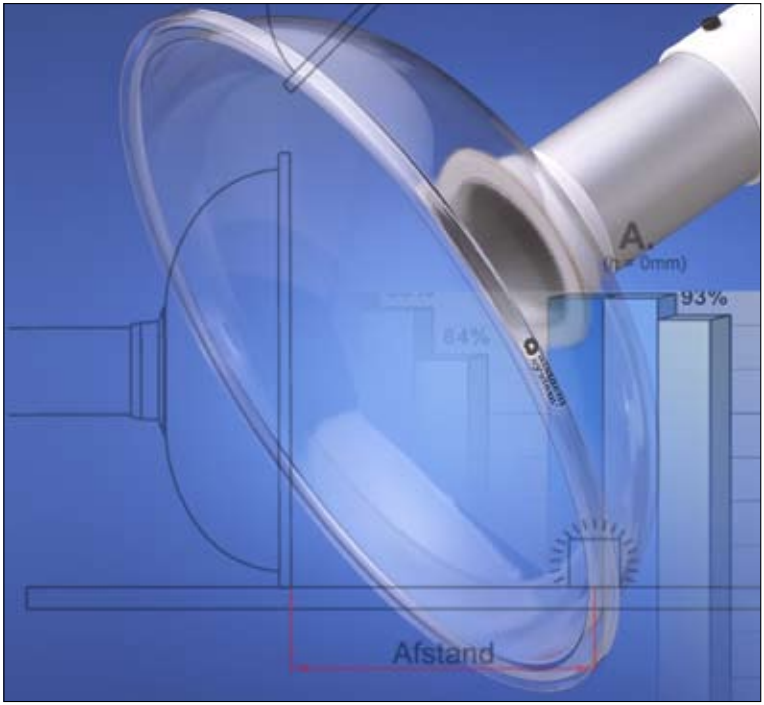
ALSIDENT® SYSTEM

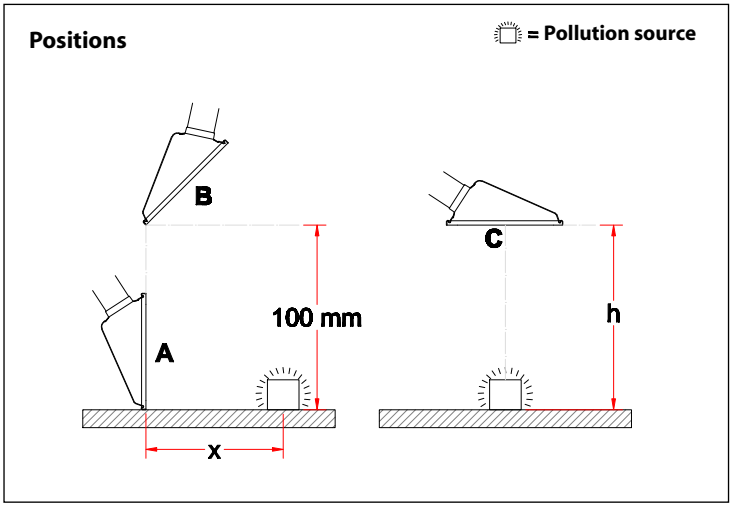
Systems 25, 50, 63, 75 & 100



Capture efficiency

alsident® system
A cleaner working environment

1-502422

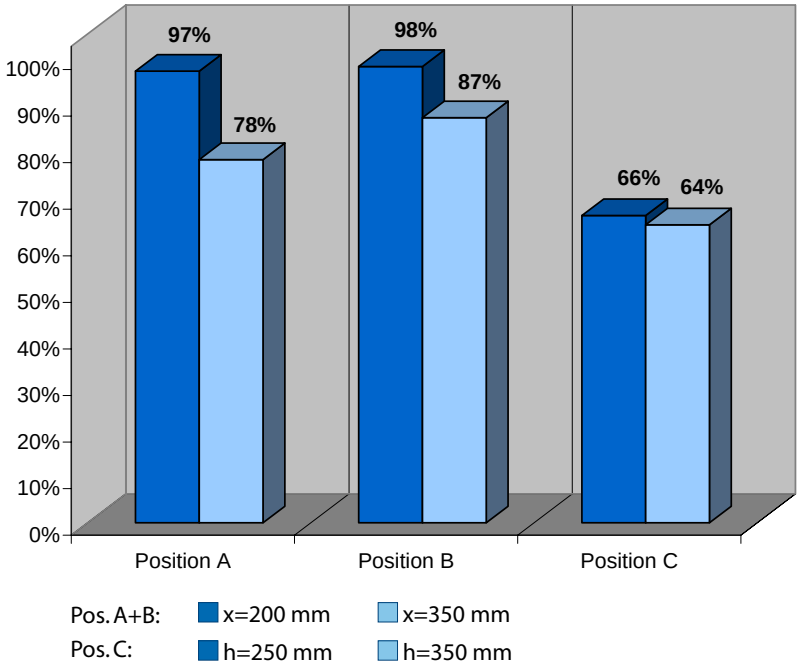


The measurements of the hood have been taken at a volume velocity of 60 m³/h. It is possible to increase the efficiency in pos. C by moving the hood at an angle as shown in pos. B.

Suction efficiency

Pos. A and B: Measured at a distance (x) of 200 and 350 mm respectively from the pollution source.

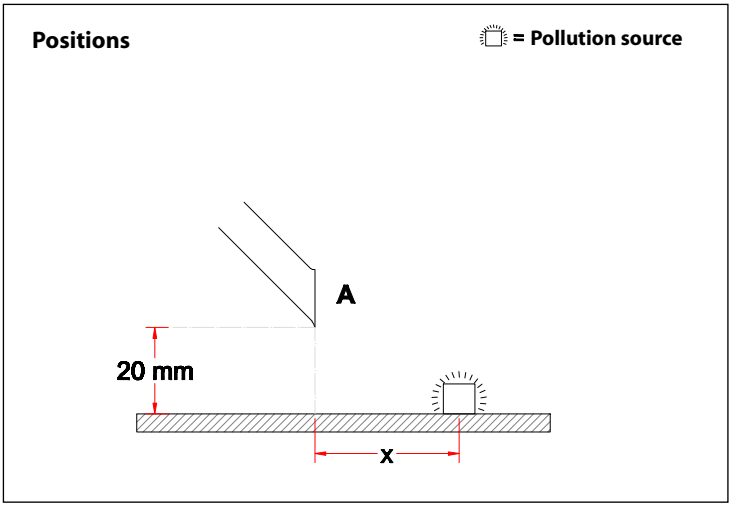
Pos. C: Measured at a hight (h) of 250 and 350 mm respectively from the pollution source.



1-5021 & 1-5031

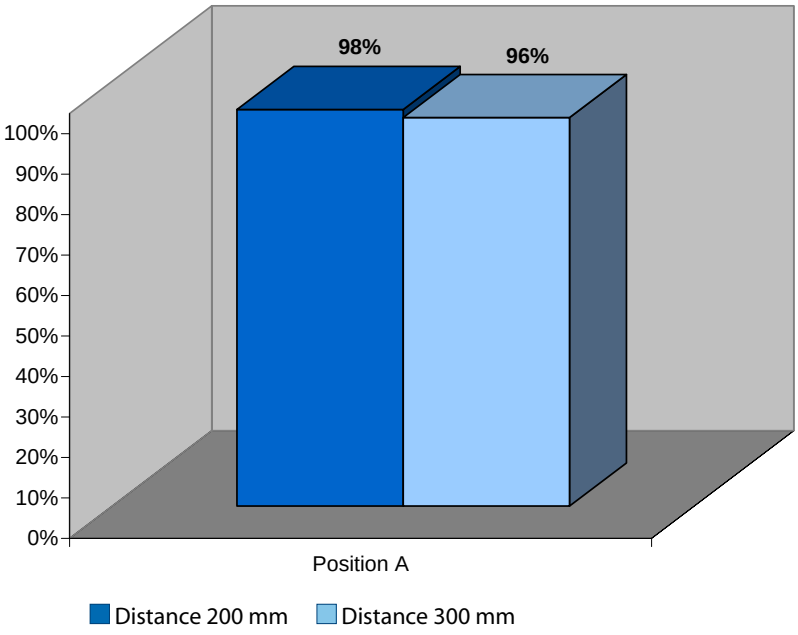
1-5022 & 1-5032

The measurements of the suction pen have been taken at a volume velocity of 60 m³/h. The suction pen is available in lengths of 210 and 310 mm.

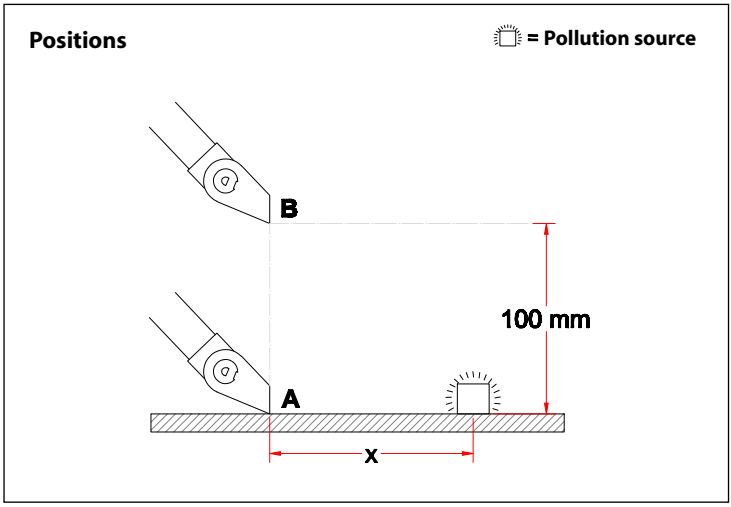


Suction efficiency

Measured at a distance of 200 and 300 mm respectively from the pollution source.



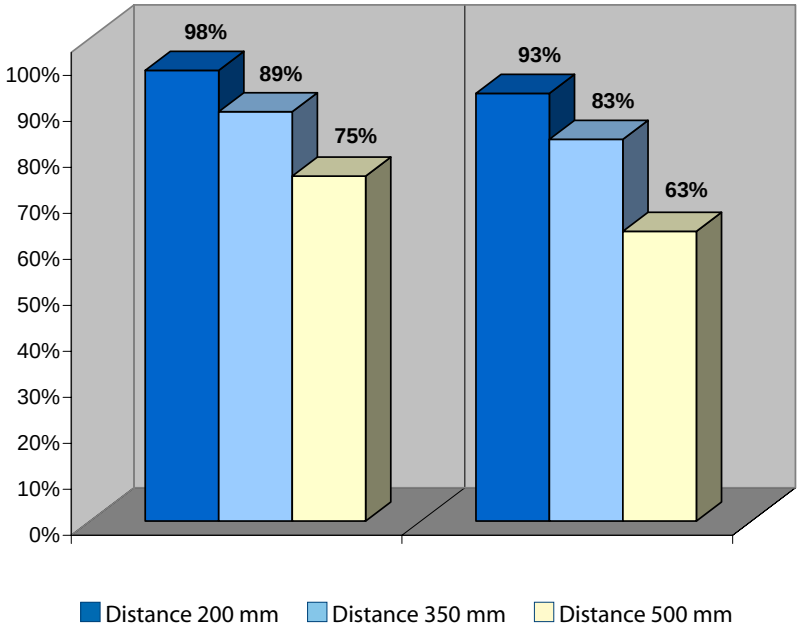
1-5020



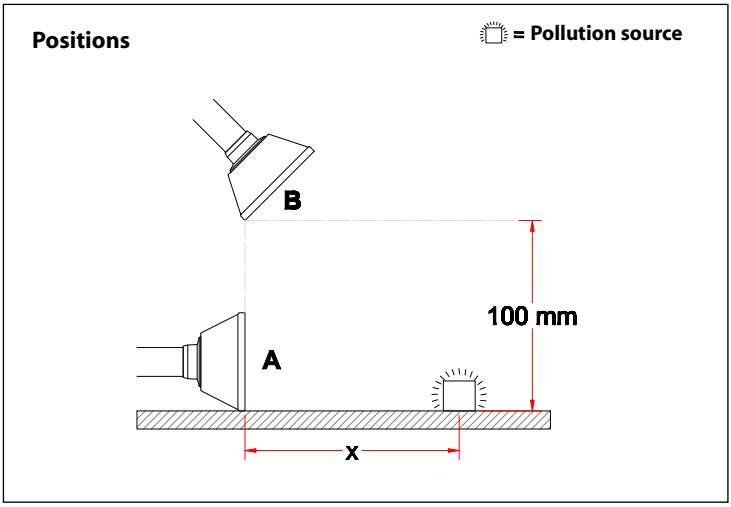
The measurements of the suction nozzle have been taken at a volume velocity of 60 m³/h.

Suction efficiency

Measured at a distance of 200, 350 and 500 mm respectively from the pollution source.



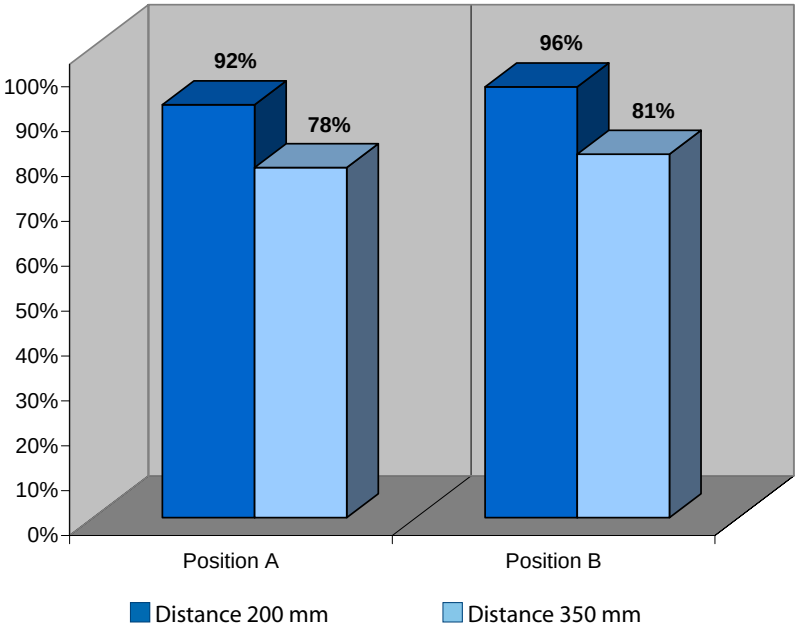
1-502015



The measurements of the hood have been taken at a volume velocity of 60 m³/h.

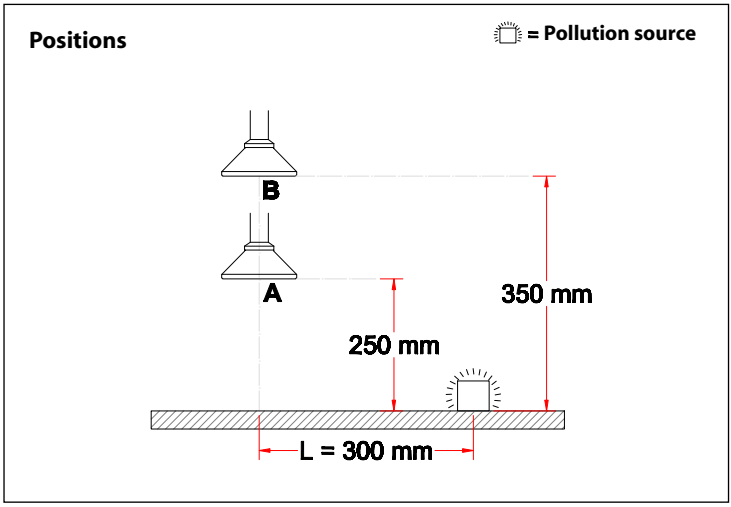
Suction efficiency

Measured at a distance of 200 and 350 mm respectively from the pollution source.



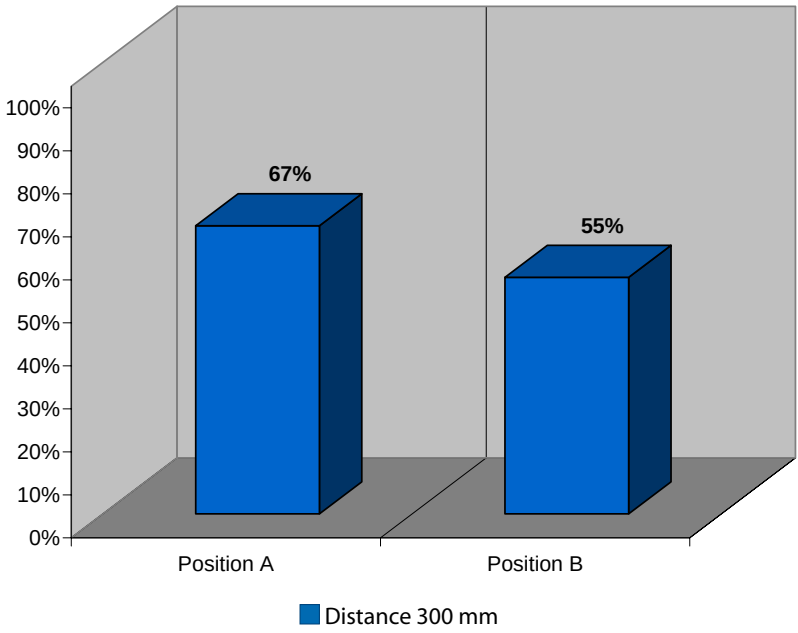
1-5024

The measurements of the hood have been taken at a volume velocity of 60 m³/h. The low efficiency values indicate that the work position is not optimal. Page 15, positions A and B shows the recommended work position of a similar hood.

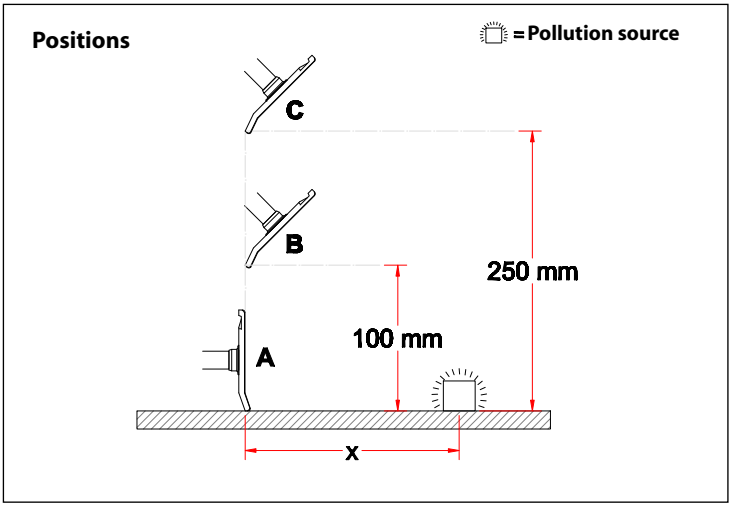


Suction efficiency

Measured at a distance of 300 mm from the pollution source.



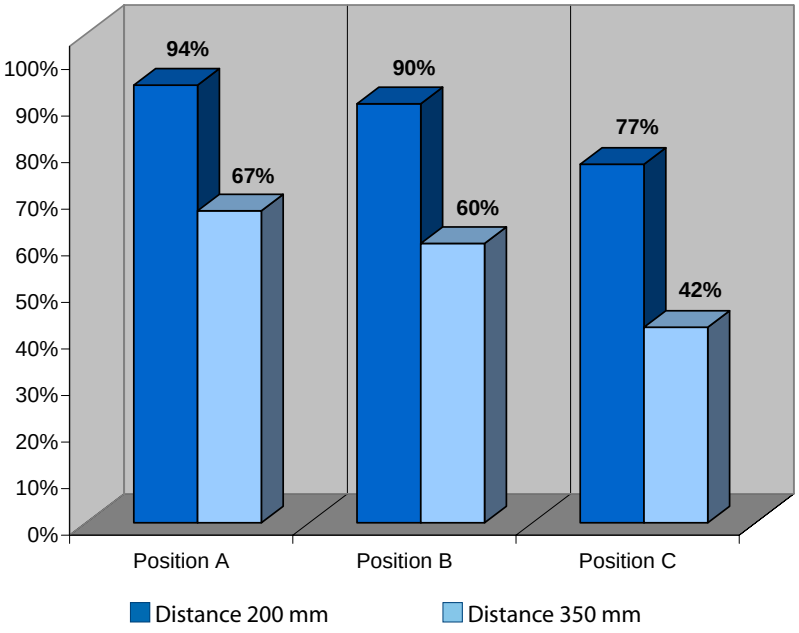
1-503324



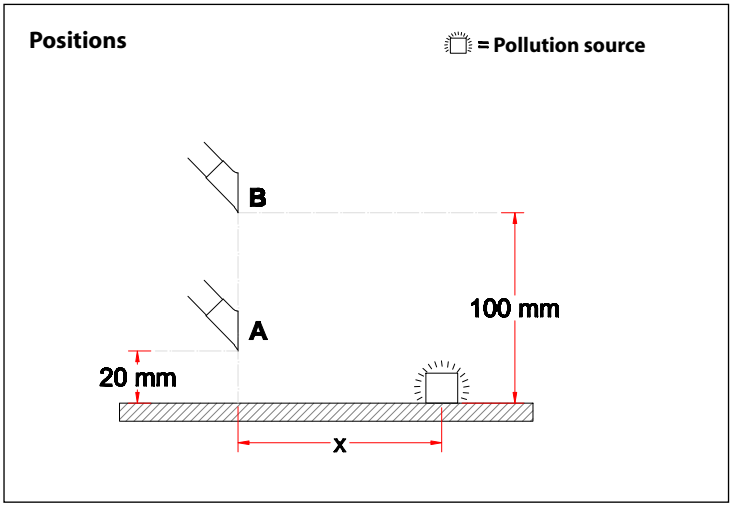
The measurements of the hood have been taken at a volume velocity of 60 m³/h.

Suction efficiency

Measured at a distance of 200 and 350 mm respectively from the pollution source.



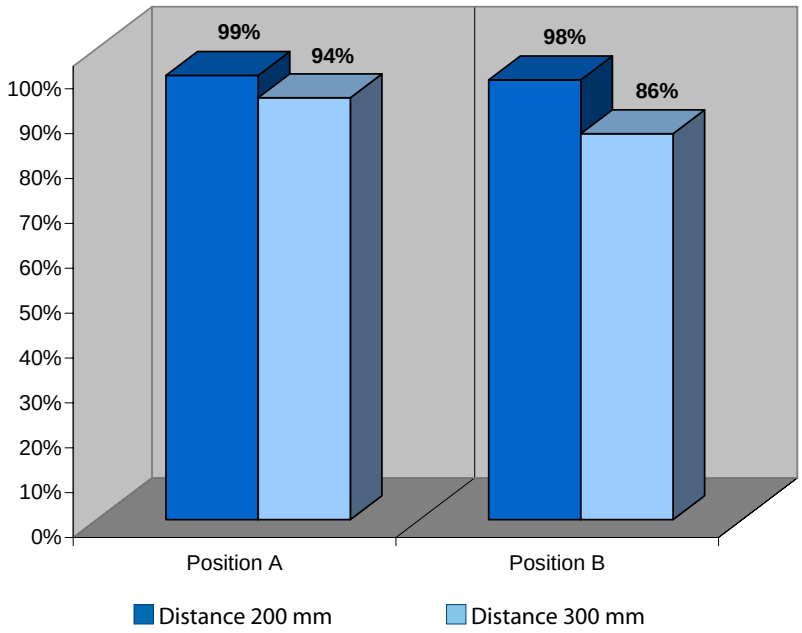
1-6325



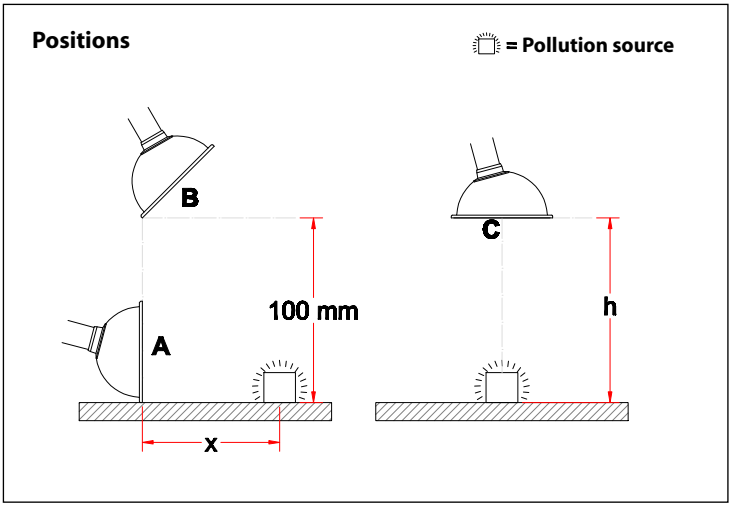
The measurements of the suction pen have been taken at a volume velocity of 100 m³/h.

Suction efficiency

Measured at a distance of 200 and 300 mm respectively from the pollution source.



1-6328

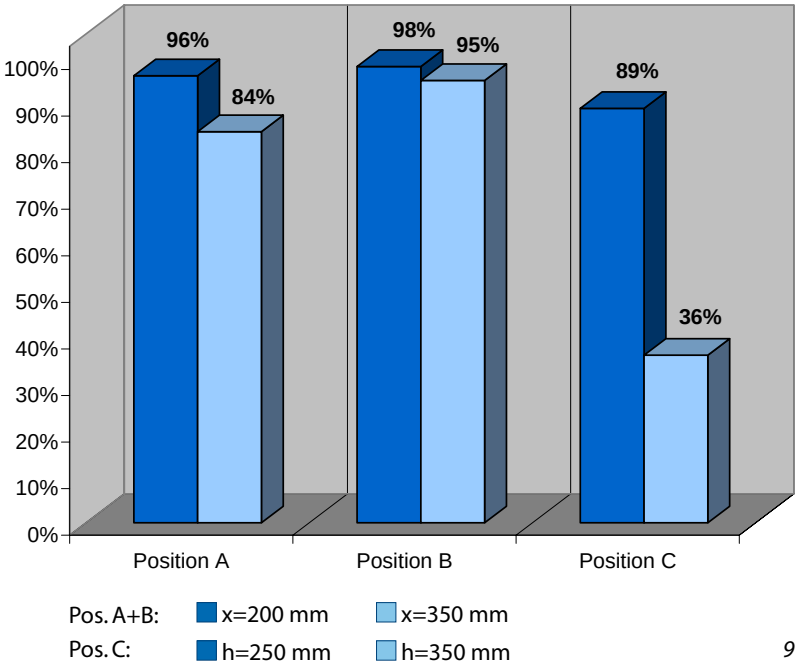


The measurements of the hood have been taken at a volume velocity of 100 m³/h.

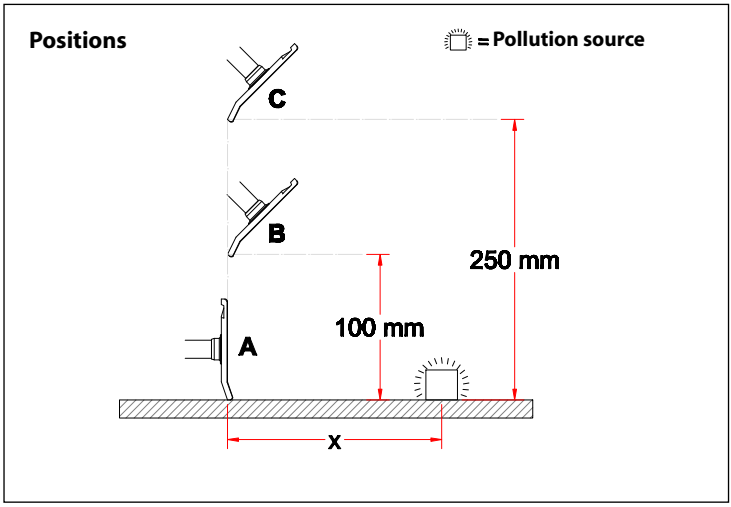
Suction efficiency

Pos. A and B: Measured at a distance (x) of 200 and 350 mm respectively from the pollution source.

Pos. C: Measured at a height (h) of 250 and 350 mm respectively from the pollution source.



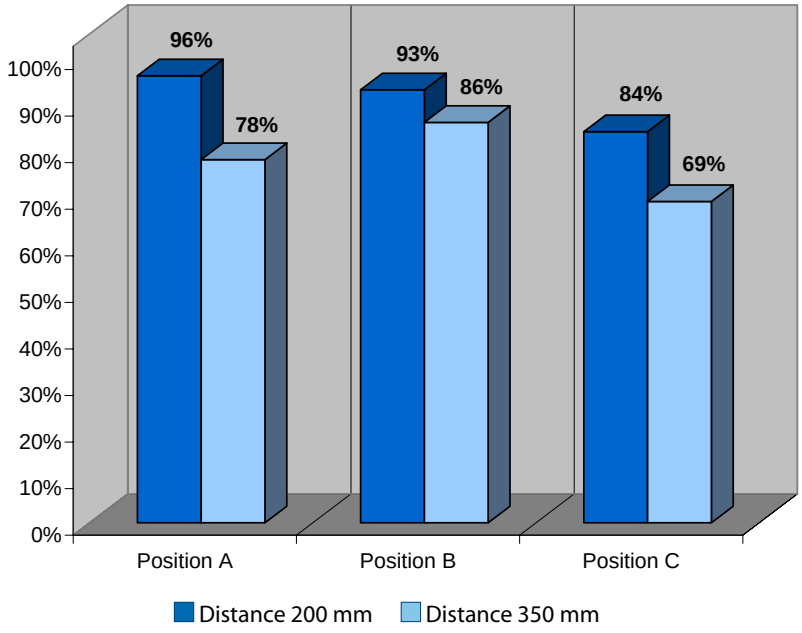
1-633324



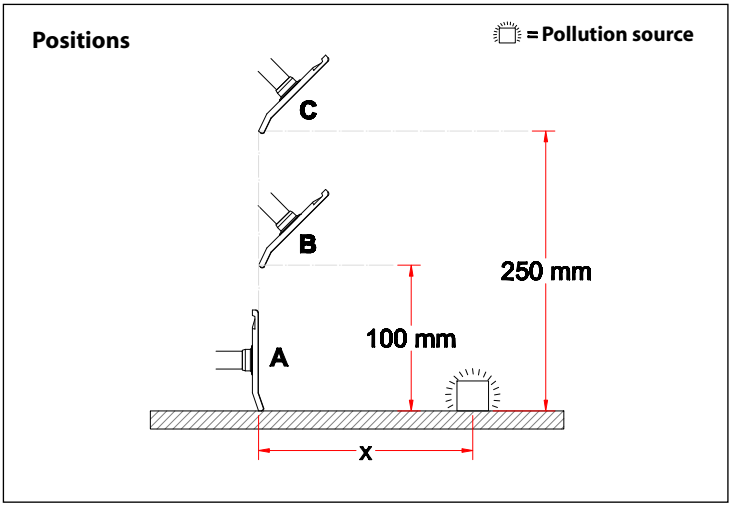
The measurements of the hood have been taken at a volume velocity of 100 m³/h.

Suction efficiency

Measured at a distance of 200 and 350 mm respectively from the pollution source.



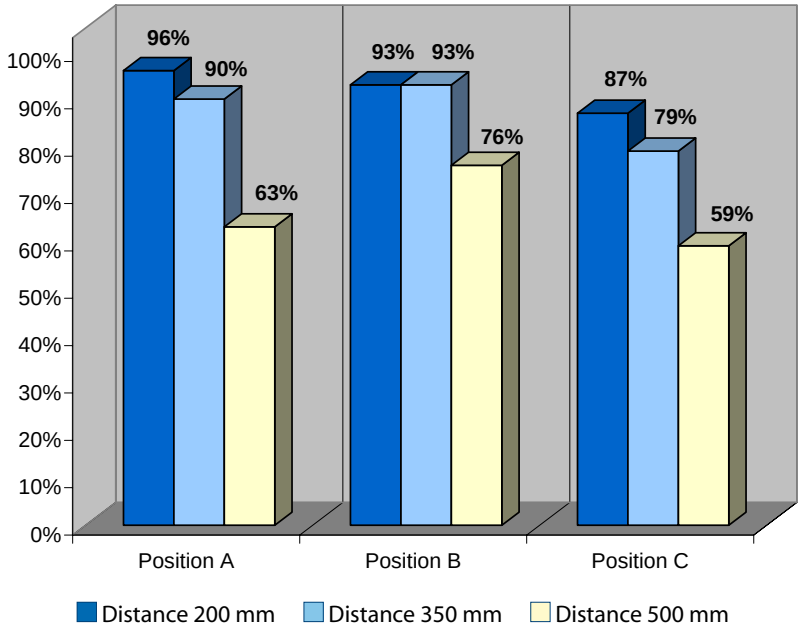
1-753324



The measurements of the hood have been taken at a volume velocity of 140 m³/h.

Suction efficiency

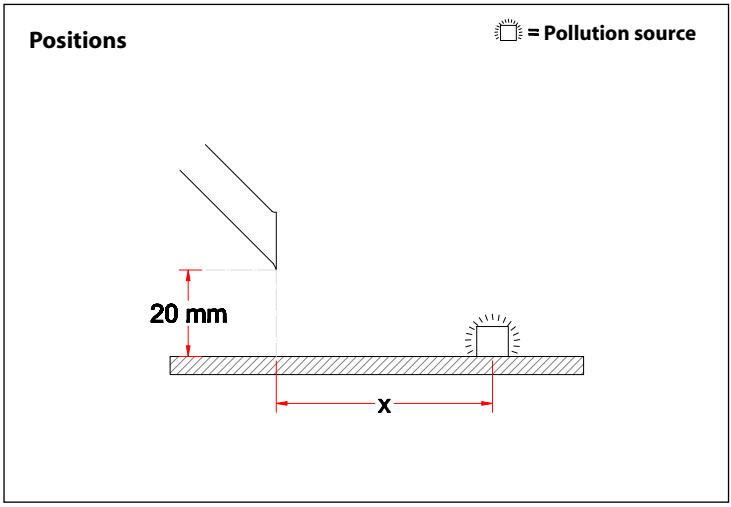
Measured at a distance of 200, 250 and 500 mm respectively from the pollution source.



1-7525

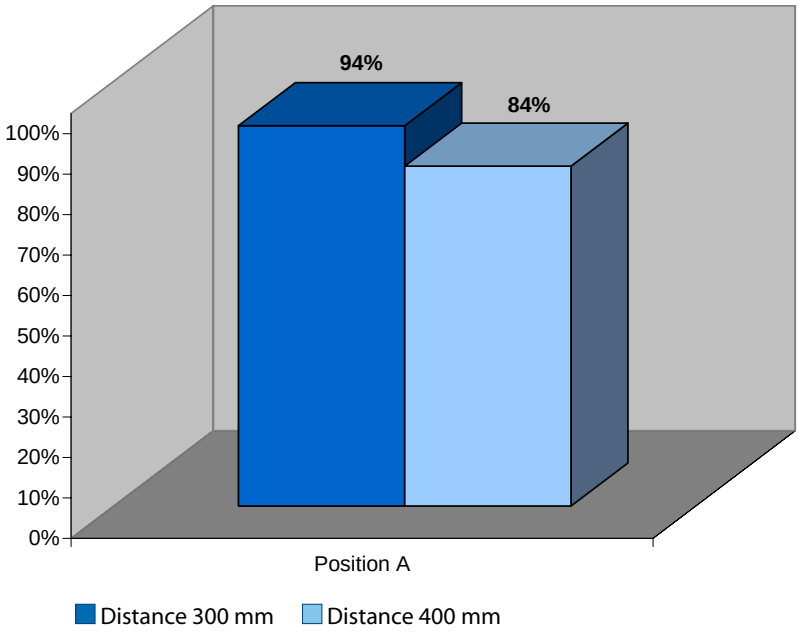
1-7526

The measurements of the suction nozzle have been taken at a volume velocity of 140 m³/h.

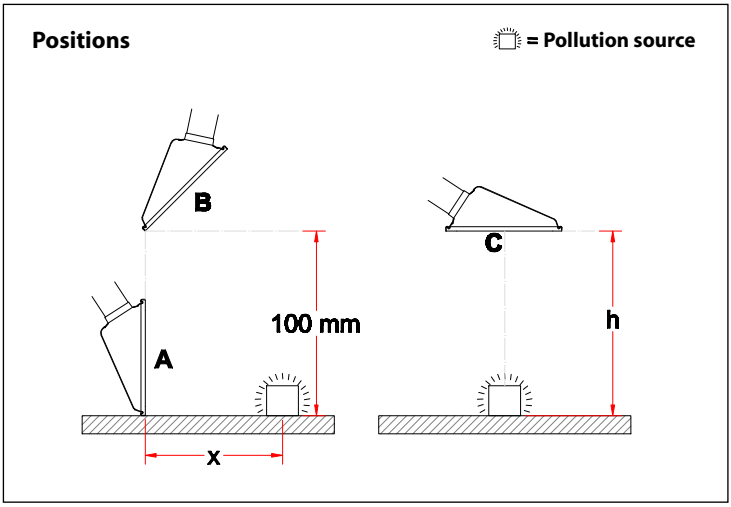


Suction efficiency

Measured at a distance of 300 and 400 mm respectively from the pollution source.



1-754232

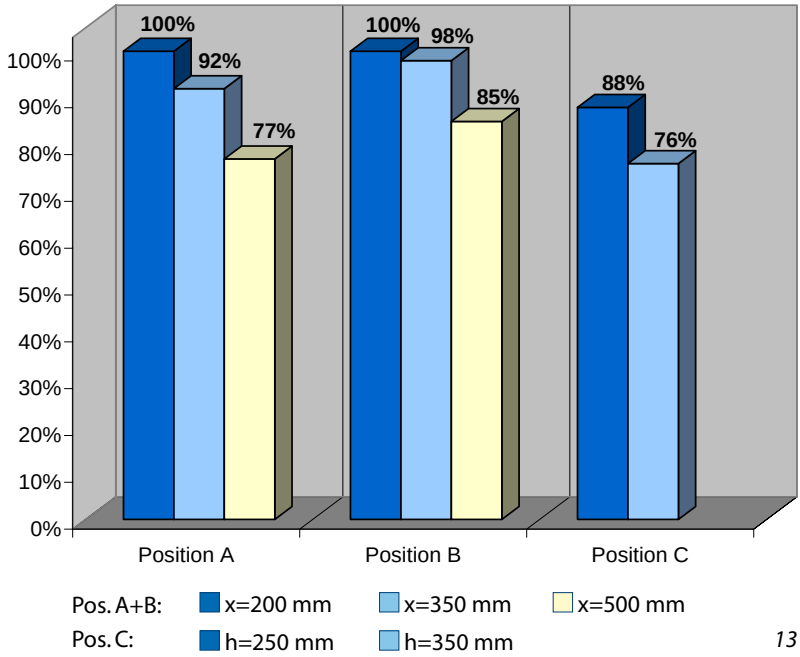


The measurements of the hood have been taken at a volume velocity of 140 m³/h.

Suction efficiency

Pos. A and B: Measured at a distance (x) of 200, 350 and 500 mm respectively from the pollution source.

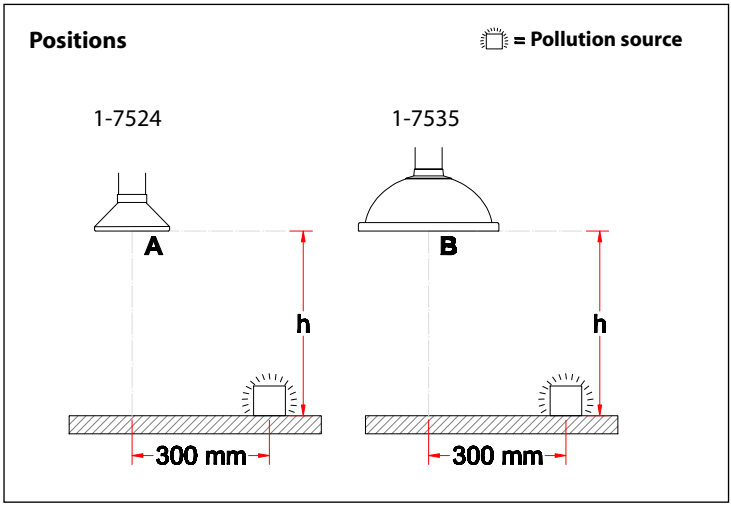
Pos. C: Measured at a height (h) of 250 and 350 mm respectively from the pollution source.



1-7535

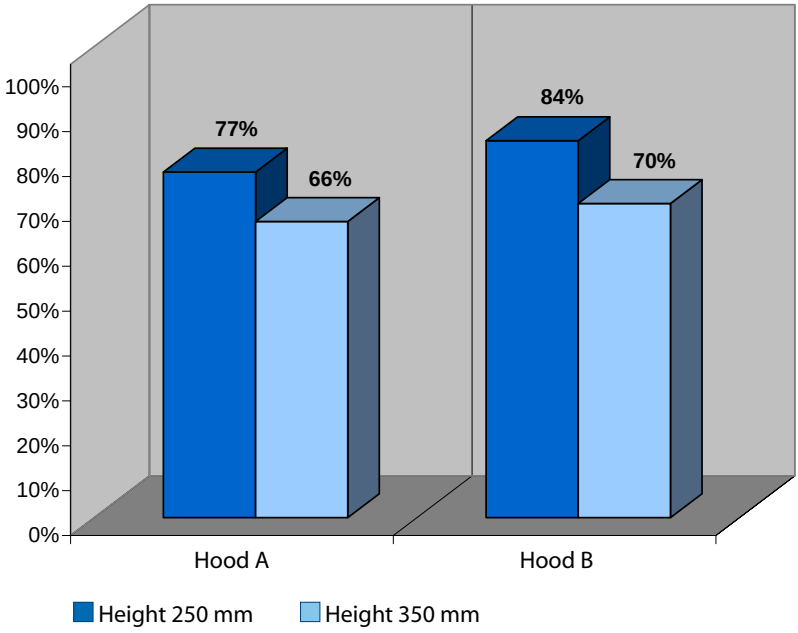
1-7524

Volume velocity: 140 m³/h. The hoods have not been measured in the recommended work position. Placing the hoods as shown on p. 15 pos. A and B, increases the efficiency.

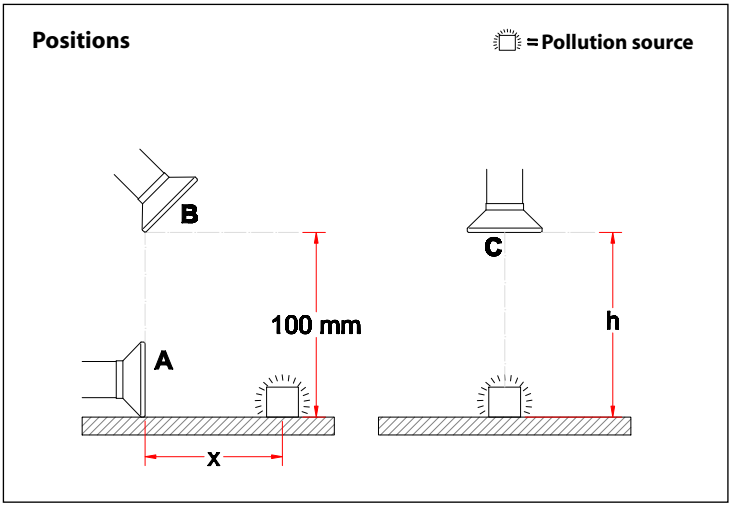


Suction efficiency

Measured at various types of hoods with a height (h) of 250 and 350 mm respectively from the pollution source.



1-10024

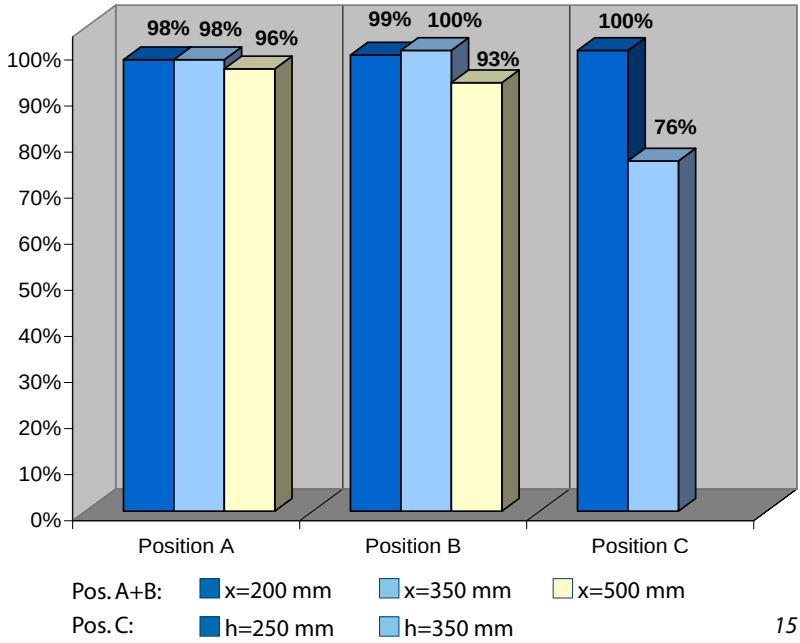


The measurements of the hood have been taken at a volume velocity of 300 m^3/h.

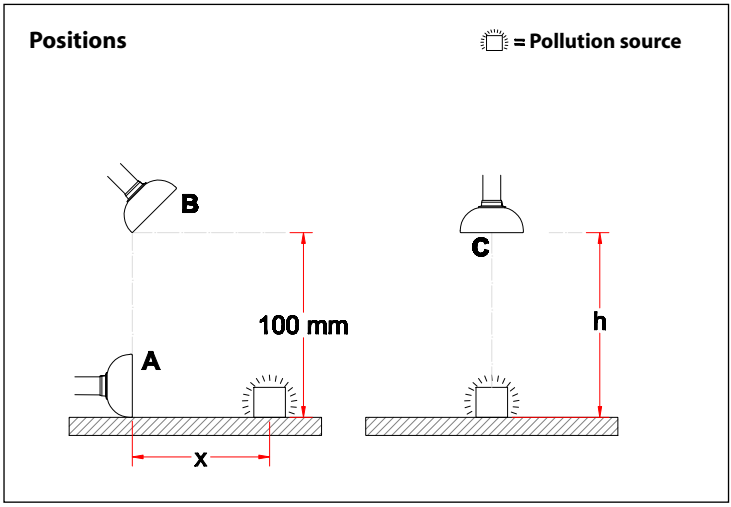
Suction efficiency

Pos. A and B: Measured at a distance (x) of 200, 350 and 500 mm respectively from the pollution source.

Pos. C: Measured at a height (h) of 250 and 350 mm respectively from the pollution source.



1-10036

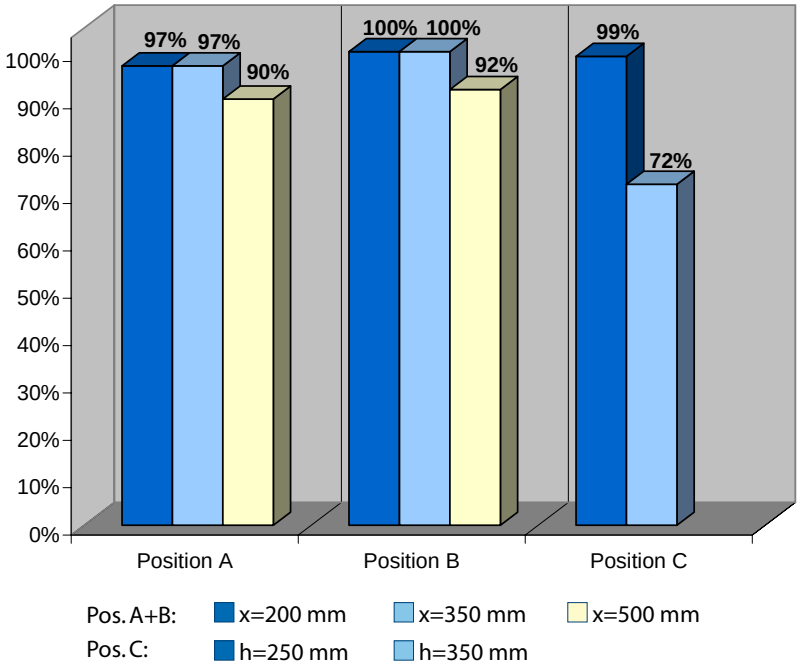


The measurements of the hood have been taken at a volume velocity of 300 m³/h.

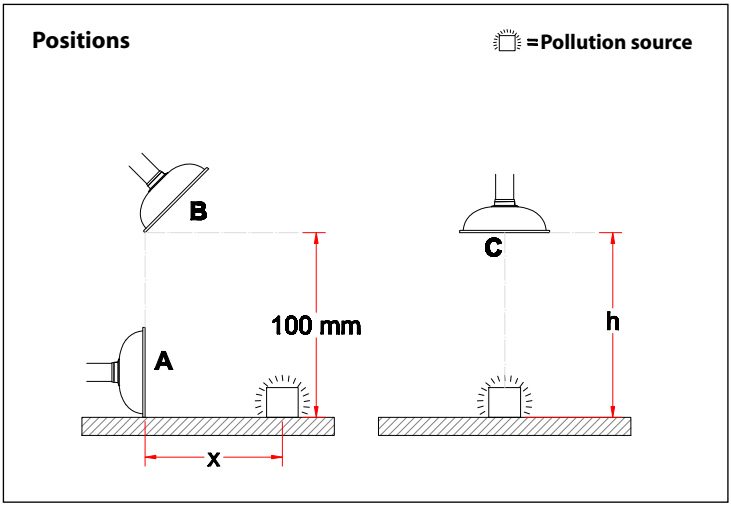
Suction efficiency

Pos. A and B: Measured at a distance (x) of 200, 350 and 500 mm respectively from the pollution source.

Pos. C: Measured at a height (h) of 250 and 350 mm respectively from the pollution source.



1-10050

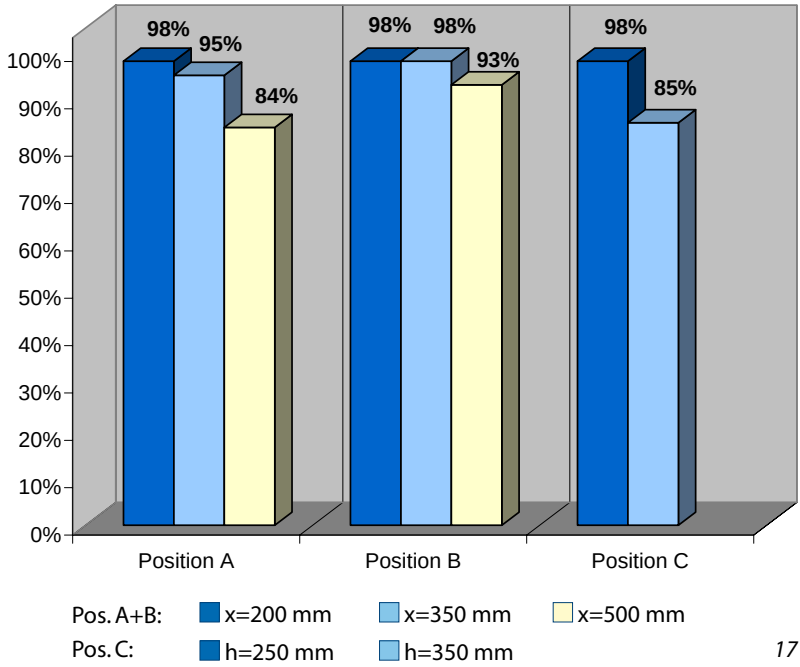


The measurements of the hood have been taken at a volume velocity of 300 m³/h.

Suction efficiency

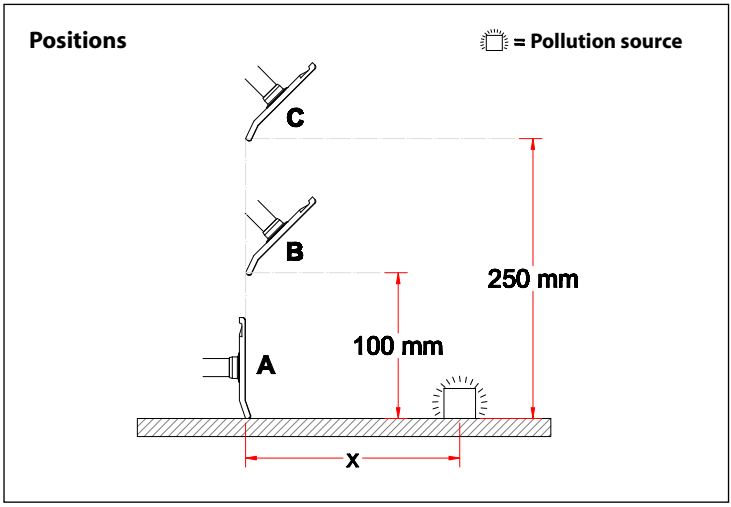
Pos. A and B: Measured at a distance (x) of 200, 350 and 500 mm respectively from the pollution source.

Pos. C: Measured at a height (h) of 250 and 350 mm respectively from the pollution source.



1-1004228

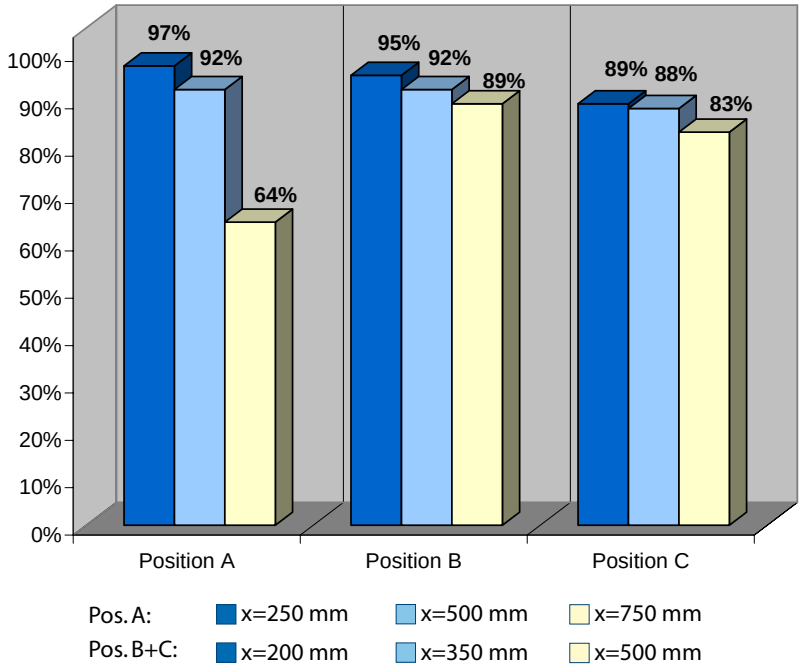
The measurements of the hood have been taken at a volume velocity of 300 m³/t.

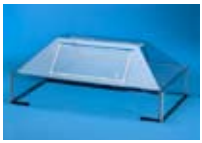


Suction efficiency

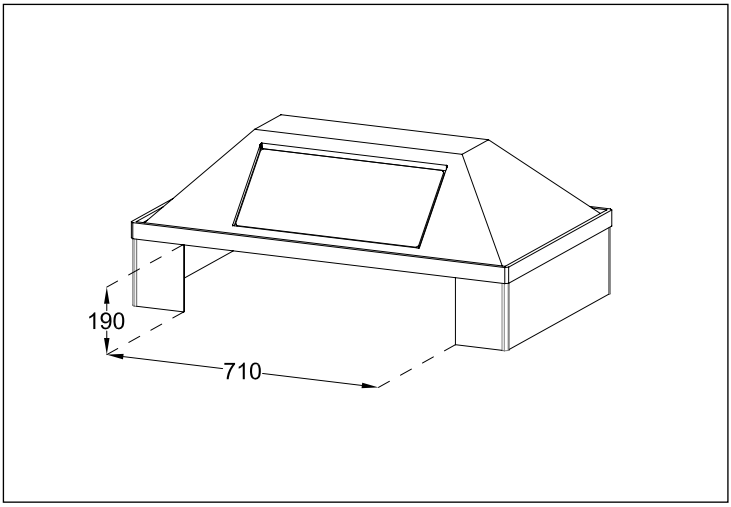
Pos. A and B: Measured at a distance (x) of 250, 500 and 750 mm respectively from the pollution source.

Pos. C: Measured at a height (h) of 200, 350 and 500 mm respectively from the pollution source.





25-106020



The measurements of the cabinet have been taken at a volume velocity of 126 and 252 m^3/h respectively.

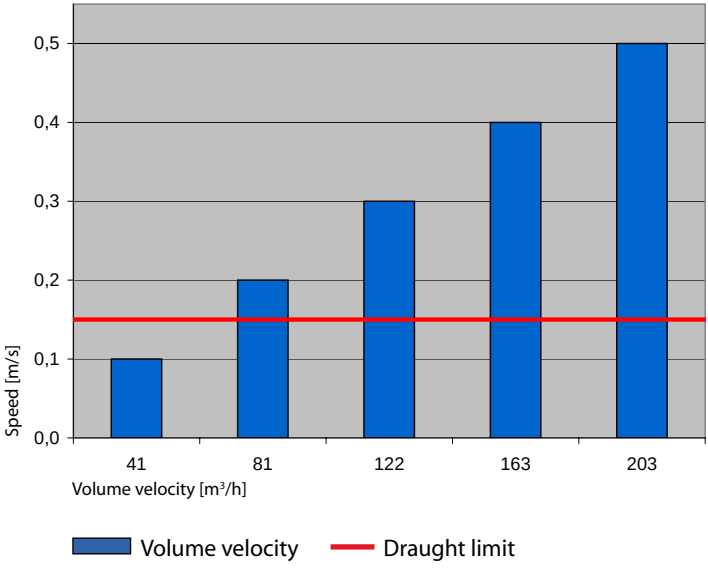
Opening:
Geometric area: 0.135 m^2
Effective area: 0.113 m^2

Coherence between volume velocity and wind velocity

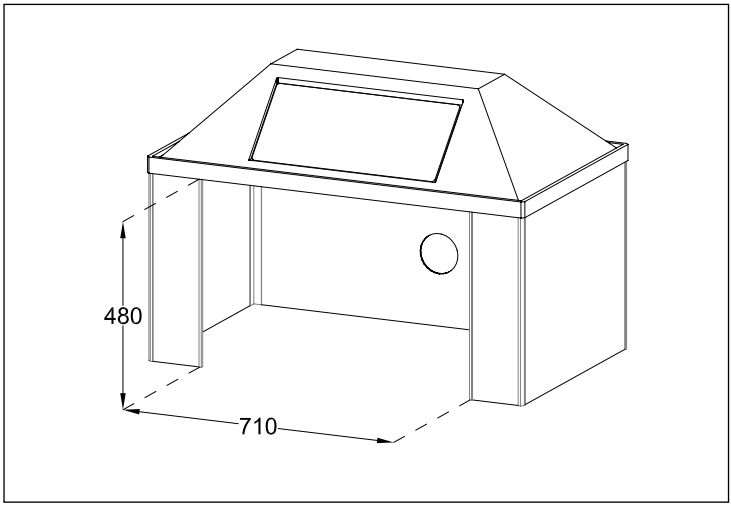
The below table shows the coherence between the volume velocity and the wind velocity of the effective opening area. The effective area is used intead of the geometric area because turbulence along the edges of the opening slows down the air velocity. This results in an area along the edge where the suction efficiency is too low.

$q_v = A \cdot v \cdot 3600$ s/h

q_v = volume velocity [m^3/h]
A = the effective area [m^2]
v = air velocity [m/s]



25-106050



The measurements of the cabinet have been taken at a volume velocity of 315 and 630 m³/h respectively.

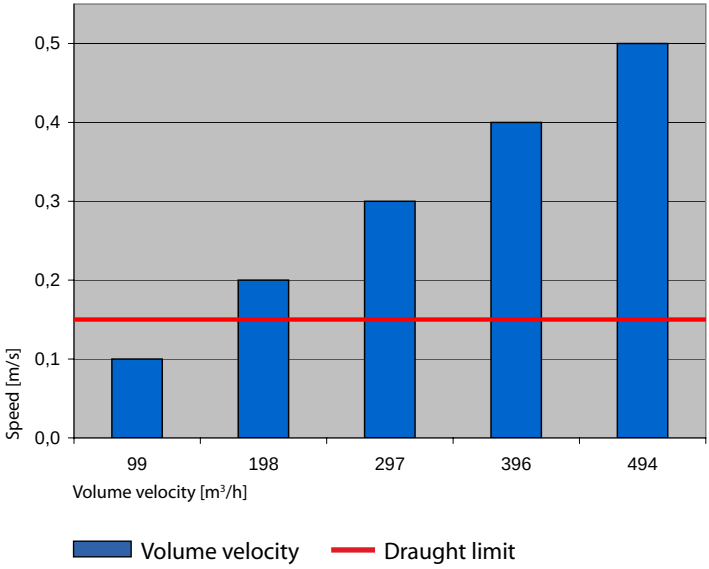
Opening:
Geometric area: 0.341 m²
Effective area: 0.276 m²

Coherence between volume velocity and wind velocity

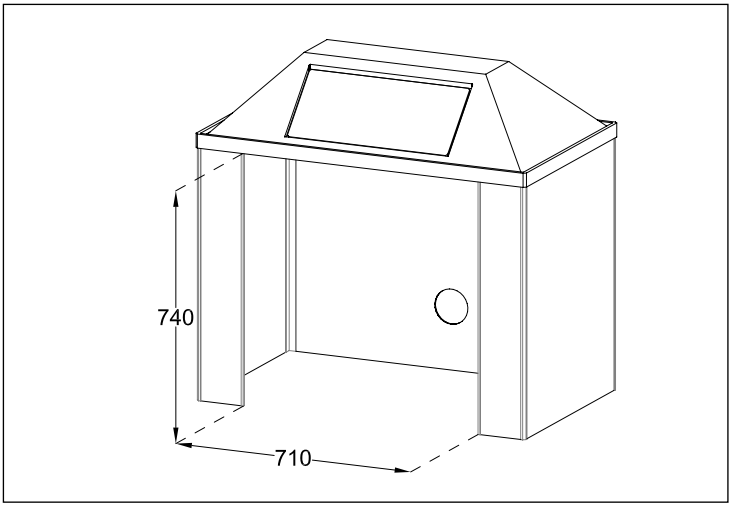
The below table shows the coherence between the volume velocity and the wind velocity of the effective opening area. The effective area is used intead of the geometric area because turbulence along the edges of the opening slows down the air velocity. This results in an area along the edge where the suction efficiency is too low.

$$q_v = A \cdot v \cdot 3600 \; s/h$$

q_v = volume velocity [m³/h]
A = the effective area [m²]
v = air velocity [m/s]



25-106075



The measurements of the cabinet have been taken at a volume velocity of 473 and 945 m³/h respectively.

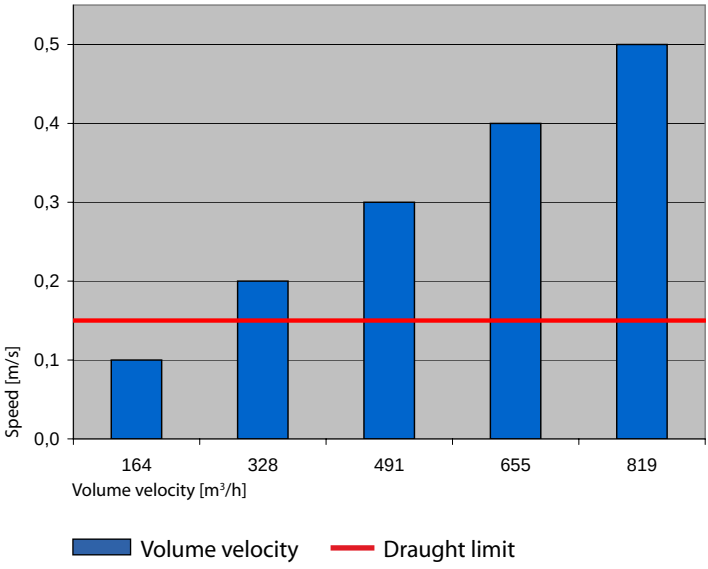
Opening:
Geometric area: 0.533 m²
Effective area: 0.501 m²

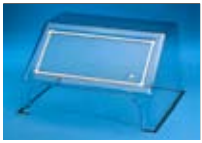
Coherence between volume velocity and wind velocity

The below table shows the coherence between the volume velocity and the wind velocity of the effective opening area. The effective area is used intead of the geometric area because turbulence along the edges of the opening slows down the air velocity. This results in an area along the edge where the suction efficiency is too low.

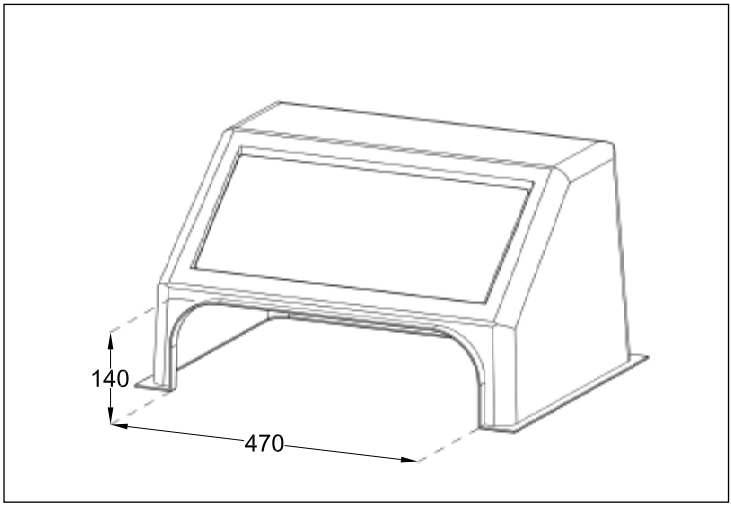
$$q_v = A \cdot v \cdot 3600 \text{ s/h}$$

q_v = volume velocity [m³/h]
A = the effective area [m²]
v = air velocity [m/s]





25-604535



The measurements of the cabinet have been taken at a volume velocity of 70 and 140 m³/h respectively.

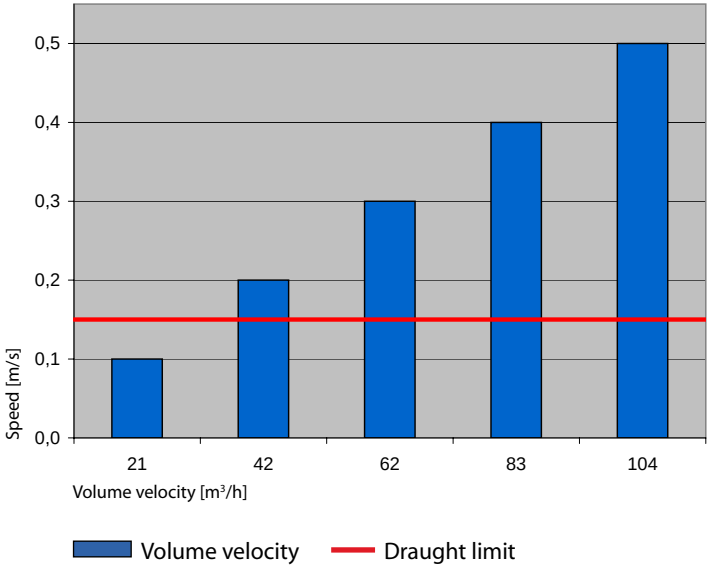
Opening:
Geometric area: 0.072 m²
Effective area: 0,058 m²

Coherence between volume velocity and wind velocity

The below table shows the coherence between the volume velocity and the wind velocity of the effective opening area. The effective area is used intead of the geometric area because turbulence along the edges of the opening slows down the air velocity. This results in an area along the edge where the suction efficiency is too low.

$$q_v = A \cdot v \cdot 3600 \text{ s/h}$$

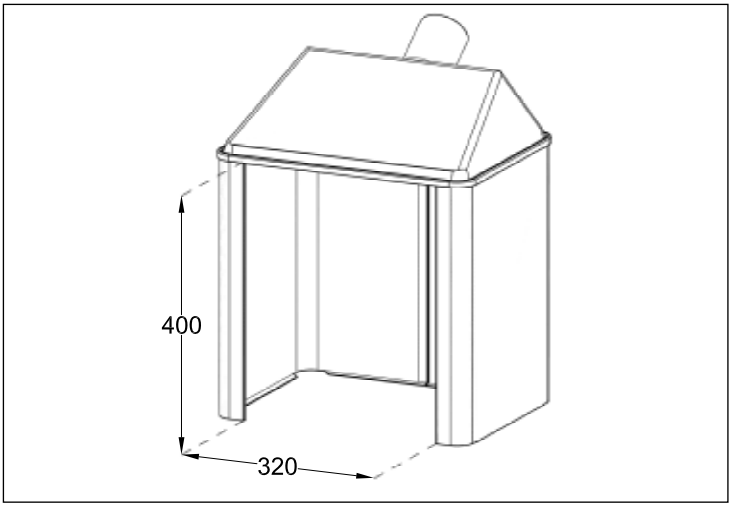
q_v = volume velocity [m³/h]
A = the effective area [m²]
v = air velocity [m/s]



25-4030

The measurements of the cabinet have been taken at a volume velocity of 50 and 100 m^3/h respectively.

Opening:
Geometric area: 0.126 m^2
Effective area: 0.106 m^2

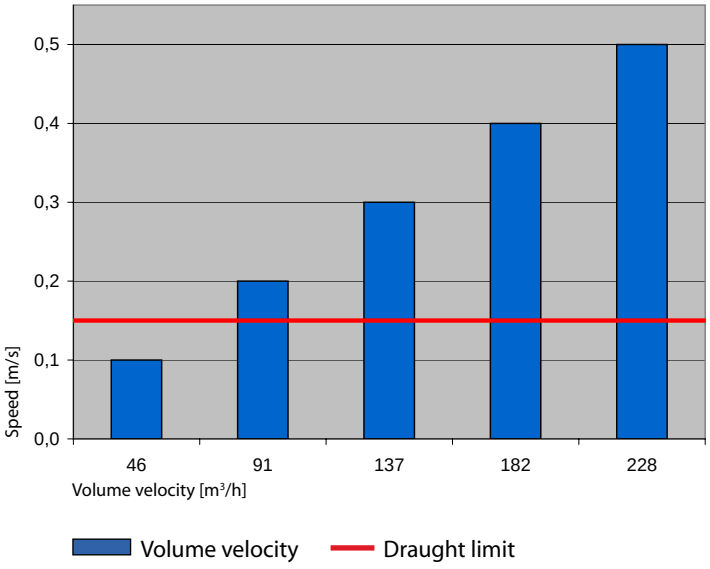


Coherence between volume velocity and wind velocity

The below table shows the coherence between the volume velocity and the wind velocity of the effective opening area. The effective area is used intead of the geometric area because turbulence along the edges of the opening slows down the air velocity. This results in an area along the edge where the suction efficiency is too low.

$$q_v = A \cdot v \cdot 3600 \text{ s/h}$$

q_v = volume velocity [m^3/h]
A = the effective area [m^2]
v = air velocity [m/s]



ALSIDENT® capture efficiency report

This capture efficiency report illustrates the suction efficiency of ALSIDENT® cabinets System 25 and a wide selection of ALSIDENT® hoods for Systems 50, 63, 75 and 100. The report is based on tests made by The Danish Technological Institute (DTI).

Each System 25 cabinet has been tested at 2 different volume velocities, and the effectively measured air velocities are compared to the theoretically calculated air velocities. The suction efficiency is illustrated by stating the coherence between the air velocity and the volume velocity of the effective suction area.

We have selected a few hoods from Systems 50, 63, 75 and 100 that have been tested in 2 to 4 different positions by the pollution source. The suction efficiency is then illustrated so that it is easy to compare the products.

The results in this report are intended as a guide because the controlled tests have been made in a test laboratory.

When the cabinets and hoods are used at a work place, the suction efficiency depends on the surroundings, eg machines, draught and people walking by.

If you have questions or need further information, you are welcome to contact us.

The test results are available in the DTI-reports ELAB-0804 and ELAB-0696 (hoods) and 270-2-0520 (cabinets).

alsident® system

ALSIDENT SYSTEM A/S · Finlandsvej 10 · DK-8450 Hammel · Tel.: 86 96 50 00 · www.alsident.com