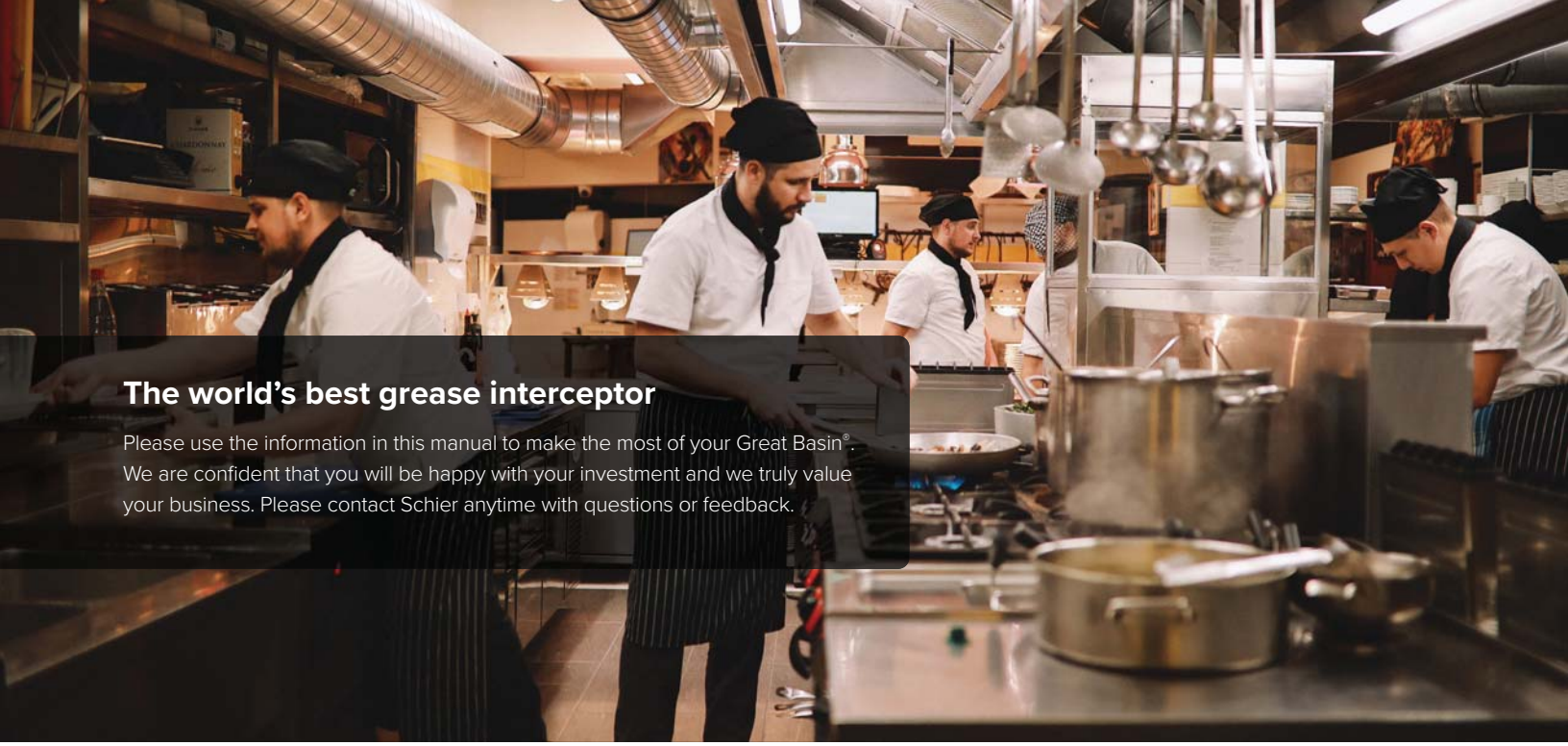
OWNER'S MANUAL

Great Basin® grease interceptors

SCHIER

LIFETIME GUARANTEED **GREASE INTERCEPTORS**

GBOM-0526



The world's best grease interceptor

Please use the information in this manual to make the most of your Great Basin®. We are confident that you will be happy with your investment and we truly value your business. Please contact Schier anytime with questions or feedback.

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History

The very first Great Basin® grease interceptor was installed in 2006, forging a new category in the world of grease interceptors. Prior to 2006, it was undersized steel grease traps inside of the building and oversized concrete grease interceptors outside of the building. These products offered little-to-no information in the way of performance. Worse, due to inferior materials and the corrosiveness of commercial kitchen wastewater, all of these units are guaranteed to fail.

The Great Basin® was designed to offer superior performance and more grease storage along with the only lifetime warranty in the industry. The #1 specified and installed grease interceptor brand in America. With more than 250,000 installations in restaurants, stadiums, schools and corporate campuses. Schier has also been installed in One World Trade Center and (we've been told) the White House.

SAFETY WARNINGS

For all Schier Grease Interceptor Maintenance - Failure to heed these warnings may result in property damage, personal injury or death.

WARNING! HYDROGEN SULFIDE (H_2S) GAS

Large grease interceptors with low flows are conducive to creating septic conditions that can generate H_2S gases and the associated "rotten egg" odor. Produced naturally from decaying organic matter, H_2S vapors are noxious, highly toxic, flammable and potentially corrosive to metal and concrete. If inhaled, these vapors can be lethal, or cause you to lose consciousness and possibly fall into the grease interceptor and drown.

WARNING! Newer Schier grease interceptors feature a Safety Star® access restrictor in the accessway to help prevent accidental falls. Do not remove the Safety Star® from the accessway unless absolutely necessary. Never cut the tether that permanently attaches the Safety Star® to the accessway. Replace worn or damaged tethers promptly.

WARNING! Perform frequent interceptor maintenance that includes complete removal (pumpout) of all interceptor conents. Schier recommends a pumpout cycle of 30 to 90 days. Doing so will prevent buildup of dangerous H_2S vapors, maintain sanitary conditions and ensure the interceptor performs as designed.

WARNING! CONFINED SPACE

All grease interceptors meet the OSHA definition of a confined space; they have the potential to contain a hazardous atmosphere, and contain material that could engulf an entrant (water, grease and solids). Enter the space only if necessary and follow established procedures:

- Test (monitor) the air in the space from the outside before entering.
- Test (monitor) the air in the space continuously during work operation.
- Determine if entry permit is required.
- Ventilate area continuously to remove accumulated hydrogen sulfide.
- Make sure that rescue procedures, personnel, and equipment are in place.
- Maintain contact with trained attendant.

WARNING! Never leave an open grease interceptor accessway unattended. Always replace the cover and secure with bolts if equipped. Failure to do so risks pedestrian injury or death. Replace damaged or missing cover bolts promptly.

Why grease interceptors are necessary

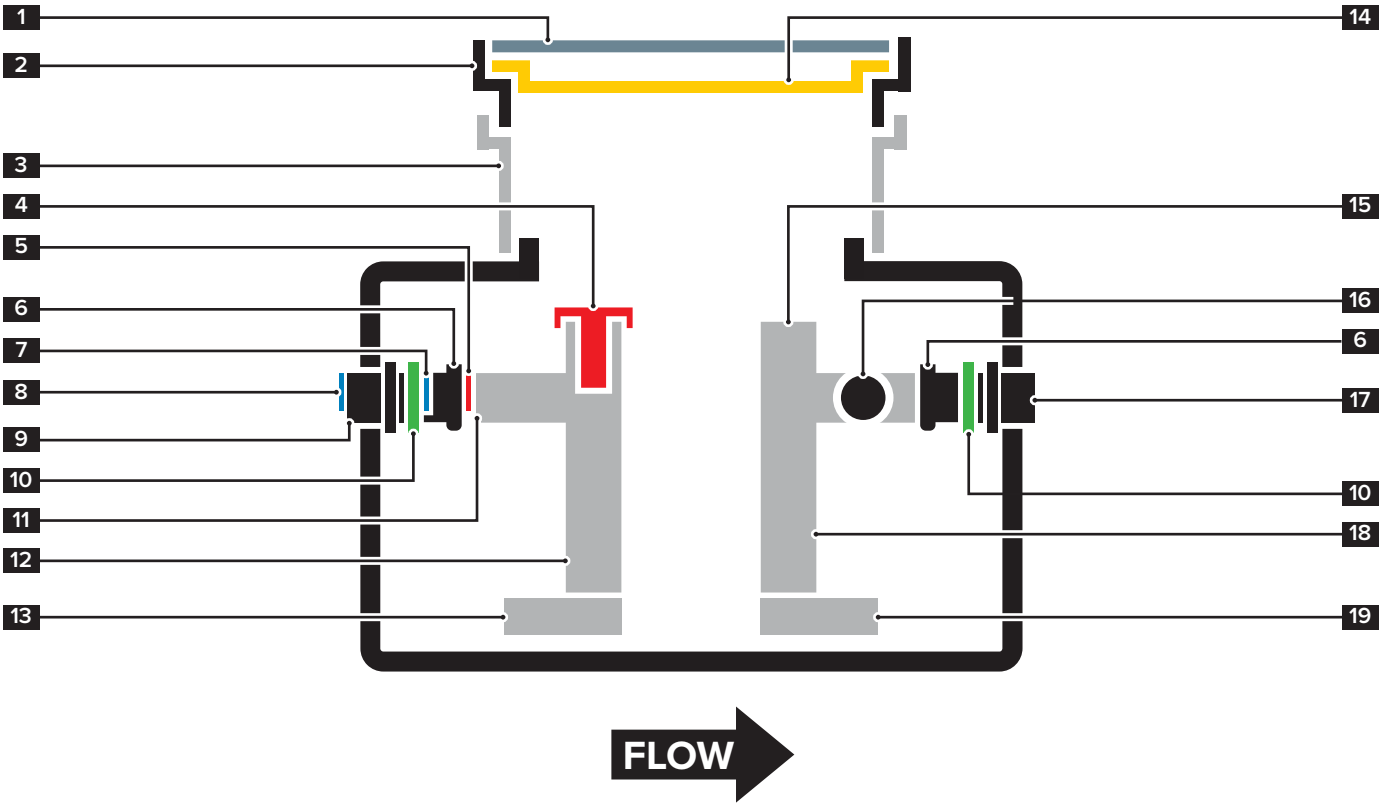
Grease interceptors, sometimes called grease traps, are required in most food service establishments. The primary function is to separate and store the fats, oils and grease (FOG) that are washed down the drain during food prep and dishwashing. Without grease interceptors, fats, oils and grease will build up on the walls of drainage piping, ultimately causing a blockage. This can lead to an immediate back-up in your kitchen, or the city's wastewater collection system. When a blockage happens in the city's system, it can lead to a Sanitary Sewer Overflow (SSO), which results in raw sewage flooding out of manhole covers spreading dangerous bacteria into streets and walkways. SSOs are a leading cause of fresh water contamination and can be deadly for fish, plankton and other aquatic life. By properly maintaining your Great Basin®, you are doing your part to protect the environment.

Inside of pipe showing effects of an improperly maintained grease interceptor

Inside of pipe of a properly maintained grease interceptor

Grease interceptor components

Generic side view diagram of a typical Great Basin® grease interceptor.



1 Cover

2 Cover adapter
Larger models (with 24" diameter covers) will have a cover adapter.

3 Riser

4 Flow control cartridge
A red cartridge may be found here on models produced after 2018. If white, the cartridge is for pressure control and does not regulate flow.

5 Flow control plate
A snap-in red plate that may be found on the snout of the inlet diffuser on any model produced from 2014 until 2019.

6 Saddle adapter
Early GB1, GB2 and GB3 models feature this adapter which allows for easy insertion and removal of the inlet and outlet diffusers.

7 Flow control plate
A snap-in white plate that may be found on the snout of the saddle adapter on indoor models produced from 2014 until 2019.

8 6" Flow control plate
A screw-on white plate may be found here on models with 6" connections.

9 Inlet bulkhead connection

10 Diffuser locking collar (green)
Used to secure the diffusers (or saddle adapters) to the bulkhead connections.

11 Flow control aperture
A permanent hole in the inlet diffuser snout used with all models produced prior to 2014.

12 Inlet diffuser

13 Inlet diffuser foot
Later models may have a foot attached to the inlet diffuser. If removed, ensure it is replaced and oriented so that the foot directs flow to the inlet endwall.

14 Safety Star®
Access restrictor for newer models with 24" diameter covers.

15 Air relief/visual access
Open top outlet diffuser for air relief/visual access

16 Optional outlet bulkhead connection

17 Outlet bulkhead connection

18 Outlet diffuser

19 Outlet diffuser foot
Later models may have a foot attached to the outlet diffuser. If removed, ensure it is replaced and oriented so that the foot directs flow to the outlet endwall.

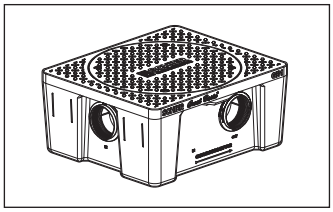
Great Basin® identification and specifications

Since its introduction, the Great Basin® series has led the industry in hydromechanical interceptor design and performance. The series has evolved during that time, resulting in a variety of units with similar or identical model numbers but different designs and certified grease storage capacities. This section is provided to help you determine which Great Basin model you have installed.

Locate the product ID label located on the interceptor and make note of the model (GB-XX), 9-digit part number and the serial number. If buried, the label will be on the underside of the cover or the inner wall of the cover adapter. Contact customer service if unsure what model you have.

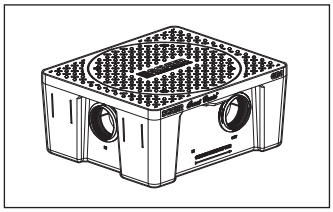
Current model generation shown

GB1



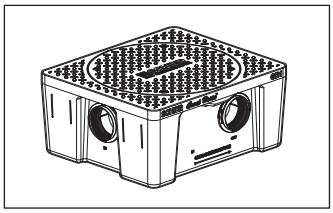
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
20 GPM / 70 lbs. (9.6 gal.)
25 GPM / 64 lbs. (8.9 gal.)
Liquid capacity: 10 gal.
Solids capacity: 1.3 gal.

GB1-CT



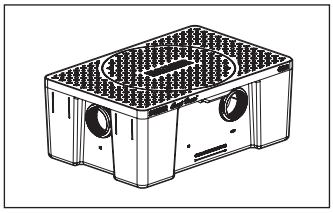
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
15 GPM / 70 lbs. (9.6 gal.)
Liquid capacity: 10 gal.
Solids capacity: 1.3 gal.

GB1-C



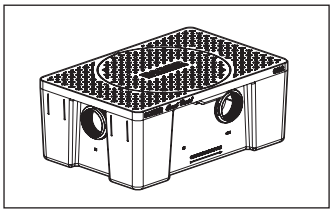
Years produced: 2025 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
20 GPM / 70 lbs. (9.6 gal.)
Liquid capacity: 10 gal.
Solids capacity: 1.3 gal.

GB2



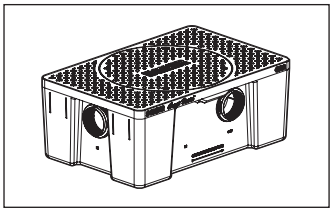
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
35 GPM / 130 lbs. (17.9 gal.)
50 GPM / 127 lbs. (17.5 gal.)
Liquid capacity: 20 gal.
Solids capacity: 1.8 gal.

GB2-CT



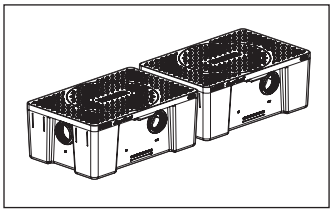
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
25 GPM / 126 lbs. (15 gal.)
Liquid capacity: 20 gal.
Solids capacity: 1.8 gal.

GB2-C



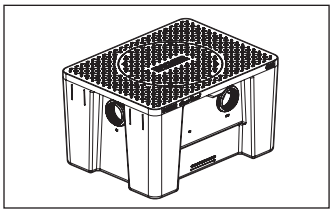
Years produced: 2025 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
35 GPM / 130 lbs. (17.9 gal.)
50 GPM / 127 lbs. (17.5 gal.)
Liquid capacity: 20 gal.
Solids capacity: 1.8 gal.

GB2-2-C (99%)



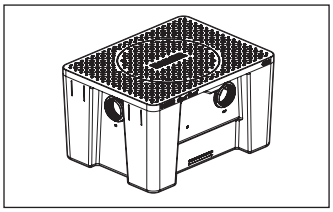
Years produced: 2019 - present
Identification: Two 21" covers (2 tanks in series).
Flow rates/grease capacities:
35 GPM / 180 lbs. (24.7 gal.)
Liquid capacity: 40 gal.
Solids capacity: 3.6 gal.

GB3



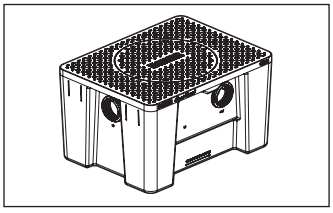
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
50 GPM / 272 lbs. (37.4 gal.)
75 GPM / 175 lbs. (24.1 gal.)
Liquid capacity: 40 gal.
Solids capacity: 1.9 gal.

GB3-CT



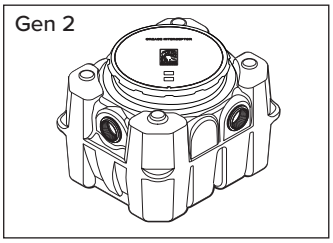
Years produced: 2017 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
50 GPM / 272 lbs. (37.4 gal.)
Liquid capacity: 40 gal.
Solids capacity: 1.9 gal.

GB3-C



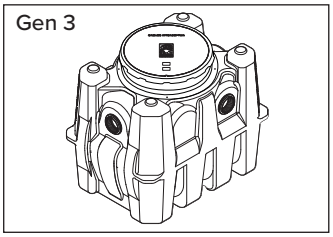
Years produced: 2025 - present
Identification: Single 21" cover.
Flow rates/grease capacities:
50 GPM / 272 lbs. (37.4 gal.)
Liquid capacity: 40 gal.
Solids capacity: 1.9 gal.

GB-50



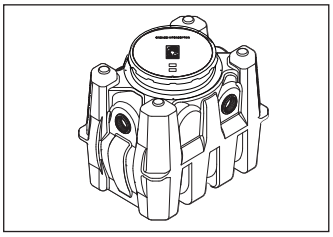
Years produced: 2019 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacities:
50 GPM / 439 lbs. (60 gal.)
75 GPM / 287 lbs. (39 gal.)
Liquid capacity: 65 gal.
Solids capacity: 13 gal.

GB-75



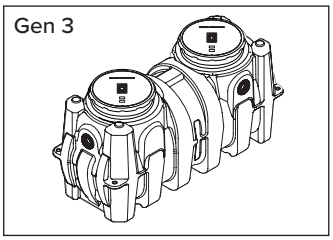
Years produced: 2020 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacity:
75 GPM / 861 lbs. (118 gal.)
Liquid capacity: 125 gal.
Solids capacity: 31 gal.

GB-75-B (99%)



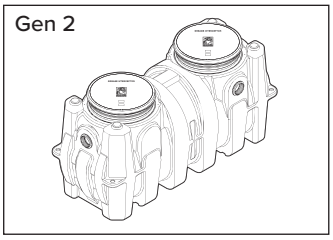
Years produced: 2020 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacity:
50 GPM / 730 lbs. (100 gal.)
Liquid capacity: 125 gal.
Solids capacity: 0 gal.

GB-250



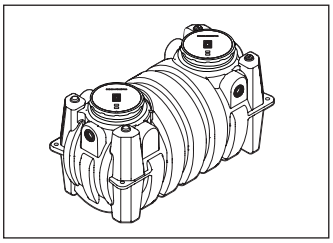
Years produced: 2020 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rates/grease capacities:
100 GPM / 1,895 lbs. (260 gal.)
150 GPM / 1,848 lbs. (164 gal.)
Liquid capacity: 277
Solids capacity: 69 gal

GB-250-B (99%)



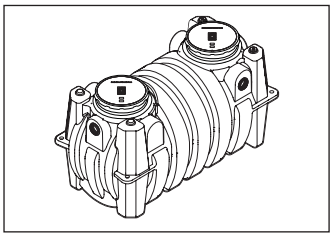
Years produced: 2020 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacity:
75 GPM / 1,560 lbs. (214 gal.)
Liquid capacity: 277 gal.
Solids capacity: 103 gal.

GB-500



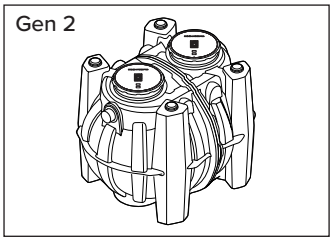
Years produced: 2018 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacity:
100 GPM / 3,271 lbs. (448 gal.)
200 GPM / 2,969 lbs. (407 gal.)
Liquid capacity: 510 gal.
Solids capacity: 128 gal.

GB-500-B (99%)



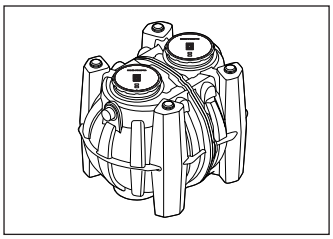
Years produced: 2019 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacity:
100 GPM / 2,817 lbs. (386 gal.)
Liquid capacity: 510 gal.
Solids capacity: 102 gal.

GB-1000



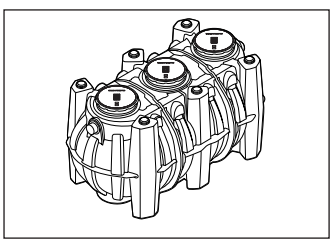
Years produced: 2021 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacities:
100 GPM / 5,495 lbs. (716 gal.)
200 GPM / 4,959 lbs. (647 gal.)
Liquid capacity: 1,000 gal.
Solids capacity: 211 gal.

GB-1000 (99%)



Years produced: 2021 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacities:
100 GPM / 5,272 lbs. (687 gal.)
200 GPM / 3,127 lbs. (369 gal.)
Liquid capacity: 1,000 gal.
Solids capacity: 211 gal.

GB-1500



Years Produced: 2023 - present
Identification: 24" covers with Safety Star® access restrictors.
Flow rate/grease capacities:
100 GPM / 10,061 lbs. (1,207 gal.)
200 GPM / 9,446 lbs (1,133 gal.)
Liquid Capacity: 1,588 gal
Solids Capacity: 318 gal.

Routine maintenance procedure

1. Remove cover(s). Do not remove Safety Star® access restrictor (if present) for routine maintenance.
2. Remove all interceptor contents including grease, sediment and wastewater. For most thorough cleaning contact a professional pumper contractor.
3. Run sinks to fill unit(s) with cold water.
4. Inspect cover gasket for wear and tear. Replace cover(s). To avoid damaging the interceptors and hardware, do not use power tools to tighten bolted covers.
5. Dispose of grease per local code.

NOTE: It is not necessary to remove the diffusers during routine maintenance unless there is a backup or drain lines require jetting. To remove most inlet and outlet diffusers, hand loosen the green locking collars. If interceptor is equipped with saddle adapters, pull the diffusers straight up to remove. With the diffusers removed, thoroughly clean the drainlines, diffusers and air relief of all debris as needed.

Routine maintenance clearance heights

The following are the minimum clearance heights required above the interceptor cover to be able to access and remove any internal interceptor components. These clearance heights apply to any generation of interceptor. Do not install permanent fixtures (i.e. plumbing) within these zones.

Model(s)	GB1, GB2, GB3	GB-50	GB-75, GB-250, GB-500	GB-1000, GB-1500
Minimum clearance height (inches)	5.5	12	16	72

Calculating pump-out frequency

All grease interceptors have a maximum grease holding capacity. Once that capacity is reached, fats, oils and grease (FOG) will begin to bypass into the collection system, creating the potential for blockages. It's critical to determine an accurate pump-out schedule that ensures the interceptor gets pumped out only as often as necessary, but before it reaches its maximum rated capacity. Your Great Basin® grease interceptor may have been sized using the Grease Production Sizing™ (GPS) formula and assigned a pump-out schedule prior to installation. If it wasn't, or if circumstances have changed, use the formula below to calculate your pump-out schedule.

Grease capacity **(See pages 5-6)** ÷ (Meals per day ✖ Grease production values (see Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ below)) = **Pumpout frequency in days**

Foodservice establishment (FSE) grease production values

CATEGORY	GREASE PRODUCTION VALUES	DESCRIPTION / EXAMPLES
LOW	Ⓐ 0.005 lbs / meal (no flatware)	serves food prepared offsite or food that requires minimal preparation and/or warming; bar (drinks only), coffee shop, continental breakfast, convenience store, deli, donut shop (w/o fryer), ice cream / yogurt / smoothies, pizza carryout, sandwich shop, sushi, snack bar
	Ⓑ 0.0065 lbs / meal (with flatware)	
MEDIUM	Ⓒ 0.025 lbs / meal (no flatware)	serves foods from a limited menu and/or with a limited amount of onsite preparation; cafeteria (heat and serve), caterer, fast food (limited prep), pizza restaurant, salad/healthy bowls, low category restaurants w/ fryer
	Ⓓ 0.0325 lbs / meal (with flatware)	
HIGH	Ⓔ 0.035 lbs / meal (no flatware)	serves a full menu of food prepared onsite; bakery, bar and grille, BBQ, buffet, cafeteria (full serve), Chinese, donut shop (w/fryer), family restaurant, fast food (full prep), fried chicken, Greek, grocery store, Indian, Italian, seafood, steak house, Mexican, medium category restaurants w/ fryer
	Ⓕ 0.0455 lbs / meal (with flatware)	

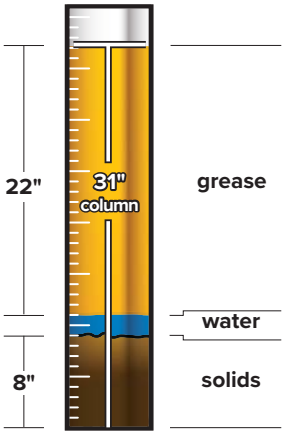
The easiest way to verify sizing for any project is to use Schier's Grease Monkey® sizing tool (https://greasemonkeysizing.com/). When scheduling pump-outs, Schier recommends a pumping frequency between 30 and 90 days. Your calculations should be updated if number of meals per day, operating days per week or the menu types (more greasy or less greasy) change.

Core samples

If you prefer not to rely solely on the GPSM to dictate pre-scheduled monthly pumpouts, you can take a more commanding role in dictating pump-out frequency with some simple tools and regular inspections. To do this you will need a core sampler. Popular brand names include DipStick Pro and Sludge Judge.

Once you have your core sampler, it can be outfitted with some simple labeling (via high adhesive tape or permanent marker) to indicate your pump-out levels (see below). Contact customer service if unsure what model you have.

GB-250 (100 GPM) core sample at full capacity



Core sample measurements at full capacity*

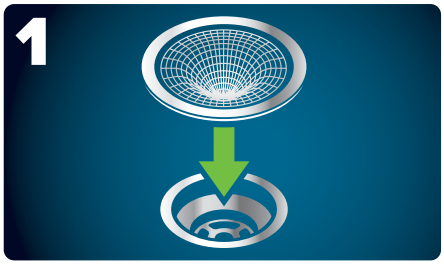
Model	ASME certification type	Flow rate (GPM)	Maximum grease capacity (lbs)	Total liquid height (In)	Maximum grease height (In)	Maximum grease % of volume	Maximum solids height (In)
GB1	D	25	58	5.25	5	95%	0.75
GB1-C	C	20	70	5.25	4.6	88%	0.75
GB1-CT	C	15	70	5.25	4.6	88%	0.75
GB2	D	35	119	7	6.25	89%	0.75
GB2-C	C	35	130	7	6.1	87%	0.75
GB2-2 (99%)	C	35	180	7	2.6	62%	0
GB2-CT	C	25	127	7	6.1	87%	0.75
GB3	D	50	268	13.75	12.8	93%	0.75
GB3	C	50	272	13.75	8.25	60%	0.75
GB-50 (Gen 2)	D	50	439	17.5	13	75%	3.25
GB-50 (Gen 2)	D	75	287	16.25	9.5	58%	3.25
GB-75 (Gen 2)	C	75	653	24	17.3	71%	1.5
GB-75 (Gen 3)	D	75	861	24	17.5	75%	6.75
GB-75-B (Gen 3, 99%)	D	50	623	24	16.5	68%	6
GB-250 (Gen 2)	C	200	1,196	36	20	59%	2.6
GB-250 (Gen 3)	D	100	1,895	29.5	23.5	82%	8.5
GB-250 (Gen 3)	D	150	1,848	29.5	23	80%	8.5
GB-250-B** (Gen 4, 99%)	D	75	1,560	29.5	22	77%	6.5
GB-500	D	100	3,271	35	25.4	73%	8.6
GB-500	D	200	2,969	34	24.4	72%	8.6
GB-500-B** (99%)	D	100	2,817	35	30.5	76%	0
GB-1000** (Gen 2)	D	100	5,495	53	42	74%	21
GB-1000** (Gen 2)	D	200	4,959	53	34.5	67%	21
GB-1000** (Gen 1, 99%)	C	100	6,237	53	39.75	85%	4.8
GB-1000** (Gen 2, 99%)	D	100	5,272	53	35.5	71%	21
GB-1000** (Gen 2, 99%)	D	200	3,127	53	21.5	42%	21
GB-1500**	D	100	10,061	57	48	86%	16
GB-1500**	D	200	9,446	57	41	81%	16

* Please note that as the grease layer inside of a grease interceptor accumulates it displaces the water below it downward. Much like an iceberg this grease layer will partially float above the static water line while the majority of it rests below it. As a result, the static water line of grease interceptor when at total grease capacity is slightly greater than the standard published static water line.

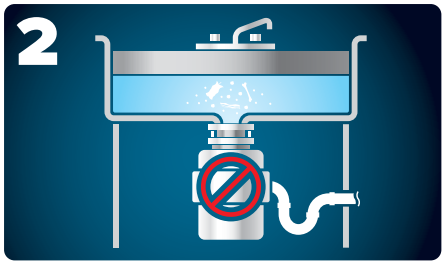
** For tanks with baffles, maximum grease height and volume is taken from outlet chamber

Kitchen best management practices

The following kitchen best management practices (BMPs) will help reduce the cost to clean and maintain your grease interceptor and keep your facility in good standing with local pretreatment authorities.



Use debris screens in all floor and sink drains. Regularly empty screens into trash.

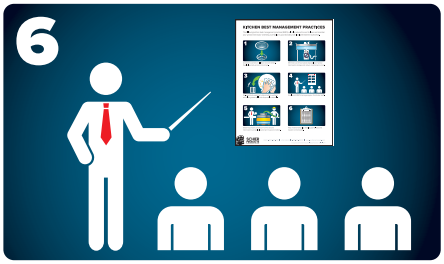


Minimize use of food waste disposals to improve interceptor storage and reduce maintenance costs.

Dry-wipe food waste from dishes before washing and clean grease spills with disposable materials.

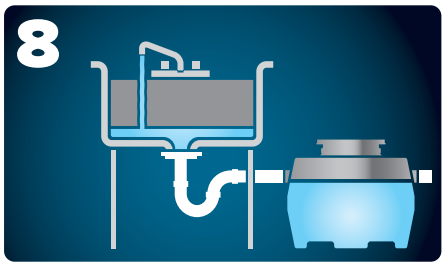
NEVER pour oil, fry oil, or melted lard or butter down drain line. Dispose these oils in appropriate container.

NEVER put chemicals for reducing grease into the drain system. The temporarily dissolved grease will bypass the interceptor and harden in downstream piping.

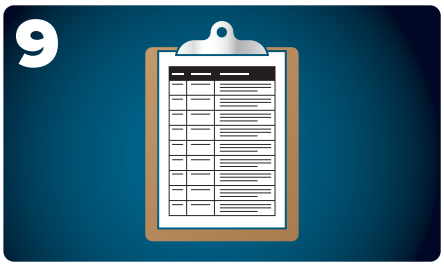


Implement BMP training program for kitchen staff.

Observe pumper contractor work to ensure interceptor is fully pumped out, properly cleaned and in good condition.



Make sure to run sinks to refill unit with cold water after pump-out.



Keep maintenance log detailing pump-outs, repairs and condition of interceptor.

Maintenance log

Date	Action (Inspection/ pump-out)	Grease level (inches)	Solids level (inches)	Notes

CONTACT INFORMATION

Grease Permit #

Pumper Contractor
Sewer and Drain Contractor
Local Authority Having Jurisdiction