

Opragon 8

Temperature Controlled Airflow — technology for operating theatres

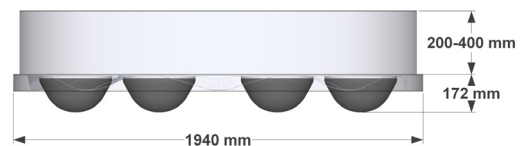
Opragon 8 is mounted in the false ceiling in operating theatres used for infection sensitive surgery. The unit is supplied with slightly cooled, HEPA filtered air of class H14 from an external air handling unit equipped with a heating and cooling coil. Opragon is based on the Temperature Controlled Airflow (TAF) principle which implies that slightly cooled air, thanks to its higher density, falls to the floor at a speed dictated by the temperature difference between the supplied air and the ambient room air. When installed, Opragon is therefore supplemented with an outer ring of external airshowers that controls the room temperature. At a TAF-installation with Opragon and external airshowers, ultraclean air can be obtained in the whole room, provided that other requirements regarding clothing and hygiene are met. Avidicare provides a control diagram to the supplier of the control system.

Example of a TAF-installation in a surgical environment

Opragon: Cooled HEPA-filtered air provides an ultraclean environment.

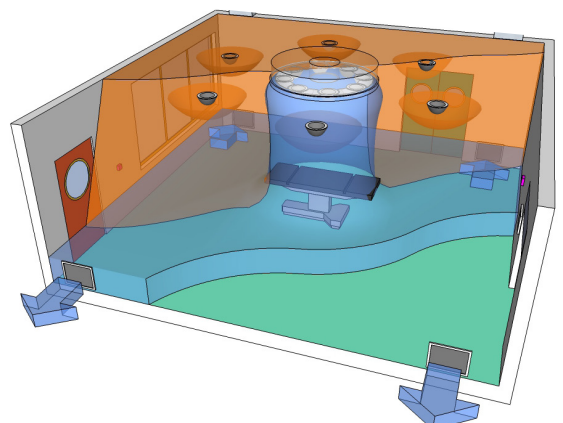
External airshowers: Their number varies depending on the size of the room. They control the room temperature and accelerate the sedimentation. The intake air is HEPA-filtered.

Exhaust air: The exhaust air is evacuated symmetrically at floor level.



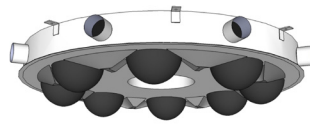
TECHNICAL SPECIFICATION

- Number of airshowers: 8
- Airflow Opragon: 2800 m³/h ≈ 780 l/s
- Diameter: 1940 mm
- Height: 200-400 mm
- Weight: 100 kg
- Material: Laser cut sheet metal
- Color: RAL 9016 (standard) alternatively powder coated in desired color or in stainless sheet metal.

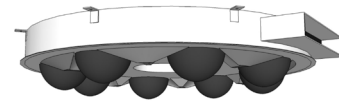


Connection

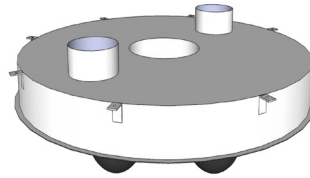
The placement and dimensions of duct connections are customized for each installation. Connection can be done from the side/above via circular/rectangular ducts. The ducts are dimensioned for 3 m/s.



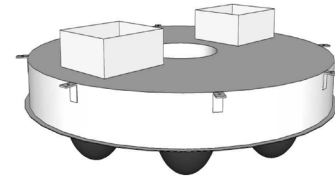
From the side, circular ducts.



From the side, rectangular ducts.



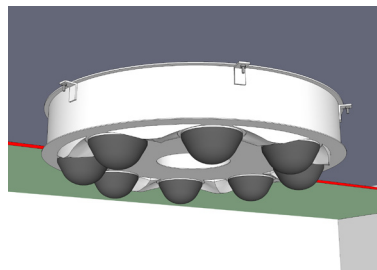
From the above, circular ducts.



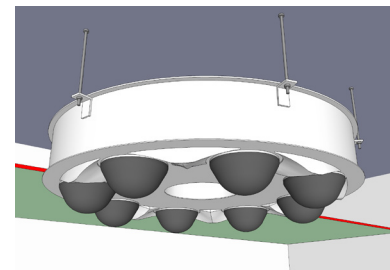
From the above, rectangular ducts.

Mounting

Opragon is mounted directly in the joists or suspended depending on the height of the false ceiling.



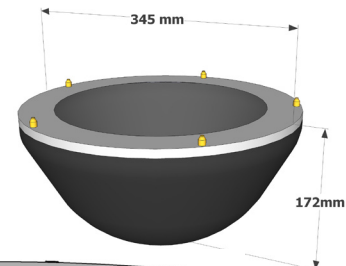
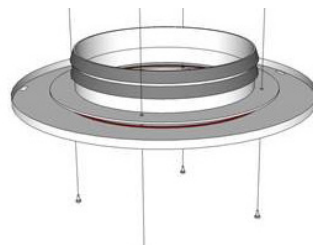
Mounting directly on the ceiling



Suspended mounting

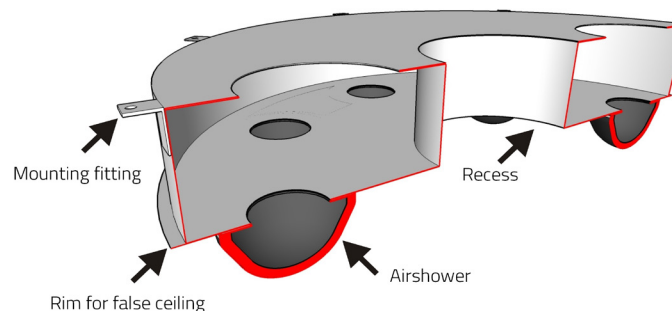
Airshowers

The low impulse airshowers are made of bulpren. In the Opragon, the airshowers are mounted with a bayonet mount in the intended keyholes. The external airshowers are mounted with a bayonet mount to a mounting ring.



Connection to the false ceiling

The Opragon is provided with a 30 mm rim for neat connection to the false ceiling.



Options

Opragon can be delivered with recesses for ceiling pendulums, surgical lights or other equipment. In order to minimize the disturbance of the airflow in the surgical zone, it is recom-

mended that ceiling mounted equipment is placed outside the Opragon. Opragon can also be delivered with integrated lightning that do not impact the airflow.

Opragon is adapted for each unique project. Upon request a configuration sheet with product codes or Opragon as a BIM-object can be provided.