## **Technical Specifications\***

- -0,6 mm ±0,1 mm accuracy in distance measurements
- -0,2° ±0,3° accuracy in pan measurements
- -0,6°  $\pm$ 0,1° accuracy in tilt measurements
- -0,1° ±0,1° accuracy in inclination measurements
- ±%0,2-0,5 accuracy in volume calculations

\*According to VSL Dutch Metrology Institute and NMi evaluation results





CalibeX 3D Laser Calibration Technology Calibrating fuel tanks with high accuracy, safely in a short period of time



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## CalibeX **3D Laser Calibration Technology**

3DCalibeX is one of the most comprehensive technological projects developed by Asis to date. It is a system composed of advanced robot mechanics, mechatronics, state-of-the-art electronic circuit designs, on-board LEL device design, laser and optical applications, etc. and applications consisting of 3D modeling algorithms and data analysis software involving advanced mathematics.

One of the most important features of the system is its capability of completing the calibration processes within a short time such as 25-40 minutes, owing to the specially developed laser-measurement technology applied through the 2" coupling, which is the smallest inlet of fuel tank covers.

The system creates a SPATIAL POINT PATTERN for the tank volume using the 3D algorithms, ultimately creating the 3 dimensional mathematical model of the underground fuel tanks. All internal and external dimensions of the underground tanks, tank volume, length, inclination angle, radius of tank heads, as well as any other data can be obtained digitally and visually using the modeling data generated from the spatial point pattern. Then, the calibration table is created based on the mathematical model.

## **Basic Features of the System**

- Measures the internal dimensions of the tanks on a 3D spatial point pattern.
- Calculates the inclination of the tank (Angular)
- Calculates the direction and position of the tank.
- Computes the diameter of the tank.
- Calculates the internal dimensions of the tank (Depth and length, etc.).
- Calculates the diameters of the tank heads.
- · Creates mathematical model of the tank.
- Usable in all horizontal, cylindrical underground and aboveground tanks.
- One tank can be calibrated within maximum 30 minutes and calibration of all tanks at a filling station can be completed only within a few hours.





- It is reliable and all risk factors are taken under control (ATEX).
- Application and operation of the system fully meets the Occupational Health and Safety and Environmental criteria (OHSE).
- Calibration process does not cause downtime.
- It does not require the tanks to be full. The emptier tank, the higher accuracy of the system.
- It generates highly accurate and reliable calibration tables compared to any other systems.
- Ensures prompt and definite results from the tank automation system.