Biaxial Tensile Creep Tester

This biaxial tensile creep testing machine assesses material behavior under biaxial tensile loads. It features a temperature control system, LCD control box, and automatic leveling for convenient, reliable creep testing.

Overview

Advanced High-Temperature Testing Solutions

The RPL series electronic High-Temperature Creep Fatigue Testing Machine is a versatile system designed for evaluating material behavior under complex stress states. It supports a wide range of testing modes including creep, relaxation, durability, and low-cycle fatigue, even operating across zero-stress points. This robust system is ideal for characterizing the long-term deformation of metals, polymers, and composites in demanding thermal environments.

Core Capabilities

Available Test Modes	Creep, Relaxation, Durability, Low-Cycle Fatigue, Creep Fatigue, Compress Strength Over Zero, Strain Durability

Dynamic Performance

Dynamic Process Modes

- Tension-tension mode
- Tension-stress mode
- Over zero continuous operation

System Components

Standard Hardware

Draw Bar • Grips • Extensometer • High-Temperature Furnace • Precision Linear Actuators • Temperature Chamber

Control & Monitoring

Control System Features

- Fully automatic operation via special controller
- Real-time monitoring of force, displacement, and temperature
- Precise data acquisition and recording
- Separate column configuration available

Material Applications

Compatible Materials	Metals, Polymers, Composites, High-Temperature Alloys

Technical Design

Biaxial Loading Architecture

The machine features a robust frame equipped with precision linear actuators designed to apply controlled tensile forces in two orthogonal directions. This biaxial configuration ensures uniform stress distribution through specialized grips and fixtures, allowing for accurate characterization of materials under complex loading conditions.