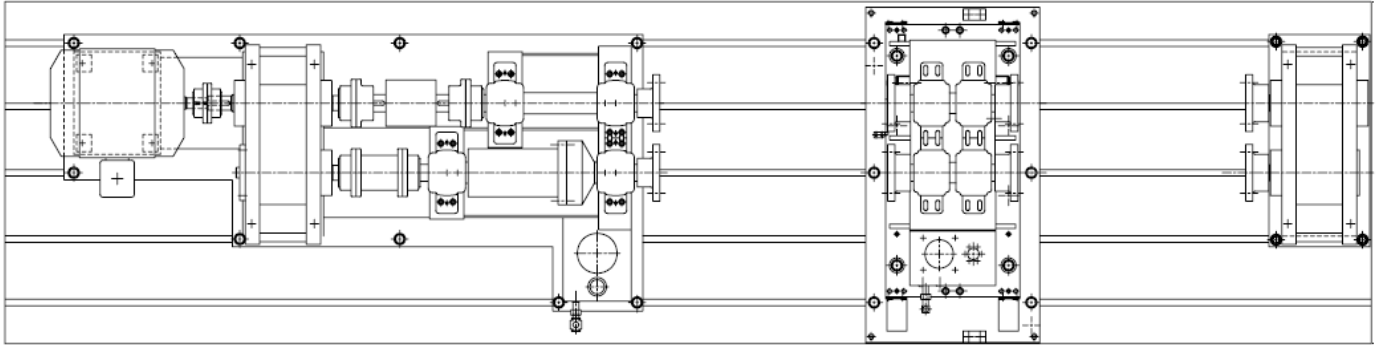


Four Square Test System

Model 1800



The Model 1800 Four Square Test System is designed to test durability of drive shafts, half-shafts and universal joints under typical and extreme operating conditions. The Model 1800 provides great flexibility and can be configured to accommodate your test needs.

The machine is capable of testing four drive shafts and eight U-Joints simultaneously in a hard-geared loop. Once this loop is connected, the rotary torque generator can be actuated to rotate one end in respect to the other end, therefore creating binding torque without using a braking device. The Four Square machine can also accommodate two drive shafts and four U-Joints by removing the jounce section. This allows testing of extra long shafts up to 100" in length.

This configuration allows constant and uniform torque throughout all four shafts at a selected speed even if the specimen's physical dimensions change. This design facilitates the replication of actual operating conditions.

The Jounce section provides the ability to offset one end of the shaft with respect to the other end simulating suspension movement as it occurs during driving. The maximum offset is 13.75" (350 mm) or eight degrees angle to the shaft axis. The Jounce section may be set at certain offset for the duration of the test or it can be programmed to oscillate at a rate up to 0.5 Hz.

Features

- ProLink Software
- Automatic or manual control modes
- Flexible testing configuration
- Variable speed input
- Variable system binding torque
- Hard-geared system

Disclaimer:

Information presented in this brochure is for informational purposes only. Link Engineering Company reserves the right to make changes, alterations and substitutions to the machines, components or other information presented in this brochure without prior notice. For the latest information contact Link Engineering Company.

Equipment pictured in this brochure may be shown with safety equipment removed or disabled for purposes of illustration. Equipment must never be operated with safety equipment removed or disabled.

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Four Square Test System

Model 1800

Typical Specifications	
Number of shafts per test	2 or 4
Shaft length range	15" - 100" (400-2500mm)
Maximum Shaft Diameter	6.3" (160mm)
Number of U joints per test	4 or 8
Maximum Static Torque	177,000 in-lbs @ 0 RPM (20000 Nm)
Maximum Dynamic Torque	177,000 in-lbs @ 500 RPM (20000Nm)
Power	300 HP - AC Variable Speed
Speed	0-6000 RPM
Maximum Drive Shaft Angle or Movement	13.8" (350mm)
Jounce Frequency	0.5 Hz
Controls	ProLink Software
Maximum Tensile Load	33,720 lbs (150 kN) @ Max Torque
Environmental Chamber (Optional)	Water & Dust Spray System Temp. 5C – 40C Relative Humidity 20% - 80%
Maximum Cooling Air Flow	30 m/s
Air Flow Rate	0-50 m/s

A key component of this system is the Microsoft® Windows® based ProLink software package that integrates machine controls, data acquisition, data analysis, and reporting. ProLink provides a user-friendly environment for monitoring test results and programming custom simulation. Characteristics such as speed, torque, temperature, jounce angle and frequency may be viewed in real time. Raw data is stored for further analysis and report generation. Using ProLink's networking capabilities data may be accessed, analyzed and reports generated from anywhere on the network.

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Optional environmental chambers are available for temperature control with water spray and dust spray systems. Variable speed cooling air system is also available to simulate real life wind cooling effects.

For more information about how the Model 1800 Four Square Test System can be configured to meet your test requirements, contact LINK at 734-453-0800 or sales@linkeng.com.

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