



# BeMicron<sup>®</sup>

Reinvents cleanroom garment and laundry solutions

Supporting global **life science companies** with on premises full service (IFM) **contamination control solutions.**

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A

# Introduction

BeMicron

**BeMicron®**

Reinvents cleanroom garment  
and laundry solutions

# About

BeMicron represents **over 25 years of global experience** of delivering innovative contamination control services and products.

This experience and knowledge is now available with the BeMicron on premises laundry unit and support model, for end users.

BeMicron delivers and continuously supports life sciences companies with a ready to operate laundry unit and further means to control contamination and meet global standards.

Our partners specific needs are embedded in the units we setup ; operational, quality procedures and systems, moreover the supply of a intelligent IT system meeting compliance and management demands.

Together with the laundry units, BeMicron supplies textile needs, innovate eye protection, breathing equipment, warehousing and logistics, intelligent control using UHF technology.





**A2** INTRODUCTION

# Mission & vision

BeMicron allows **direct control and significant cost savings** while having continued specialist operational and compliance support

BeMicron is a Belgium-based family business which has been active in the cleanroom clothing decontamination sector for more than 25 years. Over the years, the company has established a global footprint in providing innovative contamination control services and products. The company has developed amongst others the revolutionary aseptic gowning system that completely protects cleanrooms from human contamination by getting dressed without touching the garments on the outside. It's contamination control solutions include coveralls with compliant gowning solutions, integrated goggles & breathing equipment, in-house/ on-premises laundry units with intelligent track & trace system and training & e-learning modules for cleanroom operations. BeMicron offers a full range of services and customized solution in accordance with the norms and standards from ISO4 to ISO8.

## **Total safety**

Gowning without touching the parts of the products exposed to the production environment.

Online support tools for GMP compliancy in use, training, education, SOP's.

Global availability and support offering the opportunity to use, control and validate the same products and procedures in all production locations.

## **Quick and intuitive**

The gowning procedure is compliant to GMP demands and saving 25% of operators time per entry, 20 minutes per operator per production day.

## **Economical**

Suits with attached hoods and/or visors, reducing costs significantly ; gowning time, costs of individual items, washing, sterilizing, logistics, purchase.

Fabrics & materials tried and tested to be the best meeting quality and durability.

Global availability offering best practice implementation and economies of scale.

## **Sustainable**

All the products are reusable.

Supporting meeting CO<sub>2</sub> demands.



### A3 INTRODUCTION

# Industry & markets

BeMicron's decontamination solutions enable **compliant operations of controlled zones up to operating in a sterile cleanroom environment.** Henceforth, **the industries where our solutions are used are :**

**PHARMACEUTICAL INDUSTRY**  
**BIOTECHNOLOGICAL INDUSTRY**  
**(MICRO)ELECTRONIC INDUSTRY**  
**HOSPITALS**

BeMicron's contamination control solutions are **delivered globally** directly to end-users and/ or through supply chain partners in various locations like :

**ALL OF EU & UK**  
**NORTH & SOUTH AFRICA**  
**NORTH & SOUTH AMERICA**  
**PARTS OF ASIA**

# Research, developments & patents

BeMicron continuously evolves its solutions and propositions through **dynamic research and development (R&D)** activities for the sole purpose of **discovering better ways to control contamination.**

The main aim of such activities is to evolve continuously in the industry and maintain the top position providing contamination control solutions. Contributions to R&D activities are also made through the unique partnerships between BeMicron and its customers, originating from their specific contamination control needs. Thus, it favors an all-inclusive R&D environment where the ultimate beneficiary is the end-user.

**The latest from our R&D lab is BeMicron's coverall with integrated goggles.** To be released next year is a coverall with breathing equipment attached. Since, the R&D activities are so robust and acceptable worldwide, BeMicron believes in getting all its innovation patented thereby also making it exclusive for its clients.



# Customers & partners

Needless to say, BeMicron boasts a rich list of customers which it has gathered over the years of **consistent and top-quality products & services.**

**WE DELIVER TO THE GLOBAL TOP 20 LIFE SCIENCE COMPANIES. REFERENCES ARE AVAILABLE ON REQUEST.**

The BeMicron® concept is such that after **training procedures** are executed automatically without thinking and without error. Whilst the gowning using the conventional method, the operator can inadvertently contaminate his/her sterile coverall.

**Contamination risks reduction:** gowning tests with contaminated hands with fluorescein showed a total absence of contamination on the front of the BeMicron® coverall against the conventional coverall that showed contamination at front chest and forearm.

**Gowning time reduction:** the one step, within 30 seconds, while the former procedures requested up to 2 - 5 minutes.

Implementing the BeMicron® as our global standard has helped **efficiency and quality management & compliancy** through a centralized best practice approach. Especially for our new production start ups in emerging countries the concept enables to focus on implementation only, rather than having to develop.





B

# Why BeMicron ?

**BeMicron®**

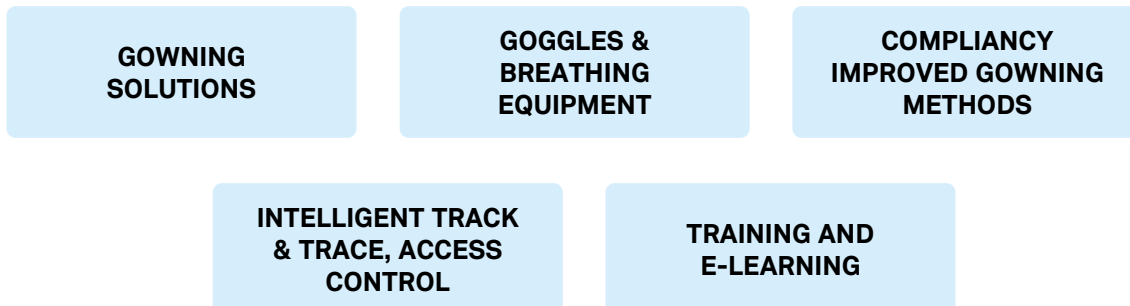
Reinvents cleanroom garment  
and laundry solutions



**B1** WHY BEMICRON ?

# Contamination control solutions

THROUGH CUSTOMER INSIGHT:



# Reinventing the cleanroom coverall

Thanks to the BeMicron® folding system and donning procedure, the operator's movements follow each other automatically without the need to touch the outside of the coverall and without any errors in procedure.



## THE BEMICRON® CONCEPT NARRATIVE :

### **Total safety**

Gowning without touching the parts of the products exposed to the production environment.

Online support tools for GMP compliancy in use, training, education, SOP's.

Global availability and support offering the opportunity to use, control and validate the same products and procedures in all production locations.

### **Quick and intuitive**

The gowning procedure is compliant to GMP demands and saving 25% of operators time per entry, 20 minutes per operator per production day.

### **Economical**

Suits with attached hoods and/or visors, reducing costs significantly ; gowning time, costs of individual items, washing, sterilizing, logistics, purchase.

Fabrics & materials tried and tested to be the best meeting quality and durability.

Global availability offering best practice implementation and economies of scale.

### **Sustainable**

All the products are reusable.

Supporting meeting CO<sub>2</sub> demands.

# Reinventing the cleanroom laundry

## HOW IT WORKS



- ✓ Time saving
- ✓ Cost saving
- ✓ Internal control
- ✓ Safety
- ✓ Sustainable



## B4 WHY BEMICRON ?

# Own and control !

BeMicron is convinced that for life sciences there is **a cheaper, more cost efficient and greener way** to take care of their textile and laundry needs then currently offered commercially.

The coveralls and in-house laundry solution have been designed considering all the relevant ISOs and industry guidelines pertaining to USFDA and cGMP.

We empower our customers to be able to own a cleanroom laundry, ensure the best operation, compliant, fully cost transparent, greener and cheaper, **without having to become laundry specialists.**

BeMicron **designs the unit, delivers the systems needed to operate and provides support to be compliant.** Thereby, allowing our partners to run it themselves or through their preferred 3rd supply parties ; FM, cleaning e.g.

There are clear advantages choosing to the universal cleanroom garment and laundry solutions of BeMicron :

### Quick and intuitive

The garment can be donned in 30 seconds without touching the outside

### Safety

Removes any risk of contamination during use as well as during laundering, meeting standards and be compliant.

### Economical

Reduces costs while increasing your productivity and quality, owning your laundry ensuring 100% cost transparency and delegating the operation to preferred FM partners.

### Sustainable

All the products used in the solution are reusable.

**Moreover, the universal solution can be said to provide organization globally with the following benefits like :**

### Time-Saver

Once implemented, the solution saves time in decision making process to execute the solution in other plants and countries.

### Compliance

The solution helps all the plants to be of a uniform standard. It helps remain compliant with the industry standards, cGMP and USFDA guidelines.

A person in a cleanroom wearing a full protective suit and hood, working at a machine. The scene is overlaid with a blue tint.

C

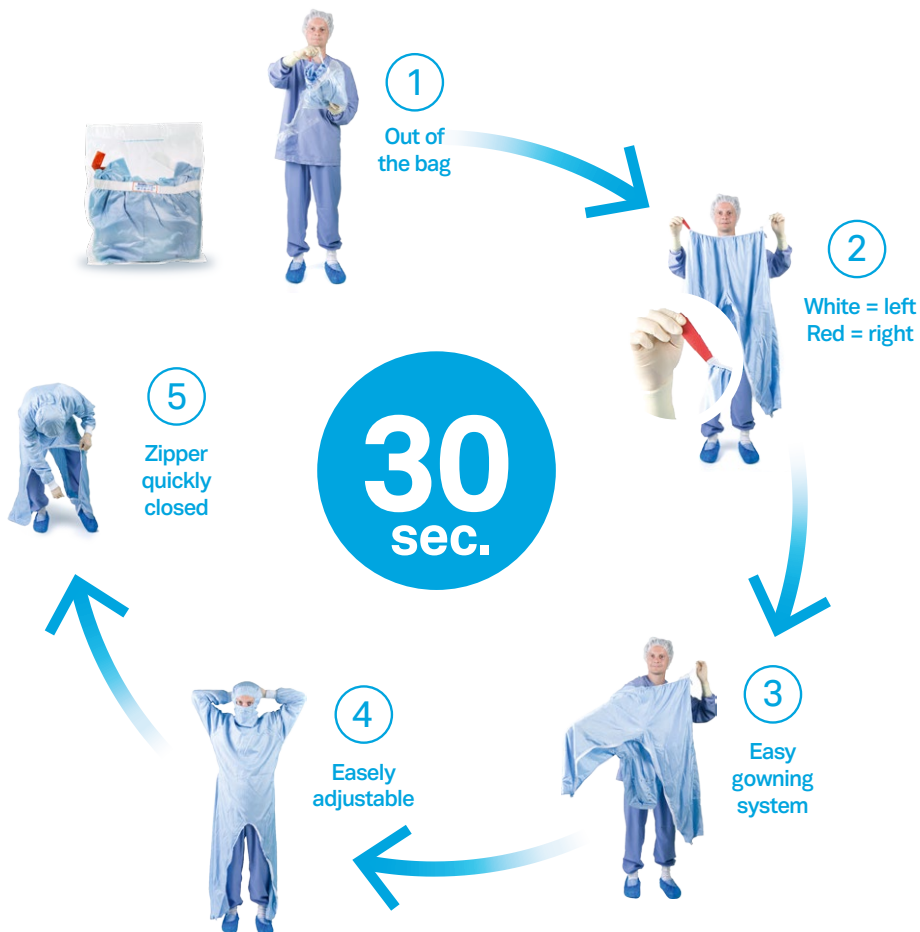
# Business model

**BeMicron<sup>®</sup>**

Reinvents cleanroom garment  
and laundry solutions

# Garment solution

Thanks to the BeMicron® folding system and donning procedure, the operator's movements follow each other automatically without the need to touch the outside of the coverall and without any errors in procedure.



# Spend more time in the cleanroom and less time in the changing room !

## THE PRODUCT LINE UP



### BeMicron® GMP

Aseptic one-piece coverall

#### Type

**GMP Performance**  
Suit with attached hood

**GMP Comfort**  
With attached hood and Comfort mask

#### Norms

ISO3 to ISO7  
Grade : A, B, C  
Antistatic



### BeMicron® Original

Coverall with integrated open hood

#### Original

Suit with attached hood

ISO5 to ISO7  
Grade : A, B, C, D  
Antistatic



### BeMicron® 4All

Classic coverall with a separate hood

#### 4All Coverall

ISO5 to ISO7  
Grade : A, B, C, D  
Antistatic



### BeMicron® Pro-Tech

Protection against liquids and particles

**Pro-Tech Performance**  
Suit with attached hood

**Pro-Tech 4All**  
Coverall

EN13034 (type6)  
EN ISO13982 (type5)  
Grade : A, B, C, D & Antistatic



### BeMicron® ESD

Apron or coverall with high antistatic protection

#### Type

ESD suit without conventional hood

#### Norms

EN-IEC 61340  
Antistatic



### BeMicron® Health-Care

Jacket or coverall allowing independent donning

**Health-Care Original**  
blouse

**Health-Care Cyto**  
blouse with hood or with attached hood

PIC/S  
Antistatic



### BeMicron® Fire-Secure

Targeted protection against fire

#### Fire-Secure Coverall

ISO5 to ISO7



### BeMicron® Single-Use

Aseptic one-piece coverall

#### Single-Use Bioclean sterile drop-down

ISO4 to ISO7  
Grade : A, B, C  
Antistatic





### TANGIBLE CUSTOMER COST IN USE CONSIDERATIONS

BeMicron gowning	Conventional gowning
30 seconds	2-5 minutes
1 piece	2 pieces
No touching outsides	Touching outsides
1 piece logistics	2 piece logistics
1 piece storage and dispensing	2 piece storage and dispensing
1 piece textile investment and depreciation	2 piece textile investment and depreciation
1 piece waste generation	2 piece waste generation

### LAUNDRY CONSIDERATIONS PROCESSING

BeMicron	Conventional	Time / costs
Folding time overall: 25 seconds	Folding time overall: 15 seconds hood: 10 seconds	Equal as per cost in use comparison is both 25 seconds
1 bag needed	2 bags needed	Saving 1 bag
1 piece to sort and distribute, at the laundry and at the customer's	2 pieces to sort and distribute, at the laundry and at the customer's	Saving labor on sorting & distribution of 1 additional piece.



**BeMicron GMP Performance**

**BeMicron GMP Comfort**

# BeMicron® GMP

An aseptic one-piece coverall, a hood with an integrated mask. Two models to choose from.

⌚ 30 sec **ESD** Grades **A,B,C** ISO **3 → 7**

## BeMicron GMP can be used in almost all cleanrooms classes.

Made from a fabric carefully selected for its quality, performance and lasting reliability, it offers excellent mechanical strength and protects against contamination. It has a perfectly-smooth technical filtering wall, at both front and back, and constitutes a veritable barrier against human contamination.

Thanks to the BeMicron® folding system and donning procedure, the operator's movements follow each other automatically without need to touch the outside of the coverall and without errors in procedure.

# Integrated goggles

Introducing an exclusive product

## Reusable and washable integrated goggles, with panoramic lens for perfect all round vision.

Spend more time in the cleanroom and less time in the changing room : this coverall will improve your efficiency! Save time and have a better contamination control during gowning while significantly reducing plastic waste.

Our cleanroom integrated goggles are fully cleanroom compliant, lightweight, durable with superior peripheral visibility and are compatible with prescription eyeglasses. They are oversized to let indirect air vents limit fogging.



**NEW**

## Integrated goggles

- ✓ Reusable and washable
- ✓ Cleanroom compliant
- ✓ Comfortable and breathable

**BeMicron integrated goggles are available with all our reusable cleanroom garments line.**



## C2 BUSINESS MODEL

# In-house laundry solution

We deliver a **complete best practice contamination control laundry unit** to be owned by, and operated on our partners premises.

Our units have been **designed to be agile, to meet all our partners capacity & compliance needs and to operate on-premise with the full support & security** just like an external commercial laundry.

However, **our partners can own and control it, without having to become a laundry**, thereby choosing whoever they would prefer to operate it with.

The **BeMicron units** fully adapt to our partners needs, with the flexibility to adapt to future capacity and quality demands.

- Designed according to **all latest innovations and requirements** for GMP compliance
- Machines and installations against **the latest technical quality and efficiency standards**. Some of these are patented for the **unique innovations** we have made.
- The units full technical set up and flow are based upon the use of **UHF technology** for efficiency, compliance, track & trace, stock management and transparency.
- Innovating technologies to ensure all the latest to positively develop your **ecological footprint**, re-use, savings on the use of natural resources, solar power...



FILTRATION UNITS



EMERY LEAKING TEST VALIDATION

## A CLEAR VISION IN MIND

BeMicron allows **ownership, control and significant cost savings** while having continuous specialised operational and compliance support.

BeMicron's **integrated contamination control laundry unit** enables the set up and operation of compliant contamination control laundry solutions & services anywhere ; especially also to support our preferential partners' investments in emerging countries to make it consistent for readers to follow.

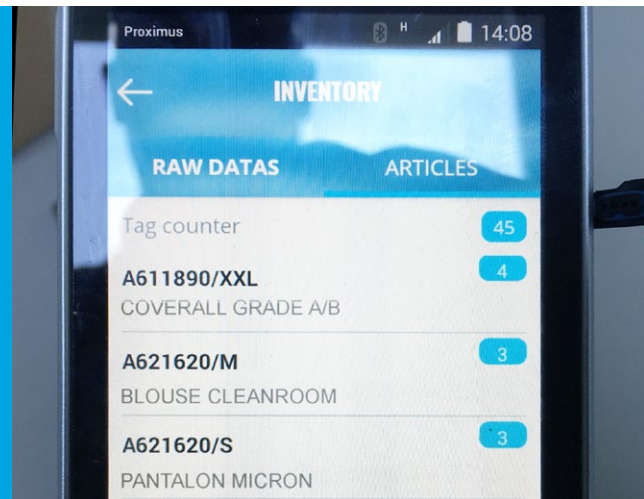
**BeMicron is a partner for ensuring security and compliance in operations** as they are the standard in established markets. It will allow our partners the contingencies in emerging countries of a trusted partnership with a professional and experienced service supplier while owning the needed specialised laundry facilities themselves.

**BeMicron allows the ownership of a compliant cleanroom laundry to its partners. Therefore, tendering of a laundry service in the future will only be about tendering the operational hours needed to run their own laundry.**



## BeMicron in-house laundry model

- ✓ **Best practice** operational cleanroom laundry units **compliant to GMP standards** continuously updated as global standards like GMP and ISO evolve.
- ✓ **Digital online cloud computing system** in order to operate and manage both operationally as well as quality wise an on-premise laundry.
- ✓ **An IT platform** covering customer needs for management and quality information (traceability, access and garment control, ordering, digital library...), as well as in house laundry & process management needs on similar topics.
- ✓ BeMicron's partners **receive continuous support to ensure compliance, highest efficiency and cost management to meet validation demands** from a distance using the IT platform, as well as on the floor during set support visits by our specialists, allowing partners the bare minimum of overheads.
- ✓ **Training and E-learning** modules fully covering what's needed to properly operate and secure compliance of the BeMicron units.
- ✓ **Continuous product & solution development** besides managing the global supply chain as part of the franchise ; garment systems, cleanroom cleaning and further contamination control products, service and propositions
- ✓ **Maximum cost transparency** adapted to local cost structures.





## BENEFITS

**A cost saving and transparent alternative for a commercial laundry solution :** own the laundry while not having to bother about the specialised knowledge, intelligence and the needed system's compliance to operate it.

Access to experience and intelligence while owning and operating an in-house cleanroom laundry unit. It will allow BeMicron's partners' to **immediately operate on the highest level of global standards**, having their compliance needs & demands as the core of their operations, **without having to go through a lengthy period of developing the knowledge and specialised competences.**



## THE CONTINGENCY AND FLEXIBILITY OF OPERATING THEIR OWN UNIT

By owning a Bemicon laundry unit, partners gain **a high level of flexibility** in their choices who to choose to operate it ; with their own resources or through a 3rd party IFM supplier. Tendering laundry services will then mean not having to go through a change control procedure as the core of the process does not change, solely the needed production hours can be tendered.

## ULTIMATE COST SAVINGS AND TRANSPARENCY

The laundry units are set up to be **easily connected** to our partners already existing cleanroom installations, air, water, electricity... Therefore not requiring these major investments. Next to this by investing in the units themselves our partners will have full insights in fixed and variable costs of operations while benefiting the cost savings and economies of scale of the **standardized best practice BeMicron unit model**.

## COMPLIANCE, SECURITY AND SUPPORT

BeMicron **will supply and continuously support** the systems and further means to operate in a fully compliant and operationally efficient way. On a daily basis, by using the BeMicron operational and QC platform, quality through support visits auditing, validating and supporting operational LEAN projects.



## Standardized (flexible) production unit

- Standardized production line
- Flexible based on low fixed investment
- Proven technical concepts
- Standardized machinery, procedures and QA/QC SOP's
- Full cost transparency

A person wearing a white cleanroom suit and hood is working in a laboratory. They are holding a large, circular, metallic object, possibly a lid or a component of a piece of equipment. The scene is overlaid with a blue tint. In the background, there is a computer monitor displaying some data and a keyboard. The overall atmosphere is professional and technical.

D

# Validation

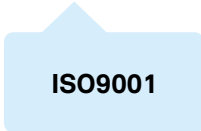
**BeMicron<sup>®</sup>**

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# Accreditations & certifications

BeMicron's worldwide facilities and processes are professionally managed with **external verification carried out by independent accreditation bodies**. Our products and services in India will work to achieve **the same level of validation**.

A light blue icon with a pointed top, containing the text "ISO9001" in black.

ISO9001

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