VISCOSITY

Sheen

REF 455N DIGITAL ROTOTHINNER

INTRODUCTION

The Rotothinner is a robustly constructed instrument, which is easy to use, clean and maintain. Three models are available: a disc shaped rotor (Ref 455N/15) allows for the addition of thinners so that test samples can be adjusted to their correct viscosity and for the rapid adjustment of production batches; two ball shaped rotors (Ref 455N/65 & 455N/340) may be used for more viscous samples and for the addition of thinners more slowly.

FEATURES

- **3 models cover 0-340 Poise range**
- **Microprocessor controlled for accuracy and repeatability**
- **Up to 9 readings can be stored in non volatile memory**
- **RS 232 printer interface**
- **Automatic display hold allows reading to be noted easily**
- **Multipoint automatic calibration for greater accuracy**
- **Opto switch for smoother operation and greater reliability**
- **Quick release "bayonet" chuck for rapid changeover and cleaning**

DESCRIPTION

A constant speed motor drives the rotor which is immersed into the sample under test. The sample, usually in a 250 ml. full aperture tin container, is positioned on the magnetic ring on the stand base. The paddle or ball is rotated at constant speed (562 r.p.m.) in the sample and the torque induced in the motor is measured and converted into poise.

OPERATION

Ensure that sample is at uniform, correct temperature. The rotor is lowered into the sample by pulling the handle down to its fullest extent, which activates the rotor via an opto switch. The digital reading in Poise is noted on the display. Free flowing liquids will give a steady reading quickly; structured materials take longer because the shear applied by the rotor will decrease the reading.
After the reading has been taken, the handle is lifted until a slight resistance is felt which checks the upward movement of the rotor, so that it can spin off the test material below the rim of the container. The handle is raised to its maximum extent, which automatically switches off the rotor. When necessary the reading obtained should be corrected to allow for the temperature of the sample; usually the specific temperature is 25°C.

CALIBRATION

The 455N Rotothinner calibrates itself automatically across the viscosity range and therefore gives extremely accurate and repeatable results. The instrument may be re calibrated using a remote key which locates in the rear of the case. The 455N cannot be re calibrated without the key in position, and this allows the instrument to be secure from accidental adjustment. For quality control purposes, the 455N may also be calibrated regularly against standard calibration oils.
The instrument should also be serviced annually and re calibrated.

SPECIFICATIONS

Range	0.1 - 15 P, 0.1 - 65 P, 1.0 - 340 P*
Resolution	Within 0.1 P or 1.0 P*
Accuracy	±2% of full scale
Repeatability	±1% of full scale
Operating Temperature	+15° C- + 35° C
Spindle Speed	562 r.p.m ±1%
Sample Container	250ml (standard)
Dimensions	200mm x 360mm x 550mm (w x d x h)
Weight	8 Kgs
Power Consumption	30 Watts max.
Electrical Supply	200/250V, 110/120V 50 Hz or 60 Hz

ORDERING INFORMATION

Ref 455N/15	0 -15 Poise Digital Rotothinner with RS 232 cable and interface module
Ref 455N/65	0 - 65 Poise Digital Rotothinner with RS 232 cable and interface module
Ref 455N/340	0 - 340 Poise Digital Rotothinner with RS 232 cable and interface module
Ref 409/081/D	Sample Container 250ml
Ref 409/081/D2	Sample Container 236ml (USA)
Ref 490/P	Battery powered rechargeable serial printer
Ref 480/019/S	Calibration key (required for instrument re-calibration)

CALIBRATION OIL SETS

Ref 455N/15	Oil ref	441/5,	441/11,	441/13
Ref 455N/65	Oil ref	441/11,	441/14,	441/16
Ref 455N/340	Oil ref	441/14,	441/17,	441/20

Note: 3 oils are required to calibrate each range.

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