

LABORTOPS

valid until 31th of December 2018

Viscometers ROTAVISC

IKA[®]

NEW

Made in
Germany

- Easy & Versatile Viscosity Measurement
- Fast & Accurate Results
- Stepless Speed



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LLG-Timer Cube



With 4 pre-set countdown times (5-15-30-60 min.). Place the cube with the desired time facing up and the count down will start immediately.

- Pulsing LED when timer is counting
- Automatically rotating flip display shows the remaining time

Dimensions (D x W x H): 60 x 60 x 60 mm
Weight: 58 g
Power supply: 2 x 1.5 V (size AAA not incl.)

Description	PK	Cat. No.
5-15-30-60 minutes	1	6291217*LLG

Portable Desiccator DURAPorter™, PC



- **Sturdy**
- **Stackable**
- **Portable**

Suitable for the transport and storage of hazardous samples, small equipment and samples that must be stored in dust-free and dry environments.

A waterproof silicone seal and three locking clamps ensure an absolutely safe and tight closure.

Suitable for some test tube sites with holes of 13 mm or 16 mm. Includes dividers for 6 compartments on the inside for the transport of bags or small parts.

Autoclavable.

Colour	Dimensions (l x w x h) mm	PK	Cat. No.
Clear with blue handles	380 x 196 x 160	1	9194005*LLG
Yellow with yellow handles	380 x 196 x 160	1	9194006*LLG
Red with red handles	380 x 196 x 160	1	9194007*LLG

LLG Trolleys, Stainless Steel



Made of CNS 18/10, stainless steel. All shelves are produced with an all round raised profile edge. This prevents anything from slipping over the edge. The load capacity per shelf is 80 kg. The trolleys are equipped with galvanized steel castors (4 swivel castors, 2 with brakes, castor diam. 125 mm) which are inserted in the tubular frame. Wall bumpers made of plastic (polyamide) on all four corners protect against damage.

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

Roller Steps, WEDO-Step



Manufactured from recyclable UV resistant polypropylene. Mounted on 3 castors allowing complete mobility which retract when stool is in use, providing a secure platform. No tools required for assembling. TÜV and GS approved. Height: 430 mm, load capacity up to 150 kg.

Colour	PK	Cat. No.
Blue	1	9700400*LLG
Red	1	9700401*LLG
Light grey	1	6055095*LLG
White	1	6239322*LLG
Black	1	6289953*LLG
Grey	1	7600593*LLG

Viscometers ROTAVISC



Viscometers with a large range of functions that determines the viscosity of liquids. Suitable for all applications, from the laboratory to quality control. The four devices measure in different viscosity ranges.

- **Highest measurement accuracy**
- **Stepless speed adjustment.**
- **4.3" TFT display**
- **Digital level**
- **Simple ramp function**
- **With connection for ext. PT100 sensor**

Scope of supply: Viscometer incl. standard spindle set, protective bracket, temperature sensor and ROTASTAND stand.



- **Very Easy to Use**
- **Highest Measuring Accuracy**
- **Stepless Speed**



Specifications

Rotation speed:	0.01 ... 200 rpm
Temperature range:	-30 ... +300 °C
Accuracy:	1 %
Repeatability:	0.2 %
Stroke max.:	200 mm
Dimensions stand (L x W x H):	351 x 372 x 629 mm
Weight:	7.1 kg
Power supply:	100 ... 240 V, 50/60 Hz
Protection class acc. to DIN EN 60529:	IP 40

Type	Viscosity range mPas	Torque mNm	PK	Cat. No.
ROTAVISC lo-vi Complete	1 ... 6,000,000	0.0673	1	4662322*LLG
ROTAVISC me-vi Complete	100 ... 40,000,000	0.7187	1	4662323*LLG
ROTAVISC hi-vi I Complete	200 ... 80,000,000	1.4374	1	4662324*LLG
ROTAVISC hi-vi II Complete	800 ... 320,000,000	5.7496	1	4662325*LLG

CO₂ Meter, Air CO₂ntrol 5000



- Acoustic Warning Signal
- Logger Function
- Traffic Light Display

With data logger function, ideal for monitoring the CO₂ concentration.

- Logger function saves the data as a CSV file on Micro SD card
- LEDs for visual identification of CO₂ concentration
- Displays temperature, Humidity and CO₂ content
- Individual alarm setting
- Bench- and wall mounting

Scope of supply: Meter incl. USB mains adapter and Micro SD card.

Specifications

CO₂	
Measuring range:	0 ... 5000 ppm
Resolution:	1 ppm (0-1000 ppm), 5 ppm (1001-2000 ppm), 10 ppm (>2000 ppm)
Accuracy:	±50 ppm or 5 % larger value applies, >3000 ppm ±7 %
Temperature	
Measuring range:	0 ... 50 °C
Resolution:	0.1 °C
Accuracy:	±0.5 °C
Relative humidity:	
Measuring range:	5 ... 95 %
Accuracy:	±5 %
Display:	7 segment LCD
Housing:	Plastic
Dimensions:	120 x 66 x 33 mm
Weight:	103 g (without mains adapter)
Power supply:	100-240 VAC 50/60 Hz

Type	PK	Cat. No.
Air CO ₂ ntrol 5000	1	6291253*LLG

Laboratory Thermometer TFX 410-1



- Measuring Range -50 to +300 °C
- Precise
- Robust and Shockproof

For control measurements in laboratories, food sector, storage and incoming goods. For temperature determination of air, liquids, plastic substances and food. Conform to HACCP and DIN EN 13485. With battery and factory calibration certificate.

- Probes made of stainless steel, for temperatures up to +400 °C
- Accuracy: exceeds DIN IEC 584, class 1

Specifications

Measurement range TFX 410-1:	-50 ... +300 °C
Accuracy:	±0.3 °C
Resolution:	0.1 °C
Sensor:	Pt 1000 (connection Lemo size 0)
Housing material:	ABS
Certificate:	3-point factory calibration
Operating temperature:	-25 ... +50 °C
Storage temperature:	-30 ... +70 °C
Automatic switch-off:	After 2 hours, optional
Dimensions (L x W x H):	54 x 22 x 109 mm (without probe)
Weight:	Approximately 90 g
Battery:	3.0 V Lithium, replaceable
Battery lifetime:	Approximately 5 years
Protection class:	IP 67

Type	Description	PK	Cat. No.
TFX 410-1	Laboratory thermometer (without probe)	1	6207171*LLG
TPX 400*	Pointed probe with 60 cm silicone cable (red) and grip	1	6233543*LLG
TPX 400-150*	Pointed probe with 150 cm silicone cable (red) and grip	1	6254169*LLG

*length: 120 mm, diam. 3 mm

Density Meters Densito/DensitoPro



NEW



- **Ideal for Quality Control**
- **Portable**

Ideal for rapid and accurate routine measurements in quality assurance, incoming and outgoing goods inspection.

DensitoPro is equipped with RFID and barcode reader for rapid and reliable tracing of samples.

- Automatic sampling pump
- Available measurement scales: API, °Baumé, Brix, density, Ethanol, H₂SO₄, proof (US and IP), °Plato, specific gravity, user-defined concentration
- Automatic temperature compensation
- Memory for up to 1100 results
- Backlit measuring cell
- Adjustable limits with customisable colours in the display

Specifications

Density range:	0 ... 3 g/cm ³
Resolution:	0.0001 g/cm ³
Accuracy:	±0.001 g/cm ³
Sample temperature range:	0 ... 50 °C
Resolution:	0.1 °C
Accuracy:	±0.2 °C
Sample volume:	2 ml
Memory:	1100 samples
Display:	2.4" colour display, backlit
Interfaces:	USB-A, USB-C
Power supply:	Removable and rechargeable Li-Ion batteries

Type	PK	Cat. No.
Densito	1	6291652*LLG
DensitoPro with RFID and barcode reader	1	6291653*LLG

Shore Hardness Testers, analogue, HB



- Compact handheld durometer for plastics with drag indicator.
- Typical application: measurement of penetration (Shore)
 - Material thickness of the sample, min. 4 mm
 - Shore A rubber, elastomers, neoprene, silicone, vinyl, soft plastics, felt, leather and similar materials
 - Shore D for plastics, formica, epoxides, plexiglass etc.
 - Max mode: Holds the maximum value in the display
 - Point mode: Shows one instant value
 - Can be attached to the test stands TI-A0 (for Shore A) and TI-D (for Shore D)
 - Screws to screw on to the TI: M7 fine thread
 - Delivered in a wooden carrying case

Specifications

Precision:	3 % of measured value
Dimensions (W x D x H):	60 x 25 x 115 mm
Net weight:	approx. 160 g

Type	Measuring range	Readability	PK	Cat. No.
	HS	HS		
HBA 100-0.	100 HA	1,0 HA	1	6284083*LLG
HBD 100-0.	100 HD	1,0 HD	1	6270975*LLG



Analytical Balance ADB

KERN

Compact analytical balance with special carat function. A low cost and space-saving balance that is easy to operate with an optimized 6-key control panel.

- Large backlit LCD display
- Digit height 16 mm
- Glass draught shield with 3 sliding doors
- Stainless steel weighing plate
- Adapted to small space requirements



- **Space-Saving and Precise**
- **High Accuracy**
- **Easy & Convenient Button Operation**

Specifications

Overall dimensions, incl. draught shield (W x D x H)

ADB: 230 x 310 x 330 mm

ADB-C: 230 x 310 x 230 mm

Dimensions weighing space (W x D x H):

ADB: 170 x 160 x 205 mm

ADB-C: 170 x 160 x 110 mm

Dimensions weighing plate (diam.): 90 mm

Net weight: 4.4 kg

Permissible ambient temperature: 10 ... 30 °C



Type	Weighing range	Readability	Reproducibility	Linearity	PK	Cat. No.
	g	mg	± mg	± mg		
ADB 100-4	120	0.1	0.2	0.4	1	6310582*LLG
ADB 200-4	210	0.1	0.2	0.4	1	6282811*LLG
ADB 600-C3	120 (600 ct)	0.1 (0.001 ct)	0.2 (0.002 ct)	0.4 (0.004 ct)	1	6310583*LLG

LLG-Weighing Bottles with NS lid, borosilicate glass 3.3



LLG
LABWARE

With writing area.
Available in tall or low shape.

Form	Capacity	Diam.	Height	NS	PK	Cat. No.
	ml	mm	mm			
low	3	25	25	19/12	1	9300151*LLG
low	10	35	30	29/12	1	9300152*LLG
low	11	40	25	34.5/12	1	9300150*LLG
low	20	50	30	45/12	1	9300153*LLG
low	29	60	30	50/12	1	9300154*LLG
low	60	80	30	80/12	1	9300155*LLG
tall	9	25	40	19/12	1	9300160*LLG
tall	19	30	50	24/12	1	9300161*LLG
tall	42	35	70	29/12	1	9300162*LLG
tall	66	40	80	34.5/12	1	9300163*LLG
tall	105	50	80	45/12	1	9300164*LLG

LLG-Sample Dishes, aluminium



LLG
LABWARE

High quality aluminium sample dishes, for moisture determination.

Description	Diam.	Height	PK	Cat. No.
	mm	mm		
Sample dishes	100	7	80	6265408*LLG

LLG-Weighing Dishes/Sample Dishes, aluminium



LLG
LABWARE

Made from oil-free, lightweight aluminium. With a flanged, crimped wall for rigidity. Finger-tab handle can be marked for identification prior to weighing.

Ø	Height	PK	Cat. No.
mm	mm		
57	14	100	6238139*LLG
101 *	8	50	6236854*LLG

* without finger-tab handle

LLG pH Meter 5, Complete Set

The LLG pH meter is a very easy to use pH/mV/°C handheld meter. The pH value and temperature can be stored directly on the SD card (Excel file) or transferred directly from the pH meter to a PC via the RS-232 interface.

- Combined, gel filled pH electrode with temperature sensor
- Automatic temperature compensation (ATC)
- Large, easy-to-read LCD display
- 3 point calibration
- 1 m cable
- BNC connector, suitable for all standard SD cards with 1 to 16 GB

Please order batteries separately (6 x 1.5 V AA)
Optional: power cable, PC connection cable, PC software

Scope of supply: pH meter, pH electrode with temperature sensor, buffers pH 4 and pH 7, 4 GB SD Memory card, transport case.



- **pH/mV-/°C-Handheld Instrument**
- **Full Set with Electrode, Buffer, SD Memory Card and Case**
- **Very Easy to Use**

Specifications

Measuring range:	0 ... 14.00 pH
Resolution:	0.01 pH
Accuracy:	±0.02 pH + 2d
Ambient conditions:	0 ... 50 °C, max. 85 % RH
Temperature range electrode:	0 ... 60 °C
Dimensions (L x W x H):	177 x 68 x 45 mm
Weight:	490 g
Power supply:	6 x 1.5 V AA batteries/9 V mains adapter (optional)
Memory:	4 GB
Protection class:	IP 51
Warranty:	3 years (1 year on the electrode)

Description	PK	Cat. No.
LLG-pH Meter 5, set with electrode, temperature sensor, SD card and case	1	6263691*LLG
Power cable for LLG-pH Meter 5	1	6263695*LLG
Connecting cable PC for LLG-pH Meter 5	1	6263696*LLG
Software for LLG-pH Meter 5	1	6263697*LLG



Indicator Paper, Tritest



For determination of pH-value.
Roll length 5 m, 10 mm width. With three colour zones, without hydrophobic zone.
Plastic container with 1 roll of indicator paper and colour scale.

Description	Range	PK	Cat. No.
	pH		
Dispensing reel with 1 roll	1 - 11	1	9130367*LLG
Refill packs with 3 rolls	1 - 11	3	9130368*LLG

Indicator Paper, PEHANON®



For determination of pH-value in coloured solutions.
Supplied in packs of 200, 11 x 100 mm strips.

Range	PK	Cat. No.
pH		
1 - 12	200	9130657*LLG
1.0 - 2.8	200	9130651*LLG
1.8 - 3.8	200	9130652*LLG
3.8 - 5.5	200	9130603*LLG
6.0 - 8.1	200	9130626*LLG

Beakers, borosilicate glass 3.3, low form



DIN 12 331. ISO 3819.
With approximate graduations and spout.

Nominal capacity	Ext. diam.	Height	PK	Cat. No.
ml	mm	mm		
50	42	60	10	9013901*LLG
100	50	70	10	9013902*LLG
250	70	95	10	9013904*LLG
400	80	110	10	9013910*LLG
600	90	125	10	9013911*LLG
1000	105	145	10	9013913*LLG

Beakers, borosilicate glass 3.3, tall form



DIN 12 331. ISO 3819.
With approximate graduations and spout.

Nominal capacity	Ext. diam.	Height	PK	Cat. No.
ml	mm	mm		
50	38	70	10	9013925*LLG
100	48	80	10	9013920*LLG
150	54	95	10	9013921*LLG
250	60	120	10	9013922*LLG
400	70	130	10	9013923*LLG
600	80	150	10	9013930*LLG
1000	95	180	10	9013932*LLG

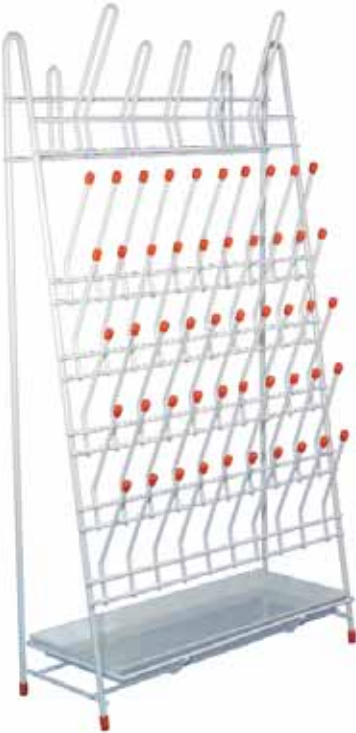
Laboratory Bottles, borosilicate glass 3.3, GL 45, with retrace code



DIN 168 - 1. EN ISO 4796-1.
With graduations and retrace code,
pouring ring, PP screw cap with
ISO thread.
Certificates are available on request.

Capacity	Ext. diam.	Height	PK	Cat. No.
ml	mm	mm		
100	56	100	10	9072331*LLG
250	70	138	10	9072332*LLG
500	86	176	10	9072334*LLG
1000	101	225	10	9072335*LLG
2000	136	260	10	9072336*LLG
5000	186	330	1	9072337*LLG
10000	234	410	1	9072338*LLG

LLG-Draining Racks, PE-coated wire



Wall or bench mounting for
50 reagent bottles and 5 flasks.
With drip channel and plastic
covered feet.
Dimensions (L x W x H):
360 x 130 x 650 mm.

Description	PK	Cat. No.
For 50 reagent bottles and 5 flasks	1	6281619*LLG

Chemically-Resistant Diaphragm Dosing Pumps SIMDOS® 10



- For Dosing Aggressive Chemicals
- Resistant to Highly Concentrated Acids



- Flow rate from 1 up to 100 ml/min/Pressure head 60 bar, suction head 3 mWg
- Pump heads available in your choice of PP, PVDF or PTFE-diaphragms available in PTFE, valves in FFKM
- Flow rate can either be set manually (Version S) or both manually and via an external control device (Version RC)
- Additional safety diaphragm for maximum security
- Easy exchange of the transfer diaphragm by activating the maintenance command in the operating program
- Intuitive operation, easy calibration
- Self-priming and dry-running
- Spray water protected IP 65

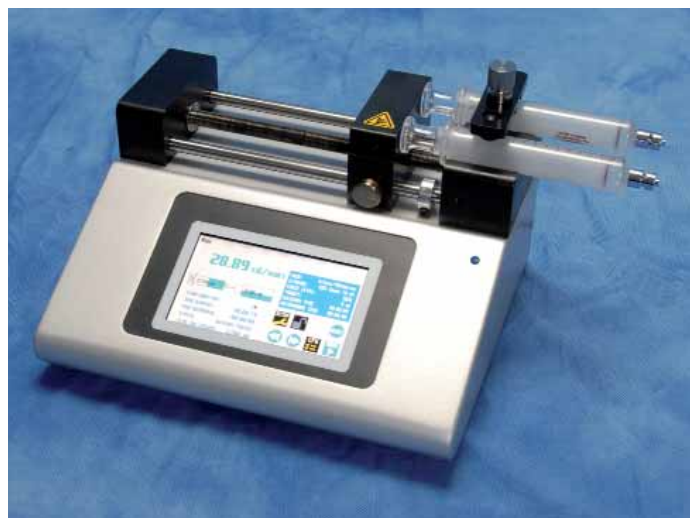
Specifications

Pressure:	6 bar
Flow rate:	1 - 100 ml/min
Dosing volume:	1 - 999 ml
Max. suction height:	3 m
Allowed ambient temperature:	+5 ... +40 °C
Allowed liquid temperature:	+5 ... +80 °C
Dimensions (WxDxH):	93 x 150 x 144 mm
Power supply:	100-240 V, 50-60 Hz
Weight:	0.9 kg

Head	Control	PK	Cat. No.
PVDF	RC	1	6268369*LLG
PTFE	S	1	6268389*LLG
PTFE	RC	1	6268390*LLG
PP	S	1	6268391*LLG
PP	RC	1	6268392*LLG
PVDF	S	1	6268393*LLG

The pump is also available with an RS 232 port on request (RC Plus).

Syringe Pumps Legato®



The intuitive chemically resistant touch screen enables the user to quickly and easily create and recall configurations.

- Single and dual syringe infuse, infuse withdraw & continuous models
- Holds syringe sizes from 0.5 ul to 140 ml (model dependent)
- Flow rates down to the picoliter/min (model dependent)
- Rugged construction with cold rolled steel chassis

Legato® 100 Single Syringe Infusion Pump: Only for the addition of liquids.

Legato® 210 Dual Syringe Infuse/Withdraw Pump: This unit supports infuse only, withdraw only, infuse/withdraw, withdraw/infuse and continuous mode. User defined flow rates with selectable target volumes.

Type	For syringes	Flow rate	PK	Cat. No.
Legato® 100	1 (0.5 µl - 60 ml)	1.26 pl/min* - 88.28 ml/min	1	6267706*LLG
Legato® 210	2 (0.5 µl - 140 ml)	3.06 pl/min* - 215.80 ml/min	1	6267702*LLG

*using a 0.5 µl syringe

LLG-Glass-Syringes, borosilicate glass



With brown graduations. Sterilisable up to 134 °C.

Capacity ml	Material Cone	Nozzle type	PK	Cat. No.
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

LLG-Pipette tip Refill System *ULTRALOW*



Pipette tips in the rack or in the refill system.
LLG-Pipette tip Refill system *ULTRALOW* is compatible with all major pipette brands such as LLG-pro*MLP*, Gilson, Eppendorf, Brand, Sartorius, Socorex and others.

- Hydrophobic insides, very low retention of liquids
- Ultralow retention tips with easy visible volume graduations
- Universal fit tips, compatible with common pipette brands
- Easy-to-use lift-and-load refill system
- Refill inserts are imprinted with volume and LOT No. for easy identification
- Rack footprint is compatible with automation and facilitates stacking, autoclavable



! STARTER PACK !

**HARIBO
Gummy
Bears
+
5 Empty
Racks for
FREE!**



**LLG-Pipette Tips *ULTRALOW*,
Refill System, Starter Pack**

- **Ultralow Retention**
- **No Transfer Device Needed**
- **Environmentally Friendly Refill System**

Capacity	Package contents	PK	Cat. No.
µl			
10	10 refills of 96 tips, 5 empty racks plus HARIBO gummy bears	1	6270873*LLG
200	10 refills of 96 tips, 5 empty racks plus HARIBO gummy bears	1	6270874*LLG
1.250	8 refills of 96 tips, 5 empty racks plus HARIBO gummy bears	1	6270875*LLG

**LLG-Disposable Reagent Reservoirs
economy, PS**

LLG-Pipette Tips *ULTRALOW*, Rack



Designed for use with multi-channel pipettes it can accommodate up to 12-channel standard pipettes. All reservoirs have internal graduated volume lines and pour-spouts on the corners. 25 ml or 50 ml versions. Available as sterile and non-sterile versions.

Capacity	Package contents	PK	Cat. No.
µl			
10	10 racks of 96 tips	960	6283567*LLG
200	10 racks of 96 tips	960	6283569*LLG
1250	8 racks of 96 tips	768	6283572*LLG

Description	Capacity	PK	Cat. No.
	ml		
non-sterile, bulk	25	100	6282144*LLG
sterile, single packed	25	100	6282145*LLG
non-sterile, bulk	50	100	6282146*LLG
sterile, single packed	50	100	6282147*LLG

Single Channel Microliter Pipettes LLG-proMLP



The LLG-proMLP single channel microliter pipettes combine high accuracy and reliability with ergonomic and extremely low force pipetting relieving stress from your hand and thumb. This high precision instrument has been built to maintain accuracy for many years making it the ideal choice for all scientific work requiring exact and reproducible pipetting.

The LLG-proMLP pipettes are equipped with an adjustable tip ejector button that allows both right and left handed users to set the button*according to their preferences. The built in volume locking mechanism and competitive pricing complete these high quality precision pipettes. Available volume ranges from 0.2 µl to 10 ml.

- High quality **Made in France**
- High accuracy, reliability and reproducibility
- Sturdy and robust but still extremely light weight
- Perfect ergonomics for highest comfort
- Colour-coded push-button for quick operation
- Extremely low force pipetting
- **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 certificate (according to EN ISO 8655)

*not available for 5 ml and 10 ml pipettes



6270427*LLG



- **Extremely Smooth-Running**
- **Precise and Reproducible Pipetting**
- **Adjustable Tip Ejector Button for Right and Left Handed Users**

Capacity	Increments	Accuracy max. vol. ($\leq \pm R\%$)	Precision max. vol. ($\leq CV\%$)	Colour code	PK	Cat. No.
µl	µl					
0.2-2	0.002	1.65	0.75	dark orange	1	6270420*LLG
0.5-10	0.02	1.10	0.44	red	1	6270421*LLG
2-20	0.02	1.00	0.33	light yellow	1	6270422*LLG
10-100	0.2	0.80	0.17	light orange	1	6270423*LLG
20-200	0.2	0.80	0.17	dark yellow	1	6270424*LLG
100-1000	2	0.80	0.17	dark blue	1	6270425*LLG
500-5000	2	0.66	0.18	purple	1	6270426*LLG
1000-10000	20	0.60	0.18	light blue	1	6270427*LLG

Pipette Stands Twister™ universal 336 for Single Channel Microliter Pipettes



Model fits six pipettes of most brands providing for an ideal storage solution in any laboratory. Rotation enables quick instrument selection. Available in seven translucent colours. Discs are exchangeable.

Colour	PK	Cat. No.
Sapphire blue	1	6253916*LLG
Emerald green	1	6253917*LLG
Topaz orange	1	6253918*LLG
Quartz grey	1	6253919*LLG
Ruby red	1	6253920*LLG
Diamond white	1	6253921*LLG
Citrine yellow	1	6253922*LLG

Volumetric Flasks, DURAN®, class A, blue graduated, with glass stopper



HIRSCHMANN®



IN (TD) calibrated. With dated batch identification. Declaration of conformity acc. to DIN 12600. NS ground with glass stopper. Ring mark and graduation in high contrasting blue enamel. According to DIN EN ISO 1042.

Capacity	Tolerance	Height	Joint size (NS)	PK	Cat. No.
ml	± ml	mm			
5	0.025	70	7/16	1	9276470*LLG
5*	0.04	70	10/19	1	9276471*LLG
10	0.025	90	7/16	1	9276472*LLG
10*	0.04	90	10/19	1	9276473*LLG
20	0.04	110	10/19	1	9276474*LLG
20*	0.06	105	12/21	1	9276489*LLG
25	0.04	110	10/19	1	9276475*LLG
25*	0.06	110	12/21	1	9276476*LLG
50	0.06	140	12/21	1	9276477*LLG
50*	0.08	140	14/23	1	9276478*LLG
100	0.1	170	12/21	1	9276479*LLG
100	0.1	170	14/23	1	9276480*LLG
200	0.15	210	14/23	1	9276481*LLG
250	0.15	220	14/23	1	9276482*LLG
500	0.25	260	19/26	1	9276483*LLG
1000*	0.6	300	29/32	1	9276484*LLG
1000	0.4	300	24/29	1	9276485*LLG

* wide mouth.

Graduated Pipettes, soda glass, class AS, type 3, blue graduation

ISOLAB
Laborgeräte GmbH



Soda glass. Conformity-certified. With batch date identification. DIN EN ISO 835, DIN 12699 and BS700 - 1583. Calibrated to deliver (EX). Ring marks and graduations in permanent blue enamel.

Volume	Graduations	Tolerance	Length	PK	Cat. No.
ml	ml	± ml	mm		
1	0.01	0.007	360	12	6290861*LLG
2	0.02	0.010	360	12	6290862*LLG
5	0.05	0.030	360	12	6290863*LLG
10	0.1	0.050	360	12	6290864*LLG
20	0.1	0.100	450	12	6290865*LLG
25	0.1	0.100	450	12	6290866*LLG
50	0.1	0.200	720	12	6290867*LLG

Measuring Cylinders, borosilicate glass 3.3, tall form, class A, blue graduated

ISOLAB
Laborgeräte GmbH



Borosilicate glass 3.3. Conformity certified with batch ID. To DIN EN ISO 4788, DIN 12680. High form, hexagonal foot with spout. Calibrated to contain (IN) and all the tolerances are according to DIN/ISO Class A standards.

Capacity	Tolerance	Height	PK	Cat. No.
ml	± ml	mm		
10	0.10	140	1	9274171*LLG
25	0.25	170	1	9274172*LLG
50	0.50	200	1	9274173*LLG
100	0.50	260	1	9274174*LLG
250	1.00	335	1	9274175*LLG
500	2.50	390	1	9274176*LLG
1000	5.00	470	1	9274177*LLG

Macropipette Controllers



The handwheel allows precise suction of the liquid into the pipette with one hand. When the wheel stops, the piston remains in the desired position. The liquid can be blown out by pressing the piston back or allowed to flow out by setting the lateral switch to "Ex".

For	PK	Cat. No.
Pipette volume up to 2 ml	1	4008322*LLG
Pipette volume up to 10 ml	1	4008323*LLG
Pipette volume up to 25 ml	1	4008324*LLG



- Variable setting of speed, tilt and time
- Low profile design
- Microprocessor control
- LED-display at digital model
- Overload protection
- Spill-resistant design
- Clock timer
- Suitable for CO₂ environments



- **For Gentle Mixing Applications**
- **Large Plattform**



- **For Cell Culture and Blotting Applications**

Tumbling Shakers SHWV



Scope of supply:

02AL/02DG Shaker incl. tray with non-slip rubber mat.

Specifications

Speed range:	02AL // 02DG 1 ... 75 rpm // 1 ... 30 rpm
Tilt angle:	0 ... 16° // 0 ... 20°
Max load:	2.3 kg
Timer:	1 ... 120 min // 1 s ... 160 h
Tray dimension:	356 x 279 mm // 299 x 222 mm
Permissible ambient conditions:	-10 ... +60 °C
Weight:	approx. 7 kg
Power supply:	230 V, 50/60 Hz

Type	Dimensions (l x w x h) mm	PK	Cat. No.
02AL, analogue	425 x 279 x 165	1	4659478*LLG
02DG, digital	413 x 254 x 165	1	4659475*LLG

Rocking Shakers SHRK



Scope of supply:

07AL1/04DG: Shaker incl. built-in tray with non-slip rubber mat
07AL2: as 07AL1/04DG, additionally incl. second tray with screws and mat

Specifications

Speed range:	07AL1+2 // 04DG 1 ... 75 rpm // 1 ... 50 rpm
Tilt angle:	0 ... 15°
Max. load:	7.3 kg // 4.5 kg
Timer:	1 ... 120 min // 1 s ... 160 h
Tray dimension:	356 x 279 mm // 324 x 254 mm
Permissible ambient conditions:	-10 ... +60 °C
Weight:	approx. 7 kg
Power supply:	230 V, 50/60 Hz

Type	Dimensions (l x w x h) mm	PK	Cat. No.
07AL1, analogue	425 x 279 x 140	1	4659476*LLG
07AL2, analogue	425 x 279 x 241	1	4659477*LLG
04DG, digital	425 x 254 x 140	1	4659481*LLG

Vortex Mixers for Multi Tubes

Multi-Tube Vortexers for high throughput sample processing. Holds up to 50 samples simultaneously. Interchangeable foam racks for vortexing tubes from 10 to 29 mm in diameter available. Analog and digital models, both microprocessor-controlled and run in continuous or timed mode.

- Digital model is ideal for applications that require accuracy and repeatability
- Pulsing mode on digital model to enhance vortexing action
- Strong suction feet

Scope of supply: Vortex Mixer incl. tray pad set for support and one 12 mm test tube foam rack.

Specifications

Orbit:	3.6 mm
Max. load:	4.5 kg
Timer VXMTAL // VXMTDG:	0 ... 60 s // 1 s ... 160 h
Permissible ambient conditions:	4 ... 40 °C
Dimensions (L x W x H):	241 x 384 x 406 mm
Weight:	19.1 kg

Type	PK	Cat. No.
VXMTAL, analogue, EU	1	4659506*LLG
VXMTDG, digital, EU	1	4659507*LLG



Ideal for High Throughput in Sample Processing



Sampling

Sampling Dippers DispoDipper LaboPlast®/SteriPlast®, PP, blue transparent



- Scaled Sample Cap
- Also sterile



Sampling tube manufactured in a clean room specially designed for disposable use. DispoDipper is manufactured completely in one piece and can be used for sampling and subsequent transport of the sample in one device. After sampling, the handle can be detached from the sample container, at the predetermined breaking point. This allows for easy and space-saving transport of the sample.

- Production and packaging according to clean room class 7
- Complies with EU food requirements and FDA regulations
- Individually packed, SteriPlast® gamma-sterilized

Description	Capacity	Diam.	Height	Overall length	PK	Cat. No.
	ml	mm	mm	mm		
LaboPlast®	100	53	98	420	20	4662230*LLG
SteriPlast®	100	53	98	420	20	4662231*LLG
LaboPlast®	250	71	117	432	20	4662232*LLG
SteriPlast®	250	71	117	432	20	4662233*LLG

Disposable Spoons SteriPlast®, PS, white



The sampling spoons are available in 2.5 ml (similar to teaspoons) and 10 ml (similar to tablespoons).

- Production and packaging acc. to Cleanroom class 7 (10,000)
- According to EU food and FDA guidelines
- Individually packed, gamma-sterilized

Type	Description	Capacity	Length	PK	Cat. No.
		ml	mm		
SteriPlast®	sterile	2.5	127	100	6265045*LLG
SteriPlast®	sterile	10	170	100	6265046*LLG

LLG-Sample Containers, PS/PP, with Tamper-Evident Cap, LDPE/PP



White with tamper-evident cap.

Capacity	Height	PK	Cat. No.
ml	mm		
40	52.00	10	9402350*LLG
100	58.00	10	9402353*LLG
250	95.00	10	9402356*LLG
1000	116.00	5	9402359*LLG

Scraper LaboPlast®/SteriPlast®, PS, white



- Production and packaging acc. to Cleanroom class 7 (10,000)
- With EU foodstuffs and FDA approval
- Individually packed, SteriPlast® gamma-sterilized

Type	Description	Width	Length	PK	Cat. No.
		mm	mm		
LaboPlast®	non-sterile	80	200	10	6284547*LLG
SteriPlast®	sterile	80	200	10	6284548*LLG

Knife Mills GRINDOMIX GM 200



Retsch
Solutions in Milling & Sieving



- **Sample Crushing & Homogenisation**
- **Fast & Reproducible Processing of Up To 700 ml Sample Material**
- **Powerful 1000 W Motor**

The Knife Mills Grindomix GM 200 are suitable for the rapid and reproducible size reduction and homogenisation of food and feed materials. They can process substances with a high water, oil or fat content just as quickly and reliably as dry, soft and medium-hard products.

Features:

- Very fast and reproducible grinding and homogenisation of foodstuffs, final fineness < 300 µm
- Speed-controlled industrial motor
- Autoclavable grinding tools
- Boost function allows short-term increase of speed from 2,000 up to 14,000 rpm
- For sample volumes up to 700 ml
- Digital display of grinding time and speed
- Interval operation possible
- Optional gravity lid for automatic adjustment of grinding chamber volume
- Storage of 4 program sequences possible
- 8 parameter combinations can be stored
- Drive power: ~ 1000 W
- Electrical supply data: 220-240 V, 50-60 Hz

Scope of supply: 1 liter plastic container, standard lid and stainless steel knife.

Type	PK	Cat. No.
GM 200	1	6310086*LLG

Homogeniser T 25 Easy Clean Digital



IKA

- **Quiet, Clean & Remotely Controlled High Performance Dispenser**
- **Electronic Speed Control from 3,000 - 25,000 rpm**



High-performance homogeniser with electronic speed control and a large variety of dispersing heads for many applications. In combination with an IKA laboratory reactor, it is also possible to conduct dispersion tasks under vacuum or pressure.

- Quick and easy cleaning of the dispersing tools, no disassembling required
- Brushless motor guarantees dust-free and silent operation
- USB interface for control and documentation via labworldsoft®
- Timer/counter function
- Increased safety through tool recognition

Dispersing heads must be ordered separately.

Specifications

Motor rating input/output:	500/400 W
Working volume range (H ₂ O):	1 ... 2000 ml
Viscosity max.:	5000 mPas
Speed range:	3,000 ... 25,000 rpm
Speed display:	LED
Speed control:	stepless
Noise without element:	70 dB(A)
Extension arm diam.:	13 mm
Dimensions (W x D x H):	89 x 161 x 270 mm
Weight:	3.0 kg
Power supply:	220-240/100-120 V, 50/60 Hz
Protection class:	IP 30



Type	PK	Cat. No.
T 25 easy clean digital	1	6291622*LLG

Dispersing Head for T 25 Easy Clean Digital



Clean the Dispersing Tool without Dismounting

IKA



Easy to clean dispersing head made of stainless steel (AISI 316) and ceramic.
Ultimate fineness: emulsions 1 µm to 10 µm and suspensions 10 µm to 50 µm, sterilisable by all methods.

Type	PK	Cat. No.
S 25 EC-C-18G-ST	1	6291623*LLG

Magnetic Stirrer LLG-uniSTIRRER 1



Ultra-Flat

An **ultra-flat** inductive magnetic stirrer with timer. The modern magnet coil technology consists only of non-moving parts and therefore guarantees a wear-free drive. **For better sample mixing, it is possible to change the direction of rotation every 30 seconds.**

- **Timer** (1 min to 99 min, infinitely)
- LED display for an exact adjustment of the rotation speed
- Digital regulated rotation speed
- Protection class IP 65
- Stainless steel surface

Delivery includes: magnetic stirrer, power cable, adapters for UK and universal plug.

Specifications

Stirring quantity (H ₂ O):	800 ml
Speed range:	15 ... 1500 rpm
Permissible ambient temperature:	5 ... 40 °C
Magnetic bar:	max. 25 mm
Display:	LED
Heating plate:	94 mm diam./Stainless steel
Dimensions (W x D x H):	110 x 155 x 12 mm
Weight:	0.5 kg
Power supply:	100 - 230 V, 50/60 Hz
Protection class:	IP 65

Type	PK	Cat. No.
LLG-uniSTIRRER 1with universal plug	1	6263420*LLG

4-Position-Magnetic Stirrer LLG-uniSTIRRER 1/M4



An **ultra-flat** inductive magnetic stirrer with timer. The modern magnet coil technology consists only of non-moving parts and therefore guarantees a wear-free drive.

For better sample mixing, it is possible to change the direction of rotation every 30 seconds.

- Max. stirring quantity per stirring position 400 ml
- **Timer** (1 to 99 min, infinitely)
- LED display for an exact adjustment of the rotation speed
- Digital regulated rotation speed
- Protection class IP 65
- Stainless steel surface



Specifications

Stirring positions:	4
Distance between Stirring postions:	95 mm
Max. Stirring quantity (H ₂ O):	4 x 400 ml = 1600 ml
Speed range:	15 ... 1200 rpm
Permissible ambient temperature:	5 ... 40 °C
Magnetic bar:	max. 25 mm
Display:	LED
Heating plate (W x D):	122 x 385 mm
Dimensions (W x D x H):	126 x 457 x 13.5 mm
Weight:	1.9 kg
Power supply:	100 - 240 V, 50/60 Hz
Protection class:	IP 65

Type	PK	Cat. No.
LLG-uniSTIRRER 1/M4 with EU-plug	1	6263425*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	15	10	9198919*LLG
6	20	10	9198920*LLG
6	25	10	9198925*LLG
6	30	10	9198930*LLG
8	40	10	9198940*LLG
8	50	10	9198950*LLG

2 Sets: Magnetic Stirrers RCT Standard Safety Control



! COMPLETE SETS !

Set 1: Magnetic stirrer incl. PT 1000

**Set 2: Magnetic stirrer incl. PT 1000,
Stand Accessories and Electr.
Contact Thermometer ETS-D5**

- Integrated temperature control
- Exact temperature and speed setting via digital display, even when switched off
- Digital display of set safety temperature limit
- Hot top indicator, hot surface warning to prevent burns
- Digital error code display
- With adjustable safety circuit of heating plate temperature (+50 to +360 °C)
- Safety magnetic stirrer with heating, suitable for unsupervised operation
- Enhanced safety due to improved heat control technology
- Enclosed assembly (IP 42) guarantees long service life
- Highly polished, aluminium hotplate for optimal heat transfer
- Improved magnetic coupling
- Supplied with housing protection cover H 98

Specifications

Stirring quantity (H₂O): 20 litres
 Motor rating input/output: 16/9 W
 Display: digital
 Speed range: 50 ... 1500 rpm
 Max. magnetic bar (L x dia.): 80 x 10 mm

Heating function

Temperature display: digital
 Heat output: 600 W
 Heating rate (1 litre H₂O in H 15): 6.5 K/min
 Temperature range: RT to 310 °C
 Setting accuracy: ±1 K
 Temp. variation without temp. sensor: ±2 K
 Adjustable safety circuit: 50 ... 360 °C
 Control accuracy with sensor: PT 1000/±1 K
 ETS-D5/±0.5 K

Heating plate

Material: aluminium alloy
 Dimensions: 135 mm diam.

General data

Dimensions (W x D x H): 160 x 270 x 85 mm
 Weight: 2.5 kg
 Operating temperature range: 5 ... 40 °C
 Operating humidity range: 80 % RH
 Protection class acc. to DIN EN 60529: IP 42



SET 1



SET 2

Type	PK	Cat. No.
Set 1: RCT Standard safety control incl. PT 1000	1	9720250*LLG
Set 2: RCT Standard safety control incl. PT 1000, Stand Accessories and Electr. Contact Thermometer ETS-D5	1	9720258*LLG

High-Performance Greenough Stereo Microscope with LED, SMZ-171 Serie



- Improved optical and mechanical performance
- Improved image contrast due to multi-layer lens coating
- Improved illumination concept
- ESD compatible set-ups available
- Various accessories available
- Observation Tube Binocular -/Phototube 45°, 360° rotating, F.N. 23
- Fixed optical split 50:50
- Widefield adjustable eyepieces WF10X/23 mm, incl. eyecups
- 6.7:1 Zoom ratio, WD=110 mm
- Objective magnification range: 0.75X-5X
- SMZ-171 Pole type stand with large working area and head holder
- Coarse focusing system with tension adjustment
- 3 W incident and transmitted LED illumination with independent intensity controls
- Transmitted light with tilting reflector (oblique illumination)
- Option to adapt flexible light guide
- Main supply 100 V-240 V (CE)
- Black/White and frosted glass stage plates, and dust cover

Type	Description	PK	Cat. No.
SMZ-171-BLED	Binocular	1	6264087*LLG
SMZ-171-TLED	Trinocular	1	7671016*LLG

Slide Storage Box, plastic



Holds 76 x 26 mm slides

To hold microscope slides	PK	Cat. No.
100	1	9161211*LLG

LLG-Staining Jars, soda-lime-glass



The Schiefferdecker staining jar is suitable for holding 76 x 26 mm slides horizontally. The Hellendahl staining jar is suitable for holding 76 x 26 mm slides vertically. The Macro staining jar is suitable for holding 20 slides with 76 x 26 mm (please order rack separately). Each staining jar is supplied with a glass lid.

Type	Width mm	Length mm	Height with cap mm	PK	Cat. No.
Schiefferdecker Staining Jar	68	88	50.15	1	9163250*LLG
Hellendahl Staining Jar	61	63	102	1	9163251*LLG
Macro Staining Jar	88	105	78	1	9163252*LLG

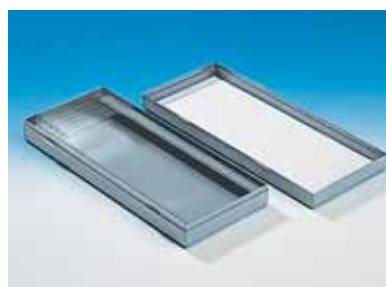
Slide Storage Box, cardboard



Cardboard covered with imitation leather. Hinged lid with locking clips. Holds 76 x 26 mm slides as outlined below.

To hold microscope slides	PK	Cat. No.
50	1	9161215*LLG
100	1	9161210*LLG

Microscope Slide Boxes, PS



High impact. For 76 mm x 26 mm slides. Numbered slots in base. Index card in lid.

To hold microscope slides	Width mm	Length mm	Height mm	PK	Cat. No.
25	96	120	35	1	9161380*LLG
50	97	230	35	1	9161381*LLG
100	187	230	35	1	9161382*LLG

Spectrophotometer LLG-uniSPEC 2

Cost-effective basic UV/VIS-spectrophotometer suitable for pharmaceutical, biochemical and clinical lab applications. Also ideal for routine measurements, such as kinetics, wavelength scans, quantitative analysis, multi-wavelength and DNA/Protein analysis. It is possible to store and save 200 calibration curves. Both lamps can be individually turned on/off to extend durability. A pre-adjusted lamp design allows a fast and easy lamp replacement.

Scope of delivery: Photometer, manual, software for connection to PC, 4 glass cells and 2 quartz cells.

Specifications

Optical System:	Single beam, Grating 1200 lines/mm, Silicium photodiode detector
Wavelength range:	190 ... 1100 nm
Bandwidth:	2 nm
Wavelength accuracy:	±0.5 nm
Wavelength repeatability:	0.3 nm
Wavelength setting:	automatic
Photometric accuracy:	±0.5 % T
Photometric repeatability:	0.3 % T
Photometric range:	-0.3-3 A, 0-200 % T, 0-9999 C
Stability:	±0.002 A/h at 500 nm
Stray light:	≤0.1 %T
Data output:	USB port
Printer port:	parallel port
Display:	128 x 64 Dots LCD
Standard cell holder:	4-position 10 mm cell changer
Lamps:	D2 lamp and W lamp
Dimension (W x D x H):	460 x 360 x 225 mm
Weight:	18 kg
Power supply:	220 V/50 Hz



Cuvette Rack, PP



Grey, 16 numbered positions.
Autoclavable (121 °C).



Type	PK	Cat. No.
LLG-uniSPEC 2 with EU-plug	1	6263610*LLG
LLG-uniSPEC 2 with UK-plug	1	6263611*LLG

Width	Length	Height	PK	Cat. No.
mm	mm	mm		
70	210	38	1	9145020*LLG

Macro and Semi Micro Cuvettes



Sorted by mould cavity number.

Polymethylmethacrylate (PMMA) cuvettes

Typical operating range: from 300 nm to 900 nm.

Standard deviation at 320 nm ≤ ±0.004 extinction units.

Polystyrene (PS) cuvettes

Typical operative range: from 340 nm to 900 nm.

Standard deviation at 360 nm ≤ ±0.005 extinction units.

Polymer Cuvettes

Made of plastic for the UV/VIS range. For analysis from 230 to 900 nm.

- Compatible with most polar solvents, as well as acids and alkalis (e.g. acetone, butanone, DMF, concentrated HCL, etc.)
- Ideal for the determination of proteins, DNA, RNA
- Number-sorted to reduce extinction deviations
- Verified windows to protect against scratches

Macro cell with 4 optical windows, PS/UV-Polymer

Particularly suitable for fluorescence spectroscopy.

The UV version can be used from a wavelength of 230 nm and shows minimal autofluorescence. Standard deviation: Cuvettes of polystyrene (PS) at 360 nm ≤ ±0.005 extinction units, cuvettes UV-transparent at 240 nm ≤ ±0.007 extinction units and at 300 nm ≤ ±0.005 extinction units.

Dimensions:	12.5 x 12.5 x 45 mm
Window:	Macro cell 10 x 35 mm
	Semi micro cell 4.5 x 23 mm

Description	Volume ml	Path length mm	Operating range nm	Material	PK	Cat. No.
Macro	2.5 - 4.5	10.0	300 - 900	PMMA	100	9406111*LLG
Semi-micro	1.5 - 3.0	10.0	300 - 900	PMMA	100	9406115*LLG
Macro	2.5 - 4.5	10.0	340 - 900	PS	100	9406110*LLG
Semi-micro	1.5 - 3.0	10.0	340 - 900	PS	100	9406114*LLG
Macro, 4 optical windows	2.5 - 4.5	10.0	340 - 900	PS	100	6280982*LLG
Macro, 4 optical windows	2.5 - 4.5	10.0	340 - 900	PS	500	6280981*LLG
Macro, 4 optical windows	2.5 - 4.5	10.0	230 - 900	UV-polymer	100	6280680*LLG
Macro, 4 optical windows	2.5 - 4.5	10.0	230 - 900	UV-polymer	500	6280980*LLG
UV macro cuvette	2.5 - 4.5	10.0	230 - 900	UV-polymer	100	9406119*LLG
UV semi-micro cuvette	1.5 - 3.0	10.0	230 - 900	UV-polymer	100	9406118*LLG

Culture Plates 3M™ Petrifilm™



- Ready to use
- 90 % less material volume
- Validated methods
- Fast and reliable evaluation

Description	PK	Cat. No.
Total bacteria count aerobic bacteria	100	6237738*LLG
Total bacteria count coliforms	50	6269820*LLG
Bacteria count <i>E. coli</i> and coliforms	50	6257512*LLG
Bacteria count Enterobacteriaceae	50	6251171*LLG
Bacteria count <i>S. aureus</i>	50	6257510*LLG
Bacteria count Yeast and Fungi	100	7657837*LLG

LLG-Cellulose Stoppers, Steristoppers®

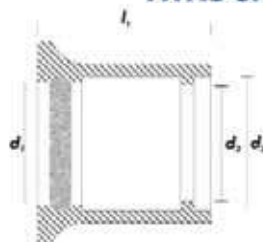


Cellulose, 100 % biodegradable and fully compostable. Autoclavable, filters bacteria, sterilizable and air permeable.

Type	For inter. diam. mm	Bottom diam. mm	Top diam. mm	Length mm	PK	Cat. No.
No. 12	11.5 - 13.5	11.0	16.0	32	1000	9231211*LLG
No. 13	12.5 - 14.5	13.0	17.0	35	1000	9231212*LLG
No. 14	13.0 - 14.5	12.0	16.0	40	1000	9231214*LLG
No. 15	13.5 - 15.5	14.0	18.0	39	500	9231215*LLG
No. 29	29.5 - 31.0	30.0	34.0	62	250	9231229*LLG
No. 40 P	42.0 - 46.5	40.0	50.0	53	100	9231240*LLG
No. 45 P	47.0 - 48.0	45.0	60.0	66	75	9231245*LLG

P = correct fit

Sterile Stoppers SILICOSEN® C-Type



Superb permeability and fits tight onto the media container due to sealing lip, where importance is placed on mounting quality. Suitable for shaking cultures.

Type	d1	I1	d2	d3	Joint size (NS)	PK	Cat. No.
C-30	mm	mm	mm	mm	20/30	1	9231130*LLG
C-40	36	28	27	40	30/40	1	9231140*LLG
C-55	50	28	34	55	40/50	1	9231150*LLG

Baffled Flasks DURAN®



With GL 45 thread.

- Baffled flasks cause a turbulent flow, increase the gas exchange surface and produce a higher oxygen transfer
- Complete with membrane screw cap (gas exchange)

Capacity ml	Bottom diam. mm	Neck diam. mm	Height mm	PK	Cat. No.
250	85	30	145	1	212833655*SCHOTT
500	105	30	149	1	212834454*SCHOTT
1000	136	30	221	1	212835459*SCHOTT

Culture Tubes, borosilicate glass 3.3, screw cap



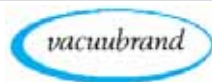
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For culture growth, transport and storage. Heavy walled, thickness 1.1 mm. Wide mouth for easy inoculation and cleaning. Complete with aluminium or plastic screw cap and rubber sealing gasket. Autoclavable.

Nominal capacity ml	Diam. mm	Length mm	Screw cap	PK	Cat. No.
15.0	16.0	98.00	Aluminium	100	9010612*LLG
15.0	16.0	98.00	Plastic	100	9010613*LLG
20.0	16.0	150.00	Plastic	100	9190605*LLG
50.0	25.0	150.00	Plastic	100	9010620*LLG

BioChem-VacuuCenter BVC control/professional



9882229*LLG



**Compact,
Space-Saving &
Quiet**

The compact BioChem-VacuuCenter offers the perfect solution for safe, sensitive and efficient aspiration of supernatants or filtration in all application areas.

- The BVC control and professional serve for efficient and convenient aspiration of supernatants. The vacuum level and the suction force are sensitively adjustable by the electronic touch panel, which allows a delicate and reproducible operation
- The BVC professional, with 4 l PP bottle with self-closing quick couplings minimises risks in transporting hazardous waste and in contamination of the workplace

Supply requirements: 230 V ~ 50-60 Hz

Type	Dimensions (W x D x H) mm	Pump Model	PK	Cat. No.
BVC control	194 x 408 x 500	ME 1C	1	9882227*LLG
BVC professional	194 x 408 x 500	ME 1C	1	9882229*LLG

Filter Units Nalgene™ Rapid-Flow™, PES Membrane, sterile



Ideal for biological and pharmaceutical sterile filtration. PES membrane features low protein binding, low level of extractables and a high flow rate. Blue colour-coded collar with cellulosic vent plug side arm and quick-disconnect tubing adapter. Leakproof, sterile screw closure included for storage of sterile filtrate. Sterile, single packed. Certificate of Quality included in each full case. Lot number, catalogue number, membrane type, pore size and expiration date are printed on filter units, bottle tops and receivers for easy identification and lot traceability.

Type	Volume upper/lower part ml	Membrane diam. mm	Pore size µm	Thread GL	PK	Cat. No.
565	150/150	50	0.20	45	1	6302336*LLG
568	250/250	50	0.20	45	1	6228218*LLG
566	500/500	75	0.20	45	1	6227381*LLG
569	500/500	90	0.20	45	1	6225298*LLG
567	1000/1000	90	0.20	45	1	6229041*LLG

Cell Culture Dishes, Nunclon™Δ Surface, PS, sterile



Surface treated dishes for cell culture, available in various sizes and formats, are optically clear and suitable for microscopy.

Nunclon™Δ surface modification is certified non-pyrogenic and tested for both monolayer formation and cloning efficiency, employing primary cells, as well as repeating cell lines. Sterile. With lid.

Material: Polystyrene

Working volume ml	Dimensions mm	Height mm	Culture surface cm²	PK	Cat. No.
5	Ø 60	15	21.5	400	9407395*LLG
12.5	Ø 100	15	56.7	150	9407398*LLG
12.5	Ø 100	20	56.7	240	9407401*LLG
35	Ø 150	20	145.0	80	9407399*LLG

Bottle Top Filters Nalgene™ Rapid-Flow™, PES Membrane, sterile



Filters securely screw onto glass media bottles with 45 mm neck sizes. Tight and secure thread connection for vacuum filtration, vacuum tubing to be connected onto tubing adapter of side-arm.

Graduated. Certificate of quality included in each full case. Lot number, catalogue number, membrane type, pore size and expiration date are printed on filter units for easy identification and lot traceability.

Type	Capacity ml	Membrane diam. mm	Pore size µm	Neck thread GL	PK	Cat. No.
596	150	50	0.20	45	1	6224312*LLG
595	500	75	0.20	45	1	7048390*LLG
597	1000	90	0.20	45	1	7048397*LLG

LLG-Wide-Mouth Bottles, with screw cap, LDPE, economy pack



Natural, translucent.
Thick-walled.
Complete with lid.

Capacity	Diam.	Thread external diam.	Height	PK	Cat. No.
ml	mm	mm	mm		
50	39.0	32	76.0	50	9073510*LLG
100	48.0	32	93.5	20	9073511*LLG
250	64.0	40	120.0	10	9073512*LLG
500	77.0	50	154.0	10	9073513*LLG
1000	95.0	65	205.0	4	9073514*LLG
1500	108.0	65	226.0	4	9073515*LLG

LLG-Mini Narrow-Neck vials, PP, Heavy Duty



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

Capacity	Diam.	Thread external diam.	Height	PK	Cat. No.
ml	mm	mm	mm		
4	16.0	13	40	100	6289520*LLG
8	25.0	19	44	100	6289450*LLG
30	36.0	19	61	100	6289451*LLG
60	40.0	19	85	100	6289452*LLG
125	51.0	23	99	50	6289453*LLG

Spray Bottle Turn'n'Spray with overhead valve, PE/PP



This high-quality, refillable spray bottle can be used again and again.

- Uninterrupted spraying, even above your head
- Parts in contact with media made of PP, PE, silicon and stainless steel
- Nozzle diameter 0.6 mm; nozzle is continuously adjustable
- Amount sprayed per stroke: 1.2 ml $\pm$ 0.1 ml

Capacity	Neck diam. int.	Height with closure	Weight	PK	Cat. No.
ml	mm	mm	g		
250	18.0	220	18	1	6252153*LLG
500	18.0	240	18	1	6252154*LLG
1000	17.5	295	17	1	6252166*LLG

Graduated Jugs, PP, moulded graduations



Highly transparent.
Food-safe (suitable for contact with foodstuff in accordance with regulation (EC) No. 10/2011).
Conditionally autoclavable at 121 °C (2 bar) according to DIN EN 285.

Capacity	Grad.	PK	Cat. No.
ml	ml		
1000	20	1	9275776*LLG
2000	50	1	9275777*LLG
3000	50	1	9275778*LLG
5000	100	1	9275779*LLG

Overshoe Dispenser HYGOMAT COMFORT/CLEANROOM

HYGOSTAR

- No electrical power needed
- Easy to use, no need for bending over
- Easy and quick handling
- With handrail for extra comfort
- Capacity: two packs of overshoes
- With window for easy control of rest capacity
- Refilled with overshoes within seconds
- Weight: 21 kg



Description	PK	Cat. No.
Overshoes dispenser HYGOMAT COMFORT, 740 x 300 x 730 mm	1	6257283*LLG
Overshoes dispenser HYGOMAT CLEANROOM, stainless steel, 740 x 300 x 730 mm	1	6269779*LLG

Overshoes for Dispenser HYGOMAT

HYGOSTAR



6257286*LLG



6257288*LLG

6257285*LLG:

- Polypropylene nonwoven, CPE coated, white
- Waterproof sole
- Very slip resistant
- Perfect for smooth surface

6257286*LLG:

- PP overshoe with CPE sole, blue
- Polypropylene nonwoven
- At the top nonwoven, at the bottom strong waterproof CPE sole
- Very tearproof and slip resistant

6257287*LLG:

- CPE (Cast Polyethylene), blue
- Strong quality, approx. 60 micron
- Light protection against liquids

6257288*LLG:

- Polypropylene nonwoven, blue
- At the bottom structure made of CPE
- Permeable to air and light slip resistant
- For dry areas

Length	PK	Cat. No.
mm		
440	80	6257285*LLG
440	70	6257286*LLG
470	110	6257287*LLG
460	100	6257288*LLG

Disposable Coverall Tyvek® IsoClean®, with collar/hood, sterile



Front zipper closure. Raglan sleeves with tunnelled elastic wrists, and tunnelled elastics ankles. Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size) and is ultra-low-linting. Silicon non-added.

- Clean laundered and gamma-sterilized
- Suitable for use in clean room class ISO 5 and higher
- Sterility assurance level (SAL) of 10⁻⁶
- Bound seams: tightly sewn seam is covered with garment fabric to reinforce seam protection and reduce potential for liquid and particle penetration
- Full traceability on all sterilized apparel with certificates of sterility available
- Single packed

Description	Size	PK	Cat. No.
with collar	M	1	9390066*LLG
with collar	L	1	9390067*LLG
with collar	XL	1	9390068*LLG
with collar	XXL	1	9390069*LLG
with collar	XXXL	1	9390070*LLG
with hood and slip-retardant overshoes	M	1	9390061*LLG
with hood and slip-retardant overshoes	L	1	9390062*LLG
with hood and slip-retardant overshoes	XL	1	9390063*LLG
with hood and slip-retardant overshoes	XXL	1	9390064*LLG
with hood and slip-retardant overshoes	XXXL	1	9390065*LLG

LLG-Safety Eyeshields *basic*



- CE approved to EN166 and EN170
- Perfect for visitors as well as over goggles for spectacles wearers
- Integrated side lens with venting, 180° visual field
- Frame made of tested hypo-allergenic material
- 100 % UV protection (up to 380 nm)
- Weight: 43 g

Colour	Lens	PK	Cat. No.
Clear	Clear, uncoated, 2-1.2 U 1 F CE	10	9006002*LLG

LLG-Safety Eyeshields *evolution*



- CE approved to EN166, EN170 and EN 172 for tinted lens
- Panoramic wrapping lens
- Frame made of tested hypo-allergenic material
- Side arms adjustable in length
- Nose pad and arm tips are made from soft, mouldable material offer optimal comfort and individual customisation
- Rubber eyebrow protection for greater shock absorption
- 100 % UV protection (up to 400 nm)
- Lightweight: 30 g only

Colour	Lens	PK	Cat. No.
black/green	clear, anti-scratch plus and anti-fog lens plus, 2C-1.2 U 1 FT CE	1	9006010*LLG

LLG-Panoramic Eyeshield



- CE approved to EN166 and EN170
- Can be worn over any prescription spectacles
- Wide, fully adjustable headband
- Frame made of tested hypo-allergenic material
- 100 % UV protection (up to 380 nm)
- Weight: 84 g

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

Laboratory Coats, Model 1656, unisex



- Boil-proof, chlorine resistant
- Fold-down collar, covered press stud and long sleeves
- One outer breast pocket and two side pockets
- Without belt at the back

Material: Sanfor 100 % cotton diagonal twill
Colour: white
Weight: approx. 205 g/m²
Length: approx. 103 cm (Size L)

Size	PK	Cat. No.
XS	1	9414320*LLG
S	1	9414321*LLG
M	1	9414322*LLG
L	1	9414323*LLG
XL	1	9414324*LLG
XXL	1	9414325*LLG

Half Mask, Series 4000 Plus, Ready to Use



- **Ready-to-use**
- **Maintenance-free**

Ready-to-use, maintenance-free half masks with built in filters designed for effective and comfortable protection against a combination of many gases, vapours and particulate hazards found throughout the industry. A unique filter technology enables a very low-profile design, for undisturbed field of vision that makes your worklife more comfortable.

- Complete mask, ready-to-use
- Integrated filter elements ensure low breathing resistance and unrestricted view
- Dolomite dust test (D) guarantees a long service life of the particle filter
- Parabolic exhalation valve, reduces heat build-up
- Easy to fasten neck strap
- Very good compatibility with panoramic eyeshield 3M™ 2890 and 2890SA

Type	Protection-level	Usage restrictions	PK	Cat. No.
4251	FFA1P2 R D	10 x TLV for gases/vapours 12 x TLV for particles	1	6072615*LLG
4255	FFA2P3 R D	10 x TLV for gases/vapours 50 x TLV for particles	1	6802700*LLG
4277	FFABE1P3 R D	10 x TLV for gases/vapours 50 x TLV for particles	1	6202909*LLG
4279	FFABEKP3 R D	10 x TLV for gases/vapours 50 x TLV for particles	1	6073056*LLG

Disposable Gloves PRO.TECT Orange HD

EN 374 EN 374



Especially sturdy disposable nitrile gloves.

- Diamond grip technology: safe grip even on damp and slippery surfaces, due to special texturing on glove surface
- 100 % silicone and latex free
- Food approval

Manufactured acc. to ISO 9001:2008 and 13485:2012
AQL 1.5, Cat.I

Size	Length	PK	Cat. No.
	cm		
M	24	100	4660866*LLG
L	24	100	4660867*LLG
XL	24	100	4660868*LLG

Disposable Gloves Microflex® 93-260

EN 388 EN 374 EN 374



JKL



Unique Wearing Comfort

Particularly thin disposable Gloves. Three layer design nitrile-neoprene-nitrile (100 % latex free and free of silicone) for superior protection against harsh chemicals including acids, solvents and bases. Thin mil construction provides enhanced tactility and dexterity. Thickness 0.20 mm.
AQL 0.65. **Cat. III**

Size	Length	PK	Cat. No.
	cm		
XS	30	50	6285431*LLG
S	30	50	6285432*LLG
M	30	50	6285433*LLG
L	30	50	6285434*LLG
XL	30	50	6285435*LLG
XXL	30	50	6285436*LLG



LLG Crimp Neck Vials ND11, wide opening

Capacity o.d. x Height Colour Form	ml mm		1.50 11.6 x 32 clear wide opening		1.50 11.6 x 32 amber wide opening		1.50 11.6 x 32 amber, labeling field wide opening		1.50 11.6 x 32 clear, labeling field wide opening
PK			100		100		100		100
Cat. No.			6291635*LLG		6263047*LLG		6291636*LLG		6290019*LLG

LLG-Aluminium Crimp Seals ND11, ready assembled



Septa	Hardness	Thickness	PK	Cat. No.
		mm		
Natural rubber red-orange / TEF transparent	60° shore A	1.30	100	9003441*LLG
Silicone white / PTFE red	45° shore A	1.30	100	9003446*LLG
Red Rubber / PTFE beige	45° shore A	1.00	100	6291637*LLG

LLG-Short Thread Vials ND9, wide opening

Capacity o.d. x Height Colour Form	ml mm		1.50 11.6 x 32 clear flat bottom		1.50 11.6 x 32 amber flat bottom		1.50 11.6 x 32 amber, labelling field flat bottom
PK			100		100		100
Cat. No.			9003448*LLG		4662800*LLG		4662801*LLG

LLG-PP Short Thread Seals ND9, ready assembled



Septa	Hardness	Thickness	PK	Cat. No.
		mm		
Natural rubber, red-orange / TEF transparent	60° shore A	1.00	100	6266883*LLG
Red Rubber / PTFE beige	45° shore A	1.00	100	4008228*LLG
Silicone white / PTFE blue, slit	55° shore A	1.00	100	4001521*LLG
PTFE red / Silicone white	45° shore A	1.00	100	6291638*LLG

LLG-Snap Ring Vials ND11, wide opening

As an alternative to snap ring seals, snap ring vials and micro-vials ND11 can also be sealed with crimp seals ND11, since the two snap ring lips have the same height as a crimp neck.

Capacity o.d. x Height Colour Form	ml mm		1.50 11.6 x 32 clear flat bottom		1.50 11.6 x 32 clear, labelling field flat bottom		1.50 11.6 x 32 amber, labelling field flat bottom
PK			100		100		100
Cat. No.			6073833*LLG		6270176*LLG		6270177*LLG

LLG-PE Snap Ring Seals ND11, ready assembled



Septa	Hardness	Thickness	PK	Cat. No.
		mm		
Red Rubber / PTFE beige	45° shore A	1.00	100	4008261*LLG
Silicone white / PTFE red	45° shore A	1.30	100	4001544*LLG
Silicone white / PTFE blue, cross-slit	55° shore A	1.00	100	4008256*LLG
Red Rubber / TEF transparent	60° shore A	1.00	100	6291662*LLG

SafetyCaps for HPLC Solvent Supply, GL 45

The integrated air valve blocks hazardous vapours and cleans the inflowing air from dust and dirt particles.



- No evaporation of hazardous gases, no contamination of solvents
- No crimping of connection tubing, easy container exchange
- Cost-efficient by avoiding evaporation of expensive solvents
- Chemically resistant PTFE body
- Freely rotatable screw cap

SafetyCaps, GL 45



Safe solvent supply.
With integral air filter vent.

Description	Connections	PK	Cat. No.
SafetyCaps I	1 capillary (3.2 mm o.d.)	1	9139850*LLG
SafetyCaps II	2 capillaries (3.2 mm o.d.)	1	9139851*LLG
SafetyCaps III	3 capillaries (3.2 mm o.d.)	1	9139852*LLG

Disposable Syringes, 3-piece, PP, sterile



Polypropylene with two-piece plunger and Luer nozzle.
Without needle. Supplied sterile, individually pouch-sealed in outer boxes.

Volume ml	Nozzle type	Grad. ml	Description	PK	Cat. No.
5	centric	0.20	with Luer nozzle	100	9950298*LLG
10	eccentric	0.50	with Luer nozzle	100	9950299*LLG
30	eccentric	1.00	with Luer nozzle	60	9410431*LLG
1	centric	0.01	with BD Luer-Lok™ nozzle	100	6251847*LLG
3	centric	0.10	with BD Luer-Lok™ nozzle	200	6238175*LLG
5	centric	0.20	with BD Luer-Lok™ nozzle	125	6050095*LLG
20	centric	1.00	with BD Luer-Lok™ nozzle	120	6050097*LLG
30	centric	1.00	with BD Luer-Lok™ nozzle	60	6051537*LLG
50/60	centric	1.00	with BD Luer-Lok™ nozzle	60	6050099*LLG
10	centric	0.50		100	6050096*LLG
1	centric	0.01	Subcutan with needle	100	6303819*LLG

Air Valve for SafetyCaps



Change Regularly

Air valve for SafetyCaps, with integrated air filter. The vent is universally suitable for all S.C.A.T. SafetyCaps.

Description	Flow rate amount ml/min	PK	Cat. No.
Air valve for SafetyCaps	150	1	9139864*LLG
Air valve for SafetyCaps (refill pack of 10)	150	10	4005886*LLG
Air valve for SafetyCaps (refill pack of 50)	150	50	9139897*LLG

Exhaust Filters for SafetyWasteCaps



Change Regularly

Depending on the required capacity, 3 filter sizes are available. The S.C.A.T. special granulate absorbs 99 % of the volatile solvent vapors. The change indicator enables easy control of the service life and shows when the filter should be replaced.

Description	Volume litres	Filter size	PK	Cat. No.
Supply pack with change indicator + splash guard	≤ 5	S	4	4653869*LLG
with change indicator + splash guard	≤ 5	S	1	9042895*LLG
Supply pack with change indicator + splash guard	≤ 20	M	3	6262288*LLG
with change indicator + splash guard	≤ 20	M	1	9042896*LLG
with change indicator + splash guard	≥ 20	L	1	4005635*LLG



- **Revolving, Height-Adjustable Seat**
- **Easy Cleaning and Disinfecting**
- **Metal 5-star Base**



6287751*LLG



6287752*LLG



6287753*LLG



6287757*LLG



6287760*LLG

LLG-Lab Chair

- Resistant to all of the usual disinfectants and chemicals
- Quick adjustment: Every function can be easily and comfortably operated in sitting position
- Seat height adjustment by gas spring
- Backrest adjustable in height and inclination
- Solid black plastic star base, flat design

- The chrome-plated foot ring for the high chairs provides support through the wide tread area and can easily and quickly be adjusted in height
- With certificate "Tested Safety" (GS mark)
- 10 years warranty, Made in Germany

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

Type	Material	Description	Seat height adjustment	PK	Cat. No.
			mm		
LLG-Lab Chair	PU Foam	Castors	440-620	1	6287750*LLG
LLG-Lab Chair	PU Foam	Glides, Foot Ring	580-850	1	6287751*LLG
LLG-Lab Chair	PU Foam	Stop and Go Castors, Foot Ring	620-890	1	6287752*LLG
LLG-Lab Chair	Artificial Leather	Castors	440-620	1	6287753*LLG
LLG-Lab Chair	Artificial Leather	Glides, Foot Ring	580-850	1	6287754*LLG
LLG-Lab Chair	Artificial Leather	Stop and Go Castors, Foot Ring	620-890	1	6287755*LLG
Armrests			-	1	6287756*LLG

LLG-Lab Stool

- Resistant to all of the usual disinfectants and chemicals
- Extra-large seat: Encourages healthy posture and upright seating in the laboratory
- Round front edge of the seat: Prevents blocked circulation in the thighs
- Seat height adjustment by gas spring
- The height adjustment can be comfortably and easily operated in sitting position

- Solid black plastic star base, flat design
- The chrome-plated foot ring for the high chairs provides support through the wide tread area and can be easily and quickly adjusted in height
- With certificate "Tested Safety" (GS mark)
- 10 years warranty, Made in Germany

Type	Material	Description	Seat height adjustment	PK	Cat. No.
			mm		
LLG-Lab Stool	PU Foam	Castors	460-630	1	6287757*LLG
LLG-Lab Stool	PU Foam	Glides, Foot Ring	570-850	1	6287759*LLG
LLG-Lab Stool	Artificial Leather	Castors	460-630	1	6287758*LLG
LLG-Lab Stool	Artificial Leather	Glides, Foot Ring	570-850	1	6287760*LLG

Circulator Baths, CORIO™ C with stainless steel Bath Tanks

Julabo



Complete Set

CORIO™ C Open Heating Bath Circulators for internal temperature applications with stainless steel bath tanks for working temperatures from 20 °C to 100 °C.

- Bright, white, easy to read display
- Whisper quiet
- High-quality bath tanks made of stainless steel
- Integrated drain screw (except for B5)

Specifications

Working temperature range:	+20 ... +100 °C
Temperature stability:	±0.03 °C
Heating capacity:	2 kW
Flow rate:	6 l/min
Pressure:	0.1 bar



Type	Capacity	Dimensions (W x D x H)	Bath opening	Bath tank depth	PK	Cat. No.
	L	mm	mm	mm		
CORIO™ C-B5	3.5 - 5	230 x 380 x 410	150 x 150	150	1	4657989*LLG
CORIO™ C-B13	9 - 13	380 x 400 x 420	300 x 180	150	1	4657990*LLG
CORIO™ C-B17	13 - 17	380 x 400 x 470	300 x 180	200	1	4657991*LLG
CORIO™ C-B19	14 - 19	380 x 580 x 420	300 x 350	150	1	4657992*LLG
CORIO™ C-B27	17 - 27	380 x 580 x 470	300 x 350	20	1	4657993*LLG

Metal-Cased Heating Mantles, series KM-MEB



NEW



Increased Working Safety

SAF
HEATING MANTLES

With corrosion-resistant stainless steel heating bowl to protect against leaking liquid resulting of a broken flask.

- Increased working safety in the lab
- Plastic-coated, chemically resistant metal housing
- Predrilled threaded hole on rear allows to fix the stativ clamp
- 2 heating zones
- With built-in controller allows a continuous adjustment of power outlet
- Thermally insulated and earthed
- With built-in heating zone switch and residual current detection (RCD)
- 1.5 m mains supply and personal safety switch

Capacity	Flask diam.	Rating	PK	Cat. No.
ml	mm	W		
250	85	150	1	6310317*LLG
500	105	200	1	6310318*LLG
1000	131	300	1	6310319*LLG
2000	166	500	1	6310320*LLG

Gas Pump Accuro

Fast measurement with one hand: The Dräger-Tube pump accuro allows you to use the established Dräger-Tubes to take measurements under extreme conditions. The easy-to-use Dräger-Tubes have already been calibrated and form a perfect unit with the Dräger-Tube pump.

Gas pump Dräger accuro® set consisting of:
Dräger-Tubes® pump accuro®,
ready bag, with tube opener and
spare part set



Description	PK	Cat. No.
Gas pump accuro®	1	9620410*LLG
Gas pump set accuro®	1	9620411*LLG

Dräger-Tubes®

The long-established principle of Dräger-Tubes® is still the same. A defined volume of gas/air must be pumped through the sampling tube. This can be achieved by using the Accuro® gas pump. On contact with the substance under test the reagent system contained in the tube reacts and displays a colour. Over 250 tubes are available on request for all substances and measuring fields.



Type	Measuring range	PK	Cat. No.
Ammonia 0.25/a	0.25 - 3 ppm	10	6056774*LLG
Ammonia 2/a	2 - 30 ppm	10	9620404*LLG
Ammonia 5/a	5 - 70 ppm	10	9620405*LLG
Petroleum hydrocarbons 10/a	50 - 600 ppm	10	9620426*LLG
Formaldehyde 0.2/a	0.2 - 2.5 ppm	10	9620429*LLG
	0.5 - 5 ppm		



Type	Measuring range	PK	Cat. No.
Carbon dioxide 100/a	100 - 3 000 ppm	10	9620408*LLG
Carbon monoxide 2/a	2 - 60 ppm	10	9620432*LLG
	23 - 300 ppm		
Nitrous fumes 0.2/a	0.2 - 6 ppm	10	6266890*LLG
	5 - 30 ppm		



Type	Measuring range	PK	Cat. No.
Sulphur dioxide 0.5/a	0.5 - 5 ppm	10	9620420*LLG
	1 - 25 ppm		
Hydrogen sulphide 1/d	1 - 20 ppm	10	9620443*LLG
	10 - 200 ppm		
Hydrogen sulphide 100/a	100 - 2 000 ppm	10	6050553*LLG

LLG-Extraction Thimbles, cellulose



Neutral and fat free.
With excellent retention capacity.

Diam.	Length	PK	Cat. No.
mm	mm		
22	80	25	9045700*LLG
25	100	25	9045709*LLG
26	60	25	9045707*LLG
28	80	25	9045711*LLG
30	80	25	9045708*LLG
33	80	25	9045702*LLG
33	94	25	9045703*LLG
33	100	25	9045704*LLG
33	118	25	9045706*LLG
37	130	25	6256301*LLG
43	123	25	9045710*LLG

BOD Meters Type KF 12, without stopper



Karlsruher BOD bottle with NS19 conical ground joint.

Type	PK	Cat. No.
Karlsruher BOD bottle, 250 ml	1	9304170*LLG

Universal Drying Oven LLG-uniOVEN 42 and LLG-uniOVEN 110



- **Cost-Effective**
- **42 litre or 110 litre volume**
- **Quick & Intuitive Operation**

Microprocessor controlled universal drying oven with **forced convection** including two shelves.

- Quick and intuitive operation
- Microprocessor control with integrated auto-diagnostic system
- Forced convection with fan
- Digital display for time and temperature
- **Timer:** 1 minute to 99.9 h and continuous
- Delayed start timer: 1 minute to 99.9 h
- Outlet for vapour exhaustion
- Acoustical and visible information for end of program
- Acoustical and optical alarm at temperature differences
- Interior made of stainless steel
- Adjustable over temperature protection at 300 °C

Scope of delivery: LLG-uniOVEN incl. 2 shelves

Specifications

Internal volume:	42 l or 110 l
Ambient temperature:	+5 ... +40 °C
Temperature range:	RT +7 up to 250 °C
Temperature accuracy:	±1 °C (at 70 °C)
Temperature uniformity:	±2 °C (at 70 °C)
Ambient humidity:	80 %, non-condensing
Power supply:	230 V, 50/60 Hz



Type	Weight	PK	Cat. No.
	kg		
LLG-uniOVEN 42 with EU-plug	39	1	6263670*LLG
LLG-uniOVEN 42 with UK-plug	38	1	6263673*LLG
LLG-uniOVEN 110 with EU-plug	66	1	6263675*LLG
LLG-uniOVEN 110 with UK-plug	66	1	6263678*LLG

LABORTOPS

Humidity Chambers for Environmental Simulations

Active humidity control in climate chamber ensures ideal homogeneity of temperature and humidity. Heating at all six sides, including heated interior glass door. This minimizes vaporisation and reduces the risk of condensed water drips onto the samples. An aluminium thermal conductive layer supports optimum temperature distribution and serves as a heat accumulator in case of a temporary power failure. The climate chamber is perfectly suited for environmental tests, environmental simulations and accelerated life tests as well as 85/85 tests according to IEC 60068-2-67 and IEC 60068-2-78.

- Practically maintenance-free
- Short recovery times after opening the door
- TwinDISPLAY - multifunctional digital PID microprocessor controller with 2 high-resolution TFT colour graphic displays
- Programming and documentation of different temperature/humidity profiles via AtmoCONTROL
- Interface via Ethernet LAN, USB
- Triple overtemperature protection and simultaneous display of all parameters
- 2 Pt100 sensors
- Integral bacteria block by generating hotsteam
- Dehumidifying via sterile filter
- Visual and acoustic alarm
- Alarm messages via MobileALERT as e-mail or SMS
- Easy to clean and rust-resistant stainless steel for interior and exterior housing
- Calibration via three freely selectable values for temperature and humidity
- Works calibration certificate (measuring point chamber centre) at 60 °C with 75 % RH
- 3 years guarantee worldwide

Specifications

Active humidity control:	20 % ... 95 % RH
Setting accuracy humidity:	0.5 % RH
Ambient temperature:	10 °C ... 30 °C
Working-temperature range:	> RT ... 90 °C
Setting temperature range:	18 °C ... 90 °C
Setting accuracy temperature:	0.1 °C
Timer:	1 min. - 99 days
Max. loading per internal:	15 kg
Voltage:	230 V, 50/60 Hz



- **Optimal Homogeneity of Humidity & Temperature**
- **Comfort Equipment for Accelerated Life Tests**
- **Ramp Programming**

memmert
Experts in Thermostatics



NEW



Type	Capacity	Internal dimensions (W x D x H)	Shelf support ribs/shelves	Housing (W x D x H)	Weight	Power consumption	PK	Cat. No.
	l	mm		mm	kg	W		
HCP 50	56	400 x 330 x 425	5/1	559 x 521 x 795	55	1520	1	4662063*LLG
HCP105	107	560 x 400 x 480	6/2	719 x 591 x 850	75	1720	1	4662064*LLG
HCP 150	156	560 x 400 x 700	10/2	719 x 591 x 1070	90	1800	1	4662065*LLG
HCP 240	241	600 x 500 x 810	12/2	759 x 691 x 1180	110	1840	1	4662066*LLG