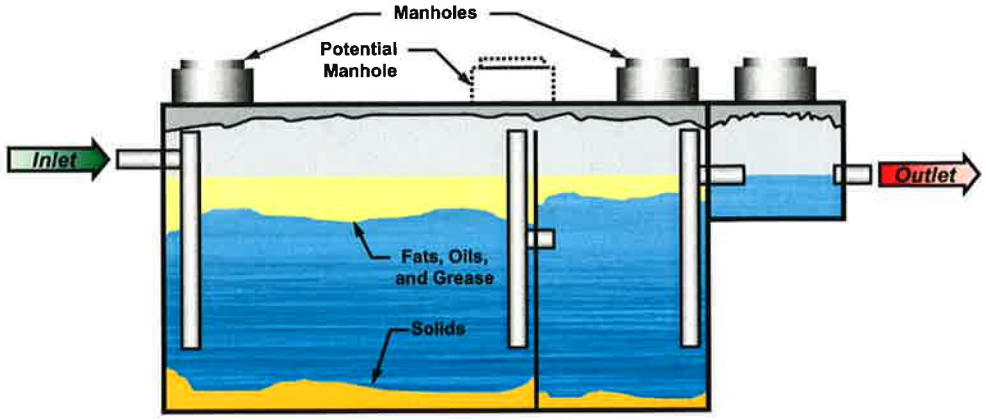
# Gravity Grease Interceptor (GGI)
# Fact Sheet

Gravity grease interceptors (GGIs) treat kitchen wastewater from food service establishments (FSEs) using gravity separation. They accumulate fats, oil and grease (FOG) and solids over time allowing the treated wastewater to discharge to the sanitary sewer (see the figure below).




**Gravity Grease Interceptor**
**Outdoor, In-ground**
**500 – 1,500 Gallons (Typical)**

## Design and Sizing

GGIs are made of precast concrete, steel, fiberglass or PVC and are sized according to the Uniform Plumbing Code (UPC). Chapter 10, Table 10-3 of the 2006 and 2009 UPC sizes GGIs based on the number of drainage fixture units (DFUs) connected to the interceptor. Typically, GGIs are 500 - 1,500 gallons in volume, depending upon the number of kitchen drains connected.

## Certification and Approval

The International Association of Plumbing and Mechanical Officials (IAPMO) provides certifications for a wide variety of GGI products and sizes. Agencies often require that GGIs be certified by IAPMO before they can be approved for use in their service area.

## Proper Maintenance and The 25% Rule

Many California sewering agencies require that GGIs be cleaned (pumped) out completely at a mandatory minimum frequency of once every 90 days to prevent the over-accumulation of floating FOG and settled solids. A complete pump-out means that all of the contents of the interceptor must be pumped out and no liquids can be returned to the interceptor unless specific permission has been granted in writing by the sewering agency for this practice. Some GGIs may need to be pumped out more frequently than once every 90 days if the floating FOG and settled solids accumulation exceeds 25% of the overall capacity of the interceptor prior to the 90 day period (i.e, the 25% Rule).

## Inspections

Agency inspections should focus on making sure that the GGI is working properly and that the internal plumbing and baffle walls are intact. If an inspector determines that the floating FOG and settled solids accumulation is excessive in the GGI, they will typically notify the FSE that the GGI must be pumped more often. FSEs are often required to save pumper receipts or maintain logs to show the inspector that the proper maintenance is being conducted.

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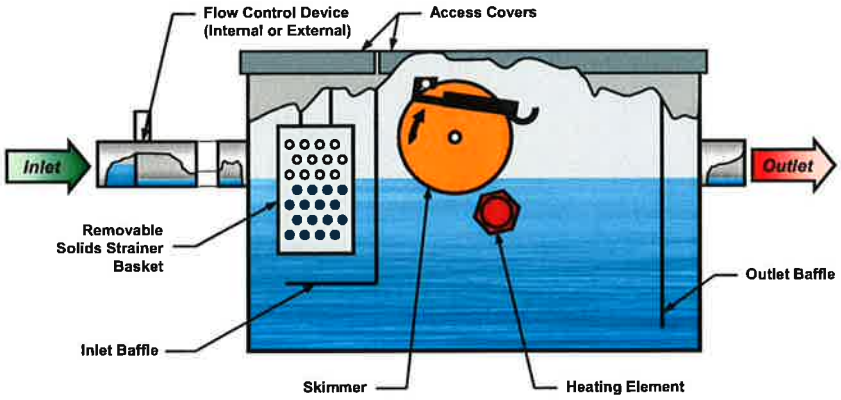
# Grease Removal Device (GRD)
# Fact Sheet

Grease Removal Devices (GRDs) are a type of hydromechanical grease interceptor (HGI) that treats kitchen wastewater from food service establishments (FSEs) and are equipped with automatic grease removal features. They are typically installed indoors and connected to one to four sinks in the kitchen. They accumulate fats, oil and grease (FOG) in a relatively small separator tank. The accumulated FOG is automatically removed from the GRD and transferred to a separate FOG waste container reducing the need for cleaning (see the figure below).




**Grease Removal Device**
**Skimmer Style Shown. Other Style Units are Available**
**Indoor, Above Ground (Typical)**
**15-60 Gallons (Typical), 20-50 GPM (Typical)**

## Design and Sizing

GRDs are typically made of corrosion resistant materials and are equipped with baffles, screens, and external waste containers to store the removed FOG waste. Some are equipped with heaters, skimmers, pumps or hydrostatic pressure chambers to assist in removal of the FOG. They are sized according to the same Uniform Plumbing Code (UPC) sizing methods that are used for HGIs (Chapter 10, Table 10-2). Flow control devices must be installed internal or external of GRDs to control the wastewater flow to match the certified flow rate of the GRD.

## Certification and Approval

GRDs are tested and certified to ASME A112.14.3 and ASME A112.14.4 standards at the GRD's specified maximum flow rate. Sewering agencies often require that GRDs be certified to these standards before they can be approved for use in their service area. Plan check approvals should make sure that one or more GRDs are connected to all the significant grease waste drains (e.g., pot sink, pre-rinse sink, wok station).

## Proper Maintenance

GRDs should be maintained through daily emptying of the solids basket into the trash and emptying the FOG waste container into a larger FOG waste container for proper disposal or recycling. Because many GRDs have heaters and skimmers and other critical mechanical equipment, these must be maintained by the FSE and cleaned or replaced, as needed.

## Inspections

Agency inspections should focus on making sure that the GRDs are in proper working order and are being maintained frequently enough to prevent an over-accumulation of FOG and solids. Inspectors will typically notify the FSE if the GRD needs more frequent cleaning or maintenance. FSEs are often required to maintain logs to show the inspector that the proper maintenance is being performed.



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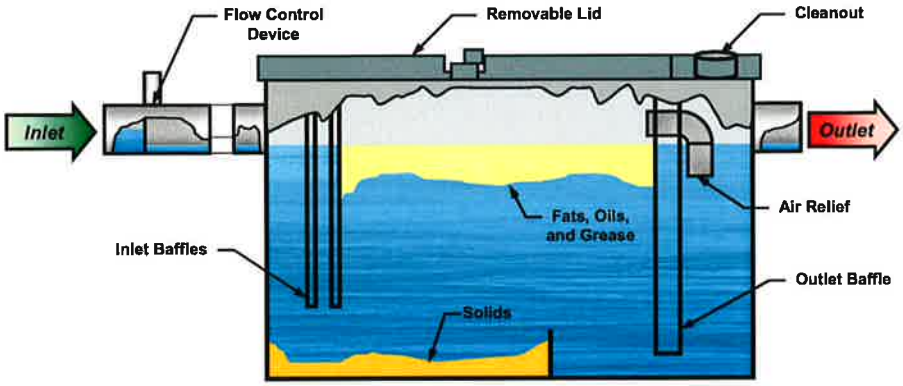
# Hydromechanical Grease Interceptor (HGI) Fact Sheet

Hydromechanical grease interceptors (HGIs) (formerly named grease traps) treat kitchen wastewater from food service establishments (FSEs) using gravity separation aided by vented flow control. They are typically installed indoors and connected to one to four sinks in the kitchen. They accumulate fats, oil and grease (FOG) and solids over time in a relatively small separator tank allowing the treated wastewater to discharge to the sanitary sewer (see the figure below).




**Hydromechanical Grease Interceptor**
**Indoor, Above Ground (Typical)**
**15-60 Gallons, 20-50 GPM (Typical)**
**40-100 Pounds of FOG Storage (Typical)**

## Design and Sizing

HGIs are made of steel, fiberglass or polyethylene, typically consisting of a single compartment with baffles, and sized according to the Uniform Plumbing Code (UPC). Chapter 10, Table 10-2 of the 2006 UPC and the 2009 UPC provide two different sizing methods for HGIs. Regardless of the sizing method, HGIs are sized based on flow rate and the pounds of FOG that they can store. Typically, they treat 20-50 gallons per minute (GPM), store 40-100 pounds of FOG, and are 15-60 gallons in volume. Vented flow control devices must be installed upstream of HGIs to control the wastewater flow to match the certified flow rate of the HGI. If this flow control device is not installed, the HGI may not perform properly when the flow exceeds the certified flow rate.

## Certification and Approval

HGIs are tested and certified to ASME A112.14.3 or PDI-G101 standards at the HGI's specified maximum flow rate. Sewering agencies often require that HGIs be certified to these standards before they can be approved for use in their service area. Plan check approvals should make sure that one or more HGIs are connected to all the significant grease waste drains (e.g., pot sink, pre-rinse sink, wok station).

## Proper Maintenance

HGIs should be cleaned before the floating FOG and settled solids accumulation exceeds 25% of the HGI's overall capacity. In order to prevent this, daily to weekly cleaning of the HGI by kitchen staff or pumping contractors may be required to ensure proper operation. If performed by kitchen staff, solids and FOG should be dewatered (e.g., mixed with kitty litter) and discarded in the trash.

## Inspections

Agency inspections should focus on making sure that the HGIs are in proper working order and are being cleaned frequently enough to prevent an over-accumulation of FOG and solids. Inspectors will typically notify the FSE if the HGI needs more frequent cleaning or maintenance. FSEs are often required to save pumper receipts or maintain logs to show the inspector that the proper maintenance is being performed.

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