

Product Information

Electromechanical Creep Testing Machine Kappa SS

CTA: 179395 179396



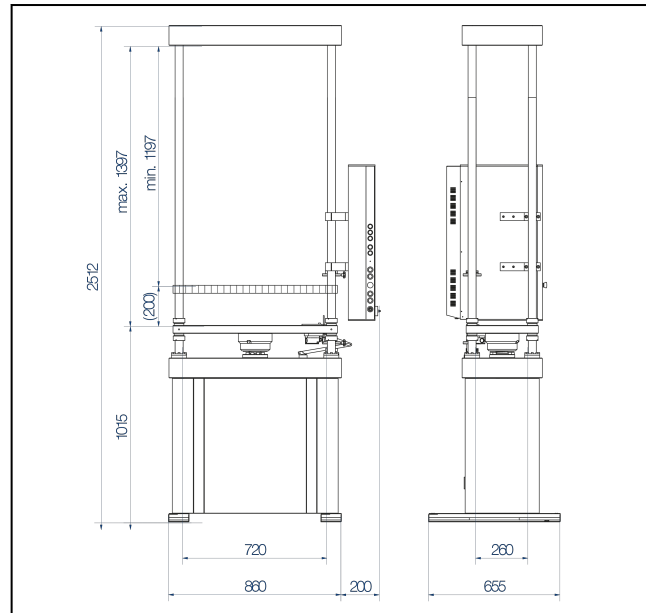
Kappa 100 SS

Applications

The Kappa SS creep-testing machine is equipped with a central lead screw and is suitable for classic and advanced creep tests that require maximum precision in force control and axial alignment.

The Kappa SS offers a wide range of applications in ambient and high-temperature conditions:

- Advanced creep tests:
 - Creep test with slow strain rate (SSRT)
 - Strain modeling (e.g. determination of creep curve at different loads)
 - Fatigue tests in the tensile range
 - Creep data from components tests
- Static crack growth/widening test (CCG)
- Determination of hydrogen embrittlement
- Relaxation tests
- Classic fatigue tests:
 - Creep, creep rupture
 - Stress rupture
- Short-term tensile, compression, and flexure tests can also be performed with this testing machine



Kappa 50 / 100 SS dimensions

Advantages and features

Specific machine design

- Load frame with central lead screw drive and precision guidance via four steel columns for precise axial loading
- Central lead screw for precise axial alignment
- High drive control frequency of 1000 Hz. This allows for precise force and strain control for a wide range of applications.
- High-resolution force and travel measurement for optimum control properties, especially at very low test speeds
- Precise loading rate with tolerance of $\pm 0.1\%$ of the set speed in the measurement range of $1 \mu\text{m/h}$ to nominal speed, unloaded or under constant load
- Wide force measurement range for tests with small and large forces according to DIN EN ISO 7500-1 in class 0.5 and class 1
- Precision testing machine to DIN EN ISO 7500-1

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Technical data

Type	Kappa 50 SS	Kappa 100 SS
Test load, max. Fmax	50 kN	100 kN
Dimensions of the test frame		
Width	860 mm	860 mm
Depth	655 mm	655 mm
Height	2512 mm	2512 mm
Test area depth	Unlimited	Unlimited
Test area width between the lead screws	720 mm	720 mm
Test area height, max.	1390 mm	1390 mm
Crosshead travel	200 mm	200 mm
Lateral guidance of the moving cross-head via precision bearings on four hard-chromed guide columns		Ø 40 mm
Test speed range		0.001 mm/h to 250 mm/min
Accuracy of the test speed	< ± 0.1 % (measured over an interval of at least 5 s or 10 mm travel)	
Position transducer travel resolution	0.136 nm	0.136 nm
Weight	800 kg	800 kg
Power supply voltage	230 VAC	230 VAC
Installed load	1 kVA	1 kVA