Knowing paper better!

Since 1992 Partner of Paper Industry
Since 1996 Partner of Printing Industry

Innovation and Competence
Development, Manufacturing and Sales

*emco*GPR
Smoothness Tester (Bekk)

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

Automatic precision tester for measuring the smoothness of paper surfaces

- Automatic adjustment of measurement range and automatic test sequence
- Menu-driven operation
- Standard measurement and fast measuring mode 1/10 volume
- Integrated statistics function for measurement series
- Air pressure compensation of measured values
- Simultaneous measurement and recording of the test climate
- Verification modes for < tightness > and < sizing die >
- RS 232 interface

Construction and Operating Mode

In addition to a Bekk compliant measuring method, the ***emco*GPR** offers a completely new method which delivers fast results.
The smoothness tester works with a chamber whose volumes and vacuum are determined by a processor. Volume chamber and measuring point (standardized glass plate with central bore) form a unit, whereby negative influences on the flow behavior are reduced. The sample is pressed against the glass plate by a pressure plate covered with special rubber and a pressure of 100 kPa. The pressure is generated by a weight of 10 kg.
The sample is loaded directly and simultaneously clamped by an electric motor. The *emco*GPR is the first smoothness tester that takes into account the influences of temperature and ambient air pressure. Since the test results are climate-dependent, the test climate is also recorded for each measurement.
The new firmware provides two measuring modes: standard and rapid measurement (1/10) and allows the adjustment of the measuring range, depending on the roughness of the paper sample.

Test sequence

After inserting the sample and pressing the "Start" key, the test runs automatically. The automatic zero adjustment before each measuring series guarantees a reproducible test air volume, independent of the ambient air pressure. Outside air is sucked in between the glass plate and the paper surface until the defined pressure increase is reached in the vacuum.chamber. The time of the increase in pressure is measured and displayed digitally. The smoother the surface, the longer the measuring time. The displayed time has the unit "Bekk seconds" (Bekk s) and is a direct measure of the smoothness of the sample.

Technical data

Standard volume:	380 ml	10 ml
Volume fast measurement:	38 ml	1 ml
Working range:		
Standard mode	10 to 1400 Bekk s	
Fast mode	80 to 1400 Bekk s	
Measuring range:	up to 600 Bekk s	
Operating conditions:	18 – 25°C; 30 – 70 % humidity	
Dimensions: (LxWxH)	500 x 400 x 520 mm³	
Weight:	45 kg	
Power supply:	230 V / 50 Hz	
Compressed air:	**not** necessary	