Need to know how your vehicle performs on track? Custom designed and constructed high accuracy instrumented wheelsets provide vehicle and component evaluation, and improve safety and productivity while meeting certified standards.

About Instrumented Wheelsets
TTCI has extensive experience in the design, construction, and operation of instrumented wheelsets for the continuous measurement of vertical, lateral, and longitudinal forces at the wheel/rail interface.

TTCI continues to serve the global railway industry by providing reliable and essential product designs with the most accurate, proven technology available in load measuring wheelsets using sophisticated techniques and equipment - the result of twenty years of experience in developing accurate measurement systems.

TTCI's load measuring wheelsets are well documented to provide the confidence required in applications from lightweight transit cars up to 125 ton freight cars and locomotives with axle loads up to 39 tons. The wheelset is calibrated to establish scale factors for data collection and then placed in-service to provide feedback on wheel/rail interaction. The wheelsets are also used to measure wheel/rail forces for new car design certifications. In addition, they can be used in conjunction with TTCI's Track Loading Vehicle (TLV) as an accurate measurement tool for investigations such as flange climb derailment studies.
Instrumented Wheelsets

Value-Added Innovations

- TTCI's patented, multifaceted instrumented wheelsets are the result of customer needs for accurate and proven test equipment.
- High accuracy wheelsets assist in making accurate management decisions for improving safety and efficiency.
- TTCI will construct a wheelset in accordance with your vehicle's specifications, and will lease or sell to your company the required data collection and analysis system to complete your testing needs.

Competitive Advantages

Use of TTCI's wheelsets provides:
- Confidence in results
- Cost efficiency
- Faster, more accurate and reliable testing
- Faster product implementation

System Function

- Modular architecture
- Accurate to 5% or better
- Custom built for any wheel size and speed application
- Continuous data in real time and recorded for post analyses

Customer Benefits

- Proven effectiveness on North American and worldwide railways in heavy haul, transit, and passenger applications
- Quantify track infrastructure condition
- Significant potential cost savings, optimization of operations, and safety for the railway
- Reliable and quick design and prototype evaluation

Calibration of Instrumented wheelsets with gearbox and traction motor attached.