Programming

Clarus Control

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Conclude programming

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Insert program number

Continue programming or stop programming

Continue programming or stop programming

Programming finished

To delete a wash program

Delete a wash program

Questions, Standard
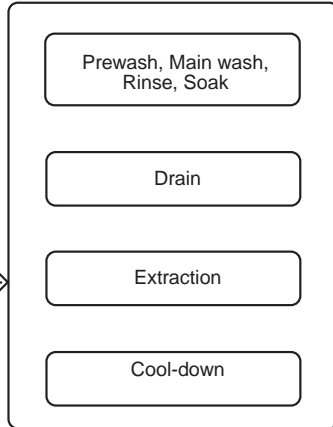
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Drain

Extraction

Cool-down

To program on the basis of an existing program

Select Programming Mode

→ Select Standard or Advanced

Select an existing program

→ Decide how to continue:

Change data in a module

Delete a module

Insert a new module

Enter text

Conclude programming

Insert Main Data

Insert program name

Insert program number

Continue programming or stop programming

Programming finished

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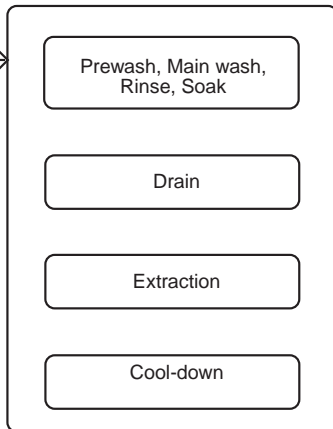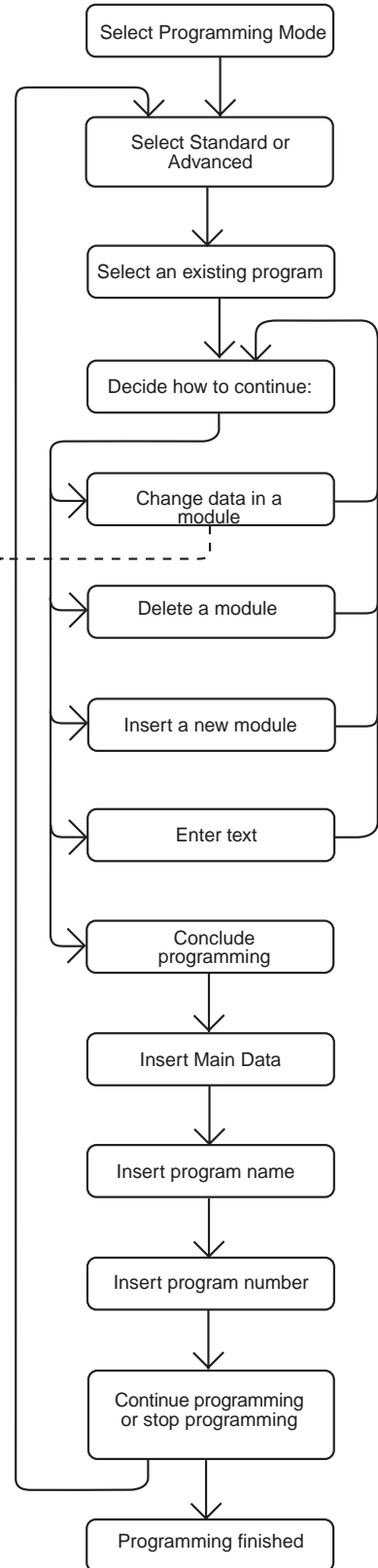
An introduction to programming

The machine's program control unit (PCU) has nine standard programs, numbered 991 to 999. If these programs are insufficient for your requirements, you can also program your own wash programs and save them under other unique program numbers.

There are two possible approaches to programming:

- You can **create a completely new wash program** by programming a number of individual "program modules" which are arranged in a logical order to form a new program.

- You can **create a new program on the basis of an existing one** by modifying, adding and deleting program modules, then saving the program created under a new program number.

  There are also two different levels (modes) available for programming:

- In **Standard** mode you can enter all the basic data required for a wash program. Other variables are set automatically using tried-and-tested standard values, which in most cases work without any problem.

- In **Advanced** mode you have a higher degree of control over all aspects of the program. Using Advanced mode does, however, call for a detailed knowledge of the way in which wash programs work, to ensure that all the possibilities available are used correctly.

It is for you to decide which mode you wish to program in.

Wash programs can be programmed directly on the machine, via the PCU control panel, which is the method described in this manual. Wash programs can also be written on a personal computer and later transferred to the machine's PCU using a memory card. This option is described in a separate manual.

Display screen

Numeric keyboard

RUN A WASH PROGRAM
GO TO THE MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

✳   ↓   SELECT

CLARUS CONTROL

Card reader for memory cards

Function keys
The functions of these keys change, depending on which menu or part of a menu you are using. Their current functions at any time are shown on the display immediately above each key.

The "Move back" key
By pressing this key repeatedly you can move backwards through the menus you have navigated through. This will always bring you back to the menu illustrated here.

4221 3651

An introduction to programming

To create and write an entirely new program

Select Programming mode

Select Standard or Advanced

Select program mode

Select position of module in program sequence

Answer questions for module

Deside how to continue:

Delete a module

Change data in existing module

Enter text

Conclude programming

Insert Main Data

Insert program name

Insert program number

Continue programming or stop programming

Programming finished

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Questions, Standard mode

Prewash, Main wash, Rinse, Soak

Drain

Extraction

Cool-down

Questions, Advanced mode

Prewash, Main wash, Rinse, Soak

Drain

Extraction

Cool-down

This is described in detail in Chapter "To create and write an entirely new program". The "questions" asked to help you construct each program module are described in Chapters "Program modules, Standard mode" and Program modules, Advanced mode". The relevant section numbers are shown to the left of each description of the steps below.

To create a new program you must start by selecting programming mode.

Next you decide whether you wish to write the whole program in Standard or Advanced mode.

Standard mode allows you to include all the basic data required, while Advanced mode gives you a higher degree of control over all aspects of the program.

Here you select which program module you want to program. You can choose from the following modules:

Prewash

Used for prewash and brief soaking.

Main wash

Used as the main wash module, with heating and detergent dispensing.

Rinse

Rinsing the wash load.

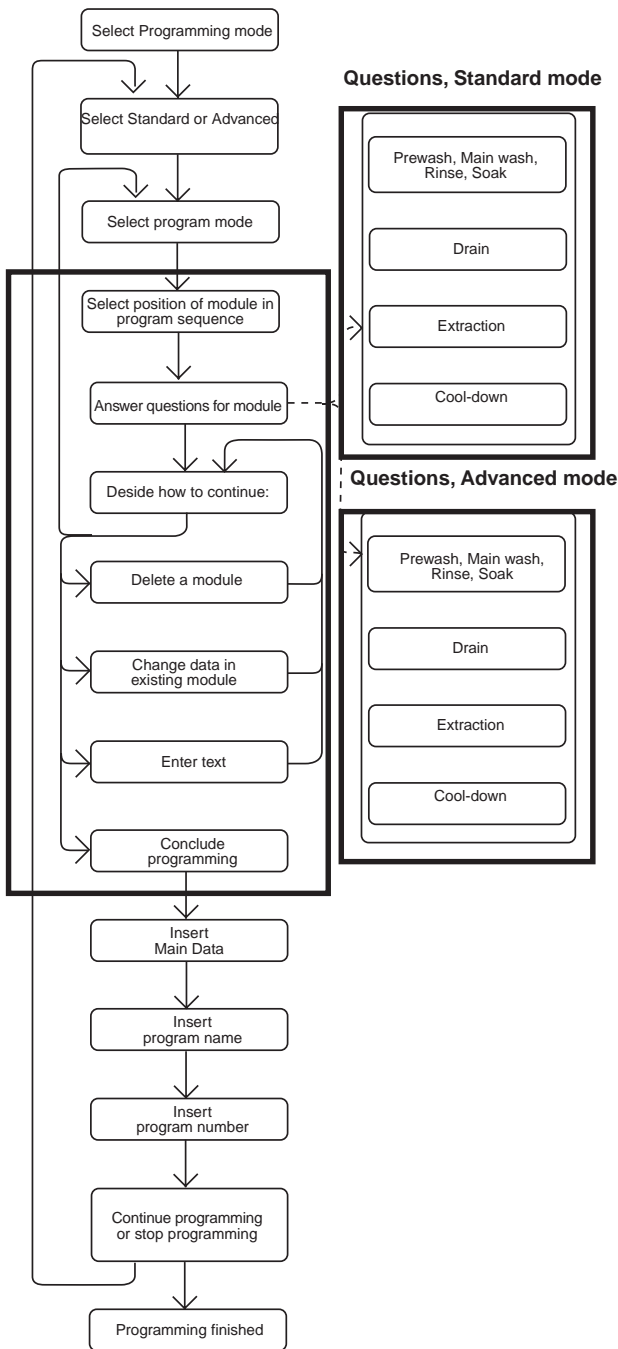**Drain**

Drain stage after wash and rinse stages.

Extract

Cool-down

Used for controlled cooling of the wash water to prevent creasing of the wash load.

Soak

Used for longer soak stages.

```
┌─────────────────────────┐
│ Select Programming mode │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Select Standard or Advanced │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Select program mode     │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Select position of module in │
│ program sequence        │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Answer questions for module │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Deside how to continue: │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Delete a module         │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Change data in          │
│ existing module         │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Enter text              │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Conclude                │
│ programming             │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Insert                  │
│ Main Data               │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Insert                  │
│ program name            │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Insert                  │
│ program number          │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Continue programming    │
│ or stop programming     │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Programming finished    │
└─────────────────────────┘
3928
```

Questions, Standard mode

- Prewash, Main wash, Rinse, Soak
- Drain
- Extraction
- Cool-down

Questions, Advanced mode

- Prewash, Main wash, Rinse, Soak
- Drain
- Extraction
- Cool-down

Here you determine the position of the module (which you are about to program) in the program sequence.

Once you reach the list of questions in the module, you have to answer a series of questions to determine factors such as times, speeds, temperatures, water and detergent options, and so on. Detailed explanations of each question can be found in these chapters:

Program modules, Standard mode

Program modules, Advanced mode

When you have completed the first program module, you can decide how you wish to continue:
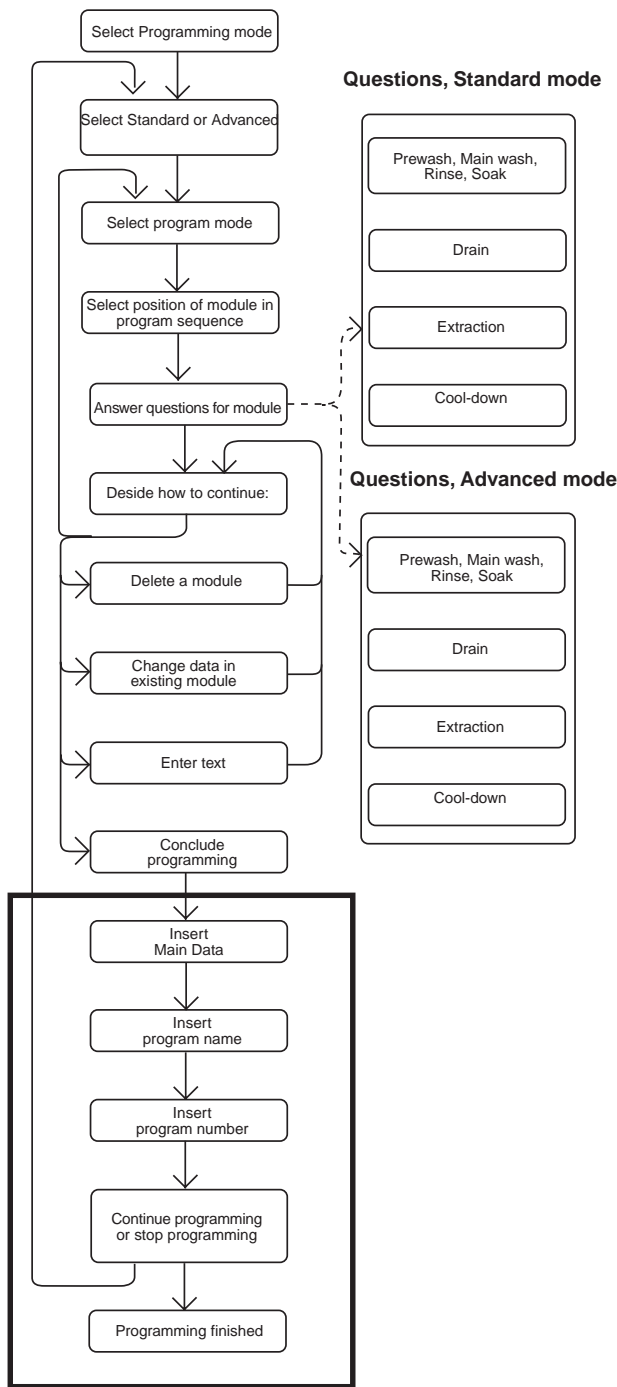
- Program more modules. Once these are finished and in a suitable order they will become a new wash program.

- Modify a module you have programmed already.

- Delete a module you have programmed already.

- Enter explanatory text.

- Stop programming.

How to delete an existing program module is described in chapter "To program on the basis of an existing program", section "To delete a module".

How to modify an existing program module is described in chapter "To program on the basis of an existing program", section "To change data in a program module".

This is where you enter text to explain what the program is used for. The text will be displayed when the program is used. No more than 155 characters.

When you have decided to conclude programming, you have to enter the program's "main data", and to give it a name and number. These steps are described in the next three points.

```
┌─────────────────────────────┐
│  Select Programming mode    │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Select Standard or Advanced│
└─────────────────────────────┘

┌─────────────────────────────┐
│  Select program mode        │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Select position of module in│
│  program sequence           │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Answer questions for module │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Deside how to continue:    │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Delete a module            │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Change data in              │
│  existing module            │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Enter text                 │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Conclude                   │
│  programming                │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Insert                     │
│  Main Data                  │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Insert                     │
│  program name               │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Insert                     │
│  program number             │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Continue programming        │
│  or stop programming        │
└─────────────────────────────┘

┌─────────────────────────────┐
│  Programming finished       │
└─────────────────────────────┘
```

Questions, Standard mode

- Prewash, Main wash, Rinse, Soak
- Drain
- Extraction
- Cool-down

Questions, Advanced mode

- Prewash, Main wash, Rinse, Soak
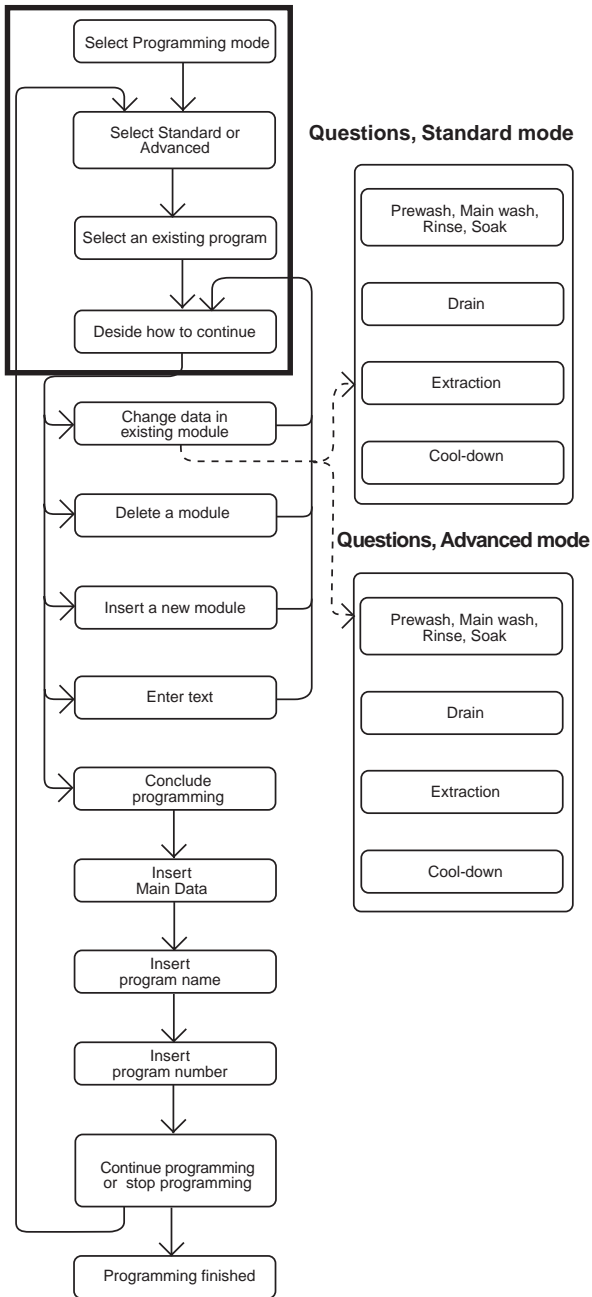- Drain
- Extraction
- Cool-down

3928

"Main data" is the name given to various functions which apply to the program as a whole. In Standard mode you can control the functions "buzzer at program end", "start program with extraction", and "calculate weight of load". In Advanced mode you can also program the cycle times for gentle action and normal action.

The program name may be up to 80 characters long.

You can give the wash program a new program number between 1 and 990. You can also replace an existing wash program by giving the new program the same number as the existing program. Note that the standard programs supplied with the machine (numbered 991 to 999) cannot be deleted or changed.

When the program has been fully programmed, you can choose either to go on and program another wash program, or to exit programming mode.

To program on the basis of an existing program

Select Programming mode

Select Standard or Advanced

Select an existing program

Deside how to continue

Questions, Standard mode

Prewash, Main wash, Rinse, Soak

Drain

Extraction

Cool-down

Change data in existing module

Delete a module

Insert a new module

Enter text

Questions, Advanced mode

Prewash, Main wash, Rinse, Soak

Drain

Extraction

Cool-down

Conclude programming

Insert Main Data

Insert program name

Insert program number

Continue programming or stop programming

Programming finished

3931

This is described in detail in Chapter "To program on the basis of an existing program". The "questions" asked to help you construct each program module are described in Chapters "Program modules, Standard mode" and "Program modules, Advanced mode". The relevant section numbers are shown to the left of each description of the steps below.

To program on the basis of an existing program, you must start by selecting programming mode.

Next you decide whether you wish to write the whole program in Standard or Advanced mode.

Standard mode allows you to include all the basic data required, while Advanced mode gives you a higher degree of control over all aspects of the program.

From the machine's program library you select the program you want to serve as the basis for your new program. You can choose any of the standard programs (numbered 991 to 999) supplied with the machine, or another program you have created in the past.

Now you can choose how to change the existing program:

Change parameters in one of the program modules in the existing program.

• Delete one or more modules in the existing wash program.

• Add new program modules and program them.

• Enter new explanatory text.

• Stop programming.
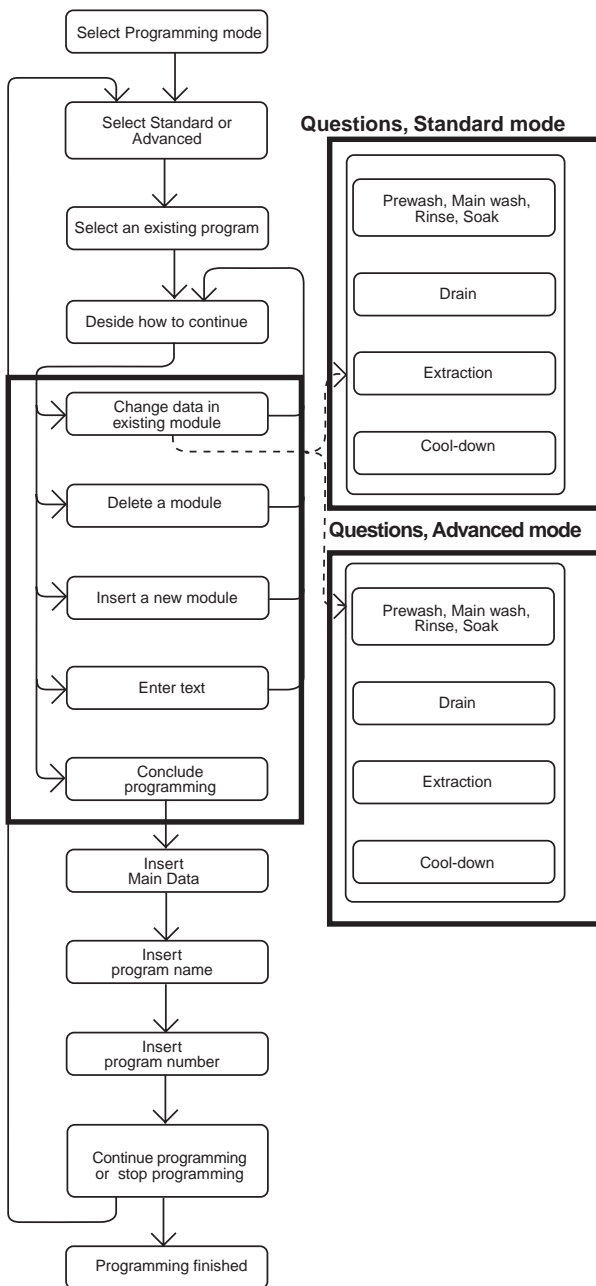
You can alter any of the parameters in any module. The questions help you to determine factors such as times, speeds, temperatures, water and detergent options, and so on. Detailed explanations of each question can be found in these chapters:

Program modules, Standard mode

Program modules, Advanced mode

Here you are shown how to delete modules you do not require in your new wash program.

You can insert any suitable module wherever you wish in the program. You can choose from the following modules:

Prewash

Used for prewash and brief soaking.

Main wash

Used as the main wash module, with heating and detergent dispensing.

Rinse

Rinsing the wash load.

Drain

Drain stage after wash and rinse stages.

Extract

Cool-down

Used for controlled cooling of the wash water to prevent creasing of the wash load.

Soak

Used for longer soak stages.

This is where you enter the new text to explain what the program is used for. The text will be displayed when the program is used. No more than 155 characters.

When you have decided to conclude programming, you have to enter the program's "main data", and to give it a new name and number. These steps are described in the next three points.

Select Programming mode

Select Standard or Advanced

Questions, Standard mode

Select an existing program

Deside how to continue

Change data in existing module

Prewash, Main wash, Rinse, Soak

Drain

Extraction

Cool-down

Delete a module

Insert a new module

Questions, Advanced mode

Enter text

Prewash, Main wash, Rinse, Soak

Conclude programming

Drain

Insert Main Data

Extraction

Insert program name

Cool-down

Insert program number

Continue programming or stop programming

Programming finished

3931

"Main data" is the name given to various functions which apply to the program as a whole. In Standard mode you can control the functions "buzzer at program end", "start program with extraction", and "calculate weight of load". In Advanced mode you can also program the cycle times for gentle action and normal action.

The program name may be up to 80 characters long.

You can give the wash program a new program number between 1 and 990. You can also replace an existing wash program by giving the new program the same number as the existing program. Note that the standard programs supplied with the machine (numbered 991 to 999) cannot be deleted or changed.

When the program has been fully programmed, you can choose either to go on and program another wash program, or to exit programming mode.

An introduction to programming

To delete a wash program

```
 RUN A WASH PROGRAM
   GO TO THE MENU
 MAKE YOUR CHOICE WITH
 ↑ OR ↓ AND PRESS SELECT
 WEIGHT, KG: 000,0
 [ ✳ ] [ ↓ ]  SELECT
```
3589

If this menu is not currently displayed:

Press (↩) **repeatedly.**

[↓]

```
RUN A WASH PROGRAM
 GO TO THE MENU
```

Press ↓ to highlight "GO TO THE MENU".

SELECT **Press SELECT.**

— — — — — — — — — — — — — — — — — — —

```
 ▣▣▣ MENU ▣▣▣
MAKE A CHOICE:
LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓STATISTICS
 [ ↓↓ ] [ ↓ ]  SELECT
```
3663

```
LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT
```

Press ↓ once to highlight PROGRAMMING MODE.

SELECT **Press SELECT.**

Password protection of programming function

If required you can implement password protection for the functions **PROGRAMMING** and **SETTINGS 1**. Once you have chosen a password (a four-digit number), both functions will be protected, and accessed using the same password.

Programming the password is done via the function **SETTINGS 1**, which is described in the section "Settings 1" of the Clarus Control Service manual.

```
┌─────────────────────────────┐
│  PROGRAMMING MODE           │
│ MAKE A CHOICE:              │
│ ▐STANDARD▌                  │
│ ADVANCED                    │
│ EXIT                        │
│                             │
│  ┌───┐  ┌───┐               │
│  │ ✳ │  │ ↓ │   SELECT      │
│  └───┘  └───┘               │
│ 3652                        │
└─────────────────────────────┘
```

```
┌──────────────┐
│ ▐STANDARD▌    │     **Check that STANDARD is**
│ ADVANCED      │     **highlighted.**
│ EXIT          │
└──────────────┘
```

SELECT   **Press SELECT.**

— —

```
┌─────────────────────────────┐
│  PROGRAMMING MODE           │
│ SELECT          MODULE      │
│ ▐LIBRARY▌                   │
│ DELETE        MAIN WASH     │
│ EDIT          DRAIN         │
│ EXIT          RINSE         │
│ PREWASH       DRAIN         │
│ ↓ MAIN WASH   EXTRACTION    │
│  ┌───┐  ┌───┐               │
│  │ ↓↓│  │ ↓ │   SELECT      │
│  └───┘  └───┘               │
│ 3924                        │
└─────────────────────────────┘
```

↓   **Press ↓ to highlight**
      DELETE PROGRAM

↓↓   **Press ↓↓ to scroll quickly**
      down through the menu.
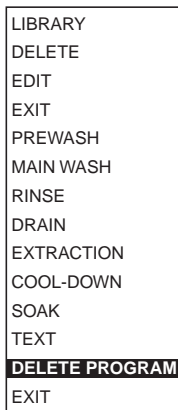
```
┌──────────────────────┐
│ LIBRARY              │
│ DELETE              │
│ EDIT                │
│ EXIT                │
│ PREWASH             │
│ MAIN WASH           │
│ RINSE               │
│ DRAIN               │
│ EXTRACTION          │
│ COOL-DOWN           │
│ SOAK                │
│ TEXT                │
│ ▐DELETE PROGRAM▌     │
│ EXIT                │
└──────────────────────┘
```

SELECT   **Press SELECT.**

Standard or Advanced mode?

This function is relevant only when you are creating or modifying a program. When you are deleting an entire program, it makes no difference to the result. You can let STANDARD (the default option) remain highlighted.

Using ↓↓ and ↑↑ to scroll quickly through menus

When the top item in a menu is highlighted, you have the option of scrolling down through the menu faster (this works in the same way in all menus where not all items can be displayed at once):
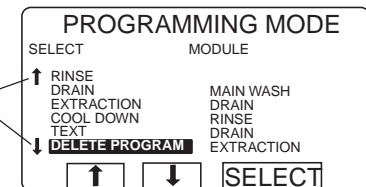
This arrow indicates that there are more items available in the menu.
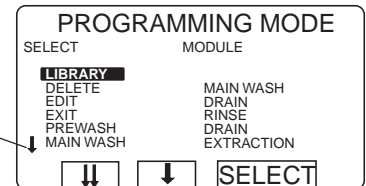
```
┌─────────────────────────────┐
│  PROGRAMMING MODE           │
│ SELECT          MODULE      │
│ ▐LIBRARY▌                   │
│ DELETE        MAIN WASH     │
│ EDIT          DRAIN         │
│ EXIT          RINSE         │
│ PREWASH       DRAIN         │
│ ↓ MAIN WASH   EXTRACTION    │
│  ┌───┐  ┌───┐               │
│  │ ↓↓│  │ ↓ │   SELECT      │
│  └───┘  └───┘               │
│ 4047                        │
└─────────────────────────────┘
```
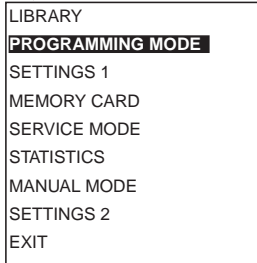
If you press ↓↓ the next portion of the programming menu will be displayed. The last item in that portion of the menu will be highlighted:

These arrows indicate that there are more items available, above and below those currently displayed.

```
┌─────────────────────────────┐
│  PROGRAMMING MODE           │
│ SELECT          MODULE      │
│ ↑ RINSE                     │
│ DRAIN                       │
│ EXTRACTION    MAIN WASH     │
│ COOL DOWN     DRAIN         │
│ TEXT          RINSE         │
│ ↓▐DELETE PROGRAM▌ DRAIN     │
│               EXTRACTION    │
│  ┌───┐  ┌───┐               │
│  │ ↑ │  │ ↓ │   SELECT      │
│  └───┘  └───┘               │
│ 4048                        │
└─────────────────────────────┘
```

Using this feature, you avoid having to press ↓ repeatedly to move through the menu item by item.

Similarly you can use ↑↑ whenever the last item on a portion of the menu is highlighted, to move quickly upwards through the menu.

```
PROGRAMMING MODE
PROGRAM LIBRARY
PR.NO.    NAME
1         HEAVY SOILED 90°C
2         HEAVY SOILED 60°C
991       NORMAL 95 °C STD
992       NORMAL 60 °C STD
993       NORMAL 40 °C STD
↓994      INTENSIVE 95°C
  ↓↓        ↓      SELECT
```

3925

↓

↓↓

If necessary, use ↓ or ↓↓ to highlight the program to be deleted.

┌─ *Standard programs can not be deleted* ─┐
│ The nine standard programs 991-999 supplied with the │
│ machine can not be deleted. │
└──────────────────────────────┘

```
1      HEAVY SOILED 90°C
2      HEAVY SOILED 60°C
991    NORMAL 95°C STD
992    NORMAL 60°C STD
993    NORMAL 40°C STD
994    INTENSIVE 95°C
995    INTENSIVE 60°C
996    PERM.PRESS 60°C
997    PERM.PRESS 40°C
998    EXTRACT LOW 1 MIN
999    EXTRACT HIGH 5 MIN
       EXIT
```

SELECT   **Press SELECT.**

```
PROGRAMMING MODE

DELETE PROGRAM NUMBER:          2


   ARE YOU SURE ?

PRESS SELECT OR ANY OTHER KEY
    ↑        ↓      SELECT
```
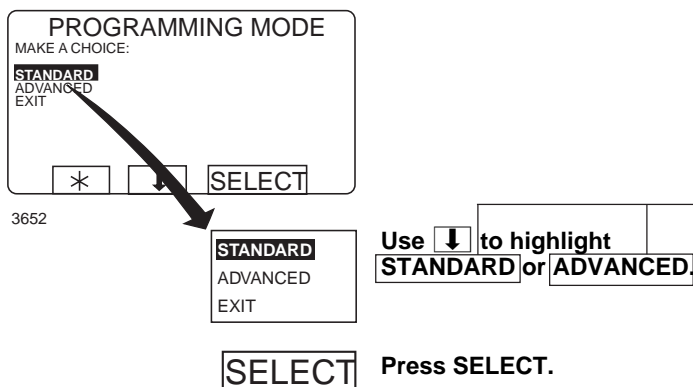
4049

If you change your mind and <u>no longer wish to delete</u> this program:
Press any key <u>other than</u> SELECT.

SELECT   If you do wish to delete this program:
Press SELECT.

— —

↓   **Choose 1 or 2:**

```
1      HEAVY SOILED 90°C
991    NORMAL 95°C
992    NORMAL 60°C
993    NORMAL 40°C
994    INTENSIVE 95°C
995    INTENSIVE 60°C
996    PERM.PRESS 60°C
997    PERM.PRESS 40°C
998    EXTRACT LOW 1MIN
999    EXTRACT HIGH 5MIN
EXIT
```

3926

1 To delete more programs:
   Use ↓ or ↑ to highlight another program to delete, then press SELECT.

2 To stop deleting programs:
   Press ↓ to highlight EXIT.

SELECT   **Press SELECT.**

To create and write an entirely new program

The "Move back" key

3627

If you find you are in the wrong place, or if you want to undo earlier key presses:

Press the "Move back" key one or more times.

The "Move back" function

Each press of the "Move back" key moves you back one menu, in reverse order. By pressing this key repeatedly you can return to this menu at any time:

RUN A WASH PROGRAM
GO TO THE MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

| ✳ | ↓ | SELECT |

3651

Select Programming Mode

RUN A WASH PROGRAM
GO TO THE MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

| ✳ | ↓ | SELECT |

3589

If this menu is not currently displayed:

Press ⏎ repeatedly.

↓

RUN A WASH PROGRAM
GO TO THE MENU

Press ↓ to highlight "GO TO THE MENU".

SELECT   **Press SELECT**

Password protection of programming function

If required you can implement password protection for the functions **PROGRAMMING** and **SETTINGS 1**. Once you have chosen a password (a four-digit number), both functions will be protected, and accessed using the same password.

Programming the password is done via the function **SETTINGS 1**, which is described in the section "Settings 1" of the Clarus Control Service manual.

To create and write an entirely new program

```
☐☐☐  MENU  ☐☐☐
MAKE A CHOICE:
LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓STATISTICS
   ↓↓        ↓      SELECT
3663
```

```
LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT
```

Press ↓ to highlight DELETE PROGRAM

SELECT **Press SELECT**

Using ↓↓ and ↑↑ to scroll quickly through menus

When the top item in a menu is highlighted, you have the option of scrolling down through the menu faster (this works in the same way in all menus where not all items can be displayed at once):

This arrow indicates that there are more items available

```
☐☐☐  MENU  ☐☐☐
MAKE A CHOICE:

WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓STATISTICS
   ↓↓        ↓      SELECT
4050
```

If you press ↓↓ the next portion of the programming menu will be displayed. The last item in that portion of the menu will be highlighted:

```
☐☐☐  MENU  ☐☐☐
MAKE A CHOICE:
↑MEMORY CARD
 SERVICE MODE
 STATISTICS
 MANUAL MODE
 SETTINGS 2
 EXIT
   ↑         ↑↑     SELECT
4051
```

Using this feature, you avoid having to press ↓ repeatedly to move through the menu item by item.

Similarly you can use ↑↑ whenever the last item on a portion of the menu is highlighted, to move quickly upwards through the menu.

Select Standard or Advanced mode

PROGRAMMING MODE
MAKE A CHOICE:
STANDARD
ADVANCED
EXIT

| ✳ | ↓ | SELECT |

3652

STANDARD
ADVANCED
EXIT

Use ↓ to highlight STANDARD or ADVANCED.

SELECT Press SELECT.

Standard or Advanced mode?

There are two distinct levels (modes) for programming.

In **Standard** mode you can enter all the basic data required for a wash program. Other variables are set automatically using tried-and-tested standard values, which in most cases work without any problem.

In **Advanced** mode you have a higher degree of control over all aspects of the program. Using Advanced mode does, however, call for a detailed knowledge of the way in which wash programs work, to ensure that all the possibilities available are used correctly.

An example:

Via the modules **Prewash, Main wash, Rinse and Soak**, when using **Standard mode** you have control of the following functions:

Wash time, temperature, fill level, five water intake options, type of drum action during filling - heating - wash, detergent supply from one of five alternatives, ten signals for liquid supply, flushing cold/hot, spray signal.

In **Advanced mode** you also have control of the following functions:

Temperature hysteresis, max. temperature increase per minute, level hysteresis, drum speeds during filling - heating - wash, and maximum drum acceleration rate.

If you have selected Standard mode

All **Standard mode** modules are described in detail in **chapter "Program modules, Standard mode"**.

Even if you have selected **Standard mode** for programming, you still have the option of using **Advanced mode** for programming any given module. Each time you access a different module to work through the questions there, you can choose either Advanced or Standard mode.

If you have selected Advanced mode

All **Advanced mode** modules are described in detail in **chapter "Program modules, Advanced mode"**

If you selected **Advanced mode** at the start of programming, all programming will continue in Advanced mode. You cannot switch back to Standard mode for some modules only.
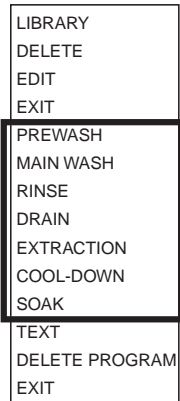
To create and write an entirely new program

Select program module

```
PROGRAMMING MODE
SELECT          MODULE
LIBRARY
DELETE              MAIN WASH
EDIT               DRAIN
EXIT               RINSE
PREWASH            DRAIN
MAIN WASH          EXTRACTION
↓
  ↓↓      ↓    SELECT
```
3655

┌── *The wash program modules* ──┐

The way in which programs are structured, using modules in sequence, is described in detail in chapter **"An introduction to programming"**.

↓↓ **Use the cursor keys to...**

The modules can be programmed in either **Standard** or **Advanced** mode. Standard mode is described in chapter **"Program modules, Standard mode"**, and Advanced mode in chapter **"Program modules, Advanced mode"**.

↓

↑

Prewash

Used for prewash and brief soaking.

Main wash

Used as the main wash module, with heating and detergent dispensing.

```
LIBRARY
DELETE
EDIT
EXIT
PREWASH
MAIN WASH
RINSE
DRAIN
EXTRACTION
COOL-DOWN
SOAK
TEXT
DELETE PROGRAM
EXIT
```

Rinse

Drain

Drain stage after wash and rinse stages.

.. highlight one of the seven program modules which go to make up a wash program.

(In this example we will choose "PREWASH".)

Extract

Cool-down

Used for controlled cooling of the wash water to prevent creasing of the wash load.

Soak

Used for longer soak stages.

SELECT **Press SELECT.**

Select position of module in program sequence
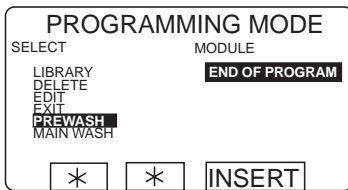
```
         PROGRAMMING MODE
SELECT                   MODULE
   LIBRARY
   DELETE                END OF PROGRAM
   EDIT
   EXIT
   PREWASH
   MAIN WASH
       ┌───┐ ┌───┐ ┌──────┐
       │ * │ │ * │ │INSERT│
       └───┘ └───┘ └──────┘
```
3889

Because this is the first module in the new wash program, you do not need to select its position in the program sequence.

┌──────┐
│INSERT│   **Press INSERT.**
└──────┘

┌─ *Position of module in wash program sequence* ─┐

Obviously, when you are about to program the first module in a wash program, you have no choice of position in the sequence. When you program subsequent modules, however, you can use these keys: ⬇ and ⬆ to determine the position of the module in the program sequence.
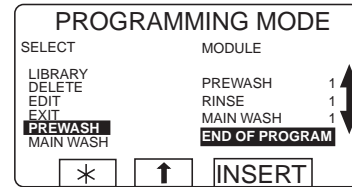
```
         PROGRAMMING MODE
SELECT                   MODULE
   LIBRARY
   DELETE                PREWASH      1  ▲
   EDIT                  RINSE        1
   EXIT                  MAIN WASH    1  ▼
   PREWASH               END OF PROGRAM
   MAIN WASH
       ┌───┐ ┌───┐ ┌──────┐
       │ * │ │ ⬆ │ │INSERT│
       └───┘ └───┘ └──────┘
```
3890

Once you have selected the position, press INSERT. Note that the new module will be inserted **above (before)** the position highlighted in the list on the right of the display.

If you want the module to be last in the sequence, press INSERT when END OF PROGRAM is highlighted.

└──┘

Answer the questions for the module

Name of module

```
          PROGRAMMING
PREWASH        1
PAUSE WITH BUZZER          N
WASH TIME              00:00
TEMPERATURE               0
LEVEL                     -
COLD WATER                N
HOT WATER                 N
COLD HARD WATER           N
↓
   ⇓          ↓       Y/N
```

3658

Sequence number of module

Option to scroll quickly through the meny.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILLING	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

Use the function key or the numeric keys to answer the various questions.

Y / N	Yes/No questions
- / G / N	Drum action
C / H	Cold or hot water
L / M / H	Water level - standard mode
1 2 3 / 4 5 6 / 7 8 9 / 0	Times, temperatures, levels - advanced mode
↓	**Press ↓ to move on to the next question.**
↑	**You can go back and change a question you have answered already by pressing ↑ repeatedly.**

Program module sequence numbering

All wash program modules are automatically given sequence numbers to help distinguish them. The first time a module is used it is given the number 1, the second time 2, and so on. For example:

Prewash	1	Extract	1
Drain	1	Rinse	1
Main wash	1	Drain	3
Cool-down	1	Rinse	2
Drain	2	Drain	4
		Extract	2

Different types of question

The questions in the various modules are of four different types, and to be answered in different ways:

Yes/No questions

The function key display shows **Y/N,** which is a toggle function (the letter to the right of the highlighted question toggles between **N** and **Y** each time it is pressed). All Yes/No questions start with No (**N**) as the default value.
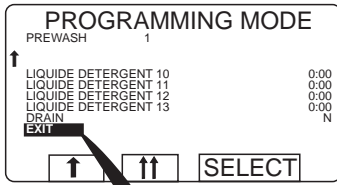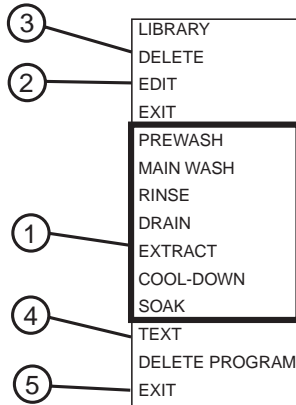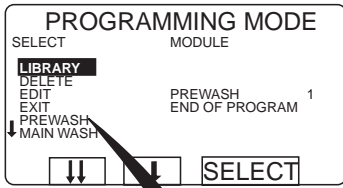
Drum action questions

The function key display shows **-/G/N,** which is a toggle function (the letter to the right of the highlighted question toggles from **-** to **G** to **N** and so on, each time it is pressed).

- = drum at a standstill

G = gentle action

N = normal action

All questions of this type start with normal action (**N**) as the default value.

Cold/hot water

Selection of water temp. for flushing detergent compartment.

Water level questions - standard mode

The function key display shows **L/M/H** and is a toggle function (the letter to the right of the highlighted question toggles from **-,** to **L**, **M** to **H**, each time it is pressed).

- = No water filling

L = Low water level

M = Medium water level

H = High water level

All questions of this type have No water filling **(-)** as a preprogrammed value.

Times, temperatures, levels - advanced mode

To answer these questions, use the numeric keys. The number of digits required will vary.

If you make a mistake while entering digits:

Press ERASE one or several times.

```
     PROGRAMMING MODE
  PREWASH        1

  LIQUIDE DETERGENT 10        0:00
  LIQUIDE DETERGENT 11        0:00
  LIQUIDE DETERGENT 12        0:00
  LIQUIDE DETERGENT 13        0:00
  DRAIN                          N
  EXIT
    ↑       ↑↑    SELECT
  3665
```

⬇

Once you have finished
entering all the values:

**Press ⬇ to highlight
"EXIT".**

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

SELECT   **Press SELECT.**

Decide how you wish to continue programming

```
PROGRAMMING MODE
SELECT              MODULE

LIBRARY
DELETE
EDIT                PREWASH          1
EXIT                END OF PROGRAM
PREWASH
MAIN WASH

   ⬇⬇      ⬇      SELECT
```
3666

⬇

⬆

③ LIBRARY
② DELETE
   EDIT
   EXIT

   PREWASH
   MAIN WASH
   RINSE
   DRAIN
① EXTRACT
   COOL-DOWN
   SOAK
④ TEXT
   DELETE PROGRAM
⑤ EXIT

SELECT

Choose 1, 2, 3, 4 or 5:

1 Continue programming
new program modules:

**Highlight one of the
seven program modules.**

Press SELECT.

**Continue answering
questions as described
earlier.**

2 Modify an existing module:

**Highlight EDIT and press
SELECT. Then follow the
instructions in chapter
"To program on the basis
of an existing program"
section "To change data
in a program module".**

3 Delete a module:

**Highlight DELETE and
press SELECT. Then
follow the instructions in
chapter "To program on
the basis of an existing
program" section "To
delete a module".**

4 Enter text about the
program:

**Highlight TEXT and then
press SELECT. Then
follow the instructions in
section "Enter text about
the program".**

5 Conclude programming:

**Follow the instructions in
section "Conclude
programming".**

"TEXT" means more information

Before you run a wash program, by pressing TEXT,
the display can show a text which gives more
information about the program. This can be helpfull to
be able to choose correct wash program. The same
text can also be shown during the wash cycle.

The text which can be used can consist of max. 150
digits and can be programmed in this function.

Programming text

```
        PROGRAMMING

PROGRAM NAME
  –


    [ ← ]   [ → ]  |EXIT|
3922
```

Enter text (no more than approx. 150 characters) to accompany the program, with the aid of the functions described below.

The cursor shows where the letter/digit/character will be inserted.

The function keys have these functions:

[←]   **Delete text.**

[→]   One press:
Enter next letter/digit/ character.

Two presses:
Insert space between words.

[↓]   Visible when the cursor is <u>not</u> at the far left of a line: **Use this to move the cursor to a new line.**

[1] [2] [3]   **Use the numeric keys to enter letters/digits/ characters.**
[4] [5] [6]
[7] [8] [9]
    [0]

| EXIT | Visible when the cursor is at the far left of a line:

Use this to exit (conclude) entering text.

How to enter letters/digits/other characters

Letters, digits and other characters can be inserted using the numeric keypad. Each of the numeric keys gives access to several characters (3-5 per key), as follows:

[1]   [2]   [3]
ABCDE   FGHIJ   KLMNO

[4]   [5]   [6]
PQRST   UVWXY   ZÅÄÖ

[7]   [8]   [9]
01234   56789   = ( )

                [0]
                ° + -.

The first time you press a given key, the first character available through that key will appear on the display. One press on **1** produces A. One press on **9** produces =.

Simply press the relevant key the required number of times until the character you want appears on the display. For example, to insert the letter **C**, press key **1**. three times. To insert: **)** (i.e. the end bracket), press **9** three times.

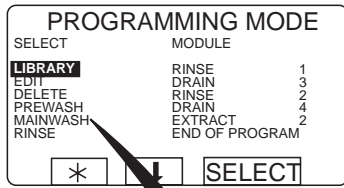When the character you want is on the display, press [→] to insert the next character.

To insert a **space** between words, simply press [→] a second time.

To **delete** a character, press [←] Press it repeatedly to delete several characters.

To **start a new line** press [↓].

To **end entering text**, press [↓] to bring the cursor to the far left of a new line. Then press **EXIT**
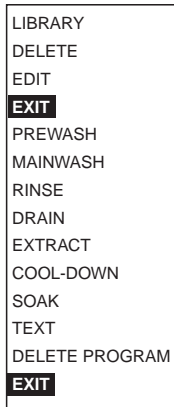
Conclude programming

```
PROGRAMMING MODE
SELECT         MODULE
LIBRARY        RINSE        1
EDIT           DRAIN        3
DELETE         RINSE        2
PREWASH        DRAIN        4
MAINWASH       EXTRACT      2
RINSE          END OF PROGRAM

  ✳      ↓    SELECT
```
3667

Once you have completed
programming of all modules
in the program:

↓

Press ↓ ...

```
LIBRARY

DELETE

EDIT

EXIT

PREWASH

MAINWASH

RINSE

DRAIN

EXTRACT

COOL-DOWN

SOAK

TEXT

DELETE PROGRAM

EXIT
```

**... to highlight either of the
two "EXIT" options.**

SELECT   **Press SELECT.**

Insert Main Data

```
PROGRAMMING MODE
MAIN DATA
STANDARD
ADVANCED
EXIT

  ✳      ↓    SELECT
```
3668

```
STANDARD
ADVANCED
EXIT
```

**Highlight STANDARD or
ADVANCED.**

SELECT   **Press SELECT.**
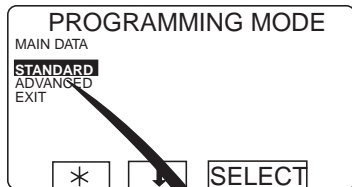
This option is presented only
if you selected Standard
mode at step "Select
standard or advanced mode".

What is Main Data?

"Main Data" is the name given to various functions
which influence the entire wash program.

Standard or Advanced mode?

Using **Standard** mode (see section Main data,
standard mode) you can control the following
functions:

   Buzzer at program end, start program with
   extraction, calculate weight of load.

Using **Advanced** mode (see section Main data,
advanced mode) you can also control the following
functions:

   Cycle times for gentle action and normal action.

Main data, standard mode

```
PROGRAMMING MODE
MAIN DATA
BUZZER AT END           N
START EXTRACT           N
READY

  [ * ]  [ ↓ ]  [ Y/N ]
```
3669

```
BUZZER AT END        N
START EXTRACT        N
READY
```

| Y / N | **Answer Yes (Y) or No (N).** |

| ↓ | **Press ↓.** |

Buzzer at end

If you answer **Yes (Y)**:
   The buzzer will sound when the program ends.
   The buzzer signal can be turned off by pressing the
   button with crossed buzzer-symbol.

If you answer **No (N)**:
   No buzzer at program end.

```
BUZZER AT END        N
START EXTRACT        N
READY
```
3670

| Y / N | **Answer Yes (Y) or No (N).** |

| ↓ | **Press ↓.** |

Start extract (start with extraction)

If you answer **Yes (Y)**:
   The machine will start with a short extraction cycle
   when the program begins. This helps the load to
   soak up water, and the machine does not require
   so much extra filling (repeated topping up).

If you answer **No (N)**:
   No extraction when the program begins.

```
BUZZER AT END        N
START EXTRACT        N
READY
```
3672

| SELECT |

Once you have answered all
the questions, highlight
READY, then:

Press SELECT.

Main data, advanced mode

The first three questions of Advanced mode are the same as in Standard mode, see section "Main data, standard mode.

BUZZER AT END	N
START EXTRACT	N
GENTLE ON TIME	**SEC 3**
GENTLE OFF TIME	**SEC 12**
NORMAL ON TIME	**SEC 12**
NORMAL OFF TIME	**SEC 3**
READY	

3892

```
[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
        [0]
```

Use the machine key to enter the required value.

If wrong digits are given:

Press ERASE.

[↓] When ready
Press [↓].

┌─ *Drum action "on-times" and "off-times"* ─┐

Here you can determine the precise structure of drum action (both "gentle" and "normal" action), by setting the individual lengths of time the drum is to rotate ("on-time") and be at a standstill ("off-time").

The values displayed initially are those recommended by supplier.

Off-time   On-time

Drum action, right-hand rotation

Time

Drum action, left-hand rotation

BUZZER AT END	N
START EXTRACT	N
GENTLE ON TIME SEC	3
GENTLE OFF TIME SEC	12
NORMAL ON TIME SEC	12
NORMAL OFF TIME SEC	3
READY	

3894

Once you have answered all the questions, highlight READY, then:

[SELECT] **Press SELECT.**

Insert the program name

```
        PROGRAMMING
PROGRAM NAME
 –

   ←        →      EXIT
```
4215

Enter program name (no more than approx. 150 characters) to accompany the program, with the aid of the functions described below.

The cursor shows where the letter/digit/character will be inserted.

The function keys have these functions:

← **Delete text.**

→ One press:
Enter next letter/digit/ character.

Two presses:
Insert space between words.

1 2 3
4 5 6
7 8 9   **Use the numeric keys to enter letters/digits/ characters.**

0   **Use this to exit (conclude) entering text.**

EXIT

How to enter letters/digits/other characters

Letters, digits and other characters can be inserted using the numeric keypad. Each of the numeric keys gives access to several characters (3-5 per key), as follows:

1	2	3
ABCDE	FGHIJ	KLMNO
4	5	6
PQRST	UVWXY	ZÅÄÖ
7	8	9
01234	56789	= ( )
	0	
	° + -.	

The first time you press a given key, the first character available through that key will appear on the display. One press on **1** produces A. One press on **9** produces =.

Simply press the relevant key the required number of times until the character you want appears on the display. For example, to insert the letter **C**, press key **1**. three times. To insert: **)** (i.e. the end bracket), press **9** three times.

When the character you want is on the display, press → to insert the next character.

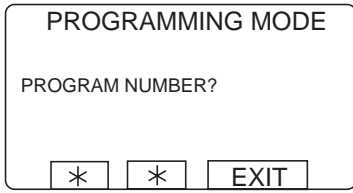To insert a **space** between words, simply press → a second time.

To **delete** a character, press ← Press it repeatedly to delete several characters.

To **start a new line** press ↓.

To **end entering text**, press ↓ to bring the cursor to the far left of a new line. Then press **EXIT**

Insert the program number

```
  PROGRAMMING MODE

  PROGRAM NUMBER?


  [ ✳ ] [ ✳ ] [ EXIT ]
```
3675

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
　　　[0]

Use the numeric keys to enter the program number.

[EXIT]

Press EXIT

```
  PROGRAMMING MODE

  PROGRAM HAS BEEN STORED

  PRESS ANY KEY  TO CONTINUE...


  [ ✳ ] [ ✳ ] [ ✳ ]
```
3676

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[ ] [ ] [ ] [↵] [0]

The new program will now be stored in the control unit EEPROM.

Once the program has been stored ("loaded"), a process which takes only a matter of seconds, the display will look like this (illustration, left).

Press any key.

Continue programming or stop programming

```
  PROGRAMMING MODE
  MAKE A CHOICE:
  STANDARD
  ADVANCED
  EXIT


  [ ✳ ] [ ↓ ] [ SELECT ]
```
3677

[↓]

STANDARD
ADVANCED
EXIT

[SELECT]

[↓]

STANDARD
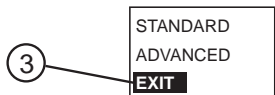ADVANCED
EXIT

[SELECT]

Choose 1, 2 or 3:

1 Continue programming in Standard mode:

　Highlight STANDARD and press SELECT.

2 Continue programming in Advanced mode:

　Highlight ADVANCED and press SELECT.

3 Stop programming:

　Highlight EXIT and press SELECT.

To program on the basis of an existing program

The "Move back" key

⏎

3627

If you find you are in the wrong place, or if you want to undo earlier key presses:
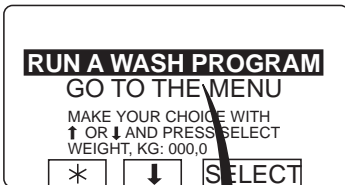
Press the "Move back" key one or more times.

The "Move back" function

Each press of the "Move back" key moves you back one menu, in reverse order. By pressing this key repeatedly you can return to this menu at any time:

RUN A WASH PROGRAM
GO TO THE MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0
✳ │ ↓ │ SELECT

3651

Select programming mode

RUN A WASH PROGRAM
GO TO THE MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0
✳ │ ↓ │ SELECT

3589

↓

RUN A WASH PROGRAM
GO TO THE MENU

SELECT

If this menu is not currently displayed:

Press ⏎ repeatedly.
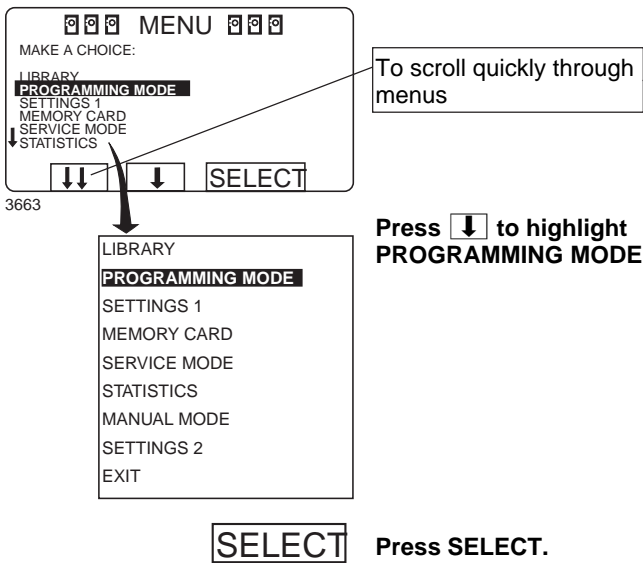
Press ⏎ to highlight "GO TO THE MENU".

Press SELECT.

Password protection of programming function

If required you can implement password protection for the functions **PROGRAMMING** and **SETTINGS 1**. Once you have chosen a password (a four-digit number), both functions will be protected, and accessed using the same password.
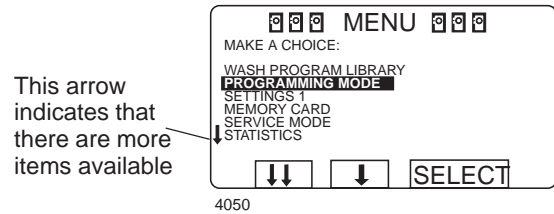
Programming the password is done via the function **SETTINGS 1**, which is described in the section "Settings 1" of the Clarus Control Service manual.

```
░░░  MENU  ░░░
MAKE A CHOICE:
LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓STATISTICS

  ⬇⬇        ⬇      SELECT
```
3663

To scroll quickly through menus

```
LIBRARY

PROGRAMMING MODE

SETTINGS 1

MEMORY CARD

SERVICE MODE

STATISTICS

MANUAL MODE

SETTINGS 2

EXIT
```

Press ⬇ to highlight PROGRAMMING MODE

SELECT   **Press SELECT.**

Using ⬇⬇ and ⬆⬆ to scroll quickly through menus

When the top item in a menu is highlighted, you have the option of scrolling down through the menu faster (this works in the same way in all menus where not all items can be displayed at once):

This arrow indicates that there are more items available

```
░░░  MENU  ░░░
MAKE A CHOICE:
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓STATISTICS

  ⬇⬇        ⬇      SELECT
```
4050

If you press ⬇⬇ the next portion of the programming menu will be displayed. The last item in that portion of the menu will be highlighted:

```
░░░  MENU  ░░░
MAKE A CHOICE:
↑MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT

  ⬆        ⬆⬆      SELECT
```
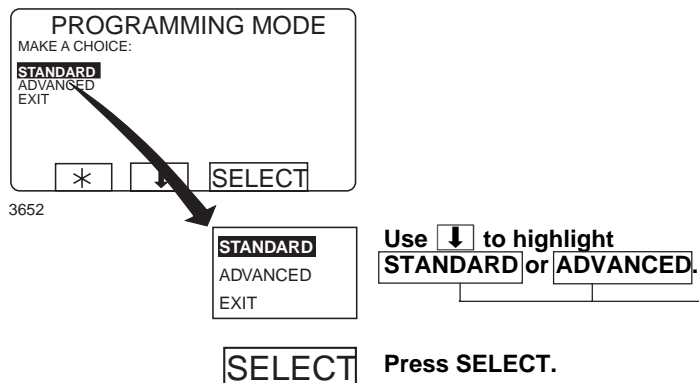4051

Using this feature, you avoid having to press ⬇ repeatedly to move through the menu item by item.

Similarly you can use ⬆⬆ whenever the last item on a portion of the menu is highlighted, to move quickly upwards through the menu.

Select Standard or Advanced mode

```
 PROGRAMMING MODE
MAKE A CHOICE:
STANDARD
ADVANCED
EXIT

  [ * ]  [ ↓ ]   SELECT
```
3652

```
STANDARD
ADVANCED
EXIT
```

Use ↓ to highlight STANDARD or ADVANCED.

SELECT **Press SELECT.**

Standard or Advanced mode?

There are two distinct levels (modes) for programming.

In **Standard** mode you can enter all the basic data required for a wash program. Other variables are set automatically using tried-and-tested standard values, which in most cases work without any problem.

In **Advanced** mode you have a higher degree of control over all aspects of the program. Using Advanced mode does, however, call for a detailed knowledge of the way in which wash programs work, to ensure that all the possibilities available are used correctly.

An example:

Via the modules **Prewash, Main wash, Rinse and Soak**, when using **Standard mode** you have control of the following functions:

Wash time, temperature, fill level, five water intake options during filling, type of drum action during filling - heating - wash, detergent supply from one of five alternatives, ten signals for liquid supply, flushing cold/hot, spray signal.

In **Advanced mode** you also have control of the following functions:

Temperature hysteresis, max. temperature increase per minute, level hysteresis, drum speeds during filling - heating - wash, and maximum drum acceleration rate.

If you have selected Standard mode

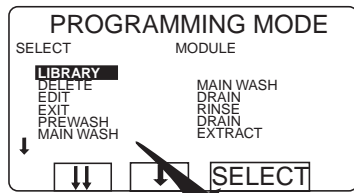All **Standard mode** modules are described in detail in **chapter "Program modules, Standard mode"**.

Even if you have selected **Standard mode** for programming, you still have the option of using **Advanced mode** for programming any given module. Each time you access a different module to work through the questions there, you can choose either Advanced or Standard mode.

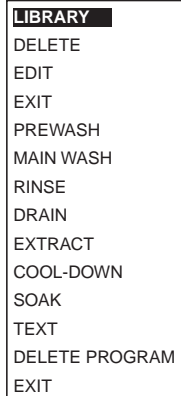---

If you have selected Advanced mode

All **Advanced mode** modules are described in detail in **chapter "Program modules, Advanced mode"**.

If you selected **Advanced mode** at the start of programming, all programming will continue in Advanced mode. You cannot switch back to Standard mode for some modules only.
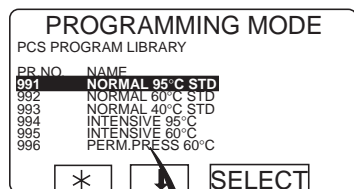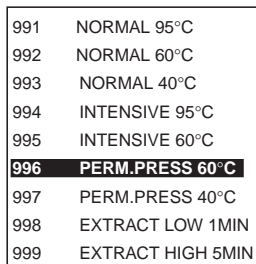
To program on the basis of an existing program

Select the existing program to adapt

```
PROGRAMMING MODE
SELECT              MODULE
LIBRARY             MAIN WASH
DELETE              DRAIN
EDIT                RINSE
EXIT                DRAIN
PREWASH             EXTRACT
MAIN WASH
 ↓
    ⇊        ↓    SELECT
```
3895

LIBRARY
DELETE
EDIT
EXIT
PREWASH
MAIN WASH
RINSE
DRAIN
EXTRACT
COOL-DOWN
SOAK
TEXT
DELETE PROGRAM
EXIT

Check that PROGRAM LIBRARY is highlighted ...

SELECT   **... and press SELECT.**

— —

```
PROGRAMMING MODE
PCS PROGRAM LIBRARY

PR NO   NAME
991     NORMAL 95°C STD
992     NORMAL 60°C STD
993     NORMAL 40°C STD
994     INTENSIVE 95°C
995     INTENSIVE 60°C
996     PERM.PRESS 60°C

    ✳        ↓    SELECT
```
3896

↓

Use ↓ to highlight the program you want to adapt (such as 996 PERM.PRESS 60°C).

991   NORMAL 95°C
992   NORMAL 60°C
993   NORMAL 40°C
994   INTENSIVE 95°C
995   INTENSIVE 60°C
996   **PERM.PRESS 60°C**
997   PERM.PRESS 40°C
998   EXTRACT LOW 1MIN
999   EXTRACT HIGH 5MIN

SELECT   **Press SELECT.**

What is the program library?

The program library lists all wash programs, both user and standard programs, showing their program numbers and names, for example:

1	OWN PROG. 40 DEGREES
2	OWN PROG. 60 DEGREES
3	OWN PROG. 90 DEGREES
991	NORMAL 95°C
992	NORMAL 60°C
993	NORMAL 40°C
994	INTENSIVE 95°C
995	INTENSIVE 60°C
996	PERM.PRESS 60°C
997	PERM.PRESS 40°C
998	EXTRACT LOW 1 MIN
999	EXTRACT HIGH 5 MIN

Each time a new program is stored in the machine program memory, its number and name will also be inserted automatically into the program library.

The program library can be used:

- When programming an existing program, which shall be modified.
- When programming a new program with an old as background.
- When choosing a suitable wash program.

To change data in a program module

```
PROGRAMMING MODE
SELECT          MODULE
LIBRARY
DELETE          MAIN WASH
EDIT            COOL-DOWN
PREWASH         DRAIN
MAIN WASH       RINSE
↓               DRAIN
     ⇊      ↓      SELECT
3897
```

The modules of the program selected will be shown on the right-hand side of the display.

↓ **Use ↓ to highlight EDIT.**

```
LIBRARY
DELETE
EDIT
EXIT
PREWASH
MAIN WASH
RINSE
DRAIN
EXTRACT
COOL-DOWN
SOAK
TEXT
DELETE PROGRAM
EXIT
```

SELECT **Press SELECT.**

```
PROGRAMMING MODE
SELECT          MODULE
LIBRARY
DELETE          MAIN WASH    1
EDIT            COOL-DOWN    1
EXIT            DRAIN        1
PREWASH         RINSE        1
MAIN WASH       DRAIN        2
    ✳      ↓      EDIT
3898
```

After you have highlighted **EDIT** and pressed **SELECT**, the first five program modules will be displayed, with the first of them highlighted.

↓ **If you want to edit some module other than the first (MAIN WASH 1), press ↓ repeatedly to highlight the right one.**

```
MAIN WASH        1
COOL-DOWN        1
DRAIN            1
RINSE            1
DRAIN            2
RINSE            2
DRAIN            3
RINSE            3
DRAIN            4
EXTRACT          1
END OF PROGRAM
```
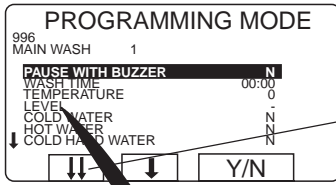
Program module sequence numbering

All wash program modules are automatically given sequence numbers to help distinguish them. The first time a module is used it is given the number 1, the second time 2, and so on.

EDIT **Press EDIT.**

To program on the basis of an existing program

```
PROGRAMMING MODE
996
MAIN WASH        1
PAUSE WITH BUZZER              N
WASH TIME               00:00
TEMPERATURE                0
LEVEL                         -
COLD WATER                    N
HOT WATER                     N
↓ COLD HARD WATER             N
   ⇊  ↓      Y/N
3899
```

Option to scroll quickly through the meny.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

Use the function key or the numeric keys to alter the answers to the various questions.

Y / N — Yes/No questions

- / G / N — Drum action

C / H — Cold or hot water

L / M / H — Water level - standard mode

1 2 3 / 4 5 6 / 7 8 9 / 0 — Times, temperatures, levels - advanced mode

Press ↓ to move on to the next question.

You can go back and change a question you have answered already by pressing ↑ repeatedly.

The wash program modules

All modules and module questions are described in the chapters:

"Program modules, standard mode" and "Program modules, advanced mode".

Different types of questions

The questions in the various modules are of four different types, and to be answered in a different way:

Yes/No questions
The function key display shows Y/N, which is a toggle function (the letter to the right of the highlighted question toggles between **N** and **Y** each time it is pressed). All Yes/No questions start with No (**N**) as the default value.

Drum action questions
The function key display shows -/G/N, which is a toggle function (the letter to the right of the highlighted question toggles from **-** to **G** to **N** and so on, each time it is pressed).

- = drum at a standstill

G = gentle action

N = normal action

All questions of this type start with normal action (**N**) as the default value.

Cold/hot water

Selection of water temp. for flushing detergent compartment.

Water level questions - standard mode

The function key display shows L/M/H and is a toggle function (the letter to the right of the highlighted question toggles from **L**, **M** to **H** each time it is pressed).
L = Low water level
M = Medium water level
H = High water level
All questions of this type have Low level **(L)** as a preprogrammed value.

Times, temperatures, levels -advanced mode
To answer these questions, use the numeric keys. The number of digits required will vary.
If you pressed wrong digits:
Press **ERASE** once or serveral times.

⬇

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

3900

Once you have finished modifying values as required:

Press ⬇ to highlight "READY".

SELECT **Press SELECT.**

To delete a module

```
PROGRAMMING MODE

SELECT           MODULE

 LIBRARY         MAIN WASH      1
 DELETE          COOL-DOWN      1
 EDIT            DRAIN          1
 EXIT            RINSE          1
↓PREWASH         DRAIN          2
 MAIN WASH
   ↓↓       ↓     SELECT
```
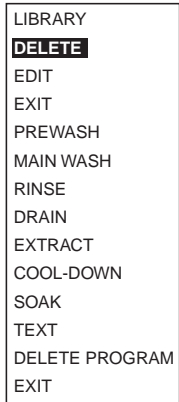3907

After you have chosen
DELETE, the first five
program modules will be
displayed. The first module
will be highlighted.

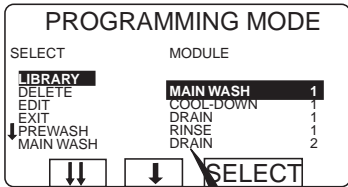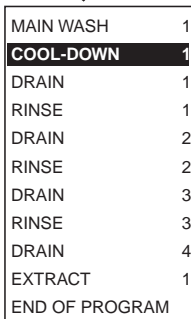⬇️ **Press ⬇️ to highlight "DELETE".**

```
LIBRARY

DELETE

EDIT

EXIT

PREWASH

MAIN WASH

RINSE

DRAIN

EXTRACT

COOL-DOWN

SOAK

TEXT

DELETE PROGRAM

EXIT
```

SELECT **Press SELECT**

— —

```
PROGRAMMING MODE

SELECT           MODULE

 LIBRARY         MAIN WASH      1
 DELETE          COOL-DOWN      1
 EDIT            DRAIN          1
 EXIT            RINSE          1
↓PREWASH         DRAIN          2
 MAIN WASH
   ↓↓       ↓     SELECT
```
3908

⬇️ **If necessary press ⬇️ to highlight the module you want to delete (e.g. COOL-DOWN 1).**

```
MAIN WASH         1

COOL-DOWN         1

DRAIN             1

RINSE             1

DRAIN             2

RINSE             2

DRAIN             3

RINSE             3

DRAIN             4

EXTRACT           1

END OF PROGRAM
```
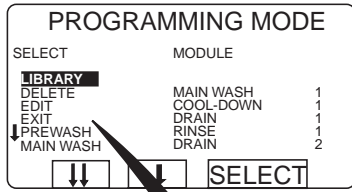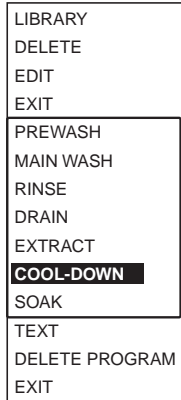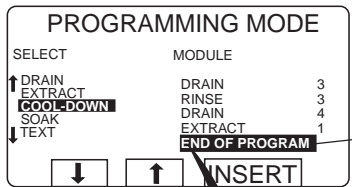
DELETE **Press DELETE.**

MAINWASH	1
DRAIN	**1**
RINSE	1
DRAIN	2
RINSE	2
DRAIN	3
RINSE	3
DRAIN	4
EXTRACT	1
END OF PROGRAM	

①

3909

The module will now have been deleted.

Choose 1 or 2:

↓

↑

DELETE

1 Delete more modules:

Use ↑ or ↓ to highlight another module.

Press DELETE.

↓

2 Stop deleting:

PRESS ↓ to highlight END OF PROGRAM.

MAINWASH	1
DRAIN	1
RINSE	1
DRAIN	2
RINSE	2
DRAIN	3
RINSE	3
DRAIN	4
EXTRACT	1
END OF PROGRAM	

②

3910

EXIT

Press EXIT

To insert a new module

```
PROGRAMMING MODE

SELECT           MODULE

LIBRARY          MAIN WASH     1
DELETE           COOL-DOWN     1
EDIT             DRAIN         1
EXIT             RINSE         1
↓ PREWASH        DRAIN         2
MAIN WASH

  ↓↓      ↓     SELECT
```
3912

↓   Use ↓ and ↑ to ...

```
LIBRARY
DELETE
EDIT
EXIT
PREWASH
MAIN WASH
RINSE
DRAIN
EXTRACT
COOL-DOWN
SOAK
TEXT
DELETE PROGRAM
EXIT
```

...highlight one of the seven possible wash program modules (e.g. COOL-DOWN).

SELECT **Press SELECT.**

— — — — — — — — — — — — — — — — — — —

```
PROGRAMMING MODE

SELECT           MODULE

↑ DRAIN          DRAIN           3
EXTRACT          RINSE           3
COOL-DOWN        DRAIN           4
SOAK             EXTRACT         1
↓ TEXT           END OF PROGRAM

  ↓      ↑      INSERT
```
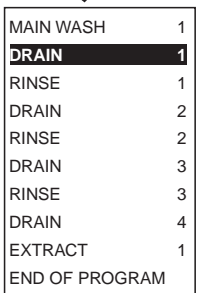3911

Now the last four modules will be displayed. **END OF PROGRAM** will be highlighted.

↑ **Press ↑ to determine where the new module will be inserted in the program sequence.**

```
MAIN WASH          1
DRAIN              1
RINSE              1
DRAIN              2
RINSE              2
DRAIN              3
RINSE              3
DRAIN              4
EXTRACT            1
END OF PROGRAM
```

The module will be inserted <u>above</u> the module you highlight.

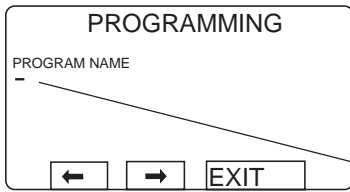To insert the module last in the program, you should highlight **END OF PROGRAM.**

INSERT **Press INSERT.**

Now you can answer the questions as described in chapter "To create and write an entirely new program ", section "Select position of modle in program sequence" and following sections.

Programming text

```
PROGRAMMING

PROGRAM NAME
–


  ←      →    EXIT

3922
```

Enter text (no more than approx. 150 characters) to accompany the program, with the aid of the functions described below.

The cursor shows where the letter/digit/character will be inserted.

The function keys have these functions:

Delete text.

One press:
Enter next letter/digit/character.

Two presses:
Insert space between words.

Visible when the cursor is <u>not</u> at the far left of a line: **Use this to move the cursor to a new line.**

Use the numeric keys to enter letters/digits/characters.

Visible when the cursor is at the far left of a line:

Use this to exit (conclude) entering text.

How to enter letters/digits/other characters

Letters, digits and other characters can be inserted using the numeric keypad. Each of the numeric keys gives access to several characters (3-5 per key), as follows:

1	2	3
ABCDE	FGHIJ	KLMNO

4	5	6
PQRST	UVWXY	ZÅÄÖ

7	8	9
01234	56789	= ( )

0
° + -.

The first time you press a given key, the first character available through that key will appear on the display. One press on **1** produces A. One press on **9** produces =.

Simply press the relevant key the required number of times until the character you want appears on the display. For example, to insert the letter **C**, press key **1**. three times. To insert: **)** (i.e. the end bracket), press **9** three times.

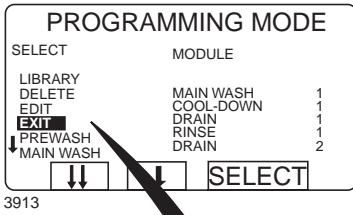When the character you want is on the display, press ➡ to insert the next character.

To insert a **space** between words, simply press ➡ a second time.

To **delete** a character, press ← Press it repeatedly to delete several characters.
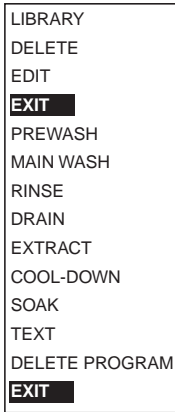
To **start a new line** press ⬇.

To **end entering text**, press ⬇ to bring the cursor to the far left of a new line. Then press **EXIT**

Conclude programming

```
 ┌─────────────────────────────────┐
 │  PROGRAMMING MODE               │
 │ SELECT        MODULE            │
 │  LIBRARY                        │
 │  DELETE      MAIN WASH    1     │
 │  EDIT        COOL-DOWN    1     │
 │ ▐EXIT▌       DRAIN        1     │
 │ ↓PREWASH     RINSE        1     │
 │  MAIN WASH   DRAIN        2     │
 │   ┌────┐ ┌───┐ ┌──────────┐     │
 │   │ ↓↓ │ │ ↓ │ │  SELECT  │     │
 │   └────┘ └───┘ └──────────┘     │
 └─────────────────────────────────┘
 3913
```

Once you have completed programming:

Press ↓ **...**

```
┌─────────────────────────┐
│  LIBRARY                │
│  DELETE                 │
│  EDIT                   │
│ ▐EXIT▌                  │
│  PREWASH                │
│  MAIN WASH              │
│  RINSE                  │
│  DRAIN                  │
│  EXTRACT                │
│  COOL-DOWN              │
│  SOAK                   │
│  TEXT                   │
│  DELETE PROGRAM         │
│ ▐EXIT▌                  │
└─────────────────────────┘
```

...to highlight either of the two "EXIT".

SELECT   **Press SELECT.**

Main data

Main data, standard mode

```
    PROGRAMMING MODE
 996     PERM.PRESS 60°C
MAIN DATA
BUZZER AT END          N
START EXTRACT          N
READY

   ✳    ↓     Y/N
```
3915

```
BUZZER AT END        N
START EXTRACT        N
READY
```

Buzzer at end

If you answer **Yes (Y)**:
    The buzzer will sound when the program ends. The buzzer signal can be turned off by pressing the crossed buzzer-symbol.

If you answer **No (N):**
    No buzzer at program end.

Y / N   **Answer Yes (Y) or No (N).**

↓   **Press ↓.**

```
BUZZER AT END        N
START EXTRACT        N
READY
```

3670

| Y / N | **Answer Yes (Y) or No (N).** |

| ↓ | **Press ↓.** |

Start extract (start with extraction)

If you answer **Yes (Y)**:
The machine will start with a short extraction cycle when the program begins. This helps the load to soak up water, and the machine does not require so much extra filling (repeated topping up).

If you answer **No (N):**
No extraction when the program begins.

```
BUZZER AT END        N
START EXTRACT        N
READY
```

3672

| S ELECT |

Once you have answered all the questions, highlight READY, then:
Press SELECT.

Main data, advanced mode

The first three questions of Advanced mode are the same as in Standard mode, see section "Main data, standard mode".

BUZZER AT END	N
START EXTRACT	N
GENTLE ON TIME	**SEC 3**
GENTLE OFF TIME	**SEC 12**
NORMAL ON TIME	**SEC 12**
NORMAL OFF TIME	**SEC 3**
READY	

3892

Use the machine key to enter the required value.

```
1  2  3
4  5  6
7  8  9
   0
```

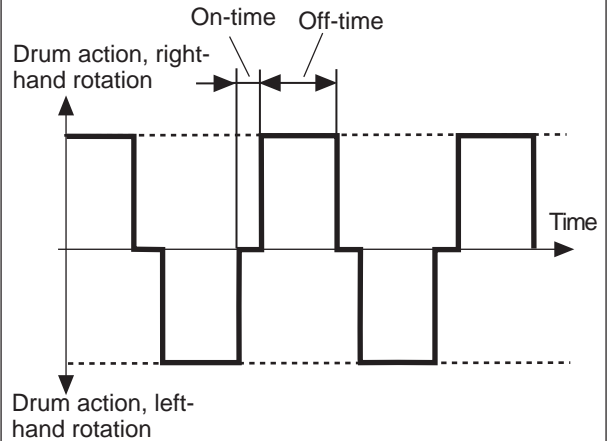If wrong digits are given:
Press ERASE.

⬇

When ready
Press ⬇.

Drum action "on-times" and "off-times"

Here you can determine the precise structure of drum action (both "gentle" and "normal" action), by setting the individual lengths of time the drum is to rotate ("on-time") and be at a standstill ("off-time").

The values displayed initially are those recommended by supplier.

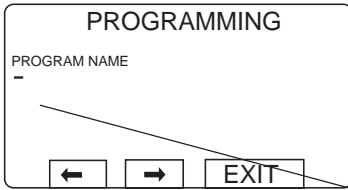|	
BUZZER AT END	N
START EXTRACT	N
GENTLE ON TIME SEC	3
GENTLE OFF TIME SEC	12
NORMAL ON TIME SEC	12
NORMAL OFF TIME SEC	3
READY	

3894

Once you have answered all the questions, highlight READY, then:

Press SELECT.

SELECT

To program on the basis of an existing program

Insert the program name

```
        PROGRAMMING

PROGRAM NAME
–


    ←      →      EXIT

4215
```

Enter program name (no more than approx. 150 characters) to accompany the program, with the aid of the functions described below.

The cursor shows where the letter/digit/character will be inserted.

The function keys have these functions:

← **Delete text.**

→ One press:
Enter next letter/digit/ character.

Two presses:
Insert space between words.

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter letters/digits/ characters.

EXIT

Use this to exit (conclude) entering text.

How to enter letters/digits/other characters

Letters, digits and other characters can be inserted using the numeric keypad. Each of the numeric keys gives access to several characters (3-5 per key), as follows:

1	2	3
ABCDE	FGHIJ	KLMNO
4	5	6
PQRST	UVWXY	Z
7	8	9
01234	56789	= ( )
	0	
	° + -.	

The first time you press a given key, the first character available through that key will appear on the display. One press on **1** produces A. One press on **9** produces =.

Simply press the relevant key the required number of times until the character you want appears on the display. For example, to insert the letter **C**, press key **1**. three times. To insert: **)** (i.e. the end bracket), press **9** three times.

When the character you want is on the display, press → to insert the next character.

To insert a **space** between words, simply press → a second time.

To **delete** a character, press ← Press it repeatedly to delete several characters.

To **start a new line** press ↓.

To **end entering text**, press ↓ to bring the cursor to the far left of a new line. Then press **EXIT**

Insert the program number

```
PROGRAMMING MODE

ENTER A PROGRAM  NUMBER?

  [ * ] [ * ] [ EXIT ]
```
3918

Use the numeric keys to enter the new program number.

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
        [0]

[E XIT]   **Press EXIT**

```
PROGRAMMING MODE

PROGRAM HAS BEEN STORED
PRESS ANY KEY  TO CONTINUE...

  [ * ] [ * ] [ * ]
```
3676
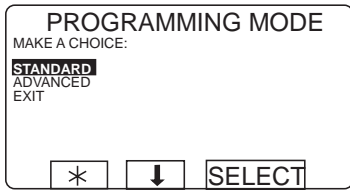
[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[↵] [0]

The new program will now be stored in the control unit EEPROM.

Once the program has been stored ("loaded"), a process which takes only a matter of seconds, the display will look like this (illustration, left).
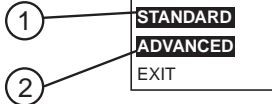
Press any key.

Continue programming or stop programming

```
PROGRAMMING MODE
MAKE A CHOICE:
STANDARD
ADVANCED
EXIT


  ✳    ↓    SELECT
```
3677

↓

① STANDARD
② ADVANCED
   EXIT

SELECT

↓

   STANDARD
   ADVANCED
③ EXIT

SELECT

Choose 1, 2 or 3:

1 Continue programming in Standard mode:

  Highlight STANDARD and press SELECT.

2 Continue programming in Advanced mode:

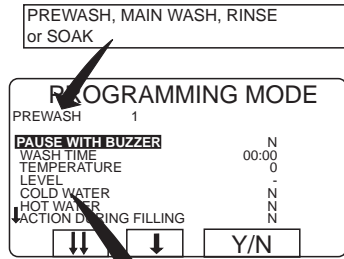 **Highlight ADVANCED and press SELECT.**

3 Stop programming:

  Highlight EXIT and press SELECT.

Program modules, Standard mode

The Prewash, Main wash, Rinse, and Soak, Standard mode

```
PREWASH, MAIN WASH, RINSE
or SOAK
```

```
PROGRAMMING MODE
PREWASH        1
PAUSE WITH BUZZER         N
WASH TIME            00:00
TEMPERATURE             0
LEVEL                   -
COLD WATER              N
HOT WATER               N
ACTION DURING FILLING
   ↓↓       ↓      Y/N
```
3697

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

To access this function, see chapter "To create and write an entirely new program.

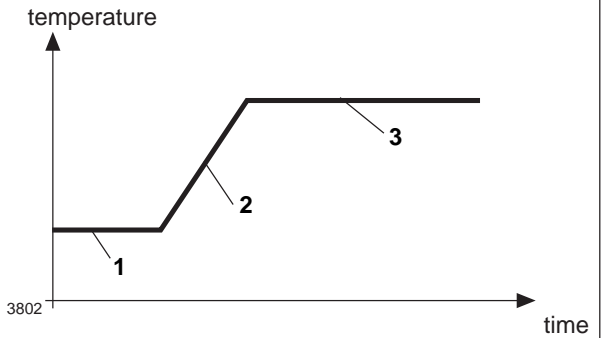**Answer the various questions. Press ↓ to move on to the next question.**

You can go back and change questions already answered by pressing ↑ repeatedly.

The module structure

The questions are identical for the Prewash, Main wash and Rinse modules.

Soak can be programmed for a longer time (up to 27 hours and 46 min.) Other modules are max 1 hour.

The module consists of three different parts:

3802

1 **Water filling**

   The motor may be at a standstill, on gentle action or normal action. Detergent may be dispensed.

2 **Water heating**

   The motor may be at a standstill, on gentle action or normal action.
   If heating is not programmed the program advances to normal action.

3 **Motor action at correct temperature and water level**

   The motor may be at a standstill, on gentle action or normal action. Temperature and water level are monitored and can be adjusted when neccessary.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3698

Y / N **Answer Yes (Y) or No (N).**

⬇ **Press ⬇.**

Pause with buzzer

If you answer **Yes (Y)**:
   The washer extractor will stop and the buzzer will sound before the program module starts.

   Turn off the buzzer by pressing the button with crossed buzzer-symbol. Start the program by pressing **START**.

If you answer **No (N)**:
   The program module will start without pause or buzzer.

PAUSE WITH BUZZER	N
WASH TIME	**00:00**
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3699

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

⬇ When ready:
Press ⬇.

Wash time

Prewash, Main wash and Rinse
   The maximum wash time is 59 minutes and 59 seconds, in increments of 1 second.
Soak
   The maximum wash time is 27 hours and 46 minutes in steps of 1 minute.

Time taken for filling and heating water is not included in the programmed time.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	**0°C**
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3700

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

⬇ When ready:
Press ⬇.

Temperature

Choose a temperature between 0 - 98°C or 0 - 208°F (whole degrees, no decimals).

To change temperature scale °C/°F

You can change the temperature scale using the "SETTINGS" function, which is described in the Service Manual.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	**-**
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3775

Answer:

- = No water filling

L = Low water level

M = Medium water level

H = High water level

$\boxed{L/M/H}$

$\boxed{\downarrow}$ **Press $\boxed{\downarrow}$.**

Fill level

The function key display shows $\boxed{\textbf{L/M/H}}$ and is a toggle function ((the letter to the right of the highlighted question toggles from **L**, **M** to **H** each time it is pressed).
- = No water filling
L = Low water level
M = Medium water level
H = High water level
L, **M** and **H** are standard levels, properly tested for each type of machine.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	**N**
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3799

$\boxed{Y/N}$ **Answer Yes (Y) or No (N).**

$\boxed{\downarrow}$ **Press $\boxed{\downarrow}$.**

Cold water

If you answer **Yes (Y):**
The drum will fill with cold water until the correct water level is reached.
If you answer **No (N):**
No cold water filling.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	**N**
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3800

$\boxed{Y/N}$ **Answer Yes (Y) or No (N).**

$\boxed{\downarrow}$ **Press $\boxed{\downarrow}$.**

Hot water

If you answer **Yes (Y):**
The drum will fill with hot water until the correct water level is reached.

If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature.

If you answer **No (N):**
No hot water filling.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	**N**
HOT WATER	**N**
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3814

Cold and hot water - correct temperature on intake

If you answer **Yes (Y)** to both of these questions, both the cold water and the hot water valves will open when the machine is filling. If the set temperature limit is exceeded, the hot water valve will be closed. When the temperature has fallen 4°C below the set temperature limit, the hot water valve will open again.

In this way you can achieve the correct water temperature even in an unheated washer extractor.

Note, however, that the water valves will close when the correct water level is reached, regardless of whether the correct temperature has been reached.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	**N**
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

4211

Cold hard water

If you answer **Yes (Y):**
The drum will fill with cold hard water until the correct water level is reached.

If you answer **No (N):**
No cold hard water filling.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
LEVEL	-
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	**N**
WATER FROM TANK 2	**N**
WATER FROM TANK 3	**N**
ACTION DURING FILL	N
ACTION DURING HEAT	N

4212

Tank water

If you answer **Yes (Y):**
The drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product).

If you answer **No (N):**
No filling from these sources.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

ACTION DURING FILL	**N**
ACTION DURING HEAT	**N**
ACTION DURING WASH	**N**
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00

3801

$\boxed{\text{- /G/N}}$

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

$\boxed{\downarrow}$ **Press $\downarrow$.**

Drum action at different stages

The program module consists of three different stages:
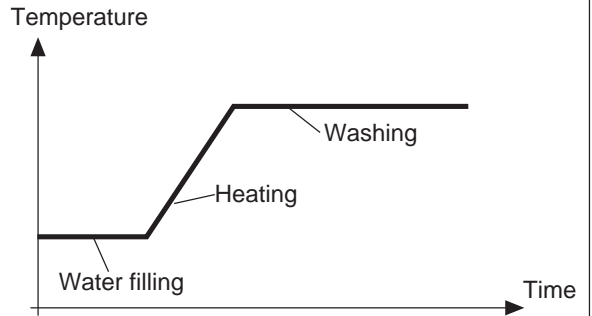
During each of these stages you can determine whether the drum is to be at a standstill, on gentle action or normal action.

Options for each question:

- = Drum at standstill

G = Gentle action

N = Normal action

You can set the drum "on-times" and "off-times" for gentle action and normal action when programming via "Insert Main Data, Advanced mode", **see the section "Main Data".**

ACTION DURING WASH	N
COMPARTMENT 1	**N**
DETERGENT 1 TIME	0:00
COMPARTMENT 2	**N**
DETERGENT 2 TIME	0:00
COMPARTMENT 3	**N**
DETERGENT 3 TIME	0:00
COMPARTMENT 4	**N**
DETERGENT 4 TIME	0:00
COMPARTMENT 5	**N**
DETERGENT 5 TIME	0:00

3804

$\boxed{\text{Y /N}}$ **Answer Yes (Y) or No (N).**

$\boxed{\downarrow}$ **Press $\downarrow$.**

Detergent options for machines with detergent dispensers

For machines with integral detergent dispensers there are five options for detergent dispensing.

If you insert Yes (Y), water will flush through that compartment throughout the time that the drum is filling with water at the beginning of the program module.

ACTION DURING WASH	N
COMPARTMENT 1	N
DETERGENT 1 TIME	**0:00**
COMPARTMENT 2	N
DETERGENT 2 TIME	**0:00**
COMPARTMENT 3	N
DETERGENT 3 TIME	**0:00**
COMPARTMENT 4	N
DETERGENT 4 TIME	**0:00**
COMPARTMENT 5	N
DETERGENT 5 TIME	**0:00**

4830

```
1  2  3
4  5  6
7  8  9
      0
   ↓
```

Detergent dispensing in machines with detergent compartments

Here you can determine the length of time water will be flushed through each individual compartment.

COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	**C**
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00

4213

C /H   **Specify cold (C) or hot (H) water.**

↓   **Press ↓**

Water for flushing detergent compartment

Every time detergent is supplied from a detergent compartment, the compartment is flushed through to remove residues of detergent. Here you can specify if the compartment is to be flushed clean using cold or hot water.

WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

3805

1 2 3   **Use the numeric keys to enter the required value.**

4 5 6

7 8 9   If wrong digits are given:

0   **Press ERASE.**

⬇   When ready
Press ⬇.

Dispensing liquid detergent from external system

For machines with an external detergent supply system there are ten control signals which can open external supply valves for a specified time.

The valves open for the time set, starting from when the drum has stopped filling.

The maximum time is 4 minutes and 10 seconds, in increments of 1 second.

The supply lines are flushed clean automatically.

LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	**N**
EXIT	

4082

Y/N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

Drain

A streamlined means of programming the drain stage. If you require times and settings different from those listed below you must answer **No (N)**, then program a separate drain module immediately after this module, see the section "Drain, advanced mode".

If you answer **Yes (Y)**:

    The program module will end with a drain sequence with these settings:

    No pause before drain.

    Drain plus normal speed   50 sec.

    Distribution time   40 sec.

    (These times are default values, but can be altered through the function SETTINGS 2, see service manual.)

If you answer **No (N):**

    No drain.

LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

3813

SELECT

Once you have answered all the questions, highlight READY, then:

Press SELECT to exit the program module.

Drain, standard mode

```
PROGRAMMING MODE
DRAIN          1
PAUSE BEFORE DRAIN        N
ACTION                    N
DRAIN A                   N
DRAIN TIME             0:50
DISTRIBUTION TIME      0:40
READY

   ✳        ↓       Y/N
```
3803

To access this function, see chapter "To create and write an entirely new program".

```
PAUSE BEFORE DRAIN     N

ACTION                 N

DRAIN A                N

DRAIN TIME          0:50

DISTRIBUTION TIME   0:40

READY
```

Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.

The module structure

Drain module can consist of part 1 or 2, or both 1 and 2 depending on how one wants the program:

3802

1 **Drain time**
The drain will be open. The motor may be at a standstill, on gentle action or normal action. During this time the drum water will be discharged.
If this time is set to 0 the drain module will only consist of distribution time.

2 **Distribution time**
The drain will be open. The motor runs at distribution speed. During this time the wash load will be distributed evenly around the walls of the inner drum.
If this time is set to 0 the drain module will only consist of draining time.

```
PAUSE BEFORE DRAIN     N
ACTION                 N
DRAIN A                N
DRAIN TIME          0:50
DISTRIBUTION TIME   0:40
READY
```
3808

```
Y/N
```
Answer Yes (Y) or No (N).

```
↓
```
Press ↓.

Pause before drain

If you answer **Yes (Y)**:
The washer extractor will stop and the buzzer will sound before the drain opens.

Turn off the buzzer by pressing the button with crossed buzzer-symbol. Start the program by pressing **START**.

If you answer **No (N)**:
The program module will open, with no pause.

Drum action during drain cycle

Here you can determine the drum action during the time programmed for the drain cycle:

Drum speed

3811

Drain action during drain cycle → Time

Options:

- **-** = Drum at standstill
- **G** = Gentle action
- **N** = Normal action

```
PAUSE BEFORE DRAIN       N
ACTION                   N
DRAIN A                  N
DRAIN TIME            0:50
DISTRIBUTION TIME     0:40
READY
```
3806

| -/G/N |

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

| ↓ | **Press ↓.**

Choose drain valve

If the machine has two drain valves (for example to allow water to be reused during some wash sequences) here you can specify which drain valve is to open.

If you answer **Yes (Y)**:

The machine's normal drain will remain closed during the drain sequence. The drain valve for water recovery will open instead.

If you answer **No (N)**:

The machine's normal drain will open during the drain sequence. The drain valve for water recovery will remain closed.

```
PAUSE BEFORE DRAIN       N
ACTION                   N
DRAIN A                  N
DRAIN TIME            0:50
DISTRIBUTION TIME     0:40
READY
```
4223

| Y/N | **Answer Yes (Y) or No (N)**

| ↓ | **Press ↓.**

Drain time

Here you can determine the drain time:

Drum speed

3812

Drain time

The maximum time is 42 minutes and 30 seconds, in increments of 10 seconds.

```
PAUSE BEFORE DRAIN       N
ACTION                   N
DRAIN A                  N
DRAIN TIME            0:50
DISTRIBUTION TIME     0:40
READY
```
3807

| 1 | 2 | 3 | **Use the numeric keys to enter the required value.**

| 4 | 5 | 6 |

| 7 | 8 | 9 | If wrong digits are given:

| 0 | **Press ERASE.**

| ↓ | When ready
Press ↓.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN TIME	0:50
DISTRIBUTION TIME	**0:40**
READY	

3809

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ↓.

Distribution time

Here you can determine the length of time the drum operates at distribution speed:

Drum speed

Distribution time

3815 ►Time

The maximum time is 42 minutes and 30 seconds, in increments of 10 seconds.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
READY	

3810

Once you have answered all the questions, highlight READY, then:

SELECT **Press SELECT to exit the program module.**

Extraction, Standard mode

```
        PROGRAMMING MODE
EXTRACT       1
EXTRACT TIME                    00:00
SPEED  RPM                          0
READY

     ┌──────┬──────┬──────┐
     │  ✻   │  ↓   │  ✻   │
     └──────┴──────┴──────┘
3818
```

```
EXTRACT TIME                    00:00
SPEED  RPM                          0
READY
```
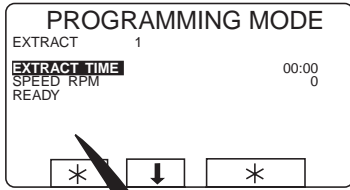
To access this function, see sections "To start a wash program from the program library" - "Pause" .
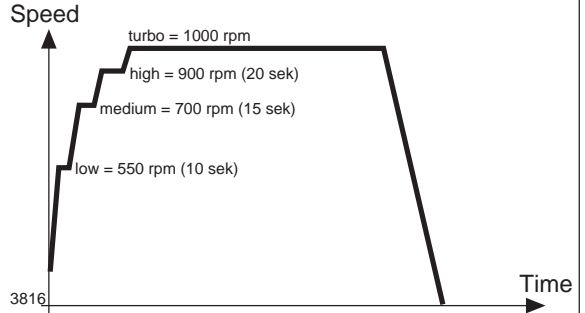
Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.
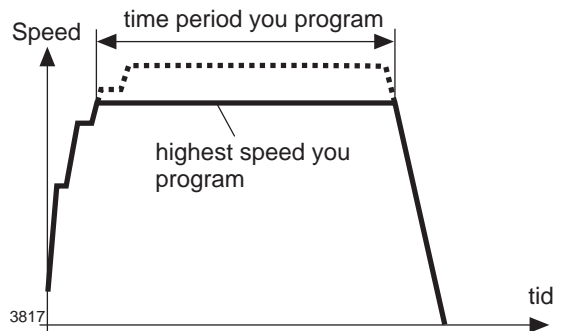
The module structure

For machines with **frequency-controlled motors**:
  The extraction time module consists of a single extraction period, for which you can determine extraction time and speed. The machine does not accelerate to its highest speed immediately, however. Instead it accelerates in several steps, because some of the water needs to be extracted at lower speeds. Shown below are the standard values the machine has when delivered:

```
Speed
  │                turbo = 1000 rpm
  │             ┌──────────────────────┐
  │        high = 900 rpm (20 sek)      │
  │       ┌─── medium = 700 rpm (15 sek)│
  │      ┌┘                             │
  │  low = 550 rpm (10 sek)             │
  │    ┌─┘                              │
  │   ┌┘                                └─┐
  │   │                                   └─┐
3816│──┴──────────────────────────────────────→ Time
```

If you program a low (maximum) extraction speed, the number of acceleration steps at the beginning of extraction may be reduced.

The time you program is the period the machine will run at its highest speed.

```
Speed      ←── time period you program ──→
  │         ............................
  │        ┌──────────────────────────┐
  │      ┌─┘                           │
  │      │        highest speed you    │
  │      │        program              │
  │     ┌┘                             └─┐
  │     │                                 └─┐
3817│────┴──────────────────────────────────→ tid
```

For machines **without frequency-controlled motors** you must choose one of the extraction speed options shown on the display.

```
EXTRACT TIME                      00:00
SPEED (LOW=400 HIGH=1000) RPM         0
READY                               3822
```

```
EXTRACT TIME              00:00
SPEED  RPM                    0
READY
```
3819

Use the numeric keys to enter the required value.

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
     [0]

If wrong digits are given:
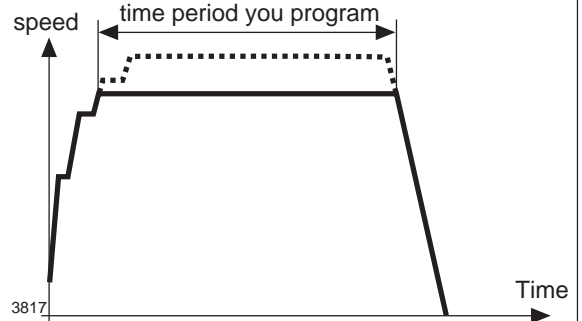**Press ERASE.**

[↓] When ready
     Press [↓].

Extraction time

The maximum extraction time is 59 minutes and 59 seconds, in increments of 1 second.

The period during which the drum is reaching its correct speed is not included in the "extraction time".

3817

```
EXTRACT TIME              00:00
SPEED  RPM                    0
READY
```
3820

Use the numeric keys to enter the required value.

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
     [0]

If wrong digits are given:
Press ERASE.

[↓] When ready
     Press [↓].

Extraction speed

For machines with frequency-controlled motors:
Enter the extraction speed you require. The maximum speed varies from one machine to another.

If you enter a value which is too high, the value will be changed to the maximum allowed when you press [↓].

For machines without frequency-controlled motors:
If the machine does not have a frequency-controlled motor, the available extraction speed options will be shown on the display.

```
EXTRACT TIME  ↓       ↓     00:00
SPEED (LOW=400 HIGH=1000) RPM    0
READY
```

Enter one of these values. **Note that no other values are allowed.**

```
EXTRACT TIME              00:00
SPEED  RPM                    0
READY
```
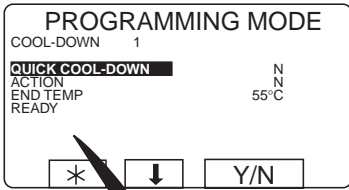3821

Once you have answered all the questions, highlight READY, then:

SELECT **Press SELECT to exit the program module.**

Cool-down, Standard mode

```
      PROGRAMMING MODE
COOL-DOWN      1
QUICK COOL-DOWN                  N
ACTION                           N
END TEMP                       55°C
READY

      ⟍
    ┌─────┬─────┬─────┐
    │  ✳  │  ↓  │ Y/N │
    └─────┴─────┴─────┘
3824
```

```
┌────────────────────────────┐
│ QUICK COOL-DOWN          N │
├────────────────────────────┤
│ ACTION                   N │
│ END TEMP              55°C │
│ READY                      │
└────────────────────────────┘
```
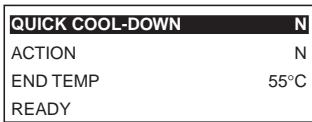
To access this function, see chapter "To create and write an entirely new program".

**Answer the various questions in the module. Press ↓ to move on to the next question.**

You can go back and change questions already answered by pressing ↑ repeatedly.

The cool-down module is used to achieve controlled cooling of the wash water. This helps prevent creasing of the wash load.

During the cool-down sequence cold water is added for a brief period at 30 second intervals. When temperature is over 70°C the cool down is monitored so that the limit value (4°C/min) is not exceeded. If the limit value is exceeded, no water will be added until the mean value is acceptable again.
If temperature is under 70°C no monitoring is done.
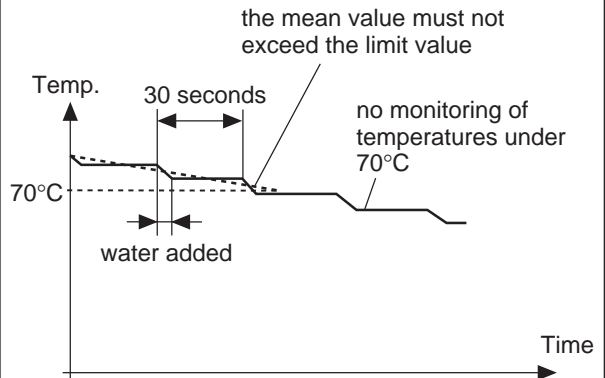
3846

```
QUICK COOL-DOWN      N
ACTION               N
END TEMP          55°C
READY
```
3825

Quick cool-down

If you answer **Yes (Y)**:

The machine will fill with cold water to a fixed higher level. The machine **does not** monitor the drop in temperature of the wash water. This function is used mainly for reducing the temperature of the water before it is discharged.

Do not use this function to prevent creasing of the wash load!

If you answer **No (N)**:

The machine makes a controlled cool-down as described earlier.

| Y / N | **Answer Yes (Y) or No (N).** |

| ↓ | **Press ↓.** |

```
QUICK COOL-DOWN      N
ACTION               N
END TEMP          55°C
READY
```
3843

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

Drum action during cool-down

Allows you to determine drum action during cool-down. Options:

- = Drum at standstill
G = Gentle action
N = Normal action

| - /G/N |

| ↓ | **Press ↓.** |

```
QUICK COOL-DOWN      N
ACTION               N
END TEMP          55°C
READY
```
3844

Use the numeric keys to enter the required value.

1	2	3
4	5	6
7	8	9
	0	

If wrong digits are given:
Press ERASE.
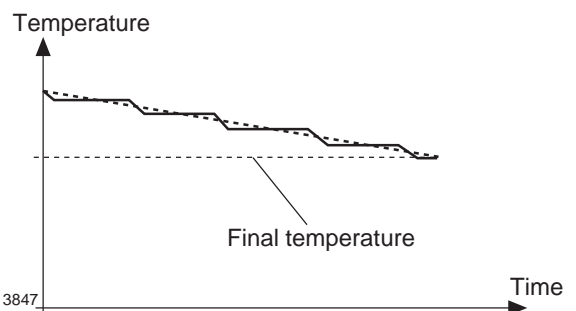
When ready
Press ↓.

Final temperature

Enter the temperature you require for the water when cool-down has ended.

Temperature / Final temperature / Time

3847

```
QUICK COOL-DOWN      N
ACTION               N
END TEMP          55°C
READY
```
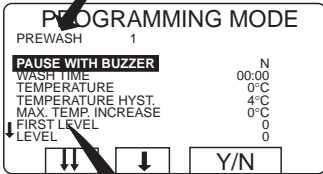3845

Once you have answered all the questions, highlight READY, then:

Press SELECT to exit the program module.

| SELECT |

Program modules, Advanced mode
The Prewash, Main wash, Rinse, Soak, Advanced mode

PREWASH, MAIN WASH, RINSE or SOAK

PROGRAMMING MODE
PREWASH   1

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
TEMPERATURE HYST.	4°C
MAX. TEMP. INCREASE	0°C
FIRST LEVEL	0
LEVEL	0

⇊   ↓   Y/N

3848

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0°C
TEMPERATURE HYST.	4°C
MAX. TEMP. INCREASE	0°C
FIRST LEVEL	0
LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
SPEED DURING FILL. RPM	48
SPEED DURING HEAT. RPM	48
SPEED DURING WASH. RMP	48
ACCELERATION. RPM/SEC	20
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

To access this function, see chapter "To create and write an entirely new program".

Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.

The module structure

The questions are identical for the Prewash, Main wash, Rinse and Rinse repeat modules.

Soak can be programmed for a longer time (up to 27 hours and 46 min.) Other modules are max 1 hour.

The module consists normally of three different parts:
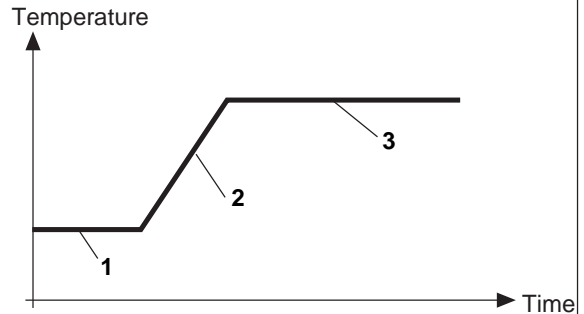
3802

1 **Water filling**

   The motor may be at a standstill, on gentle action or normal action. Detergent may be dispensed.

2 **Water heating**

   The motor may be at a standstill, on gentle action or normal action.
   If heating is not programmed the program advances to normal action.

3 **Motor action at correct temperature and water level**

   The motor may be at a standstill, on gentle action or normal action. Temperature and water level are monitored and adjusted.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0
TEMPERATURE HYST	4
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N

3849

Pause with buzzer

If you answer **Yes (Y)**:
   The washer extractor will stop and the buzzer will sound before the program module starts. Turn off the buzzer by pressing the button with crossed buzzer-symbol. Start the program by pressing **START**.

If you answer **No (N)**:
   The program module will start without pause or buzzer.

Y / N **Answer Yes (Y) or No (N).**

↓ **Press ↓.**

PAUSE WITH BUZZER	N
WASH TIME	**00:00**
TEMPERATURE	0
TEMPERATURE HYST	4
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N

3850

Wash time

Prewash, Main wash and Rinse
   The maximum wash time is 59 minutes and 59 seconds, in steps of 1 second.

Soak
   The maximum wash time is 27 hours and 46 minutes, in steps of 1 minute.

Time taken for filling and heating water is not included in the programmed time.

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

↓ When ready
Press ↓.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	**0**
TEMPERATURE HYST	4
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N

3851

1 2 3
4 5 6
7 8 9
0

⬇

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ⬇.

___ *Temperature* ___
Choose a temperature between 0 - 98°C or 0 - 208°F (whole degrees, no decimals).

___ *To change temperature scale °C/°F* ___
You can change the temperature scale using the "SETTINGS" function, which is described in the Service Manual.

PAUSE WITH BUZZER	N
WASH TIME	00:00
TEMPERATURE	0
TEMPERATURE HYST	**4**
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N

3852

1 2 3
4 5 6
7 8 9
0

⬇

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ⬇.

___ *Temperature hysteresis* ___
Once the drum has filled with water to the right level, it is heated to the washtemperature you have programmed. During the wash the water will cool down somewhat. When the water temperature has reached a lower limit (which you determine using this function), heating restarts and the water temperature is brought back up to the correct level.

Temperature hysteresis is the number of degrees between the wash temperature and the temperature at which heating needs to restart.

3867
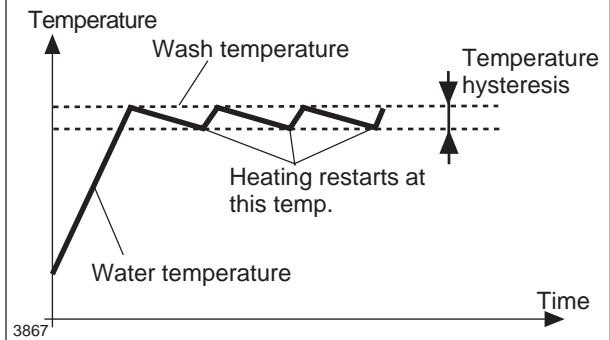
An example:

Wash temperature: 60°C

Temperature hysteresis: 4°C

The water is initially heated to 60°C. When the temperature has fallen to 56°C, heating restarts and the water temperature is brought back up to 60°C.

```
PAUSE WITH BUZZER        N
WASH TIME            00:00
TEMPERATURE              0
TEMPERATURE HYST         4
MAX TEMP. INCREASE       0
FIRST LEVEL              0
FILL LEVEL               0
LEVEL HYST.             20
COLD WATER               N
HOT WATER                N
COLD HARD WATER          N
```

3853

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

⬇ When ready
Press ⬇.

Maximum rate of temperature increase

This parameter, expressed in degrees per minute, is used to determine the rate at which the water may be heated to wash temperature.

An example:

Say you were to set this parameter to allow a maximum temperature increase rate of 3°C per minute. If we assume that the machine heats the water 3°C in 20 seconds,, then heating would be switched off after 20 seconds and would remain off for 40 seconds. The same pattern would continue throughout the heating period, so that the average rate of temperature increase would never exceed 3°C per minute.
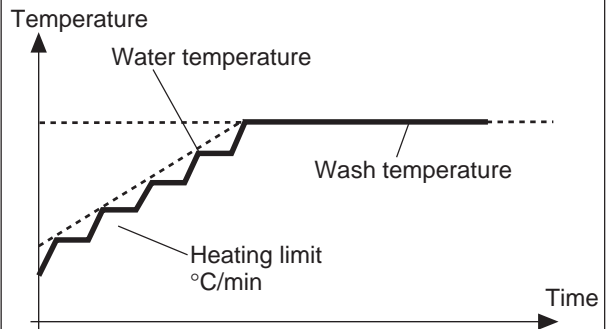
3868

If you program a too fast temperature increase which is to fast for the machine, the heating will be made without any interruptions.

If the value is set to 0 the function is not activated and the heating is done without any interruptions.

```
WASH TIME            00:00
TEMPERATURE              0
TEMPERATURE HYST         4
MAX TEMP. INCREASE       0
FIRST LEVEL              0
FILL LEVEL               0
LEVEL HYST.             20
COLD WATER               N
HOT WATER                N
COLD HARD WATER          N
WATER FROM TANK 1
```

3854

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

⬇ When ready
Press ⬇.

First level

For the relevant water level data, see the next function, "FILL LEVEL".

After water is first added to a drum containing a dry load, the level always falls slightly because the load absorbs water.

For this reason you are able to program a "first level" (i.e. the initial filling level) which is slightly higher than the level used during the rest of the wash, to avoid a situation where the water has to be topped up repeatedly during the first part of the wash.

If the parameter on this line is 0, this function will not be used. Instead the drum will fill to the "FILL LEVEL" set.
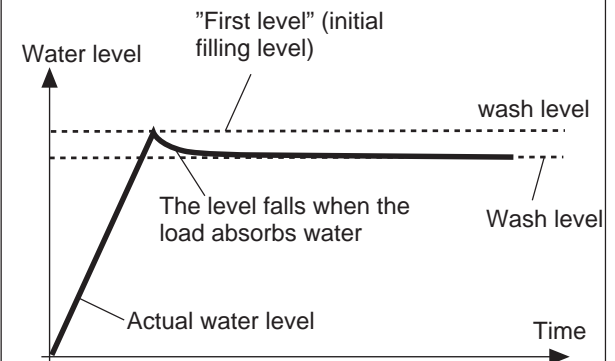
3869

TEMPERATURE	0
TEMPERATURE HYST	4
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	**0**
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N

3855

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

[↓] When ready
Press [↓].

Fill level

Enter a water filling level from 0 - 255, whole numbers only.

The "Fill level" is measured in "scale units", which correspond to different water levels for different machines. Printed below is a conversion table for this machine.

Water volume adjusted to laundry weight

(Only machines with frequence controlled motor)

When Main data is programmed (see chapter "Insert Main data") you can activate the function "Count weight". When this function is activated the machine runs a short program sequence in the beginning of the wash program where the laundry weight is calculated.

This value is then used when filling water. This mean correct amount of water compared with weight.

Because of this the level you program here can vary depending on laundry weight.

FLE 125 FC - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
98	15	28	
108	25	65	
113	30	84	low level
118	36	101	mid level
122	40	115	
126	45	131	
130	50	149	high level
134	55	165	
138	60	179	
142	65	194	
146	70	209	
150	75	223	
154	80	238	
158	85	250	
161	90	265	
165	95	280	
169	100	295	
173	105	308	
177	110	322	
180	115	336	
185	120	352	
189	125	366	
193	130	382	
197	135	395	
200	140	410	

* Distance above bottom of inner drum.

FLE 175 FC - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
89	15	30	
95	20	48	
100	25	65	
106	30	83	
111	35	100	
116	40	117	low level
121	45	130	
125	50	145	
130	55	160	
134	60	175	
138	63	186	mid level
141	65	190	
145	70	205	
150	75	218	
153	80	230	
157	85	245	high level
162	90	258	
165	95	272	
168	100	285	
172	105	297	
174	110	310	
177	115	325	
180	120	335	
184	125	348	
188	130	362	
191	135	374	
194	140	385	
199	145	400	
202	150	411	
205	155	424	
210	160	438	
214	165	450	
218	170	464	
221	175	477	
225	180	490	
229	185	504	
233	190	520	
237	195	533	
241	200	546	
246	205	560	

* Distance above bottom of inner drum.

Program modules, advanced mode

FLE 225 FC - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
85	15	9	
90	20	29	
94	25	46	
99	30	60	
103	35	75	
107	40	88	
111	45	100	
115	50	114	low level
119	55	125	
123	60	138	
127	65	150	
130	70	161	
134	75	173	
138	80	186	mid level
141	85	196	
144	90	205	
147	95	217	
150	100	229	
154	105	241	
155	107	246	high level
156	110	252	
158	115	262	
161	120	271	
163	125	281	
166	130	291	
168	135	301	
171	140	312	
173	145	323	
175	150	332	
177	155	343	
179	160	353	
182	165	364	
185	170	373	
188	175	384	
191	180	394	
193	185	403	
196	190	414	
200	195	425	
204	200	435	
209	205	448	
213	210	455	
216	215	468	
220	220	480	
224	225	488	
227	230	500	
230	235	510	
234	240	522	
239	245	533	
243	250	546	

* Distance above bottom of inner drum.

FLE 400 FC - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
61	30	31	
70	40	53	
76	50	75	
85	65	103	low level, steam
91	75	121	low level, el
95	80	130	
100	90	146	
107	100	164	
112	110	180	
118	120	198	
125	135	221	mid level
128	140	230	
132	150	242	high level
137	160	258	
142	170	270	
147	180	285	
150	190	296	
157	200	315	
160	210	325	
165	220	342	
170	230	352	
176	240	372	
178	230	382	
185	260	400	
188	270	412	
194	280	427	
197	290	438	
203	300	453	
208	310	465	

* Distance above bottom of inner drum.

FL 335 MP - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
60	10	6	safety level, steam
75	20	10	safety level, el. heated
81	25	33	
86	30	49	
91	35	64	
95	40	77	
99	45	90	
103	50	102	
107	55	114	
112	60	125	
115	65	135	low level
118	70	147	
121	75	158	
124	80	167	
127	85	177	
130	90	188	
134	95	198	
137	100	208	
140	105	217	
143	110	228	
146	115	237	
149	120	248	
152	125	258	mid level
155	130	267	
158	135	275	
160	140	284	
164	145	293	
166	150	302	
170	155	311	high level
172	160	319	
174	165	328	
178	170	336	
181	175	345	
184	180	354	
187	185	362	
189	190	371	
191	195	380	
194	200	388	
197	205	397	
200	210	404	
203	215	415	
206	220	422	
208	225	431	
211	230	441	
214	235	450	
217	240	456	
219	245	465	
222	250	474	
225	255	482	
228	260	492	

* Distance above bottom of inner drum.

FL 335 Clarus - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)
0	0	0
52	5	0
60	10	6
66	15	32
71	20	47
77	25	63
81	30	76
85	35	89
89	40	100
93	45	110
96	50	123
100	55	135
103	60	145
107	65	155
110	70	165
114	75	175
117	80	185
120	85	195
123	90	204
126	95	214
130	100	223
133	105	234
136	110	243
138	115	251
141	120	260
145	125	270
148	130	280
150	135	289
153	140	298
156	145	305
159	150	316
162	155	325
164	160	334
167	165	343
170	170	350
173	175	360
176	180	368
179	185	377
181	190	385
184	195	394
187	200	402
190	205	410
193	210	418
196	215	430
199	220	440
201	225	447
204	230	455
207	235	464
210	240	473
213	245	481
215	250	490
218	255	498
	260	

* Distance above bottom of inner drum.

Program modules, advanced mode

EXSM 230 - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
55	6	5	
60	10	26	
66	15	49	
72	20	67	
77	25	84	
82	30	100	
87	35	118	
92	40	135	
94	43	140	
96	45	146	
100	50	160	
104	55	174	
108	60	188	
110	62	195	low level
112	65	200	
116	70	214	
120	75	225	
124	80	240	
128	85	254	
132	90	265	
136	95	276	
139	100	290	
141	102	295	mid level
143	105	300	
146	110	310	
150	115	323	
153	120	335	
157	125	345	high level
160	130	357	
164	135	368	
167	140	380	
171	145	390	
174	150	400	
178	155	415	
181	160	425	
185	165	438	
188	170	448	
192	175	460	
195	180	471	
199	185	483	
203	190	495	
206	195	505	

* Distance above bottom of inner drum.

EXSM 350 Clarus - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
61	20	5	
65	25	20	
69	30	30	
73	35	44	
77	40	55	
80	45	68	
84	50	80	
87	55	90	
90	60	100	
93	65	110	
96	70	120	
99	75	130	
102	80	141	
103	81	143	low level
105	85	151	
108	90	160	
111	95	170	
114	100	180	
117	105	190	
120	110	200	
123	115	209	
125	120	217	
128	125	225	
130	130	234	mid level
133	135	242	
136	140	251	
138	145	259	
141	150	268	
143	155	275	
146	160	281	
148	165	290	high level
151	170	299	
153	175	305	
155	180	315	
157	185	320	
160	190	330	
165	200	345	
170	210	360	
175	220	376	
179	230	391	
184	240	408	
189	250	421	
193	260	438	
198	270	455	
203	280	470	
208	290	485	
213	300	500	
217	310	512	
221	320	530	
226	330	545	
231	340	560	
236	350	576	

* Distance above bottom of inner drum.

FLE 850 MP - Conversion table, water level

Scale units	Quantity of water(litres)	Water level * (mm)	
18	10	-	
29	20	20	
34	24	34	
36	30	42	
44	40	63	
50	50	85	
56	60	100	
62	70	116	
67	80	135	
73	90	151	
78	100	165	
83	110	178	
85	114	185	low level
87	120	190	
92	130	203	
96	140	217	
100	150	229	
104	160	242	
108	170	252	mid level
112	180	264	
116	190	275	
119	198	284	
120	200	287	
123	210	297	
126	220	307	
127	222	313	
130	230	319	high level
134	240	329	
137	250	340	
141	260	350	
145	270	360	
148	280	370	
152	290	380	
155	300	390	
158	310	401	
162	320	410	
165	330	420	
168	340	429	
171	350	439	
174	360	448	
178	370	457	
181	380	466	
185	390	476	
188	400	486	
191	410	495	
194	420	506	
198	430	515	
202	440	525	
205	450	534	
208	460	544	
211	470	553	
214	480	563	

* Distance above bottom of inner drum.

W365H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
10	2.5	0	
16	5	25	
23	7.5	49	
24	8	52	low level
29	10	69	
30	10.5	72	mid level
31	11	76	
33	12	82	
34	12.5	85	
35	13	88	
36	13.4	91	high level
40	15	102	
45	17.4	118	
46	18	121	
48	19	127	
50	20	134	
54	22	146	
56	23	152	
61	26	167	
67	30	186	
79	35	223	
90	40.7	258	
105	47.6	297	overfilling level
126	57.3	352	

* Distance above bottom of inner drum.

W375H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
10	3	1	
15	5	22	
22	8.2	45	
24	9	52	low level
26	10	59	
30	12	71	mid level
31	12.5	75	
34	14	84	
36	15	90	high level
43	19	113	
46	21	125	
48	22	128	
54	25	144	
61	30	170	
70	35	195	
90	47.1	255	
110	56	300	overfilling level
122	68	352	

* Distance above bottom of inner drum.

W3105H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
12	3.7	1	
15	5	15	
25	10	53	
26	10.6	56	
28	11.7	63	
29	12.2	66	
30	12.8	69	
32	13.9	76	
34	15	83	low level
38	17.5	97	
41	19.4	107	mid level
42	20	110	
46	22.2	121	
47	22.8	124	high level
50	24.5	132	
54	27	144	
59	30	158	
60	30.7	161	
63	32.8	171	
66	35	181	
72	39.3	202	
88	50	251	
103	60	295	
118	71	345	overfilling level
133	82	393	

* Distance above bottom of inner drum.

W3130H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
14	4.9	1	
24	10	40	
31	14	62	
33	15	68	
35	16	73	
36	17	78	
38	18.5	85	low level
40	20	92	
44	23	105	
45	23.5	108	
46	24	111	mid level
47	25	114	
50	27.5	125	
52	30	130	high level
55	31.2	140	
60	35	156	
62	37	163	
66	40	175	
70	42.5	185	
80	50	214	
92	60	252	
105	70	289	
117	79.6	324	
142	100	400	
154	110	436	overfilling level
170	122.5	486	

* Distance above bottom of inner drum.

W3180H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
36	20	76	
40	23	88	
49	31	118	
50	32	127	
51	32.9	129	low level
57	38	142	
67	48	175	
70	51	185	
71	51.9	188	mid level
78	58	208	
85	65	231	
86	66	235	
88	68	241	
172	150	490	overfilling level

* Distance above bottom of inner drum.

W3240H - Conversion table, water level

Scale units	Quantity of water (litres)	Water level * (mm)	
40	26	80	
46	31.5	98	
57	43	135	low level
65	51	157	
77	65	195	
80	70	205	mid level
87	78	228	
97	78	228	
98	92	285	
170	180	480	overfilling level

* Distance above bottom of inner drum.

TEMPERATURE HYST	4
MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	**20**
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N

3856

Use the numeric keys to enter the required value.

1 2 3
4 5 6
7 8 9
0

If wrong digits are given:
Press ERASE.

When ready
Press ⬇.

Level hysteresis

Once the drum has filled with water, the water level is monitored during both heating and washing.

If the water level falls below a certain level (which you determine using this function), more water will be added to achieve the correct level.

Level hysteresis is the number of "scale units" between the current water level set and the level at which filling (topping up) restarts.
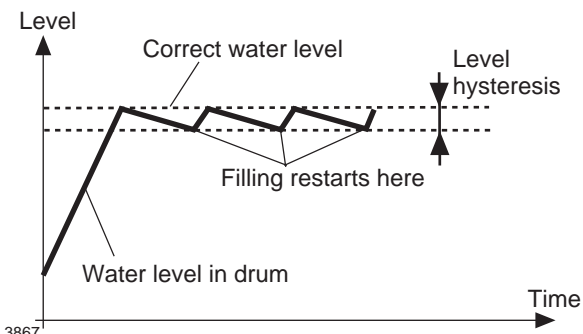
3867

An example (levels expressed in "scale units"):

Water level: 150

Water hysteresis: 20

The drum is initially filled to level 150. If the level falls below 130, filling restarts to bring the level back to 150.

The hysteresis value can be programmed from 0 to 255, in increments of 1.

MAX TEMP. INCREASE	0
FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	**N**
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N

3857

Cold water

If you answer **Yes (Y):**
   The drum will fill with cold water until the correct water level is reached.

If you answer **No (N):**
   No cold water filling.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

FIRST LEVEL	0
FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	**N**
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N

3858

Hot water

If you answer **Yes (Y):**
   The drum will fill with hot water until the correct water level is reached.

   If only hot water valve is open and the water temperature is higher than the programmed, the cold water valve will automatically open to adjust the temperature.

If you answer **No (N):**
   No hot water filling.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	**N**
HOT WATER	**N**
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
SPEED DURING FILL.RPM	48

3866

Cold and hot water - correct temperature on intake

If you answer **Yes (Y)** to both of these questions, both the cold water and the hot water valves will open when the machine is filling. If the set temperature limit is exceeded, the hot water valve will be closed. When the temperature has fallen 4°C below the set temperature limit, the hot water valve will open again.

In this way you can achieve the correct water temperature even in an unheated washer extractor.

Note, however, that the water valves will close when the correct water level is reached, regardless of whether the correct temperature has been reached.

FILL LEVEL	0
LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	**N**
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
SPEED DURING FILL.RPM	48

3859

Only machines with hard water connection.

Cold hard water

If you answer **Yes (Y)**:
   The drum will fill with cold hard water until the correct water level is reached.

If you answer **No (N)**:
   Cold hard water will not be added.

Y / N   **Answer Yes (Y) or No (N).**

↓   **Press ↓.**

LEVEL HYST.	20
COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	**N**
WATER FROM TANK 2	**N**
WATER FROM TANK 3	**N**
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
SPEED DURING FILL.RPM	48
SPEED DURING HEAT.RPM	48

3860

Applies only to certain machines.

Water from tank

If you answer **Yes (Y)**:

The drum will be filled from the specified tank (e.g. a tank for reuse of water or a special laundry product).

If you answer **No (N):**

No filling from these sources.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

COLD WATER	N
HOT WATER	N
COLD HARD WATER	N
WATER FROM TANK 1	N
WATER FROM TANK 2	N
WATER FROM TANK 3	N
ACTION DURING FILL	**N**
ACTION DURING HEAT	**N**
ACTION DURING WASH	**N**
SPEED DURING FILL.RPM	48
SPEED DURING HEAT.RPM	48
SPEED DURING WASH.RPM	48

3861

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

Y / N

⬇   **Press ⬇.**

Drum action at different stages

The program module consists of three different stages:

During each of these stages you can determine whether the drum is to be at a standstill, on gentle action or normal action.

Options for each question:

- = Drum at standstill

G = Gentle action

N = Normal action

You can set the drum action "on-times" and "off-times" for gentle action and normal action when using "Insert Main Data, Advanced mode", **see section "Main data, advanced".**
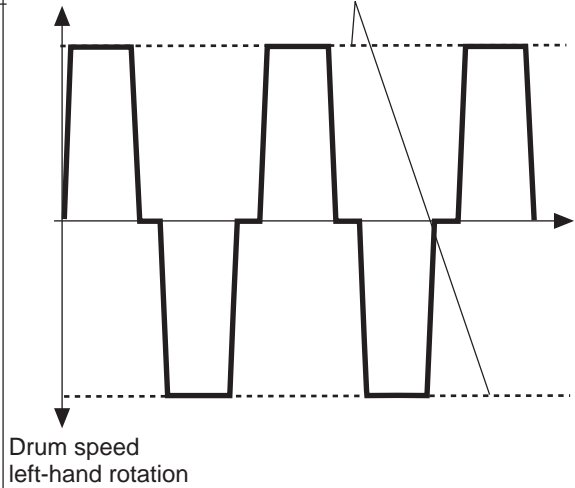
Individual drum speeds for various stages

The program module consists of three different stages:

water filling, heating and washing. You can determine the drum speed individually for each of these stages.

WATER FROM TANK 3	N
ACTION DURING FILL	N
ACTION DURING HEAT	N
ACTION DURING WASH	N
SPEED DURING FILL. RPM	**48**
SPEED DURING HEAT. RPM	**48**
SPEED DURING WASH. RPM	**48**
ACCELERATION. RPM/SEC	20
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N

3862

Only for machines with frequence controlled motor.

Drum speed right-hand rotation

This function allows you to set this level (the same for both right-hand and left-hand rotation)

Use the numeric keys to enter the required value.

1 2 3
4 5 6
7 8 9
0

If wrong digits are given:
Press ERASE.

When ready
Press ↓.

Drum speed left-hand rotation
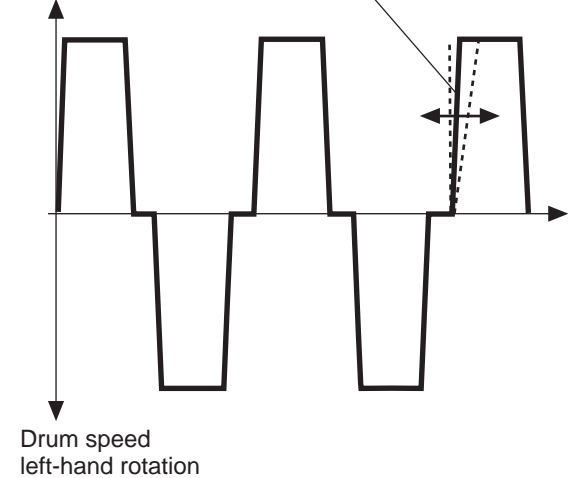

Acceleration rate

This function allows you to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed(s) you set in the function above. This setting will apply to both normal action and gentle action.

ACTION DURING WASH	N
SPEED DURING FILL. RPM	48
SPEED DURING HEAT. RPM	48
SPEED DURING WASH. RPM	48
ACCELERATION. RPM/SEC	**20**
COMPARTMENT 1	N
DETERGENT 1 TIME	0:00
COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00

3863

Only for machines with frequence controlled motor.

Drum speed right-hand rotation

In this function you determine how steep this part of the curve will be.

Use the numeric keys to enter the required value.

1 2 3
4 5 6
7 8 9
0

If wrong digits are given:
Press ERASE.

↓

When ready
Press ↓.

Drum speed left-hand rotation

ACCELERATION. RPM/SEC	20
COMPARTMENT 1	**N**
DETERGENT 1 TIME	0:00
COMPARTMENT 2	**N**
DETERGENT 2 TIME	0:00
COMPARTMENT 3	**N**
DETERGENT 3 TIME	0:00
COMPARTMENT 4	**N**
DETERGENT 4 TIME	0:00
COMPARTMENT 5	**N**
DETERGENT 5 TIME	0:00

3864

Water for flushing detergent compartment

Every time detergent is supplied from a detergent compartment, the compartment is flushed out to remove residues of detergent. Here you can specify if the compartment is to be flushed clean using cold or hot water.

Y / N   **Answer Yes (Y) or No (N).**

⬇   **Press ⬇.**

ACCELERATION. RPM/SEC	20
COMPARTMENT 1	N
DETERGENT 1 TIME	**0:00**
COMPARTMENT 2	N
DETERGENT 2 TIME	**0:00**
COMPARTMENT 3	N
DETERGENT 3 TIME	**0:00**
COMPARTMENT 4	N
DETERGENT 4 TIME	**0:00**
COMPARTMENT 5	N
DETERGENT 5 TIME	**0:00**

4831

Detergent dispensing in machines with detergent compartments

Here you can determine the length of time water will be flushed through each individual compartment.

1 2 3
4 5 6
7 8 9
0

⬇

COMPARTMENT 2	N
DETERGENT 2 TIME	0:00
COMPARTMENT 3	N
DETERGENT 3 TIME	0:00
COMPARTMENT 4	N
DETERGENT 4 TIME	0:00
COMPARTMENT 5	N
DETERGENT 5 TIME	0:00
WATER FLUSH C/H	**C**
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00

4213

C /H

↓

Water for flushing detergent compartment

Every time detergent is supplied from a detergent compartment, the compartment is flushed through to remove residues of detergent. Here you can specify if the compartment is to be flushed clean using cold or hot water.

WATER FLUSH C/H	C
LIQUIDE DETERGENT 1	0:00
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

3805

Dispensing liquid detergent from external system

For machines with an external detergent supply system there are ten control signals which can open external supply valves for a specified time.

The valves open for the time set, starting from when the drum has stopped filling.

The maximum time is 4 minutes and 10 seconds, in increments of 1 second.

The supply lines are flushed clean automatically.

Use the numeric keys to enter the required value.

1	2	3
4	5	6
7	8	9
	0	

If wrong digits are given:
Press ERASE.

When ready
↓ **Press ↓.**

LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	**N**
EXIT	

4082

Y/N **Answer Yes (Y) or No (N).**

↓ **Press ↓.**

Drain

A streamlined means of programming the drain stage.
If you require times and settings different from those
listed below you must answer **No (N)**, then program a
separate drain module immediately after this module,
see the section "Drain, advanced mode".

If you answer **Yes (Y)**:

The program module will end with a drain
sequence with these settings:

No pause before drain.

Drain plus normal speed 50 sec.

Distribution time   40 sec.

(These times are default values, but can be altered
through the function SETTINGS 2, see service
manual.)

If you answer **No (N)**:

No drain.

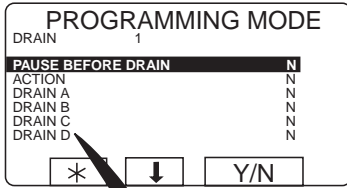|	
LIQUIDE DETERGENT 2	0:00
LIQUIDE DETERGENT 3	0:00
LIQUIDE DETERGENT 4	0:00
LIQUIDE DETERGENT 5	0:00
LIQUIDE DETERGENT 6	0:00
LIQUIDE DETERGENT 7	0:00
LIQUIDE DETERGENT 8	0:00
LIQUIDE DETERGENT 9	0:00
LIQUIDE DETERGENT 10	0:00
LIQUIDE DETERGENT 11	0:00
LIQUIDE DETERGENT 12	0:00
LIQUIDE DETERGENT 13	0:00
DRAIN	N
EXIT	

3919

Once you have answered all
the questions, highlight
READY, then:

SELECT **Press SELECT to exit the
program module.**

Drain, Advanced

```
    PROGRAMMING MODE
DRAIN           1
PAUSE BEFORE DRAIN              N
ACTION                         N
DRAIN A                        N
DRAIN B                        N
DRAIN C                        N
DRAIN D                        N
    *          ↓        Y/N
```
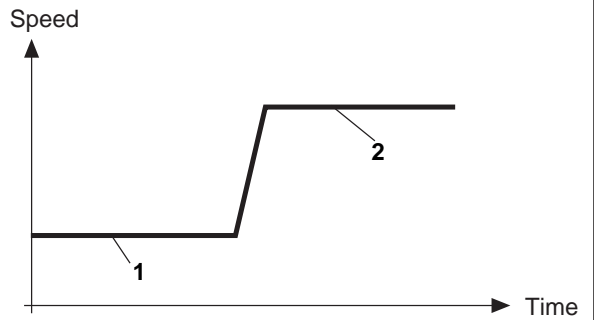3872

PAUSE BEFORE DRAIN	**N**
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

To access this function, see chapter "To create and write an entirely new program".

Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.

The module structure

Drain module can consist of part 1 or 2, or both 1 and 2 depending on how one wants the program:

1 Drain time
The drain will be open. The motor may be at a standstill, on gentle action or normal action. During this time the drum water will be discharged.
If this time is set to 0 the drain module will only consist of distribution time.

2 Distribution time
The drain will be open. The motor runs at distribution speed. During this time the wash load will be distributed evenly around the walls of the inner drum.
If this time is set to 0 the drain module will only consist of draining time.

Usable default values

When you are programming a new program module, some of the questions will already have usable default values in place. These are the standard values which are used if you program in Standard mode.

You can naturally change these values, but they are there to provide an indication of settings which normally work well.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

3873

Y / N

↓

Answer Yes (Y) or No (N).

Press ↓.

Pause before drain

If you answer **Yes (Y)**:
 The washer extractor will stop and the buzzer will sound before the drain opens.

 Turn off the buzzer by pressing the button with crossed buzzer-symbol. Start the program by pressing **START**.

If you answer **No (N)**:
 The program module starts, with no pause.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

3874

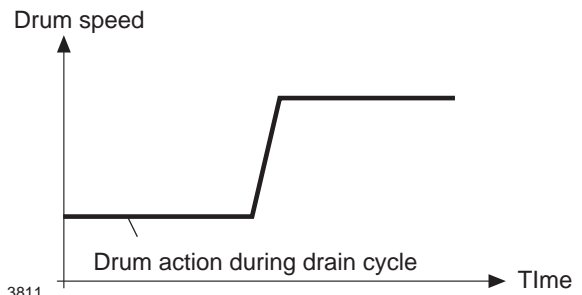- / G / N

↓

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

Press ↓.

Drum action during drain cycle

Here you can determine the drum action during the time programmed for the drain cycle:

Drum speed

3811

Drum action during drain cycle

Time

Options:

- = Drum at standstill
G = Gentle action
N = Normal action

Choose drain valve

If the machine has two drain valves (for example to allow water to be reused during some wash sequences) here you can specify which drain valve is to open.

If you answer **Yes (Y)**:

The machine's normal drain will remain closed during the drain sequence. The drain valve for water recovery will open instead.

If you answer **No (N):**

The machine's normal drain will open during the drain sequence. The drain valve for water recovery will remain closed.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	**N**
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

4225

Y/N **Answer Yes (Y) or No (N).**

↓ **Press ↓.**

Extra drain valves

Here you can control a further three drain valves in addition to the two in the previous function. These drain valves will open and close without affecting the two drains in the previous function.

If you answer **Yes (Y)**:

The specified drain will open throughout the drain sequence.

If you answer **No (N):**

The drain will remain closed.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	**N**
DRAIN C	**N**
DRAIN D	**N**
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

4226

Y/N **Answer Yes (Y) or No (N).**

↓ **Press ↓.**

```
PAUSE BEFORE DRAIN            N
ACTION                       N
DRAIN A                      N
DRAIN B                      N
DRAIN C                      N
DRAIN D                      N
DRAIN TIME                 0:50
DISTRIBUTION TIME          0:40
SPEED DURING DRAIN. RPM      48
ACC. DURING DRAIN. RPM/SEC   20
READY
```
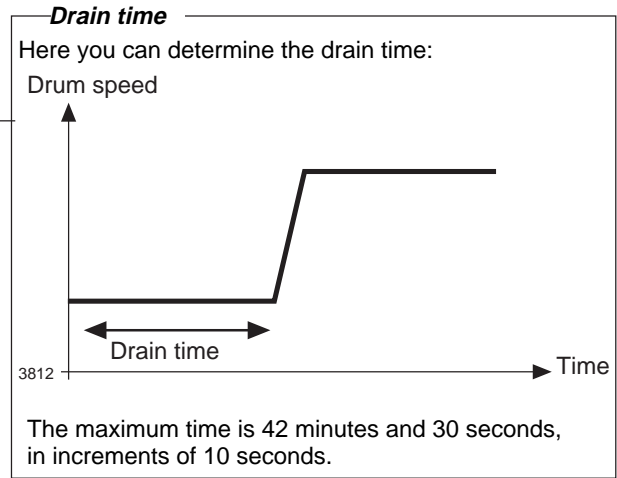
3875

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

[↓] When ready
Press [↓].

Drain time

Here you can determine the drain time:

Drum speed

← Drain time →

3812   Time

The maximum time is 42 minutes and 30 seconds, in increments of 10 seconds.

```
PAUSE BEFORE DRAIN           N
ACTION                       N
DRAIN A                      N
DRAIN B                      N
DRAIN C                      N
DRAIN D                      N
DRAIN TIME                 0:50
DISTRIBUTION TIME          0:40
SPEED DURING DRAIN.RPM       48
ACC. DURING DRAIN.RPM/SEC    20
READY
```
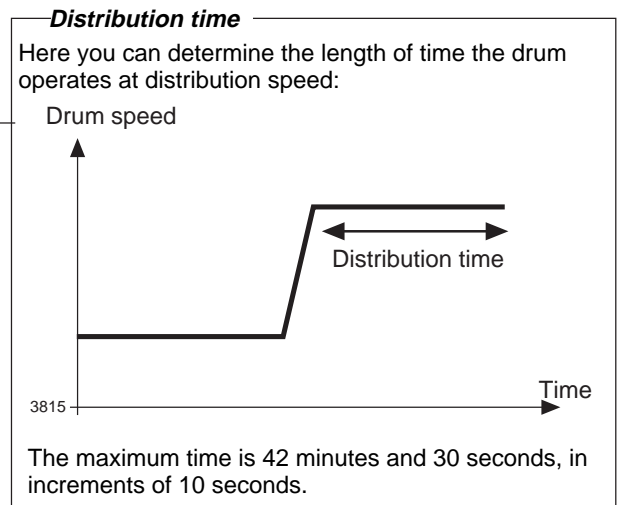
3876

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

[↓] When ready
Press [↓].

Distribution time

Here you can determine the length of time the drum operates at distribution speed:

Drum speed

← Distribution time →

3815   Time

The maximum time is 42 minutes and 30 seconds, in increments of 10 seconds.

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	**48**
ACC. DURING DRAIN.RPM/SEC	20
READY	

3877

Only for machines with frequence controlled motor.

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ⬇.

Drum speed during drain

This function allows you to determine drum speed during the drain stage. The speed will apply to both normal action and gentle action.

Drum speed right-hand rotation

This function allows you to set this level (the same for both right-hand and left-hand rotation)

Drum speed left-hand rotation

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	**20**
READY	

3878

Only for machines with frequence controlled motor.

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ⬇.

Acceleration rate during drain

This function allows you to determine the rate of acceleration for the drum, i.e. the rpm per second at which its speed should increase until it reaches the speed(s) you set in the last function. This setting will apply to both normal action and gentle action.

Drum speed right-hand rotation

In this function you determine how steep this part of the curve will be.

Drum speed left-hand rotation

PAUSE BEFORE DRAIN	N
ACTION	N
DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
DRAIN TIME	0:50
DISTRIBUTION TIME	0:40
SPEED DURING DRAIN.RPM	48
ACC. DURING DRAIN.RPM/SEC	20
READY	

3879

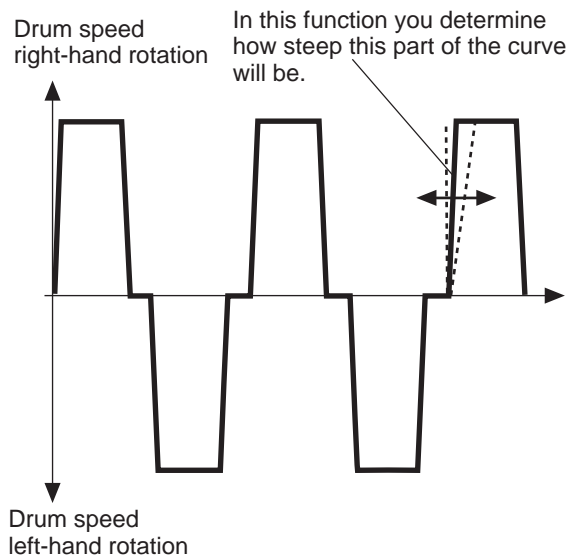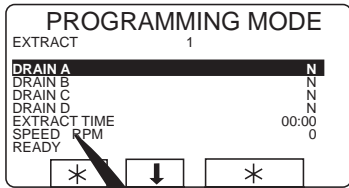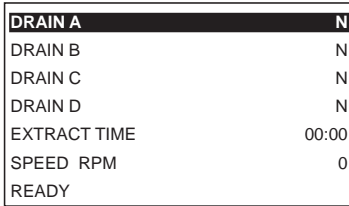Once you have answered all the questions, highlight READY, then:

SELECT

Press SELECT to exit the program module.

Extraction, Advanced mode

```
PROGRAMMING MODE
EXTRACT              1
DRAIN A                       N
DRAIN B                       N
DRAIN C                       N
DRAIN D                       N
EXTRACT TIME            00:00
SPEED  RPM                   0
READY
   ┌───┐ ┌───┐ ┌───┐
   │ ✳ │ │ ↓ │ │ ✳ │
   └───┘ └───┘ └───┘
```
4662

To access this function, see chapter "To create and write an entirely new program".

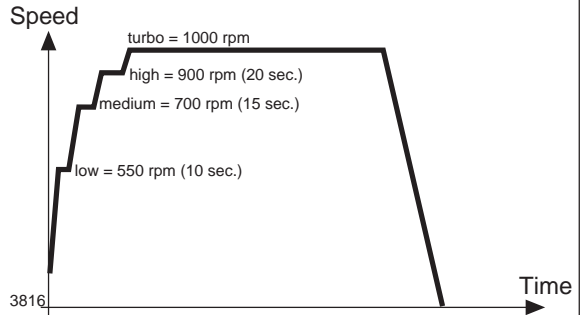| DRAIN A | N |
DRAIN B	N
DRAIN C	N
DRAIN D	N
EXTRACT TIME	00:00
SPEED RPM	0
READY	

Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.
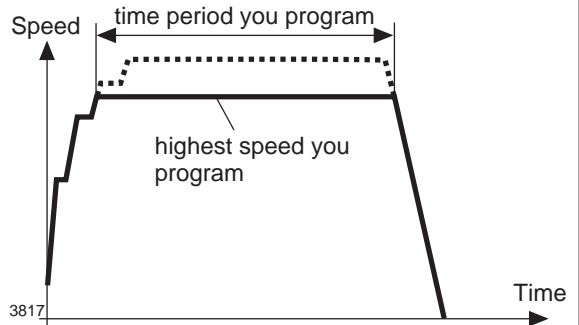

The module structure

For machines with frequency-controlled motors:

The extraction time module consists of a single extraction period, for which youcan determine extraction time and speed. The machine does not accelerate to its highest speed immediately, however. Instead it accelerates in several steps, because some of the water needs to be extracted at lower speeds. Shown below are the standard values the machine has when delivered:

Speed

turbo = 1000 rpm
high = 900 rpm (20 sec.)
medium = 700 rpm (15 sec.)
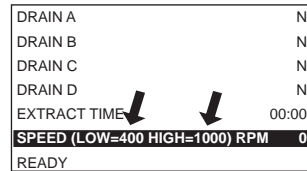low = 550 rpm (10 sec.)

Time

3816

If you program a low (maximum) extraction speed, the number of acceleration steps at the beginning of extraction may be reduced.

The time you program is the period the machine will run at its highest speed.

Speed   time period you program

highest speed you program

Time

3817

For machines without frequency-controlled motors you must choose one of the extraction speed options shown on the display.

DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
EXTRACT TIME	00:00
SPEED (LOW=400 HIGH=1000) RPM	**0**
READY	

4669

Choose drain valve

If the machine has two drain valves (for example to allow water to be reused during some wash sequences) here you can specify which drain valve is to open.

If you answer **Yes (Y)**:

The machine's normal drain will remain closed during the drain sequence. The drain valve for water recovery will open instead.

If you answer **No (N):**

The machine's normal drain will open during the drain sequence. The drain valve for water recovery will remain closed.

DRAIN A	N
DRAIN B	N
DRAIN C	N
DRAIN D	N
EXTRACT TIME	00:00
DISTRIBUTION TIME	00:40
SPEED RPM	0
READY	

4664

Y / N	Answer Yes (Y) or No (N).
↓	Press ↓.

Extra drain valves

Here you can control a further three drain valves in addition to the two in the previous function. These drain valves will open and close without affecting the two drains in the previous function.

If you answer **Yes (Y)**:

The specified drain will open throughout the drain sequence.

If you answer **No (N):**

The drain will remain closed.

DRAIN A	N
DRAIN B	**N**
DRAIN C	**N**
DRAIN D	**N**
EXTRACT TIME	00:00
SPEED RPM	0
READY	

4665

Y / N	Answer Yes (Y) or No (N).
↓	Press ↓.

```
DRAIN A              N
DRAIN B              N
DRAIN C              N
DRAIN D              N
EXTRACT TIME     00:00
SPEED RPM            0
READY
```
4666

Extraction time

The maximum extraction time is 59 minutes and 59 seconds, in increments of 1 second.

The period during which the drum is reaching its correct speed is not included in the "extraction time".

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

↓ When ready
Press ↓.

Speed — time period you program — final (maximum) speed you program — Time

3817

```
DRAIN A              N
DRAIN B              N
DRAIN C              N
DRAIN D              N
EXTRACT TIME     00:00
SPEED RPM            0
READY
```
4667

Extraction speed

For machines with frequency-controlled motors:

Enter the extraction speed you require. The maximum speed varies from one machine to another.

If you enter a value which is too high, the value will be changed to the maximum allowed when you press ↓.

For machines without frequency-controlled motors:

If the machine does not have a frequency-controlled motor, the available extraction speed options will be shown on the display.

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

↓ When ready
Press ↓.

```
DRAIN A                            N
DRAIN B                            N
DRAIN C                            N
DRAIN D                            N
EXTRACT TIME                   00:00
SPEED (LOW=400 HIGH=1000) RPM     0
READY
```
4669

Enter one of these values. **Note that no other values are allowed.**

```
DRAIN A              N
DRAIN B              N
DRAIN C              N
DRAIN D              N
EXTRACT TIME     00:00
SPEED RPM            0
READY
```
4668

Once you have finished:
Check that READY is highlighted.

SELECT **Press SELECT to exit the program module.**

Cool-down, Advanced mode

```
      PROGRAMMING MODE
COOL-DOWN    1
QUICK COOL-DOWN                        N
ACTION                                 N
VALVE ON TIME 100-70° C IN SEC.        3
VALVE ON TIME 70°-END IN SEC.          5
END TEMP                            55°C
SPEED.RPM                             48
ACCELERATION.RPM/SEC                  20
  ┌──────┬──────┬──────┐
  │  ✳   │  ↓   │  Y/N │
  └──────┴──────┴──────┘
```
3880

```
QUICK COOL-DOWN                        N
ACTION                                 N
VALVE ON TIME 100-70° C IN SEC.        3
VALVE ON TIME 70°-END IN SEC.          5
END TEMP                            55°C
SPEED.RPM                             48
ACCELERATION.RPM/SEC                  20
READY
```

To access this function, see chapter "To create and write an entirely new program".

Answer the various questions in the module. Press ↓ to move on to the next question.

You can go back and change questions already answered by pressing ↑ repeatedly.

The module structure

The cool-down module is used to achieve controlled cooling of the wash water. This helps prevent creasing of the wash load.

During the cool-down sequence cold water is added for a brief period at 30 second intervals. The sequence is divided into two distinct sections:

1 98° - 70°C.

You program the length of time during which the cold water valve opens every 30seconds, but the machine monitors constantly to ensure that the cool-down rate does not exceed the limit value, which is 4°C/minute when the machine is delivered. If the limit value is exceeded, no water will be added until the mean value is acceptable again.

2 70°C - final temperature

You program the length of time during which the cold water valve opens every 30 seconds. The rate of cool-down is not monitored during this stage. The valve opens and closes depending on the programming mode.
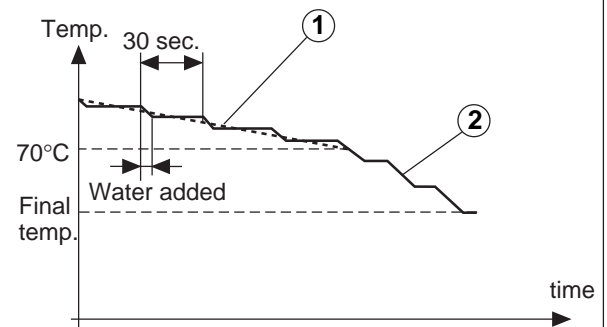
3920

Usable default values

When you are programming a new program module, some of the questions will already have usable default values in place. These are the standard values which are used if you program in Standard mode.

You can naturally change these values, but they are there to provide an indication of settings which normally work well.

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                  55°C
SPEED.RPM                   48
ACCELERATION.RPM/SEC        20
READY
```
3881

Y / N   **Answer Yes (Y) or No (N).**

↓   **Press ↓.**

Quick cool-down

If you answer **Yes (Y)**:
  The machine will fill with cold water to a fixed higher level. The machine **does not** monitor the drop in temperature of the wash water. This function is used mainly for reducing the temperature of the water before it is discharged.

  Do not use this function to prevent creasing of the wash load!

If you answer **No (N)**:
  The machine makes a controlled cool down as described earlier.

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                  55°C
SPEED.RPM                   48
ACCELERATION.RPM/SEC        20
READY
```
3882

Options:

- = Drum at standstill

G = Gentle action

N = Normal action

- /G/N

↓   **Press ↓.**

Drum action during cool-down

Allows you to determine drum action during cool-down. Options:
  - = Drum at standstill
  G = Gentle action
  N = Normal action

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                   55°C
SPEED.RPM                    48
ACCELERATION.RPM/SEC         20
READY
```
3883

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

When ready
Press ↓.

Valve on-time in seconds

The cool-down sequence is divided into two stages according to the water temperature:

1 100 to 70°C

Here the machine monitors the sequence to ensure that the average cool-down rate does not exceed a set rate (normally 4°C per minute). If the rate set is exceeded, no water will be added until the mean value is acceptable again.

2 70° to final temperature

The rate of cool-down is not monitored during this stage. The valve opens and closes depending on the programming mode.

During the cool-down sequence cold water will be added for a fixed period at intervals of 30 seconds. It is this period (the valve "on-time") which you can determine here. You can program different "on-times" for the two temperature ranges described above.
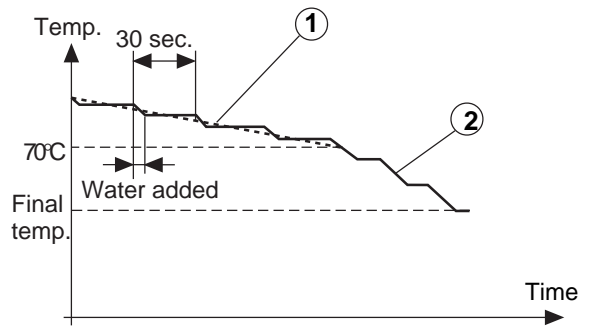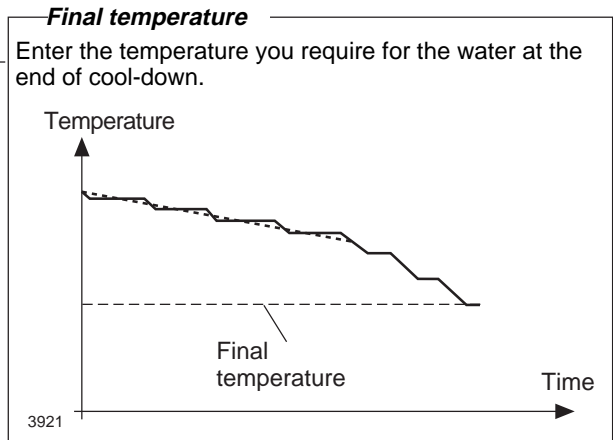
3920

The valve on-time can be programmed from 0 to 30 seconds, in increments of 1 second.

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                  55°C
SPEED.RPM                   48
ACCELERATION.RPM/SEC        20
READY
```
3885

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

↓   When ready
Press ↓.

Final temperature

Enter the temperature you require for the water at the end of cool-down.

Temperature

Final temperature

Time

3921

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                  55°C
SPEED.RPM                   48
ACCELERATION.RPM/SEC        20
READY
```
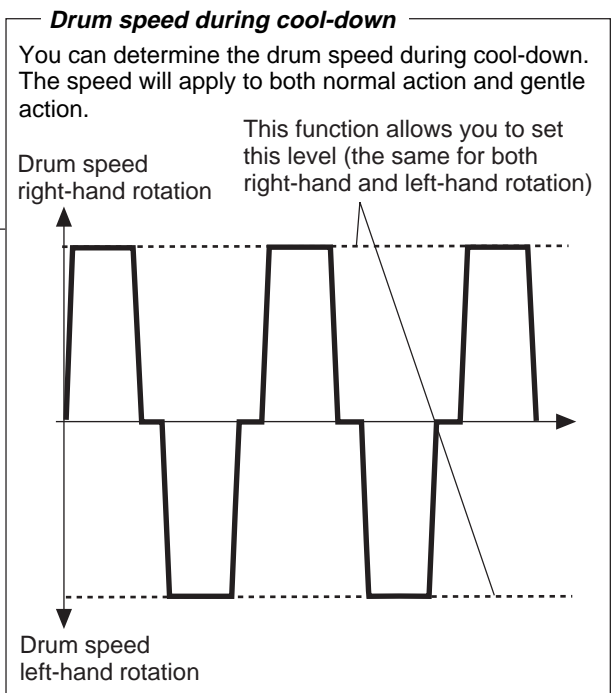3886

Only for machines with frequence controlled motor.

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the required value.

If wrong digits are given:
Press ERASE.

↓   When ready
Press ↓.

Drum speed during cool-down

You can determine the drum speed during cool-down. The speed will apply to both normal action and gentle action.

Drum speed right-hand rotation

This function allows you to set this level (the same for both right-hand and left-hand rotation)

Drum speed left-hand rotation

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                   55°C
SPEED.RPM                    48
ACCELERATION.RPM/SEC         20
READY
```
3887

Only for machines with frequence controlled motor.

[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
[0]

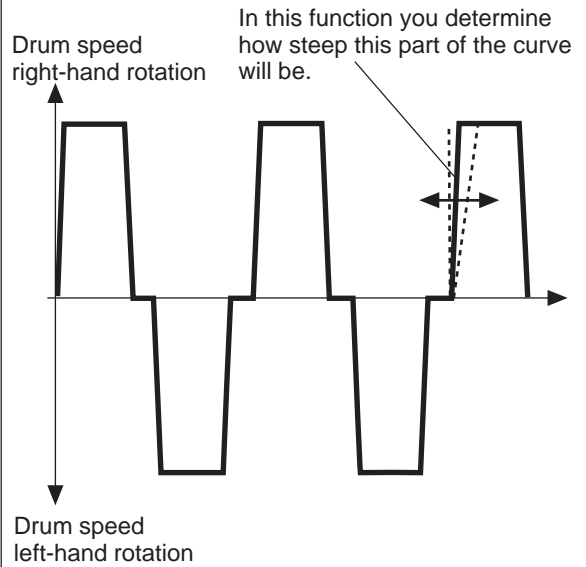**Use the numeric keys to enter the required value.**

If wrong digits are given:
Press ERASE.

[↓]

When ready
Press ↓.

Acceleration rate during drain stage

This function allows you to determine the rate of acceleration for the drum, i.e. therpm per second at which its speed should increase until it reaches the speed you set in the last function. This setting will apply to both normal action and gentle action.

In this function you determine how steep this part of the curve will be.

Drum speed right-hand rotation

Drum speed left-hand rotation

```
QUICK COOL-DOWN              N
ACTION                       N
VALVE ON TIME 100-70° C IN SEC. 3
VALVE ON TIME 70°-END IN SEC.  5
END TEMP                   55°C
SPEED.RPM                    48
ACCELERATION.RPM/SEC         20
READY
```
3888

Once you have finished:
Check that READY is highlighted.

SELECT

Press SELECT to exit the program module.