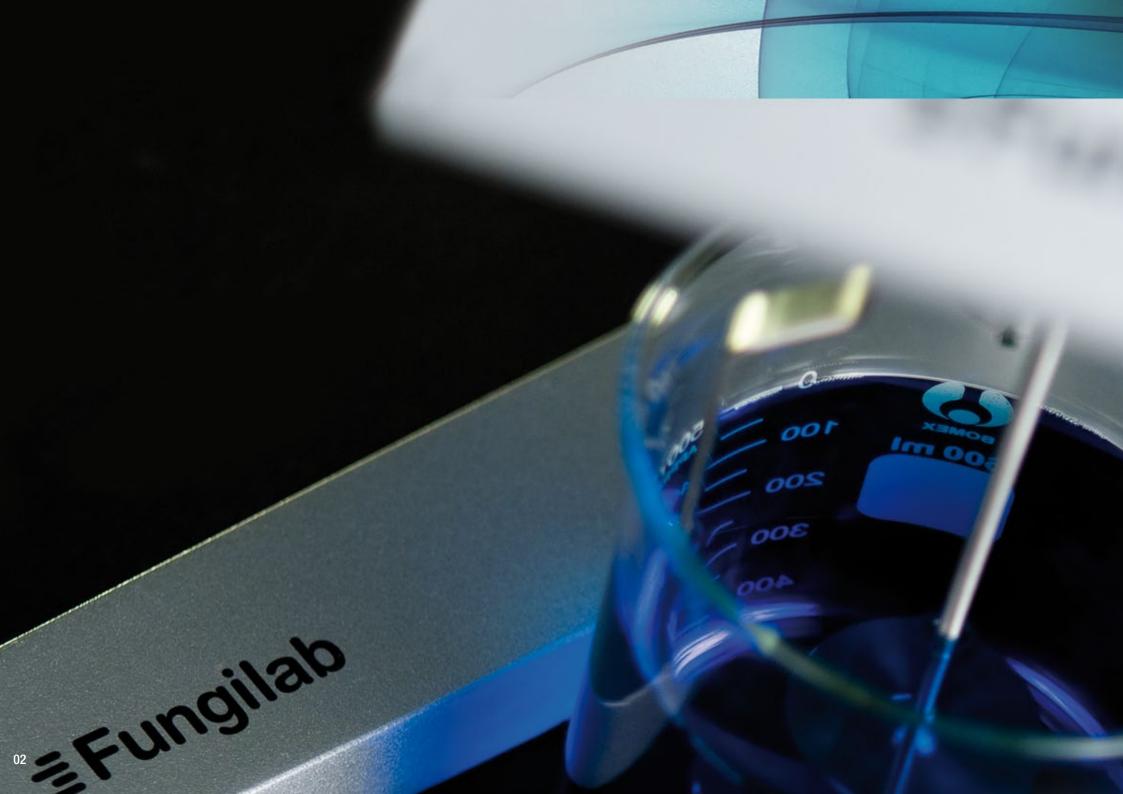
Leading viscosimetry technology
Leading viscosimetry technology

**≣Fungilab** 



Specialized in viscosimetry

To all our clients,

The trajectory of our company since its foundation has been distinguished by the continuos eagerness for commitment and evolution on our production and services.

This way of action has taken us to continuously improve the products that we develop and manufacture.

Year after year we have offered updates to our products.

This continuous research has positioned Fungilab as the reference brand in the viscosity technology. Our products are state of the art including the easiest, fastest and best technological performance in the viscosity market.

The Fungilab rotational viscometer series present remarkable updates such as touch keyboard which provides the client an easy handle, includes a new software that provides more accurate analysis of samples.

Characteristics such as visualisation of flow curves and additional options as step, multistep or ramp, generate a complete menu that offers important advantages for the final user. The USB connection provides the possibility of downloading the data into any computer.

Besides all the accessories included on our viscometers, the company keeps investing on the development of other equipment related with viscosity and is extending our offers to our clients, and complete the range with the capillary viscometers, cup viscometers and the Hoppler viscometers.

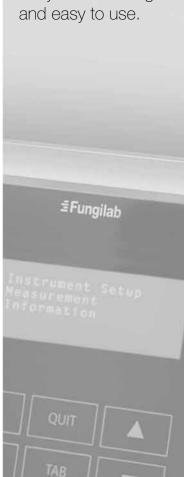
Hoping to satisfy our clients, you can consult and find our products and services in our web page as well as attend to our international exhibitions

www.fungilab.com

# Alpha series

viscometers allow fast and accurate viscosity readings.

They are low budget



# Alpha series



# Main Features

> Data displayed

Selected speed r.p.m Selected spindle SP

Viscosity reading cP (mPa•s)

Percentage of full scale

- > Relative and absolute viscosity.
- > Unit converter SI to CGS.
- > AUTO-TEST with sound and visual malfunction alarm.
- > AUTO-RANGE function.
- > User-enabled calibration.
- > 10 language options.

Standard delivery: The equipment is supplied complete with standard spindles (4 spindles for L model, and 6 spindles for R and H models), viscometer stand and spindle protector.

# Technical File

- > Precision: ± 1% of full scale.
- > Resolution:

Using low viscosity adapter: 0.01

For lower than 10.000 viscosity cP: 0.1

For viscosity equal to or above 10.000 cP: 1

- > Repeatability: 0.2%
- > Supplied at 100-240 VAC, 50/60 Hz

#### Spindles

AISI 316 stainless steel spindles, easily identified by number and letter when changed according to range of viscosity.

Code	Model	Measuring Range (cP)	Speed (r.p.m.)	Number of speeds
V100003	ALPHA L	20 - 2.000.000	0.3 - 100	18
V100002	ALPHA R	100 - 13.000.000	0.3 - 100	18
V100001	ALPHA H	200 - 106.000.000	0.3 - 100	18

### Smart series

Indispensable in QC and R&D laboratories.



# Smart series



### Main Features

- > Touch key board 6 keys.
- > Direct readout on a graphic display.
- > Data displayed:

Selected speed r.p.m. SP Selected spindle cP (mPa·s) or cSt Viscosity reading Percentage of full scale Sample temperature °C or °F (Optional) Shear Rate (with coaxial spindles) SR (s-1) Shear Stress (with coaxial spindles) SS (N/m2) Density (introduced by the user) a/cm3

- > Viscosity reading: dynamic viscosity (cP or mPa·s) or kinematics viscosity (cSt).
- > Unit converter SI to CGS.
- > Program features:

Time to torque: target torque pre-setting device. Time to stop: target time pre-setting device. 10 working memories.

- > AUTO-TEST with sound and visual malfunction
- > AUTO-RANGE function.
- > Temperature reading by PT100 (optional).
- > User-enabled viscosity and temperature (optional) calibration.
- > 10 language options.
- > Interface: USB.
- > Datalogger Software: USB allows data transfer to a PC Excel format.

Standard delivery: The equipment is supplied complete with standard spindles (4 spindles for L

model, and 6 spindles for R and H models), viscometer stand and spindle protector, carrying case, USB cable and Datalogger Software.

#### Technical File

- > Precision: ± 1% of full scale
- > Resolution:

With low viscosity adapter: 0.01 For lower than 10.000 viscosity cP: 0.1 For viscosity equal to or above 10.000 cP: 1

- > Repeatability: 0.2%
- > Thermometer features:

Temperature margins: 0°C to +100°C 32°F to 212.0 °F

Resolution: 0.1°C / 0.1722 °F Precision: +/- 0.1 °C Type of probe: PT100

> Supplied at 100-240 VAC, 50/60 Hz

## Spindles

AISI 316 stainless steel spindles, easily identified by number and letter when changed according to range of viscosity.

Code	Model	Measuring Range (cP)	Speed (r.p.m.)	Number of speeds
V200003	SMART L	20 - 2.000.000	0.3 - 100	18
V200002	SMART R	100 - 13.000.000	0.3 - 100	18
V200001	SMART H	200 - 106.000.000	0.3 - 100	18

# Expert series

Add essential performances to determine viscosity and other rheological features of homogeneus samples.



# Expert series



### Main Features

- > Touch key board 12 keys.
- > Direct readout on a graphic display.
- > Data displayed:

Selected speed r.p.m.

Selected spindle SP

Viscosity reading cP (mPa·s) or cSt

Percentage of full scale %

Sample temperature °C or °F

Shear Rate (with coaxial spindles) SR (s-1)

Shear Stress (with coaxial spindles) SS (IV/m2)

Density (introduced by the user) g/cm3

- > Viscosity reading: dynamic viscosity (cP or mPa·s) or kinematics viscosity (cSt).
- > Unit converter SI to CGS.
- > Program features:

Time to torque: target torque pre-setting device. Time to stop: target time pre-setting device.

10 working memories.

Costumizable Options.

Programmable.

Multistep.

Ramp.

- > AUTO-TEST with sound and visual malfunction alarm.
- > AUTO-RANGE function.
- > Temperature reading by PT100.
- > User-enabled viscosity and temperature calibration.
- > 10 language options.
- > Interface: USB.
- > Datalogger Software: USB allows data transfer to a PC Excel format.

Standard delivery: The equipment is supplied complete with standard spindles (4 spindles for L model, and 6 spindles for R and H models), viscometer stand and spindle protector, carrying case, USB cable and Datalogger Software.

# Technical File

- > Precision: ± 1% of full scale
- > Resolution:

With low viscosity adapter: 0.01
For lower than 10.000 viscosity cP: 0.1
For viscosity equal to or above 10.000 cP: 1

- > Repeatability: 0.2%
- > Thermometer features:

Temperature margins: 0°C to +100°C 32°F to 212.0 °F

Resolution: 0.1°C / 0.1722 °F Precision: +/- 0.1 °C Type of probe: PT100

> Supplied at 100-240 VAC, 50/60 Hz

# Spindles

AISI 316 stainless steel spindles, easily identified by number and letter when changed according to range of viscosity.

Code	Model	Measuring Range (cP)	Speed (r.p.m.)	Number of speeds
V300003	EXPERT L	20 - 6.000.000	0.01 - 200	54
V300002	EXPERT R	100 - 40.000.000	0.01 - 200	54
V300001	EXPERT H	200 - 106.000.000	0.01 - 200	54

### Premium series

viscometers. monitored by our FDB software, offer a wider and unique range of rheological applications.

# Premium series



### Main Features

- > Touch key board 12 keys.
- > Direct readout on a graphic display.
- > Data displayed:

Selected speed r.p.m. Selected spindle cP (mPa·s) or cSt Viscosity reading Percentage of full scale Sample temperature °C or °F SR (s-1) Shear Rate (with coaxial spindles) Shear Stress (with coaxial spindles) SS (N/m2) Density (introduced by the user) a/cm3 Step Program Status

- Analyze & visual characteristics (flow curves) > Viscosity reading: dynamic viscosity (cP or mPa·s) or kinematics viscosity (cSt).
- > Program features:

Time to torque: target torque pre-setting device. Time to stop: target time pre-setting device.

10 working memories. Costumizable Options.

Programmable.

Multistep.

- > AUTO-TEST with sound and visual malfunction
- > AUTO-RANGE function.
- > Temperature reading by PT100.
- > User-enabled viscosity and temperature calibration.
- > 10 language options.

Standard delivery: The equipment is supplied complete with standard spindles (4 spindles for L model, and 6 spindles for R and H models), viscometer stand and spindle protector, carrying case, USB cable and Datalogger Software.

### Technical File

- > Precision: ± 1% of full scale
- > Resolution:

With low viscosity adapter: 0.01 For lower than 10.000 viscosity cP: 0.1 For viscosity equal to or above 10.000 cP: 1

- > Repeatability: 0.2%
- > Thermometer features:

Temperature margins: 0°C to +100°C 32°F to 212.0 °F

Resolution: 0.1°C / 0.1722 °F

Precision: +/- 0.1 °C Type of probe: PT100

> Supplied at 100-240 VAC, 50/60 Hz

# **Spindles**

AISI 316 stainless steel spindles, easily identified by number and letter when changed according to range of viscosity.

Code	Model	Measuring Range (cP)	Speed (r.p.m.)	Number of speeds
V400003	PREMIUM L	20 - 6.000.000	0.01 - 250	2,600
V400002	PREMIUM R	100 - 40.000.000	0.01 - 250	2,600
V400001	PREMIUM H	200 - 106.000.000	0.01 - 250	2,600

# Premium series FDB Software



# FDB software

The FDB software developed by Fungilab has been designed to work with the Premium series viscometer. It offers the possibility to program the viscometer for step, ramp and multi-step curves, and it is an important tool to study the viscosity behaviour of different liquids.

### Control software

Establishing viscosity programs, documenting the procedure and the results in real time are some of the options offered by the Fungilab Data Boss software developed by FUNGILAB.

The software has been designed to be very intuitive. The option menu provides a clear view of the program. The help menu provides charts and descriptive texts that offer a clear explanation of the working options.

### Features

- > Complete viscometer control.
- > Easy to use. All programs eliminate user errors when programming the instrument to collect data.
- > Provides instantaneous viscosity flow curves when performing new experiments, with definable parameters.
- > Clear view of program options using flanges.
- > Definable graphics and zoom function.
- > Different types of experiments can be programmed: simple curves, ramps and multi-step.
- > All experiments are recorded in different databases to be able to consult them anytime.
- > Experiment documentation with name, number and additional data.
- > In order to compare different flow curves, experiments can be plotted simultaneously.
- > Over 12 different charts can be obtained.



USB conection for temperature probe.



Usb conection for pc.

# **∃Fungilab**

# Accesories for rotational viscometers



# Small Sample Adapters

Viscometer type	Measuring range (cP)
L	2 - 200.000
R	38 - 3.300.000
H	300 - 26.660.000

The small sample adapter consists of a cylindrical sample chamber and coaxial spindles, designed for flawless, accurate viscosity measurements of small volumes. Cylindrically designed for shear measurements. (Spindles supplied separately).

#### TECHNICAL FEATURES

- > Removable, easy-to-clean stainless steel sample
- > Flow jacket for sample thermostatisation between -10 and +100°C (optional).
- > Sample volume: from 8 to 13 ml, varies with spindle.
- > PT100 probe for accurate sample temperature (optional).

Small sample adapter works with special spindes TR for R and H viscometer type and TL for L viscometer type. Spindles have to be ordered separately.



# Low Viscosity Adapters

Measuring range (cP)
1 - 2.000
5 - 21.333

The low viscosity adapter is used with the rotational viscometers to perform accurate and reproducible readings on materials with viscosity as low as 1 cP (mPa·s). Cylindrically designed for shear measurements. (Supplied with spindle.)

#### TECHNICAL FEATURES

- > Easy to clean, removable stainless steel sample container.
- > Sample volume: from 16 to 18 ml.
- > Flow jacket for sample thermostatisation from -10 to +100°C (optional).
- > PT100 accurate temperature probe (optional).



# Heldal unit for helicoidal movement

Viscometer type	Measuring range (cP)
R	2,490 - 33.300.000
Н	19,500 - 260.000.000

Accessory designed for viscosity measurements of non-flowing substances. In these materials the viscosity cannot be measured by standard methods and spindles due to cavitation effect around the spindle.

We recommend using the HELDAL unit and T-bar spindles for comparative measurements on nonflowing substances.

A Fungilab viscometer is mounted on the Heldal unit, and it restricts measuring head to smoothly run up and down within pre-established limits, allowing constant contact between T-bar spindle and test sample thanks to the helical line described.

#### ADDITIONAL FEATURES

- > Easy to use, install and clean.
- > Supplied with motor, 6 T-shaped spindles and carrying case.
- > Compatible with all FUNGILAB rotational viscometers.

#### APPLICATIONS

- > Creams Gels
- > Pastes Gelatin
- > Other non-flowing substances.

# Spindles

Our units are supplied with our standard spindles:



L Spindles for L viscometer type: L1, L2, L3 and L4



R Spindles for R and H viscometer type: R2, R3, R4, R5, R6 and R7. Spindle R1 requested separately, not included in the standard delivery.

Special Spindles TR and TL designed to work with Small Sample adapter. Ordered separately:



TR Spindles for R and H viscometer type.



TL Spindles for L viscometer type.

# Additional Fungilab Products



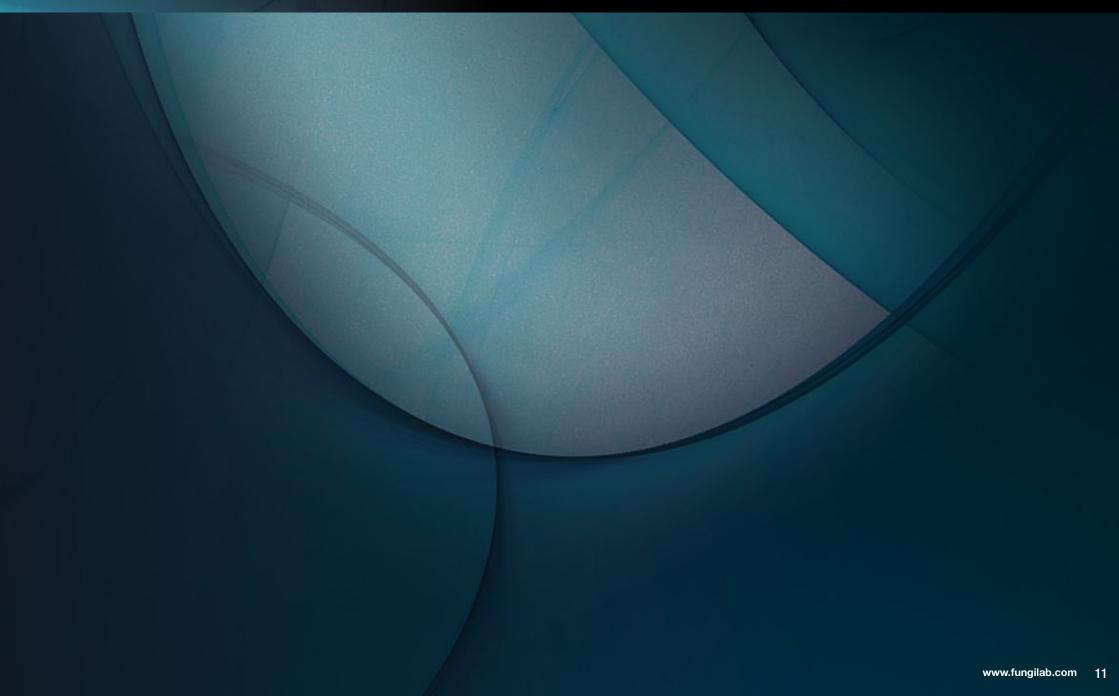
**New Thermovisc Series**Digital controlled immersion thermostat.



Standard Viscosity Oils
Standard oils for all types of viscometers are available.



Thermosphere
Digital controlled accessory, to measure samples up to 300°C. Provides precise control of temperature.





Products for Research, Analysis and Quality Control

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