

Dynatest 1295 Pavement Friction Tester

The 1295 Pavement Friction Tester (PFT) measures average locked wheel (skid) and peak incipient (slip) friction characteristics on paved surfaces. It is especially useful for maintenance testing to evaluate changes or deterioration in pavement friction due to weathering, high usage, or aging for pavement management.

The 1295 consists of a fully instrumented tow vehicle and test trailer, which uses the Dynatest two-axis force transducer to provide dynamic vertical load and horizontal tractive force measurements. As a pavement measurement device, the 1295 meets all the requirements of ASTM-E274 "Specification For Skid Resistance Using A Full Scale Tire."

All electronic instrumentation is solid state. User friendly, menu-driven Windows® software allows the operator to enter and document multiple test parameters.

The field program calculates 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 and/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 speed, a hand remote switch to initiate the automatic test, Laptop PC and graphic printer.

Trailer Assembly

The two-wheel trailer is equipped with a parallelogram suspension, stabiliser 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. Utilises ASTM E501 or E524 test tires.

Real Time Dynamic Skid Curve

From the "Auto Test" menu 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 can be displayed and 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.



The Friction 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

Options

- * GPS, dual-side watering and texture laser

