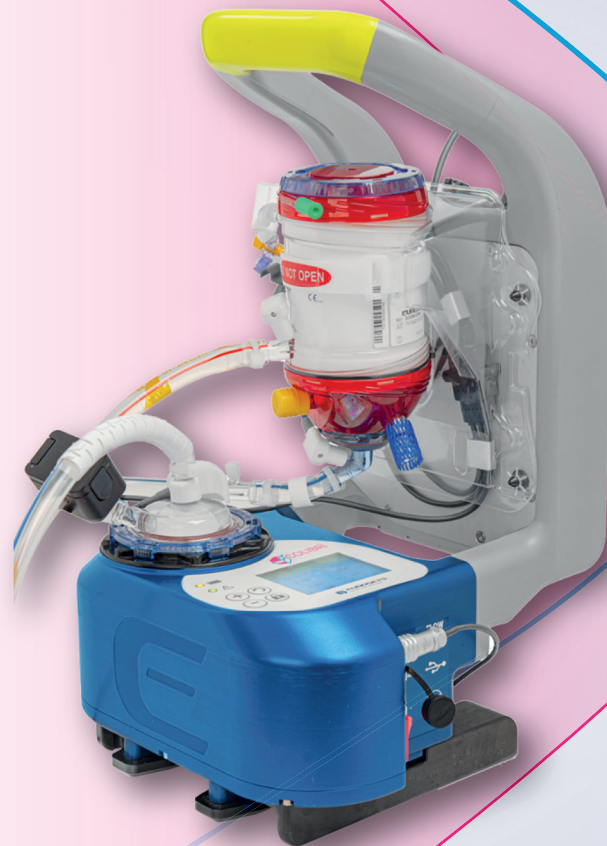




COLIBRÌ

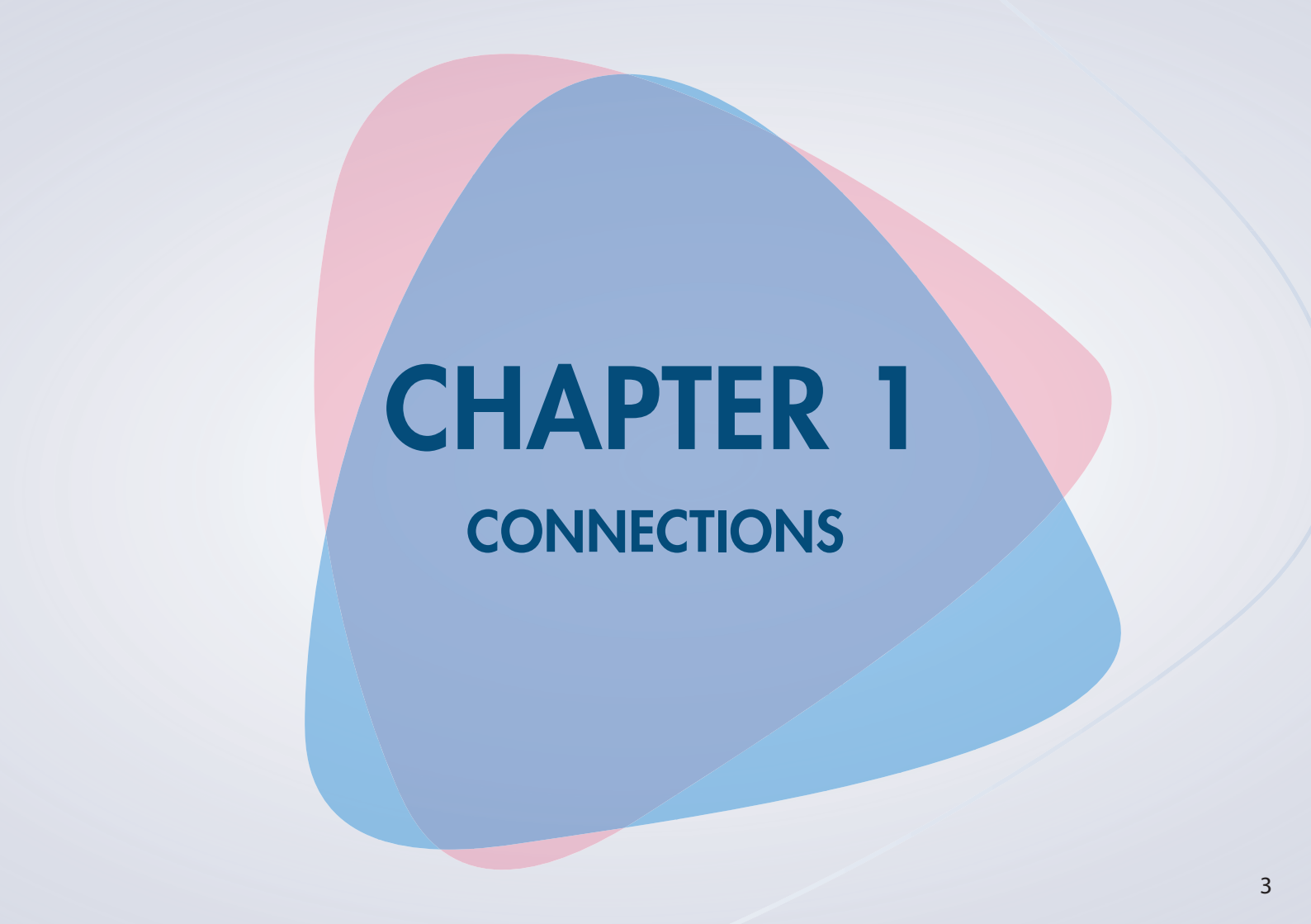
INSERVICE GUIDE

Colibrì is the lightest system equipped with gold standard features and unique advanced technologies for unlimited ECLS clinical applications.



This quick guide represents only an overview of the operating procedures and does not replace the instruction for Use.

Chapter 1	Connections.....	3
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CHAPTER 1

CONNECTIONS

**FLOWMETER &
BUBBLE SENSOR PORT**

USB KEY PORT

EMERGENCY STOP





**EXTERNAL AUXILIARY
BATTERY PORT 1**

**EXTERNAL AUXILIARY
BATTERY PORT 2**

WI-FI MODULE

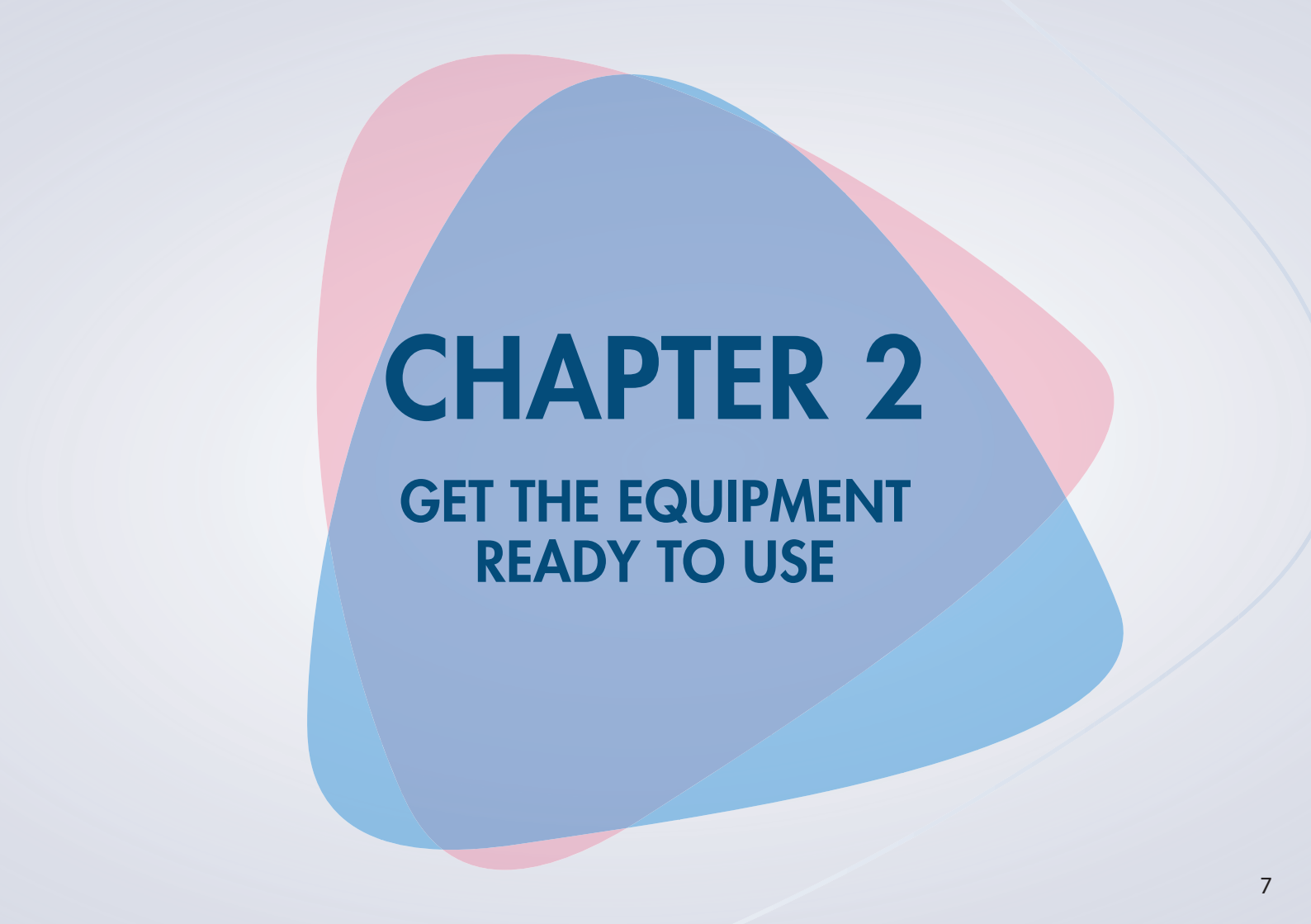
ON/OFF BUTTON

36 V POWER CORD PORT

**PRESSURE
TRANSDUCERS PORT**

**24 V ECMOLIFE
CONNECTION PORT**





CHAPTER 2

**GET THE EQUIPMENT
READY TO USE**

POWER SUPPLY



FLOWMETER & BUBBLE SENSOR



1

**Connect
the power cord
to the power supply**

**Connect
the power cord
to the machine**

2





2a

**Connect
the power cord
to the machine**

**The machine
is charging when
the light on
the power supply
appears**

3





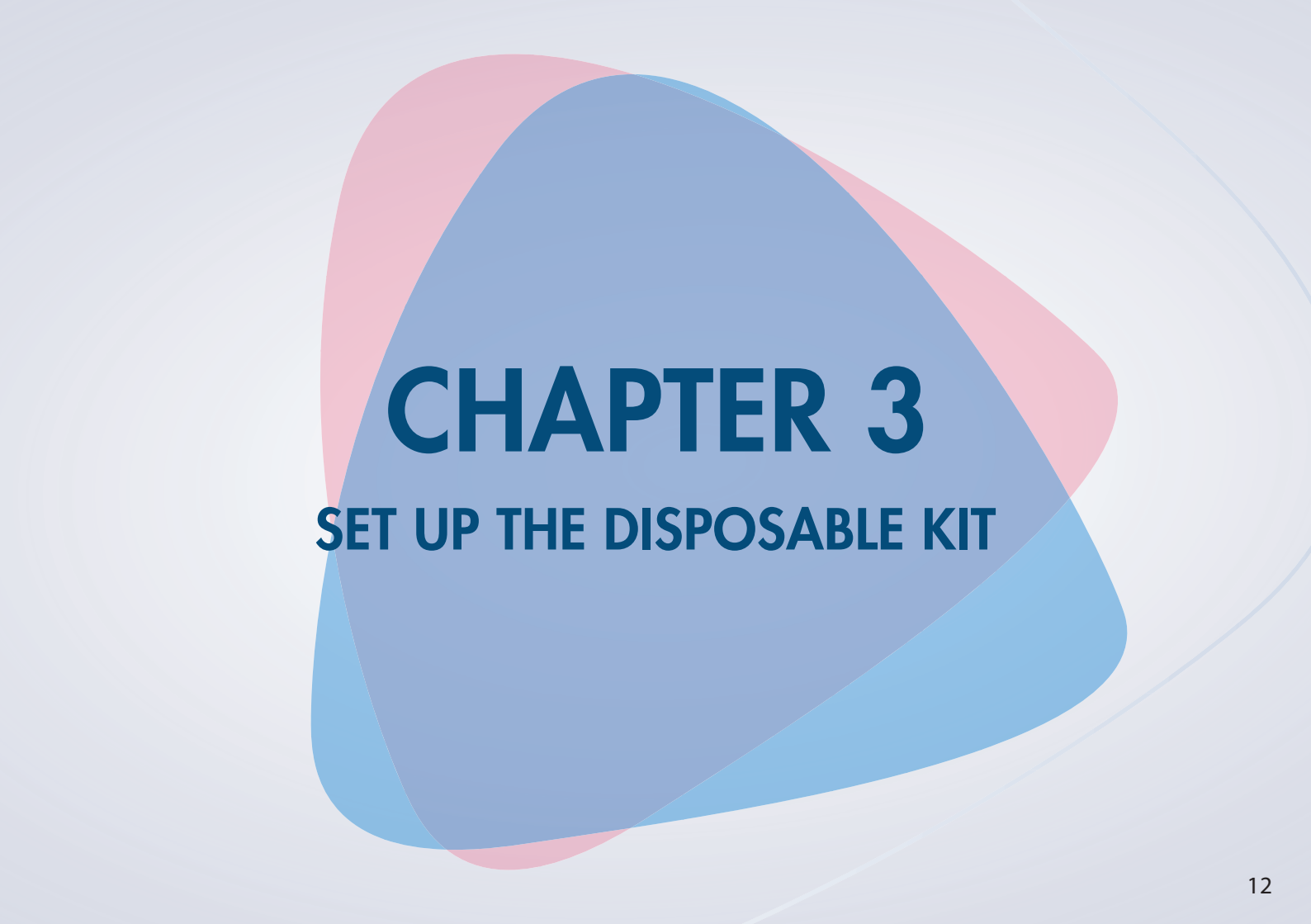
4

**Connect
the flowmeter
& bubble sensor
to the machine**

**Connect
the flowmeter
& bubble sensor
to the machine**

4a





CHAPTER 3

SET UP THE DISPOSABLE KIT

**OXYGENATOR &
RIGID CARTRIDGE**

**PRESSURE
TRANSDUCERS CABLE**



**CENTRIFUGAL
PUMP**



TABLE TRAY



PRIMING BAG



1

**Place
the priming bag
on the I.V. pole**

**Place
the priming bag
on the I.V. pole**

1a





2

Place
the table tray
on the other pole



2a



2b

3

**Insert the cartridge
in the dedicated space
of the Colibri**

3a



3b





3c

**Fixing it by using
the 4 dedicated pins**

**Fixing it using
the 4 dedicated pins**

3d



4

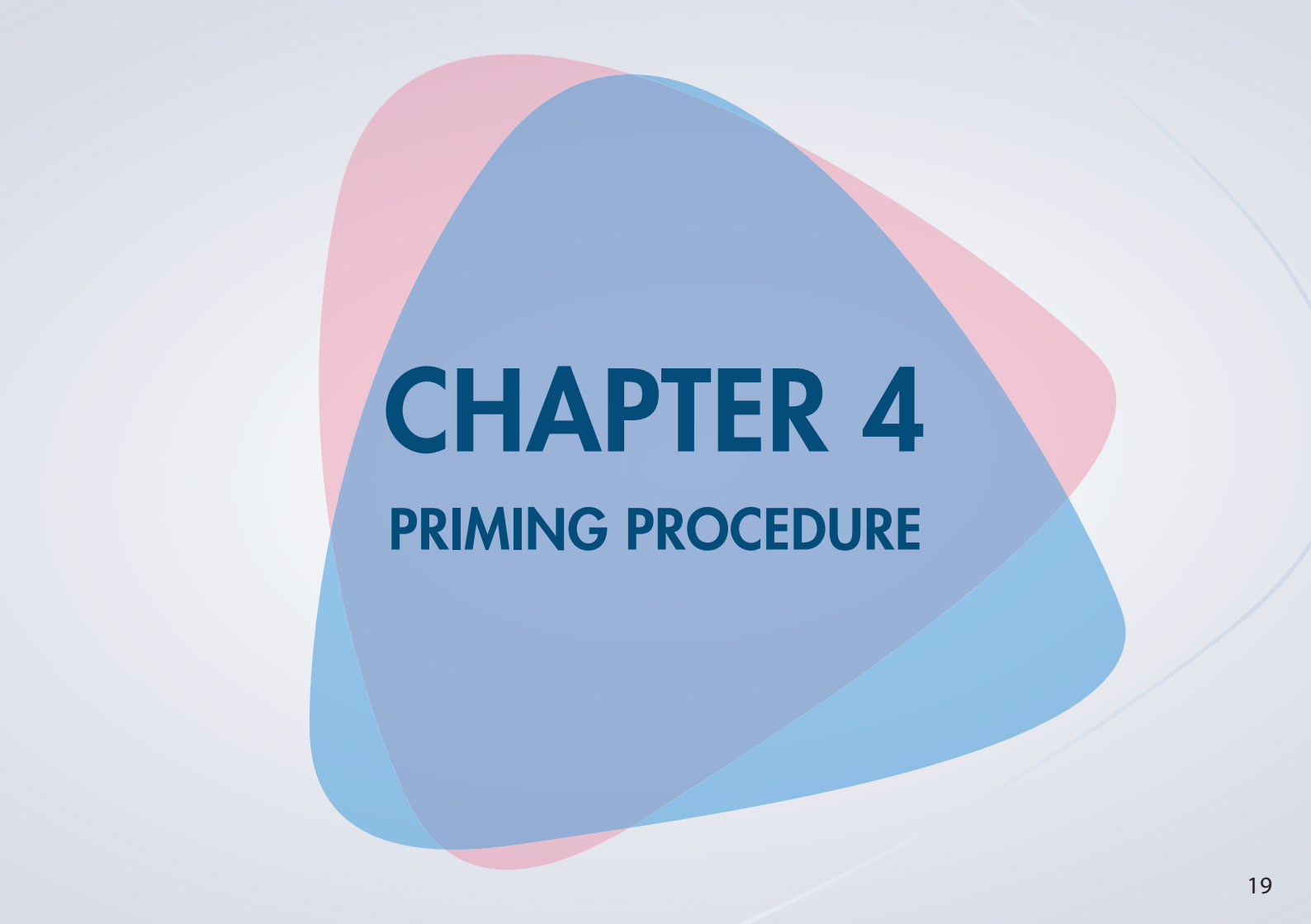
**Connect the
pressure transducers
cable to the machine**



4a

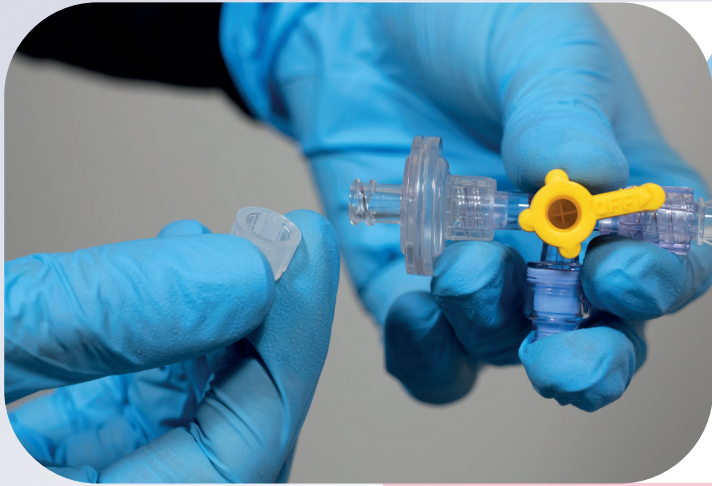
**Connect the
pressure transducers
cable to the machine**





CHAPTER 4

PRIMING PROCEDURE



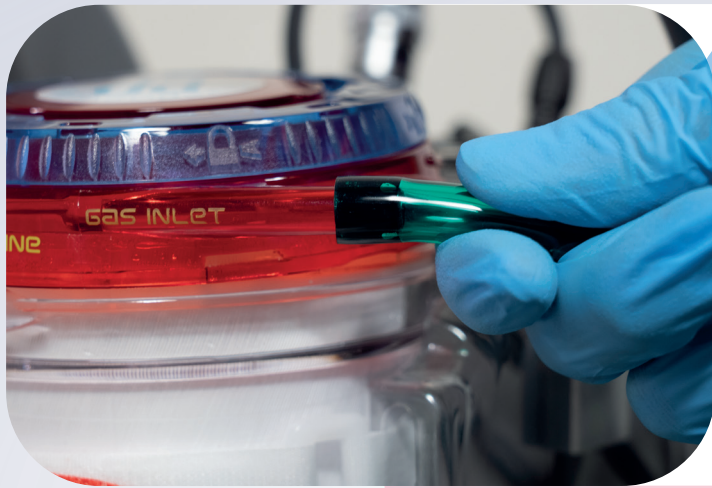
1

**Remove the cap on
the air purge line**

**Remove the yellow
cap from the gas out
of the oxygenator**

2





3

**Connect the gas line
(green tube)
to the gas inlet port
of the oxygenator.
Connect the other end
to the Gas Blender**

**Close
the proximal clamp
on the blue line**

4



5

**Spike the priming
solution bag**



6

**The priming bag
will be filled with
priming solution**



7

To facilitate priming by gravity, place the priming bag on the highest pole



8

Open the proximal clamp on the blue line to start the priming by gravity





9

Ensure that the centrifugal pump stays out of its seat until priming by gravity is completed

Insert the pump in the motor driver. Fix it by turning the blue ring clockwise

10





11

**Connect the flowmeter
to the red line tubing
using its clamp**

**and following
the arrow direction**

11a





12

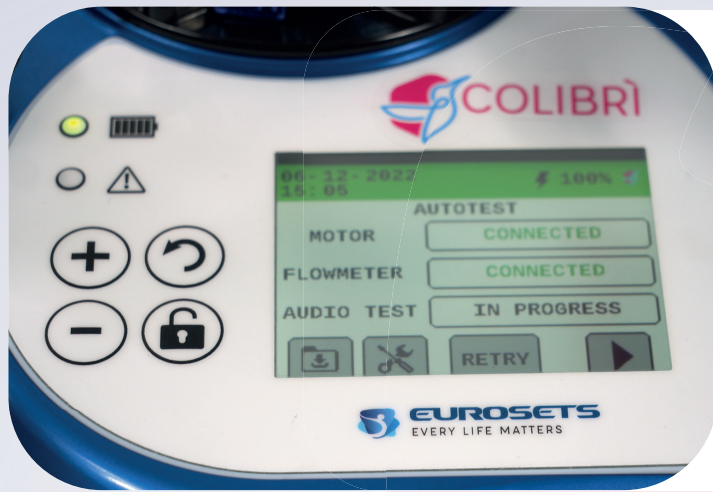
**Turn on the machine
by pressing the
main power button
for few seconds**



12_a



12_b



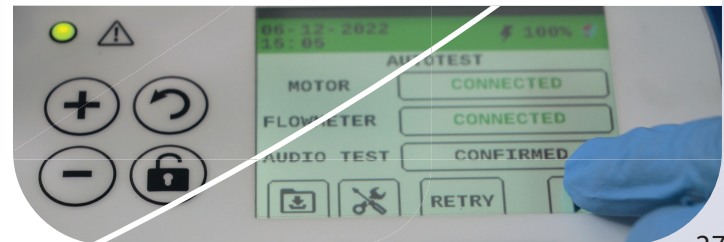
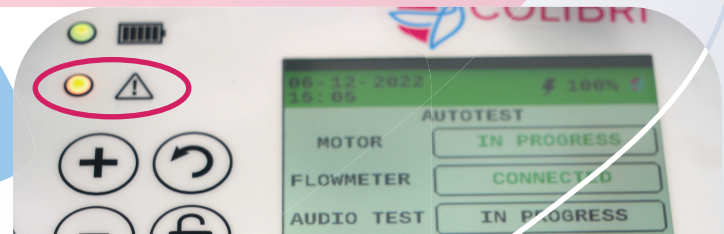
13

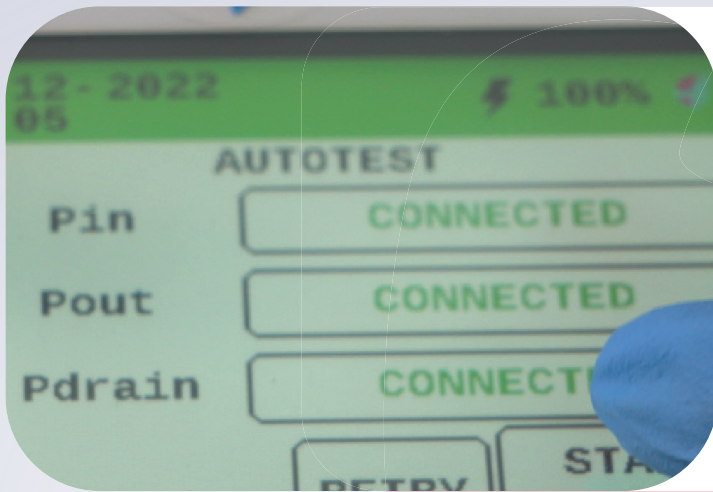
Screen will show the diagnostic page. Motor and flowmeter should appear connected

The machine will run an alarm test.

Once it is finished, press CONFIRM

13a



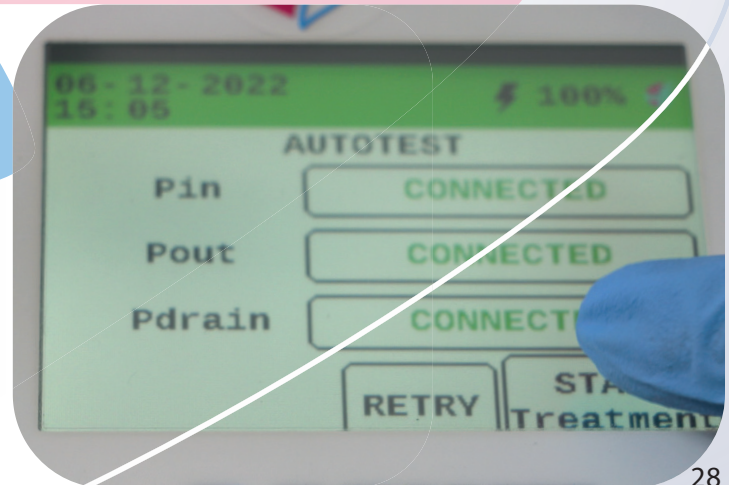


13b

The pressure transducers should appear connected

Tap
START TREATMENT
to perform the
automatic priming

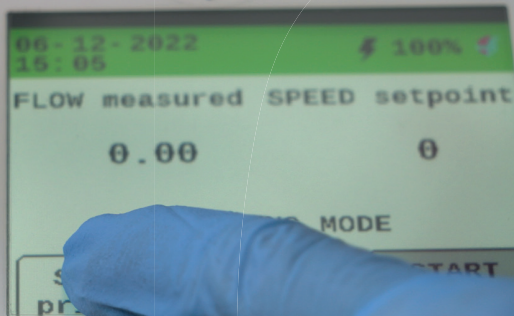
13c





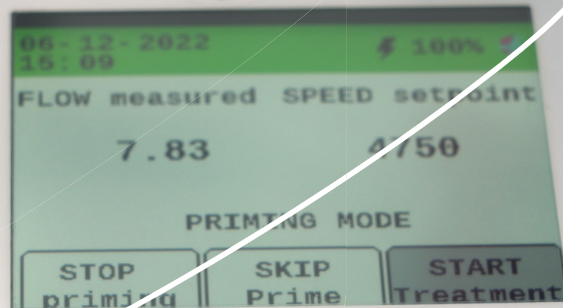
13d

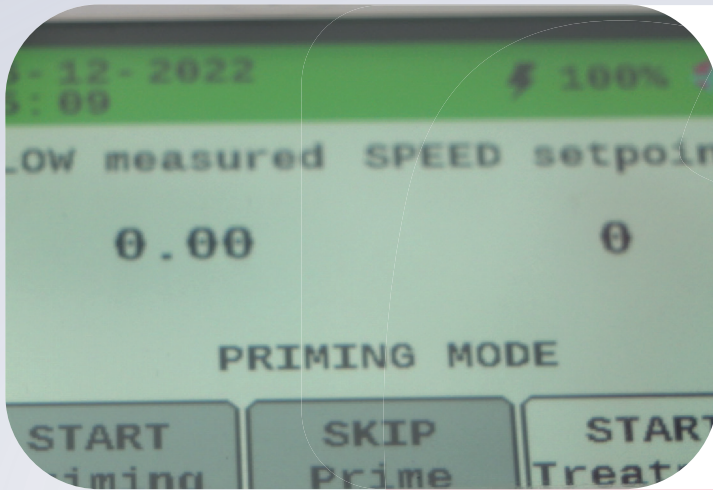
Tap
START PRIMING



13e

The automatic
priming procedure
takes few minutes



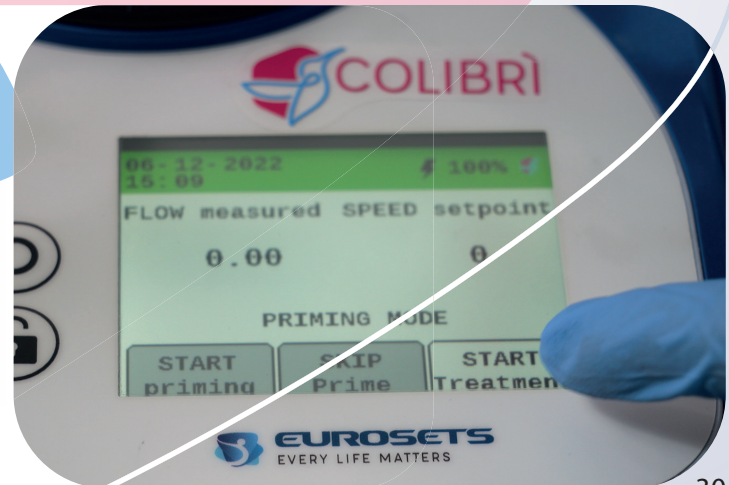


13f

When
RPM returns to 0,
the priming procedure
is completed

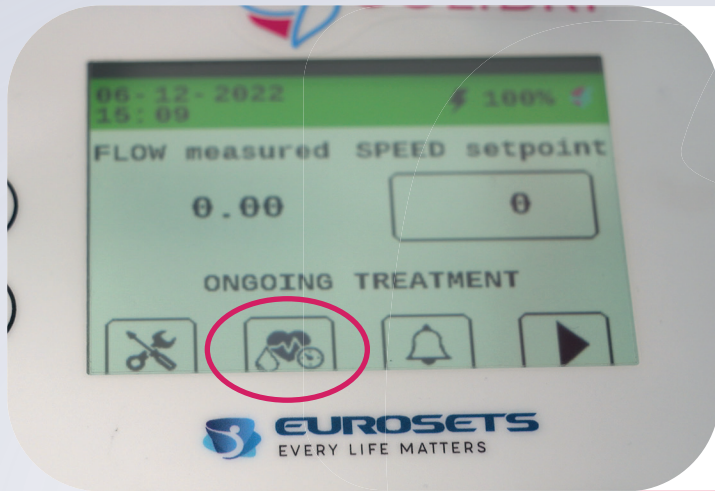
Press
START TREATMENT
to enter in the
treatment page

13g



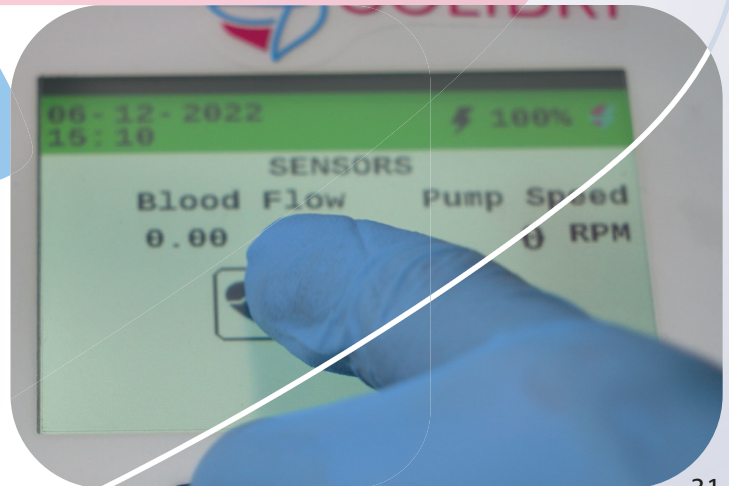
13h

Tap
SENSORS
icon



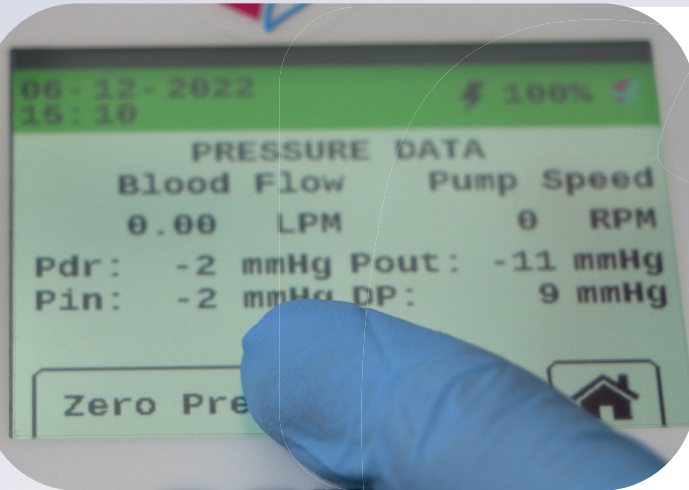
Tap
PRESSURES
icon

13i



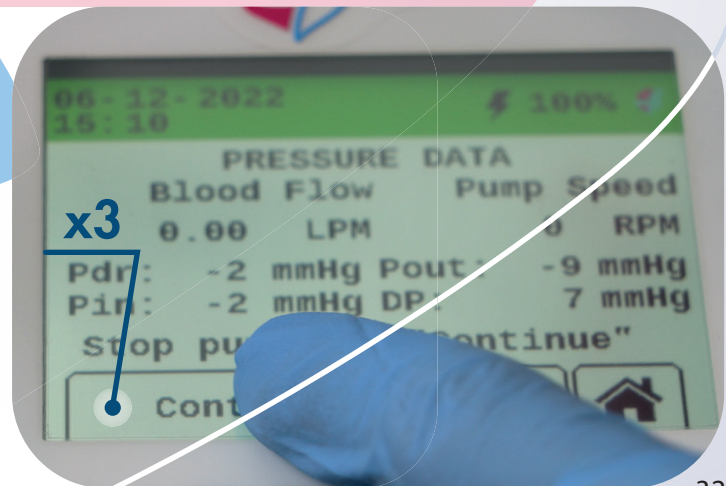
13j

Tap
ZERO PRESSURE
to calibrate the
pressure transducers



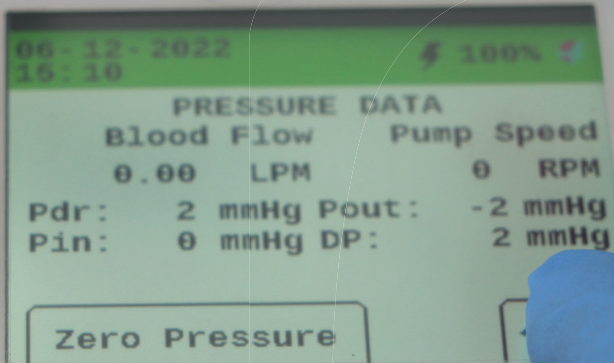
Selecting **CONTINUE**
three times to adjust
them successfully

13k



13

Tap the HOME icon to go back to the main page



06-12-2022 15:10 100%

PRESSURE DATA

Blood Flow	Pump Speed
0.00 LPM	0 RPM

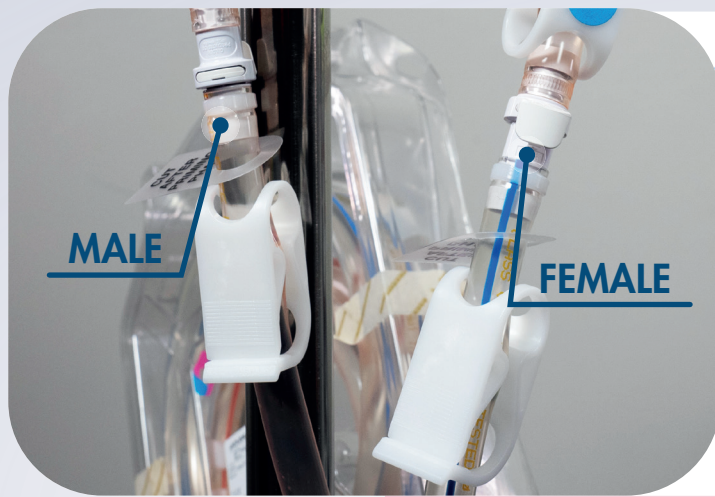
Pdr: 2 mmHg Pout: -2 mmHg
Pin: 0 mmHg DP: 2 mmHg

Zero Pressure

Close the two clamps on the red line and the two clamps on the blue line

14





15

Disconnect the male and female connectors to exclude the priming bag

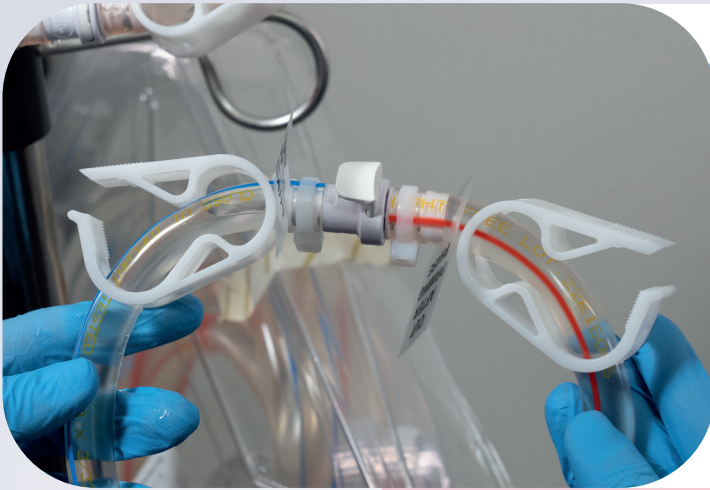
Connect the blue line with the red line to obtain a close circuit ensuring to avoid air presence

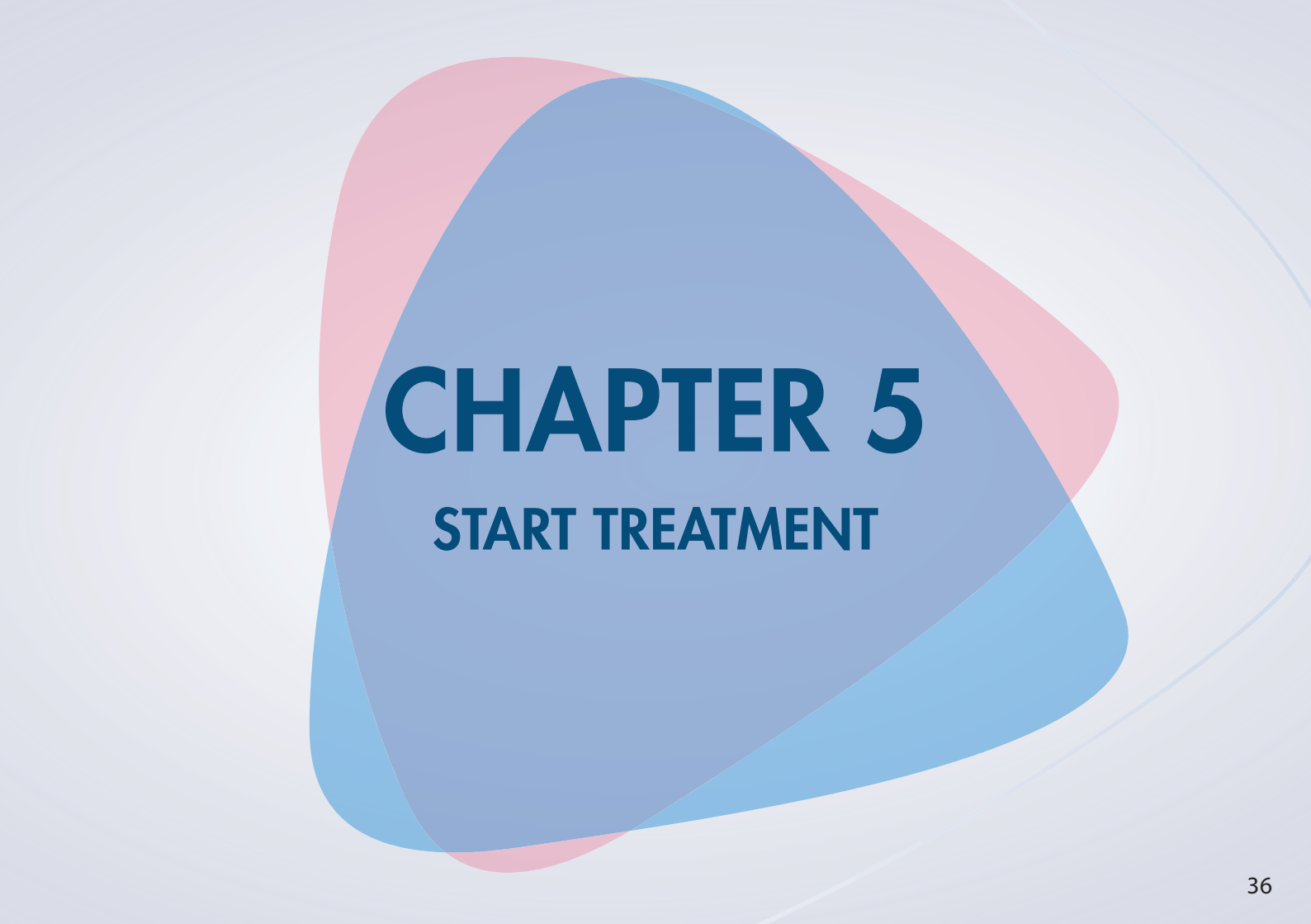
16



17

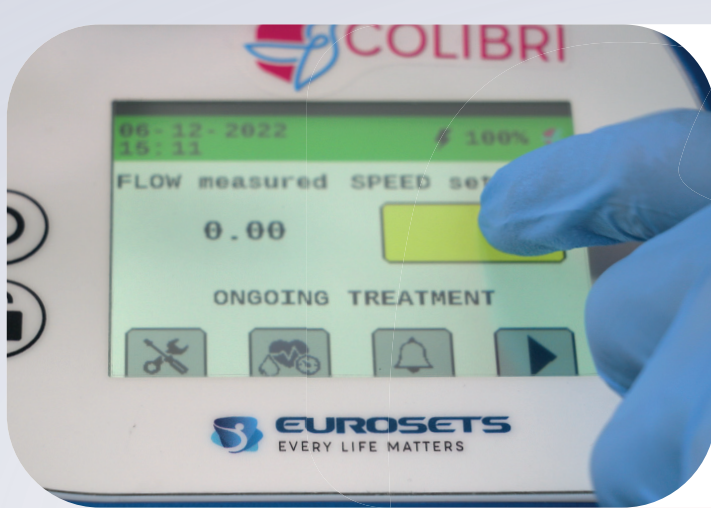
**Colibrì
is now ready
to be connected
to the patient**





CHAPTER 5

START TREATMENT



1

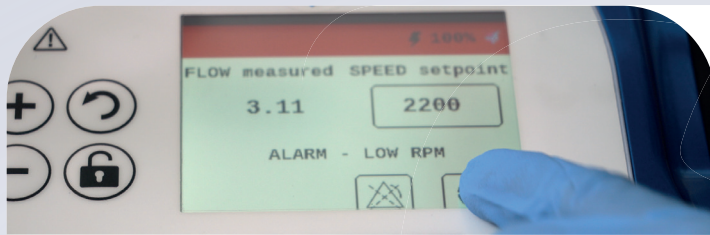
Tap RPM to set the desired pump speed, using + and - buttons, and confirm it



1a

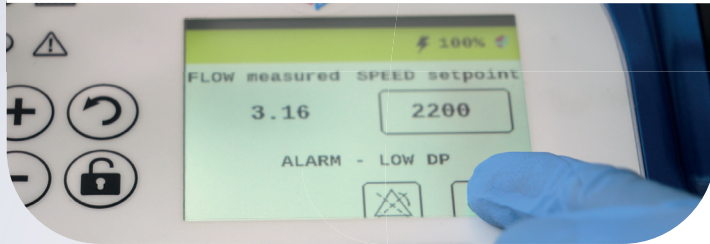


1b



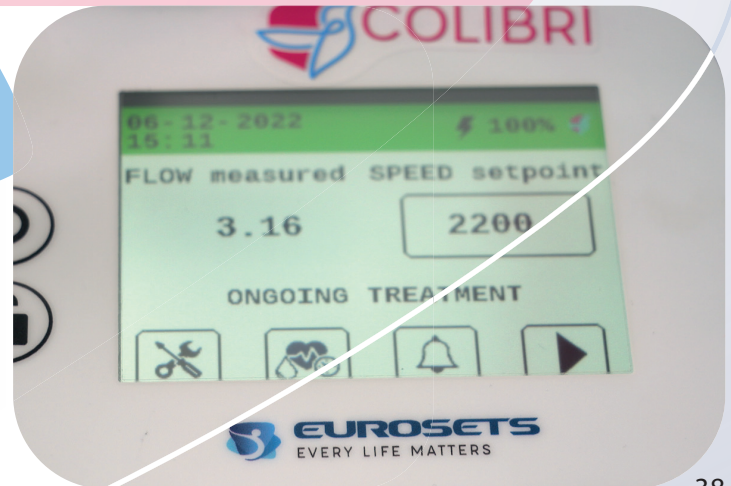
2

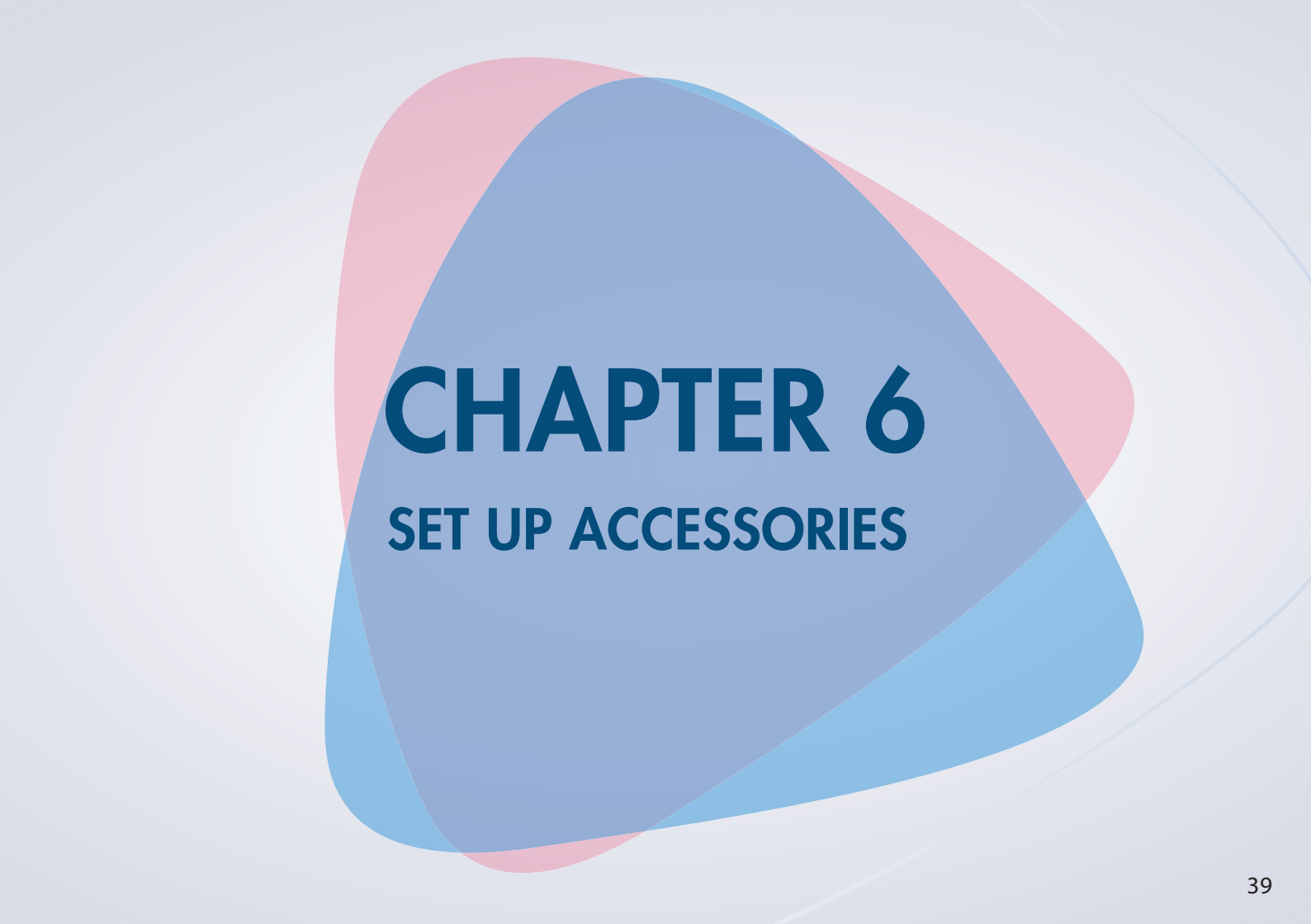
**Tap the circular sign
on the screen to
acknowledge the alarm
and make it stop**



3

**Treatment is
now ongoing**





CHAPTER 6

SET UP ACCESSORIES

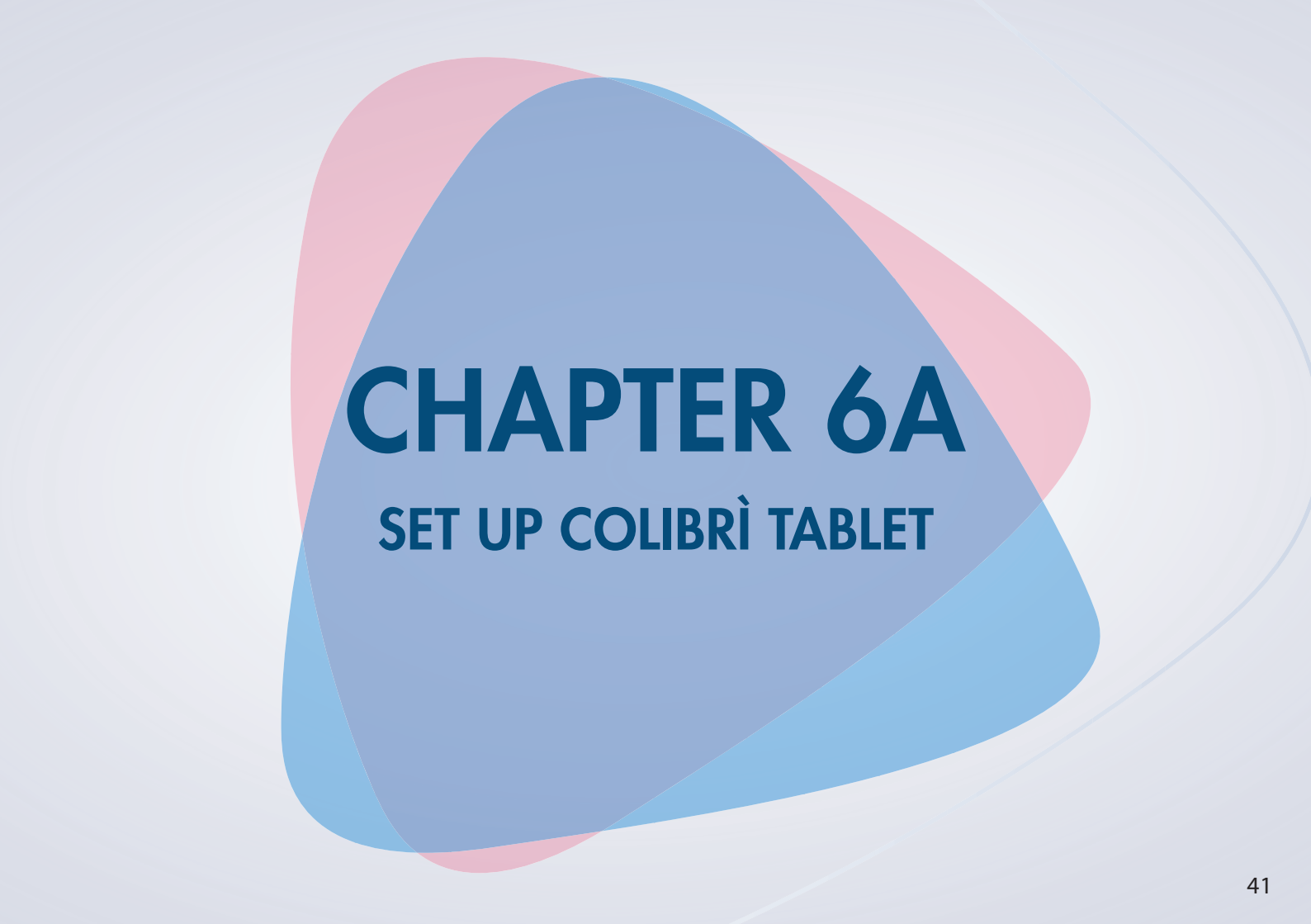
**WI-FI ECHO PROBE
and its recharge cable**



**TABLET
and its recharge cable**



**ARTERIAL AND
VENOUS PROBES**



CHAPTER 6A

SET UP COLIBRÌ TABLET



1

Tap on
«settings» icon
on the left side of the
main screen

Tap on
«Wi-Fi» icon

2





3

Slide the red icon toward right direction to activate manually the function

Secure that the red icon becomes green with indication: «connected»
The Wi-Fi icon on the upper bar appears and confirms that Wi-Fi signal is activated successfully

4





5

**Turn on the
Colibrì tablet by
pressing for a few
second the lateral
button**

**Automatically
the Colibrì App is
activated on the screen**

6



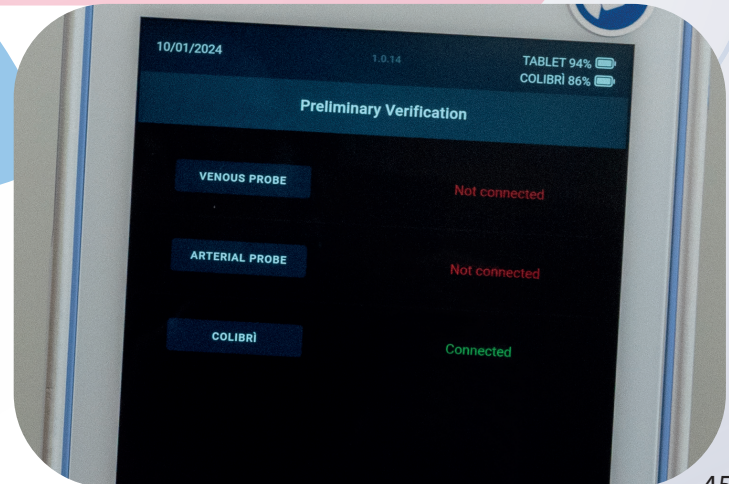


7

**Preliminary
verification on going**

**Secure that appears
on the display the
green word «connected»**

7a





8

**Tap on «continue»
to prosecute**



9

**Connection
successfully obtained.
The screen page
displays the real
time parameters**

TREATMENT PAGE TABLET CONNECTED

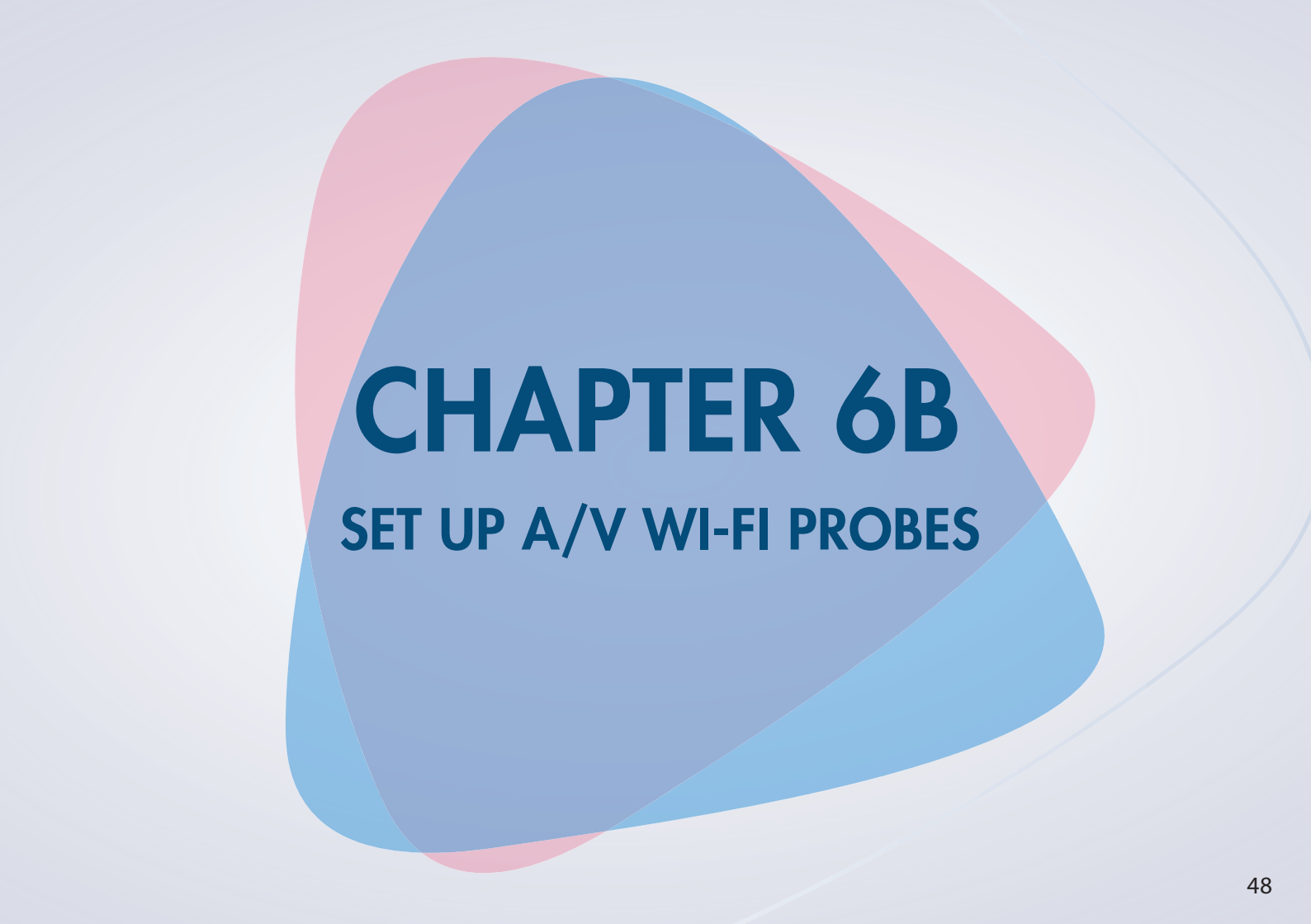


Battery level percentage on the Tablet
Battery level percentage on the Colibri

Tap on «settings» to
display the net address

Tap on «Connection» to display:
serial number, software version,
status of the connection

Patient parameters:
LPM_Blood flow
RPM_Pump speed
Pdrain_Drainage pressure
Pin_Pre-Oxygenator pressure
Pout_Post-Oxygenator pressure
DeltaP_Delta pressure



CHAPTER 6B

SET UP A/V WI-FI PROBES



1

Turn on each probe by pressing the main button

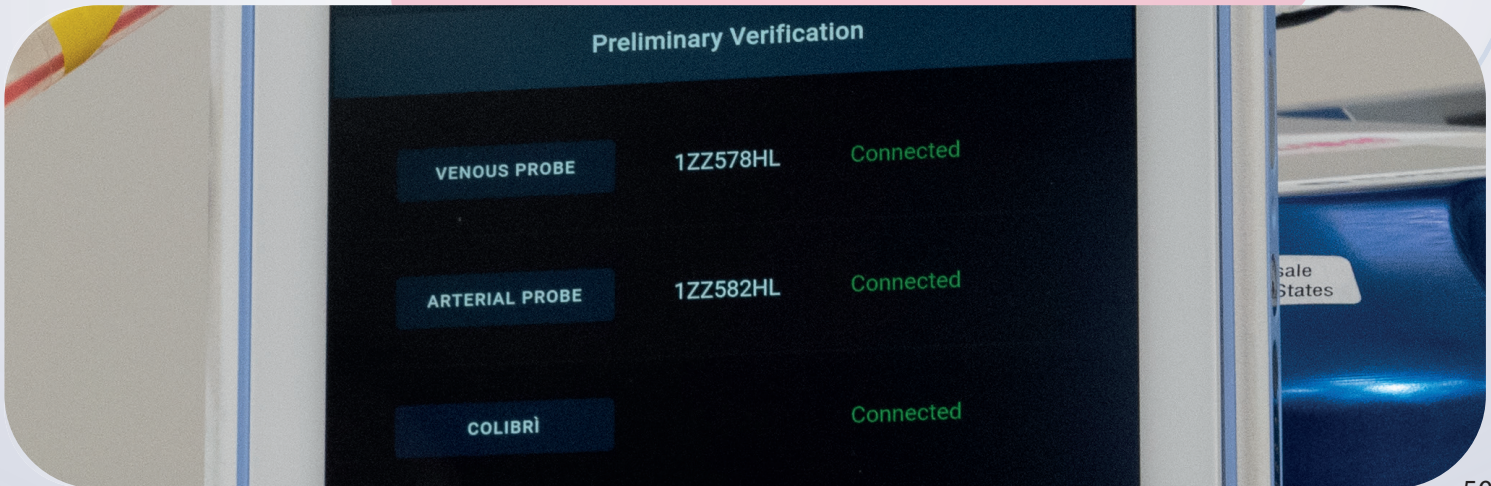
The led on the probes becomes green

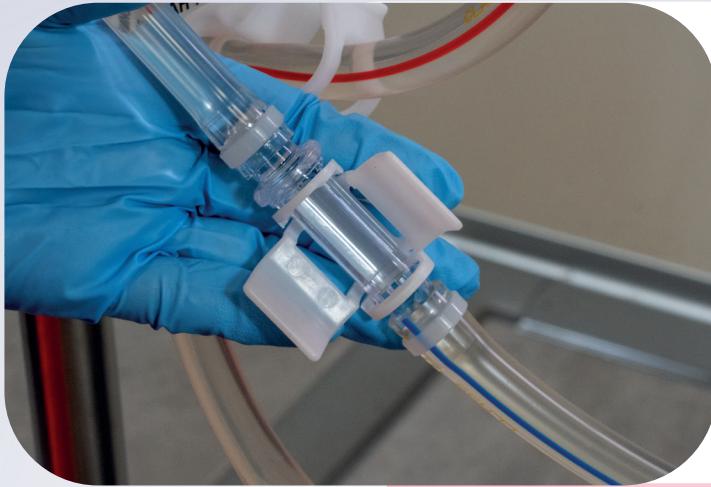
2



3

Secure that appear the green “connected” indication on the preliminary verification page for arterial and venous probe





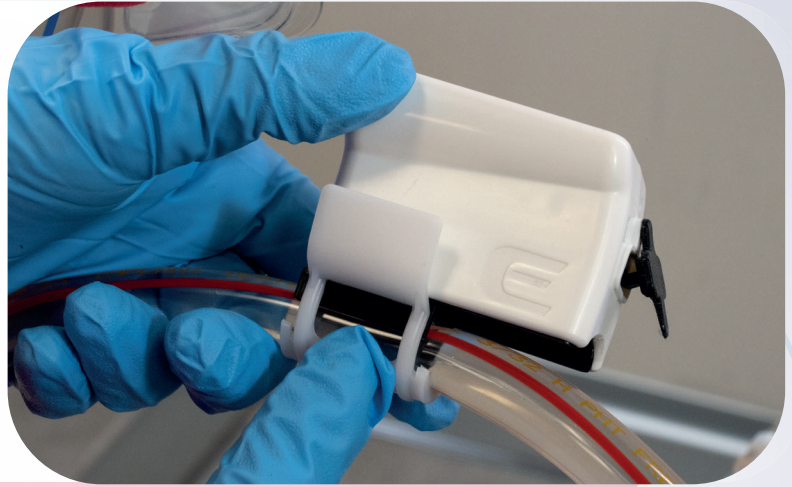
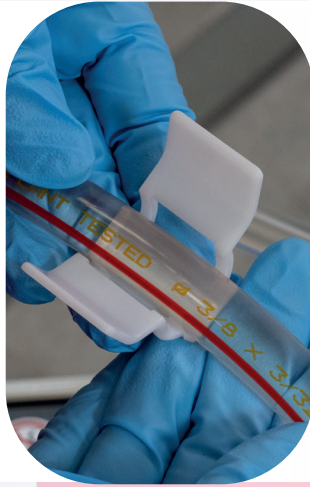
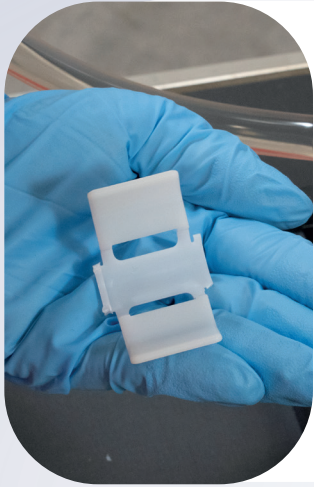
4

Set up both Wi-Fi probes on the arterial and venous lines of the circuit respectively

Check that both couvettes are positioned in a stable position

5





6

And that the
green led signal
is showed on both
Wi-Fi probes

7



**Connection performed
successfully.
Tap on “continue”
on the display**

TREATMENT PAGE WITH A/V WI-FI PROBES CONNECTED

Parameters measured
by venous probe:

SvO2: venous saturation
Tven: venous temperature
Hb: hemoglobin

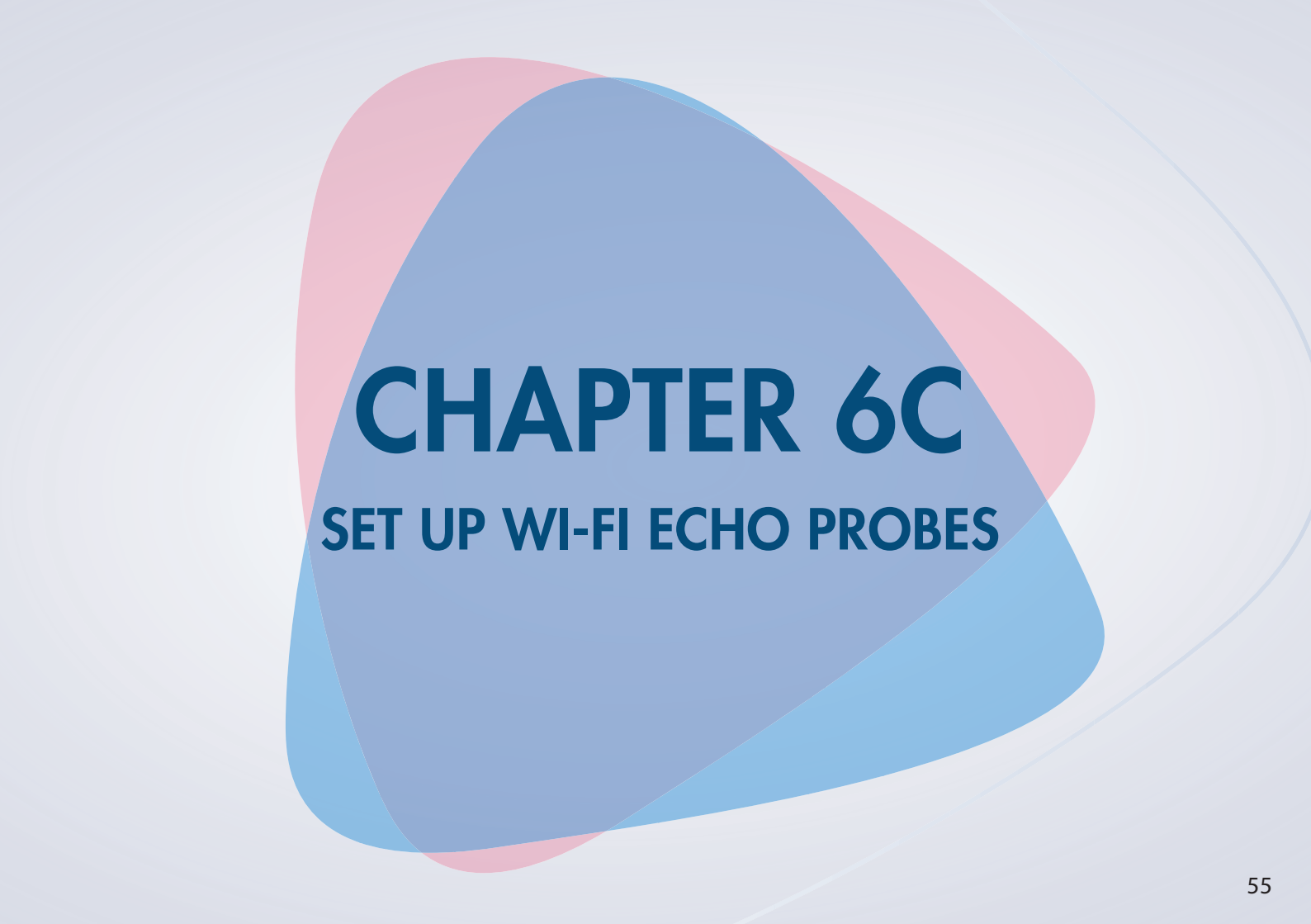
Parameters measured by
arterial probe:

SaO2: arterial saturation
Tart: arterial temperature



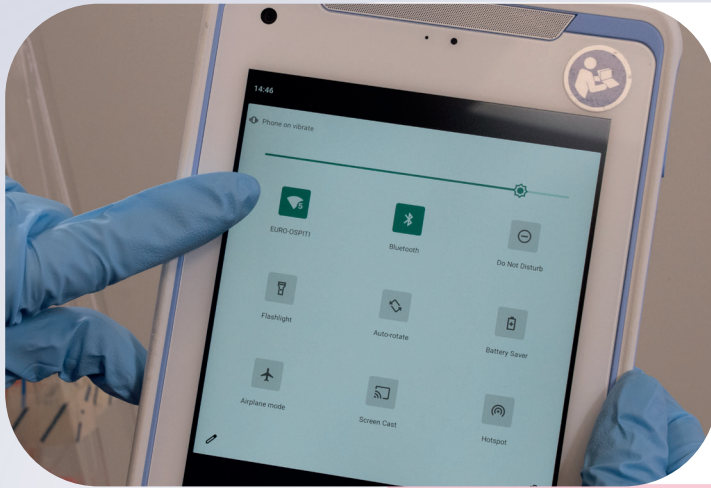
Venous probe
battery level
percentage

Arterial probe
battery level
percentage



CHAPTER 6C

SET UP WI-FI ECHO PROBES



1

**Connect Colibrì tablet
on the Wi-Fi net**

**Tap the
app Clarius on
the home page of
Colibrì tablet**

2



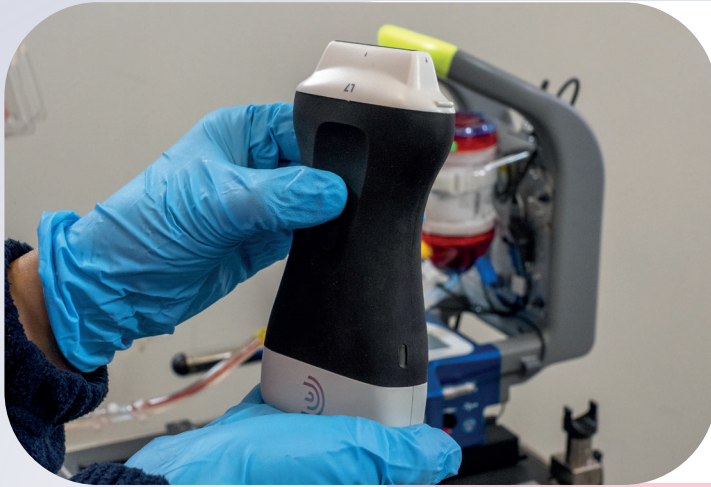
3



**Create a new account
Clarius, insert e-mail
and password.**

**Insert your
credentials account:
user & password.**

**Tap on "sign in"
to confirm**

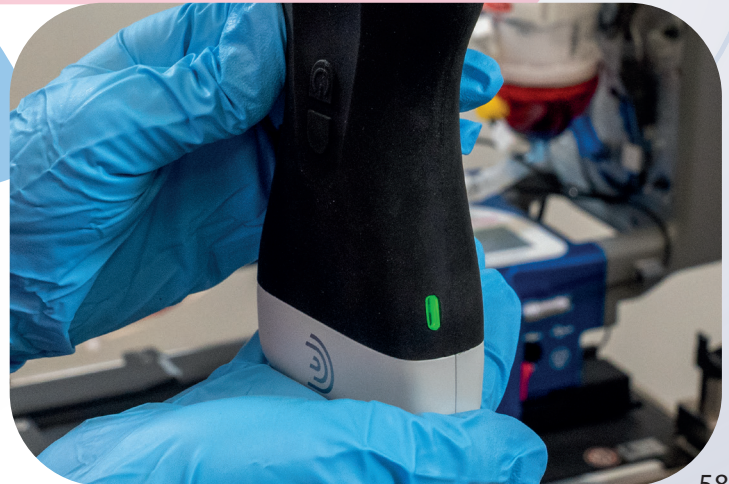


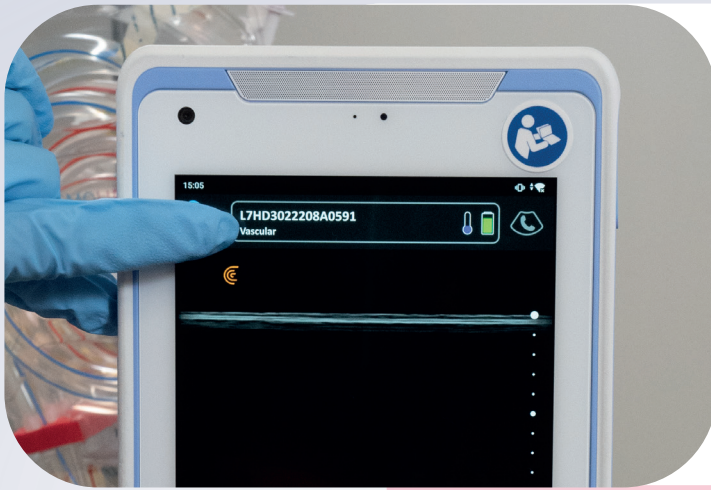
4

**Turn on the echo probe
by pressing for a few
seconds the main button
on the echo probe**

**The echo probe led
becomes green and
stable**

5



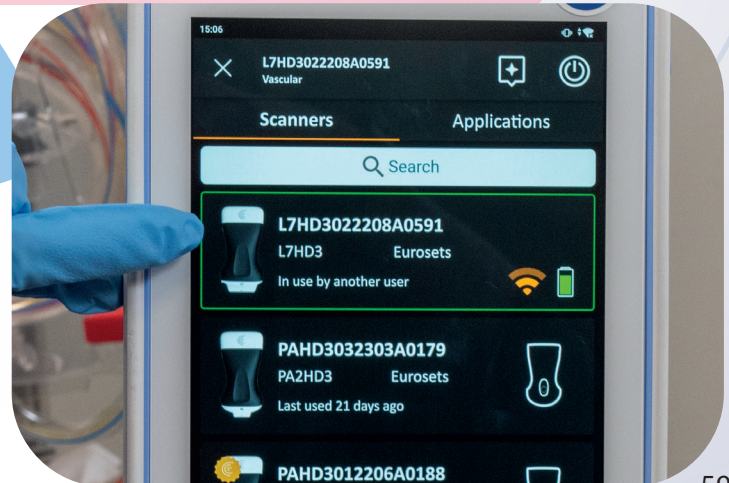


6

Tap on
"scanners"
in the upper
part of the screen

Select the
echo probe in use

7



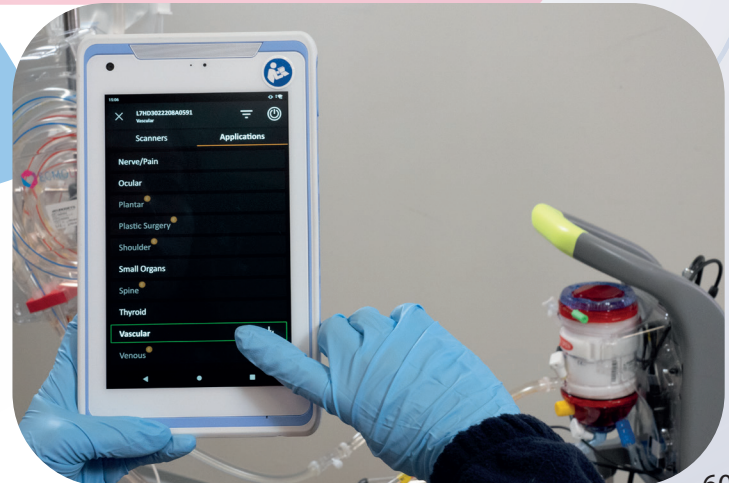
8

Tap on
“applications”
in the upper
part of the screen



9

Select vascular
or cardiac



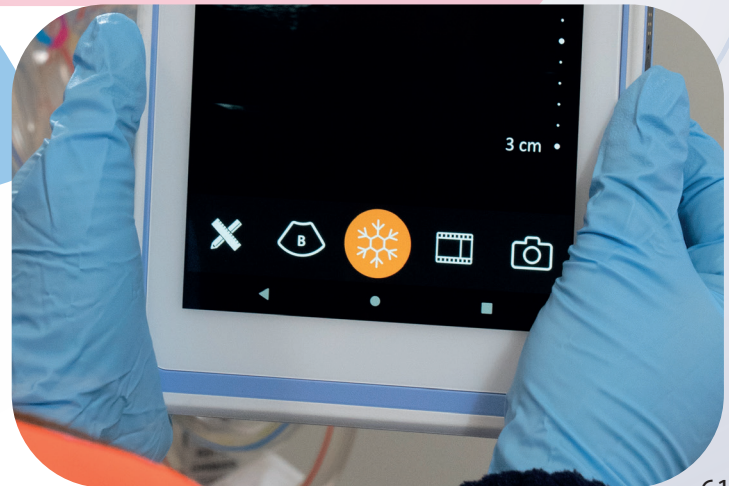


10

Setting is completed.
Echo probe is ready
to be used

Tap on the “video”
icon to acquire the
frame video.
Tap on the “picture”
icon to acquire a frame

11





12

To exit the page 2 options available

Option 1:
press the central
black dot

13



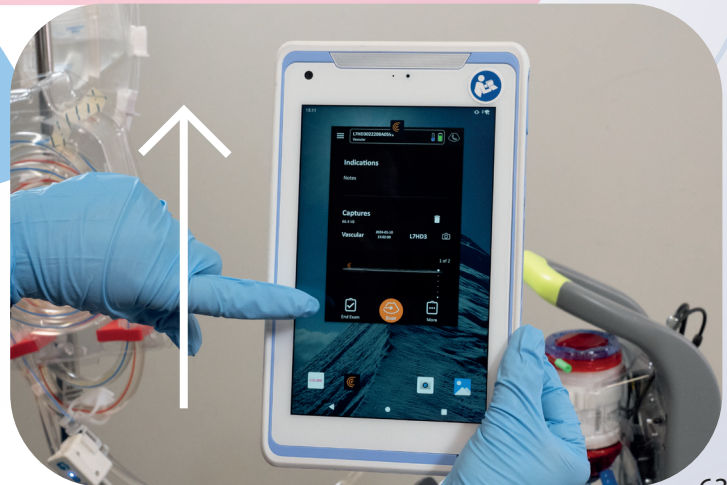


14

Option 2:
press the black square
on the right

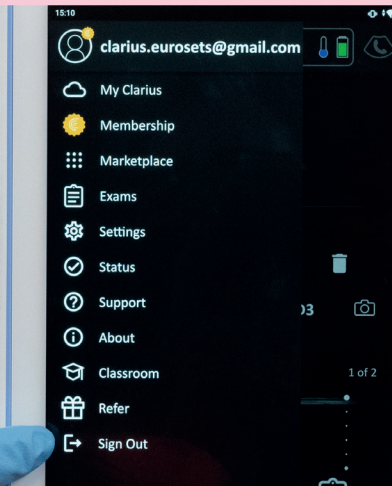
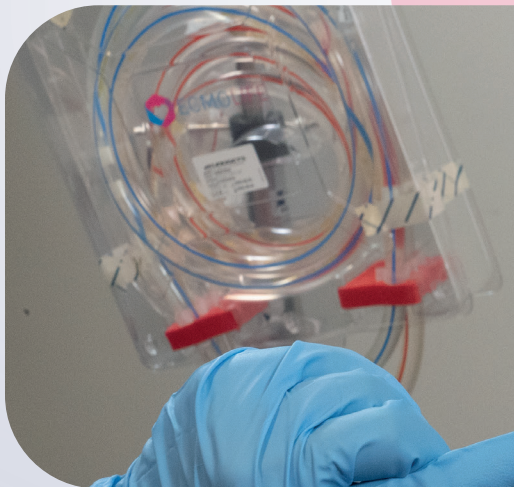
**Scroll it up
with your finger
to close the page**

15



**Do not logout to
maintain your
credentials for
next access**

16



TREATMENT PAGE WI-FI ECHO PROBE CONNECTED

Tap on scanner to display the echo probe used

Temperature probe indicator

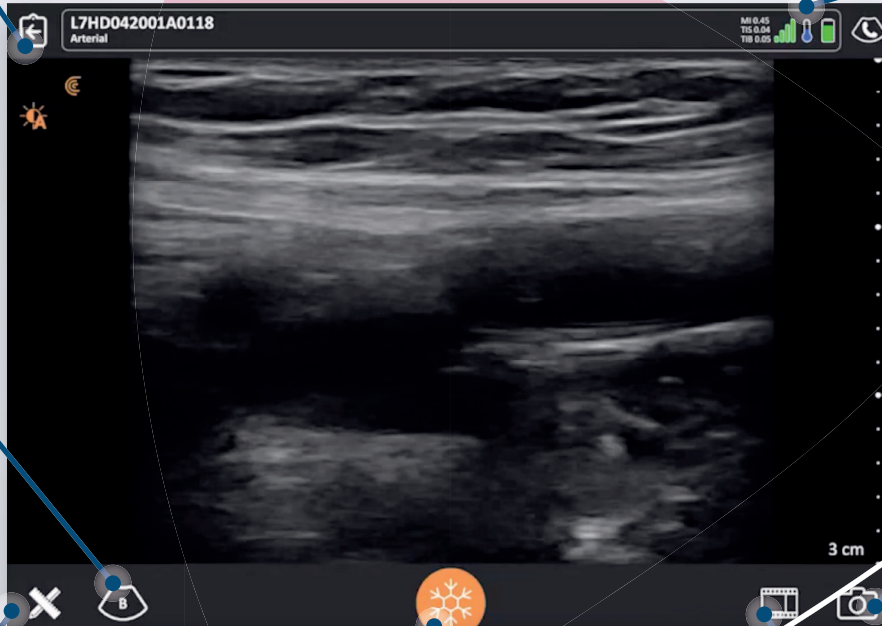
Tap on the angle to display the amplitude picture

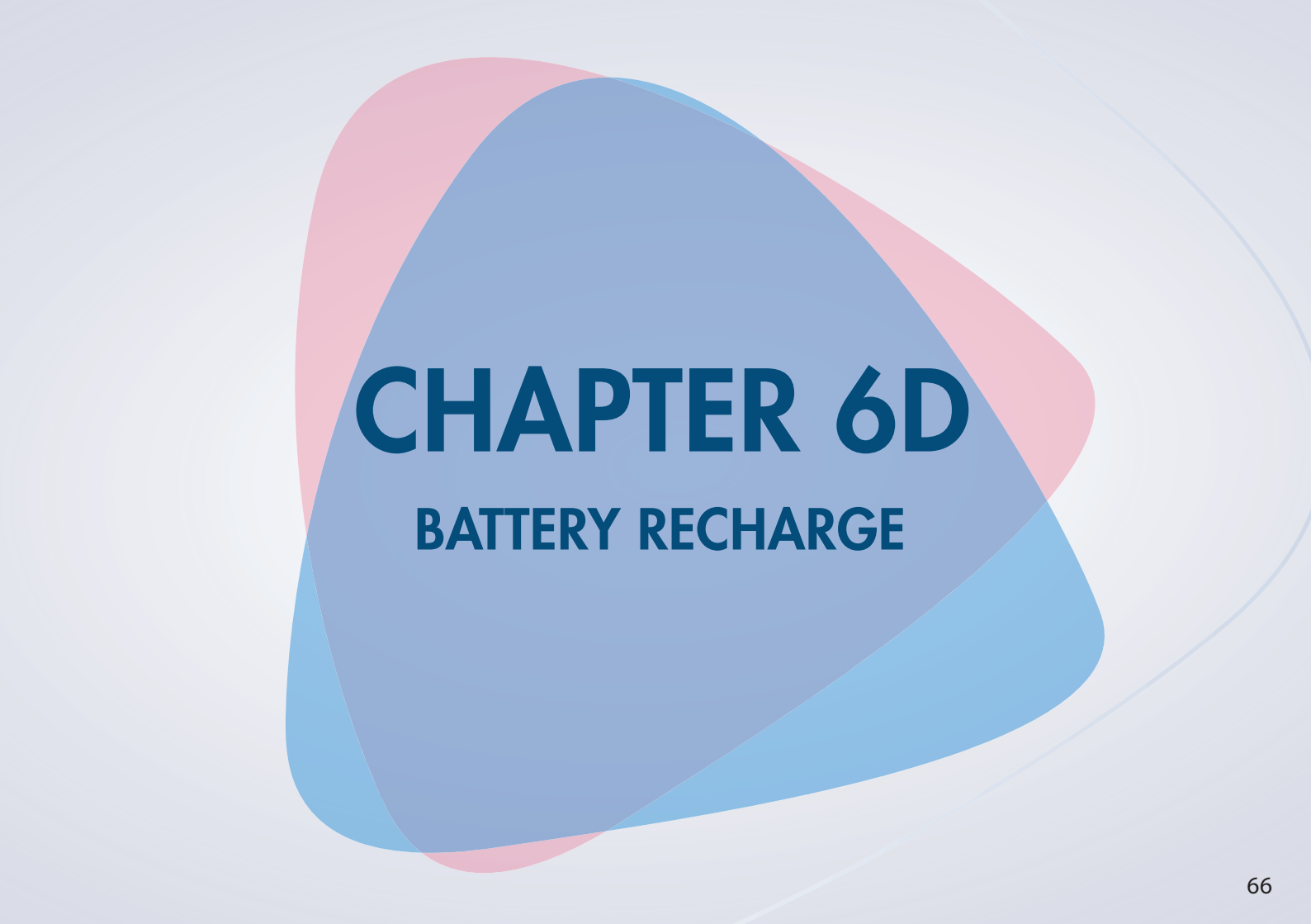
Tap on ruler to do measurement on the echo picture

Tap on the picture icon to acquire the frame

Tap on the freeze icon to stop the frame

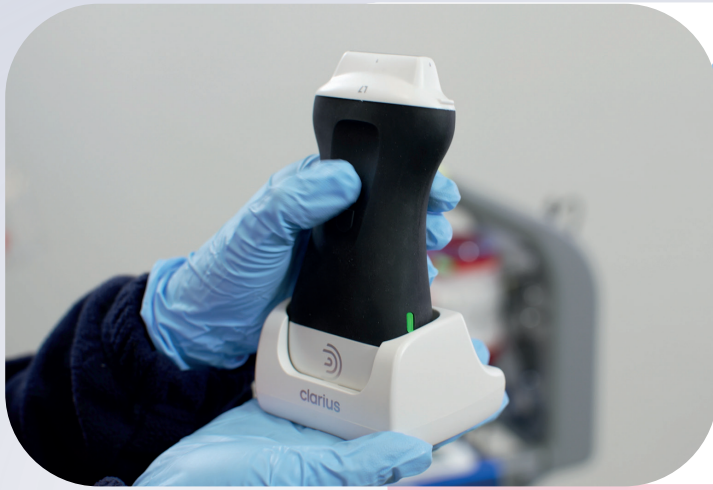
Tap on the video icon to acquire the video





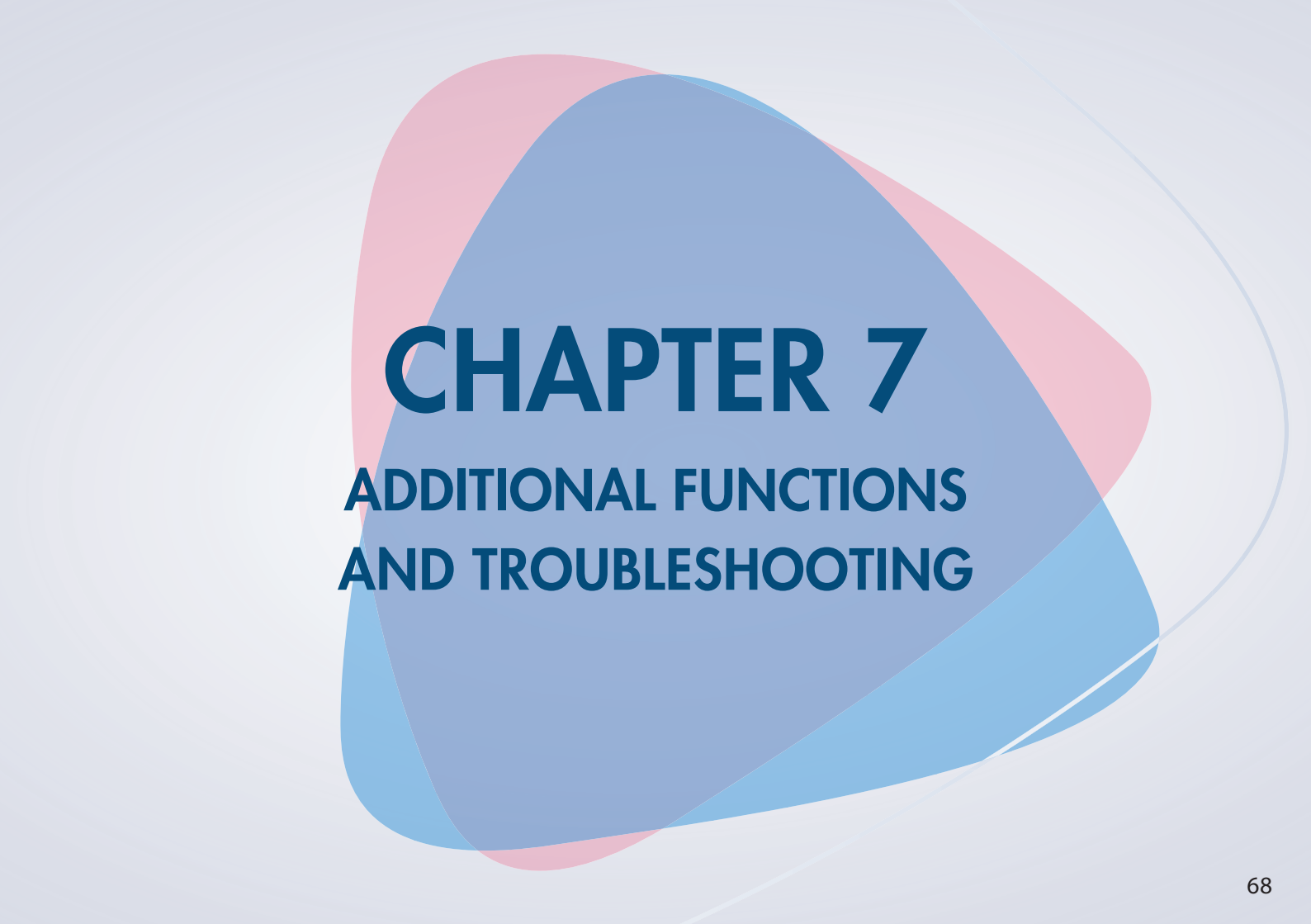
CHAPTER 6D

BATTERY RECHARGE



1

**Place the
echo probe in
it's docking station.
A green led will
appear to indicate
that it is charging**



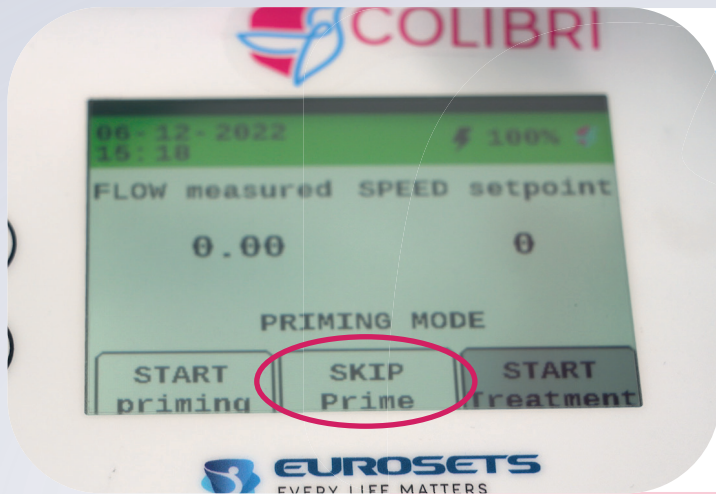
CHAPTER 7

ADDITIONAL FUNCTIONS AND TROUBLESHOOTING



CHAPTER 7A

SKIP AUTOMATIC PRIMING

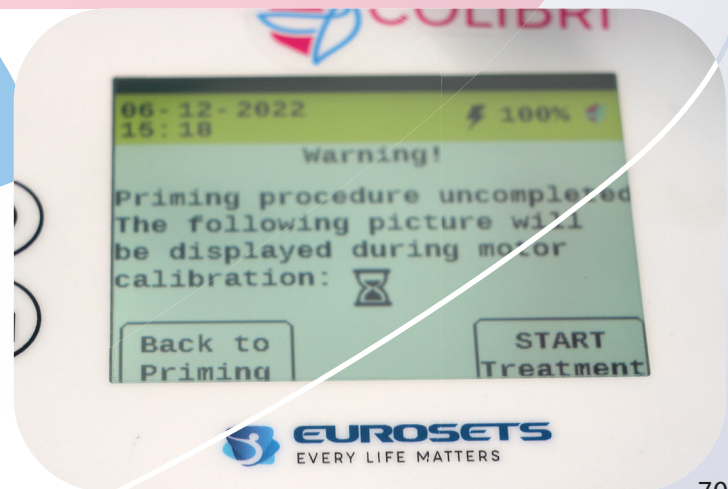


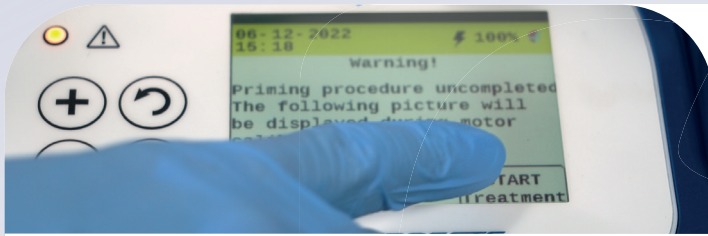
1

After performing the diagnostic phase, tap **SKIP PRIME** on the screen

Machine will advise with a yellow warning of a temporary RPM limitations

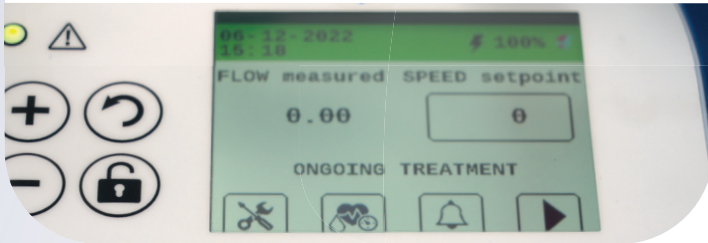
2





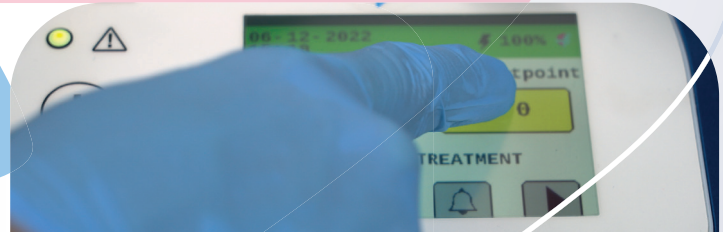
3

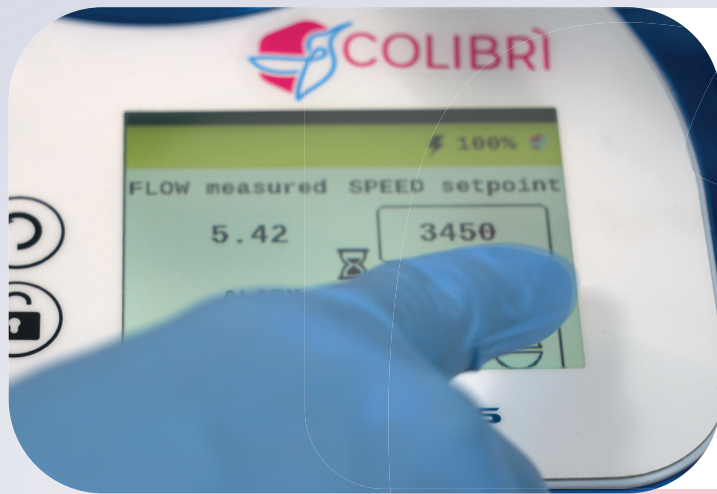
Tap
START TREATMENT
to enter in the
treatment page



4

Tap RPM to set
the desired value,
considering the
RPM limitations



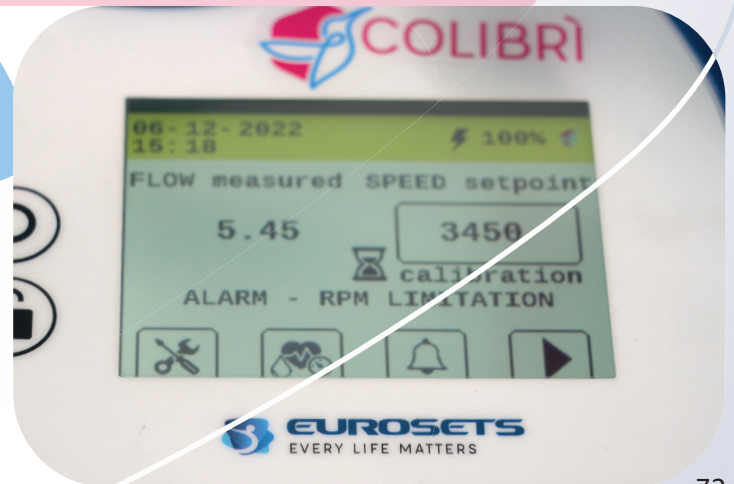


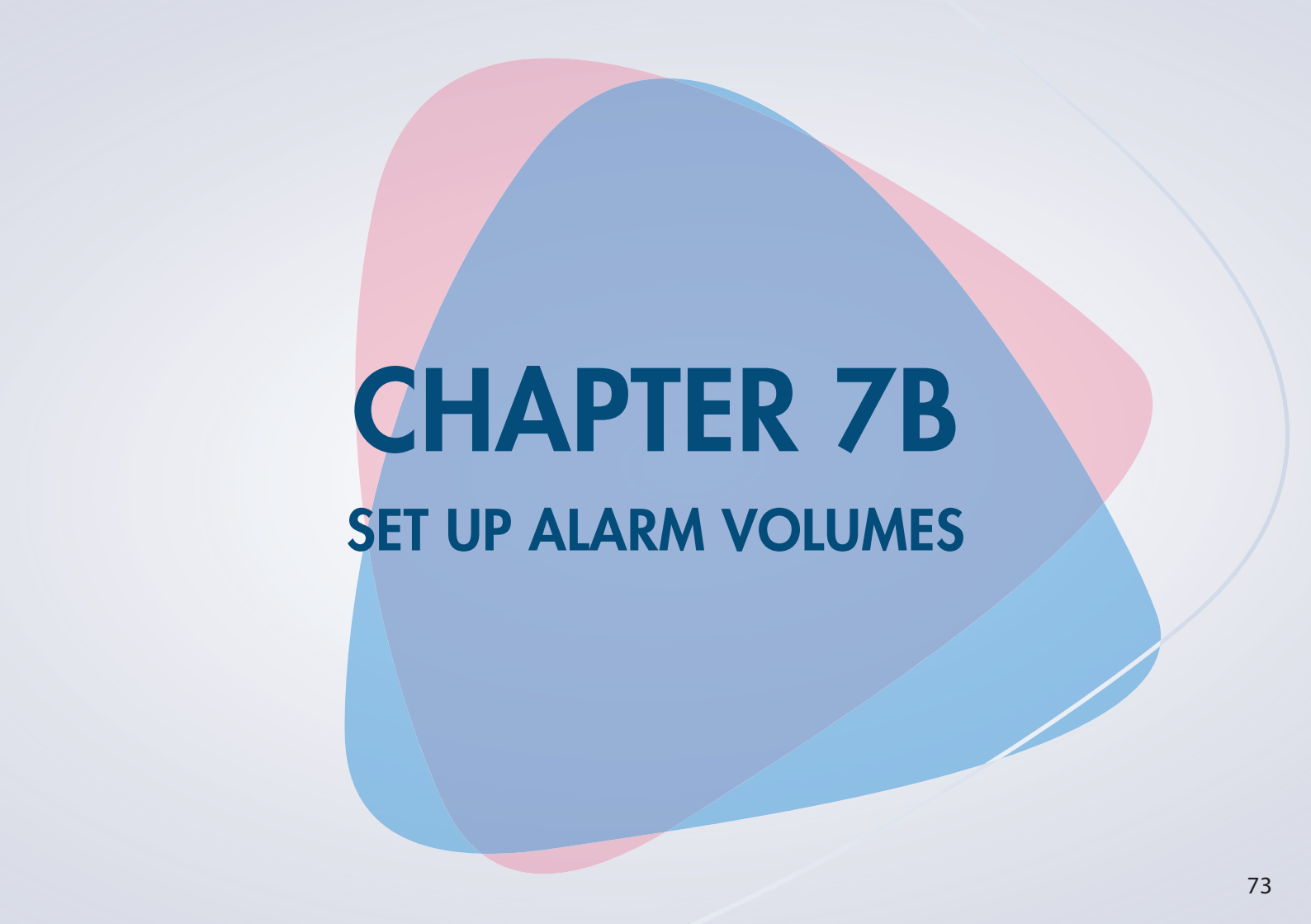
5

**The machine
will take few minutes
to calibrate RPM**

**Once the
hourglass disappears,
it is possible to go
above 3450 RPM**

6





CHAPTER 7B

SET UP ALARM VOLUMES

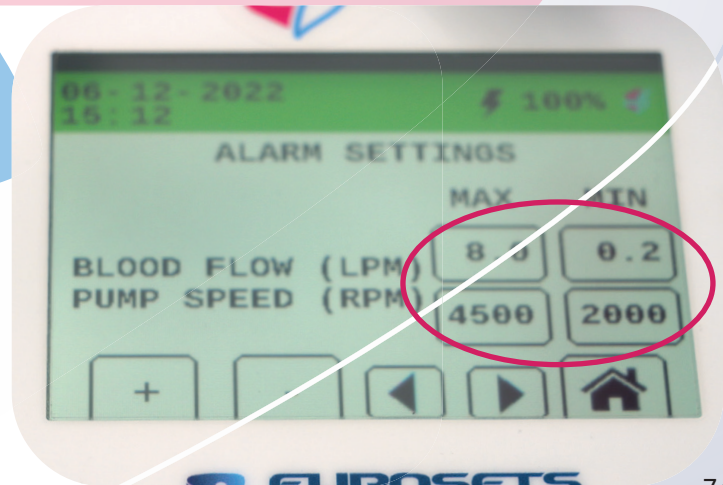


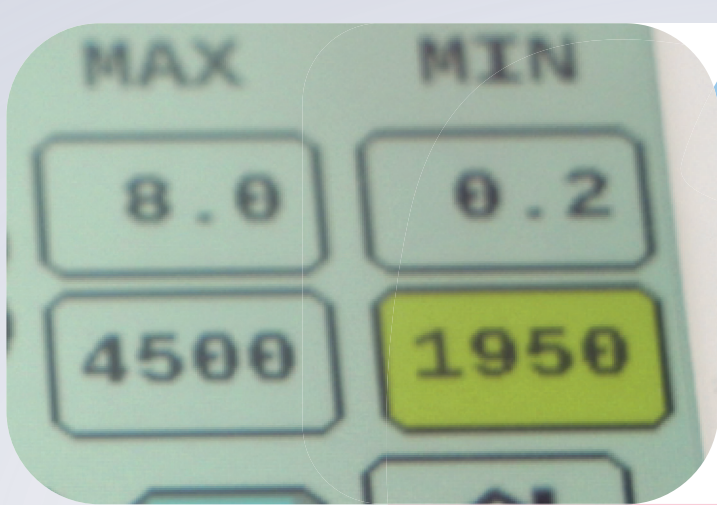
1

To modify
the alarm values,
tap **ALARM** icon
on the screen

Tap on the values
desired to modify
the ranges

2





2a

The value
will become
yellow

Use + or – icons to
change the values
to the desired
set point

3



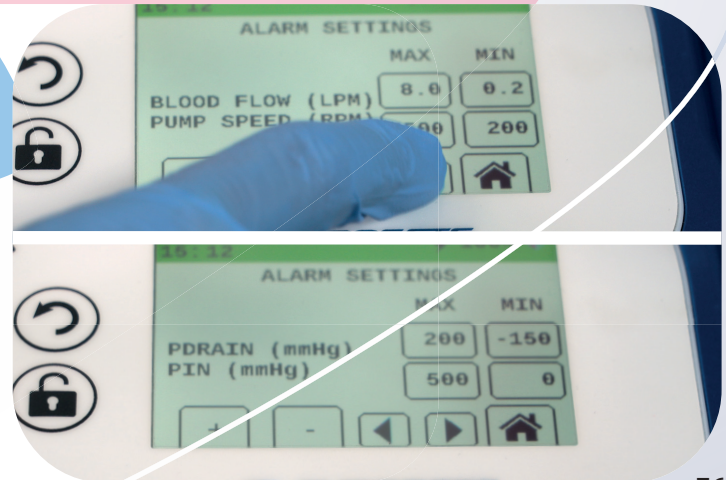
4

Tap on
the yellow box
to confirm the
adjustments



5

Use the
arrows icons
to move to the others
values to adjust





6

Tap
the **HOME** icon
to go back to
the main page



6a

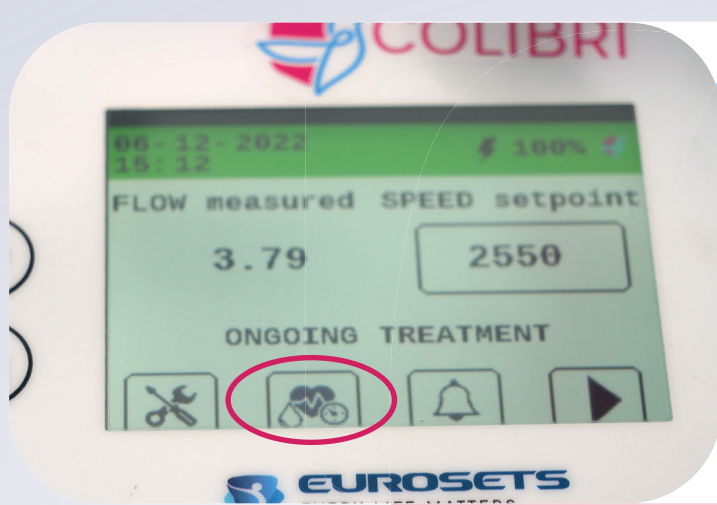


6b



CHAPTER 7C

ENABLE THE BUBBLE SENSOR

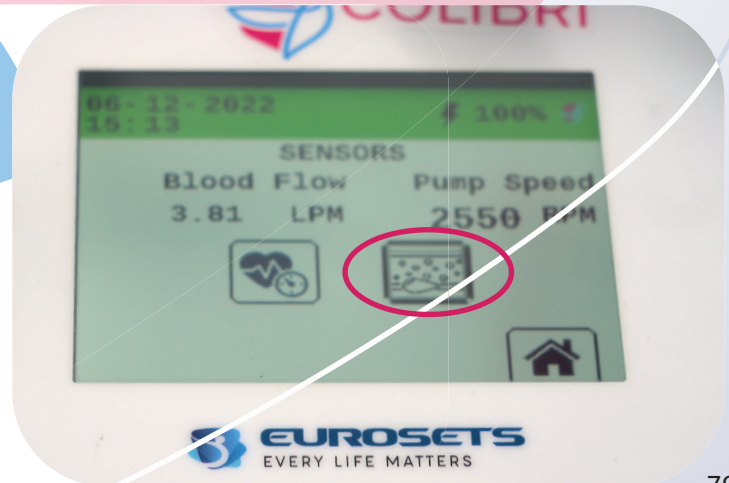


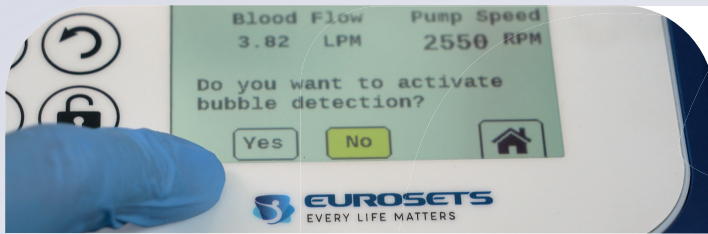
1

Tap
SENSORS icon

Select the
BUBBLE icon

2





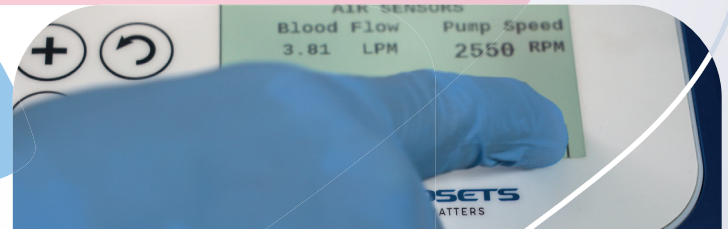
3

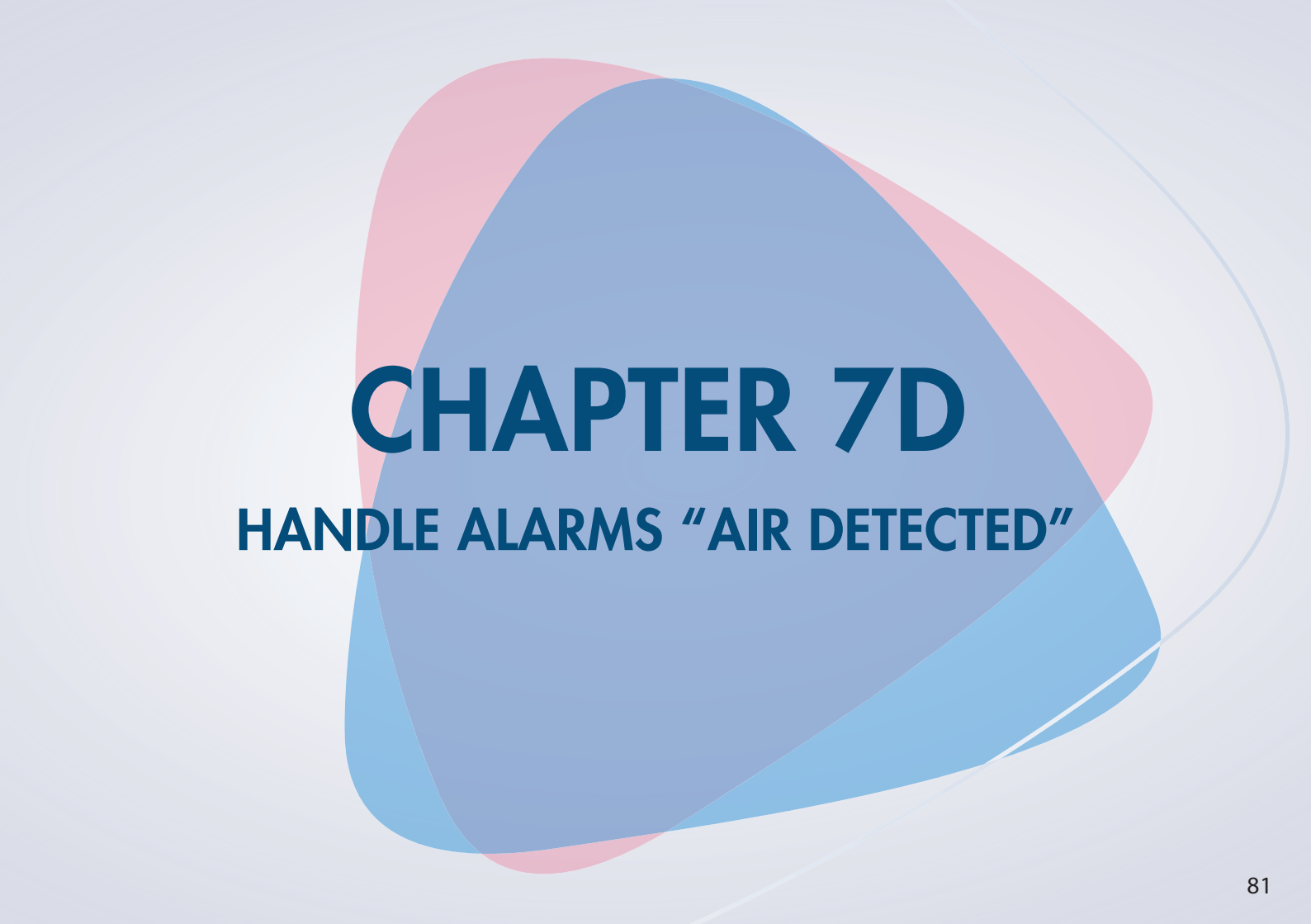
**Enable the
bubble sensor
tapping YES**



**Tap the
HOME icon
to go back to
the main page**

4





CHAPTER 7D

HANDLE ALARMS “AIR DETECTED”

1

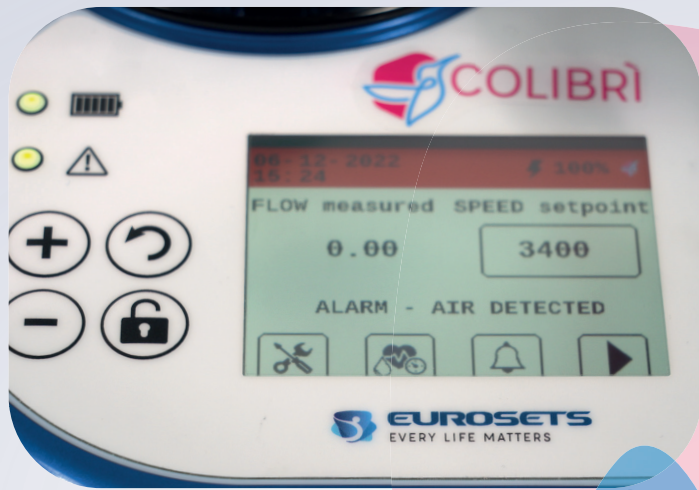
**Machine alarm
AIR DETECTED
in case of air
in the circuit**



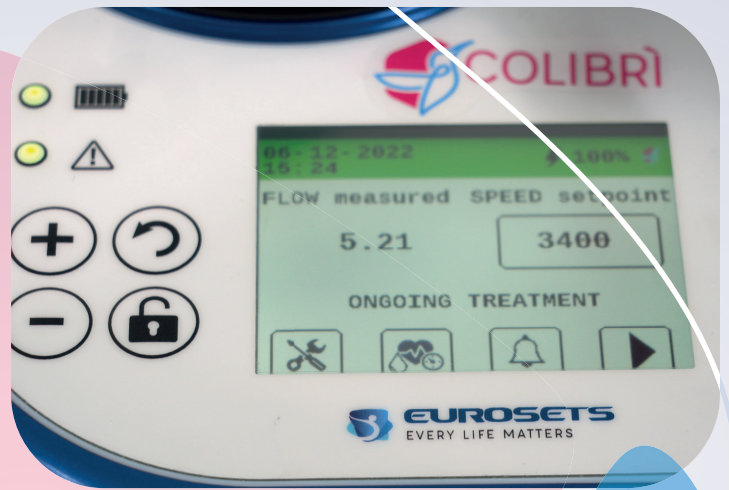
2

**Tap the triangle icon
to temporarily silence
the alarm sound or
the circular icon to
acknowledge the alarm
and make it stop**

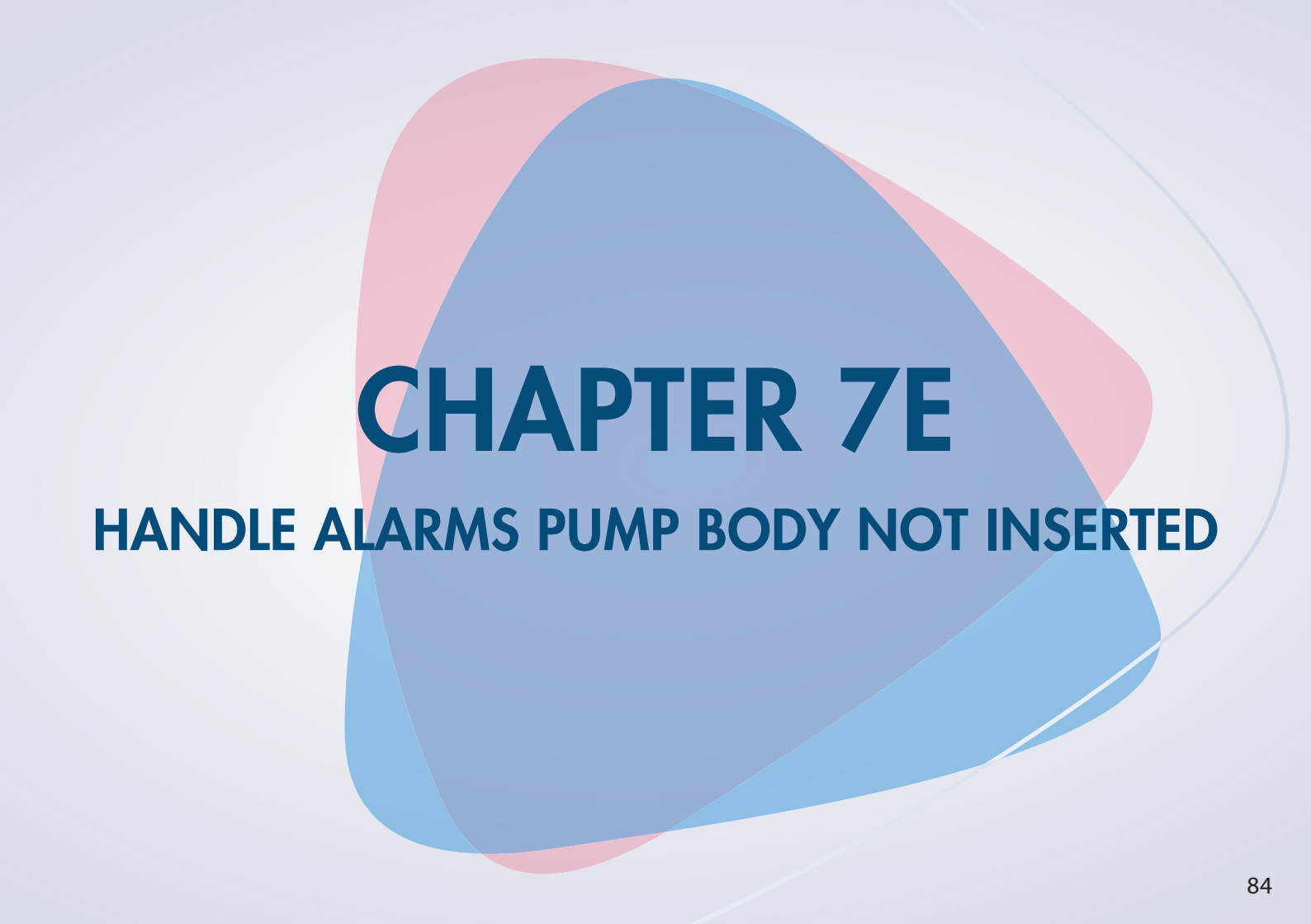




2a

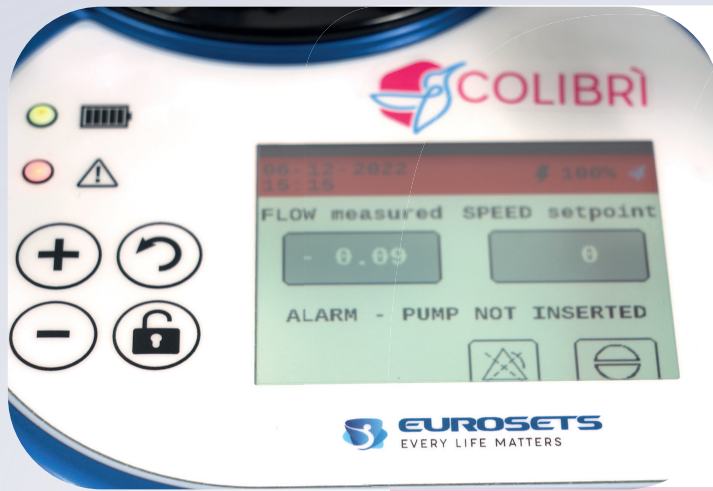


2b



CHAPTER 7E

HANDLE ALARMS PUMP BODY NOT INSERTED

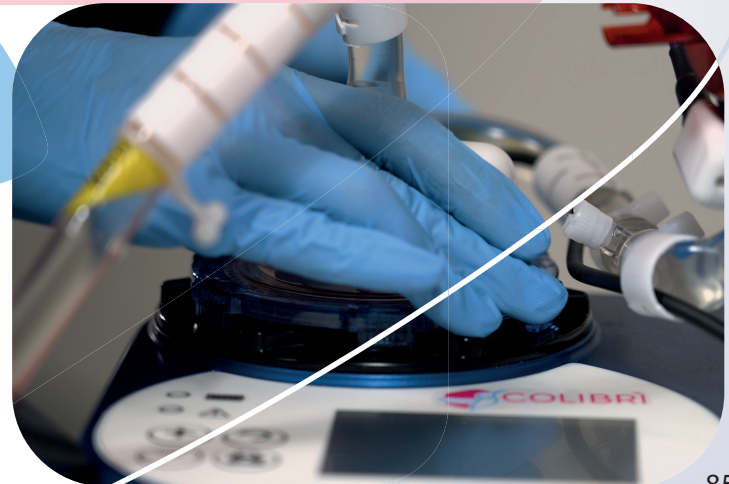


1

**Machine alarm
PUMP NOT INSERTED**

**Insert the pump in
the motor driver.
Fix it by turning the
blue ring clockwise**

2

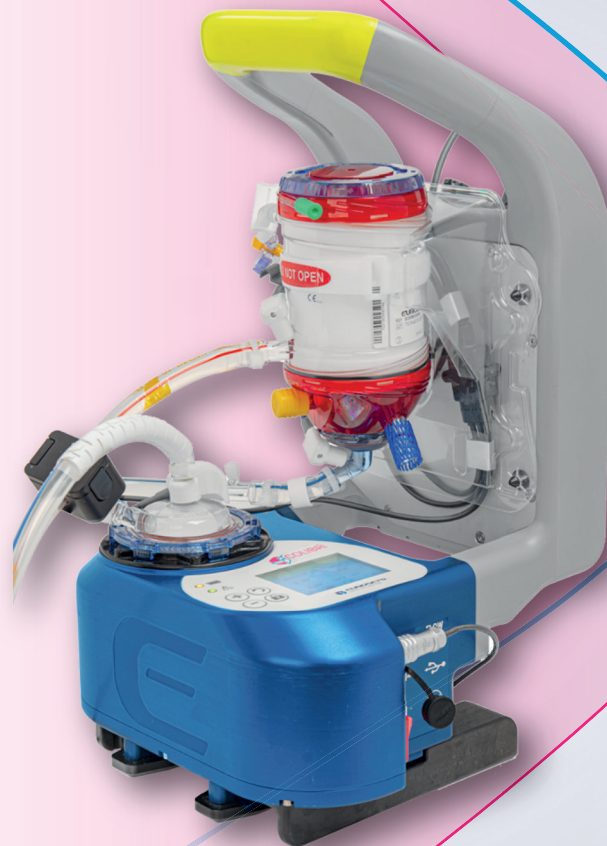




COLIBRÌ

INSERVICE GUIDE

Colibrì is the lightest system equipped with gold standard features and unique advanced technologies for unlimited ECLS clinical applications.



This quick guide represents only an overview of the operating procedures and does not replace the instruction for Use.

MM3COLIE02