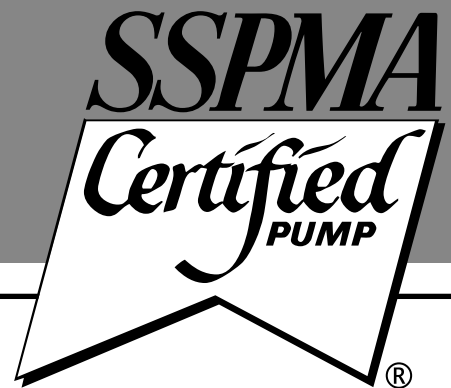

FOR NEW OR
REPLACEMENT
SUMP PUMPS

GUIDE FOR
INSTALLATION



GENERAL SAFETY RULES FOR SUMP PUMPS



DANGER!!! Unplug sump pump from power source before handling. Failure to do so could result in severe personal injury or death when touching the pump or discharge piping.

INSPECT YOUR SUMP PUMP

Occasionally products are damaged in shipment. If damage has occurred, contact your dealer. Do not attempt to operate the pump before necessary repairs are completed.

KNOW YOUR SUMP PUMP

For your own safety, read the owner's manual carefully. Learn the pump's application and limitations as well as the specific hazards peculiar to this pump. Store the owner's manual near the pump for future reference.

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides a path of least resistance for the electricity to follow. This pump is equipped with an electric cord having a grounding conductor and a 3 pronged grounding plug. The plug must be plugged into a matching outlet, properly installed and grounded, in accordance with all local codes and ordinances and National Electrical Code (NEC).

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified licensed electrician. Do not remove the ground prong from the plug.

ELECTRICAL OUTLET

Locate the electrical outlet within reach of the pump power cord. The receptacle should be located 4 feet above the basement floor to help reduce the possibility of immersion.

DO NOT USE EXTENSION CORDS

Extension cords can present a safety hazard if the insulation gets damaged or the connection end drops into the sump and contacts the water.

Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor.

VOLTAGE REQUIREMENTS

Check to be certain the voltage source is the same as that required by the pump motor. The

VOLTAGE REQUIREMENTS

Check to be certain the voltage source is the same as that required by the pump motor. The required voltage information is located on the pump nameplate.


ELECTRICAL CIRCUIT


Make certain the electrical supply circuit is equipped with fuses or circuit breakers of adequate capacity to operate the pump motor. The required amperage information is located on the pump nameplate. A separate branch circuit is recommended and shall be sized according to the National Electrical Code.


The operation of any pump can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety goggles complying with ANSI Z787.1.

ALARM

An alarm is suggested to warn of high-water condition resulting from control, pump or system malfunction. Alarms may be audible and/or visual, as appropriate for maximum effect. The power supply for the alarm shall be a separate circuit so that circuit interruption to the pump will not affect the alarm circuit. Alarm activation level must be between the pump turn-on level and the bottom of the inlet.

 **WARNING!!!** Do not use sump pumps in septic tanks to handle effluent or raw sewage.

 **DANGER!!!** Do not use sump pumps in hazardous locations or use them to handle flammable liquids.

 **CAUTION!!!** Do not discharge laundry waste into sump pit. Use separate laundry pump and separate discharge.

INSTALLATION GUIDE

THE SUMP

1. The sump pit shall not be less than 18 inches diameter and 24 inches deep, unless otherwise specifically recommended by the manufacturer. The pit shall be accessible and located such that all drainage flows into the pit due to gravity. The sump pit may be constructed of tile, concrete, steel, plastic or other suitable materials as approved by local codes. The pit bottom shall be solid and provide permanent support for the pump. The sump pit shall be fitted with a removable cover adequate to support anticipated loads in the area of use and to prevent refuse from entering the pit.
2. If you are installing a new sump:
 - a. Locate the sump approximately 6" from the basement wall in the lowest point of the basement floor.
 - b. With chalk, mark out the diameter on the floor.
 - c. Cut through the floor with masonry drill or other concrete cutting tool and excavate below the floor to the required depth.
 - d. Level the bottom and set sump pit in place. Tie in any sub-floor drains. Backfill and mortar tile or sump pit in place. The top should be flush with the floor for surface drainage unless otherwise specified by codes.
 - e. It is recommended that the bottom of the tile be provided with a concrete base. However, a concrete block or bricks may be used to provide a support for the sump pump.

INSTALLATION

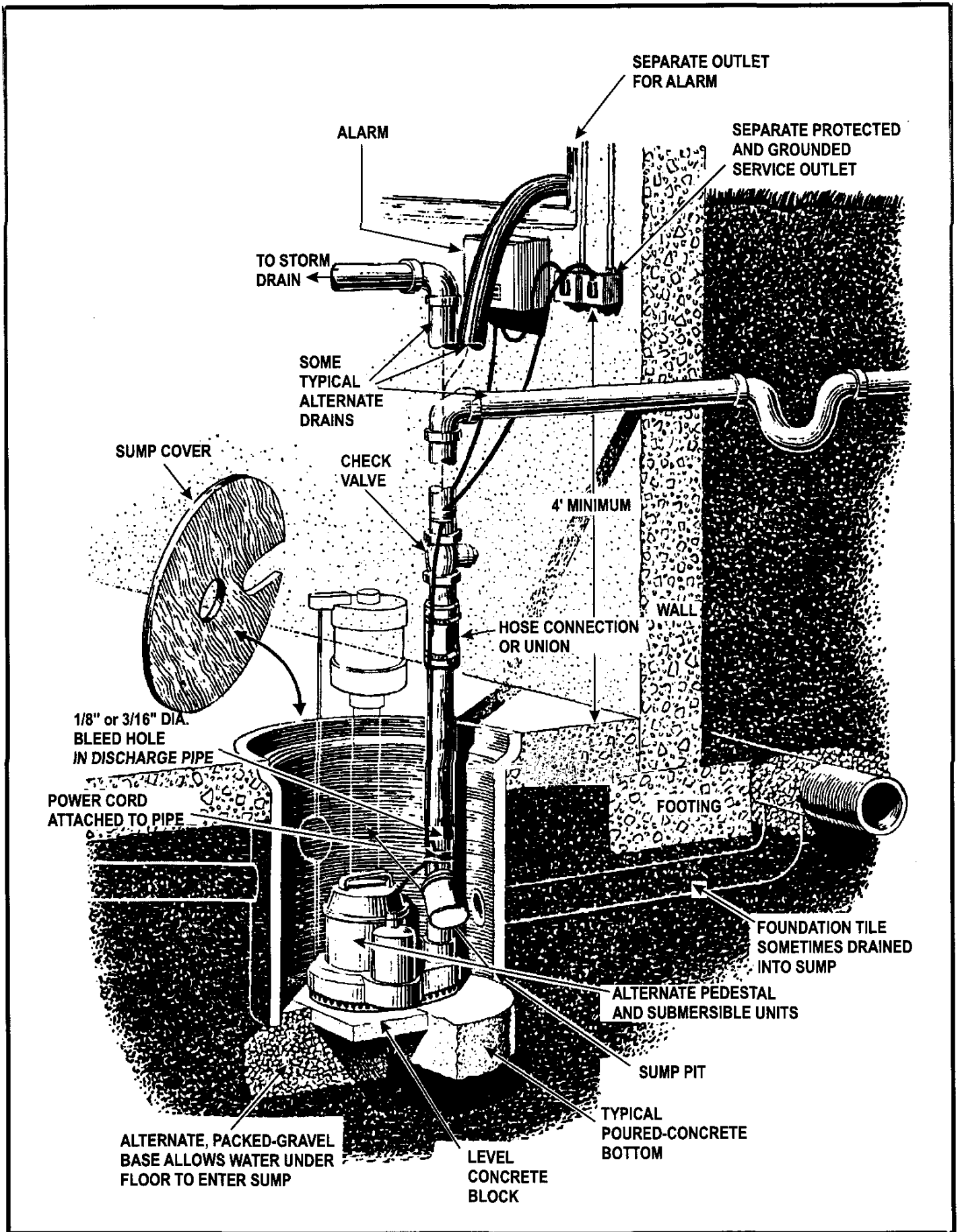
1. Clean any debris from the pit and set the sump pump in place. A solid bottom is required to prevent clogging of the pump from sand and dirt.
2. Locate the pump in the pit so that the pump housing and any float control will not come in contact with the side of the pit and create operational problems.
3. Sump pumps can be piped to discharge into the house drainage system, to a dry well or splash block, or to a storm drain depending on local plumbing codes. Do not connect the sump pump discharge to the sewage system. The discharge piping should be as short as possible, with a minimum number of turns, to reduce pipe friction losses. It is recommended that the discharge pipe diameter be equal to or larger than the discharge size of the pump. Smaller pipe diameters will

pipng should be as short as possible, with a minimum number of turns, to reduce pipe friction losses. It is recommended that the discharge pipe diameter be equal to or larger than the discharge size of the pump. Smaller pipe diameters will restrict the capacity of the pump. Do not connect with anything less than the size of the discharge tapping of the sump pump.

4. Always install a union in the discharge line just above the sump pit to allow easy removal of the pump for cleaning or repair.
5. Use of a check valve is recommended to prevent backflow of water into the sump. A relief hole (1/8" or 3/16" diameter) should be drilled in the discharge pipe. This hole should be located below the floor line between the pump discharge and the check valve. Unless such a relief hole is provided, a bottom intake pump could "air lock" and will not pump water even though it will run.
6. Do not allow the cord to interfere with the float control motion or to drape over the pump motor. With tie straps or pipe strapping, or other suitable device, secure the cord to the discharge pipe making sure not to kink or severely bend the cord where it exits the pump.
7. After the discharge piping is complete and the sump cleaned, connect the pump cord to the electrical outlet and run water into the sump to test the pump. **DO NOT ATTEMPT TO OPERATE THE PUMP WITHOUT WATER. SEALS AND BEARINGS COULD BE DAMAGED IF THE PUMP WERE RUN DRY.**
8. Fill the sump with water to the normal turn-on level (as indicated in the manufacturer's literature) and allow the pump to remove the water to the normal turn-off point (also described in the manufacturer's material).
9. Install a sump cover. A cover will help prevent solid matter from falling into the sump, help control odors, and help guard against accidental injury.



DANGER!!! NEVER TOUCH THE SUMP PUMP OR DISCHARGE PIPING WHEN THE PUMP IS CONNECTED TO ELECTRICAL POWER AND WATER IS PRESENT IN THE SUMP. ALWAYS DISCONNECT THE PUMP FROM THE POWER SOURCE BEFORE HANDLING.



SUMP PUMP INSTALLATION MADE EASY

CHECK LOCAL CODES