

COESFELD

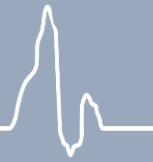
MATERIALTEST

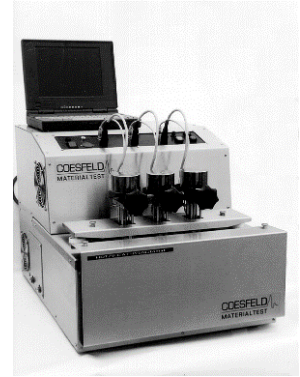
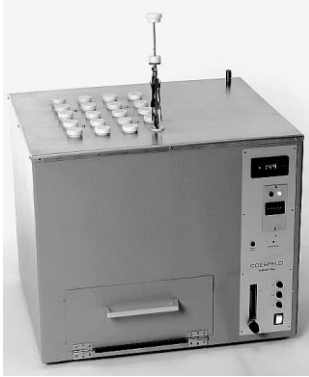


TESTING EQUIPMENT FOR PLASTICS AND RUBBER

COESFELD

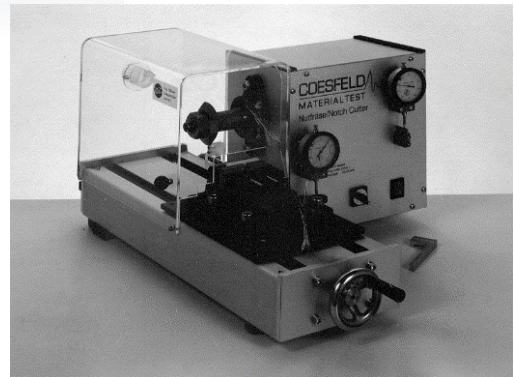
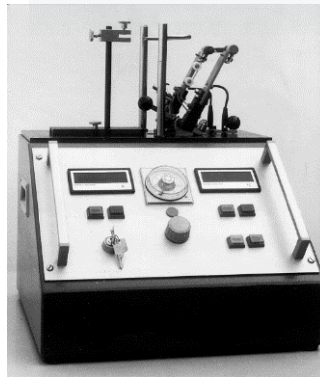
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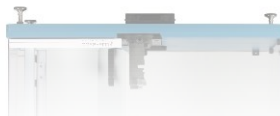




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YEARS
1968 - 2018





COESFELD GmbH & Co. KG

We produce and distribute material testing equipment for mechanical and thermal characterisation of plastics and elastomers.

Our test systems are successfully installed worldwide since 1968.

www.coesfeld.com

MATERIAL TESTING EQUIPMENT

for



PLASTIC



ELASTOMERE

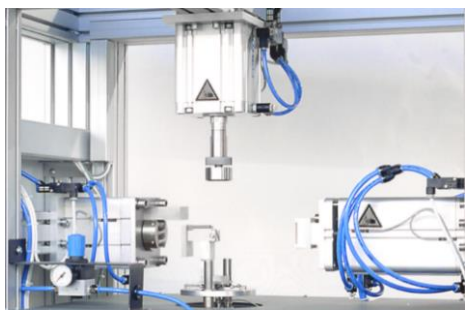


PAINT/ SURFACE/
COATING

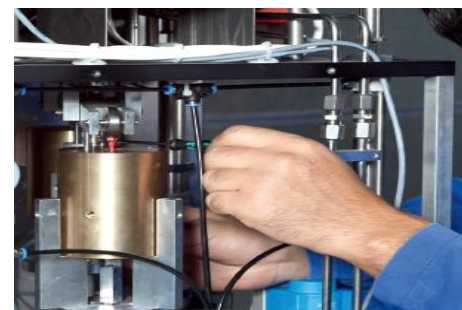


MINERAL OIL PRODUCTS
Official Sales
Partner of  **STANHOPE-SETA**

SERVICES



CUSTOM SOLUTIONS/
MODERNISATION



AT SITE SERVICE/
(DAkks)-CALIBRATION

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Bell Test/ Environmental Stress Cracking (ESCR)
Quartz Tube Dilatometer
Glow wire, Ignition Point, Flammability
Vicat Softening and Heat-Distortion-Temperature (VST/ HDT)
Dart Drop Tester (DDT)
Pendulum Impact and Instrumented Impact
Creep and Relaxation
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TESTING OF PIPE COATINGS

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TESTING OF PAINT, SURFACE, COATING

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Cathodic Disbonding (CD-Test)
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Current Tracking Index (CTI)
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OTHER SERVICES

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Automatization and Customer Specific Solutions
Modernisation, Software- and Controller Programming
Maintenance, Service and Calibration
Method Development and Contract Measurement

PUNCH, MILL, TEMPERING



SAMPLE PUNCH

Manual and pneumatic punch for precise and effortless cutting of test samples.

Manual Sample Punch, 25 kN

Pneumatic Sample Punch, 60 kN



PUNCHING DIES

All geometries according to international standards for punching Plastic Plates, Elastomer Sheets or Foils available. Custom Designs possible.



VULCANISATION MOULDS

Steel forms for vulcanisation of elastomers. Precise contours and dowels pins for exact and simple positioning of the plates. Practicable handles and screw threads for simple opening after forming.



SAMPLE TEMPERING

Low temperature cooling box for direct use within close proximity to the test system.

Robust stainless steel system with edge protection.

Volume: 16 or 35 litre

Temperature: -50 °C to -10 °C, -40 °C to 0 °C

Insert for standard sample geometries, e.g. for Charpy and IZOD notch impact test.

SAMPLE PREPARATION



CNC SAMPLE MILL

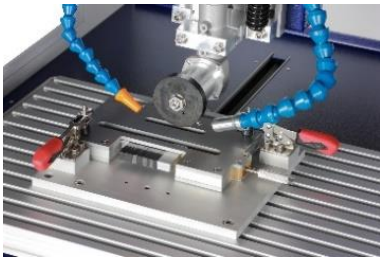
Automatic CNC Mill for milling, engraving and notching. The mill is suitable for plastic materials (PE/PA/PC/PMMA/GFR and CFRP Composites), aluminium, brass and wood.

Working Space x/y/z: 400/ 300/ 140 mm
Milling Speed: up to 20 mm/s

The system comes with an extensive library including milling files for typical sample geometries according to international standards. Individual programming is also possible.



Milling



Notching

APPLICATION

- Milling of dumbbell geometries
- Cutting off shoulders from dumbbell for rectangular sample
- Notch milling and plaining

All configurations in a single machine set-up.

Advantages

- Custom-fit configuration
- Milling and Notching in a single set-up
- High flexibility
- Extensive library of milling programs



AUTOMATIC NOTCHING MACHINE

ASTM D256, ASTM D6110, ISO 179, ISO 180

System for automatic notching of plastic samples according to international standards for notch impact testing.

Dial gauge for measurement of sample width with optional, direct integration to test software.



AUTOMATIC NOTCH CUTTER

Notching via rotating knife.

AUTOMATIC NOTCH PLAINING

Notching via plaining.

DENSITY AND THERMAL CHARACTERISATION



BULK / APPARENT DENSITY

DIN 53 466, ISO 60, ISO 171

Funnel for measuring the density of free flowing substances as powder and granulate.



POURABILITY

DIN EN ISO 6186

Funnel for measuring the pourability of free flowing substances as powder and granulate.



POURABILITY/BULK DENSITY - COMBI UNIT

DIN EN ISO 6186 / in reference ISO 60

System for the combined measurement of pourability and bulk density.



BULK / APPARENT DENSITY

ASTM D1895 Method A, Method B, Method C

Funnel for bulk density measurements

- A) Fine granulate
- B) Coarse granulate
- C) Flakes, strands and fibres



BULK / APPARENT DENSITY

ASTM D2854

Funnel with shaker for active carbon.

PLASTIC TESTING



EXTRUSION PLASTOMETER

ISO 1133, ASTM D1238, ASTM D3364, JIS K 7210

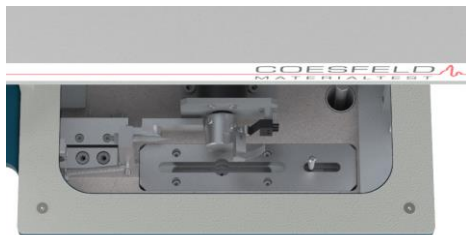
Measurement of Melt Flow Rate (MFR) and Melt Volume Rate (MVR).

Temperature: +50 °C to +500 °C

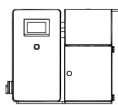
Load: 0,325 to 21,6 kg

Determination of intrinsic viscosity possible with all units from "Standard".

Optional die shutter and extrudate cutter with automatic function.

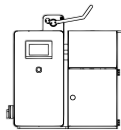


MODULAR DESIGN



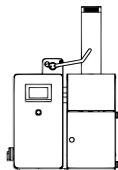
BASIC

for MFR according to method A.



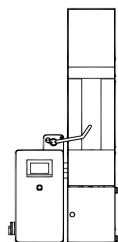
STANDARD

including sensor for MVR according to method B via speed of piston.



COMFORT

for MVR including motorized weight lift.

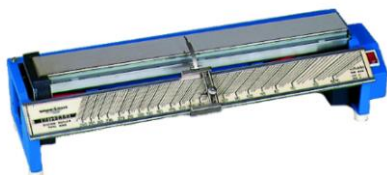


SEMI-AUTOMAT

for MVR including pre-compaction and weight selection for multi-weight test.

Advantages

- Free configuration to needs
- Good Insulation of channel
- Good accessibility for cleaning
- Measure intrinsic viscosity
- WIN-Software inclusive



KOFLER HEATING BENCH

Determine Melt-Point, Observe Degeneration, Determine of Softening Point of Synthetic Resin.

Temperature: +50 °C to +260 °C

THERMAL CHARACTERISATION



ENVIRONMENTAL STRESS CRACKING (ESCR) / BELL TEST

ASTM D1693

Testing of plates of thermoplastics for stress-crack-resistance in different media such as soap, wetting agents and oils.

10 and 50 Station System



Advantages

- Large and illuminated window
- Removable glass-carrier
- Silicon glass-cleaning ring on glass-carrier



Removable glass carrier



Glass carrier



Accessories



QUARTZ TUBE DILATOMETER

DIN 53 752

Simple, **One- and Three-Station Unit** to measure the coefficient of thermal expansion.



FOGGING TEST

DIN 75201, ISO 17071, DIN EN 14288
ISO 6452, SAE J1756

Assessment of undesirable exhalation and condensation from interior panels of plastic, polyurethane, textiles, leather, glue, elastomer, etc.

PLASTIC TESTING



AUTOMATIC GLOWWIRE TEST

DIN EN 60695

Measurement of duration from ignition to stop or flame, der Glow-Wire-Ignition-Temperature (GWIT) or Glow-Wire-Flammability-Index (GWFI).



AUTOMATIC IGNITION TEST

DIN 51 794, DIN EN 14522, IEC 79-4

Automatic detection of ignition temperature of flammable fluid, gas or solids.

The process is guided step-by-step via touch panel or WIN-Software for different test programs (Pre-Determination, Method S and manual measurement).

Temperature: +65 to +650 °C

Advantages

- Guides Testing Process
- Automatic Detection of Ignition
- Fast Procedure
- < 3 h for n-Heptan (incl. Pre-Determination)
- WIN-Datalogging-Software inclusive



FIRE CHAMBER

UL 94, ASTM D635, D3801, D4804, D5048, D4986

IEC 60695-11-10 (replaces ISO 1210)

IEC 60695-11-20 (replaces ISO 10351)

IEC 707 (partially);

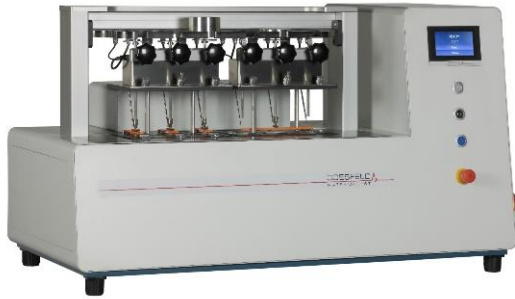
ISO 9772, ISO 9773

The UL94 Fire Chamber is a modular system that can be used for UL94 or other vertical or horizontal fire tests according to various standards.

VICAT SOFTENING TEMPERATURE (VST) AND HEAT DEFLECTION TEMPERATURE (HDT)

HDT - ASTM D648, ISO 75, DIN 53461, BSI 2782 Met 121 C, NT T 51-005, UNE 5307

VST - ASTM D1525, ISO 306, DIN 53460, BSI 2782 Met 120 C, NT T 51-021, UNE 53118



VST/ HDT TESTER SERIES

Innovative test systems for VST and HDT measurements from occasional to daily and 24/7 testing.

Advantages

- low Oil-Volume – only 7 / 11.5 litres
- integrated fume exhaust
- high test temperature up to +350 °C
- fast cooling – < 45 / < 15 minutes
- large bath opening for cleaning
- WIN-Software inclusive



HDT - ISO 75



HDT – ASTM D648



HDT - ISO 75-3



VST - ASTM D1525
ISO 306



Digital Dial Gauge

Measurement of sample dimension with direct connection to WIN-Test-Software.



Active Carbon Filter System

System for suction and filtering of oil fumes with direct connection to machine exhaust.



External Oil-Heat-Exchanger

Compact add-on device enabling the oil-bath to cool down from +300 °C back to start temperature in under 15 minutes.

PLASTIC TESTING



VST/ HDT BASIC

Functional test system with three test stations for manual test operation. Integrated sensors for distance and temperature ensure robust operation with low error potential.



VST/ HDT STANDARD

Compact and comfortable test system with three or six test stations. The test stations are automatically lowered into the oil-bath and the weight set are automatically applied to the samples. This provides a semi-automatic test process without waiting times for the operator after sample insertion.



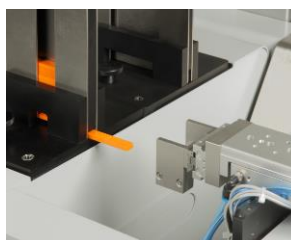
VST/ HDT SEMI-AUTOMAT

Test system with six stations with stepless, motorized weight selection and loading system. Handling of weight sets is not required yielding a comfortable, reproducible and safe loading process.



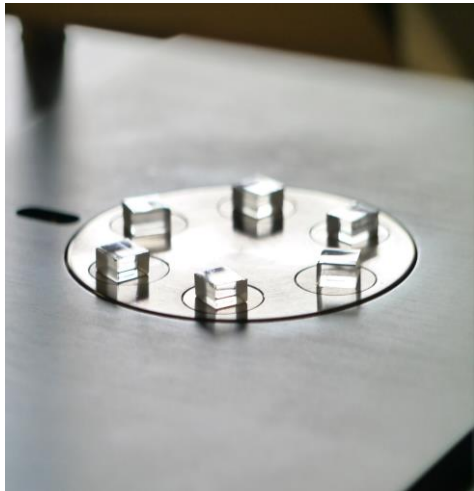
HDT FULL-AUTOMAT

System with six fully automated test stations including a motorized sample feeder enabling 24 / 7 h operation. Two sample magazines for ISO or ASTM samples (combined testing possible) hold up to 200 samples.



OILFREE VICAT SOFTENING TEMPERATURE (VST)

VST - ASTM D1525, ISO 306, DIN 53460, BSI 2782 Met 120 C, NT T 51-021, UNE 53118



VST – Oilfree Set-Up

Classic HDT and VST Testers work with silicon oil as a heat transfer medium. At high temperatures the oil begins to degenerate and evaporate.

The unique oil-free Vicat systems measure identical results compared to oil-based units. The concept is established and proven for over 20 years.

No use of Oil, powders or other media that generate fumes, dust or other pollution.

VICAT SOFTENINGTEMPERATURE (VST) IN PRODUCTION



VST QUICK-SOFT

Mobile test system for non-destructive VST-reference test in under 2 minutes measuring time.

Ideal for quality control in production process of material sheets that does not allow to cut samples for classic VST testing.

Measuring values correlate with classic measurement.

Advantage

- Mobile
- Short measuring time
- Without sample preparation

PLASTIC TESTING



ECO VST

ASTM D1525, ISO 306, DIN 53460, BSI 2782 Met 120 C, NT T 51-021, UNE 53118

Compact, comfortable and clean VST tester. Automatic course of measurement due to integrated weight sets.

Stations: 3 or 6

Advantages

- no oil-fumes
- integrated weight sets
- Established and according to standard
- WIN-Software inclusive



ECO VST – AUTOMAT

Automatic sample feeding extending the ECO VST for 24 / 7 h measurement.

Capacity: up to 120 samples



VST SAMPLE CUTTER

Practical hand cutter with longitudinal stop for cutting VST samples.

IMPACT RESISTANCE



How much energy is required to break the material? Instrumented and non-instrumented impact testing systems provide the answer. Depending on the particular application and material we offer simple to universal as well as non-instrumented and instrumented systems.



BALL DROP TESTER

A free falling steel ball of specific diameter drops from specific height to judge damage to the sample.



DART DROP TESTER

DIN EN ISO 7765-1, ASTM D1709

Non-instrumented impact tester for foils to evaluate breaking energy based on the so called stair-case method from drop heights according to method A or B.

Advantages

- Table top or floor standing
- Tray for weight set
- Foot-Switch for sample clamping
- Safe two-hand drop release
- PMMA-Safety Shield
- Drawer system to access dart after drop
- Rotateable tower to change in-between methods
- WIN-Software guiding through test and evaluation



INSTRUMENTED DART DROP TESTER

ASTM D4272

Instrumented drop tester for foils with speed measurement after impact.

PLASTIC TESTING



PENDULUM IMPACT TESTER

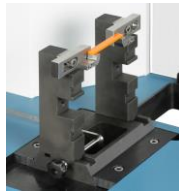
*Charpy ISO 179-1, ASTM D6110
DYNSTAT DIN 53435, ASTM D4508
IZOD ISO 180, ASTM D256
TENSILE ISO 8256, ASTM D1822*

Pendulum impact tester with robust steel frame suitable for international standards. The modular system can be configured according to testing needs with simple and precise change in-between different test methods.

Energy: 5 J, 15 J, 50 J

Advantage

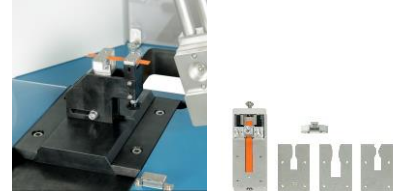
- Simple change in-between methods including optical pendulum detection
- Free selection of Start- and Braking angle via electric brake
- WIN-Software inclusive



CHARPY



IZOD



TENSILE

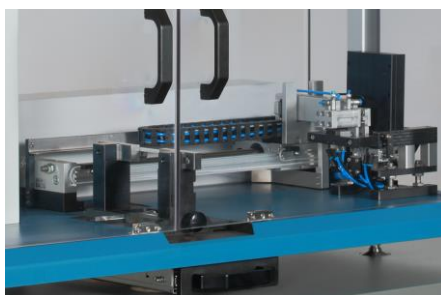


Partial Housing

Practical housing for quick and safe testing of a series. The electrical brake and partial shield provide safe operation without restricting the operator.

Full Housing

Fully housed with electrical brake that closes when doors are open provides maximal safety. In combination with motorised pendulum return the system also provides maximum comfort. Ideal for extensive use and for high energy testing.

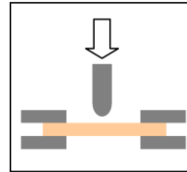


Full-Automat

Motorized system with integrated sample feeding to test full series without operator interaction.

The system does not restrict manual testing.

IMPACT RESISTANCE

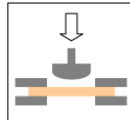


Instrumented Impact

ISO 6603, ISO 7765, ASTM D7192, ASTM D3763, GMW 14867

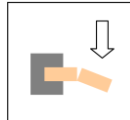
Pre-Damage for CAI

DIN 65561, EN 6038, ISO 18352



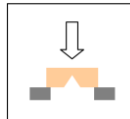
Dart-Test

ISO 7765-1, ASTM D1709, ASTM D4272



IZOD

ISO 180, ASTM D256 und 4508

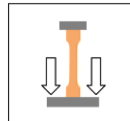


DYNSTAT

DIN 53435

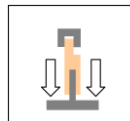
Charpy

ISO 179-1, ASTM D6110



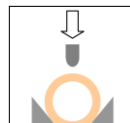
Tensile

ISO 8256, ASTM D1822



Peel-Wedge

ISO 11343



Pipes

EN 744, EN 1411, ISO 3127, ASTM D2444

CHARACTERISTICS

- Energies up to 2000 Joule
- Drop Weight up to 80 kg

Advantages

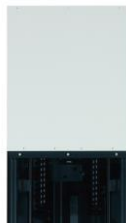
- Modular construction
- Good accessibility for drop weight change
- Highly dynamic piezo-electric impact force measurement
- Lossless scalable force measurement
- Integrated drop weight measurement
- Automatic dart lubrication
- Anti-rebound system
- Optical penetration and rebound measurement
- Integrated or external sample tempering
- Impact test in under 5 seconds
- Fully automated sample feeding
- WIN-Software inclusive with auto-detection of characteristic points

PLASTIC TESTING



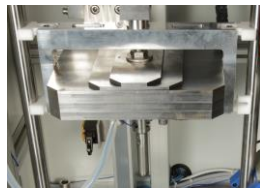
INSTRUMENTED IMPACT TOWER

Drop tower with fully integrated high-speed electronics for sampling rates up to 4 MHz and trigger-output for high-speed camera. The tower has a motorized drop height setting, drop weight sensor, lubrication system, optical speed measurement and scalable load amplifier for lossless impact force measurement at different energy level. A spacious front door provides access for dropframe exchange and drop weight adjustment.



ACCELERATION ADD-ON

Passive or active acceleration system to reach impact speeds of 6.7 m/s for a full range of weight up to 80 kg required for the automobile industry.



DROP FRAME

Solid Aluminium Frame with exchangeable weight sets for drop weight from 1 to 80 kg. Stable and frictionless guiding via sliding or ball bearing. Impactor can be easily exchanged and fitted via dowel pin.

TEST BASE/ TEST CHAMBER



Comfort Access



Compact Set-Up



Height Adjustable



Tempering Chamber



Automatic Samplefeeder



Custom Chamber

CREEP- AND RELAXATION TESTER

ISO 899-1/-2, ASTM D2990



Creep and relaxation tests on standard samples under defined environmental conditions (pre-treatment, temperature, humidity) according to DIN EN ISO 899-1/-2 and ASTM D2990 of plastics under tensile and bending load.

Advantages

- Flexible configuration according to test needs
- WIN-Software inclusive
 - Central operation of all Stations
 - Full raw data export

All Systems available

- with 3 to 10 Stations
- Temperature chamber and humidity control
- Video or tactile extensometer



DEAD WEIGHT SYSTEM

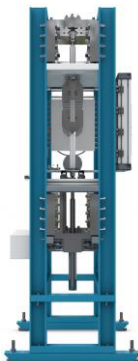
Simple and therefore ideal for long-term creep measurement. Add a motorized sled for video extensometer to build a low-budget multi-station rig. Maximum load per station: 500 N



LEVER SYSTEM

Dead weight system with 10:1 lever arms. Pneumatic System can add testing comfort and impact free loading.

Maximum load per station: 5.000 N



ELECTRO DRIVE SYSTEM

Load sensors and high-precision drives on each station work in a closed control loop. The controlled loading increases reproducibility and offers multiple testing options. Each station can run an individual loading sequence, which can be programmed by the operator. This with the full raw data access makes the systems ideal for extrapolation methods (SIM und SSM).

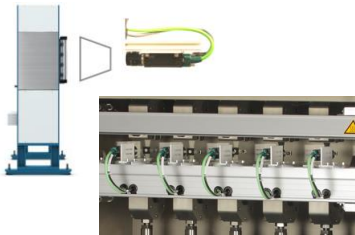
Maximum load per station: 20.000 N

PLASTIC TESTING



CREEP AND RELAXATION TEST RIG

Maximum load per station: 20.000 N
Step size electro motor: 0,04 μm



PER STATION



SLED SYSTEM

VIDEO EXTENSOMETER

Precise and contact free strain measurement. Daylight filter and infrared light assure robust measurement independent of external light sources.

The extensometer can be used one per station for high data rates or one per machine. A motorized sled moves the system between stations, which is ideal for large multi-station rigs.

The systems can be added to existing systems.



CLIP-ON EXTENSOMETER

Tactile extensometer are ideal for mechanical dead weight rigs with tolerance in mechanical alignment of the rods and for systems without tempering chamber.



TEMPERATURE CHAMBER

Stainless-steel chamber with large (optionally fully heated) double-glass front door for a (condensation and ice-free) view into the chamber.

Temperature: -20 °C to +200 °C



HUMIDITY CONTROLLER

External add-on system with large hoses for connection to tempering chamber to control relative humidity inside the chamber.

Humidity: 20 % to 90 % r.H.



TENSILE- / COMPRESSION- / BENDING-SETS

Selection of sample fixtures according to standards or custom made. Also available for different machine brands.

STATIC AND DYNAMIC TESTING



UNIVERSAL TESTING MACHINE

Testing machines in single and double column construction featuring a simple and linear design to meet the requirements of precise linear motion (0.01 mm) with synchronous force instrumentation/control. Various standard or customer-specific sample holders can be used via pin connection. The machines are operated stand-alone or with an extended range of functions via the WIN software in a standard or individual configuration.

Force: 3 to 50 kN
Travel: 500 to 1200 mm
Speed: 1 to 700 mm/min

Advantages

- Simple with good price-value
- Individual configuration



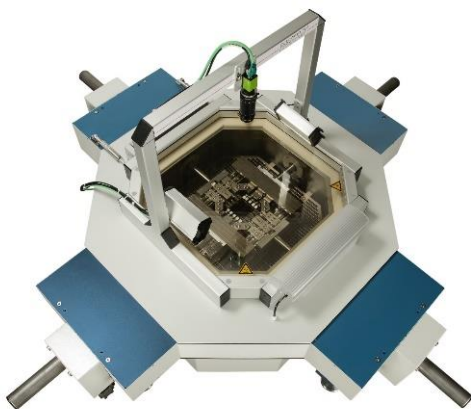
Single- / Doublecolumn Design

Customer specific Application

Temperature Chamber

Extensometer

Tensile/ Compression/ Bending/ ...



BIAXIAL TESTING MACHINE

System for material characterization of e.g. elastomers, textiles and films under biaxial loading. The construction is point-symmetrical about the center of the sample. This enables an optical strain measurement with a camera system.

Quasi-Static System

Force: 5 kN
Speed: up to 600 mm/min

Dynamic System

Force: 3,5 kN
Speed: up to 1 m/s

ELASTOMER TESTING



DYNAMIC MULTI-STATION SYSTEM

Single Dynamic Drive – Multiple Test Stations

Up to 32 non-instrumented or up to 10 instrumented measuring stations for measuring at room temperature or optionally in a temperature / humidity chamber.

NON-INSTRUMENTED SYSTEMS

FATIGUE TO FAILURE

ASTM D 4482

Lifetime test under dynamic continuous tensile/ compression/ swell loading.



DE MATTIA

DIN ISO 132, ASTM D 813, ASTM D 430 Method B

Crack generation and crack growth under permanent buckling stress. Up to 32 simultaneous measurements with optional automatic crack image capture.



INSTRUMENTED SYSTEMS

Automatic fracture detection and measurement of the stress-strain hysteresis diagram using a force sensor for each measuring station.

DRIVE TECHNOLOGY

Eccentric system with fixed stroke

Profile: Sinusoidal

Stroke: 10 to 57 mm

(individual eccentric for each stroke)

Electro-Dynamic Direct Drive

Profile: free up to 10 seconds

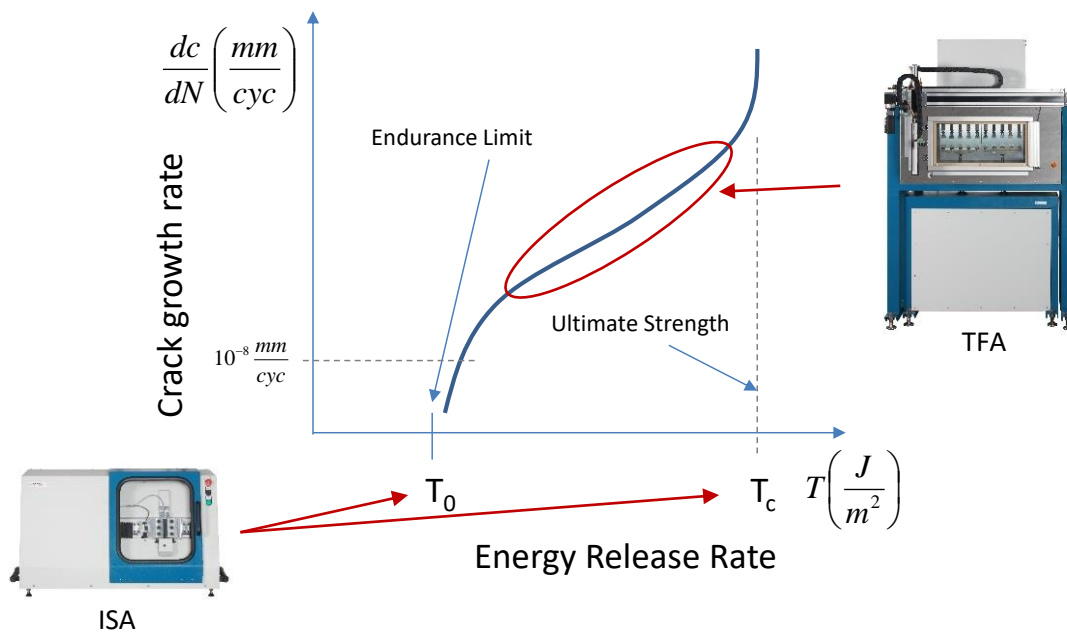
Hub: 0-58 mm (free)

LIFETIME, CRACK PROPAGATION

There are two approaches to predicting the lifetime of a component:

- Time-consuming fatigue measurements on the component and/or field tests
- Laboratory tests for material characterization and for model-based component simulation

Two essential features for the service life calculation are crack formation and crack growth. ISA and TFA systems deliver these measured values in an efficient laboratory test.

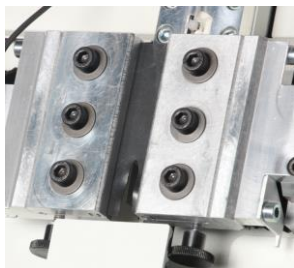


INTRINSIC STRENGTH ANALYZER (ISA)

Determination of T_0 (below this energy no crack grows) and T_c (above this energy the material fails immediately) in a cutting force measurement.

The measurement of T_0 takes a long time in a classic, dynamic measurement. The ISA delivers the value after a few hours.

Cutting speed: 0,001 to 30 mm/min



Advantages

- Fast determination of T_0 and T_c in < 4 h
- Automatic course of measurement according to the Endurica-Procedure



TEAR AND FATIGUE ANALYZER (TFA)

ISO 27727

Dynamic multi-station measuring system for service life and crack propagation measurement.

Dynamic drives: 1 to 3

Measuring stations: 1 to 10

Advantages

- Automatic Course of Measurement
- Online Data-Evaluation
- Results in < 10 h



ONLINE CRACK MEASUREMENT

The crack is recorded with a synchronized digital camera during the dynamic measuring operation and automatically evaluated.

ENDURICA PROCEDURE

With the Endurica measurement protocol, a standardized test procedure is available, which determines and immediately evaluates all the necessary data in a single measurement run. This usually requires several individual measurements that have to be evaluated manually.



ELECTRO-DYNAMIC TESTER

Testing machine for dynamic displacement and force-controlled material testing.

Test force: 3,6 to 10 kN

Stroke: 58 mm

Test frequency: 0 to 50 Hz

Advantages

- Silent and Low-Energy Operation via electric direct drive

TEMPERATURE CHAMBER

Insulated and sealed construction suitable for gas atmospheres, e.g. nitrogen or ozone.

Temperature: -20 °C to +180 °C

ABRASION, FRICTION, THERMAL TESTING



ABRASION TESTER

DIN 53516, ISO 4649, ASTM D5963

Determination of the abrasion resistance of e.g. tires, conveyor belts, toothed belts, shoe soles.



DYNAMIC LINEAR FRICTION TESTER (LFT)

Highly dynamic linear friction tester with pneumatic normal force application and 3D force sensor. Exchangeable friction partners can be tested in a temperature chamber.

Friction speed: up to 2 m/s
Temperature: -20°C to +120°C



INSTRUMENTED CHIP AND CUT ANALYZER (ICCA)

Advantages

- First system for quantitative measurement of Chip, Cut and Chunk

Controlled normal force and impact time with force measurement via 2D force sensor. Optionally including measurement of surface temperature.

Automatic evaluation of the P-parameter, which describes the chip and cut of the material, quantifies and makes it comparable for the first time.



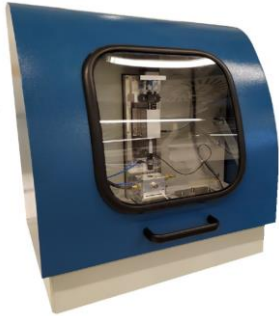
HEAT BUILT UP (HBU)

Measurement of rubber self-heating under dynamic loading. The temperature is measured online during the course of the measurement with a temperature sensor specially developed for the application, which is located inside the material.

The tensile/compressive load is carried out by rotating the test specimen and setting a bending angle.



ELASTOMER TESTING

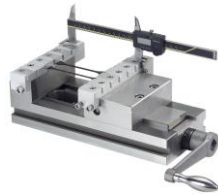


THERMAL DEGENERATION

Measuring device for determining the thermal degeneration of rubber based on the loss factor and complex modulus of a dynamic measurement.

Advantages

- Basic Dynamic-Thermo-Mechanic Analysis



TENSION SET TEST

DIN ISO 2285

Stainless steel construction for 6 S2 specimens.



COMPRESSION SET TEST

DIN ISO 815 (previously DIN 53 517), DIN EN ISO 1856

Stainless steel test plates for 4 or 8 test specimens form I and II with polished stainless steel spacers according to standard or customer specification.



MULTI-CELL-OVEN

ISO 188 method A, IEC 811 (EB01), ISO 3384 method B (EB01 LTP)

Assessment of long-term aging under the influence of temperature with a defined air volume flow.

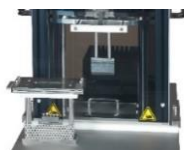
Temperature: +40 °C to +200 °C
Accuracy: +/-0,2 °C
Air Volume Exchange 3 to 30 per h
Air Flow Rate: 2 mm/s to 3 m/s

TEST BENCHES FOR STRESS RELAXATION

ISO 3384, ISO 6914, ASTM D6147

CREEP- AND RELAXATION TEST

ISO 3384 and ISO 899-1



BRITTLENESS TEMPERATURE (BT)

ISO 812, ISO 974, ASTM D746

TEMPERATURE RETRACTION (TR)

ISO 2921, ASTM D 329

Temperature: -80 °C to RT
Cooling Media: CFK/ HCFK free

Advantages

- Fast Electric Cooling without Dry-Ice
- Automatic Tracking of TR10, TR30, TR50, TR70

PIPE COATING – DIN 30 670



MOBILE TENSILE TESTER (MTT 2500)

DIN 30 670, EN ISO 21 809-1, CAN/CSA Z245.21, DIN 30 672, DIN 30 674, DIN 30 678, EN 10 285, EN 10 329

Mobile Tensile Tester for measuring peeling force of coating on steel pipes at production and offshore, in wind parks or for road markings.

Force: up to 2500 N
Peeling Distance: up to 300 mm



MANUAL TENSILE TESTER (MTT/M 500)

Force: up to 500 N



IMPACT RESISTANCE

ASTM G14, DIN 30 670, DIN 53 373, DIN EN 12068

Mobile impact tester.

Drop height: up to 1000 mm
Drop weight: 1 kg to 5 kg
Diameter of impactor: \varnothing 25 mm (Standard)



PENETRATION

ASTM G17, DIN 30 670, DIN 30 671, DIN 30 672, DIN 30 674, DIN 30 678, EN 10 285, EN 10 286, EN 10 287, EN 10 288, EN 10 329

Pipe penetrometer to measure indentation resistance of coated pipes and form parts under influence of weight and temperature in air oven or bath.



Temperature: -30 °C to +130 °C
Accuracy: +/- 0,5 °C to +/- 2 °C



COATING THICKNESS

ISO 2178, ISO 2360

For measuring all non-magnetic layers on steel and non-conductive layers on non-ferrous metals and stainless steel.

SURFACE AND COATING

CATHODIC DISBONDING (CD-TEST)

ASTM G8, ASTM G42, DIN 30 670, DIN EN ISO 15711, ISO 21809 Part 1 Annex H



Testing the adhesion of plastic coatings to steel.
Stations: 1, 4, 8, 10, 16, 20, 30

Voltage: 5 V
Current: 200 mA

DATALOGGER

High-precision, extremely low-noise USB data loggers with Windows software for data acquisition. Records current and voltage, optionally also temperature.



CAMERA EVALUATION

The damage pattern is divided into segments, 12 segments / 30° angle. The detachment depth in mm is automatically measured for each segment.



TERA OHM METER (TO)

Tera-Ohmmeter for volume-, surface- and leakage resistance, small current and cable resistance.



HOLIDAY TESTER

DIN 4681, 28055, DIN 28063, DIN 30670, DIN 55670, DIN EN 10329, DIN EN 14430, DVGW G462/I, DVGW W400-2

Measuring device for non-destructive testing of defects in sensitive coatings using high-voltage pulses.



CURRENT TRACKING INDEX (CTI)

DIN EN 60 112 / IEC 60 112 / bzw. VDE 0303 Teil 1

Determination of the tracking resistance (Current Tracking Index) of solid electrical insulating materials.

Voltage: 0 to 600 V



SURFACE AND COATING



Advantage

- Available with automation for higher reproducibility

GEL TIME (GT)

ASTM D3451, ASTM D3532, ASTM D4217
CAN/CSA-Z245.20, DIN 16 916, DIN 55 990,
EN ISO 8130-6, ISO 21809-2c

Test devices for determining the gel time and the curing characteristics of thermosetting powder coatings and resins

Temperature: +60 °C to +250 °C

Configurations:

- Ø 16 mm 1x hollow / 4x hollow
- Ø 16 mm 2x hollow, Ø 20 mm 2x hollow
- Ø 16 mm 1x hollow / 4x hollow
- 100 x 100 mm flat plate
- 150 x 150 mm flat plate



MINIMUM FILM FORMING TEMPERATURE (MFFT)

ISO 2115, ASTM D2354

Gradient test bench to determine the minimum film forming temperature (Minimum Film Forming Temperature, MFFT) of aqueous polymer dispersions.

Temperature: -30 °C to +250 °C

Gradient: up to 60 °C



SCRATCHING DEVICE

DIN EN ISO 7253, EN ISO 2409, EN ISO 17872,
ISO 1518, ASTM D3359, GME 60 280, VW PV 3952,
VDA 621

Universal applicable for automatic scratching of surfaces/coatings with high accuracy and reproducibility.



ABRASION TESTER

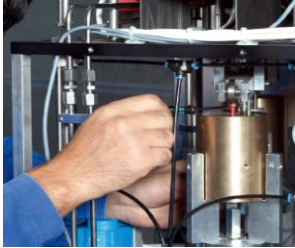
Test device for determining the abrasion resistance of plastic coatings. The tests can be carried out with the addition of liquids (test stations in a stainless steel tank with a drain valve).

Speed: 30 to 120 strokes per minute

Sample Dimension: max. DIN A4

OTHER SERVICES

AUTOMATION AND CUSTOMIZED SOLUTIONS



We see ourselves as a solution provider. In addition to standardized solutions (e.g. according to DIN, ISO, ASTM, ...) we also offer individual solutions according to the requirements of our customers. Special test fixtures and customized automation solutions have been an important part of our identity since our inception. Our local production offers the necessary flexibility.



CONSTRUCTION, SOFTWARE AND CONTROLLER PROGRAMMING



We design our products in dedicated, separate departments for construction, software development and control programming. We keep the technology up to date and continuously work on our product portfolio.



MAINTENANCE, SERVICE AND CALIBRATION



Regular maintenance ensures the longevity of the devices and minimizes downtime. Adaptations, modernizations and retrofits can also extend the life of the device. Calibration guarantees reliable and repeatable measurement results.

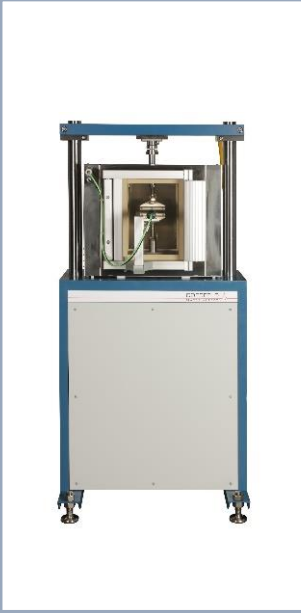


METHOD DEVELOPMENT AND CONTRACT TESTING

PRL

Polymer Research Lab.

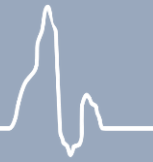
Our subsidiary PRL – Polymer Research Lab is an independent laboratory. The focus lies on materials science and method development, which is not directly related to the sale of test equipment. This enables us to offer independent contract measurements and research projects in cooperation with our customers. This is not just direct customer service, but a possible starting point for innovative products.



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