

# Measuring Solutions

## Viscometry System S-flow<sup>®</sup> - 400



### Fast & Reliable Results

- *Extreme ease of use*
  - *Highly reliable and repeatable measuring results*
  - *Short measuring times*
  - *Quick bath and sample warm-up*
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- *Very low sample quantities (0.3-0.4 ml)*
  - *Semi-automated drying and cleaning*
  - *Easily removable viscometers*
  - *Integrated system design eliminates the need for a separate thermostatic bath*
  - *Savings up to 90% on cleaning&drying agents*
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- *Exceptional bath temperature stability*
  - *Viscometers can be independently cleaned*
  - *Compliant with or exceeding requirements in ASTM D445, D446 and related specifications for kinematic viscosity testing*

**Omnitek**  
measuring solutions

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Product  
**info**

## PRODUCT ORIGINS

The S-flow<sup>®</sup> viscometer was designed as a high-speed-low-cost alternative for commonly used viscometer types such as the Ubbelohde and Cannon Fenske. Although reliable, these viscometers present the user with a number of disadvantages:

- Large quantities of both sample and cleaning & drying agents are required
- Because of its large volume it's difficult to clean or dry the viscometer completely
- Measuring cycles are generally long

The S-flow<sup>®</sup> eliminates all these disadvantages. Because of the small volume of the viscometer much smaller quantities of both sample and drying & cleaning agents are required, which saves considerably on measurement costs, guarantees complete cleaning and drying and allows for quick sample warm-up. Up to 90% savings on cleaning/drying agents are feasible compared to conventional viscometers.

## UNIQUE VISCOMETER DESIGN

The shape and dimensions of the S-flow<sup>®</sup> viscometers have been designed in such a way that disturbance of the laminary flow area by turbulence is virtually non-existent. Measuring kinematic viscosity of both transparent and opaque fluids (Newtonic) with this type of viscometer meets or exceeds the requirements in relevant international standards, such as ASTM, IP, ISO, NEN, DIN etc.

The S-flow<sup>®</sup> viscometer was designed for flow times of 30 seconds and higher and viscosities of 1-3,000 mm<sup>2</sup>/s. S-flow<sup>®</sup> types for longer flow times and higher viscosity ranges can be supplied as well.

## SYSTEM INTEGRATION

The S-flow<sup>®</sup>-400 is an integrated, compact system that requires little working space. The thermostatic bath, that offers extraordinary temperature stability can house up to 4 viscometers; therefore in principle four simultaneous measurements can be performed. Because of the relatively small volume of the bath it can be brought to temperature very quickly.

The viscometers are ergonomically integrated in the system which allows for easy removal, thereby reducing the risk of fracture considerably. Also, the bath does not need to be drained in order to replace a tube. For daily usage – such as measuring, cleaning and drying – the viscometers do not have to be removed from the bath. An illuminated screen behind the viscometers allows for easy reading of the meniscus of the sample.

After the measurement has taken place the viscometers can be separately and independently cleaned and dried. This makes it possible to only clean one tube without interfering with the measurements in other viscometers. Cleaning and drying is done by injecting a suitable agent into the viscometer. The integrated pump subsequently evacuates the tube and pulls the liquids to an external collection vessel.

For measurements that have to take place at or below room temperature, an additional cooling spiral has been provided inside the thermostatic bath, to which an external oil or water cooler can be attached.

## SPECIFICATIONS

|                               |   |
|-------------------------------|---|
| <b>Standard methods</b>       | ASTM D445, D446                         |
| <b>Temperature range</b>      | 20°C to 150°C                           |
| <b>Temperature stability</b>  | 20 - 100° ± 0.01°C,<br>> 100 ° ± 0.03°C |
| <b>Bath volume</b>            | 7.5 liter                               |
| <b>Viscometers</b>            | Four S-flow <sup>®</sup> tubes          |
| <b>Dimensions (l x w x h)</b> | 455 x 230 x 620 mm.                     |
| <b>Weight</b>                 | 23 kg (empty)                           |

Due to our continuous effort for improvement these specifications are subject to modification