

POLYPIPE WATER FLOW MONITORING

Remote Water Flow Monitoring and Leak Detection

1. The Challenge

Polypipe required a reliable solution to monitor water flow and consumption across its Horncastle manufacturing facility. The objective was to improve operational efficiency, detect abnormal flow conditions and identify water losses before they became costly.

The system also needed to support multiple users with different access levels while operating independently of the company's internal IT infrastructure to minimise cybersecurity risks.



2. The Solution

[Hydrotechnik UK](#) deployed multiple Senquip ORB devices at key locations throughout the site, each connected to magnetic flow meters using Modbus communications.

The system continuously monitors water flow and consumption, securely transmitting data to the cloud over the cellular network. Operators receive real-time alerts whenever significant changes in flow are detected, while up to two years of historical data provides valuable insight into long-term water usage trends.

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Because the solution operates independently of the site's IT network, installation was straightforward and required no integration with existing corporate infrastructure.

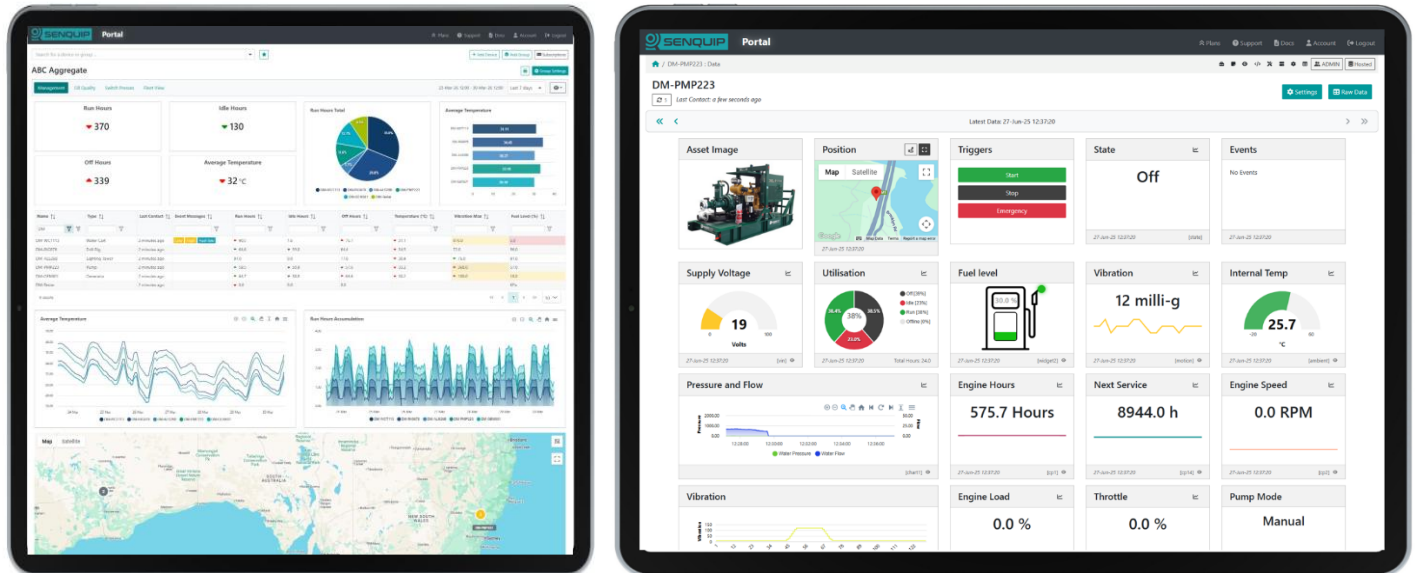


Figure 1 - Typical Monitoring Dashboard and Device Data Page

3. The Outcome

The remote monitoring system has transformed the way Polypipe manages water consumption by delivering:

- Continuous visibility of water flow and consumption across the site.
- Immediate alerts when abnormal flow conditions occur.
- Early detection of pump and process issues before they become costly failures.
- Up to two years of historical operating data for reporting and trend analysis.
- Independent operation without requiring integration into the site's IT infrastructure.

As Engineering Director Dave Vanham explained:

"The monitoring system immediately alerted us to a pump running at just a third of its expected flow rate — an issue that could have easily gone unnoticed. The real-time alerts and straightforward data access allows us to address problems quickly, preventing wasted resources. The system has made monitoring water usage simple and effective, and its ability to detect issues early and provide reports will be invaluable."

By combining rugged hardware, secure cloud connectivity and long-term operational data, the solution gives Polypipe continuous visibility of water consumption across its manufacturing facility, enabling earlier fault detection, reduced water waste and better-informed operational decisions.

The solution also provides a scalable platform for monitoring additional process variables such as pressure, temperature and level, allowing the system to grow alongside future operational requirements.