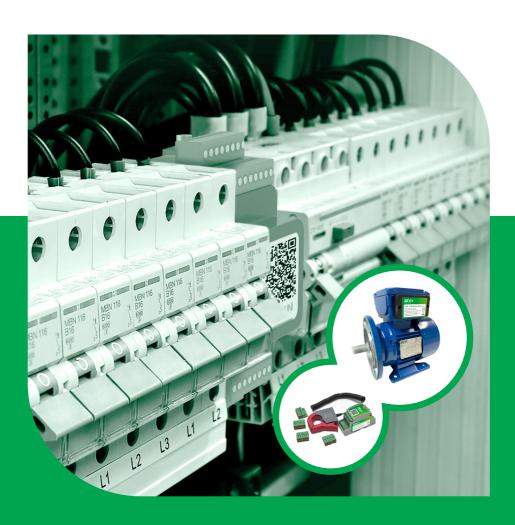


### Let's talk about optimization



# Save energy Reduce carbon footprint Optimize maintenance

Save energy, reduce carbon footprint and optimize maintenance with BEVI + Smart Sensor. This is the most cost effective path to the digitalization of rotating machines maintenance.

Plug in easily in 15 minutes and enjoy the benefits of a 24/7 remote monitoring solution!

Monitoring industrial pump operations is vital for increasing efficiency, decreasing downtime, and enabling preventive maintenance.

Industry leaders are constantly looking for new ways to increase process control and energy-saving potentials.



IoT and Electric Signature Analysis (ESA) provide an option to improve both these aspects radically. ESA uses pump motor current measurements to calculate various parameters, such as flow rates and motor usage. This allows for a new way to gain information on the state of pumping processes across operations.

#### BEVI + VT04-M

- DIN-rail mounted
- Communicate directly to the cloud + Motor current + Vibrations + Temperature

#### Area of use

Retrofit or Submersible pumps







# Actionable data to optimize equipment and maintenance performance

- Save energy and human resources by optimal usage of your machinery
- Organize the maintenance measures with enriched knowledge of the condition of your equipment
- Reduce the need of maintenance by understanding your machinery better

#### BEVI + VT04-H

- Terminal box mounted
- Communicate directly to the cloud + Motor current + Vibrations + Temperature

#### Area of use

 Integrated monitoring solution for any rotating equipment



#### The combination of VT04-M + VT04-H

Gives an excellent coverage for any monitoring requirements



#### ESA technology allows for non-intrusive pump system monitoring

Monitoring of electrical motordriven pumps with conventional methods is costly. A common approach is to measure the flow rate at the site of operations directly. But with no in-built flow measurement apparatuses, this approach requires the installation of a separate device, such as a portable ultrasonic flow meter. This is inefficient and does not allow for continuous surveillance, as it disrupts the pumping operations.

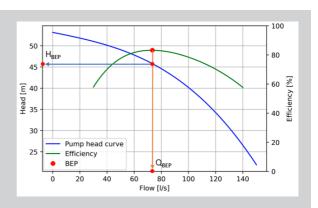
Flow measurements of pump output are time-consuming and enable evaluating only a limited number of pumps simultaneously due to the complicated setup. For this reason, it is not possible to get a comprehensive view of the entire pump fleet.

Initiating the measurements and data gathering quickly becomes economically unfeasible.

"Fortunately, combining ESA with state-of-the-art IoT technology provides an alternative way to monitor pumping operations. In fact, there exists a direct, albeit complex relationship between the motor input current and the flow generated by the pump. Thus, introducing clamp-on sensors to the pump motor power supply allows for non-intrusive and inexpensive measurements. The ESA model then analyzes the gathered data and computes the desired statistics from the pumping operations."

Antti Lehikoinen, Principal Analyst at Viimatech

**SmartView** compiles data from all sensors into one intuitive cloud-based interface. The software creates a digital twin of each pump monitored, giving a comprehensive and detailed view of all pump operations.



The pump-specific data includes pump flow rates and energy consumption.





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Contact details for all countries are continually updated on our website.

Please visit www.bevi.com to access the information direct.

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