Creep & Shrinkage

Creep and shrinkage test specimens are very sensitive to ambient temperature and humidity conditions, thus it is imperative that the test environment is maintained at the specified temperature and humidity levels.

ASTM C512 “Creep of Concrete in Compression” requires test conditions be maintained at 23±1.5°C and 50±4% relative humidity. CTLGroup’s environmental laboratory for creep and shrinkage is typically at 23±0.5°C and 50±2% RH to assure reliability of test results. Environmental conditions are continuously monitored electronically. Automated alerts are generated to notify laboratory personnel if room conditions deviate from the specified range.

CTLGroup uses custom designed frames to perform creep tests. These frames maintain load using disk springs specifically selected to maintain constant load over the range of deformation typically encountered during creep tests. Maximum applied loads to 1 MN are possible using these frames. Creep and shrinkage deformations are measured using externally mounted mechanical gage points and a digital length change comparator with a resolution of 0.001 mm. We have the capacity to conduct over 30 creep and shrinkage tests concurrently.