

# GB-250

*Great Basin™ High Efficiency Grease Interceptor Technical Data*  
 Submittal | Special Precautions | Specifications | Installation | Application Specific Details

**SUBMITTAL**

**STANDARDS:** 4" plain end inlet/outlet | Capacities - Liquid: 275 gal. (1,041 L); Grease: 1,076 lbs. (488.1 kg) (47.4 gal./568 L); Solids: 105 gal. (397.5 L); Highway traffic load rated, bolted, gas/water tight composite covers, (6,000 lbs.)

**OPTIONS:**

<input type="checkbox"/> 4" Male Thread Inlet/Outlet	<input type="checkbox"/> High Water Anchor Kit
<input type="checkbox"/> 6" Plain End Inlet/Outlet	<input type="checkbox"/> Teflon/SS Release
<input type="checkbox"/> 6" Male Thread Inlet/Outlet (stainless steel)	<input type="checkbox"/> LR24 (x2) 5" - 23"
<input type="checkbox"/> H2O Load Rated Pedestal Cast Iron Covers	<input type="checkbox"/> LR24 (x2) >23" - 38"
<input type="checkbox"/> Integral Membrane Clamping Collar Kit	<input type="checkbox"/> LR24 (x4) >38" - 43"
<input type="checkbox"/> Pumpout Port (Large)	<input type="checkbox"/> LR24 (x2) + LR24 (x2) >43" - 68"
	<input type="checkbox"/> LR24 (x4) >68" - 72"

**APPROVAL:**

Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Specifying Engineer: \_\_\_\_\_  
 Engineering Firm: \_\_\_\_\_

**SCHIER** MODEL NUMBER: **GB-250** DESCRIPTION: Polyethylene Grease Interceptor 100 GPM - 275 gallon capacity  
 PART #: 4055-00-XX DWG BY: B. Karner DATE: 10/08/2016 REV: 3 10/13/2017 BDC:  
 8800 Woodland Road | Schwanitz, IA 50111 | Tel: 515-461-8900 | Fax: 515-461-8999 | www.schierproducts.com © Copyright 2017 Schier, All Rights Reserved 057-0870-02 page 1 of 7

## SPECIAL PRECAUTIONS

For All Schier Grease Interceptor Installations

**Installation Instructions**

Installation instructions and additional components are located inside the Interceptor. Read all instructions prior to installation. This Interceptor is intended to be installed by a licensed plumber in conformance with all local codes.

**High Temperature Kitchen Water**

If water is entering the interceptor at excessive temperature (over 140° F), a drain water tempering valve (DWT) must be installed. Most state and local plumbing codes prohibit water above 140° F being discharged into the sanitary sewer. Water above 140° F will weaken or deform PVC Schedule 40 pipe, poly drainage fixtures like interceptors and erode the coating of cast iron (leading to eventual failure). Failure to follow this guidance voids your warranty.

**When Installing Interceptor Inside**

If your dishwashing sink(s) discharge into a floor drain/sink (drain), you must regulate the flow into the drain to avoid an overflow of water onto the kitchen floor. This can be done by installing a valve or flow restriction cap on the sink piping that discharges into the drain. See drawing below for guidance. For detailed guidance on indirect connections, go to: [http://webtools.schierproducts.com/Technical\\_Data/Indirect\\_Connections.pdf](http://webtools.schierproducts.com/Technical_Data/Indirect_Connections.pdf)

**High Water Table Installations**

Interceptors and risers are not designed to withstand water table height in excess of the top of the unit when buried (see figure). If it is possible for this to occur, install the interceptor and riser in a water-tight concrete vault or backfill with concrete or flowable fill (wet concrete and flowable backfill should be poured in stages to avoid crushing the interceptor). At risk areas include but are not limited to tidal surge areas, floodplains and areas that receive storm water. Follow this guidance voids your warranty. Models GB-50, GB-75, and GB-250 that are direct buried in high water table scenarios must be installed with model AK1 anchor kit or warranty is void.

**Hydrostatic Slabs (or Pressure Slabs)**

When installed under a hydrostatic slab (slab designed to withstand upward lift, usually caused by hydrostatic pressure) interceptor must be enclosed in a water-tight concrete vault. Failure to follow this guidance voids your warranty.

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## SPECIFICATIONS

**NOTES:**

- 4" plain end inlet/outlet.
- Unit weight - w/composite covers: 230 lbs. w/ast iron covers: 340 lbs. (For wet weight add 2200 lbs.)
- Maximum operating temperature: 140° F continuous
- Capacities - Liquid: 275 gal.; Grease: 1,076 lbs. (47.4 gal.); Solids: 105 gal.
- Built-in Flow control.
- For gravity drainage applications only.
- Do not use for pressure applications.
- Cover placement allows full access to tank for proper maintenance.
- Vent not required unless per local code.
- Engineered inlet and outlet diffusers are removable to inspect/clean piping.
- Integral air relief / Anti-siphon / Sampling access.

**DIFFUSION FLOW TECHNOLOGY**

The inlet diffuser splits influent into three paths, creating laminar flow and utilizing the entire liquid volume of the tank for efficient grease separation. The calibrated openings greatly reduce effluent turbulence. The effluent enters the main chamber without disturbing the existing grease or sediment layers.

The integral air relief / anti-siphon in the top of the outlet diffuser allows pressure stabilization within the unit during operation. The bottom of the outlet diffuser allows only effluent which is free of grease to exit the tank. It can easily be attached to any of the three outlets provided to ease job site piping layouts.

**ENGINEER SPECIFICATION GUIDE**

Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene. Interceptor shall be furnished for above or below grade installation. Interceptor shall be certified to ASME MEAS type C1 and CSA B481.1 with field adjustable riser system, built-in flow control, built-in test caps and three outlet options. Interceptor flow rate shall be 100 GPM. Interceptor grease capacity shall be 1,076 lbs. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

**CERTIFIED PERFORMANCE**

Great Basin hydromechanical grease interceptors are third party performance tested and listed by IAPMO and ASPE #AT214.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

**SECTION A-A**

**OUTLET END VIEW**

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## INSTALLATION (1 of 3)

**WARNING! DO NOT AIR TEST UNIT OR TELLURIDE (RISER SYSTEM)** Doing so may result in property damage, personal injury or death.

**LEAK/SEAL TESTING**

Cap/Plug all base unit plumbing connections and remove covers. For base unit testing, fill with water to just above the highest connection. For riser system testing (if required) fill with water to finished grade level. CAUTION: Risers must be supported before filling with water to prevent tipping. Inspect unit, connections and all gaskets and clamps (if applicable) for leaks. Check water level at specific time intervals per local code.

**GENERAL INSTALLATION INSTRUCTIONS**

Schier grease interceptors are manufactured with an internal flow control system. They do not require an external flow control system or air intake vent. Schier grease interceptors are not to be installed in any other manner except as shown. Consult local codes for separate trapping requirements, cleanout locations and additional installation instructions.

- The riser control plate is not installed on this unit. When the unit is installed 13 feet or more below the features that flow into the unit, or a high flow/crossed head pressure condition exists causing a flow rate above 100 GPM, install the inlet diffuser flow control plate to maintain proper flow rate.
- Set unit on level solid surface as close as possible to features.
- Connect outlet diffuser to the desired outlet (A,B,C). Unit is shipped with the outlet diffuser in location B and sealing caps on locations A and C.
- Connect inlet and outlet piping to the unit. Mechanically couple pipes to unit. Do not solvent weld.
- For units with cast iron covers, remove retainer clips prior to burial.

**BELOW GRADE INSTALLATION INSTRUCTIONS**

**EXCAVATION**

- Surrounding soil must be undisturbed soil or well compacted engineering fill.
- Width and length of excavation shall be a minimum of 12" greater than the tank on all sides and depth shall be 6" deeper than tank bottom.
- Set the tank level on a 6" deep layer of well-packed crushed aggregate material and connect waste piping per General Installation Instructions.

**BACKFILL**

- Preparation of sub grade per geotech recommendations.
- Stabilize and compact sub grade to 95% proctor.
- Fill unit with water before backfilling to stabilize unit and prevent float-out during backfilling. Secure covers and risers (if necessary) to the unit.
- Backfill evenly around tank using crushed aggregate (approximately 3/4" size rock or sand, with no fines), or flowable fill. Do not compact backfill around tank.

**FRESHEN CONCRETE SLAB**

Slab must extend 10" minimum outside the unit footprint.  
 Pedestals/triangles/grease traps areas: 4" thick reinforced concrete slab required.  
 Vent/airer traffic areas: Minimum 6" thick concrete slab with rebar required. Final thickness of concrete around and cover to be determined by specifying engineer. If traffic loading is required the concrete slab dimensions shown are for guidance purposes only. Concrete to be 28 day compressive strength to 4,000 PSI. Use No. 4 rebar (1/2" grade 60 steel per ASTM A605) connected with tie wire. Rebar to be 2-1/2" from edge of concrete and spaced in 12" grid with 4" spacing around access openings.

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## INSTALLATION (2 of 3)

**TELLURIDE RISER (24 SERIES)**

**INSTALLATION GUIDELINES**

Tools needed: 7/8" Npt driver tool kit (included), marker (included), tape measure and drill with 1/2" chuck. Jigsaw, circular saw or reciprocating saw will be needed if risers need to be cut.

**NOTE:** To remove a component or adjust its position, the Upper Band Clamp needs to be loosened or removed using the driver bit. Loosened clamps should be re-tightened to 5 - 8 ft lbs. of torque (same as a rubber nub cover). The Lower Band Clamp is factory set and should not be adjusted or removed.

**Riser Assembly Instructions/Steps**

- Set unit so the pipe connections line up with job site piping and measure riser height needed from top of cover to finished grade. See Table 1 to select risers needed.
- Remove covers from adapters. Remove adapters from main unit. On a level surface, pre-assemble the risers and adapters, adjusting the components upwards or downwards to achieve the riser height needed. Make sure to maintain minimum and maximum insertion depths as shown in Figure 2. If components are too long, make a circular line around the sidewall with marker and cut with a power saw. The lowest cut line on the riser assembly will be 6" beyond the riser height needed to allow for ideal insertion depth (See Figure 1). An alignment mark should be drawn 2" beyond the riser height needed which will align with the top of the base unit gasket.
- IMPORTANT:** Before the next step, make sure both diffusers are installed inside the main unit at the appropriate locations. Check if there needs to be any flow control adjustment at the inlet diffuser (see general installation instructions).
- Take apart riser assembly and clean all sidewalls and inlets of gaskets to remove dust/debris. Install components into the main unit starting from the lowest riser and work your way up to finished grade. Ensure that riser will not interfere with diffuser, allow min. 1" clearance. Maintain minimum and maximum insertion depths for all components (see Figure 2). Tighten Upper Clamps to specified torque after correctly positioning components. Riser assembly may need to be supported during backfill.
- If fitting of the adapter is required to be flush with grade, do so AFTER all clamps have been tightened with riser's/adapter in a vertical and level position. Tilting is done using gasket flexibility. Tilting before tightening clamps may ruin a perfect gasket seal. Schier recommends tilting only the adapter versus the entire riser assembly to make sure your riser height and proper tank access is maintained.
- If riser height conditions change after completing above steps, there may be room for adjustment. As long as minimum and maximum insertion depths are maintained (see Figure 2), the adapters/risers can be adjusted/cut as many times as necessary. When riser system installation is complete, see Leak/Seal Testing procedure if required (pg 3 of 6).

**ANCHOR KIT INSTALLATION**

Stainless steel anchor kit is recommended for installation in high water table conditions to prevent float out. Necessity to be determined by specifying engineer. Hold down force achieved by backfill weight acting on Anchor Plate.

Slide Anchor Hook over the down point on end wall and bolt to Anchor Strap. Bolt Anchor Strap to Anchor Plate using provided stainless steel hardware. If required, Anchor Plate may be bolted to concrete slab using provided holes.

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## INSTALLATION (3 of 3)

**EXPANDING GREASE CAPACITY**

Multiple grease interceptor configurations must be piped as shown to ensure the system works properly as designed. For below grade installations, all units must be level in the excavation pit. Hybrid systems combining parallel and series installations are available per written approval from Schier.

All inlet manifolds, outlet manifolds, piping between units and two-way cleanout tees by others.

**Series Installation of Multiple Grease Interceptors**

For lower flow rates and higher grease storage requirements.

For below grade installations it is recommended to install a two-way cleanout tee extended to finished grade before the inlet of the first unit, after the outlet of the last unit and in between units (if there is a long run of pipe between units) for line cleaning purposes.

**NOTE:** When the flow control plate is required, it should only be installed on the first unit in the series.

**Parallel Installation of Multiple Grease Interceptors**

For flow rates above 100 GPM and higher grease storage requirements.

Units must be equally spaced to ensure equal effluent flow distribution.

For below grade installations it is recommended to install a two-way cleanout tee extended to finished grade before and after each unit for line cleaning purposes.

Flow-Split™ (FS-DUO, FS-TRO, FS-QUAD) sold separately.

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NO.	DATE	DESCRIPTION
△	07-16-18	(NEW SHIT.)
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CONTRACT DATE: \_\_\_\_\_  
 BUILDING TYPE: EXP. LT. MED-4  
 PLAN VERSION: x  
 SITE NUMBER: 309797  
 STORE NUMBER: 420630

**TACO BELL**

20711 SO. DIXIE HWY  
 CUTLER BAY, FL



Explorers Lite  
**GREASE TRAP DETAILS**

**C-3.1**

PLOT DATE: 07-16-2018