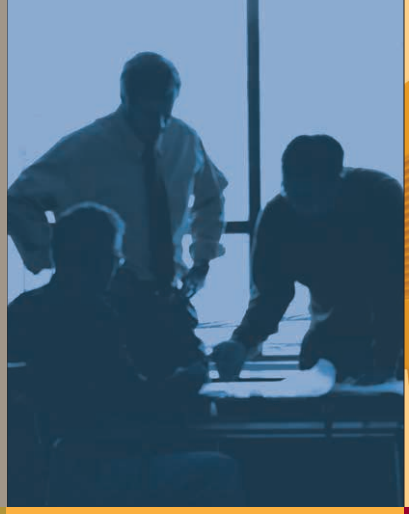
PORTABLE TEST CONTROLLER

Up to 6 channels for maximum flexibility



At Moog we understand that your investments in automotive prototypes and aerospace specimens are significant. That's why you need a dependable, proven test controller to protect both the test article and the integrity of your data.

The Portable Test Controller can operate electric, pneumatic and hydraulic test actuators in a setup with a maximum of six servo-control channels, making it suitable for a range of test systems, such as Single- and Multi-Axis Test Systems, Hydraulic Simulation Tables and Tire Coupled Simulation Systems (4-Posters).

The PC application software provides all the functionalities you need to prepare and run your tests, such as station setup, calibration and tuning, sequence building, test operation, recording and scripting. You have the ability to run multiple stations simultaneously.

The onboard operating panel allows you to perform operating tasks near the test rig, such as start and stop cycles and sequences, monitor tests, adjust safety limits and enable manifold control. You can also use a tablet or smartphone to access these software functionalities.

ADVANTAGES

- Advanced control that supports up to six servo-channels
- Flexible, user-friendly and cost-effective operation in a range of testing applications
- Proven controller technology — over ten thousand control channels installed and used daily in test labs around the world
- Advanced safety checks are built-in to ensure your test article and test data are always protected

TEST APPLICATIONS

- Durability and fatigue
- Vehicle components and systems
- Landing gear, rotor, hub and blade tests
- Play out of road load data

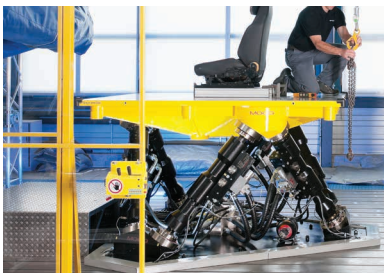
SPECIFICATIONS

INTERFACES

Perform your tasks, including station setup, calibration and tuning, sequence building and test operation, by using the Moog Integrated Test Suite PC software. In addition, perform operating tasks, such as starting and stopping cycles and sequences and monitoring tests, by using the onboard display panel or a mobile device.

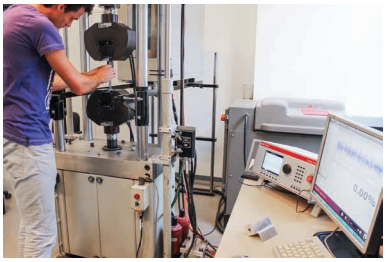
KEY FEATURES

- Suitable for any hydraulic, electric or pneumatic actuators
- Unique control loops (e.g. force, displacement and acceleration) reduce set up and run time
- Built-in real-time data-acquisition (40GB internal storage)
- Pseudo channels capability allowing the user to create online calculated channels using formulas and other inputs, offering greater flexibility
- Online adaptive controls for amplitude and phase saves operator time
- Integrated controls for activating a pump and switching pilot/low/high pressure
- EtherCat Worker Interface
- Onboard display panel for operating tasks and with language selection
- In addition to the Integrated Test Suite software, specific software modules are available for advanced tests, such as Replication, Sinesweep and Vibration



Hydraulic Simulation Table

Tire Coupled Simulation System



Single/Multi-Axis Test System

Housing	• Can contain up to 6 channels • Desktop or 19" rack mountable 450 x 177 x 280 mm (17.7 x 6.9 x 11.0 in) • Weight 9.2 kg (20.3 lb) • Integrated 640 x 480 full VGA color display • Input voltage: 90-132 / 180-264 VAC; 47-63 Hz ; 10 A @ 115 V, 5 A @ 230 V, 400 VA • 2 x 2 A @ 24 V Low/High Solenoid output Protection rate: IP30
Servo controller	• Up to 2.5 kHz multi channel or up to 10 kHz single channel control loop (software selectable) • Unique Moog control loop • Three feedback control possibilities (Force, Position, Acceleration) • Bumpless instant mode switching between force and position mode

Function Generation	• Frequency range 0.01 to 500 Hz • Multi-channel function generation with user defined "mixer" functions (e.g. mix a low frequency offset with a higher frequency load) • Waveforms: sine, sawtooth, block/square, ramp, rounded ramp, exponential • Analog input can be used as command • Complex simulation spectrum support including spectral density (psd frequency definition) • Constant amplitude and phase matching
Standard Inputs (per channel)	• Total 2x high resolution (0.03 %) 1x Pot meter or LVDT input (user selectable) with Pot excitation ± 5 V 5 mA or LVDT excitation 3.35 V RMS @ 3.5 kHz) 1x LVDT input with excitation 3.35 V RMS @ 2.5 kHz) • Encoder, absolute (SSI) maximum 32 bit or relative 10 bit • 16 bit input (± 10 V) • Acceleration, ICP* Acceleration input. 18 Bit *ICP is a registered trademark of PCB Group,Inc., Depew, New York
Standard Outputs (per channel)	• 16 bits ± 100 mA valve driver output, with a limit in software from 0 to 100 % or (hardware selectable) ± 10 V output • 2x 16 bit D/A converters, ± 10 V
Optional Items	• Manifold Control Unit with 4 On/Off Low/High pressure valves (24 VDC/2 A each) • Digital I/O board containing 8 inputs and 8 outputs • Analog I/O board containing 8 inputs and 8 outputs • Analog I/O board containing 16 inputs • Strain amplifier board (6 channels, 1/4, 1/2 and full bridge 120/350 ohm) • Accelerometer input board 6 channels • Open interface : RESTful API Moog Test Controller, SDK (for connection to MATLAB®, LabVIEW ®, and other programming environments) • COTS EtherCat I/O modules

Moog has offices around the world.
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Portable Test Controller
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This technical data is based on current available information and is subject to change at any time by Moog. Specifications for specific systems or applications may vary.

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