

# CTE MODEL 25-400 CONSISTOMETER



5704 East Admiral Blvd  
Tulsa, OK 74115  
+1.918.835.4454 Office  
+1.918.835.4475 Fax  
info@ctetulsa.com Email  
www.ctetulsa.com Web

## PRESSURIZED CONSISTOMETER

The **CTE Pressurized Consistometers, Model 25-400 and Model 25-400-2**, are specifically designed to measure cement slurries in strict compliance with ISO-10426, API Spec 10A and API RP-10B Schedules. In addition, the units can be used to prepare slurries for the measurement of free water content, viscosity, fluid loss, and rheological properties.

Cement slurries for testing are mixed with a CTE Model 7000 or 7100 Constant Speed Mixer in compliance with ISO and API Spec. The slurry is then poured into the sample container and placed in the consistometer. Next, the pressure and temperature in the consistometer are brought up to the desired testing conditions according to API cementing recommendations or the condition of a specific well. The slurry container is rotated at a constant speed of 150 rpm to circulate the slurry and simulate pumping conditions.

The Model 25-400 and 25-400-2 Consistometers have wide pressure and temperature operating ranges—up to 25,000 psi (170MPa) and 400° F (205° C). They are supplied with a magnetic drive for the rotational drive of the slurry cup as standard equipment.

With high temperatures and pressures applied to the Both single and dual cell units are available. The cement, it is possible to simulate a variety of conditions dual cell units offer the advantage of a minimum found in actual down-hole well cementing. The measured amount of laboratory space. They also offer a slightly thickening time can then be used to formulate plans for lower cost per cell because two pressure cells are the actual cementing of the well. combined into one cabinet.



## OPERATION

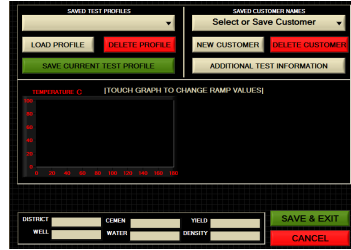
Operation of the pressurized consistometer is simple with all of the operational controls conveniently located on the front panel. The readout indicators for the viscosity, pressure, and temperature, as well as operational instructions, are easily read from the 12-inch color touch-screen.

The consistometer is designed so that closure, heating, and pressurization can be achieved quickly. This ensures compliance with the requirement of ISO and API schedules.

The temperature control system will automatically control the rate of temperature rise of the slurry (i.e. temperature gradient). When the slurry reaches the desired maximum temperature, the system will hold the slurry temperature at that level.

The temperature and viscosity of the slurry, and current pressure (optional) are displayed constantly on the touch-screen numerically or graphically at the user's option.

# CTE MODEL 25-400 / 25-400-2



## DRIVE UNIT

Drive Motor: .016 Hp, 36VDC

Drive Speed: 150 rpm

(Variable Speed Optional)

## AIR/WATER CONNECTIONS

Water In/Out: 1/8 MNPT (2)

Air Input: 1/8 MNPT (1) max 120psi

## FEATURES

- ◆ Embedded processor for temperature control and data acquisition
- ◆ 12 inch color touch-screen for display of testing parameters and access to programmable features
- ◆ Digital temperature indication
- ◆ OPTIONAL: Pressure Indication or Control
- ◆ Easy network setup for remote viewing in real-time
- ◆ USB drive for software upgrades and data down-loading
- ◆ Maximum operating pressures to 25,000 psi (170MPa)
- ◆ Maximum operating temperatures to 400° F (205° C)
- ◆ Standard with magnetic drive
- ◆ Adjustable alarm for viscosity levels
- ◆ Cooling jacket on pressure vessels
- ◆ Permanent file by serial number for every instrument
- ◆ Oil reservoir cooling
- ◆ Standard computer-industry electronics assure quality performance
- ◆ No other processor or PC is required to operate the system

## BENEFITS

- Instructions displayed on touchscreen allow first-time users to operate instrument efficiently
- Rate of temperature rise of the slurry can be closely controlled over a wide range of temperature gradients including a multi-slope gradient
- ASCII files can be transferred to any existing user data base
- Easy network configuration for remote viewing of tests, data transfer.
- Hundreds of similar units are in operation with interchangeable parts
- High - wattage slurry heater provides high heating rates needed to simulate high temperature gradients in wells as required by ISO and API schedules
- Permanent record of both temperature and viscosity (consistency) in ASCII file.
- The units have a viscosity alarm that can be set over the range from less than 30 Bc to 100 Bc
- The cooling jacket around the pressure vessel permits the circulation of a cooling fluid to cool the pressure vessel quickly
- The testing results are put into the permanent fabrication file of each individual unit.
- Oil reservoir cooling used to rapidly cool oil between tests

## ENVIRONMENTAL AND UTILITY CONNECTIONS

### ELECTRICAL

Input Voltage: 230 VAC (±10%)  
 Input Power: 6500W  
 Current: 30 A  
 Input Frequency: 50-60 Hz

### ENVIRONMENTAL

Operating Temperature: 32 to 105°F  
 0-40°C  
 Operating Humidity: 0-95% non condensing

### MECHANICAL (Single, 2X for Dual)

Height: 75 in. (190 cm)  
 Width: 41 in. (104 cm)  
 Depth: 38 in. (96 cm)  
 Weight: 1380 lb. (627 kg)

### HEATER

Heater Power: 5000 W  
 Heater Type: Cast Heater w/  
 Cooling Coils  
 Heater Control: SS Relay

## WARRANTY

All CTE products are covered by a full one-year warranty against defect in materials and workmanship. A sales terms, conditions, and warranty statement is included with each quotation or confirmation of order.