



## DVD-2800 Ultra-High Temperature Dilatometer: Salient Features

- † Superior to competition
- ⌘ Unique to our equipment

### **Furnace:**

- Water cooled shell
- Water cooled end plates
- Water cooled current feed-throughs
- Carbon-fiber insulation
- Long-life, single piece heating element
- Gas purge swept sight windows to protect against deposits
- Vacuum and purge gas capability
- ⌘ Anti-syphon safety exit trap
- Environmentally friendly, energy saving design, dumping no heat load to immediate environment
- ⌘ Single range pyrometer covering 25 to 3000°C range seamlessly and without use of retractable thermocouples or dual pyrometers. (Standard range 25 to 2500°C)

### **Power Supply:**

- ⌘ Water cooled stepdown transformer for efficient, cool operation
- ⌘ Water cooled thyristor power controller
- Phase angle and current limiters
- Small physical size

### **Safety:**

- Furnace pressure relief valve
- ⌘ Water flow interlock sensor
- ⌘ Independent over-temperature sensor
- ⌘ Dead computer detector
- † Software selectable safety limits
- † Logical (in-software) software safety features

### **Dilatometer:**

- Counterbalanced stage to lift out dilatometer
- Water cooled instrument platform
- Select-grade graphite; dilatometer matched construction pushrods (Optional refractory metal construction)
- Sample tilt-out protection
- Easy removal and exchange of sample holder components
- ⌘ Dual sample (two independent) simultaneous, or differential operation
- Vertical configuration

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- ⌘ Optional range extension to 3000°C
- †⌘ Critical parts fabricated from nearly-zero expansion Invar (no need for expensive constant temperature circulators)
- ⌘ Counterbalanced push-rod using static weights
- † TMA Operation (optional)
- †⌘ Fully digital, absolute displacement transducer
- †⌘ Long stroke coupled with high sensitivity, especially useful for sintering work

#### **Temperature Programming:**

- ⌘ Digital adaptive temperature control which provides control to true sample temperature not to furnace temperature
- † Built in tutorial and simulation program
- † On screen programming with entry checks, 26 segment program
- Variable heating rates within a broad range
- Variable dwell temperatures, 1° increments
- Variable soak times, 1 minute increments
- † Up to 98 stored programs, with quick review window
- † Up to 9 repeat cycles

#### **Special Programs (Optional):**

- † Controlled rate sintering cycles
- † Softening point determination

#### **Data Analysis:**

- Fully automatic, computer controlled data reduction according to ASTM E228 procedures
- † Statistical evaluation of data and curve fitting
- † Computation of results in uniform intervals
- Percent expansion vs. temperature table
- Average coefficient vs. temperature table
- Instantaneous coefficient vs. temperature table
- Percent expansion vs. temperature plot
- Average coefficient vs. temperature plot
- Instantaneous coefficient vs. temperature plot
- †⌘ Automatic calibration cycles with multiple (stored) calibration files

SPECIFICATIONS AND FEATURES LISTED OR REFERRED TO ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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