4715.1105 GREASE INTERCEPTORS.

Subpart 1. **Uniform Plumbing Code (UPC).** For the purposes of this part, "UPC" means the 2009 edition of the Uniform Plumbing Code as adopted by the International Association of Plumbing and Mechanical Officials (IAPMO), 5001 East Philadelphia Street, Ontario, CA 91761. Portions of this part reproduce text and tables from the UPC, with permission of IAPMO. The UPC is not subject to frequent change and a copy of the UPC is available in the office of the commissioner of labor and industry. The UPC is copyright 2009 by the IAPMO. All rights reserved.

Subp. 2. **General requirements.** A grease interceptor complying with this part shall be installed in waste lines leading from fixtures or equipment in establishments where grease may effect line stoppage as determined by the administrative authority. Only waste requiring separation may discharge to a grease interceptor. Food waste grinders and dishwashers may discharge to a gravity grease interceptor where permitted by the manufacturer and the administrative authority.

Each establishment for which a grease interceptor is required shall have an interceptor that serves only that establishment unless otherwise approved by the administrative authority. Grease interceptors must be installed in approved locations and must be readily accessible for inspection and maintenance. Grease interceptors shall be located as close as practical to the fixtures served. Each grease interceptor installation must preclude siphoning and provide air relief. Each fixture discharging to a grease interceptor shall be trapped and vented according to this chapter.

A grease interceptor located outside the building that is a part of an individual sewage disposal system is not subject to the requirements of this chapter.

Subp. 3. **Hydromechanical grease interceptors.**

A. Hydromechanical grease interceptors shall comply with ASME Standard A112.14.3. Plumbing fixtures or equipment connected to a hydromechanical grease interceptor shall discharge through an approved type of flow control installed in a readily accessible and visible location. The total flow through the flow control device shall not be greater than the rated flow of the grease interceptor. No external flow control device having adjustable or removable parts shall be installed. Except for integral flow control devices, each flow control vent shall connect to the plumbing vent system. A vent shall be installed downstream of the grease interceptor according to this chapter.

B. Hydromechanical grease interceptors shall be sized using one of the following methods.

(1) When the flow rate of fixtures or appliances are unknown, the grease interceptor shall be sized based on the diameter of the drain discharging to the interceptor according to the following table:

Hydromechanical Interceptor Sizing Using Gravity Flow Rates

waste pipe diameter, in.	min. interceptor size, gpm
2	20
3	75
4	150
5	250
6	500

(2) Where fixture dimensions and flow rates of all connected fixtures and equipment are known, the interceptor must be sized as follows:

(a) calculate the volume of each connected fixture;

(b) multiply the volume of all connected fixtures by a fill factor of 0.75 to obtain the discharge volume;

(c) divide the fixture discharge volume by a drain period of one minute; and

(d) add flow rates of appliances, hydrants, and equipment.

The minimum grease interceptor size is the sum of all flow rates discharging to the interceptor.

C. Example for sizing using fixture capacity: Two compartments of a sink, a hose bibb, and an appliance will discharge to the interceptor.

(1) Calculate the volume of each fixture.

[Length, in.] x [Width, in.] x [Depth, in.]/231 = [Volume, gallons]

24" x 24" 12" x 2 compartments/231 = 59.8 gallons

(2) Calculate the discharge volume of each fixture.

[total volume] x 0.75 fill factor = [discharge volume]

59.8 gallons x 0.75 = 44.9 gallons

(3) Calculate the flow rate from each fixture.

[discharge volume]/[1-minute drainage period] = [flow rate]

44.9 gallons/1 minute = 44.9 gpm

(4) Add flow rates from appliances, equipment, and hydrants.

2 compartments of a sink	44.9 gpm
hose bibb	5 gpm
appliance	2 gpm
	51.9 gpm

(5) Minimum interceptor size.

The interceptor must be rated at 51.9 gpm or greater.

Subp. 4. **Gravity grease interceptors.** Gravity grease interceptors shall comply with IAPMO/ANSI Standard Z1001 or ASTM Standard C1613. Gravity grease interceptors shall provide for free air circulation through the interceptor and inlet and outlet pipes. Gravity grease interceptors shall be sized by the drainage fixture unit value for all connected fixtures according to the following table.

Drainage fixture units (A,B,C)	**Interceptor volume, gallons**
8	500
21	750
35	1,000
90	1,250
172	1,500
216	2,000
307	2,500
342	3,000
428	4,000
576	5,000
720	7,500
2112	10,000
2640	15,000

A. The maximum allowable drainage fixture units plumbed to the kitchen drain lines must be connected to the grease interceptor.

B. When the flow rate of directly connected fixtures or appliances have no assigned drainage fixture unit values, the additional grease interceptor volume shall be based on the known flow rate (gpm) multiplied by 30 minutes.

C. Drainage fixture unit values must be determined according to part 4715.2300.

Subp. 5. **Protective treatments.** Grease interceptors constructed of metal, concrete, or other materials subject to corrosion shall have protective treatment approved by the manufacturer.

Subp. 6. **Interceptors located outside of buildings.** A grease interceptor outside of the building must be installed to be protected from freezing. Buoyancy protection must be provided when required by the manufacturer's installation instructions. If installed in a nonpaved area, the landscape must be bermed to divert runoff. Accessways for exterior grease interceptors must be at least 20 inches square or a diameter to allow adequate access to tank interior for inspection and maintenance. Access to the inlet and outlet must be provided. The grease interceptor and covers must be protected from loadings that may lead to structural collapse and must be designed to withstand any anticipated traffic loadings. Exterior grease interceptors to be abandoned are subject to the requirements of the Minnesota Pollution Control Agency for abandoning septic tanks.

Subp. 7. **Labeling.** All grease interceptors must contain a clear and permanent product identification label listing the construction standard identified in subpart 3 or 4 and any additional labeling requirements of that standard.

Subp. 8. **Testing, maintenance, and records.** Each grease interceptor installation must pass a manometer test with one inch of water column for five minutes or a vacuum test with two inches of mercury for 60 minutes. Grease interceptors shall be inspected at least once every three months and shall be maintained in efficient operating condition by periodic removal of the accumulated grease and latent material. Records of inspection and maintenance must be kept. The administrative authority shall set the exact frequency, duration, and availability of the inspection, cleaning, and record-keeping information.

Statutory Authority: *MS s 326B.43; 326B.435; 326B.52*

History: *36 SR 1479*

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