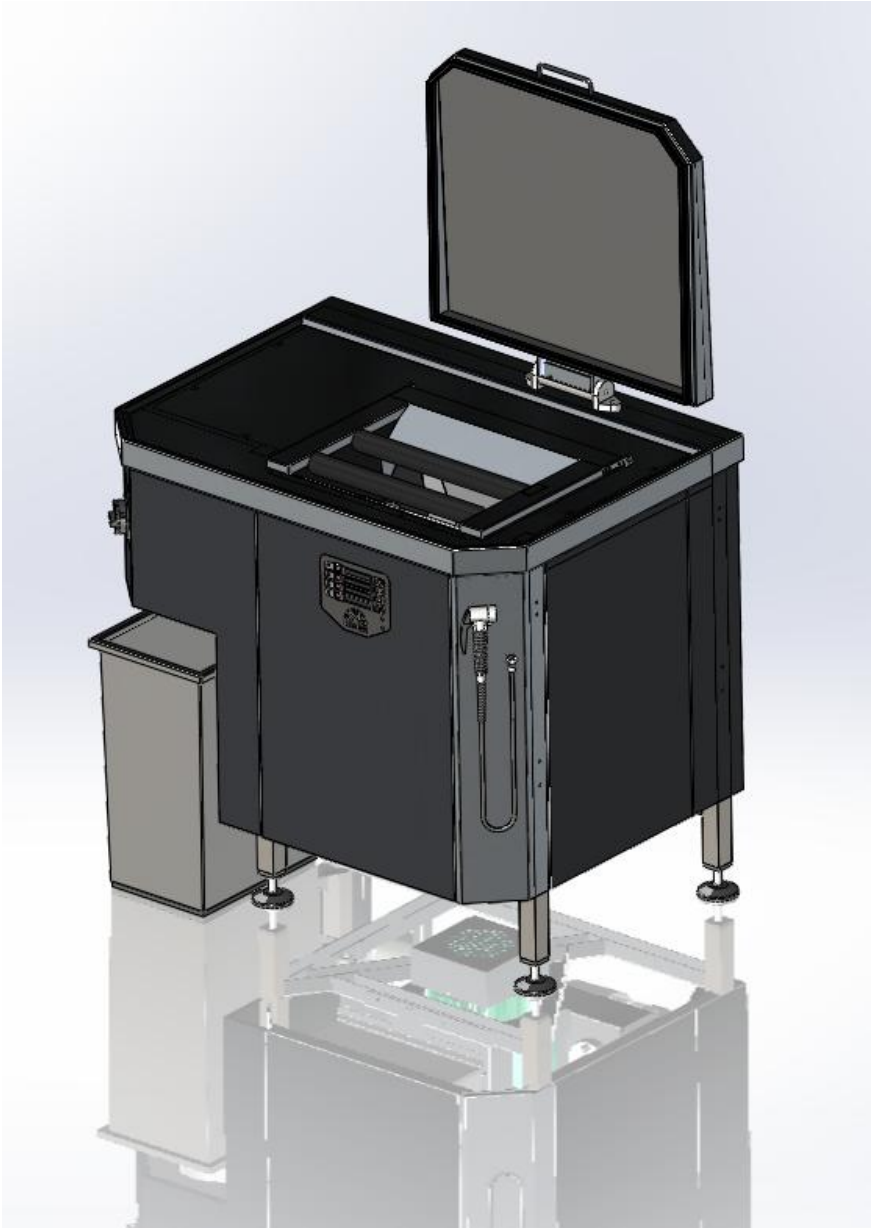
Operating- and maintenance instructions

'Original instructions'

Rendisk Solus



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Chapter 1 Introduction

This chapter provides basic information on the Rendisk Solus unit and the corresponding operating and maintenance instructions.

1.1 Warning

Read these instructions carefully before you start the Solus. Only then is maximum safety ensured. Operation of and maintenance on the Solus may only be carried out by qualified and authorized personal.

1.2 Objective and target group of this manual

These Operating and maintenance instructions are intended to provide operators and maintenance engineers with information about using and maintaining the machine.

Where Chapter 1 (Introduction) to Chapter 4 is important for operators, all chapters are relevant to maintenance engineers.

1.3 Related documents

Next to above operation and maintenance instructions the following documents are part of the overall documentation:

- Electro-technical drawings (in electrical cabinet).
- CE-2A certification (example in Appendix II).

1.4 Manufacturer

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1.5 Copyright

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1.6 Liability

Rendisk accepts no liability for unsafe situations, accidents and/or damage resulting from any of the following points:

- Ignoring warnings or instructions stated on the machine or in these Operating and maintenance instructions.
- Using the machine for other applications or under other conditions than stated in these Operating and maintenance instructions.
- Making changes to the machine of any kind. This also includes using other replacement parts and changing the machine's internal control program.
- Insufficient maintenance.

Rendisk cannot be held liable for consequential damage or loss such as damage to products, interruptions of the business operations, and any loss of production etc. following machine malfunctions.

Warning: Any modifications to the unit will cause the invalidation of the CE certification. Hazardous situations may arise.

1.7 Intended use

The Solus is used for organic kitchen waste disposal. Paper, glass, plastics and metal cannot be processed in the system. Also see **Error! Reference source not found.**.

1.8 Machine identification

A machine identification plate has been applied (at right side at lower right corner).



Figure 1 Machine identification plate (example)

1.9 Warranty

For the warranty regulations please refer to the customer contract.

Chapter 2 Safety rules

This chapter provides information on general safety rules. Read this chapter carefully before starting up the unit or before you carry out maintenance work.

2.1 Safety and precaution symbols

This chapter provides information on general safety rules. Read this chapter carefully before starting up the unit or before you carry out maintenance work.

Tip:
A suggestion to facilitate an easier or more suitable execution of a task.

Watch out:
Points to possible problems.

Caution:
Damage to the unit or the product may result if the instructions are not carefully executed.

Warning:
Danger of serious injury of the operator or damage to the unit if the instructions are not carefully executed.

Warning:
Danger due electrical shock

Warning:
Danger for pinch risk

No drinking water

2.2 Operators

The Rendisk Solus may only be operated by qualified and trained personnel.

Warning:
The safety rules listed in this document must be obeyed. If you violate them unacceptable risks may result.

The operators must be aware of the relevant chapters of the operating and maintenance instructions (Chapter 1 to Chapter 4).

2.3 Maintenance engineer

All maintenance and modification activities on the unit may only be carried out by personnel instructed and trained accordingly. Please contact Rendisk for more information.

Warning:
The safety rules listed in this document must be obeyed. If you violate them unacceptable risks may result.

The maintenance engineer must be fully aware of the complete contents of the operating and maintenance instructions.

Warning:
Any modifications to the unit will cause the invalidation of the CE certification. Hazardous situations may arise.

2.4 Safety instructions

The machine meets the basic health and safety requirements of the relevant directives of the European Union. Improper or careless use can lead to dangerous situations.

Be aware of dangerous situations!

Please observe the following general safety instructions:

- Connect the machine in accordance with the basic health and safety requirements of the relevant European directives.
- Exercise caution with loose hair and clothing.
- Keep your hands away from dangerous zones.
- Never power up the machine if people are in contact with it.
- Electrical isolate the machine before carrying out maintenance work on the machine.
- Faulty safety equipment must be replaced before the machine is used in production.
- The machine must be maintained in accordance with the instructions found in chapter 6
- Changes to the machine must not be implemented without the prior consent of the manufacturer.
- The safety equipment of the machine must be checked weekly for correct operation.
- Do not remove or cover any labels on the machine
- The unit is suitable for indoor use only.

2.5 Positioning of the units

Position the installation in such a way that the pathway for the operator and the service engineer is sufficiently wide. These pathways must not be obstructed by equipment which can cause dangerous situations for the personnel; this is important with respect to escape routes. For service propose it is necessary to have enough space to access the right side of the machine to remove the side panel and repair/replace components.

2.6 Safety precautions

The following primary precautions features are integrated:

- All units have a main switch to turn off all energy to the unit to stop the process at once.
- The main switch on each unit can be locked out in case of maintenance to prevent uncontrolled start of the units.
- The Solus is equipped with a safety grid and lid which prevents access to the rotating parts of the food waste grinder.
- A safety contact prevents the Solus to start in case the grid has been removed.
- The rotary blade stops automatically if the safety grid is removed during operation.

- The unit is delivered with a CE-2A certificate.
- There are rotating parts at the outlet of the dewater unit. To prevent access to these rotating parts the collection bin must be in place. Therefore the unit has a bin detection. If the bin is not in place the unit will not start. If the bin is removed during operating, the machine will stop instantly. There is sign indicating the risk.

2.7 Hygiene

Good hygiene is very important. Please adhere to the following rules as guideline:

- Clean the waste station at least once a day.
- Use cleaning and disinfecting agents to ensure an optimum result (cleaning agent should not affect Stainless steel 304, NBR, PVC or EPDM components of the drop unit).

Cleaning procedures of the Solus should be integrated in the existing hygiene plan of the site.
The Solus has a cleaning cycle option to clean internal wet parts and piping. We recommend using this option at least once a day to prevent buildup of fogs and oils. You can contact Rendisk for additional solutions to keep the machine in a proper condition.

! ***The operator always remains responsible for good hygiene.***

2.8 Noise

The A-weighted equivalent continuous noise level on the workstations is below 80 dB (A) during normal operation. Higher noise levels may occur at the installation site due to local conditions. In this case, the employer is obligated to provide operating personnel with appropriate protective equipment.

2.9 Water supply

Check local requirements if the Solus is connected to a drinking water network. If the Solus is connected to a drinking water network in Europe there needs to be back flow preventer installed which meets EN1717 class 5.



The water which comes from the cleaning shower is not suitable for drinking.

2.10 Wastewater

The system dewaters the food waste. The waste water can be drained to the sewer. Check local regulations for additional grease trap or other requirements.

2.11 Personal protective equipment

For normal operation (waste station) we advise the operator to wear following personal protection:

- Hand protection for hygiene (one way gloves)
- Protective clothing against water
- Safety shoes. Be aware of slippery floor.
- Ear protection in case noise level increases above 80dB.

For cleaning and maintenance:

- Hand protection for hygiene (one way gloves) in case of working at food waste contact parts.
- Protective clothing against water

- Safety shoes. Be aware of slippery floor.

Chapter 3 Machine description

This chapter gives general information about the Solus

3.1 Purpose of the unit

The unit is designed for the dispose of food waste (organic material only) in a hygienic and ergonomic way at the source (restaurant or kitchen) with a minimum of logistics and handling of personnel to the waste storage room.

3.2 Technical specification

The Solus is a standalone unit which reduces the volume of the loaded foodwaste on the spot. The food waste is loaded on the grid where it falls through. Below the grid is a grinder which reduces the size of the particles in the food waste. From here the food waste is transported to a dewater unit where the water is separated from the solid parts. The water is partly recycled and the solids are collected in a bin. The system consist the following parts:

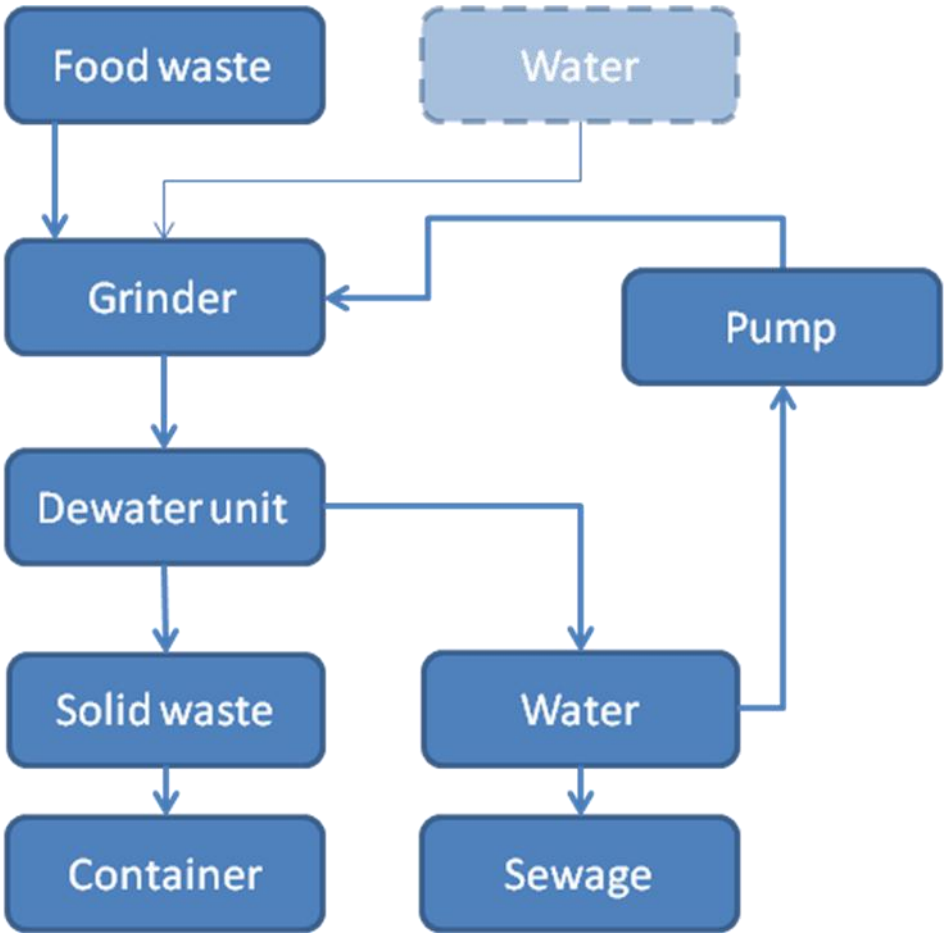


Figure 2 Overview Solus with separate pump and dewater unit

3.3 Solus main components

After opening the cover (2), the waste can be dropped into the waste inlet and safety grid (1). The waste falls on the grinder. After closing the safety grid and cover the cycle can be started by pressing the start button on the control panel (5). Some water will be added to the food waste (3). The food waste will be grinded and transported to the dewater unit. The hand shower can be used for cleaning the station (6).

1. Waste inlet and safety grid
2. Sound isolated lid
3. Water nozzle
4. Main switch (lockable)
5. Control panel
6. Hand shower
7. Solid waste storage bin

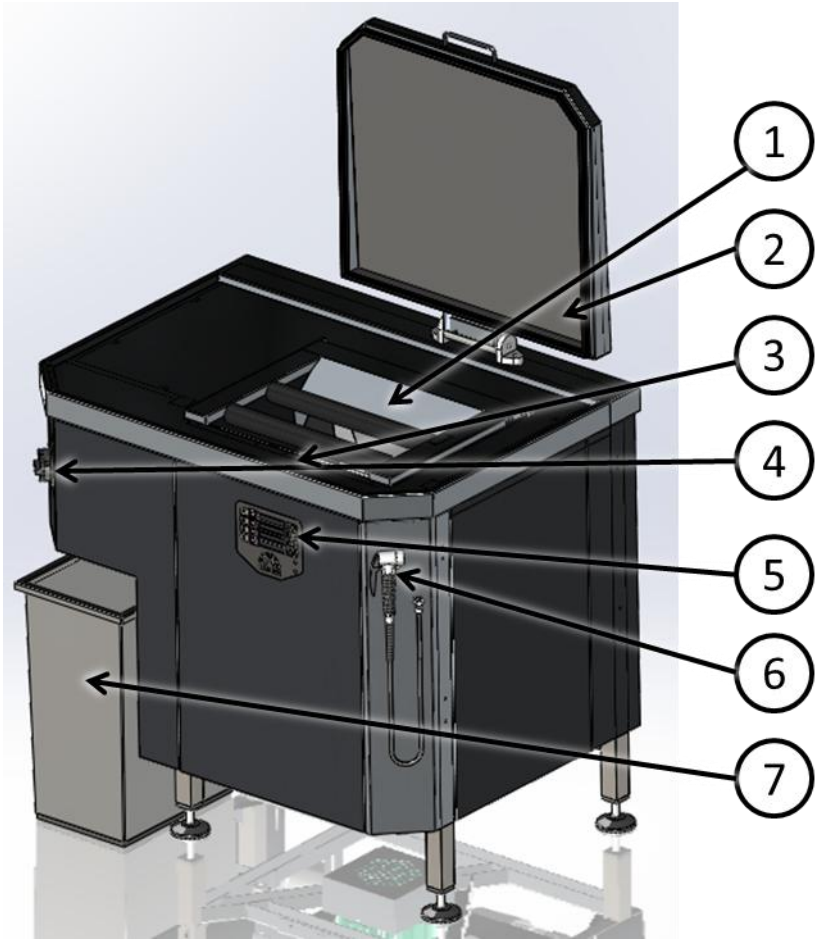


Figure 3 Solus

3.3.1 Food waste intake

The maximum intake for each cycle is 16 liters. If more waste is added the water will float through the overflow opening (1). The food waste inlet is covered with a safety grid (2) which prevents a human arm to reach into the grinder (5). On the safety grid there are hit bars (3) to easy empty a plate (only one hand needed). The grid also functions as a guide for the food waste to slide along the optional magnet (4) which is situated at the far inside of the food waste inlet. This magnet will hold cutlery (metal) to prevent the system against damage. There is a safety sensor (reed contact) (7) which detects if the safety grid is closed before starting a cycle.

1. Overflow
2. Safety grid
3. Hit bar
4. Magnet (optional)
5. Grinder opening
6. Spray nozzle
7. Safety sensor (under table top and in safety grid (or lid))

Warning:
Never reach into a working drop unit, this may result in severe injury!

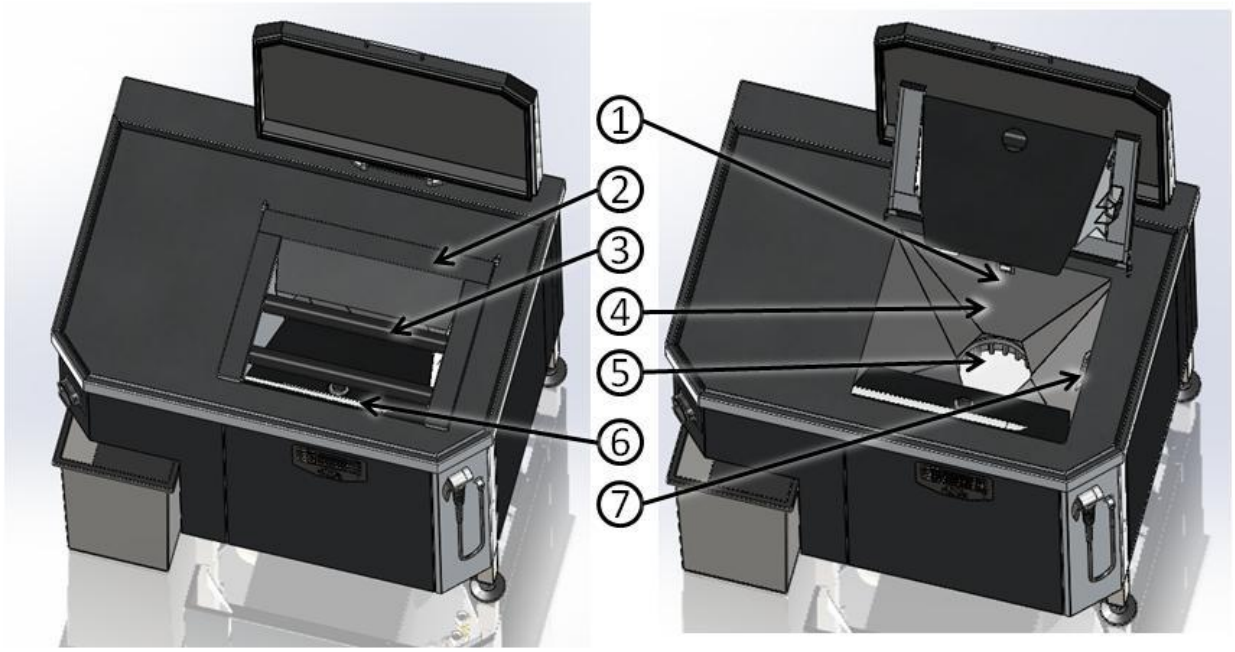


Figure 4 Top side (intake) Solus (Grill in Closed (Left) and Open (right) position)

3.3.2 Main parts front side

For maintenance and failure analyses the main components are described in the figure below:

1. Main switch
2. Dewater unit outlet
3. Solid food waste bin
4. Safety sensor
5. Control panel
6. Hand shower
7. Electrical cabinet
8. Cold and warm water supply

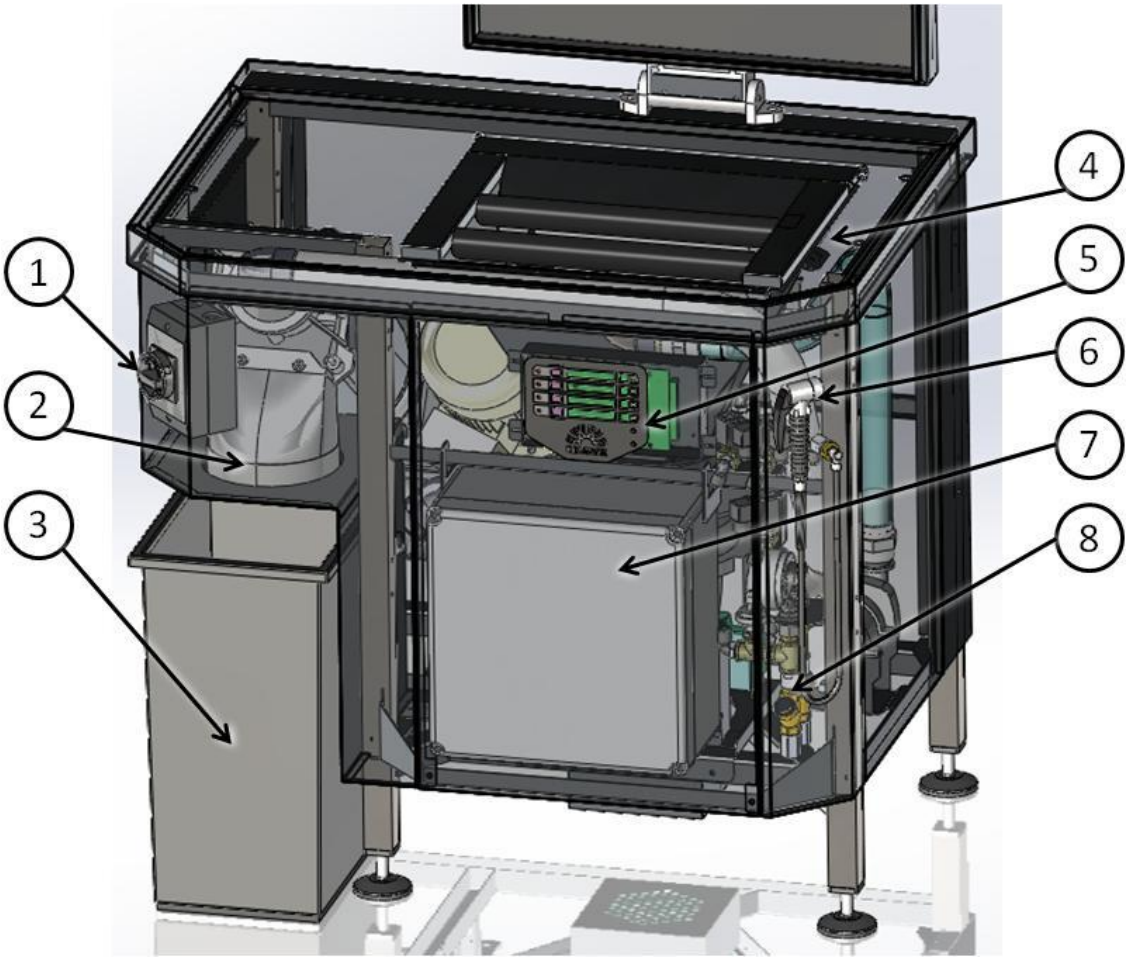


Figure 5 Main components Front side

3.3.3 Main parts back side

For maintenance and failure analyses the main components are described in the figure below:

1. Overflow
2. Magnet (optional)
3. Cold and warm water supply valves
4. Grinder
5. Recycle water pump
6. Dewater unit
7. Recycle water buffer

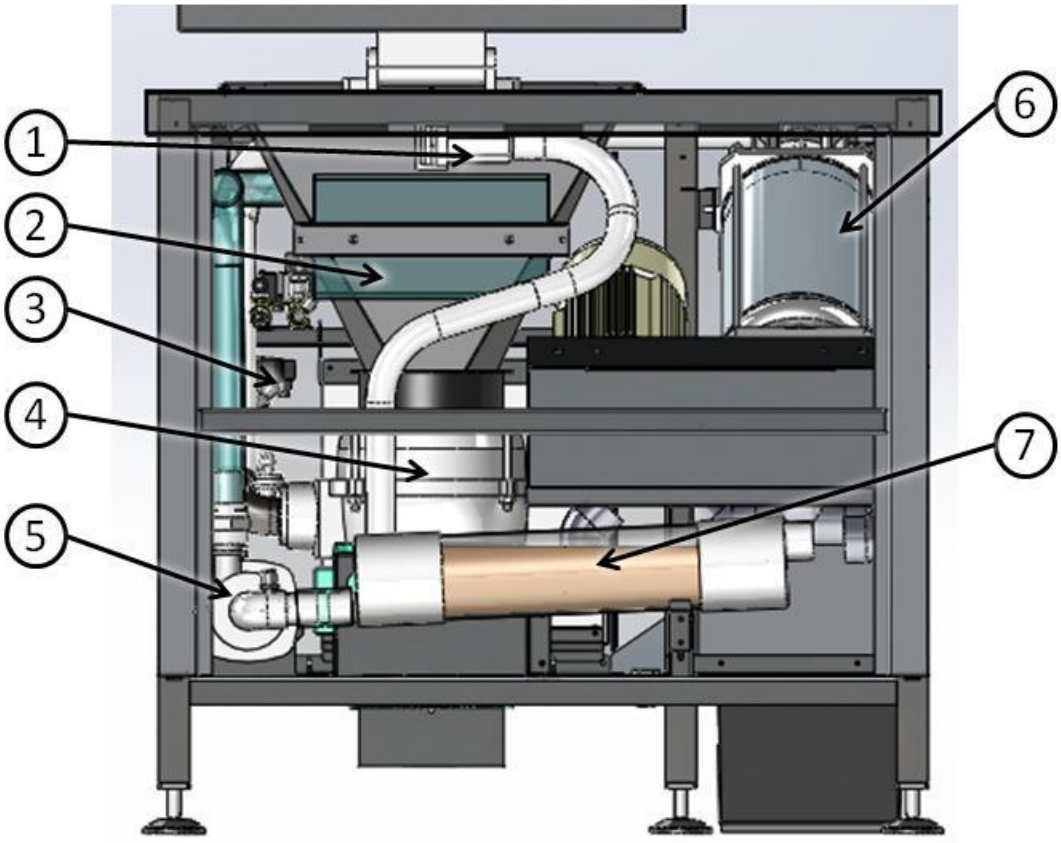


Figure 6 Main components back side

3.3.4 Main parts left side

For maintenance and failure analyses the main components are described in the figure below:

1. Grinded food waste transport pipe
2. Solid food waste outlet
3. Dewater unit
4. Bin detector
5. Water outlet dewater unit
6. Recycle water pipe (to pump)
7. Waste water outlet to sewage

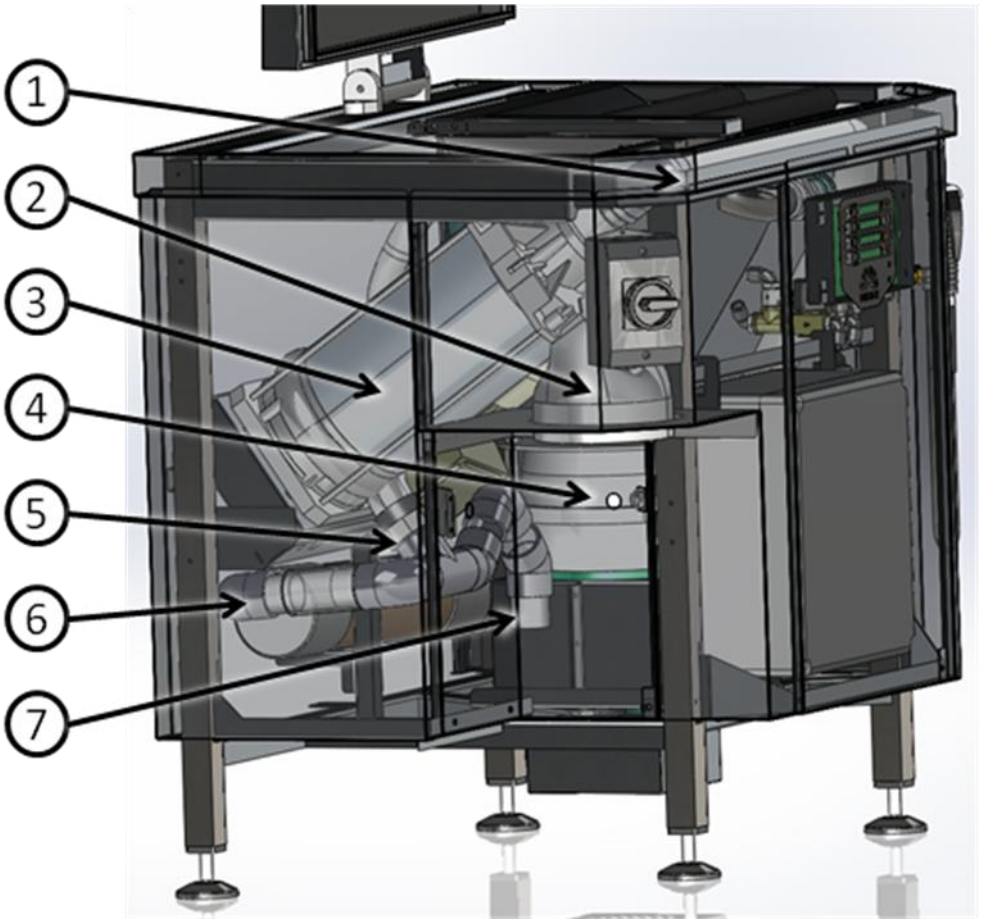


Figure 7 Main parts left side Solus

Chapter 4 Modes of operation

4.1 Prior knowledge

The operator must be aware of the operation of the Solus (described in Chapter 3) and must be able to work safely with the Solus, as described in Chapter 2.

4.2 Precautions

Always check the following points before starting the machine

Before switching on and starting the Solus, the following actions must be carried out:

- Remove all foreign objects from the machine.
- Check that all safety provisions are in place.
- Check that all safety provisions work properly.
- Check that all doors and covers are present and closed and a collection bin is placed.
- Check water supply and pressure.
- Check power connection and PE.
- Check piping for leakage.

4.3 Controls

The Solus has the following controls:

- Main switch.
- Control panel.

4.3.1 Main switch

The unit is equipped with a main switch. In case of maintenance this can be locked. This switch can also be used as emergency stop to stop all running cycles.

4.3.2 Control panel

At the front side of the Solus you can find the control panel. Explanation of the functions according to the control panel. (Figure 9).

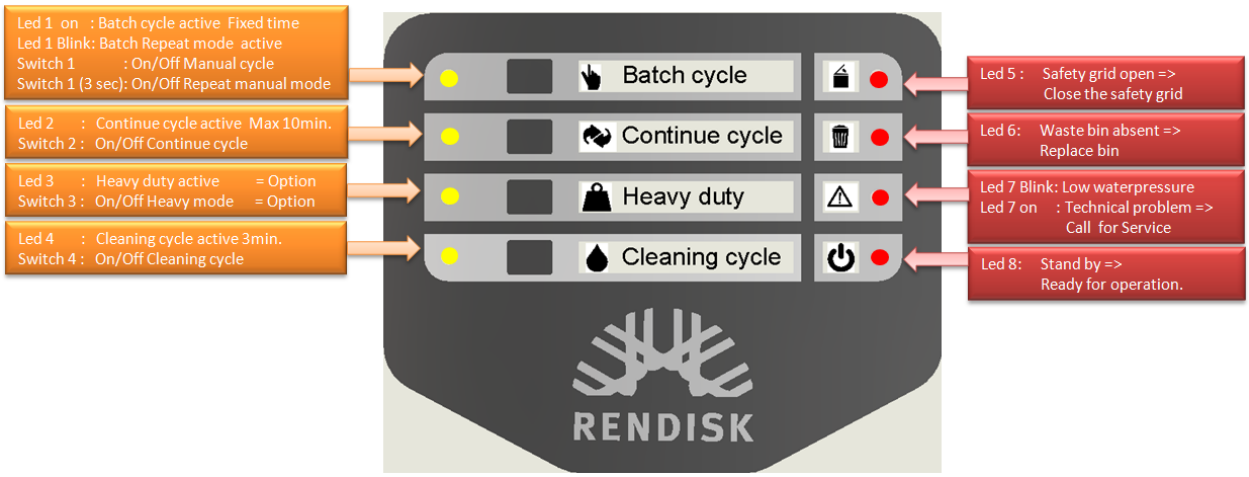


Figure 8 Control panel

4.4 Normal operation mode

4.4.1 Start-up

1. Turn on the main power switch on the Solus. The system automatically starts up in normal operation mode.

The status of the system can be checked on the control panel.

2. Check the collecting bin and replace/empty if necessary.
3. The system is ready for use.

4.4.2 Loading food waste intake

Do not throw cutlery, plastic, glass, rope or any other garbage that is not food waste (organic) into the drop unit. This can damage the system and will reduce the lifetime.

Do not throw coffee grounds or frying fat/oil into the drop unit. This can lead to blockade of the piping or dewater unit.

Do not overload the Solus.

Do not throw food waste with a temperature above 60°C in the drop unit.

Warning: Processing of meet ropes, plastic nets, fish nets or other typical fiber materials are strictly prohibited because it can cause serious damage to the machine.

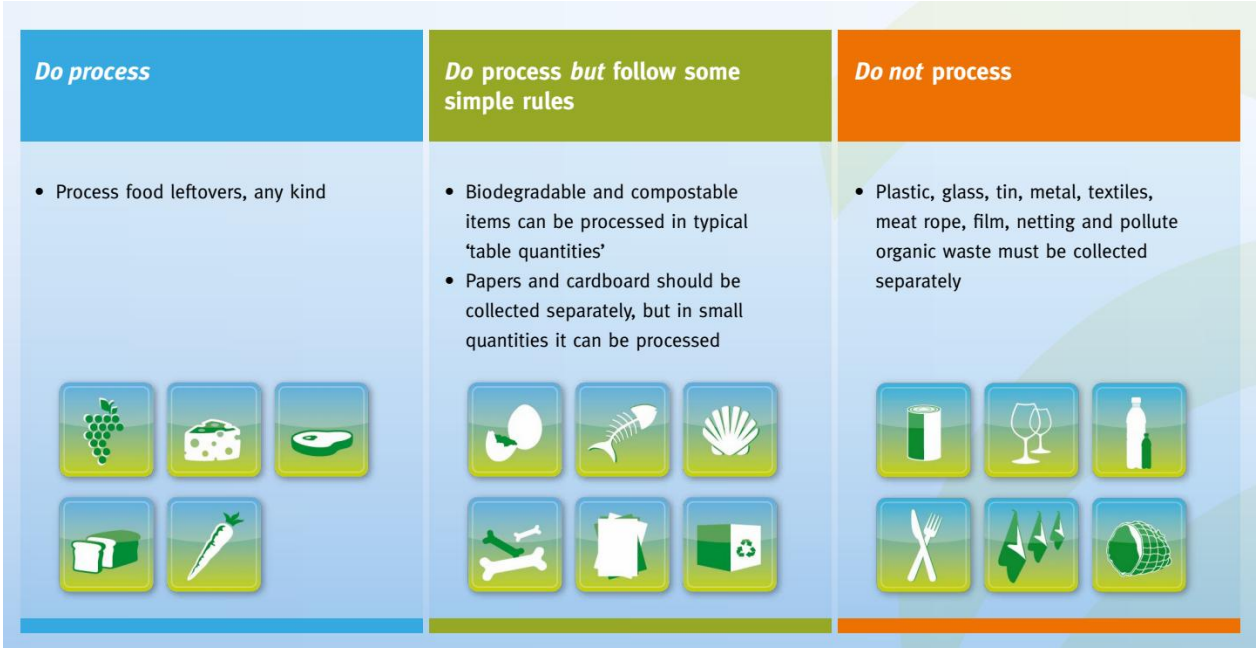


Figure 9 Materials that can (not) be processed with Solus

The following actions have to be carried out to process the food waste correctly:

Remove cutlery, plastic, coffee grounds or any other waste that is not food waste (organic) from the trash. Also see figure 10.

1. Open the lid.
2. Throw the food waste into the chute.

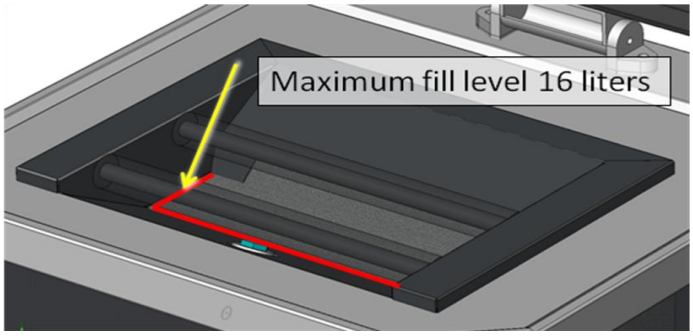


Figure 10 Maximum fill level

3. Close the safety grid (and the cover)
4. Start the cycle.

4.4.3 Batch cycle

If the push button 'Batch cycle' (Switch 1) is pressed once the Solus will start a batch to empty the food waste intake (max 16 liters). The led will indicate that the cycle is running. If the button is pressed once during the batch, the Solus will stop the running cycle instantly and return to standby mode.

4.4.4 Batch repeat cycle

If the push button 'Batch cycle' (Switch 1) is pressed for 3 seconds the Solus will start a repeated batch to empty the food waste intake (max 16 liters). The normal batch cycle will start automatically with a interval time as long if the batch repeat cycle in activated. This time can be adjusted with the potentiometer on the PLC. (Only for technical crew, see appendix V)

Default factory setting: Interval time of 2 minutes

The blinking led will indicate that the cycle is running. If the button is pressed once during the batch, the Solus will stop the running cycle instantly and return to standby mode.

4.4.5 Continuous cycle

If the push button 'Continuous cycle' (Switch 2) is pressed once the Solus will start a batch to empty the food waste intake continuously during a maximum of 10 minutes. The led will indicate that the cycle is running. If the button is pressed once during the batch, the Solus will stop the running cycle instantly and return to standby mode.

4.4.6 Heavy duty mode (Optional)

This option can be switched on and off (if installed) by pressing the button 'Heavy duty' once (Switch 3). This option will change the settings of the Solus to handle more rough and hard organic materials like bones.

4.4.7 Cleaning cycle

If the push button 'Cleaning cycle' (Switch 4) is pressed once the Solus will start a batch to clean the food waste intake and piping during 6 minutes. The led will indicate that the cycle is running. If the button is pressed once during the batch, the Solus will stop the running cycle instantly and return to standby mode.

4.4.8 Programmable cleaning cycle

The 'programmable cleaning cycle' is just a normal cleaning cycle but will be activated depending on the system clock of the Solus Eco. Once set the clock at the start time of your choice the cleaning cycle will be activated every day of the week at the same time.

The cycle can't be set off.

The cycle has to be set once at the time of your choice because the start time of the cleaning cycle from the factory is a random setting.

See Appendix VI how to set the programmable cleaning cycle.

4.4.9 Shut down

Turn off the main switch of the unit (Item 1 Figure 5).

4.4.10 Activate service mode

The following steps need to be done:

1. Disassemble the front panel (loosen two M6 bolts at bottom)

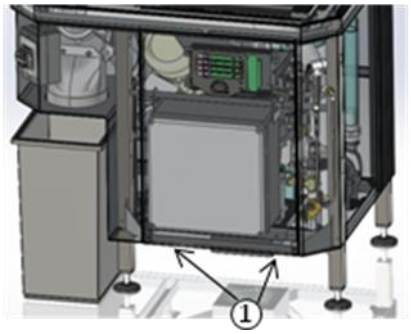


Figure 11 Disassembling front panel

2. Open the electrical cabinet
3. Turn on switch 1

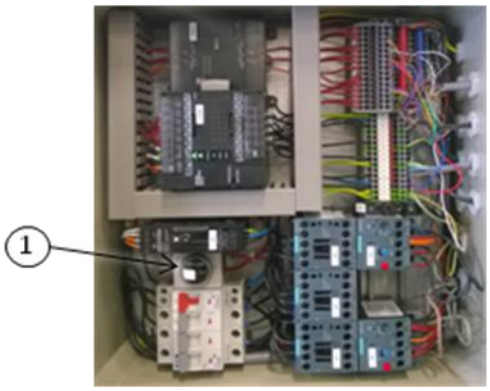


Figure 12 Electrical cabinet

4. Led L5-L8 (Figure 13) will turn on to indicate that Service mode is switched on.
5. Close electrical cabinet.

After this you can activate the following electrical parts with the next buttons (see figure 14):

- Push button S1 → Grinder + recirculation pump on
- Push button S2 → Dewater unit on
- Push button S3 → Flush valve for recirculation pump on
- Push button S4 → Flush valve dewater unit + flush valve waste inlet on

4.4.11 Deactivate service mode

To return to normal mode follow steps from paragraph 0 and turn the switch back (See pos 2 on figure 13). Led L5-L8 will turn off.

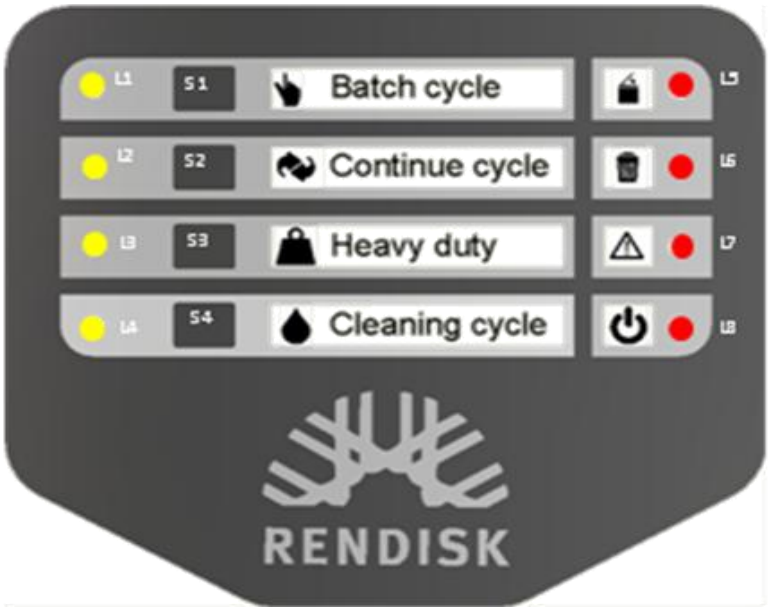


Figure 13 Control panel

4.5 Program mode

Remark: program mode can only activated when service mode is not active.

Following steps need to be followed to activate program mode:

1. Press S4 and S1 (Figure 13) for 15 seconds. Led L1-L8 will light up for 5 seconds.
2. By pressing S1 it is possible to toggle through different settings:
    a. Led L1 on → Adjusting batch cycle time in normal mode
    b. Led L2 on → Adjusting fresh water quantity in normal mode
    c. Led L3 on → Adjusting batch cycle time in Heavy duty mode
    d. Led L4 on → Adjusting fresh water quantity in Heavy duty mode
3. Press S4 for to leave program mode. Led L1-L8 will light up for 5 seconds.

4.5.1 Adjusting batch cycle time in normal mode (Led L1 on)

By pressing S2 it is possible to toggle trough following options:

- Led L5 on → batch cycle time = 50 seconds
- Led L5-L6 on → batch cycle time = 60 seconds (default setting)
- Led L5-L7 on → batch cycle time = 70 seconds
- Led L5-L8 on → batch cycle time = 80 seconds

Settings are automatically saved by leaving program mode or toggling to other settings.

4.5.2 Adjusting fresh water quantity in normal mode (Led L2 on)

By pressing S2 it is possible to toggle trough following options:

- Led L5 on → adding fresh water during 30% of cycle time
- Led L5-L6 on → adding fresh water during 40% of cycle time
- Led L5-L7 on → adding fresh water during 50% of cycle time (default setting)
- Led L5-L8 on → adding fresh water during 60% of cycle time

Settings are automatically saved by leaving program mode or toggling to other settings.

4.5.3 Adjusting batch cycle time in Heavy duty mode (Led L3 on)

By pressing S2 it is possible to toggle trough following options:

- Led L5 on → batch cycle time = 60 seconds
- Led L5-L6 on → batch cycle time = 80 seconds (default setting)
- Led L5-L7 on → batch cycle time = 100 seconds
- Led L5-L8 on → batch cycle time = 120 seconds

Settings are automatically saved by leaving program mode or toggling to other settings.

4.5.4 Adjusting fresh water quantity in Heavy duty mode (Led L4 on)

By pressing S2 it is possible to toggle trough following options:

- Led L5 on → adding fresh water during 50% of cycle time
- Led L5-L6 on → adding fresh water during 60% of cycle time
- Led L5-L7 on → adding fresh water during 70% of cycle time (default setting)
- Led L5-L8 on → adding fresh water during 80% of cycle time

Settings are automatically saved by leaving program mode or toggling to other settings.

4.5.5 Default Factory Settings

Stay in the program mode menu and press button S3 for 5 seconds, when Led 5 is on release the button S3. Within 5 seconds Led's 5, 6, 7 & 8 are on. When the led's go out the default factory settings are set.

Chapter 5 Installation

This chapter provides information about how to install the Solus.

5.1 Safety

Carefully read Chapter 2 before proceeding to install the machine. Only then can optimum safety be ensured.

5.2 Installation requirements

Dimensions	: 950 X 1020 x745 mm (free standing) (h x w x d)
Weight	: 250 kg
Hot water (see also 5.3)	: ½" BSP, pressure 2-4 barg (Check local regulations for backflow prevention).
Cold water (see also 5.3)	: ½" BSP, pressure 2-4 barg (Check local regulations for backflow prevention).
Drain	: diameter 70 mm
Ambient temperature	: between 5° and 35°C
Electrical	: 400V+/- 5%, 3F,N, PE , 4.0 kW, 50Hz

5.3 Water supply

Food waste might be a source of growth of pathogenic bacteria. This can be a risk of contamination of the drinking water. Drinking water may never contact liquids in the Solus. To prevent contamination of the drinking water network it is necessary to install backflow prevention. Check local regulations for the requirements.

5.4 Mechanical installation

- Do not obstruct any escape routes (check with local regulations).
- Keep space in front of every unit for maintenance purposes (minimum 800 x 1020 mm).
- Make sure the machine is accessible at the right side (at least 600mm) for maintenance purposes (can be done by moving Solus forward or to the left if the right side is not accessible).
- Level the units with the adjustable feet.
- Install and check connections according to paragraph 5.2 .

5.5 Electrical installation

Install electrical connections according to paragraph 5.2 . Verify earth wiring.

5.6 First start up test

This test needs to be done before first usage of the machine to prevent damage!

Please follow next steps:

1. Activate Service mode (Figure 13)
2. Check if grinder and recirculation pump are running by pressing S1 (Figure 13) (safety grid must be closed). If it fails check motor protection.
3. Check turning direction of the grinder by pushing S1 (Figure 13) shortly. The turning direction should be clockwise. You can see this when you open the safety grid directly after releasing S1. In case the direction is anti clockwise two phases need to be swapped at main power connection or main power plug.



Figure 14 Clockwise rotating grinder

4. Check if dewater unit is running by pressing S2 (Figure 13). If it fails check motor protection.
5. Flush with all water valves by pushing S3 and S4 (Figure 13). Check if there is no leakage during flushing.
6. De-activate service mode (paragraph 4.4.11).

Chapter 6 Repairs and maintenance

This chapter informs on the required maintenance of the Solus

6.1 General

Maintenance is important for the proper functioning of the Solus. Overdue maintenance may result in dangerous situations.

Overdue maintenance may lead to dangerous situations.

Maintenance activities must only be carried out by staff specially trained for this purpose (maintenance engineer, see paragraph 2.3). Carry out the activities as instructed.

Before carrying out any maintenance activities on the Solus switch off the machine components with the main switch.

Always work hygienic when working on parts which have food waste contact

6.1.1 Maintenance interval on installed parts

Maintenance intervals can be found in Appendix II

6.2 Access front

Only qualified personal (see also 2.3) are allowed to open the Solus. For maintenance or failure of the cutlery magnet, supply water valves, cleaning shower, grinder or safety sensor they can be accessed by following the next steps.

Warning:
Always disconnect all power to prevent electrical shock before opening the unit!

1. Remove front and if necessary side plating by loosing screws at bottom of each plate. You can then move the plate down and outwards to completely remove it.
2. The supply water valves, cleaning shower, and safety sensor can now be accessed.
3. Remove the horizontal front bar by lifting and moving outward. Remove the control cabinet by removing the bolts at the sides of to control cabinet and lifting the cabinet up and outwards.
4. Remove the two horizontal bars where the control cabinet was mounted on by releasing the bolts

For maintenance of the grinder see Appendix III .

To assemble the unit, go through the steps in opposite order.

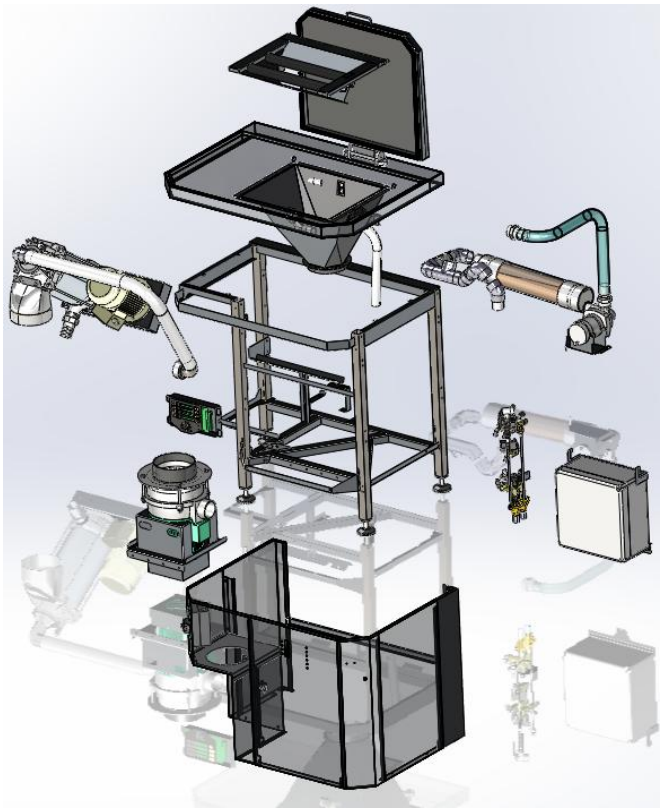


Figure 15 Exploded view Solus

6.3 Machine cleaning precautions for longer stand-still times like holidays

Please fill the hopper according to Figure 16 by using the hand shower with a maximum filling rate of 16 liters.

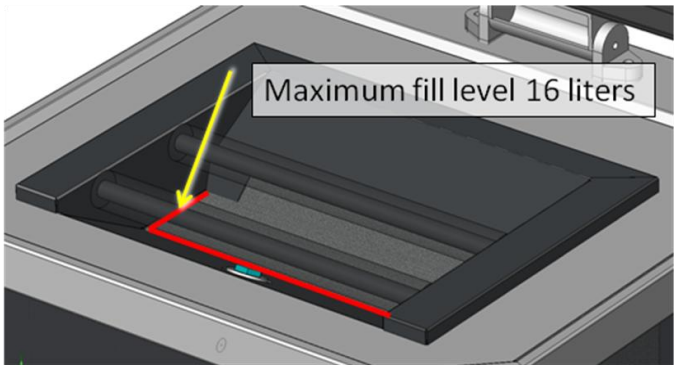


Figure 16 maximum fill level

Add a special cleaning product like the Suma Drain GTS Plus from Johnson Diversy (see appendix VII) or similar to the water according to the dosages at the product specifications. This cleaning product is based on a blend of microbial species which will break down the organic waste leftovers in the machine. It will not affect particles of the machine and it will give a nice clean smell.

Close the lid and run the cleaning cycle. The hot water inside the hopper will clean the entire system like the dewater unit, grinder and recirculation tube.

Run afterwards one normal cleaning cycle without a filled hopper to clean all other wet parts inside the machine. Now the whole machine is cleaned and ready to shut down for a longer time.

! Use cleaning and disinfecting agents to ensure an optimum result (cleaning agent should not affect Stainless steel 304, NBR, PVC or EPDM components of the drop unit).

6.3.1 Cleaning food waste chute

Always isolate / disconnect all power to prevent electrical shock before opening the unit!

Always work hygienic when working on parts which have food waste contact

Make sure the main switch is switched off before removing the bin, follow the next steps (See Figure 5).

Wear hand protection for hygiene (one way gloves)

1. Remove Food waste bin.
2. Empty the bin.
3. Clean the chute.

Clean the bin detection sensor (Item 4 Figure 7) and check functionality (Led 6)

It is not necessary to remove the front plate for cleaning the chute.

6.4 Spare parts list

A list with spare parts can be found in Appendix IV . If you do any questions or need any help you can contact the Rendisk service desk.

Chapter 7 Storage and transport

This chapter provides information on the storage and the transport of the Solus.

7.1 Storage

The unit has to be stored in a clean and dry room with a relative humidity between 10 and 80% at temperatures between -10 and 50 °C.

7.2 Transport

The units can be transported on a pallets or crates. Make sure that all lose items are fixed/fastened.
In the case the units are lifted, be aware that centre of gravity of the unit can be out of geometric middle point.

Chapter 8 Dismantling and scrapping

This chapter gives instruction for the dismantling and scrapping of the installation.

8.1 Environmental protection

Caution!
Water-polluting materials
Such materials can pollute the soil and groundwater and enter the sewage system.
Adhere to legal waste avoidance obligations and correct recycling / disposal during all work on and around the machine.
Water-polluting materials such as grease and lubricating oil must not pollute the soil or enter the sewage system, especially during installation, repair and maintenance work.
These materials must be caught, stored, transported and disposed of in suitable containers.

The appropriate valid legal regulations must be strictly adhered to when disposing of operating materials or replacement materials during maintenance or decommissioning of the system.

8.2 Oil, oily waste and greases

Oil, oily waste and greases pose a significant risk to the environment. Therefore, disposal of such materials must be made by a specialist company.

- Collect any oil and oily waste and only dispose of them according to the legal conditions through authorized waste disposal companies / authorities.

8.3 Plastics

- Sort any plastic waste as thoroughly as possible.
- Dispose of plastics according to the legal conditions through authorized waste disposal companies / authorities. The scrapping of the installation has to proceed in compliance with the regulations of the particular country.

8.4 Metals

- Sort and separate different metal types.
- Dispose of these metals according to the legal conditions through authorized waste disposal companies / authorities.

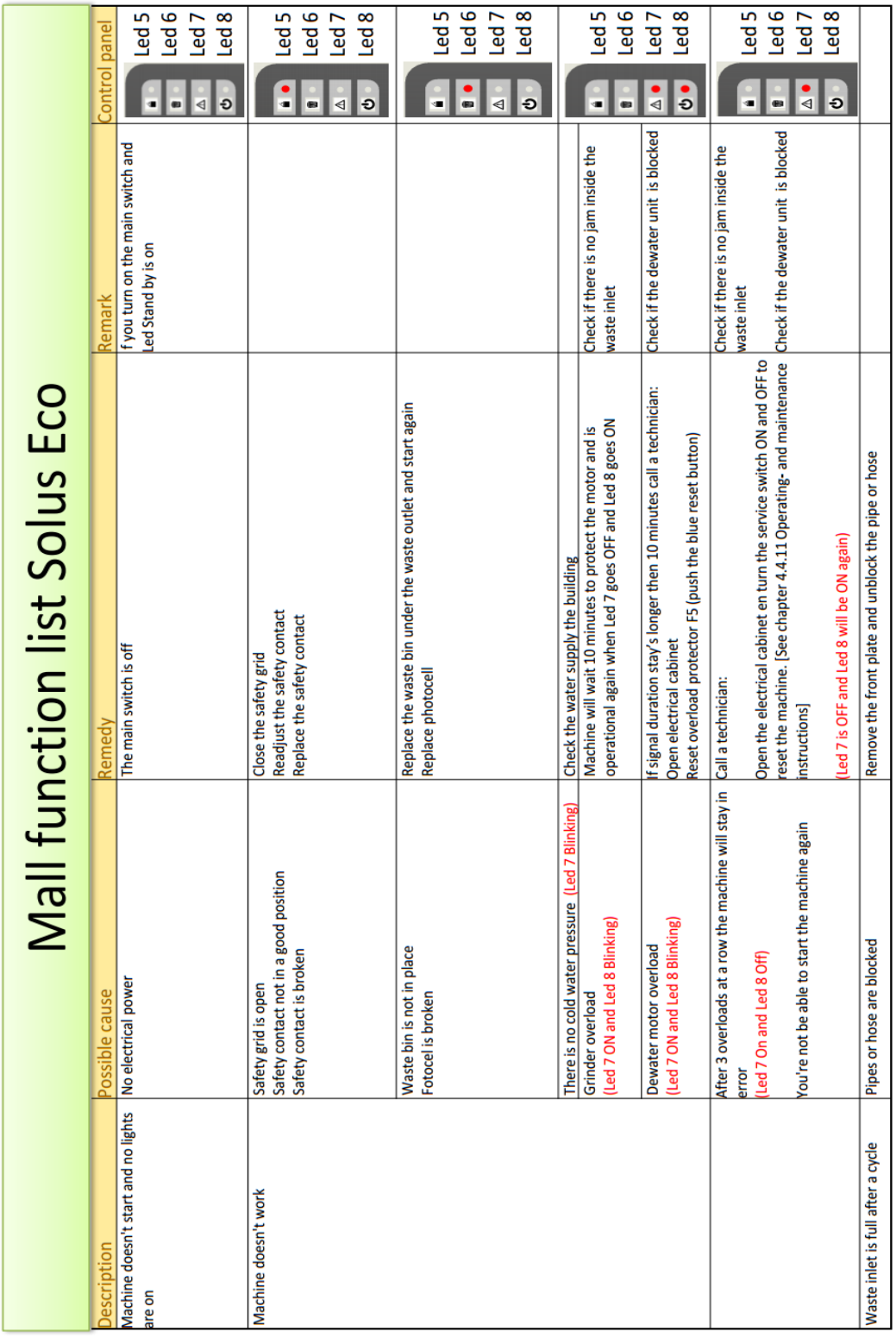
8.5 Electrical and electronic waste

Electrical and electronic waste!

This logo on the packaging or device indicates that the device must be disposed of separately. These devices must not be disposed of with domestic waste.

- Only dispose of electrical or electronic waste according to the legal conditions through authorized waste disposal companies / authorities, e.g. recycling plants.

Appendix I Malfunction list



Mall function list Solus Eco

Description	Possible cause	Remedy	Remark	Control panel
Machine doesn't start and no lights are on	No electrical power	The main switch is off	f you turn on the main switch and Led Stand by is on	Led 5 Led 6 Led 7 Led 8
Machine doesn't work	Safety grid is open Safety contact not in a good position Safety contact is broken	Close the safety grid Readjust the safety contact Replace the safety contact		Led 5 Led 6 Led 7 Led 8
	Waste bin is not in place Fotocel is broken	Replace the waste bin under the waste outlet and start again Replace photocell		Led 5 Led 6 Led 7 Led 8
	There is no cold water pressure (Led 7 Blinking)	Check the water supply the building		
	Grinder overload (Led 7 ON and Led 8 Blinking)	Machine will wait 10 minutes to protect the motor and is operational again when Led 7 goes OFF and Led 8 goes ON	Check if there is no jam inside the waste inlet	Led 5 Led 6 Led 7 Led 8
	Dewater motor overload (Led 7 ON and Led 8 Blinking)	If signal duration stay's longer then 10 minutes call a technician: Open electrical cabinet Reset overload protector F5 (push the blue reset button)	Check if the dewater unit is blocked	Led 5 Led 6 Led 7 Led 8
	After 3 overloads at a row the machine will stay in error (Led 7 On and Led 8 Off) You're not be able to start the machine again	Call a technician: Open the electrical cabinet en turn the service switch ON and OFF to reset the machine. [See chapter 4.4.11 Operating- and maintenance instructions] (Led 7 is OFF and Led 8 will be ON again)	Check if there is no jam inside the waste inlet Check if the dewater unit is blocked	Led 5 Led 6 Led 7 Led 8
Waste inlet is full after a cycle	Pipes or hose are blocked	Remove the front plate and unblock the pipe or hose		

Figure 17 Mall functions Solus Eco

Appendix II CE IIA declaration

The original will be supplied separately.

RENDISK

EU Declaration of Conformity

Directive 2006/42/EG, Annex II, sub A

Manufacturer : Rendisk BV
: Spoortstraat 62
: 7261AG Ruurlo
: Netherlands

herewith declares that:

Machine : Rendisk foodwaste disposer
Type : Solus Eco Serial nr: PR1300000402

- **is in compliance with:**

Machinery Directive 2006/42/EG

- **the following harmonized standards have been applied:**

Harmonised standards

EN 12 100-1	Machine safety: specification for general requirements, part1
EN 12 100-2	Machine safety: specification for general requirements, part2
EN 60 204-1	Machien safety: Electrical equipping of machines : general requirments
EN 61 000-6-2	Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.
2002/95/EC	RoHs directive

Managing Director		*Constructor*	
Place	: Ruurlo	Place	: Ruurlo
Date	: . . - . . -	Date	: . . - . . - . . . .
Name	: S.J.N. van Langen	Name	: R.F.J. Hulshof
Signature	:	Signature	:

DRAFT

Figure 18 Example CEIIA declaration

Appendix III Maintenance and repair grinder

Jam release

In case the grinder reduces speed, stops or does not start:

- Disconnect electrical power supply (main switch).
- Use protective gloves. Remove any non-grind able object from grinding chamber.
- Place jam release wrench on centre nut so that a shredder grinding blade fits in the recess of wrench (see Figure 19)

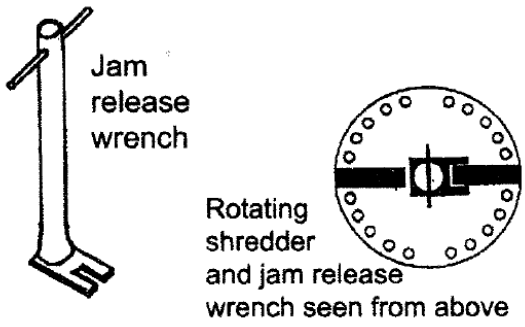


Figure 19 Jam release wrench

- Rotate the wrench backwards and forwards until the shredder rotates freely in both directions. If needed extend the bar on the wrench. Hit the bar with a hammer.

Appendix IV Maintenance interval

	Maintenance interval (which ever comes first)	
Item	**Every**	**or runtime hours**
Check working of safety switch in grill dropunit	Daily	
Cleaning Solus	Daily	
Replacing storage container dewater unit	Depending on usage	
Cleaning chute dewater unit	Weekly	
Dewater unit, overhaule	2 years	1.200 hours

Appendix V Spare parts list

Please see hardcopy of the spare part list inside the envelope.

When lost, please contact Rendisk for the spare parts list

Appendix VI Adjust interval time batch repeat cycle

To adjust the interval time of the batch repeat mode by a technician there has to be completed a couple of steps.

1. Switch off the machine with the main switch
2. Disassemble the front panel (loosen two M6 bolts at bottom)(1)

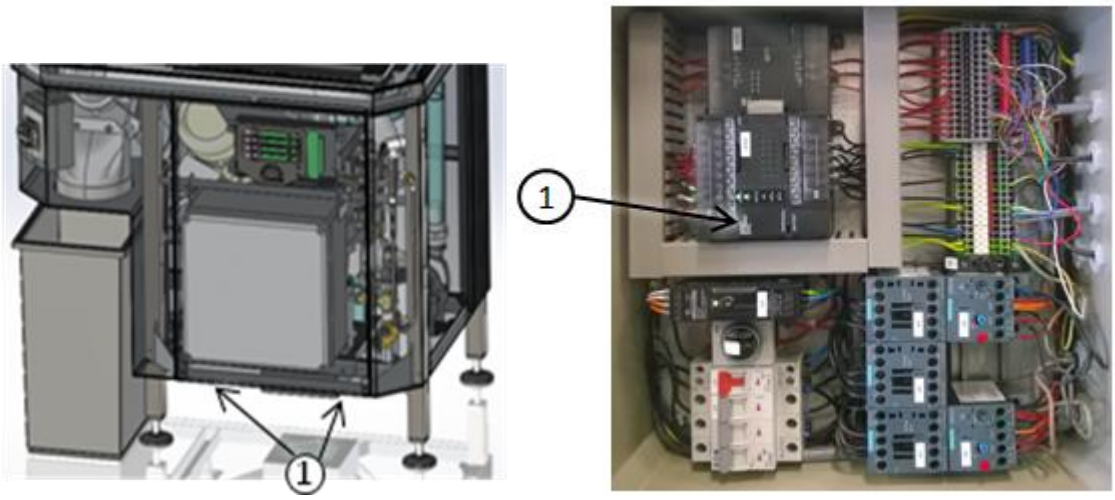


Figure 20 Disassembling front panel

Figure 21 PLC Solus

3. Open the electrical cabinet
4. Make sure you know which component is the PLC (1)
5. Open the little cover on the PLC



Figure 22 Cover and potentiometer on PLC Solus

6. Adjust with a little screwdriver the yellow/blue potentiometer on the PLC



Figure 23 Adjusting the potentiometer Solus

7. When the potentiometer is turned completely counter clockwise it indicates a batch interval time of 2 minutes.

8. When the potentiometer is turned completely clockwise it indicates a batch interval time of 14 minutes.

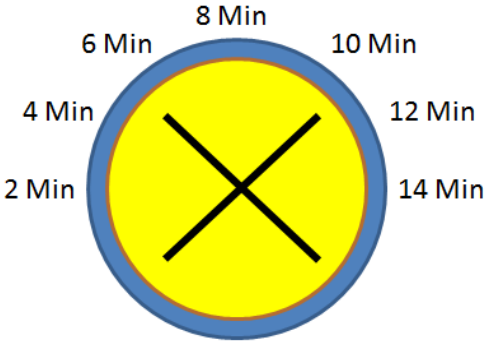


Figure 24 Potentiometer with interval time batch repeat cycle

9. Now the interval time is set

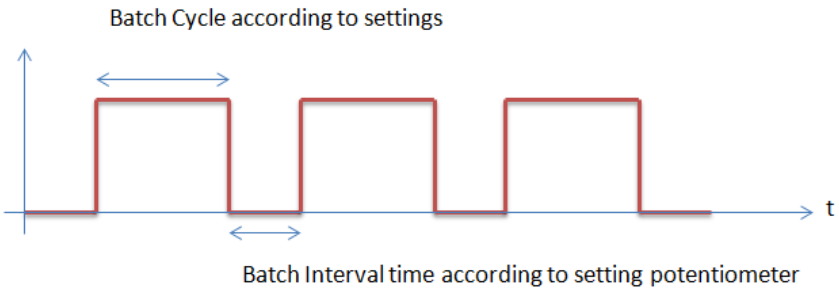


Figure 25 Schematic reproduction of batch repeat cycle

10. Close the PLC cover

11. Close the electrical cabinet

12. Close the front panel of the Solus

Appendix VII Set programmable cleaning cycle

Set the programmable cleaning cycle at a certain time. Cycle will repeat every 24 hours.

Example:
As the cleaning cycle has to run every evening at 09.00 PM than the settings has to be made 12 hours before. So at 09.00 AM you have to follow the next steps to complete the settings according to the programmable cleaning cycle.

Set programmable cleaning cycle:

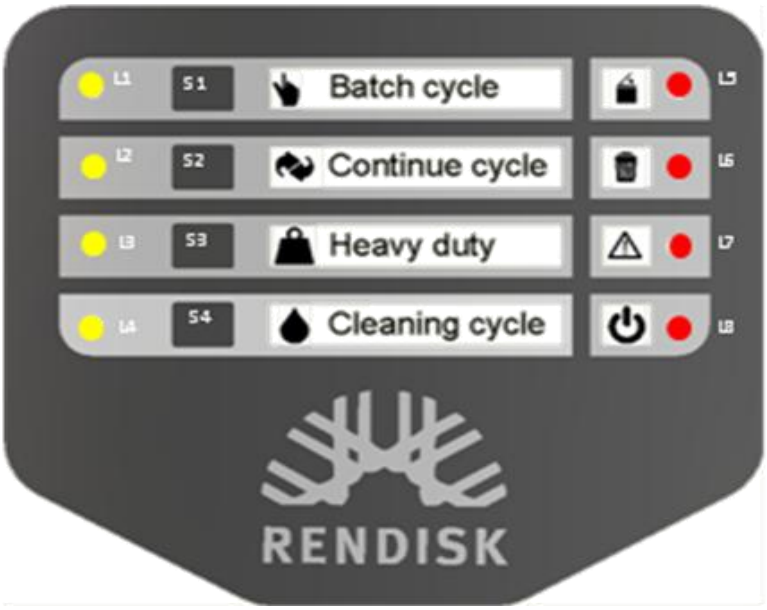
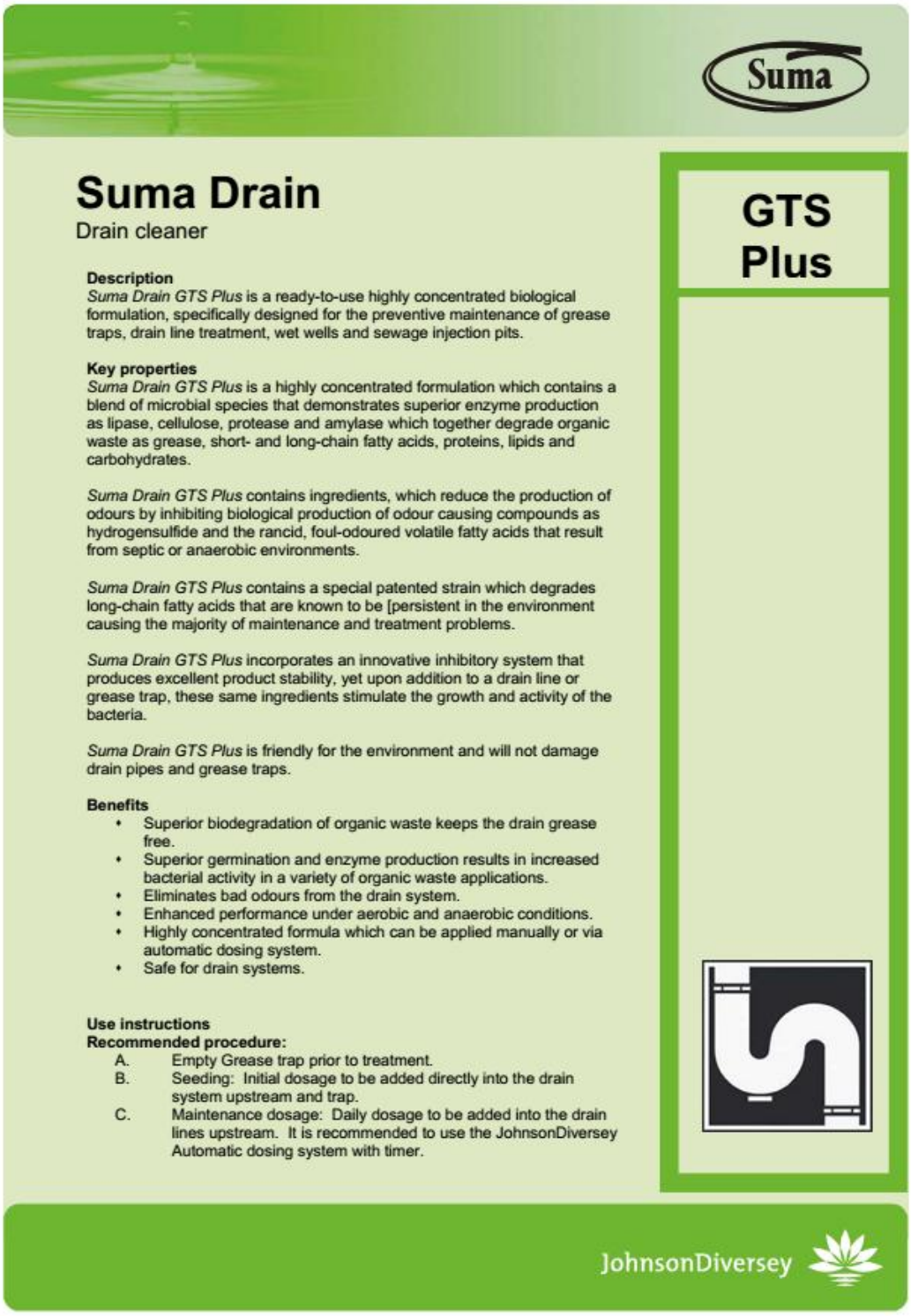


Figure 26 Control panel

1. Push the button S4 for 10 seconds without releasing it*.
2. When LED 4 starts to blink the setting is made and you can release the button.
3. LED 4 blinks once a second for a time of 10 seconds.

*When the setting is made on 09.00 AM the cleaning cycle will start 12 hours later at 09.00 PM.

Appendix VIII Cleaning agent for Solus Eco



Suma

Suma Drain

Drain cleaner

GTS Plus

Description
Suma Drain GTS Plus is a ready-to-use highly concentrated biological formulation, specifically designed for the preventive maintenance of grease traps, drain line treatment, wet wells and sewage injection pits.

Key properties
Suma Drain GTS Plus is a highly concentrated formulation which contains a blend of microbial species that demonstrates superior enzyme production as lipase, cellulose, protease and amylase which together degrade organic waste as grease, short- and long-chain fatty acids, proteins, lipids and carbohydrates.

Suma Drain GTS Plus contains ingredients, which reduce the production of odours by inhibiting biological production of odour causing compounds as hydrogensulfide and the rancid, foul-odoured volatile fatty acids that result from septic or anaerobic environments.

Suma Drain GTS Plus contains a special patented strain which degrades long-chain fatty acids that are known to be [persistent in the environment causing the majority of maintenance and treatment problems.

Suma Drain GTS Plus incorporates an innovative inhibitory system that produces excellent product stability, yet upon addition to a drain line or grease trap, these same ingredients stimulate the growth and activity of the bacteria.

Suma Drain GTS Plus is friendly for the environment and will not damage drain pipes and grease traps.

Benefits
- Superior biodegradation of organic waste keeps the drain grease free.
- Superior germination and enzyme production results in increased bacterial activity in a variety of organic waste applications.
- Eliminates bad odours from the drain system.
- Enhanced performance under aerobic and anaerobic conditions.
- Highly concentrated formula which can be applied manually or via automatic dosing system.
- Safe for drain systems.

Use instructions
Recommended procedure:
A. Empty Grease trap prior to treatment.
B. Seeding: Initial dosage to be added directly into the drain system upstream and trap.
C. Maintenance dosage: Daily dosage to be added into the drain lines upstream. It is recommended to use the JohnsonDiversey Automatic dosing system with timer.

JohnsonDiversey

Figure 27 Cleaning agent I

Suma Drain GTS Plus

Grease traps:
General Maintenance:
Seeding: 1.2L/cubic meter (volume of grease trap).

Maintenance dosages:

Grease trap size	Dosage / day
<500L	300-350 ml
500-1000L	350-500 ml
>1000L	600 ml

Maintenance dosages based on number of meals/day:

Number of meals	Dosage/day
400-500	350 ml
500-800	350 – 500 ml
800-1000	500-600 ml
1000-1500	650-1000 ml
2000	1200 ml

Drain lines (commercial outlets):

- 7day start-up treatment: 150-200 ml/day
- Weekly maintenance: 150-200 ml/week

The above mentioned dosages should be increased for treatment of lines collecting heavy organic loads. We do advise to use the JohnsonDiversey automatic dosing unit with timer. The product is best dosed into the lines 1-2 hours after the cleaning.

Properties

Appearance	Creamy white liquid
Bacteria count (spores)	$1x10^8$ CFU/ml
Relative Density @ 20°C	1.0 6 typical

These figures are typical values and should not be interpreted as specifications.

Available pack sizes
20L Drums

Safety Precautions
Essentially non-hazardous.
In case of contact with eyes rinse immediately with plenty of water, holding the eyelids open and seek medical advice if effects persist. In case of skin contact, wash thoroughly with soap and water. In case of inhalation remove from source of vapour or spray mist. In case of ingestion remove product from mouth, give plenty of water or milk to drink and seek medical advice. Store in original containers preferably in a cool and dry place.

Full guidance on the handling and disposal of this product is given in a separate Material Safety Data Sheet.

For more information
Please consult your local JohnsonDiversey representative.

Figure 28 Cleaning agent II

Appendix IX integrated break tank (WRAS approved) option

Rendisk offers an integrated air gap which meets the Category 5 from NEN 1717 so the system can safely be connected to the drinking water circuit. The break tank with airgap is fully integrated within the solus. Please request dealer for more information about availability.