A New Spin on Quality

MTS SWIFT® technology helps a European wheel manufacturer achieve consistency across three labs and the proving ground.

CUSTOMER CHALLENGE

MW – Gruppo CLN is a leading supplier of wheels for virtually all major manufacturers of passenger vehicles operating in the European Union, including Renault, Fiat, PSA Peugeot Citroën, Ford, Daimler, Volvo and Nissan. The company’s portfolio also includes wheels for heavy-duty commercial vehicles and motorcycles. Headquartered in Torino, Italy, MW operates test facilities in Turin, Milan and Tergner, France, as well as six production facilities across the continent.

To meet the exacting demands of its many customers, MW must ensure that all of its products exhibit outstanding quality, reliability and performance - and that the wheels arrive on schedule. With an extensive offering that includes hundreds of brand-specific designs, sizes and applications, as well as a testing and manufacturing network distributed throughout Europe, one significant challenge facing the company is achieving consistent performance among test systems, both within and across its test facilities.

“It is absolutely critical for us to make sure the results we see in all three test labs not only align with each other, but also with data we acquire on the proving ground,” said Andrea Finzi, Research and Development Director at MW. “Without consistency among all our different wheel testing systems at all three labs, we would be unable to achieve a proper degree of confidence in our wheel and rim designs, nor in the final finished products.”

Achieving this consistency requires the ability to verify the dynamic behavior of wheel test systems as they acquire data across a wide variety of wheel types and applications. It also requires precise test equipment, so that MW can be sure systems behave exactly the same given the same input conditions at any lab. In other words, easy verification is a prerequisite for any wheel test system MW adds to its test lab lineup.

“We have very specific needs when it comes to wheel testing systems,” Finzi said. “Corroborating data must be simple. Moving from one wheel size to the next, and from one application to the next, must be quick and seamless. This is precisely why we selected MTS systems for our labs.”

MTS SOLUTION

MW uses nearly 30 different wheel fatigue testing machines in its three test laboratories. The most recent additions are a biaxial configuration of the MTS Model 855 Multiaxial Wheel Fatigue System and the MTS Spinning Wheel Integrated Force Transducer (SWIFT).
CUSTOMER CASE STUDY

The SWIFT system is the only tool available that allows us to verify the dynamic behavior of wheel test machines quickly, cost-effectively and with unmatched fidelity,” Finzi said.

CUSTOMER BENEFITS

According to Finzi, MTS technology and support enable MW to achieve the fidelity, repeatability and lab-to-lab consistency it needs to keep pace with customer demands.

“Our SWIFT system is a fundamental tool for monitoring the consistency of results collected on many different test systems,” Finzi said. “It strengthens our confidence in results collected at different sites, on different equipment, at different times and for different applications.”

The SWIFT system is also valuable because it works with so many rim sizes and test applications without intensive modification. Its portability makes it easy for MW test teams to move it from one bench to the next without issue. This reduces total cost of ownership and minimizes the number of systems MW must keep on hand to cover all the test applications its labs perform regularly. The SWIFT system also delivers calibrated output, and its data is provided in an open format that can be processed and stored any number of ways.

“We appreciate the accuracy and reliability of the SWIFT system, both in terms of linear output and calibrated voltage output,” Finzi said. “It simplifies the data acquisition process when we are acquiring data with several gages simultaneously, and its diagnosis tools are superior, with clear indications that allow us to detect potential issues quickly.”

Looking forward, MW will soon use the SWIFT system to acquire road data as well as lab simulation data, in order to develop road profiles for existing testing equipment. The MW team is currently working with MTS to make this happen, with a level of collaboration MW has come to expect.

“The MTS service team helps set up and maintain our system as well as train our test professionals,” Finzi said. “They not only deliver turnkey solutions, but they bring complete documentation that ensures we can adapt the system to any need. They understand our applications, and they know why it is important to have a single system that works well in the lab and on the road. Plus, MTS supports us at all of our locations worldwide. They are a true partner.”

MTS and SWIFT are registered trademarks of MTS Systems Corporation within the United States. This trademark may be protected in other countries. RTM No. 211177