
Create Clean Air®
The specialists in Indoor Air Quality
create clean air

The Air is all around us.
It sustains us,
Sometimes it restrains us!

Create Clean Air®

We commenced designing systems to deal with poor Indoor Air Quality in the 1990's.
Today our systems create sterile air in any enclosed space or area.

Hospitals

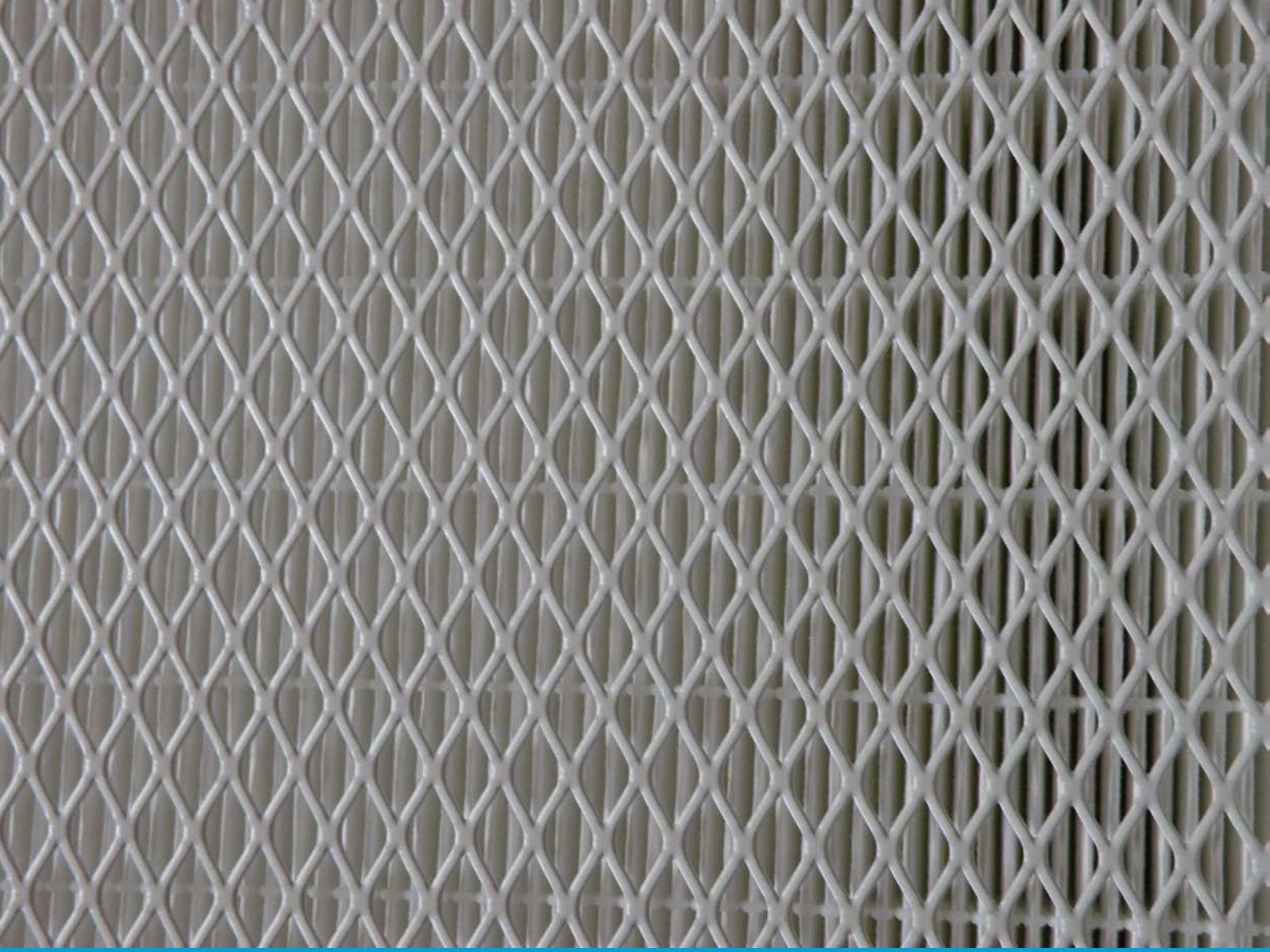
Utilised in all types of intensive care units, adult, paediatric, neurological, transplant, cardiac, oncology and operating theatres the system ensures truly sterile working environments.
The removal of air as an infection medium also removes an important infection pathway.
Used with effective barrier nursing techniques and fully implemented touch control policy, the result can be almost complete cessation of H.A.I. (nosocomial).
The reduction in preventative medication for immune-compromised patients offers a rapid pay back period on the systems initial costs.

Other

CCA military specification units offer real room protection to very high levels whilst offering client specified positive pressure protection to CDC hazardous area laboratory standards.
Any area can be quickly protected against a range of chemical and biological hazards at a surprisingly low implementation cost.

Our solutions are at the leading edge of technology offering bespoke developed systems we have pioneered.
The solutions are also based on experiences from numerous users, many who have extensive field experience in infection control and sterile air implementation for both medical and military use.

The air is all around us, join us in making it safe.



Air Security 24/7

Airborne contaminents

Increasing challenges in healthcare demand a huge drive for innovation within all disciplines of the healthcare sector. The implementation of Create Clean Air® innovative techniques to create sterile air will dramatically reduce, and often eliminate, airborne infections. Combined with simple barrier techniques and basic hygiene H.A.I. are dramatically reduced. What is not in the air cannot deposit on surfaces. Removed are all viruses, all bacteria, all spores and the majority of reactive gases and compounds.

Airborne Infections - "technical" aspects

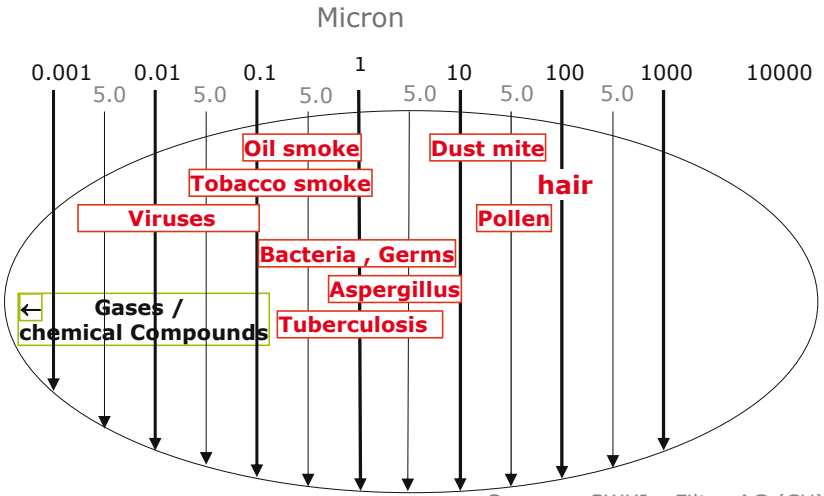
- The majority develops inside the facility / ward
- The transport route is air
- Air knows no limits or boundaries

What's in the Air?

Particle size in μm (logarithmic)

1 μm = 0.001mm

95% of all particles < 0.5 μm



Sources: SWKI - Filtec AG (CH)

Swiss Craftsmanship

The 3 phase sterile air from Create Clean Air®

The 3 phase sterile air approach is based on the concept to create sterile air for any space or area. This goal is achieved by using premium quality filtration systems which are combined with 'state of the art' propriety technologies including computer controlled programs for hygiene security.

Primary phase uses the CCA-HP unit to re-circulate room air through a 3 stage filter-cartridge.

Stage 1 stops large particles (> 1 micron) entering the cartridge whilst allowing gases and pathogens (< 1 micron) to enter.

Stage 2 is activated carbon which can be varied upon specific needs of the user up to CBRN level.

Stage 3 is the final filtration acting to 0.001 of a micron trapping all pathogens in the filter system. All spores (i.e. aspergillus), all bacteria and viruses are removed from the air.

The secondary phase uses positive pressure to stop pathogens to ingress to the area – Filtration as from HEPA 14 and higher so air is sterile.

The tertiary phase uses negative pressure to stop pathogens leaving the area – Filtration as from HEPA 14 and higher so air is sterile.

Create Clean Air® efficiency for some airborne infections

Aspergillus spp	100%
Tuberculosis	100%
Varicella	100%
MRSA-Particles	100%
Influenza viruses	100%
CBRN related	100%

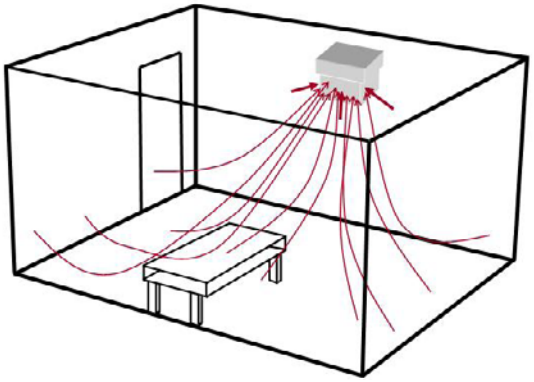
Optimised air flows

Phase 1 - the CCA-HP system

The CCA-HP unit is a proven mobile air recirculation system that removes all viruses, all bacteria, all aspergillus spp. and most reactive gases from the indoor air.
The unit creates two low frequency air currents which bring all room air through the system.

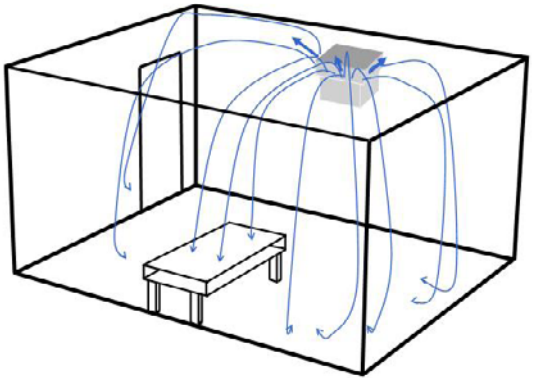
Air flow 1

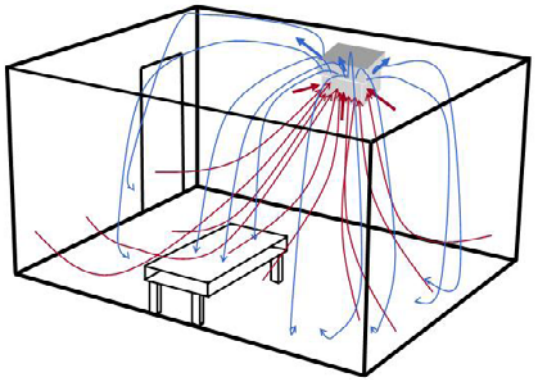
Sucks room air into the unit where the air is cleaned in the CCA-HP filter cartridge.



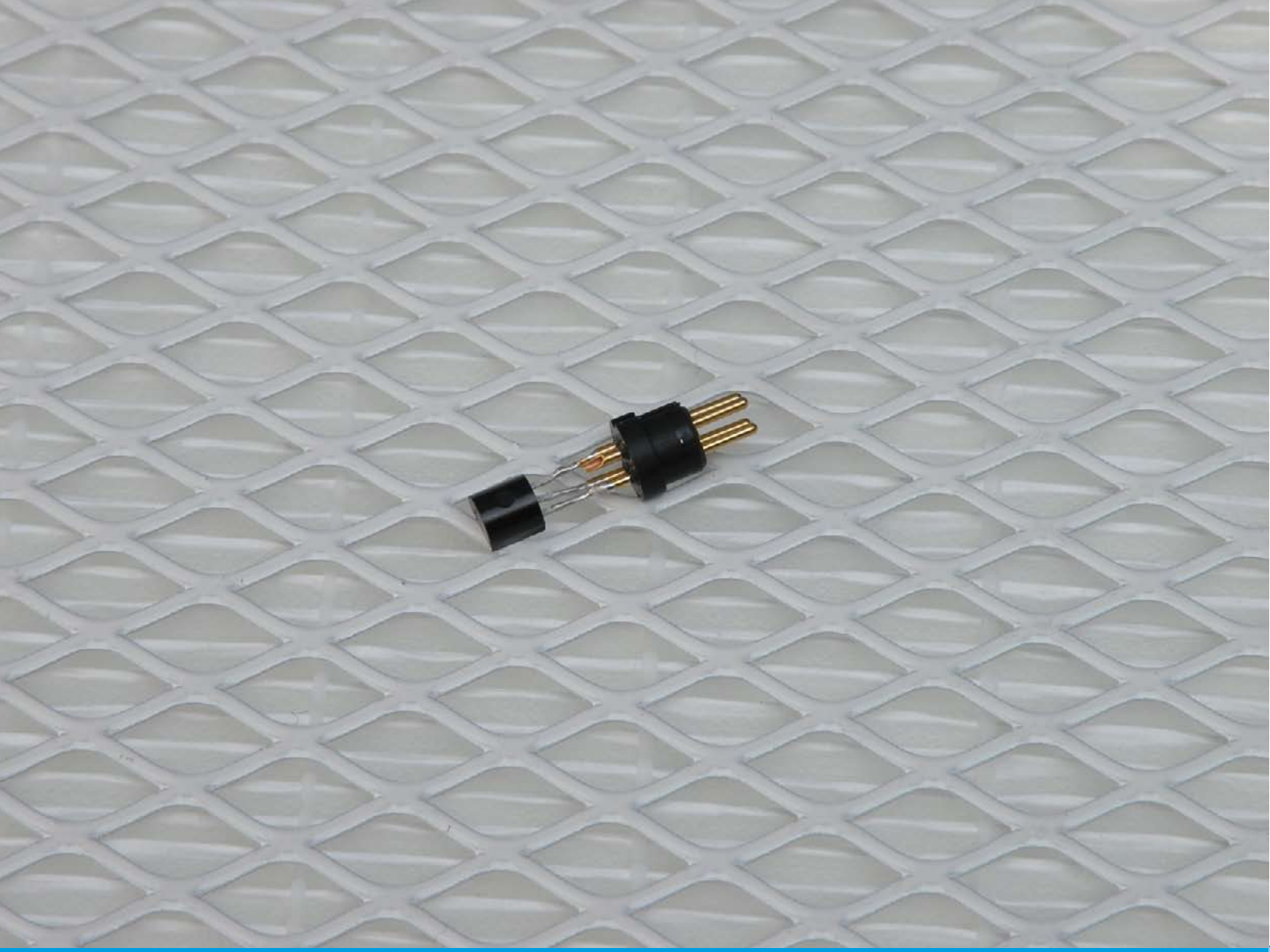
Air flow 2

Returns sterile air back to the room.





This, low velocity, air current reaches all places of an entire room.



The silence of the CCA systems is deafening

Phase 1 - the CCA-HP system

The technology in the unit allows for variable settings / levels. The operation and the hygiene security are under control of unit staff.

Operation

- controlled by key remote control
- controlled by micro-processor
- 4 levels of operation
- button off

button 1	silent/night level
button 2	day low
button 3	day high
button 3	+ fast cleaning
button 4	test and alarm.
button 4	T = Filter-control by Staff.
	A = warning + buzzer alarm

Certifications

Assembly	ISO 9001:2000 / EN 29001
Electronics	ISO 9001:2000 / EN 29001
Fans	ISO 9001:2000 and ISO 14001.
Filters	ISO 2001

Feste Installation

Mobile Installation

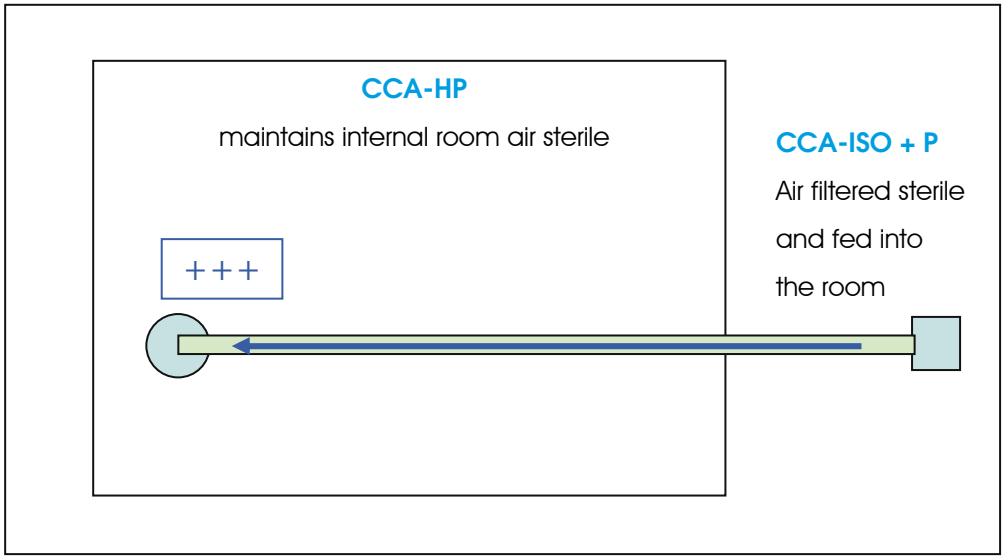
High Trolley 130 cm

Passion for innovation

Phase 2 the CCA-ISO system for Protective Environment

The CCA-ISO + P system is a truly unique system to create isolation rooms with positive pressure difference.

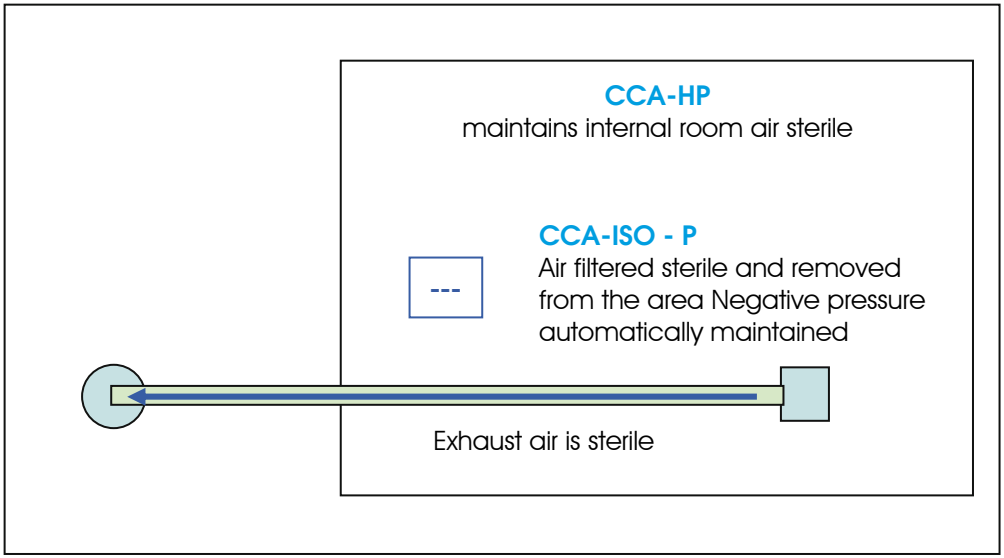
The CCA-HP unit and the CCA-ISO + P system together create a Protective Environment with sterile air in the room and a sterile positive pressure feed into the room. Utilised for immune-compromised patients like in BMT/Stem Cell, CFU concentrations are virtually eliminated. The installed filter-systems (HEPA 14 or ULPA 15) remove all viruses, all bacteria, all aspergillus spp. from the supplied air. The technology in the unit offers fixed Pa, automatically controlled, or variable settings / levels of Pa. The operation and the hygiene security are under control of units staff.



Workable solutions

Phase 3 the CCA-ISO system for Airborne Infection Isolation

The CCA-ISO - P system is a truly unique system to create isolation rooms with negative pressure difference. The CCA-HP unit and the CCA-ISO + P system together create an Airborne Infection Isolation Room with sterile air in the room and a sterile air extraction from the room area. Utilised for infectious patients. The installed filter-systems (HEPA 14 or ULPA 15) remove all viruses, all bacteria, all aspergillus spp. from the extracted air. The technology in the unit offers fixed Pa, automatically controlled, or variable settings / levels of Pa. The operation and the hygiene security are under control of units staff.



User key operated command and control

Example 3 phase Room / Reverse Isolation

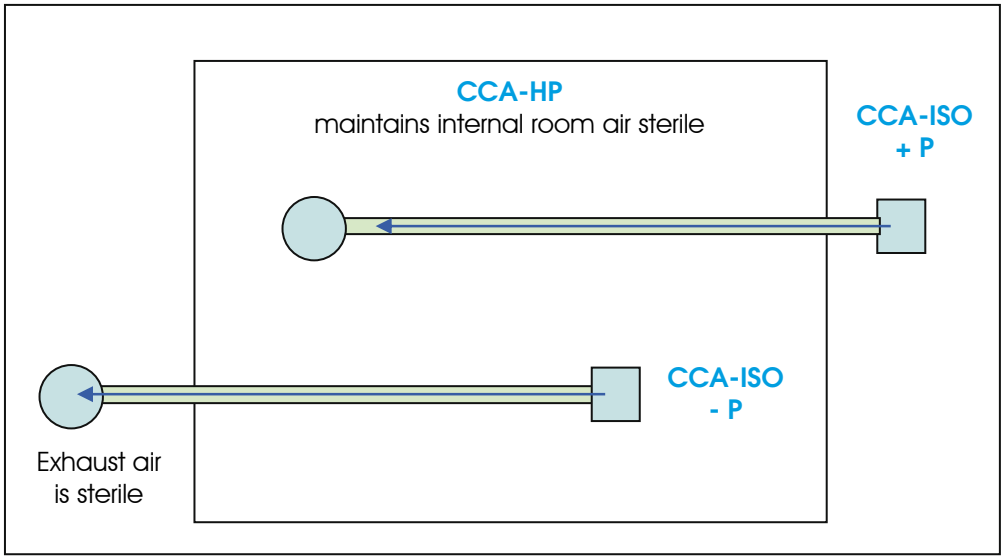
With the CCA 3 phase isolation installation, an isolation room can be changed from positive (P.E.) to negative pressure (A.I.I.) and vice versa within seconds.

Stop one CCA-ISO system and start the other CCA-ISO system.

Both CCA ISO systems are controlled by keyremotecontrol and microprocessor.

Operation

- 3 levels of operation
- button off
  - button 1 manual operation low Pa
  - button 2 manual operation high Pa
  - button 3 Fixed, computer controlled, Pa
  - button 4 test and alarm.
  - button 4 T = Filter-control by Hospital Staff.
    A = warning + buzzer alarm



Quality and Safety

Technical data CCA-HP

Casing	- Stainless steel with white powder coating
	- dimensions 59 (w) x 39 (h) x 38 (d)
	- weight 20 kgs. incl. CCA-HP cartridge.
Filtration	All CCA filter-systems are individually leaktested
CCA-HP	cartridge with 3 filter-systems combined
	- Préfiltration F9 (SN EN 779)
	- activated carbon (adsorbtion ca. 100.000 m^2)
	- HEPA 14 (SN EN 1822)
Fan	- backward curved
	- protected by IP 44
	- approvals UL, CSA, VDE, CE,
	- electronics included
Technical data	- 50/60 Hz
	- between 5 and 71 W (max)
	- 220 / 240 V
Volume	from 80 – 450 m^3/h

Note

All levels can be adapted to the clients specific requirements.

Certifications

Assembly	ISO 9001:2000 / EN 29001
Electronics	ISO 9001:2000 / EN 29001
Fans	ISO 9001:2000 and ISO
14001Filters	ISO 2001

Electronic data logging and performance monitoring

Technical data CCA-ISO

Casing	- Stainless steel with white powder coating
	- dimensions 35 (w) x 25 (h) x 35 (d)
	- weight 14 kgs. incl. CCA-ISO System.
Filtration	All CCA filter-systems are individually leak tested
CCA - ISO	- HEPA 14 (SN EN 1822)
	- ULPA 15 (SN EN 1822)
Fan	- backward curved
	- protected by IP 44
	- approvals UL, CSA, VDE, CE,
	- electronics included
Technical data	- 50/60 Hz
	- between 5 and 71 W (max)
	- 220 / 240 V
Operation	controlled by micro-processor – Hygiene Security.
	3 levels of operation, information on R.C.
	Volume (factory settings) as from 8 Pa to
	client specified

Note

All levels can be adapted to the clients specific requirements.

Certifications

Assembly	ISO 9001:2000 / EN 29001
Electronics	ISO 9001:2000 / EN 29001
Fans	ISO 9001:2000 and ISO 14001
Filters	ISO 2001

Notes:

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