

Ambulatory Patient Controlled Analgesia

Treatment of Post Operative, Palliative Care and Chronic Pain with a PCA pump ideally requires a safe, easy to use and trouble free system without frequent alarms and a trustworthy history back up.

Easy set installation and priming, risk-free programming and patient mobility contribute to treatment success.

The use of opioids requires close monitoring of the infusion in hospital and at home. Continuous information feedback on the infusion status and pain history is a necessity for clinicians to optimize the pain treatment especially for the home-based patient.

Micrel is offering the Rythmic Evolution pump to exceed the expected safety, reliability and comfort required by medical staff and patient. Furthermore Rythmic Evolution is "Ready to Connect" providing an instant access to the infusion information and pain history through the web.

Optimized ambulatory design

- Compact and lightweight (300g with battery)

Reduced alarm activity

- Long battery life (6 days at 5ml/h)
- Automatic restart after occlusion release
- Air in line eliminator

Medication error prevention

- Users customized programming menu
- Protocol library
- Colour coded systems

"Full safety set" concept

- 100,160 or 200ml bag with valve, filter and 2 m extension line already assembled
- Easy to fill the soft bag and to prime the set

Innovations : VAS and PAB

- VAS Pain score registration on the pump with easy historical access
- Programmed Automatic Bolus (PAB) combined with patient bolus demands



Truly ambulatory system

Ready to
connect



- A wireless system enables clinicians, nurses and homecare provider to remotely monitor the infusion therapy through the web.
- SMS alert messages can be sent to personnel in charge.



Experts in ambulatory infusion devices

Rythmic™ Evolution specifications

Delivery modes	• continuous • bolus only • continuous + bolus • Programmed Automatic Bolus (PAB) with combined PCA
Accuracy	+/- 5 %
Flow rate	0.1 to 100 ml/h
Programming units	ml/mg/µg
Concentration	0.1 to 99.9 mg/ml/0.1 to 999.9 µg/ml
Volume to infuse	1 to 9999 ml
Bolus dose	0 or from 0.1 to 60ml with 0.1ml increment
Bolus flow rate	100 ml/h, adjustable from 50 to 100 ml/h with 10 ml/h increment
Lockout interval	0 to 999 minutes
Special functions	Protocol libraries (60 protocols per library) - Dose limit / x hours and Bolus limit / x hours - Loading dose Clinician bolus override - Mandatory priming (enabled, warning only, disabled).
Therapy monitoring	Recording of patient pain scores with visual analogue scale (VAS) - VAS available in the pump history, printable and computer downloadable - Ready to Connect to www.micrelcare.net for therapy monitoring through the web.
KVO	0.1 to 2.0 ml/h
Automatic restart after occlusion release	Yes
Safety features	Air in line eliminator - Free flow protection according to IEC 601-2-24 - Programming within protocol limits Dedicated therapy front face and sets: - yellow for regional analgesia - green for wound infiltration - blue for others
Alarms & warnings	Occlusion (low 0.8 bar, middle 1.2 bar, high 1.6 bar), near end and end of infusion - Low and depleted battery Dose limit, bolus limit - Open mechanism, preventive maintenance warning...
Access code levels	3
Programming	Protocol libraries programmed with "Rythmic Evolution Therapy Manager" computer software Direct programming on the pump possible
History, infusion graph / printout and PC download	Yes, including 6500 time stamped events event log - "Plug and play" print facility
Battery life	6 days at 5 ml/h with bolus
Power supply	90 to 240 V, 50-60 Hz (with optional adaptor KS5.01.615.x)
Preventive maintenance	Every 3 years

	Mini Rythmic™ Evolution	Rythmic™ Evolution	Rythmic™ Evolution Organiser 101	Rythmic™ Evolution Organiser 501
Weight with battery	300g, 130x90x46 mm	335g, 130x133x46 mm with transparent locker, fitting our Full set 160ml/200ml custom bag	770 g, 148 x 249 x 69 mm with transparent locker fitting standard bags up to 100ml	840 g, 157 x 299 x 82 mm with transparent locker fitting standard bags up to 500ml
Dimensions	with transparent locker fitting our Mini Full set 100ml custom bag			
Battery	9V disposable cell or internal and rechargeable in 3 h			
Carrying bag	Included : banana bag	Included : belt/shoulder bag	Optional, ref : KM1.YY.451.x	Optional, ref : KM1.YY.418.x
Power adaptor	Optional, ref : KS5.01.615.x	Optional, ref : KS5.01.615.x	Included	Included
Pole clamp	Optional, ref : KS5.04.017.x	Optional, ref : KS5.01.430.x	Optional, ref : KS5.01.525.x	Optional, ref : KS5.01.524.x
Front panel	Standard or yellow colored dedicated to Regional Analgesia			
Ordering references	KP5.04.132.x (blue) KP5.04.134.x (yellow)	KP5.04.125.x (blue) KP5.04.130.x (yellow)	KP5.04.161.x (blue)	KP5.04.144.x (blue) KP5.04.150.x (yellow)



Rythmic Evolution on Pole clamp



Power supply and 12 V adaptor



Rythmic Evolution in banana transport bag

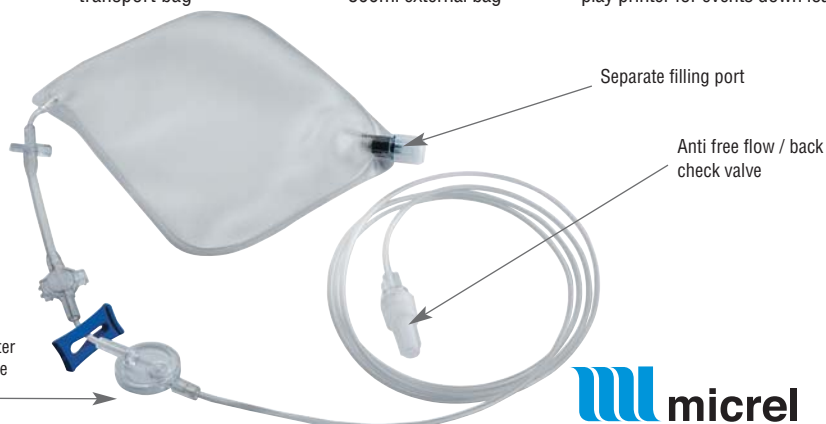


Rythmic Organiser 501 for up to 500ml external bag



Rythmic Evolution and plug and play printer for events down load

Mini Full set (100ml)	KE1.EE.177.x
Full set (160ml)	KM1.EE.100.x
Full set (200ml)	KE1.EE.185.x
Spike set	KM1.EE.099.x



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Medical Devices

Experts in ambulatory infusion devices

www.micrelmed.com