

**Maintenance manual  
for reference machines**

**Washer extractors  
FOM 71 CLS, FOM 71 MP-Lab**

**IEC 60456 Ed 5**

*Thinking of you*

 **Electrolux**



# Contents

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## Contents

Introduction.....	1:1
<b>Wascator FOM 71 CLS</b>	
Software versions .....	2:1
Installation inspection of the reference machine .....	3:1
Calibration of the level control system.....	4:1
Calibration of the scale system.....	5:1
Installation of laboratory sensors for temperature and .....	6:1
speed connection for external weight signal	
Adjustment of temperature, speed and water .....	7:1
Cleaning the machine from lint, scale and detergent .....	8:1
Maintenance before start up of a test series .....	9:1
Regular maintenance 6 - 12 months.....	10:1
Empty run test data CLS.....	11:1
Program description CLS.....	12:1
<b>FOM 71 MP-Lab</b>	
Installation inspection of the reference machine.....	13:1
Calibration of the level control system.....	14:1
Installation of laboratory sensors for temperature and speed. ....	15:1
Adjustment of temperature, speed and water.....	16:1
Flow meter: Installation.....	17:1
Flow meter: Calibration.....	18:1
Flow meter: Change of amount of water.....	19:1
Flow meter: Maintenance.....	20:1
Cleaning the machine from lint, scale and detergent .....	21:1
Maintenance before start up of a test series.....	22:1
Regular maintenance 6 – 12 months.....	23:1
Empty run test data MP-Lab.....	24:1
Program description MP-Lab.....	25:1
Programming charts Mp-Lab.....	24:1
Installation of flow meter control (438 9041-07/04).....	Appendix 1



## Introduction

The Maintenance manual for reference machines shall be used when performing washing machine tests according to the international standard IEC 60456 Ed 5.

The purpose of this manual is to help the user to keep the reference machine in best condition in order to minimize the inaccuracy of the results caused by the reference machine.

The manual only deals with the approved reference machines in IEC 60456 Ed 5: Wascator FOM 71 CLS and, FOM 71 MP-Lab equipped with flow meter 472 99 0298..



**Wascator**  
**FOM 71 CLS**





## Wascator FOM 71 CLS

### Software versions

#### Software 1.3:

Original software installed from production start

#### Software 1.7:

Introduced 2004-04-28 from serial number 005200049196

Changes:      Following parameters added to Settings 1:  
                  START SLOW FILL MM Default value = 0  
                  IS TEMP ADJUST ADD            Default value = 0  
                  IS TEMP ADJUST SUB            Default value = 0

#### Software 1.8

Introduced 2007-01-27 from serial number 005200089296

Changes:      Following parameters added to Settings 1:  
                  SPEED CALIB. LOW RANGE IN %    Default value = 1000  
                  SPEED CALIB. HIGH RANGE IN %    Default value = 1000  
                  SHOWED SPEED CALIB. LOW'        Default value = 1000  
                  SHOWED SPEED CALIB. HIGH'        Default value = 1000

#### Software 2.0

Introduced 2009-08-25 from serial number 005200126347

Changes:      Software bug regarding first fill corrected.  
                  Following parameters added to Settings 1:  
                  BACKLIGHT                            Default value

#### Rev 2.03

Introduced 2009-12-18 from serial number 005220402809

Changes:      Default values changed:  
                  IS TEMP ADJUST ADD                    Default value = 0  
                  IS TEMP ADJUST SUB                    Default value = 3

#### Software 3.0

Introduced 2010-04-12 from serial number 005220405727

Changes:      Software bug corrected.  
                  Bug does not affect testing in accordance with IEC standards.

All software from 1.30 is suitable for IEC 60456 testing, but version 1.8 is recommended. Contact your nearest Electrolux Laundry Service Centre for downloading instructions.

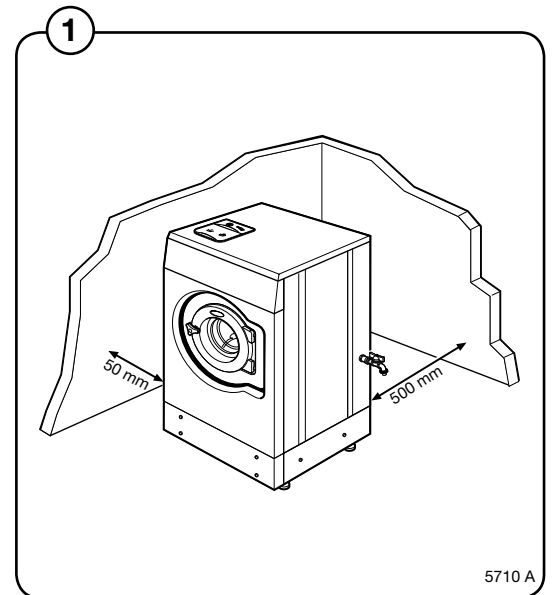


## Wascator FOM 71 CLS

### Installation inspection of the reference machine

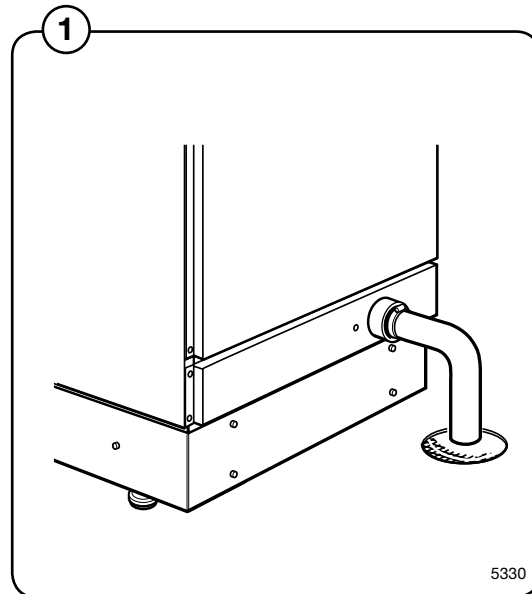
Before carrying out any major test series inspect the installation and check the following terms:

- The machine must be installed on a level base. The following clearances are recommended in order to facilitate calibration:
  - ① At least 500 mm between the machine and the wall behind and min. 50 mm on both sides of the machine whether installed next to the wall or other machines.
- Check the levelling of the machine. The vertical difference from corner to corner of the top lid shall not exceed 5 mm. If not adjust the feet of the machine.
- The machine shall be connected using the supplied Y hose or using two single hoses.
- The water hose and power cable must hang freely between the machine and wall in order to prevent disrupting the reference machine scale system.
- Make sure that the drain installation is made according to the information on next page. Observe the required air gap in the drain system.



**Drain connection**

- Connect a 75 mm (2 1/2") flexible rubber hose to the machine's drain pipe, ensuring a downward flow from the machine. Avoid sharp bends, which may prevent proper drainage.
- There should be an air-gap of 50 mm between the drain hose and the drain.
- Make sure that the drain hose is sufficiently flexible so that it does not cause problems related to the scale system.
- Pipes made from PVC or similar materials may not be connected to the machine due to the load cells.
- The drainage hose should be located over a floor drain, drainage channel or similar so that the distance between the outlet and the drain is at least 25 mm (1").
- Check that the amount of supply water at the water connection to the reference machine is sufficient and compliant with the specification in the standard (15 ± 2 litre) and that the amount can be maintained at all times. The water pressure at the intake of the machine may never fall below 100kPa.
- Check that the power supply is compliant with the voltage specified on the reference machine data label and within the tolerances of the standard (± 2%) .
- Make sure that the power supply can maintain the required voltage level whilst the reference machine is heating.



## Wascator FOM 71 CLS

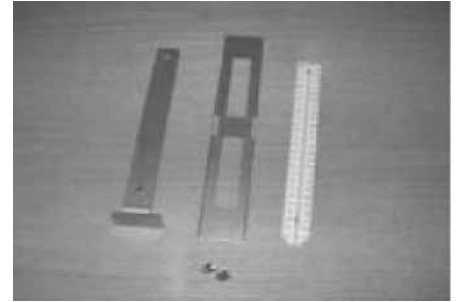
### Calibration of the level control system

During testing compliant with the IEC 604456 Ed5 standard, this calibration does not control the supply water values of the wash program. However, where wash programs use the scale for controlling the water intake level, the control becomes active and manages other levels inside the machine such as empty machine, heating element safety level and overflow. These levels are needed for the safety values of the machine. Therefore, the level must be adjusted and maintained in accordance with the procedure described below.

#### Assembling the ruler

Fig. 1-2: Mount the scale and ruler as shown in the pictures.

1



CLS 1.jpeg

2



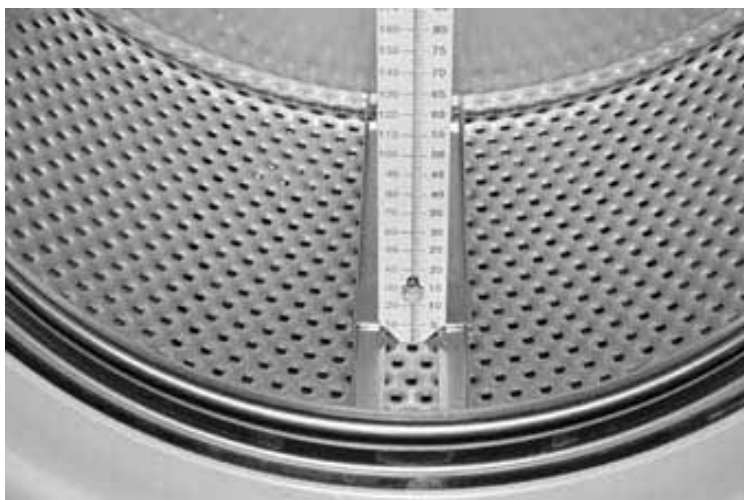
CLS 2.jpeg

### Calibration of level control system

The level control system can be calibrated both individually and manually. Calibration starts at the bottom of the inner drum and can go up to 250 mm from that point.

A ruler is supplied with the machine with which the water level above the inner drum can be read.

1



CLS 7.jpg

- 1 • Place the ruler on the bottom of the inner drum, equidistant between two lifters and front and rear gables. Rotate the drum so that the ruler is fully vertical and ensure that the three pins of the ruler fit in the holes of the inner drum.
- Push the scale to the bottom of the drum and tighten the nuts.

2

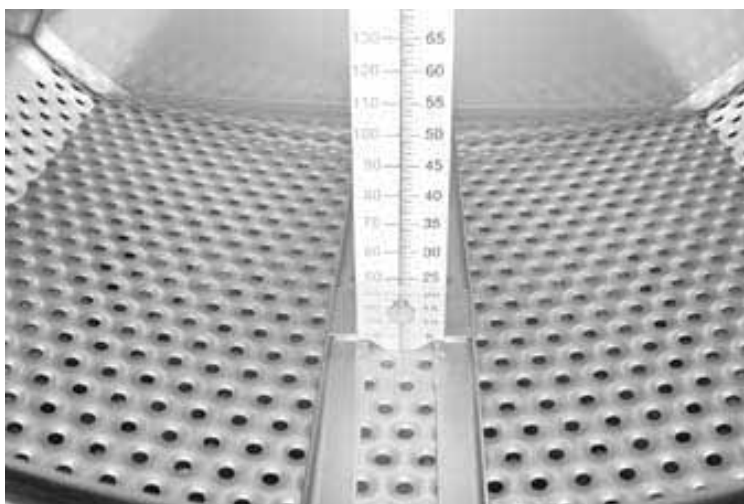


IMG 0012.jpg

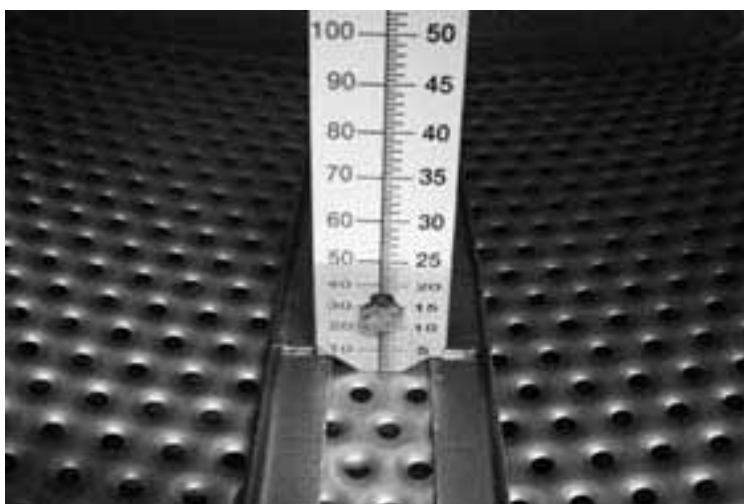
- 2 • Close the door.

- 3
- The ruler has two different scales, one in mm and one in RU units (exactly 2 mm/RU unit).  
The calibration shall be made in at least five level steps, and the first step when the water just enters the inner drum. More calibration steps can be made if requested.
    - Go down to "Options menu".
    - Press "Select".
    - Go down to "Service mode".
    - Press "Select".

3



CLS 4.jpg



CLS 6.jpg

4

### SERVICE PROGRAM

MAKE A CHOICE:

CLEAR TRIP HOUR COUNTER  
CLEAR SERVICE COUNTER  
CLEAR WASH PROGRAM COUNTER IN CLS  
CLEAR WASH PROGRAM COUNTER IN SMC  
SCALE ADJUSTMENTS  
**CALIB. OF LEVEL SENSOR**  
EXIT



**SELECT**

4

- "Service Mode" menu is now shown on the display.



- Close the door.
- Go down to "Calibration of level sensor".
- Press "Select".

5

**LEVEL CALIBRATION**

**FILL WATER TO  
DESIRED LEVEL**

**LEVEL:                      0 SCU**

5

- Press "Open" to fill the machine with water until the level reaches the bottom of the inner drum where the ruler is placed.
- Press "OK".
- Enter the value read on the ruler in RU units (The first setting is 0=level in drum.
- Press "OK".
- Press "Open" to fill more water.
- Press "OK".
- Enter the value read on the ruler in RU units. (If you enter an incorrect value, press "CLR". Enter new value.
- Press "OK".
- Enter another three values, making five in total.
- Once all values have been entered, press "Save".

**6**

**LEVEL CALIBRATION  
OLD CALIBRATION  
WILL BE OWERWRITTEN  
ARE YOU SURE?**

PRESS OK ELSE PRESS ANY OTHER KEY



- 6**
- Press "OK".
  - Go down to "Exit".
  - Press "Select".

### Wascator FOM 71 CLS

#### Calibration of the scale system

After installation, and once all hoses and electrical cables have been connected to the machine, the scale must be calibrated. The current calibration (Weight vs scale output) is factory-set and a zero calibration is required in order to compensate for the additional weight of the cables and hoses. **Important: The cables and hoses must hang freely and the drain must have an air gap in order to ensure that the scale functions properly.** See chapter: Installation.

Zero calibration is almost identical to a Tara, but with one big difference. In a Tara, the scale will be zero adjusted, although the adjustment will be lost when the power is switched off. In a Zero calibration, the adjustment will be saved.

Additional calibration variants may be selected in Service mode, but they do not apply to the CLS version.

If a weight transducer need to be replaced, or if the scale electronics are changed, a complete calibration of the scale is required. Please consult an Electrolux Laundry System Service Centre before performing such a calibration.

### Zero adjustment of the scale (weight function)

The scale is factory-set and no adjustment should be necessary unless some components have to be replaced. However, a zero adjustment must be carried out as the total weight of the machine has to be programmed into the scale.

Make sure that the water and drain hoses are in place and properly mounted. Make sure that all panels are fitted and the power connection is located on top of the machine.

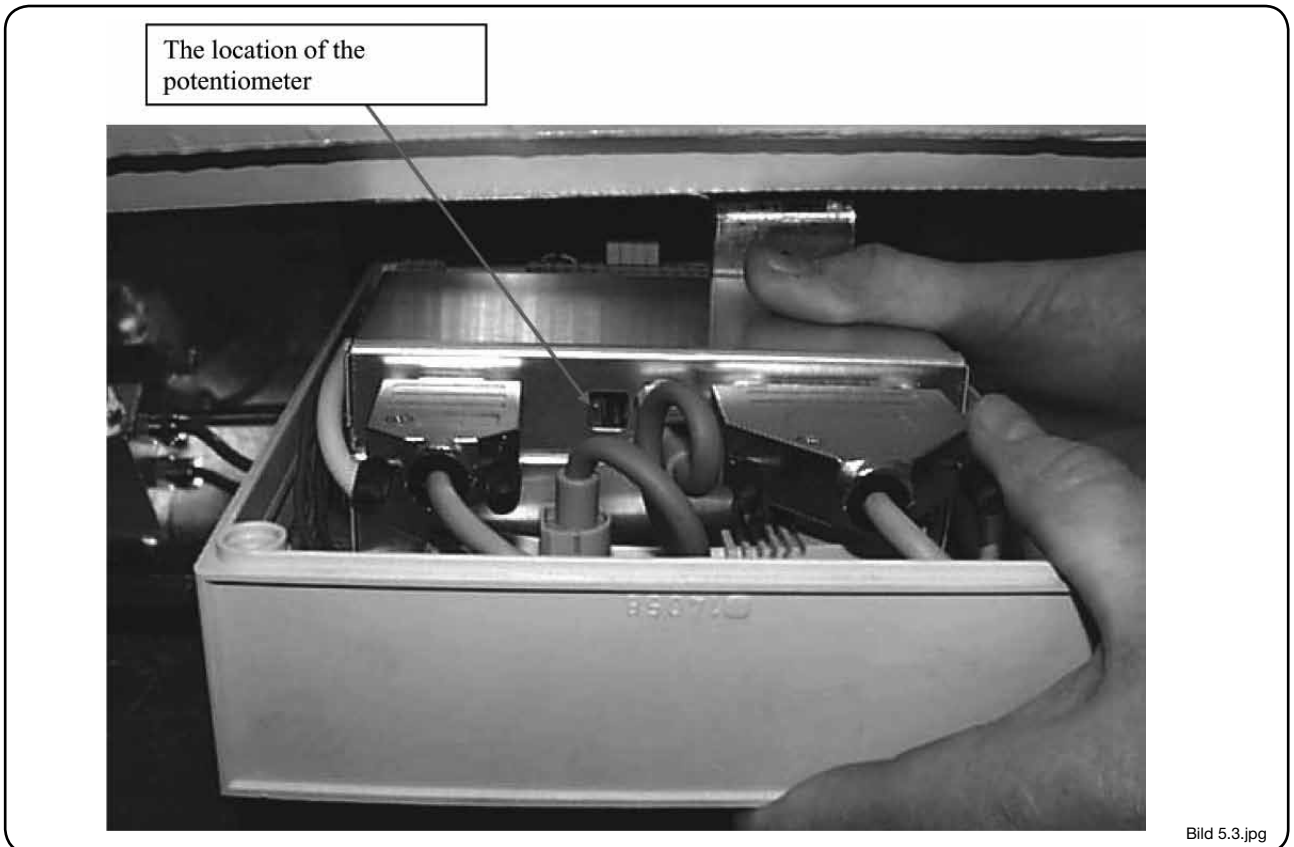
- Enter "Service mode" as described in level calibration.
- Go to "Scale adjustment"
- Press "Select"
- Go to "Zero calibration"
- Press "Select"
- Press "Select" (Make sure that there is no additional weight on the machine and don't lean on the machine).
- When display text "Reset scale from calibration..." appears, press "Select"
- Go down to "Exit"
- Press "Select"
- Go back to the main menu.

The zero adjustment is now complete and the weight of the empty machine should now be shown in the display as 0.0 kg (a margin of  $\pm 0.1$  kg is permitted). If a different value is shown in the display, the zero adjustment must be done again.

### Adjustment of the FOM 71 CLS scale control unit in event that the scale cannot be set to zero

If the offset weight is too high (or negative), a zero calibration may fail. This may be caused by the addition or removal of heavy objects (hoses, panels, etc) during installation.

The instruction below describes how to overcome this fault.



1. Remove the lower front panel and open up the control box for the FOM 71 CLS Weight System located below the machine as shown in the picture above. The box is only attached to the frame with zippers.
2. All panel plates and components removed from the machine must be placed on top of the machine. This is important in order to get the correct weight when performing the calibration.
3. Turn the potentiometer (shown above) counter clockwise until the Clarus Control display shows about -20 kg. If you turn the display too far it will display 999. If so, turn the potentiometer back about 1 full turn.
4. Once this has been done, a normal zero calibration may be performed in accordance with the instructions above.



## Wascator FOM 71 CLS

### Installation of laboratory sensors for temperature and speed and connection for external weight signal

Laboratory sensors can be attached to the Wascator FOM 71 CLS model. However, it is important that the installation is carried out in accordance with the instructions below so as not to incur improper operation or obtain inaccurate test results.

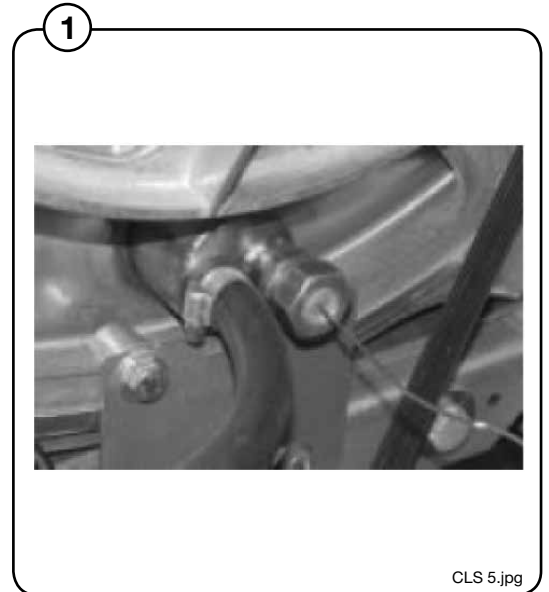
### Installation of a laboratory temperature sensor

A suitable place for an external temperature sensor can be found on the back gable of the drum.

At the bottom of the gable, next to the rubber hose running to the sample cock, there is a socket to which a sensor can be connected.

Use a ¼" clamping nut for the sensor.

Maximum insertion of the sensor is 50 mm from the edge of the socket. If the sensor is inserted too far, it will interfere with the rotating inner drum.

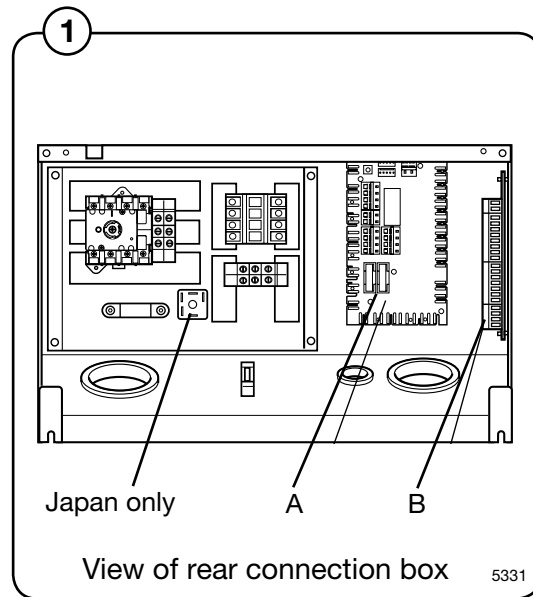


### Installation of speed sensor

A speed sensor can be attached to the end of the drum shaft. In order to be able to attach the sensor, a hole can be made in the back panel of the machine. A diameter less than 60 mm will not affect the performance of the machine. (Ventilation holes may change the air temperature inside the machine, which may also affect water temperature.)

### External weight sensing signal

An external signal may be obtained from the weight control system. On distribution card B (located on the right side panel in the rear connection box), there are two outputs (X78:1 and X78:2), which are for the weight signal. The location of X78 is shown in the diagram of distribution card B below.



**Electrical installation must be carried out by an authorized personnel**



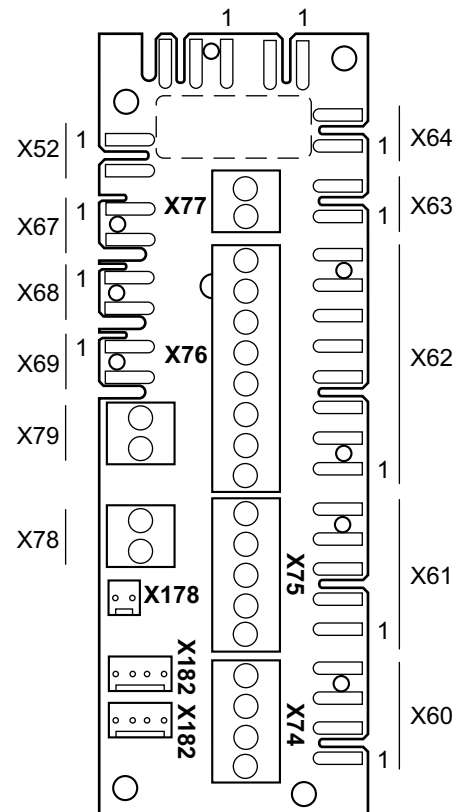
Weight signal 4 -20 mA (4 mA equal to 0 kg and 20mA to 80 kg)

Output X78:1 = +

X78:2 = -

3

Card B



View of distribution card B



## Wascator FOM 71 CLS

### Adjustment of temperature, speed and water

Many of the machine's preset parameters shown under Settings 1 in Menu mode can be changed. Some of these parameters are useful during the maintenance and calibration procedures. A full parameter list can be found in Table 1

#### Adjustment of temperature

If the actual temperature in the bath does not correspond to the set temperature or temperature shown in the display, a correction can be made. Parameters "IS TEMP ADJUST ADD" and IS TEMP ADJUST SUB" can correct a deviation. Each parameter will change the temperature (decrease or increase). For definitions and scale intervals, see table at the end of this document. Note that equal parameter values in both fields will both add and subtract the same change and thus giving no correction from the default value.

#### Adjustment of speed

An accurate calibration of the wash and/or spin speed can be achieved using the SPEED CALIB. LOW RANGE IN % and SPEED CALIB. HIGH RANGE IN % parameters. The low range covers the speed interval 0-300 rpm, and the high range from 300-1100 rpm. The parameters are a ratio factor where a change of one unit will give a 0.1 % change of the speed.

It is also possible to adjust the display value of the speed to actual speed. The display value shown is a calculated value derived from motor speed and the pulley ratios. Due to belt slip and pulley tolerances the displayed value may from time to time differ from the actual value. Parameters: SHOWED SPEED CALIB. LOW' and SHOWED SPEED CALIB. HIGH

can adjust any difference. These parameters are also ratios where a change of 1 unit will give a 0.1% change of displayed speed.

#### Adjustment of water

For zero calibration of the scale see "Calibration of the scale system".

Due to the short time delay between the scale sensor system and the water valve closure a negative off set value is needed in order to increase the accuracy. Parameter: OFF SET LEVEL HG (1Hg = 0.1kg). Default value is 2 (0.2 kg) but in case water pressure is high, this value may need to be increased, or if the pressure/flow is low, to be decreased. If a change is necessary this can be observed during a filling if the weighting system always stops at a small amount ( $\pm 0.1-0.2$  kg ) from the expected value.

The control system switches from the normal high flow valve to a smaller 5 litre/min valve at the end of each filling in order to increase the accuracy of the system. The parameter START SLOW FILLING HG defines how much before the set amount of water this change of valves shall occur. Default value is 10HG (=1 kg and equal to 1 litre )and shall not be changed.

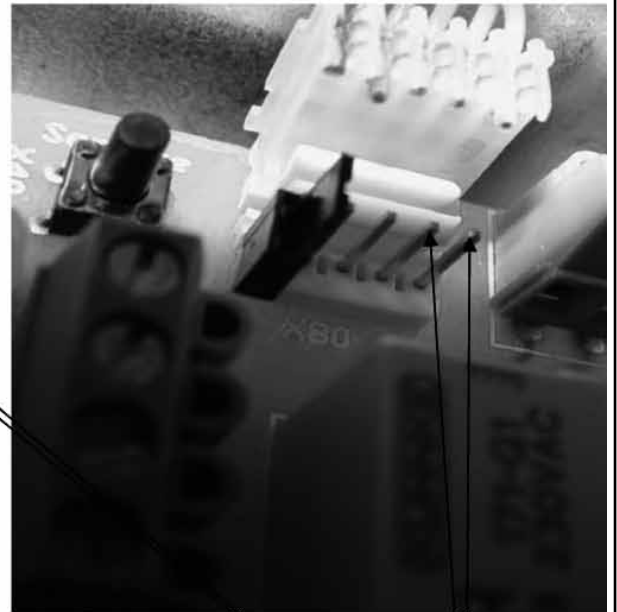
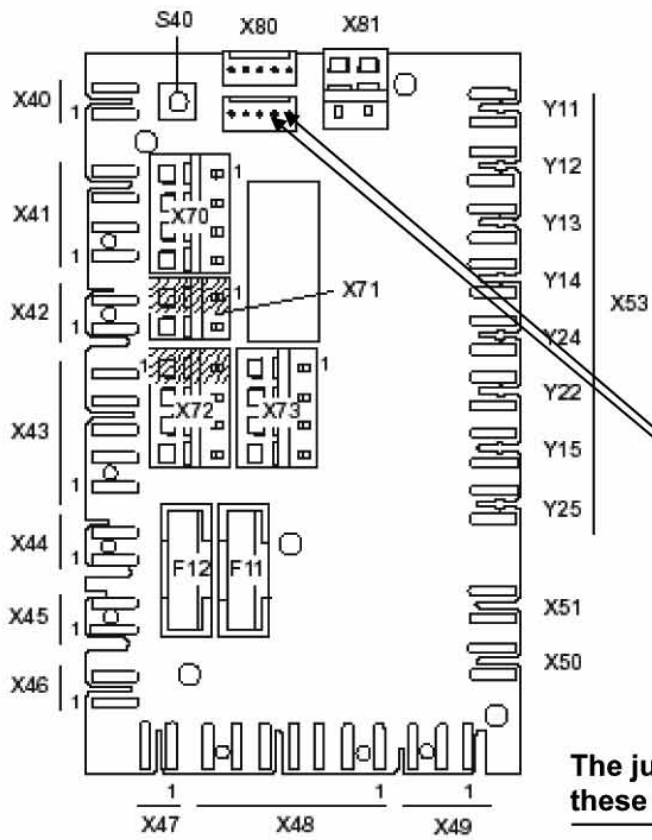
**NOTE:** It is advisable that authorized technicians from Electrolux Laundry Systems are contacted before any change is made.

### Procedure for changing parameters in SETTINGS 1



**Electrical installation must be carried out by an authorized personnel**

- Turn main switch at the rear of the machine to OFF.
- Disconnect the machine from the main power.
- Unscrew the lid to the rear electrical connection box (4 screws) and remove the lid.
- Remove the main switch knob from the lid and place the knob in the main switch again.
- Reconnect the machine to main power and turn the main power switch to ON.
- Select MENU in display.
- Go down to SETTINGS 1.
- Select and change the desired parameter. For a list of available parameters, see Table 1.
- Once all changes have been made, go to READY (last line in Settings 1).
- Insert a short-circuit jumper over the two pins to the right in connection X80 on the A21 board in rear connection box. (The board to the right facing rear). The location of X80 is shown in fig. 1. The jumper is stored on one of the pins in the X80 connector.
- Press SELECT on the front panel and read in display that the changes have been loaded into the CPU.
- Disconnect the jumper. Replace the jumper on only one pin.
- Turn main switch to OFF and disconnect main power.
- Re-fit the main switch knob in the rear connection box lid and re-fit the lid on the machine (knob in the OFF position).
- Connect the machine to main power and turn main switch to the ON position.



**The jumper shall short circuit these two pins**

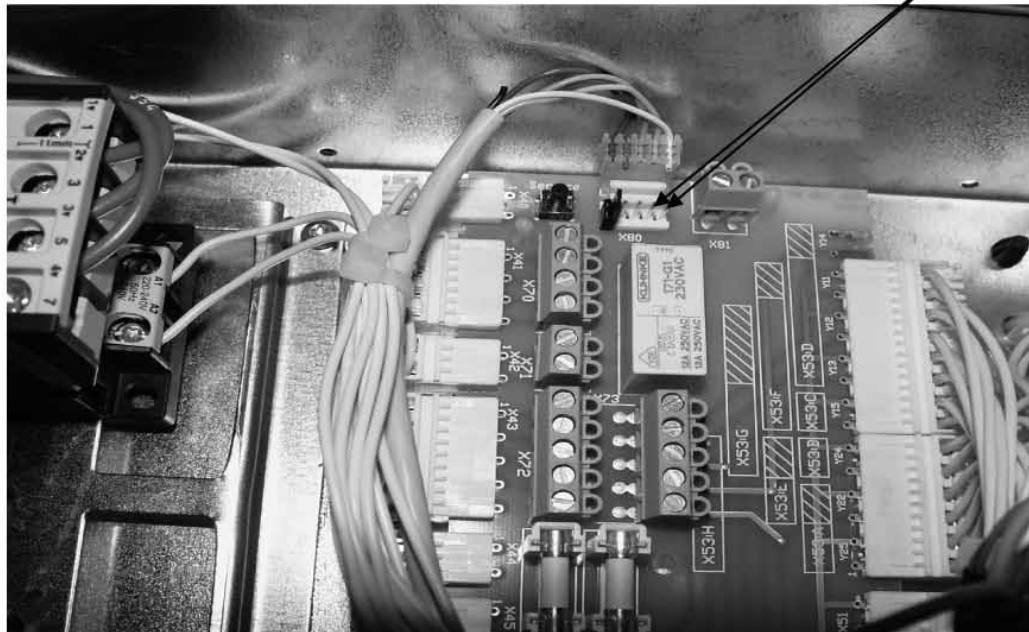


Bild 7.3.jpg

## Adjustment of temperature, speed and water

Table 1: Parameters in Settings 1

FUNCTION	DEFAULT VALUE	EXPLANATION
ADJUST TIME ALLOWED	N	Change of the "step time" (See display) e.g. wash/rinse/etc time during a program operation.
ADJUST TEMPERATURE ALLOWED	N	Change of the temperature within a sequence during program operation
RAPID ADVANCE ALLOWED	Y	Permission to rapid advance during a program operation
SHOW WEIGHT ALLOWED	Y	Option to show scale output in the display.
WATER REDUCTION NOT ALLOWED	Y	Some normal washing machines with this type of control can have an automatic system with water reduction depending on load weight. For the FOM 71 CLS this function must always be Y.
MANUAL FUNCTIONS ALLOWED	Y	The functions in "Manual Mode" (See display under Menu) are active
PAUSE ALLOWED	Y	Pause function can be activated with the pause button.
FREE TEXT ALLOWED	Y	Option to write a free text area for each wash program. This is used in order to shift between programs using the scale or level control, see manual Programming FOM 71 CLS, chapter Programming text page 42.
CHANGE WASH PROGRAM ALLOWED	Y	Possibility to change to a different wash program during a program operation
AUTO RESTART ALLOWED	Y	Automatic restart possible. The same program will be restarted as many times as desired when selecting the function Auto restart in wash program display.
ADJUST SPIN SPEED ALLOWED	Y	A possibility to change the spin speed during an extraction in an ongoing wash program
DISPLAY REMAINING TIME	Y	Remaining time will be shown in display during program operation Note: The remaining time will not be shown the very first time a specific program is running.
DISPLAY ACTUAL TEMPERATURE	Y	Actual bath temperature will be shown in the display during program operation
DISPLAY ACTUAL SPEED	Y	Actual machine speed will be shown during the program operation
MACHINE NOT HEATED	N	Should be set to Y if programs without thermostop shall be used. ( Fixed program time programs) If set to N the wash programs will be programmed with thermostop. (The program will wait for the temperature to reach set temperature before count down of set time.

Table 1: Parameters in Settings 1

FUNCTION	DEFAULT VALUE	EXPLANATION
TEMPERATURE CONTROL OF WATER	Y	If set to Y and using hot and cold water supply the hot and cold water is pulsed so the inlet water temperature does not exceed the set temperature.
TEMPERATURE IN °C	Y	Temperatures shown in centigrade. If N is set the temperature shown will be in Fahrenheit.
REPEATED PROGRAM MODE QUESTION	N	If set to Y a switch between standard and advanced programming can be made before each sequence. FOM 71 CLS shall always be programmed in advanced mode.
LOCKED STANDARD WASH PROGRAMS	N	If N the user has access to programs 991 -999. IN FOM 71 CLS these programs are the start up and check programs.
LEVEL QUICK COOL DOWN	80	If sequence COOL DOWN is used this value defines the level increase of cold water if the Quick Cool down function is activated.
LEVEL UNBALANCE	0	If set to a value other than zero the machine fills the drum to selected level at an unbalance stop before next attempt to distribute. For FOM 71 CLS the value shall be 0
LEVEL LOW	0	Set level for low level question in standard programming mode. Not used with FOM 71 CLS
LEVEL MEDIUM	0	See above (medium level)
LEVEL HIGH	0	See above (high level)
MIDDLE TEMPERATURE COOL DOWN	70	Breaking point in the cool down sequence where the temperature controlled cool down (4 °C/min) ends and the unmonitored part of the cool down sequence starts. 1 step = 1°C
DEFAULT MOTOR ON TIME	12	A default value for the motor on time. This value only used during certain restarts after for example unbalance breaks. 1 step = 1 sec
DEFAULT MOTOR OFF TIME	3	Default value for the motor off time: Only used as above. 1 step = 1 sec
FLUSH DELAY TIME	10	Delay time for the flushing of water when liquid detergent injection pumps are used. 1 step = 1 sec
FLUSH ON TIME	6	Flushing time for the water after the flush delay time. 1 step = 1 sec
BUZZER ON BUTTON	N	If Y a beep will occur each time a front panel key is pressed.
MAX FILLING TIME	60	Max filling time before an error message occur if not level/amount of water has been reached. 1 step = 10 sec
MAX HEATING TIME	60	Max heating time before an error message occurs if the temperature has not increased a specific number of degrees. 1 step = 10 sec

## Adjustment of temperature, speed and water

Table 1: Parameters in Settings 1

FUNCTION	DEFAULT VALUE	EXPLANATION
SHOW WEIGHT TIMEOUT	20	Time the weight is shown in the display before the normal display is restored. 1 step = 1 sec
PC5 BLOCKING OF HEATING	N	Parameter for parallel operation of commercial washers. Not used in FOM 71 CLS operations
PC5 BLOCKING OF SPINNING	N	See above
HEAT 2 STANDARD	N	For machines with dual heating systems. Selects which system that shall have priority. Not used in FOM 71 CLS operations.
SERVICE ALARM, HOURS	0	Time between service information calls. Parameter for commercial machines not used in FOM 71 CLS operations
BUZZER TIMEOUT AT END	3	Buzzer on time at the end of a wash process. 1 step = 1 sec
BUZZER TIMEOUT AT PAUSE	10	Buzzer on time at the activation of a programmed pause. 1 step = 1 sec
ERROR, OVERFILLED	N	If N no overfilling error message. Levels above the over fill level allowed.
PASSWORD ACTIVE	N	No password required. If Y password needed in order to start the machine.
CMIS ADDRESS	0	Address for commercial management system. Not used in FOM 71 CLS operations.
LEVEL IN MM ACTIVE	N	If Y the level values are in mm from bottom of the drum. For FOM 71 CLS the highest possible level exceeds the number of available software bites and therefore the levels are measured in RU units (1 RU unit = 2 mm)
START SLOW FILLING HG	10	Amount of water to be filled through the 5litre/min valve at the end of the filling sequence when using the scale in order to increase the accuracy. Value in hg (1 hg = 0.1 Kg)
OFF SET LEVEL HG	- 2	Offset value (negative) for the scale calculation eliminating delays in control and valve systems. Value in hg (1 hg = 0.1 Kg) Value entered
START SLOW FILL, MM From software 1.7 and machine serial number 52049196	0	Amount of water to be filled through the 5litre/min valve at the end of the filling sequence when using the level control in order to increase the accuracy. Value in hg (1 hg = 0.1 Kg)
IS TEMP ADJUST ADD	0	Temperature calibration. Add increases actual temperature signal to the control unit. Step ~0.7 °C. Result will be a lower wash temperature.
IS TEMP ADJUST SUB	3	Temperature calibration. Sub decreases actual temperature signal to the control unit. Step ~0.7 °C. Result will be a higher wash temperature.



Table 1: Parameters in Settings 1

FUNCTION	DEFAULT VALUE	EXPLANATION
SPEED CALIB. LOW RANGE IN % From software 1.8 and machine serial number 052089296	1000	Will change the drum speed in the low speed interval $\leq 300$ RPM. The default value is a ratio value and a 1 unit change will change the ratio 0.1% Thus 956 will mean 95.6% of original speed and 1050 105% of original speed.
SPEED CALIB. HIGH RANGE IN % From software 1.8 and machine serial number 052089296	1000	Will change the drum speed in the high speed interval $> 300$ RPM. The default value is a ratio value and a 1 unit change will change the ration 0.1% in the same way as for LOW RANGE.
SHOWED SPEED CALIB. LOW' From software 1.8 and machine serial number 052089296	1000	Corrects the speed showed in display to actual speed Will change the showed display speed in the low speed interval $\leq 300$ RPM. The default value is a ratio value and a 1 unit change will change the ratio 0.1% Thus 956 will mean 95.6% of original displayed speed and 1050 105% of original displayed speed.
SHOWED SPEED CALIB. HIGH From software 1.8 and machine serial number 052089296	1000	Corrects the speed showed in display to actual speed Will change the shown display speed in the high speed interval $> 300$ RPM. The default value is a ratio value and a 1 unit change will change the ratio 0.1% in the same way as for CALIB. LOW.
BACKLIGHT	30	Controls the time the display shall be illuminated in seconds. 1 step = 1 sec.Max value 254 seconds. Value 0 means display always illuminated.
READY		



## Wascator FOM 71 CLS

### Cleaning the machine from debris in water, lint, scale and residual detergent

It is very important that the wet parts of the machine are free from debris and particles that can influence the wash performance of the machine.

Lint and threads from ballast and test swatches can accumulate on the heating elements and as the bundle of lint/threads will grow it may eventually be so large that is clogging the drain valve and causing the drain valve to leak. This leakage will definitely influence the wash performance as in the beginning of the main wash unsolved detergent is located above the drain valve seat. When leakage occurs the concentrated solution will leak out reducing the detergent concentration in the bath.

Calcium carbonate from the hard water used in IEC tests will after time accumulate mainly on the heating elements. If the scale layer is too thick the heating elements may be destroyed due to the insulating effect of the layer. Heating power will also be reduced, giving longer heating times.

Lint from the textiles, together with zeolite from the detergent, will accumulate on the surface of the outer drum and on the back gable. If the amount of detergent is too large this can affect the wash and/or rinse results from the reference machine.

It is advisable not to remove the heating elements only for visual inspection of any scale or lint. Elements shall only be removed when lint or scale have been identified in accordance with the inspection procedure. A frequent removal of the elements will sooner or later result in high resistance in the wire connection causing too high connector temperature.



**Electrical installation must be carried out by an authorized personnel**

### **Cleaning the incoming supply water filter**

Debris clogging the incoming supply water filter can prolong the supply time so it falls outside the specification given in the standard. Therefore it is necessary to regularly to clean the filter.

- Disconnect the incoming water hose and remove the filter. The filter cartridge can easily be taken out from the valve housing. Clean the filter and reassemble all the parts.

### **Inspecting and removal of lint from heating elements and the drain valve**

- The built-up of lint around the heating elements and at the drain valve can be observed from inside the inner drum. Use a battery torch and illuminate the inner side of the outer drum via the holes in the inner drum. Lint around the elements and at the drain valve can then be seen.
- If lint is observed around the heating elements they shall be removed and cleaned. Remove the front panel and the element cover. Disconnect the electrical wires and unscrew the fastening bolt on the element until the bolt is at the end of the tread. (Do not remove the bolt). Press the bolt and press in inwards as far as possible. Now the heating element can be removed and cleaned. Also clean the element if a layer of scale is visible. After cleaning, the heating elements shall be assembled again. Make sure that no water leaks are visible around the element seal before mounting on the front panel.

### **Removal of lint from the drain valve**

- If lint has been observed in/on the drain valve try to remove the lint via the openings of the heating elements.
- If that is not possible then the drain valve must be removed. See instruction on next page.

## Repairs



Repair work on the machine should only be done by specially trained personnel.

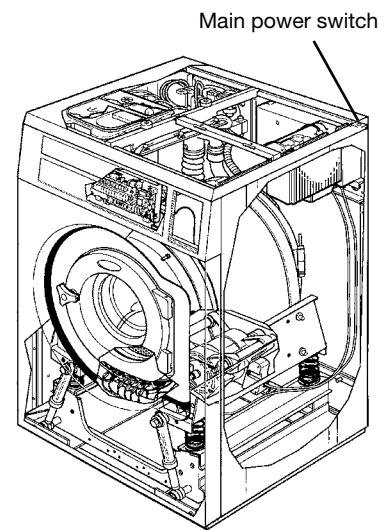
## Dissambly



For repair works on the drain valve, there is a risk that water still left in the machine may flood onto the floor. Be sure to dry up any spilled water since it may cause people to slip and hurt themselves.

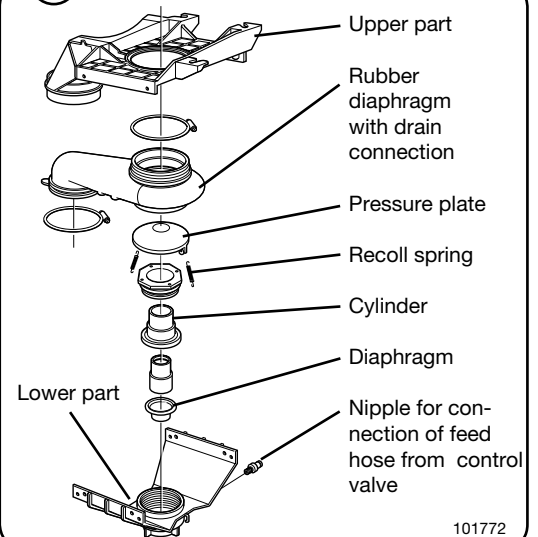
- ③ 1. Take down power from the machine by turning the main power switch to the 0 position.
2. Remove the front cover.
- ④ 3. Disconnect the drain hose from upper part of the valve.
4. Undo the hose clamp holding the valve rubber bellows against the sleeve coupling of the outer drum.
- ⑤ 5. Loosen and unscrew the 4 retaining nuts of the valve a couple of turns (use a socket, extender and ratchet wrench). Turn the valve and unhook it from the bolts.
6. Disconnect the pressure hose from the lower part of the valve.
7. Replace the valve with a new one.

③



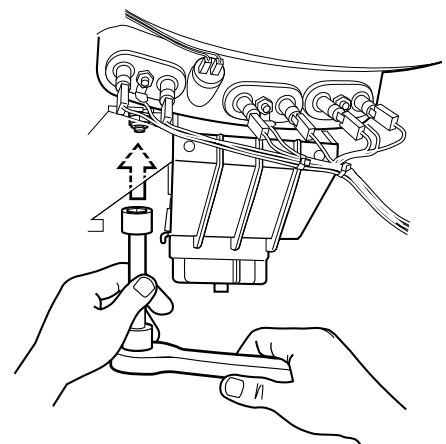
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④



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⑤



5222

## Assembling

- ④ 1. Connect the pressure hose to the lower part of the valve. Check that the hose is not bent or pinched.
2. Fit the rubber bellows onto the sleeve coupling.
- ⑤ 3. Hook the valve onto the bolts and turn the valve into position. Secure the 4 retaining bolts of the valve.
4. Secure the hose clamp at the connection of the rubber bellows on the sleeve coupling.
5. Connect the drain hose to the upper part of the valve.
- ③ 6. Turn the main power switch to position 1 and verify correct valve operation and that it does not leak.
7. Reattach the front cover.

## Removal of scale

Depending on the use of the reference machine, scale must be removed from all parts exposed to water on a regular basis.

- If the machine is operated in a hard water area, decalcify the machine in accordance with the following procedure:
  - Put 0.5 kg of citric acid in the detergent department.
  - Start program Cotton 85°C.
  - Rinse the reference machine by running the Cotton 85°C program again.

## Removal of residual detergent

Detergent may accumulate at certain parts of the machine and also be a part of the deposits on the inner side of the outer drum.

- Detergent may accumulate in the hose between the drum and the external tap valve. Remove the valve and clean the hose with a bottle cleaner. Flush the hose with water to ensure that no detergent remains.
- Run either a Cotton 85°C or Cotton 60°C programs on a regular basis, without adding a load or detergent. If foam is visible during the main wash, repeat the Cotton programs until no "stable" foam is visible.

## Wascator FOM 71 CLS

### Maintenance before start up of a test series

In order to ensure that the reference machine is in good order and will work in accordance with the specifications given in IEC 60456 a number of checks can be carried out:

#### Before any major test period:

- Check for any lint according to instructions in Chapter 8.
- Check the supply time for first fill. Shall be  $114 \pm 14$  seconds from closure of door lock relay to end of filling of the 5 litre valve. If the time is too short, lower the water pressure. If the time is too long, clean the supply filter in accordance with the instruction set out in Chapter 8 or increase the water pressure.
- Carry out an installation check according to instructions in Chapter 3.
- Carry out a weight check according to instructions in Chapter 5.
- Carry out an empty run test. Use Cotton 60°C or Cotton 40°C depending on the type of program to run be run during the test period.
- Compare the results obtained with results shown in Table 1 in Chapter 9 "Empty run test data". Note the definitions assigned to the time intervals shown in the table.
- If the value fall outside the specification detailed in Table E.2 in IEC 60456, carry out a second empty run test or recalibrate.
- If other values obtained from the empty run test differs from the value in Table 1, analyse the reason for this difference and correct (wrong water pressure, wrong supply water temperature, faulty heating element etc).

#### Before every test period:

- Check for the presence of lint according to instructions in Chapter 8.
- Check the supply time for first fill. Shall be  $127 \pm 14$  seconds from closure of door lock relay to end of filling of the 5 litre valve. If the time is too short, lower the water pressure. If the time is too long, clean the supply filter according to instruction in Chapter 8 or rise the water pressure.
- Carry out a weight check according to instructions in Chapter 5.

#### Daily check:

- If the machine has not been in use for the last 2 hours run the start up program (Program 991).The start up program will flush the machine with water and normalise all temperatures inside the machine.





### Wascator CLS FOM 71 CLS

#### Regular maintenance 6-12 months

The reference machine shall at a regular basis be maintained and checked in order to ensure that the reference machine is in good order and will work in accordance with the specifications given in IEC 60456.

##### Every 6 months:

- Carry out an installation check according to instructions in Chapter 3.
- Use the start up program (Program 991) and make a visual check and ensure that the supply or drain valves are not leaking.
- Carry out a weight check according to instructions in Chapter 5.
- To prevent the build up of scale if the reference machine is run in hard water decalcify the machine according to procedure described in Chapter 8.
- Check for any build up of lint or detergent and if verified clean according to instructions in Chapter 8
- Carry out an empty run test Cotton 60°C or Cotton 40°C depending what type of program to run during the test period.
- Compare the results obtained with results shown in Table 1 in Chapter 11 "Empty run test data". Note the definitions assigned to the time intervals shown in the table.
- If values are outside the specification in Table E.2 in IEC 60456 make another empty run test or recalibrate.
- If other values from the empty run test differs from the values shown in Table 1 Analyse why the values differ and correct (Wrong water pressure, wrong supply water temperature, faulty heating element etc).

##### Once a year:

- Perform a complete calibration of the machine in accordance with certified procedures.



## Wascator FOM 71 CLS

### Empty run test data

During the RRT2008 ring test, data was obtained from a number of laboratories. This data is useful when checking that the reference machine in the laboratory is performing as expected.

Please note: This data is obtained from runs with an unloaded machine. Therefore, the energy and process times obtained here cannot be compared with the same parameters applied during a test series carried out with a loaded machine. However, empty test runs are not affected by load differentials or detergent batches and will only produce results that are specific to the machine.

Table 1 below shows the estimated/defined values for Cotton 60°C, as well as average values from the RRT 2008 ring test.

The RRT 2008 average values were obtained from the RRT 008 IEC/CENELEC/CECED ring test. These values are based on empty run tests undertaken at 20 different laboratories.

The definitions used in Table 1 differ from those given in IEC 60456 and below are applicable to Table1.

#### Definitions

<b>Total program time:</b>	Time from the start of first filling to the start of the retardation phase at the end extraction sequence.
<b>Heating time:</b>	The time until the heating relays have been switched on during the different heating periods.
<b>Total main wash time:</b>	The time from start of first filling until the start of first rinse water supply.
<b>Filling time of water:</b>	The first filling time (26 litre). From closure of door lock relay to end of filling.
<b>Cold water inlet temperature:</b>	The temperature of the supplied cold water.
<b>Temp at end of heating in enzyme step:</b>	The temperature at the time the heating relay is switched off after reaching the 40°C enzyme step.
<b>Temp at the end of the enzyme step:</b>	The temperature in the bath just prior to the heating up to 60°C.

## Empty run test data

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**Temp at the end of heating in final heating:**

The temperature when the heating relay is switched off after reaching 60°C.

**Temp at the end of the main wash:**

The temperature in the bath just prior to drain after main wash.

**Amount of water in main wash:**

The amount of supplied water to the main wash.

Amount of water in rinses:

The amount of water supplied in each rinse.

**Total energy consumption:**

The total energy consumed during the program.

**Drum Speed:**

Drum speed measured in RPM.

**Water pressure:**

Water pressure (Static) measured close to inlet valve and during the filling of water.

**FOM 71 CLS**

**IEC 60456 ED 5 Cotton 60 Empty run**

**Time:**

Total program time  
 Heating time cold - 20°C  
 Heating time 20°C - 40°C  
 Heating time 40°C - 60°C  
 Total mainwash time  
 Filling time of water first fill

**Temperature:**

Cold water inlet temperature  
 At end of heating to 40 °C.  
 At end of heating to 60 °C  
 At the end of mainwash

**Water:**

Amount of water in mainwash  
 Amount of water in rinse 1  
 Amount of water in rinse 2  
 Amount of water in rinse 3  
 Amount of water in rinse 4  
 Total amount

**Energy:**

Total energy consumption  
 Voltage:  
 Line voltage during the test  
 Ambient temperature:  
 Room temperature close to machine

	Estimated/ defined std values	Estimated/ defined std ranges	RRT2008 Average value
Min,sec	72:00	2:00	71:58
Min,sec	1,30	1:00	1:30
Min,sec	7:00	0:30	7:52
Min,sec	8:30	0:30	8:02
Min,sec	46:00	1:30	46:07
Min,sec	1:45	0:30	2:02
°C	15.0	2.0	15.4
°C	40.0	1,3	39.2
°C	60.0	1,0	59.1
°C	57,0	2.0	56.6
Litre	26,0	0,5	26.0
Litre	18,0	0,5	18.0
Litre	18,0	0,5	18.0
Litre	18,0	0,5	18.0
Litre	18,0	0,5	18.1
Litre	98.0	2.5	98.1
kWh	1,700	0,150	1.671
V	230	4	229.7
°C	23.0	2	23.2





















# **FOM 71 MP-Lab**



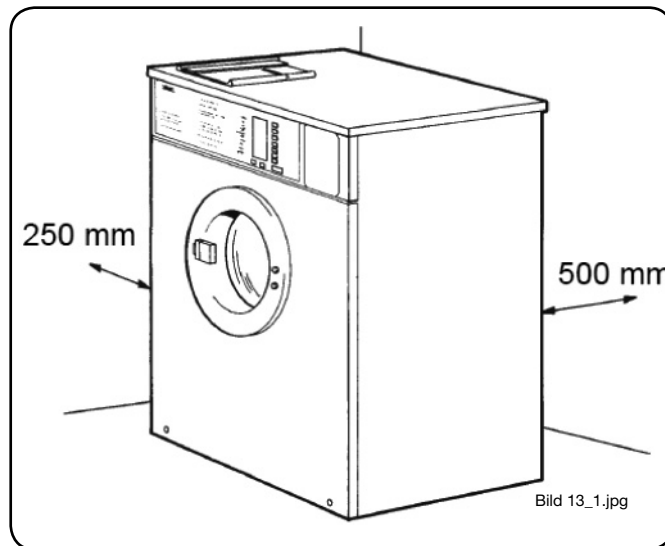


## FOM 71 MP-Lab

### Installation inspection of the reference machine

Before carrying out any major test series, inspect the installation and check the following items:

- In order to make installation and servicing the machine easier, the following clearances are recommended:
  - At least 500 mm between the machine and the wall behind.
  - A minimum clearance of 250mm at the sides between the machine and a wall or other machine, where more than one machine is installed.



- Check the mounting bolts to the floor, as in this type of machine the drum is attached directly to the frame. As a result, the floor under the machine must be stable enough to absorb the dynamic forces generated during the spin cycles. For fastening details see the Operating and installation manual for FOM 71 MP-Lab.
- Check the levelling of the machine. The vertical difference from corner to corner of the top lid shall not exceed 5 mm. If this is not the case, adjust the feet of the machine.
- The machine must be connected using the supplied Y hose or two single hoses.
- Check that the amount of supply water at the water connection to the reference machine is sufficient and in line with the specification in the standard ( $15 \pm 2$  litre) and that the amount can be maintained in all circumstances. Water pressure at the machine's water intake must never fall below 100 kPa.
- Check that the power supply is compliant with the voltage specified on the reference machine's data label and within the tolerances of the standard ( $\pm 2\%$ ).
- Make sure that the power supply can maintain the required voltage level whilst the reference machine is heating.



## FOM 71 MP-Lab

### Calibration of the level control system

For tests carried out in accordance with the IEC 604456 Ed5 standard, this calibration does not control the supply water values of the wash program. However, even if the wash programs use the flow meter to control water intake, the level control becomes active and manages other levels inside the machine such as empty machine, heating element safety levels and overflow that are required for the safety values of the machine. Therefore, the level must be adjusted and maintained in accordance with the procedure outlined below.

#### A: Calibration of the external level scale

- Clean the left hand external level tube using a bottle cleaner (with a small diameter) and remove all detergent deposits.
- Rotate the drum so that two lifters are equidistant relative to the lowest point.
- Close the door and press the manual flush button to allow water into the drum until the level reaches the inner surface of the drum.
- Check that the zero line on the external level tube matches with the level. If it does not, adjust the scale so that the zero level lines match up.
- Use the drain button to drain the water.

#### B: Water level check

##### 1: Level calibration.

- The machine must be empty.
- Use the Level Control Program (program no. 1). The Level Control program fills the machine 5 times to 160 mm and then to 100 mm, 130 mm, 160 mm and 200 mm.

Measure to 160 mm on the external scale, adjusting using the rotating potentiometer on the front panel if necessary. One full turn of the potentiometer corresponds to about 3 mm in level difference.

- Restart for second filling and check the adjustment.

##### 2: Repeatability

- Run Level Control program (Program 1).
- Fill 5 times to 160 mm.
- Read water level each time on the external scale. Max deviation  $\pm 5$  mm.

##### 3: Linearity

- Run Level Control program (Program 1).
- Run the last part. The program fills repeatedly to 100 mm, 130 mm, 160 mm and 200 mm.
- Read water level at each stop on the external scale. Max deviation  $\pm 5$  mm.





### Installation of speed sensor

A speed sensor can be attached to the end of the drum shaft. To facilitate attaching the sensor, a hole can be made in the back panel of the machine. A diameter of less than 60 mm will not affect machine performance. (Ventilation holes may change the air temperature inside the machine, which may also affect water temperature).

### FOM 71 MP-Lab

#### Adjustment of temperature, speed and water

In contrary to Wascator FOM 71 CLS, there is little scope to change or calibrate the internal parameters of the FOM 71 MP-Lab software.

##### Temperature:

- If the temperature of a wash program is too high or too low during the main wash sequence, the temperature sensor must be replaced.

##### Speed:

- If speed is too low (wash speed and/or spin speed), check incoming voltage and frequency.
- If speed is too high (wash speed and/or spin speed) check incoming voltage and frequency. Also check to see whether the V-belt is exhibiting signs of excessive wear. Changing to a new V-belt will/may reduce the speed somewhat.

##### Water:

- For level adjustment, see Chapter 13.
- For flow meter adjustment, see Chapter 17.





## FOM 71 Mp-Lab

### Flow meter installation

(All references in this document refer to ELS document 438 9041-07 Installation of flow meter control FOM 71 MP-Lab. See Appendix 1.

- Make sure that the flow meter is installed as described in Installation manual 438 9041-07
- Examine the straight tubes in front and after the flow meter sensor housing.
- The flow sensor housing shall not be placed in a location where water can drip on it.
- Program the unit in accordance with Installation manual 438 9041-07.



## FOM 71 MP-Lab

### Flow meter calibration

(All references in this document refers to ELS document 438 9041-07 Installation of flow meter control FOM 71 MP-lab. See Appendix 1)

The flow meter must be configured and calibrated in accordance with the installation manual. The configuration must adhere to the procedure at page 6 of the Installation manual. The configuration also sets the amount of water for the main wash and rinses, as well as calibration factor K. The value of the K-factor is dependent on actual water pressure in the supply line and must be adjusted for each installation. This calibration must be redone if water pressure in the supply line changes.

A flow meter shall be checked on a regular basis. If necessary, recalibration must be carried out in accordance with the procedures set out in the flow meter installation manual.

The check shall be carried out in accordance with one of the following procedures.

- Procedure A 1
  - o Select the Cotton 60 program (or any other IEC cotton program)
  - o Start the program without load.
  - o Pause the program after first fill.
  - o Drain the machine via the manual drain button and collect the water in a receptacle. Make sure no water is left in the drain hose.
  - o Weigh the water in the receptacle.
  - o If the receptacle is too small, drain water in stages and weigh.
  - o Rapid advance the program to its end.
  - o If the amount of water is incorrect, adjust the K-factor until the correct amount is achieved.
  - o Make sure no other machine connected to the same water line is filling with water whilst calibration is in process.
- Procedure A 2.
  - o Disconnect the water supply hose containing the flow meter from the machine.
  - o Fit a flow restrictor of about 15 litres/min at the end of the hose (or a valve with the opening adjusted to about 15 litres/min.)
  - o Select the Cotton 60°C program (or any other IEC cotton program)
  - o Start the program without load.
  - o Pause the program after first fill.
  - o Collect the water in a receptacle.
  - o Weigh the water in the receptacle.
  - o Rapid advance the program to its end.

## Flow meter calibration

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- o If amount of water is not correct adjust the K-factor until the correct amount is achieved.
- o Be sure no other machine connected to the same water line is filling water at the same time the calibration is done.

- Procedure B:

If a high quality and resolution calibrated laboratory flow meter is connected in series with the reference machine flow meter, the following procedure may be implemented instead:

- o Select the Cotton 60°C program (or any other IEC cotton program).
- o Start the program without load.
- o Pause the program after first fill.
- o Read the laboratory flow meter and compare with the 26 litres the reference flow meter is to supply.
- o If the amount of water is incorrect, adjust the K-factor until the correct amount is achieved.
- o Rapid advance the program to its end.
- o Be sure no other machine connected to the same water line is filling water at the same time the calib

## FOM 71 MP-Lab

### Flow meter: Setting of the correct amount of water

(All references in this document refers to ELS Document 438 9041-07 Installation of the flow meter control FOM 71 MP-Lab. See Appendix 1)

In IEC 60456 Ed 5 the amount of water levels programmed into the flow meter shall be set according to table D.3 in the standard.

Program	Set value A1 (Litre)	Set Value A2 (Litre)
Cotton 85 °C	26	18
Cotton 60 °C	26	18
Cotton 40 °C	26	18
Synthetics/Blends 60 °C	22	4
Synthetics/Blends 40 °C	22	--a
Wool 40 °C	26	--a
Cotton 30 °C	26	18
Cotton 20 °C	26	18
NOTE:		
a: No set value for A2 needed		

IEC 60456 Ed5 Table D.3

#### Procedure for programming new set values into the flow meter:

- Follow the programming given in the Installation manual for the flow meter page 6 to 9.
- Go through the complete configuration procedure and set A1 and A2 (page 8 in the Installation manual) to the desired values.
- Control that the flow meter is delivering the correct amount. If a deviation correct with the K-factor (See Chapter 18 Flow



## FOM 71 MP-Lab

### Flow meter: maintenance

(All references in this document refers to ELS document 438 9041-07 Installation of flow meter control FOM 71 LAB. See Appendix 1)

- Occasionally check the amount of water coming from the flow meter. If the amount is not correct, recalibrate in accordance with the procedures set out in Chapter 16.
- The impeller in the flow meter is sensitive to contaminants in the water and after long inoperative periods, the impeller may stop functioning.
- If the impeller is not working properly, or if the connection between impeller or control unit is broken, the water intake will stop at 8 litre.
- In this case, check the electrical connection between the impeller and control unit or or ascertain where the impeller may be stuck open and clean the impeller in accordance with the following instructions:
  - o Remove the electrical housing (Unscrew the side mounted screw and twist and lift off the housing.)
  - o Unscrew the 4 screws on the impeller housing and remove the impeller plate with impeller.
  - o Carefully turn the impeller and rotate (blow on) the impeller until it rotates free.
  - o Refit the impeller and electrical housing.





## FOM 71 MP-Lab

### **Cleaning the machine from debris in water, lint, scale and residual detergent**

It is very important that the wet parts of the machine are free from debris and particles that may affect influence the wash performance of the machine.

Lint and threads from ballast and test swatches may accumulate on the heating elements and as the bundle of lint/threads will grow it may eventually become so large that it clogs the drain valve, causing the drain valve to leak. This leakage will definitely affect wash performance as undissolved detergent builds up above the drain valve seat when the main wash begins. When leakage occurs, the concentrated solution will leak out reducing detergent concentration in the bath.

Calcium carbonate from hard water used in IEC tests will, after prolonged exposure, accumulate on the heating elements. If the scale layer is too thick the heating elements may be destroyed due to the insulating effect of the layer. The heating power will also be reduced giving longer heating times.

Lint from textiles, together with zeolite from detergent, will accumulate on the surface of the outer drum and on the back gable. Detergent will also build up in these layers. If the amount of detergent is excessive, this may affect the wash and/or rinse results obtained from the reference machine.

It is not advisable simply to remove the heating elements to visually inspect for scale or lint. The elements should only be removed where accumulations of lint or scale have been identified using the inspection procedure described below. Frequently removing the elements will sooner or later produce high resistance in the wire connection, causing an excessively high connector temperature.

### Cleaning the incoming supply water filter

Debris clogging the incoming supply water filter can prolong the supply time so it falls outside the specification given in the standard. Therefore it is necessary to clean the filter on a regular basis.

- Remove the incoming water hose and remove the filter. The filter cartridge can be easily removed from the valve housing. Clean the filter and refit all components.

### Inspecting and removing lint from heating elements and drain valve

- A build-up of lint around the heating elements and at the drain valve can be seen from inside the inner drum. Use a battery torch to illuminate the inner side of the outer drum through the holes in the inner drum. This will allow you to see any lint around the elements and the drain valve.
- If there is lint on the heating elements, they must be removed and cleaned. Disconnect the electrical wires and loosen the fastening bolt on the element (do not remove the bolt). Using flat pliers, turn the threaded axis about 90° anti-clockwise. The heating element can now be removed and cleaned. Also clean the element if a layer of scale is visible. After cleaning, refit the element and ensure that no water leaks are visible around the element seal before refitting the front panel.

### Removing lint from the drain valve

- If lint has been observed in/on the drain valve, try to remove it via the heating element openings.
- If this is not possible, the drain valve must be removed.
- Remove the front panel and unscrew all hose fastenings on hose from detergent box, to drain pipe and on the hose to the drum. Unscrew the two bolts holding the drain valve unit and remove the electrical connection to the drain valve.
- The drain valve assembly can now be removed.
- Reassemble the unit in reverse order.
- Note: Do not place the electrical connector in wrong place (correct frequency is 50 or 60 Hz).
- Also see instructions on next page.

## Description

The drain valve is a motor-operated diaphragm valve, which ensures rapid machine emptying by its opening on a large cross-sectional surface area. Its design is self-clearing, which eliminates the need for lint filters.

The main valve components are:

- motor with gear
- acme-threaded plunger rod with plunger and return spring
- rubber diaphragm
- connections for water filling, overfilling and drainage.

In the open position, the valve is de-energised. The plunger rod is thus screwed down to its lowest position by the return spring. The diaphragm is compressed, forcing the piston downwards and opening the valve.

When the motor is activated and begins to rotate, the plunger rod is screwed upwards via the gear, the diaphragm is compressed, forcing the plunger upwards, and the valve closes.

The overfilling connection is connected to the upper half of the washing drum, and the water and suds are led directly to the waste outlet, should the inlet valves or level control cease to function.

The connection for water filling as well as a nipple for connection of the sensing line for the level control are located on the riser to the washing drum.

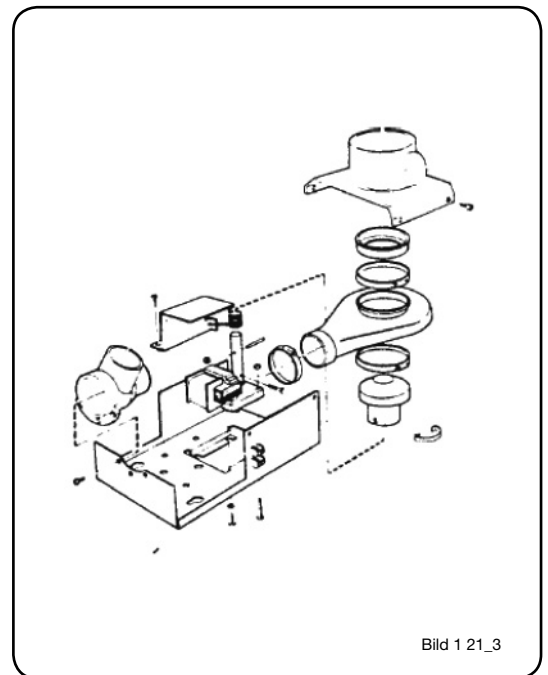


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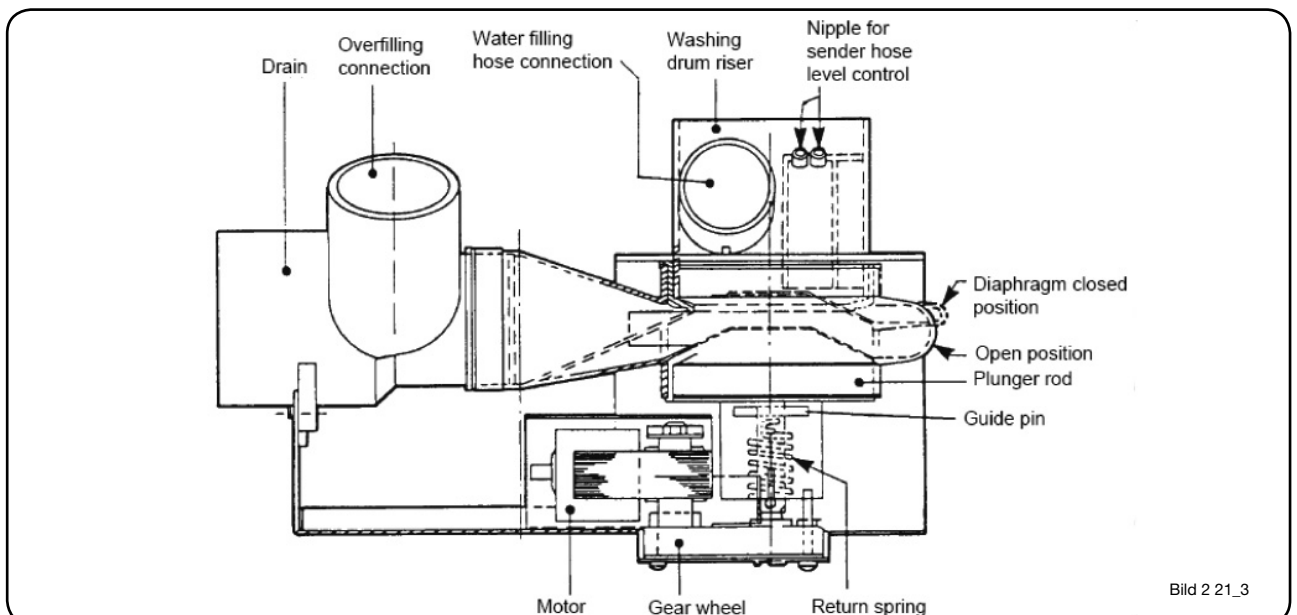


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## Repair instructions

Deposits of scale in the diaphragm may prevent the valve from closing or opening correctly. Therefore, the valve should be cleaned at specific intervals dictated by operating conditions and water quality.

The valve fails to open or close correctly

- Check that the motor has the correct supply voltage.
- Check that the plunger rod can move freely.
- Check that the diaphragm is not clogged by deposits of scale.

## Comment

When replacing the motor:

Brown cable: 60 Hz

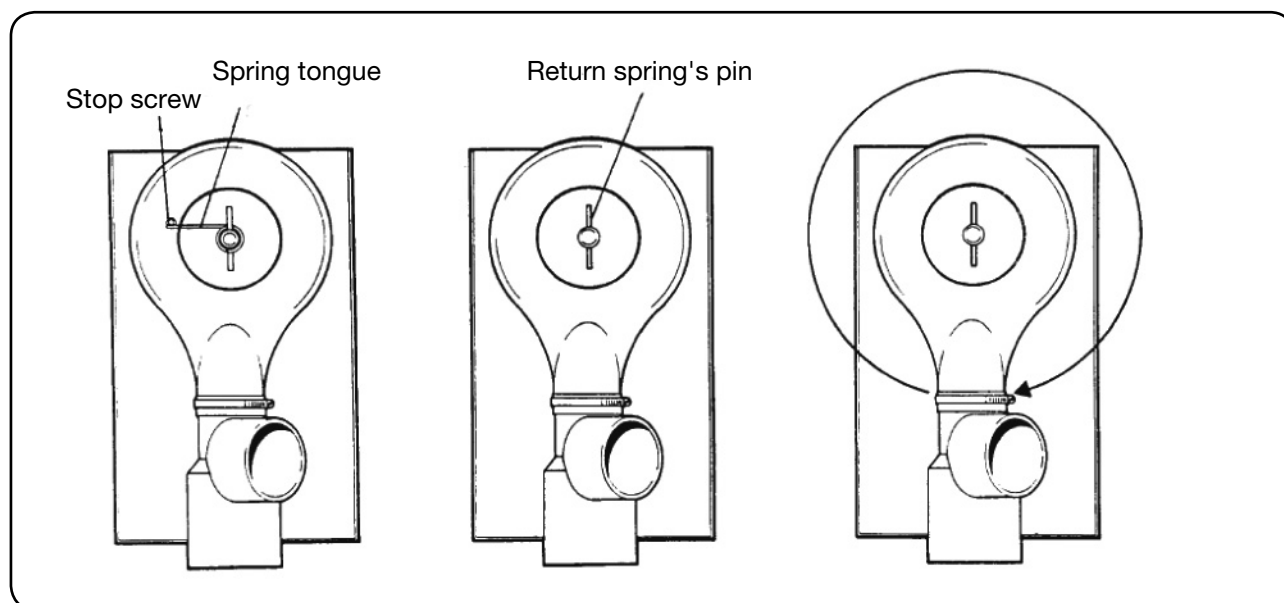
Blue cable: common.

Black cable: 50 Hz

## Tensioning the return springs

With the valve housing removed:

- Turn the return spring so that the spring's "tongue" is resting against the stop screw.
- Place the valve housing over the return spring so that the pin on the spring fits into the inlet of the piston rod. (NOTE: The piston rod shall be fitted so that its input is longitudinal with the housing.)
- Then turn the housing one turn in a clockwise direction. (In this way, the spring's pin will be threaded into the piston rod. The spring is then tensioned approximately 1/4 turn, as a result of the rise in the piston rod.)



## Removal of scale

Depending on how the reference machine is to be used, wet parts should be descaled on a regular basis.

- To remove and prevent the formation of scale in instances where the machine is used in a hard water area, implement the following procedure:
  - o Put 0.5 kg of citric acid in the detergent department.
  - o Start program Cotton 85°C.
  - o Rinse the reference machine again by running the Cotton 85°C program.

## Removal of residual detergent

Detergent may accumulate in certain parts of the machine and may also form part of deposits on the inner side of the outer drum.

- Detergent may accumulate in the hose between the drum and the external tap valve. Remove the valve and clean the hose using bottle cleaner. Flush the hose with water to ensure that no detergent remains.
- Detergent may also accumulate in the hose between the drum and the external level glass. Clean the glass and hose using bottle cleaner. Flush the hose with water to ensure that no detergent remains.
- Run a Cotton 85°C or Cotton 60°C program with the machine empty and without detergent on a regular basis. If foam is visible during the main wash, repeat the Cotton program until no "stable" foam is visible.



## FOM 71MP-Lab

### Maintenance before start up of a test series

In order to ensure that the reference machine is in good order and will work in accordance with the specifications given in IEC 60456 a number of checks can be carried out:

#### Before any major test period:

- Check for any lint according to instructions in Chapter 21.
- Check the supply time for first fill. Shall be  $109 \pm 14$  seconds from closure of door lock relay to end of filling. If time is too short, lower the water pressure. If the time is too long, clean the supply filter in accordance with the instruction set out in Chapter 21 or increase the water pressure.
- Carry out an installation check according to instructions in Chapter 13.
- Carry out a flow meter check according to instructions in Chapter 19.
- Carry out an empty run test. Use Cotton 60°C or Cotton 40°C depending on the type of program to be run during the test period.
- Compare the results obtained with results shown in Table 1 in Chapter 23 "Empty run test data" MP-Lab. Note the definitions assigned to the time intervals shown in the table.
- If the value fall outside the specification detailed in Table E.2 in IEC 60456, carry out a second empty run test or recalibrate.
- If other values obtained from the empty run test differs from the value in Table 1, analyse the reason for this difference and correct (wrong water pressure, wrong supply water temperature, faulty heating element etc).

#### Before every test period:

- Check for the presence of lint according to instructions in Chapter 21.
- Check the supply time for first fill. Shall be  $109 \pm 14$  seconds from closure of door lock relay to end of filling. If the time is too short, lower the water pressure. If the time is too long, clean the supply filter in accordance to instruction in Chapter 21 or rise the water pressure.
- Carry out a weight check according to instructions in Chapter 19.

#### Daily check:

- If the machine has not been in use for the last 2 hours run the start up program (Program 991). The start up program will flush the machine with water and normalise all temperatures inside the machine.





### FOM 71MP-Lab

#### Regular maintenance 6-12 months

The reference machine shall at a regular basis be maintained and checked in order to ensure that the reference machine is in good order and will work in accordance with the specifications given in IEC 60456.

##### Every 6 months:

- Use the start up program (Program 3) and make a visual check and ensure that the supply or drain valves are not leaking.
- Carry out a flow meter check according to instructions in Chapter 18.
- To prevent the build up of scale if the reference machine is run in hard water decalcify the machine according to procedure described in chapter 21.
- Check for any build up of lint or detergent and if verified clean according to instructions in Chapter 21
- Carry out an empty run test Cotton 60°C or Cotton 40°C depending what type of program to run during the test period.
- Compare the results obtained with results shown in Table 1 in Chapter 11 "Empty run test data". Note the definitions assigned to the time intervals shown in the table.
- If values are outside the specification in Table E.2 in IEC 60456 make another empty run test or recalibrate.
- If other values from the empty run test differs from the values shown in Table 1, analyse the reason for this difference and correct (wrong water pressure, wrong supply water temperature, faulty heating element etc).
- To prevent the build-up of scale if the reference machine is run in hard water decalcify the machine according to procedure described in chapter 21.
- Check for any build-up of lint or detergent and, if verified, clean in accordance with procedures set out in Chapter 21.
- Carry out an empty run test Cotton 60°C or Cotton 40°C depending what type of program to run during the test period.
- Compare the results obtained with results shown in Table 1 in Chapter 24 "Empty run test data". Note the definitions assigned to the time intervals shown in the table.
- If values are outside the specification in Table E.2 in IEC 60456 make another empty run test or recalibrate.
- If other values from the empty run test differs from the values shown in Table 1, analyse the reason for this difference and correct (wrong water pressure, wrong supply water temperature, faulty heating element etc).

##### Once a year:

- Perform a complete calibration of the machine in accordance with certified procedures.



## FOM 71 MP-Lab

### Empty run test data

During the CLS MP-Lab ring test, data was obtained from a number of laboratories. This data is useful when checking that the reference machine in the laboratory is performing as expected.

Please note: This data is obtained from runs with an unloaded machine. Therefore, the energy and process times obtained here cannot be compared with the same parameters applied during a test series carried out with a loaded machine. However, empty test runs are not affected by load differentials or detergent batches and will only produce results that are specific to the machine.

Table 1 below shows the estimated/defined values for Cotton 60°C, as well as average values from the RRT 2008 ring test.

The RRT 2008 average values were obtained from the RRT 008 IEC/CENELEC/CECED ring test. These values are based on empty run tests undertaken at 15 different laboratories.

The definitions used in Table 1 differ from those given in IEC 60456 and below are applicable to Table1.

#### Definitions

<b>Total program time:</b>	Time from the start of first filling to the start of the retardation phase at the end extraction sequence.
<b>Heating time:</b>	The time until the heating relays have been switched on during the different heating periods.
<b>Total main wash time:</b>	The time from start of first filling until the start of first rinse water supply.
<b>Filling time of water:</b>	The first filling time (26 litre). From closure of door lock relay to end of filling.
<b>Cold water inlet temperature:</b>	The temperature of the supplied cold water.
<b>Temp at end of heating in enzyme step:</b>	The temperature at the time the heating relay is switched off after reaching the 40°C enzyme step.
<b>Temp at the end of the enzyme step:</b>	The temperature in the bath just prior to the heating up to 60°C.

## Empty run test data

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**Temp at the end of heating in final heating:**

The temperature when the heating relay is switched off after reaching 60°C.

**Temp at the end of the main wash:**

The temperature in the bath just prior to drain after main wash.

**Amount of water in main wash:**

The amount of supplied water to the main wash.

**Amount of water in rinses:**

The amount of water supplied in each rinse.

**Total energy consumption:**

The total energy consumed during the program.

**Drum Speed:**

Drum speed measured in RPM.

**Water pressure:**

Water pressure (Static) measured close to inlet valve and during the filling of water.

# Empty run test data

24:3

Table 1

<b>FOM 71 MP-Lab</b>		<b>Estimated/ defined std values</b>	<b>Estimated/ defined std ranges</b>	<b>RRT2008 Average value</b>	<b>Measured value</b>
16 IEC/CENELEC(Not Com- pulsory)					
IEC 60456 Cotton 60 Empty run					
Time:					
Total program time	Min,sec	78:00	2:00	78:24	
Heating time cold - 20°C	Min,sec	1,00	0:30	0:54	
Heating time 20°C - 40°C	Min,sec	7:30	0:30	7:19	
Heating time 40°C - 60°C	Min,sec	8:15	0:30	8:25	
Total mainwash time	Min,sec	52:45	1:30	52:47	
Filling time of water first fill	Min,sec	1:45	0:15	1:43	
Temperature:					
Cold water inlet tempera- ture	°C	15.0	2.0	15.3	
At end of heating to 40 °C.	°C	40.0	1,0	40.1	
At end of heating to 60 °C	°C	60.0	1,0	60.3	
At the end of mainwash	°C	55,0	2.0	56.2	
Water:					
Amount of water in main- wash	Litre	26.0	0,5	26.0	
Amount of water in rinse 1	Litre	18,0	0,5	18.0	
Amount of water in rinse 2	Litre	18,0	0,5	18.1	
Amount of water in rinse 3	Litre	18,0	0,5	18.1	
Amount of water in rinse 4	Litre	18,0	0,5	18.1	
Total amount	Litre	98.0	2.5	98.2	
Energy:					
Total energy consumption	kWh	1,800	0,150	1.830	
Voltage:					
Line voltage during the test	V	230	4	231	
Ambient temperature:					
Room temperature close to machine	°C	23.0	2	23.2	





















**FOM 71 MP-Lab****Reference Programming IEC 60456 Ed5****COTTON 85****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N

HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N



NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 7**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	85
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N

SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 8</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y

GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N

COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**EXTRACT**

SPINNING ... MIN ... SEC	5 MIN
--------------------------	-------

**MAIN DATA**

BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

**COTTON 60****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N

COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31



HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
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NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 7**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	60
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0

DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 8</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y

GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N

DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**EXTRACT**

SPINNING ... MIN ... SEC	5 MIN
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**MAIN DATA**

BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

**COTTON 40****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255



TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N

GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N

COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y

GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255

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TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 5</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>EXTRACT</b>	
SPINNING ... MIN ... SEC	5 MIN
<b>MAIN DATA</b>	
BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

## Synth/Blends 60

### MAINWASH 1

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

### MAINWASH 2

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255

TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N



GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 7**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	255
HYSTERESES ... UNITS	31
TEMPERATURE ... °C	60
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0

DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 8**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 9**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y

COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y

GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>EXTRACT</b>	
SPINNING ... MIN ... SEC	2 MIN
<b>MAIN DATA</b>	
BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

**Synth/Blends 40****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255

TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N



GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	14 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N

COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y

GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**RINSE 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**EXTRACT**

SPINNING ... MIN ... SEC	2 MIN
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**MAIN DATA**

BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

## Wool 40

### MAINWASH 1

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	Y
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

### MAINWASH 2

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	Y
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	40
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	N
GENTLE ACTION Y/N	Y
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N

NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	Y
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	Y
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	N
GENTLE ACTION Y/N	Y
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	Y
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	Y
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	N
GENTLE ACTION Y/N	Y
TIME ... MIN ... SEC	1 MIN
<b>EXTRACT</b>	
SPINNING ... MIN ... SEC	1 MIN
<b>RINSE 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	Y
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	Y
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	N
GENTLE ACTION Y/N	Y
TIME ... MIN ... SEC	1 MIN

**EXTRACT**

SPINNING ... MIN ... SEC	6 MIN
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**MAIN DATA**

BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3



**COTTON 30****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255

TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	30
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	17 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y

COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 3</b>	

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>EXTRACT</b>	
SPINNING ... MIN ... SEC	5 MIN
<b>MAIN DATA</b>	
BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3

**COTTON 20****MAINWASH 1**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	Y
HOT WATER Y/N	N
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	Y
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 2**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N

COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 3</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>MAINWASH 4</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	N
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	N
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31



HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	30 SEC
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 5**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	20
WASH TIME ... MIN ... SEC	1 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**MAINWASH 6**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	10
WASH TIME ... MIN ... SEC	7 MIN
COLD WATER Y/N	N
HOT WATER Y/N	N
COLD HARD WATER Y/N	N
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 1</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y

COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0
<b>DRAIN 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
<b>RINSE 2</b>	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	3 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	N
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 3**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN
RINSE 3	
PAUSE WITH BUZZER Y/N	N
NORMAL ACTION DURING FILLING Y/N	N
GENTLE ACTION DURING FILLING Y/N	N
NORMAL ACTION DURING HEATING Y/N	Y
GENTLE ACTION DURING HEATING Y/N	N
NORMAL ACTION DURING WASH Y/N	Y
GENTLE ACTION DURING WASH Y/N	N
LEVEL ... UNITS	31
HYSTERESES ... UNITS	255
TEMPERATURE ... °C	0
WASH TIME ... MIN ... SEC	2 MIN
COLD WATER Y/N	N
HOT WATER Y/N	Y
COLD HARD WATER Y/N	Y
COMP 1 (LEVEL CONTROLLED) Y/N	N
COMP 2 (LEVEL CONTROLLED) Y/N	N
COMP 3 (LEVEL CONTROLLED) Y/N	N
COMP 2 HOT (LEVEL CONTROLLED) Y/N	N
SOAP DISPENSER	
DETERGENT 1 TIME ... MIN ... SEC	0
DETERGENT 2 TIME ... MIN ... SEC	0
DETERGENT 3 TIME ... MIN ... SEC	0
DETERGENT 4 TIME ... MIN ... SEC	0
DETERGENT 5 TIME ... MIN ... SEC	0

**DRAIN 4**

PAUSE WITH BUZZER Y/N	N
NORMAL ACTION Y/N	Y
GENTLE ACTION Y/N	N
TIME ... MIN ... SEC	1 MIN

**EXTRACT**

SPINNING ... MIN ... SEC	5 MIN
--------------------------	-------

## MAIN DATA

BUZZER ON WHEN PROGRAM FINISHED Y/N	Y
GENTLE ACTION ON TIME ... SEC	3
GENTLE ACTION OFF TIME ... SEC	12
NORMAL ACTION ON TIME ... SEC	12
NORMAL ACTION OFF TIME ... SEC	3



# **Installation of flow meter control**

## **FOM 71 LAB**

438 9041-07/04



**May only be carried out by authorized personnel.**







## Flow meter control

This flow meter kit is specially designed for use together with the reference machine FOM 71 LAB and complies with the new EN 60456/prA1.

The kit contains all necessary tubes and connectors for installation to a water hose. If installation to fixed tubes is preferred be sure that a straight tube of 150 mm before and 75 mm behind the flow meter is mounted in order to get a uniform flow. The tube diameter shall be the same as the attached tubes. Be sure that the water has no particles that can block the rotating sensor wheel in the flow meter. Mount if necessary a filter in the water housing in front of the straight tube. The kit also contains a standard battery eliminator with euroconnection and 230V. If other connections or voltages are needed an eliminator should be bought locally with following specifications: Output 24 VDC stabilised, Max 330mAmp, DC connector type: 2.1 mm pin, negative pole in centre.

- Disconnect the power supply to the machine.
- Mount the flow meter control box on the wall.
- Remove the top panel.
- Mount the flow meter on the cold water supply pipe.
- Connect cable with connection X135 to the flow meter and connect X135 on the flow meter control box (see page 10 and 11).
- Connect the eliminator 24V (X136) to the flow meter control box.

Fig 1

- If the level control A is black it shall be exchanged to a light grey (included in the kit). Part No 471 8856-02. Remove capacitor C22.

Fig 2

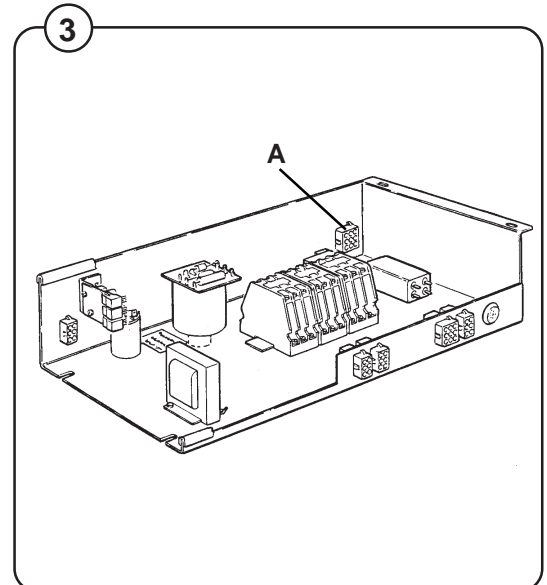
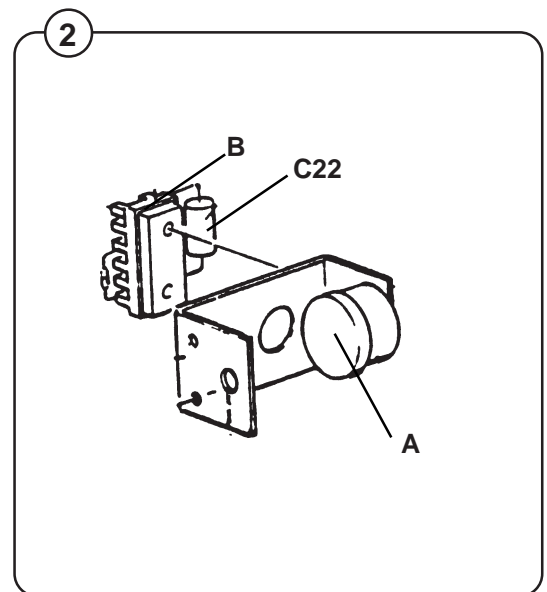
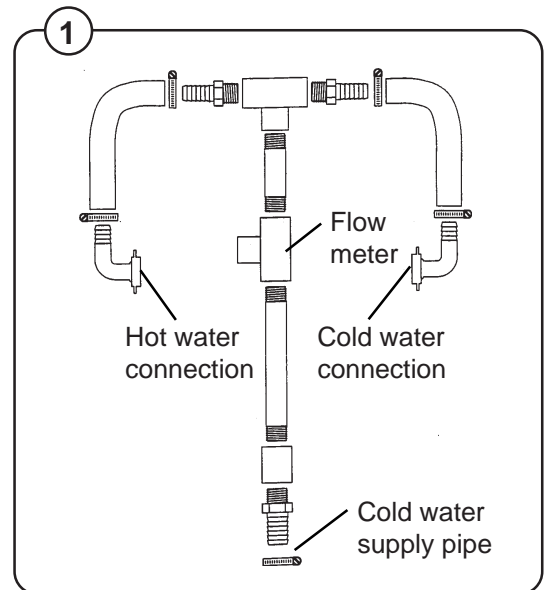
- Make a hole in the rear panel by knocking out the hole to the left of the water connections.

Fig 2

- Connect cable 10 connection X133 to the flow meter control box and the other end to the plinth B (X22) on connections 3 and 7 via the hole in the rear panel.

Fig 3

- Disconnect the quick connector A (X9) with the wires coming from the water valves. Pull cable 9 through the hole in the rear panel and connect X9A and X9B to both sides of opened connector X9. Connect X9C to the flow meter control box.



### Change of EPROM

- Two memories are included in the kit, one with English display text and one with German display text. In some cases the existing memory must be changed (See section Start up with flow controlled programs.)
- In case a memory shift is needed dismount the FOM control board and change the EPROM to attached.

Fig 4

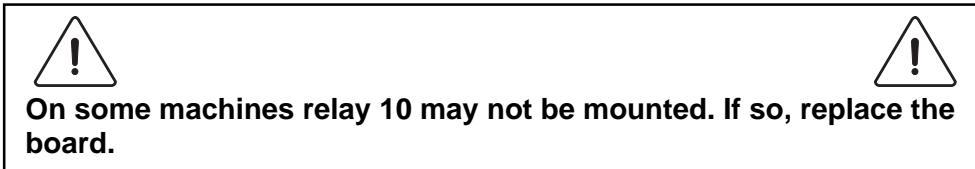
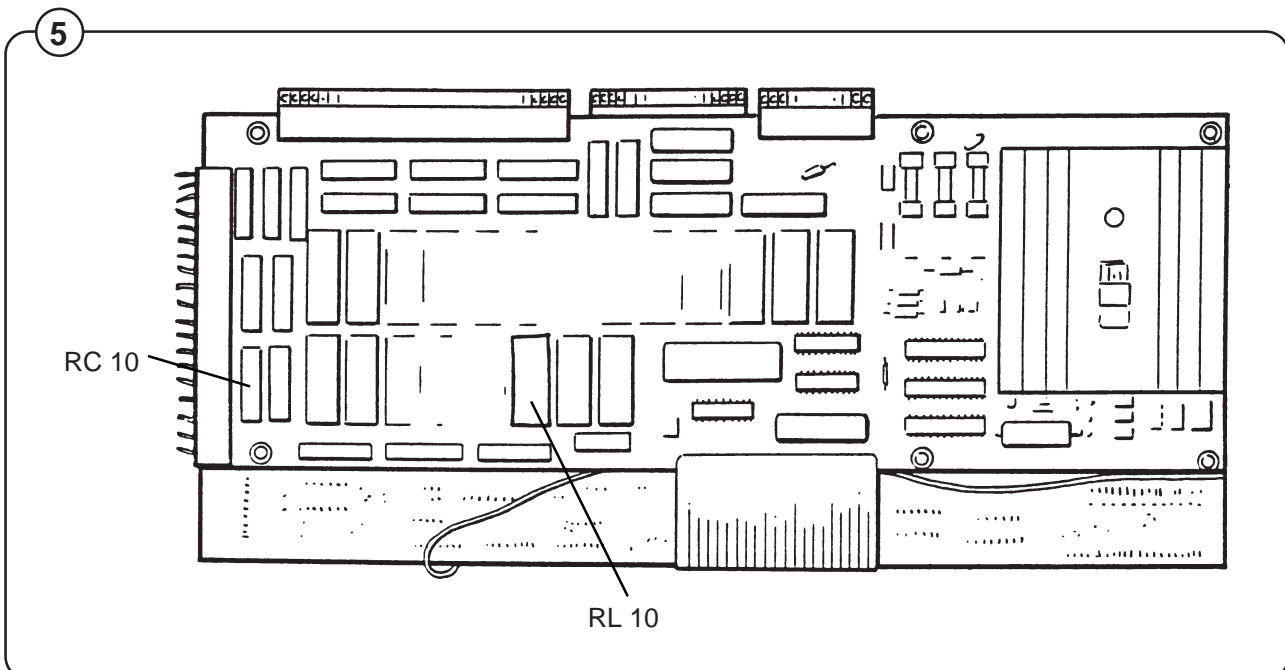
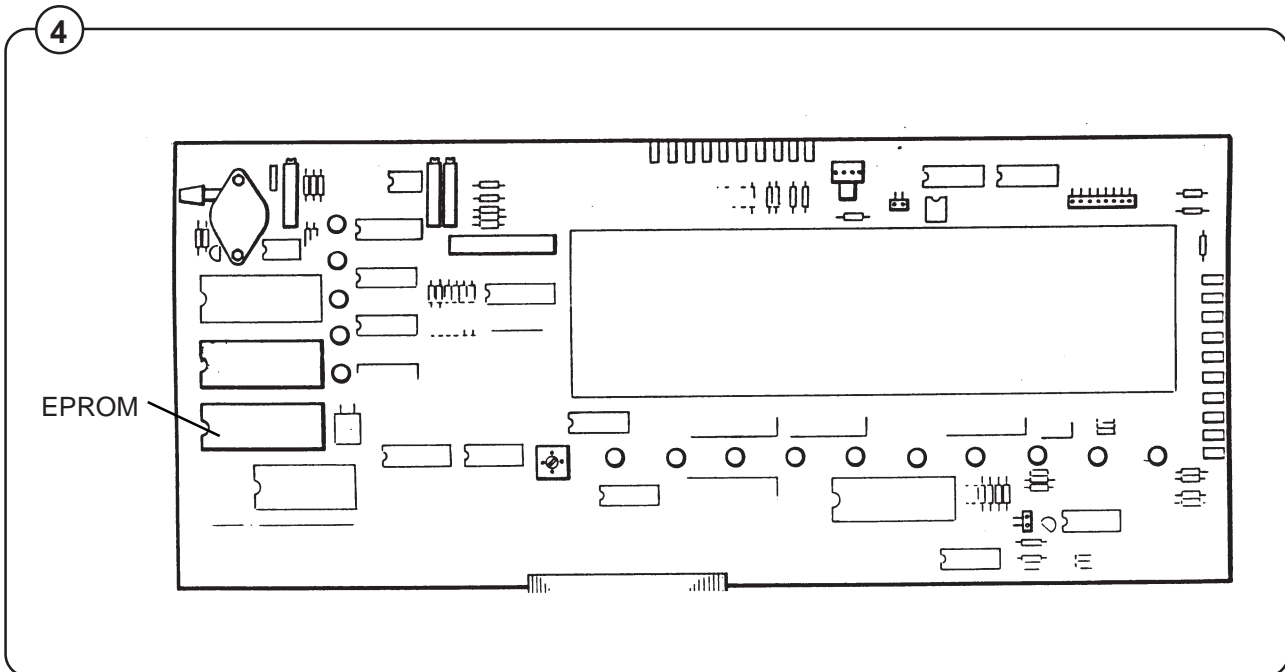


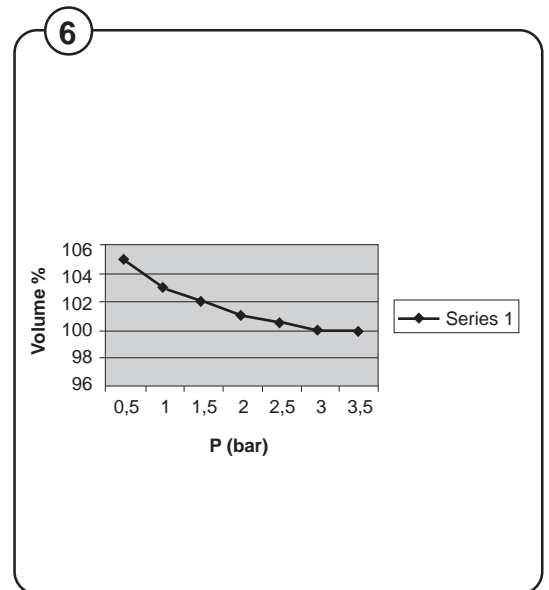
Fig 5



## Calibration and configuration of the flow meter

**Fig 5** Configure the flow meter according to the attached configuration scheme. It is very easy to make mistakes during the configuration so be careful and follow strictly the scheme. For a full description of all possibilities see the attached manual for the Batch controller type 8025. The calibration factor "K-factor" must be calibrated according to conditions in each individual laboratory. The K-factor depends among other things of available water pressure. The figure shows the dependency as measured in the Electrolux- Wascator laboratory.

The two programmable volumes A1 and A2 shall be programmed according to the water volume indicated in EN 60 456. Note that carry over can depend on textile quality and always make a check before any new test series.



## Start up with flow controlled programs

Be sure that the service switch mounted on top of the electronic board is in position 1. See picture in chapter "Service switch" in Operating and Installation Manual FOM 71 LAB. The switch in that position means that all programming questions will be presented on the display during programming. Be sure that the question "COLD HARD WATER" appears in main wash and rinse sequences. If not the memory attached to the kit has to be mounted on the FOM control board.

The flow meter can work parallel to the normal level control. A "YES" on question "HARD" water in mainwash and rinse sequences will initiate the flow meter. The questions "Cold" and "HOT" water will choose the two necessary volumes. Following procedures shall be made to convert an existing EN 60456 program to a new program with flow meter control.

Take the existing EN 60 456 programs you want to convert to flow meter controlled programs and copy them into an empty location (See Operating and Installation Manual for FOM 71 LAB for copying instructions.) and make following changes:

Set all water levels to 31 scale units (In all sequences.)

Change all inlet water in mainwash from "COLD" to "COLD" and "HARD" water.

Change all inlet waters in rinses from "COLD" to "HOT" and "HARD" water.

Now "HARD" means that the flow meter shall be used and "COLD" water volume A1 and "HOT" water volume A2 (see page 8).



**Only change in the sequences where you want a supply of water.**



All other parameters shall be unchanged.



**It is possible to run all original programs with the level control as usual as long as the parameter "HARD WATER" is not activated.**



## Failures

The water supply stops at about 8 litres.

- Configuration wrong. Go through all configuration steps and correct.

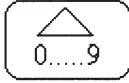


Too much water (Approx. 30 - 40 litre). Flow control unit sends Alarm.

- No signal from sensor to flow control unit.
- Check cables.
- Check that sensor wheel in the sensor unit rotates free. Can be easily checked by removing the sensor housing and unscrew the 4 screws holding the wheel.

Error message from flow control unit.

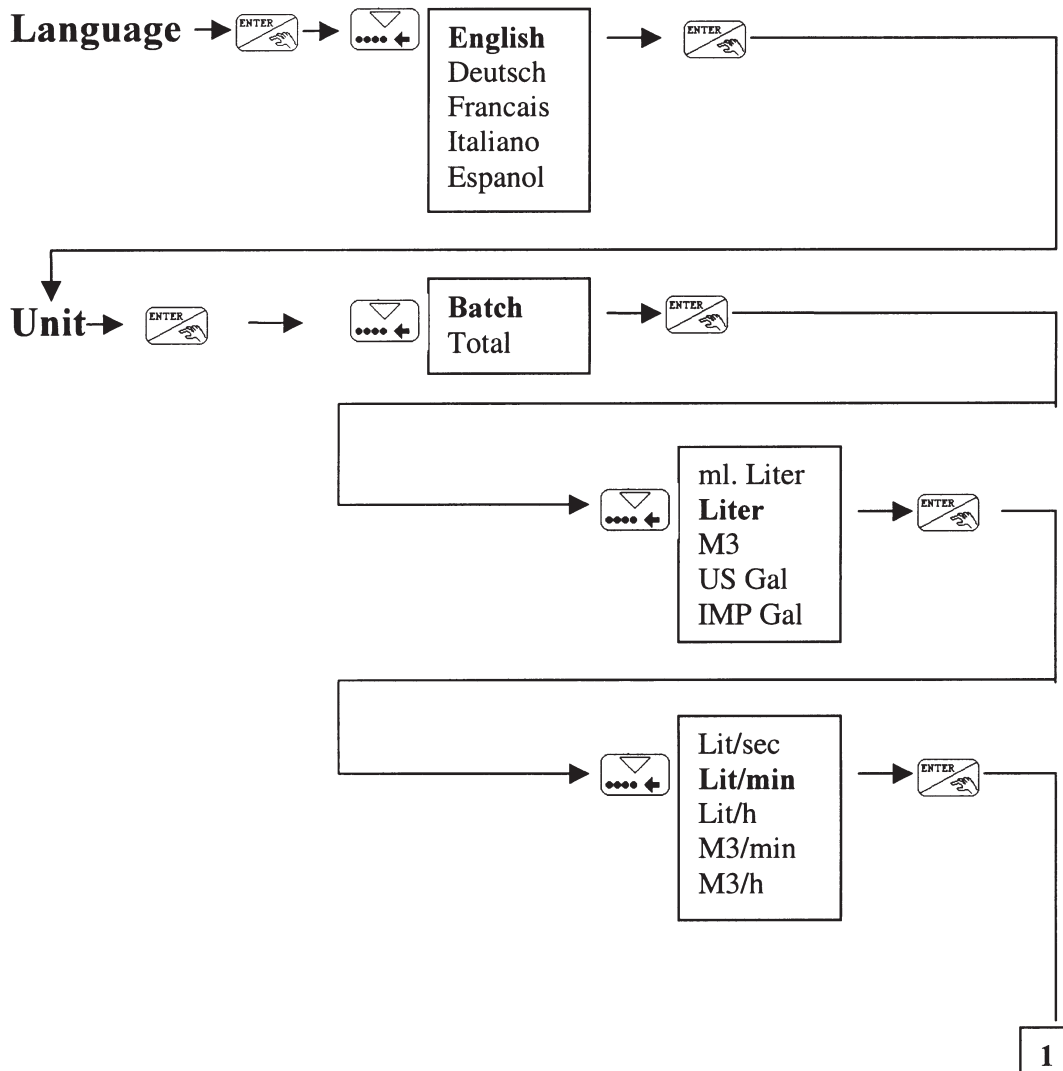
- Error in stored values. Reprogram the unit.

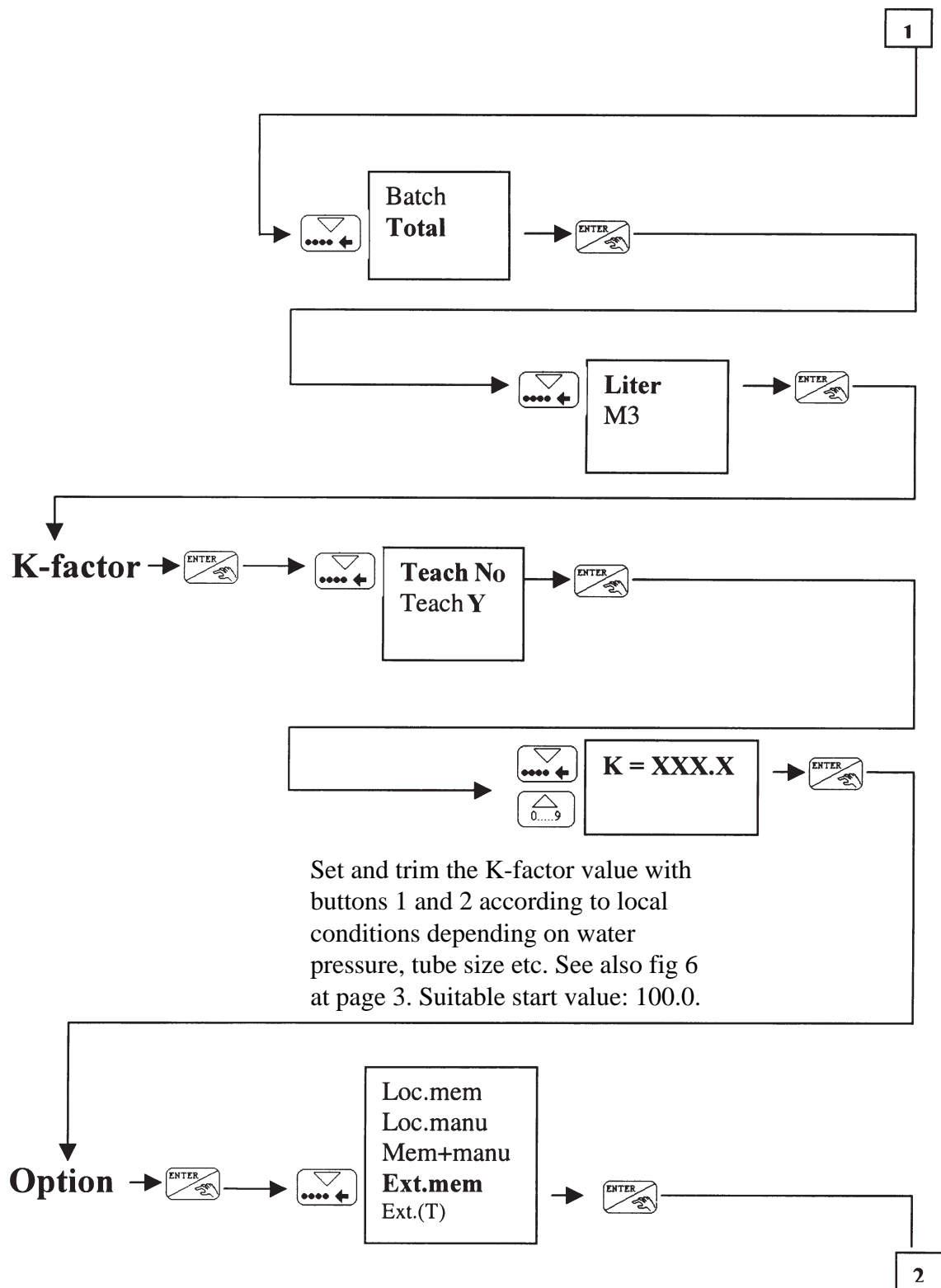
**Configuration**

- Buttons to use:** Button 1:  Toggle up, Incrementing key for numeric values
- Button 2:  Toggle down, Change digit in numerical Operation
- Button 3:  Enabling key

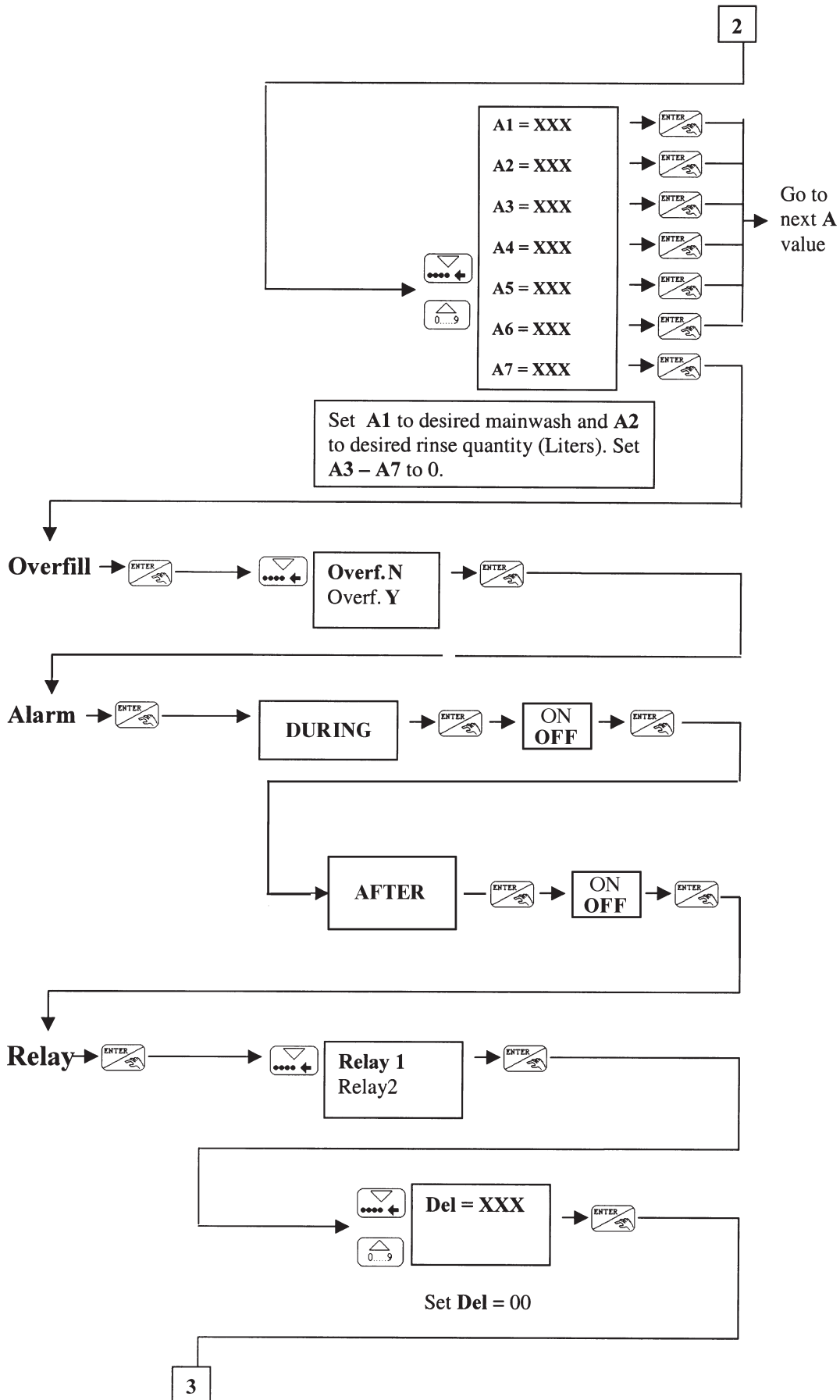
To enter calibration mode press simultaneously button 2 and 3 for 3 – 5 seconds

Follow route below and select using the **enter** button when a selection shall be made

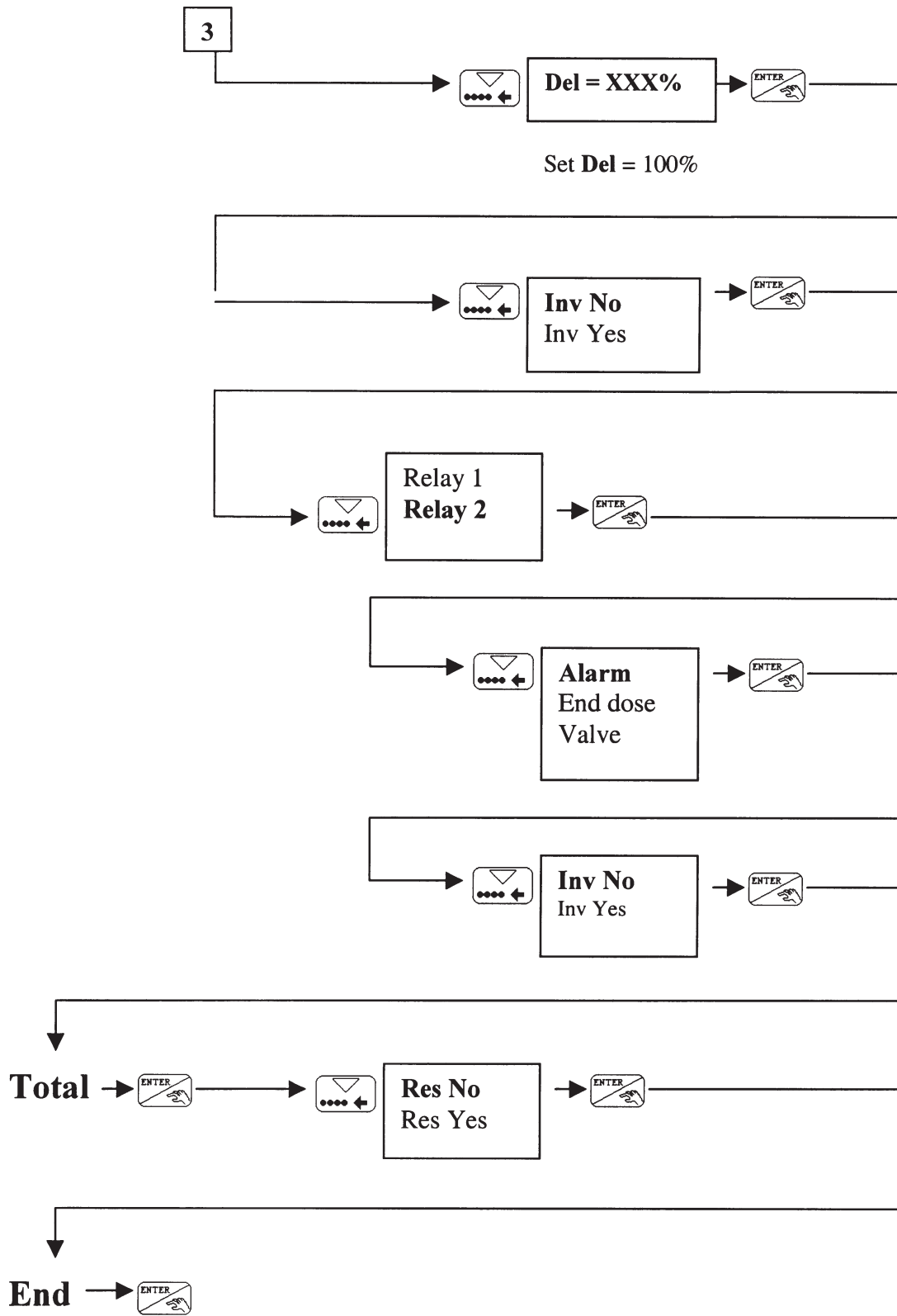




# Flow meter control







# Flow meter control

