Xpansion Instruments
Xpand Your Capabilities

SER Universal Testing Platform: SER2 Model Line

The New Paradigm in Physical Material Characterization

Extensional Rheology

Peel/Adhesion Testing

Friction Testing

Tensile Testing

Tear Testing

High-Rate Fracture

SER2 Technology: An Even Broader Range of Versatility and Adaptability

SER2-A

Building on the success of the original SER-HV model line, the SER2 model line can be accommodated on an even broader range of commercially available host rotational rheometer systems, defining a new standard in physical material characterization.

SER2 Model Line:

SER2-P - for the Anton Paar MCR 300/301/500/501

SER2-A - for the TA/Rheometrics ARES/RDA3/RDA2

SER2-G - for the TA Instruments AR-G2/2000EX

SER2-T - for the ThermoScientific MARS

SER2-M - for the Malvern Kinexus

SER2-R - for the Reologica NOVA

SER2-P

INSTRUMENT PARAMETER	SPECIFICATION
Maximum Operating Torque	2500 g-cm
Minimum Torque Threshold	< 0.1 g-cm
Maximum Recommended Hencky Strain Rate	20+ s^{-1}
Hencky Strain Per Drum Revolution	5
Maximum Tear/Peel Rate	100+ cm/s
Operating Temperature Range	0°C to 315°C
Windup Drum Diameter	1.031 cm (0.406 in)
Stretch Zone Gage Length	1.272 cm (0.501 in)
SAMPLE PARAMETER	**SPECIFICATION**
Min. Zero-Shear Viscosity (without fluid immersion)	~ 10,000 Pa-s
Sample Mass Range	5 – 200 mg
Recommended Sample Width Range	0.1 – 1.27 cm
Recommended Sample Thickness Range	0.005 – 0.1 cm

New Features

Detachable Drums

All SER2 models have removable drums that can be configured of any size, material of construction, or surface properties thereby greatly enhancing material characterization capabilities. This feature also greatly improves sample cleaning and residue removal.

Fluid Immersion Testing

Because both of the detachable drums are cantilevered and suspended from the SER2 base chassis, the SER2 models that are configured for use on controlled stress/strain rotational rheometers such as the SER2-P, SER2-G, SER2-M, SER2-T and SER2-R are capable of fluid immersion testing. The drums of said SER2 models can be raised from and lowered into a controlled temperature fluid environment contained within a jacketed beaker or other such fluid containment vessel. Applications include biomaterials testing as well as high-temperature silicon oil bath testing to eliminate any effects associated with molten sample sag at low viscosities.

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