... from development to implementation



Production of materials testing equipment and automation

Extensometers with limited deformation

Made in Czech Republic



Extensometers with limited deformation

Extensometers with limited defermation

Main features

Hanging extensometers are the simplest and most economical solution for measuring the deformation of test specimens. They are used where lower so-called random testing frequency is performed. Although these extensometers are among the simpler devices, they are widely used to detect lateral elongation, longitudinal narrowing, contraction, crack expansion in dynamic fatigue testing, high temperature tests, etc. Despite their simplicity, these extensometers are characterized by very high accuracy, durability and usability. They meet the EN ISO 9513 standard in accuracy class 0.2.

Extensometers with limited deformation can be divided into the following groups:

Longitudinal (axial) Transverse Biaxial Dynamic (crack expansion) Axial-torsion High temperature Measuring probe

Our sales manager and application engineers will be pleased to advise you on how to choose the right strain gauge to meet your.

... from development to implementation



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Extensometers Longitudial - axial

Main features Mini MFA2

Accuracy class accroding EN ISO 9513: 0.5 Standard gauge length: 10 mm Optional gauge length: 50/100 mm Measuring range: +2/-1 mm Linearity error including hysteresis : 0,05% Dimensions range for flat/ round specimens: 0 - 25 x 25 mm / 0 - 25 mm





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Extensometers longitudial - axial

Main features MFA2/0.5

Accuracy class accroding EN ISO 9513: 0.2 Standard initial gauge length: 30(25) and 50 mm Optional initial gauge length: 30 - 300 mm Measuring range: 2(3) mm / 0.5 mm Linearity error including hysteresis: 0.05 % Dimensions range for flat specimens: 0 - 30 x 30 mm / 0 - 60 x 60 mm with adjustable Dimensions for round specimens: 0 - 30 mm / 0 - 60 mm with adjustable





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Extensometers longitudial - axial

Main features MFA2/0.5

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length : 50 - 100 mm (in steps10 (5) mm) Optional initial gauge length : od 40 mm / up to 200 mm Measuring range: + 20 mm Linearity error including hysteresis: 0.2% Dimensions range for flat specimens: 15 x 1 up to 30 x 30 mm (60 x 60 mm) Dimensions for round specimens: 4 - 30 mm (60 mm)





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Extensometers longitudial - axial

Main features MFA25/12

Accuracy class accroding EN ISO 9513: 0.5 / 0.2 Standard initial gauge length: 25 and 50 mm (20 mm) Optional initial gauge length: 30, 80 a 100 mm Measuring range: + 25 mm / + 12 mm Linearity error including hysteresis: 0.25 % / 0.10 % Dimensions range for flat specimens: 0 - 28 x 30 mm / 0 - 50 x 50 mm with adjustable Dimensions for round specimens: 0 - 28 mm / 0 - 50 mm with adjustable





Extensometers with limited deformation

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Extensometers longitudial - axial

Main features MFI 20/40/100

Accuracy class accroding EN ISO 9513: 1 Standard initial gauge length: 225 mm, 250 mm, 300 mm Optional initial gauge length: 226 - 1000 mm / 251 - 1000 mm / 301 - 1000 mm Measuring range: + 20 mm / + 40 mm / + 100 mm Linearity error including hysteresis: 0.2 % Dimensions for round specimens: 3 - 35 mm





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Extensometers longitudial - axial

Main features EXA

Accuracy class accroding EN ISO 9513: 0.5 - 1 Standard initial gauge length: 10 - 100 mm (in steps 5 / 10 mm) Measuring range: 0.25 - 10 mm Linearity error including hysteresis: 0.1 - 0.3 % Operating temperature: - 80°C - +120°C or -270°C - +220°C Dimensions flat / round specimens: 1 - 18 mm / 1 - 18 mm





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Extensometers longitudial - axial

Main features 3542

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10, 12.5, 25, 50 mm Measuring range: +-5, +- 10, +- 20, +-25%, +50 / - 10%, +100 / - 5 % Linearity error including hysteresis: 0.10 % (for +-5 a 10%), 0.15 % (standby mode) Temperature range: -265°C up to +175°C Dimensions flat /round specimens: 0 - 12 x 31 mm / 0 - 25 mm





Extensometers with limited deformation

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Extensometers longitudial - axial

Main features 3542

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 3, 4, 5, 6, 8, 10, 12 mm Measuring range: +-5, +-10, +20 / - 10%, +50 / - 5%, +100 / - 5 % Linearity error including hysteresis: 0.10 % (for +- 5 and +- 10%), 0.15 % (standby mode) Temperature range: -265°C up to +175°C Dimensions flat / round specimens: 0 - 12 x 25 mm /0 - 12 mm





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Extensometers longitudial - axial

Main features 3543

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 50, 100, 150, 200 or 250 mm Measuring range: +25, +50, or +100 mm Linearity error including hysteresis: <0.15% Dimensions flat / round specimens: 0 - 12 x 31 mm /0 - 25 mm Temperature range: ST -40°C - +100°C or HT -40°C - +1500°C Typical operating force: 125 g





... from development to implementation

Extensometers longitudial - axial

Main features 3800

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 25 or 50 mm Measuring range: +125, +250 or +500 mm Linearity error including hysteresis: <0.15% Typical operating force: 20 g





Extensometers with limited deformation

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Transverse Extensometers

Main features MFQ

Accuracy class accroding EN ISO 9513: 0.2 Measuring range: 4 mm (6 mm) Linearity error including hysteresis: 0.05 % Measuring range: 300 mm minus Lo / 490 mm minus Lo Thickness of flat specimens:0.4 - 30 mm Width of flat specimens: 13, 20, 25, 30 mm / 4 - 25 mm (50 mm) Diameter of round specimens: - 4 - 25 mm (4 - 50 mm)





Extensometers with limited deformation

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Transverse Extensometers

Main features of type 3575

Accuracy class accroding EN ISO 9513: 0.5 Measuring range: +-0.5, +- 1, +-2.5, +-3 or +- 5 mm Linearity error including hysteresis: < 0.15 mm Operatin temperature: - 265 °C up to +175°C Dimensions range for flat specimens: 0 - 25 mm Dimensions range for round specimens: 0 - 25 mm





Extensometers with limited deformation

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Transverse Extensometers

Main features of type 3475

Accuracy class accroding EN ISO 9513: 0.5 Measuring range: +- 0.25, +-0.50, +-1.00, +- 1.25 mm Linearity error including hysteresis: 0.15 % (+-1.25 mm 0.20 %) Operating temperature: - 265 °C up to +175°C Dimensions range for flat specimens: 0 - 25 mm Dimensions range for round specimens: 0 - 25 mm





Extensometers with limited deformation

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Transverse Extensometers

Main features of type 3575 AVG

Accuracy class accroding EN ISO 9513: 0.5 Measuring range: 2 mm Linearity error including hysteresis: < 0.15 % Operating temperature - 265 °C up to+175°C Dimensions range for flat specimens: 9.5 - 25 mm





Extensometers with limited deformation

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Transverse Extensometers

Main features of type EXD

Accuracy class accroding EN ISO 9513: 0.5 Measuring range: +-0,25 mm,... +-4 mm Linearity error including hysteresis: < 0.35% Operating temperature: - 80 °C up to +300°C, 1200°C Dimensions range for flat specimens: 1 - 45 mm Dimensions range for round specimens: 0 1 - 45 mm





Extensometers with limited deformation

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Biaxial extensometers

Main features of type 3560

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10, 25, 50 mm Measuring range: +-5, +- 10, Linearity error including hysteresis: +-0.15 % Operating temperature: -265°C up to +175°C Dimensions range for flat specimens: 2,5 x 25 mm Dimensions range for round specimens: : 2,5 - 25 mm





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Extensometers with limited deformation

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Dynamic extensometers – crack expansion

Main features EXR

Standard initial gauge length: 5 - 30 mm (by steps about 5 mm) Measuring range: 0.25 - 10 mm Linearity error including hysteresis: 0.25 - 0.3%





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Extensometers

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Dynamic extensometers – crack expansion

Main features EXRC

Standard initial gauge length: 2,3,4,5 mm Measuring range: 3,4,5,6 mm Linearity error including hysteresis: 0.1%





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Dynamic extensometers – crack expansion

Main features of type 3541

Standard initial gauge length: 3, 5, 8, 10, 12 or 20 mm Measuring range: +2.5/-1, +4/-1, +7/-1, +10/-1, +12/-2 mm Linearity error including hysteresis: 0.15 (for < 6 mm), 0.20 (stand by mode) Operating temperature: -265°C up to+175°C





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Axial – torsion extensometers

Main features of type 3550(10-05-04/12-20-02/25-05-02/25-05-03/25-10-02)

Accuracy class accroding dle EN ISO 9513: 0.5 Axial gauge length: 10 mm / 12.5 mm / 25 mm / 25 mm / 25 mm Axial measuring range: +-5% / +-20% / +-5% / +-5% / +-10% Torsion shear deformation angel: +-4° +-2° +-2° +-3° +-2° Linearity error including hysteresis: <0.15 Operating temperature: -40°C up to +100°C or - 265 °C up to+175°C Dimensions range for round specimens: 9.5 - 25.4 mm





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High temperature extensometers

Main features EXH

Accuracy class accroding EN ISO 9513: 1 Standard initial gauge length: 15, 20, 25, 30 or 50 mm (1.25 - 10 mm) Measuring range: 0.75 - 10 mm Linearity error including hysteresis: 0.25 % Operating temperature: up to 1200°C (optional up to 1800°C)





Extensometers with limited deformation

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High temperature extensometers

Main temperature of type 3548

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10, 25 or 50 mm Measuring range: 10 %, 20%, + 50 % / - 25 %, + 100 % / - 5 % Linearity error including hysteresis: < 0.15 mm Operating temperature: Standard ST up to 1200°C, optional up to 1600°C





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Extensometers with limited deformation

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High temperature extensometers

Main featuresType 3448

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10, 25 or 50 mm Measuring range: +-5, +-10, +- 20, +50 / - 20% Linearity error including hysteresis: < 0.15 % Operating temperature: optional up to 1200°C





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Extensometers with limited deformation

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High temperature extensometers

Main features MFHT

Accuracy class accroding EN ISO 9513: 0.2 Standard initial gauge length: 15, 20, 25, 30 or 50 mm Measuring range: 10 or 8 mm Linearity error including hysteresis: 0.05 % Operating temperature: up to 1700°C





Extensometers with limited deformation

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High temperature extensometers

Main features EXAE

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 25 - 152.4 mm Measuring range: 5, 10, 15, 20, or 25 mm Linearity error including hysteresis: 0.10 % Operating temperature: 1000°C, 1100°C or 1200°C Dimensions range for flat specimens: 1 - 45 mm Dimensions range for round specimens: 1 - 45 mm





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High temperature extensometers

Main features of type 3555

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10, 25 or 50 mm Measuring range: : +-5%, +10% / -5%, +20% / -10%, +50% / -10% Linearity error including hysteresis: 0.10 % Operating temperature: Surroundings up to 540°C Dimensions range for flat specimens: 0 - 12 x 19 mm Dimensions range for round specimens: 0 - 12 mm





Extensometers

with limited deformation

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High temperature extensometers

Main features of type 3648

Accuracy class accroding EN ISO 9513: 0.5 Standard initial gauge length: 10 or 25 mm Measuring range: between +0.25 a 2.5 mm on demand! Linearity error including hysteresis: 0.10 % Operating temperature: Standard up to 1200°C. HT- Optional up to 1600°C.





Extensometers with limited deformation

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High temperature extensometers

Main features of type 3580

Accuracy class accroding dle EN ISO 9513: 0.5 Measuring range: +- 0.5, +-0.75, +-1.5, +-2 or +- 5 mm Linearity error including hysteresis: < 0.15 mm Operating temperature: - 40 °C up to +1000°C Dimensions range for round specimens: 4.5 - 16 mm





Extensometers with limited deformation

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High temperature extensometers

Main features of type 3641

Standard initial gauge length: 3, 6, 10, 12, 12.5 mm Measuring range: +3, +6, +10, +12 or +12.5 mm Linearity error including hysteresis : < 0.10% Operating temperature: up to 540°C





Extensometers with limited deformation

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Measuring probes

Main features of type 3540

Measuring range: 1, 4, 6, 12, 25, 50 mm Linearity error including hysteresis: < 0.25% Operating temperature: -265°C up to +200°C





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Extensometers with limited deformation

Measuring probes

Main features ESSA SM

Measuring range: 12,5; 30,5; 50,5 mm Accuracy: +-1 μm Degree of covering: IP40





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Measuring probes

Main features of Heidenhain CT

Measuring range: 12, 25, 30, 60, 100 mm Accuracy: +-0,1 μm Degree of covering : IP50





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Measuring probes

Main features of MFT

Measuring range: 4 mm Linearity error including hysteresis: < 0.2%





LABORTECH ve světě

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... od vývoje po realizaci