

CiTriS

Circular Triangulation Sensor



A new step in the laser measurement technology. The sensor measures internal geometries of bores, tubes, containers and other cavities. The radial laser scans the internal surface on a cavity geometry at 360° with up to 3600 angular points. The result is the precise 2D cross section. Sensors with different measurement ranges are available.



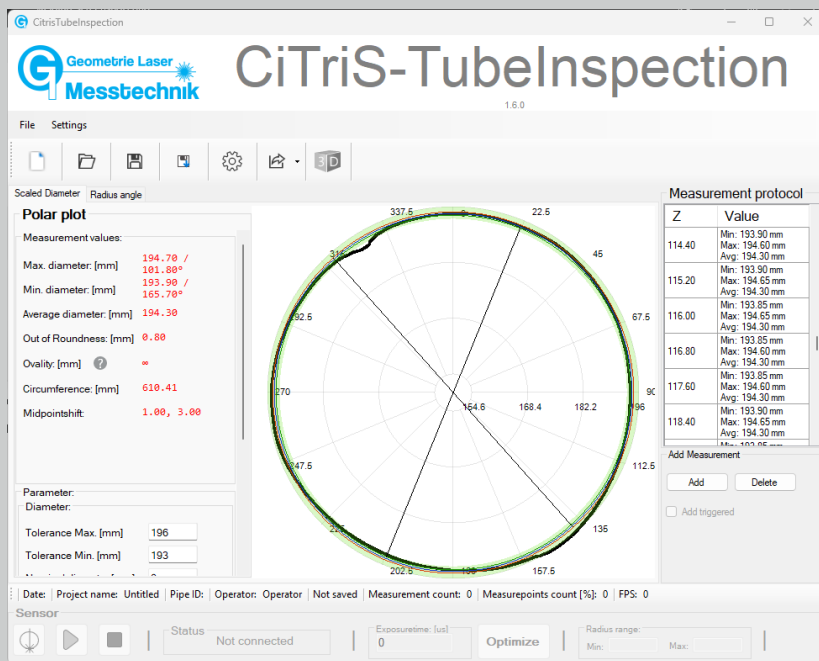
CiTriS Model: 180±340

Functions

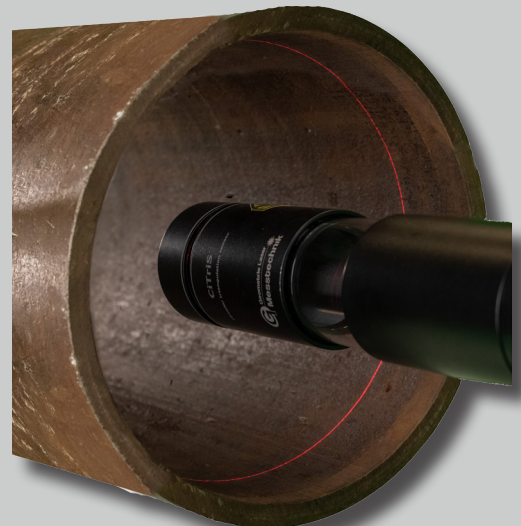
- ✓ Inner diameter measurement
- ✓ 2D cross section capture
- ✓ 3D model by axial movement
- ✓ Metric, calibrated results
- ✓ 360° capture
- ✓ up to 90 measurements per seconds
- ✓ Radial measurement ranges 30 - 500 mm



Demo Software



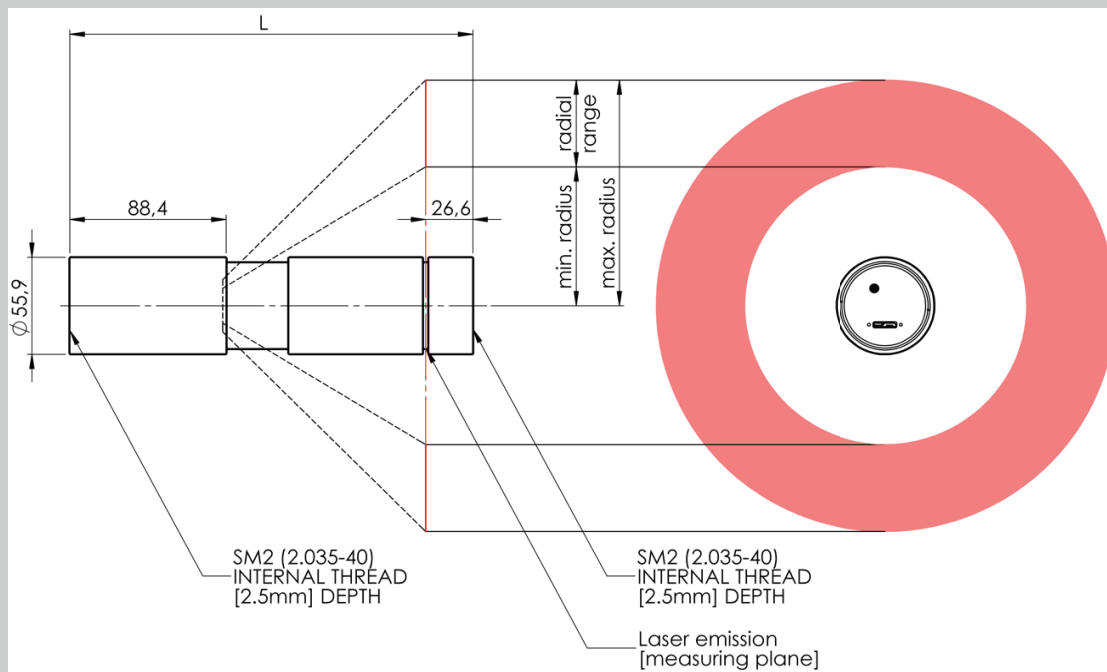
- 2D cross section plot
- Export function: ASCII / TXT
- Programmable via API C /C++
- Configuration of basic parameter
- Ready for 3D scan



Screenshot of the measured 2D cross section of a pipe with welding.

Specification:	All models
Typ of measurement	Circular Laser Triangulation / Circular sheet of light
Laser	Circular laser (660 nm, visible)
Laser class	II M
Data interface / Power supply	USB 3.0 / PoE
Programming interface	API C / C++
Circular resolution	up to 3600 radial points over 360°
Housing	gasketed aluminium, IP54
Housing diameter	∅ 55.9 mm
Trigger	TTL
Scan rate	up to 60 measurement / second
Operating temperature	10–40 °C
System calibration	ISO9001 EN (calibrated)
EC conformity declaration	CE certified

Modell	60-140	110-220	180-340	300-620	550-960
Length L [mm]	254	189	228.5	322	449
Radial measurement range [mm]	50	70	100	180	240
Min. radius [mm]	30	50	80	140	260
Max. radius [mm]	80	120	180	320	500
Weight [g]	≈400	491	505	541	623



Geometry and measurement range of the CiTriS models (USB version). The left drawing shows the housing dimensions, SM2: Fixation thread. The right drawing shows the top view of the measuring plane.