

Operating instructions for FK-5
Break Tank Station
Fig. 369





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Safety instructions

Important of the document

Read this manual before commissioning, use or maintenance, and follow the instructions given!

Always pass these instructions on to current the device operating organisation and retain for later reference!

Warnings

Be sure to read and follow the warnings in the manual. Disregard of the warning information may lead to injury or material damage!

Labelling of important warning information:



Danger! Electricity!

Indicates hazards that might result in severe or fatal injury.



Warning! Indicates hazards that may result in injury, material damage or contamination of drinking water.



Note! Indicates hazards that may result in damage to the system or malfunctions.



Disposal

Local regulations on waste recycling and disposal must be followed. The product must not be disposed of with household waste but must rather be disposed of appropriately.



Old batteries must not be disposed with household waste. Consumers are obligated by law to take batteries to a suitable trade or communal collection site. Handing these batteries in is free of charge. You can also send your used batteries back to us.

Use

The KEMPER FK-5 Break Tank Station is used for separating potable from non-potable water installations if fluid category 5 according to DIN EN 1717 / DIN 1988-100.

The device must only be operated with water. Do not fill with flammable or explosive media.

Warning! The product must only be used for this purpose as Break Tank Station in enclosed, frost-free, dry rooms. Any other use is considered contrary to the designated use.

Warning! Disregard of instructions during installation, use or maintenance can impair proper operation and can cause considerable health problems due to the mixture of drinking and non-potable water.

Do not install two or more Break Tank Stations parallel.

Ensure that you adhere to the specified maintenance intervals.

Malfunctions and errors must be rectified immediately by a specialist.



Safety instructions

Use the device

- only in sound condition
- as intended.

Note! A software update is recommended if the current version of the firmware is not present.

Liability

No warranty or liability for:

- Non-compliance with the instructions.
- Incorrect installation and/or operation.
- Unauthorised modification of the product.
- Other incorrect operation.



Warning! Any water withdrawn must under no circumstances be used as drinking water – even in small amounts!



Note! The inlet valves and pump switch on automatically for a short period of time if the device has not been used for more than 48 hours.



Note! Only use suitable cleaning agents that do not foam according to DVGW W 291 / W 319. After cleaning the device, you must remove any cleaning agent residues from the system completely!

Maintenance and repair



Warning! Only competent specialists with drinking water installation qualifications are permitted to carry out repair or maintenance work.



Danger! Only specialists with electrical system qualifications are permitted to carry out electrical installation, repair or maintenance work!



Danger! Before working on live components, be sure to disconnect the system from the power supply.



Danger! Prior to any maintenance work on electrical elements, disconnect the system from the mains. To do this, always disconnect the mains plug.

Warning! Following the installation, addition of accessories or maintenance, all feed pipes must be flushed according to DIN EN 806-5 and VDI/DVGW (Association of German Engineers/German association for gas and water) 6023.

Warning! Priority must be given to the national and regional standards and provisions on sanitary installations, electrical installations and accident prevention.

Note! Only remove the USB stick once data transmission is complete, or the controller may be damaged during a firmware update.

Important notes for the device operating organisation

Important notes for the device operating organisation

Power supply	230 V AC
Electrical power input	DN 20: 3,3 A DN 25: 5,5 A
Electrical power	DN 20: 759 W DN 25: 1265 W
Power factor	0,97
Protection class	IP 54
Medium	Water
Ambient temp., max.	40°C
Ambient temp., min.	2°C
Inflowing medium, temp. max.	35°C
Inflowing medium, temp. min.	2°C
Flow pressure, max.	DN 20/DN 25: 4,0 bar 0,4 MPa
Flow pressure, min.	DN20: 1,0 bar 0,1 MPa DN25: 1,5 bar 0,15 MPa
Pressure stage	PN 10
Outlet pump pressure	DN 20: 4.3 bar 0,43 MPa DN 25: 5,9 bar 0,59 MPa
DU value	DN 20: 0,83 l/s DN 25: 1,67 l/s



Sanitary and drinking water installation:

DIN EN 1717 / DIN 1988-100
DIN EN 806-5

EMC:

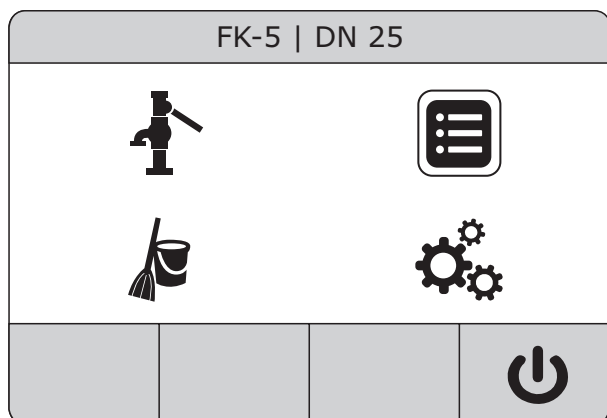
EN 61000-6-1
EN 61000-6-3

Low-voltage:

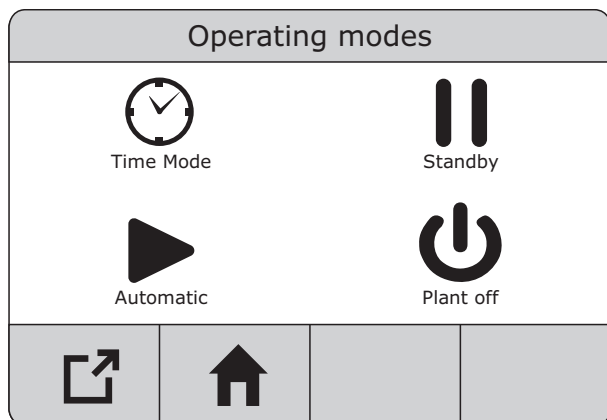
EN 60335-1

Machinery Regulation:

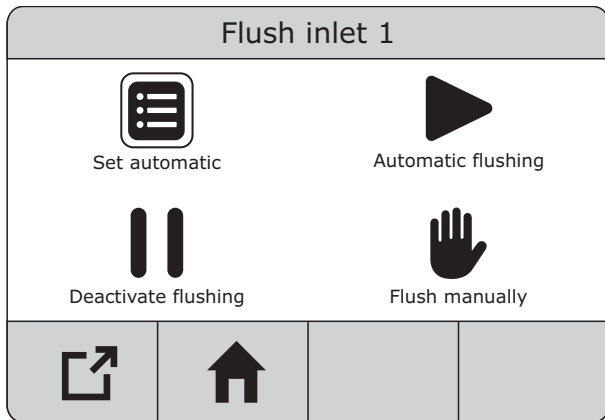
(EU) 2023/1230



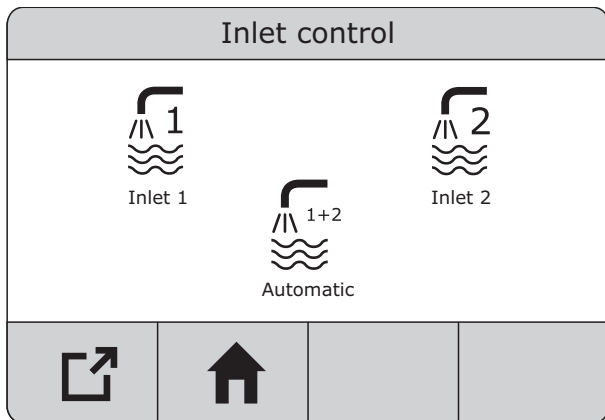
	EN Operating modes
	Flushing and cleaning program
	Main menu
	Process
	Device off Switches off the supply of the tapping point outlets and flushing processes. The alarm output remains active. The alarm state is still logged. Operating mode also permits settings on the device.
	Warning messages Device remains switched on.
	Error messages Device automatically switches off.



	EN Time mode Defines the weekly program with daily start and stop times. The tapping point outlet supply is switched off between the programmed times. Flushing and cleaning programs are still carried out.
	Standby Switches off the tapping point outlet supply. The programmed flushing processes are still carried out.
	Automatic mode Bypasses the "Time mode" weekly program.
	Time limit Switches temporarily to automatic mode until the preset time has elapsed.
	Back
	Start screen
	Active area



	EN
	Set automatic
	Automatic flushing This is where you can program the weekly program for flushing the feed pipes. Every weekday with a start time and flush duration (max. 360 minutes). A flush duration may not span multiple days. Only one inlet can be flushed at a time.
	Deactivate flushing
	Flush manually Triggers a manual inlet flushing. „Deactivate flushing“ or „Automatic flushing“ stops this function. „Flush manually“ automatically ends after 360 minutes and the device switches back to the „Deactivate flushing“ or „Automatic flushing“ function that was active before.



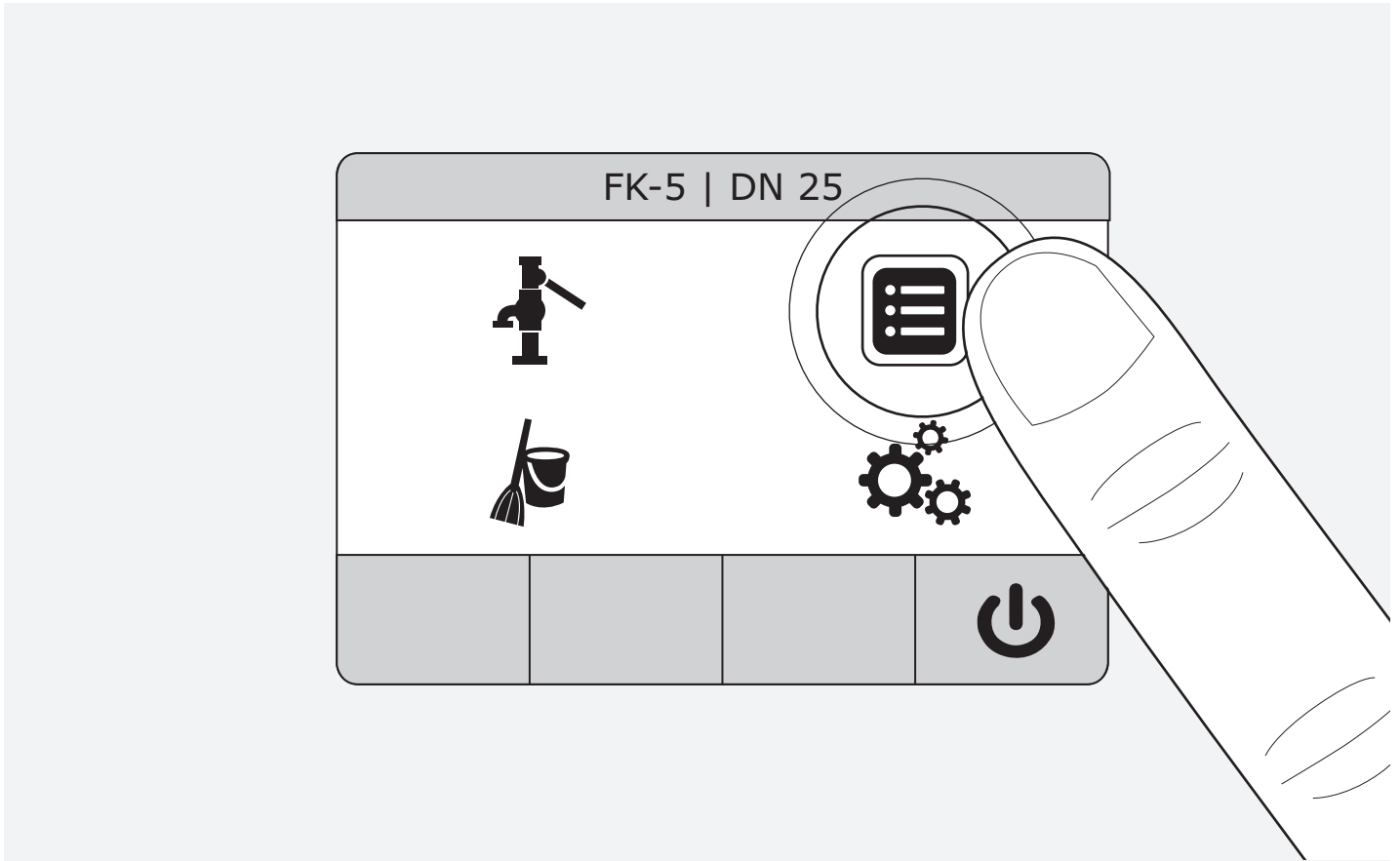
	EN
	Inlet 1/2 „Inlet 1“ or „Inlet 2“ sets the supply to exclusively through the respective inlet. If the particular inlet quantity is insufficient, a warning message appears and the tapping point outlet supply is switched off.
	Inlet 1+2 (Automatic inlet control) „Inlet 1+2“ gives priority to supply through inlet 2. If the inlet quantity is insufficient, inlet 1 opens in addition. If the overall inlet quantity is insufficient, a warning message appears and the tapping point outlet supply is switched off.

Operating times		
Monday	Off	00:00 - 00:00
Tuesday	Off	00:00 - 00:00
Wednesday	Off	00:00 - 00:00
Thursday	Off	00:00 - 00:00
Friday	Off	00:00 - 00:00
Saturday	Off	00:00 - 00:00
Sunday	Off	00:00 - 00:00

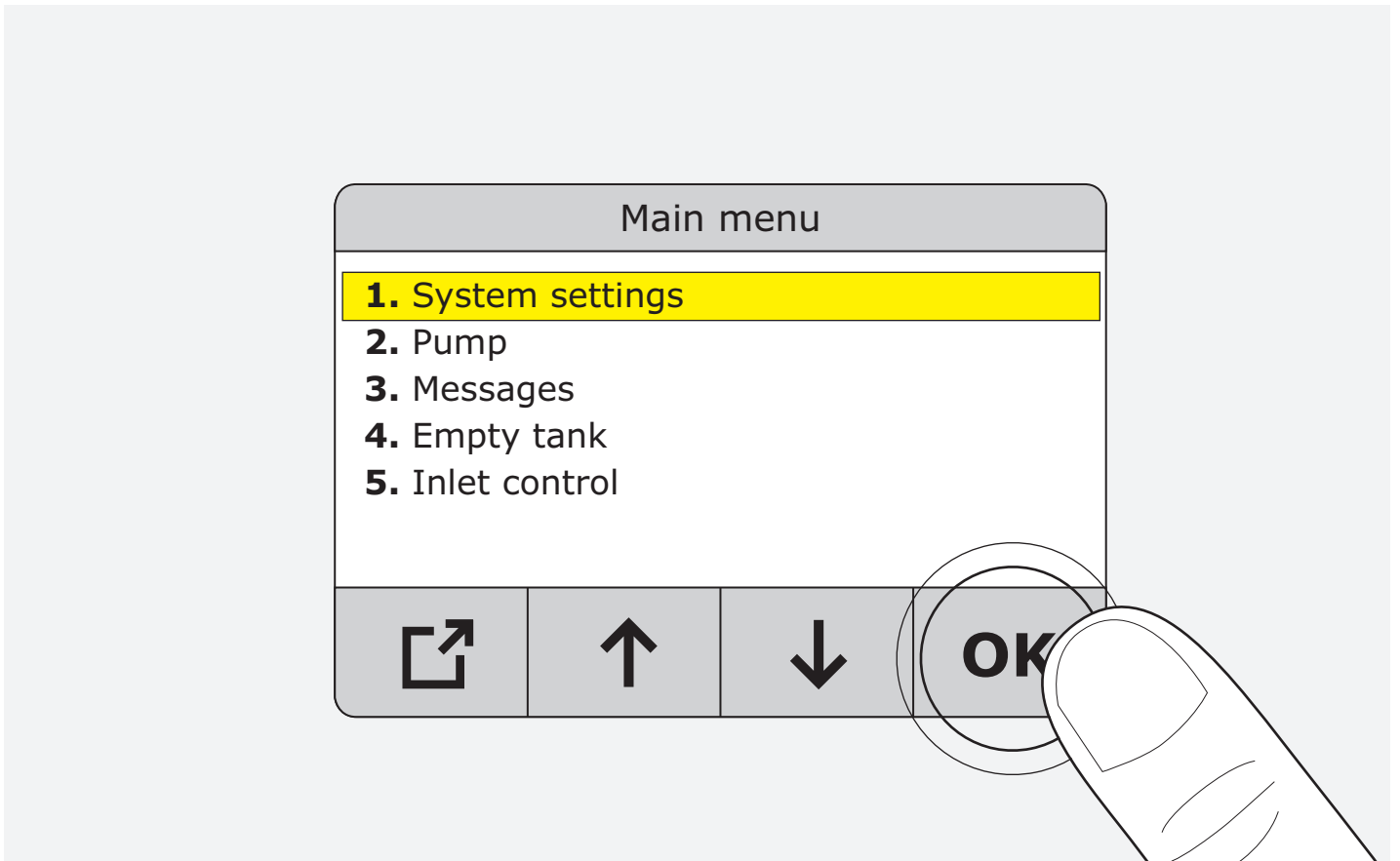
Navigation buttons at the bottom: a square with an arrow pointing up and right, an up arrow, a down arrow, and the text 'OK'.

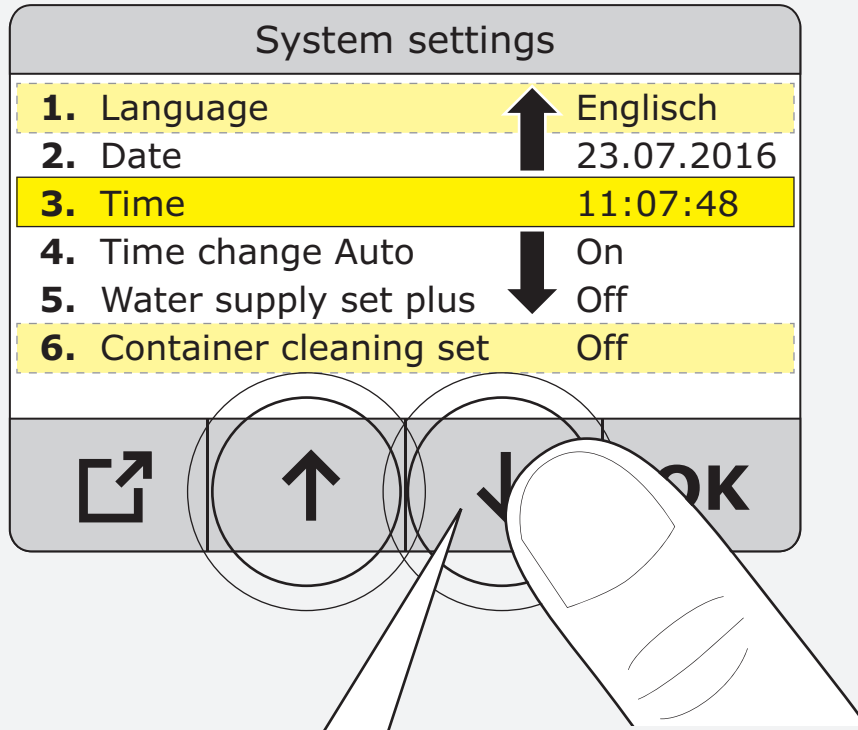
	up
	down
	left
	right
OK	Confirm entry

1

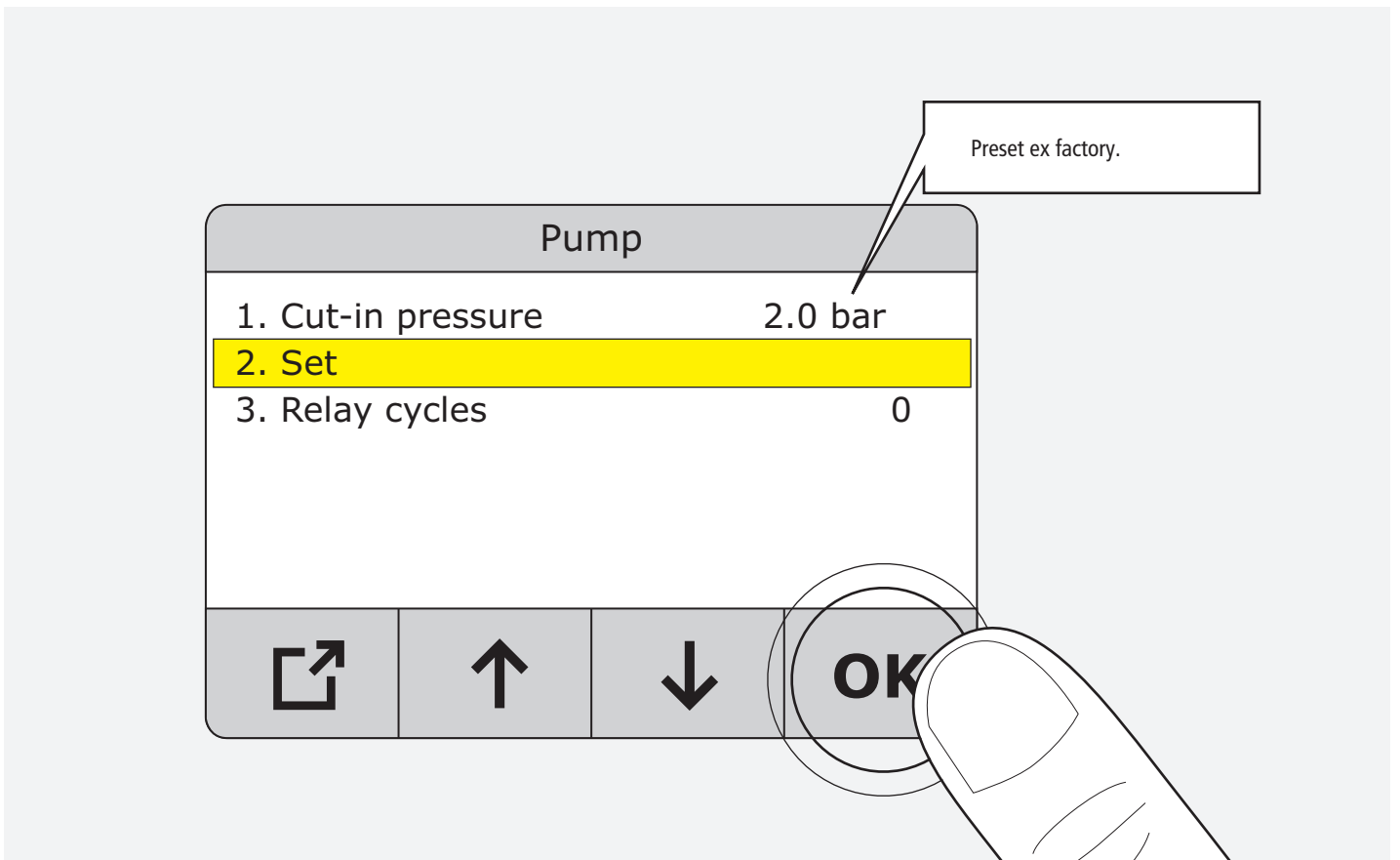
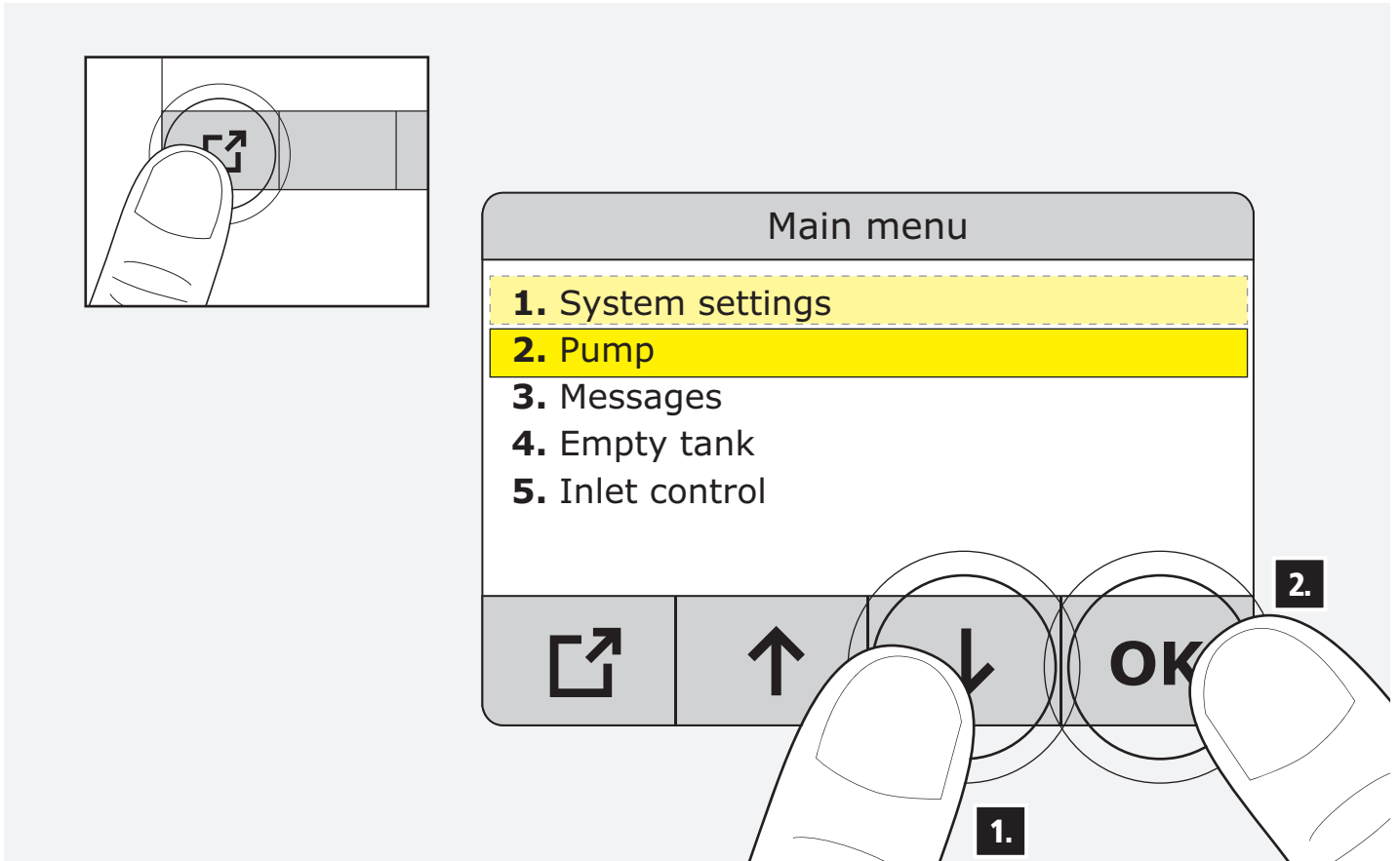


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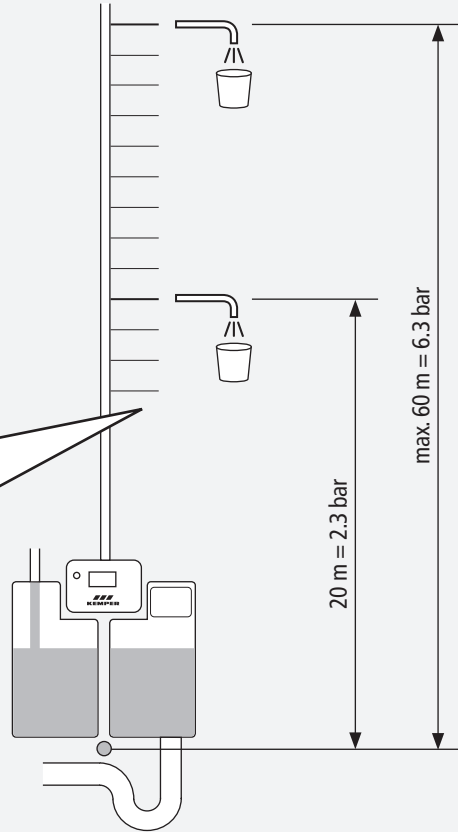
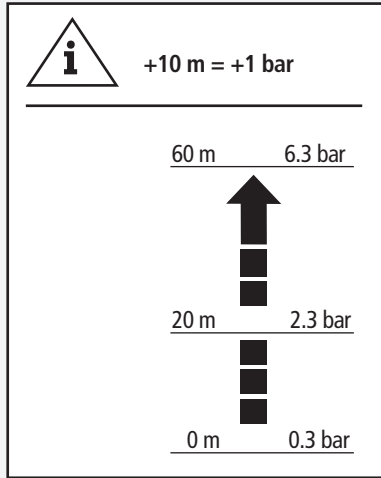


■	1.	Language	English
■	2.	Date	23.07.2016
■	3.	Time	11:07:48
■	4.	Time change Auto	On
■	5.	Water supply set plus	Off
■	6.	Container cleaning set	Off
■	7.	Overflow monitoring	Off
■	8.	Key press signal	On
■	9.	Error signal	On
■	10.	Battery change	
■	11.	Factory menu	
■	12.	Factory settings	





1.



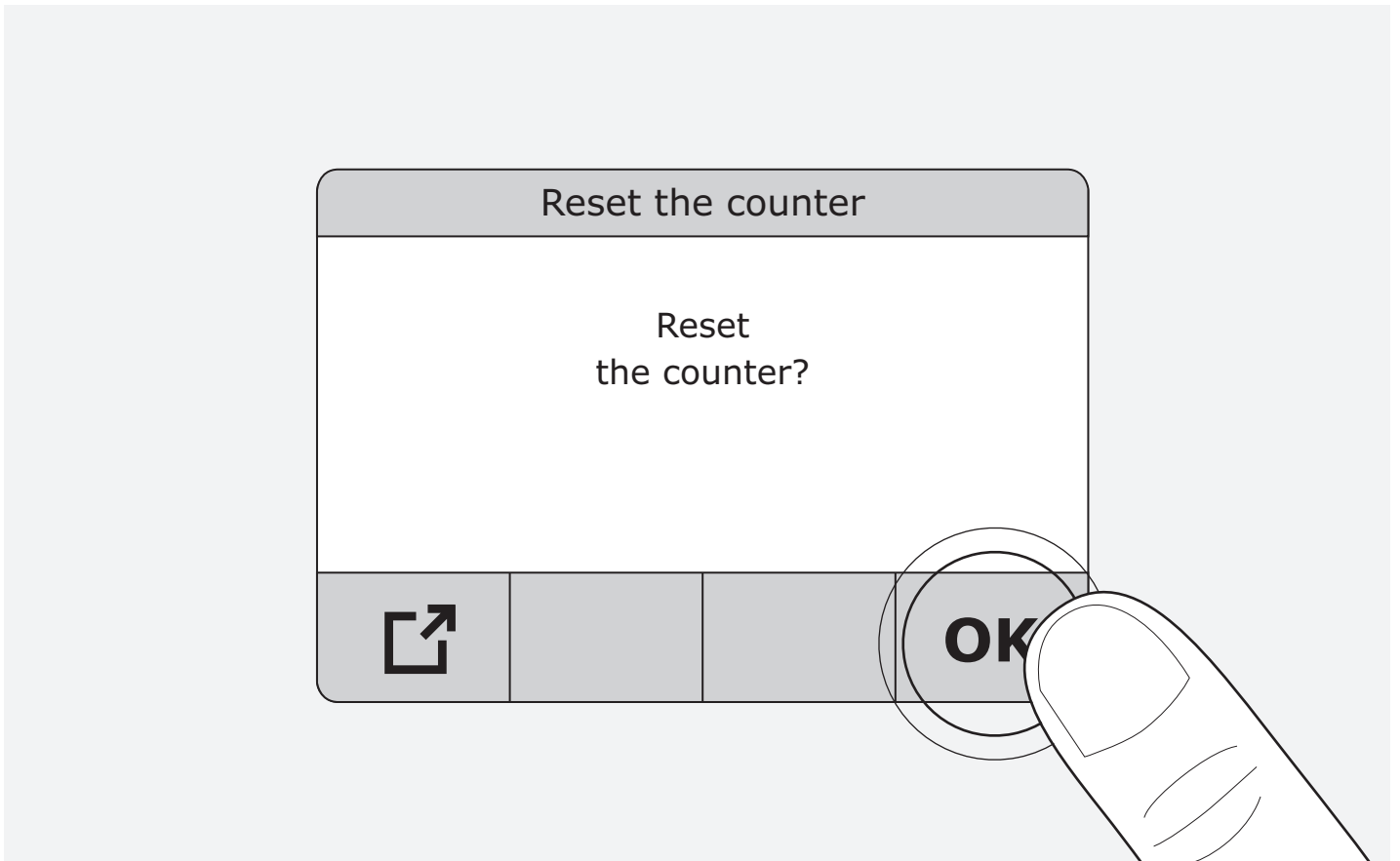
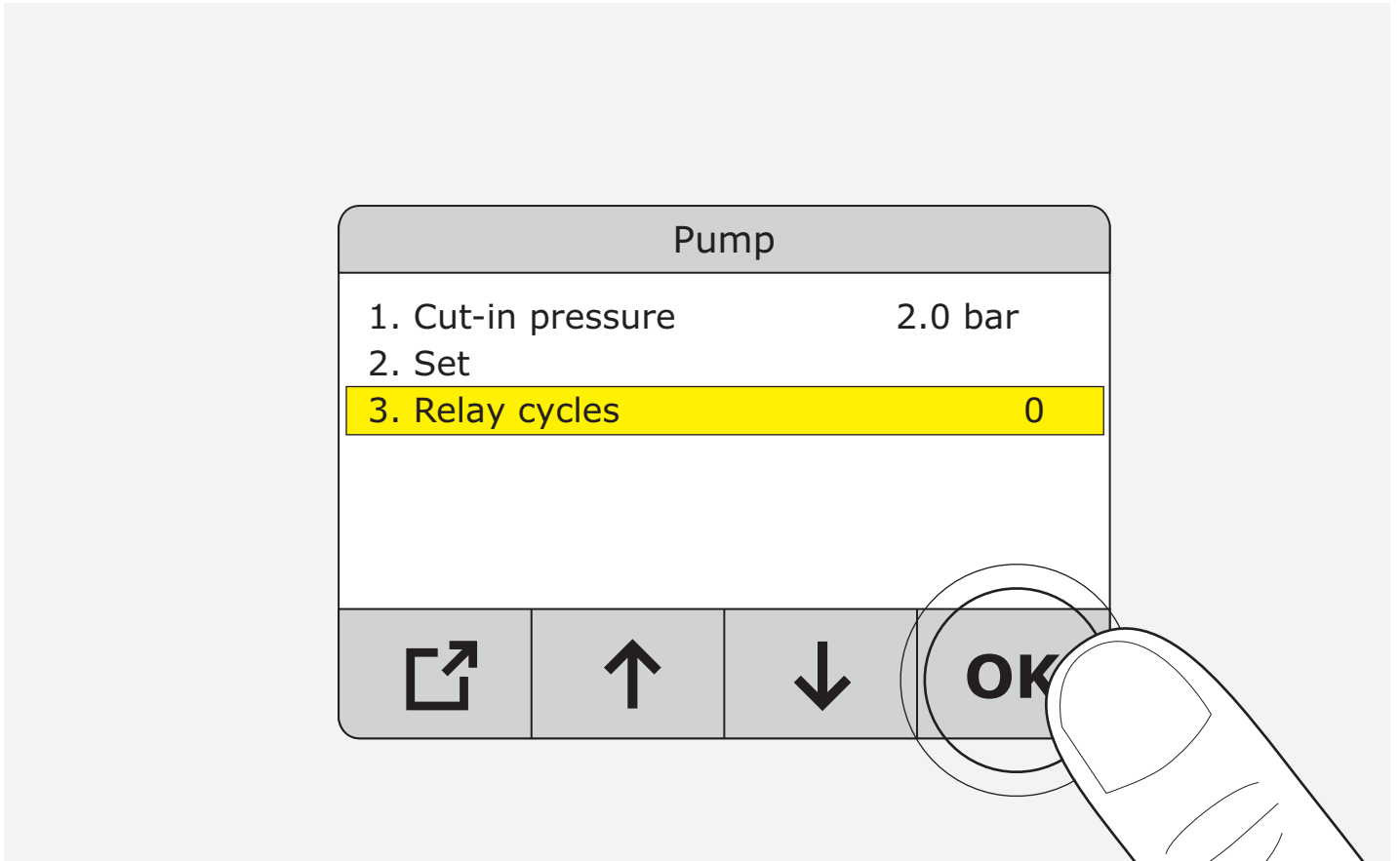
Cut-in pressure

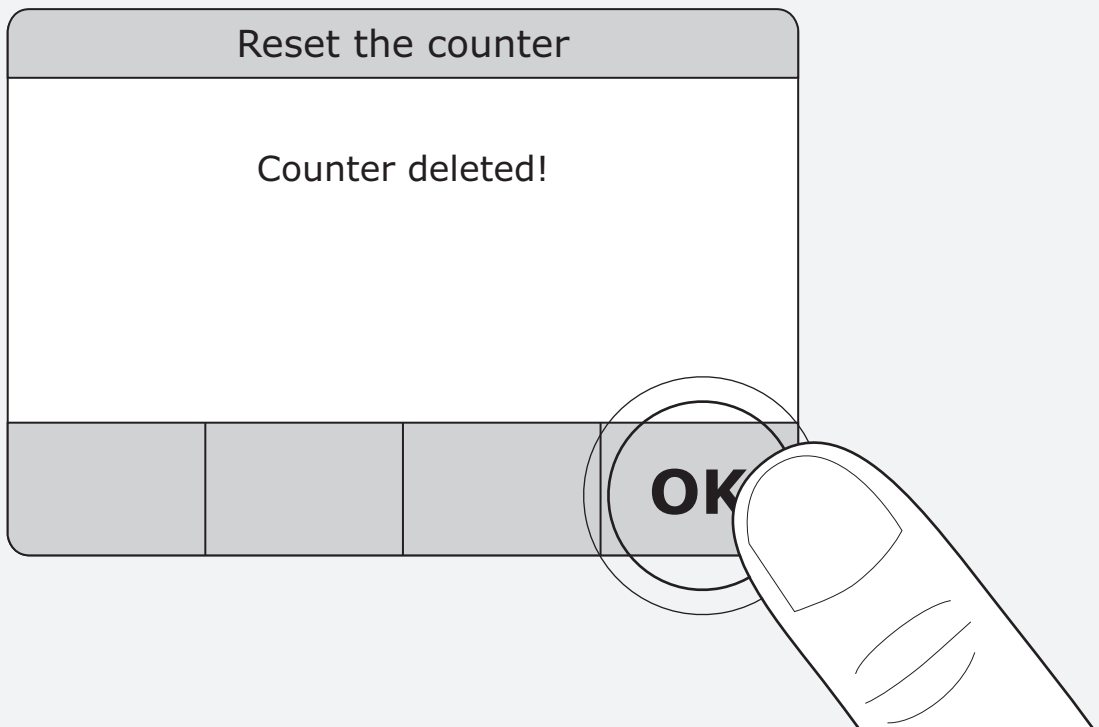
Min: 0.3-Actual: 2.0bar - Max: 6.0 bar

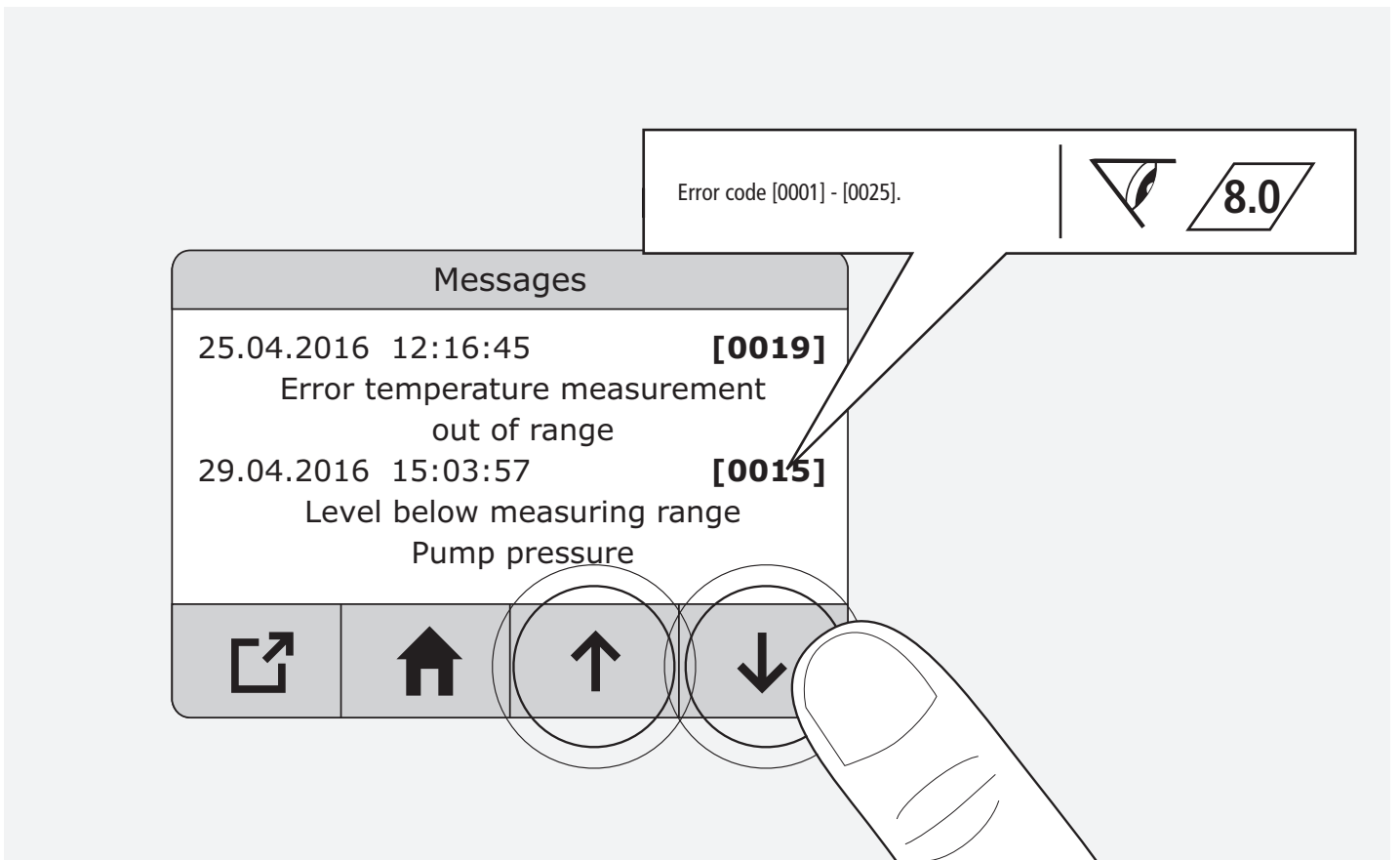
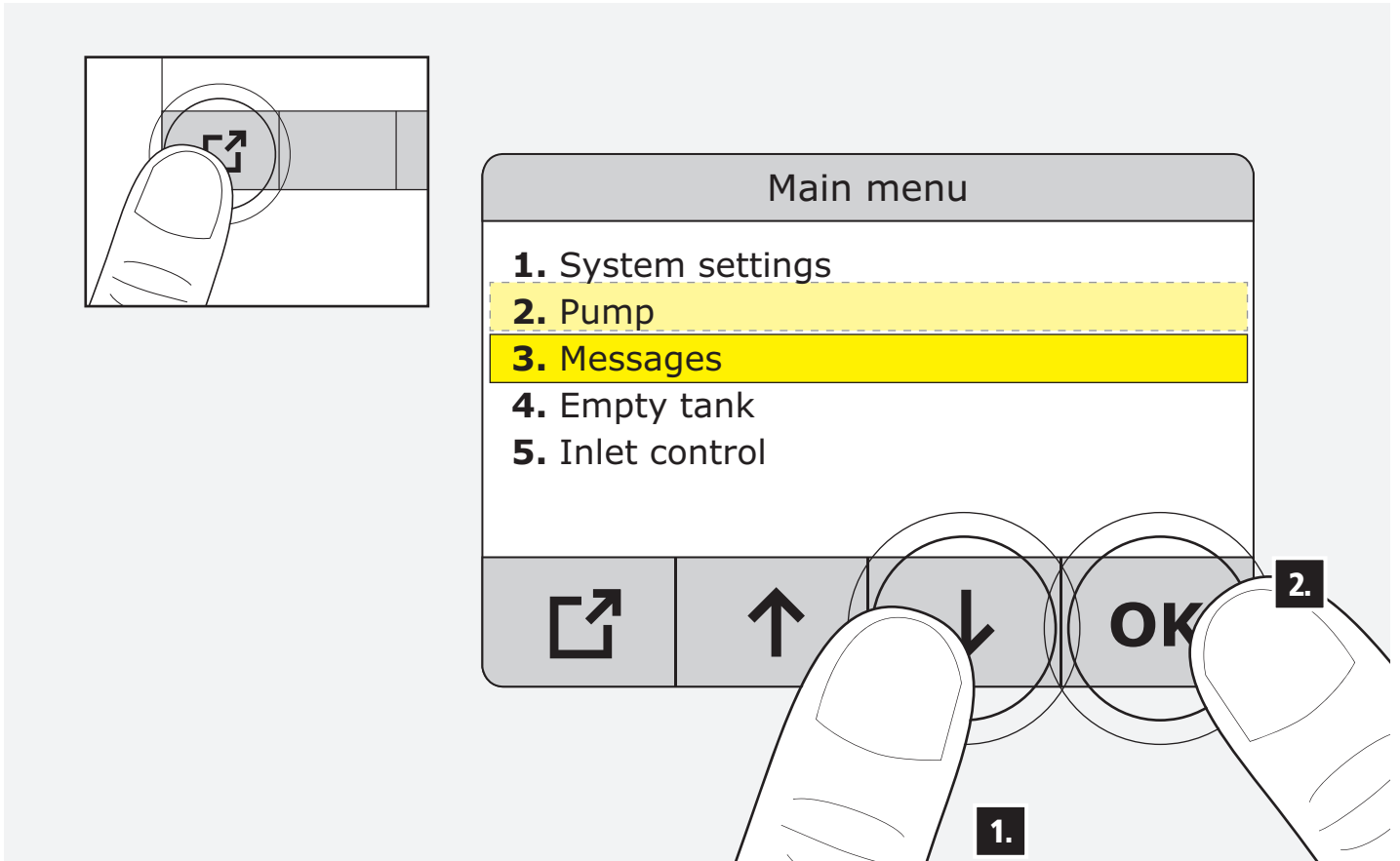
1	2	3	0
4	5	6	-
7	8	9	.
↗	←		OK

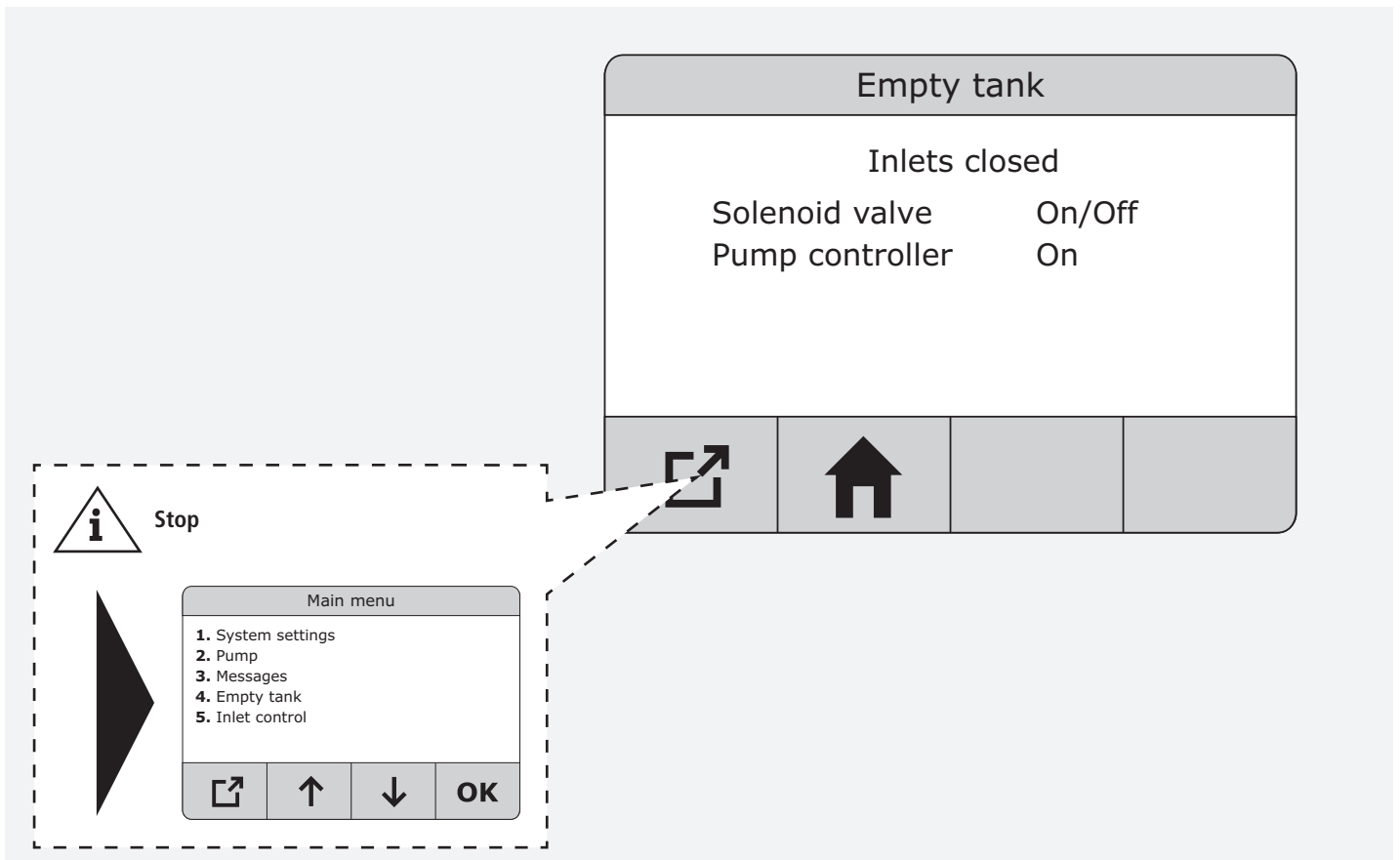
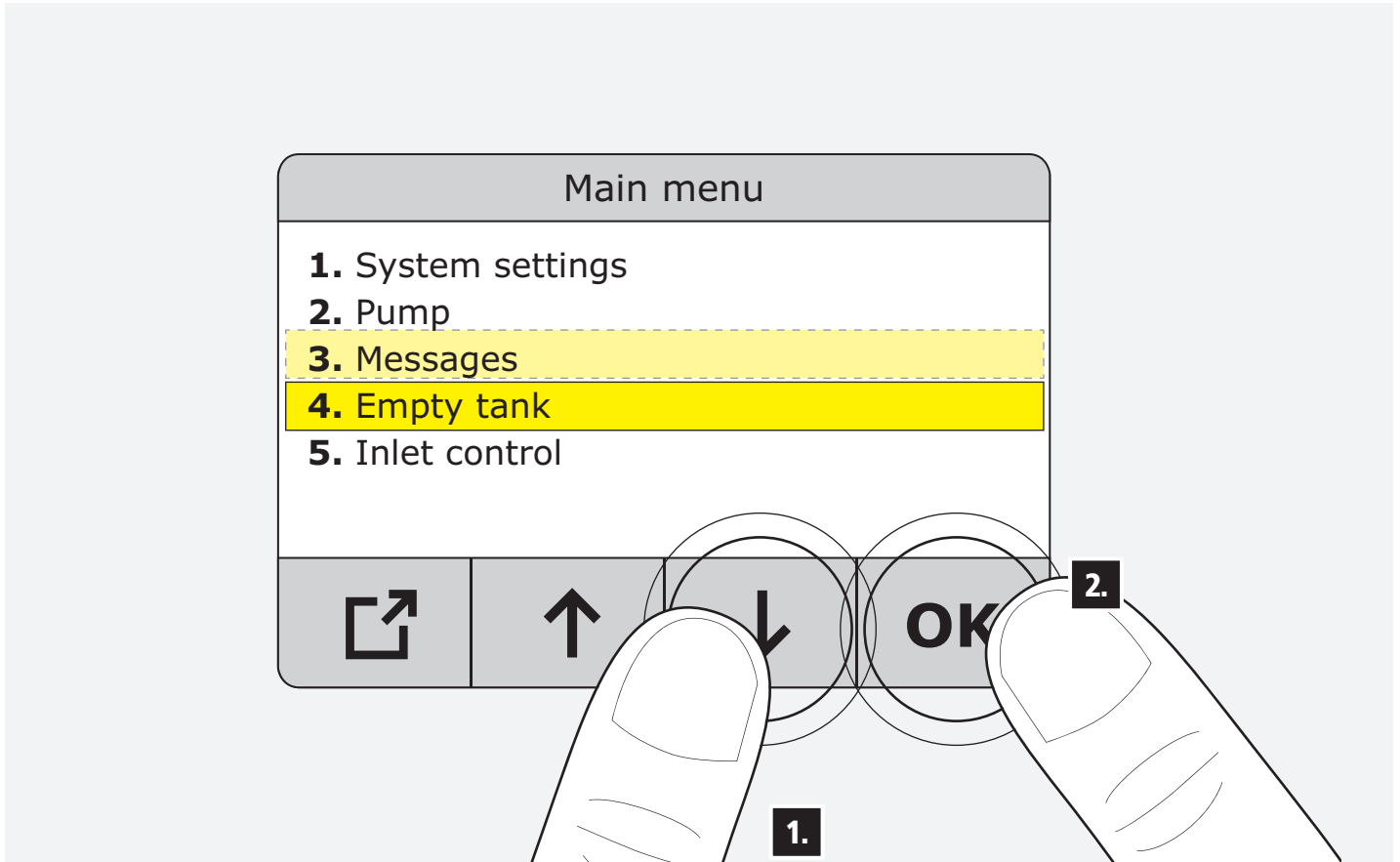
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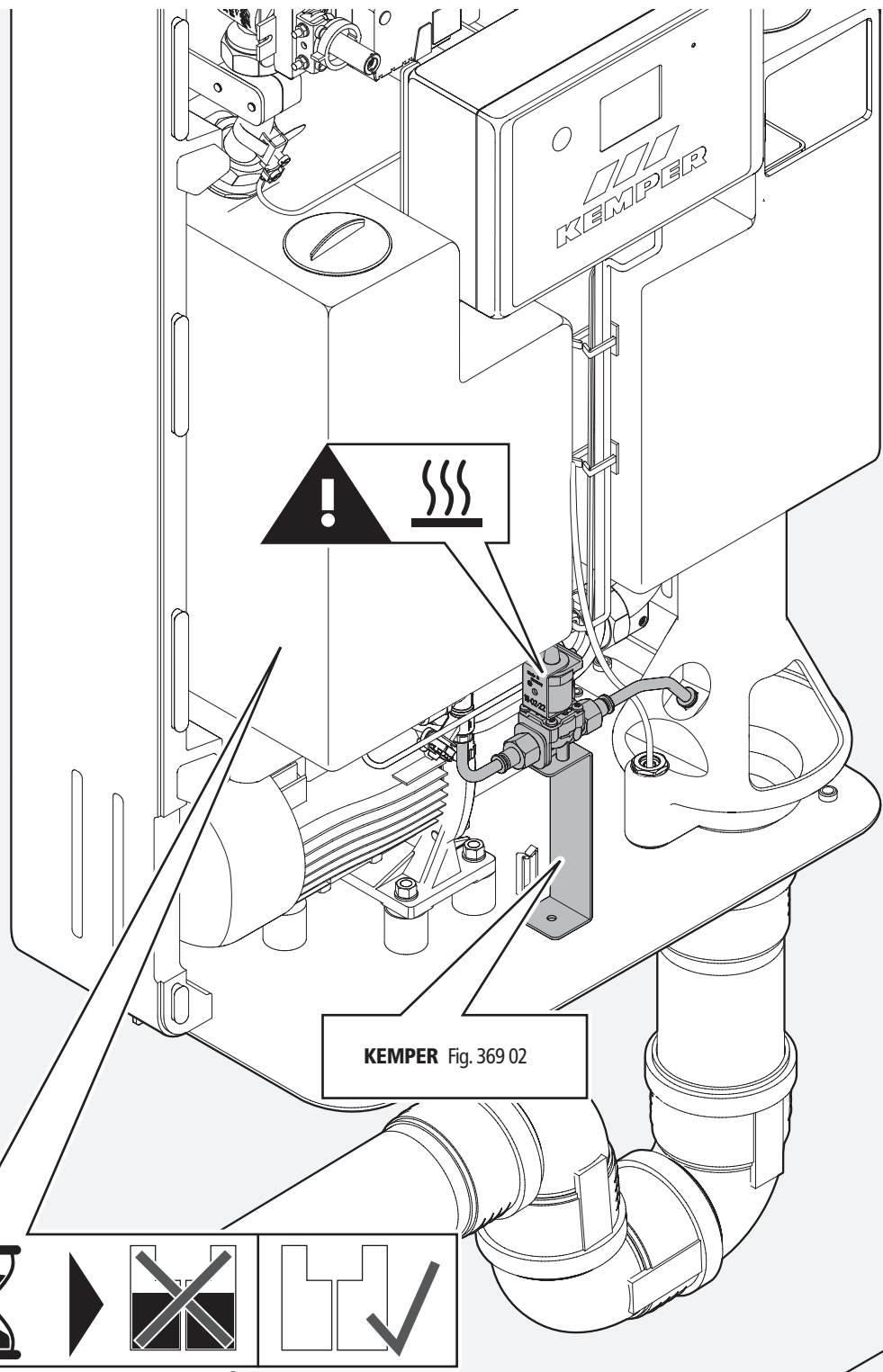
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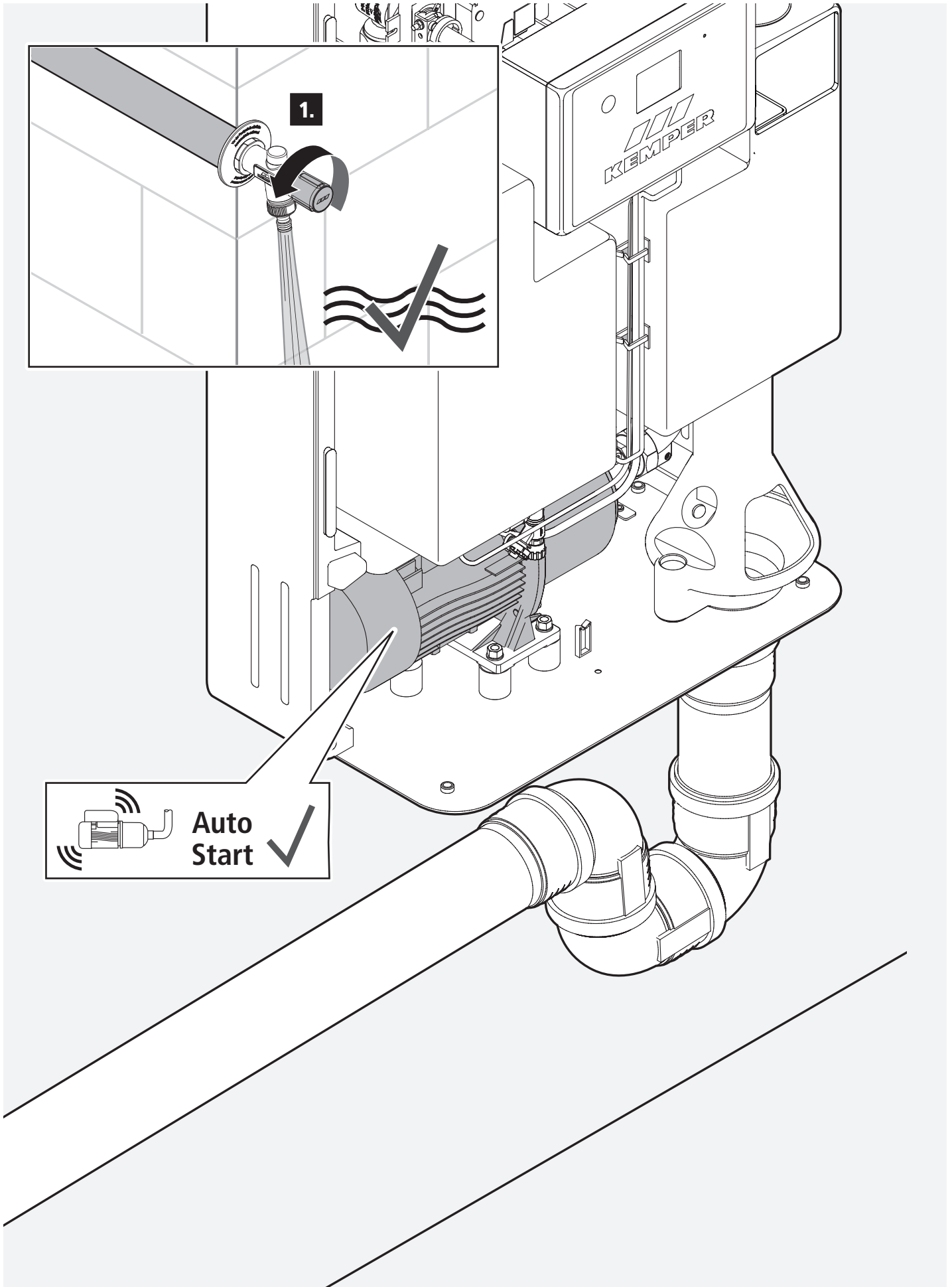






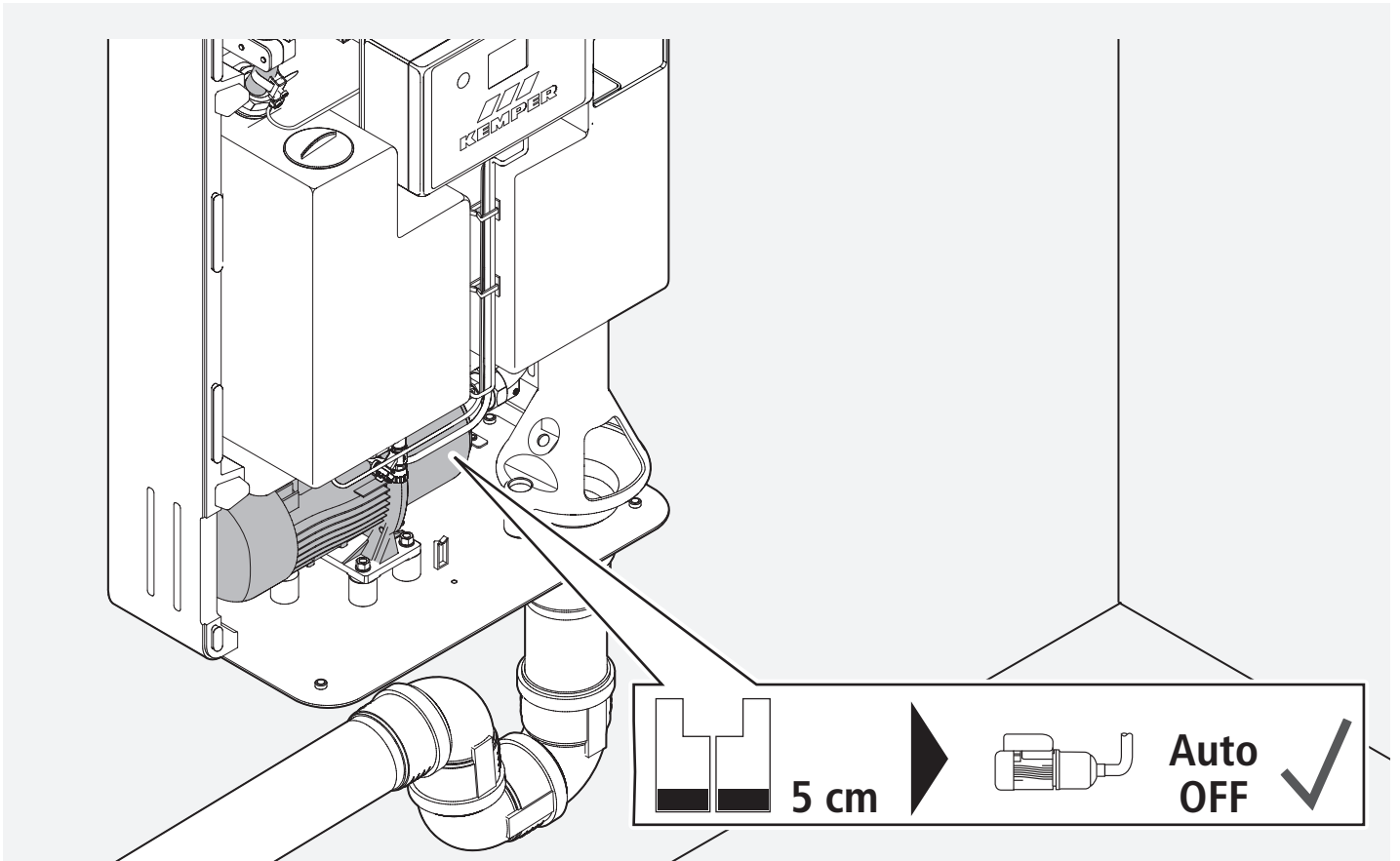






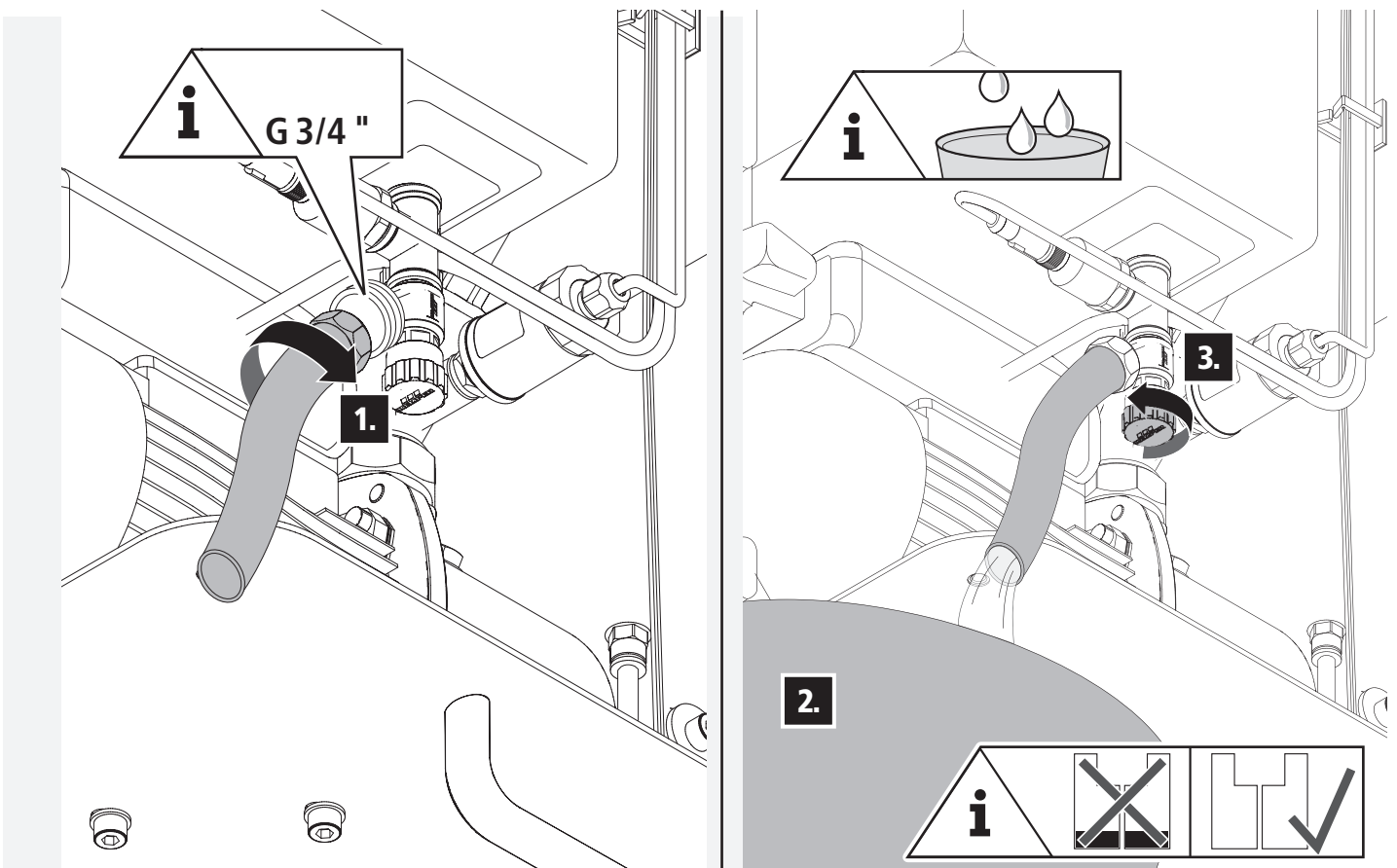
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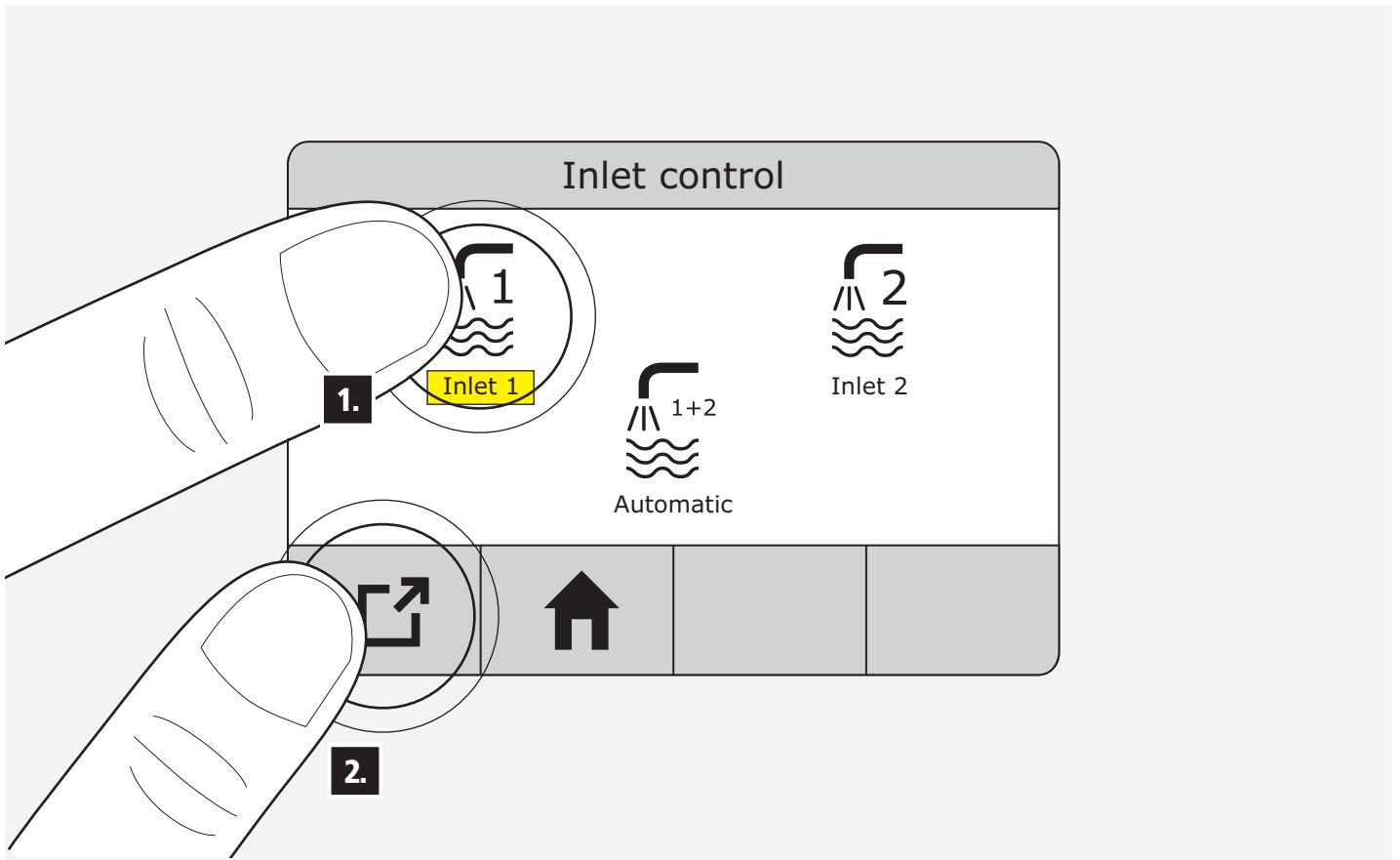
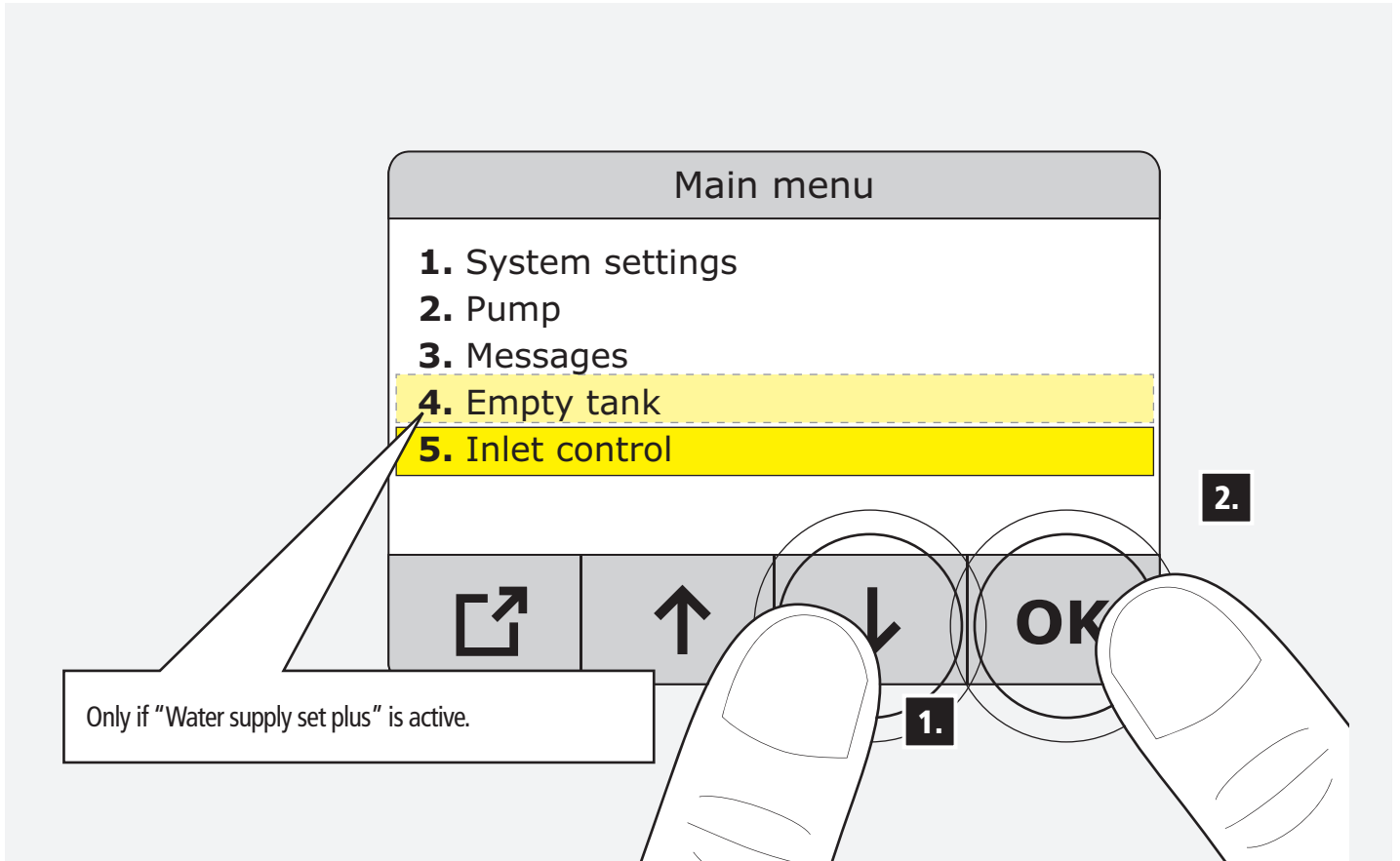
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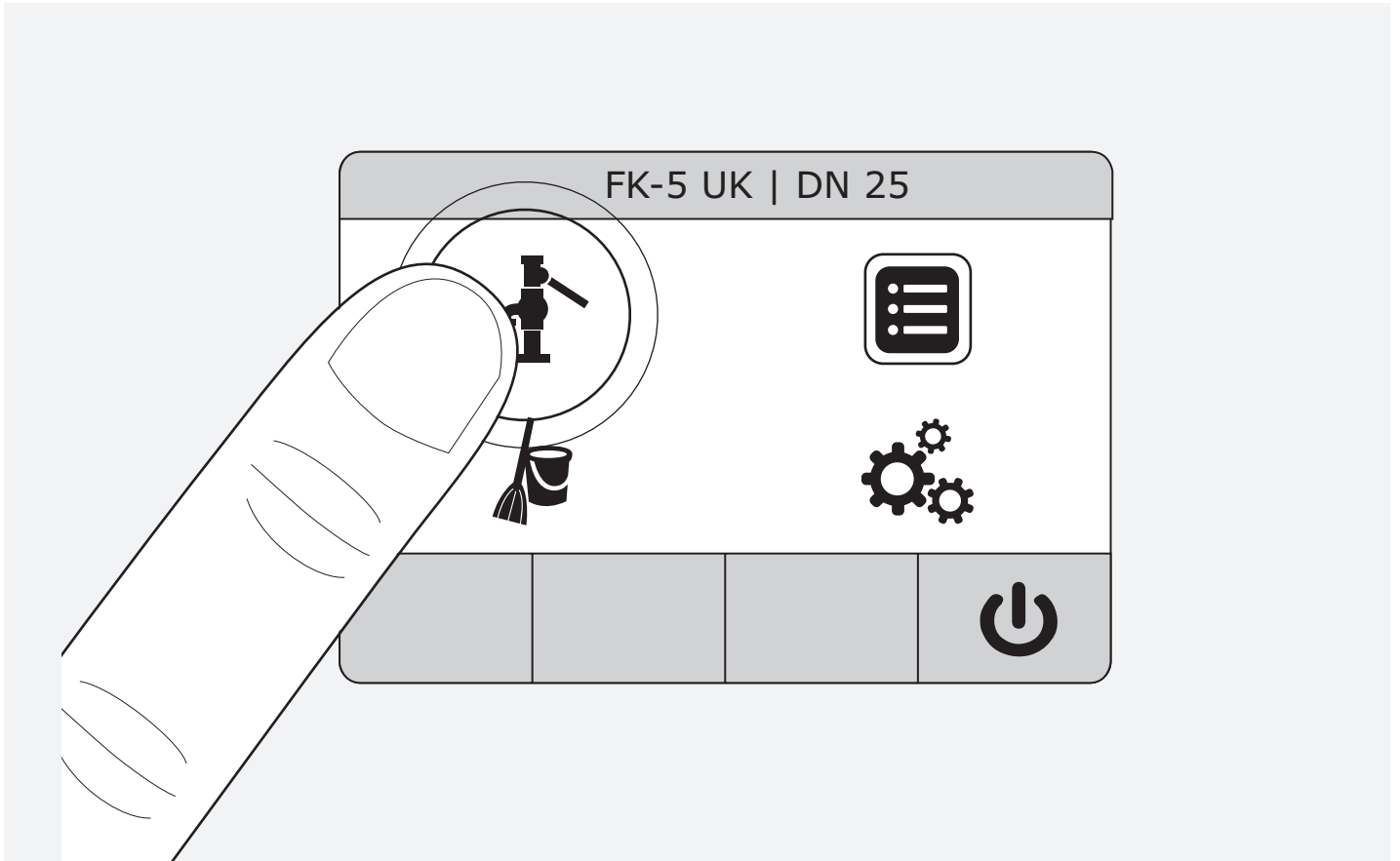
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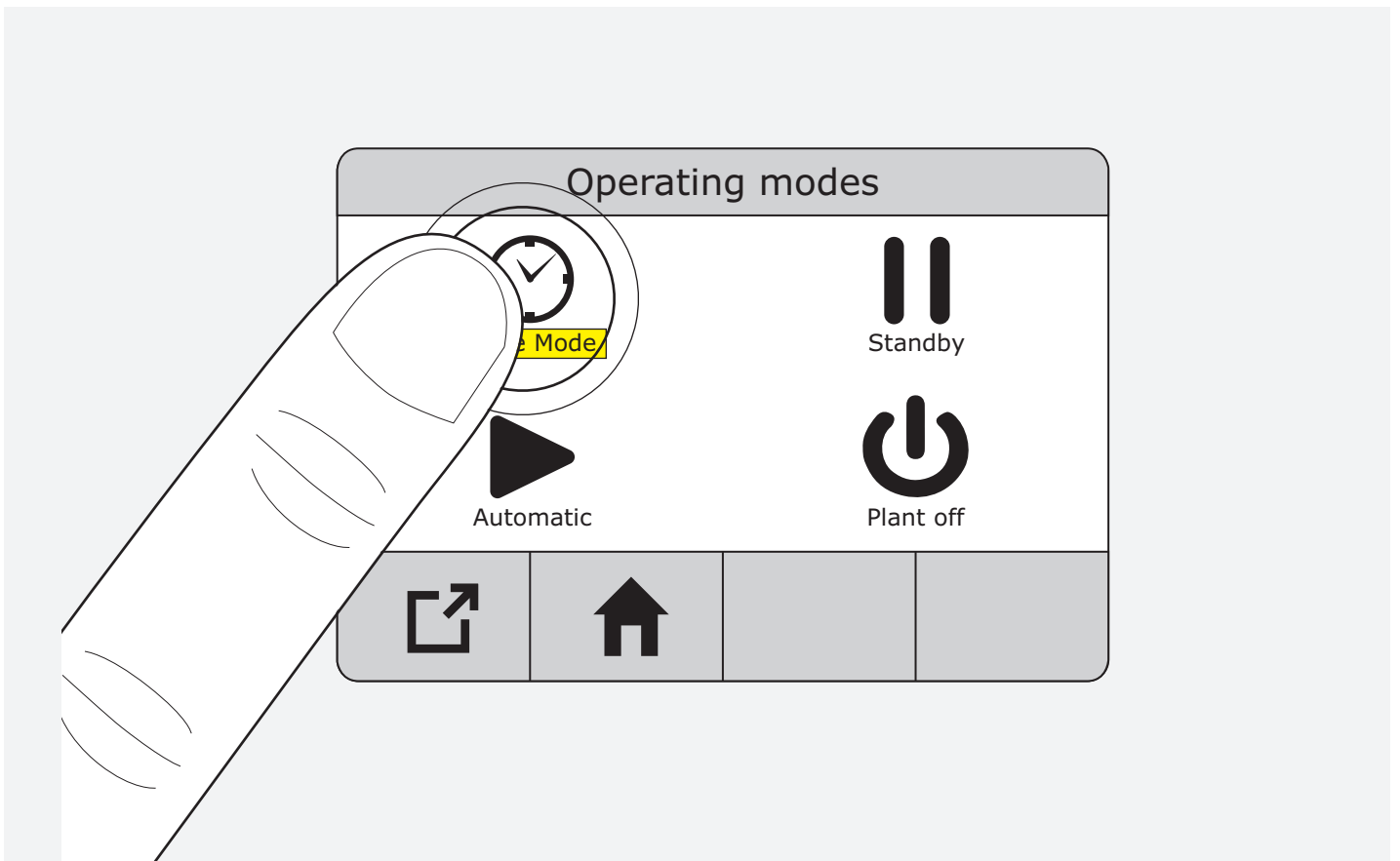


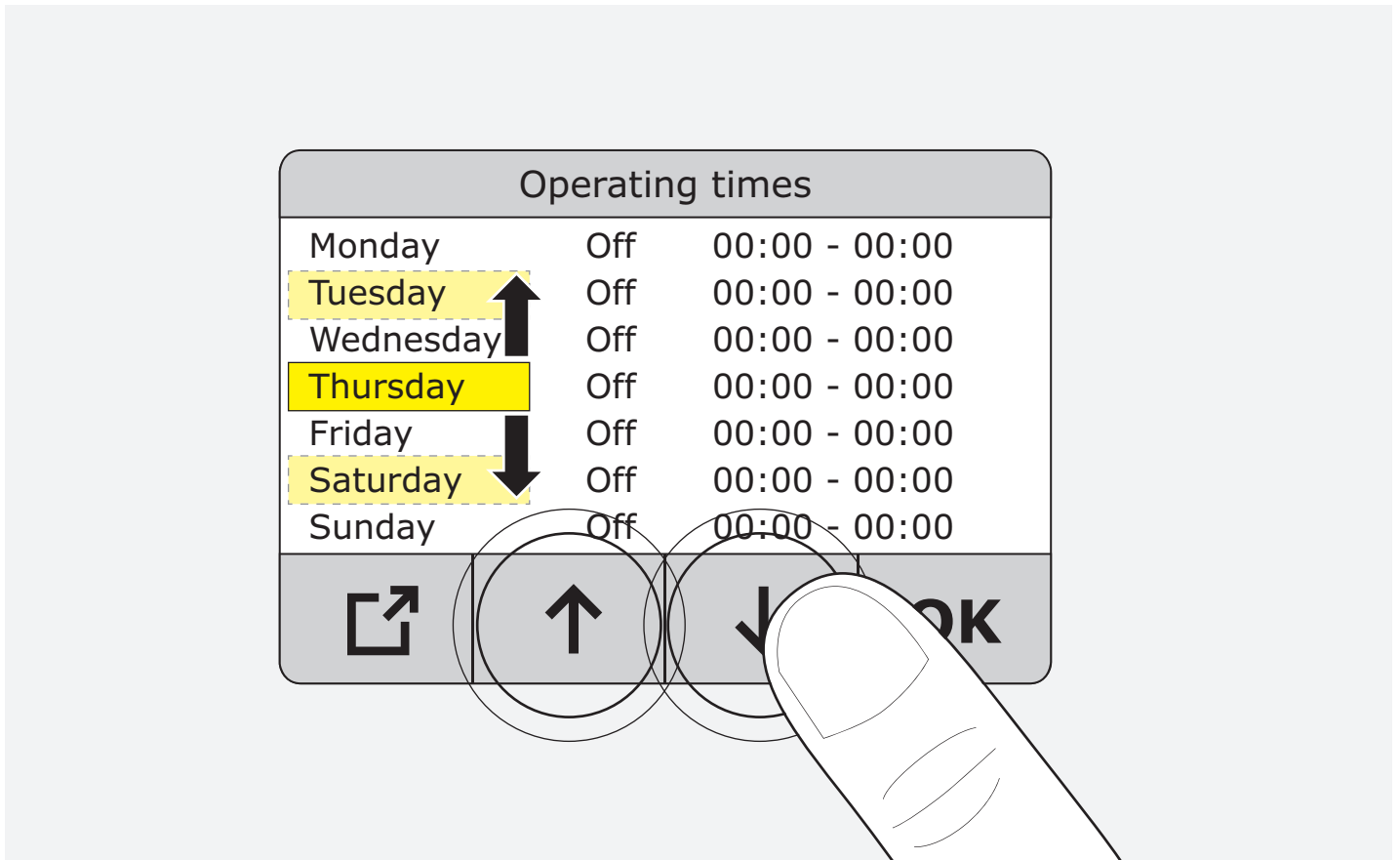
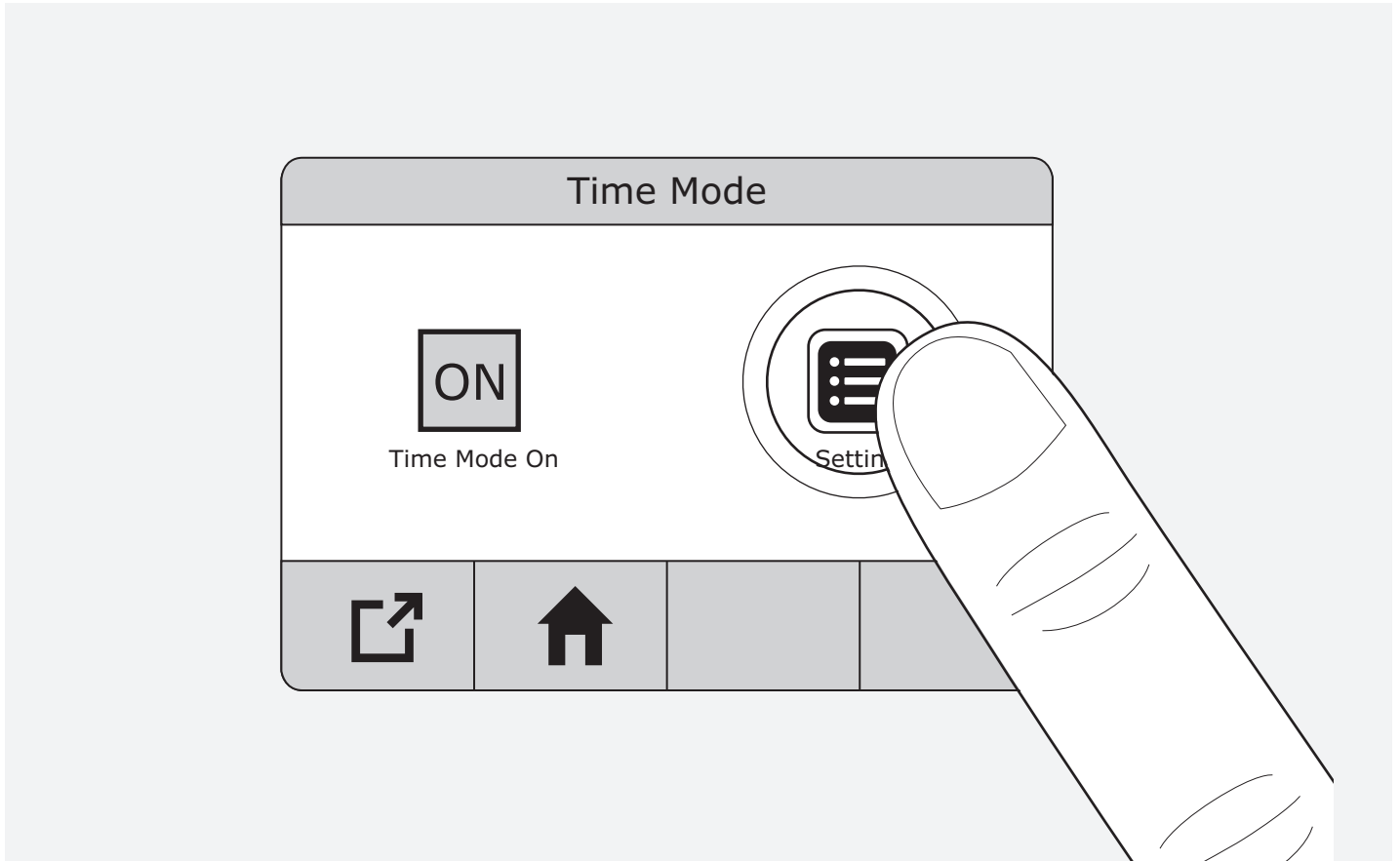


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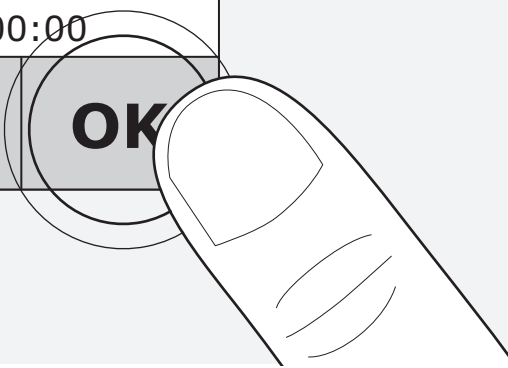
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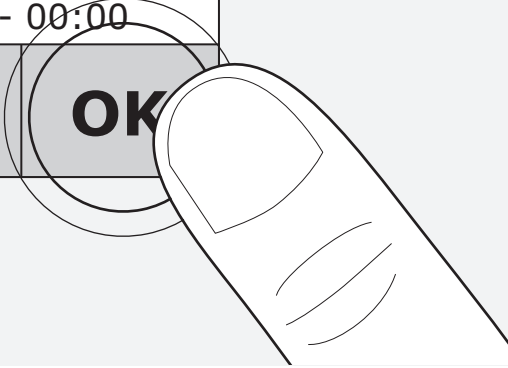
Operating times		
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Tuesday	Off	00:00 - 00:00
Wednesday	Off	00:00 - 00:00
Thursday	Off	00:00 - 00:00
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Saturday	Off	00:00 - 00:00
Sunday	Off	00:00 - 00:00

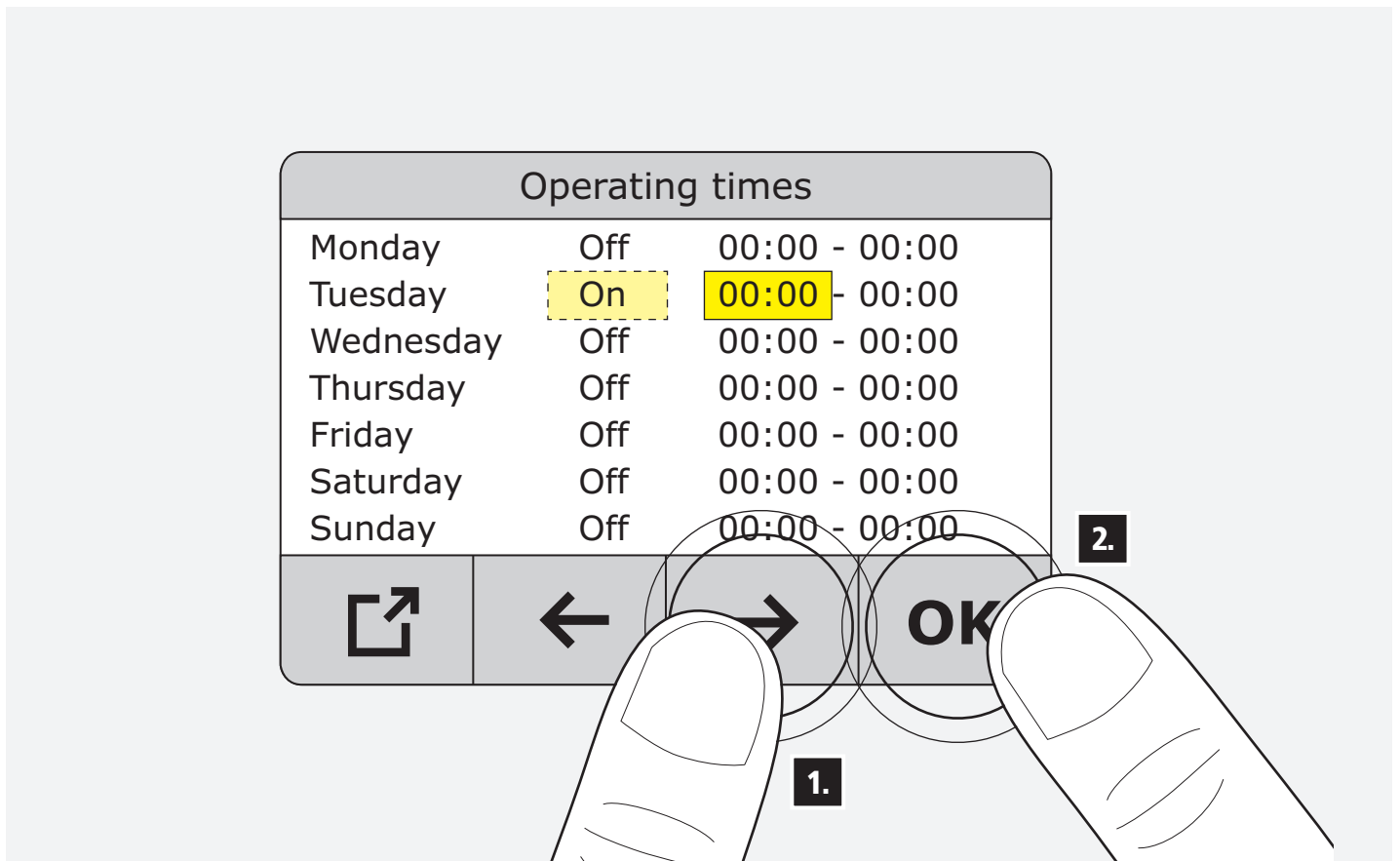
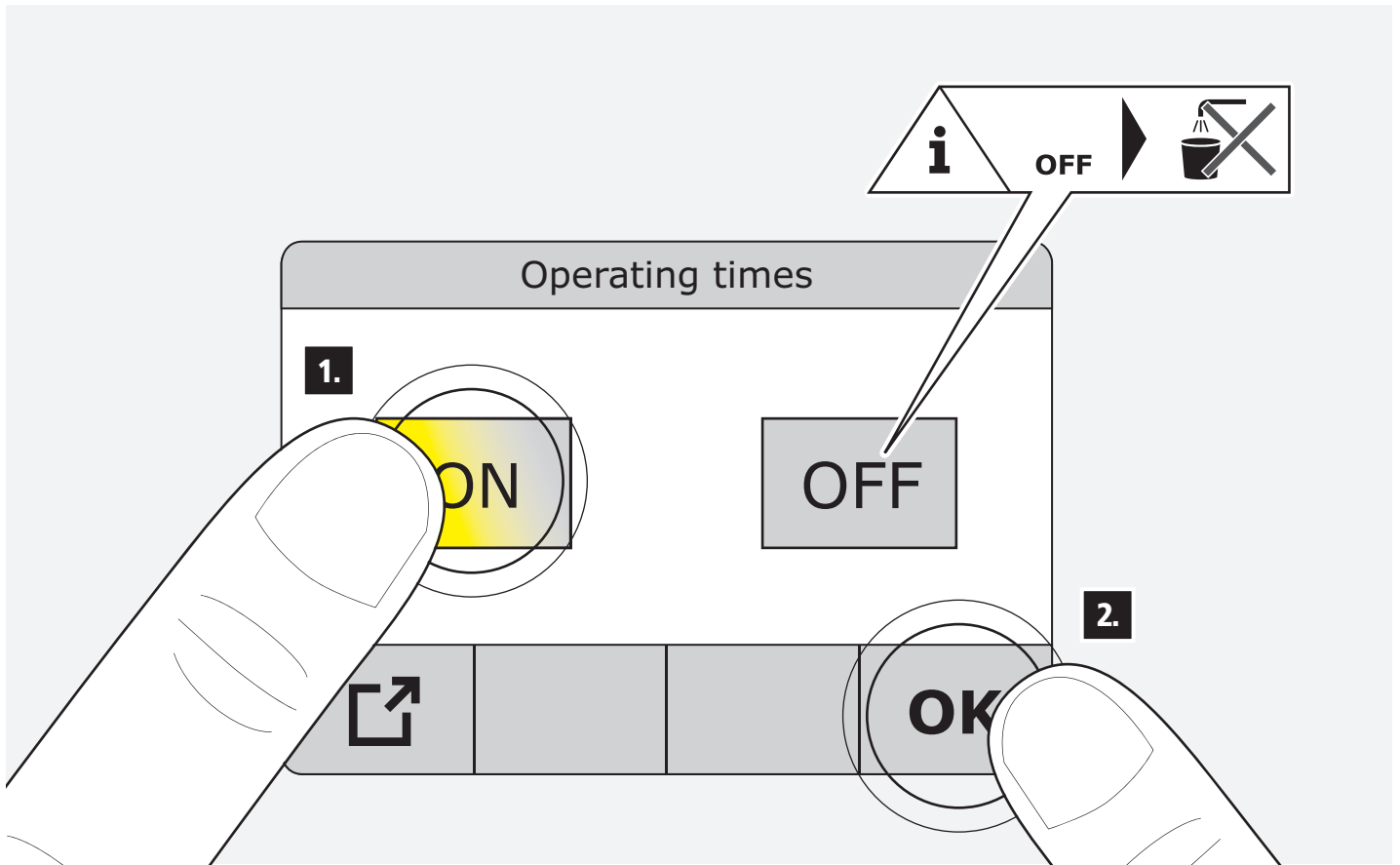
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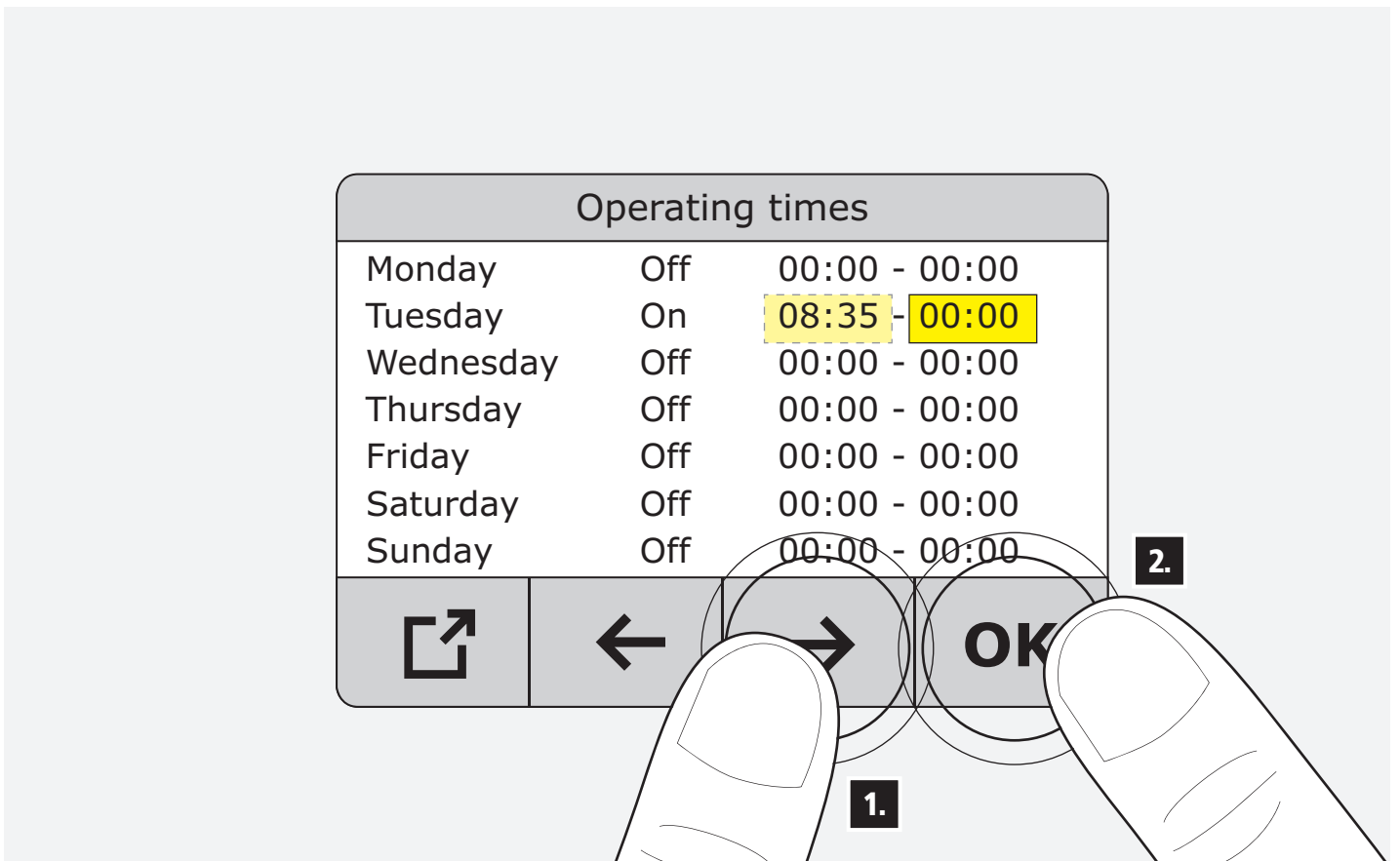
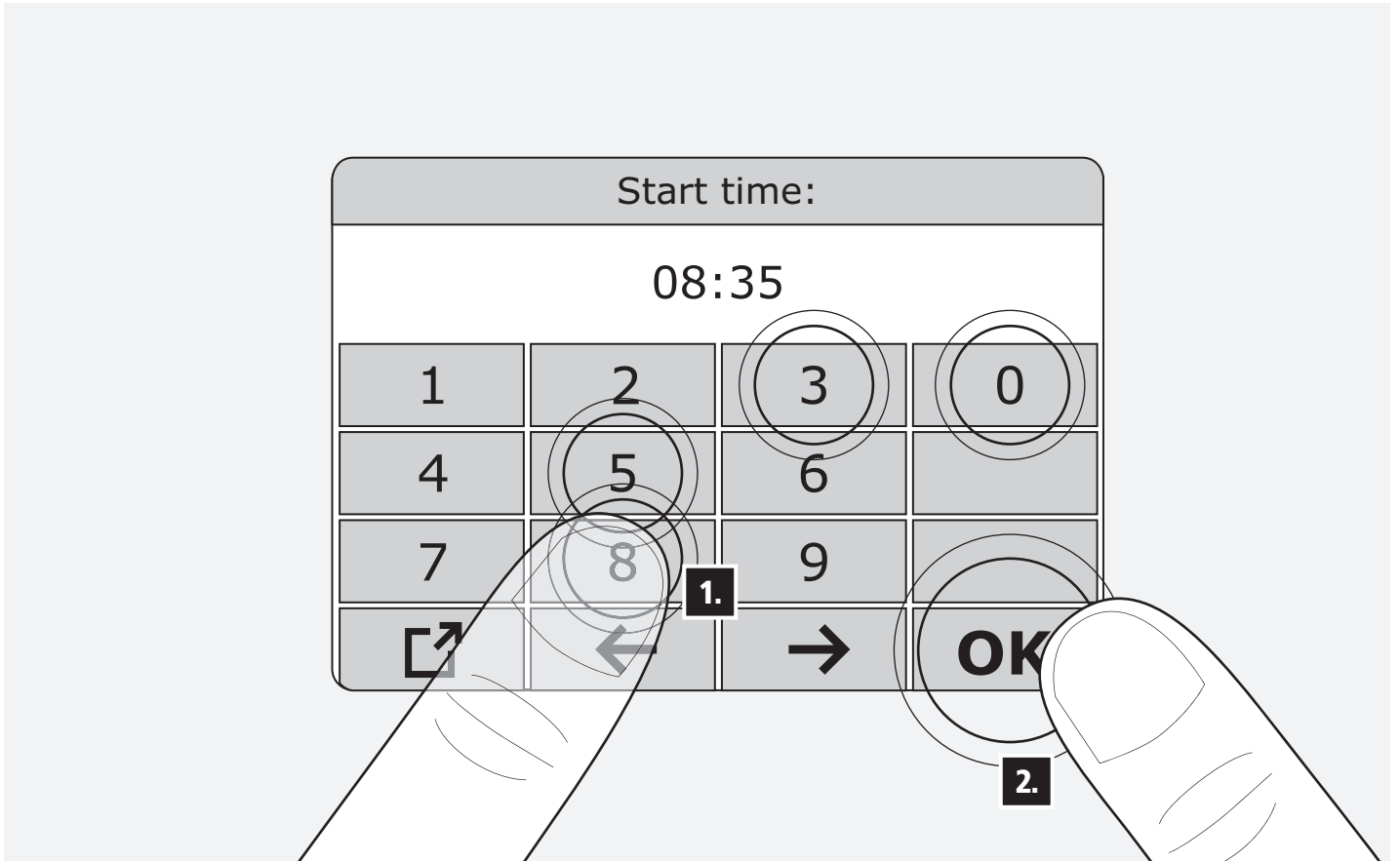


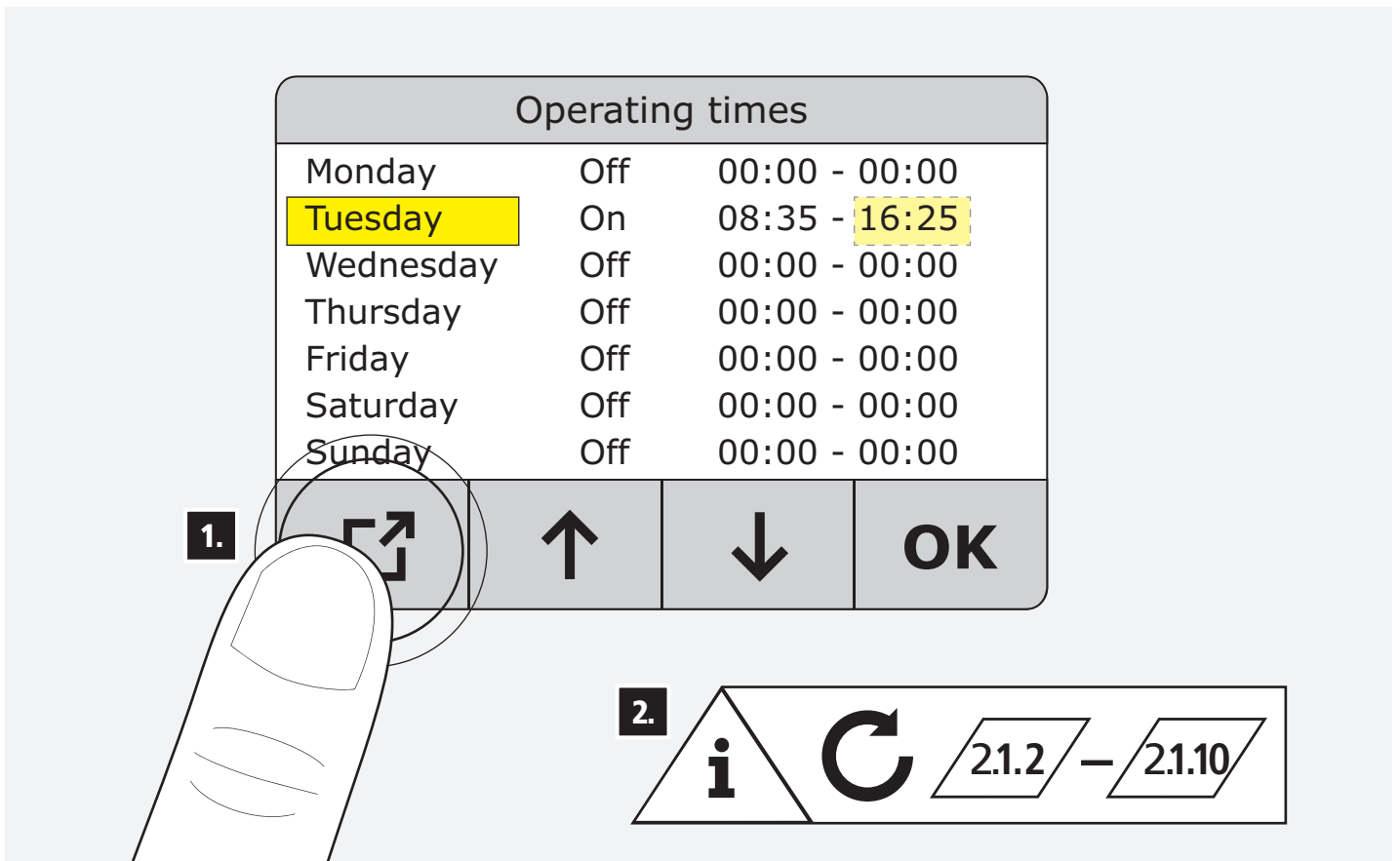
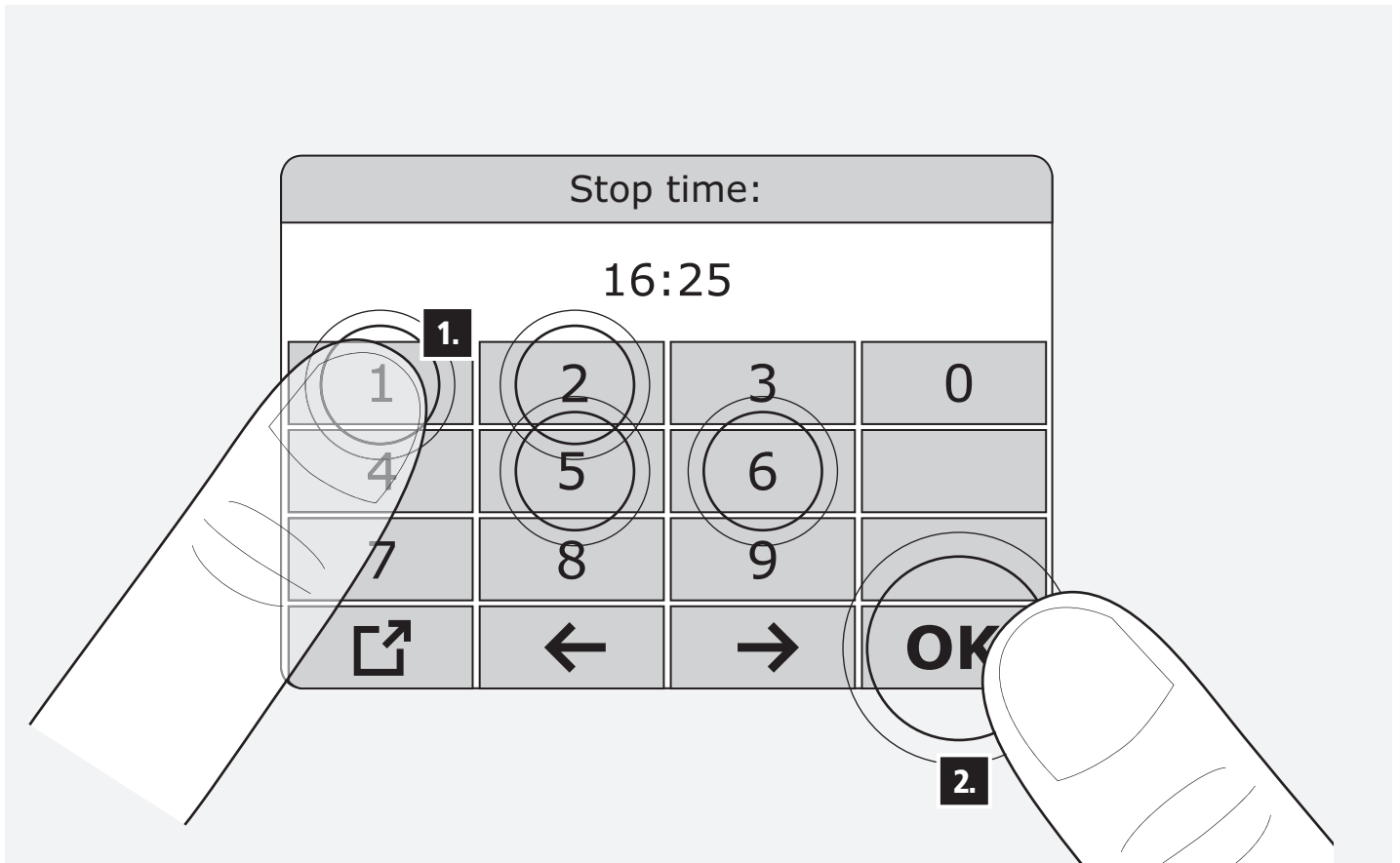
Operating times		
Monday	Off	00:00 - 00:00
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Friday	Off	00:00 - 00:00
Saturday	Off	00:00 - 00:00
Sunday	Off	00:00 - 00:00

Navigation icons: ↗, ←, →, OK

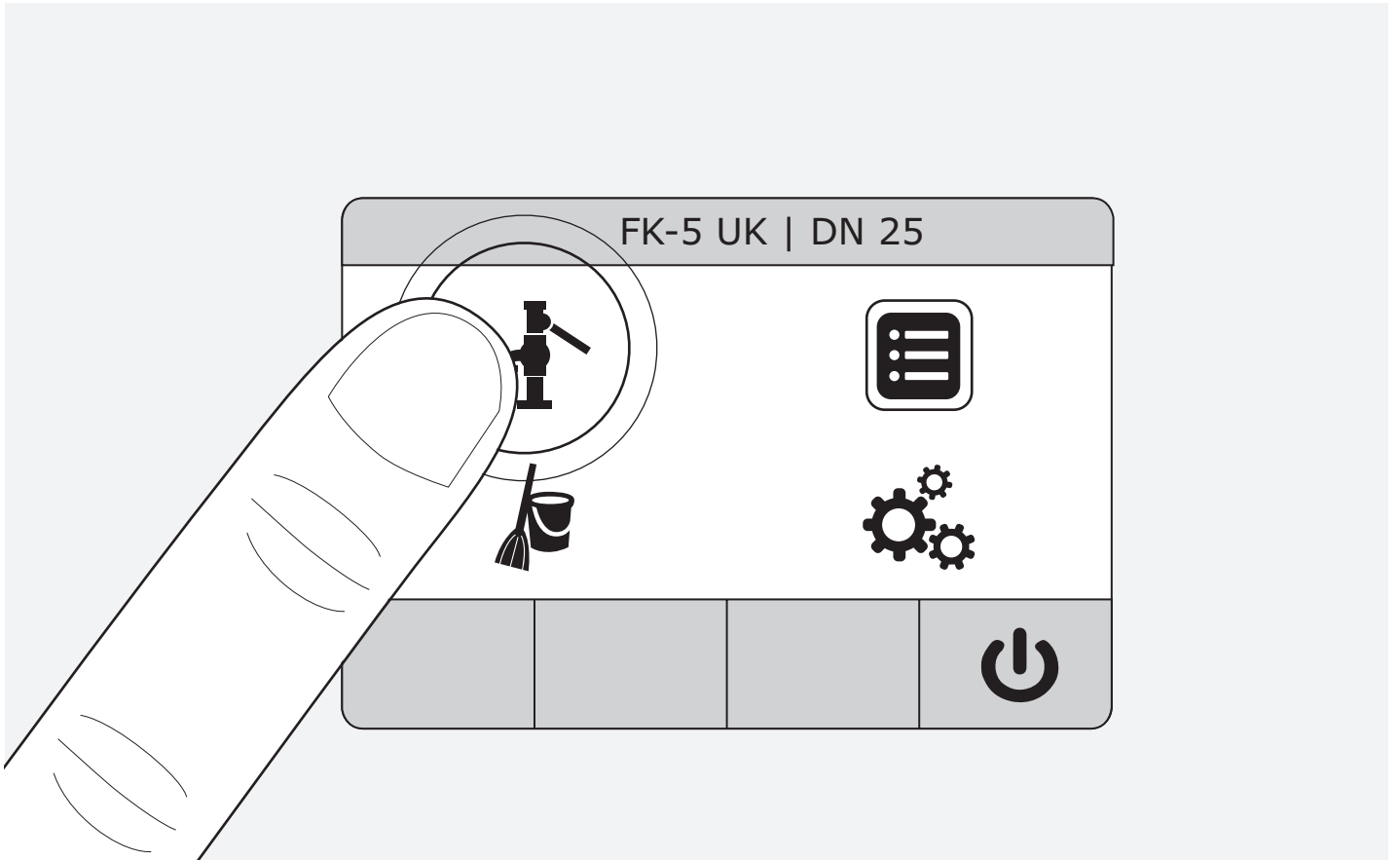




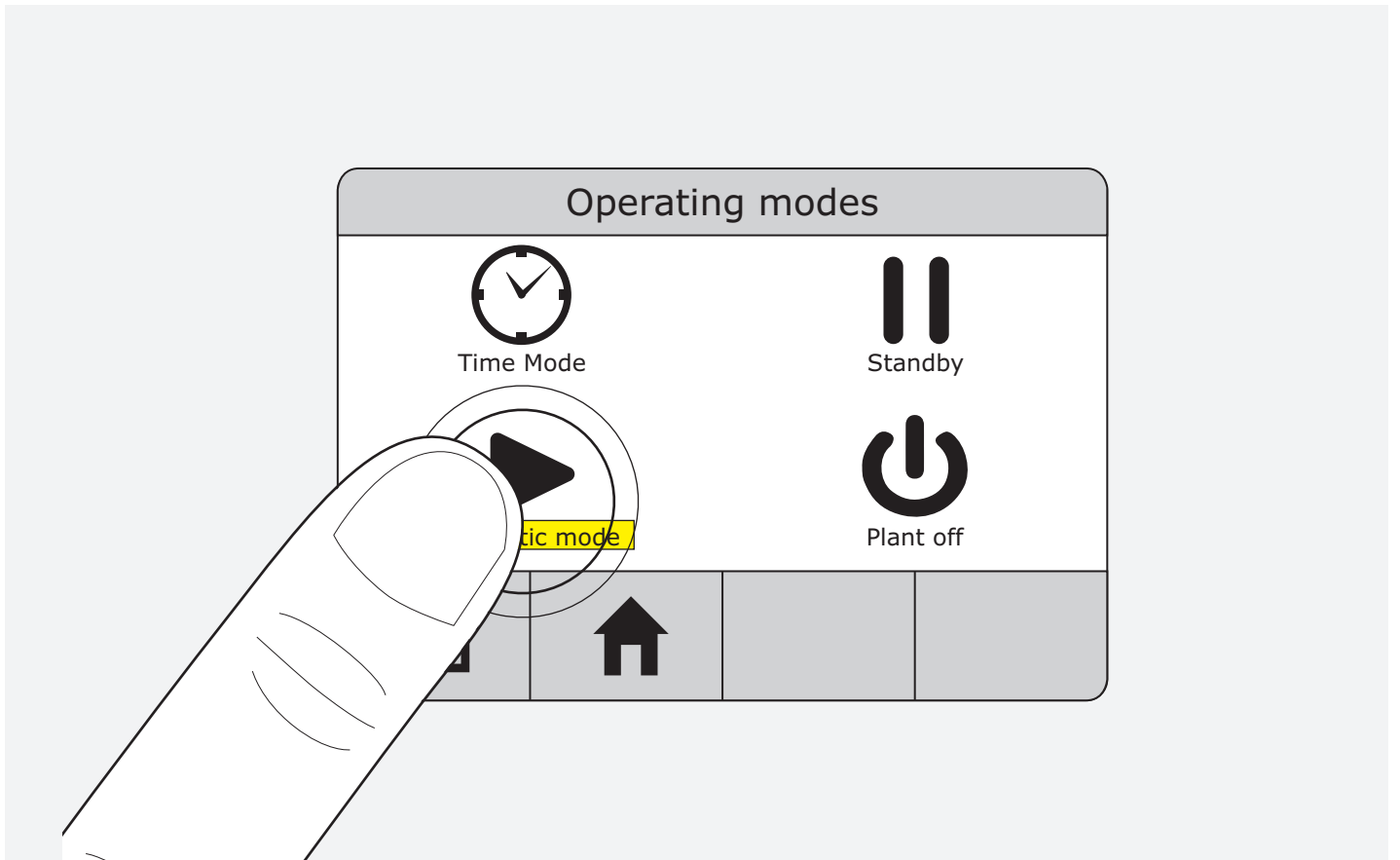


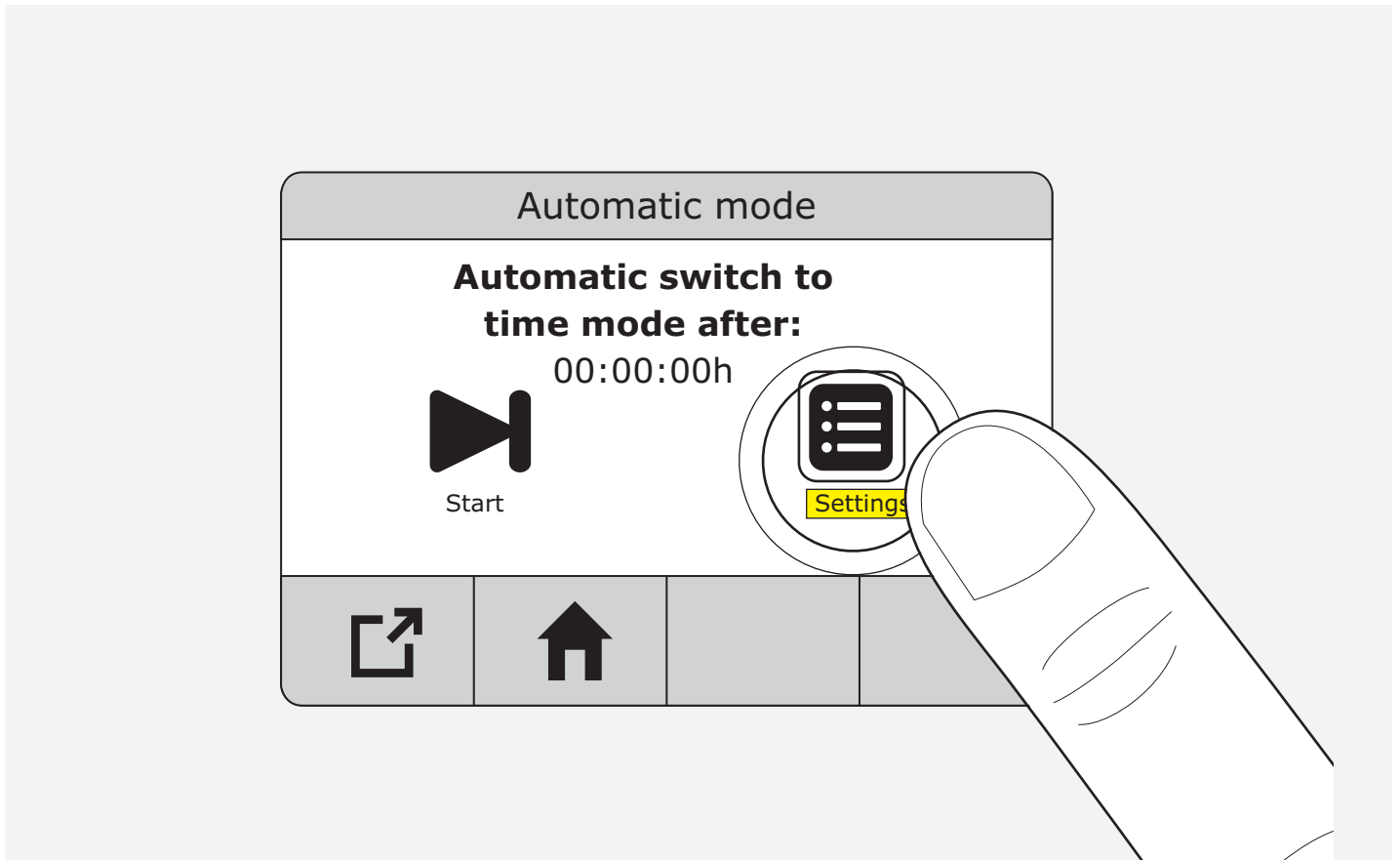
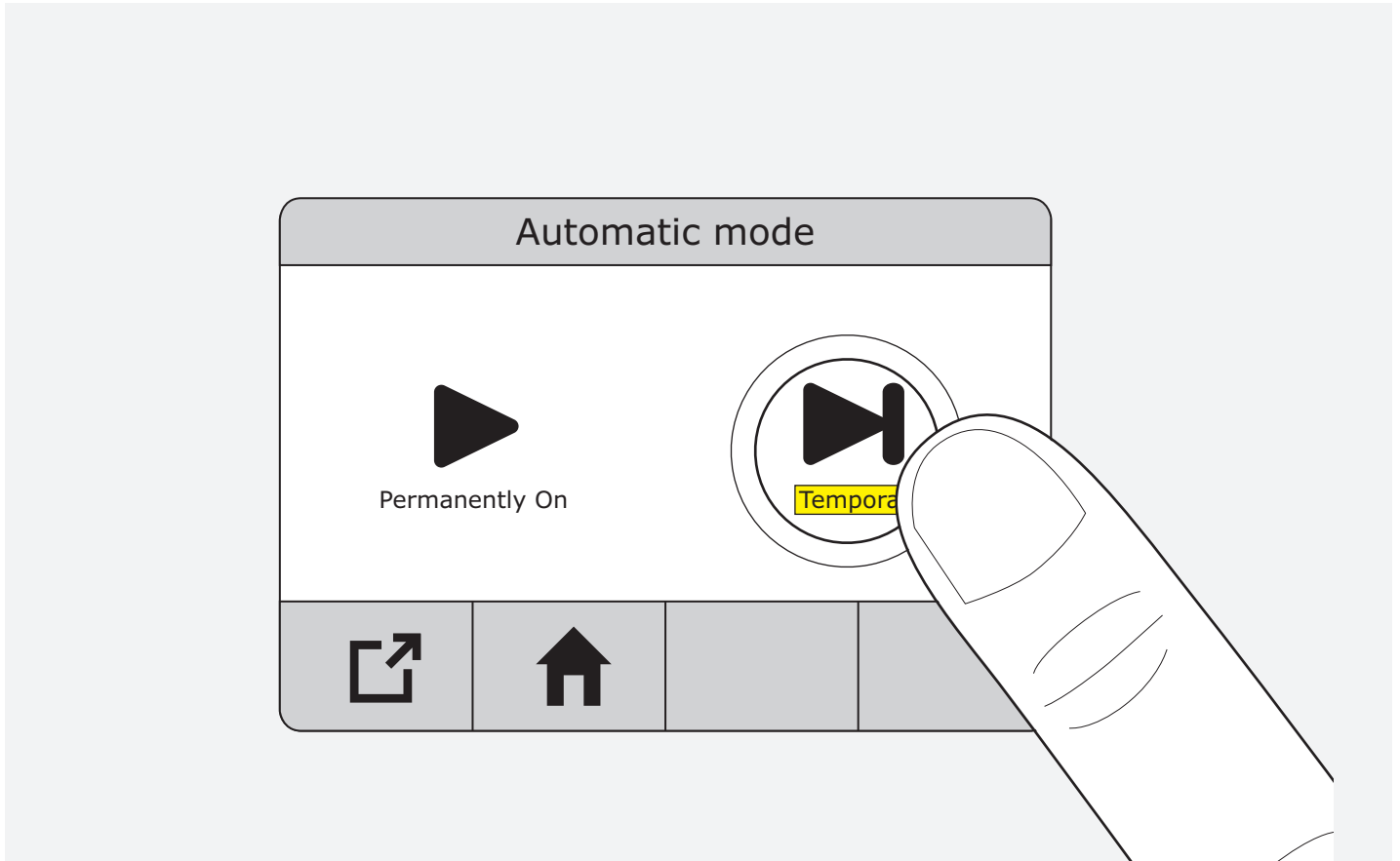


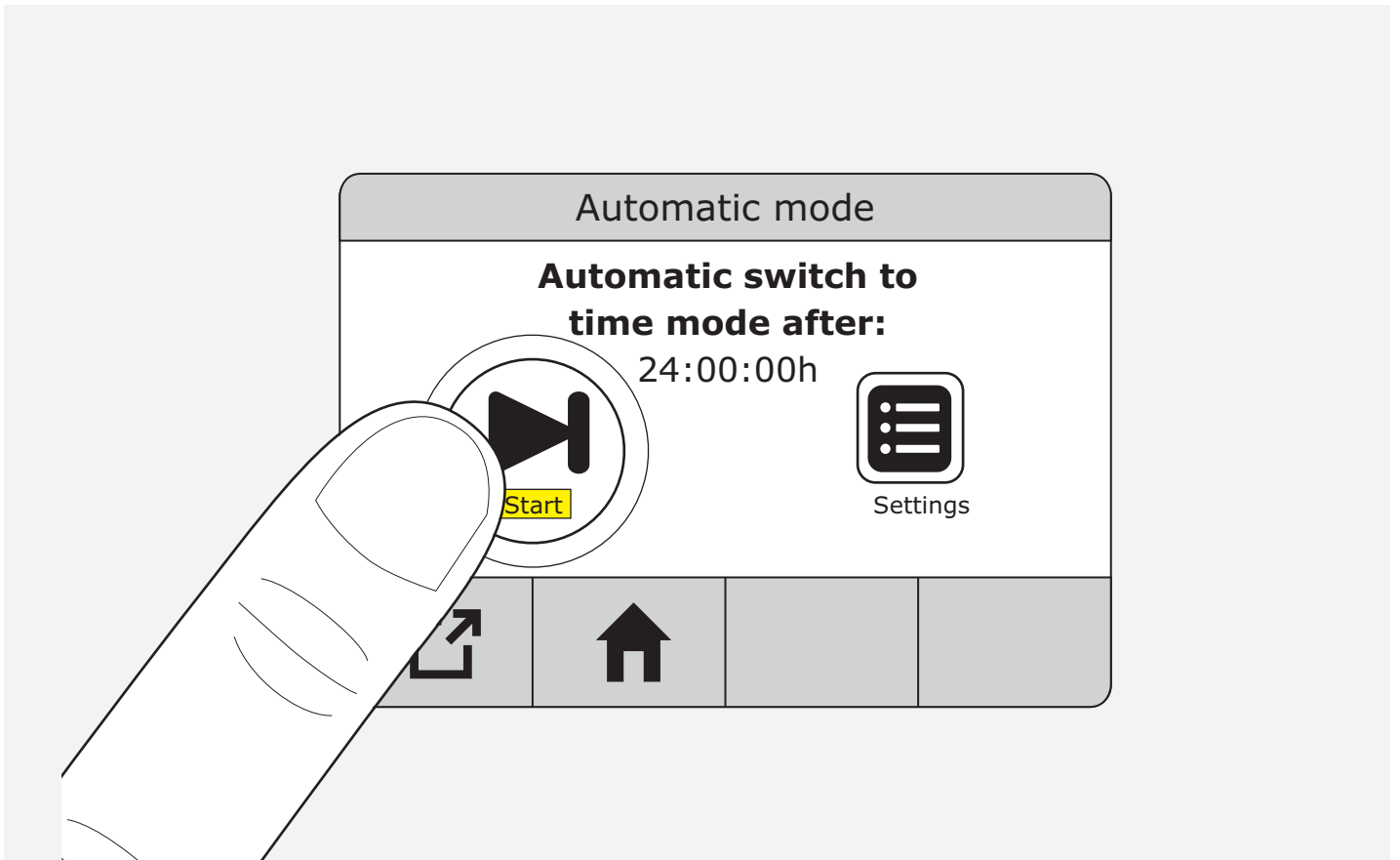
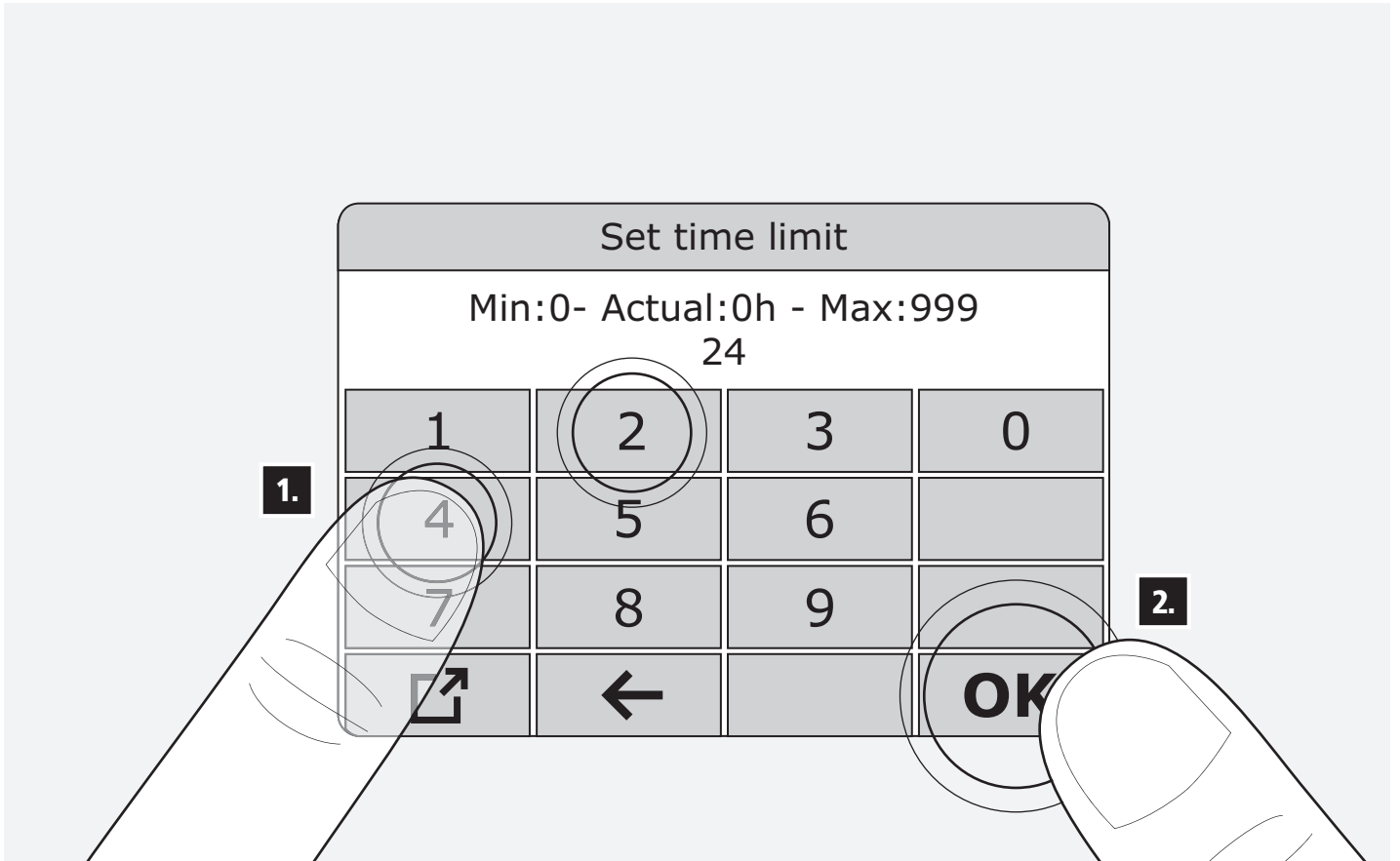
2.2.1



2.2.2







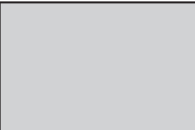
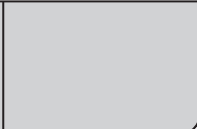


Automatic mode

**Automatic switch to
time mode after:**

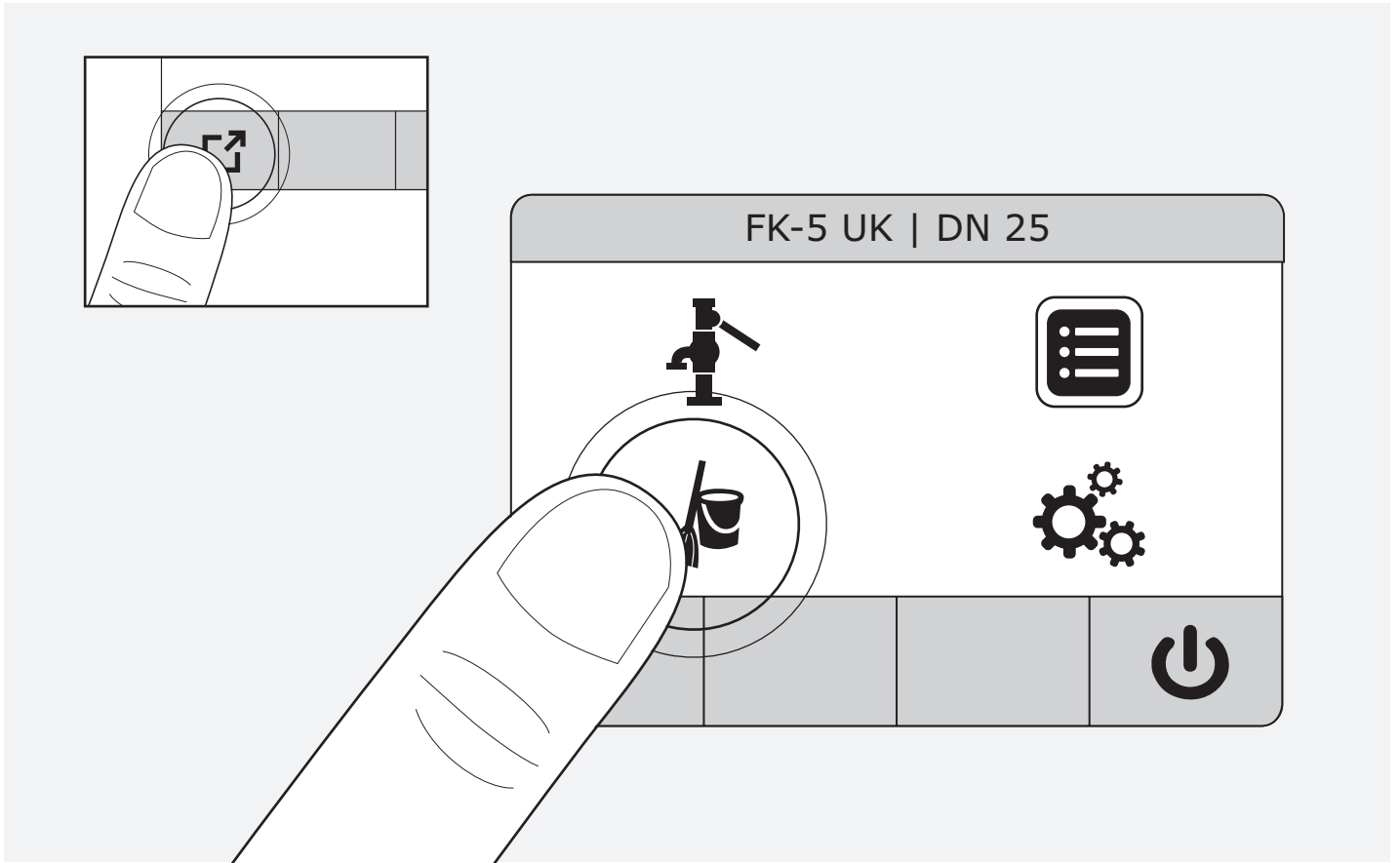
▶ 23:59:59h ◀

Permanently On Temporary

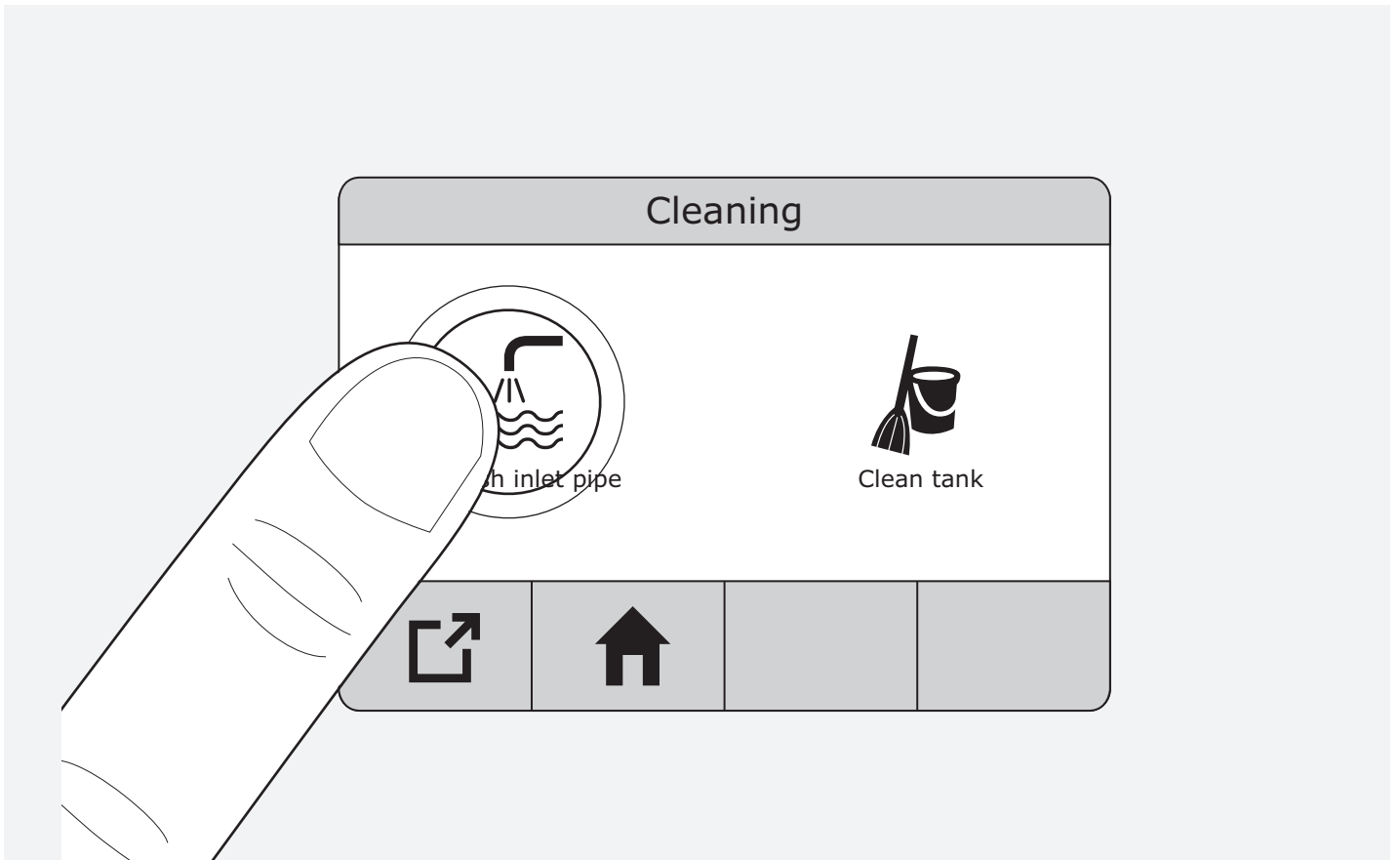
   

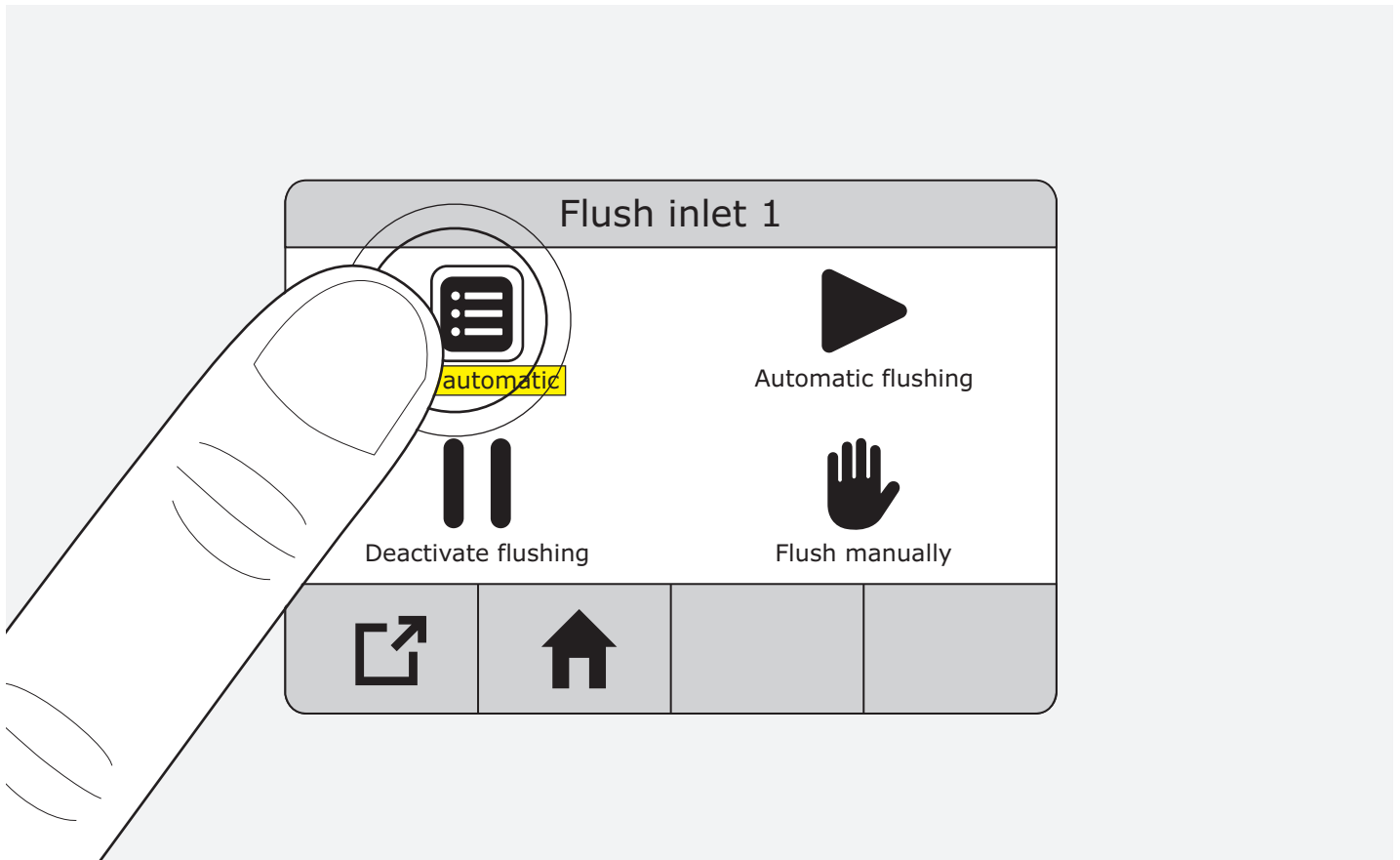
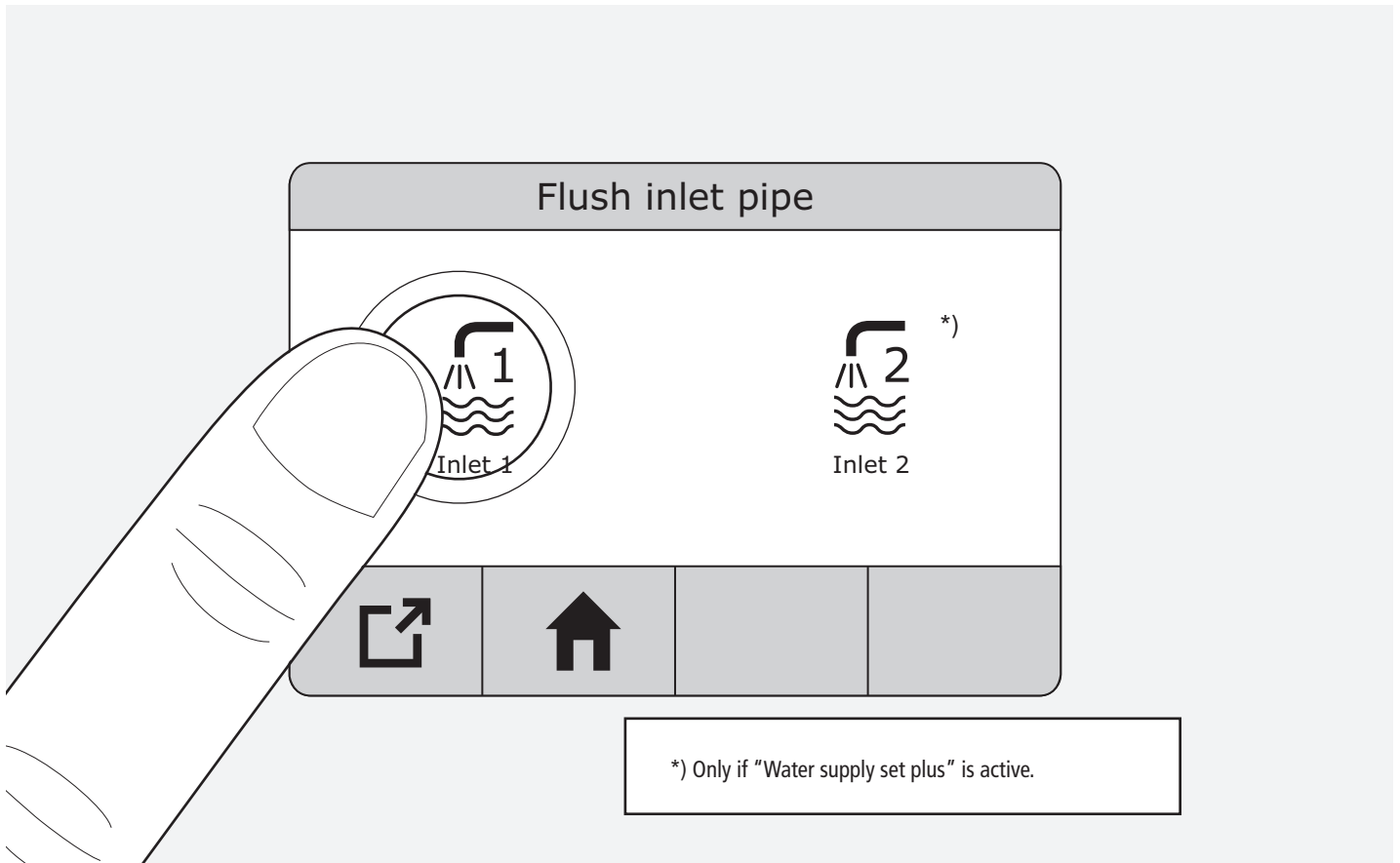


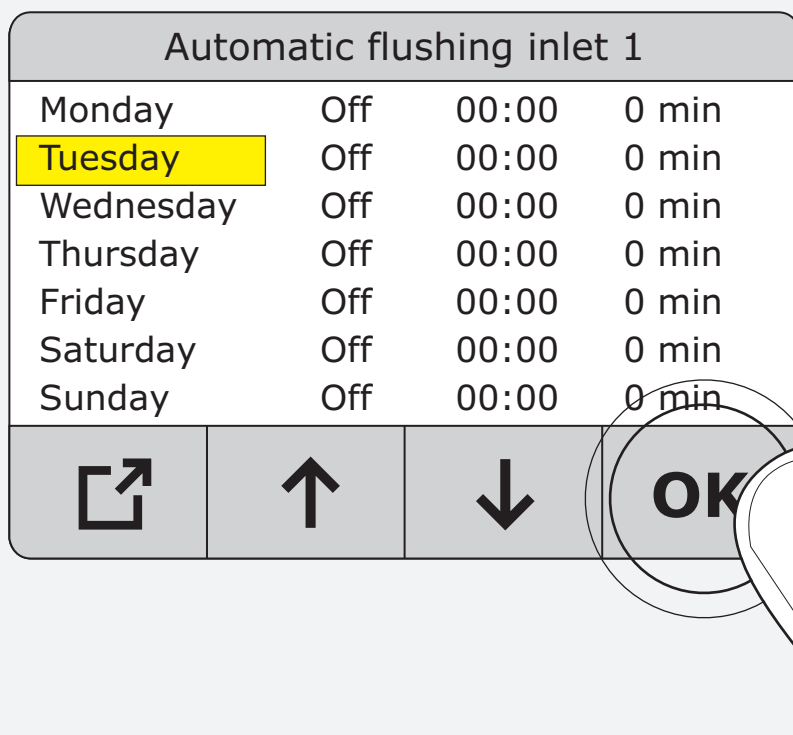
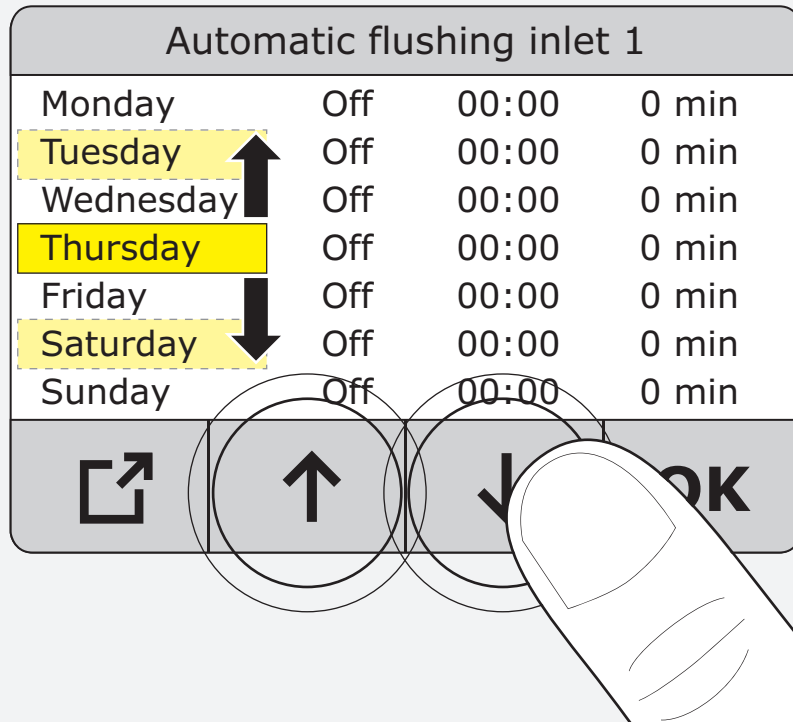
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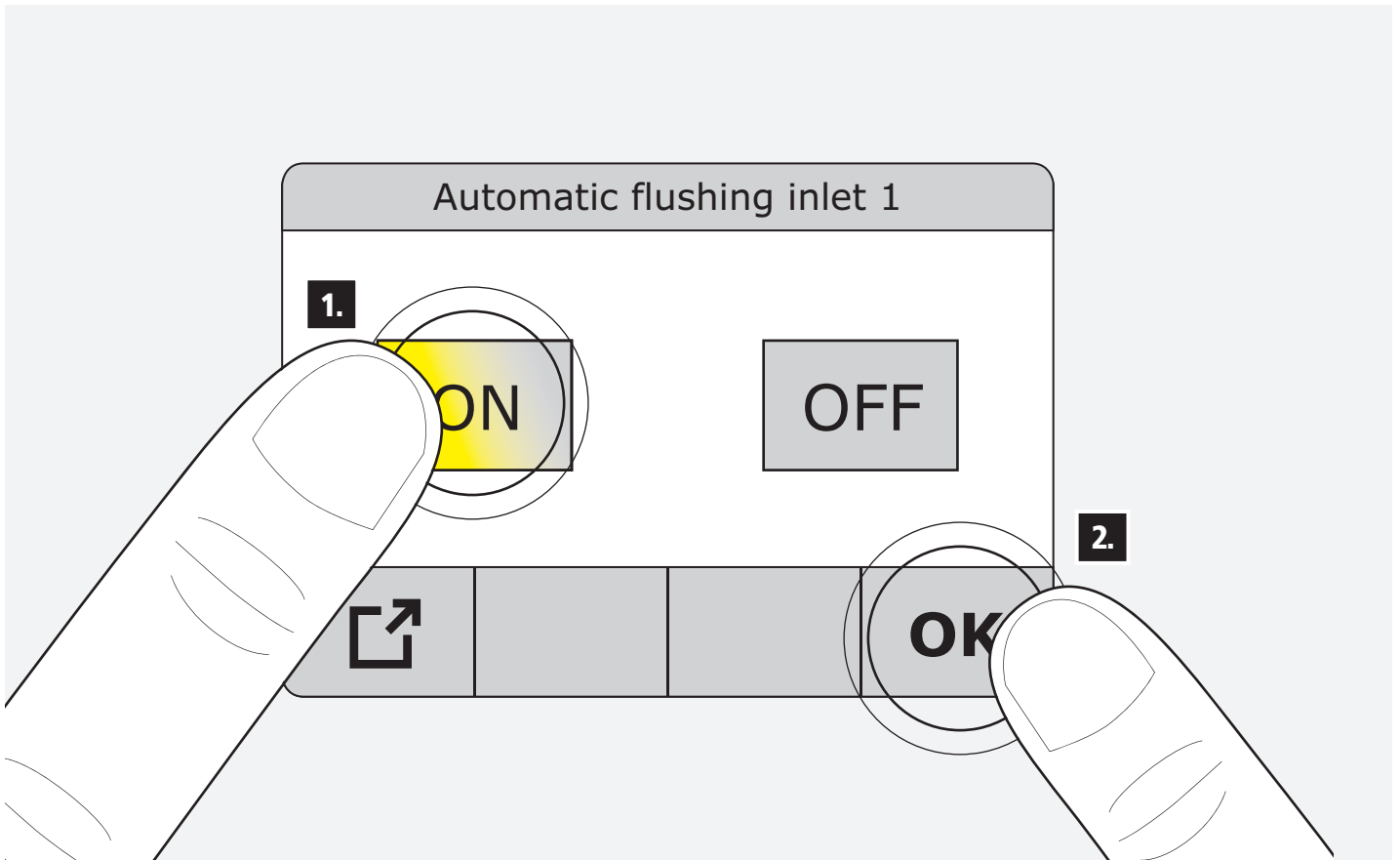
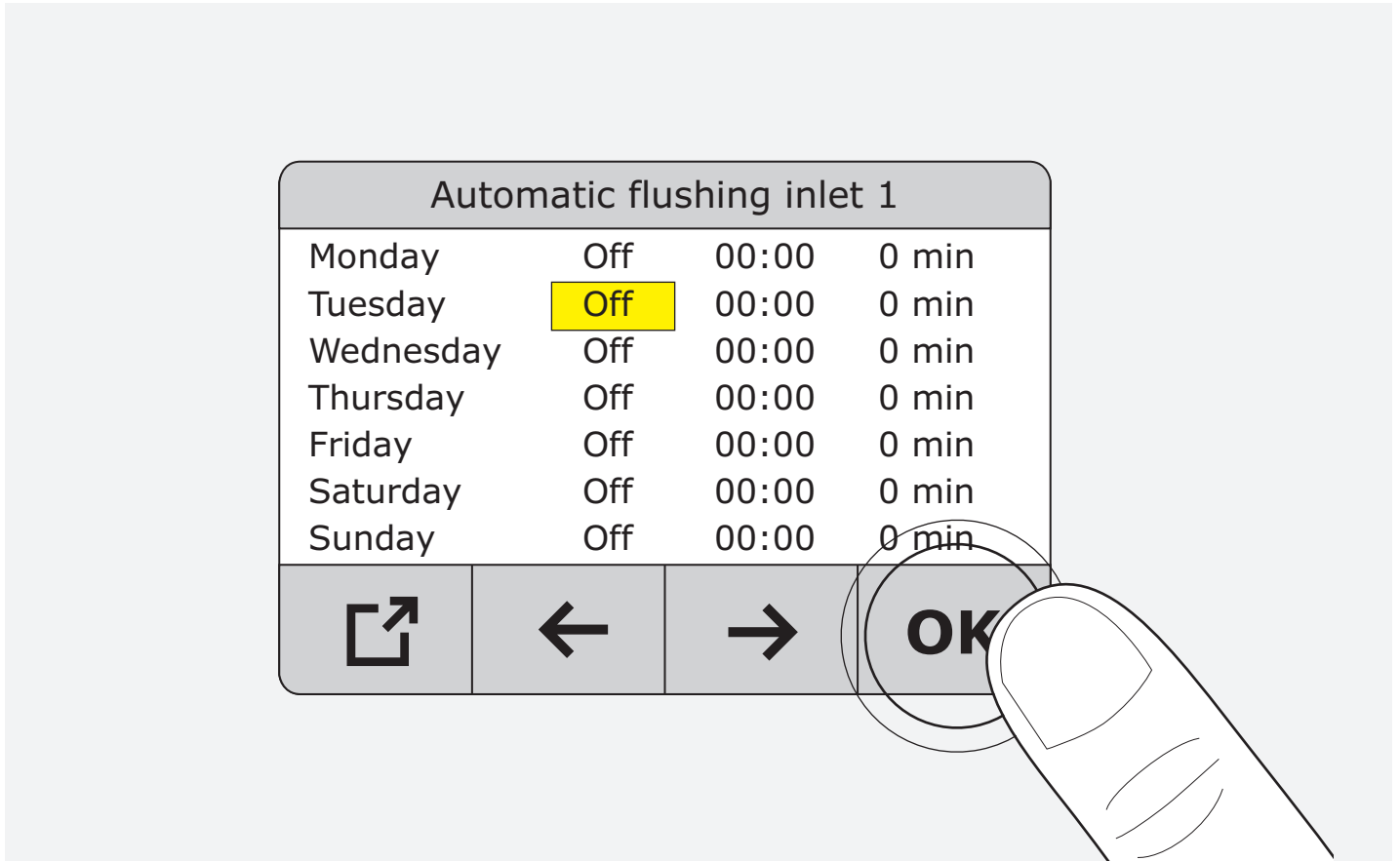


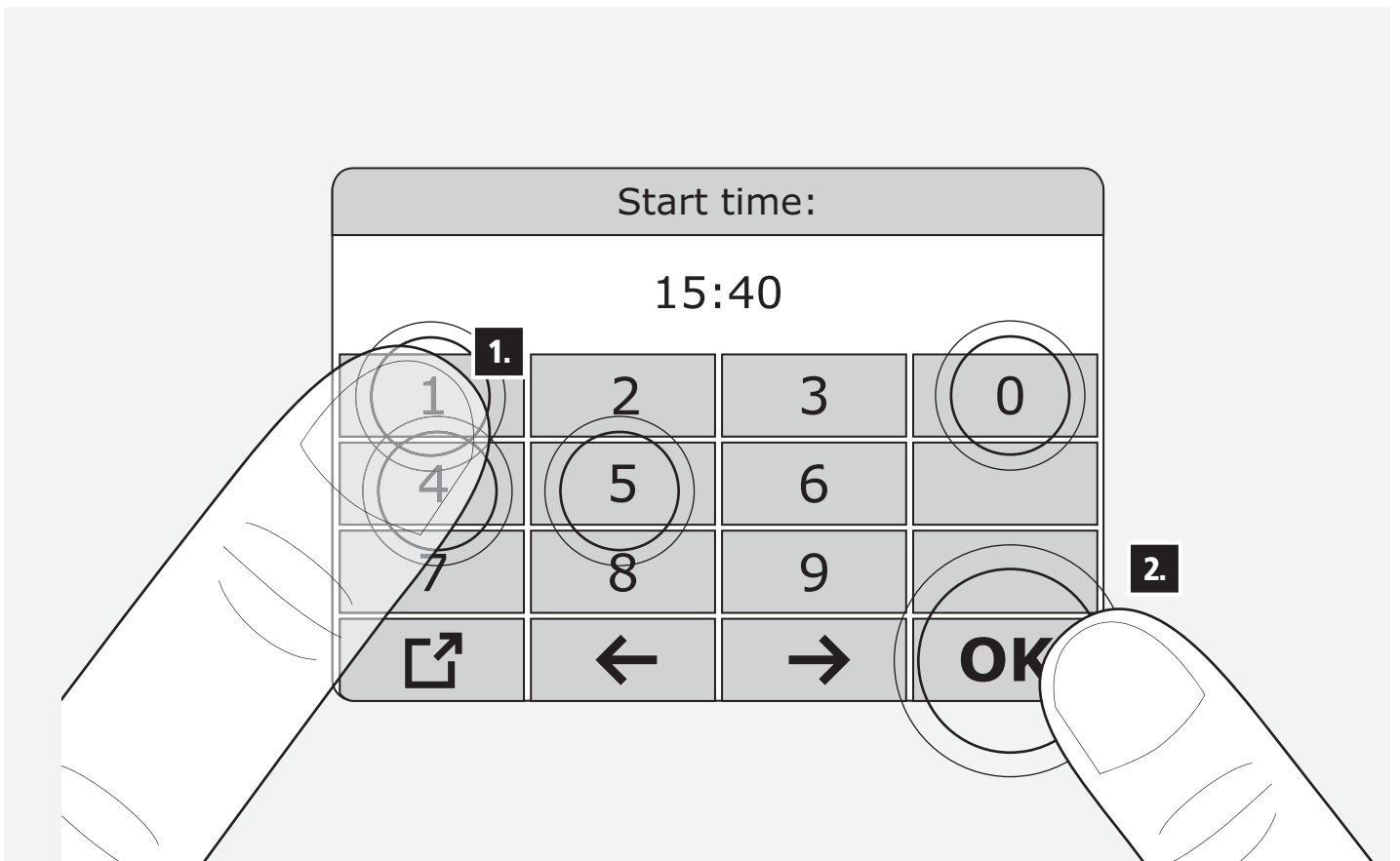
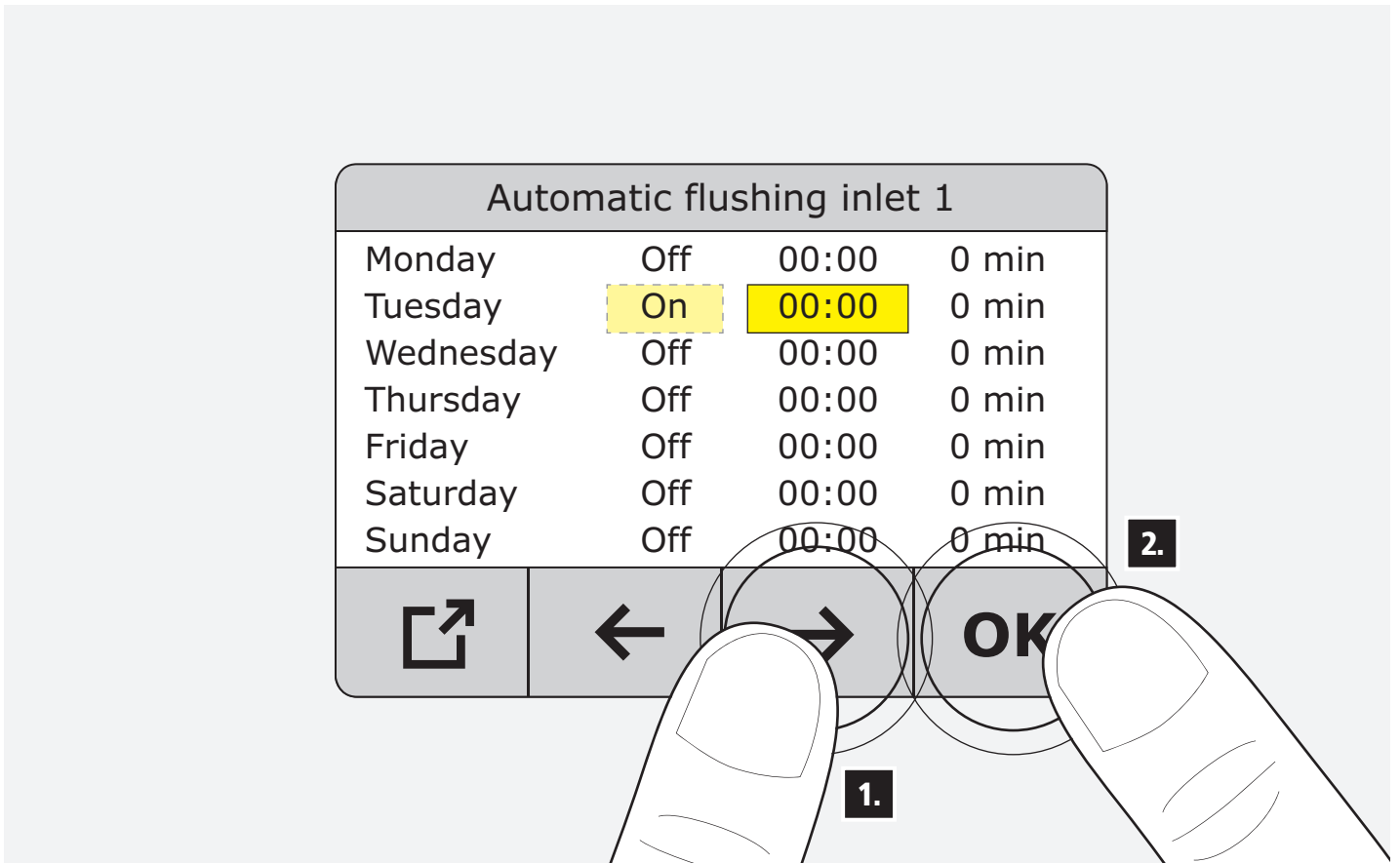
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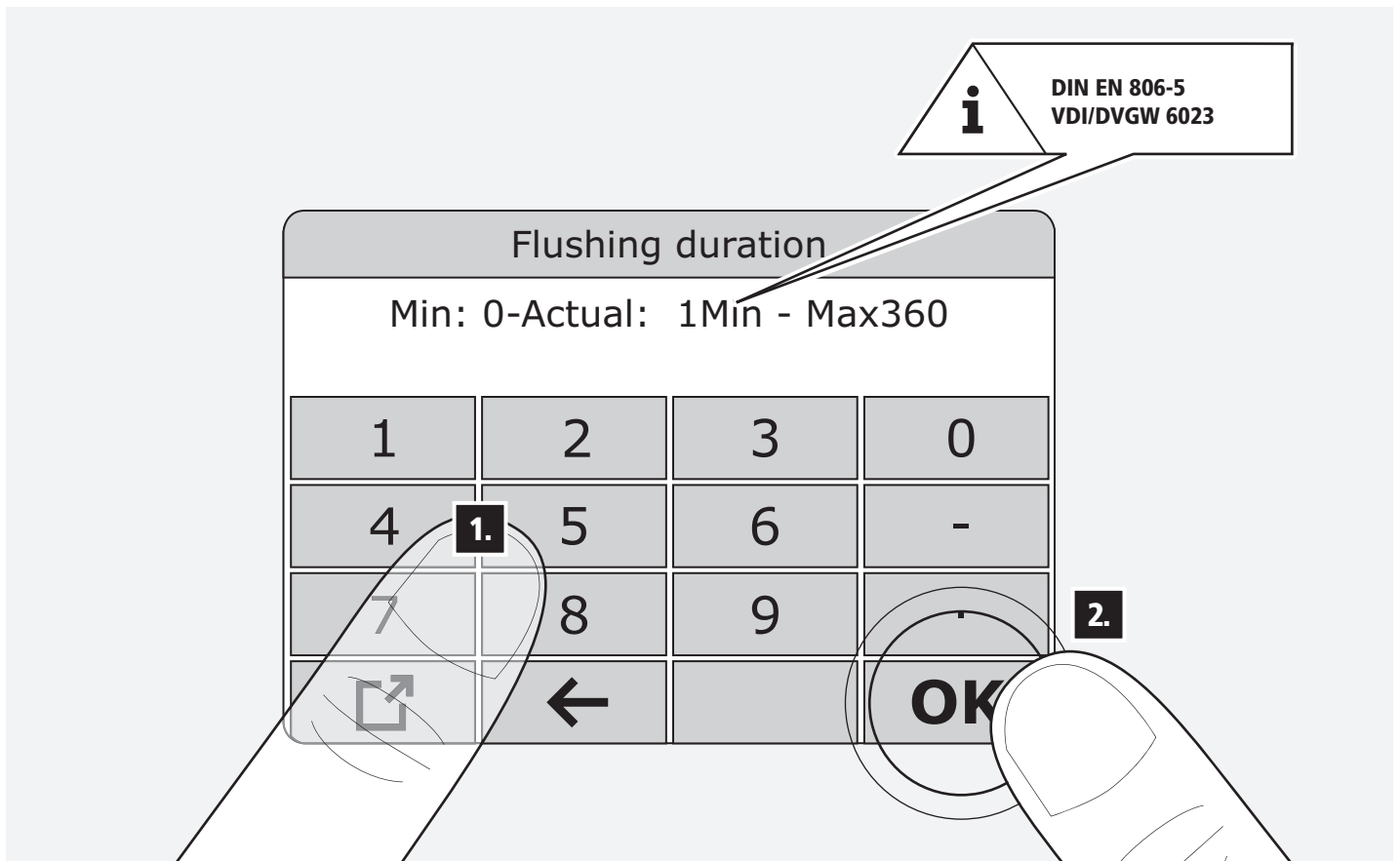
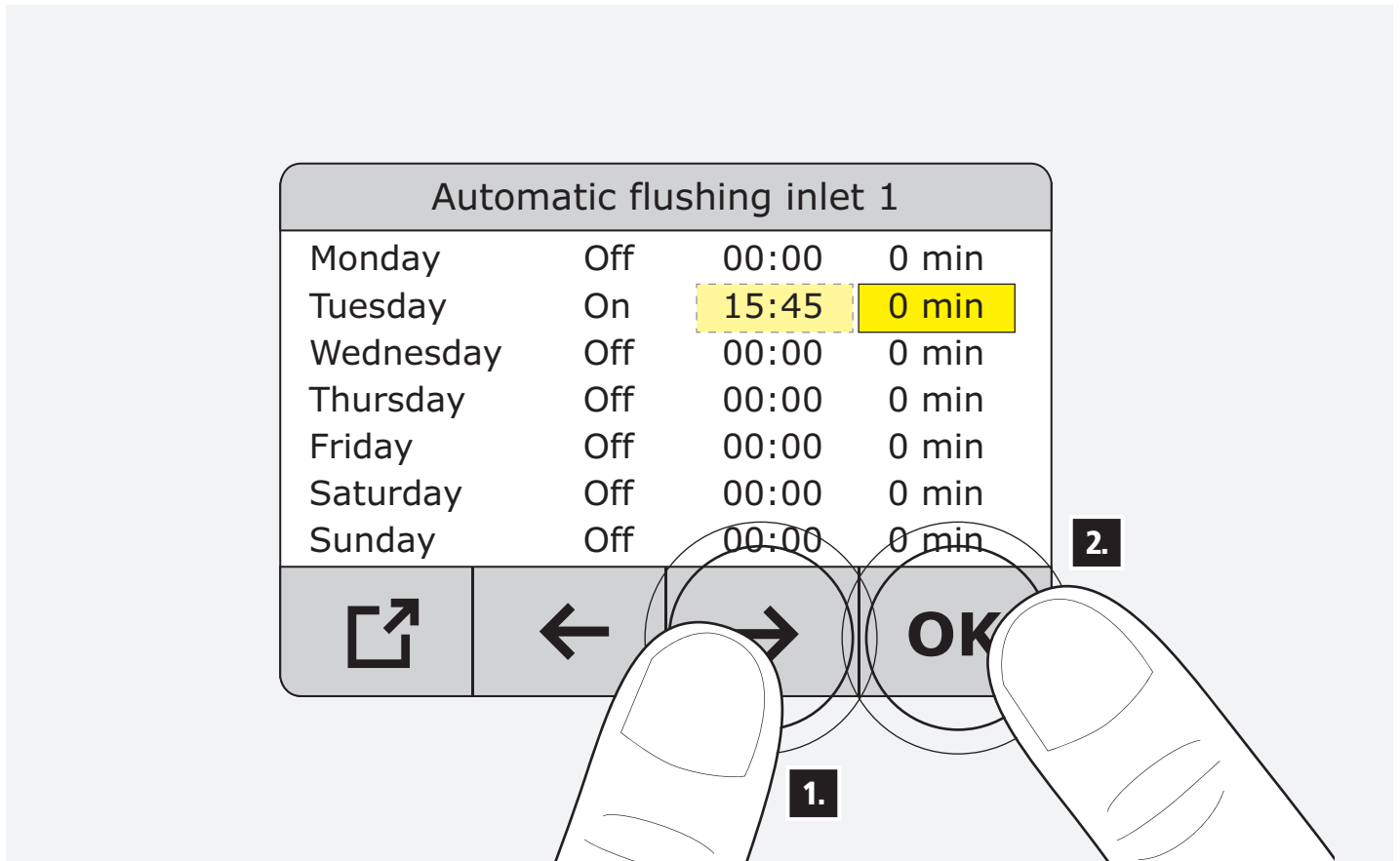


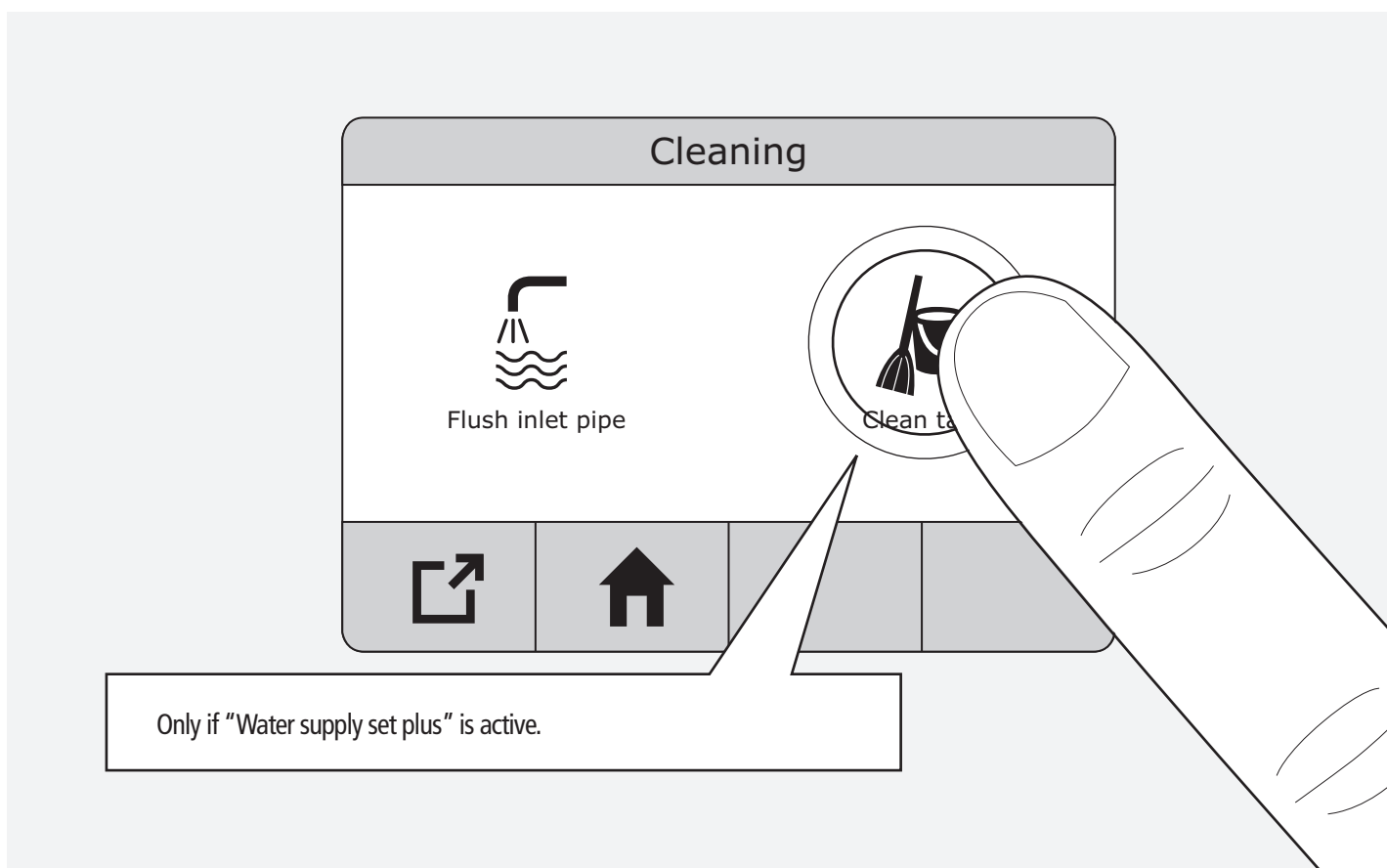
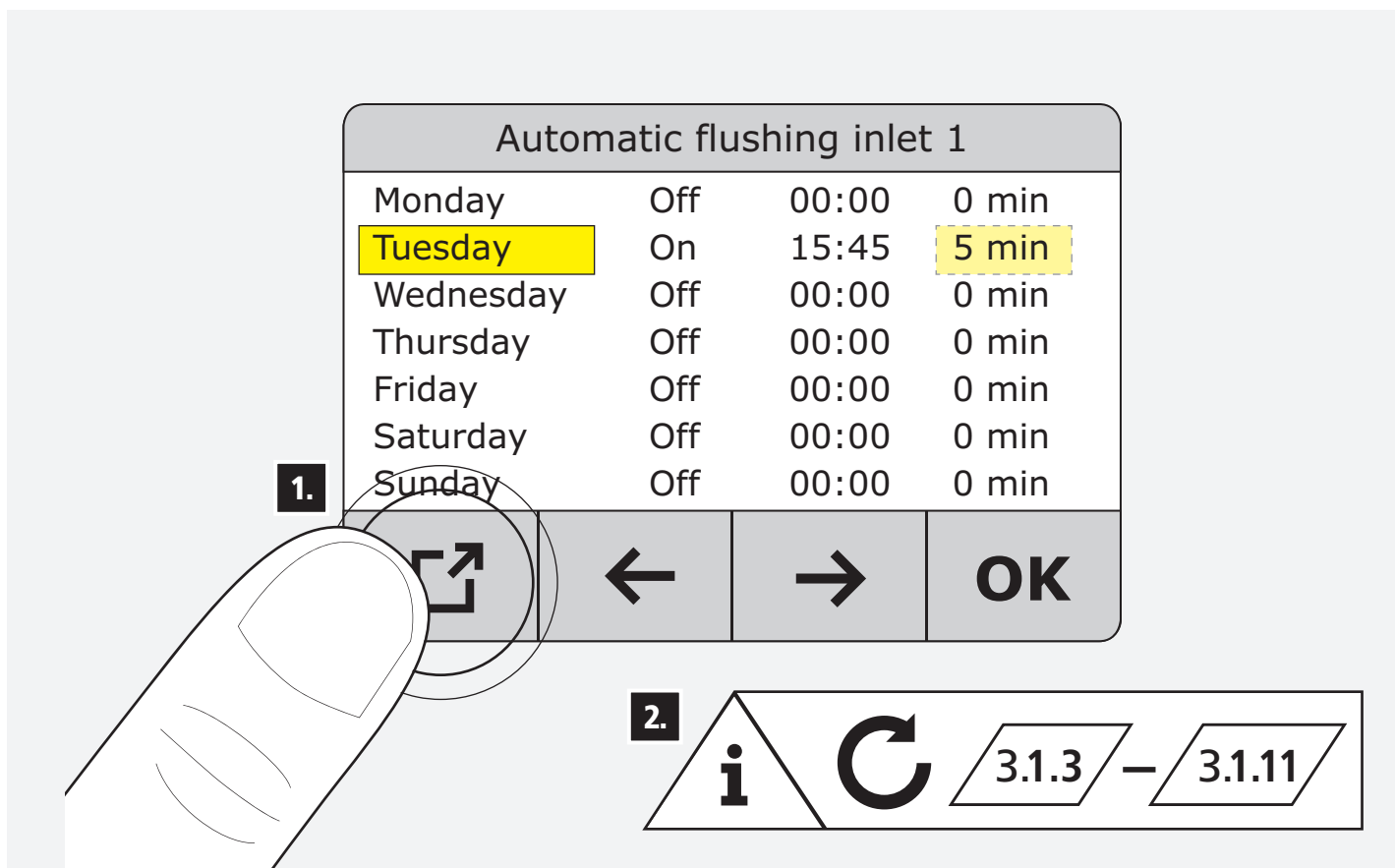


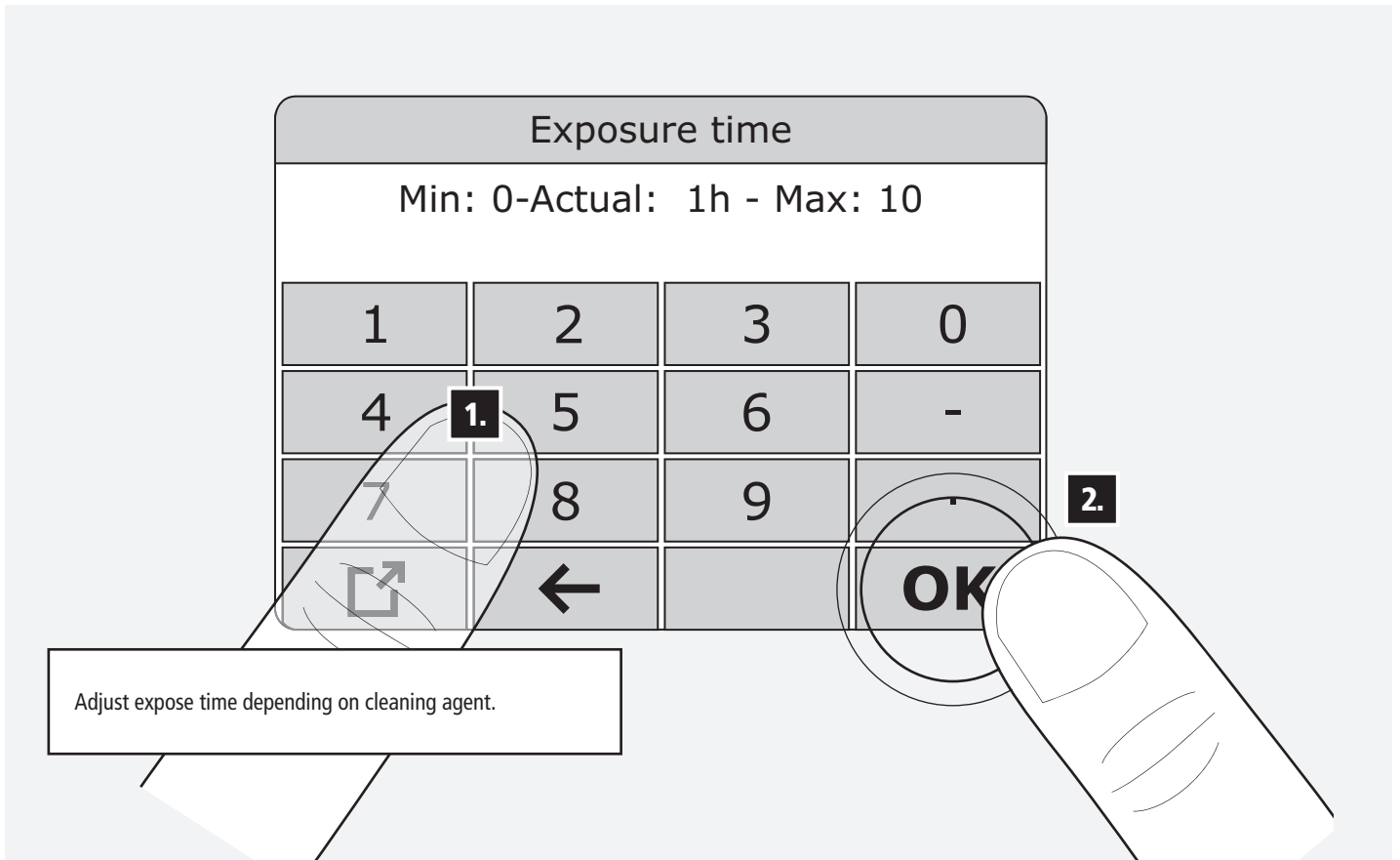
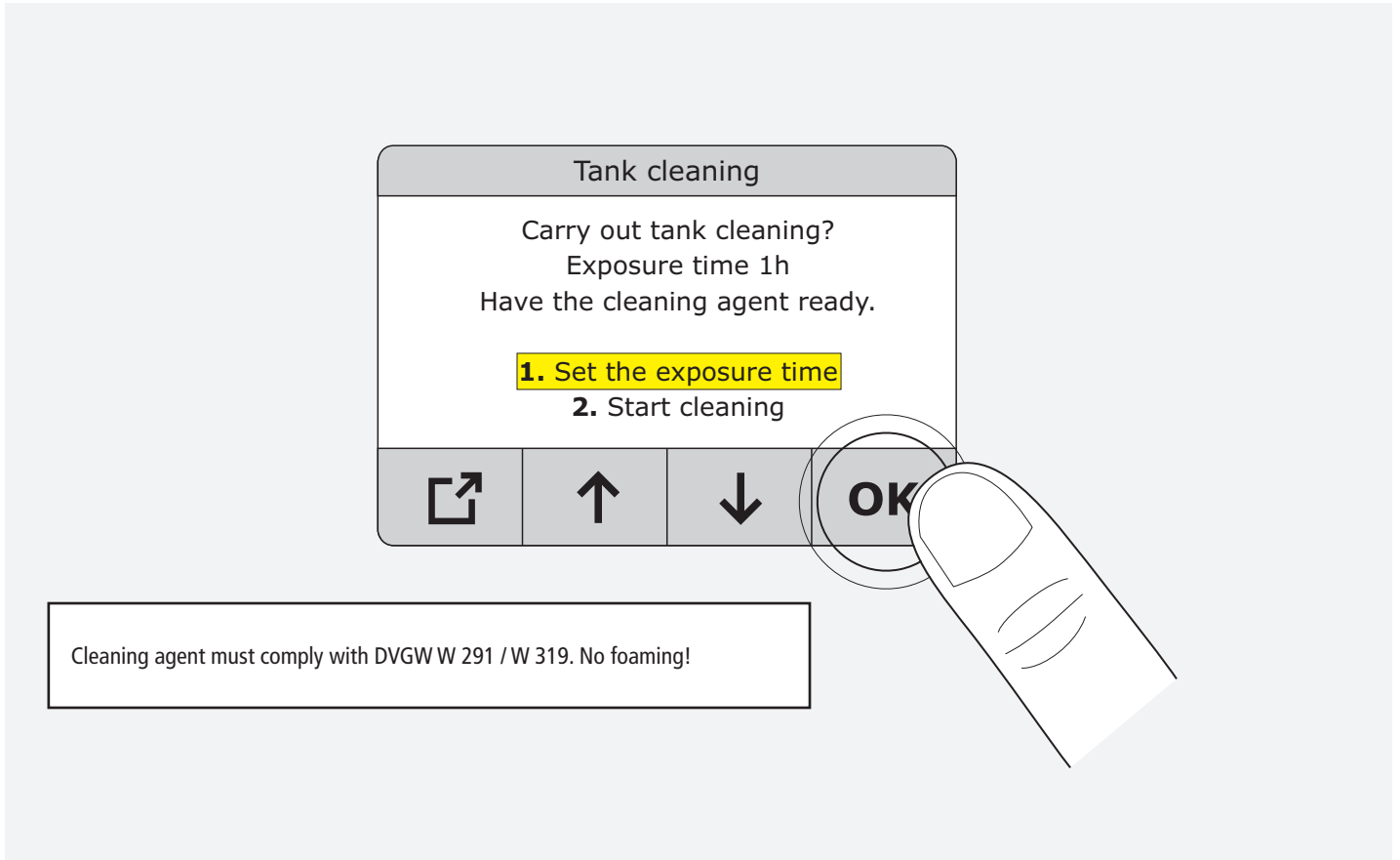


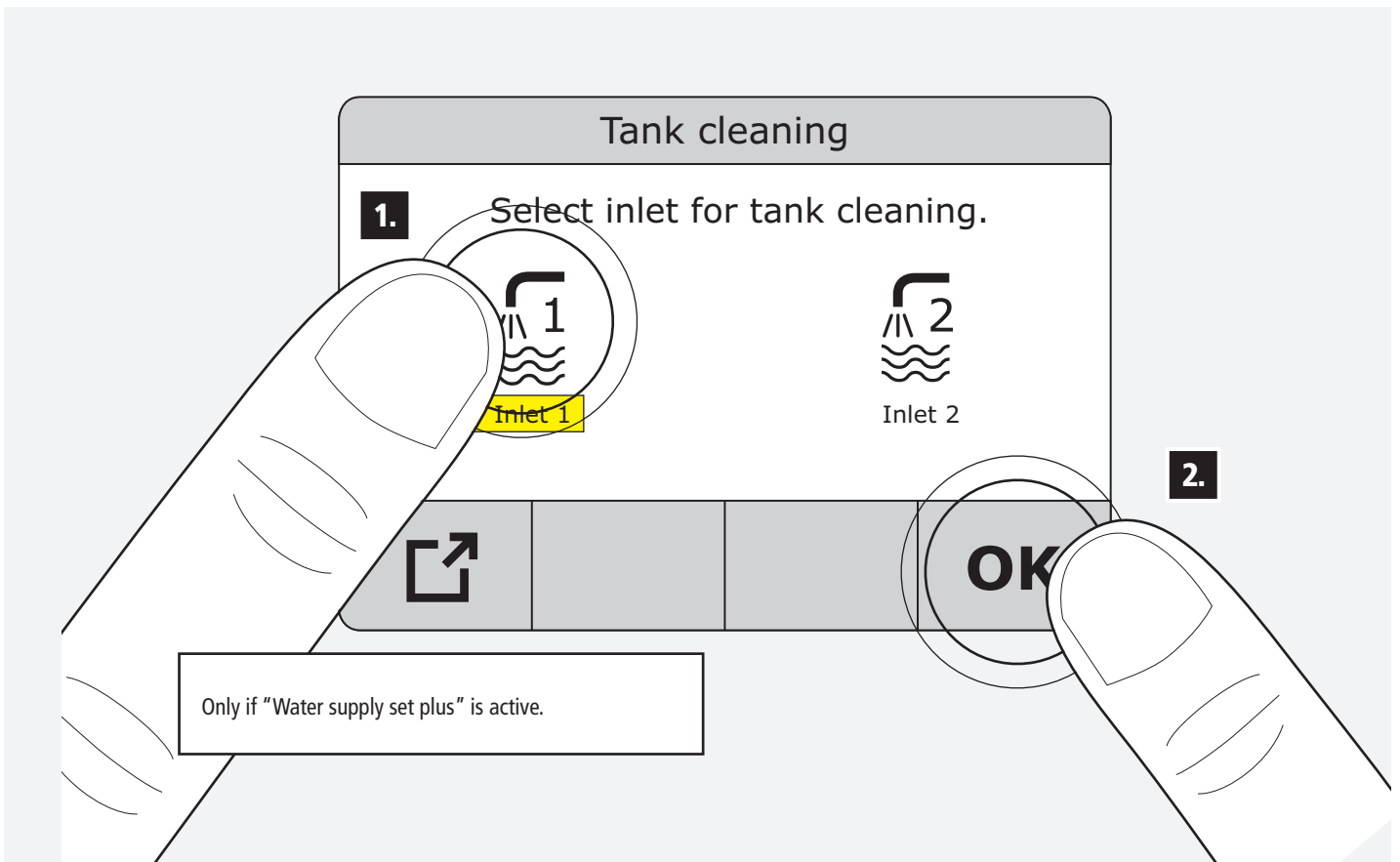
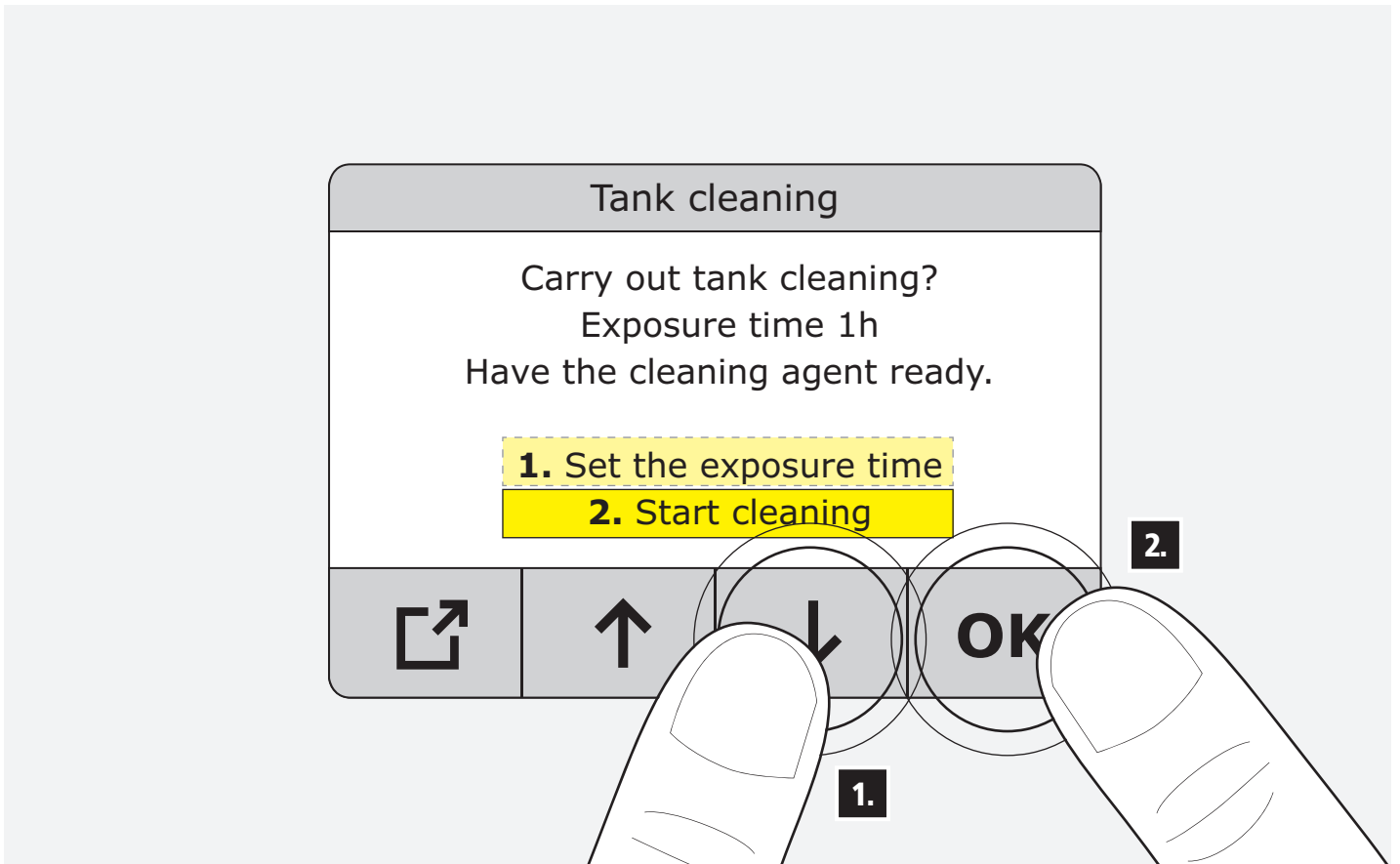


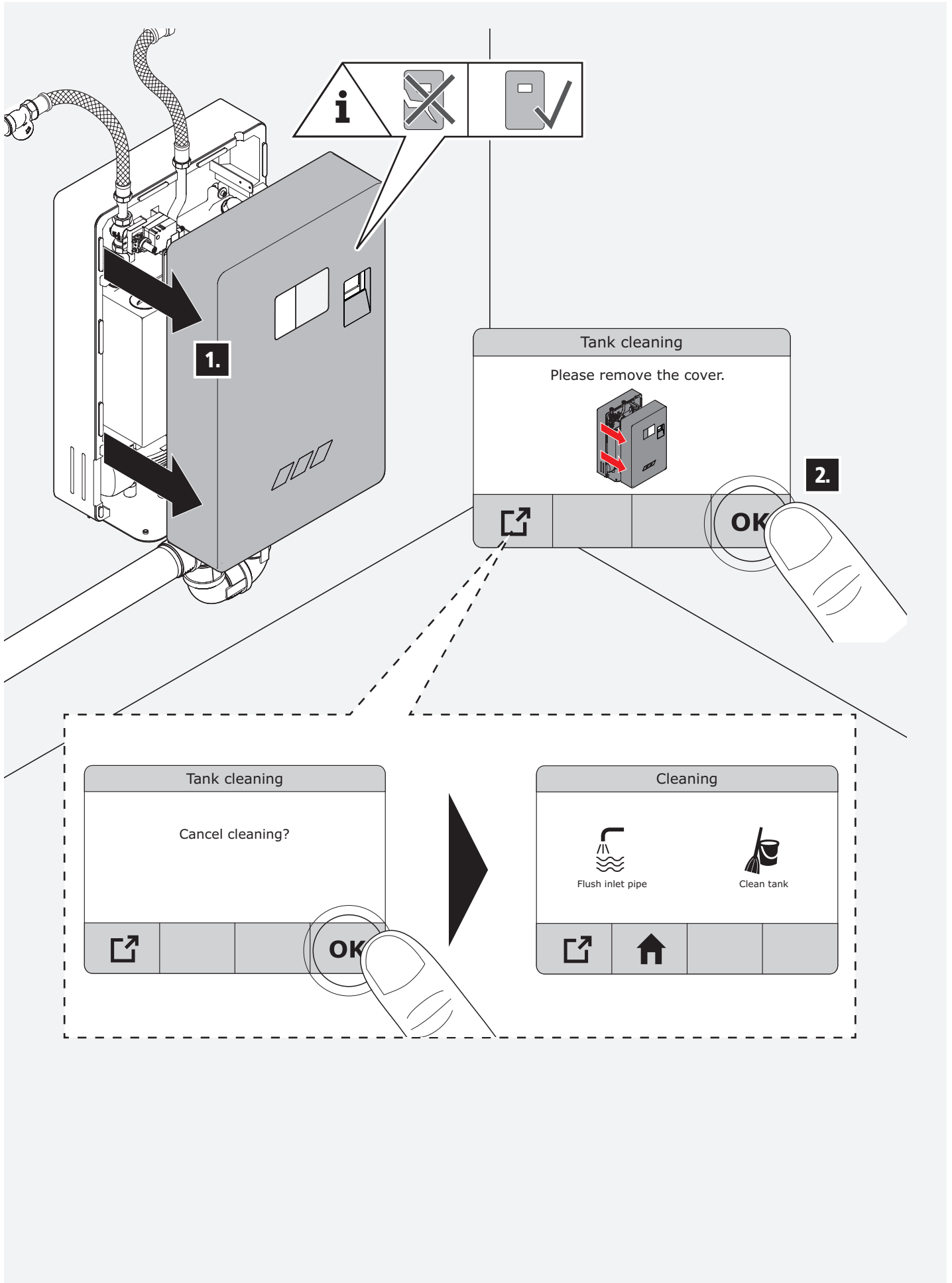




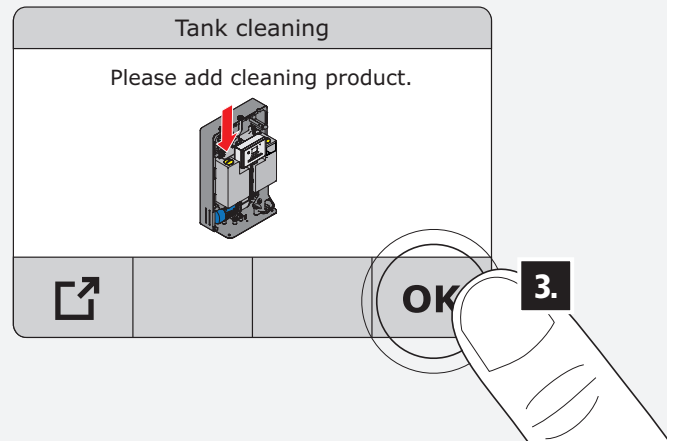
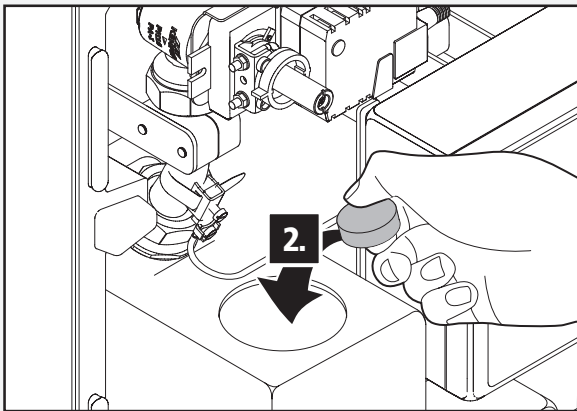
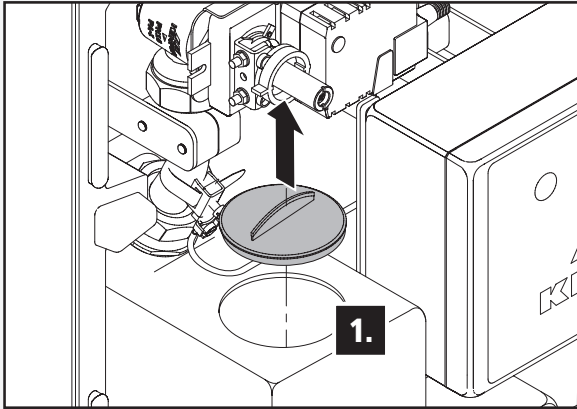




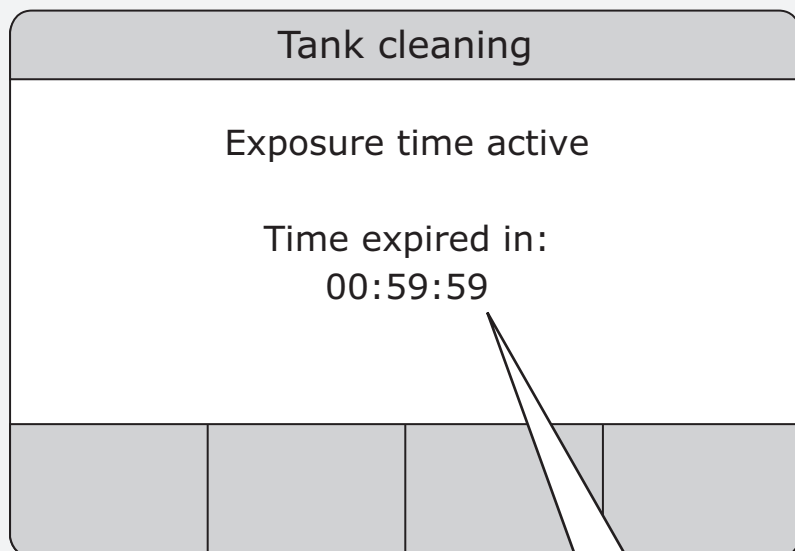




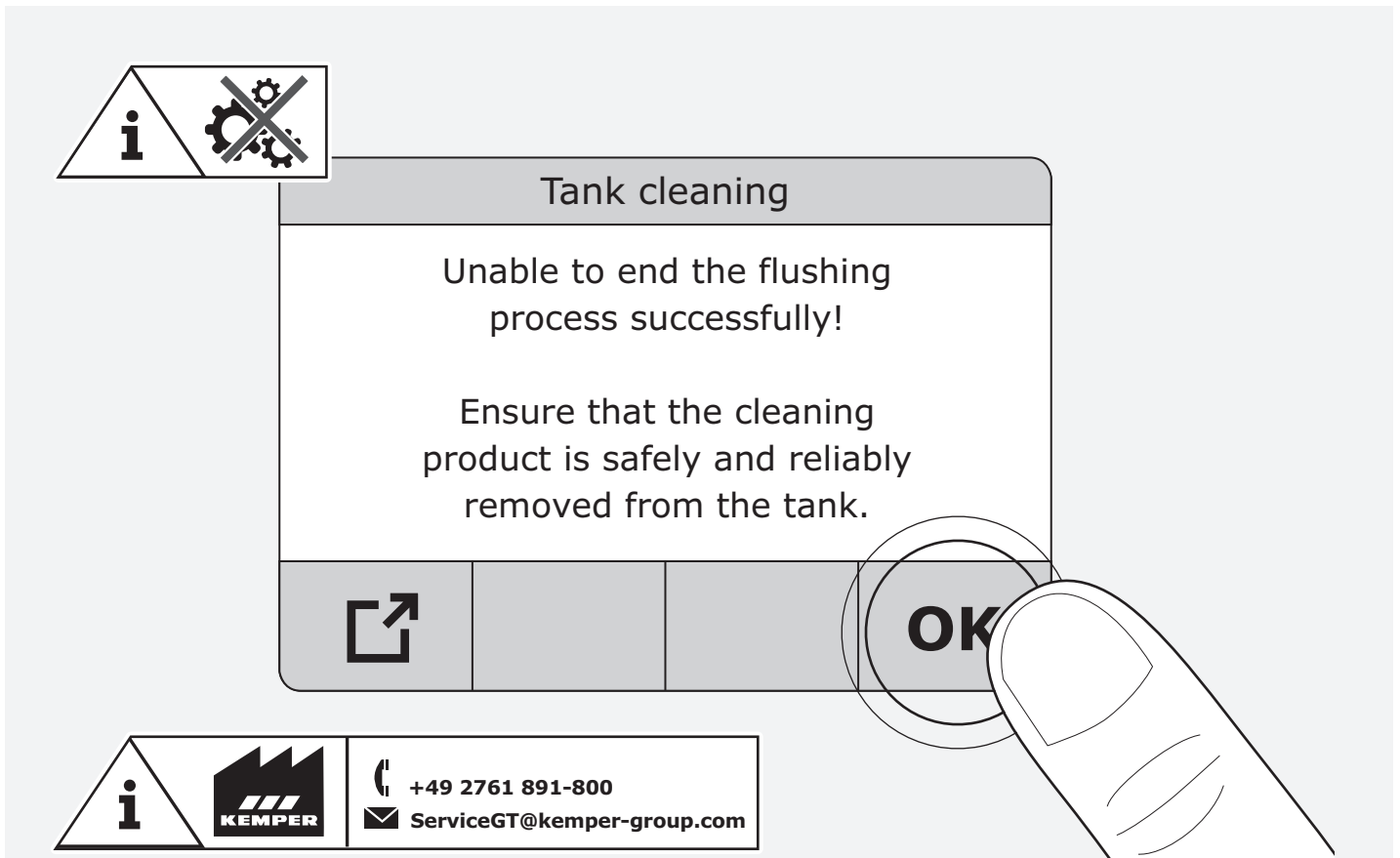
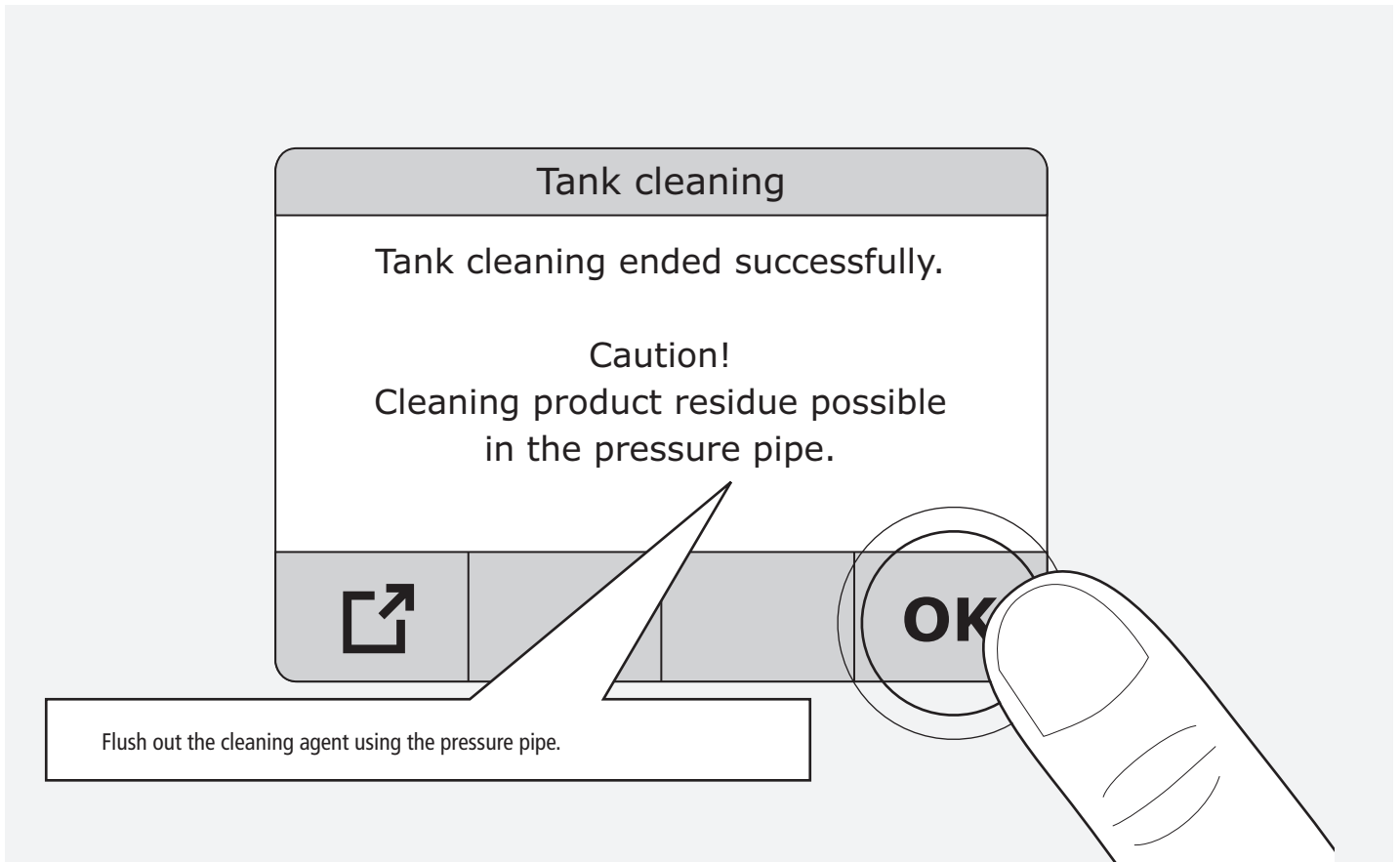
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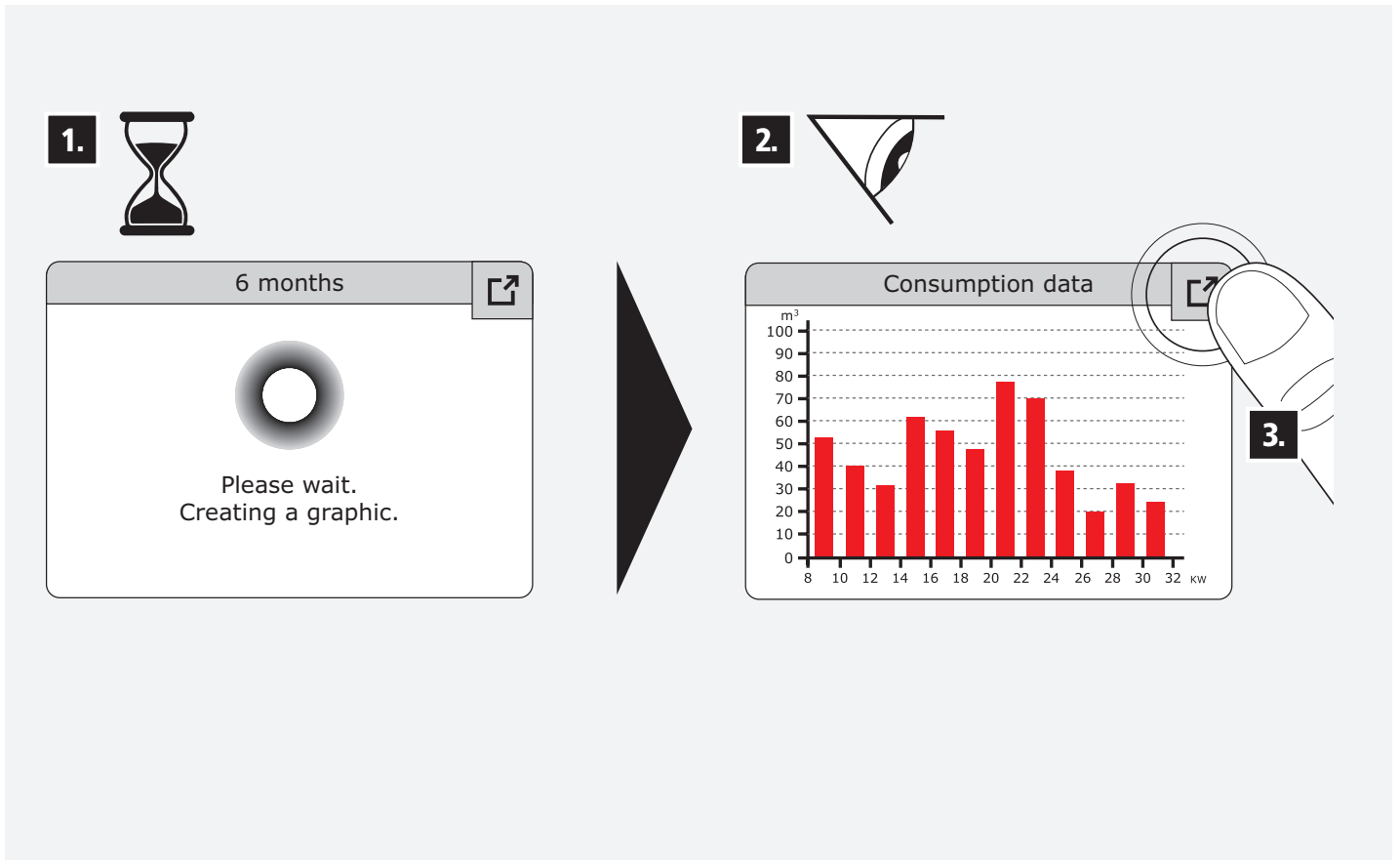
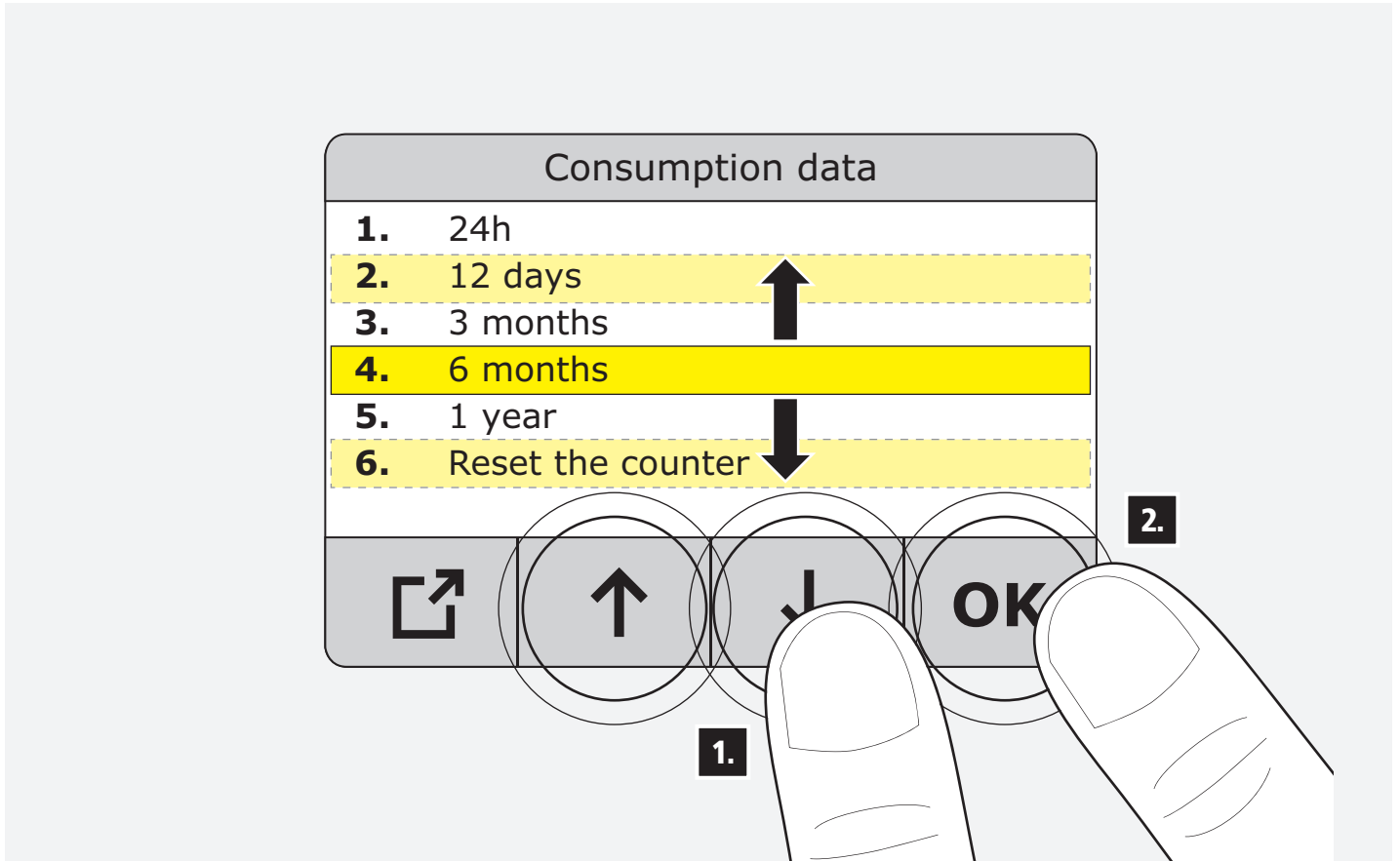


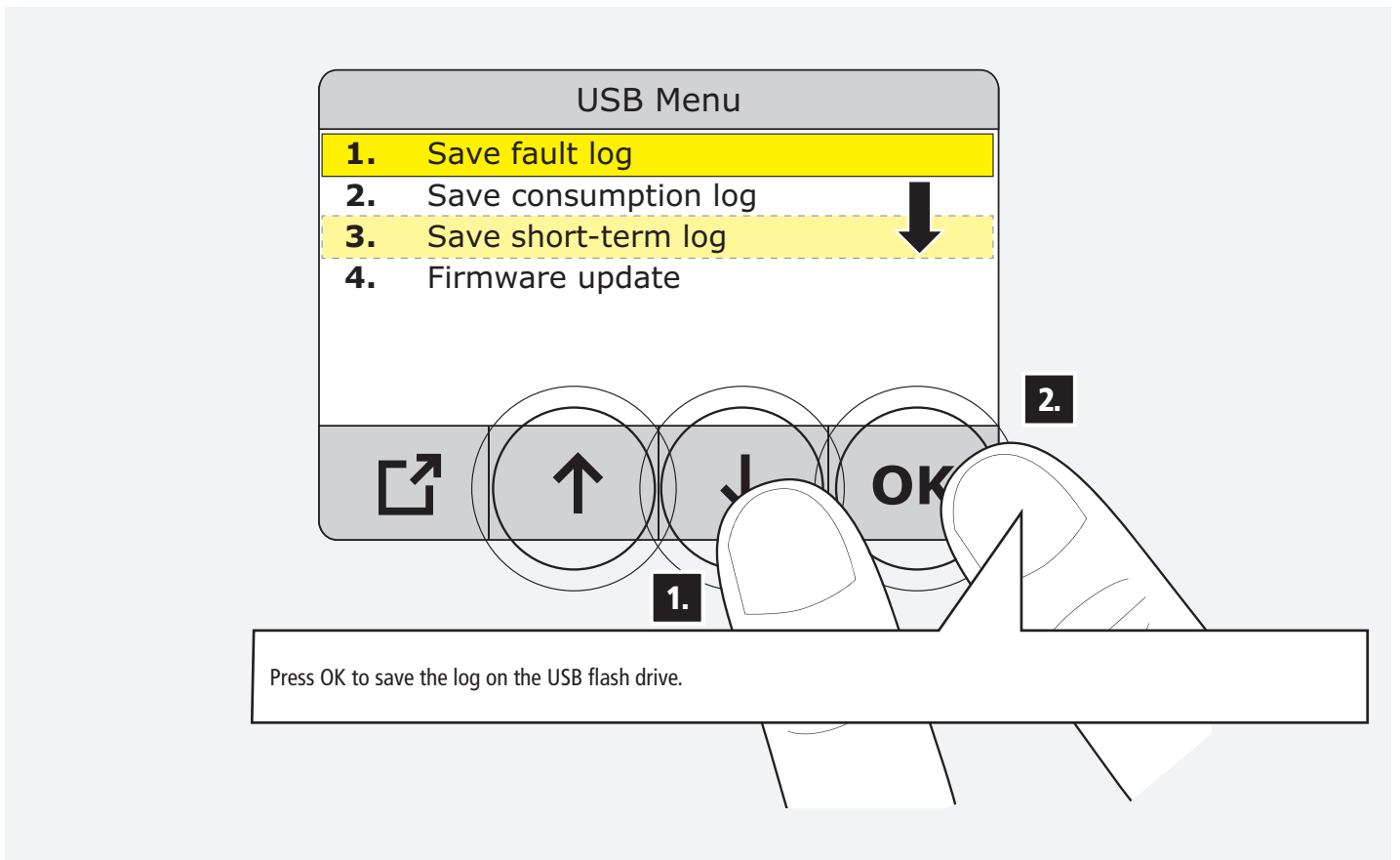
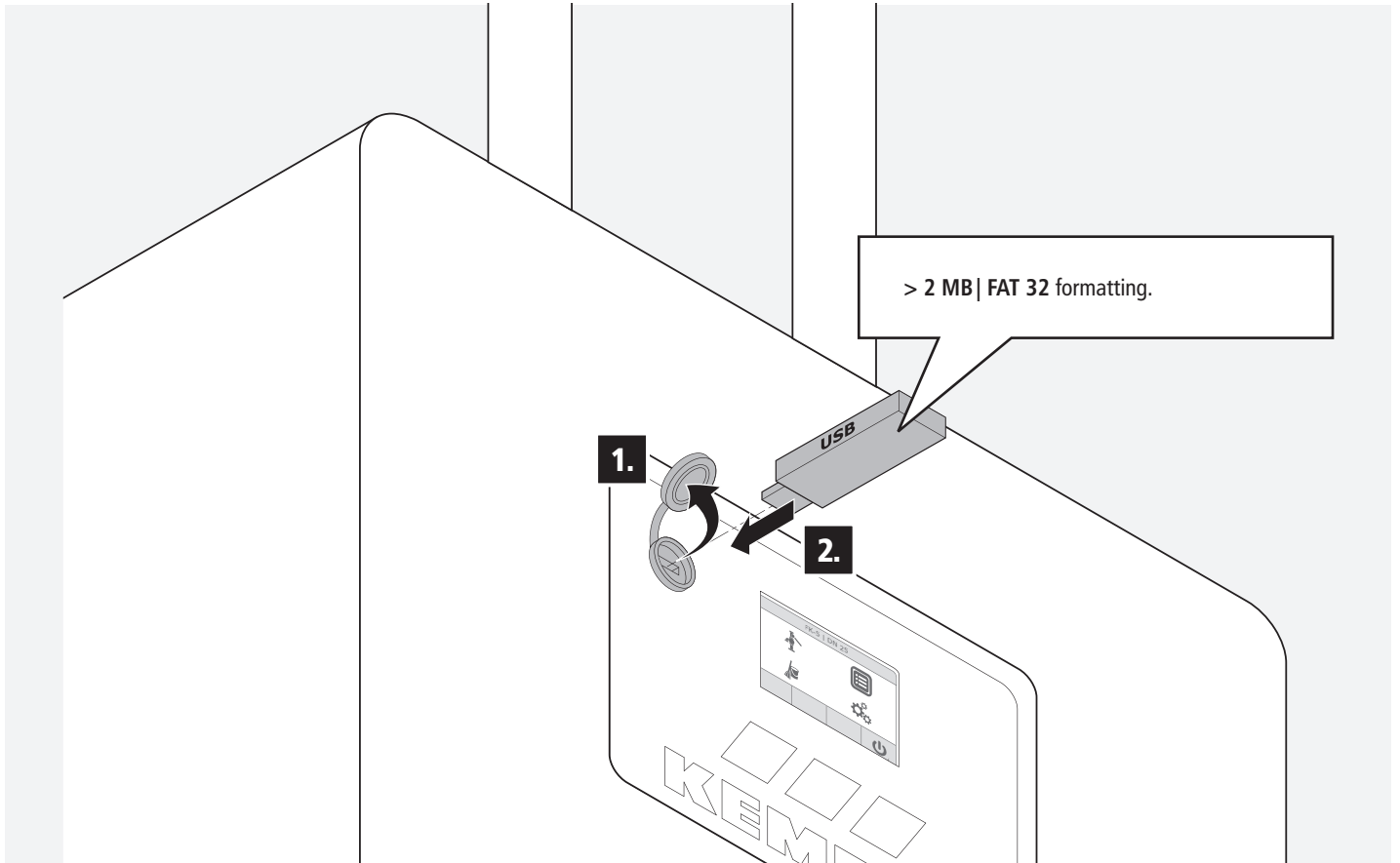
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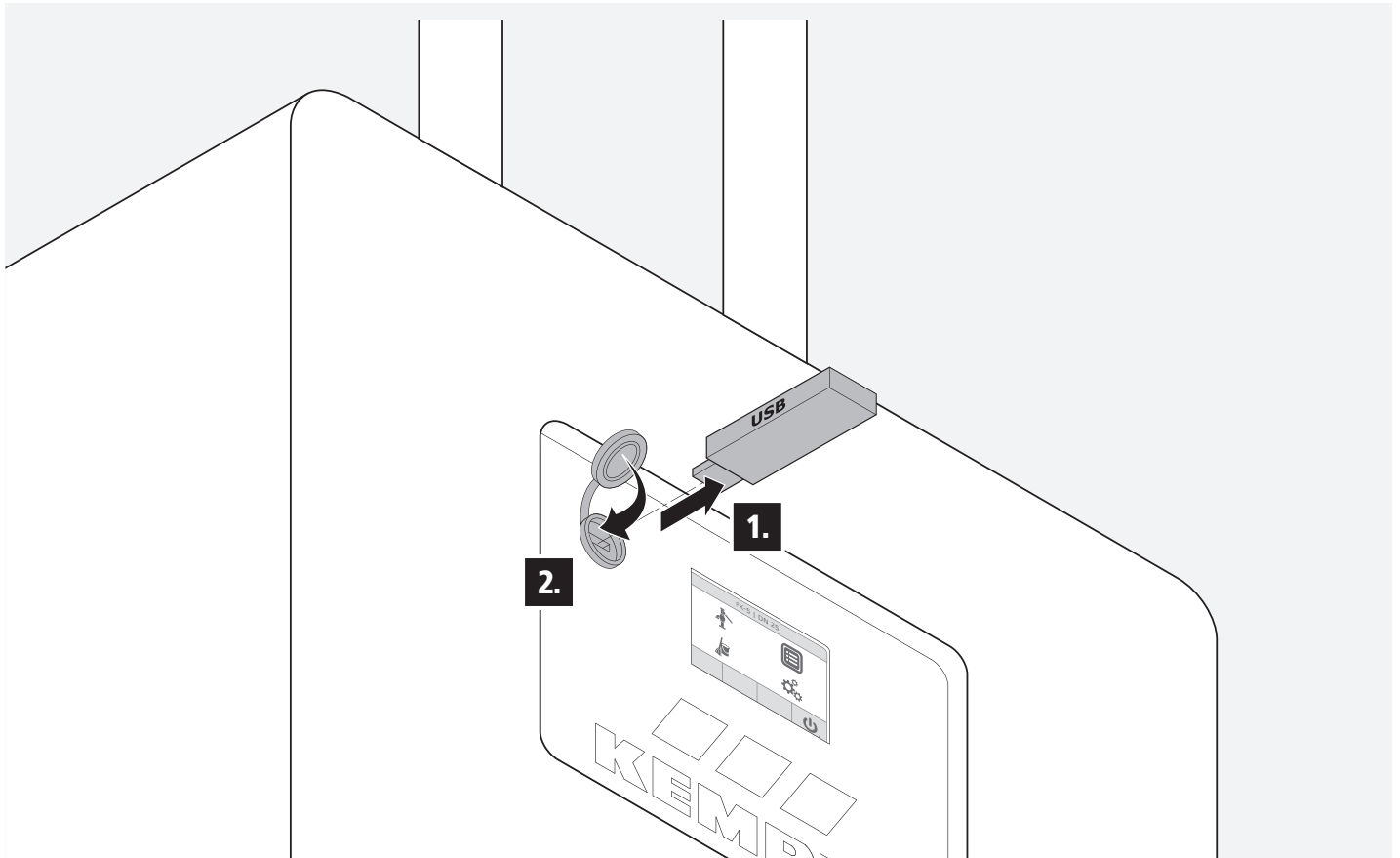
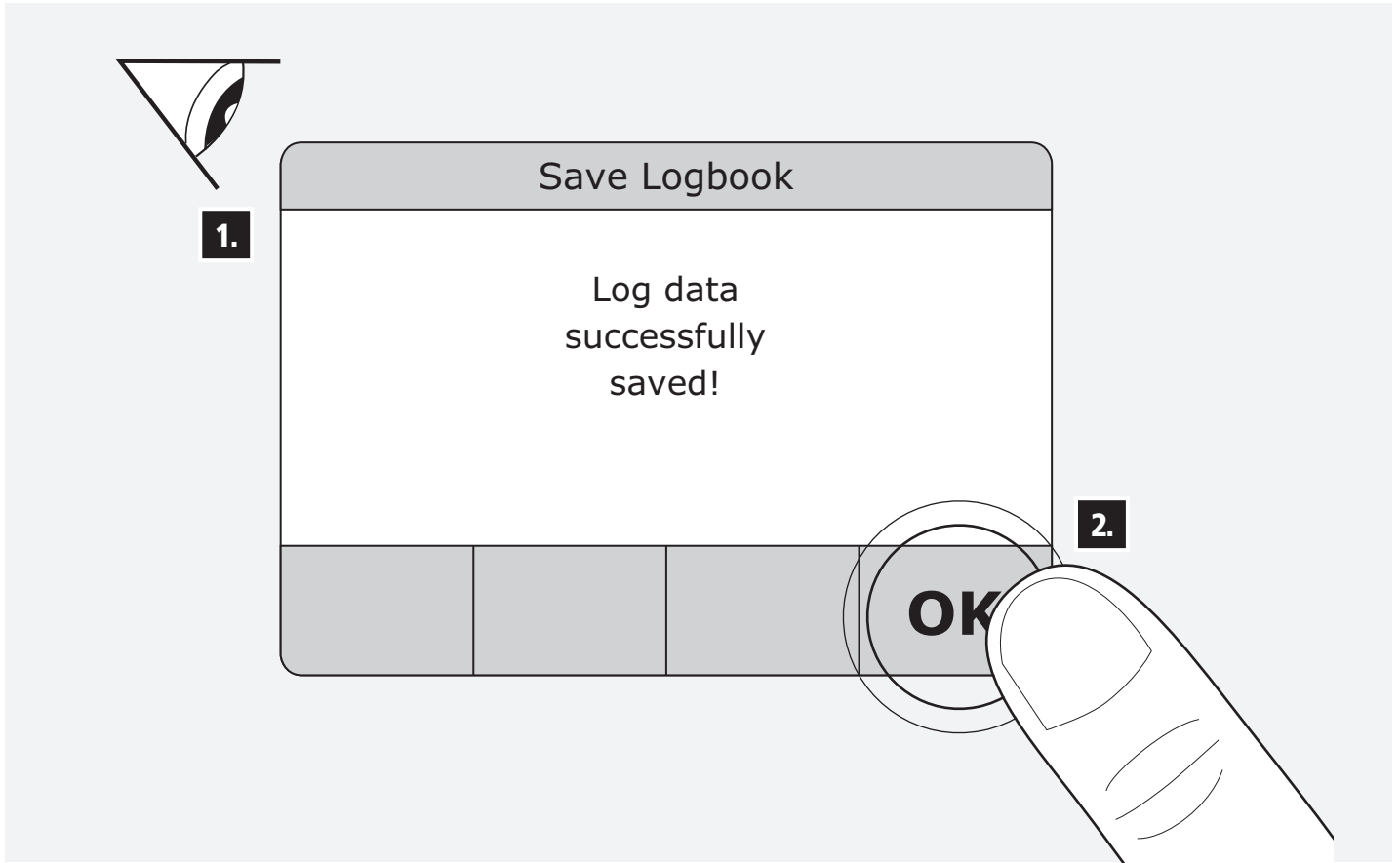


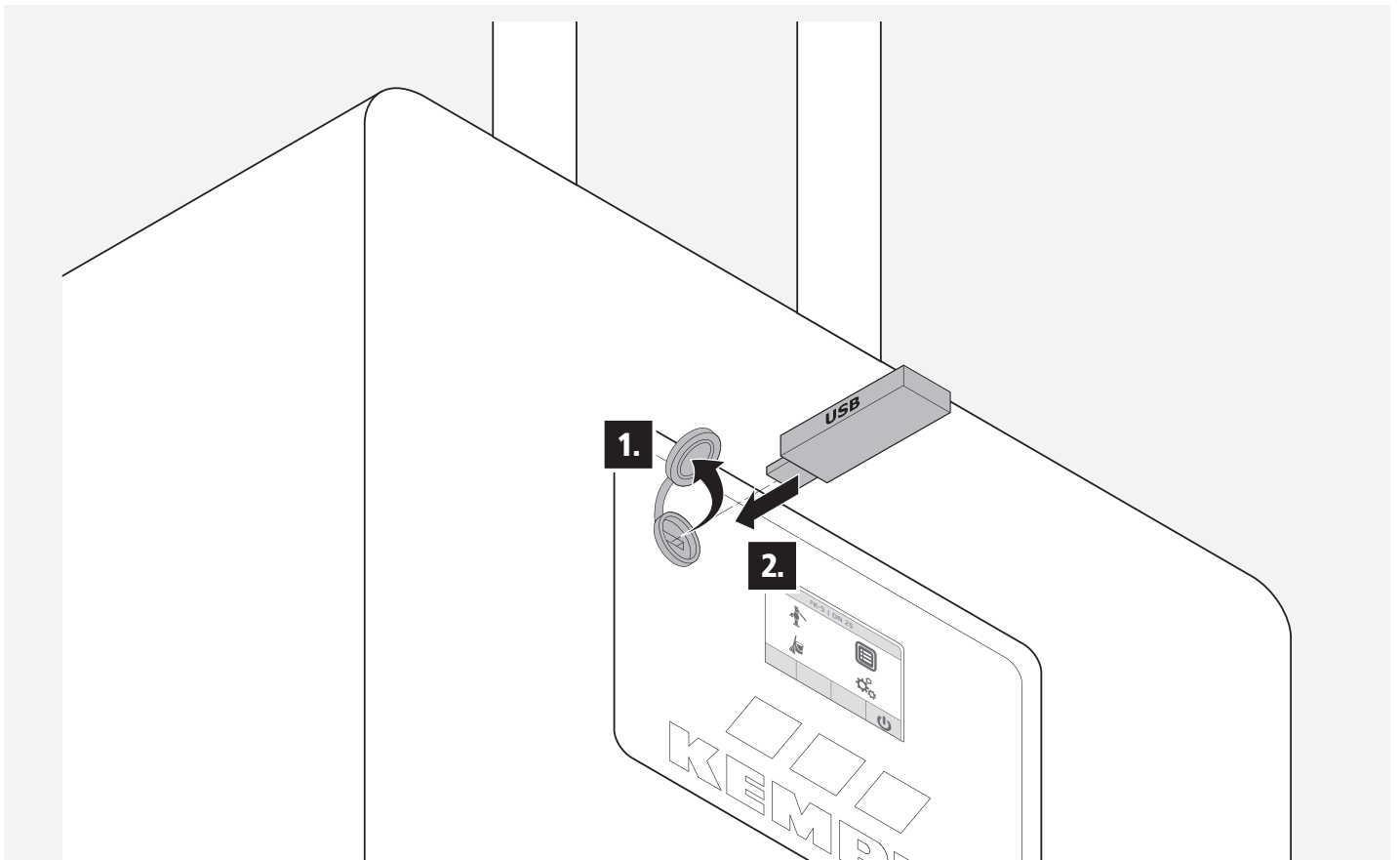
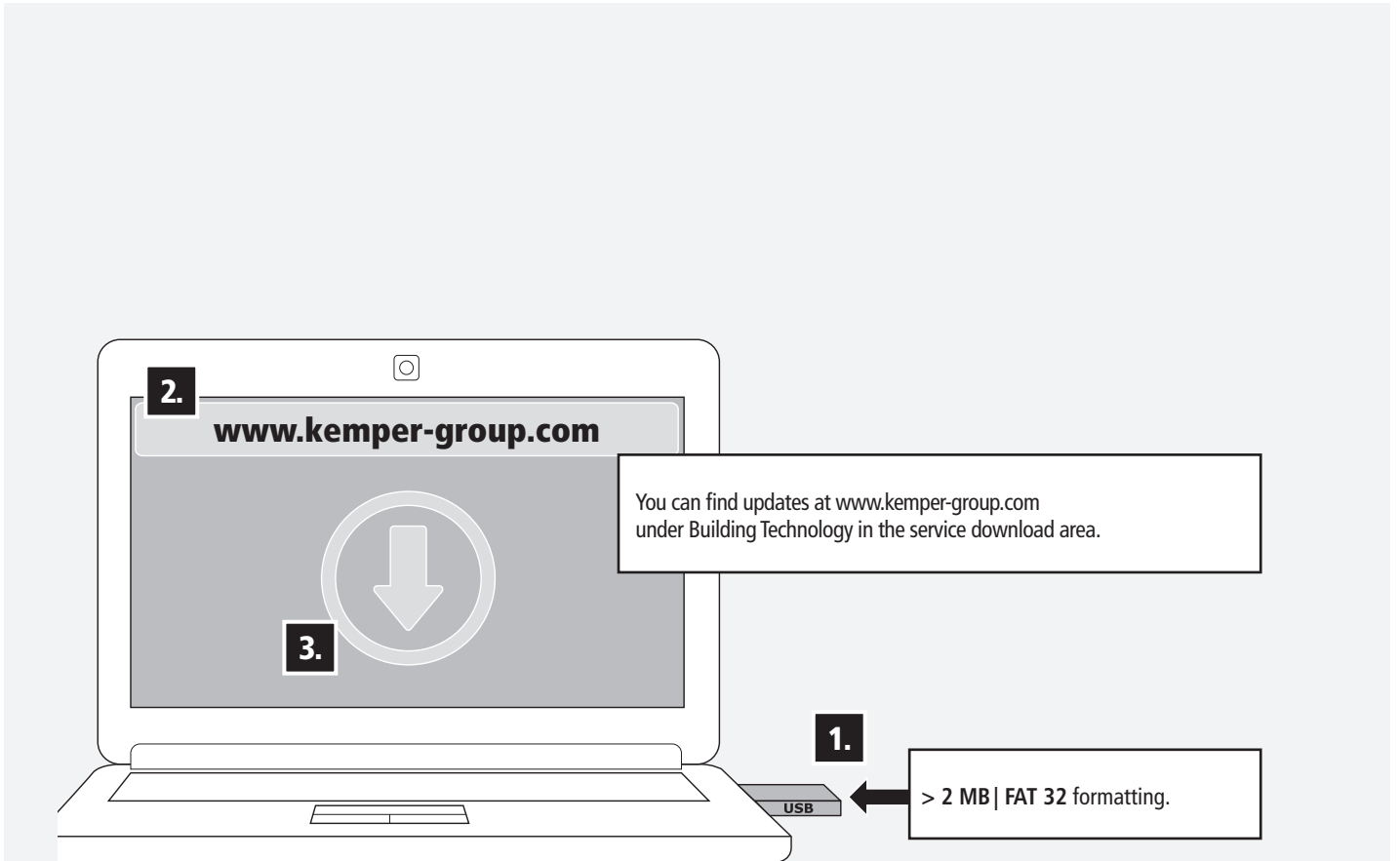
The device is blocked for the duration of the application time.

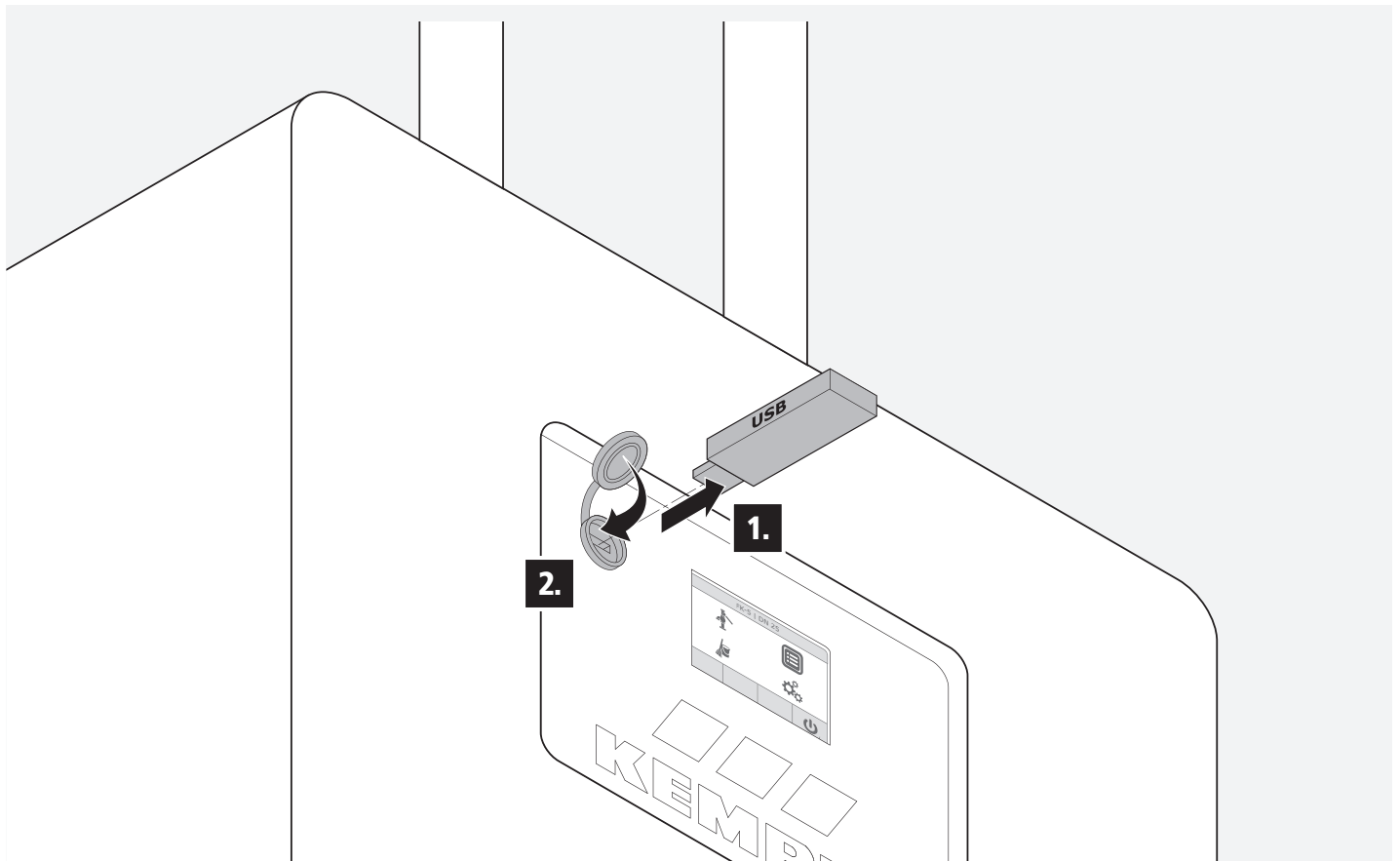
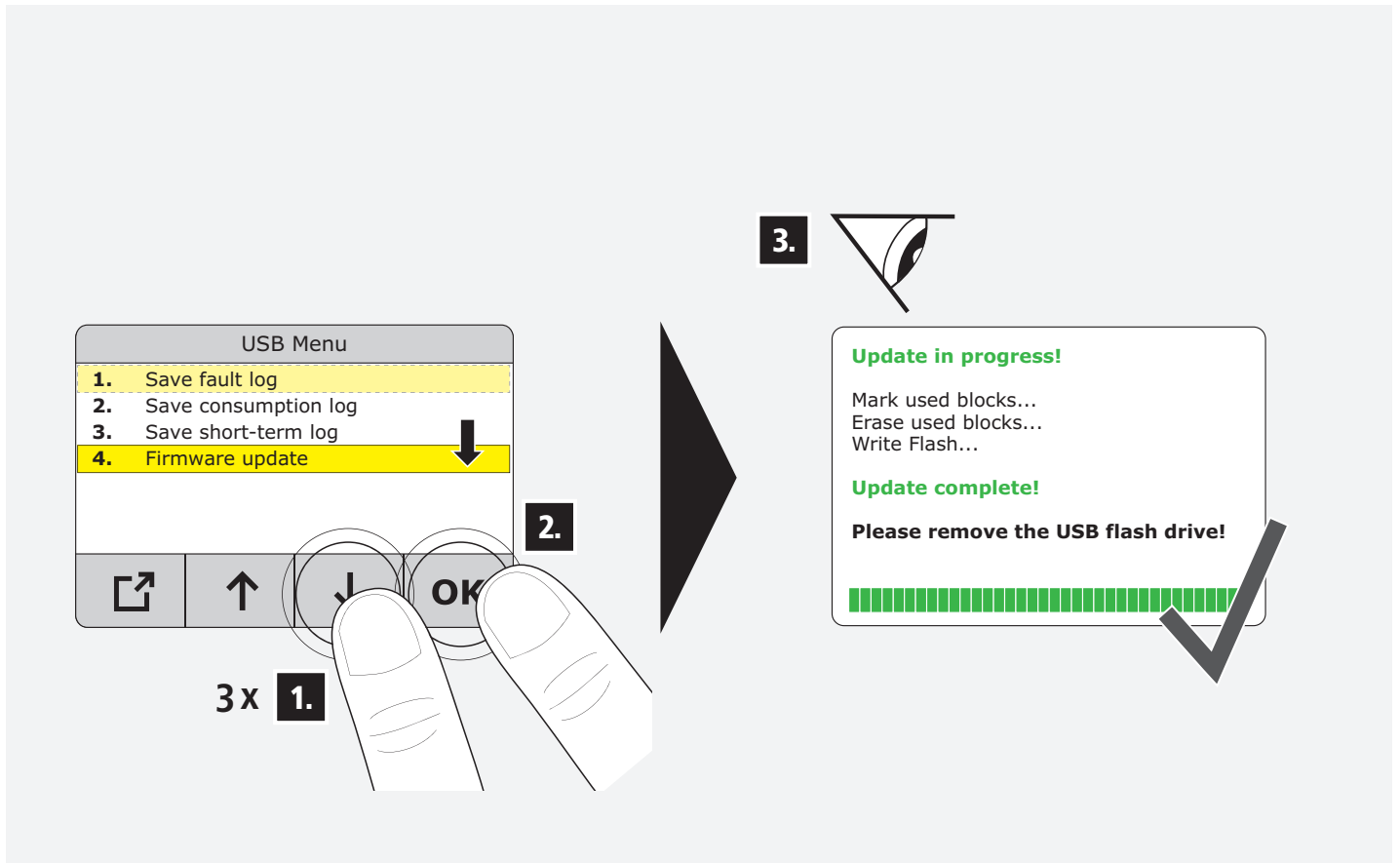


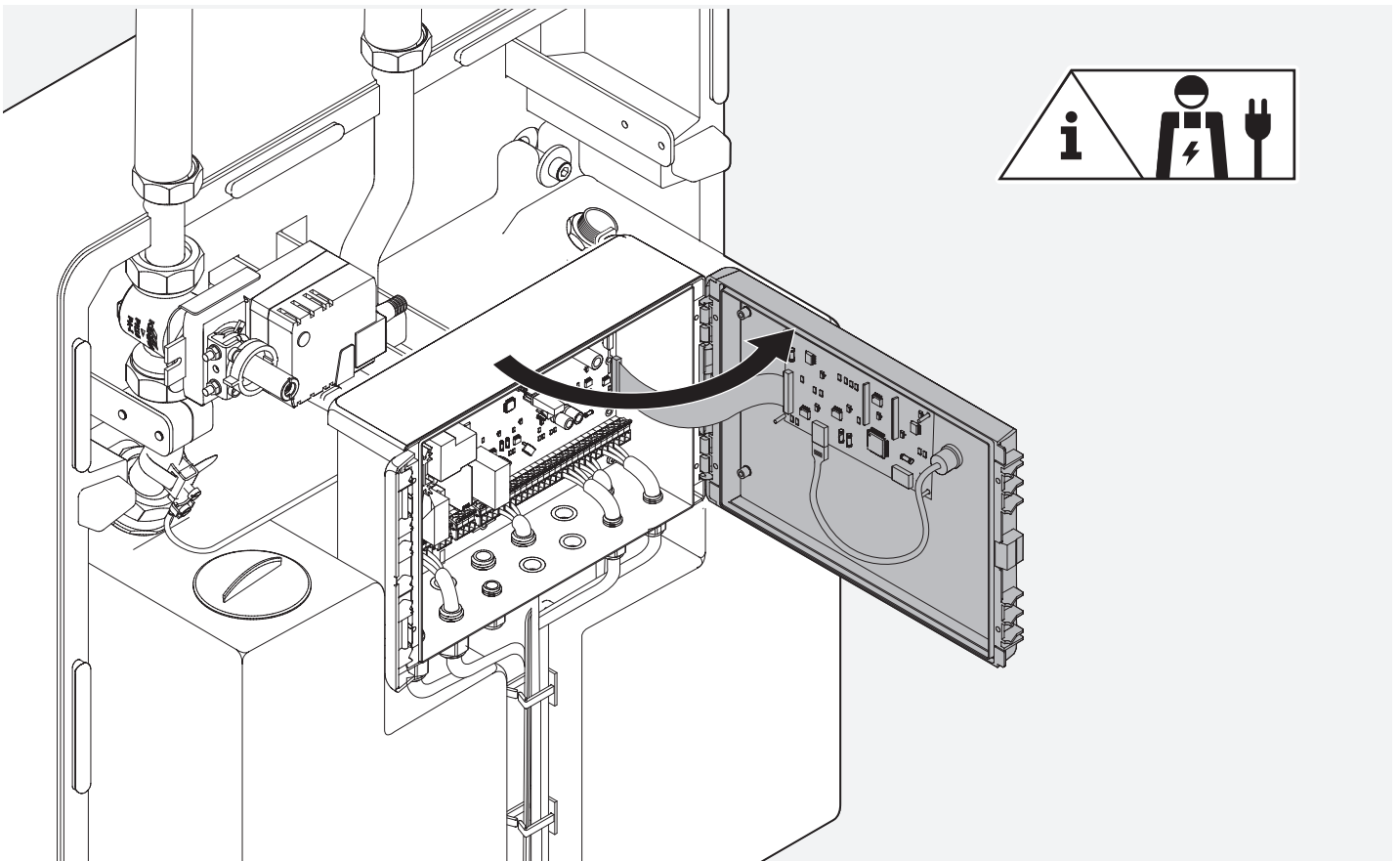
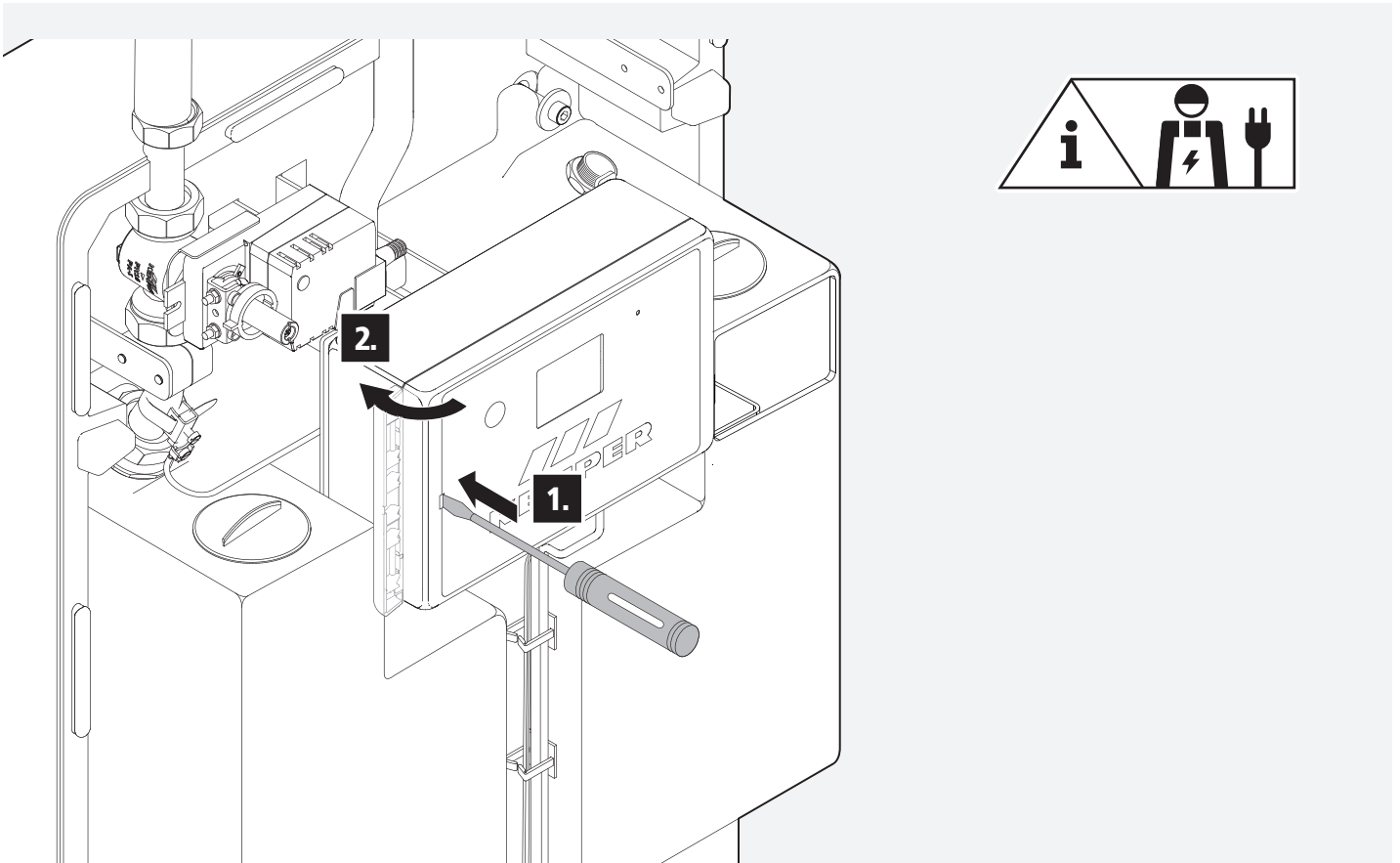


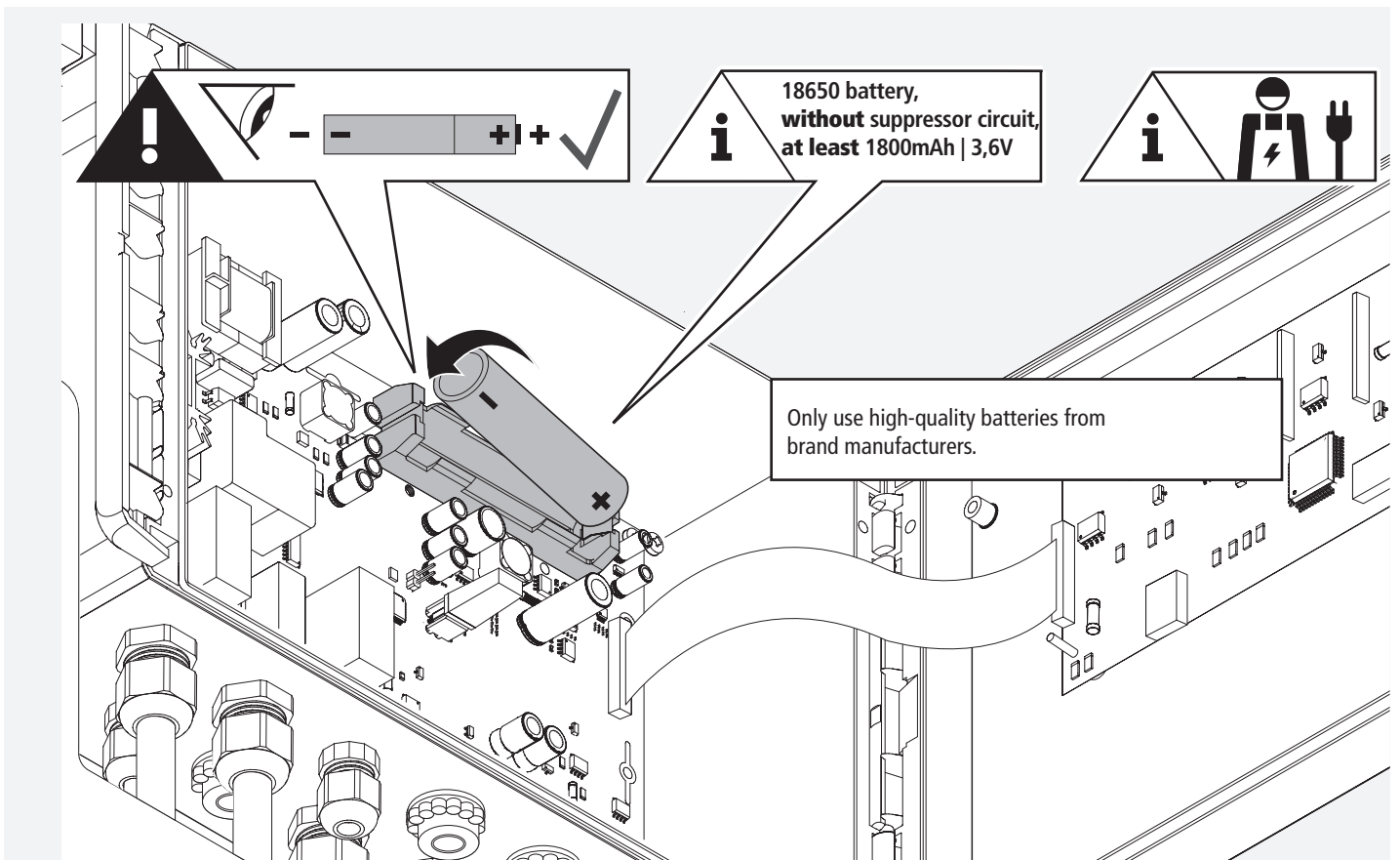
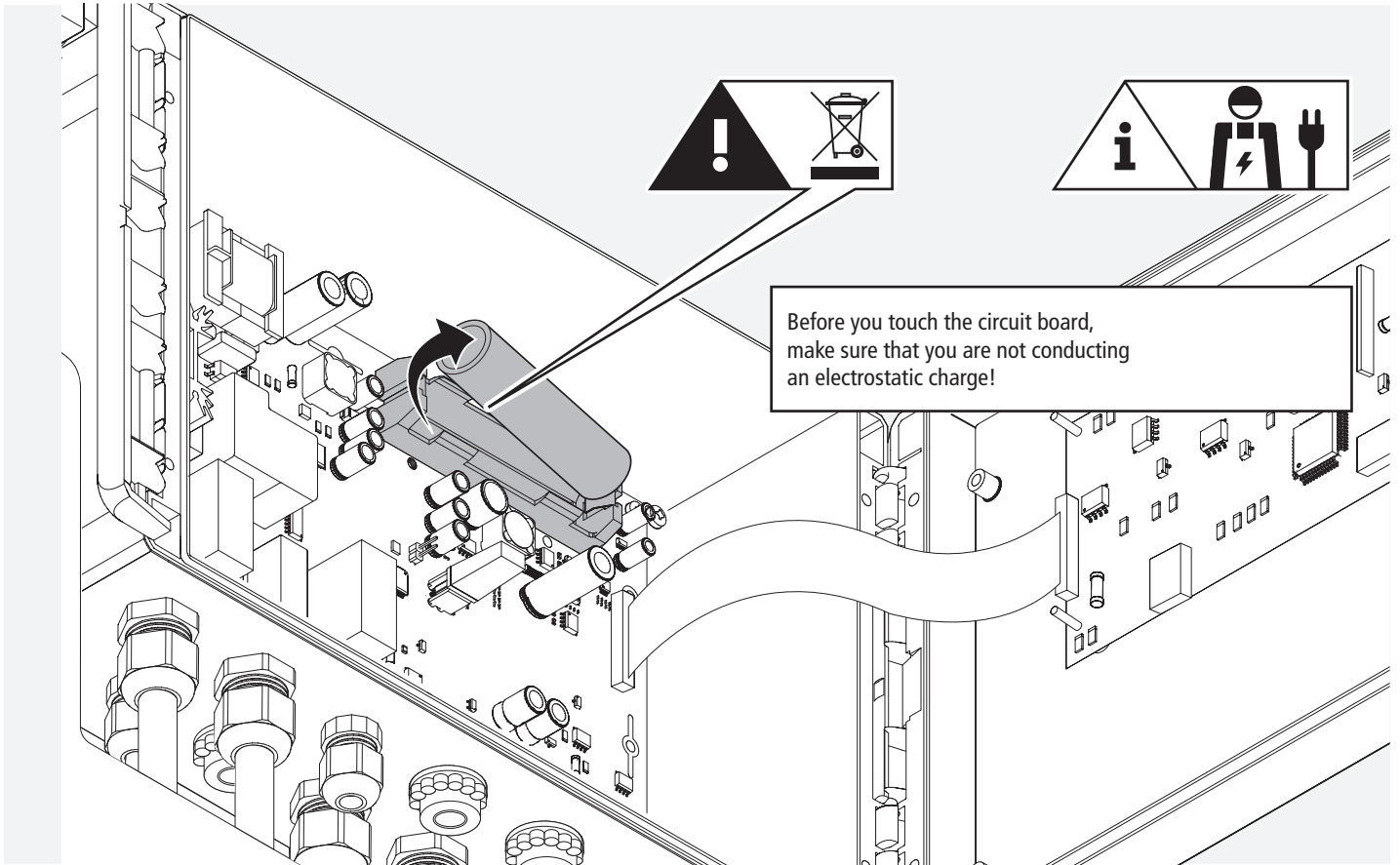




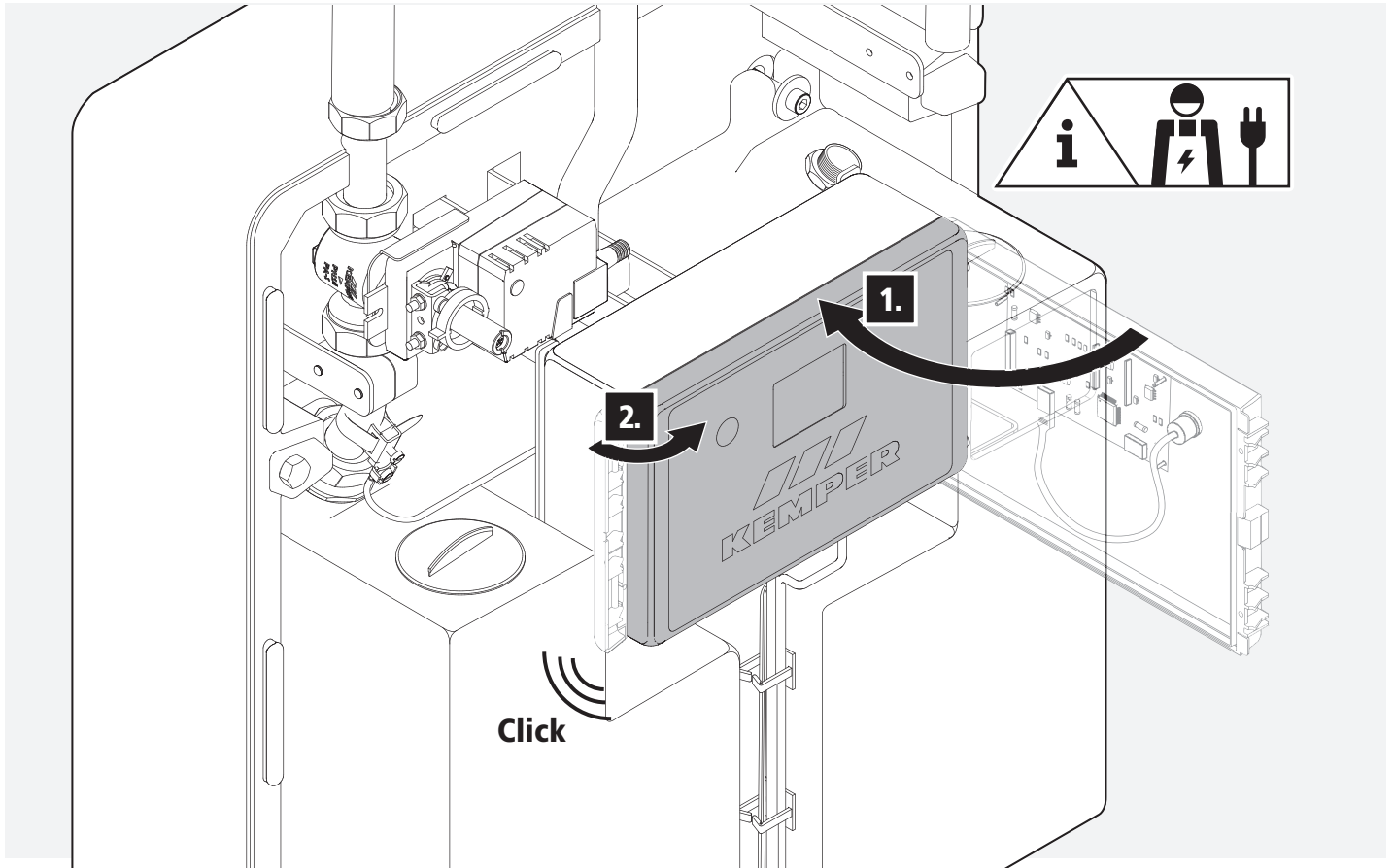




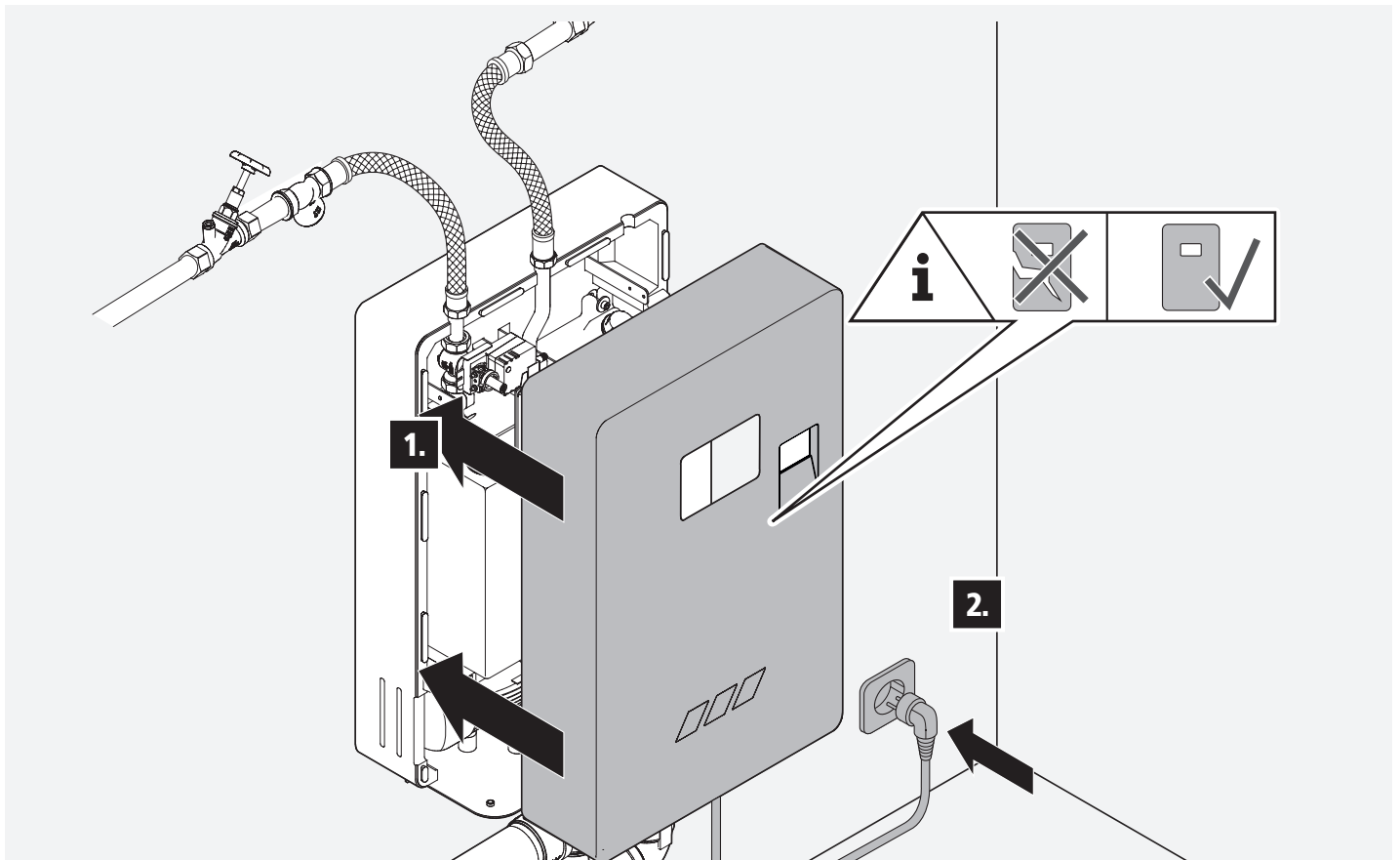


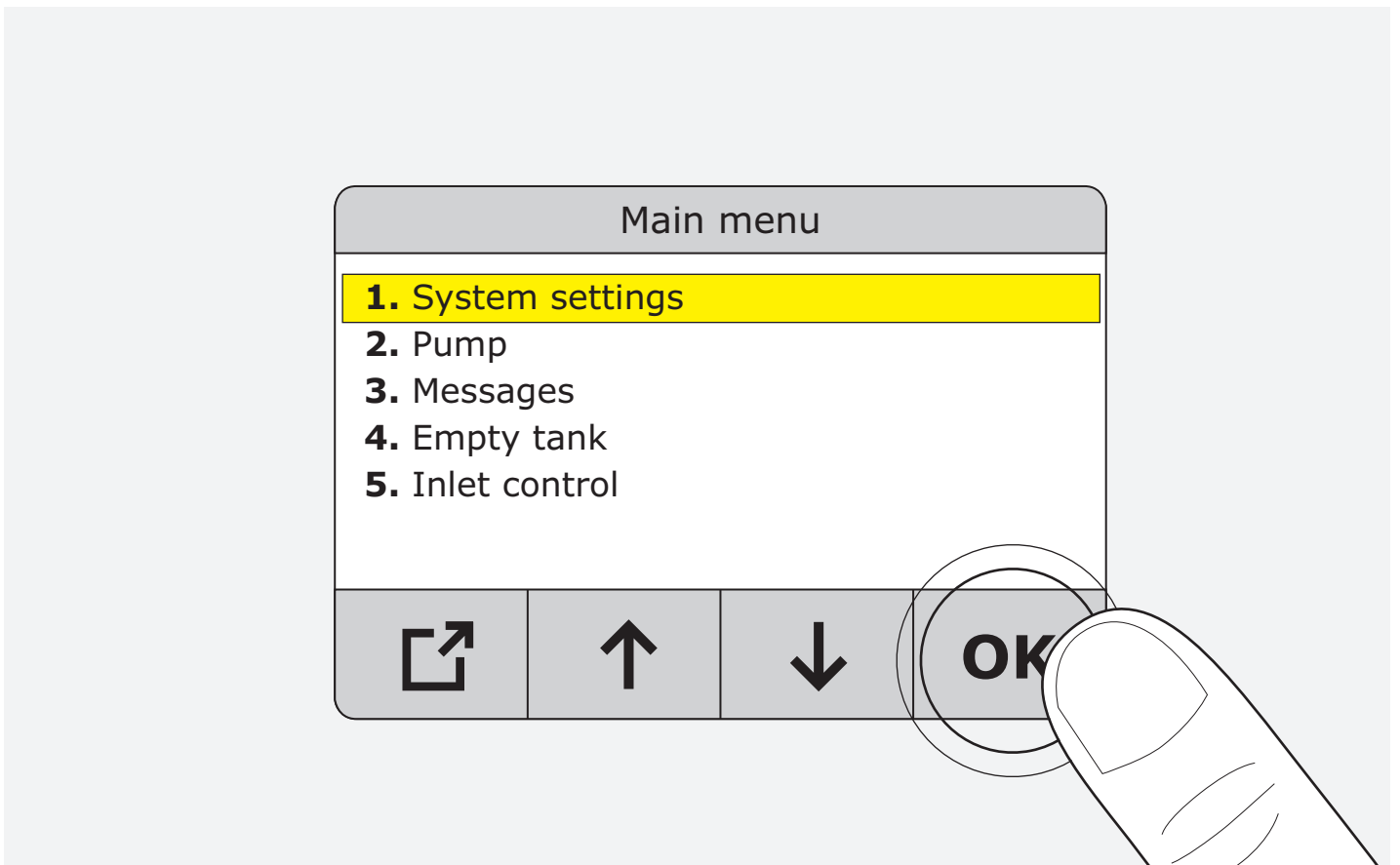
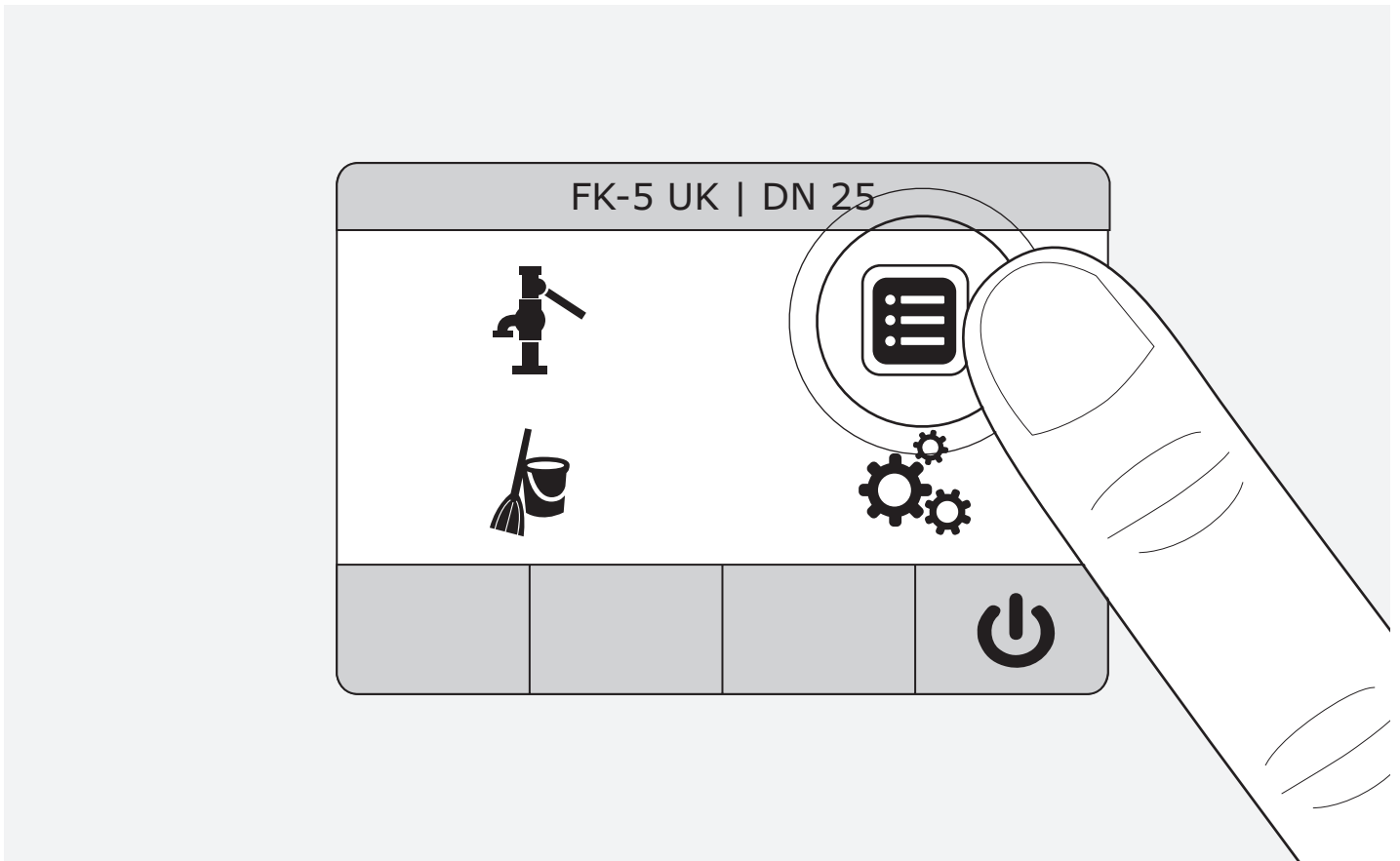


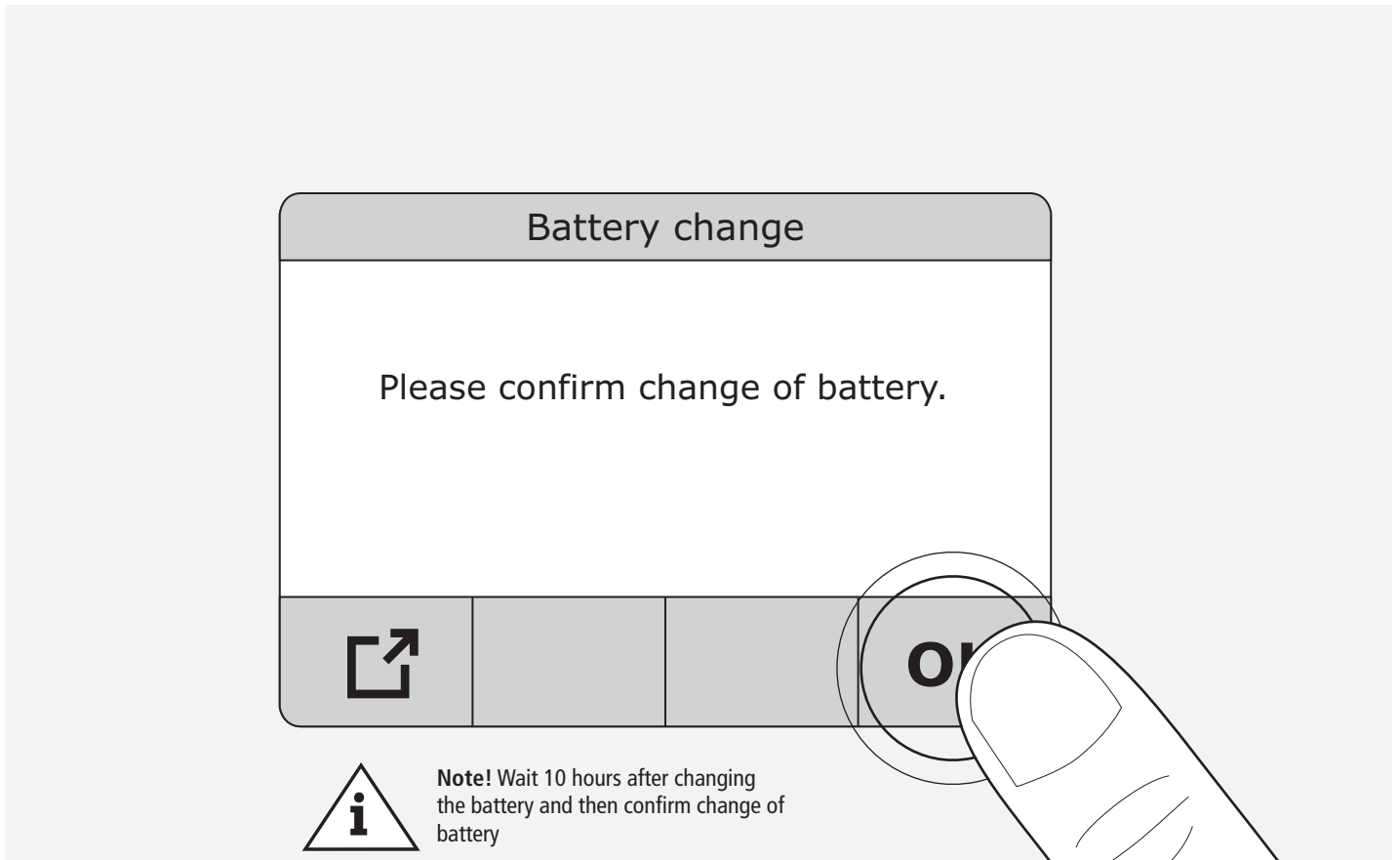
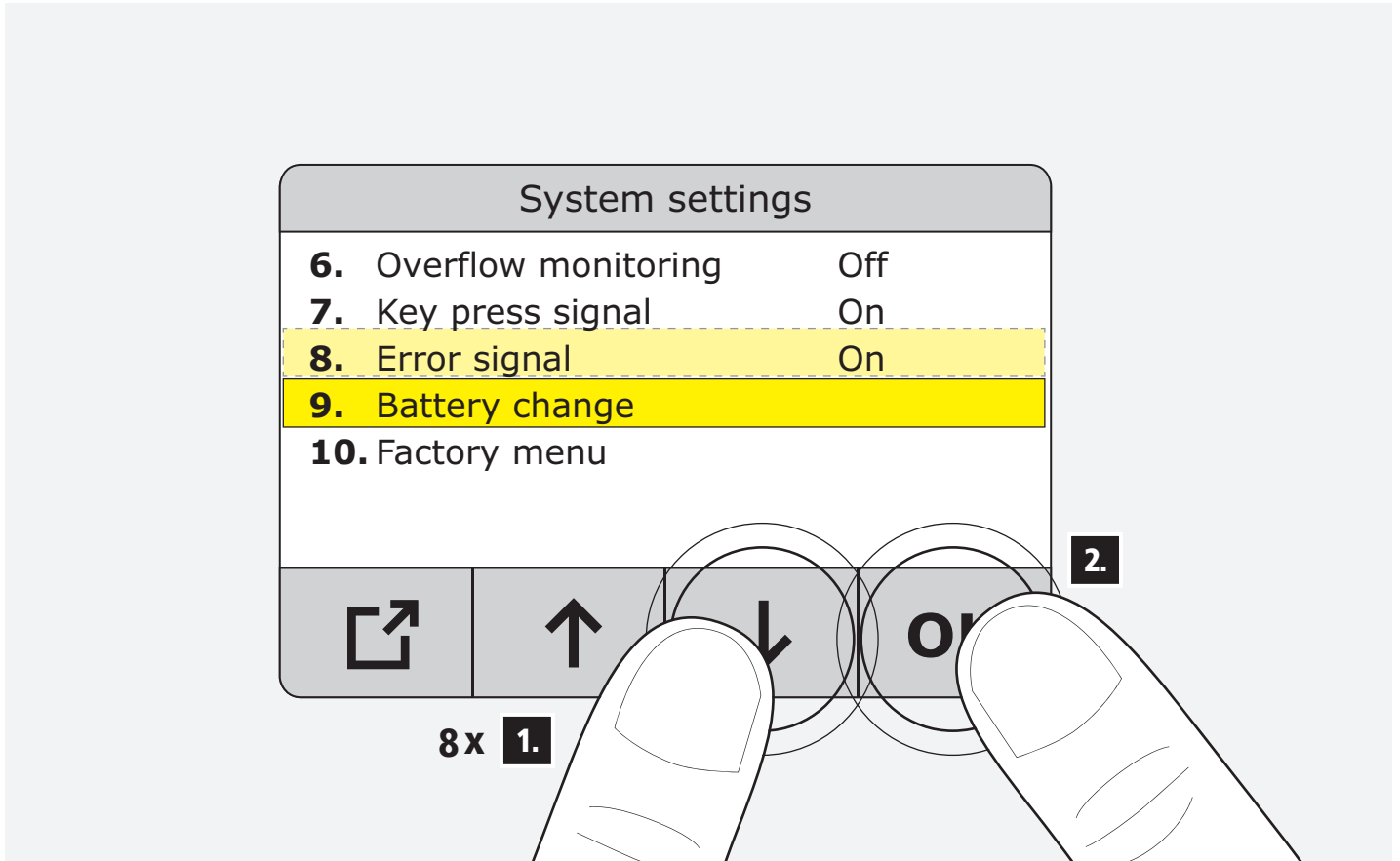
7.6













































7.7



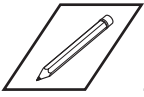




Nr.	Error description	Cause	Solution
 01 02	Level below minimum level: inlet 1 or inlet 2	A: Flow at inlet 1 or 2 too low. B: Water consumption too high. Water level has fallen below 50 mm.  Warning message persists until level > 200 mm.	A: Increase inflow to inlet 1 or 2. B: Observe maximum draw-off quantity: 100 l/min (DN25) 50 l/min (DN20) C: connect a second water supply (Water supply set plus, fig. 369 01)
 03	Level below minimum level inlet 1 and 2	Flow at inlet 1 and 2 too low. Water level has fallen below 50 mm.  Warning message remains until level > 200 mm.	Increase flow at inlet 1 and 2.
 04	Change battery. Follow operating instructions		 Pages 146-151
 05	Caution: Temperature < 5 °C Take frost protection measures	Temperature at sensor < 5 °C	 Check ambient conditions and ensure that the temperature is not within the frost range.
 06	Battery low		 Pages 146-151
 08 09	Error: Servo drive positioning inlet 1	Servo drive 1 or 2 has not achieved the setpoint position or feedback is incorrect < 1.5 V or > 11 V.	<ol style="list-style-type: none"> 1. Cut-off water supply. 2. Disconnect device from mains. 3. Remove hood. 4. Press the manual servo drive activation and try to manually open and close the servo drive completely. If the error remains, call the customer service. 5. If you are able to move the servo drive, check the electrical connection.  Attention! Qualified electrician. OK > call Kemper customer service. Not OK > mend the electrical connection.
 10	Level sensor: level below measuring range	Analogue value level sensor < 0.3 V	 Application technology customer service department
 11	Level sensor: level above measuring range	Analogue value level sensor > 3.7 V	 Application technology customer service department
 12	Actuator for secondary inlet not installed	„Inlet 2“ inlet control activates and servo drive is deactivated in the settings.	 The device automatically switches to inlet 1 inlet control. Error must be acknowledged.
 13	Maximum water level exceeded	Tank is filled up to overspill standpipe	<ol style="list-style-type: none"> 1. Cut-off water supply. 2. Remove hood. 3. Drain tank using „Drain tank“ menu item. 4. Visually check if the tank is clean and if the measurement connection of the level sensor is free of blockages. 5. If the level sensor is clogged, remove the level sensor and clean if necessary. 6. If the level sensor is not clogged, call the Kemper customer service. 

Nr.	Error description	Cause	Solution
 14	Error: Water loss in tank	 The level has dropped by approx. 100 mm in standby or device off mode	<ol style="list-style-type: none"> 1. Remove hood. 2. Visually inspect the device for leaks. 3. If the device is not leaking, call the Kemper customer service.
 15	Pump pressure below measuring range	Sensor defective or cable break (cable break < 0.4V)	 Call Kemper customer service.
 16	Pump pressure above measuring range	Sensor defective or short circuit (short circuit < 4.7V)	 Call Kemper customer service.
 17	Pump error	 Cut-in pressure remains too low despite pump being switched on. > Pump may be defective, thermal switch-off or air in the pump	<ol style="list-style-type: none"> 1. Vent pump. 2. If pump has been vented and error persists, call the Kemper customer service.
 18	Tank draining error	 When tank draining is activated, the tank level falls by less than 50 mm within 10 min	<ol style="list-style-type: none"> 1. Cancel tank draining. 2. Check hoses to solenoid valve. 3. If all hoses are ok, call the Kemper customer service.
 19	Error: Temperature measurement out of range	Incorrect reading or defective temperature sensor.	 Call Kemper customer service.
 20	Caution: Risk of frost Take frost protection measures (< 2 °C)	Temperature at sensor < 2 °C	 Check ambient conditions. If OK, call the Kemper customer service.
 21	Caution: Temperature high (> 55 °C)	Temperature at sensor > 55 °C	 Check ambient conditions and ensure that the temperature does not increase further.
 22	Overflow at free drain!	Overflow sensor triggered	 Check overflow sensor, note possible backflow from channel
 23	Battery missing	No battery has been detected when starting the controller.	Insert battery if it is missing.
 24	Battery faulty	Battery has been installed the wrong way round or is defective	Check battery installation direction
 25	Battery empty	 Battery no longer has enough power to close the servo drives. <ol style="list-style-type: none"> 1. Frequent closing of the servo drives due to power cuts without sufficient battery charging time. 2. Battery faulty 	<ol style="list-style-type: none"> 1. Give the battery time to charge. 2. Replace battery.







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