

# TANK CALIBRATION SERVICES CALIBRATION USING SCANCAL LASER SCANNING TECHNOLOGY

Intertek's innovative technology coupled with industry expertise



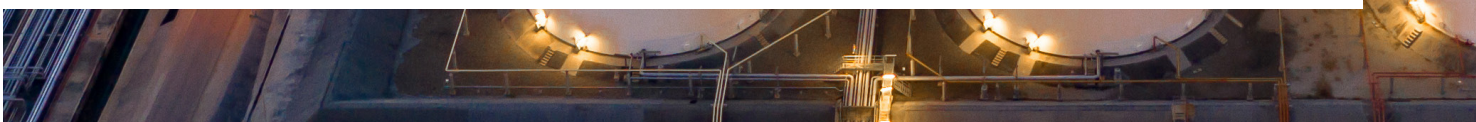
## OUR TANK CALIBRATION EXPERTISE

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Intertek offers a sophisticated tank calibration service, formulating highly accurate calibration data for tanks of various shapes, sizes and designs. The combination of years of calibration experience with the latest software enables us to provide highly accurate, cost effective tank and sphere calibrations.

Using the latest laser theodolite technology for tank calibration, engineers and technicians are equipped with state-of-the-art measuring devices. The use of EODR (Electro Optical Distance Ranging) and laser scanning offers a quicker, safer, low impact solution for strapping storage vessels.

Tank calibrations are conducted to the exacting requirements of the appropriate international standards published by the International Organization for Standardization (ISO) or by the American Petroleum Institute (API). In addition we can apply our innovative ScanCal programme to provide highly accurate calibration data with increased procedural safety.



## Maintain accurate stock control by ensuring that your calibration tables are up to date and accurate

### Why Tank Calibration is vital

Customers face a need for accurate volumetric tables and quantity measurement, to control stock held in storage vessels. Intertek can provide accurate and detailed measurement and calibration of storage tanks to ensure customers don't encounter issues.

Up to date accurate calibration tables are an essential requirement for stock control and loss management, this is especially important for customs bonded sites such as distilleries and the oil and gas industry.

Maintaining up to date tank calibration data is of vital importance in maintaining customer confidence, identifying potential losses in stock and resolving loading issues, thereby supporting client's operational efficiency.

### Our capabilities

**Tank calibration is available for any site with a tank farm including:**

- Independent storage facilities
- Small distribution depots
- Large fuel terminals
- Oil refineries
- Power plants

**Covering tanks storing a vast array of substances including:**

- Oil storage and refineries
- Breweries, Distilleries, soft drinks (bulk liquids)
- Food and animal feed storage

**We have the ability to provide volumetric capacity tables in litres per mm for:**

- Vertical Tanks
- Horizontal Tanks
- Spherical Tanks
- Double-wall Tanks
- Fixed Roof Tanks
- Floating Roof Tanks

**We also have the capabilities to provide surveys on:**

- Tank settlement for vertical storage tanks
- Tilt check
- Tank shell out of roundness (Seal surveys) for vessels with a floating roof

These hi-tech surveys produce highly accurate data that is important to be able to identify the common 'tank shell out of roundness' problem which can affect floating roofs, by impeding their vertical motion.

### Reporting

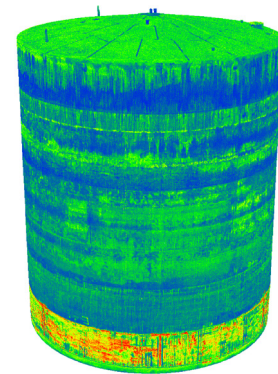
Detailed volumetric tables are compiled for each tank and can be formatted according to the client's requirements. Comprehensive tables can incorporate any standard units of measure for size, volume or both.

All Intertek tank calibrators have confined space training and an ECITB supervisor safety passport.

### Tank Calibration using ScanCal

ScanCal is a sophisticated post processing programme that has been developed by our experts over the last 20 years.

Its aim is to provide increased accuracy and procedural safety by automating the calibration process as much as possible, both onsite and when post processing the data.



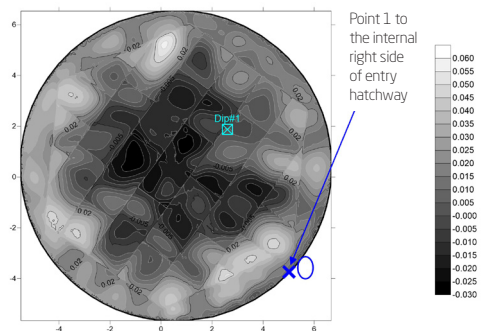
Scanner point cloud

The final product ScanCal is a user-friendly application that can apply datasets from both API/ISO formats and laser scanner point clouds and produce customer deliverables in the form of calibration tables, topographical floor surveys, tank settlement and tank shell out of roundness (seal-survey) reports.

The ScanCal program consists of five programs in one suite:

- Internal barrel survey
- External barrel survey
- Floor survey
- Deadwood calculation
- Laser scanner point cloud application

The ScanCal programme offers a number of benefits over traditional tank calibration techniques:



Topographical floor survey in grayscale format

- The time taken to acquire the on-site data is automated and very fast (up to 2.1 million points per second) thereby greatly reducing the time spent in a hazardous environment.
- The automated data acquisition and postprocessing the ScanCal technique offers reduces the likelihood of human error.
- The data collected is a highly detailed snapshot of the tank shape and internal deadwood, that can be archived and dimensionally interrogated at any time.
- The volume and proximity of the point data acquired lends itself to effective error correction. Erroneous spikes and trends in the data are clearly identifiable and highlighted by the program for analysis before the data is committed to a report.

Contact our experts to discuss your calibration requirements or visit our web page to learn more about our service offering.



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