

A new era in driving simulation

by Dr Susanne Roeder, DSC Media Correspondant, © DSA

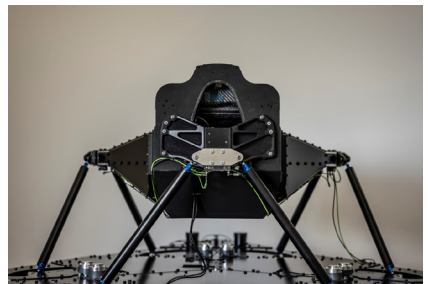
Disruptive simulator business with decades of engineering expertise – UK-based Dynisma revolutionizes vehicle production by making it faster, more precise, less costly, and more environmentally friendly.

DMG are three letters encapsulating a revolution in the automotive sphere. They are short for Dynisma Motion Generator, a system which company founder Ash Warne describes as redefining the world of driving simulation, “Our motion generators are the most dynamic, responsive and scalable available, enabling the most immersive and realistic driving simulation possible.”

What can be so fundamentally different with DMG driving simulators that has enabled Dynisma to deliver market leading performance, in the complex field of simulation, within just four years of the company’s existence? The answer is connected with looking at generating motion in a wholly new way.

Developed and built by a team of world-class engineers committed to ground-breaking solutions in motion generation, Dynisma’s class-leading range of simulators deliver the lowest latency (3-5ms) and highest bandwidth (55Hz-100Hz in all 6DOF) of any other simulator commercially available.

Lower latency ensures the driver can react faster to events such as oversteering, and it minimizes simulator sickness. High bandwidth facilitates motion cueing which is not possible with other conventional motion platforms, including high frequency ride cueing and vibrations from ABS and engine. With this market-leading mechanical engineering and technology, the DMG simulators accurately transfer a higher level of information to the driver, providing a far more realistic, and heightened responsive driving experience.



Ash Warne, Dynisma Chief Engineer and CEO comments, “Our mission is to create the world’s most immersive simulators and widen access to the best high-fidelity, responsive motion generators that drivers and engineers could want. Dynisma’s advanced DMG simulator technologies offer the perfect solution for a range of specific requirements across many forms of motorsports, automotive manufacturers and Tier 1 suppliers in the automotive industry.” automotive manufacturers and Tier 1 suppliers in the automotive industry.”

“The range of DMG simulators can reduce the cost, carbon impact and time it takes to test vehicles, as well as allowing engineers to conduct testing in a confidential and 100% safe, virtual environment,” he concludes.



Motion generators can have a dramatic uplift in the performance of any driver or test programme and play a key role in making vehicle development testing more efficient.

The global automotive industry currently spends around £7bn per year on prototype builds and each car can clock up over half a million testing miles.

The breadth of capability across the range of DMG driving simulators allows OEMs and Tier 1 suppliers alike, to conduct advanced tests such as those for vehicle dynamics, ride comfort, handling, and tyre development in a virtual environment where previously they could only be accurately performed on-road. They also give the ability to carry out complex and extreme vehicle dynamics and ADAS systems testing in complete safety.

Saving development miles and reducing the number of hand-built prototypes, using the ultra-realistic DMG simulators can dramatically reduce costs for automotive manufacturers, decrease the environmental impact of testing and the associated travel, as well as potentially shortening the time it takes to bring new vehicles to market.



DMG driving simulators are highly scalable and adaptable to a range of use cases. They are available either as turn-key solutions, or can be customized to exact requirements, with the ability to integrate any type of chassis, in current production or prototype, in both motorsport and automotive applications.

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