

## Chapter 10, Section 1003 - INTERCEPTORS AND SEPARATORS

### SECTION 1003 INTERCEPTORS AND SEPARATORS

**1003.1 Where required.** Interceptors and separators shall be provided to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes.

**1003.2 Approval.** The size, type and location of each interceptor and of each separator shall be approved by the plumbing official. Where the interceptor or separator is located within a private sewage disposal system, such interceptor or separator shall be approved by the health official. The interceptor or separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator.

**1003.3 Grease traps and grease interceptors for public sewer.** Grease interceptors shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.2.

**1003.3.1 Grease interceptors and automatic grease removal devices required.** A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without prerinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged.

**1003.3.2 Food waste grinders.** Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.

**1003.3.3 Grease interceptors and automatic grease removal devices not required.** A grease interceptor or an automatic grease removal device shall not be required for individual dwelling units or any private living quarters.

**1003.3.4 Grease interceptors and automatic grease removal devices.** Grease interceptors or automatic grease removal devices shall conform to PDI G101, ASME A112.14.3 or ASME A112.14.4 and shall be installed in accordance with the manufacturer's instructions.

**1003.3.4.1 Grease interceptor capacity.** Grease interceptors and grease traps shall have the grease retention capacity indicated in Table 1003.3.4.1 for the flow-through rates indicated.

**TABLE 1003.3.4.1 CAPACITY OF GREASE INTERCEPTORS <sup>a</sup>**

TOTAL FLOW-THROUGH RATING (gpm)	GREASE RETENTION CAPACITY (pounds)
4	8
6	12
7	14
9	18
10	20
12	24
14	28
15	30
18	36
20	40
25	50
35	70
50	100
75	150
100	200

For SI: 1 gallon per minute = 3.785 L/m, 1 pound = 0.454 kg.

a. For total flow-through ratings greater than 100 (gpm) , double the flow-through rating to determine the grease retention capacity (pounds)

**1003.3.4.2 Rate of flow controls.** Grease interceptors and grease traps shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the

flood rim level or be installed in accordance with the manufacturer's instructions.

**1003.3.5 Automatic grease removal devices.** Where automatic grease removal devices are installed, such devices shall be located downstream of each fixture or multiple fixtures in accordance with the manufacturer's instructions. The automatic grease removal device shall be sized to pretreat the measured or calculated flows for all connected fixtures or equipment. Ready access shall be provided for inspection and maintenance.

**1003.4 Oil separators required.** At repair garages, car-washing facilities, at factories where oily and flammable liquid wastes are produced and in hydraulic elevator pits, separators shall be installed into which all oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

**Exception:** An oil separator is not required in hydraulic elevator pits where an approved alarm system is installed.

**1003.4.1 Separation of liquids.** A mixture of treated or untreated light and heavy liquids with various specific gravities shall be separated in an approved receptacle.

**1003.4.2 Oil separator design.** Oil separators shall be designed in accordance with Sections 1003.4.2.1 and 1003.4.2.2.

**1003.4.2.1 General design requirements.** Oil separators shall have a depth of not less than 2 feet (610 mm) below the invert of the discharge drain. The outlet opening of the separator shall have not less than an 18-inch (457 mm) water seal.

**1003.4.2.2 Garages and service stations.** Where automobiles are serviced, greased, repaired or washed or where gasoline is dispensed, oil separators shall have a minimum capacity of 6 cubic feet (0.168 m<sup>3</sup>) for the first 100 square feet (9.3 m<sup>2</sup>) of area to be drained, plus 1 cubic foot (0.28 m<sup>3</sup>) for each additional 100 square feet (9.3 m<sup>2</sup>) of area to be drained into the separator. Parking garages in which servicing, repairing or washing is not conducted, and in which gasoline is not dispensed, shall not require a separator. Areas of commercial garages utilized only for storage of automobiles are not required to be drained through a separator.

**1003.5 Grease interceptors for onsite sewage treatment and disposal systems.** Grease interceptors shall be water and gas tight. Each interceptor shall be engineered to withstand the load, such as from vehicular traffic, to be placed on the interceptor. Sizing of grease interceptors shall be based on the equations of Table 1003.5.1. The minimum tank volume of grease interceptors shall be 750 gallons (2839 L), and the maximum volume of an individual grease interceptor chamber shall be 1,250 gallons (4731 L). Interceptors shall be permitted to be installed in series or as multi-chambered tanks.

**1003.5.1 Grease interceptor capacity.** The minimum grease retention capacity for interceptors shall be at least two times the flow-through rate.

**TABLE 1003.5.1 SIZING FORMULAS FOR GREASE INTERCEPTORS PRIVATE SEWAGE DISPOSAL SYSTEM**

<b>SIZING FORMULA FOR RESTAURANTS:</b>	<b>OTHER ESTABLISHMENTS WITH COMMERCIAL KITCHENS:</b>
$(S) \times (GS) \times (HR/12 \times (LF)) =$ Effective capacity of grease interceptor in gallons Where: $S$ = Number of seats in dining area $GS$ = Gallons of waste water per seat (Use 25 gallons for restaurants with china dishes and/or automatic dishwasher) (Use 10 gallons for restaurants with paper or baskets and no dishwashers) $HR$ = Number of hours restaurant is open $LF$ = Loading Factor (Use 2.00 interstate highway; 1.50 other freeways; 1.25 recreational area; 1.00 main highway; 0.75 other highway)	$(M) \times (GM) \times (LF) =$ Effective capacity of grease interceptor in gallons Where: $M$ = Meals prepared per day $GM$ = Gallons of waste water per meal (Use 5 gallons) $LF$ = Loading Factor (Use 1.00 with dishwashing machine and 0.75 without dishwashing machine)

**Note:** For other than private sewage disposal systems, reduce gallon values by 25 percent.

**1003.5.2 Construction of interceptor.** Each interceptor shall be constructed in accordance with Rule 64E-6, *Florida Administrative Code*. Minimum depth of the liquid shall be 40 inches (1016 mm). Each compartment shall be accessible with a minimum clearance of 18 inches (457 mm) square or in diameter.

**1003.5.3 Inlet and outlet piping.** The inlet and outlet piping shall have a two-way cleanout tee installed. Inlet piping shall enter at 2<sup>1</sup>/<sub>2</sub> inches (64 mm) above the liquid level. Inlet piping shall connect to a tee, sweep or baffle, which shall extend to 24 inches (610 mm) below the water level. The outlet pipe shall start at 8 inches (203 mm) above the bottom of the interceptor and extend vertically to a tee. The tee and pipe shall be no less than 4 inches (102 mm) in diameter. The tee shall be installed with the run in the vertical direction.

**1003.6 Laundries.** Laundry facilities not installed within an individual dwelling unit or intended for individual family use shall be equipped with an interceptor with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 0.5 inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

**1003.7 Bottling establishments.** Bottling plants shall discharge process wastes into an interceptor that will provide for the separation of broken glass or other solids before discharging waste into the drainage system.

**1003.8 Slaughterhouses.** Slaughtering room and dressing room drains shall be equipped with approved separators. The separator shall prevent the discharge into the drainage system of feathers, entrails and other materials that cause clogging.

**1003.9 Venting of interceptors and separators.** Interceptors and separators shall be designed so as not to become air bound where tight covers are utilized. Each interceptor or separator shall be vented where subject to a loss of trap seal.

**1003.10 Access and maintenance of interceptors and separators.** Access shall be provided to each interceptor and separator for service and maintenance. Interceptors and separators shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator.

**1003.11 Sand interceptors in commercial establishments.** Sand and similar interceptors for heavy solids shall be designed and located so as to be provided with ready access for cleaning, and shall have a water seal of not less than 6 inches (152 mm).

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