

Wall mounted Airshower, ASV



Airshower, type AS and ASV is a series of roof and wall-mounted supply air diffusers intended for the supply of a vertically displacing, thermally controlled air flow. The diffusers provide for an exceptionally high ventilation efficiency with its minimal pitch length and low turbulence degree.

Product advantages:

- Low noise level
- Good air comfort
- Low energy consumption
- Unique ability to create zones of treated air with very low in mixing of ambient air

The diffusers are especially suited for comfort cooling of offices and other public spaces as well as facilities in need of a high ventilation effectiveness in reducing the spread of infection or the like.

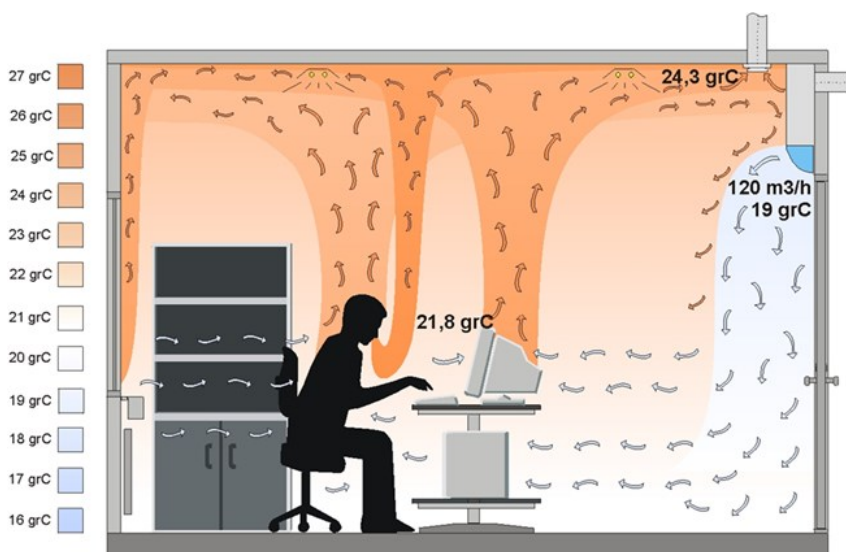


Figure 1: Visualization of convection air flows replenished by a vertically displacing, thermally controlled air flow



Figure 2: ASV in cleanroom

Product info

Wall mounted vertically displacing, low turbulent, diffuser with minimal impulse for temperature controlled air flow.

Airshower type ASV is available in two variants:

ASV-B Wall mounted diffuser for connection from behind (through the wall), made by A2 CAT, model ASV-B. Standard colour. Duct connection: $\varnothing 160$

ASV-T Wall mounted diffuser for connection from above (through the ceiling), made by A2 CAT, model ASV-T. Standard colour. Duct connection: $\varnothing 160$

Specify if to include duct cover by adding the suffix KI-*aa*, where *aa* indicates the measurement between the top of diffuser and the ceiling as measured in mm.

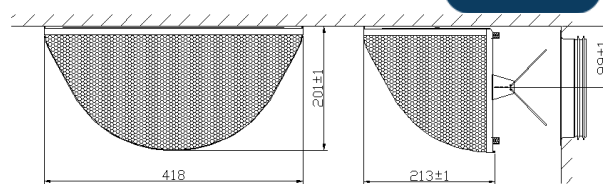


Figure 3: Measurements ASV-B, connection from behind (through the wall)

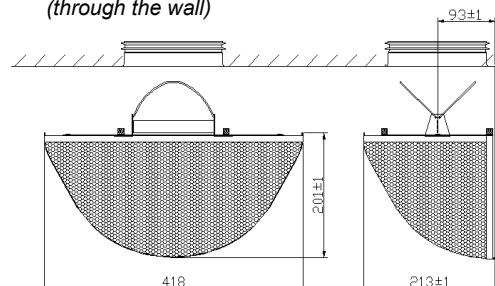


Figure 4: Measurements ASV-T, connection from above

Positioning

Airshower is best placed at about two meters above floor level, preferably above the door. By positioning the diffuser just above the room entrance the comfort zone is maximized and the ducting is kept minimal. For best performance a positioning directly above a heat source should be avoided. In rooms with large temperature differences between floor and ceiling level, the diffusers should be positioned beneath the hottest air layers. At subset temperatures above 1 °C, avoid positioning directly above deskbound (or inactive) people.

If replacing a high impulse (mixing) ventilation system it should be ensured that the room heating is readjusted. Otherwise the energy savings from the higher ventilation efficiency will be reduced.

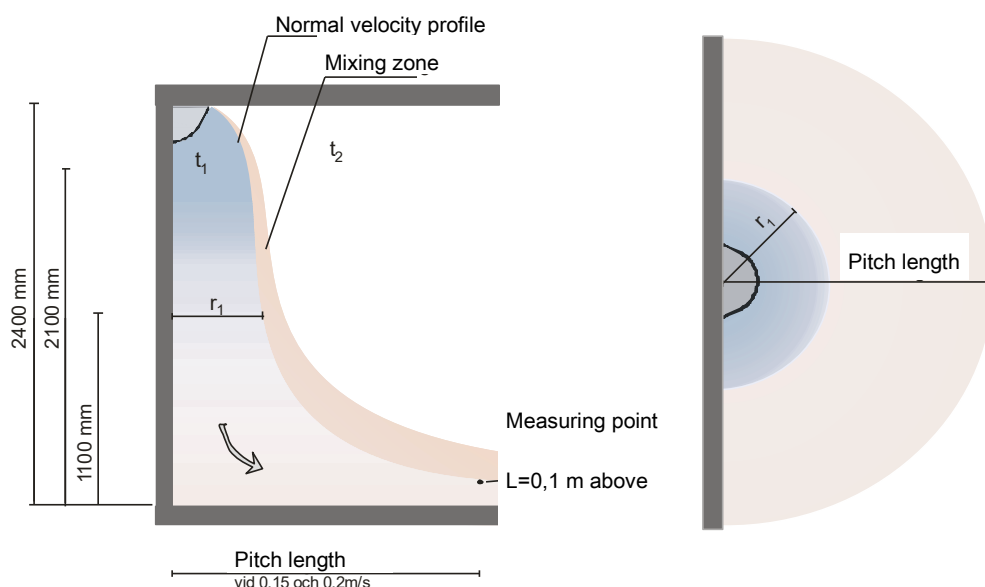


Figure 5: Air distribution at subset air supply ($t_2 - t_1 \geq 1$ °C)

Technical specification

The right hand diagram (figure 6) shows pressure drop and sound effect.

- Sound effect level (LwA)
- Total pressure drop (Pa)
- Pressure drop at measurement nipple

For air flow adjustment use the formula for air flow ($Q = l/s$) in relation to pressure ($P = Pa$) as measured at the measurement nipple:

$$Q = 3,1376 \times P_s^{0,7699}$$

These measurements are carried out by SP, the Technical Research Institute of Sweden, test number P703843. The error margin is $\pm 10\%$ due to variation in diffuser porosity.

Materials

Assembly ring:	Aluminium
Foam:	Bulpren
Coating:	White powder lacquering
Fire class:	Non-flammable

Accessories

Duct cover KI, (figure 1 and 7). White powder coating (standard). Easy attachment. Specify height and pre-sumptive special colour.

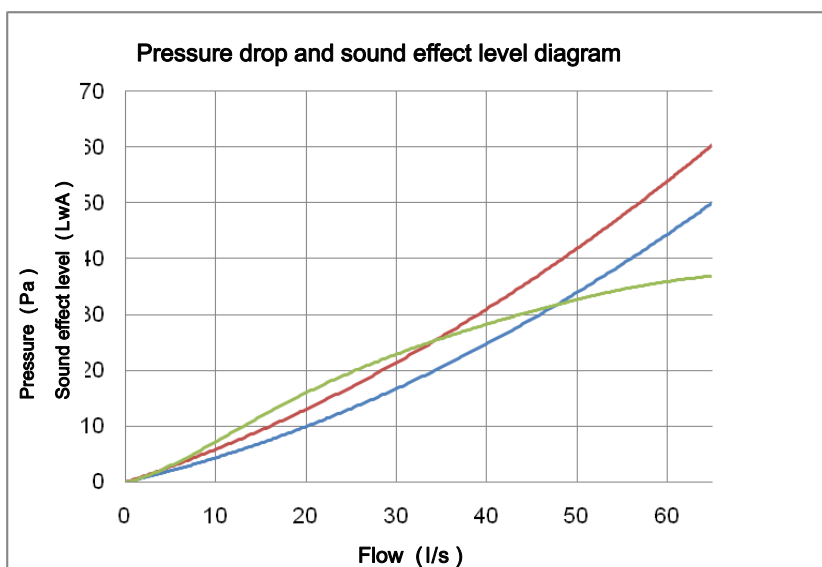


Figure 6: Pressure drop and sound level diagram for ASV-T ASV-B

Choice of colour

Colour	Code
Light grey, RAL 9010 (Standard)	White
Airshower can be supplied in any colour, to a surcharge, specify RAL code	RAL XXX

Mounting and maintenance

Information about mounting and maintenance can be found in the document "Mounting and maintenance".

Measurements

See figure 3 and 4.

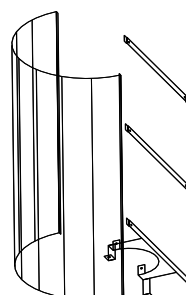


Figure 7: Duct cover, KI