

# 3D LASER SCANNER

Underground tanks recalibration

**Greenline**  
GUARANTEEING SAFETY

# Why is it better use a 3D Laser Scanner to calibrate an underground tank?



## COSTS TO BE CONSIDERED WITH THE TRADITIONAL TANK CALIBRATION METHOD:

- Coordinate with the Service Station to minimize the level of fuel in the tank to be calibrated.
- Stop the operation of the pumps connected to the tank, which will involve some sales losses that have to be accounted in the TCO (Total Cast Ownership) of this operation.
- Remove contaminated tank bottoms, which also has a cost to be considered.
- Take into account the final disposal of the contaminated bottom of the tank.
- Develop wet calibration process, which takes about half a day approx. per tank.
- After the calibration, you have to treat the contaminated water and this has a cost that have to be included in the analysis.
- You need to refill the tank with fresh product.
- The TCO should also include the cost of the fresh product that will remain blocked in the bottom of the tank, below the suction pipe (in best cases it amount to 200 liters or more).
- The whole process done in compliance with safety standards, certification and according with the rules of art, will take a whole day for two technicians, (plus transportation cost, meals, etc.).



## COSTS TO BE CONSIDERED WITH THE 3D LASER SCANNER SOLUTION:

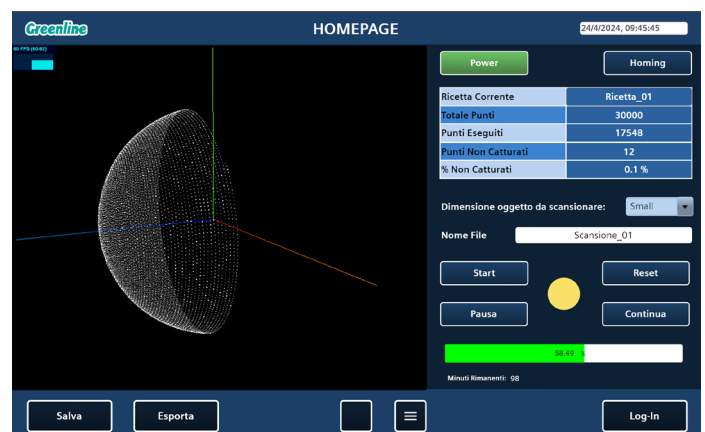
- Coordinate with the Service Station to minimize the level of fuel in the tank to be calibrated (80% empty is enough).
- Fit 3D Laser Scan equipment on a 2inch hole on the manhole.
- Proceed with the tank scanning process.
- Restart with the normal operation of the Service Station (in the meantime you will have time to receive new fresh product to fill the tank).
- Total estimated time 1,5/2 hours.
- With the proper coordination, one technician can complete the scanning process of the 5 tanks in a Service Station in one day so this is an important economic, operational and technical incentive for all parties.

**GreenLine, in its solutions for the cubature and recalibration of tanks, creates an absolutely cutting-edge system, that allows you to calculate the real volume of the tank and generate the corresponding information table with absolute accuracy, even in the case of inclined and/or deformed tanks.**

## TECHNICAL FEATURES

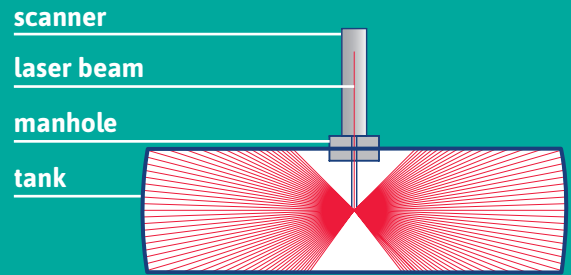
Input	230 Vac
Intake	250 VA
Longitudinal measurement range	25 mt
Standard diameter lenght	± 3.000 mm
Laser precision	± 1 mm
Scanning speed	5 ÷ 20 sec/rotation (standard 10 sec)
Points measured per rotation	100 ÷ 400 (standard 200)
Dimensions (excluding control unit)	145x30x30 cm
Weight	35 Kg
Minimal entry hole	2"

## CONTROL UNIT MONITOR

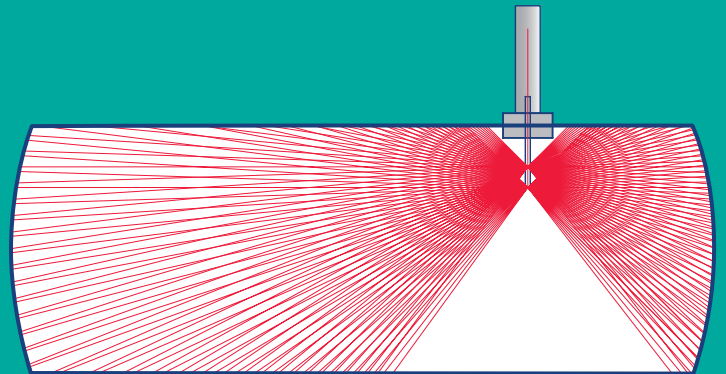


## FEATURES OF THE 3D LASER SCANNER:

- The scanner is ATEX certified for operation in zone Ø with SIL2 (Safety Integrity Level).
- The certification covers our complete solution for the specific use that we are promoting.
- The scanner is certified by an International Metrological laboratory under the OIML R71 and API standard.
- The scanner has a movable reflective mirror block, capable of rotating both horizontally and vertically. It is possible to perform surveys at different descent heights, to detect, better than any other instrument, the profile of the tank.
- The control unit is made with industrialized components, easy to find on the market in case of failure. All of the components are oversized to reduce the risk of failure.
- Replacement and repair kits are available for parts most subject to stress (brackets, mirror block).
- The control unit is connected to a wifi module to transmit scans in real time and have remote desktop support by our specialized technicians.



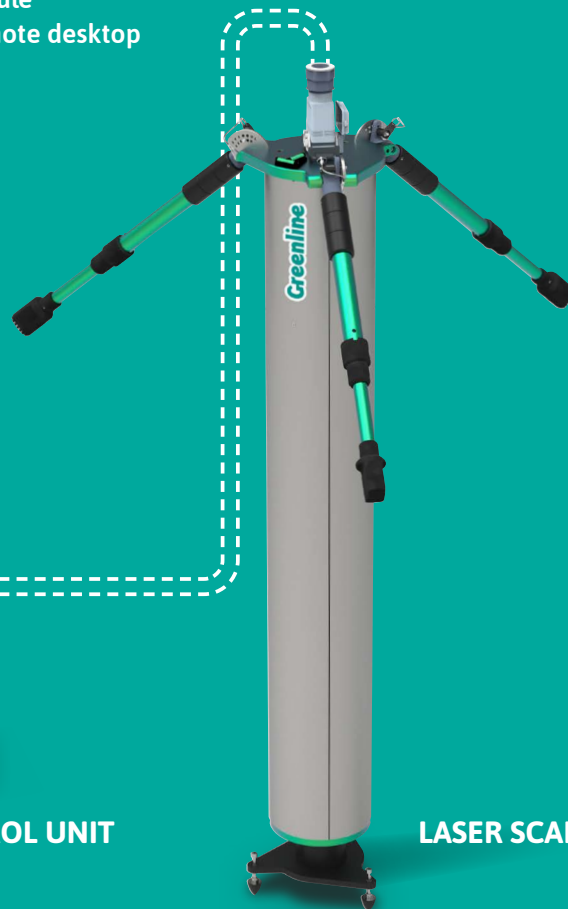
Scan on a tank with diameter: 150 cm, length: 500 cm, central manhole



Scan on a tank with diameter: 300 cm, length: 800 cm, lateral manhole



CONTROL UNIT



LASER SCAN UNIT

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**GREENLINE IS CERTIFIED ISO 9001:2015**

The technical data and drawings contained in the brochure are to be considered informative and non-binding.

**Green Line S.r.L**

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