## Standard Specifications for FOG Facilities

### A. Applicability

Fats, Oils, and Grease management equipment shall be installed on all Food Service Establishments (FSE) that have the potential to generate Fats, Oils, and Grease (FOG), such as but not limited to all restaurants, cafes, lunch counters, cafeterias, bars and clubs, hotels, hospitals, sanitariums, commercial kitchens, and coffee kiosk. Private residences are exempt from the requirement to have FOG management equipment.

### B. FOG Management Equipment

FOG equipment shall be divided up into two types as defined below.

- Gravity Grease Interceptor: A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils, and greases (FOG) from a wastewater discharge and is identified by volume, 30-minute retention time, baffle(s), a minimum of two compartments, a minimum total volume of 300 gallons, and gravity separation. Gravity grease interceptors are generally installed outside.
- Hydromechanical Grease Interceptor: A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils, and grease (FOG) from a wastewater discharge and is identified by flow rate, and separation and retention efficiency. The design incorporates air entrainment, hydromechanical separation interior baffling, and/or barriers in combination or separately, and one of the following:
  - External flow control, with air intake (vent): directly connected
  - External flow control, without air intake (vent): directly connected
  - Without external flow control, directly connected
  - Without external flow control, indirectly connected

#### a. New Construction

The following specifications are RVS's minimum requirements for all newly constructed FOG establishments within our service area.

i. FOG Equipment
Each establishment shall install FOG management devices per RVS's requirements as specified below.

1. Facilities with Type 1 Vent Hood:
FSE are required to install a Type 1 hood when exhausting grease vapors from their cooking stations, these facilities produce more FOG than the average type 2 hood facilities. All Type 1 facilities shall install a Gravity Grease Interceptor.
2. FOG Facilities without Type 1 Vent Hood:
These facilities may install either a Gravity Grease Interceptor or a Hydromechanical Grease Interceptor at the owner's discretion.

#### b. Retrofit Construction

The following specifications are RVS's minimum requirements for all existing FOG establishments within our service area.

i. FOG Equipment

1. Each establishment requiring a retrofit of the existing facilities to meet RVS's FOG equipment requirements must at a minimum install a Hydromechanical Grease Interceptor(s). The District Engineer may grant a variance to reduce the fixtures connected to the interceptor if, in the opinion of the District Engineer, connections to all fixtures would create an undue hardship and FOG can be adequately managed with partial coverage. Such variance will be conditional on performance and may be revoked if there is evidence that FOG is not being adequately managed.

**C. FOG Management Equipment Sizing**

FOG management equipment shall be properly sized to connect to all fixtures or drains that have a reasonable potential to allow FOG to be discharged into the sanitary sewer system. All FOG management equipment shall be sized based on their total Drainage Fixture Units (DFU) as defined in the 2008 Oregon Plumbing Specialty Code.

**a. Gravity Grease Interceptor**

i. Sizing will be in accordance with section 1014.3.6.1 of 2008 Oregon Plumbing Specialty Code.

1. The volume of the interceptor shall be sized based on the number of DFUs connected, if the number of DFUs is not known, volume will be based on maximum number of DFUs allowed for the pipe size connected to the interceptor.

**Gravity Grease Interceptor Sizing**

| DFUs | Volume (Gal.) |
|---|---|
| 8 | 500 |
| 21 | 750 |
| 35 | 1000 |
| 90 | 1250 |
| 172 | 1500 |
| 216 | 2000 |
| 307 | 2500 |
| 242 | 3000 |
| 428 | 4000 |
| 576 | 5000 |
| 720 | 7500 |
| 2112 | 10000 |
| 2640 | 15000 |

**b. Hydromechanical Grease Interceptor**

i. Sizing will be in accordance with section 1014.2.2 of 2008 Oregon Plumbing Specialty Code.

1. Total capacity of the fixtures discharging into any Hydromechanical Grease Interceptor shall not exceed two and one half times the certified GPM flow rate of the interceptor.

**Hydromechanical Grease Interceptor (HGL ) Sizing Chart**

| DFU | HGL Flow (gpm) |
|---|---|
| 8 | 20 |
| 10 | 25 |
| 13 | 35 |
| 20 | 50 |
| 35 | 75 |
| 172 | 100 |
| 216 | 150 |
| 342 | 200 |
| 428 | 250 |
| 576 | 350 |
| 720 | 500 |

**D. Equipment Design Standards**

Following guidelines are intended to provide minimum standards for the design and installation of FOG equipment.

**a. Gravity Grease Interceptor**

i. General

All construction and installation shall conform to ASTM C1613 standards and section 1014.3 of the 2008 Oregon Specialty Plumbing Codes.

1. All interceptors must have two compartments, their first compartments' liquid volume must be two thirds (2/3) the volume of the second compartments' liquid volume.
2. A minimum liquid volume of 333 gallons is required in the first compartment.
3. All interceptors must at a minimum have one square foot of surface area for every 45 gallons of liquid capacity.
4. Intermediate baffles shall extend to the full width of Interceptor and must be designed and constructed to ensure there is no flow around the side or bottom of the baffles.
5. Interceptor shall be sealed from allowing ground water infiltration.
6. All interceptor installations shall pass a hydrostatic test in the presence of an RVS inspector before backfilling may be completed.
7. All Interceptors shall be engineered to withstand the potential surface loadings.

ii. Plumbing

1. Size
   Minimum diameter of Interceptors inlet, outlet, and baffle fittings is four inches. Internal piping shall be constructed with schedule 40 PVC.
2. Configuration
   - Inlet opening must be at least 4 inches higher than outlet opening.
   - All baffle openings must be below the anticipated grease mat depth.
   - Each fitting must be constructed with a 'tee' design and top of piping must extend 1.5 foot or more above the waterline.
   - Lower end of outlet pipe must extend to within 12 inches of the Interceptor floor
   - Lower end of inlet pipe must extend 24 inches below the waterline.
   - Sampling port to be installed within 1 foot of downstream side of Interceptor.

iii. Access

1. Interceptors shall be designed with 30 inch in diameter gas tight access covers.
2. No more than 12 inches of grade rings will be allowed.
3. Interceptor shall be installed in a location that is readily accessible for service during daytime hours.

iv. Connections

1. All potential FOG fixtures and drains are required to be connected as determined by the District Engineer.
2. No wastewater from sanitary sewer fixtures may be plumbed into the device.
3. Commercial food waste disposers and dishwashers shall be connected to a Gravity Grease Interceptor only.

**b. Hydromechanical Grease Interceptor**

i. Plumbing

1. Shall conform to section 1014.2 of the 2008 Oregon Specialty Plumbing Codes.

ii. Access

1. Device shall be readily accessible for maintenance.
2. Minimum of 18 inches of vertical clearance

iii. Connections

1. All potential FOG fixtures and drains are required to be connected.

2. Commercial food waste disposers and dishwashers are not permitted to be connected to the Hydromechanical Grease Interceptor.

**E. Maintenance**

**a. Gravity Grease Interceptor**

i. General Maintenance

1. Interceptor must be properly maintained to insure there is no more than 30% FOG or 25% sediment by volume at any time.

**b. Hydromechanical Grease Interceptor**

i. General Maintenance

1. Hydromechanical Grease Interceptor must be properly maintained to insure there is no more than 50% FOG or 25% sediment by volume at any time.

**F. Record Keeping**

**a. Log Book**

i. Owner must keep an up to date maintenance log book onsite.

**G. Pre-Approved Products**

**a. Gravity Grease Interceptor**

**Approved Gravity Grease Interceptors**

| Manufacture | Models |
|---|---|
| Oldcastle Precast | 576-GA-CWS, 5106-GA-CWS, 712-GA-CWS, 816-GA-CWS, 576-GA (500 G) |
| | |

**b. Hydromechanical Grease Interceptor**

**Approved Hydromechanical Grease Interceptor**

| Manufacture | Models |
|---|---|
| Endura | all |
| Schier | all |
| | |