

Software supporting infusion safety and precision

MedimaNet

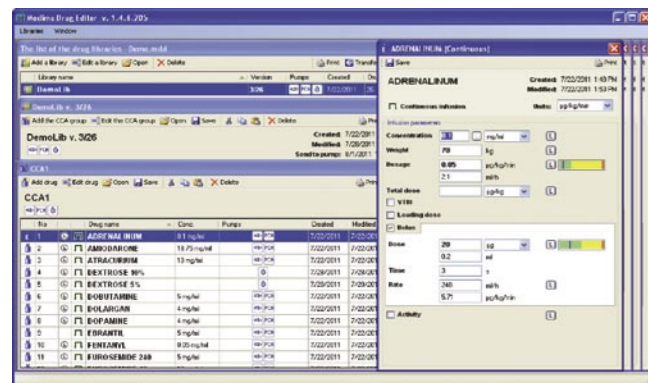
Central infusion monitoring system



Allows for infusion monitoring on any PC connected to LAN. Enables automatic transfer of drug libraries to pumps as well as for generating reports.

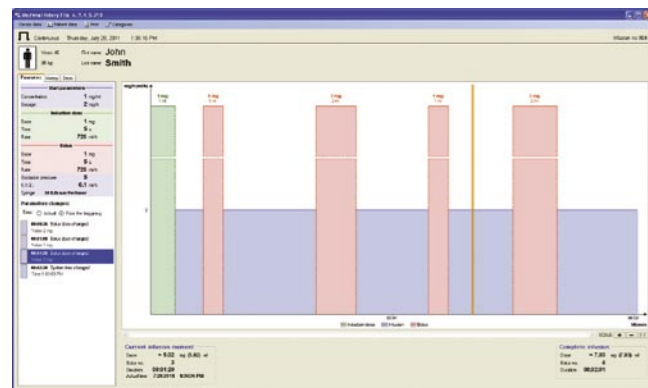
Medima User Toolbox

Medima Drug Editor



Convenient and safe way of a drug library creation in Windows environment. Enables fast transfer of drug libraries directly to pumps or through the MedimaNet.

Medima History File



Software to archive and review infusions. Graphic presentation of infusion progress, detailed event log, history of infusion parameters modifications.

Medima Service Toolbox

Contains **Medima Loader** and **Medima Configurator**. Enables pumps upgrade as well as setting and uploading default configurations to pumps.

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Medima Sp. z o.o.
Al. Jerozolimskie 200, 02-486 Warsaw
tel. +48 (22) 313 22 66; fax +48 (22) 313 22 69
e-mail: medima@medima.com.pl

www.medima.com.pl

Safe and precise infusion

Technical specification

Flow rate	0.1 - 2000 ml/h for 50 ml syringe 0.1 - 1400 ml/h for 30 ml syringe 0.1 - 1000 ml/h for 20 ml syringe 0.1 - 600 ml/h for 10 ml syringe 0.1 - 400 ml/h for 5 ml syringe 0.1 ml/h increments up to 999.9 ml/h and above in 1 ml/h
Infusion volume	0.1 – 10 000 ml ; increments 0.1 ml up to 999.9 ml and above in 1 ml
Infusion time	1 min - 200 h, 1 minute increments
Bolus	Minimal: 2 x infusion flow rate, maximal: 2000 ml/h Increments: 0.1 ml/h up to 999.9 ml/h and above in 1 ml/h Programmable volume (dose), time or rate
Induction dose	Minimal: 2 x infusion flow rate, maximal: 2000 ml/h, increments: 0.1 ml/h up to 999.9 ml/h and above in 1 ml/h
Keep Vein Open (KVO)	0 - 5.0 ml/h, 0.1 ml/h increments
Flow rate accuracy	±2% in accordance with EN 60601-2-24*
Syringe types	Range from 5 to 50/60 ml of various brands**, automatic syringe volume recognition
Occlusion pressure	11 levels, 50 mmHg - 1000 mmHg, automatic reduction of occlusion bolus
Operation modes	Model S ml/min, ml/h, ml/24h, volume over time - automatic flow rate calculation Model S1, S2, S-PCA ml/min, ml/h, ml/24h, volume over time - automatic flow rate calculation ml, ng, µg, mg, g, µU, mU, U, kU, nmol, µmol, mmol, mol / kg / min, h, 24h, ml+h intermittent infusion profile - up to 24 cycles, ramp up / ramp down (TPN) Model S-PCA PCA mode Model S2, S-PCA hard and soft limits for all infusion parameters
Additional options	Automatic syringe fixation Automatic and manual bolus Drug library with up to 120 programmable drug dosing protocols - Models: S1, S2 and S-PCA Programmed parameters protected by password Drug library and configuration transfer from pump to pump Alarm volume adjustment and choice of sound type Night mode: tuning the display's brightness and alarm loudness, programmable time of start/end Simple connection/ disconnection to docking station (also during infusion) Advanced pump testing system Possibility to connect to hospital information system directly or through docking station Open system: software update through RS232C
Alarms	No mains, battery low, battery empty, mm:ss min. to infusion end, infusion end, mm:ss min. to syringe empty, syringe empty, syringe, high pressure, occlusion, line disconnected, pause, pause end, timer cycle end, improper fixing, drug not active, error xx, infusion broken, autoinfusion block the flow S-PCA : cover open, lock open, bolus button, bolus blocked dose limit
Event log capacity	Min 2000 records of operational activities with date and time of the event
Power supply	100 (-15%) - 230 (+10%) V AC, 50/60 Hz, max. 20 VA, 12 - 16 V DC, max. 1 A
Battery	Ni-MH -2000 mAh, work time: 20 h / 5 ml/h Recharging time up to 100%: max. 5 h; life time: about 400 recharge cycles, 2 years
Communication ports	RS232C and IR connection to the docking station
Alarm connection	24V, 1 A, NO / NC
Dimensions	355 x 115 x 166 mm (W x H x D) - excluding pole clamp 2.45 kg - without power supply / connecting cords
Operating conditions	Temperature +5 °C - +40°C, humidity max. 90%
Classification	Class I, type CF, defibrillation resistance, IP22
Safety standards compliance	EN 60601-1, EN 60601-1-2, EN 60601-2-24, EN-1789, MDD 93/42/EEC - II b
Docking stations	DS4, DS4E, DS6, DS6E, DS8, DS8E, DSA (for ambulances)
Additional equipment and accessories	ST01 Medima Infusion Stand, Standard Infusion Stand, TP2 Duo Holder DC power supply cord, nurse call cord Medima User Toolbox, Medima Service Toolbox, MedimaNet software set

* Technical accuracy is 0.5%. Flow rate accuracy depends on the syringe quality.

** List of syringes available on request. There is a possibility to calibrate other syringes according to customer needs.

In pursuit of quality improvement and due to changing standards the information in this leaflet may be subject to change. Contact Medima Sp. z o. o. to verify the information.

Family of syringe infusion pumps



Safe infusion systems

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Large, Easy-to-Read Display

Shows infusion rate, syringe size, a drug name, power supply status, infusion pressure and other information. Data are readable from a considerable distance.

Wide Range of Syringes

Syringes of all world known brands from 5ml to 50/60ml.

Automatic Syringe Loading and Recognition

Facilitates and speeds up pump operation, reduces errors of initial infusion (very important in neonatology).

Simple Programming and Easy Operation

Quick data input from the keyboard. Parameters can be changed without infusion interruption.

Infusion Programming in Different Units:

ml, ng, µg, mg, µU, mU, mol, mmol, mol/kg/min, hour, 24h, ml+h and others

Data Lock

Programmed parameters can be protected by password.

Advanced Infusion Modes

The following infusion modes are available: continuous, intermittent, profile (24 cycles), PCA.

Automatic and Manual Bolus

Possibility of programming dose, flow rate or time.

Automatic Reduction of Residual Bolus after Occlusion Release

When occlusion is detected the pump withdraws the syringe plunger decreasing the pressure in the extension line and reducing the excess of drug to a minimum.

11 Levels of Occlusion Pressure

The possibility to change occlusion pressure level during infusion. Pressure indication is displayed.

Sophisticated System of Alarms

Volume adjustment and choice of sound type. Built-in night mode with the possibility of tuning alarm loudness and display's brightness.

Event Log

Full infusion history (all parameters, operator's activities and alarms, including their date and time). Saved information can be reviewed in the pump and on a PC.

Drug Library

The library standardises drug dosing procedures, considerably reducing the risk of errors. The pump memory can store up to 120 drug dosing protocols with all indispensable infusion parameters, units as well as soft and hard limits, in order to reduce the risk of overdose. Soft limits warn about exceeding the recommended values. Hard limits prevent from entering values from outside the pre-defined range. Use of a drug library also reduces time of preparatory procedures for the infusion, and the medical personnel is not required to calculate doses into ml/h. However, ml/h infusions are simple and easy with drug libraries too.

Available models:

Medima S

- The basic and very simple model for continuous infusion in ml/h, ml/min and ml/24h.
- Calculation of infusion rate on volume and time.
- The option to save up to 120 drug names.

Medima S1

- Apart from the capabilities of the S Model allows for infusion in all popular units.
- Advanced infusion modes such as intermittent infusion and infusion with profile (up to 24 cycles).
- The option to save up to 120 drug dosing protocols but without limits on parameters.

Medima S2

- Offers all capabilities of the S1 Model.
- Additionally allows to enter soft and hard limits for all infusion parameters saved in a drug library.

Medima S-PCA

- Offers all capabilities of the S2 Model and additionally the PCA mode.
- Designed for management of acute pain.
- Equipped with a syringe cover with lock and patient's bolus button for delivery of the programmed drug volume.



S-PCA Pump
(Patient Controlled Analgesia)
Designed to efficient fight against acute pain.
Available with or without syringe cover.



Docking Stations

Designed to save valuable space around the patient's bed and ensure fast and easy pumps mounting with automatic connection to the mains, without using interconnecting cables. Available models accommodate 4, 6 or 8 pumps (DS4, DS6, DS8). Models with Ethernet module (DS4E, DS6E, DS8E) allow for communication with the MedimaNet central infusion monitoring system.



Infusion Stands

Ensure reliable and safe fixing of docking stations and pumps.



TP2 Duo Holder

Allows for fast connection and easy transport of two pumps together.