

Falling Ball Viscometer HÖPPLER® KF 3.2

Based on the measuring principle by HÖPPLER to determine viscosity of translucent fluids

Applications

- Education / teaching purposes
- Petroleum industry (e.g. mineral oils)
- Fuels
- Paper industry
- Polymer chemistry
- Cosmetic / Pharmacy
- Food industry
- Detergents



Our original HÖPPLER® KF 3.2

is a precision laboratory viscometer for universal application.

It furthermore excels in uncomplicated handling and its large measuring range.

It chiefly is used to inspect the quality of fluid substances, particularly if random tests on incoming and outgoing goods are required. In addition, it is an indispensable device for instruction and measurement in technical education centres.

Principle of measurement

The HÖPPLER® KF 3.2 is a falling ball viscometer. A precision ball is sliding or dropping over a defined measuring distance along the wall of a precision glass tube inclined by 10 deg and filled with the substance being investigated. The time of fall of the ball gives the viscosity of the substance being tested. The viscosity value is obtained multiplying the measuring time, the ball constant, and the difference of specific gravity between the ball being used and the substance subject to testing. A total of 6 balls of different diameters and different specific gravities permit viscosity measurements in 6 measuring ranges.

A glass jacket tube with unions for a liquid thermostat permits temperature control of the substance being investigated. The HÖPPLER® KF 3.2 features each one measuring position in the reciprocating travel of the ball.

Examples of application:

Kerosene	($\eta_{20} = 1.9$	mPa · s)	Castor oil	($\eta_{20} = 1,000$ mPa · s)
Spindle oil	($\eta_{20} = 20$	mPa · s)	Honey	($\eta_{20} = 10,000$ mPa · s)
Machine oil	($\eta_{20} = 200$ to 1,000	mPa · s)	Superheated steam cylinder oil	($\eta_{20} = 30,000$ mPa · s)



Possible scope of delivery:

Viscometer including 1 set of balls (6 balls with ball gage and case) and supervisory thermometer (-1 to +21 °C)

Viscosity measuring range 0.6 to 70,000 mPa · s

At special request:

Stopper and cover made from Perbunan, ball catch to empty fall tube

Available thermometers:	- 61 to - 19 °C	- 21 to + 1 °C	- 1 to + 21 °C	+ 19 to + 41 °C
	+ 39 to + 61 °C	+ 59 to + 81 °C	+ 79 to + 101 °C	+ 99 to + 126 °C
	+ 124 to + 151 °C	0 to + 100 °C		

The specified viscosity measuring range refers to measuring times from 30 to 300 seconds.

Relative error	:	≤ 0.5 to ≤ 2 %, depending on partial measuring range and type of ball being used
Temperature range	:	-60 to +150 °C
Measuring distance	:	100 mm (or 50 mm)
Required quantity of substance to be measured:	:	40 ml
Dimensions (width x depth x height)	:	205 mm x 185 mm x 315 mm

Medingen – traditional location for viscometers and rheometers for more than 80 years

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