

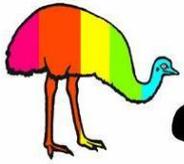
emcoGPR Smoothness Tester (Bekk)

Conforms to DIN 53107; TAPPI T-479 om 91; ISO 5627

Automatic precision tester for determination of smoothness of paper



- Automatic adjustment of measurement range as well as automatic action
- Menu-driven handling
- Standard measurement and fast measuring mode 1/10 volume
- Statistics for five samples showing average, standard deviation, max, min and edit function of the statistic values
- Compensation of atmospheric pressure and temperature
- Integrated humidity sensor
- Verification modes for < tightness > and < sizing die >
- Option: RS 232 to transfer measuring values to PC or printer



Construction and Operating Mode

The **emcoGPR** offers conventional Bekk conform testing, but also an entirely new method which gives results compatible to Bekk at a much shorter testing time.

This is made possible by the adaptive volume chamber with an electronically controlled volume and vacuum.

The chamber is located below and directly connected to the polished glass plate so that no valves are needed. A weight of exactly 10 kg is loading the sample with the required probe clamping pressure of 100 kPa via rubber plate.

The vacuum is directly produced in the vacuum chamber and sample clamping is done by an electro mechanical unit, lifting the measuring head against the loading weight.

The **emcoGPR** is the first smoothness tester providing for temperature and atmospheric pressure.

Since the test results depend on climate, the conditioned atmosphere is acquired at every measuring.

The new firmware provides two test modes: standard and rapid measurement (1/10) and allows the setting of the measuring range, depending on the roughness of the paper sample.

Chain of measurement

The volume chamber connected with the bore in the glass plate is evacuated. The glass plate itself is carrying the weight loaded probe. Between the paper surface and the glass plate air is flowing to the central bore and is causing a raise of pressure in the vacuum chamber. The time between two pressure points is measured and shown on the digital display. With raising smoothness of the paper surface the time becomes longer. The so displayed time is called Bekk-seconds (Bekk s) and is a direct measurement for the surface smoothness of the probe.

The unit is operated fully automatic by pressing the button "start".

Technical specification

Volume standard:	380 ml	10 ml
Volume fast measuring:	38 ml	1 ml
Working range:		
Standard mode	15 to 1400 Bekk s	
Fast mode	80 to 1400 Bekk s	
Measuring range:	15 to 600 Bekk s	
Operating conditions:	18 - 25°C; 30 - 70 % humidity	
Dimension: (LxWxH)	500 x 400 x 520 mm ³	
Weight:	45 kg	
Power connection:	230 V / 50 Hz	
Compressed air:	not necessary	