

Palliative Care

Treatment in Palliative care requires to be either administered Subcutaneously, Intravenously and in some cases Intrathecally. When a small volume of medication is to be infused, syringe drivers with a bolus function are commonly used with syringes up to 50 ml volume. Infusing larger volumes (from 50 ml to 200 ml) necessitates a PCA pump. Whenever opioids are infused, both systems must offer secured access to the fluid, and must have risk-free programming features. Continuous visible feedback on the infusion status and bolus history is a necessity for clinicians to optimize the pain treatment especially for the home-based patient.

Micrel offers the MP mlh+ syringe driver for small infusion volumes and the Rythmic™ Evolution range, infusion sets and accessories for larger infusion volumes. Both solutions meet and exceed the safety, reliability and comfort expected by clinical staff and patient. Furthermore the Rythmic™ Evolution is "Ready to Connect" providing instant remote access via a web platform to the infusion information. This improves patient care management and decreases hospital readmission.

For the Clinical Staff

Safe infusion

- Intuitive programming and protocol library to optimize the clinical staff training and prevent medication errors.
- Locking system to secure opioids access

When returning to home:

Optimized pain treatment and patient care

- Reduced alarm activity for patient comfort
- Remote instant bolus activity & VAS score monitoring via Micrelcare™

For Patients :

Comfort and quality of life

- Unrivalled lightweight, size, battery autonomy and carrying solutions for patient comfort

Innovations:

- Pain score registration directly on the pump with easy historical access
- Micrelcare™: a wireless system that enables clinicians, nurses and homecare providers to remotely control the infusion therapy through the web



Rythmic Evolution range for larger infusion volumes up to 200ml



MP mlh+ for smaller volume infusion up to 50ml compatible with all brands of syringes.



A truly ambulatory connected and secured system

Ready to
connect



www.micrelcare.net



Experts in ambulatory infusion therapies

| Specifications | MP mlh+ | Rythmic™ Evolution Blue & Yellow |
|--|---|--|
| Delivery Modes | • Continuous • Continuous + bolus | • Continuous • Bolus only • Continuous + Bolus • Programmed Automatic Bolus |
| Flow rate and Accuracy | 0.1 to 78.0 ml/h at +/- 2 %, depending on syringe sizes and models | 0.1 to 100ml/h at +/-5% |
| Programming units Concentration | ml | ml/mg/µg- 0.1 to 99.9 mg/ml and 0.1 at 999.9 µg/ml |
| Volume to infuse | Uses manufacturer's standard syringes (BD, Terumo, Braun, Codan) from 10 to 50/60 ml. | 1 to 9999 ml |
| Special functions | <ul style="list-style-type: none"> • Priming • Anti-tampering features including keypad lock • Fixed rate option | <ul style="list-style-type: none"> • 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, History, infusion graph/ printout and PC download | Downloadable Event log history | <p>"Ready to connect" to www.micrelcare.net for therapy monitoring through the web.</p> <p>History "Plug and Play" printout and downloads on PC or via MicrelCare™ Rythmic™ Data Manager software: PC download of infusion history up to 6500 times stamped events into xls or text formats</p> <p>"Plug and Play" instant printout of the infusion history</p> |
| KVO | No | 0.1 to 2.0 ml/h |
| Automatic restart after occlusion release | No | Yes |
| Safety features | <ul style="list-style-type: none"> • Lockable flow rate • Multipoint syringe dislodged detection according to IEC 60601-2-24 • Complies with the NHS National Patient Safety Agency (NPSA/2010/RRR019) | <ul style="list-style-type: none"> • Air in line eliminator, free flow protection compliant with IEC 60601-2-24 • Programming within protocol limits |
| Alarms | Syringe dislodged detection, near end and end of infusion, occlusion (low/medium/high), system failure, low and depleted battery, pump tamper warning... | Occlusion (3 levels : 0.5bar, 0.9bar, 1.3bar), near end and end of infusion, low and depleted battery, dose limit, bolus limit, open mechanism, preventive maintenance warning ... |
| Access code level | 1 | 3 |
| Power supply and autonomy | Alkaline LR03 AAA x6 : 70 full infusions | 9V alkaline : 6 days at 5ml/h with bolus or internal and rechargeable in 3hr |
| Design and Manufacture | European Union - CE 0120/ISO9001 :2008/ISO 13485 :2012 | |

| | MP mlh+ Multi syringes Ref : KP1.12.220.x | Mini Rythmic Evolution for Rythmic mini full set 100ml Ref : KP5.04.261.x (Blue) - KP5.04.263.x (Yellow) Rythmic Evolution for Rythmic full set 200 ml Ref: KP5.04.125.x (Blue) - KP5.04.130.x (Yellow) |
|----------------------------|--|--|
| Weight with battery | 220 g, 170 x 61 x 32 mm | Mini Rythmic Evolution: 300g / Rythmic Evolution: 335g Mini Rythmic Evolution: 75 mm x 130 mm x 46 mm Rythmic Evolution: 130mm x 133mm x 46mm |
| Dimensions | | |
| Carrying bag | Included | Included |
| Power adaptor | Not available | Optional, ref: KS5.01.615.x |
| IP Connect | Not available | Optional - 100 g, 2 x 5.5 x 10 cm Li-Ion 1.2 Ah - Fast charging 2.5 hours (90%) with charge indicator |



Mini Rythmic Evolution



Rythmic Evolution on pole clamp



MP+ Soft locker box 20 ml also available in 50ml

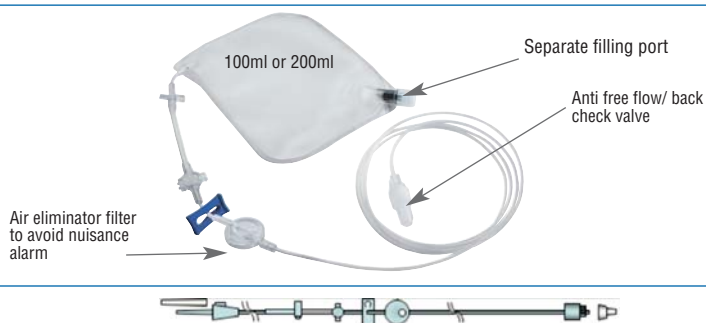


IP Connect Pack for Micrelcare connection



Mini Rythmic Evolution Yellow

| | |
|-----------------------------|--------------|
| Mini Full set 100 ml | KE1.EE.177.x |
| Yellow Mini Full Set 100 ml | KE1.EE.167.x |
| Y Mini Full set 100 ml | KE1.EE.195.x |
| Full Set 200 ml | KE1.EE.185.x |
| Yellow Full Set 200ml | KE1.EE.190.x |
| Y Full Set 200 ml | KE1.EE.196.x |
| Spike Set | KM1.EE.099.x |
| Yellow Spike set | KM1.EE.160.x |



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Medical Devices

Experts in ambulatory infusion therapies

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