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Wichtigkeit der Unterlage

Anleitung vor Inbetriebnahme, Gebrauch oder Wartung sorgfältig lesen und den Anweisungen folgen!

Anleitung immer an den aktuellen Anlagenbetreiber weitergeben und zur späteren Verfügung aufbewahren!

Warnhinweise

Beachten und befolgen Sie die Warnhinweise in der Anleitung. Nichtbeachten der Warnhinweise kann zu Verletzungen oder Sachschäden führen!

Kennzeichnung wichtiger Warnhinweise:



Gefahr! Elektrischer Strom!

Kennzeichnet Gefahren, die schwere oder tödliche Verletzungen zur Folge haben können.



Warnung! Kennzeichnet Gefahren, die zu Verletzungen, Sachschäden oder Verunreinigung des Trinkwassers führen können.



Hinweis! Kennzeichnet Gefahren, die zu Schäden an der Anlage oder Funktionsstörungen führen können.



Entsorgung:

Örtliche Vorschriften zur Abfallverwertung bzw. -beseitigung sind zu beachten. Produkt darf nicht mit dem normalen Haushaltsmüll, sondern muss sachgemäß entsorgt werden.



Altbatterien dürfen nicht in den Hausmüll. Verbraucher sind gesetzlich verpflichtet, Batterien zu einer geeigneten Sammelstelle beim Handel oder der Kommune zu bringen. Die Abgabe ist für Sie kostenlos. Sie können Ihre gebrauchten Batterien auch an uns zurückschicken.

Hinweis! Bei nicht vorhandener aktueller Firmware-Version wird ein Update der Software empfohlen.

Verwendung

Die FK-5 Sicherheitstrennstation wird zur Trennung der Trinkwasser- von der Nicht-Trinkwasser-Installation der Flüssigkeitskategorie 5, nach DIN EN 1717 / DIN 1988-100, eingesetzt. Das Gerät darf ausschließlich mit Wasser betrieben werden. Keine brennbaren oder explosiven Medien einfüllen.

Warnung! Das Produkt ist ausschließlich für den beschriebenen Zweck als Sicherheitstrennstation in geschlossenen, frostfreien, trockenen Räumen zu verwenden. Jede andere Verwendung gilt als nicht bestimmungsgemäß.

Warnung! Das Nichtbeachten der Anleitung bei Montage, Verwendung und Wartung kann den ordnungsgemässen Betrieb gefährden und durch die Vermischung von Trink- und Nichttrinkwasser zu erheblichen gesundheitlichen Schäden führen.

Die Parallelschaltung von zwei oder mehreren Sicherheitstrennstationen ist nicht zulässig.



Sicherheitshinweise

Beachten Sie unbedingt die vorgeschriebenen Wartungsintervalle.

Lassen Sie Störungen und Fehlfunktionen umgehend von einer Fachkraft beheben.

Benutzen Sie das Gerät

- nur in einwandfreiem Zustand
- bestimmungsgemäß

Haftung

Keine Gewährleistung oder Haftung bei:

- Nichtbeachten der Anleitung.
- fehlerhaftem Einbau und/oder Gebrauch.
- eigenständiger Modifikation am Produkt.
- sonstiger, fehlerhafte Bedienung.



Warnung! Das Entnahmewasser darf auf keinen Fall, auch nicht in kleinen Mengen, als Trinkwasser genutzt werden!



Hinweis! Bei Nichtbenutzung der Anlage über 48 Stunden schalten sich Zulaufventile und Pumpe kurzzeitig automatisch an.



Hinweis! Ausschließlich geeignete Reinigungsmittel ohne Schaumbildung nach DVGW W 291 / W 319 verwenden. Nach der Anlagenreinigung, sind eventuelle Reinigungsmittel-Reste, vollständig aus der Anlage zu entfernen!

Wartung und Reparatur



Warnung! Reparatur und Wartung nur durch sachkundige Fachkraft mit einer Qualifikation für Trinkwasser-Installation.



Gefahr! Elektroinstallation, Reparatur und Wartung nur durch Fachkraft mit einer Qualifikation für elektrotechnische Anlagen!



Gefahr! Bei Arbeiten an spannungsführenden Bauteilen ist die Anlage unbedingt spannungsfrei zu schalten.



Gefahr! Vor jeder Wartungsarbeit an elektrischen Elementen die Anlage vom Stromnetz trennen. Hierzu immer den Netzstecker ziehen.

Warnung! Nach Installation, Ergänzung von Zubehör oder Wartungsarbeiten immer die Zuleitungen nach DIN EN 806-5 und VDI/DVGW 6023 spülen.

Warnung! Nationale und regionale Normen und Vorschriften zur Sanitär- sowie zur Elektroinstallation und zur Unfallverhütung sind vorrangig zu befolgen.

Hinweis! Der USB-Stick darf erst nach vollständig erfolgter Datenübertragung entfernt werden. Die Steuerung kann bei einem Firmupdate sonst Schaden nehmen.

Wichtige Hinweise für den Anlagenbetreiber

Spannungsversorgung	230 V AC
Elektrische Stromaufnahme	DN 20: 3,3 A DN 25: 5,5 A
Elektrische Leistung	DN 20: 759 W DN 25: 1265 W
Leistungsfaktor	0,97
Schutzart	IP 54
Medium	Wasser
max. Umgebungstemperatur	40°C
min. Umgebungstemperatur	2°C
max. Temperatur des zulaufenden Mediums	35°C
min. Temperatur des zulaufenden Mediums	2°C
max. Fließdruck	DN 20/DN 25: 4,0 bar 0,4 MPa
Mindestfließdruck	DN20: 1,0 bar 0,1 MPa DN25: 1,5 bar 0,15 MPa
Druckstufe	PN 10
Ausgangsseitiger Pumpendruck	DN 20: 4,3 bar 0,43 MPa DN 25: 5,9 bar 0,59 MPa
DU-Wert	DN 20: 0,83 l/s DN 25: 1,67 l/s



Sanitär und Trinkwasserinstallation:

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

EMV-Richtlinie

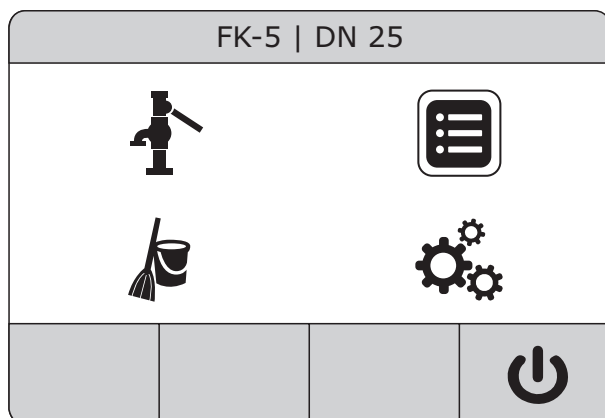
EN 61000-6-1 | EN 61000-6-3








Niederspannungsrichtlinie

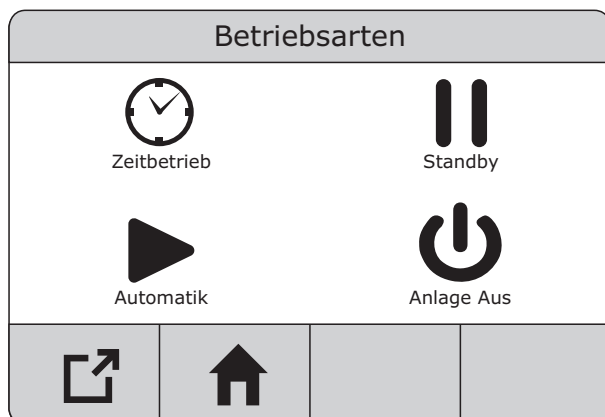
EN 60335-1

Maschinenverordnung

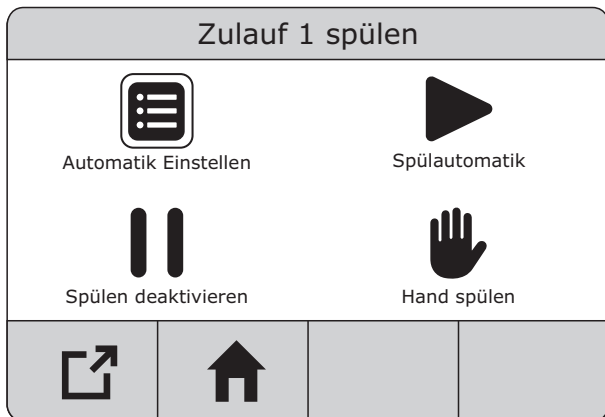
(EU) 2023/1230



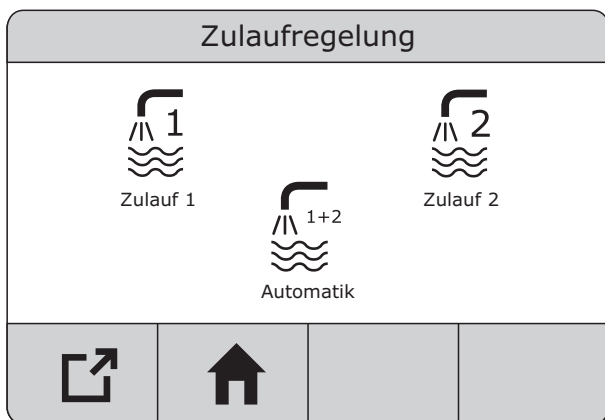
DE	
	Betriebsarten
	Spül- und Reinigungsprogramm
	Hauptmenü
	Prozess
	Anlage Aus Unterbricht die Versorgung der Entnahmestellen und die Spülvorgänge dauerhaft. Der Alarmausgang bleibt aktiv. Der Anlagenzustand wird weiterhin geloggt. Betriebsart lässt auch Einstellungen an dem Gerät zu.
	Warnmeldungen Anlage bleibt eingeschaltet.
	Fehlermeldungen Anlage schaltet automatisch aus.



DE	
	Zeitbetrieb Definiert das Wochenprogramm mit täglichem Start- und Stopzeitpunkt. Zwischen den programmierten Zeiten ist die Versorgung der Entnahmestellen unterbrochen. Spül- und Reinigungsprogramme werden weiter ausgeführt.
	Standby Unterbricht die Versorgung der Entnahmestellen. Die programmierten Spülvorgänge werden weiter ausgeführt.
	Automatikbetrieb Umgeht das Wochenprogramm „Zeitbetrieb“.
	Zeitbegrenzung Schaltet vorübergehend in den Automatikbetrieb, bis die eingestellte Zeit abgelaufen ist.
	Zurück
	Startbildschirm
	Aktiver Bereich



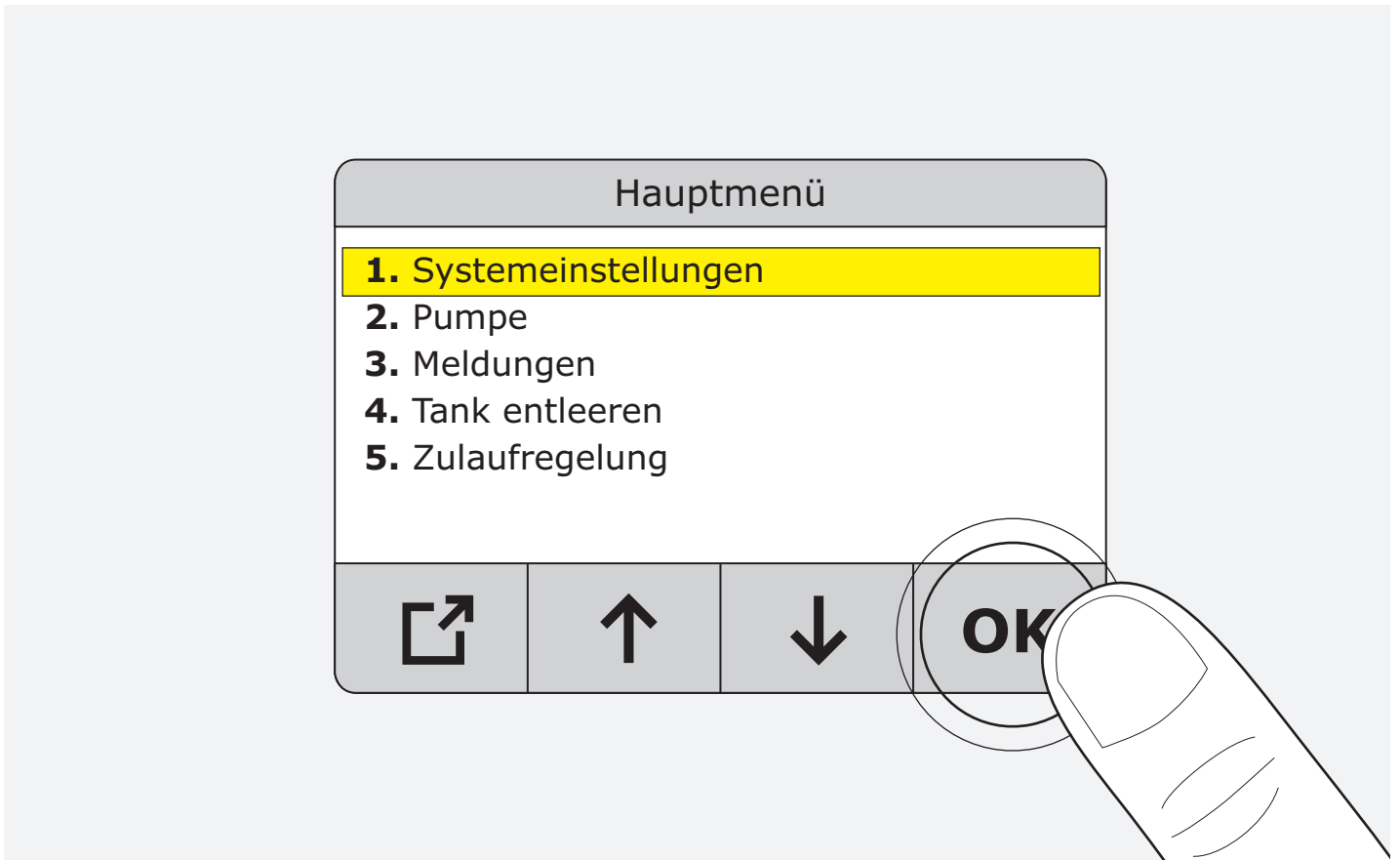
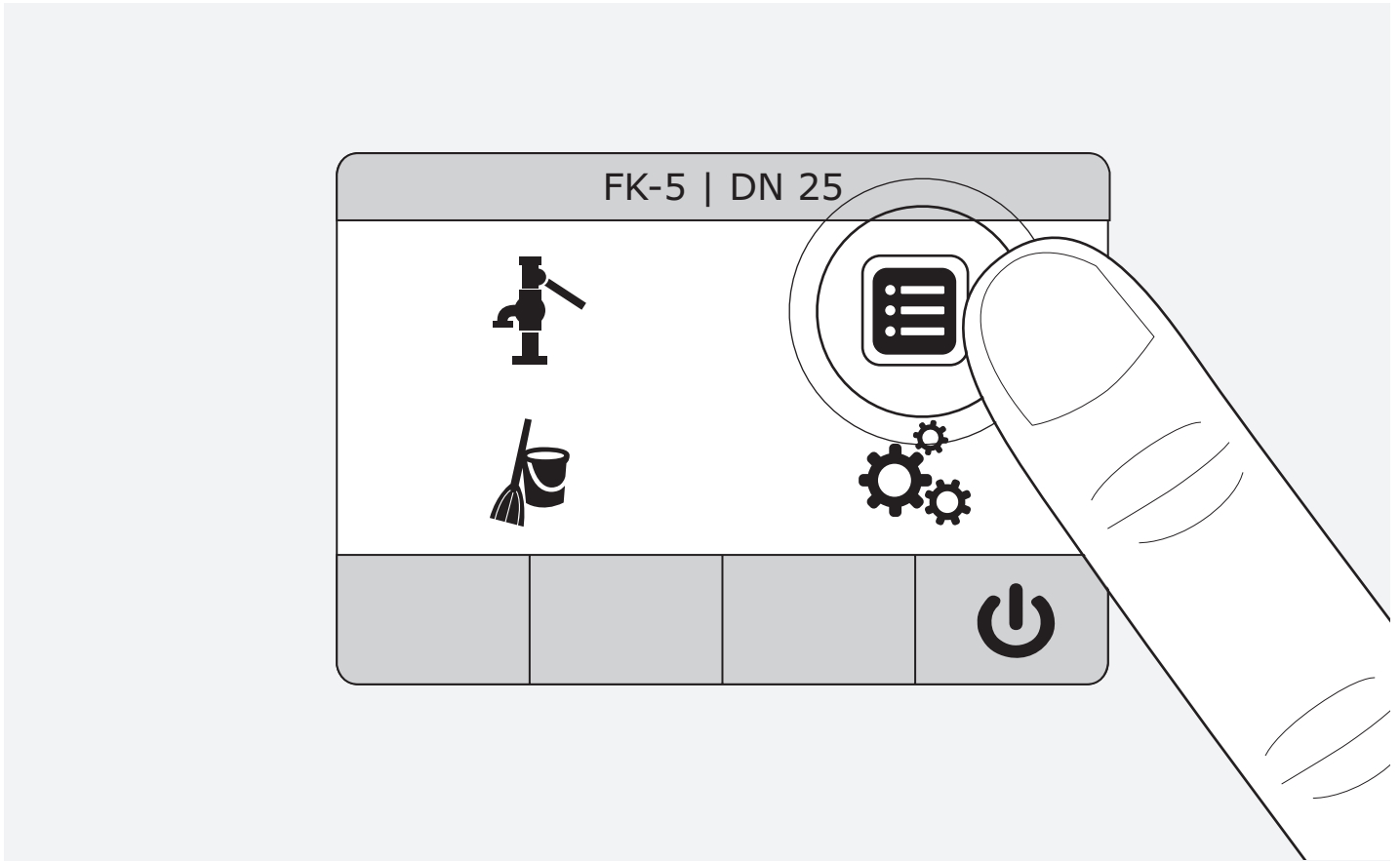
	DE
	Automatik einstellen
	Spülautomatik Hier wird das Wochenprogramm für das Spülen der Zuleitungen programmiert; jeder Wochentag mit Startzeitpunkt und Spüldauer (max. 360 Min.). Eine Spüldauer tagübergreifend ist nicht möglich. Es kann immer nur ein Zulauf gespült werden.
	Spülen deaktivieren
	Hand spülen Löst das manuelle Spülen eines Zulaufes aus. „Spülen deaktivieren“ oder „Spülautomatik“ stoppt die Funktion. „Hand spülen“ endet automatisch nach 360 Min. und wechselt in die vorher aktivierte Funktion „Spülen deaktivieren“ oder „Spülautomatik“.

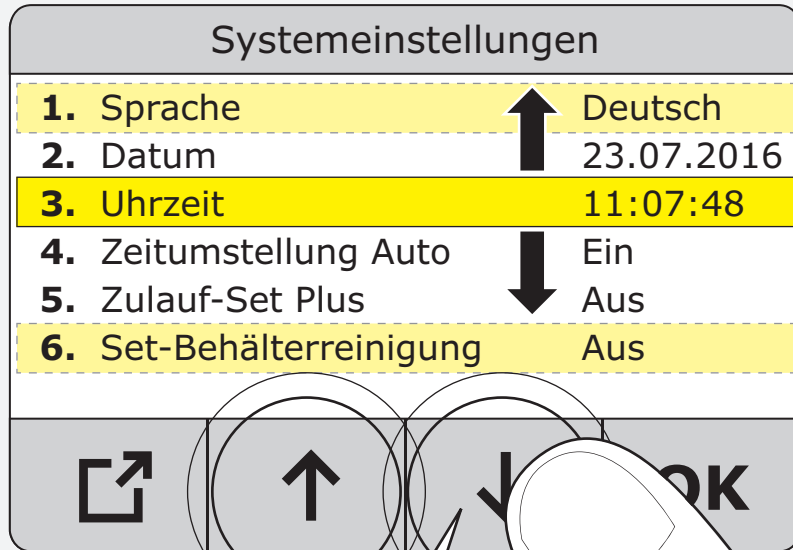


	DE
	Zulauf 1/2 „Zulauf 1“ oder „Zulauf 2“ regelt die Versorgung ausschließlich über diesen Zulauf. Wenn die jeweilige Zulaufmenge nicht ausreicht, erscheint eine Warnmeldung und die Versorgung der Entnahmestellen wird unterbrochen.
	Zulauf 1+2 (Automatik Zulaufregelung) „Zulauf 1+2“ regelt vorrangig die Versorgung über Zulauf 2. Wenn die Zulaufmenge nicht ausreicht, öffnet zusätzlich Zulauf 1. Wenn die gesamte Zulaufmenge nicht ausreicht, erscheint eine Warnmeldung und die Versorgung der Entnahmestellen wird unterbrochen.
	hoch
	runter
	links
	rechts
OK	Eingabe bestätigen

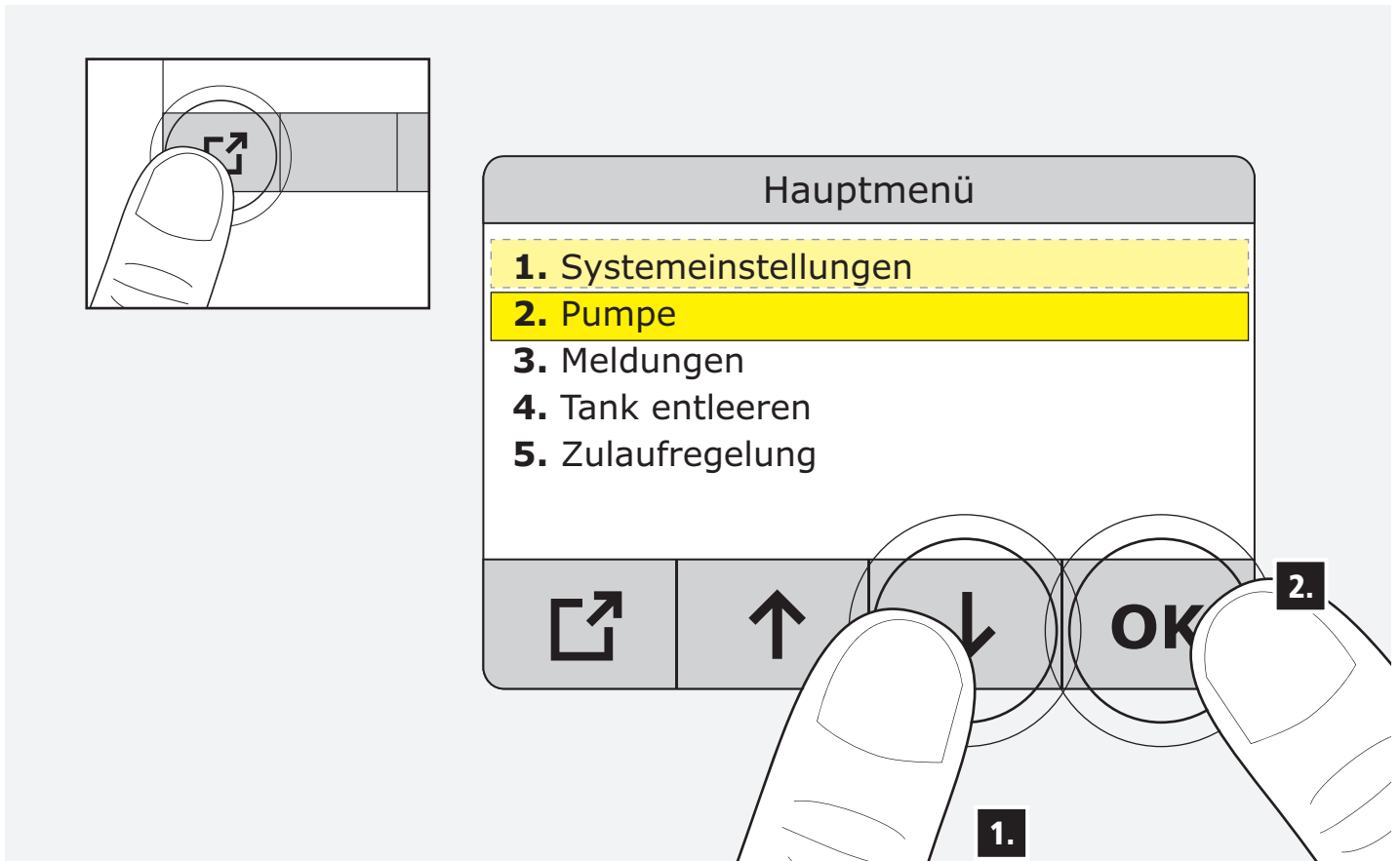
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Navigation buttons: square with arrow up-right, up arrow, down arrow, and OK.

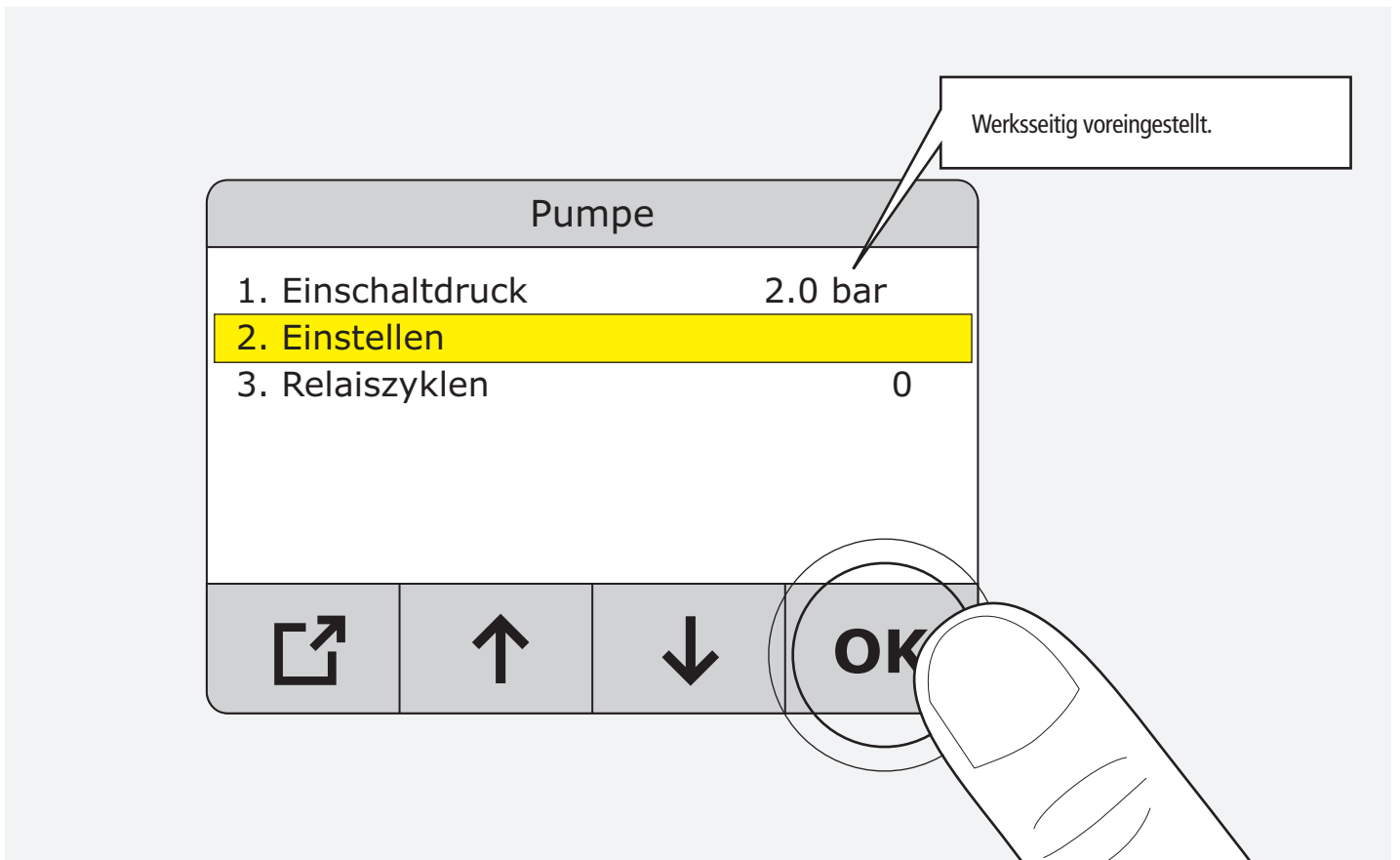




1.	Sprache	Deutsch
2.	Datum	23.07.2016
3.	Uhrzeit	11:07:48
4.	Zeitumstellung Auto	Ein
5.	Zulauf-Set Plus	Aus
6.	Set-Behälterreinigung	Aus
7.	Überlaufüberwachung	Aus
8.	Tastenquittierung	Ein
9.	Fehlersignal	Ein
10.	Akkuwechsel	
11.	Werksmenü	
12.	Werkseinstellungen	

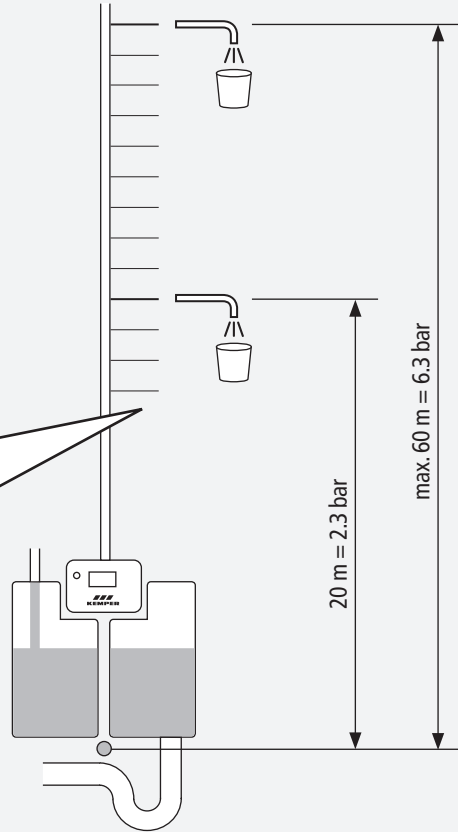
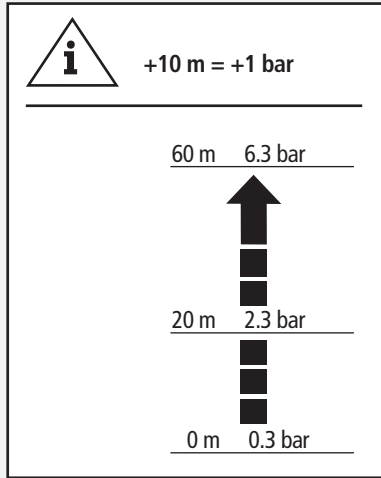


12.1





1.



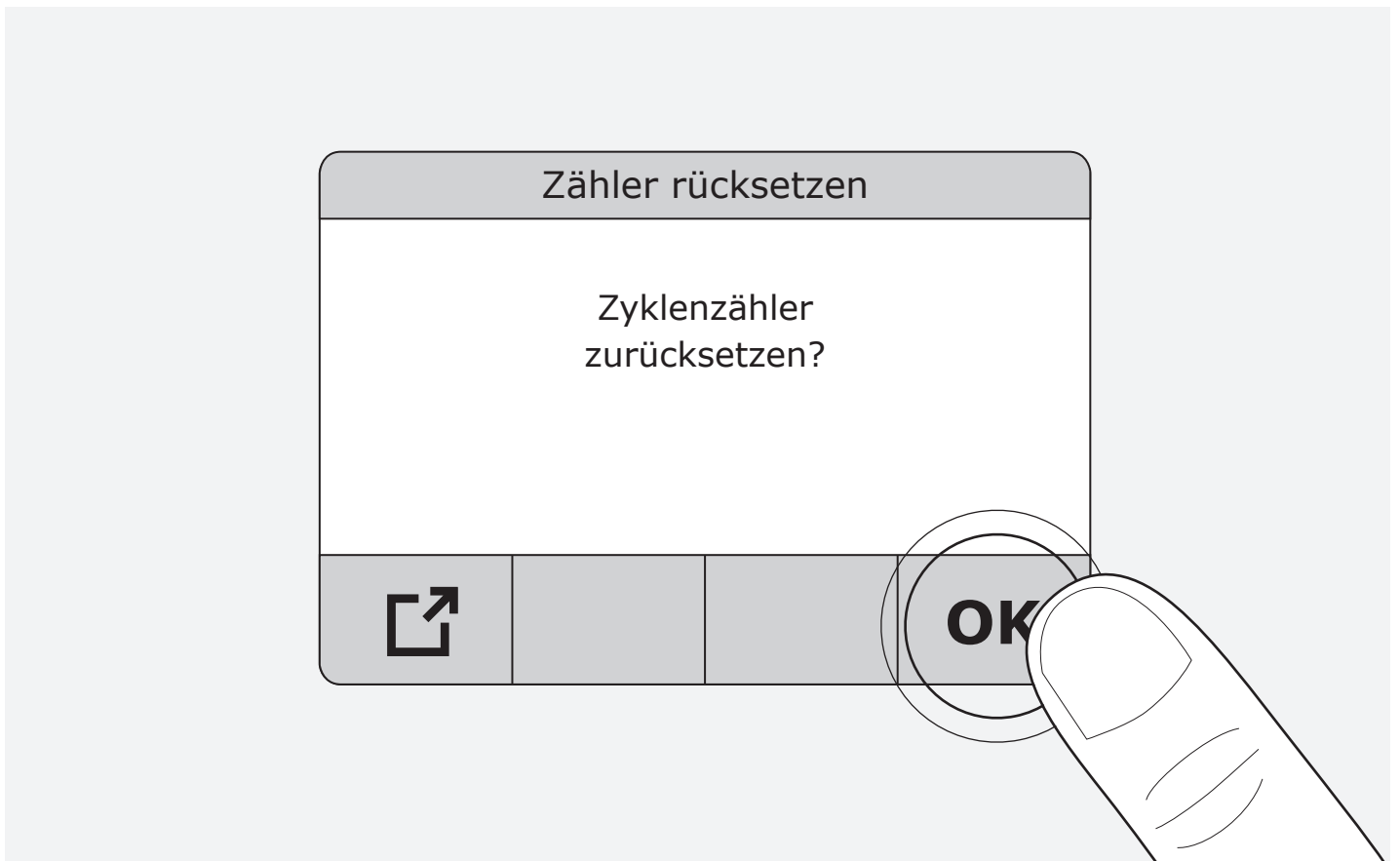
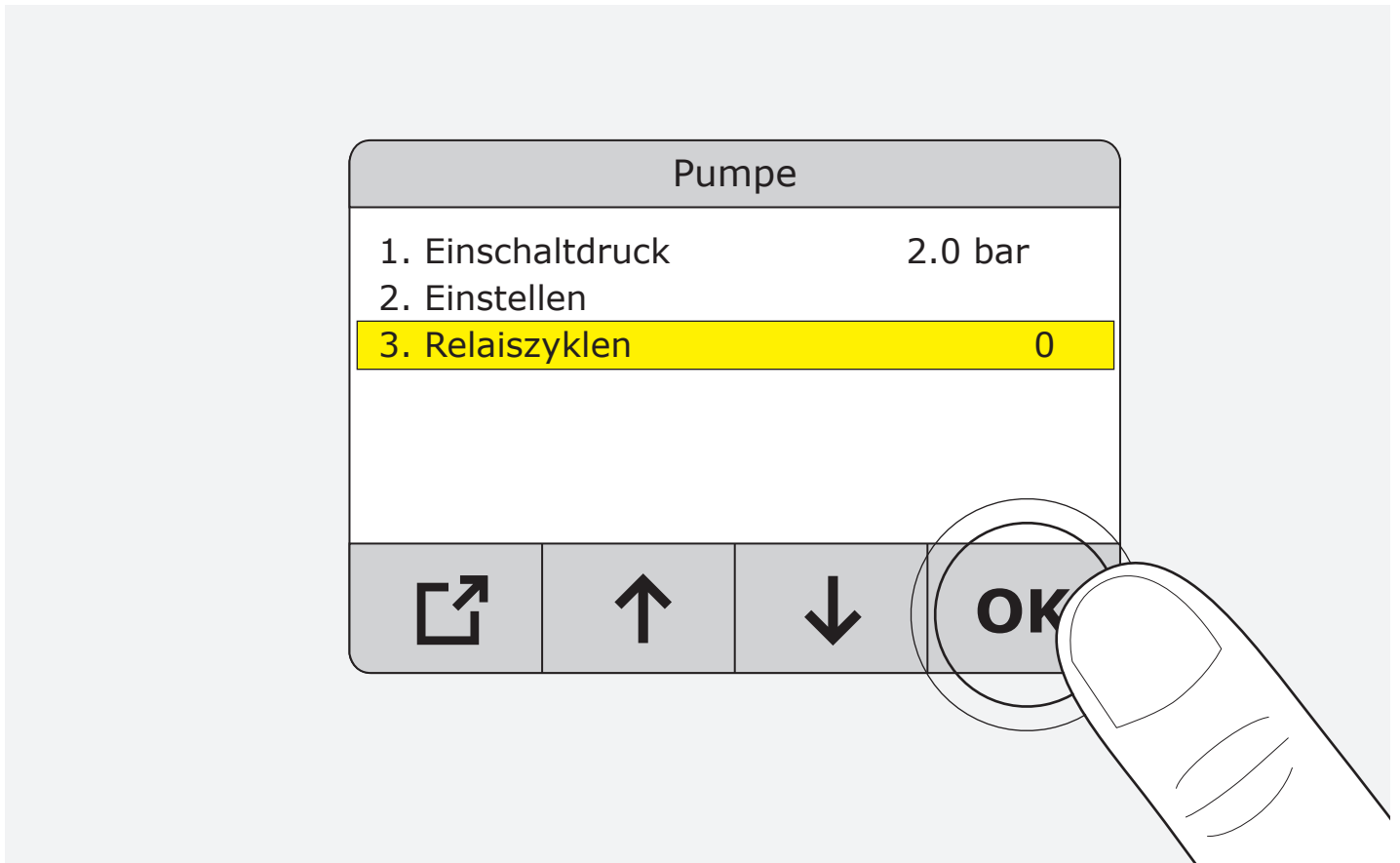
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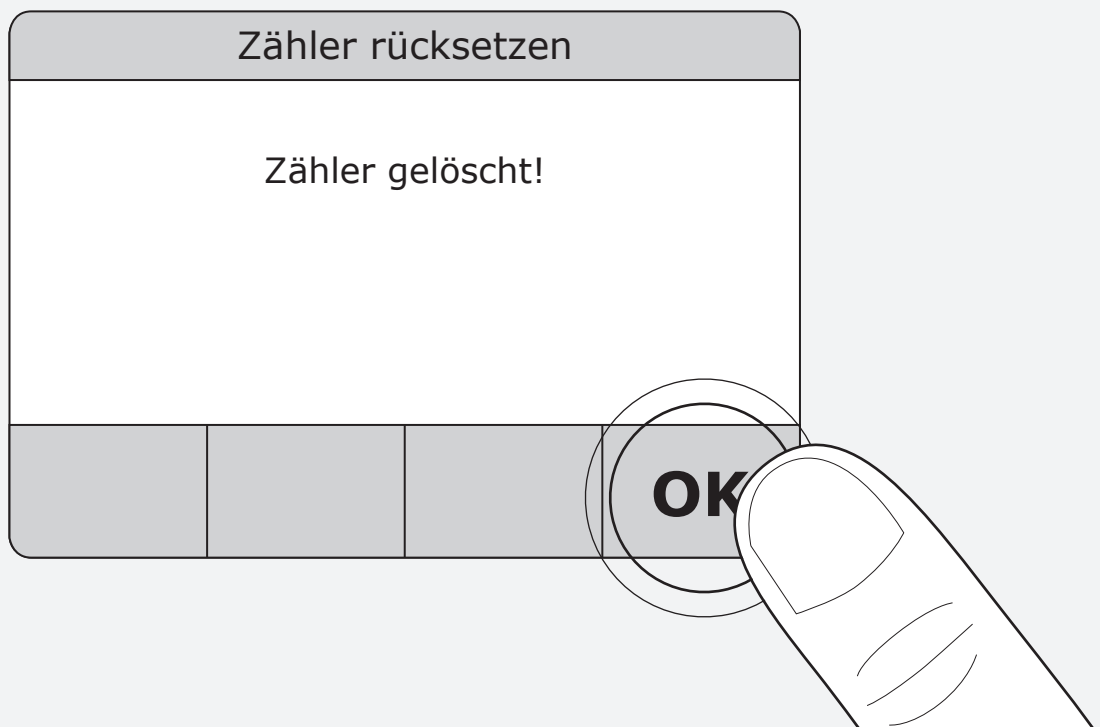
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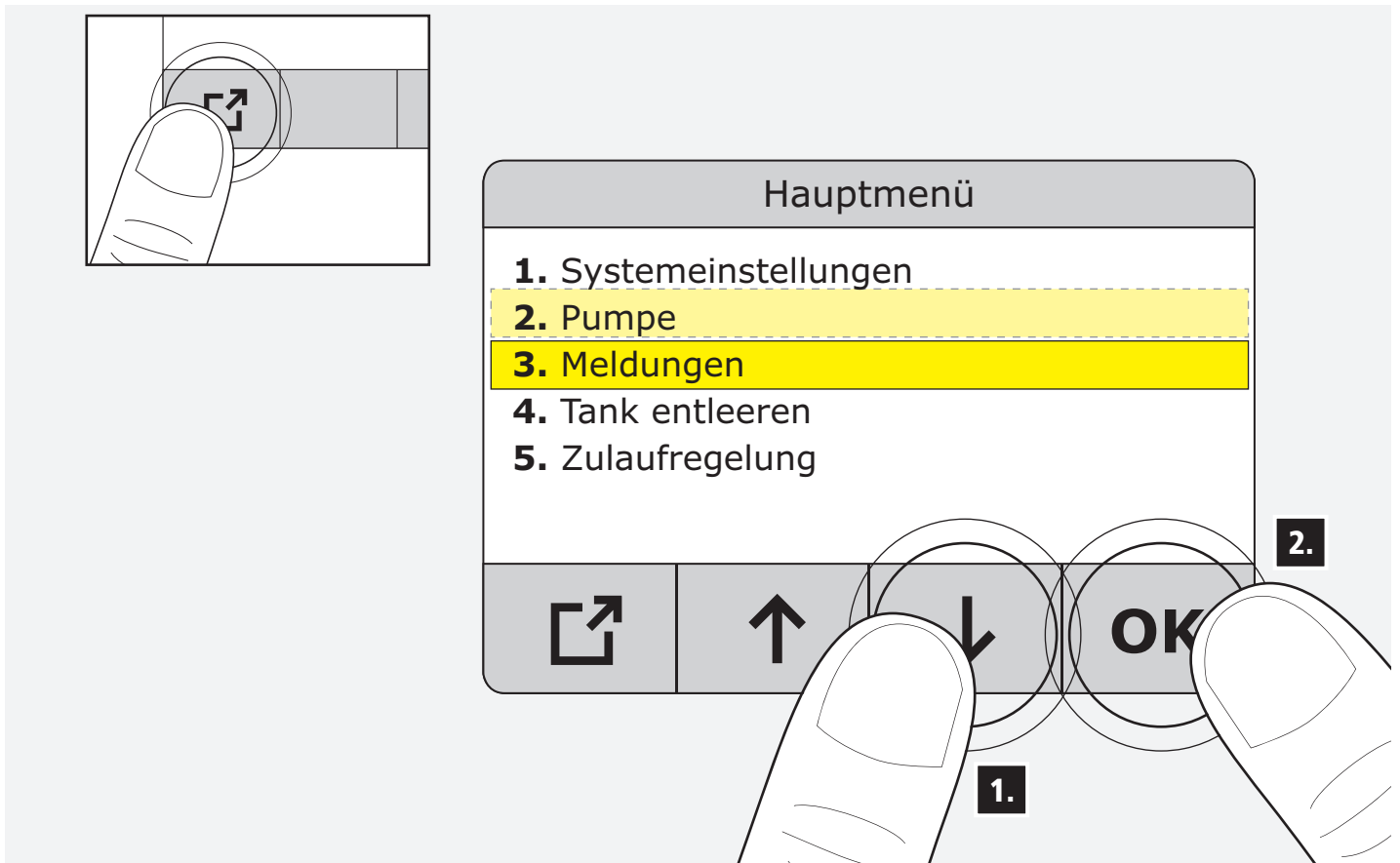
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4	5	6	-
7	8	9	.
↗	←		OK

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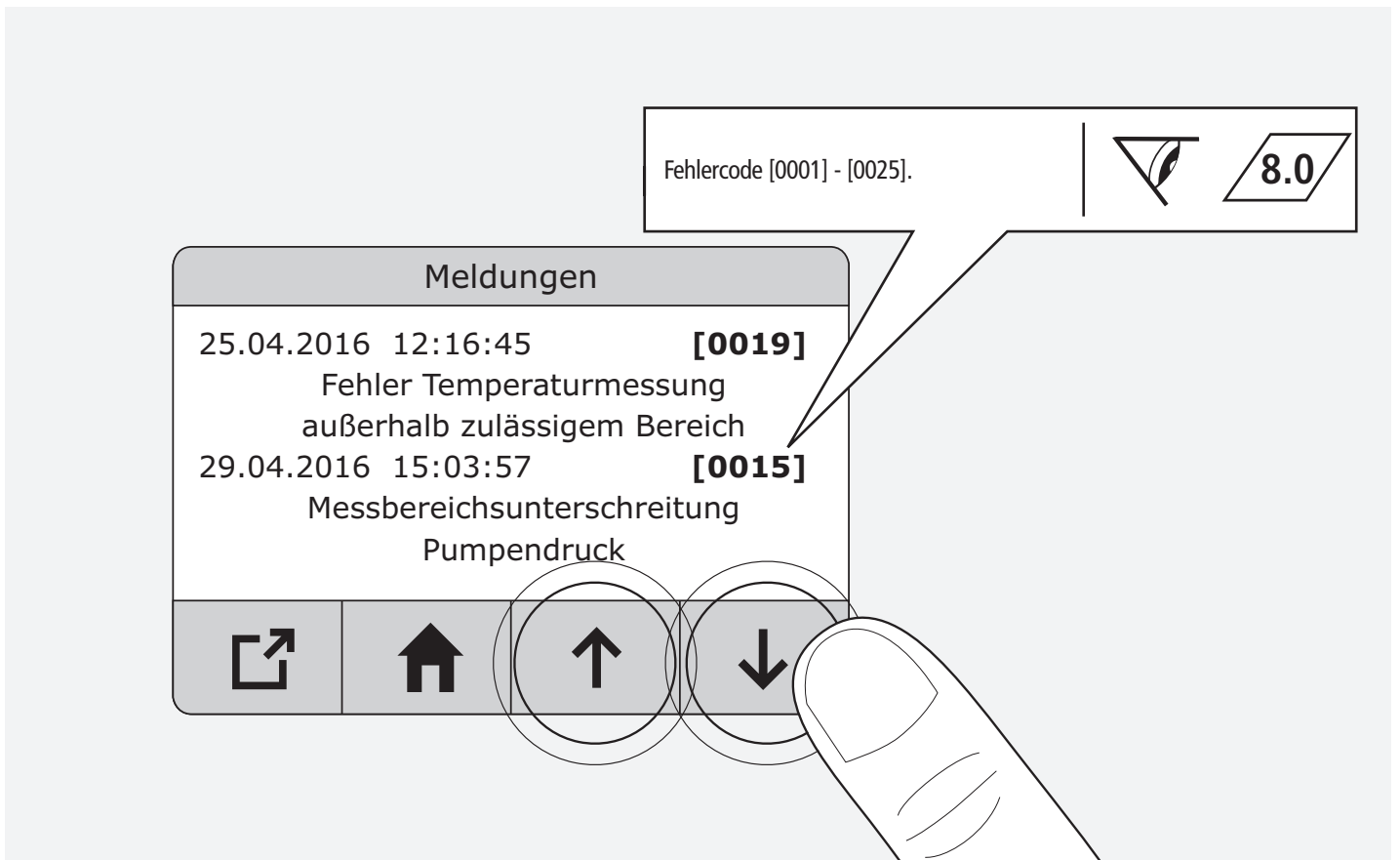
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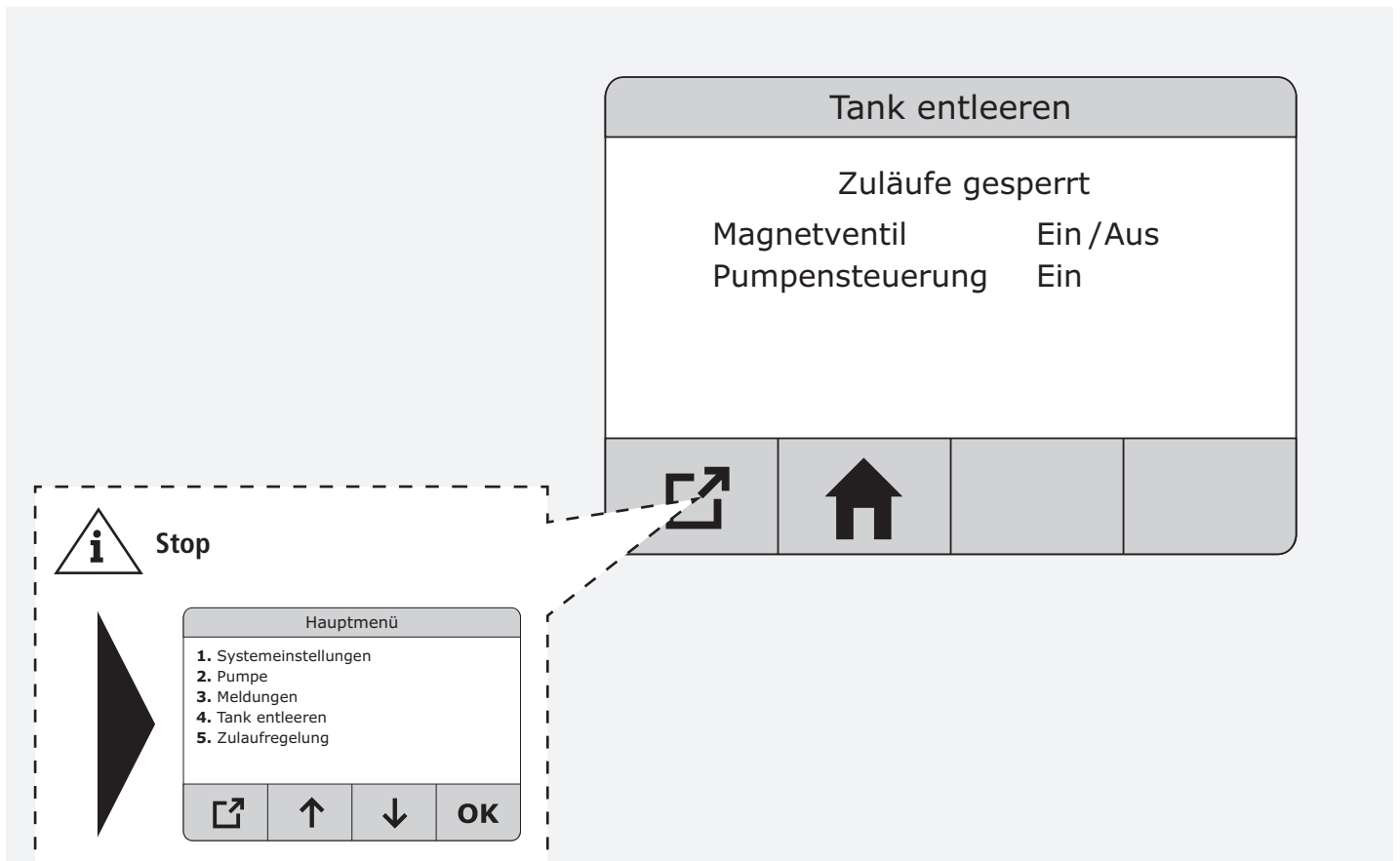
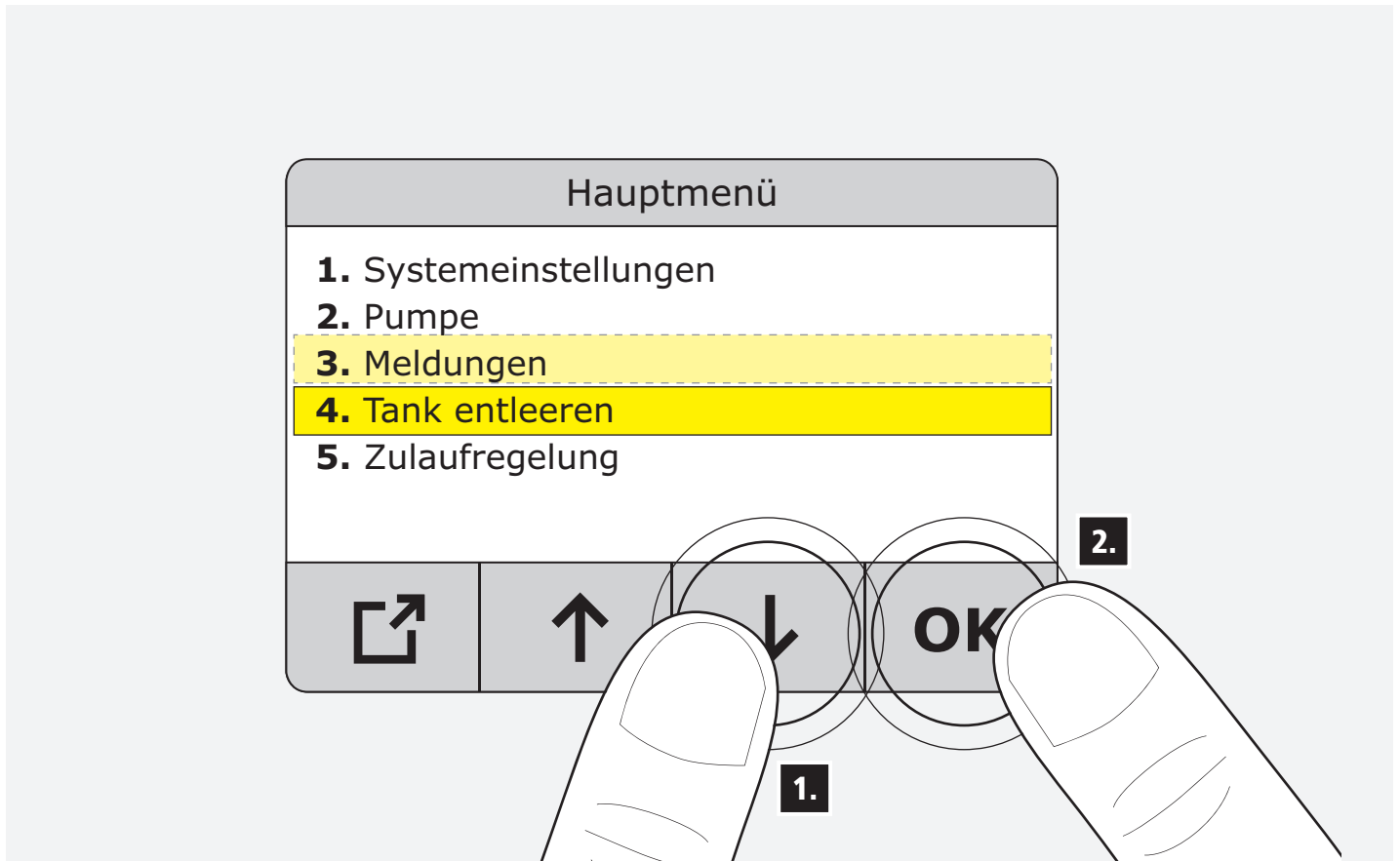


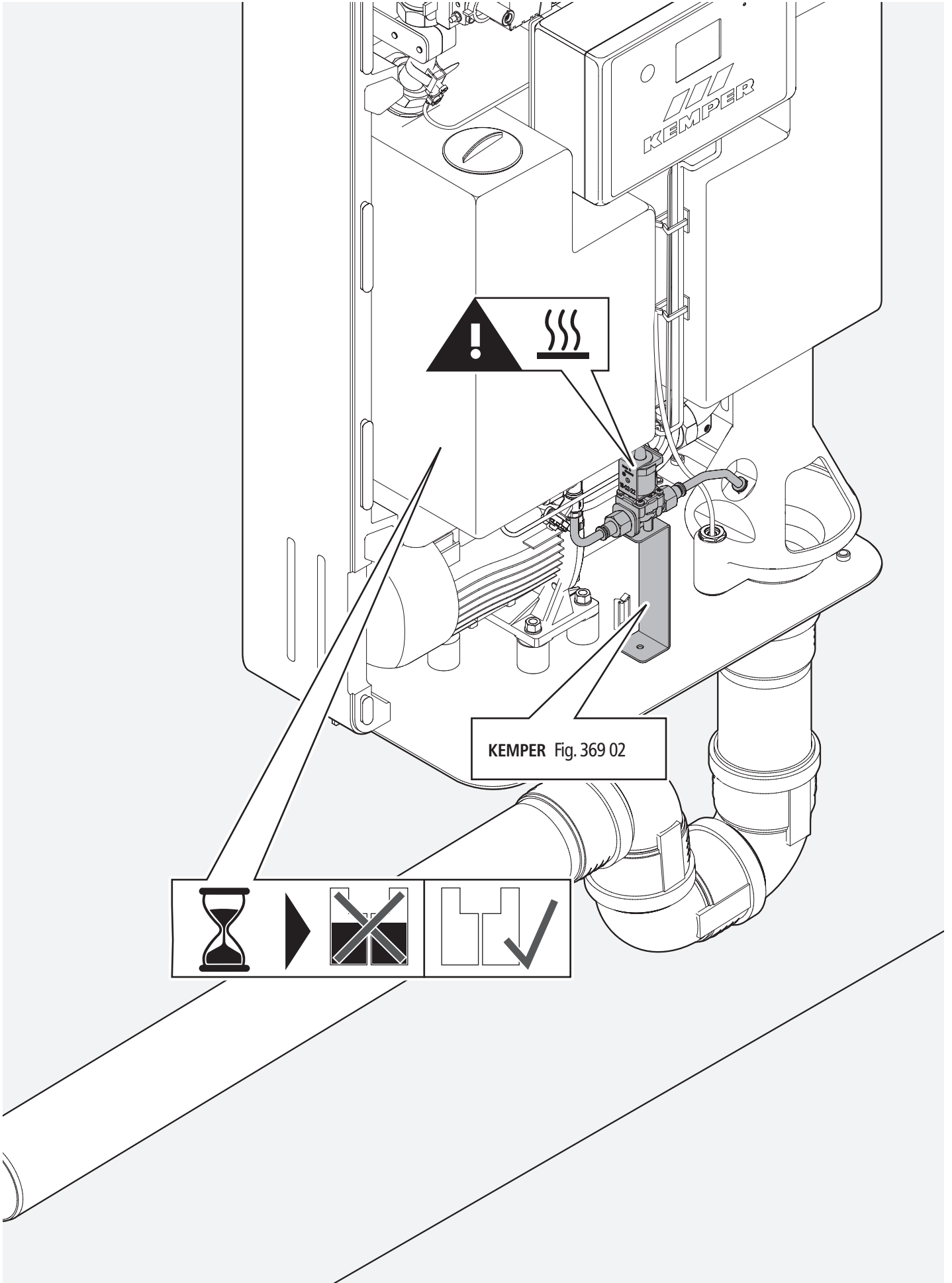


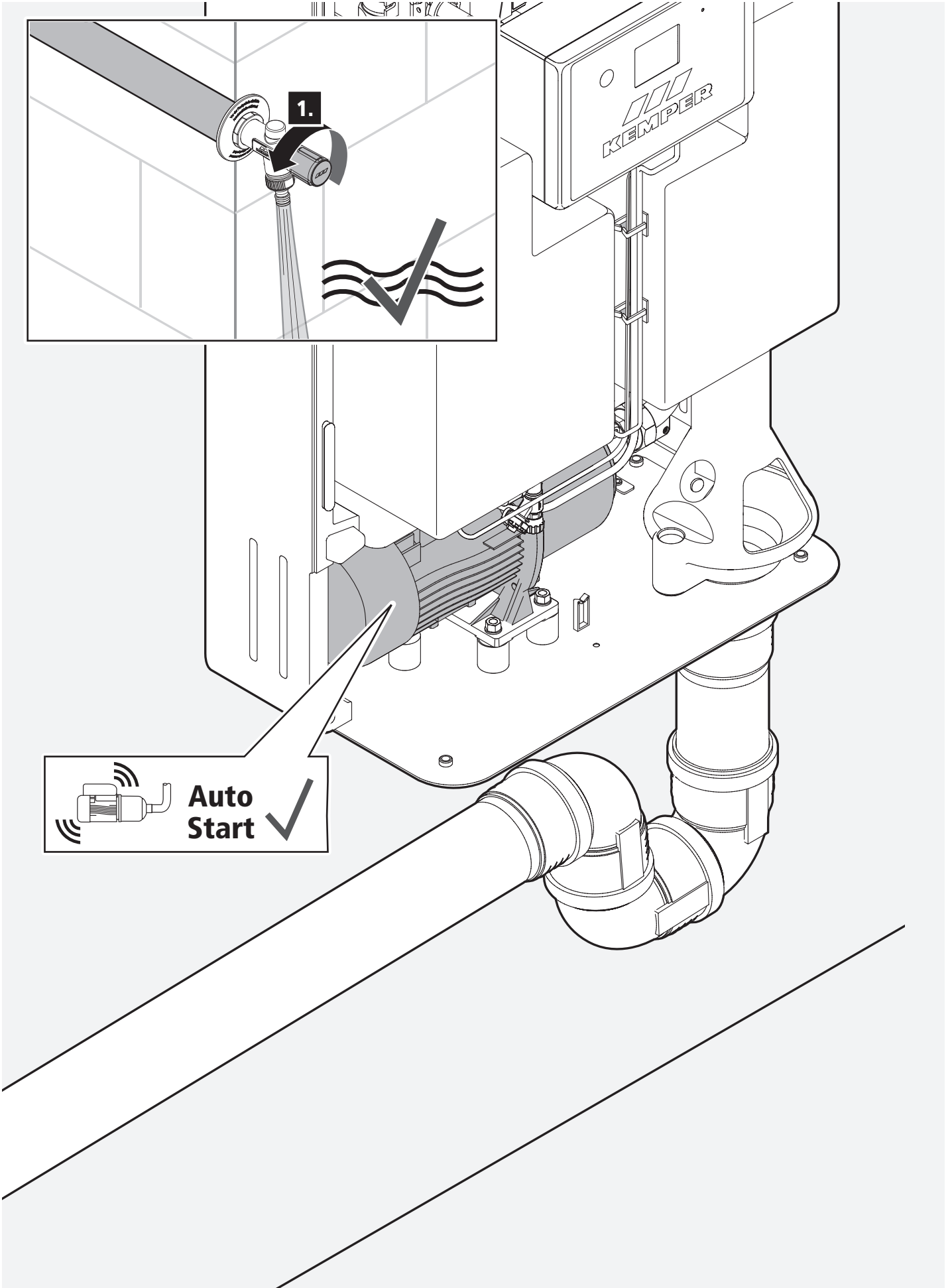


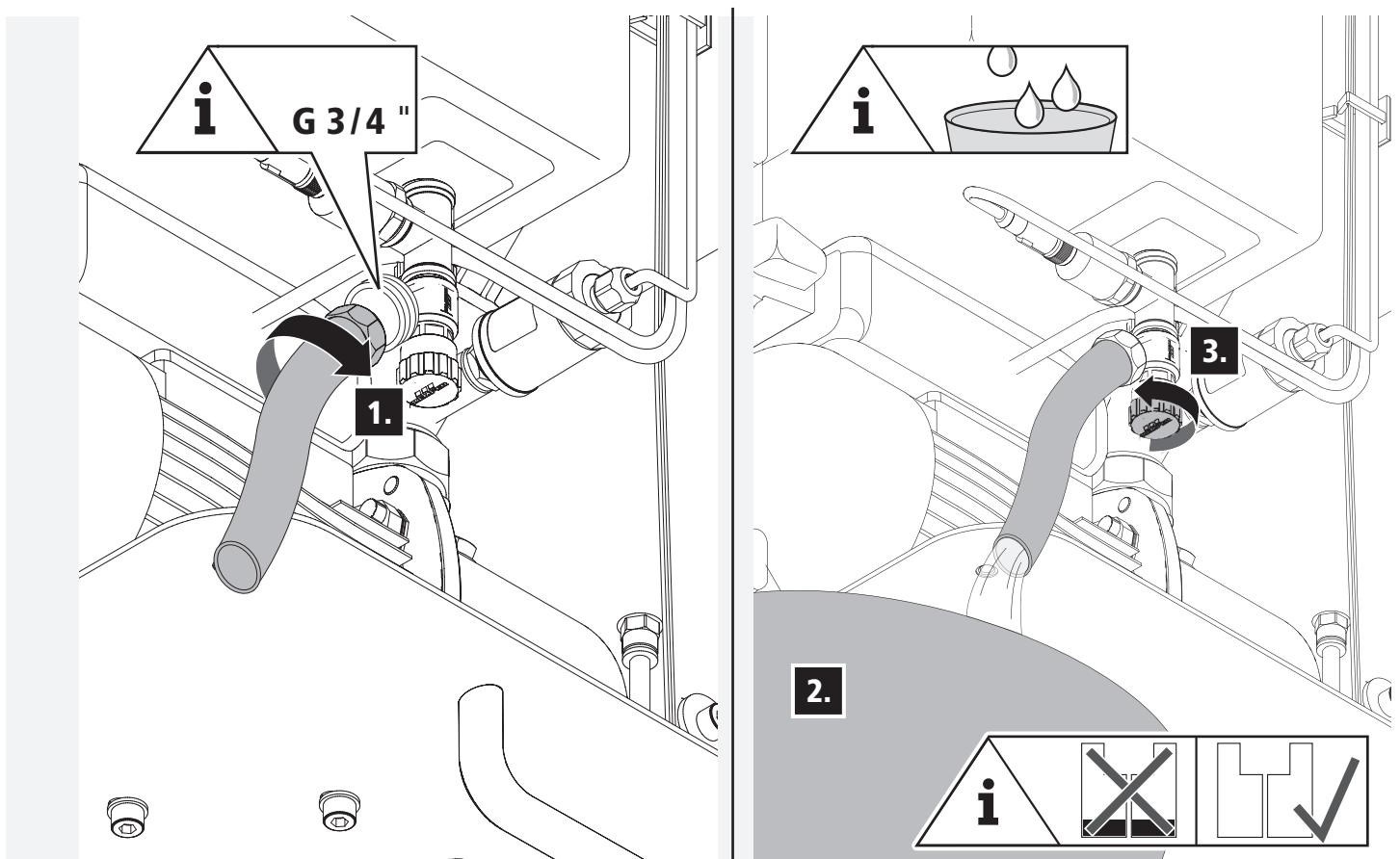
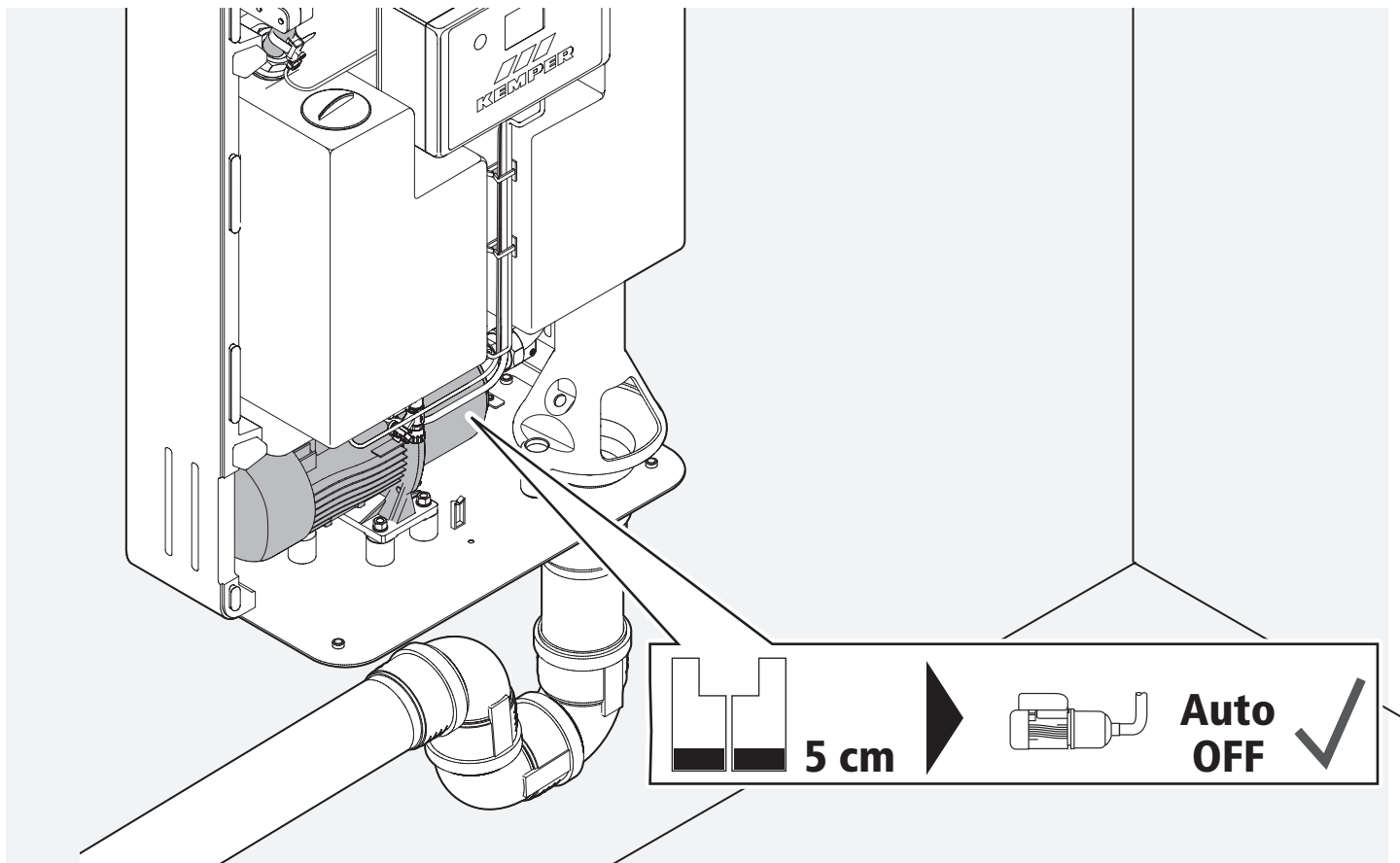
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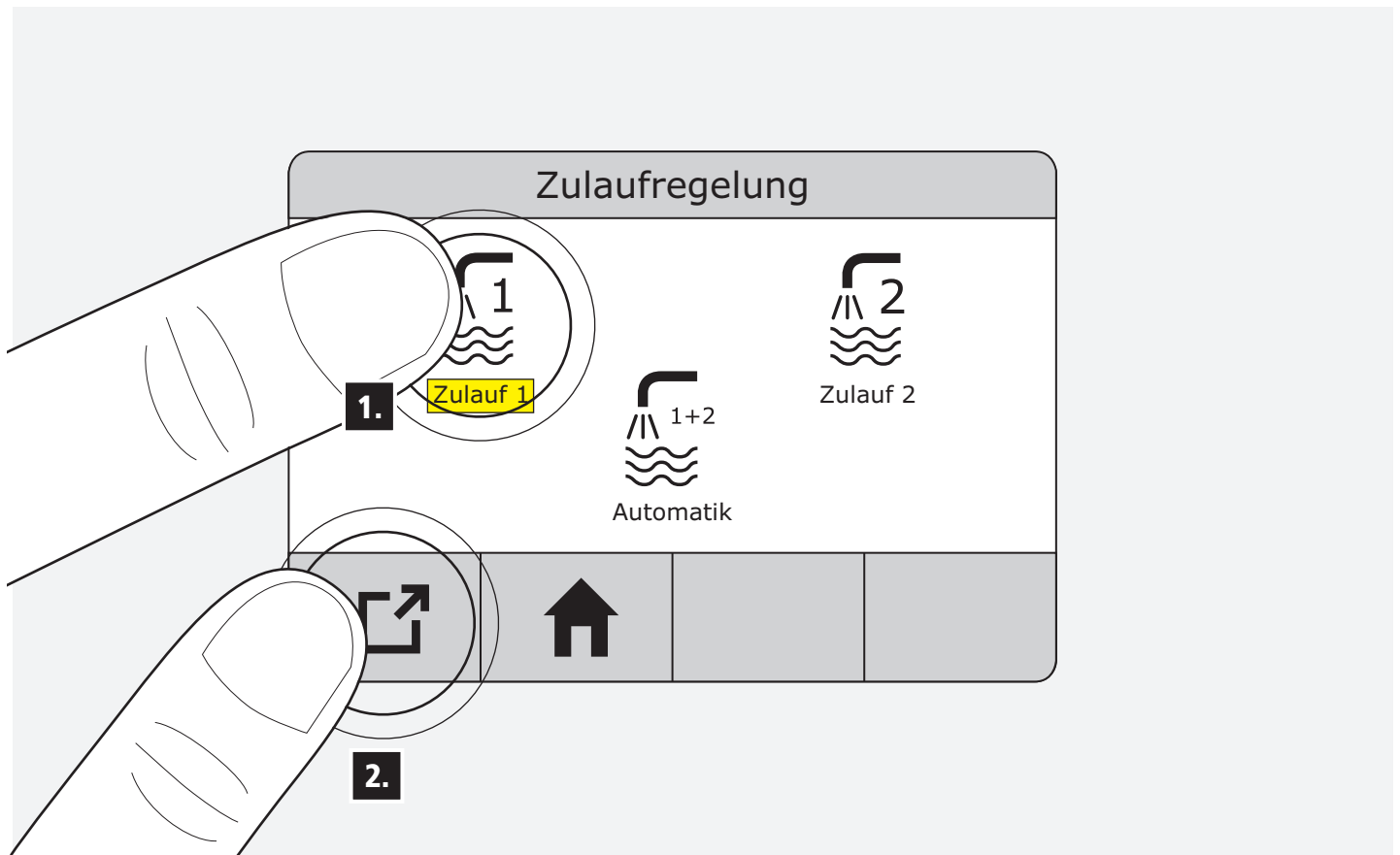
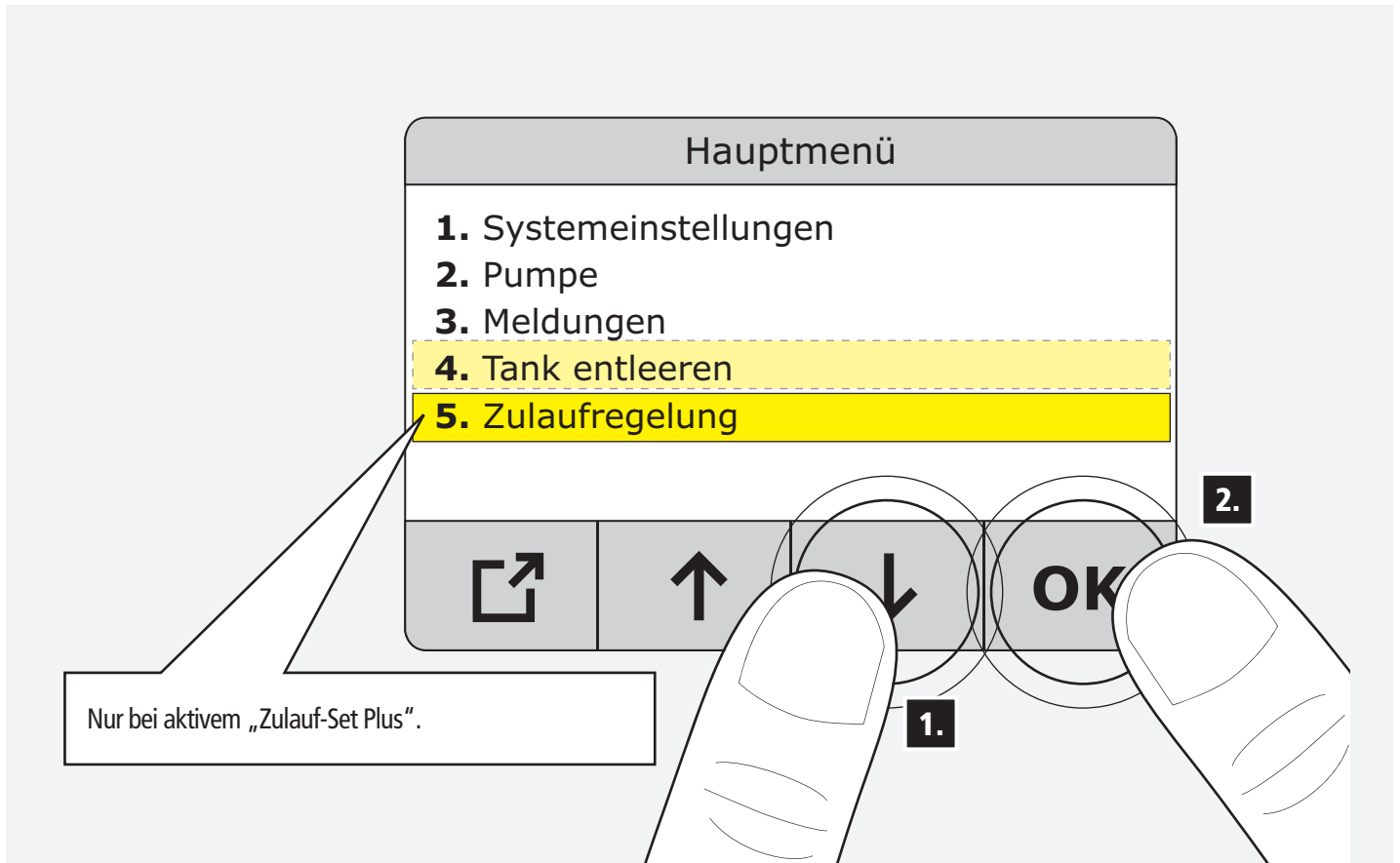


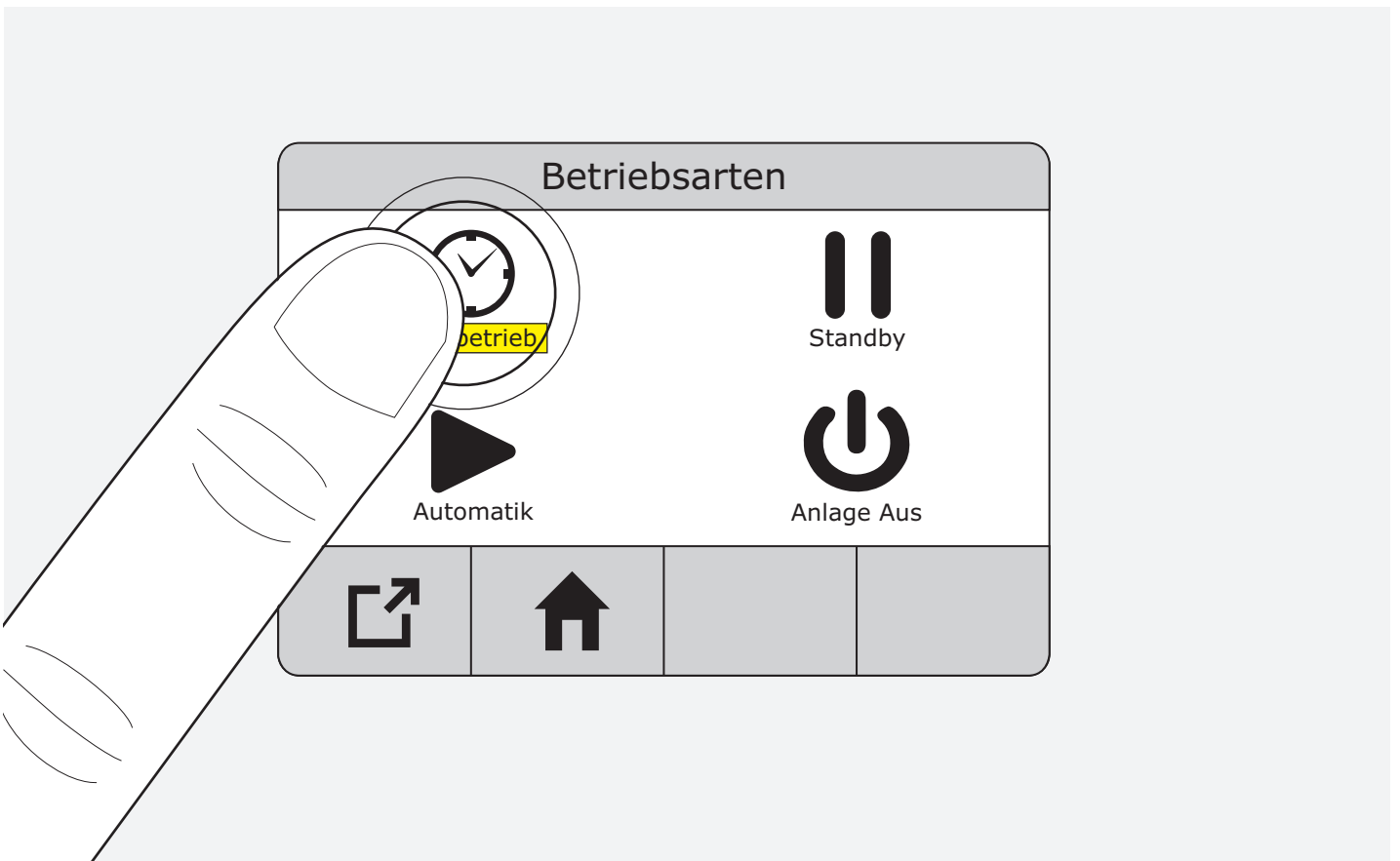
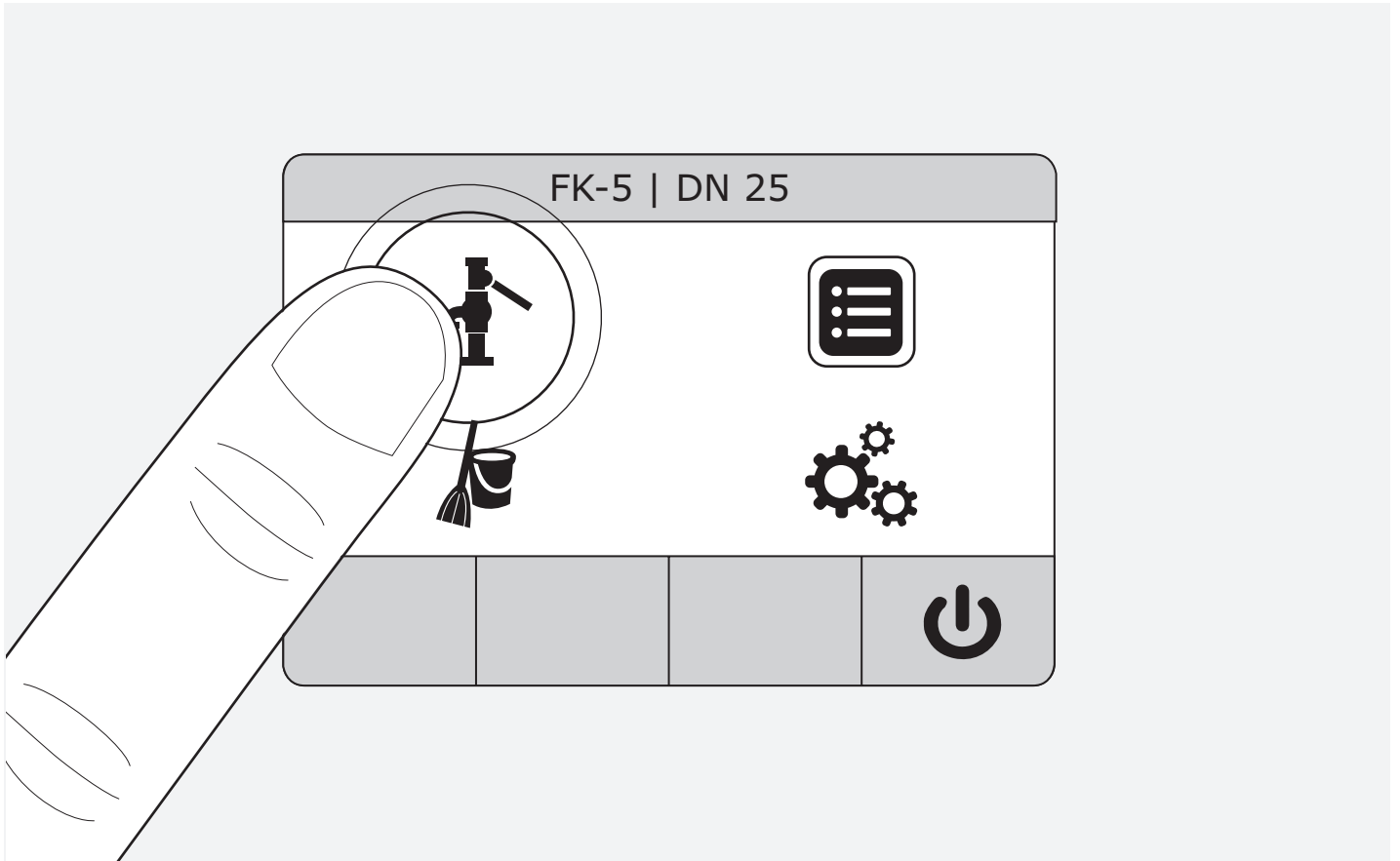


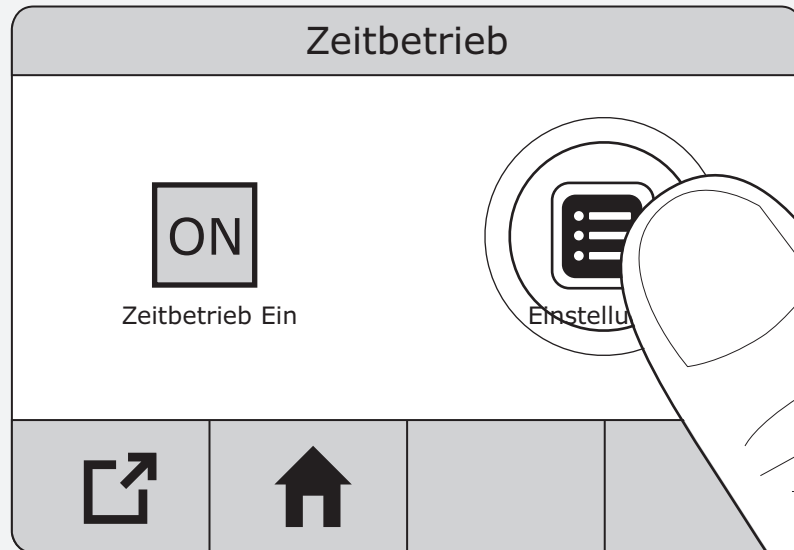










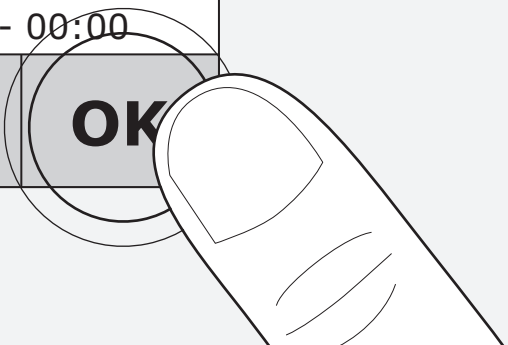


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↑	↓	OK
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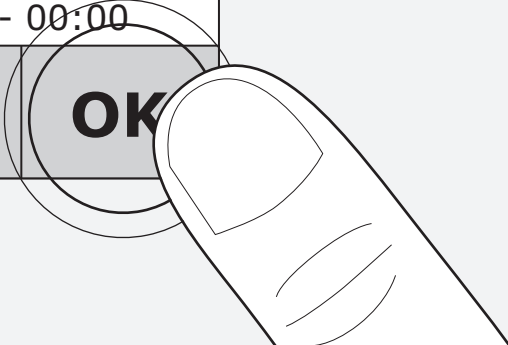
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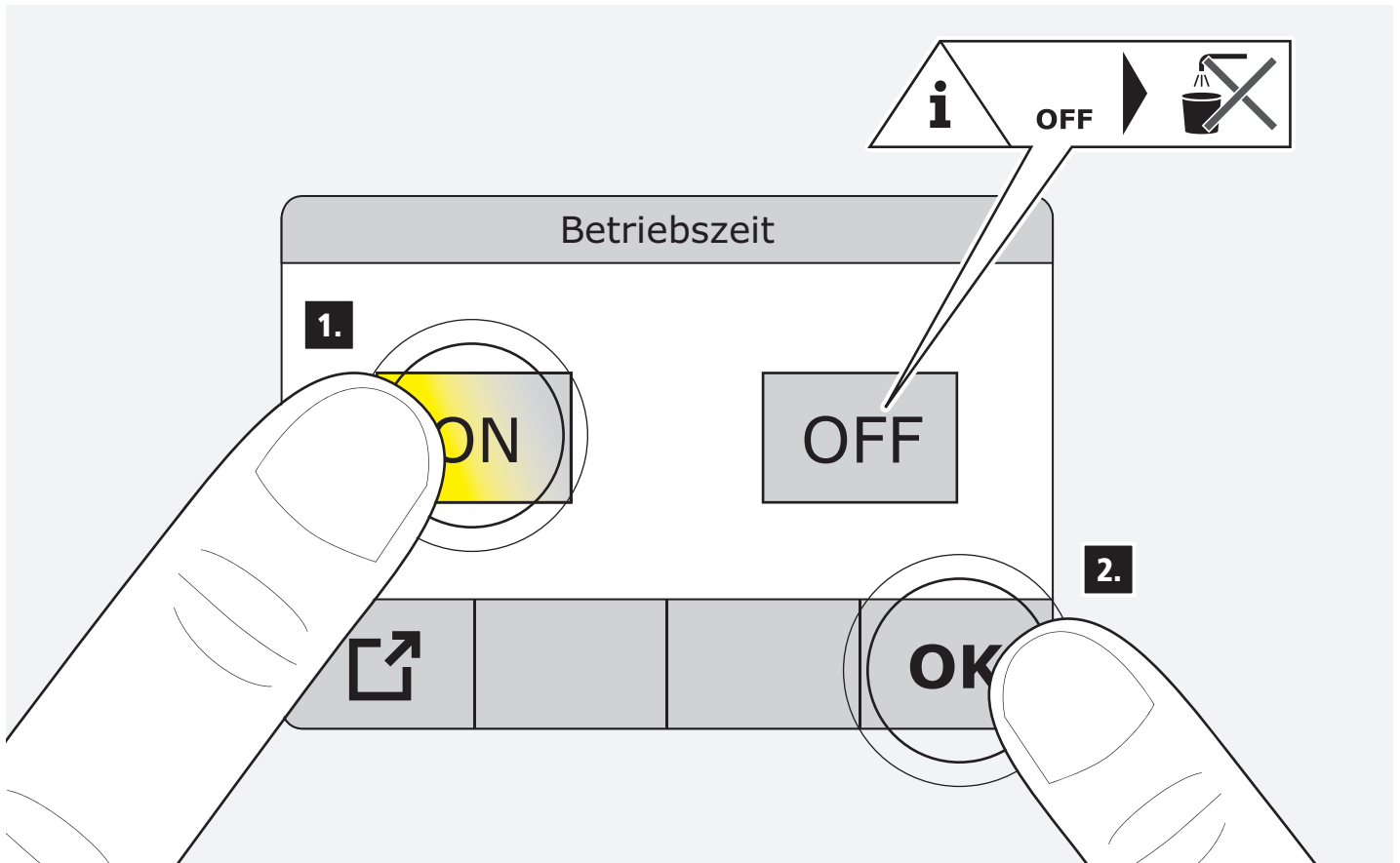
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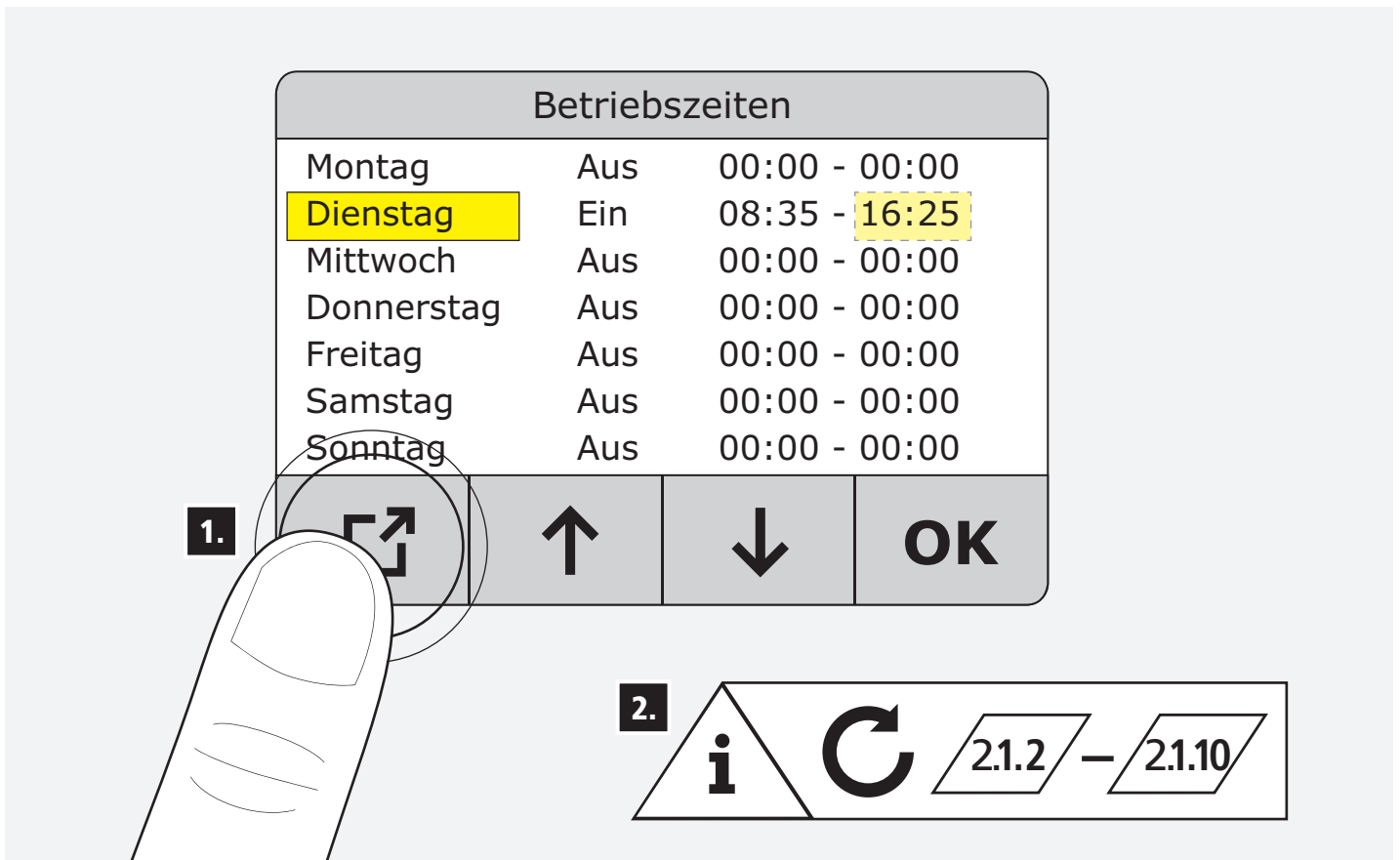
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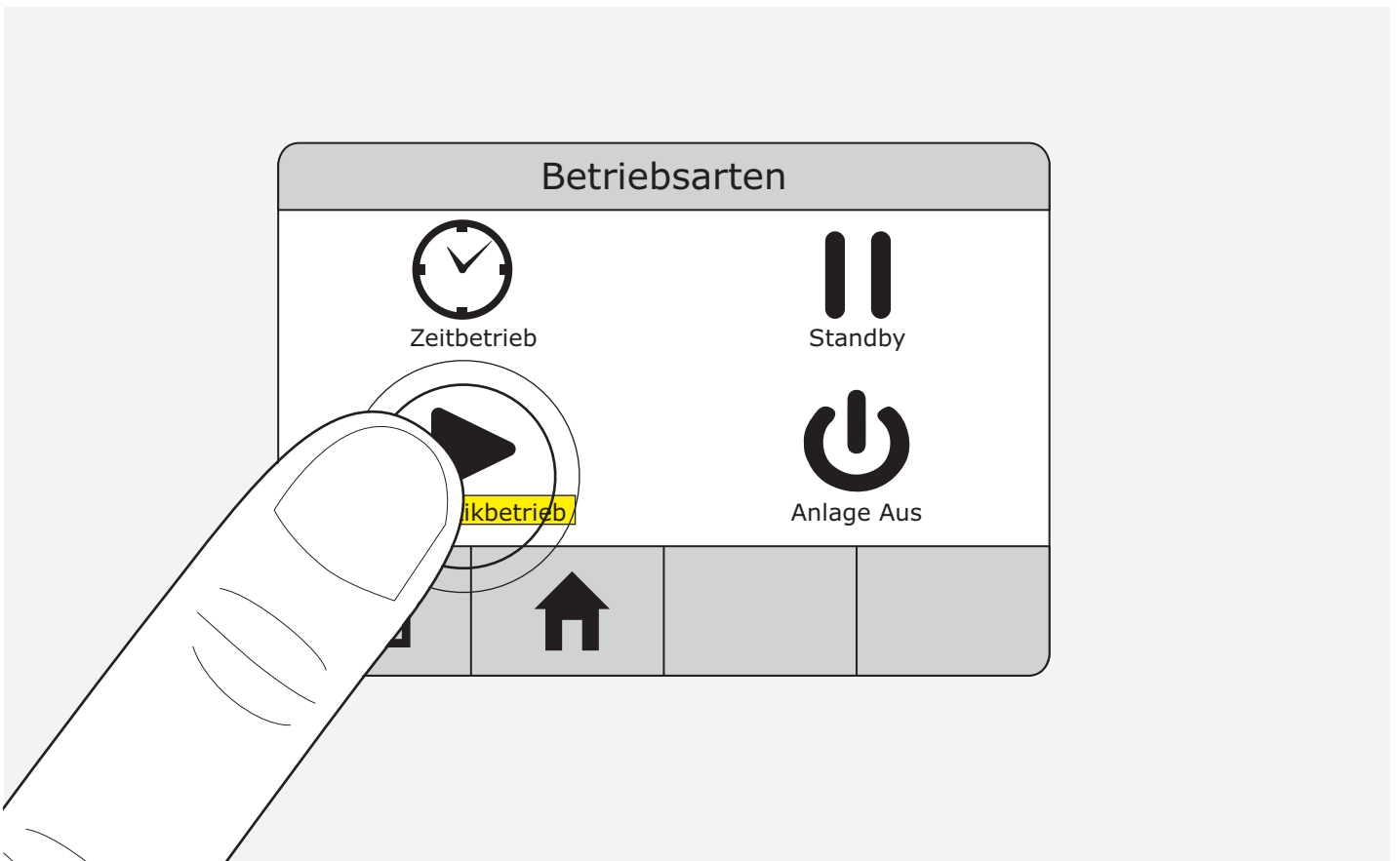
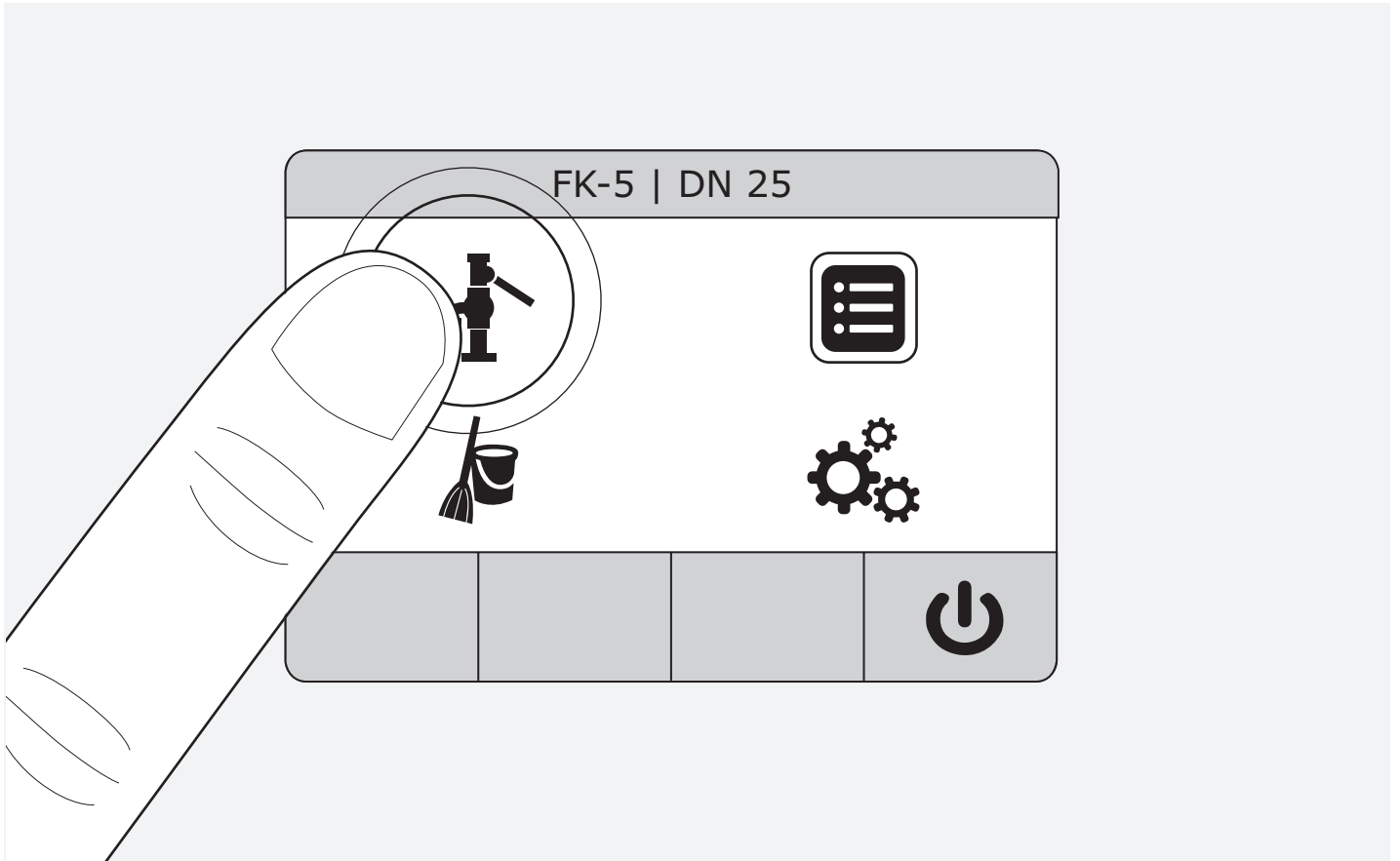
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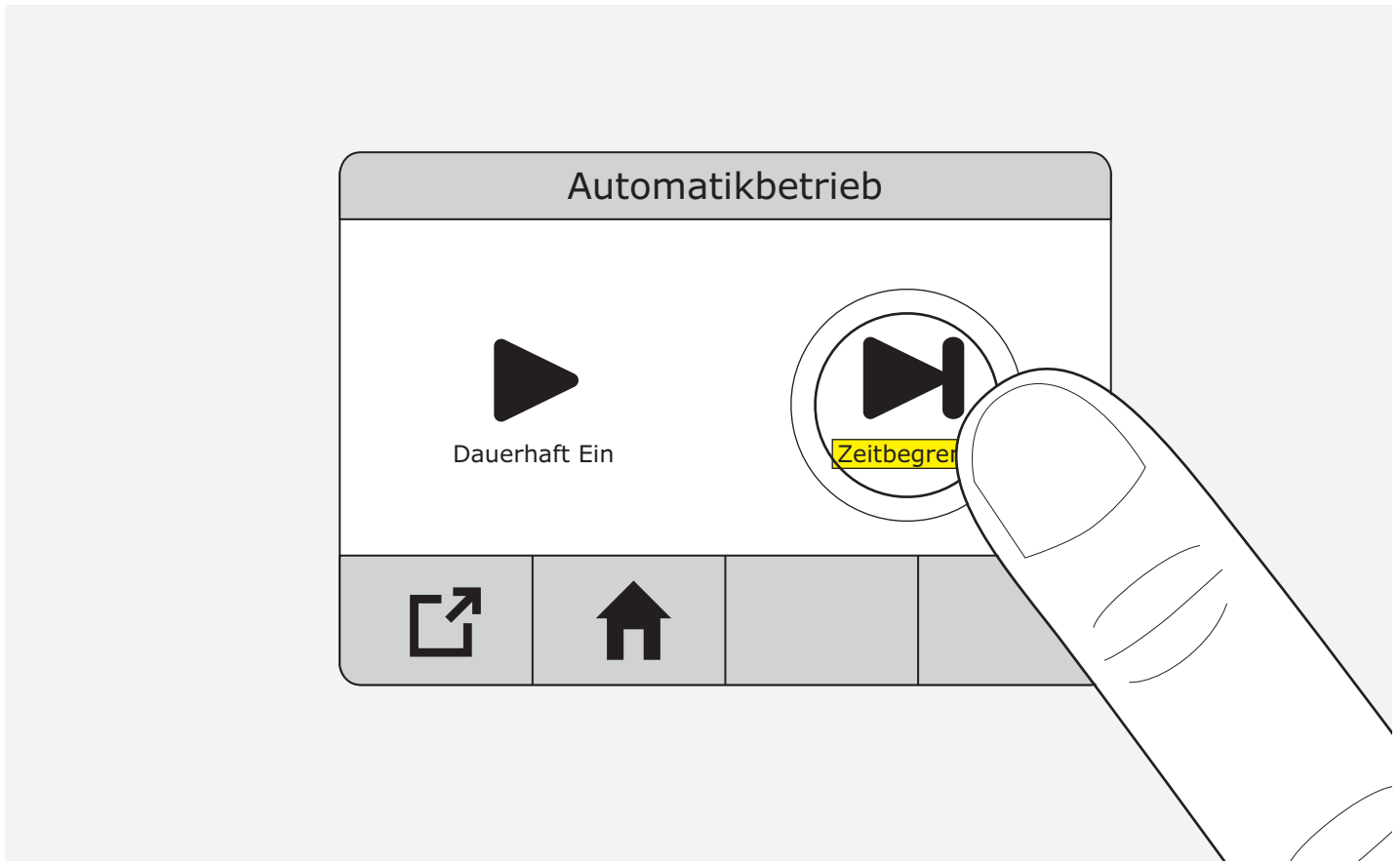


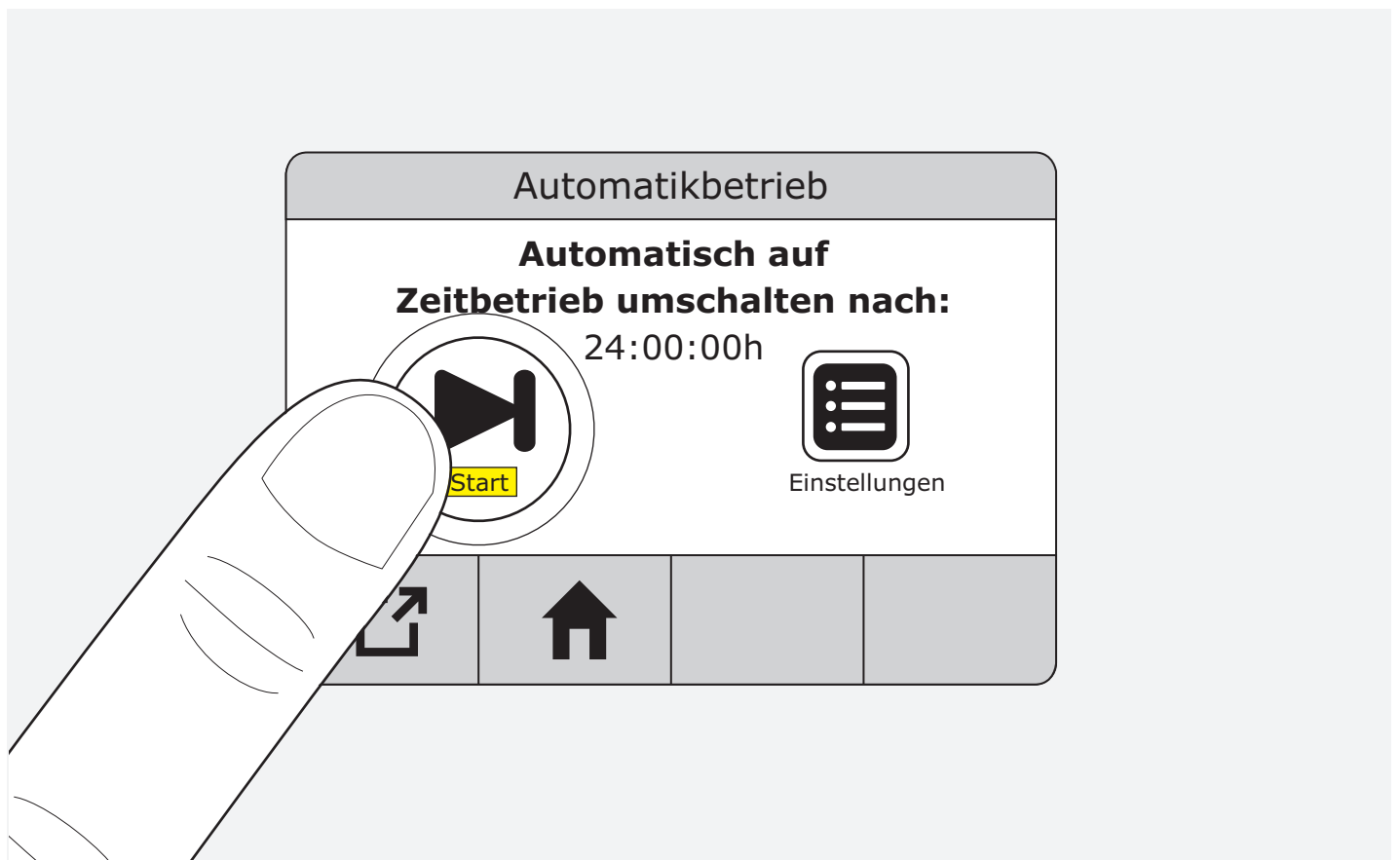




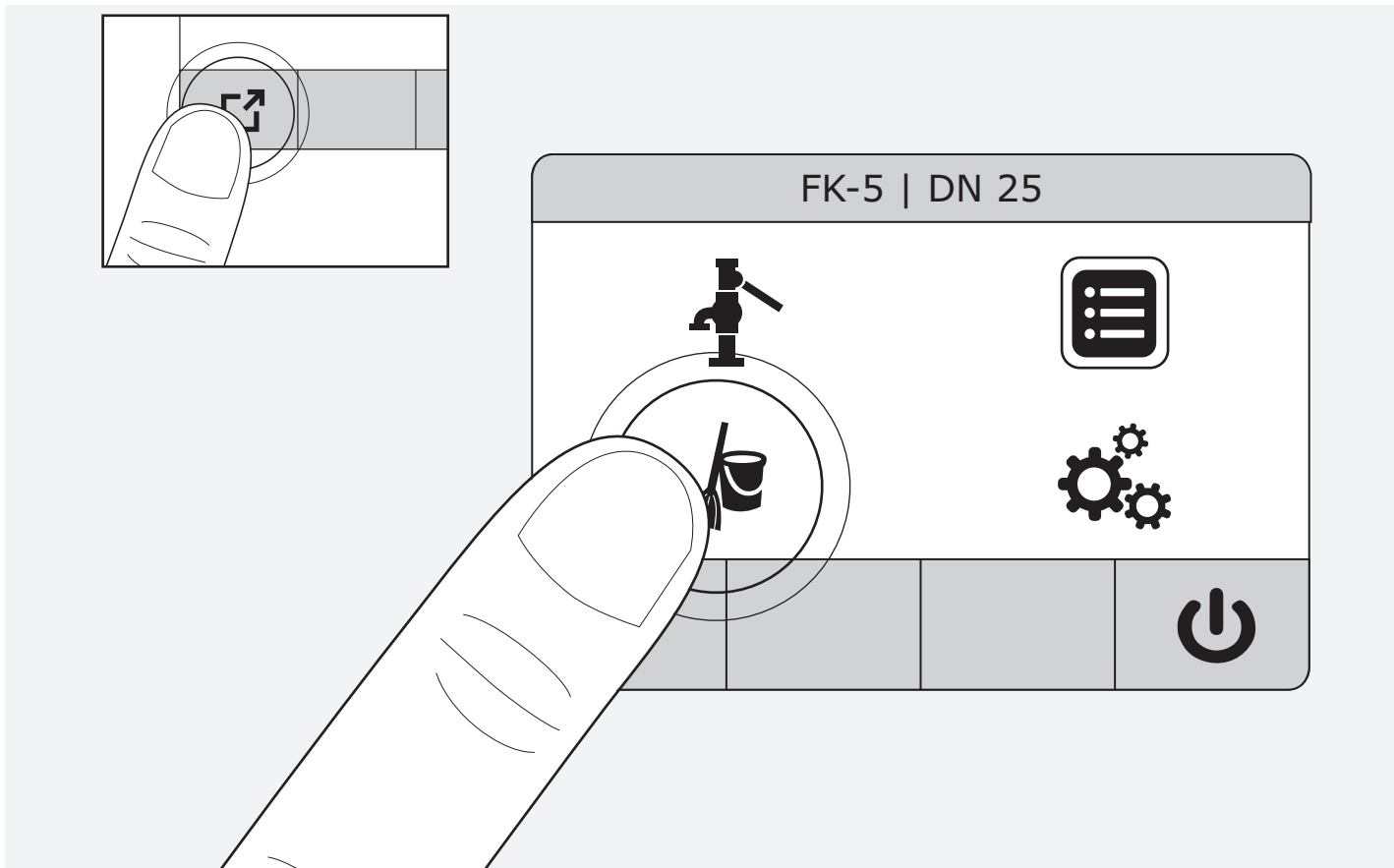




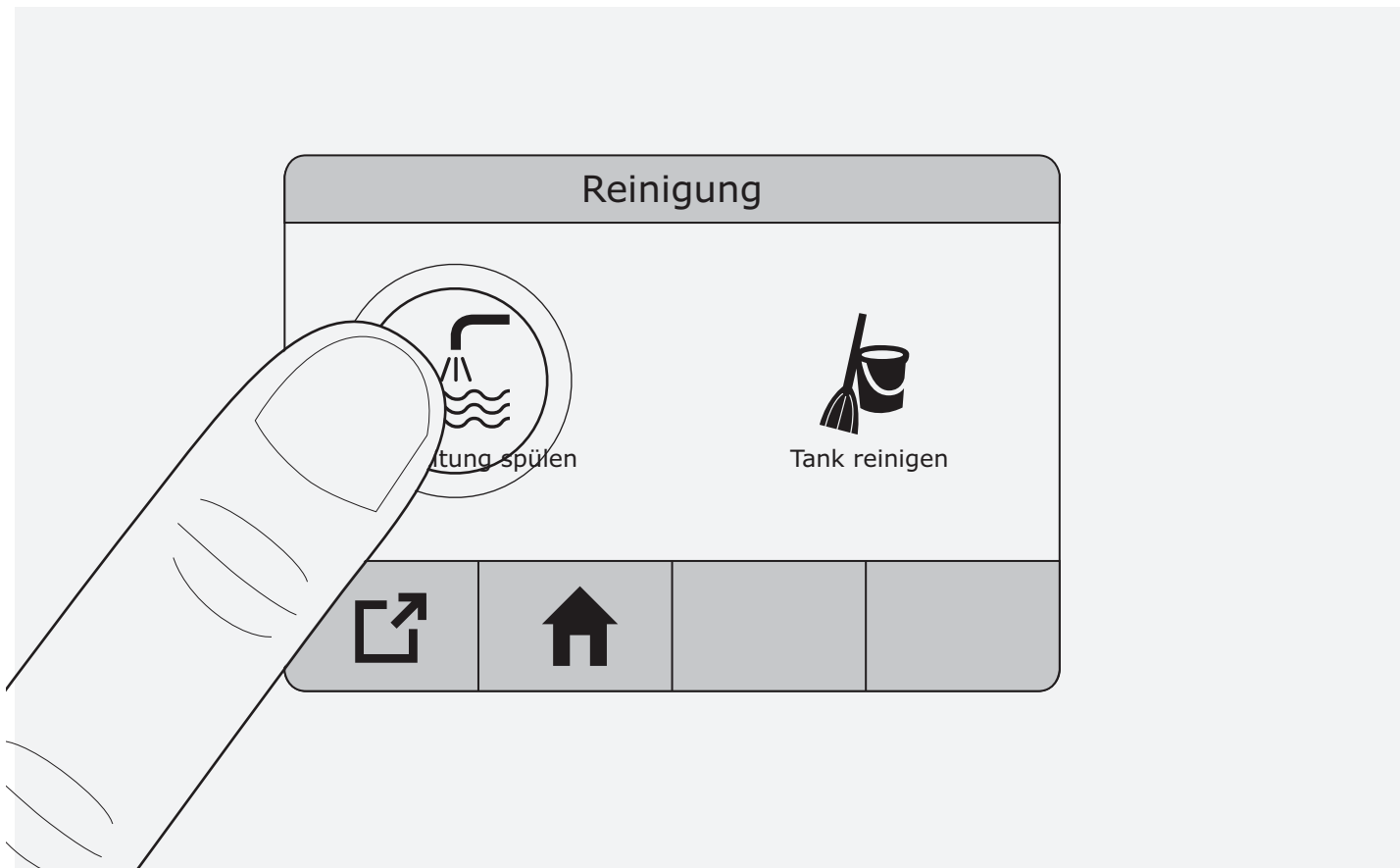


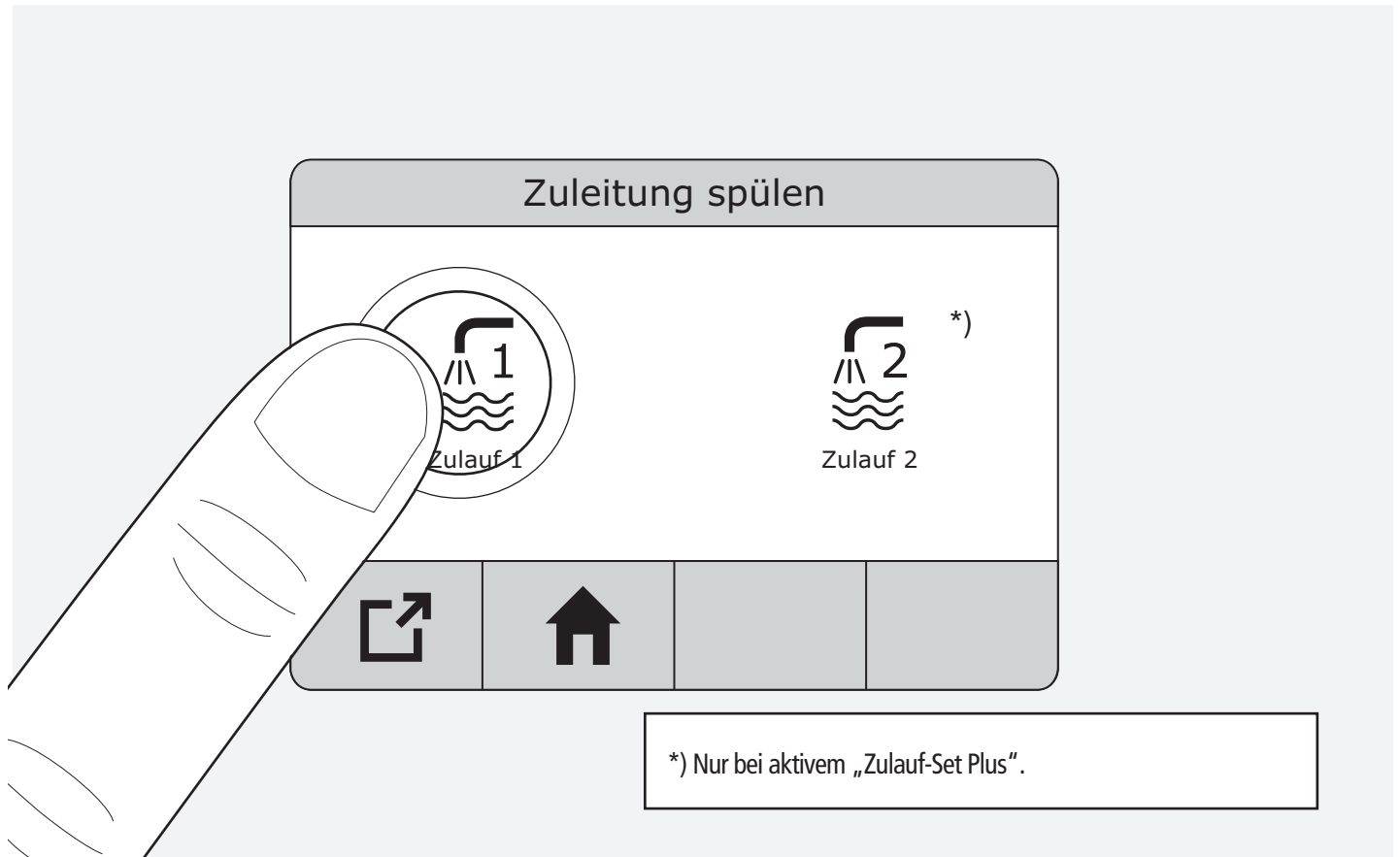


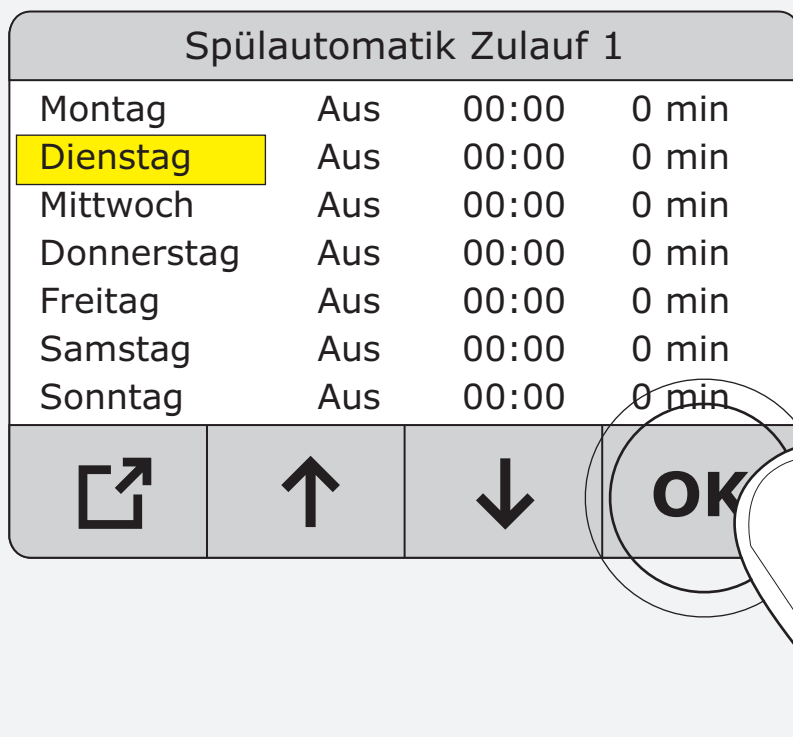
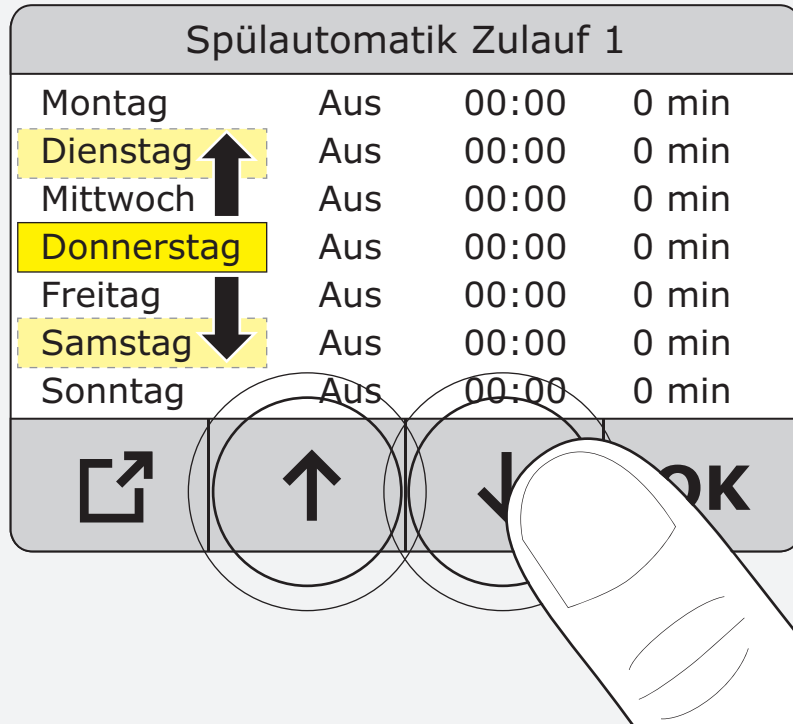


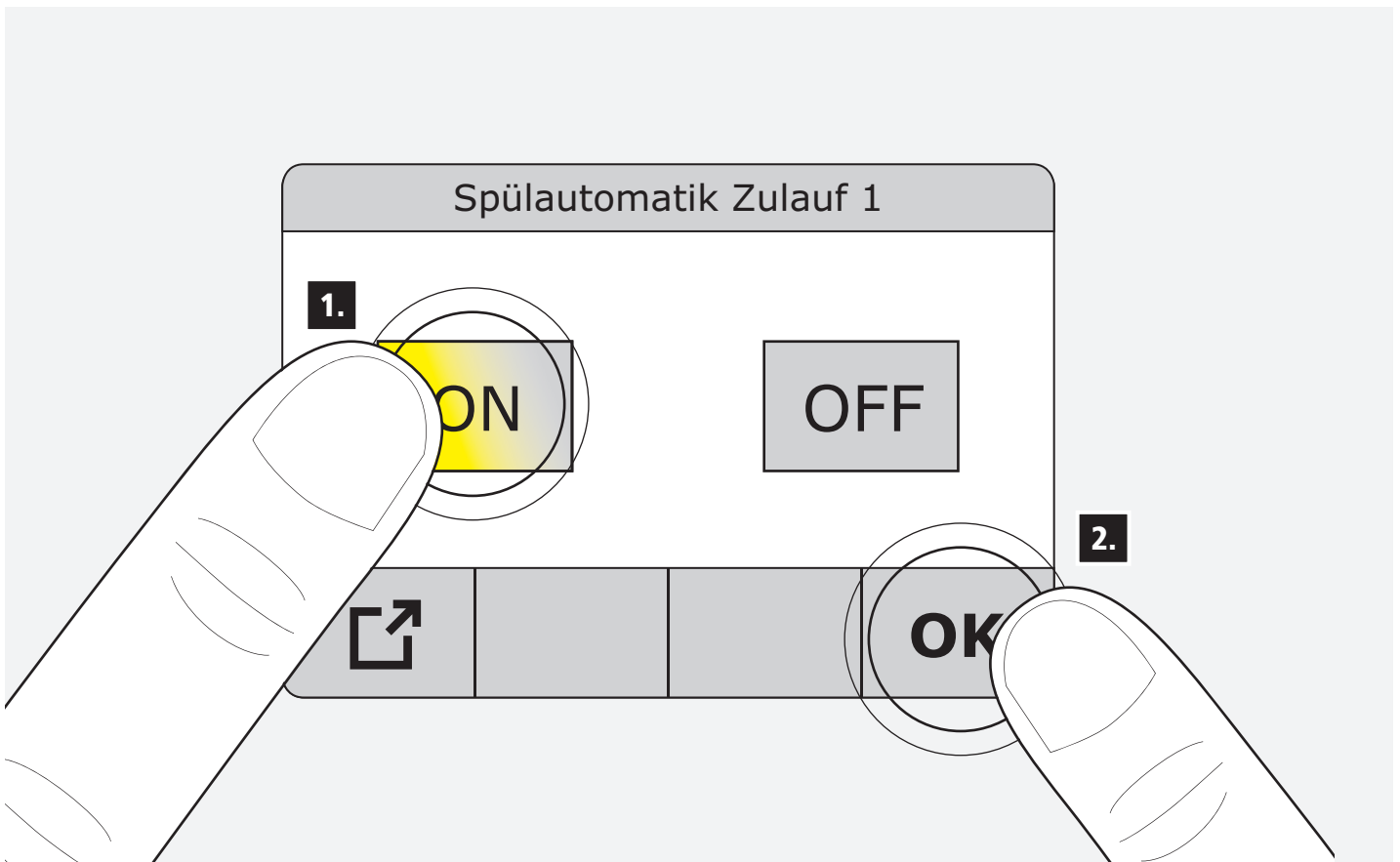


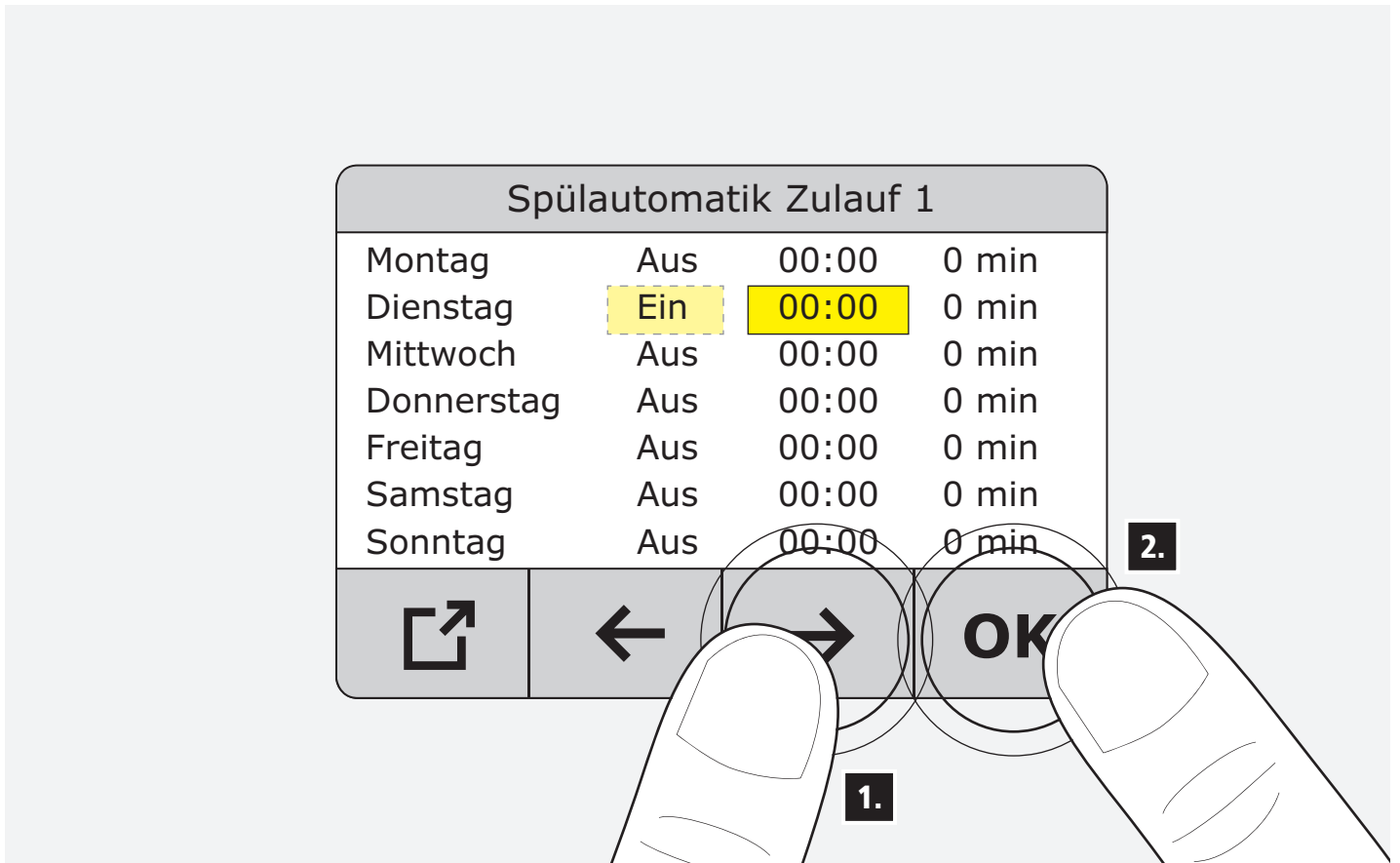
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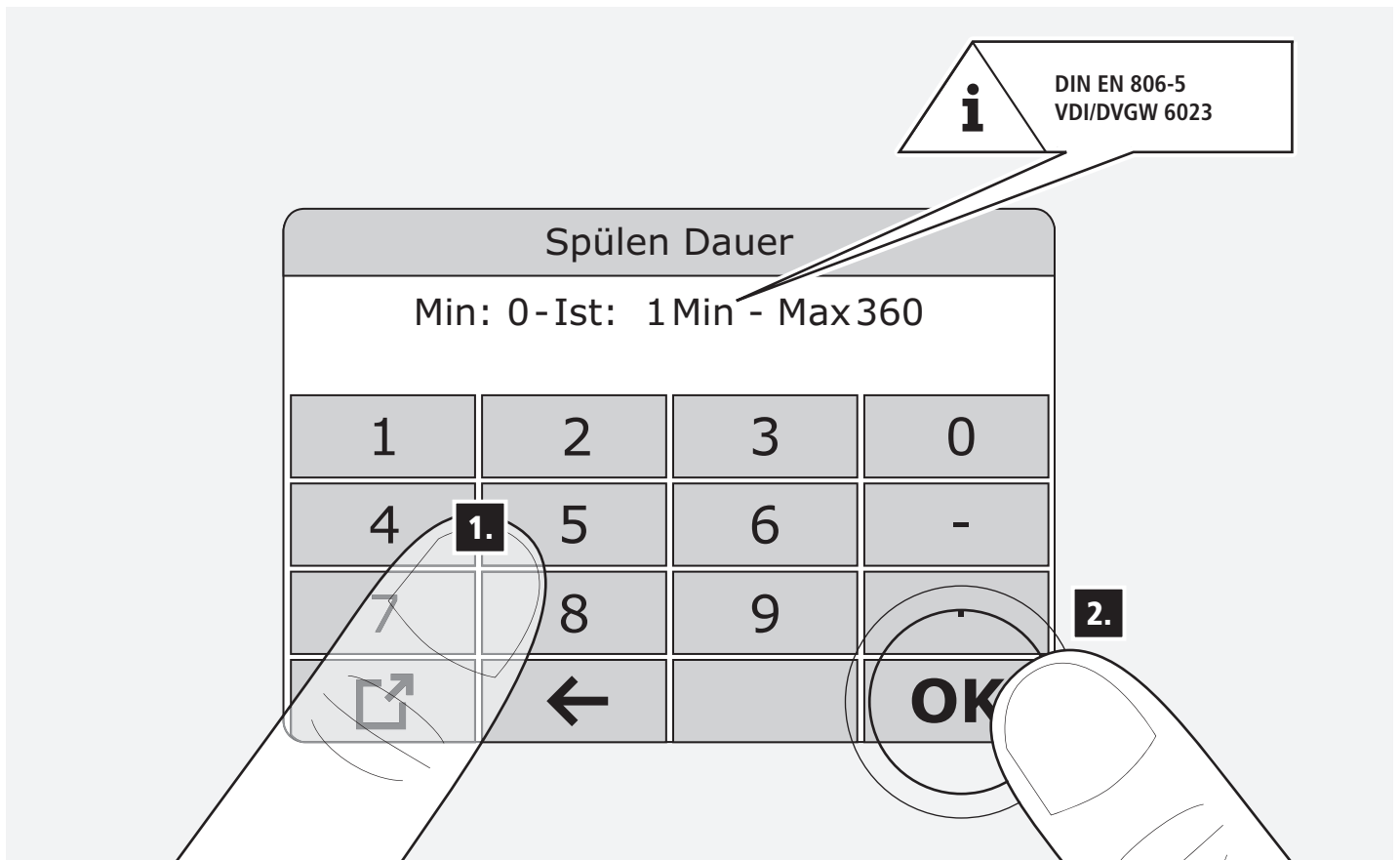


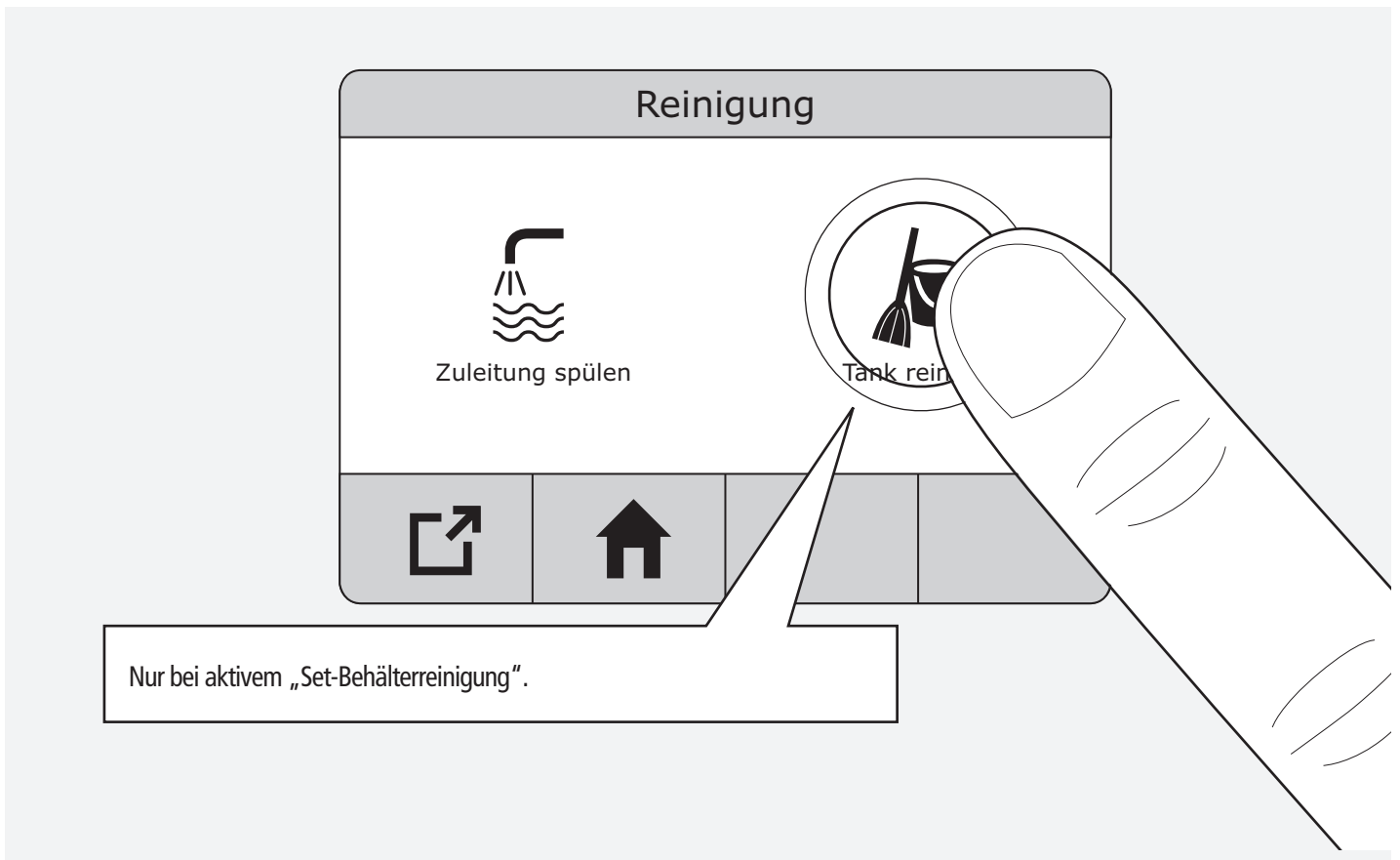
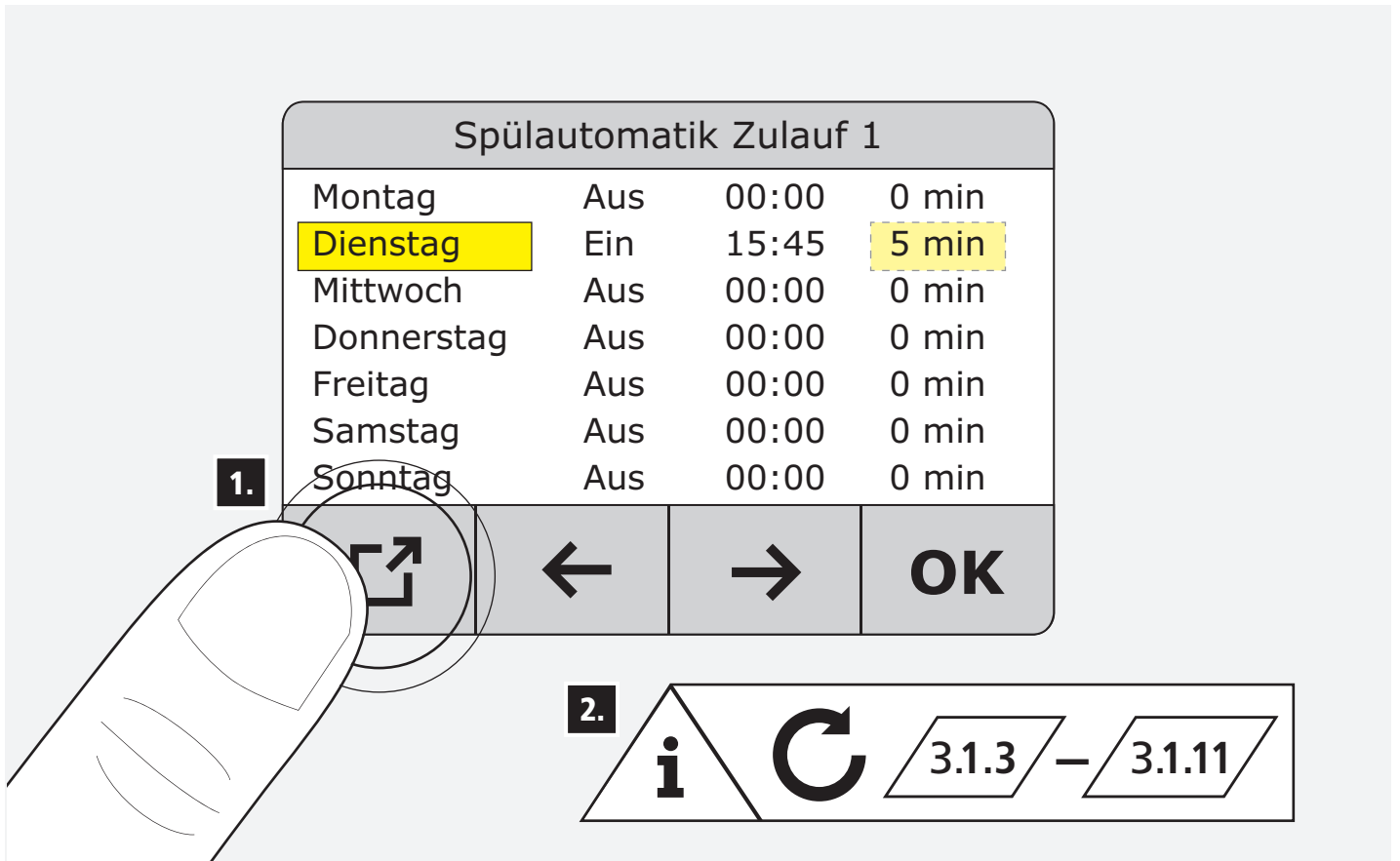


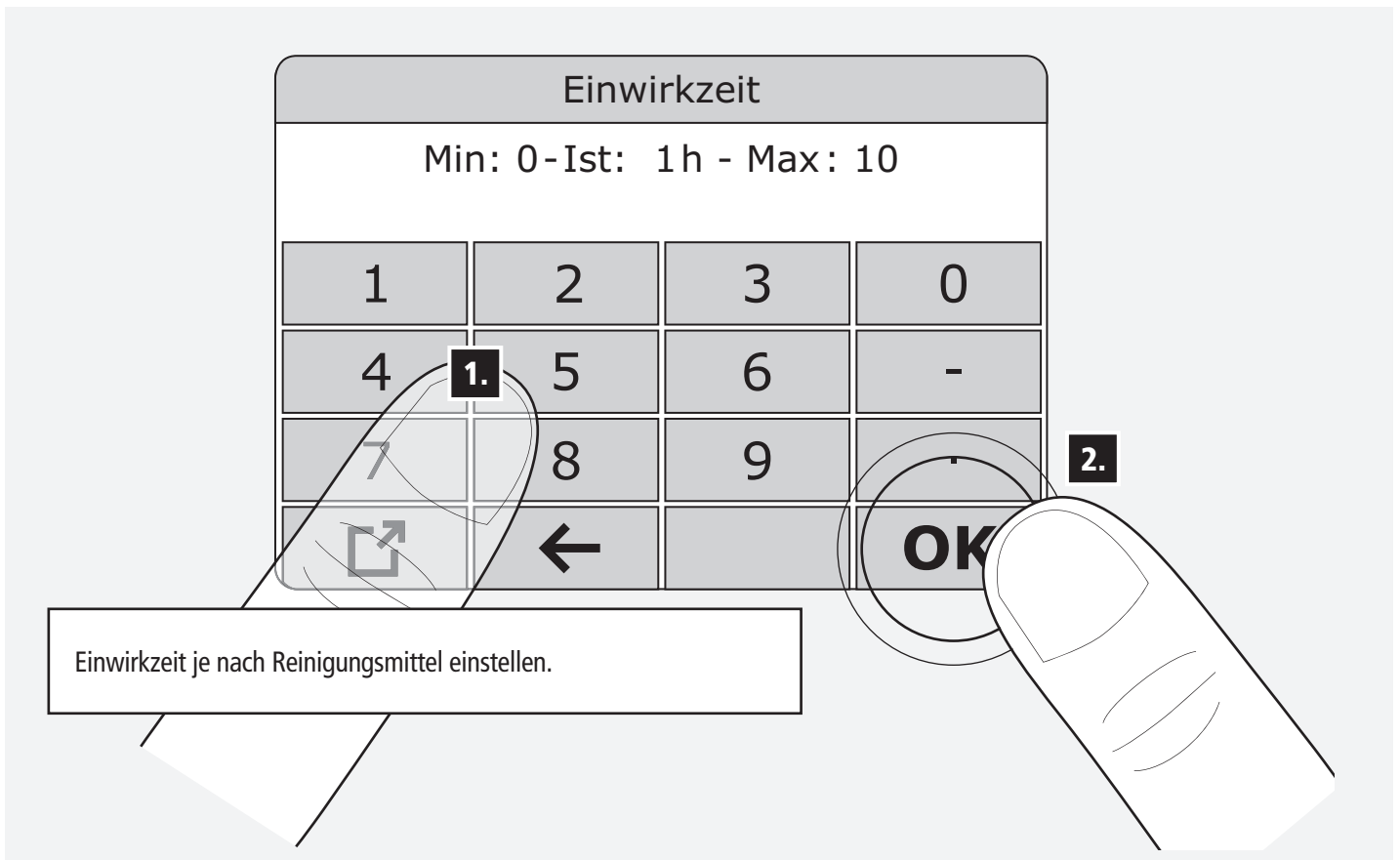
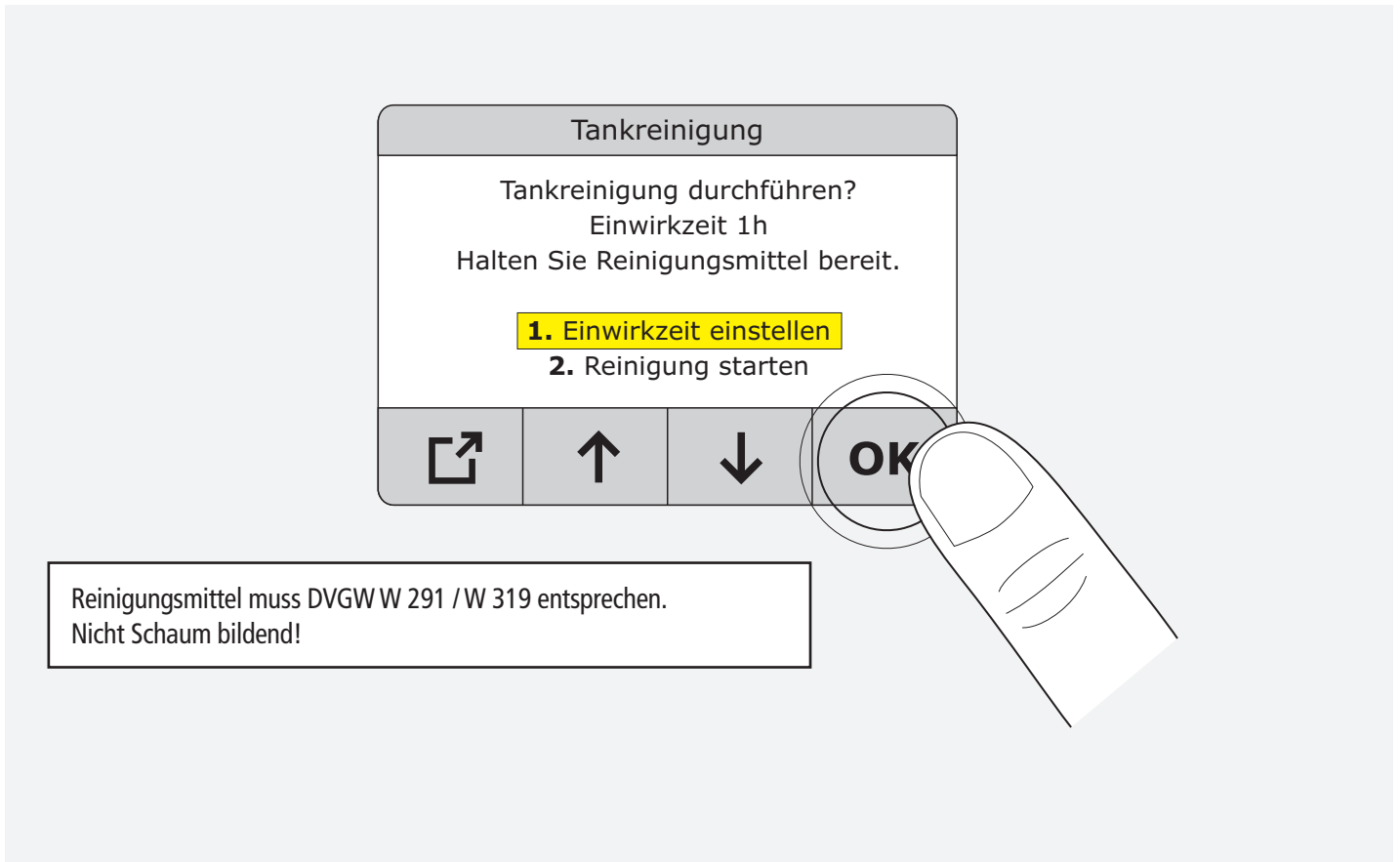


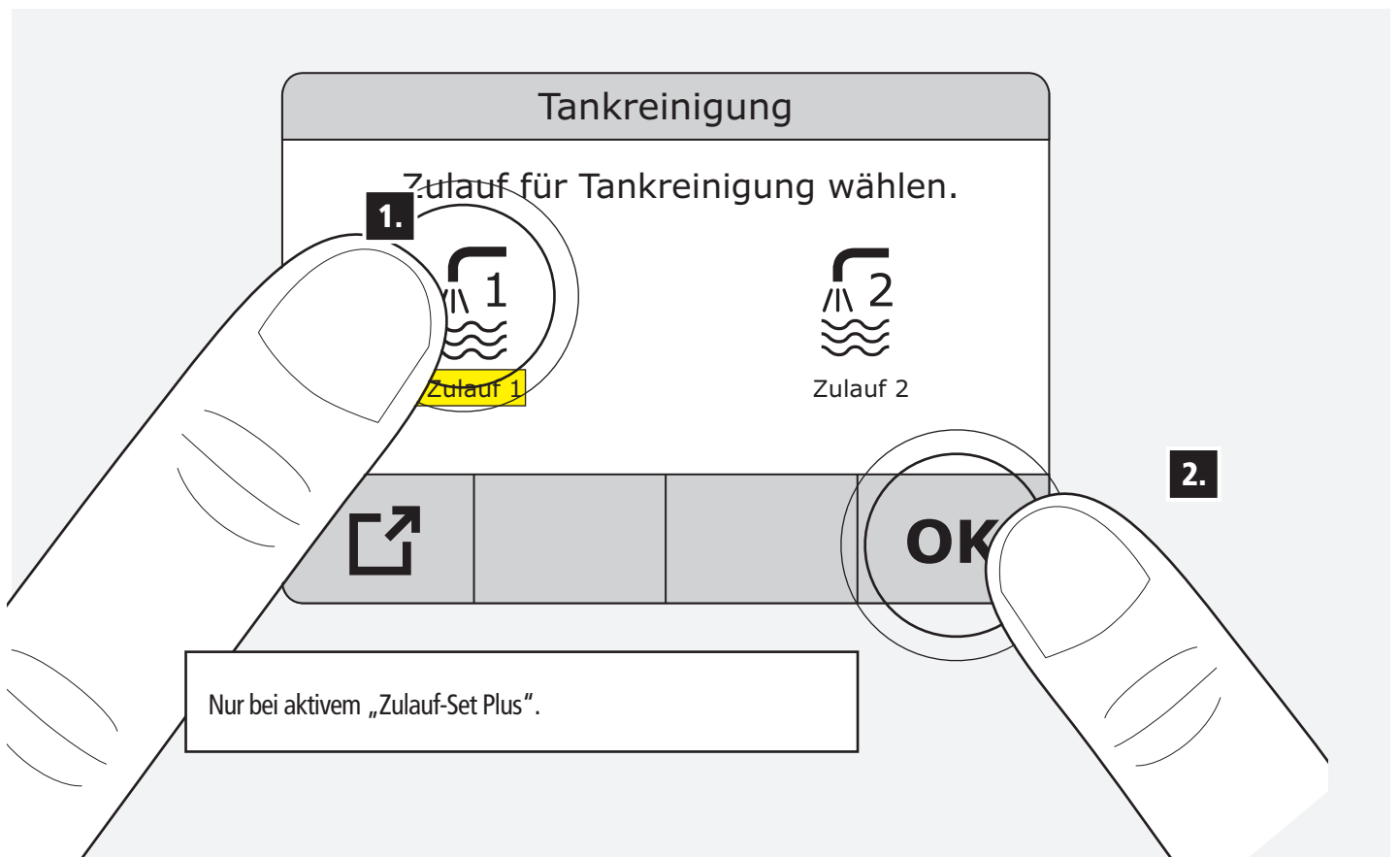
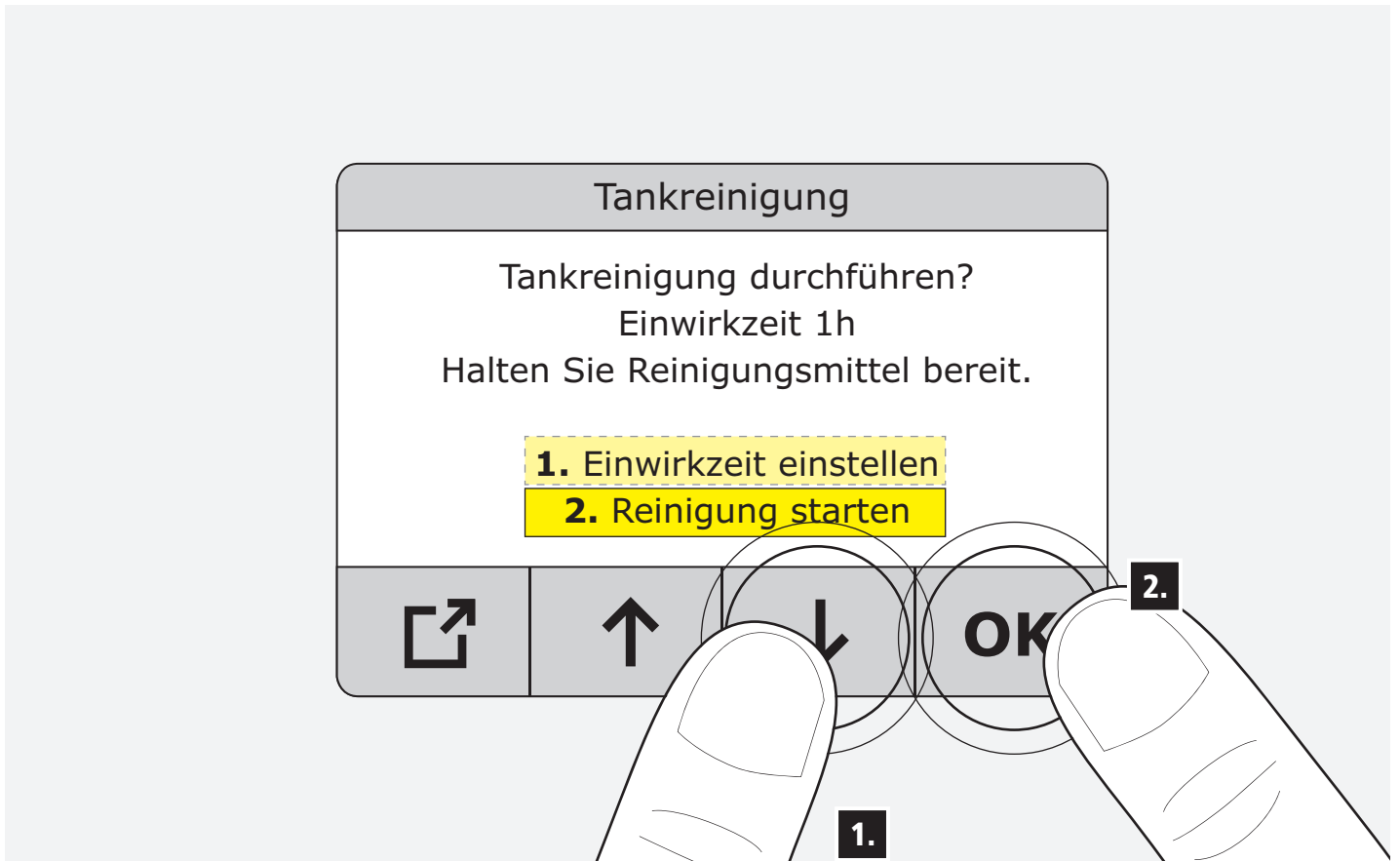


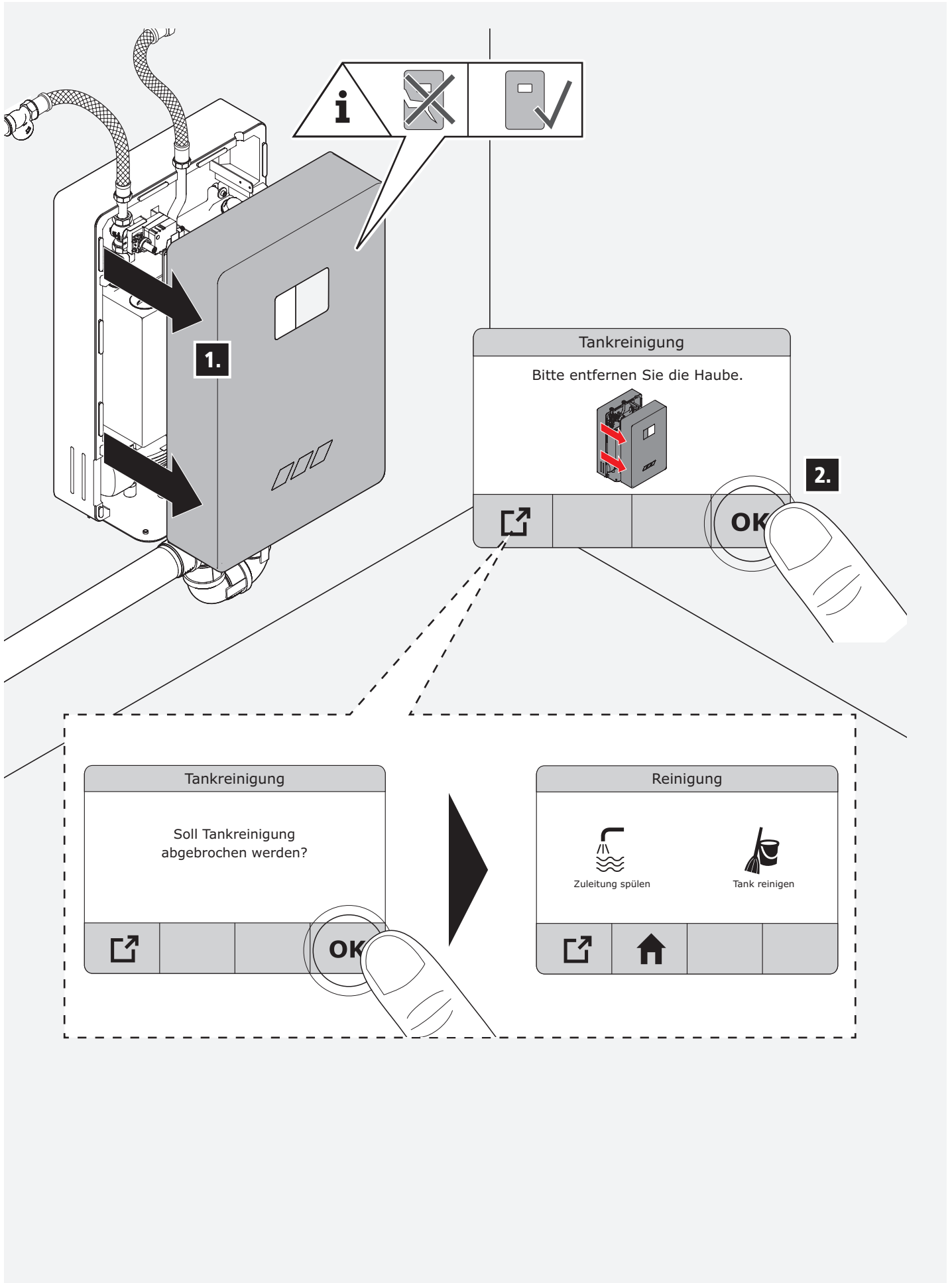


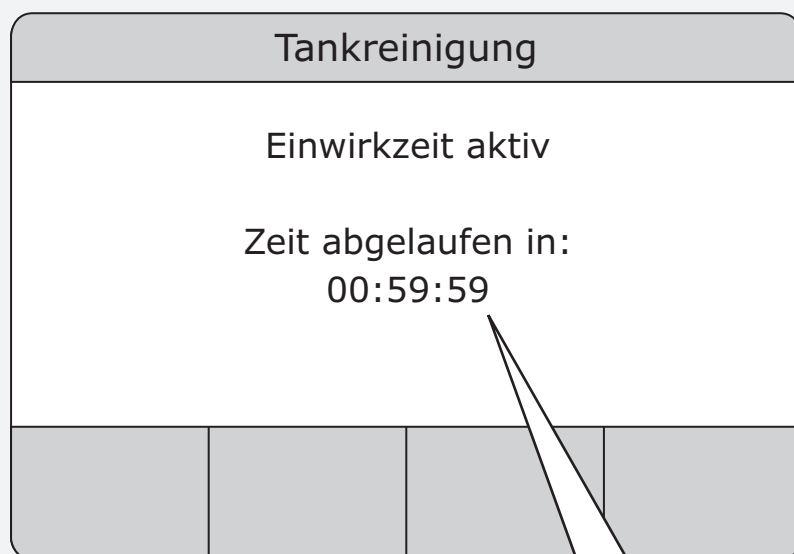
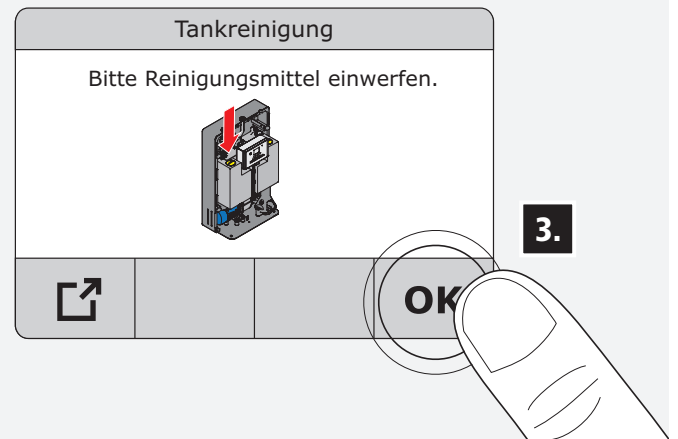
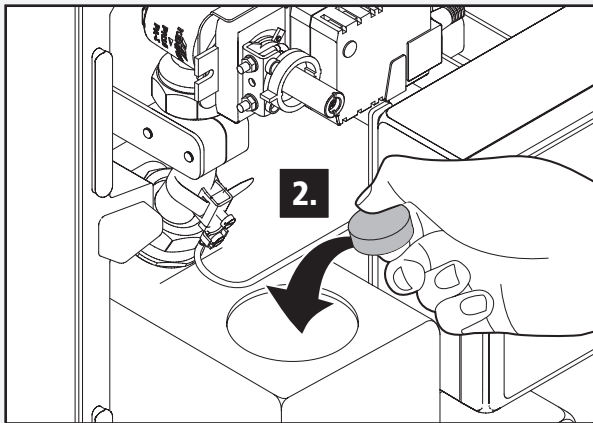
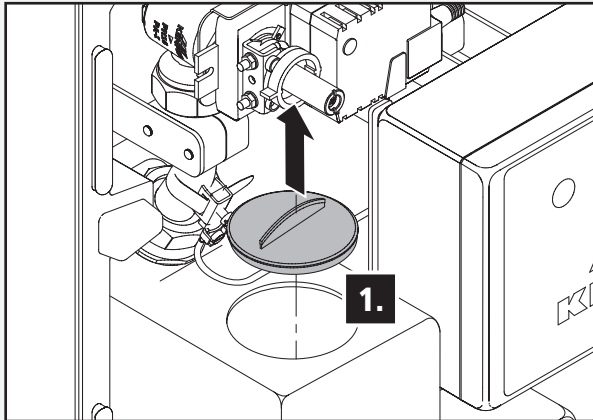




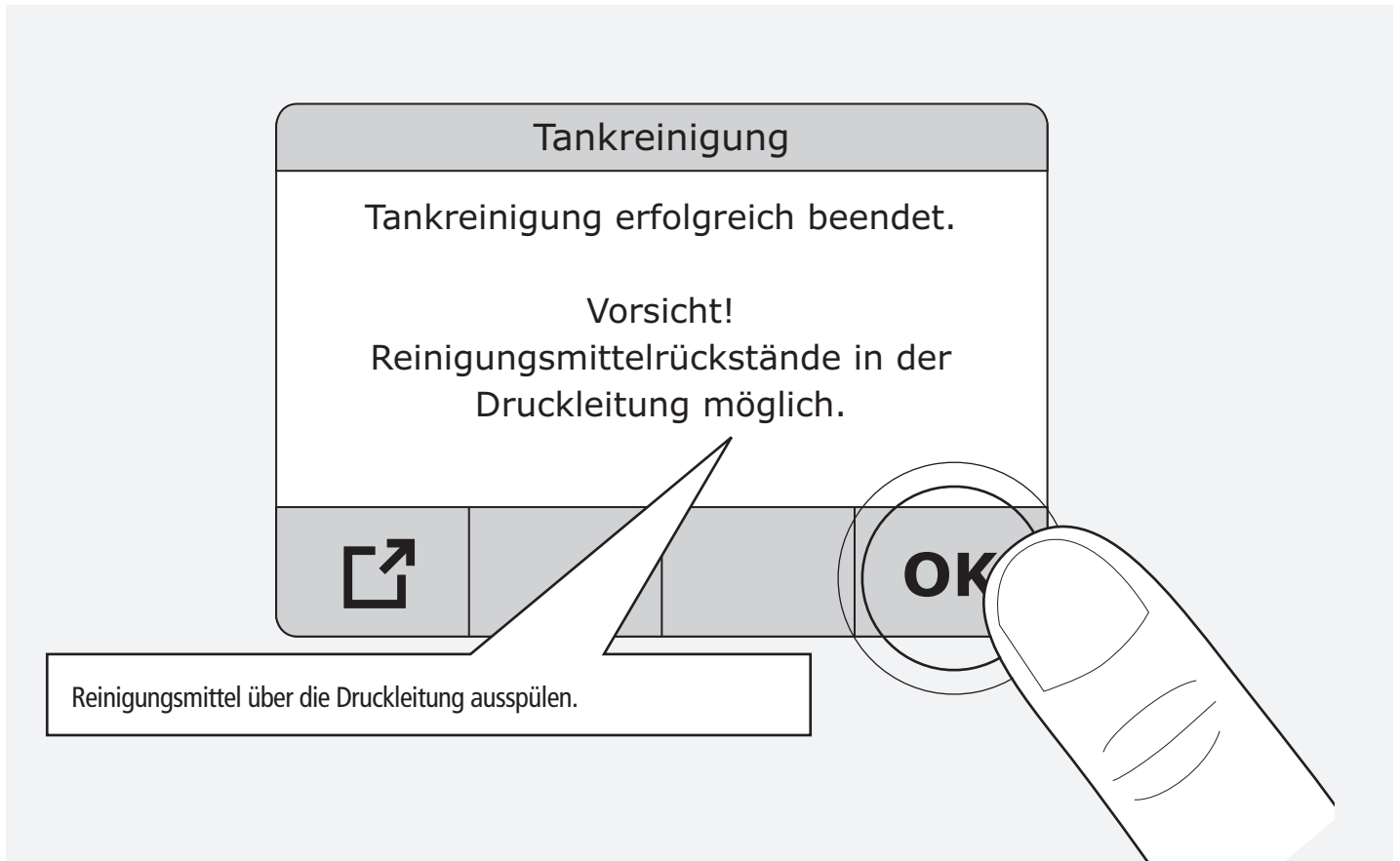


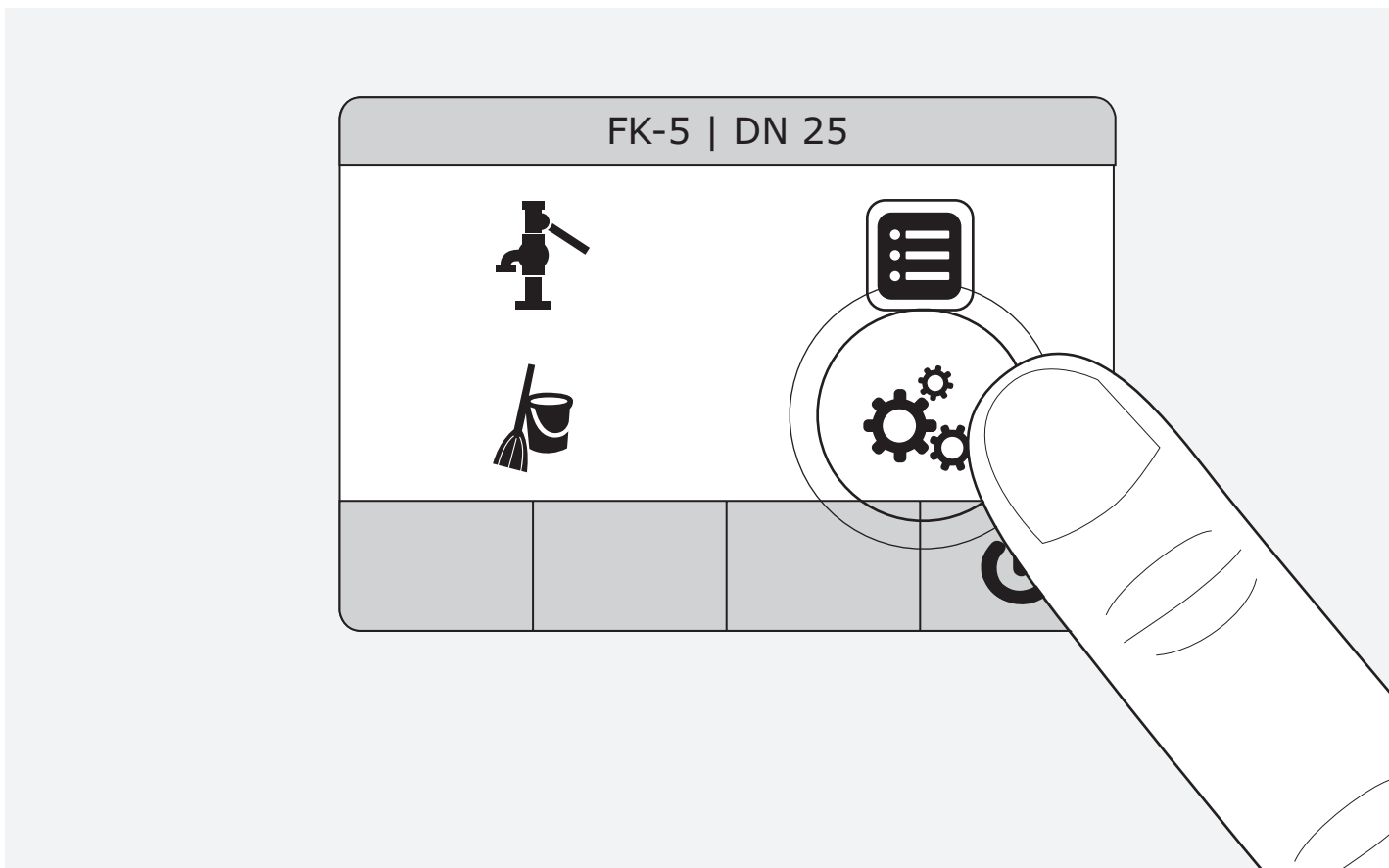




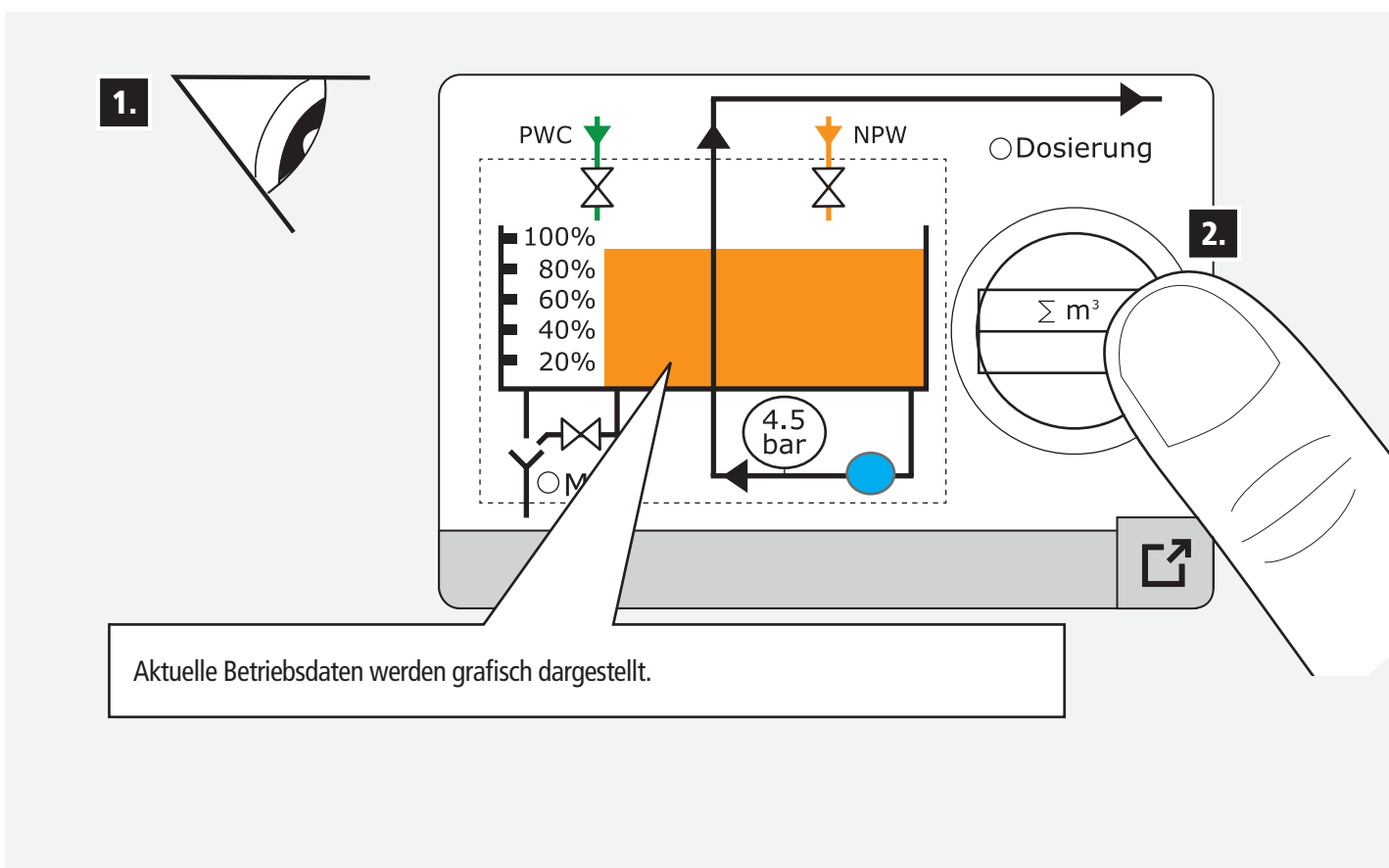


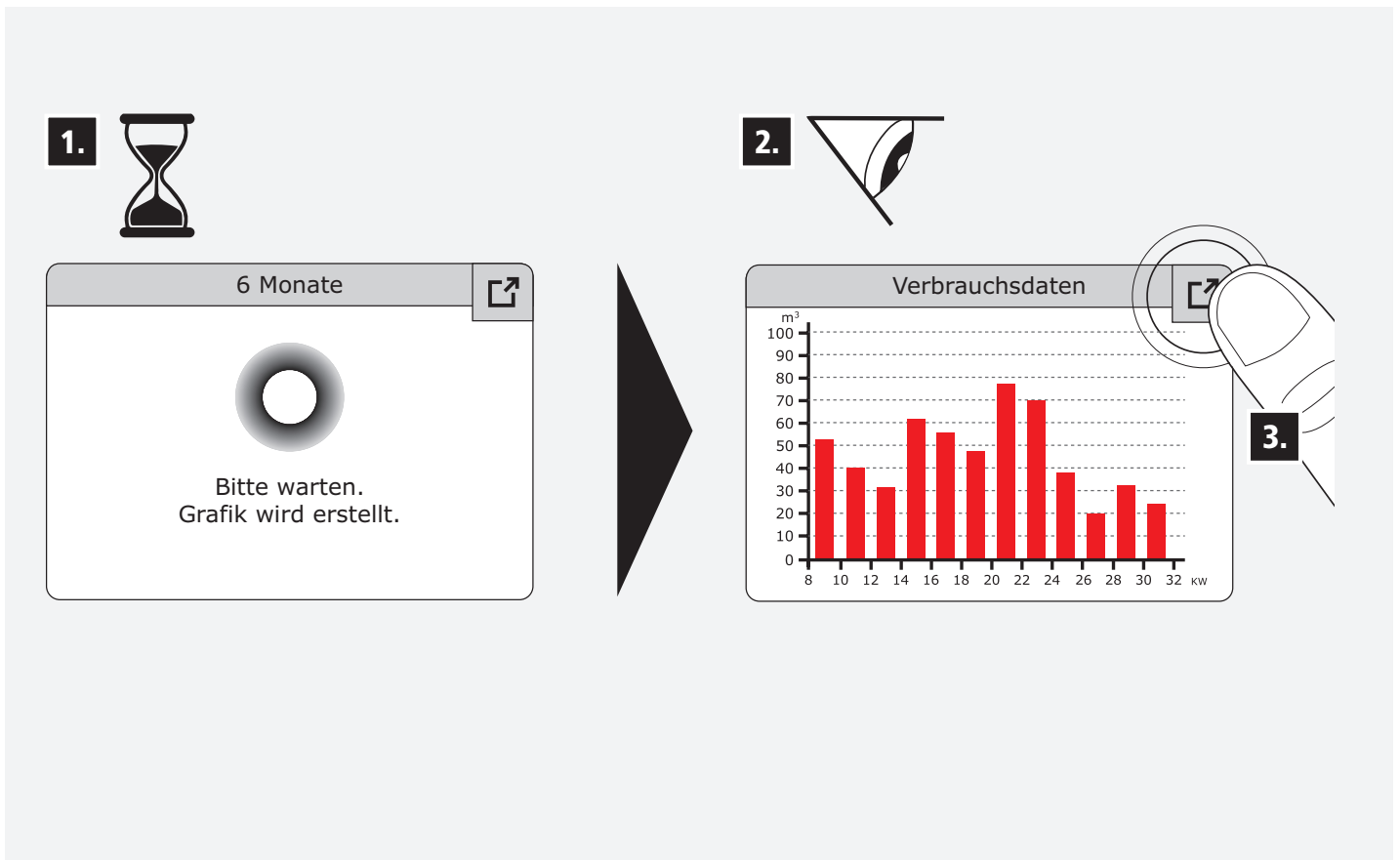
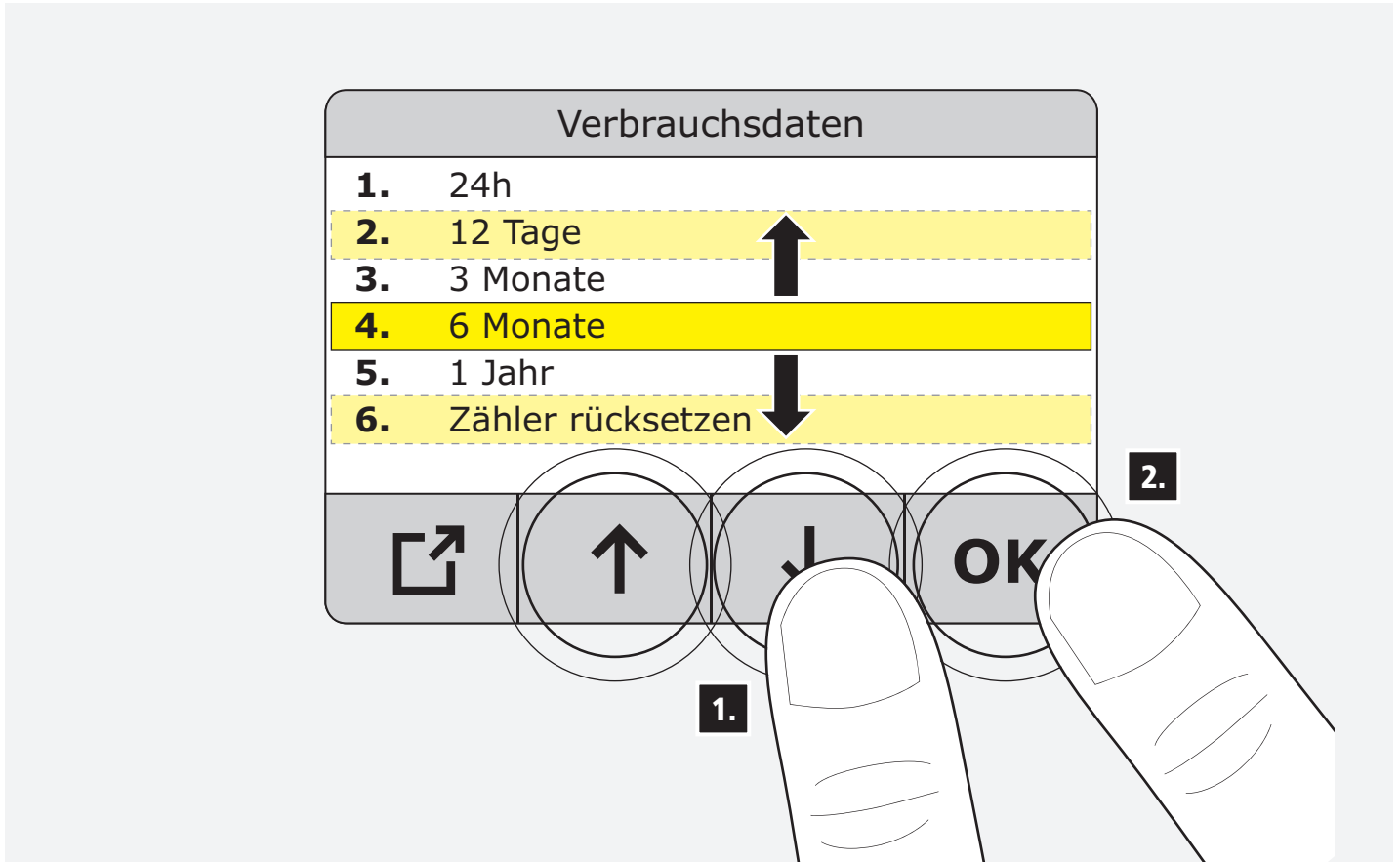
Das Gerät ist für die Dauer der Einwirkzeit gesperrt.

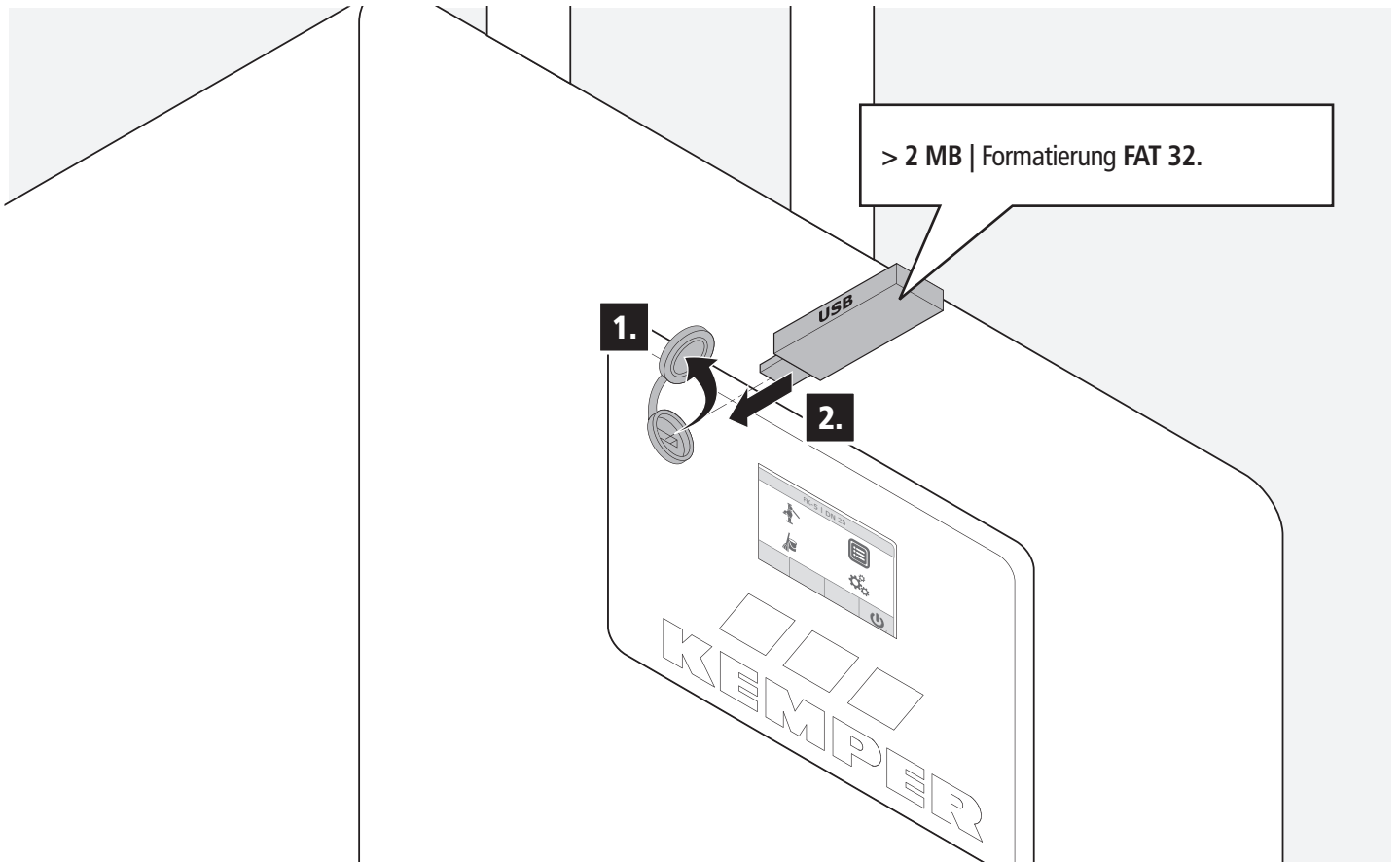




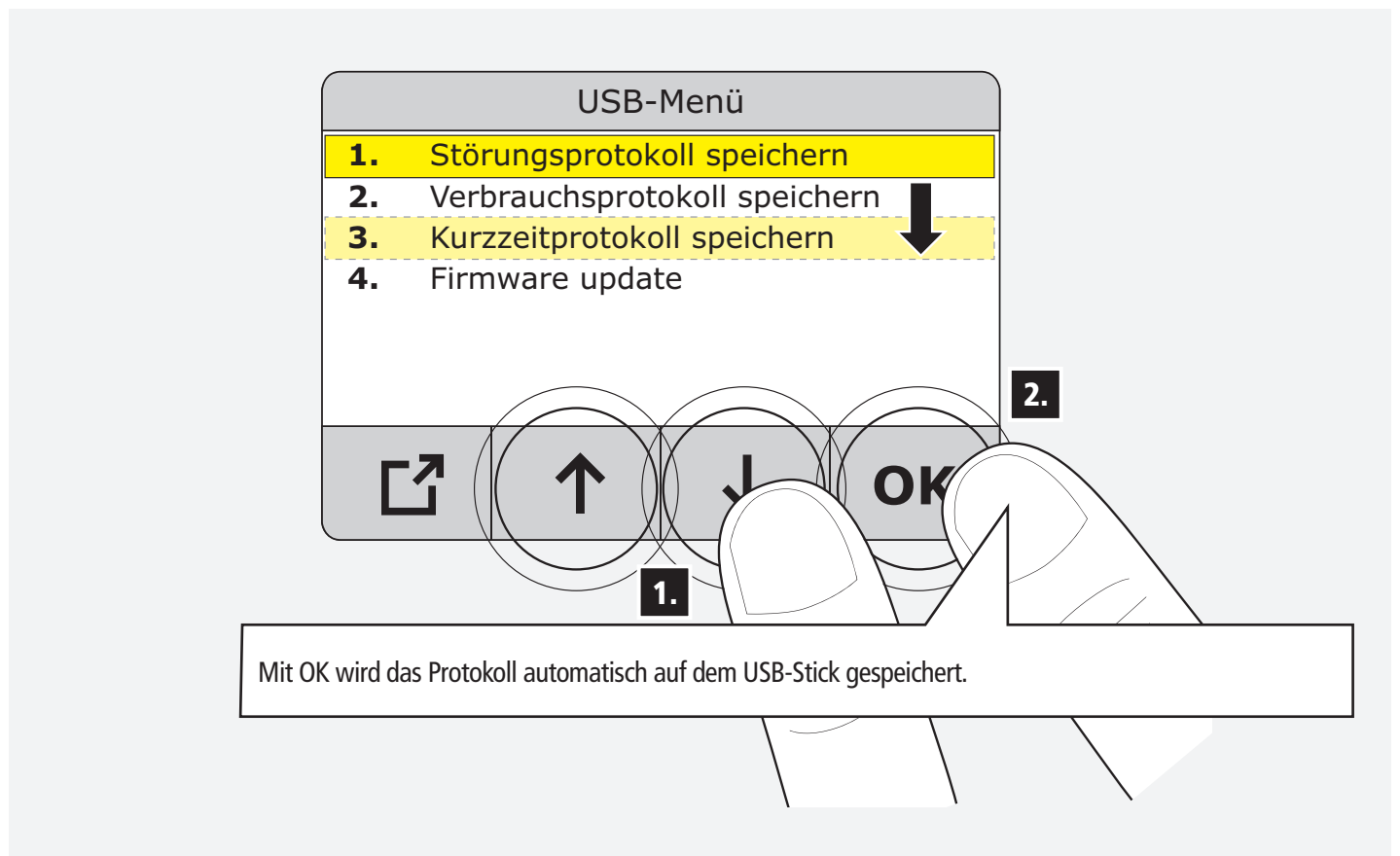
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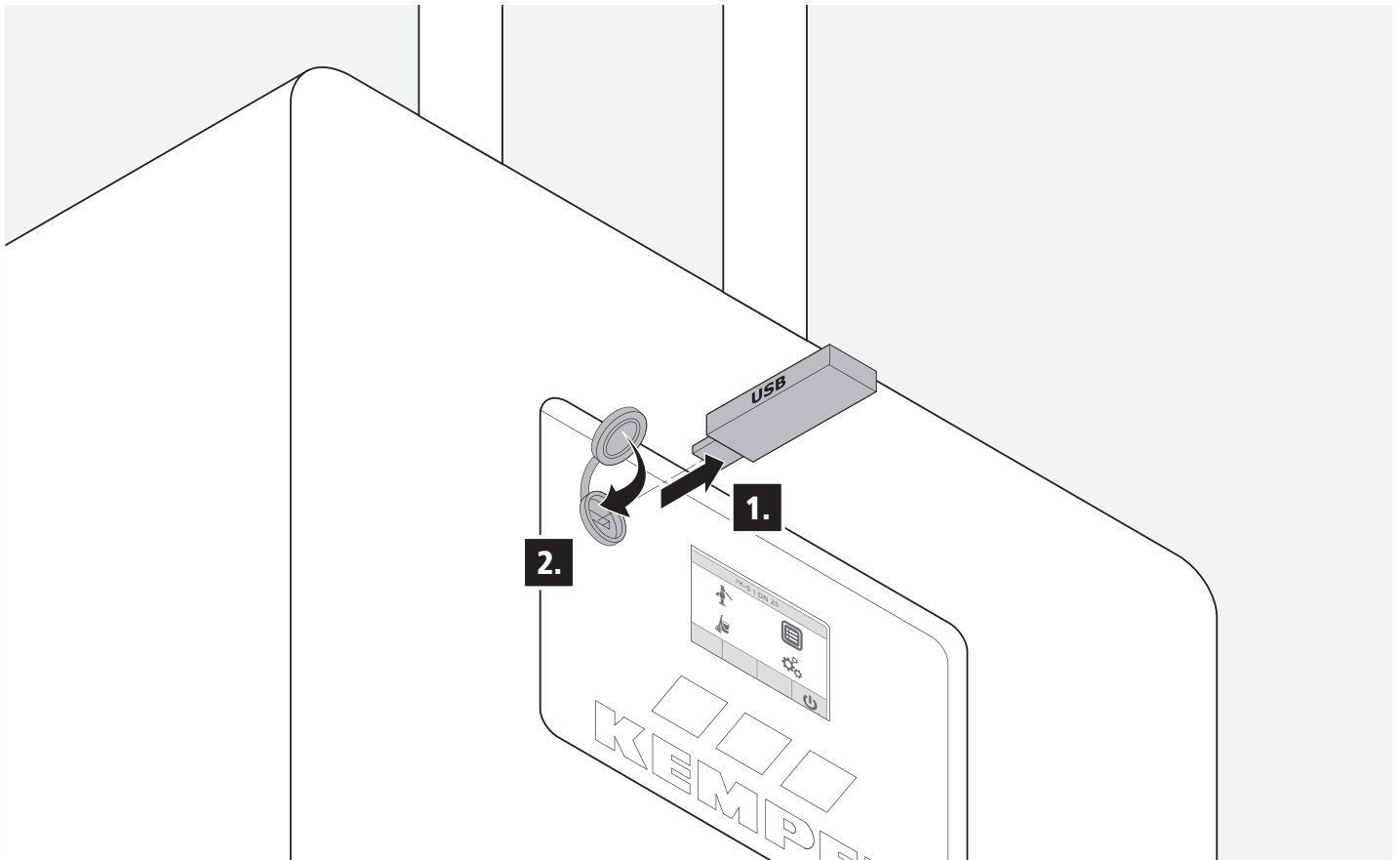
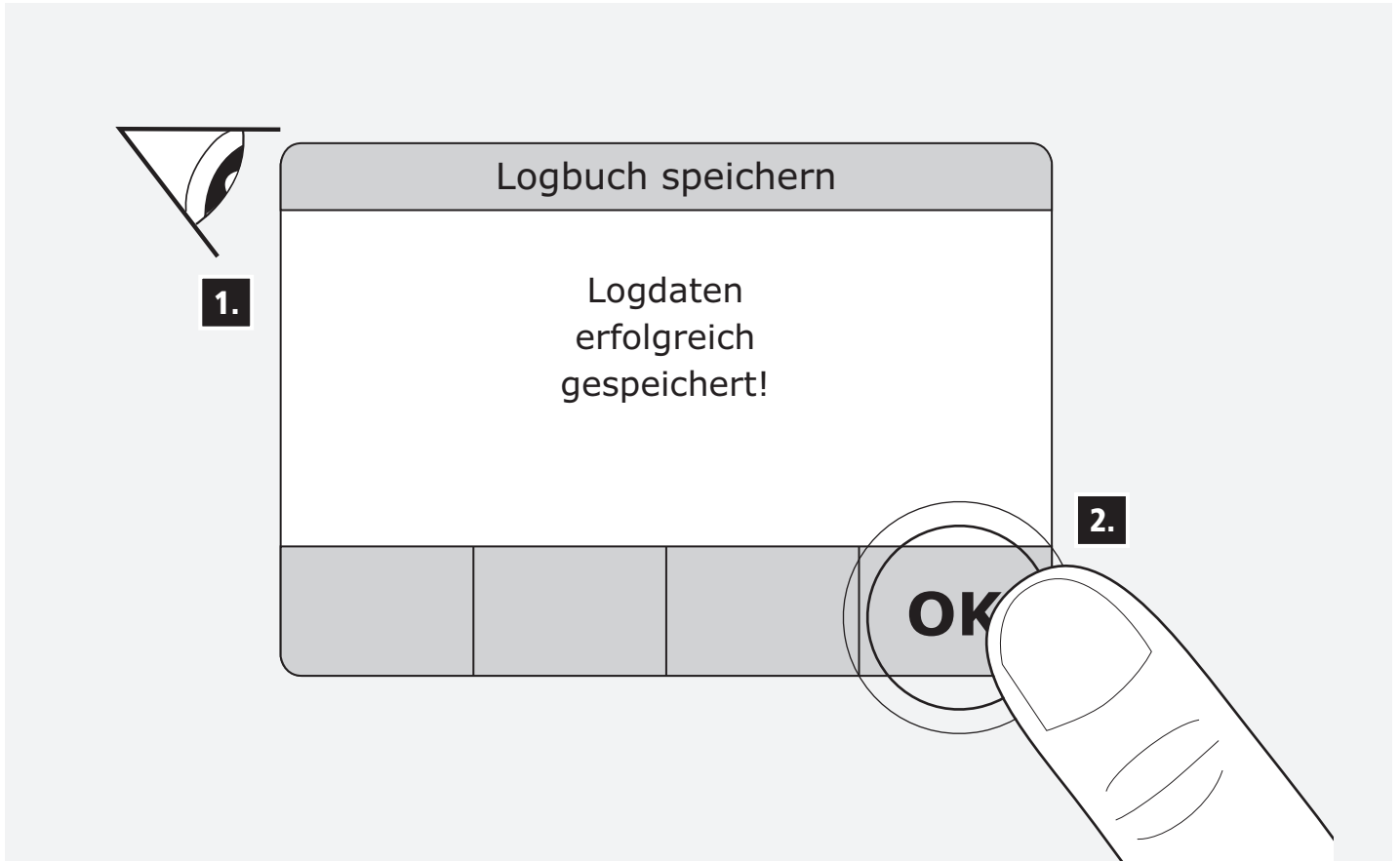


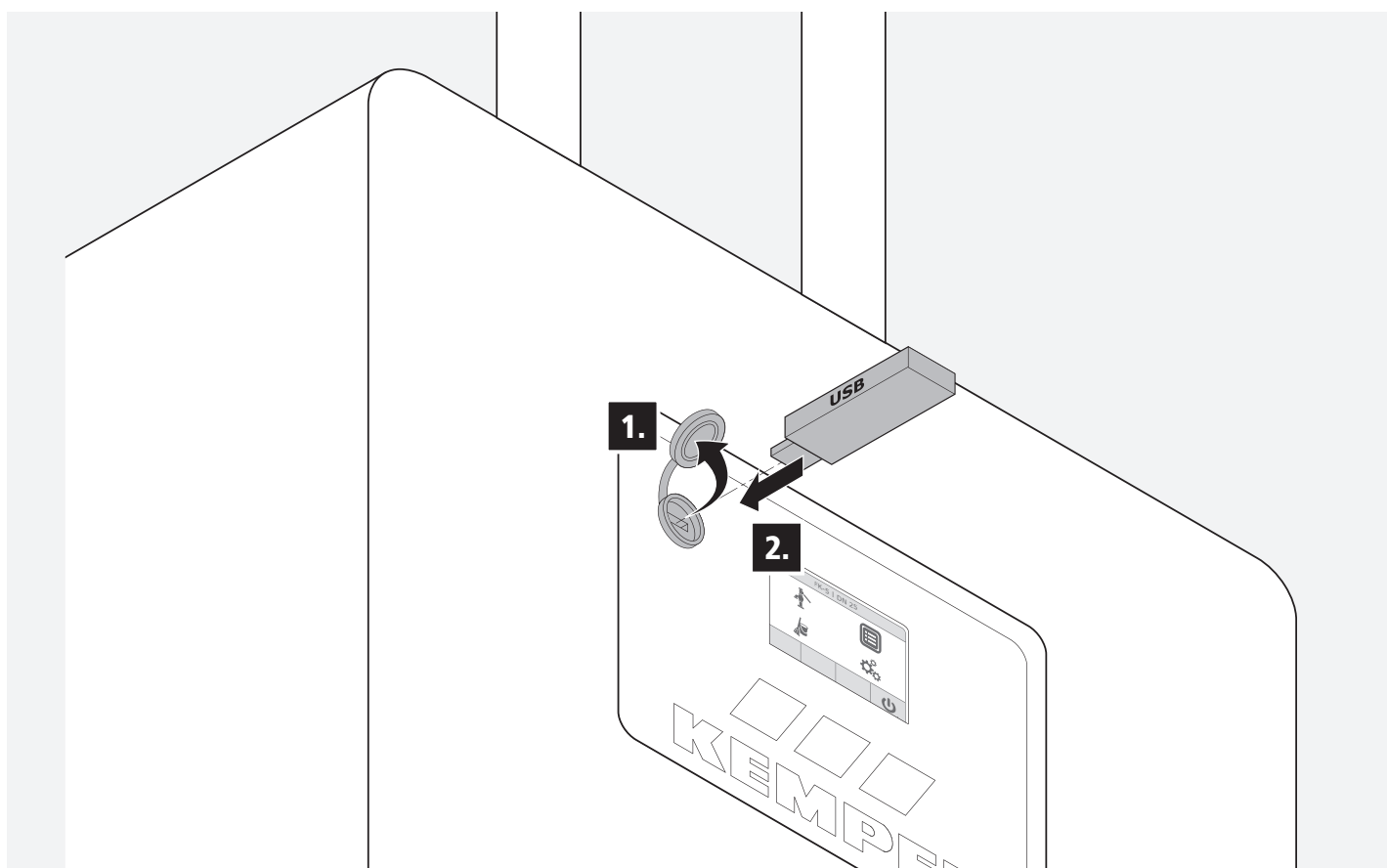
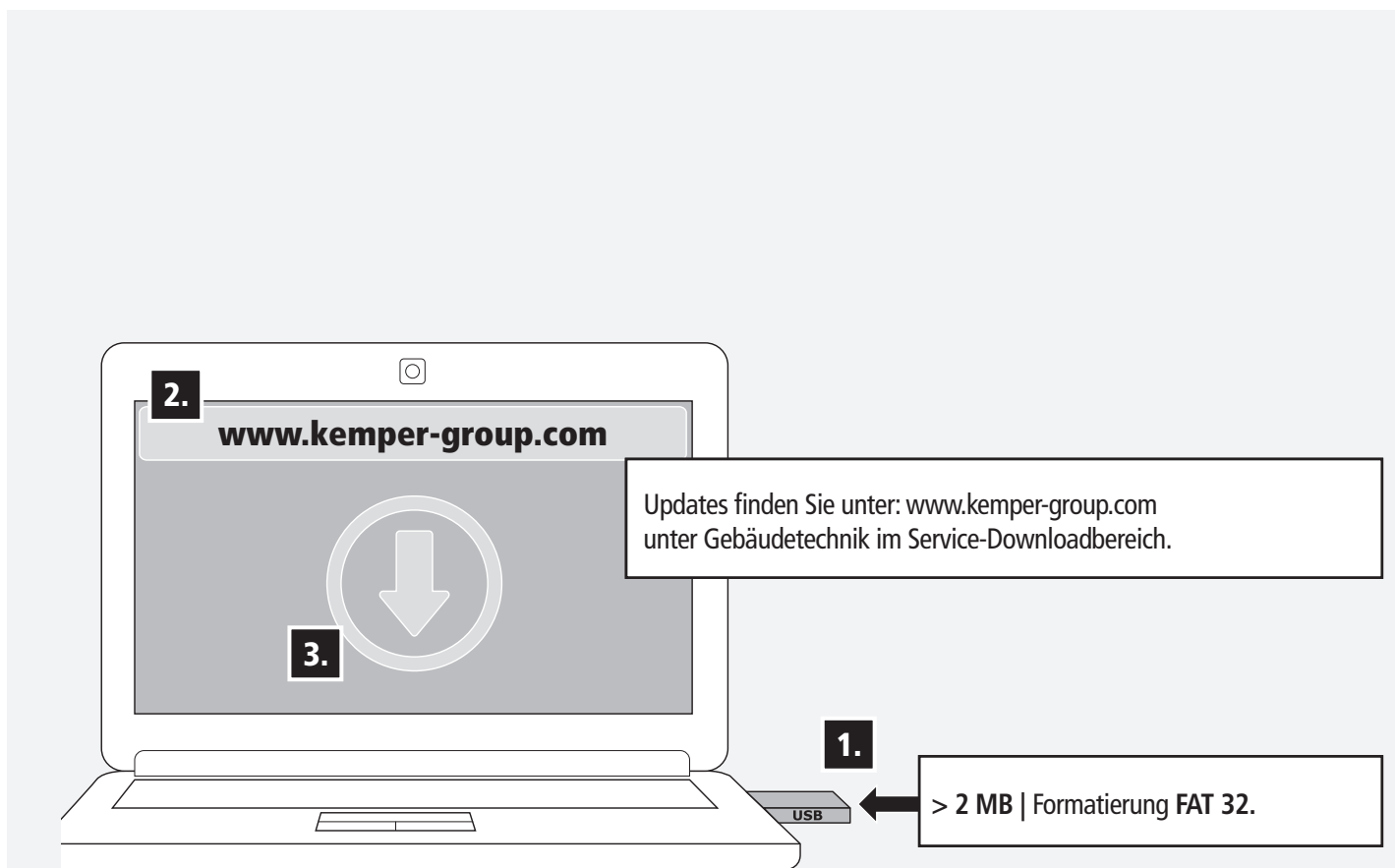


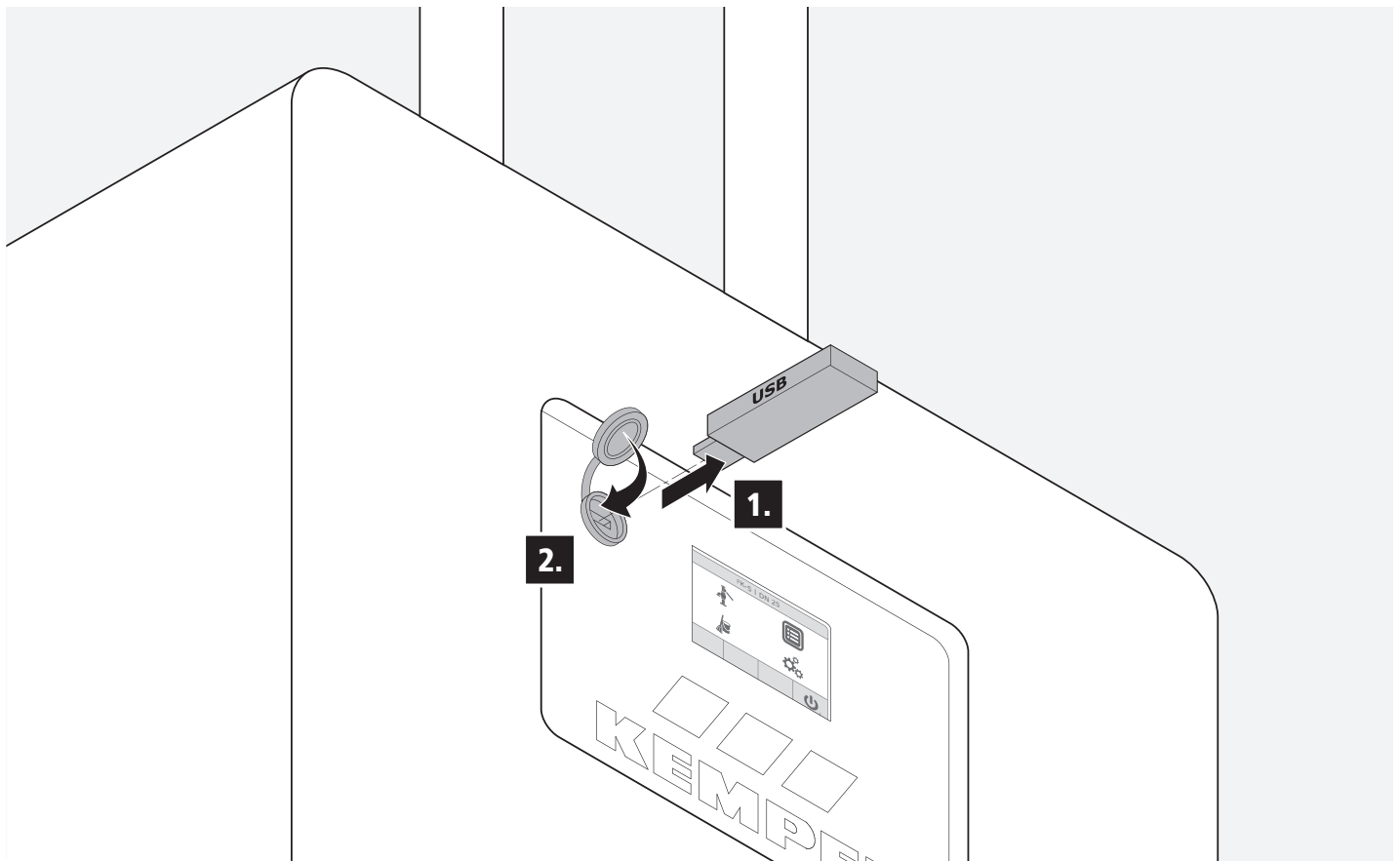
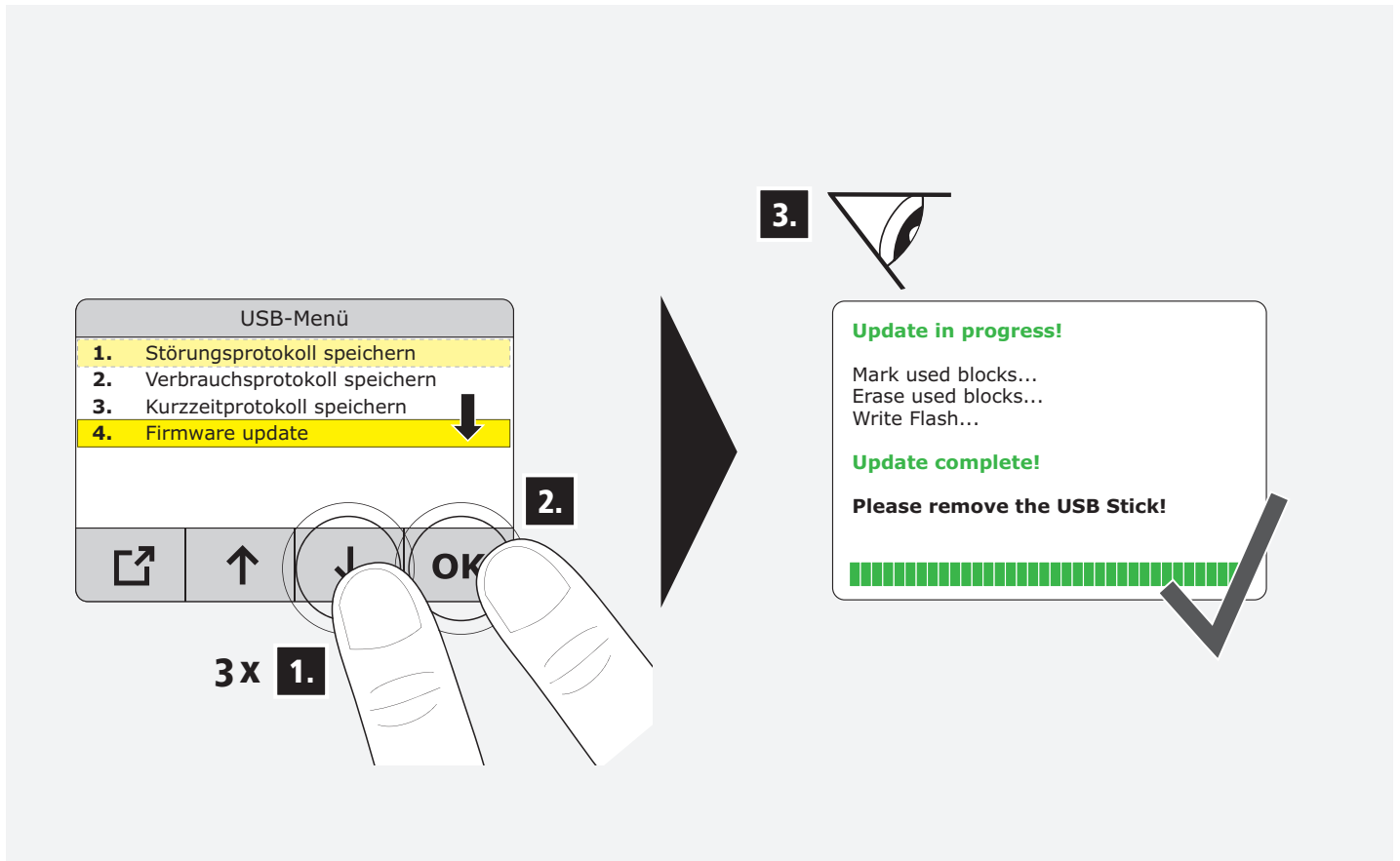


5.1











04
Akkuwechsel erforderlich.
Bedienungsanleitung beachten.



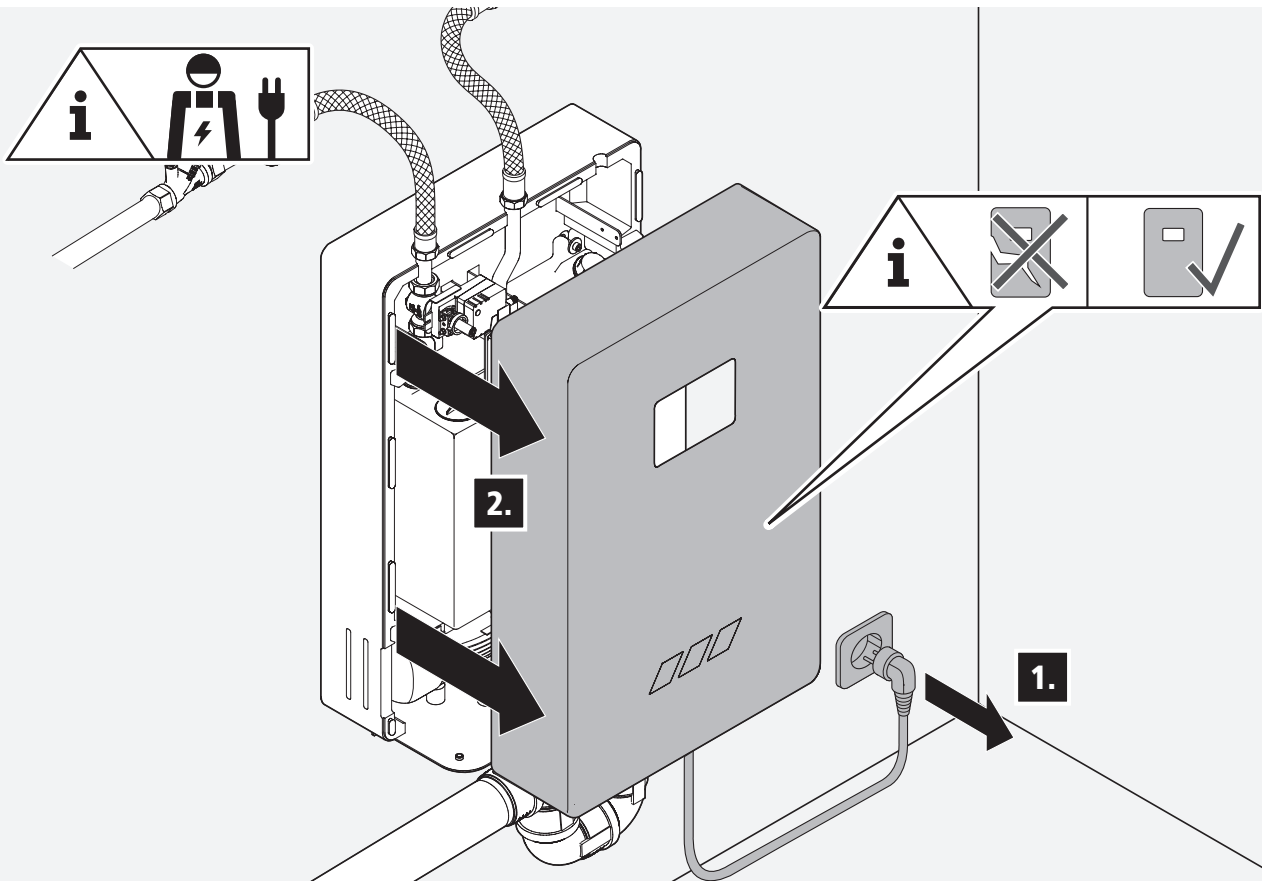
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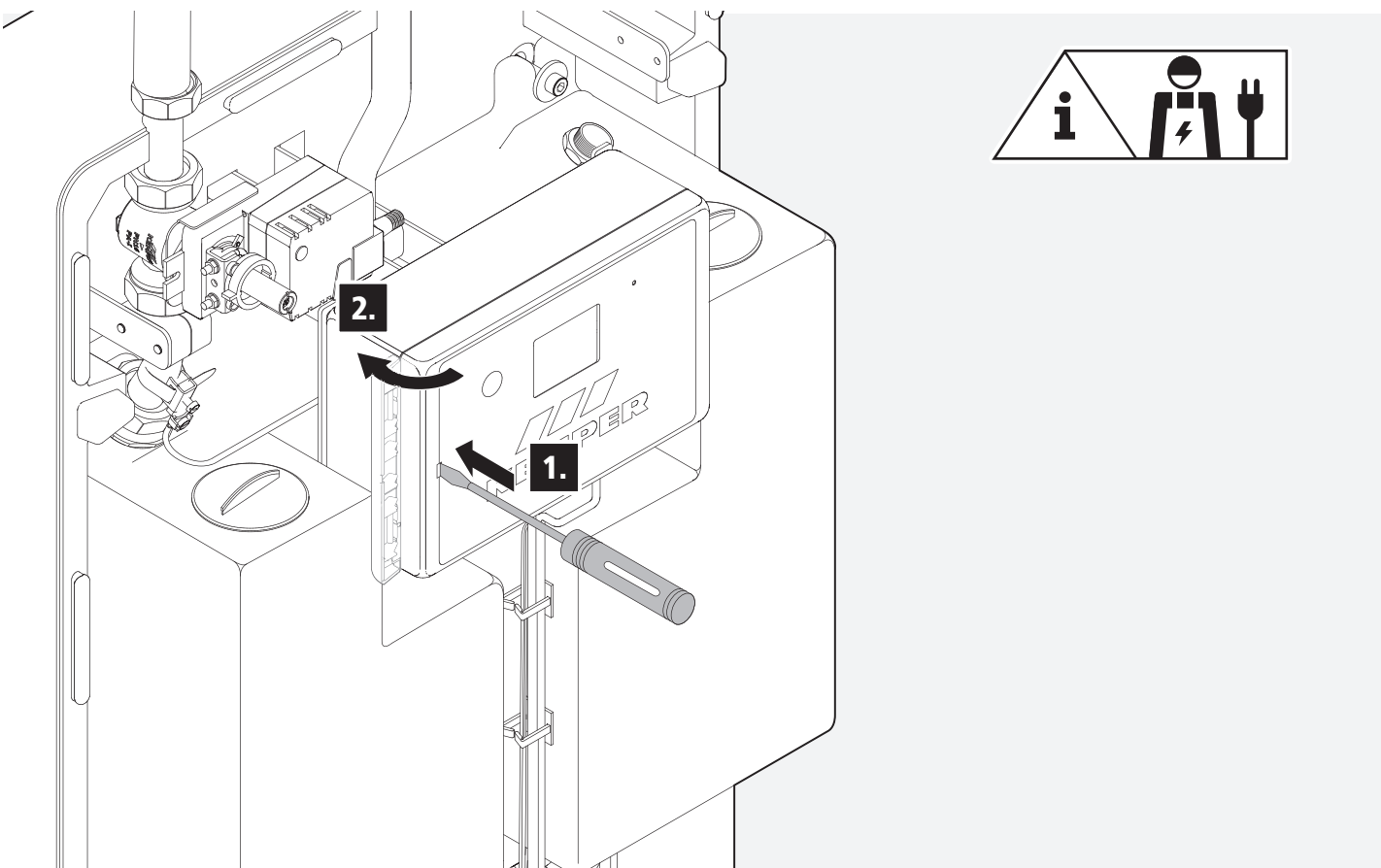
06
Akkufüllstand gering.



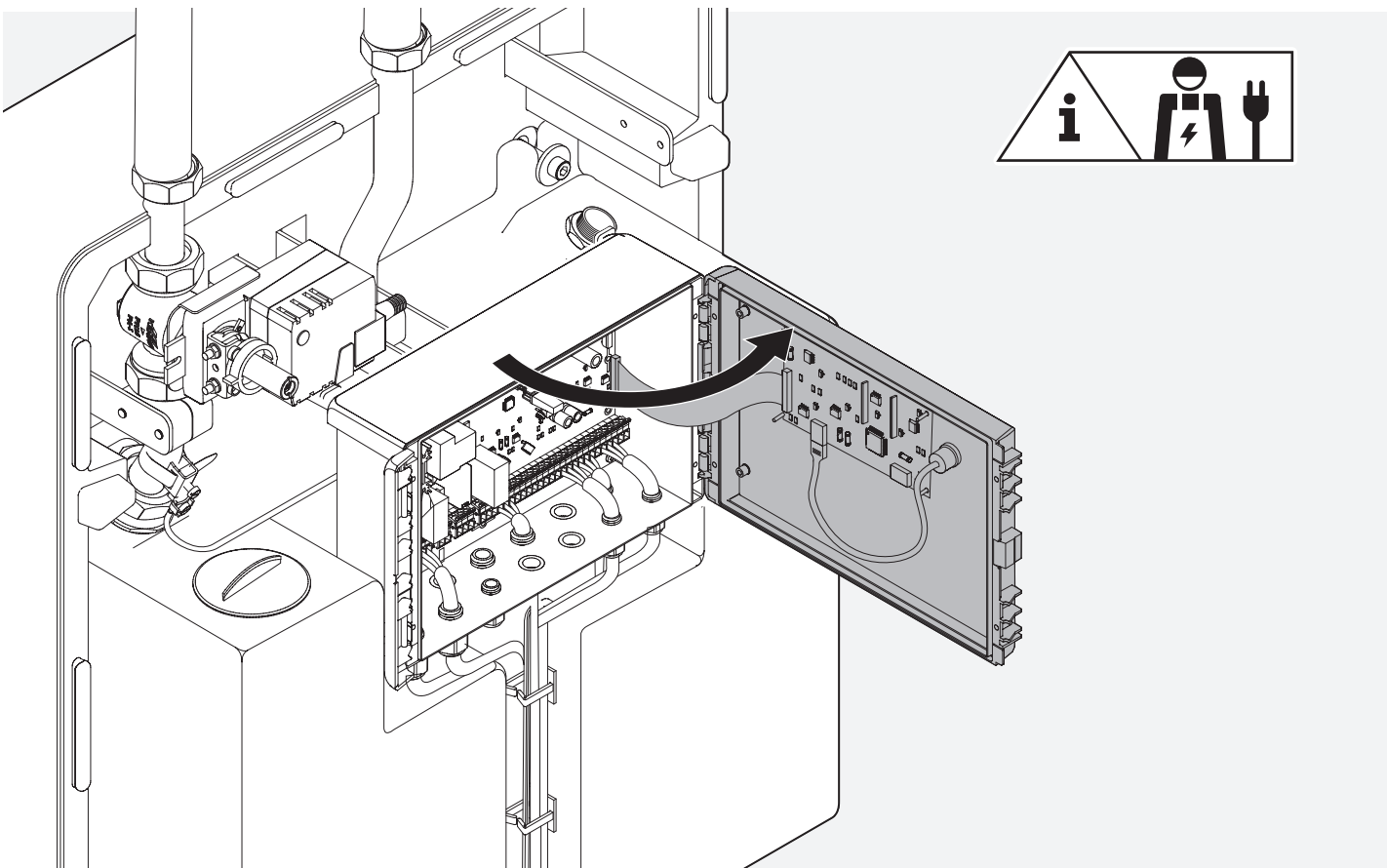
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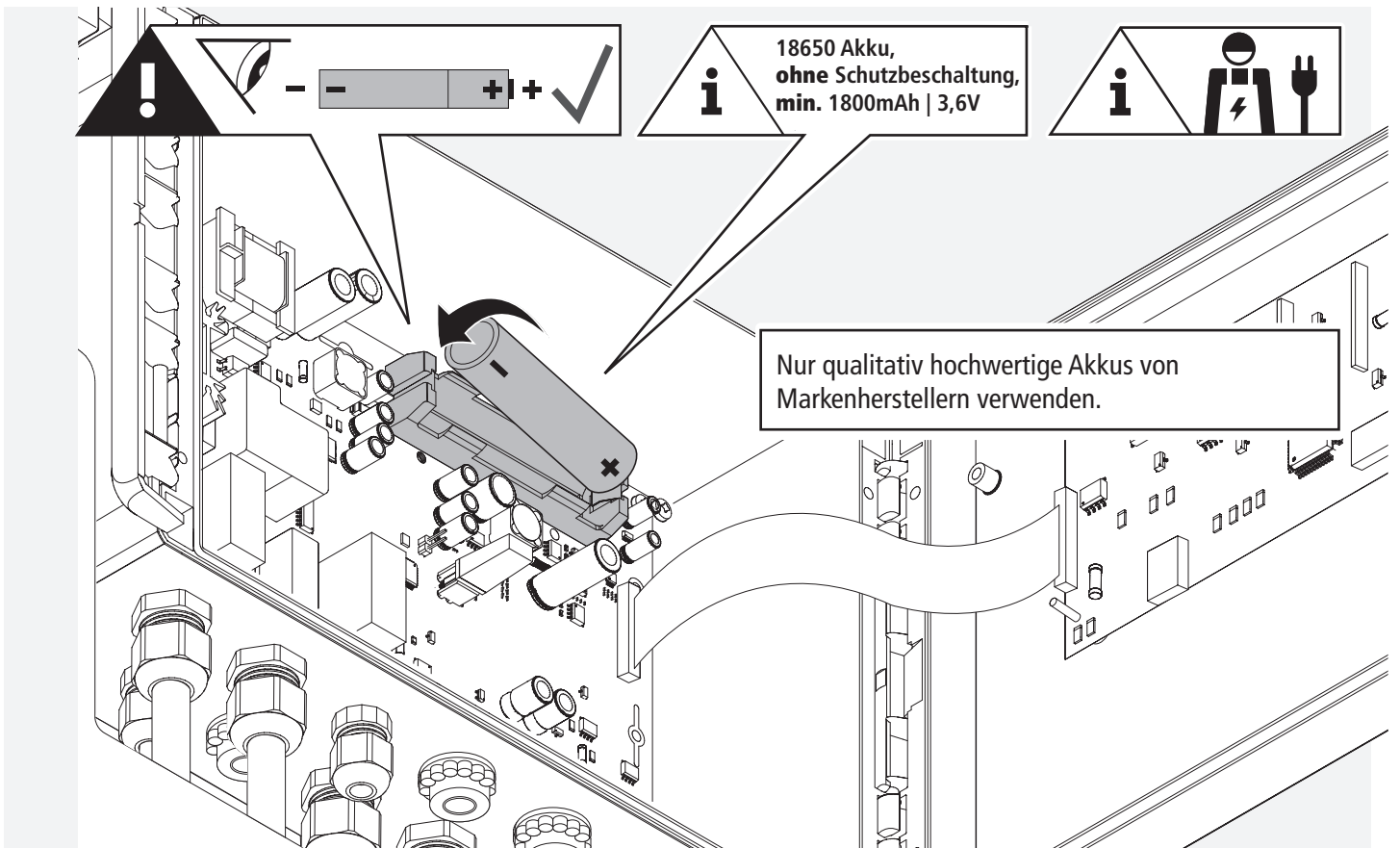
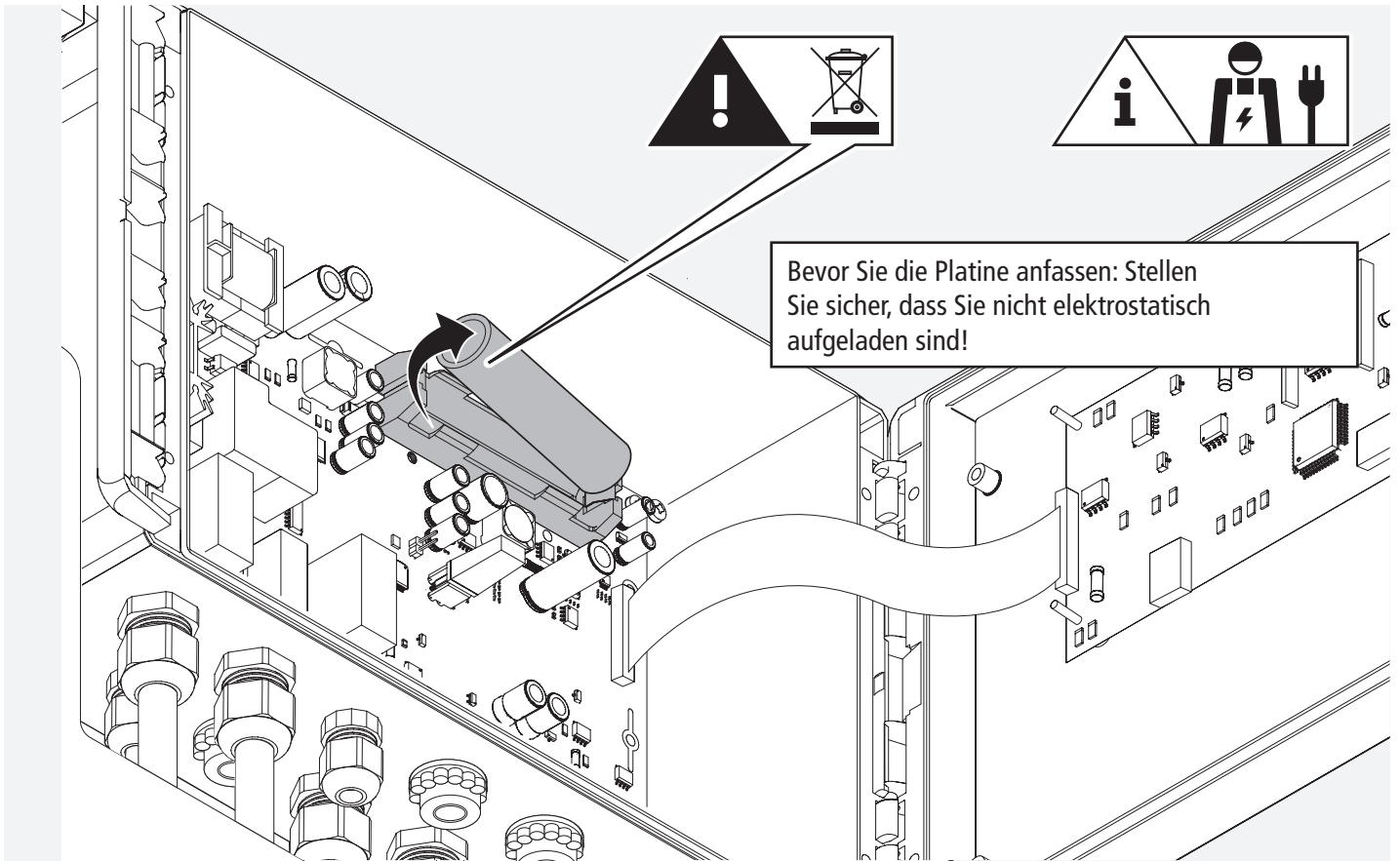


7.2

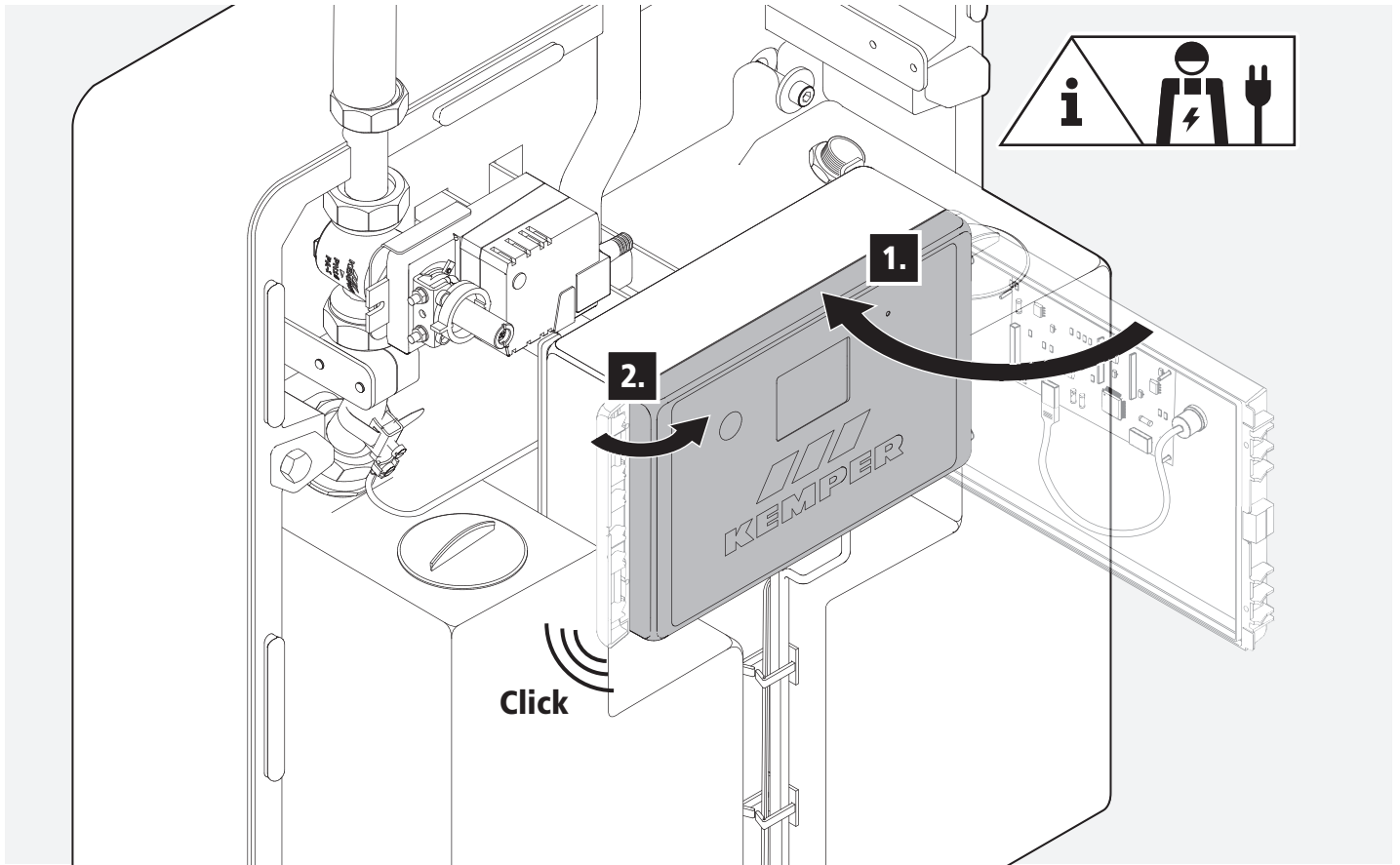


7.3

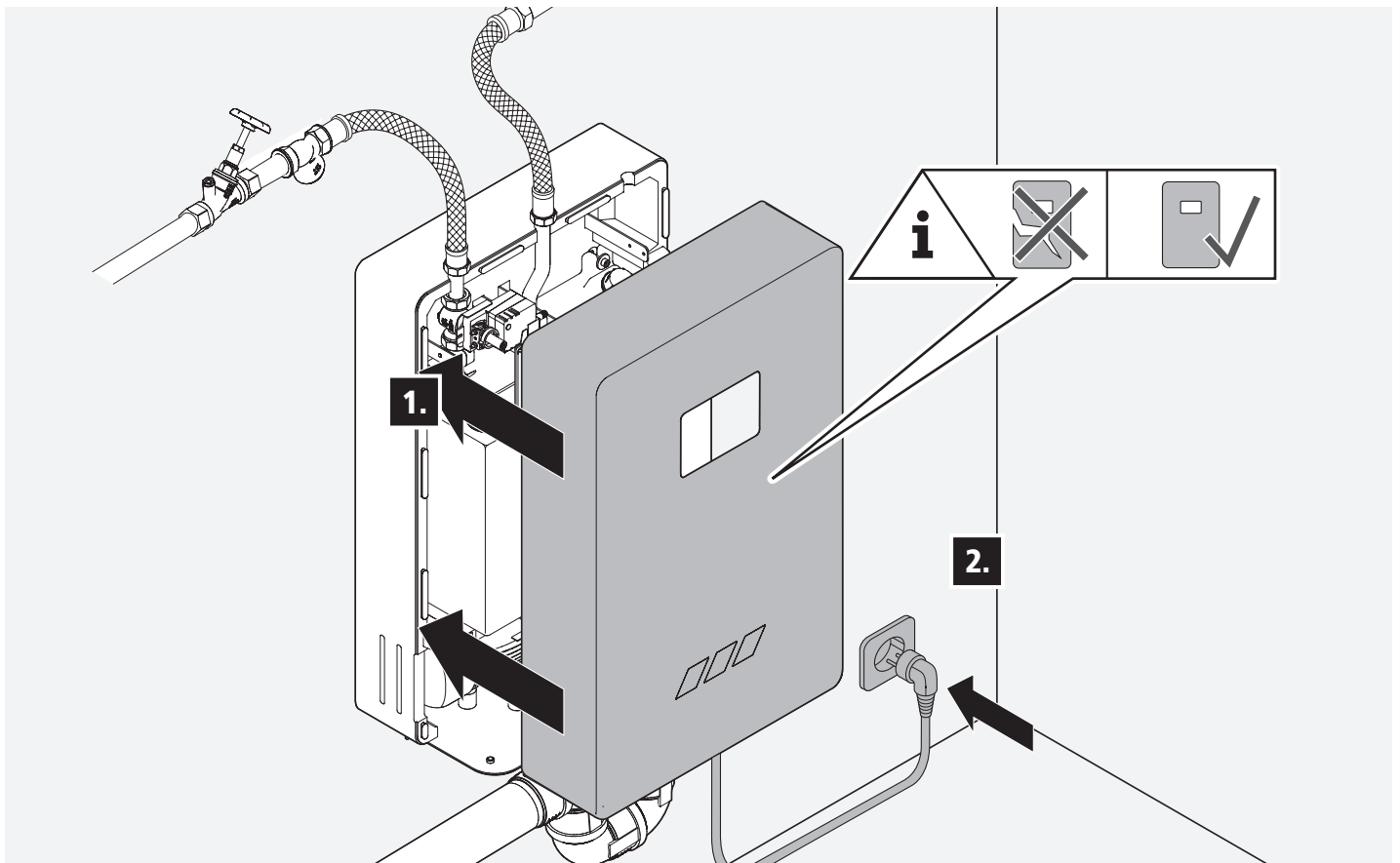


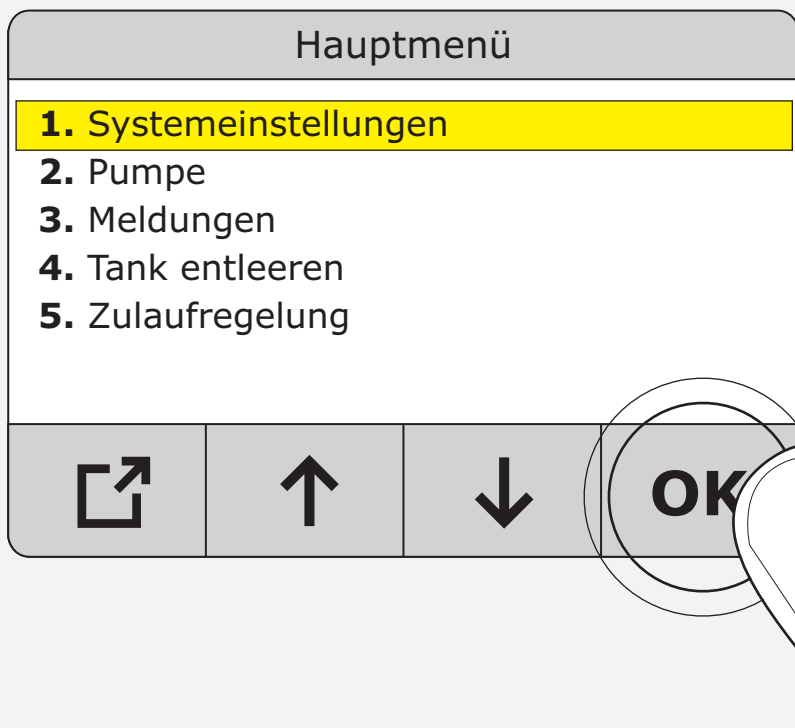
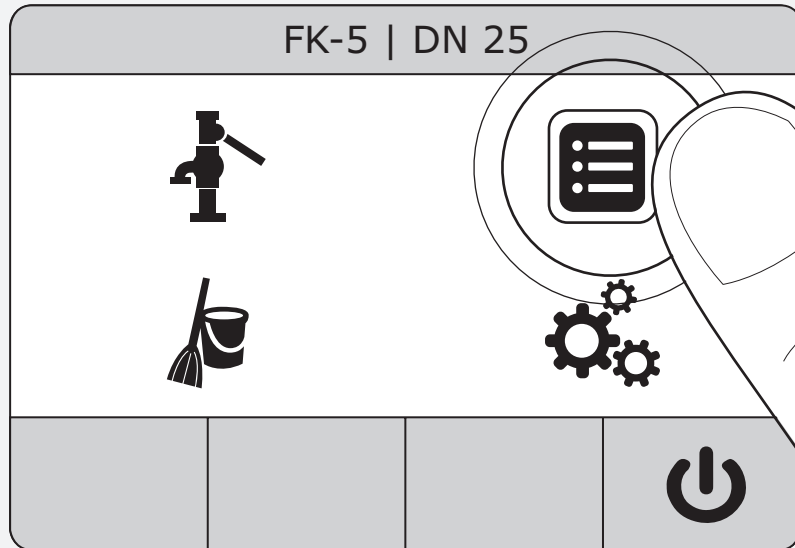


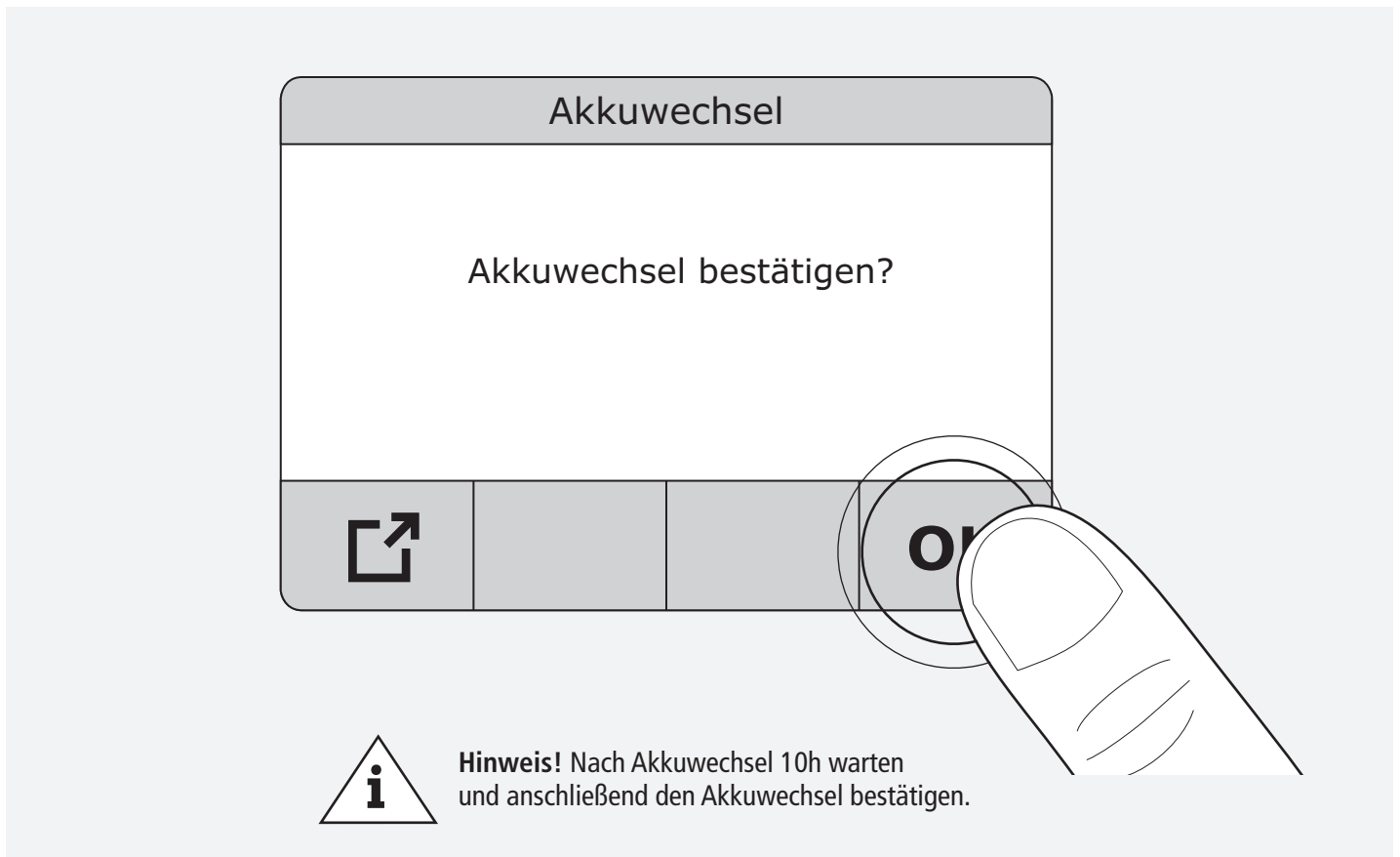
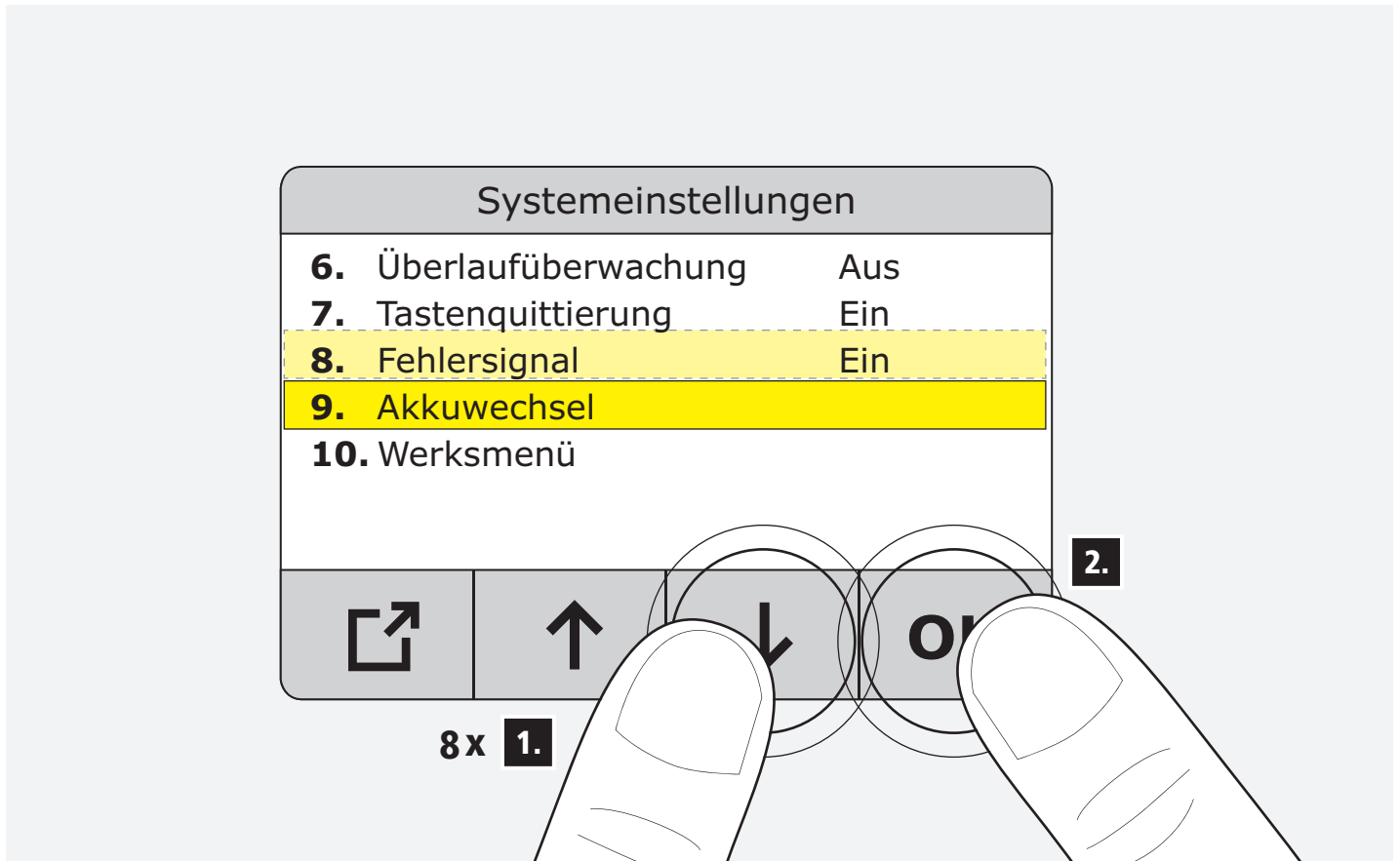
7.6

























7.7







Nr.	Fehlerbeschreibung	Ursache	Lösung
 01 02	Minimalfüllstand unterschritten: Zulauf 1 oder Zulauf 2	A: Zufluss an Zulauf 1 oder 2 zu gering. B: Abnahmemenge zu hoch. Tankfüllstand ist unter 50 mm gesunken.  Warnmeldung bleibt bestehen, bis Füllstand > 200 mm.	A: Zufluss an Zulauf 1 oder 2 erhöhen. B: Maximale Abnahmemenge beachten:  100 l/min (DN25) 50 l/min (DN20) C: Zweiten Zulauf (Zulauf-Set Plus, Figur 369 01) einbauen
 03	Minimalfüllstand unterschritten Zulauf 1 und 2	Zufluss an Zulauf 1 und 2 zu gering. Tankfüllstand ist unter 50 mm gesunken.  Warnmeldung bleibt bestehen, bis Füllstand > 200 mm.	Zufluss an Zulauf 1 und 2 erhöhen.
 04	Akkuwechsel erforderlich. Betriebsanleitung beachten		 Seite 46-51
 05	Achtung Temperatur < 5 °C Frostschutzmaßnahmen ergreifen	Temperatur am Sensor < 5 °C	 Umgebungsbedingungen kontrollieren und sicherstellen, dass die Temperatur nicht in den Frostbereich fällt.
 06	Akkufüllstand gering		 Seite 46-51
 08 09	Fehler Stellmotorpositionierung Zulauf 1 oder 2	Stellmotor 1 oder 2 hat Soll-Position nicht erreicht bzw. Rückmeldung fehlerhaft < 1,5V oder > 11V	<ol style="list-style-type: none"> 1. Wasserzufuhr absperrern. 2. Gerät vom Strom trennen. 3. Haube abnehmen. 4. Handbetätigung des Stellmotors drücken und versuchen den Stellmotor von Hand ganz zu öffnen und zu schließen. Kein Erfolg, dann Kundendienst-Anwendungstechnik anrufen. 5. Lässt sich der Stellmotor öffnen oder schließen, dann elektrischen Anschluss im Gehäuse prüfen.  Achtung! Elektrofachkraft. OK > Kundendienst-Anwendungstechnik anrufen.  nicht OK > Korrigieren.
 10	Messbereichsunterschreitung Füllstandsensoren	Analogwert Füllstandsensoren < 0,3V	 Kundendienst-Anwendungstechnik
 11	Messbereichsüberschreitung Füllstandsensoren	Analogwert Füllstandsensoren > 3,7V	 Kundendienst-Anwendungstechnik
 12	Stellmotor für zweiten Zulauf nicht vorhanden	Zulaufregelung „Zulauf 2“ aktiviert und Stellmotor wird in den Einstellungen deaktiviert.	 Es wird automatisch in Zulaufregelung Zulauf 1 umgeschaltet. Fehler muss nur quittiert werden.
 13	Maximalfüllstand überschritten	Tank bis zum Überlauf gefüllt	<ol style="list-style-type: none"> 1. Wasserzufuhr absperrern. 2. Haube abnehmen. 3. Tank über den Menüpunkt „Tank entleeren“ entleeren. 4. Optische Prüfung, ob der Tank sauber ist und ob der Messanschluss des Füllstandsensors nicht verstopft ist. 5. Ist der Füllstandsensoren verstopft, dann den Füllstandsensoren ausbauen und gegebenenfalls reinigen. 6. Füllstandsensoren nicht verstopft, dann  Kundendienst-Anwendungstechnik anrufen.











Nr.	Fehlerbeschreibung	Ursache	Lösung
 14	Fehler Wasserverlust im Tank	 Im Standby oder Anlage Aus Modus ist der Füllstand um ca. 100 mm gefallen	<ol style="list-style-type: none"> 1. Haube abnehmen. 2. Anlage optisch auf Dichtheit prüfen 3. Wenn Anlage dicht, Kundendienst-Anwendungstechnik anrufen.
 15	Messbereichsunterschreitung Pumpendruck	Sensor defekt oder Drahtbruch (Drahtbruch < 0,4V)	 Kundendienst-Anwendungstechnik
 16	Messbereichsüberschreitung Pumpendruck	Sensor defekt oder Kurzschluss (Kurzschluss > 4,7V)	 Kundendienst-Anwendungstechnik
 17	Fehler Pumpe	 Einschaltdruck bleibt trotz eingeschalteter Pumpe unterschritten. > evtl. Pumpe defekt, thermische Abschaltung oder Luft in der Pumpe	<ol style="list-style-type: none"> 1. Pumpe entlüften. 2. Wenn Pumpe entlüftet und Fehler weiter ansteht, Kundendienst-Anwendungstechnik anrufen.
 18	Fehler Tankentleerung	 Sinkt der Füllstand des Tanks bei aktivierter Tankentleerung innerhalb von 10 min um weniger als 50 mm	<ol style="list-style-type: none"> 1. Tankentleerung abbrechen. 2. Schläuche zum Magnetventil überprüfen. 3. Wenn Schläuche in Ordnung, dann Kundendienst-Anwendungstechnik anrufen
 19	Fehler Temperaturmessung außerhalb zulässigem Bereich	Fehlerhafte Werte am Temperatursensor bzw. defekt	 Kundendienst-Anwendungstechnik
 20	Achtung Frostgefahr Frostschutzmaßnahmen ergreifen (< 2 °C)	Temperatur am Sensor < 2 °C	 Umgebungsbedingungen kontrollieren. Falls OK, Kundendienst-Anwendungstechnik anrufen.
 21	Achtung Übertemperatur (> 55 °C)	Temperatur am Sensor > 55 °C	Umgebungsbedingungen kontrollieren und sicherstellen, dass Temperatur nicht weiter steigt.
 22	Überlauf am freien Auslauf!	Überlaufsensor hat ausgelöst	 Überlaufsensor kontrollieren, möglichen Rückstau aus Kanal beachten.
 23	Akku fehlt	Beim Start des Reglers ist kein Akku erkannt worden.	Prüfen, ob Akku eingebaut ist.
 24	Akku defekt	Akku ist falsch herum eingebaut worden oder defekt	Einbaurichtung des Akkus prüfen.
 25	Akku leer	 Akku hat nicht mehr genug Spannung, um die Stellmotoren zu schließen. <ol style="list-style-type: none"> 1. Häufiges Schließen der Stellmotoren aufgrund von Spannungsausfällen ohne ausreichende Ladezeit des Akkus. 2. Akku defekt. 	<ol style="list-style-type: none"> 1. Dem Akku Zeit geben, um aufgeladen zu werden. 2. Akku austauschen.





- DE Betriebsanleitung FK-5** » 2
Sicherheitsstrennstation
Fig. 369
- NL Bedieningshandleiding FK-5** » 56
Beveiligingstoestel
fig. 369
- EN Operating instructions for FK-5** » 110
Break Tank Station
Fig. 369



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**Belang van de documentatie**

Handleiding voor ingebruikname, gebruik of onderhoud zorgvuldig doorlezen en de aanwijzingen opvolgen!

Handleiding altijd aan de huidige gebruiker van de installatie overhandigen en bewaren voor toekomstige raadpleging!

Waarschuwingen

Neem de waarschuwingen in de handleiding in acht en volg ze op. Het niet in acht nemen van de waarschuwingen kan tot letsel of materiële schade leiden!

Markering belangrijke waarschuwingen:

**Gevaar! Elektrische stroom!**

Markeert gevaren die ernstig of dodelijk letsel tot gevolg kunnen hebben.



Waarschuwing! Markeert gevaren die tot letsel, materiële schade of verontreiniging van het drinkwater kunnen leiden.




Aanwijzing! Markeert gevaren die tot schade aan de installatie of tot storingen tijdens het functioneren kunnen leiden.

**Afvalverwijdering**

De plaatselijke voorschriften met betrekking tot de recycling of afvoer van afval dienen in acht te worden genomen. Het product mag niet bij het gewone huisvuil, maar moet vakkundig worden verwijderd.



Lege batterijen mogen niet bij het huisvuil. Als consument bent u wettelijk verplicht om lege batterijen in te leveren bij een geschikt inzamelpunt van uw gemeente of bij de  Dit is gratis voor u. U kunt uw gebruikte batterijen ook naar ons retourneren.

Toepassing

Het KEMPER FK-5 beveiligingstoestel wordt gebruikt om drinkwater te scheiden van niet-drinkwater tot vloeistofklasse 5 volgens NEN/NBN EN 1717 / DIN 1988-100. Het toestel mag uitsluitend met water worden gebruikt. Niet met brandbare of explosieve media vullen.

Waarschuwing! Het product mag uitsluitend voor dit doel als een beveiligingstoestel in gesloten, vorstvrije, droge ruimtes worden gebruikt. Elk ander gebruik geldt als oneigenlijk.

Waarschuwing! Het niet-naleven van de handleiding bij de montage, het gebruik en onderhoud kan de goede werking in gevaar brengen en kan door de vermenging van drinkbaar en niet-drinkbaar water aanzienlijke gezondheidsschade veroorzaken.

De parallelschakeling van twee of meer beveiligingstoestellen is niet toegestaan.

Neem in ieder geval de voorgeschreven onderhoudsintervallen in acht.

Laat storingen en defecten direct door een vakman verhelpen.



Veiligheidsinstructies

Gebruik het apparaat

- alleen in onberispelijke toestand
- voor het beoogde doel

Aanwijzing! Als geen actuele firmwareversie voorhanden is, wordt een update van de software aanbevolen.

Aansprakelijkheid

Geen garantieverlening of aansprakelijkheid bij:

- negeren van de handleiding.
- verkeerde montage en/of verkeerd bedrijf.
- eigenhandige wijziging van het product.
- andere verkeerde bediening.



Waarschuwing! Het afgetapte water mag in geen geval, ook niet in kleine hoeveelheden, als drinkwater worden gebruikt!



Aanwijzing! Wanneer de installatie meer dan 48 uur niet wordt gebruikt, worden de afsluiters in de aanvoerleiding en de pomp automatisch kort ingeschakeld.



Aanwijzing! Gebruik uitsluitend geschikte reinigingsmiddelen zonder schuimvorming volgens DVGW W 291 / W 319. Na het reinigen van de installatie dienen alle eventuele resten van reinigingsmiddelen uit de installatie te worden verwijderd!

Onderhoud en reparatie



Waarschuwing! Reparatie en onderhoud alleen door een bevoegde vakman met een kwalificatie voor het installeren van drinkwatersystemen.



Gevaar! Elektrische installatie, reparatie en onderhoud alleen door een vakman met een kwalificatie voor elektro technische installaties!



Gevaar! Bij werkzaamheden aan spanningvoerende onderdelen is het absoluut noodzakelijk dat de installatie spanningsvrij wordt geschakeld.



Gevaar! Voor ieder onderhoud aan elektrische elementen moet de installatie van het stroomnet worden losgekoppeld. Trek hiervoor altijd de netstekker uit.

Waarschuwing! Na installatie, uitbreiding met toebehoren of onderhoudswerkzaamheden moeten de aanvoerleidingen altijd worden gespoeld volgens NEN/NBN EN 806-5 en VDI/DVGW 6023.

Waarschuwing! De nationale en regionale normen en voorschriften met betrekking tot sanitaire en elektrische installaties en ongevalpreventie dienen altijd in acht te worden genomen.

Aanwijzing! De USB-stick mag pas na de volledige gegevensoverdracht worden verwijderd. Anders kan de besturing bij een firmware-update worden beschadigd.

Belangrijke aanwijzingen voor de gebruiker van de installatie

Voedingsspanning	230 V AC
Elektrisch stroomverbruik	DN 20: 3,3 A DN 25: 5,5 A
Elektrisch vermogen	DN 20: 759 W DN 25: 1265 W
Vermogensfactor	0,97
Beschermingsgraad	IP 54
Medium	Water
max. omgevingstemperatuur	40°C
max. omgevingstemperatuur	2°C
max. temperatuur van het toegevoerde medium	35°C
min. temperatuur van het toegevoerde medium	2°C
max. stroom druk	DN 20/DN 25: 4,0 bar 0,4 MPa
min. waterdruk	DN20: 1,0 bar 0,1 MPa DN25: 1,5 bar 0,15 MPa
Druktrap	PN 10
Pompdruk aan de uitgangszijde	DN 20: 4,3 bar 0,43 MPa DN 25: 5,9 bar 0,59 MPa
DU-waarde	DN 20: 0,83 l/s DN 25: 1,67 l/s



Sanitair en drinkwaterinstallaties

EN 1717 / DIN 1988-100
EN 806-5

EMC

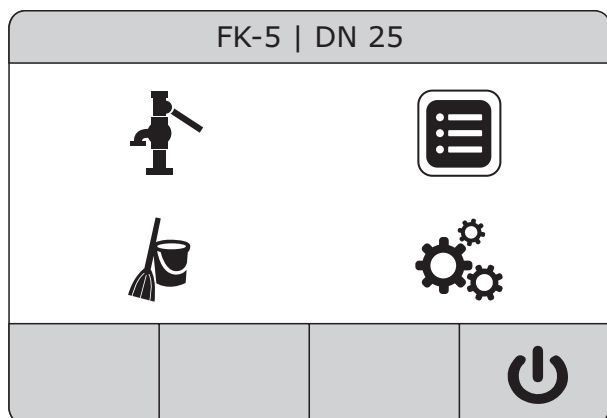
EN 61000-6-1
EN 61000-6-3

Laagspanning

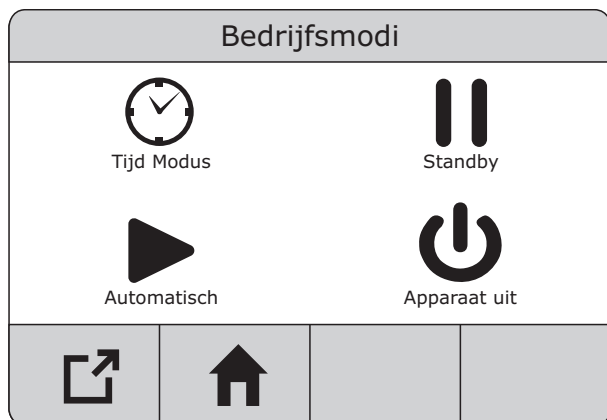
EN 60335-1

Machineverordening

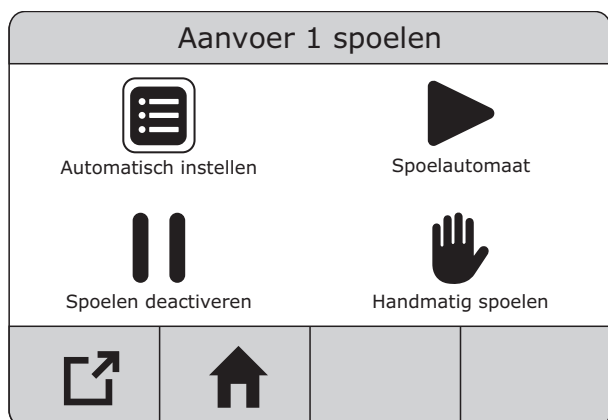
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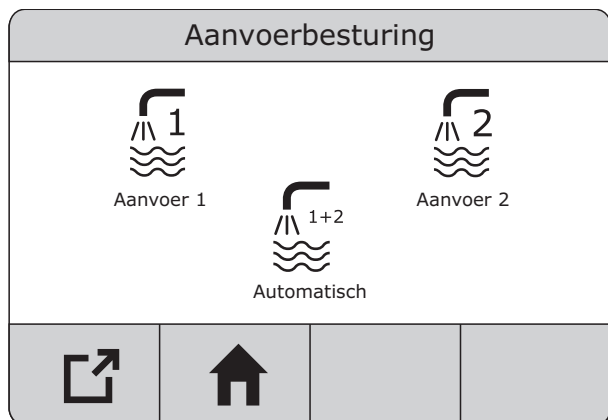
	NL
	Bedrijfsmodi
	Spoel- en reinigingsprogramma
	Hoofdmenu
	Proces
	Installatie uit Schakelt de levering aan de tappunten en de spoelprocedures uit. De alarmuitgang blijft actief. De status van de installatie wordt verder gelogd. In deze bedrijfsmodus is het mogelijk instellingen in het apparaat te maken.
	Waarschuwingmeldingen Installatie blijft ingeschakeld.
	Foutmeldingen Installatie schakelt automatisch uit.



	NL
	Tijdmodus Definieert het weekprogramma met dagelijkse starten stoptijd. Tussen de geprogrammeerde tijden is de levering aan de tappunten onderbroken. Spoel- en reinigingsprogramma's worden verder uitgevoerd.
	Stand-by Onderbreekt de levering aan de tappunten. De geprogrammeerde spoelprocedures worden verder uitgevoerd.
	Automatische modus Omzeilt het weekprogramma 'Tijdmodus'.
	Tijdbeperking Schakelt tijdelijk naar de automatische modus totdat de ingestelde tijd verstreken is.
	Terug
	Startscherm
	Actief gedeelte



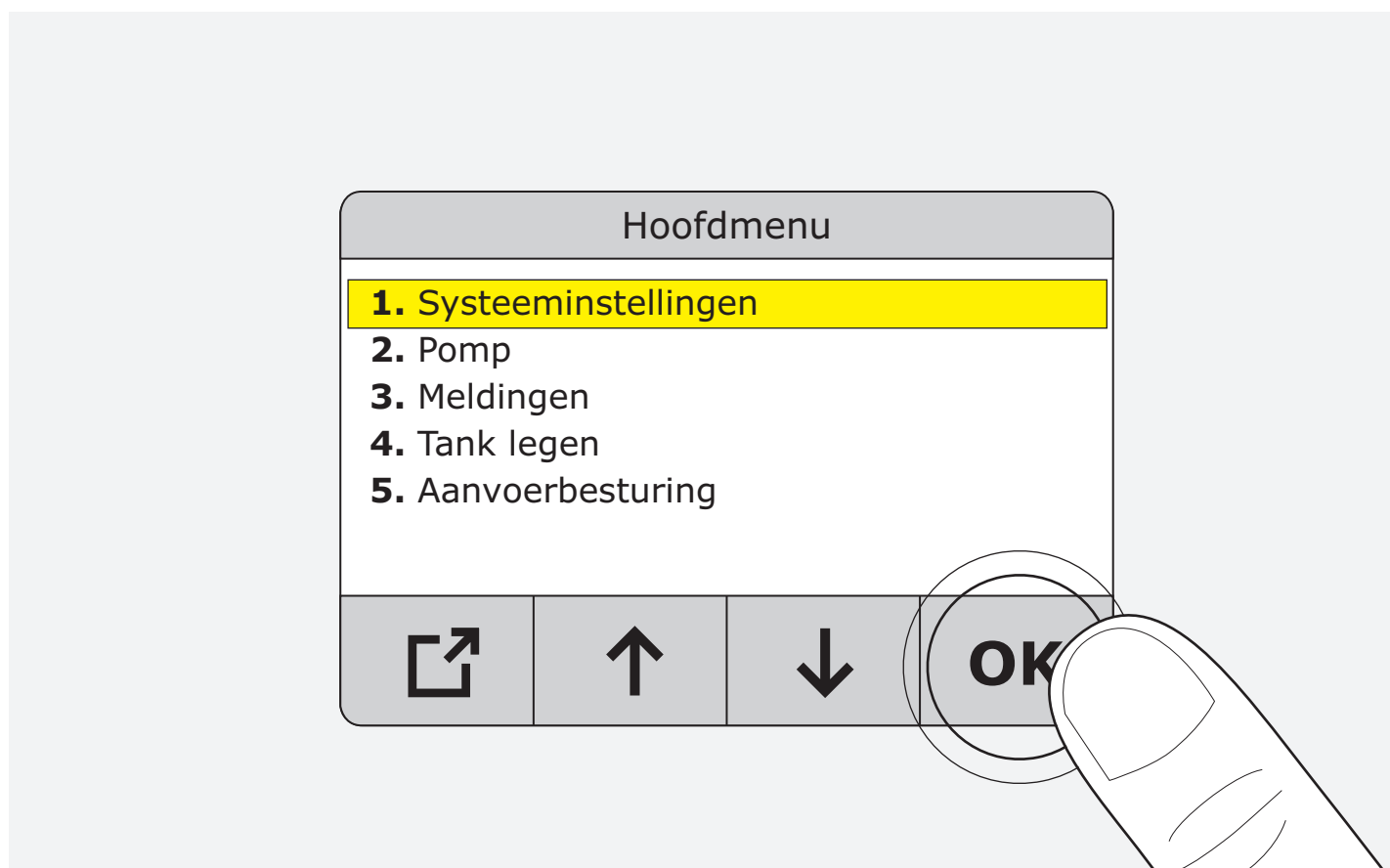
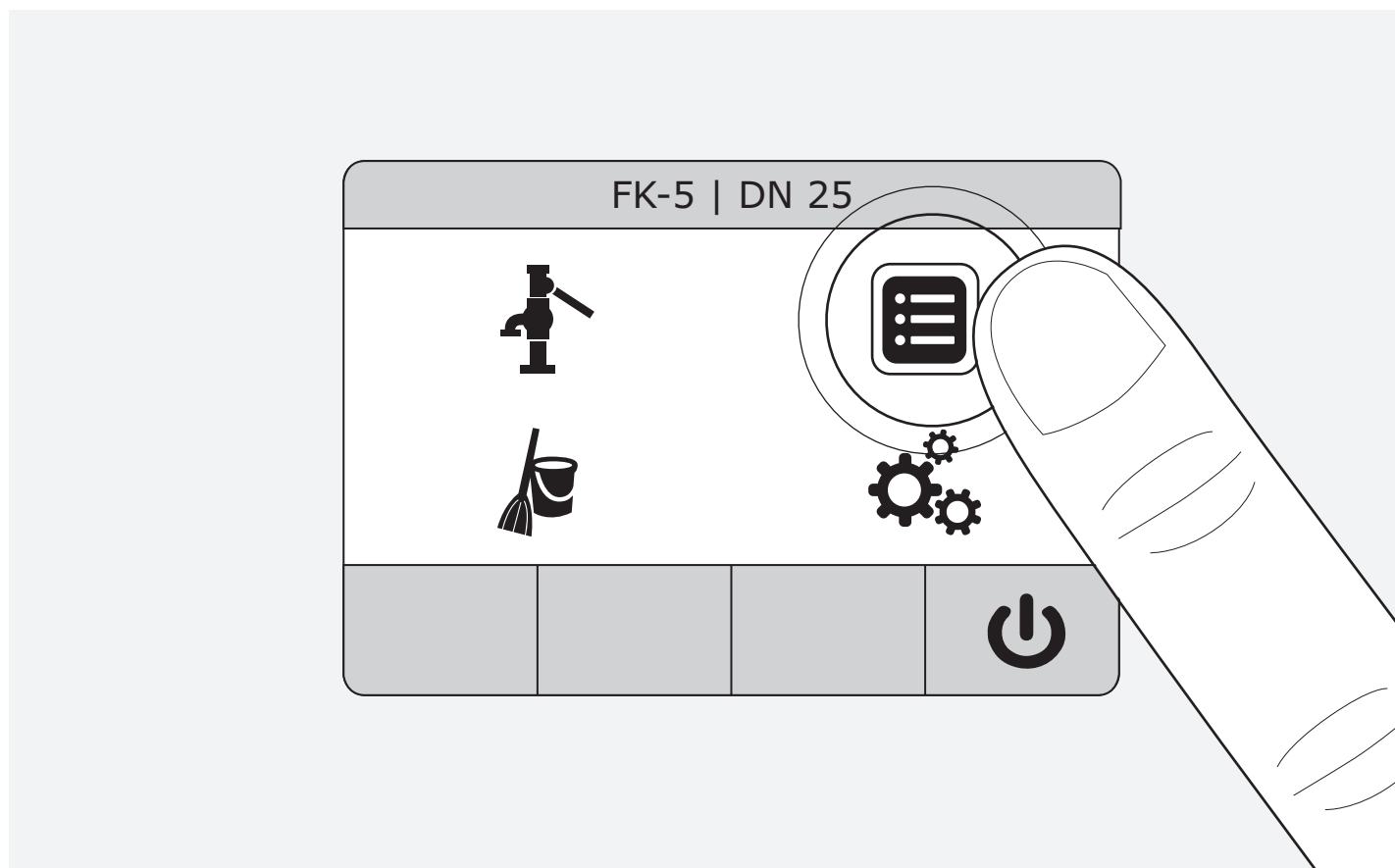
	NL
	Automatische modus instellen
	Automatisch spoelen Hier wordt het weekprogramma voor het spoelen van de aanvoerleidingen geprogrammeerd. Elke weekdag met starttijd en spoelduur (max. 360 min). Een spoelduur over verschillende dagen is niet mogelijk. Er kan telkens slechts één aanvoerleiding worden gespoeld.
	Spoelen deactiveren
	Handmatig spoelen Activeert het handmatige spoelen van een aanvoerleiding. 'Spoelen deactiveren' of 'Automatisch spoelen' stopt de functie. Na 360 min eindigt 'Handmatig spoelen' automatisch en wordt omgeschakeld naar de voorheen geactiveerde functie 'Spoelen deactiveren' of 'Automatisch spoelen'.

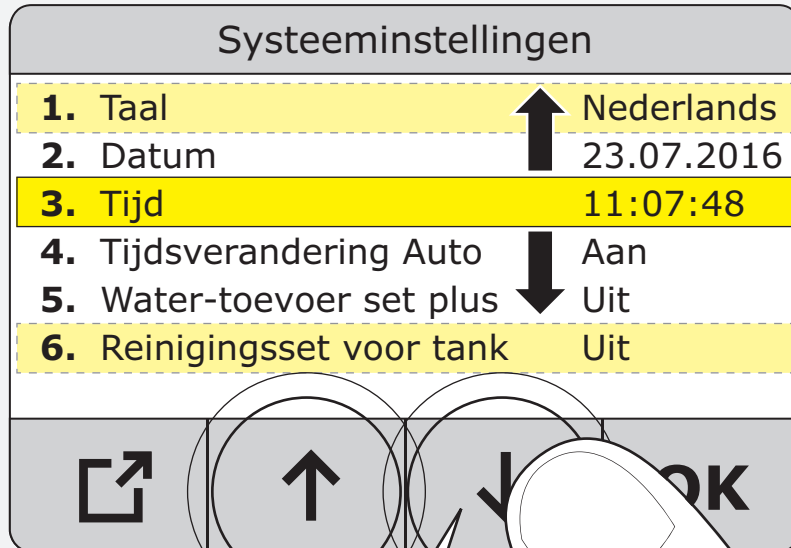


	NL
	Aanvoer 1/2 'Aanvoer 1' of 'Aanvoer 2' regelt de levering uitsluitend via deze aanvoerleiding. Indien de hierbij geleverde hoeveelheid niet volstaat, verschijnt een waarschuwingsmelding en wordt de levering aan de tappunten onderbroken.
	Aanvoer 1+2 (automatische aanvoerregeling) 'Aanvoer 1+2' regelt de levering in de eerste plaats via aanvoer 2. Indien de geleverde hoeveelheid niet volstaat, wordt aanvullend aanvoer 1 geopend. Indien de totale geleverde hoeveelheid niet volstaat, verschijnt een waarschuwingsmelding en wordt de levering aan de tappunten onderbroken.
	omhoog
	omlaag
	links
	rechts
OK	Invoer bevestigen

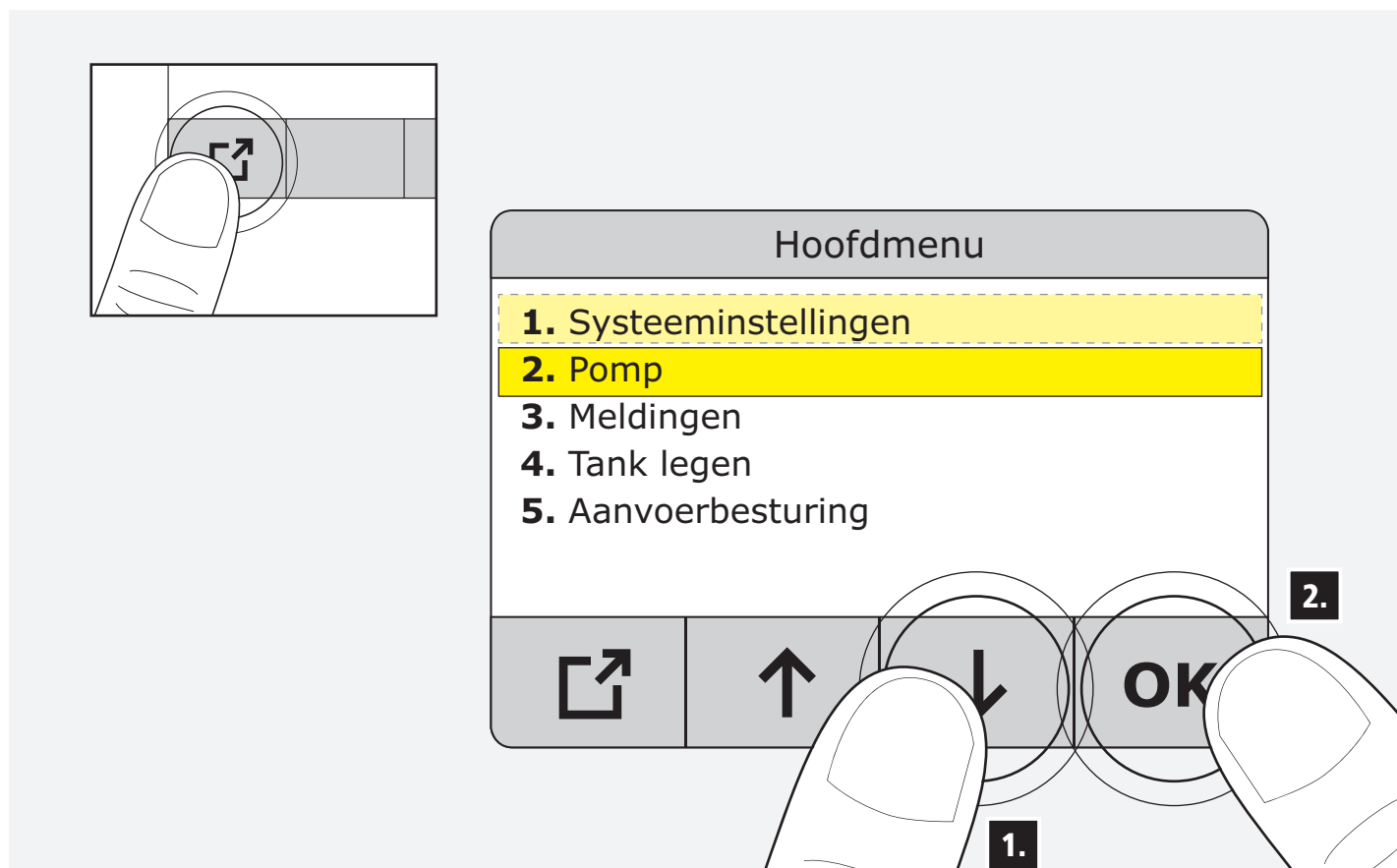
Bedrijfstijden		
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Dinsdag	Uit	00:00 - 00:00
Woensdag	Uit	00:00 - 00:00
Donderdag	Uit	00:00 - 00:00
Vrijdag	Uit	00:00 - 00:00
Zaterdag	Uit	00:00 - 00:00
Zondag	Uit	00:00 - 00:00

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

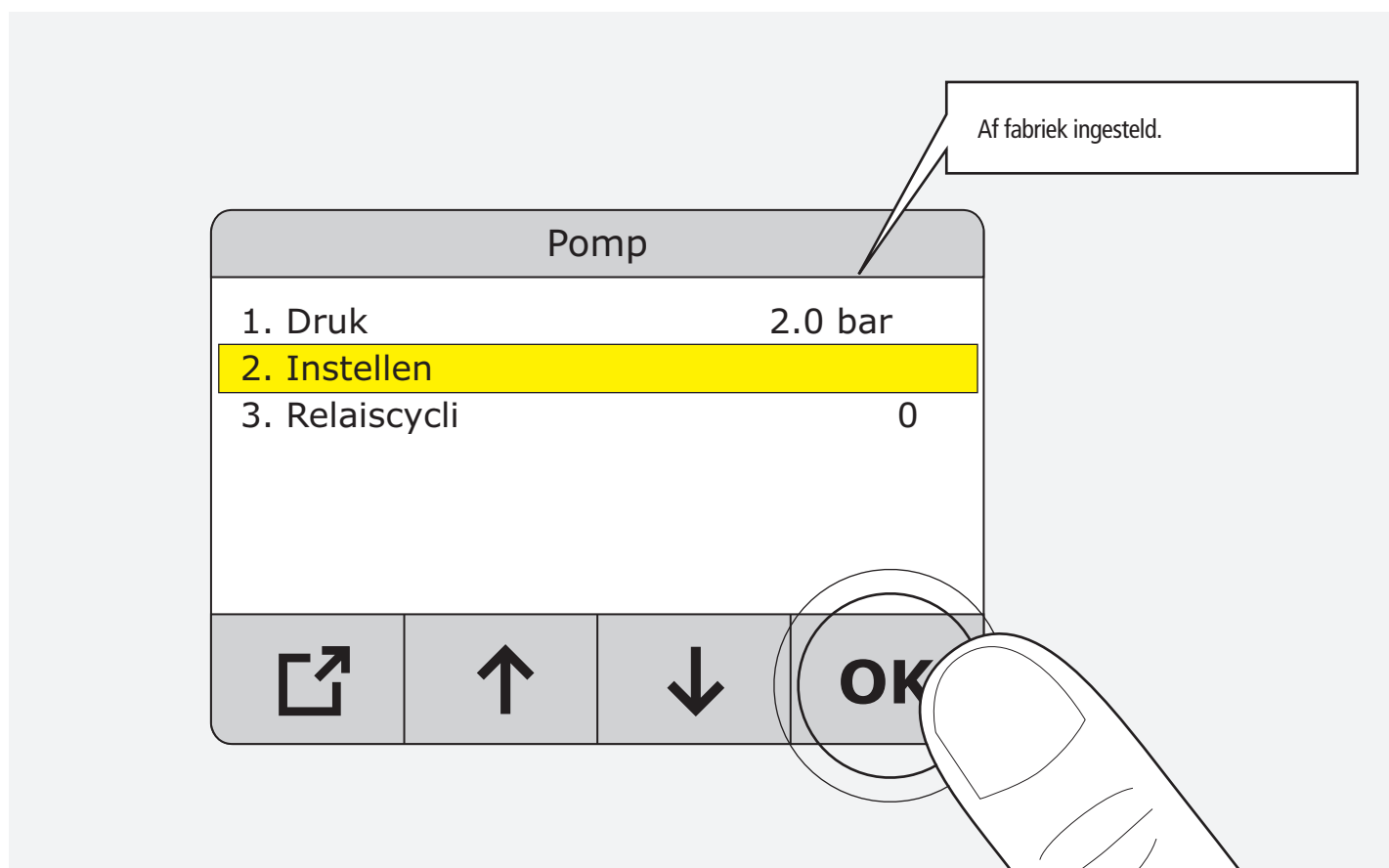




■	1.	Taal	Nederlands
■	2.	Datum	23.07.2016
■	3.	Tijd	11:07:48
■	4.	Tijdsverandering Auto	Aan
■	5.	Water-toevoer set plus	Uit
■	6.	Reinigingsset voor tank	Uit
■	7.	Overloopbeveiliging	Uit
■	8.	Bevestigingstoets	Aan
■	9.	Storingssignaal	Aan
■	10.	Batterij vervangen	
■	11.	Fabrieksmenu	
■	12.	Fabrieksinstellingen	

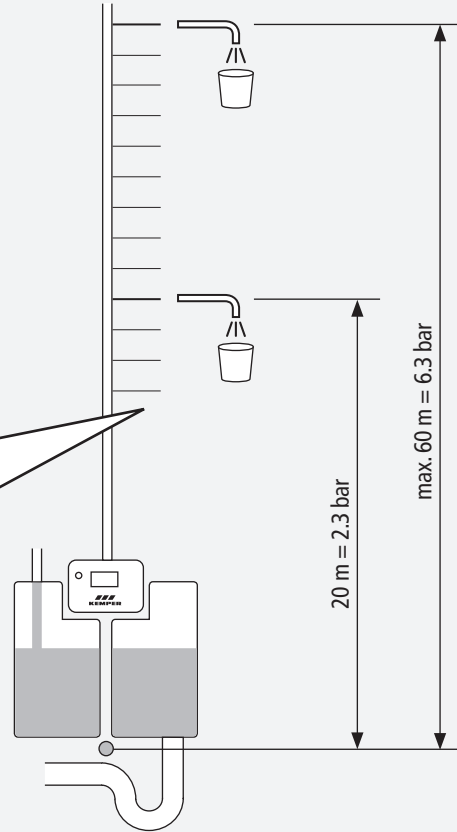
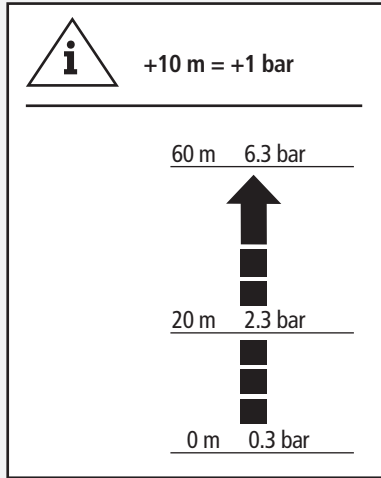


12.1





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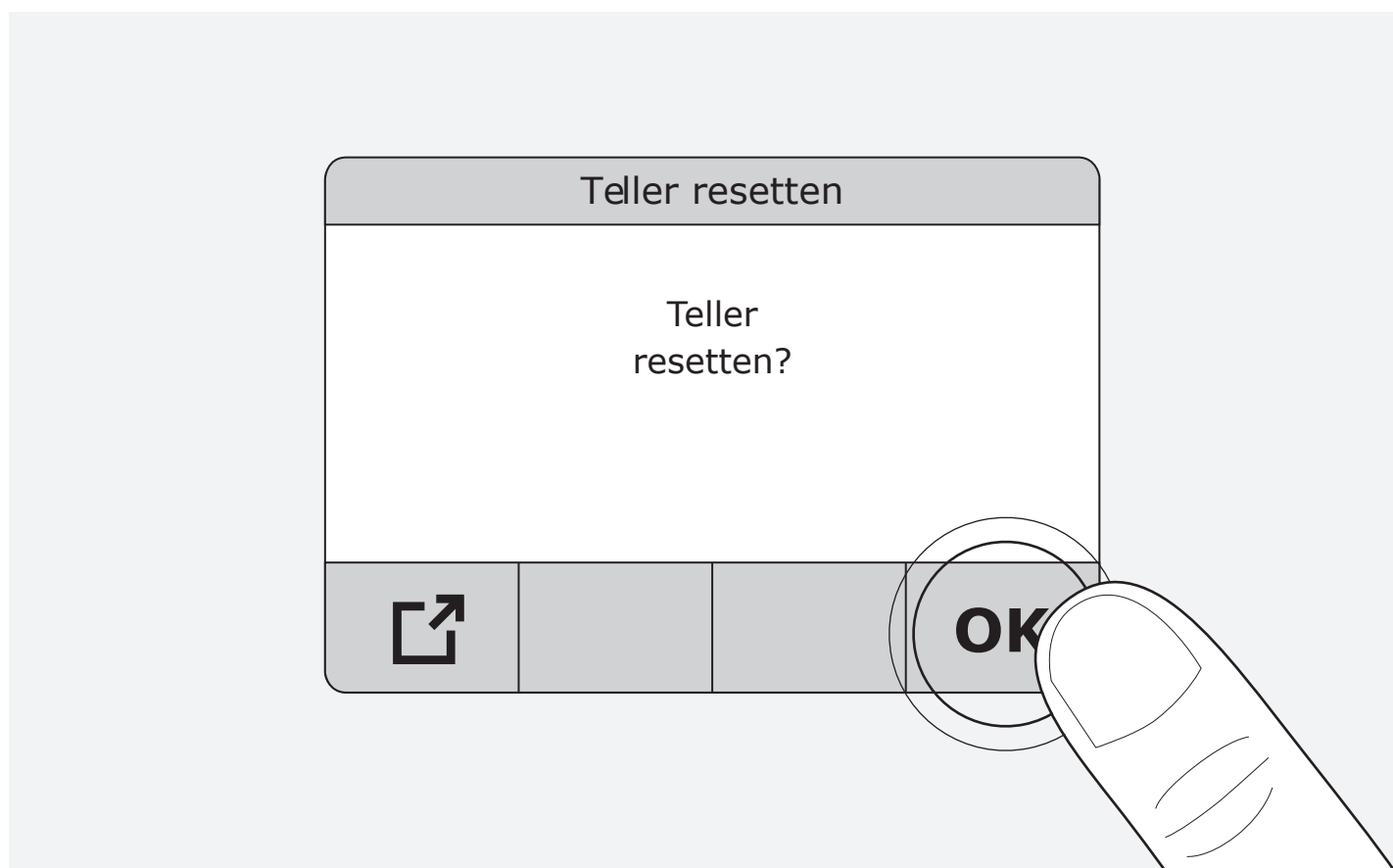
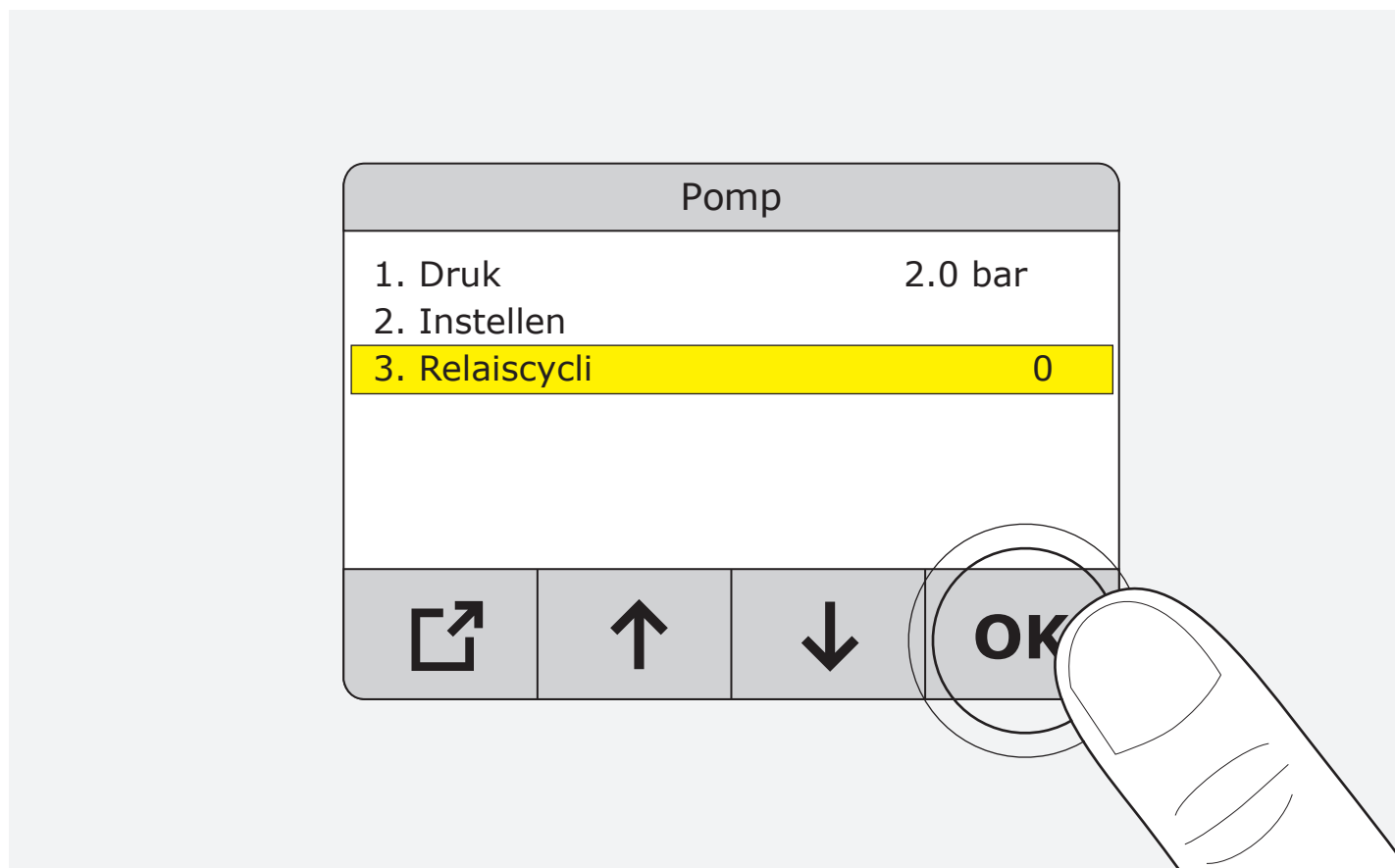
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Min: 0.3-Is: 2.0bar - Max: 6.0 bar

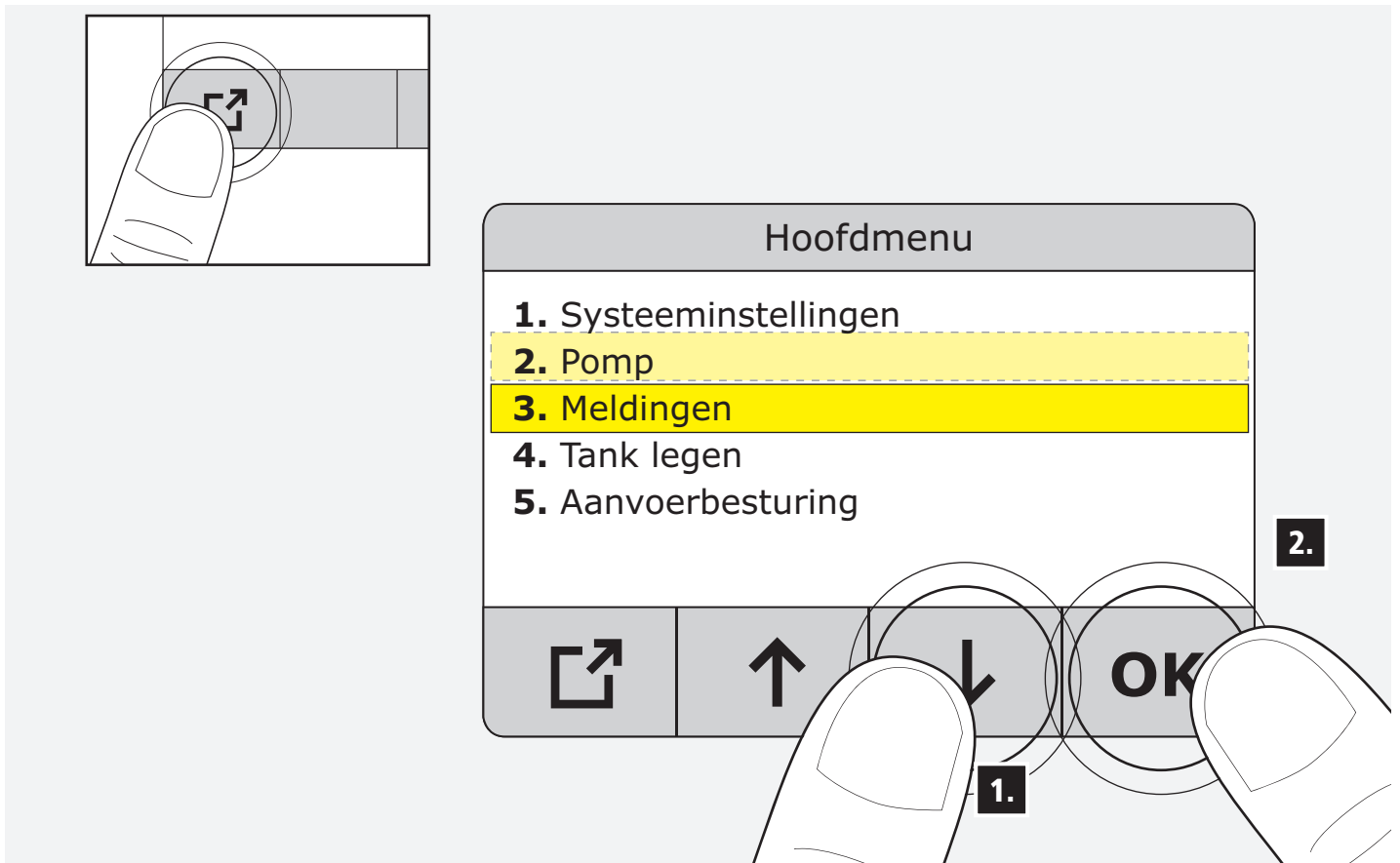
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7	8	9	.
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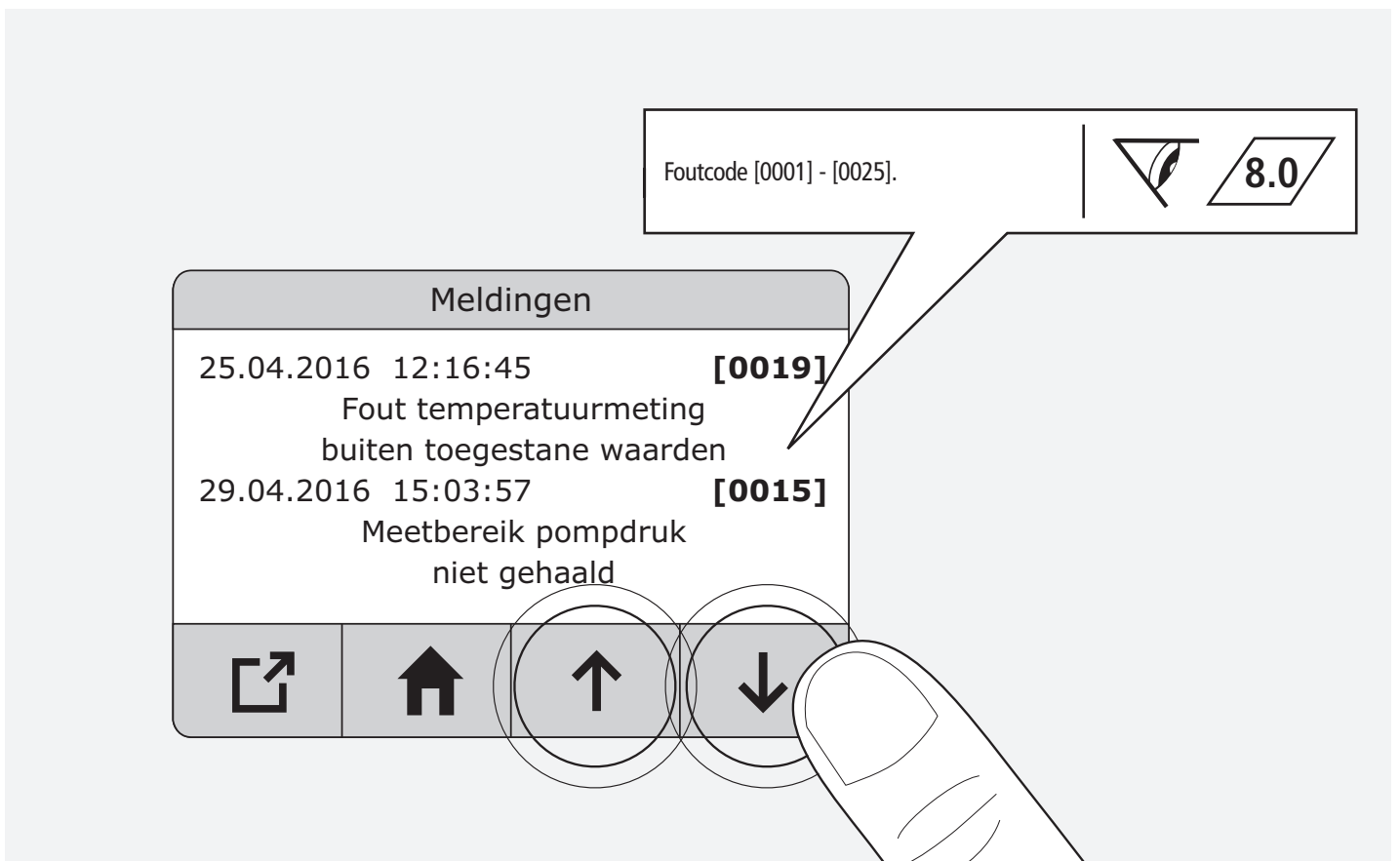
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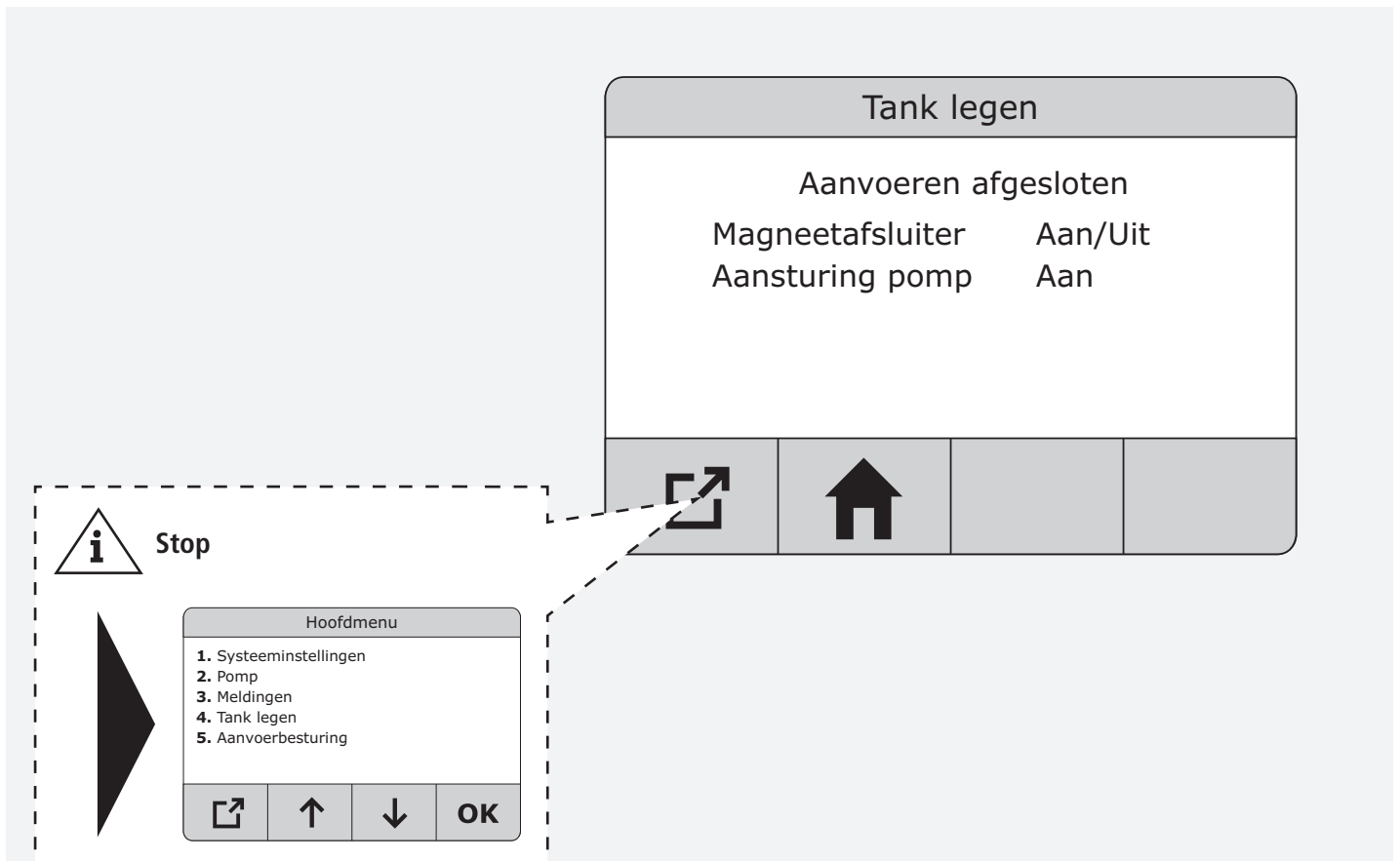


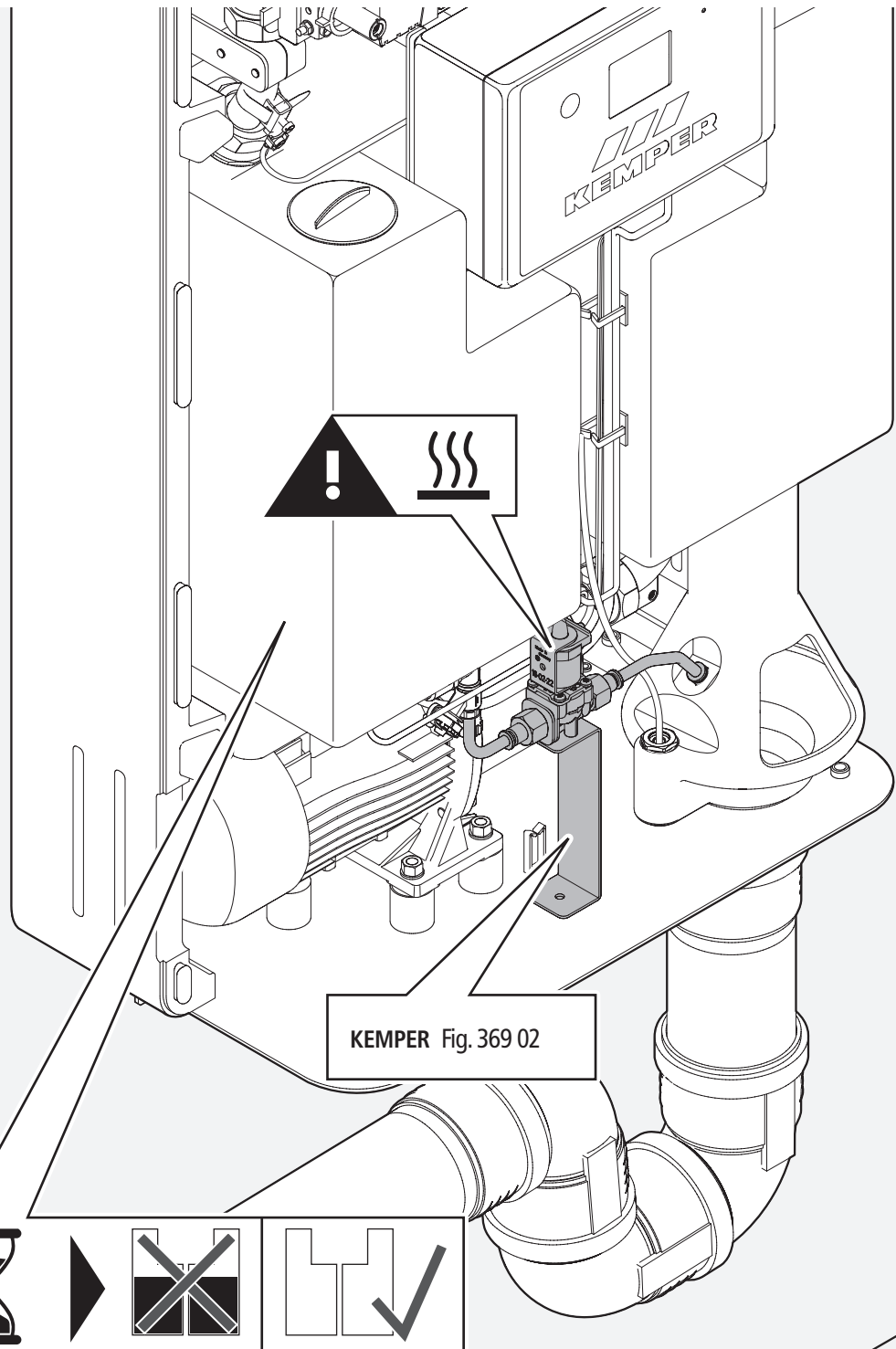


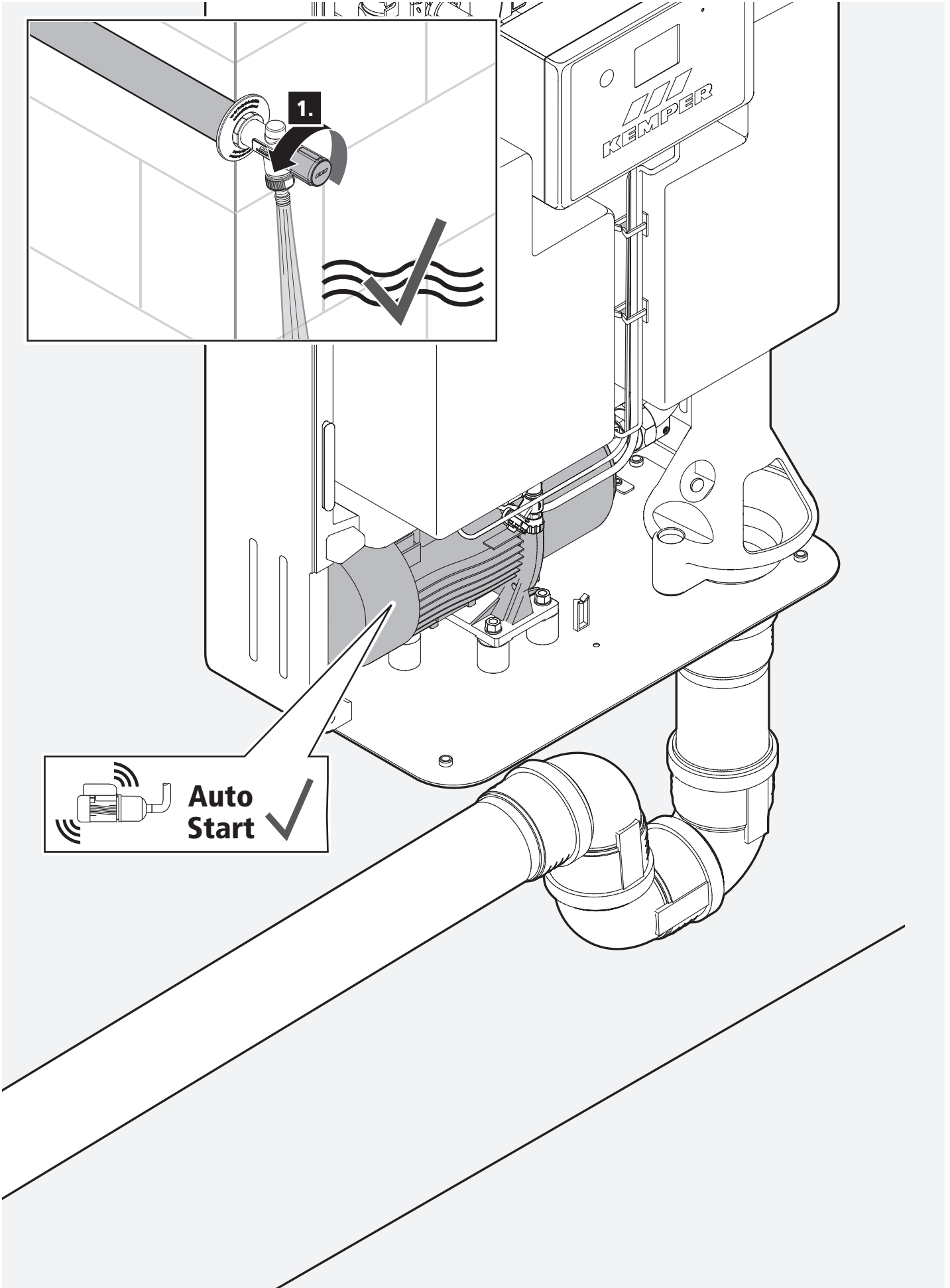


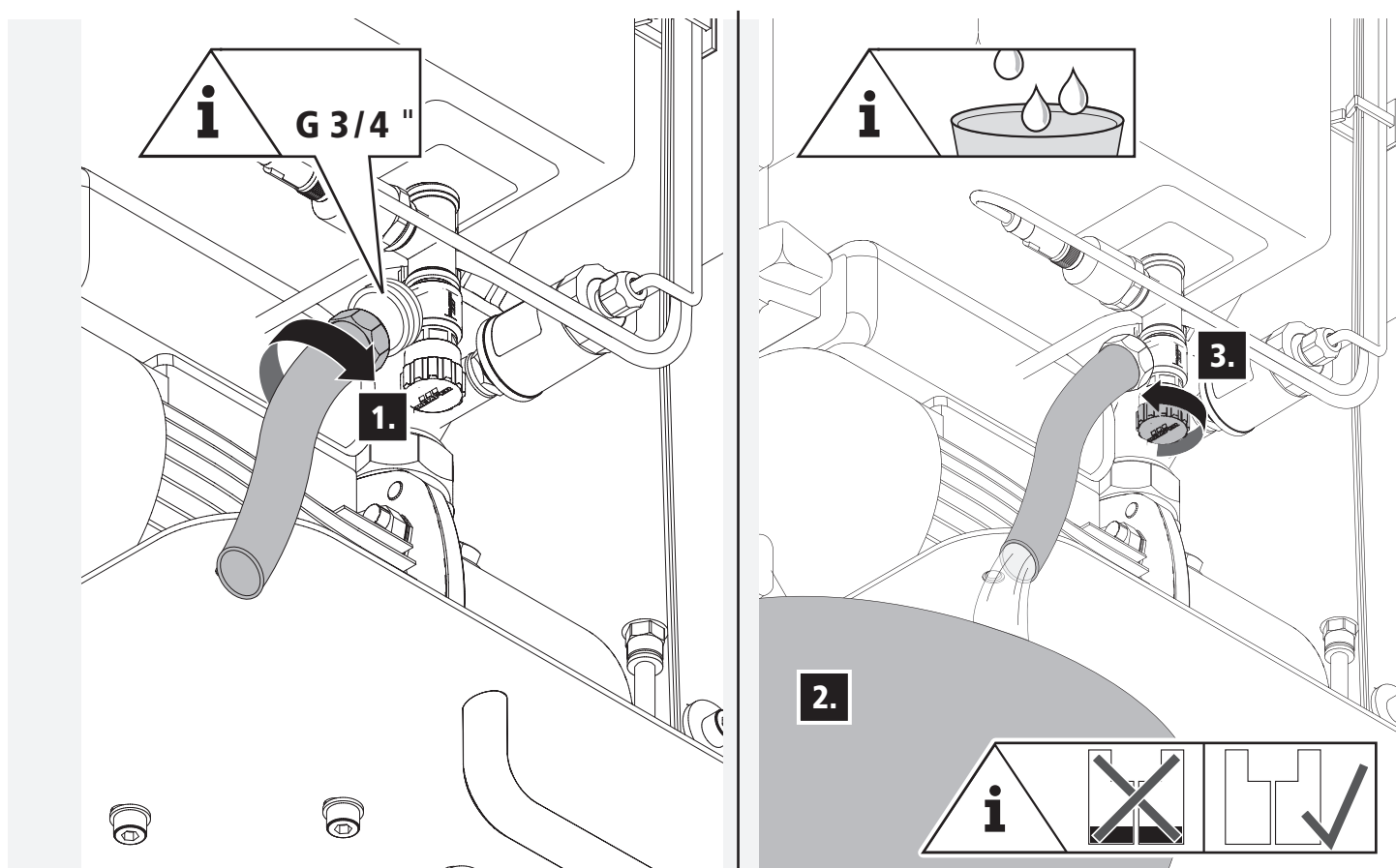
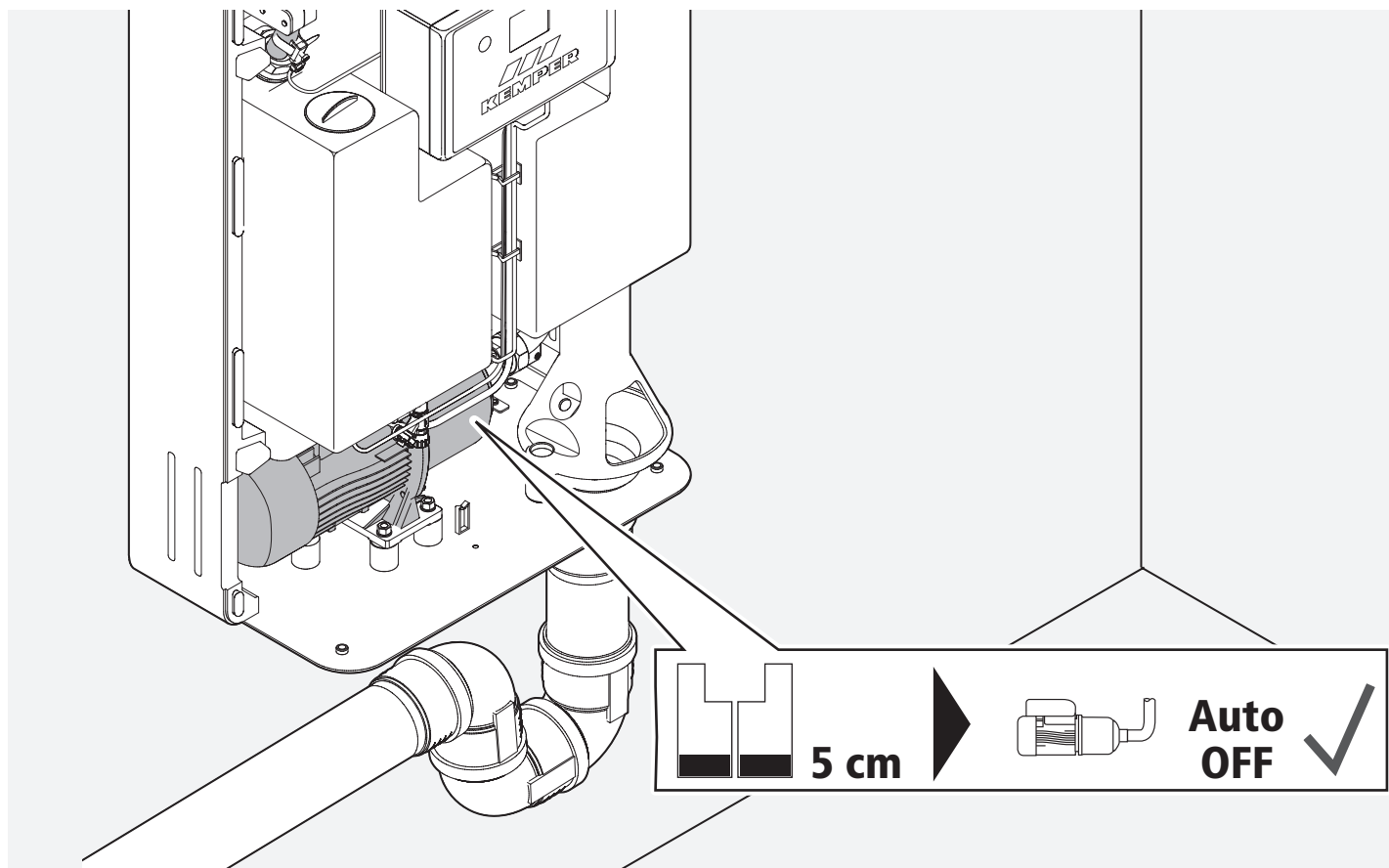
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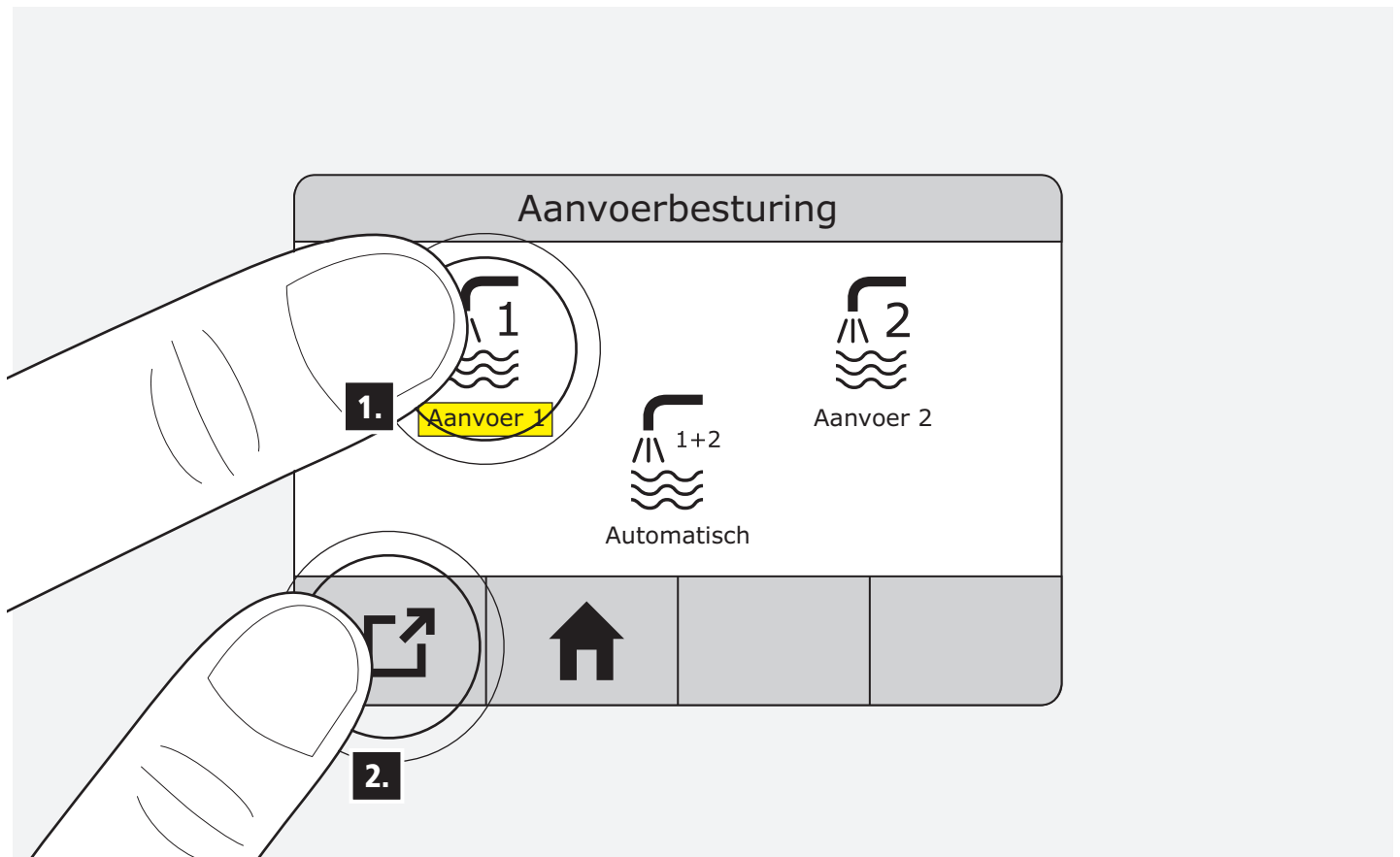
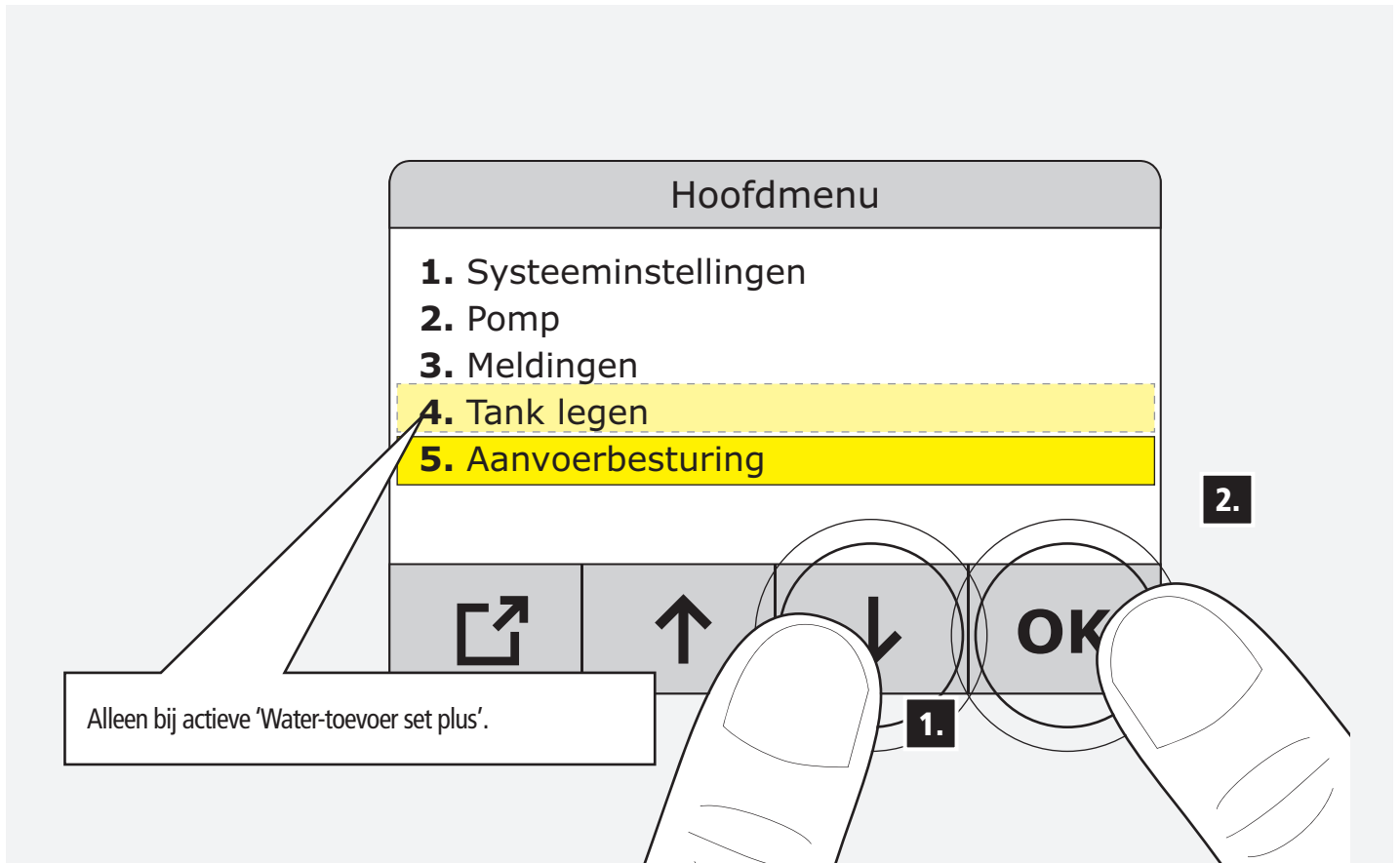


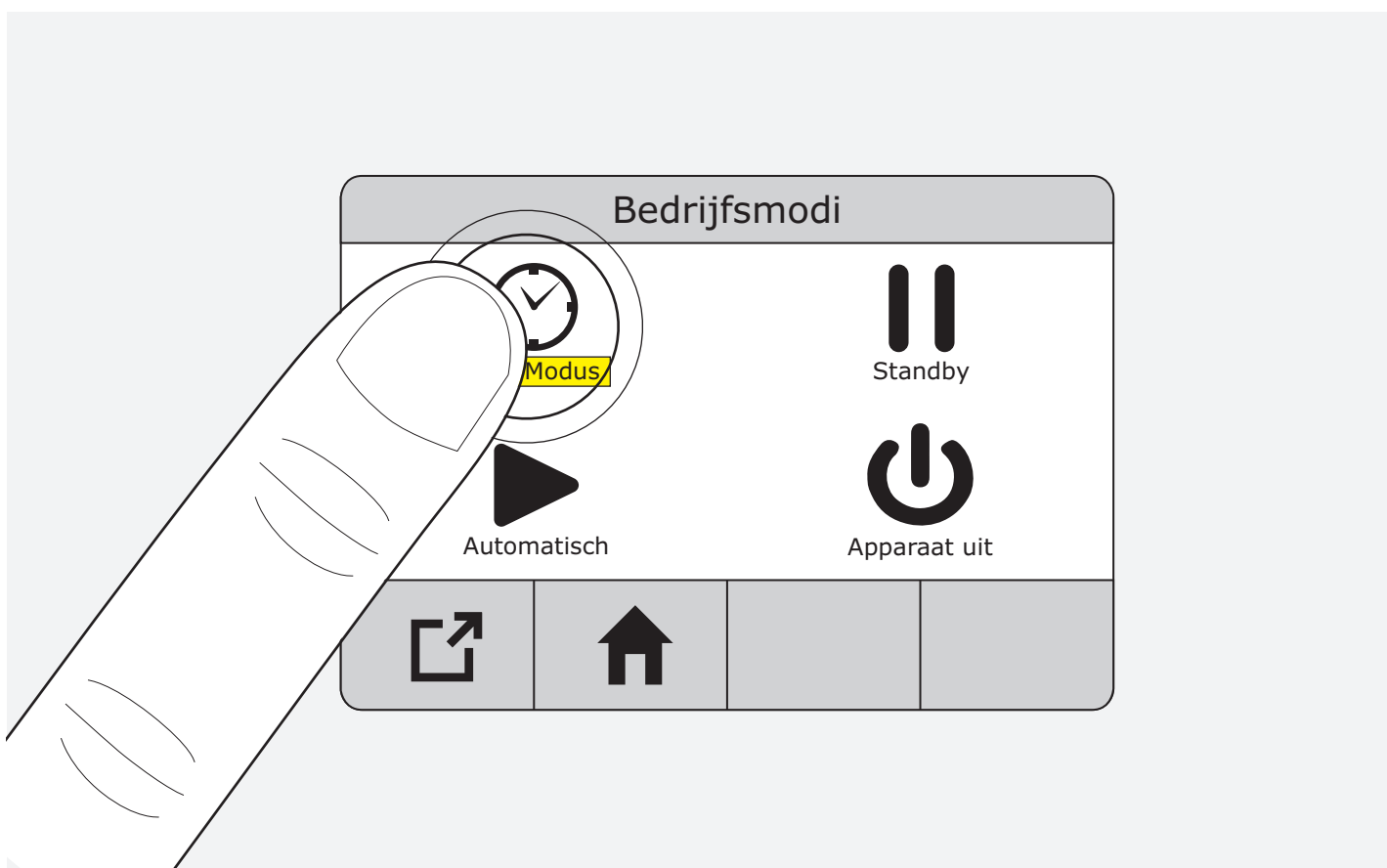
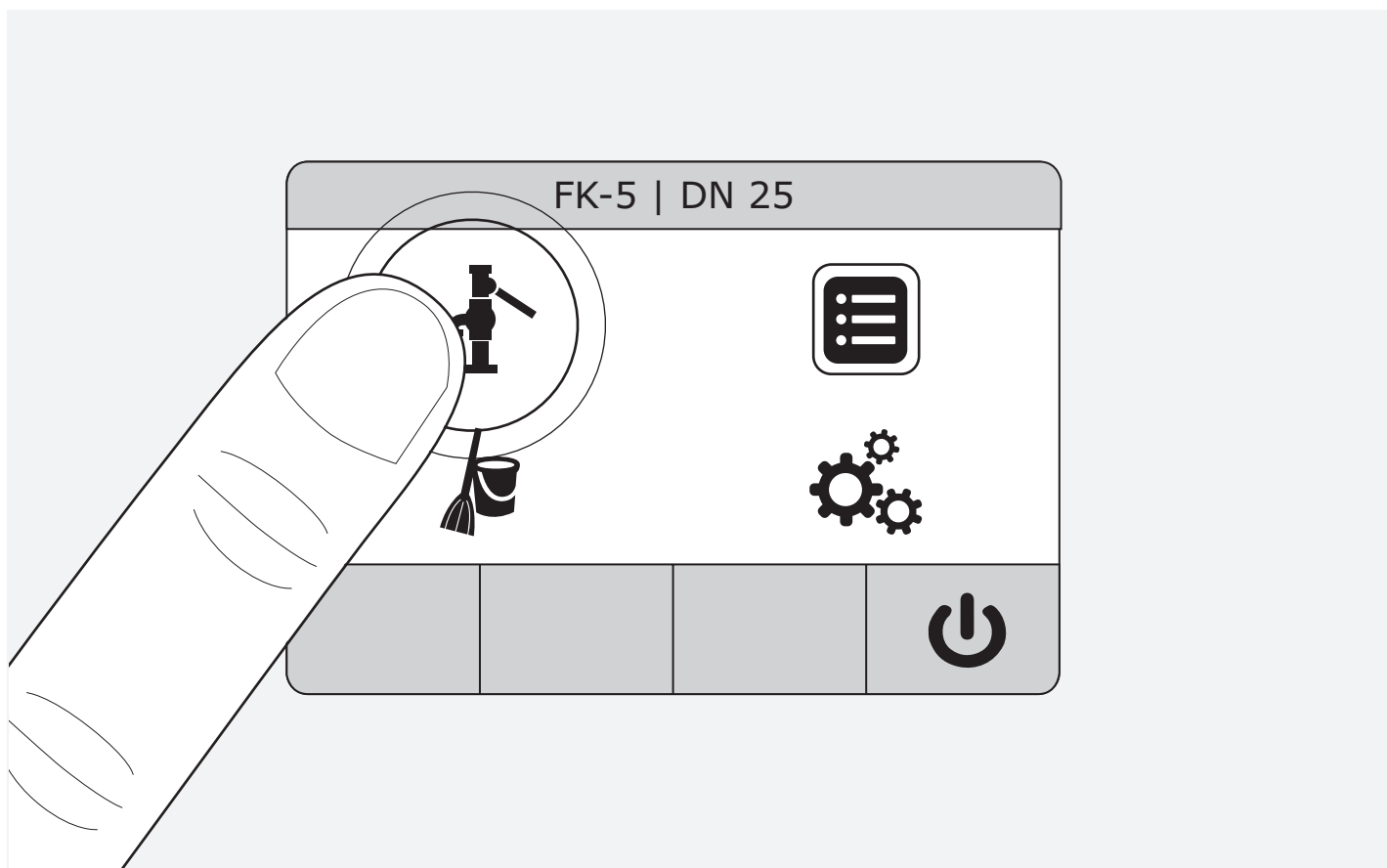


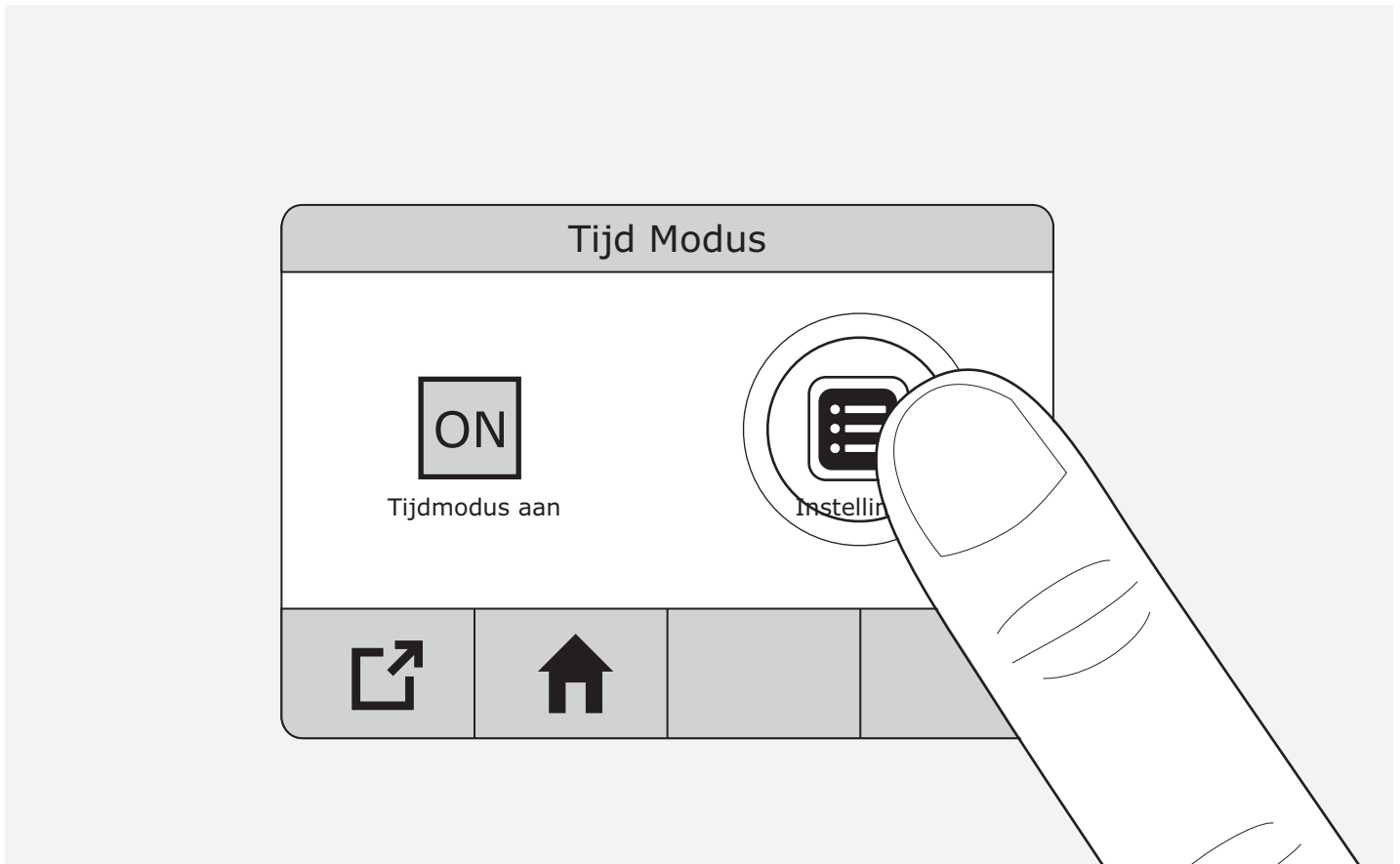






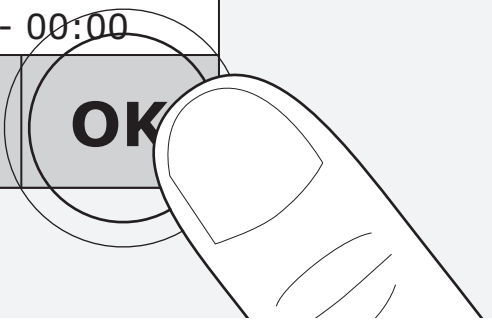






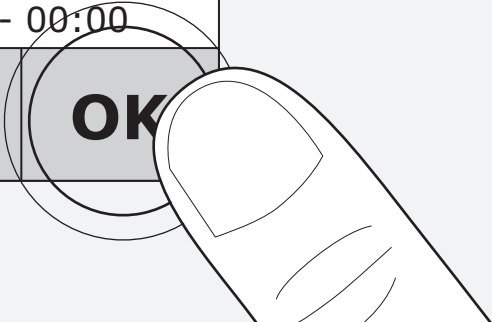
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Dinsdag	Uit	00:00 - 00:00
Woensdag	Uit	00:00 - 00:00
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Vrijdag	Uit	00:00 - 00:00
Zaterdag	Uit	00:00 - 00:00
Zondag	Uit	00:00 - 00:00

Navigation icons: ↗, ↑, ↓, OK

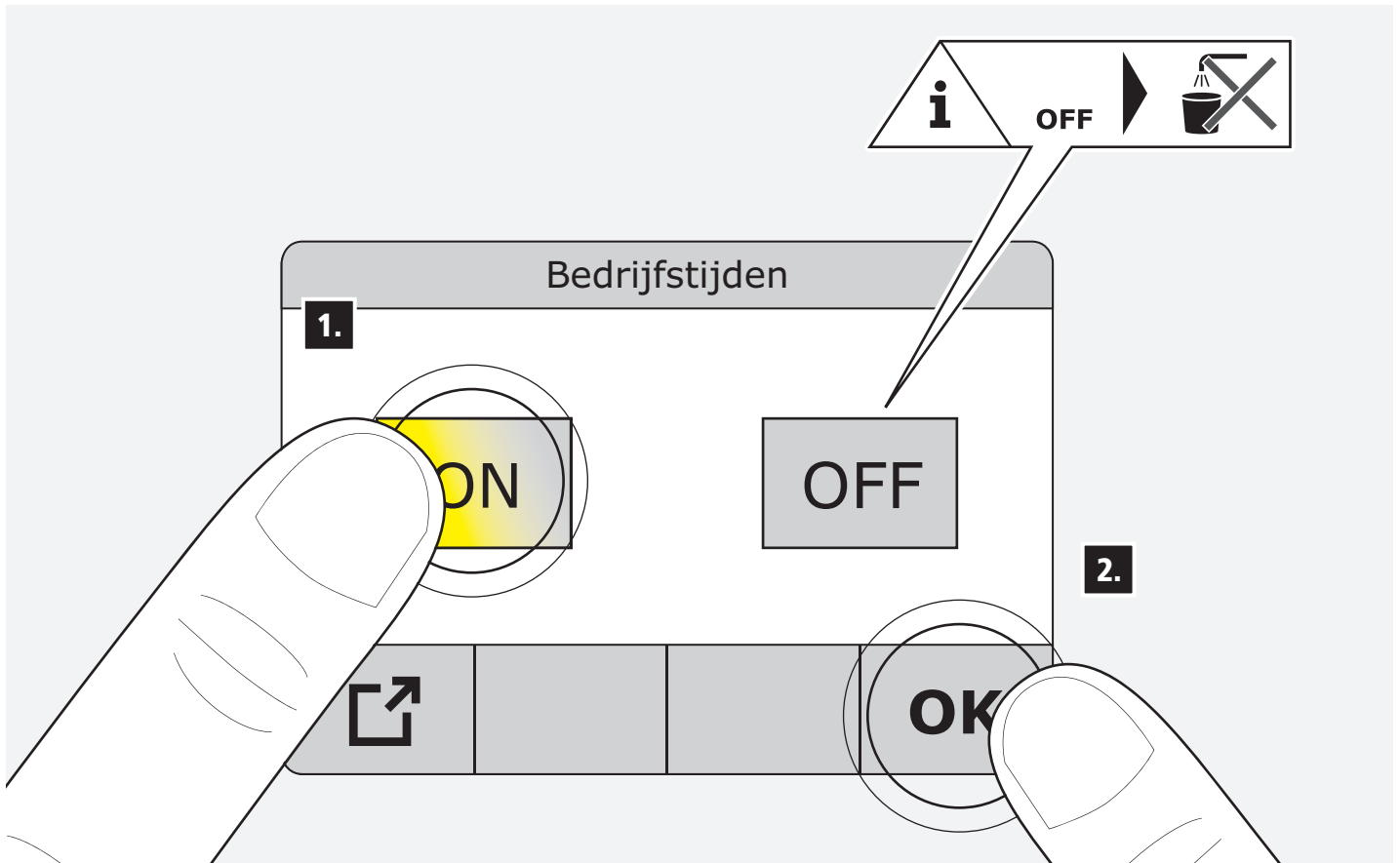


Bedrijfstijden		
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Zondag	Uit	00:00 - 00:00

Navigation icons: ↗, ←, →, OK

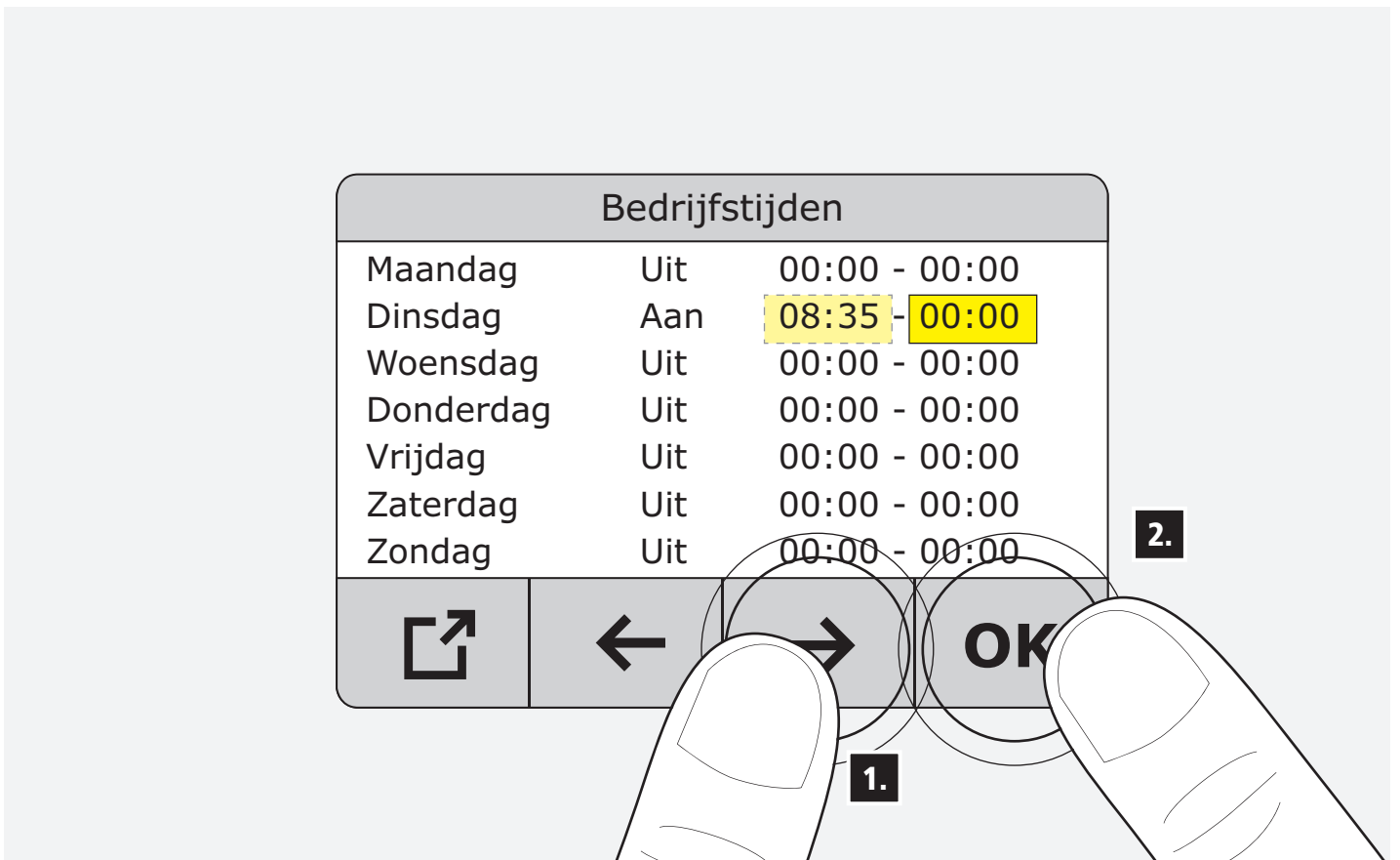
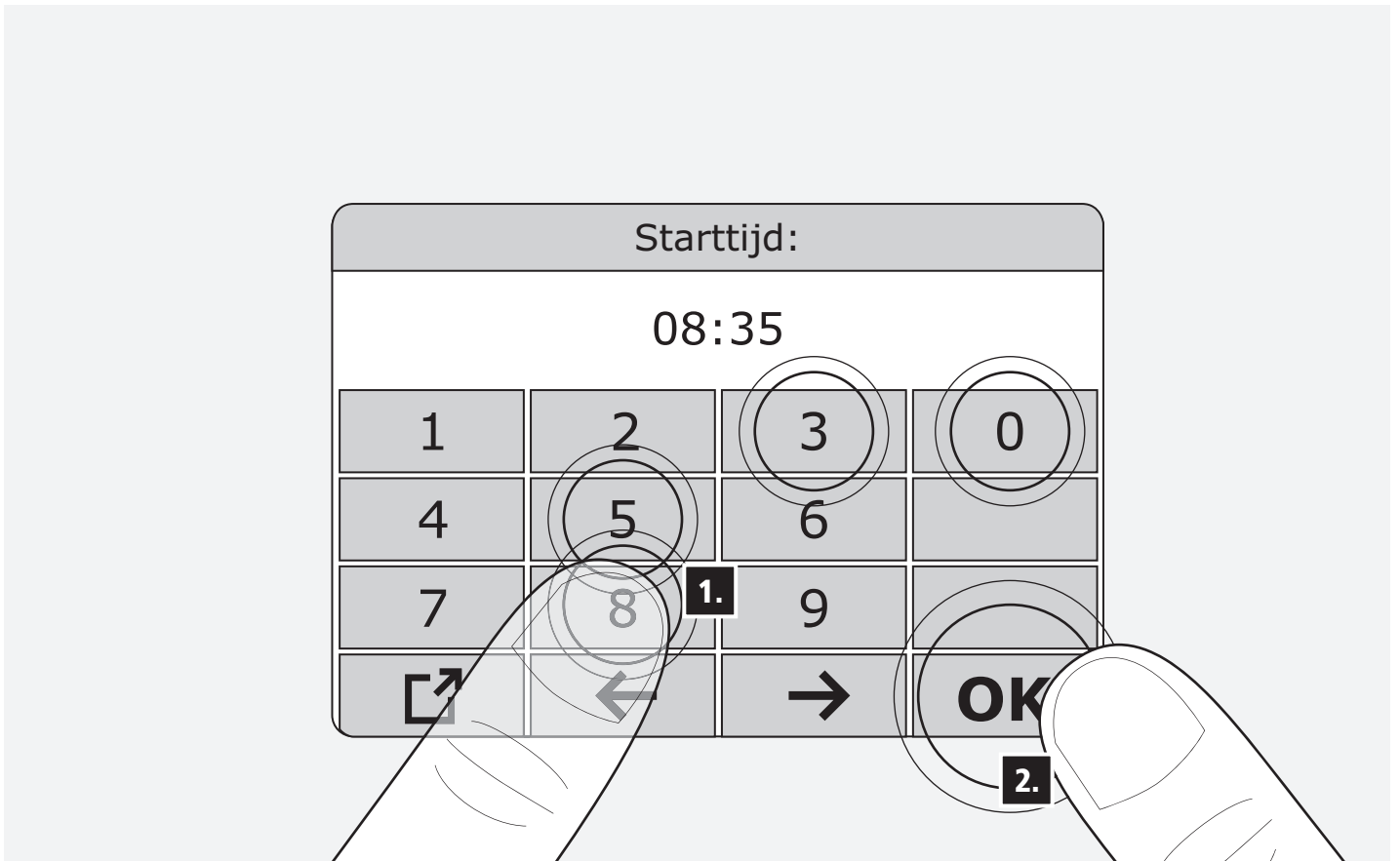


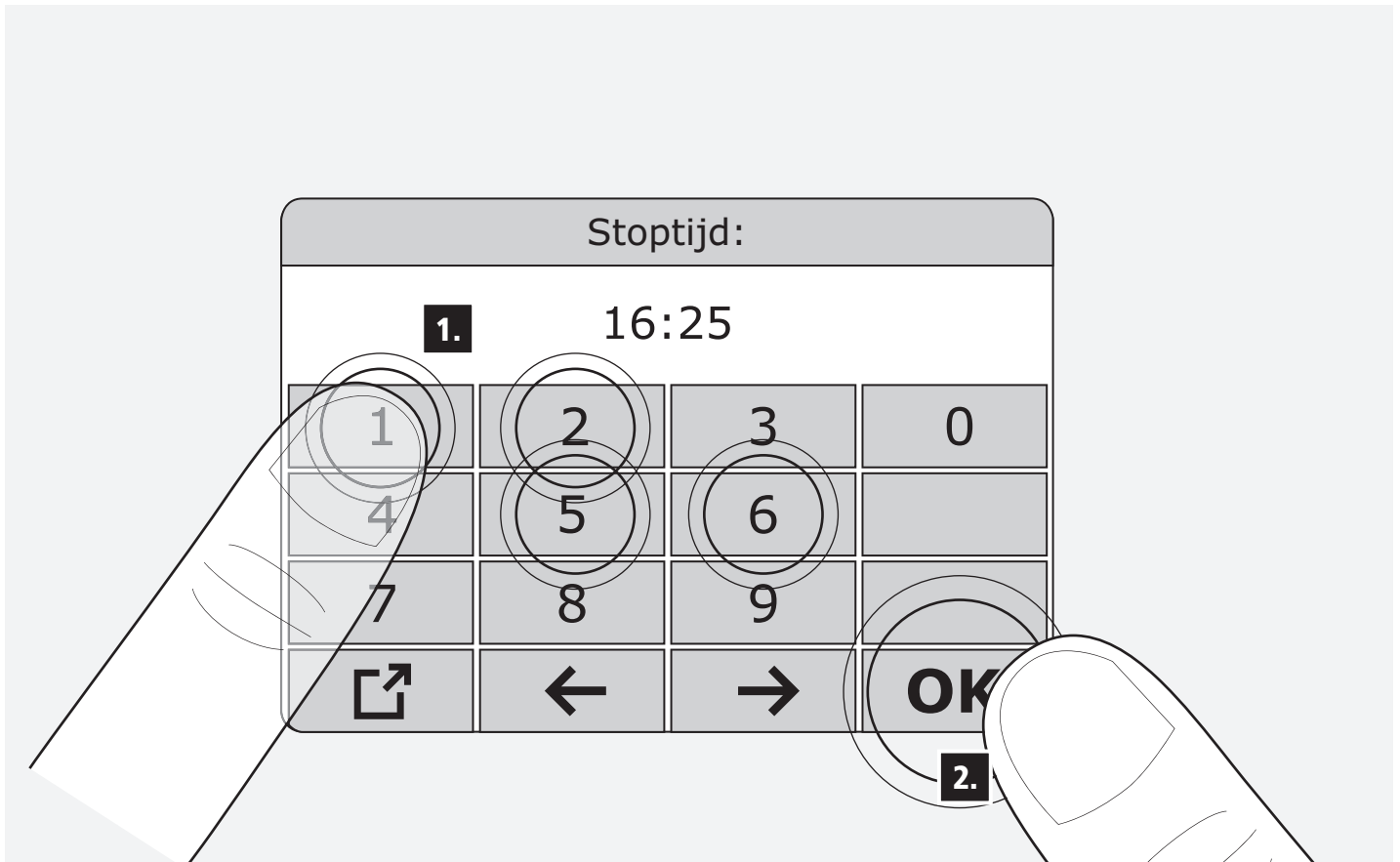
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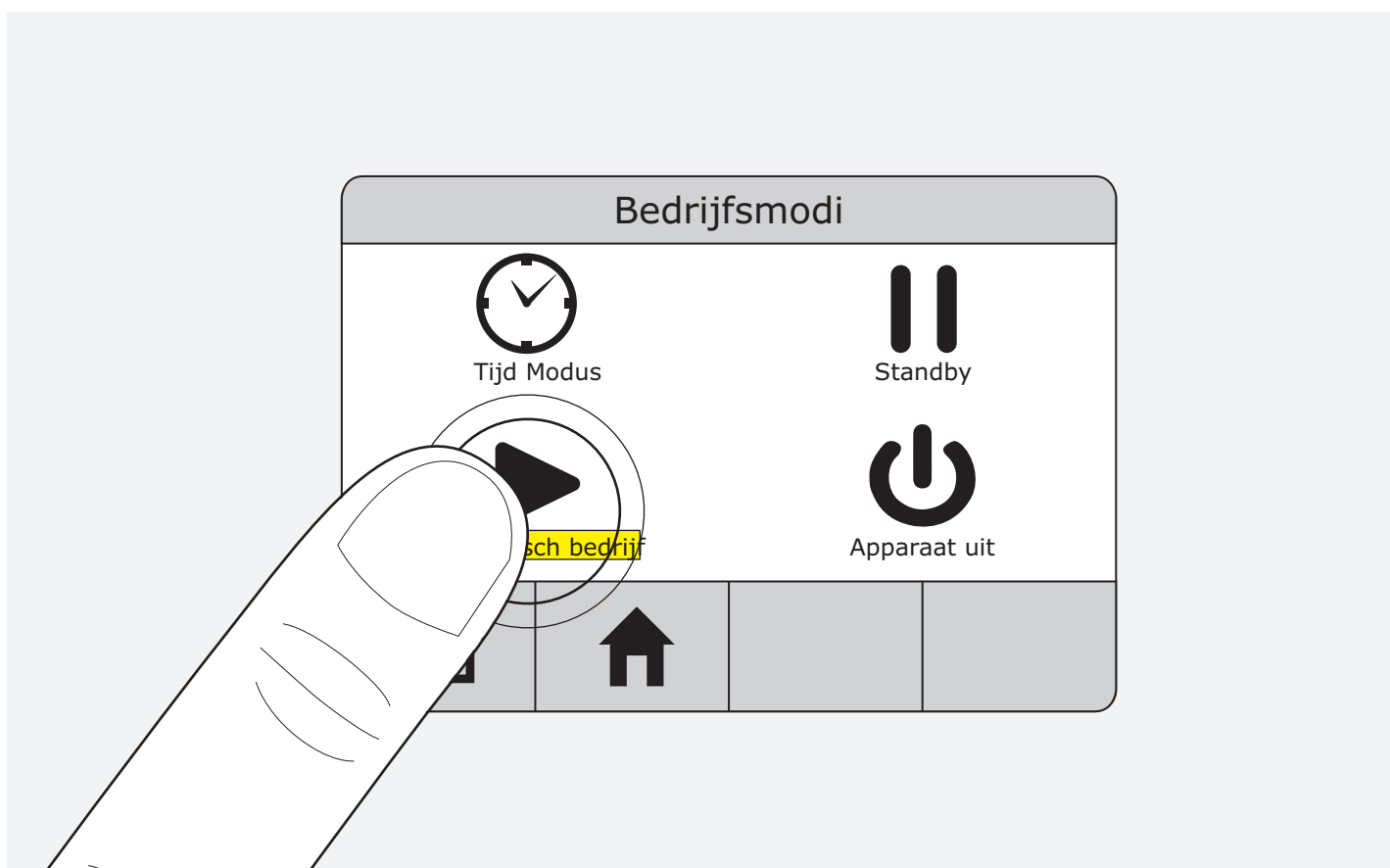
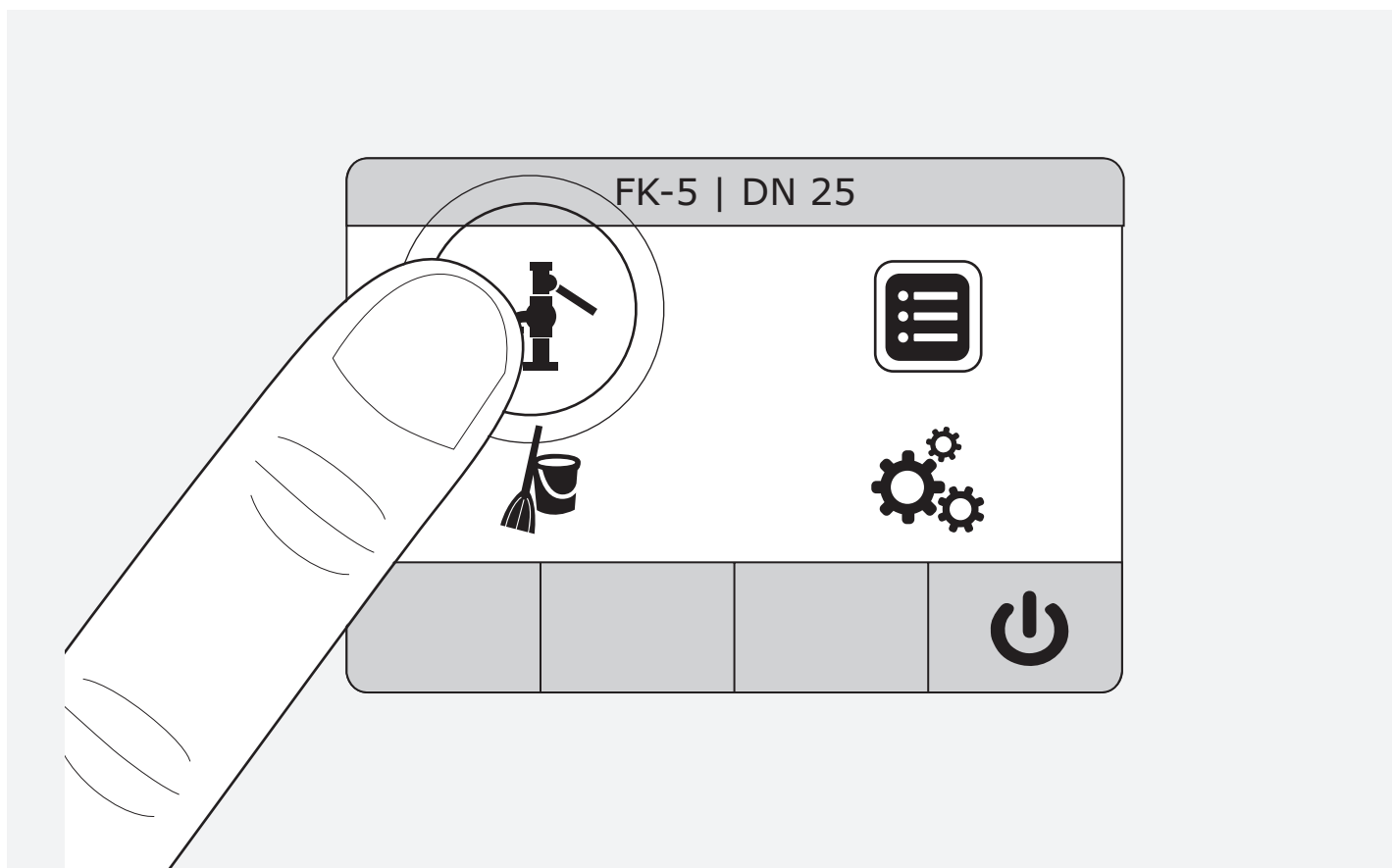


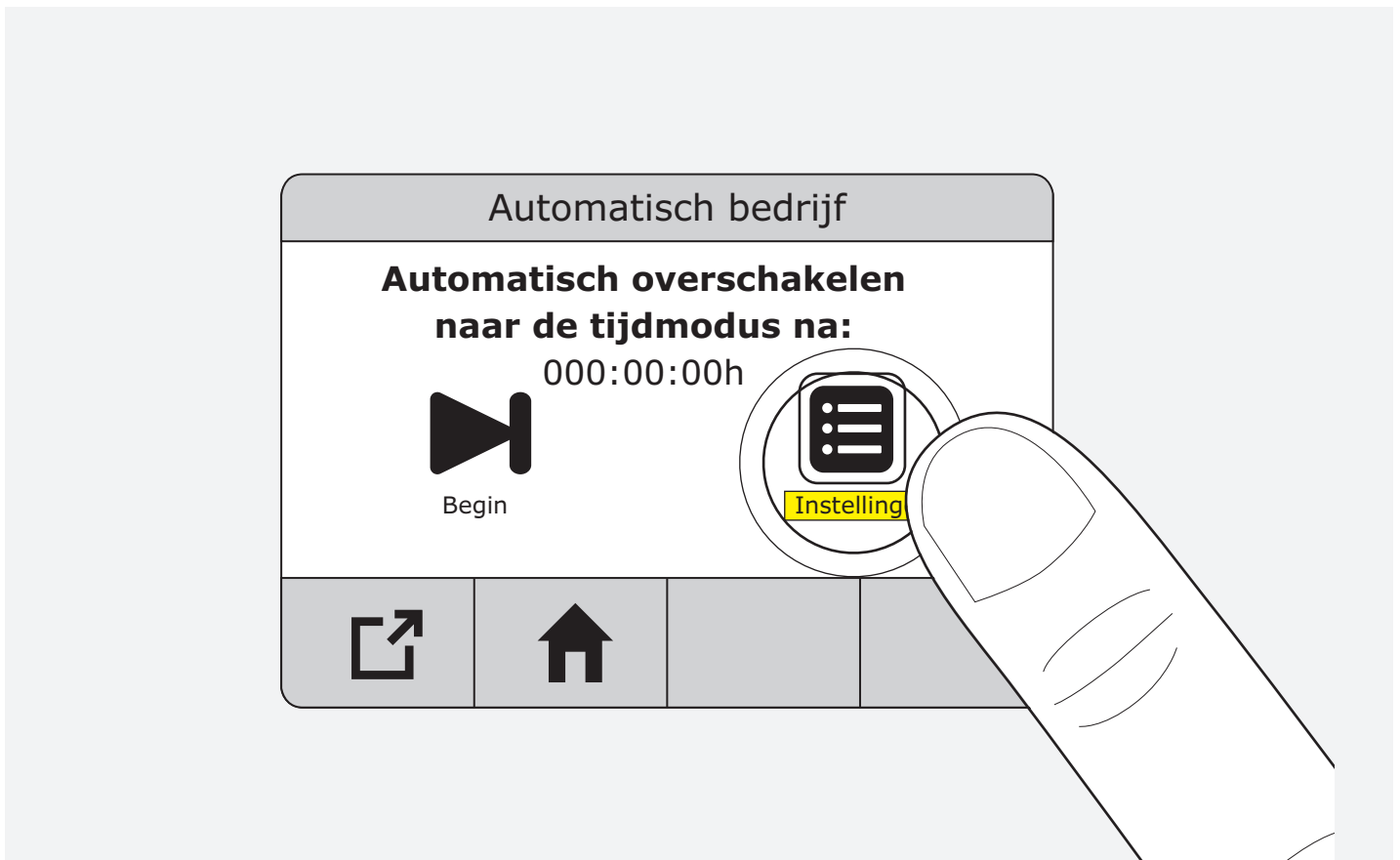
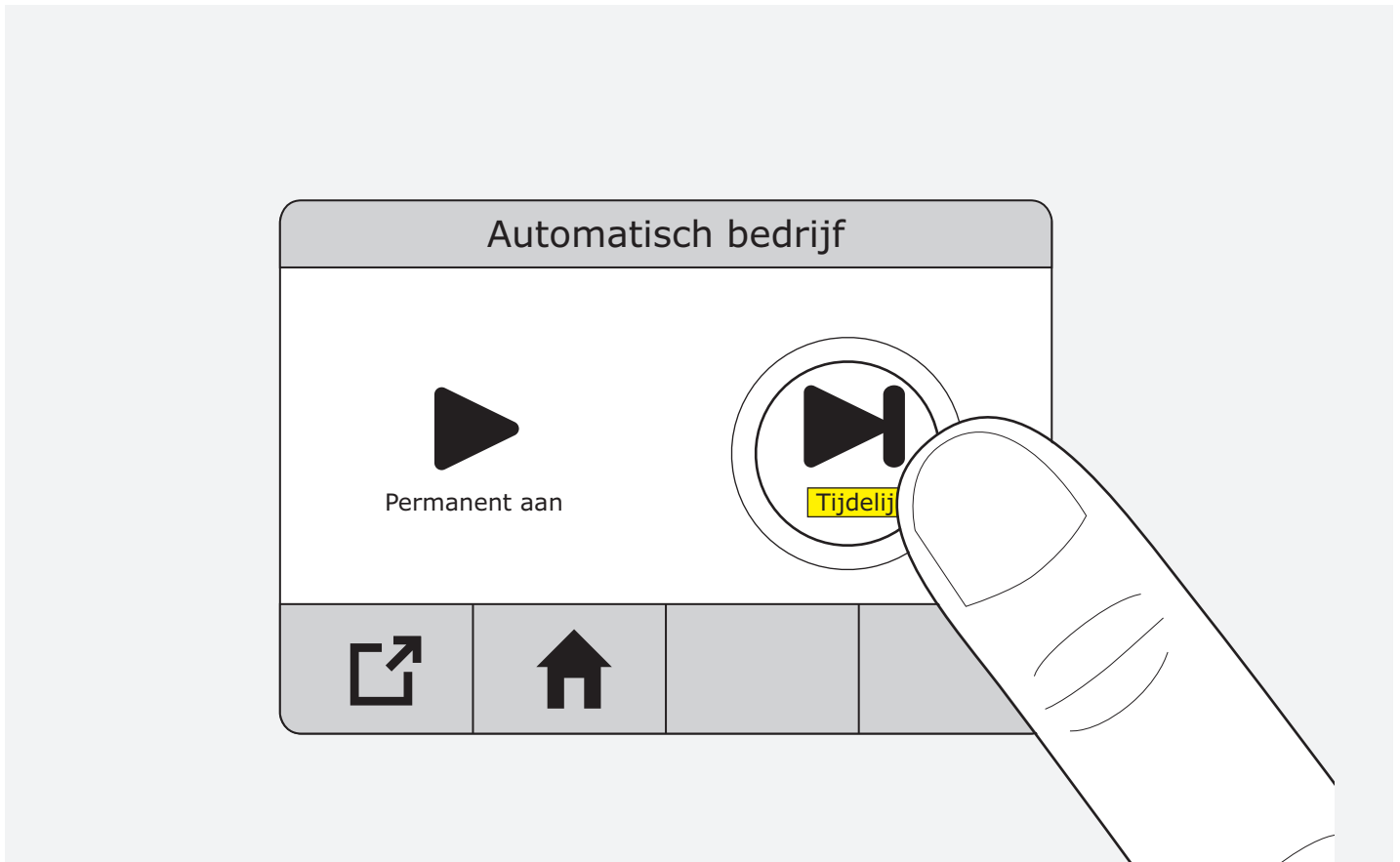
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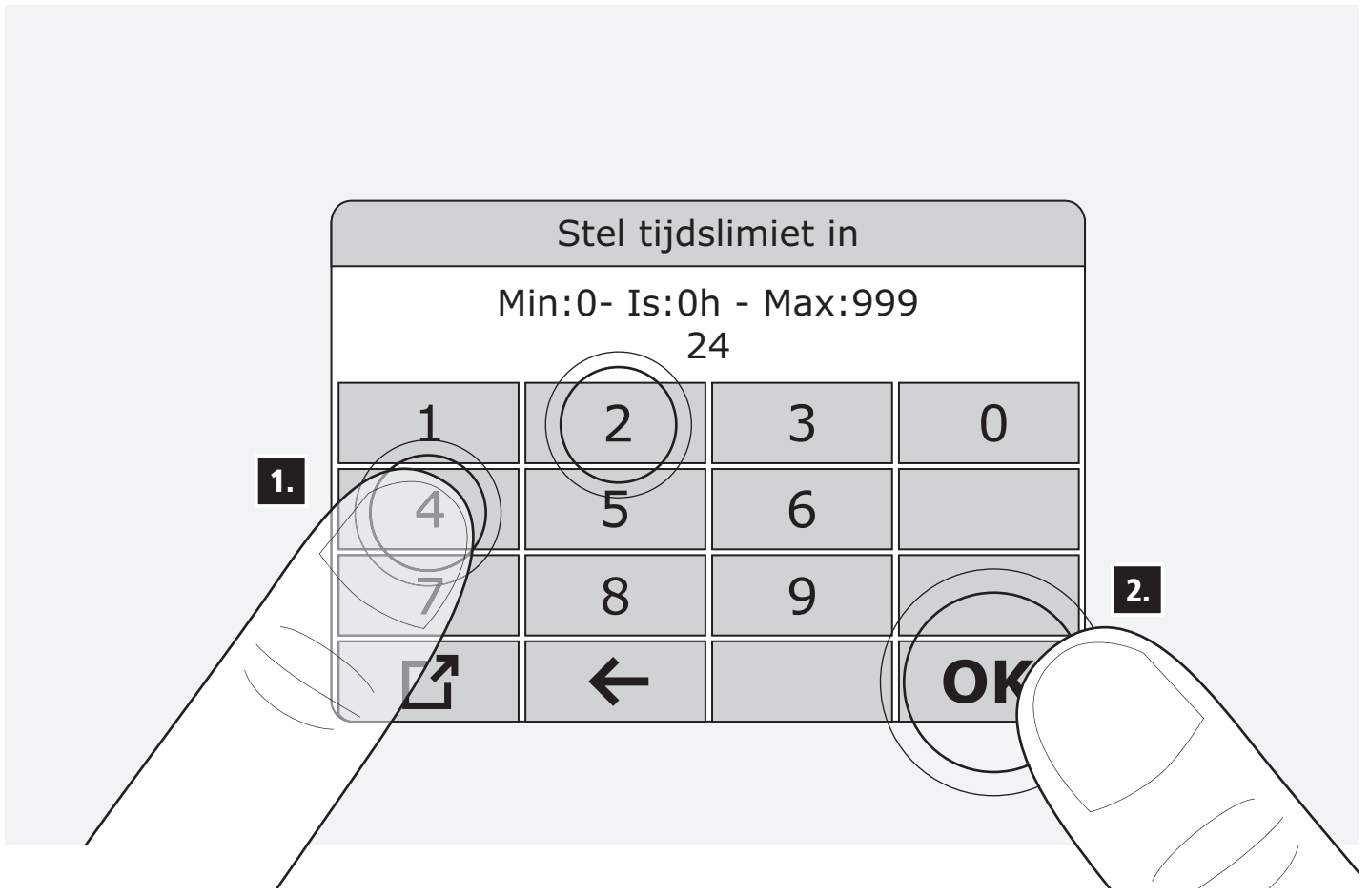




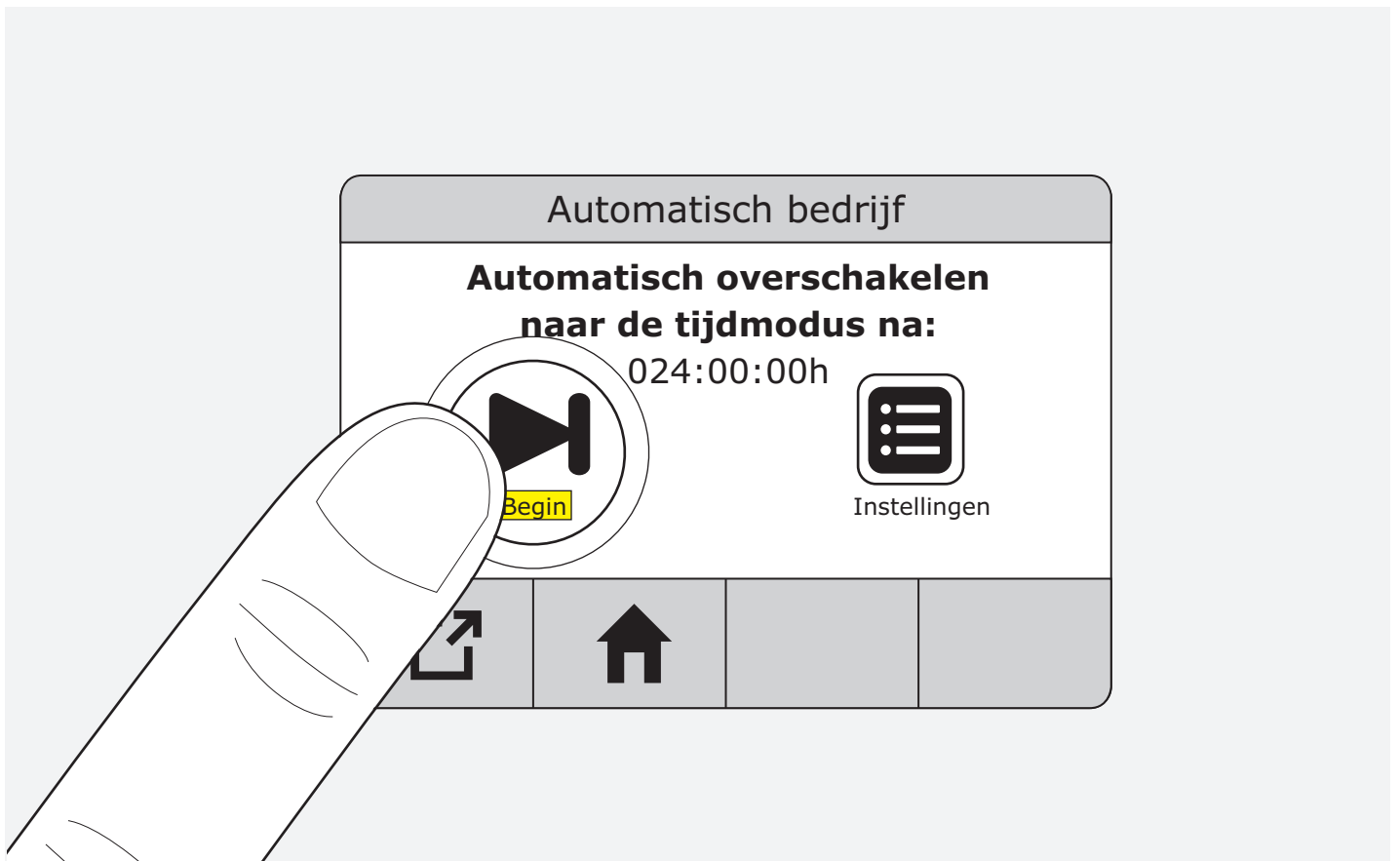




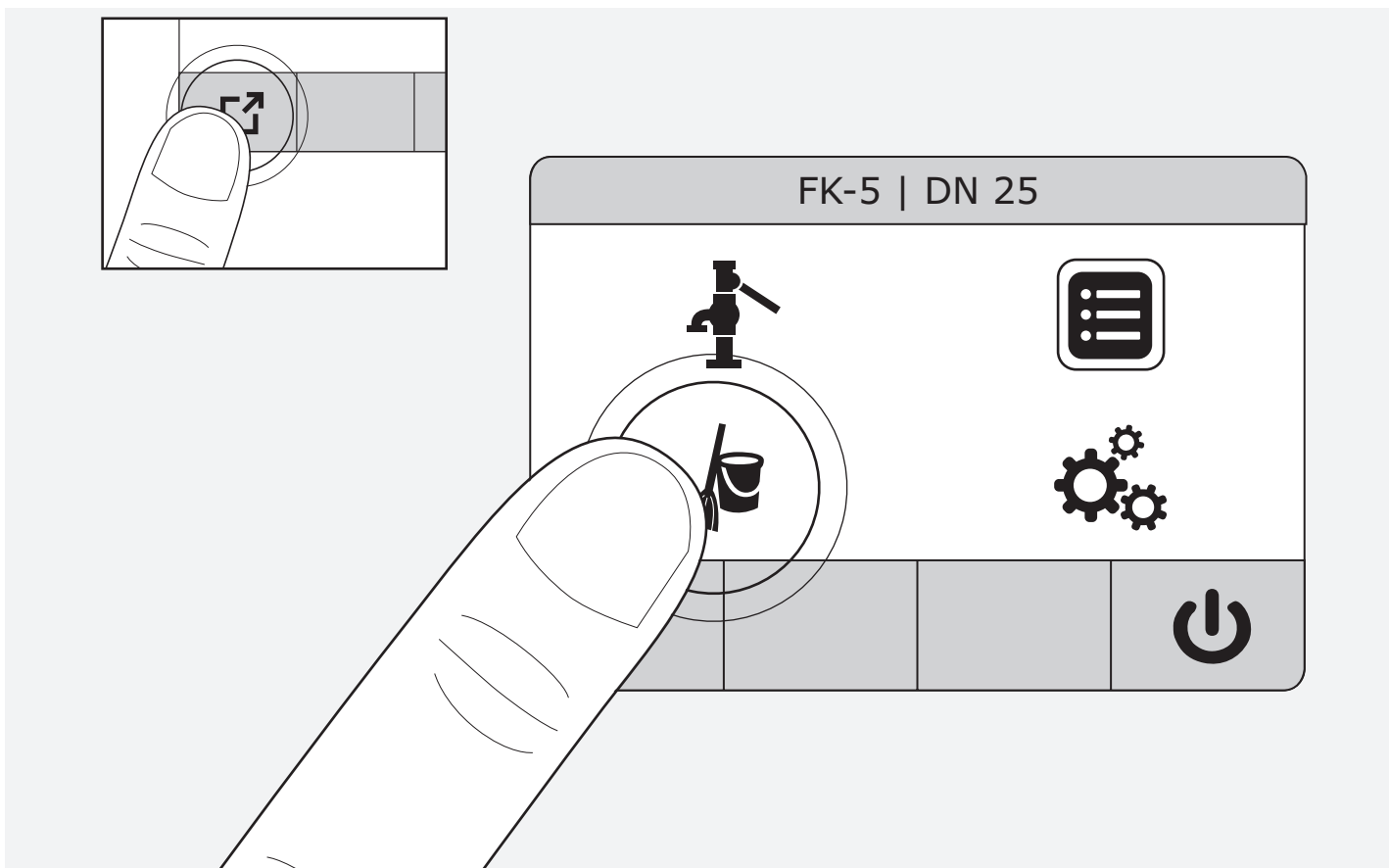




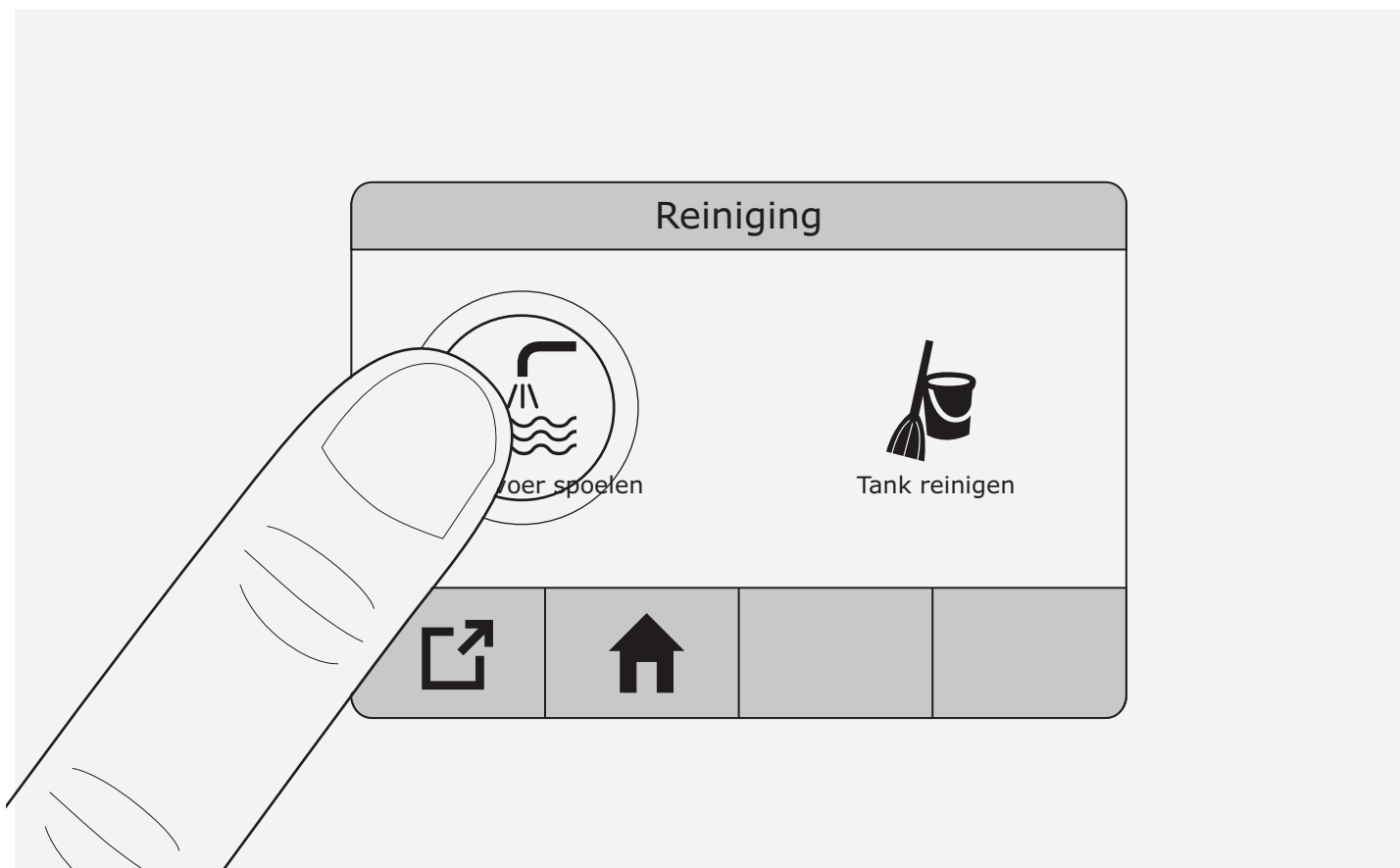
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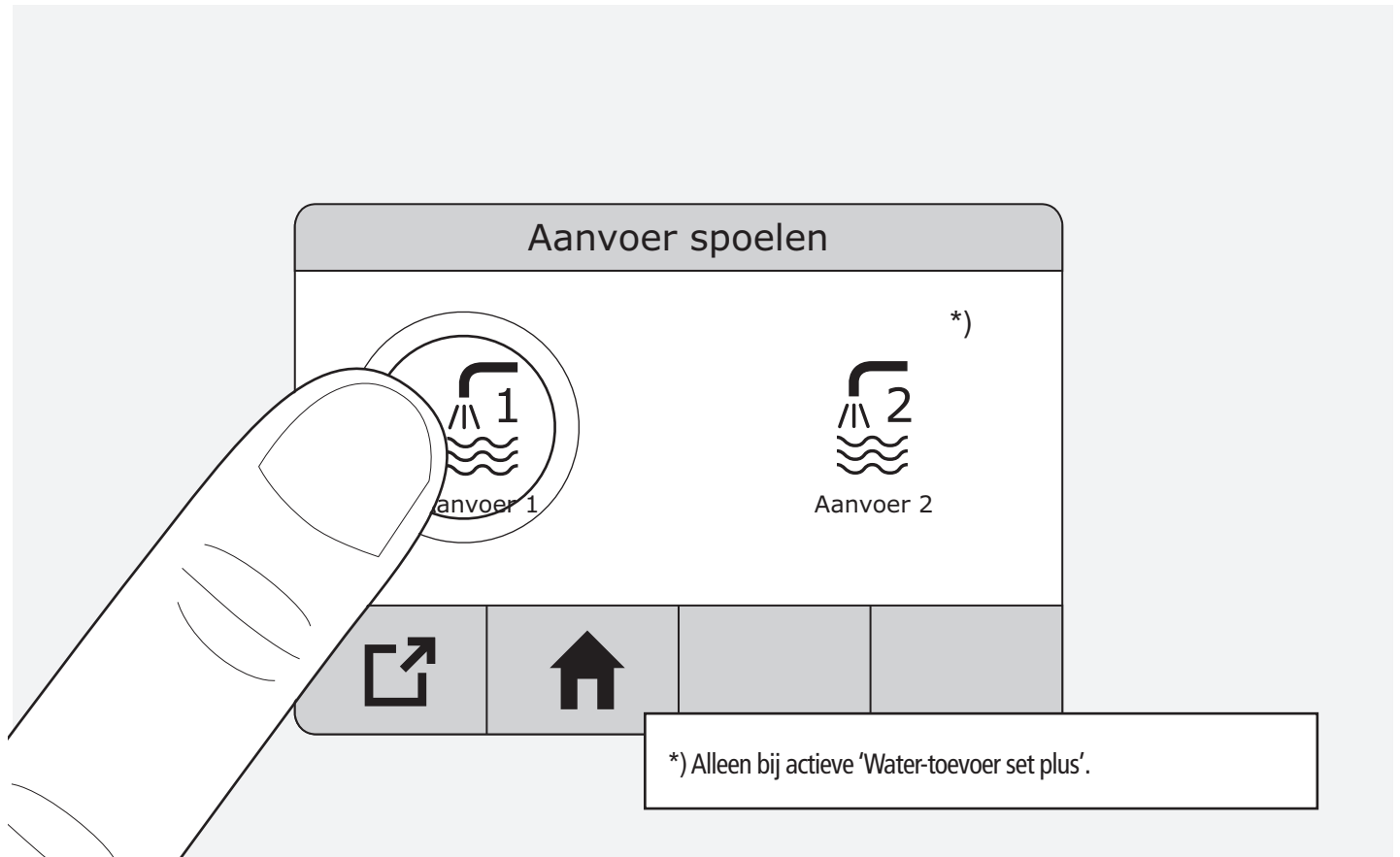




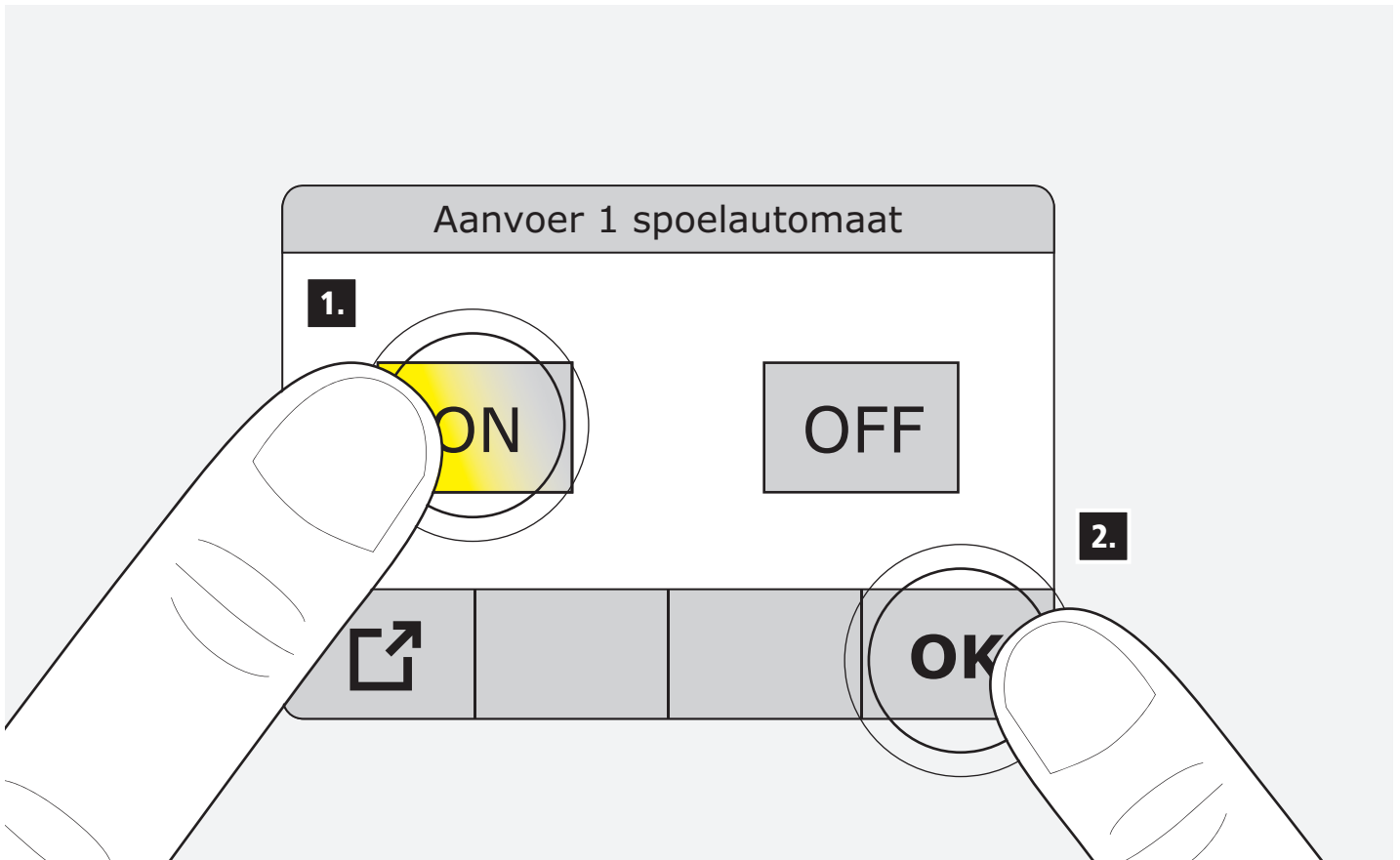


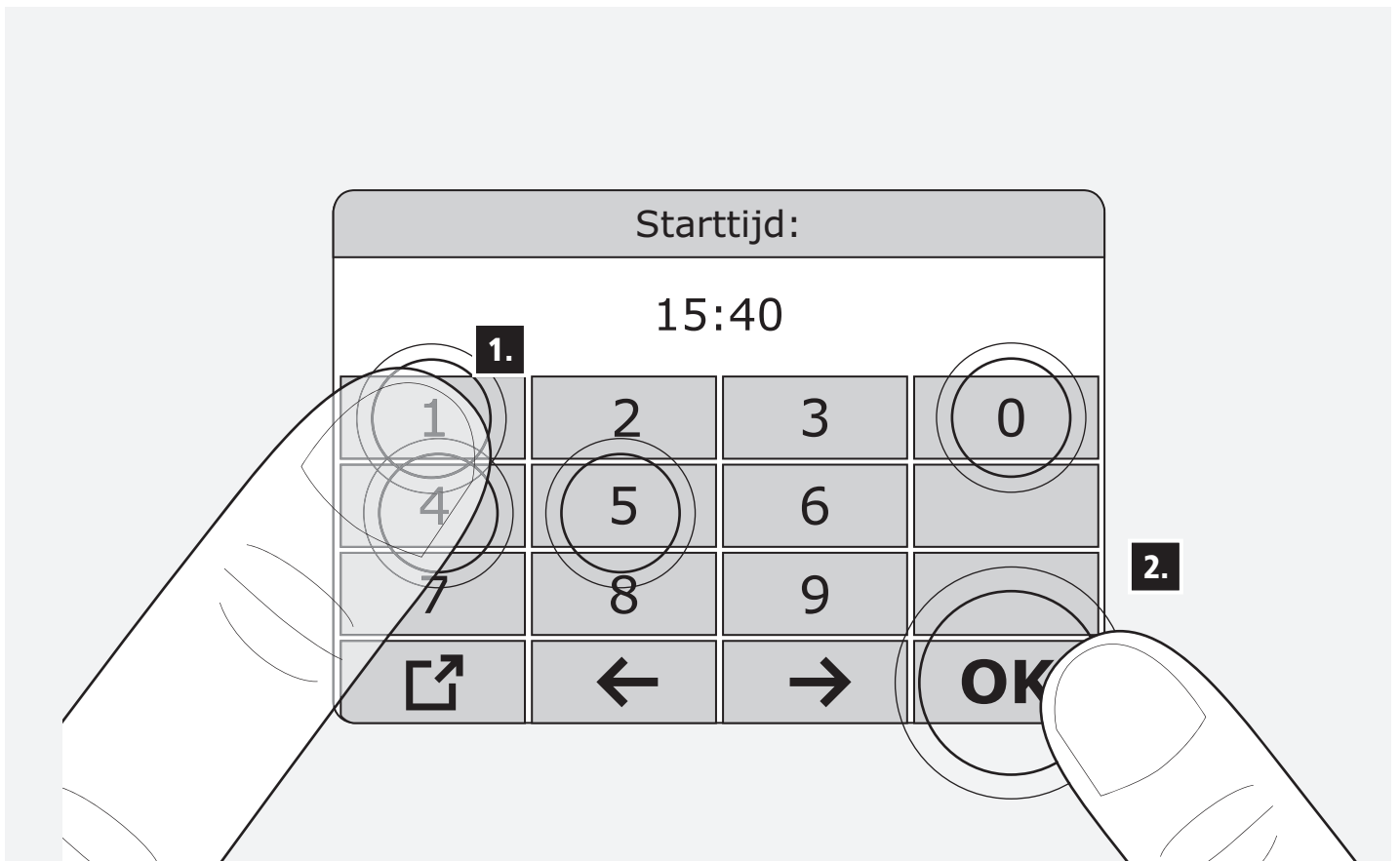
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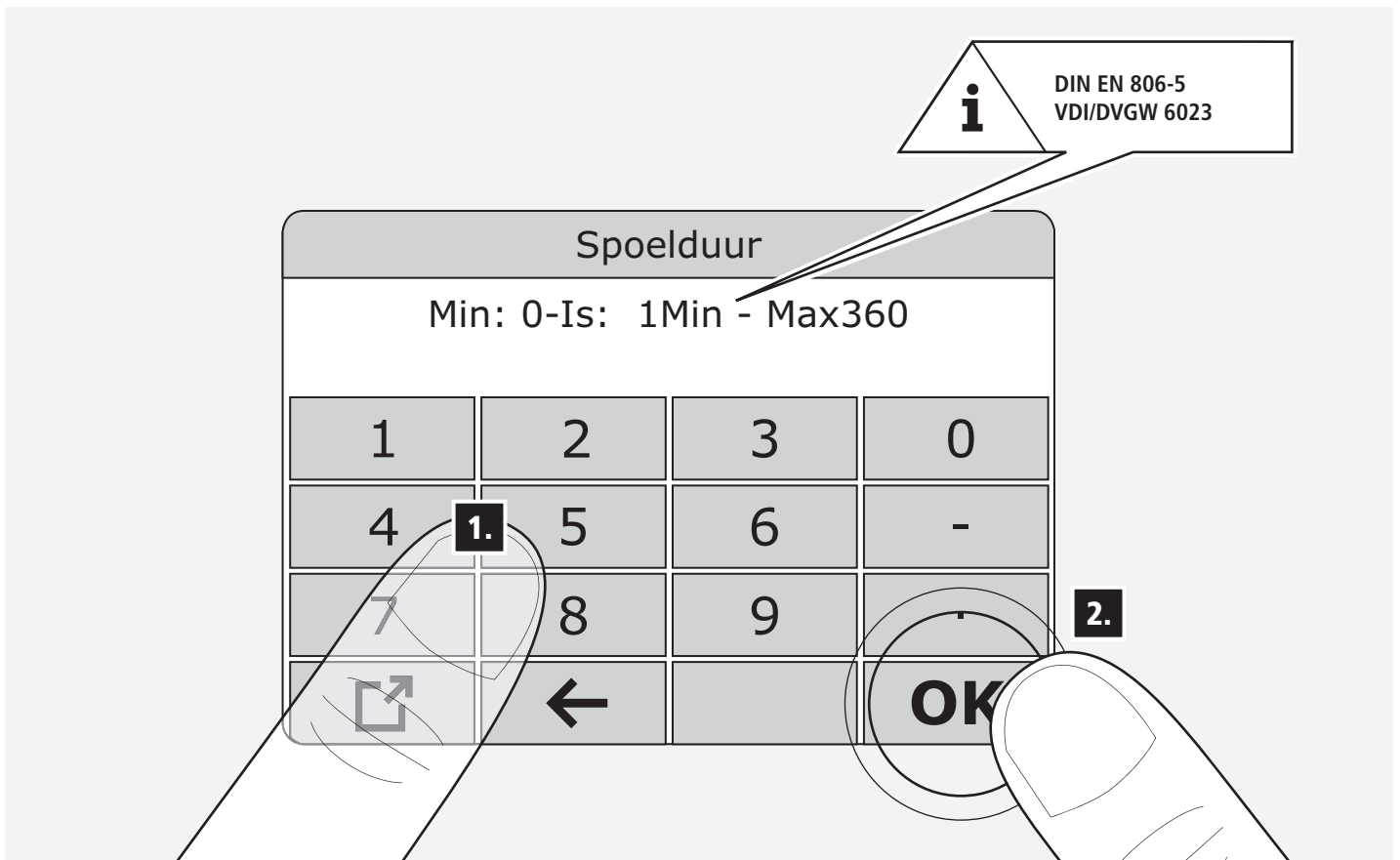






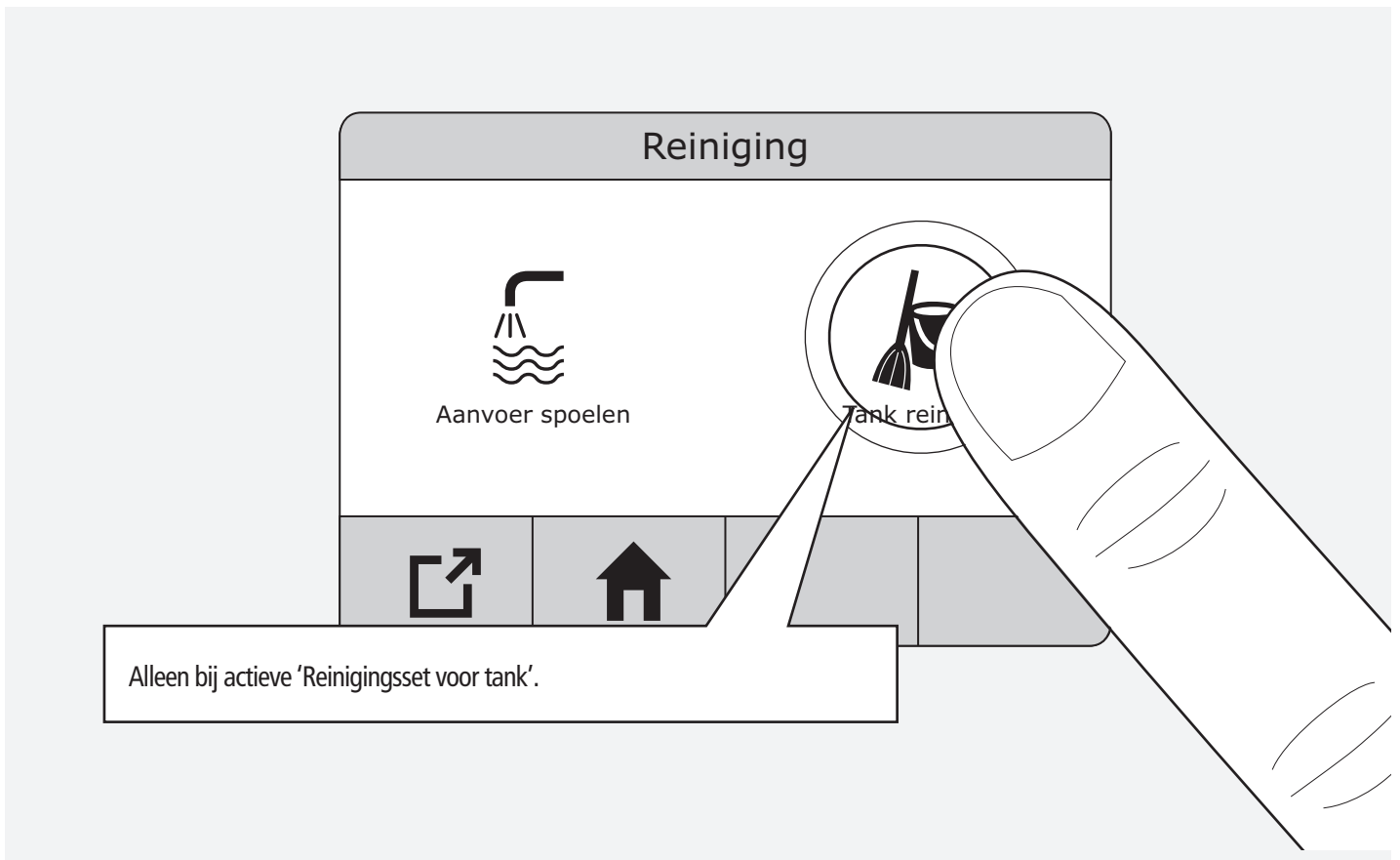


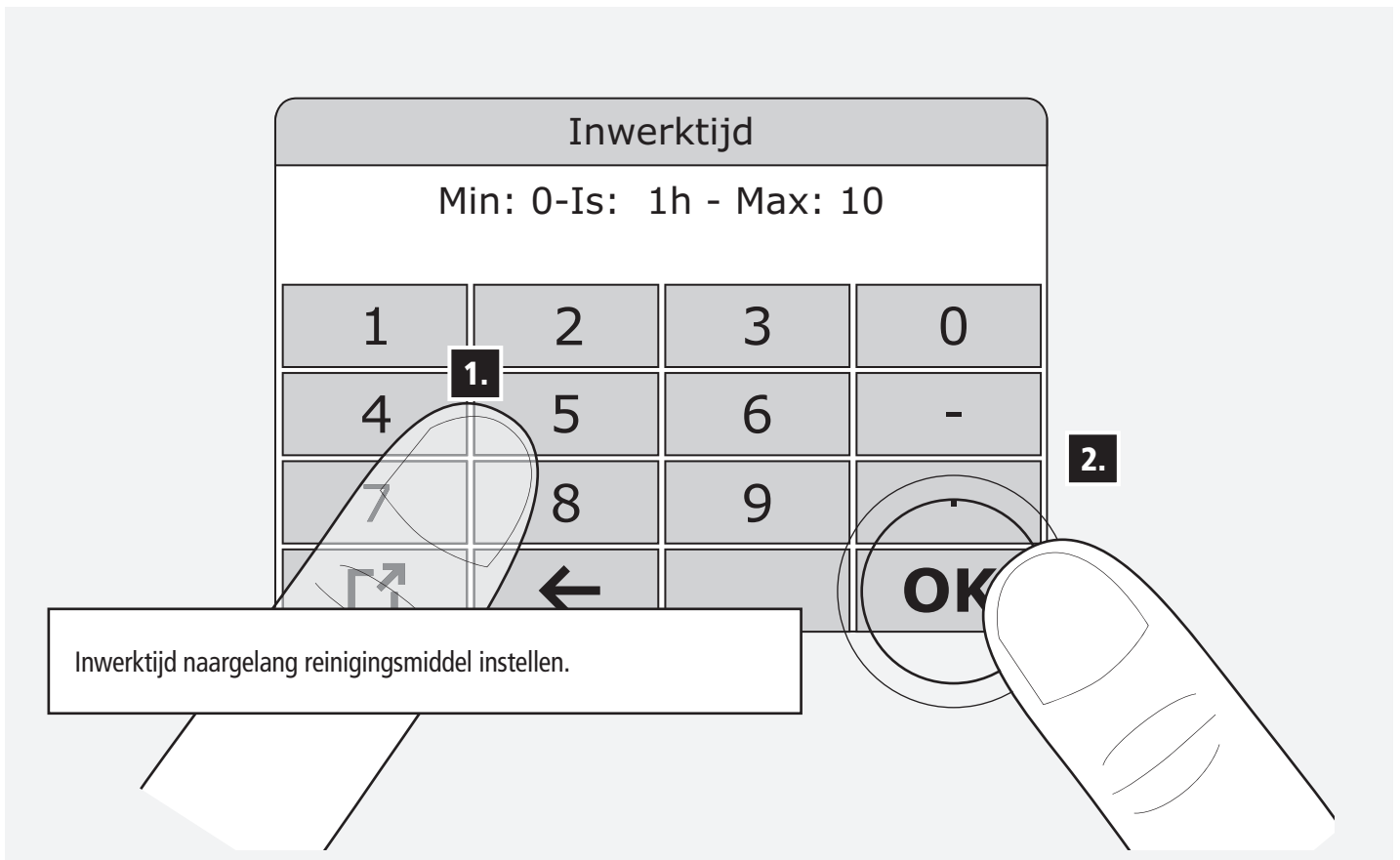
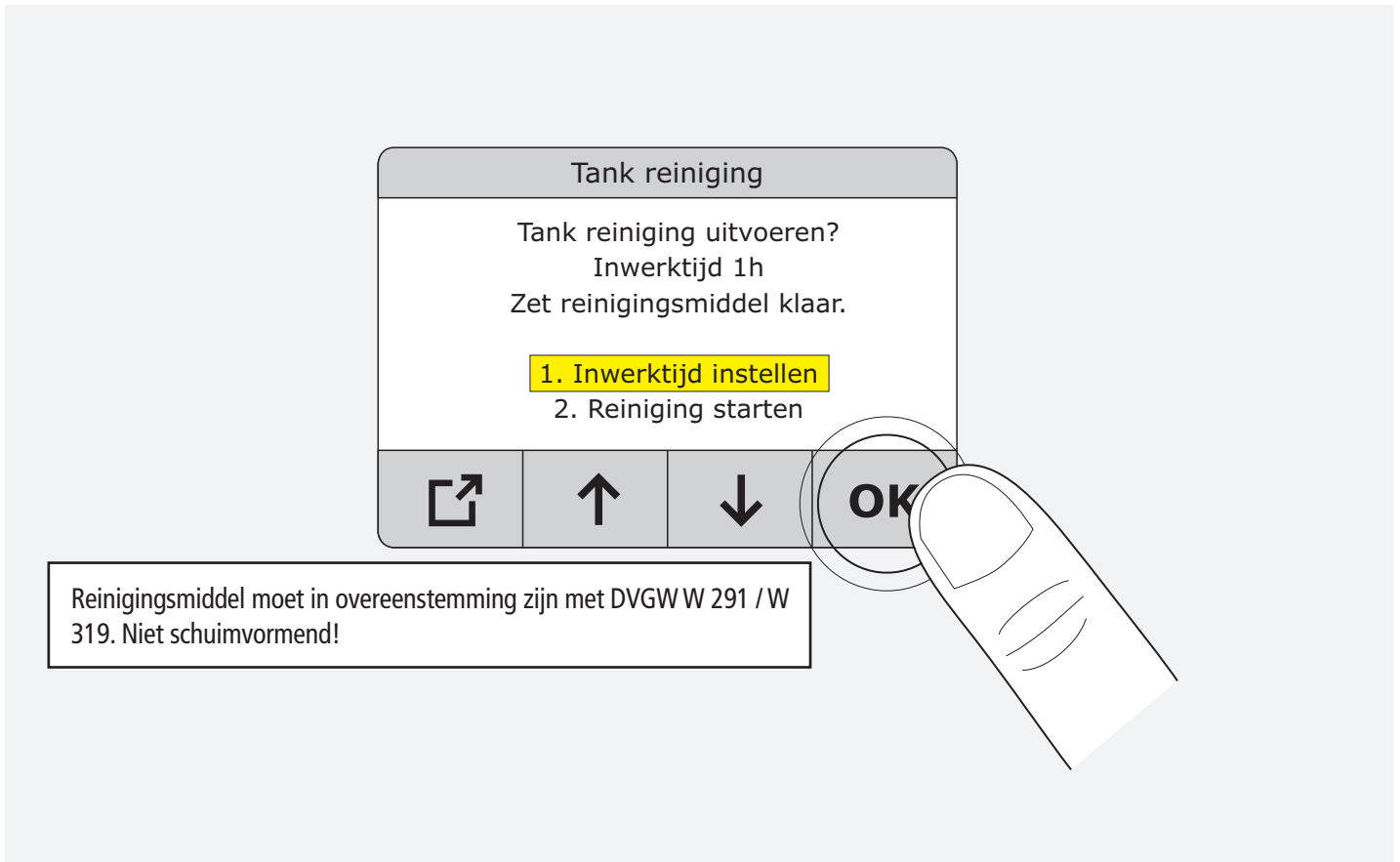


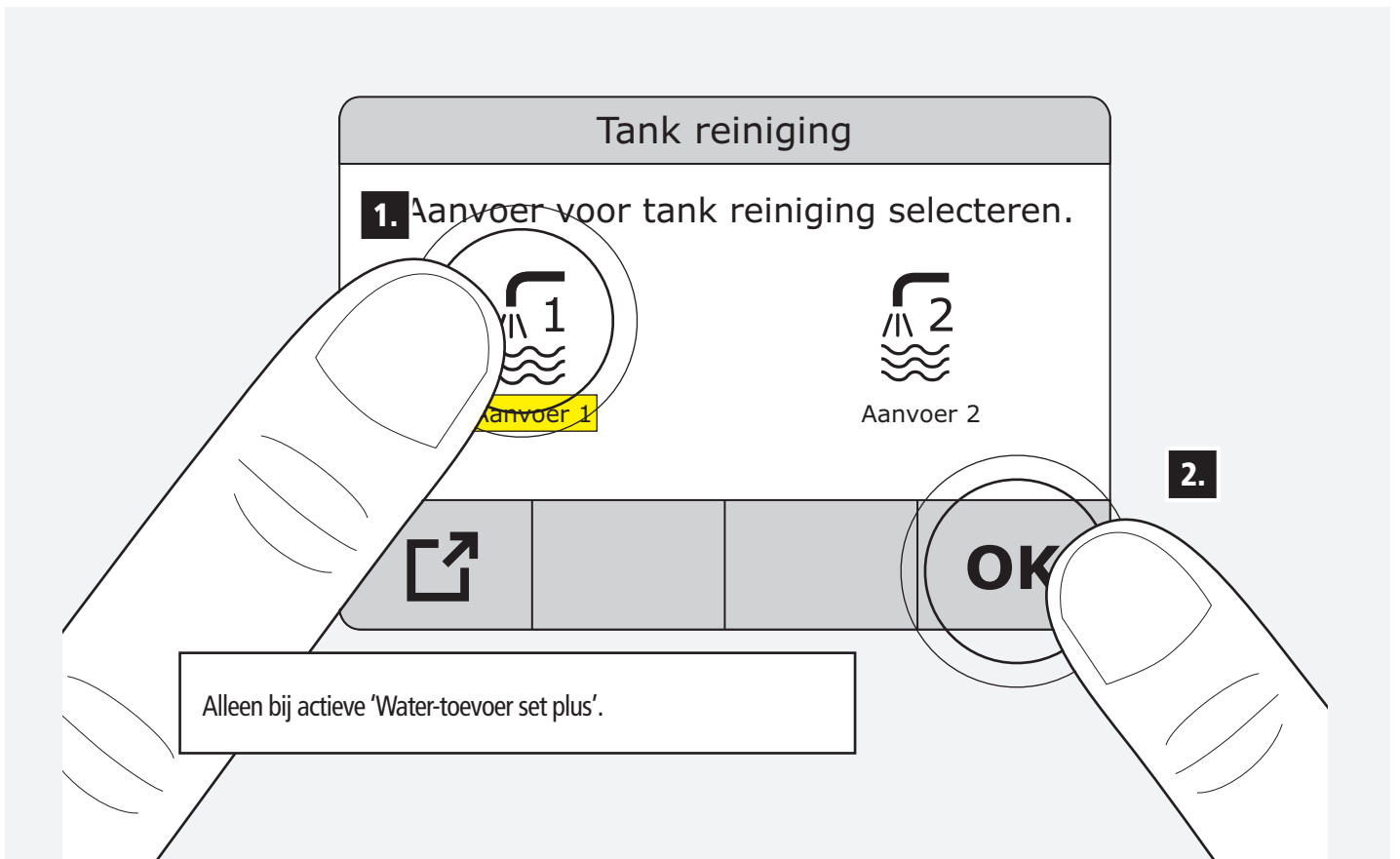
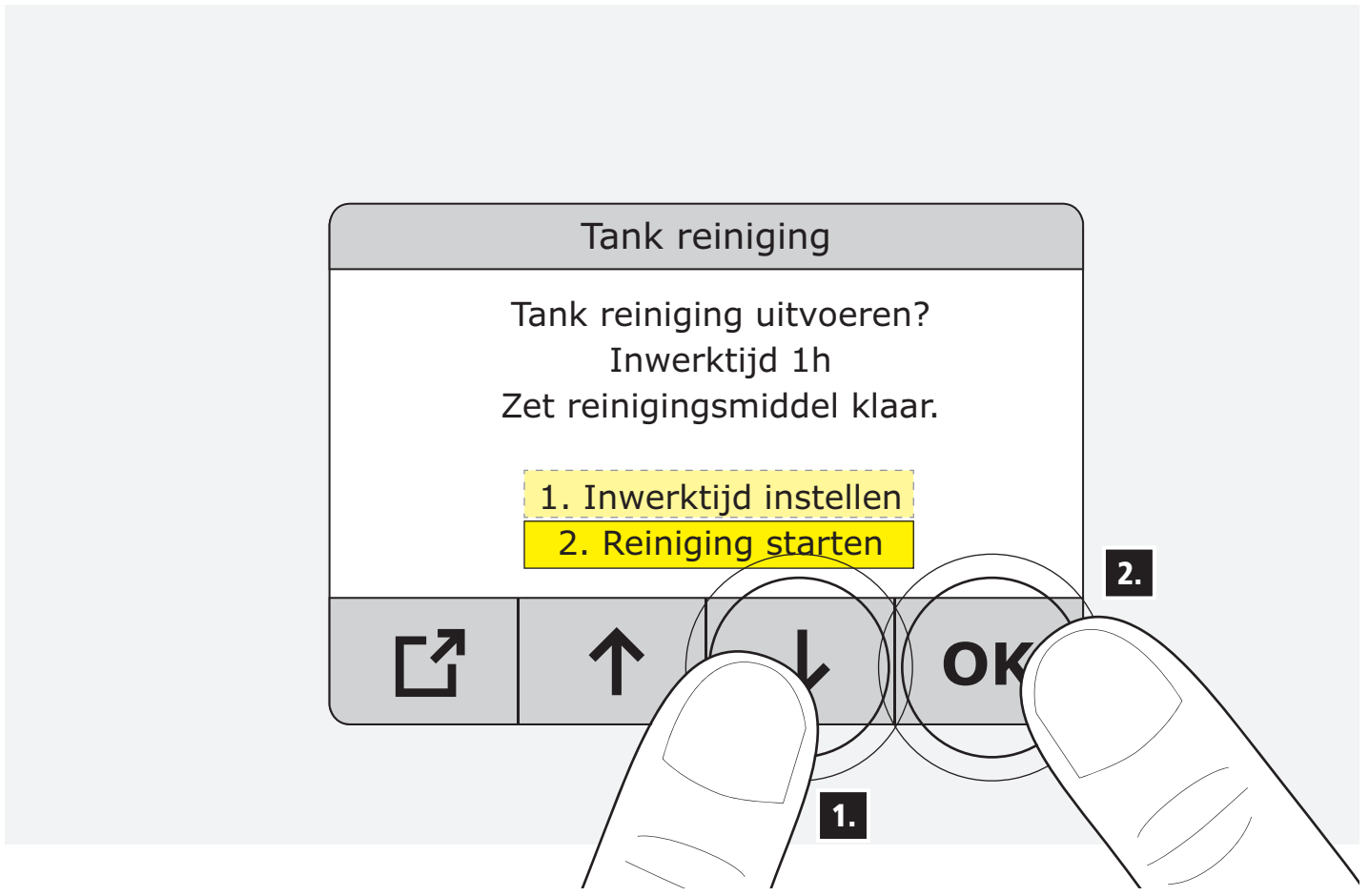


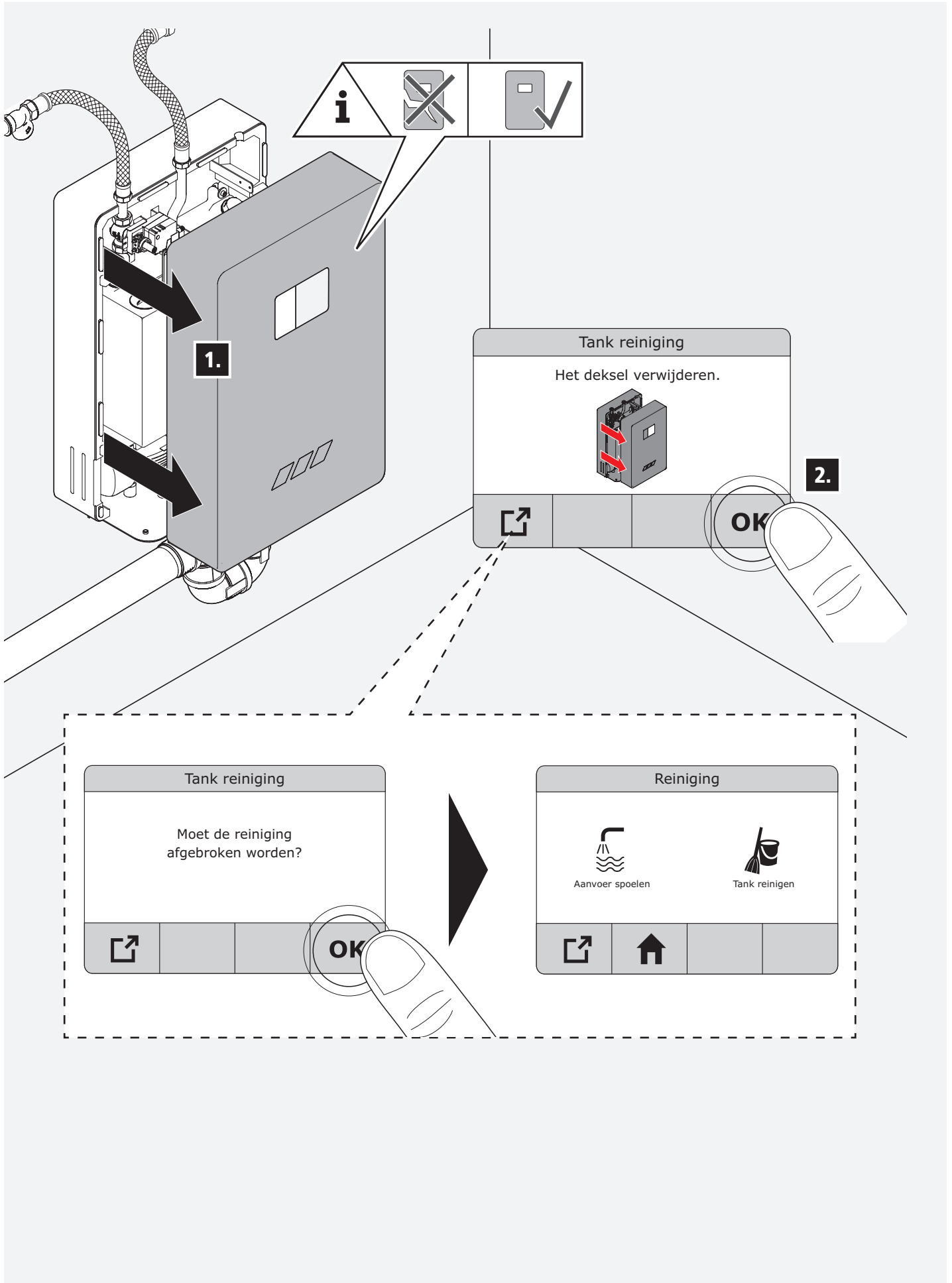


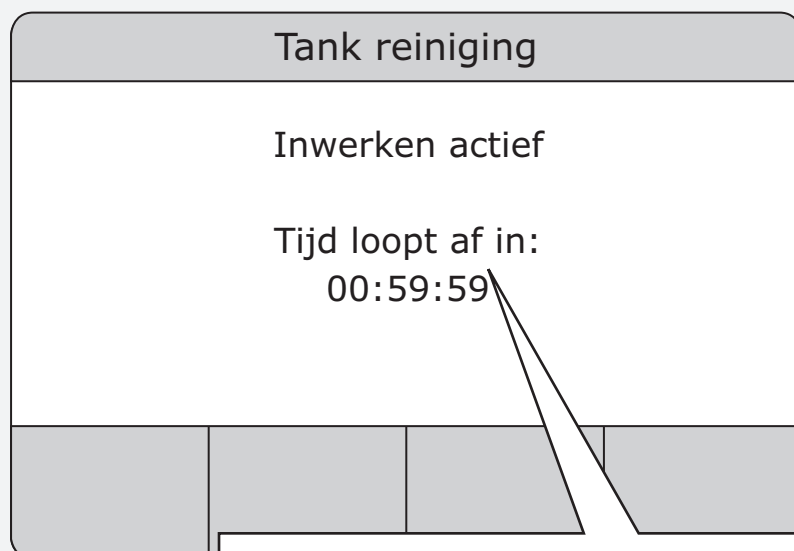
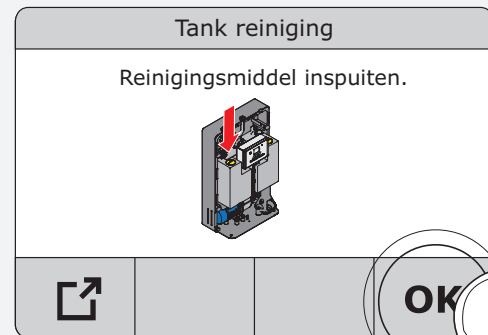
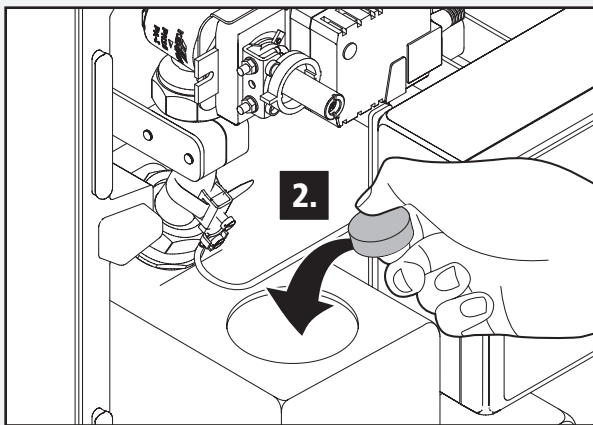
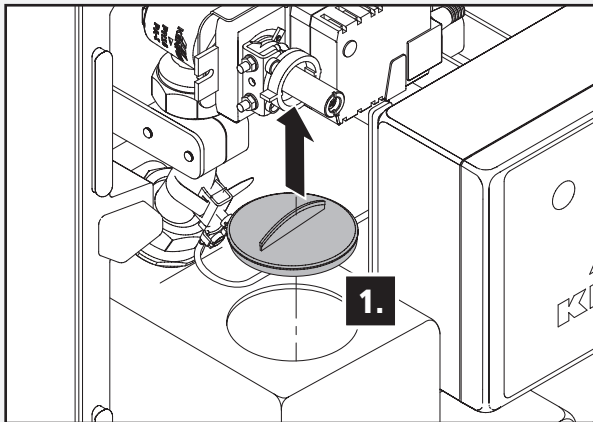
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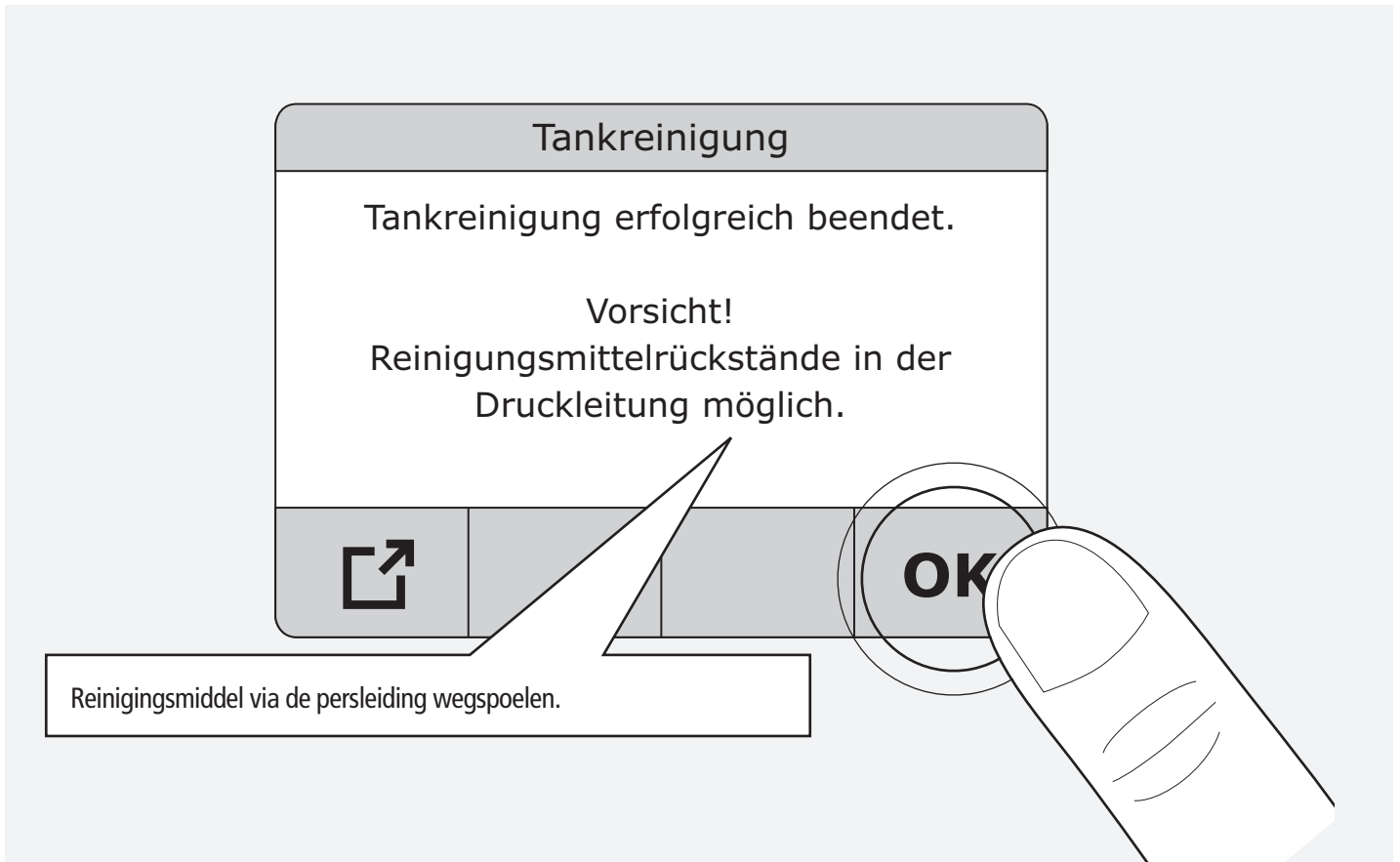


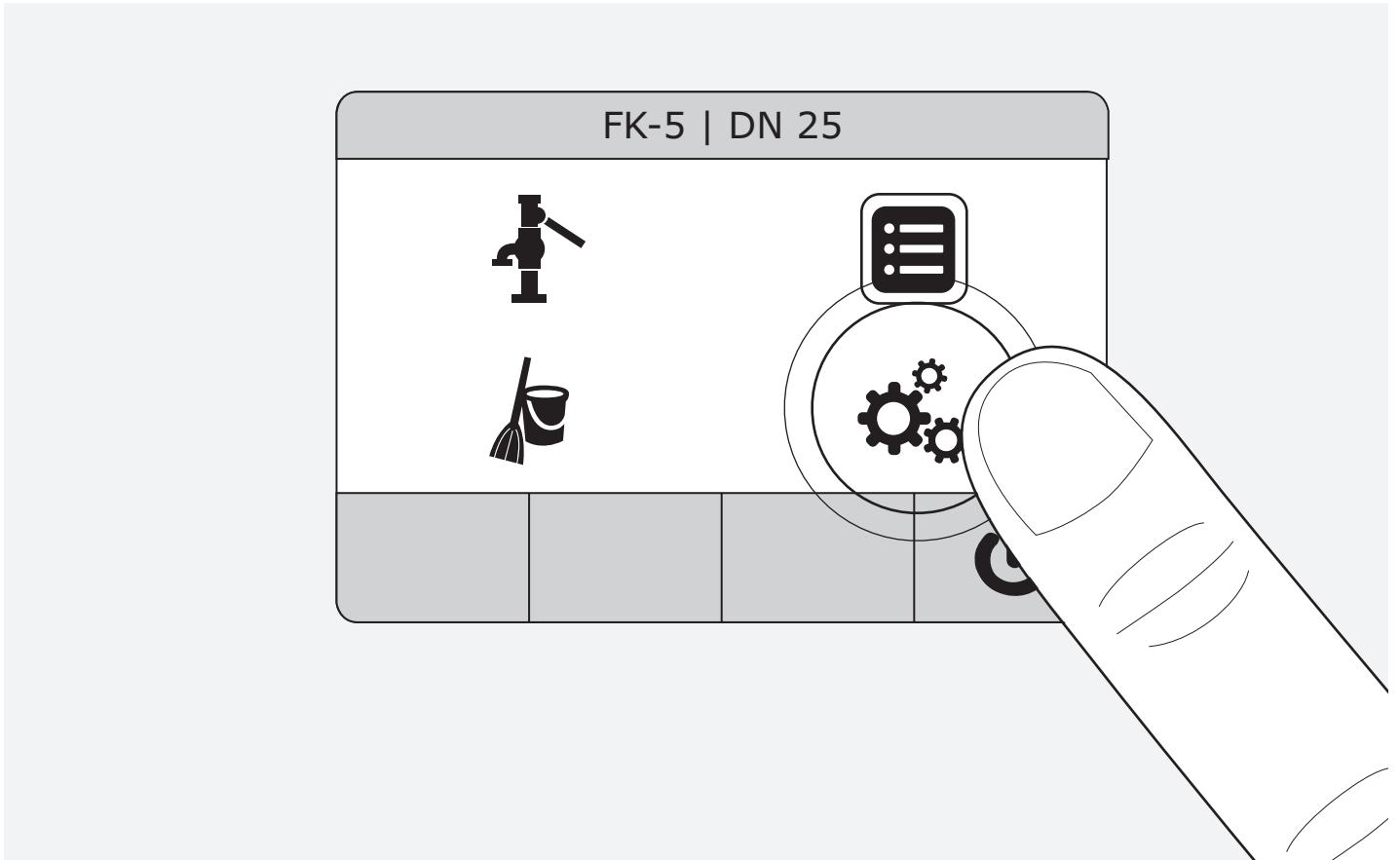




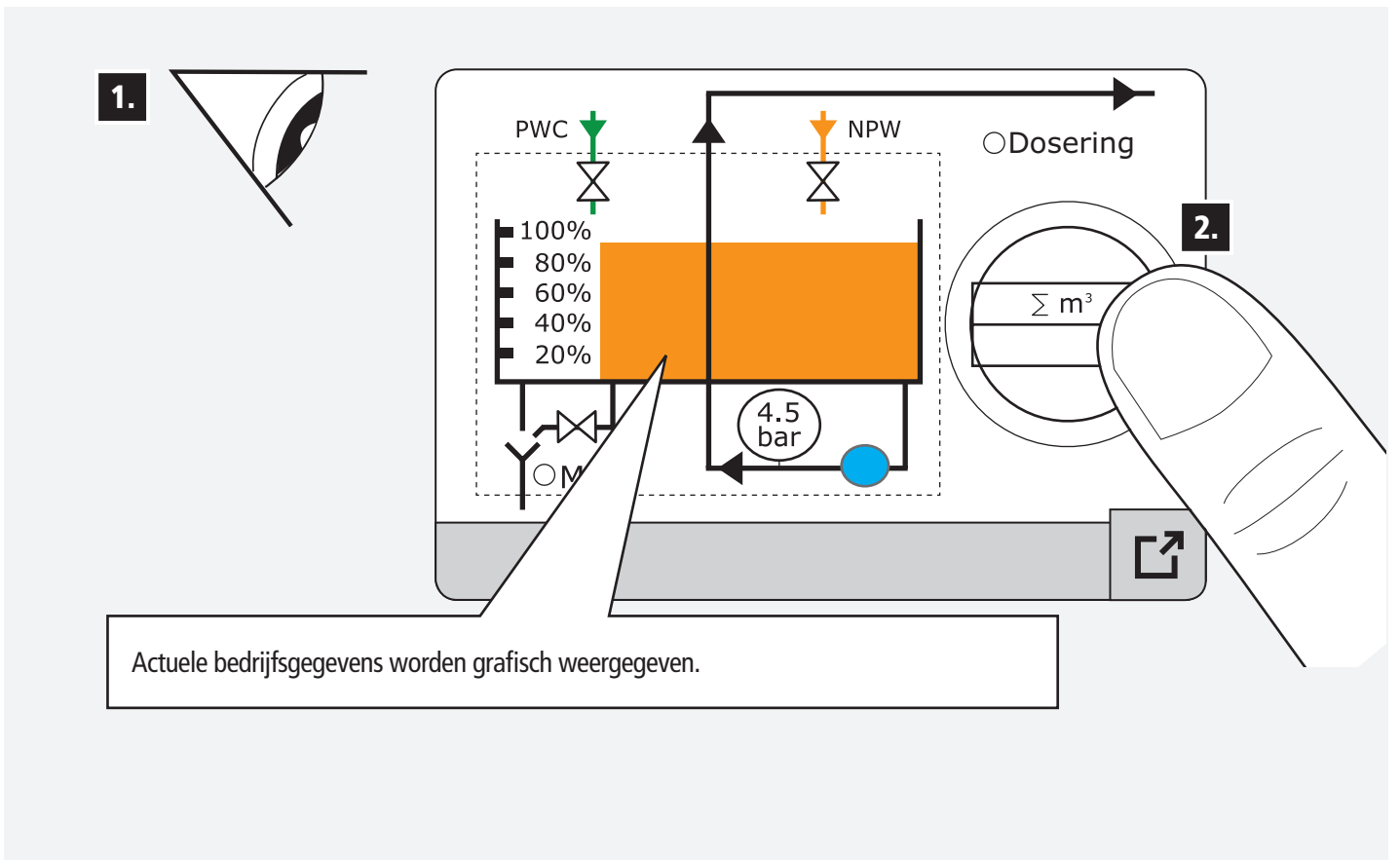


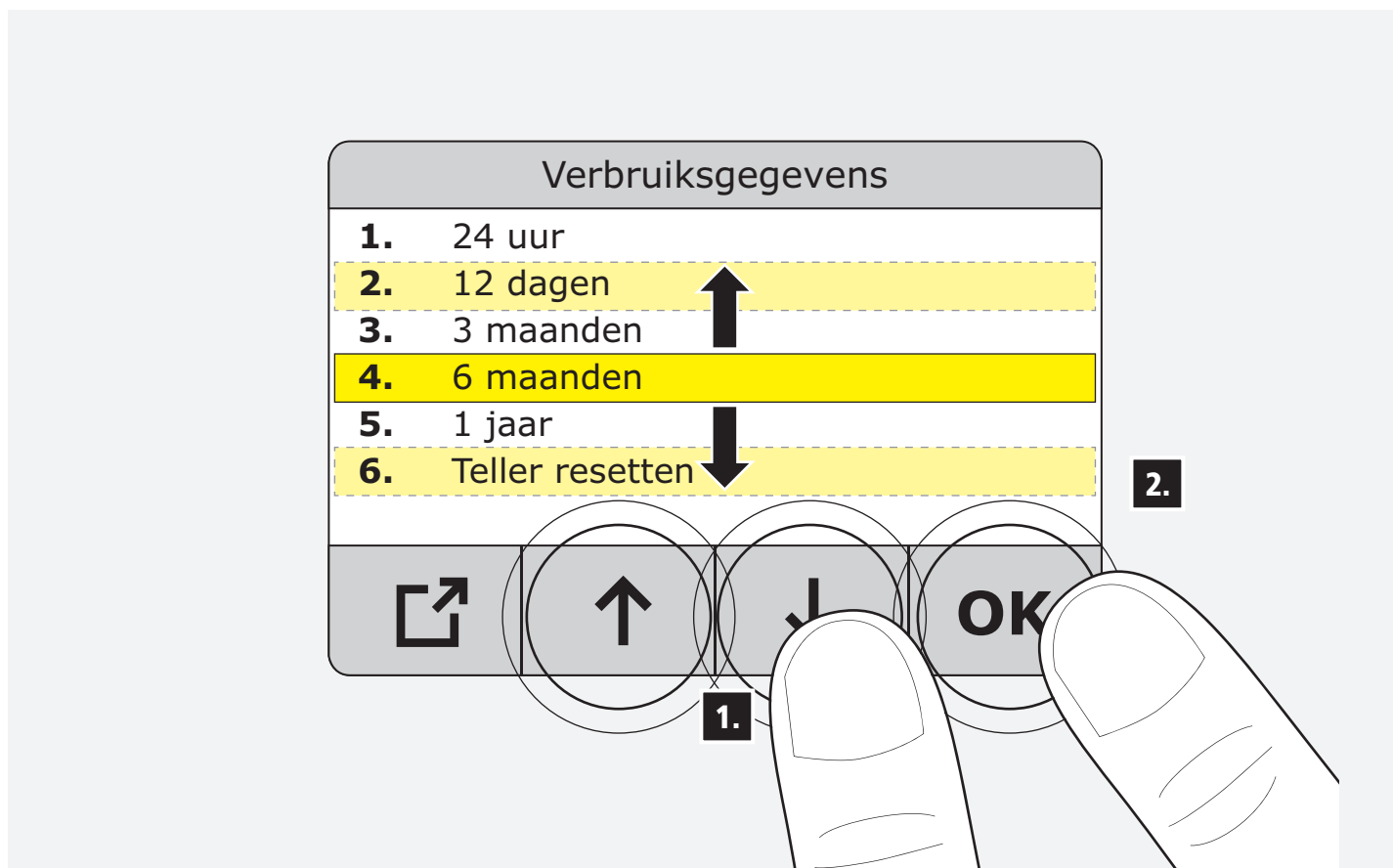
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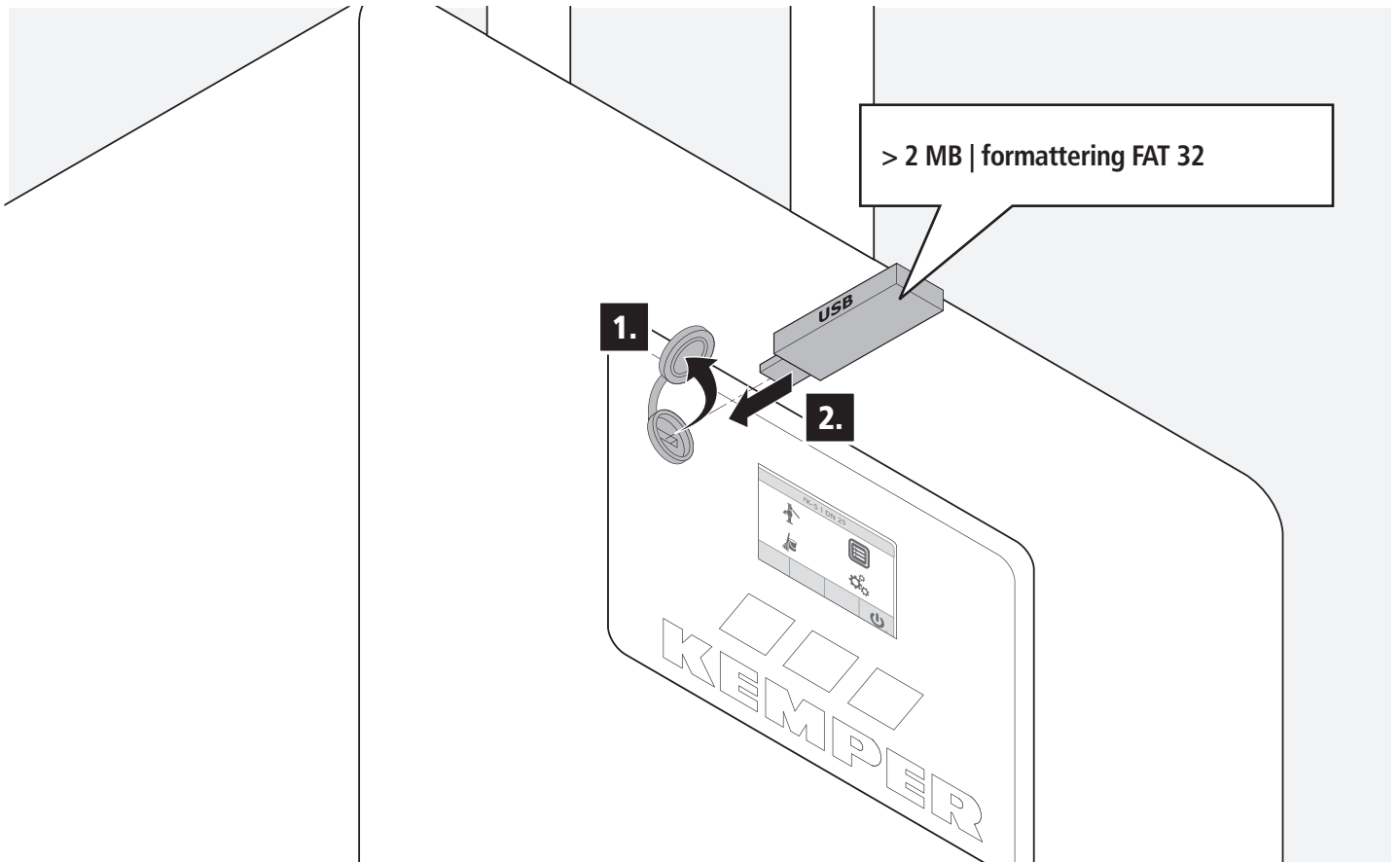




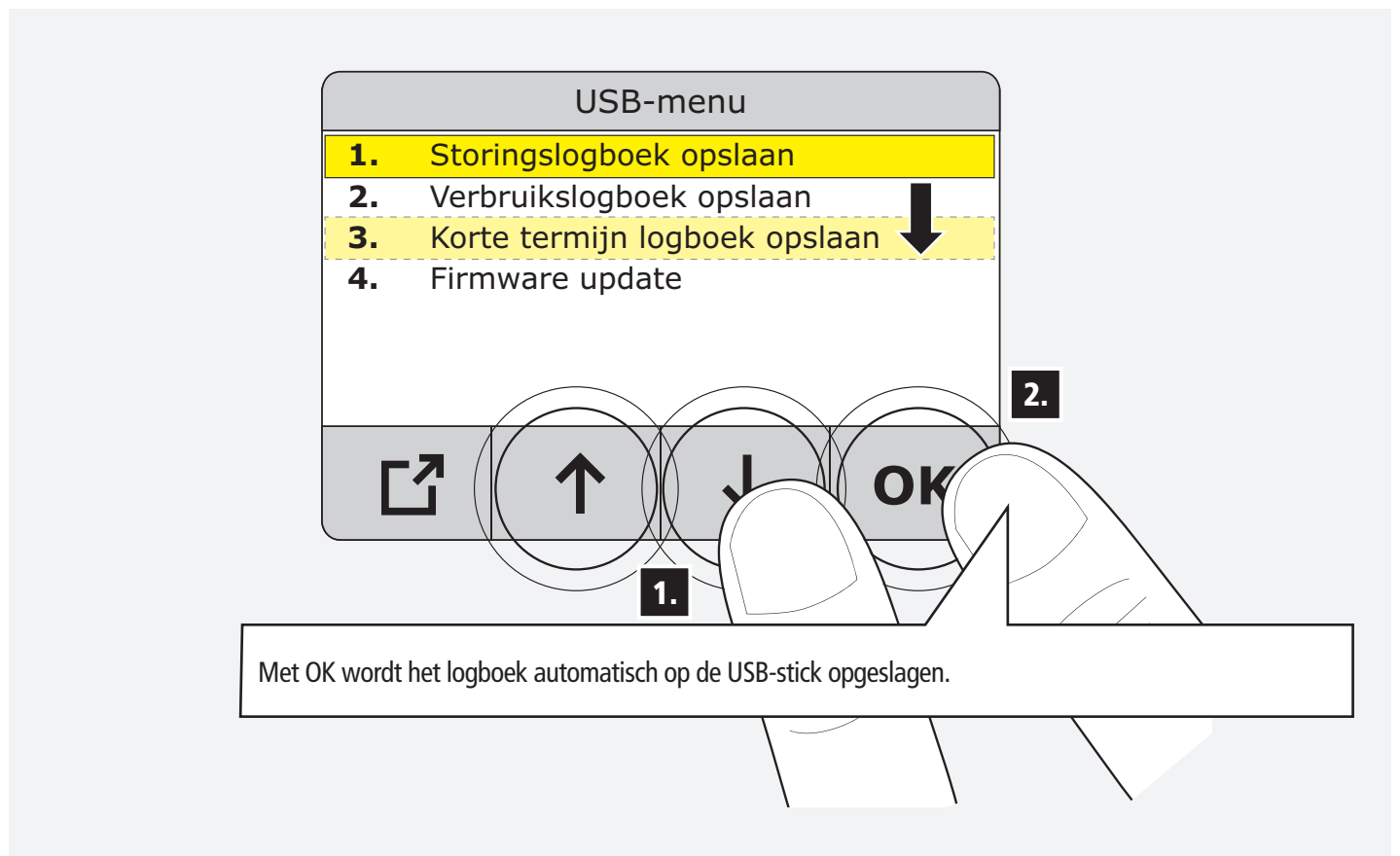
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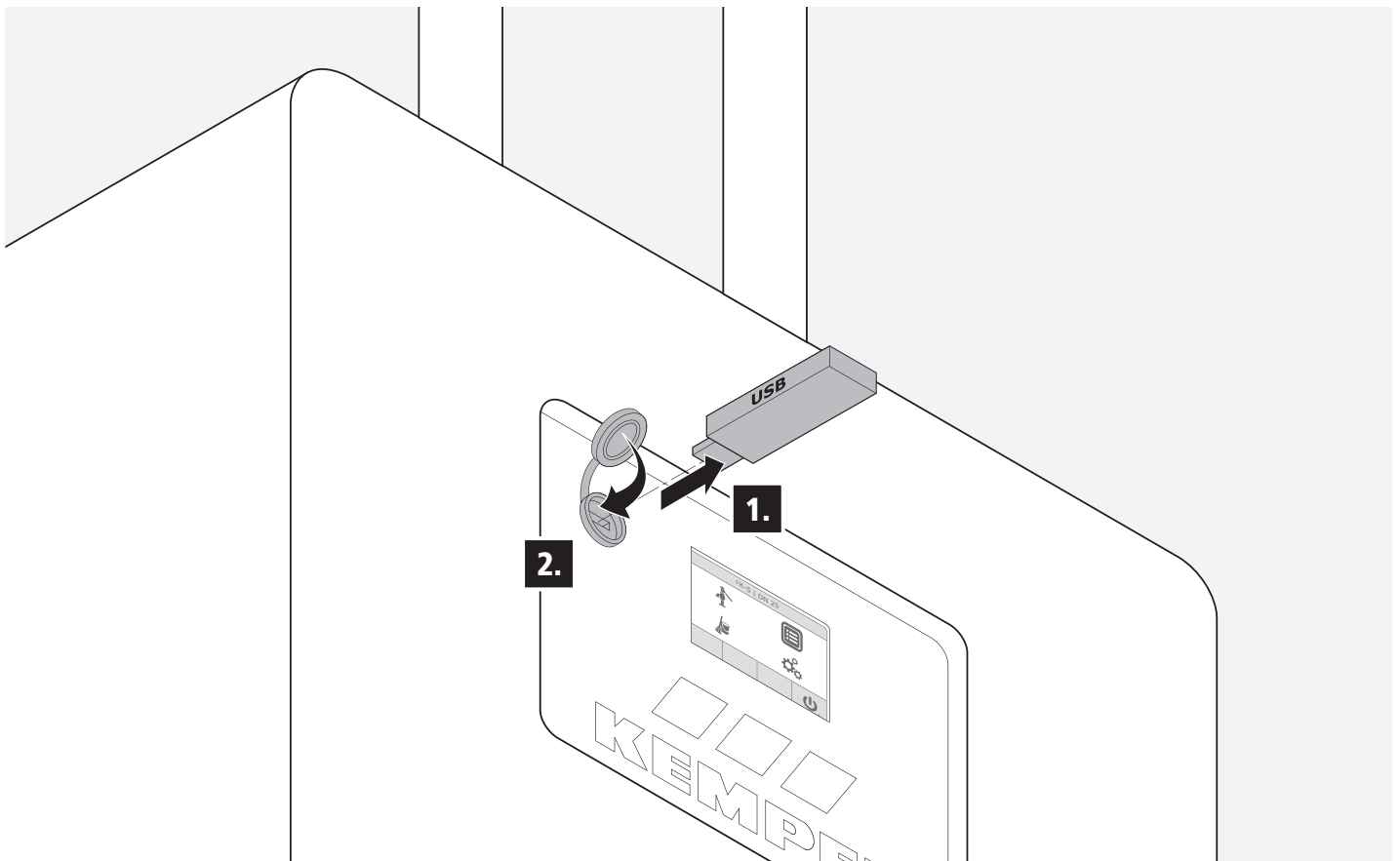
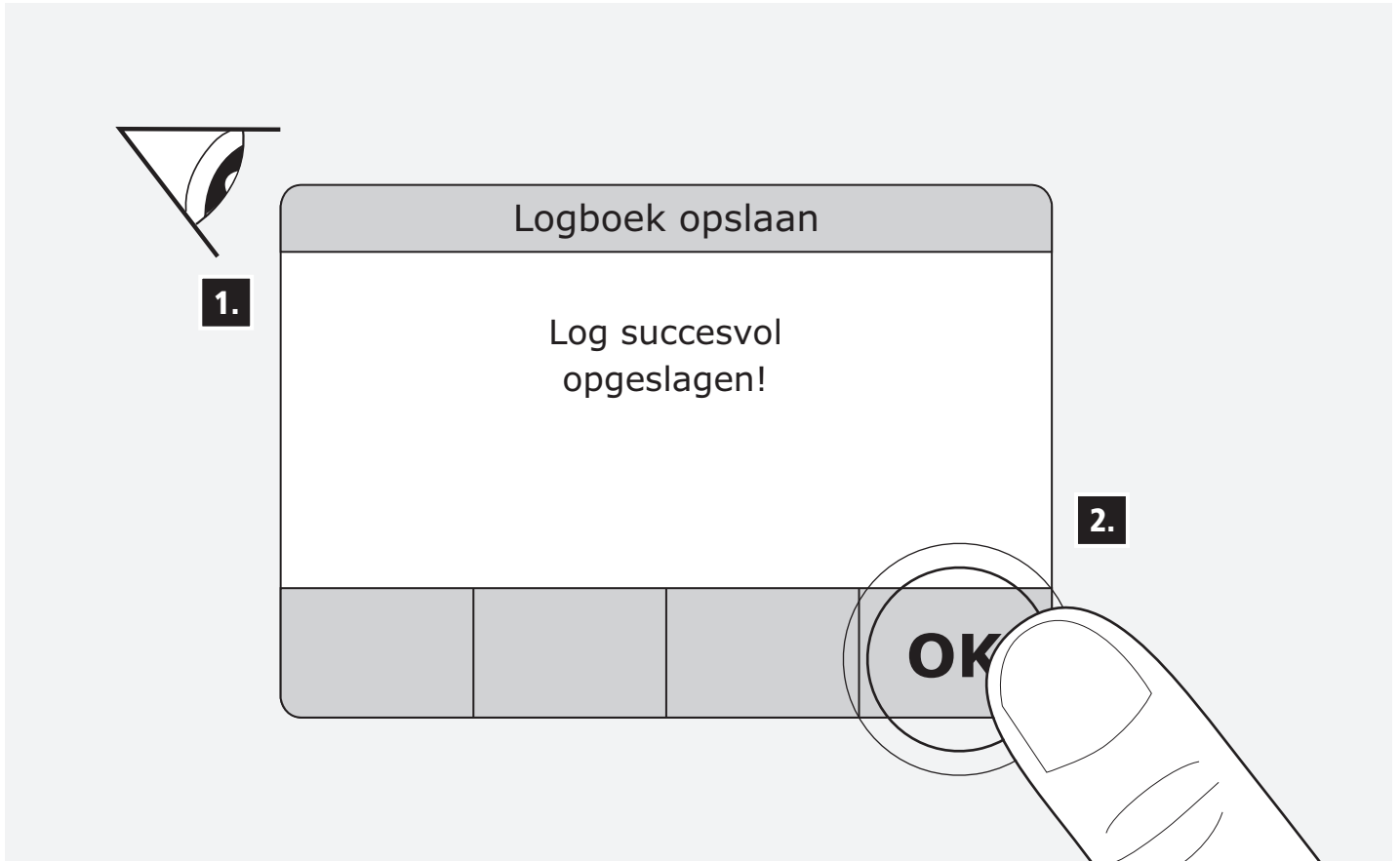


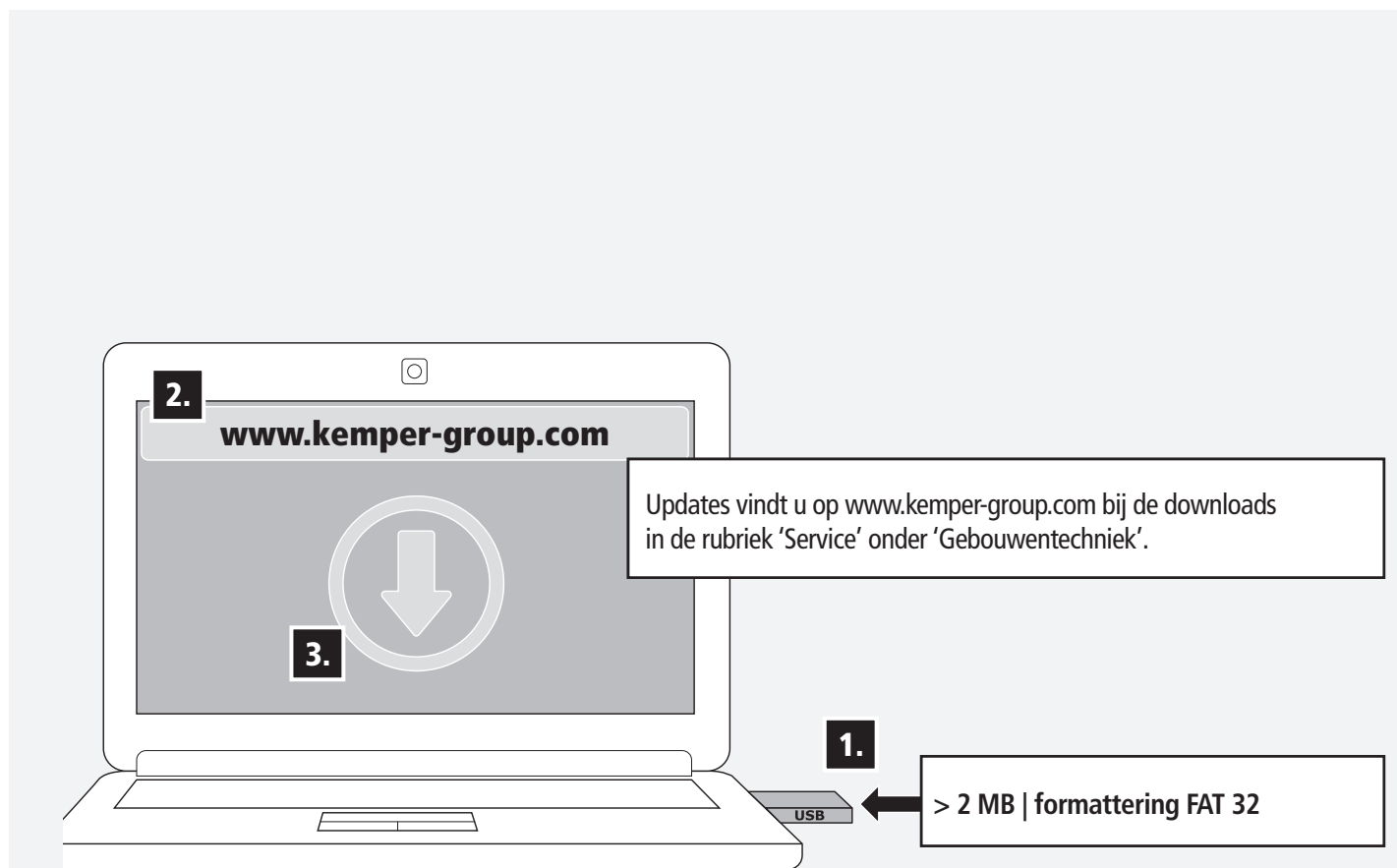




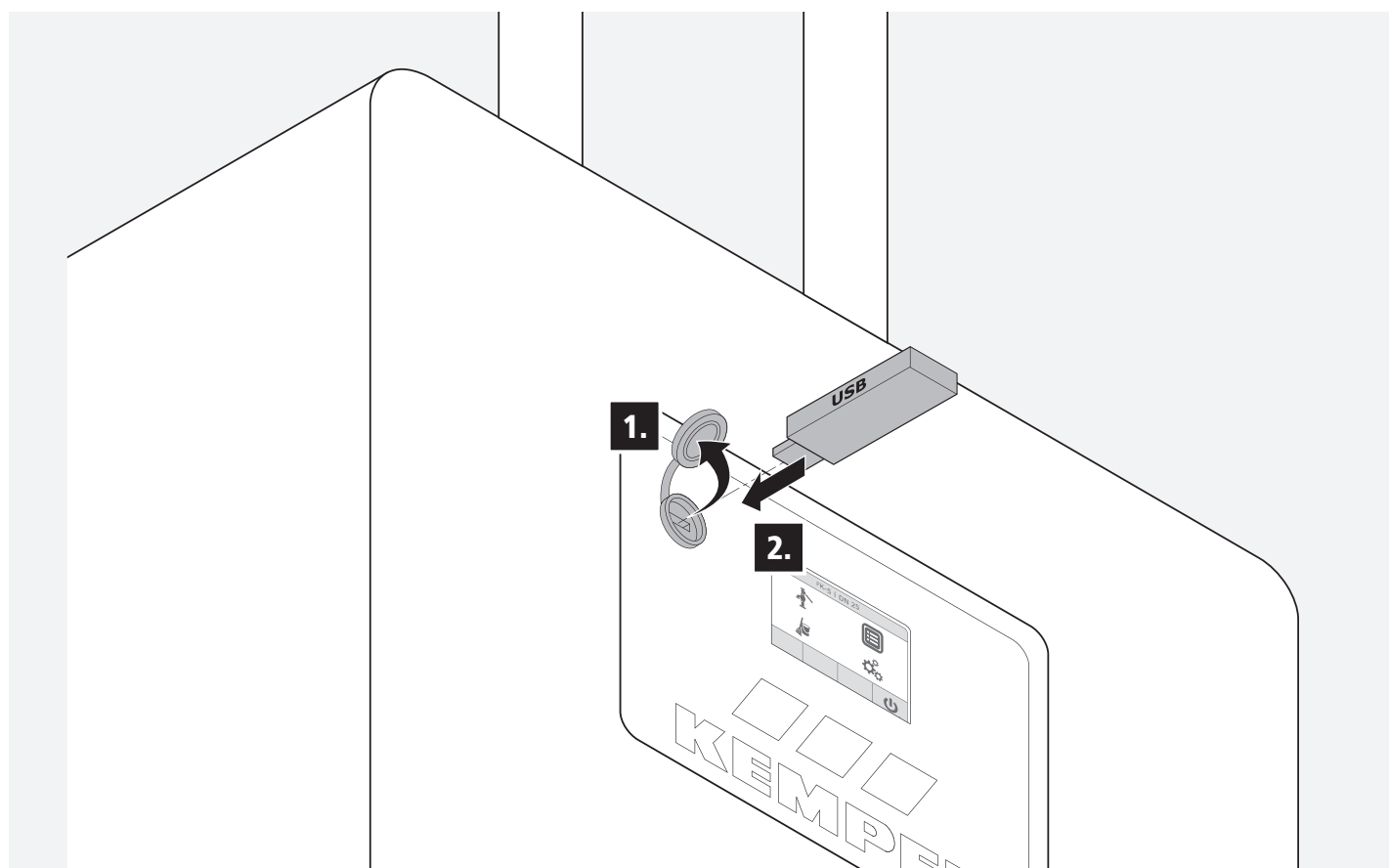
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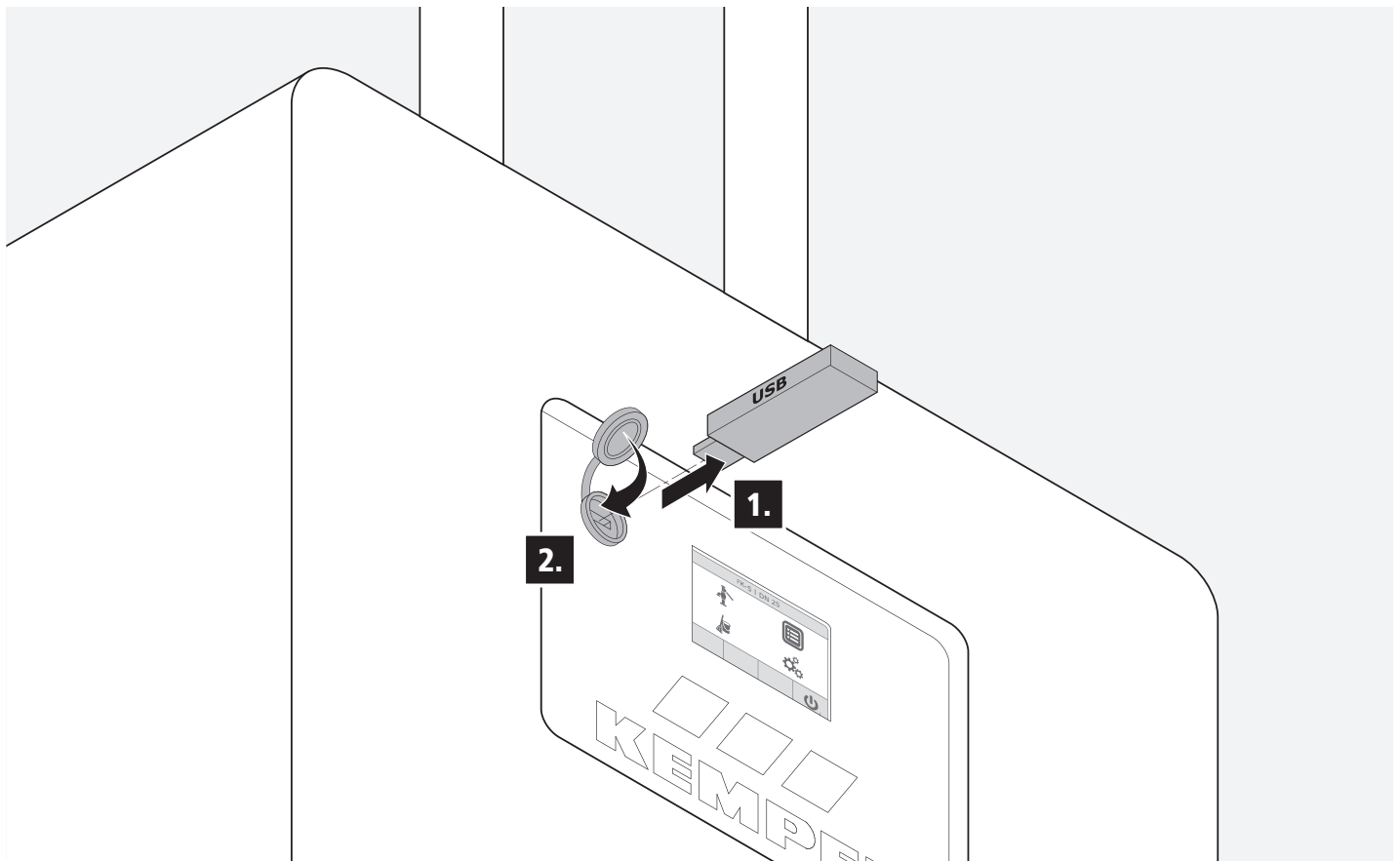
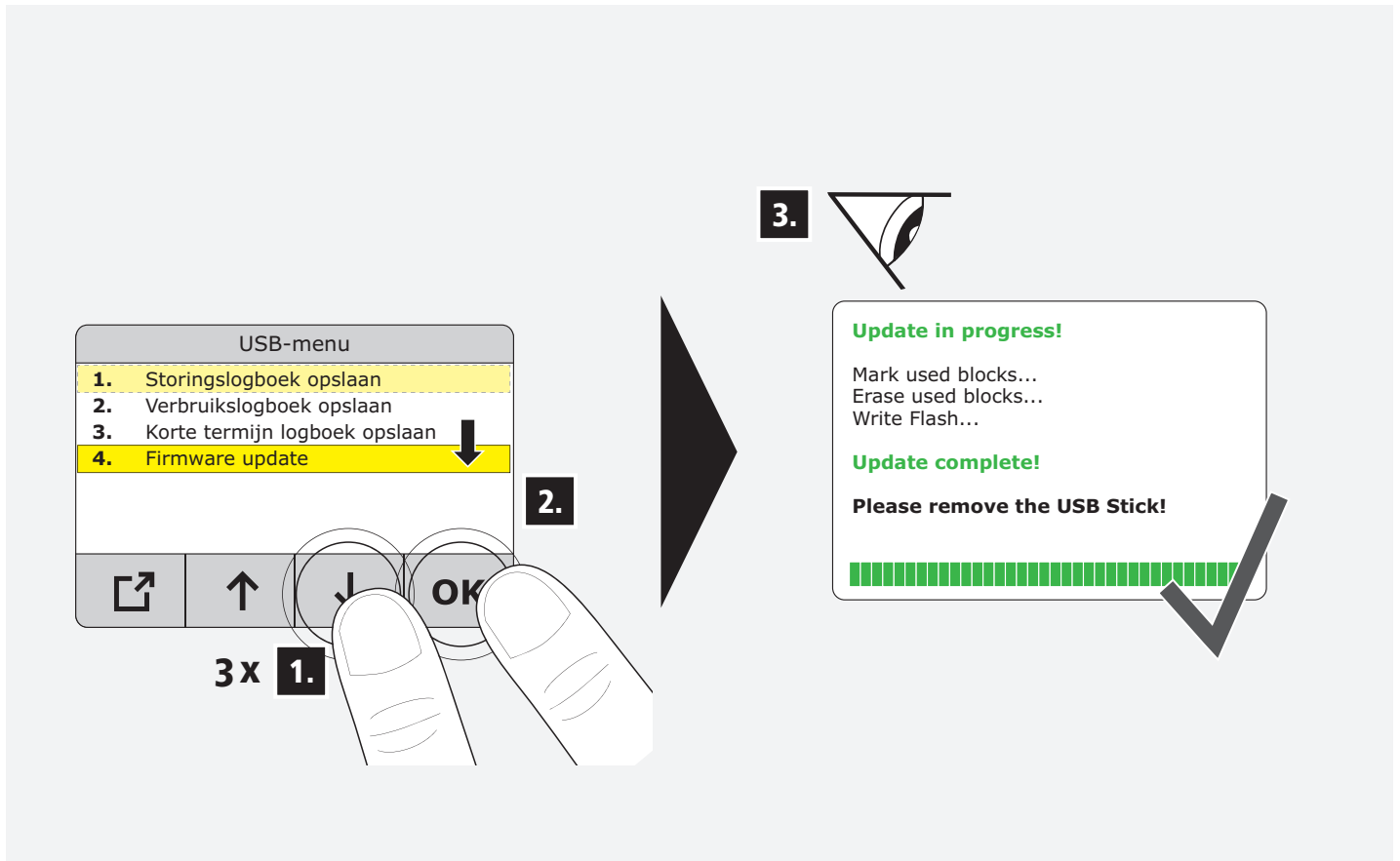






6.1







04
Batterij moet vervangen worden.
Raadpleeg handleiding.



OK

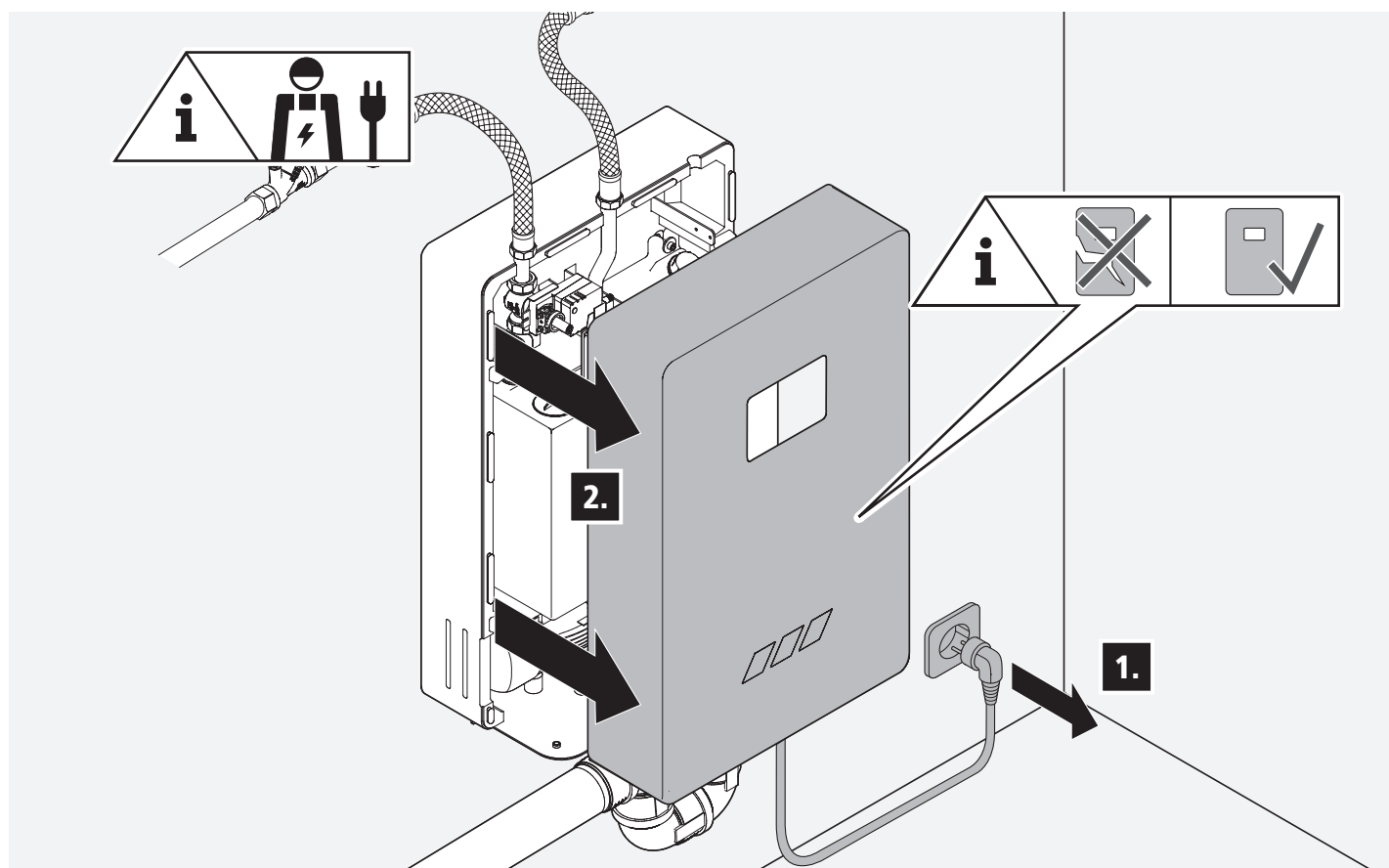


06
Batterijniveau gering.

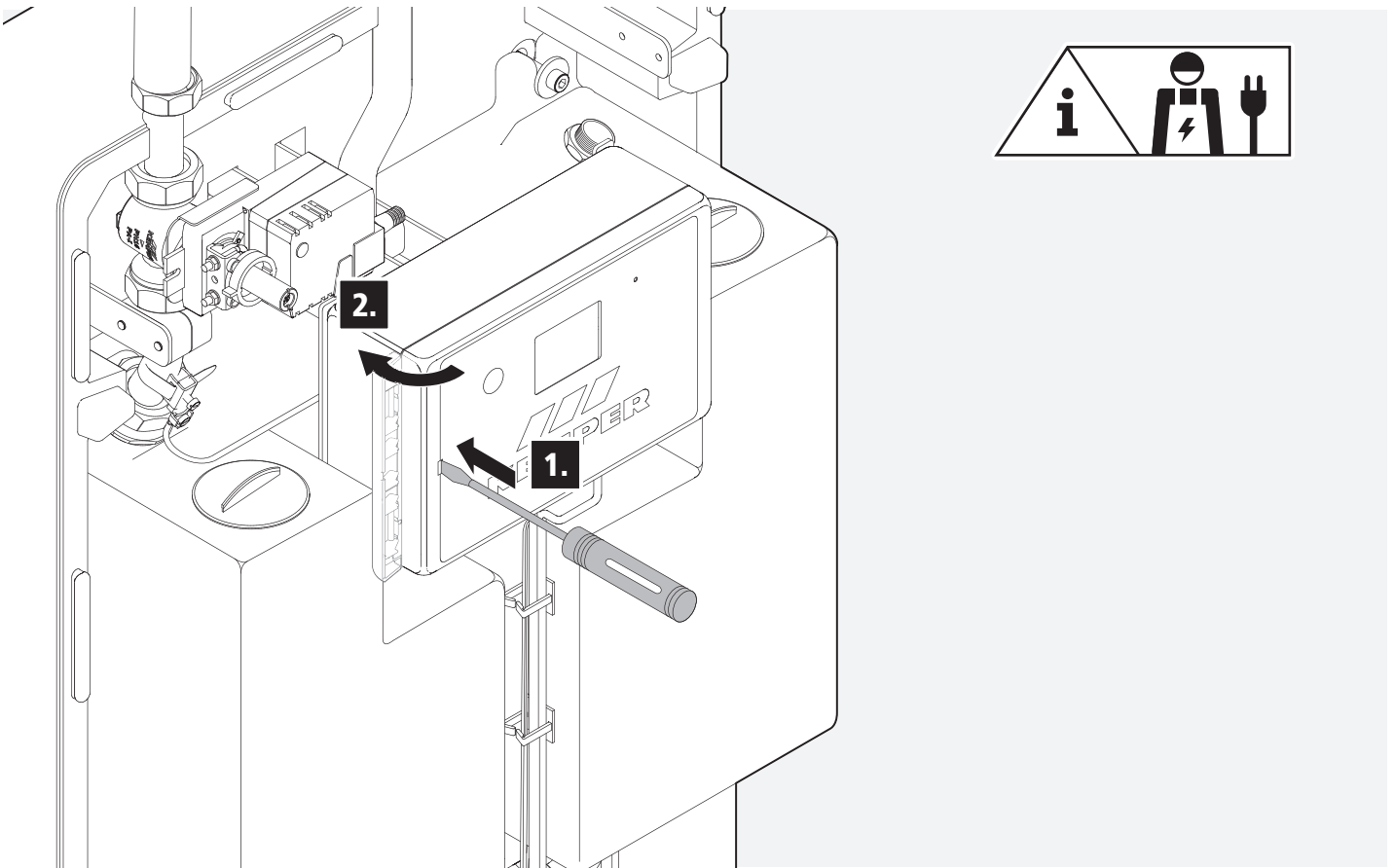


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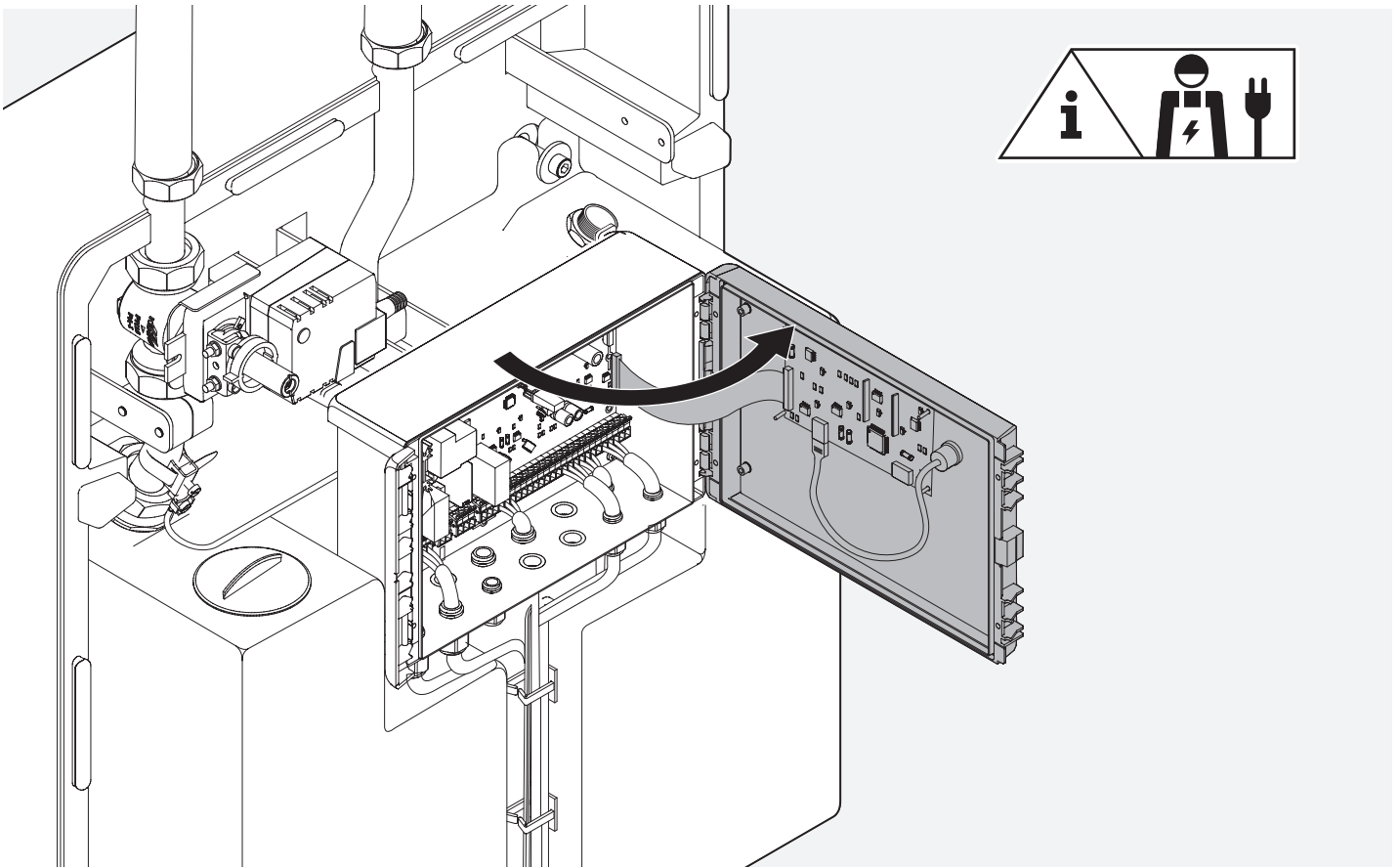
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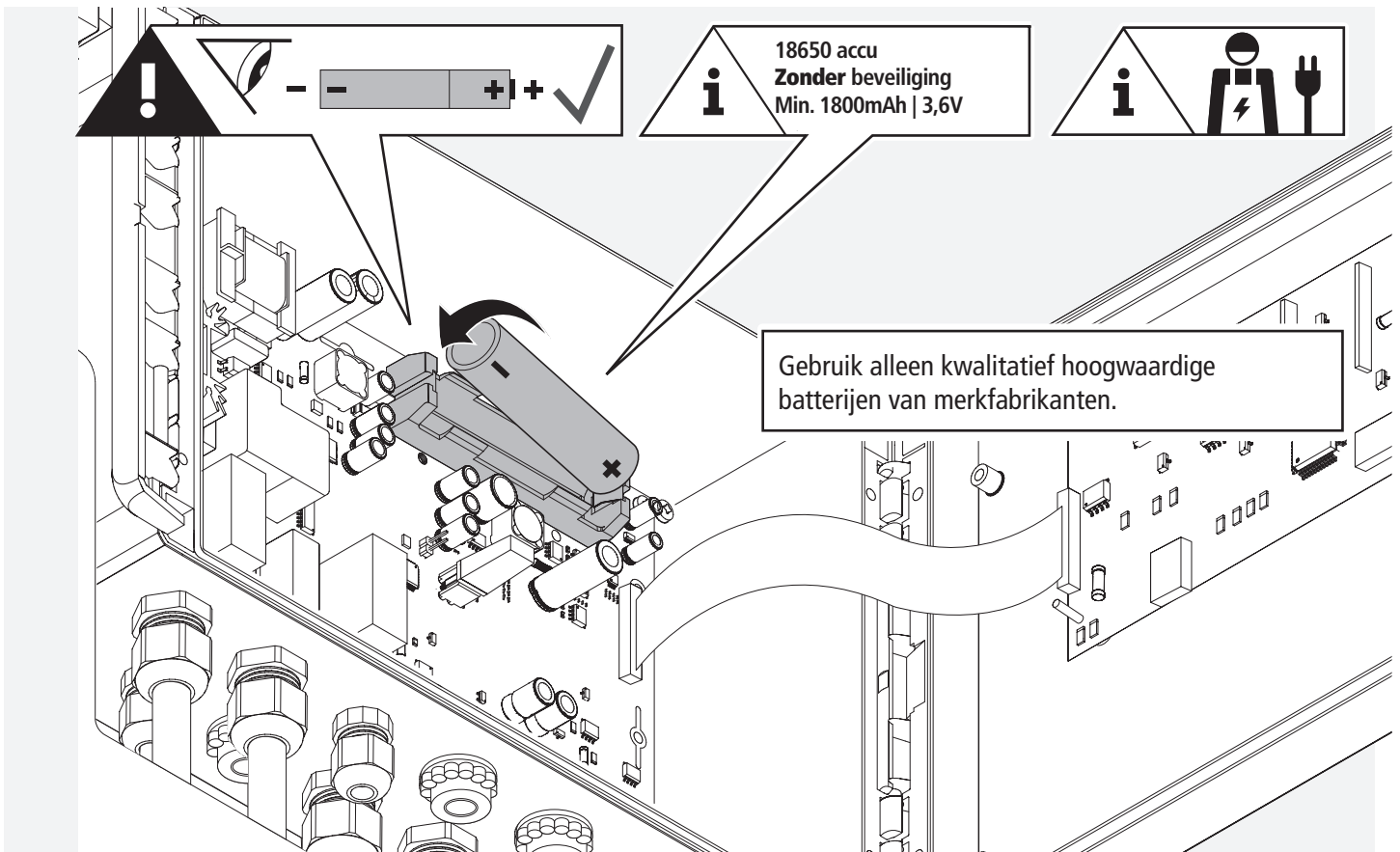
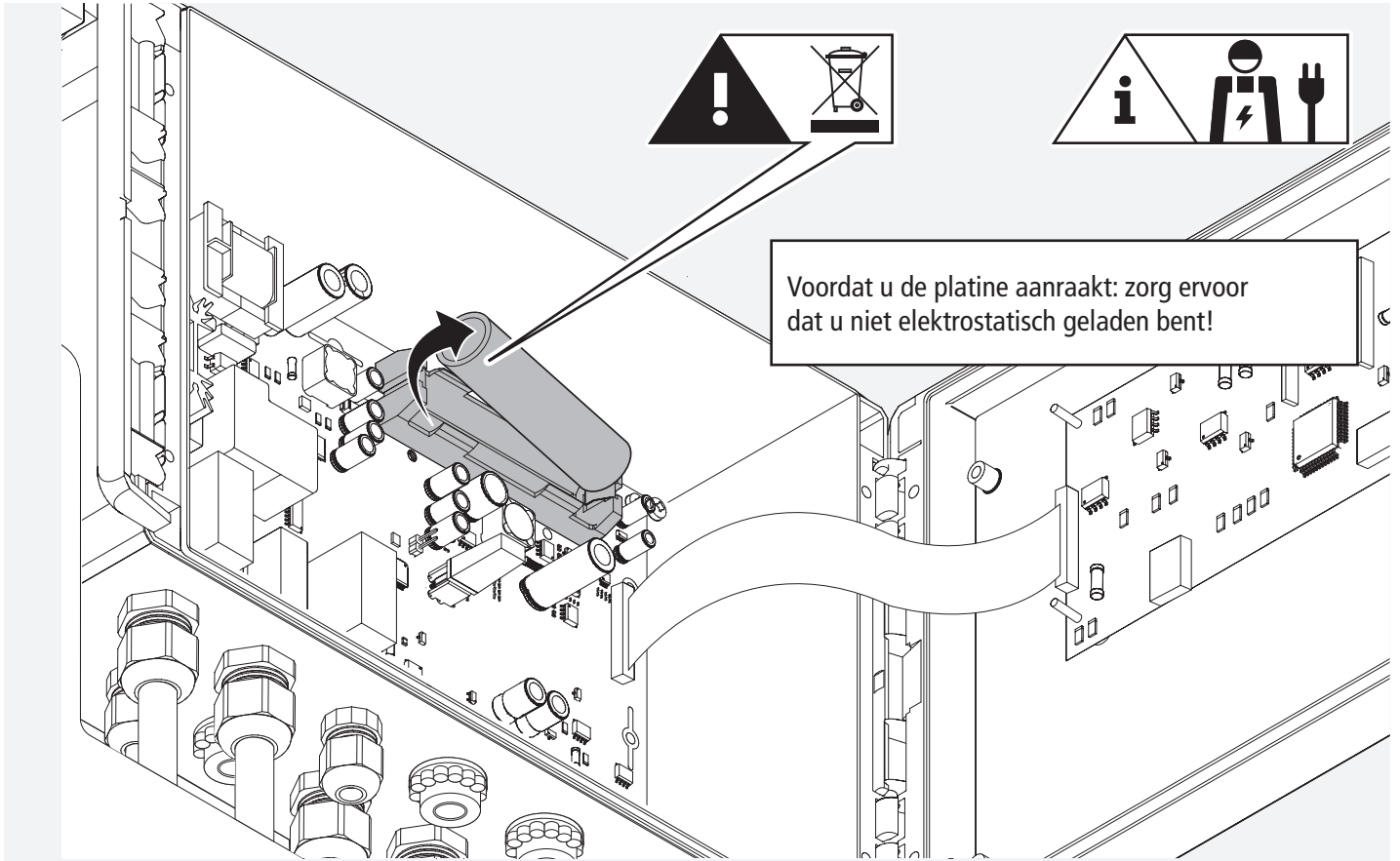


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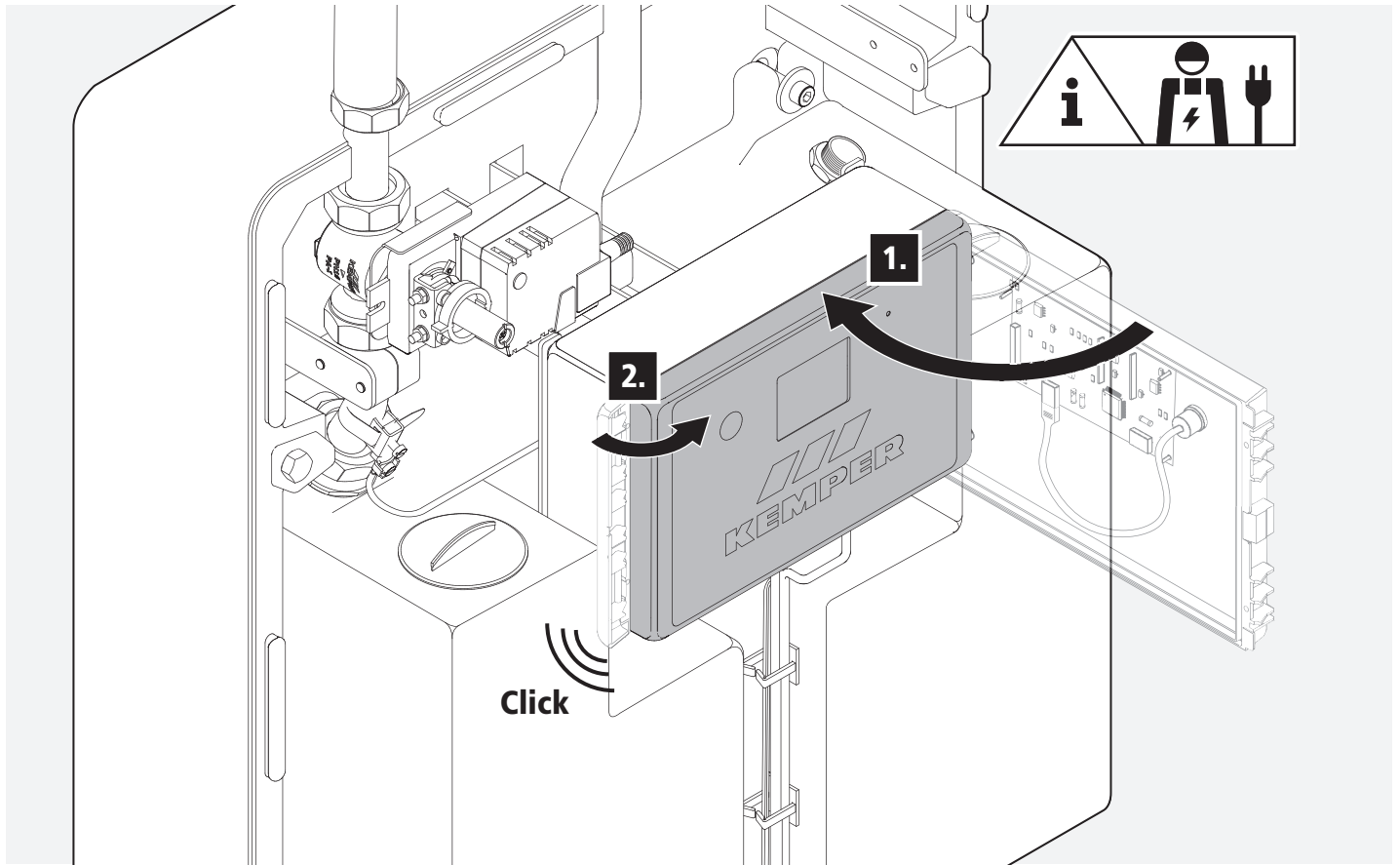


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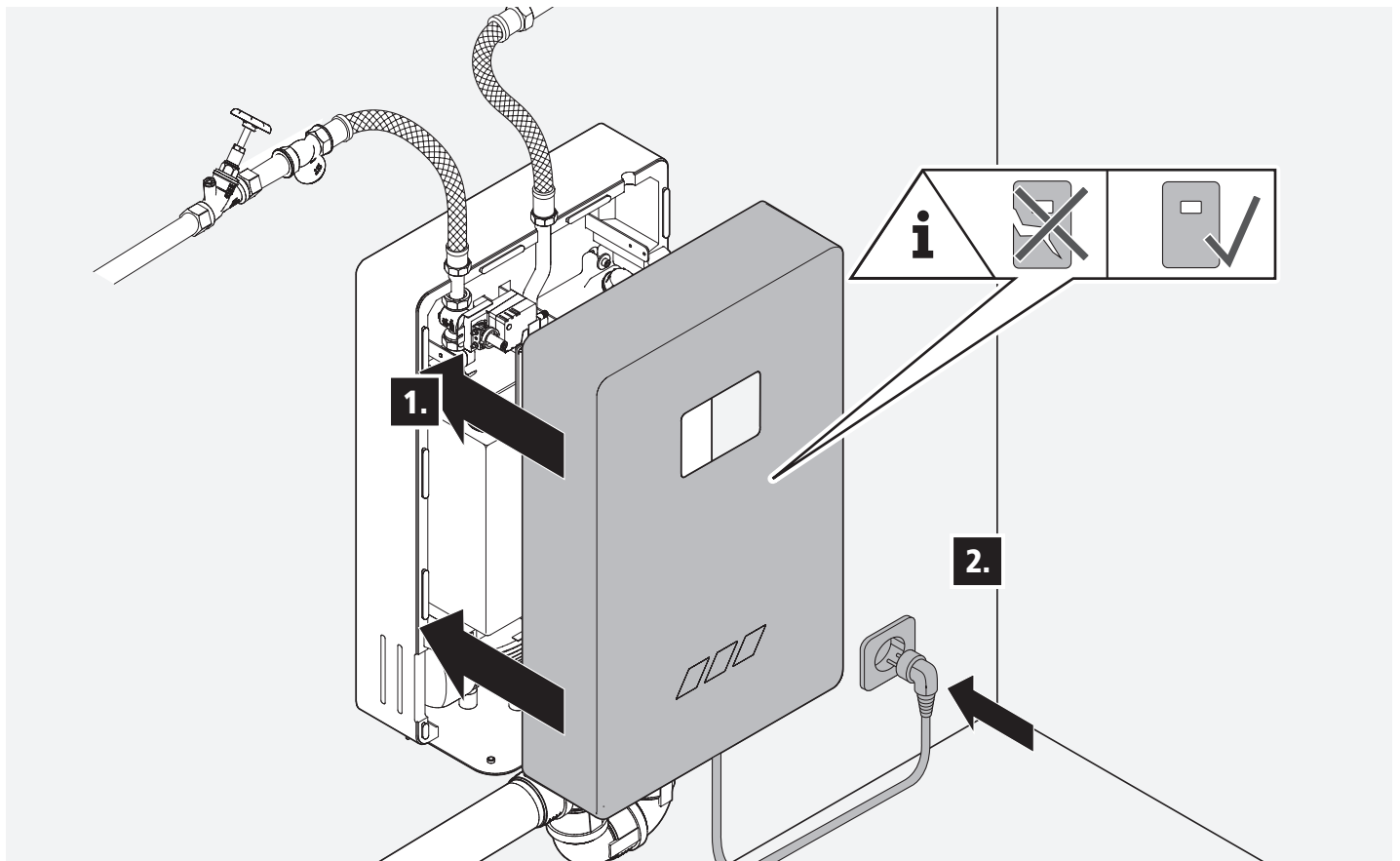


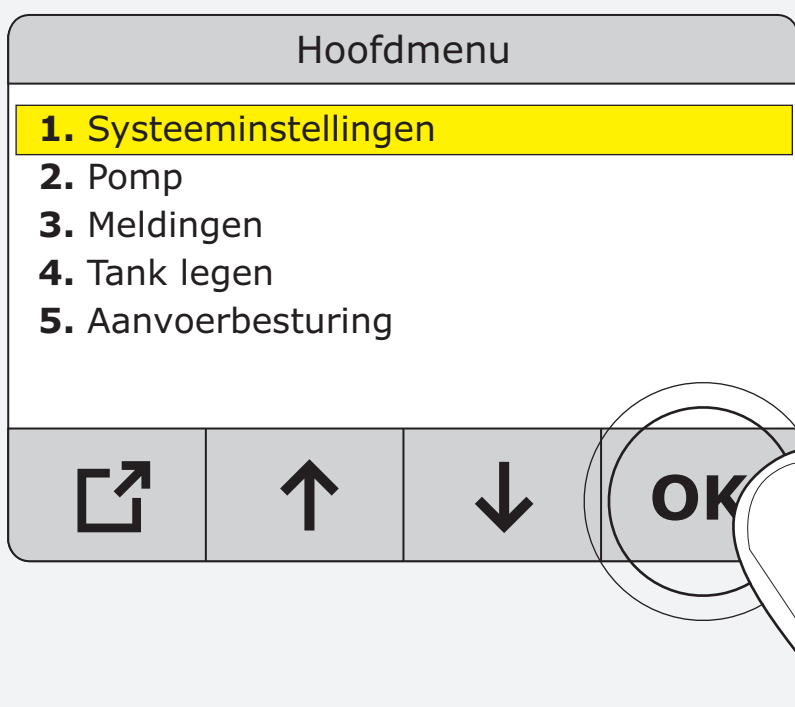
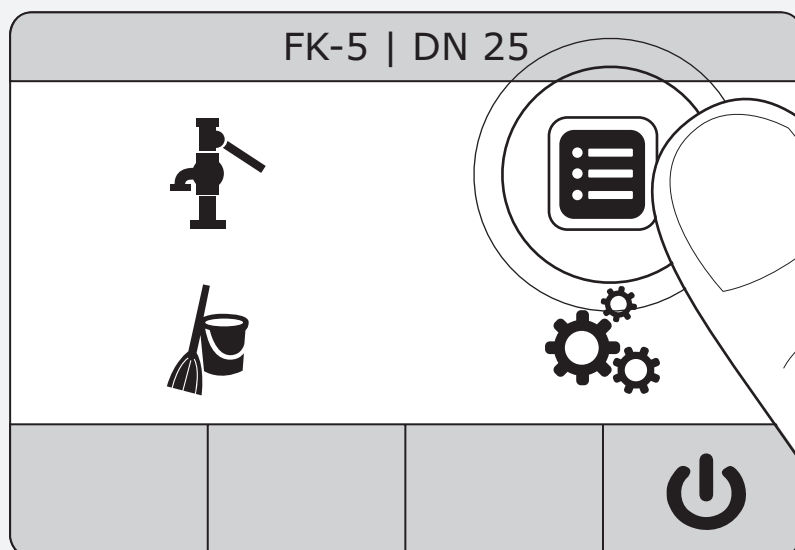


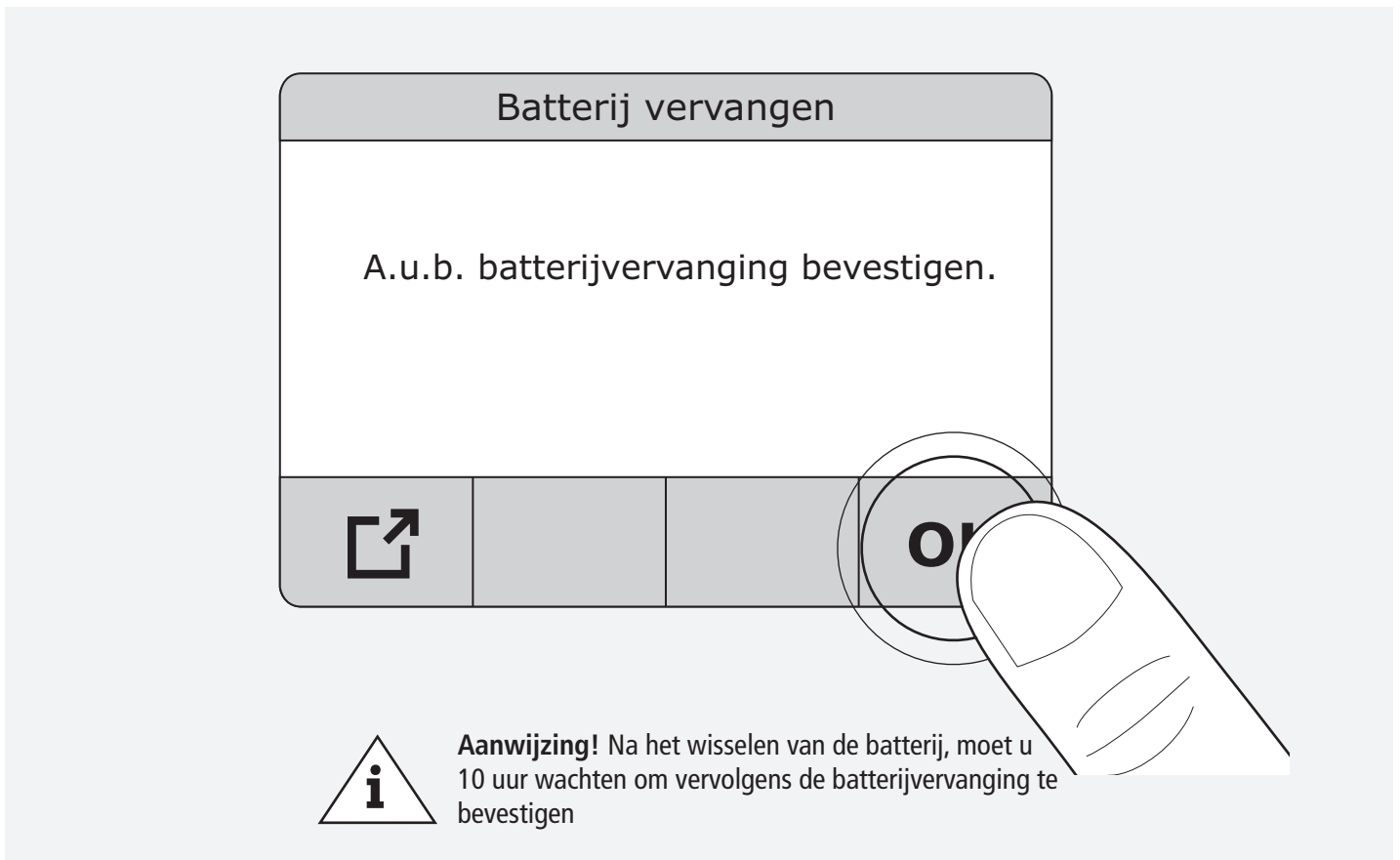
7.6














































7.7

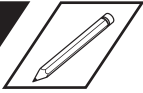






Nr.	Storingsbeschrijving	Oorzaak	Oplossing
 01 02	Aanvoer 1 of 2 onder minimale vulstand	A: Levering aan aanvoer 1 of 2 te gering. B: Tapvolume te hoog. Vulstand in tank is onder 50 mm gedaald.  Waarschuwing melding blijft actief tot vulstand > 200 mm.	 A: Levering aan aanvoer 1 of 2 verhogen. B: Maximale tapvolume in acht nemen: 100 l/min (DN25) 50 l/min (DN20) C: Installeer de tweede watertoevoer (Water-toevoer set Plus, Figuur 369 01)
 03	Aanvoer 1 en 2 onder minimale vulstand	Levering aan aanvoer 1 en 2 te gering. Vulstand in tank is onder 50 mm gedaald.  Waarschuwing melding blijft actief tot vulstand > 200 mm.	Levering aan aanvoer 1 en 2 verhogen.
 04	Batterij moet vervangen worden. Raadpleeg handleiding		 Pagina 100-105
 05	Aanwijzing: temperatuur < 5 °C Vorstbeveiligingsmaatregelen nemen	Temperatuur bij sensor < 5 °C	 Omgevingsomstandigheden controleren en zeker stellen dat temperatuur niet onder het vriespunt daalt.
 06	Batterijniveau gering		 Pagina 100-105
 08 09	Fout positie servomotor aanvoer 1 of 2	Servomotor 1 of 2 heeft ingestelde positie niet bereikt of verkeerde terugmelding < 1,5 V of > 11 V	<ol style="list-style-type: none"> 1. Wateraanvoer afsluiten. 2. Apparaat van stroom loskoppelen. 3. Kap afnemen. 4. Handmatige bediening van de servomotor indrukken en proberen de servomotor met de hand volledig te openen en te sluiten. Indien zonder succes, contact opnemen met de klantenservice toepassingstechniek. 5. Kan de servomotor worden bewogen, dan de elektrische aansluiting in de kast controleren.  Aanwijzing! Elektromonteur. OK > contact opnemen met de klantenservice toepassingstechniek. Niet OK > corrigeren.
 10	Meetbereik sensor vulstand niet gehaald	analoge waarde vulstandsensoren < 0,3 V	 Klantenservice toepassingstechniek
 11	Meetbereik sensor vulstand overschreden	analoge waarde vulstandsensoren > 3,7 V	 Klantenservice toepassingstechniek
 12	Servomotor voor tweede wateraansluiting niet beschikbaar.	Aanvoerregeling 'Aanvoer 2' geactiveerd en servomotor wordt in de instellingen gedeactiveerd.	 Er wordt automatisch naar de aanvoerregeling 'Aanvoer 1' omgeschakeld. De storing hoeft slechts te worden bevestigd.
 13	Maximale vulstand overschreden	Tank tot de overloop gevuld	<ol style="list-style-type: none"> 1. Wateraanvoer afsluiten. 2. Kap afnemen. 3. Tank via het menupunt 'Tank legen' leegmaken. 4. Visuele controle of de tank schoon is en of de meetaansluiting van de vulstandsensoren niet verstopt is. 5. Is de vulstandsensoren verstopt, dan de vulstandsensoren demonteren en indien nodig reinigen. 6. Is de vulstandsensoren niet verstopt, dan contact opnemen met deklantenservice toepassingstechniek 











Nr.	Storingsbeschrijving	Oorzaak	Oplossing
 14	Fout waterverlies in de tank	 In de modus 'Stand-by' of 'Installatie uit' is de vulstand ca. 100 mm gedaald	<ol style="list-style-type: none"> 1. Kap afnemen. 2. Installatie visueel op dichtheid controleren. 3. Indien de installatie dicht is, contact opnemen met de klantenservice toepassingstechniek.
 15	Meetbereik pompdruk niet gehaald	Sensor defect of draadbreek (draadbreek < 0,4V)	 Klantenservice toepassingstechniek
 16	Meetbereik pompdruk overschreden	Sensor defect of kortsluiting (kortsluiting > 4,7V)	 Klantenservice toepassingstechniek
 17	Storing pomp	 Inschakeldruk blijft ondanks ingeschakelde pomp te laag. > Pomp evt. defect, thermische uitschakeling of lucht in de pomp	<ol style="list-style-type: none"> 1. Pomp ontluichten. 2. Indien pomp ontluicht en storing nog altijd actief, contact opnemen met klantenservice toepassingstechniek.
 18	Storing legen tank	 De vulstand van de tank daalt bij een geactiveerd leven van de tank binnen 10 min minder dan 50 mm	<ol style="list-style-type: none"> 1. Tank legen annuleren. 2. Slangen naar magneetafsluiter controleren. 3. Indien de slangen in orde zijn, contact opnemen met de klantenservice toepassingstechniek.
 19	Fout temperatuurmeting buiten toegestane waarden	Verkeerde waarden bij temperatuursensor of defect	 Klantenservice toepassingstechniek
 20	Aanwijzing! Bevriezingsgevaar vorstbeveiligingsmaatregelen nemen (< 2 °C)	Temperatuur bij sensor < 2 °C	<p>Omgevingsomstandigheden controleren.</p>  Indien OK, contact opnemen met de klantenservice toepassingstechniek.
 21	Aanwijzing! Temperatuur te hoog (> 55 °C)	Temperatuur bij sensor > 55 °C	 Omgevingsomstandigheden controleren en ervoor zorgen dat temperatuur niet verder stijgt.
 22	Overstroming afvoer!	Overstromingssensor heeft gereageerd	 Overstromingssensor controleren, eventuele terugstuwung vanuit het riool onderzoeken
 23	Batterij ontbreekt	Bij de start van de regelaar is geen batterij gedetecteerd.	Controleren of een batterij is geïnstalleerd.
 24	Batterij defect	Batterij is verkeerd geïnstalleerd of defect	Inbouwrichting Batterij controleren.
 25	Batterij leeg	 Batterij heeft niet meer voldoende spanning om de servomotoren te sluiten. <ol style="list-style-type: none"> 1. Frequent sluiten van de servomotoren door wegvallen van de spanning, zonder voldoende laadtijd voor de batterij. 2. Batterij defect 	<ol style="list-style-type: none"> 1. De batterij voldoende tijd geven om op te laden. 2. Batterij vervangen.





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Sicherheitsstrennstation
Fig. 369
- NL Bedieningshandleiding FK-5** » 56
Beveiligingstoestel
fig. 369
- EN Operating instructions for FK-5** » 110
Break Tank Station
Fig. 369



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**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:

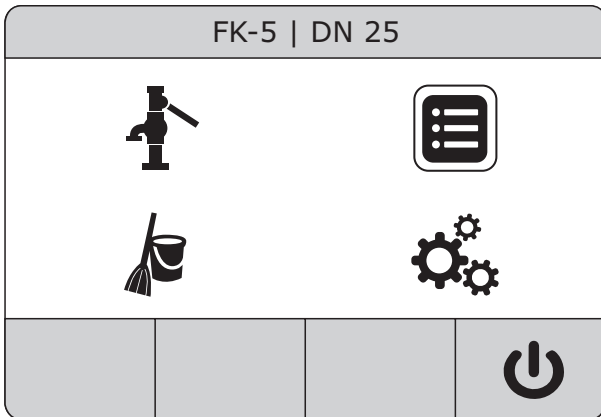
EN 61000-6-1
EN 61000-6-3

Low-voltage:

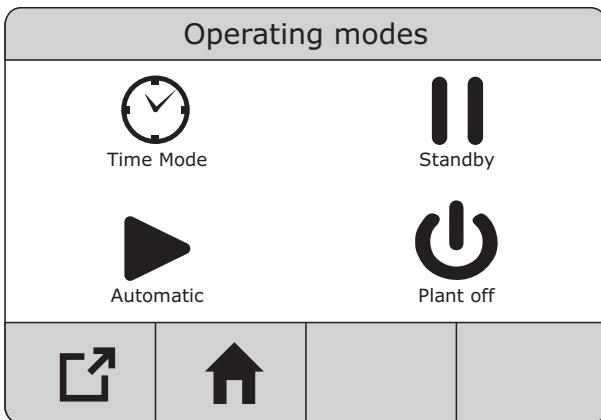
EN 60335-1

Machinery Regulation:

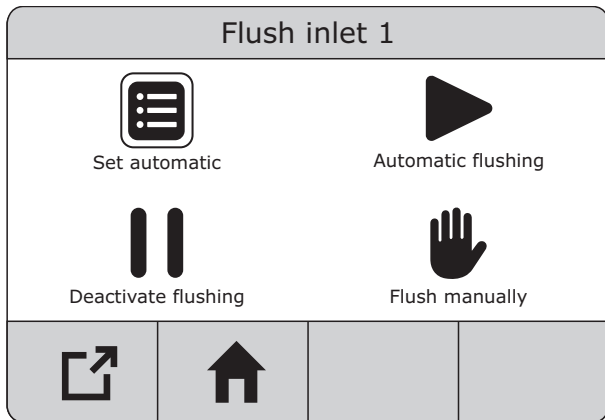
(EU) 2023/1230



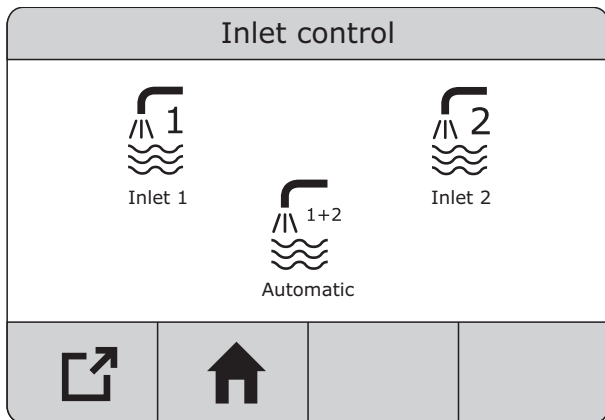
	EN Operating modes
	Flushing and cleaning program
	Main menu
	Process
	Device off Switches off the supply of the tapping point outlets and flushing processes. The alarm output remains active. The alarm state is still logged. Operating mode also permits settings on the device.
	Warning messages Device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

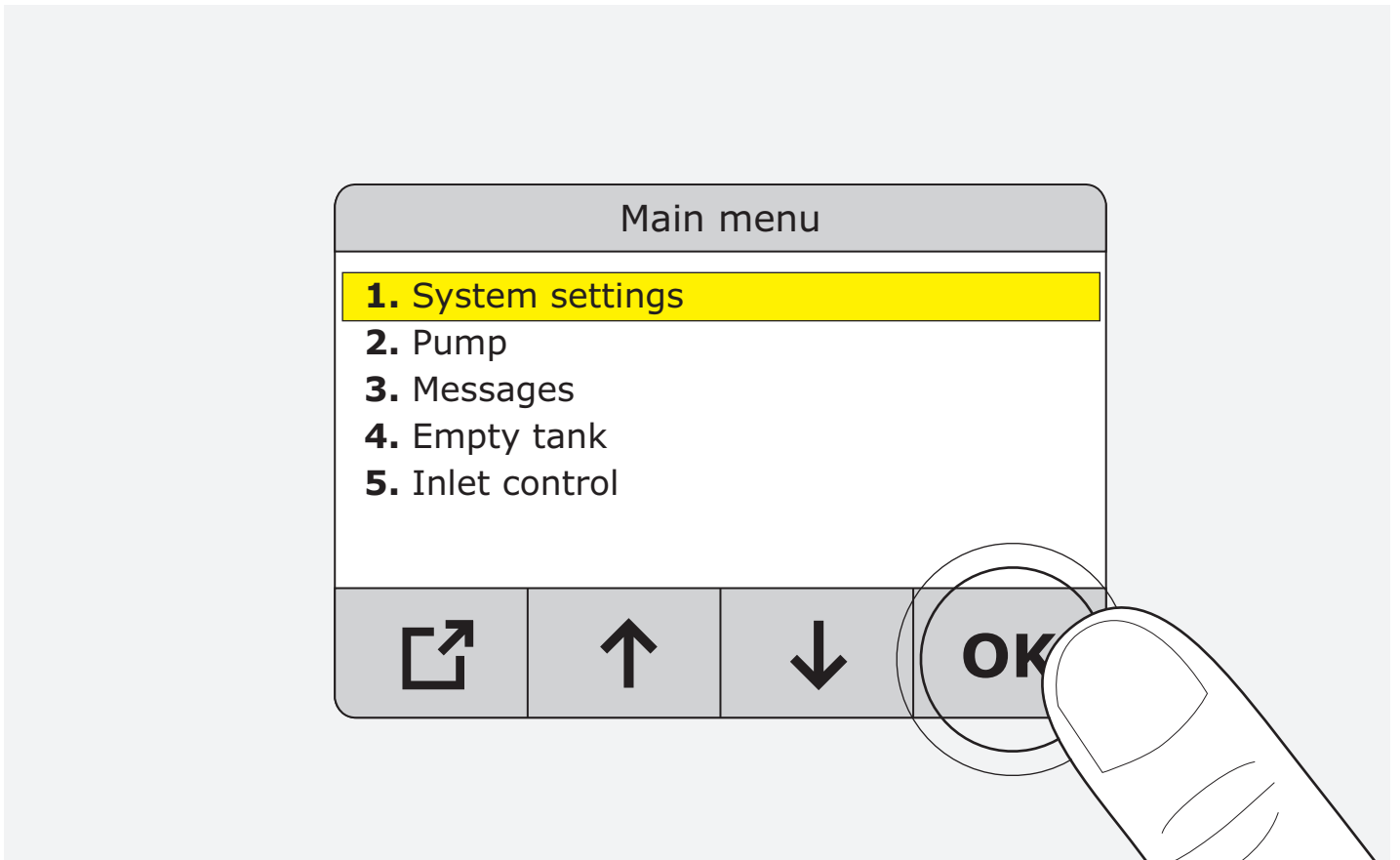
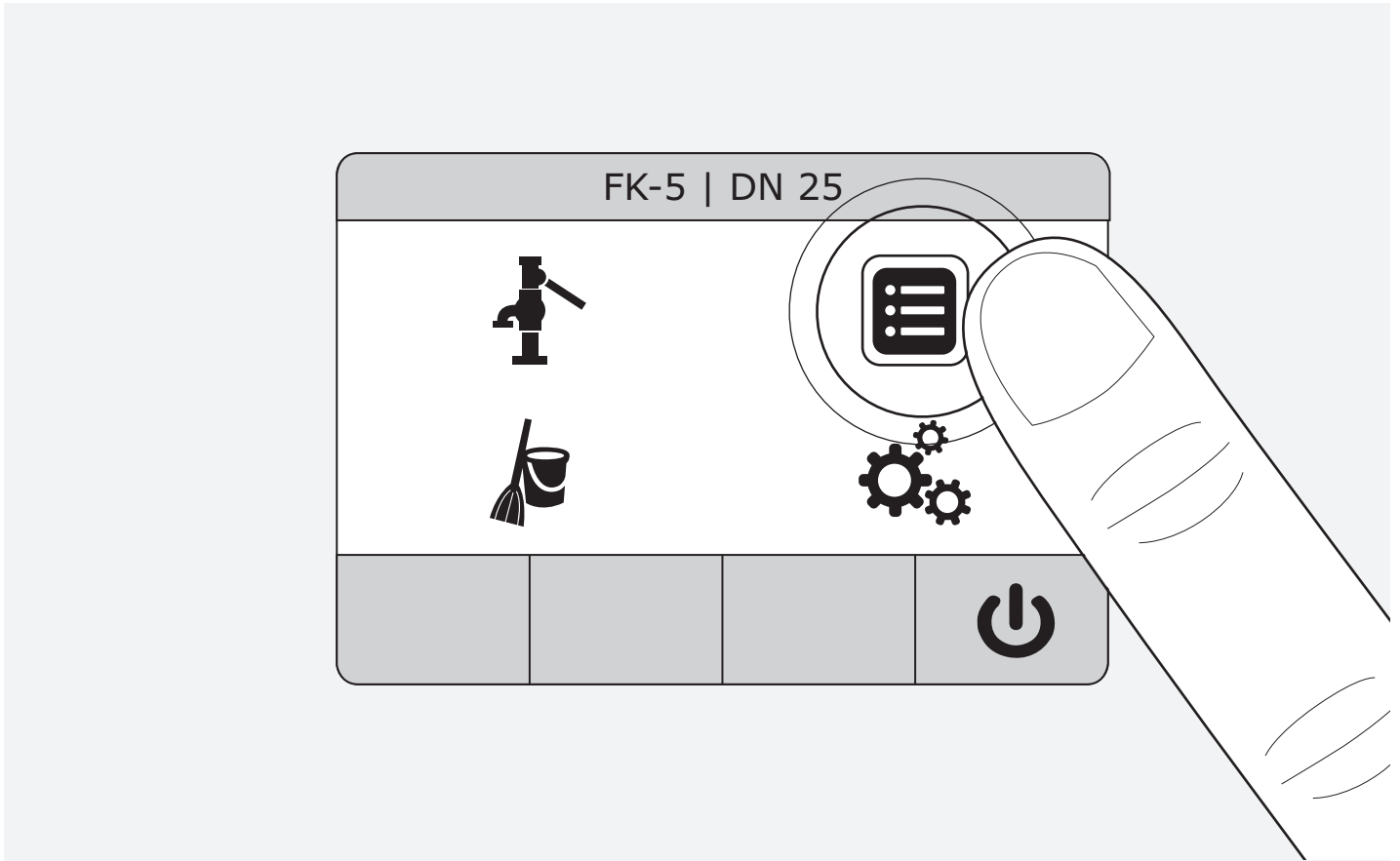


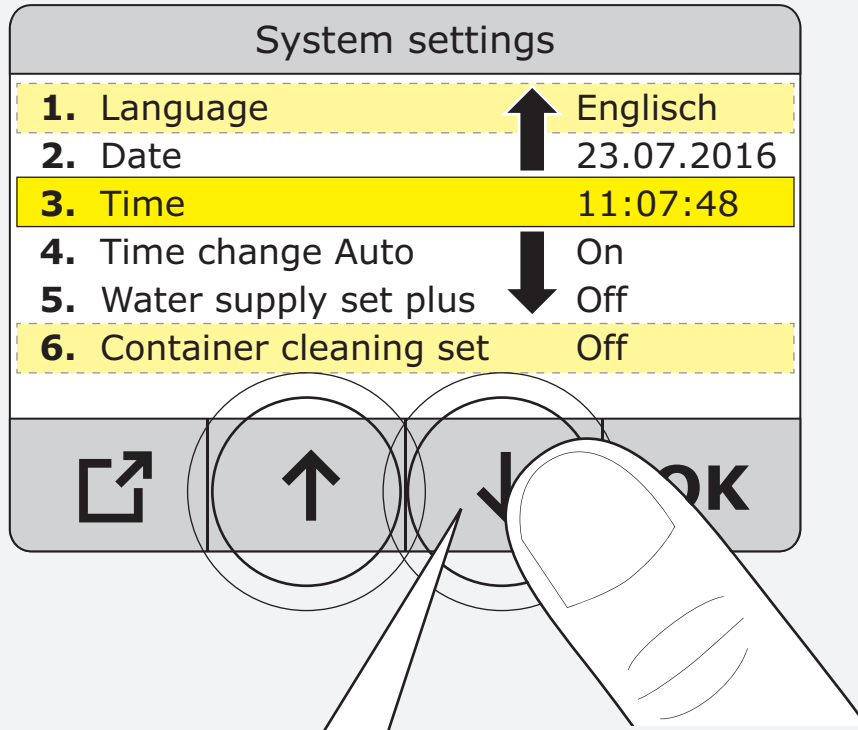
	EN
	Inlet 1/2 „Inlet 1“ or „Inlet 2“ sets the supply to exclusively through the respective inlet. If the particular inlet quantity is insufficient, a warning message appears and the tapping point outlet supply is switched off.
	Inlet 1+2 (Automatic inlet control) „Inlet 1+2“ gives priority to supply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

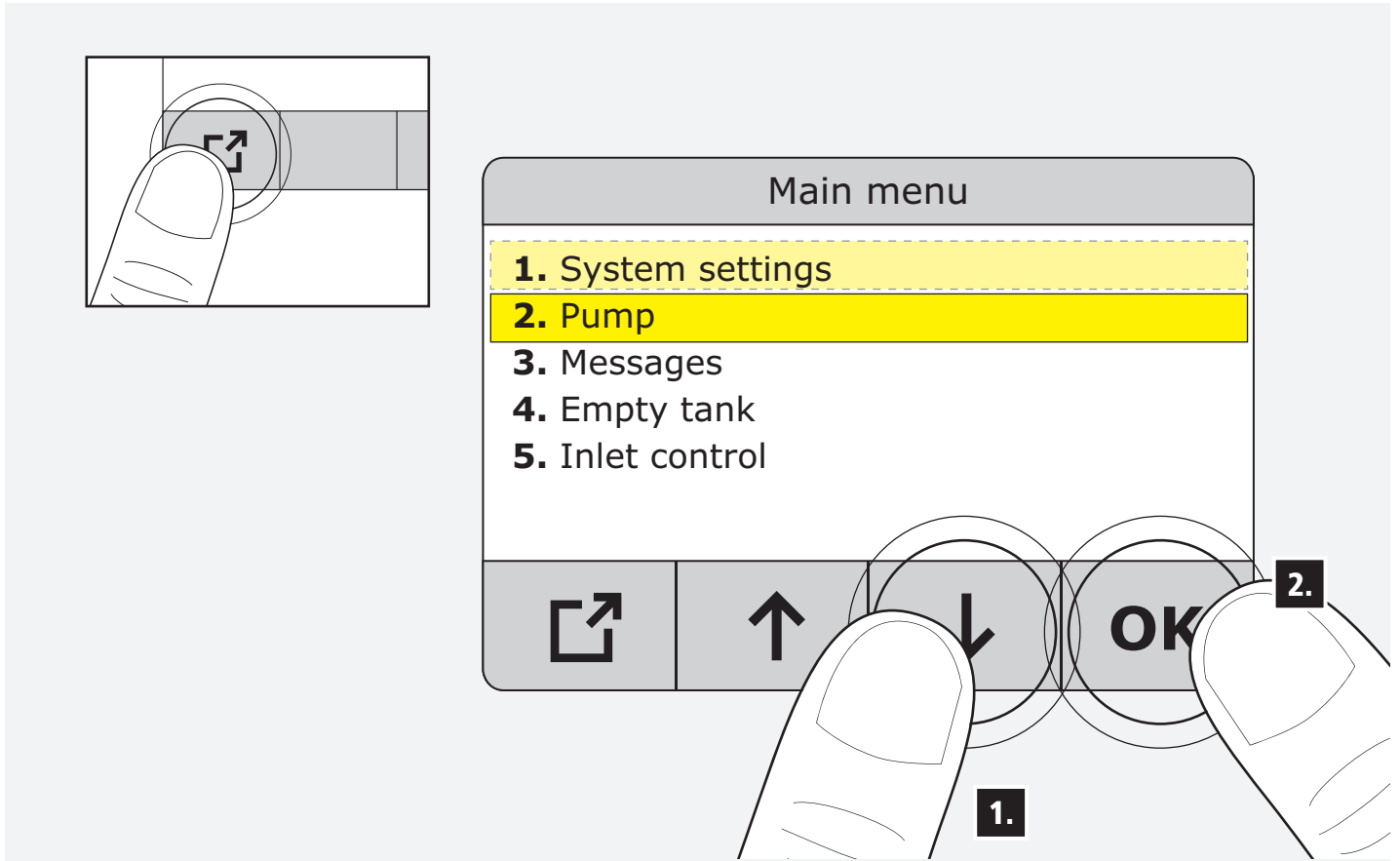
Navigation icons at the bottom: a square with an arrow pointing up and right, an up arrow, a down arrow, and the text 'OK'.

	up
	down
	left
	right
OK	Confirm entry

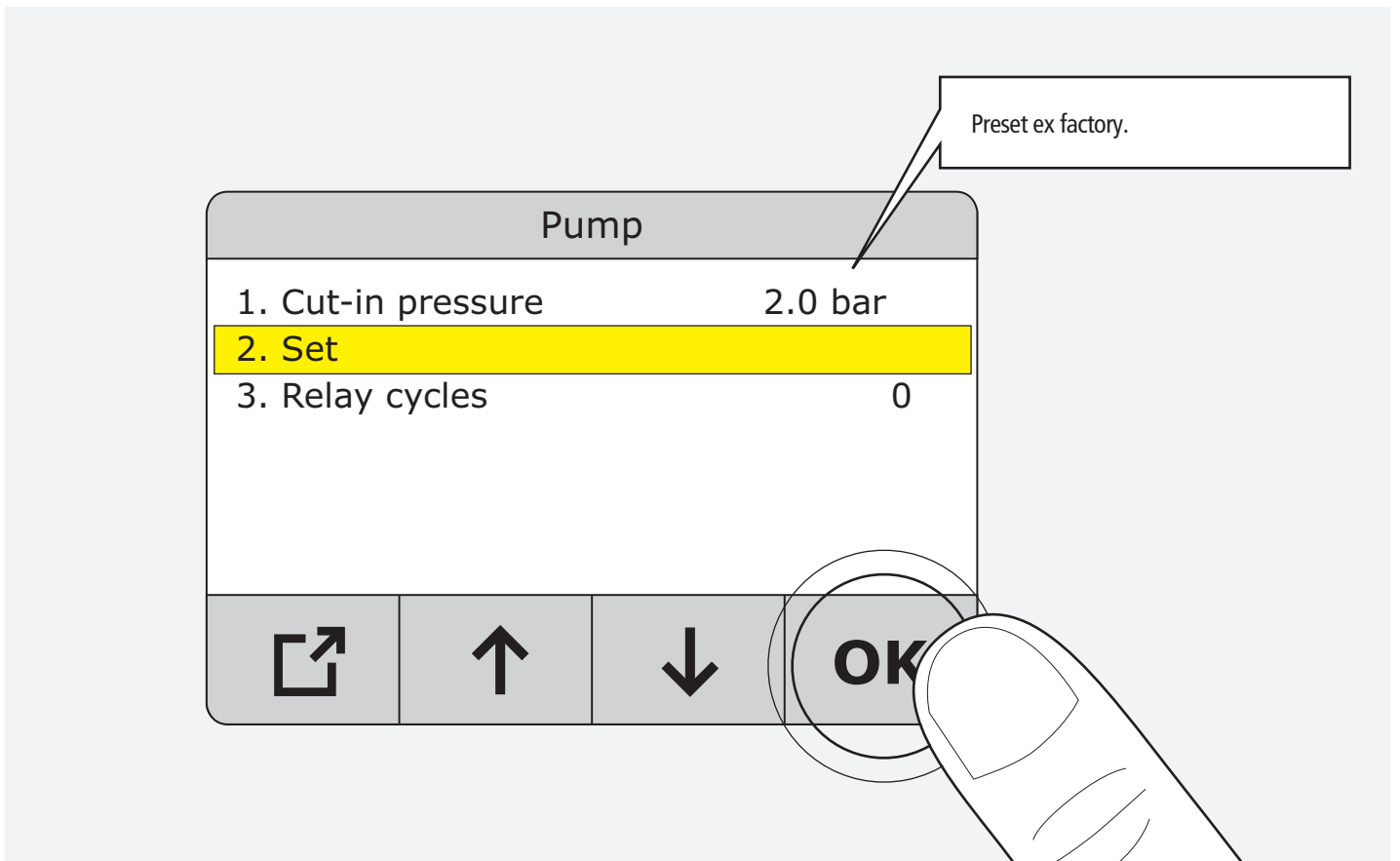




■	1.	Language	English
■	2.	Date	23.07.2016
■	3.	Time	11:07:48
■	4.	Time change Auto	On
■	5.	Water supply set plus	Off
■	6.	Container cleaning set	Off
■	7.	Overflow monitoring	Off
■	8.	Key press signal	On
■	9.	Error signal	On
■	10.	Battery change	
■	11.	Factory menu	
■	12.	Factory settings	

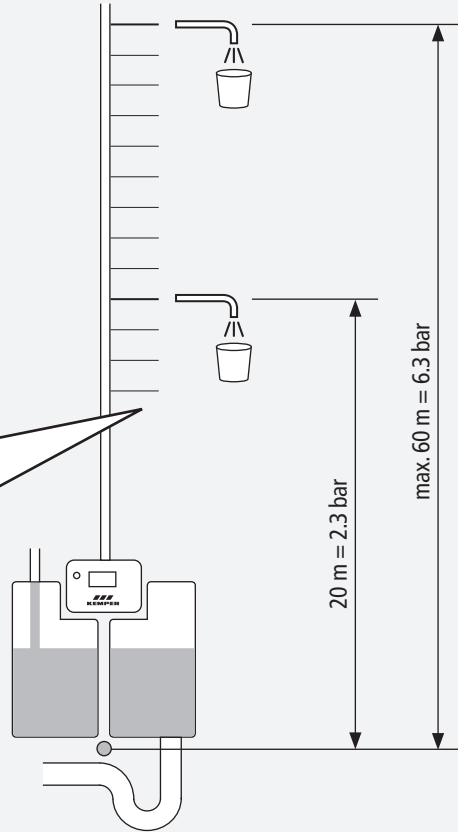
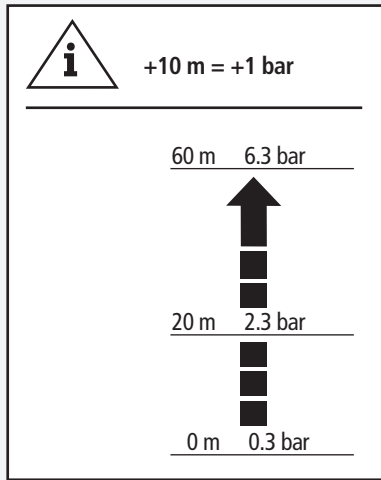


12.1





1.



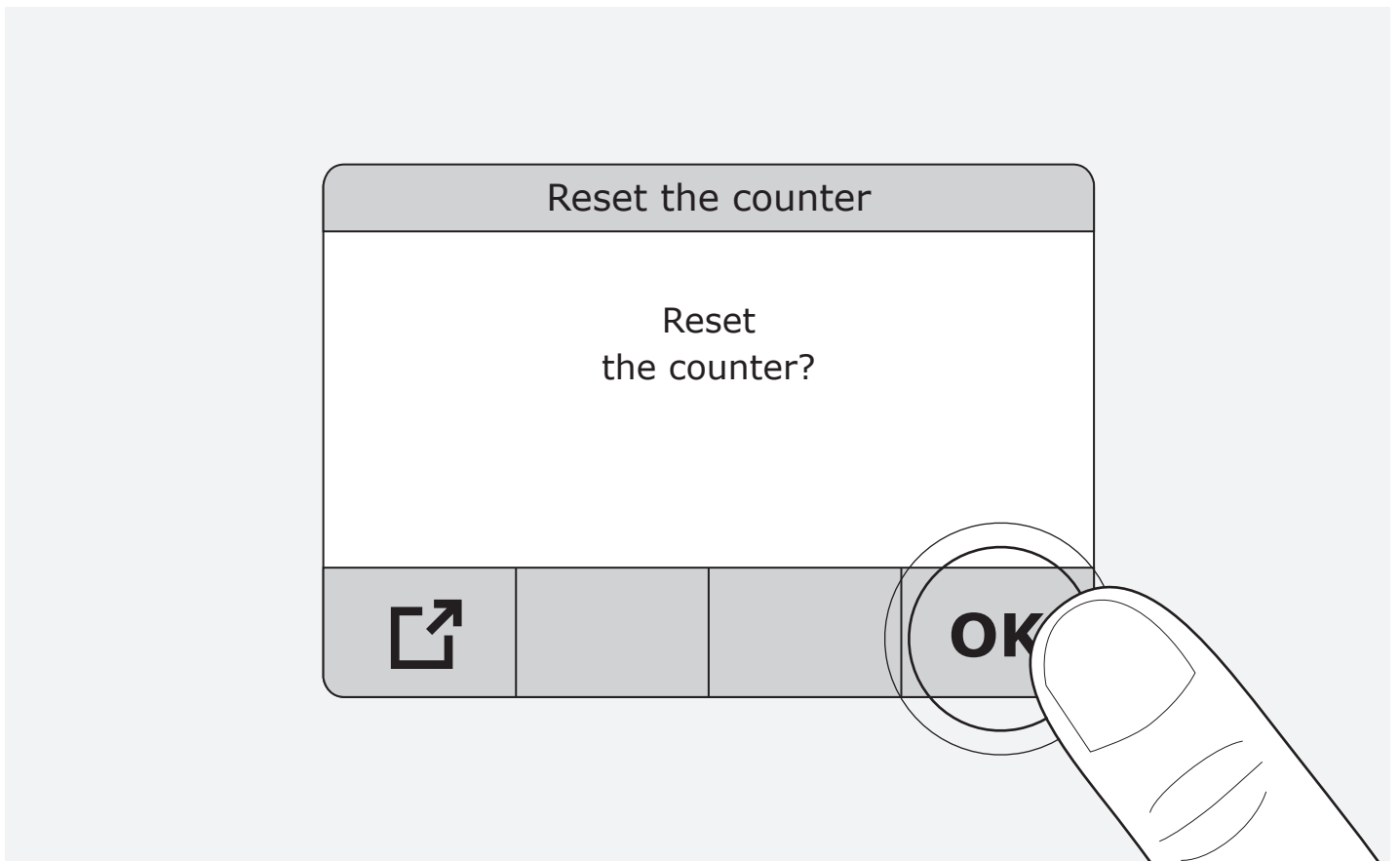
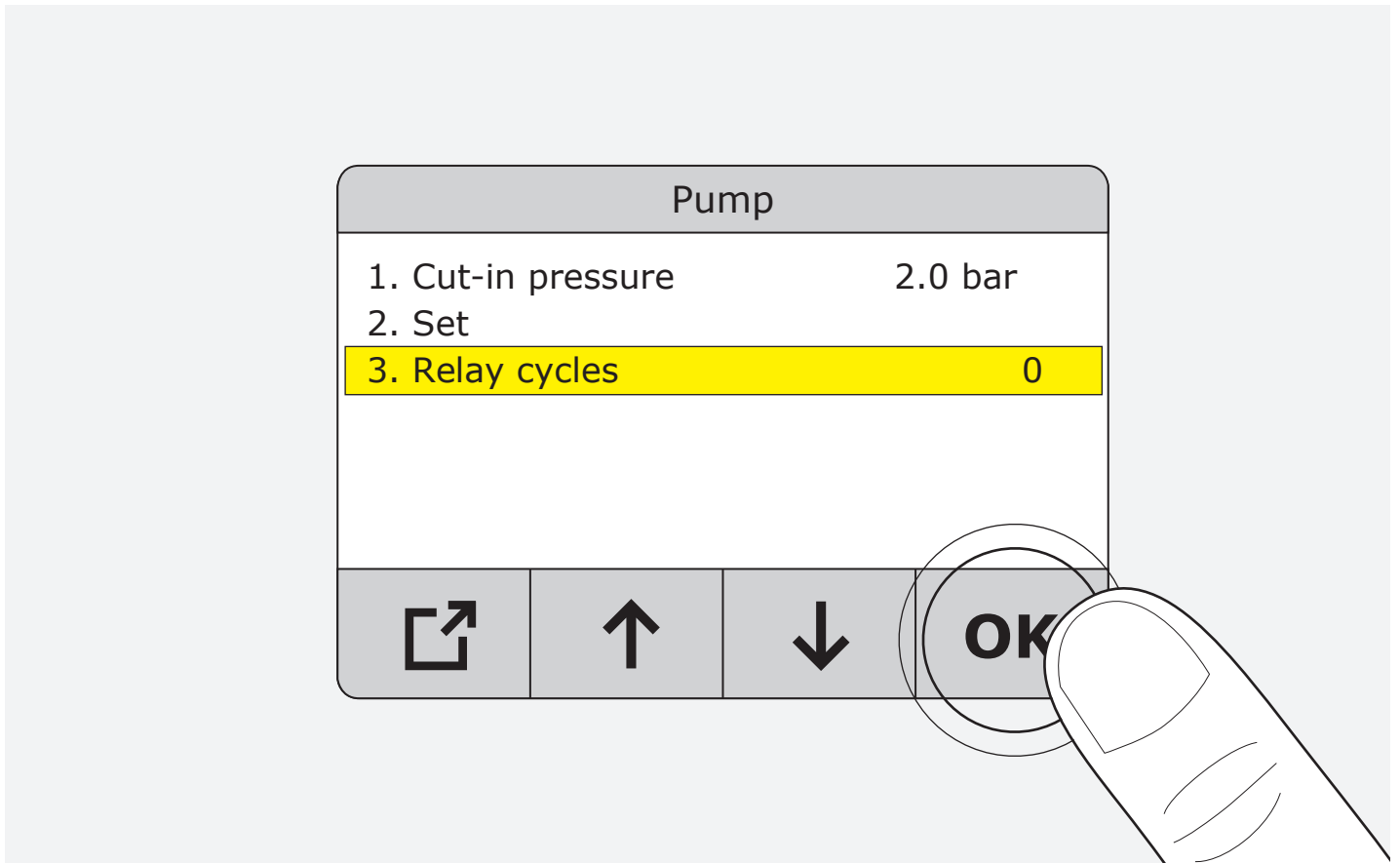
Cut-in pressure

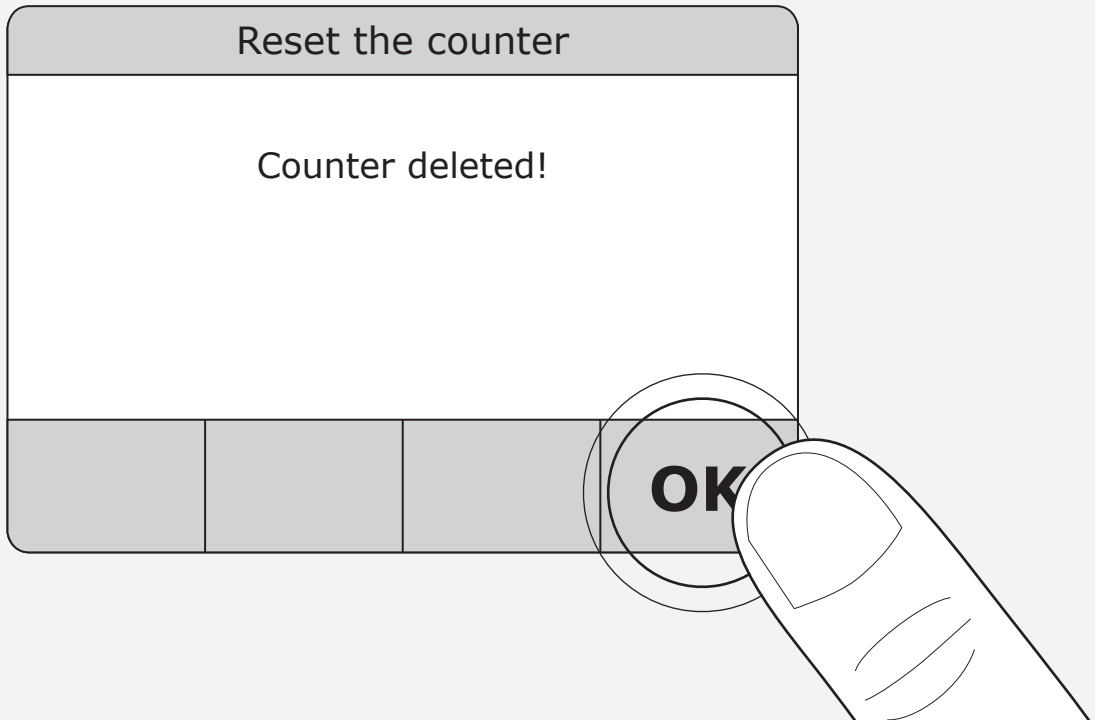
Min: 0.3-Actual: 2.0bar - Max: 6.0 bar

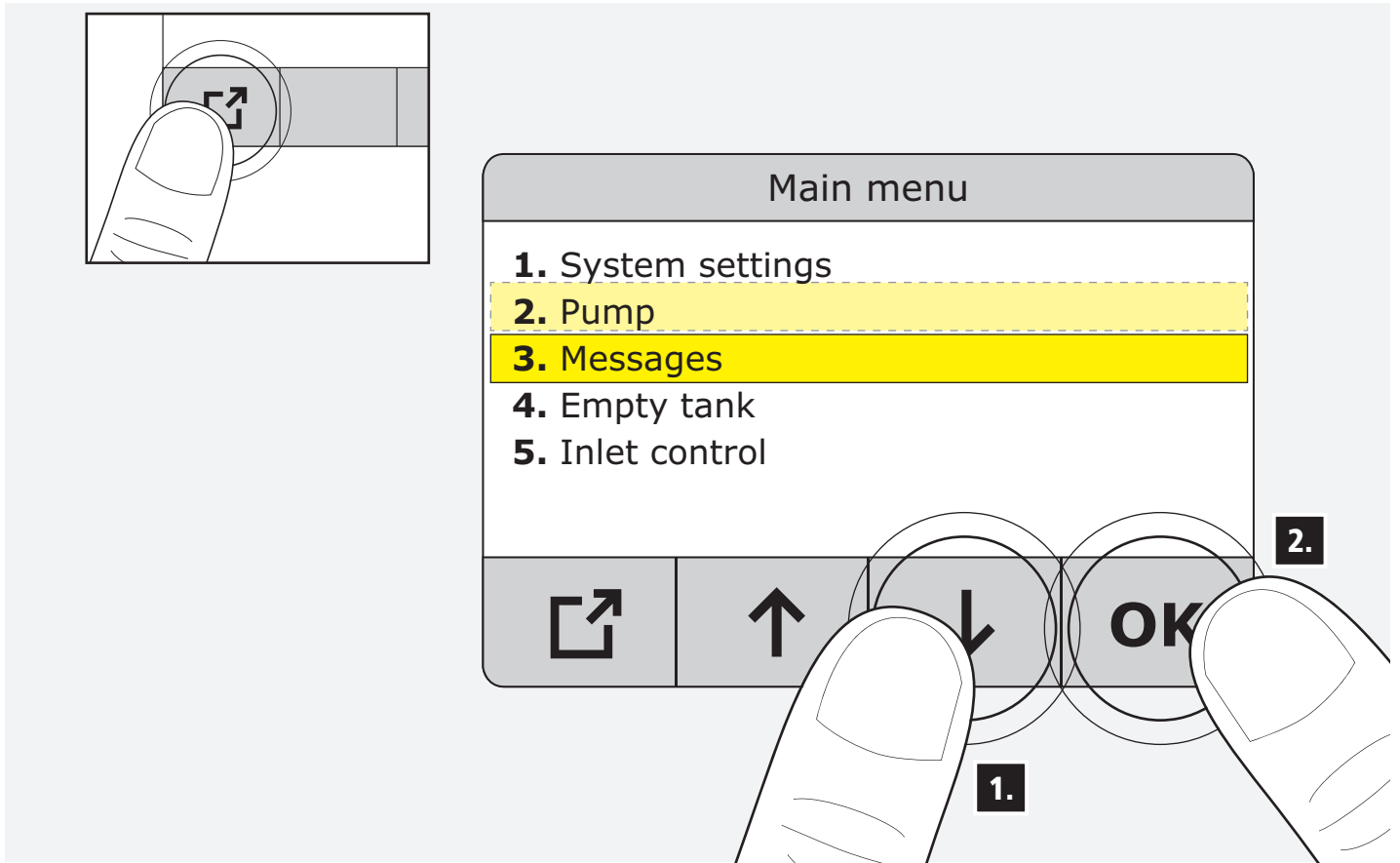
1	2	3	0
4	5	6	-
7	8	9	.
↗	←		OK

2.

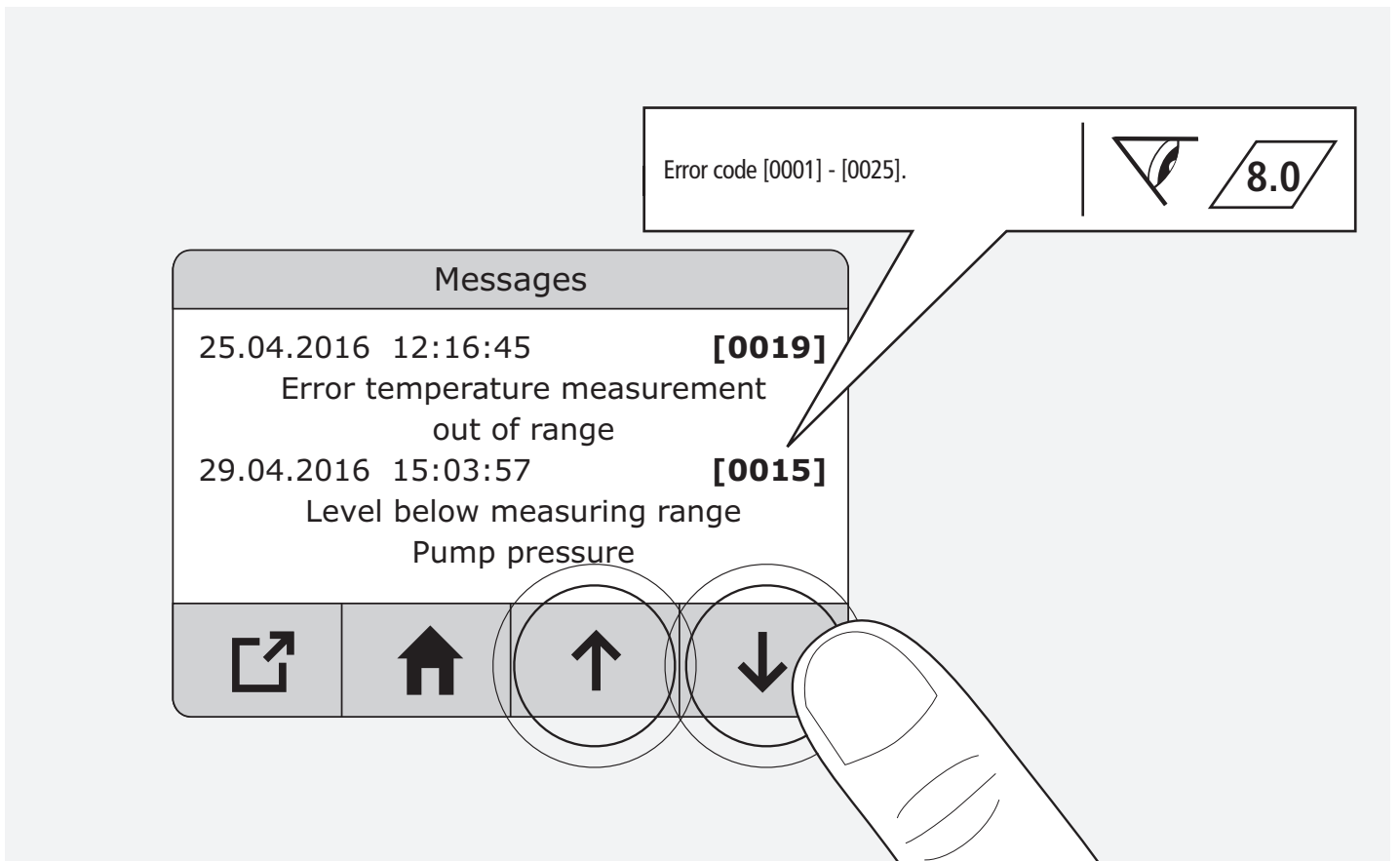
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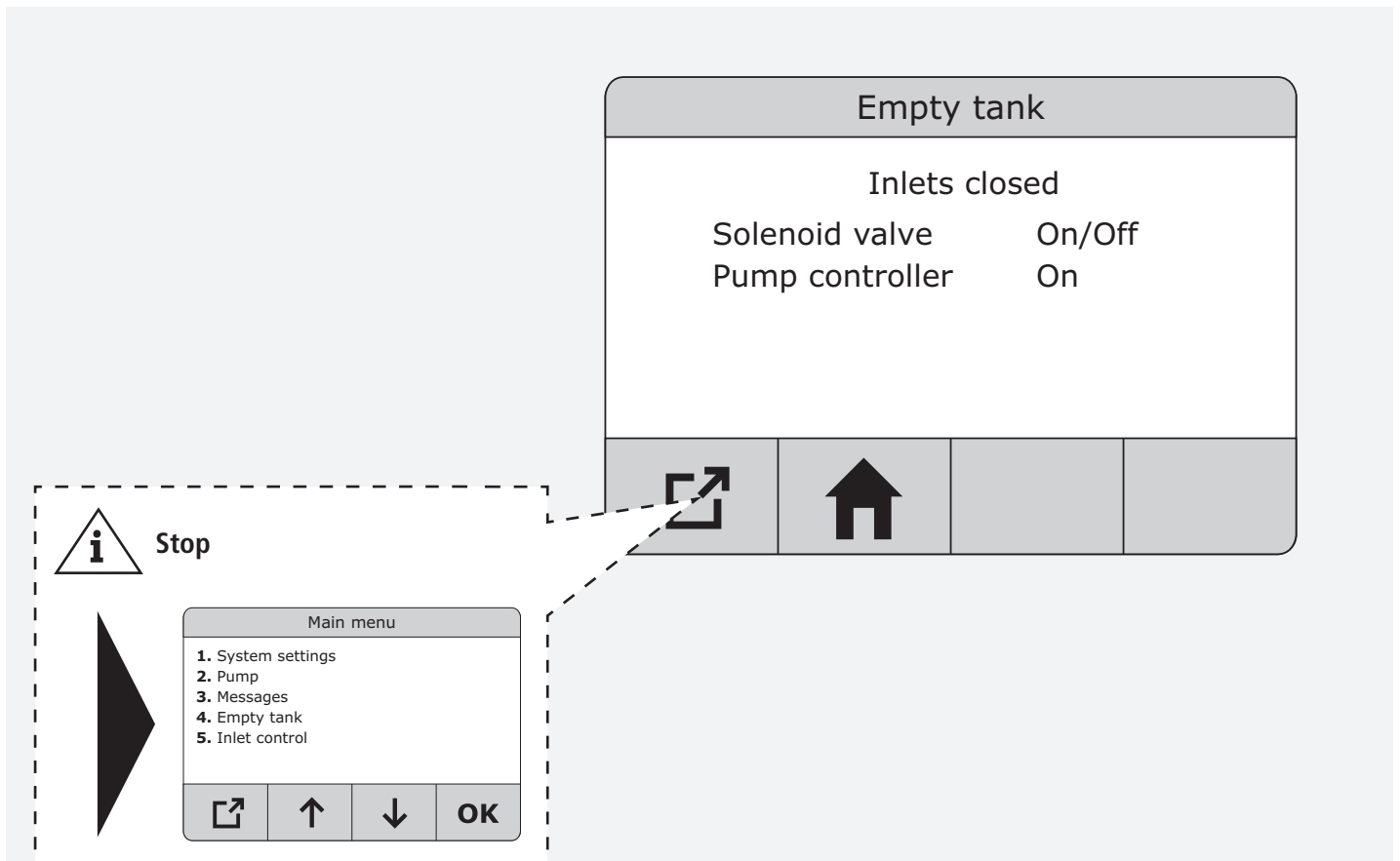
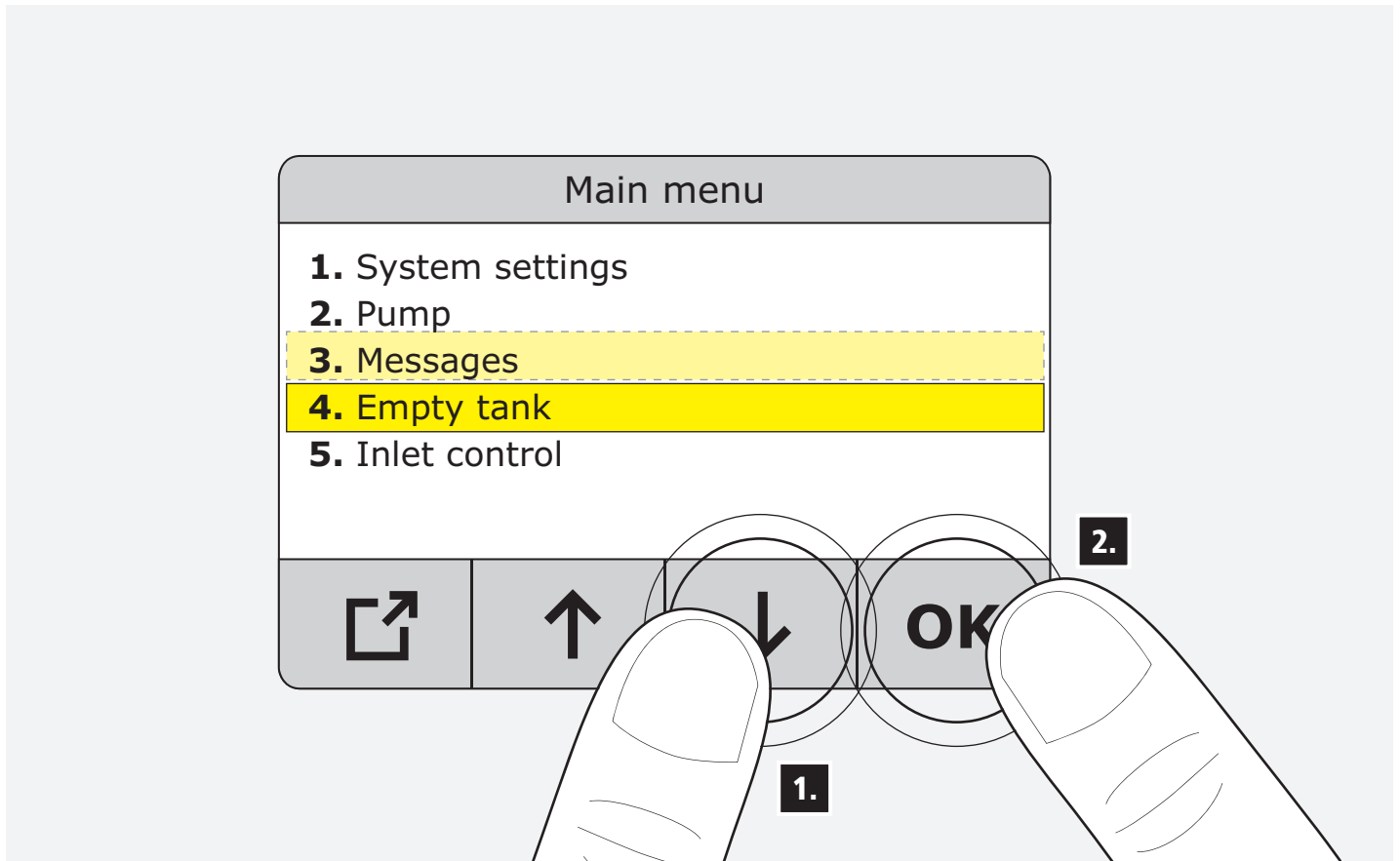


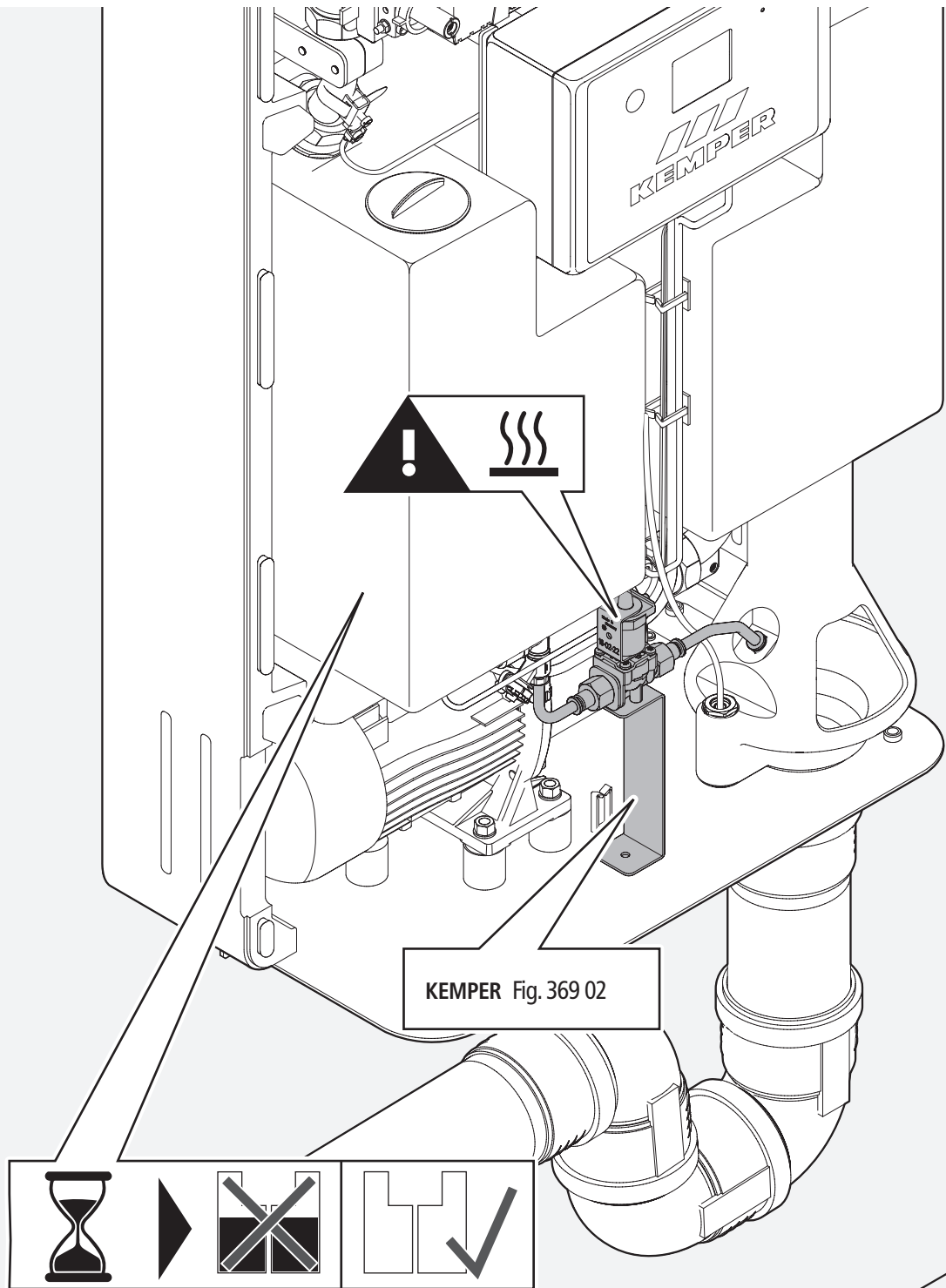


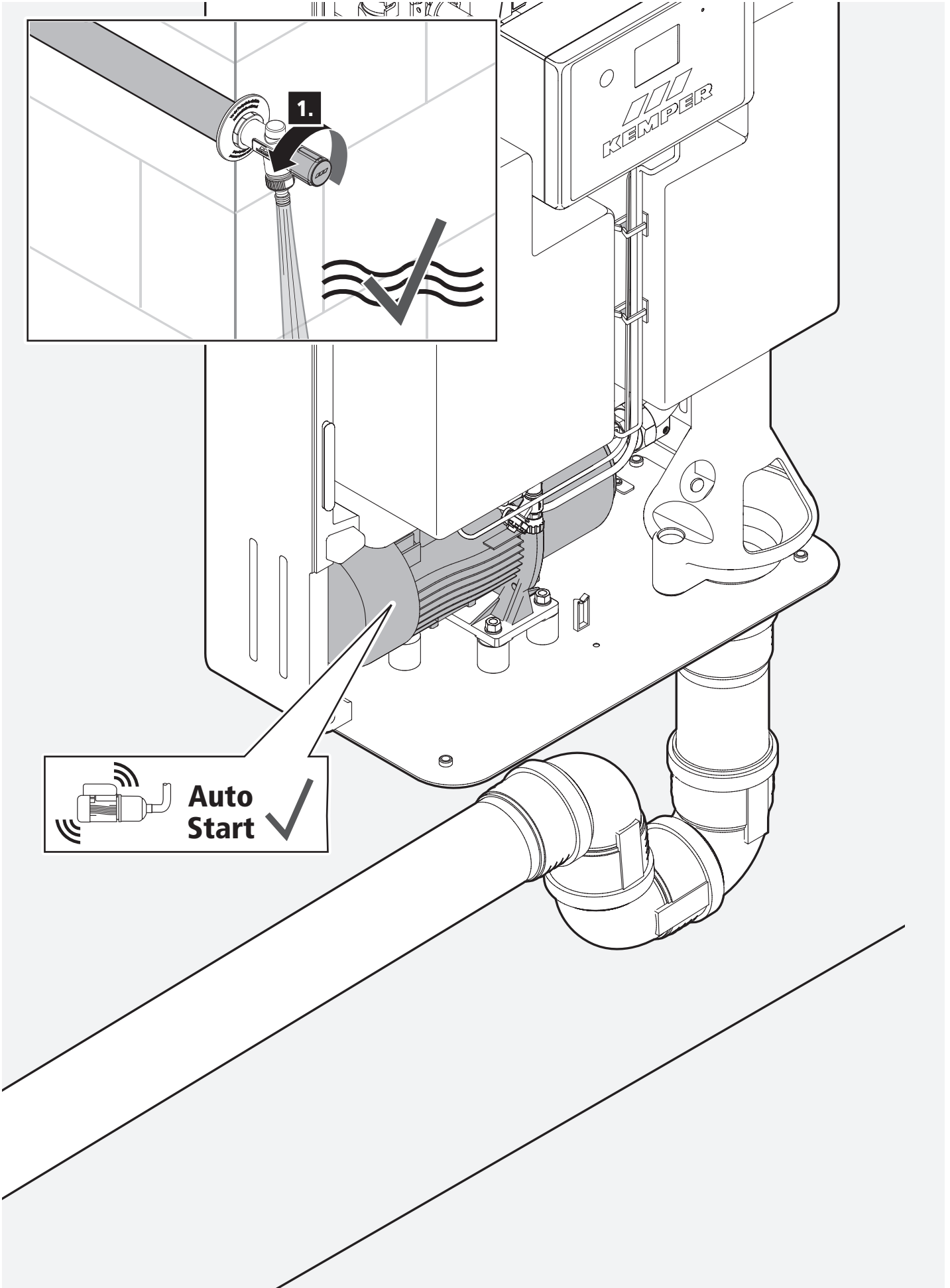


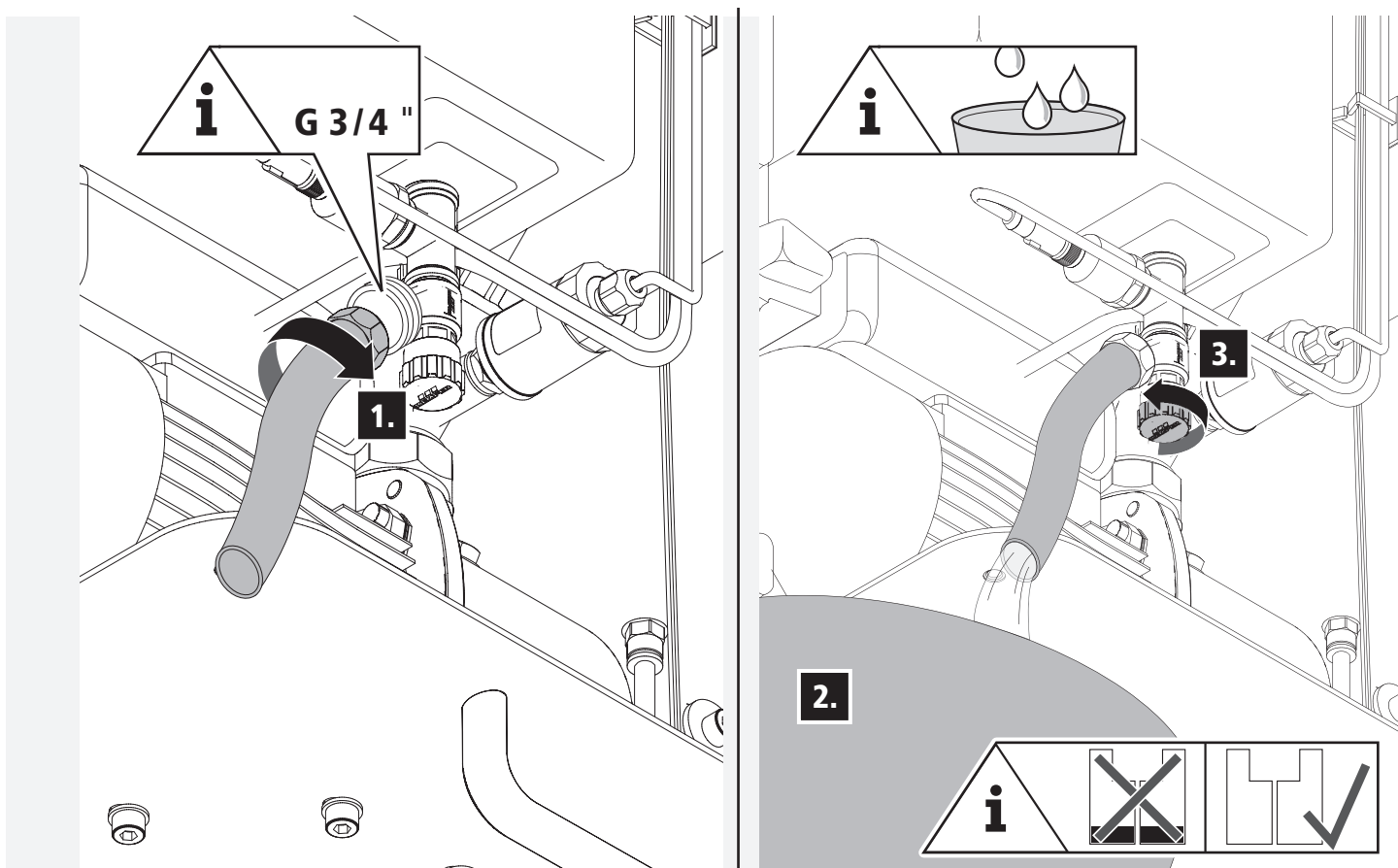
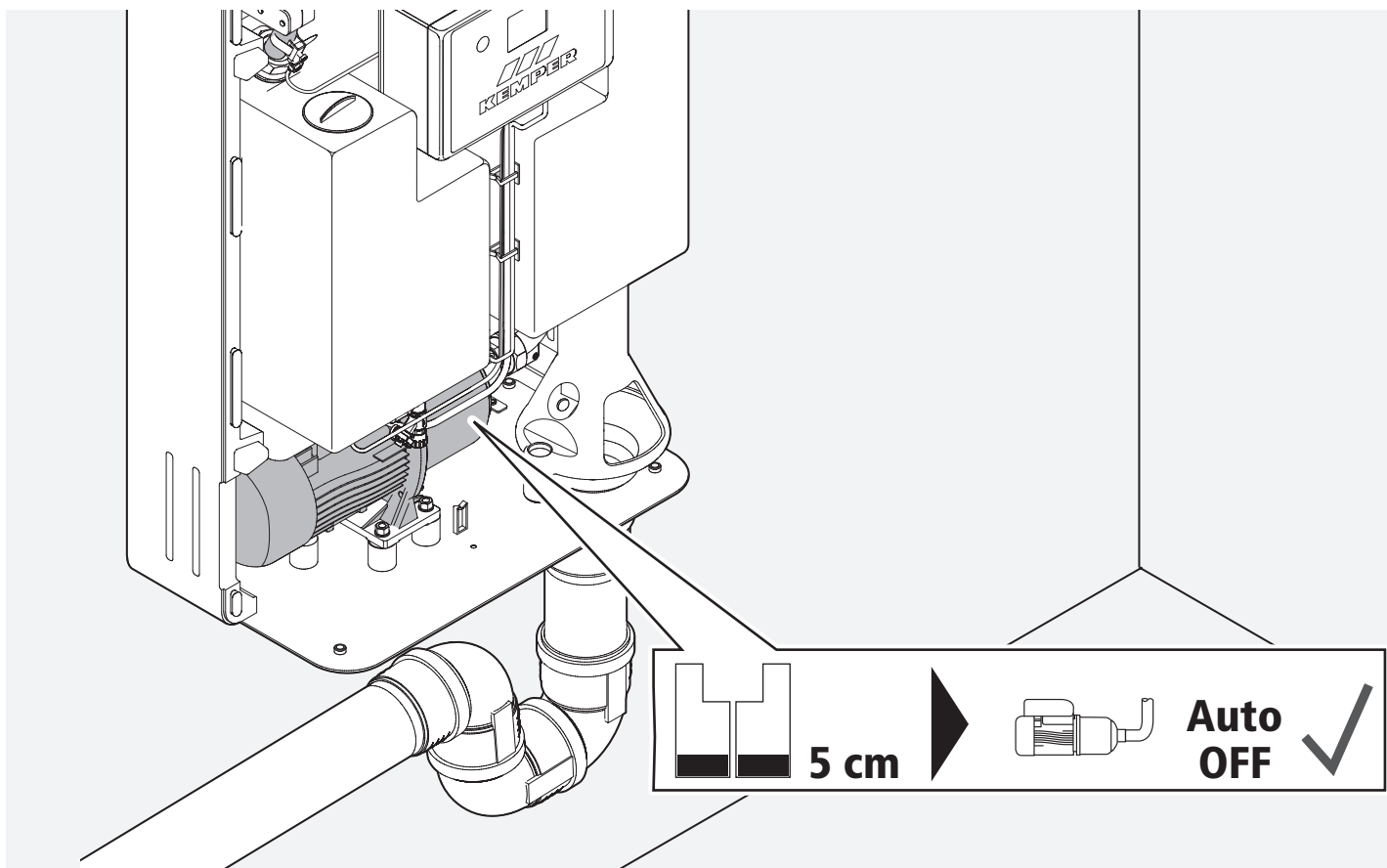
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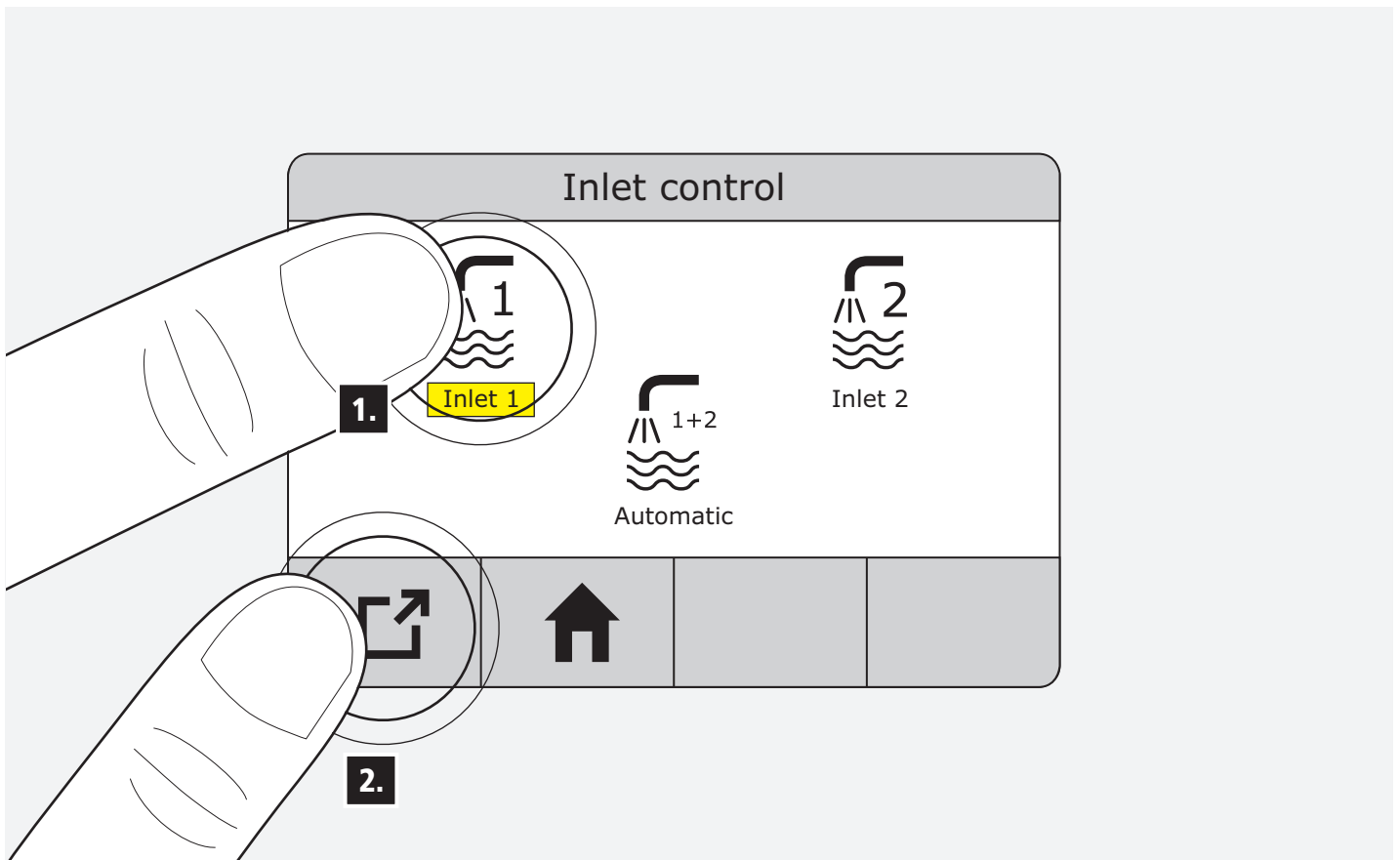
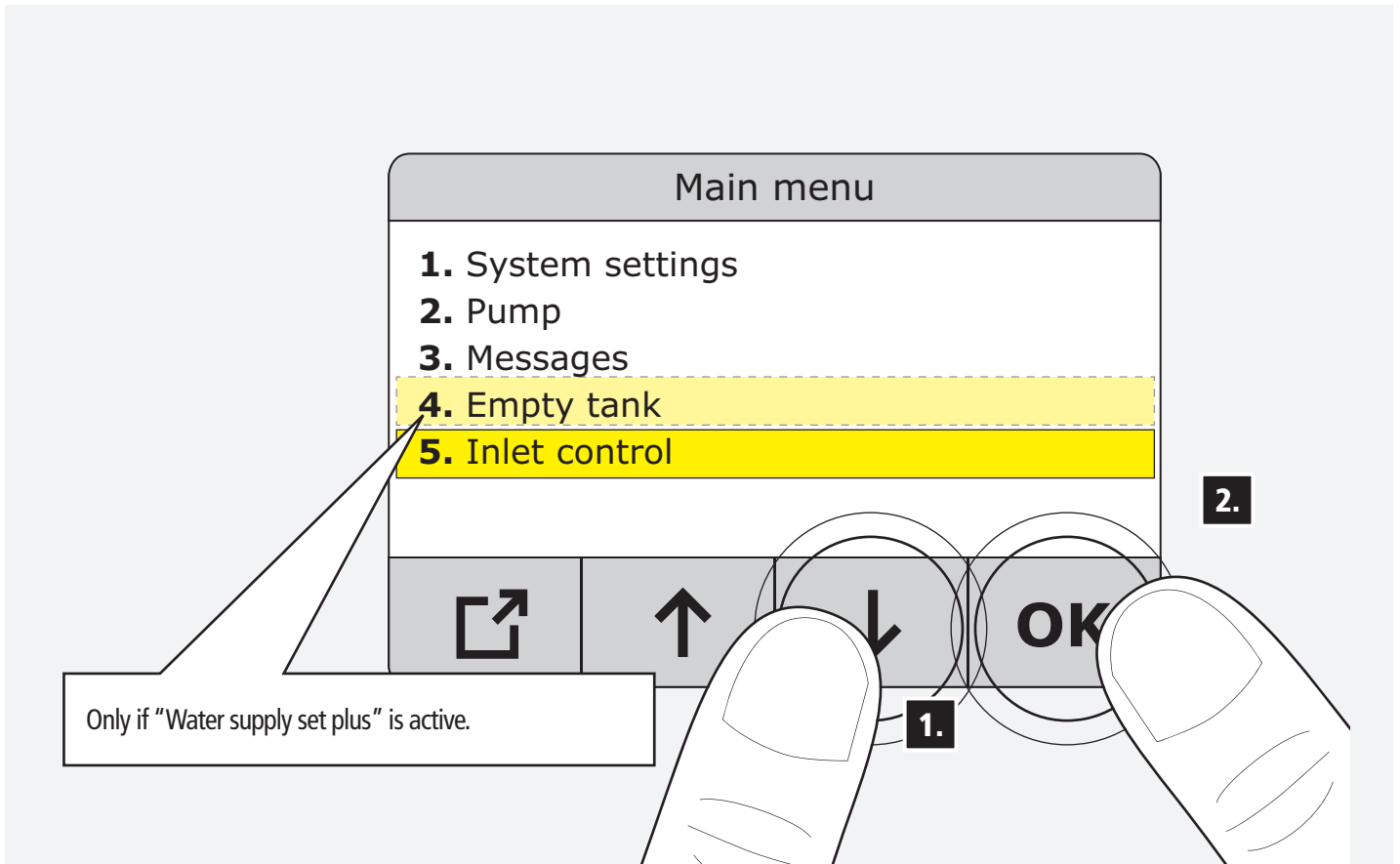


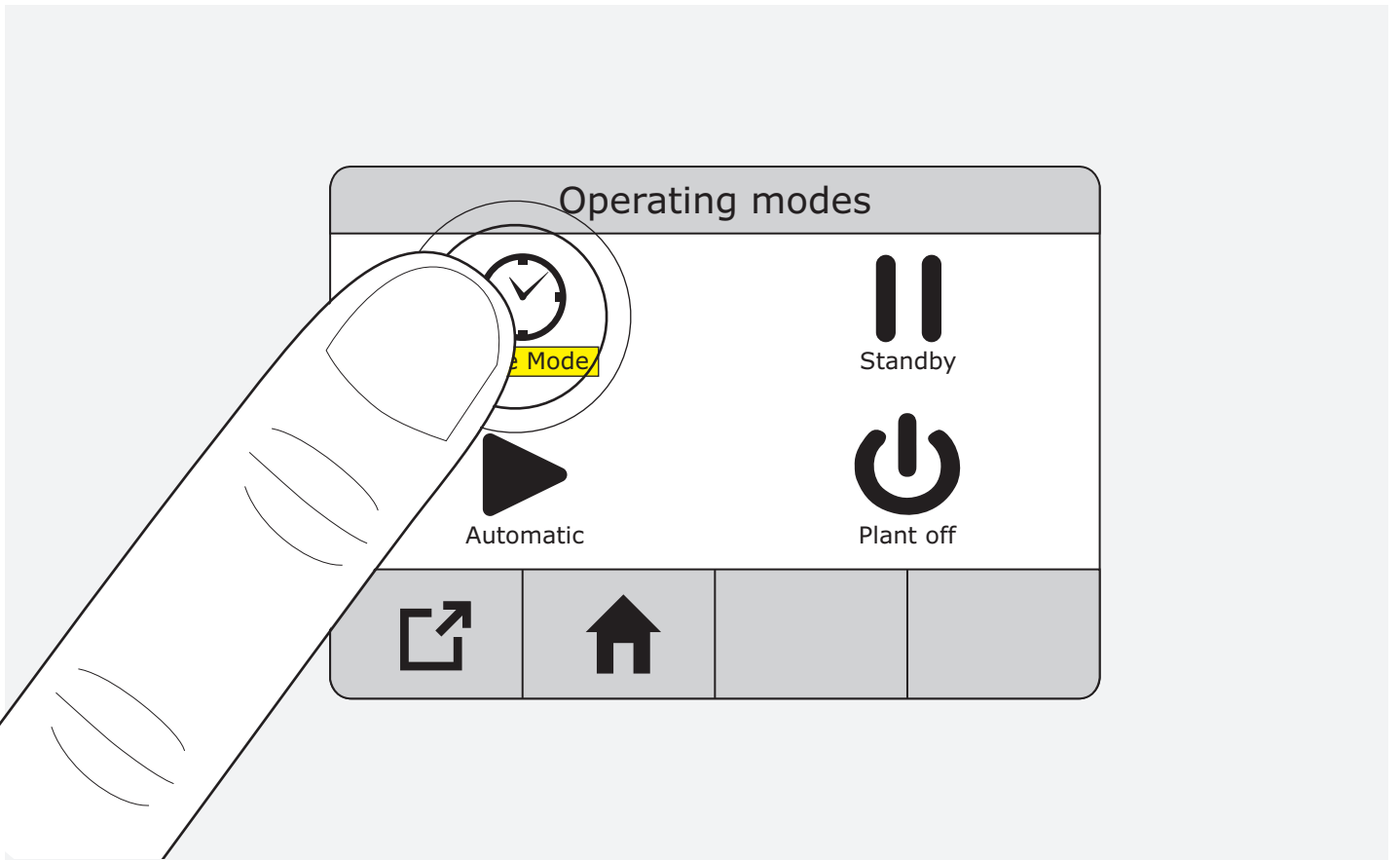
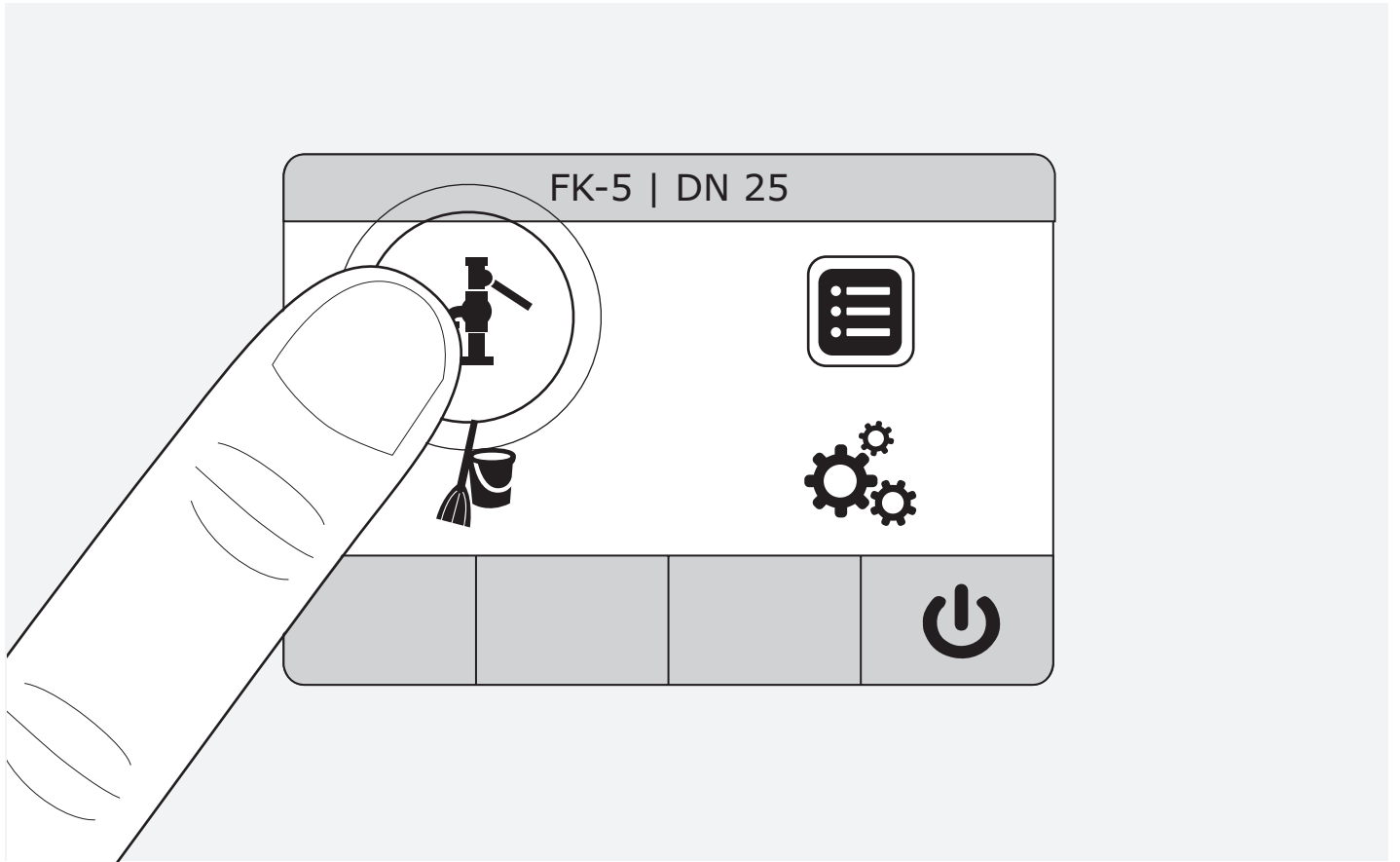


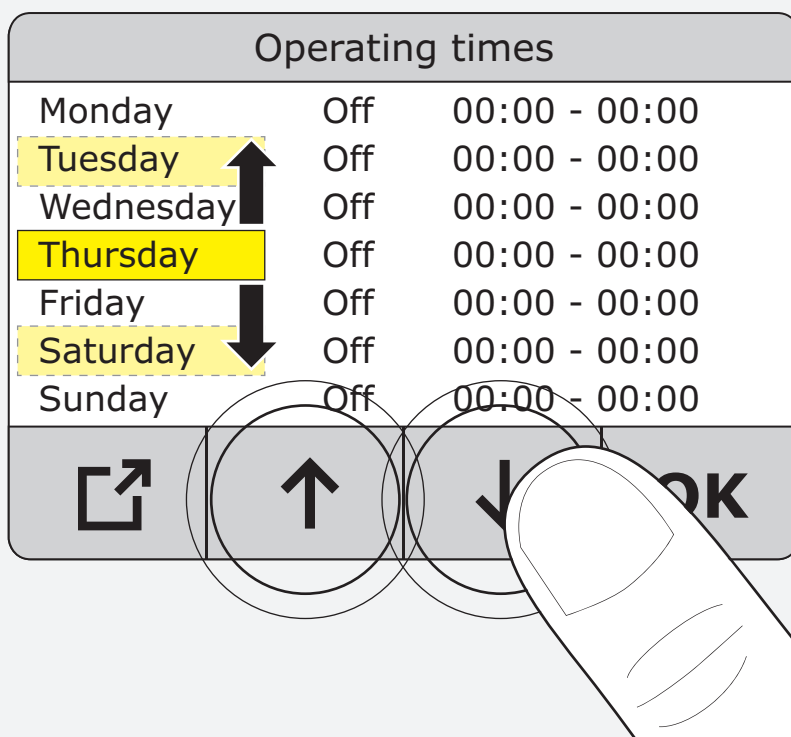
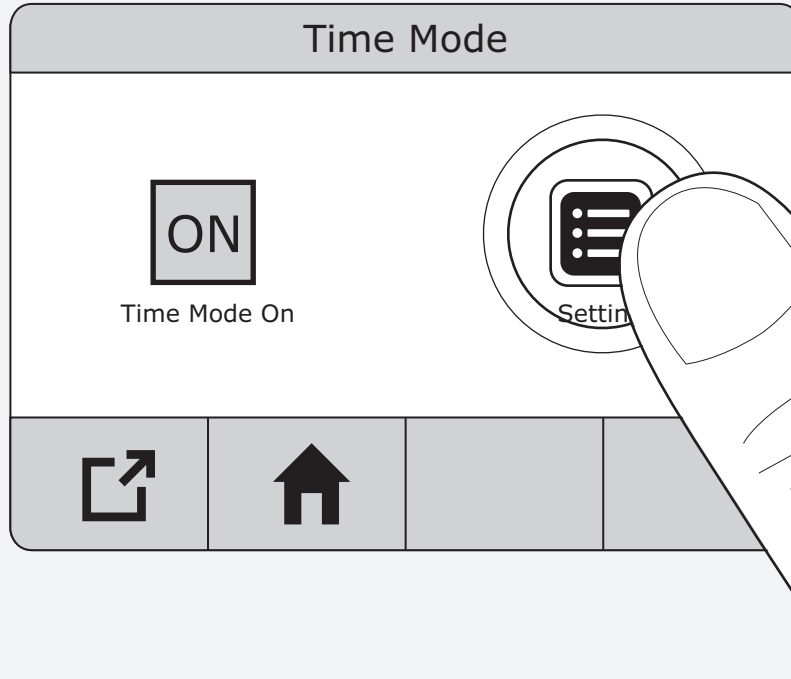


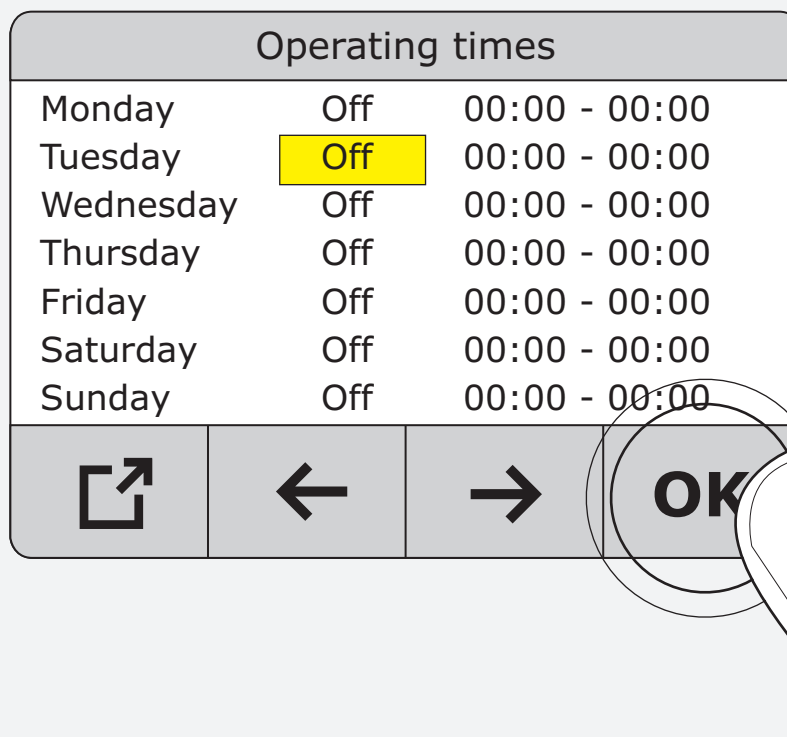
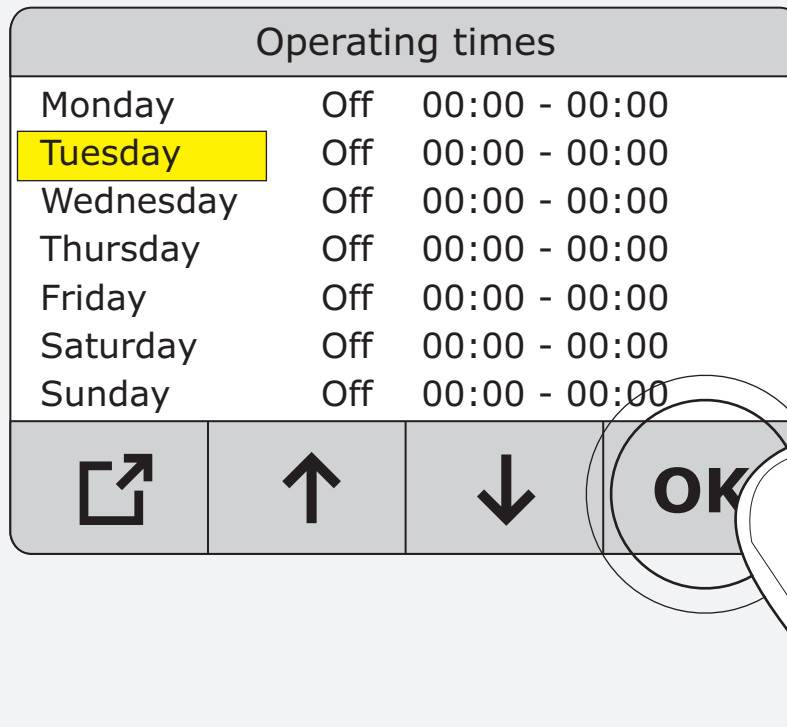


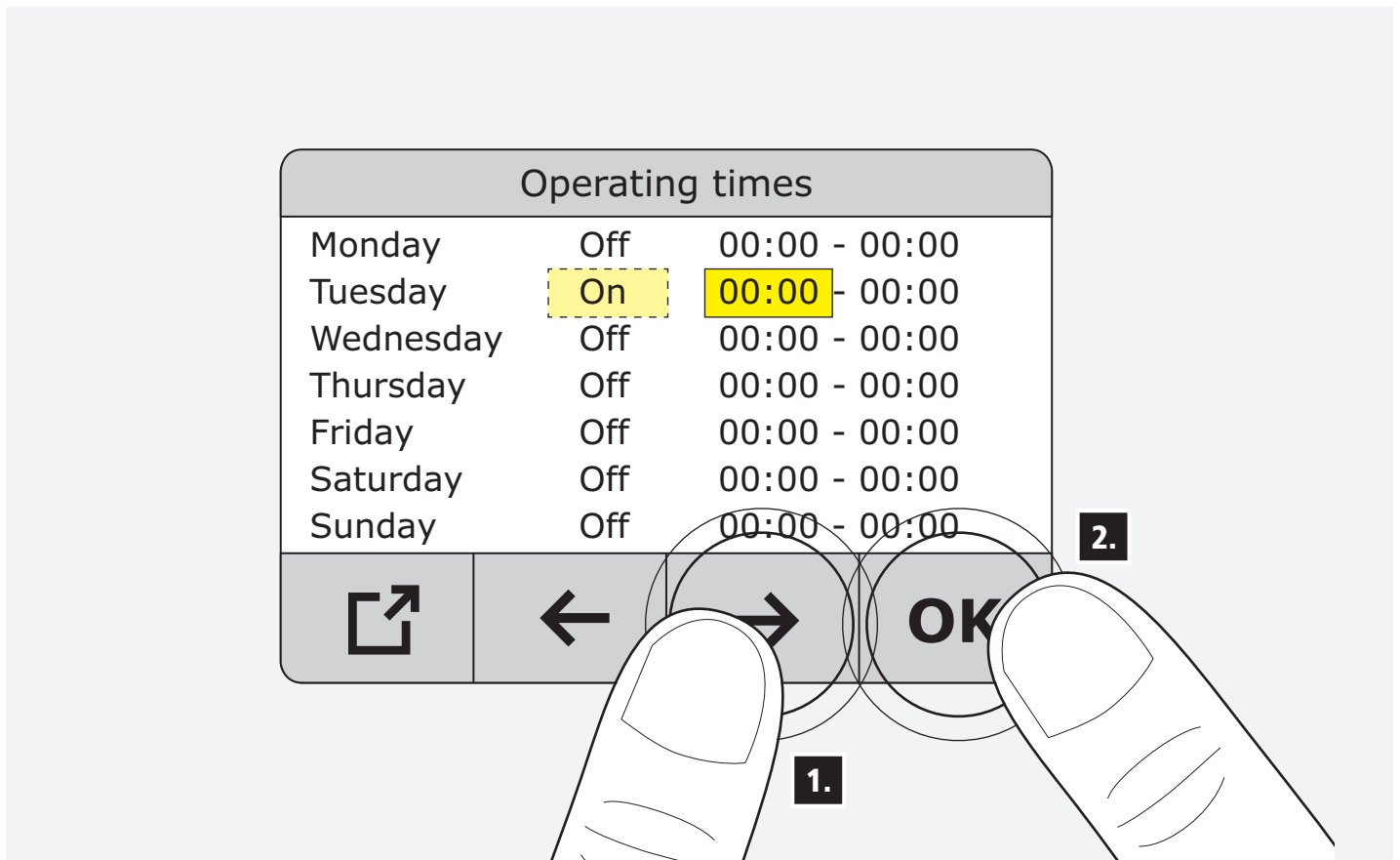
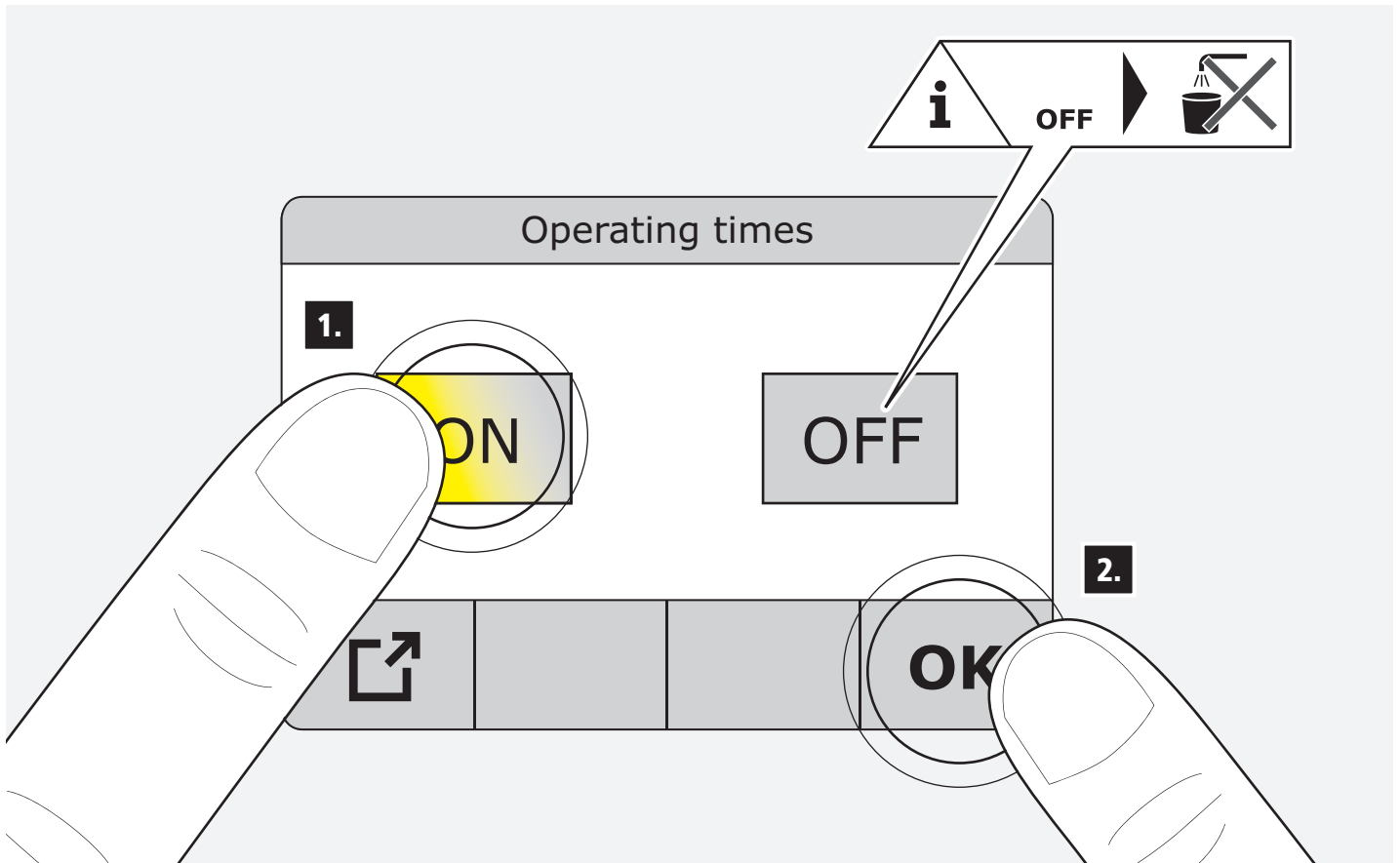


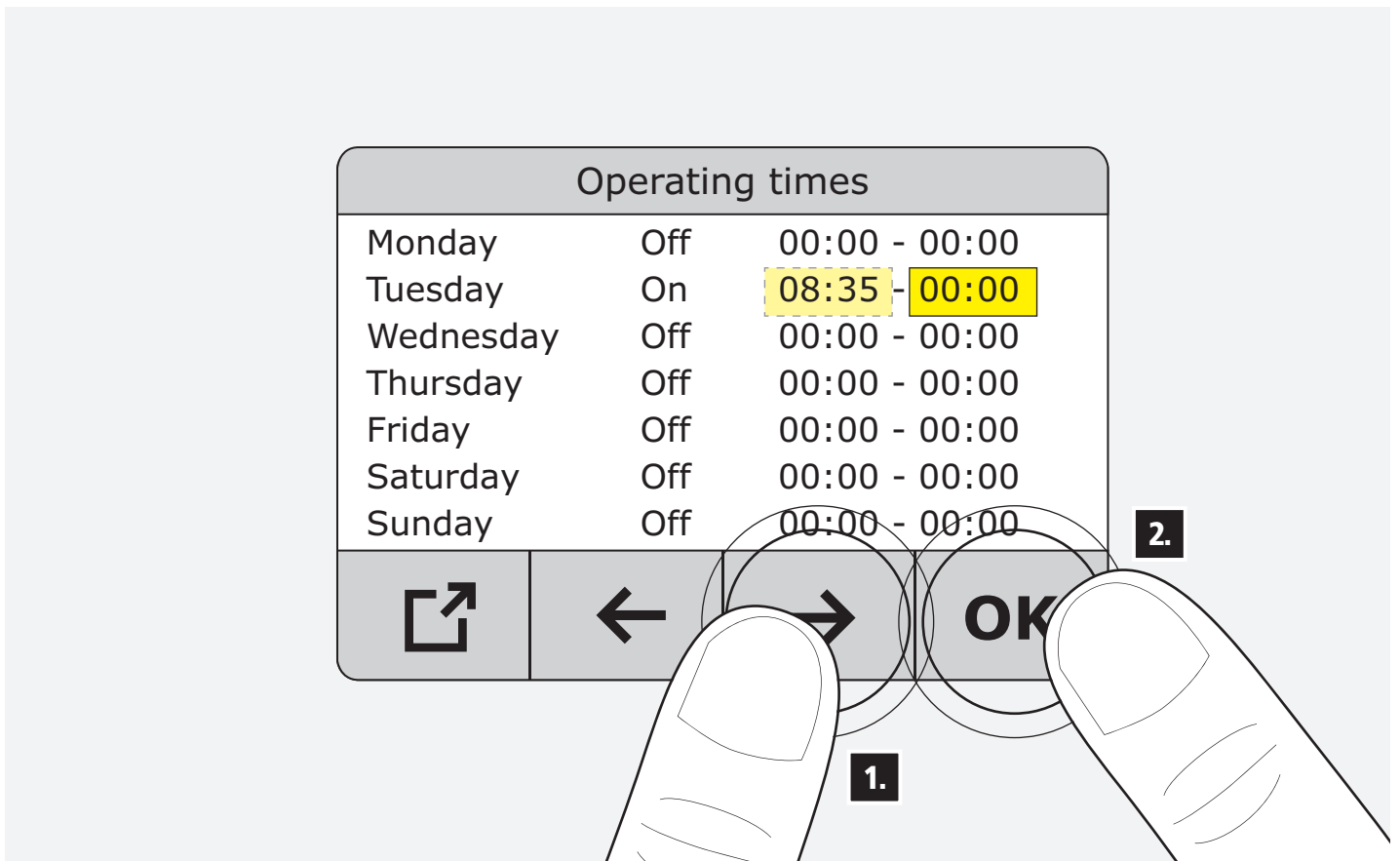
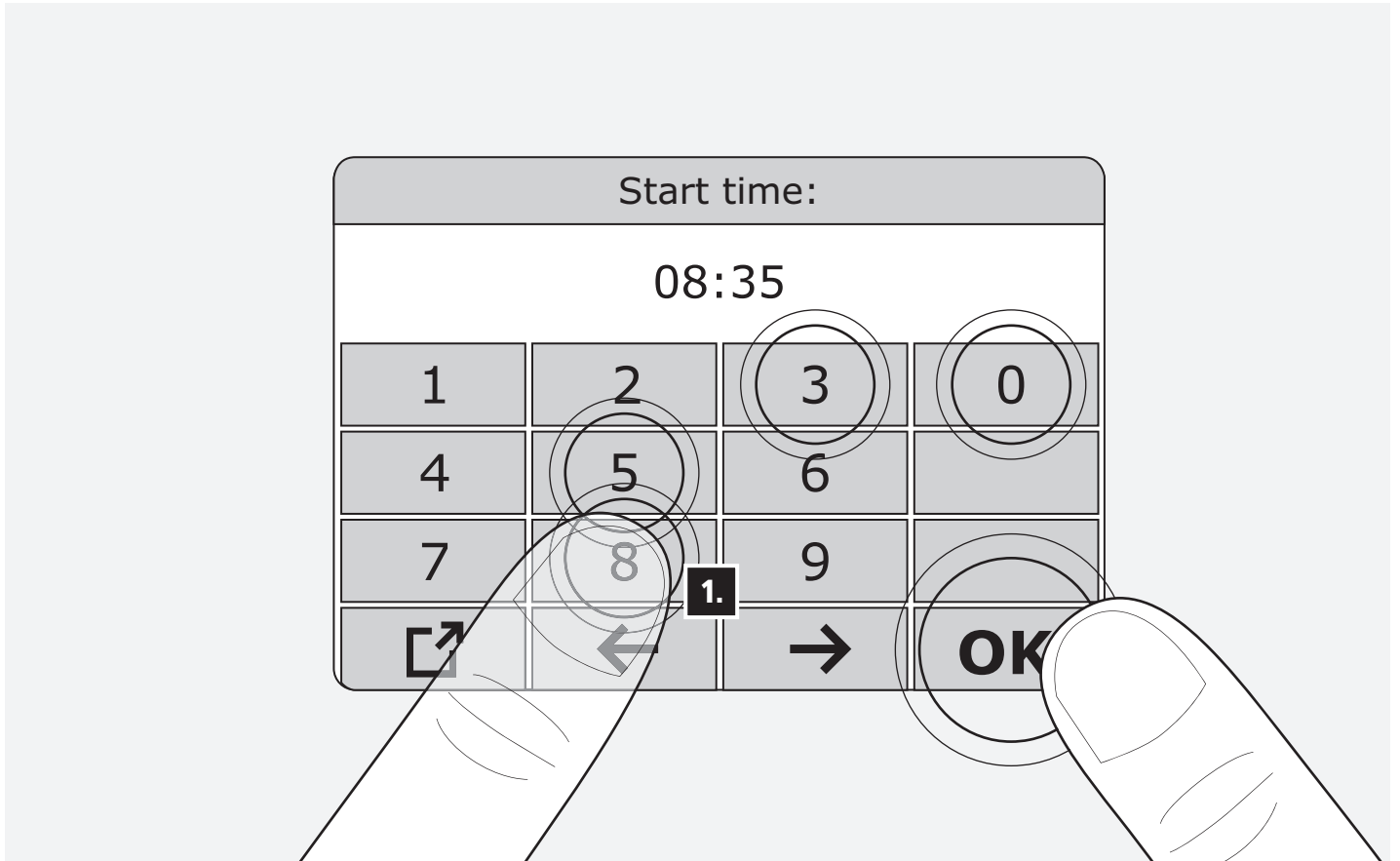


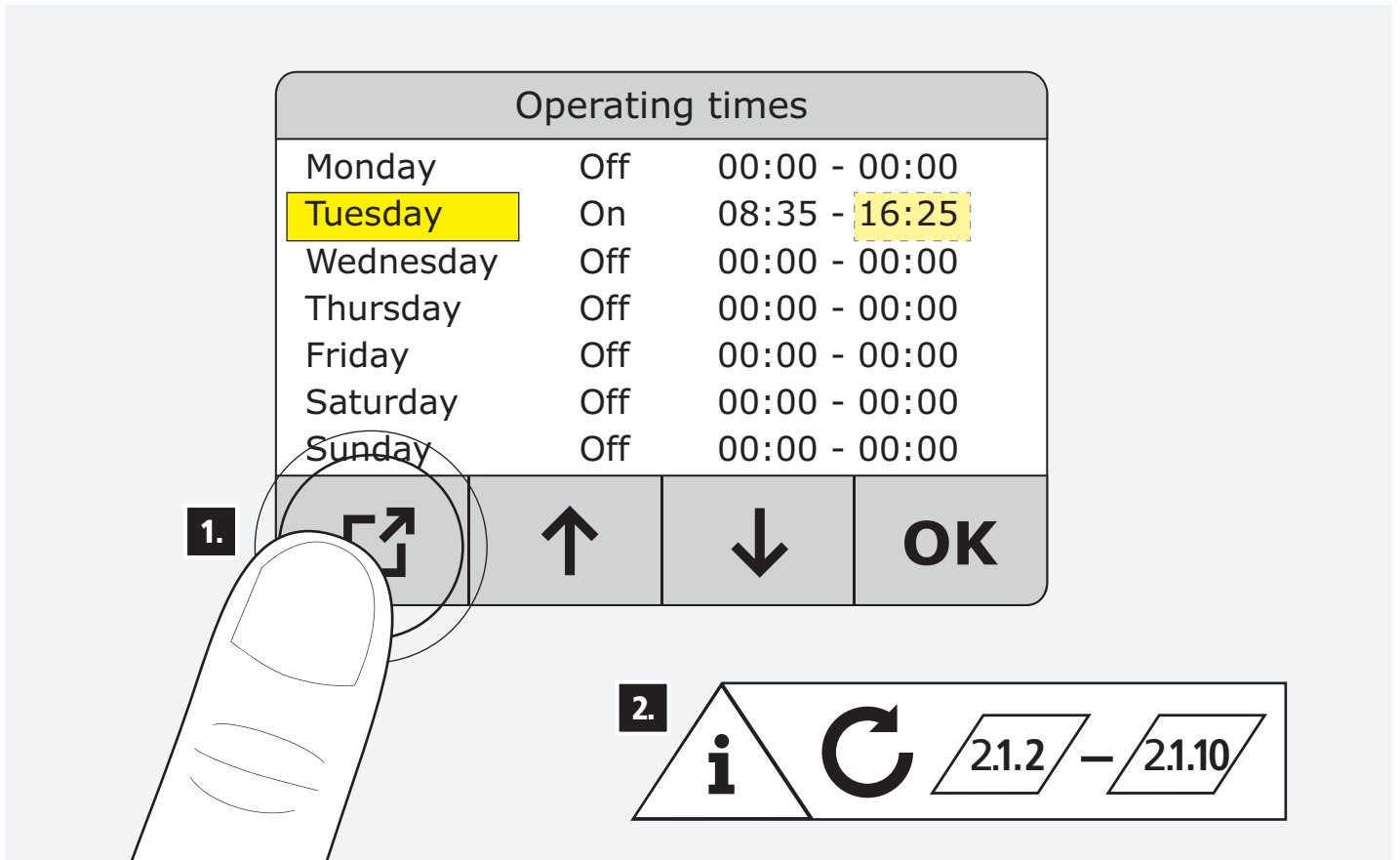
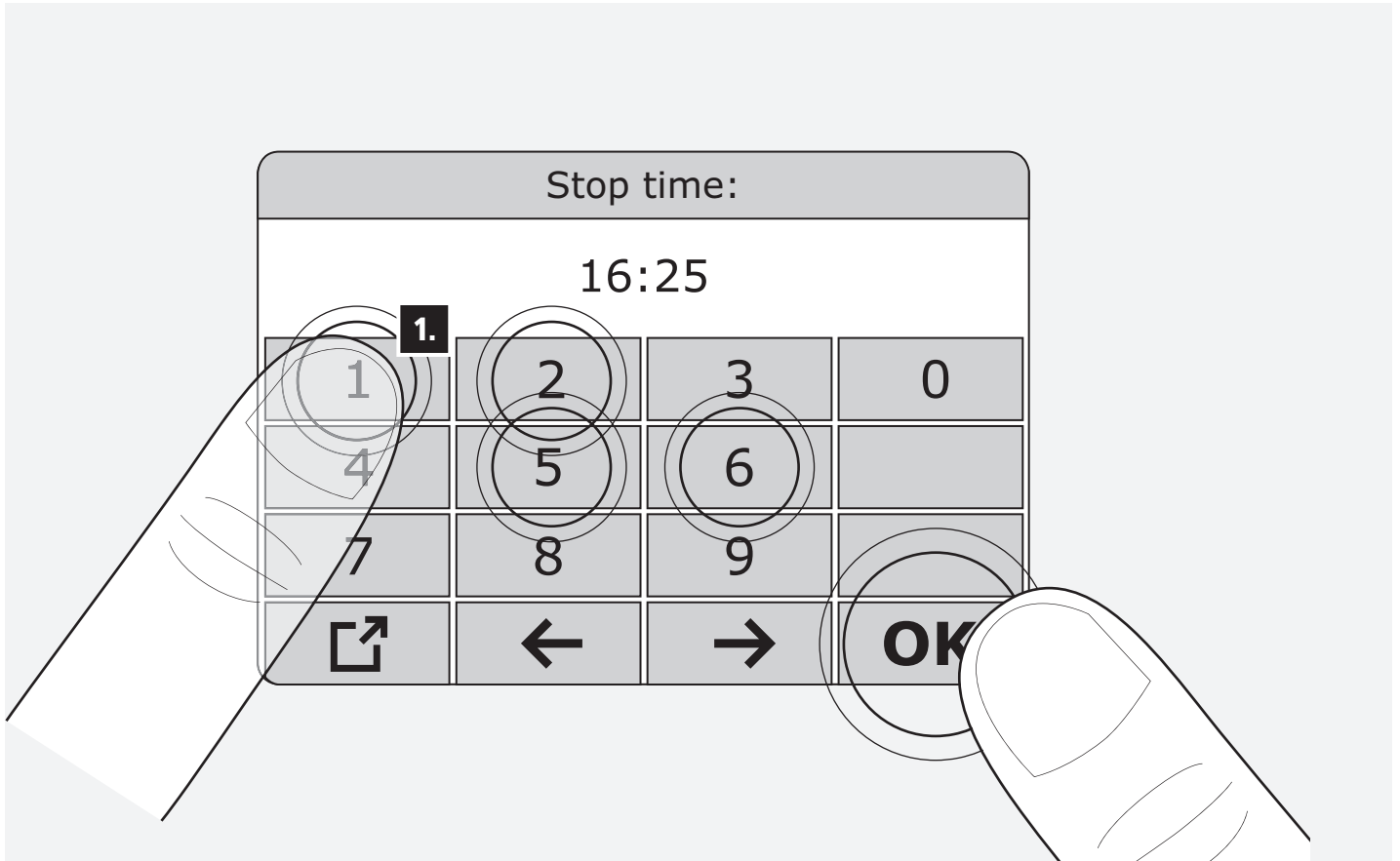


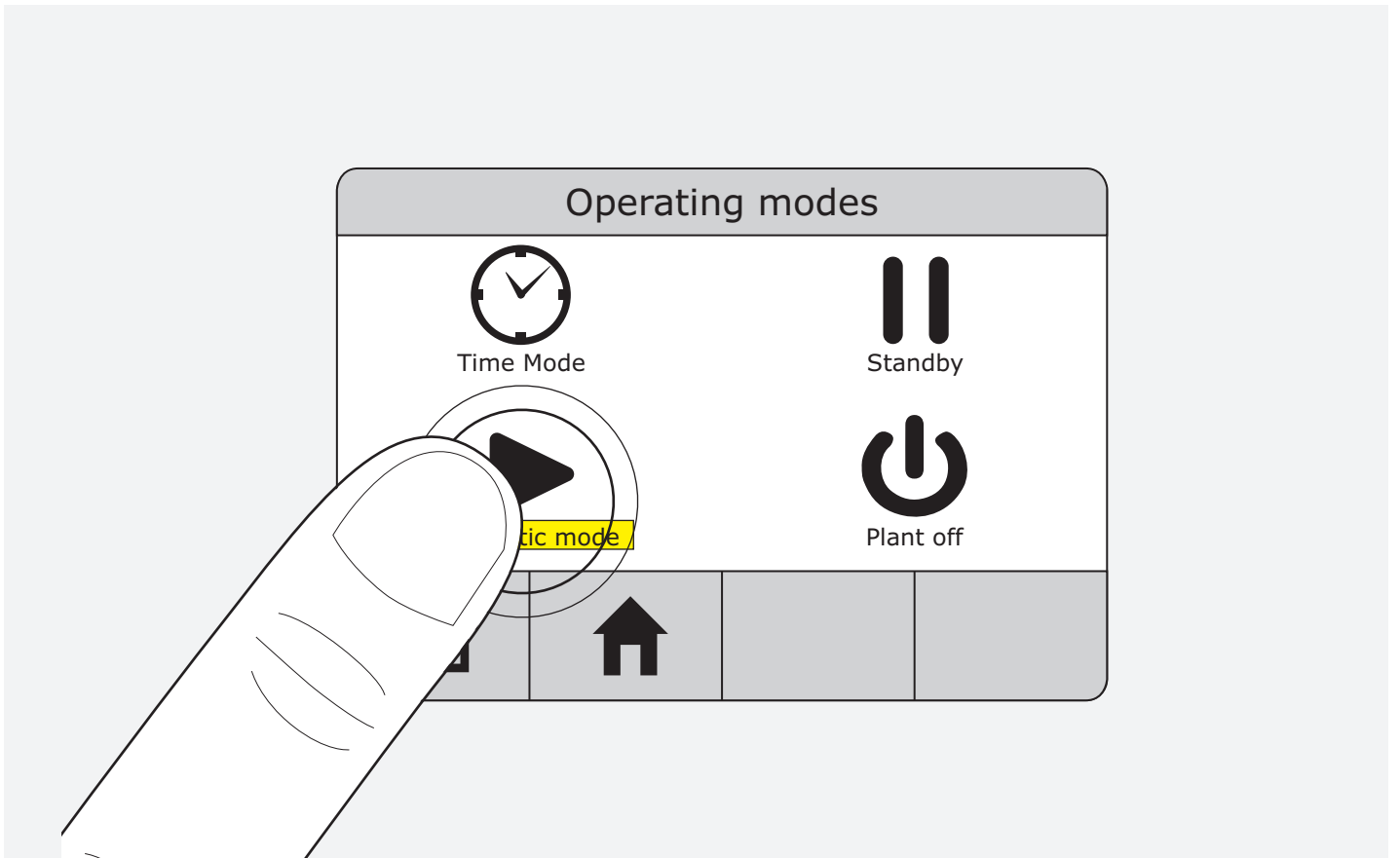
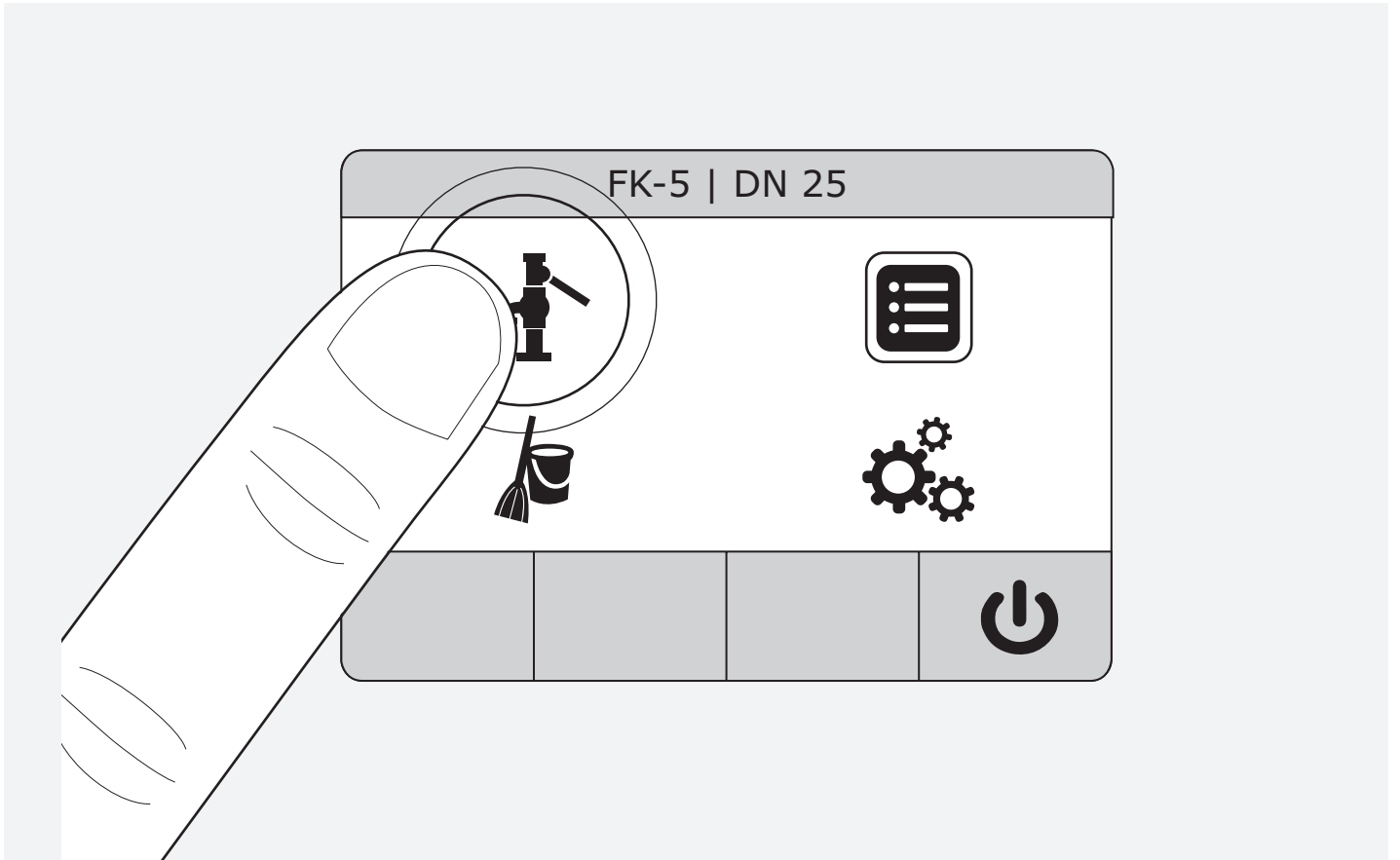


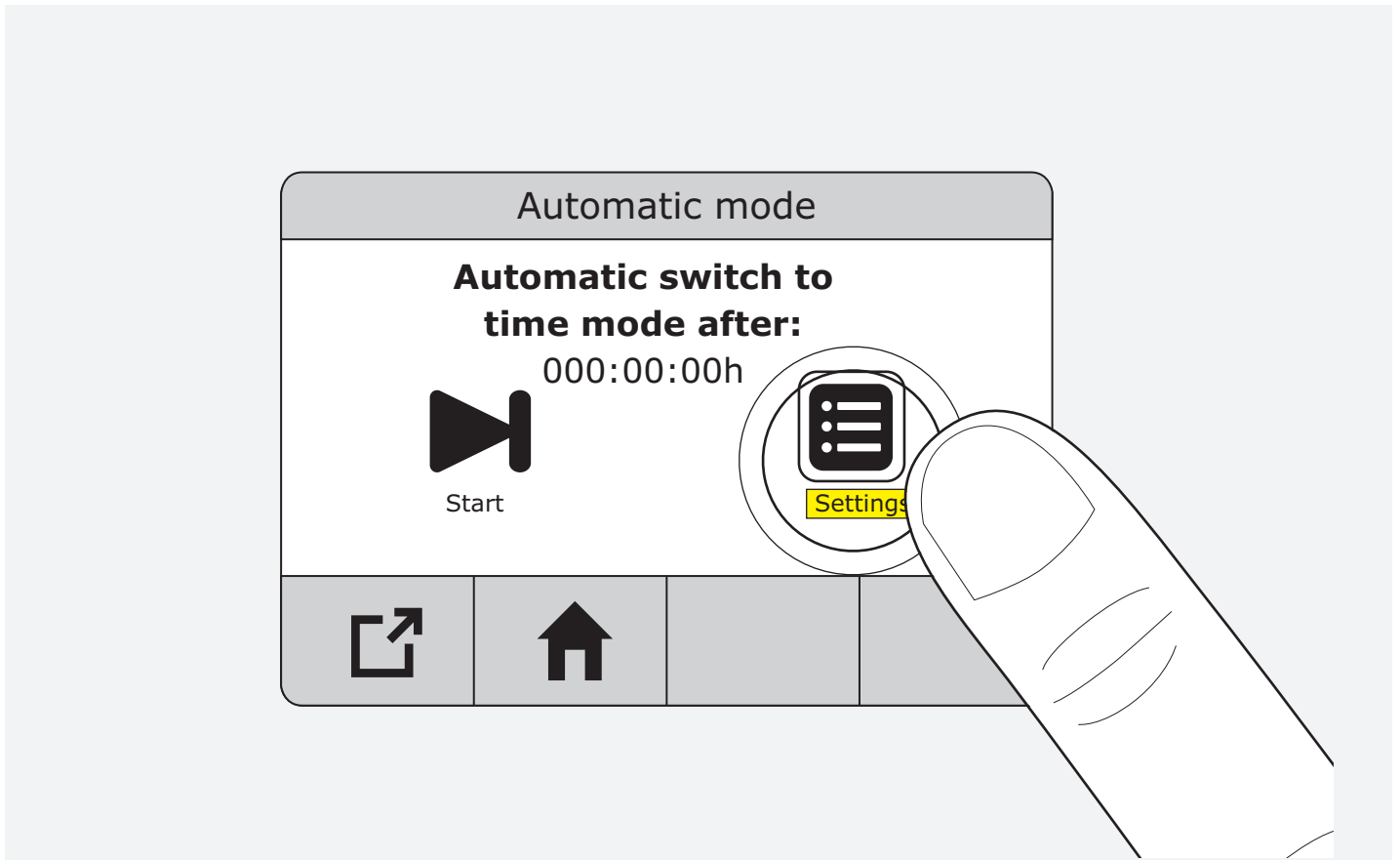
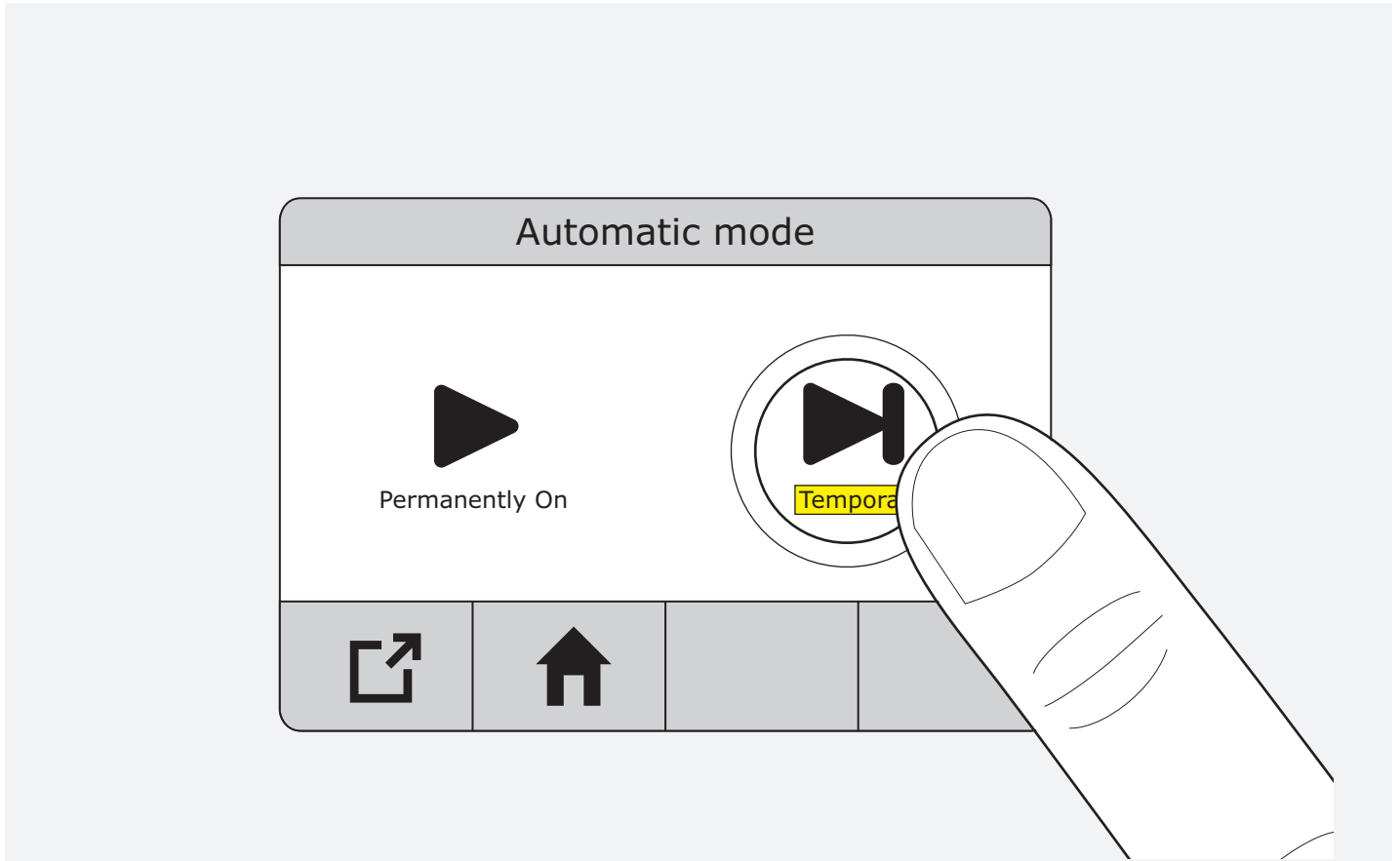


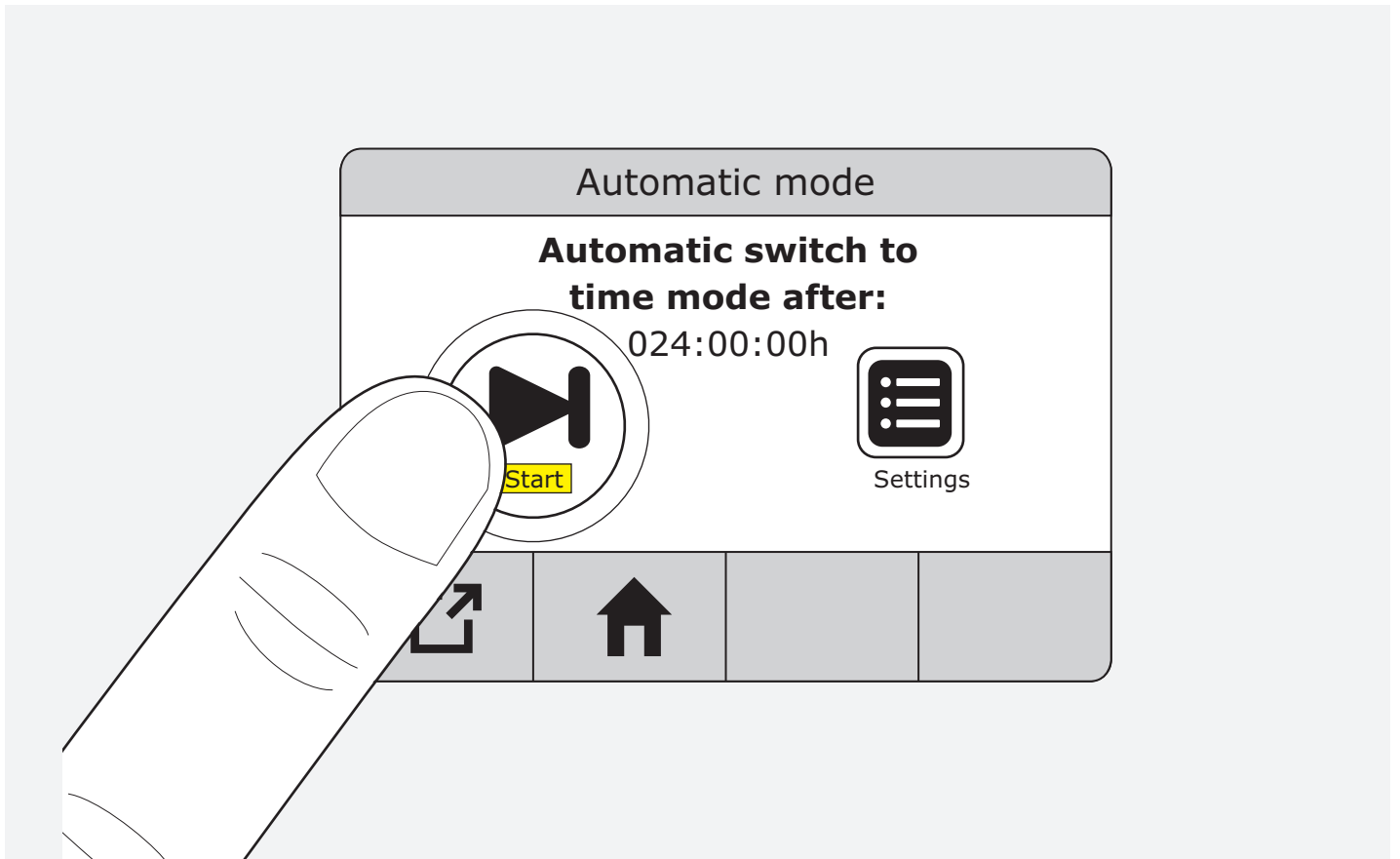
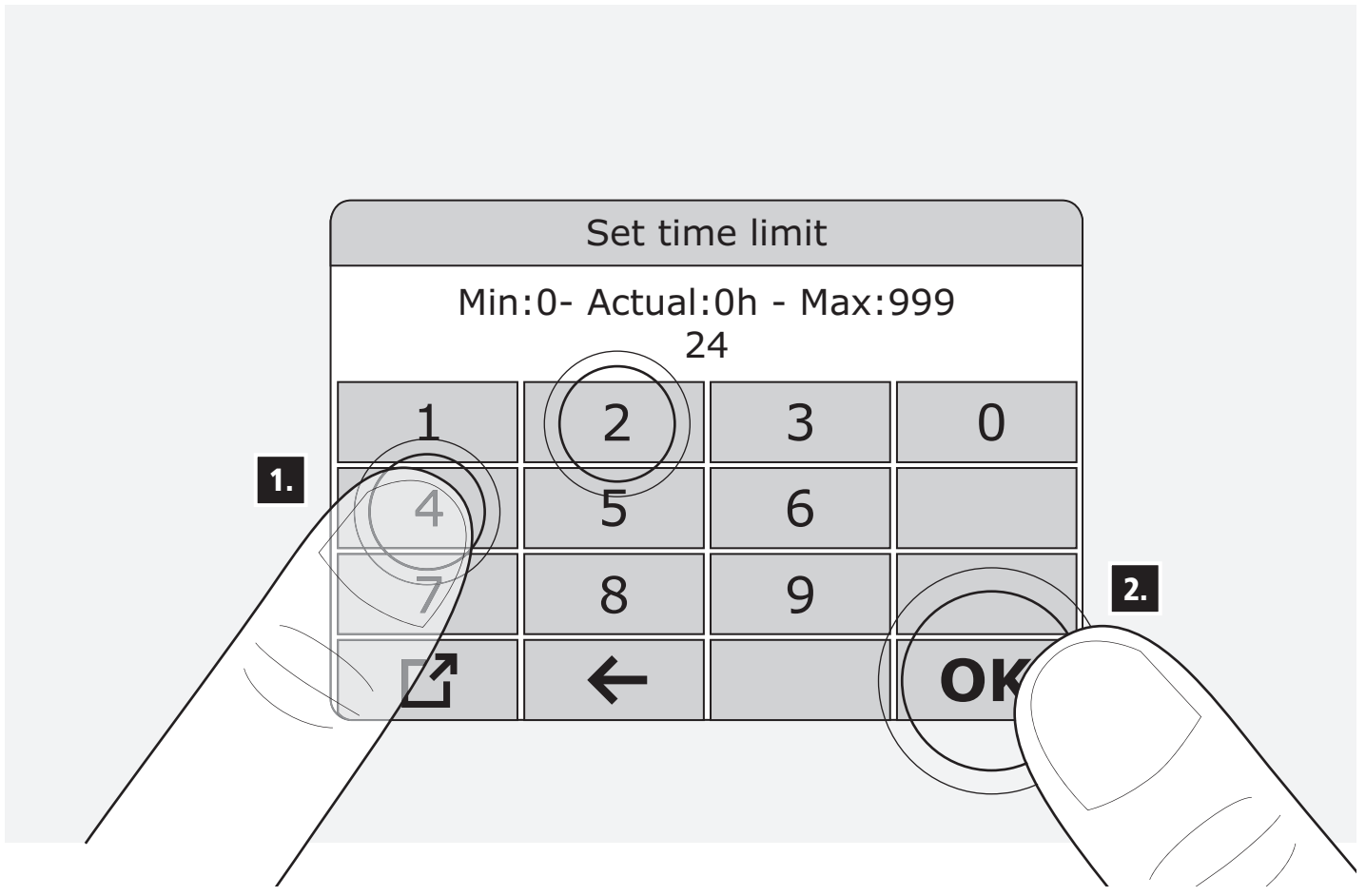


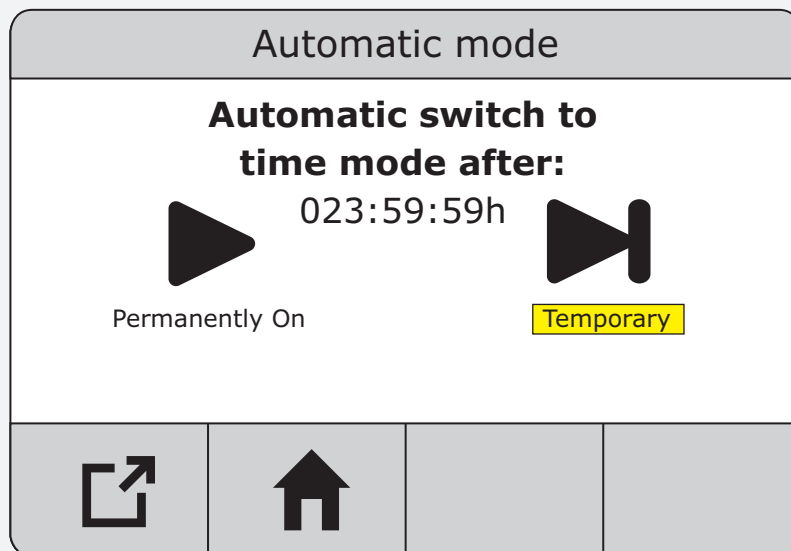


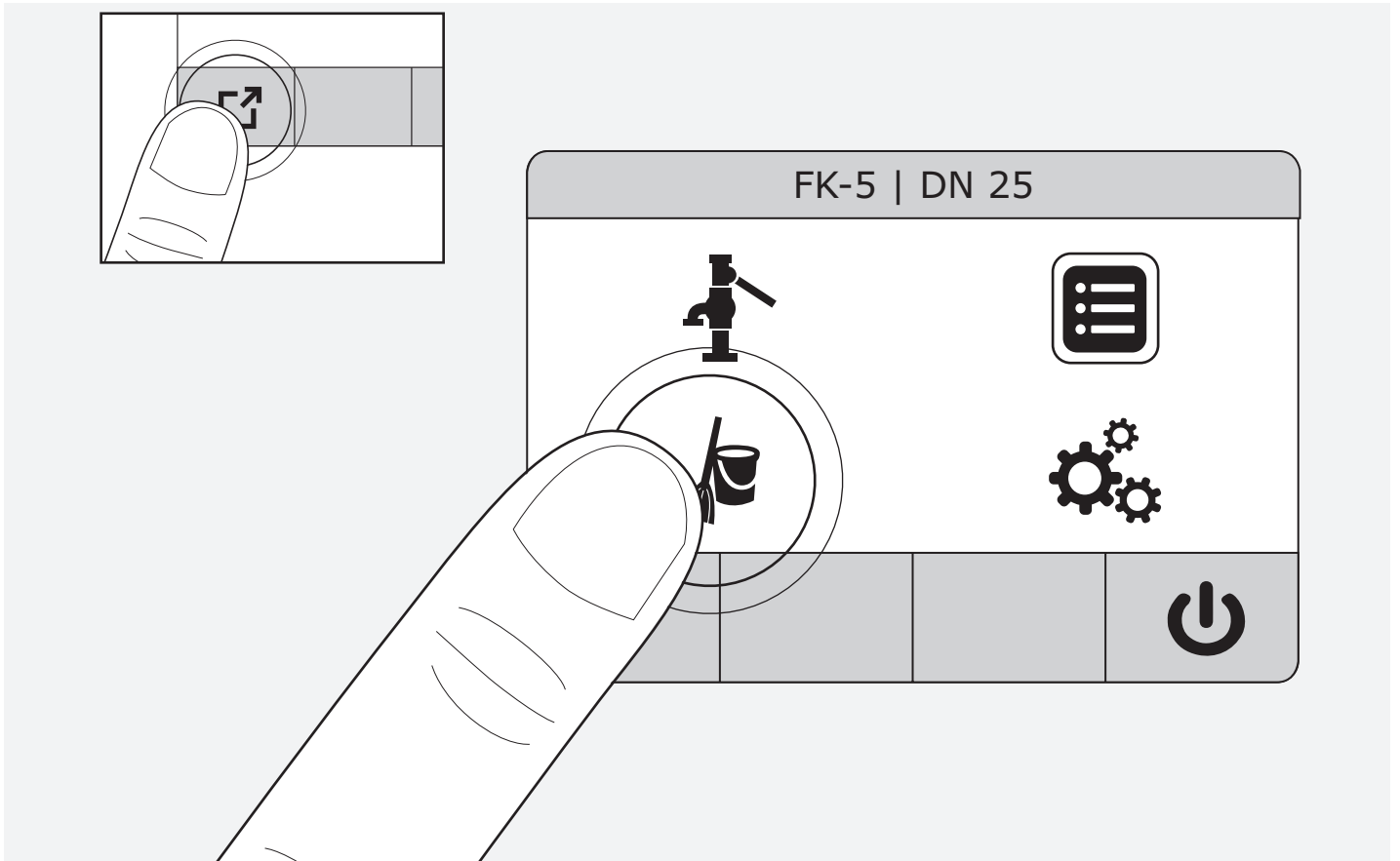




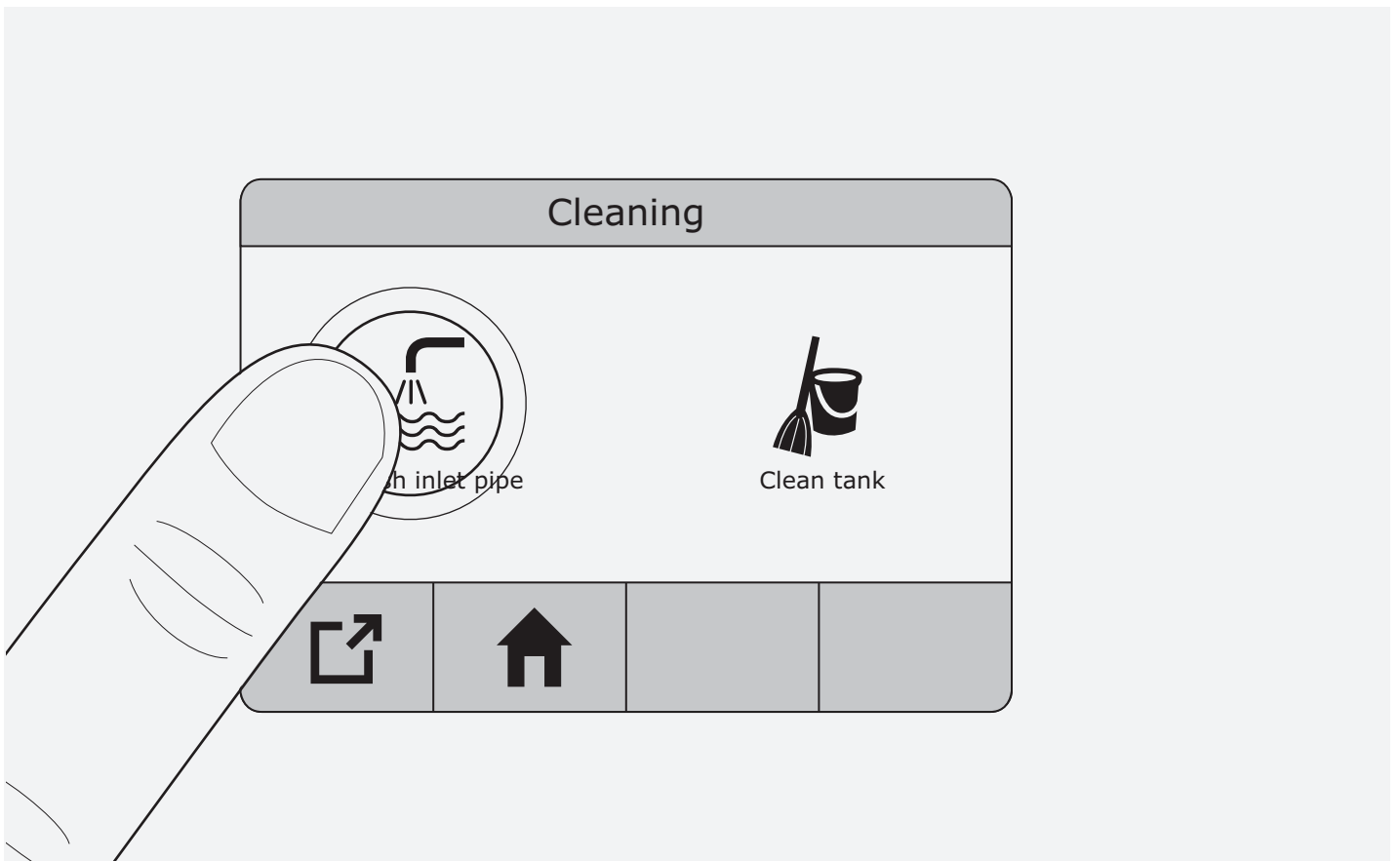


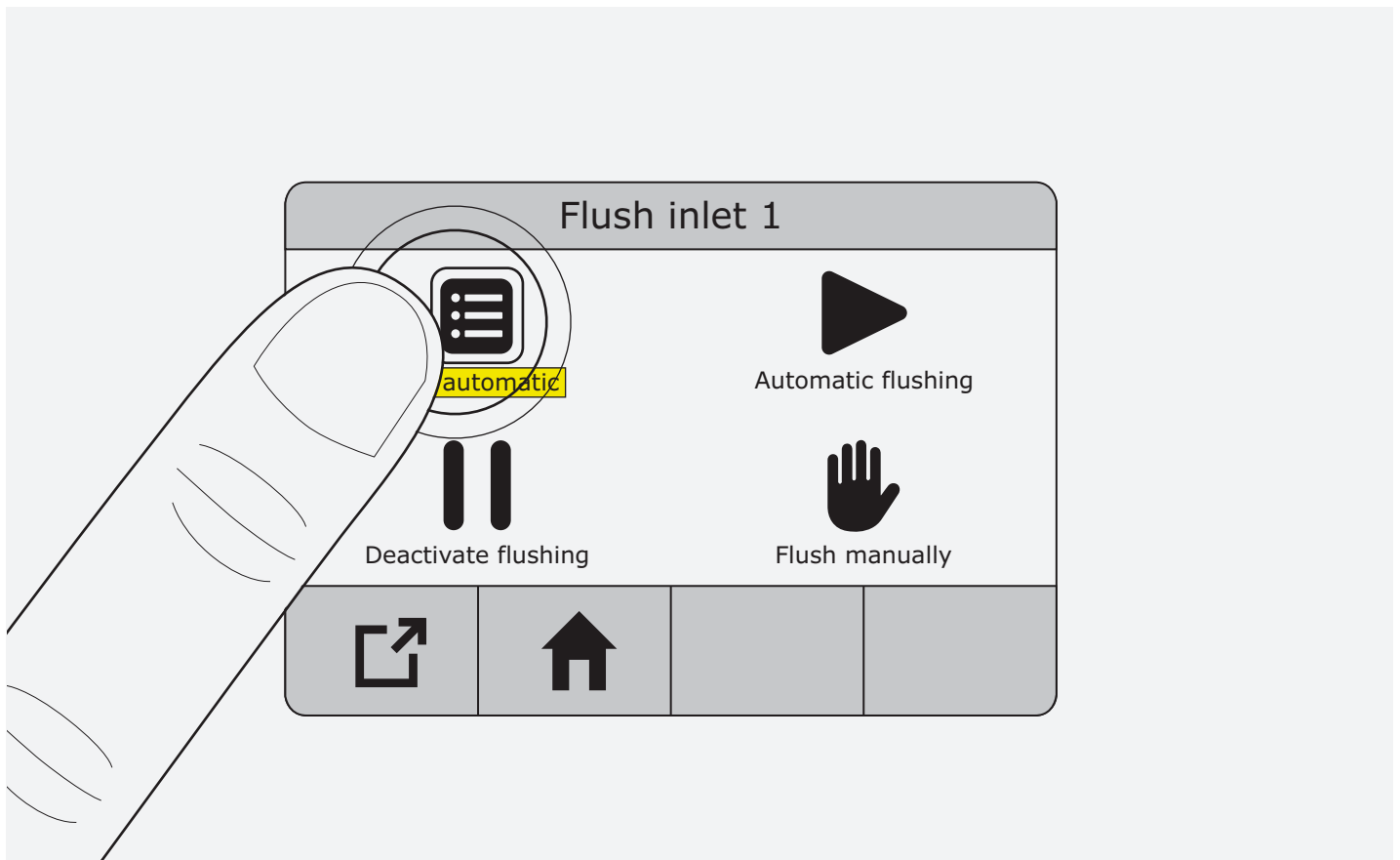
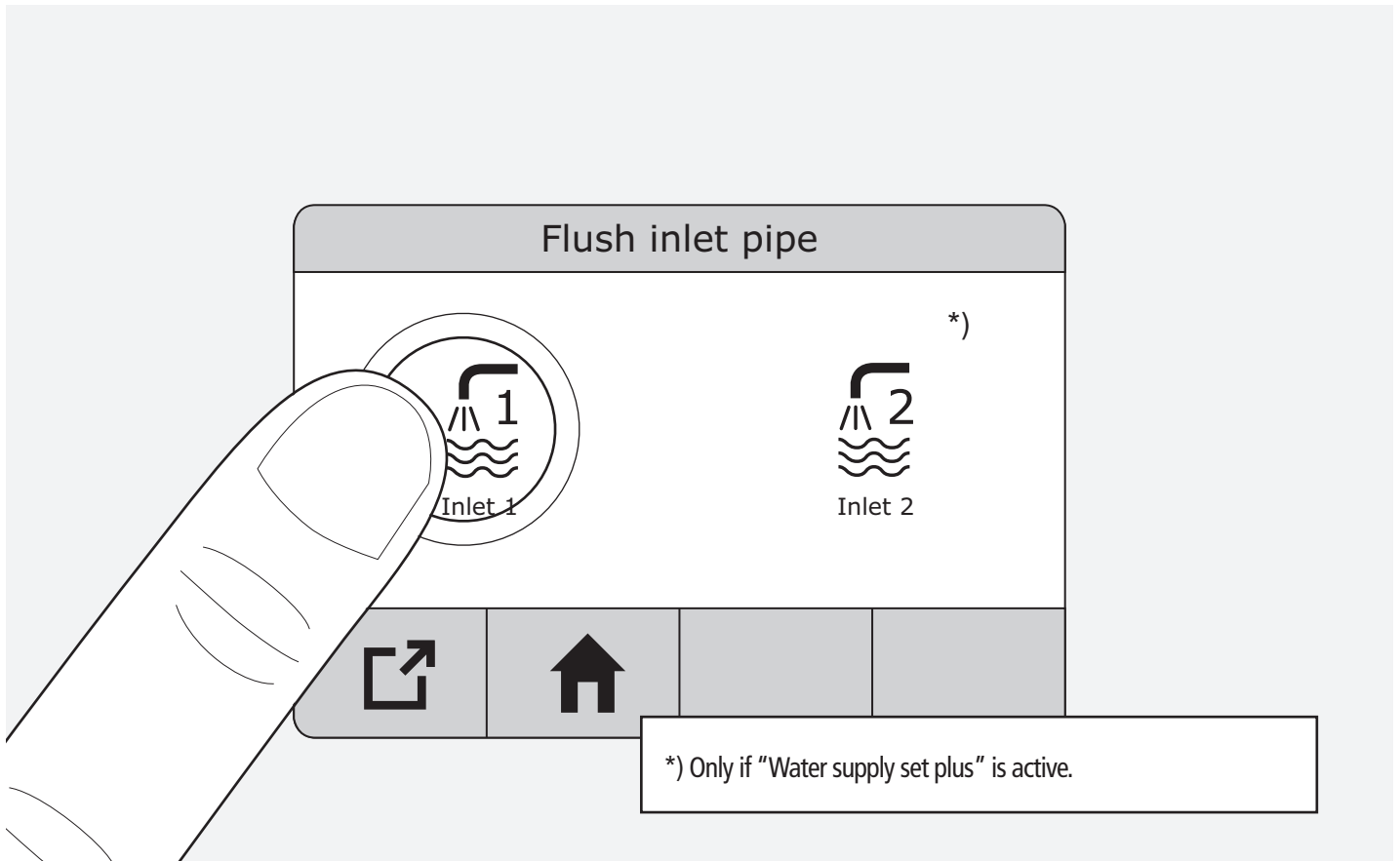


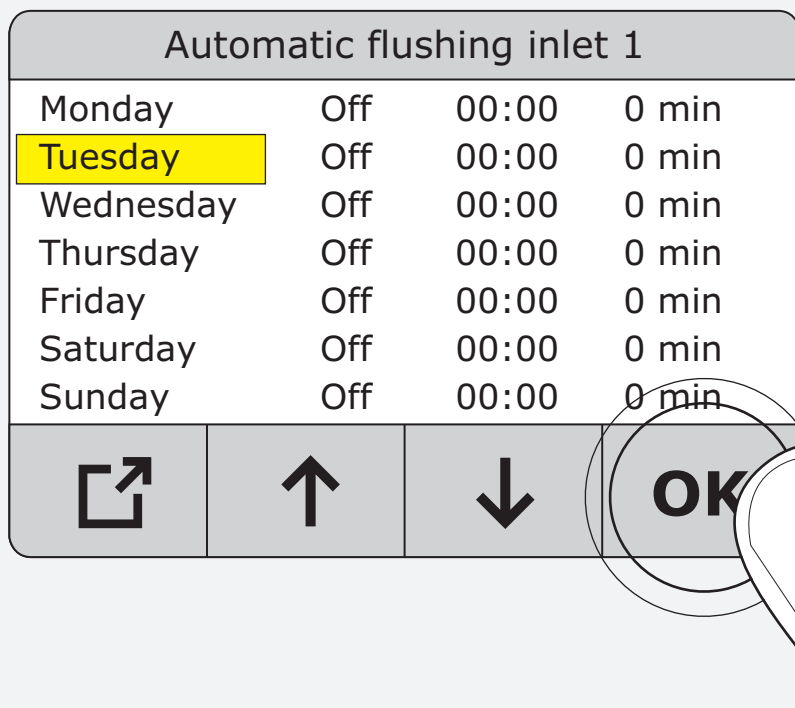
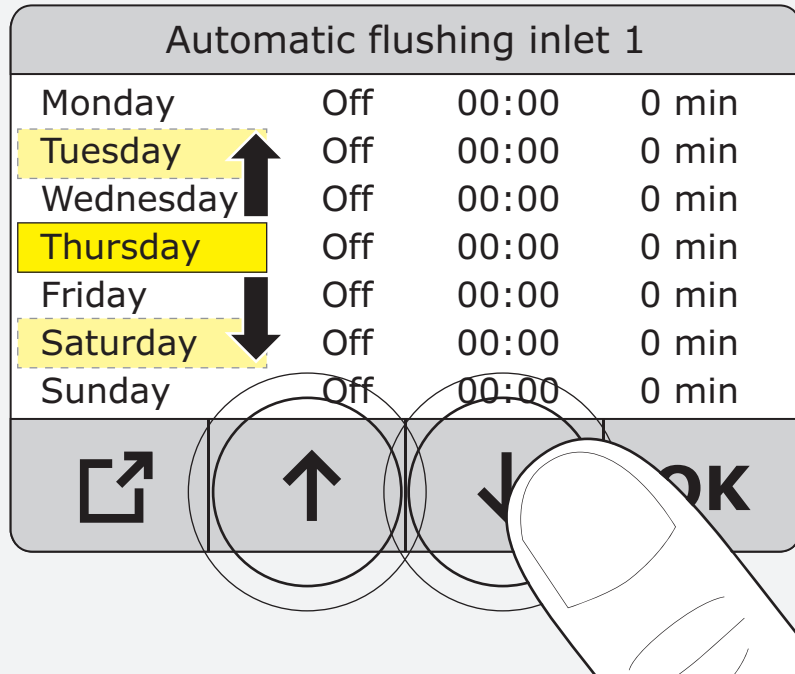


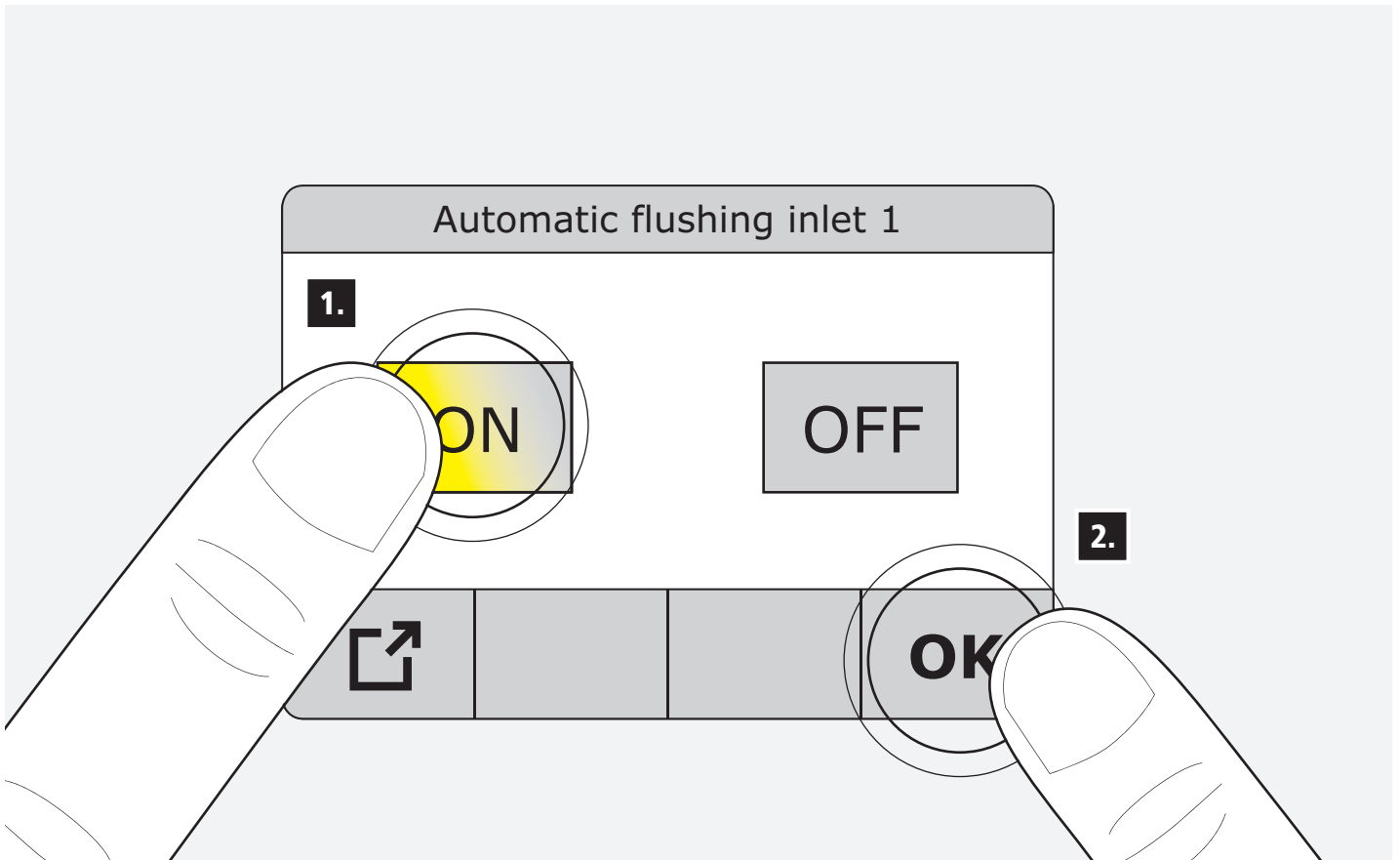
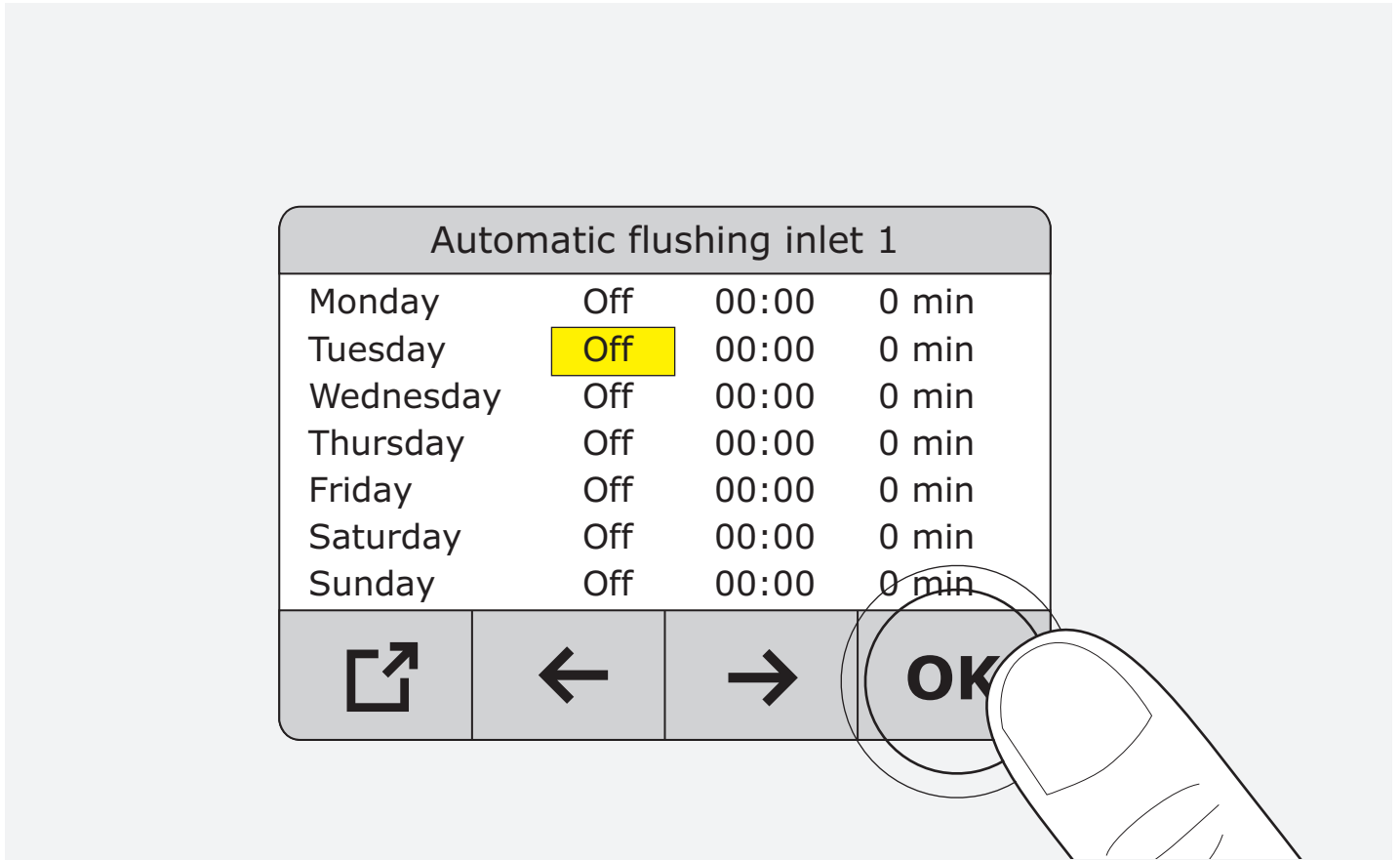


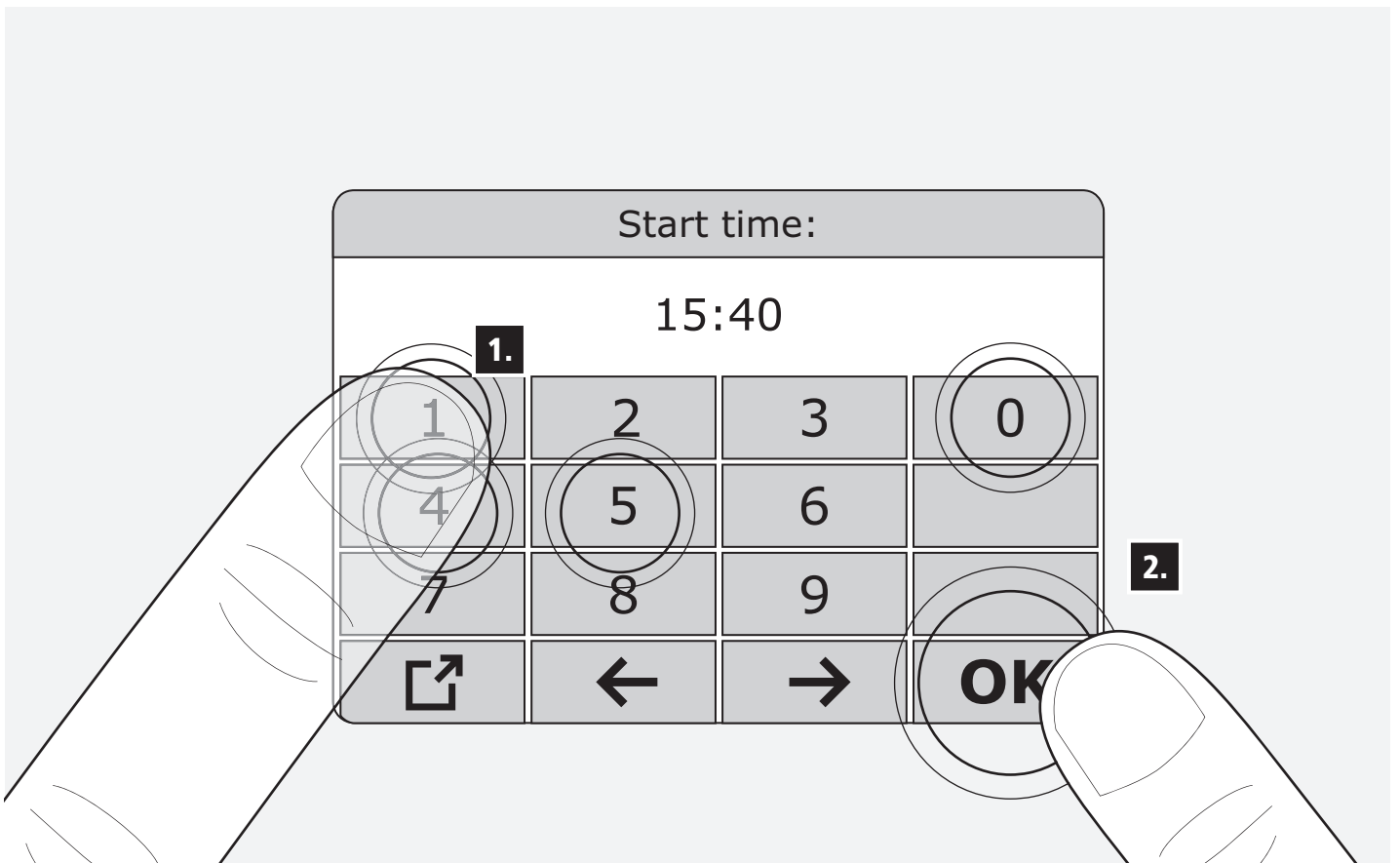
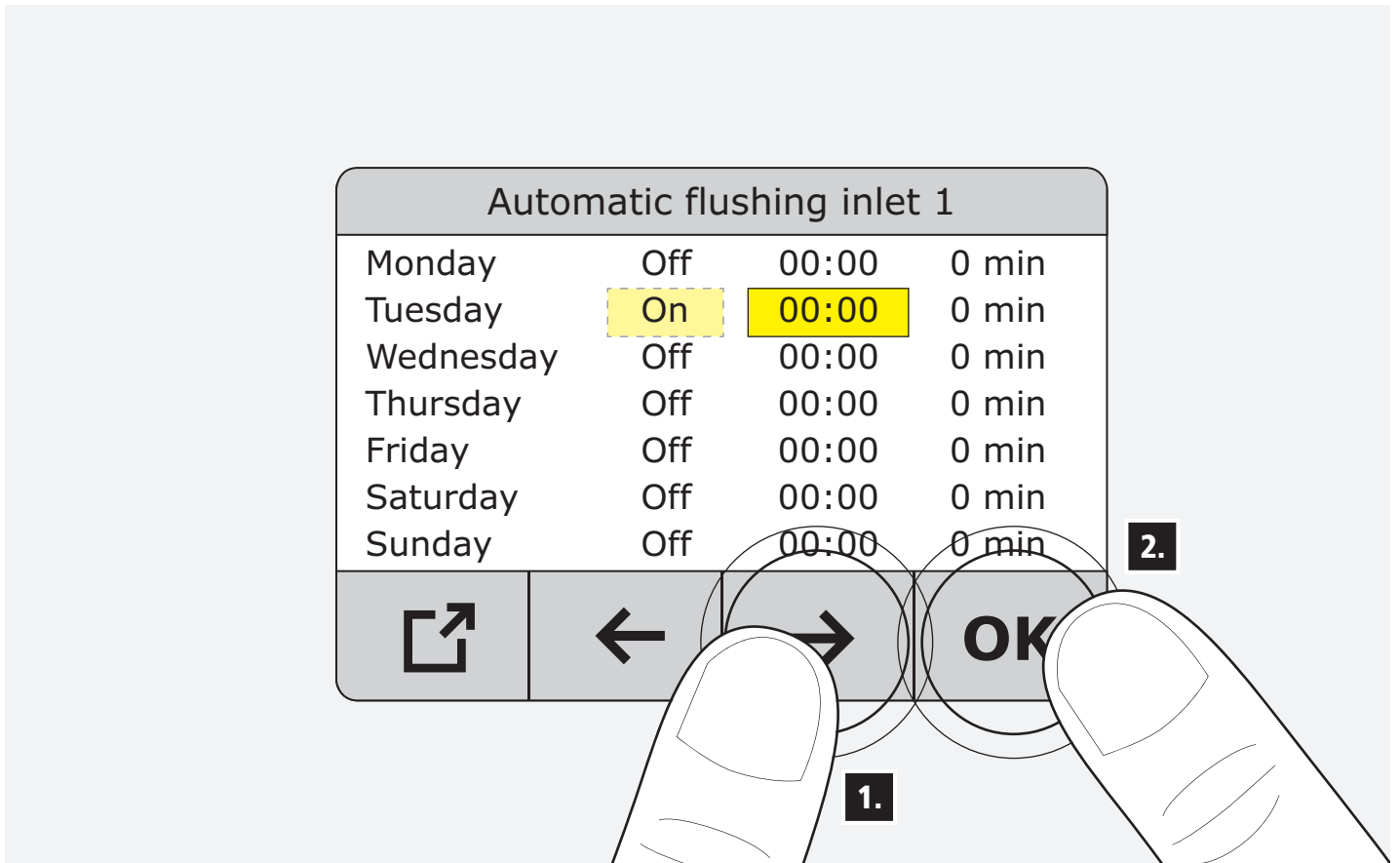
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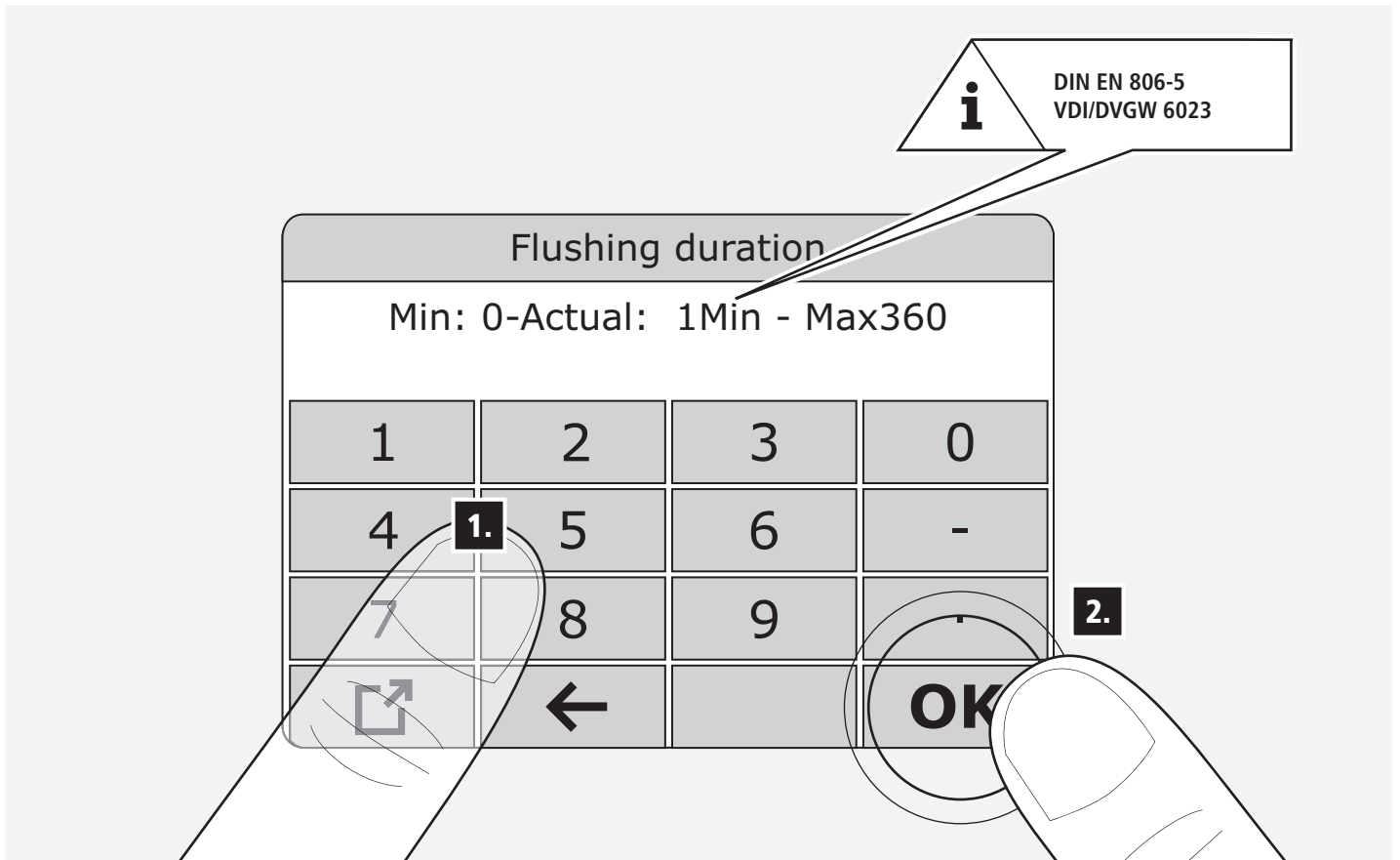
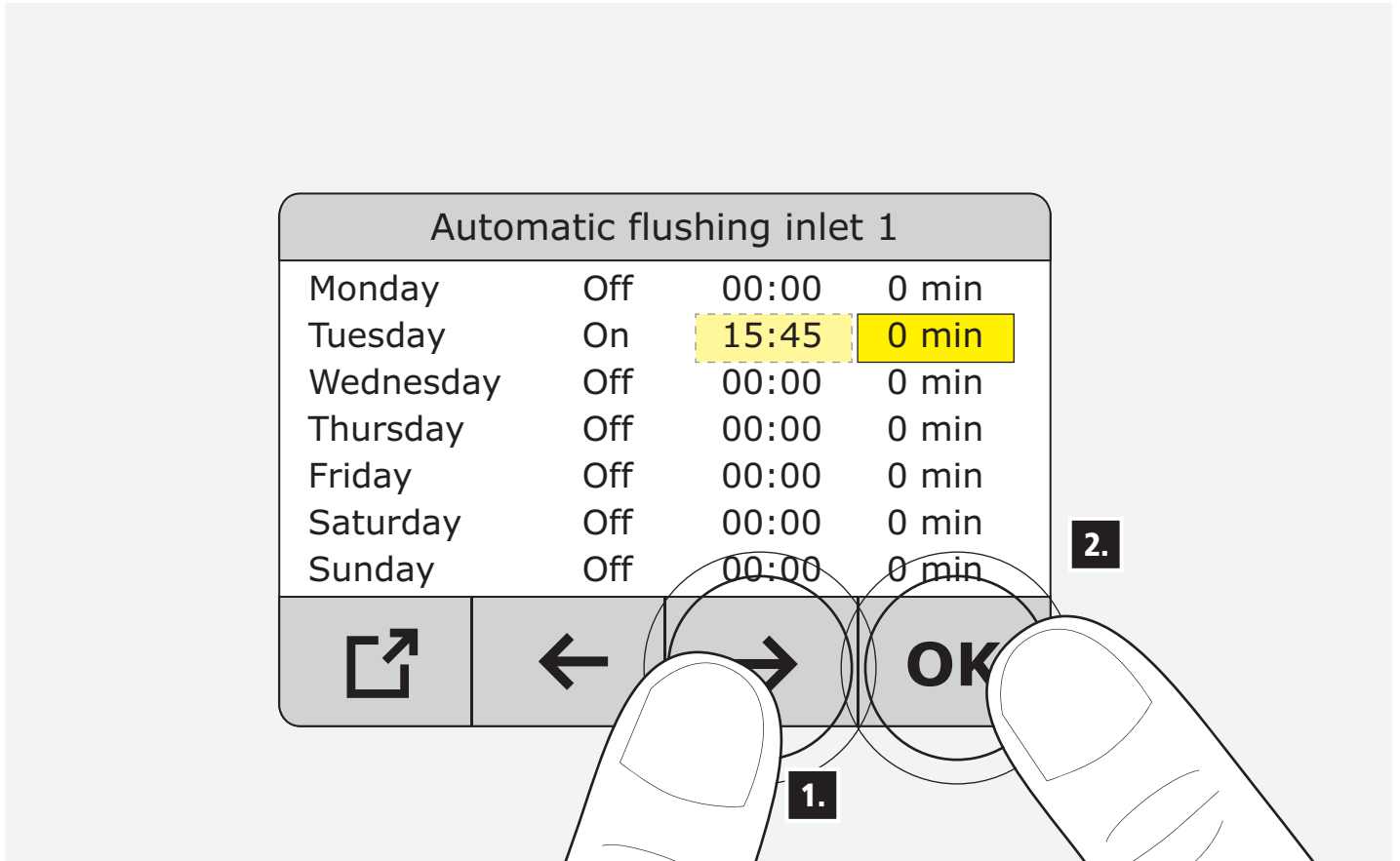


















Automatic flushing inlet 1


Monday	Off	00:00	0 min
Tuesday	On	15:45	5 min
Wednesday	Off	00:00	0 min
Thursday	Off	00:00	0 min
Friday	Off	00:00	0 min
Saturday	Off	00:00	0 min
Sunday	Off	00:00	0 min



1.    **OK**

2.   3.1.3 – 3.1.11

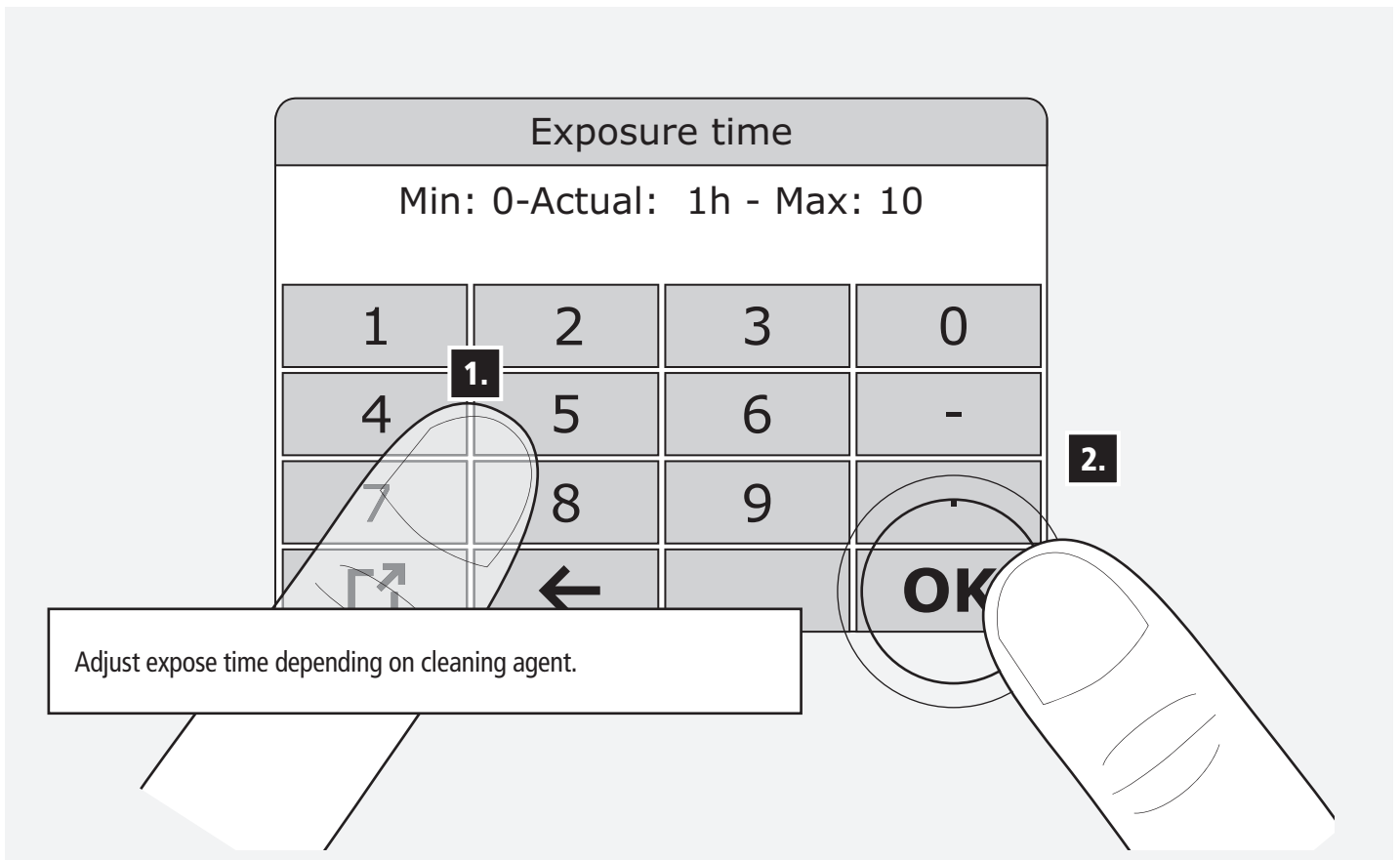
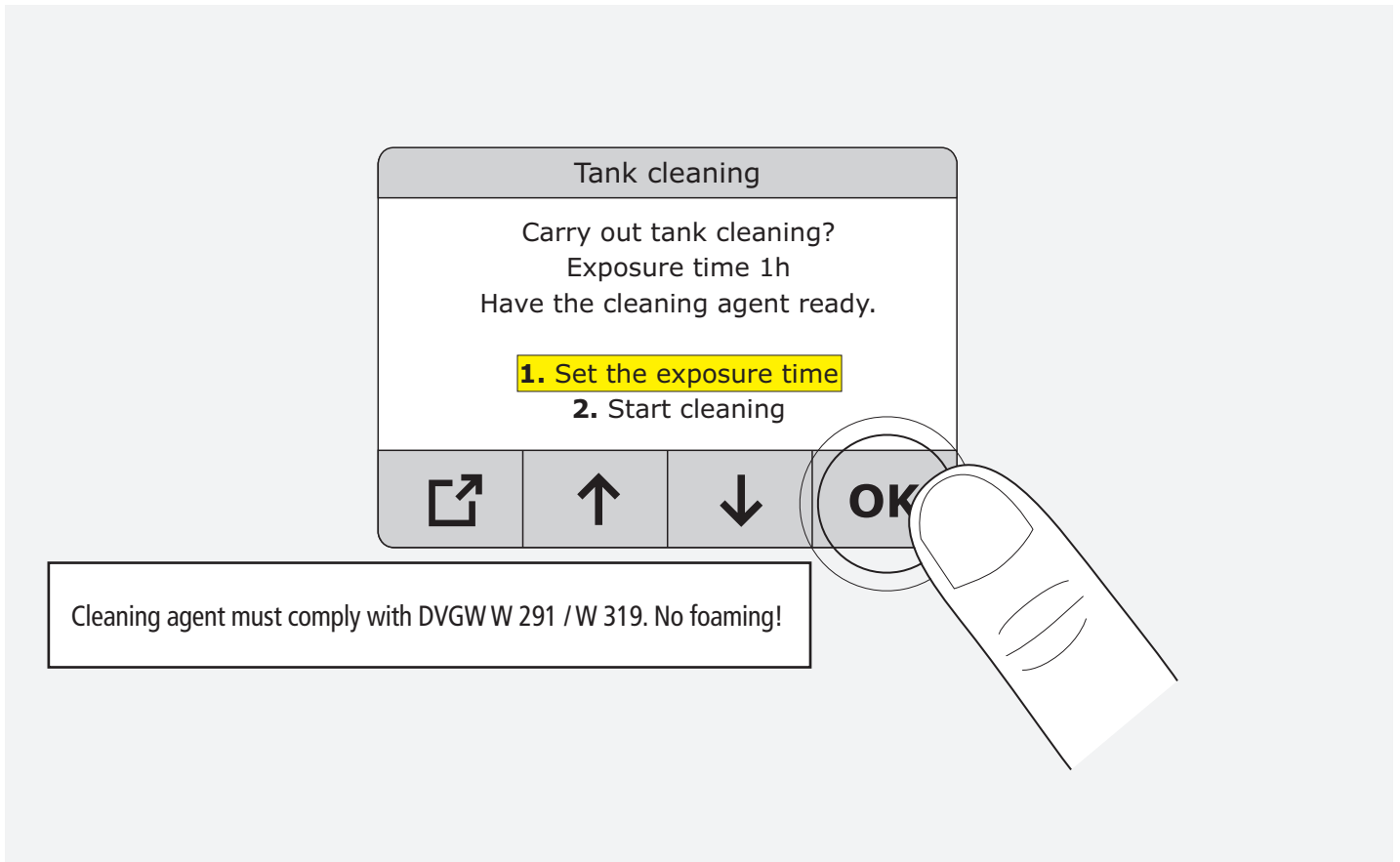
Cleaning

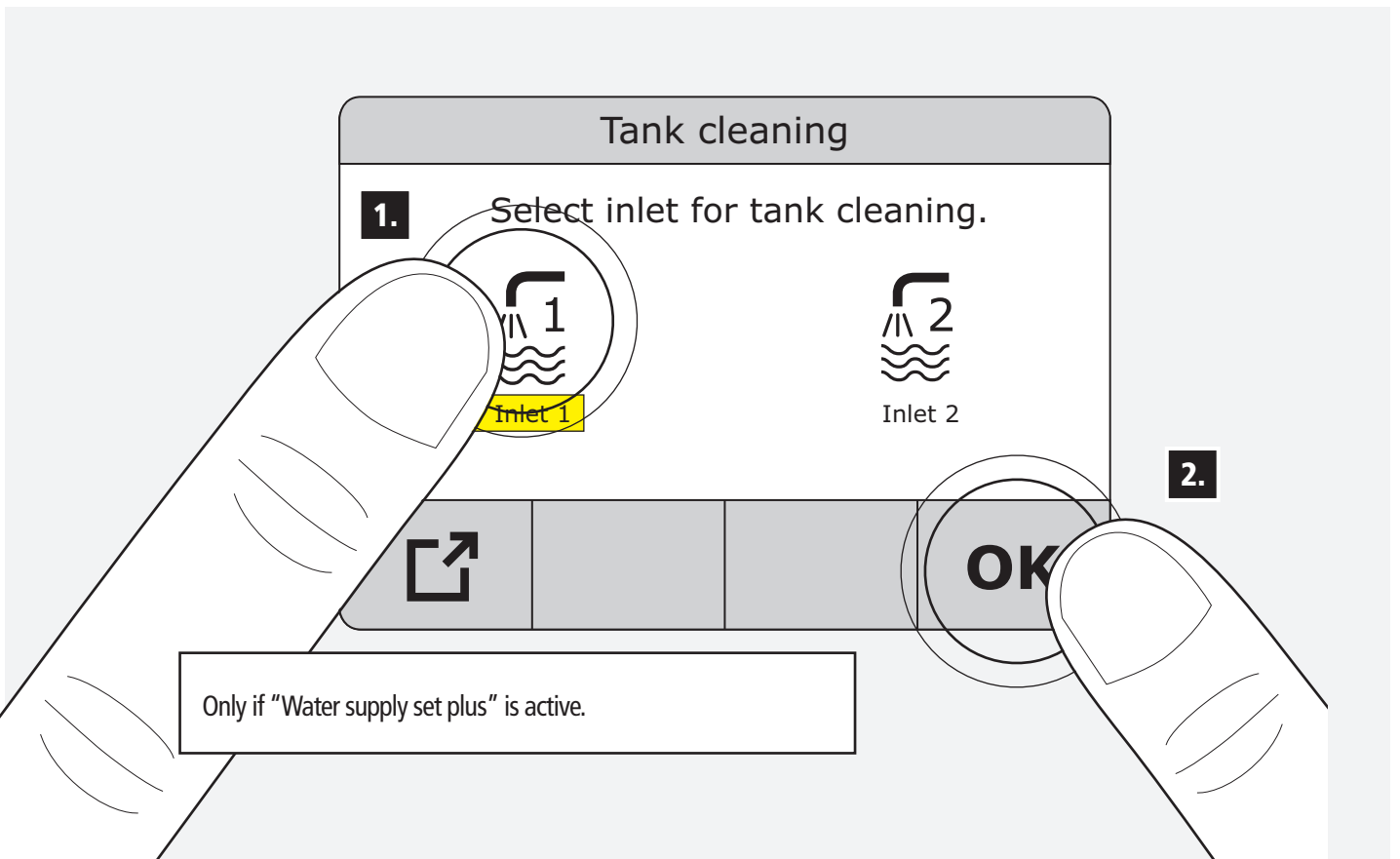
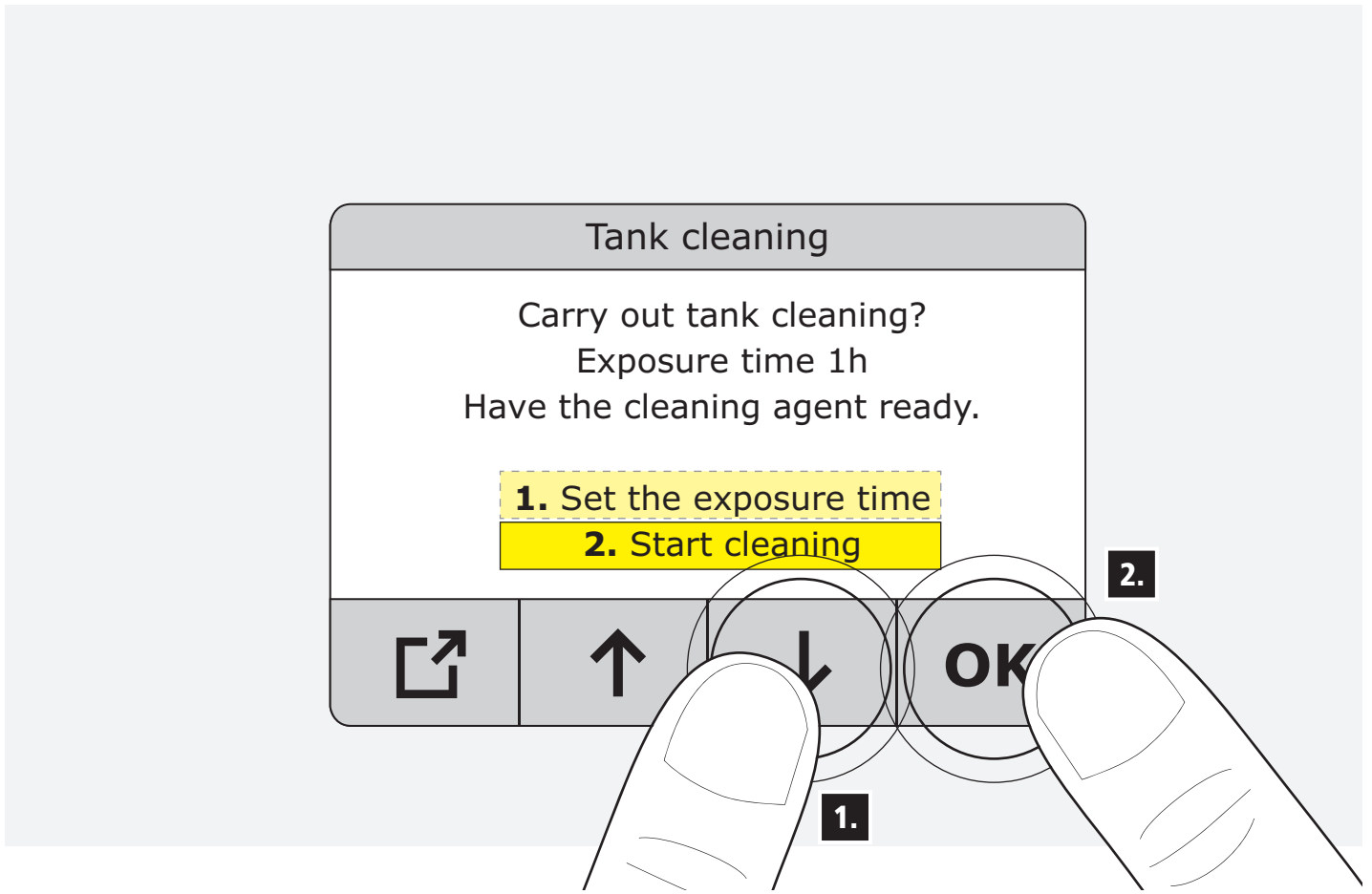
 Flush inlet pipe

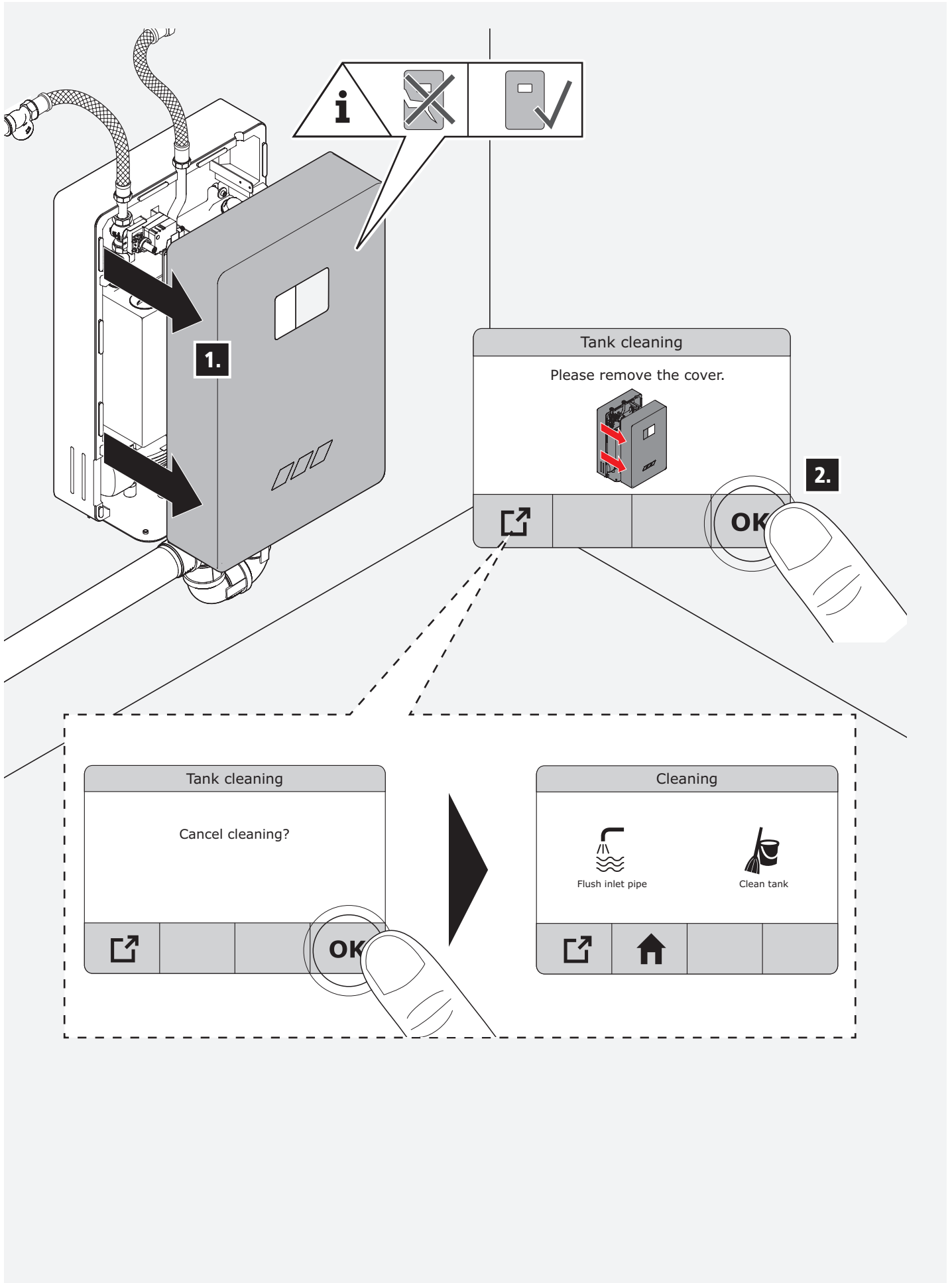
 Clean tank

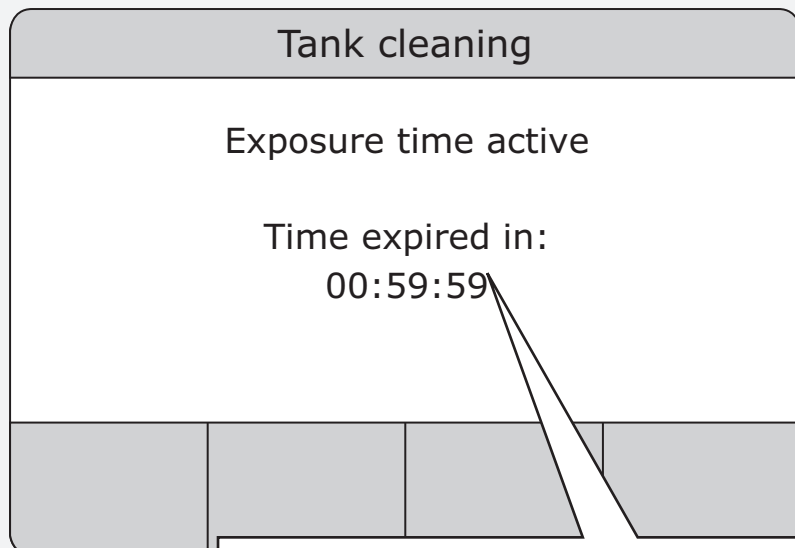
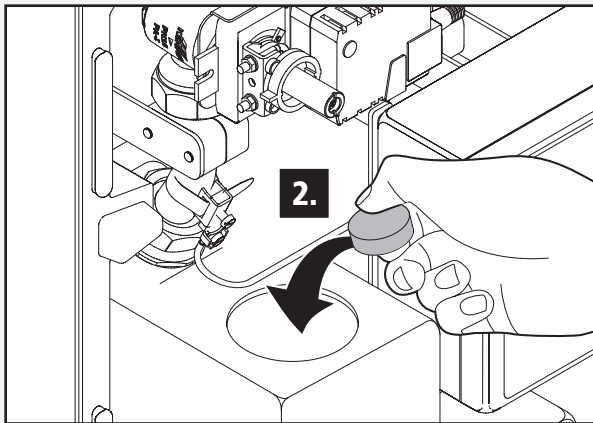
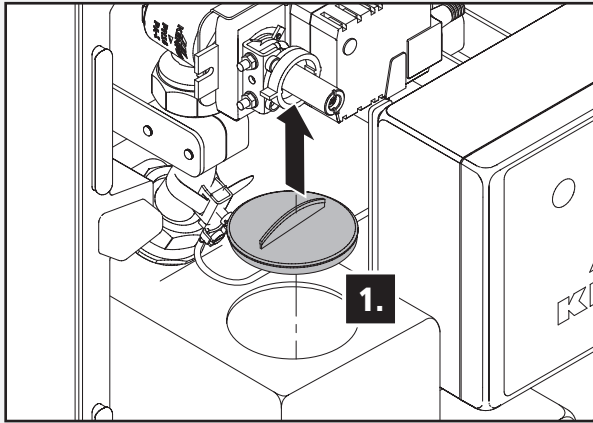
 

Only if "Tank Cleaning Unit" is active.

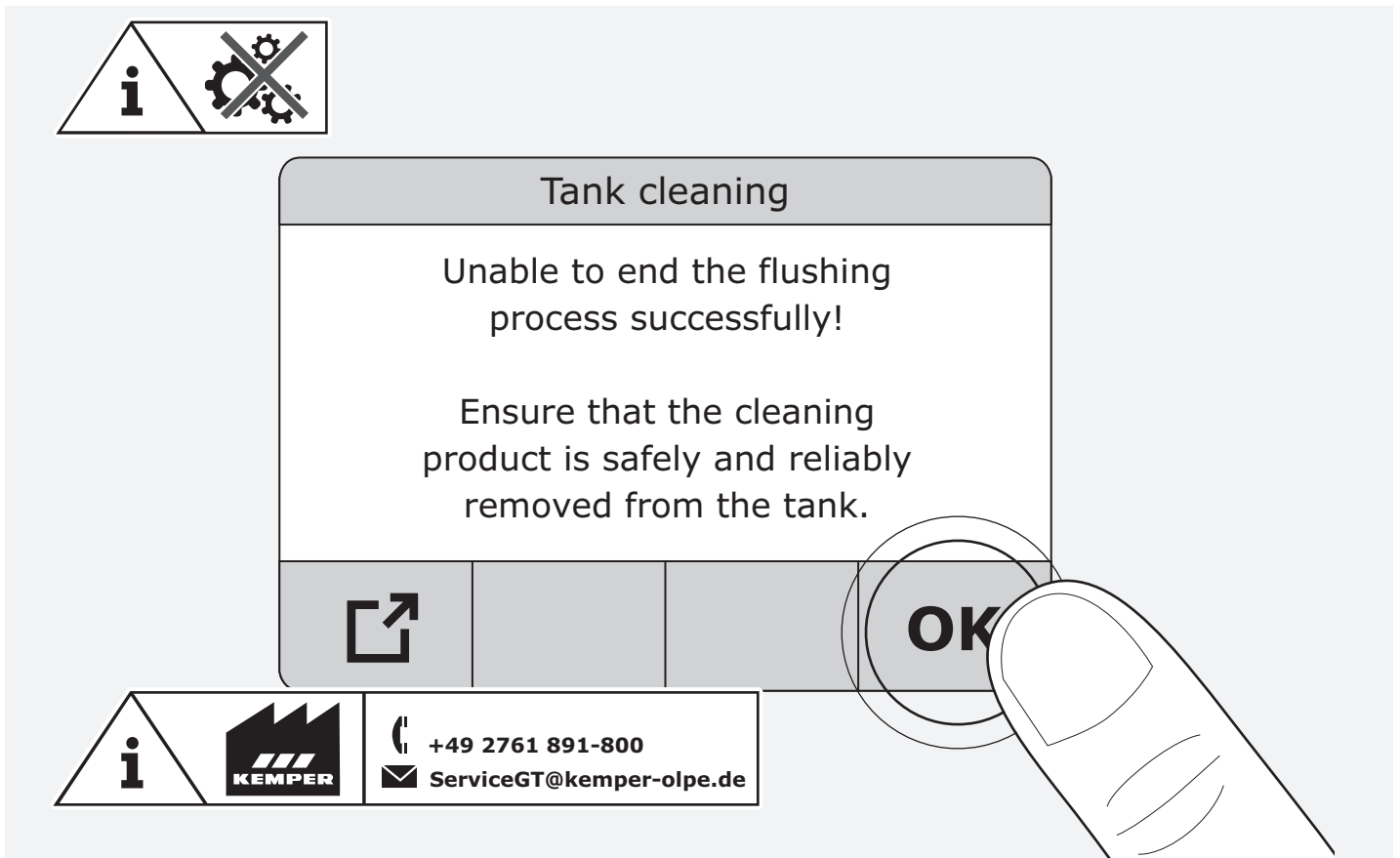
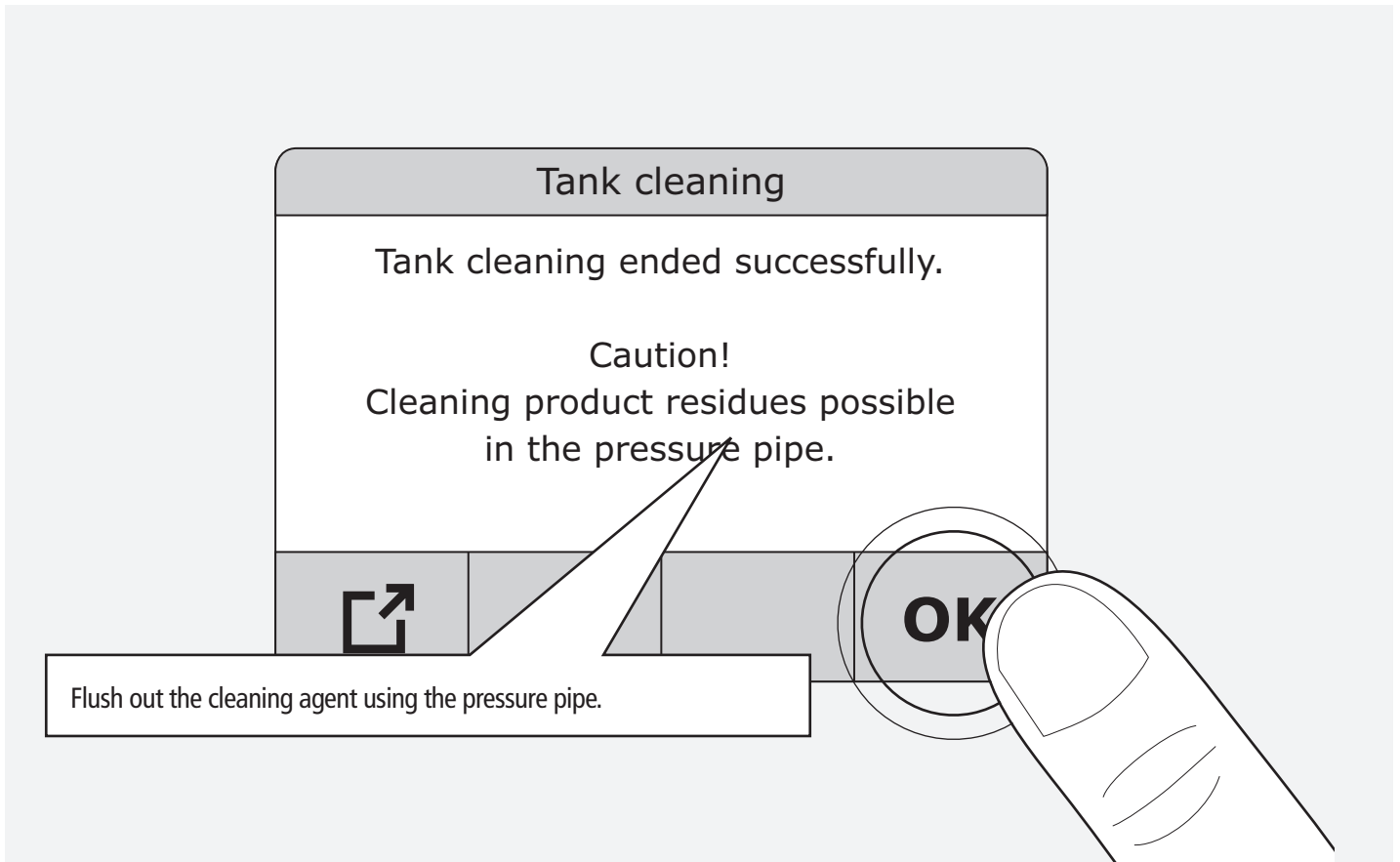


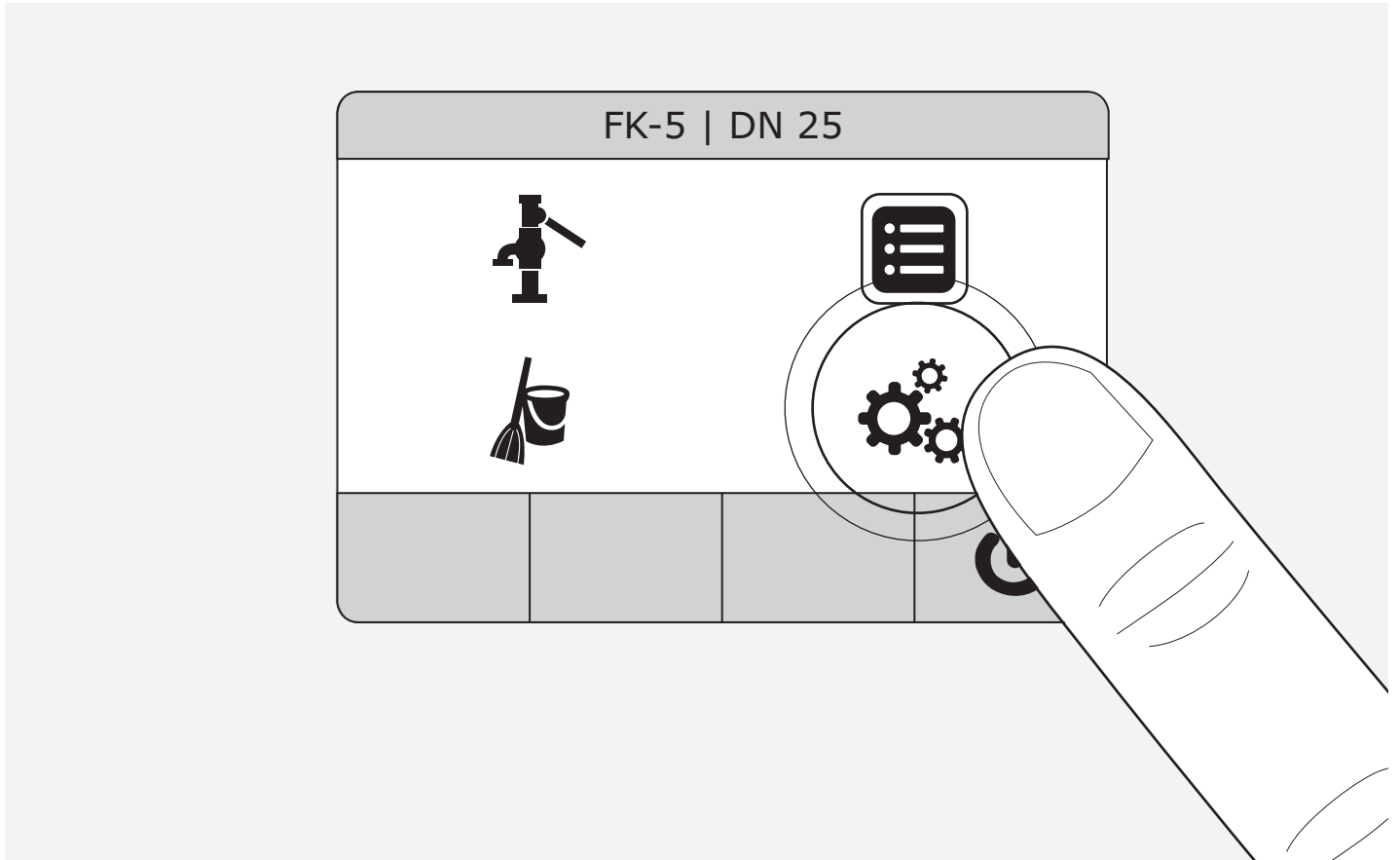




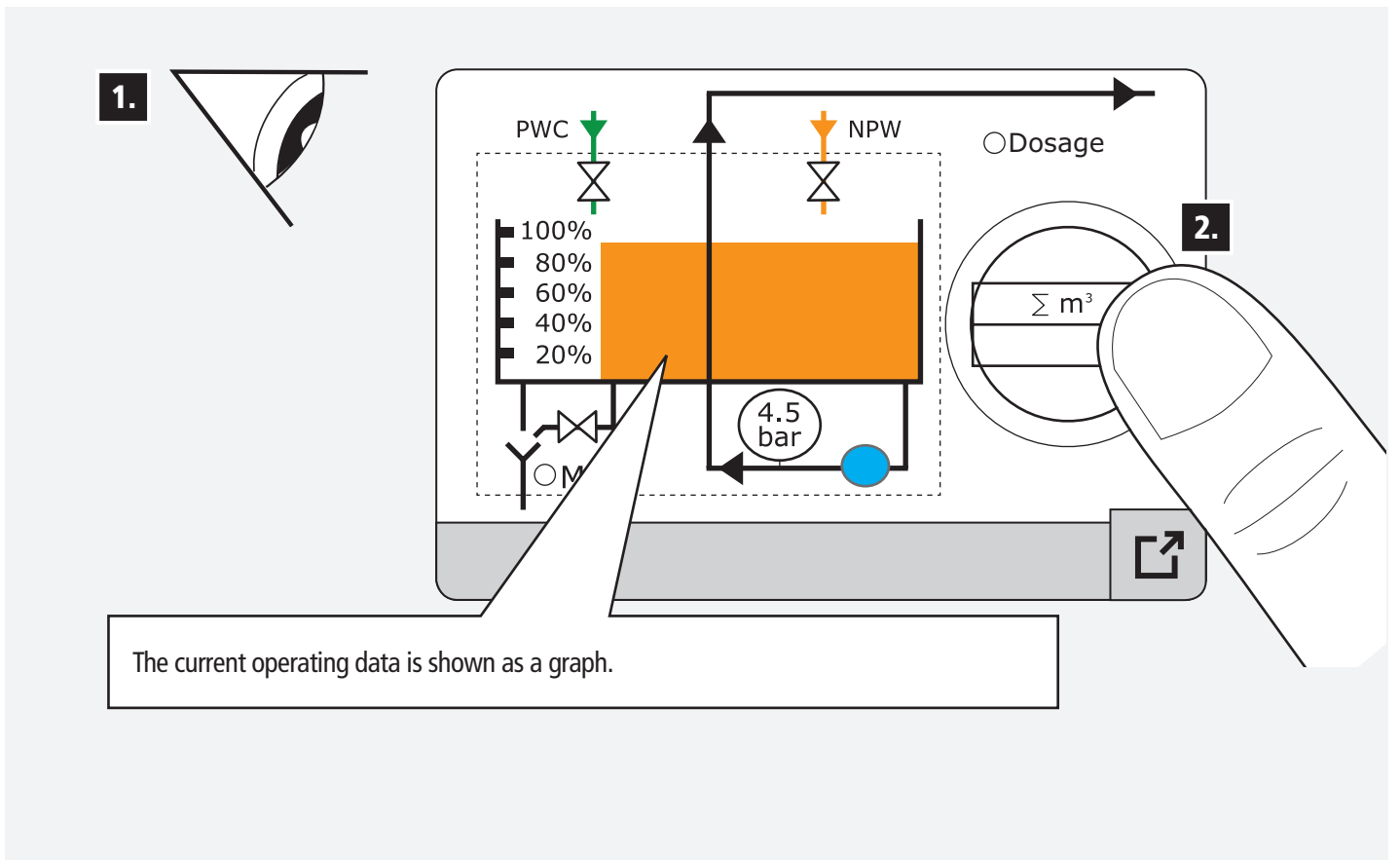


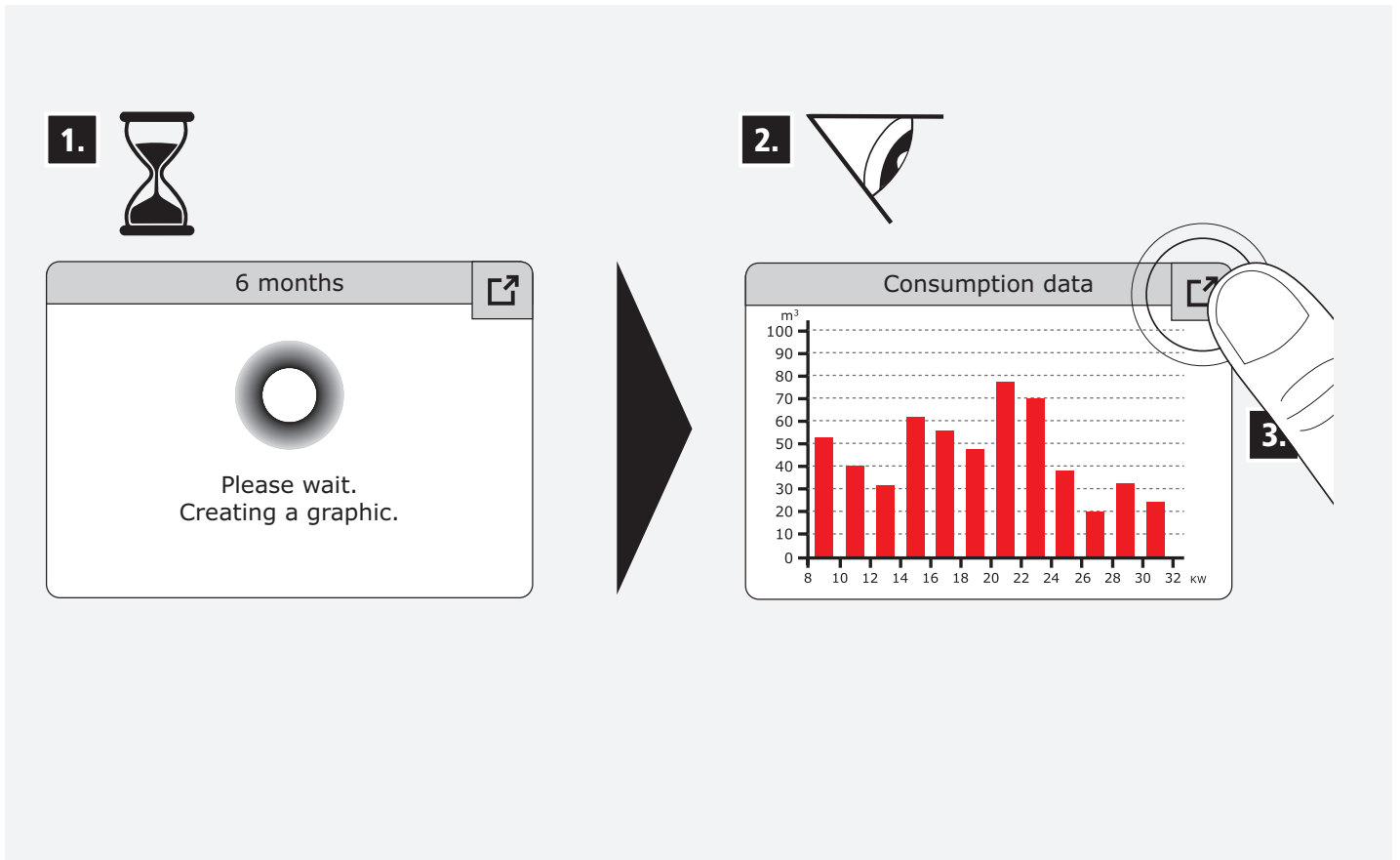
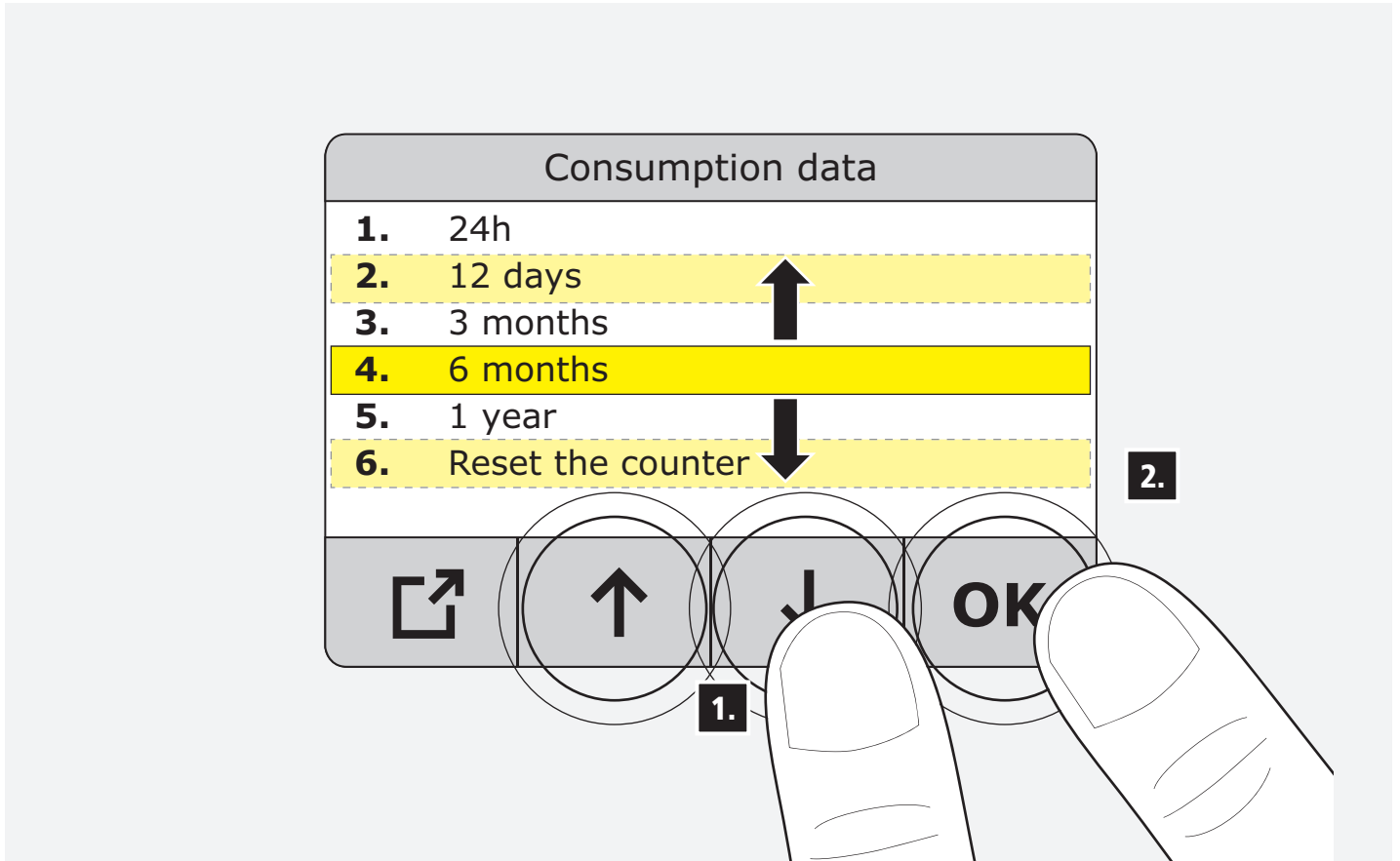
The device is blocked for the duration of the application time.

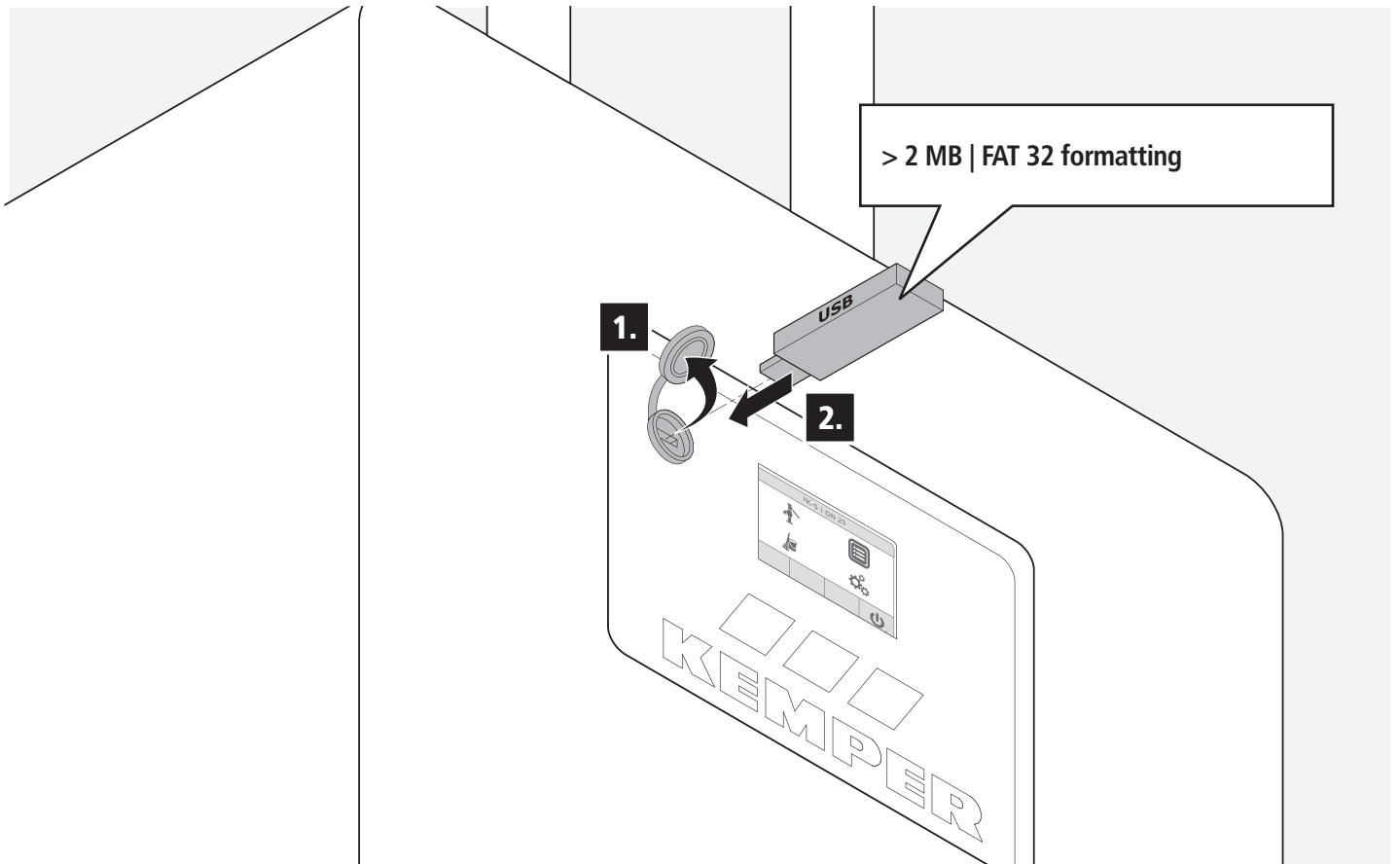




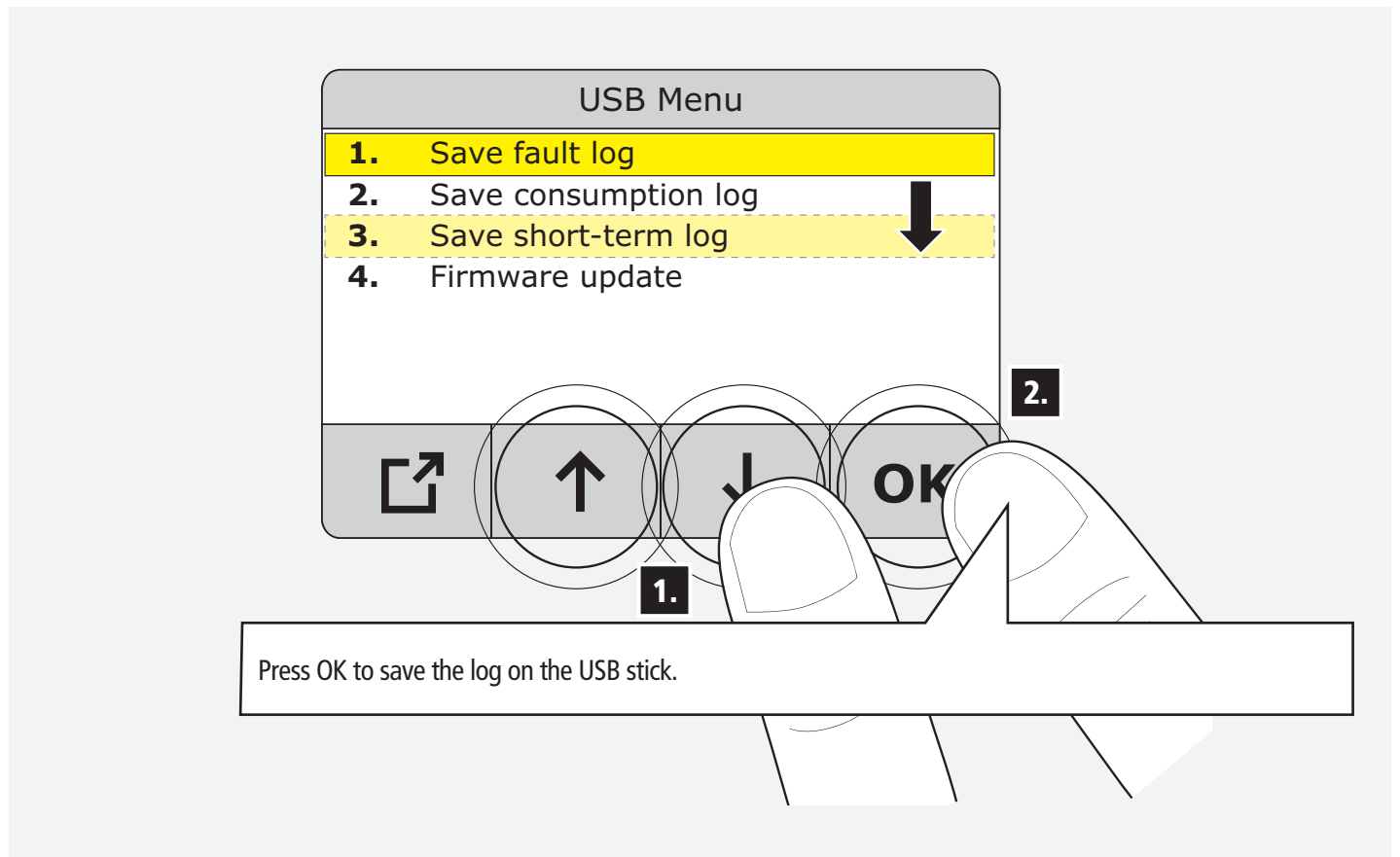
4.1

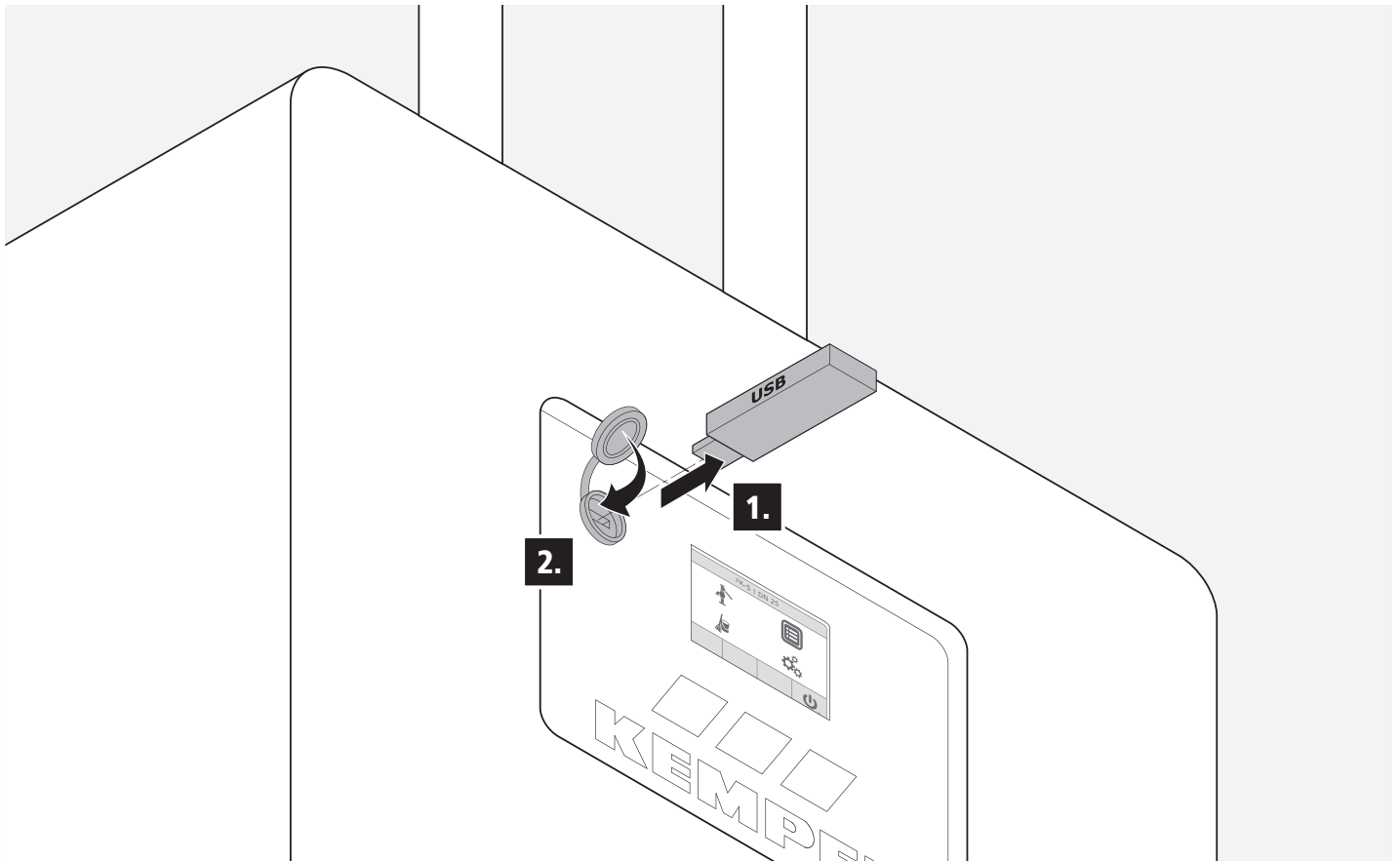
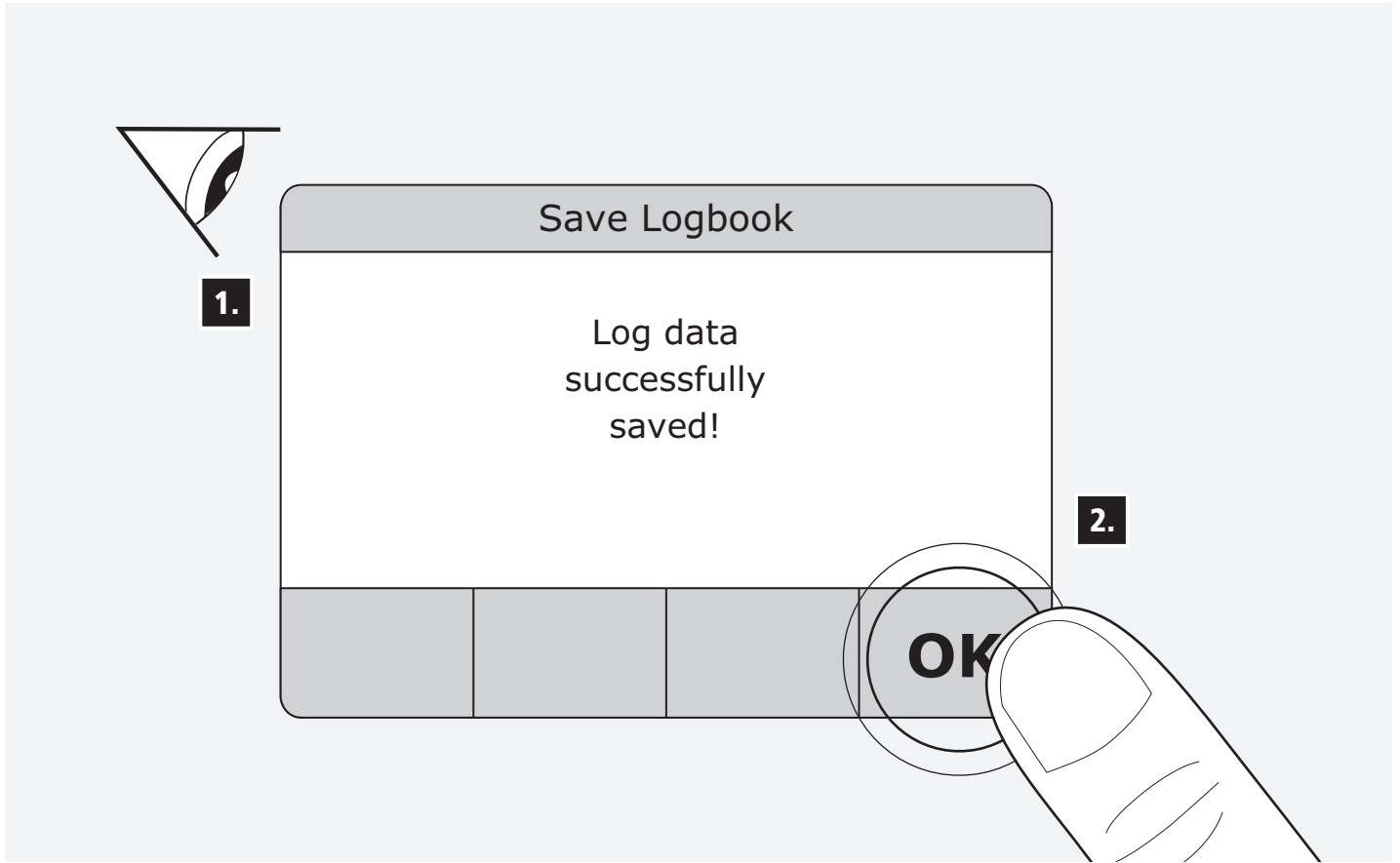


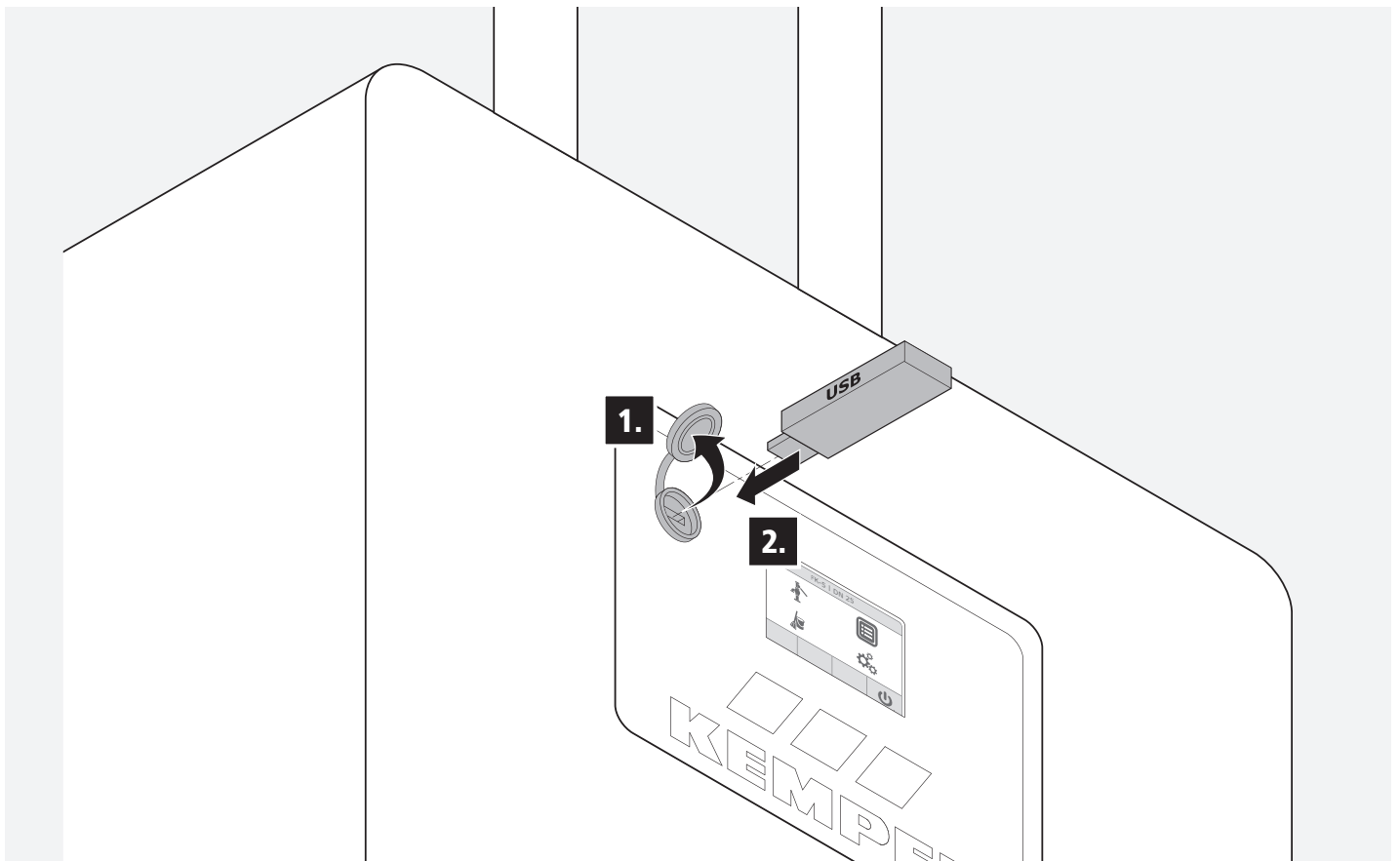
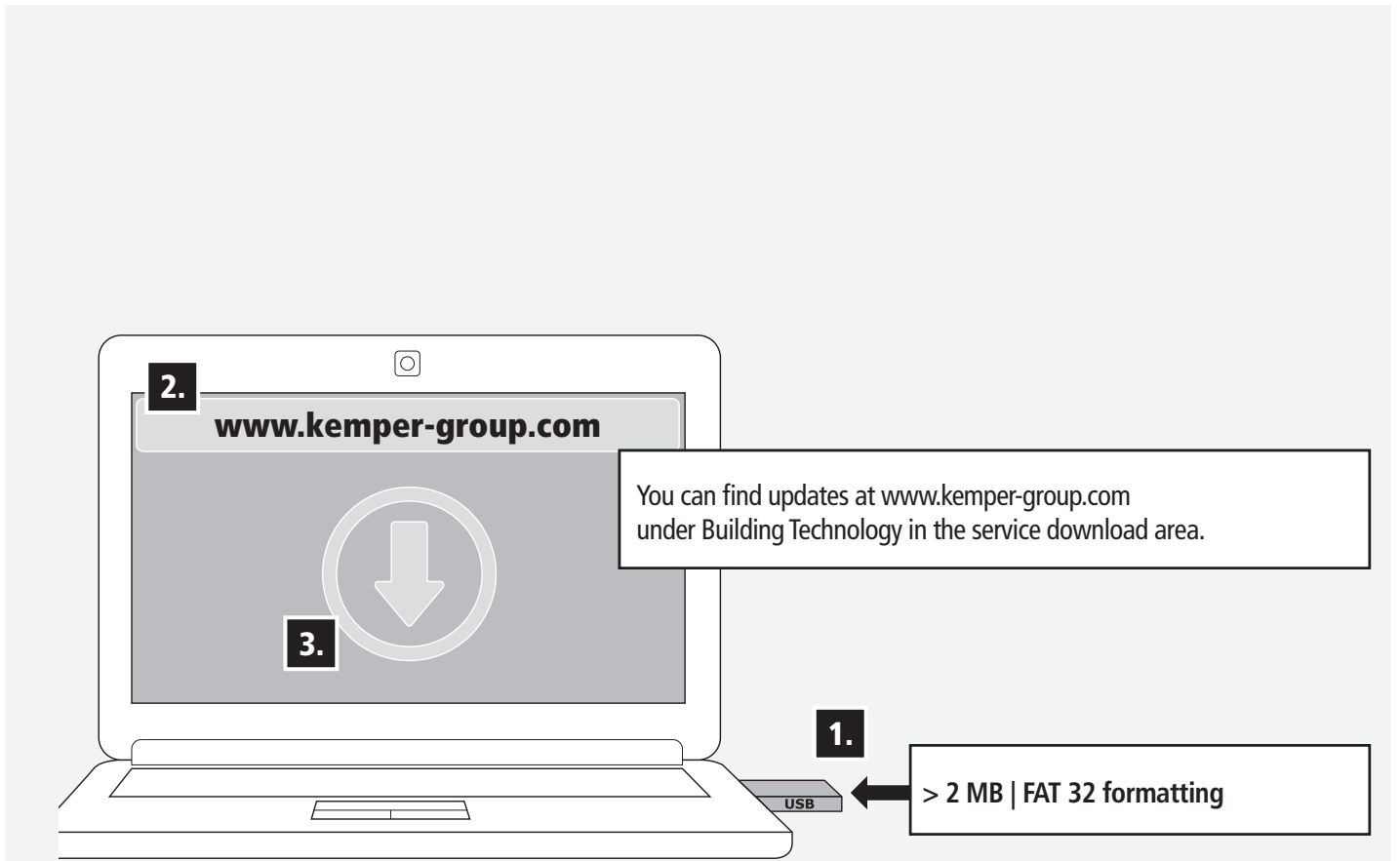


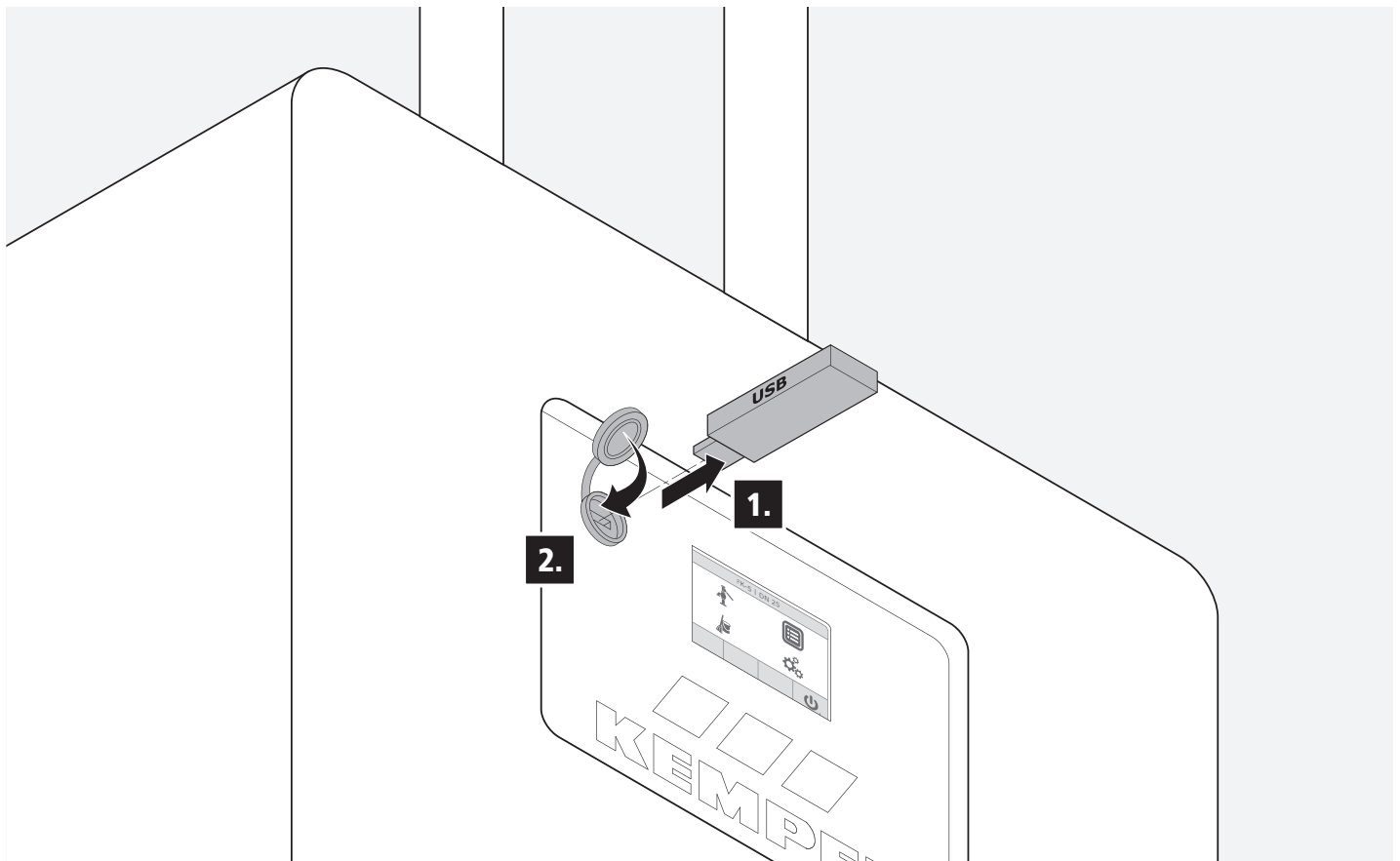
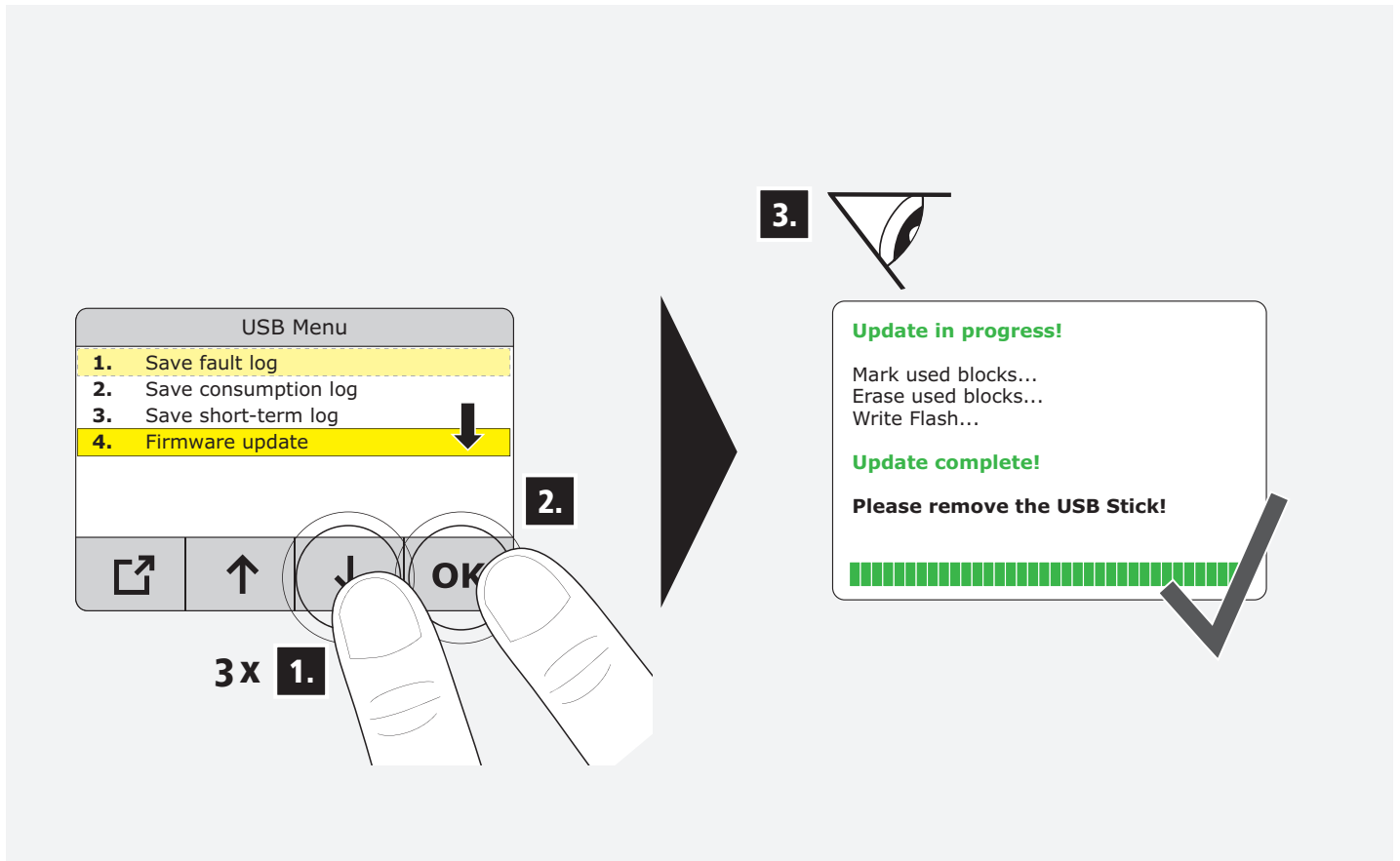


5.1

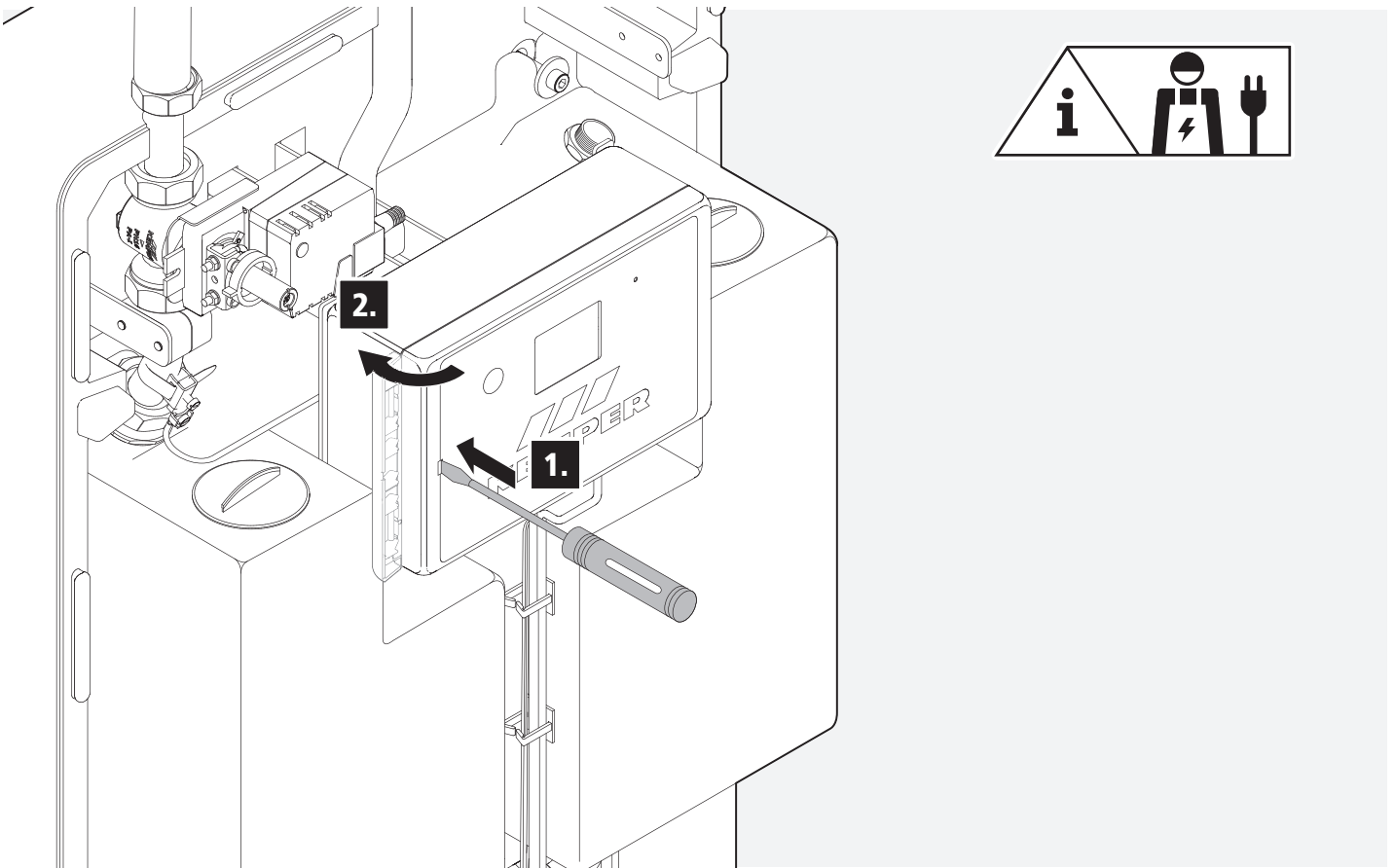




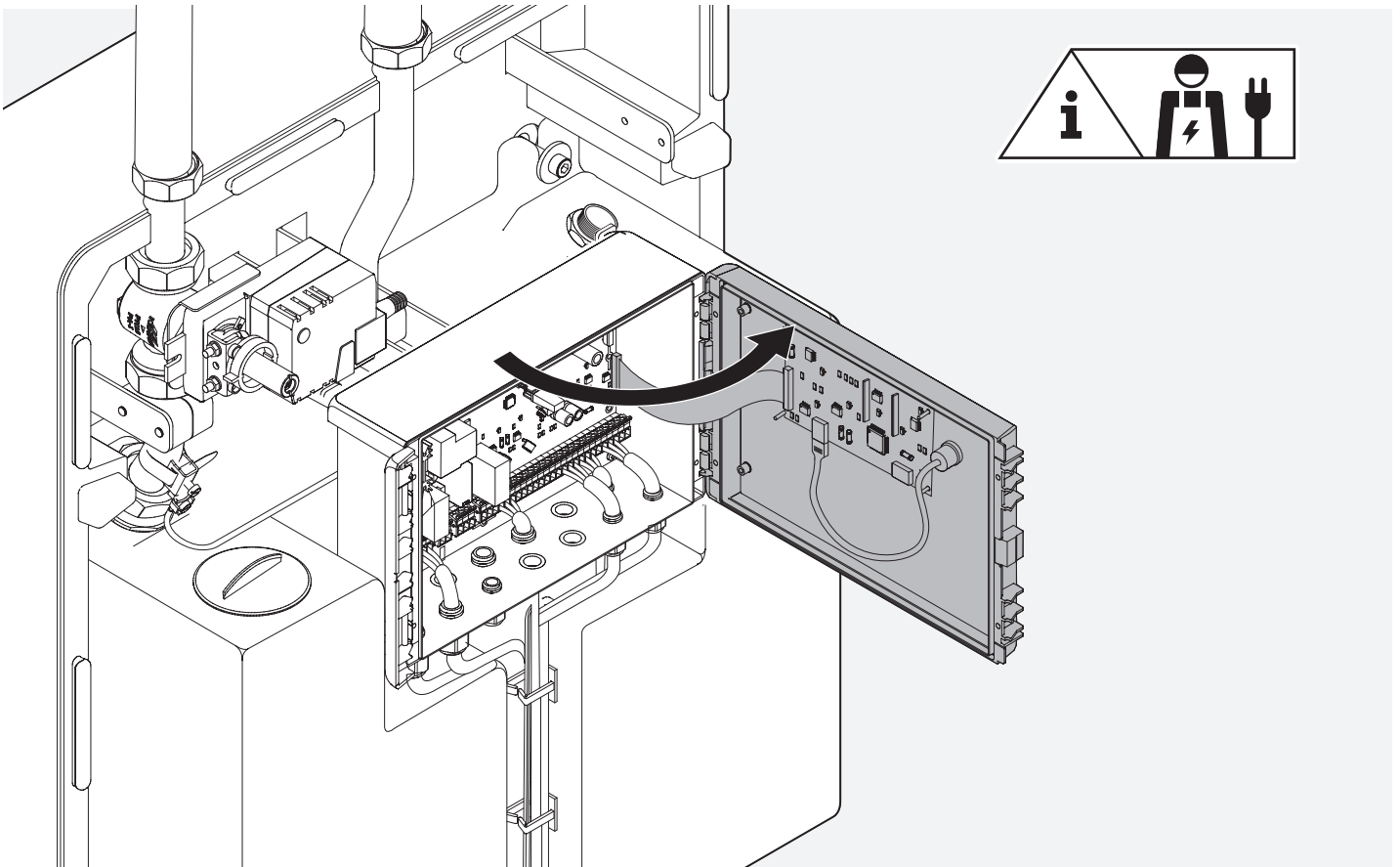


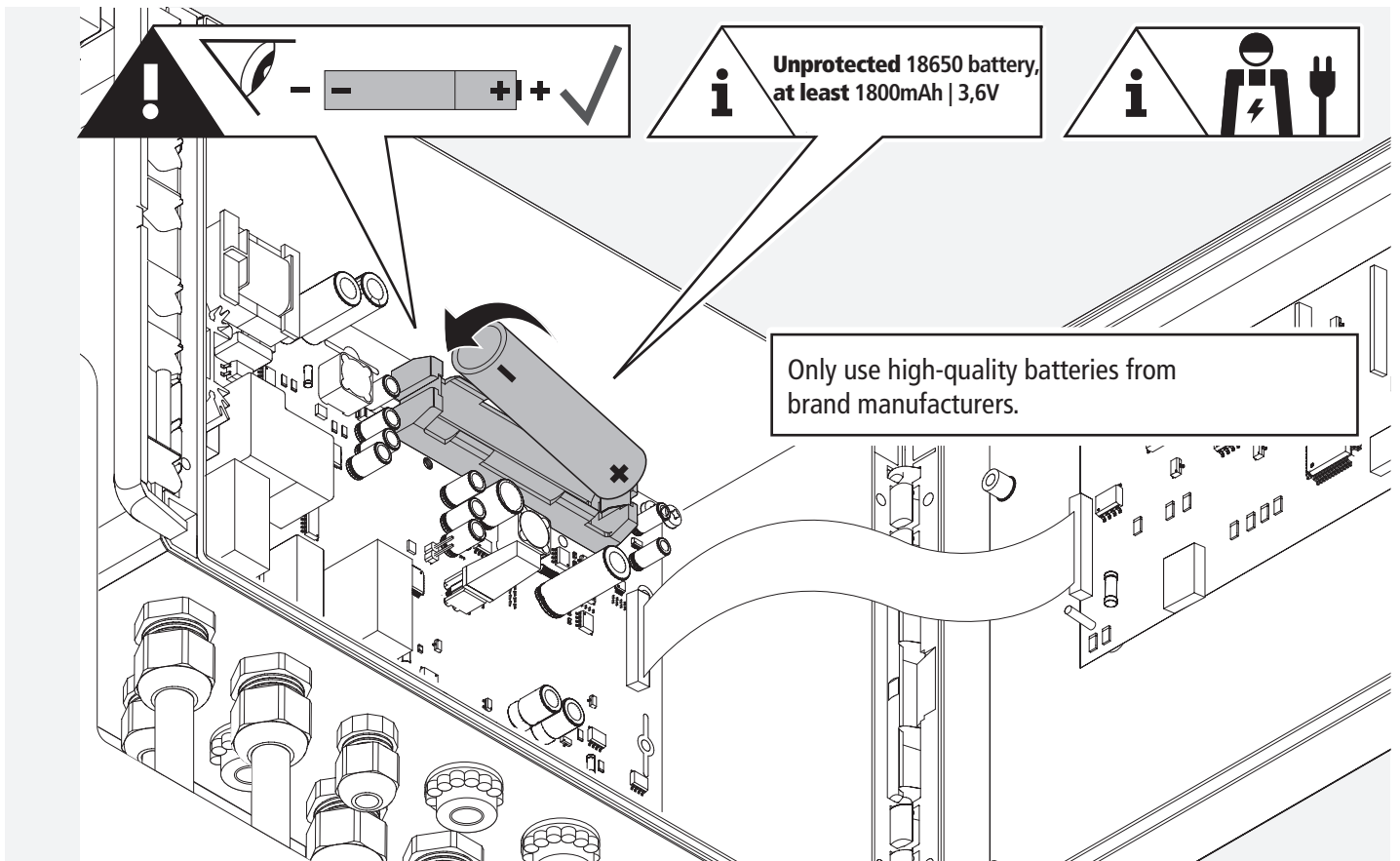
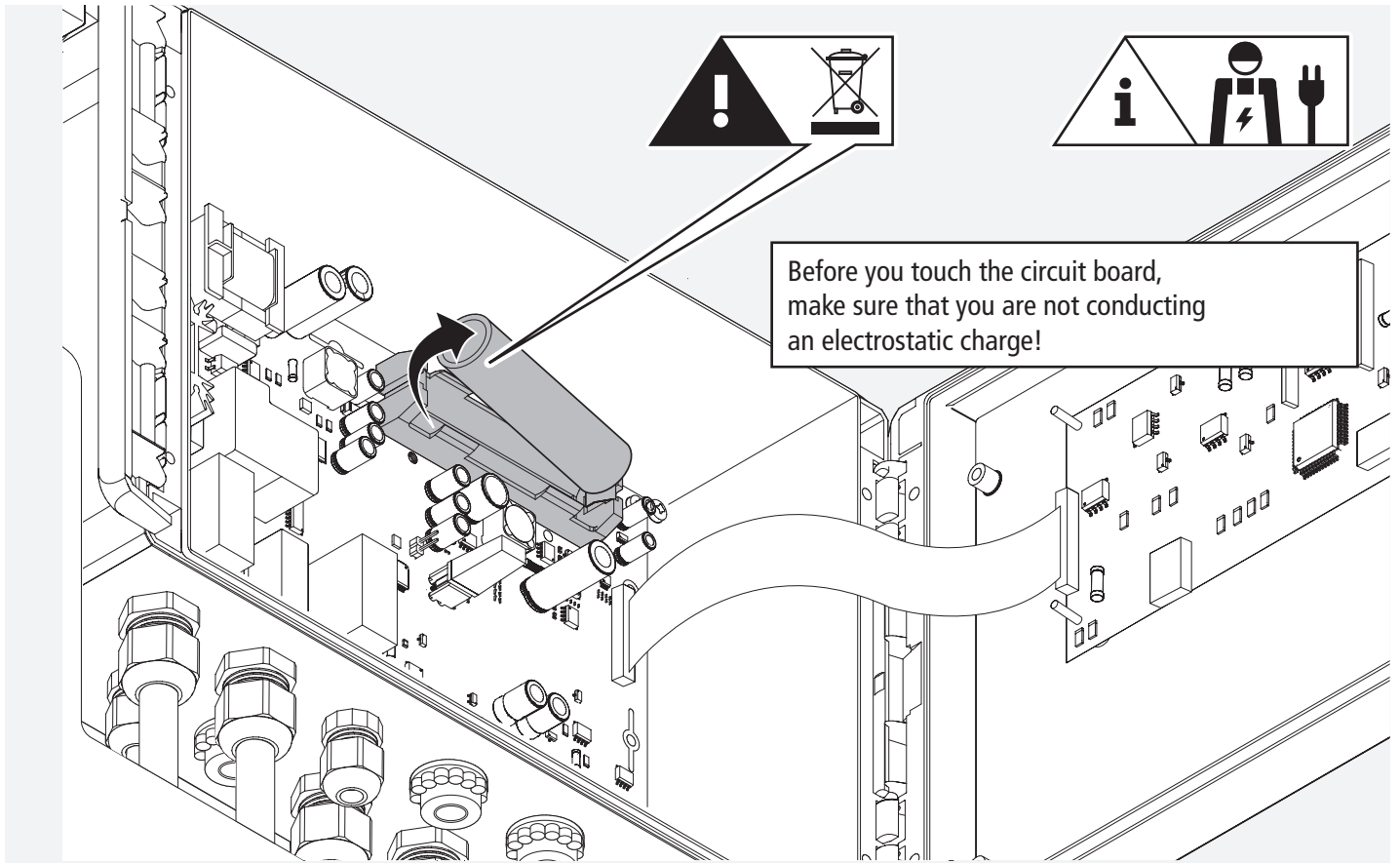


7.2

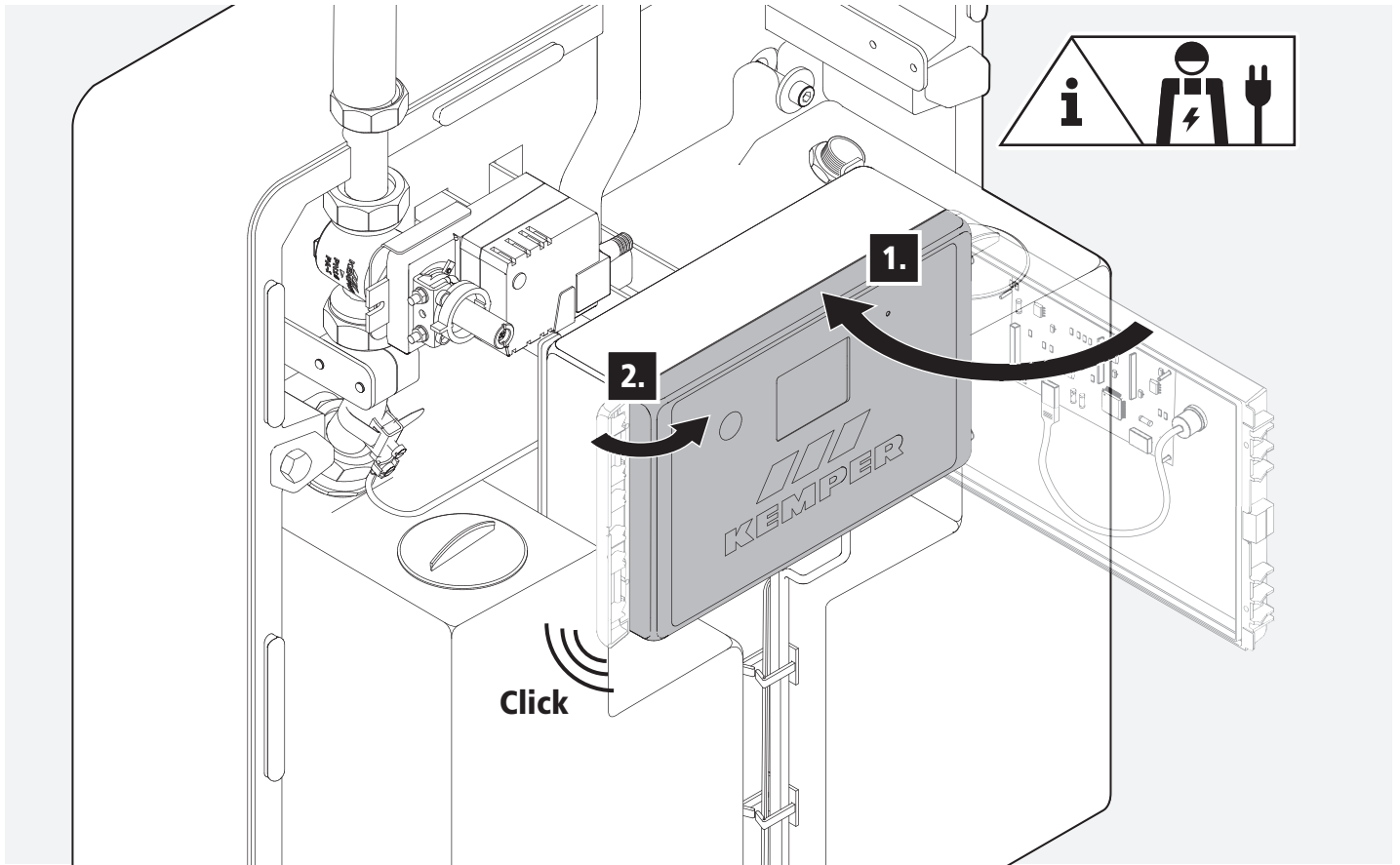


7.3

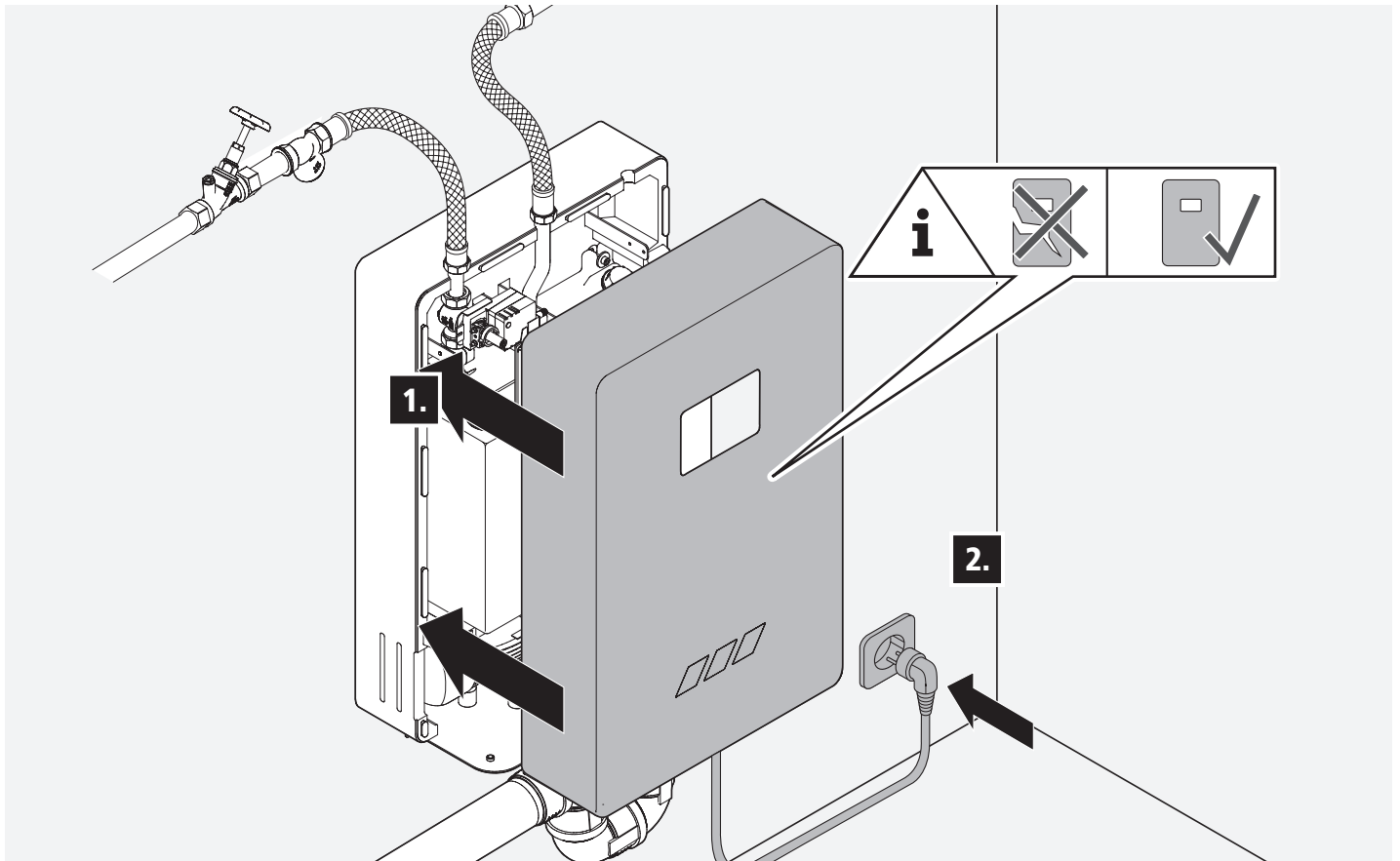


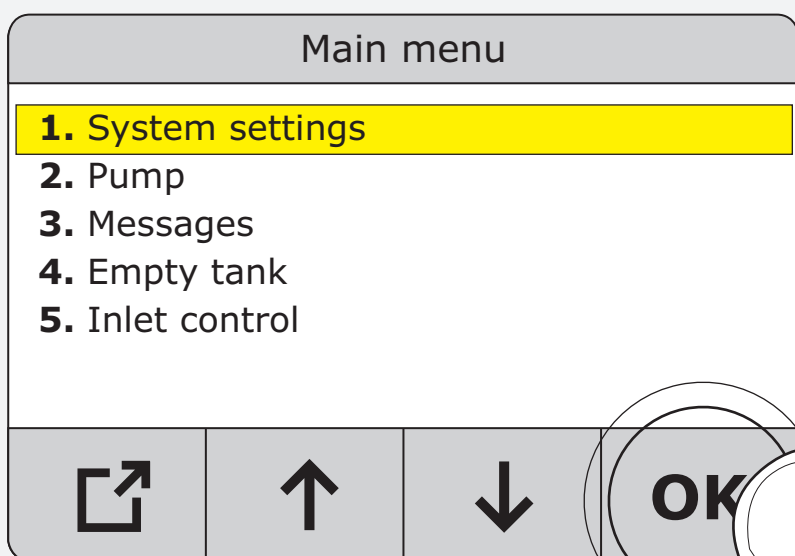
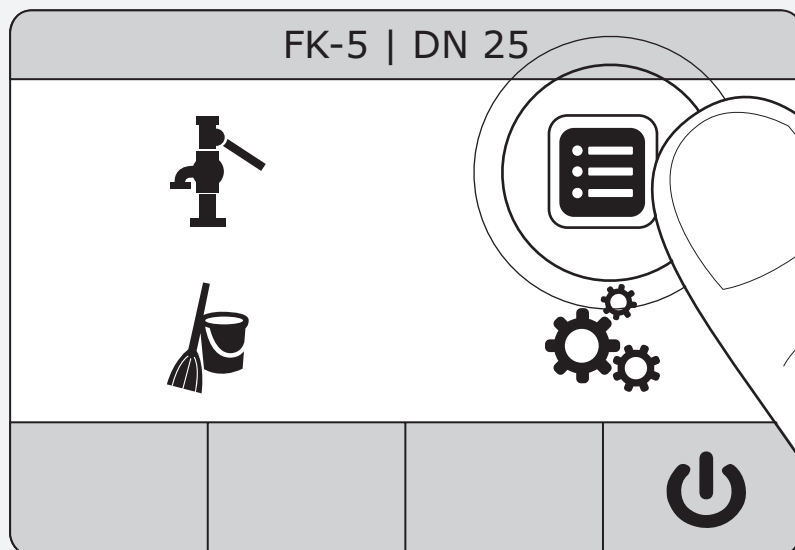


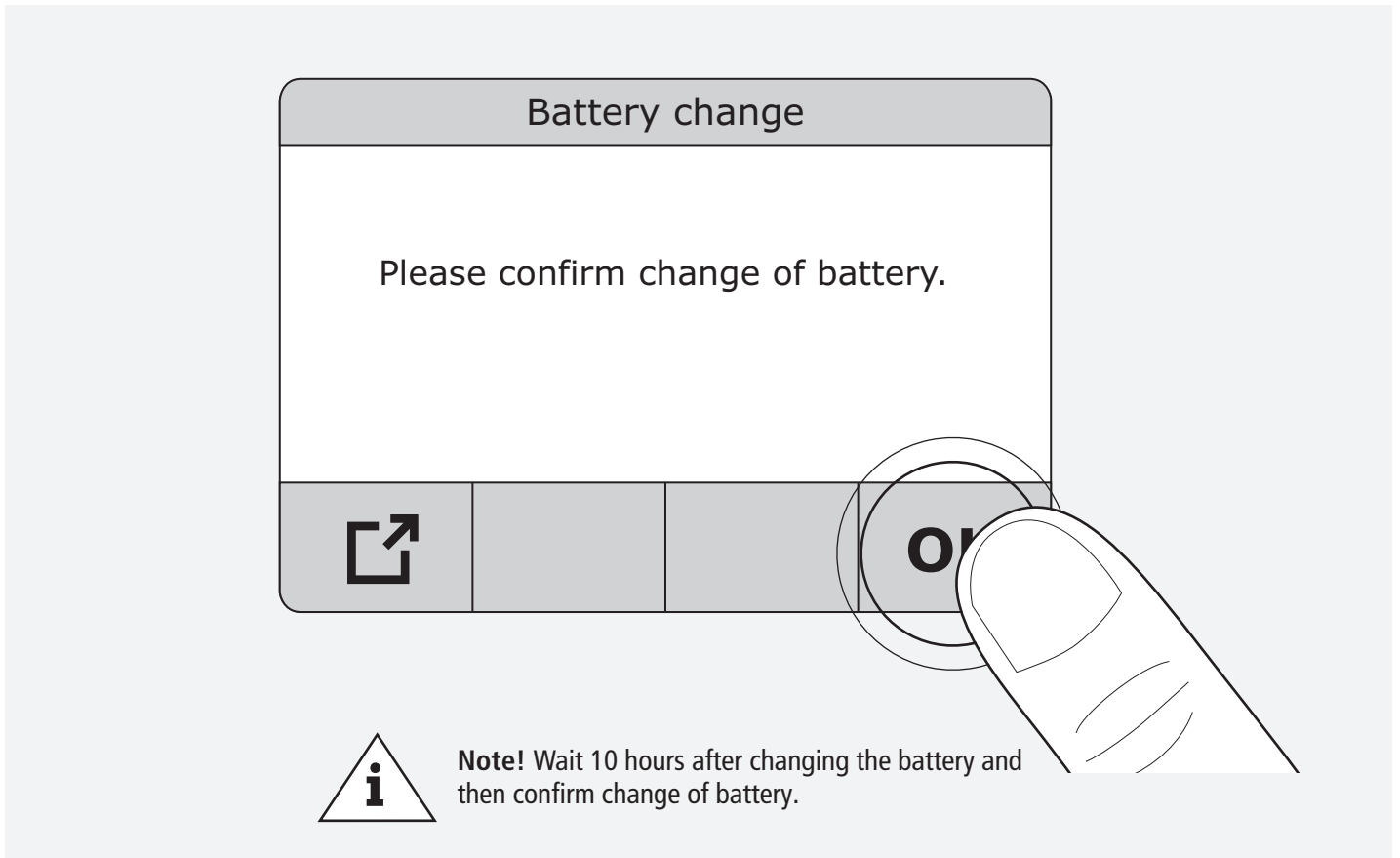
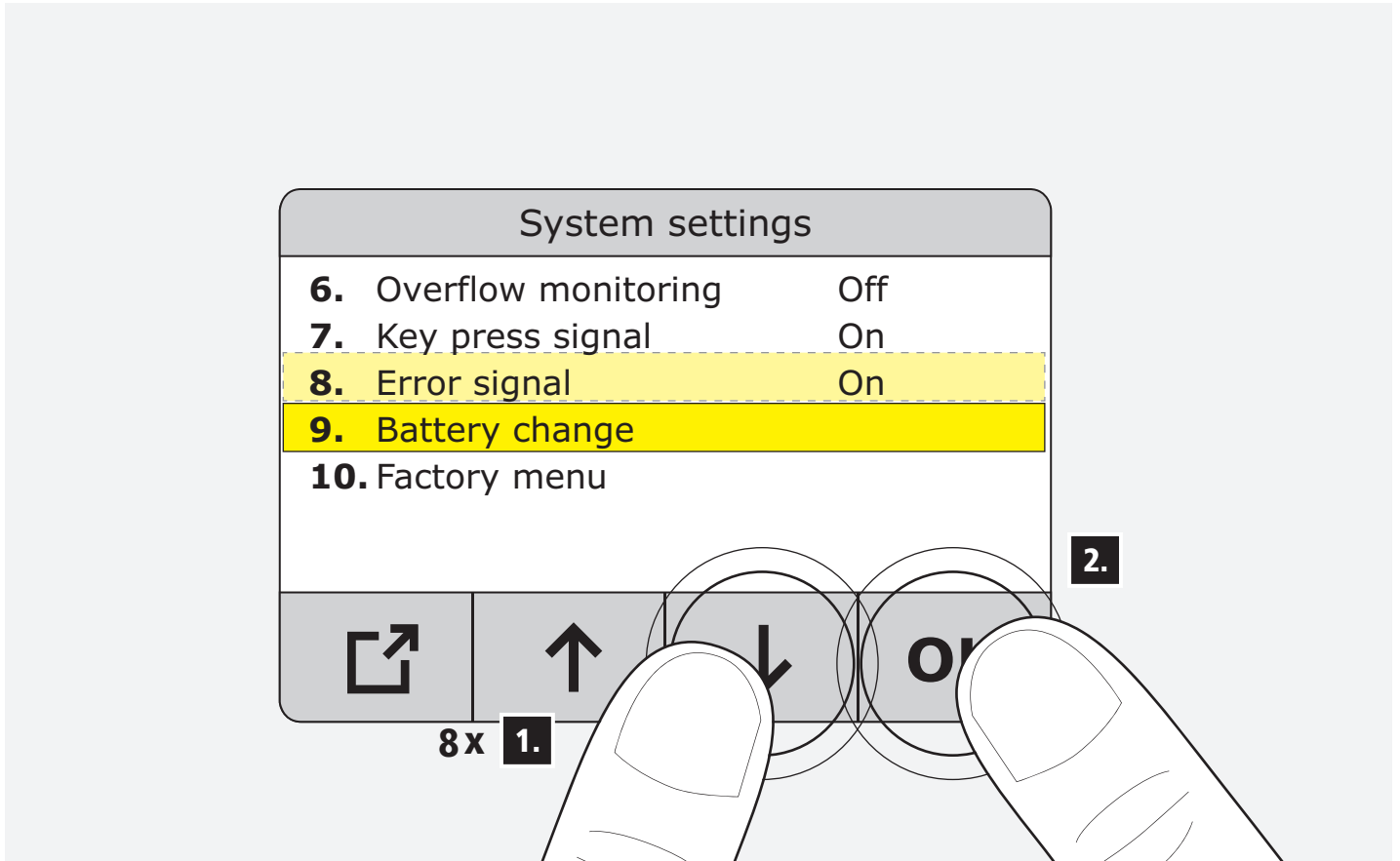
7.6



































7.7

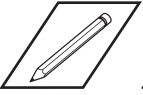


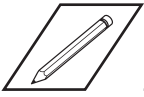




Nr.	Error description	Cause	Solution
01 02	Level below minimum level: inlet 1 or inlet 2	A: Flow at inlet 1 or 2 too low. B: Water consumption too high. Water level has fallen below 50 mm.  Warning message persists until level > 200 mm.	A: Increase inflow to inlet 1 or 2. B: Observe maximum draw-off 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 tolow. 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 imeasurement connection of the level sensor is free of blockages. 5. If the level sensor is clogged, remove the level isensor 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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