

## Viskomat NT



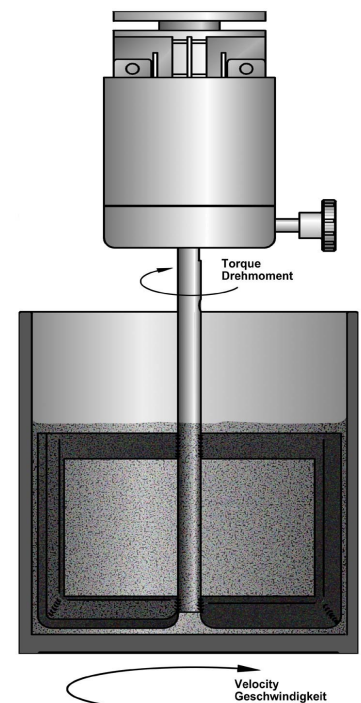
The viskomat NT is a versatile rotational viscosimeter for determine the workability of fine grained building materials such as cement paste, mortar, fine concrete, plaster etc. with maximum particle size of 2 mm. You can obtain information on:

- flow curves and rheological parameters temperature dependent workability properties
- stiffening behavior as a function of time
- stirring speed effects of concrete admixtures and mineral blendig agents on workability

Not only ist all this information useful for the materials themselves, but tests have shown that trends established, for example, in mortar are reflected in the behaviour of concrete at full scale.

## Construction and Operating Principle

The viskomat NT is a true speed controlled viscometer driven by a high precision synchron motor. Each rotation is resolved within 200.000 steps. It allows ramping from 0.001 rpm to 400 rpm in both directions to record flow curves and yield points. The torque up to  $\pm 500$  Nmm is measured by a special transducer. The standard measuring system consists of a stationary probe which is mounted concentrically in a rotating cylindrical sample container. As the sample flows around the paddle the shear resistance generates a torque wich is continuously monitored electronically. The paddle is mounted on a measuring head, which runs up and down automatically to allow easy filling, emptying and cleaning of the sample container. The sample container is mounted on a speed drive shaft. The temperature is measured by a sensor located within the measuring paddles. All the electronic is housed in a separate case. One powerful microprocessor and two special signal processors does their work there. An online display shows torque, time and temperature during the measurement in a graphical way. The electronic has an ethernet interface to any PC. With the ethernet interface you can integrate the Viskomat NT in any TCP/IP based (100 Mbit, RJ45) network. The Viskomat NT has an built in WWW Server so any WEB browser may be used as user interface. The Viskomat NT can be directly operated by the PC (Linux) included, or remote controlled



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from any Windows (95 or higher) workplace in your local area network.

## Features

- robust apparatus for industrial environments
- quality control, research and development
- informative, easy to use test procedures
- automatic running of predefined test procedures which can be either standardized or tailored to your own requirements
- inhomogeneous materials measurable with particles up to 2 mm using special paddles to avoid separation

## Measurement Modes

speed controlled	the torque over a defined speed profile is measured
torque controlled	the speed over a defined torque profile is measured
angle controlled	the torque over a defined angle profile is measured
oscillation mode f	the torque over defined frequency profile at a constant amplitude is measured
oscillation mode a	the torque over defined amplitude profile at a constant frequency is measured

## Probes

The viskomat NT is delivered with two standard probes for mortar and cement paste. Additional you can get a cylinder-cylinder probe according to EN ISO 3219 (volume 127 ml, gap size 2.1mm) and a cone plate-probe (angle 15°, diameter 100mm).

## Customers

The Viskomat NT and its predecessor Viskomat PC are used, beneath others at: Alsen Zement, Anneliese BUT, BSL Buzzi Unicem Italia, degussa Germany and Italy, Dow Chemical, Dyckerhof Zement, FH Regensburg, FH Buxtehude, FH Holzminden, FH Berlin, FH Leipzig, Hasit, HeidelbergCement AG, Heriot Watt University, Scotland, HolCim Swiss, ItaliCementi Italy, Lafarge, maxit, Cemex, RWTH Aachen, SAFA GmbH, Sakret, Scancem, Schretter und Cie. Schwenk Zement, SIKA Schweiz, SIKA Espania,

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Steinwerke Kupferdreh, Südchemie, Grace, TU München, Univ. Cottbus, Univ. Gliwice Polen, Univ. Hannover, University of Michigan, Univ. Leipzig, Univ. Innsbruck, Univ. Weimar, VDZ, BauMit Wopfinger, Golden Bay Cement Australia, United States Gypsum.....

## Technical Data

	Unit	
mains	V/Hz	110..240V / 50..60 Hz
power consumption	W	300
size Viskomat	mm (wxdxh)	300x670x50
size electronic	mm (wxdxh)	190x450x380
weight	ca. kg	25
torque range	Nmm	-500+500
speed	rpm	0,0001-400
frequency	Hz	0,001..3
amplitude	degree	0,001..3,8
specimen volume	ml	370
angel resolution	degree	$1 \cdot 10^{-4}$
accuracy over 360°	degree	$2 \cdot 10^{-2}$

## Order Info

Order Code	Description
V0001	Viskomat NT, including PC, TFT display, keyboard mouse, mortar probe, cement paste probe, scraper
V0019	circulating cooling and heating unit
V0009	double wall specimen container
V0070	cylinder probe
V0002	cone-plate probe
V0003	modified cement paste probe, for fluid mortars up to 2mm grain size
V0006	torque controlled mode
V0030	oscillation mode amplitude and frequency

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Order Code	Description
V0021	scraper

Please contact us or your local dealer:

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