

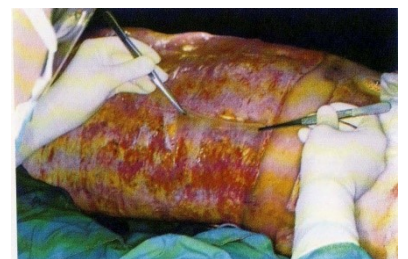
Focus Laminar Air Flow

A combination of Laminar Air Flow and high efficient HEPA filters to create sterile laminar airflow wherever needed



After natural catastrophes, terrorist attacks, wars it is important to have immediate access to medical assistance

- protecting burned patients
- quick and easy solution for producing sterile air
- keeps the operating field sterile even in extreme conditions
- can be used immediately without waiting time



95 % less risk of infections! Focus Laminar Air Flow



Reduce surgical field and instrument contamination up to 95 %

with traceability system for medical defence purpose

combating bacterial biofilm infections



The focus laminar air flow keeps the instruments and the operating field **extreme sterile** as there are **no obstacles** like surgical lights or operating staff in between

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Focus laminar air flow

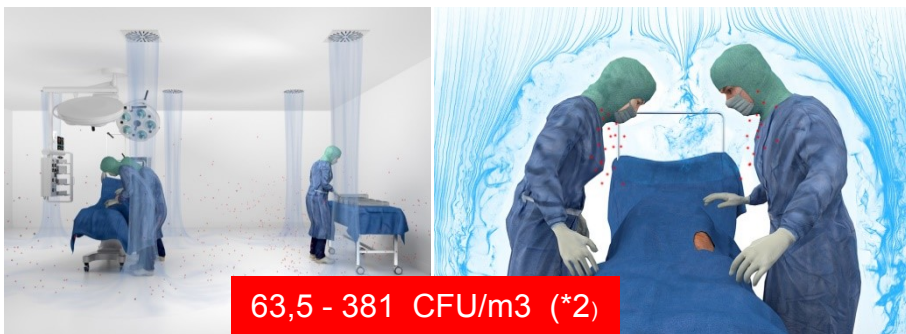
Bacterial load after 60 min.



0,2- 0,52 CFU/m3 (*1)

Conventional ventilation system

Bacterial load after 60 min.



63,5 - 381 CFU/m3 (*2)

Focused laminar flow systems: the air is filtered through hepa filters free of microorganisms and then directed **immediately** onto the surgical instruments and surgical site. It is only then distributed throughout the operating theatre. This protects the critical area of the operating theatre, i.e. the instruments and the surgical site. **With this system, the bacterial load on the instruments and surgical site is reduced by more than 95% compared with conventional ventilation systems.**

Air filtered through conventional ventilation systems is first directed towards the floor and then distributed homogenously throughout the operating theatre. Despite all measure to maintain asepsis, the floor of the operating theatre is always contaminated. Thus bacteria can be transmitted to the patient through the instruments and surgical wound.

Conventional ventilation systems cannot ensure a high degree of asepsis in the wound area as the sterile flow is always hindered by surgical lights and medical stuff thus favouring bacteria to wound area.

In the presence of implants, even a very low bacterial load is enough to cause bacterial biofilm infections or rejection of the implant.

- 1) Possible instrument contamination in the operating room during implantation of knee and hip arthroplasty. Journal for orthopedic and trauma surgery. April 2016, Germany
- 2) Influence of different ventilations systems upon the contamination of medical devices; Hyg Med 2013; 38 – 4.

Instrument preparation with focus laminar airflow



Instruments can always be prepared in the zone protected by the focused laminar air flow unit, thus maintaining their sterility even during long operations. At the start of surgery, the instrument table prepared under focused laminar air flow is simply moved towards the surgical site and the focused laminar flow also protects the surgical wound area. **The electrical height adjustment ensures the perfect height for each operation.**



The focused laminar flow acts directly on the surgical site and instrument table without being impeded by surgical lights or medical staff, thus reducing by up to 95% the bacterial load on the surgical site and instrument table. The mobile laminar flow unit also complies with the rigorous standards of ISO class 5 for extreme sterile conditions in operating rooms. **The barcoded sterile cover enables traceability of the system for defensive medicine purposes.**

Operio bears the **CE** marking and complies with the provisions of the Medical Device Directive 93/42 EEC.

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