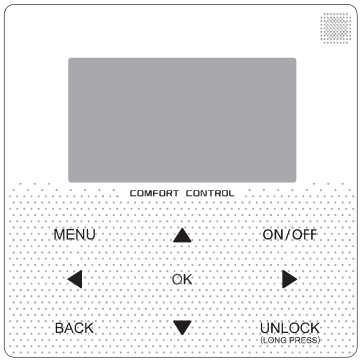
Procedure

To change one or more field settings, proceed as follows.

⚠ CAUTION

Temperature values displayed on the wired controller (user interface) are in °C.



Keys	Function
MENU	• Go to the menu structure(on the home page)
◄►▼▲	• Navigate the cursor on the display • Navigate in the menu structure • Adjust settings
ON/OFF	• Turn on/off the space heating/cooling operation or DHW mode • Turn on/or off functions in the menu structure
BACK	• Come back to the up level
UNLOCK	• Long press for unlock /lock the controller • Unlock /lock some functions such as “DHW temperature adjusting ”
OK	• Go to the next step when programming a schedule in the menu structure; and confirm a selection to enter in the submenu of the menu structure.

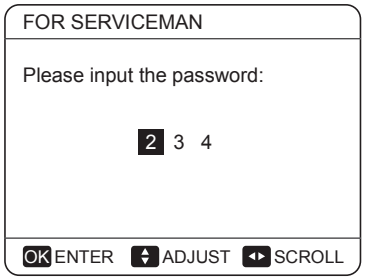
About FOR SERVICEMAN

“FOR SERVICEMAN” is designed for the installer to set the parameter.

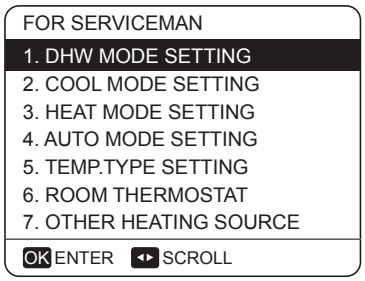
- Setting the composition of equipment.
- Setting the parameter.

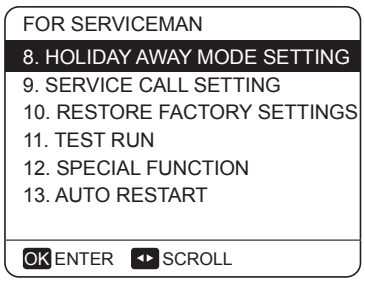
How to go to FOR SERVICEMAN

Go to MENU> FOR SERVICEMAN. Press OK



Use ▼ ▲ to navigate and use ▼ ▲ to adjust the numerical value. Press OK. The password is 234, if it is correct, the following page will appear:





Use ▼ ▲ to scroll and use “ok” to enter submenu for setting the parameters.

10.7.1 DHW control

About DHW mode

DHW: domestic hot water

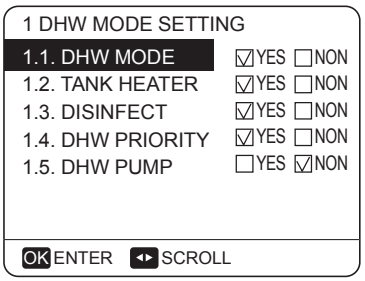
DHW MODE SETTING typically consists of the following:

- DHW MODE: enable or disable the DHW mode
- TANK HEATER: set whether the booster heater is available or not
- DISINFECT: set the parameters for disinfection
- DHW PRIORITY: set the priority between domestic hot water heating and space operation
- DHW PUMP: set the parameters for DHW pump operation. The functions above apply only to installations with a domestic hot water tank.

How to set the DHW mode

To determine whether the DHW mode is effective.

Go to MENU> FOR SERVICEMAN> DHW MODE SETTING. Press OK. The following page is displayed:



Use ▼ ▲ to scroll and OK for enter. When the cursor is on YES, Press OK to set the DHW MODE as effective.

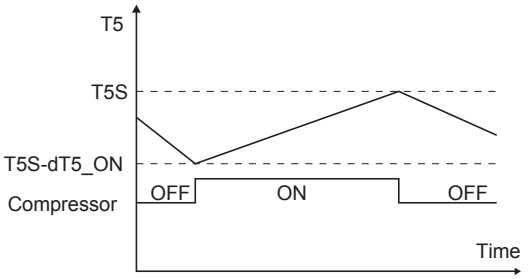
When the cursor is on NON, press OK to set the DHW MODE as ineffective.

- Go to MENU> FOR SERVICEMAN>DHW MODE SETTING>1.1 DHW MODE

1 DHW MODE SETTING	
dT5_ON	5°C
dT1S5	10°C
T4DHWMAX	43°C
T4DHWMIN	-10°C
t_INTERVAL_DHW	5 MIN
SCROLL	

Use ▼ ▲ and ▼▲ to scroll and adjust parameters. Use BACK to exit.

dT5_ON is the temperature difference for starting the heat pump, the picture below illustrates the dT5_ON function.



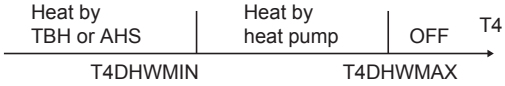
T5S is the target temperature for domestic hot water. T5 is the actual temperature of domestic hot water. When T5 drops to a certain temperature (T5<T5S-dT5_ON) the heat pump will be available. dT1S5 is the correct value for the target outlet water temperature (T1S=T5+dT1S5).

NOTE

The default value of dT1S5 is 10, if surface area of coil in tank is not large enough, heat pump will stop even water temperature in the tank is far below the setpoint, it is suggested that set dT1S5 to 20. If water temperature probe located in the bottom of tank, it is possible that long time is needed to turn on the heat pump, in this condition please set dT1s5 to 20 and put the temperature probe to the upper part of the tank.

T4DHWMAX is the maximum ambient temperature that the heat pump can operate at for domestic water heating. The unit will not operate if the ambient temperature goes above it in DHW mode.

T4DHWMIN is the minimum ambient temperature that the heat pump can operate for domestic water heating. The heat pump will turn off if the ambient temperature drops below it in water heating mode. The relationship between operation of the unit and ambient temperature can be illustrated in the picture below:



T_INTERVAL_DHW is the start time interval of the compressor in DHW mode. When the compressor stops running, the next time the compressor turns on it should be T_INTERVAL_DHW plus one minute later at least.

- If tank heater (booster heater) is avaliable, Go to FOR SERVICEMAN >DHW MODE SETTING>1.2 TANK HEATER and select “Yes”, when “OK” pressed, the following page will appear:

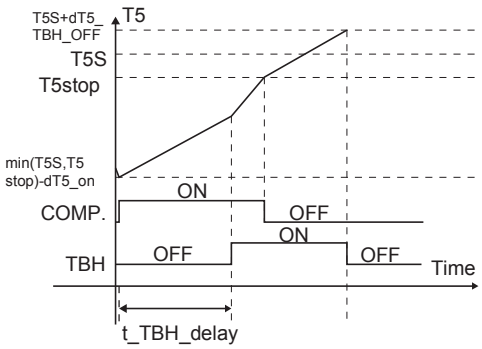
1.2 TANK HEATER	
dT5_TBH_OFF	5°C
T4_TBH_ON	20°C
t_TBH_DELAY	30 MIN
SCROLL	

Use ◄ ►and ▼▲ to scroll and adjust parameters. Use BACK to exit.

dT5_TBH_OFF is the temperature difference between T5 and T5S that turns the booster heater off. The booster heater will turn off (T5≥T5S+dT_TBH_OFF) when the heat pump malfunctions.

T4_TBH_ON is the temperature only when the ambient temperature is lower than its parameter and the booster heater will be available. t_TBH_DELAY is the time that the compressor has run before starting the booster heater (if T5＜min (T5S,T5stop)).

The operation of the unit during DHW mode described in the picture below:



In the picture, T5stop is a parameter related to ambient temperature, which cannot be changed in the user interface. When T5≥T5stop, the heat pump will turn off.

NOTE

The booster heater and backup heater can’t operate simultaneously, if the booster heater has been on, the backup heater will be off.

If the booster heater is unavailable (1.2 TANK HEATER NON is selected), the dT5_ON cannot be adjusted and is fixed at 4.

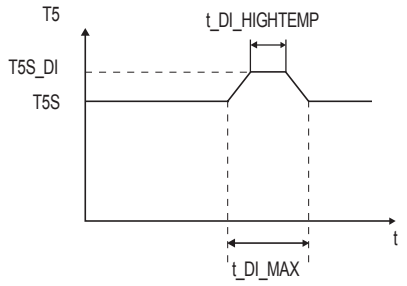
- To enable disinfect function,Go to MENU> FOR SERVICEMAN> DHW MODE SETTING>1.3 DISINFECT and select “YES”, when “OK” pressed, the following page will appear.

1.3 DISINFECT	
T5S_DI	65°C
t_DI_HIGHTMEP.	30 MIN
t_DI_MAX	120 MIN
SCROLL	

T5S_DI is the target temperature of water in the domestic hot water tank in the DISINFECT function.

t_DI_HIGHTEMP is the time that the hot water will last.

t_DI_MAX is the time that disinfection will last. The change of domestic water temperature is described in the picture below:



Be aware that the domestic hot water temperature at the hot water tap will be equal to the value selected in FOR SERVICEMAN "T5S_DI" after a disinfection operation.

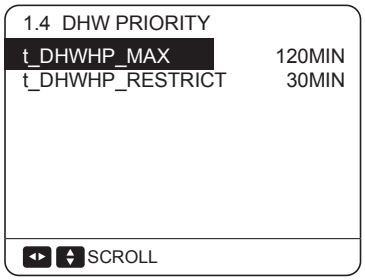
NOTE

If booster heater is not available(refer to 10.7 Field settings/Other heating source), please disable DISINFECT, because the temperature of water from heat pump is not high enough, and the unit will stay in Disinfect mode for a long time, which will effect space heating.

⚠ WARNING

If this high domestic hot water temperature can be a potential risk for human injuries, a mixing valve (field supply) should be installed at the hot water outlet connection of the domestic hot water tank. This mixing valve will ensure that the hot water temperature at the hot water tap never rises above a set maximum value. This maximum allowable hot water temperature shall be selected according to local laws and regulations.

- To set the priority between domestic water heating and space operation Go to SERVICEMAN>DHW MODE SETTING>1.4DHW PRIORITY:



The function of the DHW PRIORITY is used to set the operation priority between domestic water heating and space (heating/cooling) operation. You can use ◄ ► and ▼▲ to scroll and adjust parameters.

Using BACK to exit.

t_DHWHP_MAX is the maximum continuous working period of the heat pump in DHW PRIORITY mode.

t_DHWHP_RESTRICT is the operation time for the space heating/cooling operation.

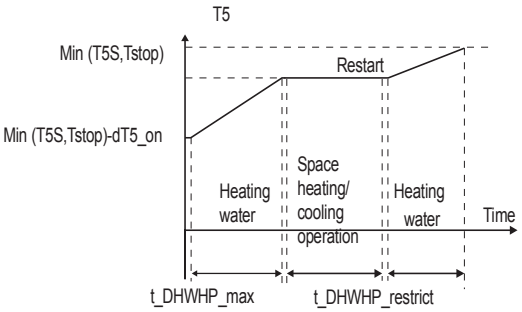
NOTE

If ROOM TEMP is enabled(refer to 10.7 Field setting/TEMP. TYPE SETTING), it is suggested that set t_DHWHP_RESTRICT to 10min.

The suggested value of t_DHWHP_MAX is listed below:

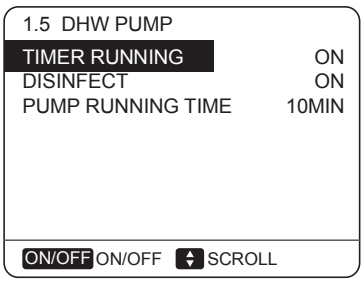
Unit (kW)	volume of tank /L	t_DHWHP_MAX min
12~16	300	90
	250	75
	200	60
5~7	200	90
	150	70
	100	50

If DHW PRIORITY is enabled, the operation of the unit is described in the picture below:



If NON is selected in the DHW PRIORITY mode, when it is available and the space heating/cooling is OFF, the heat pump will heat the domestic water as required. If space heating/cooling is ON, the domestic water will be heated by booster heater(if booster heater is available).

5 If the DHW pump(P_d) is avaliable, Go to FOR SERVICEMAN >DHW MODE SETTING>1.5DHW PUMP and select "YES", when "OK" pressed, the following page will appear,You can use ◄ ► and ▼▲ to scroll and adjust parameters. Use BACK to exit.



When the TIMER RUNNING is ON, the DHW pump will run as timed and keeps running for an certain time (as defined in PUMP RUNNING TIME), this can ensure the temperature of water in the system are uniform.

When DISINFECT is ON, the DHW pump will operate when the unit is in disinfect mode and T5≥T5S_DI-2. Pump run time is PUMP RUNNING TIME+5min.

10.7.2 COOL MODE SETTING

About COOL MODE SETTING

DHW: domestic hot water

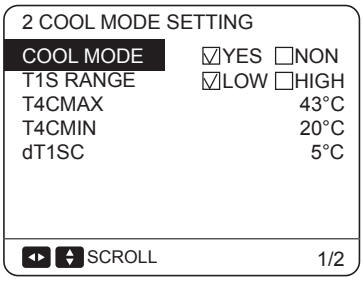
COOL MODE SETTING typically consists of the following:

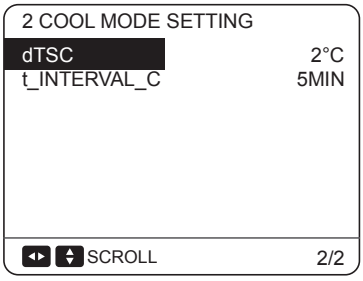
- COOL MODE: Setting the COOL mode effective or non-effective
- T1S RANGE: Selecting the range of target outlet water temperature
- T4CMAX: Setting the maximum ambient operation temperature
- T4CMIN: Setting the minimum ambient operating temperature
- dT1SC: Setting the temperature difference for starting the heat pump

How to set the COOL mode

To determine whether the COOL mode is effective, go to MENU> FOR SERVICEMAN> COOL MODE SETTING. Press OK.

The following page will be displayed:





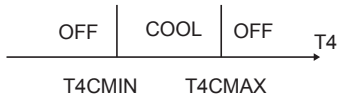
When the cursor is on COOL MODE, Use ◄ ► to select YES or NON. Then press OK to enable or disable the cool mode. When the cursor is on T1S RANGE. Use ◄ ►to select the range of outlet water temperature. When LOW is selected, the minimum target temperature is 5°C. If climate-related curve function (corresponds to “weather temperature set” in the user interface) is enabled , the curve selected is low temperature curve. When HIGH is selected, the minimum target temperature is 18°C, if climate-related curve function (corresponds to “weather temperature set” in the user interface) is enabled, the curve selected is high temperature curve.

When the cursor is on T4CMAX、T4CMIN、dT1SC、dTSC or t_INTERVAL_C, Use ◄ ► and ▼▲ to scroll and adjust the parameter.

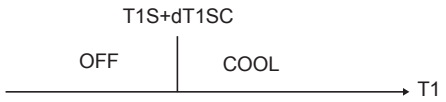
T4CMAX is the maximum ambient temperature in COOL mode. The unit cannot work if the ambient temperature is higher.

T4CMIN is the minimum ambient operating temperature in COOL mode. The unit will turn off if the ambient temperature drops below it.

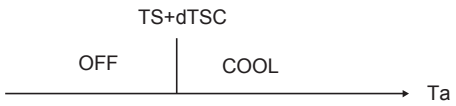
The relationship between the operation of the unit and ambient temperature is shown in the picture below:



dT1SC is the temperature difference between T1 (actual outlet water temperature) and T1S (target outlet water temperature) for starting the unit in cool mode. Only when T1 is high enough will the unit turn on, and will turn off if T1 drops to a certain value. See the diagram below:



dTSC is the temperature difference between Ta (actual room temperature) and TS (target room temperature) To start the unit when ROOM TEMP is enabled in TEMP.TYPE SETTING (refer to10.7 Field setting/TEMP.TYPE SETTING). Only when the Ta is high enough will the unit turn on, and the unit will turn off if the Ta drops to a certain value. Only when the ROOM TEMP is enabled will this function be available. See picture below:



10.7.3 HEAT MODE SETTING

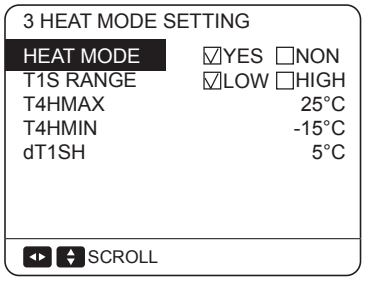
About HEAT MODE SETTING

HEAT MODE SETTING typically consists of the following:

- HEAT MODE: Enable or disable the HEAT mode
- T1S RANGE: Selecting the range of target outlet water temperature
- T4HMAX: Setting the maximum ambient operating temperature
- T4HMIN: Setting the minimum operating ambient operating temperature
- dTISH: Setting the temperature difference for starting the unit
- t_INTERVAL_H: Setting the compressor start time interval

How to set the Heat mode

To determine whether the HEAT mode is effective, go to MENU>FOR SERVICEMAN> HEAT MODE SETTING. Press OK. The following page be displayed:



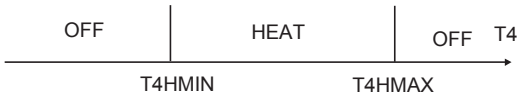
When the cursor is on HEAT MODE, Use▼ ▲ to scroll to YES or NON and press OK to enable or disable the heat mode. When the cursor is on the T1S RANGE, use ▼ ▲ to scroll to YES or NON and press OK to select the range of outlet water temperature. When LOW is selected, the maximum target temperature is 55°C. If climate-related curve function (corresponds to "weather temperature set" in the user interface) is enabled, the curve selected is low temperature curve. When HIGH is selected, the maximum target temperature is 60°C. If climate-related curve function (corresponds to "weather temperature set" in the user interface) is enabled, the curve selected is high temperature curve.

When the cursor is on T4HMAX、T4HMIN、dT1SH、dTSH or t_INTERVAL_H, Use ▼ ▲ and ▼▲ to scroll and adjust the parameter.

T4HMAX is the maximum ambient operating temperature for heat mode. The unit will not work if the ambient temperature is higher.

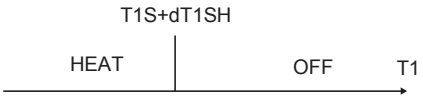
T4HMIN is the minimum ambient operating temperature for heat mode. The unit will turn off if the ambient temperature is lower.

The relationship between the operation of the unit and ambient temperature can be seen in the picture below:

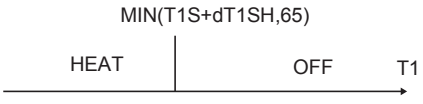


dT1SH is the temperature difference between T1 and T1S for starting the unit in heat mode.

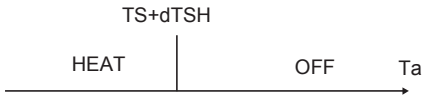
When the target outlet water temperature T1S<47, the unit will turn on or off as described below：



When the target outlet water temperature T1S≥47, the unit will on or off as described below：



dTSH is the temperature difference between Ta (Ta is the room temperature) and TS for starting the unit when ROOM TEMP is enabled in TEMP.TYPE SETTING (refer to 10.7 Field setting/TEMP.TYPE SETTING). Only when Ta drops to a certain value will the unit turn on, and the unit will turn off if the Ta high enough. See diagram below. (only when ROOM TEMP is enabled will this function be available).



t_INTERVAL_H is the compressor start time interval in heat mode. When the compressor stops running, the next time that the compressor turns on should be " t_INTERVAL_H" and one minute later at least.

10.7.4 AUTO MODE SETTING

About AUTO SETTING

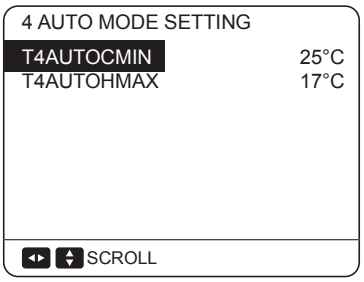
Controlling AUTO mode typically consists of the following：

- T4AUTOCMIN：setting the minimum operating ambient temperature for cooling
- T4AUTOHMAX: setting the maximum operating ambient temperature for heating

How to set the AUTO mode

To determine whether the AUTO mode is effective, go to MENU> FOR SERVICEMAN> AUTO MODE SETTING. Press OK.

The following page is displayed.



Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

T4AUTOCMIN is the minimum operating ambient temperature for cooling in auto mode. The unit will turn off if the ambient temperature is lower when in space cooling operation.

T4AUTOHMAX is the maximum operating ambient temperature for heating in auto mode. The unit will turn off if the ambient temperature is higher when in space heating operation.

The relationship between heat pump operation and ambient temperature is described in the picture below.

In the picture, AHS is an additional heating source. IBH is a backup heater in the unit.

10.7.5 TEMP. TYPE SETTING

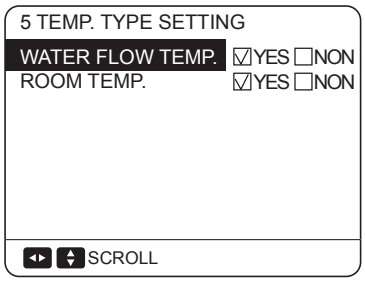
About TEMP. TYPE SETTING

The TEMP. TYPE SETTING is used for selecting whether the water flow temperature or room temperature(detected by the temperature sensor attached in the user interface) is used to control the ON/OFF of the heat pump.

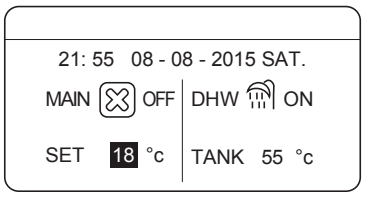
When ROOM TEMP. is enabled, the target outlet water temperature will be calculated from climate-related curves (refer to “10.1 Climate related curves ”).

How to enter the TEMP. TYPE SETTING

To enter the TEMP.TYPE SETTING, go to MENU> FOR SERVICEMAN> TEMP. TYPE SETTING. Press OK. The following page is displayed:

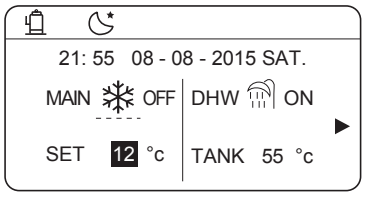


If you set WATER FLOW TEMP. to YES, and set ROOM TEMP. to NON, the water flow temperature will be displayed on the home page, and the water flow temperature will work as the target temperature.

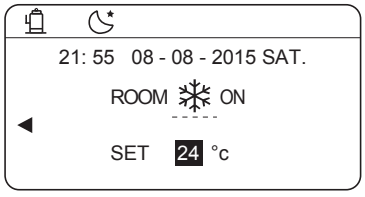


If application 7 is applied(refer to 8.7 Application 7) please set WATER FLOW TEMP. to YES, and set ROOM TEMP. to YES, then the water temperature will be displayed on the home page. and water temperature setpoint and room temperature setpoint can be set in the main page.

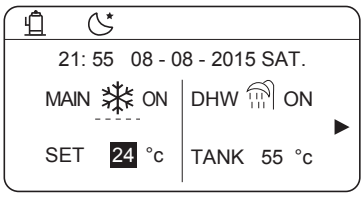
In this state, the first target outlet water temperature can be set in the main page, the second one can be calculated from the climate-related curves. In heat mode, the higher one will be the real target outlet temperature, while in cool mode, the lower one will be selected.



If ▶is pressed, the main page will display the room temperature:



If application 4(refer to 8.4 Application 4) is applied, please set WATER FLOW TEMP. to NON, and set ROOM TEMP. to YES, then the room temperature will be displayed on the home page, and the room temperature will work as the target temperature. The target outlet water temperature can be calculated from the climate related curves.



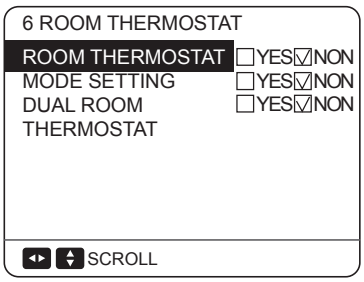
10.7.6 ROOM THERMOSTAT

About ROOM THERMOSTAT

The ROOM THERMOSTAT is used to set whether the room thermostat is available.

How to set the ROOM THERMOSTATt

To set the ROOM THERMOSTAT, go to MENU> FOR SERVICEMAN> ROOM THERMOSTAT. Press OK. The following page is displayed:



If room thermostat is available, select YES and press OK. In MODE SETTING, if YES is selected, the mode setting and the on/off function cannot be performed from the user interface. The timer function is unavailable; the operation mode, and the on/off function is decided by the room thermostat. The temperature setting can be done by the user interface. If NON is selected, the user interface can be used to set operation mode and target temperature, while the on/off function is determined by room thermostat; the timer function is unavailable. In DUAL ROOM THERMOSTAT, if YES is selected, the ROOM THERMOSTAT、MODE SETTING will turn to NON automatically, and the WATER FLOW TEMP. and ROOM TEMP. is forcibly set to YES. The timer function in the user interface is unavailable. The setting of operation mode and target temperature can be done on the user interface.

The “DUAL ROOM THERMOSTAT” function can be used only when application 6 (refer to 8.6 Application 6) is applied. If zone A requires heating/cooling (ON signal from room thermostat 5A), the unit will turn on. The operation mode and target temperature of outlet water should be set in the user interface. If zone B requires heating/cooling (ON signal from room thermostat 5B), the unit will turn on. The operation mode can be set in the user interface, the target temperature of outlet water will be decided by ambient temperature (target outlet water temperature is calculated from climate-related curves, if no curves are selected, the default curve will be curve 4). If no heating/cooling is required for both zone A and zone B (OFF signal from thermostat 5A and 5B), the unit will turn off.

NOTE

The setting in the user interface should correspond to the wiring of thermostat. If YES is selected in ROOM THERMOSTAT and the MODE SETTING is NON, the wiring of thermostat should follow method A. If the MODE SETTING is YES, then the wiring should follow method B. If “DUAL ROOM THERMOSTAT” is selected, the wiring of room thermostat should follow “method C” . (refer to “9.7.6 Connection for other components/For room thermostat”)

10.7.7 Other HEATING SOURCE

About OTHER HEATING SOURCE

The OTHER HEATING SOURCE is used to set whether the backup heater, and additional heating sources like a boiler or solar energy kit is available.

How to set the OTHER HEATING SOURCEt

To set the OTHER HEATING SOURCE, go to MENU> FOR SERVICEMAN> OTHER HEATING SOURCE, Press OK. The following page will appear:

7 OTHER HEATING SOURCE	
7.1.BACKUP HEATER	☑YES☐NON
7.2.AHS	☐YES☑NON
7.3.SOLAR ENERGY	☐YES☑NON

SCROLL

If backup heater is available, please select YES at BACKUP HEATER. Press OK and the following page is displayed:

7.1 BACKUP HEATER	
HEAT MODE	☑YES☐NON
DHW MODE	☐YES☑NON
T4_IBH_ON	-5°C
dT1_IBH_ON	5°C
t_IBH_DELAY	30MIN
t_IBH12_DELAY	5MIN

SCROLL

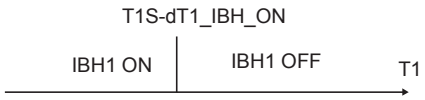
When the cursor is on HEAT MODE or DHW MODE, Use ◄ ► to select YES or NON. If YES is selected, the backup heater will be available in the corresponding mode, otherwise it will be unavailable.

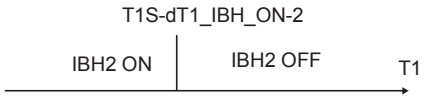
When the cursor is on T4_IBH_ON、dT1_IBH_ON、t_IBH_DELAY、 or t_IBH12_DELAY, Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

T4_IBH_ON is the ambient temperature for starting the backup heater. If the ambient temperature rises above T4_IBH_ON, the backup heater will be unavailable. The relationship between operation of the backup heater and the ambient is shown in the picture below.

dT1_IBH_ON is the temperature difference between T1S and T1 for starting the backup heater. Only when at the T1<T1S-dT1_IBH_ON can the backup heater turn on. When a second backup heater is installed, if the temperature difference between T1S and T1 is larger than dT1_IBH_ON+2, the second backup heater will turn on.

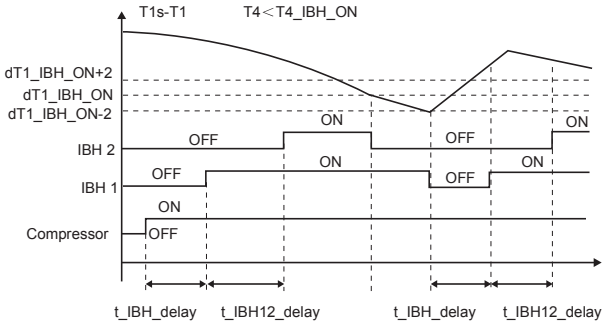
The relationship between operation of the backup heater and the temperature difference is shown in the diagram below.





t_IBH_DELAY is the time that the compressor has run before the first backup heater turns on (if T1<T1S).

t_IBH12_DELAY is the time that the first backup heater has run before the second backup heater turns on.



If an additional heating source is available, please select YES at the corresponding position. Press OK and the following page is displayed:

7.2 ADDTIONAL HEATING SORUCE	
HEAT MODE	☑YES☐NON
DHW MODE	☐YES☑NON
T4_AHS_ON	-5°C
dT1_AHS_ON	5°C
dT1_AHS_OFF	0°C
t_AHS_DELAY	30MIN

SCROLL

When the cursor is on HEAT MODE or DHW MODE, Use ◄ ► to select YES or NON. If YES is selected, the additional heating source will be available in the corresponding mode, otherwise it will be unavailable.

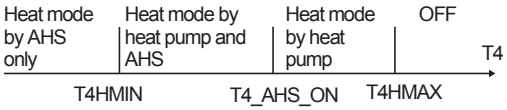
NOTE

If YES is selected in HEAT MODE, the installation of additional heating source should follow “8.5 Application 5/Applica- -tion a” or “8.5 Application 5/Application b” . IfYES is selected in DHW MODE, the installation of additional heating source should follow “8.5 Application 5/Application c”.

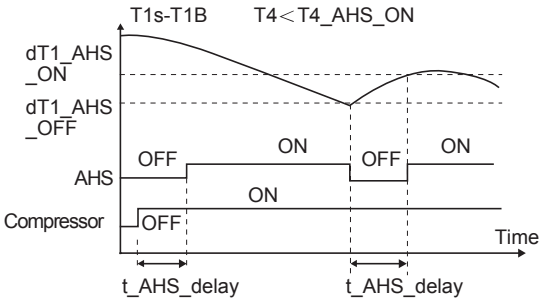
When the cursor is on T4_AHS_ON、dT1_AHS_ON、dT1_AHS_OFF or t_AHS_DELAY, Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

When the cursor is on T4_AHS_ON、dT1_AHS_ON、dT1_AHS_OFF or t_AHS_DELAY, Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

T4_AHS_ON is the ambient temperature for starting the additional heating source. When the ambient temperature rises above T4_AHS_ON, the additional heating source will be unavailable. The relationship between the operation of additional heating source and ambient temperature is shown in the picture below:



dT1_AHS_ON is the temperature difference between T1S and T1B for turning the additional heating source on(only when T1B<T1S-dT1_AHS _ON will the unit turn on), dT1_AHS_OFF is the temperature difference between T1S and T1B for turning the additional heating source off (when T1B≥T1S+dT1_AHS_OFF the additional heating source will turn off), t_AHS_DELAY is the time that the compressor has run before starting the additional heating source. It should be shorter than the additional heating source start time interval.The operation of the heat pump and the additional heating source is shown below:



If solar energy kit is installed, please select YES at “7.3 SOLAR ENERGY”, then the solar pump will operate when the solar energy kit operating for domestic hot water heating, and the heat pump will stop operating for domestic hot water heating.

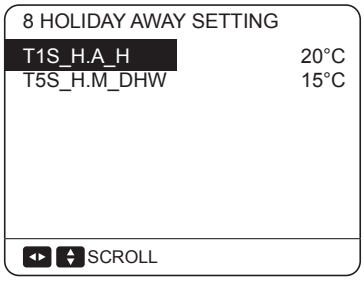
10.7.8 HOLIDAY AWAY SETTING

About HOLIDAY AWAY SETTING

The HOLIDAY AWAY SETTING is used to set the outlet water temperature to prevent freezing when away for holiday.

How to enter the HOLIDAY AWAY SETTING

To enter the HOLIDAY AWAY SETTING, go to MENU> FOR S ERVICEMAN> HOLIDAY AWAY SETTING. Press OK. The following page is displayed:



When the cursor is on T1S_H.A._H or T5S_H.M_DHW, Use◄ ►and ▼ ▲ to scroll and adjust the parameter, T1S_H.A._H is the target outlet water temperature for space heating when in holiday away mode. T5S_H.M_DHW is the target outlet water temperature for domestic hot water heating when in holiday away mode.

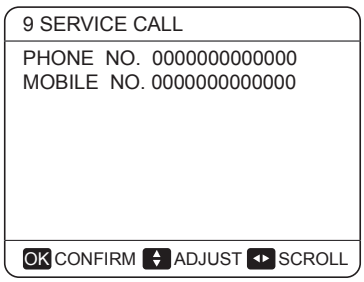
10.7.9 SERVICE CALL SETTING

About SERVICE CALL

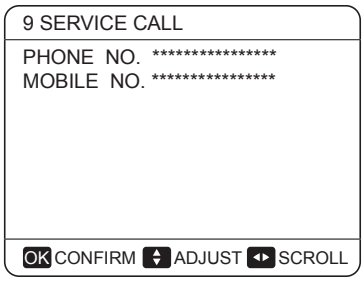
The installers can set the phone number of the local dealer in SERVICE CALL. If the unit doesn’t work properly, call this number for help.

How to set the SERVICE CALL

To set the SERVICE CALL, go to MENU> FOR SERVICEMAN>SERVICE CALL. Press OK. The following page is displayed:



Use ▼ ▲ to scroll and set the phone number. The maximum length of the phone number is 13 digits, if the length of phone number is short than 12, please input ■, as shown below:



The number displayed on the user interface is the phone number of your local dealer.

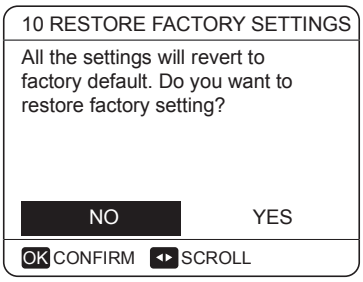
10.7.10 RESTORE FACTORY SETTINGS

About RESTORE FACTORY SETTINGS

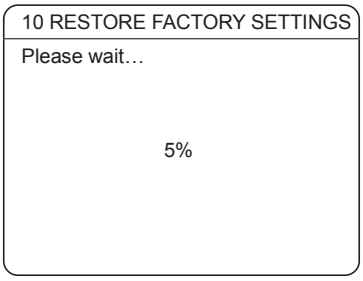
The RESTORE FACTORY SETTING is used to restore all the parameters set in the user interface to the factory setting.

How to set the RESTORE FACTORY SETTINGS

To restore factory settings, go to MENU> FOR SERVICEMAN>RESTORE FACTORY SETTINGS. Press OK. The following page is displayed:



Use ◄ ► to scroll the cursor to YES and press OK. the following page will be displayed:



After a few seconds, all the parameters set in the user interface will be restored to factory settings.

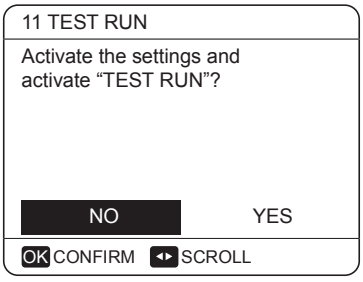
10.7.11 TEST RUN

About TEST RUN

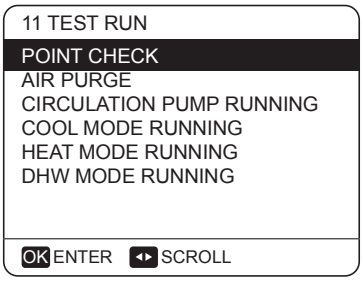
TEST RUN is used to check correct operation of the valves, air purge, circulation pump operation, cooling, heating and domestic water heating.

How to enter TEST RUN

To enter test run, go to MENU> FOR SERVICEMAN> TEST RUN. Press OK. The following page is displayed:

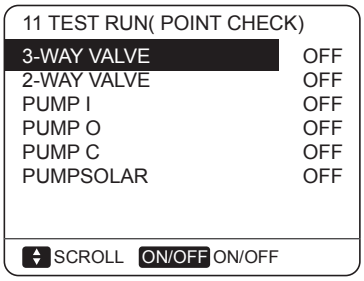


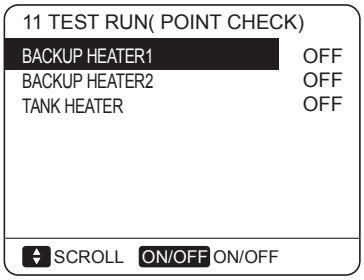
If YES is selected, the following page is displayed:



Use ▼ ▲ to scroll to the mode you want to run and press OK. The unit will run as selected.

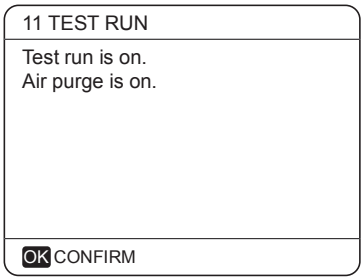
If POINT CHECK is selected, the following page will appear:





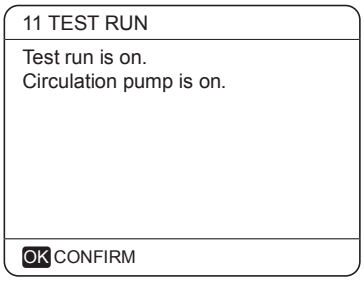
Use ▼ ▲ to scroll to the components you want to check and press ON/OFF. For example, when 3-WAY VALVE is selected and ON/OFF is pressed, if the 3-way valve is open/close, then the operation of 3-way valve is normal, and so are other components.

If you select AIR PURGE and OK is pressed, the page will displayed as follows:



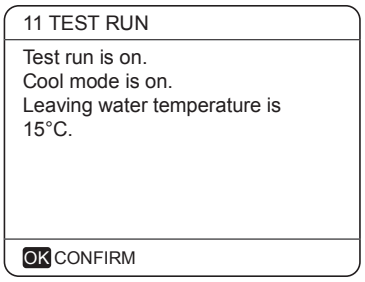
When in air purge mode, the 3-way valve will open, the 2-way valve will close. 60s later the pump in the unit (PUMPI) will operate for 10min during which the flow switch will not work. After the pump stops, the 3-way valve will close and the 2-way valve will open. 60s later both the PUMPI and PUMPO will operate until the next command is received.

When CIRCULATION PUMP RUNNING is selected, the page will displayed as follows:



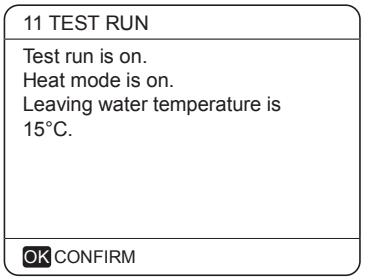
When circulation pump running is turned on, all running components will stop. 60 minutes later, the 3-way valve will open, the 2-way valve will close, 60 seconds later PUMPI will operate. 30s later, if the flow switch checked normal flow, PUMPI will operate for 3min, after the pump stops, the 3-way valve will close and the 2-way valve will open. 60s later the both PUMPI and PUMPO will operate, 2 mins later, the flow switch will check the water flow. If the flow switch closes for 15s, PUMPI and PUMPO will operate until the next command is received.

When the COOL MODE RUNNING is selected, the page will displayed as follows:



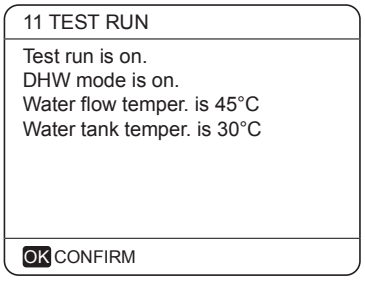
During COOL MODE test running, the default target outlet water temperature is 7°C. The unit will operate until the water temperature drops to a certain value or the next command is received.

When the HEAT MODE RUNNING is selected, the page will displayed as follows:



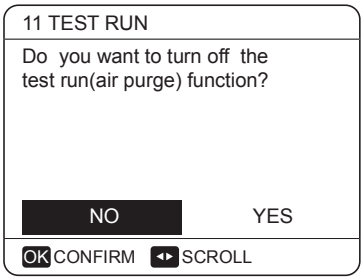
During HEAT MODE test running, the default target outlet water temperature is 35°C. The first backup heater will turn on after the compressor runs for 10 min, 60s later the second backup heater will turn on. After the two backup heater runs for 3 min, both backup heaters will turn off, the heat pump will operate until the water temperature increase to a certain value or the next command is received.

When the DHW MODE RUNNING is selected, the page will displayed as follows:



During DHW MODE test running, the default target temperature of the domestic water is 55°C. The booster heater will turn on after the compressor runs for 10min. The booster heater will turn off 3 min later, the heat pump will operate until the water temperature increase to a certain value or the next command is received.

During test run, all buttons except OK are invalid. If you want to turn off the test run, please press OK. For example ,when the unit is in air purge mode, after you press OK, the page will displayed as follows:



Use ◄ ► to scroll the cursor to YES and press OK. The test run will turn off.

10.7.12 SPECIAL FUNCTION

About SPECIAL FUNCTION

The SPECIAL FUNCTION contains AIR PURGE, PREHEATING FOR FLOOR, and FLOOR DRYING UP. It's used in special situations.

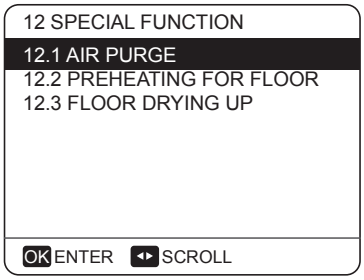
For example: the initial start of the unit, initial running of floor heating.

NOTE

The special functions can be used by service man only, during special function operating other functions (SCHDULE , HOLIDAY AWAY, HOLIDAY HOME) can't be used.

How to enter SPECIAL FUNCTION

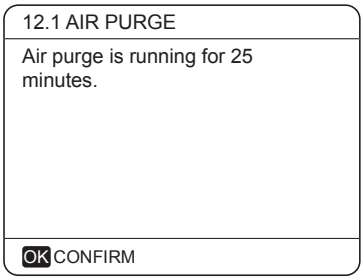
Go to MENU> FOR SERVICEMAN> SPECIAL FUNCTION.



Use ▼ ▲ to scroll and use OK to enter.

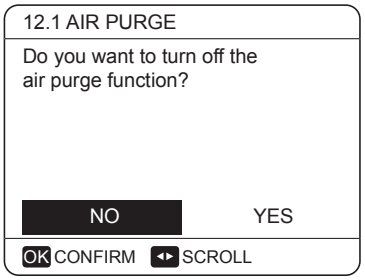
During first operation of the unit, air may remain in the system which can case malfunctions during operation. It is necessary to run the air purge function to release the air (make sure the air purge valve is open).

Go to FOR SERVICEMAN > 12 SPECIAL FUNCTION>12.1AIR PURGE :



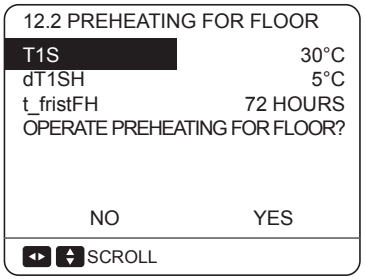
During air purge, the 3-way valve will open, and the 2-way valve will close. 60 seconds later the pump in the unit (PUMPI) will operate for 10 min, during which the flow switch will not work. After the pump stops, the 3-way valve will close and the 2-way valve will open. 60s later the both the PUMPI and PUMPO will operate until the stop command is received.

The number displayed on the page is the time that the air purge has run. During air purge, all the buttons except OK are invalid. If you want to turn off the air purge, please press OK, then the following page is displayed:



Use◄ ► to scroll and use OK to confirm.

If PREHEATING FOR FLOOR is selected, after press OK ,the page will displayed as follows:



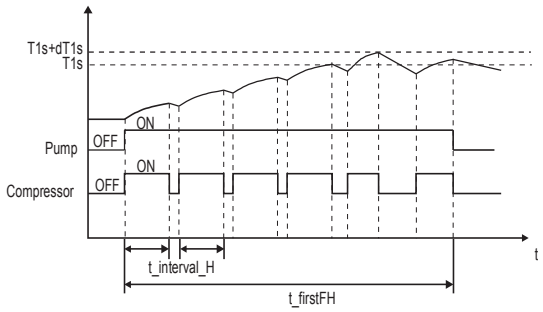
When the cursor is on T1S, dT1SH or t_fristFH, Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

T1S is the target outlet water temperature in preheating for floor mode.

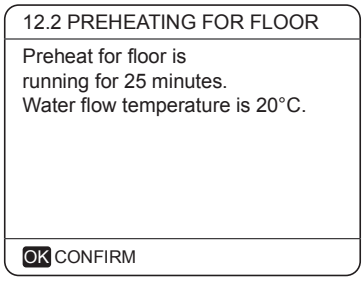
The T1S set here should be equal to the target outlet water temperature set in the main page.

dT1SH is the temperature difference for stopping the unit. (When T1≥T1S+dT1S occurs the heat pump will turn off) t_fristFH is the time last for preheating floor.

The operation of the unit during preheating for floor described in the picture below:

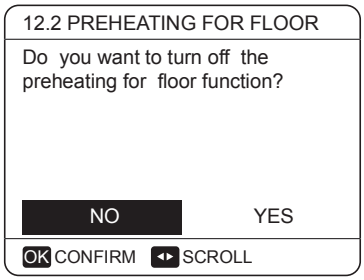


When the cursor is on OPERATE PREHEATING FOR FLOOR, Use ◄ ► to scroll to YES and press OK. The page will be displayed as follows:



During preheating for floor, all the buttons except OK are invalid. If you want to turn off the preheating for floor, please press OK.

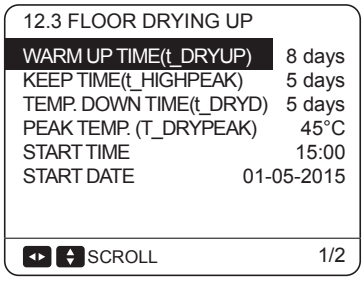
The following page will be displayed:



Use ◄ ►to scroll the cursor to YES and press OK, the preheating for floor will turn off.

Before floor heating, if large a amount of water remains on the floor, the floor may be warped or even rupture during floor heating operation, in order to protect the floor, floor drying is necessary, during which the temperature of the floor should be increased gradually.

If FLOOR DRYING UP is selected, after press OK ,the page will displayed as follows:



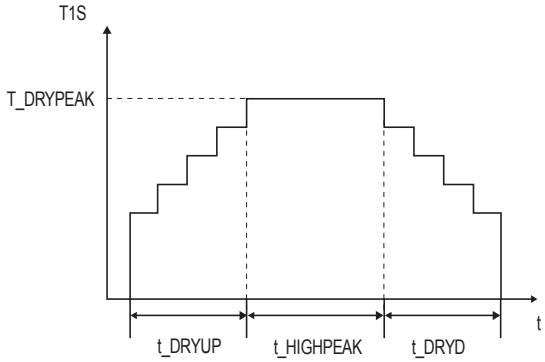
When the cursor is on WARM UP TIME (t_DRYUP), KEEP TIME (t_HIGHPEAK), TEMP. DOWN TIME (t_DRYD), PEAK TEMP. (T_DRYPEAK), START TIME or START DATE , Use ◄ ► and ▼ ▲ to scroll and adjust the parameter.

t_DRYUP is the day for warming up.

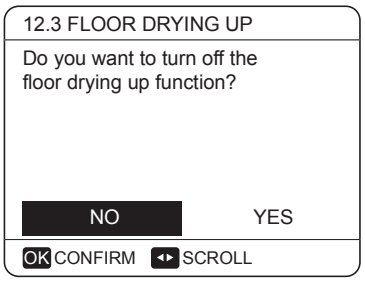
t_HIGHPEAK is the continue days in high temperature.

t_DRYD is the day of dropping temperature T_DRYPEAK is the target peak temperature of water flow during floor drying up.

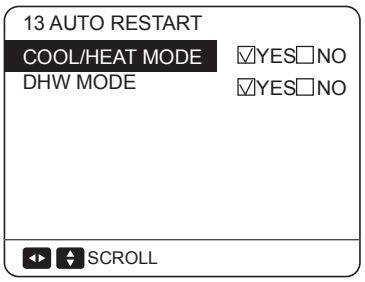
The target outlet water temperature during floor drying up described in the picture below:



When the cursor is on OPERATE FLOOR DRYING? Use ◄ ► to scroll to YES and press OK. The page will be displayed as follows:



During floor drying, all the buttons except OK are invalid. When the heat pump malfunctions, the floor drying mode will turn off when the backup heater and additional heating source is unavailable. If you want to turn off floor drying up, please press OK. The following page will be displayed:



Use ◄ ► to scroll the cursor to YES and press OK. Floor drying will turn off.

10.7.13 AUTO RESTART

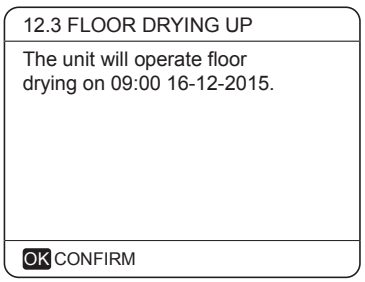
About AUTO RESTART

The AUTO RESTART function is used to select whether the unit reapplies the user interface settings at the time when power returns after a power supply failure.

How to set the AUTO RESTART

Go to MENU> FOR SERVICEMAN>

AUTO RESTART



Use ▼, ▲, ◄, ► to scroll and use OK to select YES or NON to enable or disable the auto restart function. If the auto restart function is enabled, when power returns after a power supply failure, the AUTO RESTART function reapplies the user interface settings at the time of the power supply failure. If this function is disabled, when power returns after a power supply failure, the unit won't auto restart.

10.7.14 Description of terms

The terms related to this unit are shown in the table below.

Parameter	Ilustration
T1	Outlet water temperature of backup heater
T1B	Outlet water temperature of additional heating source
T1S	Target outlet water temperature
T2	Temperature of refrigerant at outlet /inlet of plate heat exchanger when in heat mode/cool mode
T2B	Temperature of refrigerant at let outlet /inlet of plate heat exchanger when in heat mode/cool mode
T3	Temperature of tube at outlet/inlet of condenser when in cool/heat mode
T4	Ambient temperature
T5	Temperature of domestic hot water
Th	Suction temperature
Tp	Discharge temperature
TW_in	Inlet water temperature of plate heat exchanger
TW_out	Outlet water temperature of plate heat exchanger
AHS	Additional heating source
IBH1	The first backup heater
IBH 2	The second backup heater
TBH	Backup heater in the domestic hot water tank
Pe	Evaporate/condense pressure in cool/heat mode

11 TEST RUN AND FINAL CHECKS

The installer is obliged to verify correct operation of unit after installation.

11.1 Final checks

Before switching on the unit, read following recommendations: