



**Quality  
Tech Services**

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***PRESENTS...***

***NEW* Family of Training Simulators!**

## **Laser Training Simulators**

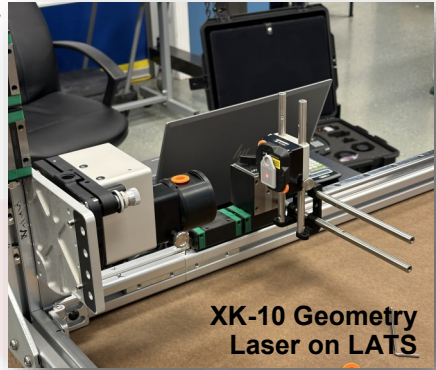
- Laser Alignment Training Simulator (LATS)
- Spindle Alignment Training Simulator (SATS)
- Rotary Indexor Training Simulator (RITS)

A large, industrial-grade metal training simulator. It consists of a heavy-duty aluminum frame with two vertical columns and a horizontal base. A central vertical post is mounted on the frame. Two horizontal arms extend from the base, each equipped with a precision spindle and a laser alignment system. The entire unit is designed for simulating laser alignment and spindle alignment in a manufacturing environment.

***\*Pictured Above is the LATS with the optional SATS system installed.***

**WHAT** is the QTS family of simulators?

The **Quality Tech Services** family of simulators consists of the *Laser Alignment Training Simulator* or **LATS**, the *Spindle Alignment Training Simulator* or **SATS**, and the *Rotary Indexer Training Simulator* or **RITS**.



**HOW** do I use the simulators?

Each of the simulators has been specifically built to work with the Renishaw Laser Calibration products. The LATS simulator works with *Renishaw's XL-80 and XM-60 Laser Calibrations system*, and the **XK-10 Geometry Laser System**. The **SATS** simulator is a bolt-on attachment to the **LATS** system. It can simulate the movement of spindles along the X, Y, and Z planes. The **RITS** works with the *XL-80 or XM-60 Laser Systems* combined with the *XR-20 Rotary Calibrator*.

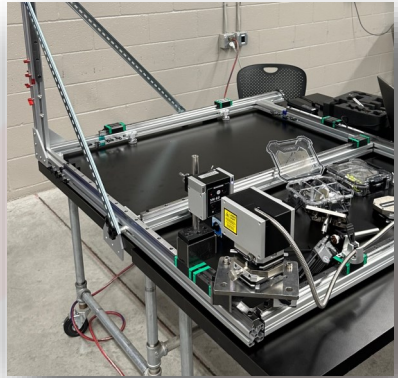
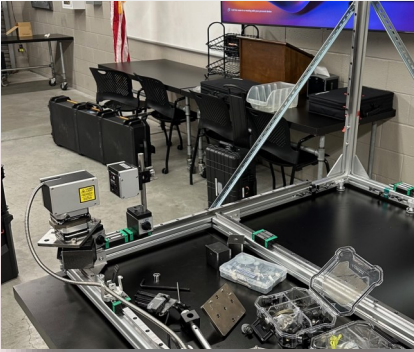
**WHY** do I need this?

The simulators allow for decreased machine down time, by bringing machine tool calibration training into the respective back shops, conference rooms, or classrooms. The **LATS**, **SATS** and **RITS** are all designed to fit on the top of a table.

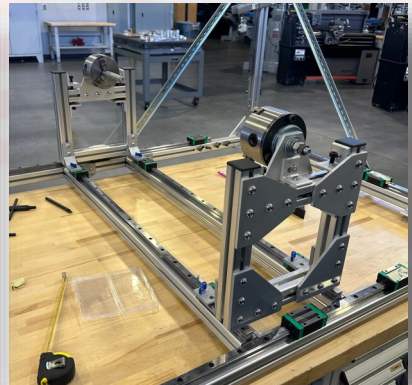
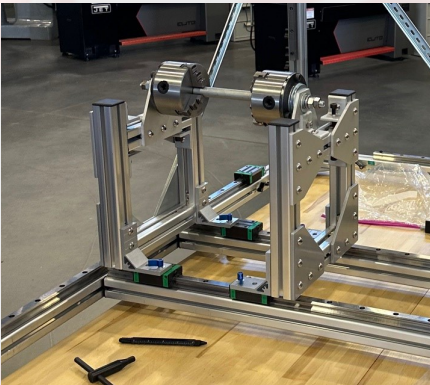


This eliminates the need for bringing down a machine for training in Laser Calibration techniques. The simulators provide the student with hands on experience with laser systems, and helps them to formulate real world setups, processes, and calibrations. Each system comes in a hard shell case with padding to ensure stability during transport. Each system can be setup and tore down in a matter of minutes.

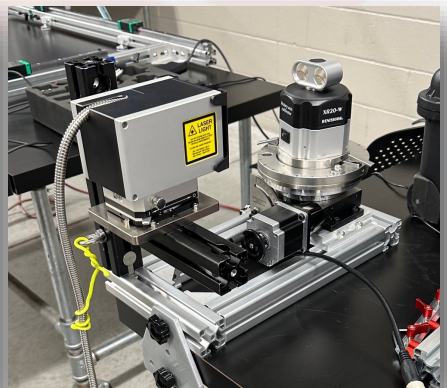
## Laser Alignment Training Simulator (LATS)



## Spindle Alignment Training Simulator (SATS)



## Rotary Indexer Training Simulator (RITS)



## Simulator Specifications

*The Simulators combined with the Renishaw laser systems provide training on the following disciplines.*

Discipline	XL-80	XM-60	XR-20
Linear Positioning	✓	✓	
Angular Pitch	✓	✓	
Angular Yaw	✓	✓	
Straightness	✓	✓	
Squareness	✓	✓	
Angular Roll		✓	
Rotary Calibration			✓

Discipline	XK-10
Straightness	✓
Squareness	✓
Flatness	✓
Parallelism	✓
Level	✓
Spindle Coaxiality	✓
Spindle Direction	✓

*All Simulators are packaged hard cases with wheels and padding for easy mobility. The Simulators are modular and only take approximately 15 to 20 minutes to setup.*



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