

(b) This is a department rule in addition to the requirements in IMC section 403.2: The outdoor air shall be free from contamination of any kind in proportions detrimental to the health and comfort of the general population exposed to it.

(3) RECIRCULATION OF AIR. This is a department informational note to be used under IMC section 403.2.1:

**Note:** The following are examples where the department will accept air transferred from: corridor to toilet room; corridor to cloak room or janitor closet; dining room to kitchen; locker room to toilet room; gymnasium to locker room; showroom to garage; and corridor to school vocational shops.

(4) VENTILATION RATE. (a) This is a department rule in addition to the requirements in IMC section 403.3:

1. 'Toilet rooms.' A toilet room that has only one water closet or urinal and no bathtub or shower shall be provided with either natural ventilation via a window or louvered opening with at least 2 square feet of area openable directly to the outside or mechanical exhaust ventilation as specified in Table 64.0403.

2. 'Janitor closets.' A janitor closet that has only one service sink shall be provided with either natural ventilation via a window or louvered opening with at least 2 square feet of area openable directly to the outside or mechanical exhaust ventilation as specified in Table 64.0403.

3. 'Locker and shower rooms.' An adjoining locker, shower and toilet room shall be exhausted at the rate specified in Table 64.0403 based on the largest amount of exhaust required for any of the three rooms. A negative pressure relationship shall be maintained in the shower and toilet rooms with respect to the locker room.

4. 'Chemical or septic toilets.' Chemical or septic toilets and composting privies are prohibited in spaces under negative pressure. Toilet rooms with chemical or septic toilets shall be provided with natural ventilation via a window, louver or skylight with at least 2 square feet of area openable directly to the outside. The opening shall be provided with a screen to limit the passage of insects and vermin.

5. 'Pool ventilation.' In a natatorium, the volume of supply air and exhaust air may be reduced to a minimum of 1 cfm per square foot of pool surface provided automatic humidity controls perform so as not to create accelerated building material deterioration from moisture condensation.

(b) Substitute the following wording for the requirements and exceptions in IMC section 403.3:

1. Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate determined in accordance with Table 64.0403 based on the occupancy of the space, the occupant load and a minimum of 7.5 cfm of outside air per person, or other parameters stated therein.

2. The occupant load utilized for design of the ventilation system shall not be less than the number determined from the estimated maximum occupant load rate indicated in Table 64.0403.

3. Where there is no value indicated for the net square feet per person in Table 64.0403, the actual number of occupants shall be used to determine the required amount of outside air.

4. Ventilation rates for occupancies not represented in Table 64.0403 shall be determined by an approved engineering analysis, or by using the most similar occupancy in the table.

5. The ventilation system shall be designed to supply the required rate of ventilation air continuously during the period the building is occupied, except as otherwise stated in other provisions of this chapter.

**Note:** See Table 64.0403 for specific occupancies.

(c) This is an additional department exception to the requirements in IMC section 403.3: The estimated maximum occupant load rate may be determined using other means with justification acceptable to the department to show that a different number of occupants is reasonable.

(d) This is a department rule in addition to the requirements in IMC section 403.3:

1. Except as provided in subd. 2., spaces requiring different ventilation requirements shall be provided with a complete solid separation or the most stringent ventilation requirement shall apply to all unseparated areas.

2. The separation as specified in subd. 1. shall not be required where an engineered ventilation design system will prevent the concentration of contaminants from exceeding that obtainable by providing a physical separation.

(e) This is a department rule in addition to the requirements in IMC section 403.3:

1. 'Outside air requirement waived'. If a mechanical air supply system is provided and the requirement for outdoor air determined in accordance with Table 64.0403 is less than 5% of the minimum required air changes per hour, the requirement for outside air may be eliminated.

2. 'Outside air requirement and percent of openings waived.' The requirement for outside air or percent of openings specified in Table 64.0403 may be omitted in large volume spaces containing 5,000 or more cubic feet per occupant. Required exhaust ventilation and makeup air shall not be omitted.

(5) COMMON VENTILATION SYSTEM. These are department alternatives to the requirements in IMC section 403.3.2:

(a) *General.* Each room served by a mechanical ventilation system shall be provided with the minimum outdoor airflow rate determined individually for each room, or the minimum amount of outside air may be supplied to the system if a minimum air change rate is provided in accordance with this subsection or waived in accordance with par. (c).

(b) *Minimum air change.* 1. 'Application.' a. Required air change shall be provided while people are present.

b. The air-change rate may be based on actual room height or up to 10 feet from the floor level of the room in question. The volume above 10 feet, in rooms that are more than 10 feet in height, need not be considered in the air change requirement if the required air change is designed to occur in the lower 10 feet of the occupied space.

c. The required minimum air change volume shall be transferred through the air handling equipment where it is diluted or replaced with outside air, and supplied back to the space.

2. 'Six air changes per hour.' Except as specified in subd. 3 and unless mechanical exhaust is required by Table 64.0403, the total air change rate for each room shall be at least 6 air changes per hour.

3. 'Less than six air changes per hour.' An air change rate of less than 6 air changes per hour will be permitted where mechanical cooling (air conditioning) is provided to maintain an interior design temperature of 78°F or lower and the heat gain requirement for the space has been satisfied. The air change rate may not be less than the minimum air changes per hour if specified in Table 64.0403.

**Note:** As specified in s. Comm 64.0403, the amount of outside air required must be maintained even if the air change rate is reduced.

(c) *Air change requirement waived.* The air change requirement for 6 air changes per hour may be omitted in any of the following applications:

1. Spot heating.
2. Buildings where the requirement for outside air is waived in accordance with sub. (4) (e).
3. Buildings utilizing natural ventilation as specified in IMC section 402.

**(6) REQUIRED OUTDOOR VENTILATION AIR.** (a) Substitute the following table for IMC Table 403.3:

Room or Space	Minimum Outdoor Air per Person per Hour
Classrooms	15
Offices	15
Conference rooms	15
Restrooms	15
Stairways	15
Corridors	15
Other rooms	15

**Table 64.0403**  
**Required Minimum Inside Temperature**  
**And Outdoor Ventilation Air**

Occupancy Classification <sup>1</sup>	Minimum Inside Temperature (degrees F)	Estimated Maximum Occupant Load (persons per 1,000 sq. ft.) <sup>2</sup>	Ventilation Requirements Basis of Capacity		
			Natural Ventilation Allowed	Exhaust <sup>e</sup> (cfm/net sq. ft. floor area)	Air Change Rate <sup>k</sup> (minimum air change per hour with A/C)
<u>Correctional facilities</u>					
Sleeping rooms <sup>j</sup>	68	20	yes	---	---
Dining halls	68	100	no	---	2.0
Guard stations	68	40	yes	---	---
<u>Dry cleaners, laundries</u>					
Coin-operated dry cleaners	68	8	yes	---	1.0
Coin-operated laundries	68	8	yes	---	1.0
Commercial dry cleaner	60	---	no	2.00	---
Commercial laundries	60	---	no	2.00	---
Storage, pick up	60	8	yes	---	1.0
Apartment laundry rooms	60	---	no	0.5	---
<u>Education</u>					
Auditoriums	68	150	no	---	2.0
Classrooms	68	50	no	---	2.0
Day care facilities	68	30	yes only if ≤ 20 children	---	2.0
Laboratories (science)	68	30	no	---	2.0
Corridors with lockers	68	---	---	---	10 cfm/lineal ft. of length
Music rooms	68	50	no	---	2.0
Smoking lounges <sup>b,g</sup>	68	---	no	2.00	---
Special education	68	35	no	---	2.0
Training shops	60	30	no	---	---
<u>Food and beverage service</u>					
Bars and cocktail lounges	68	100	no	---	2.0
Cafeterias, fast food	68	100	no	---	2.0
Dining rooms	68	70	no	---	2.0
Kitchens (cooking) <sup>f,g</sup>	60	20	yes	---	1.0

Table 64.0403

Required Minimum Inside Temperature  
And Outdoor Ventilation Air

Occupancy Classification <sup>1</sup>	Ventilation Requirements Basis of Capacity				
	Minimum Inside Temperature (degrees F)	Estimated Maximum Occupant Load (persons per 1,000 sq. ft.) <sup>a</sup>	Natural Ventilation Allowed	Exhaust <sup>e</sup> (cfm/net sq. ft. floor area)	Air Change Rate <sup>k</sup> (minimum air change per hour with A/C)
<u>Health care facilities</u>	footnote m	footnote m	footnote m	footnote m	footnote m
Hospitals					
Nursing homes					
Ambulatory surgery centers					
<u>Hotels, motels, resorts and dorms</u>					
Assembly rooms	68	120	no	---	2.0
Bathrooms <sup>b,g</sup>	68	---	no	35 cfm/room	---
Bedrooms	68	footnote n	yes	---	---
Conference rooms	68	50	no	---	2.0
Dormitory sleeping areas	68	20	yes	---	---
Casinos	68	---	no	2.00	---
Living rooms	68	footnote n	yes	---	---
Lobbies	68	30	no	---	---
<u>Industrial/Factory</u>					
Factories and machine shops	60	13	yes	---	---
Foundries	NMR	13	yes	---	---
Sawmill	NMR	---	yes	---	---
<u>Offices</u>					
Conference rooms	68	50	no	---	1.5
Office spaces	68	7	no	---	1.5
Reception areas	68	60	no	---	1.5
Telecommunication centers and data entry	68	60	no	---	1.5
<u>Places of worship, entertainment and recreation which accommodates less than 100 persons</u>	footnote h	---	yes	footnote h	---

Table 64.0403  
**Required Minimum Inside Temperature  
 And Outdoor Ventilation Air**

Occupancy Classification <sup>1</sup>	Ventilation Requirements Basis of Capacity				
	Minimum Inside Temperature (degrees F)	Estimated Maximum Occupant Load (persons per 1,000 sq. ft.) <sup>2</sup>	Natural Ventilation Allowed	Exhaust <sup>e</sup> (cfm/net sq. ft. floor area)	Air Change Rate <sup>k</sup> (minimum air change per hour with A/C)
<u>Private dwellings, single and multiple</u>					
Living areas	68	2 people for first bedroom plus one person for each additional bedroom	yes	---	---
Kitchens <sup>3</sup>	68	---	yes	100 cfm intermittent or 20 cfm continuous	---
Toilet rooms and bathrooms <sup>4,1</sup>	68	---	no	Mechanical exhaust capacity 50 cfm intermittent or 20 cfm continuous	---
Garages, separated by a solid wall for each dwelling	NMR	---	yes	100 cfm/vehicle	---
Garages, common for multiple units <sup>5</sup>	NMR	---	no	0.5	---
<u>Retail stores, sales floors and showroom floors</u>	68	8	yes	---	1.0

**Table 64.0403**  
**Required Minimum Inside Temperature**  
**And Outdoor Ventilation Air**

Occupancy Classification <sup>1</sup>	Minimum Inside Temperature (degrees F)	Estimated Maximum Occupant Load (persons per 1,000 sq. ft.) <sup>a</sup>	Ventilation Requirements Basis of Capacity		
			Natural Ventilation Allowed	Exhaust <sup>e</sup> (cfm/net sq. ft. floor area)	Air Change Rate <sup>k</sup> (minimum air change per hour with A/C)
<u>Seasonal occupancies, camps and lodges</u>					
Dining and recreational areas	NMR	15	yes	---	---
Living and sleeping areas	NMR	---	yes	---	---
Club houses	NMR	15	yes	---	---
Drive-ins	NMR	15	yes	---	---
<u>Specialty shops</u>					
Automotive service and repair garages	60	---	no	0.5	---
Barber shops	68	25	no	---	---
Beauty salons <sup>c</sup>	68	---	no	0.5	---
Clothier, furniture specialty shops	68	8	yes	---	1.0
Florist shops	68	8	yes	---	1.0
Hardware, drugs, fabrics stores	68	8	yes	---	1.0
Supermarkets	68	8	yes	---	1.0
<u>Sports and amusement</u>					
Ballrooms and discos	68	100	no	---	2.0
Bleacher areas	68	363 or 18 in./person	no	---	2.0
Bowling centers (seating areas)	68	70	no	---	2.0
Game rooms	68	70	no	---	2.0
Natatoriums	76	---	---	2.0 cfm/ sq. ft. pool area	---
Ice skating rinks (indoor)	NMR	5	no	---	---
Playing floor (gymnasiums)	68	30	no	---	2.0
Roller skating rinks (indoor)	60	30	no	---	2.0
Spectator areas (non-bleacher)	68	150	no	---	2.0

Table 64.0403

**Required Minimum Inside Temperature  
And Outdoor Ventilation Air**

Occupancy Classification <sup>1</sup>	Minimum Inside Temperature  (degrees F)	Estimated Maximum Occupant Load  (persons per 1,000 sq. ft.) <sup>a</sup>	Ventilation Requirements Basis of Capacity		
			Natural Ventilation Allowed	Exhaust <sup>e</sup>  (cfm/net sq. ft. floor area)	Air Change Rate <sup>k</sup>  (minimum air change per hour with A/C)
<u>Storage</u>					
Chlorine storage and handling rooms	NMR	---	no	2.00	---
Enclosed parking garages <sup>d</sup>	NMR	---	no	0.50	---
Warehouses	NMR	---	---	---	---
<u>Theaters</u>					
Auditoriums	68	150	no	---	2.0
Lobbies	68	150	no	---	---
Stages, studios	68	70	no	---	2.0
Ticket booths	68	60	no	---	2.0
<u>Transportation</u>					
Platforms	NMR	100	no	---	2.0
Waiting rooms	68	100	no	---	2.0
<u>Utility and public spaces</u>					
Elevators <sup>g</sup>	NMR	---	no	1.00	---
Janitor closets <sup>1</sup>	NMR	---	no	2.0 or 75 cfm/sink	---
Locker and dressing rooms <sup>b</sup>	70	---	no	0.5	---
Shower rooms	70	---	no	2.00	---
Toilet rooms <sup>b, g, l</sup>	68	---	no	75 cfm/TF	---
Smoking lounges <sup>b, g</sup>	68	---	no	2.00	---
<u>Workrooms</u>					
Bank vault	68	5	no	---	---
Meat processing workroom	NMR	10	yes	---	---
Pharmacy	68	20	yes	---	1.5
Photo studio	68	10	yes	---	1.0
Printing	60	13	yes	footnote <sup>o</sup>	---

CFM = Cubic feet per minute; LF = Lineal foot; NMR = No minimum requirement; TF = Toilet fixtures (water closets and urinals); A/C = Air conditioning

<sup>a</sup> Based upon net floor area.

<sup>b</sup> Mechanical exhaust is required and the recirculation of air from these spaces that would otherwise be allowed by IMC section 403.2.1 is prohibited.

<sup>c</sup> The classification of a 'beauty' shop depends on the types of services provided. Only beauty salons routinely provide chemical processing of hair to produce texture or color changes, or manicures or other services with a similar need for air-borne contaminant and odor control.

<sup>d</sup> Enclosed parking garages are parking garages with less than 30% open areas in the total wall area enclosing the garage. Ventilation systems in enclosed parking garages shall comply with IMC section 404. A mechanical ventilation system shall not be required in garages having a floor area of 850 square feet or less and used for the storage of 5 or fewer motorized vehicles. Requirements for parking garages shall apply to all buildings, or parts of buildings, into which motor vehicles are driven for loading or unloading or are stored.

<sup>e</sup> The ventilation rate is based upon cubic feet per minute per square foot of the floor area being ventilated.

<sup>f</sup> The sum of the outdoor and transfer air from adjacent spaces shall be sufficient to provide an exhaust rate of not less than 1.5 cfm/sf.

<sup>g</sup> Transfer air permitted in accordance with IMC section 403.2.2.

<sup>h</sup> See specific occupancy classification table entries for inside design temperature and cfm per net square feet floor area requirements.

<sup>i</sup> This table is intended as a reference guide with generic Use types listed under those Occupancy types most often associated with the use. When Use types are mixed between Occupancy types and the Use type is unlisted within the specific Occupancy type, the use shall be ventilated as required by the same Use type listed in the other Occupancy type. Unlisted occupancies or uses shall be ventilated as required for the most similar listed occupancy classification acceptable to the department. Rooms that are used for different purposes at different times shall be designed for the greatest amount of ventilation required for any of the uses.

<sup>j</sup> When unseparated toilet fixtures are included in sleeping areas (such as cells), the room shall be ventilated as required for toilet rooms.

<sup>k</sup> See sub. (5) for specific requirements and exceptions. Units listed as minimum air change per hour with air conditioning unless otherwise specified.

<sup>l</sup> Natural ventilation may be allowed under this section.

<sup>m</sup> For air ventilation requirements in healthcare facilities; use American Institute of Architects (AIA) guidelines, (R673, Guidelines for Design and Construction of Hospital and Health Care Facilities).

<sup>n</sup> The minimum mechanical ventilation rate is 15 cfm/room of outside air.

<sup>o</sup> Refer to IMC chapter 5 for requirements.

**Comm 64.0404 Enclosed parking garages. (1) ENCLOSED PARKING GARAGES. (a)**

These are department rules in addition to the requirements in IMC section 404.1:

1. Operate the exhaust for a minimum of 5 hours per day.
2. Maintain 1 ppm NO<sub>2</sub> or less where diesel fuel vehicles are stored.
3. Maintain negative or neutral pressure relative to other spaces.

(b) Substitute the following wording for the requirements in IMC section 404.1: Mechanical ventilation systems for enclosed parking garages are not required to operate continuously where the system is arranged to operate automatically upon detection of carbon monoxide of 35 parts per million (ppm) by approved automatic detection devices.

(2) MINIMUM VENTILATION. Substitute the following wording for the requirements in IMC section 404.2: Automatic operation of the system shall not reduce the ventilation rate below 7.5 cfm per person and the system shall be capable of producing an exhaust rate of 0.5 cfm per square foot of floor area.

**Comm 64.0501 Required systems.** This is a department exception to the requirements in IMC section 501.4: A mechanically exhausted room or space that is within a dwelling unit which is served by an independent heating, ventilating and air conditioning system is not required to be maintained with negative or neutral pressure.

**Comm 64.0502 Required systems.** Substitute the following wording for the requirements in IMC section 502.1: An exhaust system shall be provided, maintained and operated as specifically required by this section and for all occupied areas where machines, vats, tanks, furnaces, forges, salamanders and other appliances, equipment and processes in such areas produce or throw off dust particles sufficiently light to float in the air or which emit heat, odors, fumes, spray, gas or smoke, in such quantities to be injurious to health or safety.

**Comm 64.0506 Commercial kitchen grease ducts and exhaust equipment. (1)**  
GENERAL. This is an informational note to be used under IMC section 506.1:

**Note:** See Table 64.0403 for modifications in regarding required cfm/person.

**(2) EXHAUST FANS. (a)** This is a department alternative to the requirements, but not the exceptions, in IMC section 506.3.3: Joints may be made with any other means that provide a liquid-tight seal at 1500°F.

**(b)** Substitute the following wording for the requirements in IMC section 506.3.3.1:

1. Duct joints shall be butt joints or overlapping duct joints of either the telescoping bell type or flanged. Overlapping joints shall be installed to prevent ledges and obstructions from collecting grease or interfering with gravity drainage to the intended collection point.

2. The difference between the inside cross-sectional; dimensions of overlapping sections of duct shall not exceed 0.25 inch.

3. The length of overlap for overlapping duct joints shall not exceed 2 inches.

**(c)** This is a department rule in addition to the requirements in IMC section 506.3.8: Fans serving commercial kitchen hoods shall be listed for use with grease-laden air.

**Comm 64.0507 Capacity of hoods.** Substitute the following wording for the requirements in IMC section 507.13: The kitchen exhaust hood shall be provided with a capture velocity to effectively capture the grease vapors and may be designed through engineering analysis, or based this section and the requirements in IMC sections 507.13.1 through 507.13.4.

**Comm 64.0603 Duct construction and insulation.** This is a department informational note to be used under IMC sections 603.3 and 603.4:

**Note:** For DHFS licensed healthcare facilities as specified in chs. HFS 124, 131, 132, and 134, also refer to the following standards: Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA), HVAC Duct Construction Standards-- Metal and Flexible, 1995 edition.

**Comm 64.0604 Insulation.** This is a department exception to the requirements in IMC section 604.8: The distances from a listed duct lining to a heater may be reduced in accordance with the duct lining listing.

**Comm 64.0605 General.** These are department exceptions to the requirements in IMC section 605.1:

(1) Hospitals, nursing homes and ambulatory surgery centers shall comply with the filtration requirements in Tables 2 and 6, part III of the AIA Guidelines for Design and Construction of Hospitals and Health Care Facilities.

(2) Preheat coils for snow melting that are single row, have a maximum 8 fins per inch, are accessible for pressure washing and have ductwork that is designed for drainage need not be provided with air filters.

**Comm 64.0606 Smoke detection system control.** (1) This is a department informational note to be used under IMC section 606.2.1:

**Note:** For DHFS licensed healthcare facilities as specified in chs. HFS 124, 131, 132, and 134, also refer to NFPA standard 90A section 4-4.2A for air handling units between 2,000 cfm and 15,000 cfm.

(2) This is a department informational note to be used under IMC section 606.4:

**Note:** For DHFS licensed healthcare facilities as specified in chs. HFS 124, 131, 132, and 134, also refer to NFPA standard 90A section 4-3.2 for smoke dampers isolating air handling units.

**Comm 64.0702 Inside air.** (1) This is a department rule in addition to the requirements in IMC section 702.1: When the space providing air for combustion, ventilation and dilution of flue gases has a minimum volume of 250 cubic feet per 1,000 Btu per hour combined input rating of all appliances, the use of inside air for combustion shall be allowed.

(2) This is a department informational note to be used under IMC section 702.1:

**Note:** When applying the provisions of this section, refer to IFGC section 201 as adopted and modified in s. Comm 65.0210 for the definition of "unusually tight construction".

**Comm 64.0710 Opening location and protection.** Substitute the following wording for the requirements in IMC section 710.1: Mounting height of the combustion air intakes shall have the lowest side of outside air intake openings located at least 12 inches vertical from the adjoining grade level.

**Comm 64.0801 (1) GENERAL.** This is a department informational note to be used under IMC chapter 8:

**Note:** For DHFS licensed healthcare facilities as specified in chs. HFS 124, 132, and 134, also refer to NFPA 211 as adopted in these chapters.

(2) **CHIMNEYS AND VENTS.** These are department rules in addition to the requirements in IMC section 801.2: Permanently installed and portable unvented fuel-fired space heaters are prohibited.

**Note:** See ch. Comm 65, subch. II, Part 6 for the prohibition of unvented gas-fired space heaters.

**Comm 64.0918 Forced-air warm-air furnaces.** (1) This is a department rule in addition to the requirements in IMC section 918.6: The outside air intake openings shall be located at least 12 inches vertical from the adjoining grade level.

(2) Substitute the following wording for the requirements IMC section 918.6 item 1: Closer than 10 feet from any appliance vent outlet, a vent opening from a plumbing drainage system or the discharge outlet of an exhaust fan, unless the outlet is 2 feet above the outside air inlet.

(3) Substitute the following wording for the requirements in IMC section 918.6 item 2: Where located less than 10 feet above the surface of any abutting public way or driveway, or at grade level by a sidewalk, street, alley or driveway.

**Comm 64.1001 Boilers, water heaters and pressure vessels.** Substitute the following wording for the requirements and exceptions in IMC chapter 10:

(1) The provisions of ch. Comm 41 shall govern the installation, alteration and repair of boilers and pressure vessels. The provisions of chapters Comm 81 to 86 shall govern the installation, alteration and repair of water heaters.

(2) Water heaters utilized both to supply potable hot water and provide hot water for space-heating applications shall be listed and labeled by the manufacturer and shall be installed in accordance with the manufacturer's installation instructions and applicable provisions in chs. Comm 81 to 86.

(3) Water heaters utilized for both potable water heating and space-heating applications shall be sized to prevent the space-heating load from diminishing the required water-heating capacity.

(4) Where a combination potable water-heating and space-heating system requires water for space heating at temperatures higher than 140°F, a tempering valve shall be provided to temper the water supplied to the potable hot water distribution system to a temperature of 140°F or less.

**Comm 64.1101 Refrigeration.** Substitute the following wording for the requirements and exceptions in IMC chapter 11: Mechanical refrigerating systems installed in public buildings and places of employment shall comply with ch. Comm 45.

**Comm 64.1201 Hydronic piping.** Substitute the following wording for the requirements and exceptions in IMC Chapter 12: The provisions of ch. Comm 41 shall apply to boilers, piping components associated with boilers, pressure vessels and power piping in places of employment and in public buildings.

**Comm 64.1300 Fuel oil piping and storage.** Substitute this informational note for the requirements in IMC chapter 13:

**Note:** See ch. Comm 10 for fuel oil piping requirements.

**Comm 64.1500 Referenced standards. (1)** Substitute the following NFPA standard for the corresponding standard listed in IMC chapter 15: NFPA 13-1999 and NFPA 72-1999.

**(2)** These are department rules in addition to the requirements in IMC chapter 15: American Institute of Architects (AIA), R673-1996-97, Guidelines for Design and Construction of Hospital and Health Care Facilities, The American Institute of Architects, Order Department, 9 Jay Gould Court, P.O. Box 753, Waldorf, MD 20601

**Note:** Copies of the adopted standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies may be purchased through the respective organizations as listed in the IMC.

**Note:** The tables in this section provide a comprehensive listing of all of the standards adopted by reference in this chapter. For requirements or limitations in how these standards are to be applied, refer to the code section that requires compliance with the standard.

**Comm 64.1600 Appendices.** IMC Appendices A and B are not included as part of this chapter.

*File reference: Comm 64C 1r*

**Comm 65**  
**Fuel Gas Appliances**

**Subchapter I — Purpose, Scope, Application and Compliance**

**Comm 65.0001 Purpose and scope.** (1) **PURPOSE.** The purpose of this chapter is to regulate the design, installation, operation and maintenance of gas-fueled heating, ventilating and air conditioning systems in buildings and structures as specified in ch. Comm 61.

(2) **SCOPE.** The scope of this chapter is as specified in s. Comm 61.02.

**Comm 65.0002 Application.** (1) **GENERAL.** The application of this chapter is as specified in s. Comm 61.03 and as modified in this section.

(2) **APPLICABILITY.** All heating, ventilating and air conditioning systems shall be designed, installed, maintained and operated so as to provide the service and results required within the provisions of this chapter. The minimum requirements established in each part of this chapter shall be complied with as they apply to the structures and facilities covered in the IBC.

(3) **ADDITIONS.** (a) This chapter applies to all additions to existing buildings and structures as specified in s. Comm 61.03.

(b) Except when an existing heating, ventilation and air conditioning system is extended to serve an addition, existing system components are not required to be replaced if the provisions in this chapter are met within the addition.

(4) **ALTERATIONS.** (a) This chapter applies to all remodeling and alterations in any building or structure which affect the replacement of major equipment as specified in s. Comm 61.03.

(b) When an existing heating, ventilating and air conditioning system serves a remodeled or altered space that has not undergone a change in occupancy or use, the existing system components are not required to be replaced if the provisions in this chapter that applied to the original construction of the space are met.

**Note:** "Occupancy or use" refers to the entries in Table 64.0403.

**Note:** Maintenance and repair to existing equipment when there is no change to the building or occupancy, is considered an alteration.

**Comm 65.0003 Compliance.** All gas-fueled heating, ventilating and air conditioning systems in buildings and structures shall comply with the IFGC and the changes, additions or omissions under subch. II.

**Comm 65.0004 Approval of drawings and specifications.** All drawings and specifications shall be submitted to the department in accordance with the provisions of subch. III, ch. Comm 61.

## **Subchapter II—Changes, Additions or Omissions to the International Fuel Gas Code (IFGC)**

**Comm 65.0100 Changes, Additions or Omissions to the International Fuel Gas Code® (IFGC).** Changes, Additions or Omissions to the international fuel gas code are specified in this subchapter and are rules of the department and are not requirements of the IFGC.

**Note:** This subchapter is numbered to corresponds with the numbering used within the model code; i.e., s. Comm 65.0201 refers to section IFGC 201.

**Comm 65.0101 Administration.** Except for IFGC sections 102.8 and 108.7, the requirements in IFGC chapter 1 are not included as part of this chapter.

**Comm 65.0201 Definitions. (1)** This is a department substitution for the corresponding definition in IFGC section 201: "Unusually tight construction" means the total area of outdoor openings is less than 3% of the floor area of the space in which equipment is located.

**(2)** This is a department addition to the definitions in IFGC section 201: "DHFS" means the department of health and family services.

**Comm 65.0300 Temperature control.** This is a department rule in addition to the requirements in IFGC chapter 3: The requirements in IMC section 309 and s. Comm 64.0309 apply to gas-fired equipment and systems.

**Comm 65.0301 General regulations.** Substitute the following wording for the requirements in IFGC section 301: The requirements as specified in s. Comm 64.0301 (2) (b) shall apply.

**Comm 65.0303 Appliance location. (1) GENERAL.** This is a department rule in addition to the requirements in IFGC section 303.1: If the air entering the heat exchanger of all gas-fired equipment is 30°F or lower, the heat exchanger and burners shall be constructed of corrosion-resistive materials.

**(2) PROHIBITED LOCATIONS.** The requirements in IFGC section 303.3 Exceptions 3. and 4. are not included as a part of this chapter.

**Comm 65.0304 Combustion, ventilation and dilution air. (1) GENERAL.** This is a department rule in addition to the requirement of IFGC section 304.1: The requirements in IMC sections 705, 706, and 707 shall apply to gas appliances.

(2) **UNUSUALLY TIGHT CONSTRUCTION.** This is a department informational note to be used under IFGC section 304.9:

**Note:** When applying the provisions of this section, refer to s. Comm 65.0201 (1) for the definition for "unusually tight construction".

(3) **ALL AIR FROM INSIDE THE BUILDING.** This is a department rule in addition to the requirements in IFGC section 304.10: When the space providing air for combustion, ventilation and dilution of flue gases has a minimum volume of 250 cubic feet per 1,000 Btu per hour combined input rating of all appliances, the use of inside air for combustion shall be allowed.

(4) **COMBUSTION AIR DUCTS.** This is a department rule in addition to the requirement of IFGC section 304.15: Mounting height of the combustion air intakes shall have the lowest side of outside air intake openings located at least 12 inches vertically from the adjoining grade level.

**Comm 65.0305 Installation. (1) GENERAL.** These are department rules in addition to the requirements in IFGC section 305.1:

(a) *Additional requirements.* The requirements in IMC sections 304.2, 304.8, 304.9, 304.10, and 305 as adopted in s. Comm 64.0304 shall apply to gas appliance installations.

(b) *Final test required.* The requirements as specified in s. Comm 64.0313 shall apply.

**Comm 65.0306 Access and service space.** This is a department exception to the requirements in IFGC section 306.5.1: Section IFGC 306.5.1 does not apply to installations which consist of only fans.

**Comm 65.0400 Gas piping installations.** Substitute the following wording for the requirements and exceptions in IFGC chapter 4: All gas piping and gas piping installations shall comply with NFPA 54, National Fuel Gas Code.

**Comm 65.0501 Chimneys and vents. (1)** This is a department informational note to be used under IFGC chapter 5:

**Note:** For DHFS licensed healthcare facilities as specified in chs. HFS 124, 132, and 134, also refer to NFPA 211 as adopted in these chapters.

(2) The requirements in section IFGC 501.8 item 8 are not included as a part of this chapter.

(3) Substitute the following wording for the requirements in section IFGC 501.8 item 10: Infrared radiant heaters listed for unvented use and not provided with flue collars.

**Comm 65.0503 Venting of equipment. (1) MECHANICAL DRAFT SYSTEMS.** These are department rules in addition to the requirements in IFGC section 503.3.3:

(a) All horizontal exit terminals of a gas appliance mechanical draft system shall be located in accordance with IMC section 804.3.4, items 4 and 5.

(b) All vertical exit terminals of a gas appliance mechanical draft system shall be located in accordance with IMC section 804.3.5, items 3 and 6.

**(2) VENTING SYSTEM TERMINATION LOCATION.** Substitute the following wording for the requirements, but not the exceptions, in IFGC sections 503.8 items 1, 2 and 3:

(a) The separation between gravity and mechanical air inlets and venting system terminations shall comply with IMC section 401.5.1 and s. Comm 64.0401 (4).

(b) Unless a greater distance is specified by the manufacturer, mechanical draft venting systems shall terminate at least 12 inches vertically from the adjoining grade level.

**Comm 65.0609 Duct furnaces.** The requirements in IFGC section 609.2 are not included as part of this chapter.

**Comm 65.0617 Forced-air warm-air furnaces.** Substitute the following wording for the requirements and exceptions in IFGC section 617.5: Gas-fired appliances shall comply with IMC section 918 and s. Comm 64.0918.

**Comm 65.0620 Unvented room heaters.** Substitute the following wording for the requirements in IFGC section 620: The use of unvented room heaters is prohibited.

**Comm 65.0629 Infrared radiant heaters.** These are department rules in addition to the requirements in IFGC section 629.1:

(1) Spaces served with unvented infrared radiant heaters shall be provided with at least 4 cfm of outside air per 1,000 Btu per hour input of installed heaters.

(2) Unvented infrared radiant heaters may be used only in the following occupancies:

(a) Groups F and S.

(b) Groups U and H only with written approval.

**Comm 65.0630 Boilers.** Substitute the following wording for the requirements in IFGC section 630: The provisions of ch. Comm 41 shall govern the installation, alteration and repair of boilers and pressure vessels.

**Comm 65.0700 Referenced standards.** This is a department rule in addition to the requirements in IFGC chapter 7: ANSI Z223.1/NFPA 54-1999.

**Note:** Copies of the adopted standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies may be purchased through the respective organizations as listed in the IMC.

**Note:** The tables in this section provide a comprehensive listing of all of the standards adopted by reference in this chapter. For requirements or limitations in how these standards are to be applied, refer to the code section that requires compliance with the standard.

**Comm 65.0800 Appendices.** IFGC Appendices A to D are not included as part of this chapter.

*File reference: IBC/Comm 65C 1r*

CHAPTER Comm 61 to 65 APPENDIX A

The material contained in this appendix is for clarification purposes only and is numbered to correspond to the number of the rule as it appears in the text of the code.

**A-61.03 (4)(b) Lower thresholds for municipalities with preexisting stricter sprinkler ordinances.**  
 Section 101.14 (4m) (d) and (e), Stats, provides the following thresholds above which fire sprinkler protection or 2-hour fire-resistance can be required by a municipality with a preexisting stricter sprinkler ordinance.

Class of Construction	Total Floor Area Within Individual Dwelling Units	Number of Units	Total Floor Area of Nondwelling Unit Portions (Common use areas, such as corridors, stairways, basements, cellars, vestibules, community rooms, laundry rooms, pools, etc.)
Type IA	8,000 sq ft	8 units	12,000 sq ft
Type IB			10,000 sq ft
Type IIA			8,000 sq ft
Type IIB			5,600 sq ft
Type III			
Type IV			
Type VA			
Type VB	4,800 sq ft		

The department, based on ordinances forwarded by municipalities (and checked by Safety and Buildings staff for conformance with the preexisting sprinkler ordinance criteria) believes the following municipalities have preexisting stricter sprinkler ordinances:

- |            |                 |            |                 |
|------------|-----------------|------------|-----------------|
| Appleton   | Greenfield      | Muskego    | Shorewood Hills |
| Brookfield | Madison         | New Berlin | Sussex          |
| Franklin   | Menomonee Falls | Oak Creek  | West Allis      |
| Greendale  | Monona          | Racine     | West Bend       |

SECTION 8. Chapter Comm 50 to 64 Appendix C is renumbered Comm 61 to 65 Appendix B.

SECTION 9. Chapters Comm 66, 69 and 73 are repealed.

\*\*\*\*\*

EFFECTIVE DATE

Pursuant to s. 227.22 (2) (b), Stats., these rules shall take effect on July 1, 2002.

\*\*\*\*\*