

Dynatest 995 Tire Traction Tester

The 995 Tire Traction Tester measures average locked wheel (skid) and peak incipient (slip) friction characteristics on paved surfaces. It is used for tire testing to evaluate dry or self-wetted locked wheel (skid) and peak incipient friction characteristics of tyres at operation speeds between 20 and 70 mph (30 to 110 km/h).

The 995 consists of a fully instrumented tow vehicle and test trailer, that uses a Dynatest two-axis force transducer to provide dynamic vertical load and horizontal tractive force measurements. As a pavement measurement device, it meets all the requirements of ASTM-E274 "Specification For Skid Resistance Using A Full Scale Tire", as well as ASTM-F408 "Standard Test Method for Tyres for Wet Traction in Straight Ahead Braking, Using a Towed Trailer."

All electronic instrumentation is solid state. User friendly, menu-driven software allows the operator to enter and document multiple test parameters. The on-board laptop computer computes the dynamic Skid Number (SN) from the two-axis force transducer in real time, and displays the friction and speed traces for each test. Test headers, skid numbers, as well as curves and peak incipient friction if desired, can be printed or stored.

Additional software capabilities include automatic system calibration, full system diagnostics, adjustable test cycle timing (within ASTM-E274 specifications), as well as the ability to exit the program and use commercially available software.

Vehicle Instrumentation

The system is equipped with digital optical encoders to accurately measure distance and monitor test speeds, a hand remote switch to initiate the automatic test, an industrial rated PC and graphic printer.

Real Time Dynamic Skid Curve

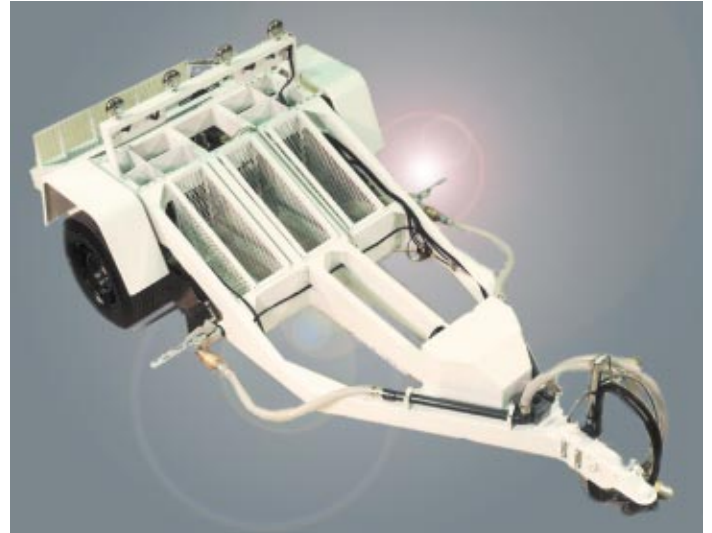
The operator can display all test results both graphically and numerically. The computer automatically controls all phases of the friction testing cycle. All test results are saved to hard drive.

Auto Calibration Menu

Auto Calibration allows the operator to automatically calibrate the electronic measurement equipment with the two-axis force transducer. The system's computer calculates the gain and the offset values for the force transducer and graphically displays the results.

Optional Features

- Differential Geographical Positioning System (DGPS)
- Integrated Selcom texture laser
- Dual Side water system



Trailer Assembly

The two-wheel trailer is equipped with a parallelogram suspension, stabilizer bar and disc brakes. An axle mounted force transducer provides direct measurement of the horizontal tractive friction force and the dynamic vertical load on the wheel. A laminar flow nozzle (ASTM E274) is automatically raised and lowered for each test set. Trailer available in Stainless Steel.



The Tire Traction Tester Field program

Transducer Output/System Diagnostics Menu

This specific part of the field program allows for general diagnostics of:

Force transducer

- View bridge characteristics (forces, gains, offsets)
- Activate bridge calibration circuitry (verify gains & offsets)

Tachometer

- Distance counting (wheel encoder distance pulse counting)
- Velocity measurement (timer latch counting)

Brake system

- Brake activation

Water system

- Nozzle activation