

Product Information

Electromechanical Creep Testing Machine Kappa SS

CTA: 179395 179336



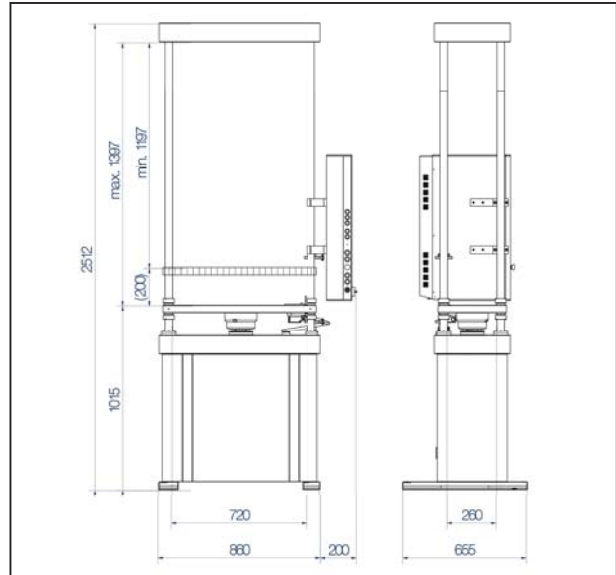
Kappa 100 SS

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

Product Information

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Technical data

Type Kappa Item No.	50 SS MP02698	100 SS MP02699	
Test load F_{\max}	50	100	kN
Test area			
Height	1397 ¹⁾	1397 ¹⁾	mm
Width	720 ²⁾	720 ²⁾	mm
Crosshead travel	200	200	mm
Load frame			
Dimensions			
Height	2512	2512	mm
Width	860	860	mm
Width with machine electronics	1060	1060	mm
Depth	655	655	mm
Weight			
With machine electronics, approx.	700	700	kg
Drive			
Crosshead speed $v_{\min} \dots v_{\max}$	1 ... 250	1 ... 250	$\mu\text{m/h} \dots \text{mm/min}$
Deviation from the set drive speed, max.	$\pm 0.1^{3)}$	$\pm 0.1^{3)}$	% of v_{actual}
Drive travel resolution	0.136	0.136	nm
Crosshead return speed, max.	250	250	mm/min
Power input specifications			
Power supply voltage	230	230	VAC
Power consumption (full load), approx.	2.3	2.3	kVA

¹⁾ Maximum distance from the moving crosshead to the height-adjustable crosshead or base crosshead, without any accessories

²⁾ Clearance between the lead screws

³⁾ Measured over an interval of at least 5 s or 10 mm travel