

CHANGE TYPE: Modification

505.1, 505.4

Domestic Range Hoods

CHANGE SUMMARY: The scope of domestic kitchen hoods coverage has been expanded to beyond dwellings units. Domestic hoods are mandated in new Section 505.4.

2015 CODE: 505.1 Domestic Systems. Where domestic range hoods and domestic appliances equipped with downdraft exhaust are ~~located within dwelling units~~ provided, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper, and shall be independent of all other exhaust systems.

Exceptions:

1. In other than Group I-1 and I-2, 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.
2. Ducts for domestic kitchen cooking appliances equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:
 - 2.1. The duct shall be installed under a concrete slab poured on grade.

505.1, 505.4 continues



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- 2.2. The underfloor trench in which the duct is installed shall be completely backfilled with sand or gravel.
- 2.3. The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.
- 2.4. The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.
- 2.5. The PVC ducts shall be solvent cemented.

505.4 Other than Group R. In other than Group R occupancies, where domestic cooking appliances are utilized for domestic purposes, such appliances shall be provided with domestic range hoods. Hoods and exhaust systems shall be in accordance with Sections 505.1 and 505.2.

CHANGE SIGNIFICANCE: In the 2012 edition, Section 505.1 required domestic hoods in dwellings to exhaust to the outdoors but allowed recirculating (ductless) exhaust hoods if other means of ventilation were provided. As revised, this section is no longer limited to dwelling units, and the exception does not apply to occupancies of Group I-1 and I-2. In I-1 and I-2 occupancies, the exhaust hoods must discharge to the outdoors without exception. The new section requires exhaust (range) hoods in all occupancies except Group R, whereas previously, range hoods were optional. Section 505.4 requires range hoods in occupancies of other than Group R, and Section 505.1 will require them to exhaust to the outdoors unless they comply with exception 1. So, in summary: If the occupancy is Group I-1 or I-2, domestic cooking facilities must have a range hood that discharges to the outdoors; if the occupancy is not Group R, I-1 or I-2, range hoods are required for domestic cooking facilities, and such hoods can discharge to the outdoors or recirculate the air where other ventilation is provided; if the occupancy is Group R, range hoods are optional, but if provided, they must discharge to the outdoors or must comply with exception 1 of Section 505.1. These changes accommodate the changing designs in today's assisted living, nursing home, hospital and rehab facilities.

The 2015 editions of the *International Building Code* (IBC) and *International Fire Code* (IFC) require domestic cooking hoods in Group I-2 occupancies to be equipped with an automatic fire-extinguishing system. The extinguishing system must be recognized for protection of domestic cooking equipment and requires a manual activation device. For more information, see the 2015 editions of *Significant Changes to the International Building Code* and *Significant Changes to the International Fire Code*.