

GP1010F

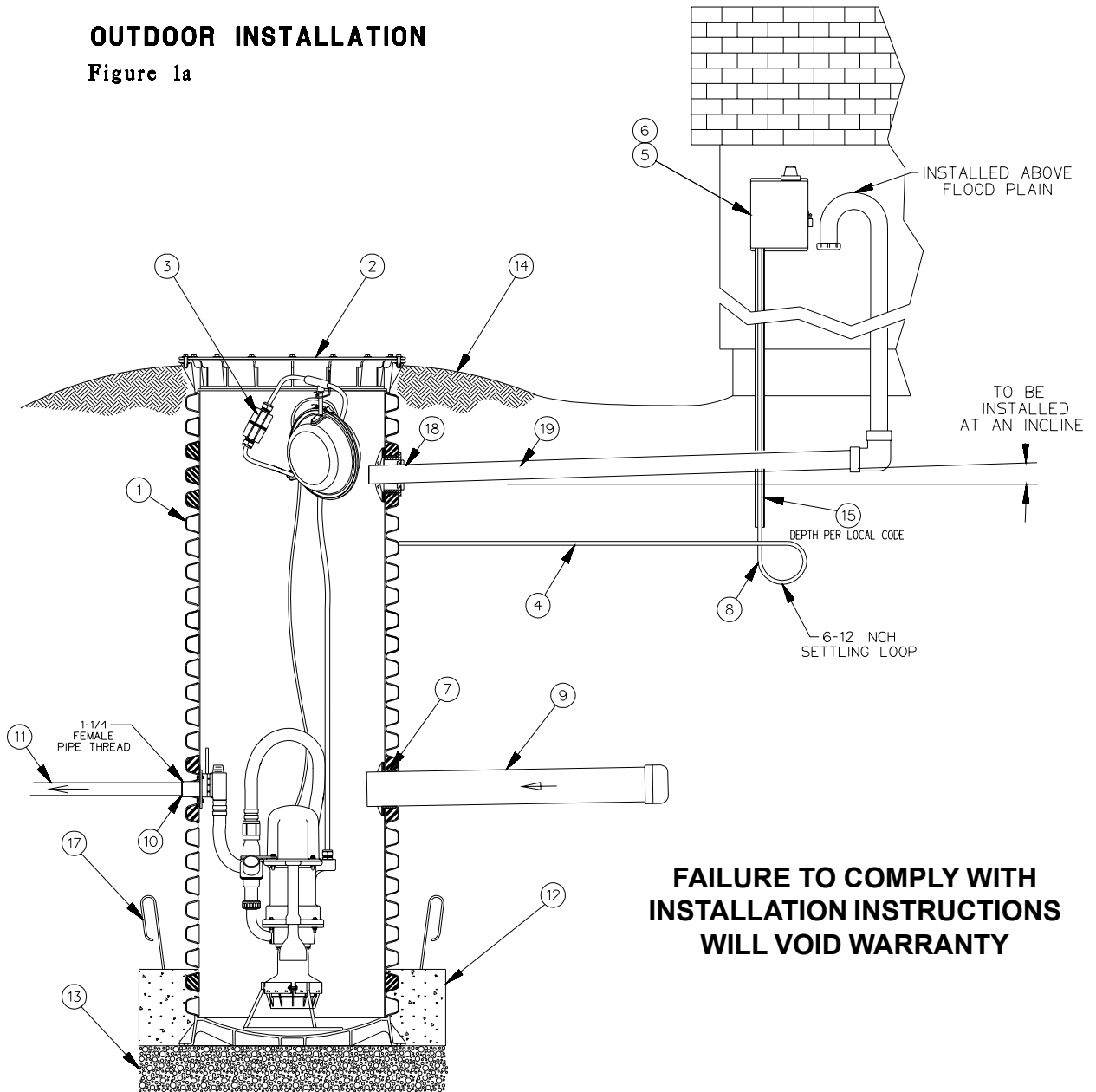
TYPICAL INSTALLATION INSTRUCTIONS

Environment One Grinder Pump Feature Identification

1. **Grinder Pump Basin** – High density polyethylene (HDPE)
2. **Accessway Cover** – Painted Steel
3. **Electrical Quick Disconnect (EQD)** – Electrical lead from pump core terminates here (NEMA 6P).
4. **Power and Alarm Lead** – Circuits to be installed in accordance with local codes.
5. **Alarm Panel** – Hose down proof (NEMA 4X) enclosure. Equipped with circuit breakers or disconnect switch. Locate according to local codes.
6. **Alarm Device** – Every installation is to have an alarm device to alert the homeowner of a potential malfunction. Visual devices should be placed in conspicuous locations.
7. **Inlet** – 4-inch PVC socket (4.5 inches ID). For solvent cementing DWV pipe.
8. **Settling Loop** – Coil wire to protect against soil settling.
9. **Gravity Service Line** – 4-inch DWV (4.5 inches OD). Supplied by others.
10. **Discharge Outlet** – 1 ¼-inch solvent weld
11. **Discharge Line** – 1 ¼-inch nominal pipe size. Supplied by others.
12. **Concrete Anchor** – Reference station detail sheet for correct ballast weight. Supplied by others.
13. **Bedding Material** – 6-inch minimum depth, rounded aggregate (gravel). Supplied by others.
14. **Finished Grade** – Grade line should be 2 inches below the cover and slope away from the accessway.
15. **Conduit** – 1 ¼-inch PVC to burial depth required by local code. Supplied by others.
16. **Elbow** – 1 ¼-inch PVC. Required to attach tank electrical fitting to conduit. Supplied by others (not shown).
17. **Rebar** – Required to lift tank after ballast has been attached (4 places, evenly spaced around tank).
18. **Vent Outlet** – Grommet for 2 inch pipe
19. **Vent Line** – 2 inch nominal pipe size. Supplied by others.

OUTDOOR INSTALLATION

Figure 1a

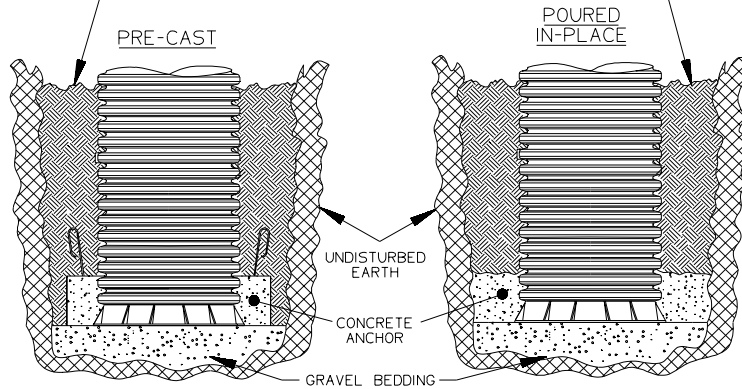


BALLAST OPTIONS

Figure 1b

NOTE: A CONCRETE ANCHOR OF 405 lbs (2.70 cu ft) IS REQUIRED ON ALL MODEL 1010 STATIONS.

FILL TO GRADE WITH CLEAN, COMPACTABLE BACKFILL, SUCH AS PEA GRAVEL OR CRUSHED STONE, 1/8" - 3/4" IN SIZE. CLAY AND SILTS ARE NOT ACCEPTABLE BACKFILL.



Installation Instructions for Model 1010F Grinder Pump

The Environment One Grinder Pump is a well-engineered, reliable and proven product; proper installation ensures years of trouble-free service. The following instructions define the recommended procedure for installing the Model 1010F Grinder Pump. The Model 1010F is a sewage-handling pump and must be vented in accordance with local plumbing codes. Do not install the unit in locations classified as hazardous in accordance with the National Electric Code, ANSI/NFPA 70. All piping and electrical systems must be in compliance with applicable local and state codes.

1. Remove Packing Material

Give the User Instructions to the homeowner. Hardware supplied with the unit, if required, will be used during installation.

2. Tank Installation

The tank is supplied with a standard 4-inch PVC DWV (4.5 inches inside dia.) inlet for connecting the incoming sewer drain. If a concrete ballast is attached to the tank, lift only by the lifting eyes embedded in concrete. Do not drop, roll or lay the tank on its side. Doing so may damage the warranty. Excavate a hole to a depth so the removable cover extends 2 inches above the finished grade line; the grade should slope away from the unit. The diameter of the hole must be large enough to allow a concrete anchor.

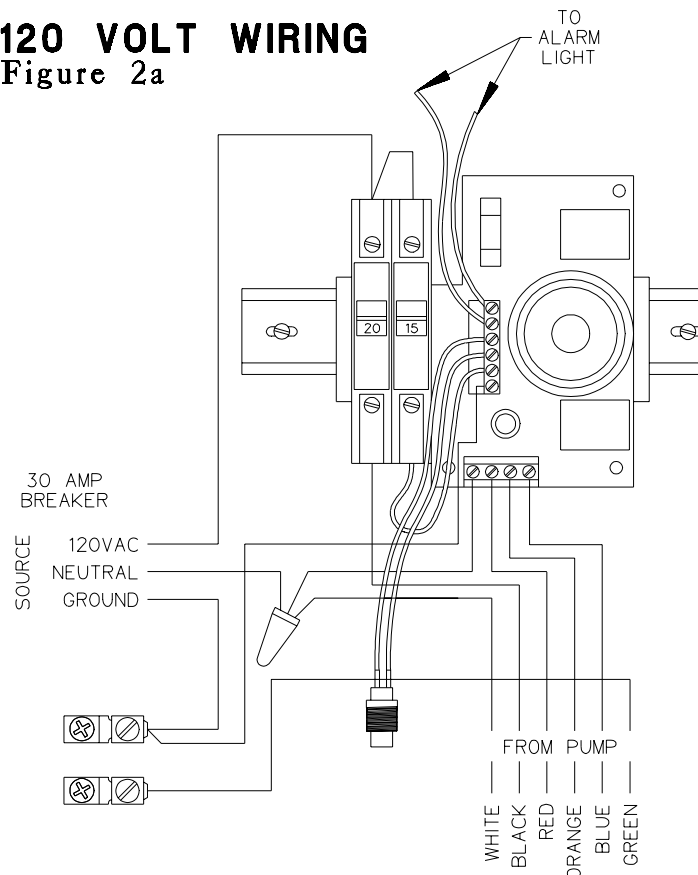
Place the unit on a 6-inch bed of gravel, naturally rounded aggregate, clean and free-flowing, with particle size no less than 1/8 inch or more than 3/4 inch in diameter. The concrete anchor is required to keep the unit from floating as a result of high groundwater levels. The amount of concrete required varies for each unit (see station detail sheet for the correct ballast weight). The unit should be leveled and filled with water to the bottom of the inlet; doing so prevents the unit from shifting when pouring the cement. The cement must be manually vibrated to eliminate any voids. If pouring the cement to a level higher than the inlet piping is necessary, place an 8-inch

sleeve over the inlet prior to pouring the cement.

3. Discharge

Using 1 1/4-inch PVC (SCH-40) pressure pipe or polyethylene water service tubing (SDR-9, Type PE3206 or PE3306) with a minimum pressure rating of 160 psi is recommended. If polyethylene pipe is chosen, use compression-type fittings to provide a smooth inner passage (insert fittings are susceptible to clogging). Environment One recommends that a redundant check valve be installed between the pump discharge and the street main on all installations. The valve is to be installed as close to the street as possible. Check local codes for applicable requirements.

120 VOLT WIRING Figure 2a



4. Vent

The station must be vented to a height above the expected maximum flood level. Using 2 inch PVC pipe, insert pipe into the grommet near the top of the tank. Route pipe above flood level, ensuring the pipe always angles down towards the station so no traps are created. Place a gooseneck at the top of the vent to prevent rainwater and other foreign objects from entering the vent. Failure to vent the station properly will prevent the station from venting and will void the warranty.

5. Backfill Requirements

Proper backfill is essential to the long-term reliability of any underground structure.

Several methods of backfill are available and each yields favorable results when done properly.

Clean, compact, native soil that is free from rocks, roots or organic material may be used if compacted in lifts not to exceed one foot. It must be compacted to a final Proctor density between 85 and 90 percent. Heavy, non-compactable clays are not acceptable backfill for this or any underground structure such as inlet or discharge lines.

Class 1 or Class 2 backfill material as defined by ASTM 2321 may also be used.

Crushed stone and gravel backfill materials offer an

advantage since they typically reach a compaction level of 90 to 95 percent standard density with minimal compaction.

Another option is flowable fill (i.e., low slump concrete). This is particularly attractive when installing grinder pump stations in augered holes where tight clearances make it difficult to assure proper backfilling and compaction with dry materials. Flowable fills should not be dropped more than four feet from the discharge nozzle to the bottom of the hole since this can cause separation of the constituent materials.

6. Electrical Connection

(Supply Panel to Environment One Control Panel)

Before proceeding, verify that the service voltage is the same as the motor voltage shown on the nameplate. The required alarm device must be installed in a conspicuous location. Wire the supply panel and Environment One control panel per Figures 2a and 2b, control wiring diagrams, and local codes.

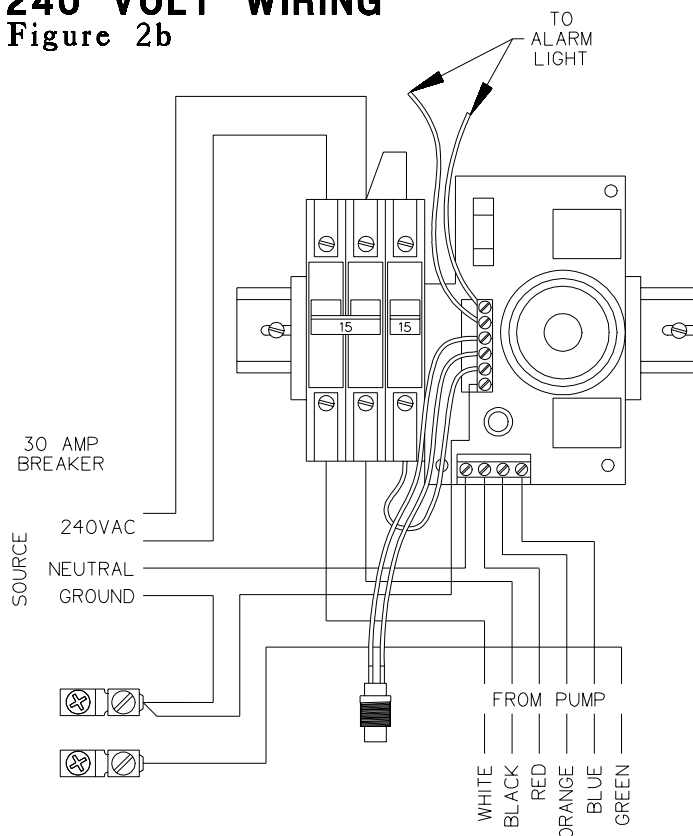
7. Electrical Connection

(Pump to Panel)

The cable provided for connection between the station and control panel is a six-conductor tray cable that meets NEC requirements for direct burial as long as a minimum of 24 inches of cover is maintained. Those portions of cable that have less than 24 inches of cover must be contained within suitable conduit. This includes the vertical section that drops to a 24-inch depth at the station and the length exiting

240 VOLT WIRING

Figure 2b



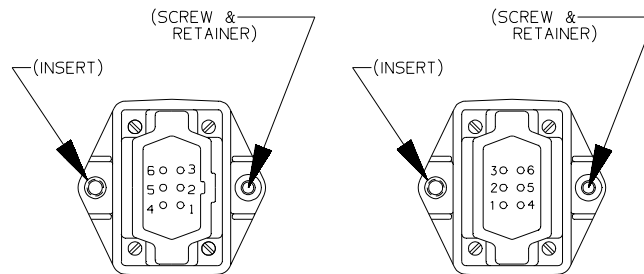
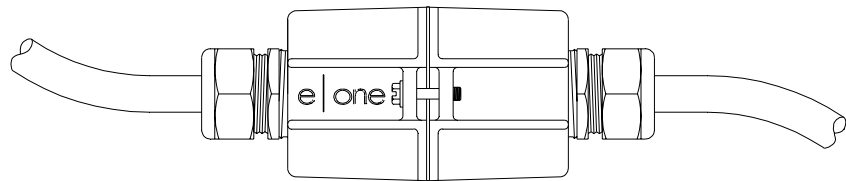
panel. Note: Wiring must be installed in compliance with local codes (which may vary from above).

8. Procedure for installing E-ONE supply cable with EQD:

1. Open the lid of the station, locate the cable and the feed-thru connector on the wall of the tank. Loosen the nut on the connector and pull the supply cable out through the connector until it hits the crimped on stop feature on the cable, approximately 24" from the EQD. ****IMPORTANT: All but 24" of the cable must be pulled out of the station, and the portion of the cable between the EQD and the molded in cable breather should be secured in the hook provided to ensure that the pump functions properly. Do not leave the excess cable in the station.**

- 2. Retighten the nut. *This connection must be tight or ground water will enter the station.*
- 3. Feed the wire through the length of conduit (contractor provided) which will protect it until it is below the 24" burial depth.
- 4. Position the conduit vertically below the cable connector along side of the station reaching down into the burial depth.

Run the cable underground, in a trench or tunnel, to the location of the E-ONE panel. Leave a 6-12 inch loop of cable at each end to allow for shifting and settling. Connections made at the panel are shown in the panel wiring diagram (Fig. 2a and 2b).



PIN No.	CONDUCTOR
* 1	RED
2	BLK
3	WHT
4	GRN
5	ORG
6	BLU

9. Debris Removal

Before the start-up test procedure, flush the incoming sewer line to force all miscellaneous debris into the tank. Next, remove all liquid and debris. Once the tank is clean, install the pump and test.

10. Install the Pump

Lower the pump into the tank. Position the pump so the pump's discharge is on the opposite side of the pump relative to the discharge in the tank. Position the pump in the center of the tank. Rotate to coil the discharge hose and slide the adapter on the discharge hose into the receiver in the tank wall. Push the white slider down to open the discharge valve.

11. Test Procedure

When the system is complete and ready for use, perform the following test to verify proper installation and operation.

- 1. Ensure the discharge shutoff valve is fully open. The white slider must be in the down position. This valve must not be closed when the pump is operating. In some installations, a valve(s) at the street main must be open.
- 2. Turn on the alarm power circuit breaker.
- 3. Fill the tank with water until the alarm turns on. Shut off the water.
- 4. Turn on the pump power circuit breaker. The pump should turn on immediately. The alarm will turn off within one minute; the pump will turn off within three minutes.



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