

A.B.E PERISTALTIC PUMP **DOSYWEL**



User manual

Revision 3

Basic edition:

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General Information

Specifications Dosywel

Model	DOSYWEL
Manufacturer	A.B.E.
Country of origin	100% France
Power supply	100-240 V 50-60 Hz
Volume Range	1 ml to 9999 ml
Distribution Speed	Adjustable: 0 to 100%
Internal tube dimensions	1.6/3.2/4.8/6.4 mm
External tube dimensions	1.6 mm
Pause time	1 to 60 seconds
Calibration mode	Yes
Connectivity	Polywel 3D (distribution automate XYZ)
Communication	USB, Ethernet, RS232
Memory of 19 dilution programs	✓
Traceability (USB, printer, Excel)	✓
Turbo mode	✓

Overview

Dimensions: W x D x H: 21 x 20 x 24 mm

Lightness: 3.8 kg

Standard accessories shipped with your Dosywel

			
Dosywel	Set of tubing 3.2mm Ref. DILW2002	Mains supply unit 120W	Power cable
			
User Manuel	Certification	METRO report	

Dosywel optional accessories & consumable

Additional Tubing

Product Code	Product Description	Qty
DOSW2001	Set of tubing 6.4mm with dispensing nozzle for DOSYWEL	1
DOSW2002	Set of tubing 4.8mm with dispensing nozzle for DOSYWEL	1
DOSW2003	Set of tubing 3.2mm with dispensing nozzle for DOSYWEL	1
DILW3001	Rotor (pump head) tubing 6.4mm	5
DILW3002	Rotor (pump head) tubing 4.8mm	5
DILW3003	Rotor (pump head) tubing 3.2mm	5
DILW2006	Priming nozzle for bottle (1L or 2L with filter)	1

DOSYWEL Accessories

Product Code	Product Description	Qty
DILW2031	Bar code / QR code reader (1D/2D) for DILUWEL+	1
DILW2011	Ticket printer (USB)	1
DILW3005	Ticket printer rolls - 2100 labels	3

DILW2013	Foot switch (USB)	1
DILW2012	Keypad for Diluwel/Dosywel	1
DILW2033	Keyboard for Diluwel/Dosywel - Waterproof & rollable	1
DILW2001	Additional pump (for turbo)	1

Setting up your Dosywel

Installation and operating environment

Environmental Conditions:	<ul style="list-style-type: none"> - Temperature: 5 °C to 45 °C (41 °F to 113 °F); - Maximum relative humidity 80%; - Indoor utilization.
Electrical environment:	According to EN61010-1 ED. 2011, international standard about the safety requirements for electrical equipment for measurement, control, and laboratory use standard.
Installation Category II	Pollution category 2 environments.
Electromagnetic compatibility (EMC) Performance:	According to EN61010-1 ED. 2011, international standard about the safety requirements for electrical equipment for measurement, control, and laboratory use standard. Requirements about the CEM (emission and immunity).

Unpacking

- Unpack in a clean and accessible place;
- Take the accessories out of the box:
 - Power chord
 - Tubing set 3.2mm
 - User Manual
 - Any additional ordered accessory or consumable.
- Take the Dosywel out of the box by lifting it from the bottom.
- Place the Dosywel on a stable and horizontal support preferably;
- Make sure, no elements are remaining in the box before disposal.

Setting pump's jaw

The pump's jaw is set in standard mode on the pipe 3.2 mm from both left and right sides, to prevent any moving from the pipe or is damaged during its use. The pump's jaw can be set in other dimensions (8.0, 0.5, 4.8 & 6.4 mm) by scrolling the knob at the bottom of the jaw.

Fixing the tubing set

- Sterilize the tubing set and the dispensing nozzle before use;
- Open pump jaw and insert the rotor section which is indicated by two metal closures into the pump head rotor;
- close the jaw and make sure the pump is properly adjusted;

Supply systems

Power supply






- ⚠ The equipment must be connected to an electrical installation that complies with the applicable standards in the country. The installation must be equipped with protections against over-currents, over-voltages, ground faults.
 - ⚠ Do not install the equipment next to a source of heat or source of humidity.
 - ⚡ For your own safety, the equipment must be switched off and disconnected from the mains before any technical intervention.
 - ⚠ Connecting any other type of power supply may disrupt the machine's operation or the surrounding machines.
- Make sure the electric supply matches the specifications of the manufacturer's plate;
 - The power supply of the unit must be assured by a grounded outlet, and a safety device must guarantee automatic power-off in case of faulty insulation. A power supply equipped with a differential circuit breaker, powerful enough, would meet this requirement. To ensure the power, switch off of the unit;
 - the outlet must be immediately identifiable and easily reachable by the operator.
 - connect the power supply to the Dosywel's back in the location indicated by the symbol 24V:



Getting Started your Dosywel

Functions of the ambidextrous controller



Button	General Features	Modality
	Powering	Briefly pressing of the button (1 Sec.) to turn on and off.
	Access Settings menu	Long pressing of the button (3 Secs.)
	Changing the program	Briefly pressing of the button (1 Sec.)
	Validation/selecting a program	Briefly pressing of the button (1 Sec.)
	Go to General menu / Escape/ Delete.	Briefly pressing of the button (1 sec.)



Screen of your Dosywel



Figure 1. Principal screen's work.

- 1 Validate/Select – 2 Menu/Cancel – 3 On/Off – 4 Program Switch/Parameters
- 1 Program name – 2 Pumps selected/Diluent name – 3 Status, Stop/Play/Pause way – 4 Dose delivered out of – 5 Interval (1 to 60 seconds).

Colours code of your screen




	
<p>The orange screen appears when:</p> <ul style="list-style-type: none"> - A program was deleted. - The declared pump is not found. 	<p>Green screen appears when:</p> <ul style="list-style-type: none"> - The dosage is ended. <p>To pause/cancel dilution:</p> <ul style="list-style-type: none"> - Click one/two times on  .

Programming your Dosywel

Create a program

You can create up to 19 programs. To create a program from the program 1, follow the following procedure:

Edit the Program's name

- Press briefly on  to access to the *programming* menu;
- select  option, by a long pressing (2-3 seconds) on one of the sides knobs.
- select program number, scrolling and then clicking on the knob
- place the cursor on the option *program's name* in the *Program Editor* screen;
- click once on the knob's side button to give a name to your program;
- enter the name using the knob or the keypad. To clear or go back, press on .

*Note: you must always write at least one character.
you don't, the program will never exist.*

- click on the knob's side button to confirm the information entered.

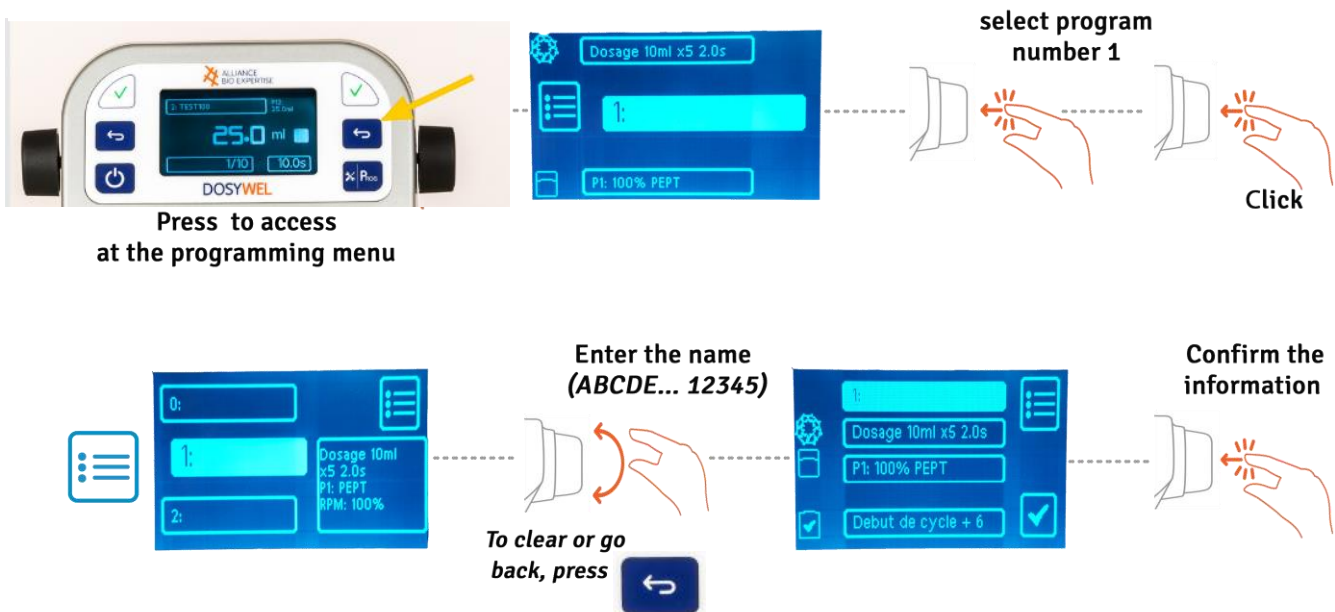



Figure 2. Steps to appoint a program.

Dosage settings

- Place the cursor over the “Dosage”  pictogram in the *Program Editor* screen, by scrolling and clicking on the knob;
- Enter the desired volume range from 1 ml to 9999 ml, by scrolling the knob and click to confirm.
- select the number of doses from 1 to 999 and click on the knob to validate
- choose the interval time between each dose from 1.0 to 60.0 seconds;
- click on the knob to confirm the interval time entered.

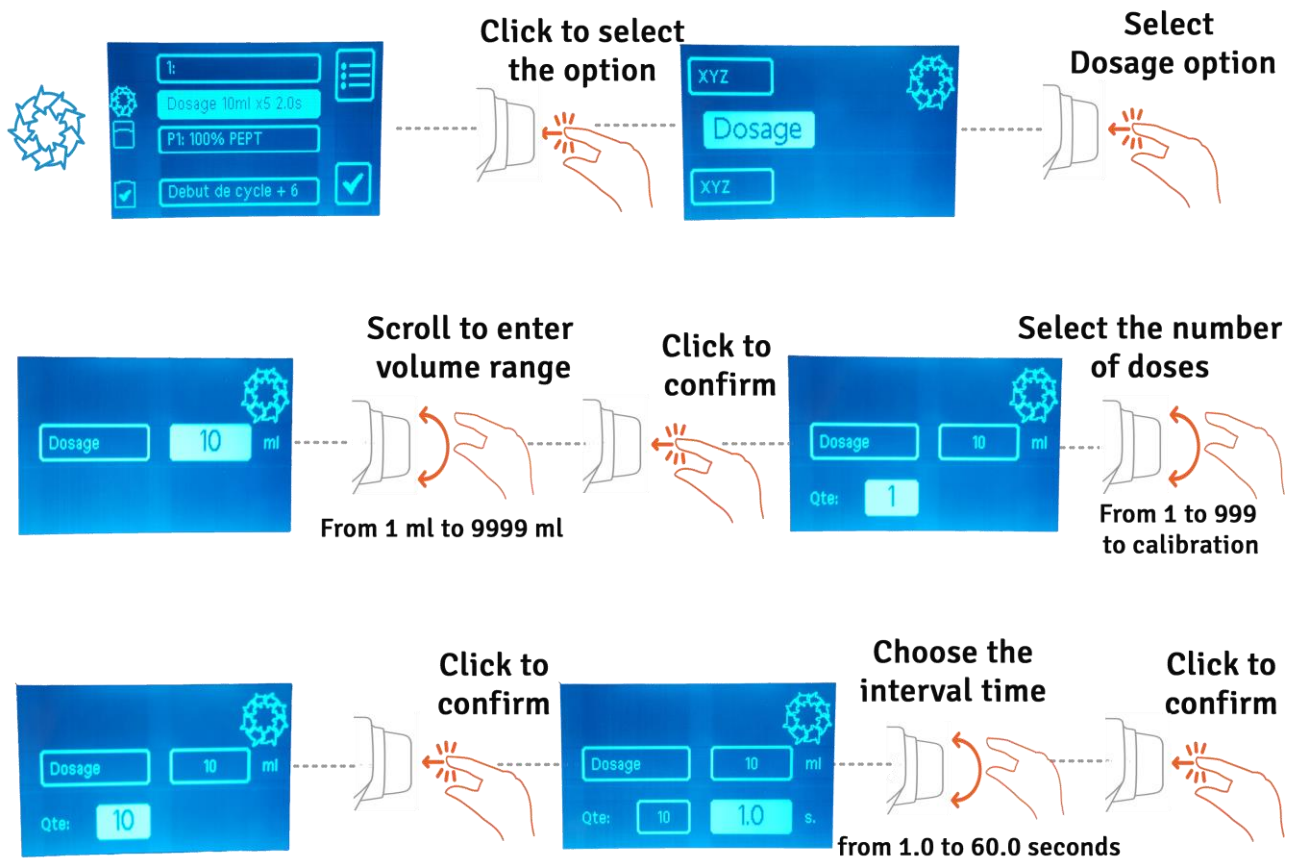


Figure 3. Steps to choose the dosage's volume.

Pump's number (ONLY available if you connect a 2nd pump for turbo dispensing)

- Check that the pump used is connected to your Dosywel;
- place the cursor over the *pump number* option in the *Program Editor* screen, by scrolling the knob. Click on the knob to validate
- click on the knob's side button to validate the pump number chosen.

Choice of pump speed

- Place the cursor over *Vi* option (*pump's speed*), scrolling one of the knobs; click on the knob to enter the cell and modify the information.
- scroll one of the knobs to change the speed of the pump: 0% to 130%, knowing that 100% is the basic setting of the pump; click on the knob to validate

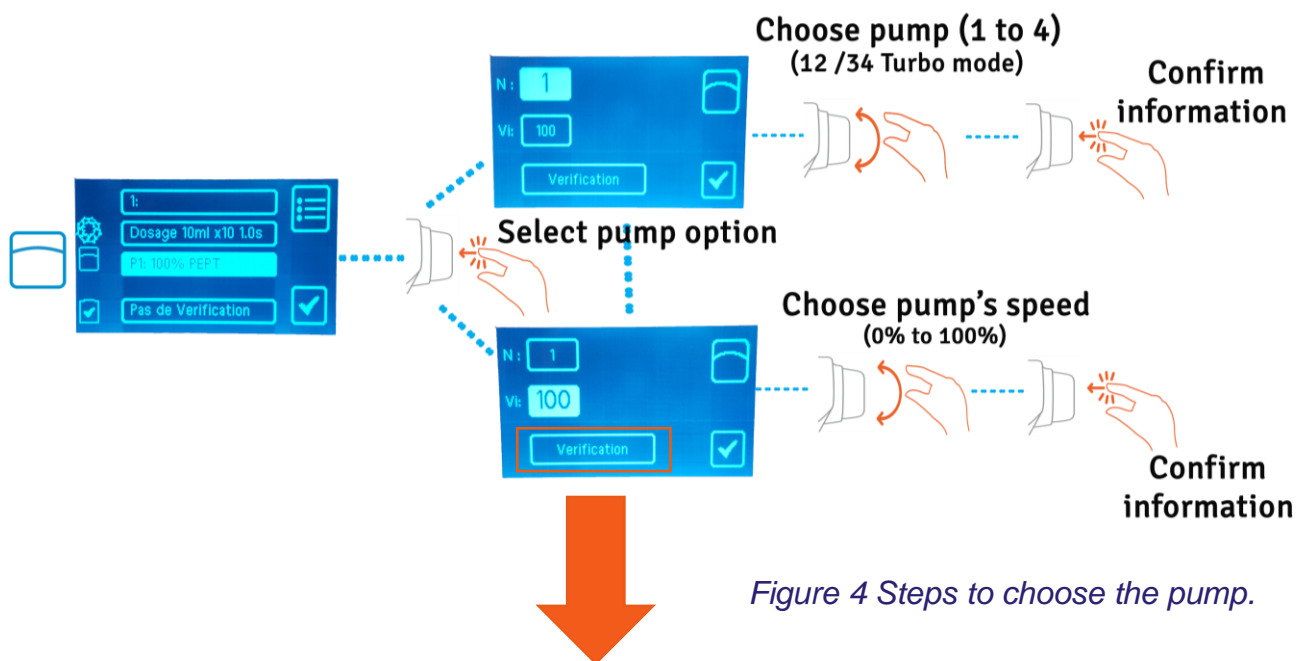




Figure 4 Steps to choose the pump.

Verification test (calibration)

- Place the cursor over the *Verification option*, scrolling one of the knobs;
- click once on the knob's side button to select the option;
- turn one of the knobs to select the requested volume of the dose: *1 ml to 1 000 ml*;
- put the nozzle above a measuring cylinder;
- click on the knob's side button to validate the volume chosen. Note: the pump delivers one dose.
- enter the measured volume, scrolling one of the knobs;
- click on the knob's side button to validate the measured volume;
- place the cursor over  by scrolling one of the knobs;
- click on the knob's side button to confirm the information entered;
- place the cursor over  , and click on the knob's side button to access to Diluent menu.

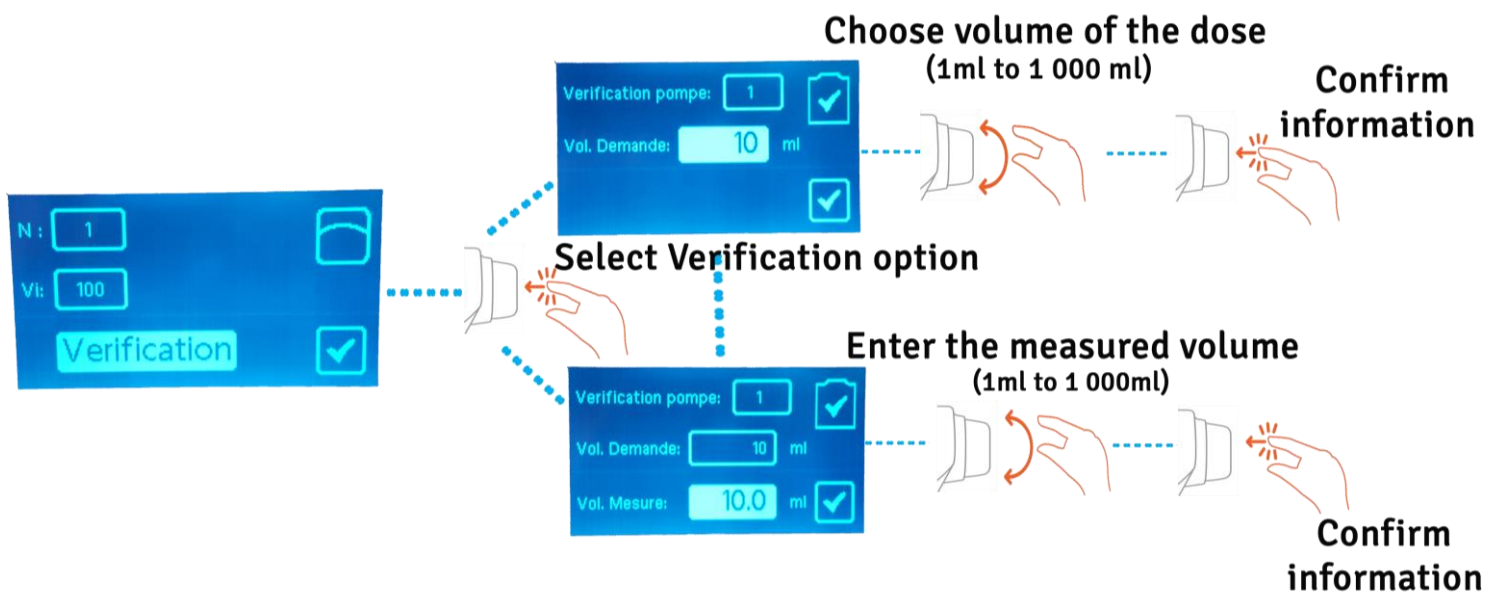






Figure 5 Steps to set the verification.

Diluent choice

When selecting a pump, the machine automatically proposes the diluent settings.

- modify the required parameters using the knob's side button, knowing that DI: Diluent name, No: batch number, Vo: Volume to dispense;
- edit the diluent's name, clicking on the one knob's button side;
- type the name scrolling the knob's button side. To clear or go back, press on  ;
- click on the knob's side button to validate the diluent name chosen;
- place the cursor over No: Batch Diluent's number by scrolling one of the knobs;
- click on the knob's side button to edit the batch number;
- type the batch number scrolling the knob's button side. To clear or go back, press on  ;
- click on the knob's side button to validate the batch diluent's number chosen;
- place the cursor over Vo: Volume by scrolling one of the knobs;
- edit the volume, clicking on the one knob's button side;
- type the name scrolling the knob's button side. To clear or go back, press on  ;
- click on the knob's side button to validate the Volume (ml) chosen;
- place the cursor over  d click on the knob's side button to confirm the information entered.

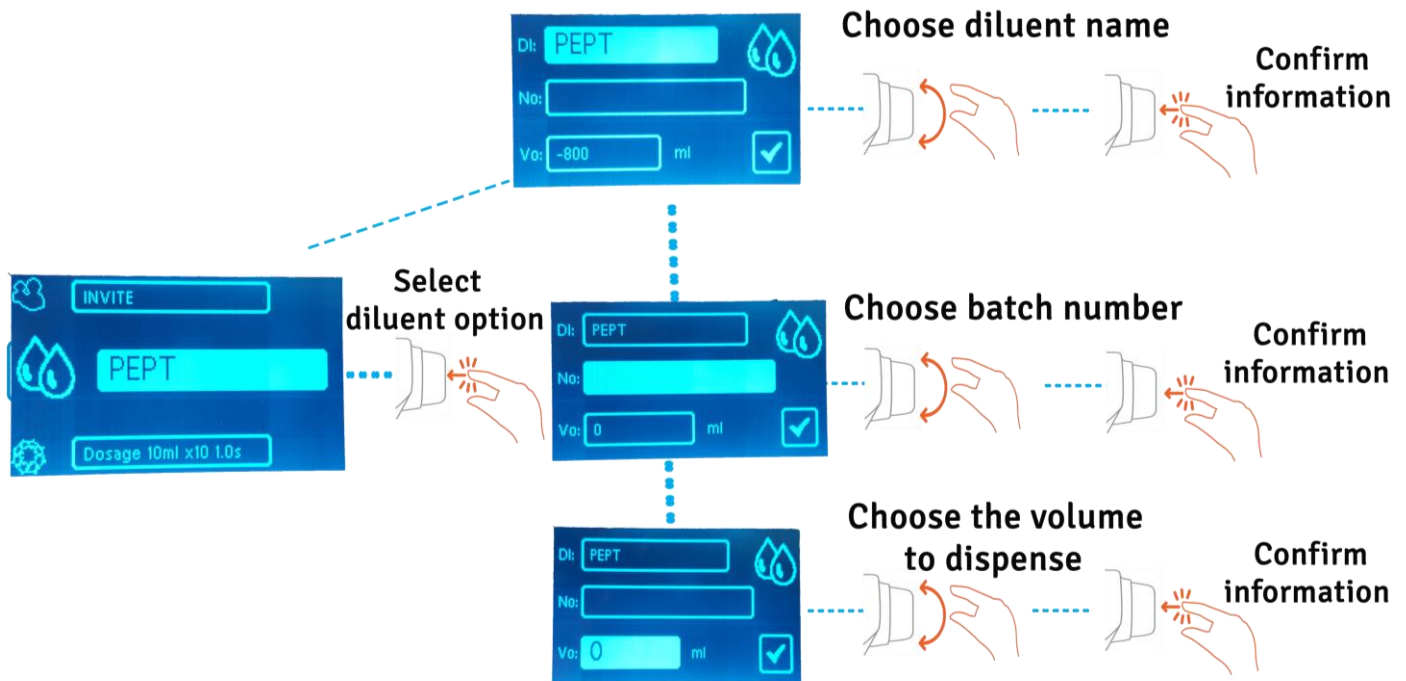






Figure 6| Steps to set the Diluent option.

Verification mode setting (calibration)

- Place the cursor over *Verification*  option, scrolling one of the knobs;
- click once on the knob's side button to select the option;
- select YES or NO in the automatic calibration, on the start of cycle, scrolling one of the knobs. Note: if you select the option YES, to start a dosage you have to carry out the calibration control (see page 17: Verification test-calibration);
- click once on the knob's side button to select the option;
- place the cursor over "Periode" option, scrolling one of the knobs;
- click once on the knob's side button to select each period you need to carry out an automatic calibration. Note: if your settings are 10 doses, each ten doses will appear a window to perform the calibration control (see page 17: Manual calibration)
- place the cursor over  by scrolling one of the knobs;
- click on the knob's side button to confirm the information entered.
- On the *Program Editor* screen, place the cursor over  by scrolling one of the knobs;
- confirm your new program by pressing the knob's side button or 

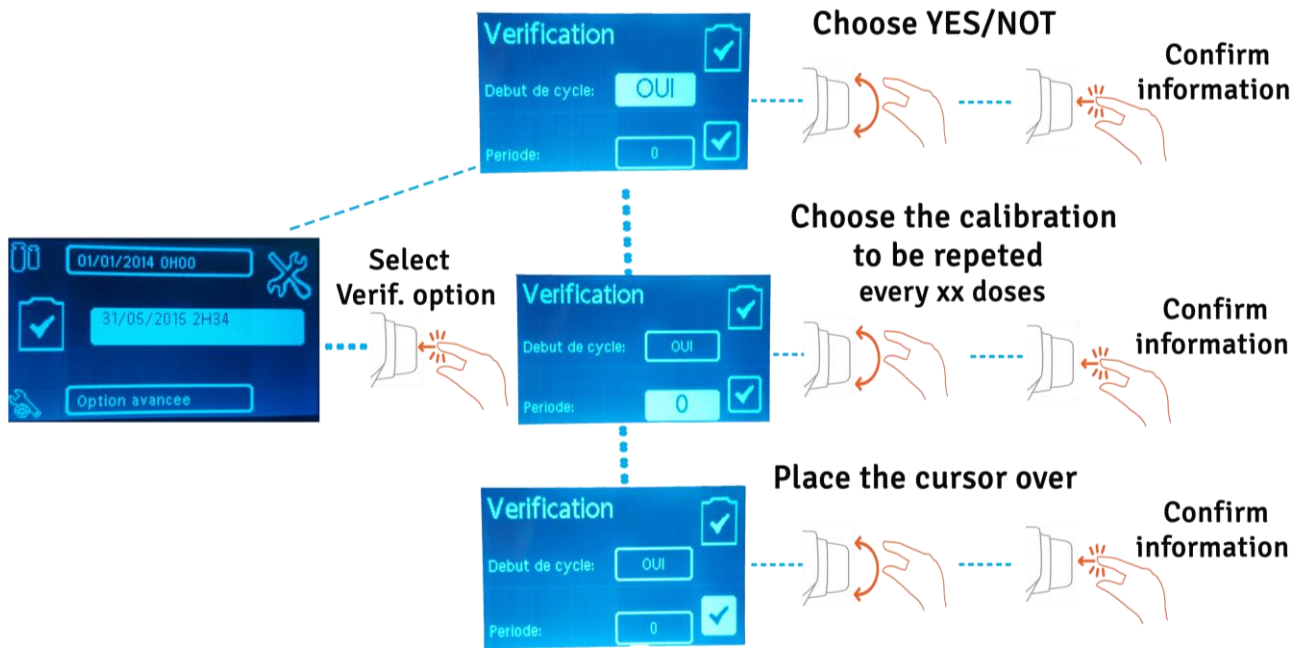



Figure 7 Steps to set the verification at the start of the cycle.

Use of turbo mode

- Place an additional pump (Dilupump, ref: DILW2001) provided by A.B.E on the additional port of the Dosywel (see the back panel).
- Use a special adapter "y" for the turbo mode, in order to gather 2 tubings in one source.
- Go to page 15 to select the pumps (you should select 1, main one + 2, additional one : shown 12 on the screen).

Settings up Users

To create a username:

- 👤 Place the cursor over "Username"  ion, scrolling the knobs, (INVITE is the basic setting of the username);
- 👤 click once on the knob's side button;
- 👤 press briefly on the knob's side button;
- 👤 click again on the knob's side button;
- 👤 write the name of the desired user using the knob's side button or keyboard;
- 👤 confirm your username by pressing the knob's side button.





To delete a username created, keep pressing 2 secs on





Programs management



Editing a program

- Press on  , to get directly to the *modification program* screen;
- select the program to edit by pressing on the one knob's side button;
- the screen displays the latest program used with a reminder of the parameters in a dashboard on right-hand side of the screen;
- place the cursor over program's name option in the *modification program* screen, click on the knob to enter the cell and scroll the knob to name your program;
- enter the name using the knobs or the keypad. To clear or recall, press 
- click on the knob's side button to confirm the information entered.

Elimination of a program

- Press on  to get directly to the Program Selection screen;
- click on the knob's side bouton;
- turn the knob to scroll through the programs;
- select the program that you want to be deleted;
- press and hold 3 secs. on  . The screen lights up orange to tell you that the program has been deleted correctly.

Routine use: reminder of a program

- Press on  to access to the **programming** menu;
- the screen displays the latest program used with a reminder of the parameters in a dashboard on right-hand side of the screen;
- select the program to be changed by scrolling one of the knobs;
- press on knob's side button to validate the selection;
- change the parameter values, If no modifications are required:
 - scroll the highlighted  to option by scrolling the knob;
 - press on the knob or to confirm and go into the working mode.

End of the cycle



End of the dilution:

The screen lights up in green and displays the doses in **green** colour with the word OK!



Settings menu




Date/Time settings

- ✘ To access to the "Date/Time  " option, click on the knob's side button;
- ✘ you can set the date (yy/mm/dd) and time (h/min) by clicking once on the knob's side button and scrolling the knob;
- ✘ place the cursor over the icon  to confirm the information entered.

Languages settings

- ✘ Place the cursor over the "Languages  "option by scrolling the knob;
- ✘ to access to the menu, click once on the knob;
- ✘ select the desired language by scrolling the knobs (French, English, , Spanish, German, Polski)
- ✘ place the cursor over the icon  to confirm the information entered.

USB data export


- ✘ Connect the USB at the back of your Dosywel;
- ✘ place the cursor on "Export  " by scrolling one of the knobs;
- ✘ click once on the knob's side button to export.

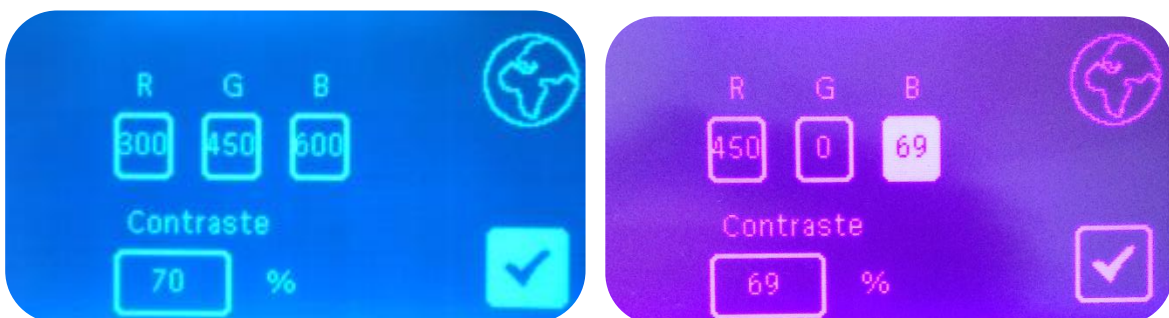
Advanced options

Passwords use

- ✂ To open the Advanced options menu, click on the knob's side button;
- ✂ type the password: ADMIN44130 in the field, by scrolling the knob;
- ✂ the password remains saved in your Dosywel, the password remains saved in your Dosywel;
- ✂ you just need to click once on the knob and the password appears. This one will disappear once your Dosywel has turned off (unplugged)

Screen colour settings

- ✂ To change the colours of your Dosywel's screen, click on the knob's side button;
- ✂ choose the desired colour by scrolling the knobs;
- ✂ remember that the letter R is equivalent to the red colour, the letter G to the green colour and the letter B to the blue colour;
- ✂ end up your setting by clicking on the knob's side button;
- ✂ place the cursor over the icon  to exit to the field.



Upkeep and maintenance

Upkeep and daily cleaning

External body

Clean the Dosywel's body and the ambidextrous control using absorbent paper lightly moistened with a water-alcohol solution.

Annual upkeep

- It is recommended to perform a functional and safety check (continuity of protection) at least once a year.
- Make sure that the grounding of the unit is always properly ensured by its power supply cord and wall outlet to which it is connected.
- The user access to the interior of the device is not authorized. The maintenance is exclusively carried out by an authorized technician A.B.E.

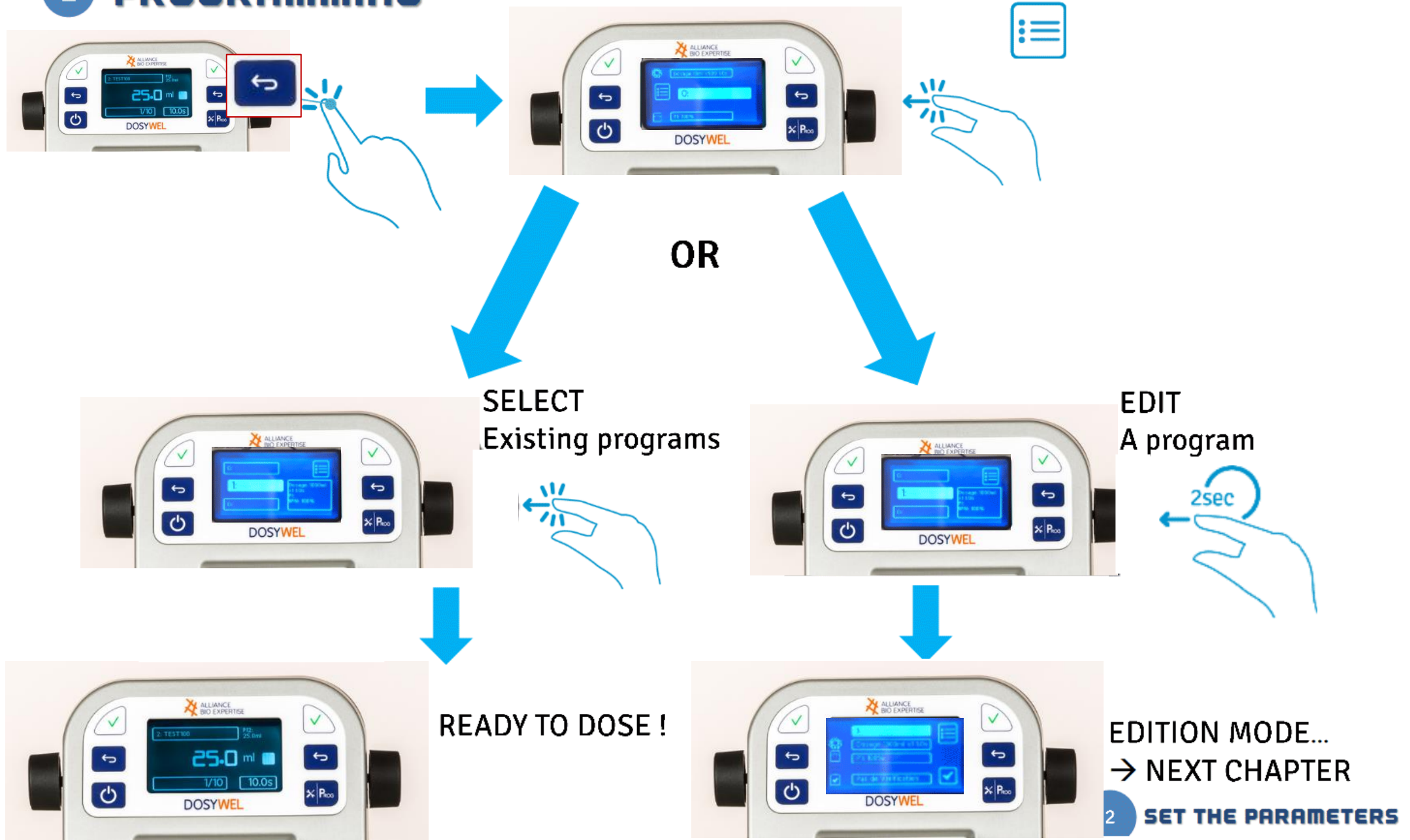
Symbols Legend



1. Dilution/Dosage Menu
2. Pump Menu
3. Diluent Menu
4. Parameters Menu
5. Programs Menu
6. User
7. Export data
8. Advanced options
9. Time settings
10. Calibration
11. Calibration verification
12. Language
13. Validation

Quick-Start Programming

1 PROGRAMMING

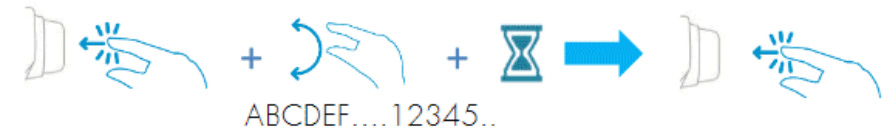


Quick-Start set the parameters

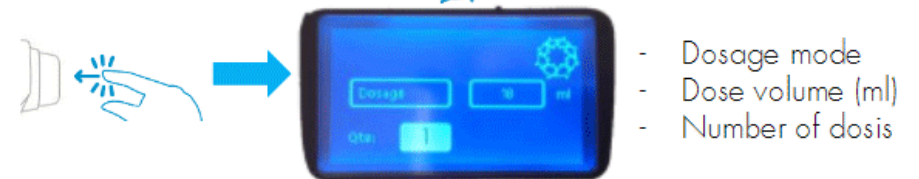
2 SET THE PARAMETERS



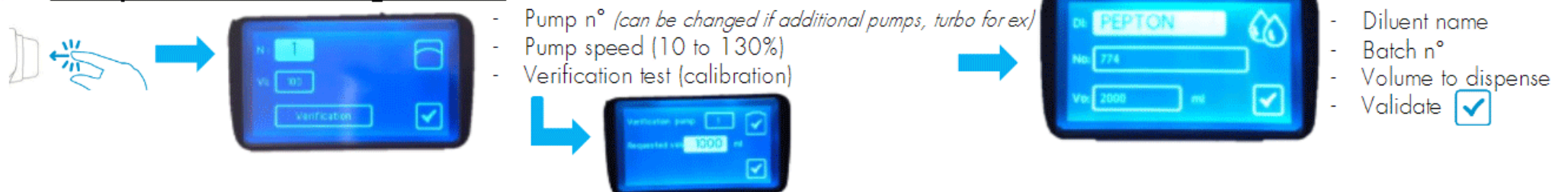
1 Edit the name of the program (☰)



2 Dosage settings (⚙️)



3 Pump/ Diluent settings (📄)



4 Verification mode settings (calibration)

