FORNEY TEST MACHINES

FW-100-VFD-C-SP AUTOMATIC COMPRESSION TEST MACHINE FOR CONCRETE PAVERS

COMPRESSION MACHINE

LOAD CAPACITY	FRAME	CONTROL SYSTEM
100,000lb	Standard (F)	VFD

TEST TYPES	TESTING MATERIALS	DESIGNED & BUILT BY FORNEY
Compression, Flexural, Tensile Splitting	Cylinders, Slab, Paver, Refactory Brick	Exceeds ACI Recommendations

DOWNLOAD SPEC SHEET

GET A QUOTE



CLICK HERE - FINANCING OPTIONS AVAILABLE

GET A CONNECTED MACHINE AND SAVE $1,500

NATIVE TWO-WAY INTEGRATION WITH CMT SOFTWARE

Connected Testing Machines allow technicians to get more done faster with minimal human error through a two-way integration with ForneyVault. Resulting in 99.9%+ fewer manual errors, 66%+ increase in productivity, and 100% unalterable, unquestionable data.

- "One-touch" test starts and automatic controls
- Pre-test "Smart Checks" to validate test parameters
- Automatic preload calculations, notifications for individual and average low breaks and excessive variance, automatic data transfer, and more

SEE HOW IT WORKS

GET A CONNECTED QUOTE

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HARDWARE

FRAME

Designed and built by Forney.

The load frame is manufactured from structural steel angles welded to top and bottom crossheads of solid steel plate. The hydraulic cylinder assembly is mounted to the top crosshead, with force being applied in a downward direction. This design eliminates foreign material build-up around the piston cylinder area.

MATERIALS

Test segmental concrete paving slabs and other cementitious materials.

CONSOLE DESIGN

The electronic control cabinet houses the variable frequency drives, power supplies, E-Stop, and additional electrical equipment to control the load frame. It also includes the human-machine interface (HMI) and a hydraulic power unit with pumps, valves, and other necessary equipment, all mounted on an extruded aluminum post.

ELECTRICAL

A PC-based system utilizes a variable frequency drive to control the hydraulic pump motor. This maximizes efficiency – only running the pump at speeds necessary to achieve the desired pressure. This energy-efficient approach dramatically reduces heat build-up in the hydraulic system and greatly extends hydraulic component life.

Here are the main components of the system:

- Variable frequency drive (VFD)
- Windows-based touchscreen human machine interface (HMI)
- Pressure transducer that provides pressure feedback
- E-stop PB
- Limit switch
- Solenoid-operated dump valve

SAFETY FEATURES

Several safety features are incorporated to protect both operator and testing machine:

- Maximum Capacity Protection: A high-pressure safety relief value protects the hydraulic circuit and load frame from exceeding maximum capacity.
- Overextension Protection: A piston over-extension limit switch system protects against piston extension beyond maximum travel.

SOFTWARE

EASY AUTOMATIC TESTING

Push one button and the machine performs the complete test, including piston retract. Accurately controls the rate of load at the desired setting, thus no question about meeting ASTM (or other) specifications and ensuring repeatable results. Frees the operator to do other tasks while testing is in process.

DIGITAL CONTROL SYSTEM

Setup of testing protocol, real-time display of test data, and post-test data transfer is accomplished through the ForneyLink touchscreen HMI. The operator can navigate options for:

- Test Run
- Test Setup
- Machine Setup
- Calibration
- Reporting and Data Transfer
- Diagnostics

Provides simultaneous display of force, stress, and rate of load and displays a real-time graph of Load vs. Time. Standard functionality includes data collection by the ForneyLink HMI for printing and transfer.

CMT SOFTWARE INTEGRATION

Connected testing machines natively integrate with ForneyVault CMT software, improving important processes before and after an automatic test.

Before the test, Connected machines will:

- Enable positive specimen identification via barcode scan
- Provide pre-test “Smart Checks” based on preloaded sample and specimen data to validate sample date, ample size and type, and expected strength.
- Validate specimen geometry.
- Calculate preload settings based on actual and/or expected strength.

After the test, Connected machines will:

- Provide detailed XY plot data for every test performed.
- Transfer data automatically to LIMS packages, QC systems, or other software.
- Alert to warn calibration expiration.
- Notify correction factor use, individual low breaks, and excessive variance.
- Enable intelligent workflows for detailed reporting and approvals.

REMOTE SUPPORT

With a user-provided Internet connection (either Wi-Fi or Ethernet), all Forney VFD systems can receive real-time, online support from the Forney Support Team for basic settings and test setup to advanced troubleshooting, fault finding, and software updates.

We offer unlimited Remote Technical Support for all Forney Testing Machines during the two-year warranty period.

For ForneyVault® subscribers, post-warranty remote technical support fees are waived for the life of your subscription.

Please refer any special requirements to a Forney sales representative.

*** Specifications are subject to change without notice.**

ACCESSORIES	
Cylinder Compression (6" Dia x 12" L with Pad Caps) (150mm x 300mm)	TA-0103 Cylinder Top Platen Assembly TM-0095 Bottom Platen TM-2035 Centering Stud
Cylinder Compression (6" Dia x 12" L with Capping Compound or Ground Ends) (150mm x 300mm)	TA-0103 Cylinder Top Platen Assembly TA-0151 Bottom Platen TM-2035 Centering Stud
Cylinder Compression (4" Dia x 8" L with Pad Caps) (100mm x 200mm)	TA-0103 Cylinder Top Platen Assembly TM-0095 Bottom Platen TM-2035 Centering Stud TA-0173 Spacer, 4" H TM-2035 Centering Stud
Cylinder Compression (4" Dia x 8" L with Capping Compound or Ground Ends) (100mm x 200mm)	TA-0103 Cylinder Top Platen Assembly TA-0151 Bottom Platen TA-0173 Spacer, 4" H (2) TM-2035 Centering Stud
Cylinder Tensile Splitting (6" Dia x 12" L) (150mm x 300mm)	TA-0107-01 Cylinder Splitting Accessory TM-0074 Bottom Platen TA-0171 Spacer, 2" H (2) TM-2035 Centering Stud
Cylinder Tensile Splitting (4" Dia x 8" L) (100mm x 200mm)	TA-0107-01 Cylinder Splitting Accessory TM-0074 Bottom Platen TA-0173 Spacer, 4" H (2) TM-2035 Centering Stud
Cube (2") (50mm)	TAG-0017 Cube (2") Accessory Kit TA-0171 Spacer, 2" H TM-2035 Centering Stud
Cube (6") (150mm)	TAG-0025 Cube (6") Accessory Kit TA-0171 Spacer, 2" H TM-2035 Centering Stud
Segmental Concrete Paving Slabs	TA-0199 Flexural Paver Accessory (included with machine)
MOR of Refractory Bricks	TA-0197 Flexural Accessory for MOR of Bricks

FACTORY INSTALLED OPTIONS	
Voltage	110/220VAC Single Phase The full load amperage for standard VFD Control Systems is less than 5A (115VAC single phase voltage). We recommend standard 15A or 20A circuits.
Displacement	Available Upgrade
Capacity Options	Frame de-rated to 30,000lbs (130kN) (30) Frame de-rated to 60,000lbs (260kN) (60) Dual Range (2 transducers) on Single Frame (2R)
Frame Options	Second Frame Capability (AB)
Travel Limit Switch	Standard Equipment

SPECIFICATIONS	
Load Capacity Range	1,000lbf - 100,000lbf
Vertical Opening	21"
Horizontal Opening	22"
Ram Diameter	6"
Piston Stroke	2.5"
Platen Hardness	60 HRC
Lower Platen Dimension	6.5" Diameter
Upper Platen Dimension	6.5" Diameter
Oil Reservoir Capacity	2 Gallons
Overall Width	43"
Overall Depth	17"
Overall Height	60"
Unit Weight	785lbs
Test Standard Ready	ASTM E4 C1782

Test Standard Capable	ASTM C140 Annex A8, C39, C78, C133, C293, C109, C469, C496, C1019, D7012 AASHTO T 22, T 97, T 106 ISO 13503-2 API RP 56 BS 1610, BS 1881, EN ISO7500-1, EN 12390-3, EN 12390-4