

PRESS RELEASE

New motorcycle ADAS target launched by AB Dynamics

- *Innovative design features multi-layered construction and rotating wheels to provide realistic Doppler effect for radar sensors*
- *Designed to Euro NCAP 2023 and ISO 19206-5 draft requirements*
- *Enables vehicle manufacturers to thoroughly test ADAS technologies to improve usability and ensure Euro NCAP compliance*

Bradford on Avon, UK, 14th September 2022. Leading automotive test solution supplier AB Dynamics, together with sister company Dynamic Research Inc (DRI), has launched the Soft Motorcycle 360. It is a next-generation Powered Two Wheeler (PTW) test target to be utilised for developing and testing active safety systems by vehicle manufacturers, test houses and regulatory bodies.

According to statistics from the UNECE, half of the world's road traffic deaths occur among the three key vulnerable user groups: motorcyclists (23 per cent), pedestrians (22 per cent) and cyclists (5 per cent). This has caused the industry to place a greater focus on protecting vulnerable road users (VRU) through preventative systems, such as ADAS. As a result, VRU tests now significantly contribute to Euro NCAP's safety rating.

"Developing and testing these systems safely and effectively requires a highly-accurate ADAS target," said Dr Andrew Pick, AB Dynamics' Business Director – Track Test Systems. "Ensuring that ADAS systems not only reliably pass the specific Euro NCAP tests but also work properly and consistently in the real world is a key challenge for vehicle manufacturers. Minimising false alarms is critical to consumer acceptance and translating better safety ratings into safer roads."

The Soft Motorcycle 360 complies with Euro NCAP 2023 and ISO 19206-5 draft requirements. In conjunction with AB Dynamics' LaunchPad 80 platform, the target is capable of an 80km/h top speed, which means it can be utilised for all upcoming 2023 Euro NCAP test scenarios involving motorcycles.

Using AB Dynamics' path following software the platform and target are precisely controlled and choreographed with the test vehicle to within an accuracy of 2cm. This enables pre-programmed test scenarios, such as prescriptive Euro NCAP tests, to be conducted quickly and repeatably.

"Our products have been designed to enable vehicle manufacturers to thoroughly test ADAS systems in a time and cost-effective way," said Dr Pick. "Limitless variations in a scenario, such as approach speed or angle, can be quickly and easily changed. The result is a much more rigorous testing programme that

provides manufacturers with greater confidence of not only passing Euro NCAP tests but that the technology will also work in the real world.”

The next-generation target utilises a modular construction made of lightweight foam which has been hollowed in specific areas to improve its compliance when hit by a test vehicle, while maintaining the necessary stiffness for highly dynamic manoeuvres. The target’s hard points have also been minimised to reduce potential damage to test vehicles, including ensuring the ends of the handlebars are soft and flexible. Its modular construction means that assembly and reconstruction after an impact is simple and costs of repairs are minimised should a replacement component be required.

The foam core is coated in a rubberised skin moulded to the shape of a motorcycle and its rider. This ensures that there is no exposed foam, which is highly susceptible to wear. The rubberised material is abrasion-resistant and can be repaired in the field to maximise longevity and minimise downtime.

“Vehicle sensors are undergoing continuous development and perception systems are becoming more discerning,” said Jordan Silberling, Product Development Manager at Dynamic Research Inc. “They are using an increasing amount of sensor data, such as radar return and IR reflectance, to accurately classify objects in the world ahead. The best way to future-proof ADAS targets to ensure they work with next-generation sensor systems is to make them as realistic as possible.”

The Soft Motorcycle 360 features unconventional rotating wheels that provide a speed-matched Doppler effect for radar sensors. This improves the realism of the target and makes it more reliably recognised by other vehicle sensor systems, such as cameras and lidar.

The Soft Motorcycle 360 has been designed and engineered by AB Dynamics Group company DRI in California. The company provides research and testing services for the world's leading OEMs, completing hundreds of tests per year, including FMVSS, NHTSA NCAP and Euro NCAP tests. DRI has leveraged its extensive hands-on experience with test targets and equipment to design, develop, and produce a range of best-in-class surrogate targets, such as the Soft Car 360.

“DRI’s experience working with the world’s leading safety organisations and OEMs has been critical in the development of the Soft Motorcycle 360,” said Silberling. “Everything it has learnt from the hundreds of tests conducted annually has gone into the product to improve its realism and reduce test vehicle damage.”

About AB Dynamics

AB Dynamics is an automotive test system supplier with a diverse range of track and lab testing equipment. From Kinematics & Compliance machines and ADAS targets to state-of-the-art driving simulators, AB Dynamics supplies the 25 most successful car manufacturers in the world. If you would like to learn more about AB Dynamics and its products, please visit ABDynamics.com

Press Contact

Richard Doherty at Automotive Technology PR

Richard.doherty@autotechpr.com

+44 (0)7814 961855

Video



Video: The Soft Motorcycle 360 in action

[Soft Motorcycle 360 - The target with revolutionary realism - YouTube](#)