TIMERS

TIMER VT 1000
TIMER VT 2000

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1. GENERAL INFORMATION

TIMER VT 1000

Timer VT 1000 is made up of an electronic card based on a microprocessor, which is designed to control either a softening or a filtering system.
Thanks to this card, it is possible to select the different functions of the system through a keyboard and the 4-digit display mounted on the same.
The card is equipped with a buffer battery which, in case of power failure, powers the internal clock and the static memory, allowing the system to resume its function from the power shut-off.
Timer VT 1000 can control:

1) a softening system by pure volume, by volume with time, by volume/ time, by time (by selecting VT1000
2) a softening system by time (by selecting ET500)
3) a filtering system (by selecting 500F)

Timer VT 1000 powers

- the chlorine generator (AD model)
- the water meter sensor (VT model)

Timer VT 1000 is available both in the standard version suitable for valve 132 and 230 and in the version VT1000 BIG for valve 250. The difference between the two models (standard and BIG) is the transmission of the control movements to carry out regeneration (see exploded views).

TIMER VT 2000

Timer VT 2000 is made up of an electronic card based on a microprocessor, which is designed to control either a single column or a two column softener (Duplex models).
Thanks to this card, it is possible to select the different functions of the system through a keyboard and the 80-digit display mounted on the same.
The card is equipped with a buffer battery which, in case of power failure, powers the internal clock and the static memory, allowing the system to resume its function from the power shut-off.
Timer VT 2000 can control:

1) a softening system by pure volume, by volume with time, by volume/ time, by time
2) a duplex softening system (by selecting duplex function)
3) an automatic mixing system (by selecting automatic by pass function)
4) an anti flood system (by selecting anti flood function)
5) micro leak system (by selecting micro leak function)

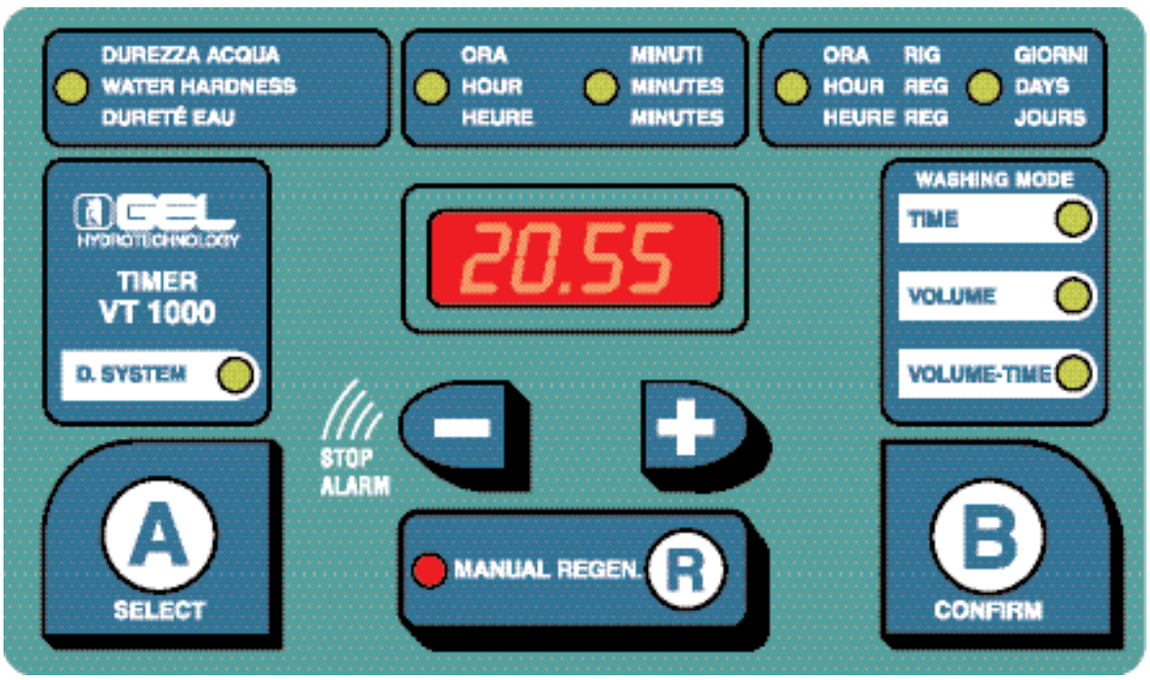
Timer VT 1000 powers

- the chlorine generator (AD model)
- the automatic mixing valve (BPA model)
- anti flood and micro leak system

Timer VT 2000 is available:

- in the standard version suitable for valve 132 and 230
- in the version VT2000 BIG for valve 250. The difference between the two models (standard and BIG) is the transmission of the control movements to carry out regeneration (see exploded views)
- in the duplex version
- in the automatic bypass (BPA) version
- in the anti flood (WS) version
- in the anti flood and automatic bypass (BPW) version.

HOW TO PROGRAMME ELECTRONIC TIMER VT 1000



starts programming

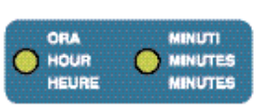
confirms programmed data

carries out a manual regeneration

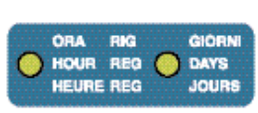
modifies values on display

indicates presence of disinfection system

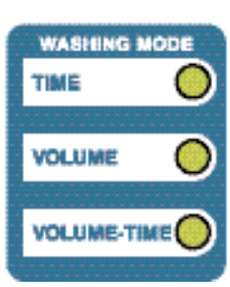
hardness set



current hour and minutes



regeneration time
regeneration day



regeneration mode

1. HOW TO PROGRAMME ELECTRONIC TIMER VT 1000

1.1 HOW TO START PROGRAMMING

Press key [A], the display below will be shown

indicating the hardness of the inlet water in °f (LED for hardness is flashing).

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

indicating current hour (LED for hour is flashing).

This value can be modified with keys [+] and [−].

Press key [B] confirm and the display below will be shown,

indicating current minutes (LED for minutes is flashing).

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

indicating regeneration time (LED for regeneration time is flashing).

This value can be modified with keys [+] and [−] .

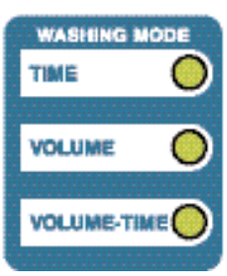
Press key [B] to confirm and the display below will be shown,

indicating the interval days between two regenerations, that is the regeneration frequency.

This value can be modified with keys [+] and [−].

P.S. For potable use, it is recommended to regenerate max. every 4 days.

Press key [B] to confirm, a Led for the WASHING MODE, with volumetric configuration (1000), will light on.



Press key [+] to modify the regeneration mode, which can be:

- TIME: regeneration will take place every X programmed days at the programmed time.
- VOLUME: regeneration will take place after the last litre of water treatable.
- VOLUME-TIME: regeneration will take place depending on the water consumption, but max. every X programmed days always respecting the programmed time.

Press key [B] to confirm and the display below will be shown. To programme 500 and 500F press key [B] to confirm and the display below will be shown

indicating pressure at the inlet of the softener.

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the current time will be displayed.

2. HIDDEN FUNCTIONS

2.1 SALT ALARM

Press keys ⊖ and B at the same time.

If OFF is displayed, salt alarm is disconnected;

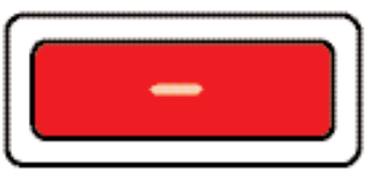
if ON is displayed, salt alarm is connected.

Select the desired priority with keys ⊕ and ⊖.

2.2 HOW TO DISPLAY THE WORKING OF THE WATER METER TURBINE

1) Unplug the transformer

2) By keeping key ⊕ pressed, plug the transformer. A dash will be displayed



3) Open water supply entry

4) If the dash moves, the water meter turbine is working; if the dash is still, the water meter turbine is blocked. Disassemble, clean, assemble again or replace.

2.3 HOW TO DISPLAY M³ OF WATER PRODUCED AND THAT CAN BE PRODUCED

1) Press keys ⊕ and ⊖ at the same time and the display will show the cubic metres of water that can be produced between the two regenerations.

2) By pressing keys ⊕ and ⊖ at the same time within 10 seconds, the display shows the cubic metres of water produced from the last regeneration.

P.S.: The values read refer to a hardness at the outlet of 0 °f.

3. FREE PROGRAMMING

From the main display

it is possible to enter free programming.
It is necessary to unplug the transformer; then with the key B pressed, plug the transformer and the display below will be shown

This value indicates the type of timer which can be programmed:
- 1000 = Timer VT 1000
- 500 = Timer ET 500
- 500F = Timer ET 500 Filtering

This value can be modified with keys ⊕ and ⊖.

Press key B to confirm and the display below will be shown (except for Timer 500F)

this value indicates the litres of resin which can be set on the timer.
The values which can be set are: 5, 8, 10, 15, 20, 25, 30, 35, 45, 60, 75, 110, 100M, 110B, 140, 140M, 140B, 200, 200M, 200B, 250M, 250B, 320B, 500B, Free (for "Free" value, please refer to section FREE PROGRAMMING OF LITRES).

This value can be modified with keys ⊕ and ⊖.

P.S.: In the different settings of litres, the duration of each phase is already programmed, while in the FREE configuration, it is necessary to programme the duration of each phase.

Press key [B] to confirm and the display below will be shown

this value indicates the cyclic capacity set on the timer. This value can be programmed from 1.0 to 9.0.

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

this value indicates the reading ratio between the turbine and the water meter sensor (impulses per litre for VOLUME mode). 14 impulses per litre is the value to be set up to 500 litres of resin. In bigger models the values should be set according to the water meter with impulse sender.

This value can be modified from 60 to 1 with keys [+] and [−].

From the value set 1, by pressing again key [−] the display below will be shown

this value indicates the reading ratio between the turbine and the water meter sensor (litre per impulse for VOLUME mode). Values can be set from 25 to 2 litres per impulse.

From the value set 2, by pressing key [−] you come back to the display of the impulses per litre.

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

this value indicates the presence of the resins disinfection system.

With keys [+] and [−] this function can be activated or deactivated. If OFF is displayed, the function is not operating, if d5FE is displayed the disinfection system is on.

Press key [B] to confirm and the display below will be shown

this value indicates water hardness.

With keys [+] and [−] it is possible to modify the unit of measure: °f or MM (millimoles).

Press key [B] to confirm and the display below will be shown

this value indicates that regeneration will take place once the last litre of treated water has passed, regardless of time.

With keys [+] and [−] it is possible to change the regeneration priority from PURE into TIME.

TIME means that regeneration will take place only at a set time.

Press key [B] to confirm and the display below will be shown

this value indicates the reduction in percentage of the regeneration time of the third phase depending on pressure.

2 bar	reduction = 0	duration of the entire third phase
3 bar	reduction = 0.8	duration of the third phase 20% less
4 bar	reduction = 0.7	duration of the third phase 30% less
5 bar	reduction = 0.65	duration of the third phase 35% less
6 bar	reduction = 0.6	duration of the third phase 40% less.

Press key [B] to select the different operating pressures.

With keys [+] and [−] it is possible to increase or decrease the reduction at a certain pressure.

Press key [B] to confirm and the display below will be shown

this value indicates in percentage the duration of the second phase of regeneration.

With keys [+] and [−] it is possible to increase or decrease the duration of the second phase

(1.0 = at 100 per cent).

Press key [B] to confirm and the display below will be shown

this value indicates in percentage the duration of the third phase of regeneration.

With keys [+] and [−] it is possible to increase or decrease the duration of the third phase

(.00 = at 0 per cent, third phase is not carried out).

P.S.: These last two displays control regeneration in a partial way. It means this reduction takes place, once time is up, when less than a half of the water which can be treated between two regenerations has been used.

Press key [B] to confirm and time will be displayed.

4. FREE PROGRAMMING OF LITRES

When selecting the writing FREE in the parameter of litres, by pressing key [B] you enter the setting of litres and the display below will be shown

this value indicates the litres the timer is programmed for.

The values of the litres set can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown

this value indicates the cyclic capacity set on the timer. This value can be programmed from 1.0 to 9.0.

The values of the litres set can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown

this value indicates the duration of the first phase of regeneration.

The values of the litres set can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown

this value indicates the duration of the second phase of regeneration.

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

this value indicates the duration of the third phase of regeneration.

This value can be modified with keys [+] and [−].

Press key [B] to confirm and the display below will be shown,

this value indicates the duration of the fourth phase of regeneration.

This value can be modified with keys [+] and [−].

Press key [B] to confirm until time is displayed.

5. PROGRAMMING OF FILTRATION 500F

When selecting 500F and confirming with key [B] the display below will be shown

this value indicates the litres of filter media which can be set on the timer.

The values which can be set are: 30L, 45L, 75L, 110L, 140L, 200L, 320L, 500L, 650L, FREE (for "Free" value, please refer to section FREE PROGRAMMING OF FILTRATION).

This value of the litres set can be modified with keys [+] e [−].

P.S.: In the different settings of filter media litres, the duration of each phase is already programmed, while in the FREE configuration, it is necessary to programme the duration of each phase.

Press key [B] to confirm and time will be displayed.

6. FREE PROGRAMMING OF FILTRATION

When selecting the writing FREE in the parameter of litres, by pressing key [B] you enter the setting of the duration of the media washing and the display below will be shown

this value indicates the duration of the first phase, which is a backwash.

This value can be modified with keys [+] e [−].

Press key [B] to confirm and the display below will be shown

this value indicates the duration of the second phase, which is a down flow.

This value can be modified with keys [+] e [−].

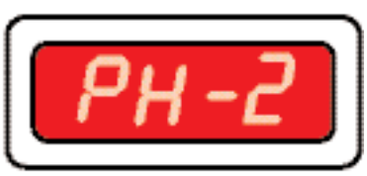
Press key [B] to confirm and time will be displayed.

7. MANUAL REGENERATION

To carry out a manual regeneration, from the display with time press key [R] and the display will always show time with a dot moving after each number.

After 45-50 seconds, necessary for positioning the cam in the first phase of regeneration, the display below will be shown

At the end of the first phase or by pressing key [R] the display will show a dot moving. After 45-50 seconds, necessary for positioning the cam in the second phase of regeneration, the display below will be shown



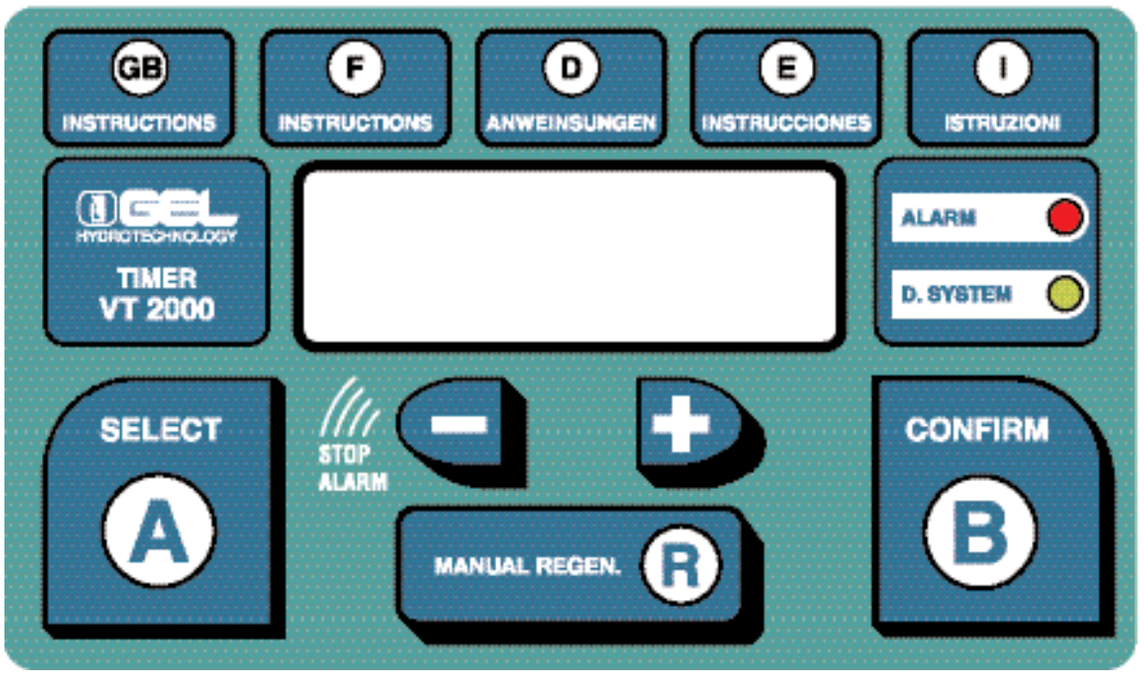
At the end of the second phase or by pressing key [R] the display will show a dot moving. After 45-50 seconds, necessary for positioning the cam in the third phase of regeneration, the display below will be shown

At the end of the third phase or by pressing key [R] the display will show a dot moving. After 45-50 seconds, necessary for positioning the cam in the fourth phase of regeneration, the display below will be shown

At the end of the fourth phase, time will be displayed again and the water softener is able to carry out a new softening cycle.

P.S.: The first three phases may be skipped by pressing key [R], while the fourth one has to be necessarily carried out.

HOW TO PROGRAMME ELECTRONIC TIMER VT 2000



enters programming

confirms entered data

starts regeneration manually

scrolls current selection back; stops the sound alarm for salt and the anti flood alarm (optional)

scrolls current selection forward

Led for self-disinfection module on

When starting the unit, the language selection display will be shown; initially the arrow indicating the current selection is placed on “Italiano”, that flashes on display.

programming display

→ ITALIANO	- ENGLISH
- FRANCAIS	- DEUTSCH
- ESPANOL	
TO CONFIRM	PRESS 1

On this display it is possible to slide the selected language by pressing keys [+] AND [−].
Press key [B] to confirm the selected language.

1. MAIN DISPLAY

The main display is the following

1	CLOCK	17:20
2	REG. VOL/TIME	GG=4 H=02
3	IN= 28 °F	OUT= 15 °F
4	TO CHANGE	PRESS A
5	[MANUAL REG. PRESS (R)]	

1. Time currently set in the timer
2. Regeneration frequency (DD) and time when regeneration will take place (H)
3. Hardness at the inlet (IN) and Hardness at the outlet of the softener (OUT)

4/5. The last two lines alternate.

2. HOW TO OPEN PROGRAMMING

Press key [A] and the display below will be shown

programming display

→ CLOCK	- REGENER.
- HARDNESS	- PRESSURE
- ALARM	- ANTI FLOOD
TO CONFIRM	PRESS B

Now it is possible to modify the programming data; at the beginning the arrow indicating the current selection is placed on “Clock”, which is flashing on display.
On this display it is possible either to slide the selected parameter by pressing keys [+] and [−], or to close programming by pressing key [A] again.

- CLOCK	→ REGENER.
- HARDNESS	- PRESSURE
- ALARM	- ANTI FLOOD
TO CONFIRM	PRESS B

For instance, by pressing key [+] once, the selection moves to “Regener.”, which starts flashing.

3. HOW TO SET HOUR AND MINUTES

From the programming display, move the selection to the parameter "Clock" with keys [+] and [−]
- press key [B] confirm the selection

CLOCK	
TIME	17:10
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

At the beginning the selection is on the time figures
- press keys [+] and [−] to change hour;
- press key [B] to confirm hour

The selection moves to the minutes figures

CLOCK	
TIME	17:10
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change minutes;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm minutes

Programming will automatically close and the main display is restored.

4. HOW TO SET REGENERATION MODE

From the programming display, move the selection to the parameter "Regeneration" with keys [+] and [−]
- press key [B] to confirm the selection, the display below will be shown

REGENERATION MODE	
MODE	VOLUME/TIME
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

Choose with keys [+] and [−] the desired regeneration mode:
3A. VOLUME/TIME
3B. pure VOLUME
3C. VOLUME with time
3D. TIME
- press key [B] to confirm settings

4.1 REGENERATION BY VOLUME/ TIME

The display below will be shown

REGENERATION FREQUENCY	
DAYS (1-19)	4
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change regeneration frequency;
Set a value between 1 and 19 days.

- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings
the display below will be shown

REGENERATION TIME	
REGENERATION HOUR	2
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

The softener will work by volume/time, with priority to volume. This means that if the water volume that can be softened is used before the day programmed for regeneration, this will occur in advance, but will respect the time set anyway.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

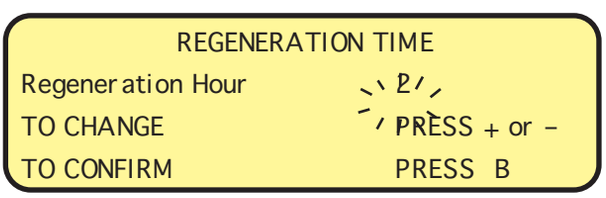
4.2 REGENERATION BY PURE VOLUME

- by pressing key [B] programming will automatically close and the main display is restored.

The softener will work by pure volume. This means that regeneration will be carried out as soon as the water volume that can be softened is reached.

4.3 REGENERATION BY VOLUME WITH TIME

the display below will be shown



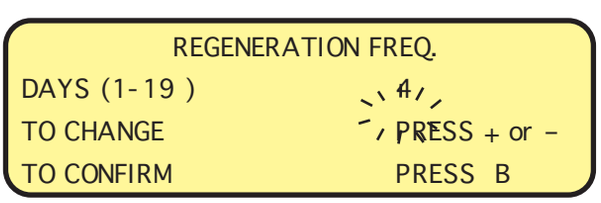
- press keys [+] and [-] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

The softener will work by volume with time. This means that, when the water volume is reached, the regeneration will take place at the time set.

4.4 REGENERATION BY TIME

The display below will be shown

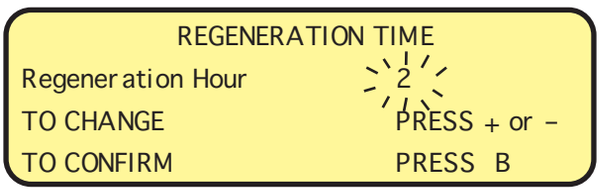


- press keys [+] and [-] to change regeneration frequency;

Set a value between 1 and 19 days.

- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

the display below will be shown



- press keys [+] and [-] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

The softener will work by time. This means that regeneration will take place in the days interval programmed and at the time set.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

5. MANUAL REGENERATION

To carry out a manual regeneration:
From the main display press key [R]
the display below will be shown

MANUAL REGENERATION	
PHASE 1 *	06:00**
PHASE SKIP	PRESS (R)
TEST END	PRESS >B<

* indicates which of the 4 regeneration phases is being carried out
* * indicates the duration in minutes of the regeneration phase that is being carried out.

– Once started, the manual regeneration will carry out the 4 phases and the softener will automatically restore the operating phase.

- press key [R] to skip a phase
It is possible to skip phases 1 - 2 - 3, but the phase 4 (rinse only) is necessarily carried out, then the softener automatically restores the operating phase.
To skip the first three phases, press key [R]. This key shall be pressed when the flashing writing "WAIT" is off.
- press key [B] to stop regeneration.
It is possible to stop regeneration, regardless of the phase that is being carried out. The rinse phase 4 is the only phase carried out, then the softener will automatically restore the operating phase.

The: The **ELECTRONIC TIMER VT 2000 AD** is fitted with a resins disinfection system. The presence of this system is indicated by the green LED always on (flashing during the second phase of each regeneration).

6. HOW TO SET IN-OUT HARDNESS

From the programming display, move the selection to the parameter "Hardness" with keys [+] and [−]
- press key [B] to confirm the selection

the display below will be shown

WATER HARDNESS	
HARDNESS	25 °f
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change hardness at the inlet (from 2 °f to 99 °f);
- press key [B] to confirm settings
the display below will be shown

RESIDUAL HARDNESS	
HARDNESS	15 °f
TO CHANGE	PRESS + or −
PTO CONFIRM	PRESS B

- press keys [+] and [−] to change the hardness at the outlet (from 0 °f to 99 °f);
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

7. HOW TO SET PRESSURE AT THE INLET OF THE SOFTENER

From the programming display, move the selection to the parameter "Pressure" with keys [+] and [−]
- press key [B] to confirm the selection
the display below will be shown

- press keys [+] and [−] to change pressure (between 2 and 6 bar)
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

P.S. To get an optimal regeneration, set in the timer the mains pressure of the water softener.

8. HOW TO SET THE EXHAUSTED SALT ALARM

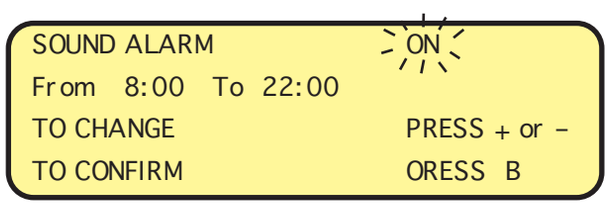
The Electronic Timer VT 2000 AD is fitted with an exhausted salt alarm system. This device starts when the salt amount is not enough for guaranteeing a total regeneration of the resins.
When this occurs, the red led ALARM is flashing and a sound alarm will be heard.

To stop the sound alarm, just press Key [−] (STOP ALARM).

P.S. Until the salt alarm is manually stopped, the softener will not carry out any further regeneration.

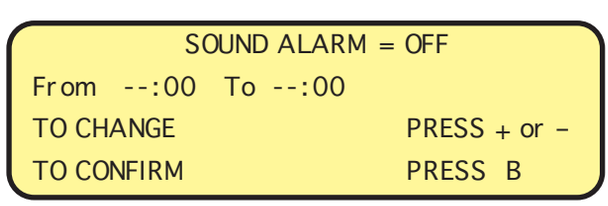
The sound alarm can be either deactivated (the alarm does not beep) or activated in a time interval (it beeps from X to Y).

From the programming display, move the selection to the parameter "Alarm" with keys [+] and [−]
- press key [B] to confirm the selection
the display below will be shown



- press keys [+] and [−] either to activate (= ON) or deactivate the alarm (= OFF)

8.1 SOUND ALARM = OFF

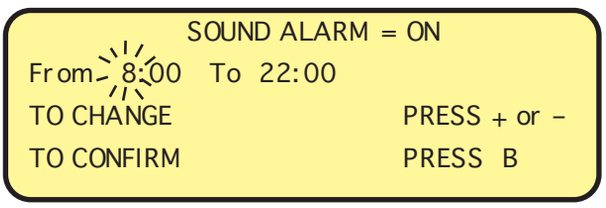


- press key [B] to confirm the selection

Programming will automatically close and the main display is restored.

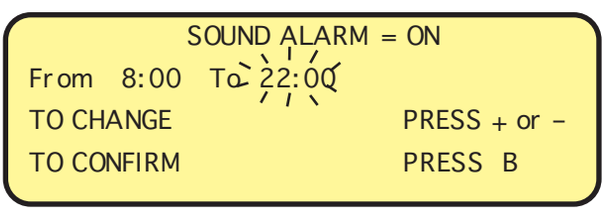
8.2 SOUND ALARM = ON

The starting time of the period when the sound alarm is allowed begins flashing (From).



- press keys [+] and [–] to change the period starting time
- press key [A] to come back to the previous selection, or
- press key [B] to confirm the setting

Then the ending time of the period when the sound alarm is allowed begins flashing (To).



- press keys [+] and [–] to change the period ending time
- press key [A] to come back to the previous selection, or
- press key [B] to confirm the setting

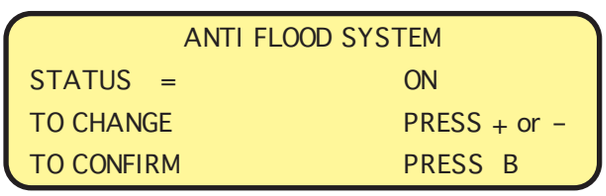
Programming will automatically close and the main display is restored.
In the example shown, the sound alarm will start solely during the time period going from 8:00 to 22:00.
Values set: start from 0.00 to 21.00
end from 1.00 to 22.00

9. HOW TO SET ANTI FLOOD SYSTEM

(MODELS FITTED WITH ACCESSORY WATER SENTINEL OR WATER SENTINEL PRO ONLY)

From the programming display, move the selection on "Anti flood" with keys [+] and [–]

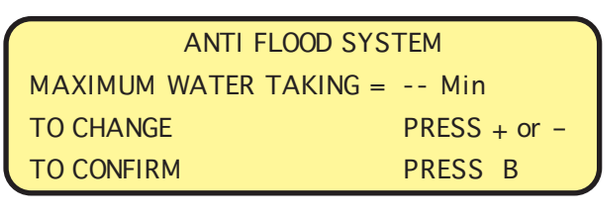
- press key [A] to come back to the previous selection, or
- press key [B] to confirm the setting.



- Press keys [+] and [–] either to deactivate (= OFF) or activate (= ON) the device Water Sentinel.

9.1 STATUS OF ANTI FLOOD SYSTEM = OFF

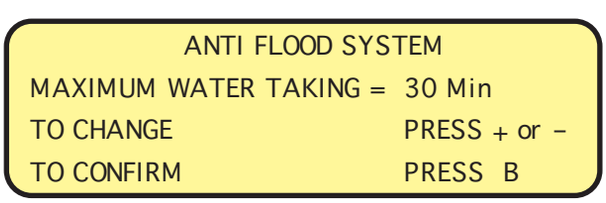
- Press key [A] to come back to the previous display, or
- press key [B] to confirm the setting.
the display below will be shown



In this display it is not possible to modify data; press key [A] to come back to the previous display, or press key [B] to confirm the setting.
Programming will automatically close and the main display is restored.

9.2 STATUS OF ANTI FLOOD SYSTEM = ON

- press key [A] to come back to the previous display, or
- press key [B] to confirm the setting.
the display below will be shown



- press keys [+] and [-] to change the maximum taking time (from 5 to 90 minutes; default value = 30 minutes) of the anti flood system. The system will block water supply when it detects a continuous flow for a time longer than the one set.
- Press key [B] to confirm the setting.

- **Softeners fitted with accessory Water Sentinel**
Programming automatically closes and the main display is restored.

- **Softeners fitted with accessory Water Sentinel Pro**
Programming carries on for setting the micro leak detection.

the display below will be shown

MICRO LEAK	
STATUS =	ON
TO CHANGE	PRESS + or -
TO CONFIRM	PRESS B

- press keys [+] and [-] either to deactivate (= OFF) or activate (= ON) the micro leak detection by the system Water Sentinel Pro.

9.3 STATUS OF MICRO LEAK = OFF

- press key [A] to come back to the previous display, or
- press key [B] press key B to confirm the setting.
the display below will be shown

MICRO LEAK	
TEST DURATION	-- Sec
TO CHANGE	PRESS + or -
TO CONFIRM	PRESS B

In this display it is not possible to modify data; press key [A] to come back to the previous display, or press key [B] to confirm the setting.
Programming will automatically close and the main display is restored.

9.4 STATUS OF MICRO LEAK = ON

- press key [A] to come back to the previous display, or
- press key [B] to confirm the setting.
the display below will be shown

MICRO LEAK	
TEST DURATION =	10 Sec
TO CHANGE	PRESS + or -
TO CONFIRM	PRESS B

- press keys [+] and [-] to change the duration of the micro leak detection test (from 5 to 120 seconds; default value = 10 seconds).

As soon as you close the last tap open, every 2 hours the system Water Sentinel Pro carries out a duration test lasting for the time set. Test is repeated three times and in case of micro leaks the alarm message "MICRO LEAK ALARM" is displayed.

- Press key [A] to come back to the previous display, or
- Press key [B] to confirm the setting.

Programming will automatically close and the main display is restored.

10. HOW TO DISPLAY REGENERATIONS

The **ELECTRONIC TIMER VT 2000** allows to display data about the regenerations to be carried out and already carried out:
– Press [B] from the main display

1) 2) 3)

NEXT REGEN. (Days)	DAYS: 4
last regen. (Days)	DAYS: 0
REGENERATIONS	00001
NEXT PUSH	B

– Press [A] to come back to the main display.

1) how many days are still there before next regeneration.
2) how many days have passed from last regeneration.
3) how many regenerations have been carried out.

11. HOW TO DISPLAY STANDARD SETTINGS

The **ELECTRONIC TIMER VT 2000** allows to display standard settings programmed.
Press key [B] from the regenerations display the display below will be shown

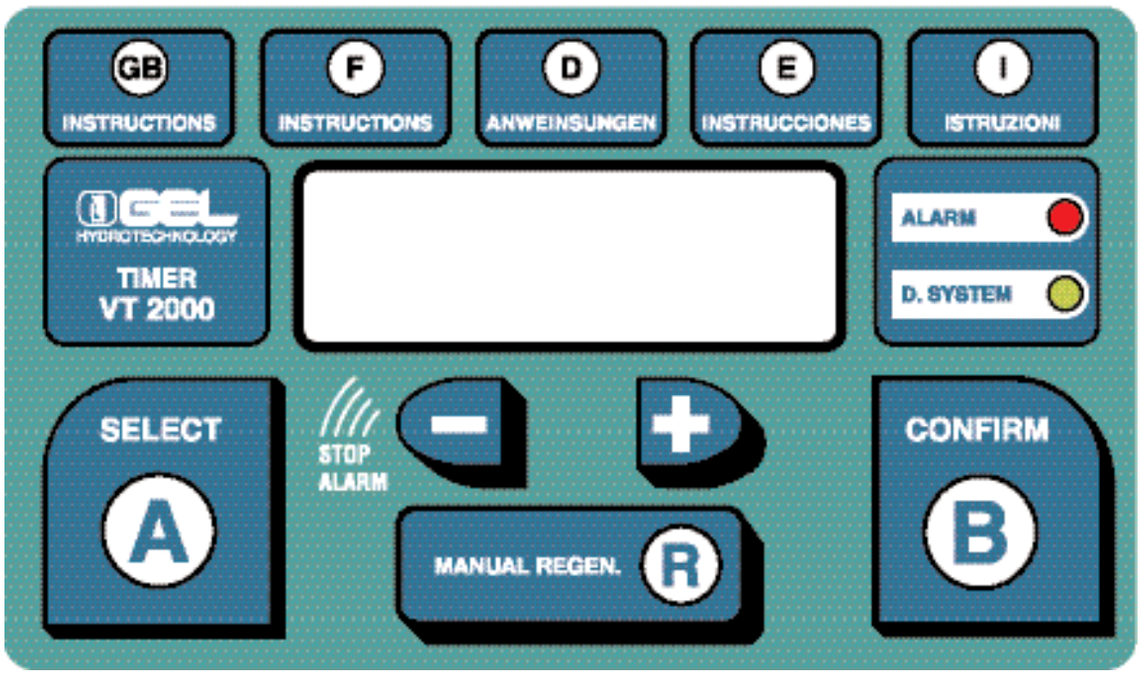
1 2 3 4 5 6

SOFTENER VER_2.6	
MONO	30-Lt
i/L = 14/OFF	
CHLORINE = OFF	BY=Manu

The information displayed may vary according to the softener configuration.
- press keys [A] or [B] to come back to the main display.

1) Microprocessor version
2) Monocolumn or master/ slave
3) Litres of resin that can be set or free
4) Ratios impulses per litre/ water meter
5) Chlorine off/ Electrodes/ Pump
6) Manual/ automatic by-pass

HOW TO PROGRAMME ELECTRONIC TIMER VT 2000 DUPLEX



enters programming

confirms entered data

starts regeneration manually

scrolls current selection back; stops the sound alarm for salt and the anti flood alarm (optional)

scrolls current selection forward

Led for exhausted salt alarm

Led for self-disinfection module on

The **ELECTRONIC TIMER VT 2000 DUPLEX** is a small computer designed and created by GEL to allow an easy and fast programming of the water softener in 5 languages.
The AD version is fitted with a resins disinfection system and a salt level control device.
The Timer VT 2000 Duplex is made up of two junction boxes called **Master** and **Slave**.
The setting **Master/Slave** is displayed when starting each timer.
Master is the control junction box where the working data are to be programmed.
Slave is the junction box solely controlling the resins regeneration of a vessel and does not need any programming.
The Timer VT 2000 Duplex is supplied with the following general programmed values:

- Time: current time
- Regeneration: volume/ time
- Days between the two regenerations: 4
- Regeneration hour: 02
- Water hardness at the inlet: 50° f
- Water hardness at the outlet: 15° f
- Vessel A: ON (operation)
- Vessel B: OFF (stand-by)

Any adjusting of the working parameters, except for the time, is to be carried out by the Technical Assistance Service taking care of the start up.

1. HOW TO PROGRAMME ELECTRONIC TIMER VT 2000 DUPLEX

When starting the unit, the language selection display will be shown; initially the arrow indicating the current selection is placed on "Italiano", that flashes on display.

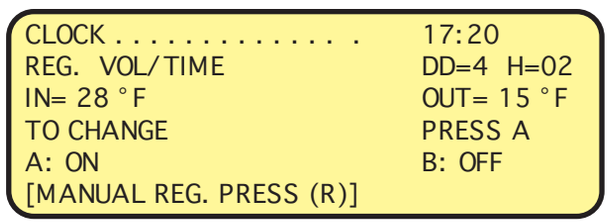
Programming display

→ ITALIANO	- ENGLISH
- FRANCAIS	- DEUTSCH
- ESPANOL	
TO CONFIRM	PRESS 1

On this display it is possible to slide the selected language by pressing keys [+] and [−].
Press key [B] to confirm the selected language.

2. MAIN DISPLAY

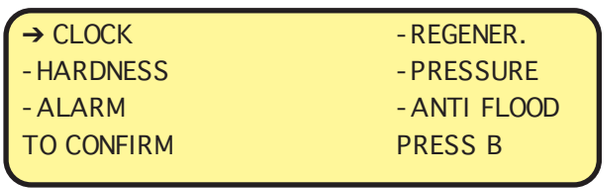
The main display is the following



Lines 4/5/6 alternate.

3. HOW TO OPEN PROGRAMMING

Press key [A] and the display below will be shown



The arrow placed on “Clock” flashes on display.
With the keys [+] and [−], it is possible to select the parameter to be programmed.
Press key [A] to come back to the main display.

4. HOW TO SET HOUR AND MINUTES

From the programming display, move the selection to the parameter "Clock" with keys [+] and [−]
- press key [B] to confirm the selection

CLOCK	
TIME	17:10
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

At the beginning the selection is on the time figures
- press keys [+] and [−] to change hour;
- press key [B] to confirm hour

The selection moves to the minutes figures

CLOCK	
TIME	17:10
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change minutes;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm minutes

Programming will automatically close and the main display is restored.

5. HOW TO SET REGENERATION MODE

From the programming display, move the selection to the parameter "Regeneration" with keys [+] and [−]
- press key [B] to confirm the selection, the display below will be shown

REGENERATION MODE	
MODE	VOLUME/TIME
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

Choose with keys [+] and [−] the desired regeneration mode:
3A. VOLUME/TIME
3B. pure VOLUME
3C. VOLUME with time
3D. TIME
- press key [B] to confirm settings.

5.1 REGENERATION BY VOLUME/ TIME

The display below will be shown

REGENERATION FREQUENCY	
DAYS (1-19)	4
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change regeneration frequency;

Set a value between 1 and 19 days.

- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

the display below will be shown

REGENERATION TIME	
REGENERATION HOUR	2
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

The softener will work by volume/time, with priority to volume. This means that if the water volume that can be softened is used before the day programmed for regeneration, this will occur in advance, but will respect the time set anyway.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

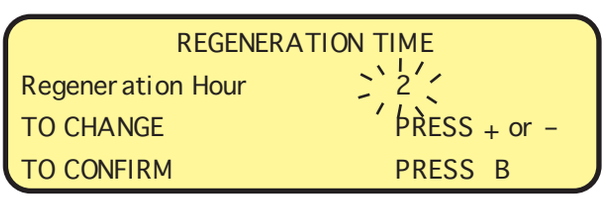
5.2 REGENERATION BY PURE VOLUME

- by pressing key [B] programming will automatically close and the main display is restored.

The softener will work by pure volume. This means that regeneration will be carried out as soon as the water volume that can be softened is reached.

5.3 REGENERATION BY VOLUME WITH TIME

the display below will be shown

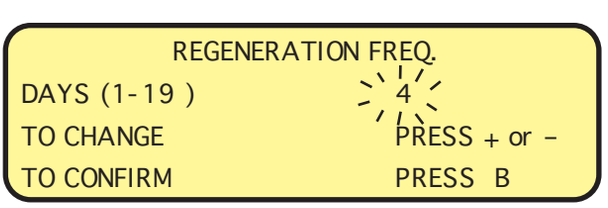


- press keys [+] and [-] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.
The softener will work by volume with time. This means that, when the water volume is reached, the regeneration will take place at the time set.

5.4 REGENERATION BY TIME

The display below will be shown

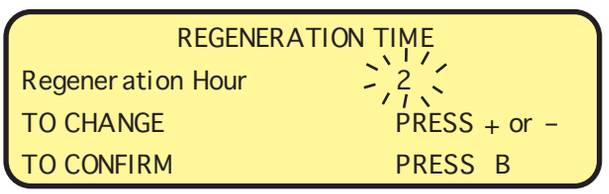


- press keys [+] and [-] to change regeneration frequency;

Set a value between 1 and 19 days.

- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

the display below will be shown



- press keys [+] and [-] to change regeneration time;
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

The softener will work by time. This means that regeneration will take place in the days interval programmed and at the time set.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

6. MANUAL REGENERATION

To carry out a manual regeneration:
From the main display press key [R]
the display below will be shown

MANUAL REGENERATION	
PHASE 1 *	06:00* *
PHASE SKIP	PRESS (R)
TEST END	PRESS >B<

* indicates which of the 4 regeneration phases is being carried out
* * indicates the duration in minutes of the regeneration phase that is being carried out.

– Once started, the manual regeneration will carry out the 4 phases and the softener will automatically restore the operating phase.

- press key [R] to skip a phase
It is possible to skip phases 1 - 2 - 3, but the phase 4 (rinse only) is necessarily carried out, then the softener automatically restores the operating phase.
To skip the first three phases, press key [R]. This key shall be pressed when the flashing writing "WAIT" is off.

- press key [B] to stop regeneration.
It is possible to stop regeneration, regardless of the phase that is being carried out. The rinse phase 4 is the only phase carried out, then the softener will automatically restore the operating phase.
To stop regeneration, it is necessary to press key [B].

Once the vessel A "ON" has finished regenerating, it is possible to carry out the regeneration of the vessel B "OFF" by repeating the above-mentioned procedure.

P.S.: The **ELECTRONIC TIMER VT 2000 AD** is fitted with a resins disinfection system. The presence of this system is indicated by the green LED always on (flashing during the second phase of each regeneration).

7. HOW TO SET IN-OUT HARDNESS

From the programming display, move the selection to the parameter "Hardness" with keys [+] and [−]
- press key [B] to confirm the selection
the display below will be shown

WATER HARDNESS	
HARDNESS	25 °f
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change hardness at the inlet (from 2 °f to 99 °f);
- press key [B] to confirm settings
the display below will be shown

RESIDUAL HARDNESS	
HARDNESS	15 °f
TO CHANGE	PRESS + or −
TO CONFIRM	PRESS B

- press keys [+] and [−] to change the hardness at the outlet (from 0 °f to 99 °f);
- press key [A] to come back to the previous selection, or
- press key [B] to confirm settings

Programming will automatically close and the main display is restored.

P.S. For potable use, the recommended regeneration interval is 4 days maximum.

8. HOW TO SET PRESSURE AT THE INLET OF THE SOFTENER

From the programming display, move the selection to the parameter "Pressure" with keys + and −
- press key B to confirm the selection
the display below will be shown

- press keys + and − to change pressure (between 2 and 6 bar)
- press key B to confirm settings

Programming will automatically close and the main display is restored.

P.S. To get an optimal regeneration, set in the timer the mains pressure of the water softener.

9. HOW TO SET THE EXHAUSTED SALT ALARM

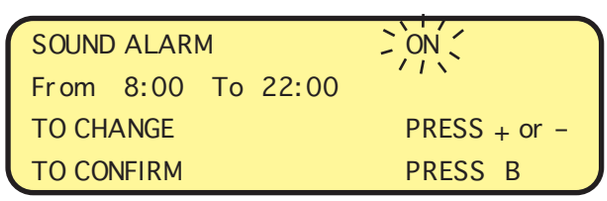
The Electronic Timer VT 2000 AD is fitted with an exhausted salt alarm system. This device starts when the salt amount is not enough for guaranteeing a total regeneration of the resins.
When this occurs, the red led is flashing and a sound alarm will be heard.

To stop the sound alarm, just press Key − (STOP ALARM).

P.S. Until the salt alarm is manually stopped, the softener will not carry out any further regeneration.

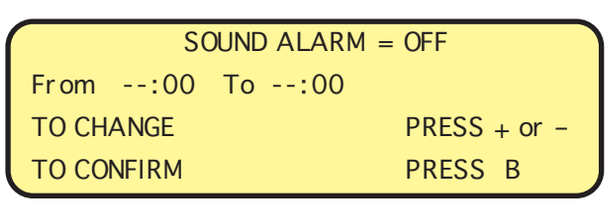
The sound alarm can be either deactivated (the alarm does not beep) or activated in a time interval (it beeps from X to Y).

From the programming display, move the selection to the parameter "Alarm" with keys + and −
- press key B to confirm the selection
the display below will be shown



- press keys + and − either to activate (= ON) or deactivate the alarm (= OFF)

9.1 SOUND ALARM = OFF

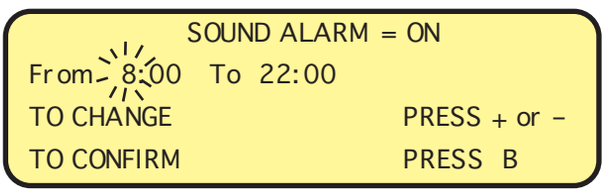


- press key B to confirm the selection

Programming will automatically close and the main display is restored.

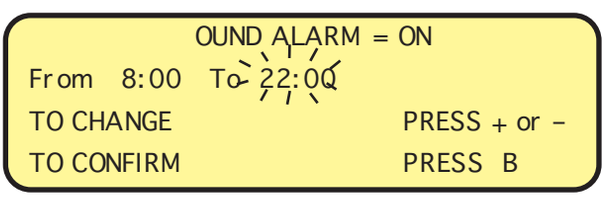
9.2 SOUND ALARM = ON

The starting time of the period when the sound alarm is allowed begins flashing (From).



- press keys [+] and [–] to change the period starting time
- press key [A] to come back to the previous selection, or
- press key [B] to confirm the setting

Then the ending time of the period when the sound alarm is allowed begins flashing (To).



- press keys [+] and [–] to change the period ending time
- press key [A] to come back to the previous selection, or
- press key [B] to confirm the setting

Programming will automatically close and the main display is restored.

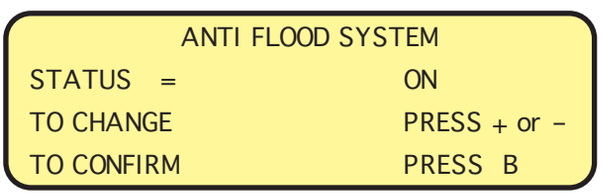
In the example shown, the sound alarm will start solely during the time period going from 8:00 to 22:00.
Values set: start from 0.00 to 21.00
end from 1.00 to 22.00

10. HOW TO SET ANTI FLOOD SYSTEM

(MODELS FITTED WITH ACCESSORY WATER SENTINEL OR WATER SENTINEL PRO ONLY)

From the programming display, move the selection on "Anti flood" with keys [+] and [–]

- Press key [A] to come back to the previous selection, or
- Press key [B] to confirm the setting.

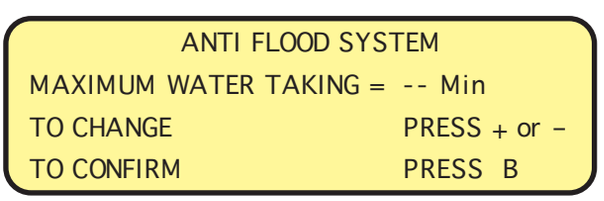


- press keys [+] and [–] either to deactivate (= OFF) or activate (= ON) the device Water Sentinel.

10.1 STATUS OF ANTI FLOOD SYSTEM = OFF

- Press key [A] to come back to the previous selection, or
- Press key [B] to confirm the setting

the display below will be shown



In this display it is not possible to modify data; press key [A] o come back to the previous display, or press key [B] to confirm the setting.
Programming will automatically close and the main display is restored.

10.2 STATUS OF ANTI FLOOD SYSTEM = ON

- Press key [A] to come back to the previous display, or
- Press key [B] to confirm the setting
the display below will be shown

ANTI FLOOD SYSTEM	
MAXIMUM WATER TAKING =	30 Min
TO CHANGE	PRESS + or –
TO CONFIRM	PRESS B

- press keys [+] and [–] to change the maximum taking time (from 5 to 90 minutes; default value = 30 minutes) of the anti flood system. The system will block water supply when it detects a continuous flow for a time longer than the one set.
- Press key [B] o confirm the setting.

- **Softeners fitted with accessory Water Sentinel**
Programming automatically closes and the main display is restored.

- **Softeners fitted with accessory Water Sentinel Pro**
Programming carries on for setting the micro leak detection.

the display below will be shown

MICRO LEAK	
STATUS =	ON
TO CHANGE	PRESS + or –
TO CONFIRM	PRESS B

- press keys [+] and [–] either to deactivate (= OFF) or activate (= ON) the micro leak detection by the system Water Sentinel Pro.

10.3 STATUS OF MICRO LEAK = OFF

- Press key [A] o come back to the previous display, or
- Press key [B] to confirm the setting.
the display below will be shown

MICRO LEAK	
TEST DURATION	-- Sec
TO CHANGE	PRESS + or –
TO CONFIRM	PRESS B

In this display it is not possible to modify data; press key [A] to come back to the previous display, or press key [B] o confirm the setting.
Programming will automatically close and the main display is restored.

10.4 STATUS OF MICRO LEAK = ON

- Press key [A] to come back to the previous display, or
- Press key [B] to confirm the setting.
the display below will be shown

MICRO LEAK	
TEST DURATION =	10 Sec
TO CHANGE	PRESS + or –
TO CONFIRM	PRESS B

- press keys [+] and [–] to change the duration of the micro leak detection test (from 5 to 120 seconds; default value = 10 seconds).

As soon as you close the last tap open, every 2 hours the system Water Sentinel Pro carries out a duration test lasting for the time set. Test is repeated three times and in case of micro leaks the alarm message "MICRO LEAK ALARM" is displayed.

- Press key [A] to come back to the previous display, or
- Press key [B] to confirm the setting.

Programming will automatically close and the main display is restored.

11. HOW TO DISPLAY REGENERATIONS

The **ELECTRONIC TIMER VT 2000** allows to display data about the regenerations to be carried out and already carried out:
– Press [B] from the main display

1) NEXT REGEN. (Days) DAYS: 4
2) last regen. (Days) DAYS: 0
3) REGENERATIONS 00001
NEXT PUSH B

– Press [B] to come back to the main display.

1) how many days are still there before next regeneration.
2) how many days have passed from last regeneration.
3) how many regenerations have been carried out.

12. OW TO DISPLAY STANDARD SETTINGS

The **ELECTRONIC TIMER VT 2000** allows to display standard settings programmed.
Press key [B] from the regenerations display the display below will be shown

1 SOFTENER VER_2.8
2 MASTER 30-Lt 3
4 i/L = 14/OFF
5 CHLORINE = ELECTR. BY=Manu 6

The information displayed may vary according to the softener configuration.
- press keys [A] or [B] to come back to the main display.

1) Microprocessor version
2) Monocolumn or master/ slave
3) Litres of resin that can be set or free
4) Ratios impulses per litre/ water meter
5) Chlorine off/ Electrodes/ Pump
6) Manual/ automatic by-pass

SYSTEM CONFIGURATION

Unlike the previous model, the new timer VT2000 has no Dip-switches and the system configuration is to be carried out through the keyboard as follows:
- plug the transformer by keeping key B, pressed, then leave it as soon as the display shows the standard setting.

display **1**

```
1 ADDOLCITORE VER_2.8
2 MASTER                    30-Lt      3
4 i/L = 14/OFF
5 CLORO = ELETTR.           BY=Manu    6
```

1) Microprocessor version
2) Monocolumn or master/ slave
3) Litres of resin that can be set or free
4) Ratios impulses per litre/ water meter
5) Chlorine off/ Electrodes/ Pump
6) Manual/ automatic by-pass

- **to enter configuration press key A within 20 seconds.**

display **2**

```
CONFIGURAZIONE
SISTEMA  =          ADDOLCITORE
PER VARIARE         PREMI + o -
PER CONFERMA        PREMI  B
```

On this display it is possible to set the system either in mode SOFTENER or COLUMN FILTER by pressing keys + / -,

- to confirm press key B;

display **3**

```
CONFIGURAZIONE
SISTEMA  =          MONO
PER VARIARE         PREMI + o -
PER CONFERMA        PREMI  B
```

On this display it is possible to set the system either in mode MONOCOLUMN or TWO-COLUMN (MASTER/ SLAVE) by pressing keys + / -,
- to confirm press key B;
- to scroll back press key A.

By pressing key B you carry on with the configuration.

DUPLEX ONLY

```
CONFIGURAZIONE
VALVOLE  =          1
PER VARIARE         PREMI + o -
PER CONFERMA        PREMI  B
```

Set the number of valves, 1 or 5 (stand by) by pressing keys + / -,

- to confirm press key B B;

- to scroll back press key A.

By pressing key B you carry on with the configuration.

```
CONFIGURAZIONE
CONTALITRI  =       A E B
PER VARIARE         PREMI + o -
PER CONFERMA        PREMI  B
```

Set the number of water meters A and B if installed in both vessels. A is single if the water meter is installed in the vessel MASTER only, by pressing keys + / -,
- to confirm press key B;
- to scroll back press key A.

By pressing key B you carry on with the configuration.

display **4**

```
CONFIGURAZIONE
BOMBOLA  =          lt di resina
PER VARIARE         PREMI + o -
PER CONFERMA        PREMI  B
```

On this display it is possible to set the litres of resin (See Table page 12/61) o the litres of filter media (See Table page 12/60) by pressing keys + /,
- to confirm press key B;
- to scroll back press key A.

By pressing key [B] you carry on with the configuration.

display **5**

CONFIGURAZIONE	
CAPACITA' CICLICA =	6000
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the exchange capacity of the resin (6.000 is the default value) of the softener by pressing keys [+] / [-],
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

Note: in the configuration of column filters the display 6 is shown and the display 5 is skipped.

display **6**

CONFIGURAZIONE	
OVERFLOW =	4680 lt/h
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the alarm for the peak flow rate exceeding by pressing keys [+] / [-],
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **7**

CONFIGURAZIONE	
IMPULSI PER LITRO =	14
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the reading ratio between the turbine and the water meter sensor (impulses per litre for regeneration by volume).
In the water softeners of the domestic line (up to 500 litres of resin) this ratio is equal to 14.
In the volumetric water softeners of the industrial line, this value is determined by the water meter with impulse sender.

Value per litre	Value that can be set from 1 to 60

To change the impulses per litre into litres per impulse it is necessary to set the value of impulses per litre = 1 and press key [-].

Litres per impulse	Value that can be set from 1 to 25

To change the litres per impulse into impulses per litre it is necessary to set the value of litres per impulse = 25 and press key [+].
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **8**

CONFIGURAZIONE	
ANTIRIMBALZO =	OFF
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the anti bounce system OFF or ON:
OFF when volume is controlled by the water meter turbine (models up to 500 litres);
ON when volume is controlled by the water meter with impulse sender (industrial models).
- press keys [+] / [-] to select the choice;
- o confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **9**

CONFIGURAZIONE	
BY-PASS =	manuale / automatico
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the system according to the installed mixing by-pass, either manual or automatic, by pressing keys [+] / [-];
- to confirm press key [B];

- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **10**

CONFIGURAZIONE	
CLORO =	OFF
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the disinfection system, which can be OFF/ Electrodes/ Pump. If you select OFF, you disable both the disinfection system and the exhausted salt alarm, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **11**

CONFIGURAZIONE	
TARATURA ASPIRAZ. SALAMOIA = NO	
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to modify the calibration of brine suction. The setting YES is for industrial systems only (see manual "Industrial systems"). Set NO for systems up to 500 litres of resin, by pressing keys [+] / [-];

- to confirm press key [B];
- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **12**

CONFIGURAZIONE	
DUREZZA =	°F
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the unit of measure of hardness either in °f (French degree) or mml = millimoles (1 millimol is equal to 10 °f), by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **13**

CONFIGURAZIONE	
OPTIONAL =	NESSUNO
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the following OPTIONALS:
- none
- anti flood system for Water Sentinel units
- anti flood system pro (P) for Water Sentinel Pro units
- sensor for micro leaks.

Select the optional installed by pressing [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **14**

CONFIGURAZIONE	
RETE =	50Hz
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to modify the value of the power frequency (50 or 60 Hz), depending on the one supplied, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].
By pressing key [B] you carry on with the configuration.

display **15**

CONFIGURAZIONE	
OVERFLOW =	HELP-OFF
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the OVERFLOW mode (flow rates exceeding) depending on the use of the softener:

Help-Off = off
Technical use <OS = steam generators
Technical use >OS = technical uses where hardness at outlet must be above 2 °f
Potable = 15 °f , see tables about flow rates.

- to confirm press key **B**;
- to scroll back press key **A**.

By pressing key **B** you carry on with the configuration.

display **16**

CONFIGURAZIONE	
OCOEFIC. 2 BAR =	1.00
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
OCOEFIC. 3 BAR =	0.85
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
OCOEFIC. 4 BAR =	0.70
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
OCOEFIC. 5 BAR =	0.65
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
OCOEFIC. 6 BAR =	0.60
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On these displays it is possible to modify the correction coefficient of regeneration times; it is also possible to modify the duration of the second phase by setting a coefficient lower than 1, depending on the mains pressure at the inlet of the softener, by pressing keys (+) / (-);

- to confirm press key **B**;
- to scroll back press key **A**.

By pressing key B you carry on with the configuration.

In this way it is possible to optimise the water consumptions of the second and third phases, which depend on the water pressure of the system (pre-set values which cannot be modified).

By pressing key **B** you carry on with the configuration.

FREE CONFIGURATION

From the system configuration (display 2), press [B] ntil the display 4 (vessel configuration) is shown. Press key [+] and keep it pressed until the following display is shown.

display **17**

CONFIGURAZIONE	
BOMBOLA =	FREE
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

To choose the FREE configuration confirm with key [B], the following display will be shown

display **18**

CONFIGURAZIONE	
LITRI DI RESINA =	60
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the litres of resin of the softener from 5 to 5000, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **19**

CONFIGURAZIONE	
CAPACITA' CICLICA =	60000
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to change the cyclic capacity by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **20**

CONFIGURAZIONE	
FASE 1 =	min. 8
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
FASE 2 =	min. 16
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
FASE 3 =	min. 18
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
FASE 4 =	min. 6
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On these displays it is possible to set the duration of the single regeneration phases in minutes, by pressing keys [+] / [-];
- to confirm each display press key [B];

By pressing key [B] you carry on with the configuration.

display **21**

CONFIGURAZIONE	
OVERFLOW =	4680 lt/h
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the OVERFLOW mode, sound alarm when exceeding the flow rate per hour in litres/hour (see tables); by pressing keys [+] / [-]; the value can be modified.
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **22**

CONFIGURAZIONE	
IMPULSI PER LITRO =	14
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the reading ratio between the turbine and the water meter sensor (impulses per litre for regeneration by volume) by pressing keys [+] / [-], (14 impulses per litre for water softeners up to 500 litres of resin, other according to the water meter with impulse sender);
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **23**

CONFIGURAZIONE	
ANTIRIMBALZO =	OFF
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the anti-bounce system OFF or ON:
OFF when volume is controlled by the water meter turbine (models up to 500 litres);
ON when volume is controlled by the water meter with impulse sender (industrial models).
- press keys [+] / [-] to select the choice;
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

MONOCOLUMN SOFTENERS ONLY

display **24**

CONFIGURAZIONE	
BY-PASS =	manuale / automatico
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the system according to the installed mixing by-pass, either manual or automatic, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **25**

CONFIGURAZIONE	
CLORO =	OFF/Elettrodi/Pompa
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the disinfection system, which can be OFF/ Electrodes/ Pump. If you select OFF, you disable both the disinfection system and the exhausted salt alarm, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **26**

CONFIGURAZIONE	
TARATURA ASPIRAZ.	
SALAMOIA =	SI / NO
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to modify the calibration of brine suction. This calibration (YES) is for industrial systems only (see manual "Industrial systems").
Set (NO) for systems up to 500 litres of resin, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **27**

CONFIGURAZIONE	
DUREZZA =	°F / MM²
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to set the unit of measure of hardness either in °f (French degree) or mml = millimoles (1 millimol is equal to 10 °f), by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **28**

CONFIGURAZIONE	
OPTIONAL:	ANTIALLAGAMENTO
OPTIONAL:	SENS. BAGNATO
OPTIONAL:	ANTIALLAGAMENTO
OPTIONAL:	NESSUNA

On this display it is possible to set the following OPTIONALS:
- none
- anti flood
- anti flood pro
- sensor for micro leaks.

Select the optional installed by pressing [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

Videata **29**

CONFIGURAZIONE	
RETE =	50Hz / 60Hz
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On this display it is possible to modify the value of the power frequency (50 or 60 Hz), depending on the one supplied, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **30**

CONFIGURAZIONE	
COEFIC. 2 BAR =	1.00
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
COEFIC. 3 BAR =	0.85
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
COEFIC. 42 BAR =	0.70
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
COEFIC. 5 BAR =	0.65
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

CONFIGURAZIONE	
COEFIC. 6 BAR =	0.60
PER VARIARE	PREMI + o -
PER CONFERMA	PREMI B

On these displays it is possible to modify the correction coefficient of regeneration times according to the mains pressure at the inlet of the softener, by pressing keys [+] / [-];
- to confirm press key [B];
- to scroll back press key [A].

By pressing key [B] you carry on with the configuration.

display **31**

CONFIGURAZIONE	
2ª FASE PARZIALE =	1.00
PER VARIARE	PREMI + o –
PER CONFERMA	PREMI B

CONFIGURAZIONE	
3ª FASE PARZIALE =	0.00
PER VARIARE	PREMI + o –
PER CONFERMA	PREMI B

On these displays it is possible to set the cut coefficient of the second partial phase; if the softener has not supplied more than 50% of the water which could have treated, when it regenerates automatically, it carries out an economic (partial) regeneration where the second phase is reduced and the third phase is completely skipped (coefficient = 0). Press keys [+] / [–] to modify this coefficient;

- to confirm press key [B];
- to scroll back press key [A].

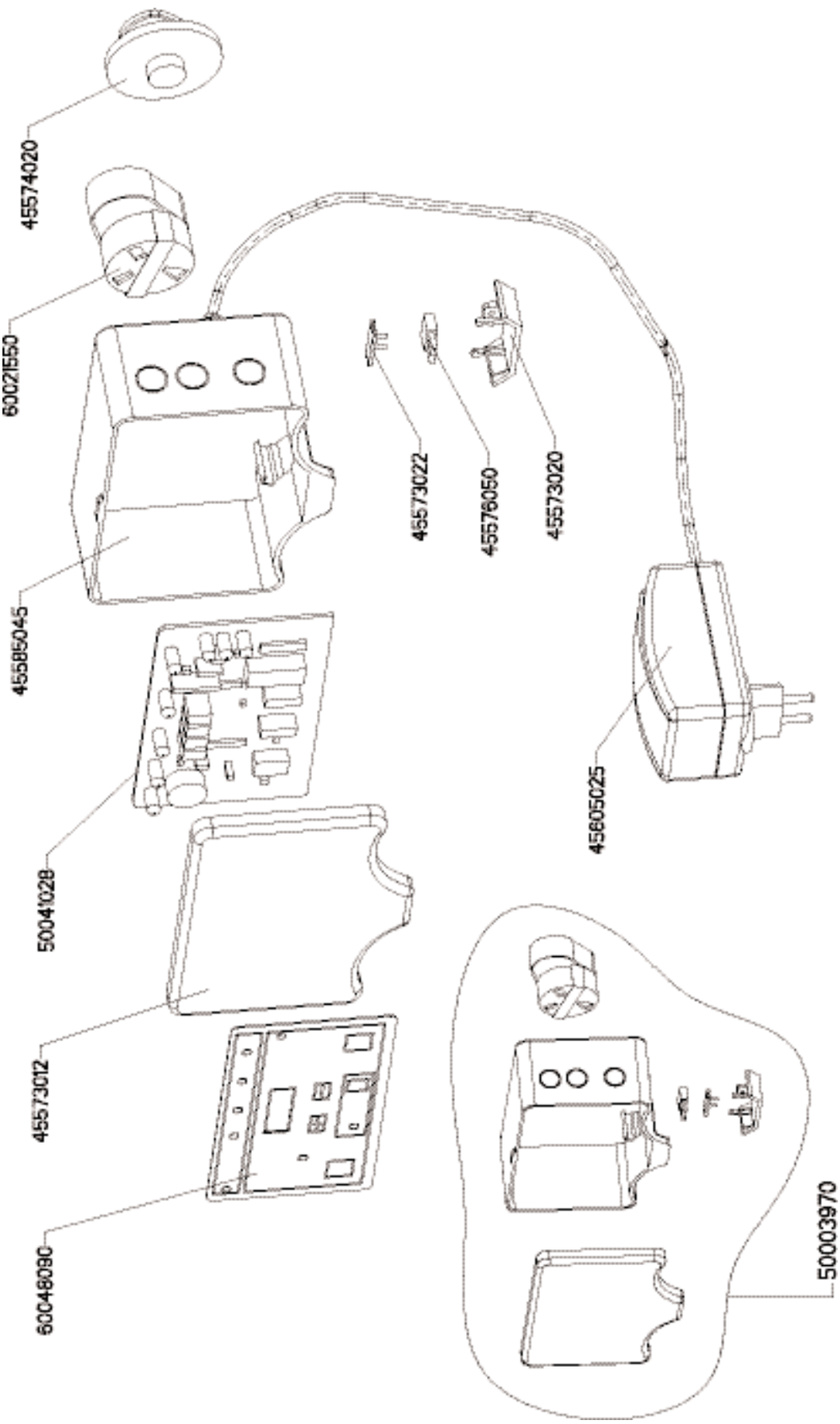
By pressing key [B] the operating display is restored.

It is possible to set the following litres of resin:

OVERFLOW table

Models	Technical use <0.5°f - l/h	Technical use >0.5f - l/h	Potable use l/h
5 litres	60	180	480
8 litres	96	288	770
10 litres	120	360	960
15 litres	180	540	1440
20 litres	240	780	1920
25 litres	300	960	2400
30 litres	360	1140	2880
35 litres	420	1260	3360
45 litres	480	1680	3600
60 litres	600	2280	4860
75 litres	840	2820	6060
110 litres	1200	4140	7020
110/M litres	1200	4140	7200
110/B litres	1200	4140	9000
140 litres	1560	5280	7020
140/M litres	1560	5280	9060
140/B litres	1560	5280	10400
200 litres	2220	7500	7020
200/M litres	2220	7500	9600
200/B litres	2220	7500	11280
250/M litres	2760	9360	9600
250/B litres	2760	9360	14100
320/B litres	3540	12000	15480
500/B litres	5580	18780	21000

TIMER ET 500 code 60045031



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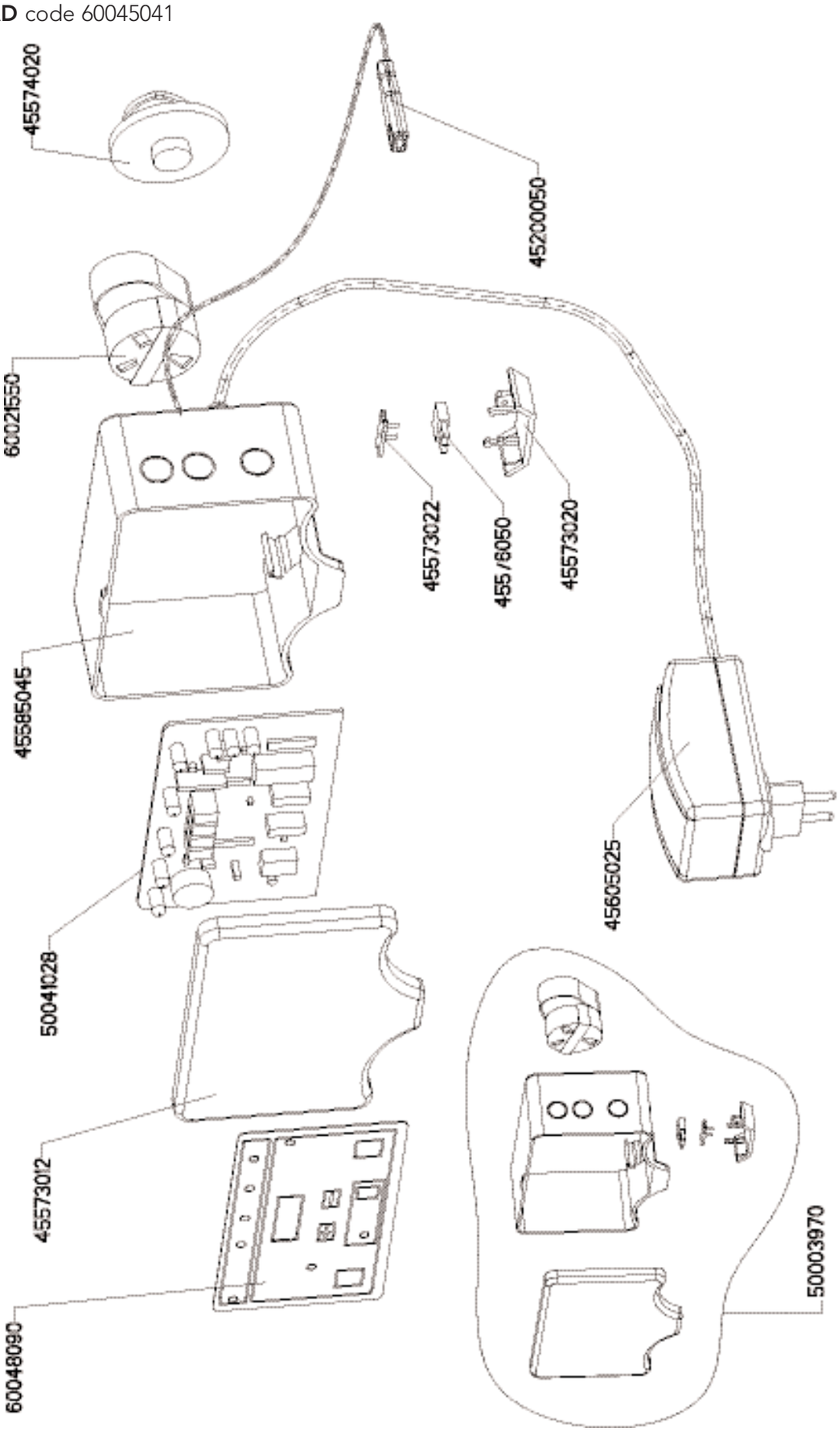

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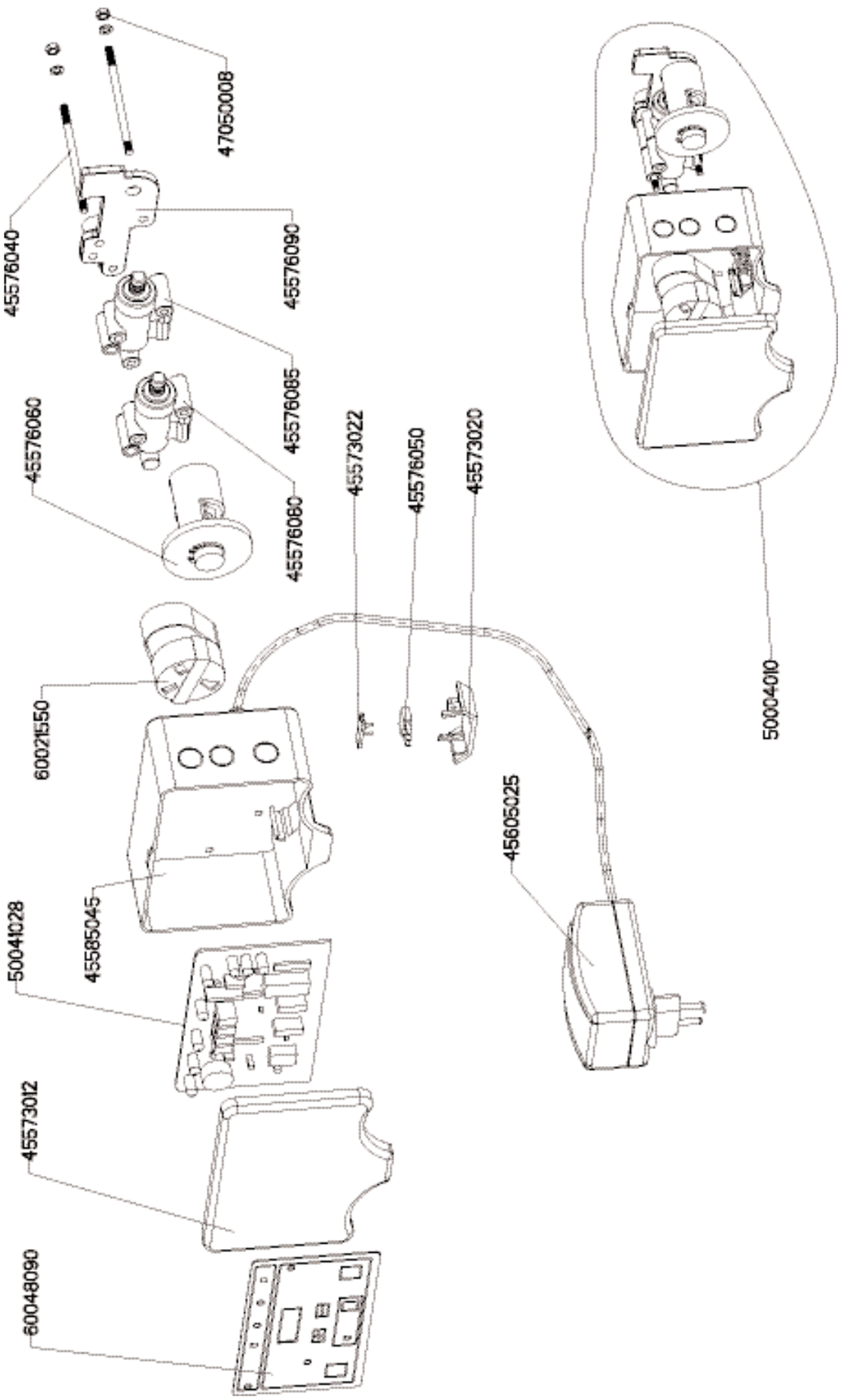

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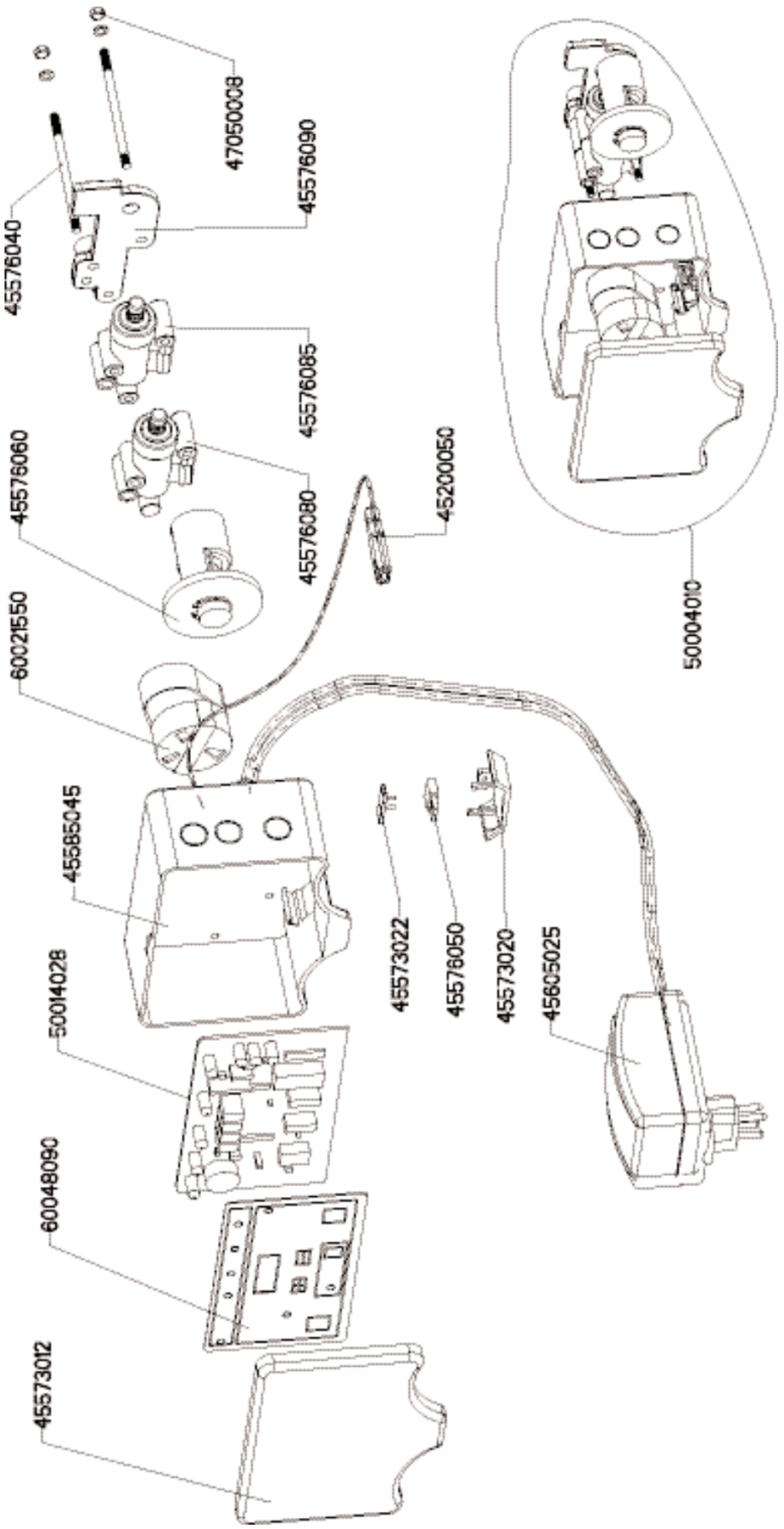

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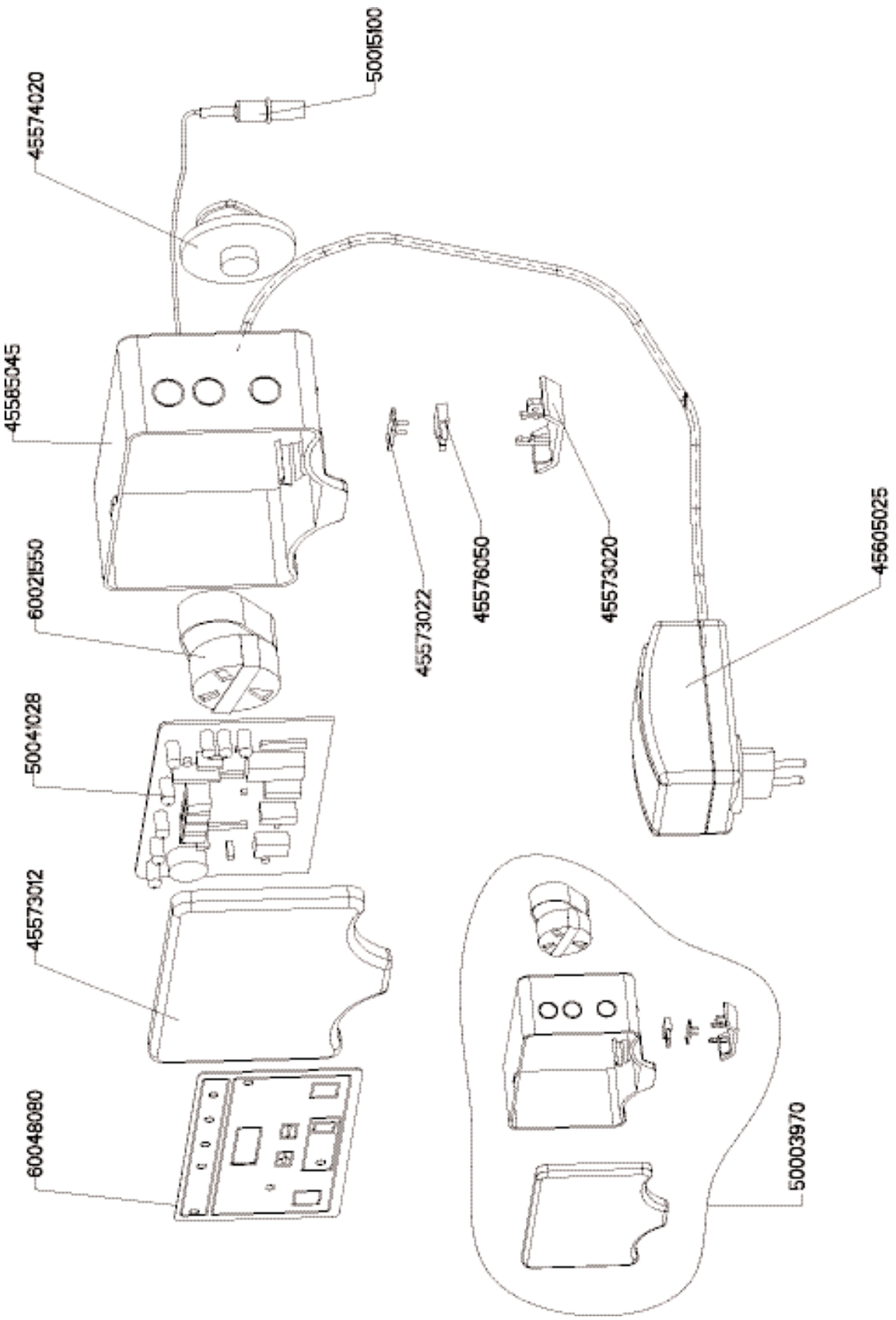

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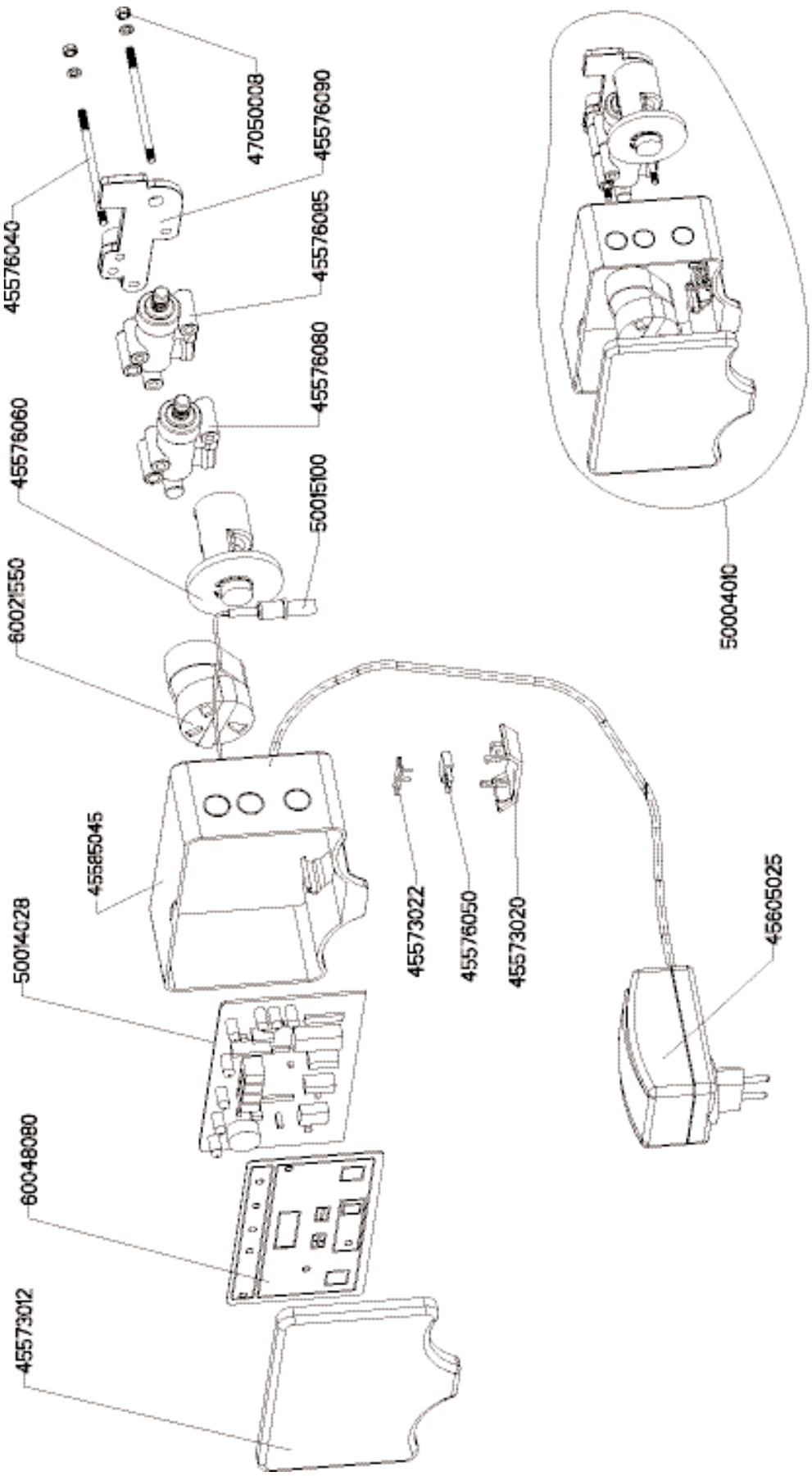

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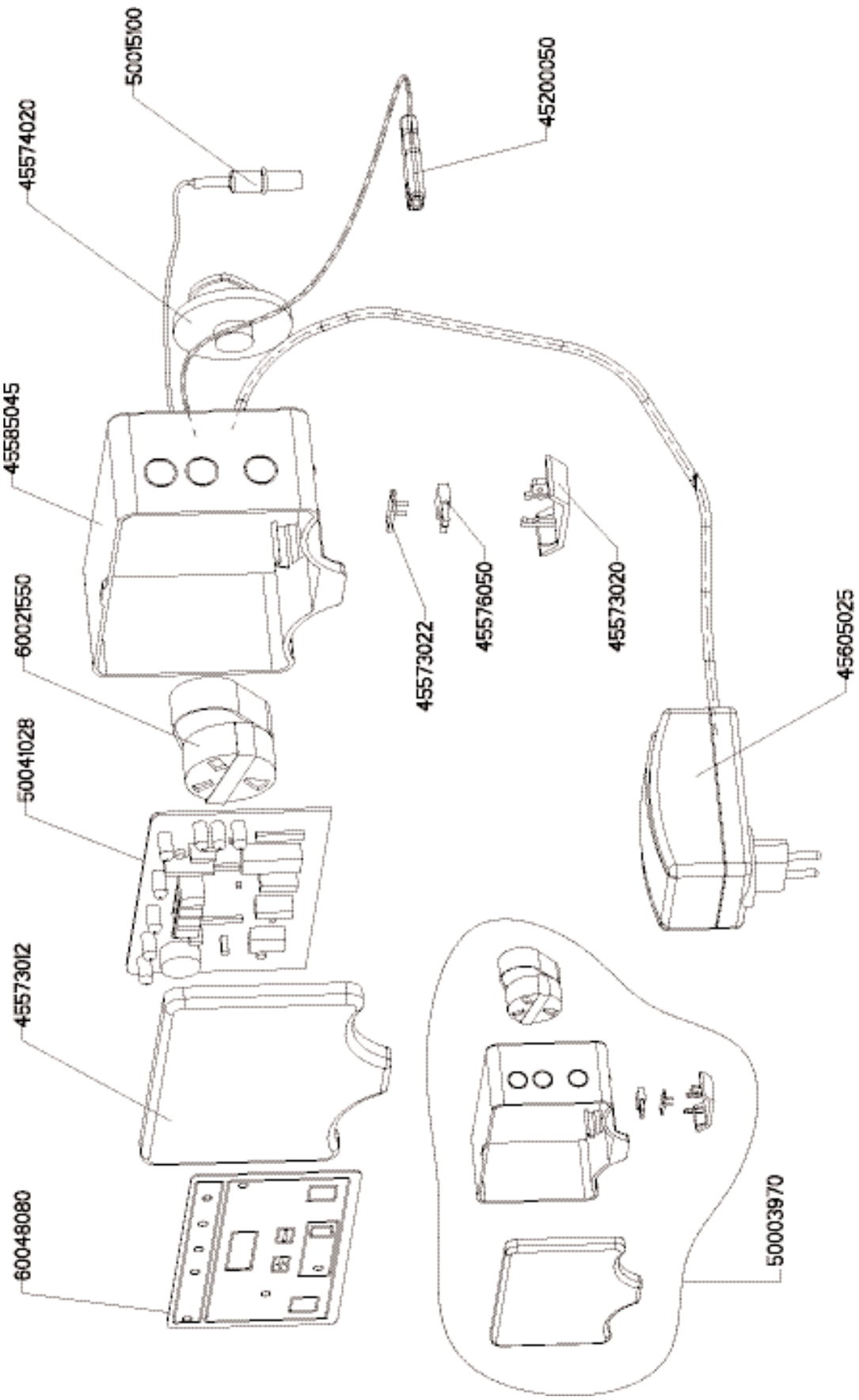

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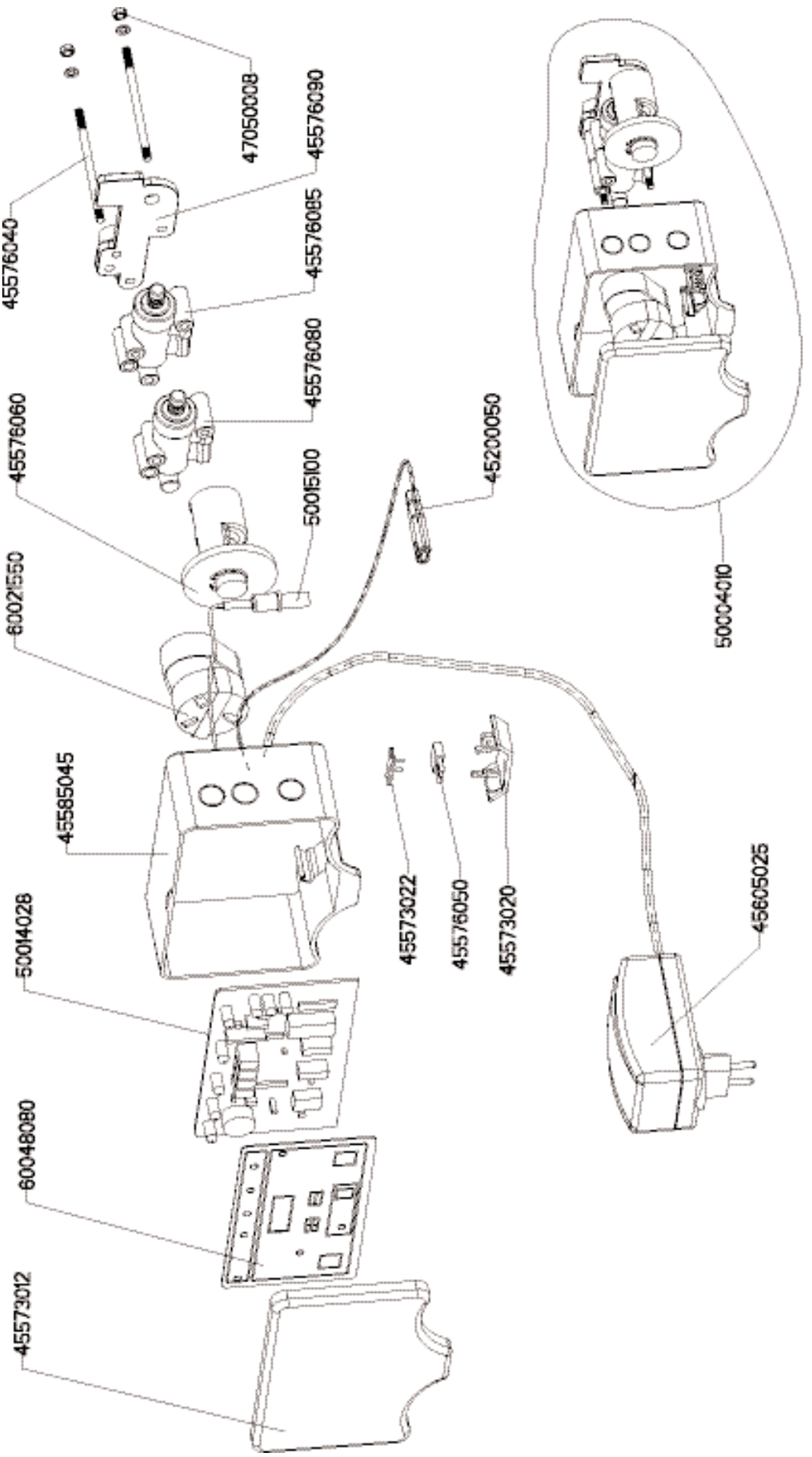

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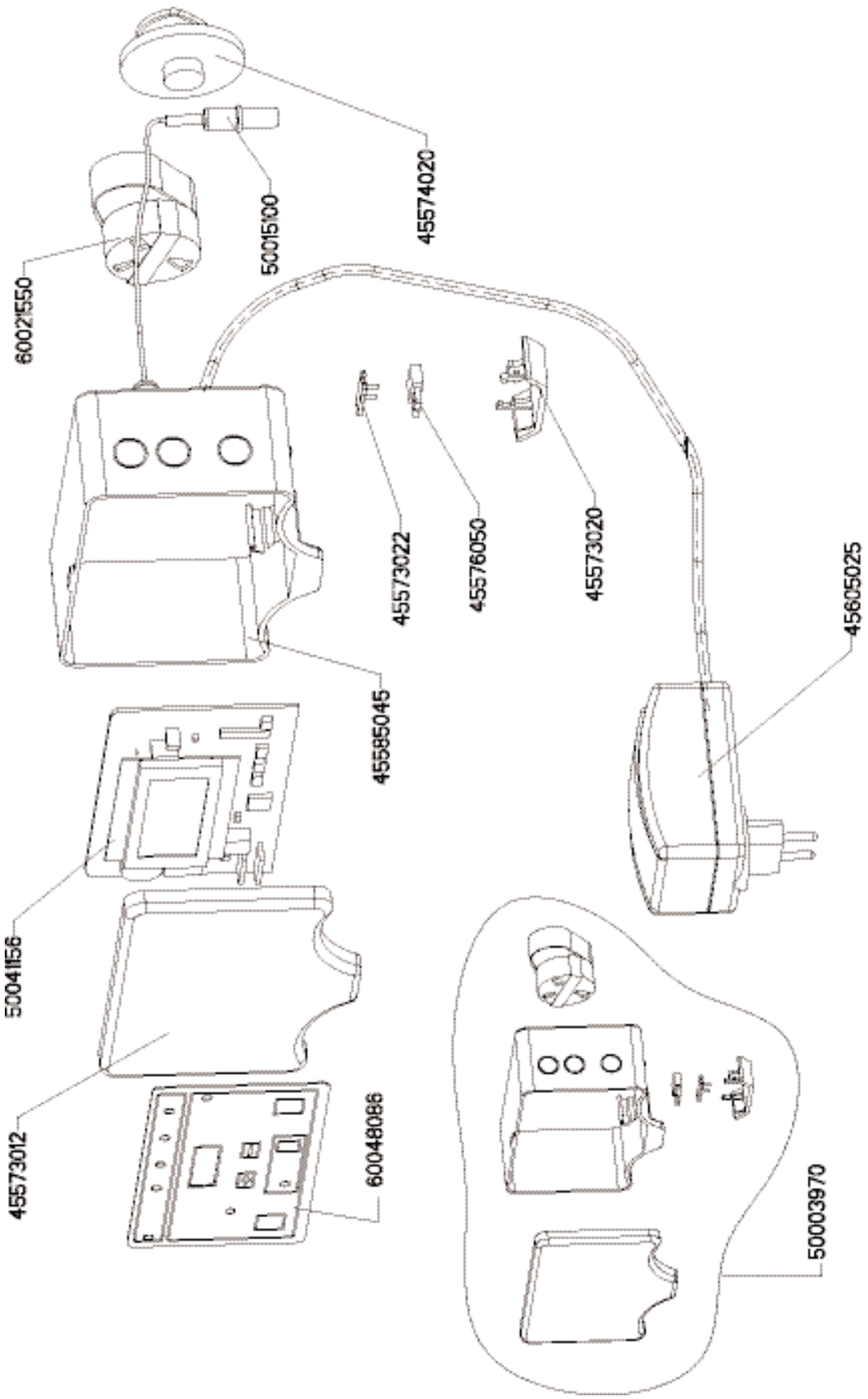

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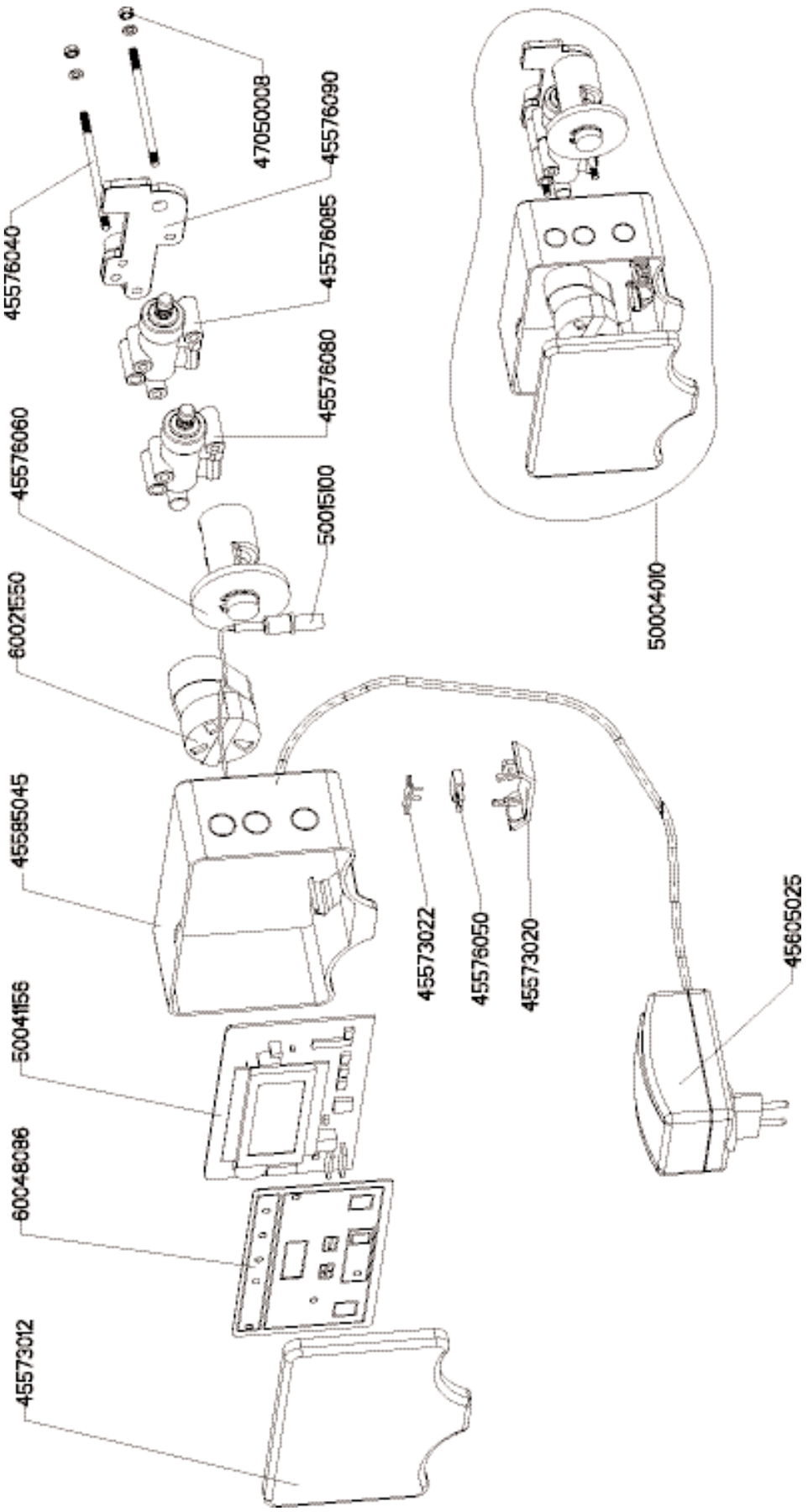

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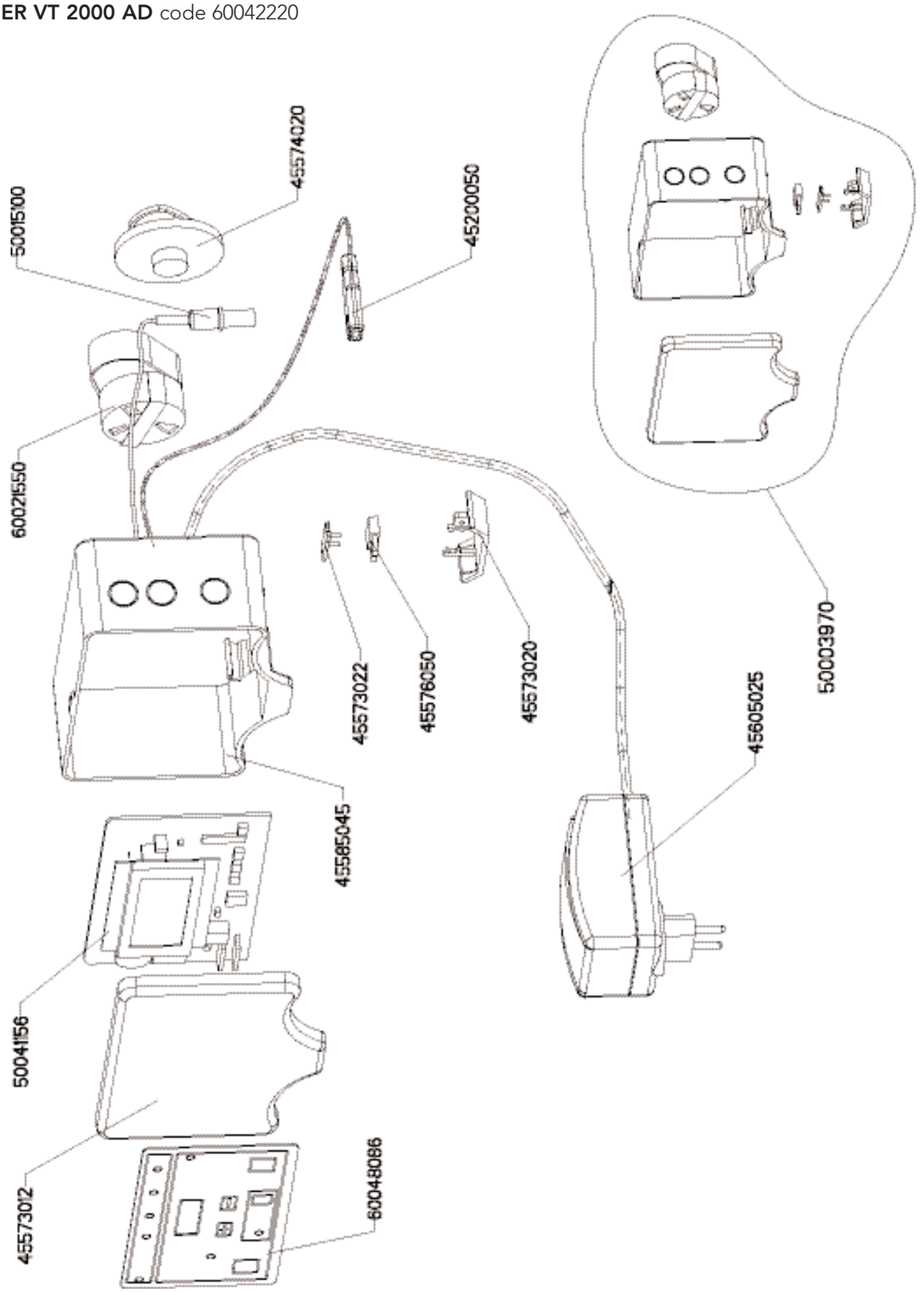

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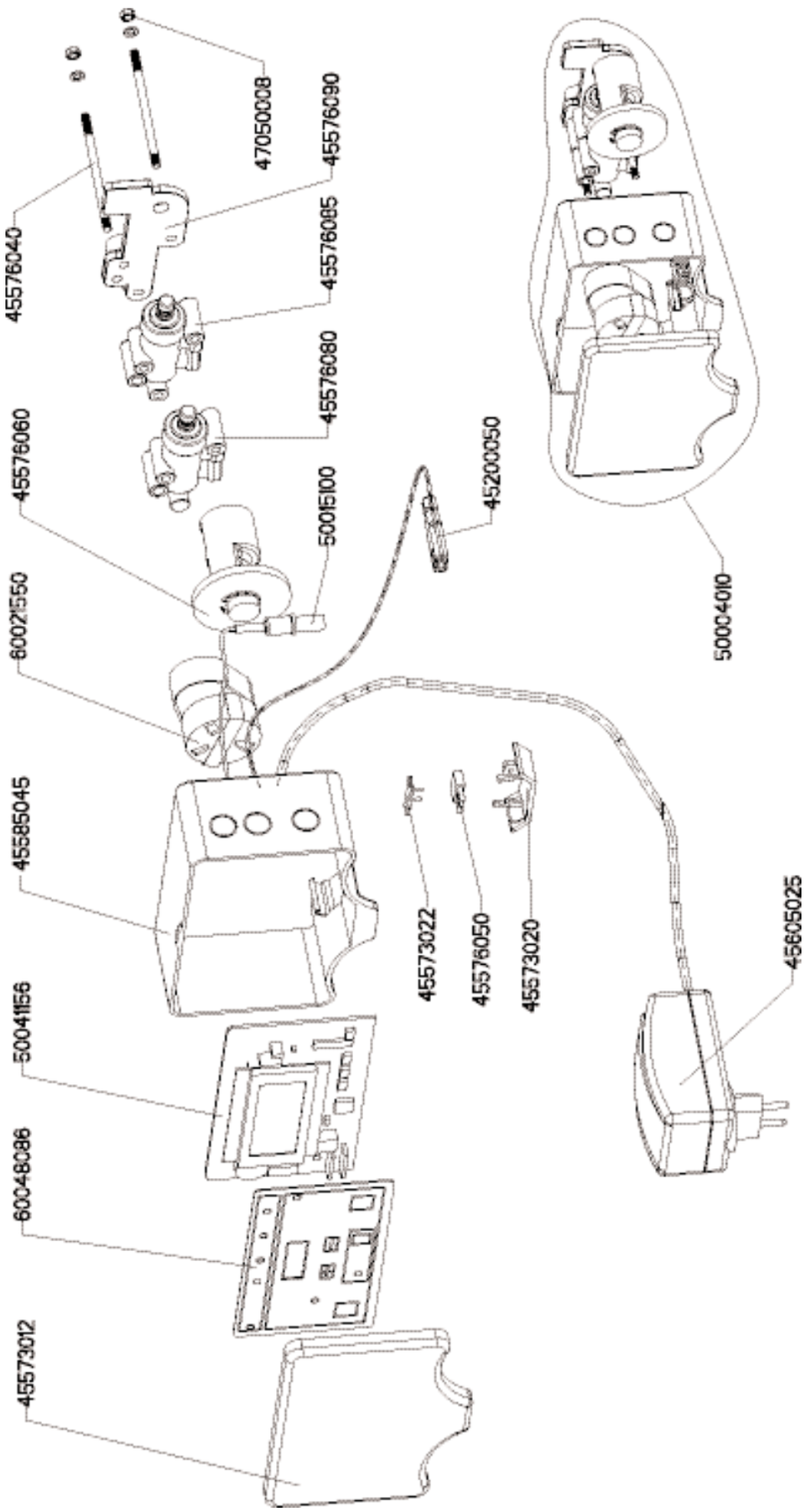

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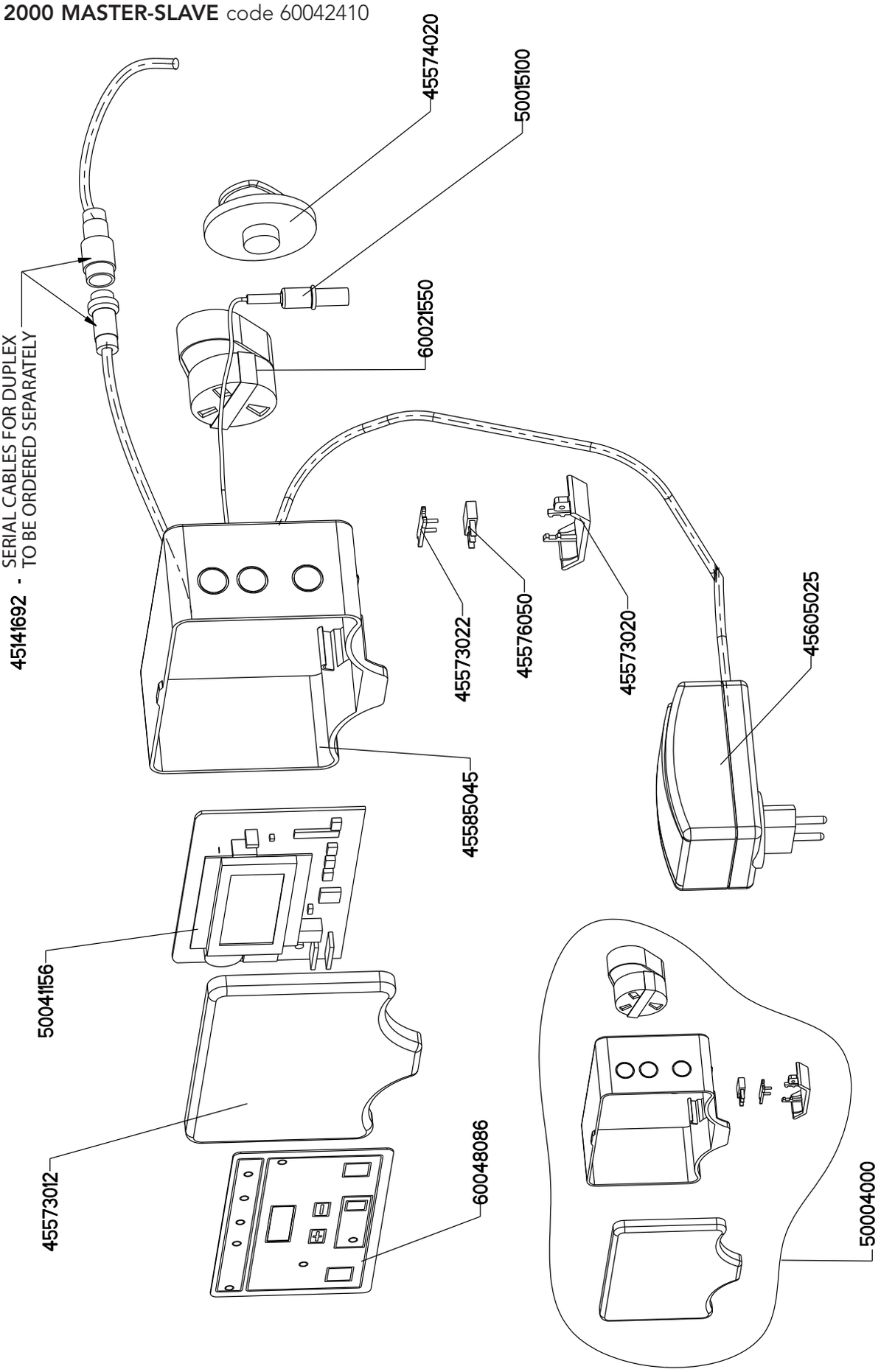

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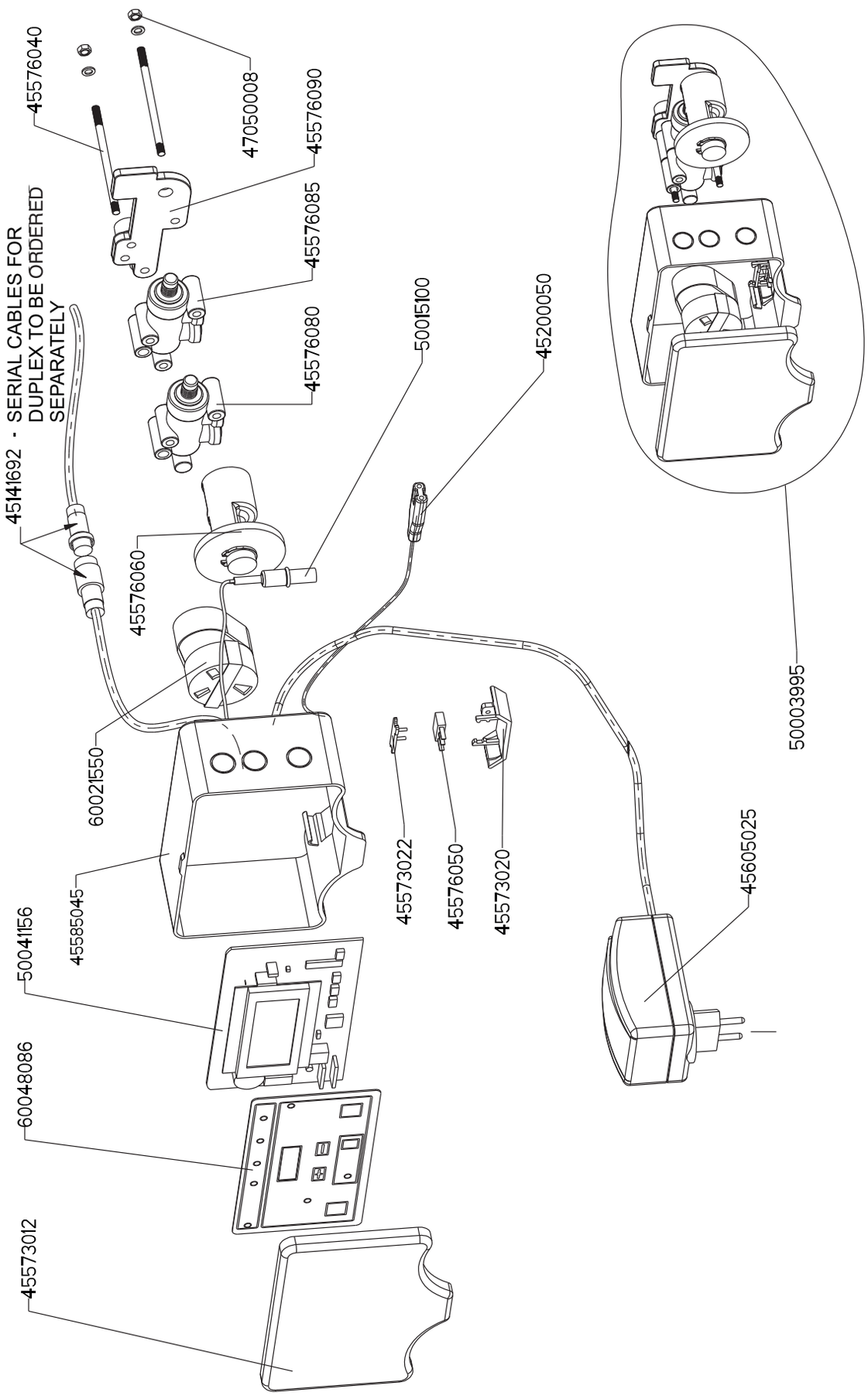

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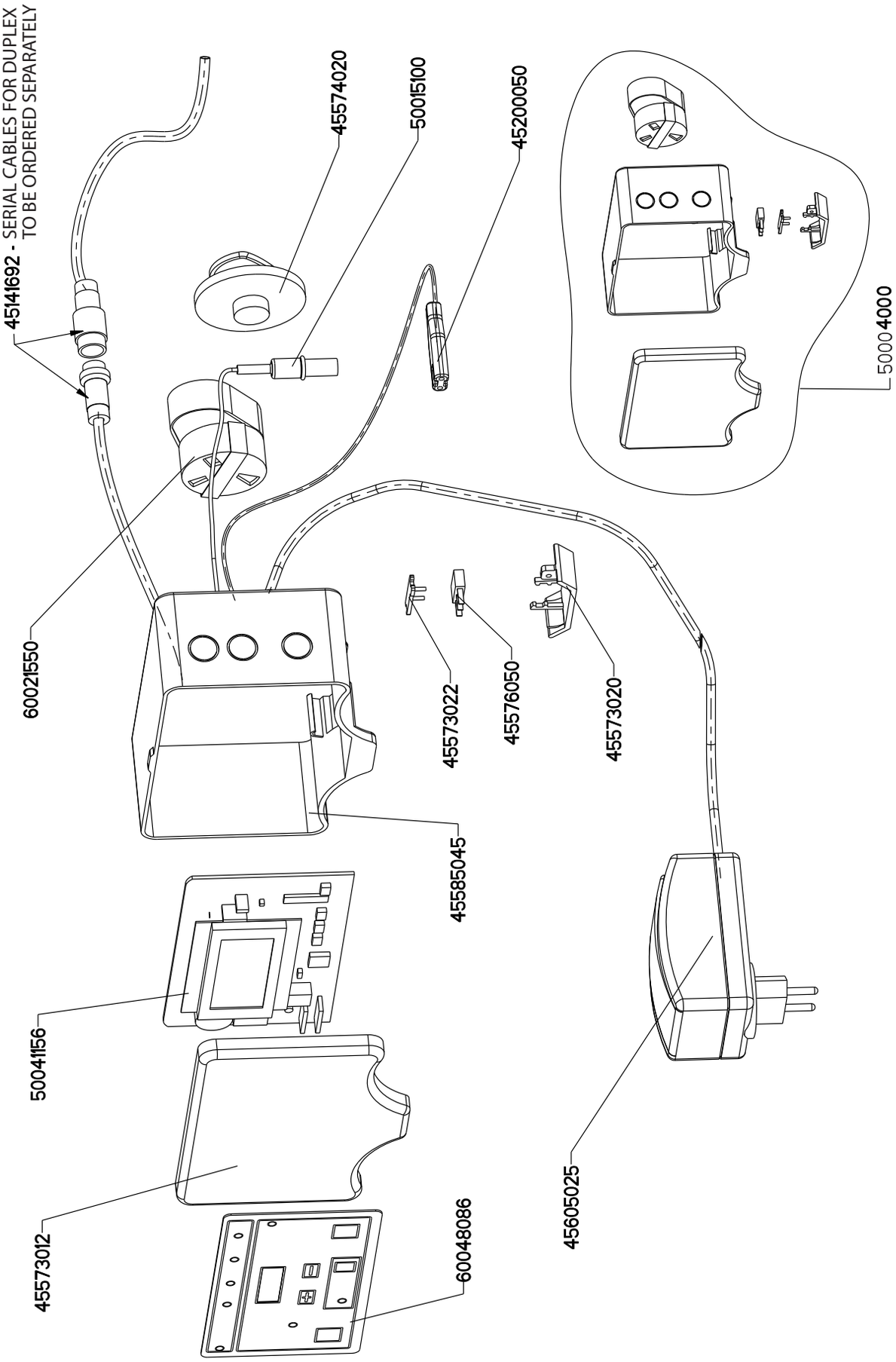

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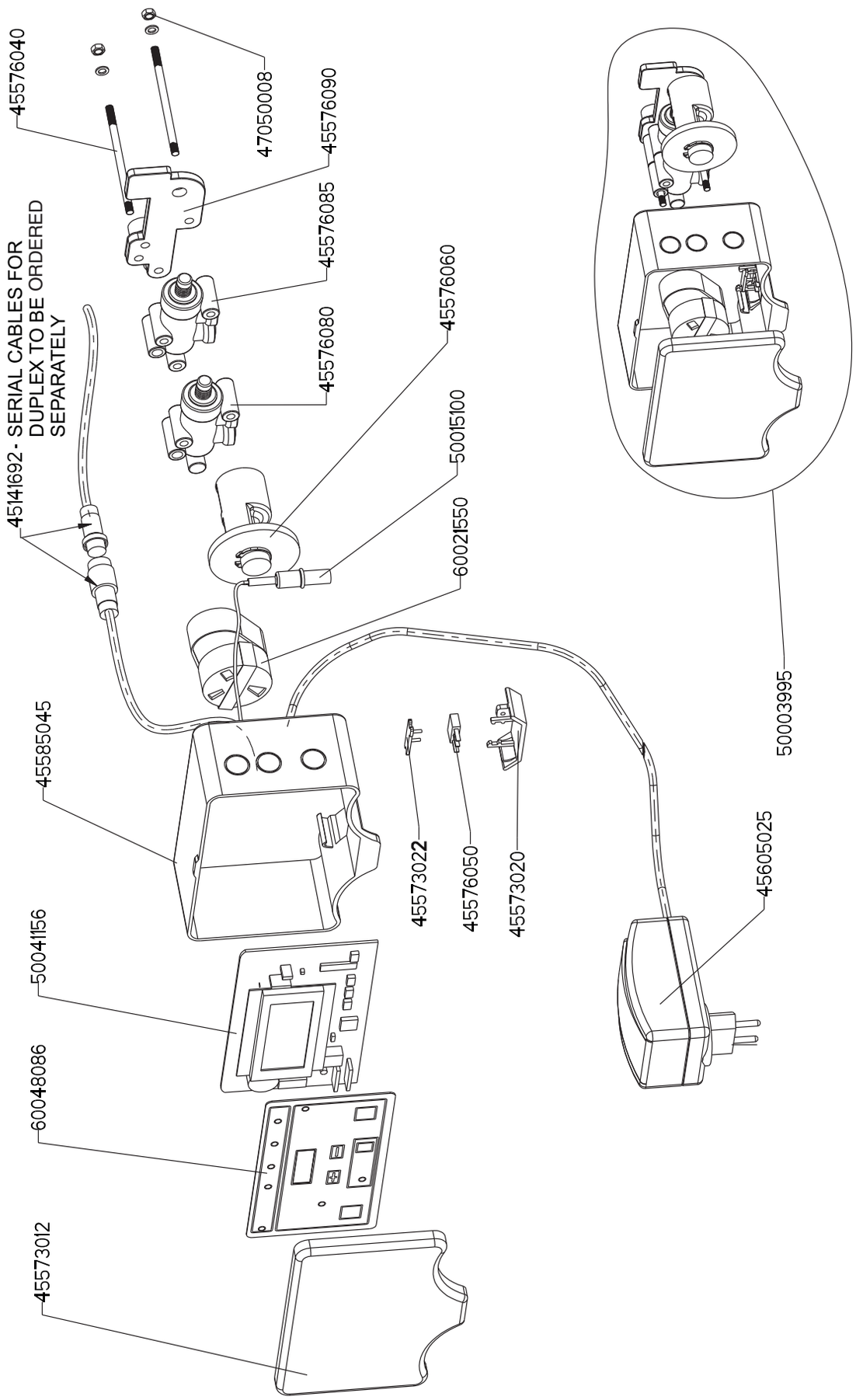

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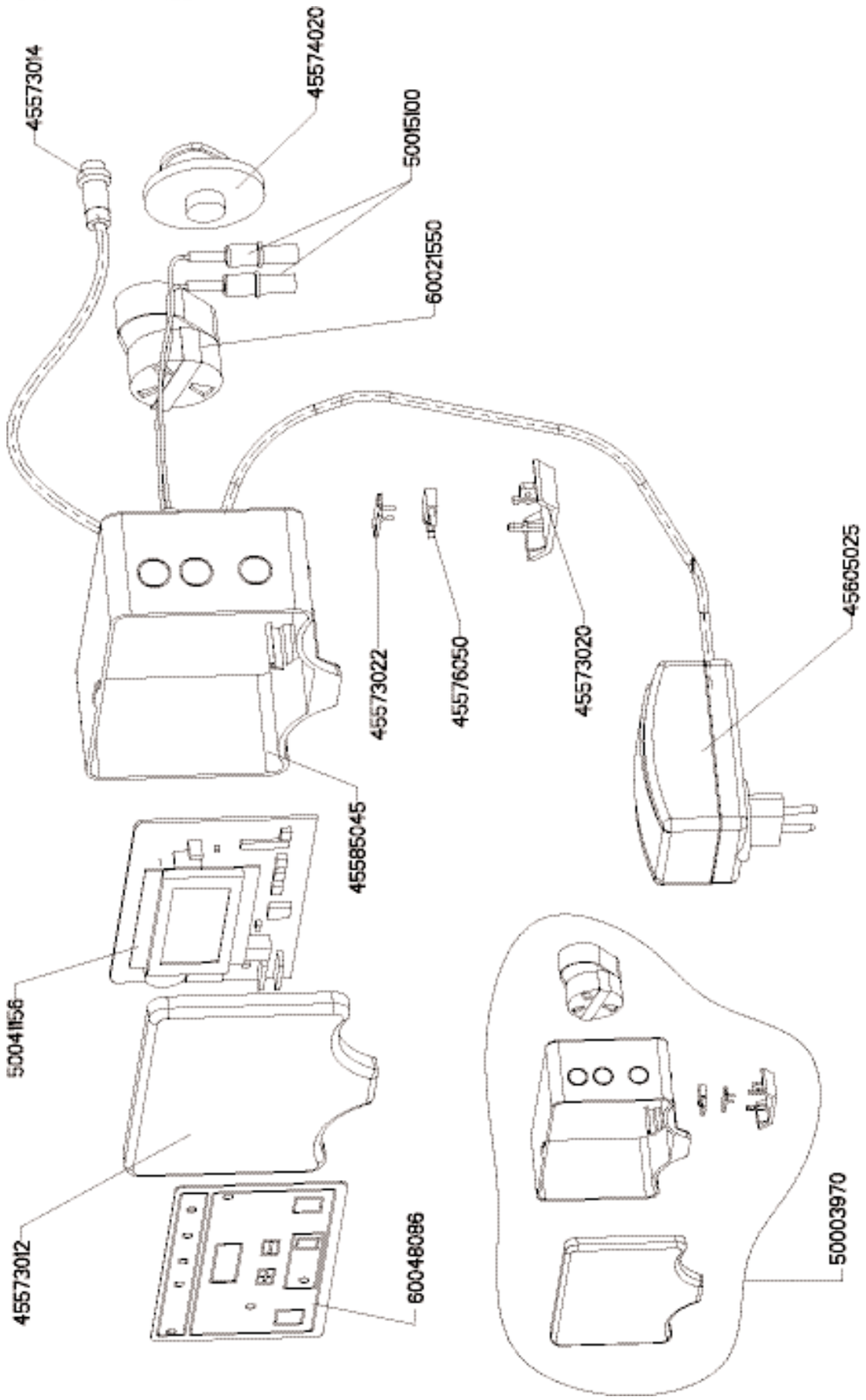

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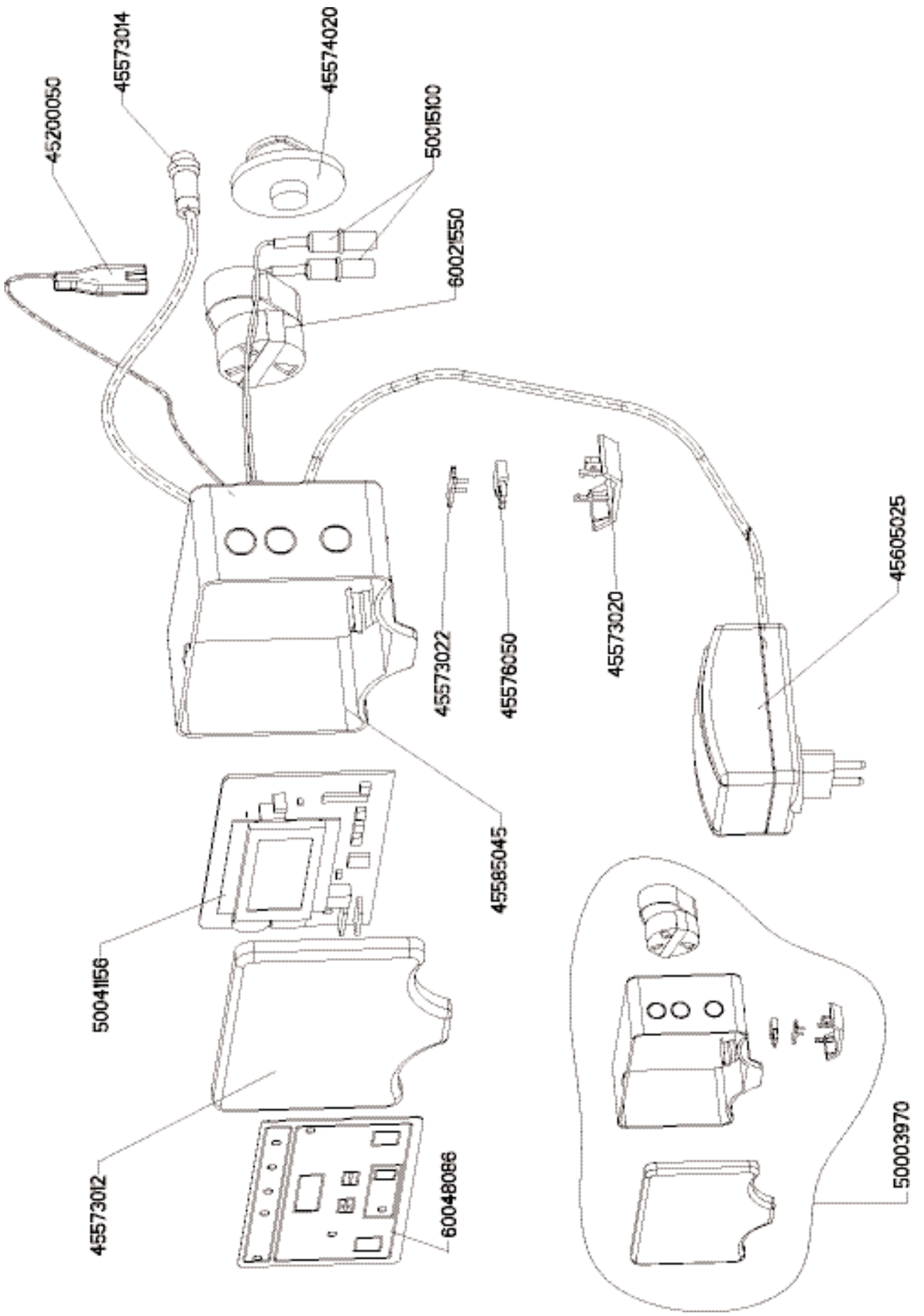

HOW TO MOUNT DOUBLE MICRO-SWITCH

Carefully open the frontal panel from left to right by making sure of not forcing the flat cable as shown in Figure 2.

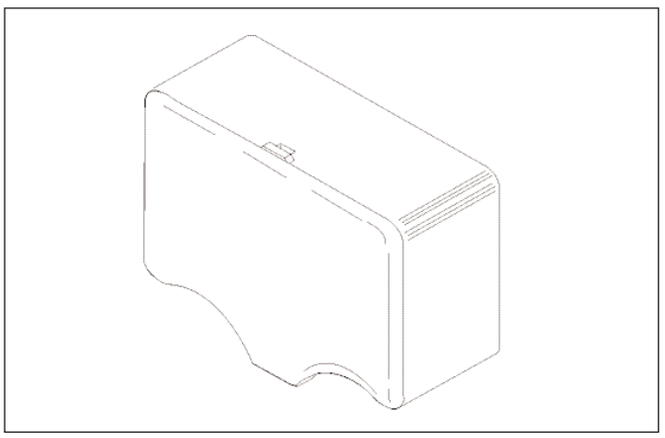

Fig. 1

CAUTION: Do not pull the flat cable indicated by the arrow.

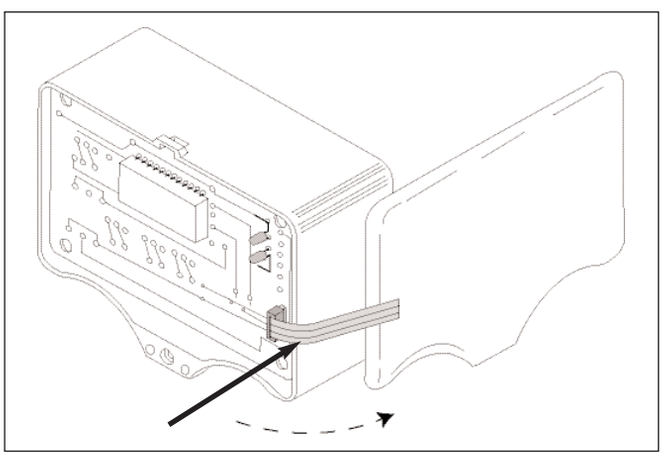

Fig. 2

Carefully lift the plastic connector with two fingers until you get the position shown in figure 4.

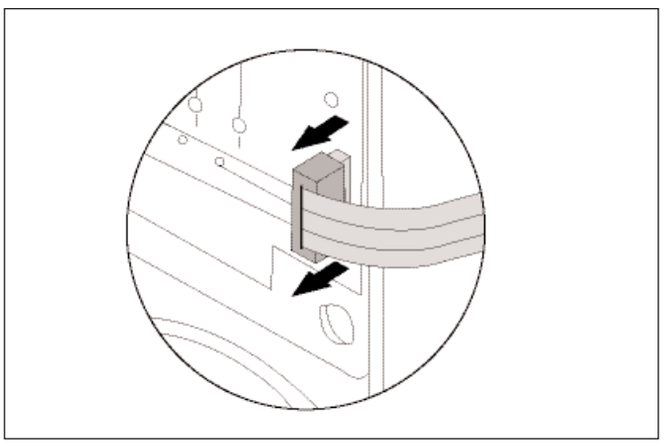

Fig. 3

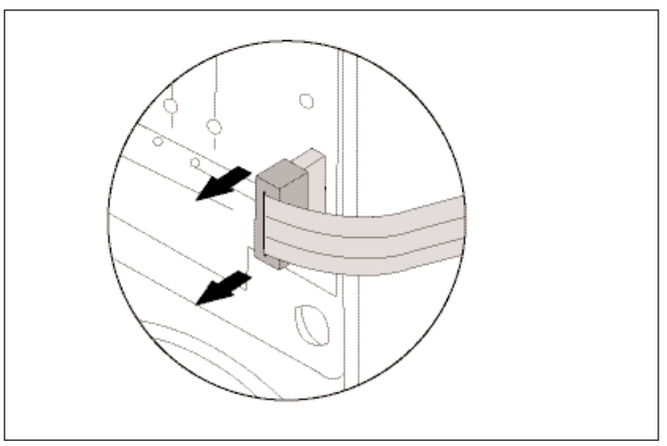

Fig. 4

Carefully take the flat cable out of the connector.

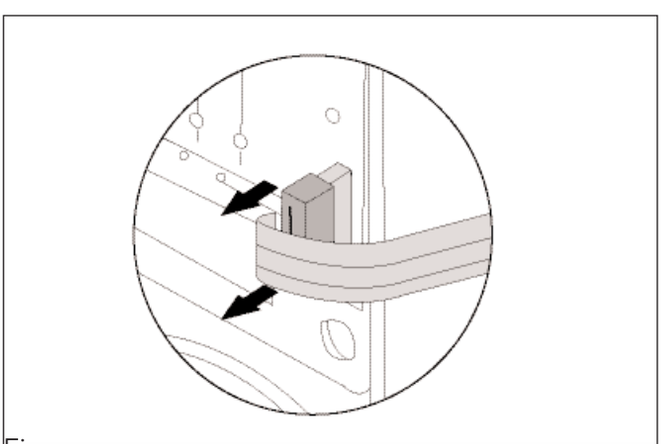

Fig. 5

Unscrew the four screws fastening the card.

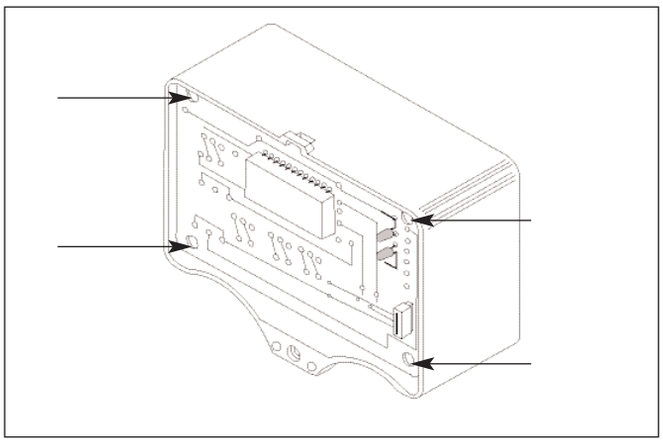

Fig. 6

Carefully take out the card without forcing the connection wires.

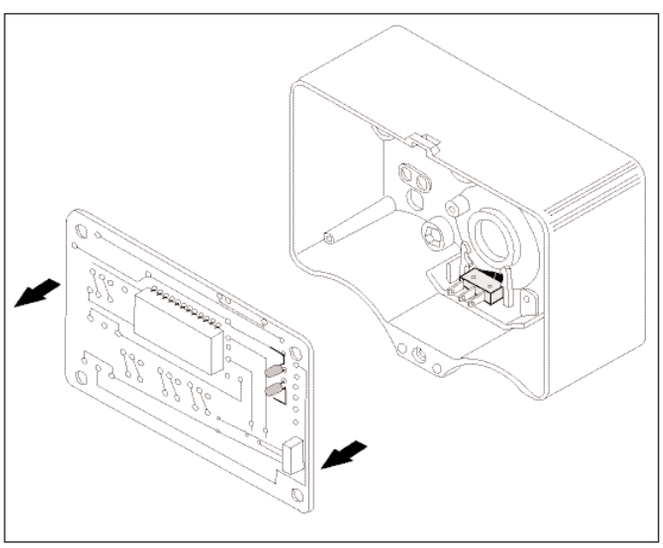

Fig. 7

Carefully take out the switch blocking plate, by widening a little bit the two side thin plates in plastic with a pair of pliers at thin points.

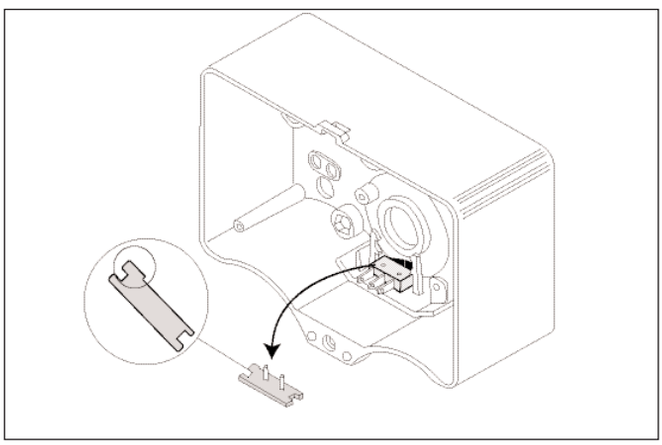

Fig. 8

Place the second switch on the pre-existing one in the same direction and install the switch blocking plate again, by making sure that the two pins are introduced into the two holes of the switch.
Pierce the back of the plastic box to let the cable of the new switch come out.

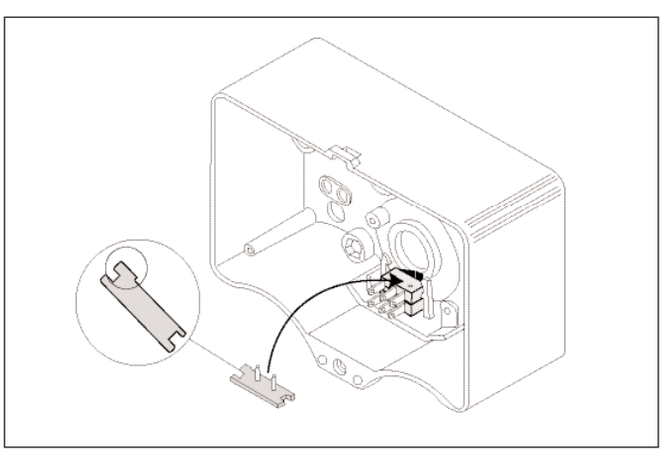

Fig. 9

GEL COMPLETE CHLORINE CELL code 60015000

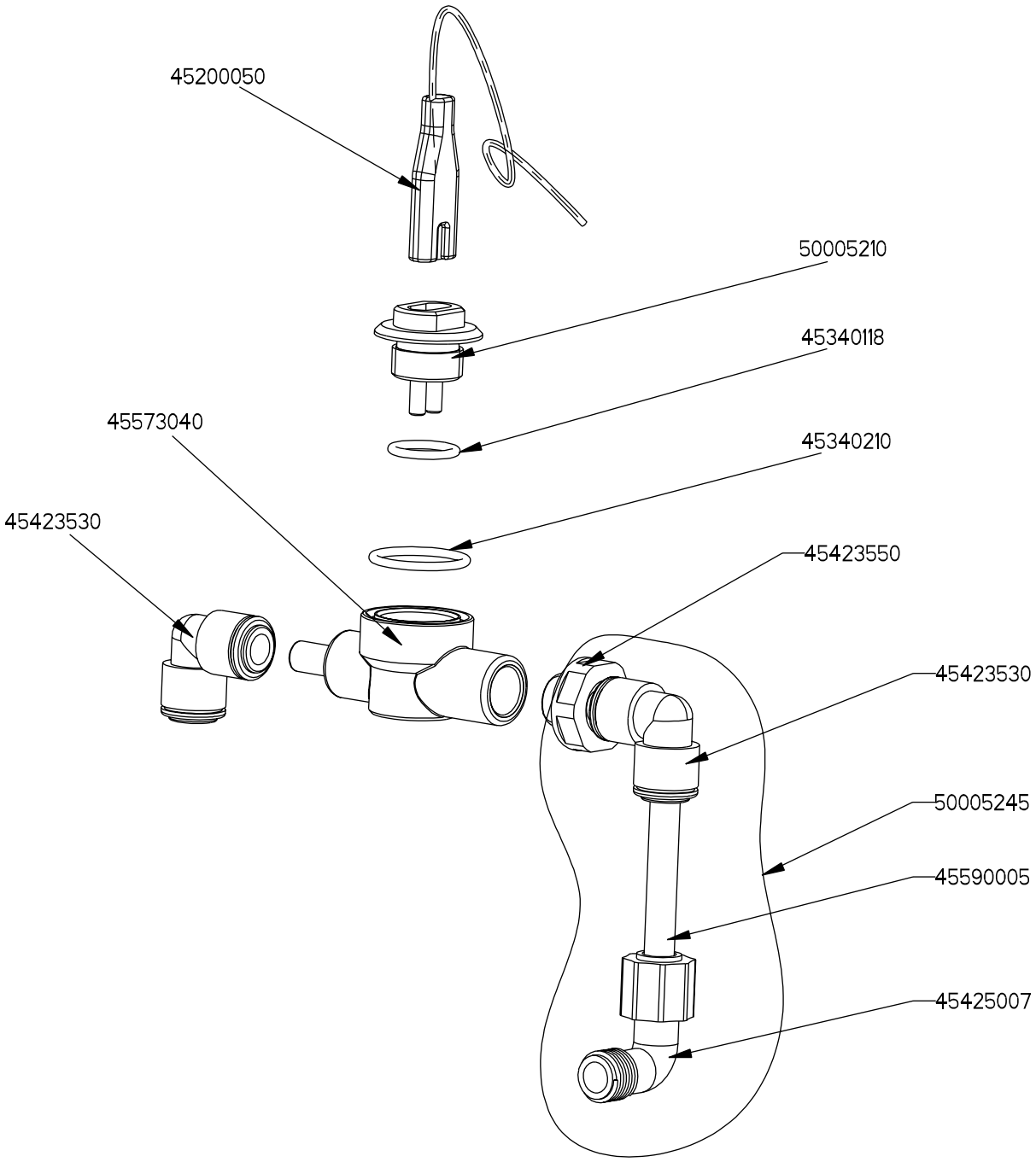

TABLE WITH TIMES FOR COLUMN FILTERS

Model	Media litres	Duration 1st phase (min)	Duration 4th phase (min)
Desabb 30	30	10	5
Desabb 45	45	10	10
Desabb 75	75	15	10
Desabb 110	110	15	15
Desabb 140 M	140	15	10
Desabb 200 M	200	15	10
Desabb 320 B	320	10	10
Desabb 500 B	500	15	10
Deferr 30	30	10	5
Deferr 45	45	10	10
Deferr 75	75	15	10
Deferr 110	110	15	15
Deferr 140 M	140	15	10
Deferr 200 M	200	15	10
Deferr 320 B	320	10	10
Deferr 500 B	500	15	10
Declor 30	33	10	5
Declor 45	48	10	10
Declor 75	80	15	10
Declor 110	116	15	15
Declor 140 M	147	15	10
Declor 200 M	213	15	10
Declor 320 B	332	10	10
Declor 500 B	530	15	10
Neutral 30	30	10	5
Neutral 45	45	10	10
Neutral 75	75	15	10
Neutral 110	110	15	15
Neutral 140 M	140	15	10
Neutral 200 M	200	15	10
Neutral 320 B	320	10	10
Neutral 500 B	500	15	10

Model	Discharge injector	Min Flow	Duration 1st PH. min. 2 bar	Duration 2nd PH. min. 2 bar	Durat.2nd PH. min. 3BAR reduced -20	Durat.2nd PH. min. 4BAR reduced -30	Durat.2nd PH. min. 5BAR reduced -37	Durat.2nd PH. min. 6BAR reduced -40	Durat.3rd PH. min.2bar	Durat.3rd PH. min.3bar reduced -20	Durat.3rd PH. min.4bar reduced -30	Durat.3rd PH. min.5bar reduced -37	Durat.3rd PH. min.6bar reduced -40	Durat.4th PH. min.	Max reg. duration
5	brown	1	2	5	4	4	4	3	3	3	3	2	2	4	14
8	brown	1	3	8	7	6	6	5	5	4	4	4	3	5	21
10	brown	1	3	10	8	7	7	6	6	5	5	4	4	7	26
15	blue	2	3	8	7	6	6	5	5	4	4	4	3	6	22
20	blue	2	4	11	9	8	7	7	6	5	5	4	4	8	29
25	blue	2	5	13	11	10	9	8	8	7	6	6	5	10	36
30	blue	2	6	16	13	12	11	10	9	8	7	6	6	12	43
45	red	3	6	11	9	8	7	7	6	5	5	4	4	13	36
60	black	4	6	9	8	7	6	6	5	4	4	4	3	13	33
75	black	4	8	11	9	8	7	7	6	5	5	4	4	16	41
110	black	5	7	16	13	12	11	10	9	8	7	6	6	15	47
110 M	grey	5	7	12	10	9	8	8	7	6	5	5	5	15	41
140	black	5	9	20	16	14	13	12	11	9	8	7	7	19	59
140 M	grey	5	9	15	12	111	10	9	8	7	6	6	5	19	51
200	black	5	13	28	23	20	18	17	16	13	12	11	10	27	84
200 M	grey	5	13	21	17	15	14	13	12	10	9	8	8	27	73
200 B	blue big	4/5	4	35	28	25	23	21	20	16	14	13	12	7	66
250 M	grey	5	16	26	21	19	17	16	15	12	11	10	9	34	91
250 B	black big	4/5	4	13	11	10	9	8	8	7	6	6	5	9	34
320 B	black big	p/f	4	17	14	12	11	11	10	8	7	7	6	7	38
500 B	black big	s/n	4	26	21	19	17	16	15	12	11	10	9	8	53

p/f = c/w flow h.
s/n = no flow h.