



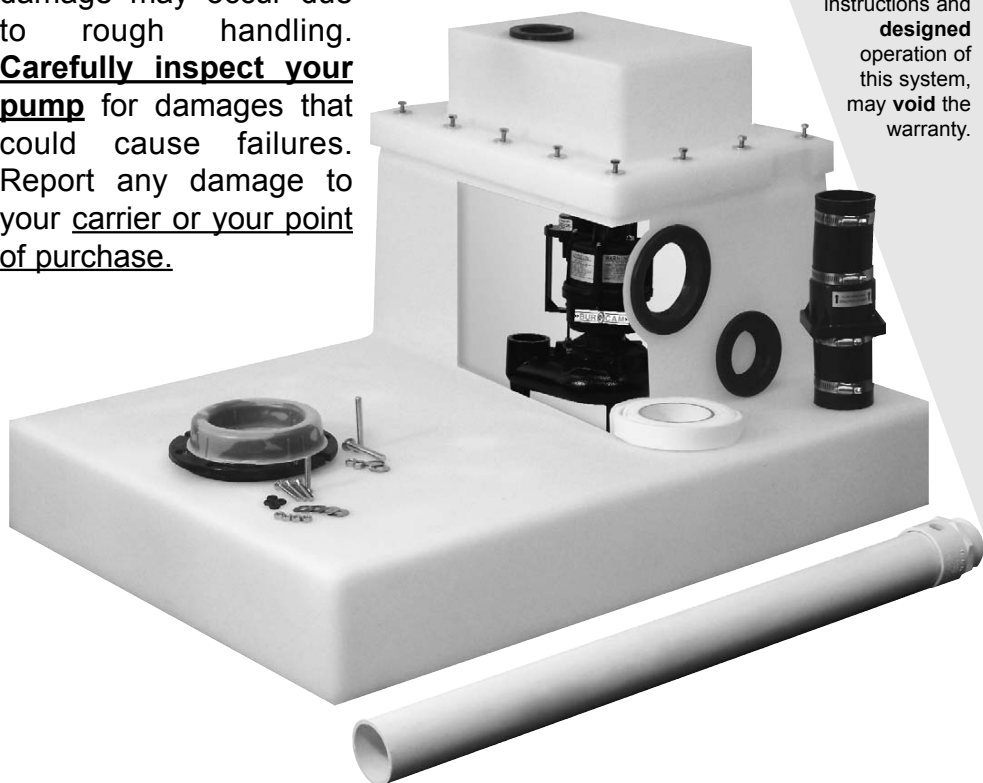
WWW.BURCAM.COM

2190 Boul. Dagenais West
LAVAL (QUEBEC)
CANADA
H7L 5X9

TEL: 514.337.4415
FAX: 514.337.4029

info@burcam.com

Your pump has been carefully packaged at the factory to prevent damage during shipping. However, occasional damage may occur due to rough handling. **Carefully inspect your pump** for damages that could cause failures. Report any damage to your carrier or your point of purchase.



INSTALLATION INSTRUCTIONS

MODEL 450475

EASY FLUSH SYSTEM

Please read these instructions carefully. **Failure** to comply to instructions and **designed** operation of this system, may **void** the warranty.

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SUPPLEMENTARY INSTRUCTIONS

MODEL
450475

Dear consumer,
We thank and congratulate you for purchasing
the latest version of the Easy Flush system.

This unit has to be installed using the same
procedures as our previous version.

Use these supplementary instructions to complete
your installation.

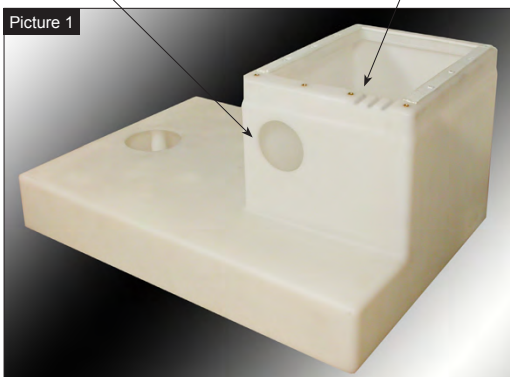
Picture 1

STEP 1

The picture 1 shows you the new
position of the side vent hole and the
wire slots position.

Vent hole

Wire slots

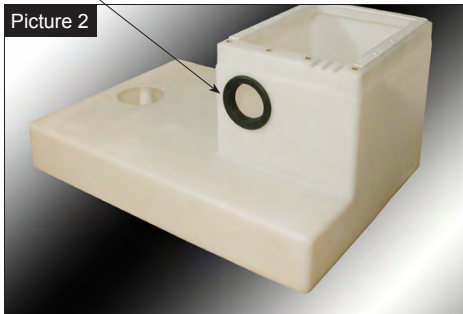


STEP 2

The rubber grommet fits to the vent hole to assure a perfect sealing. (picture 2)

Rubber grommet

Picture 2



Picture 3



STEP 3

The vent pipe size is 3". Use an elbow to connect the pipe to the tank. The length of the pipe exceeding the elbow has to be 2 1/2" to 3". (picture 3)

STEP 4

Fix the pipe to the tank by inserting the pipe into the rubber grommet. Use soap to facilitate the insertion. Push the pipe until the elbow becomes in contact with the rubber grommet. (picture 4 and 5)

Picture 4



Picture 5



FOR INFORMATION

TEL: 1 800.361.1820

FAX: 514.337.4029

STEP 5

Cut a short piece of foam seal (3 3/4") as the basic wire slots seal, then glue it to fit the slots' shape. (picture 6)

Picture 6



STEP 6

Then, cut the full length foam seal for this side of the tank. (picture 7). Glue this full length to the tank over the previous small piece.

Picture 7



STEP 7

Using a screwdriver, make pilot holes into the foam seal to allow the bolts of the lid to reach the brass insert. (picture 8)

Picture 8

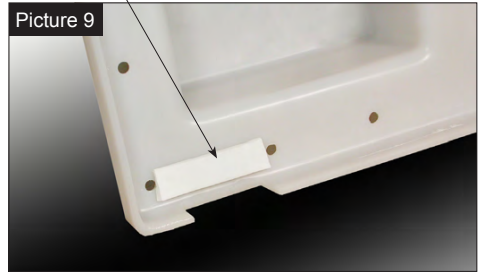


STEP 8

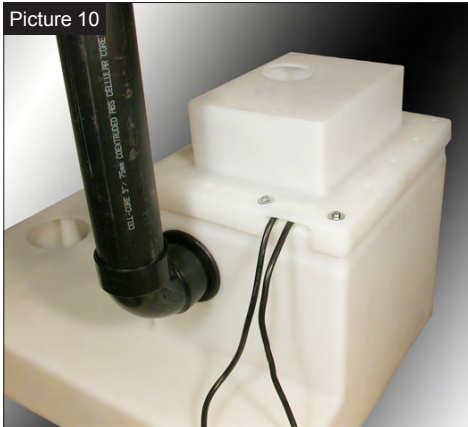
Cut another short piece of foam seal (3 3/4") and glue it to the appropriate space inside the lid of the tank.

3 3/4"

Picture 9



Picture 10



STEP 9

After completing the pump installation, fix the lid using the bolts. This will seal the wires.

These improvements allow an easier access to the pump for servicing.

SAFETY INSTRUCTIONS:

This fine pump that you have just purchased is designed from the latest in material and workmanship.

Before installation and operation, we recommend the following procedures:

A

CHECK WITH YOUR LOCAL ELECTRICAL AND PLUMBING CODES TO ENSURE YOU COMPLY WITH THE REGULATIONS. THESE CODES HAVE BEEN DESIGNED WITH YOUR SAFETY IN MIND. BE SURE YOU COMPLY WITH THEM.

B

WE RECOMMEND THAT A SEPARATE CIRCUIT BE LEAD FROM THE HOME ELECTRICAL DISTRIBUTION PANEL PROPERLY PROTECTED WITH A FUSE OR A CIRCUIT BREAKER. WE ALSO RECOMMEND THAT A GROUND FAULT CIRCUIT BE USED. CONSULT A LICENSED ELECTRICIAN FOR ALL WIRING.

C

THE GROUND TERMINAL ON THE THREE PRONG PLUGS SHOULD NEVER BE REMOVED. THEY ARE SUPPLIED AND DESIGNED FOR YOUR PROTECTION.

D

NEVER MAKE ADJUSTMENTS TO ANY ELECTRICAL APPLIANCE OR PRODUCT WITH THE POWER CONNECTED. DO NOT ONLY UNSCREW THE FUSE OR TRIP THE BREAKER, REMOVE THE POWER PLUG FROM THE RECEPTACLE.

Material required for sewage pump application

- ☐ Desired length of ABS/DWV or PVC 2" pipe, to link up from pump discharge to waste or drain existing pipe.
- ☐ Required quantities of 2" ABS/DWV or PVC elbow(s) and/or other fitting(s) to run discharge line.
- ☐ Desired length of ABS/DWV or PVC 3" pipe and required quantities of 3" ABS/DWV or PVC elbow(s) and/or other fitting(s) to run the vent line.
- ☐ Waterproof silicone caulking, teflon tape and ABS or PVC cement.

Tools

Screwdriver, hacksaw to cut pipe, knife to assist in pipe cutting, round file to smooth pipe ends, pipe wrench, adjustable wrench.

NOTICE

This unit is not designed for applications involving salt water or brine .
Use with salt water or brine will void warranty.

APPLICATIONS

- ❑ This domestic submersible sewage pump is designed and suitable for raw sewage applications where the total head requirements do not exceed 15 feet, including pipe friction losses. For higher lifts, consult factory

❑ CAPACITY:

5' 4500 US GPH
10' 3120 US GPH
15' 720 US GPH

FRICTION LOSS IN
PIPE NOT INCLUDED

FEATURES

- ❑ Vortex designed impeller made from glass filled Noryl, will not corrode.
- ❑ Rugged cast iron pump body.
- ❑ Stainless steel mechanical rotary type motor seal.
- ❑ 2" NPT pump discharge.
- ❑ Thermal and overload protection.
- ❑ Mechanical type float switch, 15A.
- ❑ 1/2HP, 115VAC, 60Hz, 9.2A, oil filled.

INSTALLATION STEPS

see the Easy Flush installation diagram in page 7

STEP 1 Position the "EASY FLUSH" System at the desired location, it should be leveled to 1/8" both on the width and length of the tank.

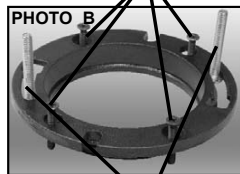
STEP 2 For a built-in installation, the unit is designed to fit within 2"x 6" floor joist.

STEP 3 Determine the closest location for the pump discharge and vent lines, take the necessary measurements and determine what plumbing parts are required. (See material required in shopping list).

STEP 4 To help reduce the risk of electrical shocks, a properly grounded receptacle must be installed and protected by a ground fault interrupter (GFCI) in accordance with local and national codes. Never remove the ground pin from the plugs, they are supplied for your protection.

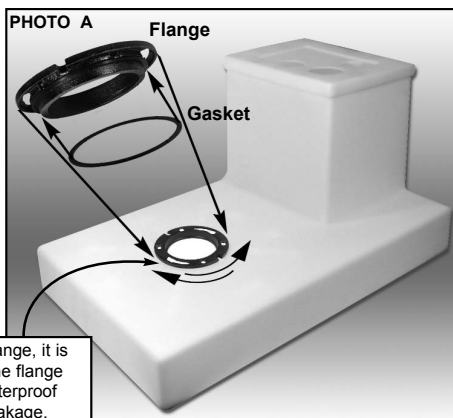
STEP 5

Flange screws (4)



Toilet brass screws (2)

During the installation of the flange, it is imperative to seal all around the flange and rubber gasket, using a waterproof silicone caulking, to prevent leakage.

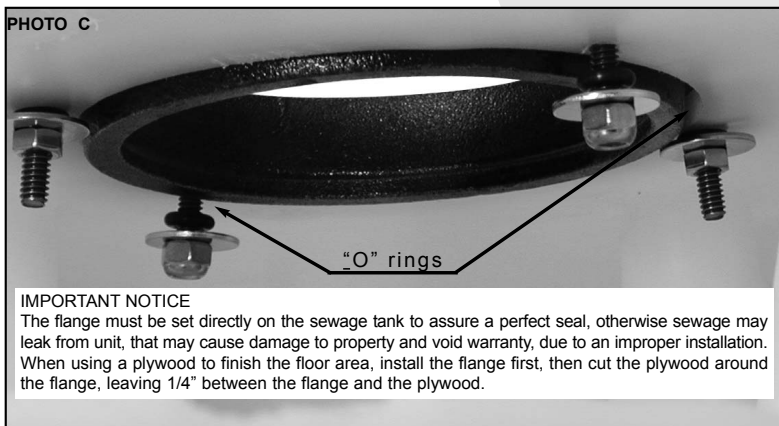


Install the rubber gasket on the lip of the cast iron flange, as illustrated on photo A.

This gasket will assure a perfect seal. Install the cast iron flange on the tank, in a suitable position that will enable you to choose the proper alignment for the type of toilet purchased, and the type of installation required.

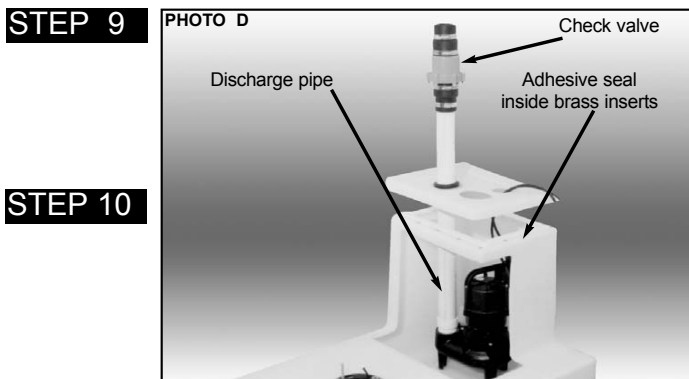
Drill four (4) 1/4" holes in the sewage tank for the installation of the flange using same as a jig (photo B). Please disregard the markings around the hole of the tank. They are only moulding guides and have no further use.

STEP 6 Insert the four (4) flange screws on these holes. From the inside of the tank, install the four(4) supplied "O" rings on the screws then, the washers and nuts. Refer to the photo C. Tighten the nuts snugly.



STEP 7 Install the pump in the "EASY FLUSH" unit, aligning the pump legs with the moulded cavities.

STEP 8 Apply the adhesive seal inside of the brass inserts and at the top of the pump cover. Refer to photo D



Screw the discharge pipe to the pump. A vent hole is drilled in the pipe, at the adapter end. This will eliminate the unit from getting air logged. That would prevent the pump operation.

STEP 10

Install a 2" Aqua Flex rubber gasket under the pump cover, in the appropriate opening for discharge line. Lubricate the gasket with soap and insert lid halfway (photo D). The large lip of the gasket should be flush with the inside of the cover.

STEP 11 Install the 2" check valve, making sure that the inside flap opens upward to the discharge line, then, connect the piping to the overhead sewer line. You are now ready to test the operation of the pump.

STEP 12 The mechanical switch provided with your pump, is supplied with a serial electrical male plug. Insert the power cord of the pump, into the piggy-back receptacle of the switch and plug it into the electrical grounded outlet.

STEP 13 Fill the basin through the toilet opening. The pump should start when the water level reaches 4 1/2".

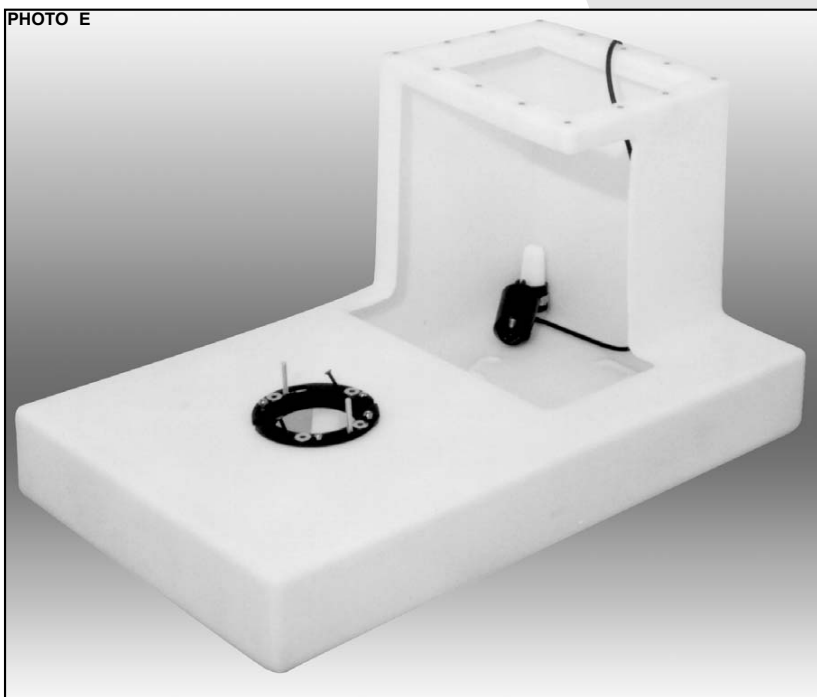
NOTE: The system is sold with two (2) possible types of switch. Follow the instructions for the type supplied with your unit.

Float switch (photo E)

or

vertical switch (photo F).

**FLOAT
SWITCH**



The switch is attached to the basin cone shape adapter which activates the pump on a 30° angle. No other type of float switch will work effectively. It must be installed as illustrated, and the length of electric cord over the rubber protector should be 1 1/2". The color of the switch is red, to identify the proper model.

To adjust the pump start level, unplug the pump and adjust the length of the switch cord, by either shortening or lengthening the cable over the rubber ring.

VERTICAL SWITCH

This type of switch is pre-set at the factory and does not normally need adjustment. However, the stoppers can be used to correct an inadequate setting. Simply use an ALLEN key to make the adjustments.

For either replacement switch, consult your retailer or call our customer service at 1 800.361.1820. These type of switch are exclusive to Burcam.

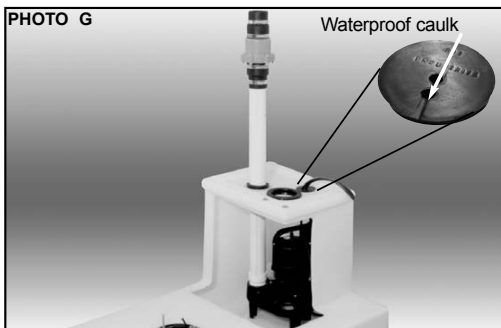
PHOTO E



STEP 14

Install your toilet in the desired location with a wax ring and bolts. Slide the brass screws in the proper slot position. Hook up the water line, turn it on and check for leaks. Flush the toilet and allow the pump to cycle and insure a proper operation. Toilets with less than a 1.6 gallon flush are not recommended for use in our "EASY FLUSH" system. For a better performance and to create a better water flow, it is recommended that the unit is flushed twice, from time to time.

PHOTO G



STEP 15

Fasten the top lid by using screws and washers, and install the 3" Aqua Flex gasket on top of it. Install the vent line making sure to connect to a line leading to your roof. Follow local and national codes concerning vent applications. Proper ventilation is very important, because the toilet will not flush adequately unless properly vented (photo G).

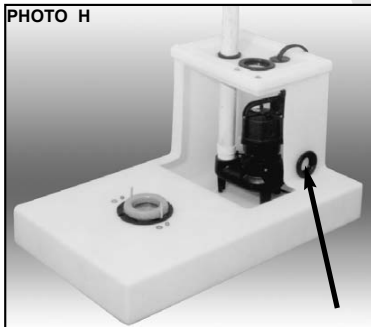
STEP 16

Install the rubber grommet on the cover and electrical cables through same. For perfect sealing, use a waterproof caulk to seal electric cord holes and slot (photo G) .

STEP 17

"OPTION" To install an additional shower or sink unit to the "EASY FLUSH" System, use the additional 2" Aqua Flex gasket. The extra fixture piping must be installed on the same side as the illustration (photo H) to prevent direct water flow on pump switch. Drill a 3" hole on the illustrated side of the basin. It is mandatory to connect the piping above the base of the unit (photo H), to prevent any waste water back flow in the additional fixtures. It's also required that the center of the gasket hole should not be less than 2 1/4" from the base (as shown in step 17 of typical installation diagram). Failure to drill the 3" hole in the proper location will void the unit warranty. It is also recommended that if you hook up more than one fixture, that these two or more be connected to the same discharge piping. Each additional unit must also be vented.

PHOTO H



EASY FLUSH APPLICATION

STEP 1

Position your "EASY FLUSH" System as per instructions.

STEP 2

Install the unit between 2" x 6" floor joist.

STEP 3

Purchase required plumbing parts.

STEP 10

Install a 2" Aqua Flex rubber gasket under the pump cover.

STEP 11

Install the 2" check valve in a vertical position.

STEP 15

Fasten the top lid and install the vent line with the 3" Aqua Flex rubber gasket.

STEP 16

Insert electrical cables through rubber grommet.

STEP 9

Screw the discharge pipe to the pump base.

STEP 7

Align the pump with the cavities inside the basin.

STEP 8

Apply the seal.

STEP 14

Install the wax ring and the toilet. Use long brass screws, nuts and washers.

STEP 5

Align and install the flange. Use the short screws, nuts and washers.

STEP 6

Install the flange. Do not forget the "O" rings between the tank and the washers inside the unit.

STEP 13

Check water level. Pump should start at 4 1/2".

STEP 4

Properly grounded receptacle.

STEP 12

Insert the switch in the receptacle, then plug the pump in the piggy-back.

STEP 17

Additional fixtures can be installed using the additional 2" Aqua Flex rubber gasket enclosed.

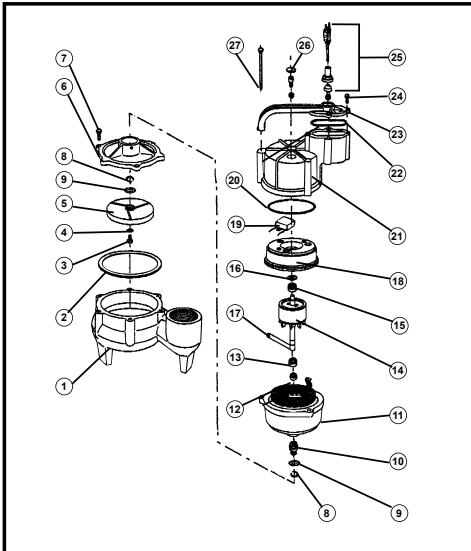
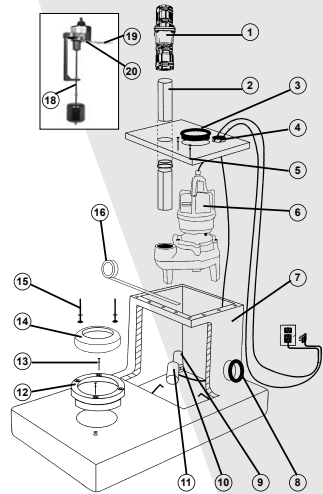
TO THE END CONSUMER

If you have any problems with the product, before advising the store, where you've purchased the pump, please contact us at 514 337-4415 , and ask for our sales department, and they will be pleased to help you with any questions you might have, concerning your installation.

FOR INFORMATION TEL: 1 800.361.1820 FAX: 514.337.4029

REPAIR PARTS

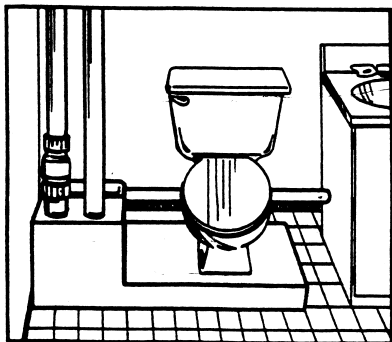
REF.	PARTS	DESCRIPTION
1	450457	2" sewage check valve
2	450480	2"x 3' discharge pipe with adaptor
3	450504	3"Aqua Flex Gasket
4	450505	Electrical cables rubber grommet
5	450445	Easy Flush top lid
6	400500E	Sewage pump
7	450444	Easy Flush tank unit
8	450503	2" Aqua Flex gasket (2)
9	450508	Float rubber ring
10	750887	2" stainless steel clamp
11	450461	30° mechanical float switch
12	450502	Cast iron flange
13	450509	Flange bolts, nuts and washers
14	450506	Toilet wax ring
15	450507	Toilet bolts, nuts and washers (2)
16	450443	Top lid foam seal
17	450510	Top lid screws and washers (14)
18	450447B	Vertical switch
19	450423	Switch Bracket
20	450402	Screws (2)



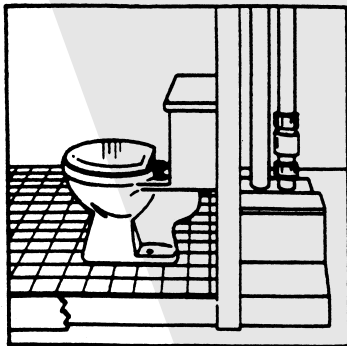
REF.	PARTS	DESCRIPTION
1	450426	Pump body
2	450432	Gasket
3	450428	Impeller bolt
4	450430	Impeller washer
5	450427A	Impeller
6	450425	Cast iron top flange
7	450429	Pump cover screws (3)
8	450210	Snap ring (2)
9	450211	Washers (2)
10	450200	Mechanical seal
11	450215	Stator
12	450216	Lip seal
13	506032	Upper bearing
14	450218	Rotor and shaft
15	350340	Lower bearing
16	450220	Washer
17	450233	Motor shaft key
18	450221	Motor flange
19	450222	Capacitor
20	450209	Large "O" ring
21	450201	Upper casing
22	450208	Small "O" ring
23	450202	Handle
24	450227	Handle screw
25	450228	Power cable
26	450229	Plug
27	450230	Long bolt

Repair parts may be ordered from your authorized point of sale or from
BUR-CAM PUMPS

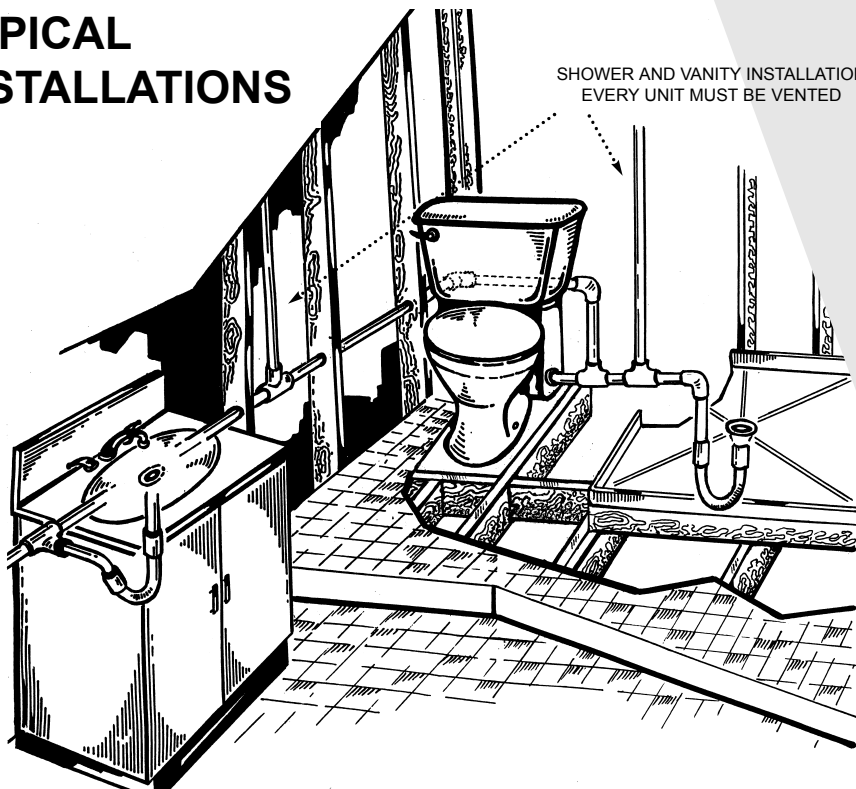
FRONT OR SIDE INSTALLATION



PLUMBING HIDDEN INSTALLATION



TYPICAL INSTALLATIONS



TROUBLE SHOOTING GUIDE CHECKLIST

NEVER MAKE ADJUSTMENTS TO ANY ELECTRICAL APPLIANCE OR PRODUCT WITH THE POWER CONNECTED. DON'T JUST UNSCREW THE FUSE OR TRIP THE BREAKER, REMOVE THE POWER FROM THE RECEPTACLE.

TROUBLE PROBABLE CAUSE

ACTION

Motor does not run.

Switch is off position
Blown fuse
Tripped breaker
Disconnected plug
Corroded plug
Float obstructed
Defective switch *
Defective motor
Low water level
Tripped thermal protection

* To confirm a switch failure, simply unplug the pump from the piggy back receptacle and plug the pump directly in the wall receptacle.

Turn switch to on position
Replace
Reset
Re-install
Clean
Remove obstruction and verify movement
Replace
Replace
Add water and check
Motor will reset automatically after 15 minutes

Motor runs but no water is delivered.

Improper voltage
Pump may be airlocked

Pump discharge head too high
Clogged inlet/impeller
Check valve installed backward

Check voltage
Check drilled hole in discharge pipe and clean it
Improper pump selection (over 15')
Clean
Install in proper position with the flap pointing upward

Pump does not deliver to full capacity.

Improper voltage
Pump may be airlocked

Pump discharge head too high
Clogged inlet/impeller
Clogged check valve

Check voltage
Check drilled hole in discharge pipe and clean it
Improper selection (over 15')
Clean pump base
Clean or replace

Pump does not shut off.

Defective switch
Missing check valve
Clogged check valve in open position
Float obstruction
Clogged inlet

Replace
Install valve
Clean debris
Remove obstruction and verify movement
Clean pump base

TO THE END CONSUMER

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Designed to be installed between 2" X 6"s, it's easy to build a complete bathroom with the EASY FLUSH system. Compare to a traditional sewage system, the only different component is the tank, which is designed to receive the toilet cabinet. All other components are standard and are part of a traditional sewage system.

You may hook up a sink, a shower or a bath, a dishwasher or a washing machine, or any other device requiring a sewage water drain.

TYPICAL HIDDEN SOLUTION FOR THE EASY-FLUSH UNIT

MODEL 450475

Please read these instructions carefully. **Failure** to comply to instructions and **designed** operation of this system, may **void** the warranty.



THIS IS A TYPICAL WAY TO COMPLETE YOUR INSTALLATION PROJECT WITHOUT BREAKING THE CONCRETE FLOOR OF YOUR BASEMENT AND TO ELIMINATE THE DISADVANTAGE OF A MESS BUILD-UP.

THIS DOCUMENT IS STEP BY STEP INSTRUCTION TO PLAN YOUR PROJECT. PLEASE REFER TO OUR INSTALLATION INSTRUCTIONS BOOKLET FOR TECHNICAL ASSEMBLY PROCEDURES.

STEP 1

The **photo 1** shows you how to begin your project by installing the 2" X 6". No nail or screw should perforate the tank. This would void warranty.

STEP 2

The drainage of a bath or a shower must be connected to the top portion of the tank to prevent a possible back flow of sewage water to the bath or shower. It is required, as per **photo 2**, to install the second row of 2" X 6" to receive the bath or shower.

Please install a gravity drainage pipe and a "P trap" in accordance with your local plumbing code. A vent line is also required for each device connected to the tank.



Photo 1



Photo 2

STEP 3

The **photo 3** demonstrates that a slope of ($1/4"$ per foot) is required for gravity to flow through the tank.

STEP 4

The **photo 4** illustrates the vent pipe of the shower base and the drainage pipe of the sink, coming from the left side of the tank.



Photo 3



Photo 4

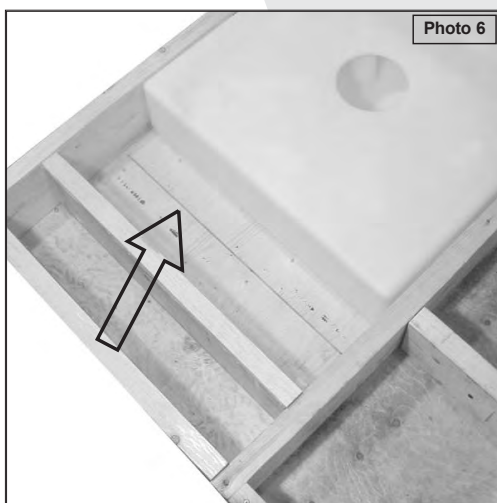
STEP 5

The next step consists in covering the tank. A 3/8" plywood is mandatory for this operation.

To have a perfect level and a strong sub floor, we suggest to double the 3/8" plywood on all floor area except for the tank.

Because 2" X 6" boards are generally a 5 1/2" in height, it will be necessary to adjust to position the top of the tank 3/8" higher than 2" X 6". In order to do this, we suggest to slide a piece of 3/8" plywood under the base to heighten the top of the tank as per the **photos 5 and 6**.

However, the thickness of this piece can be adjusted to the correct height of the 2" X 6", in reference to the tank, so that the final result allow a perfect level of the sub floor using only one 3/8" plywood on the tank and a total of 3/4" of plywood for the rest of the floor area (see **photo 7**).



STEP 6

Some 2" X 4" can be installed on each side of the higher section of the tank to hold the gypsum board to finish the wall (**photos 8, 9 and 10**).

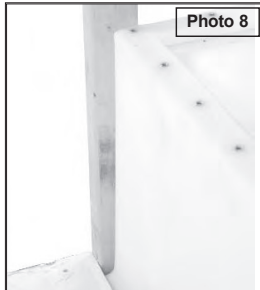


Photo 8

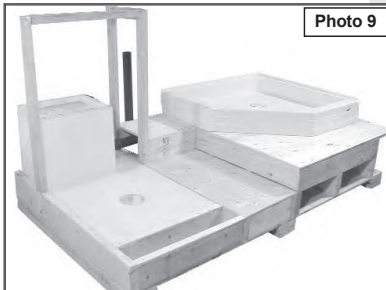


Photo 9

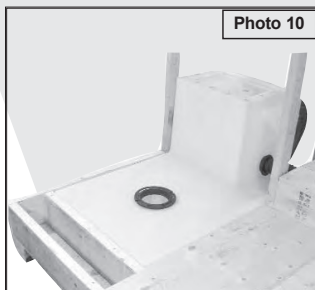


Photo 10

STEP 7

As indicated on **photo 11**, the installation flange of the toilet cabinet must be fixed directly on the plastic of the tank. Refer to the instructions manual for the installation of this flange .

STEP 8

Now the next step, is to carve a circular opening of a diameter of 1/2" larger than a flange, at the proper place, to be able to cover the base of the tank (**photos 12 and 13**).



Photo 11

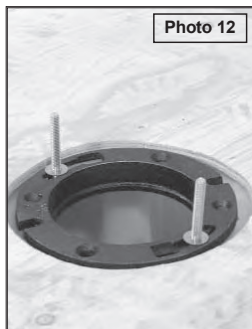


Photo 12

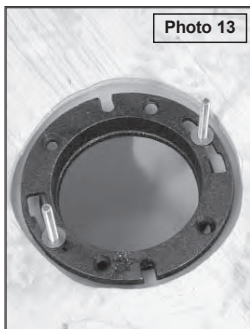


Photo 13

STEP 9

At this step, it is the time to screw the gypsum board on the 2" X 4" and finish the installation of the toilet cabinet by fixing same to the flange (**photos 14 and 15**).



Photo 14



Photo 15

STEP 10

On the cover page shows you a photo of the completed project.