



## Department of Commerce

Division of Industrial Compliance

John R. Kasich, Governor  
Andre T. Porter, Director

November 2014

At its meeting on October 24, 2014, the Ohio Board of Building Standards adopted the rule changes identified as Amendments Group 89. These rule amendments were adopted for an **effective date of January 1, 2015**.

Amendments Group 89 included the following amended Ohio Mechanical Code (OMC) rule. For your use, a summary of the changes is provided below and the text of the rule can be found immediately following this coversheet:

Rule Number	OMC Chapter	Chapter Title	Effective date
4101:2-15-01	15	Referenced standards.	January 1, 2015

**Reason for Amendments: 4101:2-15-01** to update the NFPA 70 standard in the Ohio Mechanical Code to the 2014 edition for non-residential buildings as a result of approved Petition #13-004 and to list TIA 10-4 and TIA 10-5 with the NFPA 72 standard to clarify the intent of the low frequency alarm requirements for fire alarm and emergency alarm systems and smoke alarms.

If you should have any questions regarding these rule changes, please call BBS staff at (614)644-2613.

**4101:2-15-01 Referenced standards.**

**1501.1 General.** This chapter lists the *codes and standards* that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and *the title*. The application of the referenced standards shall be as specified in Section 102.5 of the building code.

**1501.2 Referenced codes:** When indicated in the OMC, the following codes refer to provisions in the listed chapters of the Administrative Code:

<i>Referenced code</i>	<i>Ohio Administrative Code chapters</i>
<i>Building Code</i>	<i>4101:1-1 to 4101:1-35</i>
<i>Fire Code</i>	<i>1301:7-1 to 1301:7-7</i>
<i>Ohio Boiler and Pressure Vessel Rules</i>	<i>4101:4-1 to 4101:4-10</i>
<i>Plumbing Code</i>	<i>4101:3-1 to 4101:3-13</i>

**1501.3 Referenced Standards.**

**ACCA** Air Conditioning Contractors of America  
2800 Shirlington Road, Suite 300  
Arlington, VA 22206

**Standard  
reference  
number****Title**

Manual D—95	Residential Duct Systems
183—2007	Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings

**AHRI** Air-Conditioning, Heating and Refrigeration Institute  
4100 North Fairfax Drive, Suite 200  
Arlington, VA 22203

**Standard  
reference  
number****Title**

700—06	Purity Specifications for Fluorocarbon and Other Refrigerants
--------	---

## **ANSI** American National Standards Institute

11 West 42nd Street  
New York, NY 10036

### **Standard reference number**

### **Title**

Z21.8—1994 (R2002) Installation of Domestic Gas Conversion Burners

## **ASHRAE** American Society of Heating, Refrigerating and Air-Conditioning

Engineers, Inc.  
1791 Tullie Circle, NE  
Atlanta, GA 30329

### **Standard reference number**

### **Title**

<i>Handbook—2009</i>	ASHRAE Fundamentals Handbook—
15—2010	Safety Standard for Refrigeration Systems
34—2010	Designation and Safety Classification of Refrigerants
62.1—2010	Ventilation for Acceptable Indoor Air Quality
62.2. -2010	<i>Ventilation for Acceptable Indoor Air Quality in Low-Rise Residential Buildings</i>
170-2008	<i>Ventilation of Health Care Facilities (with addendums a through h-2011)</i>

## **ASME** American Society of Mechanical Engineers

Three Park Avenue  
New York, NY 10016-5990

### **Standard reference number**

### **Title**

B1.20.1—1983 (R2006)	Pipe Threads, General Purpose (Inch
B16.3—2006	Malleable Iron Threaded Fittings, Classes 150 & 300
B16.5—2009	Pipe Flanges and Flanged Fittings NPS 1/2 through NPS 24—.
B16.9—2007	Factory Made Wrought Steel Buttwelding Fittings

B16.11—2009	Forged Fittings, Socket-welding and Threaded
B16.15—2006	Cast Bronze Threaded Fittings
B16.18—2001	
(Reaffirmed 2005)	Cast Copper Alloy Solder Joint Pressure Fittings
B16.22—2001	
(Reaffirmed 2005)	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings
B16.23—2002	
(Reaffirmed 2006)	Cast Copper Alloy Solder Joint Drainage Fittings DWV
B16.24—2006	Cast Copper Alloy Pipe Flanges and Flanged Fittings: Class 150, 300, 400, 600, 900, 1500 and
B16.26—2006	Cast Copper Alloy Fittings for Flared Copper Tubes
B16.28—1994	Wrought Steel Buttwelding Short Radius Elbows and Returns
B16.29—2007	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings-
B31.9—2010	Building Services Piping
BPVC—2010	Boiler & Pressure Vessel Code
<i>BPVC Section IX-2010</i>	<i>Welding and Brazing Qualifications</i>
CSD-1—2009	Controls and Safety Devices for Automatically Fired Boilers

## ASSE American Society of Sanitary Engineering

901 Canterbury, Suite A  
Westlake, OH 44145

### Standard reference number

### Title

1017—09 Temperature Actuated Mixing *Valves* for Hot Water Distribution Systems

## ASTM ASTM International

100 Barr Harbor Drive  
West Conshohocken, PA 19428

### Standard reference number

### Title

A 53/A 53M—10	Specification for Pipe, Steel, Black and Hot-dipped, Zinc-coated Welded and Seamless
A 106/A106M—10	Specification for Seamless Carbon Steel Pipe for High-Temperature Service
A 126—04 (2009)	Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings
A 254—97 (2007)	Specification for Copper Brazed Steel Tubing
A 420/A 420M—10	Specification for Piping Fittings of Wrought Carbon Steel and Alloy

	Steel for Low-Temperature Service
A 539—99	Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines
B 32—08	Specification for Solder Metal
B 42—10	Specification for Seamless Copper Pipe, Standard Sizes
B 43—09	Specification for Seamless Red Brass Pipe, Standard
B 68—02	Specification for Seamless Copper Tube, Bright Annealed
B 75—02	Specification for Seamless Copper
B 88—09	Specification for Seamless Copper Water
B 135—10	Specification for Seamless Brass Tube
B 251—10	Specification for General Requirements for Wrought Seamless Copper and Copper-alloy Tube
B 280—08	Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service
B 302—07	Specification for Threadless Copper Pipe, Standard
B 813—10	Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
C 315—07	Specification for Clay Flue Liners and Chimney Pots
C 411—05	Test Method for Hot-surface Performance of High-temperature Thermal Insulation
D 56—05 (2010)	Test Method for Flash Point by Tag Closed Tester
D 93—10a	Test Method for Flash Point of Pensky-Martens Closed Cup Tester
D 1527—99(2005)	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80
D 1693—08	Test Method for Environmental Stress-Cracking of Ethylene Plastics
D 1785—06	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80 and 120
D 2235—04	Specifications for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
D 2241—09	Specification for Poly (Vinyl Chloride)(PVC) Pressure-rated Pipe (SDR-Series)
D 2282—99(2005)	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR)
D 2412—10	Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-plate Loading
D 2447—03	Specification for Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on Outside Diameter
D 2466—06	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe Fittings, Schedule 40
D 2467—06	Specification for Poly (Vinyl Chloride)(PVC) Plastic Pipe Fittings, Schedule 80
D 2468—96a	Specification for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe Fittings, Schedule 40
D 2513—09a	Specification for Thermoplastic Gas Pressure Pipe, Tubing, and
D 2564—04(2009)e01	Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2657—07	Standard Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings

D 2683—10	Specification for Socket-type Polyethylene Fittings for Outside Diameter-controlled Polyethylene Pipe and Tubing
D 2837—08	Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
D 2846/D 2846M—09b	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems
D 2996—01(2007)e01	Specification for Filament-wound Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Pipe
D 3035—08	Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
D 3278—96(2004)e01	Test Methods for Flash Point of Liquids by Small Scale Closed-cup Apparatus
D 3261—10a	Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and
D 3309—96a(2002)	Specification for Polybutylene (PB) Plastic Hot and Cold Water Distribution Systems
D 3350—10	Specification for Polyethylene Plastics Pipe and Fittings Materials
E 84—10b	Test Method for Surface Burning Characteristics of Building Materials
E 119—10b	Test Method for Fire Tests of Building Construction and
E 136—09b	Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C
E 814—10	Test Method for Fire Tests of Through-penetration Fire
E 1509—04	Specification for Room Heaters, Pellet Fuel-burning
E 2231—09	Standard Practice For Specimen Preparation and Mounting of Pipe and Duct Insulation Materials to Assess Surface Burning Characteristics
E 2336-04 (2009)	Standard Test Methods for Fire Resistive Grease Duct Enclosure Systems
F 438—09	Specification for Socket Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
F 439—09	Specification for Socket Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
F 441/F 441M—09	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and
F 442/F 442M—09	Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR).
F 493—10	Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
F 876—10	Specification for Crosslinked Polyethylene (PEX) Tubing
F 877—07	Specification for Crosslinked Polyethylene (PEX) Plastic Hot and Cold Water Distribution Systems.
F 1055—98(2006)	Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and
F 1281—07	Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
F 1282—10	Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
F 1476-07	Specification for Performance of Gasketed Mechanical Couplings for

	Use in Piping Applications
F 1924—05	Standard Specification for Plastic Mechanical Fittings for Use on Outside Diameter Controlled Polyethylene Gas Distribution Pipe and Tubing
F 1974—09	Standard Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe
F 2389—10	Specification for Pressure-Rated Polypropylene Piping Systems
F 2623—08	Standard Specification for Polyethylene of Raised Temperature (PE-RT) SDR 9 Tubing <sup>1</sup>

**AWS** American Welding Society  
 550 N.W. LeJeune Road P.O. Box 351040  
 Miami, FL 33135

**Standard  
reference  
number**

**Title**

A5.8—2004 Specifications for Filler Metals for Brazing and Braze Welding.

**AWWA** American Water Work Association  
 6666 West Quincy Avenue  
 Denver, CO 80235

**Standard  
reference  
number**

**Title**

C110/A21.10—08	Standard for Ductile Iron & Gray Iron Fittings, 2 inches Through 48 inches for Water
C115/A21.15—05	Standard for Flanged Ductile-iron Pipe with Ductile Iron or Grey-iron Threaded Flanges
C151/A21.51—09	Standard for Ductile-Iron Pipe, Centrifugally Cast for Water
C153/A21.53—06	Standard for Ductile-Iron Compact Fittings for Water Service

**CSA** Canadian Standards Association  
 5060 Spectrum Way Mississauga,  
 Ontario, Canada L4W 5N6

<b>Standard reference number</b>	<b>Title</b>
B137.9-M91 CAN/CSA	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems
B137.10—05	Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene Composite Pressure-Pipe Systems
ANSI CSA America FC1-04	Stationary Fuel Cell Power Systems

**DOL** Department of Labor Occupational Safety and Health Administration  
c/o Superintendent of Documents  
US Government Printing Office  
Washington, DC 20402-9325

<b>Standard reference number</b>	<b>Title</b>
29CFRPart 1910.1000 (1974)	Air Contaminants
29CFRPart 1910. 1025	Toxic and Hazardous Substances

**FS** Federal Specifications\*  
General Services Administration  
7th & D Streets Specification Section, Room 6039  
Washington, DC 20407

<b>Standard reference number</b>	<b>Title</b>
WW-P-325B (1976)	Pipe, Bends, Traps, Caps and Plugs; Lead (for Industrial Pressure and Soil and Waste Applications)

\*Standards are available from the Supt. of Documents, U.S. Government Printing Office,  
Washington, DC 20402-9325.

**ICC** International Code Council, Inc.  
500 New Jersey Ave, NW  
6th Floor ICC



Washington, DC 20001

**Standard  
reference  
number**

**Title**

IFGC—09 International Fuel Gas Code (*including ICC Emergency Amendment changing IFGC Sections 406.7*)

**IIAR** International Institute of Ammonia Refrigeration

1110 North Glebe Road  
Arlington, VA 22201

**Standard  
reference  
number**

**Title**

2—99 (with Addendum A-2005) Equipment, Design, and Installation of Ammonia Mechanical Refrigerating Systems

**MSS** Manufacturers Standardization Society of the Valve & Fittings Industry, Inc. 1

27 Park Street, N.E.  
Vienna, VA 22180

**Standard  
reference  
number**

**Title**

SP-69—2003 Pipe Hangers and Supports—Selection and Application

**NAIMA** North American Insulation Manufacturers Association

44 Canal Center Plaza, Suite 310 Alexandria, VA 22314

**Standard  
reference  
number**

**Title**

AH116—02 Fibrous Glass Duct Construction Standards

## NFPA National Fire Protection Association

1 Batterymarch Park  
Quincy, MA 02169-7471

### Standard reference number

### Title

30A—08	Code for Motor Fuel-dispensing Facilities and Repair Garages
31—06	Installation of Oil-burning Equipment
37—10	Stationary Combustion Engines and Gas Turbines
58—11	Liquefied Petroleum Gas Code
69—08	Explosion Prevention Systems
70— <del>11</del> 14	National Electrical Code
72—10	National Fire Alarm <i>and</i> Signaling Code ( <i>including TIA 10-4 and TIA 10-5</i> )
75-09	<i>Protection of Information Technology Equipment</i>
82—09	Incinerators and Waste and Linen Handling Systems and Equipment
85-07	<i>Boiler and Combustion Systems Hazards Code</i>
91—10	Exhaust Systems for Air Conveying of Vapors, Gases, and Noncombustible Particulate Solids
92B—09	Smoke Management Systems in Malls, Atria and Large Spaces
211—10	Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
262—07	Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-handling Spaces
704—07	Identification of the Hazards of Materials for Emergency Response
853—10	Installation of Stationary Fuel Power Plants

## SMACNA Sheet Metal & Air Conditioning Contractors National Assoc., Inc.

4201 Lafayette Center Drive  
Chantilly, VA 20151-1209

### Standard reference number

### Title

SMACNA/ANSI—2005	HVAC Duct Construction Standards—Metal and Flexible (2005)
SMACNA—03	Fibrous Glass Duct Construction Standards

## UL Underwriters Laboratories, Inc.

333 Pfingsten Road  
Northbrook, IL 60062-2096

<b>Standard reference number</b>	<b>Title</b>
17—08	Vent or Chimney Connector Dampers for Oil-fired Appliances
103—10	Factory-built Chimneys, Residential Type and Building Heating Appliance
127—08	Factory-built Fireplaces
174—04	Household Electric Storage Tank Water Heaters—with Revisions through May 2006
181—05	Factory-made Air Ducts and Air Connectors—with Revisions through December 1998
181A—05	Closure Systems for Use with Rigid Air Ducts and Air Connectors—with Revisions through December 1998
181B—05	Closure Systems for Use with Flexible Air Ducts and Air Connectors—with Revisions through December 1998
207—01	Refrigerant-containing Components and Accessories, Nonelectrical—with Revisions through November 2004
263—03	Standard for Fire Test of Building Construction and Materials
268—09	Smoke Detectors for Fire Prevention Signaling Systems
268A—08	Smoke Detectors for Duct Applications
343—08	Pumps for Oil-Burning Appliances
391—10	Solid-fuel and Combination-fuel Central and Supplementary Furnaces
412—04	Refrigeration Unit Coolers—with Revisions through February 2007 .
471—10	Commercial Refrigerators and Freezers
508—99	Industrial Control Equipment—with Revisions through July 2005
536—97	Flexible Metallic Hose—with Revisions through June 2003
555—06	Fire Dampers—with Revisions through January 2002.
555C—06	Ceiling Dampers
555S—99	Smoke Dampers—with Revisions through July 2006
586—09	High-efficiency, Particulate, Air Filter Units
641—95	Type L Low-temperature Venting Systems—with Revisions through August 2005
710—95	Exhaust Hoods for Commercial Cooking Equipment—with Revisions through February 2007.
710B—04	Recirculating Systems
723—08	Standard for Test for Surface Burning Characteristics of Building Materials
726—95	Oil-fired Boiler Assemblies—with Revisions through March 2006
727—06	Oil-fired Central Furnaces
729—03	Oil-fired Floor Furnaces—with Revisions through January 1999
730—03	Oil-fired Wall Furnaces—with Revisions through January 1999
731—95	Oil-fired Unit Heaters—with Revisions through February 2006
732—95	Oil-fired Storage Tank Water Heaters—with Revisions through February 2005
737—07	Fireplace Stoves
762—03	Outline of Investigation for Power Ventilators for Restaurant Exhaust Appliances
791—06	Residential Incinerators.
834—04	Heating, Water Supply and Power Boilers Electric—with Revisions

	through March 2006
858—05	Household Electric Ranges—with Revisions through April 2006
867—00	Electrostatic Air Cleaners—with Revisions through May 2004
875—09	Electric Dry Bath Heater
896—93	Oil-burning Stoves—with Revisions through May 2004
900—04	Air Filter Units
923—08	Microwave Cooking Appliances
959—01	Medium Heat Appliance Factory-built Chimneys—with Revisions through September 2006
1240—05	Electric Commercial Clothes
1261—01	Electric Water Heaters for Pools and Tubs—with Revisions through June 2004
1453—04	Electric Booster and Commercial Storage Tank Water Heaters—with Revisions through May 2006
1482—10	Solid-fuel Type Room Heaters
1777—07	Chimney Liners .
1812—09	Standard for Ducted Heat Recovery Ventilators
1815—09	Standard for Nonducted Heat Recovery Ventilators
1820—04	Fire Test of Pneumatic Tubing for Flame and Smoke Characteristics
1887—04	Fire Tests of Plastic Sprinkler Pipe for Visible Flame and Smoke Characteristics
1978—05	Grease Ducts
1995—05	Heating and Cooling Equipment .
2158—97	Electric Clothes Dryers—with Revisions through May 2004
2162—01	Outline of Investigation for Commercial Wood-fired Baking Ovens—Refractory Type
2200—98	Stationery Engine Generator Assemblies
2221—10	Tests of Fire Resistive Grease Duct Enclosure Assemblies

Effective: 01/01/2015

Five Year Review (FYR) Dates: 11/01/2016

CERTIFIED ELECTRONICALLY

---

Certification

11/20/2014

---

Date

Promulgated Under: 119.03  
Statutory Authority: 3781.10(A)  
Rule Amplifies: 3781.10, 3781.11, 3791.04  
Prior Effective Dates: 7/1/82, 3/1/85, 3/1/86, 1/1/89, 9/1/92, 7/1/95, 2/1/96,  
3/1/98, 7/1/98, 1/1/02, 1/1/04, 3/1/05, 9/6/05, 3/1/06,  
7/1/07, 1/1/08, 3/31/08(Emer.), 6/24/08, 1/1/09,  
11/1/11, 3/1/13