HELIOTHERM
The Heat Pump

INSTRUCTION MANUAL

CONTROL UNIT web control® 321

Customer level

Version 34

INSTRUCTION MANUAL

Control Unit web control® 321 - CUSTOMER LEVEL

Heliotherm Wärmepumpentechnik Ges.m.b.H.
Sportplatzweg 18
A-6336 Langkampfen / Tirol

Tel. +43 (0)5332 / 87496-0
Fax +43 (0)5332 / 87496-30

info@heliotherm.com
www.heliotherm.com

Safety Notice

Any changes and/or manipulations made to the factory suggested settings will cancel the **warranty claim**.

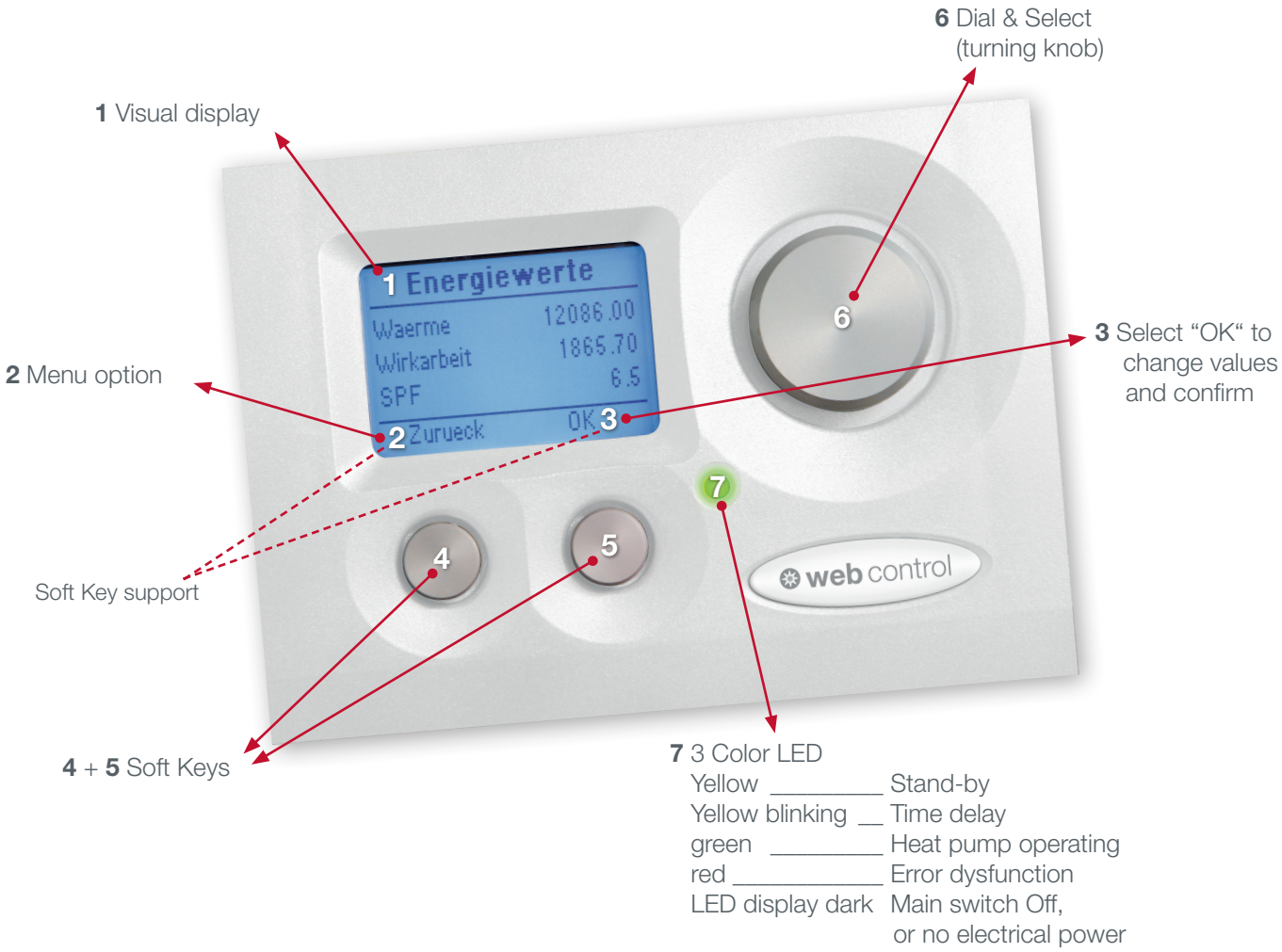
Turn off the heat pump at the heating emergency switch before opening the case. Or remove the fuse from electrical circuit board.

CONTENT

INSTRUCTION MANUAL
Control Unit web control® 321 - CUSTOMER LEVEL

1. CONTROL ELEMENT

1.1 Control element web control® 321

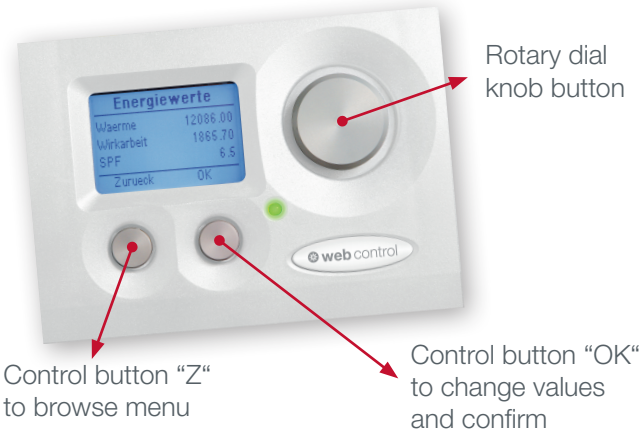


1.2 Menu control

The menu can be controlled with 3 elements:

- For menu jumps to the previous level or for leaving the current level, the left button „Z“ is pressed.

- For confirming or changing values, the right button „OK“ is used.
  The menu selection is controlled with the rotary knob.



ZERTIFIKAT
CERTIFICATE

European Quality Label for Heat Pumps

ehpa

Die Osterreichische EHPA Gütesiegelkommission bescheinigt, dass die folgenden Wärmepumpen die Anforderungen des EHPA Gütesiegels für Wärmepumpen (V 1.4 | 2011) erfüllen.

The Austrian national EHPA Quality Label Commission certifies the listed heat pump(s) according to the requirements of the EHPA Quality Regulation V1.4/2011 from the European Heat Pump Association (EHPA).

Wärmepumpen Typ Heat pump type	Luft/Wasser Air/Water
Modelle Models	HP06L-K-BC, HP08L-K-BC, HP10L-K-BC, HP12L-K-BC
Vertreiber Distributed by	Heliotherm Wärmepumpentechnik Ges.m.b.H. Sportplatzweg 18 6336 Langkampfen Austria
Zertifikatnummer Certificate ID	AT-HP-00178
Gültig in Valid in	Osterreich Austria
Gültig bis Valid until	24.05.2015

Wien, 25.05.2012

Ing. Heinrich Huber, MSc
Dr. Hermann Halozan
Osterreichische Gütesiegelkommision
Giefinggasse 2
1210 Wien
Osterreich

ehpa european heat pump association

WPZ
Wärmepumpen-Testzentrum

Von der Schweizerischen Akkreditierungsstelle akkreditierte Prüfstelle
Laboratoire d'essai accrédité par le Service d'Accréditation Suisse
Testing Laboratory accredited by the Swiss Accreditation Service

The Swiss Testing Service is one of the signatories to the EAL
Multilateral Agreement for the recognition of test certificates

Akkreditierungs-Nr.
No. d'accréditation STS 0499
Accreditation No.

Prüfnummer
No. d'essai LW-159-10-19
Test No. Version 2

Prüfzertifikat
Certificat d'essai
Test certificate

Auftraggeber Client Customer	Heliotherm Wärmepumpentechnik GmbH Sportplatzweg 18 A-6336 Langkampfen	Datum der Prüfung Date du test Date of test	29.10.2010 - 11.11.2010
Gerät Type Type	HP10L-K-BC	Bauart Type de construction Type of construction	Splitwärmepumpe Pompe à chaleur spitée Split heat pump
Kältemittel Réfrigérant Refrigerant	R410A	Kältemittelfüllmenge Quantité de réfrigérant Capacity of refrigerant	8.26 kg

Prüfung wurde gemäss den folgenden Normen durchgeführt	EN 14511
Mesures exécutées conformément aux normes	EHPA-Prüfreglement V1.4 (vollständig / complètement / complete)
Measurements regarding the following standards	EN 12102 and EN ISO 9614-2

Messresultate und Messunsicherheiten sind auf der folgenden Seite aufgeführt und sind Teil des Zertifikates.
Les résultats et les incertitudes de mesure sont donnés aux page suivante et font partie du certificat.
This measurements, the uncertainties are given on the following page and are part of the certificate.

Stempel und Datum
Timbre et date
Stamp and date

WPZ
Wärmepumpen-Testzentrum
Hochschule f. Technik NTB
Werdenbergstrasse 4
CH – 9471 Buchs SG

28.11.2014

Messort
Site de mesure
Measuring site
Wärmepumpen-Testzentrum

Prüfer
Contrôleur
Supervisor

T. Loop, Messtechniker

Prüfstellenleiter
Chef du Laboratoire
Head of the Laboratory

M. Eschmann, Dipl. Ing. FH

Leistungen / Performances / Performances

LW-159-10-19 / Version 2

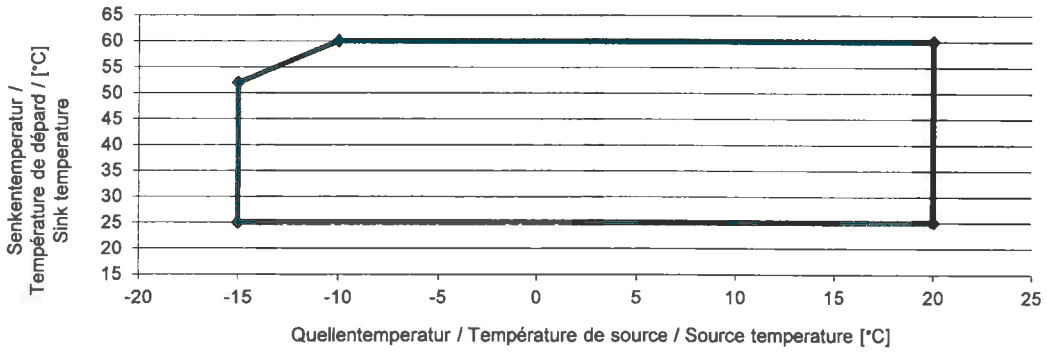
Prüfbedingungen Conditions d'essai Test conditions		A10 / W35 (80% r.H.)	A7 / W35 (89% r.H.)	A2 / W35 (84% r.H.)	A2 / W35-25 (84% r.H.)	A-7 / W35 (75% r.H.)	A-15 / W35 (-% r.H.)	A7 / W45 (89% r.H.)	A20 / W55 (50% r.H.)	A7 / W55 (89% r.H.)	A-7 / W55 (75% r.H.)				
Heizleistung Puissance chauffage moy. Heating power	kW	13.06	**12.34**	**10.12**	10.12	7.97	6.10	11.64	13.59	10.67	5.84				
Elektrische Leistung Puissance électrique moy. Electrical power	kW	2.44	**2.43**	**2.42**	2.29	2.41	2.32	3.04	3.63	3.69	3.49				
COP	-	5.35	**5.07**	**4.19**	4.43	3.31	2.63	3.83	3.74	2.89	1.67				

A7 / W35: COP ± 2.38%; cosϕ = 0.82 A2 / W35: COP ± 2.74%; cosϕ = 0.82

Einsatzgrenzen / Limites d'utilisation / Warranted usage limits

Temperaturbedingungen
Conditions du température
Temperature conditions

A-15 / W25
A-15 / W52
A-10 / W60
A20 / W25
A20 / W60
-



Sicherheitsprüfung
Test de sécurité
Safety test -

Schallleistungspegel / Niveau de puissance acoustique / Sound power level

Verdampfer Evaporateur Evaporator	dB(A)	66.0	Innenmessung Mesure intérieure Indoor measurement	dB(A)	51.0
Messunsicherheit Ecart type Standard deviation	dB	± 1.5		dB	± 1.5

Baureihe / Gamme de fabrication / Type series

	HP06L-K-BC[1]		HP08L-K-BC[1]		HP10L-K-BC		HP12L-K-BC[1]	
A-7 / W35 (COP / kW)	*3.10*	*4.94*	*3.23*	*6.27*	**3.31**	**7.97**	*3.22*	*9.72*
A2 / W35 (COP / kW)	*4.07*	*6.51*	*4.09*	*7.98*	**4.19**	**10.12**	*4.08*	*12.54*
A7 / W35-30 (COP / kW)	*5.05*	*8.08*	*4.98*	*9.60*	**5.07**	**12.34**	*4.96*	*15.14*
A10 / W35 (COP / kW)	*5.40*	*8.61*	*5.27*	*10.24*	**5.35**	**13.06**	*5.28*	*16.36*
Sound power level [dB(A)]	50.9		51.3		**51.0**		51.8	

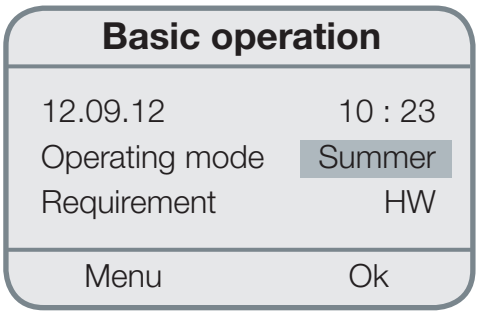
[1] Herstellerangaben (ohne Gewähr)
[1] Manufacturer informations (no liability assumed)

2. BASIC OPERATION

In this display, the basic parameters such as date/time, type of operational requirement, operating mode, requirement RL-T / PU-T, HCI temperature, hot water temperature and lead times are displayed with the current operating status.

Display date/time: dd.mm.yy hh:mm

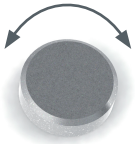
For settings refer to chapter time programme / setting time (description on page 12)



2.1 Setting operating mode

a) Off: Frost-proof
b) Automatics: Automat. hot water+heating
c) Cooling: HW + cooling
d) Summer: Hot water only
e) Con. operation: Heating curve increase by 3 K
f) Decrease: Heating curve decrease by 3 K
g) Holiday: Frost-proof, date settable
h) Party: Continuous operation for 2 hours

Change the operating mode

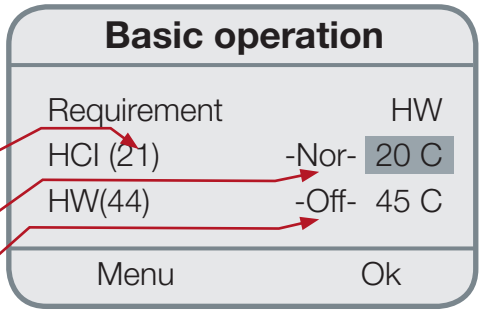


Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

The current requirement is displayed below (heating, HW, cooling, heating off, ext. requirement, none)



2.2 Parallel displacement of the heating curve

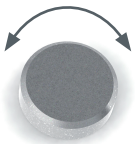
Setting range is 10 - 25 °C.

The actual room temperature is displayed only if a room sensor is connected to the control element.

Current status time programme heating

Current status time programme hot water

Change the day-time room temperature



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

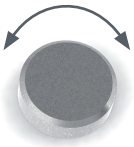
Confirm

2.3 Setting
Night HCI T

- The night-time room temperature is automatically reduced by the setback temperature.
- The switching times can be changed in the menu time programme / TP heating (description on page 10).
- The setback temperature can be changed in the menu heating circuit / target value (description on page 16) and is preset to -3 K(referred to the return temperature heating system).

2.4 Setting
hot water temperature

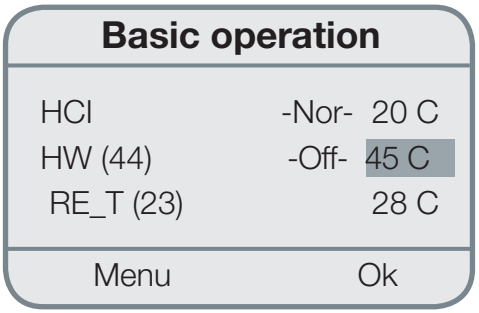
Setting range is 10 - 75 °C*.



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

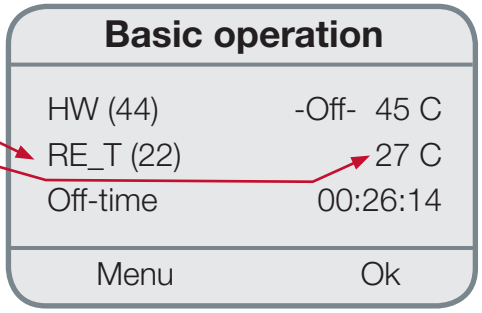


2.5 Display return temperature

Left - Display of actual return temperature
(with HCI buffer actual buffer temperature BU_T);
Right - Display of target return temperature
(with HCI buffer target buffer temperature)

The target return temperature results from the heating curve HC, the time programme and the room correction factor.

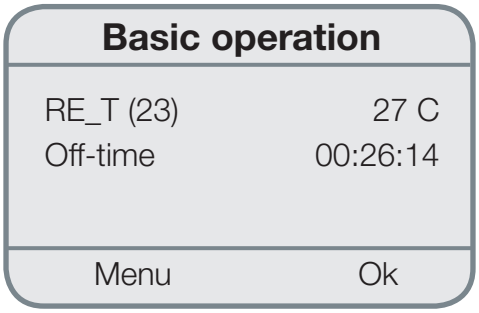
(Settings time programme: refer to page 12 / Settings time program / heating basic operation)



* Customer can set up to 50 °C /
expert up to 75 °C (2nd level only)

2.6 Display of the current status of the heat pump with counter

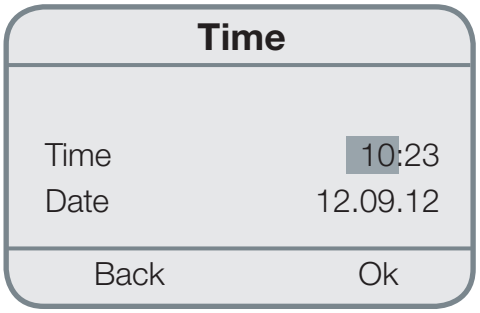
In the left field, the current mode of the heat pump is displayed, and in the right field the remaining time until the action is completed and the heat pump changes to the next operating status. During normal operation, the counter counts upwards.



Anzeige:
a) Off-time: Time delay hh:mm:sec (counts downwards)
b) LT-CIP: Lead time of the circulating pump
c) LT_ESP: Lead time of the energy source pump
d) Pre-control time Exv: Pre-control time expansion valve
e). Running since: Running time of the heat pump
f) Injection time
g) 2nd level

3. TIME PROGRAMMES

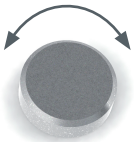
In this section, the settings for time, time interval for heating, hot water, circulating pump, holiday as well as party are performed.



3.1 Setting time (time)

Here you can change the settings for Time, Date and change the day of the week.

Change of time and date



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

Back to the main menu time programme

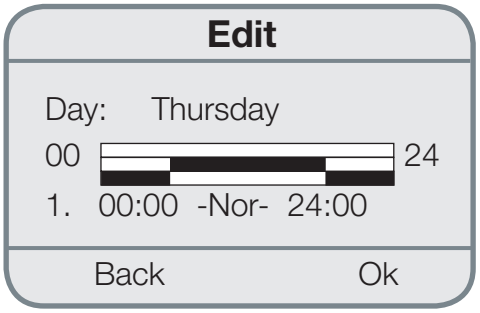
3.2 Setting Time programme heating (TP heating)

In this programme, the switching times of the heating circuit are set.

Upon delivery of the heat pump, the heating programme is set to the following default parameters:

Switching time 1:
MON - SUN normal operation
from 00:00 to 24:00
- Nor -

In the period in which no switching time is set, the time programme remains in normal operation. If you want to change the switching times, go to „edit“ in the menu.



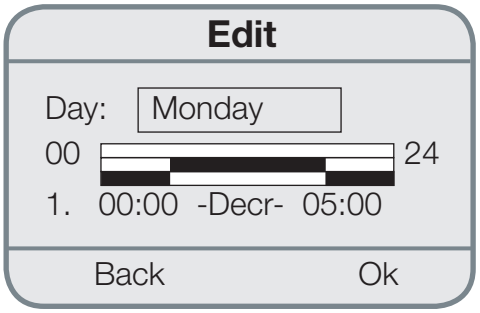
- **Edit**:

a) Select the desired day (MON - SUN).

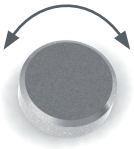
b) Select the switching time to be changed: Once you have selected one of the preset switching times (1, 2), you can change their start or end time.
The minimum time interval is 15 minutes.

For each day, up to 7 switching times can be entered. If a new switching time is defined (switching time: 2, 3, 4, 5, 6, 7) the status (heating up, normal operation, decrease) as well as the switching times (00:00 to 24:00) must be entered.

c) Graphical display:
1st line - Display heating up
2nd line - Display normal operation
3rd line - Display decrease



Change the values



Turn the rotary knob until you reached the selection point.

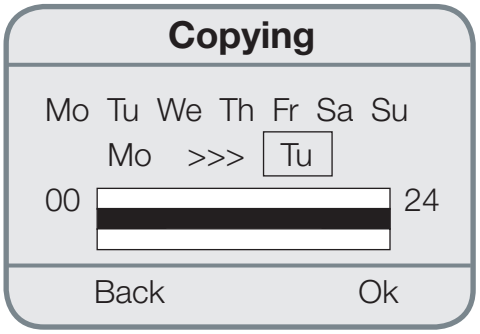
Activate selection point with OK and change with rotary knob

Confirm

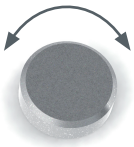
- **Copying**:

In the first line, the days are displayed which are set identically.

In the next line, you can copy the switching time of a day.



Copying switching times



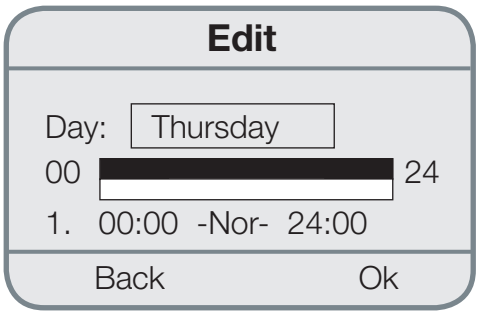
Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

Back to the main menu time programme

3.3 Setting time programme hot water (TP hot water)



In this programme, the switching times for the hot water treatment are set. Upon delivery of the heat pump, the hot water treatment is set by default to the following parameters:

Switching time 1: MON - SUN On from 00:00 to 12:00

In the period in which no switching time is defined, the time programme remains inactive (off). When in Off, HW_min is taken as the point for switching the system on once again. The hot water temperature is heated by 5 K (set at factory) above the HW_min temperature and then deactivated.

If you want to change the switching times, go to „Edit“ in the menu.

- **Edit:**

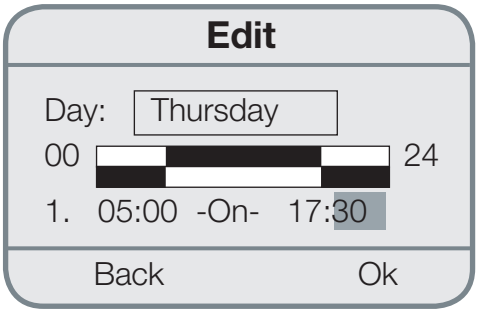
a) Select the desired day (MON - SUN).

b) Select the switching time to be changed: Once you have selected the preset switching time, you can change its start and end time.
The minimum time interval is 15 minutes.

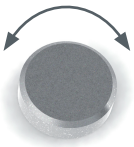
For each day, up to 7 switching times can be entered. If a new switching time is defined (switching time: 2, 3, 4, 5, 6, 7), the status (Off, On) as well as the switching times (00:00 to 24:00) must be entered.

c) Diagram view:
1st line - Display On
2nd line - Display Off

If you want to apply the set switching time of a day to another day, click on the menu „copy“.



Change the values



Turn the rotary knob until you reached the selection point.

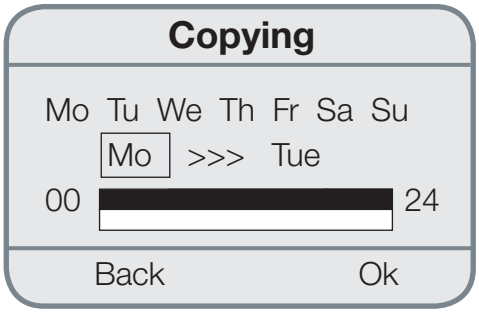
Activate selection point with OK and change with rotary knob

Confirm

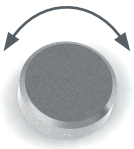
- **Copying:**

In the first line, the days are displayed which are set identically.

In the next line, you can copy the switching time of a day.



Copying switching times



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

Back to the main menu time programme

3.4 Setting
Time programme circulating pump (CP circ. pu.)

In this programme, the switching times for the circulating pump are set.

Upon delivery of the heat pump, the circulating pump is set to the following default parameters:

Switching time 1: MON - SUN On from 06:00 to 06:30
Switching time 2: MON - SUN On from 17:00 to 17:30

In the period in which no switching time is defined, the time programme remains inactive (off). If you want to change the switching times, go to „Edit“ in the menu.

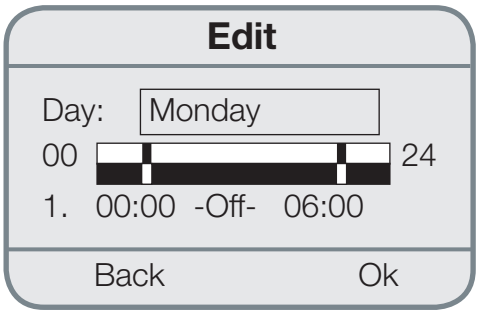
- **Edit**:

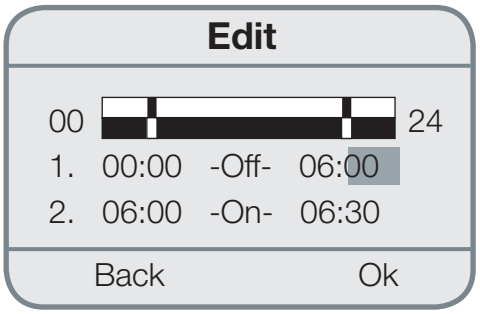
a) Select the desired day (MON - SUN).

b) Select the switching time to be changed: Once you have selected the preset switching times (1-2), you can change their start and end time.
The minimum time interval is 15 minutes.

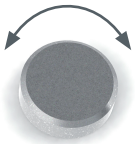
For each day, up to 7 switching times can be entered. If a new switching time is defined (switching time: 3, 4, 5, 6, 7) the status (Off, On) as well as the switching times (00:00 to 00:00) must be entered.

c) Diagram view:
1st line - Display On
2nd line - Display Off





Change the values



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

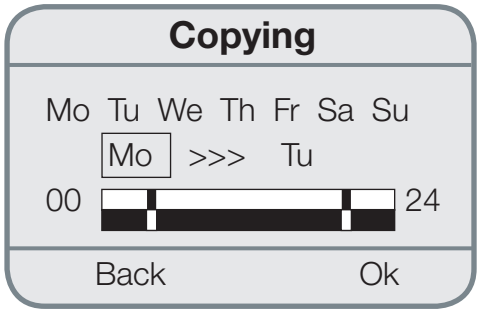
Confirm

If you want to apply the set switching time of a day to another day, click on the menu „copying“.

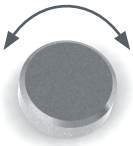
- **Copying:**

In the first line, the days are displayed which are set identically.

In the next line, you can copy the switching time of a day.



Copying switching times



Turn the rotary knob until you reached the selection point.

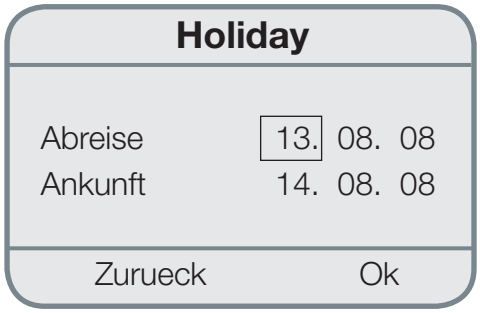
Activate selection point with OK and change with rotary knob

Confirm

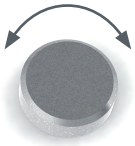
Back to the main menu time programme

3.5 Setting time programme holiday (holiday)

In this programme, you can define the period when the heating system shall run in frost-proof operation and when it shall change to the previously entered operating mode after the specified time has elapsed.
The heat pump is deactivated from 0:00 of the day of departure to 23:59 of the day of arrival.



Change the values



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

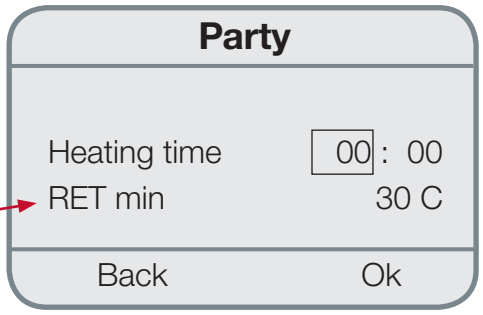
Confirm

Back to the main menu time programme

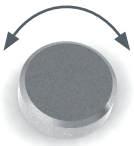
3.6 Setting time programme party

In this programme, you can define the period in which the heat pump shall switch to continuous operation and when it shall switch to the previously entered operating mode after the specified time is elapsed.

Left - display
Here, you can select which minimum return temperature you want to have in party mode.



Change the values



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

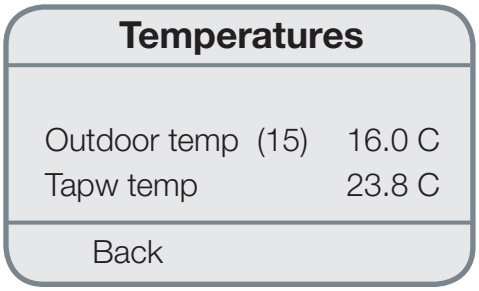
Back to the main menu time programme

3.7 Setting time programme Mixer 1 (TP Mixer 1) (similar to time programme Heating)
3.8 Setting time programme Holiday Mixer 1 (Holiday M 1) (similar to time programme Holiday)
3.9 Setting time programme Party mixer 1 (Party M 1) (similar to time programme Party)
3.10 Setting time programme Mixer 2 (TP Mixer 2) (similar to time programme Heating)
3.11 Setting time programme Holiday Mixer 2 (Holiday M 2) (similar to time programme Holiday)
3.12 Setting time programme Party Mixer 2 (Party M 2) (similar to time programme Party)

4. TEMPERATURES

4.1 Display temperatures

In this programme, all heating relevant temperatures such as outdoor temperature as well as corresponding current temperature values are displayed.



a) Outdoor temperature / specification in °C
(The value in brackets is the current temperature value; the other value is the average temperature value of the last 30 minutes)

b) Room temperature / specification in °C
(Is displayed only if a room sensor is connected)

c) Tap water temperature / specification in °C (Is displayed only if a system with tap water treatment is connected)

d) Flow temperature / specification in °C

e) Return temperature / specification in °C

f) Buffer temperature (if buffer is present)

g) Water / air / brine infeed temperature / specification in °C (only for brine/water, water/water and air/water heat pumps)

h) Water / brine outlet temperature / specification in °C (only for brine/water, water/water heat pumps)

i) Hot gas temperature / specification in °C

j) Vaporising temperature / specification in °C

k) Vaporising pressure / specification in bar

l) Condensing temperature / specification in °C

m) Condensing pressure / specification in bar

n) Mixer 1 feed temp. / return temp. (if present)

o) Mixer 2 feed temp. / return temp. (if present)

p) Undercooling temperature / specification in °C (if undercooler present) otherwise -100 °C

q) Fresh water temperature / specification in °C (is dis played only if a fresh water tank is connected)

r) Suction gas / specification in °C (only for brine/water, water/water and air/water heat pumps)

s) Oil sump temperature
(with modulating heat pumps)

t) Solar KT1
(if solar system is present and it is controlled with heat pump)

5. HOUR METER (operating hours)

5.1 Display hour meter

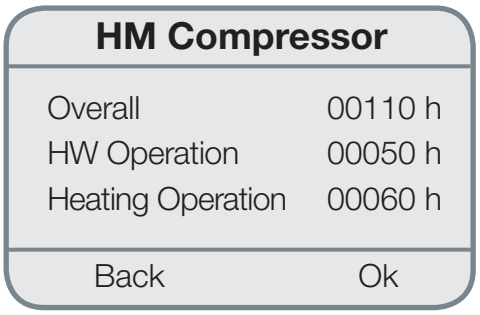
The maximum display of the hour meter is 99,999 hours.
The hour meter can be reset to 0 by your heating expert.

The programme hour meter is subdivided in:

1) Hour meter compressor:

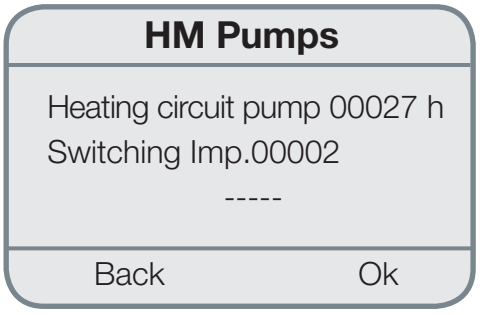
a) Overall operating hours
b) Operating hours in hot water operation c) Operating hours in heating operation
d) Switching impulses
- Overall
- Hot water
- Heating

e) Measurement since
f) Operating hours per year
- 1st year
- 2nd year
- 3rd year
- Measurement since



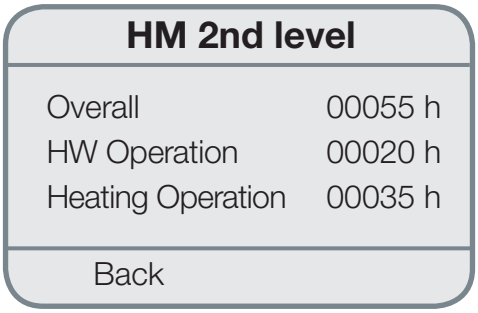
2) Hour meter pumps:

a) Heating circuit pump - switching impulses heating circuit pump
b) Tap water pump - switching impulses tap water pump
c) Circulating pump (if present) - switching impulses circulating pump
d) Energy source pump (if present) - switching impulses energy source pump
e) Operating hours circulating pump - switching impulses circulating pump
f) Buffer temperature (if present)
g) Pump external (if present)
h) Solar pump 1 (if present) - switching impulses solar pump
i) Solar pump 2 (if present) - switching impulses solar pump
g) Pump external (if present)

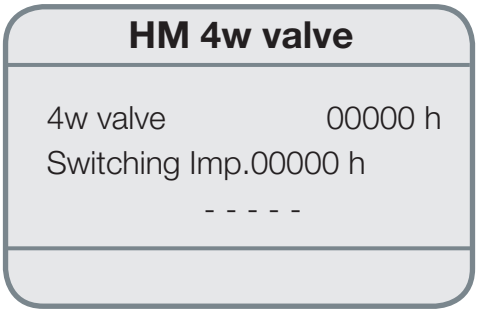


3) Hour meter 2nd level:

a) Overall operating hours
b) Hot water operation
c) Heating operation
d) Switching impulses
e) Overall
f) Hot water
g) Heating
h) Date display begin of measurement



4) 4-way valve - only with active cooling or air HP (if present)
a) Hours
b) Switching impulses



6. HEATING CIRCUIT

It has already been described in the basic menu how you can enter the target heating value. Further target values regarding the heating circuit are entered in the menu heating circuit / target values.

In addition to the target room temperature, this menu contains the heating temperature and the setback temperature.

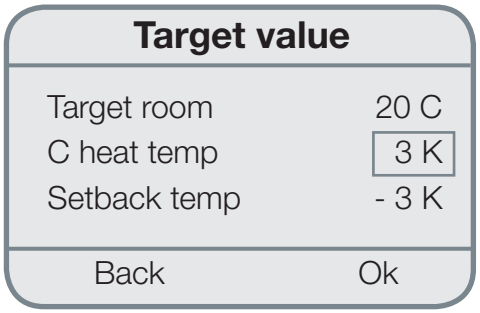
6.1 Target value

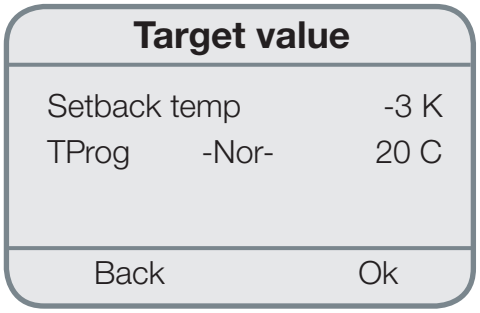
a) Target room temperature: Displayed in
(for changes refer to basic menu on page 10 / Setting day-time room temperature)

b) Heating temperature: Displayed in Kelvin
The target return value of the heating system can be increased by the heating temperature at specific moments (switching times can be set in the time programme) in order to delay activation.

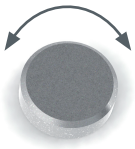
c) Setback temperature: Displayed in Kelvin
The target return value of the heating system can be reduced by the setback temperature for the night-time setback (switching time can be set in the time programme). The factory setting upon delivery of the heat pump is 3 Kelvin.

d) Time programme:
Display time programme status with the resulting target value.





Change the temperatures



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

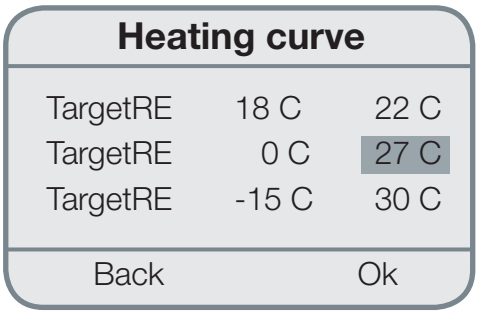
6.2 Heating curve

The heating curve slope describes the ratio between heat generator and return temperature change in respect to the outdoor temperature change and refers to the lowest outdoor temperature taken as a basis for the heat requirement calculation.

Adjustment of the heating curve should be strictly performed in small steps and in sufficiently long intervals in order to allow for steady conditions. Corrections in steps of 1-2 Kelvin after 1 to 2 days are recommended. For monitoring the room temperature, the living room should be taken as a basis which is mostly used.

During the adjustment phase, additional heat sources like open chimneys, tile stoves etc. may not be put into operation While monitoring, excessive ventilation should be avoided in order to not affect the adjustment process with low temperatures.

When the heating curve is set correctly, the set room temperature remains constant for all outdoor temperature changes.

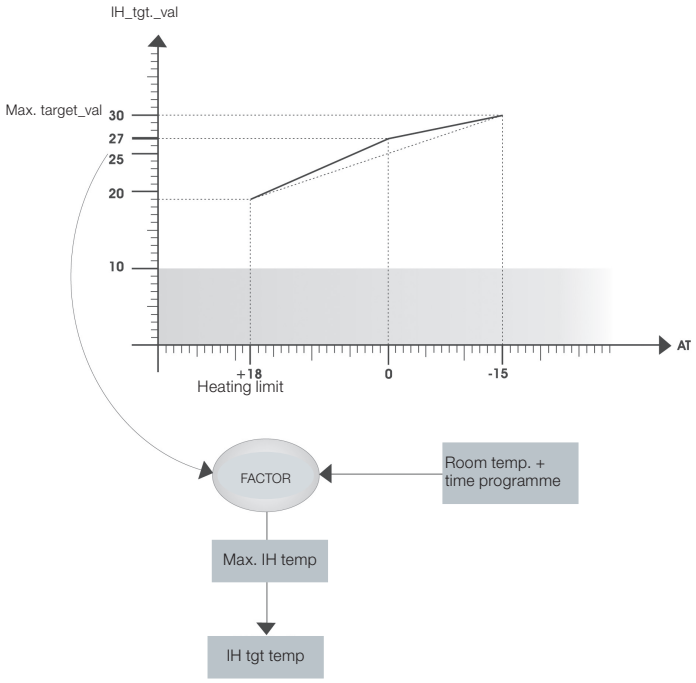


Adjustment range heating curve:
RE target at display heating curve 15 to 40 °C
RE target at 0 °C 20 to 50
°C RE target at -15 °C 25 to 60 °C
Heating limit can be set: 0 °C to 43 °C (18 °C)

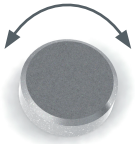
Factory setting:
RE target 22 °C at 18 °C outdoor temp.
RE target 27 °C at 0 °C outdoor temp.
RE target 30 °C at -15 °C outdoor temp.

These values are suited for floor heating.

Representation heating curve



Changing the settings



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

Back to the main menu time programme

7. HOT WATER

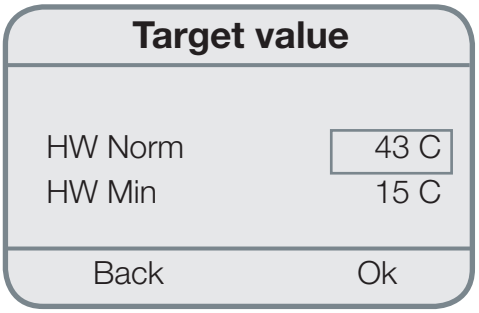
7.1 Hot water treatment (HW treatment)

- **Target value**:

  a) Hot water normal temperature:
  Within the time programme, the temperature may decrease by 5 K hysteresis; than HW is treated!

(see basic menu page 11 / setting hot water temperature)

  b) Hot water minimum temperature:
  For the reduction at night, the hot water temperature may be reduced to the minimum temperature. If the time programme is set to normal operation, the hot water normal tem perature value is maintained.
  If the time programme is deactivated, the hot water minimum temperature is used as a support point (switching time and tempera-tures can be set in the time programme).
  If HW_min is reached, the hot water is heated to 5 K (factory set hysteresis).



Adjustment range target values:

HW norm 10 to 50 °C for users
HW min 5 to 45 °C

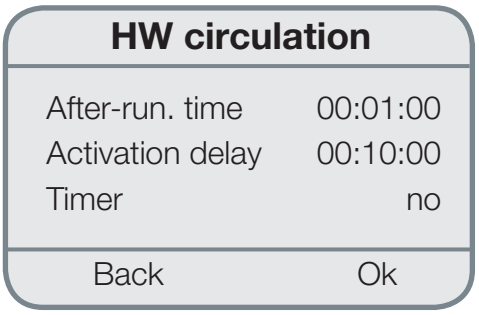
7.2 Circulation (HW circulation)

The purpose of a circulation system is to provide the consumer with hot water as quick as possible when needed.

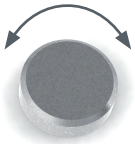
There are 2 different options:

a) Time-controlled operation of the circulation pump: Timer: yes; switching times can be set in the time programme; According to the factory settings, the timer is set to no.

b) Flow controller in the hot water pipeline:
When a tap connection is opened for a short time, the circulation pump is switched on. It is switched off after a set time. The tap connection acts as a remote control.



Changing the settings



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

Back to the main menu time programme

Adjustment range circulation:

After-running time:	0 to 10:59 min.
Activation delay:	0 to 15:59 min.
Timer:	Yes/no
Flow controller:	Status display
	Flow control

8. MIXER 1

9. MIXER 2

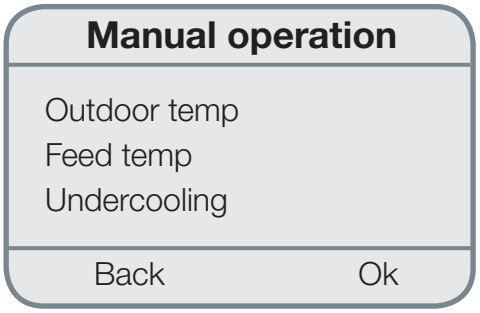
Target value M 1 or M 2
Basic operation M 1 or M 2
Heating curve M 1 or M 2
(see page 22 -> 6. heating circuit)

10. SOLAR SYSTEM

11. MANUAL OPERATION

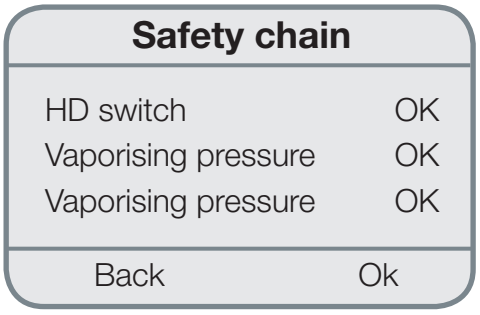
In this menu, all analogue and digital inputs and outputs being part of manual operation are displayed.

The setting „manual operation“ can ONLY be performed by the heating expert.



12. SAFETY CHAIN

In this menu, it is displayed if the individual safety components work properly (OK) or if they have faulty settings or failures (alarm) which are described in the chapter Errors.



13. EFFICIENCY

Provided that a heat meter or an electric meter is installed next to the heat pump, the current meter readings in proximity of the heat pump in kWh or the output of the electric meter can be read.
Under the data point SPF (Seasonal Performance Factor), the overall seasonal performance factor of the heat pump is displayed.

10.1 Current meter
Here, the voltage (V) as well as the current (A) and the electric output (W) are displayed. The network frequency (Nz) is also displayed.

10.2 Energy meter
Here, flow (l/h) as well as feed and return temperatures of the heating are displayed. The cooling output (output of the ES [kW]) is also displayed.
Energy values

a) Heating circuit
- Heat (adjustable kWh / MWh)
- Output
- SPF (seasonal performance factor)

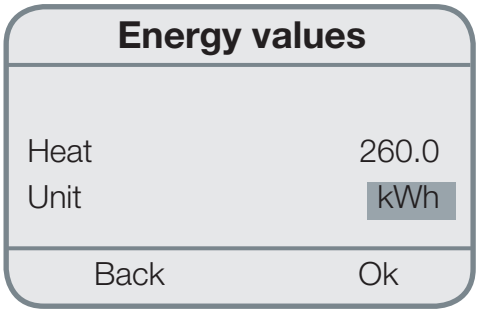
b) Hot water
- Heat (*adjustable kWh / MWh)
- Output *
- SPF (seasonal performance factor)

c) COP (current efficiency factor)

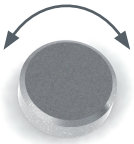
d) Unit / unit selection kWh or mWh

e) Date display begin of measurement

f) COP



Change the unit



Turn the rotary knob until you reached the selection point.

Activate selection point with OK and change with rotary knob

Confirm

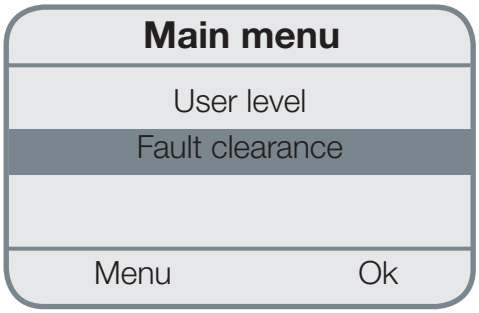
14. USER LEVEL

for the Heliotherm competence partner

15. FAULT CLEARANCE

If the heat pump should indicate a fault (red LED) due to an operating error (e.g. a sensor has exceeded the specified limit), confirm the function fault clearance with yes in the main menu. By doing so, the errors are reset andthe HP operation is re-started.

When a component of the heat pump is defective, this error message is displayed once again. Should this be the case, please contact your heating expert.



16. PRESET VALUES

Following commissioning of the heat pump, please write down the pre-set values of the controller in order to be able to reset the performed changes.

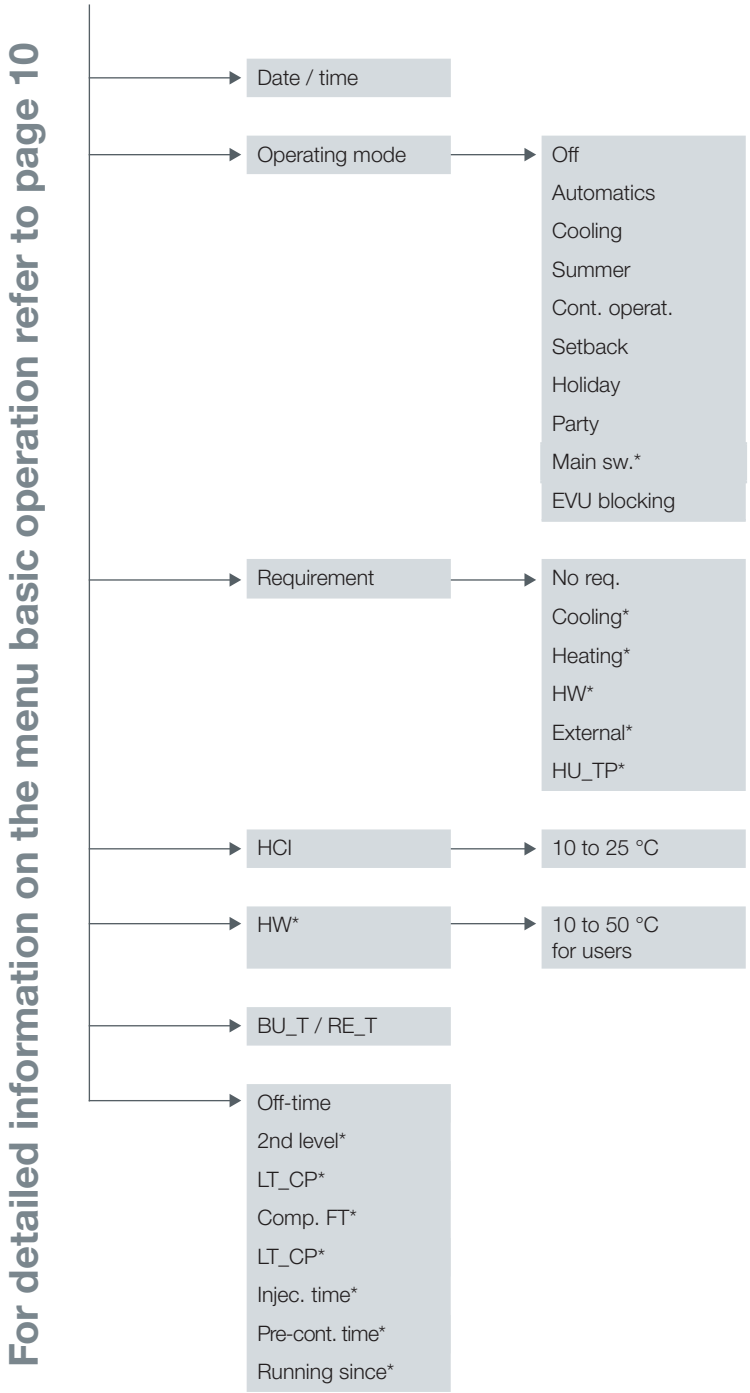
17. MENU TREE

17.1 Main menu:

Basic operation	Submenu on page 7
Time programmes	Submenu on page 9
Temperatures	Submenu on page 16
Operating hours	Submenu on page 17
Heating circuit	Submenu on page 18
Hot water treatment*	Submenu on page 20
Mixer 1*	
Mixer 2*	
Solar system*	
Manual operation	Submenu on page 20
Safety chain	Submenu on page 21
Efficiency*	Submenu on page 22
User level	Customer / technician / expert
Fault clearance	Submenu on page 23

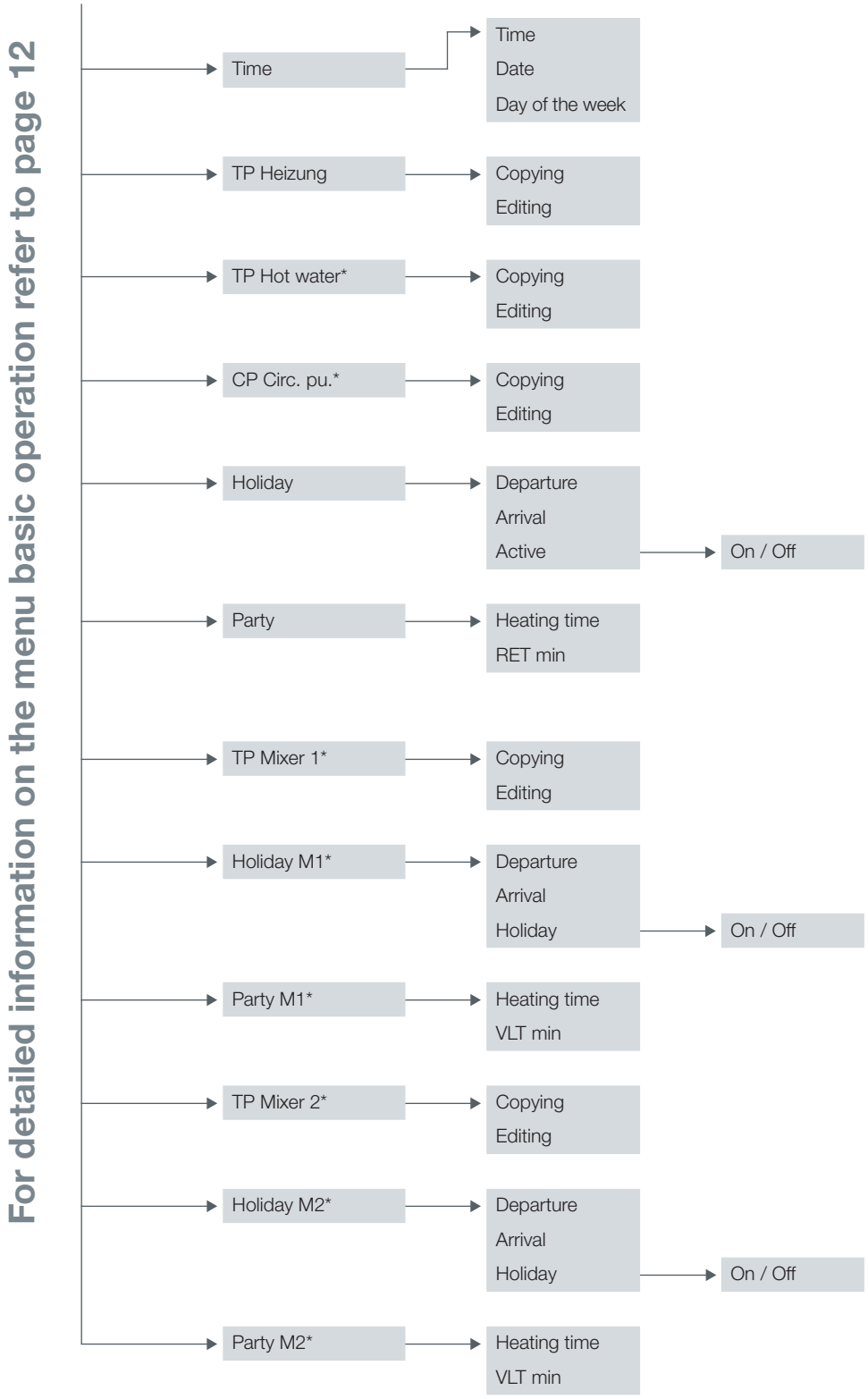
* depends on machine type, software version and settings

MAIN MENU ⟶ 17.2 Basic operation:



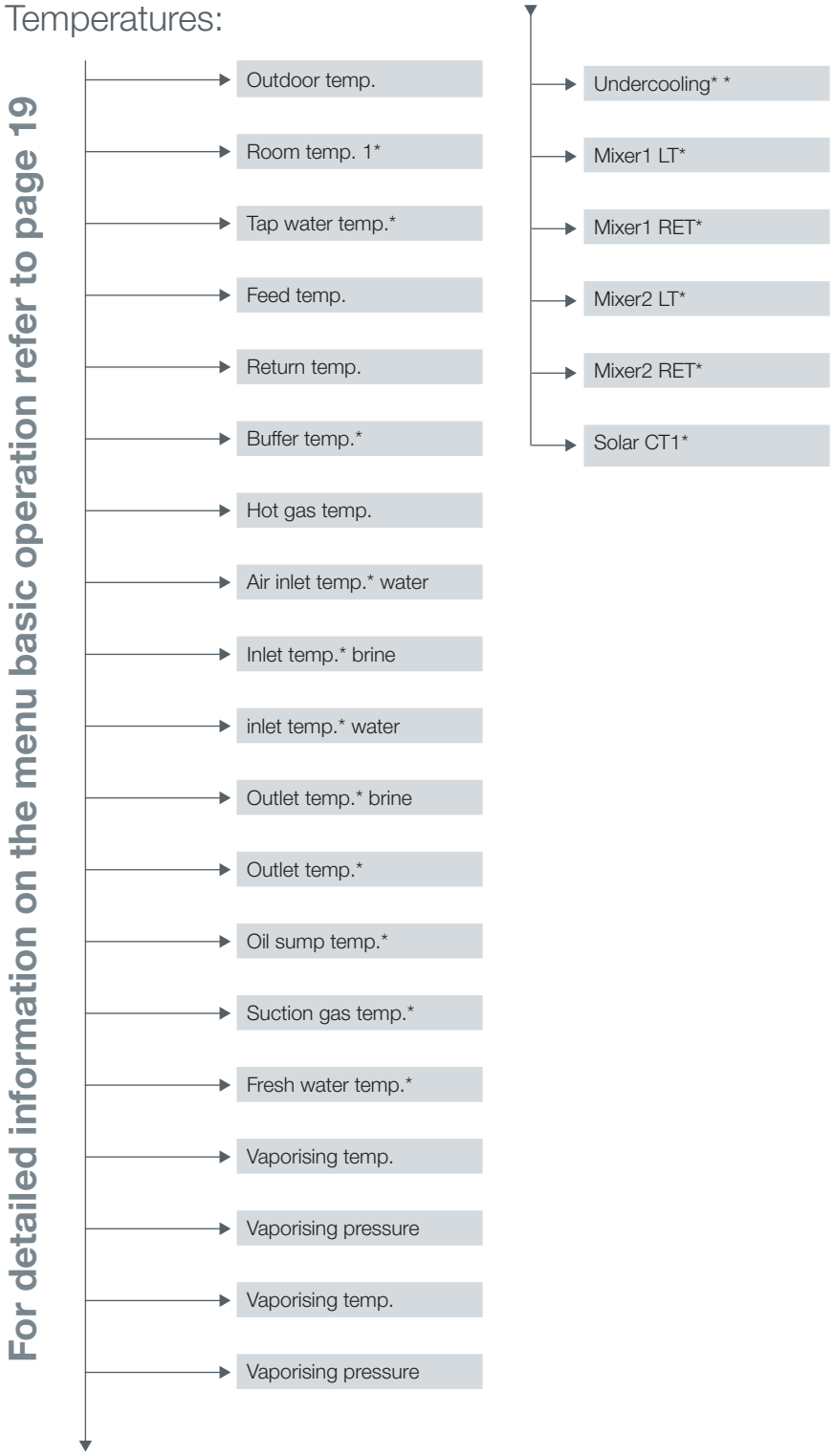
* depends on machine type, software version and settings

MAIN MENU ⟶ 17.3 Time programmes:



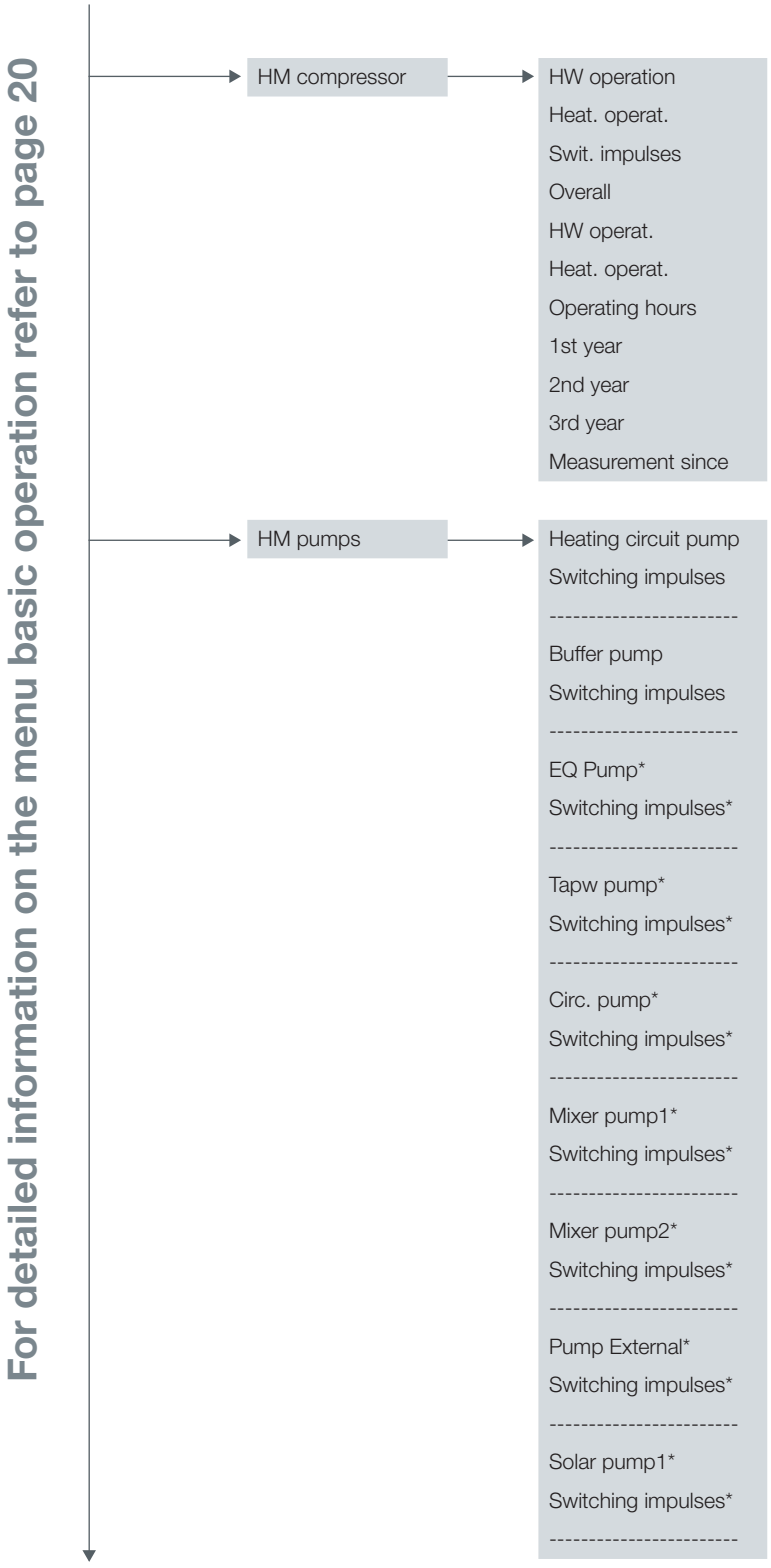
* depends on machine type, software version and settings

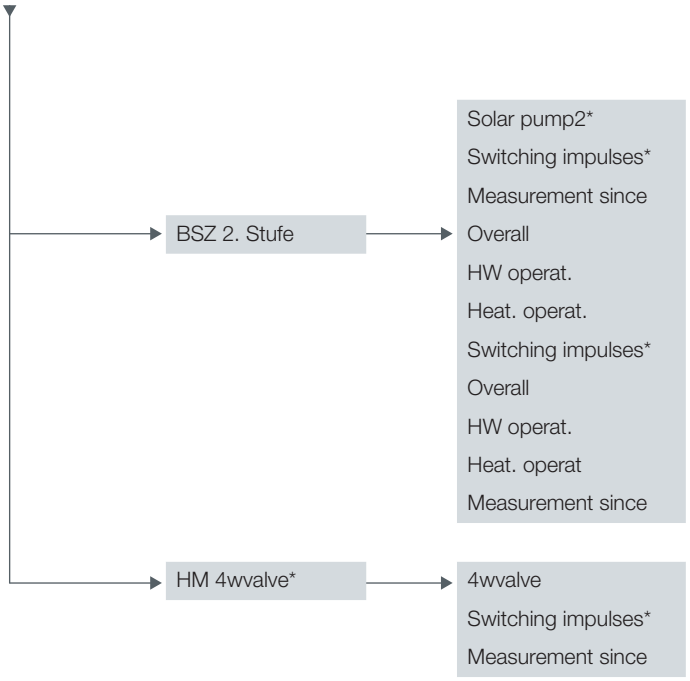
MAIN MENU ⟶ 17.4 Temperatures:



* depends on machine type, software version and settings

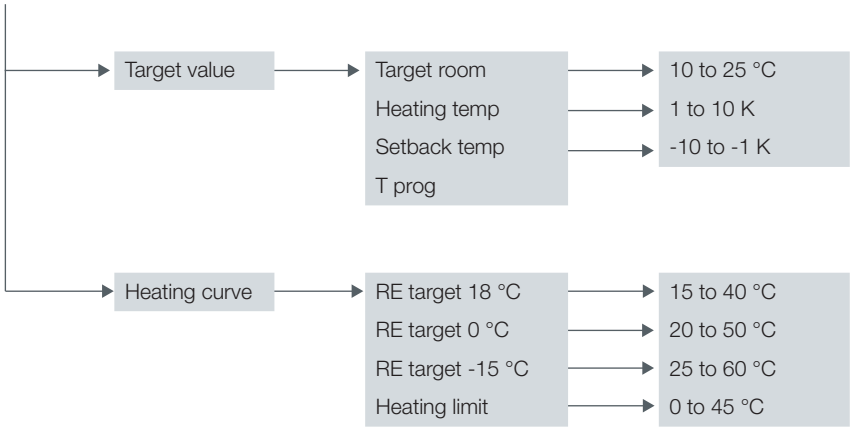
MAIN MENU ⟶ 17.5 Operating hours:





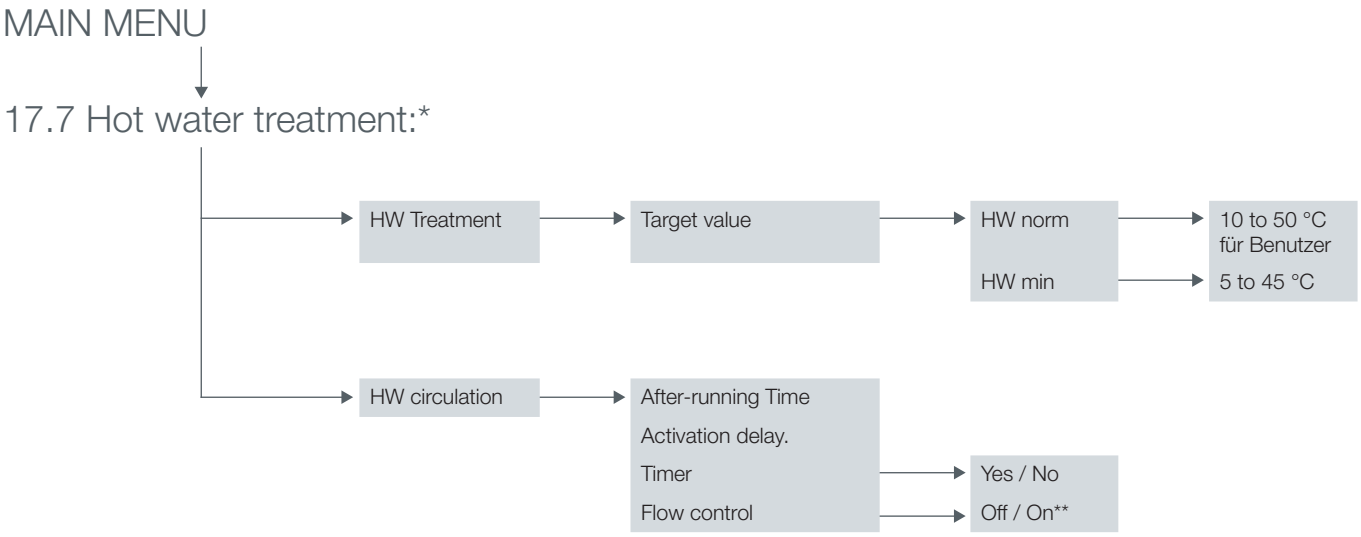
* depends on machine type, software version and settings

MAIN MENU ⟶ 17.6 Heating circuit:



* depends on machine type, software version and settings

For detailed information on the menu Heating circuit refer to page 22

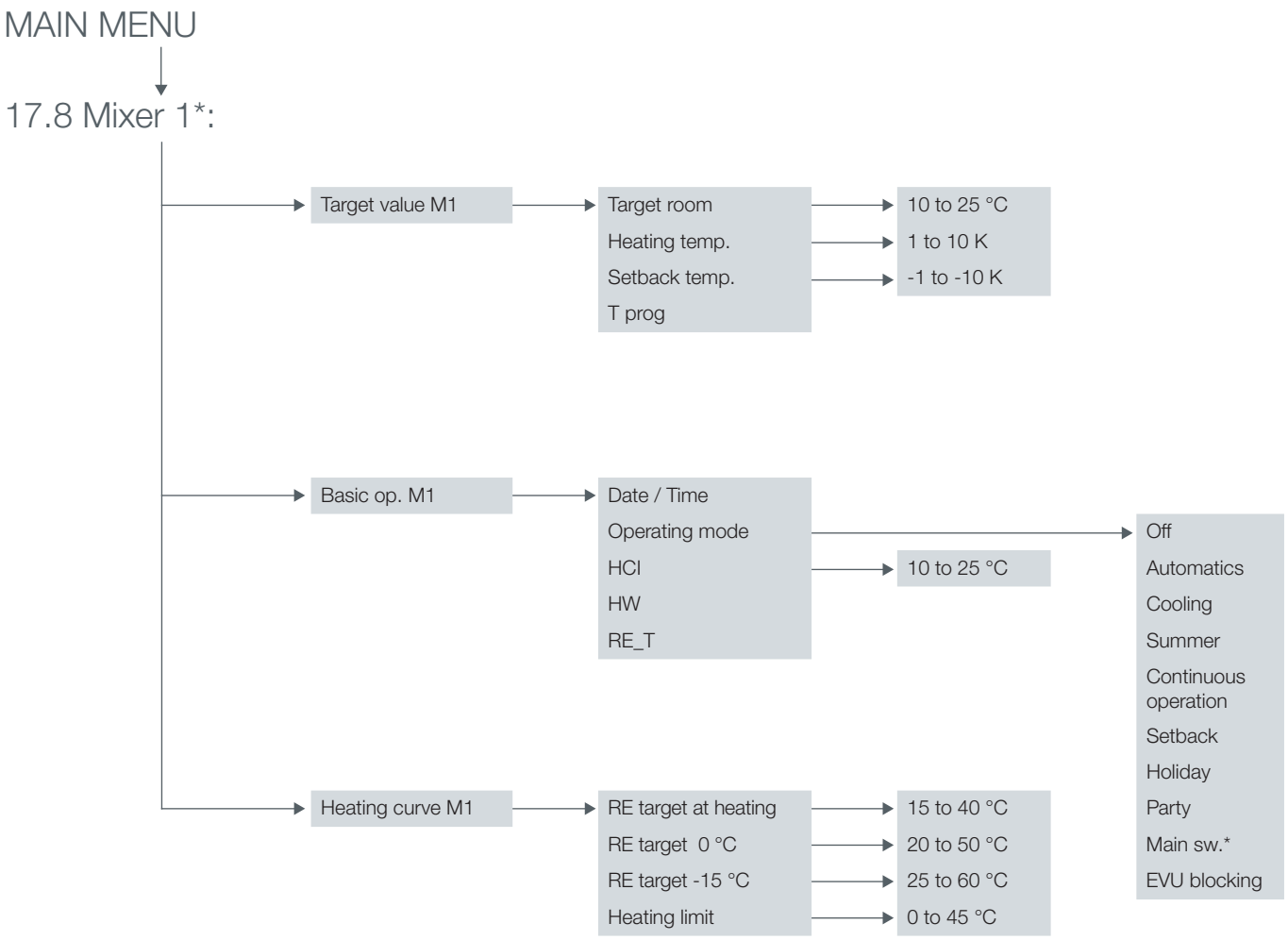


*depends on machine type, software version and setting
** Display for controlling flow controller Off/On cannot be set

For detailed information on the menu Hot water treatment refer to page 24

INSTRUCTION MANUAL

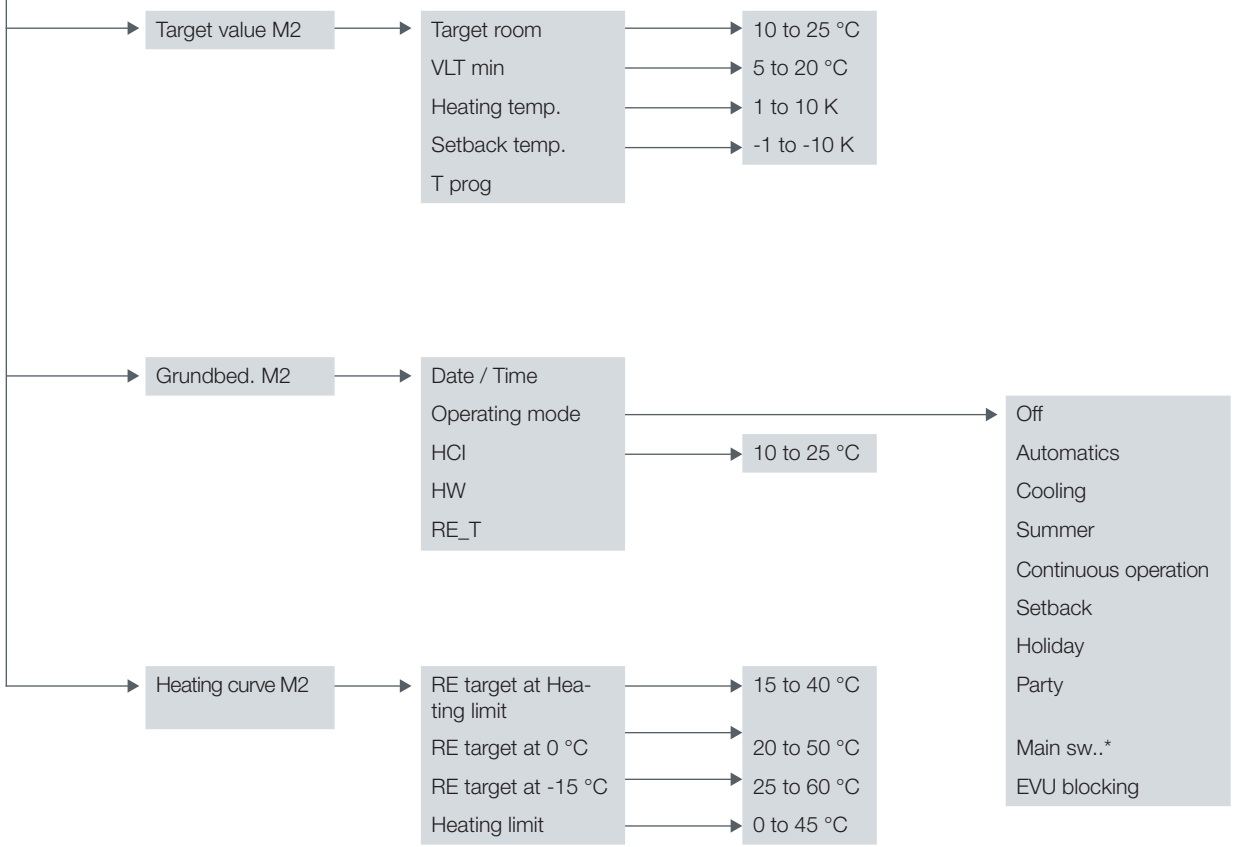
Control Unit web control® 321 - CUSTOMER LEVEL



* depends on machine type, software version and settings

MAIN MENU

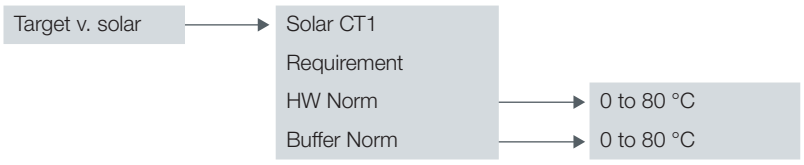
17.9 Mixer 2*:



* depends on machine type, software version and settings

MAIN MENU

17.10 Solar system*:



* depends on machine type, software version and settings

MAIN MENU → 17.11 Manual operation:

- All values set to Auto

For detailed information refer to menu Manual operation on page 25

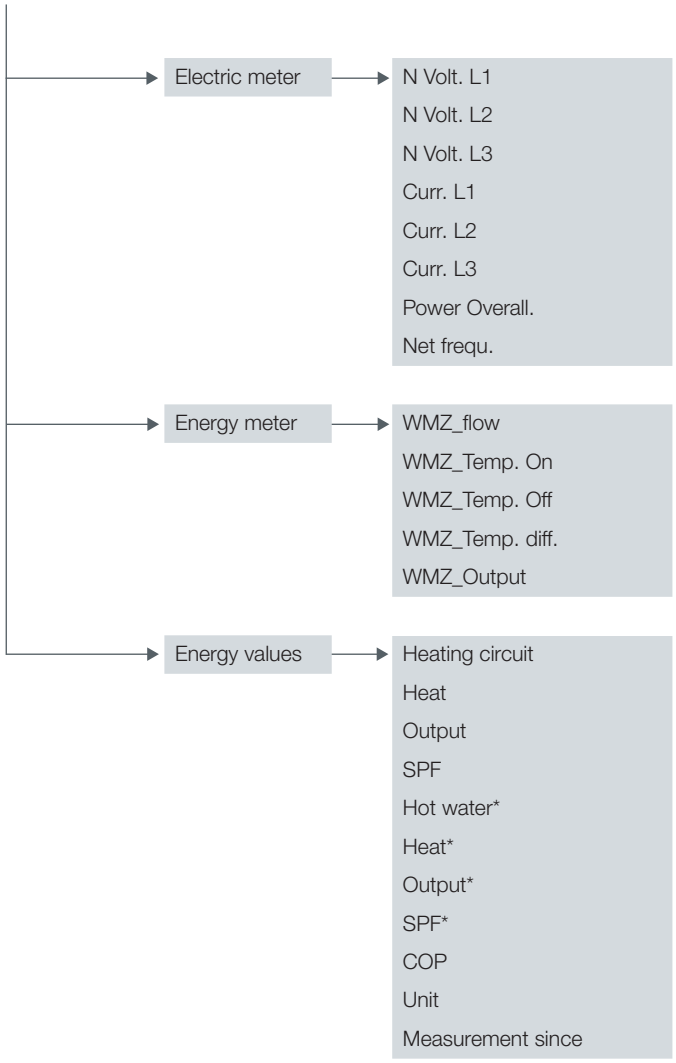
MAIN MENU → 17.12 Safety chain:

- Query
  - ES motor prot.*
  - Transducer*
  - Suction gas*
  - ES_spread
  - ES from shortfall
  - Flow min.*
  - switch
  - Condensing pressure
  - Condensing temp
  - Vaporising pressure
  - Hot gas max.
  - Diff. HD_ND
  - Heat pump status

* depends on machine type, software version and setting

For detailed information refer to menu Safety chain on page 25

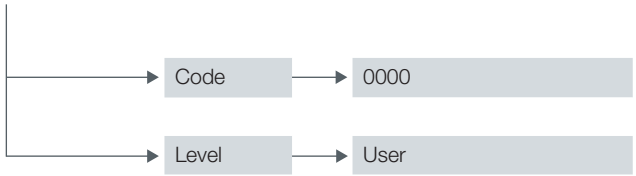
MAIN MENU → 17.13 Efficiency:*



For detailed information on the menu Efficiency refer to page 26

* depends on machine type, software version and settings

MAIN MENU → 17.14 User level:



MAIN MENU → 17.15 Fault clearance:

HELIOTHERM - AGENERAL SAFETY NOTES

Duty of care of the operator

Heliotherm heat pumps were designed and manufactured according to the requirements of the harmonised European standards and the national standards and guidelines. This guarantees maximum safety.

Such safety can only be guaranteed if the operator of the machine works in compliance with his duty of care and all required measures.

The operator must in particular ensure that:

- the machine is used only for the intended purpose.
- that the machine is operated only when in perfect and fully functional condition.

  It must be observed in particular
- that the safety devices of the machine are regularly checked for their functionality.
- workwear is provided for operating, maintenance and repair personnel.
- the Heliotherm operating instructions incl. technical connection diagrams are always available at the site of installation of the machine and that they are legible and complete.
- only sufficiently qualified and authorised personnel operates, maintains and repairs the machine.
- all safety and warning notes are not removed from the machine and remain legible.

Description of the safety symbols used

In the present operating instructions, the following safety symbols are used. These symbols are used to call the attention of the reader to the text next to the safety symbols.

Hazards for the life and health of persons
HAZARD!

Hazards for the machine, material or environment
CAUTION!

Information on the machine procedures
NOTE!

Basic safety measures

The Heliotherm operating instructions must be kept in close proximity to the machine. This means that all persons who have to perform settings on the controller can refer to the operating instructions at anytime.

All safety labels and operating labels on the machine must always be kept in a good and legible condition. Damaged or illegible labels must immediately be replaced!

Before taking the machine into operation, inform yourself about:

1. handling and control of the controlling device
2. safety devices of the machine
3. working principle of the safety chain
4. the direct environment of the machine

Before starting the machine, the following activities must be performed:

- check and ensure the functionality of all safety devices
- check the machine for visible damages. Rectify defects immediately or report them to the Heliotherm competence partner. The machine may only be switched on when in fault-free condition.
- check and ensure that only authorised persons with sufficient knowledge of the machine are located in the working area and that no other persons are endangered when the machine is put into operation.
- all objects and other materials which are not required for operation must be removed from the working area.

Working on electrical equipment

All electrical works may only be performed by qualified electricians and only when the machine is de-energised. Check the electrical equipment at regular intervals. It must be checked for lose clamping connections, damaged lines or cables must immediately be replaced!

All electrical supply units must remain locked, if possible. Never clean electrical equipment with water or similar liquids

Environmental protection

It must be observed during installation, maintenance and decommissioning that groundwater polluting substances such as greases, oil, coolants, cleaning liquids containing solvents and the like do not pollute the ground or enter the sewage system. These substances must be collected, stored, transported and disposed of in suitable containers.

Always comply with the regulations on avoiding waste and on proper recycling!

Modifications to the machine

Planned modifications to the machine must be approved in writing by Heliotherm or the Heliotherm competence partner.

Unauthorised modifications may not be performed to the machine for safety reasons.
When modifications are performed which are not agreed upon with Heliotherm or the Heliotherm competence partner, the warranty claim expires.

Original spare parts and original accessories may only be used which were specifically designed for the machine. When components are used which were not expressly approved, it cannot be guaranteed that they were designed and manufactured in respect to the exacted stresses and safety.

Special types of hazards

which may lead to serious injuries or machine damage.

When installing the machine, the following points must be observed:

- leaked lubricants may lead to chemical burns when they come into contact with the skin.
- as long as the machine is still open, there is a risk of injury in respect to sharp-edged machine parts.
- electrostatic procedures may damage electronic components.
- improperly attached machine parts may fall or topple over.
- before performing any work on the compressor, always switch the device off and let it cool down, otherwise there is a risk of severe burns! (surface temperatures of up to 100 °C possible)
- improperly laid lines (e.g. too small arc radius) may lead to smouldering and fire damage to the cables)

NOTES

HELIOTHERM
The Heat Pump

International

Heliotherm Wärmepumpentechnik Ges.m.b.H.
Sportplatzweg 18 . 6336 Langkampfen . Austria
Tel. +43 (0)5332 87496-0 . Fax +43 (0)5332 87496-30
info@heliotherm.com . www.heliotherm.com