

## 3D Log Scanner

ProScan is a 3D Log Scanner, developed to meet our customers demands on measuring true shape of the log. It consists of 3 camera units to cover the whole periphery of the log.

ProScan is a high-performance log scanner and is used both for log sorting and in the sawline.

### Benefits

- The scanner system manage very **high conveyor speed**.
- Requires a **minimum of calibration and maintenance**.
- Prepared for measuring of **bark scrub off**.
- Measures the **true shape of the log**, considering to sweep, knots, damages etc.

### Camera units

The log scanner consists of 3 cameras, pre-calibrated from factory, which contains integrated laser and image pre-processing systems.

Each camera has its own microprocessor and software, which pre-processes the measurement data in the camera images. This increases the overall speed of the system, as the PC is largely relieved of the demanding image evaluation.



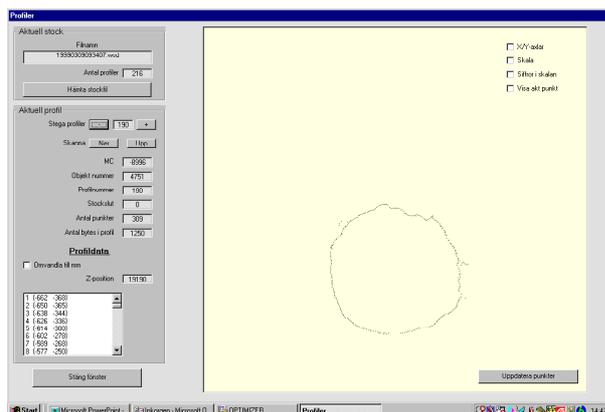
### Data (standard scanner)

|                              |        |
|------------------------------|--------|
| Scanning accuracy, diameter: | 1 mm   |
| Scanning accuracy, length:   | 2 cm   |
| Minimum diameter:            | 100 mm |
| Maximum diameter:            | 600 mm |
| Minimum length:              | 1 m    |
| Maximum length:              | 9 m    |

## Technique

Data from the cameras is transferred to a PC through fibre optic. The PC put the data together and make it into a profile.

With this camera technique it is possible to make 15 000 measurements per second, but to make a correct image of the log we only need about 300 measurements per second. At each measurement a profile is created with hundreds of scan points. On a log with a length of 4,5 meters and with a feed speed of 100 meters/minute, hundred thousands of scan point will be decided, and the true shape of the log can be determined.



Data from the log scanner is filtrated and compressed in the optimization system. The filtration eliminates the measurements that is irrelevant, as the i.e. conveyors.

With all irrelevant data reduced, the calculation of the turning angle and optimisation of the saw pattern is done very quickly.

## Maintenance

The camera is very easy to calibrate and requires a minimum of maintenance. Instrument for calibration is included in the 3D-log scanner.

The laser in the log scanner is visible which makes it easy to place the calibration-tool at the right spot. When it is placed where it should be, the operator just push the calibration button and the scanner will be adjusted automatically.

If a malfunction appears on the camera it is very easy to replace it with a new one, without any new mechanical adjustments required.

## Basic conditions

- Minimum distance between log scanner and log turner is 8 meters at a conveyor speed of 100 meters/minute.
- No direct or indirect sunlight or any other bright light in the operating area of the cameras.
- The log must be fixed on the conveyor during the scanning.
- The surrounding temperature must stay within -30-40 degrees Celsius or -22-104 degrees Fahrenheit.
- Straight intake