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ASTM D5958 test method

produces consistent varnish quality within 20 min.

standard practise for oil based resin solutions

programmable temperature and stirring programm

new automatic varnish cooker

THERMOTRONIC III

automatic varnish cooking made simple

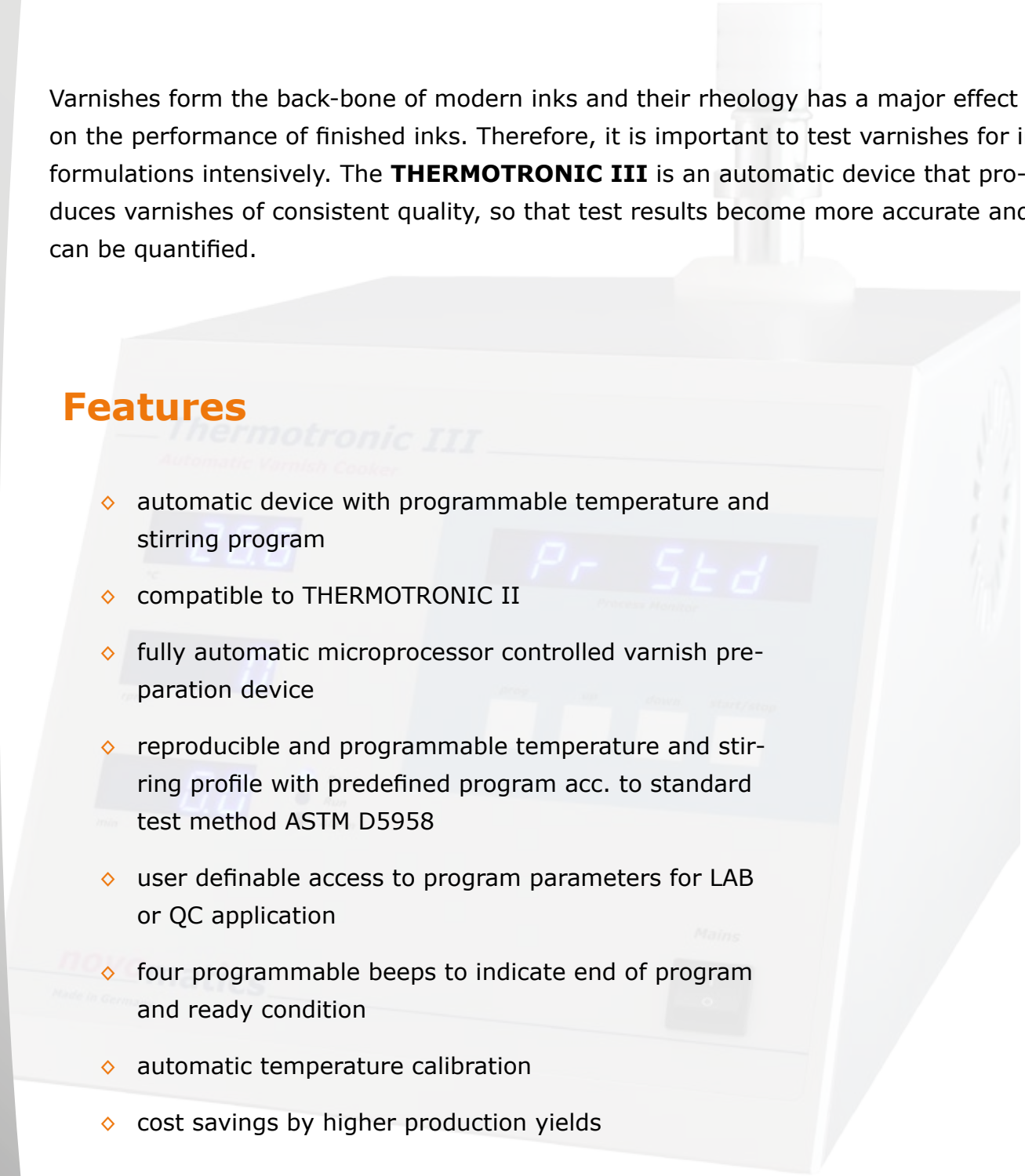
Introduction

The **THERMOTRONIC III** is an instrument to prepare resin solutions according to the test specification of the user. Test samples for rheological tests can be prepared in a repeatable manner without the need for special skills. Test samples may have different resin percentage and may be made of test oils with different solvencies, but oils and dosage should reflect actual formulations.

Typical applications

- varnishes
- flushes
- mineral oils
- solvents
- binders
- natural resins
- synthetic resins
- dispersions

Varnishes form the back-bone of modern inks and their rheology has a major effect on the performance of finished inks. Therefore, it is important to test varnishes for ink formulations intensively. The **THERMOTRONIC III** is an automatic device that produces varnishes of consistent quality, so that test results become more accurate and can be quantified.



Features

- automatic device with programmable temperature and stirring program
- compatible to THERMOTRONIC II
- fully automatic microprocessor controlled varnish preparation device
- reproducible and programmable temperature and stirring profile with predefined program acc. to standard test method ASTM D5958
- user definable access to program parameters for LAB or QC application
- four programmable beeps to indicate end of program and ready condition
- automatic temperature calibration
- cost savings by higher production yields
- improved end use product quality

Test procedure

The glass test tube must be filled with only 20 grams of resin and is then inserted into the hole on top of the instrument. Add 30 grams of test oil to obtain a 40% solution. The precision Pt100 thermometer assembly is placed on top of the test tube. Then the test program for the test is selected and the actual test can be started by pushing the start button. The varnish is prepared by heating up to 230°C max. dwelling at that level for 2 min. and cooling down to 90°C. The varnish is ready after approx. 20 min. and this is indicated by an audible signal. 4 different signals can be programmed to destingush the end of the program of this unit from other units.

Standard method

This method has been approved by standardization committees for ink test methods. In Europe the EUROCOMMIT and in the USA the ASTM committee has approved it. The ASTM test method number is D5958: standard practice for preparation of oil-based ink resin solutions.

Calibration

In the **THERMOTRONIC III** a powerful microprocessor system is installed for the control of all instrument functions. A high resolution A/D-converter is used to convert the analogue inputs of the Pt100 sensor into a digital signal. The input circuit is designed for automatic calibration by internal references. The measuring accuracy is ± 0.1°C without the need of recalibration.

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New metal test tube holder

safe handling of hot tubes

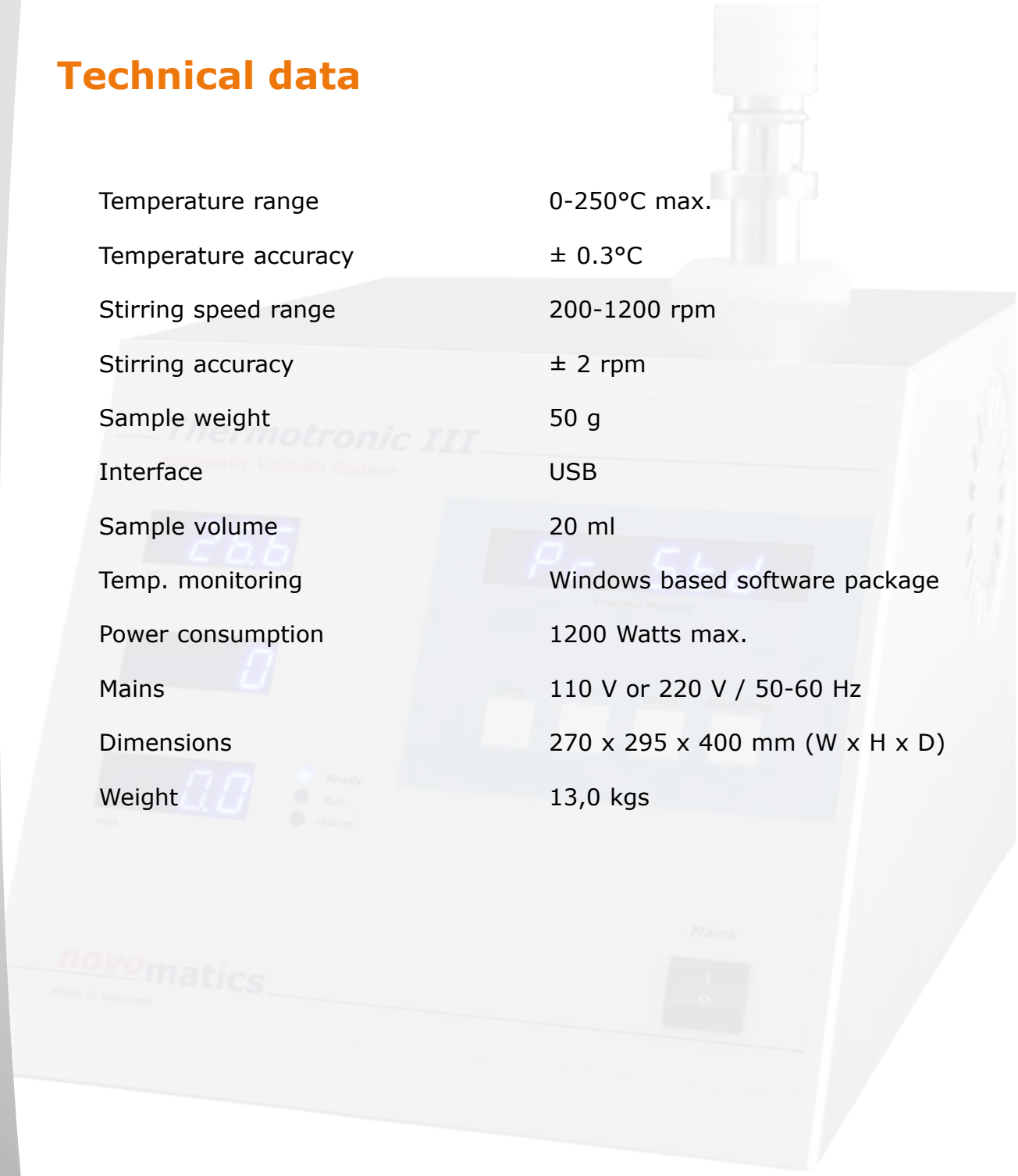
stainless steel

rugged design

for use with all
THERMOTRONIC II/III

Technical data

Temperature range	0-250°C max.
Temperature accuracy	± 0.3°C
Stirring speed range	200-1200 rpm
Stirring accuracy	± 2 rpm
Sample weight	50 g
Interface	USB
Sample volume	20 ml
Temp. monitoring	Windows based software package
Power consumption	1200 Watts max.
Mains	110 V or 220 V / 50-60 Hz
Dimensions	270 x 295 x 400 mm (W x H x D)
Weight	13,0 kgs



novomatics
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Novomatics GmbH
Aubachstr. 1
56410 Montabaur
Germany

Phone **+49-2602-919 9622**
Fax **+49-2602-919 8052**
Email **solutions@novomatics.com**

www.novomatics.com