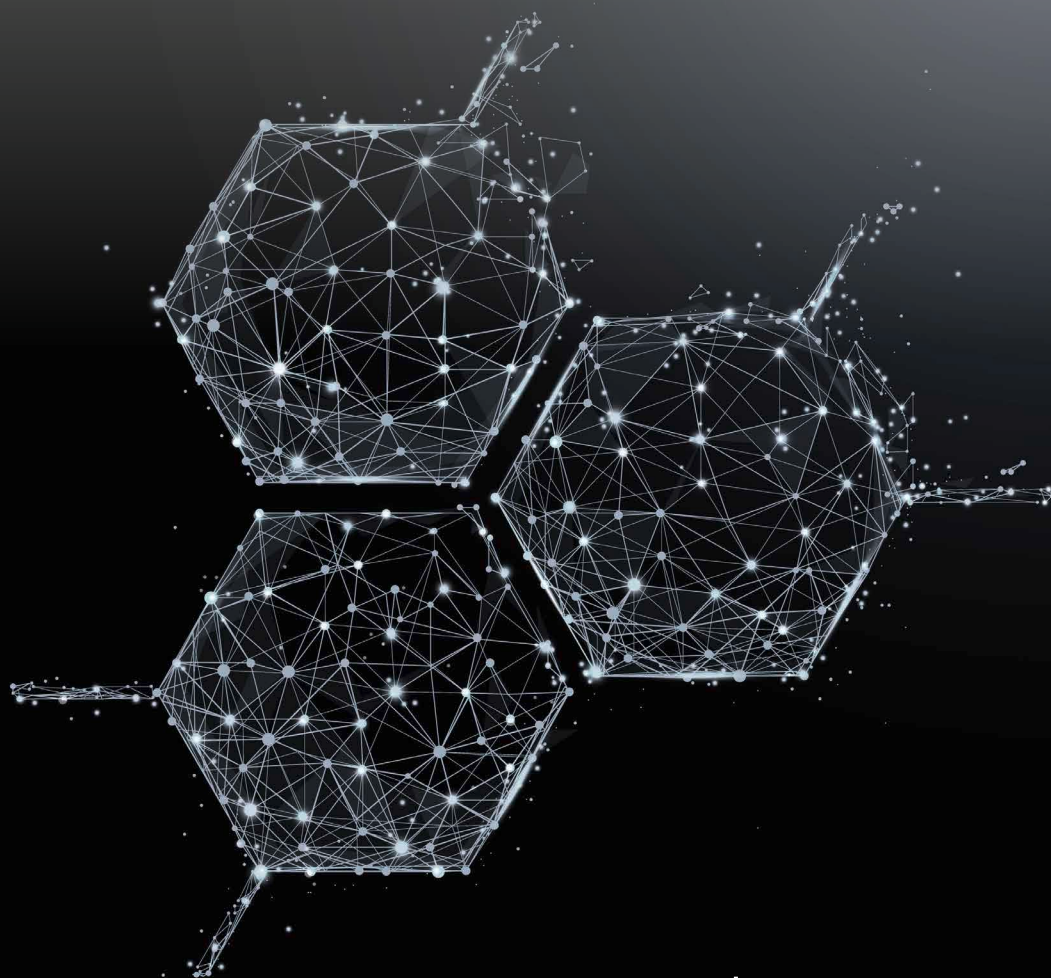


**Precise measuring instruments for
viscosity and surface science**

Product range 2023 / 2024

Version 2023-04-01

Glass capillary viscometers



Precise data. Constant values.

Glass capillary viscometers with Visco.Fix



Reliability and safety with Visco.Fix

Over 50 years of experience and continuous dialog with our customers, this is the basis for our **Visco.Fix system** for reliable handling and safe storage of your glass capillaries.

With our Visco.Fix System, glass breakage of your sensitive Ubbelohde capillaries is a thing of the past. The specifically designed retaining ring fixes reliably the capillary legs. The extended handle supports you in every manual procedure, e.g. installation in the temperature control bath, dealing with samples of hazardous solvents, cleaning, transportation and many more.

In combination with our specially developed **Visco.Fix carousel**, we offer you the ideal system for simple, safe and reliable handling and storage of your fragile glass capillaries.

Benefits:

- || No more glass breakage in the tempering bath
- || Higher precision due to longer use of the same capillary
- || Significantly longer service life of your glass capillaries

Glass capillary viscometers with Visco.Fix

Ubbelohde Viscometer for automatic cleaning Type 2 (calibrated)

For automatic measurement, with screw connections and aspirating tube.

- || ISO 3105, DIN 51562/1, NFT 60-100
- || Total length: approx. 290 mm
- || Filling volume: 18...22 ml
- || Measurement accuracy: $\pm 0.2\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No. (incl. Visco.Fix)
0c	0.003	0.7...3	0.3...2	0.47	EGVH930
0a	0.005	1...5	0.5...3	0.53	EGVH931
I	0.01	2...10	0.7...7	0.63	EGVH932
Ic	0.03	6...30	2...20	0.84	EGVH933
II	0.1	20...100	6...60	1.13	EGVH934
IIC	0.3	60...300	20...200	1.50	EGVH935
III	1	200...1,000	60...600	2.01	EGVH936
IIIc	3	600...3,000	200...2,000	2.65	EGVH937
IV	10	2,000...10,000	600...6,000	3.60	EGVH938

Incl.
Visco.
Fix



Ubbelohde Viscometer Type 1 (calibrated)

For automatic and stopwatch measurement, standard design without thread.

- || ISO 3105, DIN 51562/1, NFT 60-100
- || Total length: approx. 290 mm
- || Filling volume: 15...20 ml
- || Measurement accuracy: $\pm 0.2\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No. (incl. Visco.Fix)
0c	0.003	0.7...3	0.3...2	0.47	EGVH700
0a	0.005	1...5	0.5...3	0.53	EGVH701
I	0.01	2...10	0.7...7	0.63	EGVH702
Ic	0.03	6...30	2...20	0.84	EGVH703
II	0.1	20...100	6...60	1.13	EGVH704
IIC	0.3	60...300	20...200	1.50	EGVH705
III	1	200...1,000	60...600	2.01	EGVH706
IIIc	3	600...3,000	200...2,000	2.65	EGVH707
IV	10	2,000...10,000	600...6,000	3.60	EGVH708
IVc	30	6,000...30,000	2,000...20,000	4.70	EGVH699

Incl.
Visco.
Fix



Micro Ubbelohde Viscometer Type 3 (calibrated)

For small sample quantities and/or short measuring times, standard design without thread, compatible for use with VRM cleaning modules.

Please order one additional adapter (HKB 532) for each measuring stand (S5 or iVisc).

- || DIN 51562/1
- || Total length: approx. 290 mm
- || Filling volume: 3...4 ml
- || Measurement accuracy: $\pm 0.5\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No. (incl. Visco.Fix)
I	0.01	1...6	0.3...6	0.40	EGVH718
Ic	0.03	3...18	0.8...18	0.53	EGVH719
II	0.1	10...60	3...60	0.70	EGVH720
IIC	0.3	30...180	8...180	0.95	EGVH721
III	1	100...800	30...800	1.26	EGVH722

Incl.
Visco.
Fix



Glass capillary viscometers with Visco.Fix



Ubbelohde Dilution Viscometer Type 4 (not calibrated)

For convenient implementation of dilution series and determining concentration dependencies, e.g. IV value measuring of polymers. Standard design without thread, compatible for use with VRM cleaning modules and dosing units.

- || Filling volume: 15...75 ml
- || Total length: approx. 290 mm
- || Measurement accuracy: $\pm 0.2\%$

Size No.	Cap. const. mm^2/s^2		PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No. (incl. Visco.Fix)
0c	0.003	–	0.3...2	0.47	EGVH921
0a	0.005	–	0.5...3	0.53	EGVH922
I	0.01	–	0.7...7	0.63	EGVH923
Ic	0.03	–	2...20	0.84	EGVH924
II	0.1	–	6...60	1.13	EGVH925

To use this type of capillary, a thermostat cover plate with the indicator "V" in the item name is required (see p. 39).

The perfect match:

Visco.Fix capillaries and the Visco.Fix carousel

EGVZ001 Visco.Fix carousel

for Visco.Fix glass capillary viscometers, 4 upright and 4 downward positions, incl. 4 high waste beakers and 4 low waste beakers

Advantages and benefits:

- || Safe storage and no dusting of your capillaries
- || Easy cleaning, clean draining and drying of your capillaries with individual draining glasses
- || Always the right capillary at hand, even in the hectic laboratory routine



Standard glass capillary viscometers

Standard glass capillaries in traditional style are generally more recommended for use by experienced laboratory personnel. Nevertheless, they are manufactured to the same high standards as those incl. Visco.Fix and feature the same high precision.

For easy handling we strongly recommend supplementing the standard glass capillary viscometers with suitable viscometer frames per capillary.

UG 003 Viscometer frame

For better handling of Ubbelohde/Micro-Ubbelohde capillaries

UG 094 Viscometer frame

For better handling of Micro-Ostwald capillaries

EZ 054 Viscometer holder

For 2-legged glass capillaries

HKB 532 Adapter

For use with Micro-Ubbelohde capillaries



UG 003

Ubbelohde Viscometer Type 1 (calibrated)

For automatic and stopwatch measurement, standard design without thread.

- || ISO 3105, DIN 51562/1, NFT 60-100
- || Total length: approx. 290 mm
- || Filling volume: 15...20 ml
- || Measurement accuracy: $\pm 0.2\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No.
0c	0.003	0.7...3	0.3...2	0.47	EGV 700
0a	0.005	1...5	0.5...3	0.53	EGV 701
I	0.01	2...10	0.7...7	0.63	EGV 702
Ic	0.03	6...30	2...20	0.84	EGV 703
II	0.1	20...100	6...60	1.13	EGV 704
IIC	0.3	60...300	20...200	1.50	EGV 705
III	1	200...1,000	60...600	2.01	EGV 706
IIIC	3	600...3,000	200...2,000	2.65	EGV 707
IV	10	2,000...10,000	600...6,000	3.60	EGV 708
IVc	30	6,000...30,000	2,000...20,000	4.70	EGV 699



Standard glass capillary viscometers

Ubbelohde Viscometer for automatic cleaning Type 2 (calibrated)

For automatic measurement, with screw connections and aspirating tube.

- || ISO 3105, DIN 51562/1, NFT 60-100
- || Total length: approx. 290 mm
- || Filling volume: 18...22 ml
- || Measurement accuracy: $\pm 0.2\%$

Size No.	Cap. const. mm^2/s^2	DIN/ASTM mm^2/s	PVS/iVisc mm^2/s	inner $\varnothing$ mm	Item No.
0c	0.003	0.7...3	0.3...2	0.47	EGV 930
0a	0.005	1...5	0.5...3	0.53	EGV 931
I	0.01	2...10	0.7...7	0.63	EGV 932
Ic	0.03	6...30	2...20	0.84	EGV 933
II	0.1	20...100	6...60	1.13	EGV 934
IIc	0.3	60...300	20...200	1.50	EGV 935
III	1	200...1,000	60...600	2.01	EGV 936
IIIc	3	600...3,000	200...2,000	2.65	EGV 937
IV	10	2,000...10,000	600...6,000	3.60	EGV 938



Micro Ubbelohde Viscometer Type 3 (calibrated)

For small sample quantities and/or short measuring times, standard design without thread, compatible for use with VRM cleaning modules.

Please order one additional adapter (HKB 532) for each measuring stand (S5 or iVisc).

- || DIN 51562/2
- || Total length: approx. 290 mm
- || Filling volume: 3...4 ml
- || Measurement accuracy: $\pm 0.5\%$

Size No.	Cap. const. mm^2/s^2	DIN/ASTM mm^2/s	PVS/iVisc mm^2/s	inner $\varnothing$ mm	Item No.
I	0.01	1...6	0.3...6	0.40	EGV 718
Ic	0.03	3...18	0.8...18	0.53	EGV 719
II	0.1	10...60	3...60	0.70	EGV 720
IIc	0.3	30...180	8...180	0.95	EGV 721
III	1	100...800	30...800	1.26	EGV 722



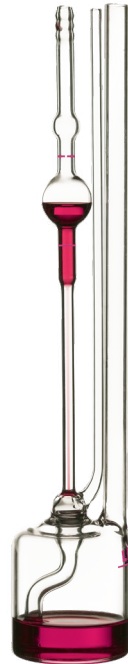
Standard glass capillary viscometers

Ubbelohde Dilution Viscometer Type 4 (not calibrated)

For convenient implementation of dilution series and determining concentration dependencies, e.g. IV value measuring of polymers. Standard design without thread, compatible for use with VRM cleaning modules and dosing units.

- || Filling volume: 15...75 ml
- || Total length: approx. 290 mm

Size No.	Cap. const. mm^2/s^2		PVS/iVisc mm^2/s	inner $\varnothing$ mm	Item No.
0c	0.003	–	0.3...2	0.47	EGV 921
0a	0.005	–	0.5...3	0.53	EGV 922
0a	0.005	with frit G2	0.5...3	0.53	EGV 922-1SI
I	0.01	–	0.7...7	0.63	EGV 923
I	0.01	with frit G2	0.7...7	0.63	EGV 926-1SI
Ic	0.03	–	2...20	0.84	EGV 924
II	0.1	–	6...60	1.13	EGV 925



Cannon-Fenske-Routine Viscometer Type 5 (calibrated)

For automatic and stopwatch measurement, standard design without thread.

- || ISO 3105, ASTM D 2515
- || Total length: approx. 245 mm
- || Filling volume: 7...10 ml
- || Measurement accuracy: $\pm 0.3\%$

Size No.	Cap. const. mm^2/s^2	DIN/ASTM mm^2/s	PVS/iVisc mm^2/s	inner $\varnothing$ mm	Item No.
50	0.004	0.8...4	0.4...3	0.44	EGV 861SI
75	0.008	1.6...8	0.8...6	0.54	EGV 862SI
100	0.015	3...15	2...10	0.63	EGV 863SI
150	0.035	7...35	4...25	0.78	EGV 864SI
200	0.1	20...100	8...60	1.01	EGV 865SI
300	0.25	50...250	20...100	1.27	EGV 866SI
350	0.5	100...500	40...200	1.52	EGV 867SI
400	1.2	240...1,200	100...500	1.92	EGV 868SI
450	2.5	500...2,500	200...1,000	2.35	EGV 869SI
500	8	1,600...8,000	700...3,500	3.20	EGV 870SI
600	20	4,000...20,000	1,500...7,500	4.20	EGV 871SI



Standard glass capillary viscometers

Cannon-Fenske-Routine Viscometer for automatic cleaning Type 6 (calibrated)

For automatic measurement, with screw connections and aspirating tube.

- || ISO 3105, ASTM D 2515
- || Filling volume: 7...12 ml
- || Total length: approx. 245 mm
- || Measurement accuracy: $\pm 0.3\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No.
50	0.004	0.8...4	0.4...3	0.44	EGV 951SI
75	0.008	1.6...8	0.8...6	0.54	EGV 952SI
100	0.015	3...15	2...10	0.63	EGV 953SI
150	0.035	7...35	4...25	0.78	EGV 954SI
200	0.1	20...100	8...60	1.01	EGV 955SI
300	0.25	50...250	20...100	1.27	EGV 956SI
350	0.5	100...500	40...200	1.52	EGV 957SI
400	1.2	240...1,200	100...500	1.92	EGV 958SI
450	2.5	500...2,500	200...1,000	2.35	EGV 959SI
500	8	1,600...8,000	700...3,500	3.20	EGV 960SI
600	20	4,000...20,000	1,500...7,500	4.20	EGV 961SI



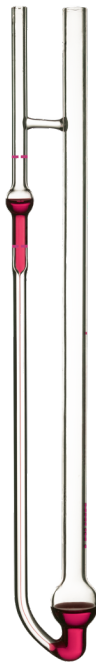
Micro-Ostwald Viscometer Type 7 (calibrated)

For small sample quantities and/or short measuring times, standard design without thread, compatible for use with VRM cleaning modules, recommended for heavy-foaming samples.

Please order one additional adapter (HKB 532) for each measuring stand (S5 or iVisc).

- || Filling volume: 2 ml
- || Total length: approx. 290 mm
- || Measurement accuracy: $\pm 0.5\%$

Size No.	Cap. const. mm^2/s^2	DIN / ASTM mm^2/s	PVS / iVisc mm^2/s	inner $\varnothing$ mm	Item No.
I	0.01	1...6	0.3...6	0.43	EGV 820SI
Ic	0.03	3...18	0.8...18	0.60	EGV 821SI
II	0.1	10...60	3...60	0.77	EGV 822SI
IIC	0.3	30...180	8...180	1.00	EGV 823SI
III	1	100...800	30...800	1.36	EGV 824SI



Viscosity standards

Viscosity standards are certified calibration oils that can be used to ensure and check the reliable and accurate function of your viscosity measurement system. Each calibration oil is delivered from the factory with an individual certificate showing exact viscosity values at different temperatures.

- LZO 002-001 Viscosity standard N8**
0.7024 mm^2/s for capillary size 0c, capillary constant 0.003, 500 ml
- LZO 002-002 Viscosity standard N1**
1.203 mm^2/s for capillary size 0a, capillary constant 0.005, 500 ml
- LZO 002-003 Viscosity standard N2**
2.621 mm^2/s for capillary size I, capillary constant 0.01, 500 ml
- LZO 002-004 Viscosity standard S6**
8.872 mm^2/s for capillary size Ic, capillary constant 0.03, 500 ml
- LZO 002-005 Viscosity standard N14**
24.46 mm^2/s for capillary size II, capillary constant 0.1, 500 ml
- LZO 002-006 Viscosity standard N35**
65.3 mm^2/s for capillary size IIc, capillary constant 0.3, 500 ml
- LZO 002-007 Viscosity standard N100**
238.4 mm^2/s for capillary size III, capillary constant 1.0, 500 ml
- LZO 002-008 Viscosity standard N350**
818.4 mm^2/s for capillary size IIIC, capillary constant 3.0, 500 ml
- LZO 002-009 Viscosity standard N1000**
2592 mm^2/s for capillary size IV, capillary constant 10.0, 500 ml
- LZO 002-010 Viscosity standard N2500**
7576 mm^2/s for capillary size V, capillary constant 30.0, 500 ml





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