

### MINI-CENTRIFUGE LLG-uniCFUGE 6



- With Combi Rotor for 15 ml and 50 ml Tubes
- With Timer
- Easy Switching between RPM and RZB

New



|                            |         |                         |         |
|----------------------------|---------|-------------------------|---------|
| General Laboratory Supply  | 2, 24   | Bottles                 | 18      |
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Pressure atomizer LaboPlast®, HDPE



The pressurised spray has a working pressure of 4 bar. Extension for spray lance 30 cm available as an accessory.

- Wetted parts PE, PP, glass-fibre reinforced PA, V2A, FKM
- Bottle made of HDPE
- With a short spray nozzle
- Adjustable spray jet
- Graduation up to 1500 ml
- Temperature max. 30 °C

| Capacity | Ext. diam. | Neck diam. | Height | PK | Cat. No.    |
|----------|------------|------------|--------|----|-------------|
| ml       | mm         | mm         | mm     |    |             |
| 1500     | 142        | 45         | 315    | 1  | 9223162*LLG |

LLG-Labeling tapes



For labelling and colour coding of laboratory vessels and utensils. Strong and durable. Water-resistant. Can withstand temperatures ranging from -23 °C to 121 °C. The tapes are easy to write on and leave no residue when removed. Rolls of 12.7 m.

| Width | Colour  | PK | Cat. No.    |
|-------|---|----|-------------|
| mm    |   |    |             |
| 12.7  | 3 x blue, 3 x green, 3 x orange, 3 x red, 5 x white, 4 x yellow, 3 x pink | 24 | 4663408*LLG |
| 19.0  | 2 x blue, 2 x green, 2 x orange, 2 x red, 4 x white, 2 x yellow, 2 x pink | 16 | 4663416*LLG |
| 25.4  | 1 x blue, 2 x green, 1 x orange, 2 x red, 2 x white, 2 x yellow, 2 x pink | 12 | 4663424*LLG |

Pressure sprayer Turn'n'Spray



The practical 360° spray function allows you to spray overhead.

- Wetted parts HDPE, PP, FKM, V4A
- Plastic container made of HDPE
- Safety valve to compensate overpressure, max. 4 bar

| Capacity | PK | Cat. No.    |
|----------|----|-------------|
| ml       |    |             |
| 1500     | 1  | 4670813*LLG |

PARAFILM® M sealing film



Parafilm® M is resistant to many polar substances such as saline solutions, inorganic acids and alkaline solutions for up to 48 hours (After this time it may become brittle). Parafilm® M conforms to general FDA requirements if used below 55 °C.

|                            |                  |
|----------------------------|------------------|
| Melting temperature:       | 60 °C            |
| Continued use temperature: | -45 °C ... 50 °C |
| Stretching ability:        | 200%             |

| Type        | Width | Length | PK | Cat. No.    |
|-------------|-------|--------|----|-------------|
|             | mm    | m      |    |             |
| PARAFILM® M | 50    | 75     | 1  | 9170003*LLG |
| PARAFILM® M | 100   | 38     | 1  | 9170002*LLG |
| PARAFILM® M | 100   | 75     | 1  | 9170005*LLG |
| PARAFILM® M | 500   | 15     | 1  | 9170004*LLG |

Microcentrifuge Frontier™ FC5513-L,  
with angle rotor  
for 18 x 1.5/2.0 ml tubes



- ! - With Rotor
- For 15 ml and 2 ml Tubes
- up to 14 000 RPM



Compact high-speed microcentrifuge with modern touch-wheel for comfortable operation and reduced wear. Ideal suited for general laboratory applications.

- Backlit, two-lined LCD display
- Powerful brushless induction motor
- 10 acceleration and deceleration rates
- Memory for up to 99 parameters
- Lid locking system
- Imbalance sensor
- Small footprint
- Timer: 10 s to 99 h 59 min 59 s, continuous

| Type     | Max. rcf x g | Rotation speed rpm | Dimensions (W x D x H) mm | PK | Cat. No.    |
|----------|--------------|--------------------|---------------------------|----|-------------|
| FC5513-L | 15994        | 200 ... 14000      | 277 x 356 x 236           | 1  | 4699640*LLG |

Safe-lock reaction tubes, PP



- Autoclavable when open (121 °C, 20 min.)
- Can be opened and closed easily with one hand
- With frosted labelling area.
- Graduated
- 0.5 ml and 1.5 ml capacity Safe-lock reaction vessels can be centrifuged up to 30 000 x g

| Capacity ml | Colour           | PK   | Cat. No.    |
|-------------|------------------|------|-------------|
| 0.5         | Transparent      | 500  | 9409320*LLG |
| 1.5         | Transparent      | 1000 | 9409331*LLG |
| 2.0         | Transparent      | 1000 | 9409341*LLG |
| 0.5         | Assorted colours | 500  | 9409357*LLG |
| 1.5         | Assorted colours | 1000 | 9409358*LLG |
| 2.0         | Assorted colours | 1000 | 9409359*LLG |

Mini centrifuge LLG-uniCFUGE 6



- ! - Complete Set with Combi Rotor
- Compact Design



New



The new LLG-uniCFUGE 6 is equipped with a combi rotor. This allows centrifugation of up to 4 x 50 ml or 8 x 15 ml vessels. The lid opens automatically on run completion.

- Easy switching between RPM and RCF operating mode
- Integrated imbalance detection with automatic switch-off
- Timer setting from 1 minute to 99 minutes or continuous operation
- Enhanced airflow design for extremely quiet performance and temperature control
- Brushless, wear-free motor
- Compact and lightweight design

**Scope of supply:** Mini centrifuge, combi rotor, 4 adapters for 15 ml vessels, power supply unit, T-Allen key, manual

| Type           | Max. rcf x g | Rotation speed rpm | Plug type | PK | Cat. No.    |
|----------------|--------------|--------------------|-----------|----|-------------|
| LLG-uniCFUGE 6 | 1985         | 500 ... 4500       | EU        | 1  | 6263532*LLG |
| LLG-uniCFUGE 6 | 1985         | 500 ... 4500       | UK        | 1  | 6263533*LLG |

Eppendorf Tubes® BioBased, PP,  
with screw cap, HDPE



Eppendorf Tubes® BioBased are made of 90% bio-based plastic.

- Sterile
- Pyrogen-, DNase-, RNase- and DNA-free
- Lid with grooved sides
- Conical with a screw cap
- Large labelling field
- ISCC PLUS and ACT certification

| Nom. capacity L | Max. rcf x g | Package       | PK  | Cat. No.    |
|-----------------|--------------|---------------|-----|-------------|
| 5               | 2500         | 2 bags of 100 | 200 | 4687109*LLG |
| 15              | 19500        | 10 bags of 50 | 500 | 4687110*LLG |
| 25              | 17000        | 8 bags of 25  | 200 | 4687111*LLG |
| 50              | 19500        | 20 bags of 25 | 500 | 4687112*LLG |

## LLG-Lab Stool



The solid black plastic star base and the upholstery edge protector that runs all the way around guarantee a long working life.

- Resistant to all of the usual disinfectants and chemicals.
- Seat upholstery made of artificial leather, 400 mm diameter (soft and comfortable, washable and antibacterial) or soft-touch PU foam, 350 mm diameter (extremely robust, washable and antibacterial) in black.
- Seat height adjustment by gas spring.
- With certificate "Tested Safety" (GS mark).
- 10-year warranty, Made in Germany.

| Material           | Description | Seat height adjustment | PK | Cat. No.    |
|--------------------|-------------|------------------------|----|-------------|
|                    |             | mm                     |    |             |
| PU foam            | Castors     | 460 ... 630            | 1  | 6287757*LLG |
| Artificial leather | Castors     | 460 ... 630            | 1  | 6287758*LLG |

## LLG-Trolleys, Stainless Steel



The LLG transport trolley is made of CNS 18/10 stainless steel, material no. 1.4301. The load capacity per shelf is 80 kg.

| Description                        | Dimensions (W x D x H) mm | PK | Cat. No.    |
|------------------------------------|---------------------------|----|-------------|
| 2 shelves, vertical spacing 585 mm | 900 x 600 x 950           | 1  | 9148101*LLG |
| 3 Shelves, vertical spacing 275 mm | 900 x 600 x 950           | 1  | 9148104*LLG |

## LLG-Lab Chair



Entry model for healthy sitting! The generously proportioned seat and backrest with integrated lumbar support provide additional support and therefore offer the best laboratory ergonomics.

- Minimal joints: Hygienic design for easy cleaning and disinfection
- Resistant to disinfectants and chemicals: Resistant to all of the usual disinfectants and chemicals.
- Seat and backrest upholstery made of artificial leather (soft and comfortable, washable and antibacterial) or soft-touch PU foam (extremely robust, washable and antibacterial) in black.
- Quick adjustment: Every function can be operated comfortably and easily in a sitting position.
- Seat height adjustment by gas spring.
- The backrest is adjustable in height and inclination.
- With certificate "Tested Safety" (GS mark).
- 10-year warranty, Made in Germany.

Accessories: Multifunctional armrests (pair):  
Adjustable in height, width and depth as well as swivelling.

| Material           | Description                    | Seat height adjustment | PK | Cat. No.    |
|--------------------|--------------------------------|------------------------|----|-------------|
|                    |                                | mm                     |    |             |
| PU Foam            | Castors                        | 440-620                | 1  | 6287750*LLG |
| PU Foam            | Stop and Go Castors, Foot Ring | 620-890                | 1  | 6287752*LLG |
| Artificial Leather | Castors                        | 440-620                | 1  | 6287753*LLG |
| Artificial Leather | Stop and Go Castors, Foot Ring | 620-890                | 1  | 6287755*LLG |
| -                  | Armrests                       | -                      | 1  | 6287756*LLG |

## Roller Steps, WEDO-Step, PP



Super easy to move thanks to three castors mounted on steel springs. With a load of up to 150 kg, it stands firmly on its integrated rubber support ring. TÜV and GS-tested safety.

| Colour     | Int. diam. mm | Ext. diam. mm | Height mm | PK | Cat. No.    |
|------------|---------------|---------------|-----------|----|-------------|
| Blue       | 290           | 440           | 430       | 1  | 9700400*LLG |
| Red        | 290           | 440           | 430       | 1  | 9700401*LLG |
| Light grey | 290           | 440           | 430       | 1  | 6055095*LLG |
| Black      | 290           | 440           | 430       | 1  | 6289953*LLG |

## Disposable Gloves TouchNTuff®, Nitrile

EN ISO 374-1 EN ISO 374-5 EN 421 EN 420  
Type B



- Manufactured from nitrile, TouchNTuff® offers up to four times the puncture resistance of comparable natural-latex gloves, and three times the resistance of similar neoprene gloves
- With a unique "Thin Nitrile Technology" formulation, this glove offers easy donning and strong grip in wet or dry conditions
- AQL 1.5 (EN374)
- **Cat. III Low Chemical resistant**
- 100% nitrile, powder-free, green, 0.12 mm thick, length 240 mm, smooth
- Supplied in dispenser box containing 100 gloves

According to EN ISO 374-1:2016/Type B, EN ISO 374-5:2016, EN 421, and EN 420 Suitable for food handling.

| Size          | PK  | Cat. No.    |
|---------------|-----|-------------|
| S (6.5 - 7)   | 100 | 9005400*LLG |
| M (7.5 - 8)   | 100 | 9005401*LLG |
| L (8.5 - 9)   | 100 | 9005402*LLG |
| XL (9.5 - 10) | 100 | 9005403*LLG |

## LLG-Panoramic Eyeshield



- CE approved EN 166 and EN 170
- Can be worn over any prescription spectacles
- Wide, fully adjustable headband
- 100% UV protection (up to 380 nm)
- Weight: 84 g

| Lens                         | PK | Cat. No.    |
|------------------------------|----|-------------|
| clear, polycarbonate, 2C-1.2 | 1  | 6291832*LLG |

## Teaching skat game



Learning by Playing



Skat game with hazardous substance pictograms for classifying and labelling chemicals, with signal words.

| Description | PK | Cat. No.    |
|-------------|----|-------------|
| skat game   | 1  | 6327764*LLG |

## Eye-Wash Bottle, Barikos KS



Barikos KS and Mini Barikos KS are maintenance-free models of eye wash bottles. Containing water, they can be kept ready for use for at least two years in a sealed state. Both models are ideal for first aid boxes and sets. All Barikos mentioned above eyewash bottles comply with EN 15154-4.

- Filled eyewash bottle, pH-neutral eyewash on a water basis without chemical additives
- Ergonomically shaped eye recess

| Description                     | PK | Cat. No.    |
|---------------------------------|----|-------------|
| Barikos KS, 620 ml, filled      | 1  | 9005009*LLG |
| Mini Barikos KS, 175 ml, filled | 1  | 9005008*LLG |

## LLG-Glass-Syringes, borosilicate glass



With brown graduations. Sterilisable up to 134 °C.

| Capacity ml | Material Cone | Nozzle type | PK | Cat. No.    |
|-------------|---------------|-------------|----|-------------|
| 1           | Glass         | Luer-Slip   | 1  | 6272088*LLG |
| 2           | Glass         | Luer-Slip   | 1  | 6272089*LLG |
| 5           | Glass         | Luer-Slip   | 1  | 6272090*LLG |
| 10          | Glass         | Luer-Slip   | 1  | 6272091*LLG |
| 20          | Glass         | Luer-Slip   | 1  | 6272092*LLG |
| 50          | Glass         | Luer-Slip   | 1  | 6272093*LLG |
| 1           | Metal         | Luer-Lock   | 1  | 6272094*LLG |
| 2           | Metal         | Luer-Lock   | 1  | 6272095*LLG |
| 5           | Metal         | Luer-Lock   | 1  | 6272096*LLG |
| 10          | Metal         | Luer-Lock   | 1  | 6272097*LLG |
| 20          | Metal         | Luer-Lock   | 1  | 6272098*LLG |
| 50          | Metal         | Luer-Lock   | 1  | 6272099*LLG |

## Syringe filter CHROMAFIL® Xtra, Polyester (PET)



Hydrophilic membrane for polar as well as non-polar solvents. The HPLC filter, especially suited for mixtures of water and organic solvents; for TOC/DOC determination; is not cytotoxic, and does not inhibit the growth of microorganisms and higher cells. Polyester filter with integrated glass fibre prefilter (GF/PET): recommended for solutions with a high load of particulate matter or highly viscous solutions.

| Pore size µm | Filter diam. mm | Housing                | PK  | Cat. No.    |
|--------------|-----------------|------------------------|-----|-------------|
| 0.20         | 25              | PP-colourless/labelled | 100 | 4003417*LLG |
| 0.20         | 25              | PP-colourless/labelled | 400 | 4003418*LLG |
| 0.45         | 25              | PP-colourless/labelled | 100 | 6232548*LLG |
| 0.45         | 25              | PP-colourless/labelled | 400 | 4003416*LLG |
| 1.20         | 25              | PP-colourless/labelled | 100 | 6232549*LLG |
| 1.20         | 25              | PP-colourless/labelled | 400 | 6233172*LLG |

## Disposable Syringes HSW HENKE-JECT®, 2-part, non-sterile



Disposable syringes with PP barrel, and PE piston. Luer-Slip or Luer-Lock nozzle.

- Wipe-resistant scale
- Transparent cylinder
- Pyrogen-free, non-toxic and PVC-free

| Capacity ml | Nozzle type | PK  | Cat. No.    |
|-------------|-------------|-----|-------------|
| 1           | Luer-Slip   | 100 | 4669386*LLG |
| 5           | Luer-Slip   | 100 | 4669387*LLG |
| 2           | Luer-Slip   | 100 | 4669388*LLG |
| 10          | Luer-Slip   | 100 | 4669389*LLG |
| 20          | Luer-Slip   | 100 | 4669390*LLG |
| 2           | Luer-Lock   | 100 | 4669393*LLG |
| 5           | Luer-Lock   | 100 | 4669394*LLG |
| 10          | Luer-Lock   | 100 | 4669395*LLG |
| 20          | Luer-Lock   | 100 | 4669396*LLG |

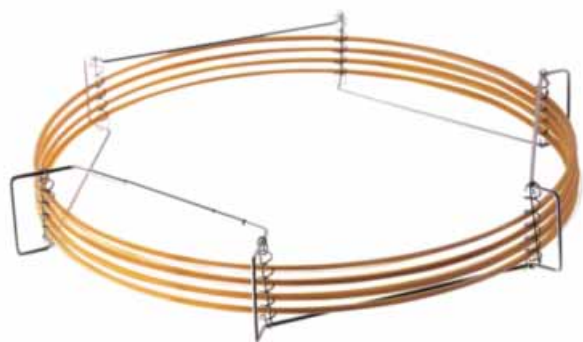
## Syringe filter CHROMAFIL® Xtra, regenerated Cellulose (RC)



Hydrophilic membrane with very low adsorption for aqueous and organic/aqueous liquids i.e. polar and medium polar sample solutions. Binding capacity for proteins 84 µg/25 mm filter.

| Pore size µm | Filter diam. mm | Housing                | PK  | Cat. No.    |
|--------------|-----------------|------------------------|-----|-------------|
| 0.20         | 13              | PP-colourless/labelled | 100 | 6287308*LLG |
| 0.45         | 13              | PP-colourless/labelled | 100 | 6287309*LLG |
| 0.20         | 25              | PP-colourless/labelled | 100 | 4003424*LLG |
| 0.20         | 25              | PP-colourless/labelled | 400 | 4003425*LLG |
| 0.45         | 25              | PP-colourless/labelled | 100 | 4003426*LLG |
| 0.45         | 25              | PP-colourless/labelled | 400 | 6233891*LLG |

Capillary columns



GC BPX90

90% Cyanopropyl Polysilphenylene-siloxane. For the fast separation of fragrances, aromatics, pesticides, PCB, isomers of fatty acid methyl esters.

- Bonded phase
- Highly polar
- Thermally stable
- Able to be solvent rinsed

| Int. diam. mm | Length m | Film thickness $\mu\text{m}$ | Temp. range $^{\circ}\text{C}$ | PK | Cat. No.    |
|---------------|----------|------------------------------|--------------------------------|----|-------------|
| 0.25          | 15       | 0.25                         | 80 ... 260 / 280               | 1  | 4682418*LLG |
| 0.25          | 60       | 0.25                         | 80 ... 260 / 280               | 1  | 6225162*LLG |
| 0.25          | 30       | 0.25                         | 80 ... 260 / 280               | 1  | 4682419*LLG |
| 0.32          | 30       | 0.50                         | 80 ... 260 / 280               | 1  | 4682420*LLG |

HT8/Fast PCB

8% Phenyl Polycarborane-siloxane. Ultra high-temperature columns for polychlorinated biphenyl compounds (PCB), nitro-substituted aromatics, polynuclear aromatic hydrocarbons, pesticides and herbicides.

| Int. diam. mm | Length m | Film thickness $\mu\text{m}$ | Temp. range $^{\circ}\text{C}$ | Type       | PK | Cat. No.    |
|---------------|----------|------------------------------|--------------------------------|------------|----|-------------|
| 0.10          | 10       | 0.10                         | -20 ... 360 / 370              | Fast PCB   | 1  | 6233627*LLG |
| 0.22          | 25       | 0.25                         | -20 ... 360 / 370              | HT8        | 1  | 6205318*LLG |
| 0.25          | 30       | 0.25                         | -20 ... 360 / 370              | HT8        | 1  | 6207027*LLG |
| 0.25          | 50       | 0.25                         | -20 ... 320 / 350              | HT8        | 1  | 4682435*LLG |
| 0.25          | 60       | 0.25                         | -20 ... 320 / 350              | HT8        | 1  | 6291057*LLG |
| 0.25          | 60       | 0.25                         | -20 ... 360 / 370              | HT8-PCB GC | 1  | 4676265*LLG |

b.safe-Caps Starter Boxes, GL 45, PPS



Complete set



For up to 4 storage bottles.

Scope of supply:

Starter Box 1:

- 3 x b.safe-Cap GL 45 with 2 connections UNF 1/4" 28G
- 1 x b.safe-Cap GL 45 with 3 connections UNF 1/4" 28G
- 4 x Air valves with service life indicator
- 5 x Fittings yellow for tubing O.D. 3.2 mm
- 1 x Blind fitting

Starter Box 2:

- 4 x b.safe-Cap GL 45 with 3 connections UNF 1/4" 28G
- 4 x Air valves with service life indicator
- 8 x Fittings yellow for tubing O.D. 3.2 mm
- 4 x Blind fittings

| Type          | Thread | PK | Cat. No.    |
|---------------|--------|----|-------------|
| Starter Box 1 | GL 45  | 1  | 6313845*LLG |
| Starter Box 2 | GL 45  | 1  | 6313846*LLG |

Safety caps, GL45, PPS/PP, PFAS Analytic



For PFAS-Analytic



Screw caps, with a freely movable insert made of PP, for connecting capillary tubing and air valve. For PFAS analysis of polyfluorinated chemicals according to DIN 38407-42/DIN 38414-14.

- Insert made of PP
- Fittings made of PP

Scope of supply: Cap, fittings (PP), air valve, service life indicator, labelling field



| Capillary | Qty. Fittings              | PK | Cat. No.    |
|-----------|----------------------------|----|-------------|
| 1         | 1 x 1.6/1 x 2.3/1 x 3.2 mm | 1  | 6324051*LLG |
| 2         | 2 x 1.6/2 x 2.3/2 x 3.2 mm | 1  | 4699537*LLG |
| 3         | 3 x 1.6/3 x 2.3/3 x 3.2 mm | 1  | 4699539*LLG |
| 4         | 4 x 1.6/4 x 2.3/4 x 3.2 mm | 1  | 4688645*LLG |

Waste SafetyCaps



Ideal for collecting liquid HPLC waste.

- Caps and fittings made of PP
- Body and hose barbs made of PTFE
- GL 45/DIN 45

| Connections  | PK | Cat. No.      |
|--|----|---------------|
| 3 x capillaries (2.3 ... 3.2 mm OD)  | 1  | SC000129.1*LE |
| 2 x capillaries (2.3 ... 3.2 mm OD) / 1 x hose (7 ... 9 mm OD)                             | 1  | SC000130.2*LE |
| 2 x capillaries (2.3 ... 3.2 mm OD) / 1 x capillary (1.6 mm OD) / 1 x hose (7 ... 9 mm OD) | 1  | SC000144.1*LE |



## Sampler ViscoSampler, PTFE/FEP or PP



Ultra-pure sample collector for viscous substances. Especially for viscous substances. The medium is drawn in and expelled again with the suction piston. Easy to dismantle and clean.

| Nominal capacity | Length | Diam. | Material | PK | Cat. No.    |
|------------------|--------|-------|----------|----|-------------|
| ml               | mm     | mm    |          |    |             |
| 160              | 600    | 32    | PTFE/FEP | 1  | 6803102*LLG |
| 300              | 1000   | 32    | PTFE/FEP | 1  | 9303960*LLG |
| 650              | 2000   | 32    | PTFE/FEP | 1  | 9303961*LLG |
| 160              | 600    | 32    | PP       | 1  | 6253163*LLG |
| 300              | 1000   | 32    | PP       | 1  | 9303965*LLG |
| 650              | 2000   | 32    | PP       | 1  | 9303966*LLG |

## Disposable liquid samplers ViscoDispo, HDPE



Contamination-free sampling. Manufactured in the clean room, individually packaged and ready for immediate use. For high viscosity-media up to 100 000 mPas.

| Capacity | Length | Sterile | PK | Cat. No.    |
|----------|--------|---------|----|-------------|
| ml       | mm     |         |    |             |
| 100      | 500    | -       | 20 | 9303732*LLG |
| 100      | 500    | +       | 20 | 9303733*LLG |
| 200      | 1000   | -       | 20 | 9303734*LLG |
| 200      | 1000   | +       | 20 | 9303735*LLG |

## Disposable tweezers, PS



For precise laboratory work, for gripping and holding small objects.

- Serrated handles
- Cleanroom manufactured (cleanroom class 7)
- Food-safe

| Form  | Length | Sterile | PK  | Cat. No.    |
|---|--------|---------|-----|-------------|
|   | mm     |         |     |             |
| Pointed / angled: fine, smooth, curved gripping tip | 130    | +       | 100 | 4670759*LLG |
| Pointed: straight, inside, serrated tip             | 130    | +       | 100 | 4670761*LLG |
| Wide tip: smooth and blunt tip                      | 130    | +       | 100 | 4670763*LLG |

## Disposable samplers PowderDispo for solids, HDPE



They are cleanroom manufactured, individually packed and always ready to use. Avoid expensive decontamination or cleaning of soiled samplers. Gamma-sterilised versions are also available. For taking cross-section samples of powdery or slightly cohesive substances.

| Capacity | Length | Sterile | PK | Cat. No.    |
|----------|--------|---------|----|-------------|
| ml       | mm     |         |    |             |
| 60       | 300    | +       | 20 | 6282453*LLG |
| 60       | 300    | -       | 20 | 6282452*LLG |
| 100      | 500    | +       | 20 | 6259428*LLG |
| 100      | 500    | -       | 20 | 9303736*LLG |



## Conductivity meter FiveGo™ F3



F3-Standard kit

Portable conductivity meter for fieldwork.

- Large, clear display, intuitively arranged buttons, simple menu structure
- The foldable tripod offers optimum readability on flat surfaces
- IP 67 waterproof and dustproof

**Supplied with:**

- F3-Meter:** Meter only
- F3-Standard kit:** Meter with LE703 sensor
- F3-Field kit:** Meter with LE703 sensor, carrying case

**Specifications**

**Conductivity**

Measuring range: 0.00  $\mu\text{S}/\text{cm}$  ... 200  $\text{mS}/\text{cm}$   
 Accuracy:  $\pm 0.5\%$  of the measured value

**Temperature**

Measuring range: 0 ... 100  $^{\circ}\text{C}$   
 Accuracy:  $\pm 0.5$   $^{\circ}\text{C}$

**TDS**

Measuring range: 0.01  $\text{mg}/\text{l}$  ... 200  $\text{g}/\text{l}$   
 Temperature compensation: Linear 0.00 ... 10.00%/ $^{\circ}\text{C}$ , reference temperature 20 and 25  $^{\circ}\text{C}$   
 Calibration: 1 point, 3 predefined standards  
 IP code: IP 67 (meter + sensor)

| Type            | PK | Cat. No.    |
|-----------------|----|-------------|
| F3-Meter        | 1  | 6280115*LLG |
| F3-Standard kit | 1  | 6280116*LLG |
| F3-Field kit    | 1  | 6280117*LLG |

## Conductivity tester Pocket Tester SD30 EC



Pocket Tester with waterproof housing for measuring conductivity, TDS, salinity, and temperature.

- Three-colour LED lighting system (blue, green, red) and display symbols for easy handling
- 3 multifunction buttons with symbols
- Up to 3 calibration points
- With stability indicator, auto-hold, and auto-off function
- Battery operation (4 x AAA batteries)
- Easy battery and electrode replacement

**Specifications**

Conductivity: 0.01 ... 20.00  $\text{mS}/\text{cm}$   
 Resolution: 0.1  $\mu\text{S}/\text{cm}$ , 1  $\mu\text{S}/\text{cm}$ , 0.01  $\text{mS}/\text{cm}$   
 Accuracy:  $\pm 1\%$  FS  
 TDS: 0.01 ... 20.00 ppt  
 Resolution: 0.1 ppm, 1 ppm, 0.01 ppt  
 Accuracy:  $\pm 1\%$  FS

| Type    | PK | Cat. No.    |
|---------|----|-------------|
| SD30 EC | 1  | 4694728*LLG |

## Conductivity Standards



Conductivity standards tested and ISO 17025 certified at 25  $^{\circ}\text{C}$ . Uncertainty of measurement of  $\pm 1\%$ . Directly traceable to N.I.S.T. Temperature dependence data is printed on the label as are lot numbers and expiry dates.

| Type                    | Capacity | PK | Cat. No.    |
|-------------------------|----------|----|-------------|
| $\mu\text{S}/\text{cm}$ | ml       |    |             |
| 1.3*                    | 250      | 1  | 6225059*LLG |
| 5                       | 500      | 1  | 6901629*LLG |
| 10                      | 500      | 1  | 6901622*LLG |
| 20                      | 500      | 1  | 6802901*LLG |
| 23.8                    | 500      | 1  | 6259883*LLG |
| 84                      | 500      | 1  | 9040904*LLG |
| 100                     | 500      | 1  | 6234859*LLG |
| 147                     | 500      | 1  | 9040905*LLG |
| 500                     | 500      | 1  | 6205415*LLG |
| 1000                    | 500      | 1  | 6901670*LLG |
| 1413                    | 500      | 1  | 9040906*LLG |
| 12880                   | 500      | 1  | 9040907*LLG |

\*1.25 - 1.35  $\mu\text{S}/\text{cm}$  at 25  $^{\circ}\text{C}$ .

## pH Tester LLG-pH Pen



**Cost-efficient pH tester**, ideal for testing small amounts of liquid and in narrow vessels. The supplied storage container prevents the electrode from drying out.

- ATC from 0 °C to 50 °C
- Large, easy-to-read LCD display
- **3-point calibration**

**Scope of supply:** pH meter

**Please order batteries separately.**

### Specifications

|  |                            |
|--|----------------------------|
| pH Measuring range:                    | 0 ... 14                   |
| pH Accuracy:                           | ±0.1                       |
| pH resolution:                         | ±0.1                       |
| Dimensions with electrode (W x D x H): | 36 x 20 x 210 mm           |
| Dimensions electrode (diam. x L):      | 12 x 110 mm                |
| Weight:                                | 72 g                       |
| Power supply:                          | 2 x 3 V CR2032 button cell |
| IP code:                               | IP 65                      |
| Warranty:                              | 2 years                    |

| Type       | PK | Cat. No.    |
|------------|----|-------------|
| LLG-pH Pen | 1  | 6263690*LLG |

## LLG-Electrolyte solutions, KCl



Potassium chloride electrolyte for pH electrodes - Filling solution for reference electrolyte.

| Type                       | Capacity | PK | Cat. No.    |
|----------------------------|----------|----|-------------|
|                            | ml       |    |             |
| 3 mol/l                    | 250      | 1  | 9041371*LLG |
| 3 mol/l                    | 1000     | 1  | 9041370*LLG |
| 3 mol/l, (AgCl saturated.) | 250      | 1  | 9041372*LLG |

## Laboratory instrument inoLab® Multi 9310 IDS



- Automatic Data Memory for up to 5 000 Measured Values
- Complete Sets with Sensors



Whether pH, conductivity or dissolved oxygen, the inoLab® Multi 9310 can be turned into a pH, conductivity or oxygen meter by plugging in the appropriate sensor. The scope of delivery includes the device, stand with sensor holder, data transmission cable and universal plug-in power supply. The inoLab® Multi 9310 IDS is radio-ready for IDS radio modules.

### Specifications

|               |  |
|---------------|--|
| Display:      | backlit graphic LCD                            |
| Memory:       | manual: 500/automatic: 5000                    |
| Logger:       | manual/time controlled                         |
| Interface:    | Mini USB-B                                     |
| Power supply: | Universal power supply, 100 to 240 V, 50/60 Hz |

| Type       | Description                      | PK | Cat. No.    |
|------------|----------------------------------|----|-------------|
| 9310       | Single instrument                | 1  | 9920120*LLG |
| 9310 Set 1 | Incl. SenTix® 940                | 1  | 9920121*LLG |
| 9310 Set 2 | Incl. SenTix® 980                | 1  | 9920122*LLG |
| 9310 Set 3 | Incl. TetraCon® 925              | 1  | 9920123*LLG |
| 9310 Set 4 | Incl. FDO® 925                   | 1  | 9920124*LLG |
| 9310 Set C | Incl. SenTix® 940, TetraCon® 925 | 1  | 9920125*LLG |

## LLG-pH-Buffer solutions with colour coding in twin-neck dispensing bottles



The ready-to-use buffer solutions offer excellent quality, precision and advantages in use.

- Accuracy ±0.01, tested and certified at 25 °C
- Temperature dependence data table printed on the label
- Traceable to NIST
- Shelf-life: 24 months (pH 7 and 10) or 36 months (pH 4) from date of production

| pH-value at 25 °C | Colour | Capacity | PK | Cat. No.    |
|-------------------|--------|----------|----|-------------|
|                   |        | ml       |    |             |
| 4.00              | Red    | 250      | 1  | 9040868*LLG |
| 7.00              | Yellow | 250      | 1  | 9040869*LLG |
| 10.00             | Blue   | 250      | 1  | 6324541*LLG |

## Multi-parameter measuring device Liquiline Mobile CML18, with USB data and charging cable

Mobile hand-held measuring device for measuring various parameters (pH/ORP, conductivity, temperature, dissolved oxygen) with digital Memosens sensors. All sensor data and measured values can be transferred to tablets or smartphones via a secure Bluetooth connection. With the free Memobase Pro app, all sample measurements can be traceably stored, documented, and visualised and sensors can be calibrated and adjusted using a guided procedure.

- Measurement of pH, conductivity, and oxygen in one device
- All calibration data, history, and measured values are stored directly in the electrode
- Data logger function for storing over 10000 measured values with time, date, and sample ID stamp
- True Plug & Play with pre-calibrated Memosens sensors enables quick changeover between parameters

The device can either be charged inductively via a pad (not included) or with the supplied USB data and charging cable.

**Scope of supply:** Multi-parameter measuring device, USB data and charging cable

Please order sensors separately.

| Type  | Dimensions (W x D x H) mm | Protection class | PK | Cat. No.    |
|-------|---------------------------|------------------|----|-------------|
| CML18 | 54 x 47 x 84              | IP 66            | 1  | 4696930*LLG |

Endress+Hauser   
People for Process Automation



- Portable Multimeter
- Digital Memosens Sensors
- Easy Change of Sensors

### pH electrode CPL51E

Robust pH electrode with Memosens technology. Plastic electrode with glass membrane. The sensor is supplied pre-calibrated and ready for immediate use.



| pH-value | Reference electrolyte | Temp. range °C | PK | Cat. No.    |
|----------|-----------------------|----------------|----|-------------|
| 0 ... 14 | 3 mol/l KCl           | -5 ... 80      | 1  | 4696933*LLG |

### pH electrode CPL53E

Versatile pH glass electrode with Memosens technology and particularly fast response time. The sensor is supplied pre-calibrated and ready for immediate use.



| pH-value | Reference electrolyte | Temp. range °C | PK | Cat. No.    |
|----------|-----------------------|----------------|----|-------------|
| 0 ... 14 | 3 mol/l KCl           | -5 ... 100     | 1  | 4696934*LLG |

### pH-Elektrode CPL59E

Rugged pH glass electrode with Memosens technology. The ion trap offers high stability against oxidizing agents. Ideal for aggressive media and challenging samples. The sensor is supplied pre-calibrated and ready for immediate use.



| pH-value | Reference electrolyte | Temp. range °C | PK | Cat. No.    |
|----------|-----------------------|----------------|----|-------------|
| 0 ... 14 | 3 mol/l KCl           | 0 ... 135      | 1  | 4696936*LLG |

### pH electrode CPL57E

The pH glass electrode with Memosens technology contains a reference system with salt storage for drift-free measurement at low conductivities. Ideal for pure and ultrapure water measurements. The sensor is supplied pre-calibrated and ready for immediate use.



| pH-value | Reference electrolyte | Temp. range °C | PK | Cat. No.    |
|----------|-----------------------|----------------|----|-------------|
| 0 ... 14 | 3 mol/l KCl           | -5 ... 100     | 1  | 4696935*LLG |

## LLG-Universal indicator paper, strips



For the determination of pH value. Vial with a snap lid of 100 pre-cut indicator paper strips.

| Range          | Package contents                  | PK  | Cat. No.    |
|----------------|-----------------------------------|-----|-------------|
| pH<br>1 ... 14 | 100 strips per vial with snap lid | 100 | 9129805*LLG |

## Indicator paper, Duotest



Roll length 5 m, 10 mm width. With two colour zones.

| Range             | Package contents            | PK | Cat. No.    |
|-------------------|-----------------------------|----|-------------|
| pH<br>1.0 ... 4.3 | Dispensing reel with 1 roll | 1  | 9130356*LLG |
| 1.0 ... 12.0      | Dispensing reel with 1 roll | 1  | 9130344*LLG |
| 3.5 ... 6.8       | Dispensing reel with 1 roll | 1  | 9130359*LLG |
| 5.0 ... 8.0       | Dispensing reel with 1 roll | 1  | 9130347*LLG |
| 7.0 ... 10.0      | Dispensing reel with 1 roll | 1  | 9130362*LLG |
| 9.5 ... 14.0      | Dispensing reel with 1 roll | 1  | 9130363*LLG |

Gel electrophoresis tank  
MultiSUB Mini



Designed for small and medium sample volumes. The small buffer volume of 225 ml increases the effectiveness of the analysis.

**Scope of delivery:**

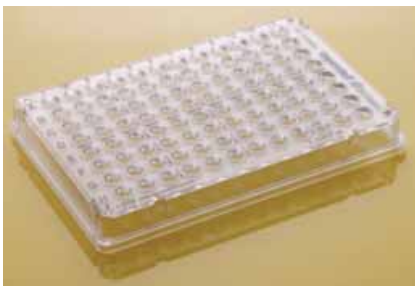
Chamber with platinum electrodes, UV carrier 7 x 10 cm, 2 combs (8 teeth), additional gel casting locks.

**Specifications**

|                              |                            |
|------------------------------|----------------------------|
| Gel dimensions (W x L):      | 7 x 10 cm                  |
| Unit dimensions (W x L x H): | 21 x 9 x 9 cm              |
| Max. sample capacity:        | 7 x 10 cm tray, 64 samples |
| Buffer volume:               | 225 ml                     |

| Description      | PK | Cat. No.    |
|------------------|----|-------------|
| MultiSUB Mini 10 | 1  | 9584650*LLG |

PCR plates, 96/384 well,  
Eppendorf twin.tec® Trace,  
BioBased, LoBind, PCR clean



The plates are made of polymer, which is produced from approx. 86% recycled feedstock.

- Laser-engraved lot number and expiration date on each single plate
- Extremely thin-walled polypropylene wells guarantee optimum heat transfer
- Raised well rims
- Free of DNA, DNAase, RNase and PCR inhibitors
- With edge (skirted)
- ISCC PLUS certified
- ACT label

| No. of wells | Nominal capacity ml | Frame | PK | Cat. No.    |
|--------------|---------------------|-------|----|-------------|
| 96           | 150                 | with  | 25 | 4699496*LLG |
| 96           | 250                 | half  | 25 | 4699494*LLG |
| 384          | 45                  | with  | 25 | 4699495*LLG |
| 96           | 20                  | half  | 25 | 4699492*LLG |
| 384          | 45                  | with  | 25 | 4699493*LLG |

Power supply nanoPAC-300 Mini  
for gel electrophoresis tanks



The nanoPAC-300 is capable of running all horizontal multiSUB™ systems and vertical omniPAGE mini gel systems.

- Maximum constant current output of 400 mA
- Simple two-step feature to set a programmable change in voltage, current and time during the run
- Constant voltage up to 300 V
- Adjustable in 1 V and 1 mA increments
- Two parallel outputs
- Continuous run or time setting up to 999 minutes

| Type              | Rating W | Supply requirements | PK | Cat. No.    |
|-------------------|----------|---------------------|----|-------------|
| nanoPAC-300P Mini | 60       | 300 V / 400 mA      | 1  | 6272711*LLG |

Agarose for gel electrophoresis



These agaroses are suitable for the routine analysis of nucleic acids. AG agaroses are very environmentally friendly as no organic solvents are used in the production process.

**Specifications**

|                                       |   |
|---------------------------------------|---|
| CAS:                                  | 9012-36-6   |
| Appearance:                           | White to off-white powder                         |
| EEO:                                  | ≤ 0.13%   |
| Gelling Point:                        | 36 °C ±1.5 °C (1.5% gel)                          |
| Melting Point:                        | 88 °C ±1.5 °C (1.5% gel)                          |
| Solubility:                           | Clear, colourless solution at 1 g in 100 ml water |
| Moisture:                             | < 10%   |
| Gel Strength:                         | ≥ 1200 g/cm <sup>2</sup> (1% gel)                 |
| Sulphate:                             | < 0.20%   |
| DNase, RNase, Protease, Endonuclease: | None Detected                                     |

| Type      | Capacity g | PK | Cat. No.    |
|-----------|------------|----|-------------|
| CSL-AG100 | 100        | 1  | 9584695*LLG |
| CSL-AG500 | 500        | 1  | 9584696*LLG |

schuett count Colony Counter

schuett**biotec**.de



Designed for reliable and efficient counting of bacterial colonies and bacteriophage plaques growing on nutrient agar or nutrient discs/filter disks in Petri dishes. Provides ergonomic and relaxed working.

- For Petri dishes with Ø 90 mm (Ø 60 or 150 mm optional)
- Individually adjustable lighting, pressure sensitivity of the counter plate and volume
- LED lighting technology, is glare-free and gentle on the eyes
- Three types of illumination: from below, from the side and incident light (optional)
- High colony transparency and differentiation (agar or nutrient discs/filter), even with transparent colonies
- No heating of the samples
- Acoustic counter control (with volume control)
- 4-digit LED display (0 - 9999), clearly arranged foil keypad
- Average count calculation, data transfer via USB to PC.
- Imported in Excel, for further processing, storage and printing

**Scope of supply:** For 90 mm dia. Petri dishes: adapter (transparent) for illumination from below, adapter (black/white) for illumination from the side, contrast disc (black), USB cable, marker-pen with holder.

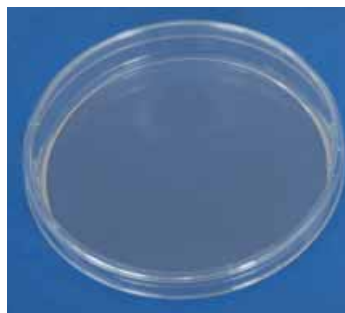
| Type                                    | PK | Cat. No.    |
|---|----|-------------|
| schuett count Colony counter, 100-240 V | 1  | 9521940*LLG |

Accessories for schuett count Colony counter



| Type   | PK | Cat. No.    |
|--|----|-------------|
| Magnifier 3 x (100 mm dia.)                    | 1  | 9521941*LLG |
| Magnifier 6-8 x (60 mm dia.)                   | 1  | 9521942*LLG |
| LED overhead lamp                              | 1  | 9521943*LLG |
| Adapter for Petri dishes, 50 to 60 mm dia.     | 1  | 9521944*LLG |
| Adapter for Petri dishes, 140 to 150 mm dia.   | 1  | 9521945*LLG |
| Adapter for other petri dish sizes on request. |    |             |

LLG-Petri dishes, PS



Made in the EU

Made of high-quality optical clear polystyrene. Produced under aseptic conditions in an ISO 6 cleanroom. Contact plate with a counting grid.

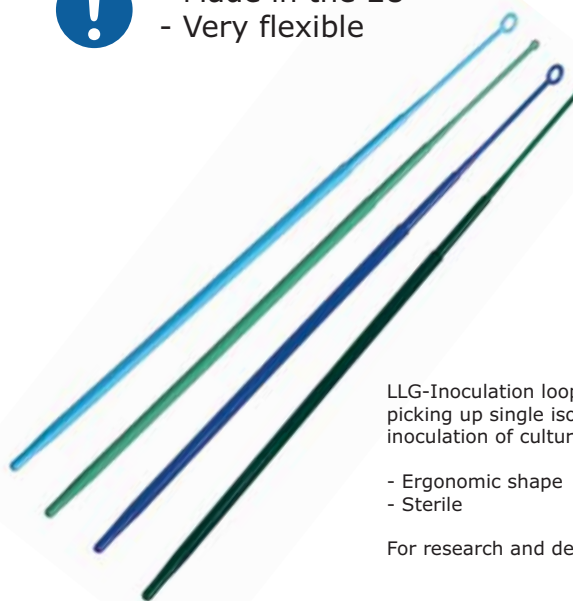
- With a smooth surface for an optimal distribution of the transport medium
- Stable thickness to prevent any deformations while using
- Stackable
- With or without vents
- Aseptic (90 mm diam.) or beta-irradiated sterile versions (all sizes)
- Packed in sleeves á 10 dishes or 20 dishes (90 mm diam. dishes)

| Ext. diam. mm | Description                | Height approx. mm | PK   | Cat. No.    |
|---------------|----------------------------|-------------------|------|-------------|
| 60            | with triple vents, aseptic | 14                | 1080 | 6323696*LLG |
| 60            | without vents, aseptic     | 14                | 1080 | 6323697*LLG |
| 90            | with triple vents, aseptic | 16                | 480  | 6285823*LLG |
| 90            | without vents, aseptic     | 16                | 480  | 6285824*LLG |
| 60            | with triple vents, sterile | 14                | 1080 | 4678371*LLG |
| 60            | without vents, sterile     | 14                | 1080 | 4678372*LLG |
| 90            | with triple vents, sterile | 16                | 480  | 6285816*LLG |
| 90            | without vents, sterile     | 16                | 480  | 6285817*LLG |
| 150           | with triple vents, sterile | 19                | 140  | 4680144*LLG |

LLG-Inoculation loops, PS, sterile



- Made in the EU
- Very flexible



LLG-Inoculation loops are ideal for picking up single isolated colonies for inoculation of culture media.

- Ergonomic shape
- Sterile

For research and development only.

| Length mm | Nominal capacity µl | Colour      | Form             | PK   | Cat. No.    |
|-----------|---------------------|-------------|------------------|------|-------------|
| 195       | 1                   | dark green  | Eyelet, fixed    | 1000 | 4691889*LLG |
| 195       | 10                  | blue        | Eyelet, fixed    | 1000 | 4691890*LLG |
| 195       | 1                   | light green | Eyelet, flexible | 1000 | 4691891*LLG |
| 195       | 10                  | light blue  | Eyelet, flexible | 1000 | 4691892*LLG |

## Laboratory and research microscopes BA410E LED-Fluorescence

Professional microscope for numerous applications in biomedical research.

- Observation tube Siedentopf type, 360° rotating
- Wide-field eyepieces for spectacle wearers incl. eyecups
- Dioptre compensation on both eyepieces
- Adjustable illumination, quartz halogen according to Köhler with external lamp house
- Auto-OFF and Light Memory Function

### Scope of supply:

Microscope, complete epi-fluorescence equipment, LUMOS FL LED high-performance light source, Halogen illumination 12 V/50 W, blue filter (Ø 45 mm), immersion oil (5 ml), armrest, mains cable, Allen key, dust cover

**Please order fluorescence filter sets separately.**

| Type   | Mag-nification     | PK | Cat. No.    |
|--------|--------------------|----|-------------|
| BA410E | 4x, 10x, 40x, 100x | 1  | 6327672*LLG |



## Inverted Microscope for advanced applications series AE31E, Trinocular LED fluorescence



- Incl. Fluorescence Module
- Light Memory
- Auto On-Off

Professional inverted research microscope for a wide range of applications.

- Observation Tube Siedentopf Type
- Wide-field eyepieces, incl. eyecups
- Diopter adjustment on both eyepieces
- Side facing nosepiece
- Illumination: Externally mounted lamp house, Koehler 6 V/30 W Quartz halogen with intensity control, automatic light switch-off

**Scope of supply:** Microscope, Epi-Fluorescence attachment with 3 position fluorescence filter cassette, LUMOS FL LED high-performance light source, dust cover, power cord, Allen key, blue, green interference and ground glass filters, phase ring Ph1, centring telescope, centring keys, spare fuse



## Inverted Routine microscope for live cell inspection, AE2000



Incl. Plan Achromat lenses

Classic cell culture microscope for daily work in the laboratory.

- Infinity Optics [CCIS®]
- Observation Tube Siedentopf Type, Binocular -/Phototube 45°, F.N. 20
- Interpupillary Distance 48 mm - 75 mm
- Eyepieces High-Eyepoint N-WF 10x/20 mm provide dioptre adjustment for both eyes
- Side-facing quadruple nosepiece
- Illumination 6V/30W halogen with intensity control and sleeping mode
- Universal power supply 100 V-240 V (CE)
- Ø 45 mm blue, green interference and neutral density filters with filter slider, centring telescope, power cord, Allen hexagonal key, vinyl dust cover
- Interchangeable LED module available

| Type   | Description | PK | Cat. No.    |
|--------|-------------|----|-------------|
| AE2000 | Trinocular  | 1  | 9727031*LLG |



| Type  | Mag-nification    | PK | Cat. No.    |
|-------|-------------------|----|-------------|
| AE31E | 4x, 10x, 20x, 40x | 1  | 6325390*LLG |

## Microscope Camera MOTICAM S



The next generation of Moticams offers solutions for a wide variety of applications in digital microscopy. Compact and robust, equipped with high-quality sCMOS sensors with many different resolutions and a fast USB 3.1 connection.

| Type        | Resolution | Sensor format | PK | Cat. No.    |
|-------------|------------|---------------|----|-------------|
| S6          | 6 MP       | 1/1.8" sCMOS  | 1  | 4672120*LLG |
| Pro S5 Lite | 5 MP       | 2/3" sCMOS    | 1  | 4672121*LLG |

## Disposable cuvettes



Kartell

Disposable cuvettes for spectroscopy made of PS or PMMA for optimum transmission when using wavelengths from 340 to 800 nm (PS) or from 280 to 800 nm (PMMA). Measurement tolerance of  $\pm 1\%$ . Layer thickness: 10 mm.

| Description                      | Capacity | Material | PK  | Cat. No.    |
|----------------------------------|----------|----------|-----|-------------|
|                                  | ml       |          |     |             |
| Standard cuvettes                | 4.5      | PS       | 100 | 9406431*LLG |
| Semi-micro cuvettes, low form    | 1.5      | PS       | 100 | 9406432*LLG |
| Semi-micro cuvettes, high form   | 2.5      | PS       | 100 | 9406433*LLG |
| Standard cuvettes, 4 clear faces | 4.5      | PS       | 100 | 9406434*LLG |
| Standard cuvettes                | 4.5      | PMMA     | 100 | 9406435*LLG |
| Semi-micro cuvettes, high form   | 2.5      | PMMA     | 100 | 9406436*LLG |
| Semi-micro cuvettes, low form    | 1.5      | PMMA     | 100 | 9406437*LLG |
| Standard cuvettes, 4 clear faces | 4.5      | PMMA     | 100 | 9406438*LLG |

## LLG-Cuvette rack, PP



Ideal for storing up to 16 cuvettes with a 12.5 mm width. Autoclavable at 121 °C.

| Length | Width | Height | PK | Cat. No.    |
|--------|-------|--------|----|-------------|
| mm     | mm    | mm     |    |             |
| 210    | 70    | 35     | 1  | 4682061*LLG |

## Spectrophotometer LLG-uniSPEC 2



High-quality and cost-efficient UV/VIS spectrophotometers for pharmaceutical, biochemical and clinical lab applications. Suitable for different measurement types such as kinetics, wavelength scans, quantitative analysis, multi-wavelength and DNA/Protein analysis.

- Single beam system, grid with 1200 lines/mm
- Silicon photodiode detector
- Parallel port for printer output
- USB port
- 4-position cell holder (10 mm) included
- Additional cell holders are optionally available
- LCD
- Deuterium and tungsten lamp
- Automatic wavelength adjustment

**Scope of supply:** LLG-uniSPEC 2 Photometer, software for connection to PC, 4 glass cells, and 2 quartz cells.

## Specifications

|                        |                            |
|------------------------|----------------------------|
| Optical System:        | Single beam                |
| Wavelength range:      | 190 to 1100 nm             |
| Bandwidth:             | 2 nm                       |
| Wavelength accuracy:   | $\pm 0.5$ nm               |
| Stray light:           | $\leq 0.1\%T$              |
| Display:               | 128 x 64 Dots LCD          |
| Dimension (W x D x H): | 460 x 360 x 225 mm         |
| Weight:                | 18 kg                      |
| Power supply:          | 220 V/50 Hz or 110 V/60 Hz |

| Type          | Plug type | PK | Cat. No.    |
|---------------|-----------|----|-------------|
| LLG-uniSPEC 2 | EU        | 1  | 6263610*LLG |
| LLG-uniSPEC 2 | UK        | 1  | 6263611*LLG |

## LLG-Cuvettes, glass

LLG-Cuvettes have two clear windows, and two side walls and they are available as optical glass or in quartz variants. Each cuvette is supplied with a PTFE lid.

- Optical Glass: 335 to 2500 nm
- Quartz: 200 to 2700 nm



| Type          | Volume | Path length | PK | Cat. No.    |
|---------------|--------|-------------|----|-------------|
|               | ml     | mm          |    |             |
| quartz glass  | 3.5    | 10          | 2  | 4681513*LLG |
| quartz glass  | 17.5   | 50          | 2  | 4681514*LLG |
| optical glass | 3.5    | 10          | 4  | 4681515*LLG |
| optical glass | 17.5   | 50          | 4  | 4681516*LLG |

## Bottle-top dispensers Calibrex™ *solutae* 530



Calibrex *solute* 530 dispensers have a PFA-coated plunger preventing the plunger and barrel from seizing together. This enables trouble-free distribution of salt solutions, weak and strong acids, as well as bases.

- 45 mm base thread
- Integrated calibration system
- Autoclavable at 121 °C fully assembled

### Scope of delivery:

Delivery jet and stopper, feed tube, 3 alternative adapters (25, 28, 32 mm for 1 and 2.5 ml versions; 28, 32, 40 mm for 5 and 10 ml version; 32, 38, 40 mm from 25 ml onwards), QC certificate and operating instructions



| Volume     | Graduations | Accuracy max. vol. (± R%) | Precision max. vol. (≤ CV%) | PK | Cat. No.    |
|------------|-------------|---------------------------|-----------------------------|----|-------------|
| 0.1 - 1    | 0.02        | 0.6                       | 0.17                        | 1  | 6281547*LLG |
| 0.25 - 2.5 | 0.05        | 0.6                       | 0.17                        | 1  | 6281548*LLG |
| 0.5 - 5    | 0.1         | 0.6                       | 0.1                         | 1  | 6281549*LLG |
| 1 - 10     | 0.2         | 0.6                       | 0.1                         | 1  | 6281550*LLG |
| 2.5 - 25   | 0.5         | 0.6                       | 0.1                         | 1  | 6261221*LLG |
| 5 - 50     | 1.0         | 0.6                       | 0.1                         | 1  | 6261222*LLG |
| 10 - 100   | 1.0         | 0.6                       | 0.1                         | 1  | 6261223*LLG |

## Maxi pipette filler, 1 to 100 ml



The large capacity bulb which works perfectly with all pipette sizes from 1 ml up to 100 ml.

| Type                | PK | Cat. No.    |
|---------------------|----|-------------|
| Maxi pipette filler | 1  | 6238525*LLG |

## LLG-Graduated pipettes, soda glass, class AS, type 3



- DIN EN ISO 835, DIN 12699
- Conformity-certified
- With batch date identification
- Calibrated to deliver (EX)
- Ring marks and graduations in permanent blue enamel

| Nominal capacity | Graduations | Tolerance | Length | PK | Cat. No.    |
|------------------|-------------|-----------|--------|----|-------------|
| ml               | ml          | ± ml      | mm     |    |             |
| 1                | 0.01        | 0.007     | 360    | 10 | 6272200*LLG |
| 2                | 0.02        | 0.01      | 360    | 10 | 6272201*LLG |
| 5                | 0.05        | 0.03      | 360    | 10 | 6272202*LLG |
| 10               | 0.1         | 0.05      | 360    | 10 | 6272203*LLG |
| 20               | 0.1         | 0.1       | 450    | 10 | 6272204*LLG |
| 25               | 0.1         | 0.1       | 450    | 10 | 6272205*LLG |
| 50               | 0.1         | 0.2       | 720    | 10 | 6272206*LLG |

## Laboratory bottles, DURAN®, with retrace code, with screw cap



With blue PP screw cap and pouring ring.

| Capacity | Diam. | Height with cap | Neck thread | PK | Cat. No.         |
|----------|-------|-----------------|-------------|----|------------------|
| ml       | mm    | mm              | GL          |    |                  |
| 25 *     | 36    | 74              | 25          | 10 | 218011453*SCHOTT |
| 50       | 46    | 91              | 32          | 10 | 218011753*SCHOTT |
| 100      | 56    | 105             | 45          | 10 | 218012458*SCHOTT |
| 250      | 70    | 143             | 45          | 10 | 218013651*SCHOTT |
| 500      | 86    | 181             | 45          | 10 | 218014459*SCHOTT |
| 1000     | 101   | 230             | 45          | 10 | 218015455*SCHOTT |
| 2000     | 136   | 265             | 45          | 10 | 218016357*SCHOTT |

\*With specially shaped glass edge for improved pouring out (so that an additional plastic pouring ring is not required).



### Multichannel microliter pipettes Transferpette® S-8/S-12, variable



- ! - Ergonomic Design
- Smooth-running

Low operating forces and a short stroke ensure relaxed pipetting, even during long pipetting series. Transferpette® S -8/-12 pipettes are available in 5 different models, covering the volume range from 0.5 µl to 300 µl.

- One-hand operation for right- and left-handed users
- Volume-change protection
- Easy Calibration technology: Calibration without tools
- Universal tip cone
- Completely autoclavable at 121 °C
- DE-M marking

**Scope of supply:** Transferpette® S -8/-12, supplied with performance certificate, 2 x TipBox filled with pipette tips from BRAND, shelf mount, reagent reservoir, mounting tool, labelling foil, silicone grease and 1 set of sealing rings



| Type | Capacity   | Tip        | PK | Cat. No.    |
|------|------------|------------|----|-------------|
|      | µl         | µl         |    |             |
| S-8  | 0.5 ... 10 | 0.5 ... 20 | 1  | 9280170*LLG |
| S-8  | 5 ... 50   | 2 ... 200  | 1  | 9280171*LLG |
| S-8  | 10 ... 100 | 2 ... 200  | 1  | 9280172*LLG |
| S-8  | 20 ... 200 | 2 ... 200  | 1  | 9280173*LLG |
| S-8  | 30 ... 300 | 5 ... 300  | 1  | 9280174*LLG |
| S-12 | 0.5 ... 10 | 0.5 ... 20 | 1  | 9280175*LLG |
| S-12 | 5 ... 50   | 2 ... 200  | 1  | 9280176*LLG |
| S-12 | 10 ... 100 | 2 ... 200  | 1  | 9280177*LLG |
| S-12 | 20 ... 200 | 2 ... 200  | 1  | 9280178*LLG |
| S-12 | 30 ... 300 | 5 ... 300  | 1  | 9280179*LLG |

### Filter tips, racked in TipBox, sterile, Bio-Cert®



PP. With a hinged lid/push-on lid. Simply rotate 180° to change the closure method. Usable with a partially loaded multichannel pipette. Two different sizes. Stackable and repeatedly autoclavable at 121 °C (2 bar), acc. DIN EN 285.

| Capacity  | Package contents | PK  | Cat. No.    |
|-----------|------------------|-----|-------------|
| µl        |                  |     |             |
| 0.1 - 1   | 10 boxes of 96   | 960 | 9409723*LLG |
| 0.5 - 10  | 10 boxes of 96   | 960 | 9409724*LLG |
| 2 - 20    | 10 boxes of 96   | 960 | 9409726*LLG |
| 5 - 100   | 10 boxes of 96   | 960 | 9409727*LLG |
| 5 - 200   | 10 boxes of 96   | 960 | 9409728*LLG |
| 50 - 1000 | 10 boxes of 96   | 960 | 9409729*LLG |

### Single channel microliter pipettes LLG-proMLP



- High quality **Made in France**
- Extremely lightweight while the robustness still remains
- Perfect ergonomics for the highest comfort
- Colour-coded push-button for quick operation
- Extremely low pipetting forces
- **Built-in volume locking** for error-free results
- **Tip ejector button\*, adjustable for right- and left-handed users**
- Completely autoclavable at 121 °C
- Including individual calibration certificates (according to EN ISO 8655)

\*not available for 5 ml and 10 ml pipettes

**Scope of supply:**  
Microliter pipette, calibration tool



| Capacity   | Increments | Colour code  | PK | Cat. No.    |
|------------|------------|--------------|----|-------------|
| µl         | µl         |              |    |             |
| 0.2-2      | 0.002      | dark orange  | 1  | 6270420*LLG |
| 0.5-10     | 0.02       | red          | 1  | 6270421*LLG |
| 2-20       | 0.02       | light yellow | 1  | 6270422*LLG |
| 10-100     | 0.2        | light orange | 1  | 6270423*LLG |
| 20-200     | 0.2        | dark yellow  | 1  | 6270424*LLG |
| 100-1000   | 2          | dark blue    | 1  | 6270425*LLG |
| 500-5000   | 2          | purple       | 1  | 6270426*LLG |
| 1000-10000 | 20         | light blue   | 1  | 6270427*LLG |

### LLG-Pipette carousel, ABS



LLG-Pipette carousel made of ABS for safe and comfortable storage of microlitre pipettes. The rotating stand allows quick access to the desired pipette.

- Space-saving storage of up to 6 single channel or multi-channel pipettes
- Suitable for common pipette brands
- Easy to clean

| Description          | PK | Cat. No.    |
|----------------------|----|-------------|
| LLG-Pipette carousel | 1  | 6490522*LLG |

## Wide-mouth bottles, soda-lime glass



Brown glass. Round thread neck in accordance with DIN 168.  
**Please order screw caps separately.**

| Capacity | Diam. | Height | Neck thread | PK | Cat. No.    |
|----------|-------|--------|-------------|----|-------------|
| ml       | mm    | mm     | GL          |    |             |
| 100      | 50    | 92.5   | 40          | 56 | 6270392*LLG |

## Screw caps for wide-mouth bottles, PP/LDPE



Cap PP, seal LDPE

| Neck thread | PK  | Cat. No.    |
|-------------|-----|-------------|
| GL          |     |             |
| 40          | 100 | 9072195*LLG |

## LLG-Mini Narrow-neck vials, PP, Heavy Duty



Ideal for collecting, transporting and storing liquid samples.

- With screw cap
- Very stable design
- Transparent
- With graduation

| Capacity | Diam. | Height | Thread external diam. | PK  | Cat. No.    |
|----------|-------|--------|-----------------------|-----|-------------|
| ml       | mm    | mm     | mm                    |     |             |
| 4        | 16    | 40     | 13                    | 100 | 6289520*LLG |
| 8        | 25    | 44     | 19                    | 100 | 6289450*LLG |
| 60       | 40    | 85     | 19                    | 100 | 6289452*LLG |
| 125      | 51    | 99     | 23                    | 50  | 6289453*LLG |

## Bottles, wide-mouth, PE/PP, graduated



PE



PP

Wide neck for easy filling and emptying of liquid or powder samples.

- Conform to DIN 13316 and 168
- With PE or PP closure
- Food-safe

| Capacity | Grad. | Material | Neck thread | PK | Cat. No.    |
|----------|-------|----------|-------------|----|-------------|
| ml       | ml    |          | GL          |    |             |
| 50       | 10    | PE       | 32          | 10 | 6323780*LLG |
| 100      | 20    | PE       | 32          | 10 | 6323776*LLG |
| 250      | 25    | PE       | 45          | 10 | 6323778*LLG |
| 500      | 100   | PE       | 45          | 5  | 6323782*LLG |
| 1000     | 100   | PE       | 63          | 1  | 9072978*LLG |
| 2000     | 100   | PE       | 63          | 1  | 9072979*LLG |
| 50       | 10    | PP       | 32          | 10 | 6323781*LLG |
| 100      | 20    | PP       | 32          | 10 | 6323777*LLG |
| 250      | 25    | PP       | 45          | 10 | 6323779*LLG |
| 500      | 100   | PP       | 45          | 5  | 6323783*LLG |
| 1000     | 100   | PP       | 63          | 1  | 9073034*LLG |
| 2000     | 100   | PP       | 63          | 1  | 9073035*LLG |

## Square Media Bottles, PET, sterile



For safe storage and transportation of cell culture media. The bottles are manufactured at aseptically sterile production halls and then sent to gamma sterilisation. The bottleneck (32 mm) provides easy filling.

- Thick walls and crush-resistant corners
- Square shape
- Caps with large ridges, made of PE
- Embossed volume graduations

| Nominal capacity | Dimensions (W x D x H) | PK | Cat. No.    |
|------------------|------------------------|----|-------------|
| ml               | mm                     |    |             |
| 125              | 53 x 53 x 105          | 40 | 9073276*LLG |
| 250              | 59 x 59 x 147          | 45 | 9073277*LLG |
| 500              | 77 x 77 x 174          | 21 | 9073278*LLG |
| 1000             | 93 x 93 x 214          | 15 | 9073279*LLG |

LLG-Wide mouth bottle,  
HDPE, round



Ideal for easy filling, storage or transport of liquids, powders and granulates.

- With a screw cap made of PP
- Very good chemical resistance
- Autoclavable

| Capacity | Diam. | Neck diam. | Height | PK | Cat. No.    |
|----------|-------|------------|--------|----|-------------|
| ml       | mm    | int. mm    | mm     |    |             |
| 30       | 34.6  | 21.0       | 59.1   | 12 | 4692544*LLG |
| 60       | 39.2  | 21.1       | 81.5   | 12 | 4692545*LLG |
| 125      | 50.3  | 28.3       | 94.7   | 12 | 4692546*LLG |
| 250      | 60.9  | 32.8       | 127.0  | 12 | 4692547*LLG |
| 500      | 72.7  | 44.0       | 164.0  | 12 | 4692548*LLG |
| 1000     | 92.0  | 51.9       | 195.0  | 6  | 4692549*LLG |
| 2000     | 119.0 | 90.8       | 236.0  | 1  | 4692550*LLG |

Water, nuclease-free



For use in any molecular biology application. Nuclease-free water is prepared in a proprietary process, which yields DNase, RNase, and nuclease-free, deionized water without the use of chemical additives, such as diethylpyrocarbonate (DEPC).

| Type                 | Nominal capacity ml | PK | Cat. No.    |
|----------------------|---------------------|----|-------------|
| Water, nuclease-free | 1000                | 1  | 4675029*LLG |

Ultra-pure water system  
OmniaTap xs<sup>touch</sup> 8 Set, under-bench  
version with OptiFill<sup>touch</sup> bench dispenser  
and replacement cartridges



- Incl. Replacement Filter Set
- Touch Display
- With External Dispenser



For pure and ultra-pure water type I + II. OmniaTap is the ideal system when both pure and ultra-pure water are needed in small quantities for analytical and life science applications in the laboratory. The integrated 7 l tank with recirculation keeps the water quality permanently at type II.

- Can be used with tap water
- Dispenser is pivotable up to 170°
- Digital control and monitoring unit OptiFilltouch with colour touch display
- Real-time TOC monitoring
- Adjustable limit values for conductivity and TOC
- Innovative monitoring and display of cartridge capacity
- Withdrawal volume is individually adjustable
- Permanent data storage of all quality parameters
- Password access and error memory
- 3 languages selectable: DE, EN, FR
- RS232 and USB interface

**Applications:**

OmniaTap xs<sup>touch</sup> UV-TOC: Ultra trace analysis, ICP-MS, HPLC, TOC analysis

OmniaTap xs<sup>touch</sup> UV-TOC/UF: Molecular and microbiology, cell culture media

Ultra-pure water system OmniaTap xs<sup>touch</sup> in the under-bench version can be installed under a laboratory bench to save space. The external dispenser and monitoring unit OptiFill<sup>touch</sup> are positioned on top of the bench.

**Scope of supply:** Ultra-pure water system, 2 x RO cartridges, 2 x ultra-pure water cartridges, sterile filter capsule (0.2 µm), sterile overflow, sterile vent filter

**Specifications**

**Pure water type II:**

|                               |                     |
|-------------------------------|---------------------|
| Pure water output (at 15 °C): | 8 l/h               |
| Resistivity at 25 °C:         | 15 ... 10 MΩ x cm   |
| Conductivity at 25 °C:        | 0.067 ... 0.1 µS/cm |

**Ultra pure water type I:**

|                          |               |
|--------------------------|---------------|
| Ultra pure water output: | Up to 2 l/min |
|--------------------------|---------------|

| Type            | TOC value | Endotoxins | PK | Cat. No.    |
|-----------------|-----------|------------|----|-------------|
|                 | ppb       | EU/ml      |    |             |
| 8 UV-TOC Set    | <2        | -          | 1  | 6493090*LLG |
| 8 UV-TOC/UF Set | <5        | <0.001     | 1  | 6493091*LLG |

## Wireless Temperature/Humidity Logger testo Saveris 2-H1



Temperature and humidity monitoring. All relevant temperature and humidity readings are recorded and sent to the Testo cloud via WLAN and can be called up at any time via smartphone, tablet or PC.

- Plug & Play, no software is required
- Automatic data transfer via WLAN to the Testo-Cloud
- High data security due to double storage of all values: in the wireless data logger and the Testo-Cloud
- Reliable alerting
- Flexible data access

**Scope of supply:** Wireless Data Logger (WLAN) with display for measuring temperature and relative humidity, capacitive humidity sensor internally, including USB cable, wall bracket, batteries, calibration protocol

### Specifications

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Sensor type:                          | NTC internal                        |
| Measuring range temperature/Accuracy: | -30 ... 50 °C/±0.5 °C (±1 digit)    |
| Measuring range humidity/Accuracy:    | 0 ... 100% R.H./±2% R.H. (±1 digit) |
| Resolution:                           | 0.1 °C                              |
| Dimensions:                           | 95 x 75 x 30.5 mm                   |
| Weight (including batteries):         | 240 g                               |
| Messtakt:                             | 5 s ... 24 h (15 min preset)        |
| Communication cycle:                  | 1 min ... 24h (15 min preset)       |
| Storage:                              | 10000 measured values per channel   |
| Power supply:                         | 4 x AA AIMn mignon cells            |

| Type         | PK | Cat. No.    |
|--------------|----|-------------|
| Saveris 2-H1 | 1  | 6283293*LLG |

## Infrared Thermometers TFI 260



Non-contact measurement of the surface temperature with infrared. Ideal for fast and secure measurements of moving or energized parts and food. With batteries and factory calibration certificate.

### Specifications

|                          |   |
|--------------------------|---|
| Measurement range:       | -60 °C to +550 °C                                     |
| Accuracy:                | ±2 °C or 2% (at 0 °C to +550 °C), whichever is larger |
| Resolution:              | 0.1 °C  |
| Distance : spot ratio:   | 12:1  |
| Operating temperature:   | 0 °C to +50 °C  |
| Response time:           | 1 sec.  |
| Emissivity factor:       | 0.95 fixed (0.1 to 1.0 possible)                      |
| Dimensions (L x W x H):  | 153 x 115 x 48 mm                                     |
| Weight (with batteries): | 177 g   |
| Power supply:            | 2 x 1.5 V AAA, replaceable                            |
| IP code:                 | IP 20   |

| Type    | PK | Cat. No.    |
|---------|----|-------------|
| TFI 260 | 1  | 6272762*LLG |

## Digital hand held thermometer TTX 200



For measuring the core temperature with a fixed probe with cable and handle.

- Very large display with large figures
- Replaceable battery
- Factory calibration certificate



### Specifications

|                      |  |
|----------------------|--|
| Temperature range:   | -30 ... +199.9 °C                        |
| Resolution:          | 0.1 °C                                   |
| Accuracy:            | ±0.5 °C (-30 ... +100 °C), otherwise ±1% |
| Sensor length/diam.: | 120 mm/3 mm                              |
| Cable length:        | 600 mm                                   |
| Power supply:        | CR 2032                                  |
| Protection class:    | IP 55                                    |

| Type    | PK | Cat. No.    |
|---------|----|-------------|
| TTX 200 | 1  | 6291272*LLG |

Thermostatic cabinets



The cabinets are equipped with sockets in the interior for connecting stirrers.

- Temperature range 2 °C to 40 °C, continuously adjustable in steps of 0.1 °C
- Illuminated LED display of preset and current temperatures
- Ideal for BOD determination at 20 °C
- With Standard door or glass door

**Specifications**

Coolant: R600a  
 Fan: Axial, delivery rate 320 m³/h  
 Power supply: 220-230 V/50 Hz

| Type      | Capacity | External dimensions (W x D x H) mm | PK | Cat. No.    |
|-----------|----------|------------------------------------|----|-------------|
| TC 135 S  | 135      | 600 x 600 x 850                    | 1  | 9699142*LLG |
| TC 710 S  | 288      | 600 x 654 x 1684                   | 1  | 6492794*LLG |
| TC 720 S  | 488      | 750 x 769 x 1684                   | 1  | 6492795*LLG |
| TC 140 G* | 140      | 600 x 600 x 850                    | 1  | 9699146*LLG |
| TC 715 G* | 288      | 600 x 654 x 1684                   | 1  | 6492988*LLG |

\* With glass door

BOD sensor system



Measuring systems for the reliable determination of 90 to 999 ppm BOD. Complete with sensor heads and multi-position magnetic stirrer.

- The sensor heads are screwed directly onto the BOD bottles
- Automatic storage of 5 results in 24-hour intervals
- Measured readings in mg/l (ppm) can be read directly on the sensor at any time
- Protected against splashing water (IP 54)

**Scope of supply BOD sensor system 6:** 6-position magnetic stirrer, each 6 BOD sensors incl. batteries, 500 ml brown glass bottles, KOH reservoirs and magnetic stirring rods

**Scope of supply BOD sensor system 10:** 10-position magnetic stirrer, each 10 BOD sensors incl. batteries, 500 ml brown glass bottles, KOH reservoirs and magnetic stirring rods

**Specifications**

BOD range: 90 ... 999 ppm  
 Display: LED (3 digits)  
 IP code: IP 54

| Type                 | Description  | PK | Cat. No.    |
|----------------------|--|----|-------------|
| BOD sensor system 6  | 6 positions  | 1  | 6317212*LLG |
| BOD sensor system 10 | 10 positions   | 1  | 6317213*LLG |
| BOD sensor set       | 500 ml brown glass bottle with BOD sensor, KOH reservoir, stirring rod | 1  | 4666791*LLG |
| BOD sensor           | Single sensor  | 1  | 4666790*LLG |

Bottles (Karlsruhe bottles) with stoppers



The special bottleneck of the Karlsruhe bottles absorbs the water which is displaced by the stopper of the electrode. This construction guarantees clean working and ensures at the same time that the test results are not adulterated by unwanted entry of oxygen into the samples.



| Capacity ml | Length* | PK | Cat. No.    |
|-------------|---------|----|-------------|
| 100         | 20      | 1  | 9920514*LLG |
| 100         | 60      | 1  | 9920515*LLG |
| 250         | 20      | 1  | 9920513*LLG |
| 250         | 60      | 1  | 9920509*LLG |

\* Stopper handle length (mm)

## Muffle furnaces series L, max. 1100 °C, with flap door



L 5/11/B410

For daily laboratory use. Max. temperature 1100 °C. The flap door can be used as a work platform.

- Dual shell housing made of textured stainless steel sheets for low external temperatures and high stability
- Adjustable air inlet integrated indoor
- Exhaust air outlet in the rear wall of a furnace
- All insulation materials used are classified as non-carcinogenic according to TRGS 905, Class 1 or 2
- Standard connection 220-240 V 1/N/PE 50/60 Hz
- Heating from two sides

| Type          | Nom. capacity | External dimensions (W x D x H) mm | PK | Cat. No.    |
|---------------|---------------|------------------------------------|----|-------------|
|               | L             |                                    |    |             |
| L 3/11/B510   | 3             |                                    | 1  | 6321436*LLG |
| L 5/11/B410   | 5             | 385 x 390 x 460                    | 1  | 6092769*LLG |
| L 9/11/B410   | 9             | 415 x 455 x 515                    | 1  | 6302391*LLG |
| L 15/11/B410  | 15            | 415 x 555 x 515                    | 1  | 6056446*LLG |
| L 24/11/B410* | 24            | 490 x 555 x 580                    | 1  | 6206861*LLG |

\* 400 V 3/N/PE 50/60 Hz connector as standard

## Serial Extraction Apparatus behrotest® for Soxhlet-/Fat-Extraction

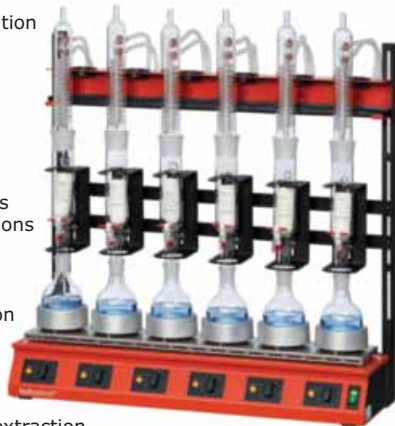


For Soxhlet and Extraction



behrotest® serial heaters are the economical and user-friendly solution for the classic Soxhlet or fat extraction:

- complete with reaction vessels, extraction spacers and coolers
- energy for each sample position is individually adjustable
- cooling water distributor ensures even cooling at all sample positions
- practical stand for holding the condensers securely between extractions
- mounts for holding the extraction spacers after removing the sample vessels
- The extractors with stopcock do away with the need for any additional distillation after extraction



| Type    | Description                | Capacity | PK | Cat. No.    |
|---------|----------------------------|----------|----|-------------|
|         |                            | ml       |    |             |
| R 304 S | 4-position, with stop-cock | 30       | 1  | 9043035*LLG |
| R 306 S | 6-position, with stop-cock | 30       | 1  | 9043036*LLG |
| R 604 S | 4-position, with stop-cock | 60       | 1  | 9043039*LLG |
| R 606 S | 6-position, with stop-cock | 60       | 1  | 9043040*LLG |
| R 104 S | 4-position, with stop-cock | 100      | 1  | 9043029*LLG |
| R 106 S | 6-position, with stop-cock | 100      | 1  | 9043028*LLG |
| R 254 S | 4-position, with stop-cock | 250      | 1  | 9043042*LLG |

## Universal Ovens UN and UF



UF30

### SingleDISPLAY: ControlCOCKPIT with one colour display

#### Specifications

Type designation:

N = Natural convection  
F = Forced air circulation

Working temperature range:

at least 5 °C above ambient to +300 °C

Setting temperature range:

+20 to +300 °C

Setting accuracy:

up to 99.9 °C: 0.1 °C/  
from 100 °C: 0.5 °C

Power supply:

230 V, 50/60 Hz

| Type  | Nom. capacity | Max. grids | Included grids | PK | Cat. No.    |
|-------|---------------|------------|----------------|----|-------------|
|       | L             |            |                |    |             |
| UN30  | 32            | 3          | 1              | 1  | 9869681*LLG |
| UN55  | 53            | 4          | 1              | 1  | 9869682*LLG |
| UN75  | 74            | 6          | 2              | 1  | 9869683*LLG |
| UN110 | 108           | 5          | 2              | 1  | 9869684*LLG |
| UF30  | 32            | 3          | 1              | 1  | 9869697*LLG |
| UF55  | 53            | 4          | 1              | 1  | 9869698*LLG |
| UF75  | 74            | 6          | 2              | 1  | 9869699*LLG |
| UF110 | 108           | 5          | 2              | 1  | 9869700*LLG |

## Crucible tongs, 18/10 steel



Electro-polished. With bow and gripping tips.

| Length | PK | Cat. No.    |
|--------|----|-------------|
| mm     |    |             |
| 200    | 1  | 9310120*LLG |
| 220    | 1  | 9310122*LLG |
| 250    | 1  | 9310125*LLG |
| 300    | 1  | 9310130*LLG |

Chest freezer LTF, up to -60 °C

**!** Environmentally Friendly Coolant



The single compressor technology provides reliable low-temperature freezing and a high-temperature uniformity.

- LED display
- Visual and acoustic alarm
- Adjustable high/low temperature alarm
- 100% HCFC & CFC Free
- With castors and key lock

| Type   | Nom. capacity | External dimensions (W x D x H) L mm | No. of Baskets | PK | Cat. No.    |
|--------|---------------|--------------------------------------|----------------|----|-------------|
| LTF85  | 71            | 550 x 645 x 895                      | 1              | 1  | 6262989*LLG |
| LTF225 | 133           | 720 x 698 x 890                      | 1              | 1  | 7981478*LLG |
| LTF325 | 284           | 1.262 x 698 x 890                    | 3              | 1  | 6260569*LLG |
| LTF425 | 368           | 1.562 x 698 x 890                    | 4              | 1  | 6280142*LLG |
| LTF535 | 476           | 1.662 x 758 x 932                    | 3              | 1  | 6263021*LLG |

Liquid nitrogen container BIO GT, aluminium



For storage and transport of biological materials.

- Transport handle
- With vacuum valve
- Loose lid-on plug
- Canister made of stainless steel

| Type  | Capacity | External dimensions (Ø x H) mm | PK | Cat. No.    |
|-------|----------|--------------------------------|----|-------------|
| GT 3  | 3.7      | 250 x 405                      | 1  | 9524383*LLG |
| GT 9  | 9.3      | 358 x 450                      | 1  | 6322966*LLG |
| GT 11 | 12.2     | 308 x 630                      | 1  | 9524386*LLG |
| GT 21 | 21.0     | 388 x 660                      | 1  | 7982553*LLG |
| GT 26 | 26.7     | 468 x 460                      | 1  | 9524392*LLG |
| GT 35 | 34.0     | 468 x 660                      | 1  | 9524387*LLG |
| GT 40 | 40.0     | 468 x 710                      | 1  | 9524394*LLG |

Flake ice maker with reservoir, UFP series, air-cooled



**!** - Environmentally Friendly Refrigerant R290  
- HACCP-compliant



For fast, HACCP-compliant production of various quantities of compact, granular ice flakes for laboratories, the chemical industry and food production. For the production of up to 153 kg of ice per day.

- Easy ice removal
- Suitable for demineralised water
- Closed system for optimum hygiene
- Environmentally friendly refrigerant R290
- Air-cooled
- Depending on the model, its storage capacities from 20 to 55 kg
- Stainless steel housing
- Low energy consumption

**Scope of supply:** Flake ice maker with height-adjustable stainless steel feet, ice shovel, water inlet and outlet set

**Specifications**  
Refrigerant: R290  
Permissible ambient temperature: 10 ... 43 °C  
Power supply: 230 V, 50 Hz

| Type       | Output kg/24 hrs. up to kg | Rating W | Capacity kg | Dimensions (W x D x H) mm | Weight kg | PK | Cat. No.    |
|------------|----------------------------|----------|-------------|---------------------------|-----------|----|-------------|
| UFP 0244 A | 113                        | 470      | 20          | 500 x 660 x 843           | 67        | 1  | 4667960*LLG |
| UFP 0200 A | 113                        | 470      | 30          | 500 x 660 x 843           | 76        | 1  | 4667961*LLG |
| UFP 0399 A | 153                        | 700      | 55          | 738 x 690 x 1173          | 105       | 1  | 4667963*LLG |

LLG-Multipurpose containers, PP, with screw cap



Transparent multipurpose containers with red screw caps made of PE. With graduation and frosted labelling field.

For research and development only.

| Nominal capacity ml | Material | Material Lid | Sterile | PK  | Cat. No.    |
|---------------------|----------|--------------|---------|-----|-------------|
| 60                  | PP       | PE           | -       | 600 | 4694706*LLG |
| 120                 | PP       | PE           | -       | 300 | 4694709*LLG |

LLG-Multipurpose containers, PP, with screw cap, **individually wrapped**

Transparent multipurpose containers with red screw caps made of PE. Universally applicable, e.g. for storing or transporting samples. With graduation and frosted labelling field.

For research and development only.

| Nominal capacity ml | Material | Material Lid | Sterile | PK  | Cat. No.    |
|---------------------|----------|--------------|---------|-----|-------------|
| 60                  | PP       | PE           | -       | 500 | 4694707*LLG |
| 60                  | PP       | PE           | +       | 500 | 4694708*LLG |
| 120                 | PP       | PE           | -       | 250 | 4694710*LLG |
| 120                 | PP       | PE           | +       | 250 | 4694711*LLG |

Measuring jugs with handle, PP



Short form. Highly translucent especially when filled with liquids. Permanently moulded graduations. Heavy duty, with non-drip spout. Thumb grip on the handle. Autoclavable

| Nominal capacity ml | Grad. ml | Ext. diam. mm | Height mm | PK | Cat. No.    |
|---------------------|----------|---------------|-----------|----|-------------|
| 500                 | 25       | 90            | 116       | 1  | 9013591*LLG |
| 1000                | 50       | 116           | 131       | 1  | 9013592*LLG |
| 2000                | 50       | 145           | 165       | 1  | 9013593*LLG |
| 3000                | 100      | 165           | 180       | 1  | 9013594*LLG |
| 5000                | 250      | 190           | 225       | 1  | 9013595*LLG |

Cylindrical jars with ribbed cap, HDPE



The cylindrical jars are supplied with inserts and caps. Thanks to the large neck they are suitable for powders, solid specimens, creamy or semisolid substances, crystals and hygroscopic substances.

| Nominal capacity ml | Ext. diam. mm | Neck i. d. mm | Height mm | PK | Cat. No.    |
|---------------------|---------------|---------------|-----------|----|-------------|
| 70                  | 50            | 36            | 60        | 10 | 4672397*LLG |
| 120                 | 56            | 36            | 71        | 10 | 4672394*LLG |
| 250                 | 69            | 50            | 94        | 10 | 4672395*LLG |
| 500                 | 86            | 70            | 107       | 10 | 4672396*LLG |
| 1000                | 111           | 85            | 128       | 10 | 4672393*LLG |
| 1500                | 111           | 87            | 182       | 10 | 9073444*LLG |
| 2000                | 111           | 87            | 235       | 10 | 9073446*LLG |

Volumetric flasks, borosilicate glass 3.3, class A, blue graduated, with PE stoppers, coated



The flasks are coated with a specially formulated coating that holds the broken parts together in case of breakage. The transparent coating can resist up to 135 °C with a maximum period of 30 minutes. Coated flasks should not be exposed directly to open flame.

- Conformity certified, with batch certificate
- DIN EN ISO 1042
- Calibrated to contain (IN)

| Nominal capacity ml | Joint size (NS) | PK | Cat. No.    |
|---------------------|-----------------|----|-------------|
| 50                  | 12/21           | 2  | 4678024*LLG |
| 50                  | 14/23           | 2  | 4678025*LLG |
| 100                 | 12/21           | 2  | 4678026*LLG |
| 100                 | 14/23           | 2  | 4678027*LLG |
| 200                 | 14/23           | 2  | 4678029*LLG |
| 500                 | 19/26           | 2  | 4678033*LLG |
| 1000                | 24/29           | 2  | 4678034*LLG |
| 2000                | 29/32           | 2  | 4678035*LLG |



## Analytical balances Entris® II



- Internal Calibration and Adjustment Function
- Hybrid touch display

SARTORIUS



BCE124i-1CEU

- Made in Germany.
- Very fast stabilisation/settling time thanks to modern sensors
- Stainless steel weighing pan
- Excellent readability and operability with a hybrid touch display
- 12 integrated applications with GLP/GMP-compliant protocol
- Multilingual operation

High weighing space, easy access to weighing platform through side doors and upper sliding door. Specially coated windscreen against an electrostatic charge.

**EU-type examination for EU member states except France.**

**Scope of supply:** Analytical balance, power supply unit

**Specifications**

|                         |                         |
|-------------------------|-------------------------|
| Readability:            | 0.1 mg                  |
| Reproducibility:        | ±0.1 mg                 |
| Linearity:              | ±0.06 mg                |
| Weighing platform:      | Ø 90 mm                 |
| Weighing space height:  | 240 mm                  |
| Dimensions (W x D x H): | 219 x 317 x 345 mm      |
| Weight:                 | 6.2 kg                  |
| Power supply:           | 100 ... 240 V, 50/60 Hz |

| Type         | Weighing range<br>g | PK | Cat. No.    |
|--------------|---------------------|----|-------------|
| BCE64i-1CEU  | 0.0001 ... 60       | 1  | 4669166*LLG |
| BCE124i-1CEU | 0.0001 ... 120      | 1  | 4669110*LLG |
| BCE224i-1CEU | 0.0001 ... 220      | 1  | 4669126*LLG |

## Balance brush



Oval.

| Type      | Size    | PK | Cat. No.    |
|-----------|---------|----|-------------|
| Brush set | 2, 4, 6 | 1  | 6266825*LLG |

## Precision balances type EG-N



- Internal Automatic Adjustment
- Housing Made of Impact-resistant Plastic

KERN



EG220-3NM

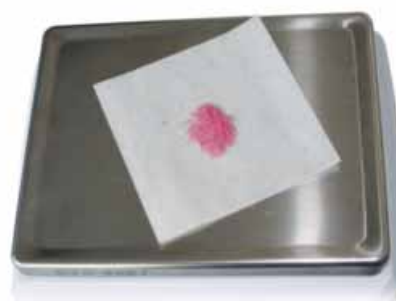
High-quality laboratory balances, housed in a robust and stable plastic casing. With a bar graph capacity display which shows the current available weighing range remaining.

- LCD display
- Internal automatic calibration (type EG-N)
- CAL adjustment programme (type EW-N)
- Draught shield supplied with all 0.001 g readability models
- Parts counting facility, percentage weighing function, under-balance weighing facility
- Weighing with tolerance range
- RS-232 data interface

**Scope of supply:** Precision balance, protective working cover

| Type       | Capacity<br>g | Readability<br>g | Plate dimensions<br>mm | PK | Cat. No.    |
|------------|---------------|------------------|------------------------|----|-------------|
| EG220-3NM  | 220           | 0.001            | Ø 118                  | 1  | 9901018*LLG |
| EG420-3NM  | 420           | 0.001            | Ø 118                  | 1  | 9901019*LLG |
| EG620-3NM  | 620           | 0.001            | Ø 118                  | 1  | 9901015*LLG |
| EG2200-2NM | 2200          | 0.01             | 180 x 160              | 1  | 9901016*LLG |
| EG4200-2NM | 4200          | 0.01             | 180 x 160              | 1  | 9901017*LLG |

## LLG-Weighing paper



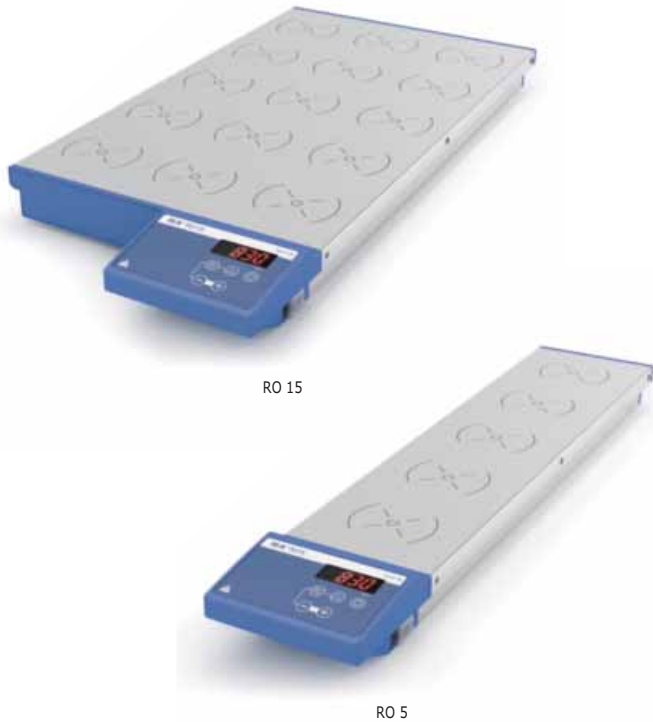
- Not treated with nitrogen during production
- Smooth surface
- 45 g/m<sup>2</sup> paper
- Block of 500 sheets

| Dimensions<br>(D x W)<br>mm | PK  | Cat. No.    |
|-----------------------------|-----|-------------|
| 76 x 76                     | 500 | 6272246*LLG |
| 102 x 102                   | 500 | 6272247*LLG |
| 152 x 152                   | 500 | 6272248*LLG |

## Multi-position magnetic stirrers RO 5/10/15 series



Synchronised Stirring Units



Without heating. Digital multi-point magnetic stirrer with 5, 10 or 15 synchronised stirring points. Thanks to noiseless coil drive technology, the speeds are identical at all stirring points. A removable transparent anti-slip film is included in the scope of delivery.

- Adjustable reverse operation
- Wear-free magnetic coils
- Error Code Display
- Easy operation with touch keypad
- Suitable for continuous operation
- Adjustable speed in increments of 10 rpm

### Specifications

Max. stirring quantity per stirring position (H<sub>2</sub>O): 0.4 l  
 Distance between stirring places: 90 mm  
 Deviation for individual stirring positions: 0%  
 Speed range: 0 to 1200 rpm  
 Speed display: LED line  
 Set-up plate material: stainless steel 1.4301  
 Protection class acc. to DIN EN 60529: IP 40  
 Power supply: 100-240 V, 50/60 Hz

| Type  | Stirring positions | Dimensions (W x D x H)<br>mm | PK | Cat. No.    |
|-------|--------------------|------------------------------|----|-------------|
| RO 5  | 5                  | 120 x 570 x 60               | 1  | 9720208*LLG |
| RO 10 | 10                 | 190 x 570 x 60               | 1  | 9720222*LLG |
| RO 15 | 15                 | 280 x 570 x 60               | 1  | 9720226*LLG |

## LLG-Magnetic stirrer RCT standard 2.0, Set

The next generation of our top-selling IKA/LLG-Labware co-branded LLG-RCT Standard magnetic stirrer. New design, new features! Trusted and reliable quality!



- Digital controlled speed and temperature
- Clearly arranged LED display
- Digital display of set safety temperature limit
- Hot top indicator, hot surface warning to prevent burns
- Connection for external PT1000 temperature probe
- Aluminium hotplate for optimal heat transfer
- Enhanced safety due to improved heat control technology
- USB interface
- Supplied with housing protection cover
- Tested acc. to DIN EN IEC 61010-1

### Scope of supply:

Magnetic stirrer, contact thermometer ETS-D5, temperature probe PT1000, housing protection cover, stand accessories



### Specifications

Max. stirring quantity (H<sub>2</sub>O): 20 l  
 Speed range: 50 ... 1500 rpm  
 Heating plate Ø 135 mm  
 Temperature range: RT + device self-heating ... 310 °C  
 Heat output: 600 W  
 Safety temperature range: 50 ... 360 °C  
 Dimensions (W x D x H): 160 x 270 x 85 mm  
 Weight: 2.4 kg  
 Power supply: 220 ... 230/115/100 V, 50/60 Hz  
 IP code: IP 42

| Description                                | Plug type | PK | Cat. No.    |
|--|-----------|----|-------------|
| LLG magnetic stirrer RCT standard 2.0, set | EU        | 1  | 6320411*LLG |
| LLG magnetic stirrer RCT standard 2.0, set | CH        | 1  | 6322748*LLG |
| LLG magnetic stirrer RCT standard 2.0, set | UK        | 1  | 6322749*LLG |

## LLG-Magnetic stirring bars, cylindrical, PTFE, *eco pack*



Circular, smooth and PTFE-coated.  
Packaging size: 10 pieces

| Diam. | Length | PK | Cat. No.    |
|-------|--------|----|-------------|
| mm    | mm     |    |             |
| 6     | 10     | 10 | 9198910*LLG |
| 3     | 12     | 10 | 9198766*LLG |
| 6     | 15     | 10 | 9198919*LLG |
| 6     | 20     | 10 | 9198920*LLG |
| 6     | 25     | 10 | 9198925*LLG |
| 8     | 25     | 10 | 9198767*LLG |
| 6     | 30     | 10 | 9198930*LLG |
| 6     | 35     | 10 | 9198935*LLG |
| 8     | 40     | 10 | 9198940*LLG |
| 8     | 50     | 10 | 9198950*LLG |

## Overhead Stirrers Hei-TORQUE Core



Compact, electronic overhead stirrer for easy operation.

- Can be integrated into closed systems such as fume hoods, reactors or production systems
- Suitable for low to medium-viscosity media
- Quick-action chuck for stirring tools up to 10 mm in diameter
- "Max" button for short-term operation at maximum speed
- Timer function
- Digital rotation speed display
- Automatic switch-off with overheating protection



### Specifications

|  |                     |
|--|---------------------|
| Stirring quantity max. (H <sub>2</sub> O): | 25 l                |
| Speed range:                               | 20 ... 2000 rpm     |
| Max. viscosity:                            | 10000 mPas          |
| Motor rating input/output:                 | 105/75 W            |
| Max. torque at stirring shaft:             | 40 Ncm              |
| Display:                                   | digital             |
| Chuck range:                               | 8 ... 10.5 mm       |
| Dimensions (W x D x H):                    | 70 x 195 x 281.5 mm |
| Weight:                                    | 2.3 kg              |
| Power supply:                              | 230 V, 50/60 Hz     |
| Protection class:                          | IP 42               |

| Type            | PK | Cat. No.    |
|-----------------|----|-------------|
| Hei-TORQUE Core | 1  | 4662304*LLG |

## Impellers for Hei-TORQUE Core

Shaft diameter: 8 mm

### Propeller-Type Impeller

- For mixing products with medium or high viscosity
- These models create an axial flow

### Radial Flow Impeller

- For mixing products with average viscosity up to <500 mPas
- These impellers create a radial flow



| Type                    | Material | Dimensions | PK | Cat. No.    |
|-------------------------|----------|------------|----|-------------|
|                         |          | mm         |    |             |
| Turbine stirrer TR 20   | V 2A     | Ø 29       | 1  | 9816548*LLG |
| Turbine stirrer TR 21   | V 2A     | Ø 50       | 1  | 9816549*LLG |
| Propeller stirrer PR 30 | V 2A     | Ø 58       | 1  | 9816550*LLG |

## Disperser OV 725 Digital System



Complete Set



Digital disperser for fast homogenizing, emulsifying, suspending, as well as mixing samples. The comfortable rotating knob allows precise electronic speed settings and controls up to 25000 rpm.

- Powerful, brushless motor
- User-friendly, clear control panel shows speed parameters at a glance
- With smooth start
- Timer adjustable up to 99 h 59 min
- Quick and easy dispersing tool installation
- LED indicator system and maintenance timer provide information on the time remaining until maintenance and allow prompt gasket replacement



### Scope of supply:

Disperser, stand with double rod, dispersing tool D20-S20C-P-R20S, tool disassembly kit

| Type                  | Volume       | Rotation speed  | PK | Cat. No.    |
|-----------------------|--------------|-----------------|----|-------------|
|                       | ml           | rpm             |    |             |
| OV 725 Digital System | 0.2 ... 2500 | 2,000 ... 25000 | 1  | 4699483*LLG |

## Beakers Super Duty, DURAN®, low form



With approximate graduations and spout. Reinforced, sturdy rim and increased mechanical strength for heavy duty. Glass Type I/neutral glass as per USP, EP and JP.

| Nominal capacity | Diam. | Height | PK | Cat. No.         |
|------------------|-------|--------|----|------------------|
| ml               | mm    | mm     |    |                  |
| 150              | 60    | 80     | 1  | 211072909*SCHOTT |
| 250              | 70    | 95     | 1  | 211073605*SCHOTT |
| 400              | 80    | 110    | 1  | 211074104*SCHOTT |
| 600              | 90    | 125    | 1  | 211074807*SCHOTT |
| 1000             | 105   | 145    | 1  | 211075409*SCHOTT |
| 2000             | 132   | 185    | 1  | 211076302*SCHOTT |
| 5000             | 170   | 270    | 1  | 211077307*SCHOTT |

## Digital Vortexer LLG-uniTEXER 4



- High Speed Up to 4200 rpm
- Infinitely Variable Speed Control
- Robust and Non-slip!



Compact vortexer with brushless motor and infinitely variable speed control up to 4200 rpm for optimal mixing results. The digital display alternately shows the set speed and time.

- Programmable Pulse mode
- 3-way switch (on/off/touch)
- Timer adjustable from 1 min up to 999 min

### Scope of supply:

Vortexer, conical tube attachment, round disk attachment, universal plug



|                         |                         |
|-------------------------|-------------------------|
| Type of movement:       | Orbital                 |
| Orbital diameter:       | 4 mm                    |
| Speed range:            | 300 ... 4200 rpm        |
| Dimensions (W x D x H): | 205 x 136 x 138.5 mm    |
| Weight:                 | 2.8 kg                  |
| Power supply:           | 110 ... 240 V, 50/60 Hz |
| IP code:                | IP 42                   |

|                |    |             |
|----------------|----|-------------|
| Type           | PK | Cat. No.    |
| LLG-uniTEXER 4 | 1  | 6263500*LLG |

## Orbital shaker for CO<sub>2</sub> Incubators



Orbital shaker for experiments with tissue cultures and cultivations of eukaryotic cells in CO<sub>2</sub> Incubators.

- Different platforms are available (must be ordered separately)
- With a remote controller for protection of the electronics

### Specifications

|                         |                            |
|-------------------------|----------------------------|
| Type of movement:       | orbital                    |
| Orbit:                  | 20 mm                      |
| Max. Load:              | 3.0 kg                     |
| Speed range:            | 50 ... 250 rpm             |
| Timer range:            | 1 min ... 96 h or non-stop |
| Dimensions (W x D x H): | 255 x 255 x 100 mm         |
| Weight:                 | 3.4 kg                     |
| Power supply:           | 100 ... 240 V, 50/60 Hz    |

|        |    |             |
|--------|----|-------------|
| Type   | PK | Cat. No.    |
| CPS-20 | 1  | 4684290*LLG |

## Microplate shaker Endeavor™ 5000



Robust shaker with microprocessor control for powerful mixing of up to 4 microtitre plates in the laboratory. The microplate shaker is equipped with a menu to set, store, and recall multi-step programs.

- Bright, backlit LCD display for speed and time
- RS232 interface for data logging and control
- Visual and audible alarm
- With timer
- Suitable for use in cold rooms and incubators

|          |                    |                           |    |             |
|----------|--------------------|---------------------------|----|-------------|
| Type     | Rotation speed rpm | Dimensions (W x D x H) mm | PK | Cat. No.    |
| E51LDM03 | 100 ... 1200       | 262 x 420 x 119           | 1  | 4693841*LLG |

## Platforms for Orbital shaker CPS-20



| Type     | Description  | PK | Cat. No.    |
|----------|--|----|-------------|
| Bio PP-4 | Flat platform, working area 230 x 230 mm                     | 1  | 9721018*LLG |
| PUP-12   | Universal platform, working area 270 x 195 mm                | 1  | 9721021*LLG |
| P12-100  | Platform with clamps for 12 x 100 ml flasks / 150 ml beakers | 1  | 9721023*LLG |
| P6-250   | Platform with clamps for 6 x 250 ml flasks / 300 ml beakers  | 1  | 9721024*LLG |
| P16-88   | Platform with spring holders for 88 tubes up to 30 mm        | 1  | 9721049*LLG |

## Thermo shaker Matrix Orbital Δ/Orbital Δ +



F2.0

Powerful thermoshakers available for samples with the smallest volumes. Thermo Shaker Orbital Δ + with heating/cooling function (cooling rate 2.5 K/min).

- A large and clear display with a convenient menu structure allows for intuitive operation
- Two different speed modes for optimal mixing
- Robust aluminum die-cast housing

### Specifications

|                         | Orbital Δ // Orbital Δ +                        |
|-------------------------|---|
| Temperature range:      | ambient +5 ... 100 °C // ambient -15 ... 100 °C |
| Temperature control:    | 1 ±K  |
| Uniformity:             | 0.5 °C  |
| Orbit:                  | 1.5 mm  |
| Display:                | TFT   |
| Programs:               | 2   |
| Timer:                  | 1 s ... 6000 min                                |
| Capacity:               | 0.3 kg  |
| Dimensions (W x D x H): | 220 x 350 x 150 mm // 220 x 350 x 125 mm        |
| Weight:                 | 9.5 kg // 8.8 kg                                |
| Power consumption:      | 100 W   |
| Power supply:           | 100 ... 240 V, 50/60 Hz                         |
| IP code:                | IP 21   |

| Type           | Description                 | PK | Cat. No.    |
|----------------|-----------------------------|----|-------------|
| Orbital Δ F0.5 | fix attachment, 24 x 0.5 ml | 1  | 4664742*LLG |
| Orbital Δ F1.5 | fix attachment, 24 x 1.5 ml | 1  | 4664740*LLG |
| Orbital Δ F2.0 | fix attachment, 24 x 2.0 ml | 1  | 4664743*LLG |
| Orbital Δ+     | variable attachments        | 1  | 4664744*LLG |

## Accessories for Thermo shaker Matrix Orbital Δ+



| Description                        | PK | Cat. No.    |
|------------------------------------|----|-------------|
| Cover                              | 1  | 4672749*LLG |
| Attachment for 96 well PCR plate   | 1  | 4672751*LLG |
| Attachment for 24 x 1.5 ml vessels | 1  | 4672754*LLG |
| Attachment for 24 x 2.0 ml vessels | 1  | 4672755*LLG |
| Attachment for 8 x 15 ml vessels   | 1  | 4672758*LLG |
| Attachment for microplates         | 1  | 4672761*LLG |

## Dry Block Heaters, Digital



Each of the models is compatible with the separate interchangeable modular blocks. Each block has a thermowell for measuring the block temperature.

- Microprocessor Control
- LED Display
- Temperature Calibration Mode
- Caution Hot Indicator
- Audible Alarm

**Without blocks. Please order separately.**

### Specifications

|                                    |                      |
|------------------------------------|----------------------|
| Temperature range:                 | ambient +5 to 120 °C |
| Temperature stability at 37 °C:    | ±0.2 °C              |
| Uniformity within block at 37 °C:  | ±0.2 °C              |
| Uniformity across blocks at 37 °C/ |                      |
| Heat up time to 100 °C             |                      |
| 1 block:                           | -/45 min             |
| 2 blocks:                          | ±0.1 °C/50 min       |
| 4 blocks:                          | ±0.2 °C/60 min       |
| 6 blocks:                          | ±0.3 °C/65 min       |
| Permissible ambient conditions:    | 18 to 33 °C          |
| Power supply:                      | 230 V, 50/60 Hz      |

| Capacity | Dimensions (W x D x H) mm | PK | Cat. No.    |
|----------|---------------------------|----|-------------|
| 1 block  | 203 x 315 x 89            | 1  | 4659491*LLG |

## Blocks for block thermostats, digital



| For    | No. of wells | Diam. mm | Depth mm | PK | Cat. No.    |
|--------|--------------|----------|----------|----|-------------|
| 1.5 ml | 20           | 11.5     | 39.9     | 1  | 4659846*LLG |
| 2 ml   | 20           | 11.5     | 38.1     | 1  | 4659875*LLG |
| 50 ml  | 5            | 29.0     | 47.6     | 1  | 4659852*LLG |
| 15 ml  | 12           | 17.1     | 44.5     | 1  | 4659856*LLG |

## Laboratory chiller LABOCOOL LC 400

**BANDELIN**

**New**



The laboratory chiller LABOCOOL LC 400 is used to remove process heat and was specially developed for cooling samples during sonication in an ultrasonic bath.

- Digital display shows water temperature and status of the cooling function
- Practical recessed grips in the housing
- Environmentally friendly thanks to natural refrigerant R-290
- Suitable for all SONOREX ultrasonic baths with bottom drain
- Protection class I
- Incl. connecting hub, three-way ball valve and hose (3 m)

### Specifications

|                         |                    |
|-------------------------|--------------------|
| Temperature range:      | 5 ... 30 °C        |
| Cooling power:          | 440 W              |
| Flow rate:              | 600 l/h            |
| Pump power:             | 10 W               |
| Dimensions (W x D x H): | 320 x 410 x 420 mm |
| Weight:                 | 18 kg              |

| Type            | Plug type | PK | Cat. No.    |
|-----------------|-----------|----|-------------|
| LABOCOOL LC 400 | EU        | 1  | 4686330*LLG |
| LABOCOOL LC 400 | CH        | 1  | 4686331*LLG |

## Ultrasonic Baths SONOREX DIGITEC

**BANDELIN**



Ultrasonic baths in stainless steel housing with heating, adjustable temperature range from 20 to 80 °C and warning LED at excess temperature, degassing of liquids (DEGAS), Pulse function, SweepTec®. Power supply 230 V ~, 50/60 Hz.

| Type     | Capacity of the bath litres | Internal dimensions (W x D x H) mm | PK | Cat. No.    |
|----------|-----------------------------|------------------------------------|----|-------------|
| DT 31 H  | 0.9                         | 190 x 85 x 60                      | 1  | 9877831*LLG |
| DT 52 H  | 1.8                         | 150 x 140 x 100                    | 1  | 9877833*LLG |
| DT 100 H | 3.0                         | 240 x 140 x 100                    | 1  | 9877835*LLG |
| DT 255 H | 5.5                         | 300 x 150 x 150                    | 1  | 9877840*LLG |
| DT 510 H | 9.7                         | 300 x 240 x 150                    | 1  | 9877842*LLG |

## Suspension baskets for Sonorex DIGITEC ultrasonic baths



Stainless steel. Optimal ultrasonic wave transmission.

| Type  | For bath type | Dimensions (W x D x H) mm | PK | Cat. No.    |
|-------|---------------|---------------------------|----|-------------|
| K 1 C | DT 52 H       | 120 x 110 x 40            | 1  | 9877631*LLG |
| K 3 C | DT 100 H      | 200 x 110 x 40            | 1  | 9877633*LLG |
| K 5 C | DT 255 H      | 260 x 110 x 40            | 1  | 9877635*LLG |
| K 08  | DT 31 H       | 170 x 65 x 50             | 1  | 9877630*LLG |
| K 10  | DT 510 H      | 250 x 195 x 50            | 1  | 9877697*LLG |

## Noise protection boxes ML/XL



A noise protection box with a quiet fan and optimal insulation guarantees low-noise cleaning. The interior lighting and glass door allow to observe the cleaning process.

- Noise is reduced by max. 85%
- The box can be opened from the top and front
- Laterally arranged halogen lamps
- Stainless steel jacket

**Scope of supply ML:** Noise protection box, bottom tray with gland plate, power supply, manual  
For use with: Elmasonic Easy 10/20/30/40/60/100/120/180, Elmasonic Select 30/40/60/100/120/180, Elmasonic P 30/60/120/180

**Scope of supply XL:** Noise protection box, 2 bottom trays with gland plate, splash plate, power supply, manual  
For use with: Elmasonic Easy 300, Elmasonic Select 80/150/300, Elmasonic P 70/300

| Type | External dimensions (W x D x H) mm | PK | Cat. No.    |
|------|------------------------------------|----|-------------|
| ML   | 545 x 530 x 525                    | 1  | 6326321*LLG |
| XL   | 850 x 605 x 525                    | 1  | 6492438*LLG |

## Speed vacuum systems SC 920 G



- Speed-controlled
- Integrated Gas Ballast Valve
- Automatic boiling point detection



- Vacuum system for 1 rotary evaporator
- Application: Rotary evaporation, distillation, central vacuum supply
- Delivery rate up to 3 m<sup>3</sup>/h and a final vacuum of 2 mbar abs.
- Radio remote control for safe operation outside closed fume cupboards
- Automatic, precise boiling point detection and boiling point tracking via integrated ramp function
- PPS pump heads in combination with a PTFE-coated diaphragm are ideal for aggressive/corrosive gases and vapours
- Speed controlled
- Integrated gas ballast valve



### Specifications

Connectors for tube: pneumatic ID10 mm, coolants ID8 mm inert gas ID6 mm

Permissible media and ambient temperature: 5 to 40 °C

Valves: FFPM

| Type     | Flow rate L / min. | Plug type | PK | Cat. No.    |
|----------|--------------------|-----------|----|-------------|
| SC 920 G | 20                 | EU        | 1  | 4658071*LLG |
| SC 920 G | 20                 | UK        | 1  | 6319732*LLG |

With overload protection and mains fuse

## LLG-Vacuum measuring instrument DVR 2 pro

Versatile vacuum gauge for vacuum measurement between atmospheric pressure and 1 mbar.



- Mains independent due to battery operation
- Large display
- High measuring accuracy
- With support rod
- All parts in contact with media are made of chemically resistant materials



### Scope of supply:

Vacuum measuring instrument with connections for small flange D16, compression fitting and tubing nozzle for tubing with 6 to 10 mm ID.

### Specifications

Measuring range: 1080 to 1 mbar (hPa), 810 to 1 Torr

Measuring accuracy: < 1 mbar (0.75 Torr) ±1 digit

Power supply/battery: 9 V battery

Dimensions (W x D x H): 115 x 115 x 66 mm

Weight: 0.40 kg

| Type      | PK | Cat. No.    |
|-----------|----|-------------|
| DVR 2 pro | 1  | 6263582*LLG |

## Piston pump LLG-uniVACUUPUMP 1



Can be Used as a Vacuum Pump and Compressor



The portable piston pump LLG-uniVACUUPUMP 1 has been developed for vacuum and pressure applications in the laboratory. The LLG-uniVACUUPUMP 1 operates oil-free and can also be used as a compressor to a pressure of up to 3.3 bar. Not recommended for pumping organic, acidic, or basic vapours.

### Advantages:

- Dry-running technology for physical applications
- Can be used as a vacuum pump and compressor
- Cost-effective alternative for water pumps
- Oil-free, suitable for continuous operation
- Suction/pressure connection: hose nozzle DN 6 for hose inner diameter 6 mm



**Scope of supply:** Pump, incl. 2 hose clamps, EU + UK-plug power cord

### Specifications

Pump speed 50/60 Hz at atmospheric pressure: 9.2/11 l/min

Final pressure: 292 mbar

Max. overpressure: 3.3 bar

Suction/pressure connection: DN 6

Dimensions (W x D x H): 194 x 114 x 191 mm

Weight: 2.0 kg

Power supply: 230 V/50 Hz

IP code: IP 20

| Type               | PK | Cat. No.    |
|--------------------|----|-------------|
| LLG-uniVACUUPUMP 1 | 1  | 6263580*LLG |

## Water jet pumps, PP



For continuous use at temperatures up to 80 °C max. High chemical resistance as the media being pumped only comes into contact with PP, FKM and PTFE. Integral non-return valve increases safety.

### Comprises:

Water jet pump, including:  
 Mains water connections: R 3/4" sleeve nut, R 1/2" reducing adapter and flexible tubing connection (nozzle) with external diameter from 10 mm to 12 mm.  
 Vacuum connection: Detachable nozzle with external diameter from 6 mm to 9 mm and GL 14 screw cap.

| Type  | PK | Cat. No.    |
|---|----|-------------|
| Water jet pump  | 1  | 9303125*LLG |
| Reducing adapter R 3/8" for water jet filter pump                         | 1  | 7020037*LLG |
| Reducing adapter M 22x1 for water jet filter pump (thread for screen tap) | 1  | 7020038*LLG |

# LABORTOPS

## Pump drive Hei-FLOW Precision 01



- For Dosing and Conveying
- Freely Selectable Process Parameters
- With Overload Protection

Dosing and conveying pump for reproducible results.  
 With freely selectable process parameters.

- Speed, direction of rotation and on/off function can be controlled via an analogue interface or digitally via the built-in RS232 interface controllable
- Buttons for setting all process parameters
- Easy calibration of the delivery volume and delivery rate
- The motor with a soft start reliably protects against splashing media
- With overload protection that switches off the device in the event of overheating, it is important for unattended continuous operation

With an optional pump head adapter the Hei-FLOW Value 01 can be upgraded for multi-channel operation.

**The pump head is not included. Please order separately.**



### Specifications

|  |   |
|--|---|
| Speed range:   | 5 ... 120 rpm                                 |
| Flow rates single-channel pumps:                     | 0.38 ... 813 ml/min                           |
| Flow rates multi-channel pumps:                      | 0.005 ... 364 ml/min                          |
| Flow rate accuracy (water without counter pressure): | ±1%   |
| Control accuracy motor:                              | ±0.5%   |
| Motor power:   | 100 W   |
| Volume dosing:                                       | 0.001 ... 9999 ml                             |
| Interval dosing:                                     | 0.001 ... 9999 ml with pauses 0.1 s ... 750 h |
| Permissible ambient conditions:                      | 5 ... 31 °C                                   |
| Permissible rel. humidity:                           | 80%   |
| Dimensions (W x D x H):                              | 166 x 256 x 225 mm                            |
| Protection class DIN EN 60529:                       | IP 55   |
| Weight:  | 7.7 kg  |

### Single-channel Pump Heads SP quick for Pump drives Hei-FLOW Precision

- Fast and convenient tube changes
- Low pulsation due to 5 roller system
- Pump head features ball bearings
- Rollers made of stainless steel
- For tubes with a 1.6 mm or 2.5 mm wall thickness (wt)
- Depending on the drive and tubing, the flow rate ranges from 0.38 to 3436 ml per minute



| Type                  | PK | Cat. No.    |
|-----------------------|----|-------------|
| Hei-FLOW Precision 01 | 1  | 9829244*LLG |

| Type     | Tubing wall thickness | Flow rate ml/min. | PK | Cat. No.    |
|----------|-----------------------|-------------------|----|-------------|
| SP quick | 1.6                   | 0.38 ... 3436     | 1  | 9829250*LLG |