

Concrete Testing Systems



ADMET - The Leader in Concrete Testing Systems

In the early 1990s, most concrete testing machines employed dial gauges with limited resolution and accuracy to indicate force. A stopwatch was used with the dial gauge to provide a crude measurement of loading rate. Operators wrote the maximum force readings for each test on a clipboard to be converted later into compressive strength then typed into a database. It was clear that there were many opportunities to introduce errors into the test results. ADMET recognized the limitations of the early 1990s equipment and applied its expertise in software, instrumentation and control to develop the first digital indicating system designed for testing concrete according to ASTM C39, C109 and C78.

Since then, high strength concrete, fiber reinforced concrete, and new uses for concrete and cementitious materials have become common. These new materials require more advanced testing according to ASTM C469 (Test Method for Static Modulus of Elasticity and Poisson's Ratio) and C1609 (Test Method for Flexural Performance of Fiber-Reinforced Concrete). Throughout these changes, ADMET has led the way in the development of new software, controllers, and test systems to meet the higher demands of these new demanding testing requirements.

Materials Testing Systems

ADMET Digital Indicating Systems

ADMET's digital indicators pioneered many firsts in the concrete testing industry. We were the first to:

- Include specimen type/geometries to facilitate compressive and flexural strength measurements
- Include C39 cylinder correction factor to automatically adjust compressive strength readings according to the length to diameter ratio
- Provide both load and stress rate indication which enabled the operators to adjust the manual loading valve during test to stay within the specified rate limits
- Enable operators to store date, time, specimen size, specimen age, specimen weight, cylinder cap type, and cylinder break type with each compressive strength result
- Allow the test results including specimen information via serial communication link to be downloaded to a computer for easy import into common spreadsheet programs or a company database designed to generate compressive strength reports for their clients
- Offer a single range force measurement system that expanded the ASTM E4 force range for all concrete testing machines and made it possible to test accurately at lower forces than previously thought possible

ADMET offers a full range of digital indicators for concrete testing. These indicators can be installed on new machines or retrofitted to existing machines in the field. Indicator selection is dependent on the testing requirements and testing machine.

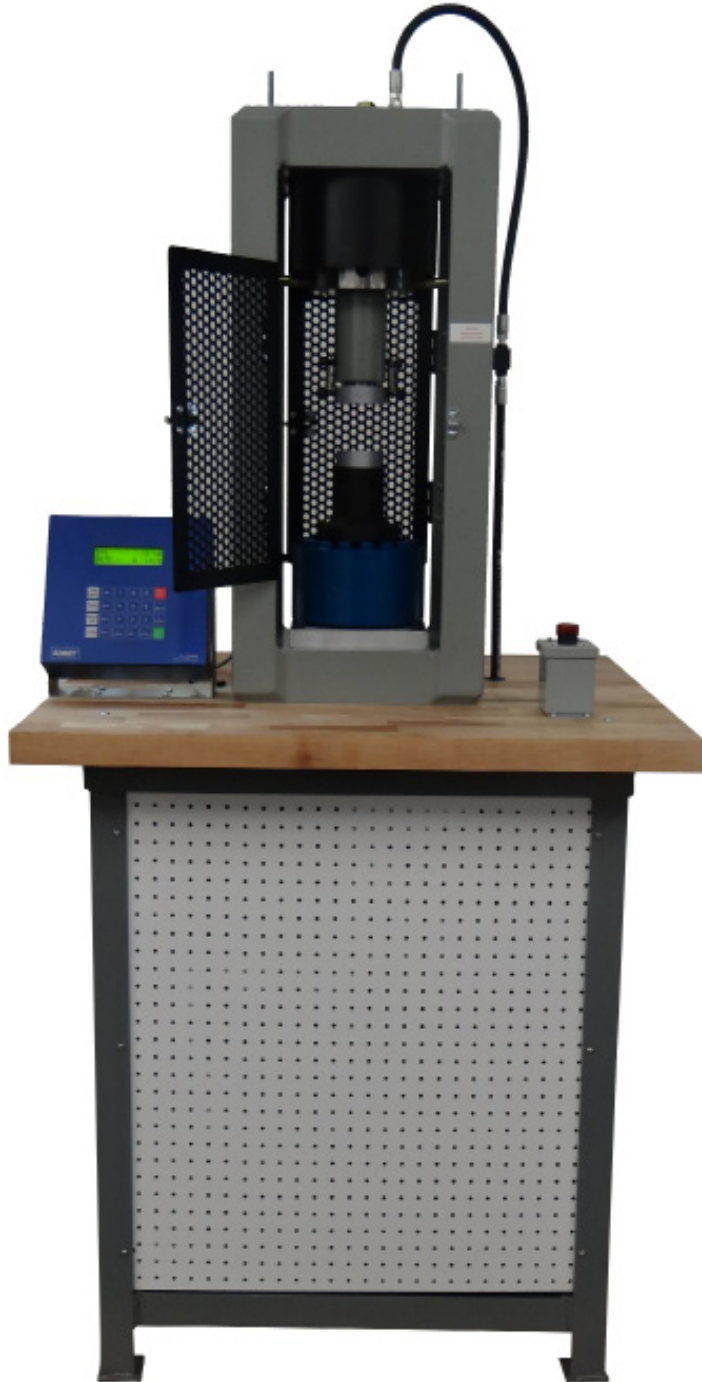
ADMET also offers easy to install retrofit kits for existing machines that include the ADMET digital indicator of your choice, pre-wired pressure transducers or load cells, an indicator mounting bracket, and software to upload your results to a PC.



Model	ASTM Test Methods	Live/Peak Load (Lbf, N, kN, kg)	Live/Peak Stress (psi, MPa, kPa)	Indicate Test Rate	Verify Test Rate	Transfer Test Results to PC	Generate Load & Stress vs Time Curves
Pi	C39, C78, C109	✓					
Pi-R	C39, C78, C109, C293	✓		✓			
Pi-XS	C39, C78, C109, C293	✓	✓	✓		✓	
DFG	C39, C78, C109, C293, C496	✓	✓	✓	✓	✓	✓
GB2	C39, C78, C109, C293, C469, C496	✓	✓	✓	✓	✓	✓

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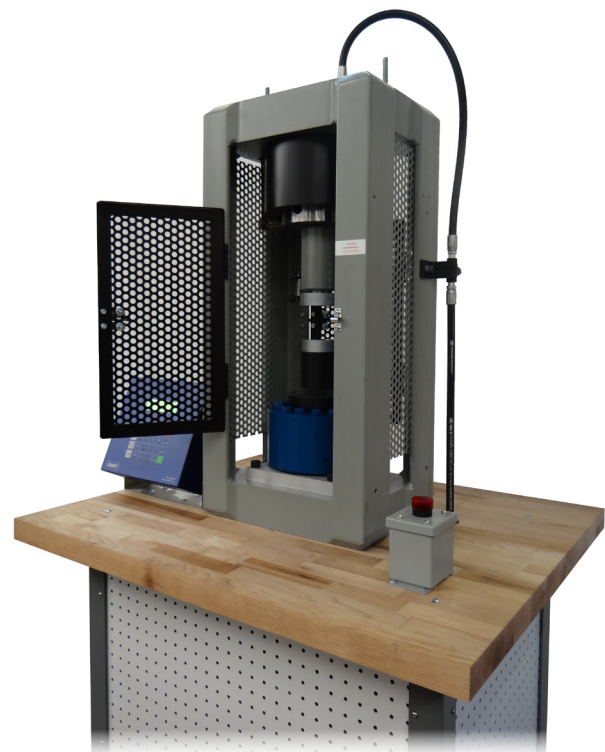
MegaForce Automatic Concrete Testing System



Concrete testing frames equipped with MegaForce and Gauge Buster 2 Indicator

ADMET's MegaForce Automatic Testing System offers a low cost servo-controlled solution for error-free testing of concrete beams, cylinders, and cubes. MegaForce can also be easily retrofitted to existing manually operated concrete testing machines. Most concrete tests are performed with manually operated testing machines which are susceptible to test rate errors because the operator does not adjust the manual control valve properly. MegaForce eliminates compressive and flexural strength errors because it automatically maintains the specified ASTM test rate throughout the entire test.

With MegaForce you can also extend the capability of your existing concrete compression testing machine. Test labs often have a small 30,000 lb capacity machine to test beams and a larger system with capacity in excess of 250,000 lb to test cylinders. With MegaForce you can test your cylinders, cubes and beams all on one machine.



ADMET Leading the Way in Fiber Reinforced Concrete (FRC) Testing

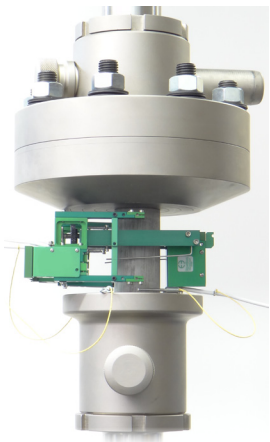
ADMET testing systems and software were used by the engineers who developed the initial test standards for fiber reinforced concrete. This early work resulted in ASTM C1609 Flexural Strength of Fiber Reinforced Concrete being adopted as one standard used to qualify this composite material.

ASTM C1609 specifies that the test must be performed in servo control at very slow net deflection rates. ADMET is one of the only testing machine manufacturers in the world that offers equipment to perform this demanding standard. Almost all C1609 tests can be performed on a 100kN (22,500 lbf) testing machine. ADMET offers a complete C1609 test package which includes our eXpert 2654 Dual Column Testing Machine equipped with the MTESTQuattro® Materials Testing System and the 3-point bend fixture with associated transducers to measure net deflection.



eXpert 2654 100 kN system configured for ASTM C1609 testing

Want to Measure Modulus and Poisson's Ratio According to ASTM C469?



Concrete cylinder sample for ASTM C469 Testing

ADMET offers eXpert 1600 series Servo-Hydraulic Testing Machines to measure the compressive modulus and poisson's ratio of concrete. The 1600 series servo controlled test machine includes the MTESTQuattro Materials Testing System plus axial and transverse extensometers or a compressometer fixture.

The Gauge Buster 2 Digital Indicator can also be installed on new or existing manually operated concrete compression testing machines to perform ASTM C469 tests. Included in this package is ADMET's GaugeSafe software plus a compressometer strain measuring fixture.

Concrete Testing Solutions from ADMET

ADMET testing systems are trusted by leading concrete producers and contractors to determine and verify mechanical properties. Our systems are capable of performing compression and flexural tests according to ASTM and ISO standards. Our ability to design a system to fit specific needs allows ADMET to provide testing solutions for even the most unique and demanding applications. ADMET Concrete Systems can be equipped with one of our easy to use controllers. Our testing system reliability, price vs. performance, and ease of use combined with our responsive customer support make ADMET a valuable partner in your testing efforts.

To see ADMET's full line of products, visit us at www.ADMET.com