

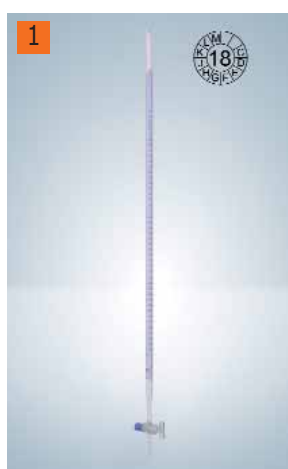
8. Liquid Handling Titration/Burettes

Burettes, with straight stopcock, DURAN®, class AS

Schellbach line for easier reading, declaration of conformity acc. to DIN 12600, with dated batch identification, high-contrast blue graduations, main point ring graduation at major subdivisions, EX (TD) calibrated, acc. to DIN EN ISO 385. Scale length approx. 500 mm. For those products batch calibration reports, which are free of charge, can be generated and printed on www.hirschmannlab.de. Additional single calibration reports or DAkkS certificates (former DKD calibration reports) are available.

Hirschmann

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.02	Glass key	1	9.270 161
25	0.05	0.03	Glass key	1	9.270 162
50	0.1	0.05	Glass key	1	9.270 163 1
10	0.02	0.02	PTFE spindle	1	9.270 164
25	0.05	0.03	PTFE spindle	1	9.270 165
50	0.1	0.05	PTFE spindle	1	9.270 166 2
10	0.02	0.02	PTFE key	1	9.270 167
25	0.05	0.03	PTFE key	1	9.270 168
50	0.1	0.05	PTFE key	1	9.270 169



9.270 163



9.270 166

3 Burettes, with straight stopcock, borosilicate glass 3.3, Class AS

BLAUBRAND®, DIN EN ISO 385.

BRAND

DE-M marking. Calibrated to deliver (TD, Ex). Schellbach stripe. Length approx. 800 mm.

Ring graduations at major subdivisions. Marks and inscriptions in high contrast blue enamel. With batch number and one batch certificate per pack included. Also available with individual works, USP or DAkkS (former DKD) calibration certificate, please enquire.

The batch certificate is also available to download from the manufacturer's website.

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.02	PTFE spindle	1	9.270 115
25	0.05	0.03	PTFE spindle	1	9.270 116
50	0.1	0.05	PTFE spindle	1	9.270 117
10	0.02	0.02	Glass key	1	9.270 118
25	0.05	0.03	Glass key	1	9.270 119
50	0.1	0.05	Glass key	1	9.270 120



4 Burettes, with straight stopcock, borosilicate glass 3.3, class AS

With class AS, conformity certified, with batch identification, blue graduations, DIN EN 385.

ISOLAB

PTFE spindle.

Description	Capacity		Tolerance	PK	Cat. No.
	ml	ml			
with Schellbach line	10	0.02	0.020	1	4.008 311
with Schellbach line	25	0.05	0.030	1	9.270 100
with Schellbach line	50	0.10	0.050	1	9.270 101
without Schellbach line	10	0.02	0.020	1	9.270 102
without Schellbach line	25	0.05	0.030	1	9.270 103
without Schellbach line	50	0.10	0.050	1	9.270 104



8. Liquid Handling Titration/Burettes



1 Burette with straight standard ground stopcock, DURAN®, class AS

The original DURAN® burettes are manufactured from chemically highly resistant borosilicate glass 3.3. Thanks to the precise scale, they are ideal for titration. Calibration is based on the released volume ("Ex") at a + 20 °C reference temperature. This means the fluid quantity released can be taken exactly from the scale, as the liquid adhesion to the glass is taken into account in the calibration. Volume content tolerances conform to DIN and ISO accuracy limits. From now on the approved DURAN® burettes are also available with PTFE keys. Unlike the glass keys, the PTFE keys need not be greased, which makes work in the laboratory easier.

DURAN Group

- Available in three sizes, the right burette for each application
- Proven DURAN® properties
- With Schellbach stripe and main graduations as circular divisions
- Conforms to ISO 385
- Autoclavable
- Corresponds to USP/EP and JP guidelines

Capacity	Grad.	Tolerance	Height	Stopcock with	PK	Cat. No.
ml	ml	± ml	mm			
10	0.02	0.02	750	Glass key	1	7.022 042
25	0.05	0.03	750	Glass key	1	7.022 043
50	0.1	0.05	750	Glass key	1	7.022 044
100	0.2	0.1	750	Glass key	1	9.270 925
10	0.02	0.02	750	PTFE key	1	9.270 921
25	0.05	0.03	750	PTFE key	1	9.270 922
50	0.1	0.05	750	PTFE key	1	9.270 923
100	0.2	0.1	750	PTFE key	1	9.270 924



9.270 157

2 Burettes, with lateral stopcock, DURAN®, class AS

With Schellbach stripe. EX (TD) calibrated. With dated batch identification. Declaration of conformity acc. to DIN 12600. High-contrast blue graduation for easier reading. Main point ring graduation, lateral stopcock with glass key or with PTFE-Spindle, DIN EN ISO 385. Scale length 500 mm.

Hirschmann

For those products, batch calibration reports, which are free of charge, can be generated and printed on www.hirschmannlab.com. Additional single calibration reports or DAkkS certificates (former DKD calibration reports) are available.

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.02	Glass key	1	9.270 155
25	0.05	0.03	Glass key	1	9.270 156
50	0.1	0.05	Glass key	1	9.270 157
10	0.02	0.02	PTFE spindle	1	9.270 158
25	0.05	0.03	PTFE spindle	1	9.270 159
50	0.1	0.05	PTFE spindle	1	9.270 160



3 Burettes, with lateral stopcock, borosilicate glass 3.3, Class AS

BLAUBRAND®. DIN EN ISO 385. Conformity certified. With batch number. Graduations and inscriptions in highly contrasting blue enamel. With Schellbach stripe. Length approx. 800 mm. Calibrated to deliver (EX). All BLAUBRAND® burettes are delivered with batch number and one batch certificate included per manufacturer's pack. Also available with individual works, USP or DAkkS (former DKD) calibration certificate, please enquire. The batch certificate is also available to download from the manufacturer's website.

BRAND

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
10	0,02	0,02	PTFE spindle	1	9.270 144
25	0,05	0,03	PTFE spindle	1	9.270 147
50	0,1	0,05	PTFE spindle	1	9.270 148
10	0,02	0,02	Glass key	1	9.270 121
25	0,05	0,03	Glass key	1	9.270 122
50	0,1	0,05	Glass key	1	9.270 125



4 Compact Burette, Boro 3.3, class AS, DE-M marking

BLAUBRAND®, DE-M marking, removable PTFE stopcock. DIN EN ISO 385. Calibrated to deliver (TD, Ex).

Scope of supply: Burette tube with Schellbach stripe, stopcock with precision tip. Incl. one batch certificate.

Capacity	Grad.	Length	Tolerance	PK	Cat. No.
ml	ml	mm	± ml		
10	0.02	795	0.02	1	4.000 014
25	0.05	800	0.03	1	4.000 015
50	0.1	800	0.05	1	7.617 437

8. Liquid Handling Titration/Burettes

1 Micro burettes with straight stopcock, Bang pattern, borosilicate glass 3.3, Class AS

BLAUBRAND®, class AS, DE-M marking. Boro 3.3. DIN EN ISO 385. Calibrated to deliver (TD, EX). Schellbach *BRAND* stripe. With needle valve stopcock with PTFE spindle (PTFE key in intermediate stopcock).
All BLAUBRAND® burettes are delivered with batch number and one batch certificate included per manufacturer's pack.
Also available with individual works, USP or DAkkS (former DKD) calibration certificate, please enquire.
The batch certificate is also available to download from the manufacturer's website.

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
2	0.01	0.01	PTFE spindle	1	7.018 361
5	0.01	0.01	PTFE spindle	1	7.018 362
10	0.02	0.02	PTFE spindle	1	7.018 363
2	0.01	0.01	PTFE spindle *	1	9.271 235
5	0.01	0.01	PTFE spindle *	1	9.271 237
10	0.02	0.02	PTFE spindle *	1	7.018 365

* with lateral stopcock



2 Burettes, lateral stopcock, Boro 3.3, Class B

SILBERBRAND, DIN EN ISO 385. Calibrated to deliver (TD, Ex). Schellbach stripe.
Length approx. 800 mm.

Capacity	Grad.	Tolerance	Stopcock with	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.03	PTFE spindle	1	7.018 318
25	0.05	0.05	PTFE spindle	1	7.018 319
50	0.1	0.08	PTFE spindle	1	7.018 320



3 Automatic burettes with splinter protection, Schilling pattern, borosilicate glass 3.3

Burette according to Dr. Schilling with splinter protection, with Schellbach stripe, automatic zeroing system and Bürkle-dosing device. The glass burette is covered with a plastic sheet which increases the tensile strength and serves as splinter protection. The probability that the burette breaks is reduced compared to conventional burettes and even in case the burette breaks, no dangerous splinters will be produced. The dosing device allows precise dosage via the pushbutton or via the micro-screw as well as precise dispensing via a fine spout tip.

- With splinter protection
- Calibrated to Ex
- Shatterproof, resistant to chemicals
- Exact spout tip, fine droplet formation
- Medium touching parts: PE, natural rubber, PP, Borosilicate glass

Description	Capacity	Grad.	Tolerance	Height	PK	Cat. No.
	ml	ml	± ml	mm		
clear glass, schellbach, blue graduated	15	0.1	0.045	52	1	6.280 403
clear glass, schellbach, blue graduated	25	0.1	0.045	65	1	6.280 404
clear glass, schellbach, blue graduated	30	0.1	0.075	92	1	6.280 405



8. Liquid Handling Titration/Burettes



4.008 314

4.008 316

Automatic burettes, schilling pattern, borosilicate glass 3.3/PE-LD

- Described as automatic burettes with fast titration and practical usage. ISOLAB
- Especially suitable for field analysis where there is a risk of breaking.
- The entire system consists of a burette tubing with automatic zeroing system together with a valve stopcock, a reservoir bottle and a bottle stand.
- Rapid filling by squeezing the bottle and fast titration by valve stopcock
- Inscriptions and graduations are printed either with blue enamel or with white enamel which is specially designed for glass use.
- Clear burettes are manufactured with schellbach stripe.
- Amber burettes are manufactured without schellbach stripe.
- 10 ml burette has a polyethylene reservoir bottle of 500 ml volume whereas 25 and 50 ml burettes are used with bottles of 1000 ml volume.

Description	Capacity ml	Grad. ml	Tolerance ± ml	PK Cat. No.	
clear glass, schellbach, blue graduated	10	0,05	0,030	1	4.008 314 1
clear glass, schellbach, blue graduated	25	0,10	0,050	1	6.241 904
clear glass, schellbach, blue graduated	50	0,10	0,050	1	4.008 315
amber, without schellbach, white graduated	10	0,05	0,030	1	4.008 316 2
amber, without schellbach, white graduated	25	0,10	0,050	1	4.008 317
amber, without schellbach, white graduated	50	0,10	0,050	1	4.008 318



6.070 072

Automatic burettes acc. to Schilling pattern, blue graduation, DURAN®

- Fast flow burette with 500 ml plastic reservoir bottle (up to 10 ml) or 1000 ml (up to 15 ml). Schellbach stripe and graduation in high contrast blue enamel, scale length approx. 330 mm. Hirschmann

Capacity ml	Grad. ml	Tolerance ± ml	Bottle size ml	Scale length approx. mm	PK Cat. No.
5	0.05	0.03	500	330	1 6.070 009
10	0.05	0.045	500	330	1 7.510 426
15	0.1	0.045	1000	330	1 6.223 256
25	0.1	0.075	1000	330	1 7.510 427
50	0.1	0.075	1000	550	1 6.070 072 3



Automatic burettes, glass, Schilling pattern, borosilicate glass 3.3/PE-LD, class B

- SILBERBRAND. Tolerances to class B, DIN EN ISO 385. Borosilicate glass 3.3 burette. BRAND
PVC filling tube and silicone outlet tubing. PE-LD reservoir bottle with PE-HD base.
Brass/PP micrometer screw. Graduations and inscriptions are in highly contrasting black enamel. With Schellbach stripes. Squeezing of bottle allows rapid filling. Fine titration is easy using the micrometer screw. Coarse titration is achieved by removal of the micrometer screw and using the push button. Calibrated to deliver (EX).

Capacity ml	Grad. ml	Tolerance ± ml	Capacity ml	Height mm	PK Cat. No.
10*	0.05	0.05	500	530	1 9.271 053
15*	0.1	0.08	500	510	1 9.271 055
25*	0.1	0.08	1000	620	1 9.271 056
50*	0.1	0.1	1000	830	1 9.271 058
25* **	0.1	0.10	100	650	1 7.981 360
50**	0.1	0.1	1000	900	1 6.239 724

* Narrower divisions
**amber, borosilicate glass 5.4

8. Liquid Handling Titration/Burettes

1 Automatic burettes, Schilling pattern, borosilicate glass 3.3, PE-LD, class B

Made of borosilicate glass 3.3. Class B. Conformity with DIN ISO 384. With Schellbach stripes (blue/white) and easily readable, black scaling. Calibrated to deliver, EX. Automatic zeroing. The burette stopcock is made of high quality plastic. Its PTFE key turns easily and allows fine titration. Special protection against breakage if the apparatus gets knocked over: A small bumper has been attached to the upper end of the upright measuring tube. This feature reduces the chance of breakage. Material: burette of borosilicate glass 3.3, PP filling tube, PMP/PTFE burette stopcock, PE-LD reservoir bottle. VITLAB

Amber borosilicate burette made of glass 3.3. Class B, for light sensitive substances. Conformity with DIN ISO 384. With easily readable black scaling. Calibrated to deliver EX. Automatic zeroing. The stopcock of the burette is made of high quality plastic. Its PTFE key turns easily and allows fine titration. A small bumper has been attached to the upper end of the upright measuring tube. This feature reduces the chance of breakage. Materials: burette of borosilicate glass 3.3, PP filling tube, PMP/PTFE burette stopcock, PE-LD reservoir bottle.



Burette capacity ml	Grad. ml	Tolerance ± ml	Bottle capacity ml	Height mm	Burette	PK	Cat. No.
25	0.05	0.05	1000	900	with plastic coating	1	9.271 082
50	0.10	0.10	1000	900	with plastic coating	1	9.271 084
25	0.05	0.05	1000	900	without plastic coating	1	9.271 085
50	0.10	0.10	1000	900	without plastic coating	1	9.271 086
25	0.05	0.05	1000	900	amber glass	1	9.271 087
50	0.10	0.10	1000	900	amber glass	1	9.271 088

Automatic burettes, borosilicate glass 3.3, class AS

- Manufactured from pre-vacuum calibrated borosilicate glass. They meet the highest quality standards according to DIN EN ISO 385 and DIN 12700. ISOLAB
- Permanent quality control through all steps eliminates possible deviations from nominal values.
- Calibrated to deliver (Ex) and the tolerances are according to DIN/ISO Class "AS" standards.
- Conformity ("H") certified, with a batch number printed on the body. Batch certificate can be downloaded from the suppliers website.
- Supplied with an automatic zeroing system, VALVE stopcock and also an intermediate PTFE stopcock to recirculate the remaining liquid.
- Clear burettes are manufactured with schellbach stripe.
- Inscriptions and graduations are printed with special blue enamel. For amber burettes, white enamel is used to maximise visibility and durability.

Glass bottle - Please order separately.



4.008 312

6.238 473

Description	Capacity ml	Graduations ml	Tolerance ± ml	Glass	Graduations	PK	Cat. No.
schellbach	10	0.02	0.020	clear	blue graduated	1	4.008 312 2
schellbach	25	0.05	0.030	clear	blue graduated	1	6.241 216
schellbach	50	0.10	0.050	clear	blue graduated	1	6.237 627
without schellbach	10	0.02	0.020	amber	white graduated	1	6.238 473 3
without schellbach	25	0.05	0.030	amber	white graduated	1	6.242 463
without schellbach	50	0.10	0.050	amber	white graduated	1	6.241 116

Automatic burettes acc. Pellet, without intermediate stopcock, class AS, DURAN®

Lateral PTFE-spindle without intermediate stopcock. Main point ring graduation. Schellbach stripe. With dated batch identification. Declaration of conformity acc. to DIN 12600. Graduation in high-contrast blue enamel, acc. to DIN EN ISO 385. Incl. 2 L clear glass bottle. Scale length approx. 500 mm. For those products, batch calibration reports, which are free of charge, can be generated and printed on www.hirschmannlab.com. Additional single calibration reports or DAkkS certificates (former DKD calibration reports) are available. Hirschmann



9.270 785

Capacity ml	Grad. ml	Tolerance ± ml	PK	Cat. No.
10	0.02	0.02	1	6.079 718
25	0.05	0.03	1	7.630 409
50	0.1	0.05	1	9.270 785 4

8. Liquid Handling Titration/Burettes-Titrators

GENERAL CATALOGUE EDITION 20



6.079 156

Automatic burettes acc. Pellet, with stopcock, class AS, DURAN®

Lateral glass stopcock and intermediate stopcock. Scale length approx. 500 mm. Main point ring graduation. Schellbach stripe. With dated batch identification. Declaration of conformity acc. to DIN 12600. Graduation in high-contrast blue enamel, acc. to DIN EN ISO 385. Incl. 2 l clear glass bottle.

Hirschmann

For those products, batch calibration reports, which are free of charge, can be generated and printed on www.hirschmannlab.com. Additional single calibration reports or DAkkS certificates (former DKD calibration reports) are available.

Capacity	Grad.	Tolerance	PK	Cat. No.
ml	ml	± ml		
10	0.02	0.02	1	6.079 157
25	0.05	0.03	1	6.056 580
50	0.1	0.05	1	6.079 156 1



9.270 780

Automatic burettes acc, Pellet, with PTFE-spindle and intermediate stopcock, class AS, DURAN®

Lateral PTFE-spindle and intermediate stopcock. Scale length approx. 500 mm. Main point ring graduation. Schellbach stripe. With dated batch identification. Declaration of conformity acc. to DIN 12600. Graduation in high-contrast blue enamel, acc. to DIN EN ISO 385. Incl. 2 l clear glass bottle.

Hirschmann

For those products, batch calibration reports, which are free of charge, can be generated and printed on www.hirschmannlab.com. Additional single calibration reports or DAkkS certificates (former DKD calibration reports) are available.

Capacity	Grad.	Tolerance	PK	Cat. No.
ml	ml	± ml		
10	0.02	0.02	1	6.228 424
25	0.05	0.03	1	6.228 425
50	0.1	0.05	1	9.270 780 2



Automatic burettes, Pellet pattern, borosilicate glass 3.3, Class AS, with stopcock

BLAUBRAND®. Class AS, to DIN EN ISO 385. Boro 3.3. With intermediate stopcock. DE-M marking. With batch number. Graduations and inscriptions in highly contrasting blue enamel. With Schellbach stripes. Intermediate stopcock allows residual reagent in the burette after titration to be recycled into the reservoir. Automatic zero point setting. Calibrated to deliver (EX). Choice of models, either with needle-valve stopcock with PTFE spindle (intermediate stopcock with PTFE-key) or with NS glass stopcock (intermediate stopcock with glass key).

BRAND

Complete with 2 litre, soda-lime glass reservoir (160 mm dia. x 200 mm height, with 29/32 ground glass neck). Overall height with bottle approx. 1 m. All BLAUBRAND® burettes are delivered with batch number and one batch certificate included per pack. Also available with individual works, USP or DAkkS (former DKD) calibration certificate, please enquire. The batch certificate is also available to download from the manufacturer's website.

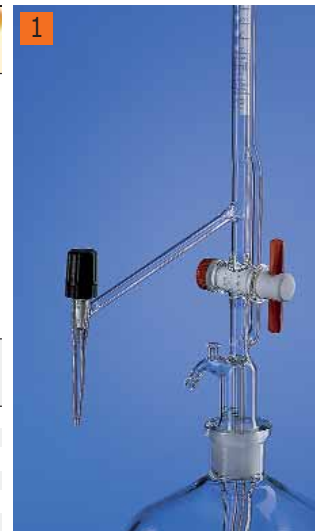
Capacity	Grad.	Tolerance	Stopcock	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.02	PTFE	1	9.270 764
25	0.05	0.03	PTFE	1	9.270 767
50	0.1	0.05	PTFE	1	9.270 768
10	0.02	0.02	Glass	1	9.270 734
25	0.05	0.03	Glass	1	9.270 737
50	0.1	0.05	Glass	1	9.270 738

8. Liquid Handling Titration/Titrators

1 Automatic burettes, Pellet pattern, borosilicate glass 3.3, with stopcock, Class AS, without bottle

NEW

1



BLAUBRAND®. Class AS, to DIN EN ISO 385. Boro 3.3. With intermediate stopcock. DE-M marking. With batch number. Graduations and inscriptions in highly contrasting blue enamel. With Schellbach stripes. Intermediate stopcock allows residual reagent in the burette after titration to be recycled into the reservoir. Automatic zero point setting. Calibrated to deliver (EX). Choice of models, either with needle-valve stopcock with PTFE spindle (intermediate stopcock with PTFE-key) or with NS glass stopcock (intermediate stopcock with glass key).

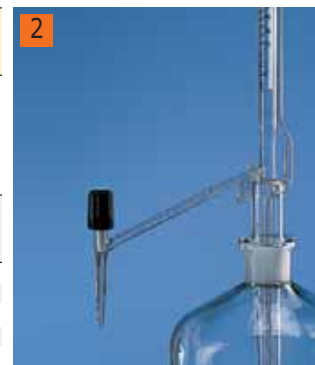
BRAND

All BLAUBRAND® burettes are delivered with batch number and one batch certificate included per pack. Also available with individual works, USP or DAKS (former DKD) calibration certificate, please enquire. The batch certificate is also available to download from the manufacturer's website.

Capacity	Grad.	Tolerance	Stopcock	PK	Cat. No.
ml	ml	± ml			
10	0.02	0.02	PTFE	1	7.609 930
25	0.05	0.03	PTFE	1	7.602 941
50	0.1	0.05	PTFE	1	7.631 635
10	0.02	0.02	Glass	1	7.608 025
25	0.05	0.03	Glass	1	6.072 789
50	0.1	0.05	Glass	1	7.300 131

2 Automatic burettes, Pellet pattern, borosilicate glass 3.3, class B, without stopcock

2



SILBERBRAND, class B. Boro 3.3. DIN EN ISO 385. Calibrated to deliver (TD, EX). Schellbach stripe. With needle-valve stopcock with PTFE spindle. Automatic zeroing. Total height approx. 1 m incl. 2000 ml bottle (soda-lime glass).

BRAND

Description	Capacity	Grad.	Tolerance	PK	Cat. No.
	ml	ml	± ml		
with bottle	10	0.02	0.03	1	7.018 326
with bottle	25	0.05	0.05	1	7.018 327
with bottle	50	0.1	0.08	1	7.018 328
without bottle	10	0.02	0.03	1	7.300 388
without bottle	25	0.05	0.05	1	7.077 524
without bottle	50	0.1	0.08	1	7.076 570

3 Automatic burettes, Pellet pattern, borosilicate glass 5.4 amber, class B, with stopcock

3



Amber borosilicate glass type 5.4. SILBERBRAND. With intermediate stopcock. 25ml: Class B, Tolerance to DIN EN ISO 385.

BRAND

50ml: Class B, to DIN EN ISO 385.

Automatic zero point setting. Graduations and inscriptions in white enamel. Intermediate stopcock for evacuation of remaining liquid. Calibrated to deliver (EX). Choice of models, either with PTFE or glass key dispensing and intermediate stopcocks. With 2-litre soda-lime glass reservoir (160 mm dia. x 200 mm height, with 29/32 ground glass neck) as indicated. Overall height with bottle approx. 1 m.

Description	Capacity	Grad.	Tolerance	Keys	PK	Cat. No.
	ml	ml	± ml			
with bottle	25*	0.1	0.08	PTFE	1	9.270 540
with bottle	50	0.1	0.1	PTFE	1	9.270 542
without bottle	25*	0.1	0.08	PTFE	1	7.200 776
without bottle	50	0.1	0.1	PTFE	1	7.200 775
with bottle	25*	0.1	0.08	Glass	1	9.270 536
with bottle	50	0.1	0.1	Glass	1	9.270 538
without bottle	25*	0.1	0.08	Glass	1	6.201 498
without bottle	50	0.1	0.1	Glass	1	6.201 499

* Narrower divisions.

8. Liquid Handling Titration/Titrators



1 Automatic burettes, Pellet pattern, borosilicate glass 5.4 amber, class B, without stopcock

SILBERBRAND, amber glass. Borosilicate glass 5.4. BRAND
 25 ml: Error limits according to class B, DIN EN ISO 385.
 50 ml: DIN EN ISO 385, class B.
 Calibrated to deliver (TD, EX). Available with titration stopcock with PTFE key or glass key.
 Total height 25 ml approx. 0.7 m, total height 50 ml approx. 1 m incl. 2000 ml bottle (soda-lime glass) as indicated.

Description	Capacity	Grad.	Tolerance	Keys	PK	Cat. No.
	ml	ml	± ml			
with bottle	25*	0.1	0.08	PTFE	1	7.079 511
with bottle	50	0.1	0.10	PTFE	1	6.072 800
without bottle	25*	0.1	0.08	PTFE	1	7.300 390
without bottle	50	0.1	0.10	PTFE	1	7.300 389
with bottle	25*	0.1	0.08	Glass	1	4.000 027
with bottle	50	0.1	0.10	Glass	1	6.203 367
without bottle	25*	0.1	0.08	Glass	1	7.055 909
without bottle	50	0.1	0.10	Glass	1	7.082 063

* Narrower divisions.



6.237 628



6.238 474

Burette bottles, borosilicate glass 3.3

Burette bottle for automatic burettes is made from heat resistant glass. Each bottle has a NS 29/32 neck grinding that fits to burette.

Colour	Capacity	Diam.	Height	PK	Cat. No.
	ml	mm	mm		
clear	1000	110	200	1	9.270 905
clear	2000	160	200	1	6.237 628 2
brown	2000	160	200	1	6.238 474 3



4 Spare reservoir bottles, glass

Boro 3.3. Available in clear glass or amber glass or soda-lime glass. Volume: 2000 ml, diameter: 160 mm, height: 200 mm. BRAND

Colour	Capacity	Diam.	Height	Material	PK	Cat. No.
	ml	mm	mm			
clear	2000	160	200	Boro 3.3	1	6.018 346
amber	2000	160	200	Boro 3.3	1	6.018 347
clear	2000	160	200	Soda-lime glass	1	7.059 541
amber	2000	160	200	Soda-lime glass	1	7.400 768



5 Orsat blowball

Natural rubber. Translucent. Deutsch & Neumann

Type	PK	Cat. No.
Orsat blowball	1	9.115 510



6 Hand bellows

Single spray. Without net. Deutsch & Neumann
 Size 3.

Type	PK	Cat. No.
Hand bellows	1	9.270 995



7 Hand bellows

Double spray. With net. Deutsch & Neumann
 Size 5.

Type	PK	Cat. No.
Hand bellows	1	9.270 990

➔ Further Burette clamp please see our chapter 1

8. Liquid Handling Titration/Titrators

1 2 Digital Burettes, VITLAB® continuous

The pulse-free, dispensing operation of the Continuous burettes makes titration safer at high-level precision. The Continuous series can be used for titration agents up to a concentration of 1 Mol/l. The patented dual pistons pump provides permanent and pulse-free the liquid requested. Refills are not necessary. The Continuous burette series undercuts the margins of error defined by DIN EN ISO 8655-3 especially in partial volumes. All operation controls and the digital display have an ergonomic and functional design and are arranged clearly.

- Pulse-free dispensing technique for continuous and quick titration
- patented recirculation valve avoids reagent waste
- Clear and precise display of titrated volume
- Battery-operated, easily replaceable micro-batteries (1.5 V)
- Dispensing volume per hand wheel revolution: 2.5 ml (Continuous E), 5.0 ml (Continuous RS)
- Device can be rotated on the bottle 360°
- Telescopic inlet tube extendible from 200 to 350 mm
- Adapters for drying tube and filter
- Certificate of conformity according to DIN 12600

Accuracy $\leq \pm 0.2\%$, Coefficient of variation $\leq \pm 0.1\%$

Supplied with: Burette continuous, 3 PP adapter (GL 32, GL 38, S 40), 1 telescopic suction tube, 1 telescopic discharge tube, 2 micro batteries 1.5 V (LR 03/AAA), manual, quality certificate.

Type	Capacity ml	Capacity/U ml	Neck thread GL	PK	Cat. No.
E	2.5	2.5	45	1	9.284 020
RS	5.0	5.0	45	1	9.284 021



Digital burettes, solarus®

A titration unit with a reagent recirculation system for manual titration directly from the reagent bottle. Power supplied by a solar cell. Available in three volumes (10 ml, 20 ml and 50 ml). The world's first digital burette with integrated solar cell. The power supply for the electronics and display is derived exclusively from an integrated solar cell. Easily replaceable valves. The vivid digital display prevents meniscus reading errors and is always clearly legible, regardless of the viewing angle. The handwheels with soft touch surface are ergonomically optimised for particularly precise control.

- Power supplied by a solar cell
- Free rotation
- Media recirculating system for simple and rapid venting without reagent loss
- Handwheels with soft touch surface
- Clearly legible display, regardless of the viewing angle
- A light protection window for the valve block is also included in the scope of delivery
- Individual calibration of user-specified adaptations with "Quick-Cal"
- Discharge valves and valve seats consisting of high-purity aluminium oxide ceramic
- Serial bidirectional interface (RS 232 and USB)

Supplied with: solarus® with A 45 mm thread, 3 thread adapters (A 32, A 38 and S 40), discharge tube, 1 suction tube with retainer screw, 1 spanner for valve, brown light protection window, with individual serial number and single calibration report.

Description	Accuracy max. vol. ($\leq \pm R\%$)	Precision max. vol. ($\leq CV\%$)	PK	Cat. No.
Capacity 10 ml	0.3	0.1	1	9.287 779 3
Capacity 20 ml	0.2	0.1	1	9.287 780
Capacity 50 ml	0.2	0.1	1	9.287 781
Interface cable			1	9.287 756



9.287 779

Accessories and spare parts, Solarus®

Description	PK	Cat. No.
Discharge unit titration with fine tip	1	9.287 881
Discharge tube unit, flexible, spiral shaped, inner dia. 1.5 mm	1	6.206 625
Discharge unit titration, variable, complete with tube holder, approx. 400 mm, FEP	1	9.287 882
Adapter with A 45 filler	1	9.287 883
Thread adapter, silicone, A 45 compliant with NS 29/32 ground adapter	1	9.287 884

8. Liquid Handling Titration/Titrators

GENERAL CATALOGUE EDITION 20



1 Bottle top burette Titrette®

BRAND

Titrette® - The next generation digital burette!

With the Titrette® bottle-top burette, you can titrate quickly and reliably with highest precision, even in close quarters, with no mains supply needed - in the lab, in production, or in the field!

- High accuracy
- precise titration within the error limits of Class A for glass burettes
- Smooth-running operation for sensitive, drop-wise titration
- compact design
- light and stable, easy handling
- no switching between fill and titrate
- Simple maintenance
- cleaning and parts replacement right in the lab
- Titrette® SH to determinate the acid content of milk and liquid dairy according to Soxhlet-Henkel (4 °SH = 1ml)

The large, easy-grip hand wheels are conveniently easy to turn. With the optimized gear ratio, you can fill the device quickly and titrate drop-wise with great sensitivity.

The Titrette® bottle-top burette has an innovative new measuring system which matches the Class A accuracy of glass burettes and, if needed, can offer the precision of 3 decimal places below 20ml. This is an important feature for users who need to work within the Class A error limits as with glass burettes according to DIN EN ISO 385

(e.g., pharmaceutical work):

All components only move within the housing, saving room on top. The compact design and the light-weight ensure good stability. The titrating tube can be adjusted horizontally and vertically. This provides flexibility when positioning the instrument, e.g., when using a magnetic stirrer or different bottle sizes.

Items supplied: Titrette® bottle-top burette, DE-M marking, performance certificate, telescoping filling tube (170 to 330 mm), recirculation tube, 2 x 1.5V batteries (AAA/UM4/LR03), 4 x PP bottle adapters (GL45/32, GL 45/38, GL 45/S40 and GL32/NS 29/32), 2 coloured light shield inspection windows, operating manual.

Volume ml	Accuracy max. vol. ($\leq \pm R\%$)	Precision max. vol. ($\leq CV\%$)	Interface	PK	Cat. No.
°SH (25)	0.07	0.025	without	1	4.007 918
10	0.10	0.05	without	1	6.259 209
25	0.07	0.025	without	1	9.271 332
50	0.06	0.02	without	1	9.271 333
10	0.10	0.05	incl.	1	9.271 338
25	0.07	0.025	incl.	1	9.271 334
50	0.06	0.02	incl.	1	9.271 335

Accessories for Titrette®

BRAND

Description	PK	Cat. No.
Valve head for Titrette® 10 ml	1	9.284 161
Valve head for Titrette® 25 ml	1	4.000 395 3
Valve head for Titrette® 50 ml	1	4.000 396
Telescopic filling tubes 125 to 240	1	6.270 816
Telescopic filling tubes 170 to 330 mm	1	6.270 818
Telescopic filling tubes 250 to 480 mm	1	6.270 819
Inspection windows, 2 x transparent and 2 x brown	1	4.000 394 2
Dosing cylinder with valve block for Titrette® 10 ml	1	9.284 162
Dosing cylinder with valve block for Titrette® 25 ml, from series no. 01K	1	6.261 478 4
Dosing cylinder with valve block for Titrette® 50ml, from series no. 01K	1	6.261 803
Titrating cannula Titrette® 10 ml with screw cap and integrated discharge/recirculation valve	1	9.284 163
Titrating cannula Titrette® 25/50 ml with screw cap and integrated discharge/recirculation valve, from series no. 01K	1	6.261 119
Filling valve	1	9.284 482 5



4.000 394



4.000 395



6.261 478



9.284 482

8. Liquid Handling Titration/Titrators-Digital burettes

Digital-burette, opus®

Hirschmann

A titration unit with a reagent recirculation system for motor-powered titration directly from the reagent bottle. Available in three volumes (10 ml, 20 ml and 50 ml). Electronic control of titration enables the achievement of reproducible results and precisely defined dynamics each time. Time-saving rapid titration with subsequent fine titration enhances accuracy and efficiency. The titration impulse triggered by the motor enables the achievement of a droplet break-up with output volumes from 10 µl to 99.999 ml and delivers resolutions up to the third decimal place.

- Electronic control and dispensing of volumes
- A light protection window for the valve block is also included in the scope of delivery
- Titration impulse triggered by the motor enables the achievement of a droplet break up p from 10 µl for precision determination
- Media recirculating system for simple and rapid venting without reagent loss
- Free rotation
- TFT touchscreen with user-friendly menu
- Method memory for nine different titration procedures with storage of all settings
- USB and RS232 interface for PC connection
- Integration in automated procedures possible
- Discharge valves and valve seats consisting of high-purity aluminium oxide ceramic
- Power supply 100-240 V, with EU, UK, US plug

Supplied with: opus® titration complete with thread 45 mm, 3 adapters (A 32, A 38 and S 40), 1 screw coupled suction tube, 1 titration discharge unit and 1 power supply, 1 brown light protection window, touch screen module "titration", Data Power Cable 0.75 m, instruction manual, single calibration report.

Description	Accuracy max. vol. (≤ ± R%)	Precision max. vol. (≤ CV%)	PK	Cat. No.
Volume 10 ml	0.6	0.2	1	9.287 875 1
Volume 20 ml	0.6	0.2	1	9.287 870
Volume 50 ml	0.6	0.2	1	9.287 871



9.287 875

2 Motor-driven piston burette Titronic® 300

SI Analytics

Motor-driven piston burette with 20 or 50ml dosing unit. For manual titrations and highly precise dosing tasks. The TITRONIC® 300 can be completely controlled from a PC via the USB- or RS-232-interface. Up to 16 burettes can be connected to one another via the RS232 interface according to the daisy chain principle.

T 300/20 M1: Basic unit without magnetic stirrer with ready to use assembled 20 ml dosing unit TZ 3130 with hoses, fittings and titration tip, controller TZ 3880, titration clamp Z 305, stand rod TZ 1748 and power supply 100-240 V

T 300/50 M1: as T 300/20 M1, only with ready to use assembled 50 ml dosing unit TZ 3160

T 300/20 M2: as T 300/20 M1, additionally with magnetic stirrer TM 50

T 300/50 M2: as T 300/20 M2, only with ready to use assembled 50 ml dosing unit TZ 3160

Specifications

Interfaces:	USB A and B, 2x RS 232
Stirrer connection:	TM 50 power supply directly through piston burette
Keyboard connection:	The unit is operated using the keys on the device itself, the controller TZ 3880 and optional PC-keyboard (USB)
Display:	graphics-capable TFT display
Volume indicator:	000.005 to 9999.999 ml
Display resolution:	0.005
Dosing speed:	max. 100 ml/min (with 50 ml unit)
Fill time:	30 secs. to 99 secs. adjustable (time depends on cylinder volume)
Dosing units:	20ml or 50ml dosing unit, interchangeable
Burette resolution:	8000
Dispensing accuracy:	0.15 % system measurement deviation, 0.05% accidental measurement deviation determined in accordance with EN ISO 8665, Part 3
Supply requirements:	230V, 50/60 Hz
Conformity:	ISO 8665, Part 6
CE mark:	EMC: 2004/108/EG; safety EG- Directive 2006/95

Type	Burette attachment ml	PK	Cat. No.
T 300/20 M1	20	1	9.863 180
T 300/50 M1	50	1	9.863 181
T 300/20 M2	20	1	9.863 182
T 300/50 M2	50	1	9.863 183



8. Liquid Handling Titration/Digital burettes

GENERAL CATALOGUE EDITION 20

1



1 Motor-driven piston burette TITRONIC® 500

Motor-driven piston burette with intelligent exchangeable dosing units with automatic recognition of unit size and reagent data. Besides manual titration and highly precise dosing tasks the TITRONIC® 500 can also be used for the preparation of solutions by entering the weights. The connection of an analytical balance allows the easy automatization of the solution preparation. The TITRONIC® 500 can completely controlled from a PC via the USB- or RS-232-interface. Up to 16 burettes can be connected to one another via the RS232 interface according to the daisy chain principle.

SI Analytics

T 500: TITRONIC® 500 basic unit without magnetic stirrer, with stand rod TZ 1510, titration clamp Z 305, controller TZ 3880, power supply 100-240.V

T 500-M1: TITRONIC® 500 basic unit with magnetic stirrer TM 235, with stand rod TZ 1510, titration clamp Z 305, controller TZ 3880, power supply 100-240 V

T 500-M2/20: TITRONIC® 500 basic unit with magnetic stirrer TM 235 and exchangeable unit WA 20, with stand rod TZ 1510, titration clamp Z 305, controller TZ 3880, power supply 100-240 V

Technical specification

Interfaces:	3 x USB (2 x USB A and 1x USB B), 2x RS-232-C, 1 x LAN
Stirrer connection:	TM 235 or alternative paddle stirrer
Keyboard:	The unit is operated using the keys on the device itself, the controller TZ 3880 and optional PC-keyboard (USB)
Display:	graphics-capable 3.5" TFT display
Volume display:	00.00 to 999.9ml
Display resolution:	0.001ml (depending on exchangeable unit)
Dosing speed:	max. 100 ml/min (with 50ml unit)
Filling speed:	min. 20 to 999 sec adjustable (time according to the cylinder volume)
Exchangeable units:	5, 10, 20 ml or 50 ml exchangeable units with reagent recognition
Burette resolution:	10000
Dosing accuracy:	systematic error 0.15 %, random error 0.05 % in compliance with EN ISO 8655-6
Netzanschluss:	100-240 V; 50/60 Hz
Conformity:	ISO 8655, part 6
CE-mark:	EMC: 2004/108/EG; safety EG- Directive 2006/95

Type	Description	PK	Cat. No.
T 500	Basic unit	1	9.863 210
T 500-M1	With magnetic stirrer	1	9.863 211
T 500-M2/20	With magnetic stirrer and 20 ml exchangeable unit	1	9.863 212

Accessories for TITRONIC® 500 and TitroLine® 7000

SI Analytics

Type	Description	PK	Cat. No.
TM 235	Magnetic stirrer	1	9.863 154
WA 05	5 ml exchangeable unit, complete	1	9.863 155
WA 10	10 ml exchangeable unit, complete	1	9.863 156
WA 20	20 ml exchangeable unit, complete	1	9.863 157
WA 50	50 ml exchangeable unit, complete	1	9.863 158
TZ 3835	USB keyboard	1	9.863 159

We can supply this
manufacturer's
whole
product range !



SI Analytics

8. Liquid Handling Titration/Digital burettes

1 Automatic Titrators TitroLine® 5000

1

Very compact new titrator for simple routine titrations. Thanks to the standard methods the creating of methods is no longer required. Just load the method and press the start button. GLP compliant results with titration curve can be documented on a connected printer or USB-memory stick.

SI Analytics

- Following titration modes are possible:
- Titrations to pH, mV and μ A endpoint (2 EP)
- Titrations to one equivalence point (pH und mV) with dynamic or linear titration addition
- Manual titrations with the controller
- Dosing tasks
- Number of methods: 5

Typical applications for the TitroLine® 5000 are:

- Salt content in foodstuffs (cheese, soy sauce, ketchup)
- Total acidity in wine and beverages
- Nitrogen according to Kjeldahl
- Chloride in drinking water and other samples
- Alkalinity (p + m-value)
- FOS/TAC



Supplied with:

TL 5000/20 M1: Basic unit without electrode, with ready to use assembled 20 ml dosing unit TZ 3130 with hoses, fittings and titration tip, controller TZ 3880, titration clamp Z 305, stand rod TZ 1748 magnetic stirrer TM 50 and power supply 100-240 V

TL 5000/50 M1: as TL 5000/20 M1, only with ready to use assembled 50 ml dosing unit TZ 3160

TL 5000/20 M2: as TL 5000/20 M1, additionally with pH combination electrode and buffer set

TL 5000/50 M2: as TL 5000/20 M2, only with ready to use assembled 50 ml dosing unit TZ 3160

TL 5000/20 M3: as TL 5000/20 M1 additionally with Ag electrode and electrode cable

Specifications

Measuring input electrode	pH/mV-input with DIN or BNC socket
Measuring input Pt 1000:	Temperature sensor connection for resistance probes Pt 1000 (socket: 2 x 4 mm)
Interfaces:	1 x USB A und 1 x USB-B 2 x RS-232-C
Stirrer connection:	TM 50 power supply directly through piston burette
Keyboard:	The unit is operated using the keys on the device itself, the controller TZ 3880 and optional PC-keyboard (USB)
Display:	graphics-capable TFT display
Dosing units:	20 ml or 50 ml dosing unit, interchangeable
Burette resolution:	8000
Dosing accuracy:	systematic error 0.15 %, random error 0.05 % in compliance with EN ISO 8655-6
Supply requirements:	230V, 50/60Hz
Conformity:	ISO 8655, part 6
CE-mark:	EMC: 2004/108/EG; safety EG- Directive 2006/95

Type	PK	Cat. No.
TL 5000/20 M1	1	9.863 184
TL 5000/50 M1	1	9.863 185
TL 5000/20 M2	1	9.863 186
TL 5000/50 M2	1	9.863 187
TL 5000/20 M3	1	9.863 191

Accessories for Titronic® 300 and TitroLine® 5000

SI Analytics

Type	Description	PK	Cat. No.
TM 50	Magnetic stirrer	1	9.863 188
TZ 3835	USB keyboard	1	9.863 159
TZ 3830	USB-HUB	1	9.863 189
TZ3803	Reagent bottle brown, 1 Litre	1	9.863 190

8. Liquid Handling Titration/Digital burettes

GENERAL CATALOGUE EDITION 20

1



1 Automatic Titrators, TitroLine® 7000

Compact titrator with intelligent exchangeable units with automatic recognition of unit size and reagent data. Thanks to the modern USB- and additional RS232 interfaces, connection of printer, balance and further accessories are possible at the same time. The brilliant, very high-contrast TFT-display allows the easy parameterisation and tracking of the titration curve. *SI Analytics*

Supplied with:

TL 7000-M1/10: basic unit with magnetic stirrer TM 235 and 10 ml exchangeable unit WA 10, incl. amber glass bottle for titration reagent, GL 45 and S 40-bottle adapter, tubes, drip off tube and titration tip.

TL 7000-M1/20: basic unit with magnetic stirrer TM 235 and 20 ml exchangeable unit WA 20, incl. amber glass bottle for titration reagent, GL 45 and S 40-bottle adapter, tubes, drip off tube and titration tip.

TL 7000-M1/50: basic unit with magnetic stirrer TM 235 and 50 ml exchangeable unit WA 50, incl. amber glass bottle for titration reagent, GL 45 and S 40-bottle adapter, tubes, drip off tube and titration tip.

TL 7000-M2/20: basic unit with magnetic stirrer TM 235 and 20 ml exchangeable unit WA 20, incl. amber glass bottle for titration reagent, GL 45 and S 40-bottle adapter, tubes, drip off tube and titration tip. With pH-combination electrode IL-pHT-A120MF-DIN-N and buffer set.

Technical specification

Measuring input pH/mV:	pH/mV-input with DIN or BNC socket, TitroLine® 7000 additionally with ID function for automatic detection of electrode
Measuring input Dead Stop:	µA-input for double platinum electrode (socket 2 x 4 mm), pole voltage adjustable for resistance probes Pt 1000 (socket: 2 x 4mm)
Temperature:	
Interfaces:	3x USB (2x USB-A und 1x USB-B), 2x RS-232-C, 1 x LAN
Stirrer connection:	TM 235 or alternative paddle stirrer
Keyboard:	The unit is operated using the keys on the device itself., the controller TZ 3880 and optional PC-keyboard (USB)
Display:	graphics-capable 3.5" TFT display
Exchangeable units:	5, 10, 20 ml or 50 ml exchangeable units with reagent recognition
Burette resolution:	10000
Dosing accuracy:	systematic error 0.15 %, random error 0.05 % in compliance with EN ISO 8655-6
Supply requirements:	100-240 V; 50/60 Hz
Conformity:	ISO 8655, part 6
CE-mark:	EMC: 2004/108/EG; safety EG- Directive 2006/95

Type	Description	PK	Cat. No.
TL 7000-M1/10	With 10 ml exchangeable unit	1	9.863 160
TL 7000-M1/20	With 20 ml exchangeable unit	1	9.863 161
TL 7000-M1/50	With 50 ml exchangeable unit	1	9.863 162
TL 7000-M2/20	With 20 ml exchangeable unit and pH Electrode	1	9.863 163

Accessories for TITRONIC® 500 and TitroLine® 7000

SI Analytics

Type	Description	PK	Cat. No.
TM 235	Magnetic stirrer	1	9.863 154
WA 05	5 ml exchangeable unit, complete	1	9.863 155
WA 10	10 ml exchangeable unit, complete	1	9.863 156
WA 20	20 ml exchangeable unit, complete	1	9.863 157
WA 50	50 ml exchangeable unit, complete	1	9.863 158
TZ 3835	USB keyboard	1	9.863 159

8. Liquid Handling Titration/Digital burettes

KF Titrators TitroLine 7500® KF/TitroLine 7500® KF trace

You can't go wrong with the new TitroLine® KF titrators from SI-Analytix. The TitroLine® 7500 KF is the volumetric generalist for a wide range of use and the TitroLine® 7500 KF trace is the specialist for low water contents. Both new titrators are to be characterized by following features: *SI Analytix*

- Fast, easy and precise
- With standard methods for different applications (titer determination, blank value...)
- High visible full color display, that can be easily viewed from a distance and extreme angles
- Storage of results via USB and LAN port (PDF and CSV -format)
- with online curve
- With intelligent interchangeable modules (only TitroLine® 7500 KF)

Applications TitroLine 7500® KF: KF volumetry, dead-stop-titrations (SO₂, bromine number)

Applications TitroLine 7500® KF trace: KF coulometry, bromine number

Volumetric KF-Titrators supplied with:

TL 7500 KF 05: titrator unit, interchangeable module WA 05, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1770, micro-dual platinum electrode KF 1100 and starter kit, power supply 100-240 V

TL 7500 KF 10: titrator unit, interchangeable module WA 10, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1770, micro-dual platinum electrode KF 1100 and starter kit, power supply 100-240 V

TL 7500 KF 20: titrator unit, interchangeable module WA 20, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1770, micro-dual platinum electrode KF 1100 and starter kit, power supply 100-240 V

Coulometric KF-titrators supplied with:

TL 7500 KF trace M1: titrator unit, generator electrode TZ 1752 without diaphragm, magnetic stirrer TM 235, titration vessel TZ 1751, micro-dual platinum electrode KF 1150

TL 7500 KF trace M2: titrator unit, generator electrode TZ 1752 without diaphragm, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1754, micro-dual platinum electrode KF 1150

TL 7500 KF trace M3: titrator unit, generator electrode TZ 1753 with diaphragm, magnetic stirrer TM 235, titration vessel TZ 1751, micro-dual platinum electrode KF 1150

TL 7500 KF trace M4: titrator unit, generator electrode TZ 1753 with diaphragm, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1754, micro-dual platinum electrode KF 1150

Specifications

Measuring range TitroLine 7500® KF:	10ppm - 100 %
Dosing accuracy:	<0.15 %
Measuring range TitroLine 7500® KF trace:	1 ppm - 5 % (10 µg to 100 mg)
Accuracy:	0.3 % at 1 mg water
Number of user methods:	50
Printer:	HP PCL, Seiko DPU S 445, PDF
Interface:	2 x USB-A, 1 x USB-B, 2 x RS 232
PC Software:	TitriSoft 3.3

Type	PK	Cat. No.
TL 7500 KF 05	1	9.863 170
TL 7500 KF 10	1	6.255 582 1
TL 7500 KF 20	1	9.863 171
TL 7500 KF trace M1	1	9.863 172 2
TL 7500 KF trace M2	1	9.863 173
TL 7500 KF trace M3	1	9.863 174
TL 7500 KF trace M4	1	9.863 175
TL 7500 KF trace M5	1	6.272 220



6.255 582



9.863 172

8. Liquid Handling Titration/Digital burettes

1 Titrators TitroLine 7750®

Titroline® 7750 is the all-rounder for both potentiometric titration and volumetric KF titration. The TitroLine® 7750 combines the features of the potentiometric titrator TitroLine® 7000 and the volumetric Karl Fischer titrator TitroLine® 7500.

SI Analytics

The new TitroLine® 7750 is characterized as follows:

- Highly visible full color display, that can be easily viewed from a distance and extreme angles
- With new interchangeable modules which all relevant reagent and unit data can be stored
- Thanks to the 2 x USB-host, 1 x USB-PC and 2 x RS232 ports, very communicable. Connect for example, USB keyboard, USB printer, barcode reader, USB flash drives, balances, PC und further SI Analytics devices such as piston burettes and sample changers
- Storage of results via USB and LAN port (PDF and CSV -format) including method transfer
- With standard methods for potentiometric and KF titration

Supplied with:

TL 7750: Basic unit without magnetic stirrer, with stand rod TZ 1510, titration clamp Z 305, keyboard TZ 3835 and power supply 100-240 V

TL 7750-M1: as TL 7750, additionally with magnetic stirrer TM 235

TL 7750-TitriSoft: as TL 7750-M1, additionally with TitriSoft 3.0 (TZ 3071)

TL 7750 KF 05: Titrator unit, exchange unit WA 05, TM 235 KF titration stand with integrated stirrer and pump, titration vessel TZ 1770, micro double platinum electrode KF 1100 and starter kit, power supply 100-240 V

TL 7750 KF 10: as TL 7750 KF 05, only with exchange unit WA 10

TL 7750 KF 20: as TL 7750 KF 05, only with exchange unit WA 20

Type	PK	Cat. No.
TL 7750	1	9.863 176
TL 7750-M1	1	6.258 235
TL 7750-TitriSoft	1	9.863 177
TL7750 KF 05	1	9.863 178
TL7750 KF 10	1	7.981 381
TL7750 KF 20	1	9.863 179

2 Titrators TitroLine® 7800

The TitroLine® 7800 is the new all-rounder for potentiometric titration with an additional digital measuring input. That enable for example the connection and use of pH and conductivity sensors at the same time. An additional external conductometer is not required anymore. The TitroLine® 7800 can also be used as volumetric KF titrator.

SI Analytics

The TitroLine® 7800 is to be characterized by following features:

- High visible full color display, that can be easily viewed from a distance and extreme angles
- With intelligent interchangeable modules and storage of all relevant reagent data
- Includes two USB-A, one USB-B, two RS-232 and one LAN port for expansion and connection of devices such as keyboard, printer, barcode reader, memory sticks, balances, PC an further SI Analytics devices
- Storage of results via USB and LAN port (PDF and CSV -format) including method transfer
- With one analogue and one digital measuring input. The digital input allows the connection of digital (IDS) pH and conductivity sensors.
- With standard methods for potentiometric and KF titration

Supplied with: Basic unit with or without magnetic stirrer, with stand rod TZ 1510, titration clamp Z 305, keyboard TZ 3835 and power supply 100-240 V

Type	PK	Cat. No.
TL 7800 (without magnetic stirrer)	1	9.863 168
TL 7800-M1 (with magnetic stirrer)	1	9.863 169

