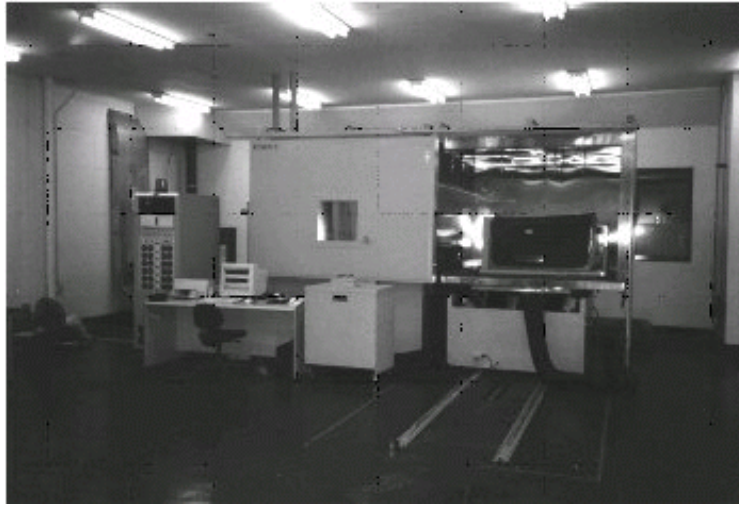


Environmentally Controlled Vibration Test System



Purpose:

Vibration performance has become increasingly important to automobile manufacturers as cars have decreased in size and mass and have been equipped with increasingly quieter interiors. The Environmentally Controlled Vibration Test System allows continuous duty testing of specimens in various climate conditions, ideally suited for product qualification, reliability, and stress screening tests.

Description:

The system consists of an Electrodynamic Shaker capable of 50mm Max Displacement, 2725 Kg Max Sine Wave Force, 2000 Kg Max Random Force, 455 Kg Payload, and a 3-2000 Hz Frequency Range; an Environmental Chamber (2.3 mW x 2.0 mD x 1.5 mH Interior Dimensions and 2.6mW x 4.1 mD x 2.8 mH Exterior Dimensions) with temperature range of -73°C to +180°C; and the **TMSI** control/acquisition/ reduction system.

Tests are controlled by a **TMSI** Industrial PC Control System (MicroTeStation), which is interlocked with the electric controls of both the Shaker and Environmental Chamber for full test automation and data reduction/presentation/archival. Pneumatic Control, Base Placement, and Armature Rotation are manually controlled by separate operator panels at specimen location for ease of setup.

Computer, printer, and control electronics are housed in a vertical rack enclosure especially prepared for electronic instrumentation.

Control System:

All electronic control and data acquisition systems provided by **TMSI** are integrated completely for control by a single PC with Windows® based software for intuitive operation with minimal operator training.

TMSI

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Sales: (888) TMSI-USA • Tel: (330)668-2010 • Fax: (330) 668-2365

<http://www.tmsi-usa.com>

TMSI MicroTeStation™ housed in 20.5 W x 72 H x 24 D inch instrument rack enclosure.
Includes:

- Intel Pentium® Based Microprocessor Industrial Computer
- Standard Hard Disk Drive
- Single 3.5 in. Floppy Disk Drive
- Removable Disk for Data Archival and Storage
- Random Access Memory
- SVGA Color Monitor
- Windows® 95/NT Operating System
- 16+ Chnl A/D, DIO On-board data acquisition/reduction system
- 6+ Chnl Anti Alias Filters
- Telephone Modem
- Color Printer

Data Acquisition/Control:

Parallel full-time data acquisition/control processing is accomplished by MicroStar Data Acquisition Processors (DAP) which feature on-board CPU and memory as well as 16 bit Analog to Digital and Digital to Analog converters. Closed-loop PID control is achieved on-board the DAP unit for full software tunability of hydraulic actuators in both load and position feedback control.

- MicroStar DAP Data Acquisition Processor to operate in parallel with the PentiumPro Microprocessor
- ComputerBoards CIO/DIO 24 SSR, Solid State Relays for sensing and controlling digital inputs and outputs

Software:

SpectraPAC™ E/V is **TMSI's** data acquisition/reduction program to operate the on-site MicroTeStation in Windows 95/NT presentation, control tests according to User-required Environmental and Vibration test procedures, reduce and present tabular and graphical reports, and archive tests results to hard or floppy disk.

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