M1520 HIGH-TEMPERATURE ANNULUS CEMENT EXPANSION AND SHRINKAGE MEASURING/TESTING KIT

- Easy-to-use, compact, lightweight, and portable.
- Includes stainless-steel ring mold, micrometer, micrometer stand, and complementary carrying case for portability.
- Comprehensive kit simulates and measures cement slurry volume expansion and shrinkage.
- Ring mold withstands high-temperature expansion and shrinkage testing.
- Results can be used to determine slurry volume change in real-world cementing applications to engineer optimal cementing solutions.
- Compatible with most standard high-temperature water baths, curing chambers, and consistometers.
- Also conveniently compatible with Grace Instrument high-temperature curing chambers, consistometers, and water baths (sold separately). (Contact Grace Instrument for exact model numbers of compatible units.)
- Compliant with API Recommended Practice 10B-5 (RP 10B-5).
PRODUCT DESCRIPTION

Cement kit simulates slurry expansion and shrinkage in an annulus

The Grace Instrument M1520 High-Temperature Annulus Cement Expansion/Shrinkage Measuring/Testing Kit is a comprehensive tool kit that simulates and measures cement slurry volume expansion and shrinkage in the annulus of an oil well. The M1520 kit is easy-to-use, compact, lightweight, and portable. It includes a stainless-steel ring mold, micrometer, micrometer stand, and complementary carrying case.

The ring mold contains an inner and outer ring that simulates the same structure of the circular annulus between an actual bore hole and well casing. Cement slurry is first poured into the ring mold and allowed to fill the mold’s annulus. Next, an initial measurement of the cement volume between a gap on the back of the mold is taken with the included micrometer. The mold is then placed inside a bath, consistometer, or curing chamber. (This ring mold can withstand high-temperature testing conditions.) Once cured, the cement sample is remeasured using the micrometer placed in the included micrometer stand for extra stability. The difference between the initial and final measurements can be used to determine the expansion or shrinkage of the slurry in an actual annulus. Using these results, ideal cement compositions can be engineered to work optimally with the bore hole and well casing walls of the oil well.

The M1520 is a powerful testing tool. It can accurately measure cement slurry expansion and shrinkage characteristics, which can be then applied to real-life cementing applications. This product is compatible with most standard high-temperature water baths, curing chambers, and consistometers. It is also conveniently compatible with several Grace Instrument high-temperature curing chambers, consistometers, and water baths (sold separately). (Contact Grace Instrument for exact model numbers of compatible units.)

The M1520 is compliant with API Recommended Practice 10B-5 (RP 10B-5).

ADDITIONAL INFORMATION

Included Kit Items

- Stainless-Steel Ring Mold
- Micrometer
- Micrometer Stand
- Portable Carrying Case

Max. Curing Temperature

400°F (204°C)

Carrying Case Dimensions

12" W x 14⅞" L x 7⅛" H

Ring Mold Dimensions

3¾" Dia. x 1⅜ H"

Compatible Grace Instrument Units (Sold Separately)

Grace Instrument High-Temperature Curing Chambers, Consistometers, and Water Baths (Contact Grace Instrument for exact model numbers of compatible units.)

Compliances

API Recommend Practice 10B-5 (RP 10B-5)