

Rythmic™ Ultima

Ambulatory Infusion Solution

Empowering you to provide next-level pain management



Safety



Connectivity



Mobility

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™ Ultima Ambulatory Infusion Solution

- ✓ Innovative features maximise patient safety and infusion reliability in all types of pain management
- ✓ Built-in connectivity facilitates responsive and adaptive care for enhanced patient management^{1,2}
- ✓ Truly ambulatory infusion pump supports patient mobility for improved patient satisfaction and outcomes
- ✓ Unique, all-in-one infusion sets and remote monitoring enable efficient use of clinical time and resources



Raise pain management to the next level

Ambulatory pumps enable healthcare professionals to safely deliver pain relief for acute and chronic patients.

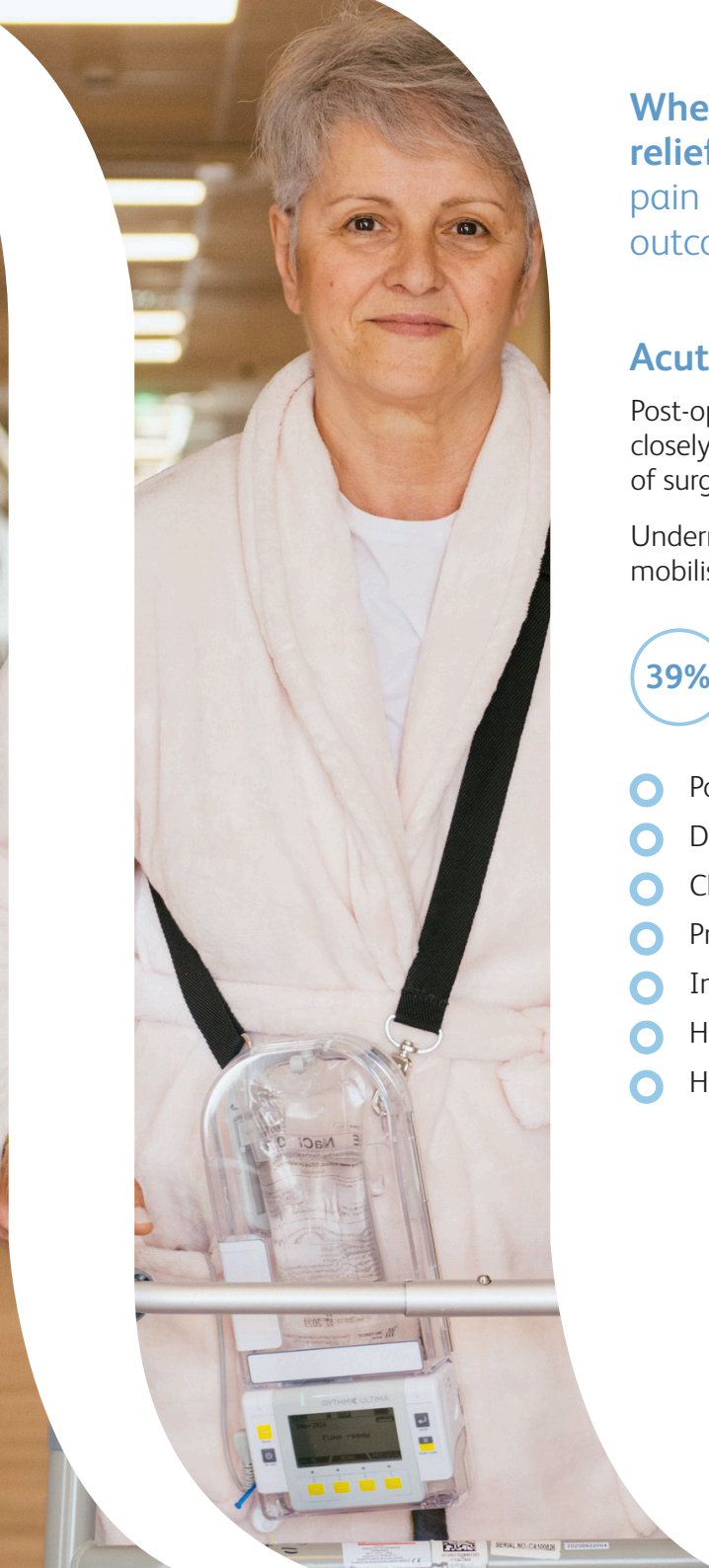
However, medication errors, such as programming mistakes and inadequate monitoring, remain a significant risk for patients.³⁻⁵ These challenges are further exacerbated by staff shortages and cost constraints.⁶

With patient satisfaction increasingly crucial, selecting the right ambulatory infusion solution is more important than ever.⁷

- **Is it acceptable for patients not to receive the intended medication dosage,** or to still experience pain and side effects?⁸
- **Can we justify not doing everything possible to reduce opioid consumption** when it's such a critical issue?^{4,9}
- **Should nurses spend time manually recording boluses** instead of focusing on patient care?
- **Is it justified to keep a patient immobilised** when we know that mobility improves outcomes?⁹
- **Is it decent to deny birthing mothers access to an appropriate infusion mode,** even if it could help avoid the use of obstetrical tools during delivery?¹¹

No. We can do better.

So, together, let's elevate infusion care.



Whether in acute or chronic settings, many patients still do not receive adequate pain relief.^{8,12-14} There is a need for ambulatory infusion therapy solutions that provide effective pain management, which in turn can optimise mobility, patient satisfaction, and clinical outcomes.

Acute, post-operative

Post-operative pain and mobility are closely linked, forming two key aspects of surgical recovery.^{10,15,16}

Undermanaged pain and lack of mobilisation can lead to:^{9,10}

39%

Post-operative patients report moderate to severe pain even after receiving analgesia⁸

- Poor patient satisfaction
- Delayed recovery
- Chronic postoperative pain
- Prolonged opioid use
- Increased hospital length of stay
- Hospital readmission
- Hospital expenses

Obstetrics

Inadequate pain management during labour significantly contributes to higher caesarean rates and poor outcomes.¹⁷

Walking and upright positions are improve maternal outcomes.^{18,19}

37%

Women with continuous epidural infusion experience motor block²⁰

29%

Reduction in caesarean section when in upright position during first stage labour¹⁹

20%

Women require instrumental delivery when on standard epidural analgesia²⁰

14%

Women experience labour breakthrough pain while on epidural analgesia¹²

Cancer pain and palliative care

Effective pain relief is crucial for individuals receiving cancer treatment or palliative care. Yet, evidence indicates that pain remains inadequately managed, impacting patients' comfort, mobility and dignity.^{13,14}

38%

Cancer patients report moderate to severe pain¹³

25%

Family members report unmet pain relief in end of life of their loved one¹⁴

With Micrel, you can offer your patients the pain relief and mobility they deserve, in a secure way.

Patient safety...



DID YOU KNOW?

1 in 20 patients worldwide experience preventable medication-related harm, of which 1/5 occurs during administration and 1/3 during monitoring³



Rythmic™ Ultima is a step ahead in medication error prevention

Minimising potential for error at every step helps maximise patient safety, whether in the hospital or at home.

- Lockable drug container cover secures drug bag access
- Colour-coded pump and dedicated administration sets available with NRFit™ connector to prevent accidental administration of medication via the wrong route
- Drug or protocol library allows titration of the selected infusion protocol, staying within pre-programmed safety limit
- Remote connectivity allows programming to be checked at any time and enables therapy monitoring

...while improving staff efficiencies



DID YOU KNOW?

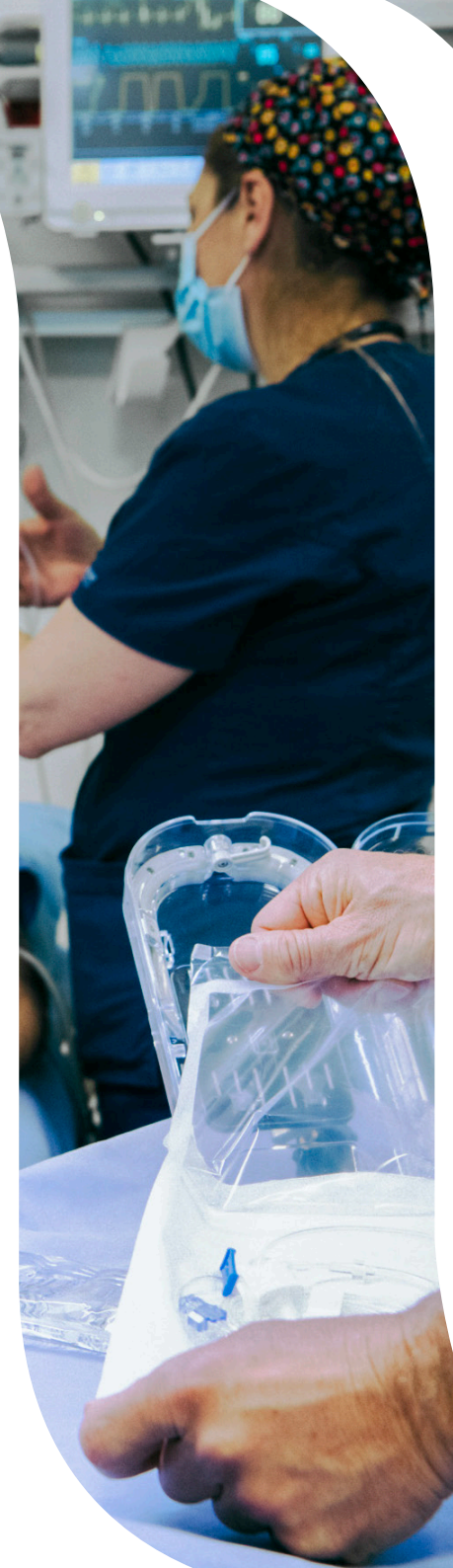
Up to 1/5 of health spending could be put to better use according to a 2017 OECD report.²¹



Rythmic™ Ultima supports efficient use of time and resources

Simplifying tasks and reducing the need for direct intervention at the patient's bedside may help reduce staff workload and related costs.^{1,2}

- All-in-one, pre-assembled infusion sets with integrated soft bag simplify infusion preparation and minimise waste
- Air vent on spike sets allow fast manual priming
- Air elimination filter, automatic restart at occlusion release, and long battery lasting reduce unnecessary alarms
- Remote transmission of therapy data relieves staff from manual actions and direct intervention at the patient bedside



Patient satisfaction through mobility...



DID YOU KNOW?
Early mobilisation after surgery reduces pain levels and improves quality of life.¹⁰

...and shared decision-making



DID YOU KNOW?
Low post-operative pain is the #1 predictor of patient satisfaction.²⁴



Rythmic™ Ultima is a truly ambulatory infusion pump exclusively designed for all types of pain management

In post-operative care, early mobilisation supports better outcomes and faster discharge.^{10,15} During childbirth, moving freely can aid a timely birthing process and reduce complications.^{18,19} In a palliative setting, mobility improves patient comfort and autonomy.²²

- Most compact and lightweight system on the market, accommodating flexible volumes²³
- Outstanding battery life up to 14 days depending on use and battery type, designed to support connectivity
- Interchangeable battery type (rechargeable battery or 2 AA alkaline batteries) for power source flexibility



Rythmic™ Ultima gives patients more control over their treatment experience, while also enabling responsive and adaptive care

Remote access to therapy feedback and historical therapy data allows a real adaptation of treatment to patients' unique needs.^{1,2}

- Bolus requests are instantly sent to the healthcare team and trends can be analysed to adjust treatment^{1,2}
- Pain scores can be recorded by patients at any time and are instantly transmitted to their healthcare team for fast therapy optimisation
- On-pump custom questionnaires enable patients to provide real-time therapy feedback, helping to personalise pain relief

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.



With the new Rythmic™ Ultima, you can be by your patient's side when they need you the most

Delivering effective pain management relies on being able to respond quickly to the patient's needs.^{1,2} Rythmic™ Ultima offers you a trouble-free solution to remotely monitor infusion-related data, reduce intervention times, and decrease nurses' workload.^{1,2}

The embedded connectivity of Rythmic™ Ultima 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 safety, at-home care monitoring.

- **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



IMPROVED PATIENT SAFETY



Programming view:

Unique pump programming double check from distance enhances safety and helps reduce medication errors



Automatic data transfer:

Remote transmission of therapy data avoids risk of manual reporting error



Infusion monitoring:

Remote notifications enables prompt intervention



Infusion history:

Remote access to historical infusion events at any time allows to proactively identify potential adverse events

OPTIMISED WORKFLOWS



Alarm management:

Allows full visibility and remote management of alarms to optimise nurse allocation



Ease of documenting:

Remote and automated data downloads may free up nurse time



Volume tracking:

Track remaining volume to anticipate bag change



Fleet management:

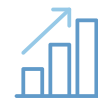
Automatically identify pumps in service through patient assignment and anticipate maintenance

SUPPORTED PATIENT CARE



Bolus ratio:

Full visibility into daily ratio of bolus demands to bolus infusions assists in determining patient pain



Pain graphs analysis:

Insights into patient pain allows to deliver the appropriate therapeutic response and assess its effectiveness



Right window of observation:

Advanced patient-centric view enables a deeper understanding of pain patterns

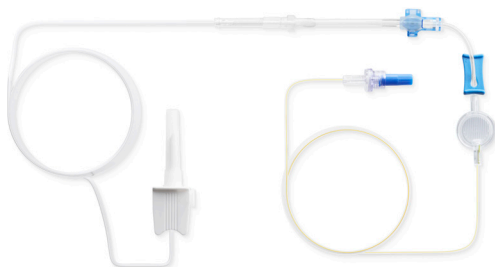


Pain management optimisation:

On-pump therapy feedback and pain scores instantly sent to healthcare team for quick intervention

A complete solution designed for all types of pain management

Properly controlled pain relief that encourages more comfortable movement may increase patient satisfaction, improve patient outcomes and speed up recovery.^{10,15,16}



The **Rythmic™ Ultima solution** is focused on pain relief, with every detail – from technology to design – carefully integrated. Each component, from the infusion sets to the accessories and the connected pump, has been developed to work seamlessly together.



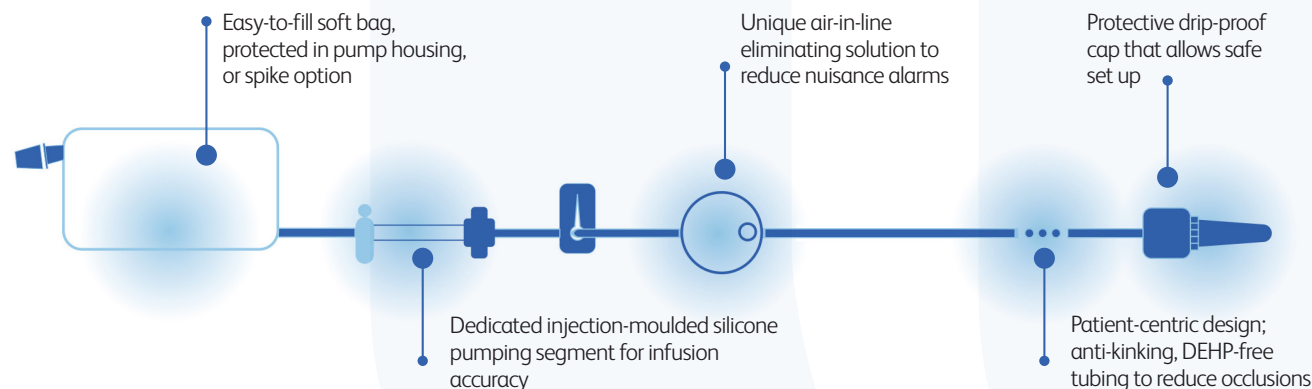
Rythmic™ Ultima

A truly ambulatory infusion pump tailored for pain management, available in two colours and three sizes to accommodate different techniques and usage



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

Large variety of all-in-one infusion sets with integrated bags along with additional options including spike or luer connection, NRFit™ and yellow colour coding



*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 solutions and accessories for every patient's needs

- Many carrying options of different sizes including shoulder bags, waist bags, and single use carrying bags
- Carrying bags designed with pump screen window to easily access pump information
- Strap option directly attaches to the Rythmic™ Ultima XL pump lockbox to allow patient mobilisation even when high infusion volume is required
- Luminous and vibrating bolus handset confirms the bolus request to the patient



Rythmic™ XS Carrying Waist Bag 250 ml*



MICREL CARE

An innovative web-based care management platform

MICREL **CARE**



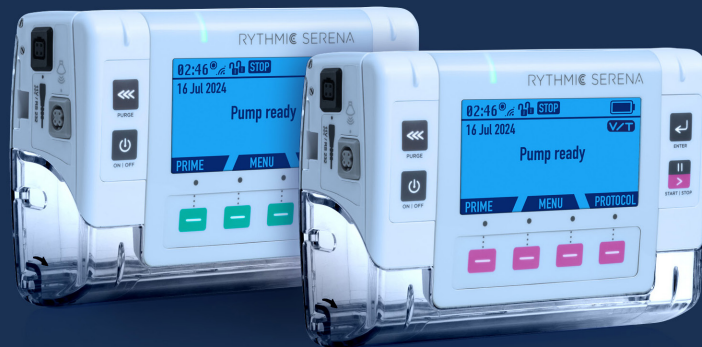
*Refer to the Product Leaflet for the full range of accessories and infusion sets available.



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

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