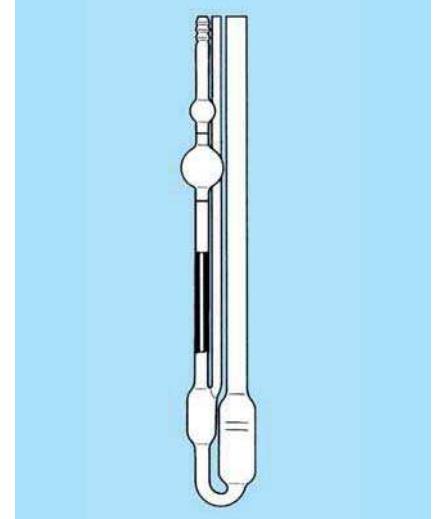


Ubbelohde viscometers, normal form

Viscometers with suspended ball level for determination of absolute and relative kinematic viscosity of liquids with Newtonian flow behavior. The calibrated viscometers are delivered with manufacturer's certificate in accordance with DIN 55 350, Part 18.

All viscometers are provided with ring marks. This ensures that viscometers for automatic measurements can also be checked by means of manual measurements. The recommended minimum flowthrough time is 200 s.



Ubbelohde-Viskosimeter (DIN)

- in accordance with DIN 51 562 Part 1, ISO/DIS 3105 (BS-IP-SL)
- filling quantity: 15 ... 20 ml
- overall length: approx. 290 mm

calibrated,
with constant,
for manual measurements

calibrated
with constant,
for manual measurements;
automatic measurement with
stand AVS/SK-HV

$$v = K \cdot t$$

$$K = \frac{v}{t}$$

$$t = \frac{v}{K}$$

v = kinematic viscosity in mm^2/s
 K = constant [mm^2/s]
 t = flow-through time in s

Type No.	Order No.	Type No.	Order No.	Capillary No. acc. DIN	acc ISO	Capillary $\varnothing \pm 0,01$ [mm]	Constant K (approx.)	Measuring range [mm^2/s] (approx.)
501 00	285400004	-	-	0	-	0.36	0.001	0.3 ... 1
501 03	285400012	-	-	0c	-	0.47	0.003	0.5 ... 3
501 01	285400029	-	-	0a	-	0.53	0.005	0.8 ... 5
501 10	285400037	-	-	I	I	0.63	0.01	1.2 ... 10
501 13	285400045	-	-	Ic	Ia	0.84	0.03	3 ... 30
501 11	285400053	-	-	Ia	-	0.95	0.05	5 ... 50
501 20	285400061	-	-	II	II	1.13	0.1	10 ... 100
501 23	285400078	-	-	IIc	Ila	1.50	0.3	30 ... 300
501 21	285400086	-	-	Ila	-	1.69	0.5	50 ... 500
501 30	285400094	-	-	III	III	2.01	1	100 ... 1000
501 33	285400107	-	-	IIIC	IIla	2.65	3	300 ... 3000
501 31	285400115	-	-	IIla	-	3.00	5	500 ... 5000
501 40	285400123	-	-	IV	IV	3.60	10	1000 ... 10000
-	-	502 43	285400131	IVc	IVa	4.70	30	3000 ... 30000
-	-	502 41	285400148	IVa	-	5.34	50	6000 ... 30000
-	-	502 50	285400156	-	V	6.30	100	> 10000

not calibrated,
without constant;
for determination of rela-
tive viscosity

calibrated,
with constant for auto-
matic measurements

$$v = K \cdot t$$

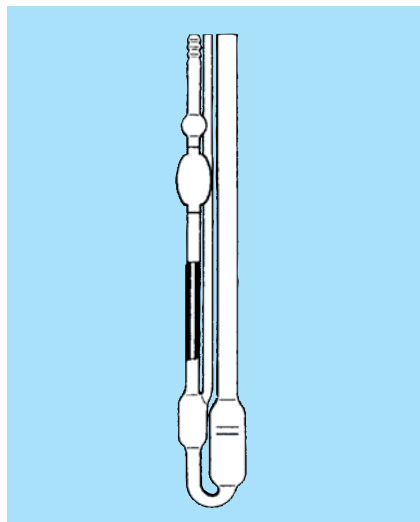
$$K = \frac{v}{t}$$

$$t = \frac{v}{K}$$

v = kinematic viscosity in mm^2/s
 K = constant [mm^2/s]
 t = flow-through time in s

Type No.	Order No.	Type No.	Order No.	Capillary No. acc. DIN	acc ISO	Capillary $\varnothing \pm 0,01$ [mm]	Constant K (approx.)	Measuring range [mm^2/s] (approx.)
-	-	532 00	285400164	0	-	0.36	0.001	0.3 ... 1
530 03	285400304	532 03	285400201	0c	-	0.47	0.003	0.5 ... 3
530 01	285400312	532 01	285400218	0a	-	0.53	0.005	0.8 ... 5
530 10	285400329	532 10	285400226	I	I	0.63	0.01	1.2 ... 10
530 13	285400337	532 13	285400234	Ic	Ia	0.84	0.03	3 ... 30
-	-	532 11	285400172	Ia	-	0.95	0.05	5 ... 50
530 20	285400345	532 20	285400242	II	II	1.13	0.1	10 ... 100
530 23	285400353	532 23	285400259	IIc	Ila	1.50	0.3	30 ... 300
-	-	532 21	285400189	Ila	-	1.69	0.5	50 ... 500
530 30	285400361	532 30	285400267	III	III	2.01	1	100 ... 1000
530 33	285400378	532 33	285400275	IIIC	IIla	2.65	3	300 ... 3000
-	-	532 31	285400197	IIla	-	3.00	5	500 ... 5000
530 40	285400386	532 40	285400283	IV	IV	3.60	10	1000 ... 10000

Ubbelohde viscometers, normal form (ASTM)



Ubbelohde Viscometer (ASTM)

- in accordance with ISO/DIS 3105, ASTM D 2515, ASTM D 446
- filling quantity: 15 ... 20 ml
- overall length: approx. 285 mm

calibrated,
with constant for manual
measurements

not calibrated,
without constant for
determination of relative
Viscosity

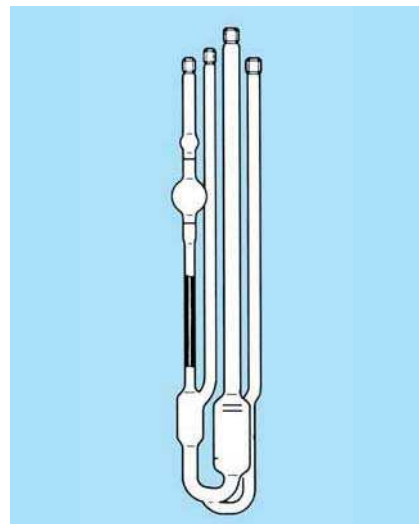
calibrated,
with constant for automa-
tic measurements

Type No.	Order No.	Type No.	Order No.	Type No.	Order No.	Capillary No.	Capillary Ø $\pm 0,01$ [mm]	Constant K (approx.)	Measuring range [mm ² /s] (approx.)	
525 00	285400501	526 00	285400707	527 00	285401255	0	0.24	0.001	0.35 ...	1
525 03	285400518	526 03	285400715	527 03	285401271	0c	0.36	0.003	0.6 ...	3
525 01	285400526	526 01	285400723	527 01	285401263	0b	0.46	0.005	1 ...	5
525 10	285400534	526 10	285400731	527 10	285401152	I	0.58	0.01	2 ...	10
525 13	285400542	526 13	285400748	527 13	285401169	Ic	0.78	0.03	6 ...	30
525 20	285400559	526 20	285400756	527 20	285401177	II	1.03	0.1	20 ...	100
525 23	285400567	526 23	285400764	527 23	285401185	IIc	1.36	0.3	60 ...	300
525 30	285400575	526 30	285400772	527 30	285401193	III	1.83	1	200 ...	1000
525 33	285400583	526 33	285400789	527 33	285401288	IIIc	2.43	3	600 ...	3000
525 40	285400591	526 40	285400797	527 40	285401296	IV	3.27	10	2000 ...	10000
525 43	285400604	526 43	285400801	527 43	285401309	IVc	4.32	30	6000 ...	30000

Ubbelohde viscometers, with additional tube and threads

Viscometers with suspended ball level for determination of absolute or relative kinematic viscosity. These viscometers are preferably used for automatic measurements when an AVS 24, AVS 26 or AVS 270 automatic viscometer cleaner is used simultaneously. The additional filling and cleaning tube and the glass

thread ensure safe operational use. The calibrated viscometers are delivered with manufacturer's certificate in accordance with DIN 55 350, Part 18. The ring marks that are also present serve as auxiliary marks in case the viscometers must be checked by means of manual measurements.

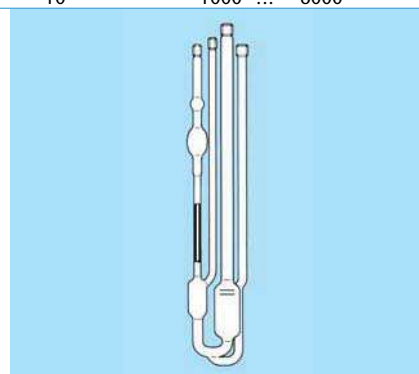


Ubbelohde viscometer (DIN)

- in accordance with ISO/DIS 3105, DIN 51 562, Part 1, BS 133, NFT 60-100
- filling quantity: 18 ... 22 ml
- overall length: approx. 290 mm

calibrated,
with constant for automatic measurements

Type No.	Order No.	Capillary No. acc. DIN	acc. ISO	Capillary Ø i [mm]	Constant K (approx.)	Measuring range [mm ² /s] (approx.)
541 03	285401925	0c	-	0.47	0.003	0.5 ... 3
541 01	285401917	0a	-	0.53	0.005	0.8 ... 5
541 10	285401933	I	I	0.63	0.01	1.2 ... 10
541 13	285401941	Ic	Ia	0.84	0.03	3 ... 30
541 20	285401958	II	II	1.13	0.1	10 ... 100
541 23	285401966	IIc	IIa	1.50	0.3	30 ... 300
541 30	285401974	III	III	2.01	1	100 ... 1000
541 33	285401982	IIIc	IIIa	2.65	3	300 ... 3000
541 40	285401999	IV	IV	3.60	10	1000 ... 6000



Ubbelohde viscometer (ASTM)

- the technical measurement characteristics are in accordance with ISO/DIS 5105, ASTM D 2515, ASTM D 446
- filling quantity: 15 ... 22 ml
- overall length: approx. 290 mm

calibrated,
with constant for automatic measurements

Type No.	Order No.	Capillary No. acc. DIN	Capillary Ø i [mm]	Constant K (approx.)	Measuring range [mm ² /s] (approx.)
545 00	285402005	0	0.24	0.001	0.35 ... 1
545 03	285402021	0c	0.36	0.003	0.6 ... 3
545 01	285402013	0b	0.46	0.005	1 ... 5
545 10	285402038	I	0.58	0.01	2 ... 10
545 13	285402046	Ic	0.78	0.03	6 ... 30
545 20	285402054	II	1.03	0.1	20 ... 100
545 23	285402062	IIc	1.36	0.3	60 ... 300
545 30	285402079	III	1.83	1	200 ... 1000
545 33	285402087	IIIc	2.43	3	600 ... 3000
545 40	285402095	IV	3.27	10	2000 ... 10000
545 43	285402108	IVc	4.32	30	6000 ... 30000