

# CTE EXPANSION MOLDS



## EXPANSION MOLDS

Cement Test Equipment expansion molds are designed to simulate the expansion properties of cement compositions placed into the annulus of a well. In a typical well cementing operation, a cement slurry is run into the annulus between the well casing and the bore hole, frequently at more than one location in the bore hole. As the cement slurry hardens to a solid during the setting-up period, it is essential that the cement composition expand sufficiently to provide a good bond with the well casing and also the wall of the borehole. Otherwise, if the cement should shrink during hardening, it can leave channels between the borehole wall and the cement column and between the cement column and the well casing. This “channeling” effect is undesirable for several reasons. One reason is that gas or oil from a producing formation could leak into these channels and thus by-pass the production tubing which carries it to the well head.

The expansion mold’s cylindrical outer sleeve has a vertical slit on one side to allow the sleeve to expand. Pins are located on opposite sides of the slit. A spring is utilized across the pins to keep the sleeve in a closed position before a test has begun. In the test procedure, the sleeve is filled with wet cement, which is then cured to a solid phase. As the cement cures it causes the sleeve to expand along with the spring. The actual expansion of the sleeve represents an expansion factor for the cement. This factor is calculated by measuring the distance across the pins, before and after the cured cement expands the sleeve. CTE offers two sizes of expansion molds, one to fit CTE curing chamber pressure vessels and another to fit CTE UCA pressure vessels. Mold units are stackable. The molds may also be used in waters baths for example. Made from high-quality, stainless steel in the USA. The material is non-corrosive, ultra durable and will last a long time with proper handling and maintenance. An optional stainless steel bucket is available for water/oil separation testing requirements on the larger curing chamber size only. Please also specify if you require the appropriate micrometer.



## SPECIFICATIONS

Model	Height	Diameter	Weight	AVG ID
UCA; 05-0100-1	1.16” (2.95cm)	2.18” (5.5cm)	0.51lbs (0.23kg)	1.79” (4.55cm)
Curing Chamber; 05-0100-2	1.29” (3.3cm)	3.9” (10cm)	2.2lbs (1kg)	3.35” (8.5cm)



**CEMENT TEST EQUIPMENT, INC.**  
 +1 (918) 835-4454  
 info@ctetulsa.com  
 www.ctetulsa.com

## 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.