

AIR PURIFICATION & ISOLATION UNITS



MedicCleanAir®
A BELGIAN - SWISS COOPERATION

MedicCleanAir®

The new generation MCA® air-cleaner units for maximum air quality.

The new generation units of MCA® meet the highest requirements for protection of patients, visitors and hospital staff in relation to the risk of infections spread through airborne contamination. Especially since the latest developments of flu and tuberculosis MCA® has invested even more in security for air purification and isolation units. As from now, perfect air quality together with the desired pressure difference inside medium- and high care wards, is not a difficult aim anymore.

The MCA® devices are easily installed and functions are selected via a state-of-the-art remote controls. Personnel are provided with optimum support by visual and acoustic signals.

The MCA® units are designed for round-the-clock operation. The efficiency of the MCA® devices has been confirmed by several scientific, medical and clinical studies of which some were published by esteemed, world-wide medical organisations.

Features of MCA® air purification units:

- mobile for rapid use with immediate results (within 20' max)
- quick and easy-to-install (maximum ½ day work)
- choice of high particulate air filters depending on requirements (HEPA12 to ULPA15)
- filters are always leaktested
- remote controls by key switch secures against undesirable external use (security)
- choice of fan speeds
- automatic regulation of desired pressure difference
- screen-display with operating data recognition
- filter monitoring with alarm function (hygiene security)
- differential pressure monitoring with alarm function
- easily changeable parameters via function keys
- backed up by medical and clinical studies
- improves infection control

References

MedicCleanAir®
A BELGIAN - SWISS COOPERATION

Centre Hospitalier Universitaire St. Pieter – Brussel, Belgium since 2000

Algemeen Ziekenhuis St. Lucas – Brugge, Belgium since 2002

Centre Hospitalier Universitaire BRUGMANN since 2008

Algemeen Ziekenhuis Maria Middelaers – Sint Niklaas, Belgium since 2000

Azienda Ospedaliera S. Croce e Carle – Cuneo, Italia since 2000

Savigliano Hospital – Cuneo, Italia since 2006

Ziekenhuis Netwerk Antwerpen – Stuivenberg – Antwerpen, Belgium since 2000

Universitair Ziekenhuis – Gent, Belgium since 2001

SNCB Centre Médical – Mons, Belgium since 2000

Centre de Santé des Fagnes – Chimay, Belgium since 2000

Centre Hospitalier Universitaire Sart Tilman – Liège, Belgium since 2005

Universitair Ziekenhuis – Antwerpen, Belgium in 2000

VRGT – National Institute for Tuberculosis – Brussels, Belgium since 2005

FARES – Belta Bnet – Brussels, Belgium since 2008

Muhimbili National Hospital – Dar es Salaam, Tanzania since 2005

Dubai Police Clinics – Dubai, United Arab Emirates since 2006

Rashid (Maternity) Hospital – Kuwait – Kuwait since 2004

Al Salam Hospital – Kuwait – Kuwait since 2008

Rustom Khatib Fertility Hospital – Beirut – Lebanon since 2007

Ealing Hospital NHS Trust – U.K. since 2007

University Hospital of North Staffordshire – UK since 2008

GATA – Ankara – Turkey since 2008

Uniklinikum Bonn, Kinderkrankenhaus – Bonn, Germany since 2005

Universitätsklinikum Magdeburg – Magdeburg, Germany since 2005

Klinikum Kassel – Kassel, Germany since 2006

Universitätsklinikum – Hamburg Eppendorf, Germany since 2006

Krankenhaus St. Josef-Stift – Celle, Germany since 2007

King Fahed Medical City – Riyadh – Kingdom of Saudi Arabia since 2008

Bah Mai Hospital – Hanoi – Vietnam since 2006

Al-Amal Hospital – Kuwait depuis 2008

MOH – Kuwait 2009

Clinique Sainte Elisabeth – Namur, Belgique 2009

Imam Khomeini Hospital – Boroujerd, Iran 2009

Medical/clinical studies presented and published by:

The Hospital Infection Society 2000

The European Bone Marrow Transplant 2002

International Congress of the German Institute for Hospital Hygiene 2006 (DGKH)

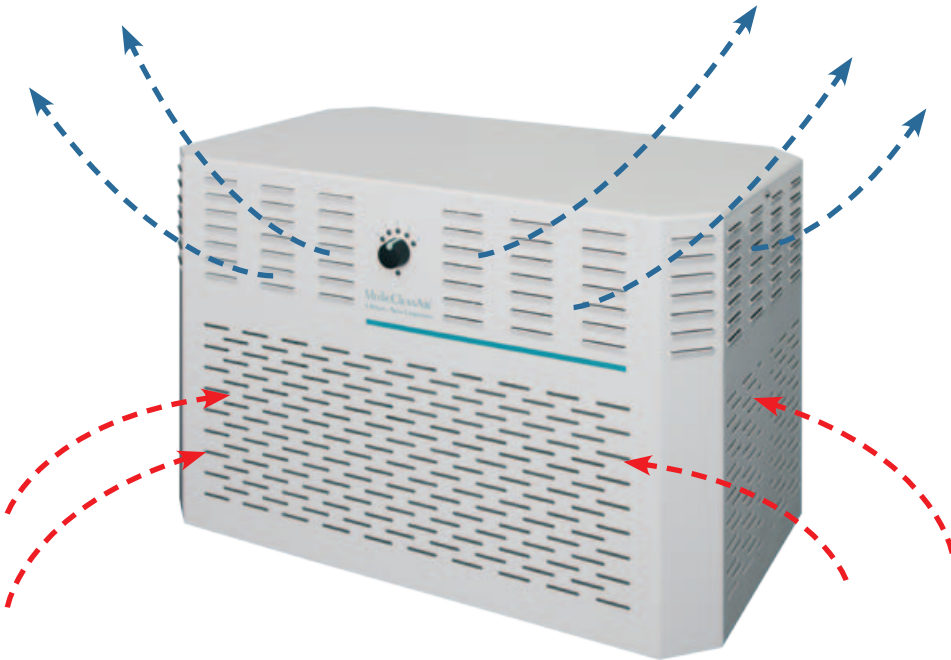
Magazine of the National Institute for Tuberculosis Belgium 2005

Scientific and medical studies carried out in: Belgium, Germany, Italy, Scandinavia, India, France, UAE, etc.

MedicCleanAir®

Fast & efficient air cleaning for hospital facilities

Mobile air purification unit – PRO

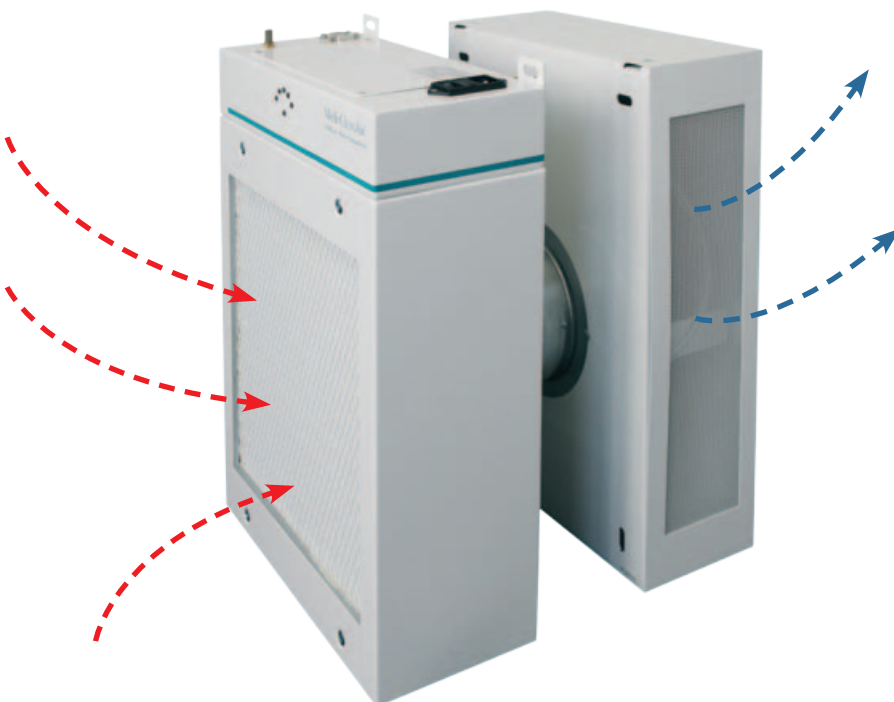


Room air purification unit

Contaminated air is **sucked** in via the unit inlet vents, **cleaned** by the highly efficient particulate air filter and the purified air is returned to the room via the outlet vents.

MCA® air purification unit PRO 100 / 110

Creation of pressure difference with the ISO units



Positive or negative room pressure units

Clean air supplied to the room creates **positive pressure** (for immunocompromised patients). Air extracted from the room creates **negative pressure** (for infectious patients). Pressure differences up to 20 Pascal can easily be generated. Leaktested filters, airtight devices, one-way airflow and fire-damper tools protect patients, visitors and hospital staff at all times.



MCA® isolation unit ISO 200 / 210

Mobile
Air purification unit

The air purification concept for maximum air quality

PRO



Used in hospitals, clinics and
medical facilities

Air purification unit for cleaning room air

The Pro air purification unit cleans the air inside the room. The Pro unit is used for the protection of vulnerable (immune-compromised) patients, protection against infectious patients, the elimination of aspergillus during renovation works, and for the upgrading of air quality in operating theatres, ICUs, isolation rooms.

The Pro unit gives immediate results (within 20 minutes max) and once deployed maintains integrity of the air quality at all times.



100 % efficiency against Tuberculosis

100 % efficiency against Influenza Viruses

100 % efficiency against Aspergillosis

100 % efficiency against Sars

100 % efficiency against Varicella / Pox

- › 360° uniform air extraction and air supply
- › Is able to achieve ISO 5 or ISO 6 level

Immune-compromised patients

Oncology, haematology, neonatology, transplant, burn units, etc.

Infectious patients

Tuberculosis, chicken pox, SARS, MRSA, flu viruses, etc.

General use in

Operating theatres, intensive care units, isolation wards, etc.

Precautions during construction works

Aspergillus emissions during renovation works.

Accessories to the
air purification unit PRO

PRO

Pre-filtration filters on the outside of the unit

Indoor work leads to an increased concentration of aspergillus. In order to protect the high efficiency particulate air filter inside the unit during building activities, pre-filtration frames with filters are added to the outside of the device.

The life-time of the high efficiency particulate air filter inside the unit is therefore largely extended. The pre-filters are supplied in packages and are easily changed.

The PRO air purification unit with pressure adapter generates, depending on the way it is installed, a positive or negative relative air pressure in the room. Pressure differences up to 10 Pascal can easily be obtained.



› Filter detection by ID code
(filter condition)

› Remote Control by key
switch (security)



High efficiency particulate air filter

Easily installable
differential pressure units

The air purification concept for maximum air quality

Used in hospitals, clinics and
medical facilities

ISO

Isolation Unit, 1-piece, for positive or negative room pressure

This Isolation Unit is made for installation in suspended or false ceilings, and walls.

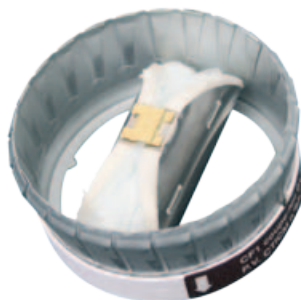
Can be connected to an existing ventilation system or new tube system. Recommended for installations where the point of extraction and supply are further away from each other.

Depending on the installation, positive (for immune-compromised) or negative (for infectious patients) pressure is generated inside the room (easily up to 20 Pascal).

Filters used in this Isolation Unit are of HEPA14 or ULPA15 quality, leaktested and airtight secured.



Air back-pressure flap



Fire protection flap (optional)

- › Automatic differential pressure regulation
- › Automatic pressure loss alert

Immune-compromised patients

Oncology, haematology, neonatology, transplant, burn units, etc.

Infectious patients

Tuberculosis, chicken pox, SARS, MRSA, flu viruses, etc.

General use in

Operating theatres, intensive care units, isolation wards, etc.

Precautions during construction works

Aspergillus emissions during renovation works.

Easily installable
differential pressure units



ISO

Isolation Unit, 2-piece, for positive or negative room pressure

This Isolation Unit is made for installation on walls or windows. Pressure differences up to 20 Pascal are easily generated.

Negative pressure is obtained when the filter unit is placed inside the room, and the ventilator unit is placed outside the room. (infectious patients) Positive pressure is obtained when the ventilator unit is placed inside the room and the filter unit is placed outside the room. (immune-compromised patients).

Both parts are connected by a tube – through the wall – which contains an air back-pressure flap (standard) and fire damper (optional). Filters used in this Isolation Unit are of HEPA14 or ULPA15 quality, leaktested and airtight secured.



Fire protection flap (optional)



Air back-pressure flap

› Filter detection by ID code (filter condition)

› Complies with CDC guidelines (Centres for Disease Control and Prevention)

Example installations

Easily installable isolation units ISO

Isolation unit, 1-piece, ISO 100 Series

Patients with weakened immune systems –
positive room pressure

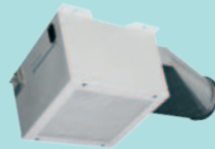
Oncology, Hematology, Neonatology, Transplant, Burn units,
Operating Theatres, ICU's.

- 1 MCA® air purification unit PRO 110,
bracket mounted

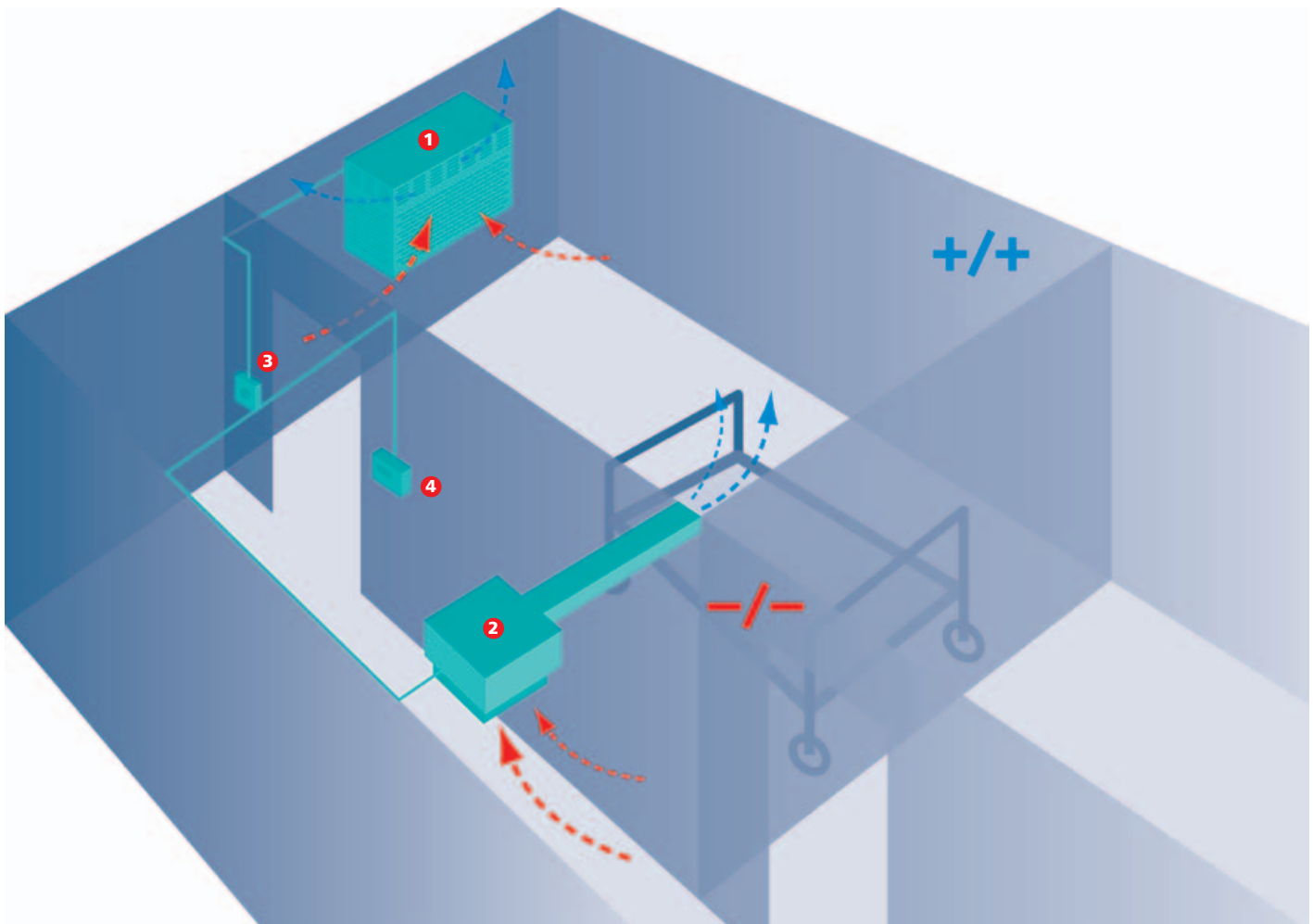


Room air purification

- 2 MCA® isolation unit ISO 100/120
installed between suspended
or false ceilings, mounted with
connection duct *



Positive or negative
room pressure



With fully automatic differential pressure regulation



3 MCA® remote controller RC 100 wall mounted



with key switch

4 MCA® remote controller RC 200 wall mounted



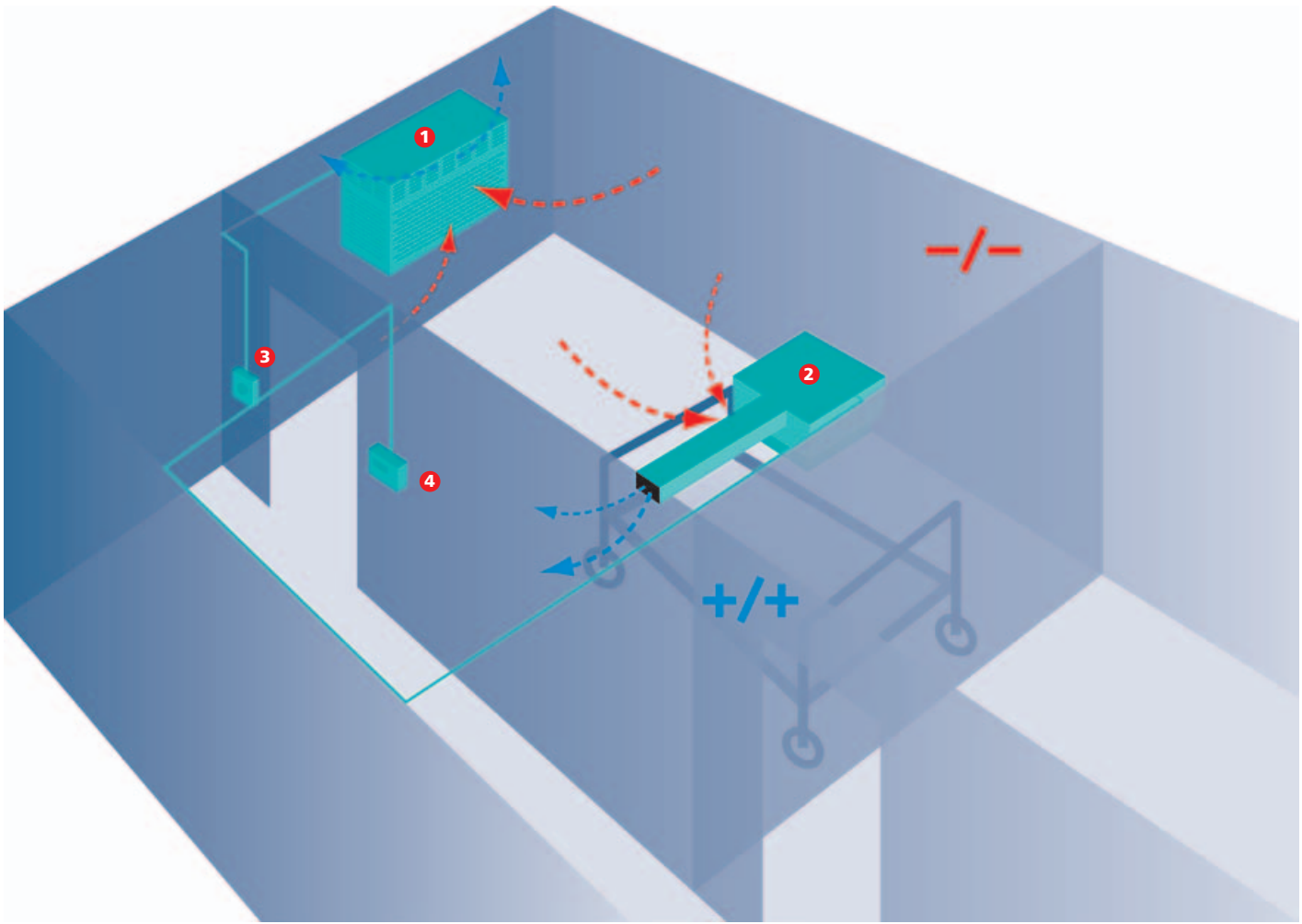
with key switch and display

Isolation unit, 1-piece, ISO 100 Series

Infectious patients –
negative room pressure

Influenza, Tuberculosis, Sars, Varicella, MRSA, etc.

- * ACCESSORIES:
- Backpressure flap BT125
- Fire protection flap FD125



Example installations

Easily installable isolation units ISO

Isolation unit, 2-piece, ISO 200 Series

Patients with weakened immune systems –
positive room pressure

Oncology, Hematology, Neonatology, Transplant, Burn units,
Operating Theatres, ICU's.

- 1 MCA® air purification unit PRO 110,
bracket mounted

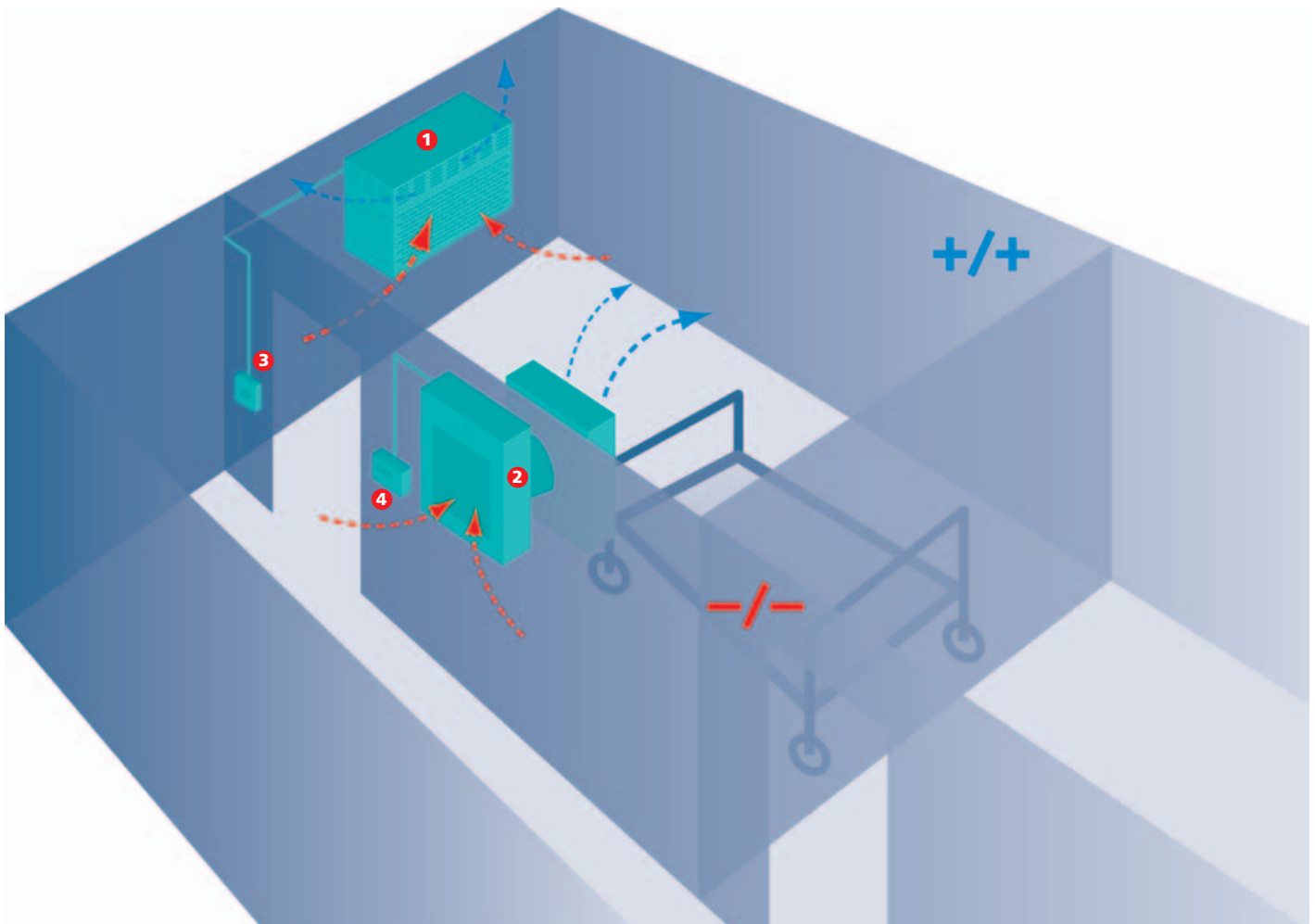


Room air purification

- 2 MCA® isolation unit ISO 200/210 for
mounting on walls or windows *



Positive or negative
room pressure



With fully automatic differential pressure regulation



3 MCA® remote controller RC 100 wall mounted



with key switch

4 MCA® remote controller RC 200 wall mounted



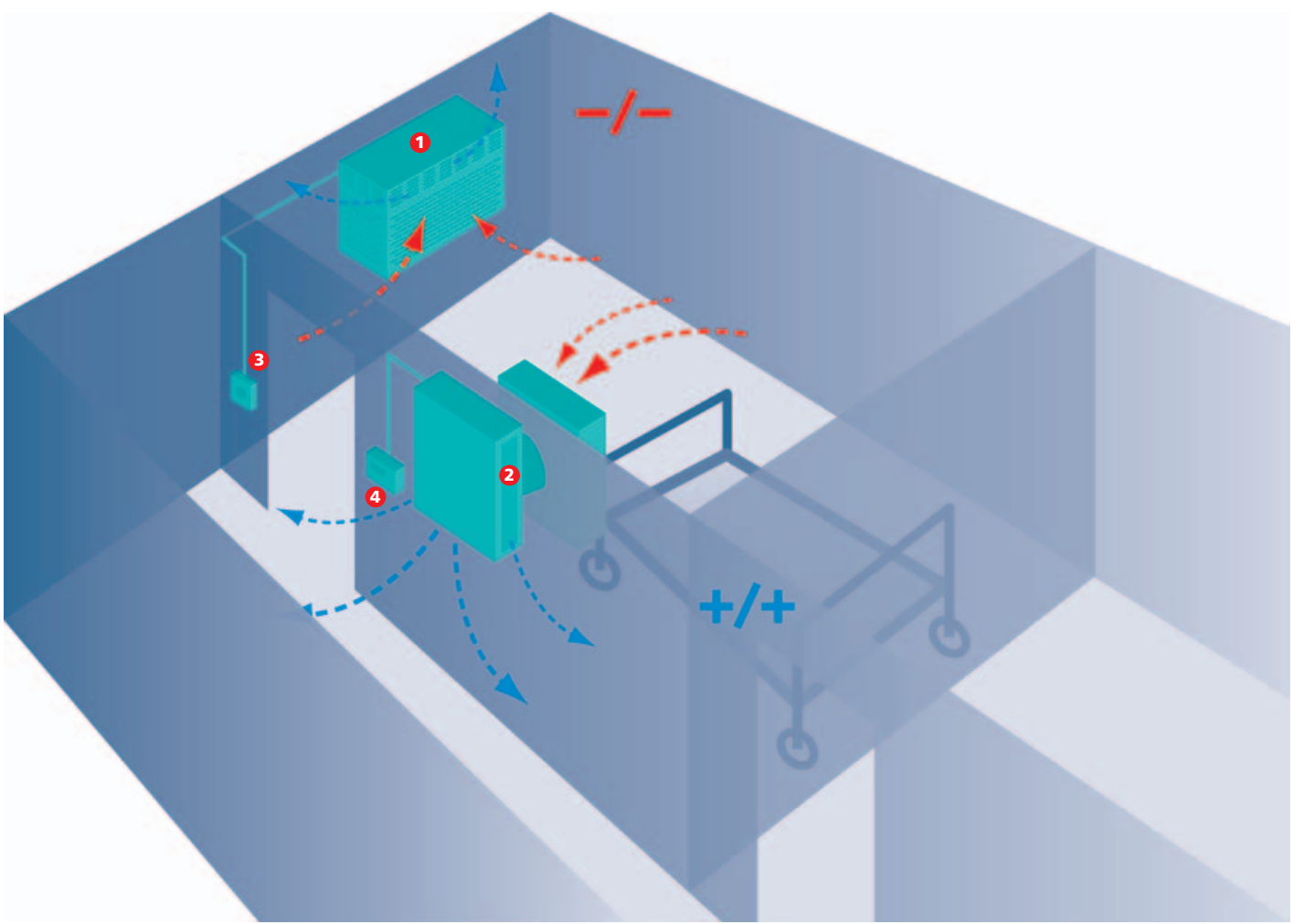
with key switch and display

Isolation unit, 2-piece, ISO 200 Series

Infectious patients –
negative room pressure

Influenza, Tuberculosis, Sars, Varicella, MRSA, etc.

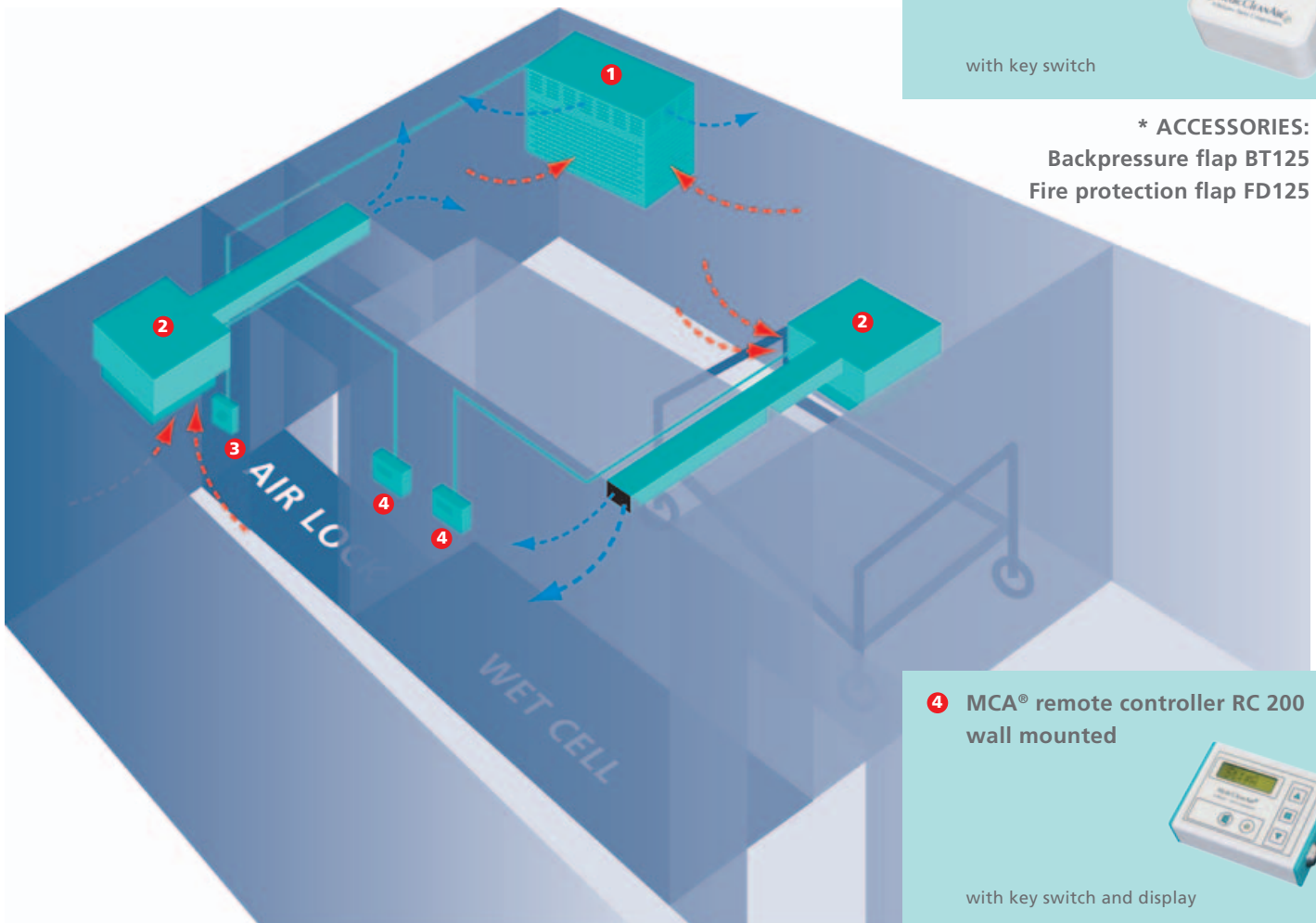
- * ACCESSORIES:
 - Backpressure flap BT125
 - Fire protection flap FD125



Double mounted isolation unit ISO 100 Series

For infectious patients or patients with a weakened immune system

The hospital personnel can generate a positive or negative room pressure via the remote controller.



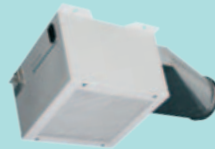
- 1 MCA® air purification unit PRO 110, bracket mounted

Room air purification



- 2 MCA® isolation unit ISO 100/120 installed between suspended or false ceilings, mounted with connection duct *

Positive or negative room pressure



- 3 MCA® remote controller RC 100 wall mounted

with key switch



* ACCESSORIES:
Backpressure flap BT125
Fire protection flap FD125

- 4 MCA® remote controller RC 200 wall mounted

with key switch and display



Remote controllers

Remote controllers with key switches or with key switches and screen-displays for permanent 100 % security, used with all MedicCleanAir units.

Remote controller RC 100

- key switch to select speed
- connects directly to the air purification unit or isolation unit / no separate power supply needed.
- avoids undesirable external use (only hospital staff)






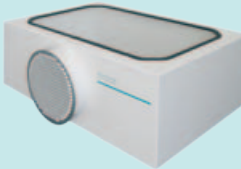

Can be used with air-filter units:
PRO 100, 110, 200i and 210i
ISO 100, 120, 200 and 210

Remote controller RC 200

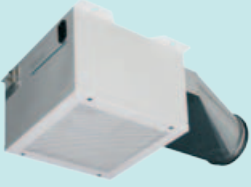




- Integrated function keys for selecting mode
- Constant pressure difference display
- Illuminated display for operating data recognition
- Key switch for secure functional change
- Secure operation by qualified personnel only
- Choice of incremental speed option
- Setting for required pressure difference (automatic at Step 4 with ISO unit)
- Choice of filter test duration (for PRO air purification unit at level 4)
- Alarm function (visual and acoustic) for pressure difference
- Alarm function (visual and acoustic) for filter condition
- Reset for acoustic alarm function
- Connects directly to the air purification unit or isolation unit / no separate power supply needed.



Can be used with isolation units:
ISO 100, 120, 200 and 210

TECHNICAL SPECIFICATIONS	Air Purification Unit PRO 100	Air Purification Unit PRO 110	Pressure adapter PRO 200i/210i	Isolation Unit ISO 100
Name MCA® – air-filter units	Mobile circulation air filter unit	Mobile circulation air filter unit	For use with Pro100 / 110	Positive or negative pressure Between floors
				
Function / use / specifications	Room air circulation	Room air circulation	Pos. or neg. room pressure in association with PRO 100 / 110	Positive or negative room pressure
Material	Chromium steel 1,0 mm	Sheet steel 1,0 mm	Chromium steel or Sheet steel	Sheet steel 1,0 mm / 2,5 mm
Colour	brushed	white powder coated	brushed or weiss	white powder coated
Colour designation	colourless	RAL 9010	colourless or RAL 9010	RAL 9010
Unit dimensions including filter	L/W/H 570 x 335 x 370 mm	L/W/H 570 x 335 x 370 mm	L/W/H 670 x 440 x 375	350 x 350 x 250 mm
Weight of unit	–	–	–	–
Weight of unit including filter cartridge	approx. 15,2 kg	approx. 15,2 kg	approx. 27 kg	approx. 13,5 kg
Dimensions of filter unit	–	–	–	–
Dimensions of fan unit	–	–	–	–
Weight of filter unit	–	–	–	–
Weight of fan unit	–	–	–	–
Duct diameter	–	–	D = 200 mm	–
Opening for air duct	–	–	–	300 x 90 mm
Ventilation duct connection piece	–	–	–	without ventilation duct piece
Type of mounting	Brackets / table	Brackets / table	Brackets / table	Between floor / wall
Air flow	max. 600 m ³ /h	max. 600 m ³ /h	max. 600 m ³ /h	–
Air backpressure flap	–	–	possible	possible
Fire protection flap, thermal	–	–	possible	possible
Standard fan speed				
Step 1	900 rpm	900 rpm	900 rpm	900 rpm
Step 2	1'300 rpm	1'300 rpm	1'300 rpm	1'100 rpm
Step 3	1'700 rpm	1'700 rpm	1'700 rpm	1'300 rpm
Step 4	approx. 2'800 rpm	approx. 2'800 rpm	approx. 2'800 rpm	–
Automatic	–	–	–	variabel / max. 3'000 rpm
Fan speed adjustment	possible	possible	possible	possible
Pressure difference according to speed increment *				
Fan stage 1 acc. to space density	–	–	–	approx. 6 Pa to 10 Pa
Fan stage 2 acc. to space density	–	–	–	approx. 8 Pa to 16 Pa
Fan stage 3 acc. to space density	–	–	–	approx. 14 Pa to 32 Pa
Fan stage 4 acc. to space density	–	–	–	–
Automatic	–	–	–	depending on speed
Noise emissions				
Fan stage 1, silence night level	yes	yes	yes	yes
Fan stage 2, daily basic level	yes	yes	yes	yes
Fan stage 3, daily high level	yes	yes	yes	yes
Fan stage 4, intensive level	yes	yes	yes	depending on speed
Filter type	Particulate filter	Particulate filter	Particulate filter	Particulate filter
Designation	HEPA / ULPA	HEPA / ULPA	HEPA / ULPA	HEPA / ULPA
DIN standard	EN 1822	EN 1822	EN 1822	EN 1822
Dimensions including frame structure	oval: 550 x 320 x 230 mm	oval: 550 x 320 x 230 mm	oval: 550 x 320 x 230 mm	305 x 305 x 90 mm
Filter monitoring with LED display	yes	yes	yes	yes
Degree of contamination 50%	LED indicator green	LED indicator green	LED indicator green	no LED indicator on unit
Degree of contamination 80%	LED indicator yellow	LED indicator yellow	LED indicator yellow	Filter monitor only
Degree of contamination 90%	LED indicator yellow flashing	LED indicator yellow flashing	LED indicator yellow flashing	in association
Degree of contamination 100%	LED indicator red	LED indicator red	LED indicator red	Remote controller RC 200
Alarm function LED / Buzzer	with remote controller RC 200 only	with remote controller RC 200 only	with remote controller RC 200 only	with remote controller RC 200 only
Control variants				
Rotary switch on the unit	yes	yes	yes	no
Remote controller Type RC 100	yes	yes	yes	yes
Remote controller Type RC 200	yes	yes	yes	yes
Connections / Type no. / guarantee				
Operating voltage	230V / 50 Hz	230V / 50 Hz	230V / 50 Hz	230V / 50 Hz
Power consumption	max. 80 Watt	max. 80 Watt	max. 80 Watt	max. 80 Watt
Unit fuse protection / Ph & N	2 x 2 A	2 x 2 A	2 x 2 A	2 x 2 A
Product code	HE 993.421.000	HE 993.421.001	Accessoires	HE 993.431.200
Complies with CE standards	yes	yes	yes	yes
Filter maintenance indicator	yes	yes	yes	yes
Unit guarantee (without filter)	3 years	3 years	3 years	3 years

All measurement data are guide values for practical application. Subject to technical changes and additions without notice.

Isolation Unit ISO 120	Isolation Unit ISO 200	Isolation Unit ISO 210	Remote controller RC 100	Remote controller RC 200
Pressure unit, 1-piece Wall mounting	Positive or negative pressure unit, 2-piece Window mounting			
				
Positive or negative room pressure	Positive or negative room pressure	Positive or negative room pressure	Stepped key switch	Display with function display
Sheet steel 1,0 mm / 2,5 mm white powder coated RAL 9010	Sheet steel 1,0 mm / 1,5 mm white powder coated RAL 9010	Sheet steel 1,0 mm / 1,5 mm white powder coated RAL 9010	Plastic white 2-tone	Plastic / PS 4 mm white / turquoise 3-tone
350 x 350 x 250 mm	–	–	86 x 86 x 52 mm	120 x 90 x 40 mm
–	–	–	approx. 0,24 kg	approx. 0,22 kg
approx. 15 kg	–	–	–	–
–	425 x 320 x 140 mm	425 x 320 x 140 mm	–	–
–	425 x 320 x 120 mm	425 x 320 x 120 mm	–	–
–	approx. 4,7 kg	approx. 4,7 kg without duct piece	–	–
–	approx. 2,4 kg	approx. 2,4 kg without duct piece	–	–
D = 125 mm	D = 224 mm	D = 125 mm	–	–
–	–	–	–	–
with ventilation duct piece L = 350 mm	without duct connection	with centre piece L = 250 mm	–	–
Between floor / wall	Window mounting	Wall mounting	Wall	Wall
–	–	–	–	–
possible	–	possible	–	–
possible	–	possible	–	–
900 rpm	1'100 rpm	1'100 rpm	} readable	} Indicator on display
1'100 rpm	1'300 rpm	1'300 rpm		
1'300 rpm	1'600 rpm	1'600 rpm		
–	–	–		
variabel / max. 3'000 rpm possible	variabel / max. 3'000 rpm possible	variabel / max. 3'000 rpm possible		
approx. 6 Pa to 10 Pa	approx. 8 Pa to 12 Pa	approx. 8 Pa to 12 Pa	} not detectable	} Indicator on display
approx. 8 Pa to 16 Pa	approx. 10 Pa to 20 Pa	approx. 10 Pa to 20 Pa		
approx. 14 Pa to 32 Pa	approx. 16 Pa to 34 Pa	approx. 16 Pa to 34 Pa		
–	–	–		
depending on speed	depending on target speed	depending on target speed		
yes	yes	yes	–	–
yes	yes	yes	–	–
yes	yes	yes	–	–
depending on speed	depending on speed	depending on speed	–	–
Particulate filter	Particulate filter	Particulate filter	–	–
HEPA / ULPA	HEPA / ULPA	HEPA / ULPA	–	–
EN 1822	EN 1822	EN 1822	–	–
305 x 305 x 90 mm	305 x 305 x 90 mm	305 x 305 x 90 mm	–	–
yes	yes	yes	–	–
no LED indicator on unit	LED indicator green	LED indicator green	} on air filter unit only detectable (LED)	} Indicator on display
Filter monitor only	LED indicator yellow	LED indicator yellow		
in association	LED indicator yellow flashing	LED indicator yellow flashing		
Remote controller RC 200	LED indicator red	LED indicator red	–	–
with remote controller RC 200 only	with remote controller RC 200 only	with remote controller RC 200 only	no	yes / visual and acoustic
no	no	no	–	–
yes	yes	yes	–	–
yes	yes	yes	–	–
230V / 50 Hz	230V / 50 Hz	230V / 50 Hz	Connect to air filter unit	Connect to air filter unit
max. 80 Watt	max. 80 Watt	max. 80 Watt	–	–
2 x 2 A	2 x 2 A	2 x 2 A	–	–
HE 993.431.202	HE 993.431.100	HE 993.431.101	HE 993.401.602	HE 993.401.610
yes	yes	yes	yes	yes
yes	yes	yes	no	yes
3 years	3 years	3 years	3 years	3 years

MedicCLEANAir®

A BELGIAN - SWISS COOPERATION

Manufacturer

Division of Walsberghe nv
Melkmarkt 35
B-2000 Antwerpen

Phone ++(32) (0)3 860 70 60

Fax ++(32) (0)3 860 70 69

info@mediccleanair.com
www.mediccleanair.com

