

# AMBERTEC

## Surface Orientation Profiler

### Description

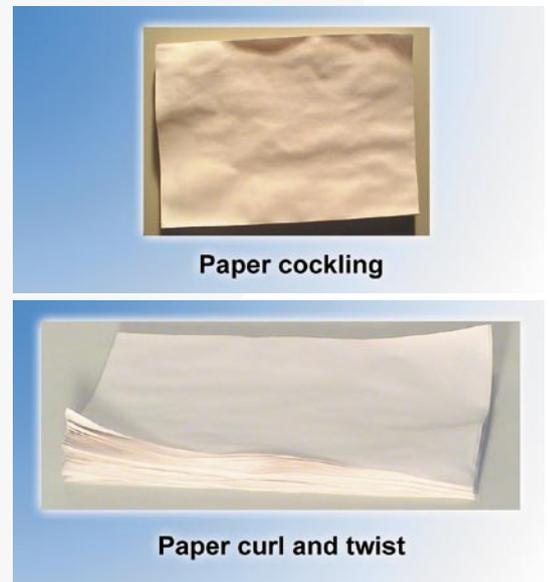
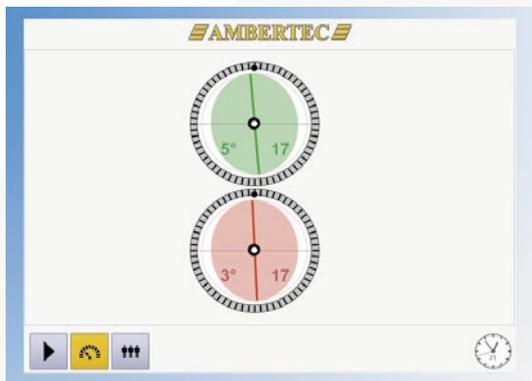
The cause of the paper instability lies in the structure of paper: The difference in the fibre orientation angle between the top and bottom surfaces of a sheet is one of the major causes for diagonal curl (twist), as well as for the cockling of a sheet, whenever the moisture content of the paper changes.

With modern paper machine control systems it has become possible to adjust the fibre orientation in an effective manner. As a result, measuring surface fibre orientation has become a very interesting topic.

The AMBERTEC Surface Orientation Profiler measures the orientation of fibres at the very surfaces of a sheet. A difference in

the orientation angle and intensity between the two sides is the major cause for cockling and curling of a sheet when moisture content changes.

Measurement is carried out simultaneously at both sides of the sheet and a typical 10 meter wide CD strip is measured and analysed in less than 30 seconds. In addition to mere orientation angle and orientation intensity profiles, the instrument also produces a curling hazard profile which pinpoints the locations on the web which potentially may cause trouble with moisture content changes.



### Technical specifications

Operation principle:	Patented AMBERTEC Surface Orientation Measurement Automatic profiling of CD profile samples
Basis weight range:	0 – 500 g/m <sup>2</sup> , depending on sample stiffness
Sample type:	Single or multiple sheets, CD profile strips
Width of sample:	210 mm max (ISO A4 format sheet)
Measuring aperture:	About 7 mm in diameter
Scanning / Measuring speed:	0,5 meters/sec
Precision of determination:	Orientation angle: 0,1 degrees. Orientation intensity: 1%
Measuring range:	Orientation angle: -90 ... +90 degrees Orientation intensity: 0...100%
Electrical:	110...230 VAC 50/60 Hz, 350 VA
Pneumatic:	Instrument air, 7 bar (0 l/min)
Dimensions:	450 mm (width) x 300 mm (length) x 440 mm (height)
Weight:	40 kg
Shipping dimensions:	800 mm (width) x 600 mm (length) x 600 mm (height)
Shipping weight:	60 kg