Instruction Manual

for the

Professional Humidity Control System

SELECT

PROGR.

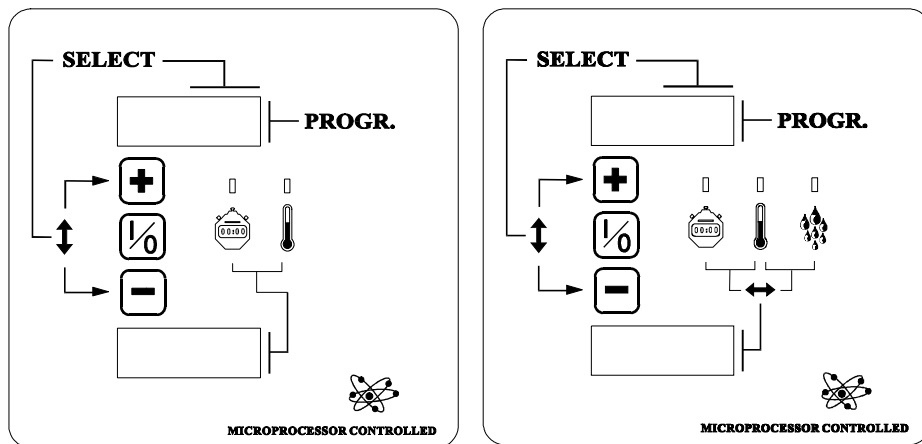MICROPROCESSOR CONTROLLED
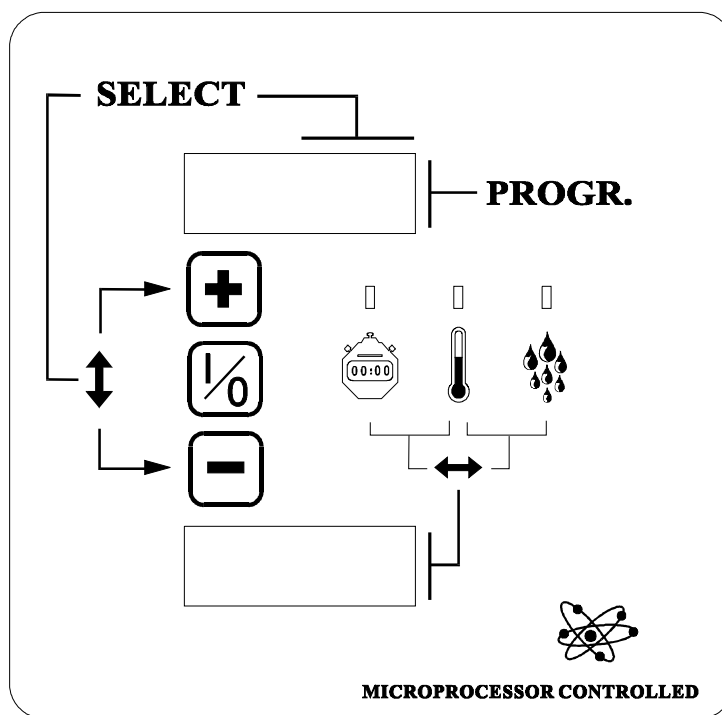
Addendum A

Information in this manual is applicable to these models:

28BD30	HD190G	L125URDG	L36URP30G
28BS30	HD190S	L125URDS	L36URP30S
28ES30	HD20	L28DPS30G	L36URP36E
36BD30	HD20.1	L28DRS30G	L36URP36G
36BD30MP	HD250	L28DS30G	L36URP36S
36BD30MPR	HD30	L28GS30G	L36URS30E
36BS30	HD30SL	L28JS30G	L36URS30G
36CD30	HD30ST	L28PS30G	L36URS30S
44BD42M	HD50	L28SRS30G	L36URS36E
44CD42M	HD50.1	L28STK30G	L36URS36G
C11E	HD75	L28UR30E	L36URS36S
C110G	HD75.1	L28UR30G	L36USD30G
C110S	HD75ST	L28UR30S	L36USD36G
C125E	HD80.1	L28US30G	L36USP30G
C125G	HD80F	L36CD30E	L36USP36G
C125S	IPD110	L36CD30G	L36USS30G
C150G	IPD125	L36CD30S	L36USS36G
C150S	IPD125 STACK	L36CD36E	L44CD42E
C30STG	IPD125G	L36CD36G	L44CD42G
CHD25	IPD125S	L36DRS36G	L44CD42S
CHD30	IPD150	L36DSS36G	L44FD42G
CHD35	IPD150G	L36FD30E	L44KD42E
CHD50	IPD150S	L36FD30G	L44KD42G
CHD75	IPD170	L36FD30S	L44KD42S
D44CD42S	IPD175	L36FD36E	L44RD42G
DR110E	IPD175G	L36FD36G	L50CD42G
DR110G	IPD175S	L36KD30E	L50CD42S
DR110S	IPD190	L36KD30G	L50KD42G
DR20.1	IPD190 STACK	L36KD30S	L50KD42S
DR30SL	IPD190G	L36KD36E	L50ST42NH
DR30SLE	IPD190S	L36KD36G	L52CD48G
DR30SLG	IPD20.1	L36RD30E	L52CD48S
DR30SLS	IPD25	L36RD30G	M110
DR30ST	IPD250	L36RD30S	M20E
DR30STG	IPD30	L36RD36E	M20S
DR50.1	IPD30.1	L36RD36G	M50BDS
EHD80	IPD30 STACK	L36SMS30	M50TDE
HD110	IPD30SL	L36TD30ME	M50TDS
HD125	IPD30STG	L36TD30MS	M80E
HD150	IPD35	L36URD30E	M80S
HD150.1	IPD35 STACK	L36URD30G	WMC-30
HD170	IPD50	L36URD30S	WMC-50
HD175	IPD50.1	L36URD36E	WMC-75
HD175G	IPD75	L36URD36G	
HD175S	IPD75 STACK	L36URD36S	
HD190	L125URDE	L36URP30E	

Table of Contents

The **"PRO/HC"** is a very powerful control system by means of which you can obtain perfect drying results, especially when using the humidity control sensors (option).

It is possible to preprogram **30 fixed drying programs**. They can be selected and started directly by the user.

Furthermore, you can also preprogram **two variable programs** - one manual **(MANU)** and one automatic program **(SEnS)**, where the user himself can easily put in certain parameters such as drying temperature, drying time or residual moisture level before starting the program.

There are also **10 standard programs** (31 to 40) available. Those standard programs can be started directly, but cannot be changed. However it is possible to copy them to another program number and then change them. This way they can thus serve as a base for another program.

Structure of setting menu

The setting menu is subdivided in three submenus.

Technical menu.

A dryer can be configured according it's own technical characteristics.
For example, is it a dryer with reversing of the drum, is the dryer equipped with a residual moisture measuring system etc...
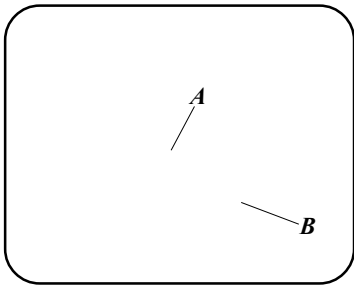*This menu is programmed by the manufacturer and does usually not have to be modified.*

Programming menu.

To program the programs.

Display menu.

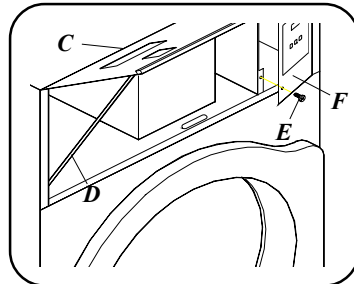To recall data such as supplied labor time of a dryer.

Selection of setting menu

In order to select the setting menu, the switch at the back of the printplate has to be pulled.

To reach the switch :
- Turn the lock (A) with the delivered key (B) 90°counter-clockwise.

- Open the top front panel (C) and put the support (D) at the left side under this panel in the provided clamp.
- Remove the screw (E) in the operating door (F).
- Then open this door.
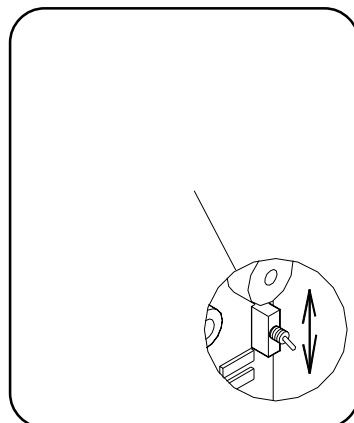
Behind this, at the backside of the printplate you find the switch.

By pulling the switch downwards, you reach the *setting menu*.

When pulling the selection switch in the upper position, "*IPSO*" appears and afterwards "*TECH*" on the upper display.

Selection of submenus

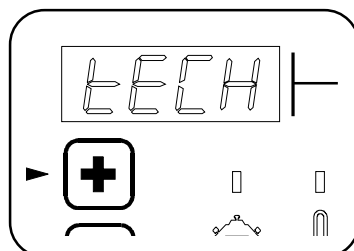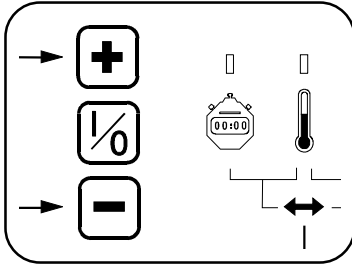Selection of submenus or programming parameters in these submenus is done by means of the three push buttons in front of the operating panel.
Select with the "+" button one of the submenus and then push the middle button in order to confirm the selection.

XX

If necessary, change this value (default 5 seconds) by means of the + or - button between 5 and 99 seconds.

TECHNICAL MENU   **PROGRAMMING MEMU**   **DISPLAY MENU**
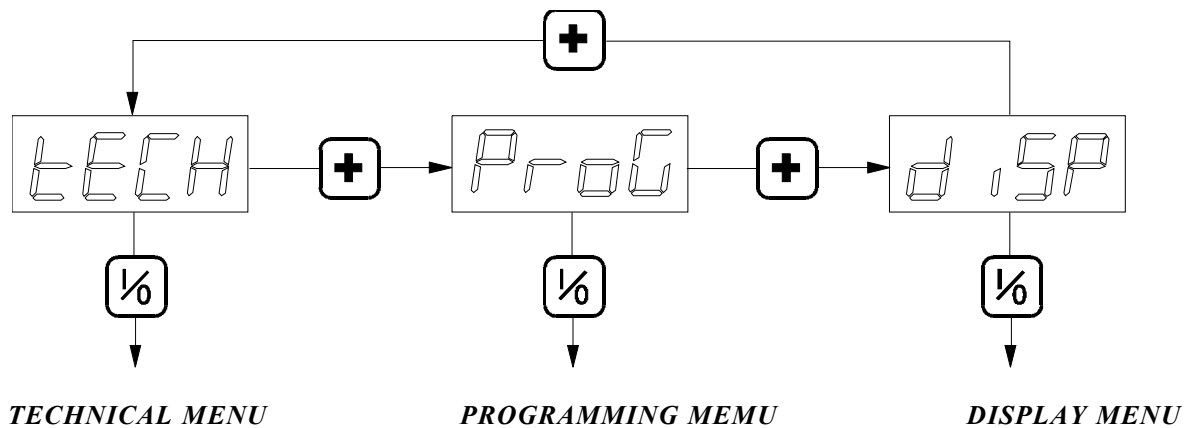
───── *Remark* ─────
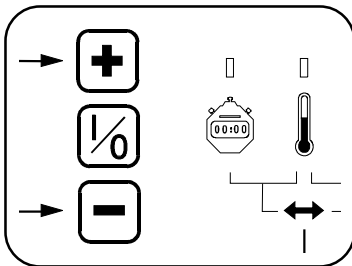
Operation of the push buttons.

Only when a button is pushed and released afterwards, the action is done.
Extremely hard or long pressing the buttons is totally useless. A light or short push gives a correct operation.

Return to selection or programming

With the following action, it is always possible to return to the previous step of selection or to program.
  - Push the middle button and keep it pressed.
  - Then push (while the middle button is still pressed) shortly the lower button.
  - Next release the middle button and the previous step is shown.

```
┌──────┐
│ tECH │
└──────┘
    │
   [½]
    │
    ▼
┌──────┐        ┌ ─ ─ ─ ┐
│ Pond │ ─ ─ ─ ─│   XX  │◄──┐
└──────┘        └ ─ ─ ─ ┘   │
    │              ▲    [+]──┘
   [½]             └────┘
    │
    ▼
┌──────┐        ┌ ─ ─ ─ ┐        ┌ ─ ─ ─ ┐
│ FLoU │ ─ ─ ─ ─│  rAd  │─[+]─► │  Asc  │
└──────┘        └ ─ ─ ─ ┘        └ ─ ─ ─ ┘
    │
   [½]
    │                    ┌───────[+]───────────────────┐
    ▼                    ▼                              │
┌──────┐        ┌ ─ ─ ─ ┐      ┌ ─ ─ ─ ┐      ┌ ─ ─ ─ ┐ │
│ HEAt │ ─ ─ ─ ─│  ELEC │─[+]─►│  GAS  │─[+]─►│  StEA │─┘
└──────┘        └ ─ ─ ─ ┘      └ ─ ─ ─ ┘      └ ─ ─ ─ ┘
    │
   [½]
    │
    ▼
┌──────┐        ┌ ─ ─ ─ ┐      ┌ ─ ─ ─ ┐
│ rEC  │ ─ ─ ─ ─│  YES  │◄─[+]─►│  no   │
└──────┘        └ ─ ─ ─ ┘      └ ─ ─ ─ ┘
    │
   [½]
    │
    ▼
┌──────┐        ┌───────┐      ┌───────┐
│ dEGr │ ─ ─ ─ ─│  °C   │◄─[+]─►│  °F   │
└──────┘        └───────┘      └───────┘
    │
   [½]
    │
    ▼
┌──────┐        ┌ ─ ─ ─ ┐      ┌ ─ ─ ─ ┐
│ NoUE │ ─ ─ ─ ─│  YES  │◄─[+]─►│  no   │
└──────┘        └ ─ ─ ─ ┘      └ ─ ─ ─ ┘
    │
   [½]
    │
    ▼
┌──────┐        ┌ ─ ─ ─ ┐      ┌ ─ ─ ─ ┐
│ rEUE │ ─ ─ ─ ─│  YES  │◄─[+]─►│  no   │
└──────┘        └ ─ ─ ─ ┘      └ ─ ─ ─ ┘
    │
   [½]
    │
    ▼
```
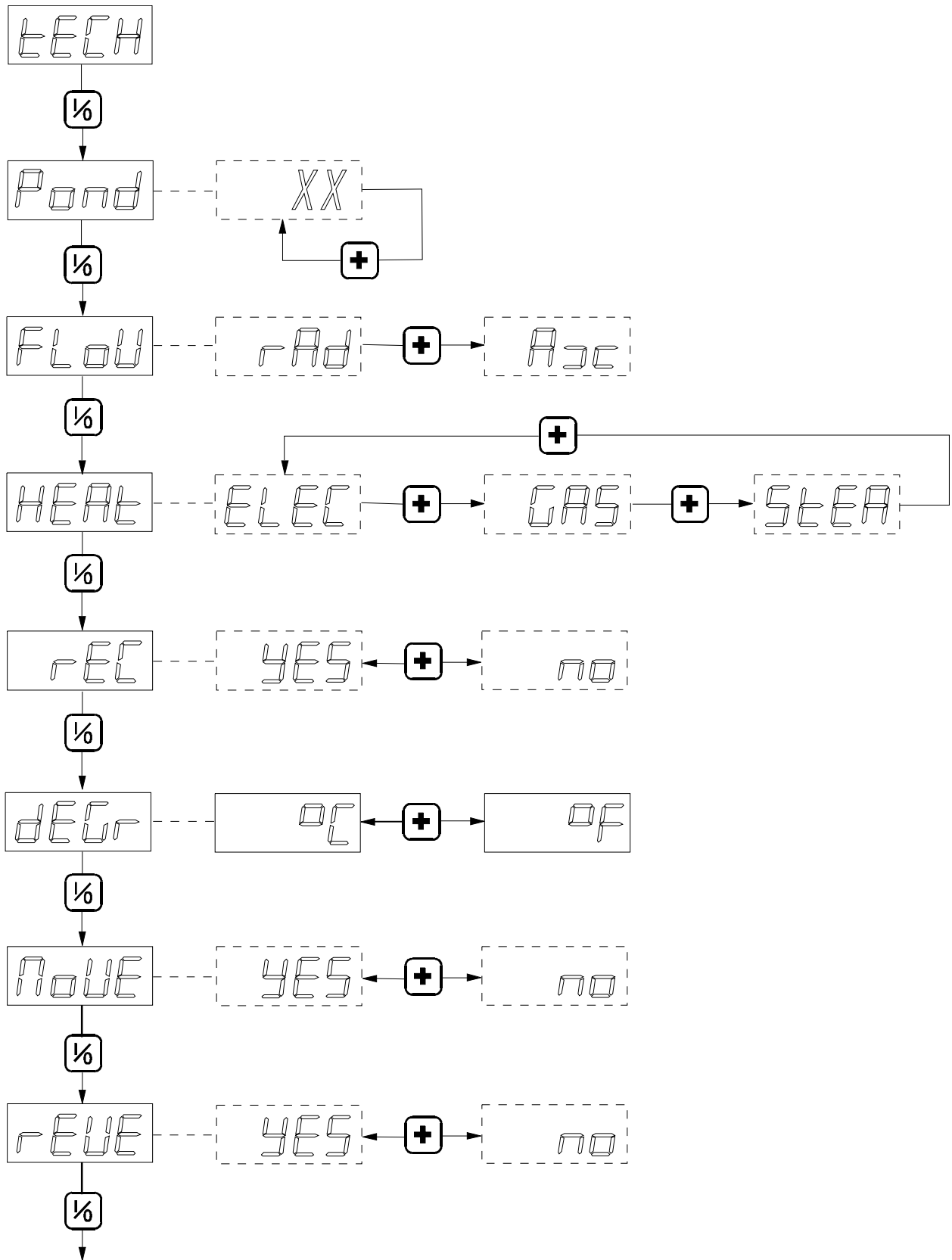
Technical menu

TECH

Press the middle button to continue.

Pond

The lower display shows the drum capacity of the dryer.

If necessary, select another value with the upper button.
Press the middle button to continue.

FloW

To program whether the dryer operates with radial or axial airflow in the drum.
- *rAd*: Radial current of air means that the air flows from the top to the bottom of the drum.
- *Ax* : Axial current of air means that the air flows from the back to the front of the drum.

If necessary, change this program with the upper button.
Press the middle button to continue.

HEAt

The lower display shows the kind of heating system that is built in.
- *ELEC*: electric heating.
- *GAS*: gas heating
- *STEA*: steam heating

If necessary, change this program with the upper button.
Press the middle button to continue.

rEC

Now the lower display shows (with YES or no) whether the dryer is equipped with heat reclaimer.

If necessary, change this program with the upper button.
Press the middle button to continue.

dEGr

The lower display shows whether the temperature indication will be in *°C* or *°F*.

If necessary, change this program with the upper button.
Press the middle button to continue.

MoVE

The lower display shows (with YES or no) whether the rotating detection is built in.

If necessary, change this program with the upper button.
Press the middle button to continue.

rEVE

Now the lower display *(YES or no)* shows whether the dryer can operate reversing (left-right movement).
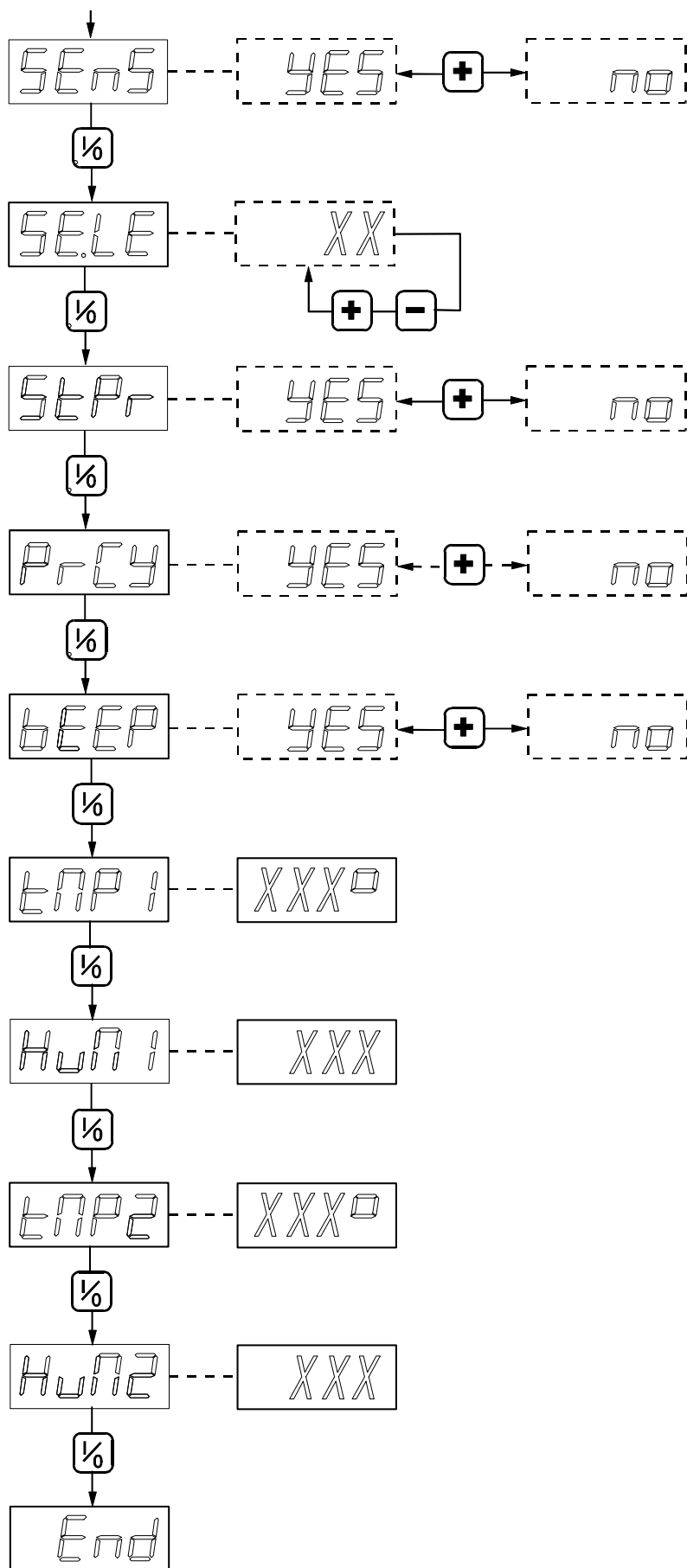
If necessary, change this program with the upper button.
Press the middle button to continue.

⚠ When "no" was selected, you proceed to *"bEEP"*

SEnS - - - [YES] ← + → [no]

↓ ½₀

SE.LE - - - [XX] + -

↓ ½₀

StPr - - - [YES] ← + → [no]

↓ ½₀

PrCY - - - [YES] ← + → [no]

↓ ½₀

bEEP - - - [YES] ← + → [no]

↓ ½₀

tПP1 - - - [XXX°]

↓ ½₀

HuП1 - - - [XXX]

↓ ½₀

tПP2 - - - [XXX°]

↓ ½₀

HuП2 - - - [XXX]

↓ ½₀

End

SEnS

Now it is shown on the bottom display (*YES* or *no*) whether the dryer is equipped with a residual moisture system with humidity sensors.
Change this setting, if necessary, with the top button.
Press the middle button to continue.

⚠️   If "no" was selected, then the display switches immediately to "*bEEP*"

SE.LE

The bottom display indicates the calibration of the humidity sensors (*Sensor level*). This is normally set at 5. If the drying results are continuously too dry or too humid, then this value can be changed between 0 and 10. The lower this factor is set, the dryer are the drying results. Is this value higher, then the drying results are more humid.

⚠️   If this factor is changed, then this will automatically have an influence on all drying programs with residual moisture control. It is normally not necessary to change this factor. It is only meant to give the technicians the possibility to optimize the drying results when the dryer is used in rather unusual environments.

Change this setting, if necessary, with the top button.
Press the middle button to continue.

St.Pr

Now the bottom display indicates (*YES* or *no*) whether the standard programs (31-40) should be shown.
Change this setting, if necessary, with the top button.
Press the middle button to continue.

Pr.CY

Here the bottom display indicates (*YES* or *no*) whether the cycle contact needs to be programmable. If yes, then the cycle contact will during the cycle close and open again alternately (pulsating function). If *"no"* is selected, then the contact will be closed during the entire drying cycle.
Change this setting, if necessary, with the top button.
Press the middle button to continue.

bEEP

The bottom display indicates (*YES* or *no*) whether a buzzer will sound at the end of the cycle.
Change this setting, if necessary, with the top button.
Press the middle button to continue.

tMP.1

The bottom display indicates the temperature inside the cylinder. This is meant as a test of the temperature sensor.
Press the middle button to continue.

⚠️   If "no" was selected with *"SEnS"*, then the display will automatically go on to *"End"*

HuM.1

The bottom display now indicates the humidity inside the cylinder. This is meant as a test of the humidity sensor.
Press the middle button to continue.

tMP.2

The bottom display now indicates the temperature in the room. This is meant as a test of the temperature sensor.
Press the middle button to continue.

HuM.2

The bottom display now indicates the humidity in the room. This is meant as a test of the humidity sensor.
Press the middle button to continue.

End

This is the end of the technical menu
Press the middle button to continue.

Now the display shows IPSO for a while and then goes back to the beginning of the technical menu.

2

Programming menu

Structure   With the "PRO", *2 variable and 3 fixed programs* can be preprogrammed.

The variable programs *"MAnU "* and *"AutO "*

At the start, the user will have to program himself some data such as drying temperature, drying time or residual moisture and cooldown time.

The fixed programs *"1- 30 "*

The user will be able to start these programs immediately after the selection. They can be built up in different parts. This way, for example, the temperature can be programmed higher at the start of a program in order to obtain a quicker drying - and decreased at the end, to avoid shrinking.

> **Remark :**
> If the residual moisture control system is not used, then there is only 1 variable program available.

The programs can be programmed according to 2 kinds of drying systems.

Manual drying system

Drying by means of setting the drying time.

Automatic drying system

Drying by means of setting the residual moisture of the linen.
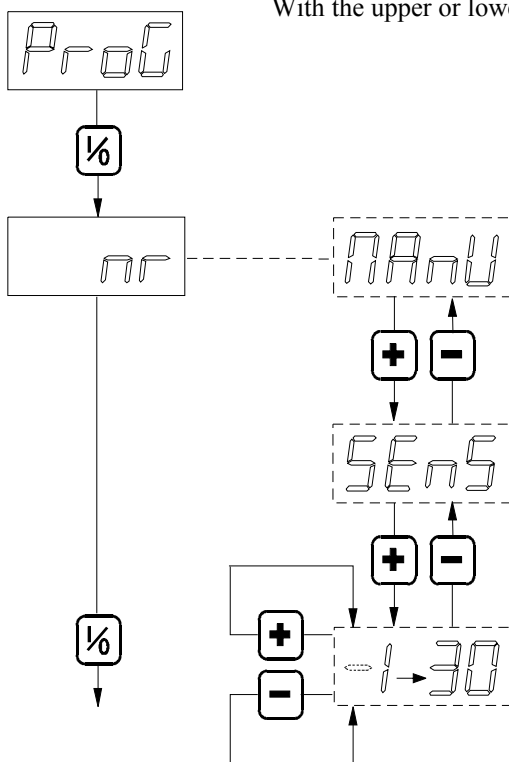
> **Remark :**
> If the residual moisture control system is not used, then it is not possible to use the automatic drying system.

Selection of the programs

Press the middle button.
" *nr* " appears on the upper display while the lower display shows the name or number of the program to be programmed.
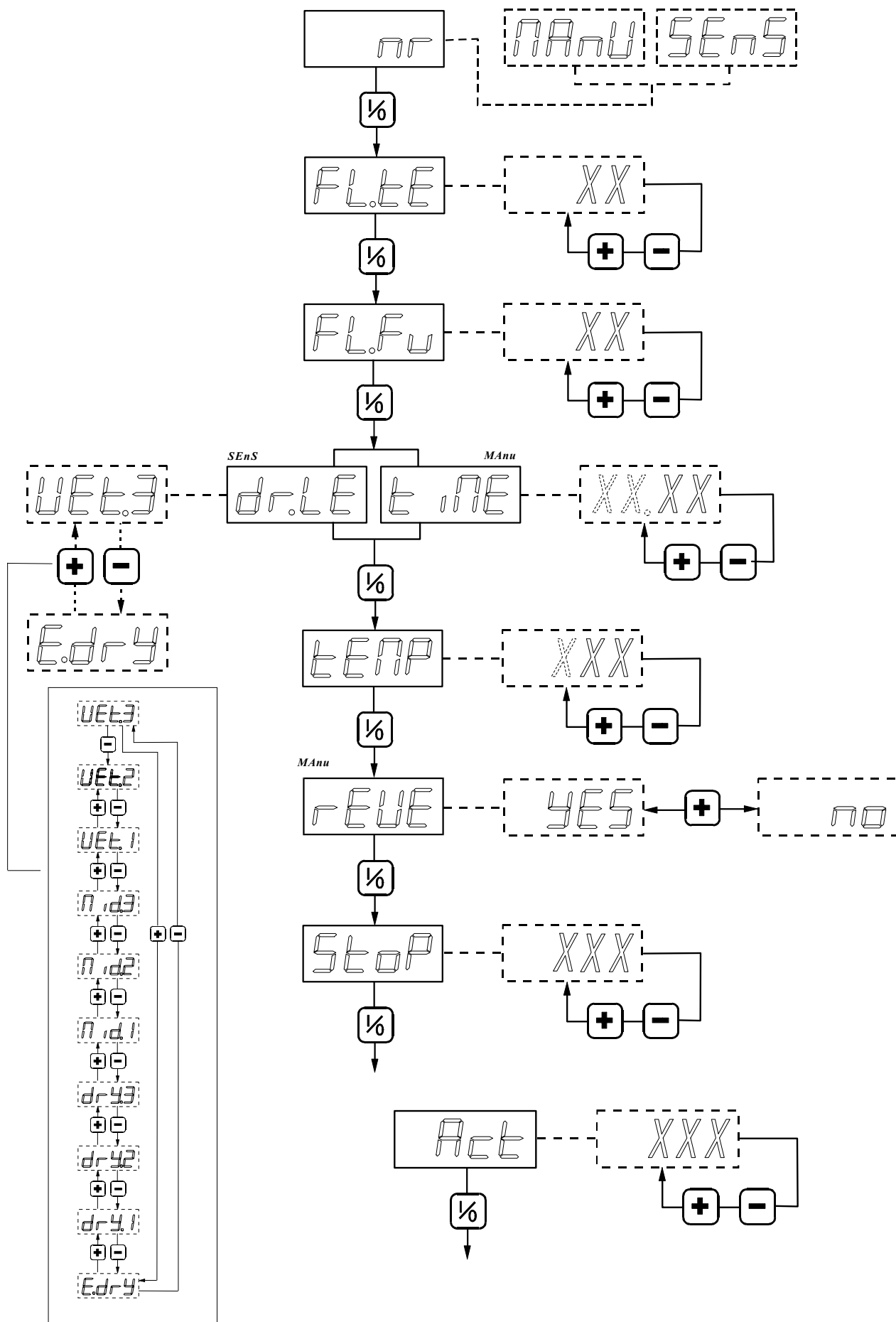With the upper or lower button you have to select now :

MAnU: This is the *variable* program for *manual* drying.

SEnS: This is the variable programme for *automatic drying.*
This program is not shown if the humidity sensors are not connected.

1-30: These are the *fixed* programs.
When a program was *not programmed*, a - *sign* is placed before this program number.
Confirm the selection with the middle button.

nr

MAnU   SEnS

FL.tE — XX   + −

FL.Fu — XX   + −

SEnS   MAnu

UEt.3 — dr.LE | tiME — XX.XX   + −

E.drY   + −

tENP — XXX   + −

MAnu

rEUE — YES ← + → no

StoP — XXX   + −

Act — XXX   + −

UEt3
UEt2
UEt1
N.d3
N.d2
N.d1
dr43
dr42
dr4.1
E.drY

Programming   of
variable   programs

Manu or SEns

Press the middle button

FL.tE (flash temperature - default 5)

On the lower display appears how many seconds the temperature indication during the drying cycle has to appear.

The combination of parameters **FL.tE** and **FL.FU** (see further) will result in an alternate indication of the remaining drying time or residual moisture and temperature.

If necessary, change this program with the upper or lower button (from 0 to 60 seconds) and confirm afterwards with the middle button.

FL.Fu (flash function - default 10)

On the lower display appears how many seconds the remaining drying time during the drying cycle has to appear.

If necessary, change this program with the upper or lower button (from 0 to 60 seconds) and confirm afterwards with the middle button.

⚠ If one of these programs was equal to "0", this indication will not appear.

tiME (time - default 30) or dr.LE (dry.level default drY1)

The bottom display shows *the drying time* for the variable manual programme, or *the residual moisture level* of the linen for the automatic variable program. This value can be changed by the user (see operating instructions).

Change this setting, if necessary, by means of the top or bottom button and confirm with the middle button.
The drying time can be set between 1 and 99 minutes. The residual moisture level can be selected between 10 different levels. The level "Wet 3" stands for the most humid drying result, the level "E.drY" (extra dry) for the dryest drying result. Inbetween it is possible to select 8 other levels (Wet2, Wet1, Mid3, Mid2, Mid1, drY3, drY2, drY1).

tEMP (temperature - default 40 of 104)

On the lower display appears the drying temperature. This value can be changed by the user (see operating instructions)..

If necessary, change this program with the upper or lower button (0° to 92 °C - 32 to 198 °F) and confirm afterwards with the middle button.

rEVE (reversing - default YES)

By means of the top button, you can select *"YES"* or *"no"* to program whether the drum has to be reversing during the dry time of this cycle.
Confirm the program afterwards with the middle button.

⚠ When in the setting menu at *"rEVE"*, no was programmed, this parameter will not be given and you will go to *"CY.on"* or *"C.tiM"*.

During the programming of the automatic program, this parameter will not be given and you will go to *"StoP"*.

When *"no"* is selected, you go immediately to *"CY.on"* or *"C.tiM"*.

StoP (stoptime - default 5)

On the lower display appears the time that the drum has to stand still during a left-right action.

If necessary, change this program with the upper or lower button (5 to 10 seconds) and confirm afterwards with the middle button.

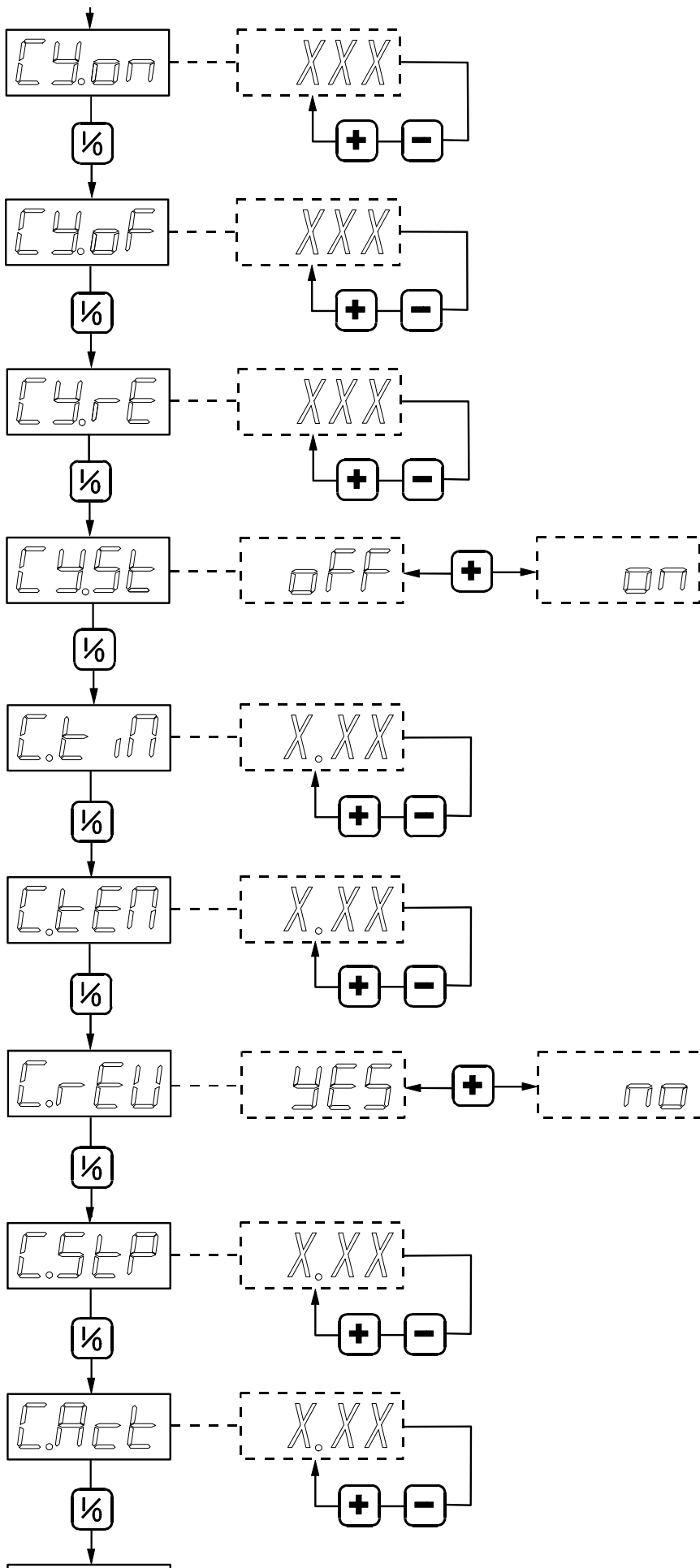### Act (actiontime - default 30)

On the lower display appears the time that the drum has to turn left or right.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button.

⚠ If *"no"* was selected in the technical menu with "Pr.CY", you proceed automatically to *"CY.on"* or *"C.tEM"*.

```
CY.on ──── [ XXX ]
  │              ↑
  ½           [+] [−]

CY.oF ──── [ XXX ]
  │              ↑
  ½           [+] [−]

CY.rE ──── [ XXX ]
  │              ↑
  ½           [+] [−]

CY.St ──── [ oFF ] ←[+]→ [ on ]
  │
  ½

C.t.iñ ──── [ X.XX ]
  │                ↑
  ½            [+] [−]

C.tEñ ──── [ X.XX ]
  │                ↑
  ½            [+] [−]

C.rEU ──── [ YES ] ←[+]→ [ no ]
  │
  ½

C.StP ──── [ X.XX ]
  │                ↑
  ½            [+] [−]

C.Act ──── [ X.XX ]
  │                ↑
  ½            [+] [−]
```

CY.on (Cycle on)

Here the pulsating function of the cycle contact can be programmed.

The bottom display shows the time during which the cycle contact needs to be closed.

Change this setting when necessary by means of the top or bottom button (0 to 40 seconds) and then confirm by means of the middle button.

⚠ If "0" is selected, you proceed immediately to *"C.tiM"*.

CY.of (Cycle off)

The bottom display shows the time during which the cycle contact (during pulsating function) needs to be opened.

Change this setting when necessary by means of the top or bottom button (5 to 600 seconds) and then confirm by means of the middle button.

⚠ This parameter is not shown when "0" was selected with "Cy.on".

CY.rE (Cycle repeat)

The bottom display shows how many times the contact needs to close and open.
Change this setting when necessary by means of the top or bottom button (1 to 99 pulses) and then confirm by means of the middle button.

CY.St (Cycle start)

The bottom display shows how the pulsating function of the cycle contact will start.
OFF : the cycle contact will first remain open during the time chosen with *(CY.of)*.
On : the cycle contact will first remain closed during the time chosen with *(CY.on)*

Change this setting when necessary by means of the top or bottom button (*on-off* pulses) and then confirm by means of the middle button.

C.tiM (cooltime - default 2)

On the lower display appears the cooltime. This value can be changed by the user (see operating instructions).
If necessary, change this program with the upper or lower button (1 to 30 minutes) and confirm afterwards with the middle button

C.tEM (temperature - default 30 or 86)

On the lower display appears the cool down temperature. This value can be changed by the user (see operating instructions).

If necessary, change this value with the uper or lower button (30 to 40 °C - 86 to 105 °F) and confirm afterwards with the middle button.

C.rEV (cool reverse - default YES)

With the middle button, you can select *"YES"* or *"no"* to program whether the drum has to turn left/right or not during the cool down time of this program.

⚠ When in *the setting menu* at *"rEVE", no* was programmed, this parameter will not be given and you will go   to *"G.tiM"*.

During the programming of the *automatic program*, this parameter will not be given and you will go to *"C.StoP"*.

When *"no"* is selected, you go directly to *"G.tiM".*

C.StP (cool stoptime - default 5)

On the lower display appears the time that the drum has to stand still between a left-right action during the cool down time.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button.
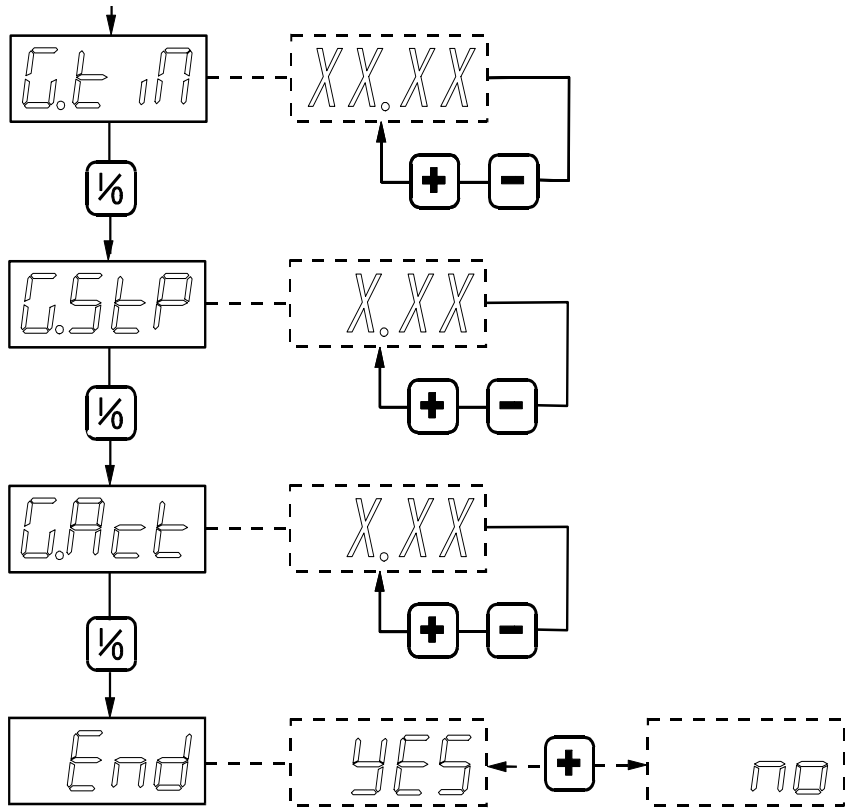
C.Act (cool actiontime - default 30)

On the lower display appears the time that the drum has to turn left or right during the cool down time.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button.

G.tiM (Guard time - default 30)

G.t iN ---- XX.XX

[+] [−]

1/0

G.StP ---- X.XX

[+] [−]

1/0

G.Act ---- X.XX

[+] [−]

1/0

End ---- YES ← [+] → no

2

On the lower display appears the guard time (anti-crease time). During this time (when cool down time is over) by moving the drum shortly now and then, creasing of the linen can be avoided.
 If necessary, change this program with the upper or lower button (0 to 99 minutes) and confirm afterwards with the middle button.

G.STP (Guard stoptime - default 120)

On the lower display appears the time that the drum has to stand still between the drum actions during the anti-crease time.

If necessary, change this program with the upper or lower button (5 to 240 seconds) and confirm afterwards with the middle button.

G.Act (Guard actiontime - default 5)

On the lower display appears the time that the drum has to be activated during the anti-crease time.

If necessary, change this program with the upper or lower button (5 to 240 seconds) and confirm afterwards with the middle button.

⚠   When in *the setting menu* at *"rEVE"*, *"YES"* was programmed, this action time will be executed left and right alternately

End

The programming of the variable manual program has ended here.
 On the lower display appears *YES*. By pushing the *middle button, you leave the program menu*.
 Select by means of the upper button *no* to program another program and confirm with the middle button.

nr	- - - 1 → 30

[+] [−]

[+]

| XX | ProG | [+] | CoPY | [+] | dEL |

[½]

| FL.tE | XX |

[+] [−]

[½]

| FL.Fu | XX |

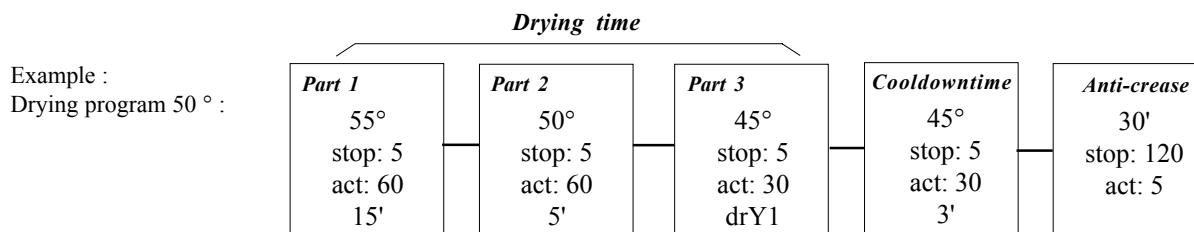[+] [−]

[½]

| XX - 1 |

[½]
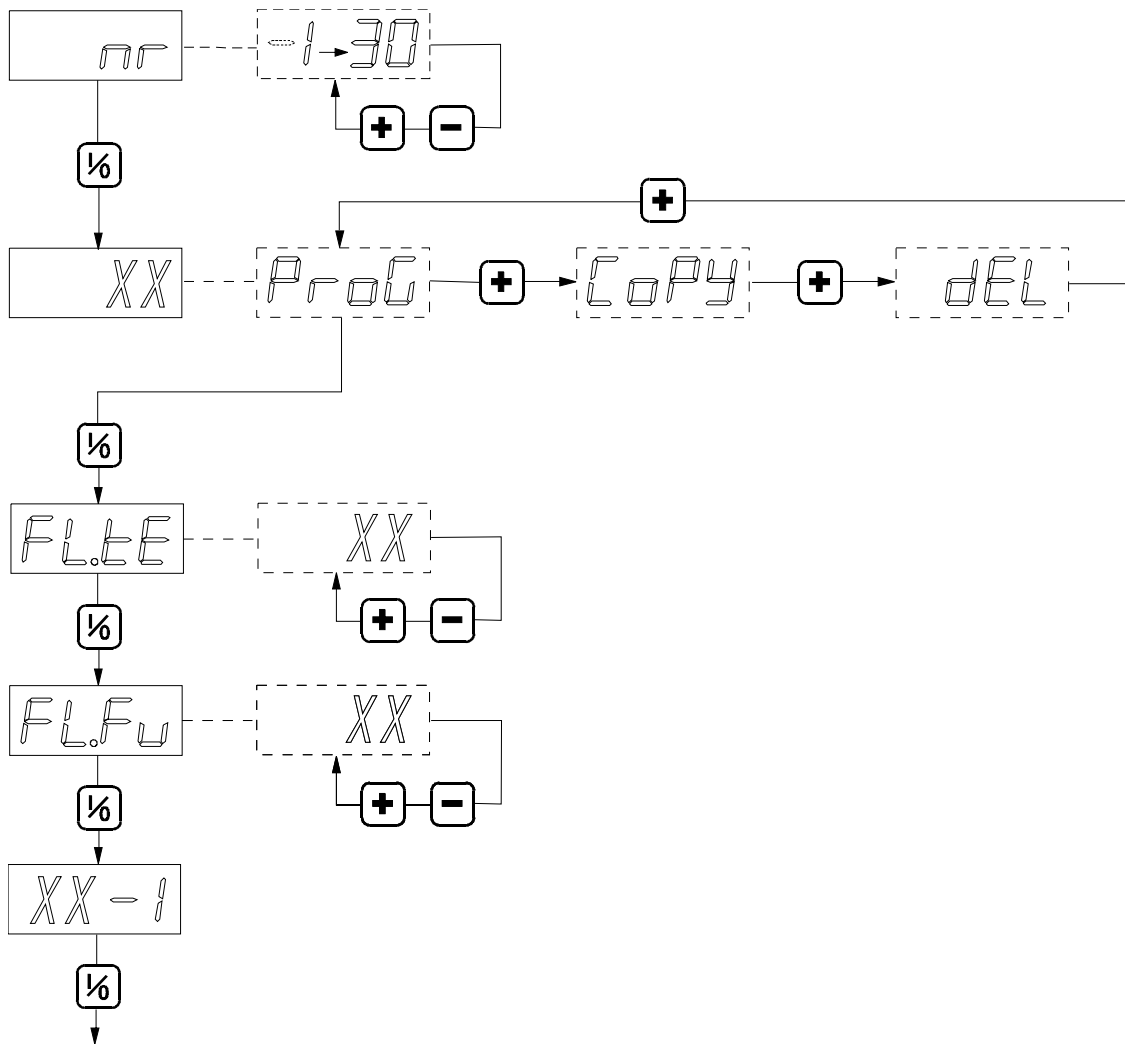
Programming of the fixed programs

The drying time of these programs can be built up in different subdivisions (max. 9).
This way, it is possible to for example in the beginning of a drying time work with a higher temperature - in order to achieve a quicker drying - while to the end, this temperature - to avoid shrinking of the linen - will be decreased.

These programs can be built up manual, automatic or in combination of these two drying systems.

> **Remark**
>
> When no residual moisture measuring system is used, only manual drying system is possible.

Example :
Drying program 50 ° :

Drying time

Part 1	Part 2	Part 3	Cooldowntime	Anti-crease
55°	50°	45°	45°	30'
stop: 5	stop: 5	stop: 5	stop: 5	stop: 120
act: 60	act: 60	act: 30	act: 30	act: 5
15'	5'	drY1	3'	

1-30

On the lower display a program number is mentioned. Select a program number by means of the upper or lower button.

Confirm your selection with the middle button.

⚠ If a *"- sign"* appears before the number, this means that this program number does not contain a program, and you go immediately to *"FL.tE"*.

XX

On the upper display, the selected program number is given.
"ProG" appears on the lower display. Now by pressing the upper button, you can possibly select out of *"CoPY"* or *"dEL"*.

ProG: To program a program.

CoPY: To copy a program to another program number. So, the program can be used as basis and this can save a lot of programming time (see further copying a program)

dEL: To delete a program (see further deleting a program).

Press the middle button to confirm your selection.

FL.tE (flash temperature - default 5)

On the upper display appears how many seconds the temperature indication has to be mentioned during the drying cycle.

The combination of the parameters *FL.tE* and *FL.FU* (see further) will result in an alternate indication of the residual drying time or residual moisture and the temperature.

If necessary, change this program with the upper or lower button (0 to 60 seconds) and confirm afterwards with the middle button.

FL.Fu (flash function - default 10)

On the lower display appears how many seconds the residual drying time during the drying cycle has to be mentioned.

If necessary, change this program with the upper or lower button (0 to 60 seconds) and confirm afterwards with the middle button.
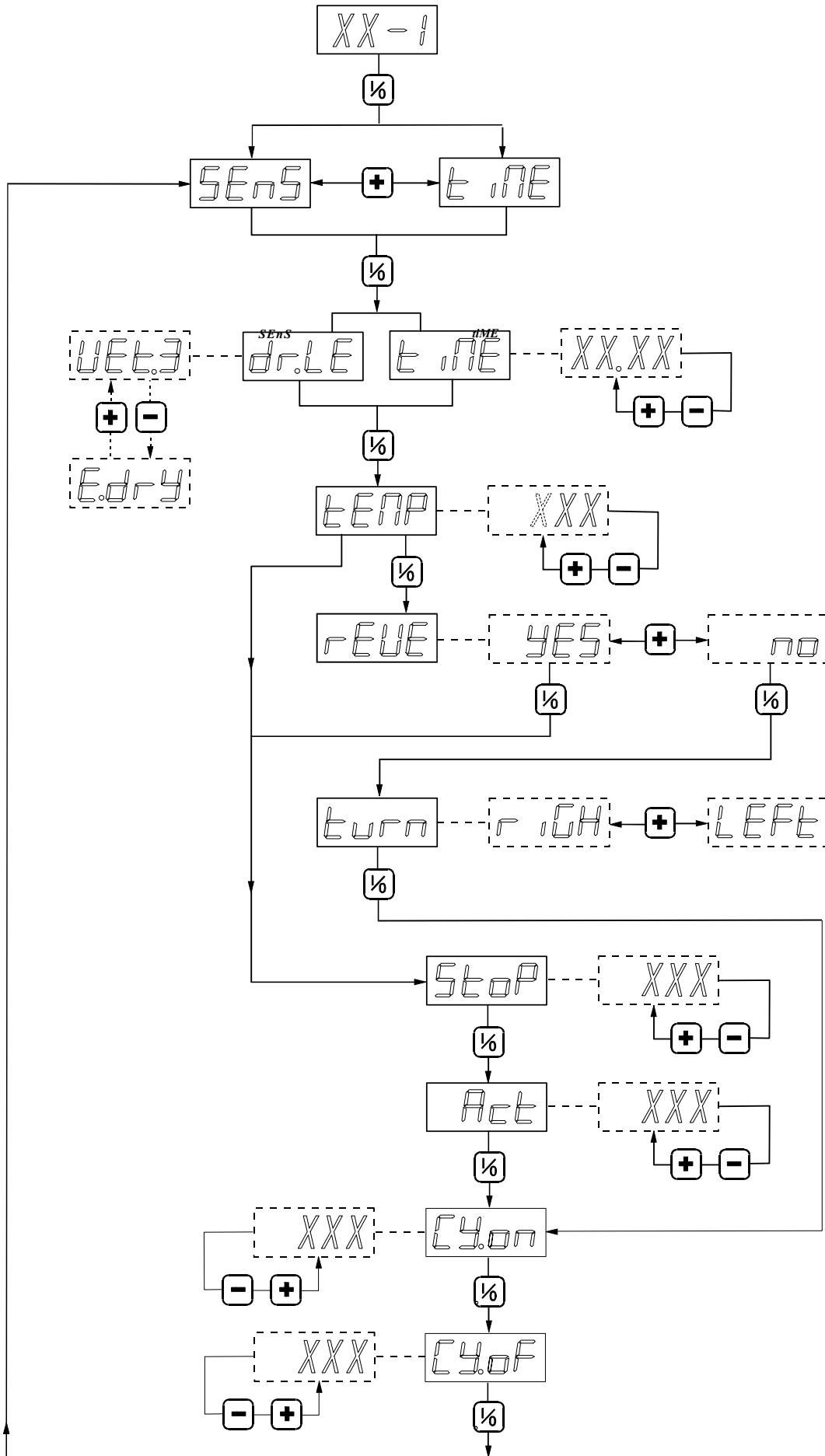
⚠ If one of these programs are equal to "0", this indication will not be given.

Now, the first program subdivision has to be programmed.

XX-1

The program number and afterwards the first subdivision number is mentioned.
Press the middle button.

```
┌─────────┐
│  XX-1   │
└─────────┘
     │
   [⅒]
     │
  ┌──┴──┐
  ▼     ▼
┌──────┐  ┌──────┐
│ SEnS │◄─[+]─►│ tiME │
└──────┘  └──────┘
     │
   [⅒]
     │
┌──────┐   ┌──────┐  ┌──────┐   ┌────────┐
│ UEt.3│┈┈┈│ dr.LE│  │ tiME │┈┈┈│ XX.XX  │
└──────┘   └──────┘  └──────┘   └────────┘
 [+] [-]                          [+] [-]
┌──────┐
│ E.drY│
└──────┘
     │
   [⅒]
     │
┌──────┐   ┌──────┐
│ tEMP │┈┈┈│ XXX  │
└──────┘   └──────┘
     │       [+] [-]
   [⅒]
     │
┌──────┐   ┌──────┐        ┌──────┐
│ rEUE │┈┈┈│ YES  │◄─[+]─►│  no  │
└──────┘   └──────┘        └──────┘
             [⅒]             [⅒]

┌──────┐   ┌──────┐        ┌──────┐
│ turn │┈┈┈│ riGH │◄─[+]─►│ LEFt │
└──────┘   └──────┘        └──────┘
     │
   [⅒]

┌──────┐   ┌──────┐
│ StoP │┈┈┈│ XXX  │
└──────┘   └──────┘
     │       [+] [-]
   [⅒]
┌──────┐   ┌──────┐
│ Act  │┈┈┈│ XXX  │
└──────┘   └──────┘
     │       [+] [-]
   [⅒]
┌──────┐   ┌──────┐
│ CY.on│┈┈┈│ XXX  │
└──────┘   └──────┘
     │      [-] [+]
   [⅒]
┌──────┐   ┌──────┐
│ CY.oF│┈┈┈│ XXX  │
└──────┘   └──────┘
     │      [-] [+]
   [⅒]
```

TiME of SEnS

By means of the top button you can select between :

TiME : drying by setting the drying time.
SenS : drying by setting the residual moisture of the linen.

Confirm this selection by means of the middle button.

The bottom display now shows the drying time or the programmed residual moisture level of the linen.
Change this drying time (between 1 and 99 minutes) - or select one of the 10 residual moisture levels (Wet3, Wet2, Wet1, Mid3, Mid2, Mid1, drY3, drY2 drY1 or E.drY) by means of the top or bottom button.

Then confirm the setting by means of the middle button.

tEMP (temperature - default 40 of 104)

On the lower display appears the drying temperature for this subdivision.

If necessary, change this program with the upper or lower button (0 - 92 ° C - 32 to 198 °F) and confirm afterwards with the middle button.

rEVE (reversing - default YES)

By means of the top button, you can select *"YES"* or *"no"* to program whether the drum has to be reversing during this subdivision and confirm the program afterwards with the middle button.

⚠ When in the setting menu at *"rEVE"*, no was programmed, this parameter will not be given and you will go *"CY.on" or to the end of this subdivision*.

During the programming of a subdivision with residual moisture measuring, this parameter will not be given and you will go to *"StoP"*.

When *"no"* is selected, you go to *"turn"*.

When *"YES"* is selected, you go to *"StoP".*.

StoP (stoptime - default 5)

On the lower display appears the time that the drum has to stand still during left-right action.

If necessary, change this program with the upper or lower button (5 to 10 seconds) and confirm afterwards with the middle button.

Act (actiontime - default 30)

On the lower display appears the time that the drum has to turn left or right.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button. You will go to *"CY.on"* or *"XX-1"*.

turn

By means of the upper button you have to select the direction of rotation of the drum
righ: right (clockwise)
left: left (anticlockwise)

Confirm the program afterwards with the middle button and you go to *"CY.on" or " XX-1"*.

CY.on (Cycle on)(default 0)

Here the pulsating function of the cycle contact can be programmed.

The bottom display shows the time during which the cycle contact needs to be closed.

Change this setting when necessary by means of the top or bottom button (0 to 40 seconds) and then confirm by means of the middle button.

⚠ If "0" is selected, you proceed immediately to "XX-1".
If "no" was selected in the technical menu with "Pr.CY", you proceed automatically to "XX-1" and this parameter is not shown.
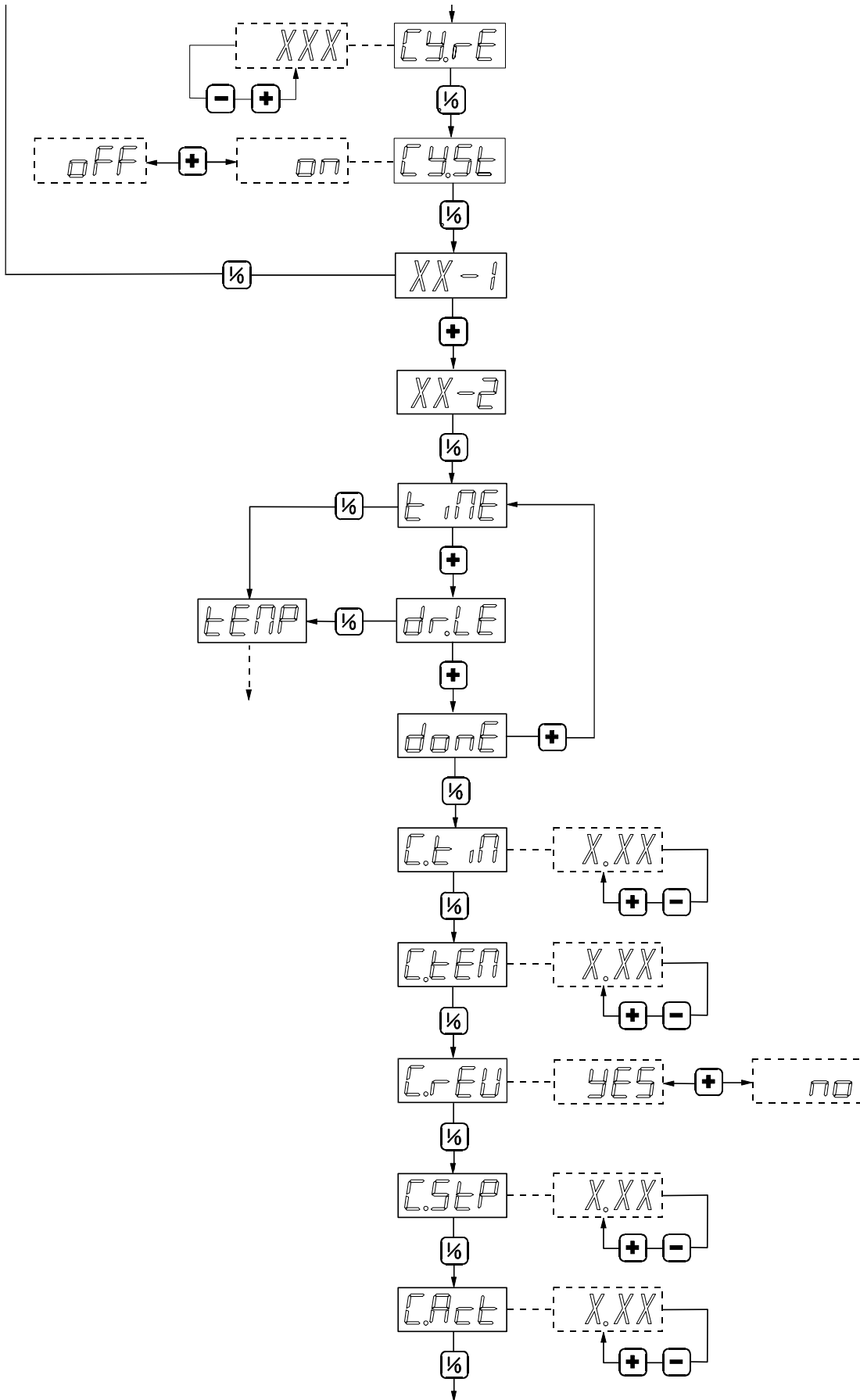
CY.of (Cycle off)(default 5)

The bottom display shows the time during which the cycle contact (during pulsating function) needs to be opened.
Change this setting when necessary by means of the top or bottom button (5 to 600 seconds) and then confirm by means of the middle button.

⚠ This parameter is not shown when "0" was selected with "Cy.on".

CY.rE — XXX
[−] [+]

CY.St — on ←[+]→ oFF

XX-1

[+]

XX-2

t.iME

[+]

dr.LE — [⅙] — tEMP

[+]

donE —[+]

C.t.M --- X.XX [+][−]

C.tEM --- X.XX [+][−]

C.rEU --- YES ←[+]→ no

C.StP --- X.XX [+][−]

C.Act --- X.XX [+][−]

CY.rE (Cycle repeat)(default : 1)

The bottom display shows how many times the contact needs to close and open.

Change this setting when necessary by means of the top or bottom button (1 to 99 pulses) and then confirm by means of the middle button.

CY.St (Cycle start)

The bottom display shows how the pulsating function of the cycle contact will start.

OFF : the cycle contact will first remain open during the time chosen with (CY.of).

On : the cycle contact will first remain closed during the time chosen with (CY.on)

Change this setting when necessary by means of the top or bottom button (*on-off* pulses) and then confirm by means of the middle button.

XX-1

Now you return to the subdivision number.

By pressing the middle button, earlier adjusted programs can be controlled or changed.

By pressing the upper button, you will go to the next subdivision of the drying cycle.

XX-2

This is the second subdivision number. Press the middle button. Now you can :

- program a next part in the same way.

Therefore, select *"tiME"* or *"PERC"* with the upper button and confirm afterwards with the middle button (transition to *"tEMP"*).

- the drying cycle is closed and you go to *the cool down time.*

Therefore select with the upper button *"donE"* and confirm afterwards with the middle button.

⚠️ The drying cycle has always - also when a program has to contain only one part - to be closed by an extra part, where *"donE"* is selected.

A drying period can contain maximum 9 parts.

C.tiM (cooltime - default 2)

On the lower display appears the cooldown time. This value can be changed by the user (see operating instructions).

If necessary, change this program with the upper or lower button (1 to 30 minutes) and confirm afterwards with the middle button.

C.tEM (temperature - default 30 of 86)

On the lower display appears the cool down temperature. This value can be changed by the user (see operating instructions).

If necessary, change this program with the upper or lower button (1 to 30 minutes) and confirm afterwards with the middle button.

C.rEVE (cool reverse - default YES)

With the middle button you can select *"YES"* or *"no"* to let the drum be reversing or not during the cool down period of this program.

⚠️ When in the *setting menu* at *"rEVE"*, *no* was programmed, this parameter is not be mentioned and you will go to *"G.tiM"*.

During the programming of the automatic program, this parameter is not mentioned and you will go to *"C.StoP"*.

When *"no"* is selected, you go immediately to *"G.tiM"*.

C.StP (cool stoptime - default 5)

On the lower display appears the time that the drum has to stand still between a left-right action during the cool down period.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button.
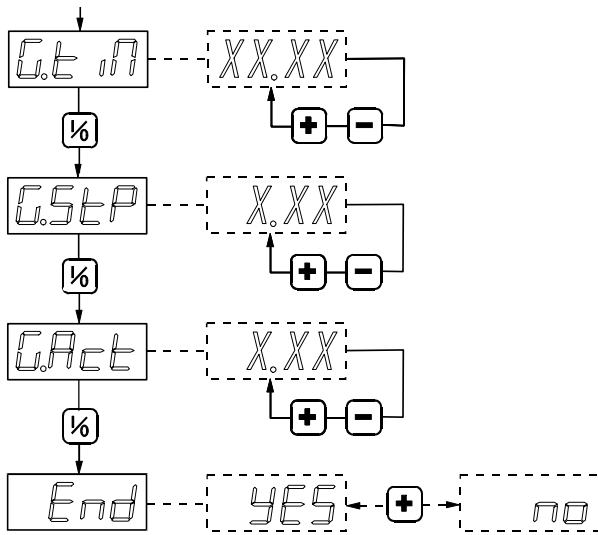
C.Act (cool actiontime - default 30)

On the lower display appears the time that the drum has to turn left-right action during the cool down period.

If necessary, change this program with the upper or lower button (5 to 120 seconds) and confirm afterwards with the middle button.

G.tiM (Guard time - default 30)

```
G.t.M  ---- XX.XX
                ⊕  ⊖
 1/0

G.StP  ---- X.XX
                ⊕  ⊖
 1/0

G.Act  ---- X.XX
                ⊕  ⊖
 1/0

End    ---- YES ← ⊕ → no
```

On the lower display appears the guard time (anti-crease time). During this time (when cool down time is over) by moving the drum shortly now and then, creasing of the linen can be avoided.

If necessary, change this program with the upper or lower button (0 to 99 minutes) and confirm afterwards with the middle button.

G.STP (Guard stoptime - default 120)

On the lower display appears the time that the drum has to stand still between the drum actions during the anti-crease time.

If necessary, change this program with the upper or lower button (5 to 240 seconds) and confirm afterwards with the middle button.

G.Act (Guard actiontime - default 5)

On the lower display appears the time that the drum has to stand still between the drum actions during the anti-crease time.

If necessary, change this program with the upper or lower button (5 to 240 seconds) and confirm afterwards with the middle button.

⚠ When in the setting menu at "rEVE", "YES" was programmed, this action time will be executed left and right alternately

End

The programming of the variable manual program has ended here.
On the lower display appears **YES**. By pushing the middle button, you *leave the programming menu.*
Select by means of the upper button *no* to program another program and confirm with the middle button.

Copying a program

Copying a program and using it as a base for a new program can save you a lot of time. Then it is also possible to change the copied program.

Follow the same procedure as when programming the fixed programs to get into the copying menu.

Select the number of a program which will be used as the base for a new program by pressing the top or bottom button.
Keep pressing the middle and top button during 5 seconds.

The bottom display shows *"ProG"*.

Press the top button so many times until the bottom display shows *"CoPY"* instead of *"ProG"* or *"dEL"* and confirm this selection by means of the middle button.
Select the base program by means of the top and bottom button. Then confirm the selection by means of the middle button.

"to" appears on the upper display. The bottom display shows the destination number.
Select the desired destination number by means of the top and bottom button.
If a program number is selected, which does not yet contain a program, a *"- dash"* is placed before the number. If a number containes a programme already, then this number is displayed *blinking.*
Then confirm the selection by means of the middle button.   The program is now being copied and you get automatically to the new program. This program can now be changed.

Deleting a program

If a programme is no longer desired, it can be deleted.

Follow the same procedure as when programming the fixed programmes to get into the deleting menu.

Select the number of a programme which must be deleted, by pressing the top or bottom button.
Keep pressing the middle and top button during 5 seconds.

"ProG" appears on the bottom display.

Press the top button so many times until the bottom display shows *"dEL"* instead of *"ProG"* or *"CoPY"* and confirm this selection by means of the middle button.
Select by means of the top or buttom button the programme that needs to be deleted.
Then confirm the selection by means of the middle button.
The programme is now being deleted.
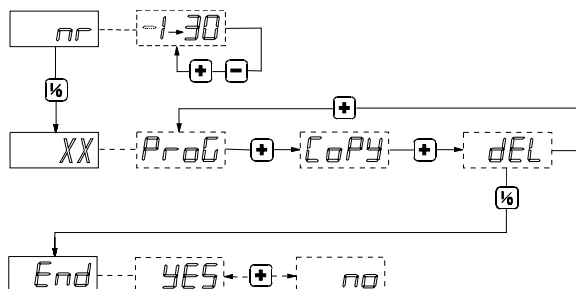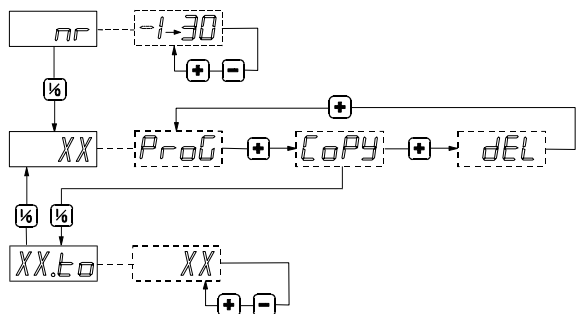
Display menu

Some data regarding the dryer can be recalled here.
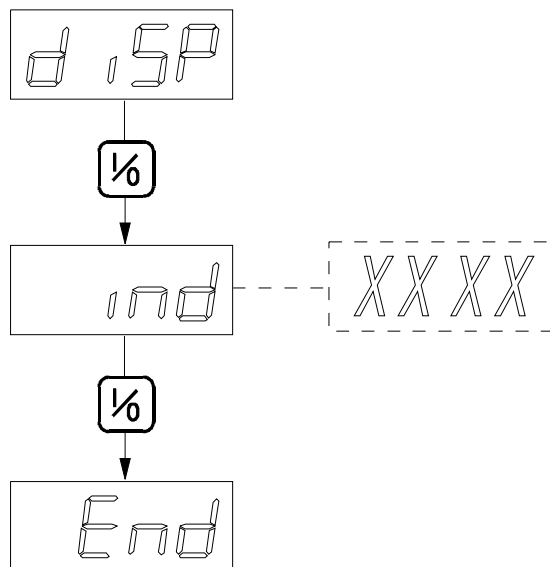
DISP

The upper display shows **"disp"** (display).
Press the middle button to continue.

Ind

The upper display shows **"ind"**. This is the **"maintenance index"**.
The lower display shows the **number of hours that the dryer has already operated.**
After the dryer was activated for "9999" hours, it restarts from "0".

Press the middle button to continue.

END

The upper display shows **END**. This is the end of the display menu.

Press the middle button to continue.

Selecting a program
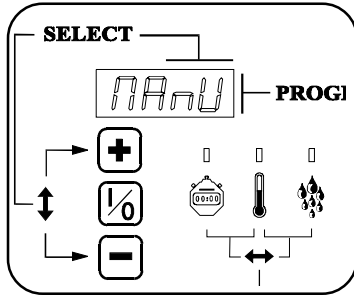
The program number is mentioned on the upper display. Press the **upper** or **lower** button to select the wished program.

⚠ It is only possible to select the program numbers which contain a program. It is also possible to select the standard programs (31 to 40) (see further: standard programs), provided that **"YES"** was selected in the technical menu for **"St.Pr"**.

Loading of the drum
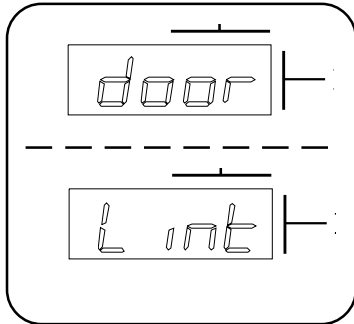
Open the door and load the drum.
When the door is opened, **"door"** and **"Lint"** appears alternately on the upper display.
Untangle the linen as good as possible so that it does not accumulate during the drying. That way, an equal drying will be obtained. Overloading of the drum can also lead to bad dry results.

⚠ Do not dry linen, which does not resist the drying temperature.

Linen treated with inflammable products, has to be aired sufficiently before putting it into the drum.

Starting the program

The start procedure is different according to the kind of program.

Variable manual program
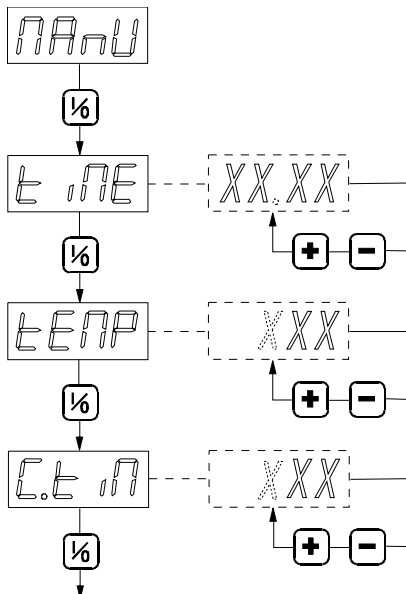
MAnU

Press the middle button.

tiME

The lower display shows the **drying time** for a variable manual program.

If necessary, change this program with the upper or lower button (1 to 99 minutes) and confirm afterwards with the middle button.

tEMP

The lower display shows the **drying temperature**.

If necessary, change this temperature with the upper or lower button (0 - 92 ° C - 32 to 198 °F) and confirm afterwards with the middle button.

C.tiM

The lower display shows the **cool down time.**

If necessary, change this program with the upper or lower button (1 to 30 minutes) and confirm afterwards with the middle button.

The program is started now.
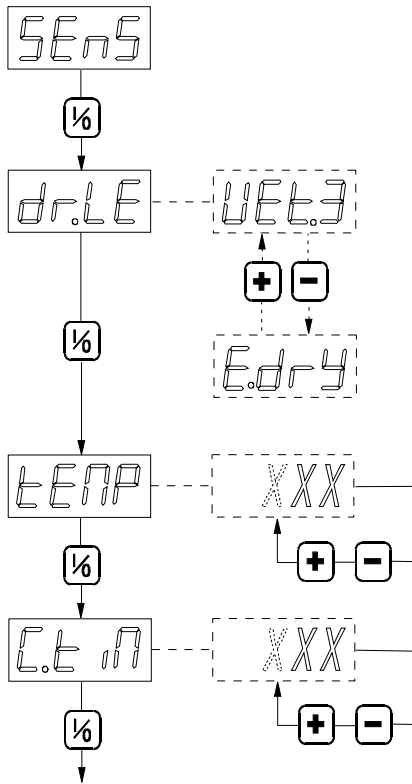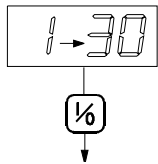
`5EnS`	**SEnS**
	Press the middle button.
`dr.LE` ---- `UEt.3`	**dr.LE**
`+` `-`	*The residual moisture level* of the linen appears on the bottom display. Select one of the 10 residual moisture levels (WEt3, WEt2, Wet1, Mid3, Mid2, Mid1, drY3, drY2, drY1 or E.drY) by means of the top or bottom button and then confirm by means of the middle button.
`E.drY`	
`tEMP` ---- `XXX`	**tEMP**
`+` `-`	*The drying temperature* appears on the bottom display. Change this temperature if necessary by means of the top or bottom button (0 to 92°C - 32 to 198°F) and then confirm by means of the middle button.
`C.t M` ---- `XXX`	**C.tiM r**
`+` `-`	*The cool down* time appears on the bottom display. Change this setting if necessary by means of the top or the bottom button (1 to 30 minutes) and then confirm by means of the middle button.
	The program is now being started.

Fixed program

`1→30`	**1.....30**
	Press the middle button and the program will start immediately.

⚠ The standard programs (31 to 40) can be started in the same way (see further : standard programs).

Program course
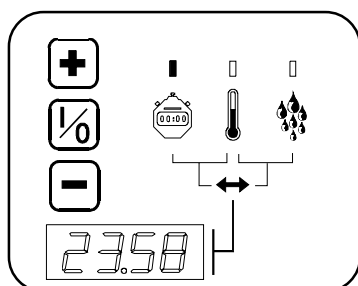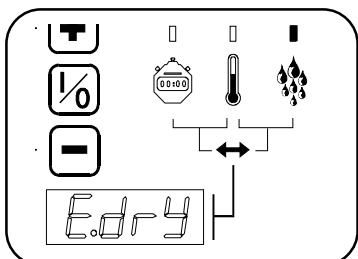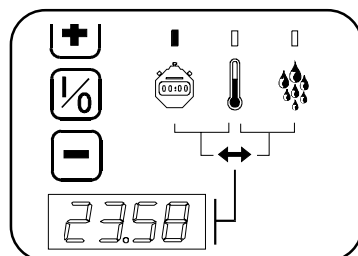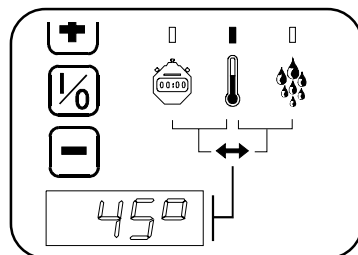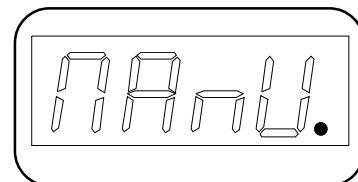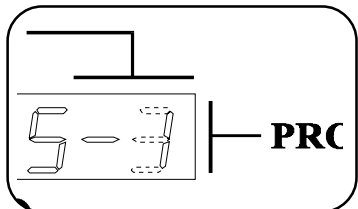
Program number

On the upper display, the ***program number or name*** (MAnU - Auto) is always mentioned.

If the drying time of a program consists of several subdivisions, next to the program number, you will find the ***number of the subdivision***, where the program is actually situated at that moment. Alternately with this, every ***5 seconds***, during ***1 second*** the number of the ***last subdivision*** is mentioned. So the user is being informed how many divisions still have to be completed.

.example : program "5" is in subdivision "1" and the drying time consists of "3" subdivions.

Heating activated

When the heating is activated, the decimal point in the right upper display lights up.

Display of the remaining drying time, temperature, residual moisture level

During the drying period the bottom display shows alternately the temperature with either ***the remaining drying time*** or ***the residual moisture level*** of the linen.

The relation of alternation has been determined in the programming menu (see ***"FL.tE-FL.FU"***).

- During the display of ***the temperature***, the ***middle led*** will light up.

- Druing the display of ***the remaining drying time***, the ***left led*** will light up. This time is counted down by second.

- During the display of ***the residual moisture*** level, the ***right led*** will light up.

— ***Remark :*** —

When a drying period was built up out of several segments, then the remaining drying time will be displayed ***per segment***, and thus not for the total program.

If ***"0"*** was put in for ***"FL.tE-FL.FU"*** in the programming menu, then nothing will appear on the display.

Changing the residual drying time

During the program or subdivision of the program, the residual drying time can be shortened or lengthened. Press therefore the lower or upper button.

– ***Remark :*** —

If this time is normally not mentioned, it will be mentioned during the pushing (plus 3 seconds afterwards).
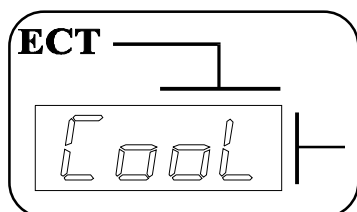
End of the drying time : transition to cool down time

When a drying time is over (drying time over or % final residual moisture achieved), the cool down time starts automatically.

On the upper display *"CooL"* is mentioned.

During the cool down time, the lower display shows alternately the *cool down temperature and* the *residual cool down time.*
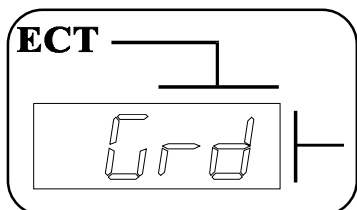
End of cool down time : transition to anti-crease time

When the *cool down time is over*, or when the *cool down temperature is reached*, the anti-crease time starts automatically.
The drum makes here a short action (eg. 5 sec) and a long stop (eg. 2 minutes) in order to prevent creasing of the linen. During the rotation of the drum, the *buzzer is activated.*
On the upper display appears *"Grd"*.
On the lower display, the programmed anti-crease time is counted per second.
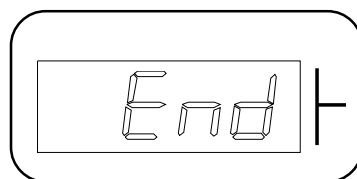
End of the drying program

When the anti-crease time is over, the program stops automatically and *"End"* appears on the lower display.

Manual interfering
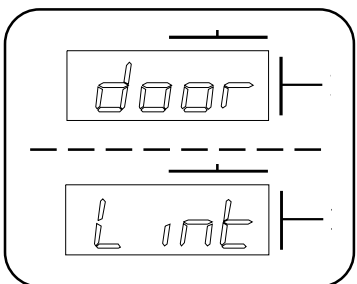
**Opening of the door or filterdoor during the program**

When during a program the door is opened, everything stops and on the upper display, *"door"* and *"Lint"* appears alternately.

The *residual drying and cool down time* is still counting on the lower display.
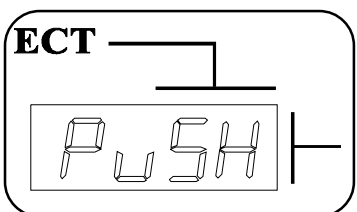
When *during a drying or cool down time* the door is closed again, *"Push"* is mentioned alternately with the program number (or "CooL").
This is a way to let you know that you have to push the *middle button* again to activate the program again.
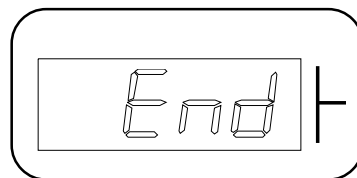
— *Remark :* —————————————————————
If the door is opened during the anti-crease time, the lower display shows *"End"* and the program stops *immediately*.

3

Standard programs

The Pro/HC is equipped with 10 standard programs. Those programs can be started directly but cannot be changed. It is however possible *to copy them* to a program number between 1 and 30 and *then be change*d.
This way they can be used as a base for another program which allows you to save quite some time and programming work.

— **Remark :** —————————————————

The standard program can only be used if *"YES"* was put in for *"St.Pr"* in the technical menu.

These drying programs are executed in a left - right action of 55 seconds with 5 seconds stop.
After the cooldown period there is an anti-wrinkle time of 30 minutes (120 seconds of stop and 5 seconds action).

Dryer with residual moisture control

Number	Temp	Level or drying time	Cool down time
31	75°	Dry1	10
32	75°	Mid1	10
33	60°	Dry1	5
34	60°	Mid1	5
35	45°	Dry1	3
36	45°	Mid1	3
37	40°	45'	2
38	40°	30'	2
39	35°	30'	2
40	0°	30'	0

Dryer without residual moisture control

If the dryer is not equipped with the reversing option, then all programs are executed in a right movement.

| Number	Temp	Level or drying time	Cool down time
31	75°	45'	10
32	75°	30'	10
33	60°	45'	5
34	60°	30'	5
35	45°	45'	3
36	45°	30'	3
37	40°	45'	2
38	40°	30'	2
39	35°	30'	2
40	0°	30'	0

Technical remarks

Gas circuit break

For a gas heated dryer, the electronic ignition will only try to ignite once during 10 seconds. If this does not work and the flame detection does not detect a flame (eg. at gas power failure)the ignition relay goes in safety. When the drying cycle is *restarted*, a new ignition will take place.

Error messages

Electronic temperature protections
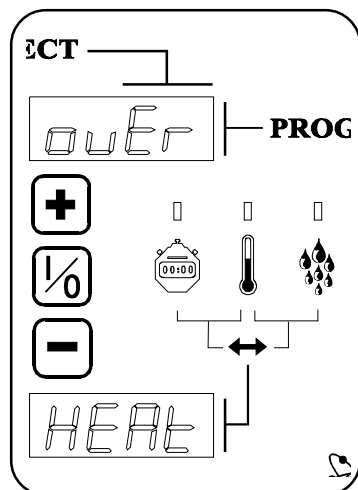
Over HEAt

When a temperature *lower or equal to 4°C (39°F)* or *higher or equal to 120°C (248°F)* is detected, the electronic temperature protection will be activated.

During the operation :

Temperature higher than *120 °C (248 °F)*:
Every action is interrupted. The buzzer is activated and *"over-HEAt"* appears blinking on the displays.

Temperature lower than 4°C (39 °F) (90 seconds after the start) :
The heating is interrupted but the cycle will be completed totally. At the end, *"over-HEAt"* appears blinking and the buzzer is activated..

During break :

"over-Heat" is mentioned blinking when a temperature higher or lower than *120 ° C* is measured.

⚠️ When *"over-HEAt"* appears, no drying cycle can be started any longer. Therefore the dryer has to be placed without electrical power for a while.
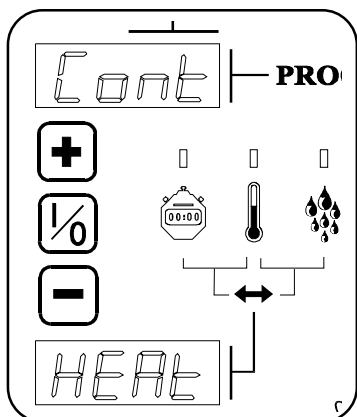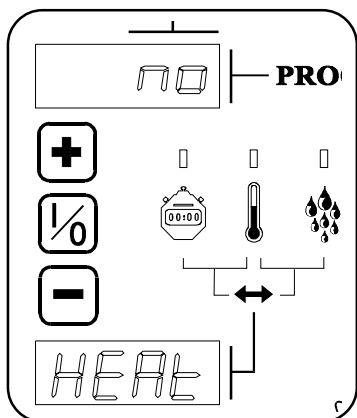
Cont-HEAt

When the heating is not activated, and nevertheless a reaction coupling of the heating contactor is detected, *"cont-HEAt"* appears blinking and the buzzer is activated.

This error can be the result of a heating contractor, which is unwanted mechanically blocked.

⚠️ Disconnect all current, steam or gas supply as soon as possible.

no-HEAt

If 9 seconds after the heating is activated, no feed back is detected, everything is stopped, *"no-HEAt"* appears blinking and the buzzer is activated.
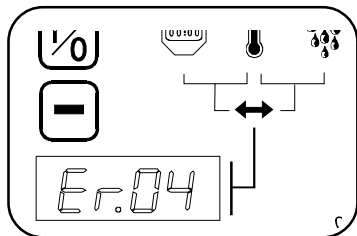
When the door is opened, the error message disappears and *"Push"* is mentioned. Now you have to restart.

This error message can be the result of a strongly filthy filter (see further draft flap and maintenance).
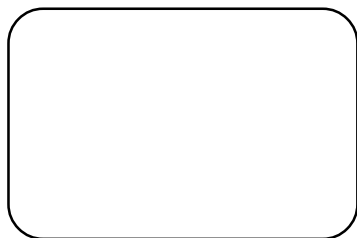
Er. 03

If the himidity sensor *under the drum* is defective, *Er.03* (Error 03) will appear on the bottom display.

Er.04

If the humidity sensor *at the back of the burner* is defective, *Er.04* (Error 04) will appear on the bottom display.

⚠ When one of above mentioned errors occur, the cycle will be continued, but all segments in which the residual moisture is being checked, will be left out.
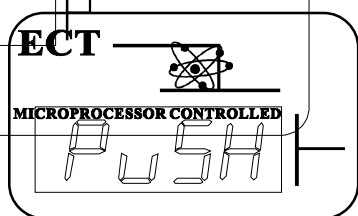

Sale switch
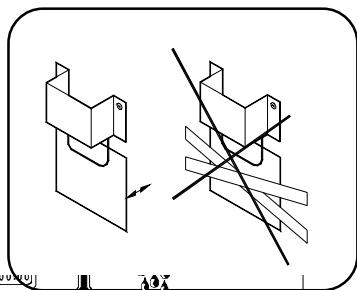
The sale switch is in the back and is a protection, which interrupts the heating, in case there's an insufficient air supply. This can be the result of an inadequate exhaust (see installation) or a dirty filter (see maintenance).

⚠ The sale switch needs to move freely. *When this sale switch is blocked, there's a serious fire risk.*
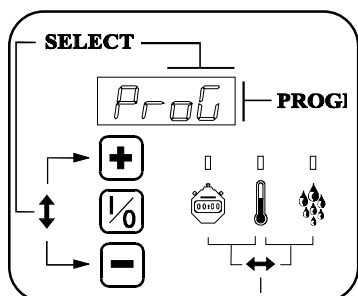

Power breakdown

When the power drops out during the program, the program can be continued when the power is back.

The upper display shows blinking *"PusH"*.
Press the middle button then.

Direct access to the program menu

By pushing simultaneously the *upper and middle* button during *5 seconds*, *you go immediately to the programing menu.*

So it is not necessary to pull the switch at the back of the print plate as described in Chapter 5 : Selection of submenus.