

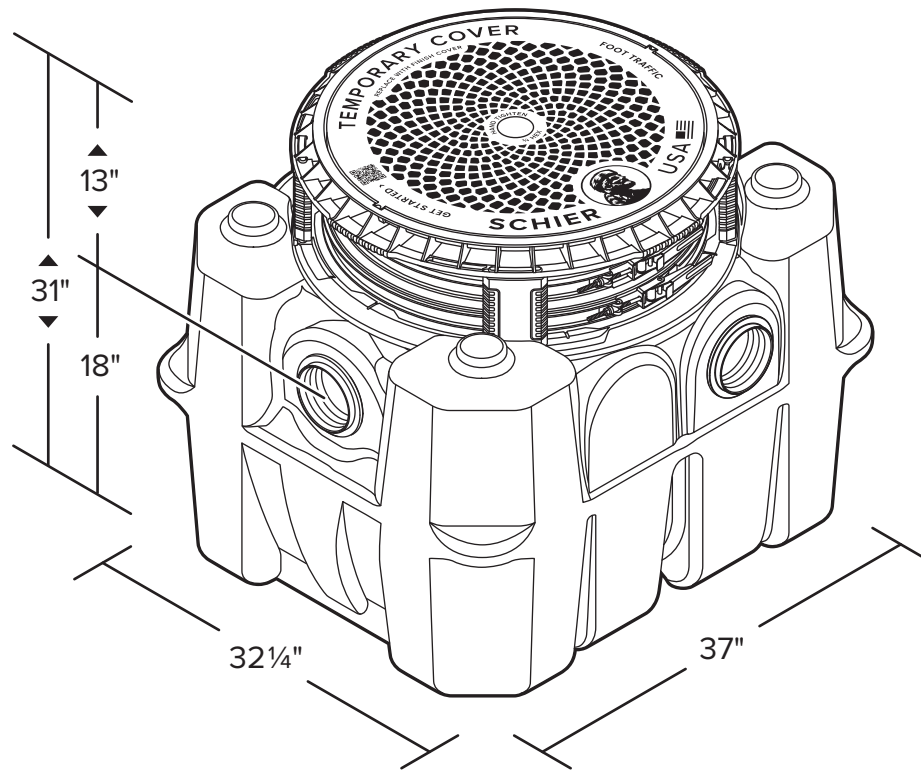
# INSTALLATION GUIDE



Failure to follow this guidance  
will void your warranty

## GB-50

50/75 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

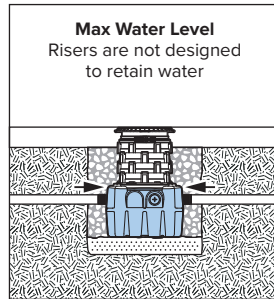


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## PRESSURE TESTING

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.



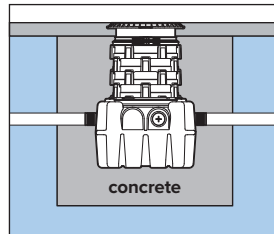
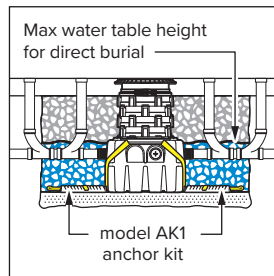
## HIGH GROUNDWATER LEVELS

**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-50 uses model AK1 anchor kit.

### 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.

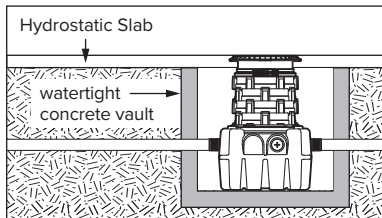
Please contact Schier for concrete encasement guidance.



**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.

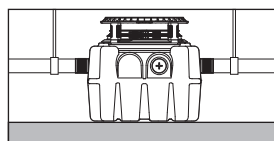
### Hydrostatic/pressure slabs:

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 encased in concrete or installed inside a watertight concrete vault.



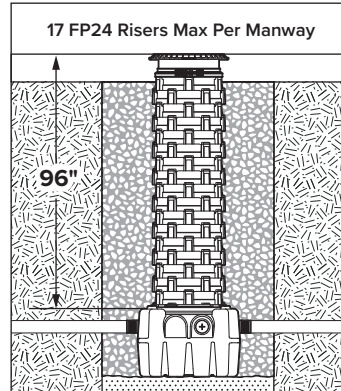
## FULLY SUPPORT BASE OF UNIT

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

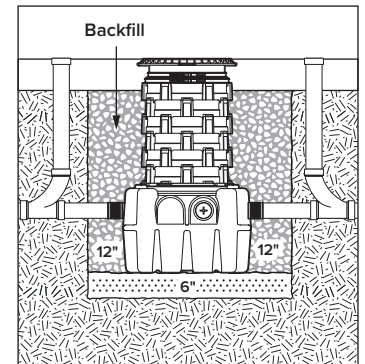


## EXCAVATION, BACKFILL AND PAD

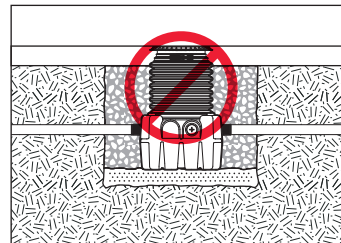
**Maximum burial depth:** The interceptor should not be buried deeper than 96" from the shoulder of the unit to grade. For deeper burials contact customer support.



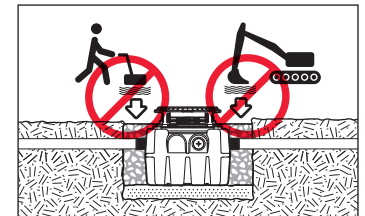
**Approved backfill:** Backfill must be clean, crushed stone approximately 1" in size (AASHTO M43 Size #57 or similar) free of debris and fines. **Native soil and sand are not approved backfill materials.**



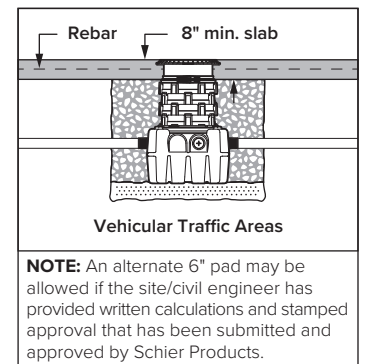
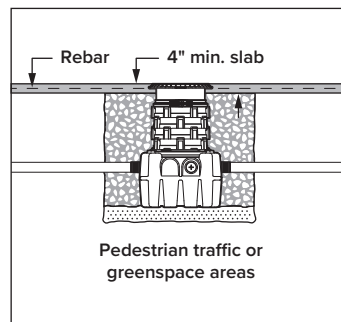
**Corrugated pipe is not allowed for riser use.**



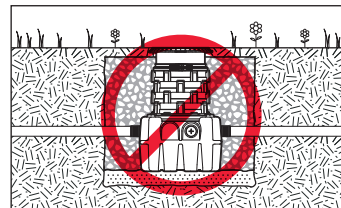
**Do not compact backfill mechanically:** Compact by hand only



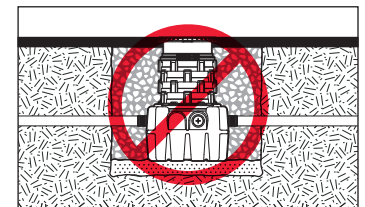
**Concrete pad required at grade:** For all buried applications. See page 11 for details.



**Do not install using native soil at grade.**



**Do not install using asphalt pad.**



# SPECIAL PRECAUTIONS

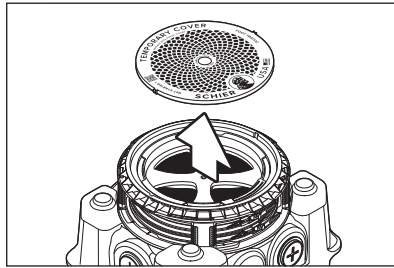


Failure to follow this guidance will void your warranty

## COVER SELECTION

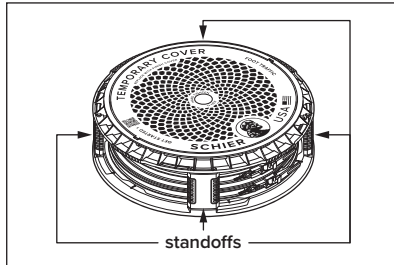
### Discard temporary cover:

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:

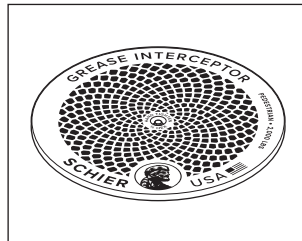
Cover adapters must be secured to base units in all above grade installations (ex: in a basement). Use the (4) standoffs included with each manway secured into the locked position.



### 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.

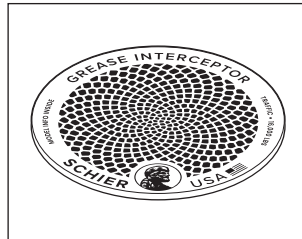
*Plastic, bolted 24", rated to 2,000 lbs., generally for indoor or above grade use.*



### Traffic cover - cast iron:

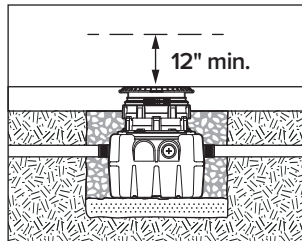
T24-GI pickable cast iron covers should be used for outdoor buried and vehicle rated applications. Not recommended for above grade or most indoor use.

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



### Required clearance above covers:

Allow at least 12" of clearance above the interceptor for routine maintenance.



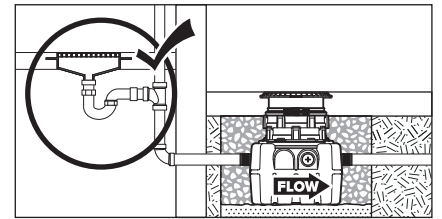
## INDOOR INSTALLATION TIPS

**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.

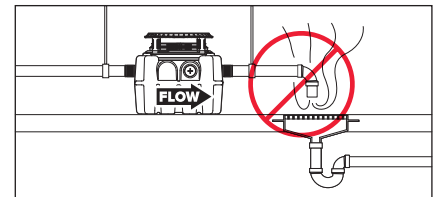
**High temperature kitchen water:** Wastewater entering the interceptor should not exceed 150° F. If wastewater temperatures will exceed 150° F, a drain water tempering valve (DTV) should be installed to cool the water.

### Odor alert!

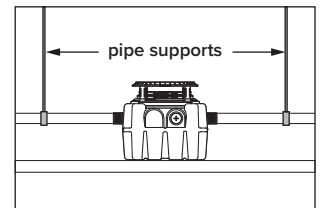
The interceptor is not a sewer gas trap. All upstream fixtures must be trapped.



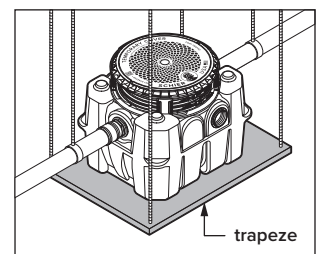
Do not install an air gap on the outlet side of the interceptor.



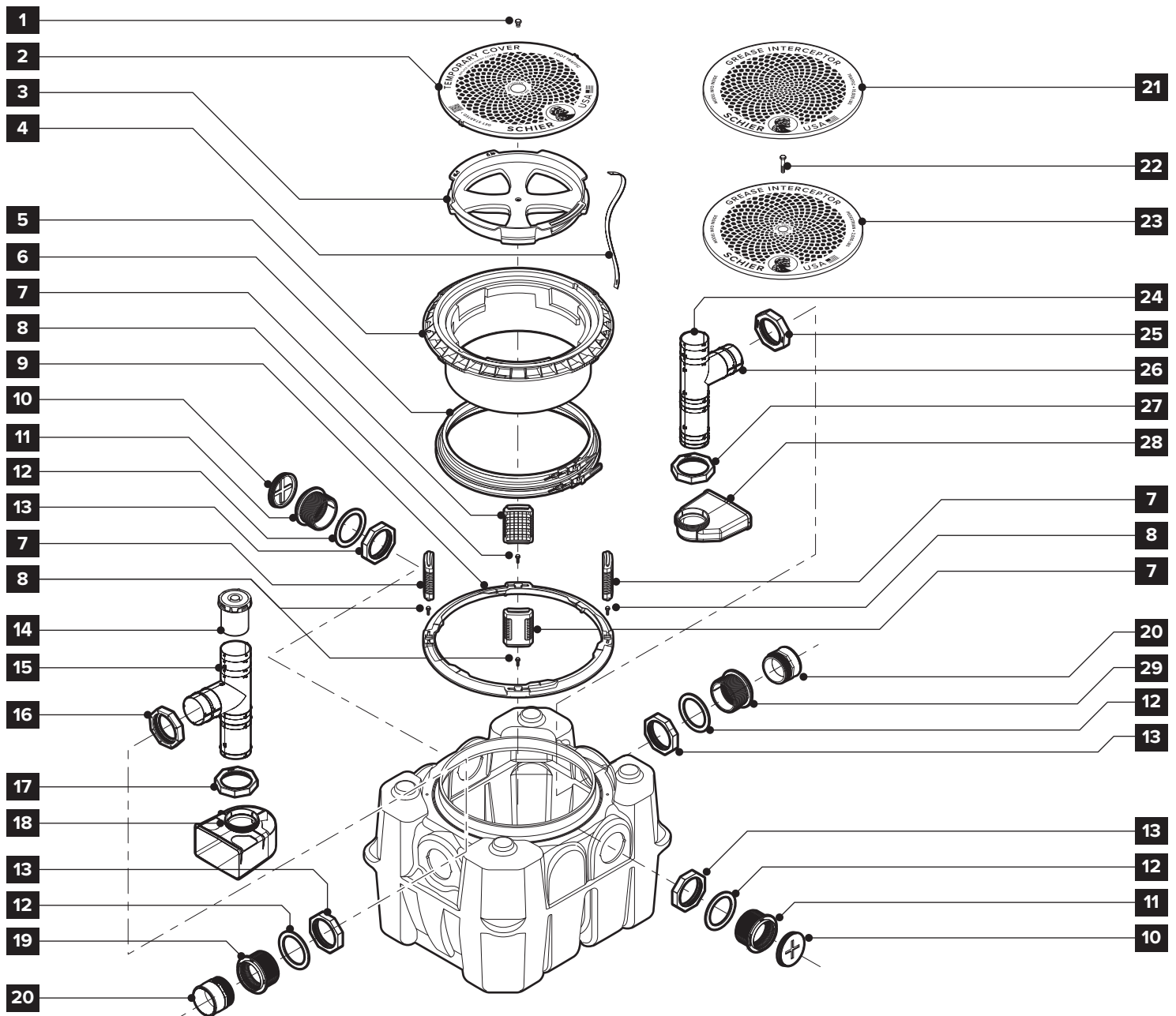
**Support piping:** Inlet and outlet piping must be properly supported.



**Suspended installations:** Design the trapeze by structural engineer to support the wet weight of the interceptor (629 lbs.). Fully support the base of the interceptor by installing on a solid, level surface in contact with the entire bottom footprint. Do not partially support with metal u-channel.



# GETTING TO KNOW THE GB-50



- |   |  |   |
|---|--|---|
| 1. Temporary cover bolt   | 11. Outlet bulkhead connection (optional)<br>4" FPT (x2) | 21. Traffic cover (not included)                    |
| 2. Temporary cover  | 12. Bulkhead connection gasket (x4)                      | 22. Pedestrian cover bolt (not included)            |
| 3. Safety Star® access restrictor   | 13. Bulkhead connection retaining nut (x4)               | 23. Pedestrian cover (not included)                 |
| 4. Safety Star® tether  | 14. Inlet diffuser cap (white)                           | 24. Outlet air relief/visual access                 |
| 5. Cover adapter  | 15. Inlet diffuser                                       | 25. Outlet diffuser retaining nut                   |
| 6. Neck gasket assembly with upper and<br>lower stainless steel band clamps | 16. Inlet diffuser retaining nut                         | 26. Outlet diffuser                                 |
| 7. Standoffs (x4)   | 17. Inlet diffuser foot retaining nut                    | 27. Outlet diffuser foot retaining nut              |
| 8. Tank ring mounting bolts (x4)  | 18. Inlet diffuser foot                                  | 28. Outlet diffuser foot                            |
| 9. Tank ring  | 19. Inlet bulkhead connection 4" FPT                     | 29. Outlet bulkhead connection (standard)<br>4" FPT |
| 10. 4" cleanout plug (x2)   | 20. 4" plain end fitting (x2)                            |   |

# 1 Remove loose parts bag

**1a** Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit.

**1b** Remove parts bag from unit.

**1c** Make sure all loose parts are inside bag.

Installation Guide

4" plain end fitting (x2)

4" cleanout plug (x2)

Inlet diffuser cap (white)

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

# 2 Test tank for water tightness

**2a** Plug all interceptor connections with 4" cleanout plugs (2 included). Use pipe thread sealant or tape approved for use with plastic.

**2b** Remove temporary cover and fill the interceptor with water until all connections are submerged.

**2c** Inspect the interceptor body, connections and gaskets for leaks.

**2d** Check the water level inside the interceptor at specific time intervals per code.

Fill Line

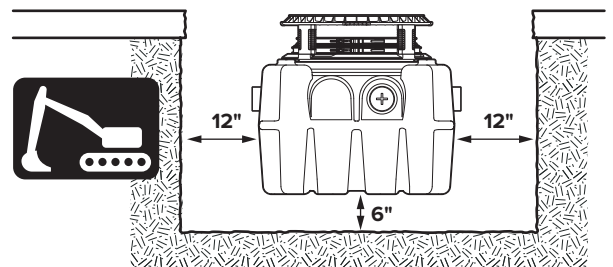
**Have a Leak?** Call customer support at 913-951-3300

# 3 Excavate burial pit



**ONLY**

Excavate the interceptor burial pit to at least 12" larger than the interceptor on all sides and 6" deeper than the interceptor bottom.



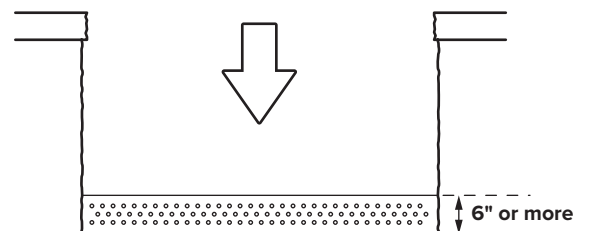
# 4 Fill base layer



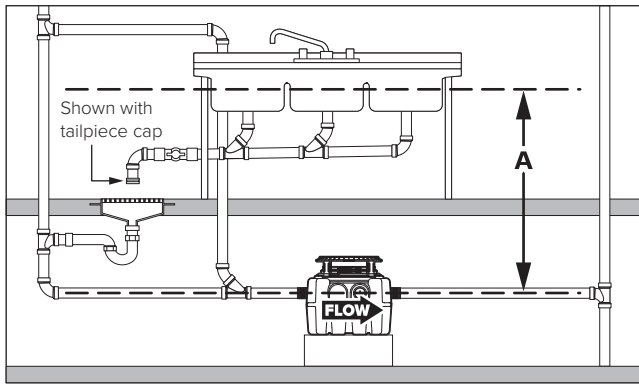
**ONLY**

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.**



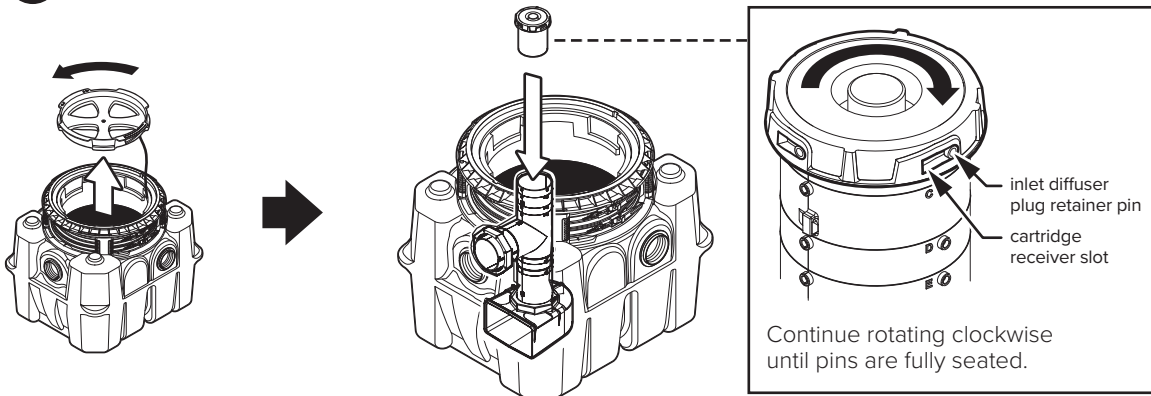
# 5 Configure inlet diffuser



The GB-50 is supplied with a white inlet diffuser cap for increased head pressure conditions.

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

## 5a Install the white inlet diffuser cap (located in the parts bag)



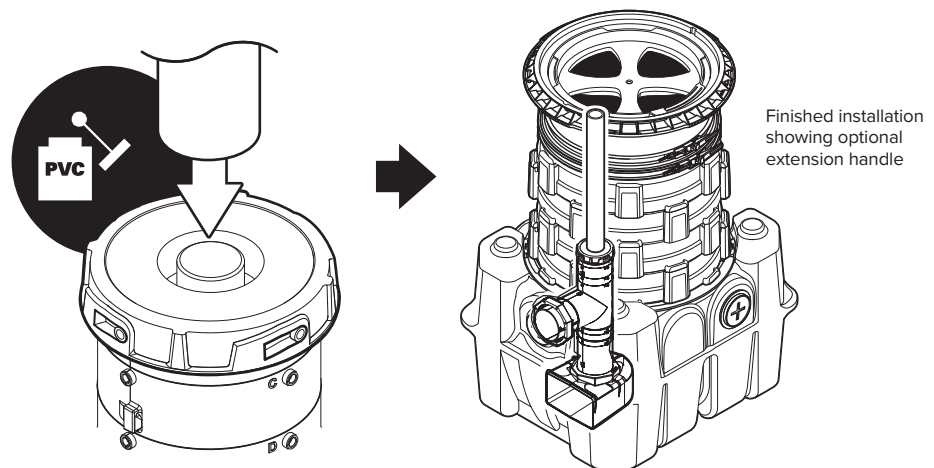
Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit. Get inlet diffuser cap from parts bag.

Slide inlet diffuser cap into top of inlet diffuser and rotate clockwise until cartridge drops onto inlet diffuser cap retainer pins.

## 5b OPTIONAL: install extension handle

**BELOW GRADE ONLY**

For easy inlet diffuser cap removal in deep burial installations, 1½" PVC SCH. 40 pipe may be used as an extension handle. Before risers have been installed, cut pipe to length and attach to top of cap using PVC primer/cement. Extension handle length should be about 12" shorter than total riser height and top out just below the Safety Star®.



Finished installation showing optional extension handle

# 6 Configure outlet diffuser

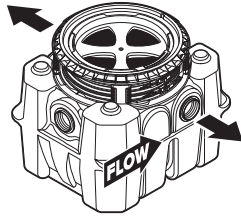
The GB-50 is manufactured with three outlet options. Only one outlet will be connected to the drainline and the other two must be plugged with the 4" cleanout plugs provided. The outlet diffuser comes pre-installed on the straight through end wall outlet connection.

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

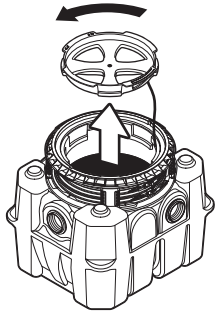
## 6a Choose the appropriate side outlet location

### Side outlet:

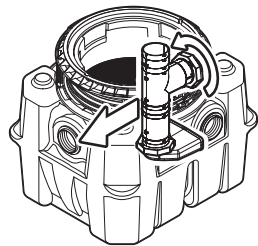
Go to Step 6b.



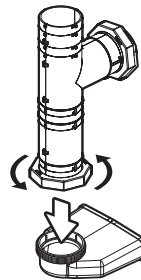
## 6b Reposition outlet diffuser from the straight through outlet to the chosen side outlet



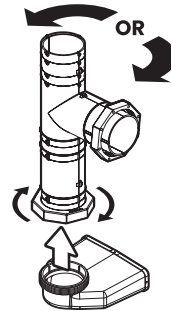
Rotate Safety Star® counter-clockwise to unlock and remove, leaving tethered to unit.



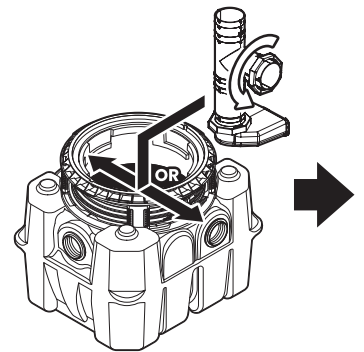
Untighten the green diffuser retaining nut and remove outlet diffuser.



Untighten the green diffuser foot retaining nut and remove outlet diffuser foot.

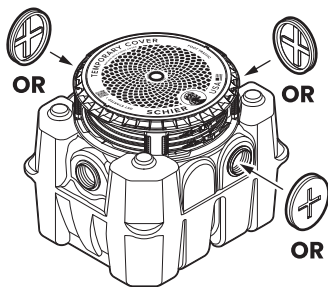


Rotate diffuser toward chosen outlet, replace foot ensuring it will point to the back wall of the unit and hand tighten the green foot retaining nut.



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

## 6c Plug the two unused connections



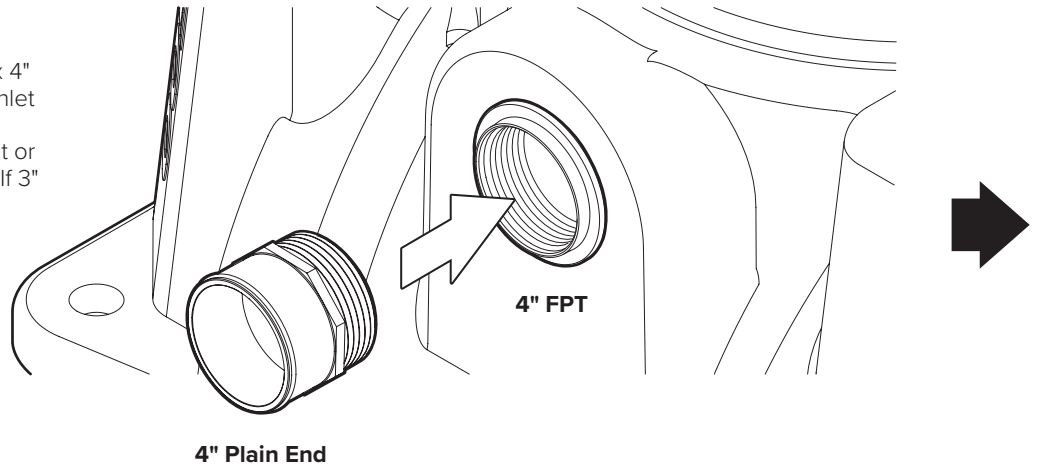
Plug the remaining two unused outlet connections with the 4" cleanout plugs provided using thread sealant or tape approved for use with plastics. **Do not plug the inlet or outlet connections with diffusers.**

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

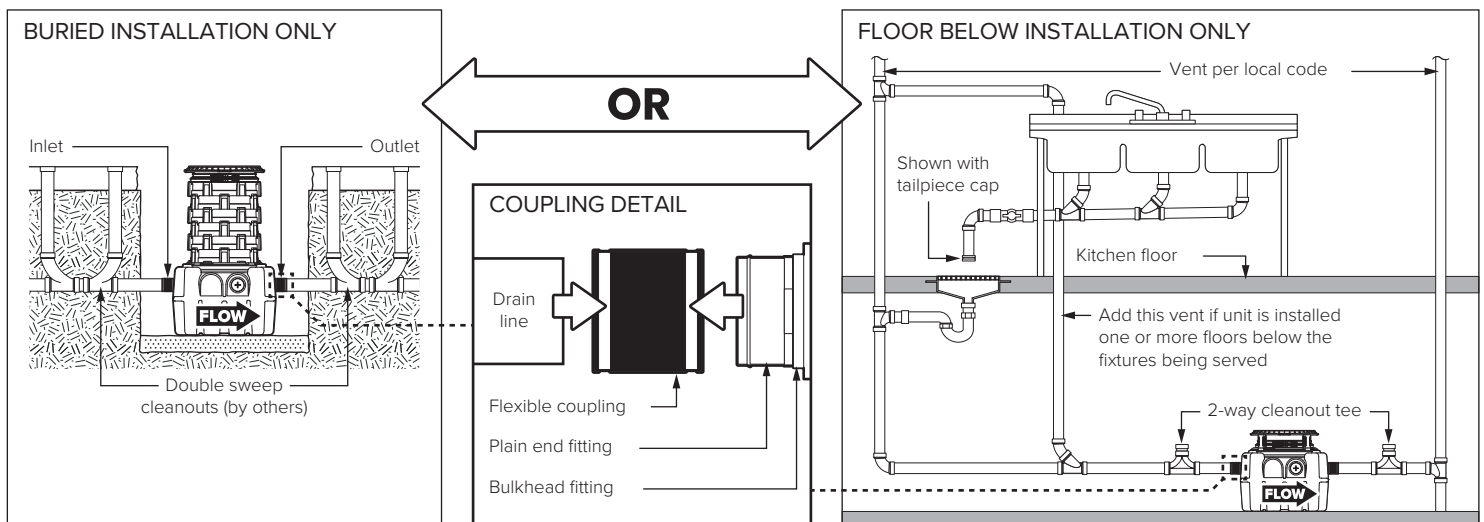
# 7 Connect piping to interceptor

## 7a Install plain end fittings

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. If 3" connections are needed, go to [schierproducts.com/shop/fittings](http://schierproducts.com/shop/fittings)



## 7b Connect the interceptor to drain lines



Place the interceptor into its final position and set level. Mechanically couple the inlet and outlet fittings to the 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 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.

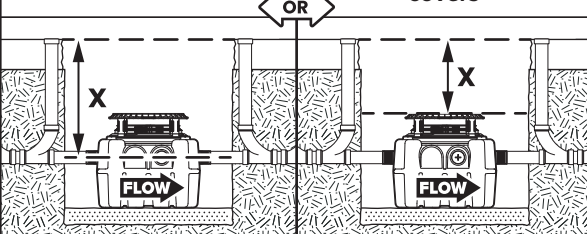
# 9 Bring covers flush-to-grade ONLY

For GB-50 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.



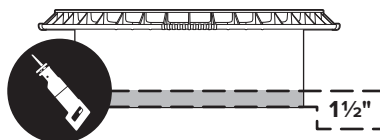
## 9a Determine number of risers required

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.

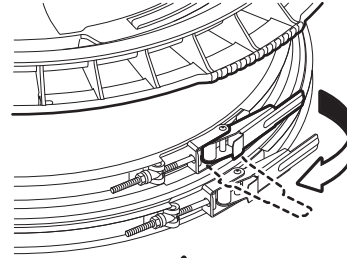
| RISER HEIGHT NEEDED MEASURED FROM  |                         | FP24 risers required per manway |
|--|-------------------------|---------------------------------|
| Centerline of inlet  | Top of temporary covers |                                 |
|  |                         |                                 |
| 13 - 15½"  | 0 - 2½"                 | 0                               |
| 15½ - 20½"   | 2½ - 7½"                | 1                               |
| 20½ - 25½"   | 7½ - 12½"               | 2                               |
| 25½ - 30½"   | 12½ - 17½"              | 3                               |
| 30½ - 35½"   | 17½ - 22½"              | 4                               |
| 35½ - 40½"   | 22½ - 27½"              | 5                               |
| 40½ - 45½"   | 27½ - 32½"              | 6                               |
| 45½ - 50½"   | 32½ - 37½"              | 7                               |
| 50½ - 55½"   | 37½ - 42½"              | 8                               |
| 55½ - 60½"   | 42½ - 47½"              | 9                               |
| 60½ - 65½"   | 47½ - 52½"              | 10                              |
| 65½ - 70½"   | 52½ - 57½"              | 11                              |
| 70½ - 75½"   | 57½ - 62½"              | 12                              |
| 75½ - 80½"   | 62½ - 67½"              | 13                              |
| 80½ - 85½"   | 67½ - 72½"              | 14                              |
| 85½ - 90½"   | 72½ - 77½"              | 15                              |
| 90½ - 95½"   | 77½ - 82½"              | 16                              |
| 95½ - 100½"  | 82½ - 87½"              | 17                              |

## Reducing interceptor height for shallow burials

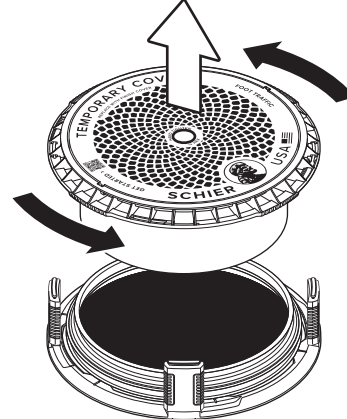
The cover adapter may be lowered up to 2½" from the factory set position. Remove the standoffs, loosen the neck gasket upper band clamp and remove the cover adapter. Use a reciprocating saw to trim up to 1½" from the bottom of the cover adapter ensuring it can be re-inserted without internal component interference. CAUTION: this will permanently reduce the cover adapter maximum extension from 5" to 3½". Place the cover adapter back into the neck gasket and go to Step 9d.



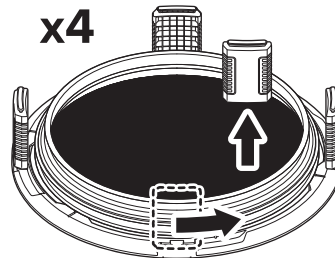
## 9b Remove cover adapter, standoffs and neck gasket



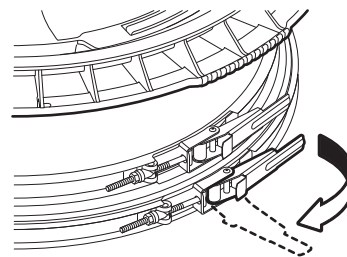
Loosen the upper band clamp by pulling open the quick release locking lever



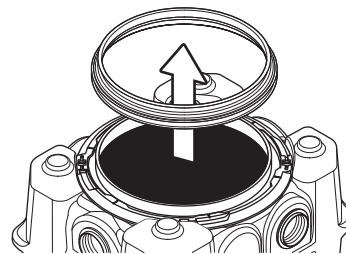
Grab the cover adapter handles and turn it counterclockwise to unlock it from the tank. Remove cover adapter



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

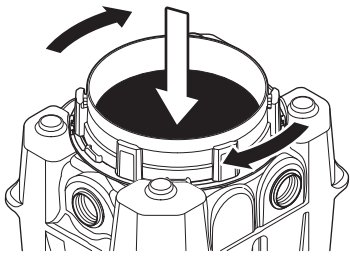


Remove the neck gasket from the tank.

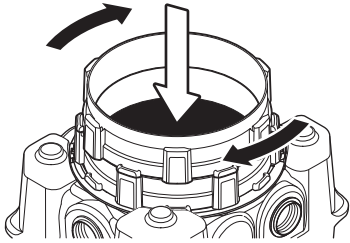
**CONTINUED**

## 9 Bring covers flush-to-grade (continued) ONLY

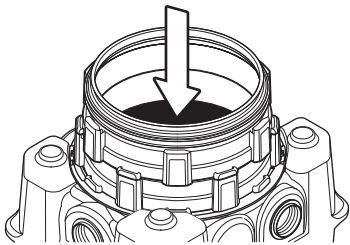
### 9c Install risers and replace neck gasket



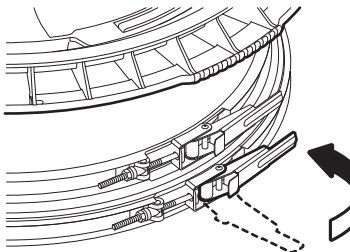
Place the Fast Pitch® riser onto the tank ring and align tabs on riser into the slots on tank ring. Turn clockwise until the riser fits firmly into place.



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

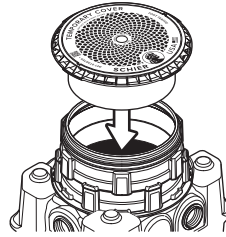


Attach the neck gasket on top of the last riser. Ensure that the gasket fully surrounds the top of the riser.



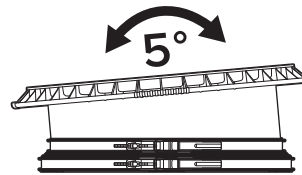
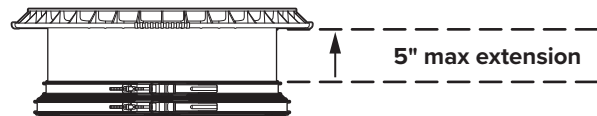
Tighten the lower band clamp by pushing the quick release locking lever closed.

### 9d Make final cover adapter adjustments

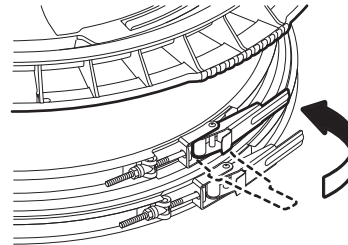


Insert cover adapter into riser assembly.

Adjust cover adapter heights as needed.



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

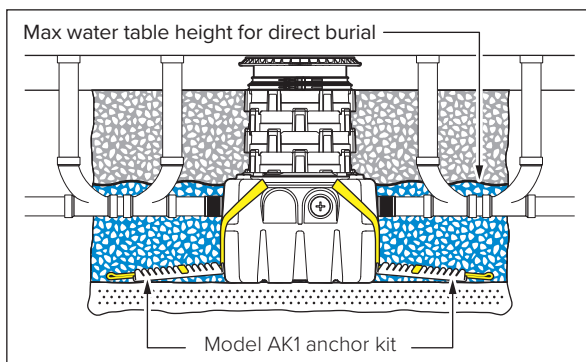


Tighten the upper band clamp by pushing the quick release locking lever closed.

#### Adjusting neck gasket band clamp tension

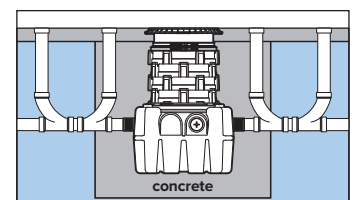
Factory set clamp tension should not need to be modified. If necessary, adjust by first pulling open the quick release locking lever. Then slightly hand tighten (clockwise) or loosen (counter-clockwise) hex nut at end of threaded rod.

## 10 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-50 uses model AK1 anchor kit. The weight of the backfill on the anchor plates will offset the buoyancy of an empty tank.

**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.

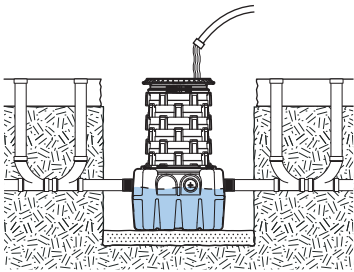


# 11 Backfill around interceptor ONLY

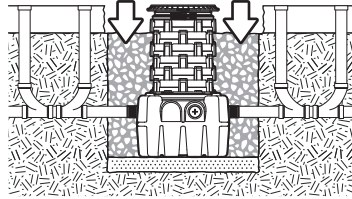


Failure to follow this guidance will void your warranty

11a Fill the interceptor with water



11b 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

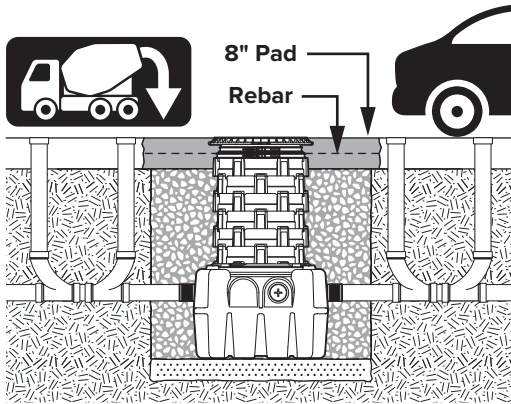


**Note:** Do not mechanically compact the backfill over top and around the interceptor.

# 12 Concrete pad at grade required ONLY

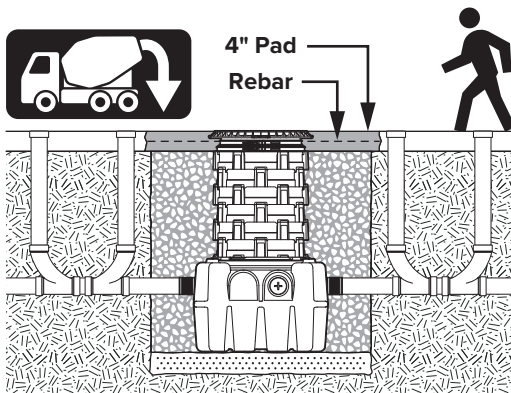


Failure to follow this guidance will void your warranty



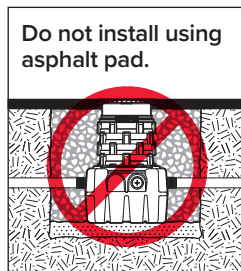
12a Vehicular traffic areas

- 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; 73" x 68 1/4" for the GB-50.
- 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.

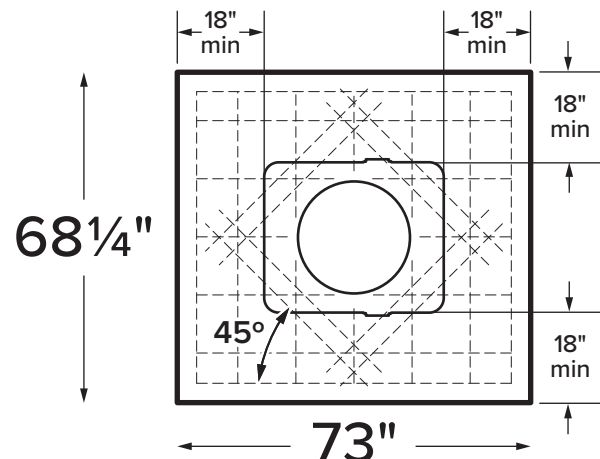


12b Pedestrian traffic or greenspace areas

- 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.