

RRTR

Rolling Resistance Test Rig



High-accuracy drum-based test rig using model-based sensor technology

Rolling resistance is an important factor in a variety of tire performance characteristics, such as treadwear and traction. Fuel efficiency is also affected, since a tire with lower rolling resistance uses less energy to travel a given distance, which in turn improves overall vehicle fuel economy. As an added benefit, lower fuel usage leads to decreased emissions.

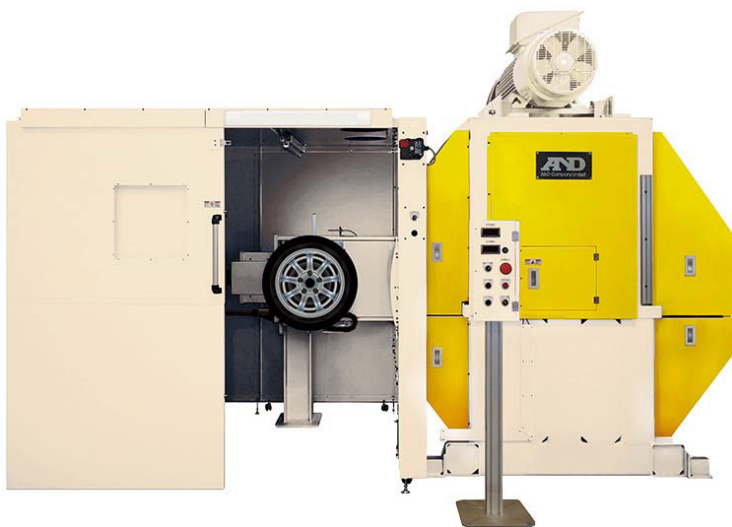
The A&D Tire Rolling Resistance Test Rig (RRTR) is a high-accuracy drum-based rolling resistance test machine. The RRTR offers high accuracy and repeatability with its rigid design and customized load cell, which utilizes A&D's model-based sensor technology.

The RRTR supports both automated and manual test scheduling, as well as the industry-standard ISO tests. A variety of configurations and sizes are available for pas-

senger car, truck and bus tires, allowing the user to select the model that best fits their application. A cost-effective aluminum cast drum option for passenger car tire testing reduces inertia by nearly half, which reduces energy consumption compared to the steel drum by 30%.

The core component of the RRTR is A&D's own model-based sensor, which minimizes cross-talk error and measures six components of force with high accuracy.

The system includes three temperature sensors for monitoring atmosphere, tire surface, and drum surface temperature. Optimal temperature compensation is applied to achieve the ideal measurement. An optional temperature chamber is also available.



The A&D Rolling Resistance Test Rig is designed with consideration for ease of use, maintenance and calibration.

Benefits

- Proven A&D sensor technology provides highly accurate, repeatable measurements
- Available models for testing passenger car, truck and bus tires
- Designed for ease of use, maintenance and precise calibration

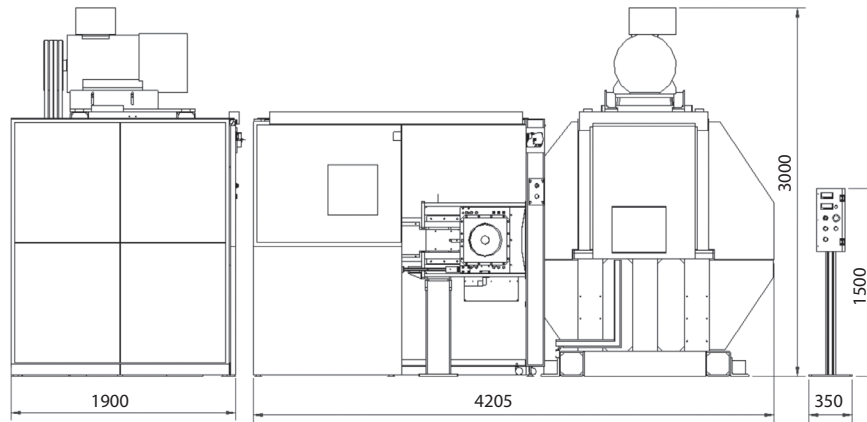
Features

- Rolling resistance accuracy
 - Passenger car: $\leq \pm 0.3N$
 - Truck & bus: $\leq \pm 0.5N$
- Rolling resistance coefficient measurement reproducibility
 - $\sigma \leq 0.005 N/kN$
- A variety of hub adapters available for attaching different tires
- Optional temperature-controlled chamber and calibration device available

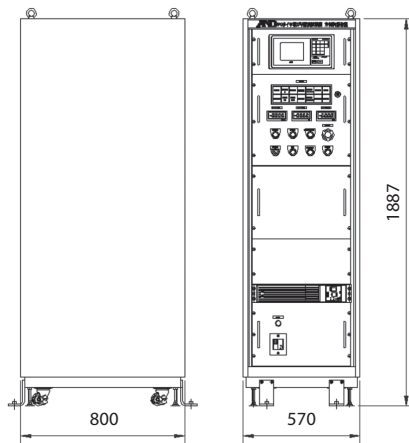
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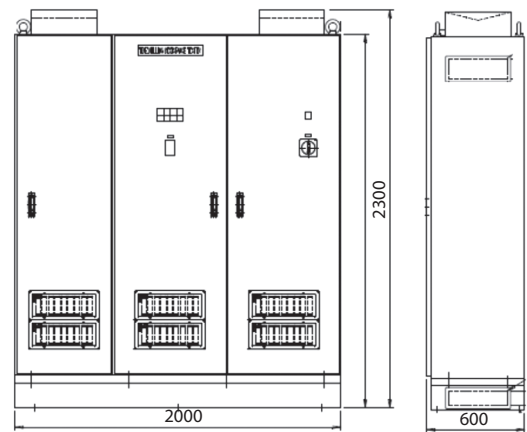
Dimensions (mm)



Main body and operation console

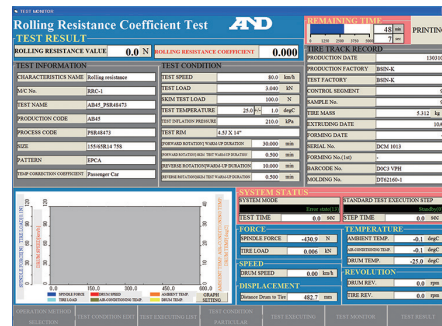


Control panel



Drive Unit

A&D test rigs come equipped with ISO28580-compliant software powered by MATLAB/Simulink, which provides superior flexibility to address specific user requirements.



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