



M7370 AUTOMATIC TWIN CELL ULTRASONIC CEMENT ANALYZER

M7370 uses automatic controls to perform non-destructive strength tests on cement slurries under high pressure and temperature conditions.

- Features twin cell design.
- Pressure and temperature are monitored and regulated automatically.
- Completely automatic pressure control—regulator adjustment not required.
- User-friendly, touchscreen display.
- Continuous measurement of cement sample under conditions of temperature and pressure.
- No sample contamination by pressurization media.
- Test sequences can be amended during test operations.
- Easy-to-use, lightweight pressure vessels capable of up to 10,000 psi.
- Unit and chambers are easy to clean up and maintain.
- Analysis software is compatible with *Microsoft Windows*.



M7370 Front Control Panel

PRODUCT DESCRIPTION

Compact, Lightweight Design with Powerful Capabilities

The *Grace Instrument M7370 Automatic Pressure Control Twin Cell Ultrasonic Cement Analyzer (UCA)* is designed to perform compressive, non-destructive strength tests on cement slurries under controlled conditions of temperature and pressure. The *M7370* features a twin cell design and allows the user to operate either one or both cells depending on the requirement. The *M7370* transmits an ultrasonic pulse through a cement slurry sample. By measuring the length of time required for the pulse to travel through the sample, the *M7370* software determines the compressive strength of the cement.

As the cement hardens, the pulse transit time becomes shorter, allowing the software to calculate changes in the compressive strength of the cement sample over time. This data is then collected into a customized database for comprehensive analysis, including for comparison with data from previous tests. This data can be easily exported in spreadsheet format.

Completely Automatic Pressure Control—Regulator Adjustment Not Required

Pressure control is completely automated. The user is not required to make any complicated regulator adjustments. Pressure control is simply hands-free for maximum efficiency. Just set the pressure in the *M7370* software or touchscreen, and it takes care of the rest.

User-Friendly, Touchscreen Display

Front touchscreen display is easy-to-use and intuitive. During operation, this LCD displays a convenient at-a-glance view of important running parameters such as pressure, temperature, compressive strength, and more. The user has full control of local operations via the touchscreen including, but not limited to, calibration and stopping test functions. An internal local single board computer adds another layer of safety to the unit by automatically shutting down tests and/or the machine in case of overheating, overpressure conditions, or PC operating system errors (in case user connects his or her own PC).

Innovative Technology Provides Efficiency and Dependability

Understanding and predicting the likely expansion or contraction of oil well cement during curing is tremendously important in maintaining the integrity of a well. By enabling the researcher to construct test sequences, analyze completed test results, and compare those results with previous results, the *M7370 Automatic Twin Cell UCA* delivers a powerful analytic tool in one compact package.

SPECIFICATIONS

Temperature Range	Ambient to 400°F
Pressure Range	Atmospheric to 10,000 psi
Coolant Supply	Tap Water or Chiller
Chiller/Cooling Water Pressure	5-80 psi
Compressed Air Pressure	60-100 psi
Utility Inlets	¼-Inch Female NPT
Operating Humidity	0-95% Non-Condensing
Heater Power Consumption	2 x 1,500 W (1,500 W per Heater)
Total Power Consumption	3,000 W
Power Supply Voltage	220-240V AC
Power Supply Line Frequency	50-60 Hz
Height	27 in.
Width	18 in.
Depth	21 in.
Weight	100 lbs.