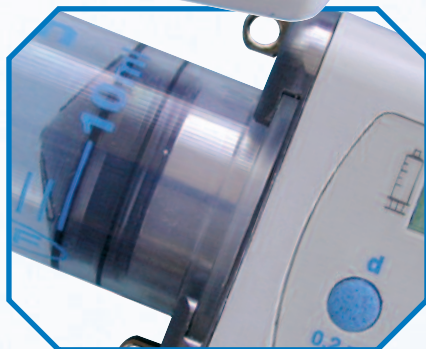


# Crono

AMBULATORY INFUSION PUMP



 **CANE**

USER GUIDE

MEDICAL TECHNOLOGY



# *Crono*

USER GUIDE



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### FOREWORD

**CAUTION:** US Federal law restricts this device for sale by or on order of a physician.

This manual is written with the aim of informing the user of this pump. The instructions and details given here are fundamental for the correct and safe use of this device.

Please take time to read all the information before using the pump and moreover keep this guide in a safe place for future reference.

### NOTE

The manufacturer only considers itself responsible for the safety and reliable working of this pump, provided that it is used in accordance with the current instructions for use.

The manufacturer declines all responsibility towards the purchaser and any third party for any damage to the pump caused by tampering, improper use, modifications and/or reparations by unauthorised personnel.

### INTENDED USE

The ambulatory infusion pump **Crono** has been designed for subcutaneous drug infusions. Canè S.r.l. declines all responsibility for the administration of drugs and solutions and/or methods of drug infusions other than those described in this manual.

### USER ASSISTANCE INFORMATION

#### **UNITED STATES:**

INTRA PUMP INFUSION SYSTEMS

920 Minters Chapel Road, Suite 200

Grapevine, Texas 76051

Tel: 866-211-7867

Fax: 630-845-2768

Email: [info@intrapump.com](mailto:info@intrapump.com)

## PUMP DESCRIPTION

Canè S.r.l. - a company specialized in the production of ambulatory pumps since 1972 - has developed a new generation of compact pumps: **Crono** which is a perfect combination of high technology and innovative design.

Infusion pumps using normal commercial syringes are bulky and cumbersome and thus difficult to use in the true sense of "ambulatory". This can have a negative impact on patient compliance and treatment goals.

A special syringe, an integral part of **Crono**, provides an efficient reduction of overall pump size. Whether day or night infusion is required, **Crono** offers more conveniences and advantages than other bulkier, heavier pumps.

Patients who have been following subcutaneous infusion therapy for a long time often experience difficulties in absorbing the drug subcutaneously. This may lead to catheter occlusion with infusion interruption.

**Crono** has a unique mechanism which responds to occlusion and provides an infusion thrust up to three times higher than conventional pumps. Normal infusion is resumed when catheter occlusion has been eliminated.

In order to provide steady infusion and continuous drug absorption, **Crono** infuses the fluid volume to be administered in pulses of .022 ml. These pulses are spread evenly over the time set for completing the infusion.

## FACTORY SETTINGS

The following features were set at the factory but can be re-programmed:

Syringe size	20 ml
Audible signal for end infusion	AL.0 (Non active)
Delivery time	10 hours
Key-pad lock level	Lo,0 (key-pad unlocked)
Number of infusions	0

## TECHNICAL FEATURES

Dimensions	77x48x29 mm (3x1.9x1.1 inch).
Weight	115 g (battery included).
Battery	3 Volt type 123 A lithium battery.
Syringes	Dedicated with 10 or 20 ml capacity.
Volume administration	Drug volume can be programmed from 1 to 20 ml.
Delivery time	Programmable from 30 minutes to 99 hours, in 15 minutes steps.
Accuracy	+/- 2%.
Available occlusion pressure	4,5 bar +/-1.
Data storage	Programmable data are automatically stored in the pump's memory; the data are not lost when the battery is removed.
Safety circuits	To control the regular working of the device, alarming in the event of anomaly and displaying error message.
Tamper resistant feature	Allows the pump to be "locked" by disassembling the buttons.
Operating conditions	+10°C / +45 °C 30% / 75% RH 700 hPa / 1060 hPa
Storage conditions	-10°C / +60 °C 10% / 100% RH 500 hPa / 1060 hPa

**STANDARD EQUIPMENT SUPPLIED**

1. Ambulatory infusion pump
2. Pump case
3. Elastic belt
4. Collar strap
5. Fabric holder
6. 2 batteries (one already inserted in the pump)
7. Battery tool
8. User guide

Fig.1

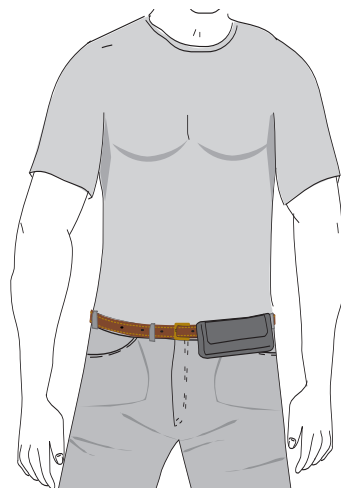
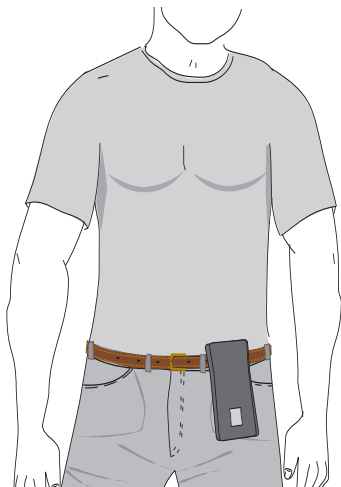


## OPTIONAL ACCESSORIES

Optional accessories are available upon request:

1. Upright leather holder similar to a mobile telephone holder.
2. Horizontal leather holder similar to a spectacle case.

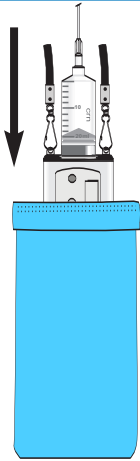
Fig.2



**HOW TO USE THE STANDARD EQUIPMENT SUPPLIED**

The following illustrations show how the pump and its accessories can be set up.

Fig.3



**How to attach collar strap to the pump and the fabric holder**

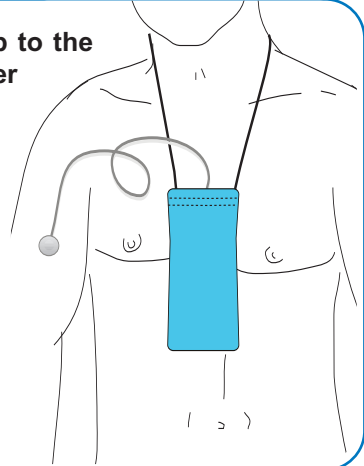
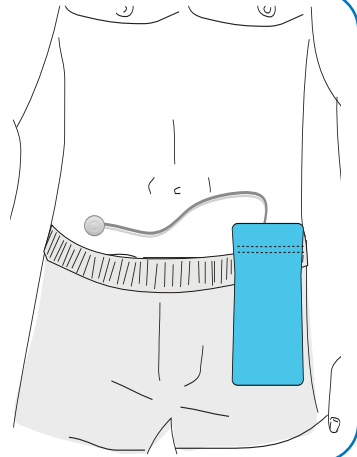
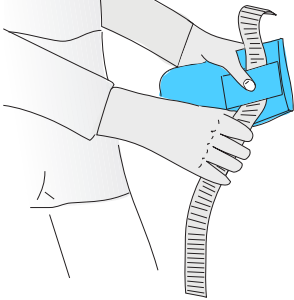


Fig.4

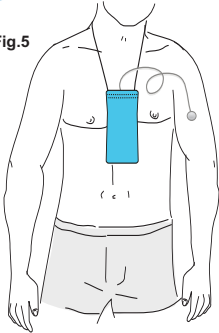
**How to use elastic belt with pump and fabric holder**



## HOW TO WEAR THE PUMP

The following pictures show the different ways the pump can be worn.

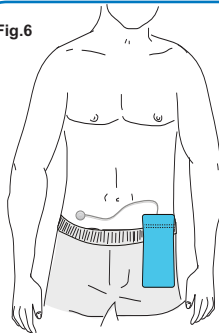
Fig.5



### WEARING THE PUMP AROUND THE NECK

Wearing the pump around the neck with collar strap and fabric holder

Fig.6

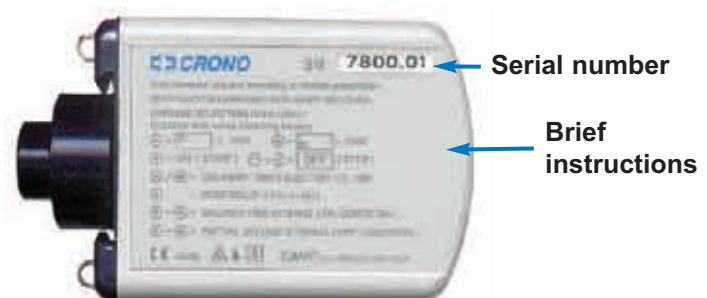
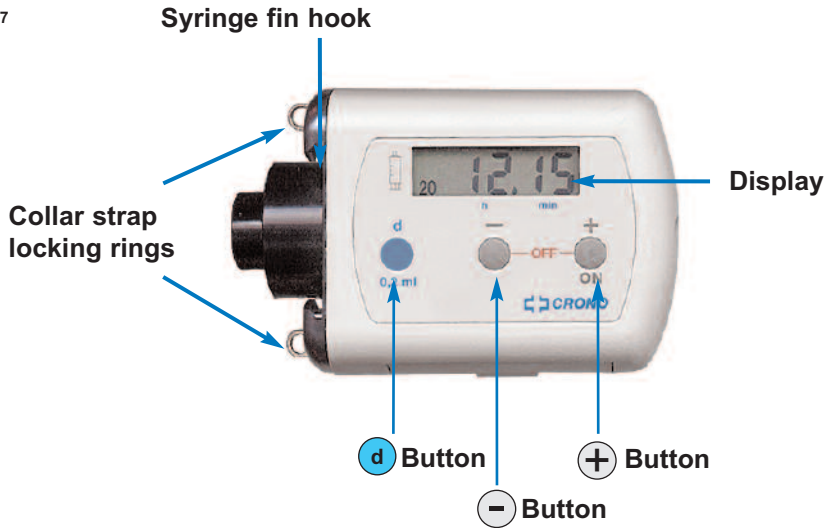


### WEARING THE PUMP AT THE WAIST

Wearing the pump at the waist with elastic belt and fabric holder

## PUMP PARTS

Fig.7



## LIQUID CRYSTAL DISPLAY

This is a screen on the front of the pump displaying symbols which inform the patient of operations in progress as well as showing warnings and alarm messages.



**“Battery” symbol:** appears when the battery is nearly expired (see the related paragraph, page 30)

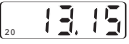




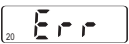

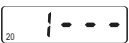


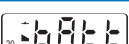



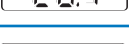


**“Drip” symbol:** flashes when the device is on; it alternates with indication of hours and minutes

10 **“10 ml” symbol:** indicates the device has been programmed to use 10 ml (CRN 10) syringe

20 **“20 ml” symbol:** indicates the device has been programmed to use 20 ml (CRN 20) syringe

## MAIN SCREEN INDICATIONS

	DELIVERY TIME
	PARTIAL VOLUME
	OFF INDICATION
	20 ML SYRINGE SELECTED
	END OF INFUSION AUDIBLE SIGNAL (ON)
	ERROR MESSAGE
	OCCLUSION
	BACKWARDS/FORWARDS MOVEMENTS OF THE PUMP PISTON
	END OF INFUSION
	LOW BATTERY
	BATTERY DISCHARGED
	DISPLAYING THE NUMBER OF INFUSIONS
	KEY-PAD UNLOCKED
	KEY-PAD LOCKED: LEVEL 1
	KEY-PAD LOCK SETTING

## SYRINGE PARTS

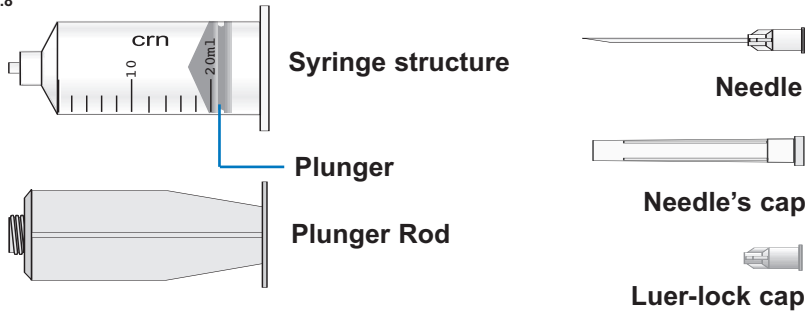
The **Crono** pump uses dedicated syringes which are available in two sizes:

- CRN® 10 ml **CRONO® Syringe**
- CRN® 20 ml **CRONO® Syringe**

The syringes are:

- Single use only
- To be used only if packaging is not damaged
- Pyrogen-free

Fig.8



## LUER LOCK CAP FUNCTIONS

- Can be used after the syringe has been filled, in order to unscrew the plunger rod from the plunger with ease.
- To protect the drug in the syringe if infusion is not imminent.

Fig.9



**Luer-Lock cap**

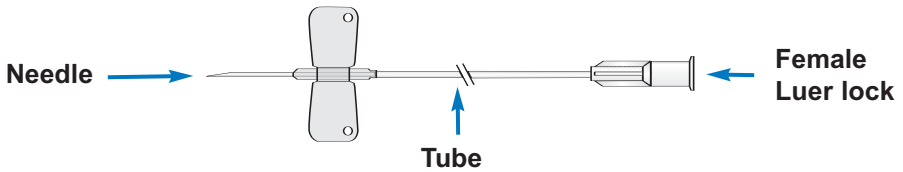
## INFUSION SET

It is advisable to use infusion sets which have the following specification:

- Tube with internal diameter of limited dimensions (optimum 0.36 mm, maximum 0.6 mm);
- Length of the tube not exceeding 90 cm;
- Tube with dead space lower than 0.5 ml;
- Anti-kink tube.

## INFUSION SET PARTS

Fig.10



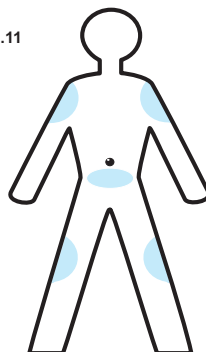
## INFUSION SITES

Infusion sites can be any of the following:

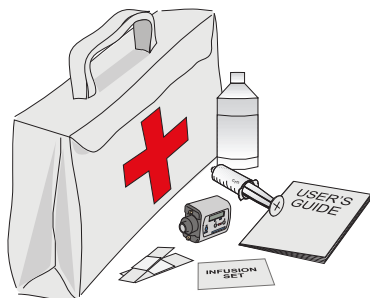
- Anterior aspects of upper arm
- Anterior abdominal wall
- Anterior aspect of thighs

It is advisable to change infusion site after each drug administration in order to avoid skin irritation.

Fig.11



## INFUSION PREPARATION



Before preparing the equipment for infusion, it is advisable to follow these precautions:

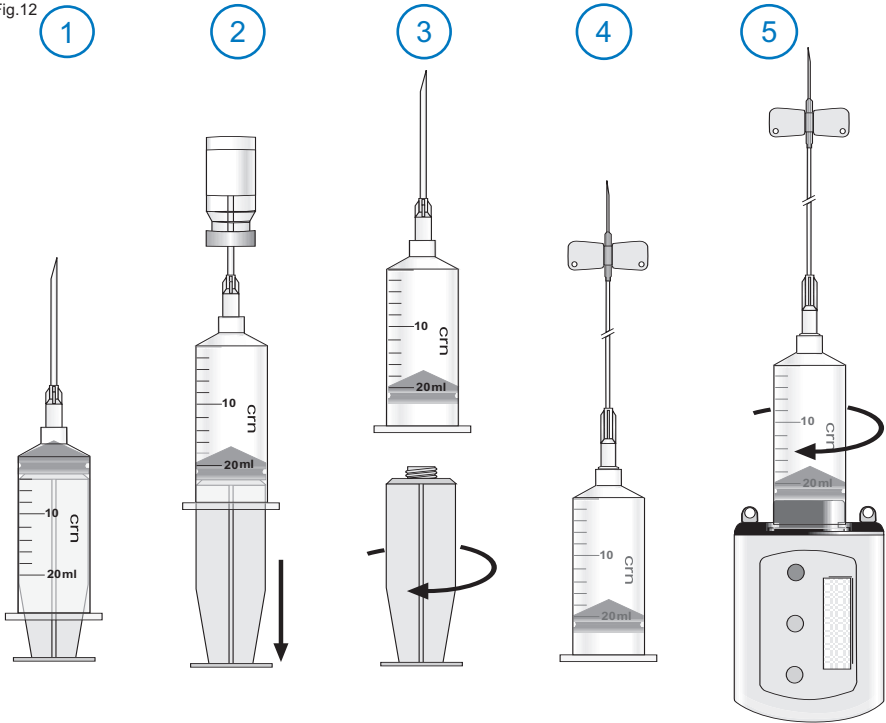
- 1 - Wash your hands
- 2 - Prepare a clean working area

## SYRINGE PREPARATION

1. Put the supplied needle on the syringe with a clockwise rotation.
2. Fill up the syringe, aspirating the drug slowly to avoid disconnection between the rubber plunger and plunger rod. Verify the drug inside does not exceed 10 or 20 ml capacity.
3. Unscrew the plunger with a brisk counter-clockwise rotation.
4. Put the subcutaneous tubing on the syringe with a clockwise rotation.
5. Insert the syringe into the instrument with a 90° rotation, making sure to detect a “click” which indicates the syringe is locked into the pump.

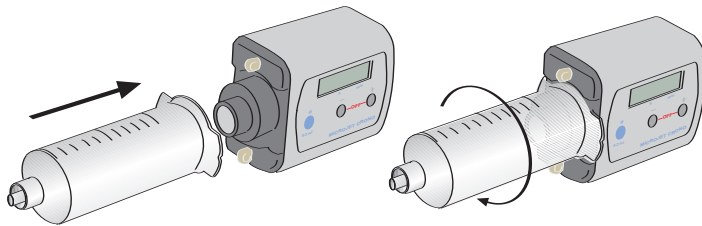
## SYRINGE PREPARATION

Fig.12

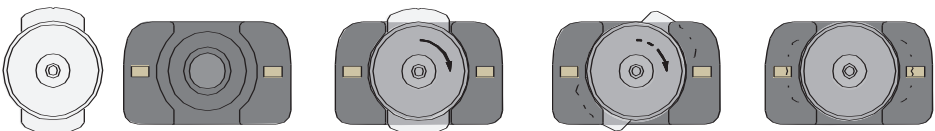


## CONNECTION OF THE SYRINGE TO THE PUMP

Fig.13



Top view

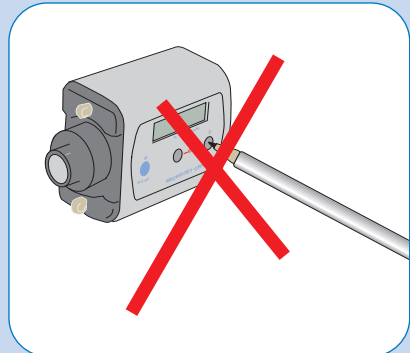


## WORKING INSTRUCTIONS

- Press the buttons with your finger-tips only, do not use sharp or pointed objects.



Fig.14



- **Time-controlled buttons:** keep buttons pressed for a few seconds to activate commands.
- Button activation is confirmed by a ticking sound, except in the phase of battery insertion.
- Command execution is confirmed by a brief audible signal.
- Before starting the infusion, check that the 10 ml or 20 ml syringe setting has been selected correctly.
- The pump is supplied with a battery already inserted.

## PUMP ACTIVATION


During the device activation phase it is possible to select the following parameters:


- Syringe size (10 ml or 20 ml)
- End of infusion audible signal (ON or OFF)



The syringe size and the end of infusion signal can only be selected and/or changed immediately after battery insertion.


Device activation:

1. Remove, and then re-insert the battery

2. The pump will carry out a self-test, during which the display will show all readable symbols and emit audible signals 

3. While syringe size symbol is flashing (the numbers “10” or “20”), you may select syringe sizes. 

Use the  or  buttons to make your selection.




If, for example, the number “10” is flashing, press the  button and keep it pressed for a few seconds until the number “20” appears.

 10 ml syringe       20 ml syringe

The information regarding the syringe size will always be shown on the display.

4. After syringe size selection, you may activate/deactivate an audible signal for end of infusion. While the display blinks, you may select to either have the audible signal or not by pressing the  or  buttons. 

**AL.1**

Audible signal ON

**AL.0**

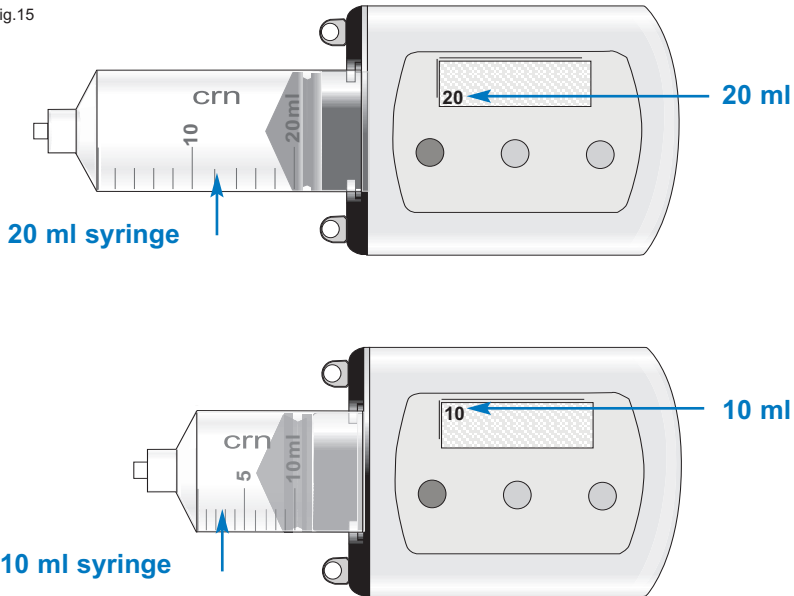
Audible signal OFF

5. After a few seconds, the pump automatically returns the pump piston to its starting position, then the screen displays OFF.

**OFF**

The selected data are automatically stored in memory.

Fig.15



## PROGRAMMING





- Delivery time
- Partial volume

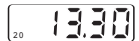
## PROGRAMMING THE DELIVERY TIME

Delivery time can be programmed at the following rate:



- **10 ml syringe:** from 30 min to 99 hours, with 15 minutes steps
- **20 ml syringe:** from 1 to 99 hours, with 15 minutes steps

Program the delivery time proceeding as follows:

1. Switch on the pump by briefly pressing the  button.
2. The adjustment of delivery time (hours and minutes) either up or down from what is shown on the screen is accomplished by first pressing  until the current delivery time starts to flash. If you wish to increase the delivery time, you continue to press  until the desired time shows on the screen. If you wish to decrease the delivery time, press  until the desired delivery time appears on the screen.


Continuous button pressure causes a rapid change of the delivery time. When buttons are not pushed for a five second period, the time is set and the display stops flashing.

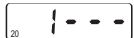
3. To store the delivery time press the  and  buttons simultaneously, the device issues a sound signal and the indication on the screen disappears for a short while; this to confirm that data have been successfully stored.

## PROGRAMMING PARTIAL SYRINGE VOLUME



If the therapy requires the use of a partially filled syringe, the infusion starting point of the pump piston can be stored into the pump's memory.

Proceed as follows:

1. Press the  button: the pump piston will advance up to the position corresponding to the volume of drug to be infused.





20 1.00

2. Switch off the pump by pressing the  and  buttons. The screen will display OFF.



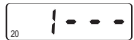
20 OFF

3. Press the  and  buttons simultaneously. The device will issue an audible signal and the screen will display the stored volume



20 18cc

4. At the end of the infusion the pump piston will return to the stored position.



20 1.00

5. The stored position can be changed by repeating the procedure above.


6. Any time the pump is switched on, the screen will display the cc stored volume.



20 18cc

7. Such setting will be maintained until the battery is removed.

## SWITCHING ON THE DEVICE

By pressing  button, the screen will swiftly display the following order of sequence:

- Stored syringe volume given in cc (appears only if formerly stored)




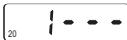
- The instrument will emit a brief sound and show the delivery time (hours and minutes), with the blinking “drip” symbol separating hours from minutes.



The infusion time on the display decreases every 15 minutes.

## PRIMING THE INFUSION SET

Before beginning the infusion, you must check whether the pump piston is in contact with the plunger. If this is not the case, move the piston forward by pressing button .



Any time you press this button the pump piston moves forward with increments of 0.45 mm corresponding to 0.2 ml.

Continue this process until a few drops of the fluid to be infused come out of the needle.

### WARNING

Make sure the infusion set is not connected to the patient during priming!

## END OF INFUSION

If the acoustic signal is activated 10 minutes prior to the end of infusion, the device will emit a two second lasting intermittent signal.

The same signal will be repeated twice 5 minutes before the infusion ends.

At the end of infusion a continuous acoustic alert lasting a few seconds will be emitted. The screen will display the message END.



The pump piston will automatically return to its starting position. The screen will read OFF.





The pump piston reversal time is about:

- 5 minutes for 10 ml syringes
- 10 minutes for 20 ml syringes

## STORING DATA


Information regarding syringe size, delivery time and number of infusions already administered will be automatically stored in the memory. Stored data are not lost even when battery is removed.

## SWITCH OFF

Press the  and  buttons simultaneously to switch off the pump during the infusion. The display will show OFF.



## READING THE NUMBER OF INFUSIONS

Keep the  button pressed for 8 seconds in OFF condition: the display will show the number of infusions already administered.




## RE-SETTING THE NUMBER OF INFUSIONS



As each infusion is finished a record of this is automatically kept by the pump, even if the battery is removed.

Instructions on how to retrieve this information is on page 28.

However, there are some situations in which it is helpful to be able to re-set the number of infusions back to the factory setting of 0000 infusions.

1. With the pump switched OFF, press the  button until the number of infusions appear on the screen.






2. Without releasing the  button, press the  button.

3. The number of infusions will flash on the screen.



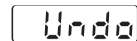
4. Release the  button.

5. In sequence press the  button , the  button and finally the  button for about 2 seconds each. (If the audio alarm is activated, there will be a “ticking” sound during each of these 2 second periods. When this sound stops, the button can be released).

6. The screen will show 0000 infusions if the procedure is done correctly.









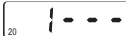
The screen will show UNDO if the procedure is done incorrectly



## REVERSAL OF PUMP PISTON


### 1. Total reversal

It is possible to interrupt the infusion already in progress and make the pump piston return to its starting position. Proceed in the following way:

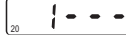
- a. Switch off the pump by pressing the  and  buttons simultaneously. 
- b. Press the  and  buttons, simultaneously. The display will show END. 
- c. The pump piston will return to its starting position. 

### 2. Automatic reversal of pump piston at the END of infusion


When infusion ends you will read END on the display. 

The pump piston will automatically return to its starting position, and the display will show OFF. 

## PISTON MOVEMENTS

When the pump piston has to move either backwards or forwards you will read a symbol on the display indicating this. 

## INFUSION SET OCCLUSION

When the infusion set occludes, Crono indicates the status of occlusion by emitting an audible acoustic alarm and a message on the display. Every two minutes the device attempts to advance the pump piston. When the occlusion is cleared and the 

pump resumes regular delivery, the screen will alternate the occlusion warning message with the information regarding the delivery time.





## TAMPER RESISTANT FEATURE

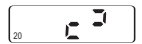
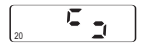
The tamper resistant feature allows the pump to be “locked” by disabling the buttons.

Putting the pump in the tamper resistant mode does not alter or impede any of the normal functions or alarms of the pump. It is designed to reduce the risk of inappropriate button pressing. IT IS RECOMMENDED THAT SMALL CHILDREN BE INSTRUCTED TO NOT TOUCH BUTTONS REGARDLESS OF WHETHER THIS FEATURE IS ACTIVATED OR NOT.

First of all, “Lo,0” message on the screen means that the pump is in normal, unlocked mode. “Lo,1” means that the pump is locked.

### TO LOCK THE PUMP:

1. Turn the pump on and set the delivery time.
2. When you are satisfied that the pump is working properly,
3. Press the  button for about 7 seconds.
4. Will appear on the screen.
5. Without releasing the  button, press the  button.
6. “Lo,0” will appear on the screen.
7. Press  button and “Lo,1” will appear.
8. If you wish to leave the pump locked, simply stop pushing buttons.



9. The pump will resume operation in lock mode.

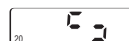
10. THE SYRINGE SIZE NUMBER WILL NOW FLASH ON THE SCREEN ,TO REMIND YOU THAT THE PUMP IS LOCKED

### TO UN-LOCK THE PUMP

This procedure is similar to locking the pump.

1. Press the  button for about 7 seconds.


2. Will appear on the screen.



3. Without releasing the  button, press the  button.

4. “Lo,1” will appear on the screen.



5. Press  button and “Lo,0” will appear.



6. The syringe size will now show a normal steady number.

### LOW BATTERY ALERT

The LOW BATTERY warning will appear on the screen to indicate that battery level is low. It is time to change the battery as soon as possible.



If the battery is not replaced soon after the screen warning, a subsequent infusion could be interrupted.

If the battery is allowed to fail completely, the screen will show the message "BATTERY DISCHARGED". In such a situation the pump has stopped. The battery must be replaced immediately .



It is advisable to change the battery as soon as the "LOW BATTERY" symbol appears.



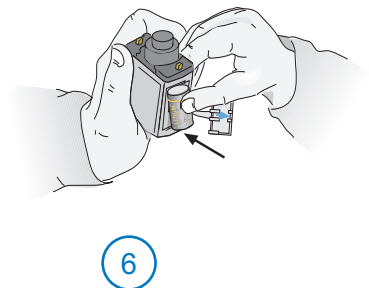
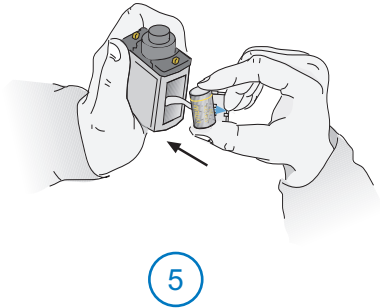
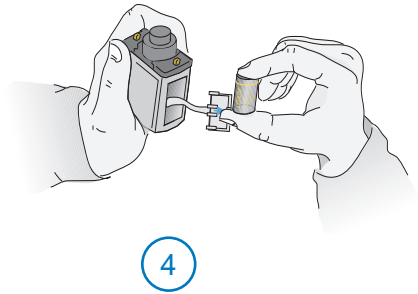
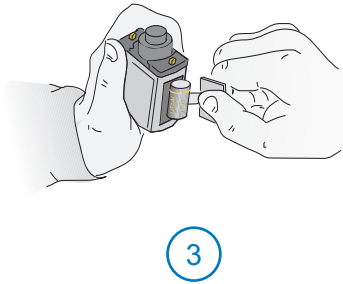
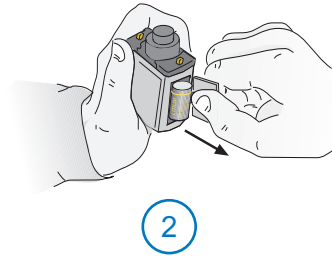
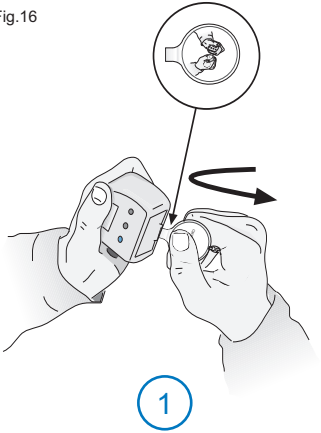
### BATTERY REPLACEMENT

1. Open the battery compartment using the battery tool or a paper clip.
2. Pull out the cover.
3. Use the small ribbon strap (which lies under the battery) to facilitate the removal of the battery.
4. Remove the discharged battery and discard it properly.
5. Insert the new battery checking that it is correctly placed in accordance with polarity and that the ribbon strap is under the battery.
6. After having installed the battery, close the cover.

If the battery cannot be removed by pulling the strap, do not try to lever with an object or tool. Take the pump firmly in one hand and, as gently as possible, shake the battery out onto your other hand.

## BATTERY REPLACEMENT

Fig.16



### CAUTIONS

- Use only a lithium 3 Volt CR 123 A battery.
- Batteries other than this type may cause the pump to malfunction.
- Batteries of the above-mentioned type are readily available in camera stores and most pharmacies.
- Under average operating conditions, each battery should last about 150 infusions. Keep a spare battery in a convenient place.
- If the pump is not used for long periods of time, it highly recommended to remove the battery from the pump.
- Remove the pump before taking a bath or shower: the pump may be damaged upon contact with water. Should the pump accidentally come into contact with any liquid (drug solution, sweat, bed wetting) the pump must be checked by the manufacturer or a qualified personnel authorised by the manufacturer.
- If you suspect that liquid has penetrated into the pump (a leakage or spill), please contact the appropriate person within your specialist health care team or your authorized distributor for advice.
- The pump must be kept away from:
  - heating devices (radiators, oven rings, stoves);
  - direct sunlight;
  - high electromagnetic fields (magnets, loud-speakers, portable radio devices, cell phones);
  - ionogenic radiations;
  - supersonant devices
  - magnetic resonance devices (MRI)
- The pump does not need to be sterilized.
- Syringes, infusion set, needles, and all material used during the infusion process must be discarded properly.

## MAINTENANCE AND CLEANING

The Crono pump requires no particular maintenance operation, owing to its technical features.

To clean the instrument, use a soft cloth slightly moistened with a mild detergent.

Avoid the risk of liquid penetration into the instrument.

In the event the instrument becomes wet, absorb the liquid with blotting paper.

## STORAGE

If the pump is not going to be used for a long period of time (more than 1 or 2 months), it is advisable to remove the battery, put it inside the device case and store it in a dry place.

### USER ASSISTANCE INFORMATION

#### UNITED STATES:

INTRA PUMP INFUSION SYSTEMS

920 Minters Chapel Road, Suite 200

Grapevine, Texas 76051

Tel: 866-211-7867

Fax: 630-845-2768

Email: [info@intrapump.com](mailto:info@intrapump.com)

### MANUFACTURER'S GUARANTEE

With this consumer guarantee, Canè S.r.l. guarantees that this product is free from defects in materials and workmanship for a period of 2 (TWO) YEARS beginning from the date of purchase.

If during this period of guarantee the product proves defective due to improper materials or workmanship, Canè S.r.l. will without charge for labour or parts, repair or replace the defective parts upon the terms and conditions set out below.

Canè S.r.l. reserves the right to modify the characteristics or the model of the pump and accessories without obligation to make similar modifications to pumps and accessories previously manufactured or sold.

Conditions:

1. This guarantee will be granted only if the defect is brought to the attention of Canè S.r.l.
2. This guarantee will not be in effect if the pump and accessories have

been damaged as a result of modifications or adjustments made without prior written consent from Canè S.r.l.

3. This guarantee will not apply if the type or serial number on the product has been altered, deleted, removed or made illegible.
4. This guarantee does not cover any of the following:
  - Periodic maintenance
  - Damage resulting from misuse, including but not limited to:
    - Failure to use the product for its normal purpose or in accordance with this user's guide;
    - Repair done by non-authorized Service Stations or Dealers, or the customer himself;
    - Accidental events, dropping, liquid infiltration.
  - Natural calamity, fraudulent or premeditated action
5. Once the warranty period has expired, Canè S.r.l. will provide the service debiting the costs of components being replaced, expenses of labour charges and freight charges.

## SECTION 13

### ALARM MESSAGE

#### ALARM MESSAGE

#### DESCRIPTION

#### ACTION

20 Err

OPERATION NOT POSSIBLE

RE-CHECK MANUAL

20 Er. 1

UNCORRECTED RESET

RE-START DEVICE

20 Er. 2

CRITICAL CONDITION OF THE SECURITY SYSTEM

PRESS BUTTON 

20 Er. 3

IRREGULARITY OF THE MOTOR CIRCUIT

PRESS BUTTON 

20 Er. 4

MECHANICAL BLOCK DURING "END" PHASE CAUSED BY FOREIGN MATTER OBSTRUCTING THE PISTON'S REVERSAL

1. REMOVE THE CAUSE  
2. RE-START DEVICE

20 Er. 5

IRREGULARITY OF THE PUMP PISTON'S ADVANCEMENT

PRESS BUTTON 

20 0000

OCCLUSION

PRESS BUTTON 

20 Er. 8

READING MEMORY ERROR (EEPROM)

RE-START DEVICE\*

20 Er. 9

ERROR WITHIN THE MOTOR PILOTING CIRCUIT

RE-START DEVICE

Alarm messages are accompanied by audible signals.

To re-start the device following an alarm message, remove the battery and wait least 15 seconds before re-inserting.










\*Please note: if your pump shows Err8, and you subsequently re-start it, the programmed settings will revert to the factory settings (see page 8). Therefore, whenever this condition takes place, you must re-program the settings assigned by your doctor or PD nurse.












If the device will not re-start, contact your authorized distributor.














## SUMMARY OF FUNCTIONS AND BUTTONS




The follow brief instructions are by no means an alternative to reading the information supplied in this manual. The following tables are both a concise and quick reference with regard to pump use and its buttons.

Time control buttons: the buttons must be pressed for a few seconds if a command is to be carried out. This ensures that if the patient accidentally touches a button, no commands will be activated.

INSERTING BATTERY PHASE	BUTTONS	PUMP ACTIVATION / SYRINGE SIZES AND END INFUSION SIGNAL	SCREEN
	<p> / </p>	<p>The syringe sizes and the end infusion signal can only be selected and/or changed immediately following the battery insertion.</p> <ul style="list-style-type: none"> <li>The screen will show all symbols</li> <li>Syringes Size setting (10 / 20 ml)</li> <li>Setting the acoustic signal of end infusion</li> <li>Piston self-adjust</li> <li>Pump switches OFF</li> </ul>	<p></p> <p> </p> <p> </p> <p></p> <p></p>

PUMP OFF	BUTTONS	PUMP SWITCH OFF / STORING OF PARTIAL SYRINGE VOLUME	SCREEN
	<p> and  depress simultaneously</p> <p> and  depress simultaneously</p> <p> depressed for 8 seconds</p>	<ul style="list-style-type: none"> <li>Reversing of the pump piston to the start position</li> <li>Storing of the partial syringe volume</li> <li>Reading of no. of infusions delivered</li> </ul>	<p>  </p> <p></p> <p></p>
	<b>PUMP ON</b>		
	<p></p>	<ul style="list-style-type: none"> <li>Pump switches ON</li> </ul>	

PUMP ON	BUTTONS	PROGRAMMING THE DELIVERY TIME / PRIME	SCREEN
	<p> / </p> <p> and  depress simultaneously</p> <p></p> <p> and  depress simultaneously</p>	<ul style="list-style-type: none"> <li>Decreasing or increasing of the delivery time</li> <li>Delivery time storing</li> <li>Prime (0.2 ml)</li> <li>Pump piston return (partial)</li> </ul>	<p></p> <p></p> <p></p>
	<b>PUMP OFF</b>		
	<p> and  depress simultaneously</p>	<ul style="list-style-type: none"> <li>Pump switches OFF</li> </ul>	<p></p>

END OF INFUSION	END OF INFUSION	SCREEN
	<ul style="list-style-type: none"> <li>End of infusion</li> <li>Piston automatic reversing</li> <li>Automatic switch OFF</li> </ul>	<p></p> <p></p> <p></p>

## PUMP ICON TABLE

SN

**Pump serial number****Drip-proof instrument**

It can withstand occasional liquid dripping or splashing.  
It must not be immersed in liquid.

**Electromedical equipment**

BF type

**Warning: see instructions for use**

**Dispose of used electric and electronic devices in an environmentally safe manner, using the appropriate containers and according to any regulations that may apply.**

## SYRINGE BLISTER PACKAGE ICON TABLE



Read the instructions

CE 0123

CE mark



Recycle



Do not re-use this device



Pyrogen free



Protection against moisture



Do not expose to direct sunlight



Expiration date

STERILE EO

Sterilized by Ethylene oxide

PP

Polypropylene

LOT

Lot number

REF

Ref number

NEEDLE

Needle dimensions

### A GLOSSARY OF TERMS

#### Alarm

An alarm is a condition that warrants the user's attention, and is critical enough that it requires that the pump be shut down or reset. When an alarm occurs, an alarm beep is sounded and a descriptive message appears on the display screen.

#### Display screen

The pump's liquid crystal display screen is located on the front panel of the pump, providing the information about the functioning of the pump.

#### Infusion pump for ambulatory use

Pump intended to be carried continuously by the patient.

#### Infusion set

An infusion set consists of a length of thin plastic tubing with a luer lock connector at one end. At the other end, there is a very small needle that is placed under the skin. The infusion set is connected to the pump and used to deliver drugs, in fluid form, to the body.

#### Infusion site

The infusion site is the place on the body where the infusion set needle is inserted under the skin.

#### Luer-lock connector

A luer-lock connector is a special threaded fitting used to connect the infusion set to the syringe.

#### Occlusion

Occlusion means "blockage". The pump is designed to be able to sense when delivery of the drug is being blocked for some reason. The pump will automatically stop delivering drug and sound an alarm to alert you to clear the occlusion and restart the pump.

## Subcutaneous

Subcutaneous means beneath the skin. The infusion set needle is placed subcutaneously.

## Syringe pump

Pump intended for controlled infusion of liquids into the patient by a syringe, and in which the delivery time is set by the operator.

### INDEX OF ILLUSTRATIONS

Figure 1	Standard equipment supplied
Figure 2	Optional accessories
Figure 3	How to attach collar strap to the pump and the fabric holder
Figure 4	How to use elastic belt with pump and the fabric holder
Figure 5	Wearing the pump around the neck
Figure 6	Wearing the pump at the waist
Figure 7	Pump parts
Figure 8	Syringe parts
Figure 9	Luer lock cap
Figure 10	Infusion set parts
Figure 11	Infusion sites
Figure 12	Syringe preparation
Figure 13	Connection of the syringe to the pump
Figure 14	Working instructions
Figure 15	Selecting the syringe size
Figure 16	Battery replacement