

AN AMERICAN NATIONAL STANDARD
IAPMO/ANSI UMC 1 – 2018

2018 UNIFORM MECHANICAL CODE®



READ ME
TABLE OF CONTENTS



2018 UNIFORM MECHANICAL CODE[®]

An American National Standard
IAPMO/ANSI UMC 1 – 2018



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Main Phone: (909) 472-4100 • Main Fax: (909) 472-4150

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The 2018 edition of the *Uniform Mechanical Code* is developed through a consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on mechanical issues. While the International Association of Plumbing and Mechanical Officials (IAPMO) administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in its codes and standards.

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To access the code information pages for a specific code, go to <http://codes.iapmo.org> to select from the list of IAPMO codes. For Tentative Interim Amendments, go to the standard council decisions. For Errata, select the archived revision information.

FOREWORD

Origin and Development

The industry has long recognized the advantages of a statewide adopted mechanical code. The first edition of the *Uniform Mechanical Code*[®] (UMC[®]) was adopted by IAPMO in 1967. The widespread use of this code over the past five decades by jurisdictions throughout the United States and internationally is testament to its merit.

Publishing the 2003 *Uniform Mechanical Code*, is a significant milestone because it is the first time in the history of the United States, a mechanical code was developed through a true consensus process. The 2018 edition represents the most current approaches in the mechanical field and is the sixth edition developed under the ANSI consensus process. Contributions to the content of this code consists of diverse interests as consumers, enforcing authorities, installers/maintainers, labor, manufacturers, research/standards/testing laboratories, special experts, and users.

The *Uniform Mechanical Code* provides consumers with complete requirements for the installation and maintenance of heating, ventilating, cooling, and refrigeration systems, while, at the same time, allowing latitude for innovation and new technologies. The public at large is invited and encouraged to take part in IAPMO's open consensus code development process. This code is updated every three years. The *Uniform Mechanical Code* is dedicated to all those who in working to achieve "the ultimate mechanical code" have unselfishly devoted their time, effort, and personal funds to create and maintain this, the finest mechanical code in existence today.

The *Uniform Mechanical Code* updates every three years in revision cycles that begin twice each year that takes two years to complete.

Each revision cycle advances according to a published schedule that includes final dates for all major events and contains four basic steps as follows:

1. Public and Committee Proposal Stage;
2. Comment Stage;
3. Association Technical Meeting;
4. Council Appeals and Issuance of Code.

IAPMO develops "full consensus" codes built on a foundation of maximum participation and agreement by a broad range of interests. This philosophy has led to producing technically sound codes that promote health and safety, yet do not stifle design or development.

It is important to stress that, the process remains committed to the principles of consensus code development where consensus Technical Committees and Correlating Committees revise codes. The public and membership is offered multiple opportunities to debate, provide input and raise concerns through Amending Motions at the annual Assembly Consideration Session. Anyone may submit an appeal related to the issuance of a document through the IAPMO Standards Council.

The 2018 *Uniform Mechanical Code* is supported by the Mechanical Contractors Association of America (MCAA), the Plumbing-Heating-Cooling Contractors National Association (PHCC-NA), the United Association (UA), and the World Plumbing Council (WPC). The presence of these logos, while reflecting support, does not imply any ownership of the copyright to the UMC, which is held exclusively by IAPMO. Further, the logos of these associations indicate the support of IAPMO's open consensus process being used to develop IAPMO's codes and standards.

The addresses of the organizations are as follows:

ASSE – 18927 Hickory Creek Drive, Suite 220 • Monkena, IL 60448 • (708) 995-3019

MCAA – 1385 Piccard Drive • Rockville, MD 20850 • (301) 869-5800

PHCC-NA – PO Box 6808 • Falls Church, VA 22040-6808 • (800) 533-7694

RPA – 18927 Hickory Creek Drive, Suite 220 • Mokena, IL 60448 • (877) 427-6601

UA – Three Park Place • Annapolis, MD 21401 • (410) 269-2000

WPC – World Plumbing Council Secretariat, Auf der Mauer 11 • Postfach CH 8021 • Zurich
Switzerland • www.WorldPlumbing.org

Adoption

The *Uniform Mechanical Code* is available for adoption and use by jurisdictions in the United States and Internationally. Its use within a governmental jurisdiction is accomplished through adoption by reference in accordance with applicable jurisdictional laws. At adoption, jurisdictions should insert the applicable information in bracketed words in the sample ordinance. The sample legislation for adoption of the *Uniform Mechanical Code* on page xi provides key components, regulations and resolutions.

Revision Markings

Solid vertical lines in the margins indicate a technical change from the requirements of the 2015 edition. An arrow (←) in the margin indicates where an entire section, paragraph, exception or table has been deleted, or an item in a list of items or a table has been deleted.

A double right angle (◀◀) in the margin indicates that the text or a table has been relocated within the code. The table found on page xiii points out the relocations in the 2018 edition of the *Uniform Mechanical Code*.

TIA TIA indicates that the revision is the result of a Tentative Interim Amendment.
TIA For further information on tentative interim amendments see Section 5 of the IAPMO
TIA Regulations Governing Committee Projects available at <http://codes.iapmo.org/>

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another document. This reprinted material is not the complete and official position of the source document on the referenced subject that is represented by the standard in its entirety.

Text that is extracted pursuant to IAPMO's Extract Guidelines, but outside of the regular revision process is denoted with the use of the source document in the margin. This text is not fully processed by IAPMO in accordance with ANSI's public announcement consensus requirements for an American National Standard (ANS) nor approved by ANSI's Board of Standards Review. The next revision cycle processes such text in accordance with those requirements.

FORMAT OF THE UNIFORM MECHANICAL CODE

The format of the *Uniform Mechanical Code* (UMC) arranges each chapter in accordance with a specific subject matter. However, Chapter 3 is dedicated to general requirements that are applicable to every chapter. The subject matters are divided as follows:

CHAPTERS	SUBJECTS
1	Administration
2	Definitions
3	General Regulations
4	Ventilation Air
5	Exhaust Systems
6	Duct Systems
7	Combustion Air
8	Chimneys and Vents
9	Installation of Specific Appliances
10	Boilers and Pressure Vessels
11	Refrigeration
12	Hydronics
13	Fuel Gas Piping
14	Process Piping
15	Solar Energy Systems
16	Stationary Power Plants
17	Referenced Standards
Appendix A	Residential Plan Examiner Review Form for HVAC System Design
Appendix B	Procedures to be Followed to Place Gas Equipment in Operation
Appendix C	Installation and Testing of Oil (Liquid) Fuel-Fired Equipment
Appendix D	Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicle Parks
Appendix E	Sustainable Practices
Appendix F	Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design
Appendix G	Example Calculation of Outdoor Air Rate

FORMAT OF THE UNIFORM MECHANICAL CODE

The following is a summary of the scope and intent of the provisions addressed within the chapters and appendices of the *Uniform Mechanical Code*:

Chapter 1 Administration.

Chapter 1 regulates the application, enforcement, and administration of subsequent requirements of the code. As well as establishing the scope of the code, this chapter is concerned with enforcing the requirements contained in the body of the code. A mechanical code, as with any other code, is intended to be adopted as a legally enforceable document to safeguard health, safety, property and public welfare. The code cannot be effective without satisfactory provisions for its administration and enforcement. The Authority Having Jurisdiction is to review the proposed and completed work and to decide whether a mechanical system conforms to the code requirements. As a public servant, the Authority Having Jurisdiction enforces the code in an unbiased, proper manner. The design professional is responsible for the design of a safe mechanical system. The contractor is responsible for installing the system in accordance with the plans.

Chapter 2 Definitions.

To maintain consistency and encourage the use of common terminology, Chapter 2 establishes definitions to provide clarity of terms and promote the use of a common language throughout the code. Understanding definitions within the context of their application enables greater collaboration, efficiency, standardization and interpretation in applying and enforcing terms used throughout the code. Codes are technical documents, and every term can impact the meaning of the code text. Terms not defined have a normally accepted meaning.

Chapter 3 General Regulations.

Chapter 3 regulates the general requirements, not specific to other chapters, for installing mechanical systems. Many regulations are not specific mechanical requirements, but relate to the overall mechanical system. This chapter contains safety requirements for appliance location and installation, appliance and system access, condensate disposal, and clearances to combustibles, and return or outside air used in mechanical systems. Listing method of approval, based on applicable nationally recognized standards, for the safe and proper installation of mechanical systems is essential to ensure protection of public health, safety, and welfare. The safety requirements provide protection for piping, material, and structures, with provisions for installation practices, removing stress and strain of the pipe, sleeving, and hanger support. The building's structural stability is protected by the regulations for cutting and notching of structural members.

Chapter 4 Ventilation Air.

Chapter 4 regulates the minimum requirements for ventilation air supply, exhaust, and makeup air for spaces within a building. Building ventilation is one important factor affecting the relationship between airborne transmission of respiratory infections and the health and productivity of workers. Ventilation air may be composed of mechanical or natural ventilation, infiltration, recirculated air, transfer air, or a suitable combination of that. Providing a comfortable and healthy indoor environment for building occupants is of primary concern. When considering how much ventilation should be supplied, typical and unusual significant sources of indoor pollution need to be controlled. Areas such as kitchens, bathrooms, and laundries are all built to allow specific functions. These spaces produce pollutants such as moisture, odors, volatile organic compounds, particles, or combustion byproducts. The purpose of local exhaust is to control concentrates of these pollutants in the room into which they were emitted in and to reduce the spread of the pollutants into other parts of the occupancy. Local exhaust ventilation is the source control for pollution that is expected in certain rooms. Using local exhaust to extract contaminants before they can mix with the indoor environment is essential.

Chapter 5 Exhaust Systems.

Chapter 5 regulates the minimum requirements for exhaust systems. Chapter 5 contains two parts: part I provides exhaust requirements for environmental air ducts and product conveying ducts; part II provides exhaust requirements for commercial kitchens. Environmental air ducts include exhaust ducts used for transporting the air from domestic kitchens, bathrooms, and clothes dryers. Systems that carry nonabrasive exhaust, such as smoke, moderately abrasives such as sawdust, and high abrasives such as manganese or acid vapors use product-conveying ducts. Part II provides the minimum fire safety requirements related to the design, installation, inspection, and maintenance of grease-type operations, such as cooking, for both fuel-gas and solid fuel. Cooking produces a significant amount of smoke, fumes, vapors, heat, and other pollutants. Therefore, acceptable kitchen ventilation is necessary to provide the occupants protection from smoke, unpleasant odors, pollutants, dangerous gases, and to prevent fires from the build-up of grease. There are two types of exhaust hoods (Type I and Type II) used in commercial kitchen applications. Type I hoods are intended to be installed above equipment or

FORMAT OF THE UNIFORM MECHANICAL CODE

appliances that generate grease or smoke. Type II hoods are intended to be installed above equipment or dishwashers that generate steam, heat, or products of combustion, or where grease or smoke is not present. Type II hood exhaust system requirements are addressed in Section 519.0.

Chapter 6 Duct Systems.

Chapter 6 regulates requirements for ducts and plenums that are portions of a heating, cooling, absorption or evaporative cooling, or exhaust system. This chapter contains material and installation requirements for metal, gypsum, factory-made, flexible, and plastic ducts. It also contains fire protection requirements, smoke dampers, and automatic shutoff for the building's air distribution system.

Chapter 7 Combustion Air.

Chapter 7 regulates combustion air requirements for the ventilation and dilution of flue gases for appliances installed in buildings. It applies to fuel-gas appliances except for direct vent appliances and clothes dryers. Chapter 5 provides makeup air for clothes dryers. Chapter 7 provides acceptable methods for supplying satisfactory combustion air to ensure proper combustion. Combustion air can be supplied by using indoor combustion air or by introducing the air from the outdoors.

Combustion is the rapid oxidation of fuel to release energy. The oxygen required to release the energy from the fuel normally comes from the air. Incomplete combustion of fuel occurs when inadequate oxygen is provided to the appliance. Combustion is needed to provide ventilation cooling for the casing and internal controls. When a lack of oxygen occurs, some of the carbon is not oxidized, and carbon monoxide forms.

Chapter 8 Chimneys and Vents.

Chapter 8 regulates the installation, design, and construction of venting systems for fuel-burning appliances. The provisions addressed within this chapter follow procedures an installer would use to design or evaluate a venting system. Many requirements apply to the design and construction of venting systems, chimneys, installation of gas vents, and the sizing of venting system for a Category I appliance. Sizing venting systems require rigorous engineering calculations. However, the venting sizing requirements and sizing tables in this chapter already perform the calculations for the benefit of the end user.

Combustion appliances produce products of incomplete combustion, including potentially harmful carbon monoxide (CO). It is desirable to vent these products to the outdoors. Although the gas is clean-burning fuel, the products of combustion must not be allowed to collect within a building.

Chapter 9 Installation of Specific Appliances.

Chapter 9 regulates the minimum requirements for the design, construction and installation of specific appliances. The provisions address the minimum requirements for gas-fired appliances, oil-fired appliances, wood-fired appliances, and electric-type appliances. In addition to the requirements of this chapter, appliances are also required to comply with the general requirements of Chapter 3.

Chapter 10 Boilers and Pressure Vessels.

Chapter 10 regulates the construction, installation, operation, repair, and alteration of boilers and pressure vessels. A low-pressure boiler provides steam at a pressure that does not exceed 15 psig, a gauge pressure more than 160 psi (1103 kPa) or heats water to a temperature more than 250°F (121°C). Potable water heaters are free from the requirements of Chapter 10 as they are within the scope of the Uniform Plumbing Code (UPC).

Pressure vessels store large amounts of energy and must comply with ASME Boiler and Pressure Vessel Code (BPVC) Section VIII. The stored energy must be contained to prevent disastrous failures. Boilers must comply with ASME BPVC Section I, ASME BPVC Section IV, or NFPA 85. Installing a safety relief valve and expansion tank prevents pressures in the tank from exceeding the design threshold.

Chapter 11 Refrigeration.

Chapter 11 regulates the design, installation, and construction requirements of refrigeration systems and the installation and construction of cooling towers. Refrigeration is a method used for achieving heat transfer to cool spaces. Refrigerants are the most common medium used to transfer the heat energy from the low-temperature level to the high-temperature level. Table 1102.3 lists the most commonly used refrigerants and is labeled by a number. The concentration limits provided in Table 1102.3 are useful for the quantity of refrigerant required to cool a volume of space safely.

FORMAT OF THE UNIFORM MECHANICAL CODE

A major milestone reached in the industry was the introduction of lower flammability refrigerants such as A2L and B2L. The industry's concerns to address lower Global Warming Potential (GWP) refrigerants led to the development of these lower flammability refrigerants. Chapter 11 does not only include these lower flammability refrigerants in Table 1102.3, but it also contains specific A2L and B2L provisions to address the precautions necessary for the proper use of these products.

In addition, Chapter 11 addresses other minimum requirements for refrigeration systems such as refrigeration machinery rooms (including ventilation), relief valves, and pressure vessels. Apart from refrigerants, the chapter also addresses minimum requirements for systems that use other mediums such as ammonia and brine systems. For ammonia systems, such systems are required to comply with IAR 2, IAR 3, IAR4, and IAR 5.

Chapter 12 Hydronics.

Chapter 12 regulates hydronic systems that are part of heating, cooling, ventilation, and conditioning systems. Such piping systems include steam, hot water, chilled water, steam condensate, and the ground source heat pumps systems. The ground source heat pumps provisions in this chapter apply to the hydronics portions of the system. It is worth noting the Uniform Solar Energy & Hydronics Code (USEHC) address added provisions for ground source heat pumps in its geothermal energy system chapter.

Materials for piping and tubing must meet the working temperature and pressure of the system. In addition, materials must be compatible with the transfer medium to prevent deformation, bursting, or any chemical action between the material and the transfer medium. The allowable joining methods for piping or tubing are provided for application and enforcement purposes.

Chapter 13 Fuel Gas Piping.

Chapter 13 regulates gas piping systems in a building, structure or within the property lines of buildings up to 5 psi. Gas piping systems must supply the minimum volume of gas required by each gas appliance to perform their proper operation under working conditions without exceeding the maximum pressure specified by each manufacturer. Because of the hazards associated with fuel gas, it is important to ensure the gas system has been inspected and tested, and that it is safe to turn on the gas supply to the building.

Chapter 14 Process Piping.

Chapter 14 regulates process piping that typically is found in refineries. Process piping is considered the piping or tubing portion that transports liquid or gas, which is used directly in research, laboratory, or production process. This chapter may be used with another chapter of the code. For example, refrigeration piping, fuel gas piping, or fuel oil piping may need to comply with this chapter for process piping and the applicable chapter for materials, design, and installation.

Chapter 15 Solar Energy Systems.

Chapter 15 refers the user to the Uniform Solar Energy and Hydronics Code (USEHC) for installations about solar energy systems. Reference is also made to Section 1203.0 as the heat source provisions are applicable to solar energy systems.

Chapter 16 Stationary Power Plants.

This chapter provides minimum requirements for stationary fuel cell power plants. A fuel cell is a device that produces electricity by a chemical reaction. Fuel cells have been used mostly for satellites. However, the costs of fuel cells have decreased to a point where they are now economically attainable. With the increase in electricity costs, fuel cells are being considered as an alternative for producing electricity.

Chapter 17 Referenced Standards.

Chapter 17 provides two comprehensive tables with referenced standards. The standards listed in Table 1701.1 are applied as indicated in the applicable reference section(s). A list of additional standards, publications, practices, and guides that are not referenced in specific sections appear in Table 1701.2 and shall be submitted to the Authority Having Jurisdiction for approval.

Referenced standards set forth specific details of accepted practices, materials specifications, or test methods in many specialized applications. Standards provide an efficient method of conveying complex information and specifications on the

FORMAT OF THE UNIFORM MECHANICAL CODE

performance requirements for materials, products, systems, application, and installation. The manner and purpose for a standard's use and, in turn, code compliance, must be definitive in all references to the standard. If the standard is intended to be a requirement for judging code compliance, the code must state its intent for use. The standard should adequately address a defined need and at the same time specify the minimum performance requirements, technical characteristics and methods of testing, and required test results.

The referenced standards table is organized in a manner that makes it easy to find specific standards in alphabetical order, and by acronym of the publishing agency of the standard. The table lists the title of the standard, the edition, any addenda, and the section or sections of the code that reference the standard. Contact information for each publishing agency is provided at the end of the chapter.

Appendix A Residential Plan Examiner Review Form for HVAC System Design.

A residential plan examiner review form is located in this appendix as an example to assist users in identifying whether the HVAC system has followed the approved procedures for system design (loads, equipment, and ducts).

Appendix B Procedures to be Followed to Place Gas Equipment in Operation.

Appendix B provides requirements for the procedures that apply after an appliance is installed in place, piped, and connected to its venting system. The requirements include adjusting the burner input, air adjustments, verifying operation of safety shutoffs, automatic ignition, and protective devices, checking draft for vent-connected appliances, and operating instructions.

Appendix C Installation and Testing of Oil (Liquid) Fuel-Fired Equipment.

Appendix C governs the installation, testing, or repair of oil or liquid fuel-burning equipment used in buildings or structures and equipment.

Appendix D Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicle Parks.

The provisions of this appendix apply to the fuel gas piping systems of mobile home and recreational vehicle parks. These provisions also apply to the use, maintenance, and installation for supplying fuel gas for accessory buildings or structures, and building components.

Appendix E Sustainable Practices.

This appendix provides a comprehensive set of technically sound provisions that encourage sustainable practices and works toward improving the design and construction of mechanical systems that result in a positive long-term environmental impact. Environmental sustainability is important because it involves natural resources that human beings need for economic or manufactured capital. Their sustainability is defined by their reliance on infinitely available resources that are naturally occurring, constant, and free to access.

Appendix F Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design.

Appendix F provides added information on the sizing of gas vents. This appendix is useful to the end user for the proper sizing of venting systems. A series of examples are given that show how to use the tables and other requirements of Chapter 8. In addition, Appendix F shows an example of how to determine the required combination of indoor and outdoor combustion air opening sizes for appliances under Chapter 7. The combustion air example also provides a table that contains the required volume of space per the appliance BTU/h input based on the standard method.

Appendix G Example Calculation of Outdoor Air Rate.

Appendix G gives an example of how to calculate the required outdoor air rate under Chapter 4.

SAMPLE LEGISLATION FOR ADOPTION OF THE UNIFORM MECHANICAL CODE

The Uniform Codes are designed to be adopted by jurisdictions through an ordinance. Jurisdictions wishing to adopt the 2018 *Uniform Mechanical Code* as an enforceable regulation governing mechanical systems by reference should ensure the legal basis under which adoption and implementation are included in the ordinance.

The following sample ordinance is a guide for drafting an ordinance for adoption that addresses key components regulations and resolutions.

ORDINANCE NO.

An ordinance of the [JURISDICTION] adopting the 2018 edition of the *Uniform Mechanical Code*, regulating and controlling the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems in the [JURISDICTION]; providing for the issuance of permits and collection of fees therefor; repealing Ordinance No. of the [JURISDICTION] and all other ordinances and parts of the ordinances in conflict therewith.

The [GOVERNING BODY] of the [JURISDICTION] does ordain as follows:

Section 1 Codes Adopted by Reference. That certain documents, three (3) copies of which are on file in the office of the [JURISDICTION'S KEEPER OF RECORDS] and the [JURISDICTION], being marked and designated as the 2018 *Uniform Mechanical Code*, including Appendix Chapters [FILL IN THE APPENDIX CHAPTERS BEING ADOPTED], as published by the International Association of Plumbing and Mechanical Officials, be and is hereby adopted as the Code of the [JURISDICTION], in the State of [STATE NAME] regulating and controlling the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems as herein provided; providing for the issuance of permits and collection of fees therefor; and each and all of the regulations, provisions, penalties, conditions and terms of such 2018 *Uniform Mechanical Code* on file in the office of the [JURISDICTION] are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance.

Section 2 Modifications. The following sections are hereby revised:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 104.5. Insert: [APPROPRIATE FEE SCHEDULE]

Section 3 Conflicting Ordinances Repealed. That Ordinance No. of [JURISDICTION] entitled [TITLE OF THE ORDINANCE OR ORDINANCES IN EFFECT AT THE PRESENT TIME SO THAT THEY WILL BE REPEALED BY MENTION] and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4 Preemption. [JURISDICTION] hereby fully occupies and preempts the entire field of regulation of design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of mechanical systems; and provision for the issuance of permits and collection of fees therefor; within the boundaries of [JURISDICTION]. [AS APPROPRIATE] Cities, towns, and counties or other municipalities may enact only those laws and ordinances relating to this field as specifically authorized by state law and consistent with this ordinance. Local laws and ordinances that are inconsistent with, more restrictive than, or exceed the requirements of [ORDINANCE NO.] shall not be enacted and are hereby expressly preempted and repealed, regardless of the nature of the code, charter, or home rule status of such city, town, county, or municipality.

Section 5 Severability. That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The [GOVERNING BODY] hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 6 Legal Notice. That the [JURISDICTION'S KEEPER OF RECORDS] is hereby ordered and directed to cause this ordinance to be published. (An additional provision may be required to direct the number of times the ordinance is to be published and to specify that it is to be in a newspaper in general circulation. Posting may also be required.)

Section 7 Violations and Penalties. [INCORPORATE PENALTIES FOR VIOLATIONS]

Section 8 Effective Date. That this ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect [TIME PERIOD] from and after the date of its final passage and adoption.

COMMITTEE ON UNIFORM MECHANICAL CODE

These lists represent the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

IAPMO Standards Council Linden Raimer, Chairman Raimer Consulting Services, LLC, [U]

Carl Crimmins, MN State Pipe Trades [SE]
Bill Erickson, CJ Erickson Plumbing Company [U]
James Majerowicz, UA Instructor [L]
Rich Prospal, ASSE [C]

Ron Rice, City of St. Paul [C]
Robert "Bud" Riestenberg, Piping Systems, Inc. [U]
Bob Siemsen, City of Lincoln [E]
Kevin Tindall, Tindall & Ranson Plumbing, Heating & A/C, Inc. [I/M]

Nonvoting

Gabriella M. Davis, Secretary
International Association of Plumbing and Mechanical Officials

Lynne Simnick, Recording Secretary
International Association of Plumbing and Mechanical Officials

IAPMO Uniform Mechanical Code Technical Committee

April Trafton, Chairperson
American Society of Plumbing Engineers [SE]

Bob Adler, City of San Jose, California [E]
Mike Afonso, UA Local 342 [L]
DJ Berger, New Orleans Pipe Trades [L]
Maggie Carroll, Underwriters Laboratories [R/S/T]
Ian Chang, Intertek Testing Services [R/S/T]
Richard Church, Plastic Pipe & Fittings Association [M]
David Delaquila, National Propane Gas Association [U]
David Dias, Sheet Metal Workers Local 104 [L]
Pennie Feehan, Copper Development Association [M]
Roel Garcia, City of Houston [E]
Eli Howard, SMACNA [R/S/T]
Ralph Koerber, Air Duct Council [M]
Harvey Kreitenberg, Harvey Kreitenberg & Associates [I/M]
David Mann, CA State Pipe Trades [L]

John Nielsen, State of Idaho [E]
James Pavesic, United Association [L]
Phil Ribbs, PHR Consultants [SE]
Anthony Scarano, Plastic Piping Consultant [SE]
Robert Sewell, Plumbers and Steamfitters, Local 159 [L]
Chris Smith, Lubrizol Corporation [M]
Donald Surrena, National Association of Home Builders [U]
Don Taylor, Dittman Plumbing [SE]
Chris Van Rite, Air Distribution Institute [M]
Bob Wiseman, Air Conditioning Contractors of America [I/M]
Osama Younan, City of Los Angeles - Department of Building and Safety [E]
Randy Young, Northern CA JATC [L]

Alternates

David Bixby, Air Conditioning Contractors of America [I/M]
Dan Buuck, National Association of Home Builders [U]
Phil Campbell, United Association [L]
Michael Cudahy, Plastic Pipe & Fittings Association [M]
TJ Dodd, Austin Area Plumbing & Pipe Fitters JATC [L]
John Hamilton, NEMIC [L]
Shawn Hargis, City of Los Angeles - Department of Building and Safety [E]

Vickie Lovell, Air Movement and Control Association International, Inc. [M]
Leonard A. Ramociotti, LAR Consulting [SE]
Jason Shelton, Air Duct Council [M]
John Taecker, Underwriters Laboratories [R/S/T]
Che Timmons, Plumbers and Steamfitters Local 342 [L]

Nonvoting

Hugo Aguilar, IAPMO Staff Liaison
Eric Nette, NFPA [R/S/T]

DJ Nunez, Ex -Officio IAPMO [E]
Laura Moreno, NFPA [R/S/T]

COMMITTEE MEMBERSHIP CLASSIFICATION ABBREVIATIONS

These classifications apply to Technical Committee members and represent their principal interest in the activity of a committee.

- M** *Manufacturer*: A representative of a maker or marketer of a product, assembly or system, or portion thereof, that is affected by the standard.
- U** *User*: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
- I/M** *Installer/Maintainer*: A representative of an entity that is in the business of installing or maintaining a product, assembly or system affected by the standard.
- L** *Labor*: A labor representative or employee concerned with safety in the workplace.
- R/S/T** *Research/Standards/Testing Laboratory*: A representative of an independent research organization; an organization that develops codes, standards or other similar documents; or an independent testing laboratory.
- E** *Enforcing Authority*: A representative or an agency or an organization that promulgates and/or enforces standards.
- C** *Consumer*: A person who is, or represents, the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in the User classification.
- SE** *Special Expert*: A person not representing any of the previous classifications, but who has special expertise in the scope of the standard or portion thereof.

SECTION RELOCATION

2018 Location	2015 Location
505.2, 505.3	505.1.1, 505.1.2
505.1.1	505.1.3
505.6.1	505.2
505.8 – 505.11	505.3 – 505.6
Table 505.9	Table 505.4
506.5 – 506.7	506.3 – 506.5
506.8.1 – 506.8.4	506.5.1 – 506.5.4
506.8	506.6
506.10.2	506.7
506.11.1	506.7.1
506.11.2, 506.11.3	506.7.3, 506.7.4
506.11.6 – 506.11.6.3	506.7.7 – 506.7.7.3
506.9	506.8
507.2 – 507.6	507.1 – 507.5
519.1(1), 519.1(2)	508.1(3), 508.1(4)
519.2	508.4
508.4	508.5
508.3.1 – 508.3.4	508.6 – 508.9
Figure 508.3.3	Figure 508.8
508.5 – 508.5.1.5	508.10 – 508.10.1.5
Table 508.5.1.2	Table 508.10.1.2
Table 508.5.1.3	Table 508.10.1.3
Table 508.5.1.4	Table 508.10.1.4
Table 508.5.1.5	Table 508.10.1.5
519.3	508.10.1.6
508.5.2 – 508.5.3	508.10.2 – 508.10.3
508.3.5 – 508.3.5.3.3	508.11 – 508.11.3.3
508.6, 508.7	508.12, 508.13
519.4	510.1.7
510.1.7	510.1.8
519.5	510.10
510.10	510.11
508.1(3), 508.1(4)	519.1(1), 519.1(2)
602.2.4	602.2.5
902.13	702.0, 702.1
902.16	704.0, 704.1
802.2.4 – 802.2.7	802.2.2 – 802.2.5
802.6.1 – 802.6.5	802.6.2 – 802.6.6
Figure 802.6.1, Table 802.6.1	Figure 802.6.2, Table 802.6.2
Figure 802.6.3.1, Figure 802.6.3.2	Figure 802.6.4.1, Figure 802.6.4.2
802.7.3.3 – 802.7.3.5	802.7.3.4 - 802.7.3.6

2018 Location	2015 Location
Table 802.7.3.3	Table 802.7.3.4
803.2.7 – 803.2.27	803.2.6 – 803.2.26
902.6	902.5
902.8 – 902.12	902.6 – 902.10
904.2.1 – 904.2.9	904.2(1) – 904.2(9)
904.7 – 904.7.3	904.7(1) – 904.7(4)
905.6 – 905.6.3	905.6(1) – 905.6(4)
303.11 – 303.12	905.8 – 905.9
905.8 – 905.8.2	905.10 – 905.10.2
907.1 – 907.1.4	907.1(1) – 907.1(5)
911.2.1 – 911.2.3	911.2(1) – 911.2(3)
914.3 – 9.14.3.3	914.3(1) – 914.3(4)
914.7.1, 914.7.2	914.7(1), 914.7(2)
915.7.1, 915.7.2	915.7(1), 915.7(2)
918.3.1	918.3(2)
920.0 – 926.1	921.0 – 927.1
1312.2	927.2
926.2 – 938.1	927.3 – 939.1
926.3.1	927.4(2)
927.3.1	928.3(2)
1102.3	1102.2
1106.10	1106.2
1106.12	1106.3
1106.5, 1106.6	1106.6, 1106.7
1106.2.5.1	1107.2
1106.4	1107.3
1106.7 – 1106.9	1107.9 – 1107.11
1109.1.3, 1109.1.4	1109.1.2, 1109.1.3
1112.6 – 1112.14	1112.5 – 1112.13
Table 1112.12.3	Table 1112.11.3
1217.1.1	1201.4
1210.4	1205.4
1206.2	1206.3
1211.4 – 1211.14.2	1211.3 – 1211.13.2
1213.2 – 1213.3	1213.3 – 1213.4
1201.5	1213.5
1217.4 – 1217.6.2	1217.5 – 1217.7.2
Table 1217.4	Table 1217.5
1220.1 – 1220.3	1220.2 – 1220.4
Table 1220.2.1	Table 1220.3.1
1308.5.10.5, 1308.5.10.6	1308.5.10.1, 1308.5.10.2
1308.7.1 – 1308.7.8	1308.7.2 – 1308.7.9
1308.10 – 1308.13.1	1308.8 – 1308.11.1

SECTION RELOCATION

2018 Location	2015 Location
902.15	1310.0, 1310.1
1310.0 – 1310.1.3	1311.0 – 1311.1.3
1310.1.4 – 1310.2.4.2	1311.1.4 – 1311.2.4.2
Table 1310.2.4.1	Table 1311.2.4.1
1310.2.5 – 1310.5	1311.2.5 – 1311.5
1310.6 – 1312.1.2	1311.6 – 1313.1.2
1312.3 – 1312.3.2	1313.2 – 1313.2.2
1312.5 – 1312.11	1313.3 – 1313.9
Figure 1312.9	Figure 1313.7
902.5	1313.9.1
1313.0 – 1315.6	1314.0 – 1316.6
Table 1313.6.1	Table 1314.6.1
Figure 1315.1.1	Figure 1316.1.1
Table 1315.3	Table 1316.3
Equation 1315.3(1) – Equation 1315.3(2)	Equation 1316.3(1) – Equation 1316.3(2)
E 201.3 – E 201.7	E 201.2 – E 201.6
E 201.9 – E 201.12	E 201.7 – E 201.10
E 201.14	E 201.11
F 101.2 – F 101.5	F 101.1 – F 101.4
Figure F 101.2(1) – Figure F 101.2(14)	Figure F 101.1(1) – Figure F 101.1(14)

TABLE OF CONTENTS

CHAPTER 1	ADMINISTRATION 1		
101.0	General 1	107.0	Board of Appeals 6
101.1	Title 1	107.1	General 6
101.2	Scope 1	107.2	Limitations of Authority 6
101.3	Purpose 1	Table 104.5	Mechanical Permit Fees 7
101.4	Unconstitutional 1		
101.5	Validity 1	CHAPTER 2	DEFINITIONS 9
102.0	Applicability 1	201.0	General 9
102.1	Conflicts Between Codes 1	201.1	Applicability 9
102.2	Existing Installations 1	202.0	Definition of Terms 9
102.3	Maintenance 1	202.1	General 9
102.4	Additions, Alterations, Renovations, or Repairs 1	CHAPTER 3	GENERAL REGULATIONS 23
102.5	Health and Safety 1	301.0	General 23
102.6	Changes in Building Occupancy 1	301.1	Applicability 23
102.7	Moved Structures 1	301.2	Approval 23
102.8	Appendices 1	301.3	Design of Equipment 23
103.0	Duties and Powers of the Authority Having Jurisdiction 2	301.4	Electrical Connections 23
103.1	General 2	301.5	Oil-Burning Appliances 23
103.2	Liability 2	301.6	Personnel Protection 23
103.3	Applications and Permits 2	302.0	Materials – Standards and Alternates 23
103.4	Right of Entry 2	302.1	Minimum Standards 23
104.0	Permits 2	302.2	Alternate Materials and Methods of Construction Equivalency 23
104.1	Permits Required 2	302.3	Alternative Engineered Design 24
104.2	Exempt Work 2	303.0	Installation 24
104.3	Application for Permit 2	303.1	Listed Appliances 24
104.4	Permit Issuance 3	303.2	Closet or Alcove Installations 24
104.5	Fees 4	303.3	Unlisted Appliances 24
105.0	Inspections and Testing 4	303.4	Anchorage of Appliances 24
105.1	General 4	303.5	Movement 25
105.2	Required Inspections 4	303.6	Identification of Equipment 25
105.3	Testing of Systems 5	303.7	Liquefied Petroleum Gas Facilities 25
105.4	Connection to Service Utilities 5	303.8	Appliances on Roofs 25
106.0	Violations and Penalties 5	303.9	Avoiding Strain on Gas Piping 25
106.1	General 5	303.10	Clearances 25
106.2	Notices of Correction or Violation 5	303.11	Installation in Commercial Garages 25
106.3	Penalties 5	303.12	Installation in Aircraft Hangars 25
106.4	Stop Orders 5	303.13	Pit Location 25
106.5	Authority to Disconnect Utilities in Emergencies 6		
106.6	Authority to Condemn 6		

304.0	Accessibility for Service	26	313.0	Hangers and Supports	30
304.1	General	26	313.1	General	30
304.2	Sloped Roof	26	313.2	Material	30
304.3	Access to Appliances on Roofs	26	313.3	Suspended Piping	30
304.4	Appliances in Attics and Under-Floor Spaces	26	313.4	Alignment	30
305.0	Location	26	313.5	Underground Installation	30
305.1	Installation in Garages	26	313.6	Hanger Rod Sizes	30
305.2	Flood Hazard Areas	27	Table 313.6	Hanger Rod Sizes	30
305.3	Elevator Shaft	27	313.7	Gas Piping	30
305.4	Drainage Pan	27	314.0	Balancing	30
306.0	Automatic Control Devices	27	314.1	General	30
306.1	General	27	315.0	Louvers in Hurricane Prone Regions	30
307.0	Labeling	27	315.1	General	30
307.1	Fuel-Burning Appliances	27	316.0	Protection of Piping, Tubing, Materials, and Structures	30
307.2	Electric Heating Appliances	27	316.1	General	30
307.3	Heat Pump and Electric Cooling Appliances	28	316.2	Installation	31
307.4	Absorption Units	28	316.3	Corrosion, Erosion, and Mechanical Damage	31
308.0	Improper Location	28	316.4	Protectively Coated Pipe	31
308.1	General	28	316.5	Fire-Resistant Construction	31
309.0	Workmanship	28	316.6	Steel Nail Plates	31
309.1	Engineering Practices	28	316.7	Sleeves	31
309.2	Concealing Imperfections	28	316.8	Firewalls	31
309.3	Installation Practices	28	316.9	Structural Members	31
310.0	Condensate Wastes and Control	28	316.10	Rodentproofing	31
310.1	Condensate Disposal	28	316.11	Metal Collars	31
310.2	Condensate Control	28	317.0	Trenching, Excavation, and Backfill	31
310.3	Condensate Waste Pipe Material and Sizing	29	317.1	Trenches	31
Table 310.3	Minimum Condensate Pipe Size	29	317.2	Tunneling and Driving	31
310.4	Appliance Condensate Drains	29	317.3	Open Trenches	31
310.5	Point of Discharge	29	317.4	Excavations	31
310.6	Condensate Waste From Air-Conditioning Coils	29	Table 303.10.1	Reduction of Clearances with Specified Forms of Protection	32
310.7	Plastic Fittings	29	Table 313.3	Hangers and Supports	34
311.0	Heating or Cooling Air System	29	CHAPTER 4	VENTILATION AIR	35
311.1	Source	29	401.0	General	35
311.2	Air Filters	29	401.1	Applicability	35
311.3	Prohibited Source	29	402.0	Ventilation Air	35
311.4	Return-Air Limitations	30	402.1	Occupiable Spaces	35
312.0	Plumbing Connections	30	402.2	Natural Ventilation	35
312.1	General	30	402.3	Mechanical Ventilation	35
			402.4	Outdoor Air Intake Protection	36
			403.0	Ventilation Rates	36

403.1	General	36	505.2	Incompatible Materials	45
403.2	Zone Calculations	36	505.3	Flammability Limit	45
403.3	Single-Zone Systems	36	505.4	Air Moving Devices	45
403.4	One Hundred Percent Outdoor Air Systems	36	505.5	Generating Flames, Sparks, or Hot Materials	45
403.5	Multiple-Zone Recirculating Systems	36	505.6	Fire Dampers	45
403.6	Design for Varying Operating Conditions	37	505.7	Fire Detection and Alarm Systems	46
403.7	Exhaust Ventilation	37	505.8	Product-Conveying Ducts Classification	46
403.8	Dynamic Reset	37	505.9	Minimum Velocities and Circulation	46
403.9	Air Classification and Recirculation	37	Table 505.9	Minimum Duct Design Velocities	46
404.0	Multiple-Zone Systems	38	505.10	Makeup Air	46
404.1	General	38	505.11	Hoods and Enclosures	46
404.2	Average Outdoor Air Fraction	38	506.0	Product-Conveying Ducts	47
404.3	Zone Ventilation Efficiency	38	506.1	Materials	47
Table 402.1	Minimum Ventilation Rates in Breathing Zone	39	506.2	Construction	47
Table 403.2.2	Zone Air Distribution Effectiveness	41	506.3	Penetrations	47
Table 403.5.2	System Ventilation Efficiency	41	Table 506.2(1)	Minimum Sheet Metal Thickness for Round Ducts	48
Table 403.7	Minimum Exhaust Rates	42	506.4	Condensate	49
CHAPTER 5	EXHAUST SYSTEMS	43	506.5	Fittings	49
501.0	General	43	506.6	Explosion Venting	49
501.1	Applicability	43	506.7	Supports	49
502.0	Termination	43	506.8	Fire Protection	49
502.1	Exhaust Opening Protection	43	Table 506.2(2)	Minimum Sheet Metal Thickness for Rectangular Ducts	50
502.2	Termination of Exhaust Ducts	43	506.9	Protection from Physical Damage	50
Part I	Environmental Air Ducts and Product-Conveying Systems	43	506.10	Duct Clearances	50
503.0	Motors, Fans, and Filters	43	Table 506.10.4	Basic Minimum Clearances to Unprotected Surfaces	51
503.1	General	43	506.11	Clearance Reduction Methods	51
503.2	Fans	43	Table 506.11	Reduction of Duct Clearance with Specified forms of Protection	52
504.0	Environmental Air Ducts	43	Part II	Commercial Hoods and Kitchen Ventilation	53
504.1	General	43	507.0	General Requirements	53
504.2	Independent Exhaust Systems	44	507.1	Type I Hood Exhaust System	53
504.3	Domestic Range	44	507.2	Exhaust System	53
504.4	Clothes Dryers	44	507.3	Listed Devices	53
504.5	Heat (Energy) Recovery Ventilators	45	507.4	Clearance	53
504.6	Gypsum Wallboard Ducts	45	507.5	Drawings	54
505.0	Product-Conveying Systems	45	507.6	Notification of Change	54
505.1	General	45	508.0	Type I Hoods	55

508.1	Where Required	55	513.0	Fire-Extinguishing Equipment	66
508.2	Listed Type I Hood Assemblies	55	513.1	General	66
508.3	Construction of Type I Hoods	55	513.2	Types of Equipment	67
508.4	Supports	56	513.3	Simultaneous Operation	68
508.5	Hood Size	56	513.4	Fuel and Electric Power Shutoff	68
Table 508.5.1.2	Extra-Heavy-Duty Cooking Appliance Airflow	56	513.5	Manual Activation	68
Table 508.5.1.3	Heavy-Duty Cooking Appliance Airflow	56	513.6	System Annunciation	68
Table 508.5.1.4	Medium-Duty Cooking Appliance Airflow	57	513.7	System Supervision	68
Table 508.5.1.5	Light-Duty Cooking Appliance Airflow	57	513.8	Special Design and Application	68
508.6	Solid-Fuel Hood Assemblies	57	513.9	Review and Certification	69
508.7	Exhaust Outlets	57	513.10	Installation Requirements	69
509.0	Grease Removal Devices in Hoods	57	513.11	Portable Fire Extinguishers	69
509.1	Grease Removal Devices	57	513.12	Maintenance	69
509.2	Installation	57	513.13	Solid-Fuel Fire-Extinguishing Equipment	69
509.3	Solid-Fuel Grease Removal Devices	58	514.0	Procedures for the Use, Inspection, Testing, and Maintenance of Equipment	69
510.0	Exhaust Duct Systems	58	514.1	Operating Procedures	69
510.1	General	58	514.2	Inspection, Testing and Maintenance	69
510.2	Clearance	58	514.3	Inspection for Grease Buildup	70
510.3	Openings	59	Table 514.3	Schedule of Inspection for Grease Buildup	70
510.4	Listed Grease Ducts	59	514.4	Cleaning of Exhaust Systems	70
510.5	Other Grease Ducts	59	514.5	Cooking Equipment Maintenance	70
510.6	Exterior Installations	60	515.0	Minimum Safety Requirements for Cooking Equipment	70
510.7	Interior Installations	60	515.1	Cooking Equipment	70
510.8	Underground Installations	62	515.2	Operating Controls	71
510.9	Termination of Type I Hood Exhaust System	62	516.0	Recirculating Systems	71
510.10	Solid-Fuel Duct Systems	63	516.1	General Requirements	71
511.0	Air Movement	63	516.2	Design Restrictions	71
511.1	Exhaust Fans for Commercial Cooking Operations	63	516.3	Interlocks	72
511.2	Airflow	64	516.4	Location and Application Restrictions	72
511.3	Makeup Air	65	516.5	Additional Fire Safety Requirements	72
511.4	Common Duct (Manifold) Systems	66	516.6	Use and Maintenance	72
511.5	Solid-Fuel Air Movement Requirements	66	517.0	Solid-Fuel Cooking Operations	72
512.0	Auxiliary Equipment	66	517.1	Venting Application	72
512.1	Dampers	66	517.2	Location of Appliances	73
512.2	Electrical Equipment	66			
512.3	Other Equipment	66			
512.4	Solid-Fuel Auxiliary Equipment	66			

517.3	Hoods for Solid-Fuel Cooking 73	603.4	Factory-Made Air Ducts 78
517.4	Exhaust Systems for Solid-Fuel Cooking 73	603.5	Flexible Air Ducts 78
517.5	Grease Removal Devices for Solid-Fuel Cooking 73	603.6	Plastic Ducts 78
517.6	Air Movement for Solid-Fuel Cooking 74	603.7	Protection of Ducts 79
517.7	Fire-Extinguishing Equipment for Solid-Fuel Cooking 74	603.8	Support of Ducts 79
517.8	Other Safety Requirements 74	603.9	Protection Against Flood Damage 79
518.0	Downdraft Appliances 75	603.10	Joints and Seams of Ducts 79
518.1	General 75	Table 603.10	Closure Markings 79
518.2	Ventilation System 75	603.11	Cross Contamination 79
518.3	Fire-Extinguishing Equipment 75	603.12	Underground Installation 79
518.4	Airflow Switch or Transducer 75	603.13	Air Dispersion Systems 79
518.5	Surface Materials 75	604.0	Insulation of Ducts 79
519.0	Type II Hood Exhaust System Requirements 75	604.1	General 79
519.1	Where Required 75	605.0	Smoke Dampers, Fire Dampers, and Ceiling Dampers 80
519.2	Construction of Type II Hoods 75	605.1	Smoke Dampers 80
519.3	Dishwashing Appliances 75	605.2	Fire Dampers 80
519.4	Type II Exhaust Duct Systems 76	605.3	Ceiling Radiation Dampers 80
519.5	Termination of Type II Hood Exhaust System 76	605.4	Multiple Arrangements 80
519.6	Makeup Air 76	605.5	Access and Identification 80
		605.6	Freedom from Interference 80
		605.7	Temperature Classification of Operating Elements 80
		606.0	Ventilating Ceilings 80
CHAPTER 6	DUCT SYSTEMS 77	606.1	General 80
601.0	General 77	606.2	Requirements 80
601.1	Applicability 77	607.0	Use of Under-Floor Space as Supply Plenum for Dwelling Units 81
601.2	Sizing Requirements 77	607.1	General 81
602.0	Material 77	607.2	Dwelling Units 81
602.1	General 77	607.3	Enclosed 81
602.2	Combustibles Within Ducts or Plenums 77	607.4	Flammable Materials 81
602.3	Metal 77	607.5	Access 81
602.4	Phenolic 77	607.6	Automatic Control 81
602.5	Gypsum 77	607.7	Temperature Limit 81
602.6	Factory-Made Air Ducts 77	607.8	Noncombustible Receptacle 81
602.7	Vibration Isolators 77	607.9	Floor Registers 81
602.8	Corridors 77	607.10	Exterior Wall and Interior Stud Partitions 81
603.0	Installation of Ducts 77	607.11	Wall Register 81
603.1	General 77	607.12	Distance from Combustible 81
603.2	Under Floor or Crawl Space 78	607.13	Vapor Barrier 81
603.3	Metal Ducts 78	607.14	Prohibited 81
		608.0	Automatic Shutoffs 81
		608.1	Air-Moving Systems and Smoke Detectors 81

CHAPTER 7 COMBUSTION AIR 83

701.0 General 83

701.1 Applicability 83

701.2 Pressure Difference 83

701.3 Makeup Air 83

701.4 Indoor Combustion Air 83

701.5 Indoor Opening Size and Location 83

701.6 Outdoor Combustion Air 83

701.7 Combination Indoor and Outdoor Combustion Air 84

701.8 Engineered Installations 85

701.9 Mechanical Combustion Air Supply 85

701.10 Louvers, Grilles, and Screens 85

701.11 Combustion Air Ducts 86

701.12 Dampers Prohibited 86

702.0 Extra Device or Attachment 86

702.1 General 86

CHAPTER 8 CHIMNEYS AND VENTS 87

801.0 General 87

801.1 Applicability 87

801.2 Venting of Gas Appliances 87

801.3 Appliances Fueled by Other Fuels 87

802.0 Venting of Appliances 87

802.1 Listing 87

802.2 Connection to Venting Systems 87

802.3 Design and Construction 87

802.4 Type of Venting System to be Used 88

802.5 Masonry, Metal, and Factory-Built Chimneys 88

Table 802.4 Type of Venting System to be Used 89

802.6 Gas Vents 91

Table 802.6.1 Roof Pitch Height 92

802.7 Single-Wall Metal Pipe 94

Table 802.7.3.3 Clearance for Connectors 94

802.8 Through-the-Wall Vent Termination 95

802.9 Condensation Drain 96

802.10 Vent Connectors for Category I Appliances 96

Table 802.10.1.3 Minimum Thickness for Galvanized Steel Vent Connectors for Low-Heat Appliances 97

Table 802.10.1.4 Minimum Thickness for Steel Vent Connectors for Medium-Heat Appliances 97

802.11 Vent Connectors for Category II, Category III, and Category IV Appliances 98

802.12 Draft Hoods and Draft Controls 98

802.13 Manually Operated Dampers 99

802.14 Obstructions 99

802.15 Automatically Operated Vent Dampers 99

803.0 Sizing of Category I Venting Systems 99

803.1 Single Appliance Vent

Table 803.1.2(1) through Table 803.1.2(6) 99

803.2 Multiple Appliance Vent

Table 803.2(1) through Table 803.2(9) 101

Table 803.2.1 Vent Connector Maximum Length 101

Table 803.1.2(1) Type B Double-Wall Gas Vent 106

Table 803.1.2(2) Type B Double-Wall Gas Vent 109

Table 803.1.2(3) Masonry Chimney 111

Table 803.1.2(4) Masonry Chimney 113

Table 803.1.2(5) Single-Wall Metal Pipe or Type B Asbestos-Cement Vent 115

Table 803.1.2(6) Exterior Masonry Chimney 116

Table 803.2(1) Type B Double-Wall Vent 117

Table 803.2(2) Type B Double-Wall Vent 121

Table 803.2(3) Masonry Chimney 123

Table 803.2(4) Masonry Chimney 125

Table 803.2(5) Single-Wall Metal Pipe or Type B Asbestos – Cement Vent 127

Table 803.2(6) Exterior Masonry Chimney 127

Table 803.2(7) Exterior Masonry Chimney 128

Table 803.2(8) Exterior Masonry Chimney 129

Table 803.2(9) Exterior Masonry Chimney 130

CHAPTER 9	INSTALLATION OF	904.6	Steam Safety and
	SPECIFIC APPLIANCES 131		Pressure-Relief Valves 134
901.0	General 131	904.7	Furnace Plenums and
901.1	Applicability 131		Air Ducts 135
902.0	General 131	904.8	Refrigeration Coils 135
902.1	Nonindustrial Appliance 131	904.9	Cooling Units Used with
902.2	Combustion Air from		Heating Boilers 135
	Bedroom or Bathroom 131	904.10	Furnace (Upright
902.3	Added or Converted		and Horizontal) 135
	Appliances 131	904.11	Solid-Fuel-Fired Furnaces 135
902.4	Type of Gas(es) 131	904.12	Oil-Fired Central Furnaces 135
902.5	Safety Shutoff Devices for	904.13	Commercial or Industrial
	Unlisted LP-Gas Appliance		Gas Heaters 135
	Used Indoors 131	904.14	Electric Central Furnaces 135
902.6	Fuel Input Rate 131	905.0	Duct Furnaces 135
902.7	Use of Air or Oxygen Under	905.1	Clearances 135
	Pressure 131	905.2	Installation of
902.8	Building Structural		Duct Furnaces 135
	Members 131	905.3	Access Panels 135
902.9	Flammable Vapors 131	905.4	Location of Draft Hoods
902.10	Solid-Fuel Burning		and Controls 135
	Appliances 131	905.5	Circulating Air 135
902.11	Combination of Appliances	905.6	Duct Furnaces Used with
	and Equipment 131		Refrigeration Systems 136
902.12	Protection of Gas	905.7	Installation in Commercial
	Appliances from Fumes		Garages and
	or Gases other than		Aircraft Hangars 136
	Products of Combustion 131	905.8	Electric Duct Heaters 136
902.13	Process Air 132	906.0	Floor Furnaces 136
902.14	Gas Appliance Pressure	906.1	Installation 136
	Regulators 132	906.2	Temperature
902.15	Venting of Gas Appliance		Limit Controls 136
	Pressure Regulators 132	906.3	Combustion and
902.16	Bleed Lines for		Circulating Air 136
	Diaphragm-Type Valves 132	906.4	Placement 136
903.0	Air-Conditioning Appliances 132	906.5	Bracing 136
903.1	Electric Air Conditioners 132	906.6	Support 136
903.2	Gas-Fired Air Conditioners	906.7	Clearance 136
	and Heat Pumps 132	906.8	Access 137
904.0	Central Heating Boilers	906.9	Seepage Pan 137
	and Furnaces 133	906.10	Wind Protection 137
904.1	Location 133	906.11	Upper-Floor Installations 137
904.2	Clearance 133	906.12	First Floor Installation 137
Table 904.2.2	Clearances to	906.13	Oil-Fired Floor Furnaces 137
	Combustible Material for	907.0	Wall Furnaces 137
	Unlisted Furnaces	907.1	Installation 137
	and Boilers 134	907.2	Location 138
904.3	Assembly and Installation 134	907.3	Combustion and Circulating Air . . 138
904.4	Temperature- or	907.4	Oil-Fired Wall Furnaces 138
	Pressure-Limiting Devices 134	908.0	Clothes Dryers 138
904.5	Low-Water Cutoff 134		

908.1	Electric Clothes Dryers	138	915.6	Atmospheric Vents, Gas Reliefs, or Bleeds	140
908.2	Gas-Fired Clothes Dryers	138	915.7	Relief Openings	140
909.0	Conversion Burners	138	915.8	Purging	140
909.1	General	138	916.0	Room Heaters	140
910.0	Burner Assemblies	138	916.1	Electric Room Heaters	140
910.1	Oil Burners	138	916.2	Gas-Fired Room Heaters	140
910.2	Gas Burners	138	916.3	Solid-Fuel-Type Room Heaters	141
911.0	Decorative Appliances for Installation in Vented Fireplaces	138	917.0	Unit Heaters	141
911.1	Prohibited Installations	138	917.1	Support	141
911.2	Installation	138	917.2	Clearance	141
911.3	Fireplace Screens	138	917.3	Combustion and Circulating Air	141
912.0	Gas Fireplaces, Vented	138	917.4	Ductwork	141
912.1	Prohibited Installations	138	917.5	Installation in Commercial Garages and Aircraft Hangars	141
912.2	Installation	138	917.6	Oil-Fired Unit Heaters	141
Table 911.2	Free Opening Area of Chimney Damper for Venting Flue Gases from Unlisted Decorative Appliances for Installation in Vented Fireplaces	139	918.0	Food Service Appliance, Floor Mounted	142
912.3	Combustion and Circulating Air	139	918.1	Clearance for Listed Appliances	142
913.0	Factory-Built Fireplaces and Fireplace Stoves	139	918.2	Clearance for Unlisted Appliances	142
913.1	Factory-Built Fireplaces	139	918.3	Mounting on Combustible Floors	142
913.2	Fireplace Stoves	139	918.4	Installation on Noncombustible Floors	142
913.3	Fireplace Accessories	139	918.5	Combustible Material Adjacent to Cooking Top	142
914.0	Non-Recirculating Direct Gas-Fired Industrial Air Heaters	139	918.6	Use with Casters	142
914.1	Application	139	918.7	Level Installation	142
914.2	Prohibited Installations	139	918.8	Ventilation	142
914.3	Installation	139	919.0	Food Service Appliances, Counter Appliances	142
914.4	Clearance from Combustible Materials	139	919.1	Vertical Clearance	142
914.5	Air Supply	139	919.2	Clearance for Listed Appliances	142
914.6	Atmospheric Vents, Gas Reliefs, or Bleeds	140	919.3	Clearance for Unlisted Appliances	143
914.7	Relief Openings	140	919.4	Mounting of Unlisted Appliances	143
914.8	Purging	140	920.0	Household Cooking Appliances	143
915.0	Recirculating Direct Gas-Fired Industrial Air Heaters	140	920.1	Electric Household Cooking Appliances	143
915.1	Application	140	920.2	Gas-Fired Household Cooking Appliances	143
915.2	Prohibited Installations	140	920.3	Floor-Mounted Units	143
915.3	Installation	140	920.4	Built-In Units	143
915.4	Clearance from Combustible Materials	140			
915.5	Air Supply	140			

921.0	Cooking Appliances Listing	144	927.5	Venting	146
921.1	Commercial Electric Ranges	144	928.0	Refrigerators	146
921.2	Commercial Wood-Fired Baking Ovens	144	928.1	Clearance	146
921.3	Oil-Burning Ranges	144	928.2	Venting or Ventilating Kits Approved for Use With a Refrigerator	146
922.0	Open-Top Broiler Units	144	929.0	Gas-Fired Toilets	146
922.1	Listed Units	144	929.1	Clearance	146
922.2	Unlisted Units	144	929.2	Installation on Combustible Floors	146
922.3	Protection Above Domestic Units	144	929.3	Vents	146
922.4	Commercial Units	144	930.0	Appliances for Installation in Manufactured Housing	146
923.0	Outdoor Cooking Appliances	144	930.1	General	146
923.1	Listed Units	144	931.0	Small Ceramic Kilns	146
923.2	Unlisted Units	144	931.1	General	146
924.0	Illuminating Appliances	144	931.2	Installation	146
924.1	Clearances for Listed Appliances	144	931.3	Fuel-Gas Controls	146
924.2	Clearances for Unlisted Appliances	144	931.4	Electrical Equipment	146
Table 924.2.1	Clearances for Unlisted Outdoor Open-Flame Illuminating Appliances	145	931.5	Installations Inside Buildings	146
924.3	Mounting on Buildings	145	931.6	Exterior Installations	147
924.4	Mounting on Posts	145	932.0	Outdoor Open Flame Decorative Appliances	147
924.5	Appliance Pressure Regulators	145	932.1	General	147
925.0	Incinerators and Crematories	145	933.0	Evaporative Cooling Systems	147
925.1	Field Constructed Commercial-Industrial Incinerators	145	933.1	General	147
925.2	Factory-Built Commercial Crematories	145	933.2	Location	147
925.3	Residential Incinerators	145	933.3	Access, Inspection, and Repair	147
926.0	Infrared Heaters	145	933.4	Installation	147
926.1	Support	145	934.0	Refrigeration Appliances	147
926.2	Clearance	145	934.1	Self-Contained Refrigerators and Freezers	147
926.3	Combustion and Ventilation Air	145	934.2	Unit Coolers	147
926.4	Installation in Commercial Garages and Aircraft Hangars	145	934.3	Self-Contained Mechanical Refrigeration Systems	147
927.0	Pool Heaters	145	935.0	Ductless Mini-Split Systems Installation	147
927.1	Location	145	935.1	General	147
927.2	Clearance	145	936.0	Air Filter Appliances	147
927.3	Temperature or Pressure-Limiting Devices	145	936.1	Electrostatic Air Cleaners	147
927.4	Bypass Valves	146	936.2	High-Efficiency Particulate Air Filter Units	147
			937.0	Gaseous Hydrogen Systems	147
			937.1	General	147
			938.0	Compressed Natural Gas (CNG) Vehicular Fuel Systems	147
			938.1	General	147

CHAPTER 10	BOILERS AND PRESSURE VESSELS 149		
1001.0	General 149	1009.1	General 151
1001.1	Applicability 149	1010.0	Clearance for Access 152
1001.2	Boiler Rooms and Enclosures . . . 149	1010.1	General 152
1001.3	Air for Combustion and Ventilation 149	1010.2	Power Boilers 152
1001.4	Drainage 149	1010.3	Steam-Heating Boilers, Hot Water Boilers, and Power Boilers 152
1001.5	Mounting 149	1010.4	Package Boilers, Steam-Heating Boilers, and Hot-Water-Heating Boilers 152
1001.6	Chimneys or Vents 149		
1002.0	Standards 149	1011.0	Boilers, Stokers, and Steam Generators 152
1002.1	General 149	1011.1	General 152
1002.2	Oil-Burning Boilers 149	1012.0	Operating Adjustments and Instructions 152
1002.3	Electric Boilers 149	1012.1	General 152
1002.4	Solid-Fuel-Fired Boilers 149	1013.0	Inspections and Tests 152
1002.5	Dual Purpose Water Heater 149	1013.1	General 152
1003.0	Detailed Requirements 149	1013.2	Operating Permit 152
1003.1	Safety Requirements 149	1013.3	Maintenance Inspection 152
1003.2	Controls 150	1013.4	Power and Miniature Boilers 152
1003.3	Gauges 150	1013.5	Steam-Heating and Water-Heating Boilers 153
1003.4	Stack Dampers 150	1013.6	Automatic Steam-Heating Boilers 153
1003.5	Welding 150	1013.7	Unfired Pressure Vessels 153
1004.0	Expansion Tanks 150	1014.0	Operation and Maintenance of Boilers and Pressure Vessels 153
1004.1	General 150	1014.1	General 153
1004.2	Open-Type Expansion Tanks 150	Table 1003.2.1	Controls and Limit Devices for Automatic Boilers 154
1004.3	Closed-Type Systems 150		
1004.4	Minimum Capacity of Closed-Type Tank 150		
Table 1004.4(1)	Expansion Tank Capacities for Gravity Hot Water Systems 150	CHAPTER 11	REFRIGERATION 157
Table 1004.4(2)	Expansion Tank Capacities for Forced Hot Water Systems 151	1101.0	General 157
1005.0	Safety or Relief Valve Discharge 151	1101.1	Applicability 157
1005.1	General 151	1101.2	Equipment 157
1005.2	Discharge Piping 151	Part I	Refrigeration Systems 157
1005.3	Splash Shield 151	1102.0	Refrigeration Systems 157
1005.4	Hazardous Discharge 151	1102.1	General 157
1005.5	Vacuum Relief Valve 151	1102.2	Ammonia Refrigeration Systems 157
1006.0	Shutoff Valves 151	1102.3	Refrigerants 157
1006.1	General 151	1103.0	Classification 157
1007.0	Gas-Pressure Regulators 151	1103.1	Classification of Refrigerants 157
1007.1	General 151	1103.2	Classification of Refrigeration Systems 157
1008.0	Low-Water Cutoff 151	1103.3	Higher Flammability Refrigerants 157
1008.1	General 151		
1009.0	Combustion Regulators - Safety Valves 151		

1104.0	Requirements for Refrigerant and Refrigeration System Use	157	1107.1	General	163
1104.1	System Selection	157	1108.0	Refrigeration Machinery Room Equipment and Controls	163
1104.2	Refrigerant Concentration Limit	157	1108.1	General	163
1104.3	Institutional Occupancies	158	1108.2	Electrical	163
1104.4	Industrial Occupancies and Refrigerated Rooms	158	1108.3	Emergency Shut-off	163
1104.5	Flammable Refrigerants	158	1108.4	Installation, Maintenance, and Testing	164
1104.6	Applications for Human Comfort and for Nonindustrial Occupancies	158	1108.5	Emergency Pressure Control System	164
1104.7	Refrigerant Type and Purity	158	1109.0	Refrigeration Piping, Containers, and Valves	164
1104.8	Changing Refrigerants	159	1109.1	Materials	164
1105.0	General Requirements	159	1109.2	Joints	164
1105.1	Human Comfort	159	1109.3	Penetration of Piping	164
1105.2	Supports and Anchorage	159	1109.4	Location of Refrigeration Piping	164
1105.3	Access	159	1109.5	Underground Piping	164
1105.4	Illumination and Service Receptacles	159	1109.6	Support	164
1105.5	Ventilation of Rooms Containing Condensing Units	159	1109.7	Pipe Enclosure	164
1105.6	Prohibited Locations	160	1109.8	Visual Inspection	165
1105.7	Condensate	160	1109.9	Condensation	165
1105.8	Defrost	160	1109.10	Identification	165
1105.9	Overflows	160	1110.0	Valves	165
1105.10	Condensate, Defrost, and Overflow Disposal	160	1110.1	More than 6.6 Pounds of Refrigerant	165
1105.11	Refrigerant Port Protection	160	1110.2	More than 110 Pounds of Refrigerant	165
1105.12	Storage	160	1110.3	Support	165
1106.0	Refrigeration Machinery Rooms	160	1110.4	Access	165
1106.1	Where Required	160	1110.5	Identification	165
1106.2	Refrigeration Machinery Room, General Requirements	160	1111.0	Pressure-Limiting Devices	165
Table 1106.2.5.2	Required Airflow for Group A2L Refrigerants	162	1111.1	Where Required	165
1106.3	Normal Operation	162	1111.2	Setting	165
1106.4	Natural Ventilation	162	1111.3	Location	165
1106.5	Combustion Air	162	1111.4	Emergency Stop	165
1106.6	Airflow	162	1112.0	Pressure-Relief Devices	165
1106.7	Ventilation Intake	162	1112.1	General	165
1106.8	Maximum Temperature	162	1112.2	Positive Displacement Compressor	166
1106.9	Refrigerant Parts in Air Duct	162	1112.3	Liquid-Containing Portions of Systems	166
1106.10	Dimensions	163	1112.4	Evaporators	166
1106.11	Restricted Access	163	1112.5	Hydrostatic Expansion	166
1106.12	Exits	163	1112.6	Actuation	166
1107.0	Machinery Room, Special Requirements	163	1112.7	Stop Valves Prohibited	167
			1112.8	Location	167
			1112.9	Materials	167
			1112.10	Pressure-Relief Device Settings	167

1112.11	Discharge from Pressure-Relief Devices	167	Part II	Cooling Towers	172
1112.12	Discharge Piping	168	1119.0	General	172
Table 1112.12.3	Atmospheric Pressure at Nominal Installation Elevation	168	1119.1	Applicability	172
1112.13	Rating of Pressure-Relief Device	169	1120.0	Support and Anchorage	172
1112.14	Rating of Rupture Members and Fusible Plugs	169	1120.1	General	172
1113.0	Overpressure Protection	169	1121.0	Drainage	172
1113.1	General	169	1121.1	General	172
1113.2	Type of Protection	169	1122.0	Chemical Treatment Systems	172
1113.3	Discharging Into Lowside of System	169	1122.1	General	172
1113.4	Parallel Pressure-Relief Devices	169	1122.2	Automated Control of Cycles of Concentration	172
1113.5	Discharge Capacity	169	1123.0	Location	172
Table 1113.5	Relief Devices Capacity Factor	170	1123.1	General	172
1113.6	Three-Way Valve	170	1124.0	Electrical	173
1114.0	Special Discharge Requirements	170	1124.1	General	173
1114.1	General	170	1125.0	Refrigerants and Hazardous Fluids	173
1114.2	Design Requirements	170	1125.1	General	173
1114.3	Testing	170	1126.0	Drift Eliminators	173
1115.0	Labeling and Identification	170	1126.1	General	173
1115.1	General	170	Table 1102.3	Refrigerant Groups, Properties, and Allowable Quantities	174
1115.2	Volume and Type	170	Table 1104.1	Permissible Refrigeration Systems	179
1115.3	Permanent Sign	170	CHAPTER 12	HYDRONICS	181
1115.4	Marking of Pressure-Relief Devices	170	1201.0	General	181
1116.0	Testing of Refrigeration Equipment	171	1201.1	Applicability	181
1116.1	Factory Tests	171	1201.2	Insulation	181
1116.2	Field Tests	171	1201.3	Water Hammer	181
Table 1116.2	Field Leak Test Pressures	171	1201.4	Terminal Units	181
1116.3	Test Gases	171	1201.5	Return-Water Low-Temperature Protection	181
1116.4	Declaration	172	1202.0	Protection of Potable Water Supply	181
1116.5	Brine Systems	172	1202.1	Prohibited Sources	181
1117.0	Refrigerant-Containing Pressure Vessels	172	1202.2	Chemical Injection	181
1117.1	Inside Dimensions 6 inches or Less	172	1202.3	Compatibility	181
1117.2	Inside Dimensions More than 6 inches	172	1203.0	Capacity of Heat Source	181
1117.3	Pressure Vessels for 15 psig or Less	172	1203.1	Heat Source	181
1118.0	Maintenance and Operation	172	1203.2	Dual Purpose Water Heater	181
1118.1	General	172	Table 1203.2	Water Heaters	181
			1203.3	Tankless Water Heater	181
			1204.0	Identification of a Potable and Nonpotable Water System	181
			1204.1	General	181

1204.2	Color and Information	181	1211.4	Copper or Copper Alloy Pipe and Tubing	185
1204.3	Potable Water	181	1211.5	Crossed-Linked Polyethylene (PEX) Pipe	185
1204.4	Nonpotable Water	181	1211.6	Cross-Linked Polyethylene/ Aluminum/Cross-Linked Polyethylene (PEX-AL-PEX) Pipe	186
Table 1204.3	Minimum Length of Color Field and Size of Letters	182	1211.7	Ductile Iron Pipe	186
1204.5	Location of Piping Identification	182	1211.8	Polyethylene (PE) Plastic Pipe/Tubing	186
1204.6	Flow Directions	182	1211.9	Polyethylene/Aluminum/ Polyethylene (PE-AL-PE)	186
1205.0	Installation, Testing, and Inspection	182	1211.10	Polyethylene of Raised Temperature (PE-RT)	186
1205.1	Operating Instructions	182	1211.11	Polypropylene (PP) Pipe	187
1205.2	Pressure Testing	182	1211.12	Polyvinyl Chloride (PVC) Pipe	187
1205.3	Flushing	182	1211.13	Steel Pipe and Tubing	187
1206.0	Pressure and Safety Devices	182	1211.14	Joints Between Various Materials	187
1206.1	General	182	1212.0	Valves	187
1206.2	Discharge Piping	182	1212.1	General	187
1207.0	Heating Appliances and Equipment	182	1212.2	Where Required	187
1207.1	General	182	1212.3	Heat Exchanger	187
1207.2	Boilers	182	1212.4	Pressure Vessels	187
1207.3	Dual-Purpose Water Heaters	182	1212.5	Pressure Reducing Valves	187
1207.4	Solar Heat Collector Systems	182	1212.6	Equipment, Components, and Appliances	188
1208.0	Circulators and Pumps	183	1212.7	Expansion Tank	188
1208.1	General	183	1212.8	Flow Balancing Valves	188
1208.2	Mounting	183	1212.9	Mixing or Temperature Control Valves	188
1208.3	Sizing	183	1212.10	Thermosiphoning	188
1209.0	Expansion Tanks	183	1212.11	Air Removal Device or Air Vents	188
1209.1	General	183	1213.0	System Controls	188
1209.2	Installation	183	1213.1	Water Temperature Controls	188
1209.3	Open-Type Expansion Tanks	183	1213.2	Operating Steam Controls	188
1209.4	Closed-Type Tanks	183	1213.3	Occupied Spaces	188
1209.5	Sizing	183	1214.0	Pressure and Flow Controls	188
1210.0	Materials	183	1214.1	Balancing	188
1210.1	Piping, Tubing, and Fittings	183	1214.2	Low-Water Control	188
1210.2	Expansion and Contraction	183	1214.3	Flow-Sensing Devices	188
1210.3	Hangers and Supports	183	1214.4	Automatic Makeup Fluid	188
1210.4	Oxygen Diffusion Corrosion	183	1214.5	Differential Pressure Regulation	188
1211.0	Joints and Connections	183	1214.6	Air-Removal Device	188
1211.1	General	183	1214.7	Air-Separation Device	188
1211.2	Chlorinated Polyvinyl Chloride (CPVC) Pipe	183			
Table 1210.1	Materials for Hydronic System Piping, Tubing, and Fittings	184			
1211.3	CPV/AL/CPVC Plastic Pipe and Joints	185			

1214.8	Secondary Loops	188	1221.4	System Drainage	192
1215.0	Hydronic Space Heating	188	1221.5	Condensate Drainage	192
1215.1	General	188	1221.6	Clearance to Combustibles	192
1215.2	Installation	188			
1215.3	Freeze Protection	189	CHAPTER 13	FUEL GAS PIPING	193
1215.4	Balancing	189	1301.0	Scope of Gas Piping	193
1215.5	Heat Transfer Fluid	189	1301.1	Applicability	193
1216.0	Steam Systems	189	1302.0	Coverage of Piping System	193
1216.1	Steam Traps	189	1302.1	General	193
1216.2	Sloping for Two-Pipe System	189	1302.2	Piping System Requirements	193
1216.3	Sloping for One-Pipe System	189	1302.3	Applications	193
1216.4	Automatic Air Vents	189	1303.0	Inspection	193
1216.5	Condensate Flow	189	1303.1	Inspection Notification	193
1216.6	Steam-Distribution Piping	189	1303.2	Excavation	193
1217.0	Radiant Heating and Cooling	189	1303.3	Type of Inspections	193
1217.1	Installation	189	1303.4	Inspection Waived	194
1217.2	Radiant Under-Floor Heating	189	1304.0	Certificate of Inspection	194
1217.3	Radiant Cooling Systems	189	1304.1	Issuance	194
1217.4	Tube Placement	189	1304.2	Gas Supplier	194
Table 1217.4	Maximum Length of Continuous Tubing from a Supply-and-Return Manifold Arrangement	189	1304.3	Unlawful	194
1217.5	Poured Floor Structural Concrete Slab Systems (Thermal Mass)	189	1305.0	Authority to Render Gas Service	194
1217.6	Radiant Heating and Cooling Panels	190	1305.1	Authorized Personnel	194
1218.0	Heat Exchangers	190	1305.2	Outlets	194
1218.1	General	190	1306.0	Authority to Disconnect	194
1219.0	Indirect-Fired Domestic Hot-Water Storage Tanks	190	1306.1	Disconnection	194
1219.1	General	190	1306.2	Notice	194
1220.0	Auxiliary Systems	190	1306.3	Capped Outlets	194
1220.1	Use of Chemical Additives and Corrosive Fluids	190	1307.0	Temporary Use of Gas	194
1220.2	Snow and Ice Melt Controls	191	1307.1	General	194
Table 1220.2.1	Loop Lengths for Snow and Ice Melt Systems	191	1308.0	Gas Piping System Design, Materials, and Components	194
1220.3	Hydronic Makeup Air Units	191	1308.1	Installation of Piping System	194
1221.0	Piping Installation	191	1308.2	Provision for Location of Point of Delivery	194
1221.1	General	191	1308.3	Interconnections Between Gas Piping Systems	194
1221.2	Embedded Piping Materials and Joints	191	1308.4	Sizing of Gas Piping Systems	195
1221.3	Pressure Testing	191	1308.5	Acceptable Piping Materials and Joining Methods	195
			Table 1308.4.1	Approximate Gas Input for Typical Appliances	195
			Table 1308.5.7.2	Specifications for Threading Metallic Pipe	196
			1308.6	Gas Meters	198
			1308.7	Gas Pressure Regulators	198
			1308.8	Overpressure Protection	199

1308.9	Pressure Limitation Requirements	199	1312.7	Quick-Disconnect Devices	207
1308.10	Backpressure Protection	199	1312.8	Gas Convenience Outlets.	207
1308.11	Low-Pressure Protection	200	1312.9	Sediment Trap	207
1308.12	Shutoff Valves	200	1312.10	Installation of Piping	208
1308.13	Expansion and Flexibility	200	1312.11	Liquefied Petroleum Gas Facilities and Piping	208
1309.0	Excess Flow Valve	200	1313.0	Pressure Testing and Inspection	208
1309.1	General.	200	1313.1	Piping Installations	208
1310.0	Gas Piping Installation	200	1313.2	Test Preparation.	208
1310.1	Piping Underground	200	1313.3	Test Pressure	208
1310.2	Installation of Piping	201	1313.4	Detection of Leaks and Defects	209
Table 1310.2.4.1	Support of Piping	202	1313.5	Piping System Leak Test	209
1310.3	Concealed Piping in Buildings	202	1313.6	Purging Requirements	209
1310.4	Piping in Vertical Chases	203	Table 1313.6.1	Size and Length of Piping.	209
1310.5	Maximum Design Operating Pressure	203	1314.0	Required Gas Supply	210
1310.6	Appliance Overpressure Protection	203	1314.1	General.	210
1310.7	Gas Pipe Turns.	203	1314.2	Volume	210
1310.8	Drips and Sediment Traps	204	1314.3	Gas Appliances	210
1310.9	Outlets	204	1314.4	Size of Piping Outlets	210
1310.10	Branch Pipe Connection.	204	1315.0	Required Gas Piping Size	210
1310.11	Manual Gas Shutoff Valves	204	1315.1	Pipe Sizing Methods.	210
1310.12	Prohibited Devices	204	1315.2	Tables for Sizing Gas Piping Systems	211
1310.13	Systems Containing Gas-Air Mixtures Outside the Flammable Range.	205	1315.3	Sizing Equations.	211
1310.14	Systems Containing Flammable Gas-Air Mixtures.	205	Table 1315.3	Cr and Y for Natural Gas and Undiluted Propane at Standard Conditions.	211
1311.0	Electrical Bonding and Grounding.	206	1315.4	Sizing of Piping Sections	211
1311.1	Pipe and Tubing other than CSST	206	1315.5	Engineering Methods	211
1311.2	Bonding of CSST Gas Piping	206	1315.6	Variable Gas Pressures	211
1311.3	Grounding Conductor of Electrode	206	Table 1315.2(1)	Schedule 40 Metallic Pipe	213
1311.4	Lightning Protection System.	206	Table 1315.2(2)	Schedule 40 Metallic Pipe	214
1311.5	Electrical Circuits	206	Table 1315.2(3)	Schedule 40 Metallic Pipe	215
1311.6	Electrical Connections	206	Table 1315.2(4)	Schedule 40 Metallic Pipe	216
1312.0	Appliance Connections to Building Piping	206	Table 1315.2(5)	Schedule 40 Metallic Pipe	217
1312.1	Connecting Appliances and Equipment	206	Table 1315.2(6)	Schedule 40 Metallic Pipe	218
1312.2	Suspended Low-Intensity Infrared Tube Heaters	206	Table 1315.2(7)	Semi-Rigid Copper Tubing	219
1312.3	Use of Gas Hose Connectors.	207	Table 1315.2(8)	Semi-Rigid Copper Tubing	220
1312.4	Injection (Bunsen) Burners.	207	Table 1315.2(9)	Semi-Rigid Copper Tubing	221
1312.5	Connection of Portable and Mobile Industrial Appliances.	207	Table 1315.2(10)	Semi-Rigid Copper Tubing	222
1312.6	Appliance Shutoff Valves and Connections.	207	Table 1315.2(11)	Semi-Rigid Copper Tubing	223
			Table 1315.2(12)	Semi-Rigid Copper Tubing	224
			Table 1315.2(13)	Semi-Rigid Copper Tubing	225
			Table 1315.2(14)	Corrugated Stainless Steel Tubing (CSST)	226
			Table 1315.2(15)	Corrugated Stainless Steel Tubing (CSST)	227

Table 1315.2(16) Corrugated Stainless Steel Tubing (CSST) 228

Table 1315.2(17) Corrugated Stainless Steel Tubing (CSST) 229

Table 1315.2(18) Corrugated Stainless Steel Tubing (CSST) 230

Table 1315.2(19) Polyethylene Plastic Pipe 231

Table 1315.2(20) Polyethylene Plastic Pipe 232

Table 1315.2(21) Polyethylene Plastic Pipe 233

Table 1315.2(22) Polyethylene Plastic Tubing 234

Table 1315.2(23) Polyethylene Plastic Tubing 234

Table 1315.2(24) Schedule 40 Metallic Pipe 235

Table 1315.2(25) Schedule 40 Metallic Pipe 236

Table 1315.2(26) Schedule 40 Metallic Pipe 237

Table 1315.2(27) Schedule 40 Metallic Pipe 238

Table 1315.2(28) Semi-Rigid Copper Tubing 239

Table 1315.2(29) Semi-Rigid Copper Tubing 240

Table 1315.2(30) Semi-Rigid Copper Tubing 241

Table 1315.2(31) Corrugated Stainless Steel Tubing (CSST) 242

Table 1315.2(32) Corrugated Stainless Steel Tubing (CSST) 243

Table 1315.2(33) Corrugated Stainless Steel Tubing (CSST) 244

Table 1315.2(34) Polyethylene Plastic Pipe 245

Table 1315.2(35) Polyethylene Plastic Pipe 246

Table 1315.2(36) Polyethylene Plastic Tubing 247

CHAPTER 14 PROCESS PIPING 249

1401.0 General 249

1401.1 Applicability 249

1402.0 Permit 249

1402.1 General 249

1403.0 Plans Required 249

1403.1 General 249

1404.0 Workmanship 249

1404.1 General 249

1405.0 Inspections 249

1405.1 General 249

1405.2 Required Inspections 249

1405.3 Other Inspections 249

1406.0 Pipe, Tubing, and Fittings 249

1406.1 General 249

1406.2 Hazardous Process Piping (HPP) 249

1406.3 Special Requirements for HPP Gases 250

CHAPTER 15 SOLAR ENERGY SYSTEMS . . . 251

1501.0 General 251

1501.1 Applicability 251

CHAPTER 16 STATIONARY POWER PLANTS 253

1601.0 Stationary Fuel Cell Power Plants 253

1601.1 General 253

1602.0 Stationary Gas Engines and Generators 253

1602.1 General 253

1602.2 Connection to the Gas Supply Piping 253

1602.3 Stationary Engine Generators 253

CHAPTER 17 REFERENCED STANDARDS . . . 255

1701.0 General 255

1701.1 Standards 255

Table 1701.1 Referenced Standards 255

1701.2 Standards, Publications Practices, and Guides 266

Table 1701.2 Standards, Publications Practices, and Guides 266

APPENDICES TABLE OF CONTENTS 271

Appendix A Residential Plan Examiner Review Form for HVAC System Design 273

Appendix B Procedures to be Followed to Place Gas Equipment in Operation 275

Appendix C Installation and Testing of Oil (Liquid) Fuel-Fired Equipment 277

Appendix D Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicle Parks 283

Appendix E Sustainable Practices 289

Appendix F Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design 397

Appendix G Example Calculation of Outdoor Air Rate 407

INDEX 409

CHAPTER 1 ADMINISTRATION

101.0 General.

101.1 Title. This document shall be known as the “Uniform Mechanical Code,” may be cited as such, and will be referred to herein as “this code.”

101.2 Scope. The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of mechanical systems within this jurisdiction.

101.3 Purpose. This code is an ordinance providing minimum requirements and standards for the protection of the public health, safety, and welfare.

101.4 Unconstitutional. Where a section, subsection, sentence, clause, or phrase of this code is, for a reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code. The legislative body hereby declares that it would have passed this code, and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, and phrases are declared unconstitutional.

101.5 Validity. Where a provision of this code, or the application thereof to a person or circumstance, is held invalid, the remainder of the code, or the application of such provision to other persons or circumstances, shall not be affected thereby.

102.0 Applicability.

102.1 Conflicts Between Codes. Where the requirements within the jurisdiction of this mechanical code conflict with the requirements of the plumbing code, the plumbing code shall prevail. In instances where this code, applicable standards, or the manufacturer’s installation instructions conflict, the more stringent provisions shall prevail. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail.

102.2 Existing Installations. Mechanical systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use, maintenance, or repair continued where the use, maintenance, or repair is in accordance with the original design and location and no hazard to life, health, or property has been created by such mechanical system.

102.3 Maintenance. Mechanical systems, materials, and appurtenances, both existing and new, of a premise under the Authority Having Jurisdiction shall be maintained in operating condition. Devices or safeguards required by this code shall be maintained in accordance with the code edition under which installed.

The owner or the owner’s designated agent shall be responsible for maintenance of mechanical systems. To determine compliance with this subsection, the Authority Having Jurisdiction shall be permitted to cause a mechanical system to be reinspected.

102.3.1 Commercial HVAC Systems. Commercial HVAC systems both existing and new, and parts thereof shall be inspected and maintained in operating condition in accordance with ASHRAE/ACCA 180. The owner or the owner’s designated agent shall be responsible for maintenance of mechanical systems and equipment. To determine compliance with this subsection, the Authority Having Jurisdiction shall be permitted to cause a HVAC system to be reinspected.

102.3.2 Residential HVAC Systems. Residential HVAC systems both existing and new, and parts thereof shall be inspected in accordance with ACCA 4 QM. The owner or the owner’s designated agent shall be responsible for maintenance of mechanical systems and equipment. To determine compliance with this subsection, the Authority Having Jurisdiction shall be permitted to cause a HVAC system to be reinspected.

102.4 Additions, Alterations, Renovations, or Repairs. Additions, alterations, renovations, or repairs shall conform to that required for a new system without requiring the existing mechanical system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe, insanitary or overloaded.

Additions, alterations, renovations, or repairs to existing mechanical system installations shall comply with the provisions for new construction, unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

102.5 Health and Safety. Where compliance with the provisions of this code fails to eliminate or alleviate a nuisance, or other dangerous or insanitary condition that involves health or safety hazards, the owner or the owner’s agent shall install such additional mechanical system facilities or shall make such repairs or alterations as ordered by the Authority Having Jurisdiction.

102.6 Changes in Building Occupancy. Mechanical systems that are a part of a building or structure undergoing a change in use or occupancy, as defined in the building code, shall be in accordance with the requirements of this code that are applicable to the new use or occupancy.

102.7 Moved Structures. Parts of the mechanical system of a building and part thereof that is moved from one foundation to another, or from one location to another, shall be in accordance with the provisions of this code for new installations and completely tested as prescribed elsewhere in this section for new work, except that walls or floors need not be removed during such test where equivalent means of inspection acceptable to the Authority Having Jurisdiction are provided.

102.8 Appendices. The provisions in the appendices are intended to supplement the requirements of this code and shall not be considered part of this code unless formally adopted as such.