

## MAAG Brain

Innovative pump performance monitoring software for demanding applications



# MAAG Brain

## Control and monitoring of the pump's functional parameters at ease

### A step forward in Industry 4.0

Maximizing uptime and efficiency is key to every process, pumps from MAAG Group are a key component for processing a wide variety of fluids. To satisfy the most demanding applications of our customers MAAG developed a performance monitoring system for industrial pumps. This new stand-alone monitoring system "MAAG Brain" is a step forward in the world of Industry 4.0 and Internet of Things (IoT). The performance of the pumps can be analyzed and controlled with a dedicated and customizable algorithm, even remotely without the need for physical on-site presence. With MAAG Brain, customers can control the functional parameters, such as:

- **pump pressure**
- **temperature**
- **flow rate**
- **vibration**

Controlling and monitoring these parameters allows preventative maintenance to avoid un-scheduled downtime, minimizing production loss. The system supports the entire MAAG Industrial portfolio, both new generation pumps and the existing series.

### Key benefits

#### Modular & customizable system

The MAAG Brain is a modular and customizable system that allows monitoring with the help of pressure, flow and temperature sensors at the suction/discharge, the rotation of the motor shaft and the vibrations at various points of the pumping system. Additional sensors can be added according to the customer's needs, for example an additional temperature sensor on the pump body or directly in the tank of the fluid to be pumped, for improved fluid temperature monitoring.

#### Monitoring in real time

Once the operating parameters are established, MAAG Brain will monitor them in real time, all of which can be conveniently viewed remotely through a user-friendly software, easy-to-read graphical interface.

#### Efficiency boost

Like all mechanical equipment, industrial gear pumps are characterized by a specific volumetric efficiency. Maintaining the consistency of such is a core performance factor of all MAAG pumps. The MAAG Brain can be used

to optimize the volumetric efficiency of pumps automatically, taking full advantage of the mechanical qualities of the MAAG pump.

#### Fast evaluation and reaction

The MAAG Brain allows in real time to assess the inlet and discharge flow rate, continuously evaluate possible malfunctions or inefficiencies of the process and adjust as required. The pressure monitoring, both at suction and discharge sides, allows to keep this vital parameter of the pump under control and to intervene in case of overpressure, avoiding damage to the pump and the systems downstream.

#### Optimal pump operating condition

Wear can lead to a reduction in volumetric efficiency or even malfunction. Vibration monitoring can detect such and is an essential parameter to conduct predictive analysis of critical pump components. The ability to monitor all pump operating conditions, on a regular basis, remotely and with an effective graphical interface avoids costly downtime due to unexpected breakdowns.

At MAAG, we persistently strive to keep up with changing customer needs and demands with our ever-evolving product portfolio. Our team of experts is available to provide prompt support to our customers with optimized solutions. Please visit our website [www.maag.com](http://www.maag.com) or contact us for further information at [info@maag.com](mailto:info@maag.com).

