code.

M1202.2 Existing installations. Except as otherwise provided for in this code, a provision in this code shall not require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an existing mechanical system lawfully in existence at the time of the adoption of this code.

❖ An existing mechanical system is generally “grandfathered” with code adoption, provided the system meets a minimum level of safety. Frequently the criteria for determining this level of safety are the regulations (or code) under which the existing building was originally constructed. If there are no previous code criteria that apply, the building official is to apply those provisions of the code that are reasonably applicable to existing buildings. Provisions dealing with hazard abatement in existing buildings and provisions dealing with maintenance, as contained in the property maintenance and fire prevention codes, dictate a specific level of safety.

M1202.3 Maintenance. Mechanical systems, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe and sanitary condition. Devices or safeguards that are required by this code shall be maintained in compliance with the code edition under which installed. The owner or the owner’s designated agent shall be responsible for maintenance of the mechanical systems. To determine compliance with this provision, the *building official* shall have the authority to require a mechanical system to be reinspected.

❖ This section allows the continued use of an existing mechanical system if it was originally lawfully permitted and installed. Periodic adoption of new codes or new provisions that may affect an existing system does not require upgrading the system to comply with the new provisions. However, this is predicated on the system being maintained by the owner in proper operating condition, in accordance with the manufacturer’s requirements. The building official has the authority, as provided for in this section, to require the

inspection of a mechanical system to determine whether work was performed to maintain the equipment in a safe operating condition. If the system becomes hazardous or unsafe, the building official has the authority to require repair, modification or even replacement to render the installation safe.

Bibliography

The following resource materials were used in the preparation of the commentary for this chapter of the code:

IFGC-12, *International Fuel Gas Code*. Washington, DC: International Code Council, 2011.

IMC-12, *International Mechanical Code*. Washington, DC: International Code Council, 2011.

Legal Aspects of Code Administration. Washington, DC: International Code Council, 2002.

Chapter 13:

General Mechanical System Requirements

General Comments

This chapter contains the provisions that apply to various types of mechanical appliances. The approval of appliances and their proper installation is the main theme. Section M1301 states the scope of the chapter and addresses its relationship with the *International Mechanical Code*[®] (IMC[®]) and the *International Fuel Gas Code*[®] (IFGC[®]). Section M1302 indicates that all mechanical appliances must be listed and labeled by an approved agency. Section M1303 addresses the information that is needed on the labels. Section M1304 discusses the proper design of appliances considering the appliances' type of fuel and the geographical location of the installed appliance. Section M1305 addresses

access to installed appliances for servicing and potential replacement. Section M1306 contains the allowance for reduced clearances between appliances and combustible construction. Section M1307 contains the criteria for the safe installation of appliances. Section M1308 is a cross reference to the proper sections in the building portion of the code for the drilling and notching of structural members of the building.

Purpose

This chapter contains requirements for the safe and proper installation of mechanical equipment and appliances.

SECTION M1301 GENERAL

M1301.1 Scope. The provisions of this chapter shall govern the installation of mechanical systems not specifically covered in other chapters applicable to mechanical systems. Installations of mechanical *appliances, equipment* and systems not addressed by this code shall comply with the applicable provisions of the *International Mechanical Code* and the *International Fuel Gas Code*.

- ❖ This section provides general requirements for mechanical systems not specifically covered in other chapters of the code. In addition, it refers to the IMC and the IFGC for regulations governing equipment not addressed by the code.

M1301.1.1 Flood-resistant installation. In flood hazard areas as established by Table R301.2(1), mechanical *appliances, equipment* and systems shall be located or installed in accordance with Section R322.1.6.

- ❖ The local jurisdiction must fill in Table R301.2(1) upon adoption of the code, including the flood hazards information. Mechanical appliances, equipment, and systems that are located in flood hazard areas must be installed above the design flood elevation or must be designed and installed to prevent the entrance of water into the components and to resist the forces of the flood waters on the components (see commentary, Section R322.1.6).

M1301.2 Identification. Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer.

- ❖ The manufacturer is given the option of determining the type of marking for the material. If there is no

applicable standard or the applicable standard does not require that the material be identified, identification of the manufacturer is still required by the code. Where the code indicates compliance with an approved standard, the manufacturer must comply with the requirements for marking in accordance with the applicable standard.

M1301.3 Installation of materials. All materials used shall be installed in strict accordance with the standards under which the materials are accepted and approved. In the absence of such installation procedures, the manufacturer's instructions shall be followed. Where the requirements of referenced standards or manufacturer's instructions do not conform to minimum provisions of this code, the provisions of this code shall apply.

- ❖ Mechanical components and materials are to be installed in accordance with the installation requirements of the applicable standard listed in the code. Where a standard is not provided, the manufacturer's instructions must be followed. For example, because there are very few standards available that regulate the installation of valves, the manufacturer's instructions must be used to install these components.

M1301.4 Plastic pipe, fittings and components. Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14.

- ❖ Plastic piping, fittings and plastic pipe-related components, including solvent cements, primers, tapes, lubricants and seals used in mechanical systems, must be tested and certified as conforming to NSF 14. This includes hydronic piping and fittings and plastic piping system components including but not