

▶ Cleaning & Disposal





Chapter 6

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General information

The definition of cleaning in the industrial sector is „maintenance and restoration of cleanliness“.

Cleanrooms, where dirt and contamination are in many cases not visually obvious at first sight, pose a challenge. As assistance for employee training, and as efficiency control, there are various devices available.

Important differences and danger of confusion concerning language use

- ▶ basic and maintenance cleaning
- ▶ cleaning and disinfection
- ▶ manual and machine cleaning

Disposable vs. reusable mop covers

Which cleaning path would you like to take? The one-way or the reusable way?
Or do you possibly use both? Or are you still undecided?

The following criteria will help you make a decision:

- ▶ Size of the area to be cleaned: → Surface performance → Efficiency
- ▶ Nature of the surface: → Liquid behaviour (wetting of surfaces)
→ Durability of cleaning utensils: → Abrasion resistance of mop covers
- ▶ Cleanliness requirements for room and material: → Abrasion resistance → State of cleanliness before the cleaning operation → Type of soiling in the area of application
- ▶ Space available and space required for storage: → Logistics → Availability of mop covers
- ▶ Risk of cross-contamination: → Ensuring safe handling
- ▶ Costs: → Overall profitability
- ▶ Sustainability

This approach is also necessary when comparing the aspects of the use of pre-saturated mop covers/wipes with those that have to be prepared separately.



Depending on the size of the area to be worked on, the processes taking place and the air cleanliness classification, as well as other individual conditions on site, there are a multitude of cleaning equipment options in different varieties and qualities.

- ▶ mop systems and handles
- ▶ cleaning trolleys and accessories
- ▶ special tools and solutions
- ▶ brooms, wipers and squeegees
- ▶ sponges, sponge clothes and special wipes
- ▶ cleaning swabs
- ▶ vacuum cleaners
- ▶ devices for efficiency control and for employee training



You can find further products in
Chapter 5 – Cleanroom wipes
Chapter 7 – Disinfectants

Should you miss a particular product, or need a special solution, please do not hesitate to contact us.

Mop covers

Disposable mop covers

Description	sterile*	Material	PU	Art. No.
Klercide™ mop cover , with pockets, 40 x 12 cm, individually double packed	yes	polyester/ cellulose	1 x 20 pieces	8032200
Mop wipe King CR , with pockets, 40 x 12 cm, individually double packed	yes	polyester (microfibre)	10 x 1 piece	81503IR
Mop wipe King CR , with pockets, 40 x 12 cm, suitable for cytostatic areas, autoclavable, decontaminated, individually double packed	no	polyester (microfibre)	10 x 1 piece	81503
Mop cover 2-layer , with pockets, 5 pcs. in vacuum bag	no	polyester	20 x 5 piece	81509
Mop cover Clino® UnoSicuro S PW structured, decontaminated, double packed**	no	polyester	1 x 5 pieces	81532
Mop cover Clino® One Way Ultra PW decontaminated, individually double packed	no	polyester (microfibre)	5 x 1 piece	81534
Mop cover Clino® One Way Ultra PW-I decontaminated, individually double packed	yes	polyester (microfibre)	5 x 1 piece	81534-IR
Mop cover Clino® One Way Standard PW decontaminated in a cleanroom, double packed	no	polyester (microfibre)	1 x 5 pieces	81535
Mop cover Clino® One Way Standard PW-I decontaminated in a cleanroom, double packed	yes	polyester (microfibre)	1 x 5 pieces	81535-IR
Mop cover DastMop , knitted fabric, with pockets	no	polyester	20 x 5 pieces	816000
Mop cover PurMop® EC40-S knitted fabric, with pockets	yes	polyester	20 x 5 pieces	816101
Mop cover PurMop® EF40-SV II , saturated 65% IPA/5% ethanol/30% pharmaceutical water	yes	polyester (microfibre)	10 x 5 pieces	816305
Mop head protection cover knitted fabric, for PU mop cover	no	polyester	10 x 1 piece	8094070

Notes: * sterile as well as gamma irradiated variants ** reusable for the grey area decontaminated = washed before packaging

IPA = Isopropanol

DI = Deionised Water



You will find pre-saturated mop covers in chapter 7!

Reusable mop covers

Description	autoclavable	Material	PU	Art. No.
Mop cover , pockets with drainage opening, blue bristle stripes, with Dastex logo	yes	polyester	5 pieces	81507-1
Mop cover King CR-MG hollow knitted loop material (microfibre) with sealed edges, decontaminated, individually double packed	yes	polyester	10 x 1 piece	81502
Mop cover MicroMopp pocket system EasyFlow, microfibre, for wet/dry cleaning of hard floors	no	polyester	5 pieces	81501
Mop cover MicroMopp Standard CR/A for dissolving adhering contaminations	yes	polyester/ polypropylene	5 pieces	81517
TruCLEAN® Sponge Mop blue cover, 40 x 12 cm	yes	polyurethane	25 pieces	82010-22-34

Mop cover holders and handles



For the area to be cleaned – under ideal conditions – the following rule of thumb applies:

- ▶ Disposable mops: approx. 8 – 15 m²
- ▶ Reusable mops: approx. 10 – 20 m²
(with the W x D standard size of 40 x 12 cm)



Description	autoclavable	Material	PU	Art. No.
Mop holder Clino® stainless steel contactless mop drop, available with locking screw, suitable for flat wringer and vertical press	yes	stainless steel	1 piece	81810
Mop holder Alu 490 g, aluminium plate/stainless steel mechanism, contactless mop drop, suitable for wall cleaning, for flat wringer and vertical press	yes	aluminium/ stainless steel	1 piece	81810-2
Mop holder Magnet , with magnet and foot pedal, only suitable for flat wringer Ringo ST (Art. No. 818016-1)	no	plastic	1 piece	81810-3
Mop holder invers ClinoConnect Lock stainless steel especially suitable for disposable mop covers, connecting part between holder and handle lockable (not suitable for flat wringers)	yes	stainless steel	1 piece	81810-11
Mop holder Clino® Synchro CR light/372 g, opening mechanism with hand and foot, symmetrical opening for easier mop cover reception, suitable for flat wringer Ringo GMP and vertical press	yes	plastic	1 piece	81810-12
Mop holder Clino® CR with ClinoConnect Lock contactless release of mop covers (MopDrop)	yes	stainless steel	1 piece	81810-14
Mop holder Clino® Synchro Hybrid with ClinoConnect Lock 475 g, no slipping of the cover, hygienic design: easy to clean, especially for hygienically sensitive areas	yes	stainless steel	1 piece	81810-16
Mop holder GMP handle and handle pick-up in one piece, length 1.60 m, suitable for flat wringer Ringo GMP	yes	stainless steel	1 piece	81510
Telescopic handle , length 1.00 – 1.80 m, with grey tilt lever	yes	aluminium	1 piece	81815-01
Telescopic handle , length 1.00 – 1.80 m, with grey tilt lever as well as sleeve and quick release fastener for ClinoConnect and ClinoConnect Lock	yes	aluminium	1 piece	81815-02
Telescopic handle , length 1.40 – 2.50 m, with tilt lever and ball shaped hold, made of glass fibre reinforced polyamide, blue, 600 g	yes	aluminium	1 piece	81816
Klercide™ Sterile mop wipe frame with telescopic aluminium handle , length 0.97 – 1.60 m*	yes	aluminium	1 piece	80303
Klercide™ Sterile mop wipe frame with stainless steel handle length 1.20 m/with handle pick-up 1.40*	yes	stainless steel	1 piece	80304
Silicone pad for mop wipe frame (Art. No. 80304) as a base for a better wiping of uneven floors	yes	silicone	1 piece	80304-1

* Use/application with saturated mop wipes of the appropriate size (420 x 250 mm).

- ▶ different, suitable handle variants are available on request
- ▶ all mop cover holders are designed for the W x D standard size of 40 x 12 cm



Classic cleaning trolleys with a wringing device are still in use, but are being replaced bit by bit by new innovative cleaning systems that allow a reproducible cleaning and application procedure. This is the only way to ensure hygienic and microbiological process reliability.

Cleaning trolleys are available in the GMP version made of stainless steel for highly sensitive areas as well as in the CR version with plastic containers for cleanrooms with less critical requirements.

The models mentioned are exemplary and can be equipped according to individual requirements (modular system).

Description / Cleaning trolleys	Type	Art. No.
Clino® CR4 SC/K-GMP with dosing unit MopScoop®, space-saving version	GMP	818040
Clino® CR4 SC/K-CR with dosing unit MopScoop®, space-saving version	CR	818041
Clino® CR4 MF-GMP, MopFloat system, high-end trolley for high sensitive areas	GMP	818030
Clino® CR4 MF-CR, MopFloat system, high-end trolley for non-sterile areas	CR	818031
Clino® CR4 EM-GMP, EasyMop system, high-end trolley for high sensitive areas	GMP	818015
Clino® CR4 EM-CR, EasyMop system, high-end trolley for non-sterile areas	CR	818014

Advantages depending on model and version

- ▶ GMP conformity
- ▶ highest efficiency in cleaning and disinfection
- ▶ safe avoidance of cross-contamination
- ▶ security and validity
- ▶ ergonomics and easy learnability
- ▶ high-level flexibility

Possible add-ons and accessories

- ▶ mop cover holders
- ▶ handle holders
- ▶ devices for contactless removal of mop covers
- ▶ buckets, system boxes and wringer handles, in different colours available – for better differentiation during the cleaning steps
- ▶ sterile removable bags for used mop covers



Decision criteria for choosing a trolley

- ▶ customer specific requirements
- ▶ customer processes
- ▶ areas of application
- ▶ size of the area to be worked on
- ▶ premises
- ▶ space and storage capacity on site

Container for pre-preparation

Description	autoclavable	Material	PU	Art. No.
System box EasyMop GMP with scale 1, 2, 2.5 and 4 L	yes	stainless steel	1 piece	81400
MopJump for system box EasyMop GMP for non-contact pick-up of mop covers	yes	stainless steel	1 piece	81401
System box EasyMop CR blue, red, green, yellow, grey, black	no	plastic	1 piece	81860



System boxes for pre-preparation are a space-saving alternative to the classic cleaning trolley:

Pre-preparation – features

- ▶ process safety
- ▶ reproducibility
- ▶ validated procedures
- ▶ sterility
- ▶ ergonomics and learnability
- ▶ avoidance of cross-contamination
- ▶ cost-effectiveness

Pre-preparation – advantages

- ▶ less fluid consumption
- ▶ consistent saturation
- ▶ contaminated mop covers cannot be used again
- ▶ ergonomic, easy to use system
- ▶ autoclavability
- ▶ standardised safety



Cleaning tools for isolators and work benches

Tools for the cleanroom compatible cleaning of safety cabinets and isolators

Extension handles can also be used for hard-to-reach areas. The special shapes make it easy to reach corners and angles. Suitable covers are ideally made of abrasion-resistant polyester. In less critical cases those made of polyester/cellulose are used. They are optionally dry/soaked with 70% IPA / 30% DI water.



Isolator cleaning tools iron-shaped

Description	Characteristic	Material	PU	Art. No.
Klercide™ isolator cleaning tool iron-shaped	autoclavable	stainless steel	1 piece	8029000
Klercide™ Pad iron-shaped, low particle	sterile	polyester	20 pieces	8029300
EasyClean® 360 cleaning tool for isolators and workbenches with 2 handles (14"/35 cm and 24"/61cm)	autoclavable	aluminium	1 piece	822EC360ICT1
Cleaning pad (set of covers and pad)	non-sterile	polyester	156 pieces*	822EC360-EC6
Cleaning pad (set of covers and pad)	sterile	polyester	220 pieces**	822ECST.20



EasyClean® 360

*6 x 25 covers and 6 x 1 pad ** 20 x 10 covers and 20 x 1 pad

Rectangular isolator cleaning tools

Description	Feature	Material	PU	Art. No.
EasyReach™ isolator cleaning tool, rectangular swivel head, 19.5 cm wide	autoclavable	stainless steel	1 piece	827301
Extendable handle QuickConnect™ for isolator cleaning tool short handle (40.6 cm) with suspension strap	autoclavable	stainless steel	1 piece	827301-1
Mop holder IsoClean with ClinoConnect Lock cleaning of safety workbenches/isolators (for Art. 81536-IR)	autoclavable	plastic	1 piece	827302
Telescopic handle CR with tilt lever short (50 – 70 cm), for IsoClean CR and GMP	autoclavable	aluminium/ PP grey	1 piece	827302-1
Pad for EasyReach™	non-sterile	polyester	60 pieces	827310
Pad for EasyReach™, saturated 70% IPA / 30% DI	sterile	polyester	64 pieces	827311-S
Pad for EasyReach™	sterile	polyester	60 pieces	827312

Rectangular isolator cleaning tools Dastex

Description	Feature	Material	PU	Art. No.
Isolator cleaning tool for DastPads (19.5 x 7 cm) holder rectangular form, 50 cm long, rigid handle	autoclavable	stainless steel	1 piece	823200
Telescopic handle for isolator cleaning tool length 77 – 145 cm (continuously adjustable)	autoclavable	aluminium	1 piece	823300
DastPad, disposable mop cover with pockets, 19.5 x 7 cm	sterile	polyester	100 pieces	823000
DastPad, (as Art. 823000) saturated 70% IPA / 30% WFI	sterile	polyester	40 pieces	823100



Art. No. 826705



Art. No. 826701



Telescopic handle,
Art. No. 826410

Many cleaning activities, particularly for special materials, machines and applications, can only be carried out with specially created equipment. For such cases and applications we present you a small selection.

Description	autoclavable	Material	PU	Art. No.
Tank cleaner , flexible bendable extension for even surface contact	yes	stainless steel/ POM	1 piece	826705
MegaTex cover for tank cleaner 5" x 14" (approx. 13 x 35 cm)	yes	polyester, PU-foam	24 pieces	826150
Cleaning device for lyophilisators	yes	polyester/ stainless steel	1 piece	826701
Cover for lyophiliser cleaning device M-Zone SnapMop™ 5" x 14" (approx. 13 x 35 cm)	yes	polyester, PU-foam	24 pieces	826131
Econo CurtainCleaner™ Adapter to clean vinyl lamella curtains and soft separators, 14" (approx. 35 cm)	yes	stainless steel	1 piece	826710
NovaPoly ECC Cover for Econo CurtainCleaner™ (Art. No. 826701) for strong disinfectants and cleaning solutions, 14 x 2.5 x 6"	yes	polyester, PU-foam	12 pieces	826140
Telescopic handle approx. 97 – 183 cm, for special tools	yes	stainless steel/ polypropylene	1 piece	826410



If you have any questions,
please contact us!

Brooms, wipers, squeegees and other cleaning equipment

6.6



Available in many colours!
Colour coding helps to avoid cross-contamination.



Description	Material	PU	Art. No.
Sweeping broom , 61 x 6.5 x 12.5 cm (L x W x H), bristle length approx. 57 mm, bristle medium-hard, suitable for sweeping fine and medium-sized particles	PP/PES/ stainless steel	10 pieces	828-3199
Ultra-hygienic squeegee , 50 x 10.5 x 7 cm (L x W x H), with exchangeable cassette and swivel joint	PP/TPE rubber	10 pieces	828-7723
Handle , 1.50 m long, ergonomic, hanging hole, robust	aluminium/PP	10 pieces	828-2937
Dustpan , 33 x 29.5 x 10 cm (L x W x H), solid model, lies flat on the floor, autoclavable	PP	10 pieces	828-5660
Hand brush , 33 x 3.5 x 11.1 cm (L x W x H), removal of fine and coarse particles, bristles with split fibres retain water and improve the cleaning effect, autoclavable	PP/PES/ stainless steel	15 pieces	828-4589
Hand scraper , 7.5 x 1.8 x 21 cm (L x W x H), blade thickness approx. 3.3 mm, ideal for removing strongly adhesive contaminants	PP	25 pieces	828-4060
Tube brush with handle , ø 20 mm, 50 cm long, for practical cleaning of bottles, tubes, pipes and places difficult to access	PP/PES/ stainless steel	15 pieces	828-5376

PP = polypropylene PES = polyester TPE = thermoplastic elastomer

In addition to the classic wiping systems, special cleaning devices such as brooms and squeegees etc. serve as further supplementary components of the cleanroom cleaning system. These are usually available in various designs and colours.

For smaller quantities, we will be happy to advise you on special purchase options!

Please note that the articles listed here are only a selection of the most common variants. Further products on request!



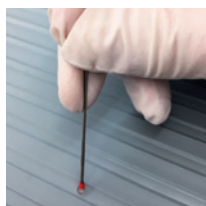
Dast-Roller, Art. No. 945320



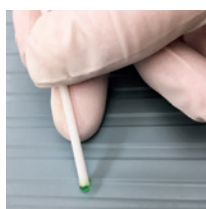
► CLEANING & DISPOSAL

Comparable to tacky mats, which bind particles to themselves through their adhesive power, there are cleaning products that also use this property to absorb particles or remove them from surfaces. They are generally used where, due to the circumstances or surface condition, no other cleaning agents and/or liquids should be used.

These can be, for example, adhesive rolls, wipes that have a certain adhesiveness or cleaning sticks that are used to specifically absorb particles.



Art. No. 53500



Art. No. 53505

Description	PU	Art. No.
Dast-Roller , ESD-compatible, yellow PE core \varnothing 38 mm, LDPE film 10 cm wide x 18 m long, film thickness $45 \pm 5 \mu\text{m}$, adhesive force 300 g/25 mm (± 50 g), surface resistance $\leq 10^{11}$ Ohm	10 x 10 rolls	945100
Handle for Dast-Roller (Art. No. 945100), chrome-plated stainless steel, 27.5 x 8 cm (L x W)	5 pieces	95310
Dast-Roller , white PE core \varnothing 76 m, LDPE film 32 cm wide x 20 m long, film thickness $80 \pm 5 \mu\text{m}$, adhesive force 500 g/25 mm (± 50 g), surface resistance $\leq 10^{11}$ Ohm, heat resistant (100 °C)	10 x 1 roll	945320
Handle for Dast-Roller (Art. No. 945320), PP/chrome-plated stainless steel, 120 x 32 cm (L x W)	1 piece	95303
Cleaning swab gel stick adhesive silicone head \varnothing 2 mm, stainless steel handle	10 x 10 pieces	53500
Cleaning swab adhesive polyurethane head \varnothing 2.5 mm, polypropylene handle, individually packed	1,000 pieces	53505
Adhesive particle counter pad PC-PAD , polypropylene/carrier paper (220 g/m ²), water-based adhesive (adhesive force 600 g \pm 100), 140 x 120 mm	4 x 20 pieces	53580
Dust binding wipe Gentex 160 , cotton gauze with adhesive, for particle removal before surface treatment, 40 x 75 cm \pm 10%	5 x 100 pieces	53160
Dust binding wipe Staubfix poly classic , impregnated polyester knitted fabric, antistatic, for critical applications, plastic substrates and water-based paints /varnishes, 20 x 45 cm	8 x 25 pieces	53170

LDPE = Low Density Polyethylene



Art. No. 90125



Art. No. 90100

Description	sterile	Size	Material	PU	Art. No.
Sponge wipes DXE-20 coarser pore structure, for cleaning of equipment and machines	no	230 x 230 x 2 mm	PVA	25 x 1 piece	90203
Sponge wipes DXD-20 very small pore structure, for precision cleaning	no	230 x 230 x 2 mm	PVA	25 x 1 piece	90204
Sponge wipes DXS-100 for cleaning large surfaces, as well as floors and walls	no	430 x 325 x 1.5 mm	PVA	10 x 1 piece	90100
Block sponge DXD-125 for absorption of larger amounts of liquid, with good particle binding	no	125 x 85 x 355 mm	PVA	10 x 1 piece	90125
Special wipes					
Reusable wipe Clino® Carbon antistatic, autoclavable, low particle emission, for smooth, water-resistant surfaces	no	350 x 400 mm	polyester/ carbon	5 x 1 piece	51PPSCarbon1
Cleaning wipe Wipextra , 68 g/m ² , Z-folding, very absorbent and relatively solvent-resistant	no	300 x 360 mm	45% polyester/ 55% cellulose	10 x 50 pieces	55WipXtra68

PVA or PVAC = polyvinyl acetate



We also offer versions
made of PVA, PU
or microfibres.

Special features of the sponges

- ▶ high liquid absorption
- ▶ reusable after rinsing in clear water/DI water



Description	sterile	Material	Head size /~	Handle length/~	PU	Art. No.
Swab	no	microporous polyurethane foam 100 PPI with polypropylene handle	Ø 3.2 mm Ø 4.8 mm Ø 6.4 mm 16 x 8 mm	9.5 cm 14 cm 9.5 cm 10.8 cm	500 pieces	55930
Swab ESD conform	no	compressed polyurethane foam 100 PPI with polypropylene handle	Ø 2.4 mm	5.1 cm	500 pieces	53-DA-1001
Swab ESD conform	no	compressed polyurethane foam 100 PPI with polypropylene handle	Ø 2.4 mm	6 cm	500 pieces	53-DA-1005
Swab ESD conform	no	knitted polyester, two layers with polypropylene handle	Ø 2.3 mm	6 cm	500 pieces	53-DA-1010
Swab LTP70R.20	no	knitted polyester, two layers with polypropylene handle	Ø 2.8 mm	5.8 cm	20 x 100 pieces	53-BS-LTP70R
Swab SP-6	no	knitted polyester, two layers with polypropylene handle	Ø 2.8 mm	14.6 cm	20 x 100 pieces	53-CO-SP-6
Swab SV-2 for validation purposes of surface cleaning protocols	no	polyester knitted fabric, two layers (minimum release of TOC) with polypropylene handle	Ø 5 mm	13.1 cm	5 x 200 pieces	53-CO-SV-2

PU = polyurethane PPI = Pores per Inch TOC = total organic carbon

For particularly difficult cleaning activities, where a wipe or other equipment is not suitable, so-called swabs are very often and successfully used. Cleaning swabs are special cleaning devices that can be recommended for use in controlled areas due to their material properties. These primarily include appropriate abrasion resistance and low self-contamination as well as absorption capacity and chemical resistance.

Cleaning swabs or so-called swabs are available in a variety of designs. The differences are mostly in the composition of the head (material, shape, size) as well as in different handle lengths. Here, too, the process and the application determine the choice of material.

We have listed only a small selection. All in all, our product range of cleaning swabs comprises almost 50 different models or variants.

Please ask for further models!



From a cleanroom point of view, it must be ensured that the disposal systems are a consistent system.

Important properties

- ▶ non-contact filling ▶ lid opening by foot pedal
- ▶ non-contact disposal ▶ endless tubular bags
- ▶ waste separation ▶ different coloured bags
- ▶ electrical conductivity/electrostatic discharge (ESD) capability ▶ suitable material and tubular foil bags
- ▶ container materials can be cleaned and disinfected
- ▶ gamma irradiated tubular foil bag cassettes available
- ▶ automatic and safe disposal and sealing of hazardous materials ▶ Pactosafe®

Type description Longopac® Stand Classic and Dynamic

Waste container system for tubular foil cassettes

Product line Stand Classic (H x W / Ø opening / weight)

▶ Mini + Mini Food: 850 x 380 mm / 290 mm / 3.2 kg

▶ Maxi + Maxi Food: 1055 x 570 mm / 420 mm / 5.4 kg

Product line Stand Dynamic (H x W / opening / weight)

▶ Mini: 955 x 395 mm / 232 x 232 mm / 6.5 kg; MINI Pedal: 970 x 395 mm / 232 x 232 mm / 7.3 kg

▶ Midi: 955 x 500 mm / 320 x 280 mm / 8.9 kg; MIDI Pedal: 970 x 500 mm / 320 x 280 mm / 9.7 kg

▶ Maxi: 955 x 560 mm / 358 x 358 mm / 10 kg; MAXI Pedal: 970 x 560 mm / 358 x 358 mm / 11 kg

Type description Pactosafe® 4.0 WIDE

Waste bag film sealing device with foot pedal switch, mains-operated (WS) or battery operated mobile version, rechargeable (WM)

- ▶ 460 x 545 x 915–1285 mm (W x D x H); opening: 143 x 260 mm, container height: 445–810 mm; 32 kg



Materials Longopac® Stand Classic

- ▶ base plate (ABS/PC), legs (aluminium), cassette holder (PP) (Standard)
- ▶ base plate and cassette holder (PP/stainless steel) – higher load bearing capacity than Standard
- ▶ base plate and cassette holder with blue metal-detecting PP, legs and wheels made of stainless steel – Food version

Material Pactosafe®

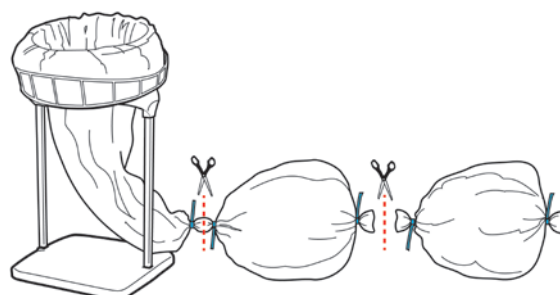
- ▶ stainless steel

Accessories options Longopac® Stand Classic

- ▶ lid +/- funnel-shaped disc
- ▶ foot pedal to open the lid
- ▶ wall mounting
- ▶ floor stand +/- frames to hold the bag
- ▶ galvanised steel / stainless steel / ESD capable castors (front castors with stopper)
- ▶ scissors + holder/cable ties (incl.)
- ▶ interconnecting kit (even for several products, also Maxi to Mini)

Variants tubular foil cassettes Longopac® Stand

- ▶ colour choice
- ▶ foil thickness: standard / strong / X-strong
- ▶ antistatic / ESD
- ▶ food industry suitable
- ▶ biodegradable
- ▶ odour control
- ▶ gamma irradiated
- ▶ metal detectable clips





Scissors and cable ties included!

Models Longopac® and Pactosafe®

Longopac® Stand Classic Mini (opening ø 290 mm) / **Stand Dynamic Mini** (opening 232 x 232 mm)



Art. No. 27050-1

Description	Art. No.
Stand Classic Mini Standard , grey base plate (ABS/PC), cassette holder (PP), alu legs, galvanised steel castors	27050-1
Stand Classic Mini Stainless , grey base plate (ABS/PC), cassette holder (PP), stainless steel legs/castor holders	27050-2
Stand Dynamic Mini , made of galvanised steel	27056-1
Stand Dynamic Mini Pedal , made of galvanised steel, with foot pedal and lid	27056-2
Stand Dynamic Mini , made of stainless steel	27056-3
Stand Dynamic Mini Pedal , made of stainless steel, with foot pedal and lid	27056-4

ABS = Acrylonitrile-Butadien-Styrene PC = Polycarbonate PP = Polypropylene PE = Polyethylene

Type (tubular foil cassettes)	Colour	Material	Foil thickness	Foil ø/length	PU	Art. No.
Longopac® Mini Standard	Ⓛ ● ● ● ● ●	PE	18 µm	357 mm / 60 RM	1	27110
Longopac® Mini Sterile gamma irradiated, according EN ISO 111371-3 (min. 25 kGy)	Ⓛ	PE	18 µm	357 mm / 60 RM	3	27111
Longopac® Mini Strong	Ⓛ ● ● ● ● ●	PE	26 µm	357 mm / 45 RM	1	27100
Longopac® Mini Food Standard	Ⓛ ●	PE	18 µm	357 mm / 60 RM	1	27161

Ⓛ transparent ● black ● red ● yellow ● green ● blue ● pink RM = running meter



Art. No. 27053-4



Art. No. 27053-1

Longopac® Stand Dynamic Midi (opening 320 x 280 mm)

Description	Art. No.
Stand Dynamic Midi , made of galvanised steel	27053-1
Stand Dynamic Midi , made of stainless steel	27053-3
Stand Dynamic Midi Pedal , galvanised steel, with foot pedal and lid*	27053-2
Stand Dynamic Midi Pedal , stainless steel, with foot pedal and lid*	27053-4

* equipped with shock absorbers for a smooth closing. The 85° opening facilitates the treatment of waste or packaging. Midi Pedal can be placed in a fully open position at 100° for faster cassette loading.

It is possible to lock the larger and quieter front wheels of the Dynamic model range. In addition, a cable-tie holder and scissors can be attached to the left or right side of the cassette holder. Plastic parts made of metal detectable material.

Type (tubular foil cassettes)	Colour	Material	Foil thickness	Hose ø/length	PU	Art. No.
Longopac® Midi Standard	Ⓛ ● ● ● ● ●	PE	22 µm	465 mm / 85 RM	1	27150-1
Longopac® Midi Strong	Ⓛ ● ● ● ● ●	PE	30 µm	465 mm / 70 RM	1	27150-2
Longopac® Midi Strong ESD*	●	PE	30 µm	465 mm / 70 RM	1	27150-3

* Surface resistance value 1.0E + 10 Ohm RM = running meter

Particle visualising lamps



Picture: CCI von Kahliden GmbH



Art. No. 257260

Description	PU	Art. No.
Particle visualising lamp PVL-2 UVA UV light including accessories	1 piece	257210
Particle visualising lamp PVL-2-Br white light including accessories	1 piece	257215
Particle visualising lamp PVL-3M UV and white light lamp (dimnable in 3 steps) including accessories	1 piece	257225-1
KlerReveal training kit for hand cleaning Training set for visualisation of contaminations on the skin consisting of: - display case - small torch - a flask of KlerReveal: red UV fluorescent powder, 50 g - hand cream, 200 ml - brush - carrier bag for display case	1 piece	25610
Inspection mirror and suitable accessories		
Micronova® inspection mirror	6 pieces	257260
LED flashlight, 3.8 x 1.25", batteries included	4 pieces	257261
Holder for LED flashlight	4 pieces	257262
Protective cap	12 pieces	257263
Extendible handle (38" – 72" / 97 – 183 cm)	6 pieces	826410



Further products and supplements available on request!

Model variants

PVL variation	Description	Features	Areas of application
PVL-2-UVA Art. No. 257210	Technical data - Li-ion battery pack, service life > 2 h - front glass with UV filter - dimensions: length 180 mm, Ø 52 mm, 295 g Components: - lamp PVL-2 as described - loading unit with charger - black glass plate, edges polished, 100 x 100 x 3 mm - aluminium suitcase with unit-specific moulded inlay - sample: black cleanroom wipe for particle inspection - UV safety goggles	- pocket-size lamp - battery operation - easy handling - resistant to disinfectants - suitable for H ₂ O ₂ -fumigation - dust-/waterproof (IP - 68) - battery checking - Full Width of Half Maximum 10 nm - wavelength 365 nm	- control/inspection of containers, machines, process enclosures, all surfaces - optimisation of cleaning processes - suitable for performing riboflavin tests - training purposes: cleaning operations, e.g disinfection of hands, demonstration of cross-contamination
PVL-2-Br White light Art. No. 257215	Technical data: - Li-ion battery pack, service life > 2 h - dimensions: length 180 mm, Ø 52 mm, 295 g Components: - lamp PVL-2 as described - loading unit with charger - black glass plate, edges polished, 100 x 100 x 3 mm - aluminium suitcase with unit-specific moulded interior - optical fibre (PVL-2-LL)	- pocket-size lamp - battery operation - easy handling - resistant to disinfectants - suitable for H ₂ O ₂ -fumigation - dust-/waterproof (IP - 68) - battery checking - Full Width of Half Maximum 10 nm - colour temperature 6,000 K	- control/inspection of containers, machines, process enclosures, all surfaces - optimisation of cleaning processes - suitable for performing riboflavin tests - training purposes: cleaning operations, e.g disinfection of hands, demonstration of cross-contamination
PVL-3M Art. No. 257225-1	Two lamps in one: UV and white light (in 3 dimmable steps) Technical data: - Li-ion battery pack, service life > 3 h - frontglass with UV filter - dimensions: length 220 mm, Ø 70 mm, 450 g Components: - lamp PVL-3M as described - UV safety glasses - PVL-3 optical fibre (PVL-3-LL) - loading unit (PVL-3-LS) with charger (PVL-3-LG) - black glass plate, edges polished, 100 x 100 x 3 mm - aluminium suitcase with unit-specific moulded inlay - manual and brief instruction - sample: black cleanroom wipe for particle inspection - durability of the LEDs: 10,000 h	- pocket-size lamp - battery operation - easy handling - resistant to disinfectants - suitable for H ₂ O ₂ -fumigation - dust-/waterproof (IP - 68) - battery checking - Full Width of Half Maximum 10 nm - wavelength 365 nm - colour temperature 6,000 K	- control/inspection of containers, machines, process enclosures, all surfaces - optimisation of cleaning processes - training purposes: cleaning operations, e.g disinfection of hands, demonstration of cross-contamination



Possible accessories (partly standard)

- ▶ bottle with dosing pump Magic Fluore (500 ml) liquid UV-fluorescent to visualize the particle concentration on surfaces
- ▶ black cleanroom wipes (pack of 50)
- ▶ black glass plates with polished edges, size: 100 x 100 mm, thickness: 3 mm, minimum purchase: 5 pieces
- ▶ fibre-optic light guide for PVL-2/PVL-3M
- ▶ loading unit and charger for PVL-2/PVL-3M
- ▶ suitcase for PVL-2/PVL-3M (aluminium with inlay)
- ▶ manual and brief instructions
- ▶ protective cap for PVL-2/PVL-3M
- ▶ anti-theft device for PVL-2/PVL-3M
- ▶ UV safety goggles – various designs

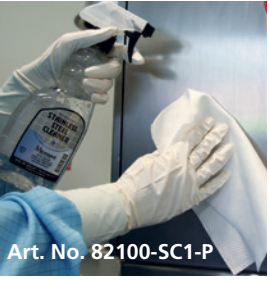
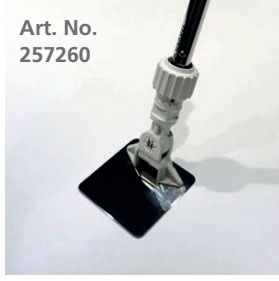


Further visualisation lamps and systems on request!

Art. No.
257225-1



Art. No.
257260



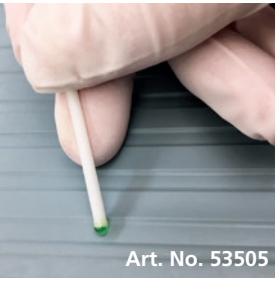
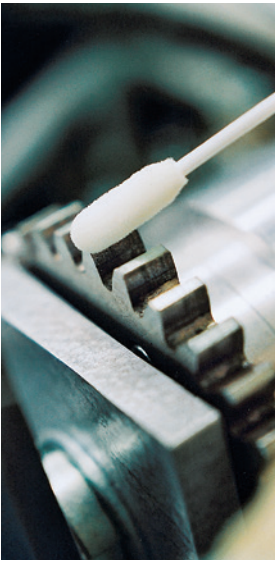
Art. No. 82100-SC1-P



Art. No. 81503



Art. No. 826705



Art. No. 53505



Art. No. 81507-1



Art. No. 945320



Art. No. 90125



Art. No. 81507-1

Cleaning liquids for various applications

6.12

Further cleaning agents, see chapter 7!

In most cases, one cleaning product is sufficient for all areas of application, but special solutions are often needed to better remove certain types of contamination.

Here we have listed a small selection of cleaning agents for you, depending on the respective material surfaces and the contaminations to be removed.

Further variants are available on request!

Description	Size	PU	Art. No.
Stainless steel cleaner gel, phosphate-free, biodegradable, with spray head	16 oz	12 bottles	82100-SC1-
MegaClean™, power cleaner and fat remover concentrate, filtered, with screw cap, non-flammable	¼ gallon 1 gallon	8 bottles 4 canisters	82100-MC1 82100-MC1
NovaClean™ AFX, cleaner for floor, wall and ceiling amine-free concentrate, filtered, with screw cap	1 gallon	4 canisters	93900
NovaClean™, cleaner for floor, wall and ceiling concentrate, filtered, with screw cap	1 gallon	4 canisters	93901
NovaClean™ Lab & Glass Cleaner ready for use, filtered, with spray head	¼ gallon	8 bottles	93902

Dimensions in US format:

16 oz = approx. 470 ml
¼ gallon = approx. 946 ml
1 gallon = approx. 3.78 l



Technical data are available on request!



▶ CLEANING & DISPOSAL

Product recommendations referring to cleanroom classes

6.13

Cleanrooms and associated controlled environments – Part 1
Classification of air cleanliness by particle concentration
EN ISO 14644-1

Hygiene zones
(microbiological controlled areas) according to GMP

Article	3	4	5	6	7	8	9	low dust	A	B	C	D	E
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All articles to product classifications:

Mop systems and handles

Cleaning trolleys and accessories

Cleaning tools for isolators/workbenches

Special solutions, special tools

Brooms, wipers and squeegees

Adhesive cleaning products

Sponges and special wipes

Cleaning swabs

Disposal systems and accessories

Cleaning liquids for various applications

▶ EXPLANATION

Cleaning and disposal systems suitable for cleanrooms can basically be recommended for all cleanroom classes from ISO 5 to ISO 9 (or low dust rooms). Therefore, we have refrained from listing a corresponding table here – as in the other chapters.

The same applies to hygiene zones A to D, if the items have been sterilised accordingly in advance for the A/B zones.