



MEASUREMENT TASK

The sterile operation conditions which exist within the pharmaceutical manufacturing processes make the installation of traditional in-line flowmeter technologies unacceptable. Firstly, exposing the internal contents of the pipeline to the environment increases the risk of contamination and necessitates the stopping of production. Secondly, there is a longer term consideration of microbiological growth within the body of the inserted flowmeter.

Some liquids used in the pharmaceutical sector such as demineralised water are purified and therefore non-conductive. This makes the use of an electromagnetic flowmeter unsuitable. It is for these reasons that companies such as TEVA Pharmaceutical are turning to clamp-on flowmeters as the best solution for their flowmetering requirements.

SOLUTION

TEVA selected Katronic to supply them with a KATflow 100 when they needed to take measurements of pure water in small stainless steel pipes. The ultrasonic device gave excellent results and compared extremely favourably to the expected results based on in-line flowmeters.

Other applications for the Katronic products could be the use of a KATflow 200 for pump performance testing, system verification and problem identification. Alternatively, the KATflow 150 would be installed on a permanent basis to provide continuous, reliable flow information from any critical location in the purified water system.

As well as assuring sterility during flow measurements, another important role for the clamp-on flowmeters is helping to control costs. The KATflow 230 and KATflow 150 can both be fitted with clamp-on temperature sensors in order to measure the energy and total heat quantity in the system. This information can then be used to calculate energy efficiency and COP.

ADVANTAGES

- Easy, quick and cost-effective installation to existing pipelines
- No sensor contact with the fluid ensuring complete sterility
- For small bore pipes and on flexible hoses
- Easy integration into existing control systems
- Maintenance free, very low MTBR (mean time between repairs)
- Meters supplied with PT100 sensors for heat quantity monitoring

SPECIFICATIONS

Installation type	Portable and fixed
Media	Demineralised water, WFI, medical products
Pipe materials	All common metals and plastics
Pipe diameters	10 ... 3,000 mm
Temperature	Up to 250 °C
Other requirements	ATEX-options available

APPLICATION



Installed K4N transducers as used by TEVA Pharmaceutical

INSTRUMENT SOLUTION



The KATflow 100 provides a cost-effective measurement solution