

Mobility

Connectivity

Reliability



Picture shows pump in original size

Rythmic™ Serena

Rythmic™ Serena XS Green

micrel

Elevating infusion care

Technical specifications

Rythmic™ Serena XS (Green)

Model	REF	Wifi	Cellular *	Dimension (W x H x D)	Weight
Rythmic™ Serena XS (Green)	16101	•		131 x 90 x 48 mm	398 g
Rythmic™ Serena XS (Green) Cellular	16102	•	•		

* 3G with 2G fallback

Delivery modes	 • Continuous • Volume/Time or Volume/Rate • Auto-Ramp	 • 25 Steps • Intermittent
Flow rate and accuracy	0.1 to 600 mL/h, ± 5 %	
Programming units	mL/mg/µg	
Concentration	0.1 to 99.9 mg/mL (0.1 mg/mL incr.) and 0.1 to 999.9 µg/mL (0.1 µg/mL incr.)	
Volume to infuse	1 to 9999 mL (1 mL incr.)	
Total infusion time	10 min to 199 h 50 min (10 min incr.)	
Ramp up – & Taper down time	0 min to 9 h 59 min	
Safety features	• Air in line eliminating filter • Free flow protection • Anti-siphon valve	• Dual air detector • 3 code protected and configurable access levels
Special functions	• Drug library (up to 300 medication protocols) • Protocol list (up to 150 medication protocols) • Manual priming or automatic priming through the pump • Priming warning (enabled, disabled) • Delayed start (up to 24 hours)	• Security code against stopping infusion • Automatic restart after occlusion release • Optional therapy questionnaires • Early taper down
Connectivity features	• 'Ready to connect' to www.micrelcare.net for therapy monitoring	• Wi-Fi and cellular
Network specification	• Cellular connecivity via Micro SIM (Not included/in option) 2G (GSM/GPRS): 900/1800 MHz 3G (UMTS/HSPA): 900/2100 MHz	• GSM/(E)GPRS - 900/1800 MHz (max. power 2 W) • 802.11b/g/n (2.4 GHz, max. power 0.1 W)
Programming	• Direct manual programming • Programming using protocol libraries with safety limits, created in Infusion Library module of Micrelcare	
KVO	0 to 50 mL/h (0.1 mL/h incr.)	
Priming rate & time	max. 600 mL/h // Average time to prime a Spike Set PN: 8-15 seconds	
Occlusion limits	3 levels: low = 0.5 bar, medium = 1 bar, high = 1.5 bar	
High priority alarms	Air in line // Battery depleted // Battery missing // Device error // Door open // Up-Downstream occlusion // Infusion completed // Key stuck // Pump unattended // Set misplaced	
Low priority alarms	Battery Low // Date and time settings may be lost // Library data lost // Near end of infusion // Preventive maintenance due // Pump cannot start // Pump settings lost	
Air detector	Adjustable air bubble size: 0.1 mL, 0.5 mL, 1 mL, Off	
Event log	6500 time-stamped events	
Preventive maintenance	Every 2 years or 2500 litres of operation	
Power supply and autonomy**	• 2x AA Alkaline batteries (LR6): 56.8 hrs at 125 mL /h, • Rechargeable battery (1400 mAh): 52 hrs at 125 mL/h, rechargeable in 3.5 h • Power supply mains: 100 to 240 V, 50-60 Hz, 170 mA Micrel power adapter (optional)	
Applicable International and European Standards	ISO 13485 // EN IEC 60601-1 // EN IEC 60601-1-2 // EN IEC 60601-1-8 // EN IEC 60601-1-11 // EN IEC 60601-2-24	
Packaging content	2 x AA Alkaline battery // Instruction for use // Patient guide // Carrying case included	

** Wireless connectivity disabled

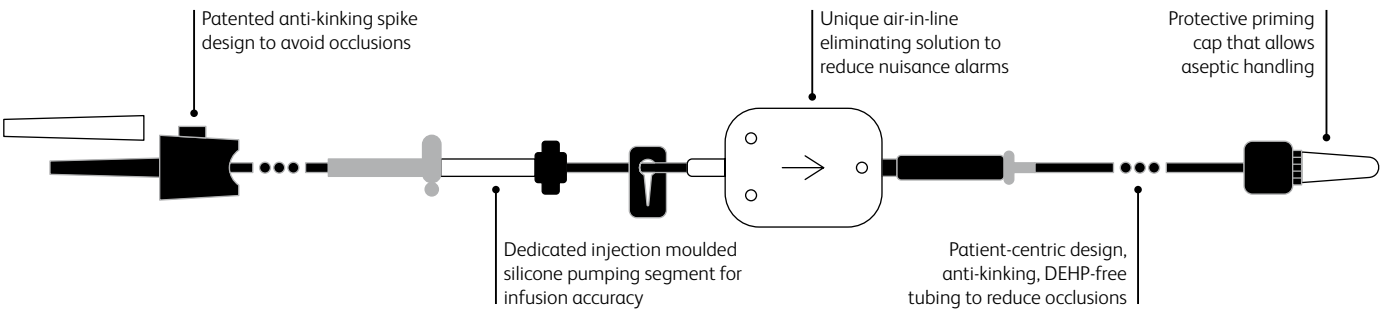
Rythmic™ Administration Sets

for Rythmic™ Serena XS (Green)

Set type	REF	Upstream-Connection	Priming volume (ml)	Up-Downstream tubing length (cm)	Filter pore size (µm)	Units/box
Spike Set PN for 3-in-1 solutions	KM1.EE.148.1	With vented spike	5.4	85/220	1.2	20
Spike Set PN with UV Protection for 3-in-1 solutions	KM1.EE.350.2	With vented spike	5.4	85/220	1.2	20
Pediatric Spike Set PN for 2-in-1 solutions	KE1.EE.192.0	With vented spike	5.4	85/220	0.2	20
Luer Set PN F	KE1.EE.134.1	Male Luer-Lock	5.2	85/220	1.2	20
Short Spike Connecting line for multi-bag infusion in PN, to be used with KE1.EE.134.1	KE1.EE.179.2	With vented spike	0.5	20	none	20
Double Short Spike Connecting line for multi-bag infusion in PN, to be used with KE1.EE.134.1	KE1.EE.225.1	With vented spike	2.0	20	none	15
Triple Short Spike Connecting line for multi-bag infusion in PN, to be used with KE1.EE.134.1	KE1.EE.226.1	With vented spike	2.9	20	none	15

- External third party containers can be connected via respective Rythmic administration set
- XS model accommodates Rythmic Administration Sets with bag up to 100 mL (see Technical Information for Rythmic Serena Magenta)

Set features for PN spike sets



- Anti free flow, pressure activated and one-way check valve
- DEHP and Latex free
- Storage Temperature: 5 – 30° C
- Sterilisation: ETO
- Shelf life: 60 months

Rythmic™ Accessories

Rythmic™ pumps should only be used with dedicated Rythmic™ accessories

Rythmic™ XS Rucksack, 6000 mL, 1 pump (optional with trolley)



Black backpack, for one pump, accomodates IV bags with up to 6000 mL.

- Weight*: 1.500 g
- Dimensions (h x w x d): 41 x 30 x 10 cm

REF: KM1.YY.577.4 (4RW)
KS5.04.196.4 (w/trolley)

* without trollley

Rythmic™ XS Rucksack, 6000 mL, 2 pumps (optinal with trolley)



Black backpack, for up to two pumps, accomodates bags with up to 6000 mL.

- Weight: 1.750 g
- Weight with trolley: 2620 g
- Dimensions (h x w x d): 44 x 35 x 15 cm

REF: KM1.YY.481.3
KS5.04.207.3 (w/trolley)

Rythmic™ XS Rucksack, 3000 mL, 2 pumps (optional with trolley)



Backpack, for up to two pumps, accommodates bags with up to 3000 mL.

- Weight*: 1.620 g
- Dimensions: (h x w x d): 48 x 35 x 10 cm

REF: KM1.YY.564.4 Pink (4RW)
KM1.YY.565.4 Blue (4RW)
KM1.YY.578.4 Black (4RW)
KS5.04.197.5 Pink (w/trolley)
KS5.04.198.5 Blue (w/trolley)
KS5.04.200.5 Black (w/trolley)

* without trolley

Rythmic™ XS Rucksack, 6000 mL, 2 pumps, with trolley



Black backpack with removable wheels, for up to two pumps, accommodates bags with up to 6000 mL.

- Weight with trolley: 2.750 g
- Dimensions (h x w x d): 59 x 36 x 24 cm

REF: KS5.04.206.2

Rythmic™ XS Rucksack, 6000 mL, 3 pumps (optional with trolley)



Black backpack, for up to three pumps, accommodates bags with up to 6000 mL.

- Weight*: 1.820 g
- Dimensions (h x w x d): 48 x 36 x 13 cm

REF: KM1.YY.366.3
KS5.04.199.2 (w/trolley)

* without trolley

Rythmic™ XS Carrying Shoulder Bag, 1000 mL, 2 pumps



Black shoulder bag, for up to two pumps, accomodates bags with up to 1000 mL.

- Weight: 1.500 g
- Dimensions (h x w x d): 40 x 20 x 10 cm

REF: KM1.YY.563.1

Mini Rythmic™ Pole Clamp



Compatible with pump size XS

REF: KS5.04.017.5

Rythmic™ Serena External Sounder



Amplifies the alarm tone when required, e.g. the pump is in a rucksack and the patient is under way.

- Weight: 33 g

REF: 81055

Rythmic™ Ultima/Serena Rechargeable Battery



- 1400 mAh
- Rechargeable in 3.5 h
- Weight: 33 g

REF: 81070

Rythmic™ Power Adaptor Plug



REF:
KS5.01.615.4 Type C (EU)
KS5.04.041.1 Type I (AU)
KS5.04.021.2 Type G (UK)
KS5.04.043.1 Type A (US)

MicrelCom System (RS232 & USB)

- Connects the pump with the PC
- Provided with USB to serial adaptor
- Compatible with all Rythmic™ Pumps

REF: KS5.04.046.1

CE 1639

info@micrelmed.com
www.micrelmed.com

Micrel Medical Devices S.A.,
42 Konstantinoupoleos,
GR19441 Koropi, Greece

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