City of LaPorte
INDIANA
Wastewater Department

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PROTECTING AGAINST SEWER BACKUP IN BASEMENTS

Find enclosed three sketches demonstrating techniques for protecting a basement against sewer backups. The sketches are general in nature. Consult your plumber for specific design for your residence.

Some possible solutions include:

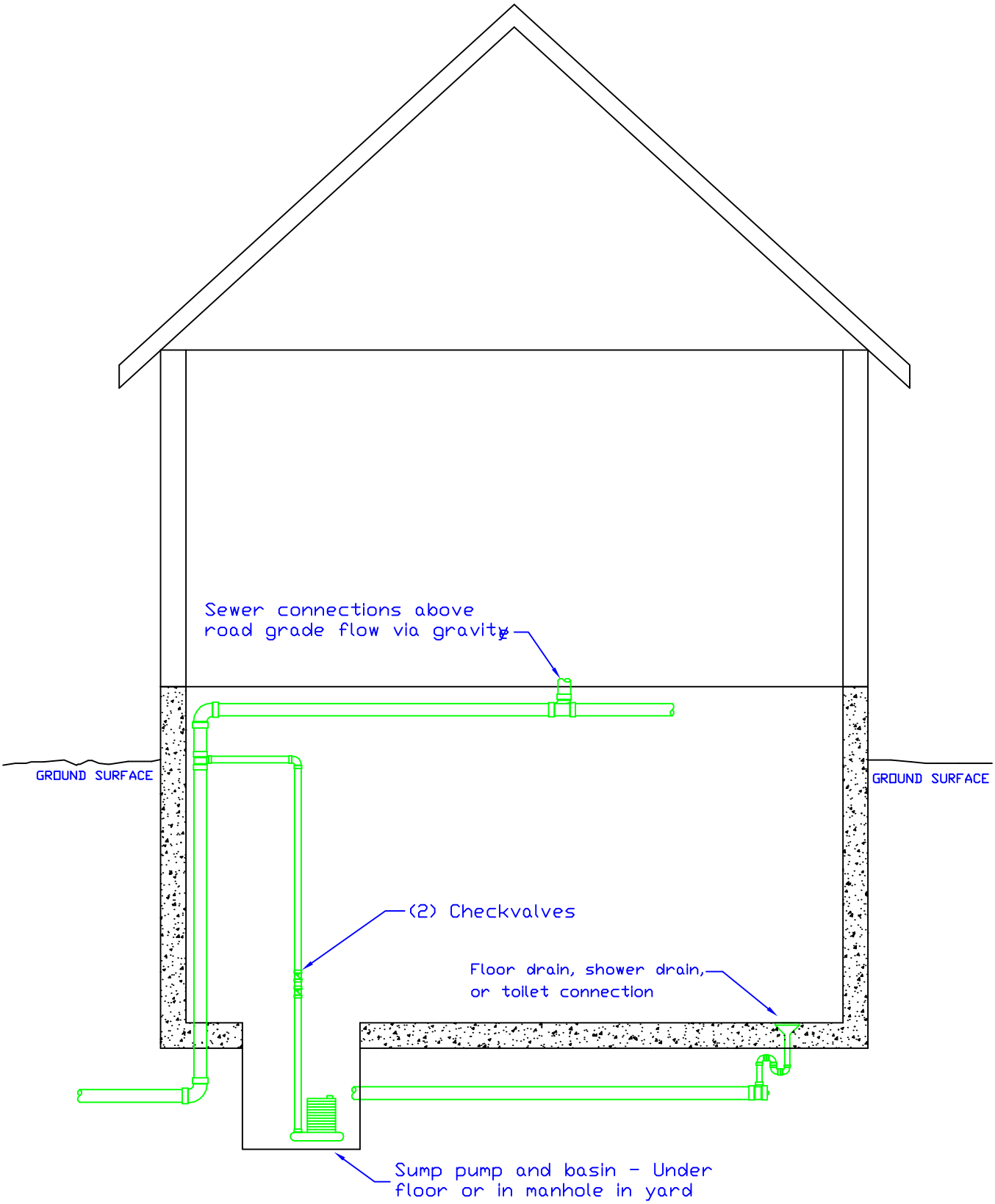
1. Installation of a sump pump, illustrated in Figure 1. Sewage flow from the basement is intercepted in a sump pit and pumped up above ground level and discharged through the original sewer line. This solution has the advantage of being very reliable while retaining the use of the facilities in the basement. This method has the draw back of occasional pump replacement(good quality pumps can last 5 years or more). Sewage from the upper floors can be piped to bypass the pump, thus allowing use of the upper floor plumbing should the pump fail.
2. Installation of a checkvalve and valve, illustrated in Figure 2. Checkvalves contain a flapper that closes automatically to prevent backflow into the basement. As check valves can sometimes leak, this method should not be used if the basement is finished or contains valuables. A valve is often installed with the checkvalve for this reason - should the checkvalve fail and someone is

there, the valve can be closed to prevent backflow. However, someone has to be on the site and alert to the danger to close the valve in a timely fashion.

3. Figure 3 illustrates backflow protection for a washing machine connection. Often, the only required sewer connection in the basement is the washing machine - the method in Figure 3 can be employed while plugging other connections(floor drains, etc.). It is important to note that this system can result in perhaps 5 or more feet of water pressure exerted against the basement piping – it should not be used if the piping is not rated to handle this pressure.
4. Tank manufacturers have developed clever designs to install isolation pumps adjacent to toilets, sinks, and washing machines without tearing up to basement floor. See attach several examples of these designs.
5. It is important to disconnect roof rain leaders(downspouts) from your building sewer pipe. Should your building sewer ever become restricted or blocked, the rain water from your roof will be unable to flow to the City sewer and could back into the basement or even the ground floor. Additionally, the storm water load from roofs contributes significantly to possibility of the City sewer backing up or the discharge of untreated wastewater to Travis Ditch.

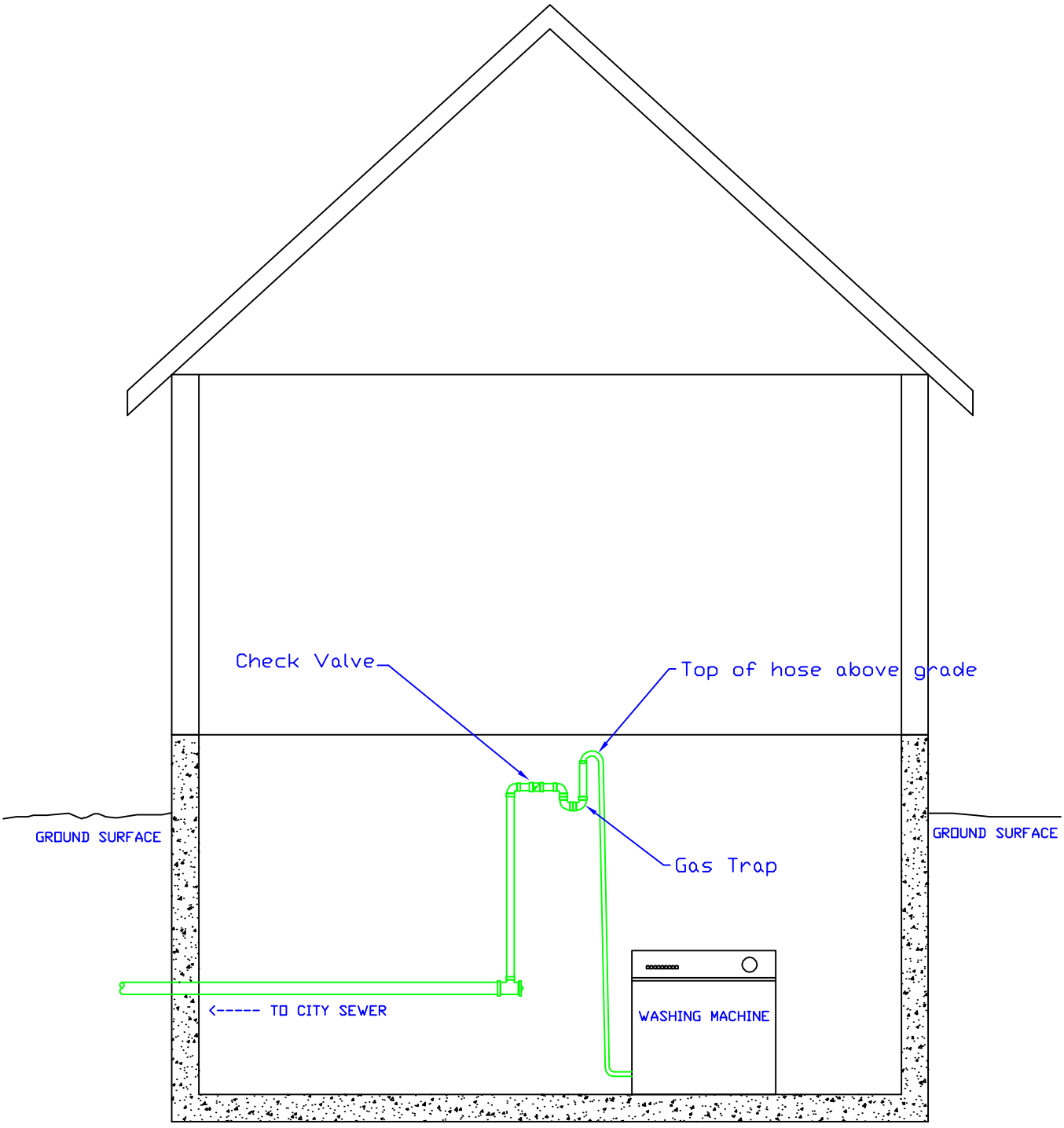
Combinations of the techniques are often employed. The Wastewater Department is available to meet with you and your plumber to discuss backup protection. Contact the Wastewater Department at (219)362-2354.

Protecting Against Sewer Backup
Figure 1



Sump Pump Addition

Protecting Against Sewer Backup



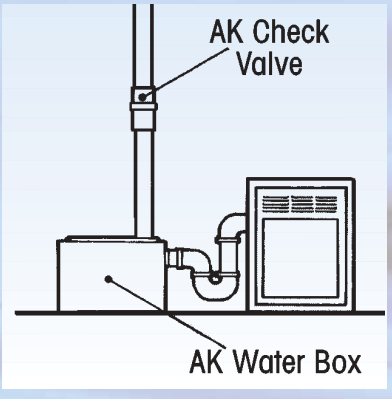
Washing Machine Connection

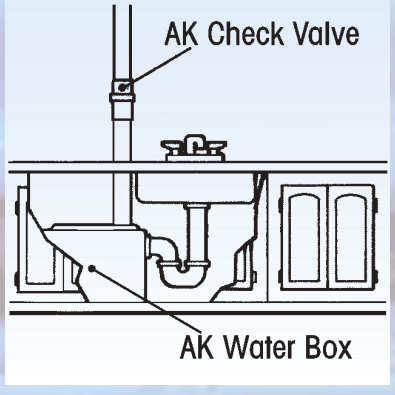
THE WATER BOX

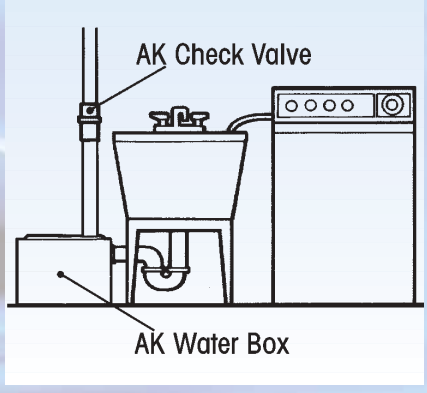
Instantly and Economically Solves Water Handling for Laundry Tubs, Washing Machines, Wet Bars, Dehumidifiers and Other Storage and Pumping Applications.

- Rotationally Molded with no Seams
- Corrosion Resistant Polyethylene
- Includes Bolt Down Cover and 1-1/2” Inlet
- 8 - 1/4”-20 Encapsulated Molded Inserts
- Accepts most 1-1/4” and 1-1/2” Sump Pumps
- Installs in Minutes

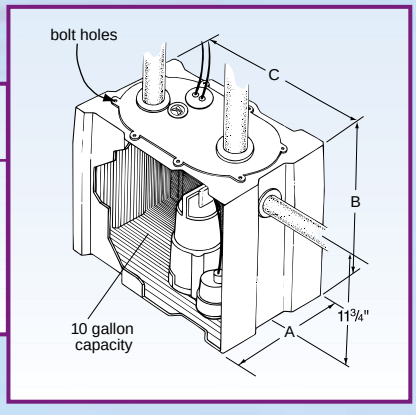
Typical Installations







Part Number	Sizes Inlet	Outlet	Capacity	Weight	Wall Thickness	Dimensions A	B	C
AKP50670	1.50”	1.25”	10 Gal	8 lbs.	0.125”	11”	14”	17”
AKP50680	1.50”	1.50”	10 Gal	8 lbs.	0.125”	11”	14”	17”
AKP50690	1.50”	1.25/1.50”	10 Gal	8 lbs.	0.125”	11”	14”	17”
AKP50700	2.00”	1.50”	10 Gal	8 lbs.	0.125”	11”	14”	17”

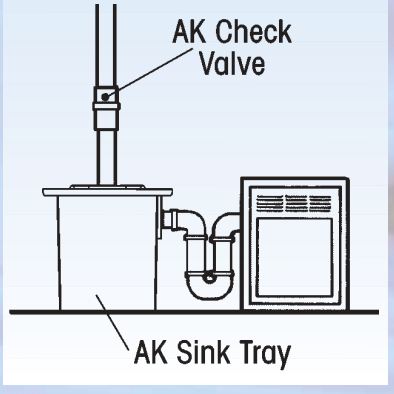


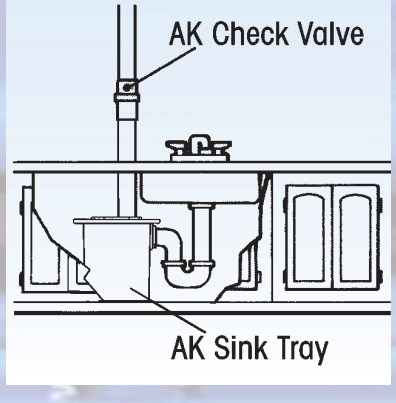
THE SINK TRAY

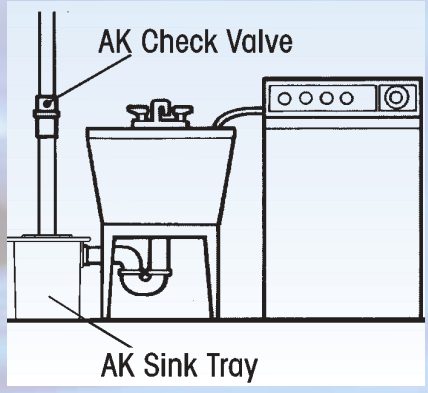
As Convenient as the Water Box, the Sink Tray Instantly and Economically Solves Water Handling for Laundry Tubs, Washing Machines, Wet Bars, Dehumidifiers and Other Waste Storage and Pumping Applications.

- Rotationally Molded with No Seams
- Corrosion Resistant Polyethylene
- Includes Bolt Down Cover and 1-1/2” Inlet
- Accepts most 1-1/4” and 1-1/2” Sump Pumps
- Installs in Minutes

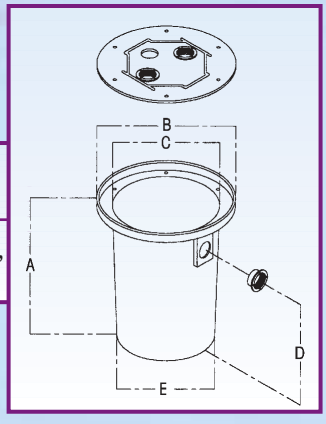
Typical Installations



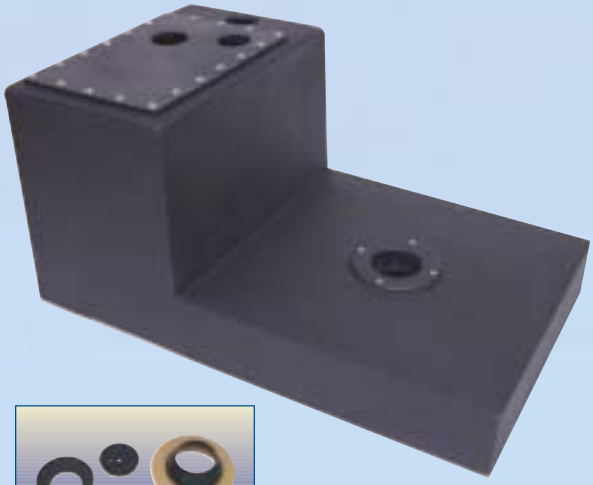


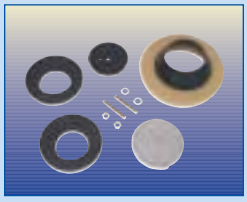


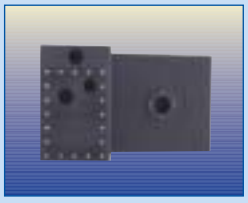
Part Number	Sizes Available	Capacity	Weight	Wall Thickness	Dimensions A	B	C	D	E
AKP50630	13” X 16”	4 Gal	8lbs.	.188”	15.5”	16.4”	12.8”	12.5”	11.8”



PUMP JON





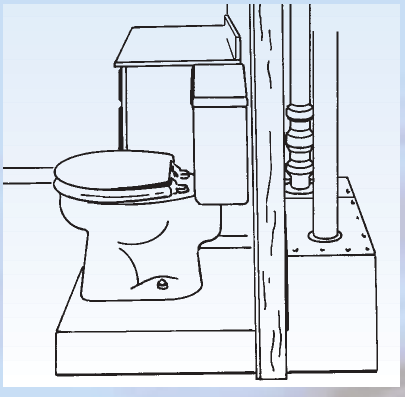


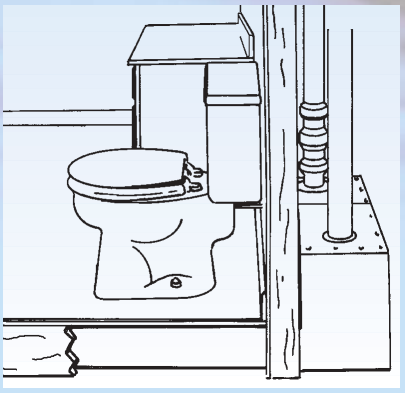
Put a Bathroom Anywhere!

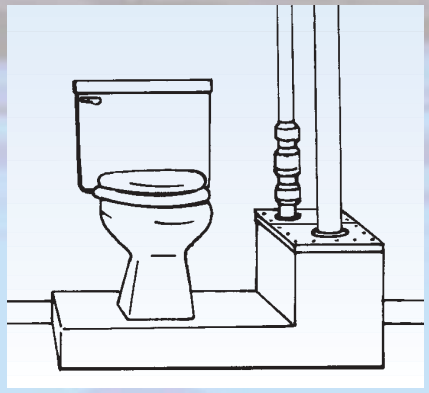
With AK's New Pump Jon System, You can Install a Toilet in Basements, Workshops, Cabins, etc. without having to Tear Up Concrete Floors and Install Underground Soil Lines. It can be a Built-In or a Free-Standing System.

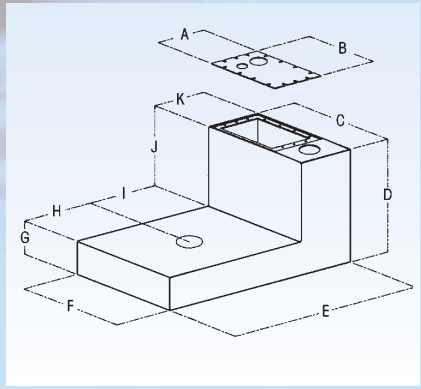
- Made of Heavy Duty Polyethylene
- Includes Bolt Down Lid for Easy Access
- Pre-Drilled Holes for Toilet, Discharge and Vent
- Accepts Waste Water from Toilet, Sinks, Raised Tubs, and Shower Stalls.
- Accepts most Residential Sewage Pumps
- Includes Gaskets and Fittings
- Available in 2" or 3" Vent & Discharge

Typical Installations









Part Number	Pump Cycle Capacity	Weight	Wall Thickness	Dimensions A	B	C	D	E	F	G	H	I	J	K
AKP50620	8 Gal	45 lbs.	0.150"	11.5"	16"	23.5"	20.5"	41"	24.5"	5.5"	12.44"	14.8"	15"	13.5"