

ANCO NEWS

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400 Hz, 55 dB Capability MAST

ANCO Engineers now offers a line of all-electric drive high frequency multi-axis shake tables which provide superior performance to 400 Hz at a noise level below 55 dB.

The multi-axis table line integrates high torque direct drive servo-motors with improved table components and controls to drive payloads with up to ± 10 inches of displacement at velocities of up to 100 inches/sec and peak accelerations up to 12 g.

ANCO configures its family of servo motor driven tables with table sizes from 12" x 12" to 6' x 8', and payloads to 1000 lbs.

ANCO's tables are used for buzz, squeak and rattle (BSR) and durability testing, seismic qualification of critical equipment, and ship/aircraft motion/vibration simulation.

These systems are the result of seven years of development by ANCO resulting in enhanced designs to reproduce broad band random and sinusoidal type wave forms up to 400 Hz with RMS error on the order of only 5%. This performance has been demonstrated in concert with LMS International's multi-axis digital control system.

The figure below, showing a 0.25 second segment of 3-400 Hz white noise command and achieved motion, illustrates the high fidelity possible over a wide frequency range.

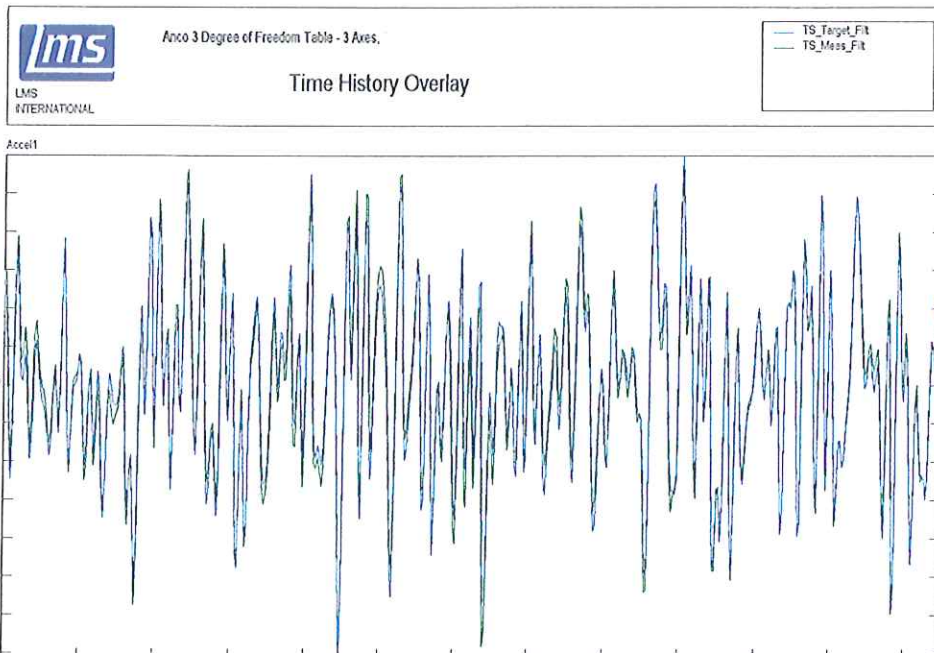
LUCAS-VARITY Selects ANCO 6 DOF Servo- Motor Table

LUCAS-VARITY of Livonia, Michigan recently contracted with ANCO for a six (6) degree of freedom (DOF) all-electric drive shake table system for use in studies of chassis vibration effects on their ABS systems and to demonstrate the durability and reliability of new ABS systems as they are introduced.

Using servo-motor drive technology, the ANCO Model R-156 six axes table can excite payloads in excess of 50 pounds to over 10 g's peak, with 5" stroke, in the 1-250 Hz range. The table is controlled by LMS International's CADA-X Time Wave Replication package.

LUCAS-VARITY indicated that ANCO's demonstration of well controlled excitation to above 400 Hz was a significant factor in selection of ANCO for the six degree of freedom table's order. Other factors included the design's elimination of the environmental and maintenance difficulties associated with servo-hydraulic systems and ANCO's ability to install the test system in a limited space with no foundation modifications.

These systems can provide the high frequency test environment needed in such areas as engine mounted equipment vibration and BSR testing.



Data Physics Controller for ANCO Uniaxial Shake Tables

ANCO Engineers recently selected Data Physics' (San Jose, CA) PC-based DP550Win controllers for uniaxial control of electric servo motor and servo-hydraulic uniaxial shake tables.

The DP550Win system runs on a Pentium class PC and has software modules for sine, random, sine on random, random on random, shock, and transient testing. Extensive automatic set up and graphical options are available.

Using 18 bit ADC/DAC and ISA buss digital processing boards, the DP system achieves at least a 70 dB dynamic range and frees the PC for graphical display and background execution of other applications.

"ANCO has been successful" explained ANCO's Dr. Paul Ibanez, " in using dual DP550Win systems for simultaneous control of two actuators, as long as the cross coupling is not excessive". Such applications allow using the cost effective DP550Win system on such tables as ANCO's recently installed 14 ft x 14 ft biaxial

system (>30,000 lb payload capacity, 0.5 - 50 Hz) for Hyundai Heavy Industries Ltd. (Ulsan, South Korea).

ANCO Automotive Office - Detroit

Sikowski & Associates, Mt. Clemens, Michigan has been appointed as ANCO's rep firm for the auto and supplier industry in the U.S.A. The firm's geographical coverage is Michigan, Ohio, Indiana, Illinois and Ontario. The president of the firm, Dennis A. Sikowski, has over 25-years of experience in the auto test systems market, including work at Ford and Wyle Laboratories in testing and consulting. He also founded and served as CEO of SMTC Corporation (now Defiance, Inc.).

Sikowski joined ANCO in late 1997, noting that "...the recent developments at ANCO with the multi-axis electric drive test system with test frequencies exceeding 300 Hz offers a unique capability to the automotive industry." Sikowski & Associates may be reached at: (810) 469-3363 or at: dsikowski@compuserve.com.

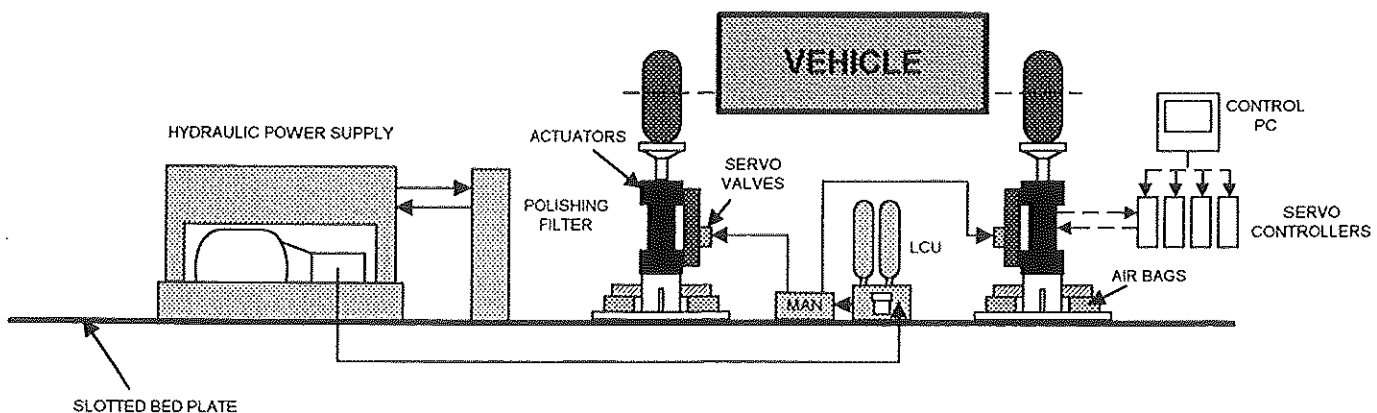
EC Representation

ANCO Engineers announces the establishment of its European representative network via experienced automotive industry firms in Italy, France, Germany, Austria, Switzerland, Benelux and UK. These firms and their counterparts in Taiwan, Singapore and South Korea signal ANCO's increasing activity in the international market place.

Multi-post Vibe Test Systems

ANCO offers a line of two to eight post systems for vehicle road simulation based on servo-hydraulic or servo-motor actuators. The systems are characterized by peak actuator forces of 2-5 tons, velocities of 40-160 ips, strokes of 6-12 inches double amplitude, frequency ranges to 100 Hz, air bag centering, displacement and acceleration safety limit stops, dual displacement feedback, PC or work station controllers (LMS International, Gardner Systems, Data Physics, etc.). Shown below is the schematic of a typical servo-hydraulic configuration.

FOUR POST ROAD SIMULATOR - TYPICAL SYSTEM SCHEMATIC LAYOUT



MAN = FOUR ACTUATOR MANIFOLD

LCU = LINE CONDITIONING UNIT (ACCUMULATORS, DUMP VALVE, AND FILTERS)