



**vileda**<sup>®</sup>  
PROFESSIONAL



# CE Specialist Cleaning Systems

Achieve a next level clean for your facility.

**NEXT  
LEVEL  
CLEAN**

a brand of

 **FREUDENBERG**



**The essence of  
70yrs forward  
thinking:**

# NEXT LEVEL CLEAN

Everything we do grows from a constant dialogue with our customers. This made us a world leader in innovative cleaning solutions for controlled environments. We provide a complete contamination control concept including planning, trial programs, training and after sales care.

We believe in making people work smarter, not harder. That is why we focus on ergonomics, performance and design at every stage of the R&D phase, while using unique and patented technologies. All that to help you realise a higher standard, a **NEXT LEVEL CLEAN**, sustainably!

# Delivering compliance & validation first time, every time

Cleanrooms are highly controlled spaces where particulate levels, humidity and temperature are regulated to stringent standards required by ISO 14644 and Good Manufacturing Practice (GMP) Annex1 guidelines. Deviations from these standards risk jeopardising product integrity and patient safety.

Cleaning specialist cleanroom equipment within these environments presents unique challenges, including rigorous and stringent contamination control thresholds and complex equipment geometries. The need for specialist cleaning tools to address these challenges cannot be understated. They offer tailored solutions aligning with cleanroom protocols, operational needs and specific equipment challenges.



## ? DOES...

... GMP Annex1 regulation revision present new SOP's challenges with regards to contamination control in your facility?

## 💡 NEED...

... high level mechanical cleaning performance and robust contamination control processes? These are key to profitable production of pharmaceuticals, medical devices and micro-electronics.

## ⚠️ SUFFERING...

... from insufficient or careless cleaning of critical surfaces, precision instruments and machinery? Daily maintenance is business critical to eliminate downtime at your facility.

## 📈 ULTIMATELY...

... want to maximise and improve your contamination control practices and protocols?



## 🏆 REGULATORY COMPLIANCE & STANDARDS ADHERENCE

Specialist cleaning tools are designed and engineered to meet stringent cleaning SOP's and industry standards.

## 📄 ISO 14644

Regulates airborne particle levels in your cleanroom (ISO 1-9) that must be adhered to. Specialist tools must help control particulate contamination and should not contribute additionally to particulate matter contamination.

## ✅ GMP (Good Manufacturing Practice) ANNEX1

Enforces robust cleaning and disinfection protocols to ensure the elimination of contaminants and specialist cleanroom equipment should:

- Minimise particle shedding while cleaning your environment to a high standard
- Deliver results that drive certification and validation requirements for audits
- Be compatible with common cleanroom disinfectants and cleaning agents

## 📋 VALIDATION & DOCUMENTATION

Regulatory compliance requires that cleaning tools and processes are validated and documented. Specialist cleaning tools support this by:

- **Traceability:** Many tools include unique identification codes, serial numbers and certificates of conformance
- **Standardisation:** Tools enable consistently high levels cleaning performance, facilitating validation efforts
- **Documentation:** Tools designed for cleanrooms often come with detailed user guides, cleaning protocols and onsite training sessions on implementation



# Specialist equipment requires specialist attention

Cleanrooms and controlled environments are indispensable in industries such as pharmaceuticals, medical device manufacturing, biotechnology, microelectronics and aerospace. Unchecked equipment contamination can compromise product quality, safety and compliance.

Cleaning specialised equipment is non-negotiable in controlled environments (and mini environments within). Specialist tools designed for delicate mechanical cleaning are essential to meet stringent industry standards, reduce contamination risks and protect sensitive equipment. Tools are effective and precise, ensuring best in class cleaning performance first time, every time.

Specialist cleaning systems are integral to contamination control SOP's in cleanrooms and controlled environments. The unique role they play should not be overlooked in your contamination control strategy, regulatory compliance, efficiency and operational safety protocols.



## CONTAMINATION CONTROL

Effective mechanical cleaning reduces the risk of particulate, microbial and chemical contamination, which can compromise products and processes. Specialist tools mitigate contamination risks by:

- **Material selection:** Tools made from non-shedding materials like PTFE, stainless steel, or low-linting specialist synthetic fibre materials such as microfibre (PES & PA) generally in their construction
- **Precision cleaning:** Specialised designs and innovative tool shapes ensure thorough cleaning of complex equipment geometries such as wheels and castors, critical surfaces and critical internal surfaces



## ENHANCED CLEANING EFFICIENCY & EFFECTIVENESS

Specialist cleaning systems and tools are designed to maximise cleaning efficiency, ensuring consistent and thorough cleaning while minimising manual effort. Features include:

- **Custom shapes and sizes:** Tools fit intricate and confined spaces in mini environments
- **Automated systems and compatibility:** Integration with automated and robotic systems for high precision and consistency
- **Ergonomics:** Lightweight, easy to handle and easy to set up reduce operator fatigue



## EQUIPMENT & SURFACE COMPATIBILITY

Specialist cleanroom equipment often includes sensitive components and delicate materials. Cleaning tools not designed specifically for cleanrooms and controlled environments can lead to inconsistent cleaning and damage surfaces, leading to operational downtime and expensive replacements. Specialist tools ensure:

- **Non-abrasive cleaning:** Specialist materials such as microfibre are gentle on surfaces and drive high standards of cleaning performance
- **Chemical resistance:** Investing in quality tools is a sound financial decision as they withstand repeated exposure to disinfectants without degradation over time
- **Preservation of integrity:** Tools designed specifically for cleanrooms maintain operational functionality and lifespan of cleanroom equipment



## OPERATIONAL SAFETY

Cleanroom operators must work in sterile and restrictive conditions, often performing repetitive cleaning tasks. Specialist tools contribute to operator safety and comfort by:

- **Ergonomic designs:** Reducing strain and muscle fatigue during long cleaning sessions
- **Safety certifications:** Compliance with cleanroom safety standards for handling and operation



# Key applications for critical cleaning operations

Specialist tools for mechanical cleaning in cleanrooms and controlled environments are not optional but essential for maintaining equipment contamination control, ensuring regulatory compliance and protecting sensitive equipment.

By investing in specialist cleaning systems and solutions, you can achieve cleaner environments, safer operations and more efficient processes. This ultimately results in extending the life of your specialist equipment, safeguarding products, reputations and your bottom line.

## KEY APPLICATIONS FOR SPECIALIST CLEANROOM EQUIPMENT CLEANING

Specialist tools designed specifically for cleanrooms are crucial for cleaning specialist equipment in your critical environment.

- Mobile, dual sided cleanroom equipment: Trolley wheels/castors are extremely hard to clean. Ineffective cleaning of these areas can be a serious risk to your contamination control strategy and tactics
- Pharmaceutical production equipment: Including isolators, RABS, drybox, steriliser and filling lines
- Biotechnology lab instruments: Such as fermenters and bioreactors
- Healthcare environments: Cleaning surgical equipment and aseptic environments



## CLEANING EQUIPMENT CHALLENGES WITHOUT SPECIALIST TOOLS

Using general-purpose tools not designed for cleanrooms and controlled environments can lead to:

- Increased contamination control risks: From shedding materials and inconsistent cleaning results
- Equipment damage: Due to abrasive non-compliant materials or tools not fit for purpose
- Non-compliance: With standards, leading to production shutdowns and failed audits



# Specialist tools that deliver..

## WHAT IS IT?

The two-track castor cleaning system is an automated solution for decontaminating trolley wheels and castors used in controlled environments.

- ✔ Trolleys are guided through the track and gate assembly by the user, castors are cleaned by a microfibre gated system validated to ISO 4 standards
- ✔ The patented system delivers a consistent and auditable cleaning step to be locked into SOP's for all wheeled equipment moving between facility zones

## WHY IS IT IMPORTANT?

Castors represent a critical contamination pathway in cleanrooms. They accumulate particles, residues and viable matter during use and can potentially transfer these into higher-grade areas if left untreated.

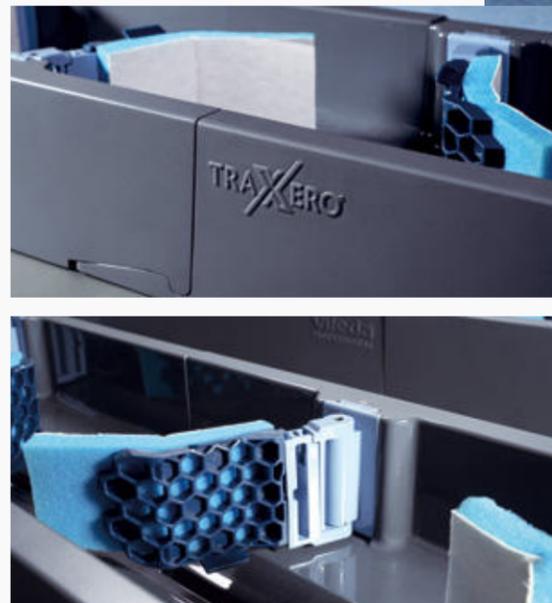
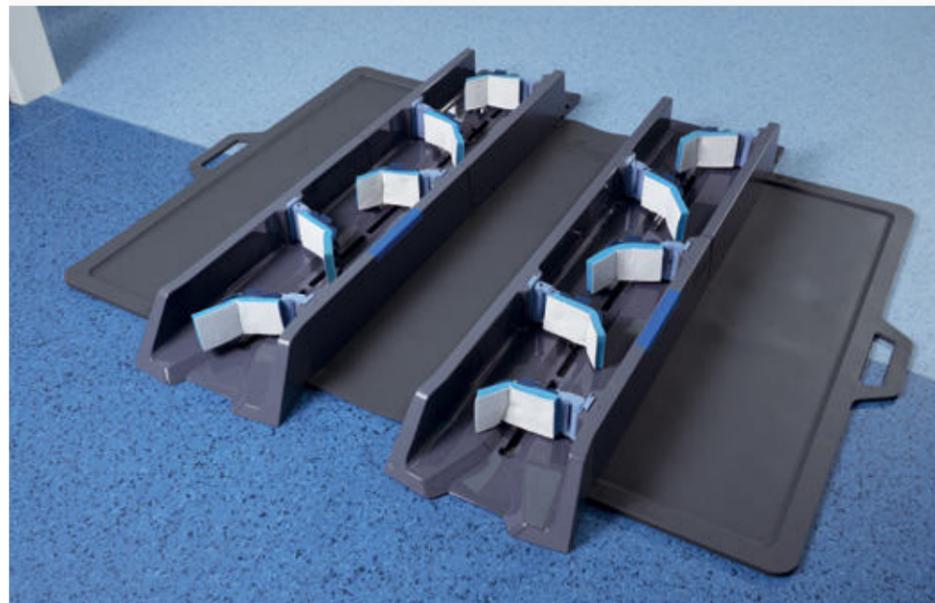
- ✔ Manual cleaning is often inconsistent, labour-intensive and difficult to validate
- ✔ By automating castor decontamination, this system eliminates a long-standing weak point in contamination control and strengthens compliance with GMP and ISO cleanroom standards

## HOW DOES IT BENEFIT THE END USER?

Operationally the system delivers high levels of contamination control when moving wheeled equipment between areas. Cleaning technicians avoid a laborious and time-consuming cleaning process thanks to the automated gate mechanism.

- ✔ Risk reduction: Minimises particle and microbial transfer from lower-grade to critical cleanroom areas
- ✔ Validated performance: Consistently achieves ISO 4 cleanliness levels, supporting regulatory compliance and audit readiness
- ✔ Operational efficiency: Integrates into existing trolley cleaning SOP's and workflows, reducing the need for manual castor cleaning
- ✔ Resource optimisation: Allows cleaning technicians to use cleaning time saved in other areas of the facility
- ✔ Ergonomic safety: Reduces physical strain associated with manual scrubbing of castors

TRAXERO®



isoXclean™

## ...a NEXT LEVEL CLEAN

### WHAT IS IT?

A purpose-built cleaning tool designed for the safe and efficient decontamination of separative devices such as bio-safety cabinets (BSC), isolators, restricted access barrier systems (RABS), dry boxes and glove boxes.

- ✓ The system combines a telescopic handle with an articulating, push-button-activated pivoting joint, allowing precise cleaning pad placement and movement in restricted spaces
- ✓ The flexible mop handle and hinged frame are engineered incorporating touchless-off mop technology, enabling safe release of used microfibre mop pads without direct operator contact

### WHY IS IT IMPORTANT?

Separative enclosures demand rigorous cleaning protocols where the cleaning technician's ability to clean effectively and safety are critical. Conventional tools can create ergonomic challenges, increase the risk of cross-contamination or compromise GMP compliance.

- ✓ Maintains controlled, precise contact with internal surfaces
- ✓ Supports cleaning technician safety by minimising overstretching and reaching into the device to clean horizontal, vertical, and front-facing surfaces, all with the added functional benefit of touchless cleaning pad removal
- ✓ Improves cleaning consistency, efficacy, and speed in highly-regulated environments

### HOW DOES IT BENEFIT THE END USER?

Operationally it's a gamechanger, the system delivers high levels of contamination control within enclosed aseptic processing manufacturing equipment. Cleaning technicians avoid direct contact with soiled cleaning pads, lowering the risk of particle and microbiological transfer.

- ✓ Improved ergonomics: Telescopic adjustability, flexible pivoting neck and hinged frame design allow for effortless access to hard-to-reach areas reducing operator strain and fatigue
- ✓ Time and cost efficiency: Faster cleaning and pad changeover functionality reduces downtime between cleaning cycles
- ✓ Compliance-ready design: Supports GMP/ISO cleanroom protocols by ensuring consistent cleaning performance and safe waste handling each time, every time



# TRAXERO®



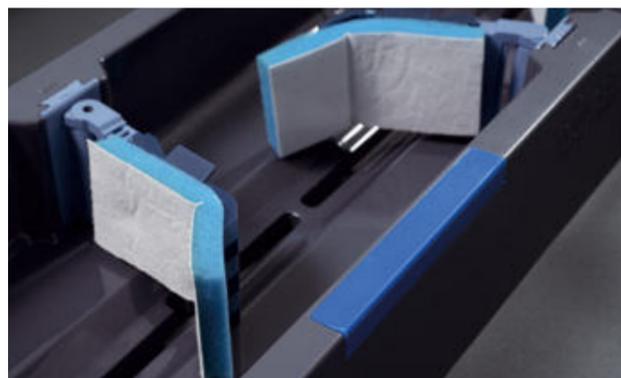
**CONTAINMENT MAT** keeps floor clean from spills, aligns track mechanisms, secures them in place, and provides an easy carry option to and from the floor.



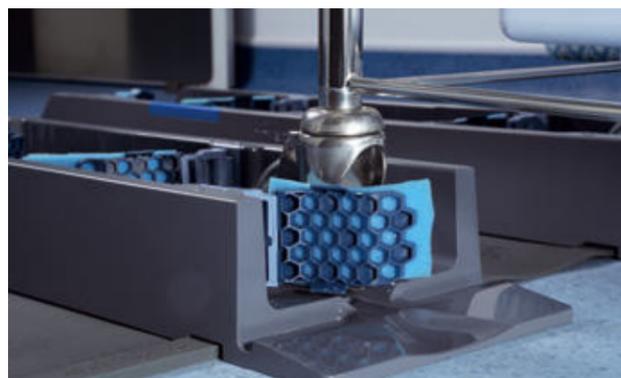
**TRACK MECHANISM** engineered for easy alignment and guidance of wheels. Modular design allows for add-on bases and gates to extend cleaning length and capability.



**REPLACEABLE CLEANING GATES** and pads deliver 4-log reduction to the wheel surface and sides with just one pass.



**HONEYCOMB BACKER** designed to allow faster dosing and dispersion of chemical cleaning agents while providing rigidity needed for mechanical removal of particles by the Evolon® microfibre layered pads.



# isoXclean™



**ADJUSTABLE TELESCOPIC HANDLE** ensures ergonomic comfort, reduces strain, and adapts to different size units — boosting cleaning speed, safety, and efficiency.



**PUSH-TO-LOCK ELBOW** creates multiple tool angles, enabling access to hard-to-reach surfaces without compromising cleaning performance.



**PIVOTING FRAME HINGE** creates additional frame angle capability to enable the operator to reach further into the extremities of the equipment.



**PUSH-BUTTON BREAK FRAME** releases soiled cleaning pads hands-free — minimising contact, reducing cross-contamination risk, and speeding pad changes for safer, more efficient cleaning.





## Unrivalled contamination control, biocontamination pickup and residue removal performance

### Vileda Professional – a part of the Freudenberg Group

Vileda Professional provides innovative cleaning solutions and systems for professional users in various application areas, such as General Building, Healthcare, HoReCa and Controlled Environment. With sales offices in all major European countries, in North America and Asia – and with a wide net of representatives – we are well located around the world. Vileda Professional belongs to the Freudenberg Group – a diversified family-run global company, headquartered in Germany.

### Vileda Professional

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