

CHAPTER XVIII

ABSORPTION UNITS AND ABSORPTION SYSTEMS

1800—GENERAL

Every absorption unit and absorption system shall comply with the requirements of this Chapter.

Every room or space in which a fuel-burning absorption unit is installed shall be provided with combustion air supply as specified for comfort heating equipment in this Code.

Every fuel-burning absorption unit shall be vented as specified for comfort heating equipment in this Code.

All air ducts and fire dampers which are a portion of an absorption system shall comply with this Code.

Every cooling tower for an absorption unit shall comply with this Code.

Types of fuel and fuel connections for an absorption unit shall conform to the requirements as specified for an appliance using oil, or gas. (Chapters V, XIII, XIV)

1801—APPROVAL OF EQUIPMENT

Each absorption unit shall be approved by the Building Official for safe use based upon applicable nationally recognized standards as determined by a testing agency approved by the Building Official.

1802—LABELS AND INSTRUCTIONS

Every fuel-burning absorption unit shall bear a label containing the following information:

1. Manufacturer's name.
2. Model number.
3. Amount and type of refrigerant.
4. Factory test pressures or pressures applied.
5. Normal hourly B.t.u. input rating.
6. Minimum hourly B.t.u. input rating for units having step or automatic modulating controls.
7. Cooling capacity in B.t.u.'s per hour.
8. Type of fuel.
9. Symbol of the organization certifying the approval of the equipment.
10. Instructions for the lighting, operation, and shutdown of the system.

Every absorption unit shall be installed to conform to the conditions of its listing and to the requirements of this Code. The installer shall leave the manufacturer's installation and operating instructions attached to the unit.

1803—LOCATION

No absorption unit shall be installed in the following places:

1. In any room or space less than twelve inches (12") wider than the units installed therein. EXCEPTION: A replacement absorption unit occupying the same or lesser floor area may be installed in the same location as the existing absorption unit provided the replacement does not violate other provisions of this Code; however, every precaution should be taken so as to be reasonably safe to persons and property.
2. In an hazardous location.
3. In any surgical operating room or medical treatment room.
4. Under any stairway

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5. In any Group Occupancy unless separated from such occupancy in accordance with North Carolina Building Code Section 401.1—Section 412, Chapter IX

EXCEPTION: This requirement shall not apply to any absorption unit installed on the roof of a building.

6. In any room used, or designed to be used, as a bedroom, bathroom, closet or in any confined space with access only through such room or space.

No absorption unit containing any Group 2 refrigerant shall be located in any building.

No absorption unit containing more than 20 pounds of a Group 2 refrigerant shall be located less than twenty feet (20') from any door, window, or ventilating air inlet to any building. EXCEPTION: This distance may be reduced provided the required pressure relief device is arranged to discharge the refrigerant.

No portion of any absorption system shall be located in any elevator shaft, dumb-waiter shaft, or any shaft having moving objects therein.

No portion of any absorption system shall be installed in any location where it will be subject to damage from an external source, unless adequately protected.

No absorption unit arranged to burn any liquid fuel shall be located on the roof of any building, in an attic, furred space or underfloor area unless listed and approved for such use.

Location of absorption units shall comply with the zoning ordinance.

No fuel-burning unvented absorption unit shall be located in any building.

No absorption unit arranged to burn any liquefied petroleum gas shall be installed in any attic, furred space, or underfloor space unless provided with an acceptable means for removal of unburned gas.

1804—INSTALLATION—ABSORPTION UNITS

Absorption units approved for outdoor installation need not be enclosed.

Every absorption unit supported from the ground shall rest on a concrete slab extending not less than three inches (3") above the adjoining ground level.

Every absorption unit shall be equipped with a factory installed pressure relief device, either a fusible plug, a rupture member, or a pressure relief valve, suitable treatment of escaping gas must be handled.

A suitable and substantial metal guard shall be provided around all flywheels, fans, pulleys and belts which are a portion of any absorption system.

Absorption units suspended from any construction in an underfloor space shall have a clearance of at least six inches (6") from the ground.

Cooling coils installed as a portion of or in connection with, any warm-air furnace shall be arranged to comply with the requirements of this Code.

No direct absorption unit containing any Group 2 refrigerant shall be used for comfort cooling.

Adequate means shall be provided for the collection and disposal of condensate from every air cooling coil, to outside the building or to a drain conforming with the plumbing code. Every such condensate drain shall be of corrosion-resistant pipe at least three-fourths inch ($\frac{3}{4}$ ") nominal pipe size.

All refrigerant piping and fittings, brine piping and fittings, which during normal operation could reach a surface temperature below the dew point of the surrounding air and are located in spaces or areas where condensation could cause a safety hazard to the building occupants, structure, electrical equipment or other equipment, shall be protected in a manner to prevent such damage.