

Viscometer Accessories

Standard Spindles

The standard spindles are designed for the byko-visc Basic, Advanced, and Premium viscometer lines. The appropriate spindle set comes standard with the purchase of byko-visc viscometer. All the spindles are made from 316 stainless steel.



Spindle set for R & H Models

Ordering Information

Cat. No.	Description
4981	Spindle set L models, set of 4(L1, L2, L3, L4)
4982	Spindle L1
4983	Spindle L2
4984	Spindle L3
4985	Spindle L4
4986	Spindle Set R & H Models, set of 6(R2, R3, R4, R5, R6, R7)
4987	Spindle R1
4988	Spindle R2
4989	Spindle R3
4990	Spindle R4
4991	Spindle R5
4992	Spindle R6
4993	Spindle R7

Technical Specifications

For Viscometer type	Viscosity Range (cP)
L	10 - 6,000,000
L	10 - 60,000
L	20 - 300,000
L	70 - 1,200,000
L	400 - 6,000,000
R, H	R: 40 - 40,000,000 H: 50 - 320,000,000
R, H	R: 20 - 100,000 H: 50 - 800,000
R, H	R: 40 - 40,000 H: 200 - 3,200,000
R, H	R: 60 - 1,000,000 H: 500 - 8,000,000
R, H	R: 120 - 2,000,000 H: 1,000 - 16,000,000
R, H	R: 250 - 4,000,000 H: 3,200 - 32,000,000
R, H	R: 600 - 10,000,000 H: 8,000 - 80,000,000
R, H	R: 2,500 - 40,000,000 H: 32,000 - 320,000,000

Note: The viscosity range may vary based on the viscometer model speed range.

Quick Disconnect Accessory

The Quick Disconnect Accessory (QDA) makes the task of changing spindles fast and easy. The coupling system is built into the motor shaft. By pushing up on the coupler the spindle will attach. By releasing the coupler the spindle is firmly set in place. The QDA also protects the motor shaft. The QDA is offered as a standard item with several byko-visc models. Please review the viscometer model information to determine if the QDA is included.



Viscometer Accessories

Low Viscosity Adapter

The Low Viscosity Adapter accessory is used to make accurate and reproducible measurements with low viscosity, Newtonian and non-Newtonian materials. This adapter is most commonly used with the L series instruments. The Low Viscosity adapter consists of a precision cylindrical spindle rotating inside a machined tube. Its rheologically correct geometry provides the highest accuracy of viscosity and shear rate.

- For any L and R viscometer models
- Takes measurements as low as 1 cP
- Only 16 - 18 ml of sample needed
- Removable stainless steel sample container easy to clean

The water jacket is made of stainless steel with delrin o-rings and washers. The temperature range is -10 °C (14 °F) to 100 °C (212 °F). An optional temperature probe is an available accessory.



Low Viscosity Adapter with water jacket - 4971

Viscosity Range with Low Viscosity Adapter

Viscosity Range	Viscometer Model	Viscosity Range cP (mPa X s)
Low	byko-visc L models	1.0 - 2,000
Medium	byko-visc R models	5.0 - 21,333

Ordering Information

Cat. No.	Description
4971	Low Viscosity Adapter, with water jacket
4970	Low Viscosity Adapter

Comes complete with:

Spindle, Sample chamber,
Mounting bracket, Hook fasteners,
Carry case, Data sheet
Water Jacket with 4971 only

Technical Specifications

Information
Includes Water Jacket
Water jacket is excluded

Ordering Information

Cat. No.	Description
4973	Temperature Probe, LVA Premium
4974	Temperature Probe, LVA
4972	Spindle, Low Viscosity Adapter

Technical Specifications

Information
For byko-visc Premium model only
For byk-visc Basic and Advanced models

Viscometer Accessories

Small Sample Adapter

The small sample adapter consists of a stainless steel cylindrical sample chamber and spindle that can handle sample volumes from 8 to 13 ml. The sample chamber is removable allowing for easy clean up without disturbing the set-up of the viscometer. A temperature probe to record the sample temperature is an option.

- Accurate measurement of samples as small as 8 ml
- Precise temperature control with flow jacket ensuring highest accuracy
- Easy change of sample chamber; successive measurements can be made under identical conditions
- Controlled cylindrical geometry allows extremely accurate viscosity, shear rate, and shear stress determinations



Small Sample Adapter, with water jacket – 4957

Ordering Information

Cat. No.	Description
4957	Small Sample Adapter, water jacket
4958	Small Small Adapter
4959	Temperature probe, for SSA/Premium
4960	Temperature probe, for SSA

Comes complete with:

Carry case, Sample chamber, Mounting plate
 Water jacket included with 4957 only
 NOTE: TL spindle is not included, need to order separately.

Technical Specifications

Information
Includes water jacket ¹
Excludes water jacket
For byko-visc Premium viscometer models only
For byko-visc Basic and Advanced models only

¹Note: Water jacket temperature range is -10 to 100°C (14 to 212°F)

Ordering Information

Cat. No.	Description
4961	Spindle, TL5
4962	Spindle, TL6
4963	Spindle, TL7
4964	Spindle, TR8
4965	Spindle, TR9
4966	Spindle, TR10
4967	Spindle, TR11

Accessories

Model Type	Sample Volume (ml)	Viscosity Range (cP)	Shear rate* (1/s)
L	6.7	5 - 30,000	1.32 x rpm
L	9.0	20 - 300,000	0.34 x rpm
L	9.4	40 - 600,000	0.28 x rpm
R, H	7.1	R 40 - 400,000 H 200 - 3,200,000	0.93 x rpm
R, H	10.4	R 150 - 2,500,000 H 1,200 - 20,000,000	0.34 x rpm
R, H	11.0	R 300 - 5,000,000 H 2,400 - 40,000,000	0.28 x rpm
R, H	13.5	R 600 - 10,000,000 H 4,800 - 80,000,000	0.25 x rpm

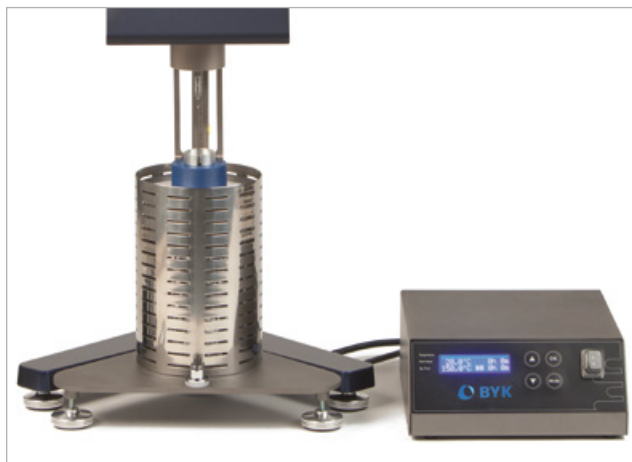
*Note: Shear rate calculation is based on Newtonian liquids.

Viscometer Accessories

ThermoChamber Accessory

The byko-visc ThermoChamber Accessory is ideal for high temperature applications involving hot melts such as asphalt, waxes, resins, and adhesives.

- Safe, accurate viscosity measurements of hot materials up to 572 °F (300 °C)
- Extends the versatility of the byko-visc viscometer range from 1.2 cps to 20,000,000 cps
- Programmable temperature control with digital display
- Small sample volume chamber
- Precise temperature control within $\pm 1.5\%$ of temperature setting
- Fast set-up and clean-up with disposable, aluminum sample chambers



Ordering Information

Cat. No.	Description
4975	ThermoChamber, 110V
4976	ThermoChamber, 220V
4977	Sample Chamber, Stainless steel
4978	Disposable Chamber, 50/pack
4979	Extraction tool

Technical Specifications

	Accessory Item
	Accessory Item
	Accessory Item

Comes complete with:

Temperature controller,
Alignment bracket, Sample chamber,
Tube extension, Extraction tool,
Choice of Spindle (1), Heat shield, Carry case

The spindle selection is based on the Model type (low, medium, high viscosity) and viscosity range.

Ordering Information

Cat. No.	Description
4961	Spindle, TL5
4962	Spindle, TL6
4963	Spindle, TL7
4964	Spindle, TR8
4965	Spindle, TR9
4966	Spindle, TR10
4967	Spindle, TR11

Accessories

Model Type	Viscosity Range* (cP)
L	1.2 - 30,000
L	12 - 300,000
L	24 - 600,000
R	20 - 500,000
H	40 - 1,000,000
R	100 - 2,500,000
H	200 - 5,000,000
R	200 - 5,000,000
H	400 - 10,000,000
R	400 - 10,000,000
H	800 - 20,000,000

***Note:** The viscosity range is based on the byko-visc Premium speed selections. Please contact your BYK-Gardner representative for the viscosity range for your viscometer.

Viscometer Accessories

byko-visc Helio Stand

The byko-visc Helio Stand is designed to lower and raise the viscometer so that the rotating shearing element will trace a helical path through the test sample. By always cutting into fresh material the T-bar spindle remains in contact with the sample. The reversing feature of the Helipath stand allows measurements to be made over a short period of time.

- Relative viscosity measurements of non-flowing substances such as gels, pastes, paint dyes, and inks
- Slowly raises and lowers the viscometer to always maintain contact with sample material



Model Type	Viscosity Range (cP)
L (Low Viscosity)	4,680 - 1,872,000
R (Mid-range viscosity)	16,600 - 33,300,000
H (High Viscosity)	130,000 - 260,000,000

Ordering Information

Cat. No.	Description
4968	Helio Stand, 110V
4969	Helio Stand, 220V

Comes complete with:

Automated motor, Spindle connector, Set of 6 T-bar spindles, Stop rings (2), Counter-weight, Rib joint, Power cord, Fastening bolt, Carry case

Technical Specifications

For use with rotational viscometers

For use with rotational viscometers

Circulating Bath

For precise and accurate viscosity measurement controlling the sample temperature is critical. BYK-Gardner offers a refrigerated circulating bath to cool or warm the sample to the specified temperature. The sample container can be placed into the bath. The low profile design allows for the rotational viscometer to be placed next to the bath to test the sample in the bath. For viscometers with water jackets, the bath has a pressure pump with external (closed-loop) circulation capability. There is a visual alarm when the temperature is outside the pre-set limits. The bath complies with DIN 12876-1 Cass 1 safety requirements for use with non-flammable liquids.



Ordering Information

Cat. No.	Description
4994	Water Bath, 120V, 60Hz
4995	Water Bath, 240V, 50Hz

Comes complete with:

Controller with digital display, Lid, Bath, Single-speed pressure pump, Power cord

Technical Specifications

Bath Capacity	Temperature Range	Maximum Flow Rate	Maximum Pressure
7.0 Liter	-20° to 135°C -4° to 275°F	12.8 L/min. 3.4 gal/min.	0.12 bar 1.80 psi
7.0 Liter	-20° to 135°C -4° to 275°F	10.6 L/min. 2.8 gal/min.	0.10 bar 1.50 psi
Dimensions	58.9x41.1x43.9 cm 23.2x16.2x17.3 in		
Temperature Stability	± 0.07°C		