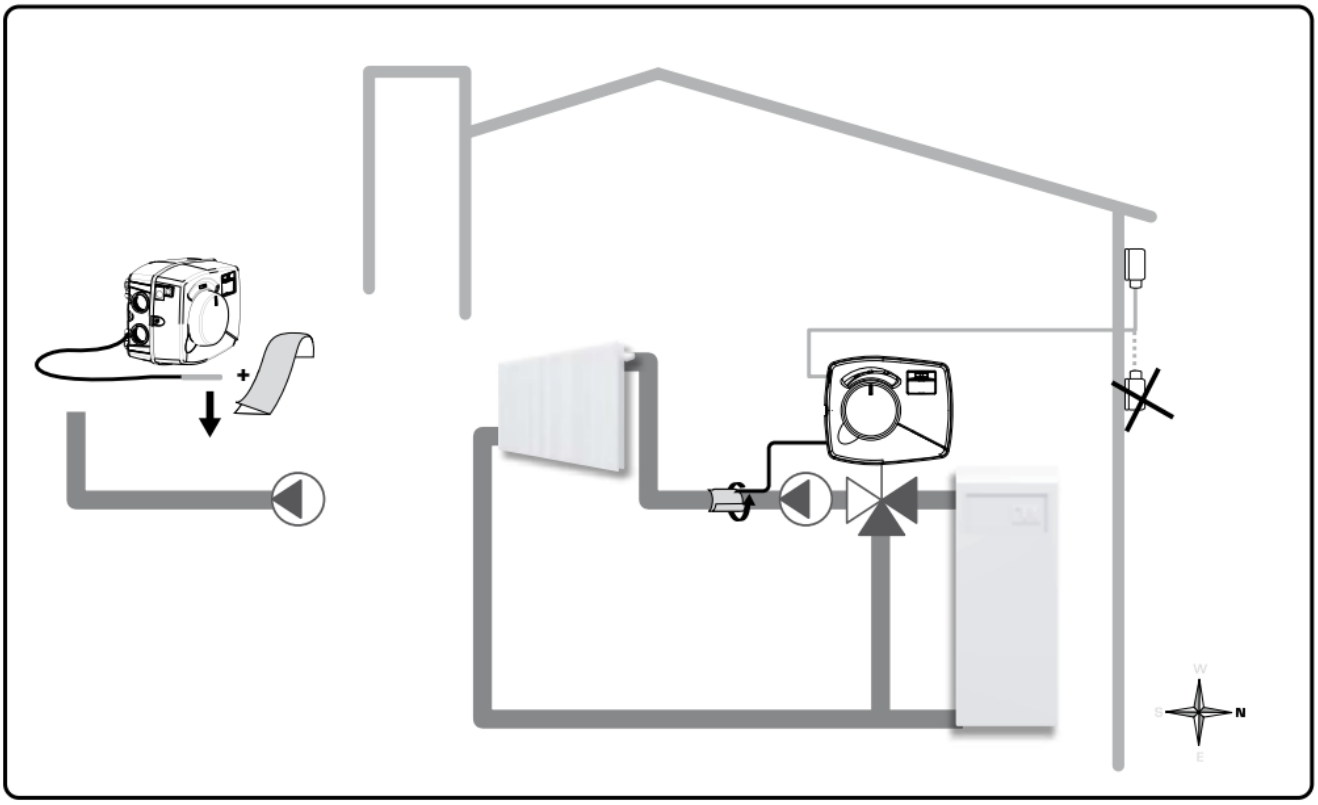
ESBE CRC200 Constant Temperature Controller Instruction Manual

ESBE CRC200 Constant Temperature Controller

Contents

Sensors

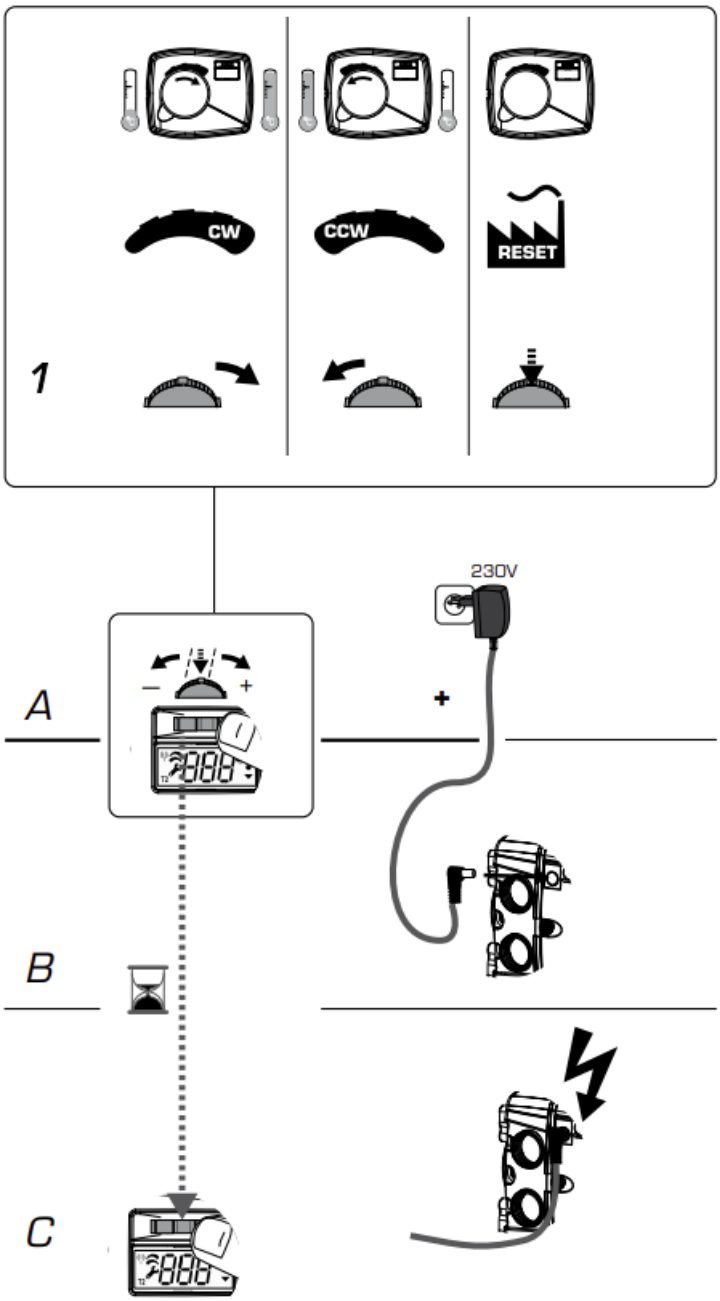
1. Mount the flow temperature sensor on the pipe using the supplied aluminum tape.
2. Mount the outdoor sensor on the north side of the building under the eaves in order to protect the sensor from direct sunlight and rain. Connect the cable plug into the controller.



Start up

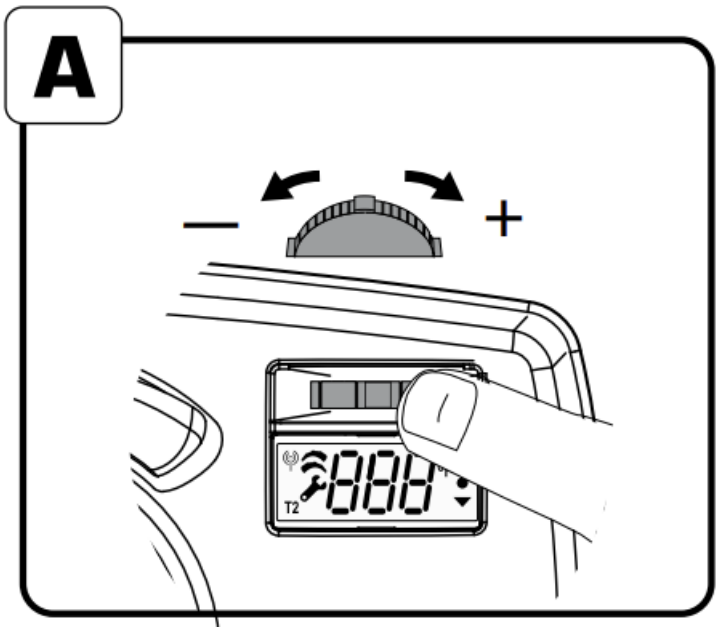
Working Direction

1. Set the working direction of the controller by pressing the joystick to right for clockwise opening or left for counter clockwise opening (A).
2. Keep the joystick in the desired direction and connect power (B).
3. Wait 2 seconds until joystick is released (C), the correct working direction is now set.

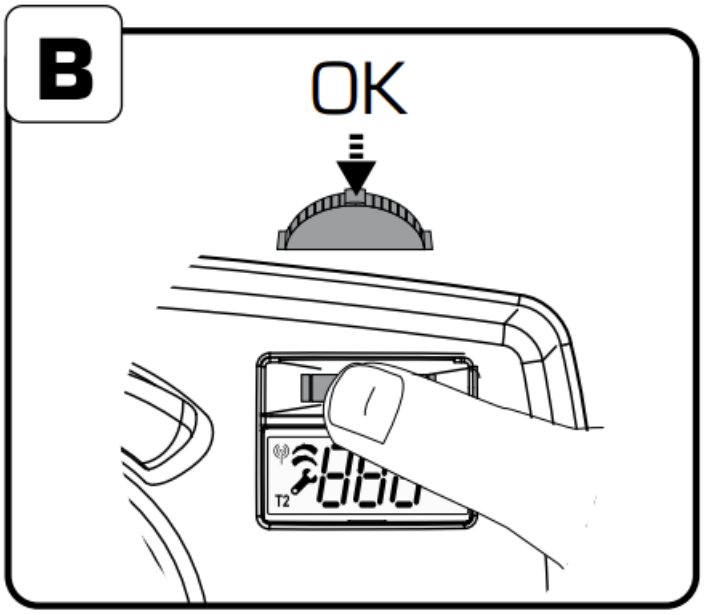


Change of target temperature

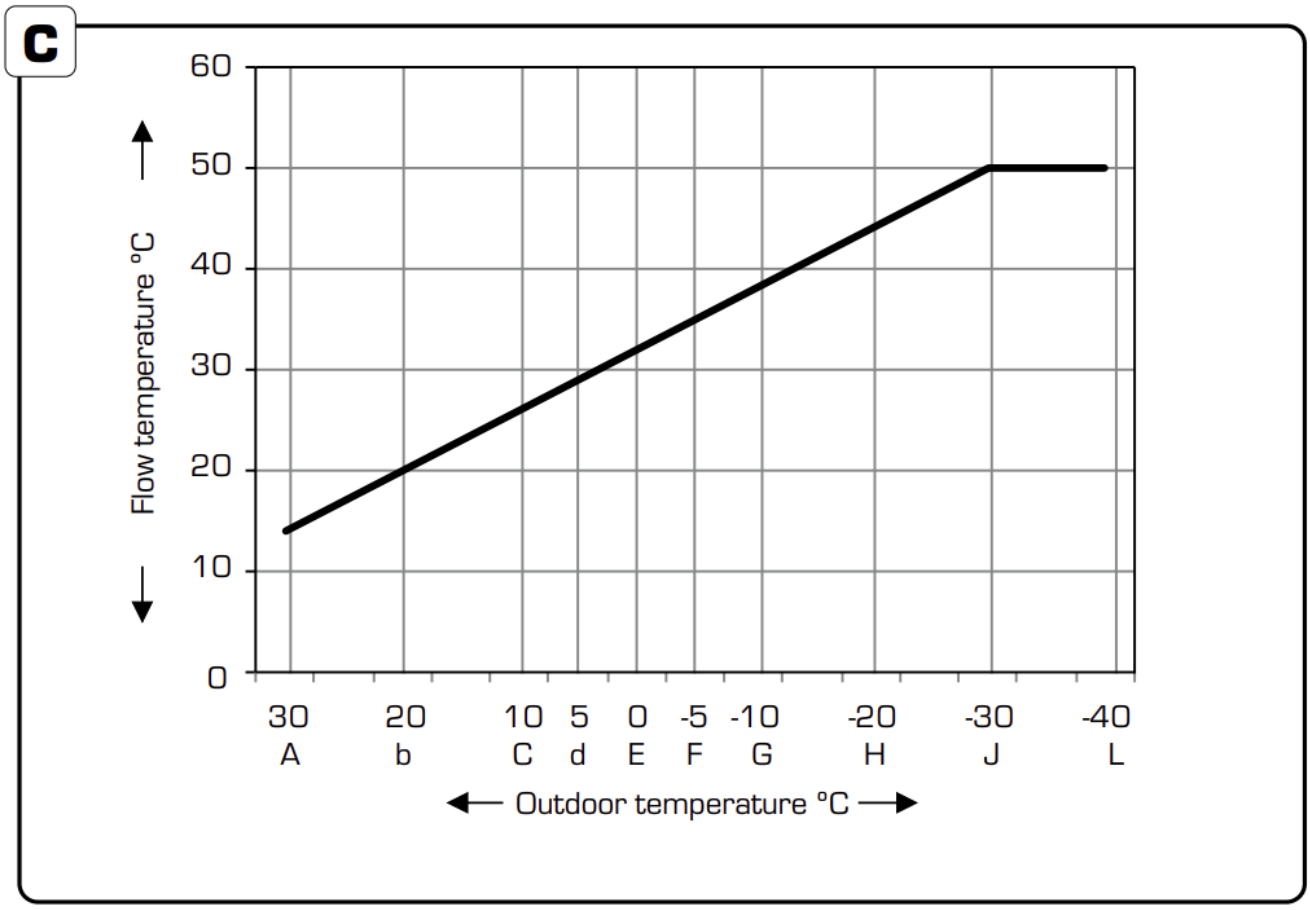
1. In order to change the target flow temperature, press the joystick to the right or to the left (A). If it is too cold inside the house, increase the target flow temperature with some degrees, if it is too hot inside the house decrease the target flow temperature with some degrees. The change will only affect the part of the curve corresponding to the actual outdoor temperature.

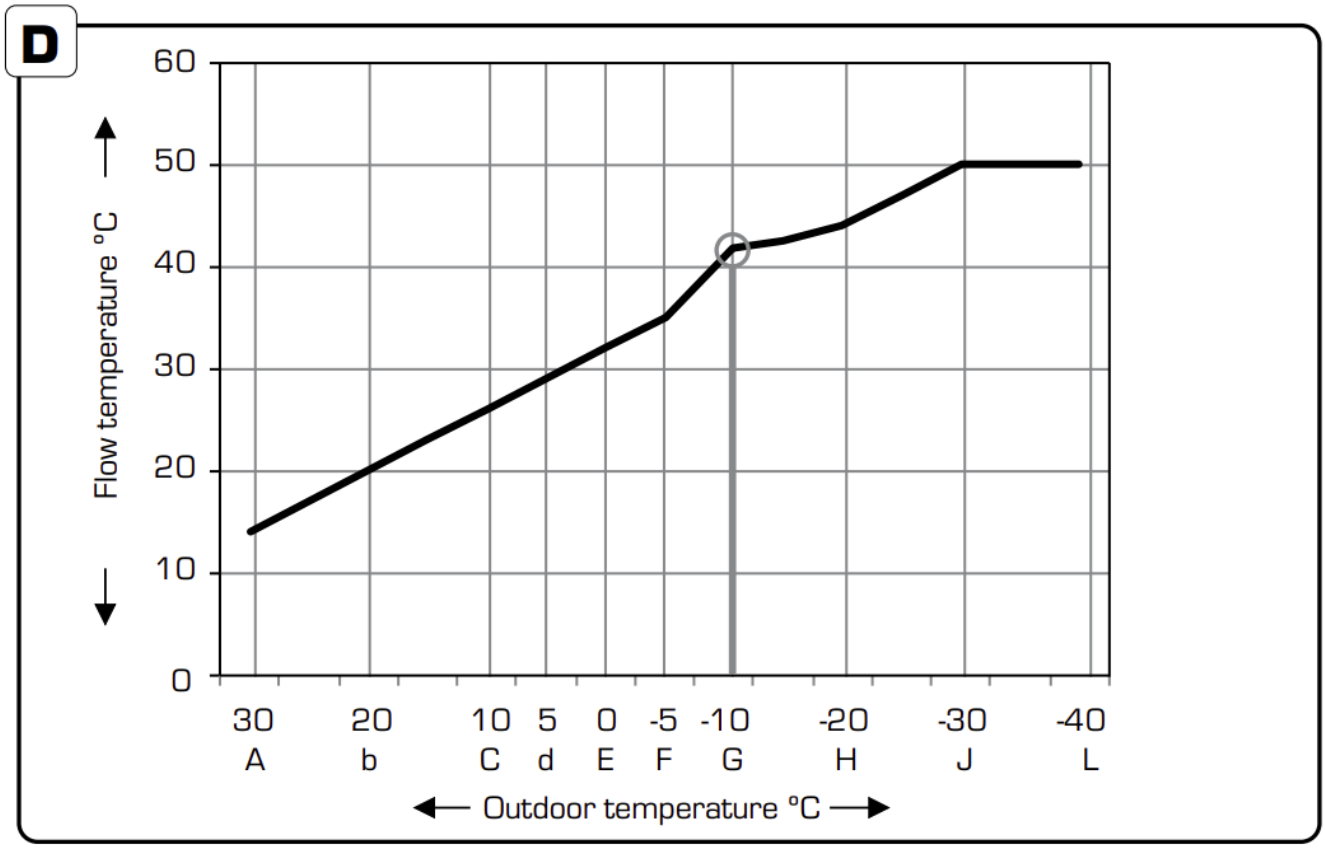


2. Press the joystick down to confirm new target temperature (B).



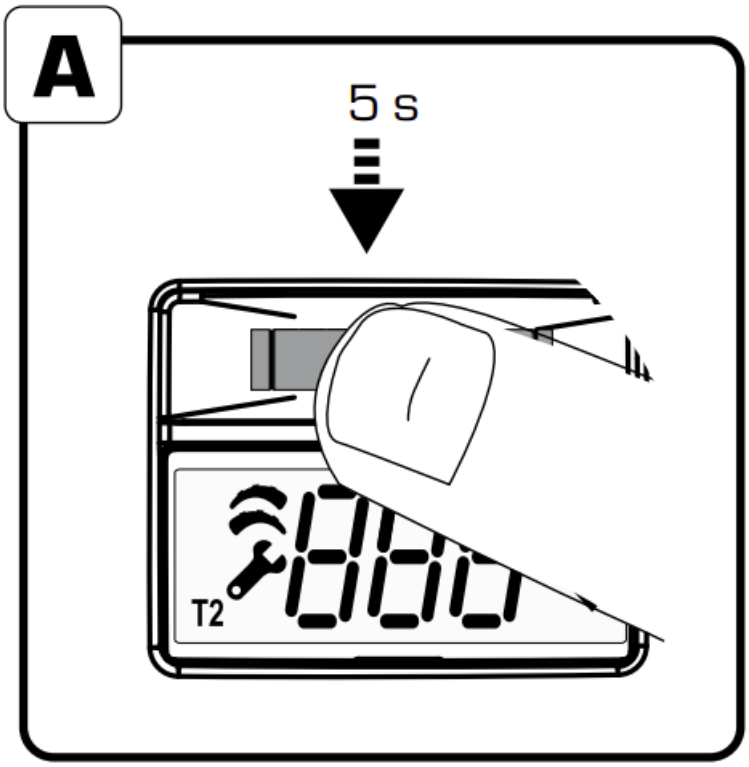
The graph C shows the factory setting of the characteristic heating curve. The graph D shows how the curve looks after a user has changed the split point G (-10ºC) and added 4ºC on the flow temperature. The curve is divided with 10 different split points and when the joystick is pressed the display shows the target flow temperature at the closest split point according to the actual outdoor temperature.



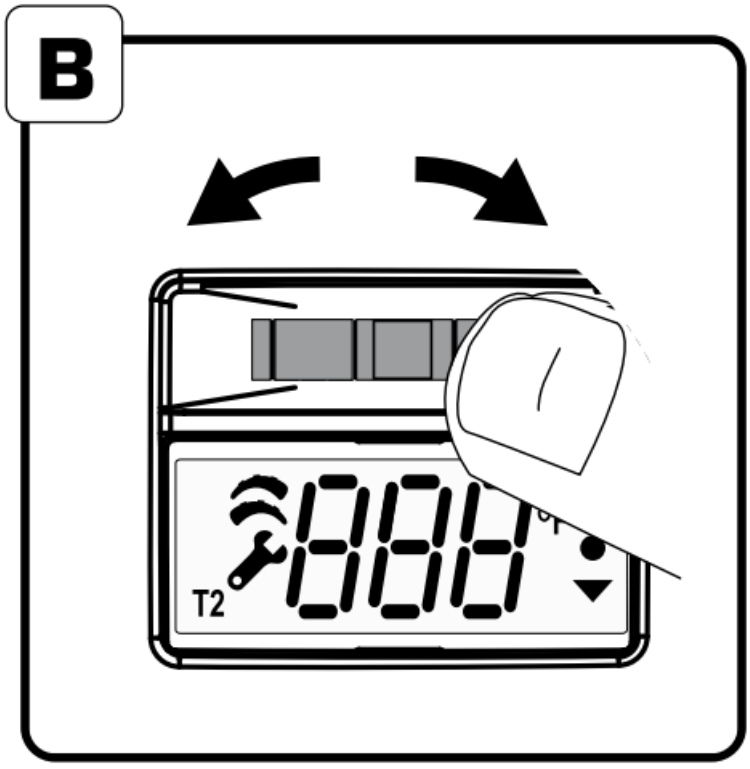


Advanced Settings

1. Press the joystick for 5 seconds to reach advanced settings (A).



2. To move between menus press joystick to left or right (B).



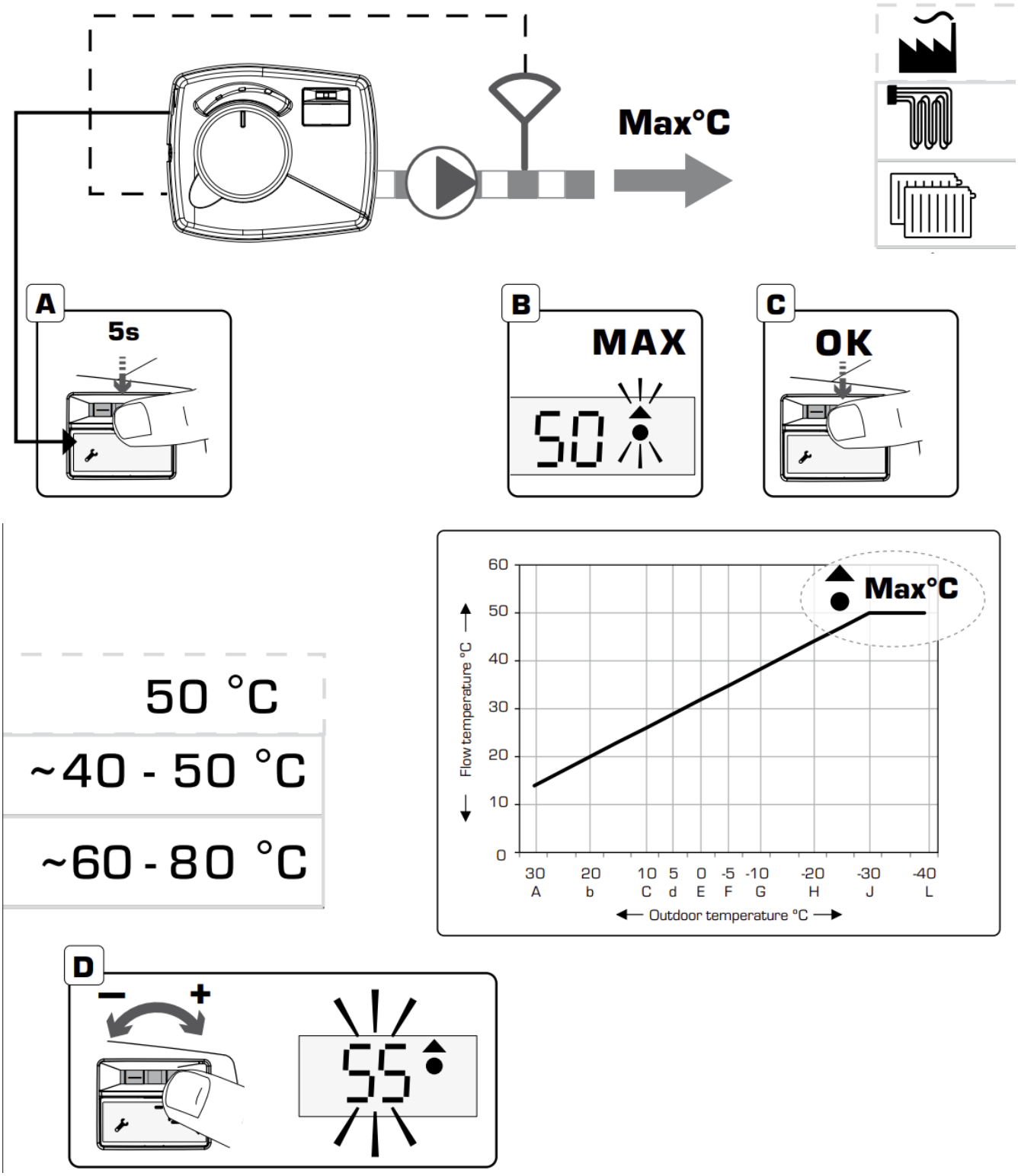
3. Press down the joystick to enter desired menu (C)

C

Symbol	Explanation **GB**	Förklaring **SE**
▲ ●	Maximum **FlowTemperature**	Max begränsning
● ▼	Minimum **FlowTemperature**	Min begränsning
Cur	Curve	Värmekurva
OFS	Offset	Offset / Parallell förflyttning
t-0	Time Constant	Tidskonstant
out	Outdoor temperature	Utomhus temperatur

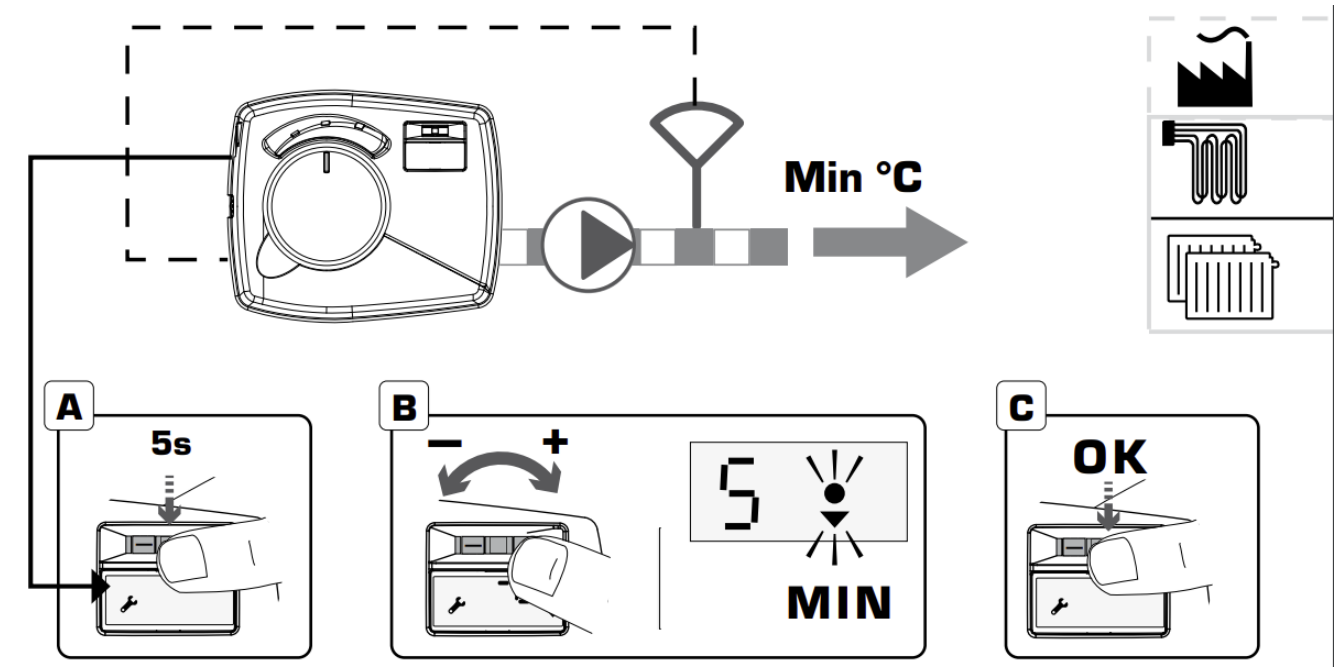
Maximum Flow Temperature

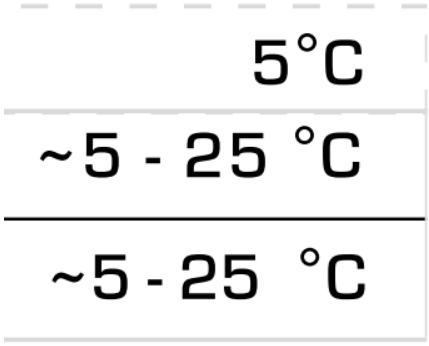
1. To change the maximum flow temperature press down the joystick for 5 seconds to reach advanced settings (A).
2. Choose menu “Max” by pressing the joystick (B) OK (C).
3. Decide the maximum flow temperature by pressing the joystick (D) OK (C). Please note that the setting can affect the upper limit of the characteristic heating curve.
4. Press down the joystick for 5 seconds to return to main menu (A).

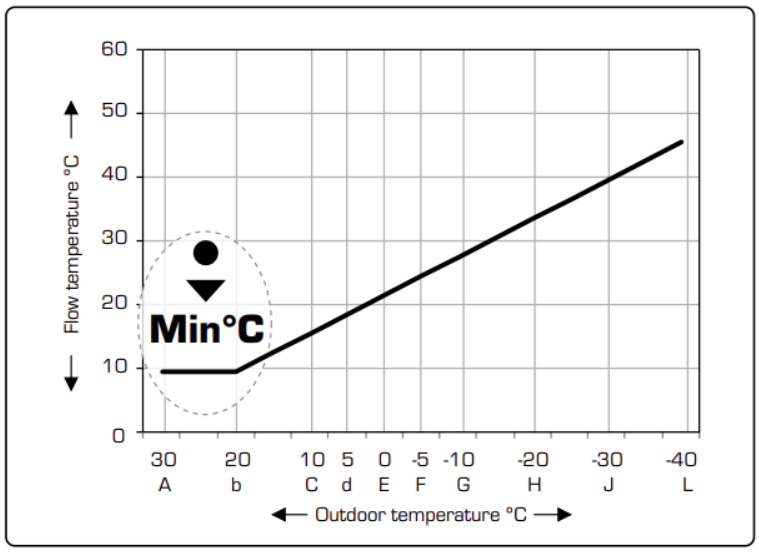


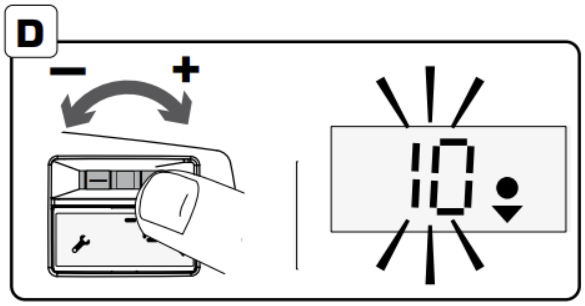
Minimum Flow temperature

1. To change the minimum flow temperature press down the joystick for 5 seconds to reach advanced settings (A).
2. Choose menu “Min” by pressing the joystick (B) OK (C).
3. Decide the minimum flow temperature by pressing the joystick (D) OK (C). Please note that the setting can affect the lower limit of the characteristic heating curve.
4. Press down the joystick for 5 seconds to return to main menu (A).







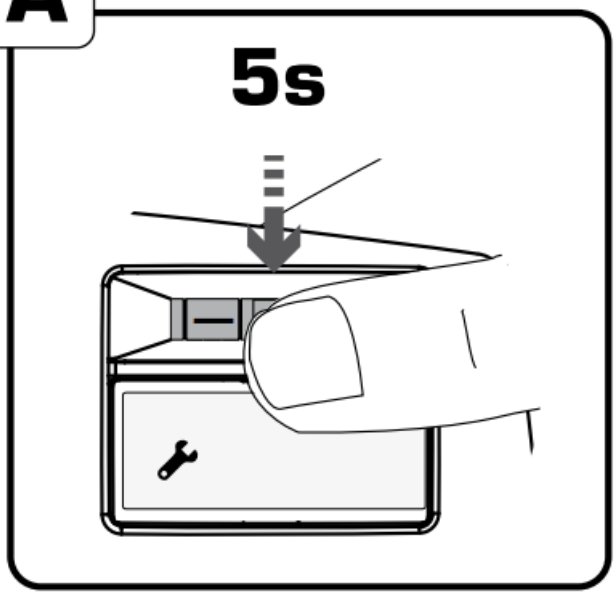


Curve

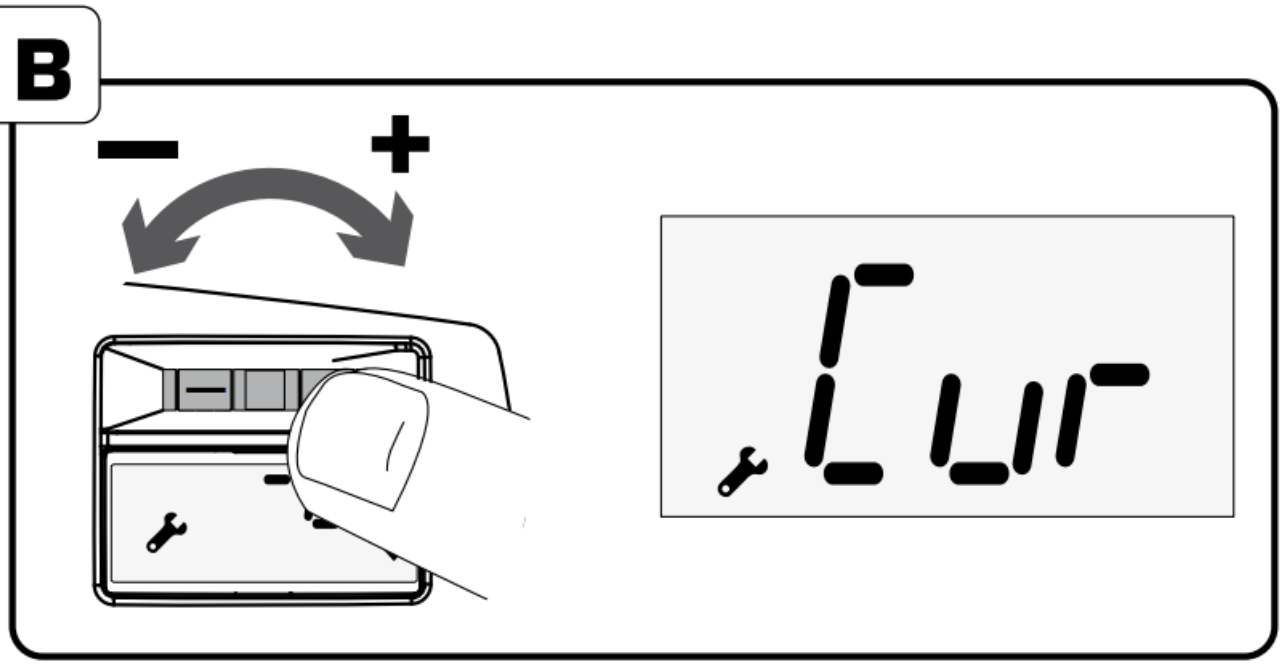
1. To change the characteristic heating curve, independent of actual outdoor temperature, press down the joystick for 5 seconds to reach advanced settings (A).
2. Choose menu “Cur” by pressing the joystick (B) OK (C).
3. Decide the split point by pressing the joystick (D) OK (C).
4. Decide the target flow temperature at the actual split point by pressing the joystick (E) OK (C).
5. Start at point 3 again if another split point shall be changed or press down the joystick for 5 + 5 seconds to return to main menu (A).

   Note: Table and graphs shows the factory setting.

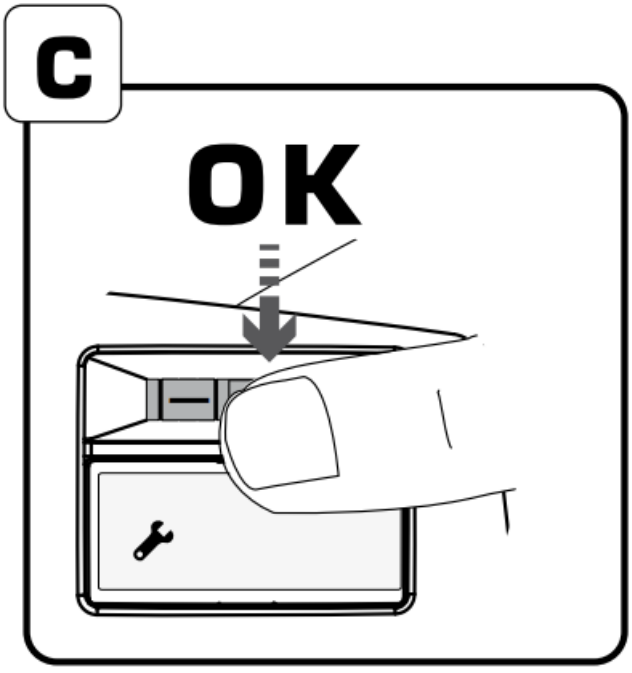
A



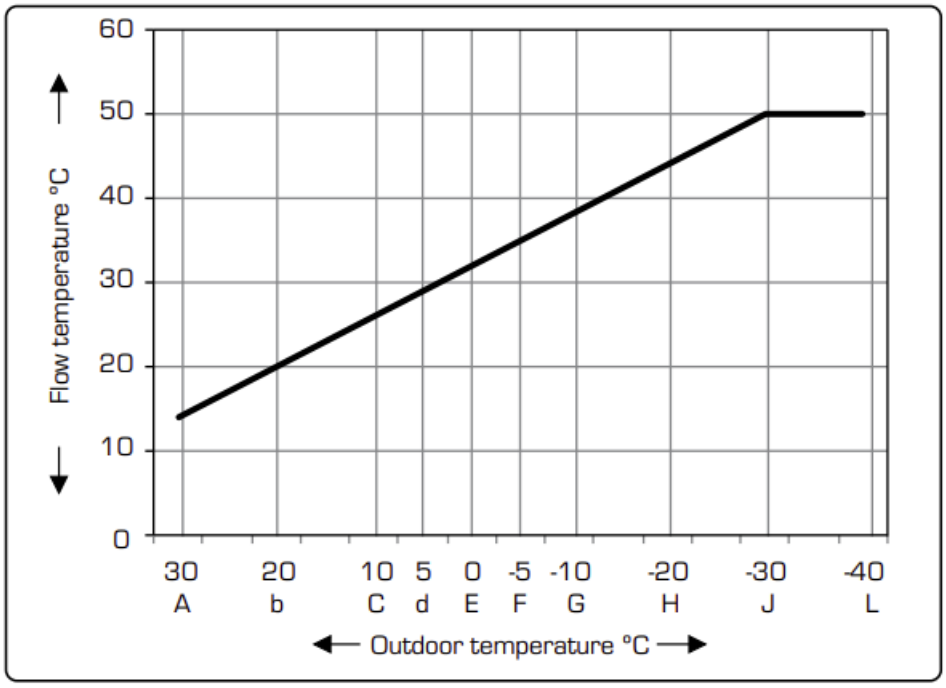
B

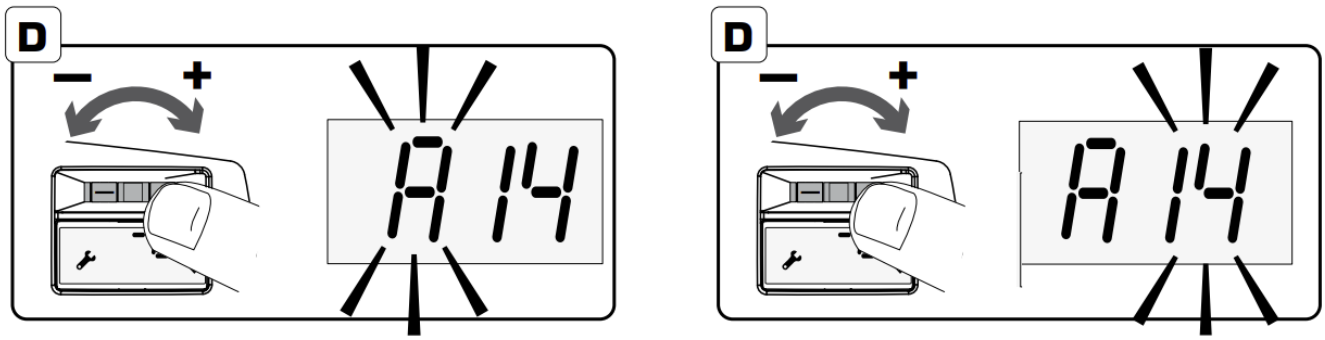


C



Outdoor temperature ºC	Symbol in display (split point)	Flow temperature ºC
+30	A	14
+20	B	20
+10	C	26
+5	D	29
0	E	32
– 5	F	35
– 10	G	38
– 20	H	44
– 30	J	50
– 40	L	50



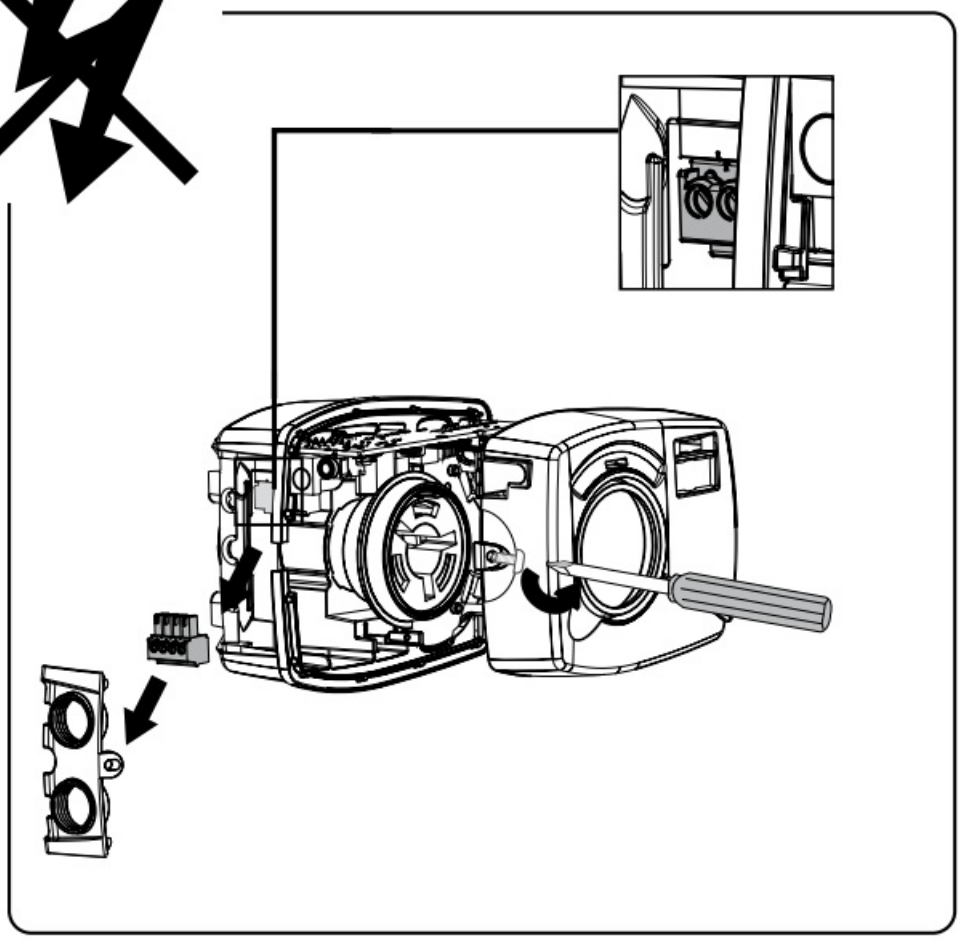


Offset

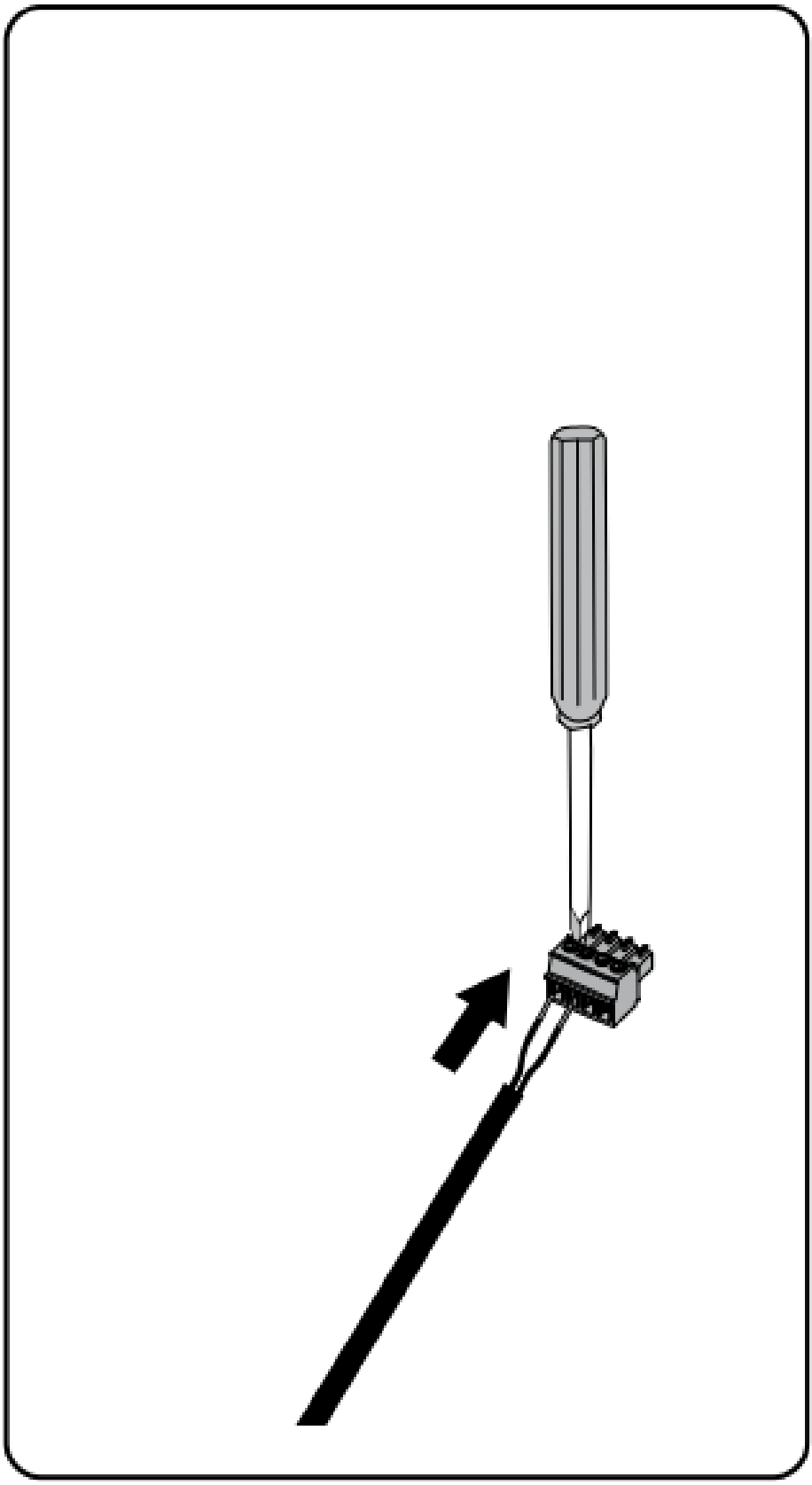
Activate Offset / Parallel adjustment

1. Disconnect power to the controller.
2. Unscrew the cover (A) and connect two conductors to the green connector (B).

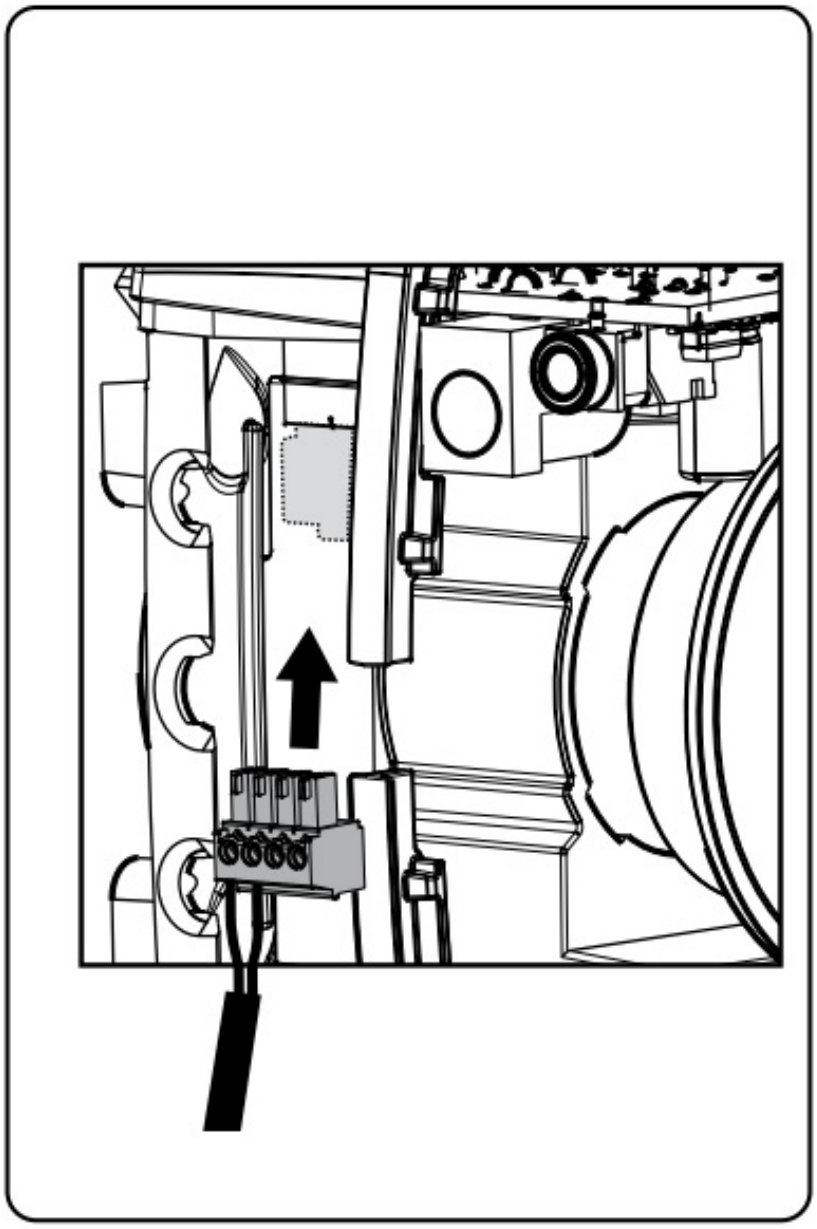
A



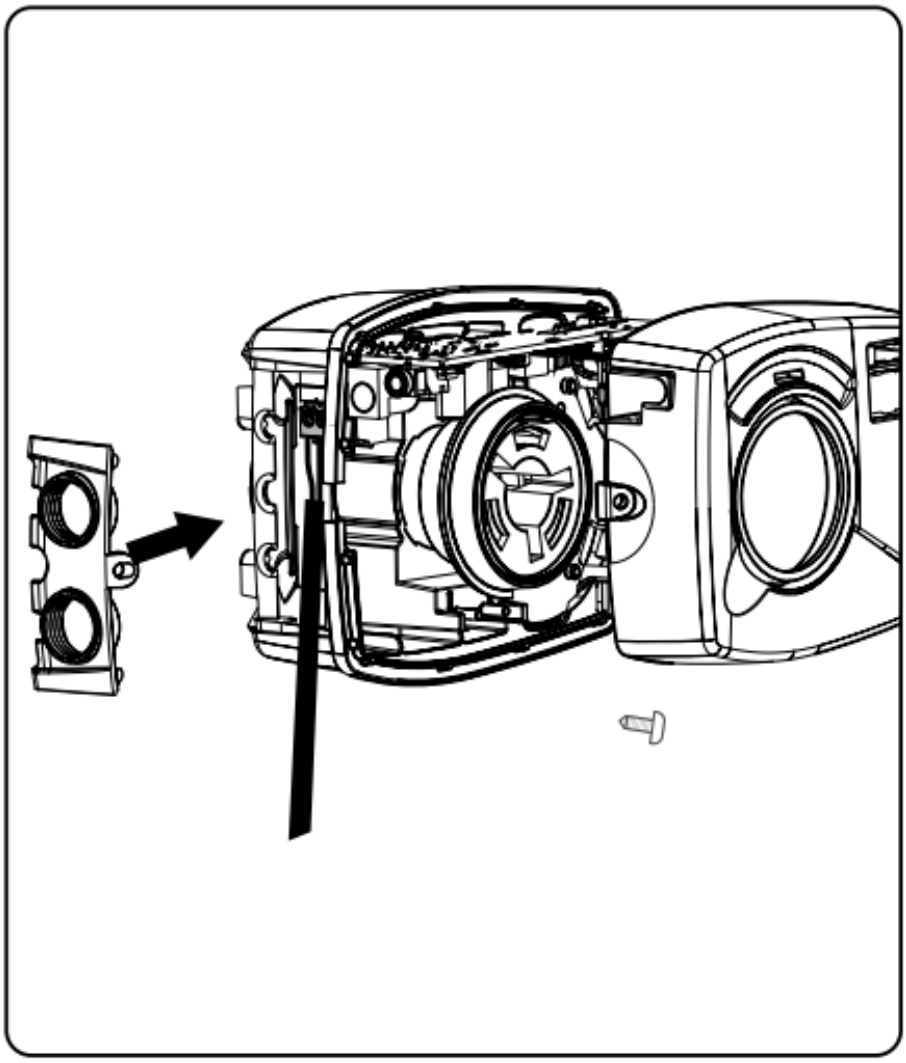
B



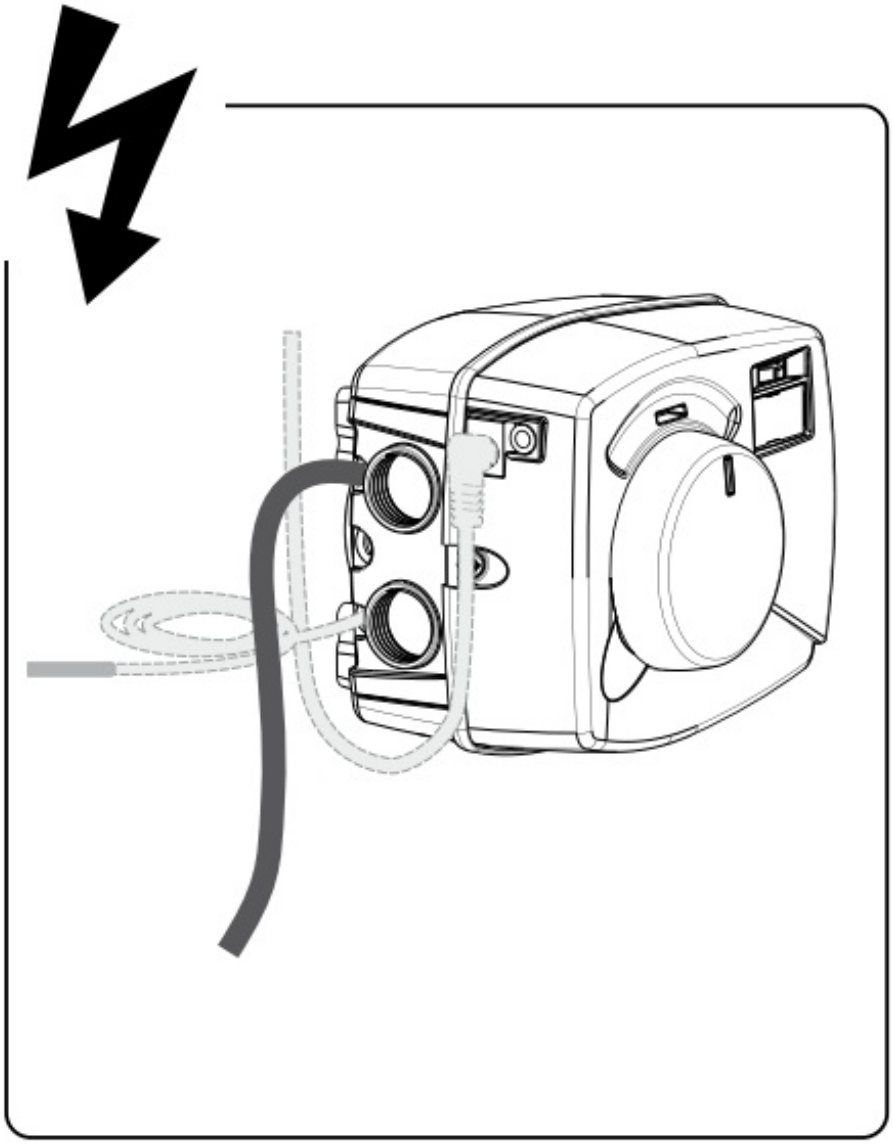
3. Place the connector on the PCB (C) and assembly the cover back (D).
   Connect power to the controller (E). When the two conductors are interconnected the parallel adjustment is activated and the T2 symbol is shown in the display. In this mode, a change of the target flow temperature can only be made in menu (Cur) or menu (OFS).



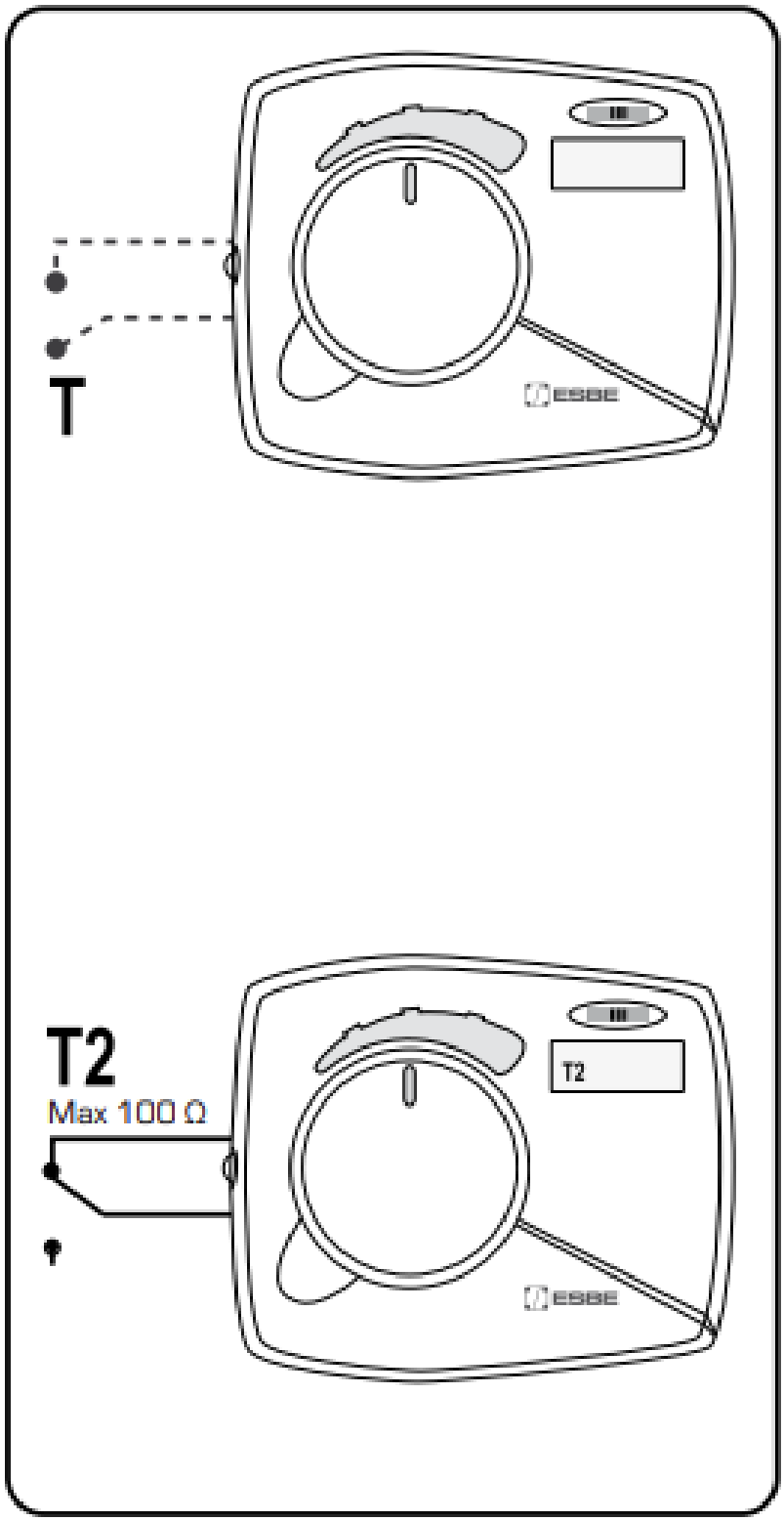
D



E



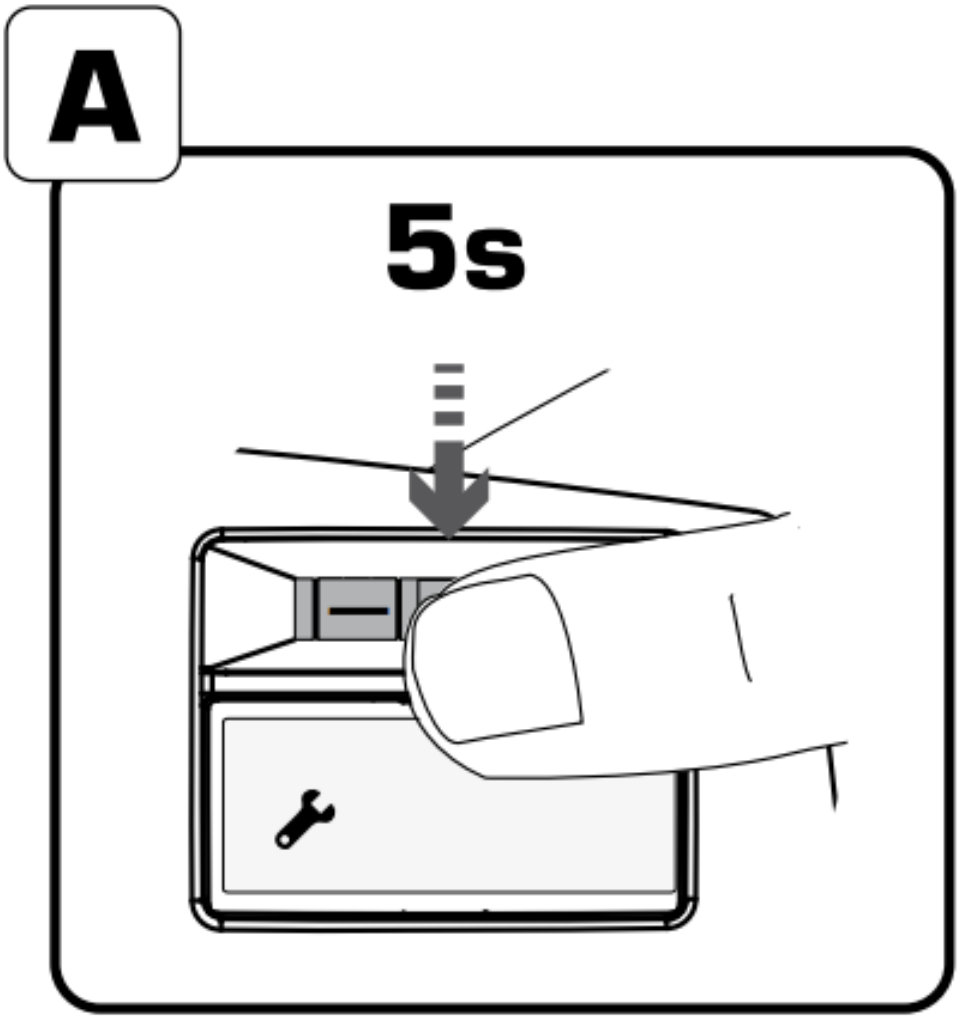
F



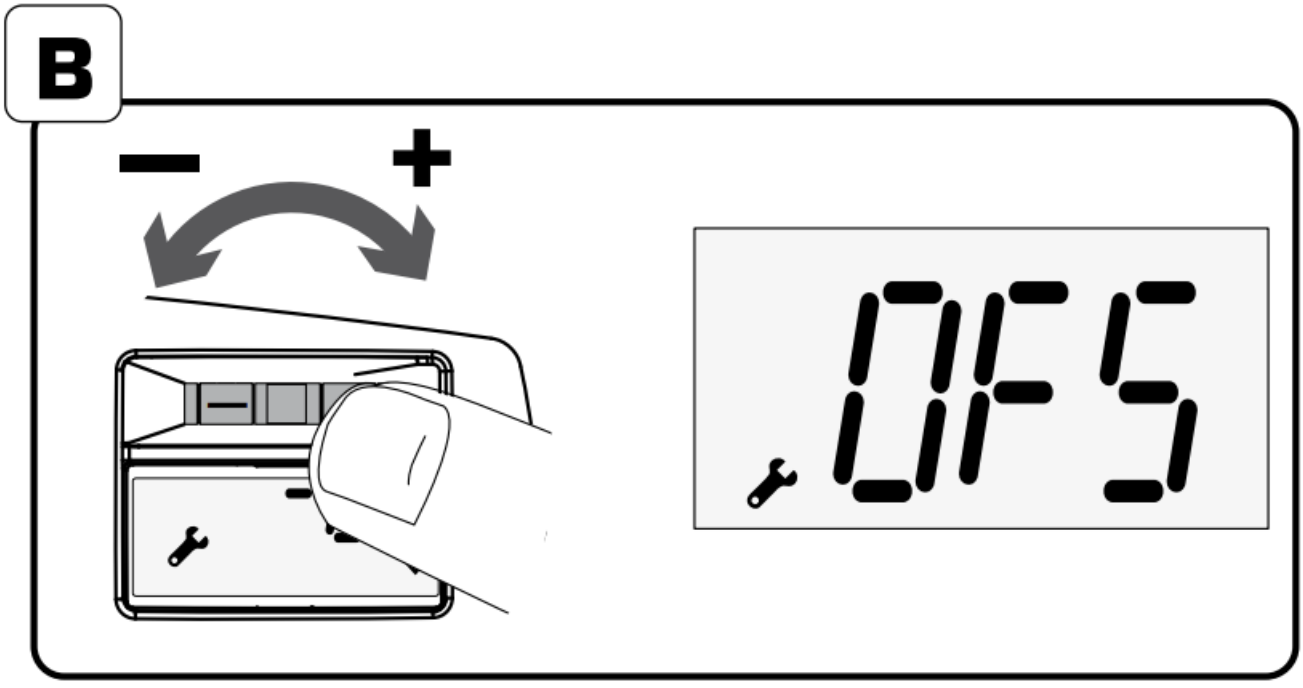
The connection shall be without any voltage or current and with a maximum resistance of 100Ω. (F)

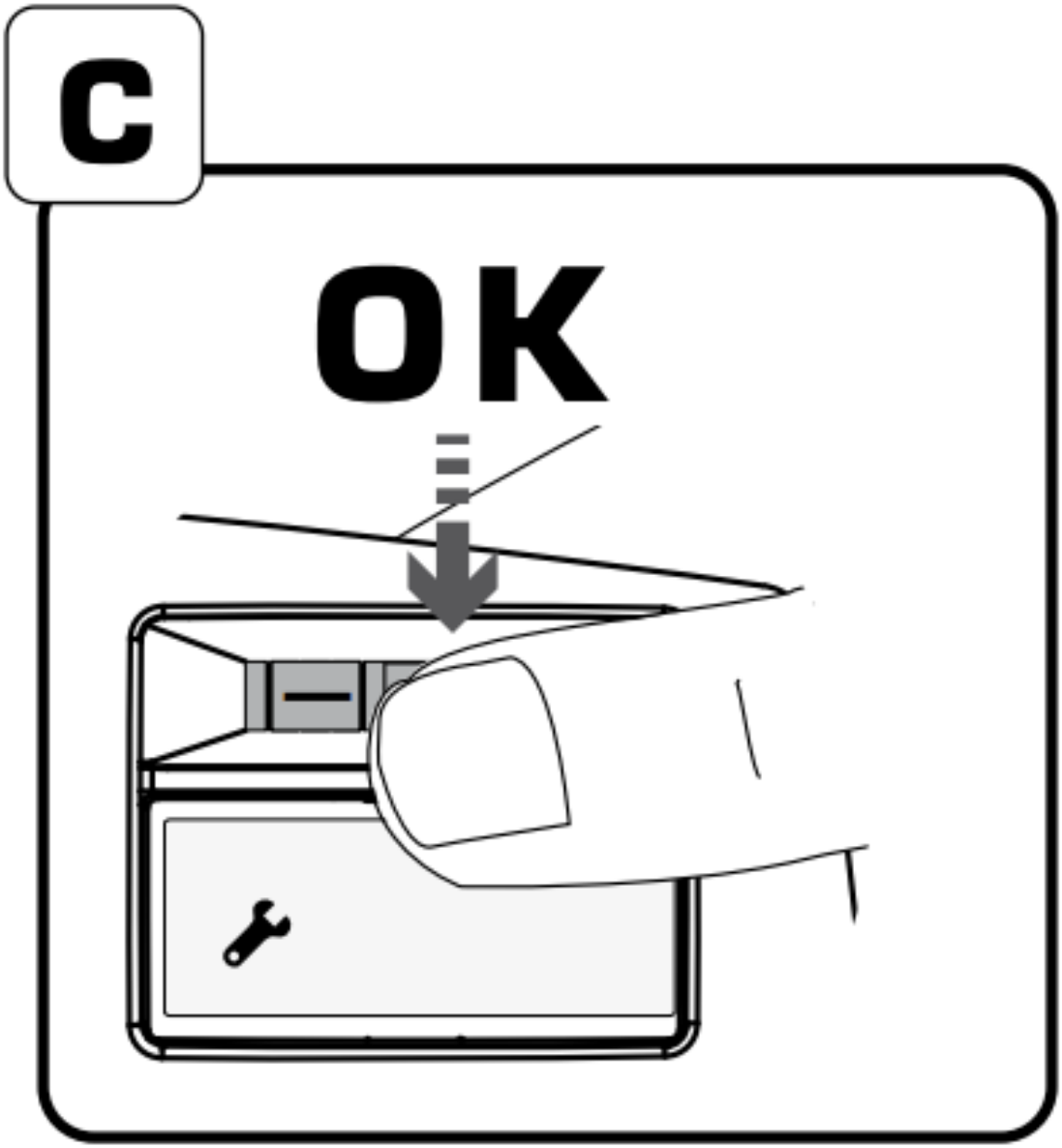
Activate Offset / Parallel adjustment

1. To set the offset / parallel adjustment of the characteristic heating curve press down the joystick for 5 seconds to reach advanced settings (A).

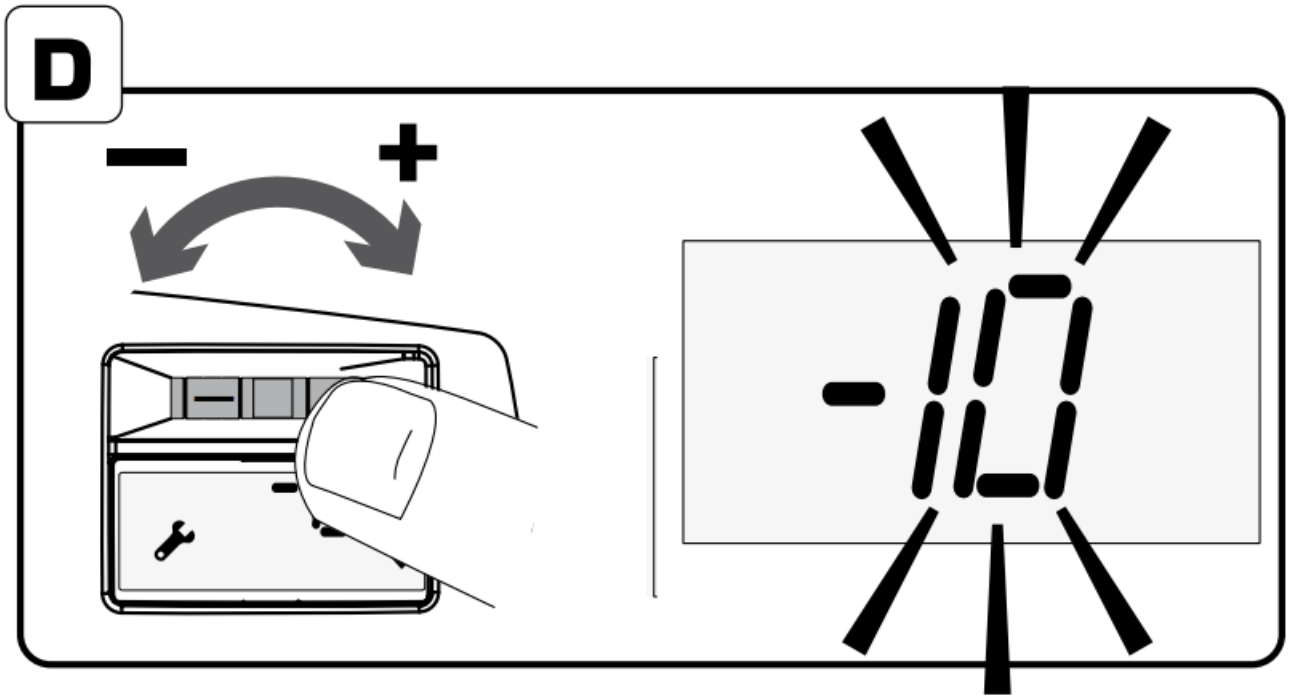


2. Choose menu “OFS” by pressing the joystick (B) OK (C).



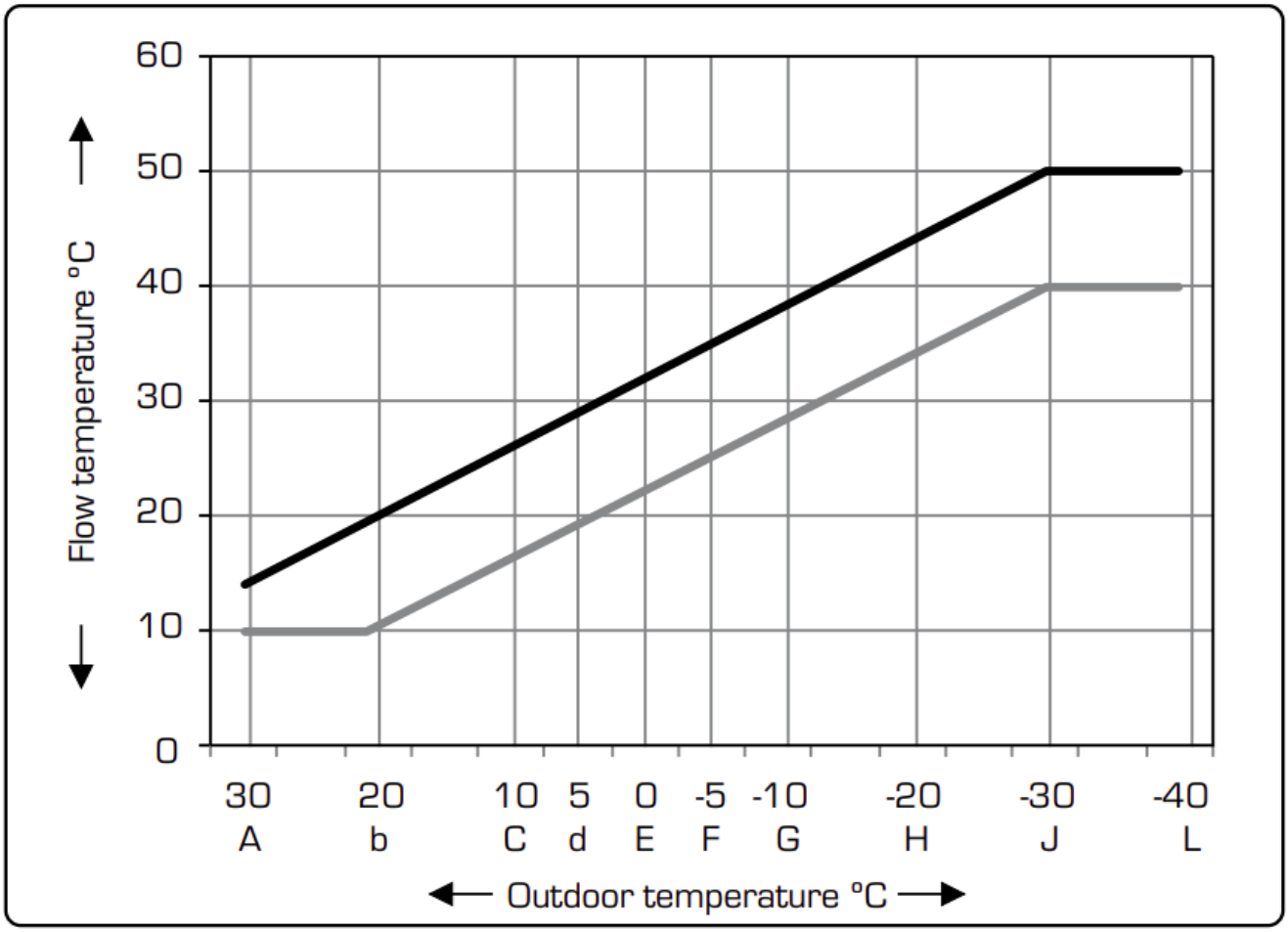


3. Decide the offset by pressing the joystick (D) OK (C).



4. Press down the joystick for 5 seconds to return to main menu (A).

Note: When the offset setting is negative (-1 to -90ºC) the minimum flow temperature will be the lower limit but other than that the complete characteristic heating curve will be parallel adjusted. When the offset setting is positive (+1 to +90ºC) the maximum flow temperature will be the upper limit but other than that the complete characteristic heating curve will be parallel adjusted.

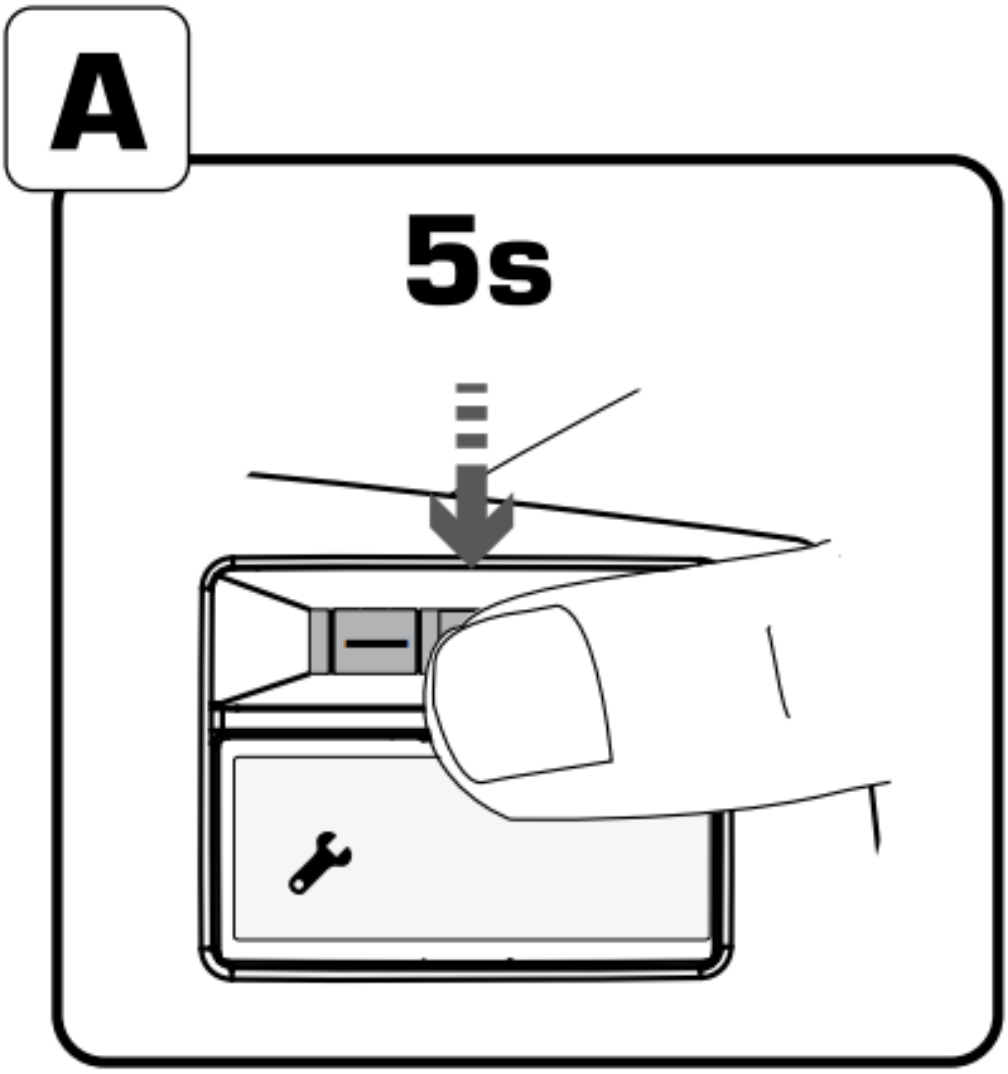


Time Constant

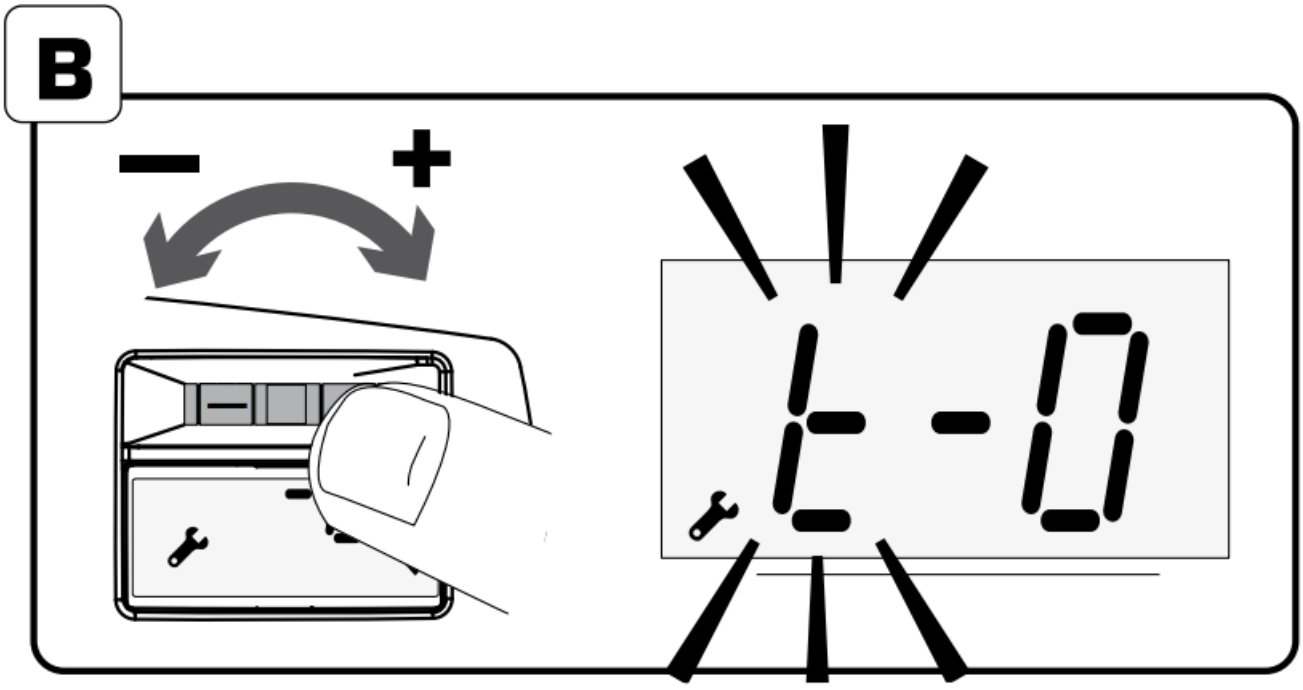
Activate an outdoor temperature filter.

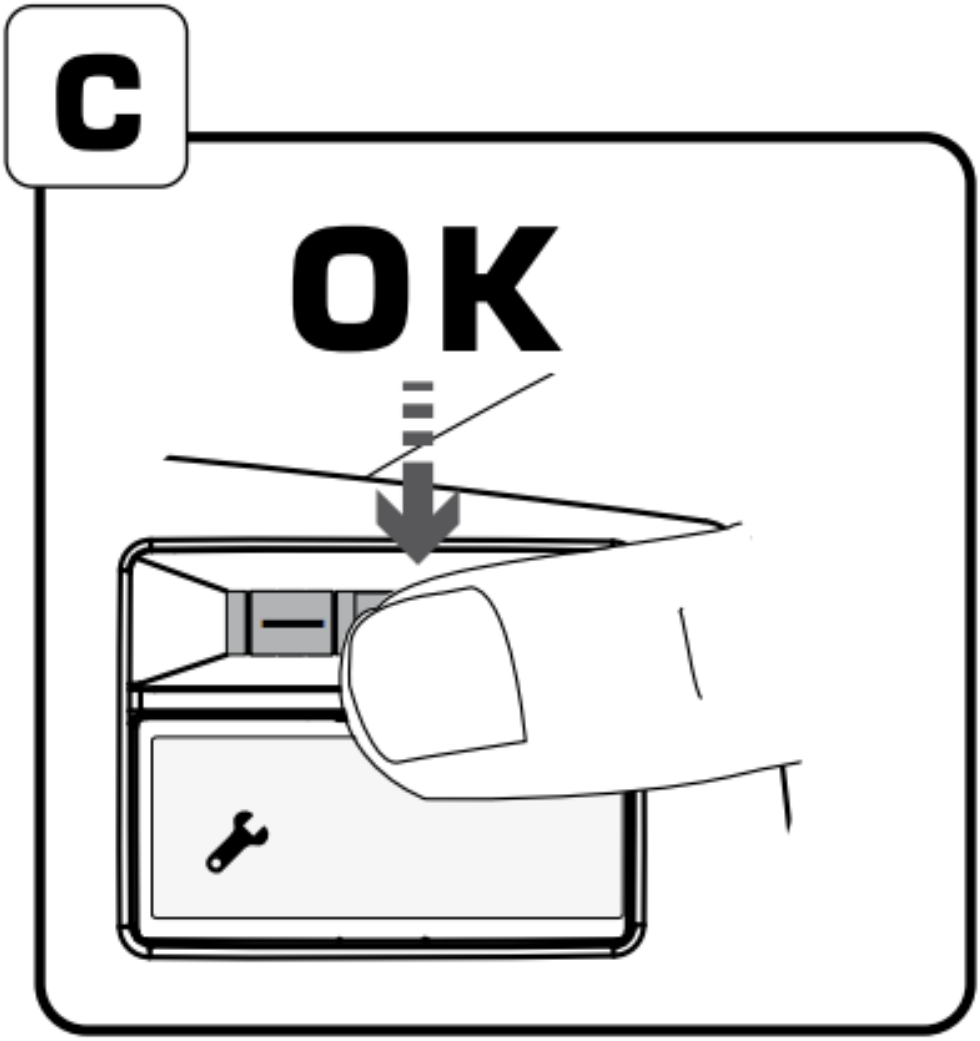
For applications with well-insulated buildings and quick heating systems such as a radiator circuit, the filter will delay the impact of a change in outdoor temperature. This is to avoid an imbalance between estimated and actual heating demand

1. To change the time constant press down the joystick for 5 seconds to reach advanced settings (A).

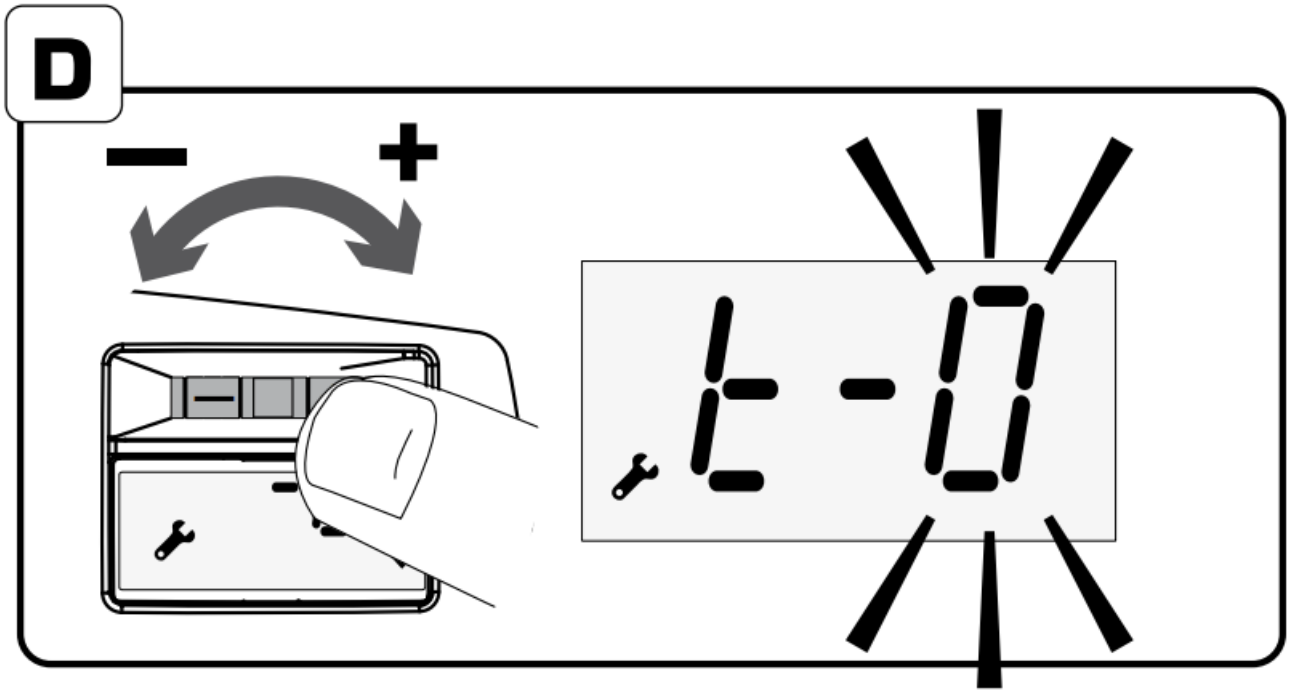


2. Choose menu “t” by pressing the joystick (B) OK (C).

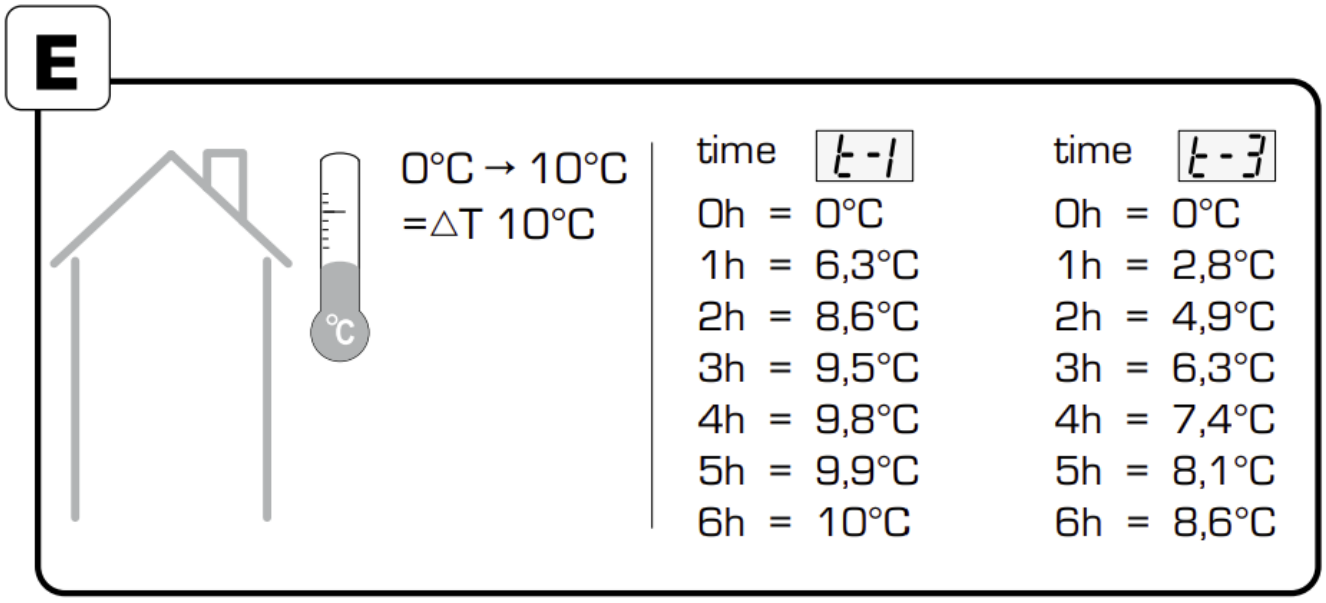


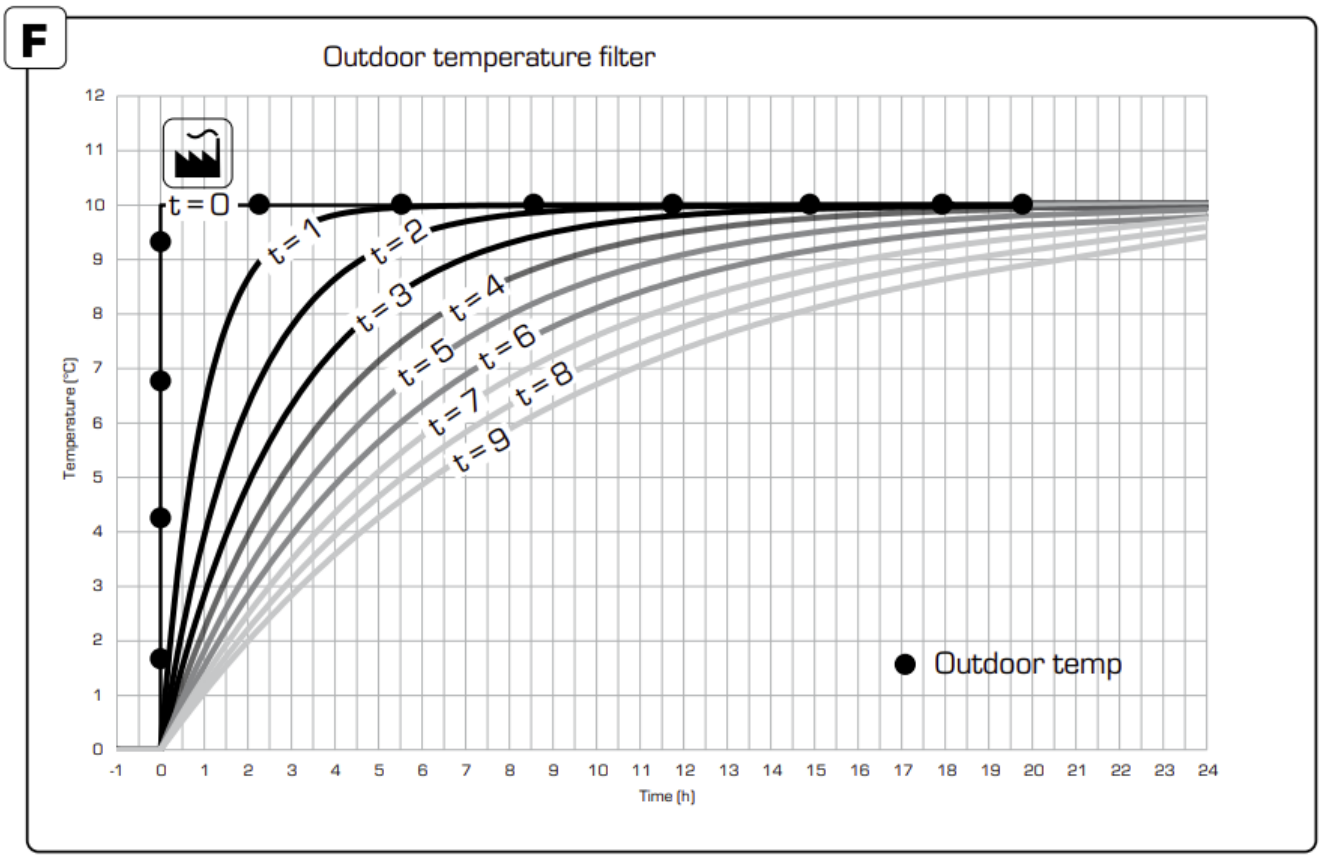


3. Decide the time constant by pressing the joystick (D) OK (C).



4. Press down the joystick for 5 seconds to return to main menu (A).
   The filter is defined by how long time it takes before the controller knows 63% of the actual outdoor temperature change. When the filter setting is for example T=3 the controller will know 63% of the change after 3 hours. For further information please see (E) + graph (F)

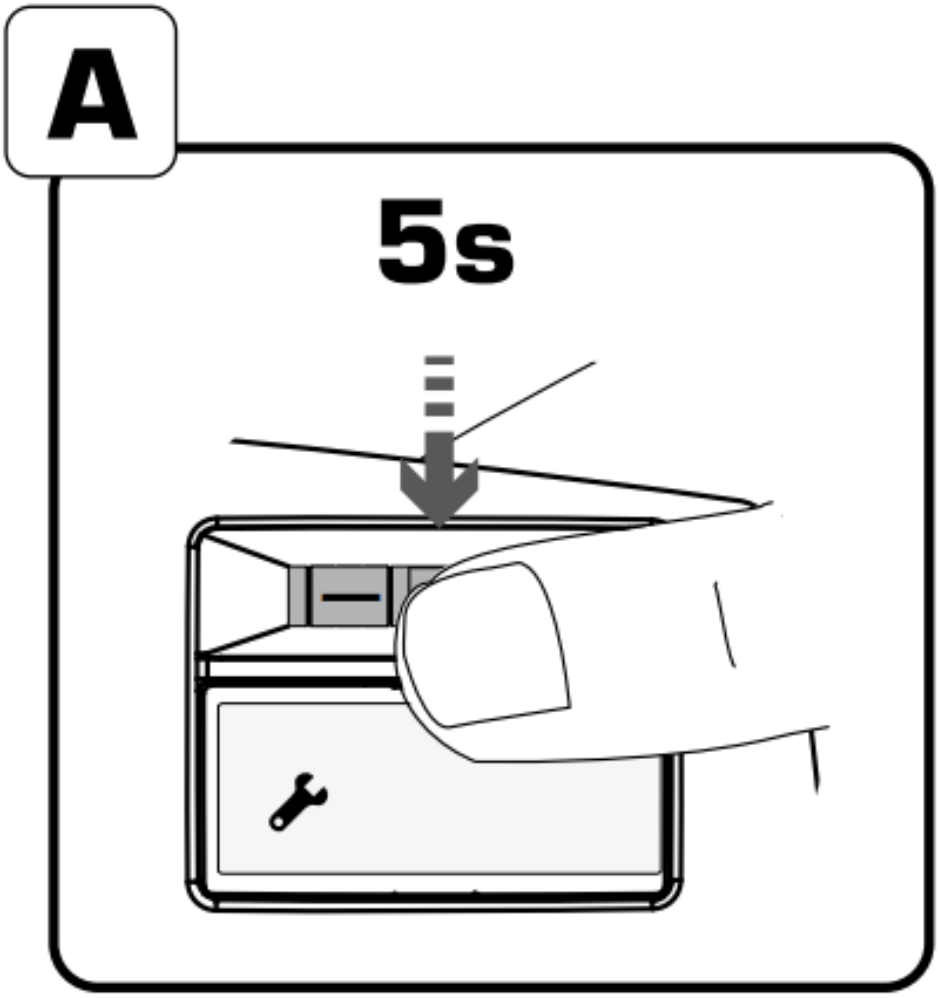




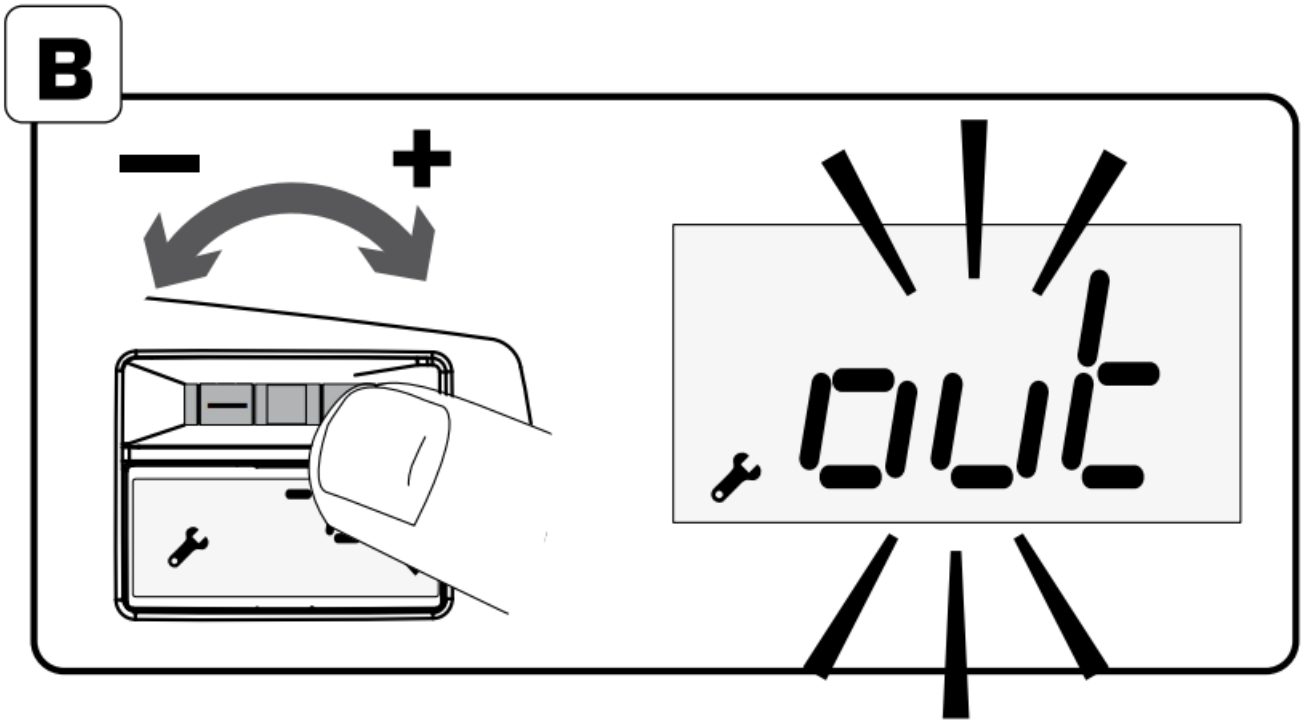
Outdoor Temperature

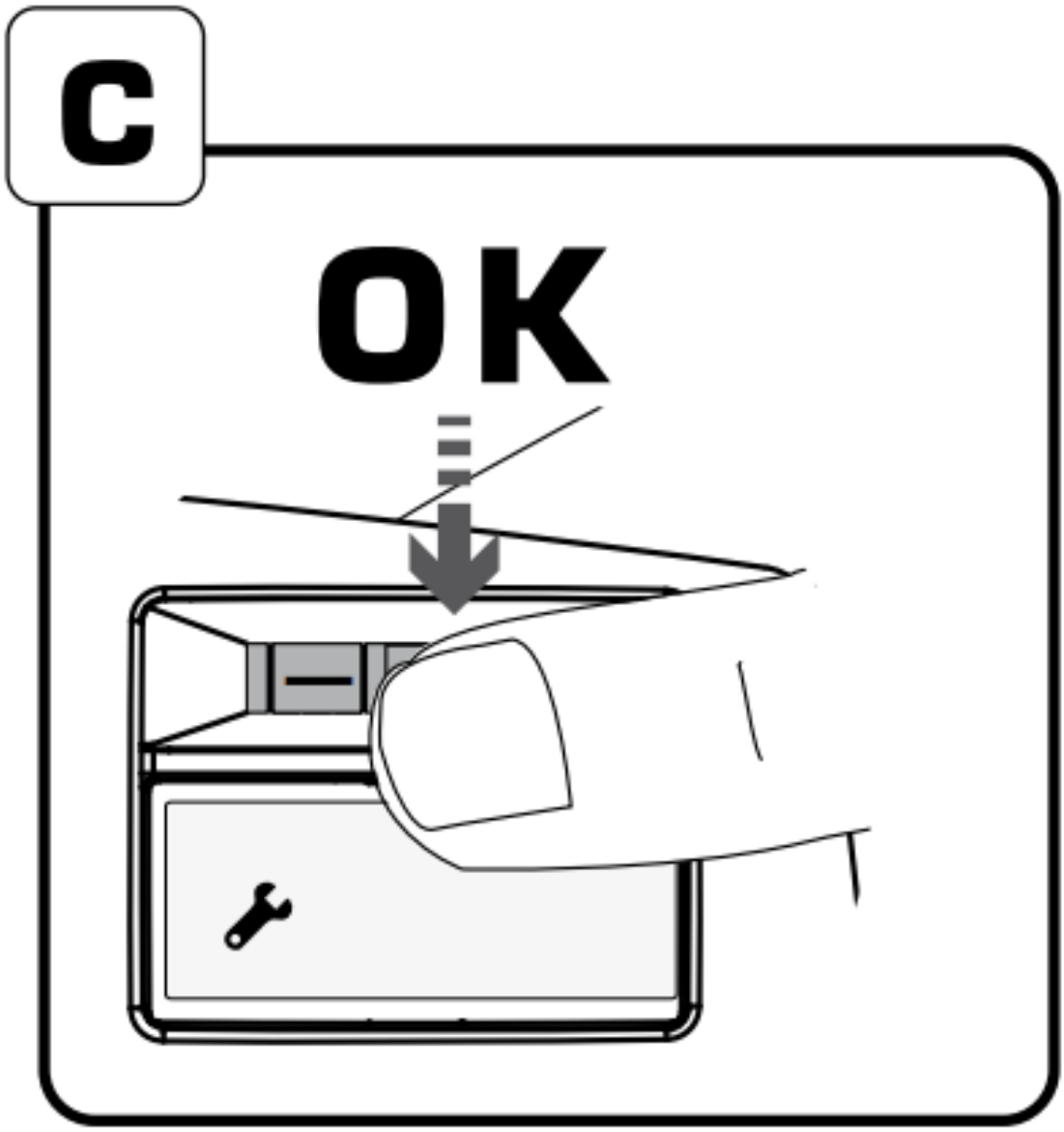
Actual outdoor temperature

1. To see the actual outdoor temperature, press down the joystick for 5 seconds to reach advanced settings (A).

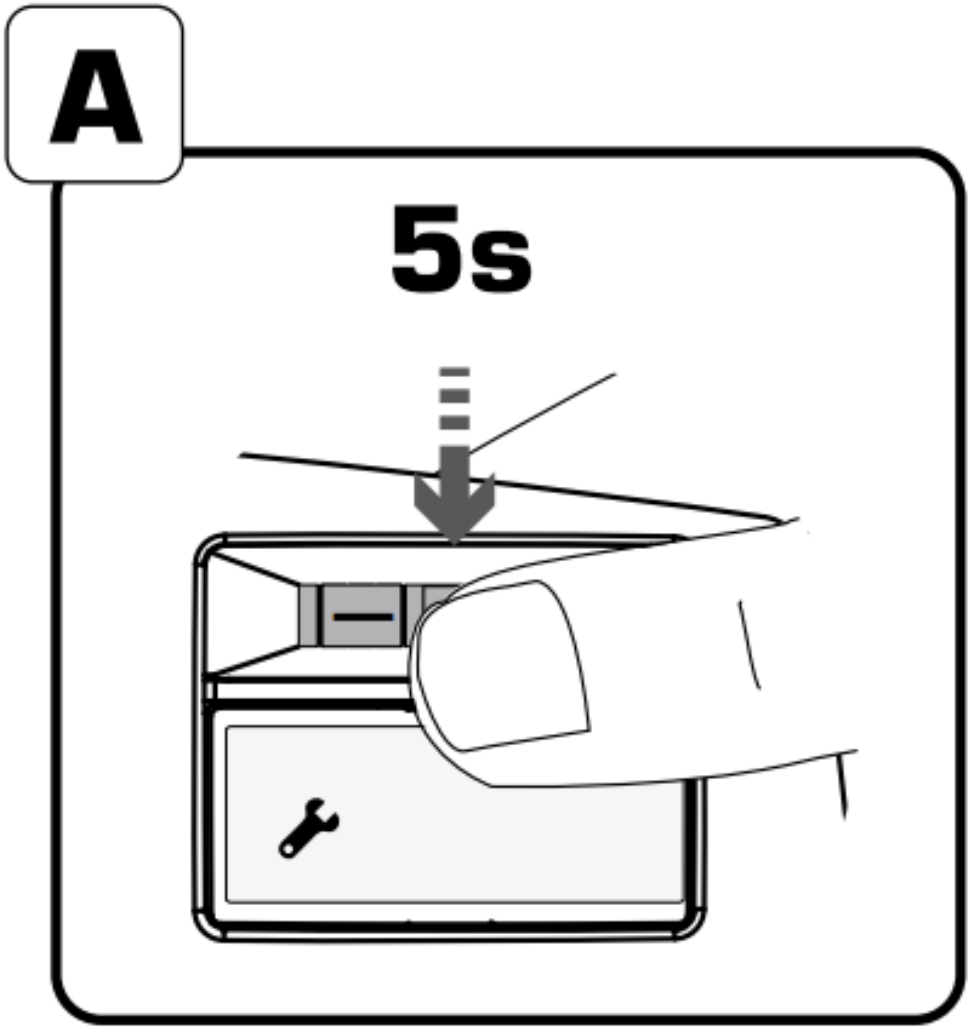


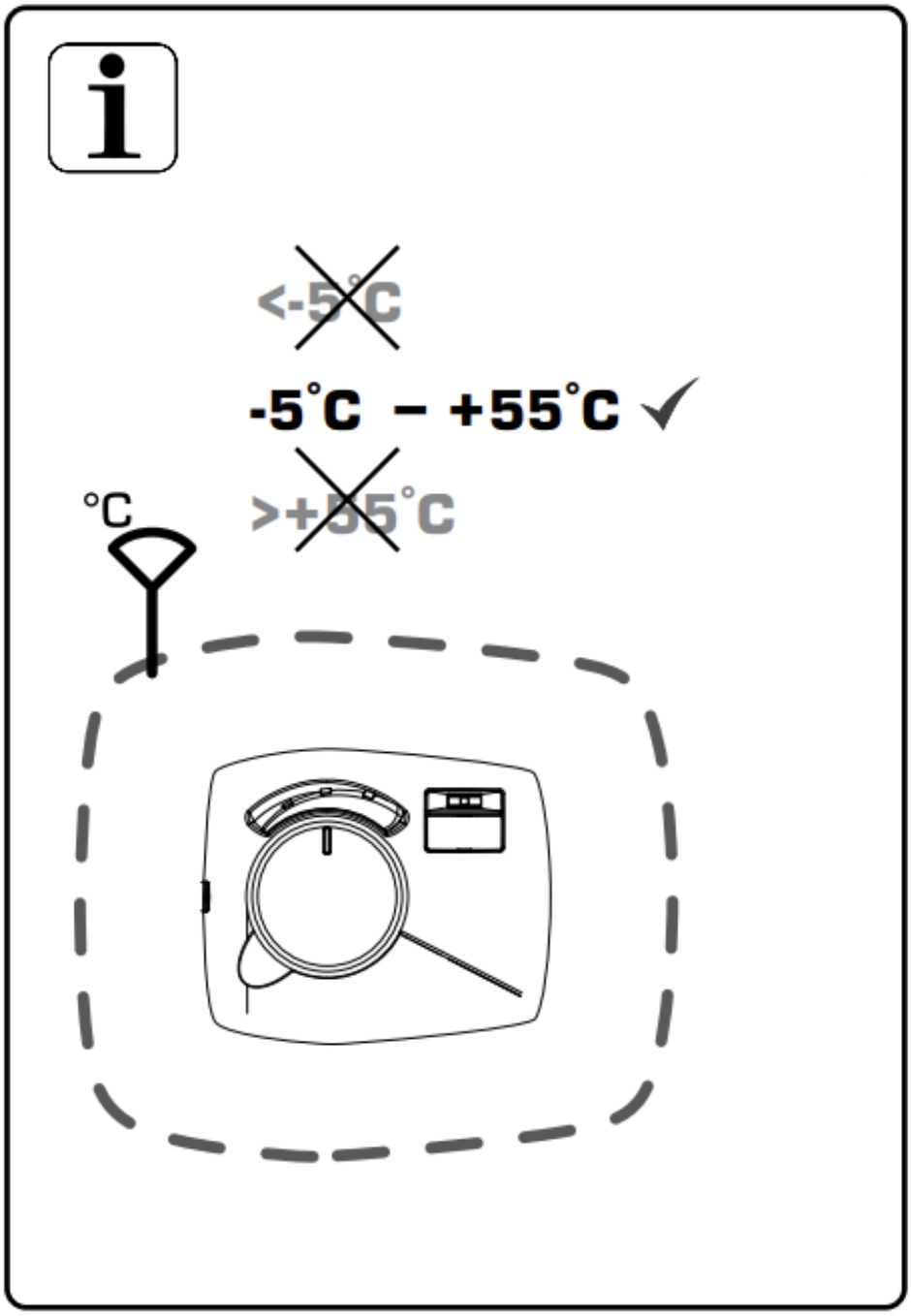
2. Choose menu “out” by pressing the joystick (B) OK (C).

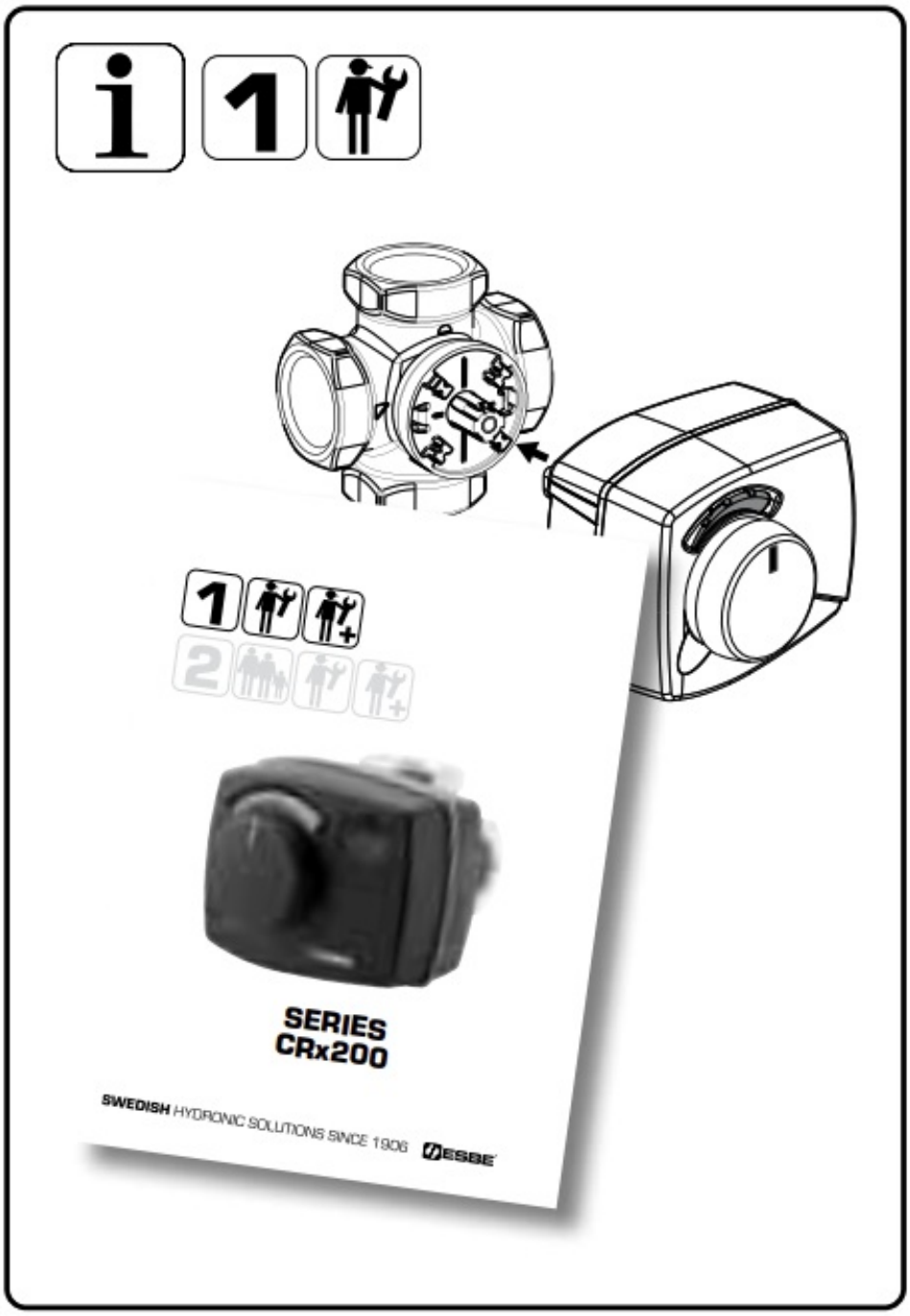




3. The outdoor temperature is now displayed.
4. Press down the joystick for 5 seconds to return to main menu (A).


A
5s


<-5°C
-5°C – +55°C
>+55°C
°C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Documents / Resources

	**ESBE CRC200 Constant Temperature Controller** [pdf] Instruction Manual CRC200, Constant Temperature Controller, CRC200 Constant Temperature Controller, Temperature Controller, Controller

References

- **ESBE | Support**