



Sciometric's Integrated Systems Division (ISD)

One-stop shop for turnkey machines and systems:
Design, build, integration, and support



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Sciometric has 40 years' experience solving manufacturers' challenges and improving their processes. It's what guides our approach in all that we do. Sciometric's ISD (Integrated Systems Division) functions as an extension of our products, making the process of improvements on the manufacturing line as easy and efficient as possible for our customers.

We work with manufacturers across the globe, with local support located across USA, Canada, Mexico, India, China, UK, and Europe. With our main ISD design lab and integration assembly and runoff area headquartered in Rochester Hills, Michigan, USA, our teams work together to deliver quality builds and systems and support locally across the globe. Working with Sciometric technology, or any technology, our ISD group will collaborate with your team to identify your needs and bring the project to life.

The Sciometric Advantage



Full in-house project management from concept to sign-off



In-house electrical, mechanical, and controls design capabilities



In-house integration/installation and runoff capabilities



We can work with your team and trusted, preferred contractors and suppliers



Decades of manufacturing process/in-process test (IPT) know-how



Data acquisition, management, and analytics expertise



Best-in-class delivery times due to direct contract with end user



Global delivery, installations, and support

Sciometric ships and installs turnkey systems **around the world**

Overview of Services

Sciometric offers flexible, customizable services and solutions to meet your needs. Anything from a small leak test cart to a full assembly system or machine, we will manage every stage of the design, build, and integration process to deliver a solution that meets your needs, on-time and on-budget. Below is an overview of our offerings.

◆ **Turnkey test carts and benches**

Sciometric has an offering of standard carts, customized solutions, or fully unique custom-built cart and bench designs to fit your testing needs and budget. We have several models of standard leak test carts for different settings, as well as custom solutions for air leak test, helium leak test, and other electrical components testing. We work with your team to identify your needs and deliver a solution that will get you the most accurate, efficient test results.

◆ **Custom turnkey machines and systems**

We have delivered fully automated, semi-automatic, and manual systems, scaling from simple or complex, including specialty stations, like cold test, hot test, NVH sound booths, hydraulic power units for endurance testing, and more.

◆ **Machine retools, expansions, retrofits, and upgrades**

Sciometric offers on-site and off-site retools, expansions, retrofits, and upgrades. We work with what you have to find the most efficient and economical way to deliver on your requirements. Whether you have an older system that needs to be retooled for model year upgrades, an expansion required to add a new test into your line, or upgrades needed to bring aging or obsolete controls and mechanical systems up to specifications, we have a solution for you.

◆ **Custom fixturing, connectors, and seals**

Our custom fixturing, connectors, and seals are designed in-house to provide the best test results for your applications. When a custom fitting is required, we work with your team to design a solution that will deliver reliable test results, as well as meet corporate ergonomic requirements, etc.

◆ **Process monitoring and measurement**

Process monitoring and measurement is a core specialty at Sciometric. Our products are built to enable visibility into every moment of production, enabling the best root cause analysis capabilities possible. We can apply measurement tools to nearly any application, granting you access to the quality insights you need.

◆ **Data acquisition and manufacturing analytics**

Sciometric is a specialist in data acquisition and data management from part production processes. Whether it is building data acquisition into a new system or applying modern data technologies to an older system, we help you access the insights you need to ensure quality products are leaving your line and that you can continuously optimize your processes.

Custom solutions for nearly any application

The Sciometric team has delivered solutions for thousands of different applications for manufacturers across the globe. Regardless of the application, we can work with your team to design and deliver a solution to solve your problems. Some examples include:

◆ In-Process Test and Specialty Systems

In-process testing is the best way to ensure quality on your line. Projects can scale from solutions for small test parts to large assemblies. Examples of our capabilities include press and force monitoring stations, crimp monitoring stations, torque-to-turn stations, dispense monitoring stations, leak test stations, rundown stations, nut runner monitoring, gauge and profile stations, hydraulic power units for destructive and non-destructive cycling testing, axle spin testers, and more.

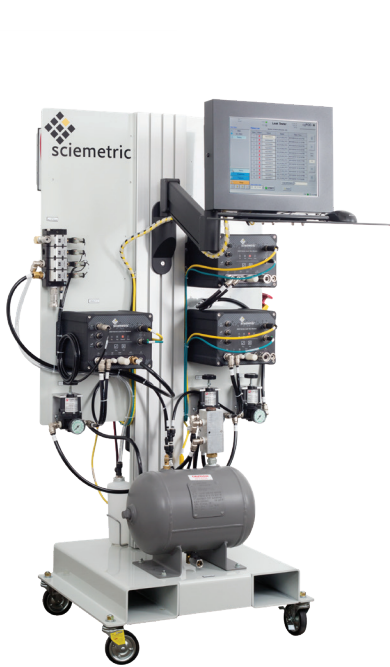


Custom designs for challenging test applications >

We have experience designing and building effective test solutions for even the most challenging test applications, including accommodating large parts, functional testing, etc.

Avoid a Costly Rip-and-Replace

Sciometric can rebuild and rework your older machines, bringing them up to speed with modern manufacturing technology and insights—without having to do a costly rip-and-replace on the line.



Model 3675



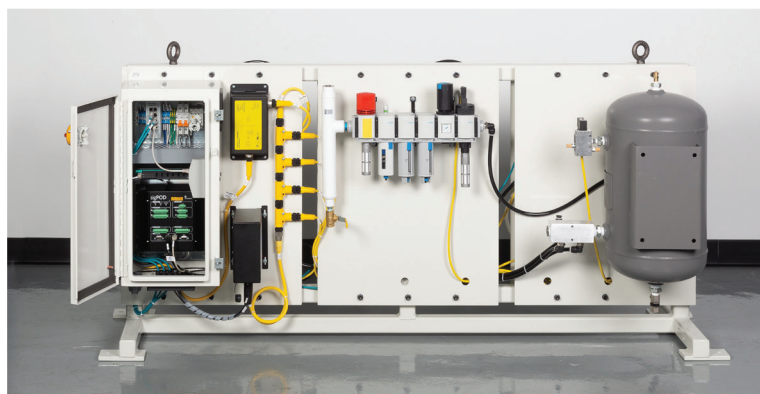
Model 3670



Model 3675-Helium

Turnkey test carts ^

We offer a variety of test carts, with standard and customizable options. Test carts are built to your specifications, adding flexible, mobile functions to your line.



◀ Custom designs to integrate seamlessly

We can customize the design of your test station to integrate seamlessly into the rest of your production line, providing the most effective and efficient solution.



Turnkey test machines >

We can design full, turnkey test machines and systems that take your part from start to finish, with operator controls and real-time insights on the floor.

Experts in Manufacturing Process, In-Process Testing

Sciemetric is the industry expert on part and components manufacturing processes and in-process testing. This expertise enhances all of our offerings, as we have a deep understanding of how the manufacturing line works and where problems are most likely to occur. We then apply measurement and alerts at these stations to make sure faulty processes are identified before they move further down the line.

We can measure and monitor nearly any process on your manufacturing line, including metrics such as: temperature and humidity, force and distance monitoring, torque/torque-to-turn, noise and vibration (NVH), profile, vision, and more.

THE RESULT?

An efficient production line, a healthy bottom line, and an end product you can count on.

◆ End of Line Tests

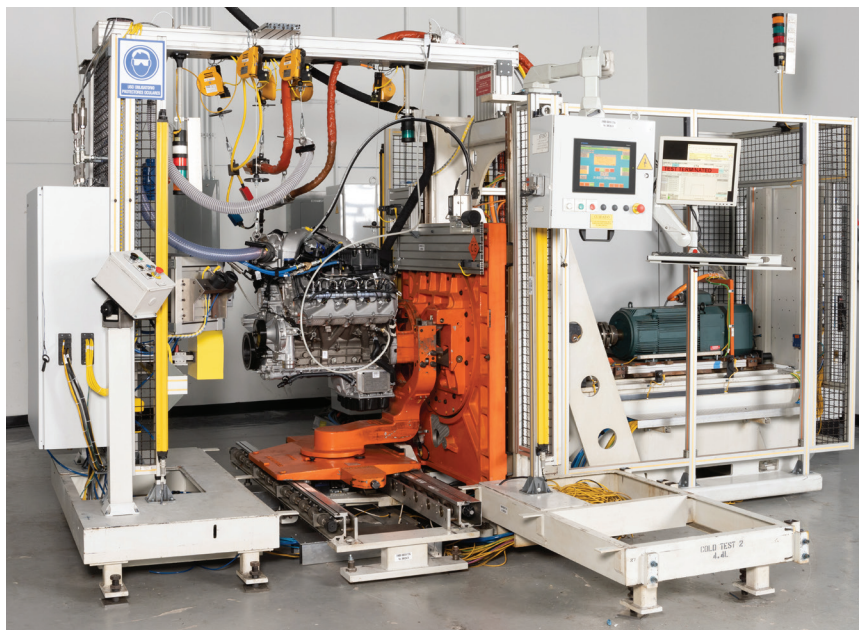
We know how important the end of the line test is to your production. We design specialized, custom end of line test solutions to ensure faulty parts and components don't leave your facility.

◆ Hot Test

Hot test is a complex engine test with many environmental and safety considerations. Sciometric can work with your team to design and build a new hot test from scratch, or we can apply Sciometric technologies to retrofit your current hot test for data acquisition of the sensors or specific applications within the hot test.

◆ Cold Test

A faster, less complex, and more cost-efficient alternative to engine hot test, we have helped many manufacturers incorporate cold test into their engine lines to boost production speed and efficiency. Without actually turning on the engine, we can design a cold test to monitor events, like simulating the gas pedal revving the engine to a certain RPM, to test proper engine function in the field. With the right monitoring and analysis tools in place during cold test, you can garner nearly the same information as during a hot test.



Thoughtfully designed systems built with effectiveness and efficiency in mind ^

We approach design with the intention of finding the most effective and efficient solution to meet your requirements. The end result is a reliable system that ensures quality parts and assemblies are leaving your line.

◆ Battery/EV Test Stations

We apply our in-process test and process monitoring technologies to ensure your trust in every part and component of your electric vehicles. Our solutions include leak testing, fastening, bead dispense, machine vision, battery end of line test, and more, to ensure your EV batteries, e-motor, transmissions, etc. are built to standard.



◆ Functional Test

Sciometric provides a wide range of functional testing solutions, including specialized solutions like seat functional testing, HVAC functional testing, and more.

◆ NVH Sound Enclosures

Sciometric can deliver NVH testing either in-line or in an enclosed sound booth, depending on your application and requirements. We design and deliver fully operational booths for NVH applications, including those requiring complete isolation from background noise.

◀ Effective environmental control

We build our machines and enclosures around the needs of the test. When noise and environment control is required, we work with you to deliver a solution to meet your specifications.

◆ Controls and Enclosures

Supported by our in-house electrical design capabilities, we can design, build, and deliver full controls and enclosures for your machines, including electrical panel wire and build projects.



Industries Served



Automotive



Electric Vehicles
(Battery, E-Motor,
Transmission, etc.)



Agriculture &
Off-Highway



Transportation



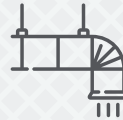
Aerospace



Power Generation
& Monitoring



Medical



HVAC &
Refrigerants



Appliances



Consumer Products



◆ Repair/Regression Bays

We design RBM (repair/regression bay manager) stations to simplify issue resolution on your line. Simply scan your failed part, and the station will tell you where to put your part back on the line to begin to identify or fix the specific issue. Connecting an RBM to Sciemetric's QualityWorX database makes our solutions unique and most effective, enabling traceability and comparison across your processes. Software can be customized to virtually any line or application, as long as they have RFID tags.



◆ Assembly Process Systems

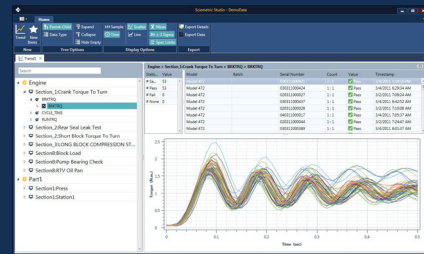
Our team specializes in small ancillary assembly systems. We build solutions that ensure that the parts or subassemblies that leave these lines are quality tested and ready for the next stage of production. Our assembly process systems can include RFID capability, PLC controls, process monitoring, data acquisition, custom fixturing, custom guarding, etc.



Leverage Expertise in Manufacturing Data and Analytics

Looking to gain more insight into the processes on your line?

Our data management and analytics solutions are flexible and scalable to your needs. With our QualityWorX suite of data management and analytics tools, we can enable real-time data insights and alerts, visualized defect detection, and continuous improvement at one station, or across a production line. Our team can help you determine the best approach for you.



 **Sciometric Studio**
qualityworx

The process

Sciometric offers a full-service solution for the delivery of turnkey machines and systems. We will manage every step of the design, build, integration, and support process. We can even manage your own internal contractors and suppliers, freeing up your team and resources to focus on your line. Below is a simple overview of the process you can expect working with Sciometric on a custom build project.



1. CONSULTATION

The extent of the consultation phase will depend on your specifications and requirements. Our in-house engineers can design and develop the specifications for your project along with your team as needed. Otherwise, we will discuss your provided specifications, do a site visit, review any concerns, and then develop the concept and proposal.



2. DESIGN

Design starts with a kick-off meeting. We have specialized in-house electrical, mechanical, and controls design capabilities to deliver this phase of the project quickly and efficiently, including providing 3D drawings.



3. BUILD

We usually build on-site at our ISD design lab and integration assembly and runoff area in Rochester Hills, Michigan, USA, or at one of our other global facilities, including runoff with the customer to confirm proof of process.



4. INTEGRATION/RUNOFF

Once you have signed off on the build, our team delivers the new system to your facility, completes the installation/integration, and performs final runoff. Our team ensures that this is an efficient process with minimal to no negative impacts to current production.



5. POST-PRODUCTION SUPPORT

We cater our post-production support to ensure your team is comfortable and satisfied with the new system. Post-production support includes training for your team, final documentation, and final project sign-off. After sign-off, our support team remains at your disposal for questions or further consultation.

Contact us to discuss your next project. inquiries@sciometric.com

Learn more about our design, build,
integration, and support services.
www.sciemetric.com/ISD

About Sciometric

Since 1981, Sciometric's process monitoring and quality management systems and software have enabled some of the world's leading industrial companies to gain visibility into and control over their processes. Process Signature Verification (PSV) technology provides the most accurate determination of process health and part quality while collecting all data. Our customers use Sciometric's analytic tools to transform the data into actionable information to reduce costs, manage quality, increase efficiency, and maximize yield while providing proof of process compliance and complete traceability. Visit sciemetric.com for more information.

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