

MICRONCLEAN INDIA

CLEANROOM LAUNDRY



DEMAND EXCELLENCE FROM YOUR CLEANROOM GARMENT SUPPLY PARTNER



Micronclean's unique cleanroom garment laundry service delivers the following benefits as standard to its customer:



Cleanroom Garments delivered in Sterile Packs ready for immediate use.



Garment processing designed from the outset to incorporate world's best practice to ensure compliance with cGMP.



Full garment tracking using UHF RFID tags with captured processing parameters to ensure full garment and processing traceability.



Cleanroom garments manufactured from best in class imported fabrics, with optimised design for wearer comfort and assured performance throughout it life.



"At Micronclean our passion is to be the first to develop new technological solutions that change the shape of the markets we serve, creating quality and efficiency for our customers."

Micronclean India has established a state-of-the art cleanroom laundry in Bangalore. The plant is a first in India in that it has been specifically designed to process and deliver high quality, sterile ready for use cleanroom garments to support the Indian Pharma/Biotech industry.

In this way it will support Pharmaceutical and Biotech producers such as vaccine manufacturers who are seeking to export products under increased regulatory scrutiny.

The key features of the Bangalore facility are:

- ▶ Built by Micronclean a family-owned UK company with over 40 years' experience in the provision of contamination control garments.
- ▶ Designed from the outset to incorporate world best practices to ensure compliance with cGMP.
- ▶ Supplies the garments in a sterile ready to wear condition for immediate use.
- ▶ Positioned to support the growing Southern India pharmaceutical industry.



WORLD BEST PRACTICE



EXPERIENCE

Micronclean is a family-owned UK company with a history dating back over 100 years. The company has been involved with the provision of textile rental and laundry services throughout its history. In the last 40 years Micronclean has specialised in the provision of cleanroom garments to various industries including pharmaceutical, biotechnology, microelectronics, aerospace and defence.

Micronclean is the UK market leader in provision of cleanroom garment rental and laundry services.

Micronclean has the privilege of providing cleanroom garments to over 65% of the aseptic pharmaceutical/biotechnology production facilities in the UK.

WORLD'S BEST PRACTICE

Micronclean India is offering a market-leading cleanroom garment rental and laundry service. The service incorporates world best practice in terms of

- ► Cleanroom garments manufactured from advanced imported cleanroom fabrics and with optimised garment designs, maximising barrier performance, durability and wearer comfort. Garments have assured performance throughout their useful life.
- A modern GMP Grade B cleanroom laundry with barrier washing machines, cleanroom dryers and steam sterilisers. All processes are validated to achieve assurance of quality.
- ► Garments are packaged using high quality materials and are delivered sterile and ready for immediate use.
- Packaged, sterilised garments have a validated shelf-life. The garment batch number and expiry date are clearly marked on each pack.
- ▶ Garments receive total inspection on receipt at the Micronclean laundry. Defects are identified and, wherever practical and economically viable, Micronclean performs validated repairs according to repair criteria agreed with the customer.
- ▶ Each garment is equipped with a radio frequency transponder. This, coupled with Micronclean's proprietary software (Protrack), allows Micronclean to track each individual garment. A complete garment history is assembled for each individual garment including customer details, processing history and batch data, repair history, as well as the last known location.



WORLD BEST PRACTICE



- ▶ Logistics are provided to ensure efficient stock management of garments at a customer's site. Regular deliveries ensure availability of sterile garments and efficient collection of used garments for reprocessing.
- ▶ Protrack assembles contract-level data to facilitate the effective management of the cleanroom garment rental service. This allows Micronclean's service team to work with customers to ensure contracts are structured and optimised, as necessary, to ensure continuity of supply and cost efficiency.

The plant itself also incorporates world best practice in that it features:

- ▶ Dual PLC control (hot standby) of all processing equipment to ensure absolute data integrity, ensuring that we can have full parametric batch release using the SCADA data.
- ▶ Validated microbiological control through our own On-Site Laboratory to ensure the consistency and quality of our ongoing operations.
- ▶ Rainwater harvesting coupled with a zero liquid discharge water treatment plant ensure that we have reduced our requirement for clean process water to an absolute minimum, reducing our environmental footprint with respect to an increasingly scarce resource.
- ▶ Built in redundancy with respect to major plant systems such as steam and electricity generation to ensure that our plant can always operate in a consistent manner without disruption to our customer deliveries.

