

RUBEN 005 P&J PLASTOMETER



*The **RUBEN 005** P&J plastometer is a full automatic microprocessor controlled instrument for testing material hardness.*

This instrument uses a standard P&J measuring method.

Portable and a full automatic instrument for testing material hardness

RUBEN 005 instrument offers to demanding industry conditions reliability and accuracy of the laboratory measuring instrument. RUBEN 005 instrument is a compact aggregate and it is easy to move from one measuring place to another. The device includes patented technology by Tieto-Oskari Oy. Ruben instrument meets extremely well the demands of P&J standard.

Saving and exporting of measuring results

The device saves the measuring results in the memory and the information can be transferred to the PC. The measuring results can be printed from the computer program and be exported for example to the MS EXCEL® program. The measuring object data can be added on the measuring results, where the device can sort out the results, count the average values of them and form reports of the results by the measuring object.

Thermometry of the material surface and instrument installation angle

RUBEN 005 instrument measures and saves also temperature of the material surface and instrument installation angle as an appendix of the measuring results.

Easy to measure

The measuring sequence starts, when the user presses the 'measure' button. The instrument moves automatically 1 kg mass on the surface of the testing material, waits 60 seconds, returns the weight back to the home position and gives the result. The instrument shows the result on the display and saves it also into the memory. So the instrument can also show the average of the P&J value concerning test series.

Diagnostics features

The **RUBEN 005** P&J plastometer has many self diagnostics features to ensure the right measuring result. The user can zero-calibrate it in a simple and fast way.



RUBEN 005 P&J transport case.

SPECIFICATIONS - RUBEN 005

Indenter

- ♦ Ball: Ø 3,175 mm

Loading weight

- ♦ 1000 g ± 1 g

Measuring range

- ♦ 0 - 300 P&J unit

Measuring resolution

- ♦ 0,001 mm (0,1 P&J)

Reading of measured values

- ♦ 0,5 P&J or 0,1 P&J

Accuracy

- ♦ Typically error smaller than +/- 0,2 P&J

Operating temperature

- ♦ Ambient temperature +10 to +40 Celsius

Reading units

- ♦ P&J, JIS, SHORE-A, SHORE-D (NOTE: JIS and SHORE units are only for comparisons)

Memory

- ♦ 500 measurements, battery backup

Weight

- ♦ < 5 kg

Dimensions

- ♦ 188 x 130 x 230 (W x L x H)

Power supply

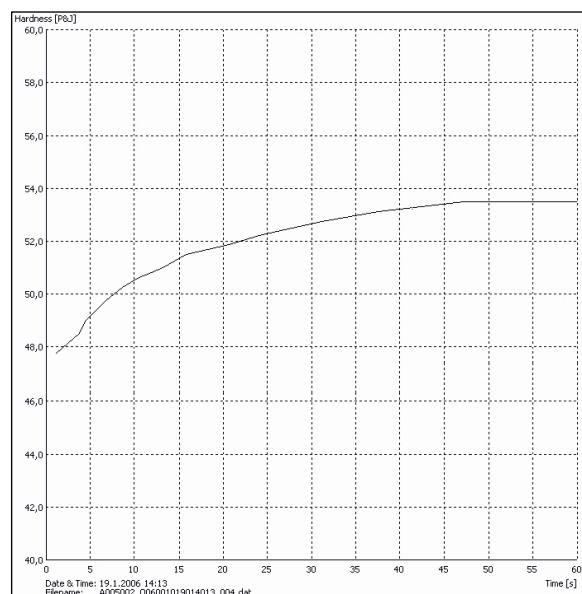
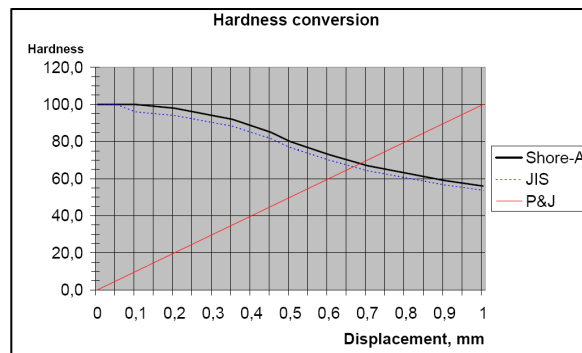
- ♦ Inside accumulator, more than 200 measurements without charging

Accessories

- ♦ Transport case
- ♦ AC/DC adapter 24Vdc for charging
- ♦ USB cable
- ♦ Zero point calibration platform
- ♦ RUBEN Explorer PC software (optional)
- ♦ RUBEN Laboratory stand (optional)

Special properties

- ♦ Indenter displacement versus time curve measurements
- ♦ Self recovery measurement
- ♦ Electronic angle measuring
- ♦ Material surface non-contacting thermometry
- ♦ Surface detection with a constant force
- ♦ Real time clock for measurement time stamp



Measurement Report				
Note:		2 years old roll		
Tag Name:		All		
Date Range:		16.12.2005 - 16.12.2005		
Batch Range:		1 - 15		
Tag Range:		1 - 3		
Hardness	Temp.	Angle (X/Y)	Result	Analysis File
14,5 P&J	24,8 °C	0,3/-2,3	Pass	
14,7 P&J	25,1 °C	0,7/-0,2	Pass	
14,5 P&J	25,6 °C	0,8/-2,1	Pass	
14,1 P&J	26,1 °C	1,1/-1,1	Pass	
13,9 P&J	26,6 °C	1,1/-1,9	Pass	
13,9 P&J	26,7 °C	1,3/-1,0	Pass	
12,9 P&J	27,1 °C	1,4/0,0	Pass	
12,5 P&J	27,4 °C	1,7/-1,3	Pass	
14,7 P&J	28,0 °C	2,2/0,5	Pass	
14,5 P&J	28,3 °C	2,6/0,6	Pass	
Hardness	Temp.	Measurements	Result	
14,6 P&J	26,3 °C	5	Fail	
14,0 P&J	26,4 °C	3	Pass	
12,7 P&J	27,2 °C	2	Pass	

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