CTE Curing Chambers are specifically designed to prepare cement samples for comprehensive strength testing in strict accordance with API and ISO specifications. These pressurized curing chambers contain pressure vessels with controlled heating rates, and are used to cure standard two-inch cement cube samples. CTE curing chambers are available to cover the wide range of temperatures and pressures associated with actual conditions found in oil well cementing applications.

Units are available in a range of pressures up to 5000 psi (35MPa), and temperatures up to 850°F (450°C) pressurized by water. The 30-series units have extended pressure ranges to 30,000 psi (210MPa) and temperatures to 700°F (370°C), and use oil as the pressuring media. Cement slurries for testing are initially mixed with a constant speed mixer in compliance with API and ISO specifications. The slurry is then poured into slurry molds and the molds are lowered into the pressure vessel. The pressure vessel is brought up to temperature and pressure to meet the conditions of the specific well being studied. Typical values for the increase of temperature and pressure on the samples in the molds are detailed in API Spec 10.

Testing to determine the compressive strength of samples is usually done after the samples have been cured for hours or days. The actual testing of the cubes is done with a compressive strength tester. The tester will crush the samples in compliance with the API Specification 10 requirements. Curing chambers are used in oil well cement research programs, research and testing of cement additives, cement manufacturer’s quality assurance programs, and in the research and field laboratories of well servicing companies. These units cover a wide range of operational temperatures and pressures to simulate a wide variety of down-hole conditions. Both single and dual cell units are available. The dual cell units decrease laboratory space requirements. They also offer a slightly lower cost per cell because two pressures vessels are combined into one cabinet.

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.
**AVAILABLE MODELS / OPTIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3-700-4</td>
<td>Curing Chamber, 4 Cube, Small Cabinet, 3600 psi</td>
<td></td>
</tr>
<tr>
<td>M3-700-8</td>
<td>Curing Chamber, 8 Cube, Small Cabinet, 3600 psi</td>
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</tr>
<tr>
<td>M3-700-8-2</td>
<td>Curing Chamber, Dual, 2x8 Cubes, Full Size, 3600 psi</td>
<td></td>
</tr>
<tr>
<td>M3-700-16</td>
<td>Curing Chamber, 16 Cube, Full Size, 3600 psi</td>
<td></td>
</tr>
<tr>
<td>M5-700-8</td>
<td>Curing Chamber, 8 Cube, Full Size, 5000 psi</td>
<td></td>
</tr>
<tr>
<td>M5-700-8-2</td>
<td>Curing Chamber, Dual, 2x8 Cubes, Full Size, 5000 psi</td>
<td></td>
</tr>
<tr>
<td>M5-700-16</td>
<td>Curing Chamber, 16 Cube, Full Size, 5000 psi</td>
<td></td>
</tr>
<tr>
<td>M30-700-8</td>
<td>Curing Chamber, 8 Cube, Full Size, 30,000 psi</td>
<td></td>
</tr>
<tr>
<td>M30-700-8-2</td>
<td>Curing Chamber, Dual, 2x8 Cubes, Full Size, 30,000 psi</td>
<td></td>
</tr>
<tr>
<td>M30-700-16</td>
<td>Curing Chamber, 16 Cube, Full Size, 30,000 psi</td>
<td></td>
</tr>
</tbody>
</table>

**BENEFITS**

- Special long-life “Bridgeman” seal proven to be extremely reliable under high temperature stress and does not require cooling.
- Units operate to extremely high temperatures and pressures to include well conditions with geothermal temperatures and ultra deep pressures.
- Hundreds of similar units are in operation.
- Rugged design. Data has shown that the useful life of this unit can easily exceed ten years with normal routine maintenance.
- The internal cooling coils permit the circulation of a cooling fluid to cool the chamber quickly - maximizing the number of tests that can be run in a day.
- Dual cell units are cost efficient and take less laboratory space than two single cells.
- Every curing chamber is fully tested in the factory to the maximum rating of the unit, ensuring that the instrument is completely and satisfactorily operational.

**ENVIRONMENTAL & UTILITY CONNECTIONS**

**ELECTRICAL**

- Input Voltage: 230 VAC (±10%)
- Input Power: VARIES
- Current: VARIES
- Input Frequency: 50 -60 Hz

**ENVIRONMENTAL**

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

**AIR/WATER CONNECTIONS**

- Water In/Out: 1/4 MNPT (2)
- Air Input: 1/4 MNPT (1) (Max 120psi)

**MECHANICAL**

- Height: VARIES
- Width: VARIES
- Depth: VARIES
- Weight: VARIES

**HEATER**

- Heater Type: Heater Bands
- Heater Type: Cooling Coils
- Heater Control: SS Relay