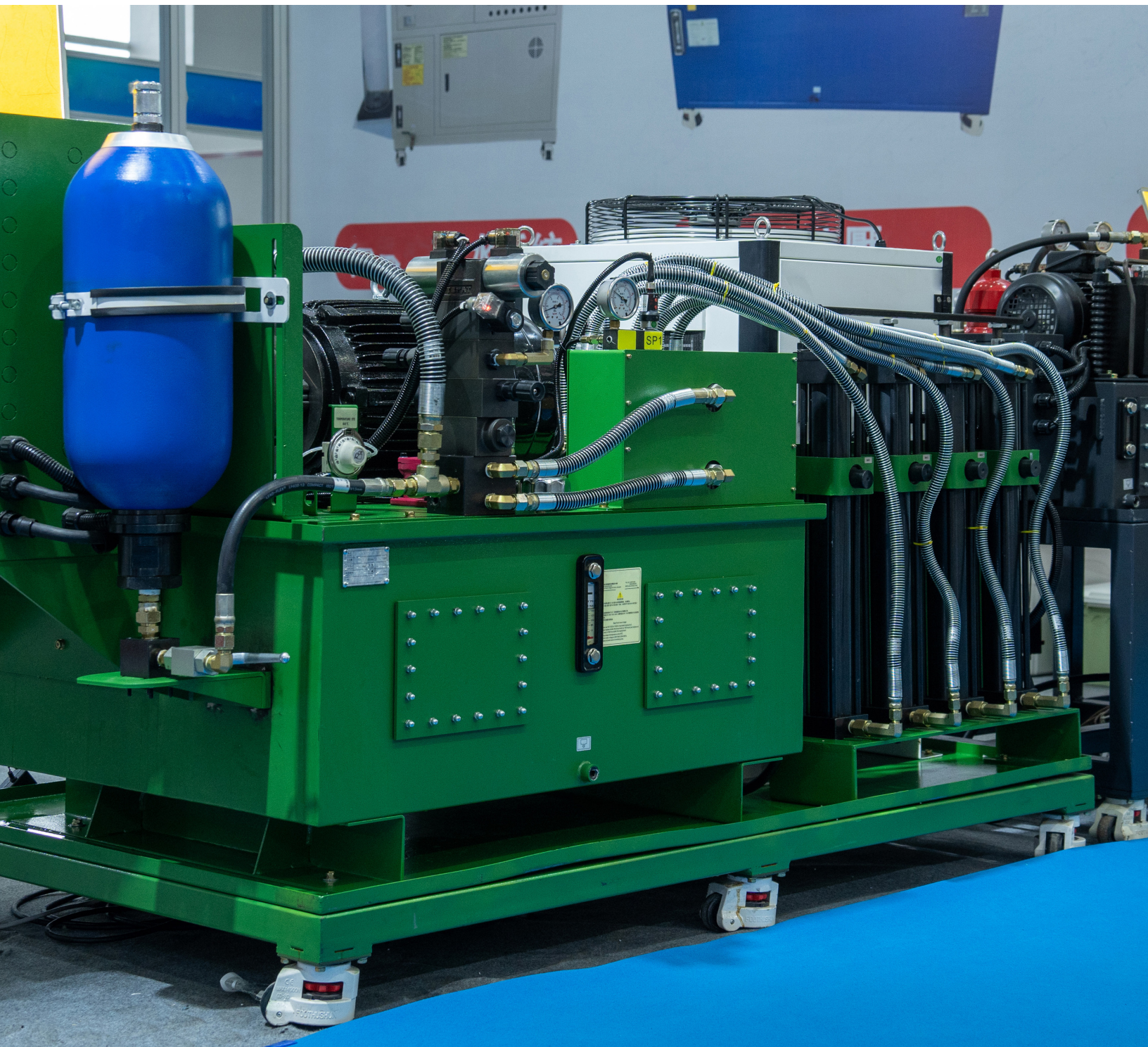


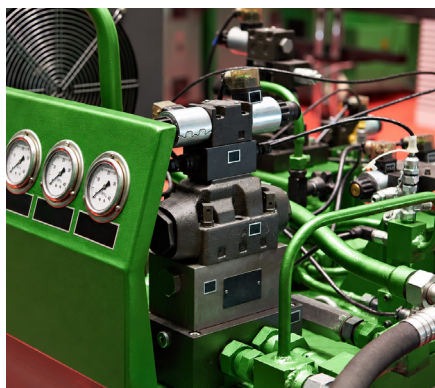
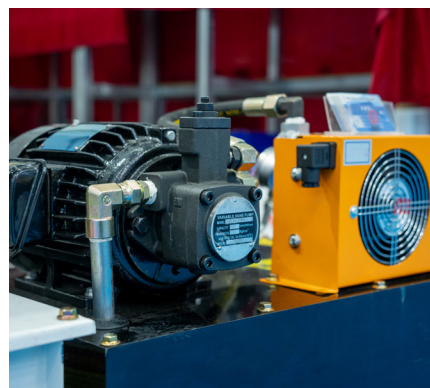


APPLICATION SPOTLIGHT

Hydraulic Power Units – Smarter Flow Monitoring with Variable Area Meters



Hydraulic Power Units – Smarter Flow Monitoring with Variable Area Meters



APPLICATION:

Hydraulic power unit (HPU) builders need to deliver systems that are reliable, easy to commission, and straightforward to maintain. Pressure gauges provide important system information, but pressure alone does not show how much hydraulic fluid is actually moving through a circuit.

Adding flow measurement gives operators and technicians another critical data point for evaluating pump performance, verifying circuit flow, and establishing normal operating conditions during assembly, startup, and service.

PRODUCT SUPPLIED:

- AW-Lake Variable Area Flow Meters
- AW-Lake Variable Area Flow Rate Transmitters

CHALLENGE:

Without flow data, troubleshooting hydraulic performance can be difficult. For example, if a cylinder begins moving more slowly than expected, pressure may still appear normal while actual flow has decreased.

A flow reading allows maintenance personnel to compare circuit performance under similar operating conditions and more quickly narrow the cause to pump delivery, valve settings, or losses elsewhere in the system.

HPU builders also increasingly need to make this information available to machine controls,

allowing operators to monitor performance without relying solely on local instrumentation.

SOLUTION:

AW-Lake Variable Area Flow Meters provide a simple, visual indication of hydraulic flow directly at the system. This allows technicians to verify pump output, confirm flow through individual circuits, and monitor cooling or return lines during factory testing and commissioning.

For systems requiring electronic monitoring, the AW-Lake Variable Area Flow Rate Transmitter combines local visual indication with an electrical output. Depending on the selected configuration, available outputs include 4–20 mA, voltage, and pulse signals for connection to a compatible PLC.

With appropriate PLC programming, flow information can be displayed on an HMI, recorded for trending, or used to trigger alerts when conditions move outside an expected range. A low-flow condition during a commanded machine cycle, for example, can signal operators to investigate before continuing production.

By incorporating flow monitoring during the HPU design stage, builders gain another diagnostic tool for startup, operation, and maintenance. Selecting the appropriate meter for fluid type, flow range, pressure, temperature, and output requirements helps ensure reliable performance throughout the life of the system.