

smiths medical
bringing technology to life

medfusion™

Medfusion® 4000 Wireless
Syringe Infusion Pump
and **PharmGuard®** Infusion
Management Software



Delivering care quickly and confidently

Moment-by-moment decisions are the lifeblood of your work. So, why not choose a smart infusion system that helps confirm your critical decisions to keep you efficient and effective?

The Medfusion® 4000 syringe infusion pump and PharmGuard® infusion management software is a smart, intuitive system that thinks along with you about infusion accuracy and safety.

Safe. Simple. Smart



Neonatal and Pediatric Expertise

Medfusion® infusion pumps are known for flow rate accuracy. First developed with a National Institutes of Health grant in 1984, they remain NICU-preferred today.



Robust Reporting Capabilities

The pump and software communicate wirelessly, compiling and analyzing data enhancing your CQI efforts with customizable and actionable reports.



Safety of a Medication Library

PharmGuard® software detects pump programming errors and helps prevent adverse drug events (ADEs) through drug libraries with hard and soft limits.

It is the most **accurate, easiest-to-use, feature-rich** Medfusion® infusion system yet.

Medfusion® infusion pump

- Portable for transport care
- Automatically detects various syringe types and sizes from 1mL to 60mL
- Visible syringe to monitor the progress of the infusion
- Allows user-friendly single-handed loading of the syringe
- Large display with TALLman lettering and visible screen in all lighting
- Communications module in each and every base provides wireless access

PharmGuard® medication safety software

Protect your patients from adverse drug events by combining smart pump technology with the safety of a medication library.

PharmGuard® medication safety software is a Dose Error Reduction System (DERS) which helps reduce pump programming errors and ADEs by encouraging the use of standard drug concentrations via customizable drug libraries resident in Medfusion® pumps.





In the NICU, PICU, ICU, OR and the PACU, you can trust the safety and accuracy of the Medfusion® 4000 syringe infusion pump and PharmGuard® infusion management software system for all your patients, from the youngest to the oldest.

The Medfusion® 4000 syringe pump is intended for small volume infusions, delivering the precise medication dosage to even your tiniest patients. Flow rates deliver with +/- 2% accuracy as low as 0.01 mL/hr.



...at the patient's bedside

The Medfusion® 4000 infusion pump is always in "medication safety" status, helping to promote your policies and procedures for medication administration and safety. This auto-default to the PharmGuard® drug library enables the use of established drug protocols set by your pharmacists, who can assign hard and soft limits for each drug and profile.

Start an infusion without delay knowing the power of a comprehensive drug library is already activated and supporting you.

Trusted Medication Delivery for Every Patient



Flexible Configurations for the Entire Hospital

The Medfusion® 4000 syringe infusion pump provides the ability to configure care area profiles and drug protocols which, along with the drug libraries, are maintained with the PharmGuard® infusion management software. Updates are transmitted wirelessly to the entire Medfusion® 4000 pump fleet simultaneously.

You no longer need to remove pumps from service and send them to clinical engineering.

The same holds true for firmware updates; and, if ever needed, your biomedical team can track any pump's location and status for scheduled maintenance or to troubleshoot connectivity issues.

Closing the CQI Loop

Continuous quality improvement is made easier with device-specific reports that are available to the entire infusion management team.

These reports give you the ability to analyze trends, compare performance data against compliance goals, and measure infusion safety to make evidence-based practice decisions.

- Compliance by profile, time of day, trends
- Safety events by drug program, even trigger
- Drug program utilization infusion frequency by drug program
- Device events infusion detail, event history
- Alarm events most frequent, invalid parameter combinations
- Clinical engineering battery status, preventative maintenance, device detail





Medfusion® 4000 Wireless Syringe Infusion Pump
and PharmGuard® Infusion Management Software...

The **Right** Decision.

Specifications

Infusion Pump

| | |
|--|--|
| Accuracy | +/- 2% |
| Size (Height x Width x Depth) | 6.2" (16 cm) x 10.5" (27 cm) x 5.7" (14.5 cm) |
| Weight | 3.8 lb (1.7 kg) |
| Moisture Protection or Fluid Resistant | IPX3 fluid ingress protection |
| Operating Temperature | 41° - 104° F (5° - 40° C) |
| Relative Humidity | 20 - 95% non-condensing |
| Ambient Pressure | 10.2 psia - 15.4 psia (70 kPa - 106 kPa) |
| MRI Compatibility | Rated MR conditional in accordance with ASTM International |
| Electromagnetic Compatibility | Tested to EMI/EMC testing per IEC 60601-2-24 |
| Durability (drop height sustainable) | The pump maintains its mechanical integrity and continues to operate within specification after being tested per IEC 60601-1 clause 21.6 |
| Delivery Rate Range (mL/hr) | 0.01 - 1130 mL/hr |
| Minimum Infusion Increment (mL/hr) | 0.01 mL/hr |
| Priming Delivery Rate | 300 mL/hr or the default maximum bolus rate for the syringe size being used, whichever is less |
| Screen Visibility | Excellent visibility. 240 x 64 pixel liquid crystal display. An always-on LED-driven backlight enhances viewing in low light areas |
| Delivery Modes | Delivery modes are user customizable. Available modes are: mL/hr, dose/min, dose/hr, dose/day, dose/kg/min, dose/kg/hr, dose/kg/day, dose/m2/min, dose/m2/hr, dose/m2/day, mL/kg/min, mL/kg/hr, dose/kg/time, dose/m2/time, mL/kg/time, volume/time, dose/time, intermittent volume/time |
| Indications / Delivery Routes | Arterial, epidural, enteral, intravenous, intrathecal, and subcutaneous |
| Dosing Units | Grams, milligrams, micrograms, nanograms, units, milliunits, milliequivalents, and millimoles |
| Power | Class II - Type CF with functional earth conductor, 110 - 240 VAC, 50/60Hz, 42 VA or rechargeable lithium ion battery |
| Battery Operating Time | 10 hours at 5 mL/hr with 60 mL syringe and a fully charged battery |
| Recovery Time to Full Battery Charge | 10 hours |
| Compatible Syringes | 1 mL- 60 mL syringes by Becton Dickinson WWD, Covidien Monoject™, Terumo®, B.Braun Perfusor®, B.Braun Omnifix®, NeoMed®, Baxa NeoThrive®, Vygon® C-Gon, and Philips Children's Medical Ventures |
| Equipment Warranty | One year factory warranty with a warranty extension available |
| Preventative Maintenance (PM) | Annual PM recommended. PM date specified within the PharmGuard® Toolbox 2 software |

Accessories

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|---------------|--|
| Pole Mounting | Optional rotating pole clamp accessory available |
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Medication Safety Software

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|-------------------------------|---|
| Dose Error Reduction System | Custom drug libraries are built using PharmGuard® Toolbox 2 V3 software |
| Dose Delivery Modes | 18 delivery modes available, including weight-based modes. Bolus dose option available with limits for dose and time |
| Minimum Software Requirements | Microsoft® Windows® XP Pro 32-bit with Service Pack 3 or XP Pro 64-bit with Service Pack 2, Microsoft® Vista® 32-bit or 64 bit Business Edition with Service Pack 2, Microsoft® Windows® 7 32-bit or 64-bit Professional, Windows® Server 2003 R2 32-bit or 64-bit with Service Pack 2, Windows® Server 2008 32-bit or 64-bit or Windows® Server 2008 R2 64 bit |
| Minimum Hardware Requirements | 1 GHz 32-bit (x86) processor or 64-bit (x64) processor, 1 GB of system memory (2GB recommended), 15 GB of available space |

Order Information

| Description | Item Number |
|--|-----------------|
| Infusion Pump | |
| Medfusion® 4000 syringe infusion pump | 4000-0101 |
| Software | |
| License for PharmGuard® Toolbox 2 V3 software | 22-0020-0300-01 |
| License for PharmGuard® server Standard Edition, V1.1 | 22-0015-0101-01 |
| License for PharmGuard® server Enterprise Edition, V1.1 | 22-0016-0101-01 |
| Pole Clamps | |
| Rotating pole clamp (45 and 90 degree) | 22-1050-51 |
| Rotating pole clamp (45 and 90 degree) that tilts the pump forward for screen visibility of pumps mounted near the top of the pole | 22-1051-51 |
| Non-rotating pole clamp | 3000PC |



To learn more, visit www.Medfusion4000.com
contact your Smiths Medical representative, or call 1-800-258-5361

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