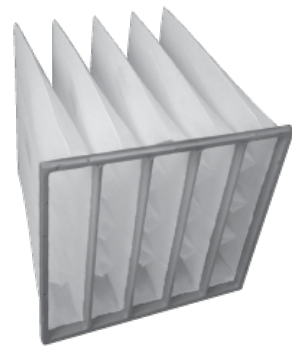
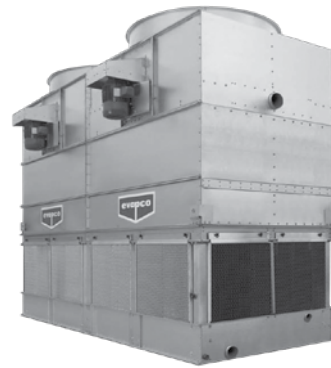


## Other products

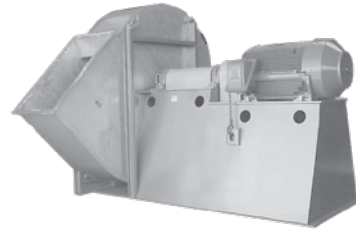
Air Filters



Cooling Towers



Industrial Fans



### Air filtration

- Activated Carbon
- Air Conditioning Filters
- Bag Filters
- Clean Rooms
- Gas Filtration
- HEPA Filters,
- Intake Filters

### Air movement

- Blowers & Gas Boosters
- Dampers & Flow Control
- Fibreglass Fans
- Industrial Fans
- Process Fans
- Side Channel Blowers

### Environmental control

- Bag Filters
- Cartridge Filters
- Cooling Towers
- Cyclones
- De-Humidifiers
- Dust Collectors
- Evaporative Cooling Systems
- Fluid Strainers
- Heat Exchangers
- Heat Recovery Systems
- Odour Control
- Scrubbers

### Measurement & instrumentation

- Flow & Pressure Instruments
- Hand held pressure measurement

### Instruments

- IR Temperature Instruments

### Design & consulting services

- Specifically in relation to our expertise in air movement, filtration, humidity control, dust collection

Please contact our Auckland sales office for these products:

Unit 1, 23 Druces Rd, Manukau, Auckland 2104, New Zealand

Ph: +64 9 262 4474

[auckland.sales@windsor.co.nz](mailto:auckland.sales@windsor.co.nz)

## Air purification systems

for Medical environments

Laminar flow circular design = Less turbulence = Greater patient protection



# Air purification systems

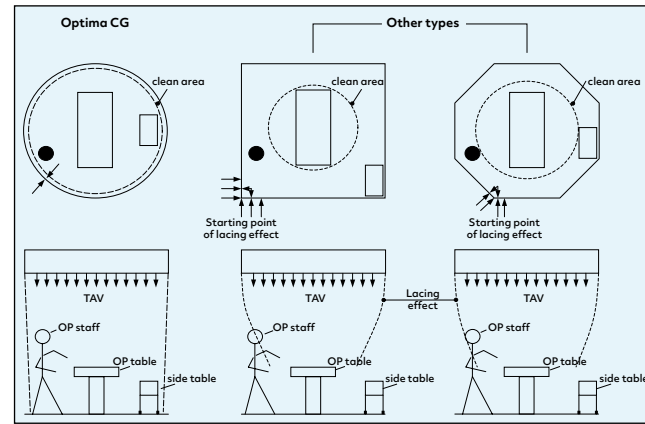
## for medical environments

### Reduce the risk of infection

A new circular design laminar air-flow system greatly improves coverage of the sterile air environment in operating theatres. Significant cost-savings support the use of the advanced OPTIMA CG model in many additional applications.

Existing rectangular laminar flow models suffer from a phenomenon called 'tracing', where turbulence can compromise the clean zone by up to 40% (see diagram).

The circular OPTIMA CG model significantly reduces this potential source of infection. The patient receives better protection and the clean zone can be extended to cover more staff, as well as instruments.

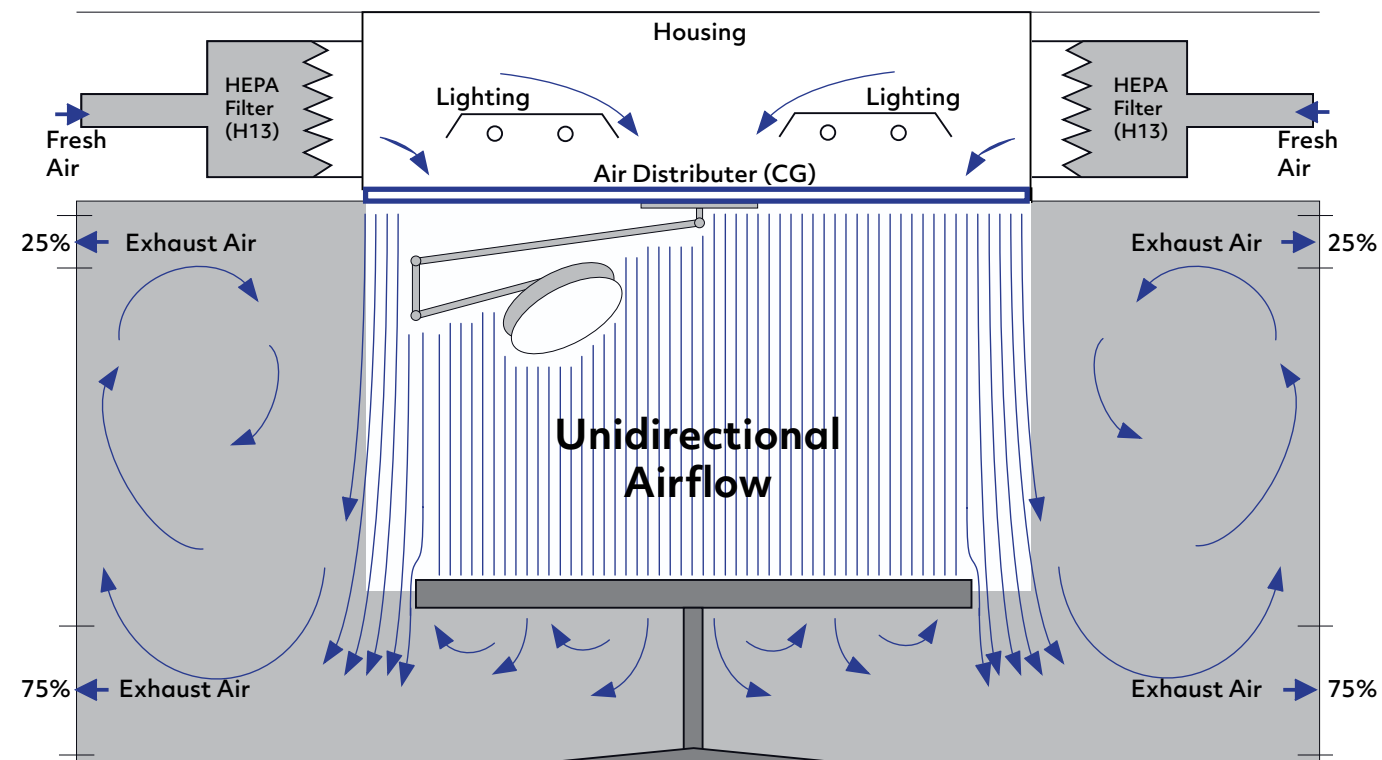


### Keep operating theatres protected

Lower capital and operating costs enable circular OPTIMA CG units to be used in a wider range of applications:

- Orthopaedic
- Head and Neurosurgery
- Heart and Lung
- Burns
- Accident and Trauma
- Paediatric

### How the airflow works to provide patient safety



# Air purification systems

## For medical environments

### Improved recovery rates and unrestricted patient access

The circular OPTIMA CG unit uses 30% less air and can provide a 30% larger clean working space for the surgical team than a square unit of the same width. Consequently, the boundary between the clean and unclean space will be broken less by personnel movement, which in itself can produce localised swirling and entrainment.

The equivalent clean area coverage provided by a traditional 4.5 metre square unit can be achieved by using a standard 3.2 metre diameter round OPTIMA CG unit, which would require 30% to 40% less airflow.

Electricity costs in ventilation systems are approximately proportional to airflow, so a 40% reduction in airflow will result in a 40% reduction in power costs.

This will also translate into reduced maintenance costs of air supply equipment.

Capital gains can be realised by reducing the capacity requirements of new central air conditioning plant installations when they are configured to take advantage of the reduced loads of circular OPTIMA CG units.

Lower infection rates and improved recovery rates are intrinsically linked to operational costs. Lowering these rates enables a hospital to increase the number of operations it can carry out in a year, while remaining within budgetary constraints.

### Benefits

- Wider area coverage and a more uniform flow.
- 'Air-curtain' provides unrestricted access around operating table.
- Patient better protected from contaminants.
- Lower infection rates.
- Improved surgical success rates.
- Wider range of potential uses.
- Potential to reduce average recovery times.
- Brilliant general lighting.
- Ongoing economic savings.
- Long-term energy savings.

### Improved energy efficiency



The circular OPTIMA CG greatly enhances energy efficiency. A more concentrated directional airflow is achieved while using lower-velocity air pressures and less power than conventional models.

In some instances this may provide an opportunity to reduce the size of the unit, adding further savings.

