

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	CHAPTER 1 SCOPE AND ADMINISTRATION	CHAPTER 1 SCOPE AND ADMINISTRATION
		<u>102.2.1 Existing buildings.</u> New section.
	105.2 Alternative materials, methods, equipment and appliances. Add- <u>Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.</u>	
	<u>106.1.1 Annual permit.</u> New section.	
	<u>106.1.2 Annual permit records.</u> New section.	
	CHAPTER 2 DEFINITIONS	
	202 AIR, OUTDOOR. New definition.	
	<u>202 AIR, TRANSFER,</u> New definition.	
		202 COMMERCIAL COOKING APPLIANCES. Revised.
	202 CONDITIONED SPACE. Revised.	
	202 DESIGN FLOOD ELEVATION. Revised.	
		<u>202 DIRECT SOLAR SYSTEM.</u> New definition.
		<u>202 DRAIN-BACK SYSTEM.</u> New definition.
	<u>202 DISCRETE PRODUCT.</u> New definition.	
	<u>202 DUCTLESS MINI-SPLIT SYSTEM.</u> New definition.	
	<u>202 EXFILTRATION.</u> New definition.	
	<u>202 FLEXIBLE CONNECTOR.</u> New definition.	
		<u>202 FOOD-GRADE FLUID.</u> New definition.
	202 HEAVY-DUTY COOKING APPLIANCE. Revised.	
		<u>202 INDIRECT SOLAR SYSTEM.</u> New definition.
	<u>202 INFILTRATION.</u> New definition.	
		<u>202 LOW-PROBABLITY PUMP.</u> New definition.

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		<u>202 NO-FLOW CONDITION (SOLAR).</u> New definition.
		<u>202 NONFOOD GRADE FLUID.</u> New definition.
	<u>202 OCCUPATIONAL EXPOSURE LIMIT (OEL).</u> New definition.	<u>202 OCCUPATIONAL EXPOSURE LIMIT (OEL).</u> Revised.
		<u>202 POLLUTION-CONTROL UNIT (PCU).</u> New definition.
		<u>202 SOLAR THERMAL SYSTEM.</u> New definition.
	CHAPTER 3 GENERAL REGULATIONS	CHAPTER 3 GENERAL REGULATIONS
	<p>303.3 Prohibited locations. Exceptions: Revise 2. Sild fuel-fired appliances, provided that <u>combustion air is provided in accordance with the manufacturer’s instructions.</u> The room is not a confined space and the building is not of unusually tight construction.</p>	
		<p>303.7 Pit locations. Appliances installed in pits or excavations shall not come in direct contact with the surrounding soil <u>and shall be installed not less than 3 inches (76 mm) above the pit floor.</u> The sides of the pit or excavation shall be held back not less than 12 inches (305 mm) from the appliance. Where the depth exceeds 12 inches (305 mm) below adjoining grade, the walls of the pit or excavation shall be lined with concrete or masonry. Such concrete or masonry shall extend not less than 4 inches (102 mm) above adjoining grade and shall have sufficient lateral load-bearing capacity to resist collapse. <u>Excavation on the control side of the appliance shall extend not less than 30 inches (762 mm) horizontally.</u> The</p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		appliance shall be protected from flooding in an approved manner.
		<u>303.9 Fireplaces in Group I-2 Condition 2 occupancies. New section.</u>
	<p>304.11 Guards. Exception: <u>Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire lifetime of the roof covering. The devices shall be re-evaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of walking spaces.</u></p>	
	<p>Interval of support. Piping supports at distances not exceeding the spacing specified in Table 305.4, or in accordance with <u>ANSI/MSS SP-58 MSS SP-69.</u></p>	
	<p>TABLE 305.4 PIPING SUPPORT SPACING. Revised.</p>	
	<p>307.2 Evaporators and cooling coils. Exception: <u>Evaporators and cooling coils that are designed to operate in sensible cooling only and not support condensation shall not be required to meet the requirements of this section.</u></p>	
	<p><u>307.2.4.1 Ductless mini-split system traps.</u> <u>New section.</u></p>	
	<p><u>307.2.5 Drain line maintenance.</u> <u>New section.</u></p>	
	<p><u>307.3 Condensate pumps.</u> <u>New section.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
<p>401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section 402.1.2 of the International Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403.</p>	<p align="center">CHAPTER 4 VENTILATION</p> <p>401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section 402.4.1.2 of the International Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403. <u>Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407.</u></p>	<p align="center">CHAPTER 4 VENTILATION</p>
	<p>403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or exhaust air <u>except that mechanical ventilation requirements in Group R-2, R-3 and R-4 occupancies three stories and less in height above the grade plane shall be provided by an exhaust system, supply system or combination thereof.</u> The amount of supply air shall be approximately equal to the amount of return or exhaust air. The system shall not be prohibited from producing a negative or positive pressure. The system to convey ventilation air shall be designed and installed in accordance with Chapter 6.</p>	
	<p>403.2.1 Recirculation of air.</p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>Revise- 3. Where mechanical exhaust is required by Note B in Table 403.3.1.1. recirculation of air from such spaces shall be prohibited. <u>Recirculation of air that is contained completely within such spaces shall not be prohibited. Where recirculation of air is prohibited, all air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.1.1. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.</u></p> <p>Revise- 4. Where mechanical exhaust is required by Note G in Table 403.3, mechanical exhaust is required and recirculation <u>from such spaces</u> is prohibited where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces. <u>Recirculation of air that is contained completely within such spaces shall not be prohibited.</u></p>	
	<p>403.3 Outdoor air and local exhaust rates. Revised.</p>	
	<p><u>403.3.1 Other buildings intended to be occupied.</u> New section.</p>	
	<p><u>403.3.3.2 Groups R-2, R-3 and R-4 occupancies, three stories or less.</u> New section and subsections.</p>	
	<p><u>TABLE 403.3.2.3 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR GROUP R-2, R-3, AND R-4 OCCUPANCIES.</u> New table.</p>	
	<p>404.1 Enclosed parking garages. Revised.</p>	<p>404.1 Enclosed parking garages. Revised.</p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<u>SECTION 407 AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES.</u> <i>New section.</i>	
	CHAPTER 5 EXHAUST SYSTEMS	CHAPTER 5 EXHAUST SYSTEMS
	501.3 Exhaust discharge. Exceptions: Add- <u>3. Where installed in accordance with the manufacturer’s instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled domestic ductless range hoods shall not be required to discharge to the outdoors.</u>	
505.2 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 <u>600</u> cfm (0.19 <u>0.28</u> m ³ /s) shall be provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.		
		502.4 Stationary storage battery systems. Stationary storage battery systems, as regulated by Section 608 of the International Fire Code, shall be provided with ventilation in accordance with this chapter and Section 502.4.1 or 502.4.2. <u>The exhaust system shall be designed to provide air movement across all parts of the floor for gases having a vapor density greater than air and across all parts of the vault ceiling for gases having a vapor density less than air.</u>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		Exception: Lithium-ion and lithium metal polymer batteries shall not require additional ventilation beyond that which would normally be required for human occupancy of the space.
		502.4.1 Flammability limit in rooms. New section.
		502.4.2 Ventilation rate in rooms. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (cfm/ft ²) [0.00508 m ³ /(s * m ²)] of floor area of the room <u>and not less than 150 cfm (4.25 m³/min).</u>
		502.5 Ventilation of battery systems in cabinets. Stationary storage battery systems installed in <u>cabinets, as regulated by Section 1206.2.11.3.1 of the International Fire Code, shall be provided with ventilation in accordance with Section 502.4.</u> Continuous cabinet ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (cfm/ft²) [0.00508m³/(s * m²)] of the floor area covered by the cabinet. The room in which the cabinet is installed shall be ventilated as required by Section 502.4.1 or 504.2.2.
	502.14 Motor vehicle operation. Add- <u>Such system shall be engineered by a registered design professional or shall be factory-built equipment designed and rated for the purpose.</u>	
		502.16 Repair garages for vehicles fueled by lighter-than-air fuels. Revised.
	502.20 Manicure and pedicure stations. New section.	
		504.4.1 Exhaust termination outlet and passageway size. New section.

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p><u>504.5 dryer exhaust duct power ventilators.</u> <u>New section.</u></p>	
	<p>504.6 Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude <u>more than 1/8 inch (3.2 mm)</u> into the inside of the duct.</p>	
		<p>504.8.2 Duct installation. Add- <u>Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.</u></p>
	<p><u>504.8.4.3 Dryer exhaust duct power ventilator length.</u> <u>New section.</u></p>	
	<p>505.1 Domestic systems. Exceptions: Revise- 1. <u>In other than Group I-1 and I-2, where</u> Where installed in accordance with the manufacturer’s installation instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.</p>	<p><u>505.1 General.</u> <u>New section.</u></p>
		<p><u>505.2 Domestic cooking exhaust.</u> <u>New section.</u></p>
	<p><u>505.3 Common exhaust systems for domestic kitchens located in multistory structures.</u> <u>New section.</u></p>	<p>505.3 Exhaust ducts Common exhaust systems for domestic kitchens located in multistory structures. <u>New section.</u></p>
	<p><u>505.4 Other than Group R.</u> <u>New section.</u></p>	
	<p>506.3.8 Grease duct cleanouts and openings.</p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>Revise- 2. Sections of grease ducts that are inaccessible from the hood or discharge openings shall be provided with <u>a cleanout opening spaced not more than 20 feet (6096 mm) apart and not more than 10 feet (3048 mm) from changes in direction greater than 45 degrees (0.79 rad).</u> Cleanout openings.</p>	
	<p>506.3.11 Grease duct enclosures. A <u>commercial kitchen grease duct serving a Type I hood that penetrates a ceiling, wall, floor or any concealed spaces shall be enclosed from the point of penetration to the outlet terminal. In-line exhaust fans not located outdoors shall be enclosed as required for grease ducts.</u> A duct shall penetrate exterior walls only at locations where unprotected openings are permitted by the International Building Code. The duct enclosure shall serve a single grease duct and not contain other ducts, piping or wiring systems. <u>Duct enclosures shall be a shaft enclosure in accordance with Section 506.3.1.1, a field-applied enclosure assembly in accordance with Section 506.3.11.2 or a factory-built enclosure assembly in accordance with Section 506.3.11.3.</u> Duct enclosures shall have a fire-resistance rating of not less than that of the assembly penetrated and not less than 1 hour. <u>Fire dampers and smoke dampers shall not be installed in grease ducts.</u> Duct enclosures shall be as prescribed by Section 506.3.10.1, 506.3.10.2 or 506.3.10.3.</p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>Exception: <u>A duct enclosure shall not be required for a grease duct that penetrates only a nonfire-resistance-rated roof/ceiling assembly.</u></p>	
	<p>506.5.1.2 In-line fan location. New section.</p>	
		<p>506.5.2 Pollution-control units. New section.</p>
	<p>507.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this section. Hoods shall be Type I or II and Shall be designed to capture and confine cooking vapors and residues. <u>A Type I or II hood shall be installed at or above all commercial cooking appliances in accordance with Sections 507.2 and 507.3. Where any cooking appliance under a single hood requires a Type I hood, a Type I hood shall be installed. Where a Type II hood is required, a Type I or II hood shall be installed. Where a Type I hood is installed, the installation of the entire system, including hood, ducts, exhaust equipment and makeup air system shall comply with the requirements of Section 506, 507, 508 and 509. Commercial kitchen exhaust systems shall operate during the cooking operation.</u></p> <p>Exceptions: <u>Add- 3. Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for the application in accordance with NFPA 96, a hood shall not be required at or above them.</u></p>	
	<p>507.1.1 Operation. Revised.</p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p><u>507.1.1.1 Multiple hoods utilizing a single exhaust system.</u> <u>New section.</u></p>	
	<p><u>507.1.2</u> <u>507.2.3</u> <u>Domestic cooking appliances used for commercial purposes.</u> Domestic cooking appliances utilized for commercial purposes shall be provided with Type I or Type II hoods as required for the type of appliances and processes in accordance with Sections 507.2 and 507.3 507.2.1 and 507.2.2. <u>Domestic cooking appliances utilized for domestic purposes shall comply with Section 505.</u></p>	
	<p><u>507.1.4 Cleaning.</u> <u>New section.</u></p>	
	<p><u>507.2.4 Type I supports.</u> <u>New section.</u></p>	
		<p>507.2.6 Clearances for Type I hood. Exception:</p> <ol style="list-style-type: none"> 1. Clearance shall not be required from gypsum wallboard or ¼ inch (12.7 mm) or thicker cementitious wallboard attached to noncombustible structures provided that a smooth, cleanable, nonabsorbent and noncombustible material is installed between the hood and the gypsum or cementitious wallboard over an area extending not less than 18 inches (457 mm) in all directions from the hood. 2. <u>Type I hoods listed and labeled for clearances less than 18 inches in accordance with UL 710 shall be installed with the clearances specified by such listing.</u>
	<p><u>507.2.9 Grease gutters for Type I hood.</u> <u>New section.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
<p>508.1 Makeup air. Makeup air shall be supplied during the operation of commercial kitchen exhaust systems that are provided for commercial cooking appliances. The amount of makeup air supplied to the building from all sources shall be approximately equal to the amount of exhaust air for all exhaust systems for the building. the makeup air shall not reduce the effectiveness of the exhaust system. Makeup air shall be provided by gravity or mechanical means or both. Mechanical makeup air systems shall be automatically controlled to start and operate simultaneously with the exhaust system. Makeup air intake opening locations shall comply with Section 401.4.</p>	<p><u>507.4 Hood size.</u> New section.</p>	
<p>508.1.1 Makeup air temperature. The temperature differential between makeup air and the air in the conditioned space shall not exceed 10⁰ F (6⁰C) except where the added heating and cooling loads of the makeup air do not exceed the capacity of the HVAC system.</p>		
<p>508.1.2 Evaporative cooling systems used as makeup air. Evaporative coolers shall not be used for makeup air units on commercial kitchen hoods and kitchen ventilation systems. Exception: Evaporative cooling systems that are a listed assembly with tempered air for kitchen makeup air systems.</p>	<p><u>508.1.2 Air balance.</u> New section.</p>	
		<p>509.1 Where required. Commercial <u>Cooking</u> appliances required by Sections 507.2 to have a Type I hood shall be provided with an approved</p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		automatic fire suppression system complying with the International Building Code and the International Fire Code.
	<u>510.5 Incompatible materials and common shafts.</u> New section inserted.	
	<u>510.7.1.1 Shaft penetrations.</u> New section.	
		<u>510.8.1 Duct cleanout.</u> New section.
	<u>510.9 Duct construction.</u> New section and subsections inserted.	
	<u>513.4.7 Smoke control system interaction.</u> New section.	
	<u>513.5.2 Testing of leakage area.</u> New section.	
	<p><u>513.5.3 Opening protection.</u></p> <p>Exceptions:</p> <p>Revise 3. In Group I-2 <u>and ambulatory care facilities, where a pair of opposite -swinging doors are installed across a corridor in accordance with Section 513.5.3.1, the doors shall not be required to be protected in accordance with Section 716 of the International Building Code.</u> where such doors are installed across corridors, a pair of opposite swinging doors without a center mullion shall be installed having vision panels with approved fire-rated glazing material in approved fire-rated frames, the area of which shall not exceed that tested. The doors shall be close-fitting within operational tolerances, and shall not have <u>a center mullion or undercuts in excess of ¼ inch (19.1 mm),</u> undercuts, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and automatic-</p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>closing devices. Positive latching devices are not required.</p> <p><u>Insert- 4. In Group I-2 and ambulatory care facilities, where such doors are special-purpose horizontal sliding, accordion or folding door assemblies installed in accordance with Section 1010.1.4.3 of the International Building Code and are automatic closing by smoke detection in accordance with Section 716.5.9.3 of the International Building Code.</u></p>	
	<p><u>513.5.3.1 Group I-1 Condition 2; Group I-2 and ambulatory care facilities.</u> New section inserted.</p>	
	<p><u>513.6.3 Pressurized stairways and elevator hoistways.</u> New section.</p>	
	<p><u>513.7 Airflow design method.</u> When approved by the code official, smoke migration through openings fixed in a permanently open position, which are located between smoke control zones by the use of the airflow method, shall be permitted. The design airflows shall be in accordance with this section. Airflow shall be directed to limit smoke migration from the fire zone. The geometry of openings shall be considered to prevent flow reversal from turbulent effects. <u>Smoke control systems using airflow method shall be designed in accordance with NFPA 92.</u></p>	
	<p><u>513.11 Standby power.</u> New section.</p>	
	<p><u>513.12.1 Verification.</u> New section.</p>	
	<p><u>514.2 Prohibited applications.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<u>Exception:</u> The application of ERV equipment that recovers sensible heat only utilizing coil-type heat exchangers shall not be limited by this section.	
	CHAPTER 6 DUCT SYSTEMS	CHAPTER 6 DUCT SYSTEMS
	<u>601.5 Return air openings.</u> New section.	<u>601.5 Return air openings.</u> Add- <u>8.</u> Return air shall not be taken from indoor swimming pool enclosures and associated deck areas. <u>Exceptions:</u> 1. <u>Where the air from such spaces is dehumidified in accordance with Section 403.2.1, Item 2.</u> 2. <u>Dedicated HVAC systems serving only such spaces.</u>
	<u>602.2.1.5 Discrete plumbing and mechanical products in plenums.</u> New section inserted.	
		<u>602.2.1.6 Foam plastic to plenums as interior finish or interior trim.</u> New section.
	<u>602.2.1.7 Plastic plumbing pipe and tube.</u> New section.	<u>602.2.1.7 Plastic plumbing piping and tubing.</u> <u>Exception:</u> Plastic water distribution piping and tubing listed and labeled in accordance with UL 2846 as having a peak optical density of not greater than 0.50, a λ -n average optical density of not greater than 0.15, and a flame spread distance not greater than 5 feet (524 mm), and installed accordance with its listing.
		<u>602.1.8 Pipe and duct insulation within plenums.</u> New section.
603.2 Duct sizing. Ducts installed within a single dwelling unit shall be sized in accordance with ACCA Manual D-S based on		

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
<u>building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculations methodologies or other approved methods. Ducts installed within all other buildings shall be sized in accordance with the ASHRAE Handbook of Fundamentals or other equivalent computation procedure.</u>		
	<u>603.4.2 Duct lap.</u> New section.	
	TABLE 603.4 DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES FOR SINGLE DWELLING UNITS. Revised.	
		<u>603.5.2 Phenolic ducts.</u> New section.
		603.8.2 Sealing. Ducts shall be <u>approved for underground installation. Metallic ducts not having an approved plastic coating shall be completely encased in not less than 2 inches (51 mm) of concrete. Sealed and secured prior to pouring the concrete encasement.</u>
	603.9 Joints, seams and connections. Exception: <u>For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams of other than the snap-lock and button-lock types. Continuously welded and locking type longitudinal joints and seams in duct openings at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.</u>	
		604.11 Vapor retarders.

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		<p>Exception: <u>A vapor retarder is not required for spray polyurethane foam insulation having a water vapor permeance greater than 3 perms per inch [1722 ng/s * m² * Pa] of the installed thickness.</u></p>
	<p>607.3.1 Damper testing. Dampers shall be listed and labeled in accordance with the standards in this section. Fire dampers shall comply with the requirements of UL 555. Only fire dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire. Smoke dampers shall comply with the requirements of UL 555S, Combination fire/smoke dampers shall comply with the requirements of both UL 555 and UL 555s. Ceiling radiation dampers shall comply with the requirements of UL 555C or shall be tested as part of a fire-resistance-rated floor/ceiling or roof/ceiling assembly in accordance with ASTM E119 or UL 263. <u>Corridor dampers shall comply with the requirements of UL 555 and UL 555S. Corridor dampers shall demonstrate acceptable closure performance when subjected to 150 feet per minute (0.76 mps) velocity across the face of the damper using the UL 555 fire exposure test.</u></p>	<p>607.3.1 Damper testing. Dampers shall be listed and labeled in accordance with the standards in this section. Fire dampers shall comply with the requirements of UL 555. Only fire dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire. Smoke dampers shall comply with the requirements of UL 555S, <u>Only fire dampers labeled for use in dynamic systems shall be installed in heating, ventilating and air-conditioning systems designed to operate with fans on during a fire.</u> Smoke dampers shall comply with the requirements of UL 555S. Combination fire/smoke dampers shall comply with the requirements of both UL 555 and UL 555s. Ceiling radiation dampers shall comply with the requirements of UL 555C or shall be tested as part of a fire-resistance-rated floor/ceiling or roof/ceiling assembly in accordance with ASTM E119 or UL 263. <u>Only ceiling radiation dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire.</u> Corridor dampers shall comply with the requirements of UL 555 and UL 555S. Corridor dampers shall demonstrate acceptable closure performance when subjected to 150 feet per minute (0.76 mps) velocity across the</p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		face of the damper using the UL 555 fire exposure test.
	<u>607.3.2.4 Corridor damper ratings. New section.</u>	
	<p><u>607.3.3.2 Smoke damper actuation.</u> Revise- 1. Where a smoke damper is installed within a duct, a smoke detector shall be installed in the duct <u>or outside the duct with sampling tubes protruding into the duct. The detector or tubes within the duct shall be within 5 feet (1524 mm) of the damper. with</u> no Air outlets or inlets between the detector and the damper. The detector shall be listed for the air velocity, temperature and humidity anticipated at the point where it is installed. Other than in mechanical smoke control systems, dampers shall be closed upon fan shutdown where local smoke detectors require a minimum velocity to operate.</p> <p>Revise- 2. Where a smoke detector is installed above smoke barrier doors in a smoke barrier, a spot-type detector listed for a releasing service shall be installed in either side of the smoke barrier door opening. <u>The detector shall be listed for releasing service if used for direct interface with the damper.</u></p> <p>Revise – 3. Where a smoke damper is installed within an unducted opening in a wall, a spot-type detector listed for releasing service shall be installed within 5 feet (1524 mm) horizontally of the damper. <u>The detector shall be listed for releasing service if used for direct interface with the damper.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>607.5.4 Corridor/smoke barriers. A listed smoke damper designed to resist the passage of smoke shall be provided at each point a duct or air transfer opening penetrates a smoke barrier wall of a corridor enclosure required to have smoke and draft control doors in accordance with the International Building Code. Smoke dampers and smoke damper actuation methods shall comply with Section 607.5.4.1.</p> <p><u>A corridor damper shall be provided where corridor ceilings, constructed as required for the corridor walls as permitted in Section 708.4, Exception 3, of the International Building Code, are penetrated.</u></p> <p><u>A ceiling radiation damper shall be provided where the ceiling membrane of a fire-resistance-rated floor/ceiling or roof/ceiling assembly, constructed as permitted in Section 708.4, Exception 2, of the International Building Code, is penetrated.</u></p> <p>Exceptions:</p> <p>Add- <u>4. Smoke dampers are not required in smoke barriers required by Section 407.5 of the International Building Code for Group I-2 Condition 2 where the HVAC is fully ducted in accordance with Section 603 and where buildings are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Building Code and equipped with quick-response sprinklers in accordance with</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<u>Section 903.3.2 of the International Building Code.</u>	
	<u>607.5.4.1 Smoke damper.</u> New section.	
		<p>607.6.2 Membrane penetrations. Exceptions:</p> <ol style="list-style-type: none"> 1. <u>A fire-resistance-rated assembly tested in accordance with ASTM E119 or UL 263 showing that the ceiling radiation dampers are not required in order to maintain the fire-resistance rating of the assembly.</u> 2. <u>Where exhaust duct or corridor air duct penetrations are protected in accordance with Section 714.5.1.2 of the International Building Code, are located within the cavity of a wall and do not pass through another dwelling unit or tenant space.</u> 3. <u>Where duct and air transfer openings are protected with a duct outlet penetration system tested as part of a fire-resistance-rated assembly in accordance with ASTM E119 or UL 263.</u>
	<p>607.6.2.1 Ceiling radiation dampers. Add- <u>3. Where duct and air transfer openings are provided with a duct outlet protection system tested as part of a fire-resistance-rated assembly in accordance with ASTM E 119 or UL 263.</u></p>	
	CHAPTER 7 COMBUSTION AIR	
	<u>701.2 Dampered openings.</u> New section.	
		CHAPTER 8 CHIMNEYS AND VENTS
		<u>805.7 Insulation shield.</u> New section.

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p align="center">CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURING EQUIPMENT</p>	
		<p><u>901.4 Solid fuel-burning fireplaces and appliances in Group I-2, Condition 2. New section.</u></p>
	<p><u>903.4 Gasketed fireplace doors. New section.</u></p>	
	<p><u>908.5 Water supply. Revised.</u></p>	
	<p><u>908.8 Cooling towers. New section and subsections.</u></p>	
	<p><u>918.5 Outdoor and return air openings. New section inserted.</u></p>	
	<p><u>923.1 General.</u> Kilns shall be listed and labeled unless otherwise approved in accordance with Section 105.2. The provisions of this section shall apply to kilns that are used for ceramics, have a maximum interior volume of 20 cubic feet (0.566 m³) and are used for hobby and noncommercial purposes. Electric kilns shall comply with UL 499. <u>The approval of unlisted appliances in accordance with Section 105.2 shall be based on approved engineering analysis.</u></p>	
	<p><u>928.1 General.</u> Revise- 4. Be provided with <u>an approved water supply, sized for peak demand. The quality of water shall be provided in accordance with the equipment manufacturer’s recommendations. The piping system and protection shall be installed as required by the potable water backflow protection in accordance with Section 608 of the International Plumbing Code.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		<u>SECTION 929 HIGH-VOLUME LARGE-DAIMETER FANS.</u> New section.
		<u>929.1 General.</u> New section.
	CHAPTER 10 BOILERS, WATER HEATERS AND PRESSURE VESSELS	CHAPTER 10 BOILERS, WATER HEATERS AND PRESSURE VESSELS
	1003.1 General. All pressure vessels, <u>unless otherwise approved, shall be constructed and certified shall be</u> in accordance with the ASME Boiler and Pressure Vessel Code, shall <u>be installed in accordance with the manufacturer’s instructions and nationally recognized standards.</u> Directly fired pressure vessels shall meet the requirements of <u>Section 1004.</u> bear the label of an approved agency and shall be installed in accordance with the manufacturer’s installation instructions.	
	1003.3 Welding. Welding on pressure vessels shall be performed by <u>an R-Stamp holder in accordance with the National Board Inspection Code, Part 3 or in accordance with an approved standard</u> approved welders in compliance with nationally recognized standards.	
		1006.6 Safety and relief valve discharge. Revised.
	1007.1 General. Exception: <u>A low-water cutoff is not required for coil-type and water-tube boilers that require forced circulation of water through the boiler and that are protected with a flow-sensing control.</u>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>1007.2 Operations. <u>The Low-water cutoff control and flow sensing controls required by Section 1007.1 shall automatically stop the combustion operation of the appliance when the water level drops below the lowest safe water level as established by the manufacturer.</u></p>	
	<p>1008.1 General. <u>New section.</u></p>	
		<p>1009.2 Where required. New section.</p>
	<p>1009.2 Closed-type expansion tanks. Revised.</p>	
	<p>TABLE 1009.2 CLOSED-TYOE EXPANSION TANK SIZING. <u>New table.</u></p>	
	<p>CHAPTER 11 REFRIGERATION</p>	<p>CHAPTER 11 REFRIGERATION</p>
	<p>1101.10 Locking access port caps. <u>Exception: This section shall not apply to refrigerant circuit access ports on equipment in controlled areas such as on roofs with locked access hatches or doors.</u></p>	
	<p>1102.3 Access port protection. <u>New section.</u></p>	
		<p>1104.2.2 Industrial occupancies and refrigerated rooms. <u>This section applies only to rooms and spaces that: are within industrial occupancies; contain a refrigerant evaporator; are maintained at temperatures below 68 °F (20°C); and are used refrigerated rooms for manufacturing, food and beverage preparation, meat cutting, other processes and storage. Where a machine room would otherwise be required by Section 1104.2, a machine room shall not be required where all of the following conditions are met machinery rooms</u></p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
		<p>are not required where all of the following conditions are met: Revise- 3. <u>Refrigerant detectors are installed as required for machinery rooms in accordance with Section 1105.3.</u> Exceptions:</p> <ol style="list-style-type: none"> 1. <u>Refrigerant detectors are not required in unoccupied areas that contain only valves, valve assemblies, equipment, or equipment connections.</u> 2. <u>Where approved alternatives are provided, refrigerated detectors for ammonia refrigeration are not required for rooms or areas that are always occupied, and for rooms or areas that have high humidity or other harsh environment conditions that are incompatible with detection devices.</u>
		<p><u>1105.6.1.1 Indoor exhaust opening location.</u> New section.</p>
		<p>1106.4 Flammable refrigerants. Exception:</p> <ol style="list-style-type: none"> 1. Ammonia machinery rooms that are provided with ventilation in accordance with Section 1106.3. 2. <u>Machinery rooms for systems containing Group A21, refrigerants that are in accordance with Section 1106.5.</u>
		<p><u>1106.5 Special requirements for Group A21, refrigerant machinery rooms.</u> New section and subsections.</p>
		<p><u>TABLE 1106.5.2 MINIMUM EXHAUST RATES.</u> New table.</p>

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<p>1106.5.2 Ventilation system. A clearly identified switch of the break-glass type <u>or with an approved tamper-resistance cover</u> shall provide on-only control of the machinery room ventilation fans.</p>	
	<p>1107.1 General. <u>The design of refrigerant piping shall be in accordance with ASME B31.5.</u> All Refrigerant piping shall be installed, tested and placed in operation in accordance with this chapter.</p>	
		<p>1107.2 Piping location. Revised.</p>
	<p>CHAPTER 12 HYDRONIC PIPING</p>	
	<p>1208.1 General. Hydronic piping systems other than ground-source heat pump loop systems shall be tested hydrostatically at one and one half times the maximum system design pressure, but not less than 100 psi (689 kPa). The duration of each test shall be not less than 15 minutes. Ground-source heat pump loop systems shall be tested in accordance with Section 1208.1.1.</p>	<p>1208.1 General. Hydronic piping systems shall be tested hydrostatically at one and one half times the maximum system design pressure, but not less than 100 psi (689 kPa). The duration of each test shall be not less than 15 minutes. Exception: <u>For PEX piping systems, testing with a compressed gas shall be an alternative to hydrostatic testing where compressed air or other gas pressure testing is specifically authorized by all of the manufacturer’s instructions for the PEX pipe and fitting products installed at the time the system is being tested, and compressed air or other gas testing is not otherwise prohibited by applicable codes, laws or regulations outside of this code.</u></p>
	<p>SECTION 1210 PLASTIC PIPE GROUND-SOURCE HEAT PUMP LOOP SYSTEMS. <u>New section and subsections.</u></p>	
	<p>TABLE 1210.4 GROUND-SOURCE LOOP PIPE. <u>New table.</u></p>	

INTERNATIONAL MECHANICAL CODE SIGNIFICANT CHANGE COMPARISON STUDY

Amended IMC-2012	IMC-2015	IMC-2018
	<u>TABLE 1210.5 GROUND-SOURCE LOOP PIPE FITTINGS.</u> New table.	
		CHAPTER 14 SOLAR SYSTEMS
		1401.4 Solar energy equipment and appliances. Solar energy equipment and appliances shall conform to the requirements of this chapter and <u>ICC 900/SRCC 300</u> . Solar thermal systems shall be listed and labeled in accordance with the shall be installed in accordance with the manufacturer's instructions and <u>ICC 900/STRCC 300</u> .
		<u>1401.4.1 Collectors and panels.</u> New section.
		SECTION 1402 DESIGN AND INSTALLATION
		<u>1402.1 General.</u> New section.
		<u>1402.2 Access.</u> New section.
		<u>1402.3.1 Relief device.</u> New section.
		1402.4 Protection from freezing. Revised.
		<u>1402.4.1 Drain-back systems.</u> New section.
		<u>1402.4.2 Freeze-protection valves.</u> New section.
		<u>1402.5 Protection of potable water.</u> New section and subsections.
		<u>1402.6 Protection of equipment.</u> New section.
		<u>1402.7 Protection of structure.</u> New section and subsections.
		<u>1402.8 Equipment.</u> New section and subsections.
		<u>1403.2 Heat transfer fluids.</u> New section.
		<u>1403.3 Food grade additives.</u> New section.
		<u>1403.4 Toxicity.</u> New section.
		<u>1404.2 Water storage tanks.</u> New section.
		<u>1404.3 Fluid safety labeling.</u> New section.
		<u>1404.4 Heat exchangers.</u> New section.