

SEE WHAT YOUR MACHINES FEEL.

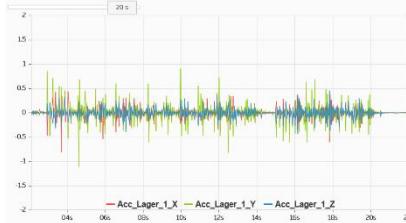
With iSense – the sensor-based machine mounting system.

iSense:

The data foundation for system optimization

isoloc is the specialist in installation/mounting technology and vibration isolation for machines and systems of all kinds – with isoloc vibration technology, machines are perfectly positioned.

With iSense, important operational data can be collected during testing, development, and production to optimize system performance and gain a deeper understanding of machine behavior. Our sensory machine mounting system provides measurement data such as forces and accelerations directly at the interface between the machine or system and the foundation. The data is transferred to a highly accurate data acquisition system, processed in real time, and clearly visualized for you.

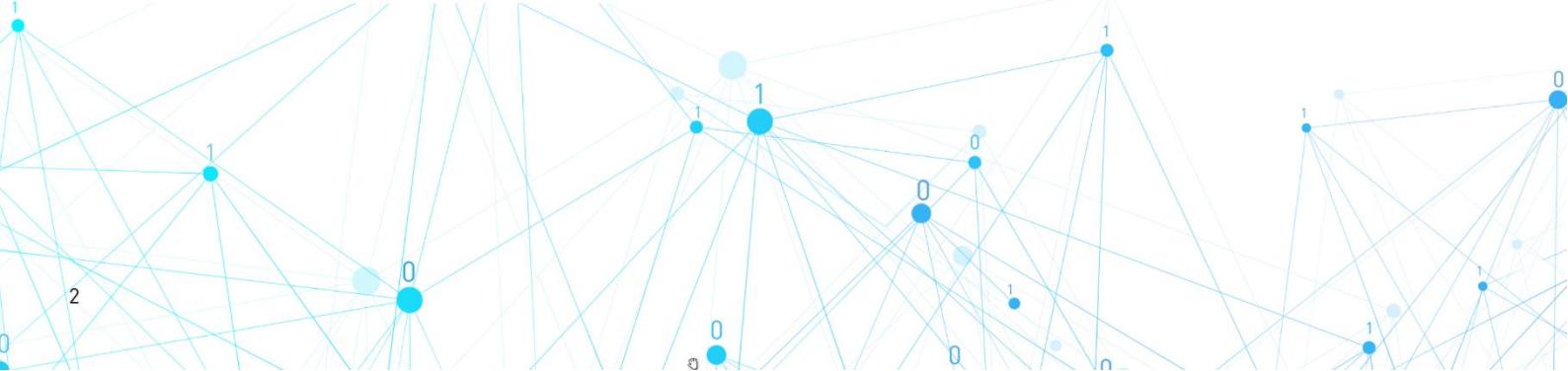


With this data, you gain valuable insights into the behavior and condition of your machines. The sensory element, acting as a bridge between the machine and the foundation, provides a unique opportunity to view the machine as a whole. The patented system operates autonomously but can also be integrated into existing environments.

The system is flexibly configurable and scalable for almost any application, including test benches and special-purpose systems.

Learn more about the wide range of applications and let us advise you.

**Request a consultation now at
+49 (0) 7 11 / 69 760-0**



Your Benefits:

More Data. More Clarity. More Security.

How you benefit from iSense

With iSense, you don't just receive important key metrics. You also get solid support for your quality management through comprehensive recording and logging of quality-critical characteristics and factors during operation. This can also serve as an additional selling point.

Data-based optimization of machines in the test environment

- Insights into function and behavior in the process
- Detailed information on the development and type of wear
- Fault diagnosis

Data collection for future use

- Sizing
- Advanced analytics
- Simulations

Option for the "Machine plus iSense" bundle

- Optimal foundation for condition monitoring and predictive maintenance
- Prevention of warranty claims or recalls through preventive anomaly detection
- Increased customer satisfaction
- Time and cost savings through minimized customer complaints

These are the data iSense provides

The precise sensors of iSense measure vibration-related quantities as well as static loads. Many useful insights can be derived from this data. See our practical examples for more details.

What iSense offers you

The sensory machine mounting system is individually configurable and can be adapted to your needs at any time.

- Easy installation, fully set up and pre-configured
- Standalone system or integrable into your existing environments
- Flexibly scalable
- Versatile analysis options
- Data storage
- Customizable data visualization
- Communication and data transfer via common industrial interfaces
- Email notifications
- Cloud solution and remote access available



The iSense Technology:

Thoughtful technology for reliable measurement data.

iSense adapts to your application: measure forces, vibrations, or both with one flexible sensor element. This versatility makes it the ideal choice for a wide range of industrial monitoring and analysis tasks.

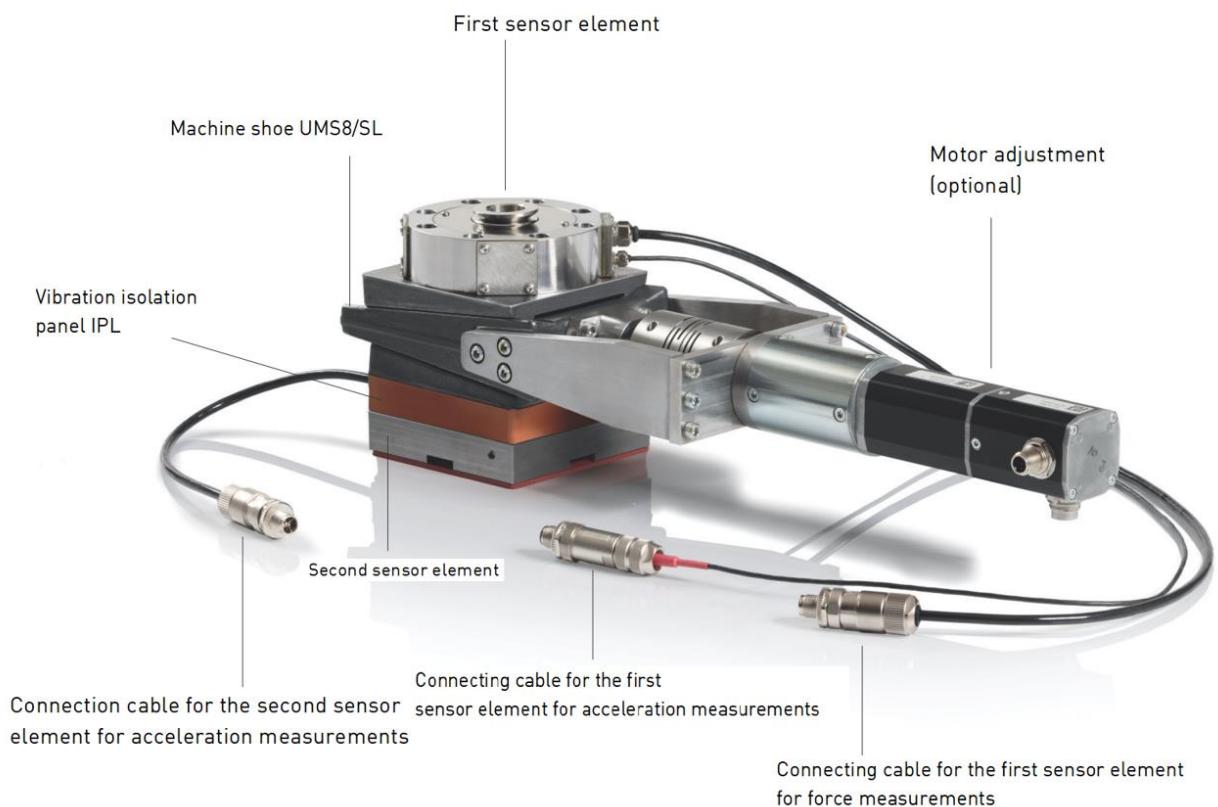
iSense captures vertical forces with outstanding precision and records vibration accelerations in up to three spatial directions. Special strain gauges ensure reliable monitoring of bearing forces.

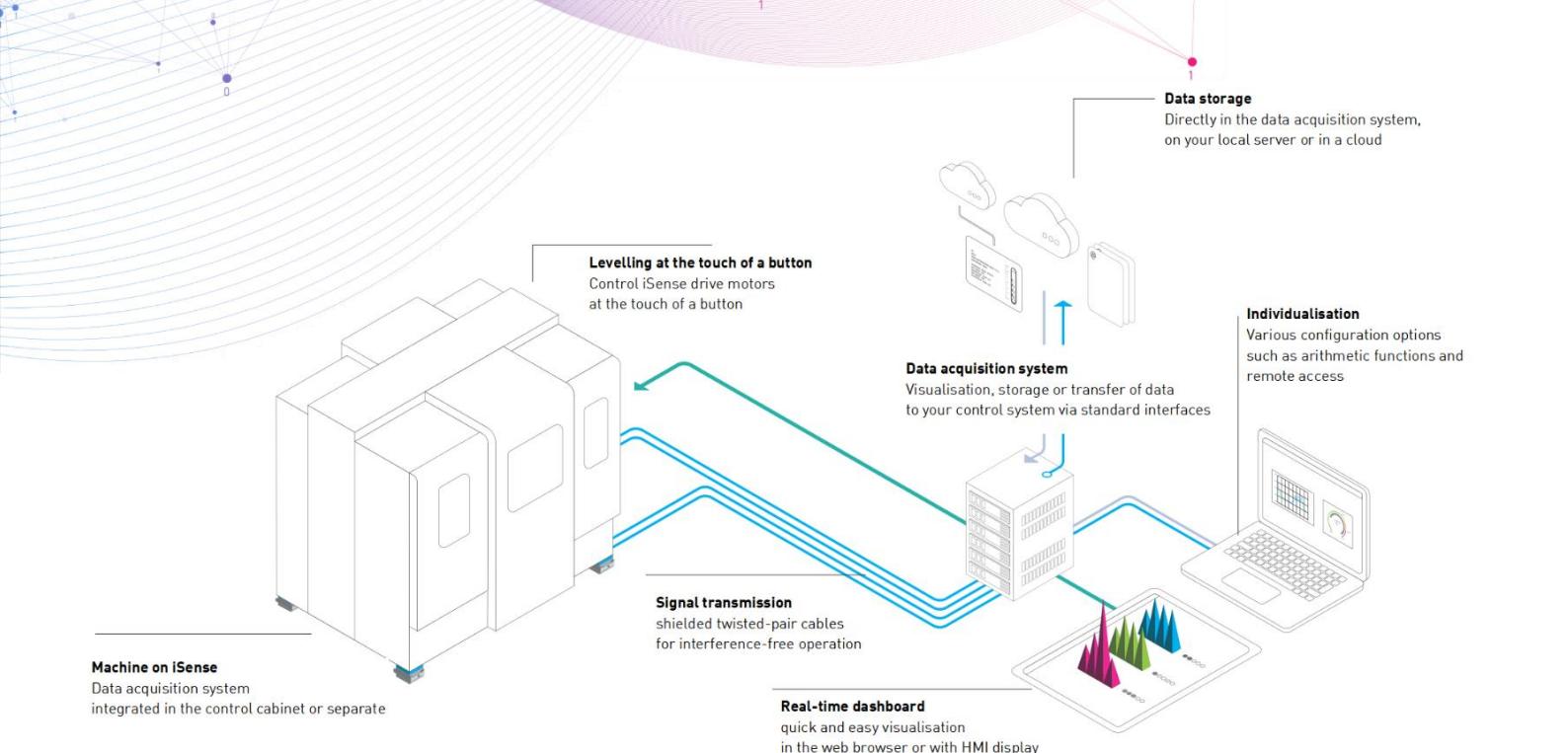
Unique iSense technology guarantees consistently high signal quality, even over extended periods of use. With proven IEPE acceleration sensors, trusted across industries, iSense delivers precise insights into machine dynamics and environmental conditions.

Installation is simple: the sensors are fully integrated into the elements and only need to be connected to the data acquisition

system by cable. Flexible controllers and modules adapt to your individual setup, ensuring seamless integration without extra effort.

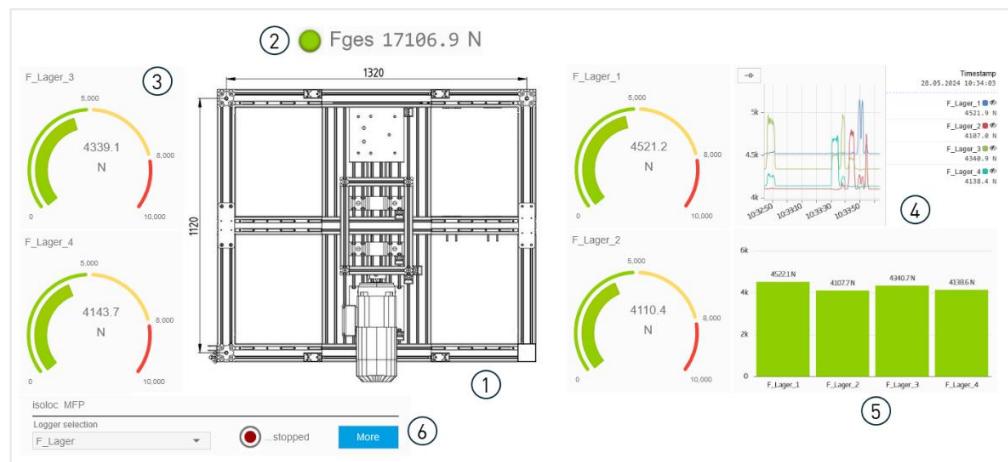
Engineered for tough conditions, iSense combines high stiffness with a highly robust design to deliver reliable performance in virtually any environment. Wherever precise and long-lasting measurements are required, iSense is ready to perform.





Dashboard examples

Statics – Bearing forces

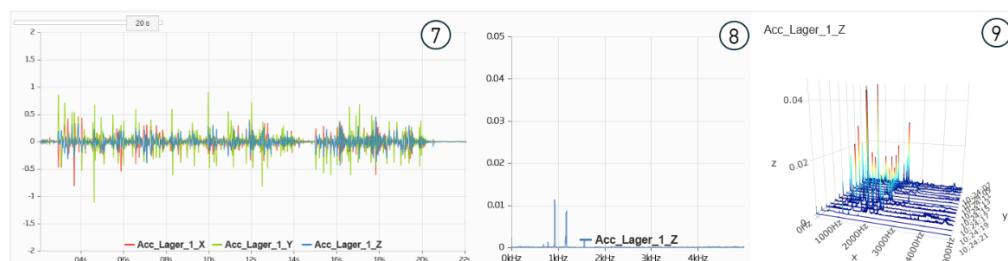


The visualization of the measurement data can be customized. Various diagrams, tables, status LEDs, buttons, and other display options are available for this purpose.

Dashboard for bearing forces

1. Presentation of the system
2. Total bearing forces with warning indicator
3. Bearing force display for each bearing point
4. Time course of the bearing forces
5. Bar chart of the bearing forces
6. Start/Stop of data recording

Dynamics – Vibrations at bearing points



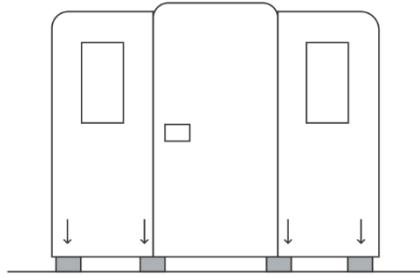
Dashboard for vibrations at the bearings

7. time behavior of the vibration acceleration
8. FFT diagram of vibrations
9. 3D FFT diagram of vibrations

iSense in action:

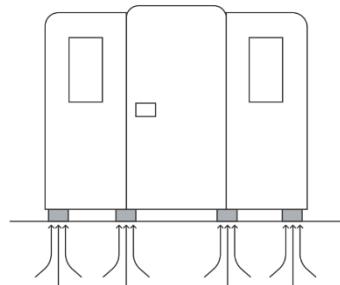
One system. Many possibilities.

The application possibilities of iSense are as diverse as the machines themselves. Whether you want to simplify setup processes, extend prototype monitoring with valuable measurement data, or identify trends and determine limit values more easily – iSense provides the right solution. We are happy to advise you – just contact us.



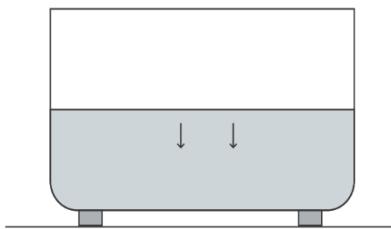
Intelligent assistance for your setup process.

With static measurements, you can determine the center of gravity of your machine and the actual bearing forces. This ensures optimal alignment and positioning, reduces wear on critical components, and improves both performance and precision. Changes in the center of gravity are detected immediately, allowing you to respond quickly to application-specific requirements.



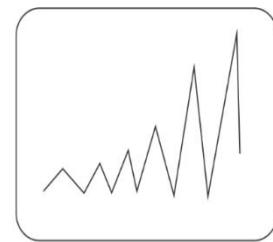
Identification of external disruptive factors

With dynamic measurements, external disruptive factors can be detected at the installation site and quickly eliminated. This ensures stable machine performance and consistent product quality.



Warning of overload and overfill

Static measurements can determine load weights, making them especially useful for machines and systems that are regularly filled or loaded. The warning function quickly detects overloads as well as slight misalignments caused by uneven loading.



Determination of long-term trends and limits

Dynamic measurements identify and track long-term trends. Reference limits can be defined to intervene before critical values are reached, ensuring smooth operation. Anomalies such as tool defects or spindle failures can be detected early through reference measurements and prevented with the additional data provided by iSense.

The Versions

The right type for every application.

iSense

Sensory machine mounting system without vibration isolation.



iSense/isoSense Type A

Measurement of static forces.

isoSense

Sensory machine mounting system with vibration isolation element



iSense/isoSense Type B

Measurement of vibration accelerations in 1 to 3 directions



iSense/isoSense Type C

Measurement of static forces and vibration accelerations in 1 to 3 directions.



isoSense Type D

Like Type C with a second sensor element for vibration measurement (e.g., to monitor vibrations at the installation site and to calculate transfer functions).



all illustrations:
isoloc Schwingungstechnik GmbH

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