

Airshower Cubicle 4200

Task

To enter or leave a cleanroom usually Airshowers are used.

The Airshower Cubicle 4200 therefore has important tasks:

- First, the Airshower Cubicle 4200 should protect the cleanroom from contaminated air and prohibit that contaminated air gets in when persons enter or leave the cleanroom.
- Second, the Airshower Cubicle 4200 should blow away particles which adhere on working clothes.
- Third, it should be possible that more persons enter or leave the cleanroom at the same time

When establishing the Airshower Cubicle 4200 Cubicle 4200 all these tasks can be solved good.

Design

The Airshower Cubicle 4200 consists of 2 parts, which are mounted together at the section point.

The doors are out of safety glass and open to the outside.

There is a maintenance door on the grey side and white side above the doors.

Inside along the side walls there are 80 nozzles from top to bottom.

4 lightings are located in the ceiling.

12 preliminary filters class EU4 are located in the bottom part of the side walls. The 2 main filters class H13 are located in the top part of the Airshower Cubicle 4200.

Pushing an emergency stop shuts down the Airshower Cubicle 4200 . Emergency stops are located on the grey side, white side and inside the Airshower Cubicle 4200.

brief description

Having entered the Airshower Cubicle 4200 the working clothes are subject to an intensive and purified air stream from the side walls with 40 nozzles each (total of 80 nozzles).

To achieve optimal decontamination of working clothes the person should walk through slowly moving arms up and down.

While doing this the fan takes in the contaminated air, used as circulation air, in the floor area.

Because of the special location of the preliminary filters to the nozzles there is no horizontal stream build up inside the Airshower Cubicle 4200. The preliminary

filters eliminate the larger particles from the contaminated air. There after the pre-cleaned air flows through the main filters and is distributed to the side walls. From there, the purified air is blown back into to Airshower Cubicle 4200. This way a forced current of air is generated blowing from top to bottom. The dust laden air from the air stream cleaning process and other airborne particles are caught by the forced air current, pulled downwards, and immediately evacuated.

Handling

The handling of the Airshower Cubicle 4200 is easy.

The doors are never locked. In the initial position both doors are closed, nobody is inside the Airshower Cubicle 4200, fan and lighting is out.



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Operating Sequence

from grey side (contaminated area) to white side (cleanroom)

- the Airshower Cubicle 4200 is in the initial position
- grey side door is opened
- fan starts running and light switches on
- person goes into the Airshower Cubicle 4200
- door closes automatically
- person go slowly through the Airshower Cubicle 4200 moving arms up and down. This process should take about 20 seconds.
- Person exit the Airshower Cubicle 4200 to the white side.
- door closes automatically
- when both doors are closed and a time of 60 seconds goes by then the fan stops running and the lighting is being switched off.
- the Airshower Cubicle 4200 is in the initial position

from white side to grey side

- the Airshower Cubicle 4200 is in the initial position
- white side door is opened
- fan starts running and light switches on
- person go into the Airshower Cubicle 4200
- door closes automatically
- person go through the Airshower Cubicle 4200
- person exits the Airshower Cubicle 4200 to the grey side
- door closes automatically
- when both doors are closed and a time of 60 seconds goes by then the fan stops running and the lighting is being switched off.
- the Airshower Cubicle 4200 is in the initial position

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