# DIL 402 *Expedis Supreme*

## Dilatometry Redefined.

## High Temperature Version

### **Up to 2800°C**

### **Refined Safety System**

An elaborate safety system monitors the cooling water and purge gas flow throughout the measurement.

### **Variable Gas Atmosphere Is Key**

In the DIL 402 *Expedis Supreme* HT instrument, the sample chamber and furnace chamber are always separated by means of a protective tube (glassy carbon or alumina). This allows for the use of a different atmosphere around the sample than around the heating elements.In combination with an alumina protective tube (maximum furnace temperature: 1680°C), even an air atmosphere can be applied to the sample.

The optional *AutoVac* system for evacuating and refilling the sample chamber along with integrated purging of the pyrometer window effectively supports the direct switch between oxidizing and inert conditions.

### **Broadest Application Range**

Two graphite furnaces with end temperatures of 2400°C and 2800°C provide the appropriate configuration for measuring the thermal expansion of metals, alloys, ceramics and composites in applications such as aerospace, power generation, the oil and gas industry or demanding research.

However, via an adapter, each of these graphite furnaces can be replaced with a standard furnace such as SiC, SiO2, Cu or steel. The opposite is also feasible: A DIL 402 *Expedis Supreme* HT measuring part with a standard furnace can be subsequently retrofitted with a high-temperature furnace.

### **Pyrometer for Detection of the Highest Temperatures**

Since W-Rh thermocouples can react with graphite above 2000°C, the sample temperature of the DIL 402 *Expedis Supreme* HT is measured optically with a high-performance pyrometer from room temperature onward.