

Separett[®]
Framtidens toaletter



FLAME 8000

Användarmanual Ohjekirja User manual



Congratulations to your new FLAME 8000



For 40 years we at Separett have been developing qualitative and functional toilet solutions that are not dependent upon access to water and sewage. Today our toilets simplify everyday life and leisure for hundreds of thousands of people worldwide.

The most important thing for us within the Separett family is for the toilet solution you have chosen to achieve high quality, possess high operational dependability and require minimal maintenance. For you to enjoy an ownership free from worry.

With Flame 8000 you have chosen a toilet solution that is both easy to use and to maintain. In this user manual you will find all the information you need in order to use it correctly!

Welcome to the Separett family!

Separett[®]
Waterless toilets

BEAR IN MIND!



Flame 8000 must be installed in the correct manner, both in order to achieve good incineration and function as well as to ensure that the warranty will apply. There are rules governing installation for both indoors and outdoors. Follow the installation manual carefully.



Flame 8000 needs to be serviced regularly in order for it to work correctly. Information about when the servicing should take place is shown on the toilets display. Contact the nearest service provider.



Flame 8000 must be used correctly in order for it to function without any worries. Only bags of the type supplied with the toilet shall be used and only urine, solid waste and toilet-paper may be incinerated. Make sure that you use the correct incineration program in order to save energy. Follow the instructions carefully.

CHANGE LANGUAGE

How to change language in the display:

1. Press the middle button for 5 seconds. You will hear a beep and enter the user menu.
2. Use the left and right buttons to browse until you see SPRAK.
3. Press the middle button.
4. Use the left and right buttons until you find the language of your choice.
ENGELSKA = ENGLISH
FRANSKA = FRENCH
NORSKA = NORWEGIAN
FINSKA = FINNISH
5. Confirm the change of language by pressing the middle button until you hear a beep.
6. To exit the menu press the right button until END MENU is shown. Press the middle button to confirm.

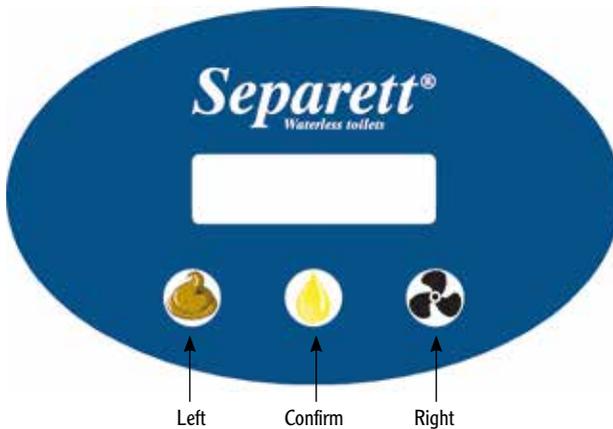


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1. FLAME 8000

THIS IS HOW AN INCINERATING TOILET WORKS

Flame 8000 is an incinerating toilet which, at a temperature of 550 degrees, incinerates toilet waste. It works as an oven which is heated by means of a heating element. Liquids are vaporised and the solid waste is incinerated. The time to heat up depends on how much waste and liquid there is in the bag that is to be incinerated. Note that only urine, solid waste and toilet paper may be incinerated in an incinerating toilet.

In order to use Flame 8000 the bag is placed on the flap trap beneath the toilet lid. When the visit is finished the toilet is flushed by pressing the flush handle down. The incineration program for either urine or solid waste is then selected. In order for the toilet to operate optimally it is important to use the correct program after each toilet visit. When the incineration program is running it is still possible to use the toilet.

An incineration cycle consists of three parts:

HEATING UP

The element goes from room temperature up to 550 degrees. During this phase all liquids are vaporised. The heating up phase takes from 30 to 60 minutes. The time depends on the temperature in the room and how much liquid there is in the ash pan.

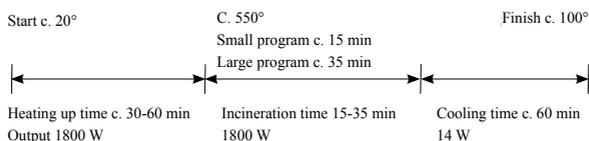
INCINERATION

The small incineration program takes 15 minutes and the big one is 35 minutes long. During the incineration the temperature is maintained at around 550 degrees.

COOLING DOWN

When the incineration is finished the toilet goes into the cooling down phase. The element is shut off and only the fan is working. The fan cools the toilet down until it is 100 degrees in the combustion chamber.

Combustion diagram



THE FAN IN THE TOILET HAS SEVERAL FUNCTIONS

- When no program is running the fan operates at about eight percent of full power. Moisture is ventilated out of the toilet and draught from the ventilation pipe is prevented.
- When an incineration program is under way the fan draws air through the combustion chamber. The combustion is then oxygenated and smoke and hot air is carried out from the toilet through the ventilation pipe.
- The fan program: if you press the fan button the fan will operate at 65 percent of full power for two hours and then work as a bathroom fan in order to ventilate dampness out of the room.

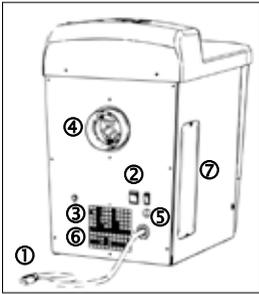
When it is time to empty the ash pan, clean the ash pan and smoke pipe or when the toilet needs to be serviced, this information is automatically shown on the display.

IMPORTANT! As long as the toilet is attached to the ventilation pipe the power should be turned on. When the fan spins it prevents moist air from getting into the toilet. If the power is turned off the toilet should be pulled out from the pipe and the pipe plugged to prevent moist air from getting in to the room. (See p. 16, “Long-term storage”)

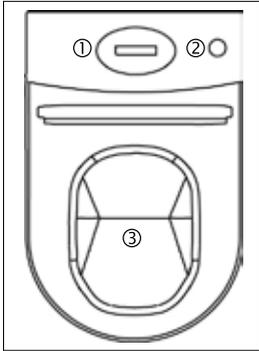
FLAME 8000 CONSISTS OF THE FOLLOWING PARTS

On the outside you will find the flush handle and the toilets display where you will see all the information you need for use and care. On the front you find the ash pan behind a front plate. It is removed completely when it is time to empty the ash.

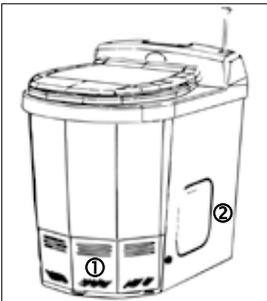
The flap trap where the bag is positioned before the toilet visit is to be found inside. When the flush handle is pressed down the lid opens and the bag falls down into the ash pan. You then start an incineration program.



1. Power cord
2. Main switch for the toilet and switch for the battery
3. Re-setting of the overheating protection
4. Ventilation spigot
5. Fuse for battery
6. Air intake
7. Lid for circuit board



1. Display
2. Flush handle
3. Flap trap for bags



1. Front plate that is removed in order to empty the ash pan
2. Service hatch

TECHNICAL INFORMATION

Voltage/total output: 240 V, 1800 W

Fuses: 10 A

Energy consumption: 0.4-1.7 kW per visit

Electrical connection: 1.9 m cord with ground

Weight: 39 kg

MATERIAL

Upper part: Polystyrene

Sweep: White enamelled galvanised plate

Inner part: Stainless steel

Seat: High polish propylene

Ash box: Acid-resistant steel

All materials are recyclable.

OTHER

Gold-plated circuit board against damp

Over load protection on circuit board

Newly developed catalyser for reduced smell.

Conical element and combustion chamber for optimal combustion.



2. SAFETY

Flame 8000 is a safe toilet with several independent safety systems that counteract over-heating. If it becomes too hot then the current is turned off automatically. There are four different temperature gauges that monitors the temperature, three fuses that protect against overloading in the electrical circuit and an over-heating protection that responds to the temperature.

FUSES

There are three fuses on the circuit board. One in the black cylinder that leads to the display and transformer and two in their respective metal holders that are for incoming current.

When changing fuses on the circuit board:

1. Turn off both power switches
2. Plug out the power cord.
3. Loosen the screws on the cover with the torx screwdriver you received with the delivery.
4. Use the tool you received with the delivery and loosen the two fuses that are positioned in the metal holders.
5. Use the screwdriver that was supplied in order to undo the black cylinder cover.
6. Check to see which fuse has blown. If the wire inside the fuse is broken the fuse has blown.
7. Change fuse.

The delivery includes fuses for the circuit board:

Power in: 2 x 10 A

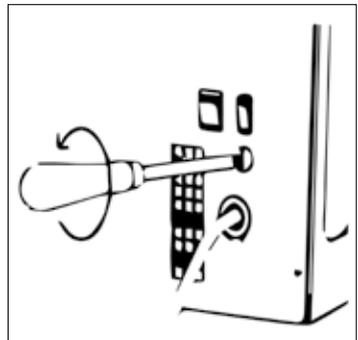
Display and transformer: 125 mA



The fuse for the battery is positioned on the back.

When changing the battery fuse:

1. Turn off both power switches
2. Use the screwdriver supplied in order to undo the fuse holder.
3. Pull the holder out.
4. Change the fuse.



TEMPERATURE SENSORS

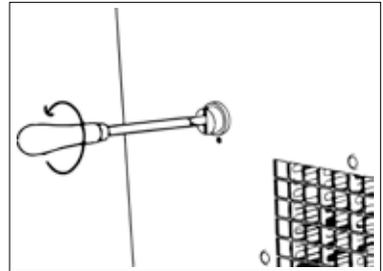
For safety and function there are several different gauges that monitors the temperature.

1. The room temperature is shown on the display when the toilet is on stand-by.
2. The ventilation temperature is measured by the fan and is shown on the display when an incineration program is running.
3. The temperature on the ccircuit board is measured. If it is too high then a fault code is shown on the display.
4. A thermo coupling inside the combustion chamber monitors the heat and regulates it like a thermostat.

OVERHEATING PROTECTION

Inside the toilet there is a resettable overheating protector.

Overheating can occur if, for example, the bag doesn't fall down compeatly and is caught by the cumbustion chamber lid, there is an obstruction in the ventilation pipe, the toilet is incorrectly installed and the resistance in the ventilation pipe is to high or if there is a malfunction in the flushing mechanism.



In order to reset the overheating protection:

1. Unscrew the black plastic cover on the back of the toilet.
2. Press the white button.

OVER-LOAD PROTECTION

Protect against changes in current strength, so-called voltage peaks. Works completely automatically.

BATTERY OPERATION

The battery is a 12 V battery which is charged continuously. The battery becomes operational automatically if the power supply no longer works.

Battery operation ensures that cooling, display and fan operate even in the event of a power failure.

ASH PAN

The bags in which the waste is gathered are incinerated in the ash pan. The bag falls down into the ash pan when the flush handle is pushed down.

LID TO COMBUSTION CHAMBER

When you press the flush handle down the lid to the combustion chamber opens so that the bag can fal down into the ash pan. When the flush handle moves up again the lid is closed and keeps the heat inside the combustion chamber.

3. USE

BEFORE USING

1. Plug in the power cord.
2. Turn both switches on.
3. The display shall show: Ready, Software, Room temperature

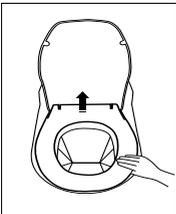


TOILET VISIT

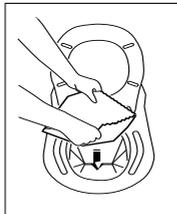
NOTE! The toilet may only be used in a sitting position.

1. Lift up both the lid and ring.
2. Insert the bag.
3. Lower the ring.
4. Get on the toilet SIT DOWN. Do not put any products that do not belong to a toilet visit in the bag.
5. Fold the bag in when you are ready. Let the lid stay open so that you can see that the bag falls down as it should.
6. Push down the flush handle.
7. Select incineration program. Either the small program for urine only or the big program for both urine and solid waste. A beep is heard when the program starts.

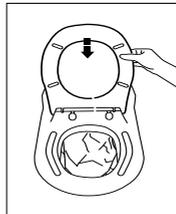
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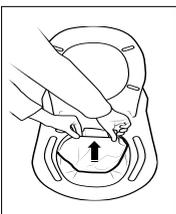
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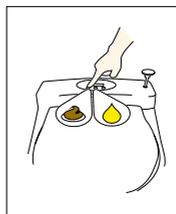
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EMPTYING OF ASH PAN

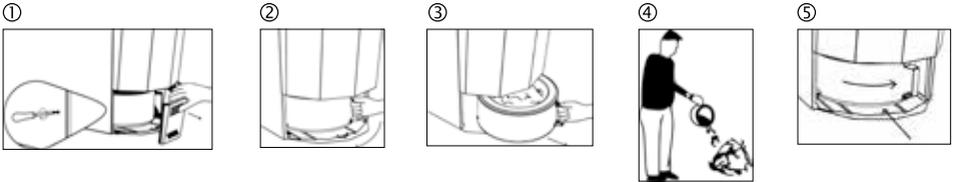
When the ash pan is full, after c. 50 toilet visits, the message ASH PAN EMPTIED? is shown on the display. Press NO (right button) in order to continue with the incineration program.

When the incineration is finished and the toilet has cooled down, empty the ash.

The next time an incineration program is started you will see the same message again and then you press YES (left button) if you have emptied the ash.

In order to empty the ash pan, do the following:

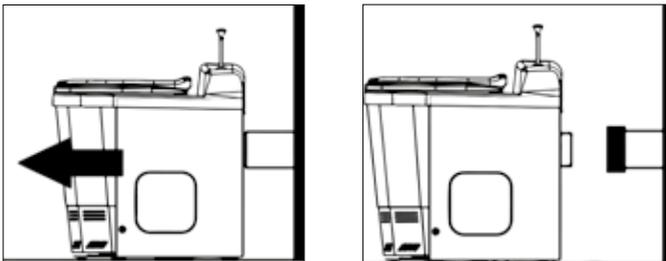
1. Open and remove the front plate using the screwdriver that was supplied with the delivery.
2. Turn the handle to the middle.
3. Pull out the ash pan.
4. Empty into the dust bin or the flower bed. The ash is completely free from bacteria.
5. Push the ash pan back in and turn the handle to the right until it stops.
6. Replace the front plate.



LONG-TERM STORAGE

If you are going to be away for a long time or you close your holiday home down for the winter, you should consider the following:

1. Unplug the power cord.
2. Turn off both the power switches (otherwise there is a risk of the battery discharging).
3. Pull the toilet out a little from the ventilation pipe.
4. Plug the ventilation pipe. The toilet is now protected from moisture and the cold air is not let into the room.



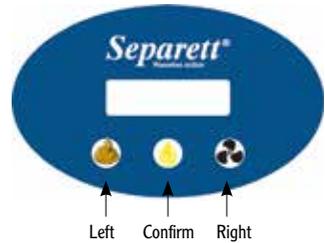
DURING THUNDERSTORMS

As with all electronics the incineration toilet is sensitive to thunderstorms. Preferably turn off both switches and unplug the power cord if there is a risk of lightning strike.

MENU ON THE DISPLAY

On the toilets display you will normally see which stage the incineration program is at. The messages shown on the display are:

- Ready: The toilet is stand by and not running.
- Cooling: Cooling down after incineration is finished.
- Fan: The fan program is running.
- Small flush: Small incineration ongoing.
- Big flush: Big incineration ongoing.



In the display both language and incineration time can be altered. You can also see how many flushes there are left before the ash pan has to be emptied and how many hours are left before it is time for a service. The three buttons are to be used for maneuver in the menu.

CHANGE LANGUAGE

How to change language in the display:

1. Press the middle button for 5 seconds. You will hear a beep and enter the user menu.
2. Use the left and right buttons to browse until you see SPRAK.
3. Press the middle button.
4. Use the left and right buttons until you find the language of your choice.
5. Confirm the change of language by pressing the middle button until you hear a beep.
6. To exit the menu press the right button until END MENU is shown. Press the middle button to confirm.

CHANGE INCINERATION TIME

It is easy to extend the incineration program by up to 15 minutes.

Do the following:

1. Keep the middle button pressed for 5 seconds. You will hear a beep and enter the user menu..
2. Browse to ADJUST TIME. Keep the middle button pressed for 5 seconds. You will then access the change position.
3. Press the right button in order to choose how many minutes you want to extend the incineration time with.
4. Save the change by pressing the middle button for 5 seconds. You will hear a beep and the text SAVE is shown briefly on the display.
5. In order to go back without saving press the middle button briefly.
6. To close the menu, browse to END MENU. Confirm by pressing the middle button.

SEE NUMBER OF FLUSHES THAT REMAIN BEFORE THE ASH BOX HAS TO BE EMPTIED

The ash box must be emptied after about 50 flushes. When it is time you will see the message ASH PAN CLEAN? on the display (see Emptying of ash pan page 16). If, before this, you want to know how many flushes you have left, then do the following:

1. Press the middle button for 5 seconds. You will hear a beep and enter the user menu.
2. Browse to FLUSH. S+L.
3. Row two shows the number of visits since the previous emptying.
4. Row three shows the number of remaining visits before emptying.

SEE REMAINING TIME UNTIL SERVICE

Service must be undertaken regularly. How often will depend, for example, on how much you use the toilet. After the element has been in operation for 1000 hours the service message TIME TO SERVICE is shown on the display. If you use your incineration toilet rather less frequently then we recommend a service every second year even if you have not come up as far as 1000 hours. If, before this, you want to know how many hours the toilet can be used before it is time for a service, then do the following:

1. Keep the middle button pressed for 5 seconds. You will hear a beep and enter the service menu.
2. Browse to TIME REMAINING with the right or left button.
3. It will then show how many hours there are left before the service message will come up.

4. CLEANING AND MAINTENANCE

GENERAL CLEANING

Wipe down the toilet both outside and inside with a slightly damp or well wrung cloth with a little cleaning liquid. Do not rinse the toilet with water either outside or inside. The combustion chamber and circuit board may be damaged.

CLEANING THE ASH PAN

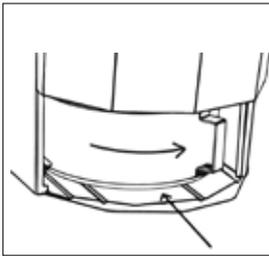
When the ash box has been emptied twice the message CLEAN ASH PAN WITH 1L WATER + BIG PROGRAM will be displayed. Confirm by pressing the middle button. Cleaning is undertaken in order to remove the crystals that are formed when urine has been evaporated by the incineration. Do the following:

1. Take the ash pan out and empty it. See Emptying of ash pan page 16.
2. Pour 1 litre water into the ash pan.
3. Replace the ash pan in the toilet.
4. Run the big program.

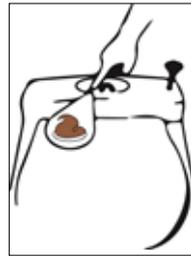
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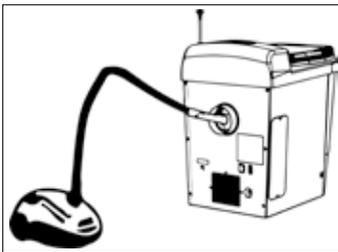
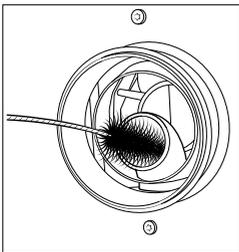


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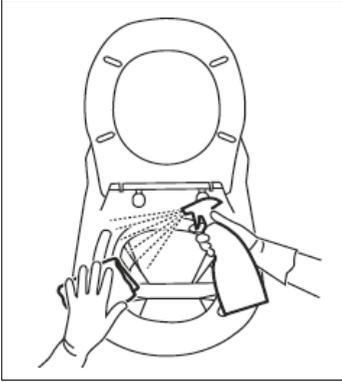
CLEANING THE SMOKE PIPE

The smoke pipe shall be cleaned after 200 flushes. When the time comes the message CLEAN SMOKE PIPE AND VACUUM CLEAN will be displayed. Confirm by pressing the middle button. The smoke pipe is easy to clean with the steel brush supplied with the delivery. To ensure that you brush sufficiently in the pipe you should press and turn the brush into the pipe until the handle is almost at its opening. Vacuum any soot or dust from the pipe.



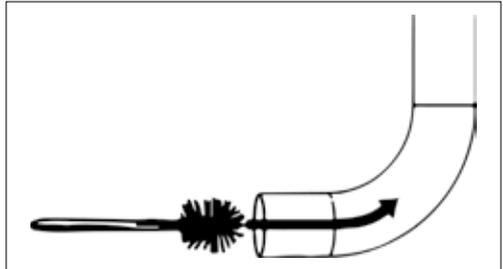
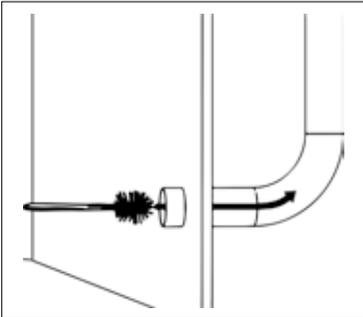
CLEANING THE TOILET BOWL

Clean the toilet bowl as required. Use a slightly damp cloth and preferably treat it afterwards with stainless steel cleaner. It creates a slippery surface that is dirt repellent.



CLEANING VENTILATION PIPES

Cleaning the ventilation pipes is easily done with an ordinary toilet brush once a year. Brush as far as you can reach.



5. TROUBLESHOOTING

FAULT CODES AND HOW TO CORRECT

When any fault occurs in the toilet you will receive a message on the display.

The following fault codes can come up and this is what you then do to correct them:

FAN STOPPED: The fan does not start.

1. Check to see that nothing has got caught up in the fan.
2. Check through the spigot on the back of the toilet that the fan blades rotate freely.

HEAT TIME UP: The incineration has been going for more than six hours since the last program selection. Restart the toilet by turning off both power switches and then turning them on again.

NO POWER: No mains power.

1. Check that the power cord is in the wall socket and that the switches have been turned on.
2. Check that there is power at the wall socket. Check fuses and residual-current circuit breaker in the fuse box of the house.
3. Check all three fuses on the circuit board. The best troubleshooting is to measure incoming current and see how far it goes.
4. Check that the switches and cords are undamaged and working.

NO POWER/BATT: No power to the battery.

1. Check the battery's fuse (2 A), which is placed beneath the switch on the back.
2. Check that the cords are firmly attached to the battery and that the battery terminals have not oxidised.

COOL LOO – CHECK FLUSH MECHANISM: The ventilation temperature is too high.

1. Let the fan cool the toilet down
2. Check that the ash pan is in the correct position and that the handle has been turned to the right.
3. Check that the installation has been carried out correctly and that the ventilation is working.
4. Check that the lid of the combustion chamber opens and closes as it should when the flush handle is pressed down.

HEAT RESTART: The temperature in the combustion chamber is not increasing.

1. Check whether the overheating protection has been triggered and, if so, reset it.
2. Check that the ash pan is in the correct position and that the handle has been turned to the right.
3. Restart the toilet by turning both switches off then turning them on again.

TIMETO SERVICE: The toilet must be serviced.

Contact the nearest service provider.

RECURRING FAULTS

In the event of recurring faults, or if you are unable to correct the fault yourself, contact the nearest service provider.



6. SERVICE AND GUARANTEE

How often you need to service your toilet depends on how much you use it. After the element has been working for 1000 hours the service message TIME TO SERVICE shows on the display. If you use your incineration toilet less frequently then we recommend that you undertake a service every second year even if you have not reached 1000 hours.

SERVICE BOOK

The delivery also includes a separate Service Book. Always have the service book with you when you take your toilet in for a service.

WARRANTY

Separett Flame is sold with a send-in guarantee. This means that you either take your toilet in to a service workshop or you send it to us for service.

INSTALLATION

For the warranty to be valid the toilet must have been correctly installed.

GUARANTEE SERVICE

When using the guarantee service pictures of the receipt and installation must be attached when you contact the service location.

