User manual

CTS 602 by Nilan

Compact P

Compact P Sun

Compact P Cool

Compact P Cool Sun

Contents

Figure table

Introduction

Please control that the following documents have been delivered together with the unit:
- *Directions for assembly and use*
- *CTS602 directions (this document)*
- *Electrical chart*

The purpose of this manual is to clearly show the menus and possibilities of the CTS602 control.
This manual may describe functions that are not accessible in your unit.
The directions can be used for all types of units described in figure 1 page 4.

PLEASE NOTE: If the system is damaged in any way, it must be inspected and repaired by licensed personnel

GETTING STARTED

The system is delivered ready for use.

**The factory settings are suitable for most user requirements and it should therefore not be necessary to change any settings other than those found in the main menu.
The main menu is described on pages 9+10.**

Types of units

The control is made for the following ventilation units.
The figure below describes the possibilities offered by the various models

Warennummer	Typ	Heated air	High pressure protection	Compressor	De-icing	Domestic hot water production	Supplementary heating of domestic water from e.g. Solar panels	Free cooling (inlet air bypasses the exchanger)	Cooling via compressor	Possibility for heating suface	
7512304	Compact P	x	x	x	x	x		x		x	
7512305	Compact P Sun	x	x	x	x	x	x	x		x	
7512404	Compact P Cool	x	x	x	x	x		x	x	x	
7512405	Compact P Cool Sun	x	x	x	x	x	x	x	x	x	

Figure 1: Types of units

Review of the thermometer sensors
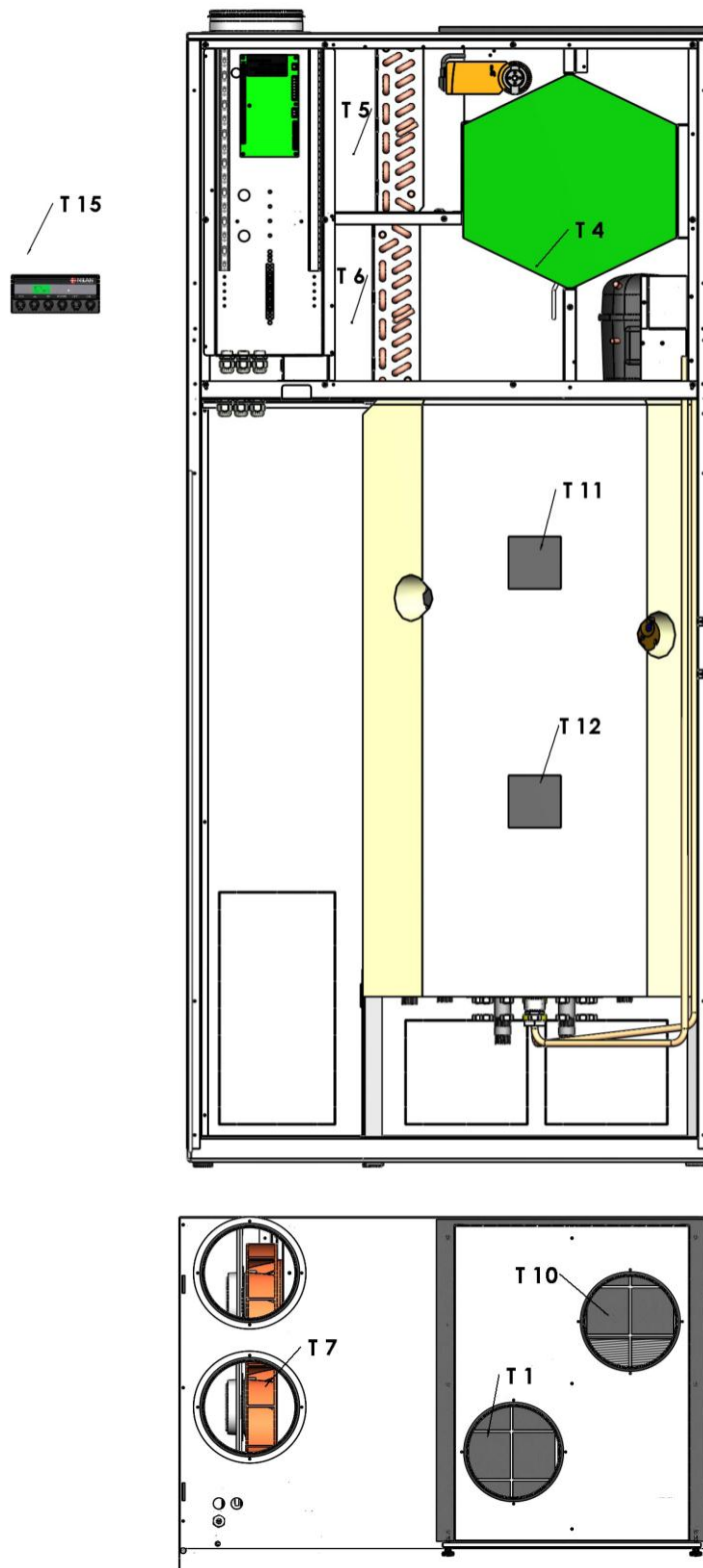
Explanation temperature sensors:

T1: Fresh air.
T4: In the counter flow heat exchanger.
T5: Condenser.
T6: Evaporator.
T7: Inlet air after the electrical heating surface. (T2 is change to T7, by mounting Heating surface)
T10: Exhaust.
T11: Top of the hot water tank.
T12: bottom of the hot water tank.
T15: CTS602 panel.
temperatures are shown in the "Show data" menu".

E5: Heating element 1,5kW

Figure 2: Location of temperature sensors

CTS602 control panel

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

Figure 3: CTS602 control panel

The following is indicated by the light-emitting diode at the front of the CTS602 panel:
Constant yellow light: the compressor is in operation
Flashing yellow: the unit is in alarm condition

The panel can show 2 lines of text with each 8 characters.
The upper line shows a guiding text.
The bottom line shows the matching values to the guiding text.

The text in the display in "on" as long as there is power to the unit and will not turn off even though the unit is set to "off" or has not been operated for a longer period of time.

How to use the menu:

It is possible to adjust a value or a function by finding the matching menu via ▲ or ▼.

To activate the desired menu press **ENTER**.

To adjust the settings of the value press **ENTER** until the value flashes.

The adjustment can now be done via▲▼.

To save the chosen value press **ENTER.**

It is advisable to have the panel and/or the review of the menus near by during the reading of the menus.

If none of the press buttons are activated for one minute the control will automatically return to the main menu.

If you are in the middle of the programming when the control returns to the main menu all data will be saved if they previously are saved by pressing **ENTER.** It is always possible to return to the programming to continue.

Menu overview

The control will have the main menu as starting point, (the menu in the full-drawn frame). From here it is possible to go through the other menus via ▲▼.

Page 11	SHOW ALARMS	Showing of alarms and resetting of alarms. Alarm log with the latest 16 alarms.
Page 14	SHOW DATA	Operating mode (heat, auto, cool), temperatures, fan speed and software version.
Page 9+10	AUTO W/1 >2< 19°C	Main menu: shows operating mode. Press ESC to return to main menu.
Page 15	USER SELECT	There are five custom options : "ext offs", "exhaust", "inlet", "extend" and "OFF".
Page 16	USER SELECT 2	User select 2 as user select
Page 17	10-09-13 TM. 12:10	Setting of clock.
Page 18+19	WEEK PROGRAM	Activating the week programme.
Page 20	INLET HEATING	Setting of inlet temperature (heating via compressor). The menu is only shown when a supplementary heating surface is installed.
Page 22	HOTWATER	Showing of data for hot water production.
Page 23	COOLING	Setting of inlet temperature for cooling via bypassing the inlet air around the heat exchanger and via compressor if this is an option (not possible on all types of units).
Page 24	HUMIDITY	Offers the option to set a higher/lower fan speed at a high/low humidity level
Page 25	AIR EXCHANGE	Starts the compressor and enable you to choose a low fan speed when the outdoor air temperature is low.
Page 26	AIR FILTER	In the "Air filter" menu it is possible to chose the interval of the filter guard.
Page 27	TEMP. CONTROL	Setting of minimum inlet temperatures·
Page 28	LANGUAGE ENGLISH	Choose language shown in control panel

Figure 4: "Menu overview"

Operating mode

The main menu shows 3 different values: operating mode, ventilation step and temperature. Those values indicate the state of the unit and are selected by the user.

The main menu is automatically shown 15 seconds after the unit is electrically connected and is now ready to be set.

Operating mode: OFF AUTO COOL HEAT

* : the "USER SELECT" menu is active
1,2,3 : week programme is active
W : electrical heating element is active
L: low ventilation step at low outdoor temperature

```
AUTO    */1
>2<     19°C
```

Ventilation step

Desired roomtemperature (5-30°C).
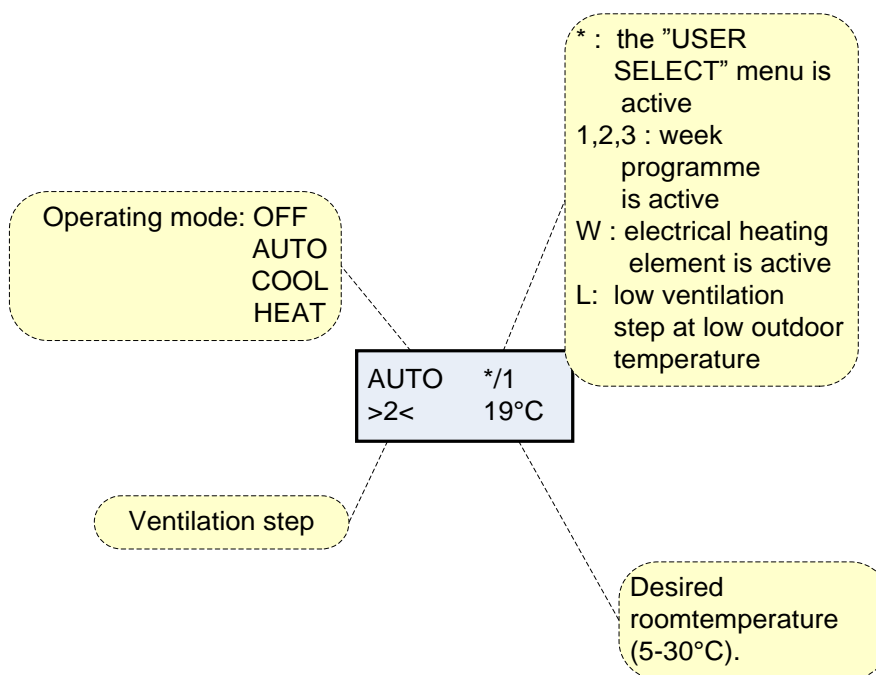
Figure 5: Main menu

Desired room temperature can be adjusted by pressing **ENTER** once. The number at °C flashes and the value can be set via ▲▼. The desired value must be approved by pressing **ENTER** once.

The operating mode can be adjusted by pressing **ENTER** twice. The actual mode is flashing and can be set via ▲▼ and approved by pressing **ENTER** once. In "AUTO"-mode the bypass-draught control is automatically opened or closed according to the temperature setting and the unit automatically switches between cooling and heating. As regards cooling there is a neutral zone of 5 °C below room temperature before the unit actively cools via compressor. For further information see page 20.

The ventilation step can be adjusted by pressing **ENTER** three times. The actual ventilation step is flashing and can be set via ▲▼ and approved by pressing **ENTER** once.

Main menu

The main menu is automatically shown 15 seconds after the unit is electrically connected.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

In AUTO mode the unit automatically choses cooling or heating according to the desired room temperature.

The indicated ventilation step applies for the exhaust.

AUTO
>2<   19°C

Main menu

ENTER

AUTO
>2< "19°C"

ENTER

"AUTO"
>2< 19°C

ENTER

AUTO
">2<" 19°C

AUTO
>2< "5-30°C"

"COOLING"
>2< 19°C

AUTO
">3<" 19°C

Desired room temperature. set between 5 to 30 ° C.

"HEAT"
>2< 19°C

Cooling according to the desired room temperature.

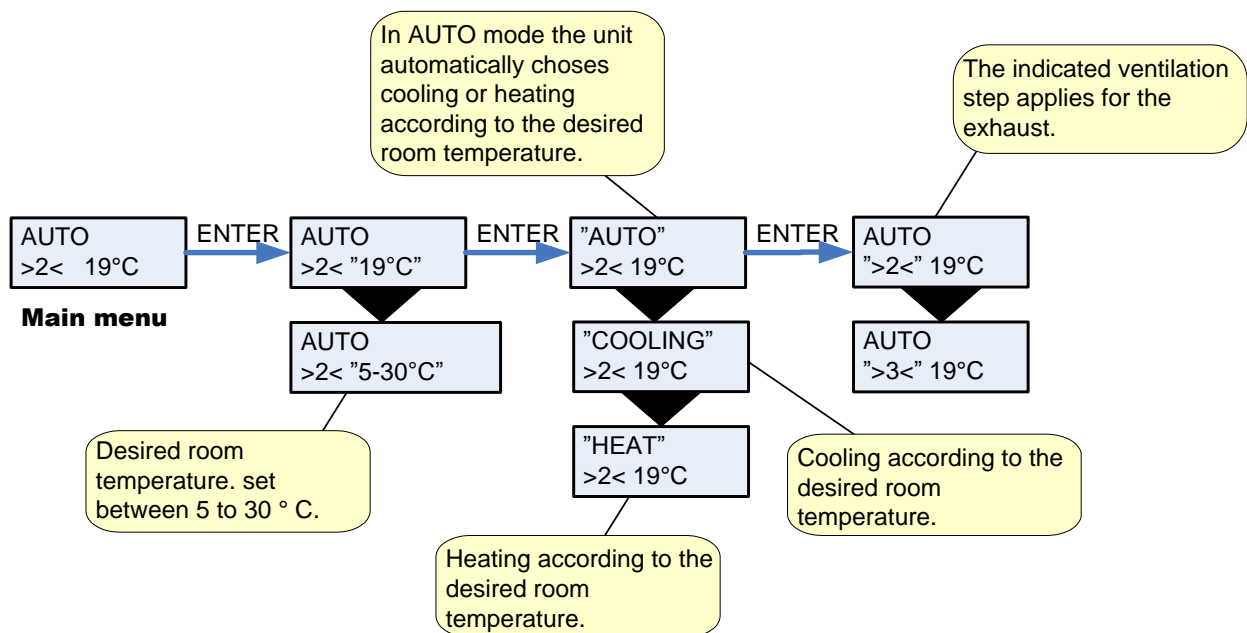Heating according to the desired room temperature.

Figure 6: Headlines in the "Main menu"

Show alarms

If the unit is in a state of alarm the yellow light-emitting diode on the front of the CTS600 panel will flash.

The "Show alarms" menu indicates the type of alarm and the time of the alarm. This is also the menu where the alarm should be reset.
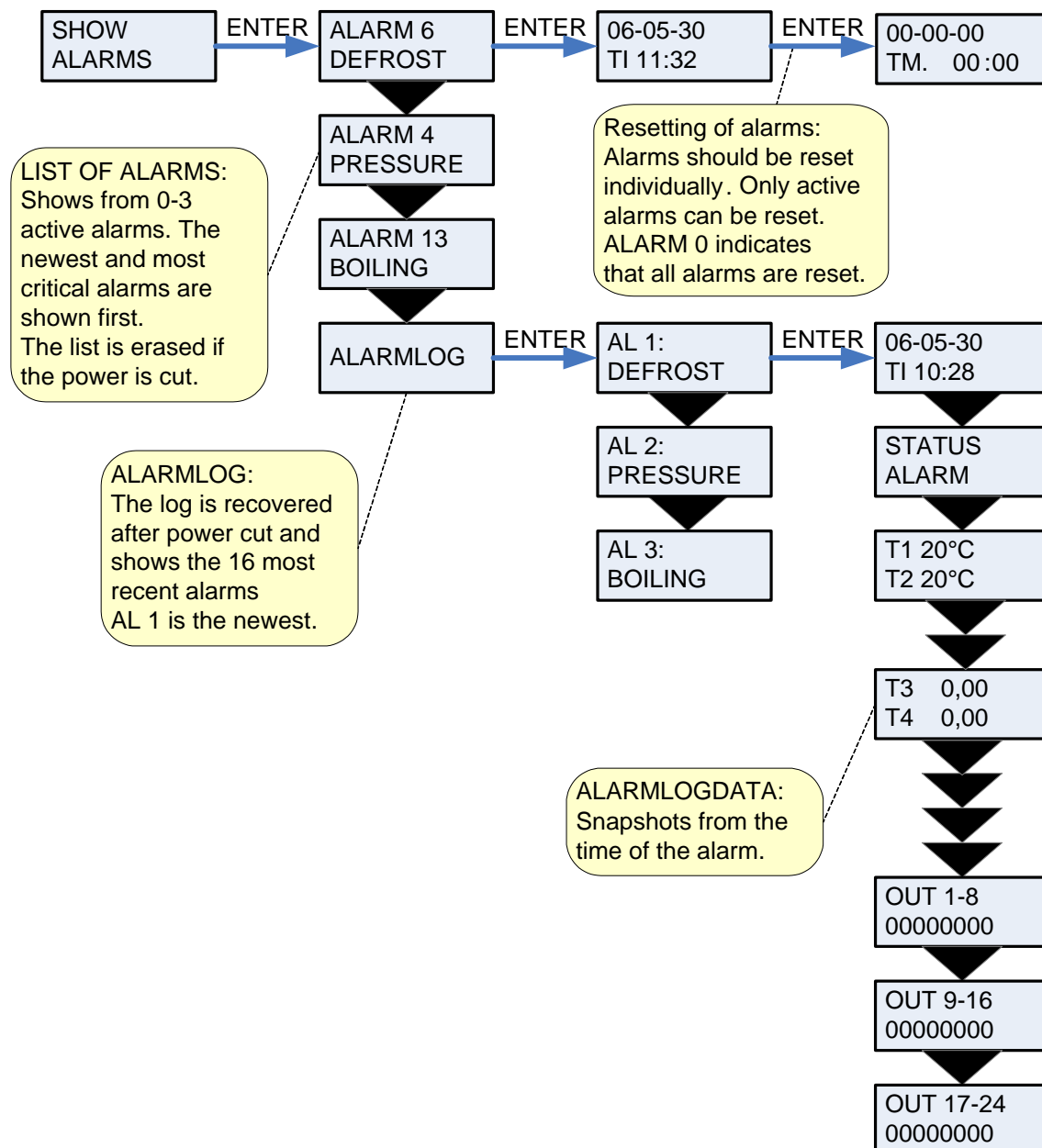

Figure 7: The "Show alarms" menu

Alarm codes are given because of a fault situation or when it is important to inform the user.

The alarms are divided into the following categories:

C   **Critical**   Operation is partly or completely stopped as long as the alarm is active.
W   **Warning**   These types of alarms will become critical if the problem is not solved quickly.
I   **Informative**   Normal operation is not affected. Alarm disappears when it is reset.

Alarm code	Categori	Text in display	Description/ cause	How to remedy alarms
00	--	--	No alarms	
01	C	HARDWARE	Error in control hardware	Contact service if reset does not help
02	C	TIMEOUT	Warning alarm W has become a critical alarm.	Note and reset the alarm. Contact service if alarm does not disappear.
03	C	FIRE	Fire detecting thermostat. Unit is stopped because the fire detecting thermostat has been activated.	If there has not been a fire please contact service.
04	C	PRESSURE	High or low pressure switch in the cooling circuit has been triggered, probably caused by: High pressure: Extreme hot Cloaked filter Defective fan Low pressure: Extreme cold Unit might have lost coolant Cloaked filter Defective fan	Check for errors and reset alarms. If you are unable to reset the alarm or if the alarm occurs often please contact service.
06	C	DEFROST	The unit is defrosting. The frost protection of the heat recovery system is insufficient and the unit will stop. This can be caused by extreme low outdoor temperatures	Contact service if reset does not help. Note the actual sensor temperatures from the menu "Show data" to help service.
08	C	FROST	One of the temperature sensors in the unit is short circuit or defect.	Note the sensor and contact service.
09	C	OVERTEMP	One of the temperature sensors in the unit is disconnected or defect.	Note the sensor and contact service.
10	C	OVERHEAT	The electrical heating element is overheated. Lack of airflow due to cloaked filters, cloaked air intake or defect inlet fan.	Check if air flows into the house. Check filter and air intake. Reset alarm. Contact service if the above does not help.
11	C	AIRFLOW	Lacking inlet airflow	See alarm code 10
13	C	BOILING	Boiling protection of the hot water	Contact service

Alarm code	Categori	Text of display	Description/ cause	How to remedy alarms
15	W	**ROOM LOW**	When room temperature drops below 10°C the unit will stop in order to protect the house from further cooling down. The function is useful when the house is not occupied and the main heating has stopped.	Heat up the house and reset the alarm
16	I	**SOFTWARE**	Error in software	Contact service
17	I	**WATCHDOG**	Error in software	Contact service
18	I	**CONFIG**	Parts of the programming are lost and can be caused by a longer period of power failure or lightning. The unit will keep on operating on standard programming.	Reset alarm Re-programme the week programme. Contact service if the unit does not operate as before. Supplementary programs can be lost. Only service can access the supplementary programs and menus.
19	I	**FILTER**	The filter guard is set to give alarm when a pre-set period of time has occurred	Clean /replace filter and reset alarm
20	I	**LEGIONEL**	Legionella temperature has not been reached within the time limit	Contact service
21	I	**POWER**	Occurs if power has been cut off for a longer period of time	The week programme should be checked and adjusted if necessary. Reset alarm.
22	I	**T AIR**	The pre-set temperature of the inlet air cannot be reached	Set a lower air inlet temperature and reset alarm.
23	I	**T WATER**	Warming up the hot water is not possible	Contact service.
24	I	**T HEAT**	Warming up the water for central heating is not possible.	Contact service.
27-57	K	**T$_x$ KURZ**	One of the temperature sensor of the device is shorted or defective.Tx = +99 °C	Please note which sensor T x, there is shorted, and contact the customer service.
28-58	K	**T$_x$ OFFEN**	One of the temperature sensor of the device is disconnected or defect Tx= -40 ° C	Please note which sensor T x, there is interruped, and contact the customer service.

Figure 8: The "Alarm Indicators" menu

Show data

The actual operation data can be read in the "Show data" menu. See review of thermometer sensors at page 5.
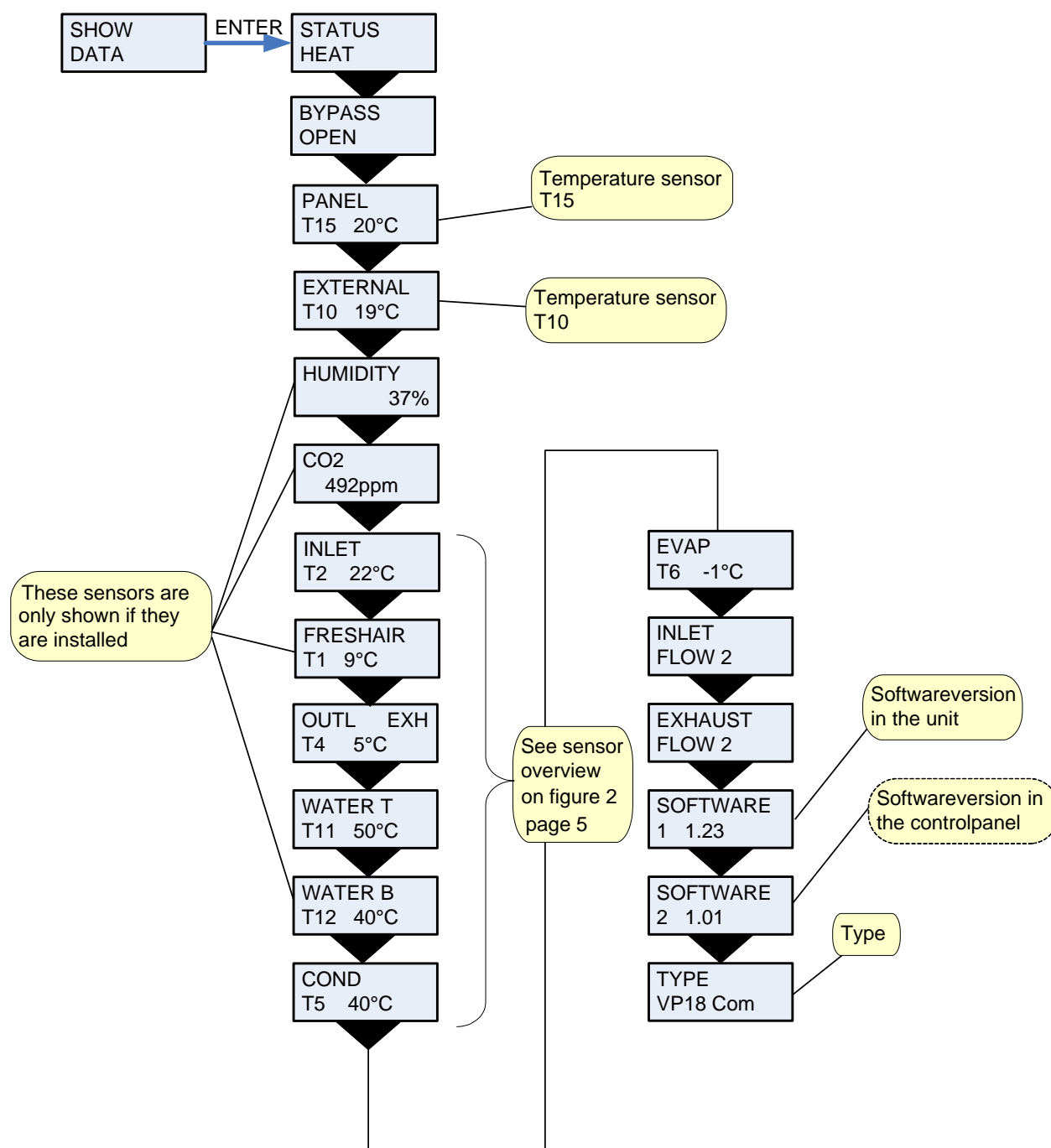
```
SHOW          ENTER    STATUS
DATA          ──────►  HEAT
                       ▼
                       BYPASS
                       OPEN
                       ▼
                       PANEL              ┌─────────────────┐
                       T15  20°C  ───────►│ Temperature sensor
                                          │ T15             │
                       ▼                  └─────────────────┘
                       EXTERNAL           ┌─────────────────┐
                       T10  19°C  ───────►│ Temperature sensor
                                          │ T10             │
                       ▼                  └─────────────────┘
                       HUMIDITY
                               37%
                       ▼
                       CO2                                   EVAP
                        492ppm                               T6   -1°C
                       ▼                                     ▼
   ┌──────────────┐    INLET                                 INLET
   │ These sensors│    T2   22°C                             FLOW 2
   │ are only shown│   ▼                                     ▼
   │ if they      │    FRESHAIR                              EXHAUST
   │ are installed│    T1   9°C                              FLOW 2     ┌──────────────┐
   └──────────────┘    ▼                  ┌──────────┐       ▼     ────►│ Softwareversion
                       OUTL    EXH        │See sensor│       SOFTWARE   │ in the unit  │
                       T4   5°C           │overview  │       1   1.23   └──────────────┘
                       ▼                  │on figure 2│      ▼     ┌──────────────────┐
                       WATER T            │page 5    │       SOFTWARE  Softwareversion in
                       T11  50°C          └──────────┘       2   1.01  the controlpanel
                       ▼                                     ▼     └──────────────────┘
                       WATER B                               TYPE      ┌──────┐
                       T12  40°C                             VP18 Com ►│ Type │
                       ▼                                              └──────┘
                       COND
                       T5   40°C
                       ▼
```

Figure 9: The "Show data" menu

User select

The menu CUSTOM OPTIONS overrides the operating mode of the main menu by activating an external switch.

There are five custom options:

"exhaust" and "inlet":
These two options increase or reduce the velocity of the exhaust or inlet air respectively for a limited period of time. The remaining functions of the operating mode remain unaltered. An external switch activates the timer function.
Another external switch ensures that the fans remain at the desired ventilation level until the switch is turned off.

"extend":
This option controls the velocity of the exhaust and inlet air and can be used to change the temperature of the inlet air for a limited period of time. An external switch activates the timer function.

"OFF":
Deactivates the external switch.

"ext offs":
Provides the possibility of choosing an afterflow time and changing the set point in external rooms.

Blinking menu options are indicated by " ".

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
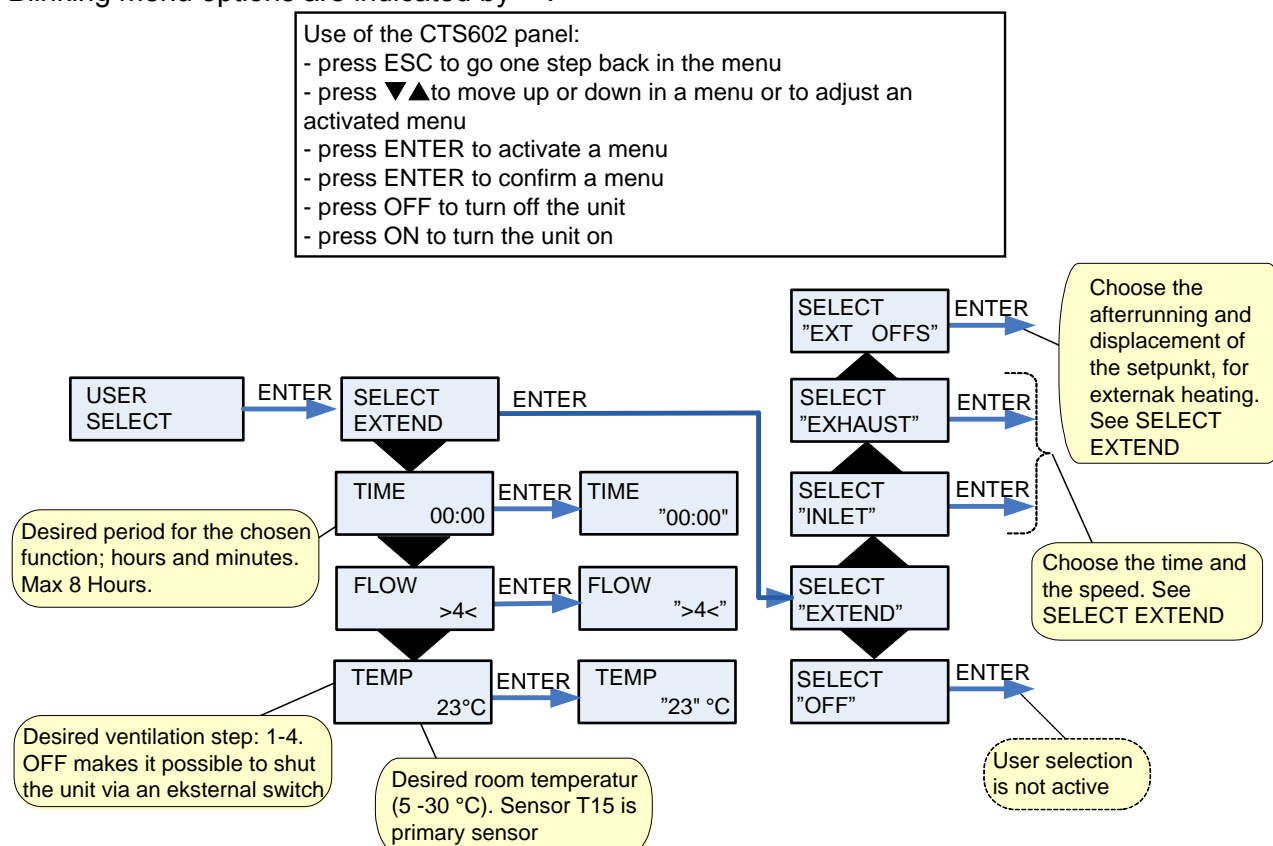- press ON to turn the unit on

Figure 10: The "User select" menu

User select 2

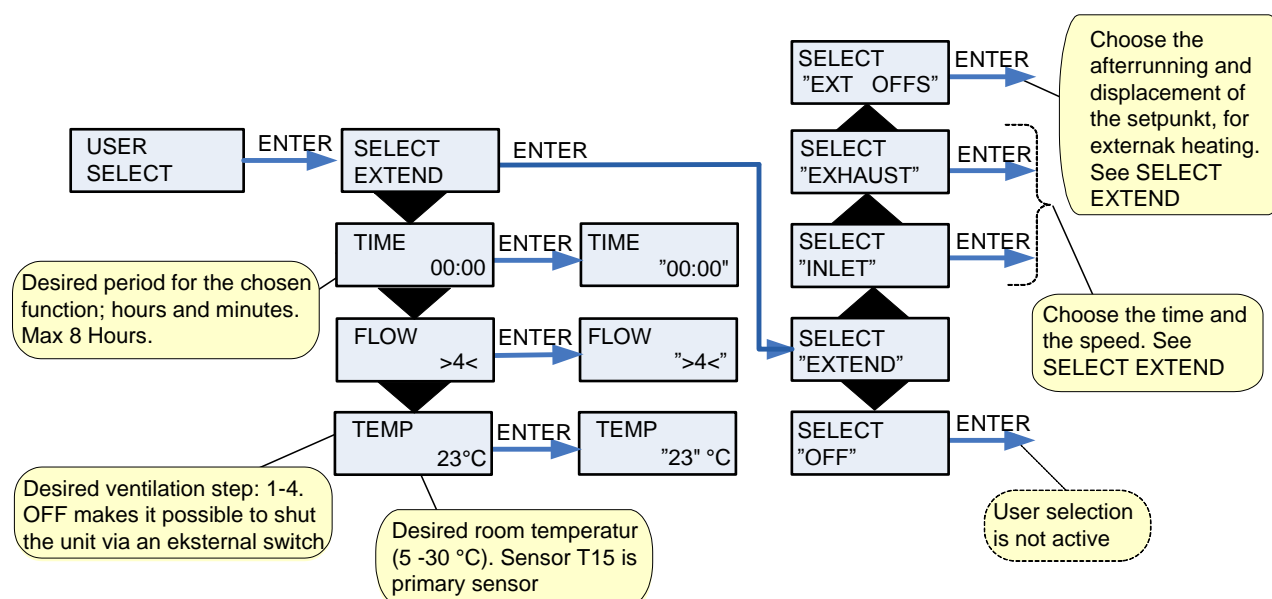User select 2 as user select

Figure 11: The "User select 2" menu

Setting of clock

In case of power cut the clock will function for at least 24 hours. If the time function is lost there will be an alarm.

Changing to daylight saving time has to be done manually.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲ to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

09-05-26 TU 12.10	ENTER→	YEAR 09	ENTER→	YEAR "09"	ENTER→

▼

| | | MONTH
05 | ENTER→ | MONTH
"05" | ENTER→ |

▼

| | | DAY
26 | ENTER→ | DAY
"26" | ENTER→ |

▼

Is only shown the first time after setting up the time function.

| | | WEEK
DAY 2 | | | |

▼

| | | HOUR
12 | ENTER→ | HOUR
"12" | ENTER→ |

▼

| | | MINUTE
10 | ENTER→ | MINUTE
"10" | ENTER→ |

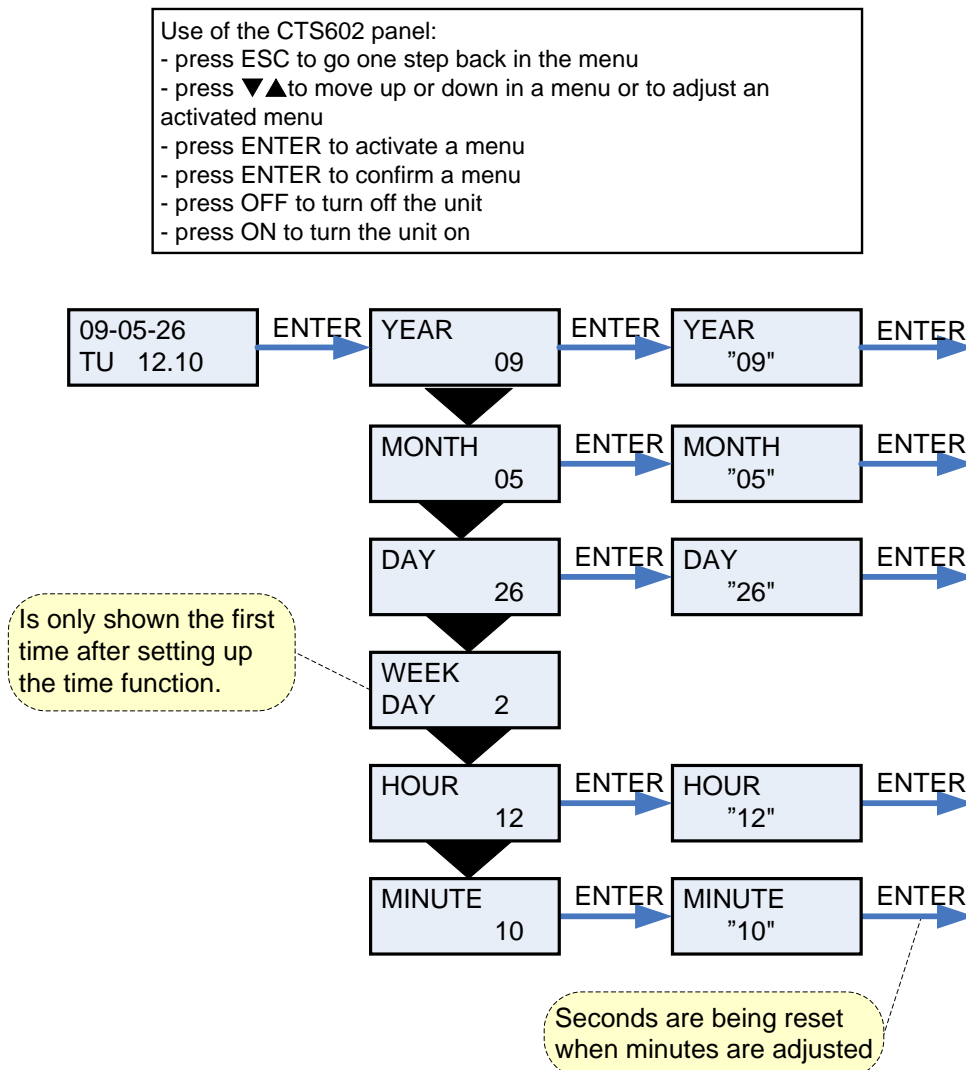*Seconds are being reset when minutes are adjusted*

Figure 12: "Setting of clock"

Week programme

The unit is equipped with 3 standardized week programmes. See page 17.
The unit is set to programme 1 from the factory.

In addition to these programmes it is possible to program your own week programme which can be one of the standard programmes with minor alterations.

" " indicates that the menu point flashes and can be set to another value.

```
Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an
activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on
```

Programmes	Weekday	Function	Time	Ventilation step	Temperature
Programme 1	Monday – Friday	1	6.00	3	21
		2	8.00	1	17
		3	15.00	3	21
		4	22.00	1	17
	Saturday – Sunday	1	8.00	3	21
		2	23.00	1	17
Programme 2	Monday – Sunday	1	8.00	3	21
		2	23.00	1	17
Programme 3	Monday – Friday	1	7.00	3	21
		2	16.00	OFF	21

Weekly program settings
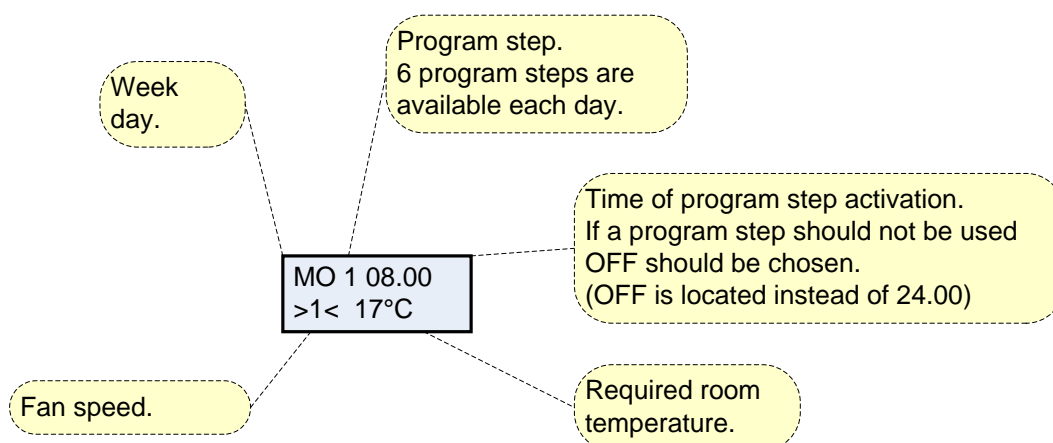
Figure 13: The Settings of "Week program"

SELECT "CLEAR" — ENTER → Here it is possible to delete all user made programmes. The unit will continue in AUTO mode without any week programme.

SELECT "PROG 3" — ENTER →

SELECT "PROG 2" — ENTER →

SELECT "PROG 1" — ENTER → SELECT PROG 1

Here it is possible to chose one of the 3 standard programmes. The 3 programmes can be altered but not deleted. The original programme can always be found.

WEEK PROGRAM — ENTER → SELECT OFF — ENTER → SELECT "OFF" — ENTER →

The Unit operaters under the main menu

MO1 06.00 >3 < 21°C — ENTER → Here it is possible to make your own programme or adjust one of the standard programmes. If there is more than one function at the same time only the last one is active.

MO2 08.00 >1 < 17°C — ENTER →

MO3 OFF >1 < 17°C — OFF replaces 24.00

MO4-6

MO→TU COPY — ENTER → MO→TU "COPY" — ENTER → TU→WE COPY — ENTER →

TU1 06.00 >3 < 21°C

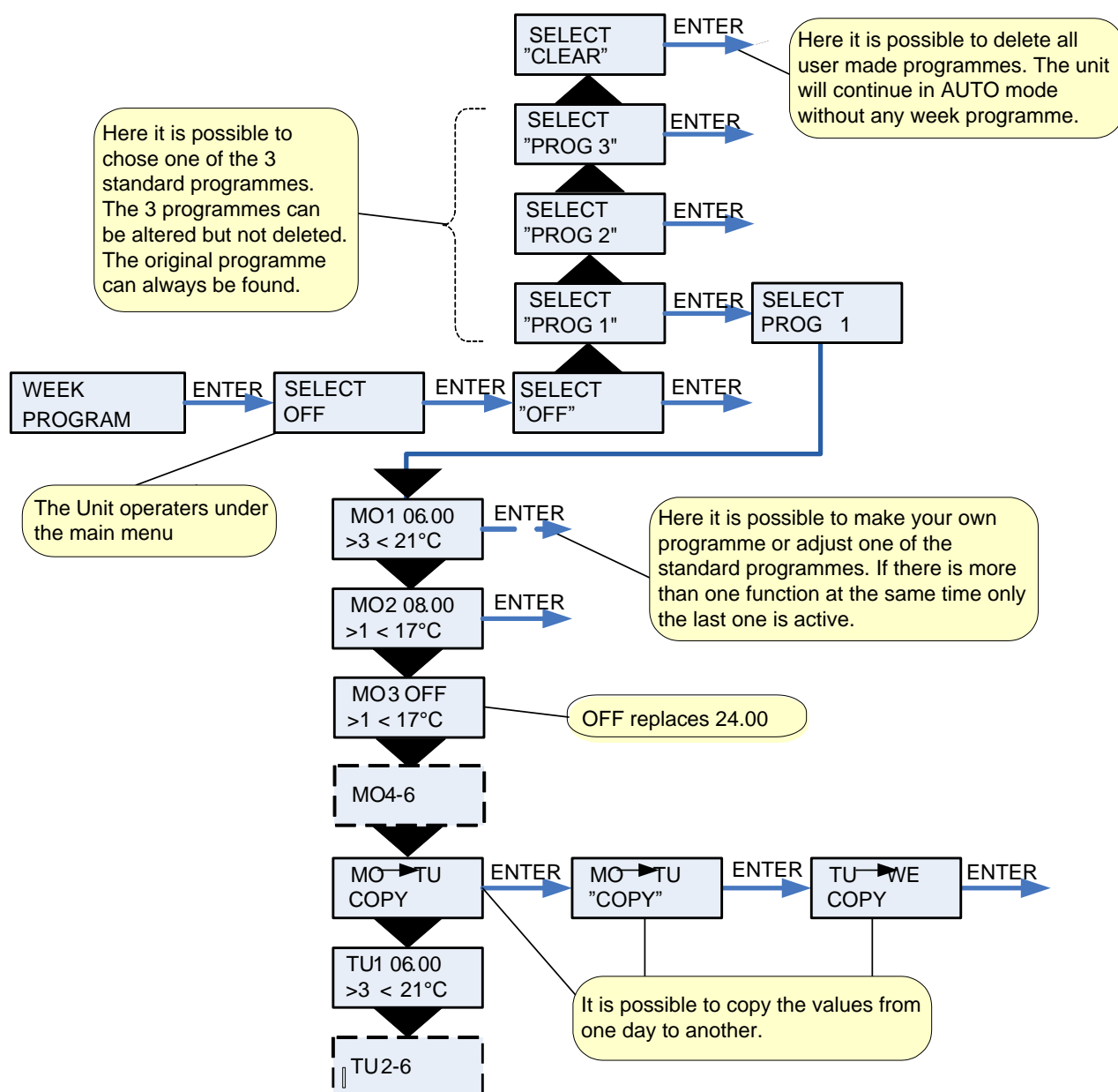It is possible to copy the values from one day to another.

TU2-6

Figure 14: The "Week program" menu

Inlet heating

The menu is only shown if a waterheatingsurface is integrated into the system.

The inlet temperature is automatically controlled on the basis of a selected curve. Inlet temperature is controlled as a function of outdoor temperature, i.e. the lower the outdoor temperature, the higher the inlet temperature

INLET MIN: The setting overrides any lower setting calculated by the curve control.
INLET MAX: The setting overrides any higher setting calculated by the curve control.

When room temperature is below set point the compressor starts to heat the inlet air. It is possible to use the heat pump for heating the inlet air by delaying the start of the electrical heating surface.

OFFSET T15 (sensor in control panel) is the deviation below room temperature where the electrical heating surface is allowed to function. **DELAY** determines for how long the deviation may last before the electrical heating surface is activated.
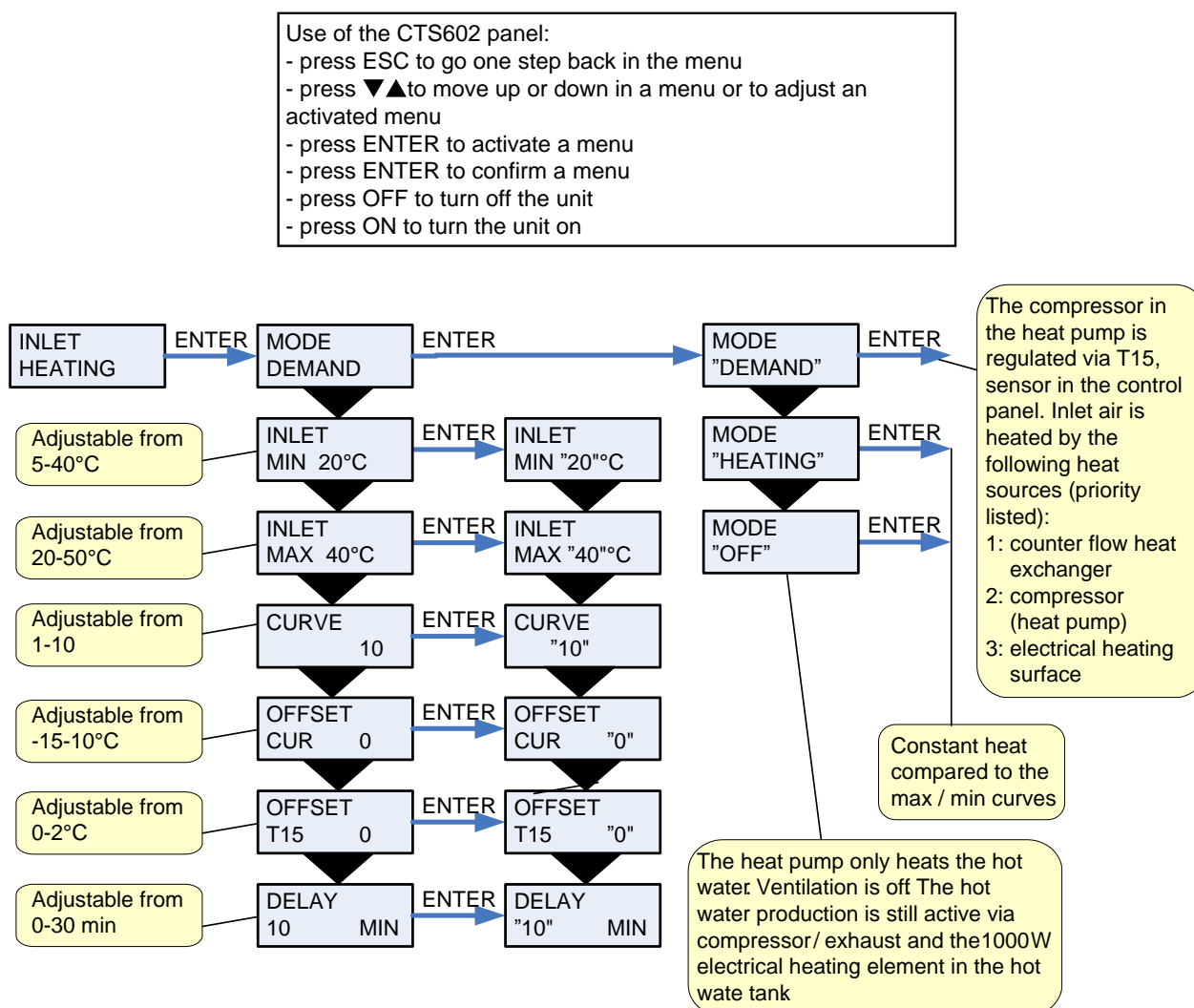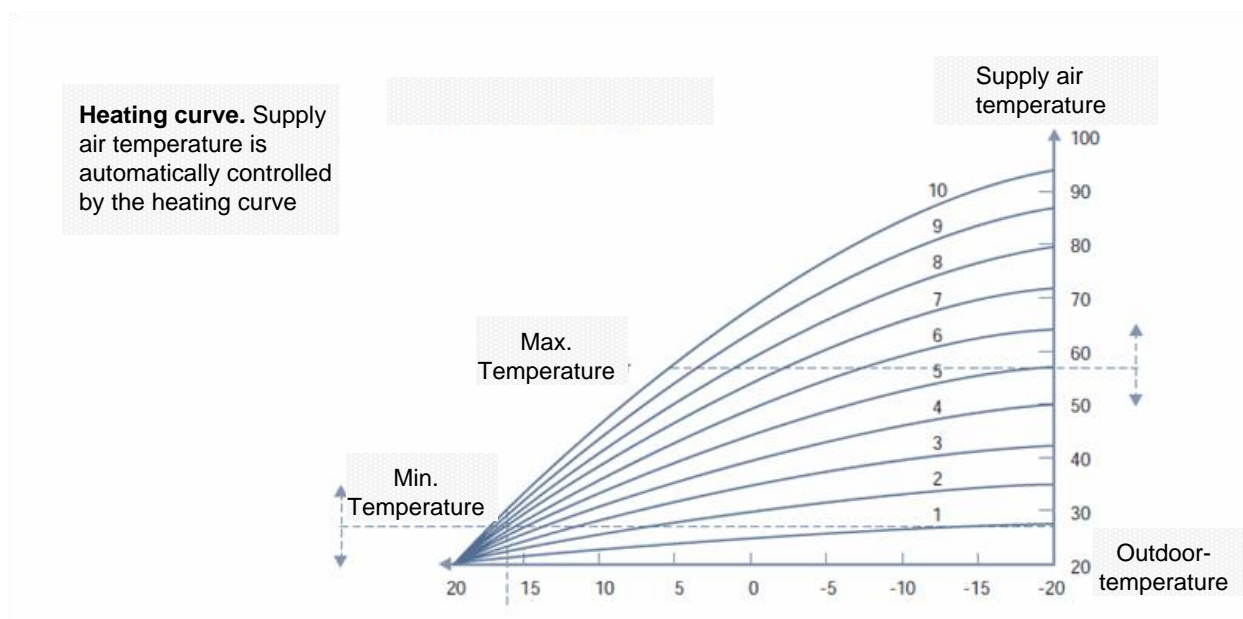
Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

Figure 15: The „Inlet heating" menu

Heating curve. Supply air temperature is automatically controlled by the heating curve

Figure 15a: " Heating curve"

Hot water

The "Hot water" menu shows the data for production of hot water.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲ to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

The electrical heating supplement temperature T11 is set between 5 °C to 10 °C lower than the primary heating temperature delivered by the compressor. It is possible to set the t11 temperature between 5 °C and 85 °C.
Recommended value: 35-40 °C

The hotwater is primarily heated by the heat pump which delivers the energy to the condensator in the water. If you have a very large demand for hot water the electrical heating element can be engaged in order to reduce time for heating the water.
T12 can be set between 5 °C and 60 °C. it is recommended to set T12 between 45 °C and 55 °C

HOTWATER → ENTER → EL SUP T11 30°C → ENTER → EL SUP T11 "30°C" → ENTER

COMP T12 55°C → ENTER → COMP T12 "55°C" → ENTER

COMP MAX T12 65°C → ENTER → COMP MAX T12 "65°C" → ENTER

For security reasons the compressor stops when the water temperature reaches the chosen temperature in order to avoid overheating. T12 can be set between 5 °C and 80 °C.
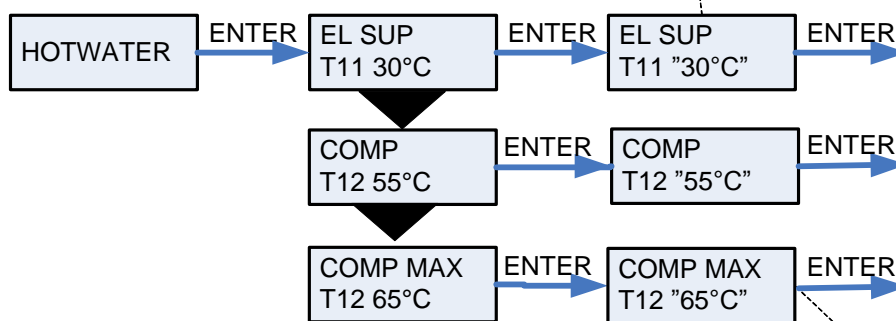
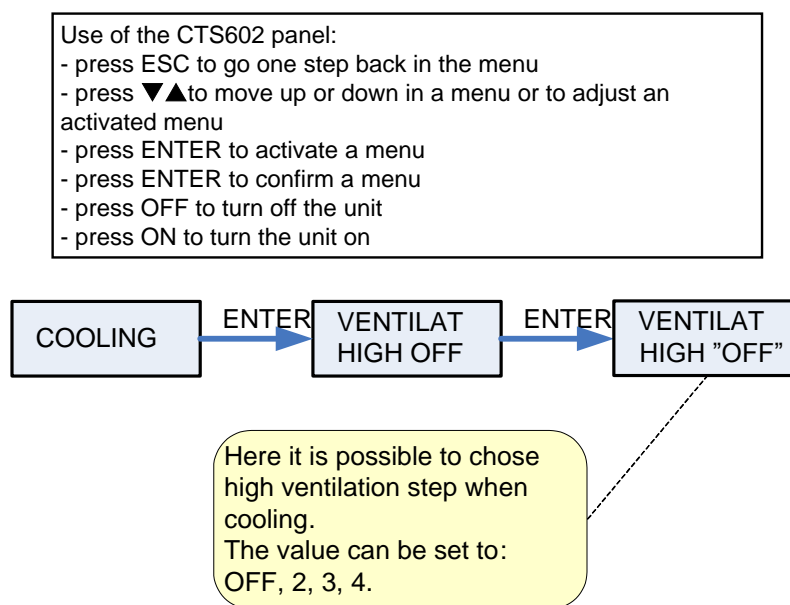**Figure 16: The "Hot water" menu**

Cooling

In the "Cooling" menu it is possible to cool the inlet air by bypassing the inlet air around the counter flow heat exchanger. See figure 17a
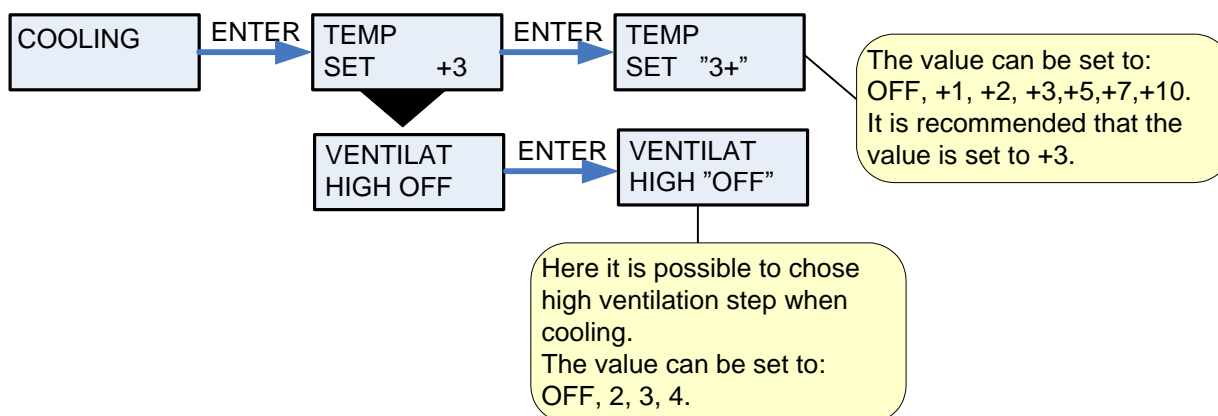If the unit has active cooling via compressor see figure 17b.

The COOLING menu gives the possibility of automatic high fan speed when high outside temperatures.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

COOLING — ENTER → VENTILAT HIGH OFF — ENTER → VENTILAT HIGH "OFF"

Here it is possible to chose high ventilation step when cooling.
The value can be set to: OFF, 2, 3, 4.

Figure 17a: The "Cooling" menu

COOLING — ENTER → TEMP SET   +3 — ENTER → TEMP SET   "3+"

The value can be set to: OFF, +1, +2, +3,+5,+7,+10. It is recommended that the value is set to +3.

VENTILAT HIGH OFF — ENTER → VENTILAT HIGH "OFF"

Here it is possible to chose high ventilation step when cooling.
The value can be set to: OFF, 2, 3, 4.

Figure 17b: The "Cooling" menu

Humidity

In the "Humidity" menu it is possible to regulate the ventilation step in accordance with the humidity level.

Low ventilation step is only active in wintertime and at humidity levels below 30%.
High ventilation step is activated when the humidity rises 10% or more compared to the average humidity level the last 24 hours. High ventilation step is deactivated when humidity drops 3% or more compared to the average humidity level the last 24 hours.

It can last up to 3 minutes before high/low ventilation step i stabilized.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲ to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

Option of choosing low ventilation step at low humidity.
The value can be set to: OFF and 1, 2, 3, .

| HUMIDITY | ENTER | FLOW LOW 1 | ENTER | HUMIDITY LOW "1" | ENTER |

Adjustable range between 15...45%
Standard is 30 %

| LOW 30% | ENTER | LOW "30"% | ENTER |

| FLOW HIGH 4 | ENTER | FLOW HIGH "4" | ENTER |

Option of choosing high ventilation step at high humidity.
The value can be set to: OFF and 2, 3, 4.

| TIME 0 MIN | ENTER | TIME 0 MIN | ENTER |

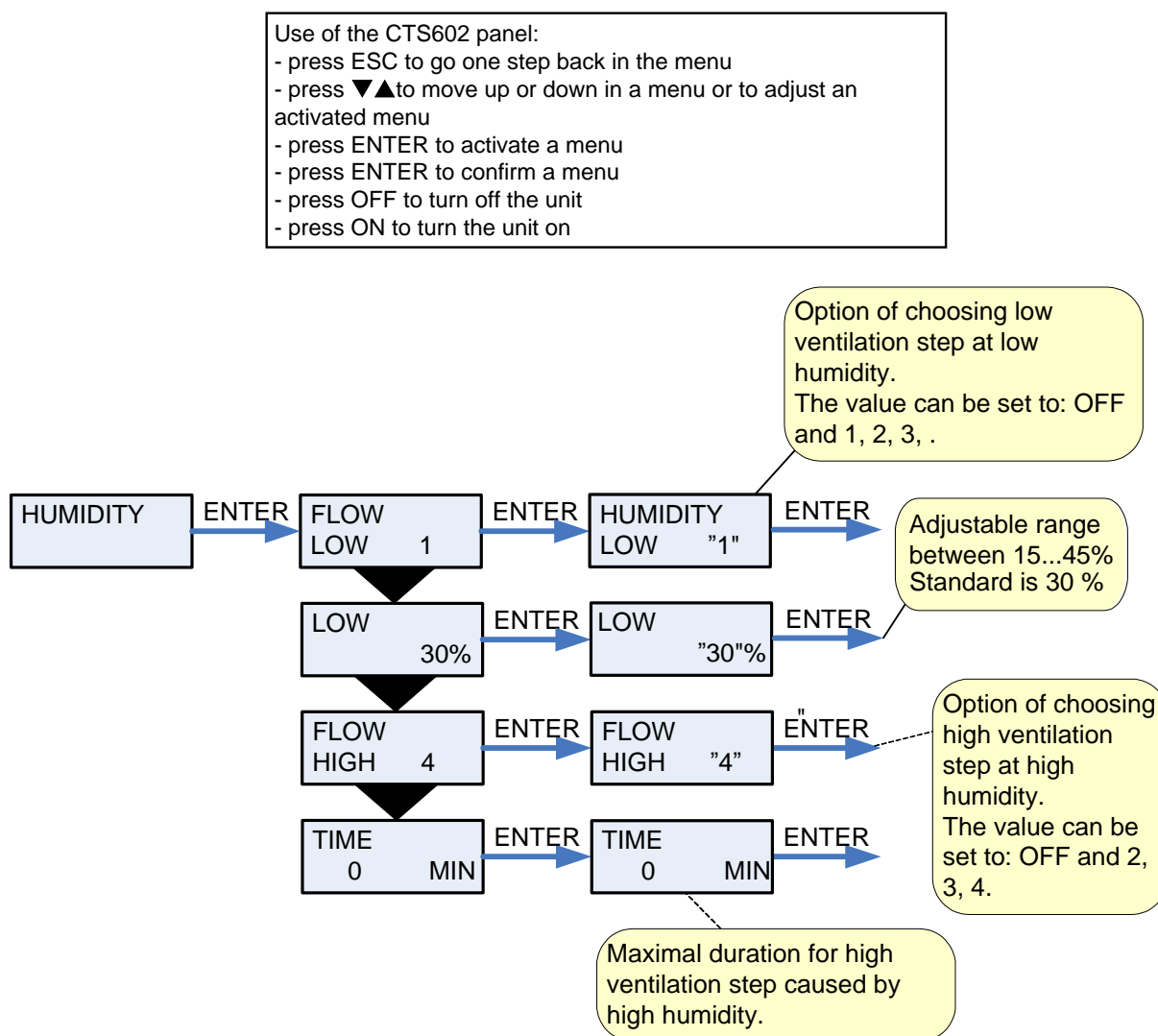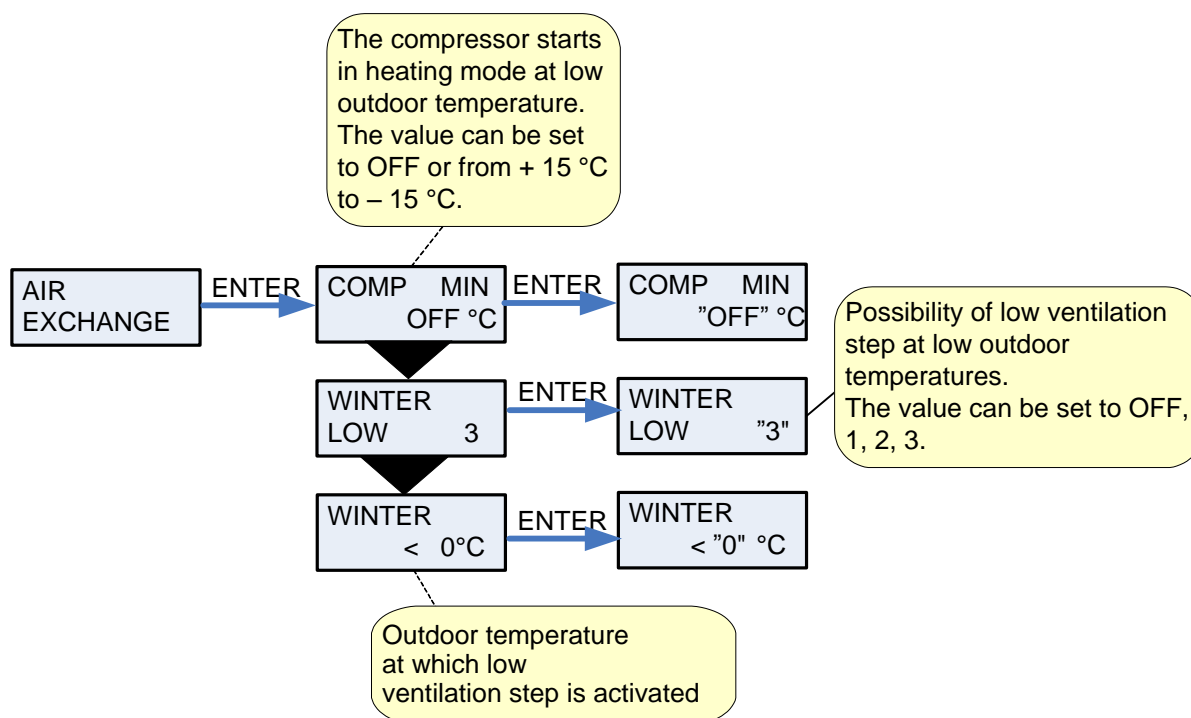Maximal duration for high ventilation step caused by high humidity.

Figure 18: The "Humidity" menu

Air exchange

In the "Air exchange" menu it is possible to regulate the airflow in wintertime

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲ to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
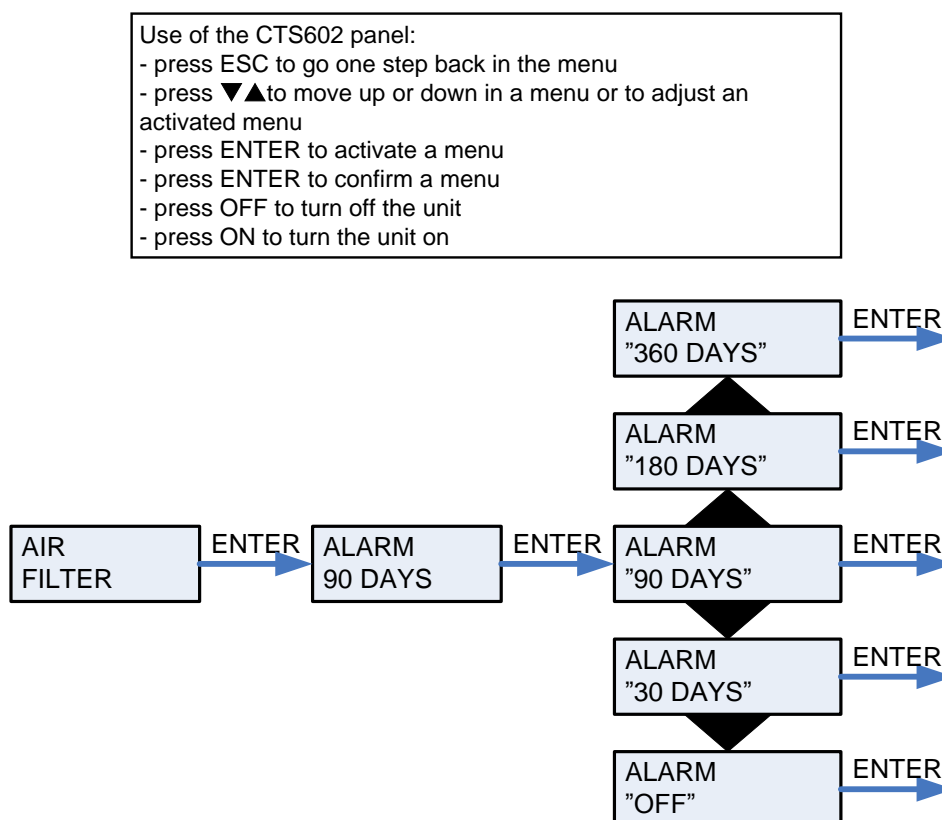- press OFF to turn off the unit
- press ON to turn the unit on

The compressor starts in heating mode at low outdoor temperature. The value can be set to OFF or from + 15 °C to – 15 °C.

| AIR EXCHANGE | ENTER → | COMP MIN OFF °C | ENTER → | COMP MIN "OFF" °C |

Possibility of low ventilation step at low outdoor temperatures. The value can be set to OFF, 1, 2, 3.

| WINTER LOW 3 | ENTER → | WINTER LOW "3" |

| WINTER < 0°C | ENTER → | WINTER < "0" °C |

Outdoor temperature at which low ventilation step is activated

Figure 19: The "Air exchange" menu

Air filter

In the "Air filter" menu it is possible to chose the interval of the filter guard.

The unit is factory configured to provide emergency with 90 days interval. It is then possible to change this range if necessary.

After the deadline you will see "Filter" as an information alert

" " indicates that the menu point flashes and can be set to another value.
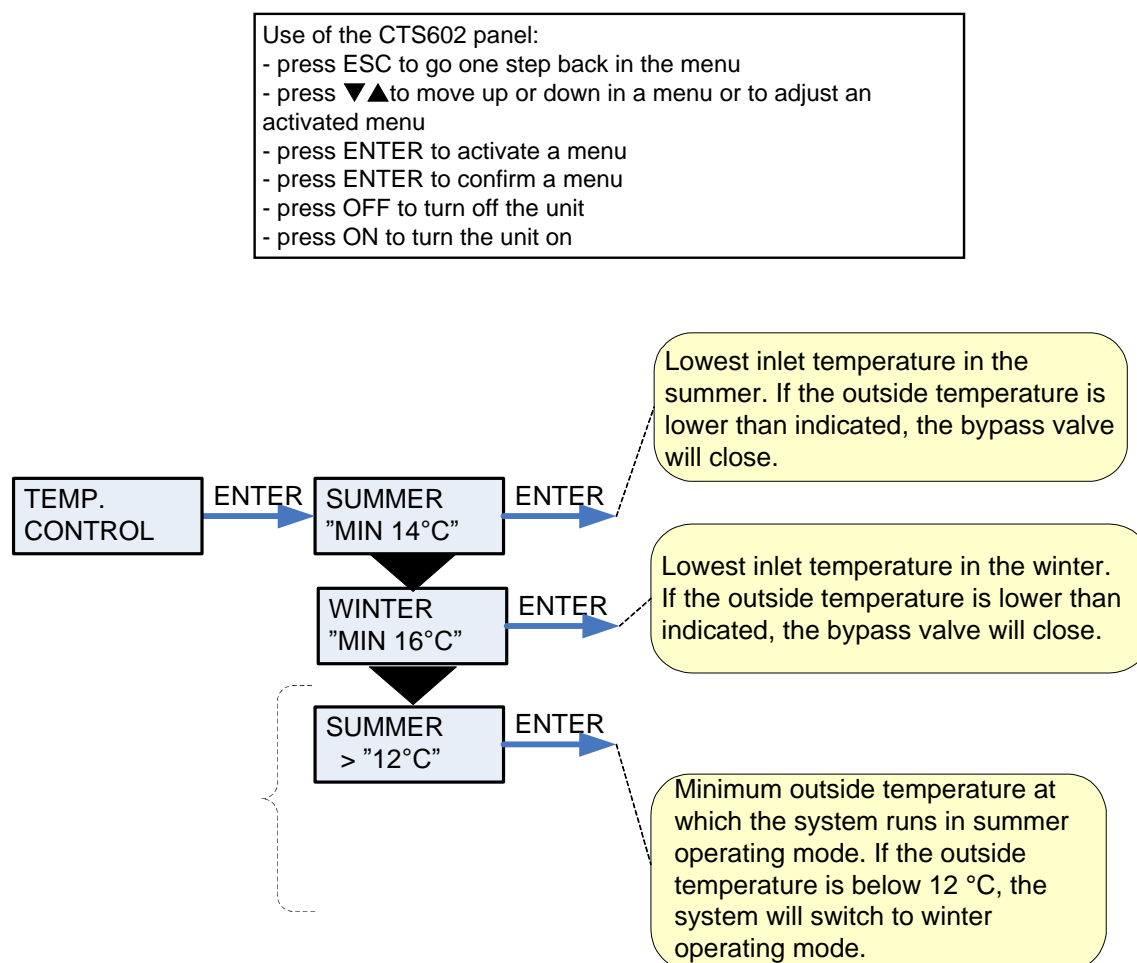
```
Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an
activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on
```

ALARM "360 DAYS" → ENTER

ALARM "180 DAYS" → ENTER

AIR FILTER → ENTER → ALARM 90 DAYS → ENTER → ALARM "90 DAYS" → ENTER

ALARM "30 DAYS" → ENTER

ALARM "OFF" → ENTER

Figure 20: The "Air filter" menu

Temp. control

In the "Temp. control" menu it is possible to set the highest and lowest inlet temperature.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲ to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on

Figure 21: The "Temp. control" menu

Setting of language

In this menu you set which language to be used in the CTS602 panel.

" " indicates that the menu point flashes and can be set to another value.

Use of the CTS602 panel:
- press ESC to go one step back in the menu
- press ▼▲to move up or down in a menu or to adjust an activated menu
- press ENTER to activate a menu
- press ENTER to confirm a menu
- press OFF to turn off the unit
- press ON to turn the unit on
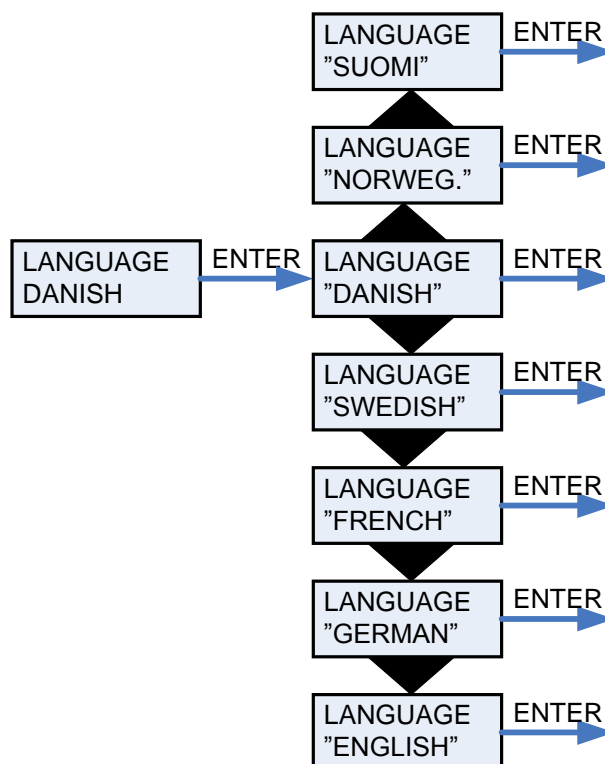
Figure 22: The „Language" menu

Faultfinding

If there should be any operating errors please inspect the following before contacting your service mechanic:

Check if the alarm diode on the CTS602 panel is flashing. If this is the case please read the alarm in the "Show alarms" menu and correct the fault. If necessary please contact your local service mechanic. Alarm codes and directions for correcting alarms can be found in the CTS602 directions.

- **Compact P is functioning but with reduced output.**
  Please inspect if the unit is supplied with enough air. Check the filters and control that the air valves are sufficiently opened. In 98% of the cases the fault derives from obstructed filters. The ventilators can be set on a higher speed if necessary. Any draught controls to the outside should be closed at outside temperatures below 6°C.

- **Compact P is functioning but there is no hot water.**
  Please check if the hot water tank is emptied. If the unit is supplied with hot-water circulation and the pipes are not insulated there can be a significant heat-loss which can cause a reduced output of the Compact P.

  Is the water temperature adjusted correctly in the CTS602 control? (T12). The temperature should normally bet set to 45–55°C. To adjust the temperature, please see the CTS602 directions.

  Is the air supply too cold or is the air flow too little? Please check the filters and valves and if the insulation of the ducts is sufficient and dense.

- **Compact P is not functioning.**
  Please inspect the fuse. Check if the safety thermostat for hot water has disengaged the electricity. If this is the case please press the button and the thermostat will connect when the water temperature has dropped 10-15°C. if the thermostat disengages the electricity several times please contact your service mechanic.

Maintenance

At least every 3 months:

The filters should be cleaned and renewed when needed. Usually the filters need to be renewed once a year. The filter guard in the CTS602 control can be used in order to make sure that the filters are checked. The filters can be cleaned by vacuuming or shaking them.
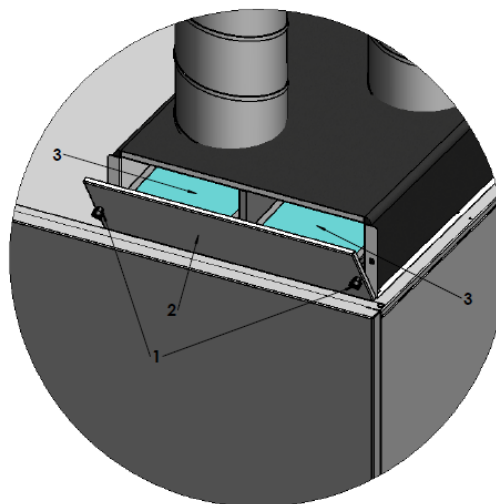

Figure 23: Air Filter change

Changing filters:
1. Loosen screws
2. Remove the filter hatch
3. Pull out the two filter frames for change/vacuuming

Once a year:

- The sacrificial anode should be inspected and renewed if it is much corroded. The hot-water tank can corrode if the anode is left unchanged.
- The intake should be inspected and any uncleanness should be removed.
- The evaporator should be inspected and cleaned.
- It should be checked that the condensate has free passage through the water seal and the condensation drain.
- The safety switch for the hot water tank should be controlled.
- It is recommended to take out a subscription for service.

Tilbehør
Zubehör
Accessories
Accessoires
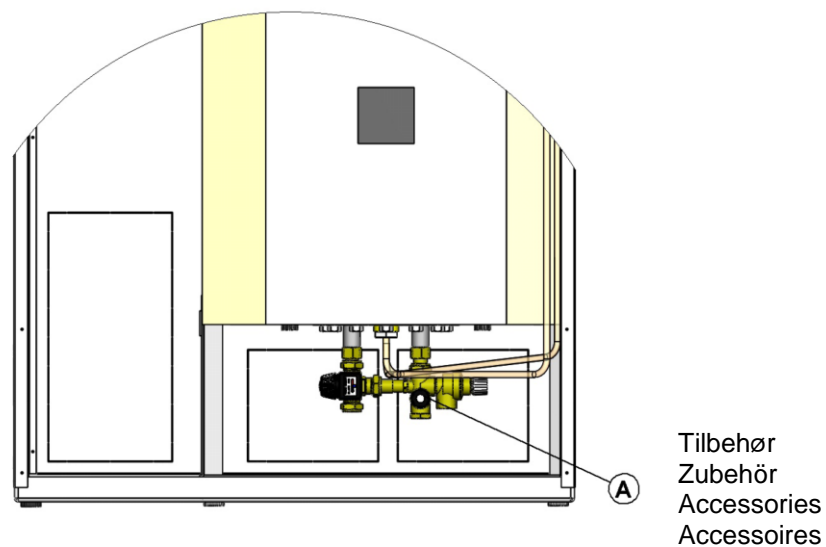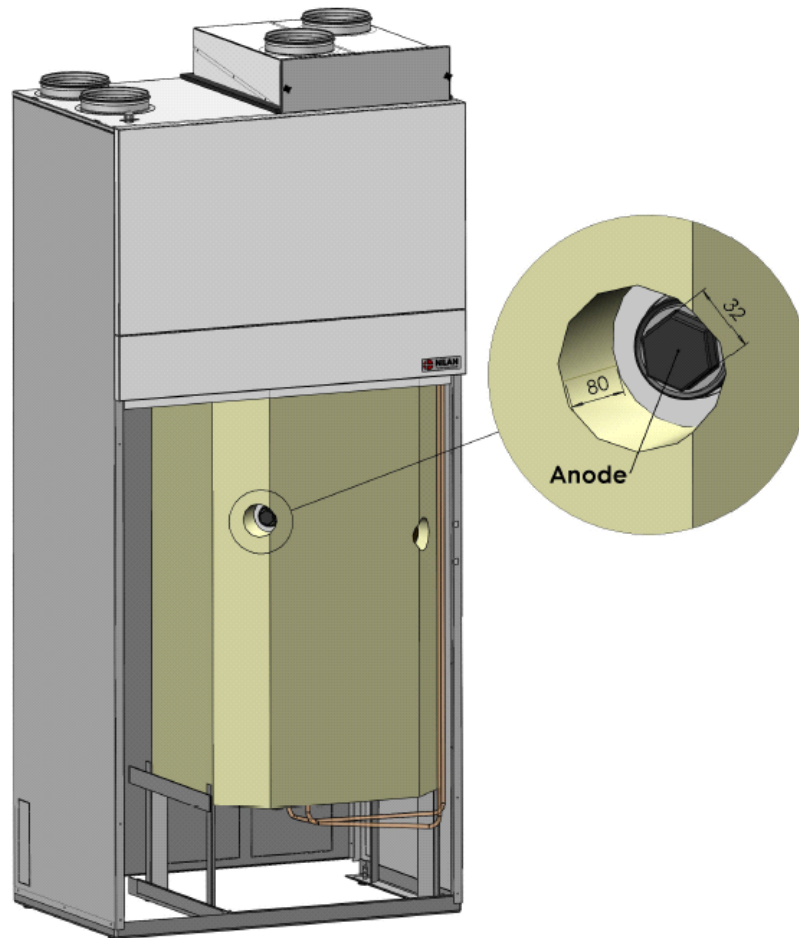
Figure 24: Placement oft he safety switch and the sacrifical anode

Energy saving

- Keep the hot-water at a low temperature. Try with 45°C.

- The auxiliary heating element should be cut off and only be used at very large hot-water demands. Please see CTS602 directions

- The ventilation speed should not be set higher than necessary.

- Avoid hot-water circulation.

- Spread out the bathing times as the Compact P needs 6-7 hours to heat the 180L water.

- Insulate the ducting as prescribed.

- Do not cool during winter time.

Accessories / spare parts

Filters

Type	Antal	Nilan varenummer
Filter (1pair = 2pcs.)	1	39167
Pollen filter F7	1	39545

Accessories / spare parts

Type	Antal	Nilan varenummer
Compressor (heat pump)(electrical) 0,9kW	1	764131
Compressor (heat pump)(electrical) 2,0kW	1	76431
Sensor for relative humidity (Humidity sensor)	1	23997
Sensor for CO_2 in the air (CO_2-Sensor)	1	239995
Hygrostat	1	3637
CTS602, control PCB	1	23991
CTS602, control panel complete	1	2398
Heating Cable for condensate drain (frost protection)	1	2172
Security group that boil protection (in line pressure to 10 bar)	1	3690
Security group that boil protection (at line pressure up to 6 bar)	1	3691
Sacrificial anode 5/4"x450mm	1	19202
PEX Pipe (for use with a hot water-circulation)	1	9825

Figure 25: Accessories/ spare parts