

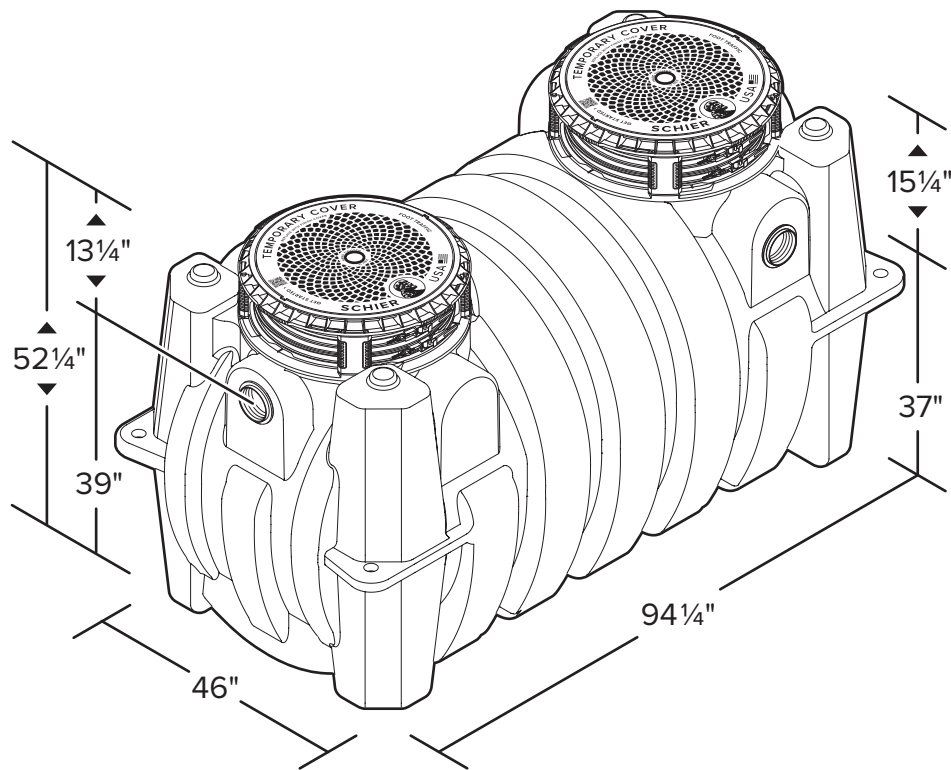
INSTALLATION GUIDE



Failure to follow this guidance
will void your warranty

GB-500

100 GPM Great Basin® indoor/outdoor grease interceptor



Cover adapter may be raised or lowered 2 1/2".

Examine product for damage and read all instructions prior to installation.

Please report significant damage to customer service at (913)-951-3300.

Warranty is void if a damaged product is installed, or if the product is not installed in conformance with all local codes.

Schier recommends installation only by a licensed plumber.



SCHIER®

SPECIAL PRECAUTIONS

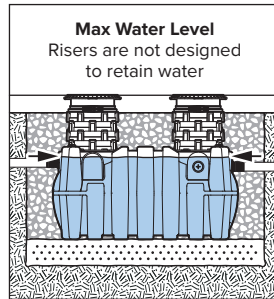


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PRESSURE TESTING

Do not pressure test the interceptor or riser system. Doing so may result in property damage, personal injury or death. The interceptor is intended for open system (vented) gravity drainage use only and should not be used in closed system pressure applications.

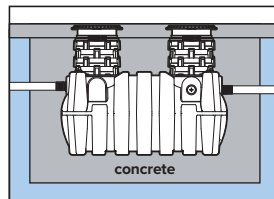
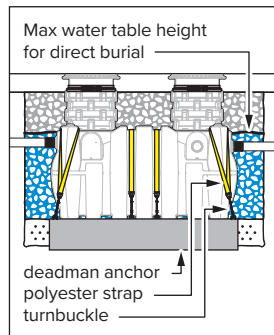
Before installation, the interceptor should be tested up to top of tank for water tightness. See page 5 for details. The risers are not designed to retain water and should not be water tested.



HIGH GROUNDWATER LEVELS

Anchor Kit Required: If the interceptor is at risk of being exposed to groundwater, an anti-flotation anchor kit is required. Great Basin model GB-500 uses model AK2 anchor kit for use with deadmen anchors.

High groundwater level warning: Interceptors and risers are not intended to withstand groundwater levels higher than the top of the tank body. Exposure to such elevated groundwater levels may compromise the structural integrity of the interceptor. If the interceptor is at risk of being exposed to groundwater levels higher than the top of the tank body, it must either be encased in concrete or installed inside a watertight concrete vault. Please contact Schier for concrete encasement guidance.

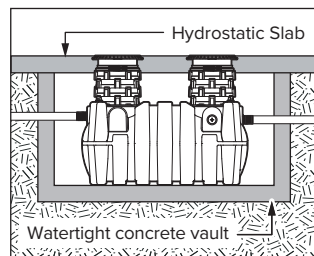


Determining groundwater levels:

High risk areas include coastal regions, floodplains and other areas susceptible to excessive stormwater accumulation. When available, consult the geotechnical report to determine the elevation of the seasonal high groundwater level.

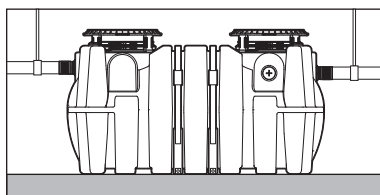
Hydrostatic/pressure slabs:

Hydrostatic slabs are designed to withstand upward groundwater pressure and water infiltration when the slab is located at an elevation lower than the water table or high groundwater level. If the interceptor and risers will be located underneath a hydrostatic slab, they must be installed inside a watertight concrete vault.



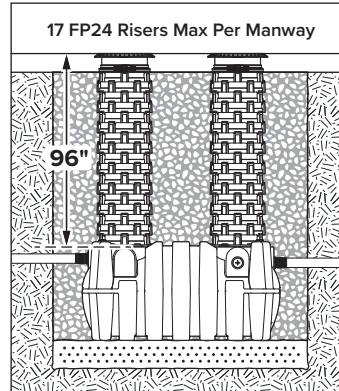
FULLY SUPPORT BASE OF UNIT

The interceptor should be installed on a solid, level surface in contact with the entire bottom of tank footprint.

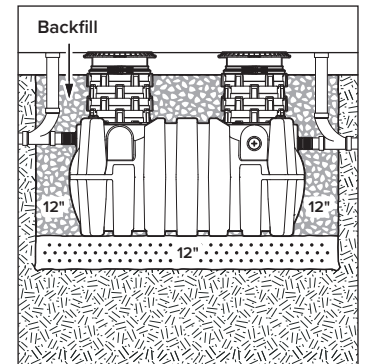


EXCAVATION, BACKFILL AND PAD

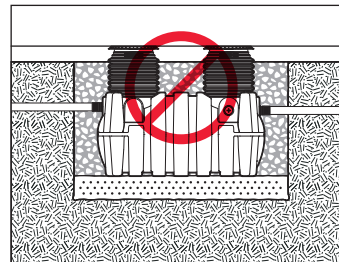
Maximum burial depth: The interceptor should not be buried deeper than 96" from the shoulder of the unit to grade. For deeper burials contact customer support.



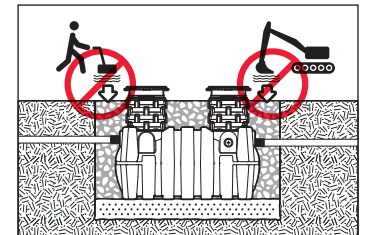
Approved backfill: Backfill must be clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines. **Native soil and sand are not approved backfill materials.**



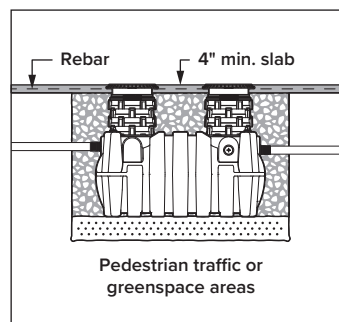
Corrugated pipe is not allowed for riser use.



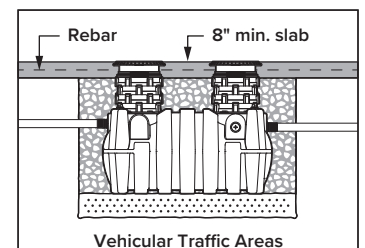
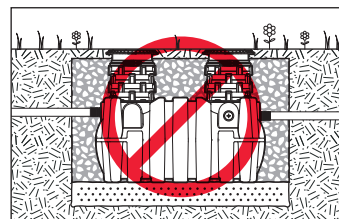
Do not compact backfill mechanically: Compact by hand only



Concrete pad required at grade: For all buried applications. See page 11 for details.

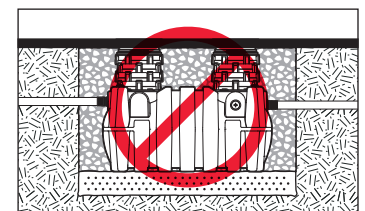


Do not install using native soil at grade.



NOTE: An alternate 6" pad may be allowed if the site/civil engineer has provided written calculations and stamped approval that has been submitted and approved by Schier Products.

Do not install using asphalt pad.



SPECIAL PRECAUTIONS

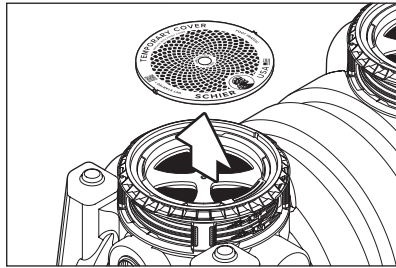


Failure to follow this guidance will void your warranty

COVER SELECTION

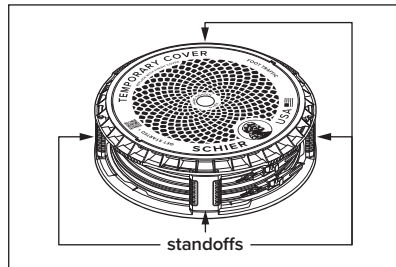
Discard temporary cover:

Temporary cover shipped with this unit is not intended for post construction use and must be replaced with a permanent pedestrian or traffic cover by Schier before the interceptor is put into service.



Secure cover adapters:

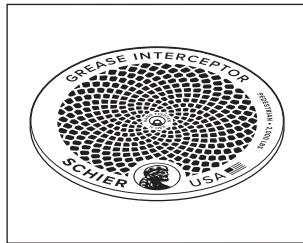
Cover adapters must be secured to base units in all above grade installations (ex: in a basement). Use the (4) standoffs included with each manway secured into the locked position.



Pedestrian cover - polypropylene:

P24-GI bolted injection molded cover should be used for above grade and pedestrian rated applications. Not recommended for outdoor use unless in a non-traffic area.

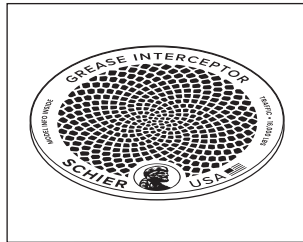
Plastic, bolted 24", rated to 2,000 lbs., generally for indoor or above grade use.



Traffic cover - cast iron:

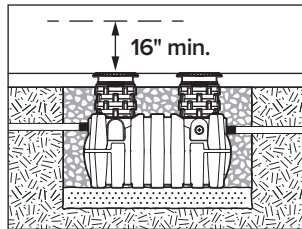
T24-GI pickable cast iron covers should be used for outdoor buried and vehicle rated applications. Not recommended for above grade or most indoor use.

Cast iron, 24", H-20 rated to 16,000 lbs., generally for outdoor use.



Required clearance above covers:

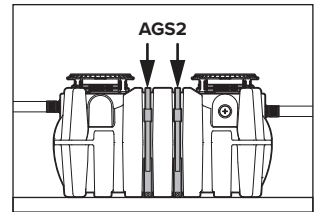
Allow at least 16" of clearance above the interceptor for routine maintenance.



INDOOR INSTALLATION TIPS

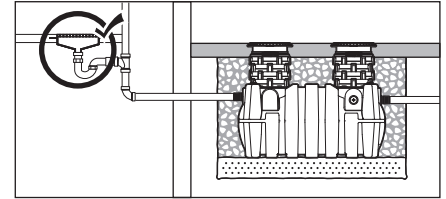
Above grade installation support:

An above grade support kit (model AGS2) is required for all above grade GB-500 installations.

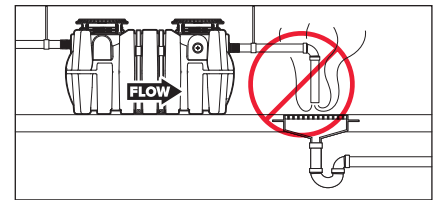


Odor alert!

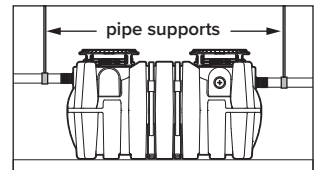
The interceptor is not a sewer gas trap. All upstream fixtures must be trapped.



Do not install an air gap on the outlet side of the interceptor.



Support piping: Inlet and outlet piping must be properly supported.



SERIES INSTALLATIONS

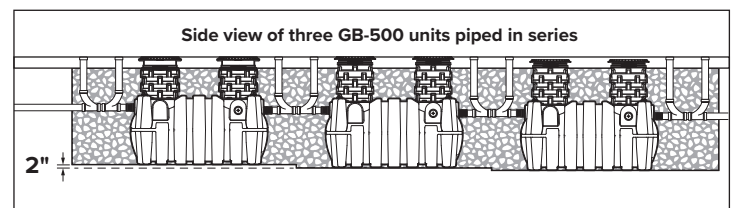
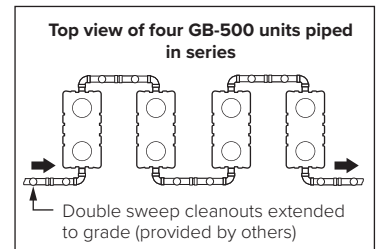
For lower flow rates and higher grease storage requirements. Piping between units and double sweep cleanouts by others.

Below grade installations:

All units must sit level in the excavation pit. Note that downstream units must be buried 2" deeper than the adjacent, upstream fixture.

Double sweep cleanouts extended to finished grade should be installed before the first unit inlet, after the last unit outlet and in between units for line cleaning purposes.

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

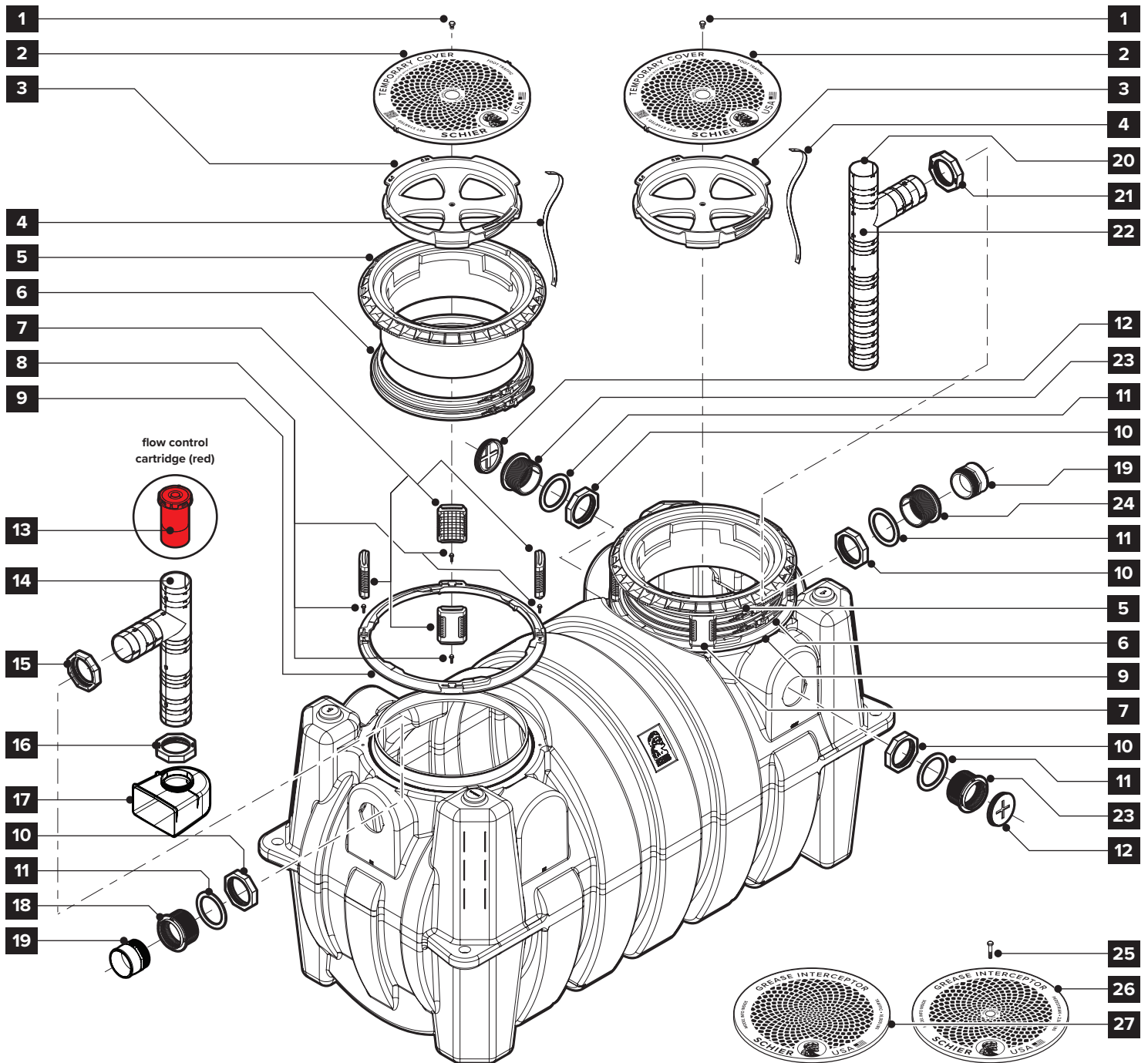


INDOOR INSTALLATION TIPS

Dishwasher discharge: If your dishwashing sink(s) discharges into a floor drain/sink (drain), you may 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.

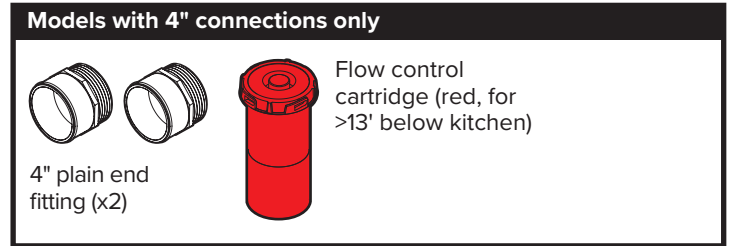
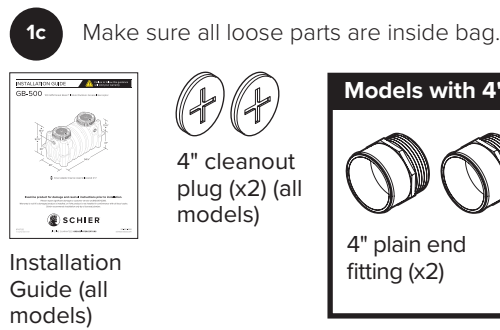
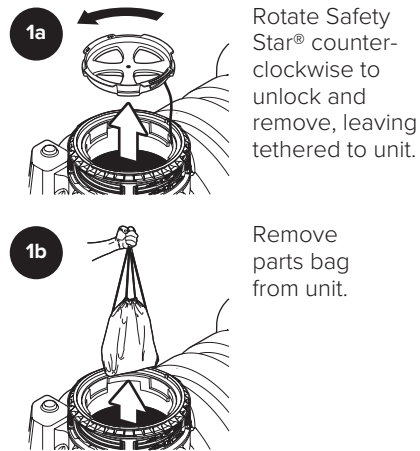
High temperature kitchen water: Wastewater entering the interceptor should not exceed 150° F. If wastewater temperatures will exceed 150° F, a drain water tempering valve (DTV) should be installed to cool the water.

GETTING TO KNOW THE GB-500 (4" connections shown)



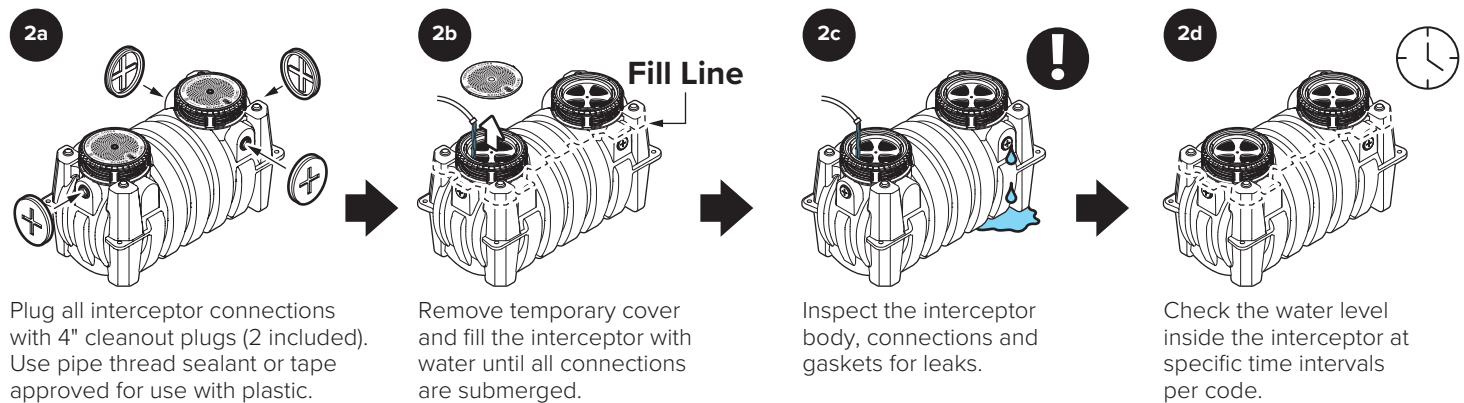
- | | | |
|---|---|---|
| 1. Temporary cover bolt (x2) | 11. Bulkhead connection gasket | 20. Air relief/visual access |
| 2. Temporary cover (x2) | 12. 4" cleanout plug (x2) | 21. Outlet diffuser retaining nut |
| 3. Safety Star® access restrictor (x2) | 13. Flow control cartridge (for >13' below kitchen), see page 7 for more information. | 22. Outlet diffuser |
| 4. Safety Star® tether (x2) | 14. Inlet diffuser | 23. Outlet bulkhead connection (optional) 4" FPT (x2) |
| 5. Cover adapter (x2) | 15. Inlet diffuser retaining nut | 24. Outlet bulkhead connection (standard) 4" FPT |
| 6. Neck gasket assembly with upper and lower stainless steel band clamps (x2) | 16. Inlet diffuser foot retaining nut | 25. Pedestrian cover bolt (not included) |
| 7. Standoffs (x8) | 17. Inlet diffuser (foot) | 26. Pedestrian cover (not included) |
| 8. Tank ring mounting bolts (x8) | 18. Inlet bulkhead connection 4" FPT | 27. Traffic cover (not included) |
| 9. Tank ring (x2) | 19. 4" plain end fitting (x2) | |
| 10. Bulkhead connection retaining nut | | |

1 Remove loose parts bag



Missing Parts? Call customer support at 913-951-3300

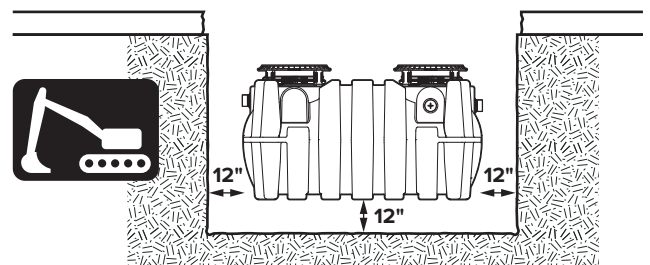
2 Test tank for water tightness



Have a Leak? Call customer support at 913-951-3300

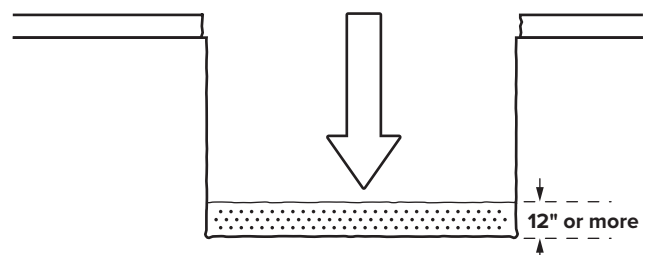
3 Excavate burial pit ONLY

Excavate the interceptor burial pit to at least 12" larger than the interceptor on all sides and 12" deeper than the interceptor bottom.

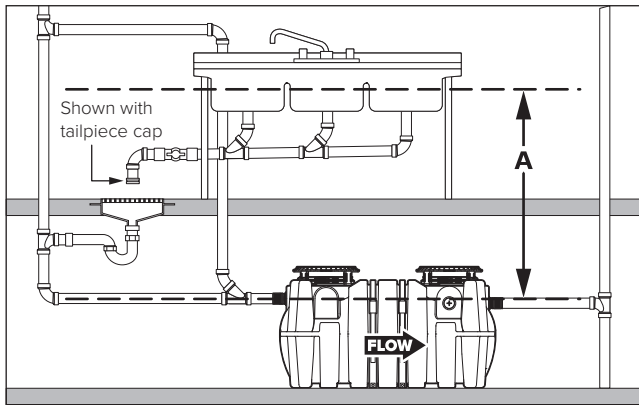


4 Fill base layer ONLY

Lay a level layer of well-packed, crushed aggregate at the base of the pit. Base layer material must be clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines. **Native soil and sand are not approved backfill materials.**



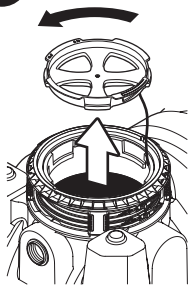
5 Configure inlet diffuser



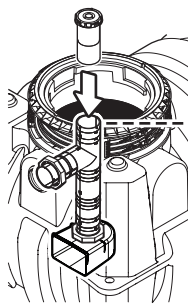
The GB-500 is supplied with a flow control cartridge that may be necessary for high flow and increased head pressure conditions.

- If the interceptor has 6" connections, no additional components are needed, **go to Step 6.**
- If dimension "A" is 13 feet or less, no additional components are needed, **go to Step 6.**
- For interceptors with 4" connections; if dimension "A" is more than 13 feet, or a high flow or increased head pressure condition exists, **follow the steps below.**

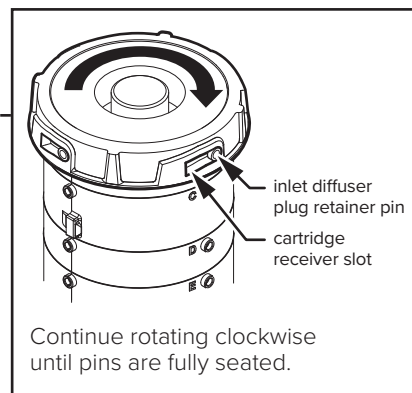
5a Install flow control



Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit.

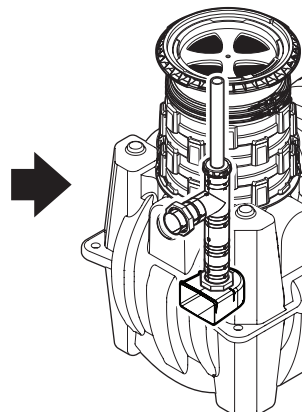
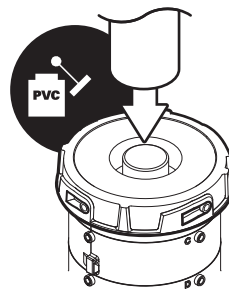


Slide flow control cartridge into top of inlet diffuser and rotate clockwise until cartridge drops onto the retainers pins.



5b OPTIONAL: install extension handle

For deep burial installations, a 1-1/2" PVC SCH. 40 pipe may be used for easy access to the inlet diffuser cover/flow control cartridge. Before risers have been installed, cut PVC pipe to length and attach to the top of the inlet diffuser cover/flow control cartridge using PVC primer/cement. The extension handle should be about 12" shorter than the total riser height.



6 Configure outlet diffuser

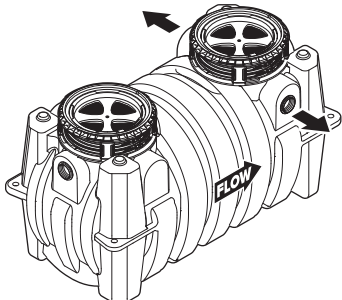
The GB-500 is manufactured with three outlet options. Only one outlet will be connected to the drainline and the other two must be plugged with the 4" cleanout plugs provided. The outlet diffuser comes pre-installed on the straight through end wall outlet connection.

If the straight through outlet connection will be used, **go to Step 6c.**

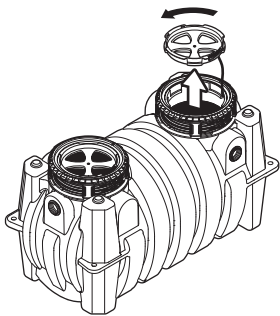
6a Choose the appropriate side outlet location

Side Outlet:

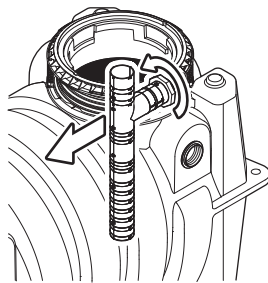
Go to Step 6b.



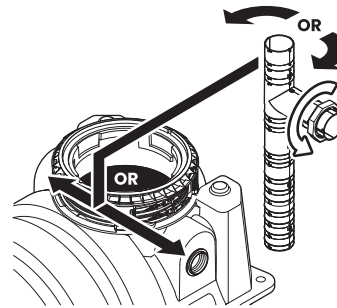
6b Reposition outlet diffuser from the straight through outlet to the chosen side outlet



Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit.

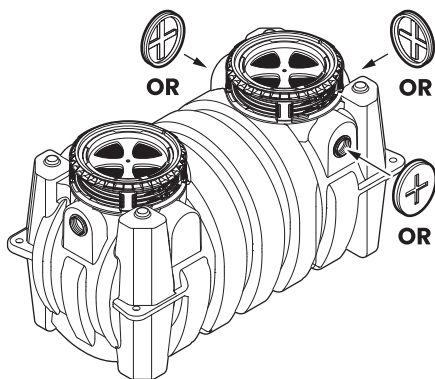


Untighten the green diffuser retaining nut and remove outlet diffuser



Insert diffuser into chosen outlet and hand tighten the green diffuser retaining nut.

6c Plug the two unused connections



Plug the remaining two unused outlet connections with the 4" cleanout plugs provided using thread sealant or tape approved for use with plastics. **Do not plug the inlet or outlet connections with diffusers.**

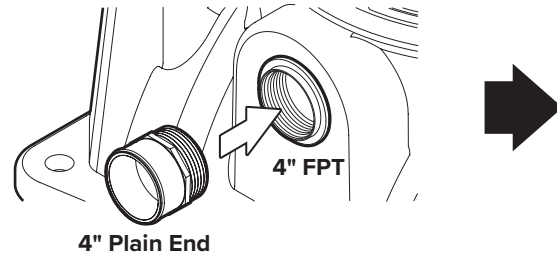
NOTE: An unused outlet connection being used with a pumpout port installation should not be plugged.

7 Connect piping to interceptor

7a Install plain end fittings (4" connections only)

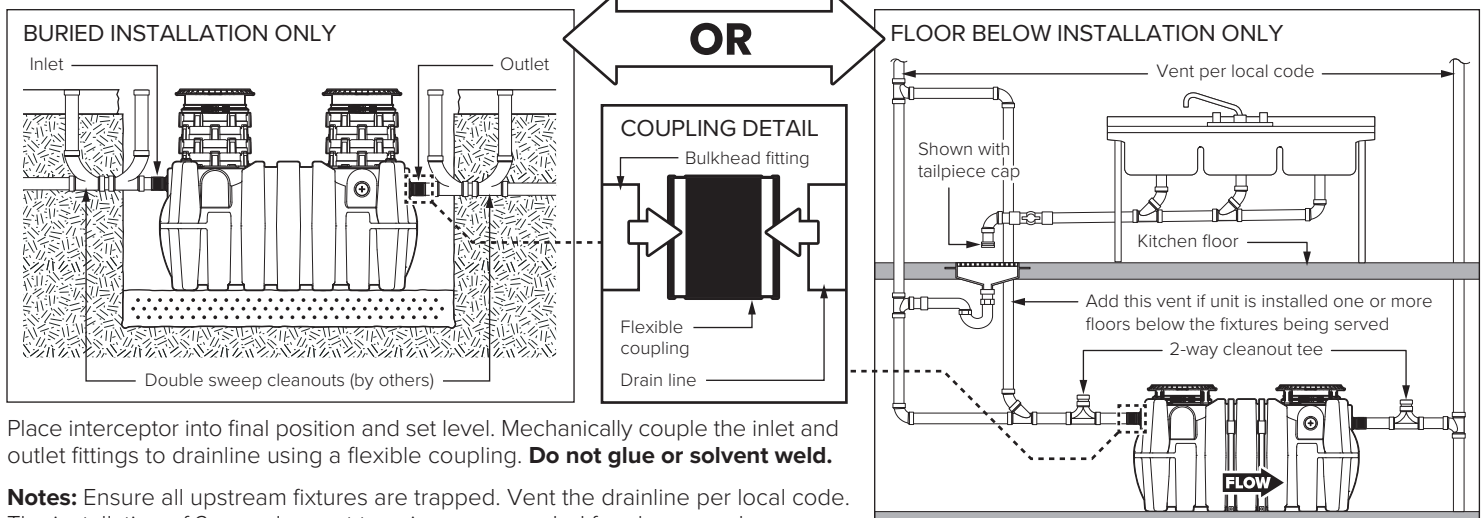
Screw plain end fittings (2 - 4" MPT x 4" plain end fittings provided) into the inlet and outlet bulkhead fittings on the interceptor using pipe thread sealant or tape approved for use with plastics.

Note: 6" connections must be factory installed.



4" Plain End

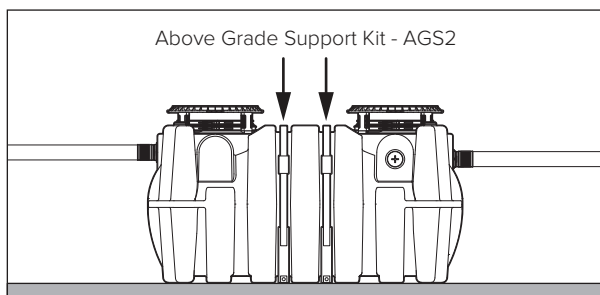
7b Connect the interceptor to drain lines



Place interceptor into final position and set level. Mechanically couple the inlet and outlet fittings to drainline using a flexible coupling. **Do not glue or solvent weld.**

Notes: Ensure all upstream fixtures are trapped. Vent the drainline per local code. The installation of 2-way cleanout tees is recommended for above grade installations. The installation of double sweep cleanouts or combination wyes is recommended for buried installations, check local code requirements to confirm acceptability.

8 Install AGS2 above grade support kit (sold separately) ABOVE GRADE ONLY



The wet weight of the interceptor combined with high temperature kitchen water creates the potential for tank deformation in above grade installations. Above grade support kit AGS2 is required to be installed to maintain GB-500 structural integrity.

9 Wet or air test piping per local code

! WARNING! DO NOT AIR TEST UNIT OR RISER SYSTEM!

Doing so may result in property damage, personal injury or death. The interceptor is intended for open system (vented) gravity drainage use only and should not be used in closed system pressure applications.

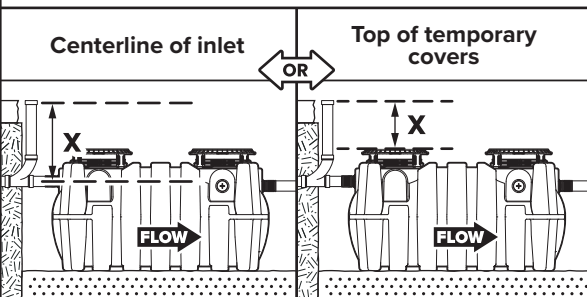
10 Bring covers flush-to-grade ONLY

For GB-500 buried installations, the cover adapter can be raised or lowered up to 2½" from the factory set position. Deeper burials require Fast Pitch® FP24 risers to extend cover adapter to grade.



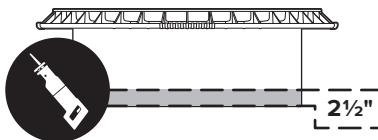
10a Determine number of risers required

Measure the distance X from either the centerline of inlet, or the top of the temporary covers (from factory set position with standoffs in place) to finished grade. Consult the chart below to determine the number of risers required.

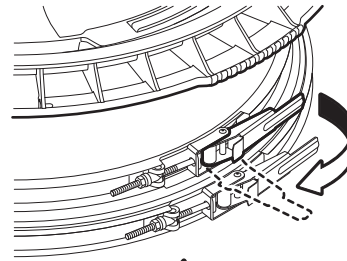
RISER HEIGHT NEEDED MEASURED FROM		FP24 risers required per manway
Centerline of inlet	Top of temporary covers	
		
13¼ - 15¾"	0 - 2½"	0
15¾ - 20¾"	2½ - 7½"	1
20¾ - 25¾"	7½ - 12½"	2
25¾ - 30¾"	12½ - 17½"	3
30¾ - 35¾"	17½ - 22½"	4
35¾ - 40¾"	22½ - 27½"	5
40¾ - 45¾"	27½ - 32½"	6
45¾ - 50¾"	32½ - 37½"	7
50¾ - 55¾"	37½ - 42½"	8
55¾ - 60¾"	42½ - 47½"	9
60¾ - 65¾"	47½ - 52½"	10
65¾ - 70¾"	52½ - 57½"	11
70¾ - 75¾"	57½ - 62½"	12
75¾ - 80¾"	62½ - 67½"	13
80¾ - 85¾"	67½ - 72½"	14
85¾ - 90¾"	72½ - 77½"	15
90¾ - 95¾"	77½ - 82½"	16
95¾ - 100¾"	82½ - 87½"	17

Reducing interceptor height for shallow burials

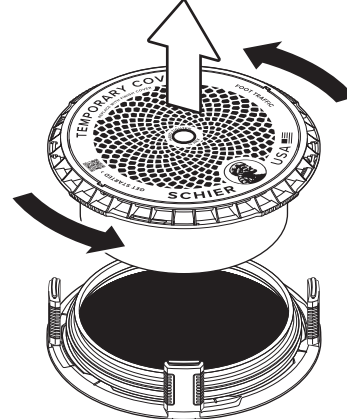
The cover adapter may be lowered up to 2½" from the factory set position. Remove the standoffs, loosen the neck gasket upper band clamp and remove the cover adapter. Use a reciprocating saw to trim up to 2½" from the bottom of the cover adapter ensuring it can be re-inserted without internal component interference. CAUTION: this will permanently reduce the cover adapter maximum extension from 5" to 2½". Place the cover adapter back into the neck gasket and go to Step 10d.



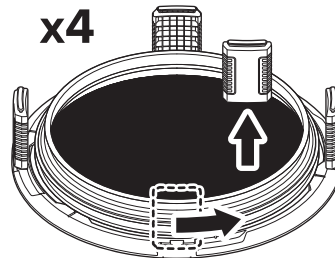
10b Remove cover adapter, standoffs and neck gasket



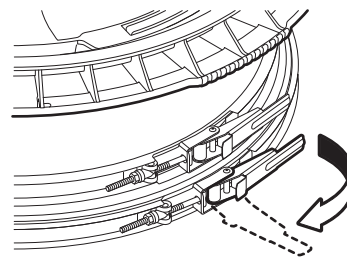
Loosen the upper band clamp by pulling open the quick release locking lever



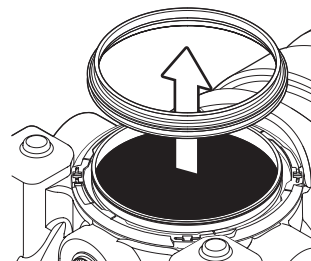
Grab the cover adapter handles and turn it counterclockwise to unlock it from the tank. Remove cover adapter



Remove the four standoffs from the tank ring (slide out of slots)



Loosen the lower band clamp by pulling open the quick release locking lever

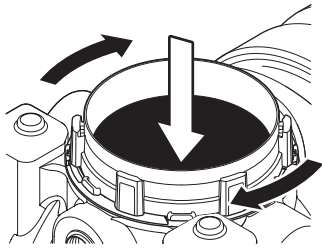


Remove the neck gasket from the tank.

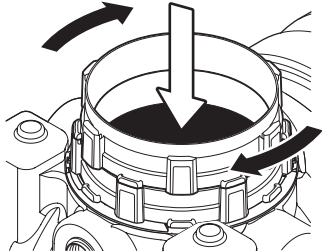
CONTINUED

10 Bring covers flush-to-grade (continued) ONLY

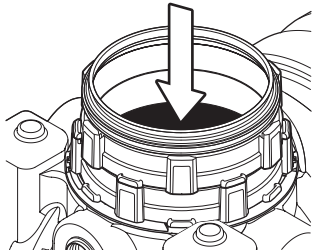
10c Install risers and replace neck gasket



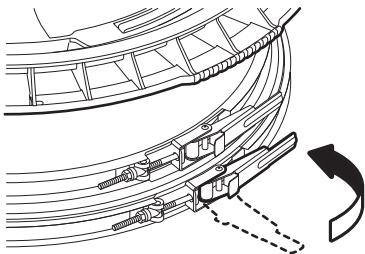
Place the Fast Pitch® riser onto the tank ring and align tabs on riser into the slots on tank ring. Turn clockwise until the riser fits firmly into place.



Place additional risers making sure each riser locks firmly into place until proper height is achieved.

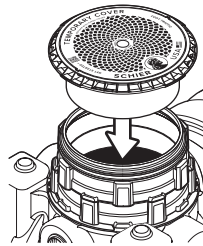


Attach the neck gasket on top of the last riser. Ensure that the gasket fully surrounds the top of the riser.



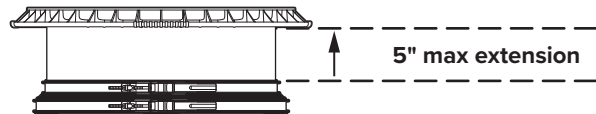
Tighten the lower band clamp by pushing the quick release locking lever closed.

10d Make final cover adapter adjustments

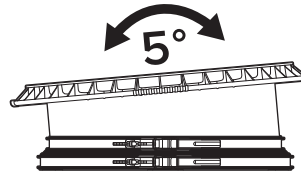


Insert cover adapter into riser assembly.

Adjust cover adapter heights as needed.

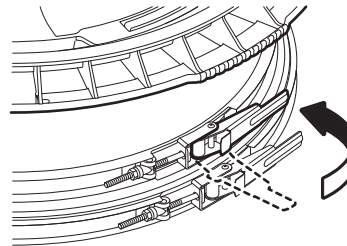


5" max extension



5°

Cover adapters may be tilted up to 5° in any direction.

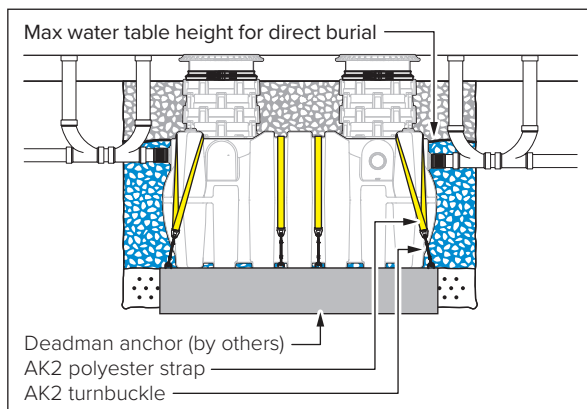


Tighten the upper band clamp by pushing the quick release locking lever closed.

Adjusting neck gasket band clamp tension

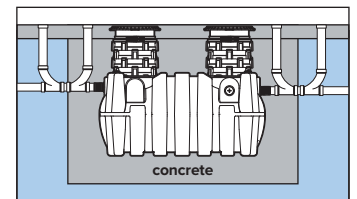
Factory set clamp tension should not need to be modified. If necessary, adjust by first pulling open the quick release locking lever. Then slightly hand tighten (clockwise) or loosen (counter-clockwise) hex nut at end of threaded rod.

11 Install anti-flotation anchor kit for high groundwater level applications only ONLY



If the interceptor is at risk of being exposed to groundwater, an anti-flotation anchor kit is required. Great Basin® model GB-500 uses model AK2 anchor kit for use with deadmen anchors (by others).

Additional protection required: If the interceptor is at risk of being exposed to groundwater levels higher than the top of the tank body, it must either be encased in concrete or installed inside a watertight concrete vault. Please contact Schier for concrete encasement guidance.

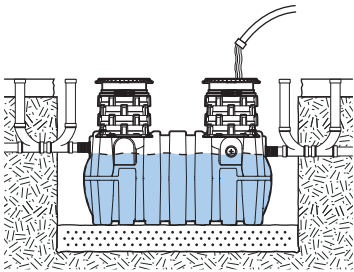


12 Backfill around interceptor ONLY

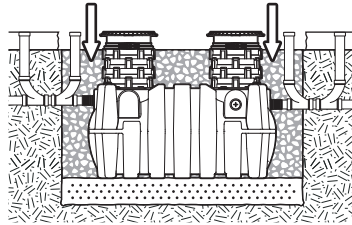


Failure to follow this guidance will void your warranty

12a Fill the interceptor with water

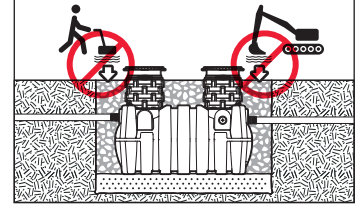


12b Add backfill



Backfill evenly around the interceptor and risers with clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines.
Native soil and sand are not approved backfill materials.

DO NOT COMPACT BACKFILL

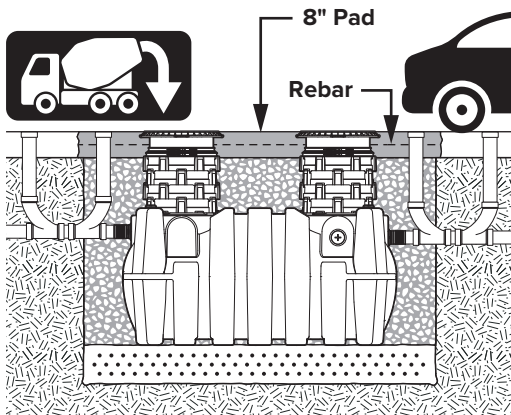


Note: Do not mechanically compact the backfill over top and around the interceptor.

13 Concrete pad at grade required ONLY

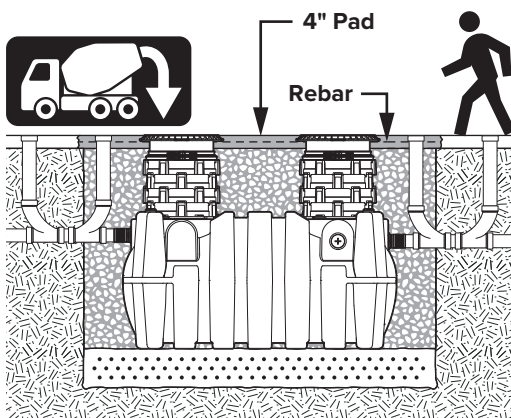


Failure to follow this guidance will void your warranty



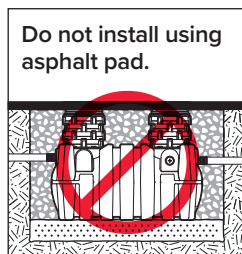
13a Vehicular traffic areas

- Concrete pad at grade must have a minimum thickness of 8" and be reinforced with rebar. An alternate 6" pad may be allowed if the site/civil engineer has provided written calculations and stamped approval that has been submitted and approved by Schier Products.
- Pad dimensions must extend 18" beyond the silhouette of the interceptor; 130 1/4" X 82" for the GB-500.
- Concrete should have 28 day compressive strength of 4,000 PSI.
- Use No. 4 rebar (Ø 1/2") grade 60 steel per ASTM A615: connected with tie wire.
- Rebar to be 2 1/2" from the edge of the concrete and spaced in a 12" grid with 4" spacing around access openings.

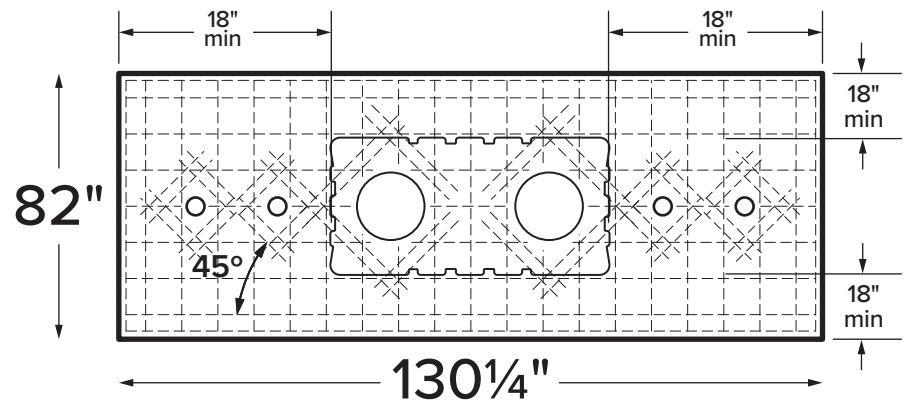


13b Pedestrian traffic or greenspace areas

- Concrete slab at grade must have a minimum thickness of 4" and be reinforced with rebar.
- Follow all other guidelines for vehicular traffic areas



CONCRETE PAD and rebar specifications for 4", 6" and 8" pads



NOTE: Use rebar support chairs to vertically position rebar in the middle of the pad and prevent rebar movement during concrete pour.