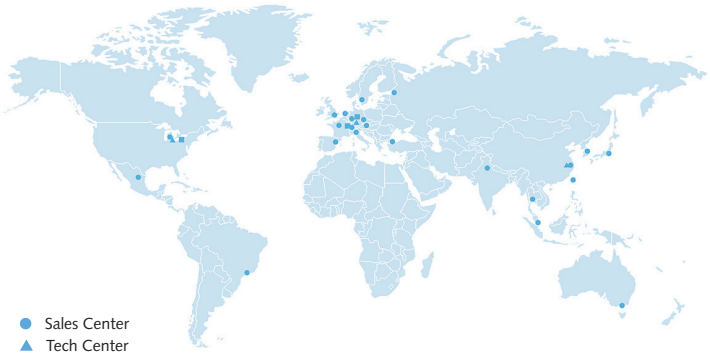
KISTLER

measure. analyze. innovate.

We can offer the right solution for your application

Industrial manufacturers need flexible and efficient solutions to meet the challenges they face as Industry 4.0 drives machine and system networking ahead. Market players who want to maintain a long-term competitive edge must consistently and sustainably optimize all their production processes.

Sensor and system technology by Kistler has a key role to play here: the measurement technology experts in our Division Industrial Process Control (IPC) develop solutions to monitor and control production processes of many different types. What makes this possible? High-precision, intelligent measurement of all relevant process parameters by Kistler sensors. They are used in primary forming and re-forming processes, in joining and assembly technology and also for product testing – always with the goals of enhancing process reliability, optimizing the use of resources and significantly boosting productivity.



Kistler offers sales and service wherever our customers manufacture their products. To round out our portfolio of customized services, we are setting up Tech Centers across the globe – to offer you the best possible technical support on your doorstep.

An overview of Kistler sensors and systems

Our portfolio of sensors, joining and process monitoring systems is geared to the needs of our customers who operate across the globe.

Visit www.kistler.com to consult our comprehensive product documentation. Simply enter the document number in the search field.

Force sensors

Kistler's sensors allow both direct and indirect force measurements. When a mechanical load is applied to the quartz crystal in the sensor, a charge signal is generated that is directly proportional to the acting force. The charge amplifier then converts this into a voltage, making it possible to assess quality.

Document number: 960-262

Piezoelectric force sensors

- Direct force measurement
- Broad measuring ranges
- Excellent rigidity, fast response times
- Easy handling
- High sensitivity
- Compact designs

90X1A
0 ... 7.5 to 0 ... 1 200 kN

913XB
0 ... 80 kN

93X3A
0 ... 700 kN

90X7C
F_x: 0 ... 75 kN
F_z: 0 ... 150 kN

93X7C
$F_{x,y}$: 0 ... 75 kN
F_z: 0 ... 150 kN

9256C...
F_x, F_y, F_z:
–250 ...250 kN

Piezoelectric strain sensors

- Indirect force measurements
- High sensitivity
- Easy handling
- Simple to retrofit

Transverse measuring pin, 9240A
–50 ... 500 με

Longitudinal measuring pin, 9243B
–1 500 ... 1 500 με

Parameterizable transmitter
9238A10
–800 ... 800 με

Pressure sensors

Kistler offers both piezoelectric and piezoresistive sensors to measure pressure. Piezoelectric sensors are suitable for measuring dynamic and quasistatic pressure curves, while piezoresistive models are the solution of choice for measuring static and quasistatic pressure curves.

Document number: 960-112

- Pressure sensors offering direct, indirect and contactless measurement
- Excellent rigidity
- High sensitivity
- Combined pressure and temperature sensors
- Rugged and maintenance-free

6183C

9210A

9247A

Torque sensors

Kistler torque sensors guarantee precise definition of the power and friction values of drives, transmissions and pumps. Strain gage technology is a powerful solution for measurements on rotating shafts, and also for long-term dynamic and static measurements.

Document number: 960-275

- Full bridge strain gage system
- Integrated electronics
- Contactless data transmission (except for Type 4501A...)
- Optional rotation angle / speed measurement

4501A...
0 ... 2 N·m to
0 ... 1 000 N·m

4503B...
0 ... 0.2 N·m to
0 ... 5 000 N·m

4550A...
/4551A...
0 ... 100
N·m to
0 ... 5 000 N·m

Electromechanical joining systems

Kistler's electromechanical NC joining systems feature process monitoring integrated directly into the manufacturing process, with end-to-end documentation: your guarantee of comprehensive quality assurance and process reliability in series production.

Document number: 960-283

- Highly accurate measurements
- Piezosensor with two calibrated measuring ranges, or strain gage force sensor, Type 2153A...
- Repeat accuracy: <0.01 mm
- High straight line velocity: up to 700 mm/s
- Low maintenance

2151B... NCFH
1 ... 60 kN

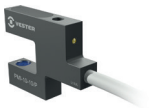
2153A... NCFN
5 ... 600 kN

2157B... NCFT
0.05 ... 1.5 kN

Optical sensors and inductive switches

Kistler offers a wide-ranging portfolio of optical sensors and inductive switches to ensure reliable, troublefree control and monitoring of punching and forming processes.
The benefits: malfunctions in the punching process are detected at an early stage, so tool breakages and the costly damage they cause are avoided.

- High resolution, detection of ultrafine ridges (as narrow as 0.2 mm)
- Repeat accuracy: <0.02 mm
- Extensive range of single-beam and multi-beam light barriers
- With cleaning nozzle as an option



PMI-10-10

ISS-20

PGI-L

Process monitoring and visualization

Process monitoring systems open up the possibility of control integrated in the manufacturing process – so cycle times are optimized. Another benefit: users can respond immediately to any quality deviations that may occur.
In all these ways, Kistler creates the reliable basis for enhanced quality and reduced costs in production.

Document numbers: maXYmos: 960-338
ComoNeo: 960-112

- Easily integrated into existing systems and processes
- Intuitive, uniform operating concept
- High-performance evaluation objects
- Extensive diagnostic possibilities, so causes of NOK can be tracked down quickly
- Standard interfaces

maXYmos
BL 5867B...

maXYmos TL/NC
5877A/5847A

ComoNeo
5637A1

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