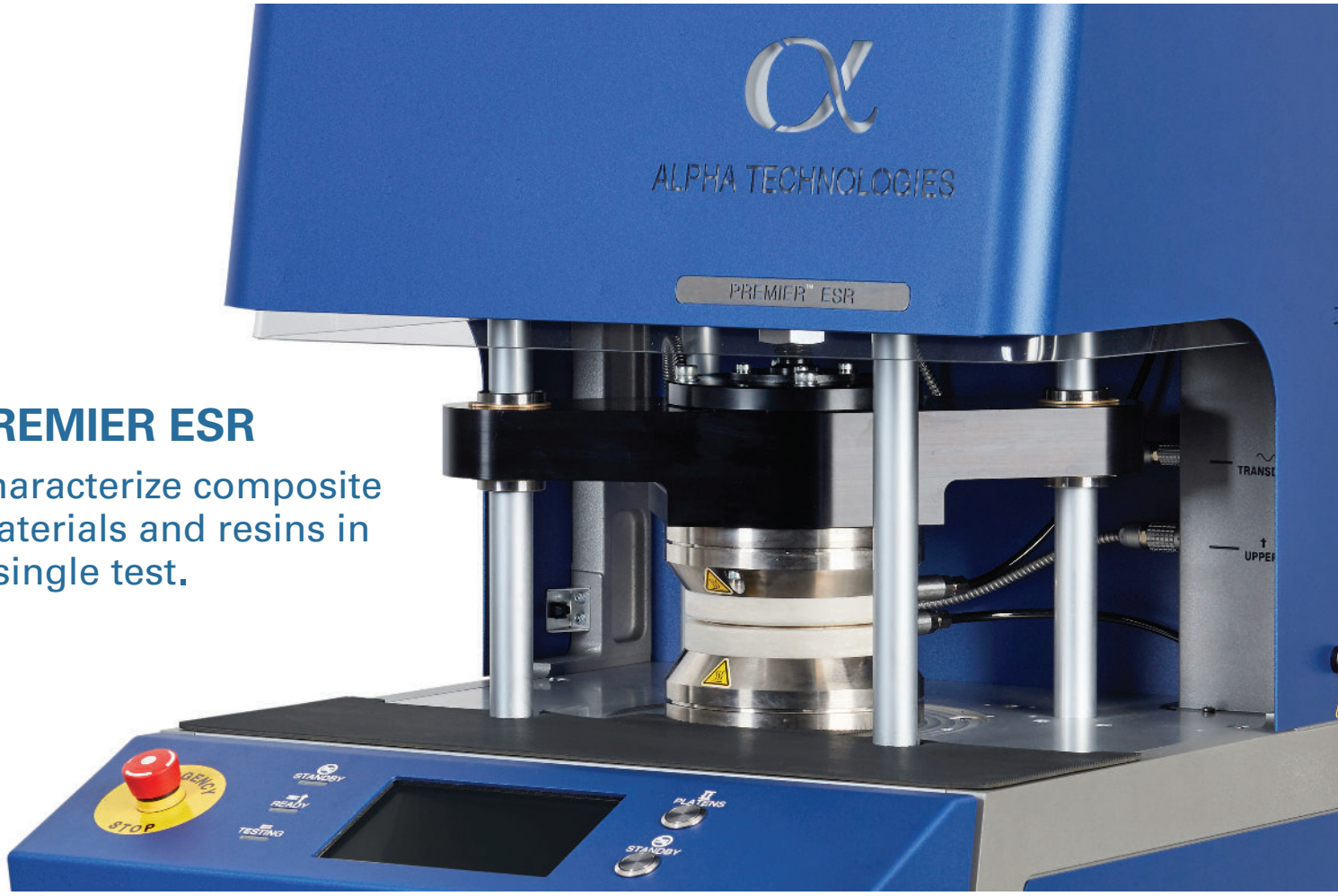


PREMIER ESR

Characterize composite materials and resins in a single test.

Designed for the next wave of high-performance materials.

Premier ESR is capable of testing cure properties using isothermal or nonisothermal temperature programs for a wide range of samples including resins, powder, pellets, liquids and prepregs. Premier ESR meets the ASTM D7750. It provides a cost-effective method to cure composite materials under any cure cycle necessary. In addition, the ESR is capable of measuring gel, cure and final physical properties from those conditions.

Applications using the Premier ESR include:

- Thermoplastics
- Thermoplastic Elastomers
- Thermosets
- Electronic Circuit Boards
- Aircraft
- Composites

How to compare Premier ESR with all the others.

Precision Encapsulated Sample Geometry – The pressurization of the sample holds the sample in place. That, in turn allows measurement of unidirectional laminates as well as optimization of cure profiles.

Test Under True Isothermal Conditions – Important for determining the state of cure and optimum viscosity, as many reactions are highly exothermal and require precise temperature control.

Separate Touchscreen User Interfaces – Workbench for instrument management and Online Manager for data analysis. Our custom electronics give you true multi-tasking. Unlike sluggish PLCs used by others, there's no waiting for the test to finish before being able to review data.

Soft Close Operation – Premier ESR controls the pressure of platens coming together to maintain sample positioning.

Custom Designed Flat Dies – Replaces Premier RPA's biconical dies. Our flat dies are essential for testing very hard materials.

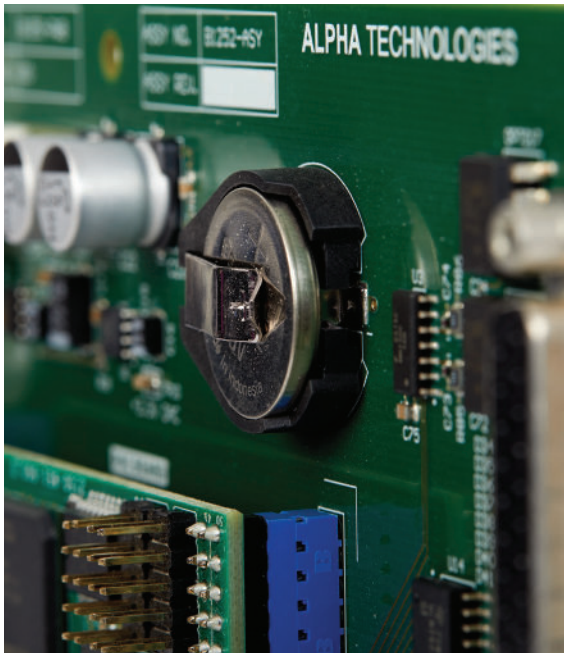
More standard features that make Premier ESR a cost effective alternative to a DMA.

K-Factor Calibration – Extends the range to higher modulus values by accounting for compliance in the transducer. Allows the measurement of very high modulus materials after curing.

Patented O-ring - Gives a constant resin-fiber ratio and improves repeatability.

Patented Limited Slip Die Option –Specifically designed for thermoplastic testing

High Temperature Testing – Premier ESR expands the range of testing from our standard 230ºC up to 350ºC .



SPECIFICATIONS

Standards:	ASTM D7750
Temperature Range:	Ambient to 662°F (350°C)
Heating Rate:	0.36 °F/min. (0.20 °C/min.) to 90 °F/min. (50°C/min.)
Max Cooling Rate:	54 °F/min. (30 °C/min.)
Torque:	0.005º to 90º (1256%)
Measurements:	Torque (S′, S″, S*), Tan(Delta), Dynamic Viscosity (η′, η″, η*),Shear Modulus (G′, G″, G*), Temperature (°C or °F), Strain (degrees, %, fractional strain), Frequency (cpm, Hz, radians/ sec), Pressure (kPa, psi)
Electrical:	100/110/120/130 VAC ±10%, 60 ±3 Hz, 20 amp single phase 200/220/240/260 VAC ±10%, 50 ±3 Hz, 10amp single phase
Air Pressure:	80 psi (5.6 kg/cm 2551 kPa minimum
Dimensions:	W: 22 in (56 cm), H: 48 in (122 cm), D: 25 in(64cm)
Weight:	Net 346 lb (157 kg), gross 616 lb (280 kg)

There's a lot to like about every Premier Instrument.

- Custom Electronics that are matched to the instrument. Better control. Better resolution.
- Custom Designed Heating Control System that ramps up heating cycles faster and maintains control for more accurate cure times and more efficient production.
- Efficient die cooling that gets your instrument ready for the next test.
- Smart Alignment and Dynamic Symmetry means you get on-target, parallel die closing, high stiffness and constant closing force.
- Cast Aluminum Frame that's lighter… stronger… stiffer.

For more information scan the QR code or visit alpha-technologies.com/premier-esr.

There's a lot riding on our testing.™

ALPHATECHNOLOGIES

Rheologists and Engineers

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