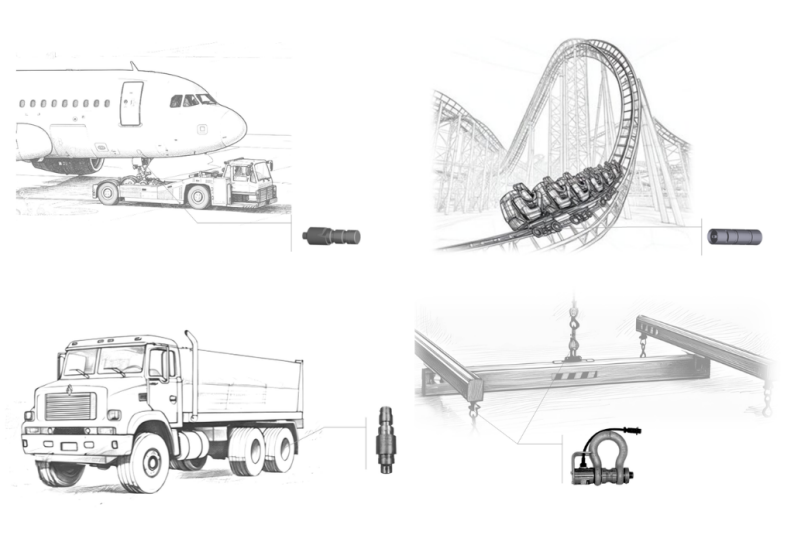
Value of the Strainsert Project Libraries for Engineers and Designers

Our application project studies demonstrate successful solutions to help engineers shorten development cycles, and build more reliable systems with confidence.



Project Library Application Sketches

WEST CONSHOHOCKEN, PA, UNITED STATES, July 28, 2026 /EINPresswire.com/ -- For application engineers and product designers, finding an effective, reliable and accurate force measurement solution can be complicated.

Every application has its own unique mechanical constraints, specific operational and environmental conditions, a defined load path requiring measurement, mounting position and limitations, measurement accuracy requirements, and operational risks.

> Engineers achieve better outcomes when they can build on proven solutions. Our project library makes that experience readily available."
>
> *Tim Foley, President*

The large variation of application requirements described above helps to explain why our industry and application specific project libraries are a valuable resource for engineers and designers to use during the design and development process.

Our project library case studies focus on the use of our custom force sensors in applications, ranging from common everyday uses up to being part of the most challenging and mission critical applications that exist.

They demonstrate real world examples of how custom load pins and load bolts, in particular, have been successfully integrated into complex systems across a wide variety of industries, including aerospace, military, maritime, industrial, automotive and entertainment, and met the

challenge successfully.

Another significant benefit of our project library case studies is the potential to reduce development time.

Engineers rarely want to “reinvent the wheel” when it comes to designing a force measurement system and our project library studies help bridge the gap between theoretical design and practical implementation by showing examples of how similar problems were effectively solved in real world applications.

These applications often require custom sensor geometries, specialized materials, very high or low measurement signal inputs, environmental sealing and simple integration into existing machine component assemblies.

For example, some common uses for our force sensors include:

- Structural load testing
- Fatigue analysis
- Force distribution studies
- Tension monitoring
- Overload protection
- Process monitoring
- Assembly preload verification
- Motion and control feedback systems

By reviewing our project libraries, engineers gain insight into:

- The specific application requiring force measurement
- The objective of the force measurement the customer is trying to achieve
- The challenging requirements the sensor must not only survive, but operate in
- The force sensor integration and positioning in the application
- The type of sensor design selected to best fit the application

- Any other special requirements involved in the project

This information builds confidence that a solution can be found and help reduce design uncertainty early in a project.

Supporting Better Force Sensor Selection Decisions:

Many engineers begin a project knowing the location and direction of the force they need to measure, but not necessarily the best way to measure it. Reviewing similar projects offers valuable context for selecting which type of force sensor is the optimal choice for their application.

The application specific projects help engineers understand why one force sensing approach may be better suited than another based on:

- Available installation space
- Load direction
- Structural integration
- Dynamic loading
- Environmental exposure
- Required accuracy
- Maintenance accessibility

For example, aerospace applications may require sensors that remain permanently embedded within the structure for the life of the system, while industrial applications may prioritize overload monitoring and ease of maintenance.

Reducing Risk in Critical Applications:

In aerospace, marine, military, and complex industrial system applications, design errors can be extremely costly. Our project libraries provide evidence that similar force sensing solutions have already been validated in demanding environments.

Recent qualification testing done by independent accredited testing labs showed that custom force sensors produced by Strainsert maintained accuracy and reliability under harsh environmental and loading conditions.

This type of design verification gives engineers additional confidence when specifying Strainsert sensors for mission critical systems.

Inspiring New Approaches and Innovation:

The project libraries are not only problem-solving tools. They can also inspire innovation and

help produce new application ideas for custom sensors. Engineers and designers frequently discover new measurement strategies or sensor integration concepts by reviewing projects from entirely different industries.

An automotive suspension force measurement concept may inspire a solution for an industrial automation system. A marine load monitoring approach may influence aerospace structural testing. Cross-industry application knowledge often leads to innovation.

For companies needing custom force measurement solutions, application project libraries also demonstrate engineering expertise and problem solving capability. Both are highly important when engineers are selecting a technical partner for complex projects.

Ultimately, application project studies allow engineers and designers to learn from successful implementations, shorten development cycles, and build more reliable systems with greater confidence.

Please contact us online or call 1-610-825-3310 for assistance with finding force measurement solutions for your applications. We look forward to working with you.

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