

Rythmic™ Serena

Ambulatory Infusion Solution

Empowering you to elevate parenteral nutrition



Mobility



Connectivity



Reliability

 micrel

Elevating infusion care



Elevating infusion care



Inspired by unique patient needs

At Micrel, we know that each patient is unique. Since our inception, we have worked hand-in-hand with clinicians and patients to help respond to their clinical needs.

We deliver unique solutions, because Micrel is unique. We are the only privately-owned medical technology company in Europe with over 40 years of experience in designing and manufacturing ambulatory infusion systems. We developed the smallest and lightest ambulatory infusion pump for thalassaemia patients, and we were the first to integrate wireless remote monitoring in ambulatory infusion care.

Confidence in care

We believe in the power of confidence in care. We provide best-in-class solutions that healthcare practitioners and patients feel confident using. The Rythmic™ Ambulatory Infusion Solutions are manufactured in Europe, following the most stringent quality standards. They feature a highly reliable, precise, and safe infusion system and are simple to learn and use.

Designed to empower

From healthcare practitioners to patients and their caregivers, we are committed to providing truly ambulatory infusion solutions that empower. The Rythmic™ Ambulatory Infusion Solutions enable remote monitoring with seamless connectivity options – and more – so that you can provide your patients with accurate, informed infusion care every day, no matter where they are in their journey.

Unfailing support

At Micrel, we exclusively develop, manufacture and market ambulatory infusion solutions, which makes us experts in this segment. We offer the resources, training and hands-on support that you, your teams, and your patients need to feel confident and empowered when using the Rythmic™ Ambulatory Infusion Solutions. We also have full control on our supply chain, which helps us make sure that you always have what you need.

Optimistic future

We don't stick with the status quo. Like you, we are focused on building a better future for patients, with every decision we make, each day. With the Rythmic™ Ambulatory Infusion Solutions, you can choose future-proof solutions that adapt to patients' lives.



Introducing the new Rythmic™ Serena Ambulatory Infusion Solution

- ✓ Truly ambulatory infusion pump with outstanding battery life, optimised for parenteral nutrition
- ✓ Reliability and confidence for you and your patients to manage at-home care
- ✓ Minimised nuisance alarms and silent pumping mechanism for improved quality of life and sleep
- ✓ Versatile, unique built-in connectivity options allow remote monitoring anywhere, anytime

PARENTERAL NUTRITION

Expect more from ambulatory parenteral infusion

For patients who require long-term nutritional support, **ambulatory parenteral nutrition provides a sustainable solution**, reducing complications associated with hospitalisation and related costs.¹

Not all portable pumps are equivalent in terms of providing the level of comfort, safety and efficiency that patients, their caregivers and healthcare professionals deserve.

- **Is it acceptable to use a pump that delivers less than the prescribed volume of nutrition?**²
- **Can we accept that a patient has to be plugged into a power outlet to receive parenteral nutrition?**^{3,4}
- **Is it fair for a patient to miss out on a family gathering** because carrying a heavy pump is too difficult?^{3,4}
- **Is it tolerable to let patients and their caregivers have their sleep disturbed** by noise or multiple alarms at night?⁴⁻⁶
- **Should we settle for a pump that forces nurses to travel in the middle of the night** to manage an occlusion alarm – when it could potentially be resolved remotely?

No. We can do better.

So, together, let's elevate infusion care.





Home parenteral nutrition can put a significant anxiety burden on patients and their caregivers.⁷ That's why they need ambulatory infusion therapy solutions that they feel confident to use and that don't get in the way of their quality of life.^{5,8,9}

Too many patients have their life disturbed by avoidable issues related to infusion therapy.⁴

50%	Patients regularly experience occlusion alarms
48%	Patients regularly experience air-in-line alarms
42%	Patients have their sleep disturbed by the pump
20%	Patients have nutrition flow issues
20%	Patients need to plug into the mains during treatment

We asked patients on home nutrition what functionalities they want from their pump:⁴

- Manage alarms settings (45%)
- Auto ramp (Ramp-up and taper down to prevent hyper- and hypoglycaemia) (37%)
- Screen luminosity setting (37%)
- Connectivity features (alarms on mobile phone) (22%)
- Delayed start (22%)

With Micrel, you can offer your patients the confidence, peace of mind and dignity they deserve.

True mobility....



DID YOU KNOW?

56% patients take a portion of their infusion outside of their home⁴



Rythmic™ Serena is a top-rated ambulatory infusion pump optimized for parenteral nutrition¹⁰

Living at home, engaging in daily activities, and maintaining a more normal lifestyle can significantly improve patients' quality of life.⁵

- Designed in collaboration with patients for both adults and children
- Lightest parenteral nutrition pump¹¹
- Available with a wide range of accessories, customised for diverse patient profiles
- Carrying solutions ranging from 500 mL up to 6 L

...through autonomy



DID YOU KNOW?

92% patients need to use the bathroom at night⁴



Rythmic™ Serena gives patients the autonomy they need

Not having to be plugged into a power outlet at any time of the day or night is ideal for patients on parenteral nutrition.

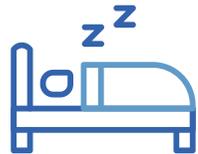
- Longest battery life with up to 3 typical parenteral nutrition infusions (52 hrs at 125 mL/h)¹¹
- No need for external battery packs
- Fastest battery charging (3.5 hrs)¹¹
- Interchangeable battery type (alkaline or rechargeable battery) for power source flexibility



Quality of life and sleep

"Adopting the Rythmic™ pump was a life-changer for me. After two years of utilisation I haven't had a single pump alarm wake me up at night."

Manon, expert patient*



Rythmic™ Serena is designed with patient comfort in mind

Having a restful night and sleep is of utmost importance for anyone. The optimised alarm management helps patients forget they are on infusion therapy and helps healthcare professionals to improve patient care efficiency.

- Unique and patented air elimination filter placed before air sensor reducing unnecessary alarms
- Optimised anti-kinking set design and patented spike set features reducing occlusions
- When needed, auto-restart after occlusion release enabling seamless infusion continuity
- Screen luminosity management for more comfort at night
- Silent pumping mechanism

Reliability and confidence

"Three nights with just one charging cycle – amazing!"

Willi, patient



Rythmic™ Serena offers the reassurance you deserve

It is crucial that patients receive their right nutritional requirement. When they return home, all stakeholders involved in the treatment need to have complete confidence in the infusion solution that will be used.³

- A patented 7-finger pumping mechanism with silicone tubing participates in infusing fluids accurately, independently of flow rate and infusion duration
- Automatic taper mode, including early taper-down, helps avoid hyper- and hypoglycaemia^{2,6}
- Intuitive programming with patented short protocol list, automatic priming, and optional infusion library for easy, confident set-up and use
- Unique and versatile connectivity reassures patients that their healthcare team can remotely monitor infusion status at any time¹²⁻¹⁵

*La Vie par un Fil – www.lavieparunfil.com;
Association des POIC – association-poic.fr.

Embedded connectivity

MICRELCARE

is an innovative web-based patient care management platform, supported by over 10 years of experience in remote monitoring. It was born from our obsession to transform exceptional patient monitoring into routine practice.

Centred around the patient, MICRELCARE enables healthcare workers to access the information they need to accurately, collaboratively and efficiently care for their patients.

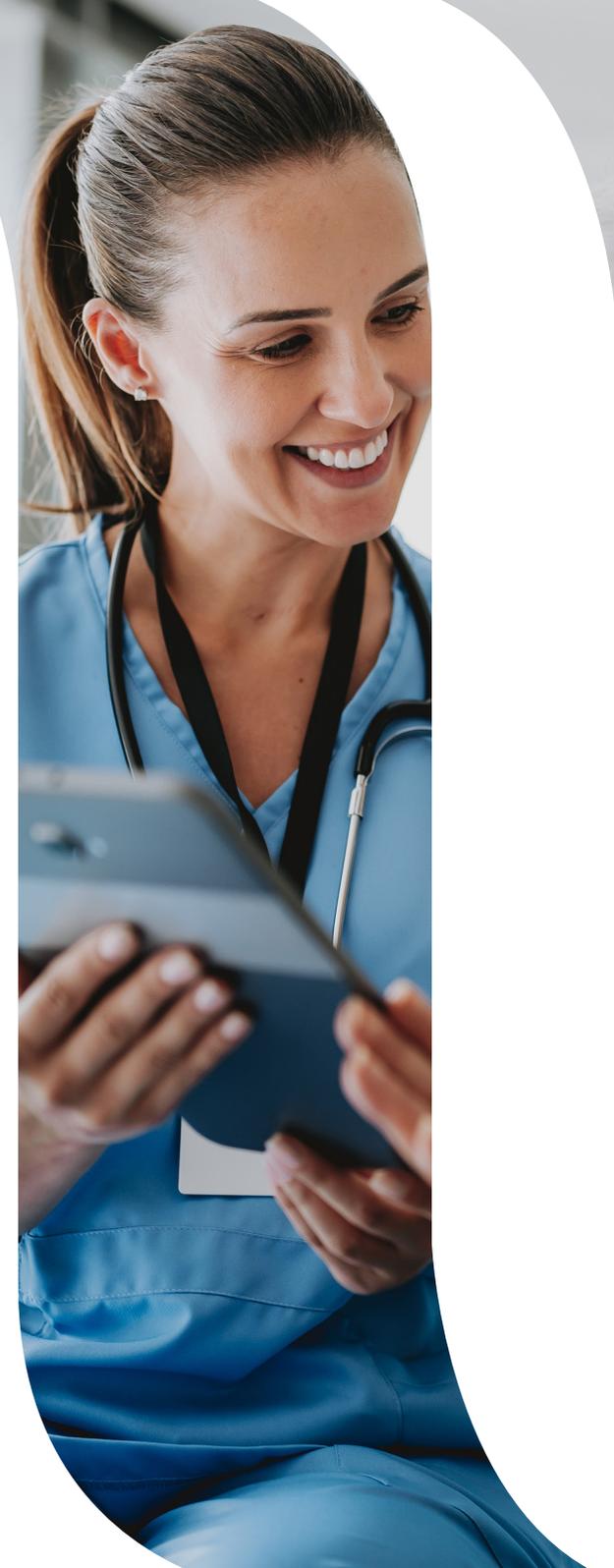


The new Rythmic™ Serena is designed for true connectivity, providing the visibility you need to monitor your patients anytime, anywhere

The embedded connectivity of Rythmic™ Serena allows easy access to MICRELCARE through log and play, helping to address your current and future needs, including nurse shortages, cost pressures, workflow efficiencies, patient comfort, and caregiver reassurance.

- **Wireless connectivity:** Choose between cellular* or Wi-Fi
- **Web-based platform:** MICRELCARE is available through a simple internet connection with double authentication. No software downloads or specific app required
- **Data privacy:** All data is highly secured in an ISO/IEC 27001-certified data centre for personal information and health data hosting
- **Healthcare network:** To support improved patient management, any healthcare practitioner or caregiver can access patient treatments from the platform

*Depending on pump model





SUPPORTED PATIENT CARE



Reporting:

Access reports to follow infusion trends and regimen compliance in accordance with ESPEN Guidelines⁶



Therapy feedback & monitoring:

Therapy feedback through on-pump custom questionnaires supports decision-making



Pressure tracking:

Track line pressure for optimal infusion conditions at all times¹³⁻¹⁵

IMPROVED PATIENT CONFIDENCE



Safety:

Parents and caregivers can monitor infusion in real-time and receive SMS and/or email alerts



Infusion monitoring:

Infusion monitoring supports patient discharge and provides reassurance at home



Patient portal:

Patients can access and manage their own infusion data, creating autonomy

OPTIMISED WORKFLOW EFFICIENCY



Alarm management:

Full visibility of infusion status and alarm type allows efficient alarm management



Fleet management:

Automatically identify pumps in service through patient assignment and anticipate maintenance



Ease of documenting:

Remote and automated data downloads may free up nurse time

A complete solution optimised for parenteral nutrition

Living at home, engaging in daily activities, and maintaining a more normal lifestyle can significantly improve patients' quality of life.⁹

The **Rythmic™ Serena solution** has been designed around the patients to improve all facets of their quality of life, from the technology to the design, and beyond. All aspects have been developed to work seamlessly together, from the infusion sets to the accessories and the connected pump.



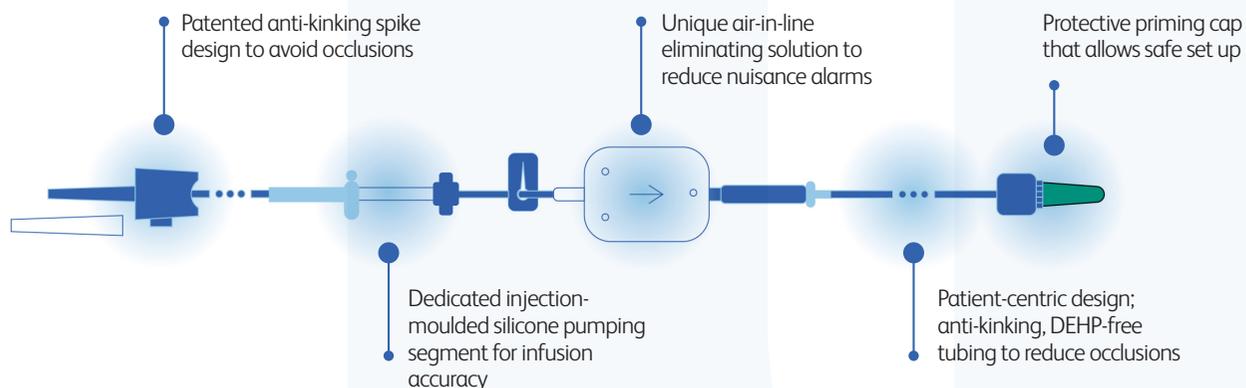
Rythmic™ Serena

A truly ambulatory infusion pump optimised for parenteral nutrition



Rythmic™ administration sets* – engineered to enhance quality of life

Large variety of infusion sets for every therapy requirements including 3-in-1, 2-in-1, paediatric, UV-protected, and multi-bag infusions



*Refer to the Product Leaflet for the full range of accessories and infusion sets available.



Rythmic™ accessories* – designed with patients for patients

Wide selection of carrying bags and trolleys for every patient's needs

- Convertible backpack for back carry or trolley usage
- Pump screen window to easily access pump information
- Up to 6L capacity with multiple hooks for versatile treatment regimen
- Design for multiple pump use to accommodate diverse patient profiles
- Anti-collapsing feeding bag system to avoid infusion interruptions
- Guided line inside the rucksack to prevent set misuse



Rythmic™ XS Rucksack 3L
2 pumps with removable wheels*



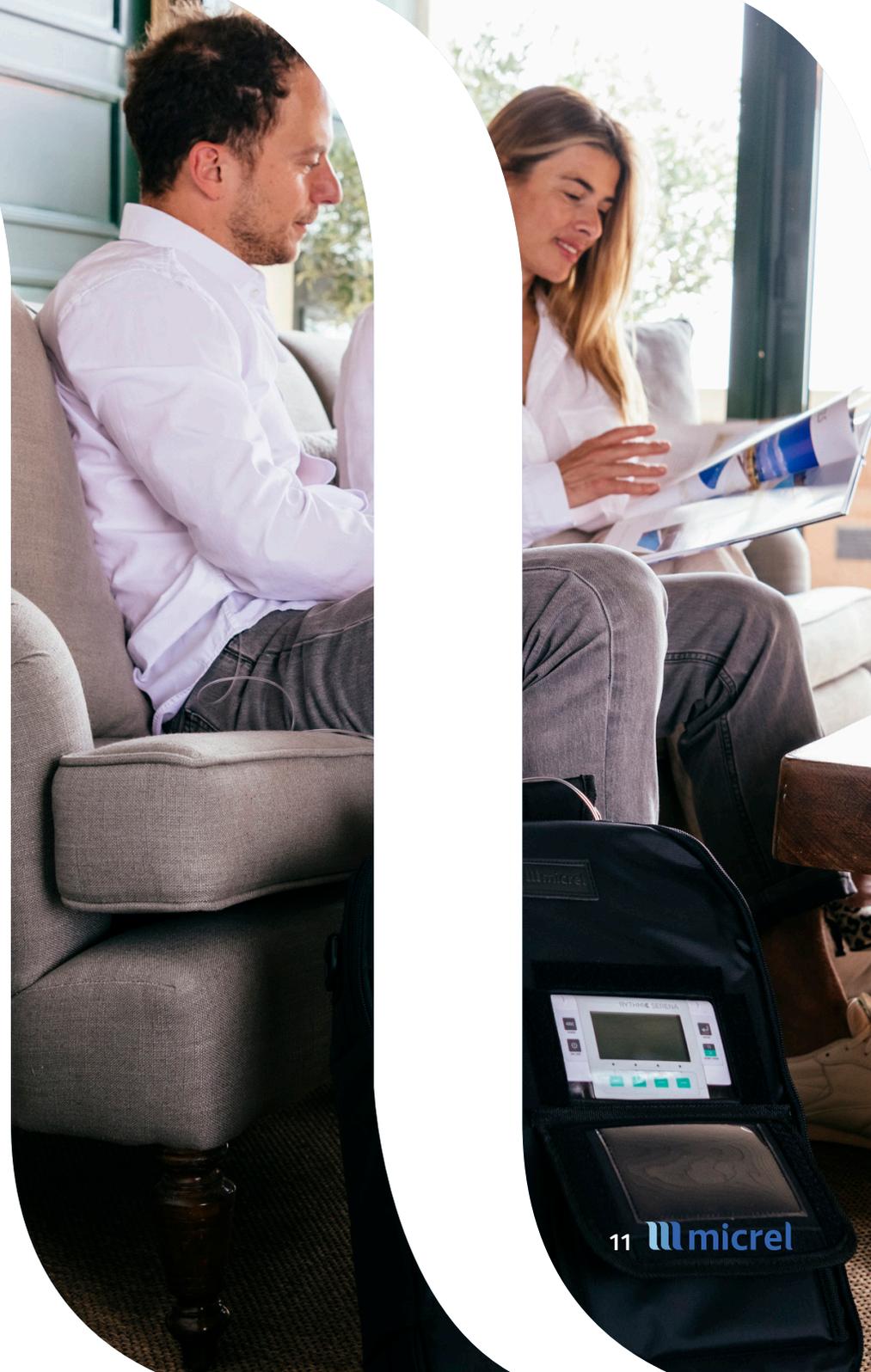
MICRELCARE

An innovative web-based care management platform

MICRELCARE



*Refer to the Product Leaflet for the full range of accessories and infusion sets available.



Discover the Rythmic™ range of ambulatory infusion pumps

Rythmic™ Serena

Optimised for home parenteral nutrition and other home infusion therapies



Rythmic™ Ultima

Designed for pain management



For more information, contact your Micrel representative

Visit www.micrelmed.com

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