



GERMANY

LABORATORY TECHNOLOGY®

Buddeberg

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LABORATORY

CATALOGUE

partner of the



Lab Logistics Group

2007/2008



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- Dispensing 662
- Pumps 676
- Volumetric apparatus 691
- Titrating 701





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Experience the BRAND family of quality pipettes and pipette tips!

The Transferpette® pipette family

Simple-to-use electronic pipettes. State-of-the-Art mechanical pipettes with central pipetting button or unique, pipetting key on the side. Unsurpassed ease of service and calibration. And dependable PLASTIBRAND® tips and filter tips for excellent results!

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1 Volumetric pipettes, Class B, Soda AR-Glas®.

Silberbrand Eterna. DIN 12690. Graduations and inscriptions in Eterna permanent amber diffusion stain. Adjusted to "Ex".

BRAND

| Capacity ml | Overall length ± 10 mm | Tolerance ± ml | Cat. No. | PK |
|----------------|---------------------------|-------------------|-----------|----|
| 0.5 | 300 | 0.007 | 9.273 001 | 1 |
| 1 | 300 | 0.010 | 9.273 002 | 1 |
| 2 | 330 | 0.015 | 9.273 003 | 1 |
| 3* | 330 | 0.015 | 9.273 005 | 1 |
| 5 | 400 | 0.025 | 9.273 007 | 1 |
| 10 | 440 | 0.030 | 9.273 012 | 1 |
| 15* | 510 | 0.040 | 9.273 013 | 1 |
| 20 | 510 | 0.040 | 9.273 014 | 1 |
| 25 | 520 | 0.040 | 9.273 015 | 1 |
| 50 | 540 | 0.070 | 9.273 018 | 1 |
| 100 | 585 | 0.120 | 9.273 019 | 1 |

* Supplementary to DIN.



2 Volumetric pipettes, class AS, AR- clear soda glass®

Blaubrand®. DIN 12691.

BRAND

Conformity certified. With batch number.

Graduations and inscriptions in highly contrasting blue enamel.

Adjusted to "Ex".

Batch certificate included per standard pack

(up to 2 ml/12 cylinders, from 2.5 ml/6 cylinders per pack).

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

| Capacity ml | Overall length ± 10 mm | Tolerance ± ml | Cat. No. | PK |
|----------------|---------------------------|-------------------|-----------|----|
| 0.5 | 300 | 0.005 | 9.273 101 | 1 |
| 1 | 300 | 0.007 | 9.273 102 | 1 |
| 2 | 330 | 0.010 | 9.273 103 | 1 |
| 2.5* | 330 | 0.010 | 9.273 104 | 1 |
| 3* | 330 | 0.010 | 9.273 105 | 1 |
| 4* | 400 | 0.015 | 9.273 106 | 1 |
| 5 | 400 | 0.015 | 9.273 107 | 1 |
| 6* | 400 | 0.015 | 9.273 108 | 1 |
| 7* | 400 | 0.015 | 9.273 109 | 1 |
| 8* | 440 | 0.020 | 9.273 110 | 1 |
| 9* | 440 | 0.020 | 9.273 111 | 1 |
| 10 | 440 | 0.020 | 9.273 112 | 1 |
| 15* | 510 | 0.030 | 9.273 113 | 1 |
| 20 | 510 | 0.030 | 9.273 114 | 1 |
| 25 | 520 | 0.030 | 9.273 115 | 1 |
| 30* | 520 | 0.030 | 9.273 116 | 1 |
| 40* | 540 | 0.050 | 9.273 117 | 1 |
| 50 | 540 | 0.050 | 9.273 118 | 1 |
| 100 | 585 | 0.080 | 9.273 119 | 1 |

* Supplementary to DIN.



3 Bulb pipettes, AR-Glas®, class AS, 2 marks

Blaubrand®. Conformity certified. Supplementary to DIN 12691.

BRAND

Adjusted to "Ex".

Graduations and inscriptions in highly contrasting blue enamel.

An excellent combination of resistance and readability.

All Blaubrand® bulb pipettes are delivered with batch number and

one works batch certificate per manufacturer's outer pack.

Also available with individual works, USP or DKD calibration certificate on request.

| Capacity ml | Overall length ± 10 mm | Tolerance ± ml | Cat. No. | PK |
|----------------|---------------------------|-------------------|-----------|----|
| 0.5 | 300 | 0.005 | 9.273 121 | 1 |
| 1.0 | 300 | 0.007 | 9.273 122 | 1 |
| 2.0 | 330 | 0.010 | 9.273 123 | 1 |
| 3.0 | 330 | 0.010 | 9.273 125 | 1 |
| 5.0 | 400 | 0.015 | 9.273 127 | 1 |
| 10.0 | 440 | 0.020 | 9.273 132 | 1 |
| 15.0 | 510 | 0.030 | 9.273 133 | 1 |
| 20.0 | 510 | 0.030 | 9.273 134 | 1 |
| 25.0 | 520 | 0.030 | 9.273 135 | 1 |
| 50.0 | 540 | 0.050 | 9.273 138 | 1 |

1 Bulb pipettes, AR-Glas®, class AS, 1 mark

Blaubrand® Eterna. DIN 12691. Calibrated to deliver (TD, Ex).

BRAND

Graduations and inscriptions in Eterna amber stain (particularly resistant to aggressive cleaning methods).

All Blaubrand® bulb pipettes are supplied with a batch number and one batch certificate per manufacturer's outer pack.

Also available with an individual works, USP, or DKD calibration certificate on request.

| Capacity ml | Overall length ± 10 mm | Tolerance ± ml | Cat. No. | PK |
|----------------|---------------------------|-------------------|-----------|----|
| 1 | 300 | 0.007 | 9.273 220 | 1 |
| 2 | 330 | 0.010 | 9.273 221 | 1 |
| 5 | 400 | 0.015 | 9.273 222 | 1 |
| 10 | 440 | 0.020 | 9.273 223 | 1 |
| 20 | 510 | 0.030 | 9.273 224 | 1 |
| 25 | 520 | 0.030 | 9.273 225 | 1 |
| 50 | 540 | 0.050 | 9.273 226 | 1 |



2 Volumetric pipettes, AR® glass, AS class

Conformity-certified. With batch date identification. DIN 12691.

Hirschmann

Calibrated to deliver (Ex). Ring mark and inscriptions in permanent blue enamel.

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

| Capacity ml | Tolerance ± ml | Overall length ± 10 mm | Cat. No. | PK |
|----------------|-------------------|---------------------------|-----------|----|
| 1.0 | 0.007 | 300 | 9.273 270 | 1 |
| 2.0 | 0.010 | 330 | 9.273 271 | 1 |
| 2.5* | 0.010 | 350 | 9.273 272 | 1 |
| 3.0* | 0.010 | 350 | 9.273 273 | 1 |
| 5.0 | 0.015 | 400 | 9.273 276 | 1 |
| 10.0 | 0.020 | 440 | 9.273 280 | 1 |
| 15.0* | 0.030 | 510 | 9.273 281 | 1 |
| 20.0 | 0.030 | 510 | 9.273 282 | 1 |
| 25.0 | 0.030 | 520 | 9.273 284 | 1 |
| 50.0 | 0.050 | 540 | 9.273 286 | 1 |
| 100.0 | 0.080 | 585 | 9.273 288 | 1 |

* Supplementary to DIN.

Also available with dated batch identification acc. to USP (US Pharmacopeia)



3 Volumetric pipettes, AR-clear soda glass

Error limits better than class B, one mark, graduated in amber and adjusted to Ex, DIN 12690.

Hirschmann

| Capacity ml | Tolerance ± ml | Overall length ± 10 mm | Cat. No. | PK |
|----------------|-------------------|---------------------------|-----------|----|
| 0.5 | 0.0075 | 300 | 9.273 258 | 1 |
| 1 | 0.0105 | 300 | 9.273 259 | 1 |
| 2 | 0.015 | 330 | 9.273 260 | 1 |
| 3 * | 0.015 | 350 | 9.273 261 | 1 |
| 4 | 0.023 | 400 | 9.273 257 | 1 |
| 5 | 0.023 | 400 | 9.273 262 | 1 |
| 10 | 0.03 | 440 | 9.273 263 | 1 |
| 15 * | 0.045 | 510 | 9.273 264 | 1 |
| 20 | 0.045 | 510 | 9.273 265 | 1 |
| 25 | 0.045 | 520 | 9.273 266 | 1 |
| 50 | 0.075 | 540 | 9.273 268 | 1 |
| 100 | 0.12 | 585 | 9.273 269 | 1 |

*Supplementary to DIN



4 Volumetric pipettes, Plastibrand®, PP

Highly translucent. Streak-resistant, blue-printed graduations and inscriptions.

BRAND

Adjusted to "Ex". Exposure to temperatures up to 60°C will not affect tolerances.

Cleaning at temperatures below 60°C is recommended to preserve graduations and inscriptions.

| Capacity ml | Overall length ± 10 mm | Tolerance ± µl | Cat. No. | PK |
|----------------|---------------------------|-------------------|-----------|----|
| 1 | 300 | 20 | 9.273 232 | 1 |
| 2 | 300 | 20 | 9.273 233 | 1 |
| 5 | 300 | 30 | 9.273 235 | 1 |
| 10 | 440 | 40 | 9.273 236 | 1 |
| 25 | 450 | 50 | 9.273 238 | 1 |
| 50 | 460 | 100 | 9.273 239 | 1 |





1 Graduated pipettes, Class B, AR- clear soda glass®

Silberbrand Eterna. DIN 12696.

BRAND

Graduations and inscriptions in Eterna permanent amber diffusion stain.

Adjusted to "Ex".

Pipettes over 5 ml capacity have large suction tube suitable for cotton wool plugs.

| Capacity | Grad. | Overall length | Tolerance | Cat. No. | PK |
|----------|-------|----------------|-----------|-----------|----|
| ml | ml | ± 10 mm | ± ml | | |
| 1 | 0.01 | 360 | 0.010 | 9.272 070 | 1 |
| 1 | 0.01 | 360 | 0.010 | 9.272 086 | 1 |
| 1* | 0.1 | 360 | 0.010 | 9.272 071 | 1 |
| 2* | 0.01 | 360 | 0.015 | 9.272 072 | 1 |
| 2 | 0.02 | 360 | 0.015 | 9.272 073 | 1 |
| 2 | 0.02 | 360 | 0.015 | 9.272 089 | 1 |
| 2* | 0.1 | 360 | 0.015 | 9.272 074 | 1 |
| 5 | 0.05 | 360 | 0.05 | 9.272 075 | 1 |
| 5* | 0.1 | 360 | 0.05 | 9.272 076 | 1 |
| 10 | 0.1 | 360 | 0.08 | 9.272 077 | 1 |
| 20* | 0.1 | 360 | 0.150 | 9.272 078 | 1 |
| 25* | 0.1 | 450 | 0.150 | 9.272 079 | 1 |

* Supplementary to DIN.



2 Graduated pipettes, Class AS, AR-Glas®

Blaubrand®. DIN 12697. Supplied with conformity certificate with batch number.

BRAND

Delivery to tip. Graduations and inscriptions in high contrast, blue enamel.

Adjusted to "Ex".

Sizes 5 ml and above have a neck constriction to take a cotton wool plug.

one batch certificate included per standard pack

(up to 2 ml: 12 cylinders, from 2.5 ml: 6 cylinders per pack).

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

| Capacity | Grad. | Overall length | Tolerance | Cat. No. | PK |
|------------------|-------|----------------|-----------|-----------|----|
| ml | ml | ± 10 mm | ± ml | | |
| 0.5 | 0.01 | 360 | 0.005 | 9.272 105 | 1 |
| 1 | 0.01 | 360 | 0.007 | 9.272 106 | 1 |
| 1* | 0.1 | 360 | 0.007 | 9.272 107 | 1 |
| 2** | 0.01 | 360 | 0.010 | 9.272 108 | 1 |
| 2 | 0.02 | 360 | 0.010 | 9.272 109 | 1 |
| 2* | 0.1 | 360 | 0.010 | 9.272 110 | 1 |
| 5 ^c | 0.05 | 360 | 0.030 | 9.272 111 | 1 |
| 5* ^c | 0.1 | 360 | 0.030 | 9.272 112 | 1 |
| 10 ^c | 0.1 | 360 | 0.05 | 9.272 113 | 1 |
| 20* ^c | 0.1 | 360 | 0.10 | 9.272 114 | 1 |
| 1 ^c | 0.01 | 450 | 0.10 | 9.272 117 | 1 |
| 25 ^c | 0.1 | 450 | 0.20 | 9.272 115 | 1 |
| 50* ^c | 0.5 | 450 | 0.007 | 9.272 116 | 1 |

* Supplementary to DIN 12699.

** Supplementary to DIN 12699, not conformity certified.

^c Cotton plugged



3 Graduated pipettes, Plastibrand®, PP

Highly transparent. Streak resistant. With blue graduations and markings.

BRAND

Particularly suitable for education and for applications where glass pipettes should not be used.

Calibrated for delivery (Ex).

Exposure to temperatures up to 60°C will not cause permanent exceeding of tolerance limits.

Cleaning below 60°C is recommended to preserve graduations and inscriptions.

| Capacity | Graduations | Overall length | Tolerance | Cat. No. | PK |
|----------|-------------|----------------|-----------|-----------|----|
| ml | ml | ± 10 mm | ± µl | | |
| 1 | 0.1 | 300 | 20 | 9.272 507 | 1 |
| 2 | 0.1 | 300 | 20 | 9.272 510 | 1 |
| 5 | 0.1 | 330 | 50 | 9.272 512 | 1 |
| 10 | 0.1 | 330 | 100 | 9.272 513 | 1 |

1 Graduated pipettes, Blaubrand®, partial delivery

AR-Glas®. To DIN 12697.

BRAND

Calibrated to deliver (TD, Ex).

All Blaubrand® graduated pipettes are delivered with batch number and one batch certificate per manufacturer's outer pack.

Also available with individual works, USP, or DKD calibration certificate on request.

| Capacity | Graduations | Overall length | Tolerance | Suitable for cotton plugs | Cat. No. | PK |
|----------|-------------|----------------|-----------|---------------------------|-----------|----|
| ml | ml | ± 10 mm | ± ml | | | |
| 0.5 | 0.01 | 360 | 0.005 | no | 9.272 121 | 1 |
| 1 | 0.01 | 360 | 0.007 | no | 9.272 122 | 1 |
| 2* | 0.01 | 360 | 0.010 | no | 9.272 124 | 1 |
| 2 | 0.02 | 360 | 0.010 | no | 9.272 125 | 1 |
| 5 | 0.05 | 360 | 0.030 | yes | 9.272 127 | 1 |
| 10 | 0.1 | 360 | 0.050 | yes | 9.272 129 | 1 |
| 25 | 0.1 | 450 | 0.100 | yes | 9.272 131 | 1 |

* in completion to DIN, not with conformity certificate



2 Graduated pipettes, Blaubrand®, class A, conformity certified

AR-Glas®. In addition to DIN 12689. Length 360 mm.

BRAND

Calibrated to contain (TC, In).

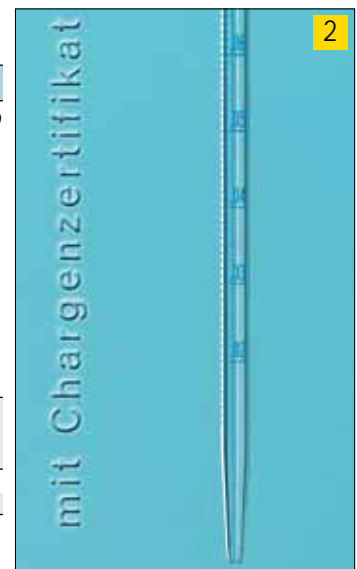
Graduations and inscriptions in highly contrasting blue enamel.

An excellent combination of resistance and readability.

All Blaubrand® bulb pipettes are supplied with batch number and one batch works certificate per pack unit.

Individual works, USP or DKD calibration certificates are available - details on request.

| Capacity | Graduations | Overall length | Tolerance | Cat. No. | PK |
|----------|-------------|----------------|-----------|-----------|----|
| ml | ml | ± 10 mm | ± ml | | |
| 0.1 | 0.001 | 360 | 0.001 | 9.272 102 | 1 |
| 0.2 | 0.002 | 360 | 0.002 | 9.272 104 | 1 |



3 Graduated pipettes, AR clear soda glass

With tolerances better than class B, zero at top, graduated down to tip, with permanent amber graduations, adjusted to Ex, DIN 12690.

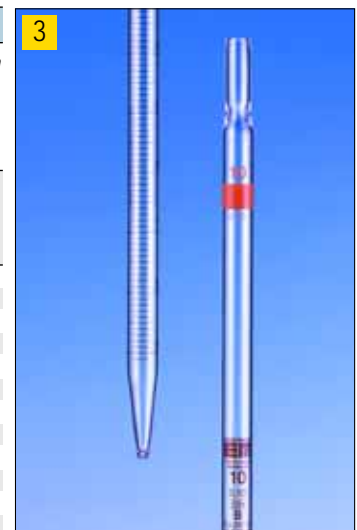
Hirschmann

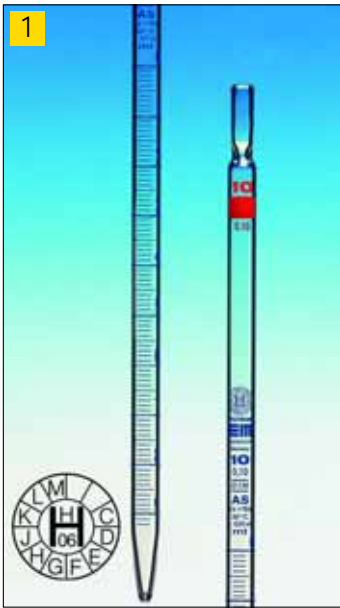
Pipettes over 5 ml capacity have a large suction tube suitable for cotton wool plugs.

| Capacity | Grad. | Tolerance | Overall length | Cat. No. | PK |
|----------|-------|-----------|----------------|-----------|----|
| ml | ml | ± ml | ± 5 mm | | |
| 0.5 * | 0.01 | 0.0075 | 360 | 9.272 366 | 1 |
| 1 | 0.01 | 0.01 | 360 | 9.272 367 | 1 |
| 1 * | 0.1 | 0.01 | 360 | 9.272 368 | 1 |
| 2 * | 0.01 | 0.015 | 360 | 9.272 376 | 1 |
| 2 | 0.02 | 0.015 | 360 | 9.272 369 | 1 |
| 2 * | 0.1 | 0.015 | 360 | 9.272 370 | 1 |
| 5 | 0.05 | 0.045 | 360 | 9.272 371 | 1 |
| 5 * | 0.1 | 0.045 | 360 | 9.272 372 | 1 |
| 10 | 0.1 | 0.075 | 360 | 9.272 373 | 1 |
| 20 * | 0.1 | 0.15 | 360 | 9.272 374 | 1 |
| 25 * | 0.1 | 0.15 | 450 | 9.272 375 | 1 |
| 50 * | 0.2 | 0.2 | 450 | 9.272 377 | 1 |

* Supplementary to DIN

Also available with dated batch identification acc. to USP (US Pharmacopeia)





1 Graduated pipettes, AR glass®, AS class

Conformity-certified.
With batch date identification.
DIN 12697.
Calibrated for delivery (Ex), with ring marks and graduations in permanent blue enamel.
Graduated down to tip.
The batch certificate is available to download from the supplier's website.

Hirschmann

| Capacity ml | Grad. ml | Tolerance ± ml | Overall length ± 5 mm | Cat. No. | PK |
|----------------|-------------|-------------------|-----------------------------|-----------|----|
| 0.5 | 0.01 | 0.005 | 360 | 9.272 380 | 1 |
| 1.0 | 0.01 | 0.007 | 360 | 9.272 381 | 1 |
| 1.0** | 0.10 | 0.007 | 360 | 9.272 382 | 1 |
| 2.0* | 0.01 | 0.010 | 360 | 9.272 383 | 1 |
| 2.0 | 0.02 | 0.010 | 360 | 9.272 384 | 1 |
| 2.0** | 0.10 | 0.010 | 360 | 9.272 385 | 1 |
| 5.0 | 0.05 | 0.030 | 360 | 9.272 387 | 1 |
| 5.0** | 0.10 | 0.030 | 360 | 9.272 388 | 1 |
| 10.0 | 0.10 | 0.050 | 360 | 9.272 389 | 1 |
| 20.0** | 0.10 | 0.100 | 360 | 9.272 390 | 1 |
| 25.0 | 0.10 | 0.100 | 450 | 9.272 391 | 1 |
| 50.0** | 0.20 | 0.200 | 450 | 9.272 392 | 1 |

* Supplementary to DIN, not conformity certified.

**Supplementary to DIN.

Also available with dated batch identification acc. to USP (US Pharmacopelia)



2 Graduated pipettes, soda AR-Glas, class A

Fortuna®.
With permanent, blue-enameled graduations.
With interchangeable suction pistons (except 100 ml size).

Poulten & Graf

| Capacity ml | Grad. ml | Cat. No. | PK |
|----------------|-------------|-----------|----|
| 1 | 0.01 | 9.273 301 | 1 |
| 2 | 0.02 | 9.273 302 | 1 |
| 5 | 0.05 | 9.273 305 | 1 |
| 10 | 0.1 | 9.273 310 | 1 |
| 20 | 0.1 | 9.273 320 | 1 |
| 25 | 0.1 | 9.273 325 | 1 |
| 50 | 0.2 | 9.273 350 | 1 |
| 100 | 1.0 | 9.273 399 | 1 |



3 Volumetric pipettes, AR-glass, class A accuracy

Fortuna®. With permanent amber graduation and inscriptions.
With interchangeable suction piston.
Note: Discharge times are shown on the pipette!

Poulten & Graf

| Capacity ml | Cat. No. | PK |
|----------------|-----------|----|
| 1 | 9.273 401 | 1 |
| 2 | 9.273 402 | 1 |
| 5 | 9.273 405 | 1 |
| 10 | 9.273 410 | 1 |
| 20 | 9.273 420 | 1 |
| 25 | 9.273 425 | 1 |
| 50 | 9.273 450 | 1 |
| 100 | 9.273 499 | 1 |

1 Pipettes, Enzymatic test, graduated, Class AS, AR-Glas®

BRAND

Blaubrand® Eterna. DIN 12699.
Conformity certified, with batch number. For partial delivery (not graduated to tip).
Graduations and inscriptions in Eterna permanent amber diffusion stain.
Adjusted to "Ex".
Pipettes over 5ml capacity have large suction tube suitable for cotton wool plugs.
Batch certificate included per standard pack
(up to 2 ml/12 cylinders, from 2.5 ml/6 cylinders per pack).
The batch certificate is available to download from the supplier's website.

| Capacity | Grad. | Tolerance | Cat. No. | PK |
|----------|-------|-----------|-----------|----|
| ml | ml | ± ml | | |
| 0.5* | 0.01 | 0.005 | 9.272 421 | 1 |
| 1.0 | 0.01 | 0.007 | 9.272 422 | 1 |
| 2.0** | 0.01 | 0.01 | 9.272 424 | 1 |
| 2.0 | 0.02 | 0.01 | 9.272 425 | 1 |
| 5.0 | 0.05 | 0.03 | 9.272 427 | 1 |
| 10.0 | 0.1 | 0.05 | 9.272 429 | 1 |

* Supplementary to DIN 12699.
**Supplementary to DIN 12699, not conformity certified.

2 Pasteur pipettes, glass

Single use. With uniform shape and length. With long drawn, 1.1 mm diameter fine tip,
20mm suction tube and constriction for tight fitting of cotton wool plugs.
External diameter: 7.1 mm.

| Length | Cat. No. | PK |
|--------|-----------|------|
| mm | | |
| 150 | 9.411 015 | 1000 |
| 230 | 9.411 020 | 1000 |

3 Pipettes, Pasteur , plastic

Disposable. PE. Graduated.
The micro pipette has a capillary suction tip.
Ideal for daily use.

| Type | Length mm | Capacity ml | Cat. No. | PK |
|------------------------------------|-----------|-------------|-----------|-----|
| standard, grad., non-sterile | 155 | 1.0 | 9.411 031 | 500 |
| micro, without grad., non-sterile* | 150 | 3.0 | 9.411 032 | 500 |
| macro, grad., non-sterile | 155 | 3.0 | 9.411 030 | 500 |
| standard, grad., non-sterile | 170 | 10.0 | 9.411 033 | 200 |
| standard, without grad., sterile* | 150 | 1.0 | 9.411 038 | 500 |
| capillary, without grad., sterile* | 144 | 1.0 | 9.411 039 | 500 |
| macro, grad., sterile | 150 | 3.0 | 9.411 035 | 500 |

* total volume

4 Disposable pipettes, plastic

High-quality polystyrene. Sterile.
Colour coded according to ISO requirements:

| Capacity | Grad. | Negative graduations | Cat. No. | PK |
|----------|-------|----------------------|-----------|------|
| ml | ml | up to | | |
| 1* | 1/100 | 0.2 | 9.380 123 | 1000 |
| 1 | 1/100 | 0.2 | 9.380 125 | 1000 |
| 5* | 1/10 | 2.0 | 9.380 131 | 200 |
| 5 | 1/10 | 2.0 | 9.380 133 | 200 |
| 10* | 1/10 | 3.0 | 9.380 135 | 500 |
| 10 | 1/10 | 3.0 | 9.380 137 | 500 |
| 25* | 1/5 | 10.0 | 9.380 139 | 200 |

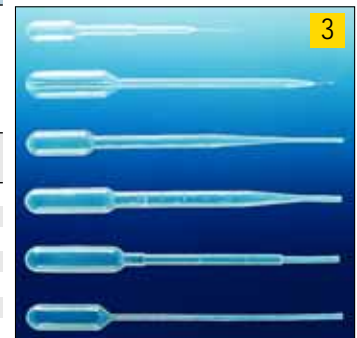
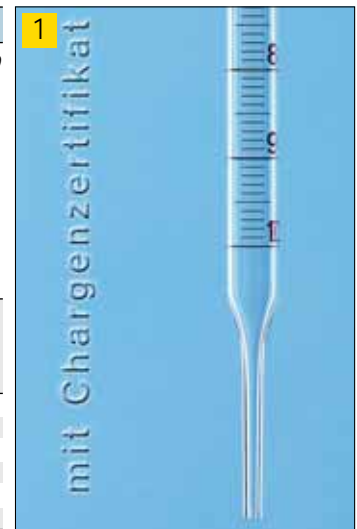
* sterile, individually packed

5 Demeter pipettes

Hirschmann

AR - Glass.
high-contrast, blue graduated, Length approx. 250 mm,
calibrated on Ex,
according to DIN 12838 + 12839.

| Marks at | Cat. No. | PK |
|--------------------|-----------|----|
| ml | | |
| 1.0, 1.1 | 9.273 294 | 1 |
| 1.0, 2.0, 2.1, 2.2 | 9.273 295 | 1 |





1 Pipettes, plastic, disposable, serological

These serological pipettes from Ratiolab were specially designed for cell culture.

The special colour-coded system makes it easy to identify the size of the pipette in use.

The pipettes are made from high-grade polystyrene and have the following features:

- Guaranteed sterile (gamma irradiated)
- Guaranteed non-pyrogenic
- Guaranteed non-cytotoxic
- Guaranteed non-haemolytic
- Cotton plugged and colour coded
- Larger capacity through extra graduations
- 5 ml, 10 ml and 25 ml pipettes are graduated with bi-directional secondary scale, enabling easier reading.
- Secure and easy-to-open 'tear off' packaging.

| Capacity ml | Colour | Grad. ml | Negative graduations up to | Cat. No. | PK |
|----------------|--------|-------------|----------------------------------|-----------|-----|
| 1 | Yellow | 1/100 | 0.3 ml | 9.380 431 | 500 |
| 2 | Green | 1/50 | 0.4 ml | 9.380 432 | 500 |
| 5 | Blue | 1/10 | 3.0 ml | 9.380 433 | 250 |
| 10 | Orange | 1/10 | 3.0 ml | 9.380 434 | 200 |
| 25 | Red | 1/5 | 10.0 ml | 9.380 435 | 100 |



2 Blood diluting pipettes

Thoma pattern. DIN 12 750. Officially certified.

Hirschmann

| For | Marks at µl | Dilution | Cat. No. | PK |
|--------------|-------------------|----------|-----------|----|
| Erythrocytes | 0.5 | 1:100 | 9.286 400 | 1 |
| Leucocytes | 0.5 | 1:10 | 9.286 410 | 1 |

3 Disposable micropipettes, without ring mark, intraEND

Blaubrand®. DIN ISO 7550.

BRAND

Conformity-certified from 5 µl in accordance with German Weights and Measures

Regulations. Calibrated to contain (In)

Accuracy: $\leq \pm 0.5\%$

Precision: $\leq 1.0\%$

(Capacity 1 µl: Precision $\leq 1.5\%$)

(Capacity 100 µl: Precision $\leq 2\%$)

CE-marked according to IVD 98/79 EG.

| Capacity µl | Length mm | Cat. No. | PK |
|----------------|--------------|-----------|-----|
| 1 | 29 | 9.411 401 | 250 |
| 2 | 29 | 9.411 403 | 250 |
| 3 | 29 | 9.411 405 | 250 |
| 5 | 29 | 9.411 407 | 250 |
| 10 | 29 | 9.411 409 | 250 |
| 20 | 29 | 9.411 418 | 250 |
| 25 | 29 | 9.411 422 | 250 |
| 50 | 29 | 9.411 433 | 250 |
| 100 | 60 | 9.411 444 | 250 |



4 Disposable micropipettes ring marked, intraMARK

Blaubrand®. DIN ISO 7550.

BRAND

Conformity-certified from 5 µl upwards, in accordance with German Weights and

Measures Regulations. Calibrated to contain (In). Length 125 mm.

Colour code according to ISO for clear identification.

Accuracy $\leq \pm 0.25\%$

Precision $\leq 0.5\%$

(Capacity 5 µl: Accuracy $\leq \pm 0.3\%$, precision $\leq 0.6\%$)

CE-marked according to IVD 98/79 EG.

| Marks at µl | Colour | Cat. No. | PK |
|-------------------|--------|-----------|-----|
| 1/2/3/4/5* | White | 9.411 307 | 250 |
| 10 | Orange | 9.411 309 | 250 |
| 20 | Black | 9.411 318 | 250 |
| 50 | Green | 9.411 333 | 250 |
| 100 | Blue | 9.411 344 | 250 |
| 50 + 100 | Blue | 9.411 345 | 250 |
| 200 | Red | 9.411 357 | 250 |

* Conformity-certified for 5 µl division only.

1 Pipetting aid, intraEnd

For Blaubrand® intraEnd micropipettes.
Consists of glass tube, rubber adapter and rubber teat with vent hole.

BRAND

| Type | Cat. No. | PK |
|-------------------------|-----------|----|
| Pipetting aid, intraEnd | 9.411 440 | 10 |



2 Disposable micropipettes, delbrück pattern, intraEND

Blaubrand®. DIN ISO 7550.
Conformity-certified. Volume defined by end-to-end filling. Calibrated to contain (In). Sodium heparinised. Ideal for blood capillary sampling. With a length of only 30 mm the pipette can be placed directly into the microcentrifuge tube where it will release the sample during centrifugation.
CE-marked according to IVD directive 98/79 EC.
Accuracy: ≤ ±0.5 %.
Precision: ≤ 1 %.

BRAND

| Capacity µl | Length mm | Cat. No. | PK |
|----------------|--------------|-----------|-----|
| 20 | 30.0 | 9.411 242 | 100 |
| 50 | 30.0 | 9.411 246 | 100 |



3 Pipette holders

For Delbrück and intraEND micropipettes.

BRAND

| Type | Cat. No. | PK |
|-----------------|-----------|----|
| Pipette holders | 9.411 260 | 1 |



4 Capillary pipettes, ringcaps®

Disposable capillary pipettes with ring marks.
ringcaps® are exclusively made out of Schott Duran® glass (CE marked, ISO 7550).
The accurately designed ring mark guarantees precise determination of volume,
the international colour code on every single micropipette prevents the risk of confusion.

Hirschmann

Advantages:

- No risk of cross contamination owing to single use
- Duran glass
- Handy length of 125 mm
- Conformity certified in accordance with the applicable weights and measures regulations

| Type | Capacity µl | Cat. No. | PK |
|---------|-------------------|-----------|-----|
| 5 marks | 1 + 2 + 3 + 4 + 5 | 9.600 105 | 250 |
| 1 mark | 10 | 9.600 110 | 250 |
| 1 mark | 20 | 9.600 120 | 250 |
| 1 mark | 25 | 9.600 125 | 250 |
| 1 mark | 40 | 9.600 140 | 250 |
| 1 mark | 44.7 | 9.600 144 | 250 |
| 1 mark | 50 | 9.600 150 | 250 |
| 1 mark | 100 | 9.600 199 | 250 |
| 1 mark | 200 | 9.600 122 | 100 |
| 2 marks | 5 + 10 | 9.600 210 | 250 |
| 2 marks | 20 + 40 | 9.600 240 | 250 |
| 2 marks | 50 + 100 | 9.600 299 | 250 |
| 2 marks | 100 + 200 | 9.600 222 | 100 |
| 1 mark | 44.7 Na-hep. | 9.602 144 | 250 |





1 Capillary pipettes, Minicaps

Minicaps, with volume defined by end-to-end filling. Duran glass.
Conformity certified ISO 7550, with batch number on the packaging. Non-heparinised.

Hirschmann

Advantages:

- Error-free filling
 - Only 30 to 32mm long
 - Easy-to-remove, colour-coded dispenser cap
 - Conformity certified in accordance with the applicable weights and measures regulations
- Supplied in drums of 100 in an outer pack of 1000.



| Capacity µl | Cat. No. | PK |
|----------------|-----------|-----|
| 0.5 | 9.411 265 | 100 |
| 1 | 9.411 266 | 100 |
| 2 | 9.411 267 | 100 |
| 3 | 9.411 268 | 100 |
| 3.33 | 9.411 269 | 100 |
| 4 | 9.411 270 | 100 |
| 5 | 9.411 271 | 100 |
| 6.66 | 9.411 272 | 100 |
| 10 | 9.411 273 | 100 |
| 20 | 9.411 274 | 100 |
| 25 | 9.411 275 | 100 |
| 30 | 9.411 276 | 100 |
| 40 | 9.411 277 | 100 |
| 44.7 | 9.411 278 | 100 |
| 50 | 9.411 279 | 100 |
| 100 | 9.411 280 | 100 |

2 Micro-haematocrit capillary tubes

Comply with BS 4316-68 and DIN 12 772 specifications.
For use in microhaematocrit centrifuges. Without calibration marks.
Heparinised.

BRAND

For capillary blood sampling. The entire inner surface is coated with sodium-heparinate. Code: red.

Non-heparinised.

To determine heparinised venous blood. Code: blue.

CE-marked according to IVD 98/79 EG.

Length: 75 mm ± 1 mm
Wall thickness: approx. 0.2 mm
Internal diameter: 1.1 to 1.2 mm
External diameter: 1.5 to 1.6 mm

- CE marked according to IVD 98/79 EG.



| Type | Cat. No. | PK |
|-----------------|-----------|-----|
| Heparinised | 9.411 215 | 100 |
| Non-heparinised | 9.411 220 | 100 |

3 Haematocrit sealing compound

Non-drying vinyl plastic compound on a plastic plate.

BRAND

For the rapid and safe sealing of several hundred micro-haematocrit capillaries.

Pairs of capillaries (48 in total) can be placed upright in the numbered storage places on each side of the plate.

CE marked.

| Type | Cat. No. | PK |
|------------------------------|-----------|----|
| Haematocrit sealing compound | 9.411 240 | 10 |



4 Pipette rack

Plastic. Revolving carousel type. Blue-grey colour.

Wagner & Munz

Holds up to 94 volumetric or graduated pipettes.

Autoclavable to 120°C. Can be dismantled. For all pipette sizes.

| Type | Cat. No. | PK |
|--------------|-----------|----|
| Pipette rack | 9.273 894 | 1 |

5 Pipette storage container

With lid. Base dia. x height: 130 x 430 mm, int. dia.: 83 mm

Kartell

Suitable for dust-proof storage of pipettes up to 400 mm long.

| Type | Cat. No. | PK |
|-----------------------------------|-----------|----|
| With lid (PP container, HDPE lid) | 9.273 900 | 1 |



1 Pipette rinsers

HDPE.
For easy and gentle cleaning of pipettes using the repetitive siphon principle.
The complete rinsing system comprises 1) rinser, 2) soaking jar and 3)

Kartell

| For pipette length mm | Capacity litres | Int. dia. mm | Height mm | Cat. No. | PK |
|-----------------------|-----------------|--------------|-----------|-----------|----|
| 460 | 13 | 150 | 740 | 9.409 238 | 1 |
| 600 | 17 | 150 | 1000 | 9.409 239 | 1 |

2 Pipette soaking jar

HDPE.

Kartell

| For pipette length mm | Int. dia. mm | Cat. No. | PK |
|-----------------------|--------------|-----------|----|
| 250 | 125 | 9.273 928 | 1 |
| 500 | 160 | 9.273 920 | 1 |
| 650 | 160 | 9.273 925 | 1 |

3 Pipette baskets

HDPE. Cylindrical, with handle.

Kartell

| For pipette length mm | Base dia. mm | Height mm | Cat. No. | PK |
|-----------------------|--------------|-----------|-----------|----|
| 360 | 145 | 495 | 9.273 980 | 1 |
| 460 | 145 | 645 | 9.273 985 | 1 |
| 600 | 145 | 870 | 9.273 990 | 1 |

4 Pipette sterilizing boxes, square

Square section. 18/10 stainless steel. Stackable. With silicone pad in base and lid.
Box W x D: 70 x 70 mm. Sterilizable up to 205°C.

Bochem

| Length mm | Effective length mm | Dia. mm | Cat. No. | PK |
|-----------|---------------------|---------|-----------|----|
| 210 | 180 | 70 x 70 | 9.010 781 | 1 |
| 290 | 257 | 70 x 70 | 9.010 782 | 1 |
| 340 | 307 | 70 x 70 | 9.010 783 | 1 |
| 430 | 412 | 70 x 70 | 9.010 784 | 1 |

5 Pipette sterilizing boxes

Cylindrical. 18/10 stainless steel. With silicone pad in base and lid.
Rotating the lid exposes or hides the lid perforations.
Sterilizable up to 205°C.

Bochem

| Dia. mm | Height mm | Cat. No. | PK |
|---------|-----------|-----------|----|
| 65 | 450 | 9.010 793 | 1 |
| 80 | 380 | 9.010 794 | 1 |
| 80 | 500 | 9.010 795 | 1 |

6 Variable pipette boxes, Varicon

Comprising two, overlapping, sliding aluminium sections which can be gently pressed together in a telescopic fashion to fit the length of the pipettes to be sterilized.
This means that only one container size for 280 to 420 mm long standard pipettes (type RS) and one for 145 to 235 mm long short or pasteur pipettes (type RK) are required.
Suitable silicone inserts available.

Schütt

| Type | Variable length mm | Int. dia. mm | Cat. No. | PK |
|------------|--------------------|--------------|-----------|----|
| Varicon RK | 145 to 235 | 60 | 9.010 801 | 1 |
| Varicon RS | 280 to 420 | 60 | 9.010 800 | 1 |





1 Pipette boxes, Specicon/Varicon, accessory Silicone liner

2mm thick silicone rubber pad.
For Varicon RS pipette boxes.
Prevents damage to pipettes when loading and transporting.
Diameter: 58mm. Supplied singly, 2 required per box.

Schütt

| Type | Cat. No. | PK |
|--------------|-----------|----|
| Silicone pad | 9.010 770 | 1 |



2 Pipette boxes, Specicon/Varicon, accessory holders

For holding Specicon, Varicon RS or square pipette boxes.
Handy storage at the workbench for a variety of pipettes.
Stainless steel frame with fixed and angled apertures for holding 4, 6 or 8 round or square pipette boxes.

Schütt

| Type | Width mm | Depth mm | Height mm | Cat. No. | PK |
|-------------|-------------|-------------|--------------|-----------|----|
| Gesticon E4 | 195 | 235 | 229 | 9.010 804 | 1 |
| Gesticon E6 | 195 | 235 | 315 | 9.010 806 | 1 |
| Gesticon E8 | 195 | 235 | 405 | 9.010 807 | 1 |



3 Safety pipette bulb Flip™

Fits virtually all pipette sizes.
Only two valve operation points.
With automatic vent valve that can be removed for cleaning.

| Type | Cat. No. | PK |
|-------|-----------|----|
| Flip™ | 9.273 838 | 1 |

4 Safety bulb pipette fillers

Chemically resistant rubber. With valves for suction, emptying and air release, controlled by thumb and finger pressure.

| Type | Cat. No. | PK |
|------------------------------------|-----------|----|
| Standard, for pipettes up to 10 ml | 9.273 836 | 1 |
| Universal for most pipettes | 9.273 837 | 1 |



Safety pipette bulb Howorka-Ball®

Advantages:

- no rigid connection with the tube
- no valves or side vent tubes
- suitable for all standard tube diameters, including pipettes, burettes, filter tubes etc.
- no unstable air pockets
- long operational life due to durable components
- Easily cleaned and steam sterilized if contaminated with liquids

| Capacity ml | Cat. No. | PK |
|----------------|-----------|----|
| 20 | 9.273 826 | 1 |
| 50 | 9.273 827 | 1 |



5 Pipette bulbs

Rubber. For quick and easy pipetting. Colour coding prevents confusion.

| Capacity ml | Colour | Cat. No. | PK |
|----------------|--------|-----------|----|
| 1 | Green | 9.115 501 | 1 |
| 2 | Grey | 9.115 502 | 1 |
| 5 | Yellow | 9.115 505 | 1 |
| 10 | Blue | 9.115 506 | 1 |
| 15 | Red | 9.115 507 | 1 |

1 Pipette bulb, 'Aspirette'

Patented pipette bulb for safe pipetting of all kinds of liquids.
Easy to use and accurate.
Highly recommended even with critical or aggressive liquids.

| Type | Cat. No. | PK |
|-----------|-----------|----|
| Aspirette | 9.273 870 | 1 |

2 Pipette teats

Transparent. Choice of materials as indicated.

| Type | Cat. No. | PK |
|---------------------------|-----------|----|
| Natural rubber/Latex (NR) | 9.072 681 | 1 |
| Silicone (VMQ) | 9.072 682 | 10 |
| Red (NR/SBR) | 9.072 683 | 1 |

3 Disposable capillary pipettes

Minicaps, with volume defined by end-to-end filling. Duran glass.
Conformity certified, with batch number on the packaging.
Specifically designed for Delbrück methods.
Sodium heparinised.
To DIN-ISO 7550. CE mark conforms with IVD guidelines.

Hirschmann

| Capacity µl | Cat. No. | PK |
|----------------|-----------|-----|
| 5 | 9.411 252 | 100 |
| 10 | 9.411 253 | 100 |
| 20 | 9.411 254 | 100 |
| 25 | 9.411 255 | 100 |
| 40 | 9.411 256 | 100 |
| 45 | 9.411 257 | 100 |
| 50 | 9.411 258 | 100 |

Other sizes on request.

4 Macropipette controllers

For use with volumetric and graduated pipettes from 0.1 to 100 ml.
Unique valve system. Particularly easy to use and lightweight.
With hydrophobic membrane filter to prevent penetration of liquid into the controller body.
The macropipette controller is autoclavable (121°C).

BRAND

| Type | Cat. No. | PK |
|-----------------------------------|-----------|----|
| Macropipette controller, grey | 9.273 867 | 1 |
| Macropipette controller, blue | 9.273 855 | 1 |
| Macropipette controller, magenta | 9.273 856 | 1 |
| Macropipette controller, green | 9.273 858 | 1 |
| Spare hydrophobic membrane filter | 9.273 868 | 1 |
| Valve assembly | 9.273 860 | 1 |
| Spare adapter, silicone | 9.273 861 | 1 |

5 Pipetting Aid Vitlab maneus

- Easy and fatigue-free operation for both left and right-handed users
- An especially designed intake cone allows the use of pipettes from 0.1 ml to 100 ml
- The perfectly balanced valve unit ensures effortless liquid aspiration
- Precise and high sensitive meniscus setting
- A replaceable, hydrophobic membrane filter protects the interior from penetrating liquids
- Completely autoclavable

VITLAB

| Type | Cat. No. | PK |
|-----------------------------|-----------|----|
| Pipetting Aid VITLAB maneus | 9.288 205 | 1 |





1 Micropipette controller

For disposable pipettes with micro ring mark and many other small glass pipettes up to 1 ml. Autoclavable (121°C). The micropipette controller reduces risk of infection.

BRAND

Contaminated disposable micropipettes can be removed using the integral ejection button.

| Type | Cat. No. | PK |
|-------------------------|-----------|----|
| Micropipette controller | 9.288 200 | 1 |
| Spare suction system | 9.288 201 | 3 |



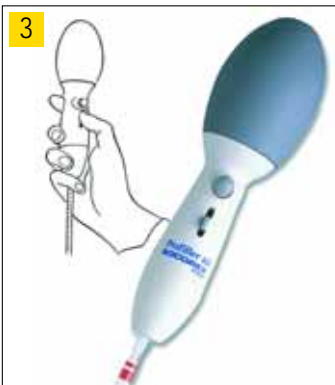
2 Pipette controllers, micro-classic

Specially designed for IVF laboratory applications. Comfortable and reliable.

BRAND

Thanks to its ergonomic design and easy handling, the micro-classic pipette controller provides the comfort needed for difficult work under the microscope. Suitable for disposable micropipettes with ring marks and other microlitre volume pipettes with a capacity up to 1 ml. Suitable for left, or right-handed operation. The adapter and suction tube are autoclavable at 121°C.

| Description | Cat. No. | PK |
|---|-----------|----|
| Micro-classic, complete, with 2 spare tubes | 9.281 080 | 1 |
| Spare adapter with suction tube | 9.281 085 | 3 |



3 Pipette controller, Profiller™ 435

- Simple, one-button, manual operation
- Robust construction
- Pipette adapter protected by membrane filter
- Practically maintenance free
- Ideal for graduated pipettes up to 100 ml

Socorex

| Description | Cat. No. | PK |
|---|-----------|----|
| Manual pipette controller Profiller 435 | 9.411 507 | 1 |
| 0.45 µm protection filter | 9.411 508 | 5 |



4 Pipette controller accu-jet® pro

Superb control, all with one hand! Choose your operating mode: powered blow-out for speed or sensitivity; delivery by gravity for volumetric accuracy.

BRAND

Set the motor speed range suited to the pipette volume: full power for large volumes; lower speed range for small-volume pipettes.

Then, achieve the finest control of filling and delivery by adjusting the pipetting speed as needed without stopping your work; speed is continuously adjustable using button pressure within the selected speed range.

- Exceptionally sensitive meniscus control, even with low-volume pipettes
- Light weight (190 g) and smoothly rounded grip ensure comfort and minimize fatigue
- Securely holds all pipettes from 0.1 to 100 ml
- Active vapour exhaust, check valve and filter help protect instrument from liquids and vapours
- Additional battery compartment cover (included) allows instrument to be inverted on the bench to avoid contamination of the pipette adapter.
- 8 hours of continuous pipetting (with a 10 ml pipette) on each charge; LED low-battery signal; instrument operates during recharge.

Items supplied: accu-jet® pro, incl. wall support, 2 membrane filters 0.2 µm, NiMH battery pack, 2 battery compartment covers, instruction manual and 230V 50Hz charger for continental Europe.

| Description | Cat. No. | PK |
|---------------------------|-----------|----|
| accu-jet® pro, dark blue | 9.281 090 | 1 |
| accu-jet® pro, magenta | 9.281 086 | 1 |
| accu-jet® pro, green | 9.281 087 | 1 |
| accu-jet® pro, royal blue | 9.281 088 | 1 |



5 Accessories for accu-jet® controller

BRAND

| Description | Cat. No. | PK |
|--|-----------|----|
| NiMH-Akku battery charger only | 9.281 096 | 1 |
| Silicone adapter, with non-return valve (PTFE) | 9.281 094 | 1 |
| Membrane filter, 0.2 µm, in blister pack, sterile* | 9.281 092 | 1 |
| Membrane filter, 0.2 µm, in PE bag, non-sterile | 9.281 091 | 10 |
| Membrane filter, 3 µm in blister pack, non-sterile | 9.273 868 | 1 |
| Membrane filter, 3 µm, in PE bag, non-sterile | 9.281 095 | 10 |

* Sterilized with ethylene oxide (ETO), guaranteed SAL of 10⁻⁶.

1 Pipette controllers, pipetus®-standard, -standard-Filter

Classic pipette controller, tried and tested for over 20 years.
Ideal for work in fume cupboards as separate hand and pump modules (230 Volt).
Handle is particularly ergonomic and lightweight.
Can be used with 0.1 to 100 ml pipettes.
Standard delivery (Ex) or Blow-out functions are available.
Pipetting speed can be pre-selected on the pump module.
Pipetting is carried out by simply pressing the in or out buttons.
The amount of pressure exerted determines the ultimate pipetting speed.
Built-in safety valve prevents penetration of liquid into the instrument or the handle
The pipetus®-standard-filter is additionally supplied with an extra large capacity filter mounted on the pump module.

Hirschmann



| Type | Cat. No. | PK |
|--------------------------|-----------|----|
| pipetus®-standard | 9.287 810 | 1 |
| pipetus®-standard-Filter | 9.287 812 | 1 |

2 Pipette controller, pipetus®-junior

Low cost, manual pipetting aid (no mains connection).
Simple, safe and accurate.
For all commercial volumetric and graduated pipettes.
Weighing only 130 g, it ensures comfortable, ergonomic and problem-free pipetting.
Each time the 'pump' button is pressed approximately 2 ml of sample fluid is drawn up.
When the 'out' button is pressed the liquid is gently released via an accurate valve system with the amount of pressure exerted on the Blow-out button determining the speed of release.
Blow-out pipettes can be emptied properly by pressing another button on the back of the unit.
A standard PTFE membrane filter prevents overfilling.

Hirschmann



| Type | Cat. No. | PK |
|-----------------|-----------|----|
| pipetus®-junior | 9.281 100 | 1 |

3 Pipette controller, pipetus®

Safe, handy, mains-independent with no interfering power cable.
Lightweight in spite of sophisticated technology.
Ergonomically designed down to the smallest detail for fatigue-free repetitive pipetting with all pipettes from 0.1 to 200 ml.
The intelligent recharging technology is extremely advantageous and ensures that the pipettor is always ready for use. Also beneficial is the colour display, which shows the operator the pre-selected settings and the battery capacity at a glance.

Hirschmann



- The pipettor has the following features:
- Ergonomic and lightweight (just over 200 g) - Ex/blow-out switching ensures that precise volumes are pipetted from both Ex and blow-out pipettes. 5 pipetting speeds can be pre-selected for quick and fine (drop by drop) pipetting.
 - Ultra-modern charging technology is provided in the inductive charging stand (supplied)
 - Battery capacity is continually monitored via microcontroller, no memory effect - Colour display shows battery capacity, selected speed and Ex or blow-out setting - Unique operating capacity: depending on requirements, up to 1 week continuous power without recharging
 - Fine meniscus adjustment thanks to superior valve technology
 - Safety valve prevents overfilling of pipette ensuring that no liquid enters the instrument
 - Ergonomic outer casing ensures fatigue-free operation

Supplied with:
Charger with plug socket, including inductive charging stand, wall unit and PTFE membrane filter.

| Type | Cat. No. | PK |
|----------|-----------|----|
| pipetus® | 9.283 958 | 1 |



1 Pipette controllers, pipetus®, accessories

Hirschmann

| Type | Cat. No. | PK |
|---|-----------|----|
| Pipet holder, complete | 9.283 970 | 1 |
| Filter disc with one-sided plug-in connection (5 pcs) | 9.283 965 | 5 |
| Spare silicone adapter | 9.283 961 | 1 |
| Spare safety valve | 9.283 962 | 1 |
| Charging set 230 V including inductive charging station | 9.283 966 | 1 |
| Mounting bracket | 9.283 967 | 1 |
| Retainer ring "white" | 9.283 968 | 1 |
| Pipet holder housing | 9.283 969 | 1 |
| Table stand | 9.287 859 | 1 |



The Eppendorf PhysioCareConcept

eppendorf

The Eppendorf PhysioCareConcept is the new standard for integrated liquid handling systems and work procedures. A light and comfortable pipettor is the basis.

However in order to fulfil the quality benchmarks of the Eppendorf PhysioCareConcept, all movement, working processes and the environment of the pipetting procedure, like the selection of the pipettor, tip attachment, minimalisation of operating, as well as tip ejection forces, are also included.

Eppendorf sets new criteria with the PhysioCareConcept for shorter operational sequences and less operator stress, with maximum ergonomics and precision.

The new Eppendorf Research® pipettor family embodies this concept, because all of the relevant aspects around pipetting have been considered.

Applying this liquid handling system immediately optimises use, thus saving time.

The 8 criteria of the Eppendorf PhysioCareConcept

- Integrated systems
- Exceptional durability
- Optimized form and function
- Perfectly balanced
- Intuitive operation
- Minimal user effort
- Simple maintenance
- Comprehensive support



2 Pipettors, air displacement, fixed volume, Reference®,

eppendorf

- With chemical and corrosion resistant, free-running piston
- New, robust material, which is UV-resistant and fully autoclavable without impairing accuracy or precision
- Conformity certified
- 2 year guarantee

Grey control button: for 20 µl, or GELoader tips
 Yellow control button: for 100 µl tips
 Blue control button: for 1000 µl tips
 Red control button: for 2500 µl tips

| Capacity | Control button colour | Cat. No. | PK |
|----------|-----------------------|-----------|----|
| µl | | | |
| 1 | grey | 9.283 280 | 1 |
| 2 | grey | 9.283 281 | 1 |
| 5 | grey | 9.283 282 | 1 |
| 10 | grey | 9.283 283 | 1 |
| 10 | yellow | 9.283 279 | 1 |
| 20 | yellow | 9.283 284 | 1 |
| 25 | yellow | 9.283 285 | 1 |
| 50 | yellow | 9.283 286 | 1 |
| 100 | yellow | 9.283 287 | 1 |
| 200 | blue | 9.283 288 | 1 |
| 250 | blue | 9.283 289 | 1 |
| 500 | blue | 9.283 290 | 1 |
| 1000 | blue | 9.283 291 | 1 |
| 1500 | red | 9.283 292 | 1 |
| 2000 | red | 9.283 293 | 1 |
| 2500 | red | 9.283 294 | 1 |

1 Pipettors, air displacement, variable volume, Reference®

eppendorf

- UV-resistant
- Autoclavable (150 x at 121°C, 20 min)
- Simple maintenance and calibration
- With individual adhesive labels
- Lateral volume setting lock safeguards volume selected
- Each variable Reference contains a service-kit and one epTIPS box with appropriate tips

Anthracite control button anthracite: for 2.5 µl tips
 Grey control button: for 20 µl, or GELoader tips
 Yellow control button: for 100 µl tips and 300 µl
 Blue control button: for 1000 µl tips
 Red control button (not conformity certified): for 2500 µl tips



| Capacity µl | Control button colour | Cat. No. | PK |
|----------------|-----------------------------|-----------|----|
| 0.1 to 2.5 | anthracite | 9.283 295 | 1 |
| 0.5 to 10 | grey | 9.283 296 | 1 |
| 2 to 20 | grey | 9.283 297 | 1 |
| 2 to 20 | yellow | 9.283 303 | 1 |
| 10 to 100 | yellow | 9.283 298 | 1 |
| 50 to 200 | yellow | 9.283 299 | 1 |
| 100 to 1000 | blue | 9.283 300 | 1 |
| 500 to 2500 | red | 9.283 301 | 1 |

2 3 Variable pipettors, epReference³ Pack

eppendorf

Comfortable, highly precision pipetting, is the result of fine tuning between pipettor and pipette tip. Why don't you try the unbeatable combination of Eppendorf Reference® pipettors and new, epTIPS pipette tips yourself?

Your epReference³ Pack contains:

Option 1:

- 3 x Eppendorf Reference® PhysioCareConcept pipettors (0.5 to 10 µl, 10 to 100 µl, 100 to 1000 µl)
- 3 x epTIPS (max. capacity 20 µl, 200 µl, and 1000 µl) in refillable boxes of 96
- 3 pipette holders, 1 x SOP (Standard Operating Procedure) leaflet; 1 x pipettor ball-point pen

Option 2:

- 3 x Eppendorf Reference® PhysioCareConcept pipettors (2 to 20 µl, 20 to 200 µl, 100 to 1000 µl)
- 3 x epTIPS (max. capacity 200 µl and 1000 µl) in refillable boxes of 96
- 3 pipette holders, 1 x SOP (Standard Operating Procedure) leaflet; 1 x pipettor ball-point pen



| Type | Cat. No. | PK |
|---|-----------|----|
| epReference ³ Pack, Option 1 | 9.283 304 | 1 |
| epReference ³ Pack, Option 2 | 9.283 305 | 1 |

4 Pipettors, positive displacement, Biomaster® 4830

eppendorf

Provides contamination free, positive displacement pipetting.

- One-handed tip attachment and removal
- Lateral volume locking
- Ergonomic design
- UV-resistant and autoclavable
- Maintenance free

Biomaster Kit, comprises:

Biomaster pipettor with continuous volume selection in the range of 1 to 20 µl and 1 box of 96 Mastertips

| Type | Cat. No. | PK |
|----------------|-----------|----|
| Biomaster® Kit | 9.283 471 | 1 |



5 Pipette tips, Mastertip®

eppendorf

Ready to use, racked tip boxes. 96 Mastertips in rack.

| Type | Cat. No. | PK |
|------------|-----------|-----|
| Mastertip® | 9.283 472 | 480 |





1 Pipettors, air displacement, fixed volume, Research®

- Robust but lightweight
- Can be recalibrated when working with higher density fluids
- Certified accuracy and precision
- Conformity certificate

eppendorf

| Capacity µl | Control button colour | Cat. No. | PK |
|----------------|-----------------------------|-----------|----|
| 10 | yellow | 9.283 371 | 1 |
| 20 | yellow | 9.283 372 | 1 |
| 25 | yellow | 9.283 373 | 1 |
| 50 | yellow | 9.283 374 | 1 |
| 100 | yellow | 9.283 375 | 1 |
| 200 | blue | 9.283 376 | 1 |
| 250 | blue | 9.283 377 | 1 |
| 500 | blue | 9.283 378 | 1 |
| 1.000 | blue | 9.283 379 | 1 |



2 Pipettors, air displacement, variable volume, Research®

- Robust but lightweight
- Digital volume display with magnifying window
- Certified accuracy and precision
- Conformity-certified

eppendorf

| Capacity µl | Control button colour | Cat. No. | PK |
|----------------|-----------------------------|-----------|----|
| 0.1 to 2.5 | anthracite | 9.283 380 | 1 |
| 0.5 to 10 | grey | 9.283 381 | 1 |
| 2 to 20 | yellow | 9.283 382 | 1 |
| 10 to 100 | yellow | 9.283 383 | 1 |
| 20 to 200 | yellow | 9.283 384 | 1 |
| 100 to 1000 | blue | 9.283 385 | 1 |
| 500 to 5000 | violet | 9.283 386 | 1 |
| 1000 to 10000 | turquoise | 9.409 402 | 1 |



3 4 Variable pipettors, epResearch³ Pack

Comfortable, highly precision pipetting, is the result of fine tuning between pipettor and pipette tip. Why don't you try the unbeatable combination of Eppendorf Research® pipettors and new, epTIPS pipette tips yourself?

eppendorf

Your epReference³ Pack contains:

Option 1:

- 3 x Eppendorf Reference® PhysioCareConcept pipettors (0.5 to 10 µl, 10 to 100 µl, 100 to 1000 µl)
- 3 x epTIPS (max. capacity 20 µl, 200 µl, and 1000 µl) in refillable boxes of 96
- 3 pipette holders, 1 x SOP (Standard Operating Procedure) leaflet; 1 x pipettor ball-point pen

Option 2:

- 3 x Eppendorf Reference® PhysioCareConcept pipettors (2 to 20 µl, 20 to 200 µl, 100 to 1000 µl)
- 3 x epTIPS (max. capacity 200 µl and 1000 µl) in refillable boxes of 96
- 3 pipette holders, 1 x SOP (Standard Operating Procedure) leaflet; 1 x pipettor ball-point pen



| Type | Cat. No. | PK |
|----------------------------|-----------|----|
| epResearch³ Pack, Option 1 | 9.283 306 | 1 |
| epResearch³ Pack, Option 2 | 9.283 307 | 1 |

1 Multichannel pipettors Eppendorf Research®

eppendorf

Long series in columns, rows and microtitre plates - these are the areas of research in which the multichannel pipettor is becoming an ever-increasing force. And it is for this environment that we developed the Research® (multichannel), which can now be operated using only one hand. This high-performance 8- or 12-channel pipettor is an effective, precise and rapid way of processing long series for a whole spectrum of different applications.

- 8-channel and 12-channel tip manifolds can be changed at a flick of the wrist
- Ideal for series dispensing for molecular biology applications and for all immunology assays, such as applying antibodies, washing or stopping
- The specially designed nose cone of the Research® (multichannel) with an O-ring seal means that very little force is required for attaching and ejecting the tip.

| Type | Capacity µl | Cat. No. | PK |
|--------------------------------|----------------|-----------|----|
| 8-channel, complete | 0.5 to 10 | 9.283 030 | 1 |
| 8-channel, complete | 10 to 100 | 9.283 010 | 1 |
| 8-channel, complete | 30 to 300 | 9.283 011 | 1 |
| 12-channel, complete | 0.5 to 10 | 9.283 031 | 1 |
| 12-channel, complete | 10 to 100 | 9.283 016 | 1 |
| 12-channel, complete | 30 to 300 | 9.283 012 | 1 |
| 8-channel, lower section only | 0.5 to 10 | 9.283 001 | 1 |
| 8-channel, lower section only | 10 to 100 | 9.283 002 | 1 |
| 8-channel, lower section only | 30 to 300 | 9.283 003 | 1 |
| 12-channel, lower section only | 0.5 to 10 | 9.283 004 | 1 |
| 12-channel, lower section only | 10 to 100 | 9.283 005 | 1 |
| 12-channel, lower section only | 30 to 300 | 9.283 006 | 1 |



2 Pipettors, air displacement, variable volume, electronic, Research® pro

eppendorf

Single and multichannel electronic pipettors, offering extremely precise pipetting and dispensing.

- Volume can be changed directly (pipetting and dispensing modes)
- All the functions of mechanical pipettes and dispensers can be carried out
- Rapid volume selection via predefined "FIX" volumes
- 5 memories for all commonly used protocols
- Low force, patented tip ejection for ease-of-use
- Removable, autoclavable and easy-to-maintain lower sections
- Multichannel versions offer adjustable operating angles due to their rotatable lower sections
- High precision with no reduction in speed
- Extra slow speed level available for special applications
- High battery capacity (currently 3700 full strokes at the fastest speed with single-channel pipettes)
- Optional charging stand (single or four-place)
- All Research pro models are available with, or without, charging adapter

| Type | Capacity µl | Cat. No. | PK |
|--|----------------|-----------|----|
| Single-channel pipettor with charging adapter | 0.5 to 10 | 9.283 550 | 1 |
| Single-channel pipettor with charging adapter | 5 to 100 | 9.283 551 | 1 |
| Single-channel pipettor with charging adapter | 20 to 300 | 9.283 552 | 1 |
| Single-channel pipettor with charging adapter | 50 to 1000 | 9.283 553 | 1 |
| Single-channel pipettor with charging adapter | 100 to 5000 | 9.283 554 | 1 |
| Single-channel pipettor without charging adapter | 0.5 to 10 | 9.283 555 | 1 |
| Single-channel pipettor without charging adapter | 5 to 100 | 9.283 556 | 1 |
| Single-channel pipettor without charging adapter | 20 to 300 | 9.283 557 | 1 |
| Single-channel pipettor without charging adapter | 50 to 1000 | 9.283 558 | 1 |
| Single-channel pipettor without charging adapter | 100 to 5000 | 9.283 559 | 1 |
| 8-channel pipettor with charging adapter | 0.5 to 10 | 9.283 560 | 1 |
| 8-channel pipettor with charging adapter | 5 to 100 | 9.283 562 | 1 |
| 8-channel pipettor with charging adapter | 20 to 300 | 9.283 564 | 1 |
| 8-channel pipettor with charging adapter | 50 to 1200 | 9.283 566 | 1 |
| 8-channel pipettor without charging adapter | 0.5 to 10 | 9.283 567 | 1 |
| 8-channel pipettor without charging adapter | 5 to 100 | 9.283 569 | 1 |
| 8-channel pipettor without charging adapter | 20 to 300 | 9.283 571 | 1 |
| 8-channel pipettor without charging adapter | 50 to 1200 | 9.283 573 | 1 |
| 12-channel pipettor with charging adapter | 0.5 to 10 | 9.283 561 | 1 |
| 12-channel pipettor with charging adapter | 5 to 100 | 9.283 563 | 1 |
| 12-channel pipettor with charging adapter | 20 to 300 | 9.283 565 | 1 |
| 12-channel pipettor without charging adapter | 0.5 to 10 | 9.283 568 | 1 |
| 12-channel pipettor without charging adapter | 5 to 100 | 9.283 570 | 1 |
| 12-channel pipettor without charging adapter | 20 to 300 | 9.283 572 | 1 |
| Charging stand for one pipettor | | 9.283 574 | 1 |
| Charging stand for four pipettors | | 9.283 575 | 1 |





1 epT.I.P.S. Standard

- original Eppendorf pipette tips of high quality and attractive price
- packed in multi sealable bag
- tips available in various sizes from 10 µl up to 10 ml

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|------|
| 0.1 to 10 | 34 | anthracite | 9.409 410 | 1000 |
| 0.1 to 20 | 40 | grey | 9.409 411 | 1000 |
| 0.5 to 20 | 46 | light grey | 9.409 412 | 1000 |
| 2 to 200 | 53 | yellow | 9.409 413 | 1000 |
| 20 to 300 | 55 | orange | 9.409 414 | 1000 |
| 50 to 1000 | 71 | blue | 9.409 415 | 1000 |
| 50 to 1250 | 76 | green | 9.409 416 | 1000 |
| 500 to 2500 | 115 | clear | 9.409 417 | 500 |
| 100 to 5000 | 120 | purple | 9.409 418 | 500 |
| 1000 to 10000 | 165 | blue | 9.409 403 | 200 |
| 1000 to 10000 | 243 | blue | 9.409 404 | 200 |



2 Multichannel pipette reservoir

- PP. Translucent. Maximum filling volume 60 ml.
Suitable for multichannel pipettes with
8 or 12 channels. Autoclavable (121°C).

BRAND

| Type | Cat. No. | PK |
|--------------------------------|-----------|----|
| Multichannel pipette reservoir | 9.280 131 | 10 |



3 epT.I.P.S. Set

- Starter kit, consisting of one epT.I.P.S. box filled with tips and 4 reload trays.

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|-----|
| 0.1 to 10 | 34 | anthracite | 9.409 480 | 480 |
| 0.1 to 20 | 40 | grey | 9.409 481 | 480 |
| 0.5 to 20 | 46 | light grey | 9.409 482 | 480 |
| 2 to 200 | 53 | yellow | 9.409 483 | 480 |
| 20 to 300 | 55 | orange | 9.409 484 | 480 |
| 50 to 1000 | 71 | blue | 9.409 485 | 480 |
| 50 to 1250 | 76 | green | 9.409 486 | 480 |
| 500 to 2500 | 115 | red | 9.409 487 | 240 |



4 epT.I.P.S. Box

- Work box, filled with tips
- autoclavable
- contamination-free refilling system suitable for loading epT.I.P.S. reloads

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|----|
| 0.1 to 10 | 34 | anthracite | 9.409 470 | 96 |
| 0.1 to 20 | 40 | grey | 9.409 471 | 96 |
| 0.5 to 20 | 46 | light grey | 9.409 472 | 96 |
| 2 to 200 | 53 | yellow | 9.409 473 | 96 |
| 20 to 300 | 55 | orange | 9.409 474 | 96 |
| 50 to 1000 | 71 | blue | 9.409 475 | 96 |
| 50 to 1250 | 76 | green | 9.409 476 | 96 |
| 500 to 2500 | 115 | red | 9.409 477 | 48 |
| 100 to 5000 | 120 | purple | 9.409 478 | 24 |



5 epT.I.P.S. Reloads

- Practical refilling system for epT.I.P.S. box
- Trays supplied either double-sided or as stack packs, depending on tip size
- Contamination-free transfer to the trays into the work box
- Autoclavable trays are available
- Colour-coded trays for simple identification of the tips

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|-----|
| 0.1 to 10 | 34 | anthracite | 9.409 450 | 960 |
| 0.1 to 20 | 40 | grey | 9.409 451 | 960 |
| 0.5 to 20 | 46 | light grey | 9.409 452 | 960 |
| 2 to 200 | 53 | yellow | 9.409 453 | 960 |
| 20 to 300 | 55 | orange | 9.409 454 | 960 |
| 50 to 1000 | 71 | blue | 9.409 455 | 960 |
| 50 to 1250 | 76 | green | 9.409 456 | 960 |
| 500 to 2500 | 115 | red | 9.409 457 | 480 |

1 epT.I.P.S. Reloads

- practical refilling system for epT.I.P.S. Box (free of DNA, human DNA, DNase, RNase, PCR inhibitors)
- workbook with tips
- autoclavable

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|-----|
| 0.1 to 10 | 34 | anthracite | 9.409 460 | 960 |
| 0.1 to 20 | 40 | grey | 9.409 461 | 960 |
| 0.5 to 20 | 46 | light grey | 9.409 462 | 960 |
| 2 to 200 | 53 | yellow | 9.409 463 | 960 |
| 20 to 300 | 55 | orange | 9.409 464 | 960 |
| 50 to 1000 | 71 | blue | 9.409 465 | 960 |
| 50 to 1250 | 76 | green | 9.409 466 | 960 |
| 500 to 2500 | 115 | red | 9.409 467 | 480 |



2 epT.I.P.S. Racks, Biopur

- Highest biological purity Eppendorf Biopur pipette tips (sterile, pyrogen-, RNase-, DNA-, ATP-free)
- Batch controlled
 - batch specific certificate available on request
 - individually boxed racks, 5 Boxes per pack

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|--------|-----------|-----|
| 0.1 to 20 | 40 | grey | 9.409 430 | 480 |
| 2 to 200 | 53 | yellow | 9.409 431 | 480 |
| 20 to 300 | 55 | orange | 9.409 432 | 480 |
| 50 to 1000 | 71 | blue | 9.409 433 | 480 |
| 50 to 1250 | 76 | green | 9.409 434 | 480 |
| 500 to 2500 | 115 | red | 9.409 435 | 240 |
| 1000 to 10000 | 165 | blue | 9.409 405 | 120 |



3 epT.I.P.S. Singles

- Eppendorf Biopur Individually blister-packed tips
- Batch number and the date of expiry indicated on each blister pack
- Batch specific certificate on request

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|--------|-----------|-----|
| 0.1 to 20 | 40 | grey | 9.409 420 | 100 |
| 2 to 200 | 53 | yellow | 9.409 421 | 100 |
| 50 to 1000 | 71 | blue | 9.409 422 | 100 |



4 epT.I.P.S. Dualfilter tips

- Pipette tips boxed in racks with integral, twin-layer ep Dualfilter made from hydrophobic polyethylene without additives. One layer protects the user against aerosols, the other against airborne microbes
- All tips are sterile and PCR clean (free from human DNA, DNase, RNase, PCR Inhibitors)
- batch specific certificate available on request
- The filter doesn't retain liquid when accidentally wetted during aspiration - the whole sample can be recovered easily
- Boxes individually wrapped, in cases of 10 boxes

eppendorf

| Capacity µl | Length mm | Colour | Cat. No. | PK |
|----------------|--------------|------------|-----------|-----|
| 0.1 to 10 | 34 | anthracite | 9.409 440 | 960 |
| 0.1 to 10 | 40 | anthracite | 9.409 441 | 960 |
| 0.5 to 10 | 46 | light grey | 9.409 442 | 960 |
| 2 to 20 | 53 | yellow | 9.409 443 | 960 |
| 2 to 100 | 55 | yellow | 9.409 444 | 960 |
| 2 to 200 | 59 | yellow | 9.409 448 | 960 |
| 20 to 300 | 55 | orange | 9.409 445 | 960 |
| 50 to 1000 | 76 | blue | 9.409 446 | 960 |
| 100 to 5000 | 120 | purple | 9.409 447 | 120 |
| 1000 to 10000 | 243 | blue | 9.409 406 | 100 |



5 epT.I.P.S. special tips

- 9.409 004 are for easy sample loading onto electrophoresis gels.
9.409 005 are for reverse filling of micro-injection capillaries.

eppendorf

| Capacity µl | Length mm | Type | Cat. No. | PK |
|----------------|--------------|--------------|-----------|-----|
| 0.5 to 20 | 62 | Gel loader | 9.409 004 | 192 |
| 0.5 to 20 | 100 | Micro loader | 9.409 005 | 192 |





1 Pipette tips

To fit Finnpipettes and Labpipettes.
Conformity-certified.
1000 to 5000 µl.

| Type | Cat. No. | PK |
|--------------|-----------|----|
| Pipette tips | 9.409 140 | 75 |



2 Pipettor rack, carousel

- Space saving pipettor rack to hold up to six pipettors eppendorf
- Carousel pipette stand
- Can accommodate a wide range of pipettors using accessory pipettor adapters

| Type | Cat. No. | PK |
|---|-----------|----|
| Carousel stand for 6 pipettors | 9.283 581 | 1 |
| Pipette holder for attachment to the wall | 9.283 580 | 1 |
| Multipette adapter for pipette carousel | 9.283 656 | 1 |
| Multipette adapter for wall mounting | 9.283 657 | 1 |

3 Transferpette® Type fixed volume/digital adjustable, single-channel pipettors

The Transferpette® pipettor from Brand is designed for routine lab and research applications in a shape that is adapted to the anatomy of the human hand. BRAND
The special handle shape with the side pipetting key allows the Transferpette® to lie loosely and lightly in your hand. The Transferpette® is particularly well suited for prolonged pipetting, or for anyone who is susceptible to RSI syndrome due to repetitive laboratory procedures.



- Special features of the Transferpette® are:
- The tip cone taper is designed to fit Plastibrand® and most other leading manufacturers tips.
 - The slim shaft (autoclavable at 121°C) makes it possible to pipette in the narrowest vessels without removing the tip ejector.
 - Corrosion-resistant piston and ejector.
 - Colored tip ejector caps indicate appropriate tips to use.
 - Side pipetting key relieves strain; separate ejector function limits errors.
 - Transferpette® Digital adjustable with Easy Calibration technique: Calibration and adjustments according to ISO 9001 and GLP are achieved within seconds.
 - Transferpette® 0.1 to 1 µl - highest precision in molecular biology - especially for pipetting enzymes.
 - CE-marked according to IVD-Directive 98/79 EC.

Items supplied: Each Fixed volume or Digital adjustable Transferpette® is conformity certified and supplied with performance certificate, Fixed volume models also have a calibration key.



4 Pipettors Transferpette® fixed volume

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Tip | Cat. No. | PK |
|----------|-----------------------------------|---|-------------|-----------|----|
| µl | | | µl | | |
| 5 | 1.0 | 0.8 | 2 to 200 | 9.280 075 | 1 |
| 10 | 1.0 | 0.8 | 2 to 200 | 9.280 076 | 1 |
| 20 | 0.8 | 0.4 | 2 to 200 | 9.280 077 | 1 |
| 25 | 0.8 | 0.4 | 2 to 200 | 9.280 078 | 1 |
| 50 | 0.8 | 0.4 | 2 to 200 | 9.280 081 | 1 |
| 100 | 0.6 | 0.2 | 2 to 200 | 9.280 082 | 1 |
| 200 | 0.6 | 0.2 | 2 to 200 | 9.280 083 | 1 |
| 200 | 0.6 | 0.2 | 50 to 1250 | 9.280 084 | 1 |
| 250 | 0.6 | 0.2 | 50 to 1250 | 9.280 085 | 1 |
| 500 | 0.6 | 0.2 | 50 to 1250 | 9.280 087 | 1 |
| 1000 | 0.6 | 0.2 | 50 to 1250 | 9.280 088 | 1 |
| 2000 | 0.6 | 0.2 | 500 to 5000 | 9.280 086 | 1 |

1 Pipettors Transferpette® digital

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Grad. | Tip | Cat. No. | PK |
|-------------|-----------------------------------|---|-------|-------------|-----------|----|
| µl | | | µl | µl | | |
| 0.1 to 1 | 2.0 | 1.2 | 0.005 | 0.1 to 20 | 9.280 099 | 1 |
| 0.5 to 10 | 1.0 | 0.8 | 0.05 | 0.5 to 20 | 9.280 089 | 1 |
| 2 to 20 | 0.8 | 0.4 | 0.1 | 0.5 to 20 | 9.280 093 | 1 |
| 2 to 20 | 0.8 | 0.4 | 0.1 | 2 to 200 | 9.280 090 | 1 |
| 5 to 50 | 0.8 | 0.4 | 0.1 | 2 to 200 | 9.280 091 | 1 |
| 10 to 100 | 0.6 | 0.2 | 0.1 | 2 to 200 | 9.280 092 | 1 |
| 20 to 200 | 0.6 | 0.2 | 1 | 2 to 200 | 9.280 095 | 1 |
| 25 to 250 | 0.6 | 0.2 | 1 | 50 to 1250 | 9.280 094 | 1 |
| 100 to 1000 | 0.6 | 0.2 | 1 | 50 to 1250 | 9.280 096 | 1 |
| 500 to 5000 | 0.6 | 0.2 | 10 | 500 to 5000 | 9.280 097 | 1 |



2 Pipettors, Transferpette®, accessories

Racks, bench-top, for Transferpettes as indicated.

BRAND

| For | Cat. No. | PK |
|--------------------------------|-----------|----|
| 1 x 3 transferpettes | 9.280 521 | 1 |
| 2 x 3 transferpettes (rondell) | 9.280 522 | 1 |



3 Pipettors, Transferpette®, accessories

Racks, wall-mounting, for 3 transferpettes (not suited for Transferpette® 0.5 - 5 ml and 2 ml).

BRAND

| Type | Cat. No. | PK |
|--|-----------|----|
| Racks, wall-mounting, for 3 transferpettes | 9.280 098 | 1 |



4 Pipettors, Transferpette®, accessories

Pipette keys for Transferpette. Choice of colours. 2 labels are included with each key.

BRAND

| Colour | Cat. No. | PK |
|------------------|-----------|----|
| Light green | 9.280 530 | 5 |
| Pink | 9.280 531 | 5 |
| Blue | 9.280 532 | 5 |
| Beige | 9.280 533 | 5 |
| Dark grey | 9.280 534 | 5 |
| Assorted colours | 9.280 535 | 5 |



5 Single-channel microlitre pipettors, Transferpette® S Fixed Volume

Transferpette® S models are the perfect manual pipettors for the most demanding applications in the laboratory.

BRAND

They include all of the features requested by Life Science users: rugged construction, one-hand volume adjustment, complete autoclavability, highest precision, and Easy Calibration™ technology for convenient, long-term reliability.

Transferpette® S features at a glance:

- Familiar, centrally placed pipetting key and separate tip ejector
- Ergonomic finger rest that adapts to your hand for a relaxed grip
- Easy, one-handed volume setting for right-or left-handed users
- Easy-to-read 4-digit volume display for highest precision
- Entirely autoclavable at 121°C (20 min.)
- Colour-coding for easy tip selection
- Corrosion-resistant piston and ejector for durability
- Volume range from 10 µl to 1000 µl
- CE-IVD-conform

Items supplied: Transferpette® S Fixed Volume, conformity-certified, with quality certificate and shelf mount.

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Tip | Cat. No. | PK |
|----------|-----------------------------------|---|-------------|-----------|----|
| µl | | | µl | | |
| 10 | 1 | 0.5 | 200 / 300 | 9.280 040 | 1 |
| 20 | 0.8 | 0.4 | 200 / 300 | 9.280 041 | 1 |
| 25 | 0.8 | 0.4 | 200 / 300 | 9.280 042 | 1 |
| 50 | 0.8 | 0.4 | 200 / 300 | 9.280 043 | 1 |
| 100 | 0.6 | 0.2 | 200 / 300 | 9.280 044 | 1 |
| 200 | 0.6 | 0.2 | 200 / 300 | 9.280 045 | 1 |
| 500 | 0.6 | 0.2 | 1000 / 1250 | 9.280 046 | 1 |
| 1000 | 0.6 | 0.2 | 1000 / 1250 | 9.280 047 | 1 |





1 Single-channel microlitre pipettors, Transferpette® S Digital Adjustable Volume

BRAND

The Transferpette® S models are the perfect manual pipettors for the most demanding applications in the laboratory. They include all of the features requested by Life Science users: rugged construction, one-hand volume adjustment, complete autoclavability, highest precision, and Easy Calibration™ technology for convenient, long-term reliability.

Transferpette®S features at a glance:

- Familiar, centrally placed pipetting key and separate tip ejector
- Ergonomic finger rest that adapts to your hand for a relaxed grip
- Easy, one-handed volume setting for right-or left-handed users
- Easy-to-read 4-digit volume display for highest precision
- Entirely autoclavable at 121°C (20 min.)
- Colour-coding for easy tip selection
- Corrosion-resistant piston and ejector for durability
- Easy Calibration technology on the Transferpette® S digital models, providing calibration adjustments without tools, and a clear indication when the pipettes have been adjusted from factory settings
- Volume range from 0.1 µl to 10 ml!
- CE-IVD-conform

Items supplied: Transferpette® S Digital Adjustable Volume, conformity-certified, with quality certificate and shelf mount.

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Grad. | Tip | Cat. No. | PK |
|---------------|-----------------------------------|---|-------|-------------|-----------|----|
| µl | | | µl | µl | | |
| 0.1 to 1 | 2 | 1.2 | 0.001 | 20 | 9.280 050 | 1 |
| 0.5 to 10 | 1 | 0.5 | 0.01 | 20 | 9.280 051 | 1 |
| 2 to 20 | 0.8 | 0.4 | 0.02 | 200 / 300 | 9.280 052 | 1 |
| 10 to 100 | 0.6 | 0.2 | 0.1 | 200 / 300 | 9.280 053 | 1 |
| 20 to 200 | 0.6 | 0.2 | 0.2 | 200 / 300 | 9.280 054 | 1 |
| 100 to 1000 | 0.6 | 0.2 | 1 | 1000 / 1250 | 9.280 055 | 1 |
| 500 to 5000 | 0.6 | 0.2 | 5 | 5000 | 9.280 056 | 1 |
| 1000 to 10000 | 0.6 | 0.2 | 10 | 10000 | 9.280 057 | 1 |



2 Single channel pipettor Starter-Kits, Transferpette® S

BRAND

Items supplied: 3 Transferpette® S Digital adjustable pipettors, 3 x Tip-Boxes (filled), 3 shelf mounts.

| Type | Description | Cat. No. | PK |
|-------------------|--|-----------|----|
| Starter-Kit Micro | 0.1 to 1 µl, 0.5 to 10 µl, 10 to 100 µl | 9.280 060 | 1 |
| Starter-Kit Midi | 2 to 20 µl, 20 to 200 µl, 100 to 1000 µl | 9.280 061 | 1 |
| Starter-Kit Macro | 100 to 1000 µl, 500 to 5000 µl, 1000 to 10000 µl | 9.280 062 | 1 |



3 Accessories for Transferpette® S single channel microlitre pipettors

BRAND

| Description | Cat. No. | PK |
|-------------------------------|-----------|----|
| Bench stand for 6 pipettors | 9.280 065 | 1 |
| Shelf hanger for one pipettor | 9.280 066 | 1 |



4 Pipettors, Transferpettor

BRAND

For easy and clean pipetting of problematic media.

Transferpettor operates by positive displacement, which makes it ideal for pipetting:

- Highly viscous media such as oils, resins and fats up to a viscosity of 50000 mm²/sec.
- Media with high vapour pressure up to 500 mbar (Alcohols, ethers, hydrocarbons etc.)
- Media with a high density up to 13.6 g/cm³ (e.g. mercury and sulphuric acid)
- Media that tend to foam (surfactant solutions).

Capillary tubes and tips can be used over and over again, since residual wetting is negligible and generally has no influence on the overall result. This leads to lower material costs and reduced waste.

But: In cases, where no contamination is permitted, e.g. with infectious or radioactive media, the Brand Transferpette is recommended, an air displacement pipettor for comfortable working with disposable tips.

Items supplied: Transferpettor, conformity-certified, with quality certificate.

1 Pipettors Transferpettor Fixed volume

With pipettor caps and seals.
Other capacities are available on request.

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Seal material | Cap material | Cat. No. | PK |
|-----------|-----------------------------------|---|------------------|-----------------|-----------|----|
| µl | | | | | | |
| 1 | 4.0 | 4.0 | --- | glass | 9.280 696 | 1 |
| 3.0 | 1.7 | 1.5 | --- | glass | 9.280 698 | 1 |
| 50 | 0.6 | 0.4 | PTFE | glass | 9.280 705 | 1 |
| 100 | 0.6 | 0.4 | PTFE | glass | 9.280 710 | 1 |
| 200 | 0.5 | 0.2 | PTFE | glass | 9.280 720 | 1 |

2 Pipettors Transferpettor Type Digital

Other capacities are available on request.

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Seal material | Cap material | Cat. No. | PK |
|---------------|-----------------------------------|---|------------------|-----------------|-----------|----|
| µl | | | | | | |
| 2.5 to 10 | 1.0 | 0.8 | PTFE | glass | 9.280 602 | 1 |
| 5 to 25 | 0.5 | 0.5 | PTFE | glass | 9.280 605 | 1 |
| 10 to 50 | 0.6 | 0.4 | PTFE | glass | 9.280 610 | 1 |
| 20 to 100 | 0.6 | 0.4 | PTFE | glass | 9.280 620 | 1 |
| 100 to 500 | 0.5 | 0.2 | PE | PP | 9.280 724 | 1 |
| 200 to 1000 | 0.5 | 0.2 | PE | PP | 9.280 726 | 1 |
| 1000 to 5000 | 0.5 | 0.2 | PE | PP | 9.280 730 | 1 |
| 2000 to 10000 | 0.5 | 0.2 | PE | PP | 9.280 732 | 1 |

3 4 Caps for pipettors Transferpettor Digital

BRAND

| Capacity | Material | Cat. No. | PK |
|----------------------|----------|-----------|-----|
| µl | | | |
| 1, 2, 3, 4, 5 | glass | 9.280 800 | 100 |
| 2.5 to 10.10 | glass | 9.280 801 | 100 |
| 20 | glass | 9.280 802 | 100 |
| 5 to 25.25 | glass | 9.280 803 | 100 |
| 10 to 50.50 | glass | 9.280 805 | 100 |
| 20 to 100, 100 / 200 | glass | 9.280 810 | 50 |
| 100 to 500 | PP | 9.280 741 | 10 |
| 200 to 1000 | PP | 9.280 742 | 10 |
| 1000 to 5000 | PP | 9.280 743 | 10 |
| 2000 to 10000 | PP | 9.280 745 | 10 |

5 6 Seals for pipettor Transferpettor

BRAND

| Capacity | Material | Cat. No. | PK |
|----------------------|----------|-----------|----|
| µl | | | |
| 5 to 25.20 | PTFE | 9.280 901 | 3 |
| 10 to 50.50 | PTFE | 9.280 903 | 3 |
| 20 to 100; 100 / 200 | PTFE | 9.280 905 | 3 |
| 100 to 500 | PE | 9.280 751 | 10 |
| 200 to 1000 | PE | 9.280 752 | 10 |
| 1000 to 5000 | PE | 9.280 753 | 10 |
| 2000 to 10000 | PE | 9.280 755 | 10 |

7 Pipettors, Transferpettor, accessories

Transferpettor stations.
For storage of 4 instruments up to 200 µl with accessories or
2 instruments from 0.5 to 10 ml with accessories.

BRAND

| Type | Cat. No. | PK |
|------------------------------------|-----------|----|
| For 2 instruments with accessories | 9.280 581 | 1 |
| For 4 instruments with accessories | 9.280 850 | 1 |





1 Transferpette® -8/-12, multichannel pipette

BRAND

The Transferpette® -8/-12 is designed with ease of use in mind. The contoured handle and accessible controls work naturally in your hand. The light-weight yet durable construction and low operating force minimize strain and fatigue.

Special features of the Transferpette® -8/-12 are:

- Significantly reduced tip-ejection forces due to resilient FKM V-rings and a stepped tip ejector.
- Easy to maintain, with individual shafts and seals that can be removed and replaced for cleaning or repair in the lab, without special tools and without affecting calibration.
- Universal tip cone - fits all conventional pipette tips.
- Corrosion-resistant pistons
- Easy Calibration Technique: Calibration and adjustments without tools.
- The pipette manifold is autoclavable at 121 °C and freely rotated over 360° to adapt to your most comfortable pipetting position.
- Separate ejector function reduces inadvertent ejector risk.
- CE-marked according to IVD-Directive 98/79 EC.

Items supplied: Each Transferpette® -8/-12 is conformity certified and supplied with performance certificate, 1 Tip-Box, filled with Plastibrand® pipette tips, 1 Tip-Rack for refilling, 1 stand, 1 reagent-reservoir, 1 spare set of sealing rings made of FKM.



2 Multichannel pipettors Transferpette®-8

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Grad. | Tip | Cat. No. | PK |
|-----------|-----------------------------------|---|-------|-----------|-----------|----|
| µl | | | µl | µl | | |
| 0.5 to 10 | 1.6 | 1.0 | 0.05 | 20 | 9.280 500 | 1 |
| 2 to 20 | 1.0 | 0.6 | 0.1 | 20 | 9.280 502 | 1 |
| 2.5 to 25 | 1.0 | 0.6 | 0.1 | 200 / 300 | 9.280 501 | 1 |
| 5 to 50 | 0.8 | 0.4 | 0.1 | 200 / 300 | 9.280 503 | 1 |
| 10 to 100 | 0.8 | 0.3 | 0.1 | 200 / 300 | 9.280 505 | 1 |
| 20 to 200 | 0.6 | 0.3 | 1.0 | 200 / 300 | 9.280 507 | 1 |
| 30 to 300 | 0.6 | 0.3 | 1.0 | 300 | 9.280 508 | 1 |



3 Multichannel pipettors Transferpette®-12

BRAND

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Grad. | Tip | Cat. No. | PK |
|-----------|-----------------------------------|---|-------|-----------|-----------|----|
| µl | | | µl | µl | | |
| 0.5 to 10 | 1.6 | 1.0 | 0.05 | 20 | 9.280 510 | 1 |
| 2 to 20 | 1.0 | 0.6 | 0.1 | 20 | 9.280 512 | 1 |
| 2.5 to 25 | 1.0 | 0.6 | 0.1 | 200 / 300 | 9.280 511 | 1 |
| 5 to 50 | 0.8 | 0.4 | 0.1 | 200 / 300 | 9.280 513 | 1 |
| 10 to 100 | 0.8 | 0.3 | 0.1 | 200 / 300 | 9.280 515 | 1 |
| 20 to 200 | 0.6 | 0.3 | 1.0 | 200 / 300 | 9.280 517 | 1 |
| 30 to 300 | 0.6 | 0.3 | 1.0 | 300 | 9.280 518 | 1 |

1 Transferpette® electronic, electronic single and multichannel pipettors

BRAND

The Transferpette® electronic design ensures significantly easy operation and is the first microlitre pipette worldwide to be awarded the "Ergonomics Approved" certificate from the TÜV Rhineland!

The optimal design, the arrangement of the operating keys and the adjustable finger rest allow the motorized Transferpette® electronic to be tailored to the shape of your hand.

The innovative, two-component, nose cone of the 20 to 200 µl and 100 to 1000 µl single-channel pipette sizes and the special V-rings of the multichannel pipette significantly reduce the tip-mounting and ejection forces to a minimum and allow perfect fit of virtually all commercially available tips.

- Motor-driven to reduce the risk of RSI and imprecision/inaccuracy caused by operator variability
- Five operating modes: Pipetting mode, Reverse pipetting, Mixing, Dispensing, Gel-electrophoresis modes
- Easy Calibration function for rapid adjustment of the unit without tools
- Extremely fast pipetting speed
- Simple, in-lab maintenance
- Completely autoclavable pipette shafts and multichannel manifolds
- NiMH rechargeable battery pack and battery regeneration-mode
- CE-marked according to IVD-Directive 98/79 EC

Every single-channel Transferpette® electronic is supplied with its own power supply unit.

As an alternative the accessory three-pipette stand can charge up to three instruments at the same time. With the charging stand, individual chargers are not needed. Multichannel Transferpette® -8/-12 electronic pipettes are additionally supplied with a stand, one reagent reservoir, one Tip-Box SL and one Tip-Rack.



2 Pipettors, Transferpette® electronic

BRAND

Items supplied: Transferpette® electronic, conformity certified, with performance certificate, battery, battery charger, 2 extra ejector clips to adapt to non-standard tips (for Transferpette® electronic 20 to 200 µl, 100 to 1000 µl), silicone oil.

| Capacity | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Grad. | Tip | Cat. No. | PK |
|--------------|-----------------------------------|---|-------|-------------|-----------|----|
| µl | | | µl | µl | | |
| 0.5 to 10 | 1.0 | 0.4 | 0.01 | 20 | 9.280 113 | 1 |
| 2 to 20 | 1.0 | 0.4 | 0.02 | 20 | 9.280 100 | 1 |
| 20 to 200 | 0.8 | 0.2 | 0.2 | 200 / 300 | 9.280 101 | 1 |
| 100 to 1000 | 0.6 | 0.2 | 1.0 | 1000 / 1250 | 9.280 102 | 1 |
| 500 to 5000 | 0.6 | 0.2 | 5.0 | 5000 | 9.280 114 | 1 |
| 0.5 to 10* | 1.0 | 0.4 | 0.01 | 20 | 9.280 115 | 1 |
| 2 to 20* | 1.0 | 0.4 | 0.02 | 20 | 9.280 103 | 1 |
| 20 to 200* | 0.8 | 0.2 | 0.2 | 200 / 300 | 9.280 104 | 1 |
| 100 to 1000* | 0.6 | 0.2 | 1.0 | 1000 / 1250 | 9.280 105 | 1 |
| 500 to 5000* | 0.6 | 0.2 | 5.0 | 5000 | 9.280 116 | 1 |

* without a.c. adapter, please order with stand 9.280 106



3 Stand for single channel pipettors Transferpette® electronic

BRAND

| Type | Cat. No. | PK |
|---|-----------|----|
| Stand for 3 pipettors with a.c. adapter (230 V 50 Hz) | 9.280 106 | 1 |
| Single stand, up to 1000 µl | 9.280 129 | 1 |
| Single stand, 500 to 5000 µl | 9.280 130 | 1 |



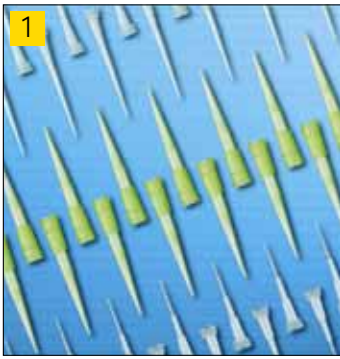
4 Multichannel pipettors Transferpette® -8/-12 electronic

BRAND

Items supplied: Transferpette® -8/-12 electronic, conformity certified, with performance certificate, battery, battery charger, stand, Tip-Box SL, refill units, reagent-reservoir, silicone oil.

| Description | Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Tip | Cat. No. | PK |
|-------------|-----------|-------|-----------------------------------|---|-----------|-----------|----|
| | µl | µl | | | µl | | |
| 8-channel | 0.5 to 10 | 0.01 | 1.2 | 0.8 | 20 | 9.280 117 | 1 |
| 8-channel | 2 to 20 | 0.02 | 1.0 | 0.5 | 20 | 9.280 107 | 1 |
| 8-channel | 10 to 100 | 0.1 | 0.8 | 0.25 | 200 / 300 | 9.280 108 | 1 |
| 8-channel | 10 to 200 | 0.2 | 0.8 | 0.25 | 200 / 300 | 9.280 118 | 1 |
| 8-channel | 30 to 300 | 0.5 | 0.6 | 0.25 | 300 | 9.280 109 | 1 |
| 12-channel | 0.5 to 10 | 0.01 | 1.2 | 0.8 | 20 | 9.280 119 | 1 |
| 12-channel | 2 to 20 | 0.02 | 1.0 | 0.5 | 20 | 9.280 110 | 1 |
| 12-channel | 10 to 100 | 0.1 | 0.8 | 0.25 | 200 / 300 | 9.280 111 | 1 |
| 12-channel | 10 to 200 | 0.2 | 0.8 | 0.25 | 200 / 300 | 9.280 128 | 1 |
| 12-channel | 30 to 300 | 0.5 | 0.6 | 0.25 | 300 | 9.280 112 | 1 |





1 Pipette tips and filter tips, racked

Plastibrand® pipette- and filter tips are manufactured and racked with minimum human contact, under cleanroom conditions. This is how we ensure uniformly high tip quality.

BRAND

Special features:

- High-purity polypropylene material
- Manufactured without lubricants
- Cadmium-free pigments
- Autoclavable at 121°C (20 min.)
- Environmentally friendly packaging systems
- CE-marked according to IVD-Directive 98/79 EC.
- Plastibrand® pipette tips are tested for use with Brand and the majority of models from Gilson®, Thermo Electron (Finnpipette®), Eppendorf® and Biohit. The 5 ml tip is tested for Brand and Finnpipette® only. The 10 ml tip is suitable for Brand, Eppendorf® and Gilson®.

Bio-Cert® pipette- and filter tips:

These pipette tips are produced under state-of-the-art cleanroom conditions and automatically racked without human contact. Sterilization is carried out using β radiation and complies with ISO 11137 and the AAMI guidelines. A SAL of 10^{-6} is obtained. The sterility corresponds to the requirements of the Ph. Eur. and USP 29. Endotoxin concentration is below 0.01 E.U./ml. Bio-Cert® products are free from DNA, RNase and ATP. Quality control is conducted at an independent, accredited test laboratory. A batch-related certificate will be provided.

Filter tips

Filter tips are especially suited for working with PCR techniques, and fully meet the requirements for microbiology and radioisotope work. The integrated hydrophobic polyethylene filter (free from chemical additives) serves as a barrier against aerosols formed during pipetting. Filter tips protect the pipette shafts from contamination, and thus lessen the risk of cross-contamination and faulty measuring results.

Plastibrand® filter tips are produced from colourless granules under the most stringent clean room conditions and are automatically racked.



2 Pipette tips in bulk, in bags, non-sterile

Plastibrand®. PP. Non-sterile. These pipette tips are produced under the latest, state-of-the-art, cleanroom conditions and automatically shrink-wrapped into bags, then packed in cardboard boxes, without contact with humans.

BRAND

| Capacity μ l | Colour | Bags per pack | Cat. No. | PK |
|---------------------|---------|------------------|-----------|-------|
| 0.1 to 20 | natural | 2 (of 1000) | 9.409 200 | 2000 |
| 0.5 to 20 | natural | 2 (of 1000) | 9.409 208 | 2000 |
| 0.5 to 20 | natural | 10 (of 1000) | 9.409 209 | 10000 |
| 2 to 200 | yellow | 1 (of 1000) | 9.409 206 | 1000 |
| 2 to 200 | yellow | 10 (of 1000) | 9.409 195 | 10000 |
| 5 to 300 | natural | 10 (of 1000) | 9.409 197 | 10000 |
| 5 to 300 | natural | 1 (of 1000) | 9.409 196 | 1000 |
| 50 to 1000 | blue | 2 (of 500) | 9.409 207 | 1000 |
| 50 to 1000 | blue | 10 (of 500) | 9.409 198 | 5000 |
| 50 to 1250 | natural | 2 (of 500) | 9.409 193 | 1000 |
| 50 to 1250 | natural | 8 (of 500) | 9.409 194 | 4000 |
| 0.5 to 5 ml | natural | 1 (of 200) | 9.409 223 | 200 |
| 0.5 to 5 ml | natural | 5 (of 200) | 9.409 199 | 1000 |
| 1 to 10 ml | natural | 2 (of 100) | 9.409 191 | 200 |
| 1 to 10 ml | natural | 10 (of 100) | 9.409 192 | 1000 |



3 Filter pipette tips, non-sterile

Plastibrand®. PP. Bulk-packed, non-sterile, conformity-certified.

BRAND

| Capacity μ l | Type | Cat. No. | PK |
|---------------------|---------------|-----------|------|
| 0.5 to 10 | 1 bag of 960 | 9.409 603 | 960 |
| 2 to 20 | 1 bag of 960 | 9.409 604 | 960 |
| 5 to 100 | 1 bag of 960 | 9.409 600 | 960 |
| 5 to 200 | 1 bag of 960 | 9.409 605 | 960 |
| 50 to 1000 | 2 bags of 500 | 9.409 606 | 1000 |

4 Pipette tips racked, non-sterile

Plastibrand®. PP.

BRAND

Tip-Rack. Refill pack for Tip-Box SL*, Tip-Box and Tip-Box N.

Number of tips in pack: 960.

Two, ready-assembled refills are packed in a space-saving carton.

| Capacity μ l | Type | Cat. No. | PK |
|---------------------|-----------------|-----------|------|
| 0.1 to 20 | 10 racks of 96 | 9.409 230 | 960 |
| 0.5 to 20 | 10 racks of 96 | 9.409 222 | 960 |
| 2 to 200 | 10 racks of 96 | 9.409 215 | 960 |
| 5 to 300 | 10 racks of 96 | 9.409 231 | 960 |
| 50 to 1000 | 16 racks of 60 | 9.409 218 | 960 |
| 50 to 1000* | 10 racks of 100 | 9.409 226 | 1000 |
| 50 to 1250* | 10 racks of 100 | 9.409 227 | 1000 |

* not suitable for Tip-Box SL



1 Filter tips racked, non-sterile

Plastibrand®. PP. BRAND
 Tip-Rack. Refill pack for Tip-Box SL*, Tip-Box and Tip-Box N.
 Two, ready-assembled refills are packed in a space-saving carton.

| Capacity µl | Type | Cat. No. | PK |
|----------------|-----------------|-----------|------|
| 0.5 to 10 | 10 racks of 96 | 9.409 607 | 960 |
| 2 to 20 | 10 racks of 96 | 9.409 608 | 960 |
| 5 to 100 | 10 racks of 96 | 9.409 609 | 960 |
| 5 to 200 | 10 racks of 96 | 9.409 610 | 960 |
| 50 to 1000* | 10 racks of 100 | 9.409 611 | 1000 |

* not suitable for Tip-Box SL



2 Pipette tips, Tip-Set, non-sterile

Plastibrand®. PP. BRAND
 The system consists of a filled Tip-Box and two refill units (Tip-Rack).
 The Tip-Box is refillable with the refill units (Tip-Rack) and repeatedly autoclavable (121°C).

| Capacity µl | Type | Cat. No. | PK |
|----------------|-------------------------------|-----------|-----|
| 0.1 to 20 | 4 racks of 96 + 1 box of 96 | 9.409 220 | 480 |
| 0.5 to 20 | 4 racks of 96 + 1 box of 96 | 9.409 221 | 480 |
| 2 to 200 | 4 racks of 96 + 1 box of 96 | 9.409 214 | 480 |
| 5 to 300 | 4 racks of 96 + 1 box of 96 | 9.409 224 | 480 |
| 50 to 1000 | 4 racks of 100 + 1 box of 100 | 9.409 225 | 500 |
| 50 to 1250 | 4 racks of 100 + 1 box of 100 | 9.409 219 | 500 |



3 Pipette tips, Tip-Box N, non-sterile

Plastibrand®. PP-box with push-on lid. Available in 2 different heights: BRAND
 low form for 96 tips up to 300 µl, high form for 100 tips of 1000 µl or 1250 µl.
 Stackable and repeatedly autoclavable (121°C).
 Refillable with Tip-Rack (non-sterile) or Tip-Rack S (sterile).

| Capacity µl | Type | Cat. No. | PK |
|----------------|----------------|-----------|-----|
| 0.1 to 20 | 5 boxes of 96 | 9.408 900 | 480 |
| 0.5 to 20 | 5 boxes of 96 | 9.408 901 | 480 |
| 2 to 200 | 5 boxes of 96 | 9.408 902 | 480 |
| 5 to 300 | 5 boxes of 96 | 9.408 903 | 480 |
| 50 to 1000 | 5 boxes of 100 | 9.408 907 | 500 |
| 50 to 1250 | 5 boxes of 100 | 9.408 908 | 500 |



4 Tip-Box SL, non-sterile

Plastibrand®. BRAND
 The Tip-Box SL features an innovative sliding lid design making it ideal for multichannel pipettes and one-handed use.
 The new sliding/swing lid opens in two ways for convenient 8- or 12-channel use while protecting unused tips, thereby reducing the risk of contamination.
 The rugged box (PC) is designed for long life, can be repeatedly autoclaved (121°C, 20 min.), and has rubber feet to prevent slipping.
 Refillable with racked tips, either non-sterile (Tip-Rack) or sterile (Tip-Rack S).

| Capacity µl | Type | Cat. No. | PK |
|----------------|------------------|-----------|----|
| 0.1 to 20 | 1 box of 96 tips | 9.280 120 | 1 |
| 0.5 to 20 | 1 box of 96 tips | 9.280 121 | 1 |
| 2 to 200 | 1 box of 96 tips | 9.280 122 | 1 |
| 5 to 300 | 1 box of 96 tips | 9.280 123 | 1 |
| 50 to 1000 | 1 box of 96 tips | 9.280 124 | 1 |
| | 1 box, empty | 9.280 125 | 1 |

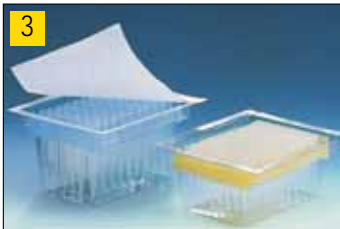
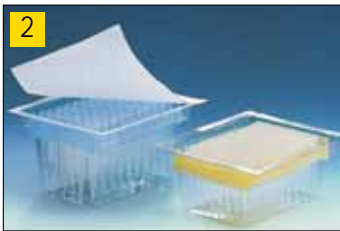


5 Tip-Box 5 ml or 10 ml, filled, non-sterile

Plastibrand®. PP. BRAND
 Specifically developed for Plastibrand® 5 ml or 10 ml tips.
 Autoclavable (121°C, for 20 mins.).
 The lid must be loosened during autoclaving.

| Capacity µl | Container | Cat. No. | PK |
|----------------|-----------|-----------|----|
| 500 to 5000 | Box of 28 | 9.408 905 | 1 |
| 1000 to 10000 | Box of 18 | 9.408 909 | 1 |





1 Pipette tips Tip-Stack™, non-sterile

Plastibrand®. PP. Space-saving, environmentally-friendly refill system, consisting of 10 stacked, yellow tip carriers with 96 x 2 to 200 µl tips on each (a total of 960 tips, incl. one Tip-Box N).
For refilling the Tip-Box SL, Tip-Box and Tip-Box N.

BRAND

| Capacity µl | Container | Cat. No. | PK |
|----------------|----------------|-----------|-----|
| 2 to 200 | 10 racks of 96 | 9.408 906 | 960 |

2 Pipette tips, Tip-Rack S sterile Bio-Cert®

Plastibrand®. PP. Sterile Bio-Cert® refill units, protected in an environmentally compatible packaging of recyclable PET.
Suitable for autoclaved Tip-Box, Tip-Box N or Tip-Box SL*.
(Sterile refill units including a Tip-Box are called Tip-Set S).

BRAND

| Capacity µl | Type | Cat. No. | PK |
|----------------|----------------|-----------|-----|
| 0.1 to 20 | 10 racks of 96 | 9.408 920 | 960 |
| 0.5 to 20 | 10 racks of 96 | 9.408 921 | 960 |
| 2 to 200 | 10 racks of 96 | 9.408 922 | 960 |
| 5 to 300 | 10 racks of 96 | 9.408 923 | 960 |
| 50 to 1000* | 8 racks of 60 | 9.408 924 | 480 |

* not suitable for Tip-Box SL

3 Filter tips racked Tip-Rack S Bio-Cert®

Plastibrand®. PP. Sterile Bio-Cert® refill units, protected in an environmentally compatible packaging of recyclable PET.
Suitable for the autoclaved Tip-Box, Tip-Box N or Tip-Box SL.
(Sterile refill units including a Tip-Box are called Tip-Set S).

BRAND

| Capacity µl | Type | Cat. No. | PK |
|----------------|----------------|-----------|-----|
| 0.5 to 10 | 10 racks of 96 | 9.409 615 | 960 |
| 2 to 20 | 10 racks of 96 | 9.409 616 | 960 |
| 5 to 100 | 10 racks of 96 | 9.409 602 | 960 |
| 5 to 200 | 10 racks of 96 | 9.409 618 | 960 |

4 Pipette tips racked Tip-Set S Bio-Cert®

Plastibrand®. PP. A filled, sterile Tip-Box with sliding lid and four or seven Tip-Racks S, filled with Bio-Cert® quality tips.

BRAND

| Capacity µl | Type | Cat. No. | PK |
|----------------|-----------------------------|-----------|-----|
| 0.1 to 20 | 4 racks of 96 + 1 Box of 96 | 9.408 910 | 480 |
| 0.5 to 20 | 4 racks of 96 + 1 Box of 96 | 9.408 911 | 480 |
| 2 to 200 | 4 racks of 96 + 1 Box of 96 | 9.408 912 | 480 |
| 5 to 300 | 4 racks of 96 + 1 Box of 96 | 9.408 913 | 480 |
| 50 to 1000 | 7 racks of 60 + 1 Box of 60 | 9.408 914 | 480 |

5 Filter tips racked Tip-Set S Bio-Cert®

Plastibrand®. PP. A filled, sterile Tip-Box with sliding lid and four or seven Tip-Racks S, filled with Bio-Cert® quality tips.
Suitable for the autoclaved Tip-Box or Tip-Box N.

BRAND

| Capacity µl | Type | Cat. No. | PK |
|----------------|-----------------------------|-----------|-----|
| 0.5 to 10 | 4 racks of 96 + 1 Box of 96 | 9.409 612 | 480 |
| 2 to 20 | 4 racks of 96 + 1 Box of 96 | 9.409 613 | 480 |
| 5 to 100 | 4 racks of 96 + 1 Box of 96 | 9.409 601 | 480 |
| 5 to 200 | 4 racks of 96 + 1 Box of 96 | 9.409 614 | 480 |

6 Pipette Tip-Box N Bio-Cert®, sterile

Polypropylene box with push-on lid. Available in 2 different heights.
Low form for 96 tips up to 300 µl, high form for 100 tips of 1000/1250 µl.
Stackable and repeatedly autoclavable at 121°C/250°F (for 20 min).
Boxes individually packed in bags with perforation.

BRAND

| Capacity µl | Type | Cat. No. | PK |
|----------------|-----------------|-----------|------|
| 0.1 to 20 | 10 boxes of 96 | 9.408 930 | 960 |
| 0.5 to 20 | 10 boxes of 96 | 9.408 931 | 960 |
| 2 to 200 | 10 boxes of 96 | 9.408 932 | 960 |
| 5 to 300 | 10 boxes of 96 | 9.408 933 | 960 |
| 50 to 1000 | 10 boxes of 100 | 9.408 934 | 1000 |
| 50 to 1250 | 10 boxes of 100 | 9.408 935 | 1000 |

1 Filter tip boxes, sterile, Bio-Cert®

Plastibrand®. PP-box with push-on lid.
Available in 2 different heights: low form for 96 tips up to 300 µl,
high form for 100 tips of 1000 µl or 1250 µl.
Stackable and repeatedly autoclavable (121°C).
Refillable with Tip-Rack (non-sterile) or Tip-Rack S (sterile).
Boxes individually packed in bag with perforation.

BRAND



| Capacity µl | Type | Cat. No. | PK |
|----------------|-----------------|-----------|------|
| 0.5 to 10 | 10 boxes of 96 | 9.409 640 | 960 |
| 2 to 20 | 10 boxes of 96 | 9.409 641 | 960 |
| 5 to 100 | 10 boxes of 96 | 9.409 642 | 960 |
| 5 to 200 | 10 boxes of 96 | 9.409 643 | 960 |
| 50 to 1000 | 10 boxes of 100 | 9.409 644 | 1000 |

2 Tip-Box empty

Plastibrand®.PC.
With sliding lid.
Box can be stacked crosswise and is autoclavable (121°C for 20 mins.).
Suitable for use with Tip-Rack or Tip-rack S formats.

BRAND



| Type | Cat. No. | PK |
|---------------------|-----------|----|
| Plastibrand Tip-Box | 9.409 232 | 1 |

3 5/835 manual - digital reading micropipettors

The latest Acura® manual pipette line was built with the same attention that made the brand famous over several instrument generations. Introducing a smooth, modern design with easy volume reading, it also features a number of innovations enabling safe and easy, high performance pipetting.

Socorex

The Acura® line features

- Digital display window for permanent volume visibility
- Exceptionally user-friendly ergonomics
- Light weight
- Ultra-smooth, effortless activation
- Innovative tip ejection concept
- *Swift-set* user calibration system
- Totally autoclavable at 121°C



| Capacity µl | Accuracy ≤ ± A% (min. vol.) | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (min. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|----------------|-----------------------------------|-----------------------------------|---|---|-----------|----|
| 0.1 to 2 | 6.0 | 2.0 | 5.0 | 1.5 | 9.411 590 | 1 |
| 0.5 to 10 | 2.5 | 1.0 | 1.8 | 0.5 | 9.411 591 | 1 |
| 1 to 10 | 0.5 | 1.0 | 2.5 | 0.7 | 9.411 592 | 1 |
| 2 to 20 | 2.5 | 1.0 | 1.7 | 0.5 | 9.411 593 | 1 |
| 5 to 50 | 1.5 | 1.0 | 1.0 | 0.4 | 9.411 594 | 1 |
| 10 to 100 | 1.5 | 0.8 | 1.0 | 0.2 | 9.411 595 | 1 |
| 20 to 200 | 1.5 | 0.6 | 0.6 | 0.2 | 9.411 596 | 1 |
| 100 to 1000 | 1.5 | 0.5 | 0.5 | 0.2 | 9.411 597 | 1 |
| 500 to 5000 | 1.5 | 0.6 | 0.6 | 0.4 | 9.411 598 | 1 |
| 1000 to 10000 | 1.5 | 0.5 | 0.4 | 0.2 | 9.411 599 | 1 |

4 Micropipettes Acura® manual Triopack

Set with 3 adjustable pipettors.

Socorex



| Type | Capacity µl | Cat. No. | PK |
|----------------------|----------------|-----------|----|
| Acura 825 Triopack.C | 2, 10, 50 | 9.411 620 | 1 |
| Acura 825 Triopack.J | 2, 20, 200 | 9.411 621 | 1 |
| Acura 825 Triopack.M | 10Y, 50, 200 | 9.411 622 | 1 |
| Acura 825 Triopack.O | 10, 100, 1000 | 9.411 628 | 1 |
| Acura 825 Triopack.P | 10Y, 100, 1000 | 9.411 623 | 1 |
| Acura 825 Triopack.S | 20, 200, 1000 | 9.411 624 | 1 |
| Acura 825 Triopack.T | 50, 200, 1000 | 9.411 625 | 1 |
| Acura 825 Triopack.V | 0.1, 1.5 | 9.411 626 | 1 |
| Acura 825 Triopack.Y | 1, 5, 10 | 9.411 627 | 1 |



1 Micropipettors Acura® manual 855

- Exceptional user-friendly ergonomics Socorex
- Ultra-soft, effortless activation
- Large display window
- Lightweight
- Easy, adjustable tip ejection
- Swift-set user calibration

| Description | Capacity | Grad. | Cat. No. | PK |
|-------------|---------------|---------------|-----------|----|
| | μl | μl | | |
| 8-channel | 0.5 to 10 | 0.01 | 9.411 630 | 1 |
| 8-channel | 5 to 50 | 0.10 | 9.411 631 | 1 |
| 8-channel | 20 to 200 | 0.20 | 9.411 632 | 1 |
| 8-channel | 40 to 350 | 0.40 | 9.411 633 | 1 |
| 12-channel | 0.5 to 10 | 0.01 | 9.411 634 | 1 |
| 12-channel | 5 to 50 | 0.10 | 9.411 635 | 1 |
| 12-channel | 20 to 200 | 0.20 | 9.411 636 | 1 |
| 12-channel | 40 to 350 | 4.00 | 9.411 637 | 1 |



2 Pipettors, air displacement, variable volume, Calibra® 822

- Instant volume selection Socorex
- Digital reading
- Attractive design, with colour coding
- Robust and chemically resistant
- Narrow shaft
- Fully autoclavable at 121°C
- according to EG IVD 98/79 EEC

| Capacity | Grad. | Accuracy $\leq \pm A\%$ (min. vol.) | Accuracy $\leq \pm A\%$ (max. vol.) | Repro- ducibility $\leq \pm V\%$ (min. vol.) | Repro- ducibility $\leq \pm V\%$ (max. vol.) | Tip | Cat. No. | PK |
|---------------|---------------|---|---|---|---|---------------|-----------|----|
| μl | μl | | | | | μl | | |
| 0.2 to 2 | 0.1 | 6.0* | 2.0 | 5.0* | 1.5 | 10 | 9.411 473 | 1 |
| 1 to 10 | 0.05 | 2.0 | 1.0 | 2.0 | 0.5 | 10 | 9.411 474 | 1 |
| 1 to 10 | 0.05 | 2.0 | 1.0 | 2.5 | 0.7 | 200 | 9.411 475 | 1 |
| 2 to 20 | 0.1 | 2.0 | 1.0 | 1.7 | 0.5 | 200 | 9.411 476 | 1 |
| 10 to 100 | 0.5 | 1.5 | 0.8 | 1.0 | 0.2 | 200 | 9.411 477 | 1 |
| 20 to 200 | 1 | 1.5 | 0.6 | 0.6 | 0.2 | 200 | 9.411 478 | 1 |
| 100 to 1000 | 5 | 1.5 | 0.5 | 0.5 | 0.2 | 1000 | 9.411 479 | 1 |

*at 0.5 μl



3 Pipettors, air displacement, variable macro volume, Calibra® 832

- Digital reading Socorex
- Macro volume range
- Ergonomic shape
- Integral protective filter
- 2 ml model with adapter for glass pasteur pipettes
- Fully autoclavable at 121°C
- according to EG IVD 98/79 EEC

| Capacity | Grad. | Accuracy $\leq \pm A\%$ (min. vol.) | Accuracy $\leq \pm A\%$ (max. vol.) | Repro- ducibility $\leq \pm V\%$ (min. vol.) | Repro- ducibility $\leq \pm V\%$ (max. vol.) | Cat. No. | PK |
|----------|-------|---|---|---|---|-----------|----|
| ml | ml | | | | | | |
| 0.2 to 2 | 0.01 | 1.5 | 0.5 | 0.5 | 0.2 | 9.411 480 | 1 |
| 1 to 10 | 0.1 | 1.5 | 0.5 | 0.3 | 0.15 | 9.411 481 | 1 |

1 Pipettors, air displacement, variable macro volume, Calibra® 832, accessories

Socorex

| Description | Cat. No. | PK |
|--|-----------|-----|
| Protection filter for 2 ml model | 9.411 482 | 250 |
| Glass Pasteur pipette for 2 ml model | 9.411 483 | 250 |
| Protection filter for 10 ml model | 9.411 484 | 100 |
| 2 ml natural macrotip | 9.411 501 | 500 |
| 10 ml natural macrotip | 9.411 502 | 300 |
| Autoclaving box for 24 x 10 ml macrotips | 9.411 503 | 4 |



2 Pipette tips, standard, Qualitips®

Socorex

High quality, heavy metal free, virgin polypropylene. Autoclavable. Strict manufacturing controls and precision moulding guarantee a perfectly tight fit on the pipette cone. Supplied in packs as indicated; packs of 1000 are loose bagged, other pack sizes in racks of 816, 960, 600 or 480.



| For | Description | Capacity µl | Length mm | Cat. No. | PK |
|-------------------------------|--------------------------|----------------|--------------|-----------|------|
| Socorex®, Gilson® | Natural ultra microtip | 10 | 31.0 | 9.282 100 | 1000 |
| Socorex®, Gilson® | Natural ultra microtip | 10 | 31.0 | 9.282 101 | 960 |
| Socorex®, Eppendorf® | Natural microtip | 10 | 42.3 | 9.282 102 | 1000 |
| Socorex®, Eppendorf® | Natural microtip | 10 | 42.3 | 9.282 103 | 960 |
| Socorex®, Eppendorf® | Natural microtip for gel | 10 | 70.9 | 9.282 104 | 816 |
| Socorex®, Gilson®, Eppendorf® | Natural universal tip | 200 | 49.4 | 9.282 105 | 1000 |
| Socorex®, Gilson®, Eppendorf® | Natural universal tip | 200 | 49.4 | 9.282 106 | 960 |
| Socorex®, Gilson®, Eppendorf® | Natural tip, extra | 200 | 51.1 | 9.282 107 | 1000 |
| Socorex®, Gilson®, Eppendorf® | Natural tip, extra | 200 | 51.1 | 9.282 108 | 960 |
| Socorex®, Gilson®, Eppendorf® | Natural tip for gel | 200 | 69.0 | 9.282 109 | 816 |
| Socorex®, Gilson® | Natural tip | 200 | 69.0 | 9.282 110 | 1000 |
| Socorex®, Gilson® | Natural tip | 200 | 49.7 | 9.282 111 | 960 |
| Socorex®, Gilson® | Yellow tip | 200 | 49.7 | 9.282 112 | 1000 |
| Socorex®, Gilson® | Yellow tip | 200 | 49.7 | 9.282 113 | 960 |
| Socorex®, Eppendorf® | Yellow tip | 200 | 49.0 | 9.282 114 | 1000 |
| Socorex®, Eppendorf® | Yellow tip | 200 | 49.0 | 9.282 115 | 960 |
| Socorex®, Gilson®, Eppendorf® | Natural tip | 350 | 58.8 | 9.282 116 | 1000 |
| Socorex®, Gilson®, Eppendorf® | Natural tip | 350 | 58.8 | 9.282 117 | 960 |
| Socorex®, Gilson®, Eppendorf® | Natural universal tip | 1000 | 79.1 | 9.282 118 | 1000 |
| Socorex®, Gilson®, Eppendorf® | Natural universal tip | 1000 | 79.1 | 9.282 119 | 600 |
| Socorex®, Gilson® | Natural tip | 1000 | 72.0 | 9.282 120 | 1000 |
| Socorex®, Gilson® | Natural tip | 1000 | 72.0 | 9.282 121 | 480 |
| Socorex®, Gilson® | Blue tip | 1000 | 72.0 | 9.282 122 | 1000 |
| Socorex®, Gilson® | Blue tip | 1000 | 72.0 | 9.282 123 | 480 |
| Socorex®, Eppendorf® | Blue tip | 1000 | 69.5 | 9.282 124 | 1000 |
| Socorex®, Eppendorf® | Blue tip | 1000 | 69.5 | 9.282 125 | 480 |



1 Universal pipette stand 337

- Holds up to 7 single-channel pipettes of most brands
- Available in 5 attractive colours
- Space-saving table-mounted models
- Polyacrylamide (PA) material is easy to clean

Socorex

| Colour | Cat. No. | PK |
|----------------|-----------|----|
| light grey | 9.411 491 | 1 |
| pink | 9.411 504 | 1 |
| ice blue | 9.411 492 | 1 |
| mint green | 9.411 493 | 1 |
| vanilla yellow | 9.411 494 | 1 |

2 Pipette stand for Calibra® and Acura® models

- PP
- For multi and single channel pipettes
- Stable and durable platform with anti-slip feet

Socorex

| Description | Cat. No. | PK |
|----------------------------------|-----------|----|
| Pipette stand 340 for 3 pipettes | 9.411 505 | 1 |



3 Pipettors, variable volume, stepper type, Varipette®

The Eppendorf Varipette® 4720 is an adjustable volume pipette, with which you can precisely pipette volumes up to 10 ml (in 10 µl steps). Ideal for use with high vapour pressure or viscous liquids.

eppendorf

| Type | Cat. No. | PK |
|---|-----------|-----|
| Varipette® 4720 | 9.283 321 | 1 |
| Adapter for storing the Varipette® 4720 in the carousel pipettor stand | 9.283 344 | 1 |
| Starter Kit (100 maxitips, 10 dispensing components, 10 valves, 2 maxitips G) | 9.283 402 | 100 |

4 Tips, Varitip P and Varitip S

- Varitip P for aspirating 1 ml to 10 ml, e.g. out of beakers
- Positive displacement tips
- Varitip S for aspirating 2.5 ml to 10 ml out of high, narrow neck vessels
- Air displacement tips
- The system consists of a dispensing part and Maxitips
- No carry-over as Maxitip is exchanged
- Valve for the maxitip ensures the drip-free dispensing of liquids with high vapour pressure
- Graduated Maxitip G for compensating the Varipette's nominal value

eppendorf

Varitip P for extraction from smaller vessels
 Varitip S for removal from narrow neck vessels and volumetric flasks, consisting of: dispensing part, Maxitip, Maxitip G, and valve for Varitip S

| Type | Cat. No. | PK |
|---|-----------|-----|
| Varitip P tips | 9.283 403 | 100 |
| Dispensing part for Varitip S tips | 9.283 324 | 30 |
| Maxitip for Varitip S tips | 9.283 325 | 200 |
| Maxitip G, graduated tip for Varitip S tips | 9.283 327 | 5 |
| Valve for Varitip S tips | 9.283 326 | 100 |



5 Pipettor rack, plastic

- White Plexiglas, for 6 pipettors.
 Holds all makes of pipettor such as Eppendorf, Brand, Gilson etc.
- Also suitable for pipettors with side-mounted tip ejector
 - The two front compartments can accommodate complete packs of Eppendorf Comfort pipette tips or a large number of loose pipette tips
 - With lid to prevent contamination

| Type | Cat. No. | PK |
|------------------------|-----------|----|
| Pipettor rack, plastic | 9.412 229 | 1 |

1 Pipettors, positive displacement, stepper type, Multipette® plus

- Easy to read: Combitip identification with digital volume display
- Positive displacement principle is ideal for viscous or high vapour pressure liquids
- Up to 100 dispensings from one fill for easy processing of long series
- 112 different volumes, also "non-standard" volumes, such as 1 µl, 3 µl and 17 µl
- Simple, variable volume setting from 1 µl to 10 ml
- Easy Combitip insertion without contact
- 2-year guarantee

eppendorf



| Type | Cat. No. | PK |
|------------------|-----------|----|
| Multipette® plus | 9.283 603 | 1 |

2 Dispensers Multipette® stream and Multipette® Xstream

Application

- Dispensing volumes in long series
- Electronic dispensing with memory functions
- Contamination-free dispensing using positive displacement principle
- Ideal for viscous solutions (e.g. glycerol, oil) or liquids with high vapour pressure (e.g. acetone, ethanol)

Product features Multipette® stream

- Dispensing and pipetting according to positive displacement principle
- Automatic dispensing
- Rapid, ergonomic dispensing with motorized piston
- One-button tip ejector
- Li-Ion battery
- Selection wheel
- Automatic Combitip® plus tip recognition
- IVD conformity
- Volume range from 1 µl to 50 ml
- During operation charging possible

Additional product features of Multipette® Xstream

- Aspirating (pipetting of supernatants)
- Titration
- Sequential dispensing

eppendorf



| Type | Cat. No. | PK |
|---|-----------|----|
| Multipette® stream | 9.283 615 | 1 |
| Multipette® Xstream | 9.283 616 | 1 |
| Charging stand Multipette® stream / Xstream | 9.283 617 | 1 |

3 Dispensing system, positive displacement, stepper type, Edos® 5222

High performance liquid-handling unit for high sample throughput and complex dispensing.

- Automatic recognition of Combitips and pipetting adapters
- Variable volume selection from 0.5 µl to 50 ml
- Dispensing and aspirating speeds individually adjustable in 8 steps
- Control unit with clear and user-friendly keyboard
- Fully calibratable for liquids with different viscosities
- Serial dispensing with one Combitip filling of up to 12 different volumes with different repeat frequencies
- Up to 30 work protocols can be saved per mode
- Can be integrated in laboratory automation via PC connection (RS232 C interface)
- Clear user control

eppendorf



| Type | Cat. No. | PK |
|--|-----------|----|
| Edos® 5222 incl. power pack | 9.283 060 | 1 |
| Pipetting adapter Pip 10: 0.5 to 10 µl | 9.283 065 | 1 |
| Pipetting adapter Pip 100: 10 to 100 µl | 9.283 066 | 1 |
| Pipetting adapter Pip 1000: 100 to 1000 µl | 9.283 067 | 1 |
| 8-channel pipetting adapter 5 to 50 µl | 9.283 070 | 1 |
| 8-channel pipetting adapter 30 to 300 µl | 9.283 071 | 1 |
| 8-channel pipetting adapter 50 to 1200 µl | 9.283 072 | 1 |
| Storage hook clip for dispensing handle | 9.283 075 | 1 |



1 Pipette tips, Combitips plus

- Ideal system components for all Multipettes and Edos® dispensing system
 - Wide ranging capacity selection with 9 sizes of Combitip plus
 - 20 different volumes per Combitip size
 - Accurate results through "positive displacement" operation
 - Fine Combitip tip cones for exact dispensing without additional pipette tips
 - Standard and Eppendorf Biopur® versions available
- Supplied in packs of 100

eppendorf

| Type | Minimum | Maximum | Cat. No. | PK |
|---|---------------|---------------|-----------|-----|
| | Interval (µl) | Interval (µl) | | |
| Combitips plus 0.1 ml | 1 | 20 | 9.283 605 | 100 |
| Combitips plus 0.2 ml | 2 | 40 | 9.283 606 | 100 |
| Combitips plus 0.5 ml | 5 | 100 | 9.283 607 | 100 |
| Combitips plus 1.0 ml | 10 | 200 | 9.283 608 | 100 |
| Combitips plus 2.5 ml | 25 | 500 | 9.283 609 | 100 |
| Combitips plus 5.0 ml | 50 | 1000 | 9.283 610 | 100 |
| Combitips plus 10 ml | 100 | 2000 | 9.283 611 | 100 |
| Combitips plus 25 ml | 250 | 5000 | 9.283 613 | 100 |
| Combitips plus 50 ml | 500 | 10000 | 9.283 612 | 100 |
| 25 ml adapter standard, navy blue | | | 9.283 619 | 1 |
| 50 ml adapter Eppendorf standard, anthracite | | | 9.283 620 | 1 |
| Mixed pack standard (5 of each size plus 1 each of 50 ml and 25 ml adapters) | | | 9.283 625 | 1 |
| Multipette plus adapter for carousel pipette stand | | | 9.283 655 | 1 |
| Combilong (suction aids for aspirating from volumetric flasks or tall neck bottles: Combitip plus sizes 5, 25, 50 ml) | | | 9.283 428 | 2 |
| Multipette adapter for the pipettor carousel | | | 9.283 656 | 1 |



2 Pipette tips, Biopur Combitips

For RNase-, DNA-, ATP- and pyrogen-free work.

eppendorf

- Continuous quality control by independent laboratory
 - Can be supplied with a batch-related quality certificate upon request
- The Eppendorf Biopur seal stands for the highest biological purity.

Eppendorf Biopur disposable products are guaranteed sterile, pyrogen-free, RNase-free, DNA-free and ATP-free. They therefore meet the highest requirements in the medical, pharmaceutical and food industries, in PCR technology, molecular biology and cell technology. This new dimension of purity is made possible because of a production process that is comprehensively automated through all of the manufacturing stages up to the end product and that excludes all types of contamination with biological substances.

Biopur Combitips, individually blister packed in outer cases of 100

| Type | Minimum | Maximum | Cat. No. | PK |
|--|---------------|---------------|-----------|-----|
| | Interval (µl) | Interval (µl) | | |
| 0.1 ml | 1 | 20 | 9.283 640 | 100 |
| 0.2 ml | 2 | 40 | 9.283 641 | 100 |
| 0.5 ml | 5 | 100 | 9.283 642 | 100 |
| 1 ml | 10 | 200 | 9.283 643 | 100 |
| 1.25 ml | 25 | 125 | 9.283 502 | 100 |
| 2.5 ml | 25 | 500 | 9.283 644 | 100 |
| 5 ml | 50 | 1000 | 9.283 645 | 100 |
| 10 ml | 100 | 2000 | 9.283 646 | 100 |
| 25 ml | 250 | 5000 | 9.283 649 | 100 |
| 12.5 ml | 250 | 1250 | 9.283 505 | 100 |
| 50 ml | 500 | 10000 | 9.283 647 | 100 |
| 25 ml adapter Biopur® f. Combitips®, individually blister-packed | | | 9.283 652 | 7 |
| 50 ml adapter Biopur® f. Combitips®, individually blister-packed | | | 9.283 650 | 7 |



3 Pipette tips, Combitip rack

- Box with slide cover and tray insert for storage of up to 10 x 0.1 ml to 10 ml Combitips (plus)
- Can also be used as stand for Multipette plus
- One-handed tip attachment
- Removable sliding cover
- Non-slip base

eppendorf

| Type | Cat. No. | PK |
|-----------------------------|-----------|----|
| Pipette tips, Combitip rack | 9.283 660 | 1 |

1 Pipettors, positive displacement, stepper type, HandyStep®

BRAND

New, ergonomic hand dispenser for quick and simple repetitive dispensing of liquids. With just one filling you can, according to the size of the PD tip used, pipette volumes between 2 µl and 5 ml in up to 49 intervals.

- Ergonomic design
 - Suitable for Plastibrand® PD tips, Combitips®, Combitips® plus and other compatible tips
 - One handed operation
 - All functions can be carried out with just three controls.
 - CE marked according to IVD 98/79 EG
- Supplied with wall support.

| Type | Cat. No. | PK |
|------------|-----------|----|
| HandyStep® | 9.280 926 | 1 |
| Wall unit | 9.280 927 | 1 |



2 Pipettors, positive displacement, stepper type, HandyStep® electronic

BRAND

Microprocessor-controlled hand dispenser for fatigue-free, serial dispensing in a wide range of applications. Ergonomic shape permits comfortable use and provides uniform precision, independent of user influence.

- Automatic size recognition of new Brand PD tips with piston coding
- Can be used with most other commercial dispenser tips
- Variable volume setting between 1 µl and 50 ml
- LCD readout of volume, number of dispensing steps and aspirating/dispensing speed
- Functions: dispensing, auto dispensing, pipetting with continuously variable volume
- Innovative recharging dock concept reduces downtimes
- User-friendly, intuitive menu system
- Auto dispensing with learning feature (average speed of first three dispensings memorized, then used for subsequent procedures during session)
- CE marked according to IVD 98/79 EG.
- NiMH battery pack can be recharged when fitted or separately.
- CE-marked according to IVD 98/79 EG.

| Type | Cat. No. | PK |
|---|-----------|----|
| HandyStep electronic, incl. NiMH battery pack, charging dock with European plug, 230 V 50 Hz power supply | 9.284 040 | 1 |

Other power supplies on request.



3 Accessories for pipettors, positive displacement, stepper type, HandyStep® electronic

BRAND

| Type | Cat. No. | PK |
|--|-----------|----|
| European plug, 230 V 50 Hz power supply only | 9.284 041 | 1 |
| Charging dock only, without power supply | 9.284 042 | 1 |
| NiMH battery pack, spare | 9.284 043 | 1 |

Other power supplies on request.



Pipettors, positive displacement, stepper type, HandyStep® electronic

BRAND

| Capacity | Capacity | Accuracy ≤ ± A% Nom. capacity 100% / 10% | Reproducibility ≤ ± V% Nom. capacity 100% 10% |
|----------|----------------|---|--|
| ml | µl | | |
| 0.1 | 1 to 100 | 1.0 / 1.6 | 0.5 / 2.0 |
| 0.5 | 5 to 500 | 0.9 / 0.9 | 0.25 / 1.0 |
| 1.2 | 125 to 1250 | 0.6 / 0.9 | 0.15 / 0.6 |
| 2.5 | 25 to 2500 | 0.5 / 0.8 | 0.1 / 0.4 |
| 5.0 | 50 to 5000 | 0.5 / 0.8 | 0.08 / 0.3 |
| 12.5 | 125 to 12.5 ml | 0.4 / 0.5 | 0.08 / 0.25 |
| 25.0 | 250 to 25 ml | 0.3 / 0.3 | 0.08 / 0.25 |
| 50.0 | 500 to 50 ml | 0.3 / 0.3 | 0.08 / 0.25 |

Tolerances according to ISO 8655.

4 Adapters

BRAND

Adapters for 25 ml and 50 ml PD tips.

| Type | Cat. No. | PK |
|----------------------|-----------|----|
| Adapter, non-sterile | 9.280 942 | 10 |
| Adapter, sterile* | 9.280 943 | 5 |

* Individually packed.





1 Precision Dispenser Tips for Stepper Pipettors

BRAND

The Plastibrand® PD-Tips with patented size encoding are the ideal system component for the HandyStep® electronic (with automatic tip size recognition) and HandyStep® from Brand. They can be used also with compatible, third-party dispensing systems. The automatic size detection option is available with HandyStep® electronic, Gilson® Repetman®, and Rainin AutoRep™ E. In addition, PD-Tips can be used with HandyStep®, Rainin AutoRep™ M, Eppendorf® Multipette® 4780 and EDOS® 5221 among others. PD-Tips are Conformity-certified, comply with ISO 8655 requirements and come with a batch certificate. CE-marked according to IVD-Directive 98/79 EC. PD-Tips are available in 8 different sizes from 0.1 ml to 50 ml. They are available non-sterile, sterile/endotoxin-free (individually wrapped), as well as in Bio-Cert® quality (available on request). Bio-Cert® products are free from DNA, RNase and ATP. Quality control is conducted at an independent, accredited test laboratory. A batch-related certificate will be provided. For 25 and 50 ml tips, an adapter is required and is included.

| Capacity ml | Type | Cat. No. | PK |
|-------------|-------------|-----------|-----|
| 0.1 | non-sterile | 9.280 923 | 100 |
| 0.5 | non-sterile | 9.280 928 | 100 |
| 1.2 | non-sterile | 9.280 930 | 100 |
| 2.5 | non-sterile | 9.280 932 | 100 |
| 5.0 | non-sterile | 9.280 934 | 100 |
| 12.5 | non-sterile | 9.280 936 | 100 |
| 25.0 | non-sterile | 9.280 938 | 50 |
| 50.0 | non-sterile | 9.280 940 | 25 |
| 0.1 | sterile | 9.280 924 | 100 |
| 0.5 | sterile | 9.280 929 | 100 |
| 1.2 | sterile | 9.280 931 | 100 |
| 2.5 | sterile | 9.280 933 | 100 |
| 5.0 | sterile | 9.280 935 | 100 |
| 12.5 | sterile | 9.280 937 | 100 |
| 25.0 | sterile | 9.280 939 | 25 |
| 50.0 | sterile | 9.280 941 | 25 |



2 Manual step dispenser, ripette®

Ritter ripette® is a very comfortable device for hand dispensing of long series. A special technical mechanism guarantees the precision of all selected dosage volumes: 1 to 5000 µl. Product advantages:

- Chart with dosage setting volumes incorporated into each dispenser.
- Lightweight (approx. 100 g)
- Easy-to-use adjustment dial for the selection of dosage volume and the number of steps
- No mechanical parts that wear out, no maintenance

| Description | Cat. No. | PK |
|--------------------------------|-----------|----|
| ripette® with 25/50 ml adaptor | 9.284 190 | 1 |



3 Dispenser tips ritips® professional standard

New generation of Ritter dispenser tips in 9 newly designed sizes, standard and bioclean® (sterile). Suitable for use together with Ritter ripette®, Multipette® 4780, HandyStep®, Minilab 100/1001, Stepmate, EasyStep, DISTRIMAN®, Multipette® plus* and HandyStep® electronic. Dosage volumes for use with Multipette® plus and other compatible systems are printed on each box. CE-marking according to IVD-directive 98/79 EG on each box. *When used with Multipette® plus the display is inoperative

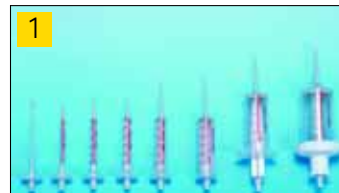
| Type | Cat. No. | PK |
|----------------------------------|-----------|-----|
| 0.1 ml / Standard | 9.284 191 | 100 |
| 0.2 ml / Standard | 9.284 192 | 100 |
| 0.5 ml / Standard | 9.284 193 | 100 |
| 1.0 ml / Standard | 9.284 194 | 100 |
| 2.5 ml / Standard | 9.284 195 | 100 |
| 5.0 ml / Standard | 9.284 196 | 100 |
| 10.0 ml / Standard | 9.284 197 | 100 |
| 25.0 ml / Standard | 9.284 198 | 25 |
| 50.0 ml / Standard | 9.284 199 | 25 |
| Tip- Mix, standard** | 9.284 200 | 100 |
| Adapter for 25 ml and 50 ml Tips | 9.284 201 | 1 |
| 0.1 ml / sterile | 9.284 210 | 100 |
| 0.2 ml / sterile | 9.284 211 | 100 |
| 0.5 ml / sterile | 9.284 212 | 100 |
| 1.0 ml / sterile | 9.284 213 | 100 |
| 2.5 ml / sterile | 9.284 214 | 100 |
| 5.0 ml / sterile | 9.284 215 | 100 |
| 10.0 ml / sterile | 9.284 216 | 100 |
| 25.0 ml / sterile | 9.284 217 | 25 |
| 50.0 ml / sterile | 9.284 218 | 25 |

* electronic tip recognition suppressed

** Tip-mix consists of 20 x 0.5 ml, 20 x 1.0 ml, 20 x 2.5 ml, 20 x 5.0 ml and 20 x 10.0 ml sizes

1 Dispenser tips, ritips®

Precision dispenser tips by Ritter in 8 sizes standard and bioclean® (sterile). Suitable for use together with Ritter ripette®, Multipette® 4780, HandyStep®, Minilab 100/101, Stepmate, EasyStep, DISTRIMAN® and HandyStep® electronic. CE-marking according to IVD-directive 98/79 EG on each box.



| Type | Cat. No. | PK |
|--------------------|-----------|-----|
| 0.05 ml / standard | 9.284 220 | 100 |
| 0.5 ml / standard | 9.284 221 | 100 |
| 1.25 ml / standard | 9.284 222 | 100 |
| 2.5 ml / standard | 9.284 223 | 100 |
| 5.0 ml / standard | 9.284 224 | 100 |
| 12.5 ml / standard | 9.284 225 | 100 |
| 25.0 ml / standard | 9.284 226 | 25 |
| 50.0 ml / standard | 9.284 227 | 25 |
| 0.05 ml / sterile | 9.284 237 | 100 |
| 0.5 ml / sterile | 9.284 230 | 100 |
| 1.25 ml / sterile | 9.284 231 | 100 |
| 2.5 ml / sterile | 9.284 232 | 100 |
| 5.0 ml / sterile | 9.284 233 | 100 |
| 12.5 ml / sterile | 9.284 234 | 100 |
| 25.0 ml / sterile | 9.284 235 | 25 |
| 50.0 ml / sterile | 9.284 236 | 25 |

2 Pipettors, positive displacement, variable, repeating, Stepper™ 411

Socorex



| Description | Cat. No. | PK |
|--|-----------|----|
| Stepper™ 411 supplied with colour-coded adjustment knobs, adapter, samples of Ecostep syringes | 9.411 561 | 1 |
| Spare PVC workstation | 9.411 567 | 1 |
| Spare adapters for 37.5 ml (red) Ecostep syringe tips | 9.411 568 | 5 |

3 Syringe tips, Ecostep

Individually wrapped sterile, or loose-packed non-sterile.

Socorex



| Type | Cat. No. | PK |
|--------------------------------------|-----------|-----|
| Non-sterile, 0.75 ml, 10 to 100 µl | 9.411 509 | 100 |
| Sterile, 0.75 ml, 10 to 100 µl | 9.411 510 | 100 |
| Non-sterile, 3.75 ml, 50 to 500 µl | 9.411 511 | 100 |
| Sterile, 3.75 ml, 50 to 500 µl | 9.411 512 | 100 |
| Non-sterile, 37.5 ml, 500 to 5000 µl | 9.411 513 | 100 |
| Sterile, 37.5 ml, 500 to 5000 µl | 9.411 514 | 100 |



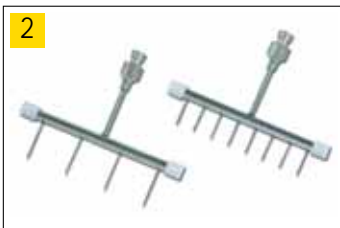
1 Microdispensers, adjustable, Acura® manual 865

- Graduated micrometer barrel setting
- High chemical resistance
- Built-in three-way valve
- Autoclavable at 121°C
- Simple user-calibration facility

Socorex

Accessories please order separately.

| Capacity | Grad. | Accuracy ≤ ± A% (min. vol.) | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (min. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|-------------|-------|-----------------------------------|-----------------------------------|---|---|-----------|----|
| µl | µl | | | | | | |
| 5 to 50 | 0.1 | 5.0 | 1.5 | 2.0 | 0.4 | 9.411 516 | 1 |
| 20 to 200 | 0.2 | 2.5 | 1.0 | 1.5 | 0.3 | 9.411 517 | 1 |
| 100 to 1000 | 1 | 1.5 | 0.6 | 0.6 | 0.2 | 9.411 518 | 1 |



2 Accessories for Microdispensers, Acura® manual 865

Socorex

| Description | Cat. No. | PK |
|--|-----------|----|
| Reservoir with Luer connection, PP, 30 ml | 9.411 572 | 1 |
| Reservoir with Luer connection, PTFE, 30 ml | 9.411 573 | 1 |
| Manifold, 4-channel, LL, stainless steel, autoclavable | 9.411 574 | 1 |
| Manifold, 8-channel, LL, stainless steel, autoclavable | 9.411 575 | 1 |



3 Bottle-top dispenser Dispensette®

BRAND

The Dispensette® bottle-top dispenser has proven itself the world over with its wide range of practical applications. It has been continuously improved over decades to meet the increasing demands of the laboratory.

BRAND offers three different models of Dispensette®:

- Dispensette® III: the approved dispenser for dispensing many aggressive reagents.
- Dispensette® Organic: especially for dispensing organic solvents and acids.
- Dispensette® HF: especially for dispensing hydrofluoric acid (HF).

(A detailed chemical compatibility chart can be requested at the manufacturer.)

The Dispensette® is available in different types:

Dispensette® Digital Easy Calibration:

- Digital display: especially easy to read, and dispensing volume can be set accurately and reproducibly (mechanical counter).
- Easy Calibration: Innovative technique for adjustment in seconds without tools.

Dispensette® Analog-adjustable:

- Fast volume adjustment with analog slide.
- Simple calibration adjustment with supplied tool.

Dispensette® Fixed-volume:

- Fixed-volume for standard applications.
- Simple calibration adjustment with supplied tool.

In general every Dispensette® offers:

- SafetyPrime™ recirculation valve (optional) reduces risk of splashes caused by air bubbles during instrument priming and permits recirculation during priming to avoid reagent waste.
- The integrated safety discharge system reduces the risk of inadvertent dispensing and splashes if discharge tube is improperly installed or missing.
- Discharge tube safety screw cap protects against reagent contact and is easy to attach and remove, even while wearing gloves.
- To allow the bottle label to face the user, the valve block can be rotated 360°.
- Telescoping filling tube adjusts easily to different size bottles - without measuring or cutting.
- The minimal force needed to operate the floating piston makes serial dispensing convenient and effortless.
- Easy to dismantle for cleaning and replaceable filling valves.
- Conformity certified
- Easy to calibrate and adjust in order to comply with ISO 9001 and GLP guidelines.
- Autoclavable (121°C)

Items supplied: Dispensette®, conformity certified and supplied with performance certificate, discharge tube, telescopic filling tube, SafetyPrime™ recirculation valve (optional), mounting tool and adapters of PP.

1 Bottle-top dispensers Dispensette® III

BRAND

Dispensette® III, Easy Calibration, conformity certified.

- Dispensette® III offers a broad application range for dispensing aggressive reagents, including strong acids such as H₃PO₄, H₂SO₄, alkaline solutions such as NaOH, KOH, saline solutions as well as a number of organic solvents. For fuming, concentrated HCl and HNO₃ and for trifluoroacetic acid (TFA), tetrahydrofuran (THF), dichloromethane and peroxide we recommend Dispensette® Organic.
- Those components which come into contact with liquids are made of the following high-grade materials: borosilicate glass, ceramic, platinum-iridium, ETFE, FEP, PFA and PP (discharge tube screw cap).
- Restrictions: vapour pressure max. 500 mbar, viscosity max. 500 mm²/s, temperature max. 40°C, min. 4°C, density max. 2.2 g/cm³.

| Capacity | Grad. | Accuracy | ± µl | Repro-ducibility | ± µl | Recycle valve | Cat. No. | PK |
|-----------|-------|--------------------|------|--------------------|------|---------------|-----------|----|
| ml | ml | ≤ ± A% (max. vol.) | | ≤ ± V% (max. vol.) | | | | |
| 0.2 to 2 | 0.01 | 0.5 | 10 | 0.1 | 2 | with | 9.284 461 | 1 |
| 0.5 to 5 | 0.02 | 0.5 | 25 | 0.1 | 5 | with | 9.284 465 | 1 |
| 1 to 10 | 0.05 | 0.5 | 50 | 0.1 | 10 | with | 9.284 471 | 1 |
| 2.5 to 25 | 0.10 | 0.5 | 125 | 0.1 | 25 | with | 9.284 475 | 1 |
| 5 to 50 | 0.20 | 0.5 | 250 | 0.1 | 50 | with | 9.284 481 | 1 |
| 0.2 to 2 | 0.01 | 0.5 | 10 | 0.1 | 2 | without | 9.284 460 | 1 |
| 0.5 to 5 | 0.02 | 0.5 | 25 | 0.1 | 5 | without | 9.284 464 | 1 |
| 1 to 10 | 0.05 | 0.5 | 50 | 0.1 | 10 | without | 9.284 470 | 1 |
| 2.5 to 25 | 0.10 | 0.5 | 125 | 0.1 | 25 | without | 9.284 474 | 1 |
| 5 to 50 | 0.20 | 0.5 | 250 | 0.1 | 50 | without | 9.284 480 | 1 |



2 Bottle-top dispensers Dispensette® III

BRAND

Dispensette® III, variable, conformity certified.

| Capacity | Grad. | Accuracy | ± µl | Repro-ducibility | ± µl | Recycle valve | Cat. No. | PK |
|-------------|-------|--------------------|------|--------------------|------|---------------|-----------|----|
| ml | ml | ≤ ± A% (max. vol.) | | ≤ ± V% (max. vol.) | | | | |
| 0.05 to 0.5 | 0.01 | 1.0 | 5 | 0.2 | 1 | with | 9.284 405 | 1 |
| 0.2 to 2 | 0.05 | 0.5 | 10 | 0.1 | 2 | with | 9.284 411 | 1 |
| 0.5 to 5 | 0.10 | 0.5 | 25 | 0.1 | 5 | with | 9.284 415 | 1 |
| 1 to 10 | 0.20 | 0.5 | 50 | 0.1 | 10 | with | 9.284 421 | 1 |
| 2.5 to 25 | 0.50 | 0.5 | 125 | 0.1 | 25 | with | 9.284 425 | 1 |
| 5 to 50 | 1.00 | 0.5 | 250 | 0.1 | 50 | with | 9.284 431 | 1 |
| 10 to 100 | 1.00 | 0.5 | 500 | 0.1 | 100 | with | 9.284 435 | 1 |
| 0.05 to 0.5 | 0.01 | 1.0 | 5 | 0.2 | 1 | without | 9.284 404 | 1 |
| 0.2 to 2 | 0.05 | 0.5 | 10 | 0.1 | 2 | without | 9.284 410 | 1 |
| 0.5 to 5 | 0.10 | 0.5 | 25 | 0.1 | 5 | without | 9.284 414 | 1 |
| 1 to 10 | 0.20 | 0.5 | 50 | 0.1 | 10 | without | 9.284 420 | 1 |
| 2.5 to 25 | 0.50 | 0.5 | 125 | 0.1 | 25 | without | 9.284 424 | 1 |
| 5 to 50 | 1.00 | 0.5 | 250 | 0.1 | 50 | without | 9.284 430 | 1 |
| 10 to 100 | 1.00 | 0.5 | 500 | 0.1 | 100 | without | 9.284 434 | 1 |



3 Bottle-top dispenser Dispensette® III

BRAND

Dispensette® III, fixed volume, conformity certified.

| Capacity | Accuracy | ± µl | Repro-ducibility | ± µl | Recycle valve | Cat. No. | PK |
|----------|--------------------|------|--------------------|------|---------------|-----------|----|
| ml | ≤ ± A% (max. vol.) | | ≤ ± V% (max. vol.) | | | | |
| 1 | 0.5 | 5 | 0.1 | 1 | with | 9.284 441 | 1 |
| 2 | 0.5 | 10 | 0.1 | 2 | with | 9.284 445 | 1 |
| 5 | 0.5 | 25 | 0.1 | 5 | with | 9.284 451 | 1 |
| 10 | 0.5 | 50 | 0.1 | 10 | with | 9.284 455 | 1 |
| 1 | 0.5 | 5 | 0.1 | 1 | without | 9.284 440 | 1 |
| 2 | 0.5 | 10 | 0.1 | 2 | without | 9.284 444 | 1 |
| 5 | 0.5 | 25 | 0.1 | 5 | without | 9.284 450 | 1 |
| 10 | 0.5 | 50 | 0.1 | 10 | without | 9.284 454 | 1 |





1 Bottle-top dispensers Dispensette® Organic

Dispensette® Organic (colour coded yellow), variable volume, is the ideal device for dispensing solvents, e.g. chlorinated and fluorinated hydrocarbons such as trichlorotrifluoroethane and dichloromethane, or concentrated acids such as fuming HCl and HNO₃, trifluoroacetic acid, tetrahydrofuran and peroxides. For alkaline and saline solutions we recommend Dispensette® III. Components which come into contact with liquid are made of the following high-grade materials: borosilicate glass, ceramic, tantalum, ETFE, FEP, PFA and PP (discharge tube screw cap). Restrictions: vapour pressure max. 500 mbar, viscosity max. 500 mm²/s, temperature max. 40°C, min. 4°C, density max. 2.2 g/cm³. Dispensette® Organic, Easy Calibration, conformity certified

BRAND

| Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | ± µl | Repro- ducibility ≤ ± V% (max. vol.) | ± µl | Recycle valve | Cat. No. | PK |
|-----------|-------|-----------------------------------|------|---|------|------------------|-----------|----|
| ml | ml | | | | | | | |
| 0.5 to 5 | 0.02 | 0.5 | 25 | 0.1 | 5 | without | 9.284 070 | 1 |
| 0.5 to 5 | 0.02 | 0.5 | 25 | 0.1 | 5 | with | 9.284 074 | 1 |
| 1 to 10 | 0.05 | 0.5 | 50 | 0.1 | 10 | without | 9.284 071 | 1 |
| 1 to 10 | 0.05 | 0.5 | 50 | 0.1 | 10 | with | 9.284 075 | 1 |
| 2.5 to 25 | 0.1 | 0.5 | 125 | 0.1 | 25 | without | 9.284 072 | 1 |
| 2.5 to 25 | 0.1 | 0.5 | 125 | 0.1 | 25 | with | 9.284 076 | 1 |
| 5 to 50 | 0.2 | 0.5 | 250 | 0.1 | 50 | without | 9.284 073 | 1 |
| 5 to 50 | 0.2 | 0.5 | 250 | 0.1 | 50 | with | 9.284 077 | 1 |



2 Bottle-top dispenser Dispensette® Organic

Dispensette® Organic, variable volume, conformity certified.

BRAND

| Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | ± µl | Repro- ducibility ≤ ± V% (max. vol.) | ± µl | Recycle valve | Cat. No. | PK |
|-----------|-------|-----------------------------------|------|---|------|------------------|-----------|----|
| ml | ml | | | | | | | |
| 0.5 to 5 | 0.1 | 0.5 | 25 | 0.1 | 5 | without | 9.284 078 | 1 |
| 0.5 to 5 | 0.1 | 0.5 | 25 | 0.1 | 5 | with | 9.284 082 | 1 |
| 1 to 10 | 0.2 | 0.5 | 50 | 0.1 | 10 | without | 9.284 079 | 1 |
| 1 to 10 | 0.2 | 0.5 | 50 | 0.1 | 10 | with | 9.284 083 | 1 |
| 2.5 to 25 | 0.5 | 0.5 | 125 | 0.1 | 25 | without | 9.284 080 | 1 |
| 2.5 to 25 | 0.5 | 0.5 | 125 | 0.1 | 25 | with | 9.284 084 | 1 |
| 5 to 50 | 1.0 | 0.5 | 250 | 0.1 | 50 | without | 9.284 081 | 1 |
| 5 to 50 | 1.0 | 0.5 | 250 | 0.1 | 50 | with | 9.284 085 | 1 |
| 10 to 100 | 1.0 | 0.5 | 500 | 0.1 | 100 | without | 9.284 086 | 1 |
| 10 to 100 | 1.0 | 0.5 | 500 | 0.1 | 100 | with | 9.284 087 | 1 |



3 Bottle-top dispenser Seripettor®

Cost-effective, bottle top dispensers constructed in specially selected materials which allow routine dispensing of alkaline and aqueous solutions, low-concentration acids, etc. The modular design minimises cleaning and maintenance time and combines easy and safe operation with low purchasing and operating costs:

BRAND

- No breakable glass components
- Interchangeable PP/PE dispensing cartridge and separately replaceable valves prolong operating life
- Disassembles without tools for easy cleaning and maintenance
- Single-handed operation owing to automatic filling of the measuring cylinder
- Graduated slide volume setting with rack-grip

Applications:

- Aqueous solutions
- Low concentration, non-oxidising acids
- Alkaline solutions e.g. ammonia, 30% sodium hydroxide
- Polar solvents e.g. ethanol, acetone.

Limits of use:

Not suitable for media that attack PP, PE or EPDM (oxidising acids or non-polar solvents). The dispensing cartridge is not autoclavable.

Items supplied:

Seripettor® with valve block suitable for fitting directly onto GL 45 neck bottles, spare dispensing cartridge, discharge tube, 250 mm long filling tube and one each PP bottle adapters for A 45/32 and A 45/S 40 necks. Without reservoir bottle.

| Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|-----------|-------|-----------------------------------|---|-----------|----|
| ml | ml | | | | |
| 1 to 10 | 0.2 | 1.2 | 0.2 | 9.284 850 | 1 |
| 2.5 to 25 | 0.5 | 1.2 | 0.2 | 9.284 851 | 1 |

* End test values relate to the nominal values (= max. volume) printed on the dispenser when the temperature (20°C) of the device, environment and distilled water is uniform, and when operated smoothly.

1 Dispensers, bottle-top, Seripettor®, accessories

PP/PE dispensing cartridges.
For Seripettor®. Not autoclavable.

BRAND

| Capacity ml | Cat. No. | PK |
|----------------|-----------|----|
| 10 | 9.284 856 | 3 |
| 25 | 9.284 857 | 3 |



2 Dispensers, bottle-top, Dispensette® III, accessories

Reservoir bottles. Amber soda-lime glass.
With PP screw cap and LDPE pouring ring.
Space-saving, square design, except 2500 ml reservoir which is cylindrical.

BRAND

| Capacity ml | Thread GL | Width mm | Height mm | Cat. No. | PK |
|----------------|--------------|-------------|--------------|-----------|----|
| 250 | 32 | 65 | 160 | 9.284 542 | 1 |
| 100 | 32 | 50 | 125 | 9.284 541 | 1 |
| 500 | 32 | 80 | 195 | 9.284 543 | 1 |
| 1000 | 45 | 95 | 230 | 9.284 544 | 1 |
| 2500 | 45 | 140 | 300 | 9.284 545 | 1 |



3 EM dispensers

EM dispenser PP. Budget version with precision-ground,
glass piston for non-hazardous, aqueous media
and for organic media which do not attack PP.

Hirschmann

| Capacity ml | Graduations ml | Cat. No. | PK |
|----------------|-------------------|-----------|----|
| 2 to 10 | 0.25 | 9.287 829 | 1 |
| 10 to 60 | 1.00 | 9.287 830 | 1 |



4 Dispensers, bottle-top, ceramus-classic

With ceramic pistons. High precision, adjustable bottle-top dispensers adjustable in fixed
steps for the reproducible dispensing of liquids. With patented, high-purity,
alumino-ceramic pistons and highly polished, Duran glass cylinders,
guaranteeing continual durability and precision.

Hirschmann

- No surface abrasion
 - No sticking due to plastic swelling
 - No thermal expansion problems
- Ratchet adjustment mechanism prevents accidental adjustment of the set volume.
When not in use the pistons can be locked and the delivery tubes capped to prevent loss of reagent.
The glass cylinders are encased in plastic for added safety and have a window for viewing the contents.
Can be autoclaved up to max. 121°C/2 bar.
- Inlet and outlet valves are easily replaced
 - Fully supported delivery jet prevents 'side fling' of reagent
 - Screwed inlet suction tube
 - Supplied with one each A 28, A 45, S 40 (Merck flasks) to fit most types of reagent bottle,
suction tube with swivel nut, outlet jet and valve spanner.
 - Works calibrated volume certificate with serial number and 12-month manufacturer's guarantee.
Without reservoir bottle.
 - High-grade materials (ECTFE, Duran glass, FEP) are used throughout.



| Capacity ml | Graduations ml | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|----------------|-------------------|-----------------------------------|---|-----------|----|
| 0.2 to 1 | 0.05 | 0.6 | 0.2 | 9.287 831 | 1 |
| 0.4 to 2 | 0.05 | 0.6 | 0.1 | 9.287 832 | 1 |
| 1 to 5 | 0.10 | 0.6 | 0.1 | 9.287 833 | 1 |
| 2 to 10 | 0.25 | 0.6 | 0.1 | 9.287 834 | 1 |
| 5 to 30 | 0.50 | 0.6 | 0.1 | 9.287 835 | 1 |
| 10 to 60 | 1.00 | 0.6 | 0.1 | 9.287 836 | 1 |



1 Dispensers, bottle-top, ceramus®

New dispenser technology from Hirschmann laboratory apparatus, with ceramic pistons. ceramus® are a high-precision, bottle-top dispenser range for almost all liquids.

Hirschmann

- Environmentally-friendly, reagent-saving, recirculation valves
- Tough, ceramic pistons
- Simple, self-locking volume selection
- When not in use, pistons can be locked and delivery tubes capped to prevent loss of reagent.
- Fixed interval graduations give excellent reproducibility
- 45mm screw neck and adapters supplied allow use with a variety of reservoir bottles
- Smooth-action piston minimises operator fatigue during serial dispensing
- High-grade construction materials provide long operational life
- 12-month manufacturer's guarantee

| Type | Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|----------|--------------|-------|-----------------------------------|---|-----------|----|
| | ml | ml | | | | |
| Variable | 0.2 to 1.0 | 0.05 | 0.6 | 0.2 | 9.287 800 | 1 |
| Variable | 0.4 to 2.0 | 0.05 | 0.6 | 0.1 | 9.287 801 | 1 |
| Variable | 1.0 to 5.0 | 0.1 | 0.6 | 0.1 | 9.287 802 | 1 |
| Variable | 2.0 to 10.0 | 0.25 | 0.6 | 0.1 | 9.287 803 | 1 |
| Variable | 5.0 to 30.0 | 0.5 | 0.6 | 0.1 | 9.287 804 | 1 |
| Variable | 10.0 to 60.0 | 1.0 | 0.6 | 0.1 | 9.287 805 | 1 |
| Fixed | 1.0 | - | 0.5 | 0.2 | 9.287 806 | 1 |
| Fixed | 2.0 | - | 0.5 | 0.1 | 9.287 807 | 1 |
| Fixed | 5.0 | - | 0.5 | 0.1 | 9.287 808 | 1 |
| Fixed | 10.0 | - | 0.5 | 0.1 | 9.287 809 | 1 |
| Fixed | 25.0 | - | 0.5 | 0.1 | 9.287 815 | 1 |
| Fixed | 50.0 | - | 0.5 | 0.1 | 9.287 816 | 1 |



2 Dispensers, bottle-top, Fortuna Optifix® Basic

For problem-free dispensing of aqueous media and acids as well as solutions subject to crystallization.

Poulten & Graf

Solid, PTFE-sleeved, dispensing piston with sealing lip. Highly polished, plastic-coated, 100 % corrosion-free, precision glass cylinder which is graduated in black.

PTFE valve block (GL32). With colour-coded plunger handles. Autoclavable.

Items supplied:

Dispenser without reservoir bottle, PTFE suction and discharge tubes and two PP bottle adapters (GL 40 and GL 45). Conformity-certified, with precision certificate.

Suitable bottles may be found in the "Bottles" section.

| Type | Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|----------|------------|-------|-----------------------------------|---|-----------|----|
| | ml | ml | | | | |
| Basic-27 | 0.4 to 2 | 0.1 | 0.7 | 0.2 | 9.287 902 | 1 |
| Basic-33 | 1 to 5 | 0.1 | 0.3 | 0.1 | 9.287 903 | 1 |
| Basic-38 | 2 to 10 | 0.2 | 0.3 | 0.1 | 9.287 904 | 1 |
| Basic-44 | 6 to 30 | 0.5 | 0.3 | 0.1 | 9.287 905 | 1 |
| Basic-48 | 10 to 50 | 1.0 | 0.3 | 0.1 | 9.287 906 | 1 |
| Basic-51 | 20 to 100 | 2.0 | 0.3 | 0.1 | 9.287 907 | 1 |
| Basic-53 | 40 to 200 | 5.0 | 0.6 | 0.1 | 9.287 908 | 1 |
| Basic-56 | 60 to 300 | 5.0 | 0.6 | 0.1 | 9.287 909 | 1 |
| Basic-58 | 100 to 500 | 5.0 | 0.6 | 0.1 | 9.287 951 | 1 |



3 Dispensers, Fortuna Optifix® HF Loop

With patented circulation system.

Poulten & Graf

Particularly for dispensing hydrofluoric acids. Other technical details are as the Optifix® HF model.

Items supplied:

Dispenser without reservoir bottle, with patented Loop circulation system, PTFE inlet tubing, 1 discharge tube and 1 ea. x GL 40 and 45 thread adapters in PP, conformity-certified, with precision certificate.

| Type | Capacity | Grad. | Cat. No. | PK |
|-------------|----------|-------|-----------|----|
| | ml | ml | | |
| HF Loop-38H | 2 to 10 | 0.2 | 9.287 981 | 1 |
| HF Loop-44H | 6 to 30 | 0.5 | 9.287 982 | 1 |

1 Dispensers, Fortuna Optifix® Basic Loop

Poulten & Graf

With patented circulation system.
For the dosage of most dosing media, e.g. aqueous media, light acids and crystallizing substances. Other technical details are as the Optifix® Basic model.
Items supplied:
Dispenser without reservoir bottle, with patented Loop circulation system, PTFE inlet tubing, 1 discharge tube and 1 ea. x GL 40 and 45 thread adapters in PP, conformity-certified, with precision certificate.

| Type | Capacity | Grad. | Cat. No. | PK |
|----------------|-----------|-------|-----------|----|
| | ml | ml | | |
| Basic Loop-38H | 2 to 10 | 0.2 | 9.287 991 | 1 |
| Basic Loop-44H | 6 to 30 | 0.5 | 9.287 992 | 1 |
| Basic Loop-48H | 10 to 50 | 1.0 | 9.287 993 | 1 |
| Basic Loop-51H | 20 to 100 | 2.0 | 9.287 994 | 1 |



2 Dispensers, Fortuna Optifix® Solvent Loop

Poulten & Graf

With patented circulation system.
In particular for the dosage of organic solvents and PTFE-swelling media. Other technical details are as the Optifix® Solvent model.
Items supplied:
Dispenser without reservoir bottle, with patented Loop circulation system, PTFE inlet tubing, 1 discharge tube and 1 ea. x GL 40 and 45 thread adapters in PP, conformity-certified, with precision certificate.

| Type | Capacity | Grad. | Cat. No. | PK |
|------------------|-----------|-------|-----------|----|
| | ml | ml | | |
| Solvent Loop-38H | 2 to 10 | 0.2 | 9.287 987 | 1 |
| Solvent Loop-44H | 6 to 30 | 0.5 | 9.287 988 | 1 |
| Solvent Loop-48H | 10 to 50 | 1.0 | 9.287 989 | 1 |
| Solvent Loop-51H | 20 to 100 | 2.0 | 9.287 990 | 1 |



3 Dispensers, bottle-top, Fortuna® Optifix® Safety

Poulten & Graf

For concentrated or fuming acids (excl. HF), strong-smelling materials e.g. bromine, oleum.
With colour-coded plunger handles.
Supplied with PTFE suction and discharge tubes and two PP bottle adapters, (GL 40 and GL 45).
Without reservoir bottle.

| Type | Capacity | Grad. | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Cat. No. | PK |
|-----------|-----------|-------|-----------------------------------|---|-----------|----|
| | ml | ml | | | | |
| Safety-27 | 0.4 to 2 | 0.1 | 0.7 | 0.2 | 9.287 962 | 1 |
| Safety-33 | 1 to 5 | 0.1 | 0.3 | 0.1 | 9.287 963 | 1 |
| Safety-38 | 2 to 10 | 0.2 | 0.3 | 0.1 | 9.287 964 | 1 |
| Safety-44 | 6 to 30 | 0.5 | 0.3 | 0.1 | 9.287 965 | 1 |
| Safety-48 | 10 to 50 | 1.0 | 0.3 | 0.1 | 9.287 966 | 1 |
| Safety-51 | 20 to 100 | 2.0 | 0.3 | 0.1 | 9.287 967 | 1 |



4 Dispensers, Fortuna Optifix® Safety Loop

Poulten & Graf

With patented circulation system.
The safety model for dispensing strong, in particular fuming acids and strong-smelling media. Other technical details are as the Optifix® Safety model.
Items supplied:
Dispenser without reservoir bottle, with patented Loop circulation system, PTFE inlet tubing, 1 discharge tube and 1 ea. x GL 40 and 45 thread adapters in PP, conformity-certified, with precision certificate.

| Type | Capacity | Grad. | Cat. No. | PK |
|-----------------|-----------|-------|-----------|----|
| | ml | ml | | |
| Safety Loop-38H | 2 to 10 | 0.2 | 9.287 983 | 1 |
| Safety Loop-44H | 6 to 30 | 0.5 | 9.287 984 | 1 |
| Safety Loop-48H | 10 to 50 | 1.0 | 9.287 985 | 1 |
| Safety Loop-51H | 20 to 100 | 2.0 | 9.287 986 | 1 |





1 Dispensers, bottle-top, Hydrofluoric acid Optifix® HF

Poulsen & Graf

With solid PTFE dispensing barrel and glass-cored, PTFE coated plunger with seal.
A PTFE ball valve in the valve block inlet prevents acid vapours escaping from the storage bottle. With colour-coded plunger handles.

Items supplied:

Hydrofluoric acid dispenser without reservoir bottle, with PTFE valve block (GL 32),
PTFE suction and discharge tubes and two PTFE bottle adapters (GL40 and GL45).

| Type | Capacity ml | Cat. No. | PK |
|-------|-------------|-----------|----|
| HF-38 | 2 to 10 | 9.287 968 | 1 |
| HF-44 | 6 to 30 | 9.287 969 | 1 |



2 Dispensers, bottle-top, Polyfix®

Poulsen & Graf

For dispensing aqueous media and weak acids.
With vacuum calibrated, glass dispensing barrel. Valve block not detachable for safety reasons.

- Conformity-certified
- Ergonomically designed plunger handle for comfortable operation
- User friendly, ambidextrous volume setting with easy movement and rotatable fine adjustment
- PP valve block (GL 32) with FIX adapter which aligns the dispenser on the bottle.

Not suitable for solvents.

Supplied with 2 x PP bottle adapters (GL 40 and GL 45).

| Capacity ml | Cat. No. | PK |
|-------------|-----------|----|
| 2 to 10 | 9.283 800 | 1 |
| 10 to 50 | 9.283 810 | 1 |



3 Dispensers, bottle-top, Calibrex™ 520

Socorex

- Ruggedly constructed and chemically resistant
- Universal applications in the laboratory
- Quick volume adjustment, dial gauge with precalibrated intervals
- Large display window is easy to read
- Dispenser can be rotated 360°
- Autoclavable at 121°C
- Simple user-calibration facility
- 32 mm diameter screwthread neck
- 28, 40, 45 mm neck adapters supplied
- GS TÜV approved

| Capacity ml | Grad. ml | Accuracy $\leq \pm A\%$ (max. vol.) | Reproducibility $\leq \pm V\%$ (max. vol.) | Type | Cat. No. | PK |
|-------------|----------|-------------------------------------|--|-----------------|-----------|----|
| 0.25 to 2 | 0.05 | 0.6 | 0.1 | Variable volume | 9.411 529 | 1 |
| 1 to 5 | 0.1 | 0.6 | 0.1 | Variable volume | 9.411 530 | 1 |
| 1 to 10 | 0.25 | 0.6 | 0.1 | Variable volume | 9.411 531 | 1 |
| 10 to 50 | 1 | 0.6 | 0.1 | Variable volume | 9.411 536 | 1 |
| 0.25 to 2 | 0.05 | 0.6 | 0.1 | Fixed volume* | 9.411 532 | 1 |
| 1 to 5 | 0.1 | 0.6 | 0.1 | Fixed volume* | 9.411 533 | 1 |
| 1 to 10 | 0.25 | 0.6 | 0.1 | Fixed volume* | 9.411 534 | 1 |

Please specify fixed volume required on your order!



4 5 Dispensers, bottle-top, Calibrex 520, accessories

Socorex

| Type | Cat. No. | PK |
|------------------------------------|-----------|----|
| Extension tubing, 60 cm, PTFE | 9.411 570 | 1 |
| Dispenser holder for small bottles | 9.411 571 | 1 |



1 Diluters/Dispensers Microlab 500 series

Hamilton

The Microlab 500B series is a versatile, easily programmed range of instruments, ideal for laboratories performing multiple dilute and dispense methods. The user can programme and store up to 21 methods in the instrument's memory. The easy-to-use LCD menu allows programmes to be named using alphanumeric characters. Programmed methods are retained in memory after the power is disconnected.

Method types

- Dilutions: simple, serial, multi-sample/reagent, or internal standard addition
- Dispenses: aliquot, serial, simple
- Pipette
- Titrate

Specifications

| | |
|--------------------------|--|
| Memory storage: | 21 programmes |
| Print function: | No |
| Working volume range: | 1 µL to 25000 µL |
| Syringe speed: | 1 to 250 seconds |
| Accuracy: | within ±1% |
| Precision: | within +0.2% |
| Resolution: | 0.1% of syringe volume |
| Volume increments: | 0.1% to 100% of total syringe volume |
| Speed: | 1 to 250 seconds per full syringe stroke |
| Communication Interface: | RS232; TTL out |



| Type | Cat. No. | PK |
|--------|-----------|----|
| ML510B | 9.566 110 | 1 |
| ML540B | 9.566 112 | 1 |

Diluter syringes, for right hand side of diluter

Hamilton

| Type | Capacity µl | Cat. No. | PK |
|---------|-------------|-----------|----|
| 1702 DX | 25 | 9.221 360 | 1 |
| 1705 DX | 50 | 9.221 365 | 1 |
| 1710 DX | 100 | 9.221 370 | 1 |
| 1725 DX | 250 | 9.221 375 | 1 |
| 1750 DX | 500 | 9.221 380 | 1 |
| 1001 DX | 1000 | 9.221 385 | 1 |

2 Diluter syringes, for left hand side of diluter

Hamilton

| Type | Capacity µl | Cat. No. | PK |
|-----------|-------------|-----------|----|
| 1702 TLLX | 25 | 9.221 300 | 1 |
| 1705 TLLX | 50 | 9.221 305 | 1 |
| 1710 TLLX | 100 | 9.221 310 | 1 |
| 1725 TLLX | 250 | 9.221 315 | 1 |
| 1750 TLLX | 500 | 9.221 320 | 1 |
| 1001 TLLX | 1000 | 9.221 328 | 1 |
| 1002 TLL | 2500 | 9.221 330 | 1 |
| 1005 TLL | 5000 | 9.221 335 | 1 |
| 1010 TLL | 10000 | 9.221 340 | 1 |
| 1025 TLL | 25000 | 9.221 345 | 1 |



3 Dispensing syringes, for both sides of diluter

Hamilton

| Type | Capacity µl | Cat. No. | PK |
|-----------|-------------|-----------|----|
| 1702 TLLX | 25 | 9.221 300 | 1 |
| 1705 TLLX | 50 | 9.221 305 | 1 |
| 1710 TLLX | 100 | 9.221 310 | 1 |
| 1725 TLLX | 250 | 9.221 315 | 1 |
| 1001 TLLX | 1000 | 9.221 328 | 1 |
| 1002 TLL | 2500 | 9.221 330 | 1 |
| 1005 TLL | 5000 | 9.221 335 | 1 |
| 1010 TLL | 10000 | 9.221 340 | 1 |
| 1025 TLL | 25000 | 9.221 345 | 1 |



Tubing assemblies. Teflon® FEP

Hamilton

| Type | Gauge | Length/Hub mm | Thread | For syringe volumes ml | Cat. No. | PK |
|-----------------|-------|---------------|--------|------------------------|-----------|----|
| Fill tubing | 18 | 650 | M6 | ≤ 1 | 9.221 640 | 1 |
| Fill tubing | 12 | 650 | M6 | > 1 | 9.221 642 | 1 |
| Dispense tubing | 18 | 900 | M6 | ≤ 1 | 9.221 641 | 1 |
| Dispense tubing | 12 | 900 | M6 | > 1 | 9.221 643 | 1 |

Dispenser valves

| Type | For | Cat. No. | PK |
|------------------------|---------|-----------|----|
| Single dispenser valve | ML 510B | 9.221 645 | 1 |
| Dual dispenser valve | ML 540B | 9.221 646 | 1 |

Hand probes

Hamilton

| Description | Cat. No. | PK |
|---------------------------------|-----------|----|
| Concorde Push-button Hand Probe | 9.221 648 | 1 |
| Dual Push-button Hand Probe | 9.221 649 | 1 |



1 Pump-it drum pump

For rapid and clean emptying from cans, drums and small barrels up to 60 litres. Bürkle

- For liquids up to a viscosity of 1500 cPs at 20°C
- Pump connection suitable for 64 mm dia. (BSI) container threads
- Threaded adapters for most commercially-sold containers available
- Precise dosing, without dripping.

| Material | Immersion depth mm | Flow rate l / min. | Cat. No. | PK |
|-----------|-----------------------|-----------------------|-----------|----|
| PP/Viton® | 1000 | 8 | 9.001 110 | 1 |



2 Adapter set for Pump-it can pump

Consisting of:

- 2" Coarse thread, Mauser L ring, green
- 2" coarse thread, Leer/Tri-sure, brown
- 2" Fine thread steel drum, blue
- DIN 60, Mauser-barrel, black
- DIN 51, black

Bürkle

| Type | Cat. No. | PK |
|----------------------------------|-----------|----|
| Adapter set for Pump-it can pump | 9.001 111 | 1 |



3 4 Hand pumps, Otal

For drums and containers up to 60 litres. Bürkle

With Unistoppers for container openings 30 to 70 mm.
PP or PVDF tubing for aggressive liquids.

| Material | Dia. mm | Flow rate l / min. | Immersion depth mm | Cat. No. | PK |
|------------------------|------------|-----------------------|-----------------------|-----------|----|
| PP | 10 | 4 | 450 | 9.001 210 | 1 |
| PP | 12 | 14 | 700 | 9.001 112 | 1 |
| PP | 15 | 20 | 700 | 9.001 115 | 1 |
| PP | 18 | 26 | 700 | 9.001 118 | 1 |
| PVDF | 16 | 20 | 700 | 9.001 135 | 1 |
| Stainless steel tubing | 18 | 26 | 900 | 9.001 137 | 1 |
| PVC dispensing tube | 10 | 12 | 700 | 9.001 138 | 1 |



5 6 Foot pumps, Otal

For drums and containers up to 120 litres. Bürkle

With Unistopper for 30 to 70 mm diameter container necks.
PP or PVDF tubing for aggressive liquids.

| Material | Dia. mm | Flow rate l / min. | Immersion depth mm | Cat. No. | PK |
|------------------------|------------|-----------------------|-----------------------|-----------|----|
| PP | 15 | 20 | 700 | 9.001 015 | 1 |
| PP | 18 | 26 | 700 | 9.001 018 | 1 |
| PP | 22 | 30 | 900 | 9.001 022 | 1 |
| PVDF | 16 | 20 | 700 | 9.001 130 | 1 |
| Stainless steel tubing | 18 | 26 | 900 | 9.001 132 | 1 |
| PVC dispensing tube | 10 | 12 | 700 | 9.001 133 | 1 |



7 Siphons

Bürkle-Laboplast. Transparent with stopcock. Bürkle

Simple to use, suitable for occasional dispensing of non-aggressive liquids from a higher drum to a lower vessel, following the siphoning principle.

| Material | Length* | Dia. mm | Flow rate l / min. | Cat. No. | PK |
|----------|---------|------------|-----------------------|-----------|----|
| PVC | 100 | 10 | 5 | 9.001 350 | 1 |
| LDPE | 100 | 15 | 9 | 9.001 355 | 1 |

* Probe length (mm)

1 Barrel pumps, PP

- For decanting acids, caustic solutions and aggressive detergents
- Excellent recovery of residual liquid in the barrel provided by base-sitting, non-return valve and steplessly adjustable immersion tube
- For barrels and tanks from 60 to 1000 litres

Bürkle

Type A: With rigid, angled, dispensing nozzle
Type B: With flexible, PVC dispensing hose and stopcock

Immersion tube dia.: 32 mm
Max. pump capacity: up to approx. 12 L/min.

| Type | Immersion depth mm | Length mm | Cat. No. | PK |
|------|--------------------|-----------|-----------|----|
| A | 500 | 595 | 9.001 356 | 1 |
| B | 500 | 595 | 9.001 366 | 1 |
| A | 650 | 740 | 9.001 357 | 1 |
| B | 650 | 740 | 9.001 367 | 1 |
| A | 800 | 895 | 9.001 358 | 1 |
| B | 800 | 895 | 9.001 368 | 1 |
| A | 1000 | 1090 | 9.001 359 | 1 |
| B | 1000 | 1090 | 9.001 369 | 1 |
| A | 1250 | 1340 | 9.001 364 | 1 |
| B | 1250 | 1340 | 9.001 370 | 1 |
| A | 1500 | 1590 | 9.001 365 | 1 |
| B | 1500 | 1590 | 9.001 371 | 1 |



2 3 4 5 Manual drum pump, accessories

Screwthread connections for PP drum pump.

Bürkle

| Type | Cat. No. | PK |
|-------------------------------|-----------|----|
| R2" steel drum screwthread | 9.001 335 | 1 |
| Drum stoppers for 40 to 70 mm | 9.001 336 | 1 |
| Mauser 2" coarse screwthread | 9.001 337 | 1 |
| Tri-Sure, coarse screwthread | 9.001 338 | 1 |



6 Drum hand pump

Stainless steel V2A and PTFE.
For safe dispensing of low flash point liquids. Solvent resistant.
Electrostatic charge can be dissipated through the accessory antistatic set and drum screwthread connection.

Bürkle

| Immersion depth mm | Dia. mm | Description | Cat. No. | PK |
|--------------------|---------|-------------------------------|-----------|----|
| 570 | 32 | rigid angled tube | 9.001 340 | 1 |
| 910 | 32 | rigid angled tube | 9.001 341 | 1 |
| 570 | 32 | flexible tubing with stopcock | 9.001 362 | 1 |
| 910 | 32 | flexible tubing with stopcock | 9.001 363 | 1 |

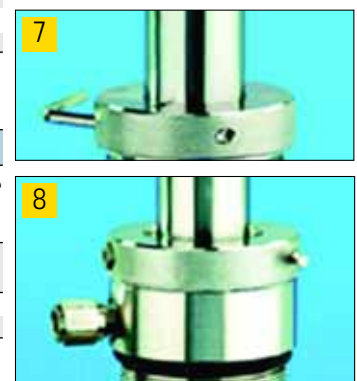


7 8 Drum pumps, accessories

Accessories for stainless steel drum hand pumps.

Bürkle

| Description | Cat. No. | PK |
|--|-----------|----|
| Drum screwthread connection 2" | 9.001 345 | 1 |
| Drum screwthread connection 2", hermetic sealing | 9.001 347 | 1 |



9 Footpump, Otal Ultrapure

- For dispensing ultrapure solvents
- Solvent-wetted materials: Stainless steel and PTFE
- Fixed angle, dispensing tube with stainless steel/Teflon® stopcock
- Supplied with gas tight, R2" steel barrel internal thread connection

Bürkle

| Tube dia. mm | Immersion depth mm | Flow rate l / min. | Cat. No. | PK |
|--------------|--------------------|--------------------|-----------|----|
| 18.0 | 95 | 30 | 9.001 134 | 1 |





1 Antistatic set Bürkle

When dispensing combustible/explosive liquids all pumps, dispensing and filling drums involved in the process must be sufficiently earthed, in order to prevent ignition or explosion through electrostatic discharges. Antistatic set, includes three colour-coded connecting cables with clamps, supplied complete in plastic case.

| Type | Cat. No. | PK |
|----------------|-----------|----|
| Antistatic set | 9.001 346 | 1 |



2 Analogue, peristaltic and gear pump drives, PD 5001/PD 5006 Heidolph

- Low cost pump drives for general purpose use
- Analogue dial rotation speed adjustment
- Electronic speed monitoring, accuracy $\pm 2\%$
- Reversible rotation direction, stackable housing

Peristaltic pump PD 5001/PD 5006

- For transport of abrasive, aggressive, corrosive or sterile liquids
- Problem-free flow under pressure or vacuum
- Can be combined with 4 different pumpheads
- PD 5001: flow rate 0.7 to 729 ml/min
- PD 5006: flow rate 3.3 to 3644 ml/min

| Type | Cat. No. | PK |
|---------|-----------|----|
| PD 5001 | 9.829 240 | 1 |
| PD 5006 | 9.829 241 | 1 |



Pump tubing - please see page 156



3 Digital, peristaltic and gear pump drives, PD 5201/PD 5206 Heidolph

Pump drives with analogue and digital (RS232) interfaces for:

- Setting and display of rotation speed (rpm)
- Setting and display of flow rate (ml/min.)
- Setting and display of flow volume (ml)
- Pulsed dispensing with adjustable pause times
- Simple calibration

Electronic rotation speed adjustment ($\pm 0.5\%$)
Protection level IP 55 (DIN 40050. "Hoseproof")

Peristaltic pump PD 5201/PD 5206

- For transport of abrasive, aggressive, corrosive and sterile materials
- Problem-free flow under pressure or vacuum
- Can be combined with 5 different pumpheads
- PD 5201: flow rate 0.3 to 729 ml/min
- PD 5206: flow rate 1.6 to 3644 ml/min

| Type | Cat. No. | PK |
|---------|-----------|----|
| PD 5201 | 9.829 244 | 1 |
| PD 5206 | 9.829 245 | 1 |

1 Pump head SP quick/SP quick d

Heidolph

- Fast and convenient tube changes
- Low pulsation due to 5 roller system
- Designed for cleaning in industrial washing mashines
- Pump head features ball bearings
- Rollers made of stainless steel
- To attach two pump heads to one drive, choose SP quick in combination with SP quick d
- Depending on drive and tubing the flow rate ranges from 0.3 to 3300 ml per minute

| Type | Tubing wall thickness | Flow rate ml/min. | Cat. No. | PK |
|----------------|-----------------------|-------------------|-----------|----|
| SP quick 1.6 | 1.6 | 0.3 to 3300 | 9.829 250 | 1 |
| SP quick 2.5 | 2.5 | 0.3 to 3300 | 9.829 251 | 1 |
| SP quick d 1.6 | 1.6 | 0.3 to 3300 | 9.829 252 | 1 |
| SP quick d 2.5 | 2.5 | 0.3 to 3300 | 9.829 253 | 1 |



2 3 Peristaltic pumpheads SP standard and SP vario

Heidolph

- Convex rollers and concave tube bed for safe pumping and easy centring
- No crushing of organic cell cultures
- Rotor equipped with 2 rollers made of stainless steel
- Discharge flow varies from 0.5 to 3644 ml/min depending on the used power unit and tubing

Peristaltic pumphead SP standard

- For simple flow requirements
- With polypropylene rollers

Peristaltic pumphead SP vario

- Rotor with adjustable roller distance
- With coated aluminium rollers
- Clockwise rotation only

| Type | Tubing wall thickness | Flow rate ml/min. | Cat. No. | PK |
|------------------|-----------------------|---------------------------------------|-----------|----|
| SP standard 1.6* | 1.6 | for simple flow requirements | 9.829 254 | 1 |
| SP standard 2.5* | 2.5 | for simple flow requirements | 9.829 255 | 1 |
| SP vario** | var. | rotor with adjustable roller distance | 9.829 256 | 1 |

*for simple flow requirements
**rotor with adjustable roller distance



4 5 Multi channel peristaltic pumps C4/C8/C12

Heidolph

- Simultaneous pumping through up to 12 channels
- Multi-channel adapter allows combination with pump drive PD 5001, PD 5101 and PD 5201
- Flowrate of 5 µl/min to 336 ml/min
- Separate dosage into different containers possible
- Easily exchangeable cartridges just click into place
- Operates also when not all pump heads are used
- Wide range of tube material for various applications available

| Type | Description | Cat. No. | PK |
|-----------------------|--|-----------|----|
| C4 | for max. 4 x small cassettes | 9.829 285 | 1 |
| C8 | for max. 8 x medium or 4 x large cassettes | 9.829 286 | 1 |
| C12 | for max. 12 x small cassettes | 9.829 287 | 1 |
| Cassette, small | Flowrate: 0.005 to 40.8 ml/min | 9.829 288 | 1 |
| Cassette, medium | Flowrate: 0.29 to 25.2 ml/min | 9.829 289 | 1 |
| Cassette, large | Flowrate: 1.0 to 336 ml/min | 9.829 290 | 1 |
| Multi channel adapter | | 9.829 291 | 1 |





1 Peristaltic pump drives, MCP, MCP process

Can be combined with over 20 pumpheads for flow rates of 0.01 to 3700 ml/min. Combined peristaltic pump and precise dispenser. Microprocessor controlled, with precise controlled rotation speed and metering unit for 1 to 24 pump channels. The speed (2 to 240 rpm) is adjustable to 0.1 %, key-pad with LCD-display, programmable. Different dosing modes supply very exact and reproducible results. With RS232 interface, tubing valve operation, dosing handle and foot switch. Can be used for sterile dosing up to 135°C (with adequate tubing). Dimensions (W x D x H): 155 x 220 x 260 mm (without pumphead).

Ismatec

- Programmable functions:
- ml/min
 - drive speed
 - drop-free (roller reverse step)
 - calibration ml/min in ml (volume)
 - drive unit on/off

- Dosing:
- volume ml
 - volume/time unit
 - dosing time (0.1 to 999 h)

- Additional functions MCP process:
- programmable sequences
 - dust-tight and water-proof

Specifications

| | |
|--------------------|-------------------------------|
| Motor type: | d.c. motor |
| Speed: | 1 to 240 rpm |
| Speed setting: | rpm, resolution 0.1 rpm |
| Flow rate setting: | ml/min and/or ml/min |
| Power consumption: | 100 W |
| Power supply: | 85 to 264 V, 47 to 60 Hz a.c. |
| Protection rating: | IP 65 |
| Weight: | 6.9 kg (without pumphead) |

MCP-Process

| | |
|--------------------|---|
| Motor type: | d.c. motor |
| Speed: | 1 to 240 rpm |
| Speed setting: | rpm, resolution 0.1 rpm |
| Flow rate setting: | ml/min and/or ml/min |
| Power consumption: | 100 W |
| Power supply: | 230 V 50 Hz; 115 V, 60 Hz a.c. selectable |
| Protection rating: | IP 30 |
| Weight: | 6.4 kg (without pumphead) |

MCP-Standard

| | |
|--------------------|---|
| Motor type: | d.c. motor |
| Speed: | 1 to 240 rpm |
| Speed setting: | rpm, resolution 0.1 rpm |
| Flow rate setting: | ml/min and/or ml/min |
| Power consumption: | 100 W |
| Power supply: | 230 V 50 Hz; 115 V, 60 Hz a.c. selectable |
| Protection rating: | IP 30 |
| Weight: | 6.4 kg (without pumphead) |



| Type | Cat. No. | PK |
|--------------------|-----------|----|
| MCP-Process IP 65 | 9.828 510 | 1 |
| MCP-Standard IP 30 | 9.828 367 | 1 |

2 3 Peristaltic pump drives, BVP-Standard/BVP-Process

These three pumps can be combined with over 20 pumpheads for flow rates of 0.001 to 3700 ml/min. For the continuous pumping of liquids and suspensions with up to 60 % solids content according to capacity or time. Analogue interface for Start/Stop, rotation direction, autostart.

Ismatec

- LED display
- speed 1 to 240 rpm, resolution 0.1 rpm
- flow rate 0.001 to 3700 ml/min
- dimensions (W X D x H): 155 x 220 x 260 mm
- weight: 5.7 kg (Standard), 6.9kg (Process)
- power supply 230 V 50/60 Hz a.c.
- protection rating: IP 30 (Standard), IP 65 (Process)
- stainless steel housing
- dust-tight and water-proof
- max-key, for quick tube refilling



| Type | Flow rate ml / min. | Cat. No. | PK |
|--------------------|------------------------|-----------|----|
| BVP-Standard IP 30 | 0.003 to 3700 | 9.828 366 | 1 |
| BVP-Process IP 65 | 0.001 to 3700 | 9.828 512 | 1 |

1 Single-channel pumpheads for BVP-Standard (-Process) and MCP-Standard (-Process) peristaltic pump drive units

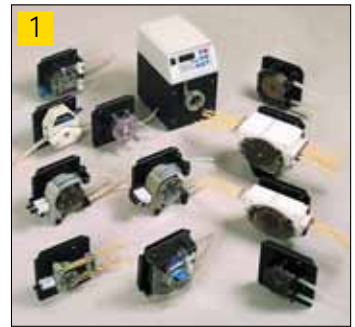
For tubing with max. wall thickness: 1.6 mm (*2.4 mm)

Ismatec

| Pumphead type | Flow rate ml / min. | Inputs | Rollers | Cat. No. | PK |
|-----------------|------------------------|--------|---------|-----------|----|
| 360 | 0.072 to 880 | 1 | 3 | 9.828 371 | 1 |
| 380 | 0.44 to 2810 | 1 | 3 | 9.828 372 | 1 |
| 380 AD** | 0.41 to 3600 | 1 | 3 | 9.828 373 | 1 |
| Pro 280 | 0.49 to 3700 | 1 | 2 | 9.828 520 | 1 |
| Pro 380 | 0.45 to 3400 | 1 | 3 | 9.828 521 | 1 |
| Pro 281* | 3.6 to 3100 | 1 | 2 | 9.828 394 | 1 |
| Pro 381* | 3.3 to 2900 | 1 | 3 | 9.828 396 | 1 |
| MF Standard (B) | 0.24 to 57 | 1 | 3 | 9.828 386 | 1 |
| MF Standard (H) | 2.3 to 560 | 1 | 3 | 9.828 387 | 1 |

* Tubing wall thickness 2.4 mm

**Pump head for tubing wall thickness of 1.6 to 2.4 mm



2 Pumpheads for peristaltic pumps BVP-Standard (-Process) and MCP-Standard (-Process) drive units

Ismatec

| Pumphead type | Flow rate ml / min. | Inputs | Rollers | Cat. No. | PK |
|--------------------|------------------------|--------|---------|-----------|----|
| SB removable plate | - | - | 6 | 9.828 533 | 1 |
| SB-3V* | 0.09 to 530 | 3 | 6 | 9.828 216 | 1 |
| SB-2V* | 1.1 to 1100 | 2 | 6 | 9.828 215 | 1 |

* Removable plate 9.828 533 is required for operation.



3 1-channel-pumpheads for peristaltic pumps BVP-Standard (-Process) and MCP-Standard (-Process) drive units

Ismatec

| Pumphead type | Inputs | Flow rate ml / min. | Rollers | Cat. No. | PK |
|---------------------------|--------|------------------------|---------|-----------|----|
| 7518-10 Easy-Load** | 1 | 0.07 to 1100 | 3 | 9.828 391 | 1 |
| 7018-21 Standard* | 1 | 3.4 to 820 | 3 | 9.828 388 | 1 |
| Easy-Load removable plate | - | - | - | 9.828 530 | 1 |
| PTFE tubing pumphead* | 1 | 0.07 to 45 | 6 | 9.828 395 | 1 |

* Removable plate 9.828 530 is required for operation.



4 5 Pumpheads for peristaltic pumps BVP-Standard (-Process) and MCP-Standard (-Process) drive units

Ismatec

| Pumphead type | Flow rate ml / min. | Inputs | Rollers | Cat. No. | PK |
|---------------------------|------------------------|--------|---------|-----------|----|
| CA4 | 0.002 to 230 | 4 | 8 | 9.828 379 | 1 |
| CA8 | 0.002 to 230 | 8 | 8 | 9.828 380 | 1 |
| CA12 | 0.002 to 230 | 12 | 8 | 9.828 381 | 1 |
| MS/CA8-6* | 0.002 to 100 | 8 | 6 | 9.828 375 | 1 |
| MS/CA4-12** | 0.001 to 57 | 4 | 12 | 9.828 377 | 1 |
| MS/CA8 cartridge block | 0.002 to 100 | 8 | 6 | 9.828 376 | 1 |
| MS/CA4-12 cartridge block | 0.001 to 57 | 4 | 12 | 9.828 378 | 1 |

*extendible to 24 channels

**extendible to 16 channels





1 Pumps, peristaltic, multichannel, precision, IPC, IPC-N-IP and IP-N

IP and IP-N series, without dispensing features

Ismatec

- Microprocessor controlled
- very precise pumping

IPC and IPC-N series, with dispensing features

- Microprocessor controlled
- very precise pumping
- with "standby-mode" (prevents draining the tubing line e.g. overnight)
- with dispensing and calibration functions

IPC-N and IP-N series

- 4, 8, 12, 16 or 24 channels
- 8 actively driven stainless steel rollers
- Transparent keyboard and LED-display
- Click 'n' go cassettes providing defined and repeatable occlusion conditions.
- different tube sizes can be inserted in each channel.
- 2 Stopper tubes
- Differential pressure: 1.0 bar

Specifications IPC and IPC-N:

| | |
|----------------------|--|
| Motor type: | d.c. motor |
| Flow rates: | IPC: 0.4 up to 45 l/min IPC-N: 0.11 up to 11.25 l/min |
| Speed range: | 1 to 100 %, resolution 0.1 % in µl/min to ml/min |
| Input: | 30 W |
| Supply requirements: | 230 V 50 Hz, 115 V 60 Hz (selectable) |
| Protection class: | IP 30 |

Specifications IP and IP-N:

| | |
|----------------------|---|
| Motor type: | d.c. motor |
| Flow rates: | IP: 0.4 up to 45 l/min IP-N: 0.11 up to 11.25 l/min |
| Speed range: | 1 to 100 %, resolution 0.1 % IP: rpm, resolution 0.1 l/min IP-N: rpm, resolution 0.03 l/min |
| Input: | 30 W |
| Supply requirements: | 230 V 50 Hz, 115 V 60 Hz a.c. (selectable) |
| Protection class: | IP 30 |

| Type | Flow rate ml/min. | Inputs | Dimensions (W x D x H) mm | Cat. No. | PK |
|--------------------|----------------------|---------|---------------------------------|-----------|----|
| IP-4 | 0.002 to 44 | 1 to 4 | 175 x 180 x 130 | 9.828 346 | 1 |
| IP-8 | 0.002 to 44 | 1 to 8 | 175 x 220 x 130 | 9.828 347 | 1 |
| IP-12 | 0.002 to 44 | 1 to 12 | 175 x 260 x 130 | 9.828 348 | 1 |
| IP-16 | 0.002 to 44 | 1 to 16 | 175 x 300 x 130 | 9.828 349 | 1 |
| IP-24 | 0.002 to 44 | 1 to 24 | 175 x 380 x 130 | 9.828 350 | 1 |
| IP-N-4 | 0.0004 to 11 | 1 to 4 | 175 x 180 x 130 | 9.828 356 | 1 |
| IP-N-8 | 0.0004 to 11 | 1 to 8 | 175 x 220 x 130 | 9.828 357 | 1 |
| IP-N-12 | 0.0004 to 11 | 1 to 12 | 175 x 260 x 130 | 9.828 358 | 1 |
| IP-N-16 | 0.0004 to 11 | 1 to 16 | 175 x 300 x 130 | 9.828 360 | 1 |
| IP-N-24 | 0.0004 to 11 | 1 to 24 | 175 x 380 x 130 | 9.828 370 | 1 |
| Foot switch T-51-S | - | - | - | 9.828 359 | 1 |
| IPC-4 | 0.002 to 44 | 1 to 4 | 175 x 180 x 130 | 9.828 351 | 1 |
| IPC-8 | 0.002 to 44 | 1 to 8 | 175 x 220 x 130 | 9.828 352 | 1 |
| IPC-12 | 0.002 to 44 | 1 to 12 | 175 x 260 x 130 | 9.828 353 | 1 |
| IPC-16 | 0.002 to 44 | 1 to 16 | 175 x 300 x 130 | 9.828 354 | 1 |
| IPC-24 | 0.002 to 44 | 1 to 24 | 175 x 380 x 130 | 9.828 355 | 1 |
| IPC-N-4 | 0.0004 to 11 | 1 to 4 | 175 x 180 x 130 | 9.828 361 | 1 |
| IPC-N-8 | 0.0004 to 11 | 1 to 8 | 175 x 220 x 130 | 9.828 362 | 1 |
| IPC-N-12 | 0.0004 to 11 | 1 to 12 | 175 x 260 x 130 | 9.828 363 | 1 |
| IPC-N-16 | 0.0004 to 11 | 1 to 16 | 175 x 300 x 130 | 9.828 364 | 1 |
| IPC-N-24 | 0.0004 to 11 | 1 to 24 | 175 x 380 x 130 | 9.828 365 | 1 |

1 2 Gear pump drives, MCP-Z-Standard, MCP-Z-Progress

Ismatec

2 drive units can be combined with 20 interchangeable magnetically-coupled pumpheads. Flow rates of 1 to 7241 ml/min. are attainable with pulse-free flow. Up to 5.6 bar differential pressure and 21 bar system pressure.

MCP-Z-Standard

Microprocessor controlled. Digital display of rotation speed, flow rate, dispensing volume or dispensing time. 4 programme memory and 6 programmable pumping or dispensing functions with calibration mode. Flow rates stored for 20 pumpheads. With RS232 and analogue interfaces.

MCP-Z-Process

Industrial process-adapted drive, dust and watertight, washdown (IP 65) capability through completely sealed stainless steel housing. PC programmed processes can be stored in the pump memory and operated without PC. Other specifications are as MCP-Z-Standard.



| Type | Cat. No. | PK |
|---------------------------------|-----------|----|
| MCP-Z-Standard | 9.828 308 | 1 |
| MCP-Z-Process | 9.828 309 | 1 |
| Spare magnet for MCP-Z-Standard | 9.828 344 | 1 |
| Spare magnet for MCP-Z-Process | 9.828 345 | 1 |

Please order two tubing connectors separately.
Tubing connectors - see Gear pump heads.

3 Gear pump drive BVP-Z

Ismatec

Flow rates of 1 to 7241 ml/min.
Motor speed: 60 to 6000 rpm, adjustable in 0.1% steps.
Up to 5.6 bar differential pressure and 21 bar system pressure,
Rotation speed adjustable via 2 or 3-digit, mechanical push-button potentiometer, with analogue interface and double overload protection. With magnet.

- Weight 5.7 kg
- 155 x 220 x 260 mm
- Supply requirements: 230 V 50 Hz, 150W

| Type | Cat. No. | PK |
|------------------------|-----------|----|
| BVP-Z | 9.828 307 | 1 |
| Spare magnet for BVP-Z | 9.828 344 | 1 |

Please order two tubing connectors separately.
Tubing connectors - see Gear pump heads.



Gear pumps MCP-Z, BVP-Z, Reglo-Z/ZS, accessories

Ismatec

Please order 2 tubing connection ferrules which are necessary for pump operation.

| Type | Cat. No. | PK |
|----------------------------------|-----------|----|
| Spare magnet for MCP-Z and BVP-Z | 9.828 344 | 1 |
| Spare magnet for Reglo-Z / -ZS | 9.828 306 | 1 |
| Spare magnet MCP-Z-Process | 9.828 345 | 1 |
| Connector nipple (required) | 9.828 540 | 1 |





1 2 Gear pump drives, Reglo-Z/ZS

Drive units can be combined with 14 interchangeable magnetically-coupled pumpheads. Ismatec
 Flow rates of 1 to 3290 ml/min. are attainable with pulse-free flow.
 Motor speed 50 to 5000 rpm, adjustable in 0.1% steps.
 Rotation speed adjustable via 2-digit mechanical push-button potentiometer, with analogue interface.

- Weight 2.0 kg
- 175 x 100 x 135 mm
- Supply requirements: 230 V 50 Hz a.c., 50 W

Reglo-ZS:

Drive and pump head are separated from control unit by a 2 m long cable.

Applications:

- cooling and climatic technology
- water purification
- liquid chromatography
- surface coating

| Type | Cat. No. | PK |
|--------------------------|-----------|----|
| Reglo-Z | 9.828 302 | 1 |
| Reglo-ZS | 9.828 305 | 1 |
| Magnet for Reglo-Z / -ZS | 9.828 306 | 1 |

Please order one magnet and two tubing connectors separately.
 Tubing connectors - see Gear pump heads.



3 Gear pump drives, Reglo-Z Digital

Pulsefree dispensing pumps with excellent repeatability! Ismatec
 - Flow rates 0.85 to 3200 ml/min (depending on mounted pump-head)
 - 6-button membrane key-pad
 - LED display

Operating modes:

- pumping by drive speed (rpm)
- pumping by flow rate (ml/min)
- dispensing by volume (ml)
- dispensing by time (0.1 s up to 999 h)
- dispensing by volume within a pre-set time
- interval dispensing by volume with a pause
- interval dispensing by time with a pause
- setting the number of dispensing cycles
- pause time setting (from 0.1 s up to 999 h)
- back-steps for drip-free dispensing
- reversible rotation direction (only for Cavity Style pumpheads)

Calibrating functions:

- for flow rate (ml/min)
- for dispensing volume (ml)

Motor speed: 50 to 5000 rpm
 Speed setting: digital speed setting (resolution 1 rpm), closed loop control
 RS232 interfaces: - RS232 "in" - for operation controlling via PC- RS232 "out"
 - for cascading up to 8 pumps
 Analogue output: Speed monitoring (0 to 12 kHz)
 Digital input (TTL level): Run/Stop, autostart
 Differential pressure: max. 5.2 bar/75.4 psi (depending on pump-head)
 Motor type: d.c. motor
 Power consumption: 60 W
 Supply requirements: 85 to 264 V a.c., 47 to 60 Hz
 Protection rating: IP 30
 Dim. (D x W x H): 175 x 97 x 135 mm (6.8" x 3.8" x 5.3") (without pump-head)
 Weight: 1.7 kg (3.7 lb) (without pump-head)
 Accessories: - Driver for "LabView" software (free download)
 - Foot switch

| Type | Cat. No. | PK |
|-----------------|-----------|----|
| Reglo-Z Digital | 9.828 310 | 1 |

Please order one magnet and two tubing connectors separately.
 Tubing connectors - see Gear pump heads.

1 Pumpheads for gear pumps MCP-Z, BVP-B

User-specific pumping heads, drive magnets and two hose connectors are required for operating the magnet-coupled gear pumps. Temperatures -45 to +177°C.
If you want to operate pumps with teflon fitments at more than 54°C,
please specify this in your order, because operation up to 99°C requires alternative seals.
Please note: The flow rate depends on the model.

Ismatec



- magnets, see gear pump drives
 - Service kits available on request
- Further pump heads available on request.

| Type | Gear material | Flow rate ml/min. | Cat. No. | PK |
|----------------------------|---------------|-------------------|-----------|----|
| Z-120 | PTFE | 40 to 3950 | 9.828 405 | 1 |
| Z-122 | PTFE | 55 to 5480 | 9.828 407 | 1 |
| Z-130 | PPS | 40 to 3950 | 9.828 408 | 1 |
| Z-140 | PTFE | 40 to 3950 | 9.828 409 | 1 |
| Z-142 | PTFE | 55 to 5480 | 9.828 411 | 1 |
| Z-150 | PPS | 33 to 3950 | 9.828 412 | 1 |
| Z-181 | Graphite | 3 to 252 | 9.828 413 | 1 |
| Z-183 | Graphite | 5 to 504 | 9.828 414 | 1 |
| Z-186 | Graphite | 1 to 99 | 9.828 415 | 1 |
| Z-200 | PPS | 35 to 3509 | 9.828 416 | 1 |
| Z-1830 | PPS | 6 to 560 | 9.828 418 | 1 |
| Z-201 | PPS | 73 to 7241 | 9.828 417 | 1 |
| Tubing ferrules (required) | | | 9.828 540 | 1 |

Gear material:
PPS = Polyphenylene sulphide
PTFE=Polytetrafluorethylene
Case material = 316 Stainless steel

2 Gyro flask pumpheads for MCP-CPF-Process

Ismatec

| Type | Flask | Working vol. µl | Flow rate ml / min. | To fit tubing mm | Cat. No. | PK |
|------------|-------------|-----------------|---------------------|--------------------|-----------|----|
| RH00SKY-LF | steel SS316 | 2.5 to 25 | 0.025 to 45 | i.d. 1.5 | 9.828 423 | 1 |
| RH00CKC-LF | ceramic | 2.5 to 125 | 0.025 to 45 | i.d. 1.5 | 9.828 422 | 1 |
| RH00CKC | ceramic | 5 to 50 | 0.050 to 90 | o.d. 6.4 | 9.828 420 | 1 |
| RH1CKC | ceramic | 10 to 100 | 0.10 to 180 | o.d. 6.4 | 9.828 421 | 1 |
| QP.Q1.CSC | ceramic | 12.8 to 320 | 0.13 to 576 | i.d. 9.5 | 9.828 431 | 1 |
| QP.Q2.CSC | ceramic | 28.8 to 720 | 0.29 to 1300 | i.d. 9.5 | 9.828 432 | 1 |
| QP.Q3.CKC | ceramic | 59.2 to 1280 | 0.51 to 2300 | o.d. 12.7/i.d. 6.4 | 9.828 433 | 1 |

Alternative Gyro flask pumpheads RH... and QP... available on request !



3 Gyro flask pumpheads for BVP and MCP

Ismatec

| Type | Flask | Working vol. µl | Flow rate ml / min. | To fit tubing mm | Cat. No. | PK |
|---------------|-------------|-----------------|---------------------|------------------|-----------|----|
| MCP-/BVP | Steel SS316 | 3.2 to 80 | 0.008 to 19 | 6.4 | 9.828 430 | 1 |
| MCP-/BVP | Ceramic | 32 to 320 | 0.032 to 77 | 9.5 | 9.828 431 | 1 |
| MCP-/BVP | Ceramic | 72 to 720 | 0.072 to 170 | 9.5 | 9.828 432 | 1 |
| MCP-/BVP | Ceramic | 128 to 1280 | 0.013 to 310 | 9.5 A.-Ø | 9.828 433 | 1 |
| MCP-/BVP-W* | Ceramic | 32 to 320 | 0.032 to 77 | 9.5 | 9.828 434 | 1 |
| MCP-/BVP-W* | Ceramic | 72 to 720 | 0.072 to 170 | 9.5 | 9.828 435 | 1 |
| MCP-/BVP-WT** | Ceramic | 32 to 320 | 0.032 to 77 | 9.5 | 9.828 424 | 1 |
| MCP-/BVP-WT** | Ceramic | 72 to 720 | 0.072 to 170 | 9.5 | 9.828 425 | 1 |

Alternative pumpheads are available - details on request !

*W - with rinsing inlet

**WT - with rinsing and thermostatic control inlet



4 Gyro flask pumpheads for Reglo CPF, digital

Ismatec

| Working vol. µl | Flow rate ml / min. | Flask | To fit tubing mm | Cat. No. | PK |
|-----------------|---------------------|---------|------------------|-----------|----|
| 2.5 to 25 | 0.1 to 45 | ceramic | i.d. 1.6 | 9.828 422 | 1 |
| 5 to 50 | 0.2 to 90 | ceramic | o.d. 6.0 | 9.828 420 | 1 |
| 10 to 100 | 0.4 to 180 | ceramic | o.d. 6.0 | 9.828 421 | 1 |





1 Gear pump

Stainless steel with magnet drive unit. Schwinherr
 Self-priming, reversible.
 Stepless speed control using drive motors from the Multifix range.
 Suitable for acids, alkaline solutions and any liquids which V4A stainless steel resists.
 2-part inlet/outlet mounts for tubing and screwthread connection.

| | |
|-----------------------|---|
| Housing: | Material No. 1.4571 |
| Pump shaft and gears: | Teflon glass fibre |
| Housing sealing rims: | Teflon |
| Flow rate: | 1 to 250 cP |
| Max. head: | 9.5 m |
| Pressure: | 8 bar |
| Flow rate: | max. 360 l/hr. |
| Temperature range: | to +90°C, to +120 and -20°C for short periods |

| Type | Cat. No. | PK |
|-----------|-----------|----|
| Gear pump | 9.736 537 | 1 |



2 Pump, peristaltic, Flowmaster FMT 300

Offers high flow rates from 37 ml/min to 13 l/min for industrial applications. Ismatec
 Protection level IP65, sterile tube insertion without priming.
 Simple detachable pumphead makes cleaning easy, no tools required.
 Dispensing in intervals possible.

Technical data:

| | |
|-------------------------|---|
| Pumping speed: | 5 to 500 rpm, accuracy 0.1 rpm, waterproof keypad, LED readout |
| Power consumption: | 500 W |
| Power supply: | 115/230V 60 Hz a.c., switchable |
| Protection: | IP 65 |
| Dimensions (H x W x D): | 220 x 500 x 262 mm |
| Weight: | 26 kg |
| Flowrate: | 37 to 13000 ml/min. |
| Pumphead: | Comprises a 3-roller pumphead for tubing with a thickness of 3.2 mm |

| Type | Cat. No. | PK |
|--------------------|-----------|----|
| Flowmaster FMT 300 | 9.828 541 | 1 |



3 Laboratory peristaltic pumps, behrotest®

Compact laboratory peristaltic pumps with stepless, adjustable flow rate, pump rotor, two compression and four guide rollers. Changing pump tubing is easy, no tools or other aids are required. For 220V 50 Hz a.c. supplies. Behr

| Type | Flow rate L/hr. | Cat. No. | PK |
|----------|-----------------|-----------|----|
| PLP 33 | 0.2 to 2 | 9.700 420 | 1 |
| PLP 66 | 0.5 to 4 | 9.700 421 | 1 |
| PLP 330 | 2 to 24 | 9.700 422 | 1 |
| PLP 1000 | 12 to 64 | 9.700 423 | 1 |



Pump tubing - please see page 156

1 | 2 Pumps, peristaltic, Ecoline

Flow rate 0.005 to 5400 ml/min. Robust and economical.
Stainless steel housing.
Easy handling. For all applications in laboratory and industry.

Ismatec

Ecoline VC-280:

Economical, basic, single-channel drive model for flow rates up to 5.4 l/min. with variable speed.

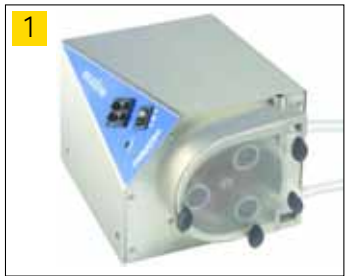
Ecoline VC-360 and VC380:

1-channel tubing pumps, microprocessor controlled. With 2-digit potentiometer, scaled 1 to 99% and analogue interface for Start/Stop, rotation direction, speed control (0 to 5 or 0 to 10V/0 to 20 or 4 to 20 mA).

Ecoline VC-drive without pump heads:

- combinable with Easy-Load®, MS/CA 8-6 and MS/CA 8-6 pumpheads

| Type | Channels | Rollers | Flow rate ml / min. | To fit tubing mm | Cat. No. | PK |
|------------------|----------|---------|------------------------|------------------------|-----------|----|
| VC-280 II | 1 | 2 | 1.7 to 5400 | 1.6 to 11.1 | 9.828 513 | 1 |
| VC-360 II | 1 | 3 | 0.25 to 1300 | 0.8 to 6.4 | 9.828 514 | 1 |
| VC-380 II | 1 | 3 | 1.6 to 5000 | 1.6 to 11.1 | 9.828 515 | 1 |
| Ecoline VC-drive | - | - | 0.23 to 1600 | - | 9.828 516 | 1 |
| Easy-Load® | 1 | 3 | 0.23 to 1600 | 0.8 to 8.0 | 9.828 391 | 1 |
| MS/CA 8-6 | 8 | 6 | 0.005 to 150 | 0.13 to 3.17 | 9.828 376 | 1 |
| MS/CA4-12 | 4 | 12 | 0.003 to 83 | 0.13 to 3.17 | 9.828 378 | 1 |



3 Compact peristaltic pump Reglo-Quick

Flow rate 2.1 to 230 ml/min.
Single-channel tubing pump with user friendly pump head for fast change of tubing.
The tubing bed is easily accessible, with large opening angle of the protection cover, rapid tube change-over.

Ismatec

- high reproductibility via speed-controlled drive
- with hinged, transparent protection cover
- for standard silicone or Tygon tubing
- occupies minimal space
- max. differential pressure 1.5 bar
- reduced pulsation

Technical specifications

Speed: 3.2 to 160 rpm
Speed setting: 1 to 99 %, resolution 1%, 2-digit potentiometer
Power supply: 230 V 50 Hz, 115 V 60 Hz a.c. selectable
Protection rating: IP 30
Dimensions (D x W x H): 178 x 100 x 143 mm
Weight: 2.2 kg

| Type | Channels | Rollers | Flow rate ml / min. | Cat. No. | PK |
|-------------|----------|---------|------------------------|-----------|----|
| Reglo-Quick | 1 | 4 | 2.1 to 230 | 9.828 490 | 1 |



4 Pumps, peristaltic, Reglo-Analogue

For high precision pumping in the ml-range and below (0.002 to 68 ml/min).
Simple Click'n'go mini tubing assembly cartridges.
With remote control for on/off and speed.

Ismatec

- power consumption 20 W
- overload control
- analogue interface
- for 0.13 to 3.17 mm tubing i.d.
- 3-stop, colour-coded tubing

Dimensions (W x D x H)

2-channel versions: 100 x 178 x 143 mm
4-channel versions: 100 x 190 x 143 mm

| Type | Rotation speed rpm | Flow rate ml/min. | Channels | Rollers | Cat. No. | PK |
|-------------|--------------------------|-------------------------|----------|---------|-----------|----|
| MS-2/6-160 | 4.8 to 160 | 0.005 to 68 | 2 | 6 | 9.828 470 | 1 |
| MS-2/8-160 | 4.8 to 160 | 0.004 to 57 | 2 | 8 | 9.828 471 | 1 |
| MS-2/12-160 | 4.8 to 160 | 0.003 to 38 | 2 | 12 | 9.828 474 | 1 |
| MS-4/6-100 | 3.0 to 100 | 0.003 to 43 | 4 | 6 | 9.828 472 | 1 |
| MS-4/8-100 | 3.0 to 100 | 0.003 to 35 | 4 | 8 | 9.828 473 | 1 |
| MS-4/12-100 | 3.0 to 100 | 0.002 to 24 | 4 | 12 | 9.828 475 | 1 |





1 Pumps, peristaltic, Reglo-Digital

For high precision pumping in the ml-range and below (0.001 to 68 ml/min).
 Simple Click'n'go mini tubing assembly cartridges.
 Microprocessor controlled, with RS232 interface and can be calibrated.
 Programmable flow rates, dispensing volume and pause times.
 Digital LED display.
 For: 0.13 to 3.17 mm i.d. tubing.

Ismatec

| Type | Rotation speed rpm | Flow rate ml/min. | Inputs | Rollers | Cat. No. | PK |
|-------------|--------------------|-------------------|--------|---------|-----------|----|
| MS-2/6-160 | 1.6 to 160 | 0.003 to 68 | 2 | 6 | 9.828 480 | 1 |
| MS-2/8-160 | 1.6 to 160 | 0.002 to 57 | 2 | 8 | 9.828 481 | 1 |
| MS-2/12-160 | 1.6 to 160 | 0.002 to 38 | 2 | 12 | 9.828 484 | 1 |
| MS-4/6-100 | 1.0 to 100 | 0.002 to 43 | 4 | 6 | 9.828 482 | 1 |
| MS-4/8-100 | 1.0 to 100 | 0.002 to 35 | 4 | 8 | 9.828 483 | 1 |
| MS-4/12-100 | 1.0 to 100 | 0.001 to 24 | 4 | 12 | 9.828 485 | 1 |



Pump tubing - please see page 156



2 Compact peristaltic pumps MS-CA

Flow rate 0.021 to 26 ml/min.
 Simple Click'n'go mini tubing assembly cartridges.
 - 3-stop colour-coded tubing
 - fixed-speed motor
 - Dimensions MS-CA2 (W x D x H): 88 x 135 x 125 mm
 - Dimensions MS-CA4 (W x D x H): 88 x 135 x 145 mm

Ismatec

| Type | Rotation speed rpm | Flow rate ml/min. | Channels | Rollers | Cat. No. | PK |
|-------------|--------------------|-------------------|----------|---------|-----------|----|
| MS-CA 2/620 | 20 | 0.028 to 8.5 | 2 | 6 | 9.828 142 | 1 |
| MS-CA 2/660 | 60 | 0.083 to 26.0 | 2 | 6 | 9.828 146 | 1 |
| MS-CA 2/640 | 40 | 0.1 to 20.0 | 2 | 6 | 9.828 144 | 1 |
| MS-CA 2/840 | 40 | 0.1 to 14.5 | 2 | 8 | 9.828 154 | 1 |
| MS-CA 2/820 | 20 | 0.021 to 7.1 | 2 | 8 | 9.828 152 | 1 |
| MS-CA 2/860 | 60 | 0.064 to 21.0 | 2 | 8 | 9.828 156 | 1 |

1 Pumps, liquid, ceramic piston, MCP-CPF Process without pumphead

Operate on a valveless rotating piston principle with liquid pathway materials made of sapphire-hard, chemically inert ceramic (99.7 % Al₂O₃).
Ideal for chemically aggressive and viscous or crystallizing materials.
Differential pressure up to 6.9 bar.
Industrial process-adapted drive, dust- and water-tight, with washdown (IP 65) capability due to completely sealed stainless steel housing.
PC-programmed routines can be stored in the pump memory and run without needing a PC.

Ismatec



Technical Data:
 Motor: d.c. motor
 Rotation speed: 10.0 to 1800 rpm.
 Speed resolution: 1 rpm, 0.1 rpm selectable
 Flowrate setting: µl/min, ml/min, l/min
 Power rating: 100 W
 Overall (W x D x H): 155 x 220 x 260 mm (without pumphead)
 Safety protection: IP65
 Weight: 6.9 kg (without pumphead)
 Supply requirements: 85 to 264V a.c. 47/ 60 Hz

| Type | Flow rate ml / min. | Width mm | Depth mm | Height mm | Cat. No. | PK |
|-----------------|------------------------|-------------|-------------|--------------|-----------|----|
| MCP-CPF process | 0.025 to 2300 | 155 | 220 | 260 | 9.828 511 | 1 |
| Reglo-CPF* | 0.08 to 180 | 100 | 175 | 135 | 9.828 368 | 1 |

We can supply this
 manufacturer's
 whole
 product range !



ISMATEC



1 Pumps, liquid, ceramic piston, valveless, BVP and MCP standard

Without pumphead, without removable plate.

Ismatec

BVP:

Rotation speed is adjustable via 3-digit, mechanical, push-button potentiometer.
Analogue input/output interface.

MCP:

Microprocessor controlled. Digital display of flow rate, dispensing volume or rotation speed.
Memorised pumphead specifications with adjustable piston stroke volume.
Programmable pump and dispensing functions with calibration mode.
4 programme memory.
RS 232 interface.
Analogue input/output.

Technical Data, BVP:

Motor type: d.c. motor
Rotation speed: 2.4 to 240 rpm
Speed adjustment: 1 to 99.9%, resolution 0.1%
Safety protection: IP 30
Power rating: 100 W
Supply requirements: 230 V 50 Hz, 115 V 60 Hz a.c. selectable

Technical Data, MCP:

Motor type: d.c. motor
Rotation speed: 1 to 240 rpm
Speed adjustment: 1 to 99.9%, resolution 0.1%
Safety protection: IP 30
Power rating: 100 W
Supply requirements: 230 V 50 Hz, 115 V 60 Hz a.c. selectable
Dimensions BVP / MCP: 155 x 220 x 260 mm

| Type | Flow rate ml / min. | Cat. No. | PK |
|-----------------------------|------------------------|-----------|----|
| BVP | 0.008 to 307 | 9.828 366 | 1 |
| MCP | 0.004 to 307 | 9.828 367 | 1 |
| Removable plate for BVP/MCP | | 9.828 369 | 1 |



2 Diaphragm Liquid Pumps Liquiport®

KNF

- Acid, alkali, solvent resistant
- Membrane: PTFE coated
- Valves: FFPM
- Self priming
- Dry running
- Maintenance-free
- Splashproof (IP 65)
- Flow rate manually adjustable, LED display
- Standby mode
- Maximum pressure limitation
- Quiet pumping, low vibrations.

Technical Specifications

Suction head: 3 mWS
Pressure head: 10 mWS
Ambient temp.: +5 to +40°C
Liquid temp.: +5 to +80°C
Supply requirements: 100 to 230 V, 50/60 Hz

| Type | Flow rate l / min. | Int. dia. mm | Rating W | Weight kg | Width mm | Length mm | Height mm | Cat. No. | PK |
|----------------|-----------------------|-----------------|-------------|--------------|-------------|--------------|--------------|-----------|----|
| NF 100 KT.18 S | 0.2 to 1.3 | 8 | 12 | 1.0 | 99 | 130 | 177 | 9.880 597 | 1 |
| NF 100 TT.18 S | 0.2 to 1.3 | 8 | 12 | 1.0 | 99 | 130 | 177 | 9.880 598 | 1 |
| NF 300 KT.18 S | 0.5 to 3.0 | 12 | 24 | 1.5 | 104 | 160 | 190 | 9.880 599 | 1 |
| NF 300 TT.18 S | 0.5 to 3.0 | 12 | 24 | 1.5 | 104 | 160 | 190 | 9.880 600 | 1 |

Further designs available on request.



Pump tubing - please see page 156

1 2 Sensors behrotest® for canisters with screw-on closures

Sensors for monitoring the maximum fill height

Sensors for monitoring the maximum fill height are used to protect against damage from overflowing vessels.

A float assembly encloses a reed contact which activates an acoustic alarm when the maximum fill height is reached, enabling the user to stop further filling in time to prevent overflow.

Sensors for monitoring the minimum fill height

Sensors for monitoring the minimum fill height are used to protect against interruption in supply or inadequate volume available in processes requiring continuous withdrawal of a liquid from a container. They give an acoustic warning when the content of the container runs low. The sensors are available in various lengths to permit use in containers of different heights.

When the liquid level in the container sinks below the set point, a float drops, opening a reed contact. An alarm warning then informs the user of the imminent risk of an empty reservoir.

Behr



| Type | For | Material | Length mm | For | Cat. No. | PK |
|-------|---------------------|----------|-----------|-----------------------------|-----------|----|
| FS001 | maximum fill height | PVC | 50 | all types | 9.843 906 | 1 |
| FS002 | maximum fill height | PP | 50 | all types | 9.843 907 | 1 |
| FS003 | minimum fill height | PVC | 320 | 5 to 10 litre canisters | 9.843 908 | 1 |
| FS007 | minimum fill height | PP | 320 | 5 to 10 litre canister | 9.843 912 | 1 |
| FS004 | minimum fill height | PVC | 400 | 20 to 30 litre canisters | 9.843 909 | 1 |
| FS008 | minimum fill height | PP | 400 | 20 to 30 litre canisters | 9.843 913 | 1 |
| FS005 | minimum fill height | PVC | 650 | 60 litre canister | 9.843 910 | 1 |
| FS009 | minimum fill height | PP | 650 | 60 litre canister | 9.843 914 | 1 |
| FS006 | minimum fill height | PVC | 1000 | 120 litre / 122 litre drums | 9.843 911 | 1 |
| FS010 | minimum fill height | PP | 1000 | 120 litre / 122 litre drums | 9.843 915 | 1 |

Measuring cylinders with spout, plastic

Measuring cylinders made of PP withstand exposure to temperatures up to 80°C without permanent loss of tolerance. Measuring cylinders made of PMP withstand exposure to temperatures up to 121°C (autoclaving) without permanent loss of tolerance.

Cleaning at temperatures below 60°C is recommended to preserve graduations and inscriptions on printed versions.

For autoclaving, we recommend the use of cylinders with moulded graduations.

BRAND



3 Measuring cylinders, with spout, glass, class A

Duran®. Conformity certified. With dated batch ID.

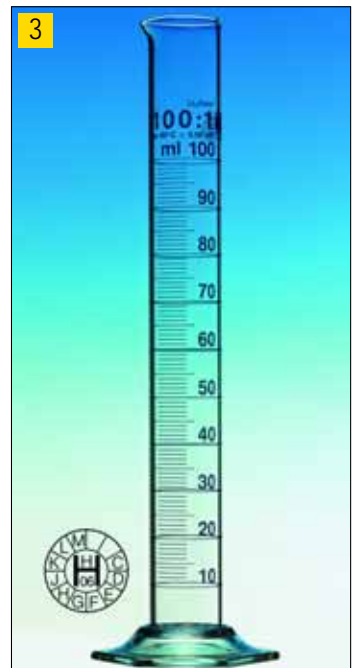
To DIN 12680 T2, calibrated to contain (In).

Inscriptions and graduations in permanent blue ceramic colour.

With spout and hexagonal foot.

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

Hirschmann



| Capacity ml | Grad. ml | Tolerance ± ml | Height mm | Cat. No. | PK |
|-------------|----------|----------------|-----------|-----------|----|
| 5 | 0.1 | 0.05 | 115 | 9.274 180 | 1 |
| 10 | 0.2 | 0.1 | 140 | 9.274 181 | 1 |
| 25 | 0.5 | 0.25 | 170 | 9.274 182 | 1 |
| 50 | 1 | 0.5 | 200 | 9.274 183 | 1 |
| 100 | 1 | 0.5 | 260 | 9.274 184 | 1 |
| 250 | 2 | 1 | 335 | 9.274 185 | 1 |
| 500 | 5 | 2.5 | 390 | 9.274 186 | 1 |
| 1000 | 10 | 5 | 470 | 9.274 187 | 1 |
| 2000 | 20 | 10 | 570 | 9.274 188 | 1 |

Also available with dated batch identification acc. to USP (US Pharmacopeia)

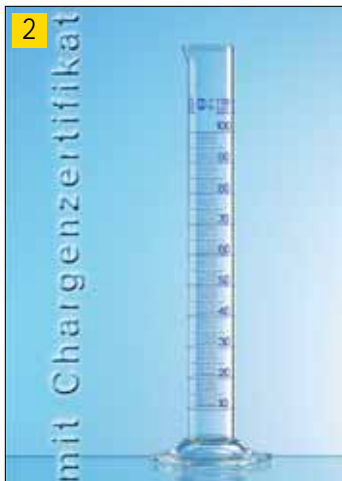


1 Measuring cylinders, glass, class B, blue graduated

Borosilicate glass, with spout, tolerances better than class B, hexagonal glass base, high-contrast blue graduations with short line minor graduations, IN (TC) calibrated, acc. to DIN 12 680 T1.

Hirschmann

| Capacity | Grad. | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 5 | 0.1 | 0.075 | 115 | 9.274 198 | 1 |
| 10 | 0.2 | 0.15 | 140 | 9.274 199 | 1 |
| 25 | 0.5 | 0.375 | 170 | 9.274 200 | 1 |
| 50 | 1 | 0.75 | 200 | 9.274 201 | 1 |
| 100 | 1 | 0.75 | 260 | 9.274 202 | 1 |
| 250 | 2 | 1.5 | 335 | 9.274 203 | 1 |
| 500 | 5 | 3.75 | 390 | 9.274 204 | 1 |
| 1000 | 10 | 7.5 | 470 | 9.274 206 | 1 |
| 2000 | 20 | 15 | 570 | 9.274 207 | 1 |



2 Measuring cylinders, with spout, glass, class A

Tall form. Blaubrand®. To DIN EN ISO 4788. Duran®.

BRAND

Conformity certified with works certified batch number. With spout and hexagonal foot.

Graduations and inscriptions in highly contrasting blue enamel. Calibrated to contain.

All Blaubrand® cylinders are delivered with batch number and one batch certificate per outer pack.

Also available with individual works, USP, or DKD calibration certificate on request.

| Capacity | Grad. | Height | Tolerance | Cat. No. | PK |
|----------|-------|--------|-----------|-----------|----|
| ml | ml | mm | ± ml | | |
| 5 | 0.1 | 115 | 0.05 | 9.274 105 | 1 |
| 10 | 0.2 | 140 | 0.10 | 9.274 108 | 1 |
| 25 | 0.5 | 170 | 0.25 | 9.274 120 | 1 |
| 50 | 1 | 200 | 0.50 | 9.274 128 | 1 |
| 100 | 1 | 260 | 0.50 | 9.274 138 | 1 |
| 250 | 2 | 335 | 1.00 | 9.274 148 | 1 |
| 500 | 5 | 365 | 2.50 | 9.274 154 | 1 |
| 1000 | 10 | 465 | 5.00 | 9.274 162 | 1 |
| 2000 | 20 | 505 | 10.0 | 9.274 164 | 1 |



3 4 Measuring cylinders, with spout, glass

Tall form. Silberbrand Eterna. Class B. To DIN EN ISO 4788. Duran®.

BRAND

With spout and hexagonal foot.

Graduations and inscriptions in Eterna permanent amber stain. Calibrated to contain.

Available with glass, or detachable plastic, feet and PP protective collars.

| Capacity | Grad. | Height | Tolerance | Foot | Cat. No. | PK |
|----------|-------|--------|-----------|-----------------|-----------|----|
| ml | ml | mm | ± ml | | | |
| 5 | 0.1 | 115 | 0.05 | Glass | 9.274 005 | 1 |
| 10 | 0.2 | 140 | 0.10 | Glass | 9.274 008 | 1 |
| 25 | 0.5 | 170 | 0.25 | Glass | 9.274 020 | 1 |
| 50 | 1.0 | 200 | 0.5 | Glass | 9.274 028 | 1 |
| 100 | 1.0 | 260 | 0.5 | Glass | 9.274 038 | 1 |
| 250 | 2.0 | 335 | 1.0 | Glass | 9.274 048 | 1 |
| 500 | 5.0 | 365 | 2.5 | Glass | 9.274 054 | 1 |
| 1000 | 10 | 465 | 5.0 | Glass | 9.274 062 | 1 |
| 2000 | 20 | 505 | 10.0 | Glass | 9.274 064 | 1 |
| 10 | 0.2 | 135 | 0.10 | PP (detachable) | 9.274 071 | 1 |
| 25 | 0.5 | 170 | 0.25 | PP (detachable) | 9.274 072 | 1 |
| 50 | 1.0 | 190 | 0.5 | PP (detachable) | 9.274 073 | 1 |
| 100 | 1.0 | 260 | 0.5 | PP (detachable) | 9.274 074 | 1 |
| 250 | 2.0 | 335 | 1.0 | PP (detachable) | 9.274 075 | 1 |
| 500 | 5.0 | 370 | 2.5 | PP (detachable) | 9.274 076 | 1 |
| 1000 | 10 | 450 | 5.0 | PP (detachable) | 9.274 077 | 1 |

5 Measuring cylinders, with spout, glass

Low form, with hexagonal foot and spout. Duran®, Class B, with permanent amber stain graduations, calibrated to contain.

Hirschmann

| Capacity | Grad. | Height | Cat. No. | PK |
|----------|-------|--------|-----------|----|
| ml | ml | mm | | |
| 10 | 1 | 100 | 9.274 190 | 1 |
| 25 | 1 | 120 | 9.274 191 | 1 |
| 50 | 2 | 145 | 9.274 192 | 1 |
| 100 | 2 | 160 | 9.274 193 | 1 |
| 250 | 5 | 190 | 9.274 194 | 1 |
| 500 | 10 | 255 | 9.274 195 | 1 |
| 1000 | 20 | 295 | 9.274 196 | 1 |
| 2000 | 50 | 325 | 9.274 197 | 1 |



1 Measuring cylinders, with spout, class B, glass

Low form. Silberbrand Eterna. Duran®. DIN EN ISO 4788.

BRAND

With spout and hexagonal foot. Graduations and inscriptions in Eterna permanent amber stain. Calibrated to contain.

| Capacity | Grad. | Height | Tolerance | Cat. No. | PK |
|----------|-------|--------|-----------|-----------|----|
| ml | ml | mm | ± ml | | |
| 10 | 1 | 90 | 0.3 | 9.274 608 | 1 |
| 25 | 1 | 115 | 0.5 | 9.274 620 | 1 |
| 50 | 2 | 145 | 0.8 | 9.274 628 | 1 |
| 100 | 2 | 165 | 1.0 | 9.274 638 | 1 |
| 250 | 5 | 195 | 2.0 | 9.274 648 | 1 |
| 500 | 10 | 250 | 5.0 | 9.274 654 | 1 |
| 1000 | 20 | 285 | 10.0 | 9.274 662 | 1 |
| 2000 | 50 | 340 | 20.0 | 9.274 664 | 1 |



2 Measuring cylinders, with spout, plastic, class A+

Tall form. Plastibrand®. PMP. Class A+ DIN 12681 and ISO 6706.

BRAND

Conformity certified. With batch number and quality certificate.

Transparent, with blue printed graduations and inscriptions.

Tolerance not influenced by autoclaving at 121°C.

Cleaning at temperatures below 60°C is recommended to preserve graduations and inscriptions.

Class A+ in comparison to Class A:

Class A+ Plastibrand® measuring cylinders attain 20% narrower tolerance margins than required by DIN 12681.

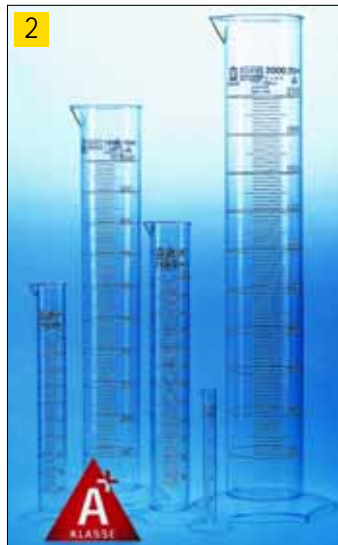
Class A+ tolerance is not affected even after 20 washes and 10 autoclave treatments.

(DIN 12681 requires: 10 washes and 3 autoclave treatments).

| Capacity | Grad. | Tolerance A+ | Tolerance A | Height | Cat. No. | PK |
|----------|-------|--------------|-------------|--------|-----------|----|
| ml | ml | ± ml | ± ml | mm | | |
| 10 | 0.2 | 0.08 | 0.10 | 145 | 9.274 790 | 1 |
| 25 | 0.5 | 0.20 | 0.25 | 170 | 9.274 791 | 1 |
| 50 | 1.0 | 0.40 | 0.50 | 200 | 9.274 792 | 1 |
| 100 | 1.0 | 0.40 | 0.50 | 250 | 9.274 793 | 1 |
| 250 | 2.0 | 0.80 | 1.00 | 315 | 9.274 794 | 1 |
| 500 | 5.0 | 2.00 | 2.50 | 360 | 9.274 795 | 1 |
| 1000 | 10 | 4.00 | 5.00 | 440 | 9.274 796 | 1 |
| 2000 | 20 | 8.00 | 10 | 535 | 9.274 797 | 1 |

Tolerance A+: Actual tolerance of PMP measuring cylinders by Brand.

Tolerance A: Tolerance required to meet DIN 12 681.



3 Measuring cylinders, with spout, plastic

Tall form. TPX (PMP). To DIN 12681/ISO 6706. Class A, transparent, with printed graduations and ring marks at the major graduation points. Hexagonal foot.

VITLAB

| Capacity | Tolerance | Grad. | Height | Dia. | Cat. No. | PK |
|----------|-----------|-------|--------|------|-----------|----|
| ml | ± ml | ml | mm | mm | | |
| 10 | 0.10 | 0.20 | 140 | 16 | 9.274 508 | 1 |
| 25 | 0.25 | 0.50 | 169 | 21 | 9.274 520 | 1 |
| 50 | 0.50 | 1.00 | 199 | 28 | 9.274 528 | 1 |
| 100 | 0.50 | 1.00 | 260 | 34 | 9.274 538 | 1 |
| 250 | 1.00 | 2.00 | 315 | 47 | 9.274 548 | 1 |
| 500 | 2.50 | 5.00 | 350 | 61 | 9.274 554 | 1 |
| 1000 | 5.00 | 10.00 | 415 | 76 | 9.274 562 | 1 |
| 2000 | 10.00 | 20.00 | 482 | 97 | 9.274 564 | 1 |



4 Measuring cylinders, with spout, plastic

Plastibrand®. PP. DIN 12681/ISO 6706. Calibrated to deliver (In).

BRAND

With moulded graduations.

| Capacity | Grad. | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 10 | 0.2 | 0.2 | 145 | 9.274 760 | 1 |
| 25 | 0.5 | 0.5 | 170 | 9.274 761 | 1 |
| 50 | 1.0 | 1.0 | 200 | 9.274 762 | 1 |
| 100 | 1.0 | 1.0 | 250 | 9.274 763 | 1 |
| 250 | 2.0 | 2.0 | 315 | 9.274 764 | 1 |
| 500 | 5.0 | 5.0 | 360 | 9.274 765 | 1 |
| 1000 | 10 | 10 | 440 | 9.274 766 | 1 |
| 2000 | 20 | 20 | 535 | 9.274 767 | 1 |





1 Measuring cylinders, with spout, plastic, class B

PP. Kartell
 With blue printed graduations, spout and hexagonal foot.
 Class B according to DIN 12681/ISO 6706

| Capacity | Grad. | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 10 | 0.2 | 0.2 | 140 | 9.274 750 | 1 |
| 25 | 0.5 | 0.5 | 195 | 9.274 751 | 1 |
| 50 | 1.0 | 1.0 | 200 | 9.274 752 | 1 |
| 100 | 1.0 | 1.0 | 250 | 9.274 753 | 1 |
| 250 | 2.0 | 2.0 | 315 | 9.274 754 | 1 |
| 500 | 5.0 | 5.0 | 360 | 9.274 755 | 1 |
| 1000 | 10 | 10 | 440 | 9.274 756 | 1 |
| 2000 | 20 | 20 | 535 | 9.274 757 | 1 |



2 Measuring cylinders, with spout, plastic, class B

Tall form. PP. Transparent. Accuracy to ISO 6706. Comply with DIN 12681. VITLAB
 With blue printed graduations and ring marks at the major graduation points.
 Autoclavable to 121°C.
 With spout and hexagonal foot. All volumetric ware is heat-treated.
 Therefore accuracy is not affected by heat.

| Capacity | Grad. | Height | Tolerance | Dia. | Cat. No. | PK |
|----------|-------|--------|-----------|------|-----------|----|
| ml | ml | mm | ± ml | mm | | |
| 10 | 0.2 | 140 | 0.2 | 16 | 9.274 408 | 1 |
| 25 | 0.5 | 169 | 0.5 | 21 | 9.274 409 | 1 |
| 50 | 1.0 | 199 | 1.0 | 28 | 9.274 410 | 1 |
| 100 | 1.0 | 260 | 1.0 | 34 | 9.274 411 | 1 |
| 250 | 2.0 | 315 | 2.0 | 47 | 9.274 412 | 1 |
| 500 | 5.0 | 350 | 5.0 | 61 | 9.274 413 | 1 |
| 1000 | 10.0 | 415 | 10.0 | 76 | 9.274 414 | 1 |
| 2000 | 20.0 | 482 | 20.0 | 97 | 9.274 415 | 1 |
| 25 | 0.5 | 169 | 0.5 | 21 | 9.274 420 | 1 |
| 50 | 1.0 | 199 | 1.0 | 28 | 9.274 428 | 1 |
| 100 | 1.0 | 260 | 1.0 | 34 | 9.274 438 | 1 |
| 250 | 2.0 | 315 | 2.0 | 47 | 9.274 448 | 1 |
| 500 | 5.0 | 360 | 5.0 | 35 | 9.274 454 | 1 |
| 1000 | 10.0 | 415 | 10.0 | 76 | 9.274 462 | 1 |
| 2000 | 20.0 | 482 | 20.0 | 97 | 9.274 464 | 1 |



3 Measuring cylinders, with spout, plastic, Class B

PMP (TPX®). Kartell
 With blue printed graduations, spout and hexagonal foot.
 Class B according to DIN 12681/ISO 6706.

| Capacity | Grad. | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 10 | 2 | 0.2 | 140 | 9.274 770 | 1 |
| 25 | 5 | 0.5 | 195 | 9.274 771 | 1 |
| 50 | 10 | 1.0 | 200 | 9.274 772 | 1 |
| 100 | 10 | 1.0 | 250 | 9.274 773 | 1 |
| 250 | 20 | 2.0 | 315 | 9.274 774 | 1 |
| 500 | 50 | 5.0 | 360 | 9.274 775 | 1 |
| 1000 | 100 | 10 | 440 | 9.274 776 | 1 |
| 2000 | 200 | 20 | 535 | 9.274 777 | 1 |



4 Measuring cylinders, plastic

Low form. PP. Almost transparent. VITLAB
 Steam-sterilizable (to 121°C). All volumetric ware is heat treated.
 Therefore accuracy is not affected by heat.
 With spout and hexagonal foot.

| Capacity | Grad. | Height | Tolerance | Dia. | Cat. No. | PK |
|----------|-------|--------|-----------|------|-----------|----|
| ml | ml | mm | ± ml | mm | | |
| 25 | 1.0 | 110 | 0.5 | 22 | 9.274 820 | 1 |
| 50 | 2.5 | 145 | 1.0 | 27 | 9.274 828 | 1 |
| 100 | 5.0 | 180 | 2.0 | 37 | 9.274 838 | 1 |
| 250 | 10 | 265 | 5.0 | 51 | 9.274 848 | 1 |
| 500 | 10 | 310 | 10.0 | 67 | 9.274 854 | 1 |
| 1000 | 25 | 335 | 20.0 | 78 | 9.274 862 | 1 |

1 Measuring cylinders, stoppered, glass, Class A

Blaubrand®. To DIN EN ISO 4788. Duran®.

BRAND

Conformity certified, with works certified batch number. PP stoppers and hexagonal foot. Graduations and inscriptions in highly contrasting blue enamel. Calibrated to contain. Height given is overall height without stopper.

All BLAUBRAND® cylinders are delivered with batch number and enclosed one batch certificate per packing unit of the manufacturer. On demand also available with individual certificate, USP Individual certificate or DKD calibration certificate.

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

| Capacity | Grad. | Neck | Height | Cat. No. | PK |
|----------|-------|-------|--------|-----------|----|
| ml | ml | NS | mm | | |
| 10 | 0.2 | 10/19 | 160 | 9.275 208 | 1 |
| 25 | 0.5 | 14/23 | 190 | 9.275 220 | 1 |
| 50 | 1 | 19/26 | 220 | 9.275 228 | 1 |
| 100 | 1 | 24/29 | 285 | 9.275 238 | 1 |
| 250 | 2 | 29/32 | 350 | 9.275 248 | 1 |
| 500* | 5 | 34/35 | 395 | 9.275 254 | 1 |
| 1000* | 10 | 45/40 | 500 | 9.275 262 | 1 |

* Fitted with PE octagonal stoppers.

2 Measuring cylinders, stoppered, glass, class B

Silberbrand Eterna. Class B. To DIN EN ISO 4788. Duran®.

BRAND

With PP stoppers and hexagonal foot.

Graduations and inscriptions in Eterna amber stain.

Calibrated to contain.

Height given is overall height without stopper

| Capacity | Grad. | NS | Height | Cat. No. | PK |
|----------|-------|-------|--------|-----------|----|
| ml | ml | | mm | | |
| 10 | 0.2 | 10/19 | 160 | 9.275 008 | 1 |
| 25 | 0.5 | 14/23 | 190 | 9.275 020 | 1 |
| 50 | 1.0 | 19/26 | 220 | 9.275 028 | 1 |
| 100 | 1.0 | 24/29 | 285 | 9.275 038 | 1 |
| 250 | 2.0 | 29/32 | 350 | 9.275 048 | 1 |
| 500* | 5 | 34/35 | 395 | 9.275 054 | 1 |
| 1000* | 10 | 45/40 | 500 | 9.275 062 | 1 |

* Fitted with PE octagonal stoppers.

3 Volumetric flasks, glass

Duran®.

Not according to DIN 12664. With special official testing mark.

With wide NS conical neck and plastic stopper.

| Capacity | Tolerance | Neck | Cat. No. | PK |
|----------|-----------|-------|-----------|----|
| ml | ± ml | NS | | |
| 10 | 0.025 | 10/19 | 9.276 643 | 1 |
| 25 | 0.040 | 12/21 | 9.276 752 | 1 |
| 50 | 0.060 | 14/23 | 9.276 755 | 1 |
| 100 | 0.100 | 14/23 | 9.276 757 | 1 |

4 Volumetric flasks, glass, Class A, trapezoidal shape

Trapezoidal shape. Duran®, Class A, with PP stoppers, conformity certified, with dated batch certificate and permanent, high contrasting blue enamel graduations, to DIN EN ISO 1042.

Hirschmann

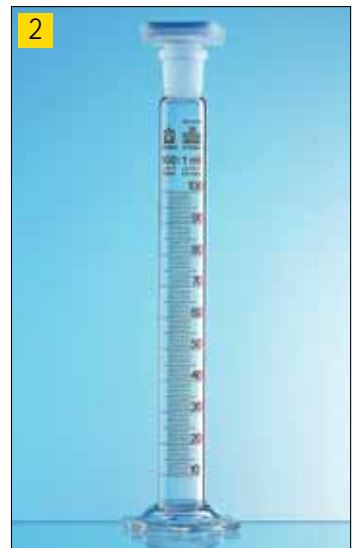
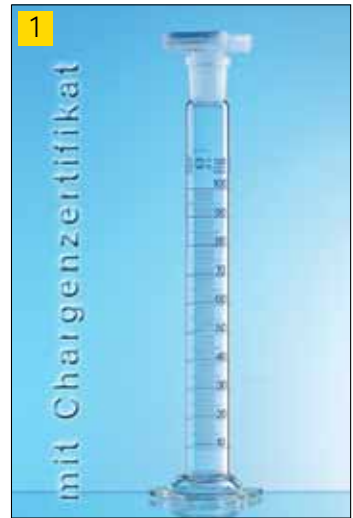
The batch certificate is available to download from the supplier's website.

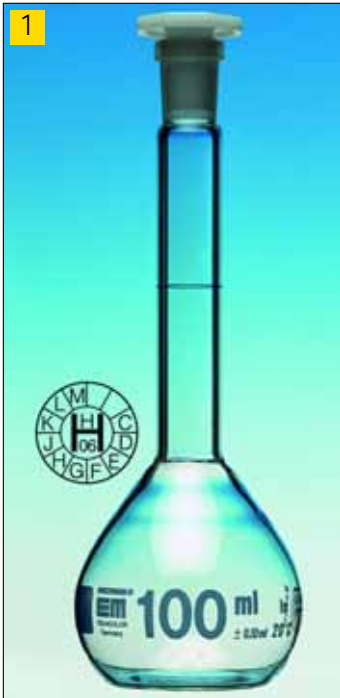
| Capacity | NS | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | | ± ml | mm | | |
| 1* | 7/16 | 0.025 | 60 | 9.276 645 | 1 |
| 2* | 7/16 | 0.025 | 70 | 9.276 646 | 1 |
| 5 | 7/16 | 0.025 | 70 | 9.276 647 | 1 |
| 5** | 10/19 | 0.04 | 70 | 9.276 648 | 1 |
| 10 | 7/16 | 0.025 | 90 | 9.276 649 | 1 |
| 10** | 10/19 | 0.04 | 90 | 9.276 650 | 1 |
| 20* | 10/19 | 0.04 | 110 | 9.276 651 | 1 |
| 25 | 10/19 | 0.04 | 110 | 9.276 652 | 1 |
| 50 | 12/21 | 0.06 | 140 | 9.276 653 | 1 |

* Supplementary to DIN

**wide neck

Also available with dated batch identification acc. to USP (US Pharmacopeia)





1 Volumetric flasks, glass, Class A, blue grads

Hirschmann

Duran®.
Conformity certified. With standard ground joint PP stoppers.
With dated batch certificate.
To DIN 12644 T1. Calibrated to contain (In).
Ring marks and inscriptions in permanent blue ceramic.
The batch certificate is available to download from the supplier's website.

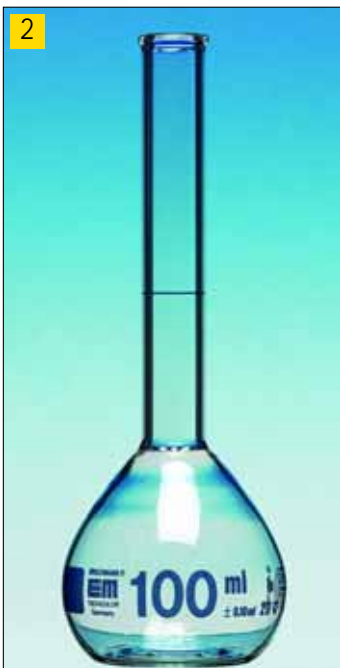
| Capacity ml | NS | Tolerance ± ml | Height mm | Cat. No. | PK |
|----------------|---------|-------------------|--------------|-----------|----|
| 5 | 7/16 | 0.025 | 70 | 9.276 680 | 1 |
| 5 | 10/19** | 0.040 | 70 | 9.276 681 | 1 |
| 10 | 7/16 | 0.025 | 90 | 9.276 682 | 1 |
| 10 | 10/19** | 0.040 | 90 | 9.276 683 | 1 |
| 20 | 10/19 | 0.040 | 110 | 9.276 684 | 1 |
| 20 | 12/21** | 0.060 | 105 | 9.276 679 | 1 |
| 25 | 10/19 | 0.040 | 110 | 9.276 685 | 1 |
| 25 | 12/21** | 0.060 | 110 | 9.276 686 | 1 |
| 50 | 12/21 | 0.060 | 140 | 9.276 687 | 1 |
| 50 | 14/23** | 0.080 | 140 | 9.276 688 | 1 |
| 100 | 12/21 | 0.100 | 170 | 9.276 689 | 1 |
| 100 | 14/23 | 0.100 | 170 | 9.276 690 | 1 |
| 200 | 14/23 | 0.150 | 210 | 9.276 691 | 1 |
| 250 | 14/23 | 0.150 | 220 | 9.276 692 | 1 |
| 500 | 19/26 | 0.250 | 260 | 9.276 693 | 1 |
| 1000 | 29/32** | 0.600 | 300 | 9.276 694 | 1 |
| 1000 | 24/29 | 0.400 | 300 | 9.276 695 | 1 |
| 2000 | 29/32 | 0.600 | 370 | 9.276 696 | 1 |
| 5000 | 34/35 | 1.200 | 470 | 9.276 697 | 1 |
| 10000* | 45/40 | 2.000 | 570 | 9.276 698 | 1 |

*Supplementary to DIN.
**Wide neck.

Also available with dated batch identification acc. to USP (US Pharmacopeia).



Stoppers - please see page 164



2 Volumetric flasks, with rim, class A, blue graduated

Hirschmann

Duran®, conformity certified, with dated batch identification,
IN (TC) calibrated, acc. to DIN EN ISO 1042.
The batch certificate is available to download from the supplier's website.

| Capacity ml | Tolerance ± ml | Height mm | Cat. No. | PK |
|----------------|-------------------|--------------|-----------|----|
| 5 | 0.025 | 70 | 9.276 715 | 1 |
| 10 | 0.025 | 90 | 9.276 716 | 1 |
| 20* | 0.04 | 110 | 9.276 717 | 1 |
| 25 | 0.04 | 110 | 9.276 718 | 1 |
| 50 | 0.06 | 140 | 9.276 719 | 1 |
| 100 | 0.1 | 170 | 9.276 720 | 1 |
| 200 | 0.15 | 210 | 9.276 733 | 1 |
| 250 | 0.15 | 220 | 9.276 734 | 1 |
| 500 | 0.25 | 260 | 9.276 735 | 1 |
| 1000 | 0.4 | 300 | 9.276 736 | 1 |
| 2000 | 0.6 | 370 | 9.276 737 | 1 |
| 5000* | 1.2 | 470 | 9.276 738 | 1 |
| 10000* | 1.2 | 570 | 9.276 739 | 1 |

*additional to DIN

Also available with dated batch identification acc. to USP (US Pharmacopeia).

1 Volumetric flasks, glass, Class A

Duran®, with glass stoppers, conformity certified, with dated batch certificate and permanent, high contrasting blue enamel graduations, to DIN EN ISO 1042.
The batch certificate is available to download from the supplier's website.

Hirschmann

| Capacity | NS | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | | ± ml | mm | | |
| 5 | 7/16 | 0.025 | 70 | 9.276 470 | 1 |
| 5** | 10/19 | 0.04 | 70 | 9.276 471 | 1 |
| 10 | 7/16 | 0.025 | 90 | 9.276 472 | 1 |
| 10** | 10/19 | 0.04 | 90 | 9.276 473 | 1 |
| 20* | 10/19 | 0.04 | 110 | 9.276 474 | 1 |
| 20** | 12/21 | 0.06 | 105 | 9.276 489 | 1 |
| 25 | 10/19 | 0.04 | 110 | 9.276 475 | 1 |
| 25** | 12/21 | 0.06 | 110 | 9.276 476 | 1 |
| 50 | 12/21 | 0.06 | 140 | 9.276 477 | 1 |
| 50** | 14/23 | 0.08 | 140 | 9.276 478 | 1 |
| 100 | 12/21 | 0.1 | 170 | 9.276 479 | 1 |
| 100 | 14/23 | 0.1 | 170 | 9.276 480 | 1 |
| 200 | 14/23 | 0.15 | 210 | 9.276 481 | 1 |
| 250 | 14/23 | 0.15 | 220 | 9.276 482 | 1 |
| 500 | 19/26 | 0.25 | 260 | 9.276 483 | 1 |
| 1000** | 29/32 | 0.6 | 300 | 9.276 484 | 1 |
| 1000 | 24/29 | 0.4 | 300 | 9.276 485 | 1 |
| 2000 | 29/32 | 0.6 | 370 | 9.276 486 | 1 |
| 5000* | 34/35 | 1.2 | 470 | 9.276 487 | 1 |
| 10000* | 45/40 | 2 | 570 | 9.276 488 | 1 |

*Supplementary to DIN

**wide neck

Also available with dated batch identification acc. to USP (US Pharmacopeia).

**2 Volumetric flasks, glass, Class A**

Duran®, amber, with amber glass stoppers, conformity certified, with dated batch certificate and white enamel graduations, to DIN 12 644 T1.
The batch certificate is available to download from the supplier's website.

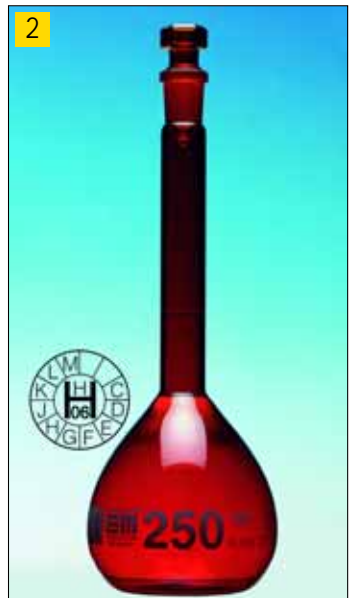
Hirschmann

| Capacity | NS | Tolerance | Height | Cat. No. | PK |
|----------|-------|-----------|--------|-----------|----|
| ml | | ± ml | mm | | |
| 5 | 7/16 | 0.025 | 70 | 9.276 500 | 1 |
| 5** | 10/19 | 0.04 | 70 | 9.276 501 | 1 |
| 10 | 7/16 | 0.025 | 90 | 9.276 502 | 1 |
| 10** | 10/19 | 0.04 | 90 | 9.276 503 | 1 |
| 20* | 10/19 | 0.04 | 110 | 9.276 504 | 1 |
| 25 | 10/19 | 0.04 | 110 | 9.276 505 | 1 |
| 50 | 12/21 | 0.06 | 140 | 9.276 506 | 1 |
| 50** | 14/23 | 0.08 | 140 | 9.276 507 | 1 |
| 100 | 12/21 | 0.1 | 170 | 9.276 508 | 1 |
| 100 | 14/23 | 0.1 | 170 | 9.276 509 | 1 |
| 200 | 14/23 | 0.15 | 210 | 9.276 510 | 1 |
| 250 | 14/23 | 0.15 | 220 | 9.276 511 | 1 |
| 500 | 19/26 | 0.25 | 260 | 9.276 512 | 1 |
| 1000 | 24/29 | 0.4 | 300 | 9.276 513 | 1 |
| 2000 | 29/32 | 0.6 | 370 | 9.276 514 | 1 |

*Supplementary to DIN

**Wide neck

Also available with dated batch identification acc. to USP (US Pharmacopeia).





1 Volumetric flasks, glass, class A

Duran®, amber, with PP stoppers, conformity certified, with dated batch certificate and permanent white enamel graduations, to DIN 12644 T1.
The batch certificate is available to download from the supplier's website.

Hirschmann

| Capacity | Tolerance | NS | Height | Cat. No. | PK |
|----------|-----------|-------|--------|-----------|----|
| ml | ± ml | | mm | | |
| 5 | 0.025 | 7/16 | 70 | 9.276 699 | 1 |
| 5* | 0.04 | 10/19 | 70 | 9.276 700 | 1 |
| 10 | 0.025 | 7/16 | 90 | 9.276 701 | 1 |
| 10* | 0.04 | 10/19 | 90 | 9.276 702 | 1 |
| 20 | 0.040 | 10/19 | 110 | 9.276 703 | 1 |
| 25 | 0.040 | 10/19 | 110 | 9.276 704 | 1 |
| 50 | 0.060 | 12/21 | 140 | 9.276 705 | 1 |
| 50* | 0.080 | 14/23 | 140 | 9.276 713 | 1 |
| 100 | 0.100 | 12/21 | 170 | 9.276 706 | 1 |
| 100 | 0.100 | 14/23 | 170 | 9.276 714 | 1 |
| 200 | 0.150 | 14/23 | 210 | 9.276 707 | 1 |
| 250 | 0.150 | 14/23 | 220 | 9.276 708 | 1 |
| 500 | 0.250 | 19/26 | 260 | 9.276 709 | 1 |
| 1000 | 0.400 | 24/29 | 300 | 9.276 711 | 1 |
| 2000 | 0.600 | 29/32 | 370 | 9.276 712 | 1 |

*Wide neck

Also available with dated batch identification acc. to USP (US Pharmacopeia).



2 Volumetric flasks, glass

With beaded rim neck. Class A. DIN EN ISO 1042. Blaubrand®. Duran®. Conformity certified. With batch number. Ring marks and inscriptions in highly contrasting blue enamel. Calibrated to contain. Without stoppers.
All Blaubrand® volumetric flasks are delivered with batch number and one batch certificate included per pack.

BRAND

Also available with individual works or DKD calibration certificate, please enquire. Blaubrand® volumetric flasks (except wide-neck flasks) are also available with individual and batch USP certification.

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

| Capacity | Tolerance | Cat. No. | PK |
|----------|-----------|-----------|----|
| ml | ± ml | | |
| 10 | 0.04 | 9.276 345 | 1 |
| 20 | 0.04 | 9.276 346 | 1 |
| 25 | 0.04 | 9.276 347 | 1 |
| 50 | 0.06 | 9.276 348 | 1 |
| 100 | 0.10 | 9.276 349 | 1 |
| 200 | 0.15 | 9.276 350 | 1 |
| 250 | 0.15 | 9.276 351 | 1 |
| 500 | 0.25 | 9.276 352 | 1 |
| 1000 | 0.40 | 9.276 353 | 1 |



3 Volumetric flasks, class A, amber graduations

Duran®, with NS-ground neck and poly stopper. Conformity certified, with dated batch identification and durable amber stain graduation and inscriptions. IN (TC) calibrated, acc. to DIN EN ISO 1042.

Hirschmann

| Capacity | NS | Cat. No. | PK |
|----------|----------|-----------|----|
| ml | | | |
| 5 | 10 / 19* | 9.276 758 | 1 |
| 10 | 10 / 19* | 9.276 759 | 1 |
| 20 | 10 / 19 | 9.276 760 | 1 |
| 25 | 10 / 19 | 9.276 761 | 1 |
| 50 | 12 / 21 | 9.276 762 | 1 |
| 50 | 14 / 23* | 9.276 763 | 1 |
| 100 | 12 / 21 | 9.276 764 | 1 |
| 100 | 14 / 23 | 9.276 765 | 1 |
| 200 | 14 / 23 | 9.276 766 | 1 |
| 250 | 14 / 23 | 9.276 767 | 1 |
| 500 | 19 / 26 | 9.276 768 | 1 |
| 1000 | 24 / 29 | 9.276 769 | 1 |
| 2000 | 29 / 32 | 9.276 770 | 1 |

*wide neck

Also available with dated batch identification acc. to USP (US Pharmacopeia).

1 Volumetric flasks, glass, class A

Blaubrand®. Class A. DIN EN ISO 1042. Duran®. BRAND
 Conformity certified with works certified batch number.
 Ring marks and inscriptions in highly contrasting blue enamel.
 Calibrated to contain. With PP stoppers.
 All Blaubrand® volumetric flasks are delivered with batch number and one batch certificate included per pack.
 Also available with individual works or DKD calibration certificate, please enquire. Blaubrand® volumetric flasks (except wide neck flasks) are also available with individual and batch USP certification.
 The batch certificate is also available to download from the manufacturer's website.

| Capacity | NS | Tolerance | Cat. No. | PK |
|----------|-------|-----------|-----------|----|
| ml | | ± ml | | |
| 5 | 10/19 | 0.04 | 9.276 438 | 1 |
| 10* | 10/19 | 0.04 | 9.276 443 | 1 |
| 20 | 10/19 | 0.04 | 9.276 446 | 1 |
| 25 | 10/19 | 0.04 | 9.276 447 | 1 |
| 50 | 12/21 | 0.06 | 9.276 448 | 1 |
| 50* | 14/23 | 0.08 | 9.276 456 | 1 |
| 100 | 12/21 | 0.10 | 9.276 449 | 1 |
| 100 | 14/23 | 0.10 | 9.276 457 | 1 |
| 200 | 14/23 | 0.15 | 9.276 450 | 1 |
| 250 | 14/23 | 0.15 | 9.276 451 | 1 |
| 500 | 19/26 | 0.25 | 9.276 452 | 1 |
| 1000 | 24/29 | 0.40 | 9.276 453 | 1 |
| 2000 | 29/32 | 0.60 | 9.276 454 | 1 |
| 5000 | 34/35 | 1.20 | 9.276 455 | 1 |
| 10000 | 45/40 | 2.0 | 9.276 436 | 1 |

*wide neck version

2 Volumetric flasks, glass, Class A

Blaubrand® Eterna. Class A. To DIN EN ISO 1042. Duran®. BRAND
 Conformity certified. With batch number.
 Graduation and inscriptions in Eterna amber stain.
 Calibrated to contain. With PP stoppers.
 All Blaubrand® volumetric flasks are delivered with batch number and one batch certificate included per pack.
 Also available with individual works or DKD calibration certificate, please enquire. Blaubrand® volumetric flasks (except wide-neck flasks) are also available with individual and batch USP certification.
 The batch certificate is also available to download from the manufacturer's website.

| Capacity | NS | Tolerance | Cat. No. | PK |
|----------|-------|-----------|-----------|----|
| ml | | ± ml | | |
| 5* | 10/19 | 0.04 | 9.276 260 | 1 |
| 10* | 10/19 | 0.04 | 9.276 261 | 1 |
| 20 | 10/19 | 0.04 | 9.276 262 | 1 |
| 25* | 12/21 | 0.06 | 9.276 263 | 1 |
| 50 | 12/21 | 0.06 | 9.276 264 | 1 |
| 50* | 14/23 | 0.08 | 9.276 265 | 1 |
| 100 | 14/23 | 0.1 | 9.276 270 | 1 |
| 200 | 14/23 | 0.15 | 9.276 271 | 1 |
| 250 | 14/23 | 0.15 | 9.276 272 | 1 |
| 500 | 19/26 | 0.25 | 9.276 273 | 1 |
| 1000 | 24/29 | 0.4 | 9.276 274 | 1 |
| 2000 | 29/32 | 0.6 | 9.276 275 | 1 |

*Wide neck version

3 Volumetric flasks Silberbrand, glass, for determination of oil content

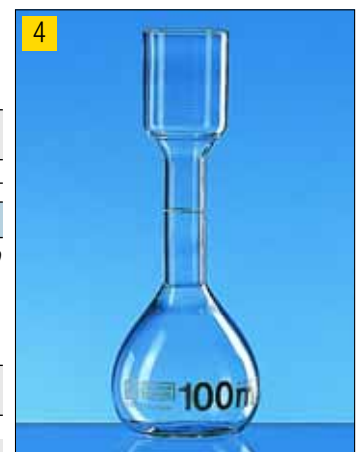
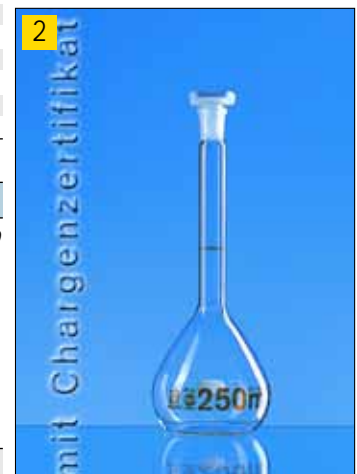
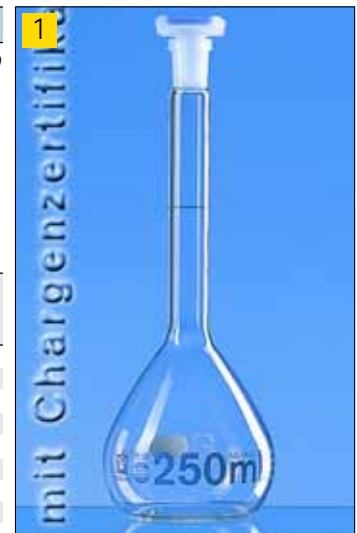
DIN 51 368. Borosilicate glass type 3.3. BRAND
 For determination of oil content in aqueous oil emulsions (e.g. drilling oil).
 With NS19/26, hollow glass stoppers.
 Graduations and inscriptions in highly contrasting white enamel.
 Capacity 100 ml, tolerance ±0.2 ml. Calibrated to contain.
 Subdivisions: 0 to 5 ml: 0.1 ml, tolerance: ±0.1 ml
 Subdivisions: 5 to 30 ml: 0.5 ml, tolerance: ±0.5 ml

| Capacity | Cat. No. | PK |
|----------|-----------|----|
| 100 ml | 9.276 880 | 1 |

4 Volumetric flasks, glass, Kohlrausch

Silberbrand. Borosilicate glass type 3.3. BRAND
 For sugar tests in the style of Kohlrausch.
 Tolerance equivalent to class B. Ring marks and inscriptions in highly contrasting white enamel.
 Calibrated to contain.

| Capacity | Tolerance | Cat. No. | PK |
|----------|-----------|-----------|----|
| ml | ± ml | | |
| 100 | 0.2 | 9.276 885 | 1 |
| 200 | 0.3 | 9.276 887 | 1 |




1

1 Volumetric flasks, glass, class A

Trapezoidal shape. Blaubrand®. DIN EN ISO 1042. Duran®.

BRAND

Conformity certified. With batch number.

Graduations and inscriptions in highly contrasting blue enamel.

Calibrated to contain. With PP stoppers.

All Blaubrand® volumetric flasks are delivered with batch number and one batch certificate included per pack.

Also available with individual works or DKD calibration certificate, please enquire. Blaubrand® volumetric flasks (except wide-neck flasks) are also available with individual and batch USP certification.

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

| Capacity | NS | Tolerance | Cat. No. | PK |
|----------|-------|-----------|-----------|----|
| ml | | ± ml | | |
| 1 | 7/16 | 0.025 | 9.276 001 | 1 |
| 2 | 7/16 | 0.025 | 9.276 002 | 1 |
| 5 | 7/16 | 0.025 | 9.276 003 | 1 |
| 10* | 10/19 | 0.040 | 9.276 004 | 1 |
| 20 | 10/19 | 0.040 | 9.276 006 | 1 |
| 25 | 10/19 | 0.040 | 9.276 007 | 1 |
| 50 | 12/21 | 0.060 | 9.276 008 | 1 |

*wide neck version


2

2 Volumetric flasks, plastic, Class B

To DIN 12664 (Glass standard)/ISO 1042, highly transparent PP, with individually adjusted, blue printed graduation and inscriptions, with PP standard ground joint stoppers.

VITLAB

Tolerance is approx. 20% better than class B DIN EN ISO 1042.

| Capacity | Height | NS | Tolerance | Cat. No. | PK |
|----------|--------|---------|-----------|-----------|----|
| ml | mm | | ± ml | | |
| 10 | 90 | 10 / 19 | 0.05 | 9.276 818 | 1 |
| 25 | 115 | 10 / 19 | 0.06 | 9.276 820 | 1 |
| 50 | 150 | 10 / 19 | 0.10 | 9.276 828 | 1 |
| 100 | 180 | 14 / 23 | 0.16 | 9.276 838 | 1 |
| 250 | 235 | 19 / 26 | 0.24 | 9.276 848 | 1 |
| 500 | 270 | 19 / 26 | 0.40 | 9.276 854 | 1 |
| 1000 | 310 | 24 / 29 | 0.60 | 9.276 862 | 1 |


3

3 Volumetric flasks, plastic, Class B, PP, with standard ground joint stoppers

To 12664 (Glass standard)/ISO 1042, transparent PMP, with individually adjusted, red printed graduation and inscriptions and PP standard ground joint stoppers.

VITLAB

Tolerances are approx. 20% better than class B DIN EN ISO 1042.

| Capacity | Height | NS | Tolerance | Cat. No. | PK |
|----------|--------|-------|-----------|-----------|----|
| ml | mm | | ± ml | | |
| 25 | 115 | 10/19 | 0.06 | 9.276 671 | 1 |
| 50 | 150 | 10/19 | 0.10 | 9.276 672 | 1 |
| 100 | 180 | 14/23 | 0.16 | 9.276 673 | 1 |
| 250 | 235 | 19/26 | 0.24 | 9.276 674 | 1 |
| 500 | 270 | 19/26 | 0.40 | 9.276 675 | 1 |
| 1000 | 310 | 24/29 | 0.60 | 9.276 676 | 1 |


4

4 Volumetric flasks, plastic, with screw cap, class A

PFA. Highly transparent. With individually adjusted graduation.

VITLAB

To DIN EN ISO 1042 (Glass standard), Class A. With PFA screwthread cap.

Provides hermetic seal and optimal protection against contamination

from the outside environment. High temperature and chemical resistance.

For applications in trace analysis, e.g. AAS, ICP-MS etc.

| Capacity | Height | Thread | Tolerance | Cat. No. | PK |
|----------|--------|--------|-----------|-----------|----|
| ml | mm | GL | ± ml | | |
| 10 | 90 | 18 | 0.025 | 9.276 919 | 1 |
| 25 | 115 | 18 | 0.04 | 9.276 920 | 1 |
| 50 | 150 | 18 | 0.06 | 9.276 921 | 1 |
| 100 | 180 | 18 | 0.10 | 9.276 922 | 1 |
| 250 | 235 | 25 | 0.15 | 9.276 923 | 1 |
| 500 | 270 | 25 | 0.25 | 9.276 924 | 1 |

1 Volumetric flasks, plastic, Class A

PMP. To EN ISO 1042 (Glass standard), transparent PMP, with individually adjusted, red printed graduation and inscriptions, PP standard ground joint stoppers, with printed batch number and conformity certificate.

VITLAB

| Capacity | Tolerance | Height | Stopper | Cat. No. | PK |
|----------|-----------|--------|---------|-----------|----|
| ml | ± ml | mm | NS | | |
| 10 | 0.025 | 95 | 10 / 19 | 9.276 949 | 1 |
| 25 | 0.04 | 115 | 10 / 19 | 9.276 950 | 1 |
| 50 | 0.06 | 150 | 10 / 19 | 9.276 951 | 1 |
| 100 | 0.10 | 180 | 14 / 23 | 9.276 952 | 1 |
| 250 | 0.15 | 235 | 19 / 26 | 9.276 953 | 1 |
| 500 | 0.25 | 270 | 19 / 26 | 9.276 954 | 1 |
| 1000 | 0.40 | 310 | 24 / 29 | 9.276 955 | 1 |



2 Tilt pipettes (bottle top dispensing pipettes)

Bottle top dispensing pipettes. Duran®. With inscriptions in green enamel. Calibrated to deliver. Complete with 1000 ml soda-glass reservoir with NS29/32 joint. Height given is overall height with reservoir.

Lenz

| Capacity | Height | Description | Cat. No. | PK |
|----------|--------|------------------------------|-----------|----|
| ml | mm | | | |
| 5 | 270 | with soda-glass reservoir | 9.277 005 | 1 |
| 10 | 270 | with soda-glass reservoir | 9.277 010 | 1 |
| 20 | 280 | with soda-glass reservoir | 9.277 020 | 1 |
| 25 | 280 | with soda-glass reservoir | 9.277 025 | 1 |
| 50 | 280 | with soda-glass reservoir | 9.277 050 | 1 |
| 100 | 280 | with soda-glass reservoir | 9.277 100 | 1 |
| 5 | 270 | without soda-glass reservoir | 9.277 105 | 1 |
| 10 | 270 | without soda-glass reservoir | 9.277 110 | 1 |
| 20 | 280 | without soda-glass reservoir | 9.277 120 | 1 |
| 25 | 280 | without soda-glass reservoir | 9.277 125 | 1 |
| 50 | 280 | without soda-glass reservoir | 9.277 150 | 1 |



3 Burettes, glass, lateral stopcock.

Blaubrand®. Class AS. DIN EN ISO 385. Duran®. Conformity certified. With batch number. Graduations and inscriptions in highly contrasting blue enamel. With Schellbach stripes. Length approx. 800 mm. Calibrated to deliver. Available with screwthread PTFE plug stopcock or standard glass key stopcock. All Blaubrand® burettes are delivered with batch number and one batch certificate included per pack. Also available with individual works, USP or DKD calibration certificate, please enquire. The batch certificate is also available to download from the manufacturer's website.

BRAND

| Capacity | Grad. | Tolerance | Stopcock | Cat. No. | PK |
|----------|-------|-----------|------------------|-----------|----|
| ml | ml | ± ml | | | |
| 10 | 0.02 | 0.02 | Screwthread PTFE | 9.270 144 | 1 |
| 25 | 0.05 | 0.03 | Screwthread PTFE | 9.270 147 | 1 |
| 50 | 0.1 | 0.05 | Screwthread PTFE | 9.270 148 | 1 |
| 10 | 0.02 | 0.02 | Glass | 9.270 121 | 1 |
| 25 | 0.05 | 0.03 | Glass | 9.270 122 | 1 |
| 50 | 0.1 | 0.05 | Glass | 9.270 125 | 1 |



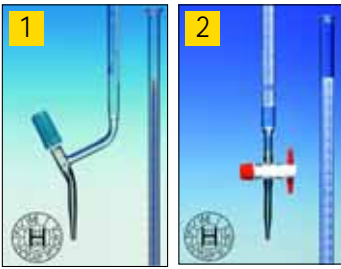
4 Burettes, Class AS, with straight stopcock, Blaubrand®

Duran®. DIN EN ISO 385. Conformity certified. 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 DKD calibration certificate, please enquire. The batch certificate is also available to download from the manufacturer's website.

BRAND

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





1 2 3 Burettes, class AS, straight stopcock

Duran®, Schellbach line for easier reading, conformity certified, with dated batch identification, high-contrast blue graduations, ring graduation at major subdivisions, EX (TD) calibrated, acc. to DIN 12 700 T2. Scale length approx. 500 mm. The batch certificate is available to download from the manufacturer's website.

Hirschmann

| Capacity | Grad. | Tolerance | Stopcock | Cat. No. | PK |
|----------|-------|-----------|--------------------------|-----------|----|
| ml | ml | ± ml | | | |
| 10 | 0.02 | 0.02 | glass | 9.270 161 | 1 |
| 25 | 0.03 | 0.05 | glass | 9.270 162 | 1 |
| 50 | 0.05 | 0.1 | glass | 9.270 163 | 1 |
| 10 | 0.02 | 0.02 | valve type with PTFE key | 9.270 164 | 1 |
| 25 | 0.03 | 0.05 | valve type with PTFE key | 9.270 165 | 1 |
| 50 | 0.05 | 0.1 | valve type with PTFE key | 9.270 166 | 1 |
| 10 | 0.02 | 0.02 | glass with PTFE-key | 9.270 167 | 1 |
| 25 | 0.03 | 0.03 | glass with PTFE-key | 9.270 168 | 1 |
| 50 | 0.05 | 0.1 | glass with PTFE-key | 9.270 169 | 1 |

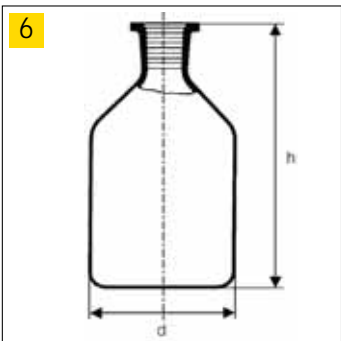


4 5 Burettes, glass, with Schellbach stripes, Class AS

Duran®, conformity certified, with dated batch certificate, highly contrasting blue graduations, ring marks at main graduation points and lateral glass stopcock with choice of glass or PTFE screwthread keys. To DIN 12700 T3. Scale length approx. 500 mm. The batch certificate is available to download from the manufacturer's website.

Hirschmann

| Capacity | Grad. | Tolerance | Stopcock | Cat. No. | PK |
|----------|-------|-----------|---------------------------|-----------|----|
| ml | ml | ± ml | | | |
| 10 | 10 | 0.02 | with glass key | 9.270 155 | 1 |
| 25 | 25 | 0.03 | with glass key | 9.270 156 | 1 |
| 50 | 50 | 0.05 | with glass key | 9.270 157 | 1 |
| 10 | 10 | 0.02 | with PTFE screwthread key | 9.270 158 | 1 |
| 25 | 25 | 0.03 | with PTFE screwthread key | 9.270 159 | 1 |
| 50 | 50 | 0.05 | with PTFE screwthread key | 9.270 160 | 1 |



6 Burette reservoir bottles

Duran®. With 29/32 ground joint. DIN 12463.

SCHOTT Duran

| Capacity | Dia. | Height | Material | Colour | Cat. No. | PK |
|----------|------|--------|-----------------|--------|-----------|----|
| g | mm | mm | | | | |
| 1000 | 110 | 200 | soda-lime glass | clear | 9.270 905 | 1 |
| 1000 | 110 | 200 | soda-lime glass | amber | 9.270 915 | 1 |
| 2000 | 160 | 200 | Duran® | clear | 9.270 910 | 1 |
| 2000 | 160 | 200 | Duran® | amber | 9.270 920 | 1 |

7 Burette clamp

Material: Polypropylene. Bosshead supplied with two adapters so that the clamp can fit on to support rods having diameters 8 to 14 mm. Stainless steel spring loaded centre arm holds burette firmly against the two outer arms and is protected by rubber grips. Graduations and meniscus are visible at all times. Suitable for all burettes.

Kartell



| Rod | Cat. No. | PK |
|-----------------------|-----------|----|
| Ø mm | | |
| 8 to 14, double clamp | 9.224 495 | 1 |
| 8 to 14, single clamp | 9.224 496 | 1 |



8 Burette covers

PP. Ribbed inside to prevent suction attachment during titration.

BRAND

| Int. dia. | Height | Cat. No. | PK |
|-----------|--------|-----------|----|
| mm | mm | | |
| 20 | 30 | 9.270 330 | 1 |

1 Rubber blowballs

Non-rigid PVC. Red-brown, smooth. With 6 mm i.d. outlet hole.

| Type | Capacity ml | Dia. mm | Cat. No. | PK |
|--------|----------------|------------|-----------|----|
| B oval | 5 | 30 | 9.115 404 | 1 |
| 0 | 10 | 30 | 9.115 411 | 1 |
| 2 | 28 | 42 | 9.115 430 | 1 |
| 3 | 42 | 48 | 9.115 450 | 1 |
| 5 | 90 | 62 | 9.115 480 | 1 |
| 7 | 145 | 72 | 9.115 485 | 1 |
| 9 | 225 | 84 | 9.115 487 | 1 |

2 Orsat blowball

Natural rubber. Translucent.

| Type | Cat. No. | PK |
|----------------|-----------|----|
| Orsat blowball | 9.115 510 | 1 |

3 Hand bellows

Single spray. Without net.
Size 3.

| Type | Cat. No. | PK |
|--------------|-----------|----|
| Hand bellows | 9.270 995 | 1 |

4 Hand bellows

Double spray. With net.
Size 3.

| Type | Cat. No. | PK |
|--------------|-----------|----|
| Hand bellows | 9.270 990 | 1 |

5 Automatic burettes, glass, Pellet pattern, Class AS

Blaubrand®. Class AS, to DIN EN ISO 385. Duran®.

BRAND

With intermediate stopcock.

Conformity certified. 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.

Choice of models, either with screwthread PTFE screwthread dispensing stopcock and PTFE plug key intermediate stopcock, or glass key stopcocks for both.

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. 1000 to 1050 mm.

All Blaubrand® burettes are delivered with batch number and one batch certificate included per pack.

Also available with individual works, USP or DKD calibration certificate, please enquire.

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

6 Automatic burettes, glass, Pellet pattern

Silberbrand. Amber borosilicate glass type 5.0. With intermediate stopcock.

BRAND

25 ml: Tolerance to DIN EN ISO 385.

50 ml: 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.

Choice of models, either with PTFE or glass dispensing and intermediate stopcocks.

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. 1000 to 1050 mm.

| Capacity | Grad. | Tolerance | Keys | Cat. No. | PK |
|----------|-------|-----------|-------|-----------|----|
| ml | ml | ± ml | | | |
| 25* | 0.1 | 0.08 | Glass | 9.270 536 | 1 |
| 50 | 0.1 | 0.1 | Glass | 9.270 538 | 1 |
| 25* | 0.1 | 0.08 | PTFE | 9.270 540 | 1 |
| 50 | 0.1 | 0.1 | PTFE | 9.270 542 | 1 |

* Narrower divisions.





1 Automatic burettes, glass, Dr. Schilling pattern

Silberbrand.

BRAND

Tolerances to class B, DIN EN ISO 385. AR soda-glass burette*. PVC discharge tubing and silicone outlet tubing. LDPE reservoir bottle with HDPE base. PE pushbutton and support clamp. Brass micrometer screw with PE knurled knob. 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.

| Capacity | Grad. | Tolerance | Capacity | Height | Cat. No. | PK |
|----------|-------|-----------|----------|--------|-----------|----|
| ml | ml | ± ml | ml | mm | | |
| 10* | 0.05 | 0.05 | 500 | 530 | 9.271 053 | 1 |
| 15* | 0.1 | 0.08 | 500 | 510 | 9.271 055 | 1 |
| 25* | 0.1 | 0.08 | 1000 | 620 | 9.271 056 | 1 |
| 50* | 0.1 | 0.1 | 1000 | 830 | 9.271 058 | 1 |

* Narrower divisions.



2 Automatic burettes, Blaubrand®

Duran®, detachable PTFE stopcock. To DIN EN ISO 385. Calibrated to deliver (TD, Ex).

BRAND

Automatic zeroing (filling tube PVC, transparent). Schellbach stripe.

Incl. one batch certificate. With burette support and base plate and 1000 ml bottle (PE).

Supplied with a batch number and an accompanying batch certificate in the original packaging.

| Capacity | Graduations | Tolerance | Length | Cat. No. | PK |
|----------|-------------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 10 | 0.02 | 0.02 | 775 | 9.271 013 | 1 |
| 25 | 0.05 | 0.03 | 785 | 9.271 014 | 1 |
| 50 | 0.1 | 0.05 | 790 | 9.271 018 | 1 |

Automatic burette, Silberbrand

With PTFE stopcock, fast to dismantle and easy to clean. Simple repair - all individual components replaceable. AR-Glas®, detachable PTFE stopcock.

BRAND

Tolerances according to class B, DIN EN ISO 385. Calibrated to deliver (TD, Ex).

Automatic zeroing (filling tube PVC, transparent).

Schellbach stripe. With burette support and base plate and 1000 ml bottle (PE).

| Capacity | Graduations | Tolerance | Length | Cat. No. | PK |
|----------|-------------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 10 | 0.05 | 0.05 | 445 | 9.271 003 | 1 |
| 25 | 0.1 | 0.075 | 520 | 9.271 006 | 1 |
| 50 | 0.1 | 0.1 | 730 | 9.271 008 | 1 |



3 Automatic burette, amber glass, Silberbrand

Amber borosilicate glass 5.0, with detachable PTFE stopcock.

BRAND

Tolerances according to DIN EN ISO 385 class B.

25 ml: reduced distance between subdivision marks.

Calibrated to deliver (TD, Ex). Automatic zeroing (filling tube PVC, transparent).

With burette support and base plate and 1000 ml PE reservoir bottle.

| Capacity | Graduations | Tolerance | Length | Cat. No. | PK |
|----------|-------------|-----------|--------|-----------|----|
| ml | ml | ± ml | mm | | |
| 25 | 0.1 | 0.075 | 495 | 9.271 026 | 1 |
| 50 | 0.1 | 0.1 | 780 | 9.271 028 | 1 |

Burette support with base plate for bottle 1000 ml.

BRAND

Rubber feet for secure stand and protection of table top.

Base plate: PP (L x W: 210 mm x 155 mm)

Support rod: Steel alloy (L x W: 595 mm x 12 mm)

| Description | Cat. No. | PK |
|---------------------------------|-----------|----|
| Burette support with base plate | 9.271 073 | 1 |

Spare filling tube, PVC, transparent and bottle threaded coupling with bushing.

BRAND

| Description | Cat. No. | PK |
|--------------------|-----------|----|
| Spare filling tube | 9.271 074 | 1 |

Narrow neck bottle, PE, 1000 ml

BRAND

| Colour | Cat. No. | PK |
|-------------|-----------|----|
| amber | 9.072 768 | 1 |
| translucent | 9.271 075 | 25 |



1 Accessories for burettes

Spare burette length with automatic zero adjustment.

BRAND

| Description | Capacity ml | Length mm | Cat. No. | PK |
|---------------------------|-------------|-----------|-----------|----|
| BLAUBRAND®, DURAN® | 10 | 680 | 9.271 060 | 1 |
| BLAUBRAND®, DURAN® | 25 | 690 | 9.271 061 | 1 |
| BLAUBRAND®, DURAN® | 50 | 695 | 9.271 062 | 1 |
| SILBERBRAND®, AR-GLASS® | 10* | 360 | 9.271 063 | 1 |
| SILBERBRAND®, AR-GLASS® | 25* | 425 | 9.271 064 | 1 |
| SILBERBRAND®, AR-GLASS® | 50* | 635 | 9.271 065 | 1 |
| SILBERBRAND®, amber glass | 25* | 400 | 9.271 066 | 1 |
| SILBERBRAND®, amber glass | 50 | 685 | 9.271 067 | 1 |

* reduced distance between subdivision marks

2 Spare stopcock, PTFE. With screw couplings and seals, without burette tip.

BRAND

| Description | Cat. No. | PK |
|----------------|-----------|----|
| Spare stopcock | 9.271 068 | 1 |



Digital burettes, Solarus®, accessories

Hirschmann

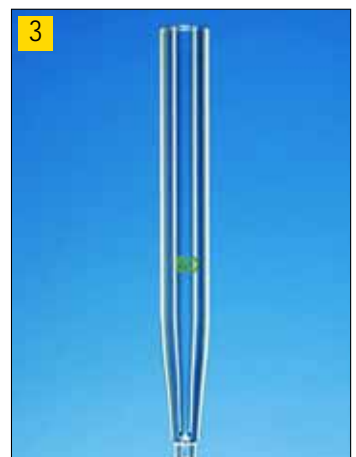
| Type | Cat. No. | PK |
|--|-----------|----|
| Adapter, PP, screwthread A 45 to A 32 | 9.287 783 | 1 |
| Adapter, PP, screwthread A 45 to A 38 | 9.287 784 | 1 |
| Adapter, PP, screwthread A 45 to S 40 | 9.287 785 | 1 |
| Adapter, ETFE, screwthread A 45 to A 32 | 9.287 786 | 1 |
| Adapter, ETFE, screwthread A 45 to A 38 | 9.287 787 | 1 |
| Adapter, ETFE, screwthread A 45 to S 40 | 9.287 788 | 1 |
| Discharge valve | 9.287 750 | 1 |
| Inlet valve | 9.287 751 | 1 |
| Recycling discharge valve | 9.287 752 | 1 |
| Assembly key | 9.287 753 | 1 |
| Discharge tube, pointed | 9.287 754 | 1 |
| Discharge tube, spiral, internal Ø: 3,0 mm | 9.287 755 | 1 |
| Inlet tubing 310 mm | 9.287 851 | 1 |
| Inlet tubing 400 mm | 9.287 852 | 1 |
| Recycle tubing | 9.287 858 | 1 |



3 Spare burette tips, Boro 3.3.

BRAND

| For | Cat. No. | PK |
|----------------------------------|-----------|----|
| clear glass burettes, 10 ml | 9.271 069 | 1 |
| clear glass burettes, 25 ml | 9.271 070 | 1 |
| clear glass burettes, 50 ml | 9.271 071 | 1 |
| amber glass burettes, 25 / 50 ml | 9.271 072 | 1 |





1 Manual titration station, behrotest®

The behrotest® HTS manual titration station simplifies manual titration and therefore increases the accuracy and reproducibility of results.

Behr

The user always titrates under similar optical conditions.

- a neutral background to the field of view permits more accurate appraisal of the colour change at the end of titration. A curved screen cowl prevents straylight affecting view
- precise positioning of the titration vessel within a holder which mounts onto the magnet stirrer top plate
- four upright rods provide a stable frame for the test vessel. These are adjustable, allowing different diameter vessels to be used.

The behrotest® manual titration station comprises:

- Vessel holder with non-tilting frame
- Magnet stirrer with mounting plate. Suitable for containers with diameter < 88 mm (Erlenmeyer flasks up to 300 ml, beakers up to 600 ml etc.)
- Screen with viewing aid
- Optional accessory: burette with digital display

| Type | Description | Cat. No. | PK |
|--------|--|-----------|----|
| HTS | Manual titration unit with magnetic stirrer and protection shield | 9.843 764 | 1 |
| STI | Manual titration station for nitrogen analysis as HTS but with digital display | 9.843 772 | 1 |
| DIT 50 | Burette with digital display | 9.843 765 | 1 |

2 Automatic Reagent Metering Unit for General Laboratory Use

Reagent metering unit for automating and accelerating reagent addition in the laboratory. Can be connected to behr reagent dosing modules with 1, 2 and 4 burettes. Can deliver into any desired number of vessels of varying sizes on a surface measuring 330 x 210 mm.

Behr

The reagent addition is achieved via one or more dispensing nozzles, moving successively to each vessel.

Options are also available to permit simultaneous delivery into two adjacent vessels.

The reagent metering unit is controlled via Windows software.

| Description | Cat. No. | PK |
|---|-----------|----|
| Fully automatic metering unit including Windows software | 9.843 916 | 1 |
| Reagent dosing module with 1 burette, 10 ml, corrosion resistant | 9.843 917 | 1 |
| Reagent dosing module with 2 burettes, 10 ml, corrosion resistant | 9.843 918 | 1 |
| Reagent dosing module with 4 burettes, 10 ml, corrosion resistant | 9.843 919 | 1 |
| Cooling / thermostatic trough for liquids, working range 2°C to 60°C | 9.843 920 | 1 |
| Magnetic stirrer, inductive, holds up to 12 samples, for direct connection to DS 20 | 9.920 746 | 1 |

3 Digital Burette III, Easy Calibration

The Digital Burette III bridges the gap between cumbersome glass burettes and costly titrators. Its small size and long-life battery enable it to be used in confined spaces and in locations far from electricity supplies.

BRAND

The SafetyPrime™ recirculation valve reduces reagent waste and the safety discharge system reduces the risk of inadvertent dispensing and splashes. To allow the bottle label to face the user, the valve block can be rotated 360°. Easy-grip hand wheel action simplifies the continuous control of titration rate, from fast to dropwise.

Easy Calibration Technique:

Calibration and adjustments according to ISO 9001 and GLP are done within seconds.

Straightforward and intuitive operation together with high reliability simplifies your daily routine, whether in the lab or in the field.

| Capacity | Resolution | Accuracy ≤ ± A% (max. vol.) | Repro- ducibility ≤ ± V% (max. vol.) | Recycle valve | Cat. No. | PK |
|----------|------------|-----------------------------------|---|------------------|-----------|----|
| ml | °C | | | | | |
| 25 | 0.01 | 0.2 | 0.1 | with | 9.271 320 | 1 |
| 50 | 0.01 | 0.2 | 0.1 | with | 9.271 321 | 1 |
| 25 | 0.01 | 0.2 | 0.1 | without | 9.271 330 | 1 |
| 50 | 0.01 | 0.2 | 0.1 | without | 9.271 331 | 1 |

4 Accessories for burette digital III

BRAND

| Description | Cat. No. | PK |
|---|-----------|----|
| Venting valve SafetyPrime™ | 9.284 506 | 1 |
| Filling valve with sealing washer | 9.284 507 | 1 |
| Spare seals, PTFE, for discharge tube, SafetyPrime™ and filling valve | 9.284 508 | 5 |
| Drying tube and seal, without drying agent | 9.284 174 | 1 |

Filling tubes, FEP/PTFE

BRAND

| Length mm | Cat. No. | PK |
|--------------|-----------|----|
| 125 to 240 | 9.284 502 | 1 |
| 195 to 350 | 9.284 505 | 1 |
| 250 to 480 | 9.284 500 | 1 |

Thread adapter, PP

BRAND

| Thread | For bottles | Cat. No. | PK |
|--------|-------------|-----------|----|
| GL 32 | GL 28 | 9.284 628 | 1 |
| GL 32 | GL 30 | 9.284 630 | 1 |
| GL 45 | GL 32 | 9.284 696 | 1 |
| GL 45 | GL 38 | 9.284 697 | 1 |
| GL 45 | S 40 | 9.284 643 | 1 |
| GL 32 | NS 19 / 26 | 9.284 719 | 1 |
| GL 32 | NS 24 / 29 | 9.284 724 | 1 |
| GL 32 | NS 29 / 32 | 9.284 729 | 1 |

1 Micro-valve titration tube. Dispenses directly into the sample without drop build-up.

BRAND

| Type | Length mm | Height mm | Cat. No. | PK |
|------------------------------|--------------|--------------|-----------|----|
| Micro-valve titration tube | 125 | 50 to 250 | 9.271 340 | 1 |
| Titration tube with fine tip | 165 | 75 | 9.284 509 | 1 |

2 Digital burettes, Top Burette

Bottle-top digital burettes with safety valve, telescopic filling tube, variable discharge tubes, 3 adapters for reservoir bottles with 40/38/32 mm diameter screwthreads and 2 x 1.5 V micro batteries.

eppendorf

- Continuous and pulse-free dispensing technology for rapid titration
- Patented safety valve for burette priming without loss of reagent
- Power supply from long-life batteries with remaining charge displayed
- Dispensing range from 0.01 ml to 999.9 ml
- Electronics are removable as single unit
- Servicing-friendly modular construction
- Simple calibration programme
- Discharge tube rotates 360°
- Variable discharge tubes are individually adjustable horizontally 142 to 220 mm vertically 10 to 200 mm
- Telescopic filling tube for automatic length adjustment from 210 to 370 mm
- Connector for drying tube.

| Type | Capacity µl | Cat. No. | PK |
|---------------|-------------------|-----------|----|
| Top Burette M | 2500 per rotation | 9.863 030 | 1 |
| Top Burette H | 5000 per rotation | 9.863 031 | 1 |

3 Digital burettes, Solarus®

Powered by built-in solar cells.

Hirschmann

Solarus® is available in either 20 ml or 50 ml capacity versions. With media recycling system which aids priming, saves on expensive reagents and is environmentally-friendly. Easy to replace valves. Simple "Quick Cal" user calibrations and factory settings memorised in the unit allow individual adjustments.

- High visibility display
- Very fine resolution in 0.01 ml steps
- Simple 2-key operation
- Can be switched between factory and customer calibration
- Rotating, stable discharge tube
- Conformity certified

Additional features:

Serial bidirectional interface for logging completed titration procedures, subsequent processing of titration data and fully automatic setting of customer calibration factors by electronic connection to a balance.

Solarus® is supplied with GL 45 screwthread valve block, GL 45/32, GL 45/S40 bottle-top adapters, outlet nozzle, screw-in filling tube, assembly key, individual test certificate, instructions and guarantee.



| Description | Cat. No. | PK |
|--------------------------------------|-----------|----|
| Solarus®, capacity 20 ml | 9.287 780 | 1 |
| Solarus®, capacity 50 ml | 9.287 781 | 1 |
| Interface cable | 9.287 756 | 1 |
| Liquid handling software liqui-soft® | 9.287 757 | 1 |



Digital burette, Titronic® universal

Motorised piston burette for precise fixed volume dispensing, with dispensing volume and speed adjustment, for incremental dispensing tasks with input of pause time between dispensing stages and for manual titration tasks. The Titronic® universal burette can be controlled directly from a PC via an RS232 interface. Several burettes can also be 'daisy chain' linked to each other. Thanks to the motor driven, 2/3-way valve, the Titronic® universal burette can be used with all standard laboratory aqueous and non-aqueous titration reagents and many other solutions.

Schott Instruments

Titronic® universal, 20 ml, module I:

Supplied with: Titronic® universal 20 ml dispensing attachment, TZ 1503 titration tip, TZ 3665 support rod, TZ 3660 electrode/titration tip holder, TZ 3680 mini keyboard

Titronic® universal, 20 ml, module II:

Supplied with: as module I, but with additional TM 96 magnetic stirrer

Titronic® universal, 50 ml, module I:

Supplied with: see above 20 ml, module I listing

Titronic® universal, 50 ml, module II:

Supplied with: as module I, but with TM 96 magnetic stirrer.



1 Digital burette, Titronic® universal

Schott Instruments

Specifications

Interfaces: 2 x RS232-C for connection to a serial printer, PC or other Titronic® universal piston burettes, plug-in connection with integral low-voltage power supply for TM 96 magnetic stirrer

Stirrer connection: Operation via 6 instrument keys and TZ 3680 mini keyboard

Keyboard connection: 4 digit LCD display

Display: 00.00 to 999.9 ml

Volume indicator: 0.01 ml

Display resolution: 0.1 to 40 ml/min. (with 20 ml dispensing unit)
0.1 to 100 ml/min. (with 50 ml dispensing unit)

Dispensing speed: 30 secs. to 99 secs. adjustable (time depends on cylinder volume)
0.1 to 99.99 ml

Fill time: 0.01 to 999.9 s

Pre-titration volume: 20 ml or 50 ml Duran® glass cylinder with UV protection sleeve

Pause time between increments: 1/8000

Dispensing cylinder: 0.1% system measurement deviation, 0.05% accidental measurement deviation determined in accordance with EN ISO 8665, Part 3

Burette resolution: 230 V 50/60 Hz or 115 V 50/60 Hz

Dispensing accuracy: ISO 8665, Part 6

Supply requirements: In accordance with European Council guidelines 89/336/EWG and 72/23/EWG

Conformity: CE mark:

| Type | Burette attachment ml | Cat. No. | PK |
|-----------|-----------------------|-----------|----|
| Module I | 20 | 9.863 205 | 1 |
| Module II | 20 | 9.863 206 | 1 |
| Module I | 50 | 9.863 207 | 1 |
| Module II | 50 | 9.863 208 | 1 |

1 Digital burettes, Titronic® basic

More precise and an easier alternative to bottle-top and conventional glass burettes for all manual laboratory titration tasks. With the motor driven, 2-/3-way valve the Titronic® basic can be used in all standard aqueous and non-aqueous titration reagents.

Schott Instruments

**Specifications**

| | |
|----------------------|--|
| Interfaces: | RS232 C for connection to serial printer or PC. Plug-in connection with integral low-voltage. |
| Stirrer connection: | TM 96 magnetic stirrer |
| Keypad connection: | for TZ 3680 hand sensor |
| Display: | 4 digit LCD display |
| Volume indicator: | 00.00 to 999.9 ml |
| Display resolution: | 0.01 ml |
| Dispensing cylinder: | 20 ml Duran® with UV protection |
| Burette resolution: | 1/8000 |
| Dosage accuracy: | 0.1% system measurement deviation, accidental measurement deviation 0.05%, determined according to EN ISO 8665, part 3 |
| Supply requirements: | 230 V 50/60 Hz or 115 V 50/60 Hz |
| Conformity: | ISO 8665, Part 6 |
| CE mark: | according to 89/336/EEC and 72/23/EEC guidelines |
| Module I: | Supplied with: Titronic® basic with 20 ml dispensing unit, titration tip with tubing, TZ 3665 support rod, TZ 3660 electrode/titration tip holder, TZ 3680 hand switch |
| Module II: | Supplied with: as module I, plus TM 96 magnetic stirrer |

| Type | Cat. No. | PK |
|----------|-----------|----|
| Module 1 | 9.863 065 | 1 |
| Module 2 | 9.863 066 | 1 |

2 Digital Titrator, TitroLine easy

Schott Instruments

**Specifications**

| | |
|----------------------|--|
| Conformity: | EN ISO 8665-3 |
| Cylinder: | 20 ml Duran® glass with UV protection |
| Valve: | Motor driven 3/2 way PTFE/ETFE valve |
| Tubing: | FEP with UV protection |
| dispensing accuracy: | 0.1% systematic measurement deviation, 0.05% accidental measurement deviation in accordance with EN ISO 8655-6 |
| Volume indicator: | 0.01 to 999.9 ml |
| Display: | LCD matrix display 69 x 39 mm, 64 x 128 pixel |
| Mini keyboard: | Plug-in connection: 4-pin mini round DIN plug |
| Stirrer: | Plug-in connection with integral low-voltage power supply for TM 96 |
| Electrodes: | pH/mV: DIN or BNC connector Measuring ranges, pH: 0 to 14, mV: -1400 to +1400 |
| Temperature sensor: | Pt1000, measuring range -30 to +115°C |
| Interface: | bidirectional RS232 C interface, 4-pin mini DIN round plug |
| Supply requirements: | 230V 50/60 Hz or 115V, 50/60 Hz |
| Case dimensions: | 135 x 310 x 205 mm (W x H x D), height includes dispensing unit, stirrer not included |
| Weight: | approx. 2.2 kg |
| Operating range: | Ambient temperature: +10 to +40°C |

| Type | Description | Cat. No. | PK |
|----------|------------------------------|-----------|----|
| Module 1 | | 9.863 130 | 1 |
| Module 2 | for pH titrations | 9.863 131 | 1 |
| Module 3 | for argentometric titrations | 9.863 132 | 1 |



1 Compact titrator

Schott Instruments

The TitroLine alpha *plus* is a compact, flexible, very robust and universal titrator. With large, graphics LCD readout and interchangeable dosing unit enabling a variety of titrating tasks to be undertaken.

The TitriSoft 2.5 titration software accessory provides the optimum solution for your titration tasks, supporting your daily work procedures including sample preparation, titration and evaluation of the results.

100 pre-programmed standard titration methods· titration up to 3 endpoints (EP) and 5 equivalent points (EQ)· 8 standard formulas and a free programmable formula editor· GLP support

Applications:

PH-, mV-, redox-, argentometric-, pH-stat, Karl Fischer (KF) and other coulometric applications.

TitroLine alpha 05 plus with 5ml dosing unit (230 V)285212934

TitroLine alpha 10 plus with 10ml dosing unit (230 V)285216944

TitroLine alpha 20 plus with 20ml dosing unit (230 V)285216977

TitroLine alpha 50 plus with 50ml dosing unit (230 V)285212983

TitriSoft 2.5 285221717

Supplied with stand rod with holder, titration clamp, and PC-style keyboard TZ2835.

Specifications

Hardware

| | |
|--------------------------------|---|
| Interfaces: | 2 x RS232-C for connection to PC, external power supply, Sample changer TW alpha plus, Analyser and various Titronic® dispensing burette measures |
| Printer connection: | Centronics-interface for connection to an Epson-compatible printer with interface |
| Control connector: | for magnetic stirrer TM 135 |
| Keyboard connection: | PS-2 connection for PC-type keyboard |
| Display: | Multifunctional graphics user interface |
| Burette capacities: | choice of 1, 5, 10, 20 or 50 ml |
| Burette resolution: | 10000 stages |
| Electrode inputs: | 2x pH/mV input with DIN 19 262 or BNC connectors |
| KF measurement input: | µA input for dual-platinum electrode (connectors: 2 x 4 mm), with adjustable polarisation voltage |
| Temperature measurement input: | Pt1000 resistance thermometer input (connectors: 2 x 4 mm) |

| Type | Description | Cat. No. | PK |
|------------------------------------|---|-----------|----|
| TitroLine alpha plus TL 05 plus | with 5 ml exchange unit | 9.863 036 | 1 |
| TitroLine alpha plus TL 10 plus | with 10 ml exchange unit | 9.863 037 | 1 |
| TitroLine alpha plus TL 20 plus | with 20 ml exchange unit | 9.863 038 | 1 |
| TitroLine alpha plus TL 50 plus | with 50 ml exchange unit | 9.863 039 | 1 |
| TitroLine alpha plus TL KF 05 plus | with 5 ml exchange unit | 9.863 040 | 1 |
| TitroLine alpha plus TL KF 10 plus | with 10 ml exchange unit | 9.863 041 | 1 |
| TitriSoft 2.5 | Titration software for TitroLine alpha plus | 9.863 072 | 1 |
| TM 135 | Magnetic stirrer | 9.863 068 | 1 |

The first address for
Titration



TitroLine KF trace

- ▶ Coulometric KF Titrator – for determination of low water contents
- ▶ Compact design – easy to operate
- ▶ With USB interface – for easy connection to PC

SCHOTT
Instruments

www.schottinstruments.com

1 Karl Fischer titrator, TitroLine KF

Schott Instruments

Extremely compact, easy to use, volumetric Karl Fischer titrator for quick and accurate water analysis. A large display makes KF titration easier through menu-driven operation. Connection to an accessory external keyboard enables easy input of alphanumeric sample labels and weighing data. Solvents can be added and titrated solutions aspirated at the touch of a button.

Software

Pre-set, adjustable parameters for sample titration (3), titre analysis with water, standard solutions, sodium tartrate dihydrate and blank value determination (oven drying and external extraction). Automatic drift analysis and correction and adjustable extraction interval. Statistical functions: average value, standard deviation and variance. Automatic inclusion of titre and blank value in calculating results. User-configurable printout (short, standard or GLP). Instrument monitoring functions. 4 language versions (German, English, French and Spanish).
TitroLine KF: complete instrument for Karl Fischer titration

Supplied with: TitroLine KF base unit, titration stand with TM KF pump, TZ 1770 titration vessel, KF 1100 micro double platinum electrode with fixed cable and starter kit.



Specifications

- RS232 C No. 1 interface: for connection to a PC in order to control and transfer data or to a serial printer
- RS232 C No. 2 interface: for "daisy chain" connection to other titrators or to a balance
- Stirrer connection: TM-KF titration stand stirrer; TitroLine KF start and stop signal
- Keyboard connection: for TZ 2825 mini-PC keyboard
- Display: high-contrast 8 digit, backlit LCD display with contrast adjustment, size 69 x 39 mm
- Burette volume: 20 ml
- Burette resolution: 8000 steps
- KF measurement input: Double platinum electrode connection; adjustable polarisation voltage

| Type | Cat. No. | PK |
|--------------|-----------|----|
| TitroLine KF | 9.863 139 | 1 |

Accessories for Titrator TitroLine KF

Schott Instruments

| Type | Description | Cat. No. | PK |
|---------|---|-----------|----|
| TZ 2825 | Mini PC keyboard, splashproof | 9.863 135 | 1 |
| TZ 2008 | Adaptor for reagent bottles with S 40 screwthread | 9.863 096 | 1 |
| TZ 1795 | Adaptor for TM KF waste and solvent bottles with S 40 screwthread | 9.863 136 | 1 |
| TZ 1052 | Drying oven for water analysis, Karl Fischer | 9.863 137 | 1 |
| TZ 1050 | Set of accessories for TZ 1052 drying oven | 9.863 138 | 1 |
| TZ 3460 | RS232-C printer incl. printer cable | 9.863 133 | 1 |



First class pumps for first class science



"Innovative Technology Worldwide" – KNF Neuberger GmbH has remained true to this slogan since its founding in 1946 when it began developing, producing, and selling diaphragm pumps and systems for laboratories and industrial customers.

The KNF Group is headquartered in the city of Freiburg in southwestern Germany.

In addition, the company operates production sites in three other countries: Switzerland, France, and the United States. Thirteen wholly-owned subsidiaries throughout the world contribute to KNF Neuberger's global presence. Finally, more than twenty representatives on every continent have been working with KNF for years, some for decades.



These companies employ more than 450 people, 180 in Freiburg alone.

Throughout the sixty years of its existence, KNF has consistently set new standards in the development of vacuum-producing diaphragm pumps. More than 100 patents in 2600 standard products are clear evidence of its accomplishments. Customized versions of standard products have been produced in more than 20,000 instances.



This level of experience ensures that KNF customers benefit from the best engineering possible. With comprehensive know-how, 9000 m² of production area at its manufacturing sites, an advanced machine shop, and highly motivated employees, KNF Neuberger is in an ideal position to provide its customers with the best possible solutions.



KNF Neuberger GmbH – Membranpumpen + Systeme

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