



Certified, accurate and transparent

3D stereo technology for the contemporary timber industry

Calibrated Photo-optic measurement with sScale™ - the new dimension for a professional forest measuring!

By demonstrating the verifiability of sScale™ as a photo-optic woodpile-measuring device, Dralle A/S has been able to offer the forestry and wood industry a user-friendly and professional basis for legally compliant, accurate and transparent forest measuring since the beginning of 2016. The basis of each spatial dimension calculation is a precisely measured woodpile face area, which is determined to be conformity-rated with sScale™.

Through a possible correction with the woodpile rear surface and multiplication with the assortment length results in the gross cubic measure, which can be converted with the help of industry-standard reduction factors and conversions to further billing-relevant characteristics of piles of wood.

In contrast to other measuring systems, the sScale™ unit can now be used to make relevant, clear and legally binding information concerning the commercial target size - the cubic measure.

The photo-optic measurement also enables automated piece number determination with diameter distribution of the log faces.

Stereo measurement makes the work with reference dimensions superfluous. The mobile sScale™ unit is ready for use day and night and in any weather conditions - powerful LED floodlights ensure the necessary exposure conditions for the measurement. A device user converts between 200 and 400 thousand cubic metres a year, thus guaranteeing a high process standard.

The data collected from your woodpile inventory is available to you in real-time on a central server and can be exported

1. Dralle A/S was able to obtain a Conformity Rating (according to international standards and the requirements and test conditions of PTB Braunschweig) in accordance with MessEG and MessEV for sScale™. On this current legal basis, Dralle A/S has been completing Conformity Rated procedures for sScale™ systems since January 2016



in various formats for further use (e.g., marketing or accounting). Furthermore, there is the possibility of a complete integration of the woodpile management in your own IT system.

With the amazingly easy-to-use sScale™ measurement and data processing system, you do not have to be an IT expert for professional woodpile data management.

In addition to easing company internal work and staff loads, significant improvements are made in the provisioning, marketing and logistics process. Above all, your costs are reduced due to standardisation and process acceleration.

sScale™ has proven its value in everyday forest life since 2007 with more than 20 million cubic metres measured. The logistics and marketing is carried out just-in-time through customer-specific data management.

With detailed measurement and photo documentation for each woodpile, new impulses are set for your wood marketing!

Test design for Conformity Rating

In total, with five device users and three sScale™ systems, over 500 area measurements were performed under normal and extreme conditions.



sScale™ has a maximum error of +/- 3% relative to traceable reference areas on real woodpiles. Fixed outer contours of woodpile face areas are measured regardless of device user or sScale™ system under all test conditions with a maximum deviation of +/- 3%, based on the average value.

Test limits

Woodpile states	Environmental conditions	Travel movements
Number of reference areas: 7	Temperature: -20°C - +40°C	Distance to woodpile face 2m - 6m
Number of woodpile face areas: 5	Rel. humidity: 20% - 90%	Speed: 1 m/s - 10 m/s
Tree species: Spruce and Maple	Light intensity: 0 - 3000 Lux	Slalom: Amplitude up to 4 m
Size of area: 2.4 m ² - 52 m ²	Light: from the front, rear, side	Slanted on the woodpile to and from
Woodpile length: 2.7 m - 25 m	Clouds: clear - overcast	Camera angle: straight up and down
Cutting face: fresh - weathered	Twilight and night	Uneven ground: 15 cm high
Assortments: Industrial wood and saw-wood sections	Fog (to a visibility of less than 10 m) and heavy rain (approx. 300l/m ² *h)	Heavy vibration and shaking

According to the OIML D11-Directive. The OIML is the International Organisation for the harmonisation of metrology in trade relations and prepares recommendations for the testing of measuring devices.