

		Rythmic™ Evolution range	Mini Rythmic™ PN+
Delivery modes		<ul style="list-style-type: none"> • Continuous • Bolus only • Continuous + Bolus • Programmed Automatic Bolus (PAB) with combined PCA 	<ul style="list-style-type: none"> • Continuous • Volume/ time • Volume/ rate • Auto ramp • Intermittent • 25 steps
Accuracy		+/- 5 %	+/- 5 %
Flow rate		0.1 to 100 ml/ h	0.1 to 400 ml/ hr (configurable maximum rate)
Programming units Concentration		ml/ mg/ µg	ml/ mg/ µg
Bolus dose / Lockout interval		Yes/ 0 to 999 minutes	-
Special functions		Automatic priming through the pump, Mandatory priming (enabled, warning only, disabled) , Protection code against stopping infusion	
		Dose limit/ x hours and Bolus limit/ x hours Loading dose Clinician bolus override	Early taper down Delayed start (up to 24 hours)
Therapy Monitoring	Recording of patient pain scores with visual analogue scale (VAS) on the pump	VAS available in the pump history, printable and computer downloadable	-
	Ready to Connect to www.micrelcare.net therapy monitoring through the web	- VAS pain score graph - Bolus and infusion data history and graphs - Infusion & Alarm alerts	- Daily/ weekly volume infused compliance graph - Pressure monitoring graph to anticipate potential catheter occlusion - Infusion & Alarm alerts - Infusion data history
Protocol Libraries		Yes, 60 Protocols	-
KVO		Yes, configurable	Yes, configurable and programmable
Automatic restart after occlusion release		Yes	Yes
Safety features		Air in line eliminator, free flow protection according to IEC 60601-2-24	
Alarms & Warnings		Programming within protocol limits Dedicated therapy front face and sets colour codes	Programming within protocol limits
		Near end and end of infusion, low and depleted battery, KVO, open door preventive maintenance warning, Occlusion (low 0.8 bar, middle 1.2 bar, high 1.6 bar).	
		Dose limit, bolus limit	Air bubbles size 0.1 ml; 0.5 ml; 2 ml; Off
Battery & Battery life		9 V alkaline: 7 days at 2 ml/ h or Internal and Rechargeable in 3 h Optional External power adaptor	9 V alkaline: 9 h @ 300 ml/ h External battery pack: 24 h @ 300 ml/ h Optional External power adaptor
Access code levels		3	
History, infusion graph / printout and PC download		Yes, including 6500 time stamped events event log – "Plug and Play" print and PC download facilities into Excel or Text formats	
Weight and size with battery		<ul style="list-style-type: none"> • Mini Rythmic™ Evolution: 300 g, 130 x 75 x 46 mm with transparent locker fitting Mini Full set 100 ml custom bag • Rythmic™ Evolution: 335 g, 130 x 133 x 46 mm with transparent locker fitting Full set 160/ 200 ml custom bag • Rythmic™ Evolution Organiser 100/ 101: 770 g, 148 x 249 x 69 mm with transparent locker fitting standard bags up to 100 ml • Rythmic™ Evolution Organiser 500/ 501: 840 g, 157 x 299 x 82 mm with transparent locker fitting standard bags up to 500 ml 	Mini Rythmic™ PN+: 300 g, 75 mm x 130 mm x 46 mm
Infusion Sets		A wide range of infusion sets (all DEHP free and Latex free) to fit each therapy requirement, available on www.micrelmed.com	
Design and Manufacture		European Union	

ACCESSORIES	
Micrel Power adaptor	120 g, 2.5 x 8 x 5 cm Input 230 V/50 Hz, 90 mA - Output 11 Vdc 500 mA also used as charger for Battery/ IP Connect Pack
Battery pack	100 g, 2 x 5.5 x 10 cm Li-Ion 1.2 Ah - Fast charging 2.5 hours (90%) with charge indicator
IP Connect Pack	105 g, 2.3 x 5.5 x 10 cm Li-Ion 1.2 Ah - Fast charging 3.5 hours (90%) with charge indicator
Rythmic™ Manager Pack	Custom PC software to create, manage and download protocol libraries to the Rythmic™ Evolution pump Automatic PC download of the infusion history in xls and txt formats



Rythmic™ Evolution
Fits Full set 200 ml

Rythmic™ Organiser 500/ 501
Fits standard bags up to 500 ml

Rythmic™ Organiser 100/ 101
Fits standard bags up to 100 ml

Mini Rythmic™ Evolution
Fits Mini Full set 100 ml

Mini Rythmic™ PN+
For external bags only

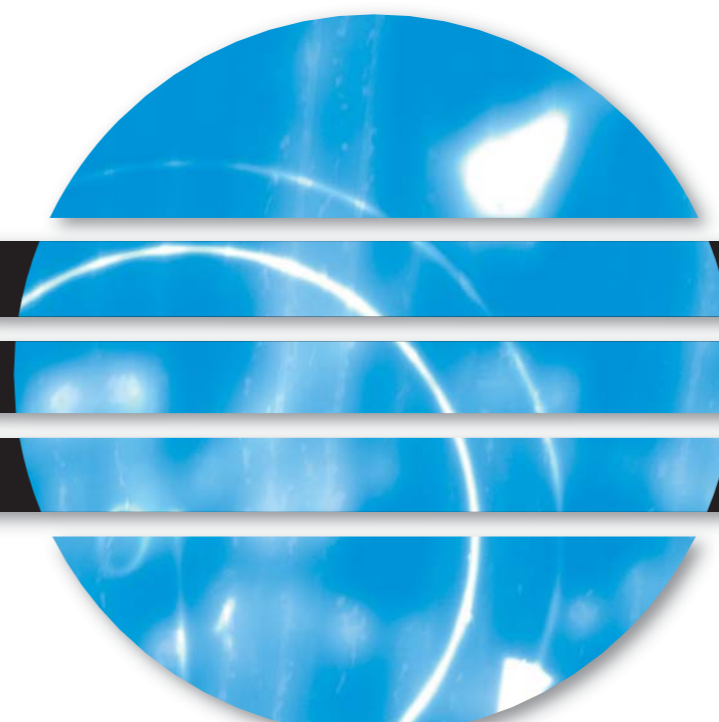
Contact :
info@micrelmed.com

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ISO13485:2012

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Medical Devices
www.micrelmed.com

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Rythmic™



The
smart way to
ambulatory infusion

Experts in ambulatory infusion therapies

Experts in ambulatory infusion therapies

Rythmic™

A family of ambulatory infusion pumps tailored by therapy...

■ Rythmic™ Evolution range is indicated for:

- **PCA, PCEA, PCRA, Wound infiltration:**
 - Custom made user menus to best fit the specific pain protocols in Acute, Birth delivery, Palliative and Chronic pain treatments.
 - Innovative features such as Pain Score log (VAS), Programmed Automatic Bolus (PAB), Protocol library and easy patient history review...
- **Chemotherapy, Primary Pulmonary Hypertension, Parkinson's...**
 - The Rythmic™ Evolution offers a safe, easy to use and trouble free system and trustworthy history back up for each therapy requirement.
 - Pump, Accessories and Infusion sets are designed to provide comfort and optimized mobility to the patient.



■ Medication Error Prevention:

- Colour coded pump and infusion line (yellow, green, transparent) are available to fit the therapy safest recommendations to reduce administration errors.
- Safe non-Luer Surety® connector also available.
- 60 Protocols library with low and high safe limits and mandatory protocol reviewing.
- 3 levels of user access codes, secured priming, lockable keyboard.
- Lockable cover to prevent drug access.



■ Mini Rythmic™ PN+

for Home Parenteral Nutrition (HPN), Antibiotherapy, Immunotherapy...

- Therapy dedicated profiles: Continuous, Auto-Ramp, Intermittent, 25 steps and Volume/ Time.
- Air filter eliminator is positioned upstream the air detector to avoid repeated air alarms.
- Extremely compact and lightweight for such applications: 390 g with battery pack providing up to 3.5 L of infusion at 400 ml/h.
- Extremely quiet.
- Large choice of rucksacks with optional wheels for comfortable large bags infusions.



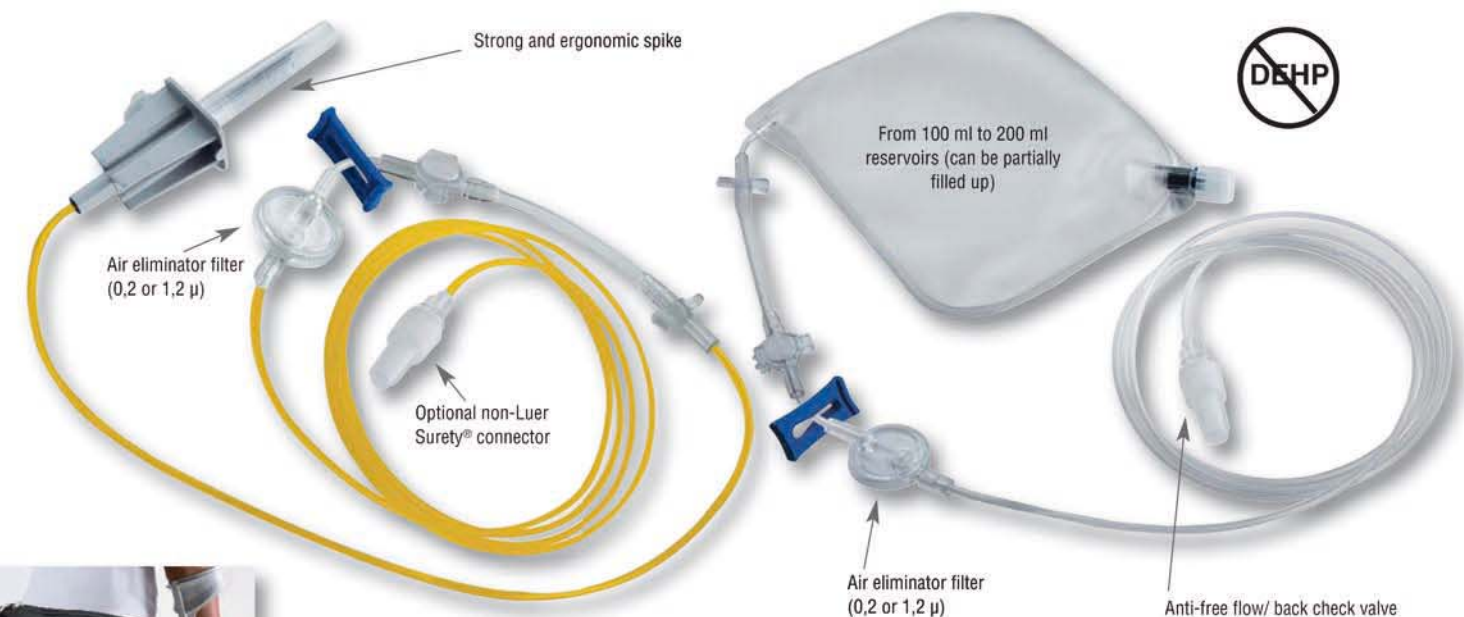
...the smart choice for safety and patient freedom

■ Rythmic™ reduces alarms activity

- The pump has been designed to decrease most of unnecessary potential alarms whilst preserving full safety:
- No air alarm thanks to the air eliminating filter incorporated in all sets.
 - Automatic restart after occlusion release.
 - Long battery autonomy (7 days at 2 ml/h) to decrease the frequency of battery alarms and related changes.

■ Rythmic™ offers "All in one" innovative and safety infusion sets:

- Silicone pumping system for high and long term accuracy.
- All sets include all pre-assembled components thus avoiding additional unsafe connections.
- Soft Bag convenient to fill and prime (manually or via the pump).
- In built anti-free flow/ back check valve, air eliminator, and extension line on all sets.



■ Rythmic™ offers real mobility to patients

- Small, ergonomic and compact for true and comfortable ambulatory therapies.
- Pump size already includes the drug volume (up to 200 ml).
- Lightweight: 300 g with dry cell battery.
- Outstanding battery autonomy.

■ Rythmic™ is simple and intuitive to program

Customization of the Rythmic™ menu according to the user protocol enables easy and safe programming. By reducing the menu to the minimum required parameters to be programmed, Rythmic™ optimizes set up time and decrease potential errors. Rythmic™ software is in 15 different languages.

Ready to connect

to www.micrelcare.net

“Real time access to
your patients’ therapy data
through the web”

MicrelCare™

Remote monitoring solution for ambulatory infusion therapies...

- **Rythmic™ pump associated to IP Connect Pack** is a wireless, real time technology to safely and instantaneously transfer infusion data to the MicrelCare™ server through the GPRS network.
- **www.micrelcare.net is a therapy dedicated web server.** It offers to physicians, nurses and homecare providers a friendly and secured web interface to remotely and economically monitor at anytime from anywhere their patients' treatment: infusion status, programmed infusion parameters, bolus given vs bolus requested, pain score (VAS), history graphs and detailed events, delivery and pressure graphs...



- **SMS and e-mail alerts** are featured on www.micrelcare.net. Users select warnings and pre warnings to be received to anticipate on specific episodes, such as a bag change, a depleted battery, an occlusion alarm, a protocol modification...



IP Connect Pack



- **Connecting physicians to patients**
Rythmic™ pump with IP Connect Pack and MicrelCare™ represents a unique and major step forward in the practice and management of the home care infusion therapies. It definitely contributes to closer patient care at home as well as an improvement in their quality of life.

