



HEAVY VEHICLE SIMULATOR (HVS)



The Dynatest Heavy Vehicle Simulator (HVS) is the most widely used, reliable, and productive full-scale Accelerated Pavement Testing (APT) device available in the world. To date, nearly 20 HVSs have been delivered around the globe and many are operated 24 hours per day, seven days per week, 365 days per year to provide research engineers with valuable pavement performance data that would otherwise take years to produce from traditional in-service pavement test sections or fixed test tracks. The HVS enables pavement researchers to evaluate new pavement materials, such as warm-mix asphalt or new pavement designs in months or weeks, rather than years. There is no full scale APT device with a track record that comes close to the long proven performance of the Dynatest HVS.

The Mark VI HVS was designed with mobility in mind, both for over-the-road transport as well as movement between test sections at a fixed facility. The HVS can be separated into two sections for long distance transport by a standard truck-tractor or it can be left whole for towing as a single unit. This mobility is intended to facilitate operations at multiple locations around the user's road network. For movement between test sections at a given location, the HVS can be moved longitudinally or laterally using a forklift, truck-tractor, or other readily available equipment.



■ PERFORMANCE SPECIFICATIONS for the standard Mk VI

Automated pavement loading of at least 10,000 passes unidirectionally or 20,000 passes bidirectionally over a 24-hour period using either single/dual truck or aircraft wheels

Pavement loading between 7–22.5 kips (30–100 kN) with single or dual truck tire configurations

Testing speed up to 8 mph (12.8 kph)

Automatic/programmable indexing (wheel wander) between passes in increments of 0.984 to 2.95 in over 31.5 in (25 to 75 mm over 0.8 m)

Electrically driven load carriage to minimize noise

■ PERFORMANCE SPECIFICATIONS for the standard Mk VI-A

Maximum load level: 100 kips (440 kN)

Test section length: 40 ft (12.2 m)

Test section width: up to 6 ft (1.8 m)

Load carriage speeds: 0.17 to 5 mph (0.27 to 8.0 kph)

Weight: 115 tons (104 tonnes)

Length: 121 ft (36.9 m)

Width: 16 ft (4.87 m)

Height: 13 ft 11 in (4.24 m)

■ AVAILABLE OPTIONS

Beam extension for higher test speeds up to 12 mph (20 kph) and/or longer test section length

Increase to 45 kips (200 kN) loading with custom axle and client supplied aircraft wheel

On-board laser profiler for measuring pavement deformation

Dynamic loading

Diesel generator for self-powering

Environmental chamber for temperature control

Pavement test section instrumentation and data acquisition systems

Extendable warranty

Full time operations and research support