

CRONO PAR4 20



Portable pump for the
subcutaneous infusion
of apomorphine

PUMP DESCRIPTION

CRONO PAR4 20 is an ambulatory infusion pump, designed for the subcutaneous infusion of apomorphine in the treatment of Parkinson's disease, which uses specific 10 ml and 20 ml syringes called reservoirs. 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.

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 downloading usage data

The pusher mechanism acts directly on the plunger of the reservoir, allowing for an accurate administration of the drug. The pump administers shots of programmable volume 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

Pump dimensions	76 x 49 x 29 mm (138 x 49 x 29 mm with protective wings)
Pump weight	127 g, including the battery and protective wings.
Battery	Lithium CR 123A 3V (battery life approx. 100 infusions).
Reservoir	Dedicated, with 10 ml or 20 ml capacity and "Luer-Lock" universal safety fitting
Flow rate in Free mode (F1, F2, F3)	Programmable from: <ul style="list-style-type: none">• 0.05 ml/h to 1.00 ml/h with 0.01 ml/h increments;• 1.00 ml/h to 2.00 ml/h with 0.02 ml/h increments; F2 and F3 may also be programmed to 0.00 ml/h or to OFF (flow rate display disabled).
Selectable flow rates in Free mode	3, all programmable
Flow rate in Auto mode (F1, F2, F3)	Programmable from: <ul style="list-style-type: none">• 0.05 ml/h to 1.00 ml/h with 0.01 ml/h increments;• 1.00 ml/h to 2.00 ml/h with 0.02 ml/h increments;
Selectable flow rates in Auto mode	4, of which 3 are programmable and one is fixed to 0 ml/h.
Bolus dose volume	Programmable from 0.00 to 2.0 ml.
Interval between bolus doses	Programmable from 5 minutes to 24 hours. May be disabled.
Flow rate precision	+/-2%.
Occlusion pressure	3 selectable values. The pump is set to PL2 (4.0 bar +/- 2.0).
Post-occlusion bolus	Max. 1.0 ml
Electronic circuits	Managed by twin microcontrollers for improved safety.
Memory	All selected values are automatically stored in a memory which is retained even if the battery is removed from the device.
Display	Colour graphical OLED display, 96x64 pixels.
Motor	Coreless DC motor. The microcontroller controls the rotation speed using an infrared encoder.
Settings lock	Two configurable levels.
Safety circuits	They ensure that the device is correctly operational. In case of a fault they generate acoustic signals and messages shown on the display.
Ingress protection rating of the pump	IP 42.
Supplied standard equipment	Ambulatory infusion pump with reservoir, infusion pump carry-case, elastic belt, collar strap, fabric case, 2 batteries, battery cover opening tool and user guide.
Guarantee	Two years for manufacturing defects.