



Granule Maxi

Service manual

Granule Maxi serial # 920010–



Art.no EN22559–201205

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No responsibility is taken for any printing errors.

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CE Declaration of Conformity

The Manufacturer:
GRANULDISK AB
Jägershillgatan 15
SE-213 75 MALMÖ, Sweden

declares that the following machinery:

The GRANULDISK system Granule Maxi.

The Granule Maxi is a Granule pot washing machine – a pot washing machine for commercial kitchens that is designed for washing such wares as pots and pans.

Basic conception

- a. the equipment, to which the CE Mark has been affixed, complies with the Machinery Directive, 2006/42/EC.
- b. is besides the provisions under a) manufactured according to the following directives: the EC Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC
- c. is manufactured in conformity with the following harmonised standards: EN 60204-1:2006, EN 55014-1, EN 60335-2-58, EN 60439-1, EN 55022, EN ISO 13850:2008, EN ISO 13857:2008, EN 61000-6-3 and EN 61000-6-2
- d. is manufactured in accordance with EN 1717 and fitted with a type AB back flow protection device with airgap in accordance with EN 13077:2008.

Malmö, Sweden 11.02.2012

Signed on behalf of
GRANULDISK AB



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President

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1 General Description and Safety

1.1 To the user

Granule Maxi is a Granule pot washing machine – a pot washing machine for commercial kitchens that is designed for washing pots and pans.

This manual is your guide for the correct installation and use of the Granule Maxi pot washing machine.

GRANULDISK recommends that you study the manual thoroughly to be sure that the machine is installed and used correctly and safely.

Ensure that the manual is always available during the whole life of the machine.

GRANULDISK accepts no responsibility for damage to the equipment or other damage or injury caused by not following the directions in this manual.

1.2 Safety regulations

The machine uses hot water. Avoid contact with the skin as there is a risk for scalding!

Do not open the doors during a wash cycle! Risk of burn.

The plastic in the Granules is approved for use in conjunction with food.

There is a risk of slipping if Granules are left on the floor.

Formaldehyde, which is dangerous if inhaled, may be formed if the Granules catch fire.

1.3 Disconnecting power

How to disconnect the power safely when performing maintenance.

The machine must be connected to a supply disconnecting device, in accordance with EN60204–1:2006. This must be in off position. The rinse aid and detergent installation must also be put out of circuit, unless it is supplied from the GRANULDISK machine.

It must be possible to lock the supply disconnecting device in the off position.

A sign prohibiting all use of the switch must be posted at the separation point. The sign must be mounted securely so as to remain in place throughout the duration of the work.

Ensure the machine is dead by undoing the front cover, the lid to the electrical cabinet and measuring the incoming voltage on Q1. There must not be any voltage between any of the phases or between any of the phases and protective earth. The measurements must be performed on both sides of Q1. (Appendix for electrical diagram.)

1.4 Technical data

Weight	666 kg (filled machine), 485 kg (empty machine)
External dimensions	2029 (± 25 mm) x 1452 x 1089 mm (H x W x D)
Tank volume	165 litres
Granule amount	16 kg
Wash water temperature	65 °C
Rinse water temperature	85 °C
Wash programmes w Granules	Eco: 2 min, 30 sec Short: 4 min, 40 sec (1 min longer with steam reduction) Normal: 6 min, 40 sec (1 min longer with steam reduction)
Wash programmes w/o Granules .	Eco: 2 min, 30 sec Short: 3 min, 40 sec (1 min longer with steam reduction) Normal: 5 min, 40 sec (1 min longer with steam reduction)
Rinse water volume	7 litres/ECO programme 14 litres/short, normal programme To achieve 3600 HUE according to NSF/ANSI 3, 14 litres is necessary.
Capacity	8 x GN1/1 or 16 x GN1/2, or equivalent in other items
Loading volume	450 litres (w 540 x h 1060 x d 680 mm)
Design	Compact System with extractable cassette. Flow System with 1 trolley and 2 loose cassettes. Freeflow System with 2 trolleys and 2 loose cassettes.
Voltage**	400 V (standard); 3-phase, earth 230, 415, 440 and 575 V (option); 3-phase, earth
Fuse**	400 V: 40 A (steam heated 20 A, cold water option 50 A) 230 V: 63 A (steam heated 25 A) 415, 440 V: 40 A 575 V: 25 A (steam heated 16 A)
Frequency.	50 Hz (standard) or 60 Hz
Maximum power	21 kW (steam heated 5 kW, cold water option 29 kW)
Wash pump motor	2 x 2.2 kW (2 x 3.0 kW 575 V)
Rinse pump motor	0,37 kW
Wash tank element*	16 kW (cold water option 24 kW)
Rinse tank element*	16 kW (cold water option 24 kW)
Encapsulation class	IP55
Sound pressure level	< 70 dB(A)
Hot water	½" (DN15), 55-65 °C, 3-10 °dH NB! Reverse osmosis water and totally softened water must not be used.
Water pressure/flow h.w	1-6 bar, 25 l/min

Cold water	1/2" (DN15), 3-10 °dH
Water pressure / flow c.w	1-6 bar, 15 litres per min (steam reduction; 3-6 bar)
Recommended ventilation capacity	700 m ³ /h (without steam reduction) 200 m ³ /h (with steam reduction). N.B. steam reduction is factory fitted for Granule Maxi. For ECO-programmes, the factory setting for Steam reduction is OFF.
Outflow	Pipe Ø 32 mm
Drain	Required capacity 100 l/min. The machine should not be placed directly above the drain.

* Not in use simultaneously

** For specific data regarding delivered machines, please see machine rating plate



NOTE

The Granule Maxi is supplied with a 2 metres long electric cable to be connected to an approved supply disconnecting device on the wall. The supply disconnecting device is not included in the delivery.

2 Installation



WARNING

All operations described in this chapter must only be carried out by qualified staff. All electrical components described in this chapter apply to 400 volt machines. Recalculated electrical values apply to other voltages (see [section 1.4 Technical data on page 9](#)).

2.1 Installation instructions

The Granule Maxi is delivered well packaged and placed on a pallet.

1. Remove the packaging so that the machine is left standing on the pallet.
Undo the 8 fixing screws, remove the beams from front and back side.
Lift the machine from the front or back using a pallet truck now you can remove the beams at the sides.
Fit the feet to the legs and remove the pallet truck.
2. Place the machine in position and adjust the legs, use a spirit level and the arrows on the doors to get the machine in level. Check front, left and right side.



Figure 1: Check level front, left and right.

The arrows should be in line.

3. Check too that all external screws as well the screws on the door's hinges are tightened.
4. For the Granule Maxi, Flow System and Freeflow System: Also make this test using an empty cassette.
 - fill a cassette to it's maximum 60 kg with items to be washed, then move this into the machine using a cassette trolley.

- Make sure that the cassette moves freely into the machine, adjust the feet if necessary.
 - The machine can be laid down on its side when being moved in.
5. Connect the hot and cold water (A and B [Figure 2 ,on page 13](#)).
The connections are located at the back of the machine – ([Figure 2](#)) and are marked red and blue . Use flexible connection hoses with a minimum internal diameter of 9 mm. Ensure that there is at least 500 mm of extra hose in order to make it possible to move the machine forward for service. Incoming water must be at a pressure of 1-6 bar when the solenoid valve is open. If the water pressure is in excess of 6 bar, a relief valve must be installed.
 6. Connect the drain pipe on the back right to the drain Ø 32 mm (C [Figure 2 ,on page 13](#)). Place the valve in open position (shown by symbols on the side panel). The drain capacity must be at least 100 litres/minute. The machine should not be placed directly over a floor drain, since it is important for the drain to be accessible for cleaning.
 7. All electrical connections in the electrical cabinet must be tightened before the electrical supply is connected. Connect the electric cable (E [Figure 2 ,on page 13](#)) to a supply disconnecting device on the wall. Check that the power supply complies with the Technical Data on the rating plate.
 8. Fill the machine by starting the filling process. If the machine will not fill, check water supply and rotation direction of pumps. Rotation according to markings on pumps (arrows).

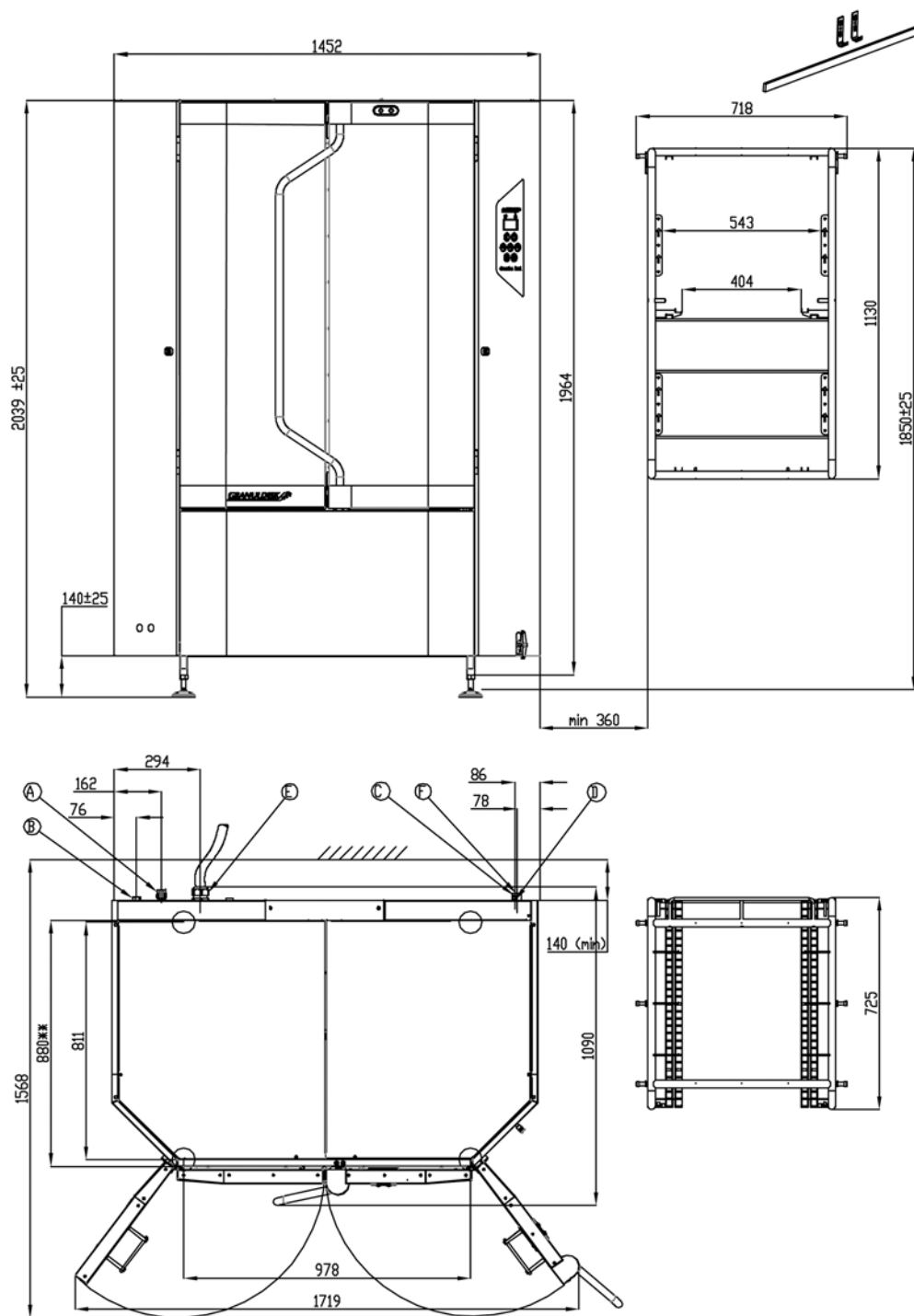


Figure 2:

2.2 Detergent and rinse aid

**NOTE**

Only pre drilled hole and connections must be used for sensor, detergent and rinse aid.

The dosing equipment is only to be connected in the detergent connection box.

All dosing equipment must be fitted with a main switch.

Do not use detergent containing chlor.

To obtain the best performance of this GRANULDISK pot washer we strongly recommend installing sensor controlled detergent dosing equipment and appropriate rinse aid equipment.



Figure 3: Detergent and rinse aid junction box

The 230 V AC and the 24 V AC supply as well as the control signals for the detergent and rinse aid equipment are located in the junction box behind the front cover plate. There are terminal blocks as listed below in the junction box (Picture: [Figure 4 Detergent and rinse aid junction box](#)).

The dosing of rinse aid is normally done during filling of the rinse tank, depending on rinse aid this could cause foaming in the rinse tank causing error 112. To avoid this the rinse aid dosing equipment could use the detergent signal and the equipment set to dose on time, if possible (fixed volume on positive flank). This means the dosing of rinse aid is done when the rinse tank is full and the foam is avoided.

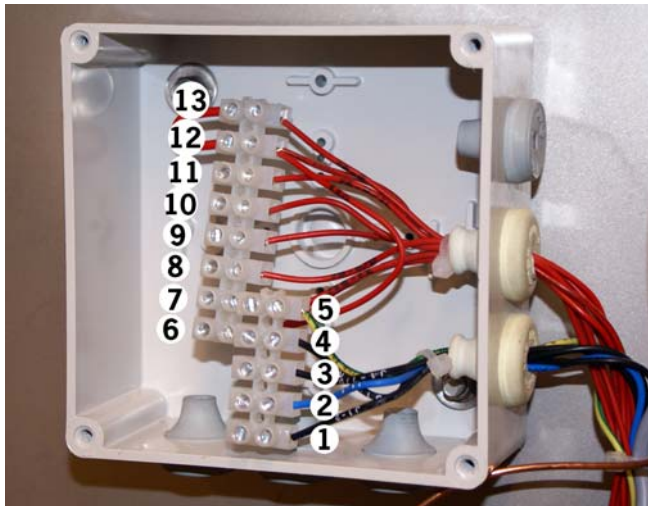


Figure 4: Detergent and rinse aid junction box

1. Constant 230 VAC J 1-2
2. Neutral 230 VAC J 1-6
3. Detergent connection 230 VAC J 1-7/D
4. Rinse connection 230 VAC
5. Earth PE
6. Constant 24 VAC 113
7. Neutral 24 VAC J 16-12
8. Detergent connection 24 VAC J 8-9/D
9. Rinse connection 24 VAC J 8-4/R
10. Central metering (full wash tank) J 8-5/TF
11. Operations indication J 6-4
12. Emergency stop J 8-3
13. Emergency stop J 8-8

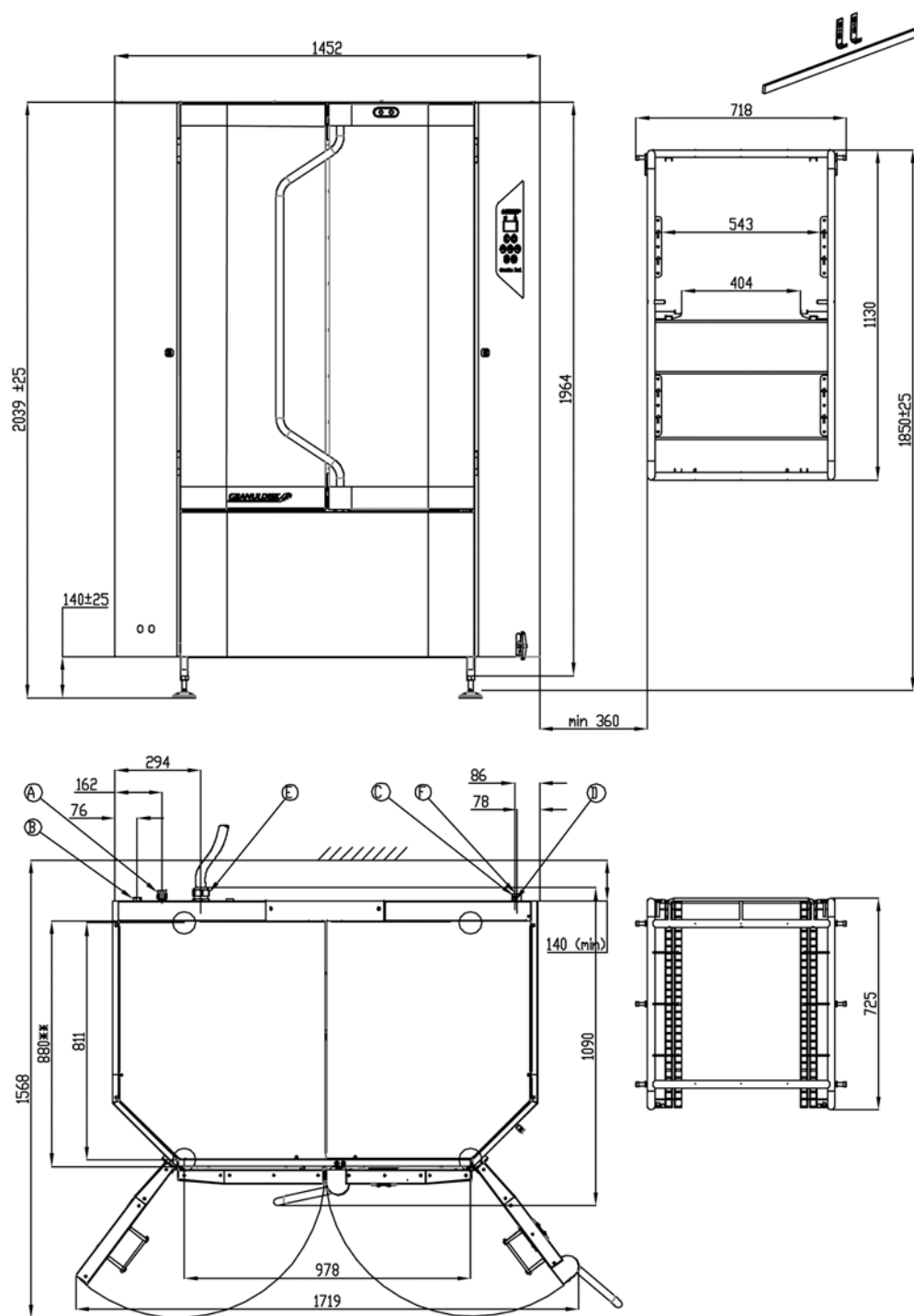


Figure 5:

The detergent inlet is a tube.



Figure 6: Detergent inlet tube

The machine is equipped with a rinse aid connection ([see section D, on page 16](#)). The tube is connected to the rinse tank.



Figure 7: Detergent and rinse aid connections.

The pre-drilled sensor hole is found on the right hand side. To make it easier to find, a red plastic plug is fitted in the hole. In case a sensor is not installed replace the plug with a more durable plug.



Figure 8: Predrilled hole for detergent sensor; red plug.

In case of solid detergent being connected, the hot water connection point (1/8") for the dosing equipment is located at the machine's hot water connection (A, [on page 16](#)).

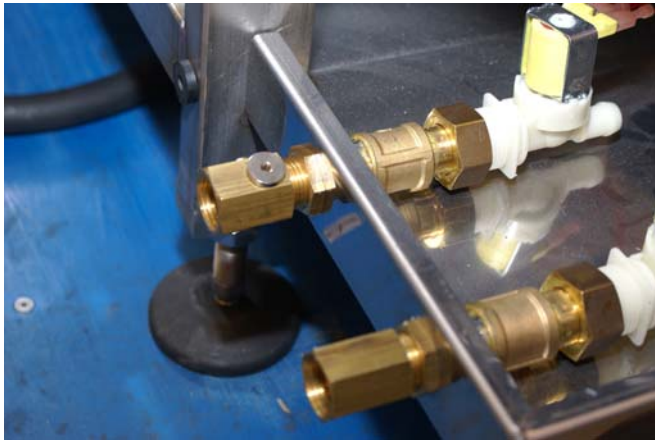


Figure 9: Connection point warm water for solid detergent.



CAUTION

*It is very important that the detergent supplier uses the existing holes so that no unnecessary holes are made in the machine.
All dosing equipment must be fitted with a main switch.*

2.3 How to lay the Granule Maxi down on its side

To pass low doorways when moving the Granule Maxi it is possible to lay it down on the **right** side.

Material needed:

- A pallet truck
- Two EUR pallets
- Standard tool kit
- Profiles from the machines wooden frame
- Four strong men

1. Remove the plastic packing material and the bottom wooden frame.

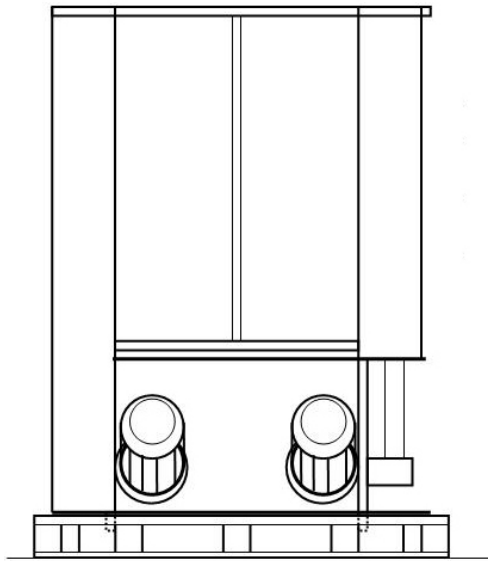


Figure 10: Machine prepared for to be tilted to right side.

2. Open doors and take out all removable parts like the multi-cassette, other accessories, tank grids and overflow filter.
3. Remove the plastic roof, front cover plate, all three cover panels on the right side and right support-frame (some models) for these three panels.
4. Take the front and the rear wooden profiles and cut off a part of them according to Figure 2.

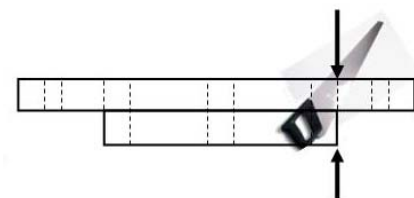


Figure 11: Cutting the beams to the correct length

5. Lift the machine up on wooden profiles according to Figure 3. Put short planks under booth left leg-profiles to incline (lean) the machine.

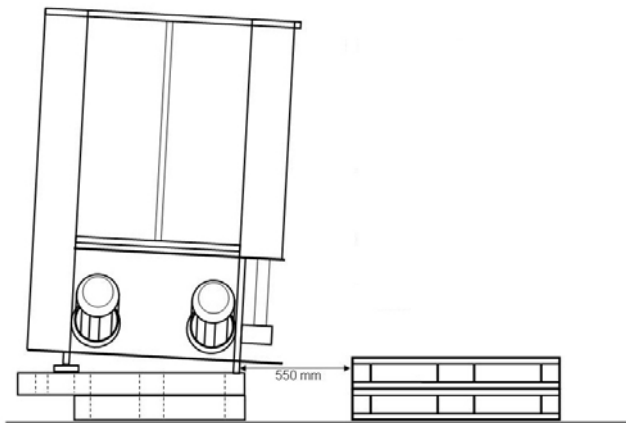


Figure 12: Plank under left pair of legs. **Correct distance, 550 mm**

6. Right leg-profiles have to be placed in the centre of wooden beams.



CAUTION

*Please mind the correct position, otherwise machine could fall of the beams.
If it falls off the bottom plate could be damaged by the beams.*

7. Put two EUR pallets according to the Figure 3. It is important to keep the distance 550 mm, between the pallets and the order to avoid damages on the cabinet and the spray arm bearings.
8. Tilt the machine with caution until it rests on the pallets. Figure 5 and 6. The machine can now be moved.

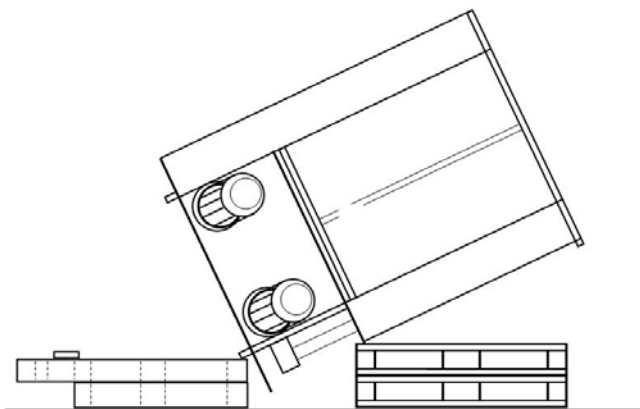


Figure 13: The machine is tilted with caution.

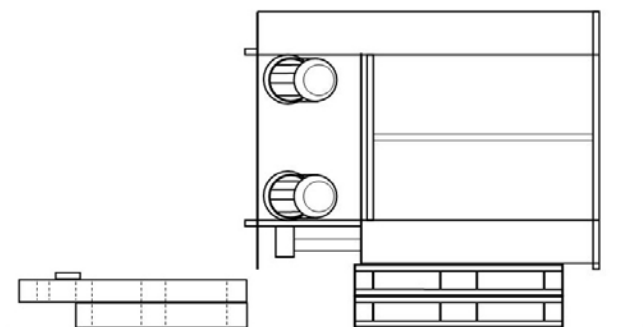


Figure 14: The machine is now ready to be moved.

9. To rise the machine up, perform in reversed order.

3 Troubleshooting and Alarms

**NOTE**

Controls in this chapter may only be carried out by qualified staff.

FAULT	CHECK
Machine will not fill with water.	1. Water valves for incoming water are open. 2. Rinse pump is rotating in the correct direction, phase order correct. 3. That the solenoid valve is working. 4. That the level sensor is clean. 5. Solenoid valve water filter is clean.
The display will not light up.	1. Fuse F5 (24 V) 2. Cable connection between PCB and display panel. 3. Main switch Q1 in electrical connection box
No Granules when washing with Granules is selected.	1. Granules loaded into the wash tank. 2. Granules are chosen on the operators panel. 3. Granule valve is opening properly.
Granules left on the items washed.	1. That wash nozzles are not blocked. 2. That pots are angled correctly. 3. Granule valve seal is tight against the cabin. 4. The correct amount of Granules are loaded, not too much. 5. That there is not too much foam in the machine while washing.

*

FAULT	CHECK
Wash result not satisfactory.	1. That the nozzles are not blocked. 2. That the wash water temperature is approx. 65 °C. 3. That detergent dosing is correct. 4. That the right amount of granules are in the machine. 5. That there is not too much foam in the machine while washing.* 6. That the pots are placed correctly. 7. That the protective grids for the pumps have not been blocked. 8. That wash arms are moving correctly. 9. That both wash pumps are running correctly.
Doors leaking	1. That the machine is in level. 2. The door alignment. 3. Upper and lower locking mechanism, bearings undamaged. 4. Centre seal correctly positioned against the cabin seal.

*** Foam test**

1. Run a wash program with Granules.
2. When separation is done and **no** Granules are circulating, stop the program.
3. When the machine is stopped, open the door immediately and check how much foam there is.
4. There will be some foam. The foam must disappear relatively quick.

No other chemical than the connected detergent and rinse aid must be in the wash tank!

All inside surfaces of the wash tank, including inside of doors and seals, must only be cleaned with water.

3.1 Error codes

The meaning of the error codes can be read out from the table below.

- Error codes 100, 109, 116, 118, 132 are also displayed with an Error message text shown in the Meaning column.
- When an error code is displayed, the program is always interrupted.
- After checking and taking care of the problem, the alarm can be reset by pressing the STOP button.

Error code	Meaning	Cause	Remedy
001		Program interrupted by operator.	This error code is displayed only when operating data is read in GDTdirect™ 3.x.
100	Spray pipe alarm	Something is preventing movement of the spray pipes.	Remove whatever is preventing movement. Check the magnetic proximity switch and the magnet on the rocking arm. Check the fuse F4 on the PCB
101	Motor circuit breaker for wash pump right tripped.	The motor is overloaded. The impeller is blocked by Granules or by small utensils	Check that the impeller turns freely, reset the motor circuit breaker, start the machine and check the current of all three phases Check the volume of charged granules.
102	Motor circuit breaker for wash pump left tripped.	The motor is overloaded. The impeller is blocked by Granules or by small utensils.	Check that the impeller turns freely, reset the motor circuit breaker, start the machine and check the current of all three phases. Check the volume of charged granules.
103	Motor circuit breaker for rinse pump tripped	The motor is overloaded. The impeller is blocked.	Check that the impeller turns freely, reset the motor circuit breaker, start the machine and check the current of all three phases.
104	Overheating protector for rinse tank tripped	The rinse tank heater has overheated.	Check the functioning of the level sensors, and check that the machine is filling with water. Reset the overheating protector located to the right of the electrical cabinet. (Non 400 V machines only)

Error code	Meaning	Cause	Remedy
105	Overheating protector for wash tank tripped	The wash tank heater has overheated.	Check the function of the level sensors, and check that the machine is filling with water. Reset the overheating protector located to the right of the electrical cabinet. (For 400 V machines only)
106	Overheating protector for one of the heaters tripped.	One of the heater elements has overheated.	Check the functioning of the level sensors, and check that the machine is filling with water. Reset the overheating protector located to the right of the electrical cabinet. (For 400 V machines only)
107	Temperature not reached in wash tank	The wash water in the wash tank does not reach its preset temperature during the wash process.	Check overheat protector. (Non 400 V machines only) Check the heating element circuit breaker and the contactor in the electrical cabinet. Can also be caused by low temperature of incoming water.
108	Temperature not reached in rinse tank	The rinse water in the rinse tank does not reach its preset temperature during the wash process.	Check overheat protector. (Non 400 V machines only) Check the heating element circuit breaker and the contactor in the electrical cabinet.
109	Door switch	Someone has attempted to open the doors during operation.	Close the door and reset the alarm by pressing the STOP button.
110	Temperature sensor in	The temperature sensor in the wash tank or rinse tank is broken - probably the rinse tank sensor.	Replace the temperature sensor in the wash tank or rinse tank.
111	Temperature sensor in	The temperature sensor in the wash tank or rinse tank is broken - probably the wash tank sensor.	Replace the temperature sensor in the wash tank or rinse tank.

Error code	Meaning	Cause	Remedy
112	Water level too low in rinse tank	The level in the rinse tank has fallen incorrectly.	Check the water connections from the rinse tank. Check the condition (value) of the upper and lower level sensor in the rinse tank. Leakage of rinse system. Upper level sensor is sensing water when the lower is not sensing water. Foam.
113	Water level too low in wash tank.	The level in the wash tank has fallen incorrectly.	Check the water connections to the wash tank, as well as the drainage pipe and the drain valve.
114	Long wash tank filling time	The level sensor in the wash tank has not been activated within 20 minutes of the rinse pump start.	Check the water supply to the machine, as well as the rinse pump. Clean the rinse nozzles/pipe. Check the sensitivity of level sensors
115	Long rinse tank filling time	The level sensor in the rinse tank has not been activated within 5 minutes of the solenoid valve opening.	Check the water supply to the machine, as well as the solenoid valve for rinse tank filling. Check the condition (sensitivity value) of level sensors in the rinse tank.
116	Low water level, problem with foam	Foam forming in the machine.	Avoid using detergent designed for washing up by hand. Change the wash water. Contact the detergent supplier if the problems with foam formation still persist. Reset the alarm by pressing the STOP button.
117	Long rinse time	The lower level sensor in the rinse tank has not indicated that the correct amount of water has been pumped out.	Check rinse pump function. Clean the rinse nozzles, and check if the lower level sensor in rinse tank is emitting a faulty signal.
118	Drain valve not closed	The drain valve has opened during an active process in the machine.	Close the drain valve and reset the alarm by pressing the STOP button.
128, 129, 130, 131	System error, control card non operational	A control card component is broken.	Replace the control card.

Error code	Meaning	Cause	Remedy
132	Clean level sensor	The level sensor in the wash tank may be dirty, or water in the wash tank has not been totally drained at start up if the machine has been shut down for more than 4 hours.	Empty the wash tank and clean the level sensor in the wash tank. If sensor is already cleaned, reset the error and set the machine in heating mode for continued heating.
133	Short rinse time	Rinse water was pumped out too fast, causing insufficient heating and rinsing of the pots and pans.	Check all rinse nozzles, no missing nozzles, leaks. Check that nozzles are not too open, worn out.
140	An initiation error of the temperature sensors has occurred./Temperature sensor in the wash tank or rinse tank not functioning.	The communication between the temperature sensors and the PCB was disturbed during start up. The temperature sensor in the wash tank or rinse tank is broken.	Switch machine power off, wait 30 seconds and then turn power back on. If error persists, redo the procedure. If the error still persists, replace the temperature sensor in the wash tank or rinse tank or both.

4 Programming

4.1 Preselected values in Service menu

Factory settings in service mode, Program version 4.x:

#	Text	Flexi	Maxi	Maxi S	Gastro	Combi	Unit
32	Eco wash time	60	60	60	60	60	s
33	Short wash time	180	180	180	120	120	s
34	Normal wash time	300	300	300	240	240	s
35	Eco fine wash time					60	s
36	Short fine wash time					90	s
37	Normal fine wash time					120	s
38	Separation time	60	60	60	30	40	s
39	Time control the rinse pump Pot wash Eco	YES	YES	YES	YES	YES	na
40	Time control the rinse pump Pot wash Other	NO	NO	NO	NO	NO	na
41	Eco Rinse time	20	20	20	20	20	s
42	Other Rinse time	40	40	40	40	40	s
43	Eco fine Rinse time					20	s
44	Other fine Rinse time					20	s
45	Steam reduction equipment	YES	YES	YES	NO	NO	na
46	Steam reduction time Eco-program	0	0	0	0	0	s
47	Steam reduction time Other program	60	60	60	30	30	s
48	Steam reduction time Fine Eco program					0	s
49	Steam reduction time Fine Other program					20	s
50	Wash tank temperature	65	65	65	65	65	°C
51	Rinse tank temperature	85	85	85	85	85	°C
52	Temperature block in the wash tank	YES	YES	YES	YES	YES	na
53	Temperature block in the rinse tank	YES	YES	YES	YES	YES	na

#	Text	Flexi	Maxi	Maxi S	Gastro	Combi	Unit
54	Type of rinse aid dosage	Per cycle	Per cycle	Per cycle	Per cycle	Per cycle	na
55	Sensitivity of level detectors	500	500	500	500	500	na
56	Prescavenging at program start	Interval	NO	NO	NO	NO	na
57	Impulse time on the pump during prescavenging	200	200	200	200	200	ms
58	Alarm Low water level	20	20	20	20	20	s
59	Alarm Wash temperature not reached	30	30	30	30	30	min.
60	Alarm Rinse temperature not reached	15	15	15	15	15	min.
61	Alarm Long fill time in the wash tank	20	20	20	20	20	min.
62	Alarm Long fill time in the rinse tank	5	5	5	5	5	min.
63	Change water after	25	25	25	25	25	cy-cles
64	Run test program						
65	Load factory settings						
66	Value on the level sensors						
67	Read operation data						
68	Read accumulated values						

4.2 Flashloader 4.2

With this PC program it is possible to:

- Upgrade the software and language file.
- Troubleshoot using the inputs & outputs on the PCB.
- Reset Granule & Service time.
- Change date & time in the machine.
- Set displayed service phone number.

4.2.1 Installation

The program can be supplied on a CD or by email and is installed as follows:

1. The system requirements for external computers connected are Windows 2000, Windows XP or Windows 7.
2. Create a folder for the program on the hard drive. Use "Windows Explorer".
3. Insert the CD and click the program file Flashloader 4.2.zip. Save the files in the folder that was just created on the hard drive.

Tip: create a shortcut on the desktop to make it easier to find the program when needed.

4.2.2 Cable connection

1. Connect a serial RS-232 cable (straight) between the machine serial connector and the computer's serial port. The cable can be obtained as a spare part. The cable must be connected to J11 on the PCB.

If the computer does not have a serial port, a USB/serial adapter can be used. For information on what is suitable to a particular computer, contact an IT specialist.

2. Connect the cable in the machine's electrical cabinet to the J11 terminal on the PCB.

4.2.3 How to use the Flashloader

1. Put the wash machine in "stop" mode by pressing the STOP button (1).
2. Start the program by double-clicking on the program file Flashloader Extended 4.2.exe in the folder or by clicking on the short cut icon on the desktop.
3. Select serial port, by clicking on Communication/Ports, and select the port to which the pot washing machine is connected. (Flashloader remembers this setting next time the program is started.) The port can be checked by using the control panel or "Devices and Printers" menu in Windows.

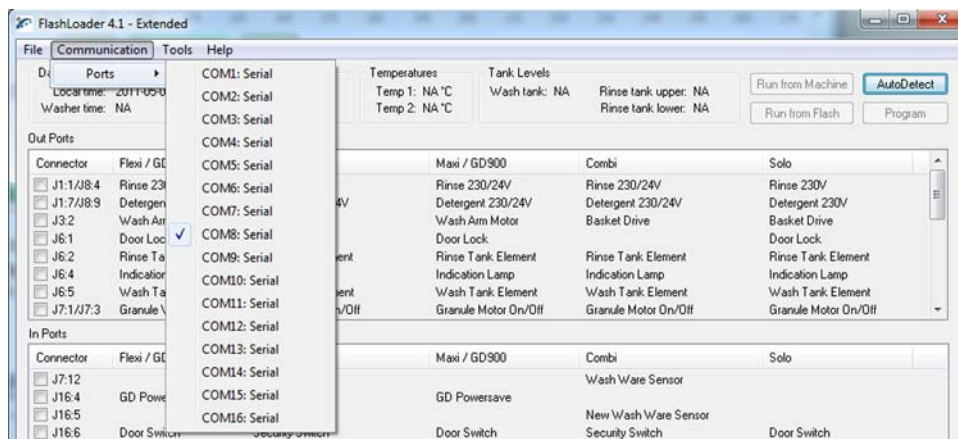


Figure 15: Setting the correct com port.

4. Press "Auto detect".

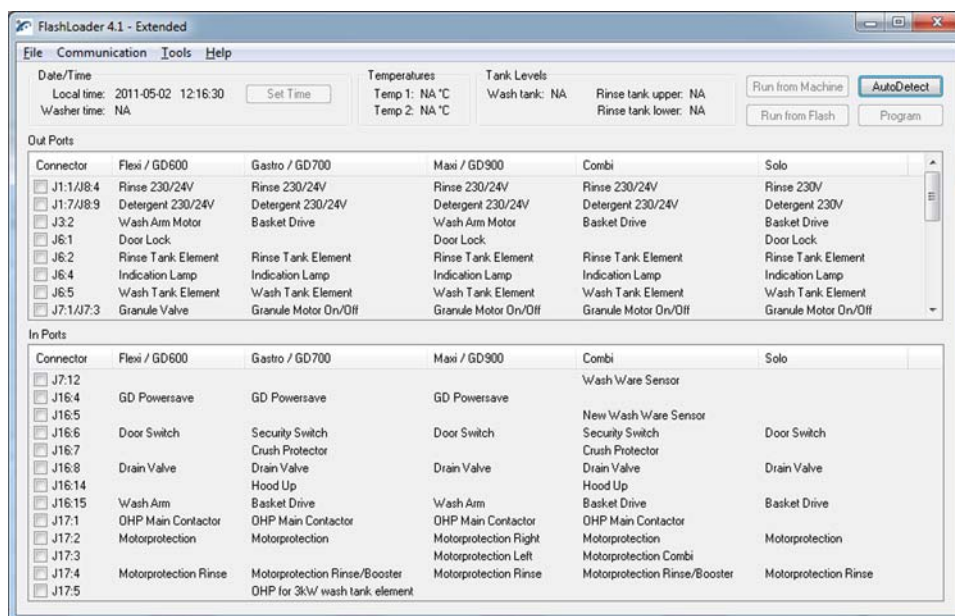


Figure 16: Making the connection with the machine.

5. Press "Run from Flash".

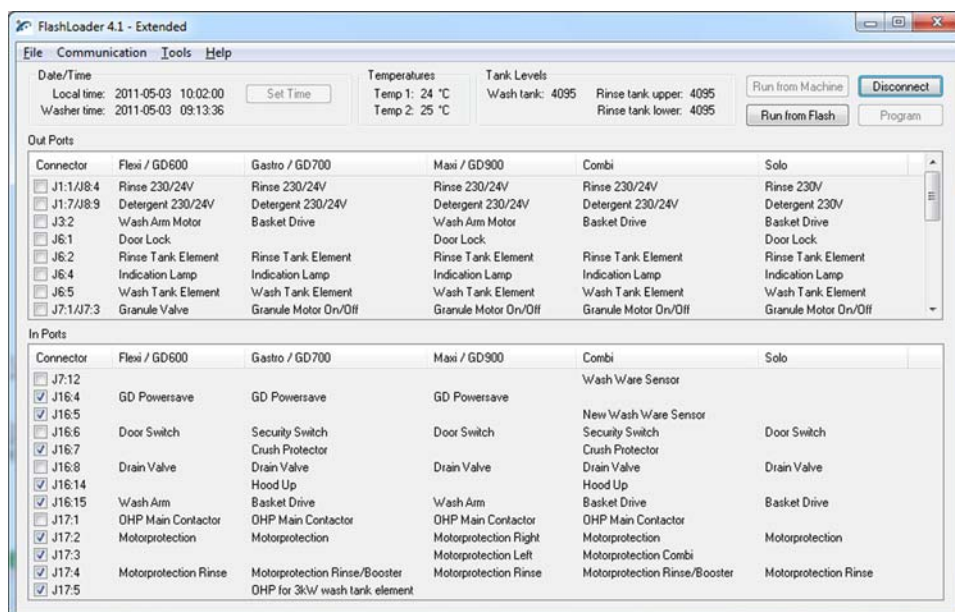


Figure 17: Computer connected and ready to take control.

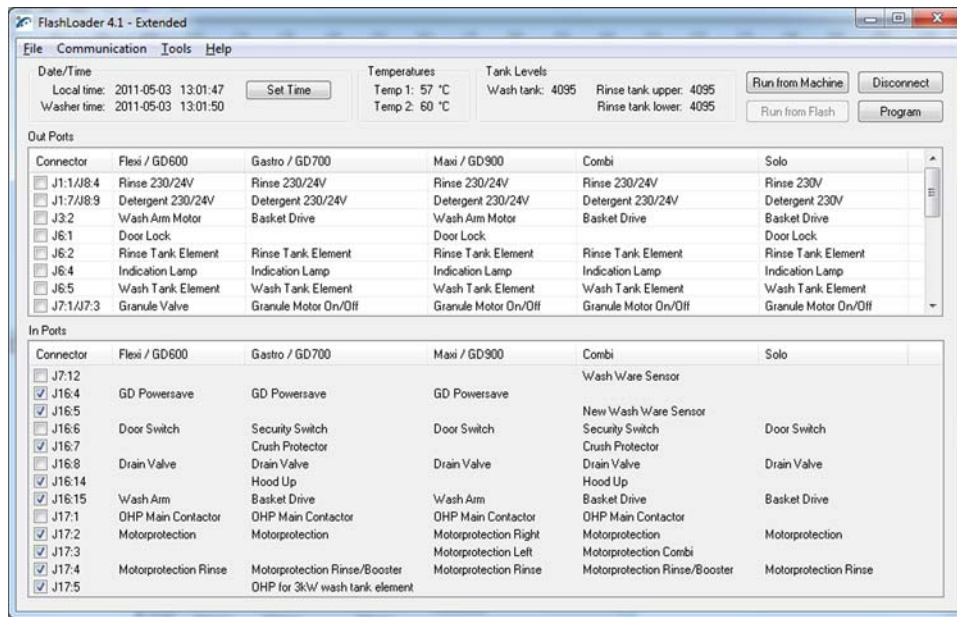


Figure 18: Running the machine with Flash Loader.

- Update date and time in the PC settings by pressing "Set Time". ([Figure 18 Running the machine with Flash Loader, on page 33](#))

4.2.4 Flashloader for troubleshooting

- Connect the computer by pressing "Autodetect" and then select "Run from Flash". (if not done in previous section.)



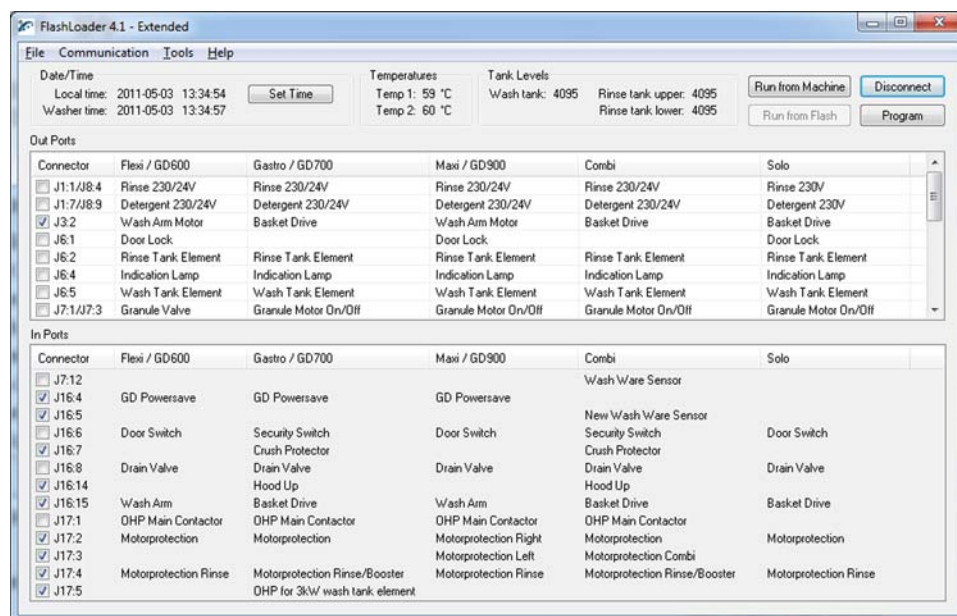
CAUTION

Only tick one function at a time.

Heaters can be turned on without water.

Pumps will only run if the doors are closed.

- When the "Outports" field is white, the outputs can be forced remotely.



Example: Basket drive ticked, basket drive out port forced, basket drive motor running.

3. The inputs are displayed in the "InPorts" field on the computer screen.

- time
- temperature settings
- and tank levels (No level<500, Level>500.)

are displayed at the top of the screen.

4. Always finish the session by pushing "Run from machine". Restart the machine and make sure it runs.

Tip:When looking at the ticks on "In Ports" always look for changes when the sensor/function is manipulated. (By hand or using the Out Ports.)

In this mode no information is shown on the machine's display.

4.2.5 Uploading



NOTE

If the main PCB is replaced all data is lost, if possible read out the values for Service and Granules before the PCB is exchanged. The values are then noted and can be entered using Flashloader after the new PCB is installed.

1. Connect the computer by pressing "Autodetect" and then select "Run from Flash". (if not done in previous section.)
2. Update date and time in the PC settings by selecting "Set Time".



NOTE

Check the time and date on the PC. The machine will be set to the time setting of the PC.

- Enter the Upload software menu by pressing "Program" when this button is highlighted.

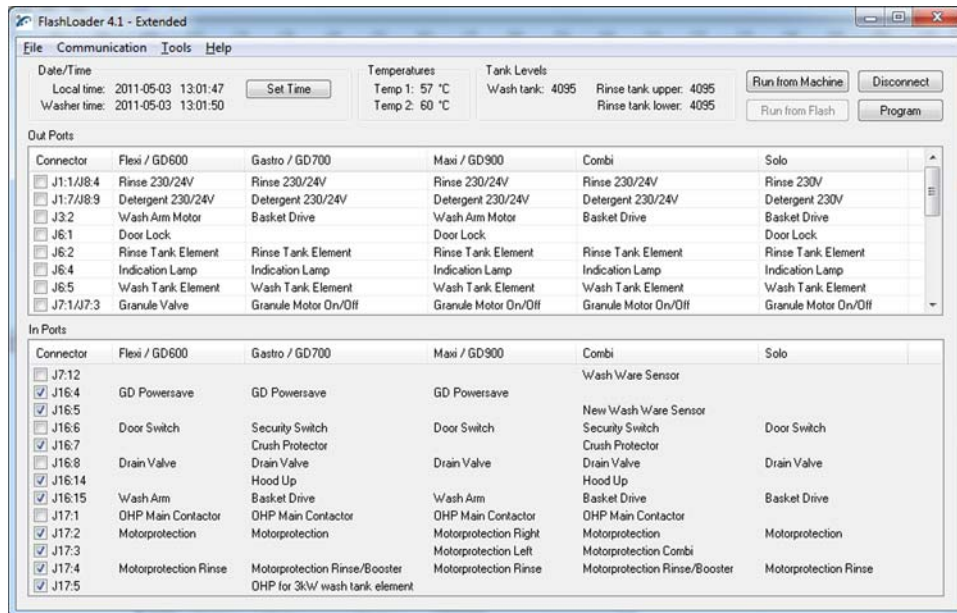


Figure 19: Press Program to enter the menu.

- Select software version e.g. for Smart: "WashProg Smart 4.0.bin", for Maxi, Gastro/Combi, Flexi: "WashProg 4.3.bin".

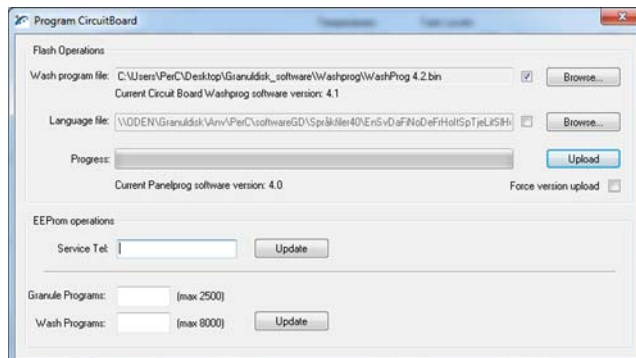
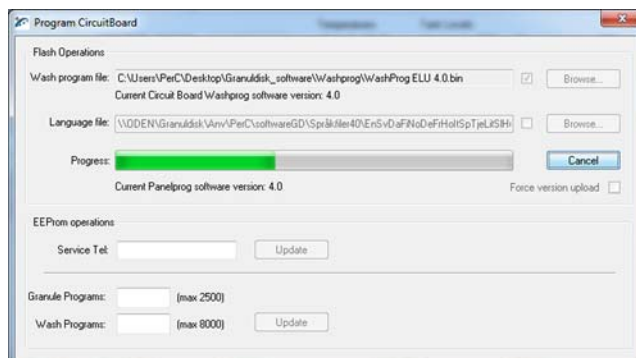


Figure 20: Press "Browse" and select the software to be loaded.

- Make sure that only "Wash program file" checkbox is ticked. If languagefile is to be updated as well, tick "Language file" and choose the correct Language file. (*.spk)
- Then press "Upload".



Uploading

7. When programming is complete, the "Upload ready" window is displayed.



Figure 21: Upload ready

4.3 GDTdirect™ 3.x*

The GRANULDISK® Documentation Tool, GDTdirect™ 3.x, is an integrated function for documentation of the pot washing machine's operating parameters and critical hygiene control points, HACCP. The function can be utilized in two different ways:

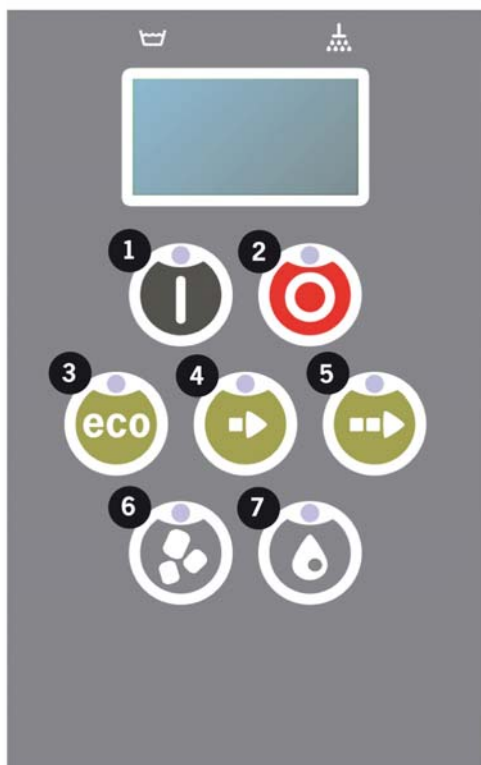
- The operating data for the 100 most recent wash programs can be read off directly on the display.
- For complete storage of all data, an external computer can be connected to the machine and operating data can be stored in separate files.

The system requirements for external computers connected are Windows 2000, Windows XP or Windows 7.

* x is current version number and begins with 0.

4.3.1 Reading data on the control panel display

1. Press the STOP 2 button and release it, and wait for 3 seconds.
2. Press button 4, "short program", 5 times.
3. Scroll with button 3, "eco program", or button 5, "normal program", until "Read operating data" is displayed in the window. Confirm the selection by pressing the OK button 1.



4. Operating data for the most recent program is displayed in the window, for example:

120121 15:19 SG 65/85 OK

The information is read as follows:

Date – 120121 (21/01/12)

Time – 15:19

Program type

E = Eco program

S = Short program

N = Normal program

G = Washing with Granules selected

blank space = Washing without Granules selected

F= Combi mode (Granule Combi only)

65 – indicates the average temperature in the wash tank during washing.

85 – indicates the minimum temperature in the rinse tank during the final rinse.

OK – indicates that the rinse water volume is correct in accordance with the factory settings.

If the settings have been changed, NA (not applicable) is displayed instead.

If the wash program has been interrupted on account of a handling error or a technical fault, no temperature is indicated and "Error:" and an error code is displayed. See the example below. The error message is written in plain text for the most frequent potential errors.

For other errors, [see section](#) , [on page](#) .

120121 15:19 SG Error 103

7. To obtain information about previous programs, scroll forwards and backwards in the list with button 3, "Select eco program", and button 5, "Select normal program".
8. To finish scrolling and exit the list, press the STOP button 2.

4.3.2 Storing data on an external computer

To store complete operating data for the machine, it needs to be connected to an external computer via a serial cable. Software is installed on the computer which gradually collects and stores operating data from every wash program run.

For continuous storage, the computer has to be switched on and the documentation program has to be active. Data is transferred and stored in the selected folder on the computer after every program cycle. This program can be active without preventing the computer being used for other purposes. It is also possible to download the last 100 programs by selecting "Washer/Get all log data" if the computer has not been connected. Note: Duplicates may appear in this mode.

4.3.3 Cable connection

1. Connect a serial RS-232 cable (straight) between the machine serial connector and the computer's serial port. Some machines will not be fitted with the cable. The cable can in these cases be obtained as a spare part.
If the computer does not have a serial port, an USB/serial adapter can be used. For information on what is suitable to a particular computer, contact an IT specialist. The cable is connected to the D-sub 9-pole connector by the detergent junction box in the machine.
2. The cable is then directly connected to a free COM port.
3. Check that the internal cable is connected in the machine's electrical cabinet to the J11 terminal on the PCB.

4.3.4 Program installation

The program can be supplied on a CD or by E-mail and is installed as follows:

1. Create a folder for the program on the hard drive. Use "Explorer" in the computer's office program.
2. Insert the CD and click the program file gdt-direct 3.x.zip on the CD. Save the files in the folder on the hard drive.
3. Tip: a shortcut can be inserted on the desktop to make it easier to find when needed.

4.3.5 Starting the program

1. The program started by double-clicking the program file gdt-direct 3.x.exe in the folder created on the hard drive or by clicking the icon on the desktop.
2. When the program has started, select the port to which the pot washing machine is connected. Click Ports and select the correct port. GDTdirect™ 3.x will remember this setting for the next time GDTdirect 3.x™ starts up.
3. Select Washer.
4. Select Connect.
5. A window appears on the screen and select where log file is to be saved. Select the folder created under "Program Installation" above and save the file.

Tip: name the file after the week or month so that it is easy to find the operating data stored. Example: "HACCP-w.17-2012". New data are saved in the same file after data saved previously until a new file is saved. Rename the log file at regular intervals to avoid too long files.

6. Data is displayed directly on the computer screen. The window is fixed in size and cannot be changed. Table headings are in English. The columns can be widened by placing the mouse cursor in the table header and extending it.

From left to right, the following information can be collected:

- Date;
- Time
- Eco, Short, Normal
- Program type
- Granules
- G/washing with Granules or NO/Washing without Granules
- Temperature in wash tank
- Temperature in rinse tank
- Information on final rinse sufficient – OK or NA if the rinse volume was reduced.

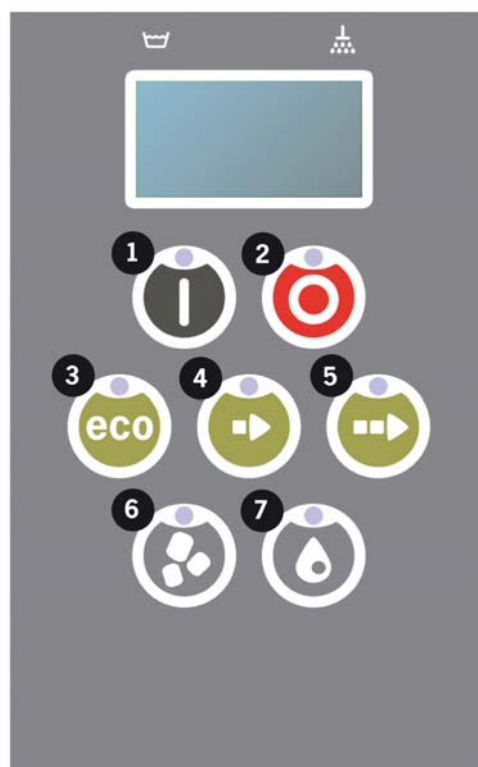
To collect all data continuously, the program must be active and connected to the pot washing machine.

4.3.6 Data processing

Data can be processed by selecting View in the menu and then Log file. To read out data saved in older files, use "Explorer" to find and click the file in the folder in which the files are saved. From Log file, the information can be cut and pasted into e.g. Excel for statistical processing. Saved files can also be placed on a common server or be emailed to a central HACCP manager.

4.4 GD Memo™

GD Memo is an integrated function which informs the user of the machine's most important maintenance requirements. With GD Memo, it is possible to ensure optimum wash results, avoid stoppages during peak hours and maintain the lowest possible operating costs. This function is integrated in the control panel and keeps the user informed as follows:



1. Time to change wash water

— to ensure a good washing result. The "Washing without Granules" button (7) flashes and the message "Change water" is shown in the display. This information disappears once the water has been changed or can be reset by pressing Stop (2), releasing it, waiting 3 seconds and then pressing button (7) five times. OK is shown in the display during 2 seconds after the reset. This reminder appears after every 25 wash cycles in preset. The number of washes may be varied between 15 and 40 washes.

2. Time to change Granules

— to maintain the wash power in the machine. The "Washing with Granules" button (6) flashes and the message "Change Granules" is shown in the display. After changing the Granules, reset the reminder by pressing the STOP button (2), wait for 3 seconds, then press the Granule button (6) 5 times. OK is shown in the display during 2 seconds after the reset. A Granule change reminder appears after every 2500 wash cycles.

3. Time for periodical service

— to avoid expensive repairs and unnecessary breakdowns. The STOP button (2) flashes and a message is shown in the display. Either "Time for service 1" or "Time for service 2" depending on which service is required. Phone number for Service company or GRANULDISK is shown below the service message. The reminder can be reset by an authorised service technician, once the service is performed. OK is shown in the display during 2 seconds after the reset. Service message appears every 8000 programmes or once a year, whichever occurs first.

4. Alarm priority

If the reminders "Change water", "Change Granules now" or "Time for service" occurs at the same time, the messages are prioritised as follows:

- "Change wash water" will always have first priority
- Once the water has been changed and the message reset, the next message can be shown
- Second priority "Change Granules now", "Time for service" are alternately displayed, if issued at the same time.
- The reminders flash until messages are reset.

4.4.1 User menu entrance



Figure 22: Operators panel

1. Press the STOP button, release it and wait for 3 seconds,
2. Press the Short program button (4) five times.

The following menus can be can be scrolled by using eco button (3) or the Normal program button (5).

1. Language:
Set the language by pressing Confirm button (1) and set the language by scrolling with eco (3) and Normal program (5). Press Confirm (1) to select the language
2. Values on the level sensors:
Values of level sensors are displayed and status on door switches (serial connected i.e. both have to be closed to give status "Doors closed").
Values on level sensors should be 0–100 when no level and 4095 when indicating water, any value above 500 (factory setting) is read as level by the software.
WT=Wash tank
URT=Upper rinse tank
LRT=Lower rinse tank
3. Read operation data:
Here the data from the last 97 programs are stored. [see section 4.3.1 Reading data on the control panel display, on page 36](#)
4. Read accumulated values:
In this menu the number of occurrences of most errors are stored that has occurred during wash cycles. The total number of cycles and type of cycle can be read out.
5. Steam reduction equipment:
Activate and deactivate steam reduction, if installed.
6. Type of rinse aid dosage
"Per cycle": Dose when rinse tank is refilled after cycle.
"Per litre": Dose when rinse tank is filled after cycle and during filling of wash tank.

5 Routines for long time storage

Routine for storing Granule Maxi not in daily use.

1. Collect the Granules in the machine with the Granule collector.
2. Rinse the Granules with plenty of water so all the dirt is removed.
3. Fill a sink with dish washing detergent solution (2 ml detergent / litre water) Place the Granule collector with the Granules in that solution overnight.
4. Drain the machine and leave the drain valve open.
5. Perform an extra careful daily cleaning of the machine.
6. Lubricate the door seals and Granule valve gasket with rubber grease
7. Turn off the supply disconnecting device and the inlet water supply.
8. Next day, drain the detergent solution from the sink where the Granules has been stored overnight.
9. Rinse the Granules with plenty of water. Shake well to remove as much water as possible.
10. Store the clean Granules in the Granule collector.
11. Place the Granule collectors in the machine.
12. Ensure that the machine doors are not completely closed so that air can circulate.
13. Service #1 has to be carried out if the machine has been stored for more that 3 months.
Service #2 has to be carried out if the machine has been stored for more than 9 months.

6 Warranty

The following requirements apply for a valid GRANULDISK product warranty:

The standard warranty is valid for 12 months from commissioning or at the most 15 months from the date the goods are delivered from GRANULDISK AB in Malmö, Sweden.

The warranty is valid only if the product has been utilized for normal and proper use in a catering kitchen, or similar, and is correctly installed according to instructions and requirements supplied by GRANULDISK AB.

GRANULDISK AB shall remain liable for a period of twelve (12) months (warranty period) for the removal and replacement of any parts of the goods suffering from "Epidemic failure". The notification of such a defect shall be done by the Distributor prior to the end of the warranty period.

"Epidemic failure" refers to any defect which has appeared in any consecutive 12-month period in 10 % of any parts of the goods of a similar type and nature to each other.

The warranty does not include compensation for personal injury, loss of production, loss of profit or any other indirect losses.

The warranty is valid ONLY if periodic maintenance has been performed by an authorized Service Partner and reported to the local GRANULDISK representative. The GRANULDISK Product's Operator display reminds users when Service is needed.

Periodic Maintenance and parts needed for this are not covered by the Warranty

The warranty does not cover wear to metal and consumables such as light bulbs, filters, fuses, gaskets etc.

Every month, the distributor shall provide GRANULDISK AB with a list of spare parts which have been replaced under the warranty, specifying machine number and information about the defect.

GRANULDISK AB decides which replaced spare parts must be returned for examination at GRANULDISK.

Incomplete documentation may result in the warranty being null and void.

The return of parts covered by the warranty must be approved by your local GRANULDISK After Sales representative and clearly labelled with machine number and copy of packing slip for replacement part.

The warranty is valid only if GRANULDISK AB Granules and spare parts are being used and if a completed and signed Site Survey/Installation Protocol is returned to GRANULDISK AB.

The cost of labour for warranty repairs is not covered by GRANULDISK AB.

The warranty covers faults caused by defects in construction, materials or fabrication.

7 Maintenance and Service

7.1 Service instructions 1 year service

Granule Maxi 1 year service (8000 Cycles).

Spare parts: Servicet kit 1 article # 20032.

1. Perform checks according to "Service record 1 year service". [see section 9 Appendix](#)
2. Replacing the wash nozzles.
 - a Undo the wash arms.
 - b Check arms and locking devices for damages, cracks.
 - c Undo the wash nozzles and check for foreign objects in the arms.
 - d To replace the wash nozzles with new ones: Twist the nozzle with a pair of adjustable pliers until the lug snaps and the nozzle comes off.
 - e Make sure that the upper part and the hole in the white plastic bearing, of the wash arm, is clean. Clogged hole could cause problems removing the wash arms during daily cleaning.



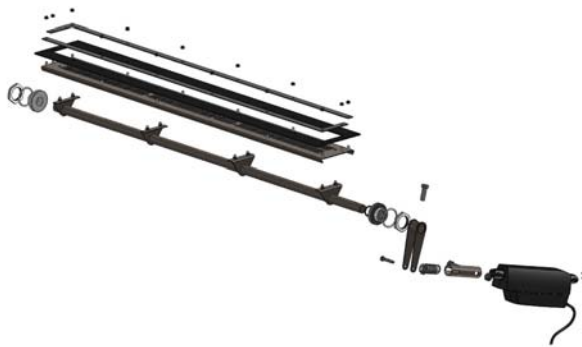
Figure 23: Make sure the hole is not clogged and no granules.

- f Mount o-rings on the wash nozzles and mount the wash nozzles.
 - g Mount washer arm.
 - h Check that the washer arms are firmly locked with the locking device.
3. Replace the Granule damper seal and Granule damper shaft seals.
 - a Undo the 8 nuts holding the damper to the shaft.



Nuts holding the damper.

- b Take the damper grid with seal out of the machine.
- c Undo the frame holding the seal (14 Nuts).
- d Replace the seal and mount the frame again.



Exploded view of Granule damper mechanism.

- e Undo right cover plate.
- f Undo the brass nut that holds the right damper shaft bearing.
- g Push the bearing into the machine.
- h Undo the bolt (M12) that fixes the arm to the shaft.

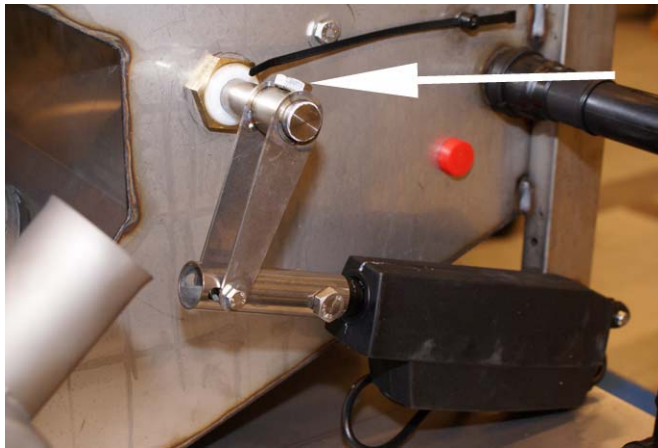


Figure 24: Bolt



NOTE

Never tap the shaft to the left when it is placed in the left hand bearing. This will crack the bearing.

- i Gently slide the arm off the shaft.

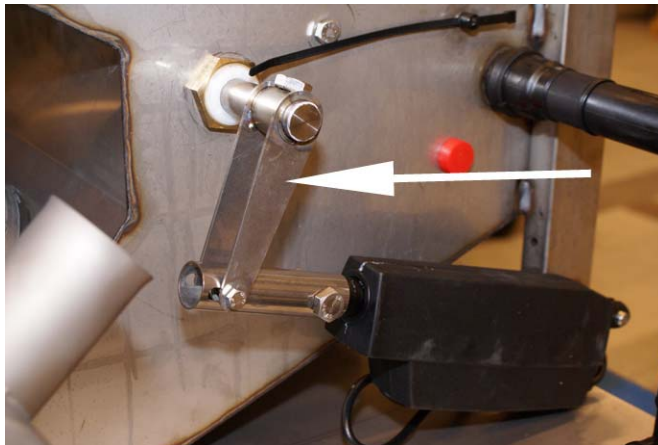


Figure 25: Arm

- j Push the shaft to the right and take it out of the machine.
 - k Undo the bearing, and replace the o-rings. The o-ring between machine wall and bearing is mounted dry. Lubricate the o-ring for the shaft well before mounting
 - l Slide the bearing on the shaft and fit the shaft in the right hand hole for bearing.
 - m Slide the nut on the shaft. Slide the arm on.
 - n Secure the arm with the bolt.
 - o Fit the shaft into the left hand bearing.
 - p Fit the right hand bearing and tighten the brass nut.
 - q Remount the damper on the shaft.
4. Replace the cabin seal.
- a Undo the seal supports.
 - b Undo the seal.

- c Clean supports and seat edges for tight sealing.
 - d Fit new seal make sure that the joint is to the bottom right or left. Shorten for good joint.
 - e Remount the seal holders.
5. Replace middle seal (left door).
- a Undo old seal.
 - b Fit seal top, bottom and centre. Align the phased parts of the centre seal against the cabin seal. (picture).

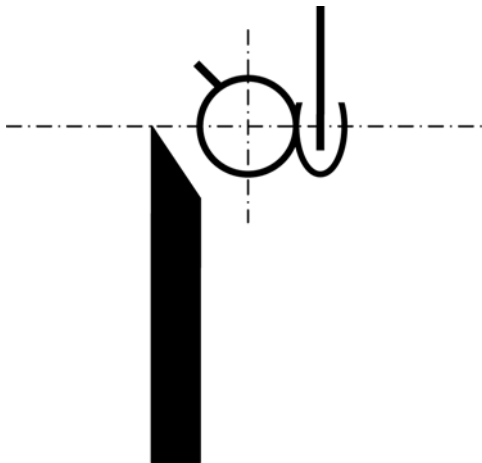


Figure 26: Alignment to cabin seal, same alignment up and down.

- c Press in the rest of the seal.
- d Close door and make sure that the seal sits straight in the holder for a tight fit.

7.2 Service instructions 2 year service

Granule Maxi 2 year service (16000 Cycles).

Spare parts: Service kit 1 article # 20036.

Make sure that the machine is empty from granules and water.

1. Perform checks according to "Service record 2 year service". [see section 9 Appendix](#)
2. Replace slide bearings and wash nozzles for wash arms (13131, 20021):



- a Remove the roof.
- b Undo the right and left cover plates.
- c Undo the screw locking the rocker arm.
- d Undo the rocker arm.
- e If stuck, use a withdrawing tool, do not tap, tapping might damage the seat for bearing or welding.
- f Undo the wash arms and the shafts together. Undo the locking washer and washer.



NOTE

If the arms were removed previously, cover the lower wash arms bearings. The shafts will end up in the wash hoses, if the lower bearings are not covered.

- g Undo the slide bearings.
- h Undo the wash nozzles and check for foreign objects in the arms.
- i To replace the wash nozzles with new ones: Twist the nozzle with a pair of adjustable pliers until the lug snaps and the nozzle comes off.
- j Make sure that the upper part and the hole in the white plastic bearing, of the wash arm, is clean. Clogged hole could cause problems removing the wash arms during daily cleaning.



Figure 27: Make sure the hole is not clogged and no granules.

- k Check arms and locking device for damages, cracks.
- l Mount o-ring on wash nozzles and mount the wash nozzles.
- m Mount new bearings.
- n Check that the pins on the shafts that interlock with the wash arms are firmly fastened. If not, secure it with centre punch in the centre of shaft.



Figure 28: Make sure the pin is secured.

- o Mount shaft on washer arm. Mount washer arm together with the shaft.
 - p Check that the washer arms are firmly locked with the locking device.
 - q Mount the washer and locking washers on the shafts.
 - r Mount the rocker arms and remount the screws.
3. Dismount and clean the washer arm motor fan cover and remount it.
 4. Replace the y-piece in the rinse system (18056, 6005171):
 - a Check rinse hoses for damage exchange if necessary. (Normally not required)
 - b Undo the three hose clamps and exchange the y-piece on top of machine (rinse system).
 - c Mount the new y-piece with new hose clamps.
 5. Replace all rinse nozzles (20019):

- a Check tubes from dirt. By undoing the lower nozzle on each side.
 - b If dirt is present: run the rinse system with bottom nozzles dismounted by using a computer and the Flash loader software.
If no computer is available, fill the machine for one minute and drain it.
Abundance of lime scales could be caused by too hard water. If possible soften the water.
 - c Undo all rinse nozzles.
 - d Fit new rinse nozzles.
6. Replace the Granule damper seal and change o-rings for Granule damper shaft (18070, 60477, 10930): Perform point [3 on page 47](#)
7. Replace wash hoses (18270, 18271, 60415):
 - a Undo hose clamps
 - b Undo wash hoses.
 - c Fit new hoses and clamps.
8. Replace cabin seal (19919): Perform point [4 on page 49](#)
9. Replace middle (left door) seal (11772): Perform point [5 on page 50](#)

8 Steam heating Granule Maxi®

8.1 Power/Effective Steam Pressure

The element is designed to be connected to an effective steam pressure of 0.3-2.0 bars saturated steam for a water feed temperature of 55° C. Always contact Granuldisk if the temperature of the water supply is lower.

8.2 Heating time

Example: If the required heating time is 4 minutes and the rinse water's original temperature is 40° C, the steam pressure needed is about 0.55 bars. Wash tank Diagram 2 (p. 4) shows how the time to heat the water in the wash tank to 65° C depends on the steam pressure and the water's original temperature. This heating time only affects the wash process of the first wash of the day or after a change of wash water. Diagram 2 is read in the same way as diagram 1.

8.2.1 Rinse tank

The short programme allows approx. 5 minutes heating time. Diagram 1 (p. 4) shows how the steam pressure and the original temperature of the rinse water affect the heating time for the final rinse water. If the theoretical heating time exceeds approx. 5 minutes, the wash time is automatically increased until a temperature of 85° C has been reached in the rinse tank. In this way a hygienically clean wash result is guaranteed.

Example:

If the steam pressure is 1.5 bars and the rinse water's original temperature is 55° C, the heating time is less than 2 minutes.

Example:

If the required heating time is 4 minutes and the rinse water's original temperature is 40° C, the steam pressure needed is about 0.55 bars.

8.2.2 Wash tank

Diagram 2 ([on page 59](#)) shows how the time to heat the water in the wash tank to 65° C depends on the steam pressure and the water's original temperature. This heating time only affects the wash process of the first wash of the day or after a change of wash water. Diagram 2 is read in the same way as diagram 1.

8.3 Steam Consumption

Steam consumption can be described in two ways:

- a. The daily consumption as a function of the number of wash cycles in an eight-hour day is shown in diagram 3 ([on page 60](#)). The calculation assumes that the water is changed after 25 wash cycles. Heat losses during the day have also been taken into consideration. Diagram 3 is valid for short and normal programmes. If eco programme is used the steam consumption is lower per wash cycle.
- b. Peak consumption, the steam consumption per unit of time when both the elements are on at the same time, is shown in diagram 4 ([on page 60](#)). This information is used to determine the capacity of the steam and condensation systems.

8.4 Safety

The steam element is tested at 10 bars for 30 seconds, strength calculations according to pipe norms. Maximum working pressure for the magnetic valves is 10 bars.

8.5 Connection

8.5.1 Steam pressure

0.3-2.0 bars

8.5.2 Fuse

20 A / 400 V

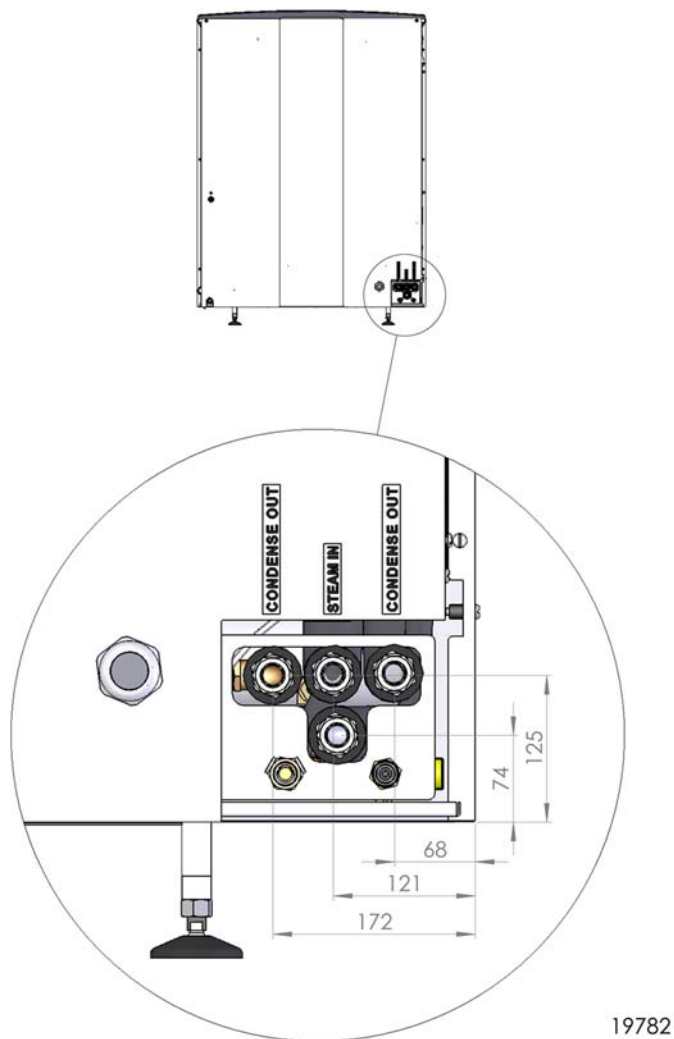
25 A / 230 V

8.5.3 Steam in

- 2 magnetic valves, 2/2 position, closed in the idle position.
- Pressure range 0-10 bars
- Voltage/frequency 24V/50 Hz
- Connection back side left ([Steam connections, on page](#)), 2 x 1/ 2" external thread

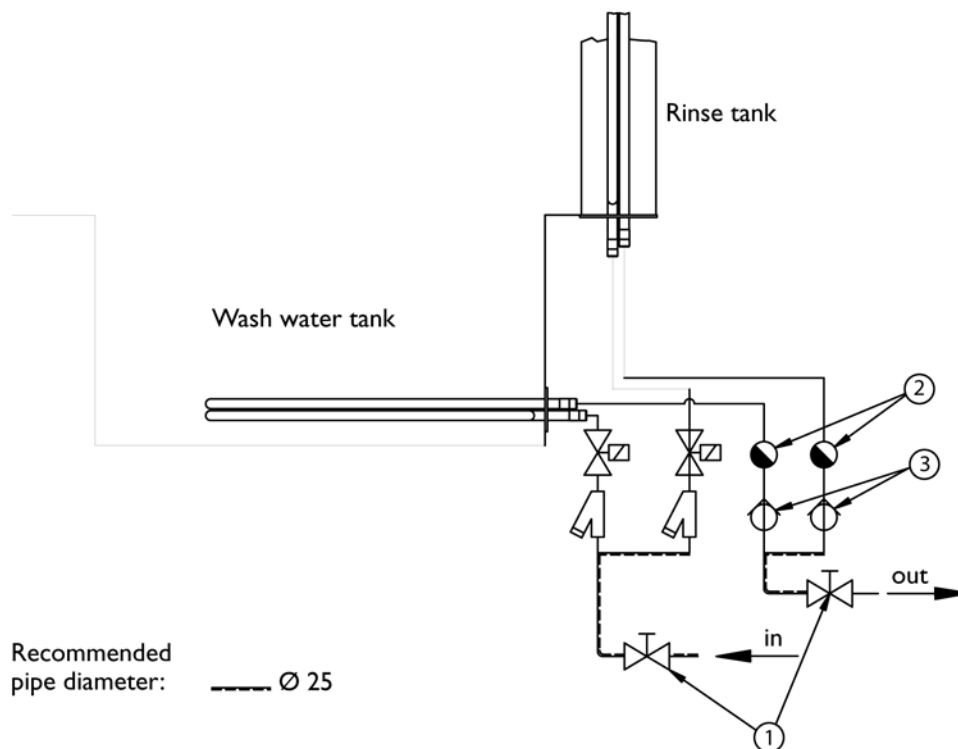
8.5.4 Condensation out

Connection back side left ([Steam connections, on page](#)), 2 x 1/ 2" external thread.



Steam connections

Pressure 0,3 - 2 Bar



Flow chart

8.6 Recommended equipment not included

Other essential or recommended equipment not included in the steam version of the Granule Maxi

1. Separate closing valve 1/2".
2. Condensation carrier, e.g. thermally encapsulated condensation carrier 1/2"
3. Non-return valve 1/2"

8.7 Diagrams

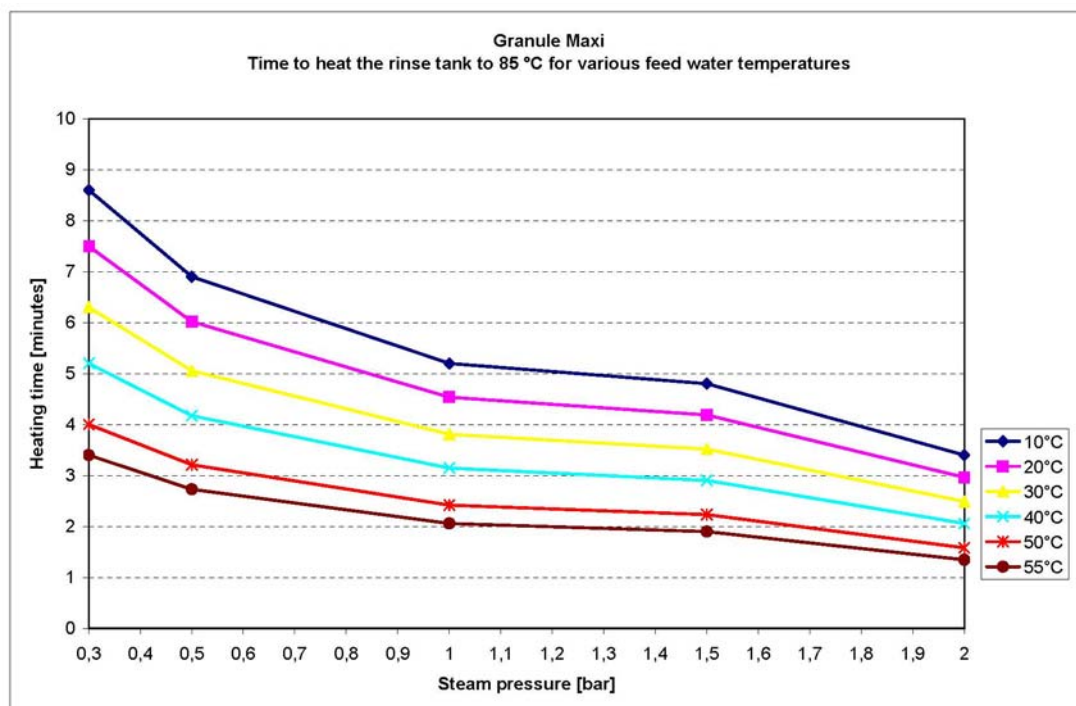


Diagram 1

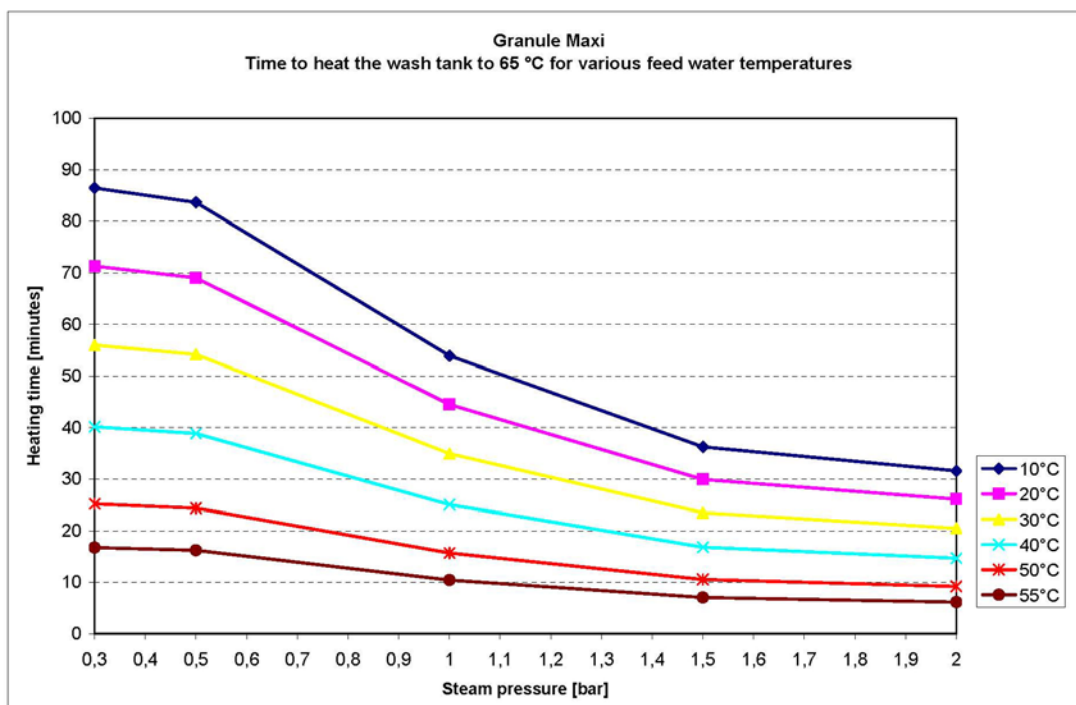


Diagram 2

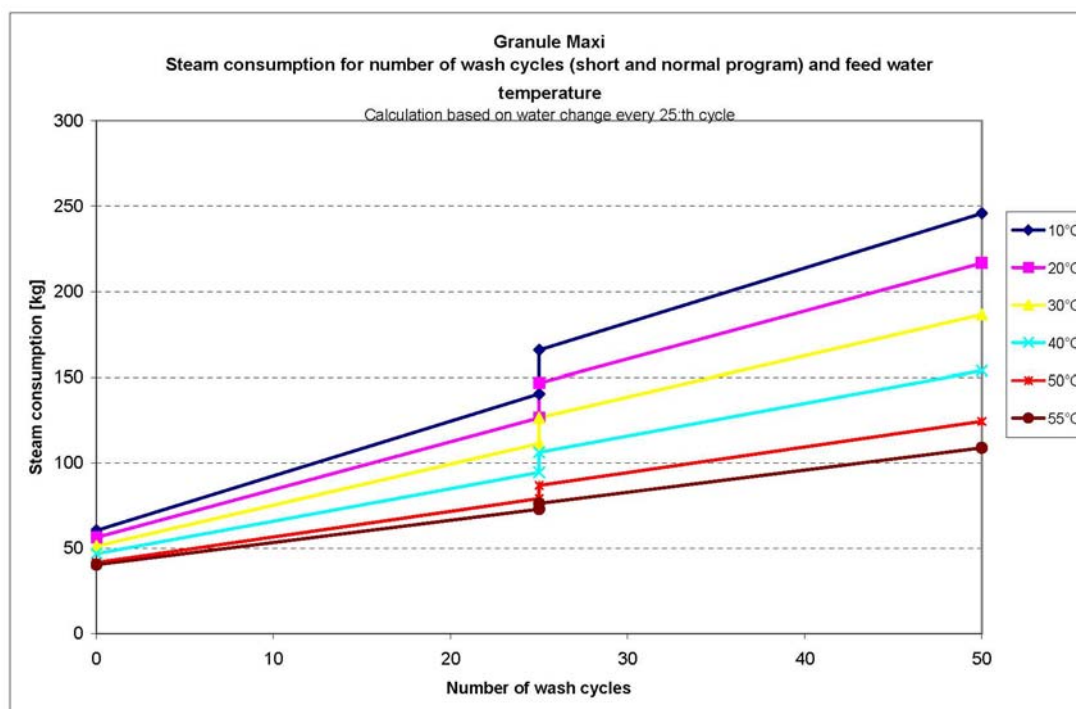


Diagram 3

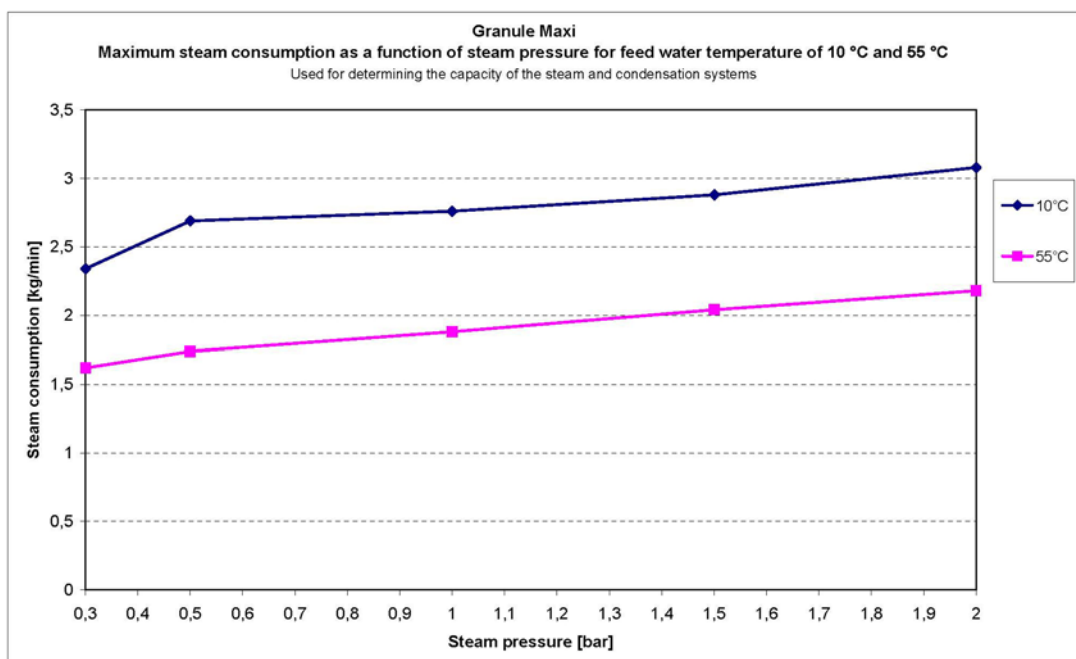


Diagram 4

9 Appendix

Service record 1 year service

Service record 2 year service

Wiring diagrams

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Service record 1 year service

Customer:	
Machine type	Granule Maxi
Serial no.	
Service performed by:	
Name	Company:

Check point		Passed	Failed	Notes
1. Solenoid valve, incoming water	Check operation. Leaks in the pipes, connections, solenoid valve and water filter.	☐	☐	
2. Tank level	Check level sensor. Clean	☐	☐	
3. Final rinse pipes	Check nozzles/inlets/hoses	☐	☐	
4. Granule damper	Exchange the seal and the shaft seal. Check the opening and closing function.	☐	☐	
5. Overflow drain sieve	Is it undamaged, clean and in place?	☐	☐	
6. Steam reduction unit	Check the solenoid valve and nozzles. Can be checked with open doors and Flashloader software.	☐	☐	
7. Spray pipe motor	Clean the fan cover on the spray pipe motor	☐	☐	
8. Link system, bearings and nozzles	Wear and leakage in the spray pipe bearings and/or O-rings. Exchange wash nozzles. Binding in the pipe or link systems? Lubricate ball-and-socket joints and bearings. Check the spray pipe lock.	☐	☐	
9. Doors and seals	Exchange the cabin seal and left door seal. Check for leakage / door closing/ door seals / door bearings / control guide knobs	☐	☐	

Check point		Passed	Failed	Notes
10. Drip collector	Check function of drains if necessary clean the tubes.	☐	☐	
11. Door sensors and locking mechanism.	Check operation 1: Ensure that there is no water in the wash tank. Close one door and leave the other open. Check that the machine does not fill with water when a wash programme is selected. Repeat with the other door. Check operation 2: Close both doors and check that neither can be open while the machine is filling.	☐ ☐	☐ ☐	
12. Rinse tank	Check the level sensor. Clean, exchange if necessary. Check for leaks in water connections.	☐	☐	
13. Granules	Check amount and wear. <i>NB! Ensure that only original Granules are used in the machine.</i> PowerGranules® 8 kg Order no 19833 20 kg Order no 19834	☐	☐	
	Fill the machine with water and Granules. And make a test run.			
14. Heater wash tank and rinse tank	Check that the current the same to all three leads. Measure by the contactor.	☐	☐	
15. Temperatures	Check the temperature sensors Are the probes inserted properly in the wash/rinse tank? Are the probe screws tightened? Wash temperature = 65 °C Rinse temperature = 85 °C Check the heater elements	☐	☐	Wash tank temperature=_____ Rinse tank temperature=_____
16. Pumps/ distributors/ hoses	Check for noise and leaks	☐	☐	
17. Other water leakage	Welded joints, washers etc. Check doors for leaks	☐	☐	
18. Distribution box	Check cable connections.	☐	☐	
19. Control panel	Check the main cable, panel buttons as well set programme values. Check	☐	☐	

Check point		Passed	Failed	Notes
	temperature blocks. Check rinse time normal time =40 s. (non Eco mode).			
20. Detergent and rinse aid dosing	Doses correctly/does food fat dissolve/is there foam in the wash water?	☐	☐	
21. Outflow	Check the drain time. Do granules emerge with the water when the machine is emptied? Check the overflow pipe.	☐	☐	
22. User manual/ wall chart	Are they available?	☐	☐	
23. Accessories for pots trolleys	Check that welds etc. are undamaged.	☐	☐	
24. Trolley	Check trolleys function and ware. Check trolley wheels ware and function.	☐	☐	
25. Reset GDMemo	Reset Service notification in GDMemo.	☐	☐	

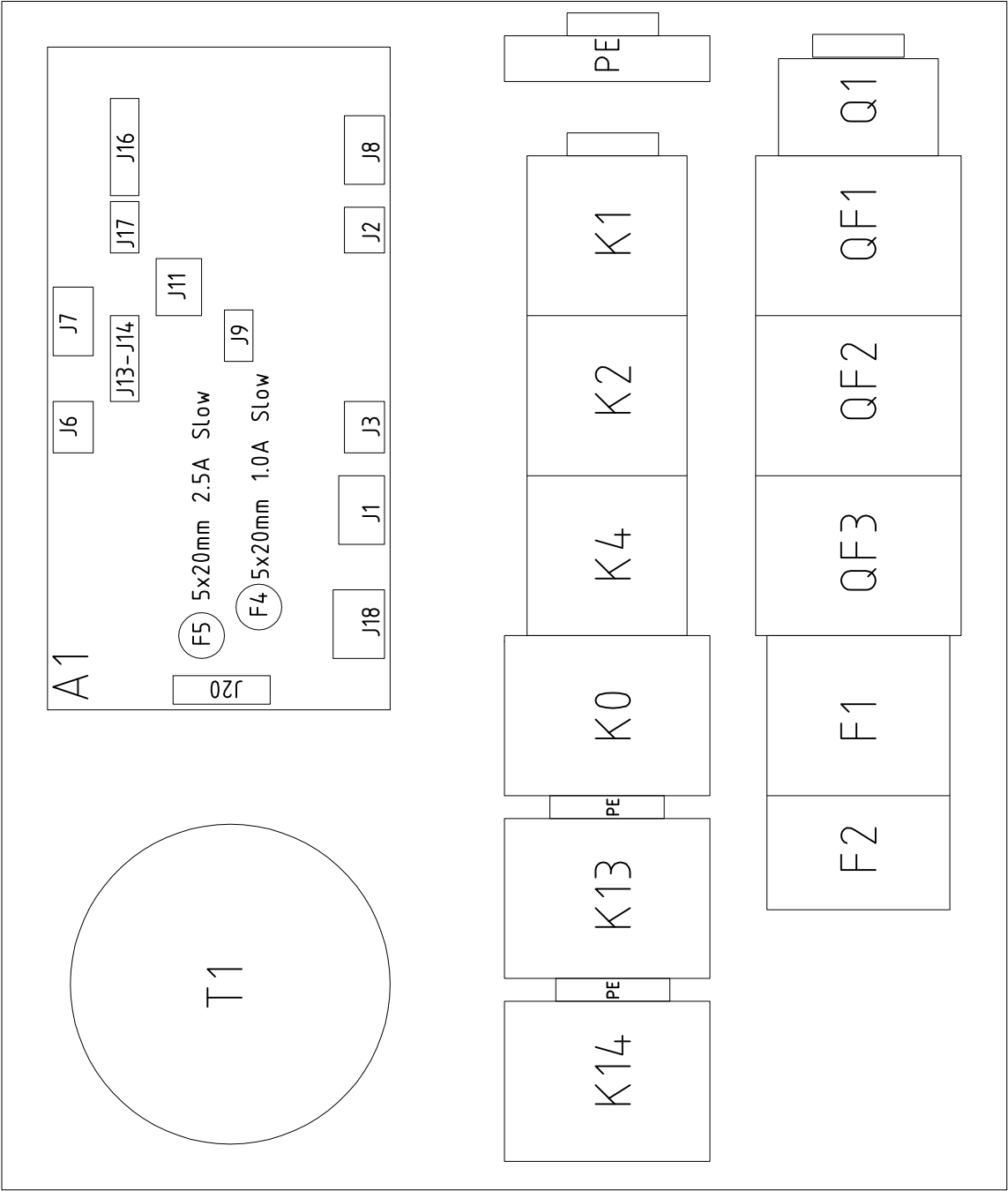
Service record 2 year service

Customer:	
Machine type	Granule Maxi
Serial no.	
Service performed by:	
Name	Company:

Check point		Passed	Failed	Notes
1. Solenoid valve, incoming water	Check operation. Leaks in the pipes, connections, solenoid valve and water filter.	☐	☐	
2. Tank level	Check level sensor. Clean	☐	☐	
3. Final rinse pipes	Exchange the y-connector on the tubing (roof).	☐	☐	
4. Granule damper	Exchange the seal and the shaft seal. Check the opening and closing function.	☐	☐	
5. Overflow drain sieve	Is it undamaged, clean and in place?	☐	☐	
6. Steam reduction unit	Check the solenoid valve and nozzles. Can be checked with open doors and Flashloader software.	☐	☐	
7. Spray pipe motor	Clean the fan cover on the spray pipe motor	☐	☐	
8. Link system, bearings and nozzles	Exchange wash nozzles. Exchange the slide bearings. Binding in the pipe or link systems? Lubricate ball-and-socket joints and bearings. Check the spray pipe lock.	☐	☐	
9. Doors and seals	Exchange the cabin seal and left door seal. Check for leakage / door closing/ door seals / door bearings / control guide knobs	☐	☐	
10. Drip collector	Check function of drains if necessary clean the tubes.	☐	☐	
11. Door sensors	Check operation 1: Ensure that	☐	☐	

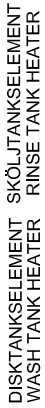
Check point		Passed	Failed	Notes
and locking mechanism.	there is no water in the wash tank. Close one door and leave the other open. Check that the machine does not fill with water when a wash programme is selected. Repeat with the other door. Check operation 2: Close both doors and check that neither can be open while the machine is filling.	☐	☐	
12. Rinse tank	Check the level sensor. Clean, exchange if necessary. Check for leaks in water connections.	☐	☐	
13. Wash hoses	Exchange the wash hoses.	☐	☐	
14. Granules	Check amount and wear. <i>NB! Ensure that only original Granules are used in the machine.</i> PowerGranules® 8 kg Order no 19833 20 kg Order no 19834	☐	☐	
	Fill the machine with water and Granules. And make a test run.			
15. Heater wash tank and rinse tank	Check that the current the same to all three leads. Measure by the contactor.	☐	☐	
16. Temperatures	Check the temperature sensors Are the probes inserted properly in the wash/rinse tank? Are the probe screws tightened? Wash temperature = 65 °C Rinse temperature = 85 °C	☐	☐	Wash tank temperature=_____ Rinse tank temperature=_____
17. Pumps/ distributors/ hoses	Check for noise and leaks	☐	☐	
18. Other water leakage	Welded joints, washers etc. Check doors for leaks	☐	☐	
19. Distribution box	Check cable connections.	☐	☐	
20. Control panel	Check the main cable, panel buttons as well set programme values. Check temperature blocks. Check rinse time normal time =40 s. (non Eco mode).	☐	☐	

Check point		Passed	Failed	Notes
21. Detergent and rinse aid dosing	Doses correctly/does food fat dissolve/is there foam in the wash water?	☐	☐	
22. Outflow	Check the drain time. Do granules emerge with the water when the machine is emptied? Check the overflow pipe.	☐	☐	
23. User manual/ wall chart	Are they available?	☐	☐	
24. Accessories for pots trolleys	Check that welds etc. are undamaged.	☐	☐	
25. Trolley	Check trolleys function and ware. Check trolley wheels ware and function.	☐	☐	
26. Reset GDMemo	Reset Service notification in GDMemo.	☐	☐	

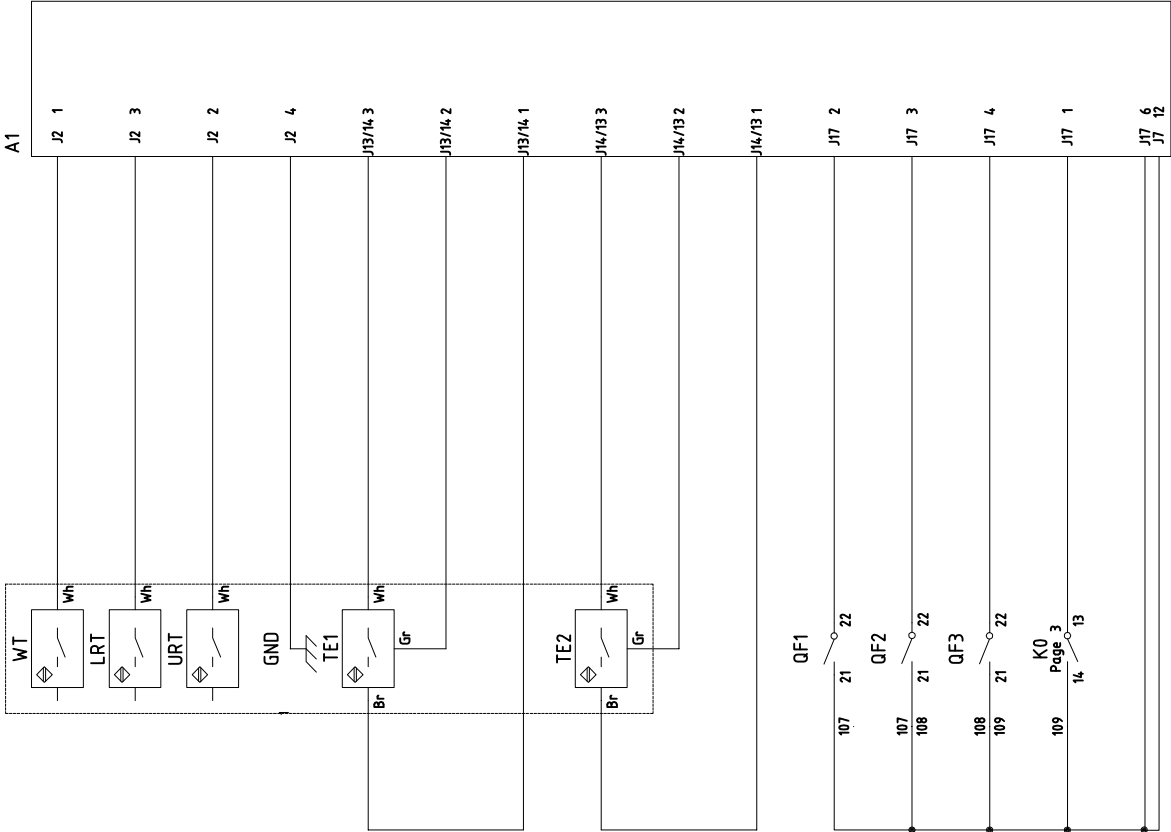


Item	Quantity	Description (Name / Material / Note)				Part number / Dimension	
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HS	CK	TM					
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		Granule Maxi				Drawing number 23017	Edition 00

200/230 V + 400/415 V CW



x, F4 supplies Wash Arm Motor, Detergent box and A1
xx, F5 supplies Linear Actuator, Detergent box and A1



NIVÅGIVARE DISKTANK
LEVEL SENSOR, WASH TANK

NIVÅGIVARE NEDRE SKÖLJTANK
LEVEL SENSOR, RINSE TANK LOWER

NIVÅGIVARE ÖVRE SKÖLJTANK
LEVEL SENSOR, RINSE TANK UPPER

TEMPERATURGIVARE
TEMPERATURE SENSOR

TEMPERATURGIVARE
TEMPERATURE SENSOR

MOTORSKYDD DISKPUMP HÖGER
PROTECTIVE MOTOR SWITCH WASH PUMP RIGHT

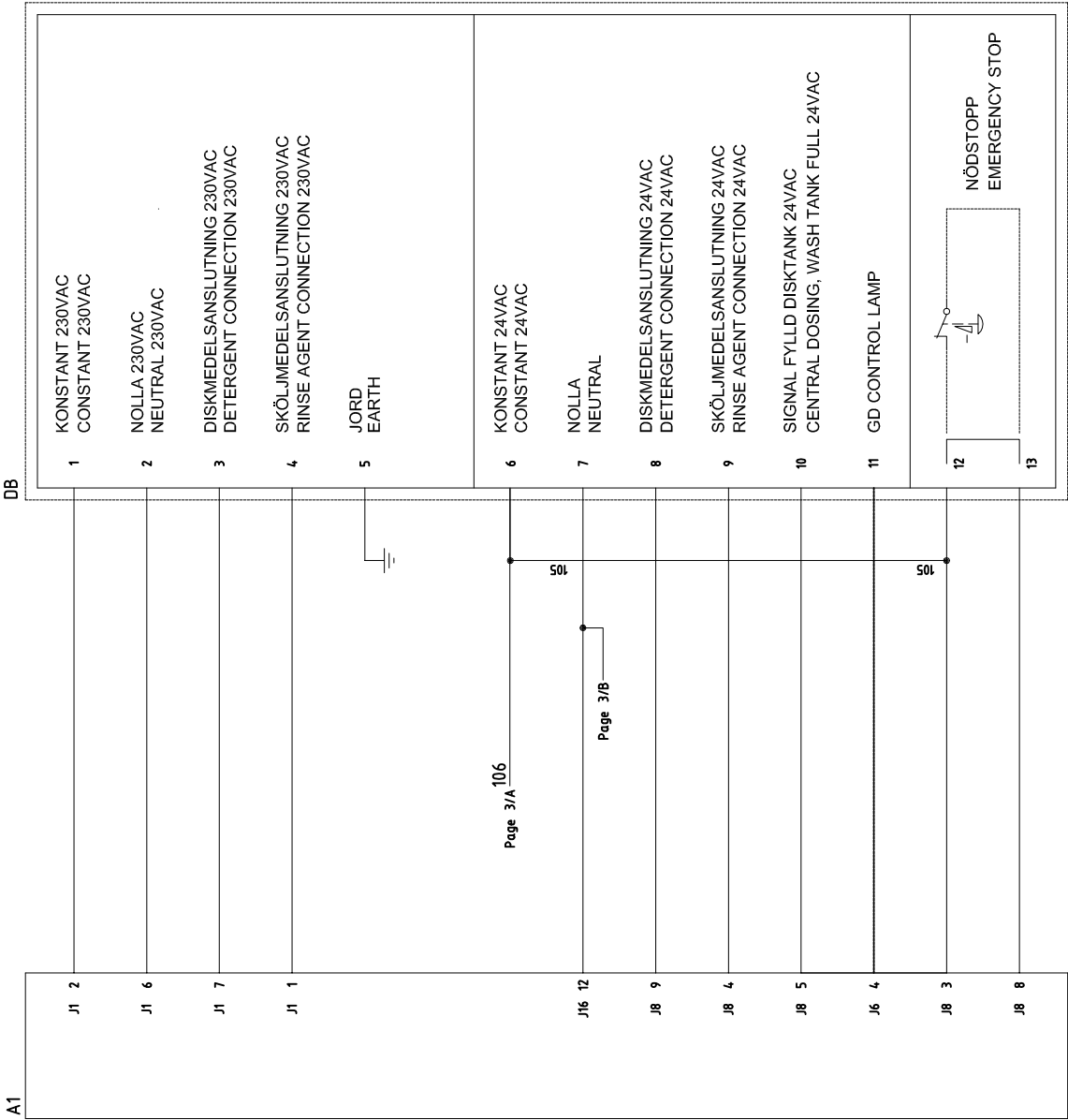
MOTORSKYDD DISKPUMP VÄNSTER
PROTECTIVE MOTOR SWITCH WASH PUMP LEFT

MOTORSKYDD SKÖLJPUMP
PROTECTIVE MOTOR SWITCH RINSE PUMP

DRIFT ELEMENT
OPERATION HEATER

Item	Quantity	Description (Name / Material / Note)				Part number / Dimension	
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HS	CK	TM					
		Circuit Diagram				DWG-file name	Date
		Granule Maxi				23019.dwg	2012.01.23
						Drawing number	Edition
						23019	00

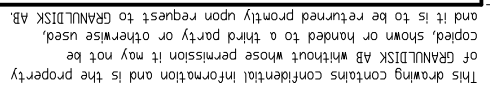




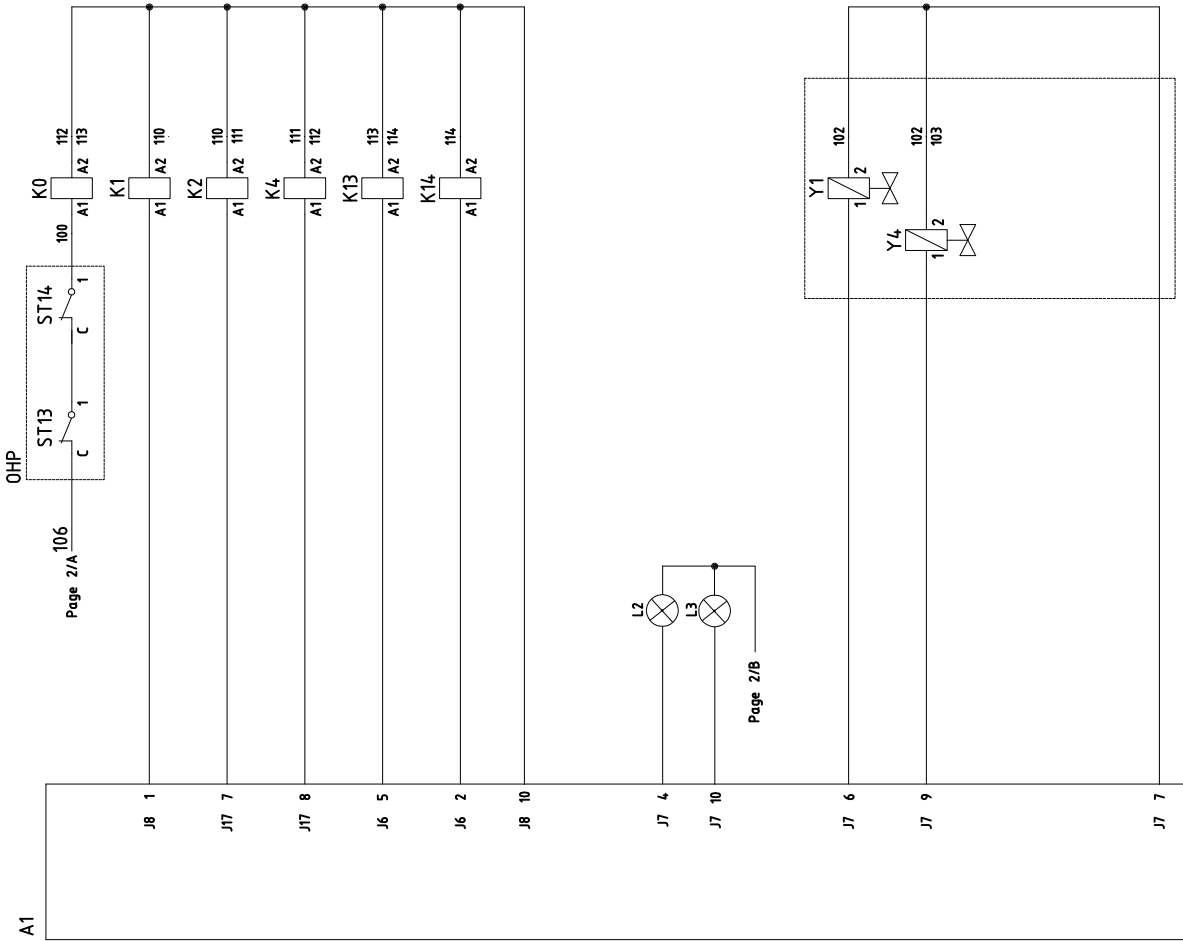
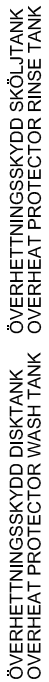
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HS	CK	TM					
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						23019.dwg	2012.01.04
		Granule Maxi				Drawing number	Edition
						23019	00



1



x, F4 supplies Wash Arm Motor, Detergent box and A1
xx, F5 supplies Linear Actuator, Detergent box and A1



SKYDDSKONTAKTOR ELEMENT
PROTECTIVE CONTACTOR HEATERS

DISK PUMP HÖGER
WASH PUMP RIGHT

DISK PUMP VÄNSTER
WASH PUMP LEFT

SKÖLJPUMP
RINSE PUMP

DISKTANKSELEMENT
WASH TANK HEATER

SKÖLJTANKSELEMENT
RINSE TANK HEATER

Röd LED-lampa dörr
Red LED lamp door
Grön LED-lampa dörr
Green LED lamp door

INKOMMANDE VATTEN SKÖLJTANK
SOLENOID VALVE, INCOMING WATER RINSE TANK

ÅNGREDUCERING
SOLENOID VALVE, STEAM REDUCTION

Item		Quantity		Description			(Name / Material / Note)		Part number / Dimension			
Designed by		Drawn by		Checked by	Projection method	Scale	Replaces			Replaced by		
HS		CK		TM			-					
					Circuit Diagram							
					DWG-File name						Date	
					23019.dwg						2012.01.04	
Granule Maxi					Drawing number						Edition	
					23019						00	



TEMPERATURGIVARE
TEMPERATURE SENSOR

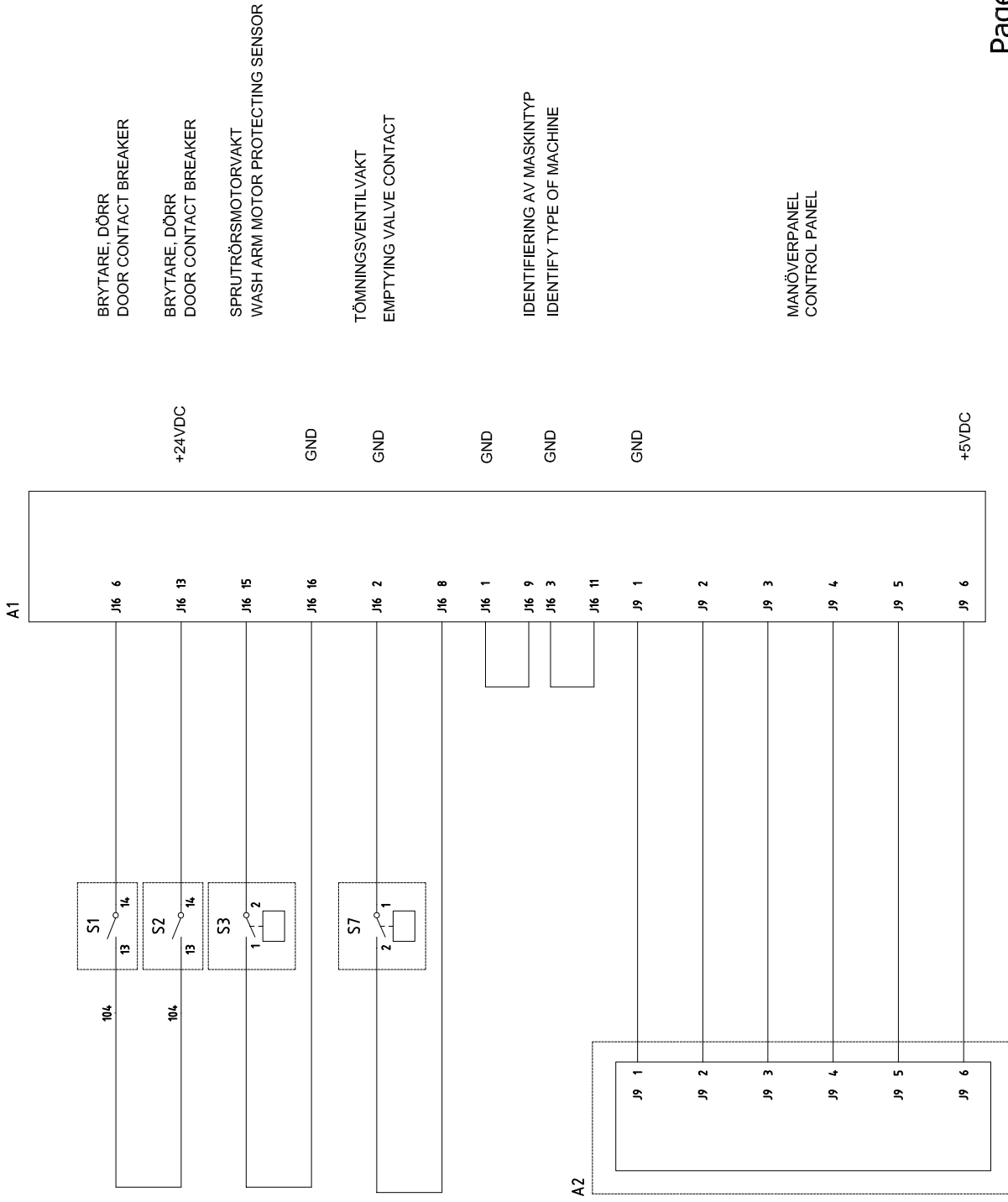
TEMPERATURGIVARE
TEMPERATURE SENSOR

MOTORSKYDD DISK PUMP HÖGER
PROTECTIVE MOTOR SWITCH WASH PUMP RIGHT

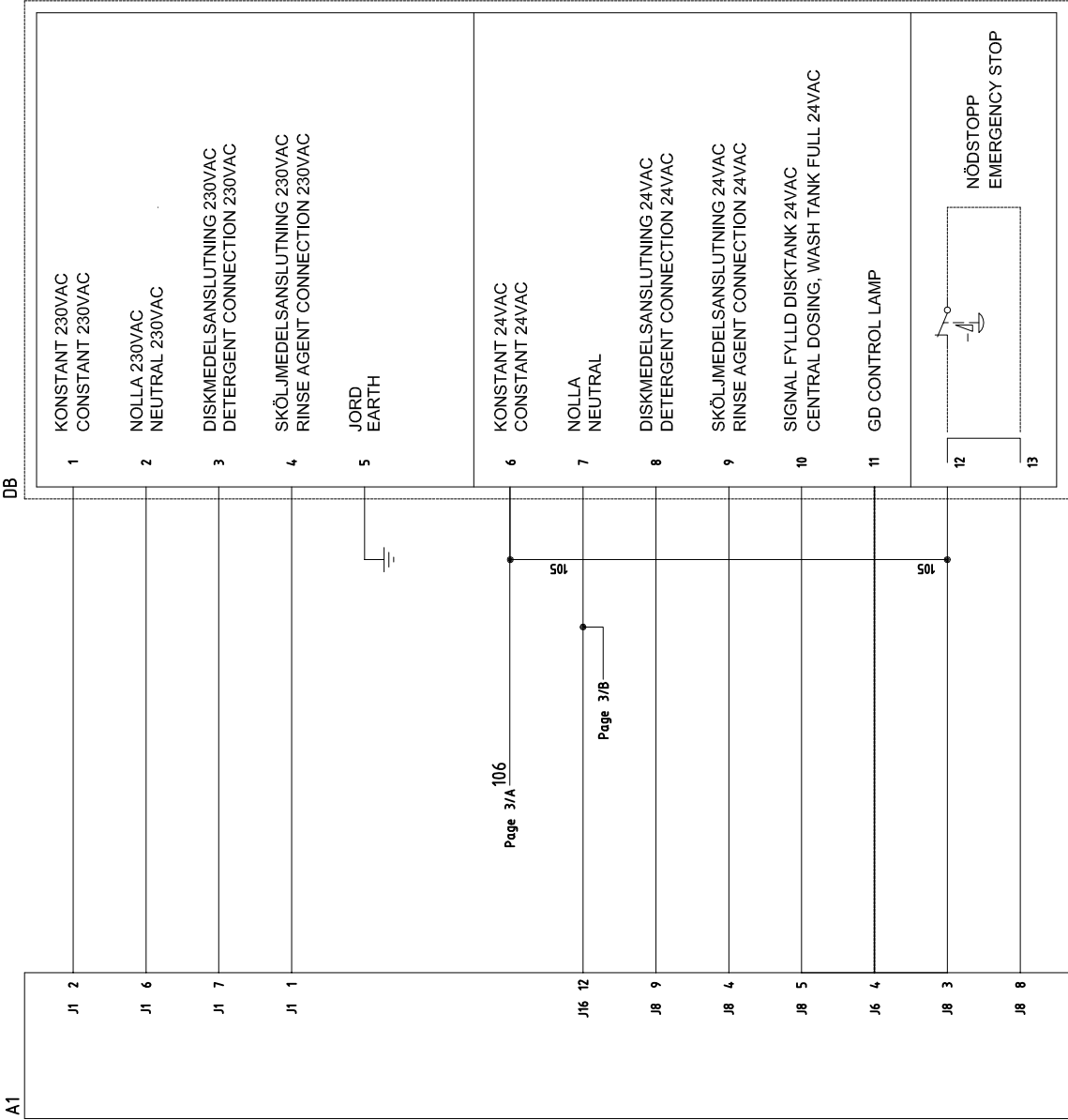
MOTORSKYDD DISKPUMP VÄNSTER
PROTECTIVE MOTOR SWITCH WASH PUMP LEFT

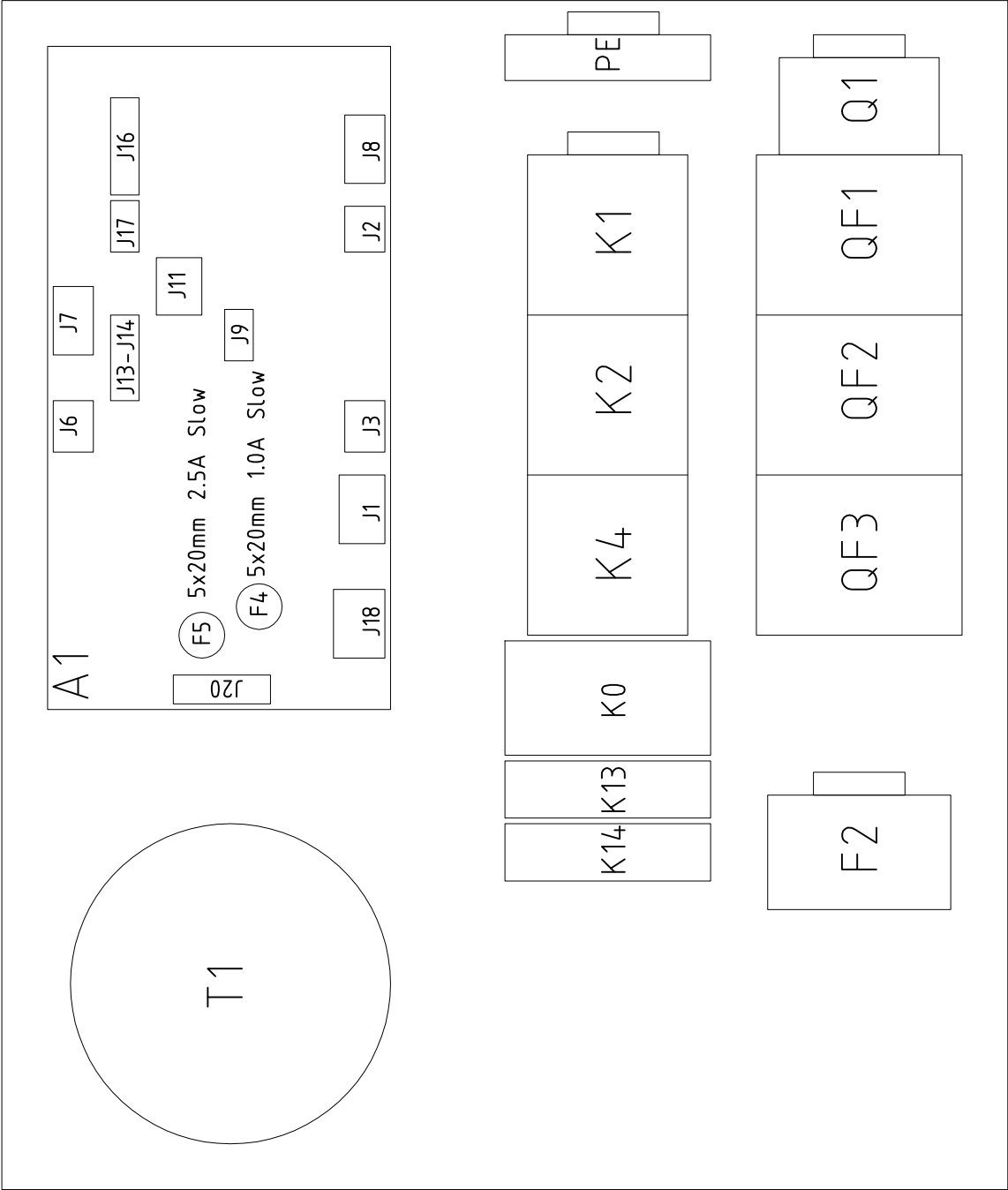
MOTORSKYDD SKÖLJPUMP
PROTECTIVE MOTOR SWITCH RINSE PUMP

DRIFT ELEMENT
OPERATION HEATER

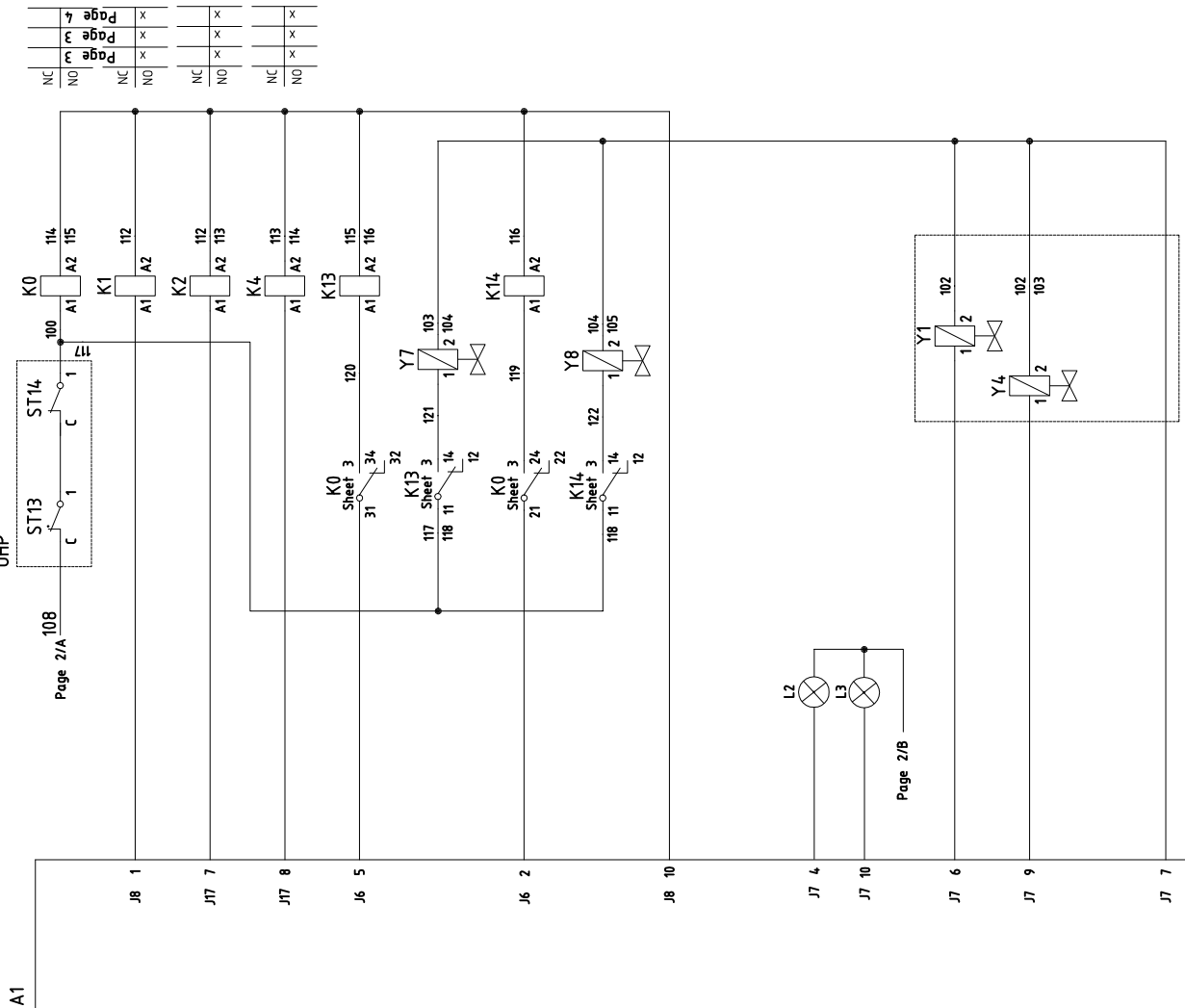


Item Designed by	Quantity Drawn by	Description (Name / Material / Note)				Part number / Dimension
		Tolerance, if not indicated, according to				
HS	CK	TM		Scale	Replaces	Replaced by
Circuit Diagram						
						
Granule Maxi						
DWG-File name						Date
23019.dwg						2012.01.23
Drawing number						Edition
23019						00





Item		Quantity	Description (Name / Material / Note)				Part number / Dimension					
Designed by		Drawn by	Checked by	Projection method	Scale	Tolerance: if not indicated, according to	Replaces	Replaced by				
HS	CK	TM				-						
			Placement of Components 230/400/415VAC Steam									
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			Granule Maxi				Drawing number	Edition				
							23037	00				

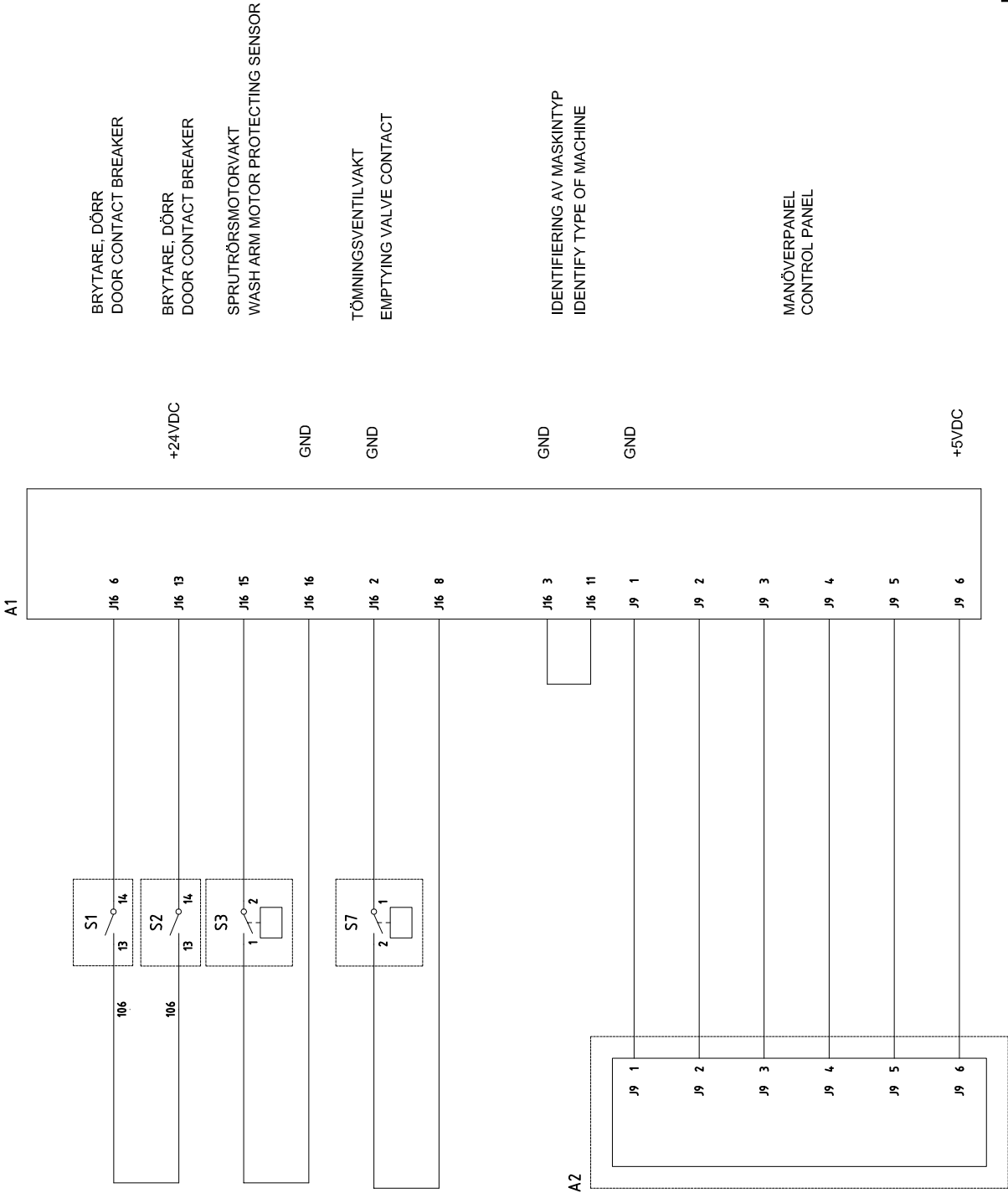


Röd LED-lampa dörr
Red LED lamp door
Grön LED-lampa dörr
Green LED lamp door

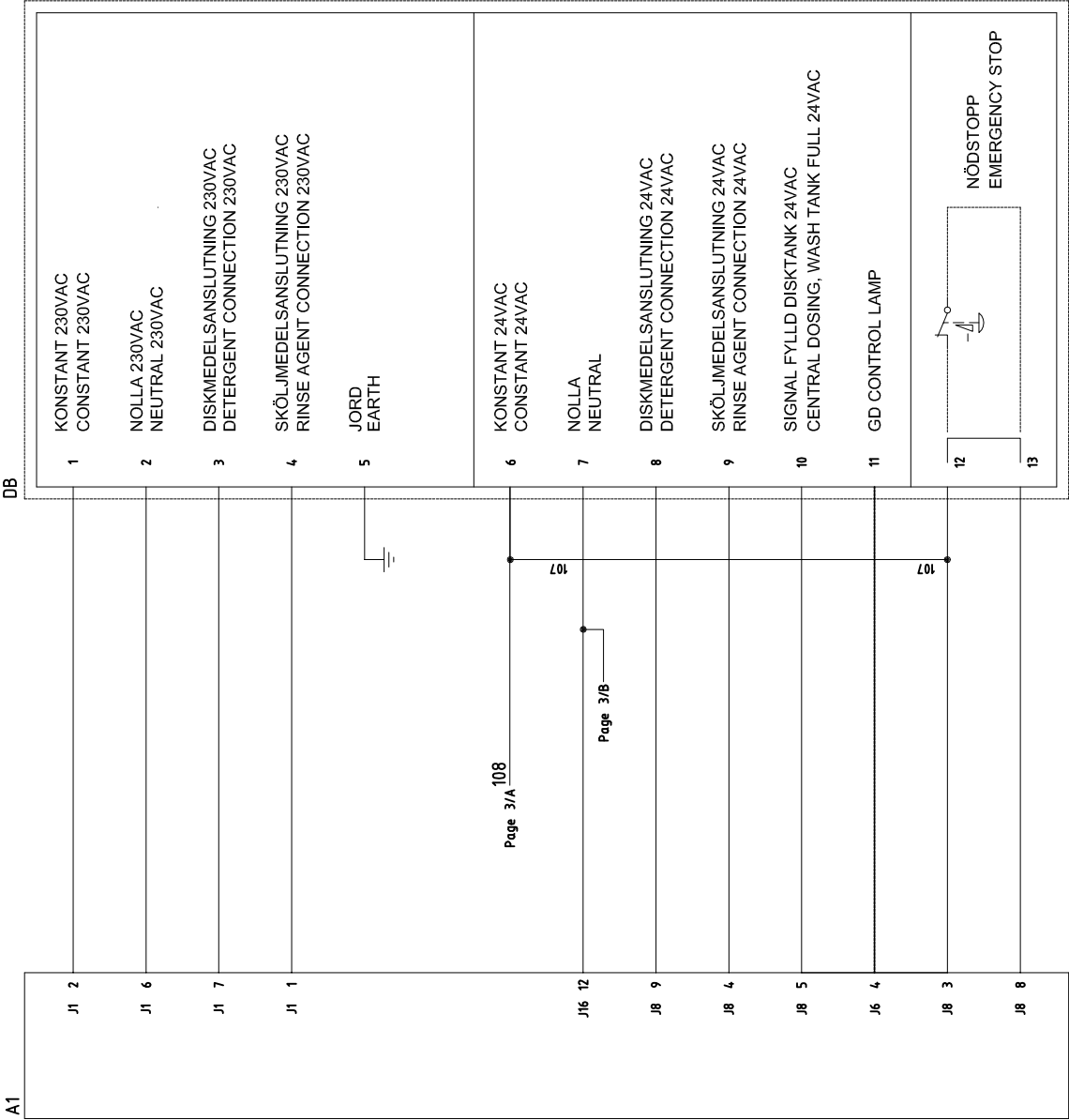
INKOMMANDE VATTEN SKÖLJTANK
SOLENOID VALVE, INCOMING WATER RINSE TANK

ÅNGREDUCERING
SOLENOID VALVE, STEAM REDUCTION

No.	Reg. no.	Revision note	Date	Sign	Check
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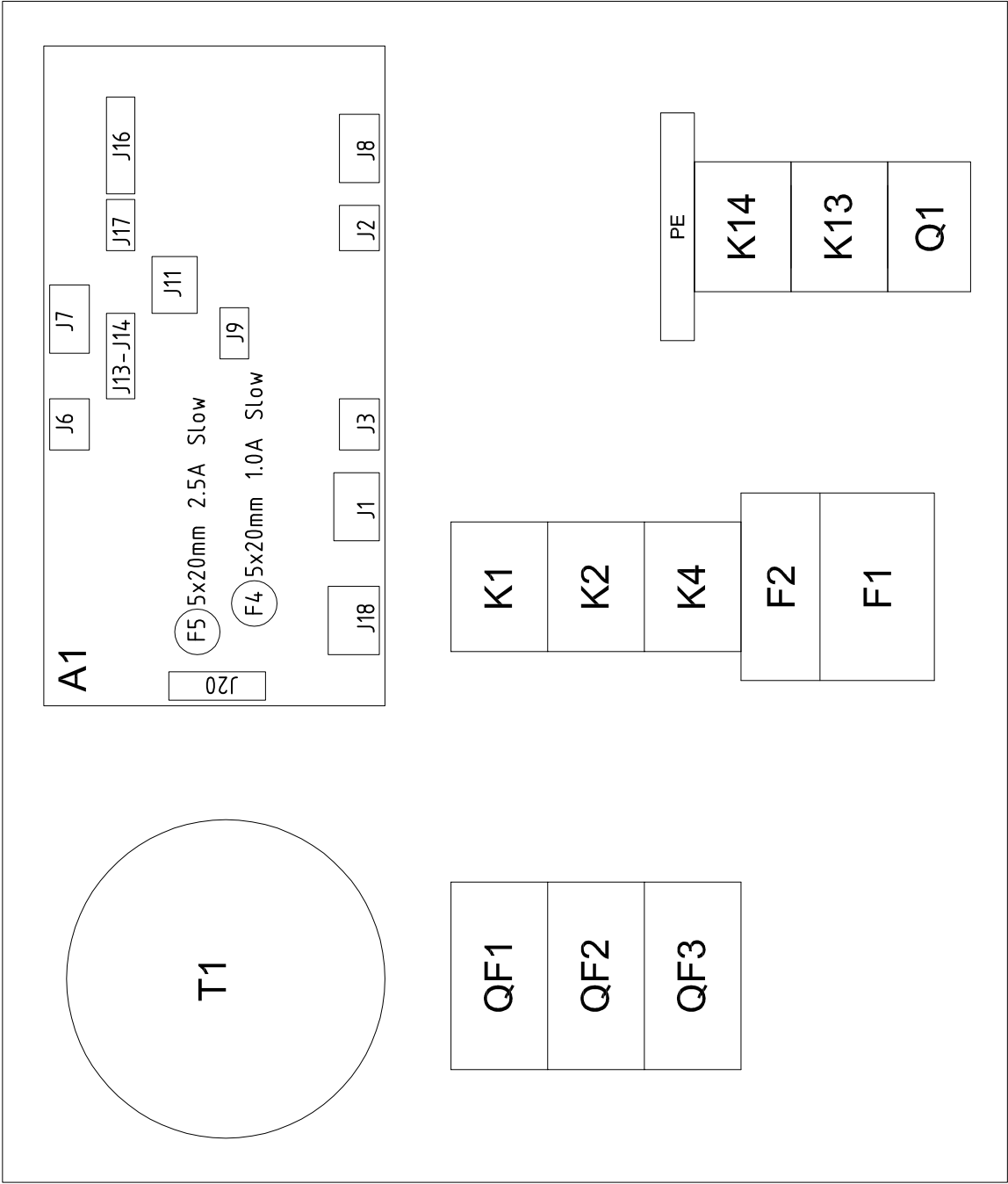


Item	Quantity	Description	(Name / Material / Note)	Part number / Dimension
HS	CK	TM	Scale	Replaces
HS	CK	TM	Scale	Replaces
Circuit Diagram				DWG-file name
Granuldisk Maxi				23039.dwg
Date				2012.01.23
Drawing number				23039
Edition				00



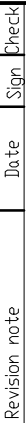
Item	Quantity	Description	(Name / Material / Note)	Part number / Dimension
HS	CK	TM	Scale	Replaces
HS	CK	TM	Scale	Replaces
Circuit Diagram				DWG-file name
Granule Maxi				23039.dwg
				Date
				2012.01.04
				Drawing number
				23039
				Edition
				00

No.	Reg. no.	Revision note	Date	Sign	Check
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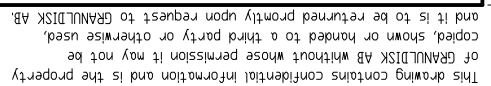
Item	Quantity	Description (Name / Material / Note)				Part number / Dimension	
		Designed by	Checked by	Projection method	Scale	Replaces	Replaced by
HS	CK	TM					
		Placement of Components 380/400/415/440/480VAC				DWG-file name	Date
						23137.dwg	2012.01.04
						Drawing number	Edition
		Granule Maxi				23137	00

Revision note	Date	Sign	Check
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Revision note	Date	Sign	Check
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Revision note	Date	Sign	Check
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TEMPERATURE
TEMPERATURE SENSOR

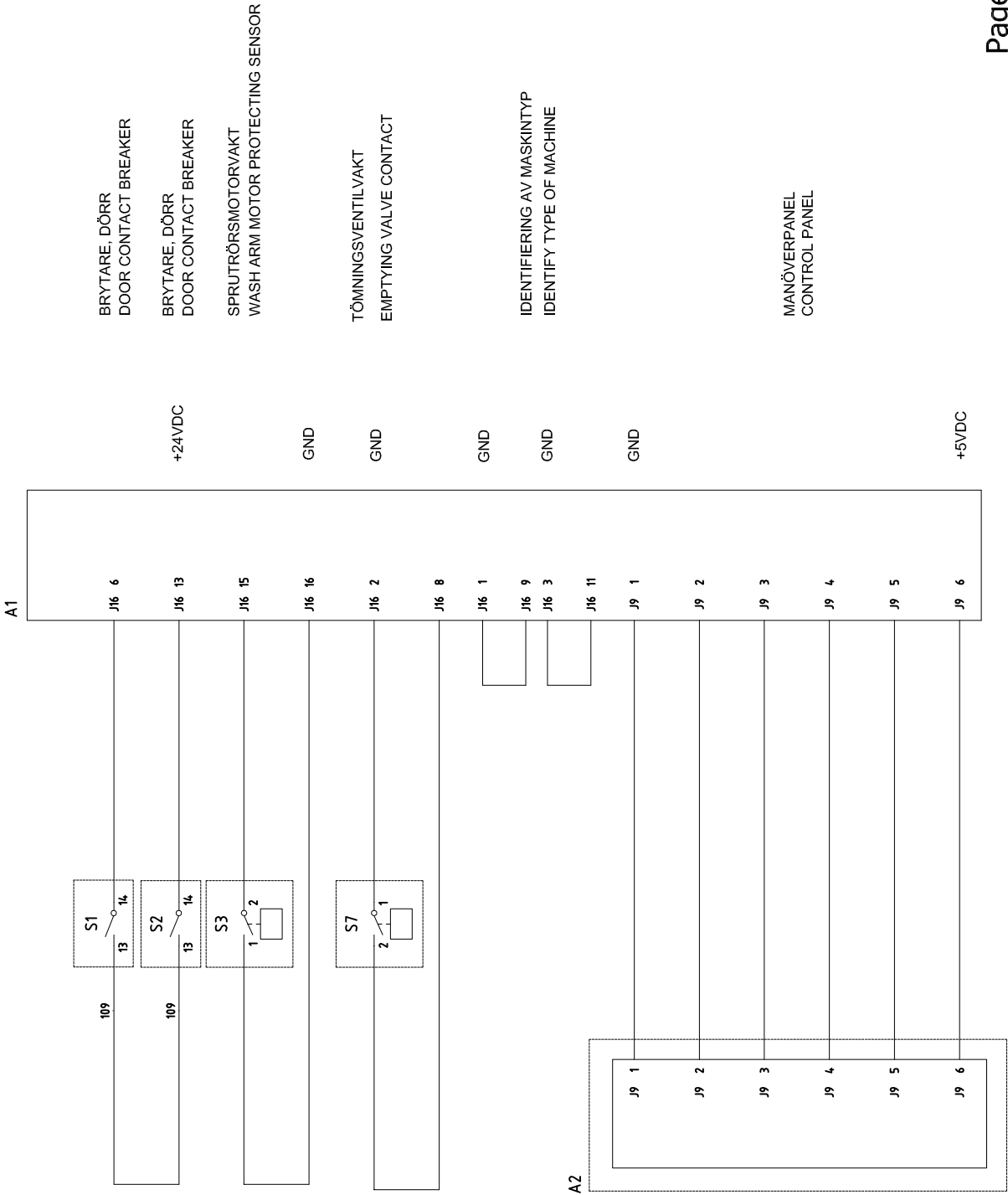
TEMPERATURE
TEMPERATURE SENSOR

DRIFT ELEMENT
OPERATION HEATER

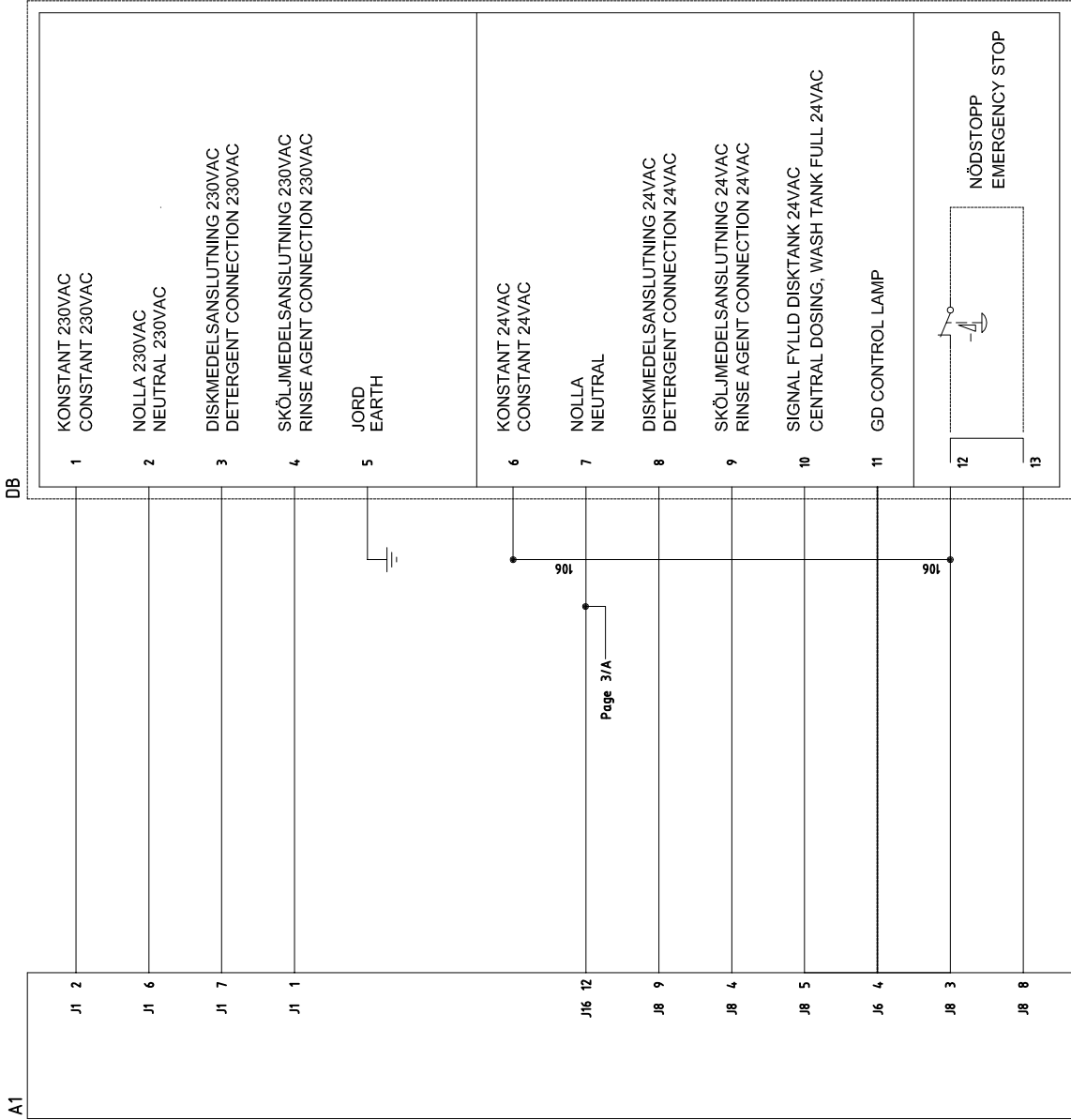
MOTORSKYDD DISKPUMP HÖGER
PROTECTIVE MOTOR SWITCH WASH PUMP RIGHT

MOTORSKYDD DISKPUMP VÄNSTER
PROTECTIVE MOTOR SWITCH WASH PUMP LEFT

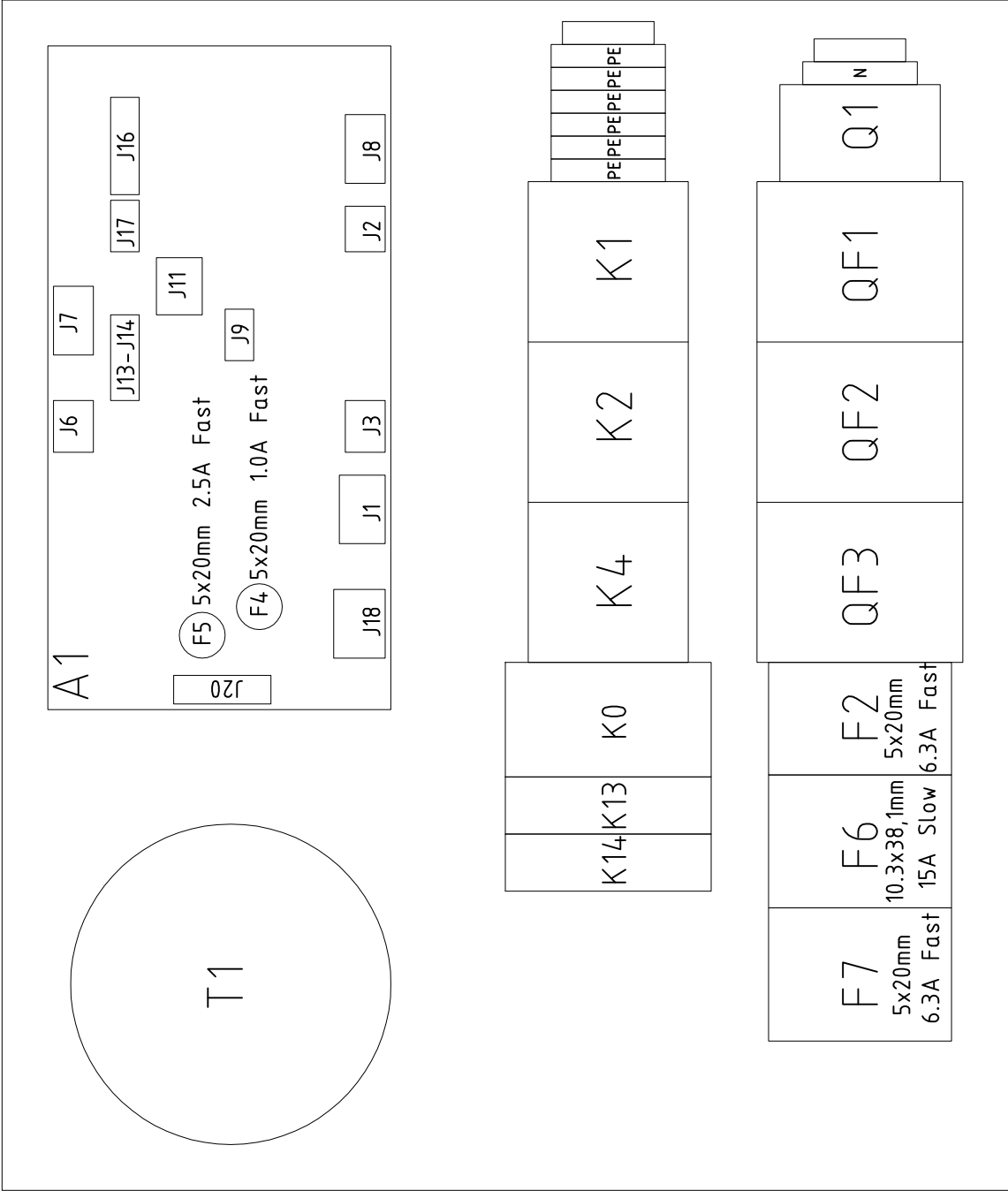
MOTORSKYDD SKÖLJPUMP
PROTECTIVE MOTOR SWITCH RINSE PUMP



Item		Quantity	Description (Name / Material / Note)			Part number / Dimension	
HS	Designed by	Drawn by	Checked by	Projection method	Scale	Replaces	Replaced by
	CK	TM					
Circuit Diagram			Granule Maxi				
GRANULDISK			Date				
23029.dwg			2012.01.23				
23029			Edition				

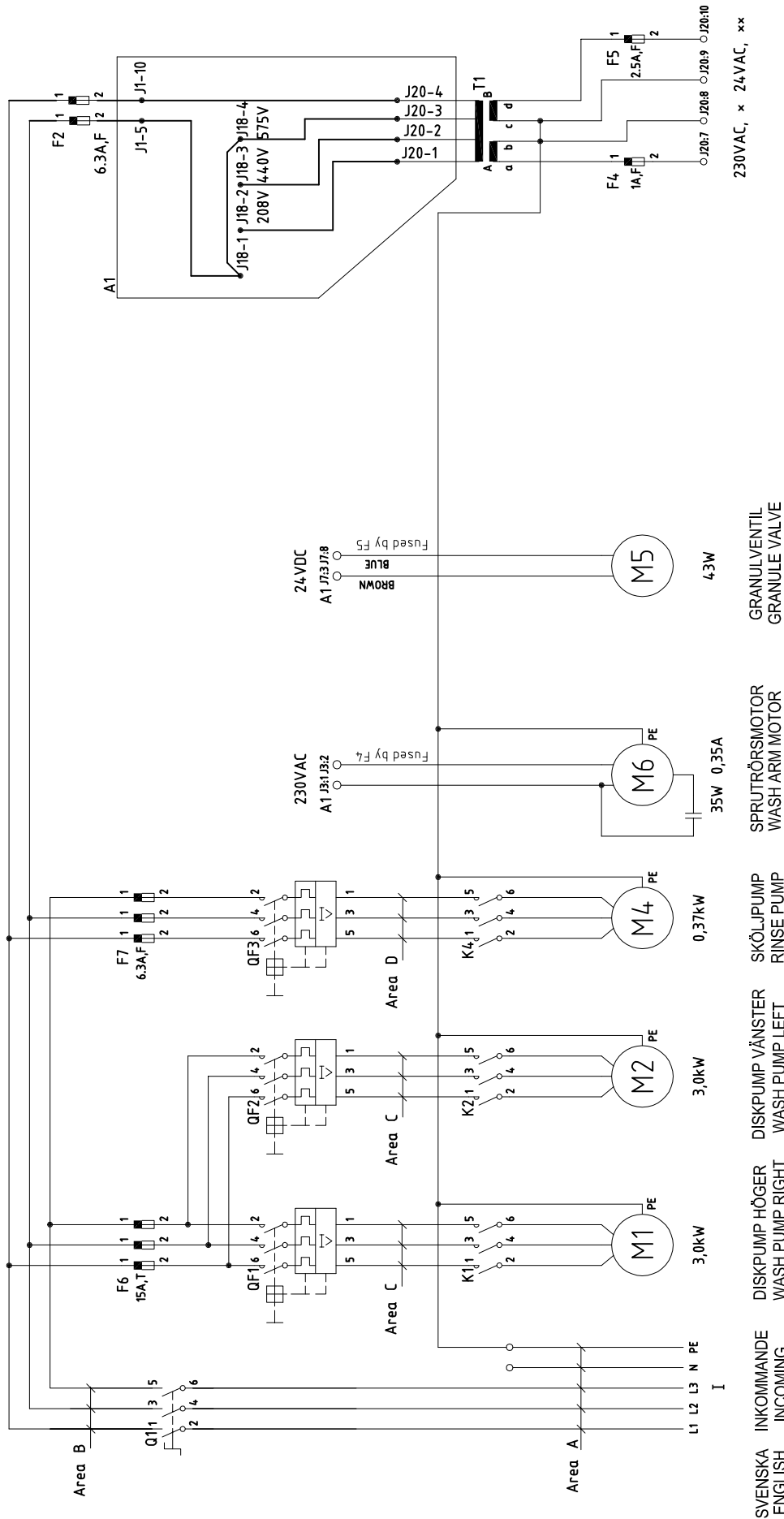


No.	Reg. no.	Revision note	Date	Sign	Check
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Item	Quantity	Description (Name / Material / Note)				Part number / Dimension	
		Designed by	Checked by	Projection method	Scale	Replaces	Replaced by
HS	CK	TM					
		Placement of Components 575VAC CSA Steam				DWG-file name	Date
						23047.dwg	2012.01.17
						Drawing number	Edition
		Granule Maxi				23047	00

Part number	Description	I	QF1,QF2 preset	QF3 preset	Area A	Area B	Area C	Area D	Jumper between
23048	Granule Maxi	16 A	5.0 A	1.1 A	AWG 8	AWG 14	AWG 16	AWG 16	J18-1 J18-4



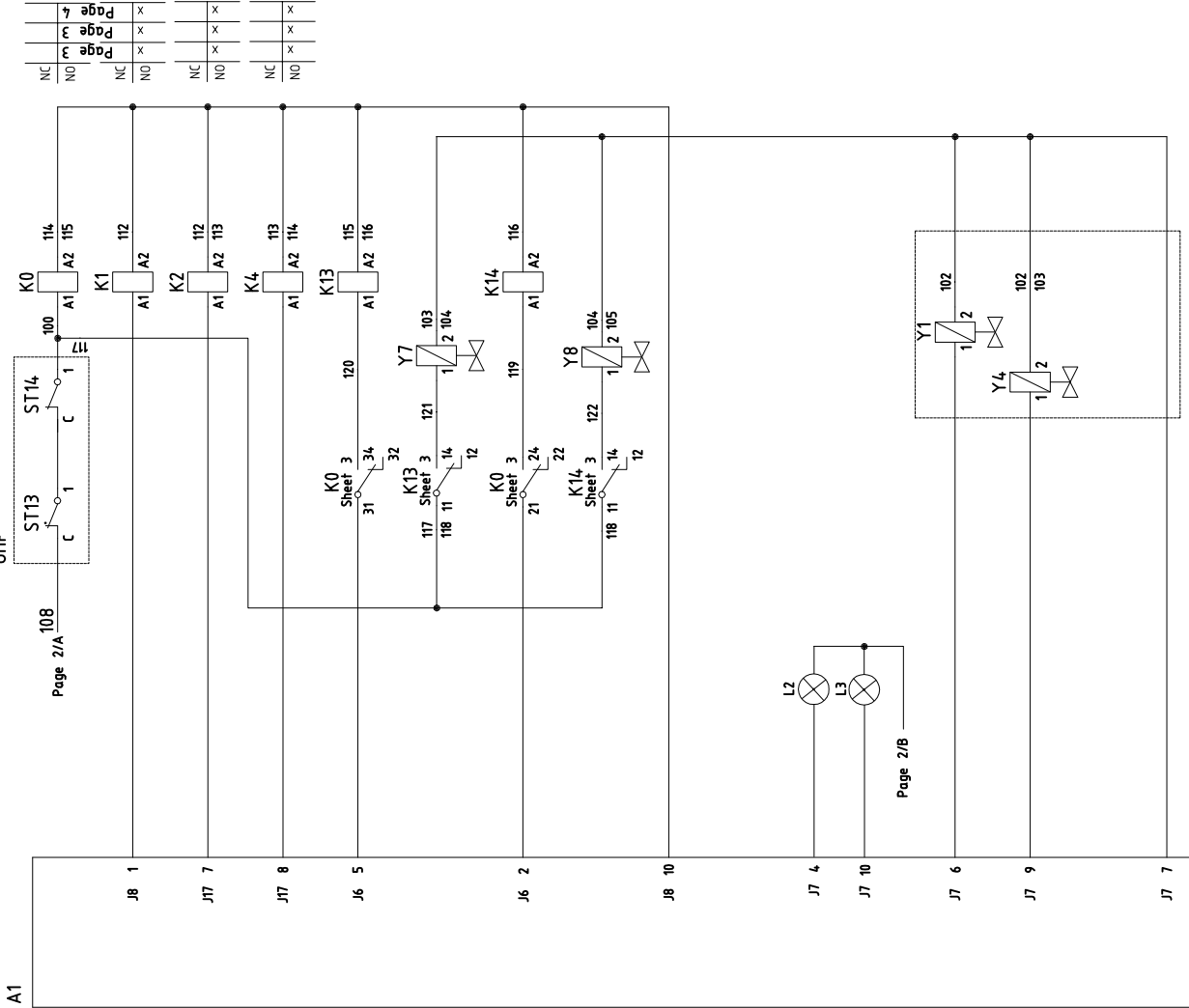
SVENSKA	INKOMMANDE	DISKPUMP HÖGER	DISKPUMP VÄNSTER	SKÖLJPUMP
ENGLISH	INCOMING	WASH PUMP RIGHT	WASH PUMP LEFT	RINSE PUMP

GRANUL VENTIL
GRANULE VALVE

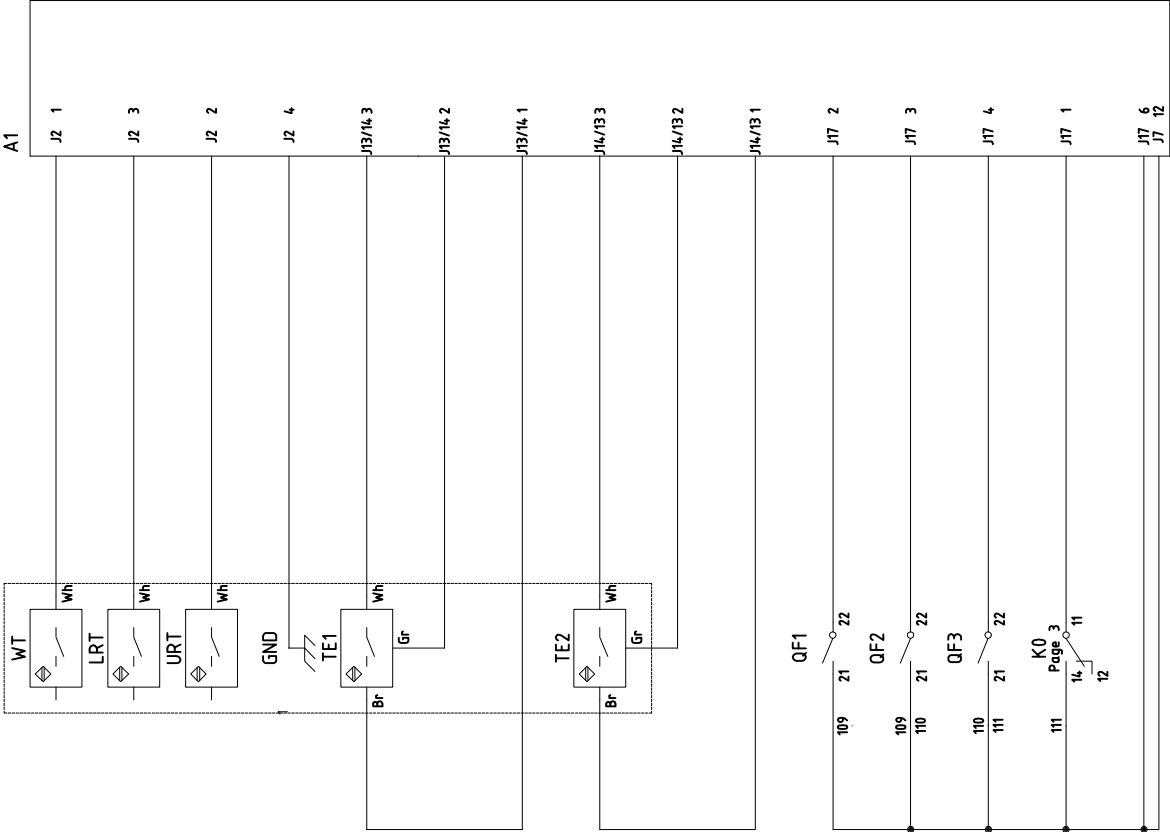
230VAC, x 24VAC, xx

x, F4 supplies Wash Arm Motor, Detergent box and A1
xx, F5 supplies Linear Actuator, Detergent box and A1

Item	Quantity	Description	(Name / Material / Note)	Part number / Dimension
Designed by	Drawn by	Checked by	Projection method	Scale
HS	CK	TM		
 Granuldisk				
Main Circuit				
575VAC CSA Steam				
 Granuldisk				
			DWG file name	Date
			23048.dwg	2012.01.05
			Drawing number	Edition
			23048	00



Item	Quantity	Description	(Name / Material / Note)	Part number / Dimension
HS	CK	TM	Scale	Replaces
HS	CK	TM	Scale	Replaces
Circuit Diagram				DWG-file name
Granule Maxi				23039.dwg
				Date
				2012.01.04
				Draining number
				23039
				Edition
				00



NIVÄGIVARE DISKTANK
LEVEL SENSOR, WASH TANK

NIVÄGIVARE NEDRE SKÖLJTANK
LEVEL SENSOR, RINSE TANK LOWER

NIVÄGIVARE ÖVRE SKÖLJTANK
LEVEL SENSOR, RINSE TANK UPPER

TEMPERATURGIVARE
TEMPERATURE SENSOR

TEMPERATURGIVARE
TEMPERATURE SENSOR

MOTORSKYDD DISKPUMP HÖGER
PROTECTIVE MOTOR SWITCH WASH PUMP RIGHT

MOTORSKYDD DISKPUMP VÄNSTER
PROTECTIVE MOTOR SWITCH WASH PUMP LEFT

MOTORSKYDD SKÖLJPUMP
PROTECTIVE MOTOR SWITCH RINSE PUMP

DRIFT ELEMENT
OPERATION HEATER

Item	Quantity	Description (Name / Material / Note)				Part number / Dimension	
		Designed by	Checked by	Projection method	Scale	Replaces	Replaced by
HS	CK	TM					
Circuit Diagram						DWG-file name	Date
Granule Maxi						23039.dwg	2012.01.23
						Drawing number	Edition
						23039	00

