

Micro Dosage System for Fluids

Monitoring Unit for Micro Pump

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Technology

A micro pump used for drug dosage in medical applications can be combined with the present invention for continuous long term monitoring of several pump functions. This micro pump monitoring unit upgrades the micro pump with smart functions like self-test, micro-pump test, catheter monitoring and fluid flow measuring. It consists of an inlet valve, which is connectable with a micro pump, and an outlet valve which outputs the monitored fluid flow. A fluid reservoir is arranged between the inlet valve and the outlet valve and has a reservoir diaphragm area. A strain measuring strip is placed on the reservoir diaphragm for detecting the volume and/or the pressure in the fluid reservoir. The unit is suitable in combination with various micro pumps such as those used for the development of an implantable, artificial pancreas.

Innovation

- Reliable, pressure-monitoring of the dosage
- Able to run a self test
- Micro pump test function
- Detects plugged catheter
- Suitable in combination with various micro pumps
- Very low energy consumption

Application

- Drug dosage / drug delivery
- Pain therapy
- Cancer therapy
- Hormone therapy
- Artificial pancreas, insulin dosage



Market Potential

Total Market 2004-2009 (Source: NEXUS III):

- Drug delivery systems: approx. 150 \$ US millions
- Micro pumps are an emerging market

Branch

Medical engineering, Implants

Patent Status

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