

# Crawler

## 3D pipe scanning robot

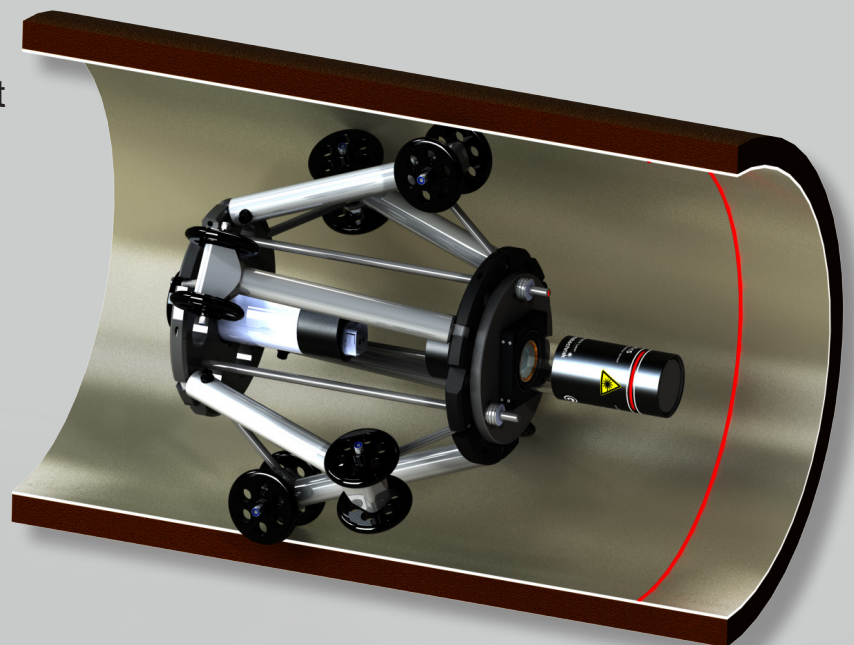


The crawler is a robot to inspect tubes for Inside diameter, roundness and surface defects.

The crawler is based on CiTriS, a new 360° laser sensor.

### Details

- ✓ Laser measurement system for pipes
- ✓ Exact inner profile
- ✓ Contactless measurement
- ✓ Laser sensor driven by a robot



*Pipe-scanning via Crawler*

### Computer

22" Multi Touch  
Core i5  
8 MB RAM  
2X Gigabit LAN  
USB2:0 + USB 3.2

### Functions

- ✓ Multiple 2D-Section scan and complete 3D scan
- ✓ 3600 radial measurements per scan
- ✓ 60 scans per second
- ✓ Automatic center calculation
- ✓ No mechanical centering required
- ✓ Tolerance surveillance

# Crawler

## 3D pipe scanning robot

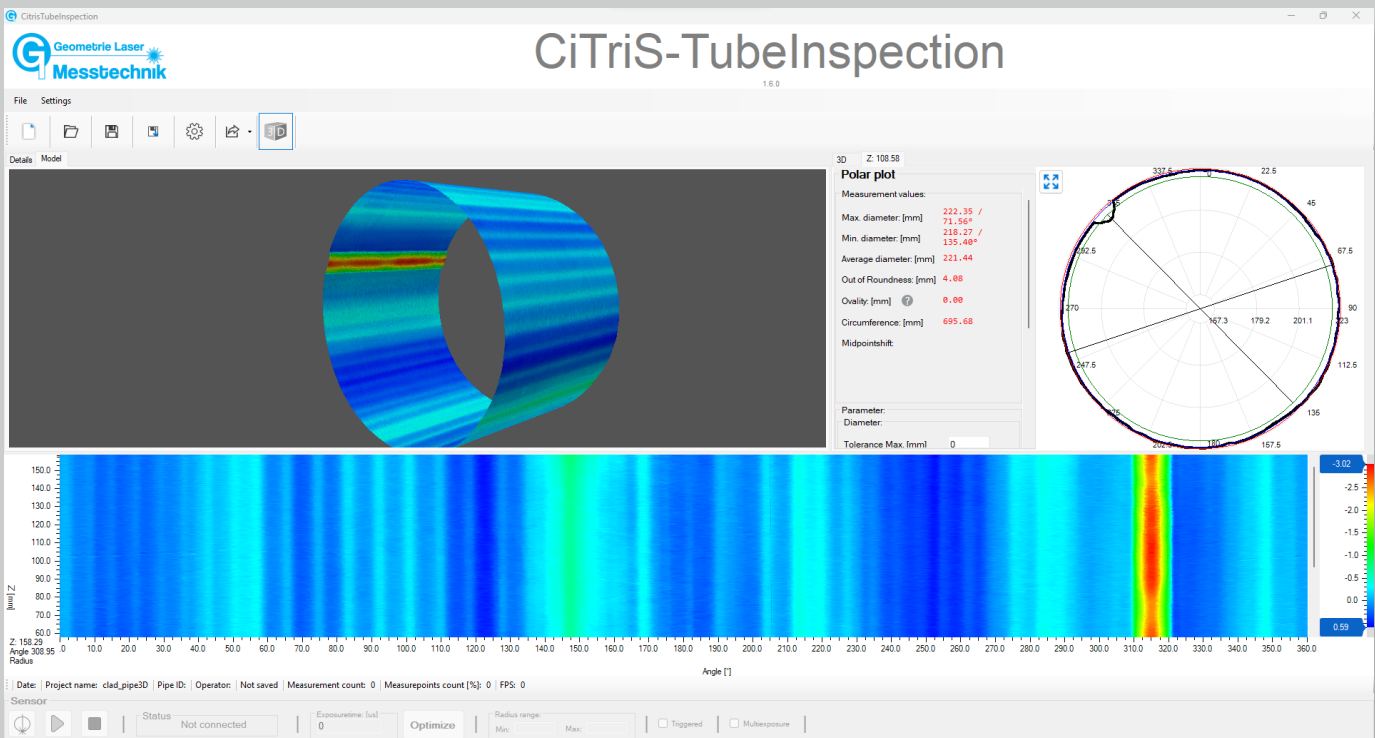


|                           |  |         |         |         |
|---------------------------|--|---------|---------|---------|
| Specification:            | All models                             |         |         |         |
| Typ of sensor             | CiTriS - Circular Triangulation Sensor |         |         |         |
| Laser class               | II M, Circular laser (visible)         |         |         |         |
| Data interface            | Ethernet                               |         |         |         |
| Power Supply              | 24 V DC                                |         |         |         |
| Software                  | Crawler                                |         |         |         |
| Operating temperature     | 10–40 °C                               |         |         |         |
| System calibration        | ISO9001 EN (calibrated)                |         |         |         |
| EC conformity declaration | CE certified                           |         |         |         |
| Crawler-model             | 125-200                                | 200-340 | 340-610 | 610-960 |
| Pipe Ø ID [mm]            | 125-200                                | 200-340 | 340-610 | 610-960 |



### Calculation of:

- Ovality
- Tolerance exceedings
- Surface defects
- Enveloping
- Welding inspection
- Side tabs dimensioning



Screenshot of analysing a 2D-section of the 3D-model.  
3D-scan of pipe ending with welding and welding preparation.  
Each measured plane can be analysed in 2D.