

testing equipment for quality management



Programme summary.

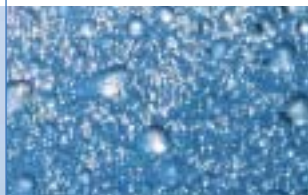


METROLOGY

Sheet metal testing

Surface testing

Corrosion testing



Tensile and Pressure
Testing Machines
Measuring Devices
Display Devices

ERICHSEN

The physical parameters force, torque and displacement can exactly be measured by means of the following instruments belonging to the field of metrology.

These parameters are determined using portable, easy to handle measuring instruments or stationary testing equipment.

Our testing instruments comply with all standards (DIN, ISO, EN) currently used by the industry and laboratories.

Special applications are available on request. Please contact us directly for detailed technical information:

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Tensile and Pressure Testing Machines

UNIMAT®



Tensile and Pressure Testing Machines DIN, EN, ISO

The compact material testing machines of the UNIMAT® series have been specifically designed to facilitate goods acceptance inspections and quality checks simply and fast. Their robust construction also makes them suitable for in-process controls as well as for tension and compression tests.

Together with the PHYSIMETER® 906 MC measuring system plus force transducer, these machines comply with the current standards DIN 51220 and DIN 51221 for tensile testing machines and meet the standards and regulations

relating to CE qualification. We recommend our series UNIMAT® testing machines for testing either hard and tough or soft specimens.

These tensile testing machines are equipped with one column (UNIMAT® 050) or two columns (UNIMAT® 052, 054 and 056) and two recirculating ball screws which guide the travelling cross-arm. The upper fixed cross-arm and the base plate in conjunction with the travelling cross-arm between the two from two separate working areas.

UNIMAT® C



Tensile and Pressure Testing Machines + UNICONTROL® DIN, EN, ISO

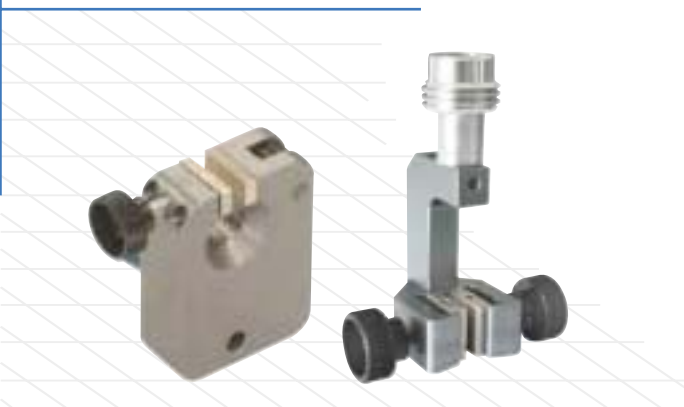
The material testing machines of the UNIMAT® + UNICONTROL® series have been specifically designed to facilitate goods acceptance inspections and quality checks. Their robust construction also makes them suitable for in-process controls as well as for tension and compression tests. Together with force transducer or the integrated control and evaluation unit UNICONTROL®, these machines comply with the current standards DIN 51220 and DIN 51221 for tensile testing machines and meet the standards and regulations relating to CE qualification.

We recommend our series UNIMAT® 050 C, 052 C, 054 C, 056 C and 058 C testing machines for testing either

hard and tough or soft specimens. These tensile testing machines are equipped with one column (UNIMAT® 050 C) or two columns (UNIMAT® 050 C, 052 C, 054 C, 056 C and 058 C) and two recirculating ball screws which guide the travelling cross-arm. The upper fixed cross-arm and the base plate in conjunction with the travelling cross-arm between the two from two separate working areas.

The industrial PC integrated in the "C version" of the tensile testing machine UNIMAT® as well as the included control and evaluation software UNICONTROL® can be used for controlling and monitoring tasks.

Grips



Grips DIN, EN, ISO

A wide range of clamping tools and testing devices are available as standard equipment or in customized versions for special materials. The grip heads are quick and easy to change by way of appropriate plug-type connections, providing the user with an optimum means to adapt to the various specimen requirements.

The selection ranges from basic parallel grip heads, e.g. for plastic, textile, rubber, paper and metal specimens, to wedge-type clamping tools, pneumatic clamps, and pressure plates and bending devices.



Measuring and Display Devices

Multi Measuring Device DIN, EN, ISO

The PHYSIMETER® 906 MC has been developed to measure a variety of mechanical parameters with one instrument. The concept is similar to the measurement of electrical values with a multimeter.

Various measuring heads can be attached to the battery-operated basic instrument. In addition, the PHYSIMETER® 906 MC is equipped with storage capacity for up to 500 measured values

which can be grouped in up to 100 batches. To facilitate further analysis of the measured data on a PC, the software PhysiSoft can be installed.

Due to its exceptional flexibility the PHYSIMETER® 906 MC is suitable for a wide range of measuring applications, e.g. using force transducers, torque transducers, displacement transducers, pressure transducers, rotational speed transducers, etc..

PHYSIMETER® 906 MC



Electric Load Cells DIN, EN, ISO

Electric load cells from ERICHSEN reflect state of the art sensor technology. At the same time they are easy to use and capable of meeting a wide range of customer requirements.

These force measuring devices are suitable for universal applications, namely wherever tensile and pressure forces need to be measured with a high degree of accuracy, e.g. in materials testing (Erichsen Tensile Testing Machines UNIMAT® and UNIMAT® +

UNICONTROL®), in reference measuring equipment and in research and development. For industrial purposes too, these force transducers are ideal in the fields of automation, controlling press-in processes and in joining technology.

An extensive accessories program is available. A connection to the Measuring and Display Devices 975 AP and 980 AP and PHYSIMETER® 906 MC is also possible by means of an adapter plug.

Model 921/922



Measuring and Display Devices DIN, EN, ISO

Models 975 AP and 980 AP provide a convenient means of measuring and displaying forces in combination with ERICHSEN force transducers on a wire strain gauge basis. It is suitable for applications in all areas where forces need to be measured without bother and within the shortest possible time. Ease of operation makes this display instrument useful for a wide range of measuring tasks.

The measuring and display electronics are designed for mains operations and installed in a sturdy aluminium box. The LED digital display on the front

panel is easily identifiable, even from a distance. By way of the 7-pin socket on the rear of the box the force transducer can be disconnected quickly from the display instrument. A peak value memory is included in the standard version of Models 975 AP and 980 AP. Minimum and maximum readings can be fetched by means of key operation.

Adjustable limit value outputs are available for this measuring and display instrument. These limit value outputs can also be used to relieve the force transducer and the specimens or for other monitoring purposes.

Model 975 AP/980 AP



Hydraulic Load Cells DIN, EN, ISO

ERICHSEN hydraulic load cells provide a simple and economical method of measuring forces. The technique is based on the hydraulic transmission of forces which act on the piston of the force transducer. This hydraulic pressure is immediately indicated on a display unit with a scale in Newton.

Load cells are ideal for maintenance and adjustment work as well as for the use in plants, machines and systems of

all kinds. This particular series has been designed primarily for carrying out occasional force checks as well as for continuous loading. Their compact dimensions make these instruments extremely versatile.

By using the appropriate accessories the measured value can also be shown on a remote display. The readings can be transmitted to the PHYSIMETER® 906 MC by way of a pressure transducer.

Model 830/833/840



Force Standard Machines

Standard Machines / Control Machines / Calibration Machines



APPLICATION

Standard Machines

Force standard machines for use by government institutes and agencies to express national scales for the physical quantity force.

Control Machines

Force control machines for testing bureaus and other official agencies, calibration offices and members of official calibration services.

Calibration Machines

Calibration machines for manufacturers of weighing cells, load cells and torque transducers used both in manufacturing and for quality control purposes.

Fully automatic control and evaluation in accordance with internationally recognized standards such as DIN EN ISO 7500-1, EN 10002-3, ISO 376, NF 03-510, BS 1610, Part 2, ASTM 74-81, OIML IR 60/IR 76.

MEASUREMENT PRINCIPLES

Standard Machines and Calibration Machines

Direct loading

To achieve maximum precision in expressing the physical quantity force it is necessary to use exactly defined masses. The force is applied by coupling successively masses to the device under test.

Hydraulic amplification

Direct loading is not economical when dealing with very large forces. In this case the force generated by the masses is applied to the primary measurement cylinder of a hydraulic system; at a second cylinder with a different piston diameter this force is amplified to exert greater force in a second machine frame.

MEASUREMENT RANGES

Standard Machines and Calibration Machines

Direct loading

Used for measurement values between 10 N and 500 kN, start with zero and rising in steps of 10%, a 10% overload step is available on request, with a relative measurement uncertainty $\leq 2 \cdot 10^{-5}$.

Hydraulic amplification

Used for measurement values depending on the direct loading machine required and on the amplification ratio(s) selected at 10 : 1, 20 : 1, 50 : 1, 100 : 1 and so on, up to about 1000 : 1. Between 100 kN and 10 MN with a relative measurement uncertainty $\leq 7 \cdot 10^{-5}$ to $\leq 1 \cdot 10^{-4}$.

Calibration Machines with Comparative Measurement

Comparison measurements can also be made when dealing with calibration machines where ultimate accuracy is not required. In this case load cells with known response characteristics are mounted in a particularly stiff machine frame, whereby a comparison is made with the response of the load cell being tested. The load is applied with an electric motor under microprocessor control, the force being transferred via recirculating ball spindles.

Calibration Machines with Comparative Measurement

Here all measurement ranges are possible within the spectrum of the reference load cells available, from about 50 N to about 500 kN with a relative measurement uncertainty $\leq 5 \cdot 10^{-4}$.

For further information:

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Oddělení _____

Adresa / Ulice _____

Adresa / PSČ / Město _____

Telefon _____

Fax _____

E-mail _____

Prosím zašlete nám :

 ...cenovou nabídku

 ...detailní technický popis

...na následující model:

Poznámky:

 Prosím zavolejte nám

 Rádi bychom dostávali pravidelné informace o výrobcích ERICHSEN

Zvláště se zajímáme o produkty v oblasti :

 Zkoušení plechů

 Zkoušení povlaků

 Korozivní zkoušky

 Metrologie
