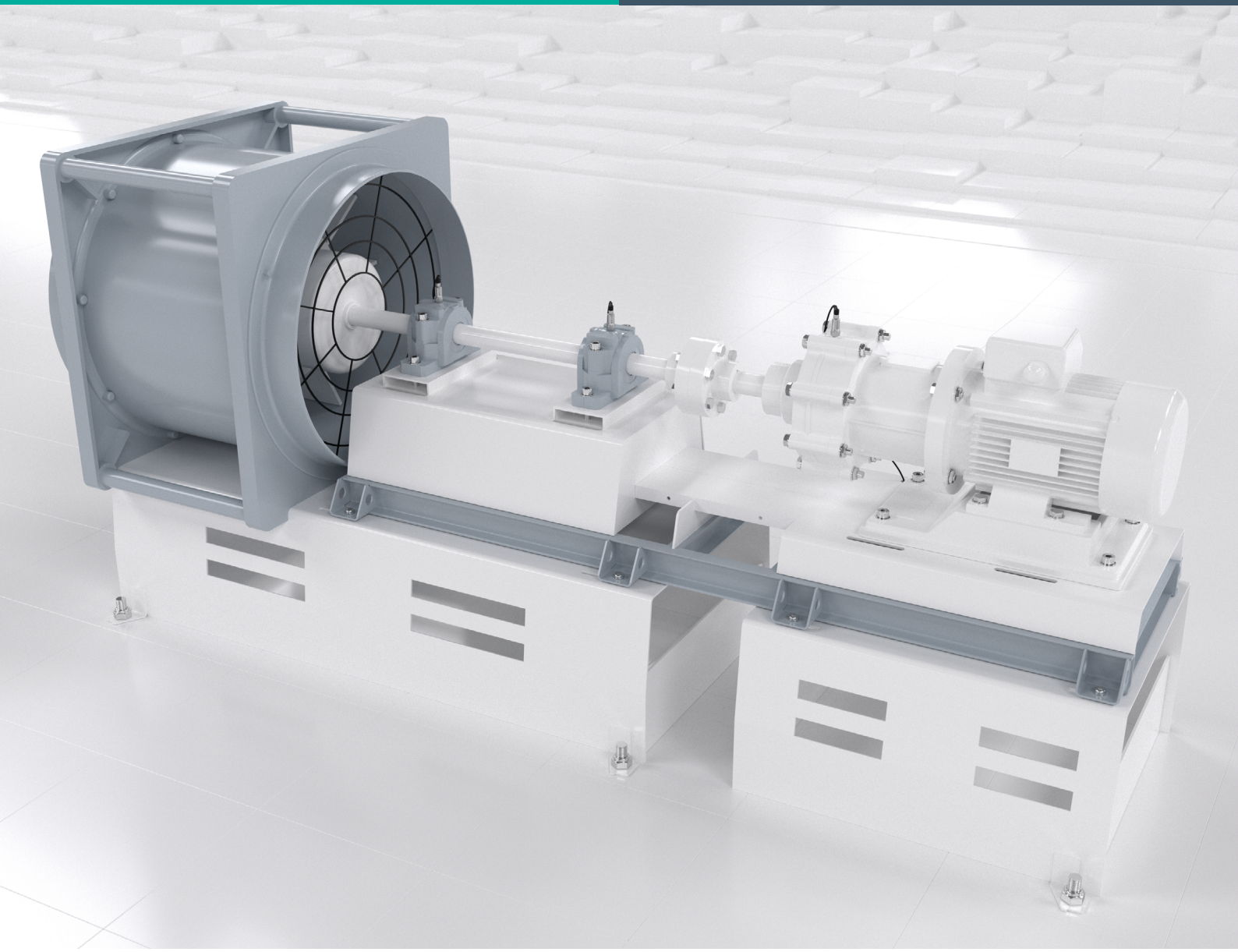
Modernizing Industrial Blowers with Advanced Vibration Sensors

VIM3 IO-Link Sensors Enable Predictive Maintenance of Critical Components

At a Glance

- IP67-rated sensors with IO-Link master for easy setup and reliable streaming data transfer
- Monitor motor, bearings, and fan blades continuously
- IO-Link Interface for process data, parameterization, and diagnostics



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The Application

The application involves an industrial blower that has been retrofitted with vibration sensors to enable machine condition monitoring. The system continuously tracks the vibrations of the blower's components, helping detect early signs of wear or imbalance. The equipment operates indoors, in an environment where dust is present. This setup is particularly relevant in machine and plant engineering as well as process equipment industries.



The Goal

The goal of this application is to monitor the condition of the blower's motor, bearings, and fan blades, enabling early detection of wear, imbalance, or potential failures. To achieve this, the monitoring device has to support IO-Link communication for reliable streaming data transfer to the control system. It also requires IP67 degree of protection to ensure accurate measurements in the indoor environment, which is exposed to airborne dust particles from operations.

The Solution

The Pepperl+Fuchs VIM3 IO-Link sensors provide the ideal solution for this application due to their compact design, IO-Link communication, and ease of installation and monitoring. The customer installed six VIM3 sensors along with an IO-Link master on their existing blower, following Pepperl+Fuchs' recommended placement: one sensor on each side of the motor and one on each of the four bearings. The sensors' single mounting point simplified installation while ensuring precise vibration measurement of critical components.

The Benefits

The customer can now monitor critical parts of the blower and perform maintenance based on actual equipment condition rather than a fixed schedule. This is known as predictive maintenance as opposed to preventive maintenance. The Pepperl+Fuchs solution has proven superior to alternative products through strong sales and customer support, a trusted relationship with the customer, and the use of IO-Link version 1.1 with COM 2 transfer rate, enabling high-frequency vibration data acquisition for efficient and reliable condition monitoring.

Technical Features

- Switching output and current output parameterizable
- Additional temperature value output
- Rugged stainless-steel housing
- Vibration velocity: 0 … 128 mm/s
- Vibration acceleration: 0 … 10 g rms
- Operating temperature: -40 … 85 °C (-40 … 185 °F)



VIM32PL-E1AC8-0RE-IO-1V1401

For more information, visit: **www.pepperl-fuchs.com/vim**