

SCConcrete Rheometer BT2

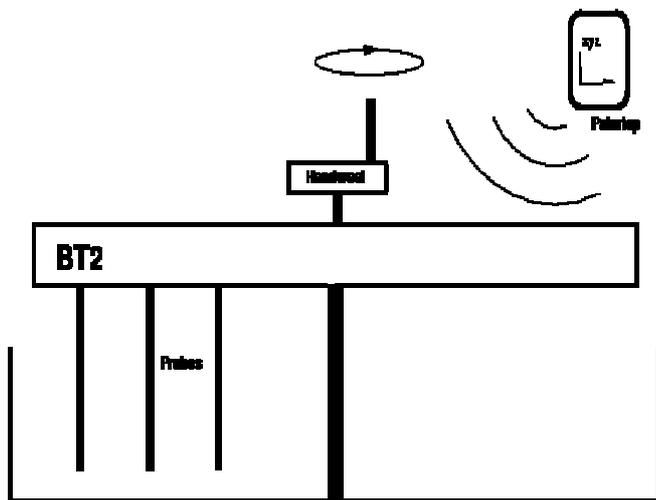
Application



The BT2 is a compact rheometer for fresh concrete. In opposite to the spread table the concrete is tested at various loads. Therefore you can determine a relative yield-stress and a relative viscosity. The construction avoids structural breakdown and segregation during measuring. The BT2 is small, power independent and easy to use.

Design

Figure 1



A sample of test material is placed in a sample container. The BT2 is fixed in the middle of the container and turned one round by hand. The internal processor monitors the measuring data i.e. The momentum on the three probes and the angular velocity. On completion of the measurement the readings may be wireless transferred and displayed at an external Palmtop.

At the most rheometers the shear stress is measured at

various speeds when a probe is rotating sometimes in the container. With the BT2 you will get three speeds at the same time. So one convolution is enough. You will never measure on the same place two times.

The system is driven by hand, and all the electronic is power independent. The ideal instrument specially designed for the building site.

How it works.

- Fill about fresh concrete in the specimen container.
- Switch on the BT2, in this moment the force sensors are automatically calibrated.
- Then set the BT2 on the shaft in the middle of the container.
- Press the start button
- Turn the wheel by hand until the BT2 turned one round.
- The data are now non volatile stored in the BT2.
- Up to 35 datasets can be stored in BT2.
- Afterwards you can transfer the data via the infrared (IRDa) interface to a Palm handheld computer which is delivered with the BT2.
- On the palm relative yield stress and relative viscosity are calculated and displayed both numerical and graphical .
- At your office you may transfer this datasets to your notebook or desktop PC
- With a mobile phone coupling set you can also transfer the datasets as an e-mail to any place on the world.

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near the same spread table value (44 cm, 44,25 cm and 45 cm). You see that nevertheless you will get three quite different flowcurves. This is clear because the spread table value is mixed result depending on the viscosity and the yield value.

Examples

Figure 3

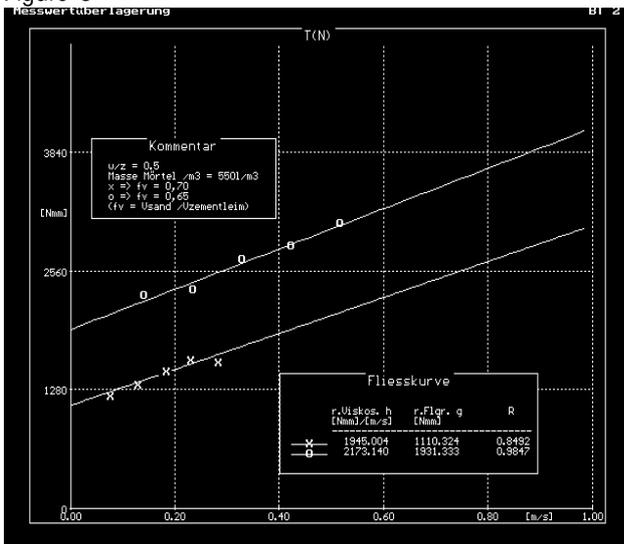
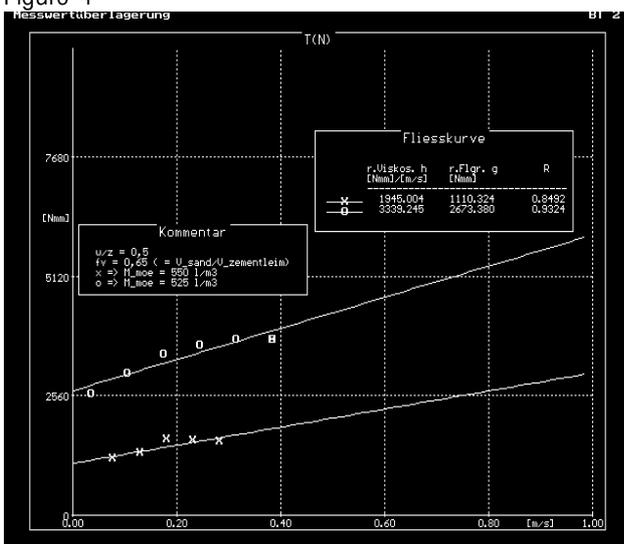


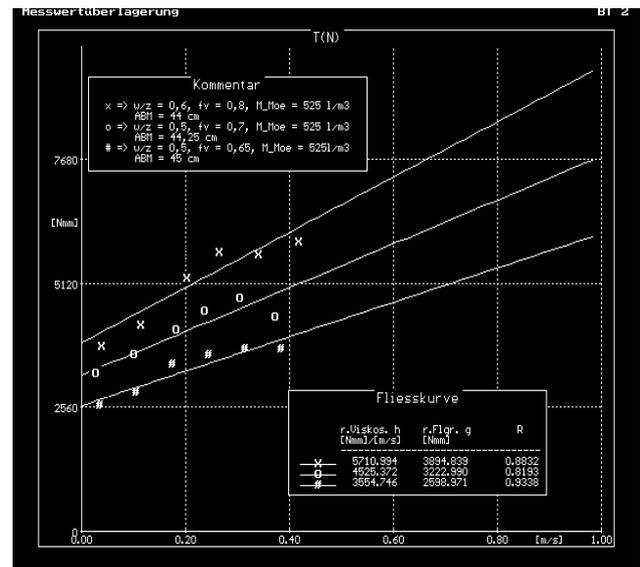
Figure 3 shows two concrete flowcurves with different filling ratios of the mortar. The volume mortar per cubicmeter concrete is constant.

Figure 4



Now you see 2 flowcurves where the amount of mortar / m is different the lower curve has 550 l/ m the upper one 525 l/ m . Figure 5 shows three specimens with

Figure 5



Five good reasons for the BT2..

- Short measurement
- easy handling
- portable
- no structural breakdown during the measurement
- no segregation ore sedimentation during the measurement

and *not expensive* !

Price : incl. Palmpilot © , software, specimem container, battery charging unit.

Technical data

maybe changed without noticed !

SCConcrete Rheometer BT2

Container diameter	50 cm
Height of the shaft	130 mm
Specimen volume	19.6 Liter
Length measurement arm,	43 cm
Length probes	90 mm
Measurement range torque	0-3 Nm
Measurement range speed	0-4 m/s
Resolution angel	1000 / 2 pi
Display	Graphical display in the external Palmtop 160x160 points
Handling	2 buttons + external Palmtop (included)
Interface	IRDA ©
Power supply	4 A cells C size
Weight wo container	ca. 6.9 kg

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