



# VibroLine Condition Monitoring

case study

## Fan monitoring in High temperature applications

Vibration monitoring on machines and systems with special requirements regarding the prevailing ambient conditions, such as temperatures of 200°C, not only place increased demands on the technology used, but also require clever planning and conscientious execution.

To ensure that the plant components to be monitored, such as the fans of a forced-air furnace in this case, are permanently and reliably protected against unexpected failure, IDS Innomic not only offers suitable **measurement technology** if required, but also takes over the complete **planning** right from the start, thus ensuring optimum interaction of all individual components.

The installation of the measurement technology can usually be carried out cost-effectively by the end customer's own employees under the guidance of IDS Innomic. We are then happy to take over **installing** and initial parameterization.

With a **training** of the employees, they are enabled to use and maintain the vibration monitoring optimally in the further course. The basics and correlations of vibration measurement are taught so that the operating behavior of the plant can be monitored in a targeted manner and, if necessary, limit values can be adjusted independently.

A future extension of the vibration monitoring to further plant components or due to an increase in the number of measuring channels, can be carried out easily and **cost-effectively** with the acquired plant knowledge and the already existing conception of IDS Innomic.



VibroLine VLE Series

VibroLine VLX Series

IDS Innomic develops and supplies suitable hardware for condition monitoring, which can be excellently integrated into existing control and monitoring systems via Modbus RTU/TCP/, Http-API, or CANopen.

### Conception by IDS

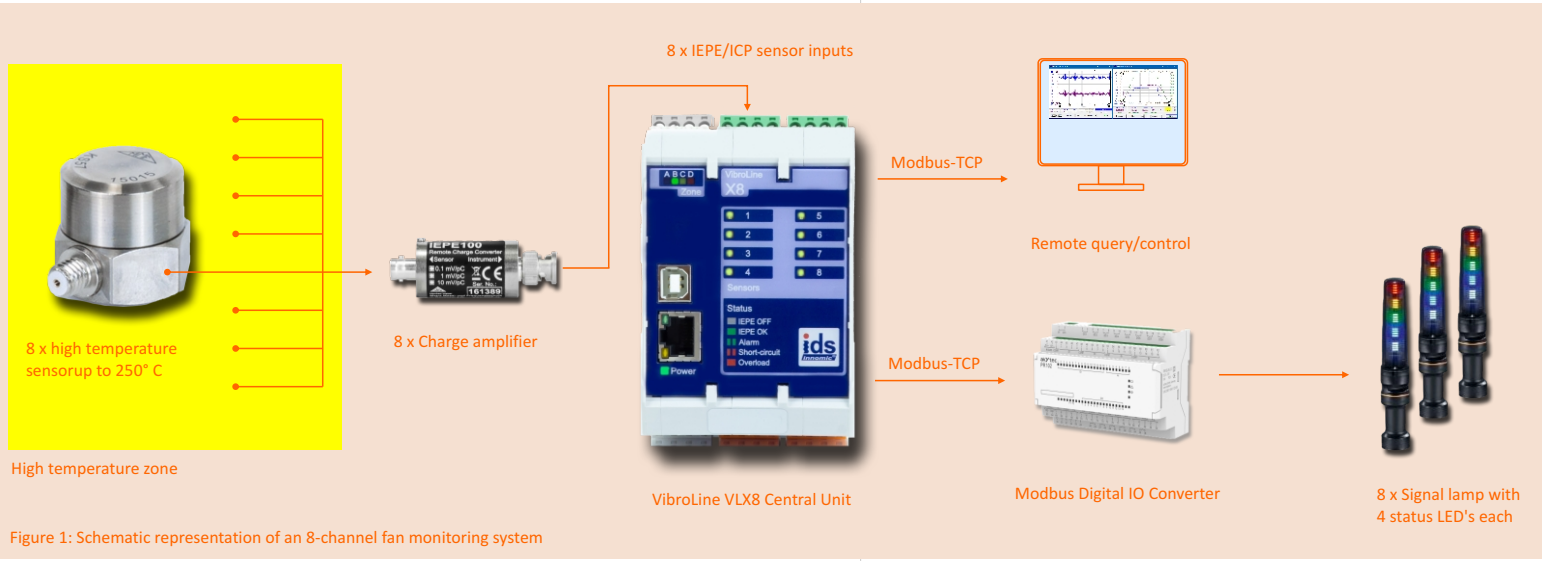
- Matching hardware optimally each other
- Cost-effective installation by ownemployees of the end customer
- Installation and training of Employees by IDS Innomic
- Future extensions based onbased on the existing concept

Condition Monitoring with VibroLine series VLE / VLX  
Optional: DataStream, DataInspect, MultiMode

<https://www.innomic.com/en/products/condition-monitoring-vibroline/vlx-options/>



# Fan monitoring in High temperature applications



## Sensors

Acceleration sensors without further integrated electronics are used. So-called charge sensors, whose signal is evaluated by remote electronics (charge amplifier). This means that there are no electronic components within the high-temperature zone that could be damaged. The application range of the entire monitoring system is thus extended to a temperature range of up to 200° Celsius.

## Sensor cable

The connecting cables between the sensor and the IEPE charge amplifier are also special low-interference cables with a temperature range of up to 200°Celsius.

## Charge amplifier

From a technical point of view, the charge amplifier is again in the "normal" ambient temperature and converts the high-impedance charge signal into a low-impedance IEPE/ICP signal, which can then again be transmitted over longer distances using standard signal cables.

## VibroLine VLX - Control center

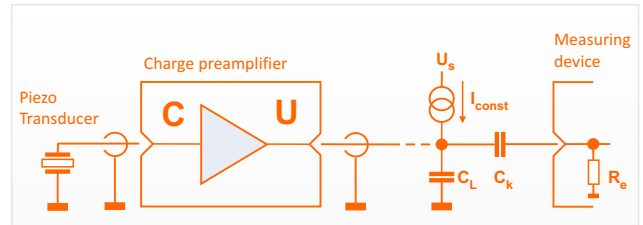
The heart of the vibration monitoring system is the VibroLine VLX device with 8 analog IEPE/ICP sensor inputs. Here the sensor signals are evaluated, characteristic values are formed and compared with limit values.

## Signalization

The alarm in case of exceeding the vibration limit values is realized here on customer request via a traffic light display per measuring point / sensor input. In order to specifically control the 8x4, i.e. 32 signal LEDs, VibroLine VLX supplies the information to the Modbus/Digital converter via the Modbus TCP.

## Remote query - remote access

VibroLine additionally enables the connection via Modbus TCP/RTU, CANOpen or Http-API to a monitoring center or query of the vibration monitoring via PC / tablet / cell phone.



The signal from the ceramic or quartz sensor element reaches the input of the charge preamplifier via a low-interference special cable. This amplifies it and converts it into a low-impedance IEPE output signal.

## Benefit for the customer

- Predictive maintenance in harsh industrial environments reliably master
- Control over process quality, maintenance and downtime
- A competent partner for planning installing and training