



SPMM 5000e

Our class-leading vehicle Kinematics and Compliance (K&C) test machine

It is equipped with next-generation control CPU hardware with powerful X86 processors, giving an improved performance gain of at least ten times on current CPU performance.



The system supports the EtherCAT fieldbus protocol, allowing it enough performance to run the motion control at a PWM frequency of 4kHz, previously this was 2kHz.

This allows hardware-in-the-loop (HIL) models to be computed faster with the potential of running these simulations at higher frequencies. Debugging of faults is made easier as more information about hardware is available on the EtherCAT bus.

Features

Increased centre table stroke

The SPMM 5000e has a larger vertical stroke of $\pm 215\text{mm}$, this is beneficial for clamping vehicles with high ground clearance allowing smaller stiffer spacers to be used whilst maintaining full testing capability.



Low inertia motors on all axes

The SPMM 5000e is equipped with low inertia motors.

The motor inertia is a significant proportion of the total inertia of the centre table assembly and by reducing the motor inertia, the response of the centre table is improved.

This should be beneficial for HIL testing.



Improved upgradeability and reduced installation cost

From the outset, the SPMM 5000e was designed to be modular; future upgrades are possible without large wiring changes, significantly reducing cost.

The SPMM 5000e has a smaller installation footprint largely due to smaller electrical cabinets and fewer wiring connections.

It is no longer a requirement to dig multiple trenches into the foundation slab. Instead, the relatively small number of cables in the field are fed through a cast duct.



K&C Inspect

The SPMM 5000e is fully equipped to work with the optional AB Dynamics K&C inspect body deflection measurement system.

This system allows the user to track the motions of up to 50 targets recording movement in 3 degrees of freedom of specific points on the vehicle body during standard K&C tests.