IMPORTANT
DO NOT RETURN ANY MERCHANDISE TO THE VENDOR
For Customer Service, Returns or Technical Questions, please call Saniflo's technical support toll-free at 800-571-8191 (USA).

The user should retain these instructions for future reference

This product must be installed in strict accordance with local plumbing codes. Product should be installed by a licensed plumber.

INSTALLATION AND MAINTENANCE INSTRUCTIONS
SANIPRO®
SFA SANIFLO

120 V - 60 Hz - 4/10 HP - 7,2A - IP44 - 6,8 KG
This macerator is manufactured in a factory which is quality certified to ISO 9001 (2000) accredited by AFAQ. This equipment benefits from the latest technological innovations concerning soundproofing. To benefit fully from the advantages provided by this new generation of appliances, it is important to comply with the installation instructions.

1.1 - GENERAL DESCRIPTION
The macerating unit is a residential pumping system for toilet and bathroom fixtures. The system is comprised of three major components:
- the macerating unit, which connects to the outlet of a rear spigot outlet toilet
- The toilet bowl
- The toilet tank

The macerating unit also consists of three major parts: the container which houses the operating mechanism; a pressure chamber which automatically activates and deactivates; the induction motor which drives the cutting blade and the impeller.

The macerating unit can simultaneously receive wastewater from several sanitary fixtures, e.g. sink, shower, bathtub, urinal, but only one water closet per unit.

Macerating units are designed for the disposal of human waste, toilet paper and water. They are not intended to be used for the disposal of kitchen waste, neither are they intended to be used for the disposal of waste water from such pump appliances as dishwashers and clothes washers.

Macerating system must discharge into a minimum 3/4-inch sanitary drainage pipe. The macerating system will pump up to 15 feet vertically, with a 1/4” per foot gravity fall (minimum) constantly throughout the horizontal run to the point of discharge. If you require a vertical lift it should precede any “horizontal” run and should commence as near as possible to the discharge elbow. Once you have started the horizontal run, you cannot change directions in a upward vertical manner.

SANITARY INLETS
The macerating unit is equipped with two additional 2” inlets, one on either side of the case. These inlets, which incorporate an internal check valve, are used to connect the drainpipe of other sanitary fixtures to the macerating unit.

Note: In case one of the inlets is not used by a fixture, you will need to block off this inlet with the plugs provided.

BATHTUB
Any regular bathtub can be used, as only the drainpipe connects to the macerating unit. When installing a bathtub, we recommend to build a platform out of 2 x 8-inch lumber, on which the tub is placed. This gives enough space for a p-trap and slope toward the wastewater inlets.

SHOWER STALL
When installing a shower, a special raised shower base can be installed. This eliminates the building of a platform. Alternatively, you may want to purchase a regular shower and also build a platform for it. We recommend to build a platform out of 2 x 8-inch lumber.

Note: Platform height. The actual distance between the p-trap of the additional fixture and the macerating unit determines the necessary clearance to install the p-trap and elevation required to ensure a minimum gravity flow of 1/4-inch per foot.

1.2 - NORMAL OPERATING CYCLE
As the flush is operated or as the bath, shower and lavatory discharge, the water and waste enter the unit and the water level begins to rise, triggering the micro-switch in the pressure chamber. This in turn activates the motor. The shredded waste is picked up by the impeller and discharged through a 3/4” or 1” outlet pipe to a sanitary sewer or soil stack.

Safety note: For safety the macerating unit should never be activated with the lid removed.

2.1 - PREPARING THE MACERATING UNIT
The pan gasket (part 35 – schematic diagram) supplied will be used to connect the pump casing to the back of the bowl. The smaller end will need to be stretched to fit the outer groove in front of the pump. Once installed, this gasket will need to be secured to the pump casing by means of a tie wrap (provided). Upon installing the toilet bowl, the other end of this gasket will need to be connected to the spigot of the bowl. Secure this connection with the gear clamp provided.

The plastic discharge elbow/check valve assembly should be installed using the three holes located on the top of the lid. The step-down rubber fitting should then be inserted at the discharge side of the elbow assembly and secured with the provided metal clamps. The step-down rubber fitting may need to be cut depending on the discharge pipe diameter. Three metal clamps should be used to secure all fittings.

2.2 - CONNECTION OF THE OTHER SANITARY APPLIANCES
See page 2 drawing 7b
• To connect to the side entries of the case, use the side connector. Secure with clamps.
• Plug the unused inlet with blanking plug after greasing the joint.

Warning: Ensure when connecting a shower to the macerating unit that the underside of the shower tray is raised by at least 7 inches from the floor.

2.3 - WATER CLOSET ASSEMBLY
The tank comes with the fill and flush valve assembled, however, please ensure that all screws, nuts, etc. are tightened

2.4 - SYSTEM ASSEMBLY
See page 2 drawing 7a
1. Place the macerating unit in the desired spot and connect all inlet and outlet waste piping to the unit. (See Connection to discharge pipe work).
2. Place the spigot outlet of the toilet bowl firmly against the white accordion connector and mark the floor through the holes in the bowl.
3. Remove bowl and bore two holes approximately 2 1/4” deep with a 5/16” masonry drill bit. Insert plastic plugs into holes. If the floor is wood, bore a pilot hole with a 1/4” drill bit.
4. Place the bowl in front of the macerating unit and pull the accordion gasket all the way onto the rear spigot outlet. Attach with supplied gear clamp. Check that gasket and clamp are even all around.
5. Move the bowl over the holes in floor. Slip the plastic china protectors over the lag screws. Tighten lag screws (do not overtighten) and snap plastic cover caps in place.
6. Locate the tank to bowl kit and place foam gasket on the sound of the flush valve and over nut. Place tank on top of the bowl. Insert screws and gasket through the tank and tighten nuts underneath. Do not overtighten as this may damage the china.

The system is supplied with fixing lugs to prevent it from moving during use. To optimize the latest technical developments concerning soundproofing incorporated into this unit, it is important to:
• position the WC pan so that it is not in contact with a partition or wall of the room.
• place the WC pan on a perfectly level surface to ensure that the resilient mounts are fully efficient.
• fix the discharge pipe correctly with distances of not more than 3½ (11m) between the fastenings.

2.5 - CONNECTION TO WATER SUPPLY
Connect the water supply hose to the fill valve.

2.6 - CONNECTION TO THE DISCHARGE PIPE WORK
These macerating units have an elbow, and a “step-down” bushing simply cut off the appropriate portion of the bushing in order to fit it to the discharge pipe. Use ridged wall pipe, not flexible pipe or hose, as flexible pipe may distort over time. Use 3/4” or 1” discharge pipe.
Install a “full-port” ball or gate valve and a union in the discharge pipe in order to facilitate the removal of the macerating unit. Place the union or hose connector then the valve at the lowest portion of the discharge pipe. If you wish the unit to pump vertically and horizontally you may calculate that 3 feet of vertical lift is equivalent to 30 feet of “horizontal” run.

Each bend or change of direction causes minor losses, which must be deducted from the discharge performance figures in accordance with the usual head loss practice. (Rough guide: reduce discharge height by 3 feet for each 90° turn.) The discharge pipe work can be made from 3/4” diameter material. Copper (Type M), CPVC or PVC. Use long turn bends and not elbows, elbows are not normally available in plastic piping, use two 45° pieces back to back to make a 90° elbow. The connection to the soil-stack or sewer pipe should be made with an approved wye fitting. When in doubt about this procedure please have a plumbing contractor install this for you. As an optional accessory, we recommend the installation of an external alarm system “SANIALARM” (fitted to the lid of the unit), which warns the user in case of abnormal water level inside the case. This is available from your Saniflo supplier.

2.7 - SEWER PIPE (COPPER, CAST IRON, PVC, ABS)
1. Install an appropriate wye fitting into the sewer pipe, (with 1 1/2” branch hub).
2. Reck point 3a first if using a copper wye. Glue a bushing, (spigot x FP) 1 1/2” x 3/4”) into the 1 1/2” hub of the Y fitting.
3. Screw male adapter, (IMP x Hub) 3/4” x 3/4” sweat into the bushing, when discharge pipc is copper buy brass adapter, when in CPVC buy CPVC adapter.
   a. When in copper; solder a length of pipe to the male adapter first, allow to cool then screw assembly into female bushing into the branch socket. When soldering pipe systems together, wind a wet rag around the plastic to keep it cool. Maintain at least a distance of 6” between the plastic and the piece soldered. Use Teflon tape or 100% Teflon dope on male thread. Any other dope product will deteriorate plastic material.
   b. When using CPVC material, use glue to glue the CPVC pipe into the ABS fitting. Caution: Do not use ABS glue on CPVC materials, as the plastic will not bond.

2.8 - CONNECTION TO ELECTRICAL SUPPLY
All wiring should be in accordance with the applicable electrical code in your territory. The macerating system requires a single-phase 120-volt, 15 Amp, supply. When installed in a bathroom, the receptacle should be 40 inches away (in a straight line) from a shower or bathtub. Connect only to receptacle protected by a ground fault circuit interrupter (GFCI).
Warning: risk of electric shock - this pump is supplied with a grounding conductor and grounding type attachment plug to reduce the risk of electrical shock. Be certain that it is connected only to a properly grounded - type receptacle.

2.9 - CONNECTION TO A VENT SYSTEM
See page 3 drawing 7c
The macerating unit must be vented. It has 2 inlets on the top of the cover: a 1 1/2” cap and a hole of smaller diameter. The unit must be connected to a vent system according to the plumbing codes. Put the waste inlet (provided) on the cap and clamp it down. Then, connect the vent pipe. Note that all fixtures connected to the system must also be vented.
Warning: Do not use an air admittance valve or a mechanical spring-loaded venting device, as these devices are one-way valves. The air pressure in and outside the macerating unit must be equal, a “cheater” vent will obstruct the airflow one direction.
Note: The smaller diameter 1/2” hole must be plugged with a plastic cap supplied (f).

2.10 - ACTIVATEING THE UNIT
1. Ensure that the toilet is free of building debris prior to activating.
2. Open the shut-off valve and let the tank fill up.
3. Ensure power supply is on.
4. Flush several times with intervals in between depositing a few sheets of toilet paper into the bowl to check discharge piping. Usually, there should be no paper remaining in the bowl after each flush.

3. USAGE
The normal domain of application of SFA macerating units only concerns the disposal of human waste, toilet paper and water.
This macerator is designed for family use only and cannot accept without damage the disposal of sanitary items such as condoms, tampons, sanitary pads and cotton swabs.
CAUTIONARY NOTES:
Do not discharge any acids, alkaliolys, solvents painting, paint strippers, food waste, plastic bags, metal such as nails, hairpins, wood, building materials, kitty litter or anything that could halt or damage or corrode the unit. Disregarding the above might damage the macerating unit and shall void your warranty.
Do not hang bleach blocks or hydrochloride cleaners in the toilet tank. These solutions have been shown to deteriorate the plastic and neoprene components of the flush and fill valves, and may cause leaks. In the event of a power loss do not use the toilet or any other sanitary fixture connected to the macerating unit since it will not work until the power is restored.
The toilet works as a conventional flushing toilet and needs no maintenance in normal use. However, there is nothing wrong with running out the macerating unit once a year. Do not use bleach (Be careful not to let water enter the electrical cord opening).
The macerating unit starts automatically once the toilet is flushed or the bath, shower, hand basin, etc. flush and cease operation once the contents have been pumped away. Whenever the unit is not to be used for long periods of time (vacation, power failure, maintenance, etc.) turn off the water supply to the tank and flush the unit to evacuate the water. No leakage into the bowl should ever be permitted from the tank. In areas, which are prone to freezing, the total system must be properly winterized. This includes the draining of all pipes, the toilet tank and bowl and the macerating tank. The macerating system is simple to winterize. Pour a cup of plumbers’ anti-freeze into the tank and flush the toilet. This will cause the macerating unit to activate and all remaining water will be replaced by plumbers’ anti-freeze. No parts or labour are warranted when a breakdown occurs due to freezing.
Ensure that there are no faucets left open. Drops will eventually fill up the pump and the resultant repeated start-stop of the motor may heat up to such an extent, that the thermal overload switch may eventually operate and automatically stop the motor, thus possibly causing a flood.

4. PROBLEM SOLVING
4.1 - CHECKUP
The macerating unit is very reliable. With normal use long service is assured. However, in certain cases an incident may occur which you may rectify yourself. Before taking any action check the following points:
1. Plumbing system. Flush system, water supply turned on.
2. Electrical system. G.F.C.I. breaker on. Receptacle on. Fuse okay. Breaker on. Male plug still in receptacle. Check that the thermal overload has not operated; (wait approximately 20 minutes for unit to reactivate).
3. Hydraulic System. Check that the discharge and vent pipe are not blocked.
If the macerating unit turns on intermittently without the flush having been activated or water having been discharged, check that water out of the toilet tank is not leaking into the bowl. Or, that there is no leakage back into the macerating unit due to incorrect seating of the check valve and/or that the discharge elbow is seated properly.
4.2 - DISASSEMBLY FOR LITTLE INTERVENTION

As the unit is connected to the water and electrical supply, it is important to check that the following actions have been taken before removing the unit:

1. If possible, close off the water supply to the tank and close the ball or gate valve on the outlet pipe.
2. Pull the electrical cord out of the receptacle before removing unit.
3. Empty out as much water as possible from the toilet tank and toilet bowl.
4. Disconnect toilet from unit. Remove toilet bowl and set aside against a wall to prevent from tipping over.
5. The use of a dry/wet type vacuum cleaner might assist you greatly in removing the residual water in the bowl or macerating unit.
6. When you have to remove the macerating unit, carefully disconnect the inlet drainpipes, (there might be residual water inside).
7. Side inlet valves clogged: remove the sleeves and use a screwdriver to free or clean the rubber flap if necessary.
8. For SANIPRO®, use the WC inlet to remove a foreign object with the help of a folded wire.

4.3 - RETURN AND REPAIR OF THE MACERATING UNIT

In the event that the unit needs to be returned for service, please call for possible options, or to inquire about an authorized repair shop in your area. When you are required to return the macerating unit to the manufacturer, please ensure that prior to shipping, the unit has been cleaned and disinfected inside and outside. A labour charge will be in effect for cleaning ($50.00). Before returning any unit, a return authorization is needed from the manufacturer. Units returned without prior RGA number will be refused and returned collect. If you return the macerating unit in its original packaging, please remove the discharge elbow and retain until re-assembly. If elbow is not removed, damage due to shipping might occur.

Please package the macerating unit properly with adequate shock absorbent material around it.

Send this package prepaid to the manufacturer, making sure to insure against loss and/or transit damage, (the amount of $300.00 will suffice).

If any repairs are done outside the warranty period, or when the user has damaged the macerating unit, you will be apprised of repair costs. All repair work will be conducted on a pre-paid basis only.

5.3 - SANIPRO® FUNCTION CHECKUP IMPELLER

Invert motor to gain access to pump chamber at the base. Unclip pump cover plate from motor housing.

Unscrew the pump impeller counter clockwise, releasing it from the spindle (block the spindle to unscrew). Clean pump chamber and discharge elbow and pipe work to ensure no blockage exists. Check that drive shaft rotates freely. Also check that the air relief-hole in the wall of the chamber is clear.

5.4 - CAUTIONARY NOTE

Do not immerse unit totally in water. Do not let water enter the electrical cord entrance opening.

5.5 - REASSEMBLY OF THE LID

When replacing the lid grease the rubber gasket lightly with soapy water or dishwasher liquid. (Do not use Vaseline as this may expand the neoprene materials). The gasket must be inside the lid first. Start by pushing the lid down at the cord side first, then work your way around and tap on the lid with a rubber mallet or bloc.
PIPE SUPPORTS
All sanitary pipe work must be supported, in accordance with the pipe manufacturer’s recommendations. Avoid dipping or trapping, which may cause the build up of residual “solids” and subsequent blockage.

BENDS
Where possible long sweeping bends should be used. Do not use short elbows. If sweeping 90° elbows are not available use two 45° elbows to make a 90° turn.

VERTICAL INSTALLATION FIRST
If vertical lift is required, this must precede the horizontal pipe run.

DIRECTLY VERTICAL
All vertical lifts should rise as directly above the unit as possible, allowing only for the need to clear the toilet tank. Any initial horizontal pipe run from the unit, prior to a vertical lift should not exceed 12-18 inches.

EASY ACCESS
The unit should be accessible and removable in the event of maintenance being required. During the installation a full-port ball valve should be installed at the base of any vertical discharge pipe work from the unit to allow easy service of the unit.

GRAVITY FALL
The unit accepts wastewater by gravity; it does not “vacuum” in water. All inlet pipe work must have a positive gravity fall, (1/4” per foot). All horizontal piping from the macerating unit must also have a positive gravity fall to allow free drainage when the pump stops.

NO DIRECT FALL
Where the point of discharge into the soil stack is significantly lower than the base of the unit, a vacuum relief valve may need to be fitted at the highest point in the pipe run in order to avoid siphonage of the water seal.

THREE FEET MINIMUM
The macerating unit must be installed at least 3 feet from the soil stack. This will allow the macerator to operate for an adequate period of time to ensure efficient waste reduction.

SOIL STACK CONNECTION
All discharge pipe work must be connected to the soil stack by an appropriate and approved connection. A “tee” or “y” fitting as shown is preferable.

NO DIAGONAL “UPHILL” PIPE RUNS
All discharge pipe work from the unit should run either directly vertical upwards from it or in a horizontal plane (with a small gravity flow) to the point of discharge. Pipe work should not be installed with diagonal upward slope from the unit to the point of discharge.

PIPE WORK
All pipe work should be either copper, PVC or CPVC (Do not use flexible pipes). Hangers should not be less than three feet apart to prevent pipe rattling.

DISCHARGE
Never discharge directly into an open drain, fixture, manhole or rainwater drainpipe. It is illegal for it constitutes a health hazard. Direct connections into sanitary waste systems only, shall be acceptable.

FREEZING
Ensure all pipe work susceptible to freezing is adequately insulated or heated. In unheated buildings, the toilet, piping and macerating unit must be properly winterized with “RV or plumbers” anti-freeze or drained completely.

ELECTRICITY
Before attempting any maintenance or servicing, the unit must be disconnected from the power source. The macerating system must be connected to a Ground Fault Circuit Interrupter (GFCI).
### TROUBLE SHOOTING GUIDE

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>REMEDY</th>
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<tbody>
<tr>
<td>Motor turns normally but the water evacuates slowly from the bowl,</td>
<td>Discharge pipe blocked or valve not vented properly.</td>
<td>Clean out the piping and air breather hole.</td>
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<tr>
<td>(flush incomplete).</td>
<td></td>
<td></td>
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<tr>
<td>Waste build up in bowl.</td>
<td>Inadequate water supply from reservoir.</td>
<td>Check and/or adjust water level in reservoir.</td>
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<td></td>
<td>Power supply off. Thermal overload cut out.</td>
<td>Wait for thermal overload to engage (approx. 20 min).</td>
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<tr>
<td>The macerating unit does not start up.</td>
<td>Foreign body blocking the macerating blades. Defective capacitor.</td>
<td>See “dismantling”.</td>
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<tr>
<td>Water does not evacuate.</td>
<td>Clogged up (sanitary napkin, newspaper, plugged breather hole etc.).</td>
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<tr>
<td></td>
<td>Kinked/blocked discharge pipe, damaged membrane, defective impeller,</td>
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<tr>
<td>The motor hums but does not turn the water does not evacuate.</td>
<td>and partially blocked pump.</td>
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<tr>
<td>Water goes down slowly and motor works intermittently.</td>
<td>Water siphons back into the macerating unit. Check valve is not</td>
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<tr>
<td></td>
<td>functioning properly.</td>
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<td></td>
<td>Siphonage or insufficient back pressure in discharge pipe, causing</td>
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<tr>
<td>The water evacuates from the toilet but the motor runs for a very long</td>
<td>airlock. Foreign object.</td>
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<tr>
<td>time, thermal overload activates.</td>
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<tr>
<td>After evacuation the motor engages several times in succession before</td>
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<tr>
<td>it stops completely.</td>
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<tr>
<td>Motor turns noisily without stopping or pumping.</td>
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<tr>
<td>After evacuation the motor starts, stops, and re-engages indefinitely.</td>
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<tr>
<td>For SANIPRO®, the motor turns with a rattling noise.</td>
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<tr>
<td>Water backs up into shower tray or bathtub.</td>
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<tr>
<td>Important</td>
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</table>

When claiming a warranty repair we will need the information you have written down below. Please ensure that you have all particulars available when requesting warranty work.

Name Owner:  

Installation Address:  

Purchased From:  

Installed By:  

Date of Purchase:  

Serial Number:  

Date of Manufacture:  (see manufacturers’ tag on unit)
LIMITED WARRANTY

2 Year Warranty from Date of Purchase

Subject to the terms and conditions set out below, SFA-SANIFLO INC., (hereafter designated the as the Company) warrants that it will repair or replace the product or any of its component parts, at the Company’s discretion if it deems that the product or part it is defective or does not meet the rated performance due to a manufacturing or material default.

If replacement is to be issued, this will only be extended to the first 180 days starting from the date of purchase. Warranty repairs will apply after such date up to the warranty’s date of conclusion.

TERMS AND CONDITIONS

The conditions of this warranty are the following:

• The product must be installed in accordance with the use described in the enclosed manuals.
• The product must be connected to a single phase 120V, 60Hz electrical outlet and was not subject to any negligence, accident or exposure to harmful products or substances.
• The alleged defect or fault must be reported either to the installer or to the Company during the warranty coverage period.
• The warranty coverage period is valid for 2 years.

PART OR PRODUCT EXCHANGE

The product may be exchange without cost only at the sales outlet where it was purchased subject to the following conditions:

• The customer must have an “authorized return number” from the manufacturer in order to validate exchange.
• The customer must produce proof of purchase to validate exchange.

LIMITATIONS

1. Fill and flush mechanism are guaranteed as per OEM warranty only.
2. Vitreous china are guaranteed only for a factory defect.
3. Cost of disconnection and reconnection (ie labor charges) are not covered by the warranty and are end-users responsibility.
4. Cost of mail or freight when a part or parts of the system have to be repaired at the company are not covered by this warranty.
5. In no event shall the company be reliable for any special, incidental or consequential damage, loss, or injury of whatsoever nature or kind arising from or in connection with the product or any component thereof.
6. The guarantee is transferable only when the product remains at the same premises as where it was installed initially.

Except as set forth in this Limited Warranty, the company disclaims all other warranties, express or implied, with respect to the product or any component thereof including, but not limited to, all implied warranties for merchantability and fitness for a particular purpose.

For Service and other inquiries, please call the address listed below.

United States
SFA-SANIFLO INC.
105 Newfield Avenue, Suite A
Edison, NJ 08837

Customer toll free: 800-571-8191
Telephone: 732-225-6070
Telefax: 732-225-6072
Email: sales@saniflo.com
Web Site: www.saniflo.com
DISCONNECT THE ELECTRICAL POWER SUPPLY BEFORE ANY SERVICE REMOVING THE TOILET FROM THE MACERATOR

1. Disconnect the electrical power supply.
2. Turn off the water feed to the toilet tank. Bail out as much water as possible from the tank.
3. Close or drain down any vertical discharge pipework and remove discharge hose from elbow.
4. Disconnect any inlet pipes from the unit.
5. Loosen the metal gear clamp securing the flexible connector and pull off the toilet spigot, now slide the unit out from behind the WC.

HINGED SIDE INLET VALVES CLOGGED

Remove the sleeves and use a screwdriver to free or clean the rubber flaps if necessary.

WARRANTY

We offer a two-year warranty on our macerators. Warranty issues will be handled by the Technical Department and will be subject to correct installation and usage. If a replacement is to be issued, this will only be extended to the first 180 days starting from the date of purchase and will need to be approved by one of our company's representative. Warranty repairs will apply after such date up to the warranty's date of conclusion. Plumber's invoices for any type of repair, disconnection and reconnection are not covered by the warranty and are end user's responsibility.