

7 Overlooked features that deserve more attention when choosing a flow meter

When selecting a flow meter, the first things that probably come to your mind are specifications like, flow, pressure, temperature, medium, etc. However, there are more important features to pay attention to than the ones that meet the eye. In this e-Book we set up seven features that deserve attention as well when selecting the right flow meter for you and your factory.

1. Safety First

Safety always comes first. Working with compressed air means thinking about your safety, especially when installing insertion flow meters. Insertion flow meters can shoot out of the pipe when safety measures are not taken. Hence, a safety cable is crucial. Always use the original safety devices as supplied by the manufacturer. Only a certified technician should install the flow meter. Safety measures not only ensure your employees are safe, but also decrease the possibility of damaged equipment and unexpected downtime.

2. Measure flows bi-directional

In compressed air networks, bi-directional flow may occur more often than you would think. This can happen, for instance, in large ring networks, in factories with multiple compressor rooms or when large receivers are used. Measure bi-directional flow to decrease misreadings, spot unforeseen issues, and get exact insights into where your compressed air is flowing to.

3. Data logging

Data logging is crucial for trend monitoring, baseline establishment and analysing past events. Therefore, our flow meters are equipped with built-in data loggers. E.g. the VPFlowScope M can record flow, temperature, pressure, and the totalizer every second for > 1 year! Do not forget when logging data, eventually you will have to analyse all the data. So, "the more the better" does not always hold true. Thus, to enhance efficiency of your air audit, make sure to set the right measurement interval. Based upon years of feedback and experience, we set up some guidelines to help you set the right measurement interval.

Application	Flow	Pressure	Temperature
Standard energy management	5 min	5 min	5 min
Machine testing - quick fluctuations	1 sec	1 sec	1 sec
Audit - one week	10 sec	10 sec	5 min
Audit - one month	30 sec	30 sec	5 min

4. Get ready for Industry 4.0 with Ethernet

We are in the midst of the 4th manufacturing revolution, also known as Industry 4.0 and the Internet of Things, encompassing the digitalization of all processes. Act now to reap the benefits of this revolution. Industrial Ethernet is the platform of choice to handle seamless communication with many sensors and by far the most used backbone for any Industry 4.0 project. To help you prepare for this new revolution, we standardized our products with internal Ethernet interfaces or Ethernet output. Prepare for the future and already select today's equipment with Ethernet.

5. The importance of calibration

Calibration is a necessary evil. Measuring instruments which are not calibrated on a regular basis are unreliable. Sensors and electronics may drift, get polluted or mechanically wear out. Therefore, you will want to keep track of and correct this, using a reliable, traceable reference standard. When a flow meter is part of an incentive program, calibration is often even mandatory by law. Inefficient calibration can be cumbersome and time consuming. Make calibration as easy as possible by choosing the right sensor technology. The replaceable VPSensorCartridge for example, reduces the hassle that usually comes with calibration to a bare minimum.

6. Master your factory with Modbus

Modbus is one of the most widely used network protocols in the industry. It is a way for electronic industrial devices to communicate with each other, allowing information to be transmitted over serial lines between electronic devices. Furthermore, it allows you to get all data from your instruments consistently without scaling issues. As a communication layer, we offer Modbus over RS485 and Modbus over Ethernet (Modbus/TCP). It offers great advantages over traditional 4..20 mA sensors: with a single cable, you can read out multiple parameters, and you do not have to bother about scaling. Therefore, using Modbus will significantly enhance communication efficiency between devices in your factory.

7. Set alarms to prevent and fix issues before they cause downtime

If your system shuts down, your business shuts down. Using alarms on pressure loss, or on specific KPI/EnPI values with your own thresholds can help you prevent this from happening by notifying you when there are irregularities in your plant. This way you can fix issues before they cause actual downtime.

Wrap up

Like humans, every factory is unique. Therefore, it is important to know which features you should pay attention to when choosing a flow meter. Investing time and money in a flow meter that perfectly fits your company will provide long-term benefits and prevent unnecessary costs due to downtime and unforeseen issues.

About VP Instruments

easy insight into energy flows™

VP Instruments offers industrial customers easy insight into energy flows. We believe that industrial energy monitoring should be easy and effortless to enable insight, savings and optimization.

VP Instruments products are recommended by leading energy professionals worldwide and offer the most complete measurement solution for compressed air flow, gas flow and electric energy consumption. Our monitoring software VP Vision can be used for all utilities and enables you to see where, when and how much you can save.

Our products can be found all over the world. We serve all industrial markets; for example automotive, glass manufacturing, metal processing, food and beverage and consumer goods. We can help your industry too. Let us help you to open your eyes and start saving energy.

Proudly serving leading companies worldwide

Through our distributors and dealers, we serve clients worldwide to save on compressed air energy costs. A small selection of end users: Astrum UK (Steel castings), IKEA (Wholesale), GSK (Medicines), Kikkoman Foods, Libbey (Glass), Mars (Food), Samsung (Consumer goods), Nestlé (Food), O&I (Glass), Philips (Consumer goods), Rexam (Glass), Toyota (Automotive).



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