



GERMANY

LABORATORY TECHNOLOGY®

**Buddeberg**

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**LABORATORY**

**C A T A L O G U E**

partner of the



Lab Logistics Group

2007/2008



Welcome to Buddeberg,

Buddeberg is your competent and friendly supplier of laboratory equipment. We can provide the complete range of products for your requirements.

As a modern service provider for laboratory supply, our policy is to ensure the highest quality of products and services, advice and consultancy, rapid delivery times and a "can-do" attitude to customer support.

As shareholders in LLG (Lab Logistics Group) and therefore backed by an extensive stock and warehousing facility, Buddeberg can react very quickly and effectively to your requirements.

Please feel free to contact us. We will find the solution that suits your requirements. Our product experts will be pleased to actively assist you with their customer service know-how.



Do you need chemicals ?

We offer the complete range needed in your laboratory.

- Chemicals and reagents
- Solvents for HPLC, analysis and synthesis
- Buffers and ready-to-use reagents for gel electrophoresis, scintillation and histochemistry
- Products for the biomolecular laboratory

Please contact us. We would be pleased to inform you on the variety of our product range.

**Buddeberg GmbH**  
**Mallastr. 49**  
**D - 68219 Mannheim, Germany**

# Cleaning and sterilization

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# High-power ultrasound

for laboratory and process engineering

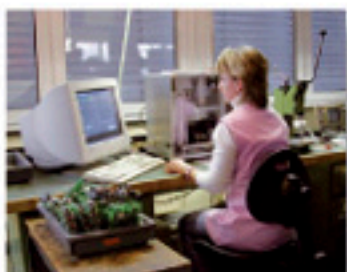
**SONOREX • SONOPULS • TICKOPUR • STAMMOPUR • SONOBLOC**



Laser and blanking works



CNC machining of system components



Test location



final inspection



For more than 60 years, office and production facility of the family-run company BANDELIN electronic GmbH & Co. KG is in Berlin. Today, BANDELIN electronic is the leading developer, producer and supplier of

- ultrasonic cleaning units
- special agents for cleaning and disinfection
- ultrasonic homogenizers
- sonoreactors
- low frequency ultrasonic therapy units

for applications in industry, trade, laboratory, medicine, sonochemistry and process engineering. All products come from our own development and production. As a member in several special boards the company exerts influence over norms and guidelines.

BANDELIN electronic is certified according to EN ISO 9001:12.2000 and to EN ISO 13485:11.2000 also for medical products.



**BANDELIN** *electronic* GmbH & Co. KG  
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**BANDELIN**

55 years ultrasound instrument engineering in Berlin



### 1 Laboratory wash lotion

Mild, gentle and effective. pH 5.8.  
With special skin protection and non-greasy agents.  
Environmentally-friendly, almost 100% biodegradable.

Capacity ml	Cat. No.	PK
150	9.191 021	1
1000	9.191 023	1
5000	9.191 025	1



### 2 3 Dispenser for skin protection agent

Easy to refill, non-drip, with dispensing handle. Stable. Lockable.  
Supplied empty. With mountings and instructions for assembly.

For bottles	Material	Cat. No.	PK
250	ABS plastic	9.191 087	1
650	ABS plastic	9.191 083	1
1000	Aluminium, anodized	9.191 085	1



### 4 Lifosan® soft wash lotion

Lifosan® soft.  
Alkali and soap-free washing lotion with a skin-neutral pH-value of 5.5.  
- Cleans thoroughly and gently  
- Caring protection agents keep the skin smooth and supple  
- For normal to oily skin

Braun

Container	Capacity ml	Cat. No.	PK
Dispenser	1000	9.191 203	1
Canister	5000	9.191 205	1



### 5 Softa-Man® hand disinfectant

Softa-Man®.  
Ready to use alcohol-based solution for gentle hand disinfection.  
- Effective against bacteria including fungi, lipophile viruses including HBV and HIV  
- Offers safe, immediate and long-term action  
- Gentle cleansing agents and non-greasy emollients make it non-allergenic  
- Dermatologically approved  
- DGHM- and BGA-listed  
- For normal to dry skin

Braun

Type	Capacity ml	Cat. No.	PK
Dispenser	1000	9.191 213	1
Canister	5000	9.191 215	1



### Pump dispenser for Lifosan® soft and Softa-Man®

Braun

For dispensing bottles ml	Cat. No.	PK
500 / 1000	9.191 218	1



### 6 Trixo® collagen cleaning lotion

Trixo®.  
Medical cosmetic skin cleansing lotion with collagen.  
- Contains the natural elasticity of the skin  
- Prevents chapping and dryness  
- Hinders the build-up of infectious germs  
- Non-greasy, non-sticky and quickly absorbed  
- Ideal for normal to oily skin

Braun

Type	Capacity ml	Cat. No.	PK
Tube	100	9.191 231	1
Dispenser	500	9.191 233	1

**1 Lindesa® skin protection cream with beeswax**

With beeswax. Non-greasy, quickly absorbed.  
The cream strengthens the defensive functions of the skin, preventing skin damage from external pollution and soothes irritation. Smooths and cleans without leaving a residue.  
Lindesa® gives the skin elasticity and suppleness through its special caring agents.  
The sense of touch is not affected.  
For low levels of soiling it provides protection against weak acids, alkalis and organic substances.

Capacity ml	Cat. No.	PK
50	9.191 145	1



**2 Lindesa® O skin protection cream with beeswax**

Moderately greasy. Particularly suitable for protecting the skin against organic solvents, varnishes, oils, petroleum spirit, resins, dyes, paints etc. as well as for after-work care for dry skin.

Capacity ml	Cat. No.	PK
100	9.191 148	1



**3 Chinosol industrial health and safety cream**

Chinosol.  
Medical skin ointment for protection against industrial skin allergies, e.g. caused by organic solvents, oils, varnishes, paints etc.  
45g tube.

Capacity ml	Cat. No.	PK
45	9.191 010	1



**4 Lindesa K® skin protection cream with beeswax and camomille**

Quickly absorbed. The cream strengthens the defensive functions of the skin, preventing skin damage from external pollution and soothes irritation. Smooths and cleans without leaving a residue.  
Using Lindesa® K avoids greasy smears on surfaces and is therefore suitable for workers involved with enamelling, electronics production, or final inspection.

Capacity ml	Cat. No.	PK
50	9.191 149	1



**5 Cleaning concentrate, deconex® 12 PA**

Liquid, mildly alkaline concentrate for manual cleaning of laboratory glassware.  
Versatile use.  
Active against stubborn residues due to excellent emulsifying and dispersing capabilities.  
Suitable for soaking and in ultrasonic baths.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
12 PA	1.3	9.192 923	1
12 PA	7.0	9.192 924	1
12 PA	14.0	9.192 925	1
12 PA	35.0	9.192 926	1



**6 Cleaner, Deconex® 15 PF, liquid, phosphate free**

Alkaline cleaning concentrate. Specifically designed for phosphate critical applications.  
Very stable, long shelf life and low COD value.  
For manual washing.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
15 PF	1.0	9.192 900	1
15 PF	5.0	9.192 901	1
15 PF	10.0	9.192 902	1
15 PF	28.0	9.192 903	1





### 1 Cleaners, deconex® 22 Liq/22 PF

Alkaline cleaners. Particularly suitable for stainless steel and glass instruments. Phosphate and surfactant free.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
22 LIQ, liquid	6.0	9.192 931	1
22 LIQ, liquid	12.0	9.192 905	1
22 LIQ, liquid	30.0	9.192 906	1
22, PF, powder	10.0	9.192 907	1



### 2 Cleaning concentrate, deconex® 22 HPF

Highly alkaline, special cleaner for analytically pure reprocessing of laboratory glassware. Phosphate- and surfactant-free, with enhanced performance against stubborn residues.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
22 HPF, liquid	6.0	9.192 928	1
22 HPF, liquid	12.0	9.192 929	1
22 HPF, liquid	30.0	9.192 930	1



### 3 Cleaning concentrate, deconex® 24 LIQ/24 Forte

Highly alkaline cleaner with active chlorine. Particularly suitable for the removal of stubborn stains on glass. Surfactant free.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
24 LIQ, liquid	7.0	9.192 932	1
24 LIQ, liquid	14.0	9.192 908	1
24 LIQ, liquid	35.0	9.192 909	1
24 Forte, powder	10.0	9.192 910	1



### 4 Cleaning concentrate, deconex® 25 Organacid

Liquid, phosphate free. For neutralising carry-over alkaline residue. Specially suitable for glassware, aluminium and sensitive materials. Surfactant free.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
25 Organacid	5.0	9.192 911	1
25 Organacid	10.0	9.192 912	1
25 Organacid	25.0	9.192 913	1



### 5 Cleaning concentrate, deconex® 26 Mineralacid/Plus

For neutralising carry-over alkaline residue. Used in combination with all alkaline and highly alkaline deconex® cleaning concentrates. Ideally suitable for chromium steel parts. Surfactant-free.

Borer Chemie AG

Type	Weight kg	Cat. No.	PK
26 Mineralacid, liquid	5.0	9.192 914	1
26 Mineralacid, liquid	10.0	9.192 915	1
26 Mineralacid, liquid	25.0	9.192 916	1
26 Plus, liquid	7.0	9.192 917	1
26 Plus, liquid	12.0	9.192 918	1
26 Plus, liquid	35.0	9.192 919	1



### 6 Cleaning concentrate, deconex® Labclean

Eliminates lime deposits, bacteria, and mould in all types of heating baths. Cleans exterior surfaces of laboratory washing machines and ultrasonic cleaning systems made of stainless steel and decalcifies washbasins. Not suitable for: Aluminium, tin, zinc, marble or acid-sensitive enamel

Borer Chemie AG

Description	Cat. No.	PK
Bottle, 1 litre	9.192 920	1
Canister, 5 litres	9.192 921	1
Bottle, empty, 500 ml	9.192 922	1

**1 Spray disinfectant, Meliseptol®**

For targetted spray disinfection of small surfaces and equipment.

Braun

- Ready-to-use alcoholic solution
- Effective against bacteria incl. T.B.-B, fungi, lipophilic viruses including Hepatitis-B and HIV, rotaviruses
- Pleasant odour
- Dries thoroughly without residue
- Effective within 5 minutes
- 250 ml bottle for propellant-free, spray disinfection of hard-to-reach areas
- Overhead use also possible



Type	Capacity ml	Cat. No.	PK
Hand spray bottle	250	9.191 262	1
Hand spray bottle	1000	9.191 263	1
Jerrycan	5000	9.191 265	1
Spray head for 1L hand spray bottle	1000	9.191 268	1

**2 Instrument disinfectant and cleaner, Helipur®**

Helipur®.

Braun

- For use on instruments and laboratory equipment made of metal, glass and ceramics.
- Effective against bacteria incl. T.B.-B, fungi, lipophilic viruses including Hepatitis B and HIV, adeno and vaccinia viruses
  - Disinfection and cleaning in one single operation; contaminated instruments are placed directly in the standard solution. No prior or subsequent manual cleaning is necessary
  - DGHM (German Hygiene and Microbiology Society) listed

Application concentration: 1.5 % reaction time 60 min = 15 ml in 1 l water

Type	Capacity ml	Cat. No.	PK
Dosing bottle	1000	9.191 253	1
Carboy	5000	9.191 255	1



**3 Disinfectant for temperature-sensitive materials, Helipur® H**

Helipur® H plus N.

Braun

Liquid concentrate for disinfecting flexible endoscopes, anaesthetic accessories, rubber and plastic items.

- Also suitable for disinfecting metal, glass and ceramics
- Effective against bacteria incl. T.B.-B, spores, fungi, lipophilic viruses including Hepatitis-B and HIV, coxackie, adeno and vaccinia viruses
- Can also be used in ultrasonic baths
- Formaldehyde free
- Material compatability reports are available from leading manufacturers

Application concentration: 1.5 % reaction time 60 mins. = 15 ml in 1 L water  
1.0 % reaction time 60 mins. = 10 ml in 1 L water

Type	Capacity ml	Cat. No.	PK
Dosing bottle	1000	9.191 277	1
Jerrycan	5000	9.191 278	1



**4 Meliseptol® rapid - fast acting spray disinfectant**

Meliseptol® rapid is a fast acting, ready-to-use disinfectant for medical equipment such as treatment chairs, operating theatre equipment and hospital beds.

Braun

Meliseptol® rapid works within one minute as a bactericide, tuberculocide, fungicide (incl. mould fungi) and inactivates Hepatitis-B, HIV, rotaviruses, adeno and vaccinia viruses. Free from aldehydes and alkyl amines.



Type	Capacity ml	Cat. No.	PK
Spray bottle	250	9.191 036	1
Dosing bottle	250	9.191 037	1
Spray bottle	1000	9.191 038	1
Jerrycan	5000	9.191 040	1


**1**

### 1 Dosing dispenser

For dosing that is economical and in accordance with regulations.

*Braun*

- Reliable function
- Easy to operate
- Solid construction gives long operating life
- Simple wall mounting
- Sterilizable

Type	For dispensing bottles ml	Cat. No.	PK
ELS	500	9.191 227	1
TLS	1000	9.191 228	1


**2**

### 2 Cleaner, Neodisher® LaboClean A 8

An intensive cleaner in powder form for machine washing of laboratory glassware and other utensils, with excellent cleaning power. Minimal residue.

Type	Capacity kg	Cat. No.	PK
Bucket	25	9.192 401	1
Bucket	10	9.192 403	1
Bottle	1	9.192 404	1


**3**

### 3 Cleaner, Neodisher® LaboClean GK

Mildly alkaline cleaner in powder form for machine washing of laboratory glassware and other utensils, in particular, cell and tissue culture glassware. Surfactant free.

Type	Capacity kg	Cat. No.	PK
Bucket	10	9.192 415	1


**4**

### 4 Cleaner, Neodisher® LaboClean LA

Intensive cleaner in powder form for machine washing of laboratory glassware. With strong emulsifying, dispersing and foam-inhibiting effects. Especially suitable for removing greases, oils and paraffin.

Type	Capacity kg	Cat. No.	PK
Bucket	3	9.192 418	1
Bucket	25	9.192 417	1


**5**

### 5 Cleaner, Neodisher® LaboClean MA

Alkaline cleaner in powder form for machine washing of utensils in laboratory and medical applications, with good cleaning properties and gentle action. Free from oxidizing agents. Foam inhibiting.

Type	Capacity kg	Cat. No.	PK
Bucket	10	9.192 405	1
Bottle	1	9.192 406	1


**6**

### 6 Cleaner, Neodisher® LaboClean UW

Mildly alkaline cleaner in powder form for machine cleaning of laboratory glassware and other utensils. Phosphate free. Particularly suitable for cleaning equipment in Water Industry laboratories where traces of phosphate compounds would interfere with analytical results.

Type	Capacity kg	Cat. No.	PK
Bucket	10	9.192 445	1


**7**

### 7 Cleaner, Neodisher® FA

Efficient emulsifying and dispersing liquid, alkaline cleaner for machine washing of utensils from laboratory and medical applications. Very gentle on materials and free from surfactants and oxidizing agents.

Type	Capacity	Cat. No.	PK
Jerrycan	5 litres	9.192 435	1
Jerrycan	10 litres	9.192 431	1
Jerrycan	25 kg	9.192 434	1

**1 Cleaner, Neodisher® LaboClean FLA**

Intensive, surfactant free cleaner in liquid form for machine washing of laboratory glassware. Contains no phosphate compounds or oxidizing agents.

Type	Capacity	Cat. No.	PK
Jerrycan	5 L	9.192 446	1
Jerrycan	10 L	9.192 447	1
Jerrycan	25 kg	9.192 448	1



**2 Cleaner, Neodisher® LaboClean FT**

Surfactant free cleaner in liquid form for the machine washing of laboratory glassware and other utensils. Especially formulated for reagent bottles and infusion bottles as well as for cell and tissue culture glassware. With active chlorine.

Type	Capacity kg	Cat. No.	PK
Jerrycan	12	9.192 436	1
Jerrycan	25	9.192 437	1



**3 Cleaner, Neodisher® N**

Acidic cleaning and neutralising agent in liquid form, without surfactant. Can be used to neutralise carry-over alkaline residue or to remove limescale and other acid-soluble residues.

Type	Capacity	Cat. No.	PK
Bottle	1 L	9.192 422	1
Jerrycan	5 L	9.192 421	1
Jerrycan	12 kg	9.192 420	1
Jerrycan	25 kg	9.192 423	1



**4 Cleaner, Neodisher® Z**

Acidic cleaning and neutralising liquid, based on organic acids. Free from surfactants, phosphates and nitrogen.

Type	Capacity litres	Cat. No.	PK
Bottle	1	9.192 426	1
Jerrycan	5	9.192 425	1
Jerrycan	10	9.192 427	1
Jerrycan	20	9.192 428	1



**5 Cleaner, Neodisher® LM 3**

Alkaline cleaner in liquid form for manual cleaning of laboratory glassware. Special dispersing agents remove even hard-to-dissolve residues. Also suitable for washing machines. Low foaming and phosphate free.

Type	Capacity litres	Cat. No.	PK
Bottle	1	9.192 442	1
Jerrycan	10	9.192 441	1



**6 Cleaner, Neodisher® LaboClean F**

Intensive cleaner in powder form for machine washing of laboratory glassware and other utensils, with good cleaning power. Particularly suitable for removing fats, oils, waxes and organic colourings. Good complexing and dispersing power. Phosphate and surfactant free.

Type	Capacity kg	Cat. No.	PK
Tubs	3	9.192 387	1
Bucket	25	9.192 410	1




**1**

### 1 Universal cleaner, Mucasol®

*BRAND*

High performance, alkaline cleaning concentrate in liquid form for soaking and ultrasonic cleaning baths.  
 Suitable for use on laboratory equipment and instruments made of glass, porcelain, plastic, rubber and metal. Has a bacteriostatic action and can be used to decontaminate radioactive objects. An alternative to chromosulphuric acid mixtures, free from chlorine and caustic alkalines, non-toxic, non-corrosive, gentle on the skin, has a low phosphate content and is biodegradable. Zinc and non-anodized aluminium items should not be immersed in Mucasol® for long periods as corrosion may occur. Also suitable for wiping down surfaces.

Contents:  
 special phosphate, surfactant, complexing agents, process materials.

Application concentration:  
 In ultrasonic baths: 0.2 to 2 % (1.4 to 14 ml/l)  
 In soaking baths: 0.7 to 3 % (5 to 22 ml/l)  
 Physico-chemical data:  
 Liquid: light green, transparent  
 Density: approx. 1.4 g/ml  
 pH value (0.7 %): approx. 11.5  
 pH value (3 %): approx. 11.7

Type	Capacity litres	Cat. No.	PK
Bottle	2	9.192 501	1
Jerrycan	5	9.192 507	1
Drum	60	9.192 508	1


**2**

### 2 Instrument disinfectant cleaner, Mucocit® T

*BRAND*

Alkaline disinfectant cleaning concentrate in liquid form for soaking and ultrasonic baths. Extremely effective cleaner. Stains such as blood and protein are removed and bacteria, fungi and viruses, in particular Hepatitis-B and HIV, are inactivated in just one operating cycle. Complies with the current requirements of the DGHM (German Hygiene and Microbiology Society). Especially suitable for use with delicate equipment. Free from phosphate, aldehyde, phenol and chlorine compounds. With fresh fragrance.

Contents per 100 g:  
 2 g (aminopropyl) lauryl amine  
 4.64 g alkyl propylene diamine -  
 1.5 g guanidinium acetate  
 7 g N, N-didecyl-N-methyl-poly-(oxyethyl)  
 ammonium-propionate, surfactant, auxiliary materials  
 Bacteria (incl. T.B.-B) and fungi in acc. with DGHM  
 1% (10 g/l)/1 hr.  
 2% (20 g/l)/30 min.  
 3% (30 g/l)/15 min.  
 Inactivating Hep.-B-/HIV viruses (HBsAg test)  
 1% (10 g/l)/1 Std.  
 2% (20 g/l)/30 min.  
 3% (30g/l)/15 min.

Microbiological power/application concentration  
 Instrument disinfection:

Physico-chemical data:  
 Liquid: blue green, transparent  
 Density: approx. 1 g/ml  
 pH value (1%): approx. 9.5

Type	Capacity litres	Cat. No.	PK
Bottle	2	9.192 550	1
Jerrycan	5	9.192 551	1

**1 Instrument disinfecting cleaner, Mucocit®-F 2000**

BRAND



Alkaline disinfecting and cleaning concentrate in liquid form for soaking and ultrasonic baths.  
Highly effective in cleaning and disinfecting instruments and laundry in one single operation. Removes stains such as blood and protein and inactivates bacteria, fungi and viruses, in particular Hepatitis-B and HIV. Complies with the requirements of the DGHM (German Hygiene and Microbiology Society).  
Restrictions exist for item materials sensitive to alkalines and phenol. Phosphate free.  
Contents per 100g:  
5g 2-benzyl-4-chlorophenol, 9 g 3-methyl-4-chlorophenol, 4 g 2-phenyl-phenol, corrosion inhibitors, surfactant, auxiliary materials.

Microbiological strength/application concentration:

Instrument disinfection:  
Bacteria (incl. T.B.-B) and fungi in acc. with DGHM: 2 % (20 g/l)/1 hr.  
Inactivating HBV/HIV viruses (MADT test): 2 % (20 g/l)/2 hrs.  
Laundry disinfection: 1 % (10 g/l)/4 hrs.

Physico-chemical data:  
Liquid: yellowish brown, transparent  
Density: approx. 1.1 g/ml  
ph value (1 %): approx. 9.6  
pH value (2 %): approx. 9.8

Type	Capacity litres	Cat. No.	PK
Bottle	2	9.192 541	1
Jerrycan	5	9.192 546	1

**2 Surface disinfection concentrate, Pursept® AF**

BRAND



For alcohol-resistant worktops and equipment surfaces in microbiological and medical laboratories. Cleans and disinfects floors, walls and equipment in one operating cycle. Effective against bacteria, fungi and viruses, in particular Hep.-B and HIV. Tested and certified in accordance with the guidelines of the DGHM (German Hygiene and Microbiology Society).  
Particularly gentle on surfaces, kind to skin and has a pleasant, fresh fragrance.

Contents per 100 g:  
12.5 g didecyl dimethyl ammonium chloride  
10.4 g alkyl propyl diamine guanidinium diacetate  
1.5 g (aminopropyl)-lauryl amine, auxiliary materials

Microbiological power/application concentration  
Surface disinfection:  
Bacteria and fungi in acc. with DGHM  
0.25% (2.5 g/l)/4 hrs.  
0.5% (5 g/l)/60 min.  
1% (10 g/l)/30 min.  
1.5% (15 g/l) /10 min  
Inactivating Hep.-B/HIV viruses within DGHM values  
1% (10 g/l)/15 min.  
Inactivating human rotaviruses  
0.25% (2.5 g/l)/2 mins.  
Concentration for TbB  
2% (20 g/L)/60 mins.

Physico-chemical data:  
Liquid: clear, green  
Density: approx. 1 g/ml  
pH value (1%): approx. 9.5

Type	Capacity litres	Cat. No.	PK
Bottle	2	9.192 569	1
Jerrycan	5	9.192 570	1



### 1 Surface disinfectant spray, Pursept®-A

BRAND

Ready-to-use, with fresh, pleasant fragrance.  
 Rapid disinfection and cleaning of glass, metal or plastic surfaces in microbiological and medical laboratories. The solution acts on bacteria, viruses and fungi in only 1 minute. Inactivates Hepatitis-B and HIV viruses. Listed in the current DGHM (German Hygiene and Microbiology Society) documentation for surface disinfection. pH-neutral. Particularly gentle on materials and skin. Supplied in refillable pump spray bottle without propellant. Please order spray cap separately. Contents per 100g:  
 38.9 g ethanol, 0.1 g glyoxal, 0.05 g Didecyl-dimethyl-ammonium chloride, auxiliary materials.

Microbiological power/application concentration:

Surface disinfection:

Bacteria and fungi in acc. with DGHM: conc./1 min.

Inactivating HBV/HIV viruses (HBsAg test): conc./1 min.

Strength with regard to T.B.- B: conc./5 min.

Physico-chemical data:

Liquid: colourless, transparent

Density: approx. 0.94 g/ml

pH value: approx. 7

Type	Capacity litres	Cat. No.	PK
Pump spray bottle (without cap)	1	9.192 567	1
Jerrycan	5	9.192 568	1
Spray cap	0	9.192 566	1



### 2 3 High-Tech cleaning cloths

Technical Cleaner.

For the streak-free, powerful cleaning of screens and office equipment.

Surface cleaner.

Deep, gentle cleaning of all office equipment surfaces.

With orange terpene degreaser.

Office cleaner.

Pure cotton construction, particularly gentle.

Specially impregnated and individually sealed in foil pack.

Pack of 5 cloths in one collapsible cardboard dispenser.

Type	Cat. No.	PK
Technical Cleaner	9.412 940	5
Surface cleaner	9.412 942	5
Office Cleaner	9.412 941	5



### 4 Surface disinfection cloths, Pursept® A

BRAND

Chlorine-free bleached cloths made of 100% natural fibres for the rapid disinfection and cleaning of work and apparatus surfaces made of glass, metal or plastic.

Comprehensive disinfection against bacteria, fungi and viruses, in particular Hepatitis-B and HIV, within a short period of time. Tested and certified in accordance with the guidelines of the DGHM (German Hygiene and Microbiology Society). Particularly gentle on materials and skin.

With fresh fragrance.

Supplied in a dispensing box of 150 cloths.

Contents per cloth (approx.): 723 mg ethanol, 1.9mg glyoxal, 0.9 mg didecyl dimethyl ammonium chloride, auxiliary materials

Microbiological power/application concentration

Surface disinfection:

Bacteria and fungi in acc. with DGHM

Conc./1 min.

Inactivating Hep.-B/HIV viruses (HBsAg test)

Conc./1 min.

Strength with regard to T.B.-B

Conc./5 min.

Chemico-physical data of the solution (Pursept® A):

Liquid:

colourless, transparent

Density:

approx. 0.94 g/ml

pH value:

approx. 7

Non-woven towels:

chlorine-free, bleached, biodegradable

Type	Cat. No.	PK
Dispensing box	9.413 040	1
Refill pack	9.413 041	1

**1 Screen cleaner**

With antistatic agent. Spray bottle without propellant.  
For cleaning and caring for glass and plastic screens, glass panels, mirrors and lenses of copiers and microfiche readers as well as hoods and plexiglas components.  
For the easy removal of dirt, grease and nicotine.

Type	Capacity ml	Cat. No.	PK
Screen cleaner	200	9.190 975	1
Refill bottle	1000	9.190 974	1



**2 Cleaning Office, technical cleaning cloths with alcohol**

Moist, non-woven cloths in a re-sealable dispensing pack.  
For the cleaning of, and caring for, all office equipment.  
With antistatic and disinfectant action.

Box capacity: 100 cloths 138 x 200 mm  
Refill pack capacity: 100 cloths 138 x 200 mm  
Shelf life: unopened, 30 months without loss of quality

Type	Cat. No.	PK
Dispensing pack	9.190 977	1
Refill pack	9.190 976	1



**3 Druckluft 67**

Compressed air spray for contact-free removal of dust and dirt in hard-to-reach places using the capillary tube nozzles attached. For safe use where there are no ignition sources under normal operating conditions. CFC- and HCFC-free (contains 25% flammable components). Very effective: 100 ml of the contents produces approx. 30 litres of gas (20°C, 1 bar).

Examples of use:  
photography, precision electronics, watchmaking, cameras, medical technology, microscopy, research.

Pressure: 4.2 bar (20°C)  
Density: 1.00 g/cm³ (20°C)

Capacity ml	Cat. No.	PK
200	9.412 800	1
400	9.412 801	1



**4 Druckluft 67 Super**

Spray for the contact-free removal of dust and dirt from hard-to-reach places. This new product offers the quality of conventional dust extraction sprays, but is non-combustible and contains no CFCs or HCFCs. The spray is chemically pure and efficient. The capillary tube nozzle attachments are ideal for reaching difficult to access areas.

Examples of use:  
photography, precision electronics, watchmaking, cameras, medical technology, microscopy.

Pressure: 4.6 bar (20°C)  
Density: 1.17 g/cm³ (20°C)  
Gas volume: 400 ml can produces 116 L gas at 20°C and 1 bar.

Type	Capacity ml	Cat. No.	PK
Spray can	400	9.412 805	1



**5 Label solvent, Solvent 50**

Colourless. For the effortless removal of self adhesive labels. It works on the adhesive and quickly and gently dissolves adhesive labels on glass, porcelain, metal, wood, foil and cardboard. Check compatability when using on plastics. Not suitable for polystyrene.

Density: Spray: 0.74 g/cm³ (20°C)  
Jerrycan: 0.83 g/cm³ (20°C)  
Ignition point: Spray: < 0°C  
Jerrycan: 46°C  
Evaporation rate: Spray and jerrycan: 94 (DIN 53170 Ether = 1).

Type	Capacity L	Cat. No.	PK
Spray can	0.20	9.412 810	1
Jerrycan	5.00	9.412 811	1





1 Facial Tissues, Kleenex®			
Convenient tissues, well-known for comfort and performance. Soft as a whisper and very absorbent. The leading brand. Hygienic and economical. Individually self-dispensing tissues, ready for use at any time. Quality tissues that epitomise care, comfort and convenience.		<i>Kimberly-Clark</i>	
Pack size	Cat. No.	PK	
Box of 100 tissues	9.413 014	1	



2 Towels, Scott® Excellent Plus			
Airflex® material, ultra-white, 2-ply. SCOTT® Hand Towels are renowned for their reliability, consistent performance and in-use value. Made from AIRFLEX® Highly Absorbent Fabric, they offer an effective and economical solution to your hand drying requirements. The towels are folded and interleaved so that when they are dispensed they provide an individual towel that is ready for use and has been touched only by the user. The system is hygienic and helps to reduce wastage.		<i>Kimberly-Clark</i>	
Type	Pack size	Cat. No.	PK
Small - cross-folded, 24.7 x 23 cm	20 x 180 towels	9.413 106	20
Medium - cross-folded, 25 x 33 cm	20 x 110 towels	9.413 107	20



3 Towels, Scott® Plus			
Airflex® material, ultra-white, 1-ply x 35 g/m <sup>2</sup> .		<i>Kimberly-Clark</i>	
Type	Pack size	Cat. No.	PK
Small - cross-folded, 24.7 x 23 cm	20 x 180 towels	9.413 108	20



4 Cleaning wipes, Kimtech® Prep*			
Super strong, robust, reusable lint-free PP wipes. Ideal for residue-free wet cleaning of smooth surfaces with cleaning agents and solvents and for wiping up oil and grease. Perforated large roll, embossed, blue, 500 cloths per roll.		<i>Kimberly-Clark</i>	
Width mm	Length mm	Colour	Cat. No.
340	380	blue	9.413 065
			PK
			1



5 Cleaning wipes, Kimtech Prep*			
Super strong, robust, lint-free, PP reusable wiping cloths, ideal for residue-free wet cleaning with cleaning agents and solvents as well as wiping up oil and grease. Folded into quarters, embossed, blue. Sold in packs of 12 bags containing 35 cloths.		<i>Kimberly-Clark</i>	
Width mm	Length mm	Colour	Cat. No.
490	380	blue	9.413 070
			PK
			12



6 Cleaning wipes, Wypall® X 60, tear-resistant			
Hydronit® material. Stable, strong cleaning wipes. For absorbing oil, grease and lubricants. Resist sharp corners and edges. Extremely robust and reliable. Excellent tear resistance, even under wet conditions.		<i>Kimberly-Clark</i>	
Type	Width mm	Length mm	Cat. No.
Large roll, white, 750 wipes	380	420	9.413 036
Box, white, 126 wipes	230	425	9.413 035
Individual cloths, folded in Z shape, 12 bags x 76 wipes	365	315	9.413 034
			PK
			1
			10
			1

**1 Cleaning wipes, Wypall® L 10 - RCS**

Cut down consumption of wiping cloths by up to 40% with the revolutionary Roll Control System from Kimberly-Clark, which is extremely economical to use. The controlled tear-off system prevents waste caused by tearing off overly long strips of paper. A fresh, clean towel is available at any time. The risk of cross contamination is reduced thanks to optimised hygiene. The circular dispenser has no sharp edges or metal parts liable to rust.

Kimberly-Clark

**Wypall® L 10 cleaning wipes - RCS**

Soft, absorbent wipes. The roll control system enables you to tear off individual towels. 100% recycled Airflex® Material. Perforated, 1-ply, 6 rolls containing 600 sheets, 20.5 x 38 cm, white.

**Dispenser for Roll Control System**

Dispenser casing for Roll Control System (RCS), plastic, grey transparent. Dimensions (H x W x D): 305 x 260 x 240 mm

Type	Cat. No.	PK
Wypall® L 10 cleaning wipes - RCS	9.413 018	6
Roll Control System (RCS)	9.413 013	1



**2 Cleaning wipes, Wypall® L 20**

Particularly absorbent, white, 2-ply, perforated, embossed. Dimensions 260 x 240 mm. Tissue material.

Kimberly-Clark

Type	Pack size	Cat. No.	PK
Wypall® L 20	4 boxes of 65 wipes	9.413 080	4



**3 Wipes, Wypall® L 30**

Airflex® fabric, 2-ply x 25 g/m². Strong and fast absorbing wipers for general purpose use, especially for oil and grease. High tensile strength in wet conditions for rapid cleaning.

Kimberly-Clark

Type	No. of wipes	Width mm	Length mm	Cat. No.	PK
Large roll, blue	500	235	380	9.413 054	1
Large roll, blue	500	330	380	9.413 044	1
Centre feed Roll, white	6 x 300	205	380	9.413 091	6



**3 Wipes, Wypall® L 40**

Perforated, blue Airflex® material, 3-ply x 20 g/m². Bulky wipers with excellent absorption capacity and wet strength. For cleaning-up larger spillages and suitable for most surfaces. Comparable in quality to a 4-ply tissue product.

Kimberly-Clark

Type	Material	No. of wipes	Width mm	Length mm	Cat. No.	PK
Large roll, blue	Airflex® 3 x 20 g/m²	750	330	380	9.413 046	1
Large roll, white	cellulose/latex 82 g/m²	750	315	340	9.413 094	1
Large roll, white	cellulose/latex 57 g/m²	950	315	340	9.413 095	1

**4 Laboratory wipes, Kimtech Science**

Tissue wiping cloth for professional use in laboratories. Highly absorbent and soft for wiping up small amounts of liquid and for cleaning pipettes and microscope slides. Chemical resistant and chemically neutral. 2-ply, white, 200 x 210 mm.

Kimberly-Clark

Pack size	Cat. No.	PK
Box of 100 wipes	9.413 017	1
Box of 200 wipes	9.413 015	1



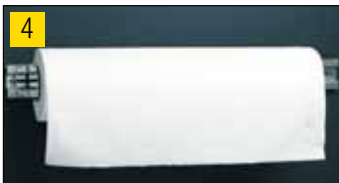
**5 Cleaning cloths, Kimtech®**

Soft and gentle, yet strong. White, embossed, sterilizable. Individual cloths 32 x 38 cm. Hydronit® material. Packed in cases of 20 bags, each containing 50 cloths.

Kimberly-Clark

Pack size	Cat. No.	PK
Bag of 50 wipes	9.413 033	1





### 1 Hand towels, Kleenex® Ultra

The new way to get more value for money: tissues made of extremely soft, Airflex® material. So economical, they can be used in any situation.

Kimberly-Clark

Description	Width mm	Length mm	Pack size	Cat. No.	PK
Hand towels, ultra-white, 2-ply	415	215	30 x 84 wipes	9.413 051	1
Hand towels, ultra-white, 2-ply	315	215	30 x 116 wipes	9.413 060	1
Hand towels, ultra-white, 3-ply	315	215	30 x 88 wipes	9.413 057	1

### 2 Precision wipes, Kimtech® Science

Tissue wiping cloth for precise, critical cleaning in the electronic, optic and precision mechanics industries, lint-free, highly absorbent and strong, even when wet. 1-ply, white.

Kimberly-Clark

Pack size	Cat. No.	PK
Box of 196 wipes, 300 x 300 mm	9.413 020	1
Box of 280 wipes, 110 x 210 mm	9.413 021	1

### 3 Hand towel dispenser, Variant

For all Kleenex® hand towels and Scott® Performance hand towels. Metal, finished in off-white. Portable. Can be configured in different ways (bench or wall mounting). Holds one dispenser pack.

Kimberly-Clark

Width mm	Depth mm	Height mm	Cat. No.	PK
115	145	390	9.413 010	1

### 4 Holder for medical rolls

Metal, chromium-plated, adjustable. For 40, 50 and 59 cm wide rolls. Dimensions (H x D x W): 60 x 650 x 140 cm

Kimberly-Clark

Type	Cat. No.	PK
Holder for medical rolls	9.413 029	1

### 5 6 Dispensing systems

Wall and floor dispensing units for small and large rolls.

Kimberly-Clark

For	Width mm	Depth mm	Height mm	Colour	Material	Cat. No.	PK
Wall, for small rolls 250 mm wide	320	150	150	white	plastic	9.413 043	1
Floor, for large rolls 490 mm wide	515	300	330	blue	Metal	9.413 047	1

### 7 Portable floor stand

For large rolls. With refuse sack. Metal, blue.

Kimberly-Clark

Type	Width mm	Length mm	Height mm	Cat. No.	PK
Wide	500	740	1090	9.413 055	1

**1 Hand Towels, Scott® Performance**

Made of highly absorbent, Airflex® material.  
These rapidly absorbing hand towels are very effective for drying hands due to high moisture absorbency and good wet strength.  
1-ply, 100 % recycled material.

Kimberly-Clark

Colour	Pack size	Cat. No.	PK
White	15 x 180 towels, 215 x 315 mm	9.413 048	1
Blue	15 x 180 towels, 215 x 315 mm	9.413 052	1



**2 Askina Brauncel cellulose swabs**

Non-sterile. Size 40 x 50 mm.  
In rolls of 500. Soft, perforated design.  
Extremely absorbent and strong.  
Easy and clean to tear off.

Braun

Type	Cat. No.	PK
Cellulose bags	9.413 101	1000
Dispenser	9.413 102	1



**3 Cellulose wadding**

Askina Cel surgical cellulose.  
Available highly bleached or unbleached.  
As a reasonably priced absorbent material, Askina Cel is a reliable, everyday aid in surgeries.

Braun

Type	Description	Weight kg	Cat. No.	PK
Highly bleached	roll	1.00	9.413 110	1
Unbleached	layered	15.00	9.413 120	1
Highly bleached	layered	15.00	9.413 111	1



**4 Flexible bottle brush**

For round and Erlenmeyer flasks from 500 to 5000 ml with NS 29 or wider neck .  
Comprises replaceable, flexible head with short, stiff bristles on a long wooden handle.  
Total length approx. 420 mm.

Type	Cat. No.	PK
Spare brush head	9.019 150	1
Bottle brush with head locking pin	9.019 152	1



**5 Brushes with natural bristles**

Type	Illus.	Dia. mm	Cat. No.	PK
Pipette brush	[ a ]	5	9.019 010	1
Pipe cleaner	[ b ]	4	9.019 005	100
Brush for tip	[ c ]	10	9.019 020	1
Reagent bottle brush	[ d ]	10	9.019 030	1
Reagent bottle brush with wool tip	[ e ]	15	9.019 035	1
Reagent bottle brush with wool tip	[ f ]	30	9.019 040	1
Erlenmeyer flask and bottle brush	[ g ]	50	9.019 050	1
Erlenmeyer flask and bottle brush	[ h ]	63	9.019 060	1
Beaker brush with wooden handle	[ i ]	85	9.019 070	1
Beaker brush with wooden handle	[ j ]	85	9.019 080	1
Beaker brush with wooden handle	[ k ]	90	9.019 090	1
Beaker brush with extra long handle	[ l ]	90	9.019 092	1
Rinsing brush	[ m ]	65	9.019 110	1
Set*	-	0	9.019 002	1
Burette brush with 1m long wire handle	[ n ]	30	9.019 100	1

\*Set consisting of order numbers 9.019 010, 9.019 020, 9.019 030, 9.019 040, 9.019 050, 9.019 060, 9.019 070, 9.019 080, 9.019 090 and 9.019 092.



**6 Hair brushes, oval**

Black goat hair. In metal mounts on round wood handle.

Size	Dia. mm	Cat. No.	PK
0	6	9.172 025	1
1	7	9.172 026	1
2	8	9.172 027	1





### 1 Hair brushes, broad

Bear bristle. Blunt head. Flat stem.

Width mm	Thickness mm	Hair length mm	Cat. No.	PK
12.5	3.9	16	9.172 042	1
19.0	3.9	18	9.172 043	1
25.4	4.1	22	9.172 044	1



### 2 Red marten-hair brushes

Silver ferrule. Black enamelled round handle.

Size	Hair length mm	Cat. No.	PK
0	8	9.172 050	1
1	9	9.172 051	1
2	11	9.172 052	1
3	13	9.172 053	1
4	15	9.172 054	1
5	18	9.172 055	1
6	19	9.172 056	1



### 3 Brush set, water-colour

Water-colour brushes, round, fine hair blend.  
Pack of one each: sizes 2/0, 0, 1, 2, 3, 4.

Type	Cat. No.	PK
Brush set, water-colour	9.172 060	1



### 4 Brush set, silk painting

Silk painting brush set, comprising round tip, sizes 1, 4, 8; textured brush size 18.

Type	Cat. No.	PK
Brush set, silk painting	9.172 062	1



### 5 Brush set

Comprising one each round, sizes 0; 4 and 6; flat, sizes 6 and 10.

Type	Cat. No.	PK
Brush set	9.172 063	1



### 6 Brush set

Comprising one each size 3 round and pointed, size 0 flat and pointed and size 1 wide hair brushes.

Type	Cat. No.	PK
Brush set	9.172 061	1



### 7 Brush bag

Imitation leather, for 8 brushes, empty.

Type	Cat. No.	PK
Brush bag	9.172 064	1

# Adding value to science and research



Thorough reprocessing of laboratory glassware is an essential prerequisite for analytically clean and reproducible results. Miele's machine-based reprocessing method offers maximum safety, economy and cleaning performance through standardisation, validation and documentation. **Typically Miele.**

**NEW:** First 60 cm wide washer-disinfector G 7893 with integrated hot-air drying for reprocessing laboratory glassware.

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PROFESSIONAL



### 1 Washing and disinfecting machine, Mielabor G 7883

For analytically clean, glassware preparation in industrial, environmental and research laboratories. Can be equipped with various spray-injector carriages, holders and trays. Front loading appliance with drop-down door. Free-standing unit; but can also fit below worktops. Multitronic/electronic control with 10 programmes. 3 water valves for cold, hot and deionized water. Water softener.

3 dosing devices:

- 1 x dispenser for powder detergent (door)
- 1 x dispenser for liquid detergent (door)
- 1 x dosing pump Dos 10/30 for neutralizers and for acid rinsing.

Specifications

Connection for dosing pump:

DOS-C 60 liq. detergent

Dimensions (WxDxH):

600 x 600 x 850 (820 w/o top cover- underbench use) mm

Miele

Type	Cat. No.	PK
Stainless steel cabinet, steam condenser	9.803 702	1



### 2 Washing and disinfecting machine, Mielabor G 7735 CD

Compact washing machine and disinfector. Underbench unit without cover, to be built into existing bench runs/cupboards.

For scrupulous cleaning and preparation of laboratory glassware for research and production as well as all analytical and preparative areas including microbiology.

Can be equipped with various spray-injector carriages, holders and trays.

Front loading appliance with drop-down door. MCU - electronic control for quality assurance, freely programmable controller with RS232 serial interface for PC or printer connection.

3 water connections for cold, hot and deionized water.

4 dosing devices:

- 1 x dispenser for powder detergent (door)
- 1 x dispenser for liquid detergent (door) electrically switched in parallel
- 1 x dosing pump DOS 60/30 for liquid detergents with 1.5 L storage tank
- 1 x dosing pump DOS 10/30 for neutralisers and acid rinsing with 1.5 L storage tank.

TA drying unit for hot air drying.

DK steam condenser for condensing steam and preventing aerosol emissions.

Circulation pump Q:

max 400 L

Dimensions (WxDxH):

900 x 700 x 820 (850 with cover - stand-alone use) mm

Miele

Type	Cat. No.	PK
G 7835 CD	9.803 808	1

# Miele

## PROFESSIONAL

**Note: We can supply products from the entire Miele laboratory range, on request.**



### 3 Draining rack, LaboPlast®

PVC.

Wall mounting. Perforated with holes to take interchangeable pegs as indicated.

Supplied complete with wall-mounting screws and dowels, PVC outlet channel and drainage connection.

Bürkle

Rods 60 x 6 mm	Rods 100 x 10 mm	Rods 150 x 12 mm	Width mm	Length mm	Cat. No.	PK
Quantity	Quantity	Quantity				
5	26	2	400	400	9.003 374	1
10	39	4	500	500	9.003 375	1
15	56	6	600	600	9.003 376	1



### 4 Pegs for LaboPlast® draining racks

Bürkle

Length mm	Dia. mm	Cat. No.	PK
60	6	9.003 379	1
100	10	9.003 380	1
150	12	9.003 385	1

Length 150 mm only applicable with length 100 mm.





### 1 Portable autoclaves, Certoclav Multicontrol

Microprocessor controlled, freely programmable, fully automatic, aluminium, steam sterilizing autoclaves. For all variable, controlled temperature and time processes. Space-saving, portable and maintenance free. 7 freely selectable programmes from 35 to 142°C, from 6 seconds to a week, with cycle memory. Two fixed programmes also available: 138°C/5 mins., 125°C/15 mins. Fully automatic operation including controlled fractional steam venting. With separate LED display of time, temperature and cycle progression with optical and audible alarms. Working pressure max. 3 bar. With EEPROM non-volatile memory, cycle counter, BNC recorder connection with 10 mV/°C output. Precision, analogue manometer with drag needle pointer dial, safety valve for fractional venting, pressure limiting valve, overpressure cutout and safety catch to prevent opening under pressure. GS symbol in accordance with DIN and VDE/IEC, splashproof protection IP 44. Interference suppression category N. With microbiological effectiveness documentation.

Heating capacity: 1600 to 1750 W  
Supply requirements: 230 V ±10 % 50 Hz.

Type	Capacity litres	Dia. mm	Int. height mm	Cat. No.	PK
Certoclav MultiControl	12	240	260	9.842 018	1
Certoclav MultiControl	18	240	400	9.842 017	1



### 2 Portable autoclaves

For pressurized steam sterilization. Up to 3 bar, 143°C. 4 bar version available on request. Enamelled steel chamber, with mild steel exterior. S models are silicon-coated in black, without heating. M model is enamelled white. Temperature indication by enclosed-scale thermometer (S-models), digital display (M-model). S models with heating are available on request.

Type	Ext. dia. mm	Height mm	Int. dia. mm	Int. height mm	Cat. No.	PK
S-3-13	370	445	260	260	9.842 063	1
S-3-20	400	590	260	400	9.842 061	1
M-3-20-ECZ-J	410	595	260	400	9.842 066	1



### 3 Portable autoclaves

Provide sterilization in pressurized steam. Up to 3 bar, 143°C. 4 bar version available on request. With enamelled steel chamber and steel casing. S-models are silicon-coated and finished in black, without heating. M-models are enamelled white. Supply requirement: 230 V 16 A, 2kW. Temperature is indicated by a straight, enclosed-scale thermometer. S-model without heating.

Type	Heating	Ext. dia. mm	Height mm	Int. dia. mm	Int. height mm	Weight kg	Cat. No.	PK
S-3	without	400	590	260	400	17.50	9.842 091	1
M-3-ECZ-J	with	410	595	260	400	19.40	9.842 093	1

### Accessories for autoclaves

Electrical heating for use with model S. Temperature and time control for use with both S and M models.  
Power: 2000 W  
Temperature range: 0 to 151°C  
Timer: 1 min. to 100 hrs.

Type	Cat. No.	PK
Heating	9.842 096	1
Temperature and time control	9.842 068	1



**1 2 Steam sterilizer Laboklav 25**

Compact benchtop model with the capacity and performance of a larger autoclave.  
No supply/waste water connections required.  
Not even if supplied with integral cooling.  
Conforms with DIN 58951 and TRB 402 ( IEC61010-2-40 Thermolock)

Basic unit with:

- 25 litre chamber capacity, table top unit
- Useable chamber dimensions 250 x 450 mm (10" x 18")
- Max. permissible pressure 2.8/-1bar
- Sterilization temp. range 98 to 135°C
- Integral steam generator
- Automatic feed water pump
- Microprocessor control with 10 pre-programmed cycles, which are code protected
- All programme parameters can be adjusted by an authorized operator
- Integral exhaust steam condenser
- Feed water and condensate tank integrated into the housing
- RS 232 and RS 485 interfaces
- Internal 4 Mb storage chip, safe data storage of up to 100 cycles
- Validation port prepared

Optional:

- Rapid cooling of liquids (air cooling)
- Vacuum device, providing fractionated pre-vacuum and drying functions

**Specifications**

Dimensions (w x d x h):	475 x 655 x 475 mm
footprint:	500 x 600 m
weight, empty:	60 kg
<b>chamber</b>	
chamber volume:	25 litres
chamber dim. (dia. x litres):	250 x 495 mm
max. pressure:	2.8 bar
<b>electrical connection</b>	230 V, 50 Hz, 16 A
max. power consumption:	3350 W
power per batch:	0.75 kWh
<b>loading</b>	
max. instruments or waste:	5 kg
bottles, 1 litre (Schott):	5 pieces
<b>water consumption</b>	
consumption per batch:	0.55 litres (demineralised water)

SHP



Type	Description	Cat. No.	PK
LABOKLAV 25 B	Basic unit	9.842 440	1
LABOKLAV 25 M	Liquid with standard integral rapid cooling system (air-cooling)	9.842 441	1
LABOKLAV 25 V	Vacuum with integral vacuum system	9.842 442	1
LABOKLAV 25 MV	Combi with standard integrated rapid cooling system as well as integrated vacuum system	9.842 443	1

**Accessories for Steam sterilizer Laboklav 25**

SHP

Description	Cat. No.	PK
External remote printer. With plain paper print-out.	9.842 450	1
Software for data transfer, presentation and storing of all relevant process data., network-compatible	9.842 451	1
Insert with three trays, for sterilizing small items	9.842 453	1
Insert tray	9.842 454	1



### 1 2 Steam sterilizers Laboklav 55-195

Steam sterilizer for general laboratory use.

*SHP*

Conformance:

DIN 58951 (general laboratory use)  
 PED (Pressure Equipment Directive) 97/23/EU  
 IEC 61010-2-40 Thermolock

A completely new concept allows the units to be used as vertical or horizontal autoclaves. Even at a later stage the unit can be changed from the vertical to the horizontal position, or vice versa. No additional equipment is required.

The Laboklav 55-195 series is available in different chamber volumes (see table below). The Laboklav 80 unit specification described serves as an example for the whole range. All model options are identical.

- basic unit with 80 litre chamber volume, can be set up as a horizontal or vertical autoclave
- working chamber size 410x610 mm (16x24") typical load 18 x 1 litre Schott/Pyrex bottle
- up to 30 kg waste or instruments
- max. permissible pressure 2.8/-1 bar
- sterilization temperature range: 98 to 135°C
- integral steam generator
- automatic feed water pump
- thermolock acc. to IEC 61010-2-40 with flexible reference sensor
- microprocessor control with 20 programme memory, code protected
- programme parameters can be changed by authorized operator
- integral exhaust steam condenser
- RS232 and RS485 interfaces
- Internal 4 MB memory to log the process data of up to 100 cycles
- Validation port available as per DIN 58950
- 7.5 kW heating capacity
- Stainless steel chamber and housing

Accessories:

- Exhaust air filtration, recommended for BSL 1 laboratories but mandatory for BSL 2upwards
- Integral printer for printing all relevant process data with plain paper roll, stored data can be printed out
- Software for downloading, reading, printing and storing process data, or allows network operation
- Castors, only applicable for vertical format
- Stainless steel wire mesh baskets and drums with, or without, lid

Type	Description	Cat. No.	PK
Laboklav 80 B	Basic unit	9.842 460	1
Laboklav 80 M	Liquid Standard with integral rapid cooling system, insulated jacket	9.842 461	1
Laboklav 80 MS	Liquid Support, as Liquid Standard but with ballasting pressure	9.842 462	1
Laboklav 80 MSL	Liquid Max, as Liquid Support but with fan assistance	9.842 463	1
Laboklav 80 V	Vacuum, integral vapour vacuum pump for fractionated pre-vacuum and drying function	9.842 464	1
Laboklav 80 MV	Combi Standard with option M and V	9.842 465	1
Laboklav 80 MSV	Combi Support with option MS and V	9.842 466	1
Laboklav 80 MSLV	Combi Max with option MSL and VM	9.842 467	1

Accessories are available on request!

**1 Automatic autoclave AH-21S**

This autoclave is microprocessor controlled and monitored with 5 sterilization programmes of which 4 are fixed and 1 is freely selectable.

- Operating temperature range 100°C to 135°C
- RS232 interface
- Fully automatic functions
- With water reservoir, pre-vacuum and drying
- Case and lid shrouding are AISI 304 stainless steel
- Sterilization chamber, lid and sealing system are AISI 316 stainless steel
- Electrical heating with protected heating elements
- Safety pressure valve
- Safety thermostat
- Automatic steam venting controlled by microprocessor
- Manual valves for emptying the sterilization chamber and for draining steam
- Equipped with mesh stand on the chamber base and trays
- Supply requirements: 230 V 16 A single phase



Capacity	Chamber dia. x depth mm	Rating	Width	Length	Height	Cat. No.	PK
litres	W		mm	mm	mm		
21	250x415	2000	680	590	425	9.851 865	1

**2 Automatic autoclaves, AE-Dry 28-150 series**

These autoclaves are microprocessor controlled and monitored with 10 sterilization programmes of which 4 are fixed and 6 are freely selectable.

- With RS232 interface
- Fully automatic functions
- With water reservoir, pre-vacuum and drying
- Casing and lid shrouding made of stainless steel AISI 304
- Sterilization chamber, lid and sealing system are AISI 316 stainless steel
- Electrical heating with protected heating elements in the interior of the chamber
- Safety pressure valve
- Safety thermostat
- Automatic steam venting controlled by microprocessor
- Manual valves for emptying the sterilization chamber and for draining steam
- Equipped with mesh stand on the chamber base and trays
- Supply requirements:  
AE-28 and AE-75: 230 V 16 A single phase  
AE-110 and AE-150: 380 V + Neutral (3-phase)



Operating temperature for all models +105°C to +139°C

Type	Capacity	Chamber dia. x depth mm	Rating	Width	Length	Height	Cat. No.	PK
	litres	W		mm	mm	mm		
AE 28	28	300x400	2000	510	560	1010	9.851 889	1
AE 75	75	300x600	3000	620	730	1090	9.851 890	1
AE 110	110	400x850	4500	630	730	1330	9.851 891	1
AE 150	150	500x750	6000	760	850	1310	9.851 892	1

**3 Thermoprinter for all AE - models**

Printer with plain paper reel prints the programme i.d., cycle number, temperature, date and time of each sterilization. Also prints any errors or warning messages. If everything has proceeded correctly by the end of the sterilization cycle, the following message is printed: Sterilization O.K.



Type	Cat. No.	PK
Thermoprinter	9.851 871	1

**4 Automatic autoclaves, AE-Dry series, accessory mesh baskets**

For	Dia.	Height	Baskets per autoclave	Cat. No.	PK
	mm	mm			
AE-Dry 28	280	200	2	9.851 872	1
AE-Dry 75-100	380	260	2	9.851 873	1
AE-Dry 150	475	360	2	9.851 875	1





### 1 2 Steam sterilizers (autoclaves), HG series

- Fully automatic microprocessor controlled
- 12 installed programmes
- Timer-controlled night programme
- Overnight sterilization does not heat up the laboratory
- Agar programme with thermostatic heating for agar production
- Liquids programme with removal temperature of 95°C
- Low feed water consumption
- Electronic pressure switch, pressure and temperature control
- Exhaust reservoir for condensate, this prevents fogging and unpleasant odours
- Drain valve for easy cleaning of sterilization chamber
- Bottom plate for baskets and cans
- Air-cooling at the press of a button
- Lid-opening and lid-closing by press-button
- Mounted on wheels, cleaning is possible even under the autoclave
- Safety: Electromechanical safety sealing system, relief vent, low water switch, overpressure safety device, overheat protection power supply cut-out, audible and visual error alarms.



#### Specifications

Automatic start:	1 minute to 7 days, Night program
Time of sterilization:	1 to 250 minutes
Power supply:	AC 220 V/240 V
Sealing:	at the push of a button, fully automatic
Boiler material:	SUS304 (Stainless steel, antirust)

Type	Capacity litres	Internal dimensions (Ø x H) mm	External dimensions (W x D x H) mm	Temp. range °C	Pressure bar	Rating W	Weight kg	Cat. No.	PK
HG 50	50	364 x 482	455 x 900 x 691	105 to 135	2.5	2000	41	9.842 410	1
HG 80	80	364 x 730	455 x 1030 x 691	105 to 135	2.5	3000	82	9.842 411	1



### 3 4 5 Accessories for HG series steam sterilizers

Type	Cat. No.	PK
Flexible temperature sensor	9.842 420	1
Automatic water supply	9.842 421	1
Exhaust air filter for sterilization	9.842 422	1
Stainless steel sterilizing basket	9.842 423	1
Stainless steel sterilizing basket with bottom	9.842 424	1
Stainless steel sterilizing can	9.842 425	1
Process documentation software, Segosoft®	9.842 426	1



### Automatic autoclaves, AES series, accessory solid baskets

For	Dia. mm	Height mm	Baskets per autoclave	Cat. No.	PK
AE / AES 28	380	260	2	9.851 876	1
AE / AES 75 / 110	380	260	2 / 3	9.851 877	1
AE / AES 150	280	200	2	9.851 879	1



### Media probe

Flexible Pt100 probe with silicone feed tube.  
For the sterilization of media (liquids), in order to observe the exact temperature at set times.  
The probe is directly connected to the control panel IN or OUT.

Type	Cat. No.	PK
Media probe	9.851 880	1

**Autoclaves, Varioklav**

The design of these autoclaves conforms with TÜV specifications and the main emphasis placed on your safety. Priority is given to operational and procedural safety with regard to both mechanical construction and to technical design features.  
For your protection and for reproducible results.

*Thermo Electron*



**Quality.**

Chambers are constructed in titanium-stabilized, electropolished, grade 1.4571 stainless steel. All temperature probes are highly accurate, class A, four-conductor technology Pt100 probes. Our guarantee terms speak for themselves:

- 1 year for materials and manufacturing faults
- 3 years for the heating element
- 5 years for the stainless steel chamber and central lock.

**Flexibility.**

The range is as variable as the applications to which they are used, from microbiological to high-sterility genetics laboratories, clinical sterilization to pharmaceutical production lines. The flexible Varioklav modular system enables all requirements to be covered essentially with only one model series. The combination of components are matched to fit your needs exactly. Due to their modular construction, the autoclaves can be easily and cheaply adapted to new conditions or upgraded to the latest technology.

**1 Automatic autoclaves, Varioklav 75 S and 135 S**

The new Varioklav 75 S and 135 S free-standing autoclaves ideally combine the advantages of a double-walled sterilizer (energy saving, preheating option and effective drying) with those of a single-walled sterilizer (rapid processing, with the best cooling functions and economy). They also incorporate a new, automatic locking system to aid loading and improve security. Safe and easy to operate

*Thermo Electron*



- Very low loading height, extremely compact
- Rapid closing and easy to open due to automatic locking system
- The integral lid seal is hinged away with the lid - not left on the chamber rim
- It is not possible for baskets to damage the silicone seal
- Easy to clean - no feed water is left in the chamber
- Simple programme selection, 3 pre-set, practical sterilization programmes (liquids, instruments, waste). Additional, freely adjustable programmes are available, and programme settings are secured by keyswitch control locking. An overnight programme timer is also provided
- Thermolock in accordance with TRB 402
- Chamber material 1.4571 DIN 17440 (V4A)

Safe and innovative

- Super low-profile steam generator under the double-walled chamber base
- Steam generator and chamber are separated. The double-wall stores heat and feed-water, and serves as an energy reservoir, with many advantages
- Rapid batch processing times, without active cooling
- Enhanced drying
- Short heating times without overshoot
- Optional pre-heating and efficient drying in vacuum or in the sterile air stream
- Automatic feed-water supply
- Rotary sealing ring

Safe both in terms of present and known future requirements

- TÜV-tested safety device
- Pressure vessel made of titanium stabilised, electropolished V4A stainless steel
- Customisable documentation outputs
- Crevice-free, without deadspace or possibility of microbial build-up in internal pipelines

**Varioklav autoclaves 75 S and 135 S,**

Floor standing, with 75 or 135 litres of usable volume respectively, double-wall base with steam generator, automatic 0 to 3 bar feed-water pump with connection for reservoir tank or distilled water connection, Thermolock in accordance with TRB 402 and EN 61010-2 for sterilizing liquids, automatic quick-release lock, counterweighted lid, pneumatic door seal, fully automatic control with timer, three pre-set programmes, further programmes can be selected depending on accessories fitted. Insert shelf for sterilization baskets, powder coated casing, integral compressed air supply for automatic locking mechanism and valves, collector outlet with vacuum breaker and non-return valve, ready for connection.

Type	External dimensions (W x D x H) mm	Int. dia. mm	Loading height mm	Capacity L	Power W	Cat. No.	PK
75 S	500 x 650 x 1000	400	750	6	4800	9.842 149	1
135 S	600 x 750 x 1050	500	800	8	7800	9.842 150	1



### Automatic autoclaves, Varioklav 75 S and 135 S, accessories

Thermo Electron

Type	Cat. No.	PK
Condensate drip tray, 20 litres, stainless steel drain tube, quick-fitting pipe union	9.842 111	1
Mesh insert basket, tall, for Model 75S	9.842 112	1
Mesh insert basket, tall, for Model 135S	9.842 116	1
Sheet metal insert basket, for Model 75S	9.842 117	1
Sheet metal insert basket, for Model 135S	9.842 197	1

### 1 Polyesteribox®

Re-usable sterilisation container, autoclavable up to 134°C. Also suitable for Sterrad® plasma sterilisation. Transparent, highly robust special plastic material, temperature-resistant up to 150°C, CE marked.



Type	Internal dimensions (W x D x H) mm	External dimensions (W x D x H) mm	Cat. No.	PK
Polysteribox® SH	177 x 76 x 45	208 x 111 x 54	9.284 265	1
Polysteribox® M	155 x 123 x 32	184 x 144 x 59	9.284 266	1
Polysteribox® L	261 x 164 x 65	290 x 183 x 74	9.284 267	1

### 2 Spare parts for polyesteribox®



Type	Cat. No.	PK
Filter set S/SH	9.284 281	1
Filter set M	9.284 282	1
Filter set L	9.284 283	1

### 3 Spare parts for polyesteribox®



Type	Cat. No.	PK
silicone anti-slip-inlay for box S, SH	9.284 289	1
silicone anti-slip-inlay for box L	9.284 290	1
silicone anti-slip-inlay for box M	9.284 291	1

### 4 Spare parts for polyesteribox®



Type	Cat. No.	PK
Safety seals	9.284 285	1000
Sterilisation seal for box S	9.284 286	1000
Sterilisation seal for box SH, M, L	9.284 287	1000
Silicone positioning mat for box S, SH	9.284 288	1
Silicone positioning mat for box L	9.284 292	1
Silicone positioning mat for box M	9.284 293	1
Filter insert for box L	9.284 294	1

Ritter GmbH

### Ultrasonic baths Sonorex

Bandelin

- Intensive cleaning
- Liquid degassing
- Sonochemistry
- With noise suppression and CE approval.

Sonorex Super ultrasonic baths

These devices work at 35 kHz and have PZT transducers for maximum cleaning power.

Accessory integral heating is available. Power information: High frequency continuous peak power. 230V, 50/60 Hz, or 115 V.

All models are spill-proof with stainless steel tanks and outer cases.

Sonorex Digital 10 P ultrasonic cleaning baths

With 10-programme memory. With digital display of time, temperature, power and degas.

For reproducible sonification.

Sonorex Technik - welded tanks.

Capacities up to 245 litres and internal tank length up to 1000mm.

Frequency 40 kHz.

Sonorex ultrasonic pipette cleaner.

Automatic ultrasonic cleaning and rinsing of pipettes.



**1 Ultrasonic baths, Sonorex Super**

- Type RK 102 H and above supplied with outlet, 1 to 15 minute timer and continuous operation.
- Type H with heating adjustable from 30 to 80°C, 230 V, or 115 V.
- Types RK 106 and RK 1040 are ideal for sieve cleaning.

Bandelin



Type	Internal dimensions (W x D x H) mm	Capacity	Ultrasonic capacity		HF peak power	Heating capacity	Cat. No.	PK
		L	W	W <sub>eff</sub>	W			
RK 31	85 x 60 x 190	0.90	240	30	-	-	9.877 021	1
RK 52	140 x 100 x 150	1.80	240	60	-	-	9.877 052	1
RK 52 H	140 x 100 x 150	1.80	240	60	140	-	9.877 051	1
RK 100	140 x 100 x 240	3.00	320	80	-	-	9.877 100	1
RK 100 H	140 x 100 x 240	3.00	320	80	140	-	9.877 101	1
RK 102 H	140 x 100 x 240	3.00	480	120	140	140	9.877 103	1
RK 103 H	140 x 150 x 240	4.00	560	140	200	-	9.877 114	1
RK 106*	130* x 240	5.60	480	120	-	-	9.877 106	1
RK 156	140 x 100 x 500	6.00	640	160	-	-	9.877 156	1
RK 156 BH	140 x 150 x 500	9.00	860	215	600	-	9.877 155	1
RK 255 H	150 x 150 x 300	5.50	640	160	280	-	9.877 256	1
RK 510	240 x 150 x 300	9.70	640	160	-	-	9.877 510	1
RK 510 H	240 x 150 x 300	9.70	640	160	400	-	9.877 511	1
RK 512 H	240 x 300 x 200	13.00	860	215	400	-	9.877 512	1
RK 514	300 x 150 x 325	13.50	860	215	-	-	9.877 540	1
RK 514 H	300 x 150 x 325	13.50	860	215	600	-	9.877 516	1
RK 514 BH	300 x 200 x 325	18.70	860	215	600	-	9.877 515	1
RK 1028	300 x 200 x 500	28.00	1200	300	-	-	9.877 537	1
RK 1028 H	300 x 200 x 500	28.00	1200	300	1300	-	9.877 529	1
RK 1028 C	300 x 300 x 500	45.00	2000	500	-	-	9.877 528	1
RK 1040*	195* x 500	38.00	1200	300	-	-	9.877 108	1
RK 1050	500 x 200 x 600	58.00	2400	600	-	-	9.877 551	1

\* Ø x D

**2 Ultrasonic baths Sonorex Digitec**

- 4-step "plug and clean" operation - heater range 20 to 80°C, thermostatically adjustable, with LED display for target and actual temperature values
- optical signal in case of overtemperature
- timer for countdown and continuous operation
- Degas: adjustable pulse sound level for removing unwanted air bubbles, with LCD display indicator
- splash (water)-proofed, stainless steel housing, protection class at maximum level possible: IP 33
- SweepTec for permanent transducer frequency oscillation.

Bandelin



Type	Int. tank dims. (W x D x H) mm	Capacity	Ultrasonic capacity		HF peak power	Heating capacity	Cat. No.	PK
		L	W	W <sub>eff</sub>	W			
DT 31	85 x 60 x 190	0.9	240	30	0	0	9.877 830	1
DT 31 H	85 x 60 x 190	0.9	240	30	70	0	9.877 831	1
DT 52	140 x 100 x 150	1.8	240	60	0	0	9.877 832	1
DT 52 H	140 x 100 x 150	1.8	240	60	140	0	9.877 833	1
DT 100	140 x 100 x 240	3.0	320	80	0	0	9.877 834	1
DT 100 H	140 x 100 x 240	3.0	320	80	140	0	9.877 835	1
DT 102 H	140 x 100 x 240	3.0	480	120	140	140	9.877 836	1
DT 103 H	140 x 150 x 240	4.0	560	140	200	0	9.877 837	1
DT 156	140 x 100 x 500	6.0	640	160	0	0	9.877 838	1
DT 255	150 x 150 x 300	5.5	640	160	0	0	9.877 839	1
DT 255 H	150 x 150 x 300	5.5	640	160	280	0	9.877 840	1
DT 510	240 x 150 x 300	9.7	640	160	0	0	9.877 841	1
DT 510 H	240 x 150 x 300	9.7	640	160	400	0	9.877 842	1
DT 106	240 dia., 130 deep	5.6	480	120	0	0	9.877 848	1
DT 156 BH	140 x 150 x 500	9.0	860	215	600	0	9.877 849	1
DT 512 H	240 x 200 x 300	13.0	860	215	400	0	9.877 850	1
DT 514	300 x 150 x 325	13.5	860	215	0	0	9.877 851	1
DT 514 H	300 x 150 x 325	13.5	860	215	600	0	9.877 852	1
DT 514 BH	300 x 200 x 325	18.7	860	215	600	0	9.877 853	1
DT 1028 H	300 x 200 x 500	28.0	1200	300	1300	0	9.877 855	1
DT 1028 C	300 x 300 x 500	45.0	2000	500	0	0	9.877 856	1
DT 1028 CH	300 x 300 x 500	45.0	1200	300	1450	0	9.877 857	1
DT 1050	500 x 200 x 600	58.0	2400	600	0	0	9.877 859	1
DT 1050 CH	500 x 300 x 600	90.0	2400	600	1950	0	9.877 860	1



### 1 Ultrasonic baths with infra-red interface, Sonorex Digitec ...-RC

RS232 data interface to the laboratory PC allows processing of individual control tasks and integration into an automated laboratory line.

*Bandelin*

- Datalogging method is explained and described in a detailed instruction manual.
- Infra-red adapter IR 1 is used for connection.

Winsonic® DT remote control consisting of: software and infra-redadapter IR 1 - see 9.877 847. Please order separately.

Type	Int. tank dims. (W x D x H) mm	Capacity L	Ultrasonic capacity		HF peak power W <sub>eff</sub>	Heating capacity W	Cat. No.	PK
			L	W				
DT 102 H-RC	140 x 100 x 240	3.0	480	120	120	140	9.877 843	1
DT 255 H-RC	150 x 150 x 300	5.5	640	160	160	280	9.877 844	1
DT 510 H-RC	240 x 150 x 300	9.7	640	160	160	400	9.877 845	1
DT 514 BH-RC	300 x 200 x 325	18.7	860	215	215	600	9.877 846	1



### 2 Remote control Winsonic® DT for Sonorex Digitec ...-RC ultrasonic baths

*Bandelin*

- The PC program is designed for operating systems Microsoft® Windows® 2000 and Microsoft® Windows® XP in connection with the infrared adapter IR 1 allowing a comfortable operation and monitoring of Digitec units.
- The status window gives an updated overview on the working conditions.
- Start time and stop time as well as the respective bath temperature are automatically collected in log files. In this way, documentation of the cleaning process for quality assurance is possible.

Supplied as Winsonic® DT software and infra-red adapter IR 1.

Type	Cat. No.	PK
Winsonic® DT	9.877 847	1



### 3 Ultrasonic baths, Sonorex digital

*Bandelin*

Ultrasonic baths with 10-programme memory. Digital display of time, temperature, power and degas. Constant power for reproducible results. Digital timer 1 to 99 minutes and continuous running. Remaining time display. Heating 20 to 80°C. Output regulation 10 to 100 %. Degas button for rapid liquid degassing. With drain valve - except DK 102 P. 230 V, 50/60 Hz. For accessories- see below.

Type	Internal dimensions (W x D x H) mm	Capacity L	Ultrasonic capacity		HF peak power W <sub>eff</sub>	Heating capacity W	Cat. No.	PK
			L	W				
DK 102 P	140 x 100 x 240	3.00	480	120	120	140	9.877 059	1
DK 156 BP	140 x 150 x 500	9.00	720	180	180	600	9.877 054	1
DK 255 P	150 x 150 x 300	5.50	640	160	160	280	9.877 055	1
DK 512 P	240 x 200 x 300	13.00	820	205	205	400	9.877 056	1
DK 514 BP	300 x 200 x 325	18.70	860	215	215	600	9.877 057	1
DK 1028 P	300 x 200 x 500	28.00	1200	300	300	1300	9.877 058	1

### 1 Suspension baskets for Sonorex ultrasonic baths

Stainless steel.

Maximise ultrasonic wave transmission.

Items to be cleaned should not be allowed to rest on the bottom of the tank.

*Bandelin*



Type	For bath type	For bath type	Width mm	Length mm	Height mm	Cat. No.	PK
K 08	RK/DT 31		65	170	50	9.877 630	1
K 1 C	RK/DT 52 / 52 H		110	120	40	9.877 631	1
K 3 C	RK/DT 100 / 100 H / 100 SH / 102 H / 102 H-RC	DK 102 P	110	200	40	9.877 633	1
K 3 CL	RK/DT 103 H		110	200	40	9.877 632	1
K 6*	RK/DT 106		215	215	50	9.877 634	1
K 6 BL	RK/DT 156 BH	DK 156 BP	100	460	50	9.877 637	1
K 5 C	RK/DT 255 H / 255 H-RC	DK 255 P	110	260	40	9.877 635	1
K 10	RK/DT 510 / 510 H / 510 H-RC		195	250	50	9.877 697	1
K 10 B	RK/DT 512 H / 512 CH	DK 512 P	195	250	50	9.877 700	1
K 14	RK/DT 514 H		245	275	50	9.877 694	1
K 14 B	RK/DT 514 BH / 514 H-RC	DK 514 BP	245	275	50	9.877 701	1
K 28	RK 1028/H / DT 1028 H	DK 1028 P	245	455	50	9.877 698	1
K 28 C	RK/DT 1028 CH		245	455	50	9.877 702	1
K 50	RK/DT 1050		450	545	50	9.877 699	1
K 50 C	RK/DT 1050 CH		450	545	50	9.877 703	1

\*round

### 2 Flask Clips for Sonorex Suspension Baskets

Stainless steel. Suitable for suspension baskets and instrument holders with mesh apertures up to 12.5 x 12.5 mm.

*Bandelin*



Type	Cat. No.	PK
EK 10 for suspension baskets up to 31 mm dia.	9.877 651	1
EK 25 for suspension baskets up to 42 mm dia.	9.877 653	1
EK 50 for suspension baskets up to 52 mm dia.	9.877 655	1
EK 100 for suspension baskets up to 65 mm dia.	9.877 657	1

### 3 Handle adjusters, GV 3 and GV 10, for Sonorex Suspension baskets

The immersion depth of the baskets can be continuously adjusted using the handle adjuster - prevents laboratory flasks from floating, tipping over or becoming flooded. Quick and easy attachment to suspension baskets or instrument holders (except GH 1).

*Bandelin*



Type	For baskets	Cat. No.	PK
GV 3	K 1 C, K 3 C, K 3 CL, K 5 C L, K 6 L, K 6 BL, GH 5	9.877 720	1
GV 10	K 10, K 10 B, K 14, K 14 B, K 28, K 28 C, K50, K50 C, GH 10/B / GH 14/B, GH 28	9.877 721	1

### 4 Lids for Sonorex ultrasonic baths

Stainless steel.

For covering bath tanks, as indicated.

*Bandelin*



Type	For bath type	For bath type	Cat. No.	PK
D 08	RK/DT 31		9.877 597	1
D 52	RK/DT 52 / 52 H		9.877 601	1
D 100	RK/DT 100 H / 102 H / 102 H-RC / 103 H	DK 102 P	9.877 603	1
D 6	RK/DT 106		9.877 606	1
D 156	RK/DT 156 BH	DK 156 BP	9.877 602	1
D 255B	RK/DT 255 H / 255 H-RC	DK 255 P	9.877 605	1
D 510B	RK/DT 510 / 510 H / 510 H-RC / 512 H	DK 512 P	9.877 610	1
D 514	RK/DT 514 / 514 H / 514 BH / 514 BH-RC	DK 514 BP	9.877 604	1
D 1028	RK 1028/H / DT 1028 H	DK 1028 P	9.877 607	1
D 1028C	RK/DT 1028 CH		9.877 600	1



### 1 Perforated lids for Sonorex ultrasonic baths

Stainless steel.  
For supporting insertion bowls/containers.

Bandelin

Type	For bath type	For bath type	Cat. No.	PK
DE 08	RK/DT 31		9.877 621	1
DE 52	RK/DT 52 / 52H / 52H-RC		9.877 611	1
DE 100	RK/DT 100 H / 102 H / 103 H	DK 102 P	9.877 613	1
DE 6	RK/DT 106		9.877 616	1
DE 156	RK/DT 156 BH / 156BH-RC	DK 156 BP	9.877 612	1
DE 255	RK/DT 255 H / 255 H-RC	DK 255 P	9.877 615	1
DE 510	RK/DT 510 / 510 H / 512 H	DK 512 P	9.877 620	1
DE 514	RK/DT 514 H / 514 BH / 514 BH-RC	DK 514 BP	9.877 614	1
ES 4	RK 1028/H / DT 1028 H - CH / 1050 / 1050 CH		9.877 617	1



### 2 Sonorex insertion containers

For perforated lids and beaker holders.  
SD 06, PD 06, EB 05 = with retaining ring  
SD 05, KB 04 = with retaining ring, only for DE 08  
SD 09= with retaining ring  
With lid: SD 06, PD 06 and EB 05

Bandelin

Type	Material	Capacity ml	Dia. mm	Height mm	Cat. No.	PK
SD 05	Glass	600	76	150	9.877 645	1
SD 06	Glass	600	84	125	9.877 622	1
SD 09	Glass	1000	91	180	9.877 623	1
EB 05	Stainless steel	600	87	120	9.877 626	1
KB 04	Plastic	400	76	110	9.877 644	1
PD 06	Plastic	600	86	125	9.877 628	1



### 3 Insertion bowls for Sonorex insertion containers

Mesh aperture 1 x 1 mm.

Bandelin

Type	For	Material	Dia. mm	Cat. No.	PK
PD 04	Insertion containers	Plastic	60	9.877 643	1
KD 0*	Insertion containers	Stainless steel	75	9.877 642	1

not for SD 05 and KB 04



### 4 Suspension basket accessories for Sonorex ultrasonic baths

Perforated plastic.  
For cleaning sensitive components.

Bandelin

Type	For bath type	For bath type	Internal dimensions (W x D x H) mm	Cat. No.	PK
PK 1 C	RK 52 / 52 H / 52 CH		90 x 90 x 66	9.877 661	1
PK 3 C	RK 103 H / 103 CH		90 x 187 x 56	9.877 666	1
PK 2 C	RK 100 / 100 H / 102 H / 102 H-RC/RK / 103 H / 100 SH	DK 102 P	115 x 195 x 88	9.877 664	1
K 5 P	RK 255 H	DK 255 P	96 x 254 x 130	9.877 667	1



### 5 Suspension tanks for Sonorex ultrasonic baths

Unperforated plastic, with cover  
For cleaning with aggressive liquids.

Bandelin

Type	For bath type	For bath type	Internal dimensions (W x D x H) mm	Cat. No.	PK
KW 3	RK/DT 102 H / 102 H-RC / 103 H / 100 / H - SH	DK 102 P	115 x 195 x 88	9.877 800	1
KW 5	RK/DT 255 H/-RC	DK 255 P	96 x 254 x 130	9.877 801	1
KW 14	RK/DT 514/H		215 x 280 x 145	9.877 802	1
KW 14 B	RK/DT 514 BH/-RC	DK 514 BP	210 x 275 x 195	9.877 803	1
KW 28-0	RK 1028/H, DT 1028 H/CH	DK 1028 P	230 x 437 x 155	9.877 804	1
KW 50-0	RK/DT 1050		445 x 517 x 184	9.877 806	1
KW 50 B-0	RK/DT 1050 CH		445 x 520 x 284	9.877 717	1

**1 Ultrasonic cleaning rack Sonorex**

LP 14 accommodates plates and panels. Up to 10 casting plates or glass panels up to 10mm thick can therefore be quickly and easily transported and cleaned. The easily adjustable LP 14 is suitable for various plate sizes up to max. 235 mm long and is inserted into a basket or instrument holder. PH 14 is suitable for picking up round plates up to 250 mm in diameter.

Bandelin

Type	For bath type	Cat. No.	PK
LP 14	RK/DT 514 BH / 1028 / H - CH	9.877 790	1
PH 14	LP 14	9.877 792	1



**2 Instrument and test sieve holder for Sonorex ultrasonic baths**

Instrument and test sieve holder.  
9.877 781: Holder for 1 litre glass flasks, 105 mm diameter.  
GH 1 (fig.)9.877 784: Sieve holder SH 7 for test sieve 200 mm dia.  
9.877 746: SH 28C - sieve holder for five test sieves 200 mm dia.

Bandelin

Other: GH instrument holders, stainless steel, mesh aperture 12.5 x 12.5 mm (GH 5 B and above).

Type	For bath type	For bath type	Dimensions (W x D) mm	Cat. No.	PK
GH 1	RK/DT 52 / H - CH / H-RC 100 / H - SH / 102 / H - CH / 103 / H - CH	DK 102 P	129 x 117	9.877 781	1
SH 7	RK/DT 106	-	-	9.877 784	1
GH 5	RK/DT 255 / H	DK 255 P	270 x 120	9.877 739	1
GH 10	RK/DT 510 / 510 H / H-RC	-	260 x 200	9.877 731	1
GH 10 B	RK/DT 515 CH / 512	DK 512 P	260 x 200	9.877 735	1
GH 14 B	RK/DT 514 BH / H-RC	DK 514 BP	280 x 250	9.877 736	1
GH 28	RK 1028/H, DT 1028 H/CH	DK 1028 P	455 x 250	9.877 733	1
GH 28 C	RK/DT 1028 CH	-	455 x 250	9.877 737	1
GH 50 C	RK/DT 1050 CH	-	550 x 455	9.877 738	1
SH 28 C	RK/DT 1028 C / 1028 CH	-	-	9.877 746	1



**3 Ultrasonic baths, Sonorex Technik**

Modular range - with 6 standard tank capacities in 4 versions (without heating, without ultrasonic on request).  
For cleaning and rinsing. With integral ultrasonic generator.  
Frequencies: 25 kHz (models up to RM 110) or 40 kHz (rest of range).  
For 220-240 V, 50/60 Hz (RM 110: 210 UH, 400 V, 3ph. 50/60 Hz, Cekon plug 16 A).  
With 2mm thick, stainless steel V 4A, 1.457, welded tank.  
With overflow, drainage outlet and timer up to 15 minutes or can be set for continuous operation.  
With adjustable heating 30 to 80°C.

Bandelin

Type	Int. tank dims. (W x D x H)	Capacity L	Ultrasonic capacity		HF peak power W <sub>eff</sub>	Heating capacity W	Cat. No.	PK
	mm		W	W				
RM 16 UH	275 x 200 x 325	19.00	1200	1 x 300	800	9.877 570	1	
RM 40 UH	300 x 300 x 480	45.00	2000	1 x 500	1250	9.877 571	1	
RM 75 UH	500 x 300 x 580	90.00	4000	1 x 1000	1950	9.877 572	1	
RM 110 UH	450 x 450 x 600	135.00	4000	1 x 1000	4800	9.877 573	1	
RM 180 UH	500 x 400 x 1000	215.00	4000	2 x 1000	7200	9.877 575	1	
RM 210 UH	650 x 500 x 750	265.00	4000	2 x 1000	7200	9.877 577	1	





### 1 Accessories for Sonorex Technik ultrasonic baths

Suspension baskets and lids for Technik models.  
Stainless steel.  
Baskets for hanging in bath tanks as indicated.  
Lids protect against evaporation and reduce operating noise.

Bandelin

For bath type	For	Internal dimensions (W x D x H) mm	Cat. No.	PK
Suspension basket MK 16B	RM 16 UH	275 x 200 x 325	9.877 680	1
Suspension basket MK 40B	RM 40 UH	300 x 300 x 480	9.877 681	1
Suspension basket MK 75B	RM 75 UH	500 x 300 x 580	9.877 682	1
Suspension basket MK 110	RM 110 UH	450 x 450 x 600	9.877 683	1
Suspension basket MK 180	RM 180 UH	500 x 400 x 1000	9.877 684	1
Suspension basket MK 210	RM 210 UH	650 x 500 x 750	9.877 685	1
Lid MD 16	RM 16 UH		9.877 582	1
Lid MD 40	RM 40 UH		9.877 583	1
Lid MD 75	RM 75 UH		9.877 584	1
Lid MD 110	RM 110 UH		9.877 585	1
Lid MD 180	RM 180 UH		9.877 586	1
Lid MD 210	RM 210 UH		9.877 587	1



### Ultrasonic cleaning baths, Sonorex Longlife

For aqueous liquids. Fitted with an interference suppressor. CE marked.

Bandelin

#### Specifications:

HF-Frequency: 35 kHz, timer: 1 to 15 minutes and continuous operation, with built-in heating, setting range 30 to 80°C (86 to 176°F), welded tank in 2 mm thick grade AISI 316 Ti (1.4571) stainless steel, stainless steel housing and integral tank drain tap for easy emptying



### 2 High-power ultrasonic cleaning unit Sonorex Longlife RK 1028 CH

Bandelin

#### Specifications:

Inner tank dimensions (WxDxH):	300 x 300 x 500 mm
Transducers:	8 PZT-broad beam transducers
Capacity:	45 litres
Filling volume for cleaning:	30 litres
Ultrasonic top output:	1200 W
HF output:	300 W <sub>eff</sub>
Heating power:	1450 W
Current consumption:	7.7 A
Leakage current:	0.5 mA
Protection rating:	< IP 32
Exterior dimensions (L x W x H): (without handles and drain tap)	540 x 340 x 500 mm
Weight:	net 23.7 kg gross 27.2 kg
Packed dims (L x W x H):	670 x 470 x 565 mm

Type	HF peak power W <sub>eff</sub>	Cat. No.	PK
RK 1028 CH	500 x 300 x 300	9.877 530	1

**Accessories for Sonorex Longlife RK 1028 CH**

**Accessories:**

Insert basket K 28 C stainless steel, 455 x 245 x 50 mm, mesh size 5 x 5 mm.  
 Insert basket stainless steel, int. 470 x 270 x 215 mm.  
 For 6 breathing masks: K 28 CA  
 For 3 full-face masks: K 28 CV  
 Utensil-holder GH 28 C stainless steel, 455 x 250 mm, mesh size 12.5 x 12.5 mm.  
 Insert bowl KW 28-0 plastic, non-perforated, with lid, int. 437 x 230 x 155 mm.  
 lid D 1028 C stainless steel.

*Bandelin*



**For cleaning small parts:**

Insert support ES 4 stainless steel, for positioning of up to 4 beakers:

- SD 06 glass - 600 ml
  - EB 05 stainless steel - 600 ml
  - PD 06 plastic - 600 ml
- Insert sieve basket  
 Fits into beakers:  
 KD 0 stainless steel, dia. 75 mm  
 PD 04 plastic, dia. 60 mm

Type	Description	Cat. No.	PK
K 28 C	Insert basket	9.877 702	1
K 28 CA	Insert basket	9.877 712	1
K 28 CV	Insert basket	9.877 713	1
GH 28 C	Utensil-holder	9.877 737	1
KW 28-0	Insert tub	9.877 804	1
D 1028C	Lid	9.877 600	1
SD 06	Beaker, glass	9.877 622	1
ES 4	Insert support	9.877 617	1
EB 05	Beaker, stainless steel	9.877 626	1
PD 06	Beaker, plastic	9.877 628	1
KD 0	Beaker, stainless steel	9.877 642	1
PD 04	Beaker, plastic	9.877 643	1

**Caution!**

Do not use combustible, acidic cleaning agents or chemicals containing chloride ions like household cleaners. Do not place any items on the tank bottom, neither baskets nor beakers.

**1 Ultrasonic cleaning bath Sonorex Longlife RK 1050 CH**

*Bandelin*

**Specifications:**

Int. tank dimensions ( WxDxH): 500 x 300 x 600 mm  
 Volume: 90 litres  
 Working volume: 60 litres  
 Ultrasonic output max.: 2400 W  
 HF-output: 600 W<sub>eff</sub>  
 Heating power: 1950 W  
 Current consumption: 11.1 A  
 Leakage current: < 0.5 mA  
 Protection rating: IP 32  
 Exterior dimensions (WxDxH): 540 x 640 x 530 mm  
 (without handles and drain tap)  
 Weight: net 37 kg  
 gross 67 kg



Type	HF peak power W <sub>eff</sub>	Cat. No.	PK
RK 1050 CH	600	9.877 552	1



### Accessories for Sonorex Longlife RK 1050 CH

*Bandelin*
**Accessories:**

Insert basket K 50 C stainless steel, 545 x 450 x 50 mm, mesh size 5 x 5 mm.  
 Insert basket stainless steel, int. 540 x 445 x 240 mm, mesh size 12.5 x 12.5 mm.  
 For 9 breathing masks: K 50 CA  
 For 6 full-face masks: K 50 CV  
 Utensil-holder GH 50 C stainless steel, 550 x 455 mm, mesh size 12.5 x 12.5 mm.  
 Insert bowl KW 50 B-0 for the use of aggressive liquids.  
 plastic, non-perforated, with lid, int. 520 x 445 x 284 mm.  
 Lid D 50 C stainless steel.

**For cleaning small parts:**

Insert support ES 4 stainless steel, for positioning of up to 4 beakers:

SD 06 glass - 600 ml  
 EB 05 stainless steel - 600 ml  
 PD 06 plastic - 600 ml  
 Inset sieve basket

Fits into beakers:

KD 0 stainless steel, dia. 75 mm  
 PD 04 plastic, dia. 60 mm

Type	Description	Cat. No.	PK
D 50 C	Lid	9.877 608	1
K 50 C	Insert basket	9.877 703	1
K 50 CA	Insert basket	9.877 715	1
K 50 CV	Insert basket	9.877 716	1
GH 50 C	Utensil-holder	9.877 738	1
KW 50 B-0	Insert tub	9.877 717	1
SD 06	Beaker, glass	9.877 622	1
ES 4	Insert support	9.877 617	1
EB 05	Beaker, stainless steel	9.877 626	1
PD 06	Beaker, plastic	9.877 628	1
KD 0	Beaker, stainless steel	9.877 642	1
PD 04	Beaker, plastic	9.877 643	1

**Caution!**

Do not use combustible, acidic cleaning agents or chemicals containing chloride ions like household cleaners. Do not place any items on the tank bottom, neither baskets nor beakers.



### 1 Ultrasonic pipette cleaner PR 140 C, Sonorex

*Bandelin*

Offers ultrasonic cleaning and rinsing in the same container - without chromosulphuric acid - with water soluble cleaning concentrates.

For pipettes, burettes and other glass instruments up to 755 mm long.

**Specifications**

Overall height: 1130 mm  
 Area required (W x L): 255 x 335 mm  
 Ultrasonic output max.: 860 W  
 HF power: 215 W<sub>eff</sub>  
 Timer: up to 60 min.  
 Effective capacity: 13.9 litres  
 Effective cleaning depth: 765 mm

Type	Description	Cat. No.	PK
PR 140 C	Complete set, with plastic basket, stainless steel lid, 5 litres of Tickopur R 33 mildly alkaline cleaning concentrate, and R 2	9.877 911	1
K 140 B	Plastic basket, 120 mm dia.	9.877 905	1
PG 140 B	Pipette storage container for soaking and for the final rinse in pure water, plastic	9.877 904	1
AR 140 C	3-way switch armature made of metal	9.877 912	1
AR 140 CP	3-way switch armature made of plastic	9.877 913	1
D 140	Stainless steel lid	9.877 914	1

**1 Tickopur - Stammopur**

*Bandelin*

Concentrates for Sonorex ultrasonic cleaning baths.  
Enhances cavitation, cleans intensively, kind to most materials and free from chloride.  
For use hot or cold.

**Tickopur R 27.**  
Special cleaner, concentrate.  
Properties: acid pH 1.9 in 1 % solution, dosage up to 5%.  
For: glass, steel, rubber, plastic, precious metals, ceramics  
Removes: rust, lime scale, mineral deposits, silicate, phosphate, cement, urine scale, etc.

**Tickopur R 30.**  
Neutral cleaner, concentrate.  
Properties: neutral, pH 7% dosage 1 to 5 %  
For: glass, steel, nonferrous metals, aluminium, rubber, optical components, test sieves.  
Removes: grease, oils, dust, protein, wax, silicone films, etc.

**Tickopur R 33.**  
Universal cleaner, concentrate.  
Properties: mildly alkaline pH 9.9 at 1%, dosage 1 to 5%  
For: glass, metal, ceramics, plastic, rubber  
Removes: grease, oils, wax, silicone films, protein, ink residue, etc.

Type	Capacity litres	Cat. No.	PK
Tickopur R 27	1	9.192 761	1
Tickopur R 27	2	9.192 762	1
Tickopur R 27	5	9.192 765	1
Tickopur R 30	1	9.192 641	1
Tickopur R 30	2	9.192 646	1
Tickopur R 30	5	9.192 642	1
Tickopur R 33	1	9.192 601	1
Tickopur R 33	2	9.192 602	1
Tickopur R 33	5	9.192 605	1



**2 3 4 Tickopur - Stammopur cleaners**

*Bandelin*

**Tickopur RW 77.**  
Special cleaner with ammonia, concentrate.  
Properties: mildly alkaline, pH 9.9 at 1%, dosage 5 to 10%  
For: steel, stainless steel, non-ferrous metals, glass, plastics, optical components  
Removes: grease, oils, wax, lubricants, silicone films, grinding, polishing and soldering agents, etc., slightly anti-oxidizing.

**Tickopur J 80 U.**  
Anti-oxidant with tarnish preventer, ready for use.  
Properties: slightly acidic, pH 2, for use in glass and plastic beakers only.  
For: non-ferrous metals, alloys, copper, electron microscope screens  
Removes: oxide and sulphide layers, flux, anti-oxidizing.

**Stammopur 24.**  
Disinfection and cleaning concentrate.  
Disinfection and intensive cleaning - VAH-certified.  
Free from aldehydes, chlorine and phenol. Effective against bacteria, fungi, viruses (Vaccinia/ BVDV/ H5N1/ HBV/ HIV).  
Application 1 to 2%, mildly alkaline, pH 9.4 (1%).  
With corrosion prevention.  
Highly compatible with most materials.

Type	Capacity litres	Cat. No.	PK
Tickopur RW 77	1	9.192 611	1
Tickopur RW 77	2	9.192 612	1
Tickopur RW 77	5	9.192 615	1
Tickopur J 80 U	1	9.192 751	1
Tickopur J 80 U	2	9.192 752	1
Tickopur J 80 U	5	9.192 755	1
Stammopur 24	2	9.192 711	1
Stammopur 24	5	9.192 712	1
Stammopur 24	25	9.192 714	1



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