2019 OREGON MECHANICAL SPECIALTY CODE
Adopted changes to the code

The following is a summary of the adopted significant changes to the *2019 Oregon Mechanical Specialty Code (OMSC).*

SECTION	DESCRIPTION OF CHANGE
Chapter 3 – General mechanical requirements	
304.11	**Guards** • 2015/2018 IMC change. • An exception has been added to allow for fall-arresting restraint systems as an alternative to guards.
306.1	**Access.** • 2015 IMC change. • The access requirements for appliances have been expanded to include control devices, heat exhangers and HVAC system components that utilize energy.
307.2.4	**Ductless mini-split system traps.** • 2015 IMC change • This section has been added to address ductless mini-split system traps, requiring those that produce condensate be provided with an inline check valve located in the drain line, or a trap.
307.2.5	**Drain Line Maintenance.** • 2015 IMC change • This section has been added to allow for cleanout without cutting the drainpipe or tube: Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.
307.3	**Condensate pumps.** • 2015 IMC change • This section has been added to address condensate pumps located in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment to prevent water damage if there is a pump failure: Condensate pumps located in uninhabitable spaces, such as attics and crawl spaces, shall be connected to the appliance or equipment served such that when the pump fails, the appliance or equipment will be prevented from operating. Pumps shall be installed in accordance with the manufacturers' instructions.
Chapter 4 – Ventilation	
403.2.1	**Recirculation of air.** • 2015 IMC change • This section has been modified to clarify that recirculation of air contained completely within spaces requiring mechanical exhaust shall not be prohibited.

SECTION	DESCRIPTION OF CHANGE
403.3	**Outdoor air and local exhaust airflow rates.** • 2015 / 2018 IMC change • To simplify the compliance path for Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane Sections 403.3.2 through 403.3.2.3 and Table 403.3.2.3 have been added specifically for Group R occupancies when using mechanical ventilation. • The provisions remain the same for other than Group R occupancies.
404.1	**Enclosed parking garages.** • 2018 IMC change • This section has been modified to clarify the intent for "intermittent" operation. The garage exhaust system can never shut off completely but automatic operation shall cycle the ventilation system between the following two modes of operation: 1. Full-on at an airflow rate of not less than 0.75 cfm per square foot [0.0038 m3/(s · m2)] of the floor area served. 2. Standby at an airflow rate of not less than 0.05 cfm per square foot [0.00025 m3/(s · m2)] of the floor area served.
Chapter 5 – Exhaust systems	
501.3	**Exhaust discharge.** • 2015 IMC change • This section has been modified to make it more enforceable by adding a third exception: "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." • Recirculating range hoods are permitted where continuous ventilation is provided in accordance with Table 403.3.1.1
502.20	**Manicure and pedicure stations.** • 2015 IMC change aligning with current OMSC • This section has been added and Table 403.3.1.1 has been modified to specifically address manicure and pedicure stations requiring that: 1. Exhaust systems be in accordance with Table 403.3.1.1, Note h. 2. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches (305 mm) horizontally and vertically from the point of chemical application.
504.8.2	**Duct installation.** • 2018 IMC change • This section has been modified to address the installation of clothes dryer exhaust ducts in wall and ceiling cavities requiring that, where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.
505.5	**Common exhaust systems for domestic kitchens located in multistory structures.** • 2015 IMC change • This section has been added to address the design and construction of exhaust shafts that serve domestic kitchen exhaust systems in multistory buildings.

SECTION	DESCRIPTION OF CHANGE
506.3.7.1	**Grease duct reservoirs.** • 2015 IMC change • This section has been modified to require a drease duct reservoir to be the full width of the duct in all cases and that it be provided with a drain opening.
506.3.8	**Grease duct cleanouts and openings.** • 2015 IMC change • This section has been modified to add cleaning spacing provisions consistent with Section 506.3.9 for horizontal ducts:" …Sections of grease ducts that are inaccessible from the hood or discharge openings shall be provided with cleanout openings 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)."
506.3.11	**Grease duct enclosures.** • 2015 IMC change • This section has been modified to specifically prohibit the installation of fire and smoke dampers in grease ducts.
506.3.13.2	**Type I hood exhaust termination.** • 2018 IMC change • This section has been modified to clarify that terminations through an exterior wall shall be located in accordance with Section 506.3.13.3 and shall not be located within 3 feet (914 mm) of any opening in the exterior wall.
506.5.1.2	**In-line fan location.** • 2015 IMC change • This section has been added to address the enclosure requirements for in-line exhaust fans located in kitchen hood exhaust ducts. • Where enclosed duct systems are connected to in-line fans not located outdoors, the fan shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of fan components. Such rooms or spaces shall be ventilated in accordance with the fan manufacturer's installation instructions.
506.5.2	**Pollution Control Units.** • 2018 IMC change • This section has been added to address pollution control units installed in the grease exhaust system to extract smoke, grease particles and odors from the exhaust flow. • Units shall be installed in accordance with the manufacturer's instructions, be listed and labeled for their specific use, etc.
506.5.4	**Exhaust fan mounting.** • 2015 IMC change • This section has been modified to require that hinged exhaust fans be provided with a means to limit the travel of the fan assembly.

SECTION	DESCRIPTION OF CHANGE
507.1	**Commerical kitchen hoods: General.** • 2015 IMC change • Type I hood installations shall comply with all aspects of a Type I exhaust system, whether the Type I hood is required by the code or installed by choice.
507.1.1	**Operation.** • 2015 IMC change • The requirement for automatic activation of the exhaust system has been revised to provide the intended performance requirements and to clarify that an interlock arrangement is an alternative to automatic hood operation.
507.1.1.1	**Multiple hoods utilizing a single exhaust system.** • 2015 IMC change • A section has been added prohibiting the use of a single sensor mounted in the common ductwork for commercial kitchen hood systems having multiple hoods manifolded together.
507.2.6	**Clearances for Type I hood.** • 2018 IMC change • An exception has been added to the clearance requirements for Type I hoods for those listed and labeled for clearances less than 18 inches in accordance with UL 710. They shall be installed with the clearances specified by the listings.
507.2.8	**Type I grease filters.** • 2015 IMC change. • This section has been modified to address the use of disposable grease filters.
507.3	**Type II hoods.** • Oregon amendment • This section was reorganized to clarify the exception to Type II hoods.
508.1.2	**Air Balance.** • 2015 IMC change • This section has been added to require an air balance schedule be submitted for commercial kitchen ventilation systems.
510.4 / 510.5	**Independent system and incompatible materials and common shafts.** • 2015 IMC change • These sections have been modified to clarify the scope in the exceptions: 3. Hazardous exhaust ductwork originating in different fire areas and manifolded together in a common shaft shall meet the provisions of Section 717.5.3, Exception 1, Item 1.1 of the *Building Code*. 8. Each hazardous exhaust duct system shall be served by redundant exhaust fans that operate simultaneously in parallel and each fan shall be individually capable of providing the required exhaust rate; or is controlled so as to operate when the other fan has failed or is shut down for servicing.

SECTION	DESCRIPTION OF CHANGE
510.7.1.1	**Shaft penetrations** • 2015 IMC change • Hazardous exhaust duct penetrations of shafts shall comply with the OSSC.
511.1.1	**Collectors and separators.** • Oregon amendment • Oregon adds pointers to NFPA 654 and 664 and the Electrical Code. • The amendment has been rewritten to clarify that the intent of the second exception is to allow five dust-producing system per collector.
514.2	**Prohibited applications.** • 2015 IMC change • This section has been modified to allow for previously limited applications if coil type is not heat wheel.
Chapter 6 – Duct systems	
602.1	**General.** • 2015 IMC change • This section has been modified to clarify that a plenum in a fire area cannot be connected to a plenum in an adjoining fire area by means of transfer ducts or opening.
602.2	**Construction.** • 2015 IMC change • This section has been modified to prohibit plenums being bound by the same materials that were used to create the space being used as a plenum. The plenum surfaces exposed to the airflow be constructed of noncombustible material or those that meet class I, 25/50 flame-spread and smoke-developed indices.
602.2.1.5	**Discrete plumbing and mechanical products in plenums.** • 2015 IMC change • This section has been added to address discrete products (see new definition) and require they be listed and labeled in accordance with UL 2043.
602.2.1.8	**Plastic Pipe Insulation within Plenums.** • 2018 IMC change • This section has been added to specifically address duct and pipe insulation in plenums.
603.5.2	**Phenolic Ducts.** • 2018 IMC change • This section has been added to address a newer type of nonmetallic phenolic duct (foil coated foam-board duct).
603.8.2	**Sealing.** • 2018 IMC change • This section has been modified to address testing of underground ducts: Ducts shall be leak tested as required by the Energy Code.

SECTION	DESCRIPTION OF CHANGE
603.9	**Joints, seams and connections.** • 2015 IMC change and 18 IMC change • This section has been modified to require duct sealant tapes be listed in accordance with UL181B. • Oregon adds an exception for adjustable metal elbow gore, longitudinal pipe joints, integral seams with a boot fitting or similar within a "Y" fitting.
607.3.1	**Damper testing.** • 2018 IMC change • This section has been modified to require dynamic-type ceiling radiation dampers where subject to continuous air flow from HVAC fans.
Chapter 7 – Combustion air	
701.2	**Dampered openings.** • 2015 IMC change • This section has been added to address dampers installed on combustion air openings and require they be interlocked with the appliance to prevent operation when the damper is closed. This section prohibits manual interlocks on combustion air openings.
Chapter 8 – Chimneys and vents	
802.9	**Door swing.** • 2015 IMC change • Doors are not permitted to swing within 12 inches of an appliance vent terminal.
Chapter 9 – Specific appliances, fireplaces and solid fuel-burning equipment.	
903.4	**Gaseketed fireplace doors.** • 2015 IMC change • This section has been added to prohibit gasketed fireplace doors for a factory-built fireplace unless listed for that fireplace.
929	**High Volume large-diameter fans.** • 2018 IMC change • This section has been added to address high-volume large-diameter fans. Where provided, high-volume large-diameter fans shall be tested and labeled in accordance with AMCA 230, listed and labeled in accordance with UL 507, and installed in accordance with the manufacturer's instructions.
Chapter 11 – Refrigeration	
1105.6.3	**Ventilation rate.** • 2018 IMC change • This has been modified to clarify that the 30 ACH is for emergency operation and not for normal conditions.

SECTION	DESCRIPTION OF CHANGE
1107.2	**Refrigerant Piping location.** • 2018 IMC change • This section has been modified to clarify the prohibited locations for refrigerant piping to any of the following: 1. A fire-resistance-rated exit access corridor. 2. An interior exit stairway. 3. An interior exit ramp. 4. An exit passageway. 5. An elevator, dumbwaiter or other shaft containing a moving object. 6. A shaft that has one or more openings into a fire-resistance-rated exit access corridor, interior exit stairway or ramp or exit passageway.
Chapter 14 – Solar thermal systems	
All	**Solar thermal.** • 2018 IMC change • This chapter has been rewritten to address current technology.
Appendix C – Fuel Gas	
C303.3	**Prohibited locations.** • 2018 IFGC change • This section has been added to allow gas-fired clothes dryers in toilet rooms or bathrooms if a permanent opening to another room is provided. - A clothes dryer is installed in a residential bathroom or toilet room having a permanent opening with an area of not less than 100 square inches (0.06 m^2) that communicates with a space outside of a sleeping room, bathroom, toilet room or storage closet.
C304.1	**Combustion, ventilation and dilution air: General.** • 2015 IFGC change • This section has been modified to clarify that the prescriptive combustion air provisions of Section C304 do not apply to appliances have power burners.
C307.6	**Condensate Pumps.** • 2015 IFGC change • This section has been added to address condensate pumps in uninhabitable spaces and used with condensing fuel-fired appliances and cooling equipment. • Condensate pumps located in uninhabitable spaces, such as attics and crawl spaces, shall be connected to the *appliance* or *equipment* served such that when the pump fails, the *appliance* or *equipment* will be prevented from operating. Pumps shall be installed in accordance with the manufacturer's instructions.
C403.4.2	**Steel, Schedule 10 press-fittings gas pipe.** • 2018 IFGC change • This section has been modified to allow the use of Schedule 10 steel pipe for fuel gas services

SECTION	DESCRIPTION OF CHANGE
C403.10.1	**Pipe joints** • 2018 IFGC change • This section has been modified to differentiate the requirements for Schedule 40 or heavier pipe and lighter than schedule 40 pipe connections. Schedule 40 and heavier require press-connect fittings listed in accordance with ANSI LC4/CSA 6.32.
C404.5	**Fittings in concealed locations.** • 2015 IFGC change • This section has been modified to clarify the correct application for fittings in concealed locations.
C404.7	**Protection of Piping against physical damage.** • 2015 IFGC change • This section has been added to require protection against penetration by fasteners where piping will be concealed within light-frame construction assemblies. • The exception has been modified, by Oregon, to clarify that the exempted steel pipe must be at least schedule 40 or thicker.
C404.11	**Corrosion Protection of Steel Gas Pipe.** • 2018 IFGC change • This section has been rewritten to include three distinct prescriptive methods for protection from corrosion for steel pipe: 1. The piping shall be made of corrosion-resistant material that is suitable for the environment in which it will be installed. 2. Pipe shall have a factory-applied, electrically-insulating coating. Fittings and joints between sections of coated pipe shall be coated in accordance with the coating manufacturer's instructions. 3. The piping shall have a cathodic protection system installed and the system shall be monitored and maintained in accordance with an approved program.
C404.14	**Piping underground beneath buildings.** • 2018 IFGC change • This section has been modified to allow for a listed encasement system for underground beneath a building.
C404.18	**Pipe Cleaning.** • 2015 IFGC change • This section has been added to prohibit the use of fuel gas as a medium for flushing foreign matter and debris from fuel-supply piping.
C406.4 **C406.4.1**	**Test pressure.** • Oregon amendments • Mechanical gauges used to measure test pressure shall use a 15-psi gauge or 30-psi gauge for testing 14 inches w.c. systems and a 100-psi gauge for testing systems exceeding 14 inches w.c. operating pressure. The gauges shall not exceed the manufacturer's listing and labeling. • Oregon specified the exception is for LP-gas systems.

SECTION	DESCRIPTION OF CHANGE
C409.5.1	**Located in same room.** • 2018 IFGC change • This section has been modified so that shutoff valves behind movable appliances are considered as meeting the access requirement: Shutoff valves serving movable appliances, such as cooking appliances and clothes dryers, shall be considered to be provided with access where installed behind such appliances.
C409.7	**Shutoff valves in tubing systems.** • 2018 IFGC change • This section has been added to address shutoff valve support for tubing systems and requires they be rigidly and securely supported independently of the tubing. • An exception specific to Oregon has been added for gas fireplaces installed in accordance with manufacturer's instructions.
C410.2	**Medium Pressure Regulators.** • 2015 / 2018 IFGC change • This secton has been modified to require that line regulators installed in rigid piping must have a union installed to allow removal of the regulator to provide a new alternative to the required pressure tap fitting downstream of a medium pressure regulator.
C411.1	**Connecting appliances.** • 2015 IFGC change • This section has been modified to limit connecting to gas distribution systems to gas hoses designed for that purpose.
C411.1.1	**Commercial cooking appliances.** • 2015 IFGC change • This section has been modified to specify requirements for the safe installation of ANSI Z21.69 connectors for commercial cooking appliances: The commercial cooking appliance connector installation shall be configured in accordance with the manufacturer's instructions. Movement of appliances with casters shall be limited by a restraining device installed in accordance with the connector and appliance manufacturer's instructions.
C502.7.1	**Door swing.** • 2015 IFGC change • Doors are not permitted to swing within 12 inches of an appliance vent terminal.
C503.4.1 **C503.4.1.1** **C503.4.2**	**Plastic piping.** **Plastic vent joints.** **Special gas vent** • 2018 IFGC change • This section has been modified to require materials be listed and labeled in accordance with the product standards.
C503.6.10.3	**Category II, III, and IV appliances.** • 2015 IFGC change • This section has been modified to address the sizing of vents that do not fall under the definition of vents, which shall be in accordance with the manufacturer's instructions.

SECTION	DESCRIPTION OF CHANGE

C503.8	**Venting system termination location.**
	• 2015 / 2018 IFGC change
	• This section has been modified by:
	  • Reformatting the direct-vent appliances into a table
	  • Adding a new category for direct-vent appliances having higher Btu/hr inputs that are more consistent with nonresidential appliances.
	  • Adding language to require vent systems for Category IV appliances that terminate through an outside wall of a building and discharge flue gases perpendicular to the adjacent wall to be located not less than 10 feet (3048 mm) horizontally from an operable opening in an adjacent building. This requirement doesn't apply to vent terminals that are 2 feet (607 mm) or more above or 25 feet (7620 mm) or more below operable openings.

C623.2	**Cooking appliances: Prohibited locations.** • 2015 IFGC change • An exception has been added permitting the installation of cooking appliances listed as commercial and domestic.