

mpSmart – A dosing system with great possibilities

Medical systems used for ambulatory and home care infusion pumps today are outdated and do not take advantage of current options. Even though in some applications, the accuracy of the dosage can determine the success of a therapy or even life or death. Well-known examples are chemo- and pain-therapies. For reasons of expense or convenience, simple elastomer pumps are still used but the infusions are purely mechanical.

Shocking facts

According to international standards, the tolerance of the flow rate for drugs is high with $\pm 15\%$. In addition, the application under daily life-circumstances is difficult to realize. Elastomer pumps have a concave pressure profile: the flow rate is higher than the set value at the beginning and lower at the end. Therefore medication is under- and overdosed.

Further issues such as system plugging can only be detected by human monitoring. Due to various factors, such as viscosity and temperature, elastomer pumps are very specifically adapted to drugs.

Consequently, a better alternative that is affordable, effective and meets all quality standards is required.

An intelligent alternative

Bartels Mikrotechnik designed a solution: a complex and intelligent system that allows a regulation of flow rates for different media with highest precision – regardless of temperature and viscosity. The mpSmart.



By combining the commercially available Bartels mp6 micropump and the SENSIRION (LD20 / SLSF 3S) liquid flow sensor, a controlled and cost-effective system was created. A suitable Bluetooth device can be used for adjustment and control. mpSmart also features time-saving automatic data transfer with immediate documentation. Because of the significantly better adjustment and regulation possibilities the system can be used easily and properly by different users.

Due to the big advantages and cost-efficient concept, mpSmart can revolutionize the market as a smart pharma-packaging with high quality standard.

Why should today's medicine not use the possibilities of today? The mpSmart shows: Affordable and better is possible now.

This video on YouTube is the best way to understand how the mpSmart works:

<https://www.youtube.com/watch?v=OgEwXSe4S7Y>



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