

CRONO PAR4 20

REF: PS4AH



Ambulatory infusion pump

INTENDED PURPOSE

CRONO PAR4 20 is an ambulatory pump for subcutaneous infusions of apomorphine in the treatment of Parkinson's disease.

PUMP DESCRIPTION

CRONO PAR4 20 is a medical device.

Its small size and reduced weight make **CRONO PAR4 20** ideal for home use, thus giving the patient the freedom to engage in everyday activities during the treatment.

CRONO PAR4 20 uses dedicated 10 and 20 ml reservoirs.

Main technical features of the pump:

- The possibility of choosing from two different operation modes:
 - **Free** mode, with up to three user-selectable flow rates
 - **Auto** mode, with up to three automatically selected flow rates depending upon the time of day
- Bolus dose with programmable lockout period
- Bluetooth interface for communication with CronoManagementTouch

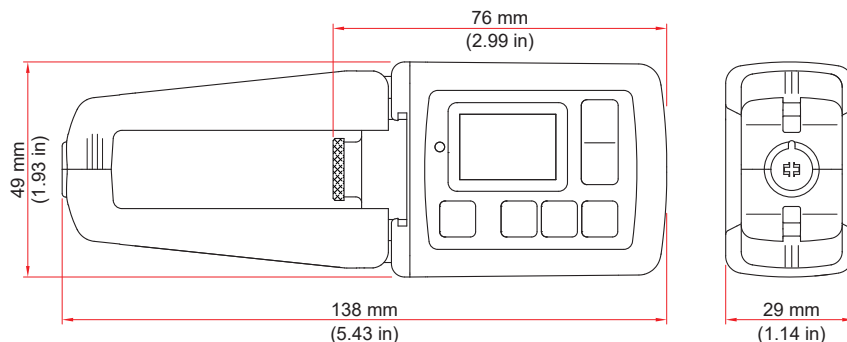
The pusher mechanism acts directly on the plunger of the reservoir, allowing for an accurate administration of the drug.

The pump administers 10 µl shots at intervals which depend on the chosen flow rate. If the programmed flow rate is increased, the time interval between the shots decreases proportionally.

CRONO PAR4 20 features a graphical OLED display for improved user interaction which shows practical information viewable by the healthcare personnel and the patient about the settings, operation and diagnostics of the pump.

TECHNICAL FEATURES

Dimensions with protective wings



Weight	114 g (4.02 oz.), including battery
Weight (with protective wings)	127 g (4.48 oz.), including battery
Power supply	CR123A 3V lithium battery
Battery life	Approximately 90 infusions
Display	Colour OLED 96x64 pixels
Ingress protection	IP 42
Acoustic sound pressure level	53 dBA +/- 5 dBA
Data storage	The value settings and counters are retained even without the battery
Motor	Coreless DC motor, the rotation of which is controlled by an infrared system
Electronic circuits with twin Microcontrollers	Ensures a more reliable and safer infusion system
Safety circuits	They monitor the correct functioning by intervening in the event of faults with acoustic signals and messages on the display
Single-use reservoir	Dedicated reservoirs with 10 and 20 ml capacity and Luer-Lock universal safety fitting
Administrable volume	from 1 to 10 ml (10 ml reservoir) from 1 to 20 ml (20 ml reservoir)
Volume increment	1 ml
Infusion flow rates that can be set	F1: 0.05 – 2.0 ml/h F2: 0.00 – 2.0 ml/h in Free mode 0.05 – 2.0 ml/h in Auto mode F3: 0.00 – 2.0 ml/h in Free mode 0.05 – 2.0 ml/h in Auto mode
Infusion flow rates programming increment	0.01 ml/h up to 1 ml/h 0.02 ml/h from 1 ml/h to 2 ml/h
Shot volume	Selectable: 5, 10, 20, 30, 40, 50 µl
Bolus dose volume	0 - 2.0 ml
Bolus dose volume programming increment	0.02 ml
Interval between bolus doses	5 min – 24 h or no limit
Bolus dose interval programming increment	5 min (up to 1 h) 15 min (from 1 h to 24 h)
Flow rate accuracy	+/- 2 %
Prime volume	0.1 - 0.5 ml, repeatable up to a maximum of 1.5 ml
Maximum occlusion pressure levels	PL1: 4 bar, PL2: 6 bar, PL3: 7.5 bar
Post-occlusion bolus (ml)	About 0.6 (PL1), 0.8 (PL2), 1.0 (PL3)
Anti-free flow system	Avoids the occurrence, within the delivery set, of a flow not under the control of the instrument but caused by the effect of gravity
Warranty	2 years from the date of purchase against any material or manufacturing defects
Standard equipment	CRONO PAR4 20 ambulatory pump, Carrying case, Elastic belt, Fabric case, Support strap, Reservoir protective wings (optional), 2 batteries (1 of which in the pump), Battery compartment opening accessory, Instructions for use
Environmental conditions for use	Temperature: +5 ÷ +40 °C Relative humidity: 15% ÷ 90% RH (non-condensing, water vapour partial pressure max 50 hPa) Pressure: 700 ÷ 1060 hPa
Environmental conditions for storage and transport	Temperature: -25 ÷ +70 °C Relative humidity: 15% ÷ 90% RH



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