VTUBE LASER

Tube measuring software for
FARO
ScanArms

IMPORT MODELS

Import solid model data from STEP or IGES files generated by CAD packages to create MASTER data.

LASER MEASURE

Measure tube shapes using laser technology for comparison against master data or to reverse-engineer from existing parts.

QUALIFY

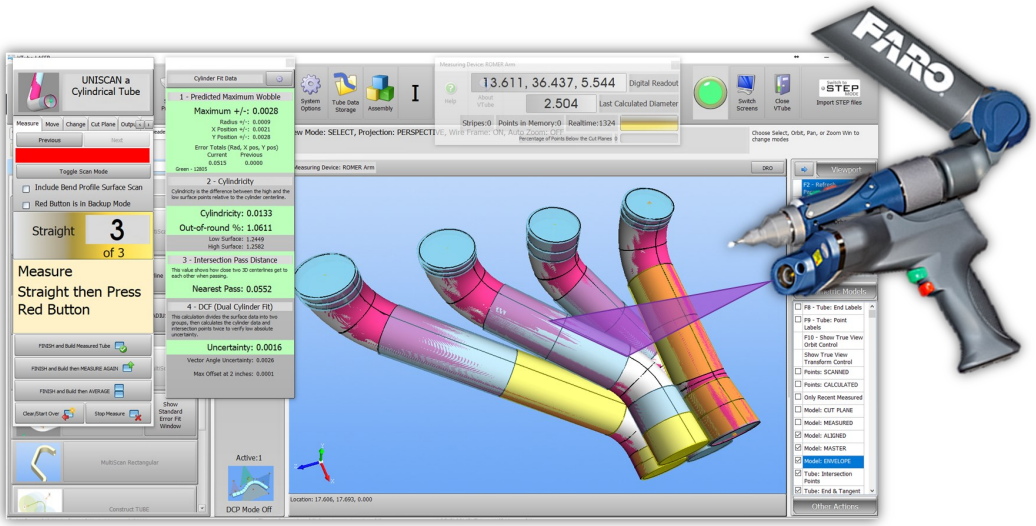
Fully-qualify tube shapes with inspection reports that contain tangent, midpoint, end angle deviations all compared to tolerance. Quickly verify a part shape by viewing the inspection result with shades of green (pass) or red (no pass).

DISPLAY MODELS

Display rendered image of measured tube, best-fit tube, and master tubes on the screen at the same time.

CORRECT BENDERS

Connect to and correct CNC benders.



This is the software tool designed exclusively for **tube measuring, tube-shape qualification, tube bender correction,** and **tube-shape reverse engineering** using laser scanners.

- VTube-LASER connects directly to FARO ScanArms with laser scanners to scan tube shapes faster with greater repeatability.
- Qualify tube shapes.
- Setup and correct a bender in just a few minutes. Transfer of correction data takes a few seconds.
- Build SolidWorks models of reverse-engineered tubes in seconds.

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www.advancedtubular.com

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ALL FARO ARMS

VTube-LASER connects to all models of FARO ScanArms that use the USB driver.

IMPORT SOLID MODELS

Import from any solid model CAD package using the universal STEP or even IGES format.

EXTRACT CENTERLINE DATA

Extract centerline data to build MASTER data for inspection. View the results of the extraction in the viewport using transparency.

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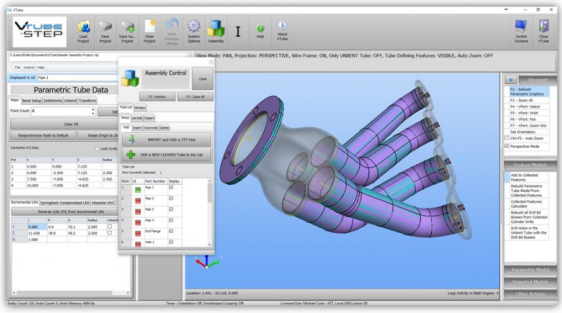
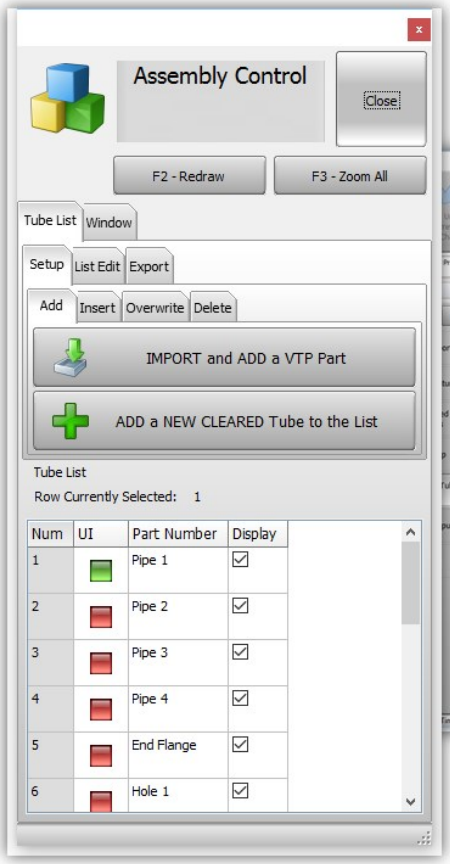
SOLID Model IMPORT

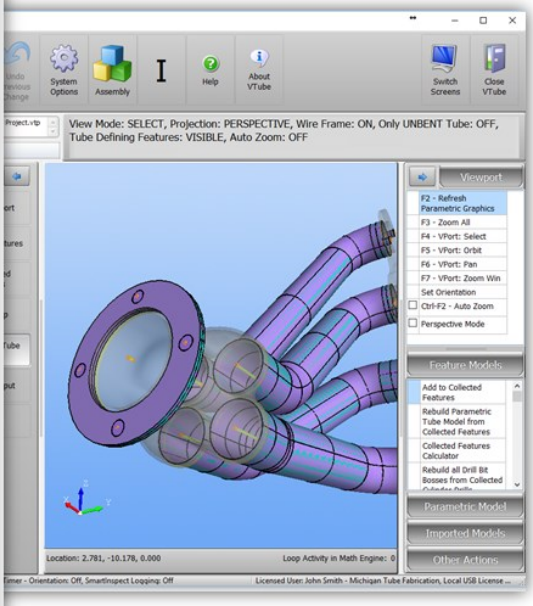


The product design world is switching to "**Model-Based Definition**" (MBD), where solid models are used to create and control the nominal MASTER data.

VTube enables MBD by allowing you to import master tube shape data from the universal STEP or IGES files – which means you can import from any solid model package.

Import one tube or entire assemblies into on VTube-LASER project file.





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INSPECTION

VISUALIZE DEVIATIONS

The measured tube is fit on the master tube using sophisticated fit technology, then displayed on the screen for visualization.

INSPECTION GRID COLOR CODES

Solid Green: The deviation is less than ½ the tolerance.

Light Green: The deviation ok, but is greater than ½ the tolerance.

Light Red: The deviation is out of tolerance by less than 2 times the tolerance.

Solid Red: The deviation is out of tolerance by greater than 2 times the tolerance.

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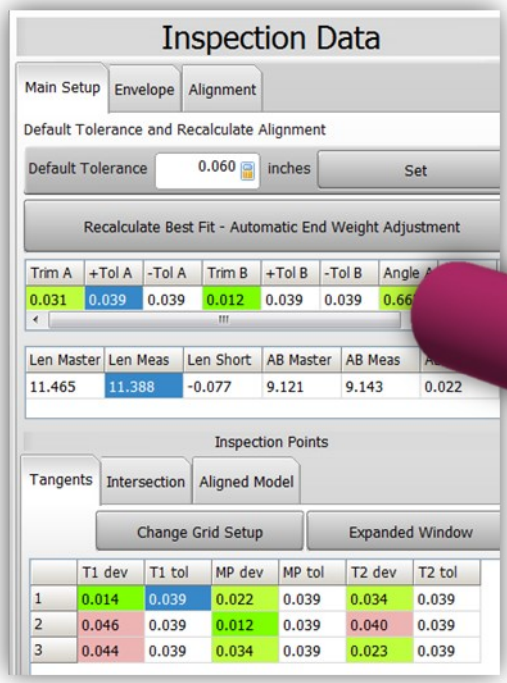
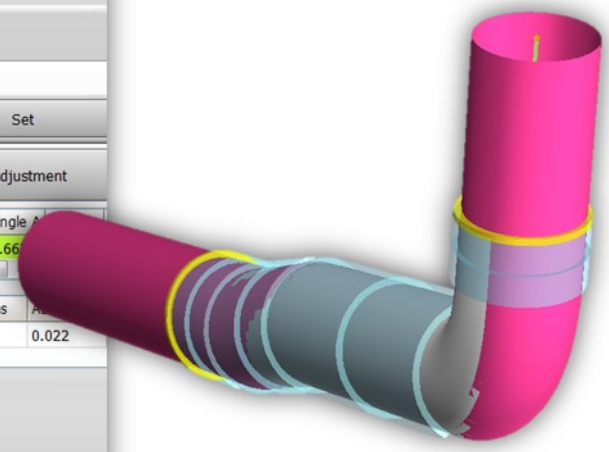
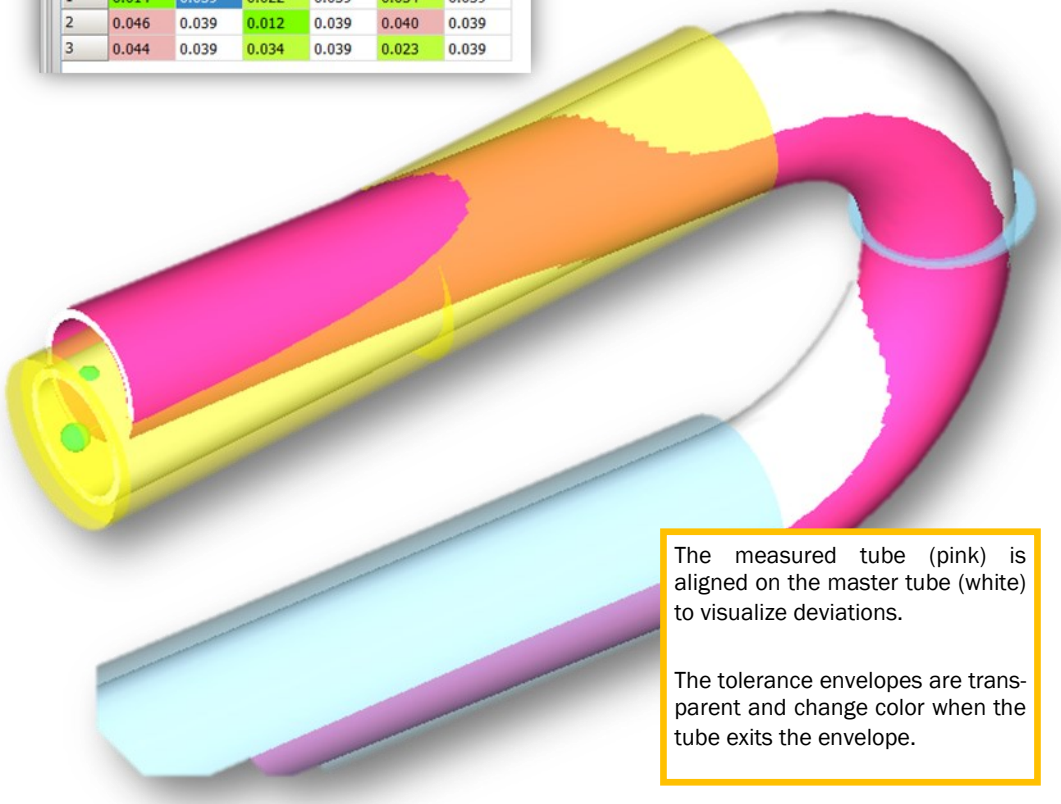
Part Qualification

Fully qualify the part using the Inspection Results grid. Color codes give a quick indication of pass/fail for part qualification. Print customizable inspection reports to document the qualification.







The measured tube (pink) is aligned on the master tube (white) to visualize deviations.

The tolerance envelopes are transparent and change color when the tube exits the envelope.

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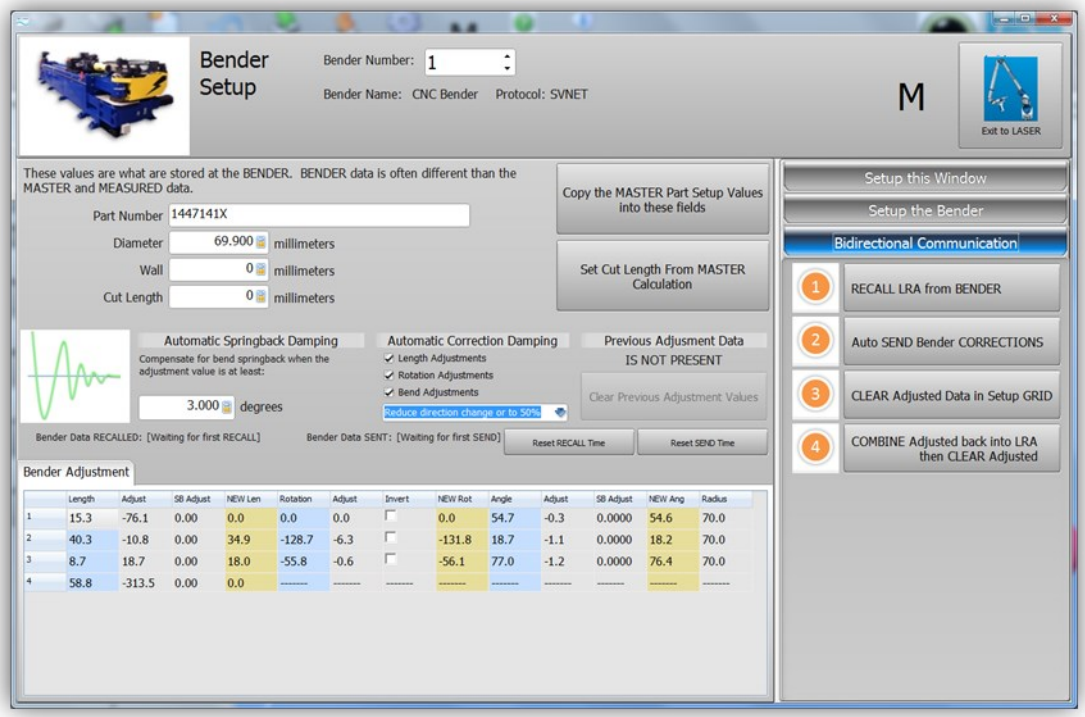
BENDERLINK

Bender Communication

Connect up to 100 benders using the VTube-LASER Benderlink system. Network benders on your shop floor to correct the part shape in a seconds.



BENDERLINK

We can help you integrate VTube-LASER to benders. We're known as Benderlink specialists.

LEAPFROG

For tubes that are longer than the arm reach, VTube-LASER uses the LEAPFROG feature using magnetic conical seats we call "targets".

KNOWLEDGEBASE

We have a comprehensive web-based knowledgebase that is available to all customers for details about our products – including revision details, technical documents, tutorials, and videos.

VTube-LASER COMMUNICATES with CNC Tube BENDERS

- AddisonMcKee
- Alpine
- AMOB
- BLM
- Chiyoda
- COMCO / KEINS
- Crippa
- CSM
- EL Premier
- EL Lightspeed
- Herber
- Horn Machine Tools
- PINES Technology
- SMI
- SMT industries
- SOCO
- STAR Benders
- Techno
- Transfluid
- Unison Limited
- Winton
- YLM

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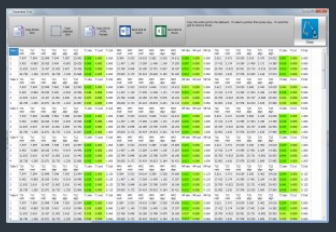
TUBE DATA STORAGE

VTube can permanently store every measure in each tube's project file. Tube Data Storage records a permanent date-time stamped image of the data after every measure.

DATA for GAGE STUDIES

The Tube Data Storage feature is perfect for collecting data for GR&R studies – because all the data can be transferred to a Microsoft Excel spreadsheet with a button press.



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Flexible Report-

Design reports with HTML report templates using our sample reports. Add any number of custom report templates to the list for use in different situations.

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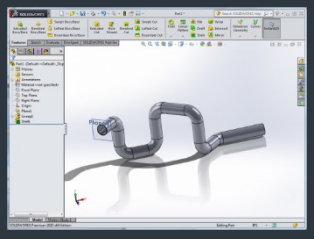
BUILD to SOLIDWORKS

VTube can even build a fully constrained 3DSketch centerline tube with sweep and shell in a few seconds. You can measure a tube, then let VTube draw it for you in SolidWorks.



COPY MEASURED to MASTER

Reverse-engineering is simple: Copy MEASURED to MASTER data with the single press of a button in the Data Handling menu.

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"Until we purchased VTube-LASER the tube measuring process was very slow and painful. Now we find ourselves measuring tubes more frequently to ensure good quality parts. VTube has allowed us to be more productive and reduce scrap rates. With past tube measuring software we were required to hard probe which was much slower and required us to fixture the parts. **VTube-LASER is the fastest and most accurate tube measuring / bender correction software that I am aware of."**

"Since we are a SolidWorks-based company, it is very beneficial that, **with one button click, I can have a fully-defined 3D cad model of the tube that was just measured**. This decreases the amount of time it takes to get a hard prototype reverse engineered into CAD for fixture creation. I am very excited to welcome VTube-LASER into our facility and look forward to working with Advanced Tubular in the future."

Greg Whittle
Senior Design Engineer