

Thwing Albert Electronic Inkometer



Model 106 with Temperature Controller

Description

By simulating the dynamic conditions that occur in the printing process, the Electronic Inkometer provides rapid and reliable data on the tack and length of ink. It measures the integrated forces involved in ink film splitting and the effects of speed, film thickness, temperature and solvent evaporation.

Advanced microprocessor control ensures the highest accuracy and efficiency for the confident comparison of new and different inks in research and development, quality control and process evaluation.

The test results are numerical values, in gram metres, for the torque required to 'work' the ink film at known rates with predetermined film thickness and temperature. These torque readings are actual measurements of the tack of the ink. The length of the ink is calculated by analysing the difference between readings at different roller speeds.

Operation

The Electronic Inkometer consists of three rollers:

- upper composition covered roller
- vibrator composition covered roller
- temperature-controlled roller

The pressure between the two composition covered rollers, their speed of rotation and the temperature of the ink film reproduce on-press conditions. These rollers are suitable for testing all types of printing inks, having definite plastic properties and containing no volatile thinners.

Temperature is controlled by circulating water from a control unit, composed of a refrigerated bath circulator with a stainless steel reservoir that is separate from the tester and may be placed wherever convenient.

Electronic Inkometer

- Microprocessor-based electronics for high reliability
- Push-button operation
- Digital display of temperature, tack in gram metres, rpm and test time
- Automatic mode for quick and easy test flow
- Fixed speeds (150, 400, 800, 1200 and 2000 rpm) and variable speeds (up to 3000 rpm)
- Calibration weights included
- RS-232 interface for ink stability curve
- Built-in printer to print automatically the results of a 10-minute ink stability test

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Options

- Recorders – Single-pen chart recorder or x-y recorder
- Parallel BCD and RS-232 output available as replacement options for multiplexed BCD
- Roller testing speed 4000 rpm

Performance data

- Electronic Inkometer
 - Roller testing speeds fixed 400, 800, 1200 and 2000 rpm; variable 0–3000 rpm
 - Roller distribution speed nominal 150 rpm
 - Roller set total surface area of 684 cm²
 - Power consumption 2.8 A at 800 rpm, 3.4 A at 1200 rpm, 4.0 A at 3000 rpm, 0.22 A on standby
 - Power supply 220 V, 50 Hz
- Temperature Controller
 - Water temperature settings 32°C or variable
 - Heat adjust control 100–1000 W
 - Reservoir capacity 9.5 l
 - Power consumption 5.5 A at steady rate

Physical specifications

Dimensions (W x D x H)

Electronic Inkometer 91.5 x 46 x 46 cm; Temperature Controller 21.5 x 45.5 x 53 cm

Net weight

Electronic Inkometer 124 kg; Temperature Controller 25 kg

Standard

ASTM D4361