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## Welcome to the PMG Educational Program

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## 2018 IMC and IFGC Significant Changes

Based on the  
2018 International Mechanical Code®, (IMC®)  
2018 International Fuel Gas Code®, (IFGC®)



### Course Icons





**Addition**      **Deletion**      **Modification**      **Clarification**

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## 2018 International Mechanical Code®, IMC®



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Chapter 2

**Definitions**

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Section 202



**COMMERCIAL COOKING APPLIANCE**

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Section 202 – 2015 IMC

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**COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or a portion thereof used for the preparation and serving of food.

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Section 202 – 2018 IMC

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**COMMERCIAL COOKING APPLIANCES.** Appliances used in a commercial food service establishment for heating or cooking food. For the purpose of this definition, a commercial food service establishment is where food is prepared for sale or is prepared on a scale that is by volume and frequency not representative of domestic household cooking.

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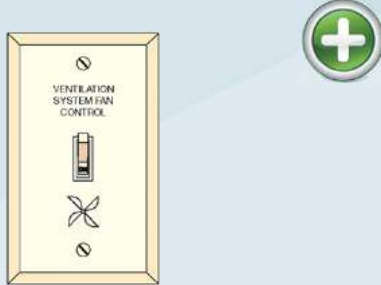
# Chapter 4

## Ventilation

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### 403.3.2.4 System Controls

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### 403.3.2.5 Ventilating Equipment


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### 404.1 Enclosed Parking Garages

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# Chapter 5

## Exhaust Systems

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**504.4 Exhaust Installation**

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**504.4.1 Exhaust Termination Outlet and Passageway Size**

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Using the blower unit from an electric dryer and a Magnetic Gauge we ran some random pressure testing on popular roof vent caps. Back pressures provided is some more equal to what three or more elbows would provide.

27 inches of water column pressure  
2 times as much as a typical elbow

30 inches of water column pressure  
3 times as much as a typical elbow

Popular 4 inch wide galvanized roof vent = 35 inches of water column pressure = 3.5 times as much pressure as a typical elbow

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**504.8.2 Duct Installation**

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Examples of "mechanical walls" showing the acceptance of utilities in this wall. Demonstrating the need to provide more than 3.5"

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### 506.3.13 Termination Through an Exterior Wall, Termination Location

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Fixed panel non-operable window

Not less than 3 feet

Kitchen exhaust fan

Openable window

Not less than 10 feet

Not less than 3 feet

Air intake louver

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### 506.5.2 Pollution-Control Units

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### 507.2.6 Clearances for Type I Hood

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# Chapter 6

# Duct Systems

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### 602.2.1.8 Pipe and Duct Insulation with Plenums

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Photo courtesy of Armoval, LLC

Pipe and duct insulation for use in plenums must meet the limitations and conditions specified in Section 602.2.1.8.

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### 603.5.2 Phenolic ducts

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### 603.8.2 Sealing

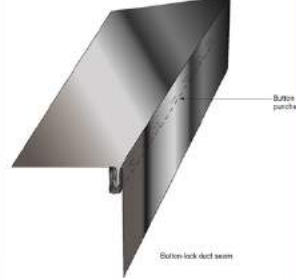

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### 603.9 Joints, Seams and Connections

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Butt-joint

Butt-lock duct seam



Variations of snap-lock round duct seams

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### 607.3.1 Damper Testing

Diagram illustrating the testing setup for a ceiling radiation damper. The setup includes a ceiling radiation damper, a thermal blanket, a lay-in diffuser, a tee bar, and a fusible link. A note states: "ALL HANGER WIRES MUST BE VERTICAL (NOT SPLAYED)". A dimension of "3 3/4 IN. MAX." is indicated for the distance between the tee bar and the damper. A pencil icon is present in the top right corner.

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## Chapter 9

# Specific Appliances, Fireplaces and Solid-Fuel-burning Equipment

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### 929 High-Volume Large-Diameter Fans

Photograph showing a large, multi-bladed industrial fan installed in a warehouse. A green plus sign icon is present in the top right corner.

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## Chapter 11

# Refrigeration

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### 1105.6.3 Ventilation Rate

The diagram illustrates a ventilation system for a machinery room. It shows a room containing ammonia refrigeration equipment. Exhaust air outlets are located on the ceiling. A fan is positioned above the room, drawing air from the exhaust outlets. Make-up air is shown entering the room from above. A note states: "Minimum ventilation to be based on IAR2".

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### 1107.2 Piping Location

A photograph showing a spiral staircase with metal railings, illustrating the location of piping.

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## Chapter 14

# Solar Thermal Systems

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### Chapter 14 Solar Thermal Systems

A photograph showing two workers installing solar panels on a roof.

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**Chapter 3**

**General Regulations**

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**303.3 Prohibited Locations #6**

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**310.2 CSST**

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### 310.2.3 Bonding Jumper Length

The additional grounding electrode by the gas service allows the CSST to be grounded to earth by a very short grounding conductor and allows the CSST to be bonded to the electrical service grounding electrode system by a bonding conductor that is not limited to 75 feet in length.

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### 310.3 Arc-resistant CSST

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## Chapter 4

# Gas Piping Installations

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### 403.4.2 Steel and 403.10 Pipe Joints

Press-connect fittings use gaskets and special equipment to join steel gas piping

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### Section 404.11.1-4 Protection Against Corrosion

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### 404.14 Piping Underground Beneath Buildings

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### 409.5.1 Located within same room

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Countertop

Kitchen cabinets

Kitchen cabinets

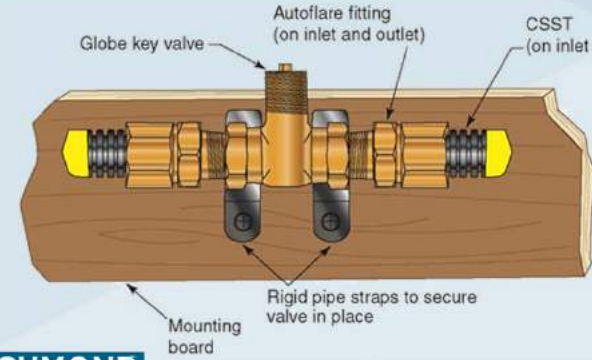
Appliance shutoff valve located behind gas range



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### 409.7 Shutoff Valves in Tubing Systems

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Globe key valve

Autoflare fitting (on inlet and outlet)

CSST (on inlet and outlet)

Rigid pipe straps to secure valve in place

Mounting board



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### 409.7 Shutoff Valves in Tubing Systems

CSST

Key handle valve

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## Chapter 5

# Chimney and Vents

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### Section 503.4.1 Plastic Piping, 503.4.1.1 Plastic Vent Joints and 503.4.2 Special Gas Vent

Skyline Termination

Adjustable Flashing

Skyline Termination

Co-Linear Adapter

Locking Band

Wall Strap

Single Wall Pipe

45° Elbow

Locking Band (both set of pipes)

Appliance Adapter

Adapter Connector

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### 503.8 #2 and #3 and Table 503.8

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DIRECT-VENT APPLIANCE INPUT RATING (Btu/hr)	THROUGH-THE-WALL VENT TERMINAL CLEARANCE FROM ANY AIR OPENING INTO THE BUILDING (inches)
< 10,000	6
≥ 10,000 ≤ 50,000	9
> 50,000 ≤ 150,000	12
> 150,000	In accordance with the appliance manufacturer's instructions and not less than the clearances specified in Section 503.8, Item 2

For SI: 1 inch = 25.4 mm, 1 Btu/h = 0.2931 W.

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## Discussion Activity



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## Final Reflection


- This slide will help the learner to reflect on the day and what they will take back to the job and apply.
- What? What happened and what was observed in the training?
- So what? What did you learn? What difference did this training make?
- Now what? How will you do things differently back on the job as a result of this training?

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**Thank you for participating**



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