

Safe Kitchens ● ● ● Appliances

Kitchen appliances, regardless of safety precautions observed in design, manufacture, and installation, are inherently hazardous by reason of high temperatures, cutting edges, shearing or mashing actions, and other physical or conditional factors which are necessary in the conduct of their intended function. Exceptional care must be employed in planning the location of these necessary modern tools of the home, and special attention must be given to their proper and safe installation.

Refrigerator location may be hazardous unless the refrigerator is placed so that the door does not interfere, to an unreasonable degree, with adjacent cabinet doors or the traffic flow. Refrigerators should also be located so that, with doors open, the interior is easily accessible from the work triangle.

Ranges and ovens are hazardous appliances because of the high temperatures associated with them. Convenient and adequate counter space adjacent to these units is a necessity to minimize the distances required to transport hot utensils and to provide space for utensil handles. A minimum of 18" on each side of ranges and surface of separate oven units is considered adequate for these purposes.

Leaning across the range to operate the controls or to reach storage can be a risky operation. Garments may catch fire or burns from spattering grease, boiling water or steam can result. Ranges manufactured after September 30, 1975

must meet more stringent Underwriters' Laboratories (UL) and American Gas Association (AGA) standards aimed at reducing the most frequent injuries caused by ranges. The elimination of storage above the range can reduce the hazard.

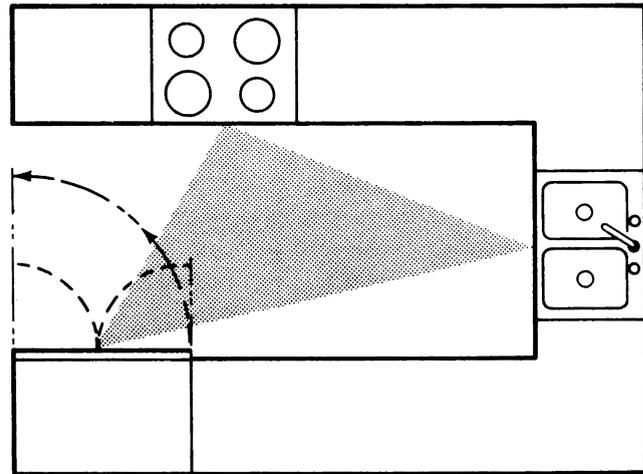


Diagram illustrating poor choice of refrigerator model because of wide door-swing requirement which restricts passage in the open position. Dotted lines indicate a double-door refrigerator which would be a better choice in this situation.

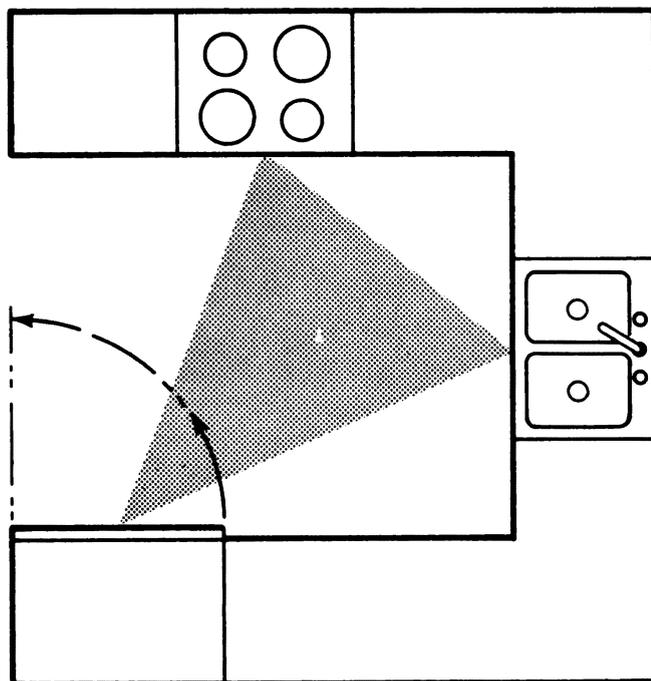
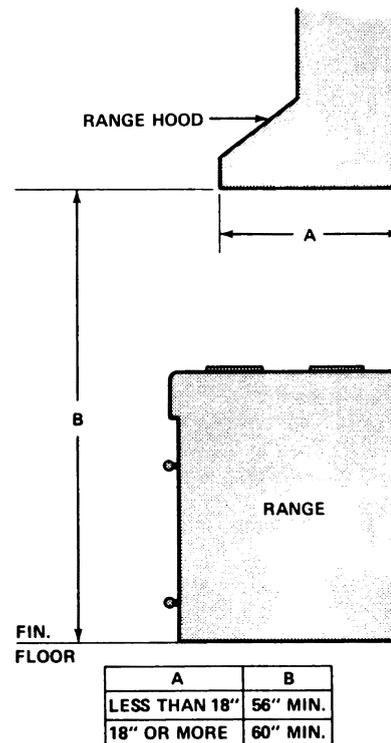


Diagram showing well-planned refrigerator door-swing, allowing ample passage in the opened position.



Dimensional limits for the safe installation of standard sized range hoods. Care in planning here can prevent or diminish accidents related to range hood design and installation.

In installations utilizing a wall oven, or ovens, and separate range surface, countertop accessibility must be considered to accommodate these two cooking appliances. Additionally, the design and placement of the range hood over the range surface requires adequate safety consideration. Range hoods are intended primarily to remove heat, smoke, moisture, and odors from the kitchen, as well as to provide a light source immediately above the cooking surface. Range hoods should be designed without sharp corners and sharp edges. Rounded corners and rolled edges will eliminate or substantially reduce this accident hazard. The placement of range hoods is also a factor in eliminating accident hazards. The height of the lower edge of the range hood above the floor should be such that it does not restrict the view of the interior of utensils on the rear heating elements. Studies show that the optimum height-range for hood installation is 56 to 60" above the floor. The depth of the hood determines which limit of the dimensional range should be used for a particular hood. A hood 17" or less in depth should be installed no less than 60" above the floor.

Exhaust systems incorporated within a hood design should mechanically direct their flow to the outside atmosphere and not into the attic or other overhead, unused space in the house.

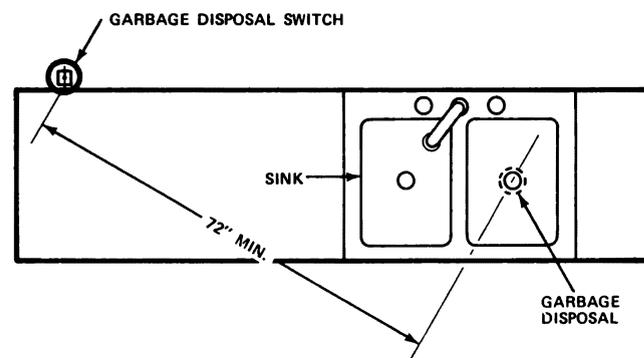
Two types of garbage disposals are in general use in homes today: the batch-feed type and the continuous-feed type. Batch-feed disposers are loaded to capacity and are activated when the cover is positioned over the opening. Continuous-feed disposers permit continuous loading during operation. Operation is activated by a remote switch nearby.

Both types have inherent safety hazards, since the heart of the disposer function is a grinding action. Injuries occur when a person attempts to extract, or otherwise touch, an item placed in the disposer unit while it is in operation. In batch-feed installations, inserting the hand through the opening may activate the disposer, which is normally deactivated with the cover removed. An inexpensive method of eliminating or reducing this type of accident is the use of a momentary contact switch located a minimum of 6 linear feet from the disposer opening.

RECOMMENDATIONS:

To provide safety considerations in the use of major kitchen appliances, the following recommendations are made:

- Refrigerator door-swing shall be away from the "work triangle." For double-door refrigerator/freezer combinations, the refrigerator door shall swing away from the "work triangle."
- Provide minimum counter space of 18" on each side of ranges and surface units and 24" on at least one side of separate oven units.
- Follow the manufacturer's recommendations for space allowances in installation.
- Eliminate storage above the range and surface units.
- Range hoods 17" or less in depth shall be placed no more than 56" above the floor. Those 18" or more in depth shall be placed no more than 60" above the floor.
- Range hoods shall have rounded corners and rolled edges.
- Range hood exhaust shall not be to attic or other unused space.
- The switch for the garbage disposer shall be of the momentary contact type and shall be located a minimum of 6 linear feet from the opening of disposer.



Before building, consult the BOCA code.

Extension Division • Virginia Polytechnic Institute and State University • MI-173 • September 1977

Prepared by Helen L. Wells, Housing Specialist

Originally prepared for the Office of Research and Technology, U.S. Department of Housing and Urban Development, "A Design Guide for Home Safety" HUD-RT-17 January 1972

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. W. R. Van Dresser, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

The Virginia Cooperative Extension Service by law and purpose is dedicated to serve all people on an equal and nondiscriminatory basis. An Equal Opportunity/Affirmative Action Employer