



Cleanliness
lies in detail

Cleaning and disinfection systems for cleanrooms

The consulting catalogue for
effective contamination control

PPS
PFENNIG PROFI SYSTEM



Welcome



Dipl.-Kfm. Dietmar Pfennig
Master Craftsman for Professional Building Cleaning
Managing Director

Herbert Pfennig
Founder

For more than 40 years we have been working on the development and production of professional cleaning equipment. The name of our company – Pfennig Reinigungstechnik – is based on the fact that, for us, a product's technical components are always at the forefront. As a master craftsman for professional building cleaning, I am very cognisant of what a good cleaning system should be: an efficient tool for the production of the commodity cleanliness. Since in controlled areas, the term "cleanliness" is subject to a completely different meaning than is the case in standard building cleaning services, in 1999 we decided to rise to this challenge by using an entirely newly developed product line: The Clino CR cleaning and disinfection system.

Clino CR was the first system of its kind certified for the use in cleanrooms. Since then, we have continuously been improving it.

In the meantime, the segment "special solutions for cleanrooms" has developed into its own business unit within our company. Initially, this business segment was operated based on

our own inquisitiveness and our fascination for its technical feasibility. For this reason, from now on we will publish a specific catalogue just for cleanrooms. This catalogue will supplement our overall corporate catalogue. This is our first issue.

In this issue, when we now and then refer to "systems", we do not only mean the alignment of the individual components to each other: we retain a significant network to manufacturers of cleaning and disinfection agents, cleanroom laundries and other suppliers of specialised cleanroom services. Our goal is not to offer you individual components, but always an aligned system solution.

If you ever need anything that you are unable to find in our brochure or if you're looking for a specialised solution, then talk to us. We look forward to hearing from you.

*Sincerely,
Dietmar Pfennig*





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PPS Pfennig – the company

We are able to work in a place where others spend their holidays – in Oberallgäu, situated directly at the edge of the Alps. We have been located in Durach since the company's founding in 1974. Based on our location in the middle of Germany's southernmost administrative district and the traditional specialisation of the Allgäu-based industry on mechanical engineering and plastics technology, we have first-class employees and access to a comprehensive network of specialists at our suppliers. Our – or your – ideas take shape at this location.

Brought to life on the most modern CAD workstations, we build and test prototypes and mount the series models in a ready-to-use manner. From this location we also deliver our products using our own vehicles, through a forwarding agent, or through specialised wholesale trade – all based on your wishes. All of our products are based on our own developments. We own all tools, forms and proprietary rights. This fact guarantees that we remain independent and it guarantees that you will continue receiving reliable products.



The Pfennig Reinigungstechnik building and premises in Durach

Being an entrepreneur also means to assume social responsibility

The Pfennig Foundation

Around the globe, about 16,000 Salesians of Don Bosco work in more than 130 countries to help underprivileged children and young adults. As a member of the Don Bosco Foundation Centre, the "Pfennig Foundation" supports this work.



Planning, consulting and sampling:

Based on the PPS system cycle, our in-house and field specialists will analyse your individual requirements. The products that have been aligned to your needs will be provided to you as a free-of-charge sample to undergo your own evaluation.



Continuing education and training:

Our highly qualified specialists (master craftsmen in the field of building cleaning, hygiene engineers) conduct training seminars in our training facilities in Durach. If requested, they can also conduct training in your regional offices.



Consulting and support:

With a nationwide sales staff in Germany as well as an extensive network of dealers domestically and throughout Europe, we are located near you. Our highly specialised inside sales staff is available to provide you with telephone support.



Leasing and financing:

In collaboration with specialised cleanroom laundries, we offer you a mop leasing concept. This means that you only pay one flat rate per mop cover used. However, you do not have to worry about the procurement and preparation. Even our system trolleys and accessories can be purchased through either leasing or rent-to-own schemes.



You must react quickly

Our comprehensive Cleanroom warehouse enables us to meet your requirements and wishes within a 24-hour period. We retain large volumes of all items in our cleanroom range in stock. This way we – and you – can react quickly.



The PPS fleet will deliver the products to your door, if desired.



Innovations

Copying may be the best form of flattery*, but we'd rather develop our own products.

We've always chosen to take a different path – since 1974 we have been primarily responsible for the development of many pioneering developments in professional industrial cleaning or played a major role in these. With 16 owned patents, patent applications and utility models – only in the area of manual cleaning and disinfection of hygienically sensitive areas – we are one of the most innovative companies in the industry.

* Chinese proverb

- 1974 Company founding
- 1988 Stainless steel flat wringer
- 1990 Stainless steel module system "Clino"
- 1995 ISO certification as one of the first companies in the industry
- 1995 Plastic flat wringer "Ringo"
- 1997 System for the hands-free mop reception "MopJump"
- 1998 Co-development of the first system for the ready to use machine impregnation of textiles "ProMop".
- 1999 Cleaning system for cleanrooms "Clino CR" with Mop King CR with IPA-certification
- 2000 System for the manual, ready-to-use impregnation of mops "EasyMop"
- 2009 Special mop for cleanrooms MicroSicuro CR/A
- 2011 Nordic Ecolabel-certified cleaning concept "PPSC"
- 2011 Cleaning system for cleanrooms "EasyMop GMP" – the first reproducible and operator-independent system
- 2013 Extension of the ISO certification to include the development of cleaning equipment for cleanrooms
- 2013 IPA-certification for the Mop King GMP and MicroSicuro CR/A
- 2014 Clino MultiBox with impregnation system PlusBox
- 2014 IPA-certification for single use mop King CR Wiper Mop S
- 2014 MopFloat: Secure, reproducible and verifiable impregnation of mops
- 2015 EasyMop GMP system box wins the Innovation award at the ContaminExpo in Paris



1999: Clino CR, cleaning system for cleanrooms (entire system is IPA-certified)



2000: System for the manual, ready-to-use impregnation of mops "EasyMop": The maximum security and efficiency in the cleaning through relinquishing the mechanical components and the operator-independent design



2011: EasyMop GMP is the first closed and verifiable cleaning and disinfection system for sterile areas – reproducible and operator-independent (entire system is IPA-certified)



2014: MopFloat GMP, verifiable and operator-independent impregnation of mops through mechanical intelligence. Suitable for sterile areas GMP A/B

The Company – Services



Construction:

Using the modern 3-D engineering software "Solid Works", we can depict different solutions – of course, you are more than welcome to introduce your own ideas.



Flexible manufacturing:

Through the high qualification of our metal, plastic and textile experts, we can quickly implement your requirements, including your custom-made product.



Quality:

All of our products are manufactured on our own tools and forms; since 1995 we have been implementing the quality management guidelines as per ISO 9001 ff.



10-year spare parts guarantee:

We support the proverbial longevity of our systems through a 10-year spare parts guarantee as well as a complete renewal programme for up to 20-year-old stainless steel system trolleys.



Individualisation:

Do you require an individualised product or a special solution? We are able to realise your wish within a short period of time using CAD.

Range of applications

The activities of Pfennig Reinigungstechnik are divided into the four divisions listed below. This catalogue is limited to the cleanroom division. Information about our Hospital, Industrial and PPSC divisions is available in our comprehensive catalogue or at www.pps-pfennig.de.

PPS Cleanroom



Solutions for high-sensitive areas

For 15 years, we have been working to meet the highest existing demands in the area of manual floor cleaning: The development of special solutions for the pharmaceutical industry as well as for the manufacturers of semiconductors, optical technology and precision engineering. Our Clino CR cleanroom cleaning system fulfils the following requirements:

- + Safety and verifiability:**
Qualification through Fraunhofer IPA
- + GMP conformity:**
Safety, also in sterile areas
- + Highest efficiency for cleaning and disinfection:**
Through intelligent work processes
- + Safe avoidance of cross-contamination:**
Through hands-free mop reception and creation of zone concepts
- + Ergonomics and easy to learn:**
Ensure resistance against incorrect handling

PPS Hospital



Expertise in the health care industry

Hygienic cleanliness and efficiently designed, ergonomically optimised work processes – for over 30 years Clino system trolleys have proven themselves in hygienically sensitive areas:

From the major university hospital to the small health care facility, our EasyMop impregnation processes ensure the most stringent hygienic reliability with maximal flexibility.

- + Latest prior art:**
The EasyMop process provides ready-to-use mops and cloths
- + Hygienic design:**
 - Use of stainless steel as a base material
 - Completely removable without tools
 - Consequent avoidance of using materials that aren't hygienically safe
- + Colour-coded hygienic zone concept:**
Through a colour-coded system of system boxes and mops, safety is created across all language barriers
- + PPS mops for use in hospitals:**
Long-lasting and durable with the use of all professional cleaning and disinfection agents
- + Comprehensive evaluation:**
The PPS hospital cleaning system is tested by independent experts

PPS Industry



Ergonomics and efficiency

Industrial cleaning is a trade. In each trade one strives to find the most efficient production method and to use the most appropriate tools. For this reason, we provide you with the flat wringer “Ringo” and the modular Clino cleaning trolley, which enables the most efficient technique suited to the respective process and helps structure work processes in the easiest and most time-saving manner possible.

- + More efficiency:**
Since the mop remains on the mop frame, the Ringo flat wringer reduces the non-productive times (such as, for example, detaching the mop, washing and mounting) to a minimum
- + More ergonomics:**
The entire workflow runs in an ergonomically efficient manner:
 - No more bending
 - Much lower weight of the mops
 - Higher coverage area per mop
- + Excellent result:**
Maximum cleaning performance through:
 - High-tech fibre mixture
 - Precise dosability of the moisture level
 - Altering between one- and two-stage wiping technique possible at any time

PPSC



Professional sustainable cleaning

Ensuring the efficient use of resources is a challenge that goes far beyond the actual manufacturing of a product. For this reason we have introduced – based on over 40 years of experience in the development and manufacturing of professional cleaning tools – an independent concept with associated product line to the market: PPSC – Pfennig Professional Sustainable Cleaning.

- + Sustainable layout of the four core processes of manual floor cleaning**
- + Certified cleaning textiles:**
The mops and cloths designed for the PPSC concept have been certified in accordance with the extremely demanding »Nordic Environmental Seal« for tested sustainability
- + Tried and tested Basis Clino STE:**
The multiply proven and tested Clino STE modular design with rust-free stainless steel frame construction is a cognisant counterpoint to the »throw-away« mentality
- + Comprehensive range of accessories:**
For the alignment to object-specific circumstances, the PPS product line also features a comprehensive range of accessories

Cleanroom classification



Cleanrooms
for the production
of non-sterile phar-
maceutical products
and medical devices



Cleanrooms
for the
technical industry



Cleanrooms
for the food
processing industry

The cleaning and disinfection of all cleanrooms demands efficiency, process reliability, cost effectiveness and must be easy to use. If, however, you take the different purity classes (ISO and/or GMP) in different industrial areas into account, then the cleanrooms differ according to the requirements and regulatory standards:

In the technical industry, all kinds of particles can lead to disruptions, production downtimes, or quality issues. Thus, the removal of particle contamination is in the foreground; also, the cleaning equipment itself should not be a source of particles.

In the industrial areas of medical technology, non-sterile medical devices,

foodstuff and the cosmetic industry, a defined safety standard in regards to particles and microbiological contamination is demanded, however sterility is not a presupposed condition. To ensure the hygienic purity, it is important that the machines used in the production do not import or spread any contamination. In addition, they must offer a high level of reliability in daily use.

The pharmaceutical GMP guidelines provide clear specifications for the machines producing pharmaceutical products in order to prevent health risks and spoiling.

The equipment must be GMP-conform, using special materials, and

secure a safe and reproducible wetting.

In order to assist you in your choice of suitable equipment, we have classified our products with a cleanroom class indicator as per the classification table on the right.

In order to make it easier to assign the PPS cleanroom products to the respective cleanroom classes, you can find this indicator, which folds out, at the very front of the basic information.

ISO	3	4	5	6	7	8	9
GMP			A/B		C	D	



Sterile rooms for the production of sterile pharmaceutical products and medical devices



Cleanrooms for the cosmetics industry



Controlled areas, for example, for car painters

Classification comparison of airborne particulate contamination

Nomenclature				Maximal allowable number of particles as per ISO 14644-1 [$\mu\text{m}/\text{m}^3$]											
DIN EN ISO 14644-1	EU-GMP »at rest«	EU-GMP »in Operation«	US Fed. Std. 209 E*	0,1 μm		0,2 μm		0,3 μm		0,5 μm		1,0 μm		5,0 μm	
				pro m^3	pro ft^3	pro m^3	pro ft^3	pro m^3	pro ft^3	pro m^3	pro ft^3	pro m^3	pro ft^3	pro m^3	pro ft^3
1				10	0,3	2	0,1								
2				100	3	24	1	10	0,3	4	0,1				
3				1.000	30	237	7	102	3	35	1	8	0,2		
			1	1.240	35	265	8	106	3	35	1				
4				10.000	300	2.370	67	1.020	29	352	9,9	83	2		
			10	12.000	340	2.650	75	1.060	29	353	10				
5				100.000	2.833	23.700	671	10.200	289	3.520	100	832	24	29	0,8
	A	A								3.520	100			20	0,6
	B									3.520	100			29	0,8
			100			26.500	750	10.600	300	3.530	100				
6				1.000.000	28.329	237.000	6.710	102.000	2.890	35.200	997	8.320	235	293	8
			1.000							35.300	1.000			247	7
7										352.000	9.972	83.200	2.357	2.930	83
	C									352.000	9.972			2.900	82
		B								352.000	9.972			2.900	82
			10.000							353.000	10.000			2.470	70
8										3.520.000	99.716	832.000	23.569	29.300	830
	D									3.520.000	99.716			29.000	821
		C								3.520.000	99.716			29.000	821
			100.000							3.530.000	100.000			24.700	700
9										35.200.000	997.167	8.320.000	235.694	293.000	8.300

* The US Federal Standard 209E was replaced in 2001 by DIN EN ISO 14644-1 and is no longer valid.

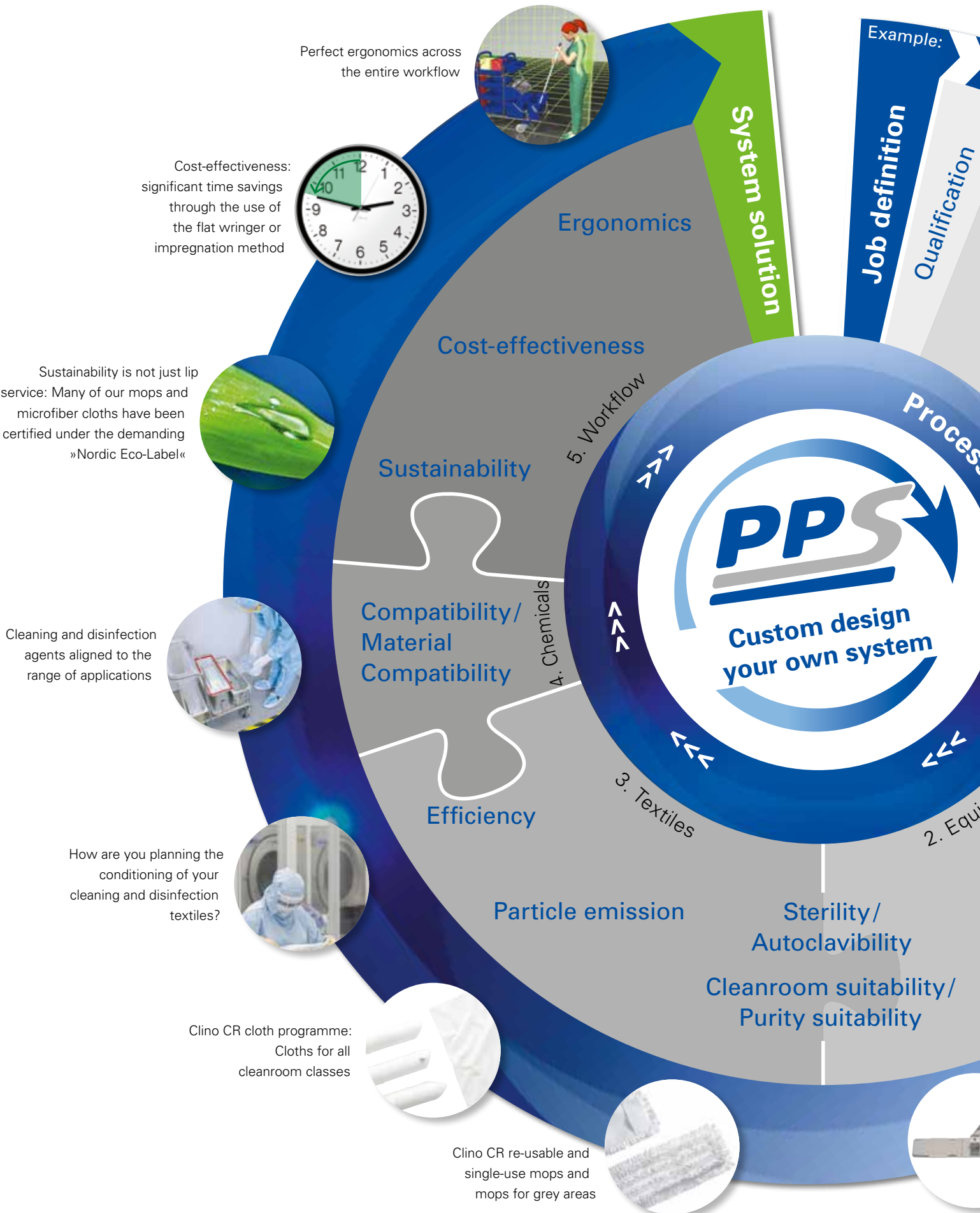
Purity classes

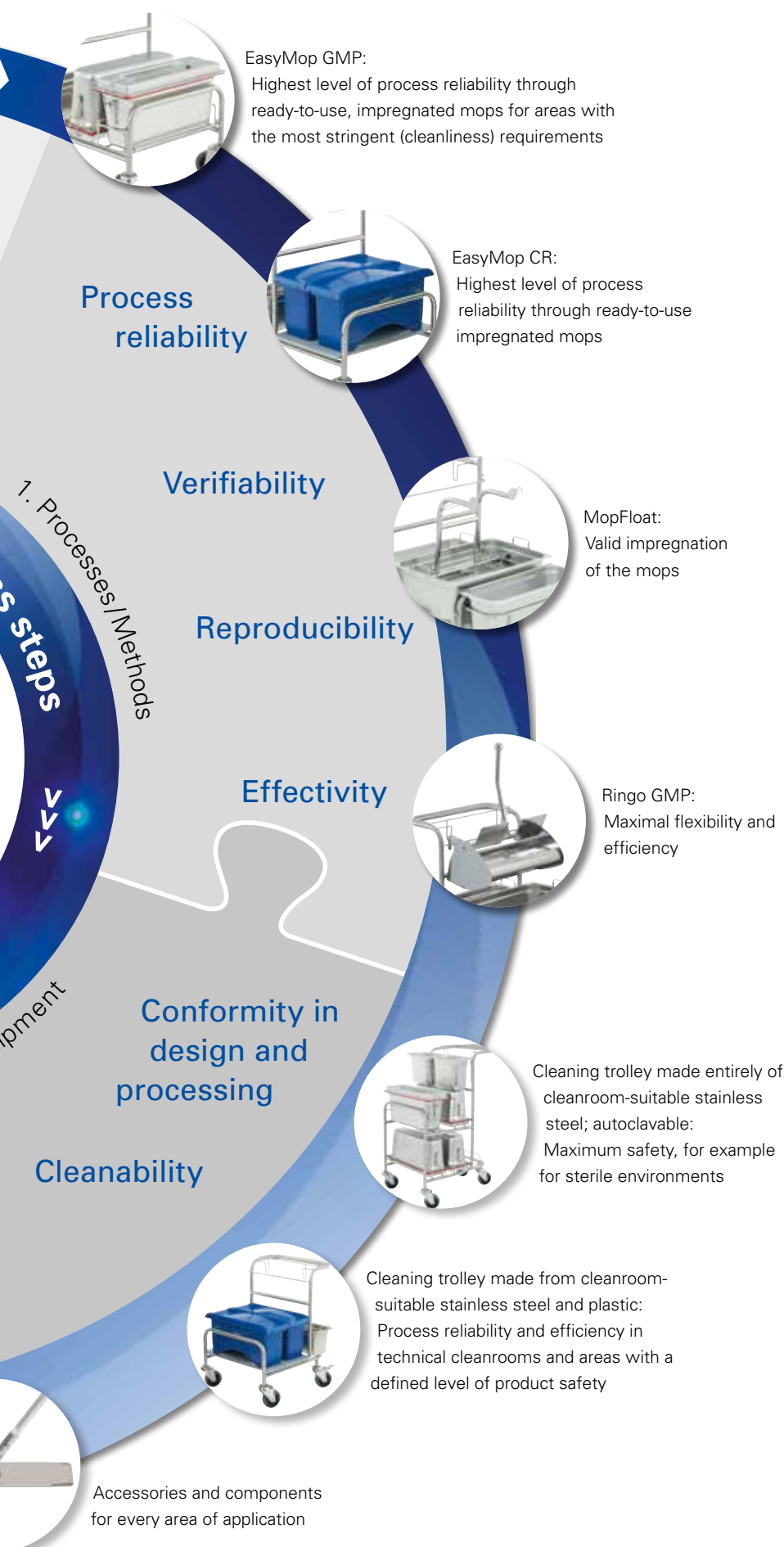
The determination of the air quality requirements is performed in the form of purity level classes. In the pharmaceutical industry and in other companies that work in accordance with GMP, a tolerable microbiological contamination is also defined.

Classification

The purity or level of purity is characterised by the current level of impurity in the air, whereby the size and number of existing particles are used to assign these to different purity classes.

PPS® System Cycle





There are specific requirements for each type of product and for each area of production, e.g.

- Removing/preventing undesirable particles
- Deactivation of micro-organisms
- Creation of hygienic areas
- Carrying out the specifications in the pertinent regulations

With the PPS System Cycle, we have developed a system solution in the form of a modular system that perfectly covers all requirements of the cleaning and disinfection of your cleanroom.

We recommend the following approach:

- + Methods:** The choice of the correct cleaning and/or disinfection method is essential for the success of the craftsmanship and the product's profitability. Validation, reproducibility and ergonomic optimisation are essential factors.
- + Equipment:** Whilst defined synthetics may be adequate in low cleanroom classes, where a higher level of purity is required – or in sterile areas – suitable stainless steel must be used.
- + Textiles:** The success in cleaning and disinfecting stands and falls with the use of suitable wiping textiles. These need to be tested and certified for the use in the individual cleanroom classes.
- + Chemicals:** The chosen equipment must not only be resistant to the cleaning agents and disinfectants used but also to the process media with which they potentially come into contact.
- + Workflow:** The planning of an efficient use of the chosen cleaning system ensures profitability in its use and reliability in its results. We will gladly support you in this.

In cleanrooms, cold and hard facts dictate

For the individual purity classes (ISO and GMP), the pertinent rules and standards prescribe certain requirements for mobile systems. In the following, we would like to explain the most important regulations and briefly describe how they can be fulfilled.

Reliability/Reproducibility

§ **The effectiveness and reproducible quality of the cleaning – even using a manual method – must be ensured.**
[VDI 2083 Sheet 5.1]



Through the largely operator-independent design of our systems and the protection from maloperation inherent in the system, a high level of process security is achieved. Through this, the “people” factor can be controlled and the results can be reproduced.



Impregnated mops only have to be removed from the system box

Verifiability

§ **The effectiveness of each new technique should be validated.**
[EU-GMP-RL, Annex 1, Sentence 82]



Validation is the confirmation that the defined processes actually produce the required results. For this, you need a reproducible procedure, a defined description of the procedure, as well as reports which confirm the validity of the procedure.



Purity compatibility

§ **All materials, mobile and rolling devices need to be suitable for the cleanroom-specific purity degree and, whilst in use, are not allowed to impact the product or process.**
[ISO 14644-5, Sentence 4.5.1]



Our most important cleanroom products have been tested in regards to their purity compatibility as defined in the regulations and have been certified as a “TESTED DEVICE” through attestations and reports conducted by the Fraunhofer Institute for production technology and automation (IPA) in Stuttgart.



Design and processing/Cleanability

§ **Surfaces and moving parts should cause and distribute as little contamination as is possible. They should have intact, impermeable and clean surfaces. They should possess qualities that limit contamination through abrasion and chip formation to a minimum.**
[ISO 14644-5, Annex E, Sec. E.2.1]



Our cleanroom cleaning systems are developed and produced according to EHEDG (European Hygienic Engineering Design Group) recommendations. The cleanability and processing of the stainless steel components, as well as the own particle emissions, are tested and certified.



Checking the cleanability with fluorescent particles.

Sterility/Autoclavability

§ **Elements, containers, equipment and other objects that are needed in a cleanroom area, in which aseptic work takes place, should be ... sterilised.**
[EU-GMP-RL, Annex 1, Sentence 81]



Along with stainless steel suitable for cleanrooms, special cleanroom-suitable rolls with high moving comfort ensure that the whole cleaning and disinfection process can be permanently autoclaved.





Cleanroom compatibility/Particle emissions



Containers and materials that easily lose fibres should not, as far as possible, be used in cleanrooms.

[EU-GMP-RL, Annex 1, Sentence 75]



Our mops King GMP, Micro-Sicuro CR/A and the single-use mop King CR cloth mop S have been tested for their own particle emission and certified as a "TESTED DEVICE" by the Fraunhofer Institute for production technology and automation (IPA) in Stuttgart.



Sealed special fibres prevent the emission of particles.

Efficiency



Cleaning equipment and materials need to be qualified in regard to their application location and their intended use.

[VDI 2083, Sheet 5.1]



Depending on the application field, for our textiles we have test reports from Fraunhofer IPA that confirm the cleaning efficiency as well as inspection reports on the reduction of germs and the area performance for our textiles.



Compatibility/Material compatibility



Cleaning equipment and materials must ... in terms of the cleaning agents used be qualified.

[VDI 2083 Sheet 5.1]



Test results for material compatibility with the standard cleaning and disinfection agents exist for the system trolley components and textiles. Based on their functions some components have to possess long-lasting resistance to various chemicals and were correspondingly tested by Fraunhofer IPA.



Cost-effectiveness



A production method must be as efficient as possible.

[General commercial law; also applies to the manufacturing of the product cleanliness]



Countless lab and practical studies, for example for the EasyMop GMP process, have been able to prove an increase in productivity between 18 and 22 % as opposed to standard methods.



Sustainability



»Only chop as much wood as the forest can sustain! Only as much wood as can regrow!«

[The first wording of the Principle of Sustainability, by Hans Carl v. Carlowitz, 1713 in "Silvicultura oeconomica"]



Ensuring the efficient use of resources is a challenge that goes far beyond the actual manufacturing of a system trolley and wiping textiles. In this fashion some of our wiping textiles have been certified in accordance with the demanding "Nordic Eco-Label" for tested sustainability.





Cleaning methods



Advantages and ranges of application

The selection of the correct work method for the respective task is largely decisive for the success of the craftsmanship and the product's profitability. For example, the daily disinfection of a sterile area requires an entirely different method than the cleaning after a maintenance phase.

For your better orientation, we have listed the most important points for the respective cleaning methods; the detailed explanations are provided in the subsequent chapters.



EasyMop GMP

- + Maximum process reliability
- + No open water
- + Certified for sterile areas GMP A/B
- + Entire system can be autoclaved



MopFloat GMP

- + Maximum process reliability and flexibility
- + Verifiable, operator-independent impregnation of the mops
- + Entire system can be autoclaved



EasyMop CR

- + Maximum process reliability
- + No open water
- + Hygiene zone concept with up to 6 colours



MopFloat CR

- + Maximum process reliability and flexibility
- + Verifiable, operator-independent impregnation of the mops
- + Can be retrofit to all Clino system trolleys



Ringo GMP

- + Maximum flexibility
- + Entire system can be autoclaved
- + Certified for sterile areas GMP A/B



Clino flat wringer

- + Transmission mechanism with defined pressure point
- + Reproducible pressing result
- + Easy opening of the press through spring mechanism

Impregnation EasyMop GMP® and CR



The EasyMop GMP and CR impregnation systems offer the maximum in safety and efficiency in cleanroom treatment and disinfection. Independent of the operator and without the use of any mechanical components, the mops are always subject to the same level of treatment, which guarantees that the defined areas are always properly and thoroughly disinfected. Comprehensive audits, certificates and seals of approval from recognised, independent institutions are available.

The characteristics:

- + Reliability:**
Unintentional misuse impossible
- + Reproducibility**
Impregnation of the textiles is independent of operator
- + Verifiability:** Exhaustive series of measurements for appraisal of the disinfection performance
- + Sterility:** Also tested for the GMP A/B areas
- + Ergonomics and learnability:**
Self-explanatory, easy-to-operate system
- + Avoidance of cross-contamination:** The entire work process is contactless
- + Efficiency:** Significantly less consumption of medium through complete use of the applied agent is possible

Closed system with built-in safety



EasyMop GMP and CR – State of the Art in cleanroom cleaning and disinfection

The impregnation is a closed system and offers more extensive process reliability than an open system. This is shown through the avoidance of incorrect operation such as re-use of a previously contaminated mop. Due to the system characteristics, a valid surface moistening for an effective disinfection and reduction of residues is processed through the application of the actually required amount of fluid.

The moistening of the mops in the system box EasyMop GMP rests on two physical principles: Gravity and capillary actions of the microfibers. Through defined holding times, storage times and extraction times, the wipes are uniformly moistened due to this interplay between gravity and capillary action. The liquid's uniform distribution is supported through the MopJump system, which, due to its form, enables the contactless collection of the mops. The displacement area located just beneath ensures that even if excessive volumes of liquid are used, the impregnation process is not disturbed.

Within the scope of scientific work, the holding times, storage times and extraction times as well as liquid vol-



Design and operating sequences of the EasyMop system are scientifically researched and documented



All PPS Cleaning systems can be equipped with MopJump – the aid for a contactless collection of the mop.

ume required for a consistent result were determined and depicted in an operating procedure. These parameters ensure a reproducible and verifiable wiping disinfection process.

EasyMop GMP® – reliability due to GMP conformity

EasyMop GMP reduces the “human” influence to a minimum and in actuality eliminates any unintentional misuse. The impregnation process occurs entirely independently of the operator, and through the attaining

of equilibrium between gravity and capillary force it leads to an easily reproducible result.



1 Dose the corresponding amount of solution



2 Load the system box with no more than 10 mops – ensure that the back of the mop (pocket) is pointed up



3 Close and turn the box



4 Equip system trolley with up to 4 boxes



5 Take up the mop contactlessly with the MopJump system



6 Clean and disinfect



7 Detach mop and repeat steps 5 – 7 until the system box is empty



8 Activate the next system box with prepared mops etc.



9 Done

EasyMop GMP® – the components

- + Low use of agents
- + Consistent impregnation of the mops
- + Contaminated mops cannot be re-used
- + Ergonomic, easy-to-operate system
- + Can be autoclaved
- + Reliability: Also tested for GMP A/B areas



System box EasyMop GMP and its components: A container that can also be used for transport, storage, steam sterilisation, impregnation and application of special mops

System box EasyMop GMP

The system box EasyMop GMP is at the centre of this process. Aside from the special construction for the impregnation, of great importance are also the ability to autoclave of the system box and the use of material certified for use in cleanrooms – for example, the triple seal for the secure, leak-proof closing of the box. The MopJump located in the system box EasyMop GMP ensures that the contactless reception of the mop is significantly simplified.



System box EasyMop GMP prepared for the autoclave process

Introduction to areas under sterile conditions

In order to meet the requirements listed in Appendix 1 of the EU-GMP guidelines, which states that all equipment required in the purity classes A/B must be introduced into that area in a sterile manner, not only do the system trolleys and the system boxes have to be sterile before entering the cleanroom, but also the wiping covers required for wiping. The special design of the closing mechanism enables the user to autoclave the wiping covers already in the system box EasyMop GMP.



MopFix for the stabilisation of Mopp King GMP in the impregnation of a smaller number (approx. 4 – 7) of mops

Use for small areas

In small cleanrooms without storage facilities for a system trolley, the EasyMop GMP box can also be used as a "stand-alone" solution. If due to small room sizes less than 10 mops are required, then the King GMP mop can be stabilised during the impregnation process with the MopFix insert.

EasyMop CR® – reliability due to GMP conformity and efficiency

The work steps of the EasyMop CR are the same as for the EasyMop GMP. The difference is the system box material used. Through the selection of polypropylene instead of stainless steel, the EasyMop CR is geared

towards cleanroom areas in which no sterility is preconditioned. All other advantages, such as the resistance against misuse, the contactless work or the reliable reproducibility of the results, naturally remain unaffected.

The system box EasyMop CR is available in six colours for the establishment of the various hygienic concepts.



1 Dose the corresponding amount of solution



2 Load the system box with no more than 12 mops – ensure that the back of the mop (pocket) is pointed up



3 Close and turn the box



4 Equip the system trolley with 2 boxes



5 Take up the mop contactlessly with the MopJump system



6 Clean and disinfect



7 Detach mop and repeat steps 5 – 7 until the system box is empty



8 Activate the next system box with prepared mops, etc.



9 Done



After the cleaning process,
Clino system trolley can be easily stored

MopFloat® GMP and CR



The open system with the safety of a closed system



Reproducibility:
Precise amount of solution per dosing process



Work ergonomically:
Easily removable and automatic return of the dosing container with the mop frame



MopFloat can be folded quickly and easily. Due to its small dimensions, it fits in almost any autoclave.

MopFloat GMP: The open system with the safety of a closed system: If you don't intend to use a box system, MopFloat GMP offers the "open" alternative:

The characteristics:

- + Inbuilt safety:** Unintentional misuse impossible
- + Reproducibility:** Impregnation of the textiles is independent of operator
- + Verifiability:** The impregnation process automatically delivers identical results
- + The dosage can be varied** between 130 ml, 250 ml or 400 ml depending on the use (floor, wall or ceiling cleaning) or mop type (reusable or single use)
- + GMP conformity:** Made entirely of stainless steel. The only pivot point is mounted in an FDA-conform plain bearing bush
- + Hygienic design:** No inaccessible or dead areas
- + Ergonomics and easy to learn:** Self-explanatory system, can be operated with a low amount of required physical effort
- + Avoidance of cross-contamination:** The entire work process is contactless
- + MopFloat can also be used in combination** with a 25-litre plastic bucket (MopFloat CR)



pg. 47 ff

Even if ceilings, walls and floors do not come into direct contact with the product, the cleaning and disinfecting of these surfaces is an important step in restoring and retaining the level of required cleanliness in the manufacturing areas – and therefore for retaining the safety of the products. Since the cleaning and disinfecting of large surfaces in the cleanroom is usually performed manually, simple and systematic work steps are required to attain the desired validity of the processes. This means that the less likely any potential misuse is, the more likely the process can be implemented in a safe and reproducible way.

“Surfaces and moving parts should create and distribute as little contamination as is possible. ... They should display characteristics that limit the creation of contamination through abrasion and chip formation to an absolute minimum.”

[ISO 14644-5, Appendix E, Sec. E.2.1]

This means that a cleanroom-suitable device must have as few mechanical components as technically possible. MopFloat GMP achieves its function with only one pivot point, which is additionally mounted in an FDA-conform plain bearing bush. The upper operating unit can be removed in a few sim-

ple steps. MopFloat fits in almost all autoclaves. The wetting of the mop covers with the MopFloat GMP system is – exactly like EasyMop GMP – based on only two physical principles: gravity and capillary effect. Through the elimination of the unintentional misuse and the automatic, gravity-determined sequence of the impregnation process, each mop always and reliably has the same level of impregnation volume – completely independent of the operator.



- 1 Fill 25-litre stainless steel bucket with desired amount of solution and equip MopTen with mop covers



- 2 Due to the weight of the mop frame, the operating lever swings downward and after discharge it automatically returns to the initial position



- 3 Attach mop cover while the solution amount is automatically dosed



- 4 The mop cover independently absorbs the previously adjusted volume of fluid (130, 250 or 400 ml)



- 5 Complete the wiping process



- 6 Contactless mop cover discharge with MopDrop; repeat steps 2 through 6

Flat wringer Ringo® GMP and Clino® stainless steel



The PPS flat wringer systems enable the quick adaptation to different requirements.

Ergonomics, efficiency and the independently tested safety are thereby always ensured.

When cleaning in hygienically sensitive areas, the avoidance of cross-contamination is of paramount importance. For this reason, the mop must be changed after each wiping work step. The flat wringer Ringo doses the required amount of moisture for the respective area. In combination with the MopJump system, a contactless and ergonomically optimised work flow is ensured.

The characteristics:

- +** **Flexibility:** Adaptation to different room sizes
- +** **Versatility:** Alternating between single- and two-stage wiping technique
- +** **Tested device:** Certified through Fraunhofer IPA
- +** **Ergonomics and safety:** Contactless work with MopJump and MopDrop
- +** **Reliability:** Also tested for GMP A/B sterile areas

Flexibility and ergonomics



Direct propulsion for ergonomic and fatigue-free operation



Contactless reception of the mop through MopJump



Contactless release of the mop through MopDrop

Ringo® GMP

Upon its market introduction in 1999, Ringo GMP was the first cleaning and disinfection system certified for use in sterile areas. Today it is the most widely used system in the pharmaceutical industry. Entirely manufactured with stainless steel, it still represents an excellent and flexible solution for all GMP areas.

Flat wringer Clino® stainless steel

The Clino flat wringer's gear mechanism has a defined pressure point, i.e. even if the operator applies additional force no further pressure is exerted on the mop. In this fashion, the Clino flat wringer ensures that each mop is removed from the wringer with the same amount of residual moisture. At the same time, the gear mechanism

ensures that the required pressure can be exerted with the least amount of force and the wringer automatically re-opens.



Short film: Cleanroom hygiene for professionals: Floors, ceilings, walls

To view, scan this QR code using your smartphone or type the following link into your browser:
www.pps-pfennig.de/reinraumhygiene



- 1 Place mops in the 9-litre stainless steel container and prepare cleaning and/or disinfection solution in a 25-litre bucket



- 2 Attach a clean mop using the mop frame



- 3 Immerse mop in 25-litre stainless steel container and tip to the front edge



- 4 Use the flat wringer Ringo GMP to dose the mop to the required level of moisture



- 5 Begin wiping process



- 6 Detach mop with MopDrop. Repeat steps 2 – 6

Additional cleaning and disinfection methods

The following should outline several methods that one often encounters in cleanrooms but that we believe do not represent the most optimal solution. However, with the Clino modular system these solutions – if, for example, a transition to a more modern method is only planned for a later date due to organisational reasons – can easily be realised and later converted.



Two-stage method (bucket-sieve system)

A mop is briefly pressed against the sieve, and then the floor's surface is wetted. With a second, dry mop, the liquid on the floor is absorbed:

- Widely used method that requires a significantly higher level of time and use of materials
- If required, bucket can be autoclaved
- Results are not easily reproducible



Kentucky wringer (bucket wringer)

Instead of the flat wringer Ringo, a standard Kentucky wringer is used:

- Mops have to be handled
- High risk of cross-contamination
- Inefficient and non-ergonomic method
- Wringer cannot be completely cleaned
- Cannot be autoclaved



Dousing method

- Can be used in even the smallest areas
- Mops have to be handled
- Significantly less safety than using the impregnation method

The so-called reusable mop methods, in which a previously used mop is rinsed and reused several times, will not be alluded to any further. All of these methods contain inherent high risks of cross- and particle contamination and should not be used in cleanrooms. The three-bucket method that is widely used in the Anglo-Saxon region will be briefly touched upon, even though this method is also subject to the above-noted risks.



Three-bucket method

The first bucket contains a disinfectant, the middle bucket contains clean water and the waste water is located under the wringer. The mop is rinsed in the waste water and wrung out, then immersed in the clean water and wrung out again. Finally, it is impregnated with the fresh disinfectant.

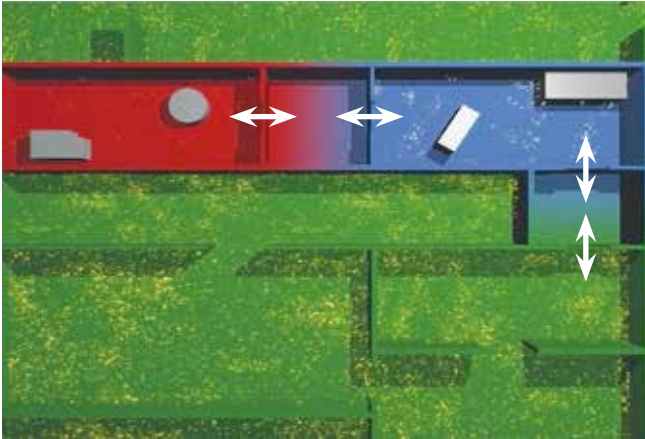
- Low requirement of mops
- High risk of cross- and particle contamination
- Outdated method



Product description: [pg. 20](#)

During the cleaning process, the cover of the system box can be placed sideways on the CR9 cleaning trolley

Hygienic zone concept



Through the colour-coding marking of the system boxes and, if requested, the mops as well, operational safety is ensured across all language barriers. The EasyMop CR system boxes are – like most other plastic components in the Clino modular system – available in up to six different colours. A clear and easy-to-understand colour coding of the different hygienic zones clearly identifies – to both internal employees as well as your customers – that different cleanroom classes require different cleaning and hygienic concepts. It also ensures that these concepts are also implemented.

Example of a hygienic zone concept with the EasyMop method:



Cleaning trolley made entirely of stainless steel for GMP A and B areas



Cleaning trolley made of a stainless steel/plastic combination, e.g. blue for your C areas



Cleaning trolley made of a stainless steel/plastic combination, e.g. green for your D areas



Cleaning trolley made of a stainless steel/plastic combination, e.g. grey for your grey areas

Further trolley examples: [pg. 62](#)



You can implement your own individual zone concept in various trolley sizes. For example, this is a medium-size trolley with EasyMop CR system boxes in red.



Example of a very small trolley. If your cleanroom is even smaller, you can also only bring one single system box into the cleanroom.



You can design your individualised zone concept with different work methods (shown here, for example, with the flat wringer Ringo GMP) and can differentiate using the colours red, blue, yellow, green or white or can select a full stainless steel design.



We will be more than happy to help you realise your individual zone concept, even with the MopFloat work method; shown here, for example, in the full stainless steel design. Also available as a stainless steel/plastic combination in red, blue, yellow, green and white.

Surface cleaning



Outside of areas under sterile conditions and other highly critical areas, we recommend surface cleaning and disinfection using the cloth impregnation method. This method is significantly more cost efficient than working with ready-to-use products yet still offers safety against germ- and particle contamination. We have specifically developed the Clino PlusBox for this application. In the PlusBox, the impregnation of reusable cloths can be safely carried out; at the same time, the PlusBox serves as a sealable container that is only opened when a cloth is removed. The used cloths are detached and can be treated in a cleanroom laundry.



- 1 Depending on the type of cloth, fill PlusBox with 25 – 30 cloths



- 2 Put sieve in place



- 3 Pour cleaning or disinfection agent onto the cloths



- 4 Remove impregnated cloth and clean surface



- 5 Detach cloth and repeat steps 4 – 5



The PlusBoxes can be selected in up to 6 different colours, e.g. blue indicating "fresh" and grey indicating "contaminated" cloths (see step 5)

Clino[®] Connect – the clean connection



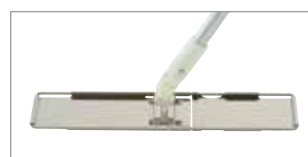
The connection between mop frame and stick is a critical component. On the one hand, it must have a high degree of stability, but on the other hand it must enable a quick change of different mop frames and, in particular, be easy to clean. Therefore, we have – under consideration of the EHEDG guidelines – developed an entirely new connection system: Clino Connect.

- + Quick change system:**
With the push of a button, the mop frame can be changed
- + Easy to clean:** Fully open design
- + Autoclavable:** Manufactured using heat-stabilised special plastic
- + Clino Connect Lock:**
With locking device for cleaning walls and ceilings
- + Clino Connect:** Without locking or blocking assistance



Clino Connect Lock: For the cleaning of walls and ceilings, the Clino Connect Lock has a button that can lock the swivel joint

Due to the fully open design, there are no dead areas; all of the component's areas are easily accessible for cleaning



All PPS mop frames can be equipped with the Clino Connect pg. 94

Disposal variants



In order to avoid recontamination, it is required to detach used cloths in such a manner that they can be removed from the cleanroom without any further contact. Depending on the trolley model, there are different disposal variants available to you. The division into a "sterile" area in front of the system trolley's centre beam and an "unsterile" area behind it increases the operator safety. ► pg. 71



Disposal PlusBox 6 litres

Through the detachment into the PlusBox attached at the side, the entire rear disposal unit is available for the detachment of the mops. For all CR4 cleaning trolleys.



Disposal 1 x 35 litres

Sack holder frame 1 x 35 litres for all CR1 and CR4 cleaning trolleys. For unsterile areas, also available in transparent plastic.

► pg. 65



Disposal Stainless steel, 4-litre container

The side detachment is also available in stainless steel for areas under sterile conditions. For all CR4 cleaning trolleys.



Disposal 1 x 70 litres

Sack holder frame 1 x 70 litres for mop detachment for all CR9 cleaning trolleys.



Disposal 1 x 9 litres

For the Clino CR3 FP-GMP.

► pg. 54



Insert 1 x 35 litres

The insert 1 x 35 litres enables the separate detachment of mop and cloths in the same disposal unit.

For all CR9 cleaning trolleys.

Contactless working with MopDrop®



The MopDrop enables the contactless opening of the mop frame. It is located directly above the release sack so that the used wiping cover falls directly into it without any further contact. Contamination through used wiping covers is therefore eliminated. The positioning of the MopDrop behind the push handle provides a clear separation of the trolley areas into a clean area (in front of the handle) and an unclean area (behind the handle).



1 Opening the mop frame with MopDrop by moving it against the inclined plane



2 Attachment of the mop and cleaning



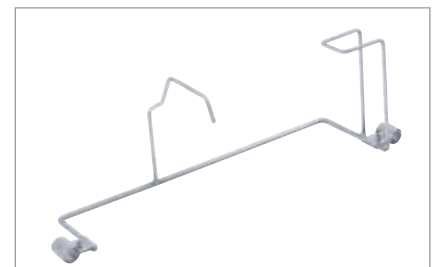
3 Contactless release of the contaminated mop. Suitable for all system trolleys that include an attachment for a disposal sack. [pg. 35](#)



MopDrop is compatible with all Clino mop frames, e.g. wire mop frame ...



... or Clino Ergo EM mop frame ... or ... [pg. 94](#)



Can be retrofitted to all Clino system trolleys with a disposal unit

Sterile disposal bags

Designed for cleanroom use



Our cleanroom disposal bags are made of special transparent LDPE with strength of 75 μ . They are individually cut, folded and double-packaged in blocks of 10 in the cleanroom. They are available as a precise fit for the 70-litre and 35-litre disposal units as well as an insert in the 9-litre bucket or the EasyMop GMP and CR system boxes. All sizes are also available in sterilised form with batch documentation and gamma ray indicator.

► pg. 72



6- and 9-litre disposal bags

Can be used with all 4-litre stainless steel containers and PlusBoxes.

Delivery time:
approx. 6 weeks

► pg. 35



70-litre disposal bag

Can be used with all large (CR9) PPS cleaning trolleys with disposal.



35-litre disposal bag

Can be used with all small (CR1) and medium-sized (CR4) cleaning trolleys with disposal.



Sterile disposal bag

Double-packaged with LOT number and gamma ray indicator.

Cleanroom-compliant trolley design

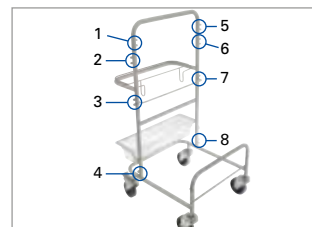


The system trolley of the Clino CR series has particularly been developed for the use in the cleanroom. Using the example of the Clino CR4 model, we would like to highlight some of the differences to the "standard" cleaning trolleys.



Hygienic design:

All of the Clino CR system trolley assembly groups have been designed so that they are easy to clean



ClinoLink: pg. 69

Connection system consisting of a total of eight multi-functional retainers for the object-specific adjustment of the CR4 system trolley. All accessory parts can easily be removed for cleaning



Modular design:

For most models, the cleaning method can easily be exchanged. Almost all trolley sizes can be equipped with impregnation, MopFloat or flat wringer



Special castors:

The swivel castors are available as an autoclavable (up to 134 °C) or electrically conductive design. If required, the castors can be equipped with locking devices



Enclosed design:

The system trolley does not have any open areas. Intake for other attachments are designed as blind-hole bushings, i.e. they are closed from the inside



Welding technology:

The stainless steel pipes are connected in a smooth and form-fitted manner

The Clino[®] CR model series



Cleaning trolley for impregnation

EasyMop GMP and CR
Enclosed system with inherent system safety

► pg. 40 et seq.



Stainless steel design

Stainless steel-plastic design

Cleaning trolley with MopFloat

MopFloat GMP and CR
The open system with the safety of an enclosed system

► pg. 46 et seq.



Stainless steel design

Stainless steel-plastic design

Cleaning trolley with flat wringer

Flexibility and ergonomics

► pg. 50 et seq.



Stainless steel design

Stainless steel-plastic design

Cleaning trolley for grey areas

Professional solutions for controlled areas

► pg. 56 et seq.



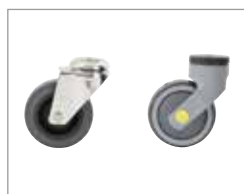
Clino® CR trolley systems with impregnation of EasyMop GMP® and CR



Process reliability with the EasyMop GMP and EasyMop CR system



Manufactured from stainless steel 316L in accordance with the guidelines of EHEDG



Available with swivel castors suitable for the cleanroom; if required, the castors can be autoclaved or electrically conductive, with or without locking device



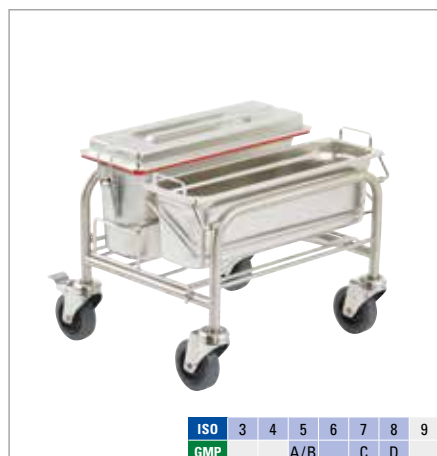
Hygienic design: Entirely enclosed finishing. Enclosed attachment point designed as blind-hole bushings

The system trolley for use in areas with stringent requirements such as areas under sterile conditions (GMP A/B) or ISO areas with high cleanliness requirements. Design, materials and processing meet the highest demands and are tested and certified by independent institutes.

The characteristics:

- +** **Validatable process** with maximum process reliability (as per EU-GMP-RL Annex 1, Sentence 82)
- +** **Reproducible results** due to system-specific elimination of sources of errors
- +** **Autoclavable***, suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence 81)
* Does not apply to the EasyMop CR system box
- +** **Entirely enclosed** and smooth finishing (as per ISO 14644.5, Annex E, Sec. E.2.1)
- +** System box EasyMop GMP and Clino CR9 have the **TESTED DEVICE certificate** of Fraunhofer IPA
- +** The Clino modular design enables **object-specific adjustments**
- +** A practically **contactless workflow** with MopJump and MopDrop
- +** **Self-explanatory work steps**, therefore easy-to-learn

Work procedure, see page 20 et seq.



Picture shows model, including optional extras

1

A

0,2
m²

Clino® CR mini EM-GMP1

Impregnation system for 10 mops, for highly sensitive areas – minimal space requirements, including disposal

Art. No.: 3510170

Dimensions (LxWxH): 43 x 53 x 43 cm

Basic components

- + Base frame mini
- + Stainless steel suitable for cleanrooms, high-end finish
- + Special castors (100 mm)

can be autoclaved



Ergonomics: The small, compact CR mini cleaning unit was constructed in such a manner that it can be moved with the mop frame. No bending down is required.

Work area

- + 1 system box EasyMop GMP
- + 1 9-litre stainless steel container for mop release

Method of operation

- + Impregnation with the system box EasyMop GMP



1

A

0,2
m²

Clino® CR mini EM-GMP2

Impregnation system for 20 mops, for highly sensitive areas – minimal space requirements

Art. No.: 3510160

Dimensions (LxWxH): 43 x 53 x 43 cm

Basic components

- + Base frame mini
- + Stainless steel suitable for cleanrooms, high-end finish
- + Special castors (100 mm)

can be autoclaved



Additional attachment of stainless steel container MopTen for mop release possible – Art. No.: 3510185

Work area

- + 2 system boxes EasyMop GMP

Method of operation

- + Impregnation with the system box EasyMop GMP



1

A

0,3
m²

Clino® CR1 EM-GMP

Impregnation system for highly sensitive areas – with disposal unit

Art. No.: 3510100

Dimensions (LxWxH): 61 x 53 x 70 cm

Basic components

- + Small base frame
 - + Stainless steel suitable for cleanrooms, high-end finish
 - + Special castors (100 mm)
- can be autoclaved

Work area

- + 2 system boxes EasyMop GMP

Method of operation

- + Impregnation with the system box EasyMop GMP

Disposal

- + 1 x 35-litre unit
- + 1 9-litre stainless steel container

Picture shows model, including optional extras

Cleaning trolley with impregnation



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1

Clino® CR4 EM-GMP

The high-end system trolley:
The modular design system
suitable for the cleanroom;
for use in highly sensitive areas

A

0,4
m²

- + Cleaning method: EasyMop GMP with a system box certified for areas under sterile conditions
- + Highest efficiency and process reliability in the single-step process
- + Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- + Individually configurable through Clino modular design system
- + ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)



► pg. 69

Clino® CR4 EM-GMP
Art. No.: 3540500

Dimensions (LxWxH): 61 x 63 x 102 cm
Variable width, depending on assembly variant

Standard equipment Clino CR4 EM-GMP Art. No.: 3540500

Basic components

- Medium base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm) can be autoclaved

Work area

- 2 system boxes EasyMop GMP
- 2 4-litre stainless steel containers

Supply unit

See ClinoLink Assembly variants 2, 3 and 4

Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

Optional extras/accessories



ClinoLink Assembly variant 2:
Contains 3 trays for various mops
Art. No.: 3500088
► pp. 62, 69, 101



ClinoLink Assembly variant 3:
Additional attachment of a 4-litre stainless steel container, e.g. for cloth release
Art. No.: 3500094



ClinoLink Assembly variant 4:
Additional attachment of a 9-litre stainless steel container (only possible for EasyMop method)
Art. No.: 3530189



Clino stainless steel mop frame with one-piece handle
Art. No.: 3500902
Additional mop frames
► pg. 94



MopDrop
Contactless release of the mop with MopDrop
Art. No.: 3500019
► pg. 36



Disposal bag
1 x 35-litre, sterile, medium-sized, transparent
Art. No.: 3580016
► pp. 37, 72



Picture shows model, including optional extras

1

Clino® CR9 EM-GMP

The high-end solution for very large cleanrooms

A

0,5
m²

- + Cleaning method: EasyMop GMP with a system box certified for areas under sterile conditions
- + Highest efficiency and process reliability in the single-step process
- + Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- + Can be equipped for an up to 600 m² floor cleaning area
- + Including 4-litre stainless steel container, swivel-mounted, for surface cleaning



Clino® CR9 EM-GMP
Art. No.: 3570050

Dimensions (LxWxH): 83 x 53 x 98 cm

Standard equipment Clino CR9 EM-GMP

Art. No.: 3570050

Basic components

- Large base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm

- Special castors (100 mm) can be autoclaved

Work area

- 4 system boxes EasyMop GMP
- 2 4-litre stainless steel containers

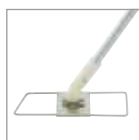
Disposal

- 1 x 70-litre unit

Optional extras/accessories



Space-saving solution after the cleaning procedure: the CR9 system trolleys can be telescoped



Stainless steel Trapez mop frame for surface cleaning and disinfection, e.g. of WSP benches
Art. No.: 2009580

► pp. 95, 99



MopDrop
Contactless release of the mop with MopDrop
Art. No.: 3500019

► pg. 36



They are optionally available with either autoclavable or electrically conductive special castors with or without locking devices

► pg. 70



Clino stainless steel mop frame with one-piece handle
Art. No.: 3500902
Additional mop frames

► pg. 94



Disposal bag
1 x 70-litre sterile, large, transparent
Art. No.: 3580017

► pp. 37, 72

Cleaning trolley with impregnation



Picture shows model, including optional extras

1

0,2
m²

Clino® CR mini EM-CR1

Impregnation system for 12 mops for use in non-sterile areas, minimal space requirements

Art. No.: 3510150

Dimensions (LxWxH): 43 x 52 x 45 cm

Basic components

- + Base frame mini
- + Stainless steel suitable for cleanrooms, high-end finish
- + Electrically conductive special castors (100 mm)

Work area

- + 1 system box EasyMop
 - + 1 tray for system boxes EasyMop
 - + System box is available in the following colours:
- pg. 63

Disposal

- + 1 system box EasyMop
- + Cleanroom-suitable 9-litre disposal bag available for delivery as an accessory ► pp. 37, 72



Picture shows model, including optional extras

1

0,3
m²

Clino® CR mini EM-CR2

Impregnation system for 24 mops for use in non-sterile areas, minimal space requirements, with disposal

Art. No.: 3510140

Dimensions (LxWxH): 57 x 53 x 45 cm

Basic components

- + Base frame mini
- + Stainless steel suitable for cleanrooms, high-end finish
- + Electrically conductive special castors (100 mm)

Work area

- + 2 system boxes EasyMop
 - + 1 tray for system boxes EasyMop
 - + System box is available in the following colours:
- pg. 63

Disposal

- + 1 stainless steel container MopTen
- + Cleanroom-suitable 9-litre disposal bag available for delivery as an accessory ► pp. 37, 72



Picture shows model, including optional extras

1

0,3
m²

Clino® CR1 EM-CR

The EasyMop CR system can be stored underneath the workbench

Art. No.: 3510200

Dimensions (LxWxH): 61 x 53 x 70 cm

Basic components

- + Small base frame
- + Stainless steel suitable for cleanrooms, high-end finish
- + Electrically conductive special castors (100 mm)

Work area

- + 2 system boxes EasyMop
 - + 1 tray for system boxes EasyMop
 - + System box is available in the following colours:
- pg. 63

Disposal

- + 1 x 35-litre unit
- + 1 9-litre stainless steel container
- + Cleanroom-suitable 35-litre disposal bag available for delivery as an accessory ► pp. 37, 72



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1

Clino® CR4 EM-CR

The high-end system trolley:
The cleanroom-suitable modular design system for highly sensitive areas that do not require sterility

0,4
m²

- ⊕ Cleaning method: EasyMop CR with ergonomically optimised system box
- ⊕ Highest efficiency and process reliability in the single-step process
- ⊕ Wiper impregnation for surface cleaning in the PlusBox
- ⊕ Made of cleanroom-suitable stainless steel, base frame and electrically conductive castors
- ⊕ Individually configurable through Clino modular design system
- ⊕ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 EM-CR

Art. No.: 3540600

Dimensions (LxWxH):

61 x 63 x 102 cm

Variable width, depending on assembly variant

Standard equipment Clino CR4 EM-CR Art. No.: 3540600

Basic components

- Medium base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Electrically conductive special castors (100 mm)

Work area

- 2 system boxes EasyMop CR
- 2 PlusBoxes
- 1 tray for system boxes EasyMop

Supply unit

See ClinoLink assembly variants 2, 3 and 4

Disposal

- 1 x 35-litre unit
- 5-litre plastic container

Optional extras/accessories



**ClinoLink
Assembly variant 2:**
Contains 3 trays for various mops
Art. No.: 3500088
► pp. 62, 69, 101



**ClinoLink
Assembly variant 3:**
Additional attachment of a Clino PlusBox, e.g. for cloth release
Art. No.: 3500095



Are available with either autoclavable or electrically conductive special castors
► pg. 70



**ClinoLink
Assembly variant 4:**
Additional attachment of a 5-litre plastic container (only possible for EasyMop method)
Art. No.: 3530188
► pg. 69



MopDrop
Contactless release of the mop with MopDrop
Art. No.: 3500019
► pg. 36



Disposal bag
1 x 35-litre, sterile, medium-sized, transparent
Art. No.: 3580016
► pp. 37, 72

Clino® CR trolley systems with MopFloat® GMP and CR



MopFloat GMP: The open system with the safety of an enclosed system



Manufactured from stainless steel 1.4404 in accordance with the guidelines of EHEDG



Available with swivel castors suitable for the cleanroom; if required, the castors can be autoclaved or electrically conductive, with or without locking device



Reproducibility:
Precise amount of solution per dosing process

In case you don't intend to use a box system, MopFloat GMP offers the "open" alternative: Through the use of mechanical intelligence, it is ensured that – independent of the user – the same reliable result is always attained in the mop impregnation process. From the beginning, MopFloat GMP offers maximum safety while providing full flexibility for the requirements of highly critical areas under consideration of the pertinent regulations and guidelines.

The characteristics:

- + Validatable process** with maximum process reliability (as per EU-GMP-RL Annex 1, Sentence 82)
- + Inbuilt safety:**
Unintentional misuse impossible
- + Reproducibility:**
Impregnation of the textiles is independent of operator
- + Autoclavable:** suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence 81)
- + GMP conformity:** Manufactured entirely from stainless steel; the only swivel is located in an FDA-conform plain bearing bush
- + Hygienic design:** No hard-to-reach places or dead areas; MopFloat can be folded
- + Ergonomics and easy to learn:**
Self-explanatory system, can be operated with a low amount of required physical effort
- + Avoidance of cross-contamination:**
The entire work procedure is practically contactless through MopJump and MopDrop

Work procedure, see page 26

Technical changes reserved



Picture shows model, including optional extras

1

A

0,3
m²

Clino® CR mini MF-GMP

For highly sensitive areas; minimal space requirements

Art. No.: 3510180

Dimensions (LxWxH): 57 x 56 x 49 cm

Basic components

- Base frame mini
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

Work area

- MopFloat GMP
- 25-litre stainless steel container

Supply unit

- stainless steel container MopTen



Also available as a stainless steel/plastic version
Clino® CR mini MF-CR
Art. No.: 3510190



Picture shows model, including optional extras

1

A

0,4
m²

Clino® CR1 MF-GMP

For highly sensitive areas; low space requirements, includes disposal

Art. No.: 3510050

Dimensions (LxWxH): 74 x 57 x 71 cm

Basic components

- Small base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

Work area

- MopFloat GMP
- 25-litre stainless steel container
- stainless steel container MopTen

Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container



Also available as a stainless steel/plastic version
Clino® CR1 MF-CR
Art. No.: 3510060



1

A

0,8
m²

Clino® CR5 MF-GMP

The system trolley with maximum transport capacity – add-on parts in the front and back for storage can be folded in

Art. No.: 3570020

Rest dimensions (LxWxH): 85 x 52 x 130 cm 0,4
m²

Working dimensions (LxWxH): 146 x 52 x 101 cm

Basic components

- Large base frame
- Stainless steel
- Special castors (100 mm) can be autoclaved

Work area

- MopFloat GMP
- 25-litre stainless steel container
- stainless steel container MopTen

Supply unit

- 3 stainless steel trays
- 3 4-litre stainless steel containers

Disposal

- 2 x 70-litre unit

Cleaning trolley with MopFloat



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1

A

0,5
m²

Clino® CR4 MF-GMP

The high-end system trolley:
The modular design system
suitable for the cleanroom;
for use in highly sensitive areas

- ⊕ Cleaning method:
Results can be validated through the innovative MopFloat method
- ⊕ Highest efficiency and process reliability in the single-step process
- ⊕ Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- ⊕ Individually configurable through Clino modular design system
- ⊕ ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 MF-GMP

Art. No.: 3540300

Dimensions (LxWxH):

75 x 63 x 102 cm

Variable width, depending on assembly variant

Standard equipment Clino CR4 MF-GMP

Art. No.: 3540300

Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

Work area

- MopFloat GMP
- 1 25-litre stainless steel container for the cleaning and disinfection fleet

- 1 stainless steel container MopTen for fresh mops

Supply unit

See ClinoLink assembly variants 2 and 3

Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

Optional extras/accessories



**ClinoLink
Assembly variant 2:**
Contains 3 trays for
various mop frames
Art. No.: 3500088
► pp. 62, 69, 101



**ClinoLink
Assembly variant 3:**
Additional attachment of a
4-litre stainless steel con-
tainer, e. g., for disposal of
decontaminated wipers
Art. No.: 3500094



**Autoclavable
special castors**
with and without locking
device
Art. No.: 3500100 (without)
Art. No.: 3500150 (with)
► S. 70



MopJump
Contactless and easy
mop attachment
Art. No.: 3500020
► pg. 66



MopDrop
Contactless release of
the mop with MopDrop
Art. No.: 3500019
► pg. 36



Disposal bag
1 x 35-litre, sterile, me-
dium-sized, transparent
Art. No.: 3580016
► pp. 37, 72



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1

0,5
m²

Clino® CR4 MF-CR

The high-end system trolley:
The cleanroom-suitable modular design system for highly sensitive areas that do not require sterility

- + Cleaning method:
Results can be validated through the innovative MopFloat method
- + Highest efficiency and process reliability in the single-step process
- + Made from cleanroom-suitable stainless steel, base frame and electrically conductive castors
- + Individually configurable through Clino modular design system
- + ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 MF-CR
Art. No.: 3540400

Dimensions (LxWxH):

78 x 63 x 104 cm

Variable width, depending on assembly variant

Standard equipment Clino CR4 MF-CR

Art. No.: 3540400

Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm), electrically conductive

Work area

- MopFloat CR
- 1 25-litre bucket
- 1 15-litre bucket
- 2 PlusBoxes

Supply unit

See ClinoLink assembly variants 2 and 3

Disposal

- 1 x 35-litre unit
- 5-litre plastic container

Optional extras/accessories



**ClinoLink
Assembly variant 2:**
Contains 3 trays for various mop frames
Art. No.: 3500088
► pg. 62, 69, 101



**ClinoLink
Assembly variant 3:**
Additional attachment of a PlusBox, e.g. for wiper release
Art. No.: 3500095



Trapez mop frame
for surface cleaning
Art. No.: 2520300
► pp. 95, 99



MopJump
Contactless and easy mop attachment
Art. No.: 3500020
► pg. 66



MopDrop
Contactless release of the mop with MopDrop
Art. No.: 3500019
► pg. 36



Disposal bag
1 x 35-litre, sterile, medium-sized, transparent
Art. No.: 3580016
► pp. 37, 72

Clino® CR trolley systems with flat wringer Ringo® GMP



The Clino CR3 system trolley with the flat wringer Ringo GMP was certified by Fraunhofer IPA in 1999. It was the first ever cleaning and disinfection system certified for cleanrooms. Its open design enables the use of single or two-step cleaning techniques and therefore makes it an ideal tool for primary or intermediate cleaning. However, the design, selection of materials and processing reflect the highest requirements, so that the use even in areas under sterile conditions (GMP A/B) is not a problem.

* Does not apply to Clino CR6

The characteristics:

- +** **Open design** for the use of various cleaning methods
- +** **Full flexibility** with changing requirements
- +** **Security** through independent assessment (Clino CR3)
- +** **Autoclavable***, suitable for the use in areas under sterile conditions (as per ISO 14644-5, Sec. E.2.2. and EU-GMP-RL, Annex 1, Sentence 81)

* Does not apply to Clino CR6

Full flexibility with Clino CR –
the first certified cleaning system
for cleanroom use



Manufactured from stainless steel 316L in accordance with the guidelines of EHEDG



Available with swivel castors suitable for the cleanroom; if required, the castors can be autoclaved or electrically conductive, with or without locking device



All trolleys shown here are also available with the stainless steel Clino flat wringer

► pg. 28

- +** The Clino modular design enables **object-specific adjustments**
- +** A practically **contactless workflow** with MopJump and MopDrop

Work procedure, see page 29



1/2

A

0,4
m²

Picture shows model, including optional extras

Clino® CR1 FP-GMP

For highly sensitive areas, minimal space requirements, with disposal

Art. No.: 3511000

Dimensions (LxWxH): 74 x 53 x 70 cm

Basic components

- + Small base frame, high-end finish
- + Special castors (100 mm) can be autoclaved

Work area

- + Flat wringer Ringo GMP
- + 25-litre stainless steel container
- + stainless steel container MopTen

Disposal

- + 1 x 35-litre unit
- + 9-litre stainless steel container



Also available as a stainless steel/plastic version
Clino® CR1 FP-CR
Art. No.: 3511500

The most-liked accessories for the Clino CR1 FP-GMP

- + Stainless steel mop frame (see pg. 94)
- + MopJump (see pg. 66)
- + MopDrop (see pg. 36)
- + Electrically conductive castors (see pg. 70)
- + 1 x 35-litre sterile disposal bag (see pp. 37, 72)



1/2

A

0,8
m²

Picture shows model, including optional extras

Clino® CR5 FP-GMP

The system trolley with maximum transport capacity – add-on parts in the front and back for storage can be folded in

Art. No.: 3570000

Rest dimensions (LxWxH): 85 x 52 x 130 cm

Working dimensions (LxWxH): 146 x 52 x 101 cm

Basic components

- + Large base frame
- + Stainless steel
- + Special castors (100 mm) can be autoclaved

Supply unit

- + 3 stainless steel trays
- + 3 4-litre stainless steel containers

Disposal

- + 2 x 70-litre unit

Work area

- + Flat wringer Ringo GMP
- + 25-litre stainless steel container
- + stainless steel container MopTen

The most-liked accessories for the Clino CR5 FP-GMP

- + Stainless steel mop frame (see pg. 94)
- + MopJump (see pg. 66)
- + Electrically conductive castors (see pg. 70)
- + 1x 70-litre sterile disposal bag (see pp. 37, 72)
- + Trapez stainless steel mop frame (see pp. 95, 99)

Cleaning trolley with flat wringer



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1/2

A

0,5
m²

Clino® CR4 FP-GMP

The high-end system trolley:
The modular design system
suitable for the cleanroom;
for use in highly sensitive areas

- + Cleaning method:
certified flat wringer Ringo GMP for areas under sterile conditions
- + Full flexibility in single- and two-step technique
- + Made from stainless steel suitable for cleanrooms, all components can be autoclaved
- + Individually configurable through Clino modular design system
- + ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 FP-GMP

Art. No.: 3540100

Dimensions (LxWxH):

74 x 72 x 102 cm

Variable width, depending on assembly variant

Standard equipment Clino CR4 FP-GMP Art. No.: 3540100

Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Special castors (100 mm) can be autoclaved

Work area

- Flat wringer Ringo GMP
- 1 25-litre stainless steel container for the cleaning and disinfection fleet
- stainless steel container MopTen for fresh mops

Supply unit

See ClinoLink assembly variants 2 and 3

Disposal

- 1 x 35-litre unit
- 9-litre stainless steel container

Optional extras/accessories



ClinoLink Assembly variant 2:
Contains 3 trays for various mop frames
Art. No.: 3500088
► pp. 62, 69, 101



ClinoLink Assembly variant 3: Additional attachment of a 4-litre stainless steel container, e.g. for wiper release
Art. No.: 3500094
► pg. 69



Are available with either autoclavable or electrically conductive special castors
► pg. 70



Trapez mop frame stainless steel for surface cleaning and disinfection
Art. No.: 2009580
► pp. 95, 99



MopDrop
Contactless release of the mop with MopDrop
Art. No.: 3500019
► pg. 36



Disposal bag
1 x 35-litre, sterile, medium-sized, transparent
Art. No.: 3580016
► pp. 37, 72



ClinoLink assembly variant 1: With mop handle holder and support for the mop frame.
Picture shows model, including optional extras

1/2

0,5
m²

Clino® CR4 FP-CR

The high-end system trolley:
The cleanroom-suitable modular design system for highly sensitive areas without sterility requirements

- + Cleaning method:
Flat wringer Ringo GMP
- + Full flexibility in single- and two-step technique
- + Wiper impregnation for surface cleaning in the PlusBox
- + Made of cleanroom-suitable stainless steel, base frame and electrically conductive swivel castors
- + Individually configurable through Clino modular design system
- + ClinoLink: Cleanroom-suitable connection system for individual attachment of accessory parts (see assembly variant for an example)

► pg. 69

Clino® CR4 FP-CR
Art. No.: 3540200

Dimensions (LxWxH):
77 x 70 x 104 cm

Variable width, depending on assembly variant

Standard equipment Clino CR4 FP-CR Art. No.: 3540200

Basic components

- Base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Tube size 22 mm
- Electrically conductive special castors (100 mm)

Work area

- Flat wringer Ringo GMP
- 2 PlusBoxes
- 1 25-litre bucket
- 1 15-litre bucket for fresh mops

Supply unit

See ClinoLink assembly variants 2 and 3

Disposal

- 1 x 35-litre unit
- 5-litre plastic container

Optional extras/accessories



ClinoLink Assembly variant 2:
Contains 3 trays for various mop frames
Art. No.: 3500088

► pp. 62, 69, 101



ClinoLink Assembly variant 3:
Additional attachment of a PlusBox, e.g. for wiper release
Art. No.: 3500095



Are available with either autoclavable or electrically conductive special castors

► pg. 70



Trapez mop frame for surface cleaning
Art. No.: 2520300

► pp. 95, 99



All Clino PlusBoxes can be equipped with the 4- to 6-litre mini disposal bag

► pp. 37, 72



Disposal bag
1 x 35-litre, sterile, medium-sized, transparent
Art. No.: 3580016

► pp. 37, 72

Cleaning trolley with flat wringer



Picture shows model, including optional extras

1/2

A

0,5
m²

Clino® CR3 FP-GMP

The tried-and-tested all-round solution



- + Cleaning method: Flat wringer Ringo GMP
- + Full flexibility in single- and two-step technique
- + Certified for sterile areas GMP A/B
- + Made from stainless steel suitable for cleanrooms, all components can be autoclaved

Clino® CR3 FP-GMP
Art. No.: 3530010

Dimensions (LxWxH):
86 x 53 x 109 cm

Standard equipment Clino CR3 FP-GMP Art. No.: 3530010

Basic components

- Large base frame
- Stainless steel suitable for cleanrooms, high-end finish
- Special castors (100 mm) can be autoclaved

Work area

- Flat wringer Ringo GMP
- 2 25-litre stainless steel containers

Supply unit

- 9-litre stainless steel container, top for fresh mops

Disposal

- 9-litre stainless steel container, bottom for contaminated mops

Optional extras/accessories



Clino stainless steel mop frame with one-piece handle
Art. No.: 3500902
Additional mop frames

► pg. 94



Optionally available with either autoclavable or electrically conductive special castors with or without locking devices

► pg. 70



MopJump
Contactless and easy mop attachment
Art. No.: 3500020

► pg. 66



The mop frame's handle can be affixed to the permanently attached carrier



All mop frames are available with the Clino Connect replacement mount for fast and easy handle replacement

► pp. 34, 94



Disposal bag
1 x 9-litre, sterile, small, transparent
Art. No.: 3580015

► pp. 37, 72



1/2

A

0,4
m²

Clino® CR6 FP

3-bucket system with four buckets for surface cleaning and supply articles

Art. No.: 3550100

Dimensions (LxWxH): 80 x 54 x 102 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Special castors (100 mm) can be autoclaved

Work area

- + Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- + 3 15-litre buckets with straight stainless steel handle

Supply unit

- + 4 6-litre buckets with straight stainless steel handle



1/2

A

0,4
m²

Clino® CR6s FP

2-bucket system trolley with additional storage space on top

Art. No.: 3550200

Dimensions (LxWxH): 67 x 54 x 102 cm

Basic components

- + Medium base frame
- + Stainless steel
- + Tube size 22 mm
- + Special castors (100 mm) can be autoclaved

Work area

- + Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- + 2 15-litre buckets with straight stainless steel handle

Supply unit

- + 4 6-litre buckets with straight stainless steel handle



1/2

A

0,3
m²

Clino® CR6xs FP

Double rolling bucket system with minimal space requirements

Art. No.: 3550300

Dimensions (LxWxH): 51 x 54 x 101 cm

Basic components

- + Medium base frame
- + Stainless steel
- + Tube size 22 mm
- + Special castors (100 mm) can be autoclaved

Work area

- + Flat wringer Clino stainless steel with defined pressure point for uniform residual moisture
- + 2 15-litre buckets with straight stainless steel handle

Clino® Trolley systems for grey areas



In controlled and grey areas there are no regulated requirements such as in the classified cleanrooms, but, even so, all types of contamination must be avoided or removed from the area. Therefore, the Clino system trolleys for controlled areas make professional cleaning technology available, however without leading to unnecessary costs. On the contrary – through their origin in professional building cleaning, they are consistently designed to efficient work procedures and, as a result, save both time and money. The possible cleaning methods are the same as for the cleanroom system trolleys – only implemented as a lower-priced solution.

The characteristics:

- + **Stainless steel modular design system** for the object-specific adjustment
- + **All cleaning methods** are available
- + **Almost any type of special construction** is possible
- + **Changing the cleaning system without using any tools** can be completed quickly
- + **MultiBox drawer system** for maximal storage space and enclosed appearance
- + **Hygienic zone concept** attainable by using five colours of plastic components

The Clino stainless steel modular design system: Professional solutions for controlled areas



Plug-in connections,
no screws required



Double-bearing mounted
125 mm swivel castors
with panel



22 mm stainless steel
tube



Picture shows model, including optional extras

1

0,4
m²

Clino® STEC20

The compact system trolley for sensitive areas

Art. No.: 3202000

Dimensions (LxWxH): 68 x 62 x 115 cm

Basic components

- + Medium base frame
- + Stainless steel
- + Double-bearing mounted 125 mm swivel castors

Work area

- + 1 MultiBox with 4 PlusBoxes for impregnation of mops and cloths
- + ClinoBar bottle holder

Supply unit

- + 1 MultiBox

Disposal

- + 1 MultiBox



Picture shows model, including optional extras

1

0,7
m²

Clino® STEC20 with disposal unit

The compact system trolley for sensitive areas with removable disposal unit

Art. No.: 3205000

Dimensions (LxWxH): 117 x 62 x 115 cm

Basic components

- + Medium base frame
- + Stainless steel
- + Double-bearing mounted 125 mm swivel castors

Work area

- + 1 MultiBox with 4 PlusBoxes for impregnation of mops and cloths
- + ClinoBar bottle holder

Supply unit

- + 2 MultiBoxes

Disposal

- + 1 removable unit



The STEC20 is also available with the system box EasyMop and in different colours.
Art. No. of this version: 3204000



1/2

0,3
m²

Clino® E1e

The smallest possible cleaning trolley with stainless steel flat wringer

Art. No.: 2020400

Dimensions (LxWxH): 62 x 57 x 86 cm

Basic components

- + Small base frame
- + Stainless steel
- + Double-bearing mounted 125 mm swivel castors

Work area

- + Flat wringer Clino stainless steel
- + 1 25-litre bucket
- + 1 15-litre bucket

Trolley systems for grey areas



1

0,3
m²

Clino® E1 MF

The smallest possible cleaning trolley with the innovative MopFloat system

Art. No.: 2020900

Dimensions (LxWxH): 62 x 57 x 86 cm

Basic components

- + Small base frame
- + Stainless steel
- + Double-bearing mounted 75 mm swivel castors

Work area

- + MopFloat CR
- + 1 25-litre bucket
- + 1 15-litre bucket



1/2

0,6
m²

Clino® Profi C5e

The medium-sized cleaning trolley with stainless steel flat wringer and three buckets for surface cleaning

Art. No.: 2095520

Rest dimensions (LxWxH): 78 x 58 x 110 cm 0,4 m²

Working dimensions (LxWxH): 100 x 58 x 110 cm

Basic components

- + Medium base frame
- + Stainless steel
- + Double-bearing mounted 125 mm swivel castors

Work area

- + Flat wringer Clino stainless steel
- + 1 25-litre bucket
- + 1 15-litre bucket
- + 3 6-litre bucket

Disposal

- + 2 x 70-litre unit



1

0,6
m²

Clino® Profi C5 MF

The medium-sized cleaning trolley with the innovative MopFloat system

Art. No.: 2095900

Rest dimensions (LxWxH): 78 x 59 x 110 cm 0,4 m²

Working dimensions (LxWxH): 100 x 59 x 110 cm

Basic components

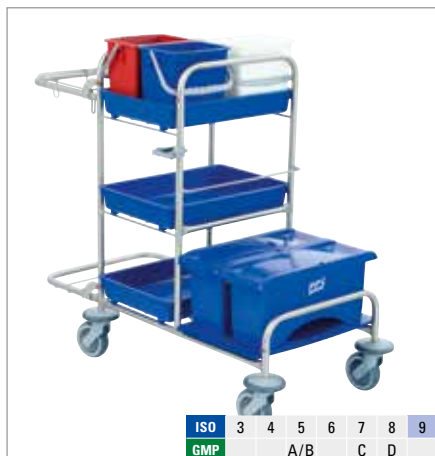
- + Medium base frame
- + Stainless steel
- + Double-bearing mounted 125 mm swivel castors

Work area

- + MopFloat CR
- + 1 25-litre bucket
- + 1 15-litre bucket
- + 3 6-litre bucket

Disposal

- + 2 x 70-litre unit



Picture shows model, including optional extras

1

0,7
m²

Clino® Profi C9

The large stainless steel system trolley for the EasyMop process

Art. No.: 2099980

Rest dimensions (LxWxH): 90 x 57 x 133 cm 0,5 m²

Working dimensions (LxWxH): 119 x 57 x 107 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + 1 tray for system boxes EasyMop
- + 2 system boxes EasyMop

Supply unit

- + 3 trays
- + 3 6-litre buckets

Disposal

- + 2 x 70-litre unit



Picture shows model, including optional extras

1/2

0,8
m²

Clino® Profi C7e

The large cleaning trolley with stainless steel flat wringer

Art. No.: 2097575

Rest dimensions (LxWxH): 90 x 57 x 133 cm 0,5 m²

Working dimensions (LxWxH): 131 x 57 x 107 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + Flat wringer Clino stainless steel
- + 1 25-litre bucket
- + 1 15-litre bucket

Supply unit

- + 3 trays
- + 3 6-litre buckets

Disposal

- + 2 x 70-litre unit



1

0,8
m²

Clino® Profi C7 MF

The large cleaning trolley with the innovative MopFloat system

Art. No.: 2097900

Rest dimensions (LxWxH): 90 x 58 x 133 cm 0,5 m²

Working dimensions (LxWxH): 131 x 58 x 107 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + MopFloat CR
- + 1 25-litre bucket
- + 1 15-litre bucket

Supply unit

- + 3 trays
- + 3 6-litre buckets

Disposal

- + 2 x 70-litre unit

Trolley systems for grey areas



1/2

1
m²

Picture shows model, including optional extras

Clino® STEC7

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3077670

Rest dimensions (LxWxH): 107 x 61 x 115 cm 0,6 m²

Working dimensions (LxWxH): 155 x 61 x 115 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + Flat wringer Ringo
- + 1 25-litre bucket, 1 15-litre bucket
- + ClinoBar bottle holder

Supply unit

- + 3 MultiBoxes
- + 4 PlusBoxes

Disposal

- + 2 x 70-litre unit



1

1
m²

Picture shows model, including optional extras

Clino® STEC7 MF

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3077470

Rest dimensions (LxWxH): 107 x 61 x 115 cm 0,6 m²

Working dimensions (LxWxH): 155 x 61 x 115 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + MopFloat CR
- + 1 25-litre bucket, 1 15-litre bucket
- + ClinoBar bottle holder

Supply unit

- + 3 MultiBoxes
- + 4 PlusBoxes

Disposal

- + 2 x 70-litre unit



1

0,9
m²

Picture shows model, including optional extras

Clino® STEC9K

The ergonomically optimised system trolley for controlled areas.

Enclosed appearance, open function with the Clino MultiBox

Art. No.: 3079740

Rest dimensions (LxWxH): 98 x 61 x 115 cm 0,6 m²

Working dimensions (LxWxH): 142 x 61 x 115 cm

Basic components

- + Large base frame
- + Stainless steel
- + Tube size 22 mm
- + Double-bearing mounted 125 mm swivel castors

Work area

- + 1 tray for system boxes EasyMop
- + 3 system boxes EasyMop
- + ClinoBar bottle holder

Supply unit

- + 3 MultiBoxes
- + 4 PlusBoxes for cloth impregnation

Disposal

- + 2 x 70-litre unit



All PPS system trolleys for cleanrooms are also ideally suited for wall and ceiling cleaning

PPS® components for cleanroom system trolleys

Due to its standardised dimensions, the Clino modular design system enables the trouble-free exchange of individual components. Using the example of the CR4 model, here we'll show you a selection of possible variants that are all based on identical base frames:



Clino CR4 FP with accessories
(assembly variants 1 and 3) ► [pg. 53](#)



Clino CR4 FP-GMP with accessories
(assembly variants 1 and 2) ► [pg. 52](#)



Clino CR4 MF-GMP with accessories
(assembly variants 1 and 3) ► [pg. 48](#)



Clino CR4 EM-GMP with accessories
(assembly variants 1, 2 and 4) ► [pg. 42](#)



Clino CR4 EM-CR with accessories
(assembly variants 1 and 2) ► [pg. 45](#)
Zone concept **blue**



Clino CR4 EM-CR with accessories
(assembly variants 1 and 3) ► [pg. 32](#)
Zone concept **grey/charcoal-grey**



Clino CR4 EM-CR with accessories
(assembly variants 1 and 3) ► [pg. 32](#)
Zone concept **yellow**



Clino CR4 EM-CR with accessories
(assembly variant 1) ► [pg. 32](#)
Zone concept **green**



Clino CR4 EM-CR with accessories
(assembly variants 1 and 3) ► [pg. 32](#)
Zone concept **red**

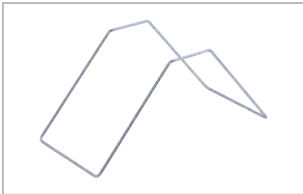
The components and colours can be freely combined. Let us help you design your own system trolley design concept.

Work area

	Article No.	Description	Colour	Suitable for system trolley
		System box EasyMop GMP Certified for sterile areas GMP A/B. Can be validated and autoclaved, safe to use. With scaling 1, 2, 2,5 and 4 litres  		
	3500200	System box EasyMop GMP with lid	Stainless steel	Cleaning trolley with impregnation
	3500210	MopJump for System box EasyMop GMP and MopTen		► pp. 20, 40
	3500220	Triple seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910000	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910001	Lid	■	
	2910003	Seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910010	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910021	Lid	■	
	2910003	Seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910030	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910031	Lid	■	
	2910003	Seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910040	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910041	Lid	■	
	2910003	Seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910060	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910061	Lid	■	
	2910003	Seal		
		System box EasyMop CR The solution for impregnation in cleanrooms without sterility requirements. Different colours, e.g. for designing your own individual zone concept ► pp. 32, 62		Cleaning trolley with impregnation
	2910070	System box EasyMop CR with lid and seal	■	► pp. 20, 40 et seq.
	2910071	Lid	■	
	2910003	Seal		

PPS® components for cleanroom system trolleys

Work area

	Article No.	Description	Colour	Suitable for system trolley
	MopFix 3500215	Stabilisation assistance during impregnation of a small number of King GMP mops (approx. 4 – 7) MopFix		Cleaning trolley with impregnation EasyMop GMP (stainless steel system box) ▶ pg.40 et seq.
	Tray for system box EasyMop CR 2920001 2920006	Carries two system boxes EasyMop in work or impregnation position Tray for system box EasyMop Tray for system box EasyMop	■ ■	Cleaning trolley with impregnation ▶ pg.40 et seq. for grey areas ▶ pg.56 et seq.
	Flat wringer Ringo GMP 3560000	Manufactured from high-grade stainless steel; certified for use in areas under sterile conditions GMP A/B With direct drive Flat wringer Ringo GMP	Stainless steel	Cleaning trolley with flat wringer ▶ pg.50 et seq.
	Flat wringer Clino stainless steel 1900002	Manufactured from high-grade stainless steel; with transmission mechanism for an always consistent level of moisture in the mop Flat wringer Clino stainless steel	Stainless steel	Cleaning trolley with flat wringer ▶ pg.50 et seq. for grey areas ▶ pg.56 et seq.
	MopFloat GMP 3500810 3500830 3500832 3500834	The innovative, validatable stainless steel impregnation system for areas through GMP A/B MopFloat GMP Metering insert 100 ml Metering insert 250 ml Metering insert 400 ml	Stainless steel	Cleaning trolley with MopFloat ▶ pg.46 et seq.
	MopFloat CR 3500820 3500830 3500832 3500834	The innovative, validatable impregnation system for cleanrooms without sterility requirements MopFloat CR Metering insert 100 ml Metering insert 250 ml Metering insert 400 ml	Stainless steel	Cleaning trolley with MopFloat ▶ pg.46 et seq. for grey areas ▶ pg.56 et seq.
	25-litre stainless steel container 3500032 3500078 3530210	With scaling 8- and 16-litres 25-litre stainless steel container Lid for 25-litre stainless steel container Rack for 25-litre stainless steel container for Clino CR5	Stainless steel Stainless steel	Cleaning trolley with MopFloat ▶ pg.46 et seq. with flat wringer ▶ pg.50 et seq.

Work area

	Article No.	Description	Colour	Suitable for system trolley
	25-litre bucket			Cleaning trolley with MopFloat
	Polypropylene, with scaling from 1 – 20 litres			
	2025001	25-litre bucket	■	► pg. 46 et seq.
	2025002	25-litre bucket	■	with flat wringer
	2025003	25-litre bucket	■	► pg. 50 et seq.
	2025004	25-litre bucket	■	for grey areas
	2025005	25-litre bucket	□	► pg. 56 et seq.
	15-litre bucket , Polypropylene, with scaling from 1 – 10 litres			Cleaning trolley with MopFloat
	2015001	15-litre bucket	■	► pg. 46 et seq.
	2015002	15-litre bucket	■	with flat wringer
	2015003	15-litre bucket	■	► pg. 50 et seq.
	2015004	15-litre bucket	■	for grey areas
	2015005	15-litre bucket	□	► pg. 56 et seq.
	2000150	Lid for 15-litre bucket	□	
	15-litre bucket with stainless steel handle			CR6
	Polypropylene, with scaling from 1 – 15 litres, autoclavable			► pg. 55
	3550009	15-litre bucket	■	
	3550010	15-litre bucket	■	
	3550008	15-litre bucket	■	
	2000155	Lid for 15-litre bucket with stainless steel handle		
	15-litre bucket Ergo			STE series for grey areas
	With ergonomic handle and scaling from 1 – 12 litres			► pg. 56 et seq.
	2815001	15-litre bucket Ergo	■	
	2815012	15-litre bucket Ergo	■	
	2815004	15-litre bucket Ergo	■	
	2815006	15-litre bucket Ergo	■	
	Stainless steel container MopTen			Cleaning trolley with EasyMop
	Made from high-quality stainless steel; for 10 mop covers; can be combined with MopJump			► pg. 40 et seq.
	3500022	MopTen	Stainless steel	with MopFloat
	3530187	Bucket support for MopTen		► pg. 46 et seq.
	3500210	MopJump		with flat wringer
				► pg. 50 et seq.
	9-litre stainless steel container			Cleaning trolley with EasyMop
	Made from high-grade stainless steel with tightly welded handles			► pg. 40 et seq.
	3500016	9-litre stainless steel container	Stainless steel	with MopFloat
	3500076	Lid for 9-litre stainless steel container		► pg. 46 et seq.
	3500060	9-litre container for mops with carrier for retrofitting		with flat wringer
				► pg. 50 et seq.
	5-litre plastic container			Cleaning trolley with EasyMop CR
	Scaling 1–4 litres			► pg. 40 et seq.
	2088010	5-litre plastic container for all CR4 in stainless steel-plastic combination	transparent	with MopFloat
	Can be used both as a tray (see image) and as a collecting container in disposal area			► pg. 46 et seq.
				with flat wringer
				► pg. 50 et seq.

PPS® components for cleanroom system trolleys

Work area

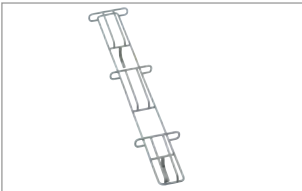
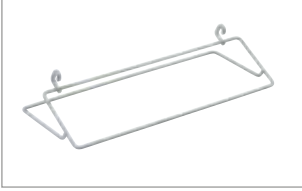
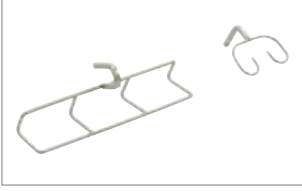
	Article No.	Description	Colour	Suitable for system trolley
	MopJump system for 9-litre stainless steel container			for 9-litre stainless steel container and all 15-litre buckets
	3500020	MopJump system for 9-litre stainless steel container	Stainless steel	
	2008008	MopJump system for 15-litre plastic bucket		
	ClinoBar bottle holder			For all STE trolleys in the grey area ► pg. 56
	2870003	ClinoBar bottle holder	Blue	
	2870008	ClinoBar bottle holder	Green	
	2870006	ClinoBar bottle holder	Grey	
	Bottle holder for 4 bottles			For all C9 and C7 trolleys in the grey area ► pg. 59
	2001209	Bottle holder for four bottles with handle carrier	Stainless steel	
	1901209	Bottle holder for four bottles without handle carrier		
	4-litre stainless steel container			Cleaning trolley with EasyMop ► pg. 40 et seq.
	3500007	4-litre stainless steel container	Stainless steel	with MopFloat ► pg. 46 et seq.
	3500074	Lid for 4-litre stainless steel container		with flat wringer ► pg. 50 et seq.
	3500070	4-litre stainless steel container with swivel handle for retrofitting		
	6-litre bucket with stainless steel handle			For CR6 series and grey areas ► pp. 55, 58, 59
	3550012	6-litre bucket	Red	
	3550011	6-litre bucket	Blue	
	3550014	6-litre bucket	Yellow	
	3550013	6-litre bucket	Green	
	3550015	6-litre bucket	White	
	6-litre bucket			For all trolleys in the grey area ► pp. 58, 59
	2000601	6-litre bucket	Red	
	2000602	6-litre bucket	Blue	
	2000603	6-litre bucket	Yellow	
	2000604	6-litre bucket	Green	
	2000605	6-litre bucket	White	
	Clino PlusBox			Cleaning trolley with EasyMop ► pg. 40 et seq.
	2088611	Clino PlusBox	Red	with MopFloat ► pg. 46 et seq.
	2088622	Clino PlusBox	Blue	with flat wringer ► pg. 50 et seq.
	2088633	Clino PlusBox	Yellow	for grey areas ► pg. 56 et seq.
	2088644	Clino PlusBox	Green	
	2088666	Clino PlusBox	Grey	
	2088677	Clino PlusBox	White	

Work and service area

	Article No.	Description	Colour	Suitable for system trolley
	2000610	Lid for 6-litre bucket With hooks for side mounting Lid for 6-litre bucket	transparent	For all trolleys in the grey area ► pp. 58, 59
	2088650 2088653	Accessories for Clino PlusBox Includes foldable lid with grip recesses and insert for the absorption of surplus cleaning solution Lid for Clino PlusBox Insert for absorption of surplus cleaning solution		Cleaning trolley with EasyMop ► pg. 40 et seq. with MopFloat ► pg. 46 et seq. with flat wringer ► pg. 50 et seq. for grey areas ► pg. 56 et seq.
	2088655	Sieve for Clino PlusBox Removable sieve for consistent impregnation of textiles Sieve for Clino PlusBox		Cleaning trolley with EasyMop ► pg. 40 et seq. with MopFloat ► pg. 46 et seq. with flat wringer ► pg. 50 et seq. for grey areas ► pg. 56 et seq.
	3550020	Stainless steel basket For reception of four 6-litre buckets ► pg. 66 Stainless steel basket	Stainless steel	For CR6 and CR6s ► pg. 55
	3500036	Stainless steel tray For depositing utensils, autoclavable Stainless steel tray	Stainless steel	For Clino CR5 ► pp. 47, 51
	2017017 3550030	Handle carrier Permanently elastic and safe locking carrier: for handles ranging in size between 20 and 30 mm in diameter, autoclavable Toolflex 22 mm Handle carrier for Clino CR6		For all Clino system trolleys
	2088620 2088640 2088660 2088610	Clino MultiBox For enclosed appearance and open function on the trolley Clino MultiBox Clino MultiBox Clino MultiBox Clino MultiBox	   	For all STE trolleys in the grey area ► pp. 57, 60

PPS® components for cleanroom system trolleys

Components for CR4

	Article No.	Description	Position	Suitable for system trolley
	3500088	Storage area for 3 mop frames Can be used for all PPS mop frames, autoclavable, for assembly variant 2 (stainless steel) Storage area for 3 mop frames	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	3500098 3500099	Holder frame for 4-litre stainless steel container Fits the ClinoLink holder system, autoclavable Holder frame for 4-litre stainless steel containers, upper left* Holder frame for 4-litre stainless steel containers, upper right* * (when standing in front of the CR4) ▶ pg. 69	▶ ▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	3500094	Holder frame for 4-litre stainless steel container Fits the ClinoLink holder system, autoclavable, for assembly variant 3 Holder frame for 4-litre stainless steel container, middle ▶ pg. 69	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	3500096 3500097	Holder frame for Clino PlusBox Fits the ClinoLink holder system, autoclavable Holder frame for Clino PlusBox, upper left* Holder frame for Clino PlusBox, upper right* * (when standing in front of the CR4) ▶ pg. 62	▶ ▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	3500095	Holder frame for Clino PlusBox Fits the ClinoLink holder system, autoclavable, for assembly variant 3 Holder frame for Clino PlusBox, middle ▶ pg. 62	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53
	3530188	Carrier for 9-litre stainless steel container and 5-litre transparent plastic container ▶ pg. 69 For attaching above the system boxes for assembly variant 4 Carrier for 9-litre stainless steel container, middle	▶	Cleaning trolley CR4 with EasyMop ▶ pp. 42, 45
	3500093 3500092	Carrier for mop frame Carrier for mop frame and handle fits multifunctional holder ClinoLink, autoclavable, for assembly variant 1 Carrier for handle, made of stainless steel Mop frame support, made of stainless steel ▶ pg. 69	▶ ▶	For all CR4 variants with EasyMop ▶ pp. 42, 45 with MopFloat ▶ pp. 48, 49 with flat wringer ▶ pp. 52, 53

ClinoLink

Variable configurable connection system consisting of a total of eight multi-functional holders for the object-specific adjustment to the CR4 system trolley. All accessory parts can easily be removed for cleaning.

The following shows the standard assembly variants 1 to 4 (also see pages 42, 45, 48, 49, 52 and 53)



ClinoLink
Assembly variant 1:
With mop handle carrier and mop frame support



ClinoLink
Assembly variant 2:
Contains 3 trays for various mop frames

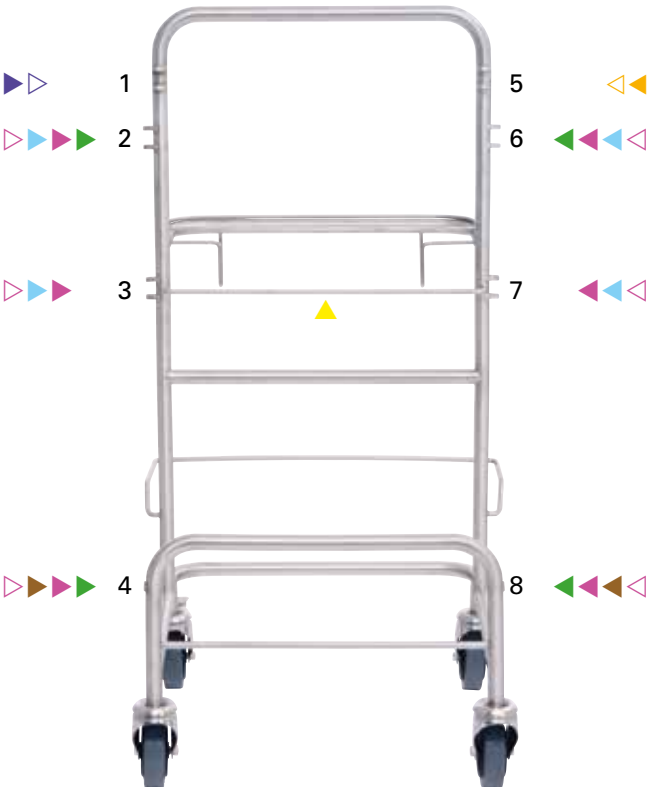


ClinoLink
Assembly variant 3:
Additional attachment of a stainless steel container, e.g. as deposit area or as a separate area for cloth release



ClinoLink
Assembly variant 4:
Additional attachment of a 9-litre stainless steel container (only possible for EasyMop method)

The assembly variants 1 to 4 only represent a small sample of the attachment possibilities. They can be attached either on the left or on the right of the ClinoLink. The components listed on the opposite [pg. 68](#) can be used at the following positions:



PPS® components for cleanroom system trolleys

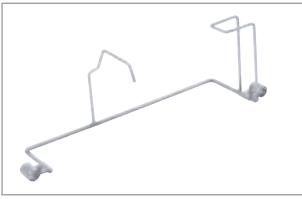
Swivel castors



	Article No.	Description	Colour	Suitable for system trolley
	Swivel castor CR 100 mm			For all Clino system trolleys with EasyMop
		Autoclavable castors with double ball bearings		► pg. 40 et seq.
	3500100	Swivel castor 100 mm		with MopFloat
	3500150	Swivel castor 100 mm with locking device		► pg. 46 et seq.
				with flat wringer
				► pg. 50 et seq.
	Swivel castor, electrically conductive 100 mm			For all Clino system trolleys with EasyMop
		Electrically conductive castors with double ball bearings		► pg. 40 et seq.
	2013430	Swivel castor 100 mm		with MopFloat
	2013440	Swivel castor 100 mm with locking device		► pg. 46 et seq.
				with flat wringer
				► pg. 50 et seq.
	Clino plastic swivel castor 125 mm			For all trolleys in the grey area
		Best running comfort and maximum ergonomics of the PPS cleaning trolley through ball bearing in running and turning direction		► pg. 56 et seq.
	2013115	Clino plastic swivel castor 125 mm		
	2013117	Clino plastic swivel castor/F 125 mm with locking device		
	Deflector ring			For all system trolleys without sterility requirements,
		For protection of walls in object through elastic sheath		for all system trolleys used in grey areas
	2014030	for 22 mm tube with soft abutting edges	■	► pg. 56 et seq.
	2014010	9 cm ø for 22 mm tube	■	

Disposal



Description	Suitable for system trolley
 Mini disposal with 4-litre stainless steel container ... e.g. for cloth release, suitable for multi-functional ClinoLink holder Details ► pp. 35, 69  ... and Clino PlusBox	Cleaning trolley CR4 with EasyMop ► pp. 42, 45 with MopFloat ► pp. 48, 49 with flat wringer ► pp. 52, 53
 MopDrop Contactless disposal of the mop 3500019 MopDrop	Cleaning trolley CR1, CR4 and CR9 with EasyMop ► pg. 40 et seq. with MopFloat ► pg. 46 et seq. with flat wringer ► pg. 50 et seq.
 Small disposal with 9-litre stainless steel container For mop release Details ► pg. 35	Cleaning trolley CR3 ► pg. 54
 Medium-sized disposal 1 x 35 litre For the release of contaminated mops Details ► pg. 35 • Sack holder frame • Insert 1 x 35 litre • 9-litre stainless steel container with carrier	Cleaning trolley CR1, CR4 with EasyMop ► pg. 40 et seq. with MopFloat ► pg. 46 et seq. with flat wringer ► pg. 50 et seq.
 Large disposal 1 x 70 litre For the release of contaminated mops Details ► pg. 35 • Sack holder frame • Bag wire 1 x 70 litre • Sack support	Cleaning trolley CR9 ► pg. 43

PPS® components for cleanroom system trolleys

Disposal

	Article No.	Description	Colour	Suitable for system trolley
		Release frame 1 x 35 litre Divides the disposal unit in two areas, e.g. for the separate release of contaminated mops and cloths 3530150 Release frame 1 x 35 litre Details ► pg. 35		Cleaning trolley CR9 ► pg. 43
		Disposal 2 x 70 litre For separation of waste or separate release of mops and residual waste • Sack holder frame • Bag wire 2 x 70 litre • Sack support		For all medium-sized and large trolleys in the grey area ► pg. 56 et seq.
		Mini sterile disposal bag For 4-litre stainless steel container and Clino PlusBox PU: 10 parts, delivery time: approx. 6 weeks 3580014 Mini sterile disposal bag Details ► pg. 37		4-litre stainless steel container Clino PlusBox
		Small sterile disposal bag For 9-litre stainless steel container and all EasyMop GMP and CR system boxes PU: 10 parts 3580015 Small sterile disposal bag Details ► pg. 37		9-litre stainless steel container CR3 ► pg. 54 System box EasyMop GMP System box EasyMop CR ► pg. 40 et seq., 63
		Medium-sized sterile disposal bag For disposal unit 1 x 35 litre (CR1 and CR4) PU: 10 parts 3580016 Medium-sized sterile disposal bag Details ► pg. 37		Cleaning trolley CR1, CR4 with EasyMop ► pg. 40 et seq. with MopFloat ► pg. 46 et seq. with flat wringer ► pg. 50 et seq.
		Large sterile disposal bag For disposal unit 1 x 70 litre or 2 x 70 litre PU: 10 parts 3580017 Large sterile disposal bag Details ► pg. 37		Cleaning trolley CR9 ► pg. 43 For all medium-sized and large trolleys in the grey area ► pg. 55 et seq.
		MemoBoard Lid for 70-litre disposal with reception for work instructions and the like, in A5 page format, laminated 2806401 MemoBoard Clino 2806402 MemoBoard Clino 2806403 MemoBoard Clino 2806406 MemoBoard Clino	2806411 MemoBoard Profi 2806412 MemoBoard Profi 2806413 MemoBoard Profi 2806416 MemoBoard Profi ■ ■ ■ ■	For all large trolleys in the grey area ► pg. 56

Look behind the scenes

The design of PPS cleanroom products must be proven in the cleanroom



For this reason, we conduct, for example, numerous tests and analyses regarding the cleanability. At first glance, it appears as if cleanliness rules, but ...



when taking a closer look under UV light, the contamination becomes clearly visible. Subsequently, the prescribed cleaning procedure is carried out.



The renewed review shows that all particles were removed. Test passed.

Of course, we also have our own tests confirmed by independent institutes, such as Fraunhofer IPA.

Cleanroom vacuum Clino[®] KR/A



The Clino KR/A series vacuums have been specifically designed for use in technical cleanrooms and in the pharmaceutical industry. Due to its modular design, it can be specifically configured to meet the needs of dry or wet vacuum operations. Even special versions, such as compressed air powered turbines for explosion protected areas, are available:

The characteristics:

- +** **Multi-level filter system**
up to a separation level of 99.999%
- +** Made entirely of **high-quality stainless steel**
- +** **Autoclavable**
- +** **Modular design:** Object-specific adjustments are possible
- +** For the vacuuming of hazardous dusts
- +** Comprehensive range of accessories
- +** Can be delivered with 230 V, 400 V or powered by compressed air
- +** Made in Germany

High performance special equipment in modular design



ULPA 15 / HEPA 14:
Separation level at least
99.999%



Module structure:
Wet and dry vacuum



Comprehensive
accessory programme

Cleanroom vacuum Clino® KR/A 10



A

GMP

Clino® KR/A 10

Mobile, autoclavable cleanroom vacuum (dry vacuum) for the use in ISO class 4/5 cleanrooms. Specifically designed for cleanroom use.

- + Made entirely of high-quality stainless steel
- + With a quadruple filter system
- + Collection container and filter chamber autoclavable
- + Comprehensive accessories deliverable, autoclavable
- + All elements can be easily removed
- + Soundproof turbo ventilator
- + Simple operation and maintenance
- + Fast and safe emptying
- + Cable length: 8 m; with safety plug
- + Non-marking special swivel castors, autoclavable
- + Delivery times upon agreement
- + Including accessory set:
3590773 Hand pipe, 3590776 Suction hose CBS, 3590780 Floor nozzle with brush strip, 3590784 Joint nozzle and 3590788 Diagonal pipe nozzle

Clino® KR/A 10
Art. No.: 3590710

Technical data Clino KR/A 10				Art. No.: 3590710	
Output	1000 W	Container volume (dry)	10 l	Separation level	99.999 %
Voltage	230 V	Intake volume (max.)	160 m³/h	Empty weight	15 kg
Noise level	67 dB (A)	Length x width	400 x 400 mm		
Negative pressure max.	250 mbar	Height	760 mm		



With cable holder



With quick clamp



Pre-filter, PTFE coated, antistatic



With Hepa filter in front of ...



... and behind the motor, exhaust air is emitted near floor, optimal for use in clean-room



With sealable microfibre bags K4, fast and safe emptying through newly developed concept

Cleanroom vacuum Clino[®] KR/A 30



Made entirely of high-quality stainless steel

A

GMP

Clino[®] KR/A 30

The cleanroom Clino KR/A 30 has been developed for the intake of dust, wet production residues and liquids in the ISO class 4/5 cleanrooms. The handling is very easy due to the lowerable and easily removable container.

Filter system during use as a dry vacuum

- + Microfibre bag, antistatic
- + Polyester pre-filter, antistatic
- + Optional activated carbon filter (gases, vapours, odours)
- + In front of the motor: HEPA H14 (99.999%)
- + Behind the motor: HEPA H14 (99.999%)

Separation system during wet vacuum uses

- + Float switch-off
- + Optional activated carbon filter (gases, vapours, odours)
- + In front of the motor: HEPA H14 (99.999%)
- + Behind the motor: HEPA H14 (99.999%)
- + Delivery time upon agreement

Clino[®] KR/A 30

Art. No.: 3590720 Dry vacuum

Art. No.: 3590730 Wet vacuum

Art. No.: 3590740 Vacuum for ex-areas



Technical data Clino KR/A 30

Output	1000 W	Container volume (dry)	30 l	Height	1010 mm
Voltage	230 V	Container volume (wet)	16 l	Separation level	99.999 %
Noise level	67 dB (A)	Intake volume max.	150 m ³ /h	Empty weight	34 kg
Negative pressure max.	220 mbar	Length x width	600 x 510 mm		



Comfortable lowering of container;
container with 4 castors



With float switch-off when used as a wet
vacuum



Stainless steel trolley with 4 castors,
electrically conductive



With security cable holder



With suction pipe holder



With quick clamp

Accessories

Every accessory is suitable for all cleanroom vacuums



	Article No.	Description	Colour
	A	Hand pipe 3-parts, made of stainless steel, length 1340 mm, Ø 38 mm	
	Ex	3590773 Hand pipe, 3-parts with mounting for KR/A 10 and KR/A 30	stainless steel
		High-tech suction hoses for hand pipe Ø 38 mm, length: 3 m	
		3590779 Nitrile suction hose (see image) Multi-layer Nitrile, extremely smooth interior	A Ex grey
		3590776 CBS suction hose High-quality EVA plastic, very flexible	Ex blue
	A	Floor nozzles for hand pipe, Ø 38 mm, 300 mm width; additional widths available upon request.	
		3590780 Floor nozzle with brush strips PA, for dry vacuum 3590710, 3590720, 3590740	Ex black
		3590781 Floor nozzle with rubber lip PA (see image), for wet vacuum 3590730	Ex black
		Microfibre filter bags 4-layer design, with sealing cap for secure disposal. Very high filter performance. Also suitable for vacuuming glass breakages with small amounts of liquid. Can be used for Clino KR/A 10 (3590710) and Clino KR/A 30 Dry vacuum (3590720)	
		3590750 Microfibre filter bags	white
	A	Diagonal pipe nozzles for hand pipe Ø 38 mm	
		3590788 Diagonal pipe nozzle PA 200 mm (see image)	Ex black
		3590787 Diagonal silicone pipe nozzle 200 mm	Ex transparent
		3590789 Diagonal stainless steel pipe nozzle 325 mm	Ex stainless steel
	A	Conical rubber pipe nozzle 90° for hand pipe Ø 38 mm, length 320 mm Additional materials and bending radii available upon request.	
		3590792 Conical rubber pipe nozzle 90 PA	Ex black
		3590793 Conical rubber pipe nozzle 90 silicone (see image)	transparent
	A	Compartment nozzle for hand pipe Ø 38 mm, 120 x 35 mm	
		3590796 Compartment nozzle PA 200 mm	Ex black
		3590797 Compartment nozzle silicone 200 mm (see image)	transparent
	A	Joint nozzle for hand pipe Ø 38 mm	
		3590784 Joint nozzle PA 300 mm (see image)	Ex black
		3590785 Stainless steel joint nozzle 305 mm	Ex stainless steel

Select a suitable product from our extensive range of accessories. We offer you all accessory parts in a standard design, autoclavable or suitable for explosion-protected areas. For this, please request our special cleanroom vacuum flyer.

Cleanroom-suitable mop design



+ Cleanroom suitable bordering



+ High-tech equipment



+ Robust backing material



+ open pockets, drainage function



+ Hollow-knitted bagging with sealed edges, autoclavable



Cleanroom suitability/purity suitability

- + Qualification**
Certification as TESTED DEVICE by Fraunhofer
- + Sterility**
Autoclavable and resistant against gamma radiation
- + Material compatibility**
Tested with all standard disinfectants/groups of active substances



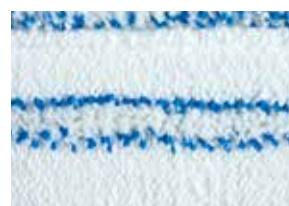
Material and processing

- + High-tech material**
Special yarn made from 100% polyester microfiber processed in a manner suitable for cleanrooms
- + Sealed edges**
All material edges are bordered and/or sealed
- + Cleanability**
Open pockets enable the rinsing of particles in the treatment process



Cleaning performance and reproducibility

- + 99.9% of all particles**
can be safely removed
- + Tested wetting process**
guarantees reproducible disinfection success
- + Water absorption and water release**
have been tested and appraised using scientific methods
- + Optimal cleaning performance**
Adhering impurities and disinfection agent residues are safely removed



Cost-effectiveness

- + Very high square-metre cleaning rate**
ensures low cost per application
- + High-quality manufacturing**
enables 50 sterilisation cycles or over 100 treatment cycles without sterilisation



Clino® CR

Special mops – reusable



Our reusable mops represent the state-of-the-art in cleanroom cleaning. Innovative materials – that can stand up to the wear of numerous wash and sterilisation cycles and simultaneously achieve validatable cleaning and disinfection processes.

The characteristics:

- +** Manufactured from **high-tech materials suitable for the cleanroom**
- +** **Cleaning efficiency and particle emission approved by an expert report***
* for models with IPA certificate
- +** Qualified for the **use in areas under sterile conditions GMP A/B**
- +** Up to **50 sterilisation cycles** possible
- +** Therefore **low costs per use**
- +** Products can also **be leased**

The reference class

Individualisation



Individual labelling of different areas through printing (in colour or black and white)



Attachment of barcode labels

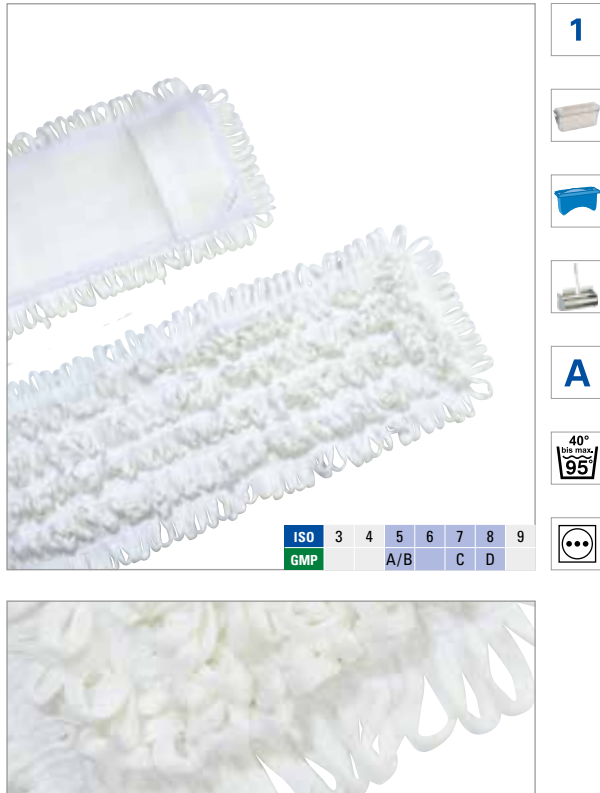


Sewing in of RFID chips

All types of special solutions are feasible within a short period of time

Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames  [pg. 94](#)



King GMP



Art. No.: 3500051

- + Removes 99.9 % of all particles in a single-stage process
- + Safe disinfection of GMP areas through validatable wetting process
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + Optimised for the EasyMop GMP impregnation method
- + Minimal amount of particle emission

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100 % high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges

Equipment Loop along the same lines as working material, with cover specifically suited for impregnation, polyester pocket with drainage function

Weight 160 g

Dimensions 40 cm

Packaging Packaging Unit: 10 parts
Also deliverable in smaller quantities



King CR

Art. No.: 3500040

- + Removes 99.9 % of all particles in a single-stage process
- + Safe disinfection of GMP areas through validatable wetting process
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + Optimised for the flat wringer Ringo GMP
- + Minimal amount of particle emission

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges

Equipment Loop along the same lines as working material, special laminated cover, textile pocket with drainage function

Weight 140 g

Dimensions 40 cm

Packaging Packaging Unit: 10 parts
Also deliverable in smaller quantities

Clino® CR

Special mops – reusable



1/2



A



Lord CR

Art. No.: 3500048

- + For cleaning and disinfection of GMP areas
- + Short loop form, good gliding characteristics
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + Optimised for flat wringer
- + Minimal amount of particle emission

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, medium-sized loop form

Equipment Loop along the same lines as working material, with cover, textile pocket with drainage function

Weight 125 g

Dimensions 40 cm

Packaging Packaging Unit: 10 parts
Also deliverable in smaller quantities



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A



King CR-MG

Art. No.: 3500052

- + 100 % polyester microfiber with high-low structure
- + Optimal gliding characteristics, suitable for perforated floors
- + Autoclavable
- + High particle absorption through special weaving process
- + Low particle emission

Types of floors All standard cleanroom and pharmaceutical floors, perforated floors

Working material 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, processed in special locking technology

Equipment with cover,
with polyester pocket

Weight 60 g

Dimensions 40 cm

Packaging Pre-washed, single, double-packaged



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King CR-MG Plus

Art. No.: 3500062

- + 100% polyester microfiber with high-low structure, with loop
- + Optimal gliding characteristics, suitable for perforated floors
- + Autoclavable, not suitable for chlorine-based disinfectants
- + High particle absorption through special weaving process
- + Low particle emission

Types of floors All standard cleanroom and pharmaceutical floors, perforated floors

Working material 100% high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, along the lines of equipment, processed in special locking technology

Equipment Loop with cover, with microfiber backfilling, polyester pocket with drainage function, with microfiber and PU foam backfilling

Weight 120 g

Dimensions 40 cm

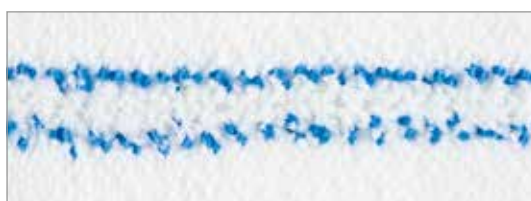
Packaging Pre-washed, single, double-packaged



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MicroSicuro CR/A

Art. No.: 2700268



- + Removes 99.9 % of all particles in a single-stage process
- + Safe disinfection of GMP areas through validatable wetting process
- + Maximal square metre cleaning rate through use of innovative material combination, ideal for removal of disinfection agent residues
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + Through maximum capillary effects, optimally suited for all PPS cleaning methods

Types of floors All standard cleanroom and pharmaceutical floors, perforated floors and anti-slip flooring

Working material 100% PES microfibers with special soft bristle

Equipment With permeable cover, polyester pocket with drainage function, with backfilling for high square metre cleaning rate

Weight 110 g

Dimensions 40 cm

Packaging Packaging Unit: 10 parts
Also deliverable in smaller quantities

Clino® CR

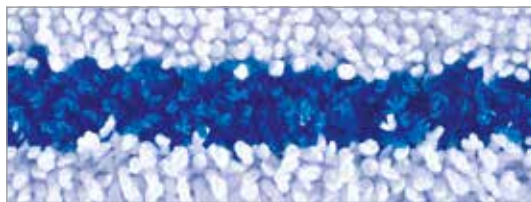
Special mops – reusable



1



A



MicroMopp Standard CR/A

Art. No.: 3500067

- + Fully enclosed construction made from 100% polyester micro loops, right-angled mop design for optimal use in corners
- + Very good gliding characteristics, not suitable for chlorine-based disinfectants
- + Suitable for dissolving adhesive contamination
- + Suitable for impregnation and flat wringer
- + Autoclavable

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% PS microfiber with polypropylene bristle

Equipment With permeable cover, with polyester pocket with drainage function, with PU backfilling for high square metre cleaning rate

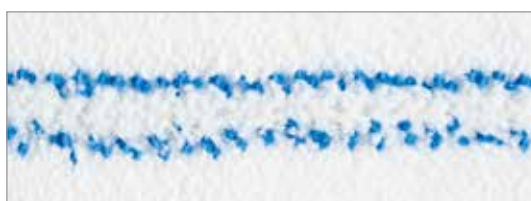
Weight 110 g

Dimensions 40 cm

Packaging 100 parts per carton
Also deliverable in smaller quantities



1



MicroSicuro CR

Art. No.: 2700266

- + Maximal cleaning performance through 2-component working material
- + Ideal for dissolving adhesive contamination
- + Over 99% reduction of contamination due to bacterium, yeast and mildew is already achieved when using only ionised water (test method DGMH 2001 Standard method 14)
- + Very high square-metre cleaning rate
- + Through maximum capillary effects, optimally suited for all PPS cleaning methods

Types of floors All standard cleanroom and pharmaceutical floors, perforated floors and anti-slip flooring

Working material 100% PES microfibers with PA bristle material

Equipment With permeable cover, with belt pocket with drainage function, with backfilling for high square metre cleaning rate

Weight 120 g

Dimensions 40 cm

Packaging Packaging Unit: 10 parts
Also deliverable in smaller quantities





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MicroSicuro Trapez CR/A

Art. No.: 2700293

- + Removes 99.9 % of all particles in a single-stage process
- + Safe disinfection of GMP areas through validatable wetting process
- + Maximal square metre cleaning rate through use of innovative material combination, ideal for removal of disinfection agent residues
- + Autoclavable up to 50 processing cycles, resistant to disinfection agents and gamma radiation
- + For the surface cleaning of, for example, isolators and cleaning of difficult-to-reach places
- + Suitable for all Trapez mop frames [pg. 99](#)

Types of floors All smooth surfaces
Working material 100 % PE microfibers with special soft bristle
Equipment With permeable cover, with polyester pocket with drainage function, with backfilling
Weight 80 g
Dimensions longer side: 27 cm, shorter side: 22 cm
Packaging Packaging Unit: 10 parts
 Also deliverable in smaller quantities



1



Mop CR for wall cleaning tool

Art. No.: 3580038

Art. No.: 3580039 MicroSicuro CR/A for wall cleaning tool

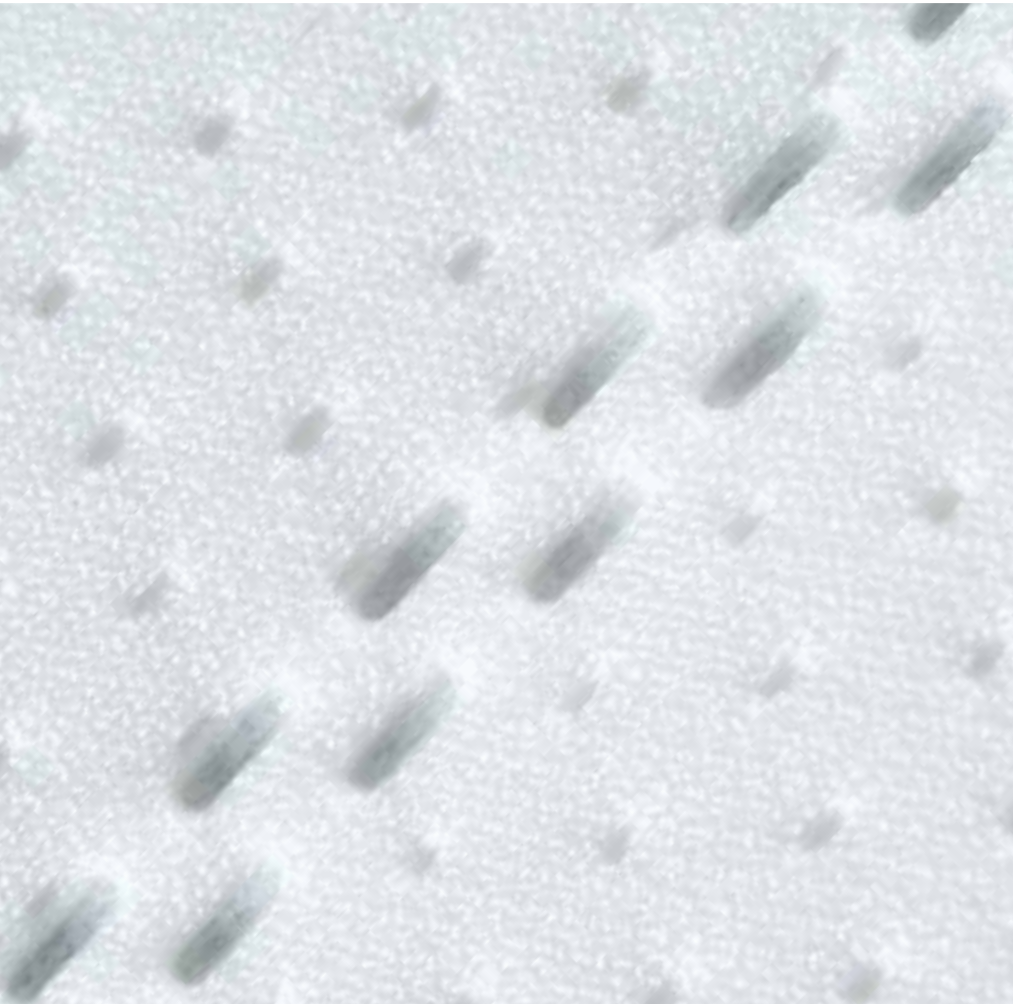
- + 100 % polyester microfiber continuous filament yarn
- + For cleaning walls, ceiling and hard-to-access areas
- + Autoclavable, resistant to disinfection agents
- + High-quality stainless steel push buttons

Surfaces All smooth surfaces
Working material 100 % high-tech manufactured polyester microfiber yarn suitable for the cleanroom – hollow-knitted bagging with sealed edges, medium loop form
Equipment High-quality stainless steel push buttons
Weight 160 g
Dimensions: 40 cm
Packaging Pre-washed, single, double-packaged



Clino® CR

Special mops – single-use and accessories



In small areas, where the logistical effort for the use of reusable textiles would be too high, single-use mops are a practical solution. When working with harmful substances, such as cytostatics, you will have a higher level of safety.

The characteristics:

- +** Made from **special yarn**, specially suited for cleanrooms
- +** **Water retention** for high square metre cleaning rates
- +** If desired, available as **sterile double-packaged** (gamma irradiated with lot documentation, batch documentation and indicator): Therefore, it can be **directly introduced into areas under sterile conditions GMP A/B**
- +** Different variants and packaging units are available
- +** **Pocket mop system:** Compatible with all Clino mop frames

The practical solution – with certainty



Pocket mop system for easy mop change, even for single-use mops



Processed with ultrasonic technology



If required, available in sterile

Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames 



1



ISO	3	4	5	6	7	8	9
GMP			A/B	C	D		

King CR wiper mop

Art. No.: 3500055

Art. No.: 3500056, gamma irradiated

- + Cost-efficient single-use mop
- + If desired, available sterile double-packaged
- + Ideally suited for cytostatic areas
- + High levels of area output through backfilling
- + Very high-quality, processing suitable for cleanrooms

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% polyester
Equipment with polyester pocket, with backfilling

Weight 50 g

Dimensions 40 cm

Packaging Pre-washed, single, double-packaged



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ISO	3	4	5	6	7	8	9
GMP			A/B	C	D		



King CR wiper mop S

Art. No.: 3500066

Art. No.: 3500068, gamma irradiated



- + Excellent cleaning performance due to 100% polyester microfibers
- + Special structure for optimal particle reception
- + Very high-quality, processing suitable for cleanrooms
- + High levels of area output through backfilling
- + Also ideal for wall and ceiling cleaning, can be sterilised

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% polyester with special structure
Equipment with polyester pocket, with backfilling

Weight 50 g

Dimensions 40 cm

Packaging 3500066: 100 parts per carton
Also deliverable in smaller quantities
3500068: Pre-washed, single, double-packaged

Clino® CR

Special mops – single-use



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King CR wiper mop PU

Art. No.: 3500057

- + PU foam backfilling as water retention
- + For small areas
- + Sealed edges
- + Not suitable for chlorine-based disinfectants

Types of floors All standard cleanroom and pharmaceutical floors

Working material 100% polyester

Equipment with PU backfilling, with cover, with polyester pocket

Weight 30 g

Dimensions 40 cm

Packaging Pre-washed, single, double-packaged



Sterile, single-use eyewear

Art. No.: 3580020

- + Highest level of wearing comfort, suitable for eyeglass wearers
- + Indirect ventilation system ensures high degree of safety
- + Highest degree of protection and robustness
- + Scratch-proof
- + No fogging due to Anti-Fog feature
- + Validated ETO sterilisation for use in all areas under sterile conditions
- + Developed for use in areas up to ISO class 4

Dimensions 17x8x7 cm

Weight 72 g

Packaging Packaged individually and under sterile conditions in Tyvek/PE

10 glasses repackaged in Tyvek/PE

Material Frame made of lightweight PVC
Silicone band, not outgassing
Sight glass made of polycarbonate

Sight glass thickness 2.00 mm

Shelf life 3 years from the sterilisation date

Classification Category 2 as per PPE Directive 89/686/EEC



PPS special reusable mops with  icon are autoclavable

Mops for grey areas

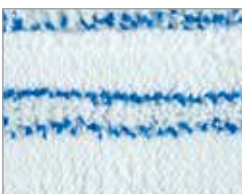


Even the immediate surroundings of cleanroom areas pose high requirements on the quality of the cleaning: Apart from the overall impression the area makes, the contamination already removed from this area cannot be returned to the previously controlled area. For this, we recommend the following mops from our professional series, which have, in part, also been verified and certified.

The characteristics:

- +** Highest quality from the professional industrial cleaning
- +** Maximum cleaning and area output
- +** Best processing quality
- +** Extreme durability of up to 500 washing cycles

Professional mops for use outside of cleanrooms, in controlled areas and for primary cleaning



High level of dirt removal forces through soft bristles



High-tech loop for greatest absorption of small and large dirt particles



Robust pocket design

Suitable for all PPS mop frames:

- Clino stainless steel 
- Clino stainless steel with Clino Connect 
- Aluminium with Clino Connect 
- Stainless steel wire with Clino Connect 
- Inverse with Clino Connect 
- Additional mop frames 

pg. 94

PPSC MicroTec

Art. No.: 2700531

- + The PPSC MicroTec was tested in accordance with the stringent requirements of the "Nordic Eco Label"
- + Over 99 % reduction of germs due to bacterium, yeast and mildew is already achieved when using only ionised water (test method DGMH 2001 Standard method 14)
- + Maximum cleaning efficiency
- + Excellent suitability for slip-resistant tiles

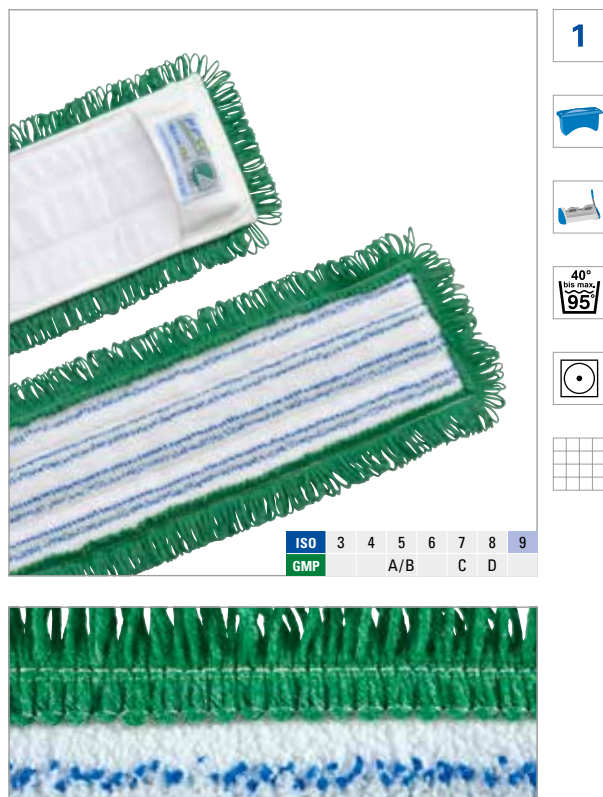
Types of floors All water-resistant hard floor coverings, anti-slip flooring

Working material High-tech microfibers 100% PES with PA bristle
Equipment Loop made from TEC polyester, with cover, including belt pocket extremely tear-resistant, with backfilling

Weight 130 g

Dimensions 40 cm

Packaging Pre-washed, 50 parts in a carton
 Also deliverable in smaller quantities



MicroSicuro Plus

Art. No.: 2700535

- + For all smooth and structured hard flooring, for slip-resistant tiles
- + Over 99 % reduction of germs due to bacterium, yeast and mildew is already achieved when using only ionised water (test method DGMH 2001 Standard method 14)
- + Maximum efficiency
- + Excellent suitability for slip-resistant tiles

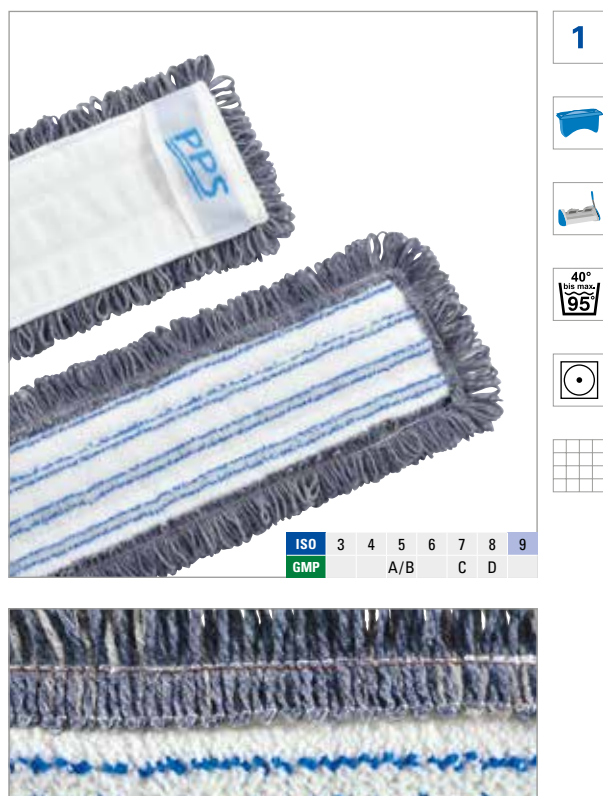
Types of floors All water-resistant hard floor coverings, anti-slip flooring

Working material High-tech microfibers 100% PES with PA bristle
Equipment Loop made from TEC polyester, with cover, with belt pocket extremely tear-resistant, with backfilling

Weight 130 g

Dimensions 40 cm

Packaging Pre-washed, 50 parts in a carton
 Also deliverable in smaller quantities



Mops for grey areas



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MicroMopp Plus

Art. No.: 2700530

- + Wet and moist cleaning in single-stage technique
- + Dry cleaning, sealed parquet floors, laminate
- + With special loop for excellent dirt pick-up

Types of floors For all smooth hard floors
Working material High-tech microfibers 100% PES
Equipment Loop made from TEC polyester, with cover, with belt pocket extremely tear-resistant, with backfilling
Weight 130 g
Dimensions 40 cm
Packaging Pre-washed, 50 parts per carton
 Also deliverable in smaller quantities



Art.-Nr. 2700202 MicroMopp
 same as MicroMopp Plus without loop
 Weight: 120 g



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MicroSicuro



Art. No.: 2700246

- + Excellent cleaning performance
- + Germ-reducing effect, same as PPSC MicroTec
- + For all smooth and structured hard floors, for slip-resistant tiles

Types of floors All smooth hard floors
Working material High-tech microfibers 100% PES with PA bristle
Equipment with cover, with belt pocket extremely tear-resistant, with backfilling
Weight 130 g
Dimensions 40 cm
Packaging Pre-washed, 50 parts per carton
 Also deliverable in smaller quantities



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King

Art. No.: 2140020

- + Maximum surface capacity, excellent dirt pick-up capability
- + The reference product in one- and two-step technique
- + The best tuft quality, ready to use, pre-washed

Types of floors All water-resistant hard floors
Working material Synthetic/Viscose yarn (50/50)
Equipment with cover,
 with PVC pocket,
 Double sealing of the pocket seam
Weight 150 g
Dimensions 40 cm
Packaging Pre-washed, 100 parts per carton
 Also deliverable in smaller quantities



1/2



MicroKing

Art. No.: 2140080

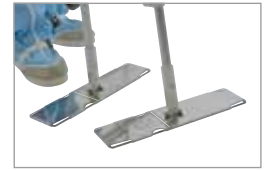
- + Characteristics as Mopp King
- + Maximal dirt pick-up capability
- + Maximal cleaning performance through additional rows of microfibers
- + Ready to use, pre-washed

Types of floors All water-resistant hard floors
Working material Synthetic/Viscose yarn (50/50) with additional rows of microfibers
Equipment with cover,
 with PVC pocket,
 Double sealing of the pocket seam
Weight 150 g
Dimensions 40 cm
Packaging Pre-washed, 100 parts per carton
 Also deliverable in smaller quantities



Mop frames and handles

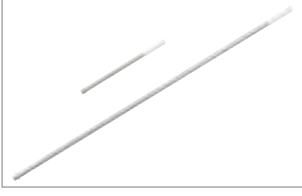
All PPS mop frames are available with a stainless steel handle reception as well as the Clino Connect quick change system (without clamping) and Clino Connect Lock (with clamping) [pg. 34](#)



Mop frames/Handles

Article No. Description	
	 
	 
	 
	 
Clino CR stainless steel mop frame All mop frames are also available with stainless steel handle reception 2009050 Clino CR stainless steel mop frame	
	 
	 
	 
	 
Clino CR stainless steel mop frame Robust and durable through stainless steel • Autoclavable • Contactless release of the mop with MopDrop pg. 36 2009060 Clino CR stainless steel mop frame with Clino Connect 2009061 Clino CR stainless steel mop frame with Clino Connect Lock	
	 
	 
	 
	 
Aluminium mop frame Weight-saving through aluminium • Mechanism made of stainless steel, aluminium plate, autoclavable • Contactless release of the mop with MopDrop 2009160 Aluminium mop frame with Clino Connect 2009161 Aluminium mop frame with Clino Connect Lock 2009100 Aluminium mop frame with stainless steel handle reception	
	 
	 
	 
	 
Stainless steel wire mop frame Very low weight • Autoclavable • Contactless release of the mop with MopDrop 2009560 Stainless steel wire mop frame with Clino Connect 2009561 Stainless steel wire mop frame with Clino Connect Lock 2009500 Stainless steel wire mop frame with stainless steel handle reception	
	 
	 
	 
	 
Stainless steel inverse mop frame In particular for single-use mop • Autoclavable • Stainless steel plate on the bottom • Not suitable for flat wringer 2009460 Stainless steel inverse mop frame with Clino Connect 2009461 Stainless steel inverse mop frame with Clino Connect Lock 2009470 Stainless steel inverse mop frame with stainless steel handle reception	
	 
	 
	 
	 
Stainless steel wall cleaning unit For wall and ceiling cleaning • Made entirely of stainless steel, autoclavable • With locking screw • With stainless steel handle reception 3580033 Stainless steel wall cleaning unit	
	 
	 
	 
	 
One-piece mop frame GMP Hygienic safety through 100 % stainless steel • Handle and handle reception made from a single piece • Smooth finishing • Autoclavable • Total length: 1.6 m 3500902 Stainless steel mop frame with stainless steel handle, one-piece GMP conform 3500913 Stainless steel mop frame with inverse, one-piece GMP conform	

Mop frames/Handles

Article No. Description	
    	Mop frame Clino Ergo EM Perfect functionality with minimal weight, autoclavable • Hygienic design: Entirely enclosed areas • High loading capacity through innovative material • Very low weight: Ideal for wall and ceiling cleaning 2520150 Clino Ergo EM mop frame with Clino Connect 2520151 Clino Ergo EM mop frame with Clino Connect Lock
  	Mop frame Clino Ergo FP • Hygienic design: Entirely enclosed areas, autoclavable • High loading capacity through innovative material • Very low weight: Also ideal for ceilings and walls • Suitable for flat wringer Ringo and Ringo GMP 2520100 Mop frame Clino Ergo FP
   	Trapez mop frame with Clino Connect Ideal for cleaning hard-to-reach areas • Trapezoidal 22/27 cm, autoclavable • Very low weight: Also ideal for ceilings and walls • Available in stainless steel and in plastic design 2009580 Trapez stainless steel mop frame with Clino Connect Lock 2520300 Trapez plastic mop frame with Clino Connect Lock pg. 99
	Stainless steel telescopic handle, autoclavable Suitable for 2016115 Stainless steel telescopic handle, 1.0 to 1.8 m with tilting lever all PPS mop 2016120 Stainless steel telescopic handle, 1.0 to 1.8 m with tilting lever, frames sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock 2016110 Stainless steel telescopic handle, 0.7 to 1.2 m with tilting lever 2016112 Stainless steel telescopic handle, 0.7 to 1.2 m with tilting lever, sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock
	Aluminium telescopic handle Suitable for all • Autoclavable PPS mop frames 3516050 Aluminium telescopic handle, 1.0 to 1.8 m with tilting lever, white 3516051 Aluminium telescopic handle, 1.0 to 1.8 m with tilting lever, white, with sleeve and quick closing mechanism for Clino Connect and Clino Connect Lock
	Aluminium telescopic handle, short Suitable for all • Autoclavable PPS mop frames 3516055 Aluminium telescopic handle, 0.7 to 1.2 m with tilting lever, white 3516056 Aluminium telescopic handle, 0.7 to 1.2 m with tilting lever, white, with sleeve and quick closing mechanism for ClinoConnect and ClinoConnect Lock
	Aluminium handle Suitable for all • Autoclavable PPS mop frames 3516060 Aluminium handle 30 cm, white 3516062 Aluminium handle 30 cm, white* 3516080 Aluminium handle 50 cm, white 3516082 Aluminium handle 50 cm, white* 3516070 Aluminium handle 70 cm, white 3516072 Aluminium handle 70 cm, white* 3516090 Aluminium handle 1.4 m, white 3516092 Aluminium handle 1.4 m, white* * with quick closing mechanism for Clino Connect and Clino Connect Lock

Clino® CR wiper programme



While in areas under sterile conditions the doubled-packaged single-use wipers ensure maximum safety, in non-sterile areas the use of reusable microfiber wipers can be a great degree more economical.

The characteristics:

- + **Maximum efficiency** through polyester microfibers
- + **Reusable products can be recycled up to 50 times**
- + **Suitable for the impregnation in the PlusBox**
- + **Single-use products also available double-packaged and gamma irradiated**

The Clino PlusBoxes are available in up to 6 different colours



► pg. 33

Single-use and reusable wipers for cleanrooms



Ideally suited for impregnation method

► pg. 33



Easy handling with the PlusBox



Electrostatically derivable

4-litre stainless steel container and PlusBox can be equipped with sterile disposal bags:



► pg. 37



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A

Clino® Carbon

Electrostatically derivable wiper

Art. No.: 3600095

Art. No.: 3600098

- Reusable wiper
- Electrostatically derivable
- Autoclavable
- Low particle emission

Surfaces For all smooth, water-resistant surfaces

Material Polyester/carbon, with linking seam

Dimensions Art. No.: 3600095: 26 x 26 cm
Art. No.: 3600098: 35 x 34 cm

Weight Art. No.: 3600095: 10 g

Art. No.: 3600098: 16 g

Packaging Packaging Unit: 5 parts

Also deliverable in smaller quantities



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Clino® Ultra CR

For all smooth surfaces

Art. No.: 2660005

Art. No.: 2660006

- Reusable wiper, autoclavable
- >99 % reduction of germs due to bacterium, yeast and mildew through use of PPSC textiles achieved when using only ionised water (Test method DGMH 2001 Standard method 14)

Surfaces For all non-structured surfaces

Material Polyester/polyamide (80/20) with linking seam

Dimensions Art. No.: 2660005: 31 x 38 cm
Art. No.: 2660006: 60 x 60 cm

Weight Art. No.: 2660005: 28 g

Art. No.: 2660006: 70 g

Packaging Packaging Unit: 5 parts

Also deliverable in smaller quantities



1

A

Clino® glass wiper

The very fine super microfiber enables the streak-free cleaning of all smooth surfaces

Art. No.: 2650002 – blue

Art. No.: 2650004 – green

- Reusable wiper
- non-sterile

Surfaces For all very smooth surfaces such as glass, mirrors, etc.

Material Polyester/polyamide (80/20), with linking seam

Dimensions 40 x 38 cm

Weight 48 g

Packaging Packaging Unit: 50 parts, 5 PU per carton

Also deliverable in smaller quantities

Clino® CR wiper programme



1

Clino® One Way Professional

Single-use wiper for the cleanroom

Art. No.: 3600085

- High absorption rate
- Low particle emission
- Washed and packaged in cleanroom class 10

Surfaces	All smooth surfaces
Material	100 % polyester, outstanding durability due to double-knitted structural design with heat cut edges
Dimensions	23 x 23 cm
Weight	6 g
Packaging	PU: 1 package with 150 parts, 1 carton contains 8 PU



1

Clino® One Way Premium

Single-use wiper for the cleanroom

Art. No.: 3600094

- High-dense stitching
- Low particle emission
- Washed and packaged in cleanroom class 10

Surfaces	All smooth surfaces
Material	100 % microfiber, knitted structural form with ultrasonically sealed edges
Dimensions	30 x 30 cm
Weight	19,5 g/wiper
Packaging	PU: 150 parts, 1 carton contains 6 PU



1

Clino® One Way

Single-use wiper for the cleanroom

Art. No.: 3600070

- Excellent absorption capacity
- High abrasion resistance
- Low release of particles and fibres

Surfaces	All smooth surfaces in the semiconductor and pharmaceutical industries
Material	nonwoven, cellulose/polyester
Dimensions	23 x 23 cm
Weight	3 g/wiper
Packaging	PU: 1 package with 300 parts, 1 carton contains 8 PU

Problem solver for special cases



Problem solver

	Article No.	Description Characteristics	Application information
	2009580	Trapez stainless steel holder for surface cleaning with Clino Connect Lock	• For surface cleaning • For isolator cleaning • For wall and ceiling cleaning • Autoclavable
	3516062	Aluminium handle 30 cm	
	3516082	Aluminium handle 50 cm	
	Suitable for all handles with Clino Connect Lock ▶ pg. 95		
	2520300	Trapez plastic holder for surface cleaning with Clino Connect Lock	• For surface cleaning • For isolator cleaning • For wall and ceiling cleaning • Autoclavable
	3516062	Aluminium handle 30 cm	
	3516082	Aluminium handle 50 cm	
	Suitable for all handles with Clino Connect Lock ▶ pg. 95		
	2700293	Mop MicroSicuro Trapez CR/A for surface cleaning ▶ pg. 85	• For Trapez stainless steel (2009580) and plastic (2520300) holders • Autoclavable • For isolator cleaning
	3580010	Stainless steel squeegee 25 cm	• For glass cleaning • Autoclavable
	3580011	Rubber lip replacement 25 cm	
	3580012	Stainless steel squeegee 35 cm	
	3580013	Rubber lip replacement 35 cm	
	2700603	Flexible holder also available with telescopic handle	• Cannot be autoclaved • For grey areas
	2700602	Mop MicroSicuro for flexible holder	
	3590100	Broom for hygienically sensitive areas Material: Body: PP setting: PBT Dimensions (LxWxH): 300 x 70 x 120 mm	
	3590200	Handle for hygienically sensitive areas, L 1.45 m Material: Anodised aluminium pipe	
	3590210	Telescopic handle for hygienically sensitive areas, L 2.2 – 4.0 m Material: Anodised aluminium pipe	

Problem solver for special cases

Problem solver

	Article No.	Description Characteristics	Application information
	3590300	Hand broom with run direction for hygienically sensitive areas Material: Body: PP, setting: PBT Dimensions (LxWxH): 310 x 40 x 90 mm	• Setting height 45 mm • unslotted fibre ends • hard bristle material • white
	3590400	Dustpan for hygienically sensitive areas Material: Stainless steel Dimensions (LxWxH): 400 x 220 x 55 mm	• Made entirely of stainless steel • autoclavable
	3590500	Handle brush for hygienically sensitive areas Material: Body: PP setting: PBT Dimensions (LxWxH): 400 x 48 x 70 mm	• Setting height 35 mm • unslotted fibre ends • hard bristle material • white
	3590510	Joint scrubber for hygienically sensitive areas Material: Body: PP setting: PBT Dimensions: L 490 mm	• Setting height 45 mm • unslotted fibre ends • medium-hard bristle material • white
	3590600	Joint brush for hygienically sensitive areas Material: Body: PP setting: PBT Dimensions (LxWxH): 410 x 50 x 40 mm	• Setting height 42 mm • sharpened fibre ends • medium-hard bristle material • white
	3400715	Squeegee white Material: Body: PP Lip: TPE Dimensions: 56 cm	Suitable for handle • 3590200 • 3590210 Telescopic handle

► pg. 99



Clino Connect in connection with CR4
Assemble your own individual mop carrier system and quickly
and easily change the mop carrier with the Clino Connect
connection system ► pp. 34, 94

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