

Systems Solutions

Engineered

vibration testing

solutions for

improved

product quality.

Team Corporation

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Standard Products

Rotary Systems





Packaging Testing Systems

Multi Axis



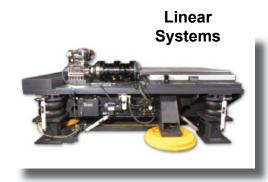
Automotive Applications







Seismic Systems



Engineered for the Accuracy, Durability and Dependability Demanded by Test Professionals

Over the past 55 years, advances in vibration testing have enabled designers to predict the effects of mechanical and acoustic vibration with ever-greater accuracy. Architects, civil engineers, earth scientists, and engineers from automotive, aerospace, packaging, electronics and other fields have come to rely on vibration testing as a critical tool.

The advent of vibration testing technology has resulted in the steady improvement, across many sectors of our economy, in product reliability, passenger comfort, and public safety. Vibration testing has become an essential element in product quality. *Team* Corporation, the pioneer and quality leader in this exacting field, has become the most trusted name in vibration testing. Our company was founded on the principle that designing and building complex testing equipment requires a unusually high degree of teamwork between equipment designers and end users. Since 1954, that principle has served us and our customers well. *Team* personnel will work closely with you to understand your requirements and preferences. We will propose a system that meets those requirements and fits within your constraints. We will be clear about the advantages and disadvantages of the system we propose, giving you the information necessary to make informed decisions. By sharing our experience with the test engineers who specify and use your system, we can help maximize performance, reduce costs, and speed delivery of the finished product.

From the first hydraulic shakers, to the recent introduction of the first 6-degree-of-control systems, *Team* Corporation has introduced a long list of innovations. We have developed solutions for vibration testing of armaments and missiles, automobile components and vehicles, communication satellites, instrumentation of all types, military and civilian aircraft components, and shipping containers.

Guiding Principles

Customer Satisfaction

Our primary goal is to satisfy you, our customer. We will deliver only the highest quality product, back it with a solid warranty, and provide excellent service. Our products will meet your needs and expectations, and will provide you with many years of trouble-free service.

Performance

We will never compromise our integrity. Our commitment is to deliver the system we quote, with the performance we quote, at the price we quote. We will honor our warranty, and support our equipment throughout its useful life.

Leadership

We are, and will continue to be, the leaders in vibration test equipment engineering and manufacturing. We have earned this position by consistently delivering the highest performance, most reliable hardware available. We will vigorously continue with product improvement and new product devleopment.

Service

Our field service engineers and technicians are highly skilled, and each has served a long apprenticeship at our factory. Armed with keen interpersonal skills and years of experience in the field they are at your service day and night–anywhere in the world–to keep your system in top condition.

Products, Markets & Applications

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CUBE™	*		*	*							*			*
MANTIS™	*										*			
TENSOR™	*		*	*						*	*			
Bearings & Tables		*	*	*			*	*						*
Hydrostatic Couplings	*	*	*	*		*	*	*	*	*	*			*
Sliptables		*	*	*			*	*				*		
Rotary Actuators	*		*	*								*		*
Hydrashaker	*	*	*	*	*	*	*	*					*	
RVC 400												*		
4-Poster	*													
Pitch Table	*													
901 Engine Simulator	*											*	*	
Engine Valve Simulator	*												*	
Pressure Pulsation Systems	*												*	
SubsidiaryShock TestSystems			*	*										
Acoustic Test Systems			*	*										
LCS-48					*									











Hydrashaker System

The *Team* Hydrashaker test system is a high performance, versatile and cost effective vibration testing system. All *Team* systems are designed specifically for vibration testing and are particularly suited for vibration tests requiring high force, long stroke or very low frequency capability. With the capability of sine, random, sine on random, random on random, or resonant search & dwell, the *Team* Hydrashaker system will provide consistent, reliable test results year after year. The Hydrashaker is available in dynamic stroke lengths up to 12 inches or more. Exciting a large payload can generate severe overturning moments. Hydrashakers are equipped with hydrostatic rod bearings providing constraint in excess of 50,000 in-lbs. on our standard designs, without the need for any external mechanism.

Horizontal Systems

The Hydrashaker combined with a *Team* T-Film® Slip Table for horizontal testing offers overturning moment capacity to the millions of inch pounds. *Team's* low pressure hydraulic system eliminates potential oil misting problems seen in other slip table bearing systems using high pressure hydraulics.

Vertical Systems

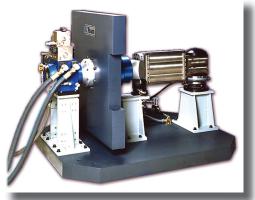
Standard systems are available in 2 and 4 inch strokes. Our 50 and 60 Series actuators are produced in a range of dynamic force outputs from 2,000 to 50,000 lbf. Our 80 Series actuators offer dynamic strokes up 12 inches and are available with a wide range of dynamic force outputs.

Combination Systems

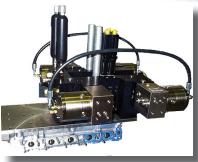
Combination Systems provide for dual-axis testing while using only one actuator. Our unique trunion mounted actuator assembly minimizes changeover time from the vertical to horizontal test operation.

Slip Tables

For large, heavy and awkward loads, *Team* slip tables offer extraordinary load capacity, excellent cross-axis control, outstanding dynamic stiffness, and an "All Bearing" system that utilizes a low-pressure oil supply.











R-10 Rotary Actuators

The R-10 Rotary Actuators were designed for fatigue testing wherever high torque output with restricted rotational travel is required. The R-10 has a total rotational travel of 100 degrees (+/- 50 degrees) and dynamic torque output from 5,000 to 200,000 lb-in (564 – 22,596 N-m).

900 Series Engine Simulators

The 900 Series Engine Simulator produces torsional vibrations similar to those found on an engine crankshaft. Like an engine, the engine simulator produces torsional vibrations while spinning. This system offers repeatability, and can be programmed to simulate any type of engine configuration. With reduced R&D costs and enough flexibility to test front engine accessories, harmonic dampers, clutches, transmissions, and drivelines. *Team's* 900 Series Engine Simulator will give you the results you need.

Engine Valve Simulator

Originally developed by *Team* for Stanford University two decades ago, valve actuators are used by engine manufacturers to study valve timing and valve lift profiles. Mounted on live firing engines, the valve actuators let design engineers and scientists study the effect of various cam profiles, and investigate variable valve timing. The results have proven useful in studies of fuel economy and enhanced engine performance. *Team's* Engine Valve Simulator permits full control of exhaust and intake valve lift and dwell on operating automotive engines by effectively replacing the function of camshaft and rocker arms.

RVC 400

The RVC400 is an electro-dynamic rotary shaker used to create controllable torsional vibration and shock, all in a compact, quiet device suitable for use in a standard office or laboratory setting. Capable of frequency response to 2 kHz, the RVC400 can provide clean rotary sinusoidal and random profiles as well as limited shock pulses on small test objects.

Team Bearings

Team Hydrostatic Bearings provide a zero backlash, zero frictionanddirect load path coupling. Team Hydrostatic Bearings include "T" & "V" Bearings, Pad Bearings, and journal bearings. Team also manufactures hydrostatic gas bearings for use in inerital guidance systems and military applications.









Team Hydrostatic Couplings

Team Corporation's complete line of hydrostatic spherical couplings are specifically designed to be the ideal connection for vibration exciters. With all articulating surfaces supported by a hydrostatic film, Team Hydrostatic Couplings have the highest possible transmissibility of force. The hydrostatic film eliminates virtually all friction, eliminating wear and reducing maintenance.

Four Poster Test Systems

A unique design that offers Squeak & Rattle testing of an entire vehicle and reproduction of test track data. Options include automatic track and wheelbase adjustment, and high frequency response to 500Hz. The individual actuator modules can be used as stand-alone vertical vibration test systems.

CUBE™ Vibration Test System

The CUBE™ offers 6 Degrees of Control and can accurately replicate virtually any vibration environment with forces up to 14,000 lbf (62 kN) and a frequency range from 1 Hz to in excess of 250 Hz. The CUBE's small footprint makes it ideal for smaller laboratories. With 5 active mounting surfaces, simultaneous testing of more than one test object is possible.

MANTISTM

MANTIS™ is the culmination of over 45 years of experience in the design and manufacture of multi-axis test equipment for military, aerospace, automotive and commercial customers. Force levels from 2,000 lbf (8.89 kN) to 50,000 lbf (222 kN), pk-pk displacements of 4 inches or more and operating frequencies up to 100 Hz.









TENSOR™Vibration Test System

TENSOR™ is the system of choice for multi-axis, high frequency vibration testing applications; providing controllable excitation simultaneously in each axis. Through the use of electrodynamic shakers, TENSOR™ has the performance to produce true multi-axis environmental stress screens(ESS) or replicate field conditions to frequency levels previously attainable only in a single axis.

Hydraulic Pressure Pulsation System

Designed for testing the dynamic response of spool valves in the development of automatic transmissions, this portable device is able to generate pressure oscillation with a controllable shape, frequency and amplitude. The self-contained hydraulic power unit provides oil flow and pressure to continuously operate the transmission pressure oscillator. The system produces 300 psi pk-pk oscillation pressure about a nominal pressure with a 300 Hz maximum frequency capability. Pressure oscillations are controlled with a *Team* V-20 Voice Coil Servo-valve.

Pitch Tables

The Pitch Table is designed to perform in-process testing as described in the "Vibration Amplitude of Seat Back (IP TESTING)" and "Evaluation of Noise During Applied vibration (IP TESTING)" sections of Ford Motor Company's ES-F58B-1600034-A specification.

LCS-48 Package Test System

To meet the transportation and packaging tests identified in the ASTM, ISTA and IEC specifications *Team* can offer either the LCS-48 Package Test System or custom designed solutions. The LCS-48 is a compact, self-contained unit with a 48" square vibration table. This system is exceptionally quiet and does not require any additional utilities such as water for cooling or external hydraulic supply. The integral hydraulic supply is an efficient, air-cooled, variable volume hydraulic pump that allows the electric motor to work in exact proportion to the system requirements, thereby reducing electrical consumption.





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