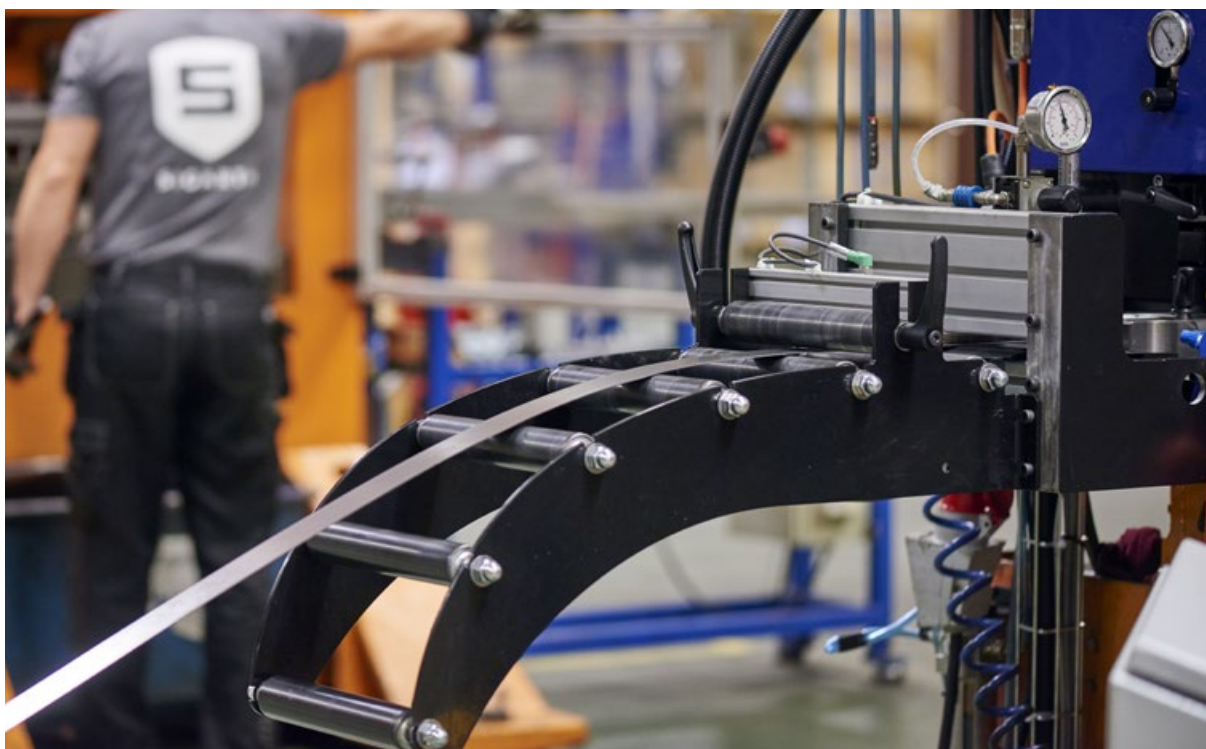


VENTPLUS



SIGARTH



SIGARTH AB

OUR SOLUTIONS MAKE THE WORLD MORE SECURE

A MARKET LEADER IN THE HVAC INDUSTRY

Sigarth in Hillerstorp is a market leader in suspension systems and accessories to the radiator industry. We are an international company and are part of the already listed Midway Holding.

At Sigarth, we are market leaders who take responsibility and deliver on our promises. Market leaders who put in extra effort, rising beyond to see that little further. We know what it takes to be a leading and competent partner to the HVAC industry. Our MONCLAC® suspension system is well known in the HVAC branch for time saving and stability and has set the standard for an entire industry.

YOU CAN RELY ON US

With over 50 years of industry experience, and through close cooperation with radiator manufacturers in Europe, we have built up a knowledge base within the company over the years that is of great benefit to our clients.

At Sigarth we want to continue taking on new challenges, to be a step ahead and to find creative solutions for our clients' needs. With our own design department and skilled and experienced staff, we can continue to develop unique solutions for our customers. Continue to be a resource, a partner to clients in the radiator industry.



A DEVELOPMENT RESOURCE AND PARTNER...

At Sigarth we like to be thought of as a close partner, not merely as a subcontractor. Through our close partnerships with radiator manufacturers across Europe and our focus on skills and experience, we will continue to be a resource for our clients when it comes to design and development. That way, we can deliver the best possible client benefits.

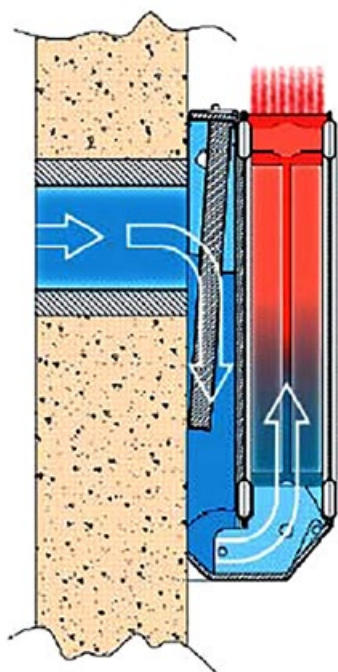
...IN EUROPE AND ACROSS THE WORLD

To further consolidate our position as the market leader, we will continue to develop, produce and market new products and solutions in Europe and across the world. Products and solutions that set the benchmark for safety. Products and solutions that make the world a little safer.





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- 1.** Outdoor air is taken in through a round or rectangular duct to VENTPLUS.
- 2.** An integrated filter purifies the incoming air.
- 3.** The cold, clean air falls to the ground behind the radiator.
- 4.** The air is heated by the radiator, rises upward and further into the room.

VENTPLUS

VENTPLUS is not only an ideal solution for new construction of apartments but is also highly useful in renovation projects. When VENTPLUS is installed in old buildings, one should however be noted that the existing radiator connections can be different due to the difference in wall distances.

RADIATOR TYPE

- Compact radiator type 21 and 22-33 with or without integrated valves
- Radiator heights of 300-900 mm
- Radiator lengths 600 - 3000 mm (If the radiator has hangers on the rear the radiator must be min. 800 mm)
- Ventilation of type 11 must be specially adapted.

RADIATOR SUSPENSION

- VENTPLUS has an integrated suspension function.
- Radiators with length 600-1300 are fitted only with VENTPLUS
- Radiators with length 1600 - 2200 are fitted with VENTPLUS and 2 extra wall brackets
- Radiators with length 1200 - 2400 mm can be equipped with 2 VENTPLUS
- Radiators with length of 2400 mm that are mounted with 2 VENTPLUS, must be equipped with at least 1 additional bracket if the distance between the point of attachment is over 600 mm.
- When planning, one should bear in mind that one should not combine small radiators with low heat with VENTPLUS, especially in colder temperature zones, given the risk of frost



MATERIALS AND VARNISH

- White varnished steel plate. Thickness 0.8-1.5 mm. Some exposed parts are of galvanized steel sheet.
- All interior surfaces in VENTPLUS are condensation insulated.
- White RAL 9016, gloss 80 ± 5 , film thickness 40-120 μm .

FUNCTION

The air is heated by passing the hot radiator body and will pass draft-free and silently above the radiator. The radiator's efficacy increases significantly with the installation of VENTPLUS. See separate dimensions and effect table.

Depending on the filter selected, extraneous particles are prevented from passing through the system. Even the air speed and pressure are dependent on the filter type. All design values are based on the use of an approved F7 filter.

Radiators with supply air should always be supplied with min-limiting thermostatic valves, to avoid freezing.

VENTPLUS MAXI is equipped as standard with a stop-gap, which can also be used for flow control. VENTPLUS BASIC is equipped as standard with a plastic sheet to be removed for adjustment, but can be used in the event of gas and smoke alarms.

USE

In the DIN 1946-6 norm is the ventilation values (air exchange) worded as follows: "In order to avoid damage to building structures caused by humidity, the air in an apartment should be exchanged 0.5 times per hour (based on the total volume of air in the entire apartment).

CONTINUOUS VENTILATION

Although sometimes the humidity is relatively low, because an apartment is unoccupied for a long period it still requires continuous ventilation (basic ventilation).

WELL-BEING

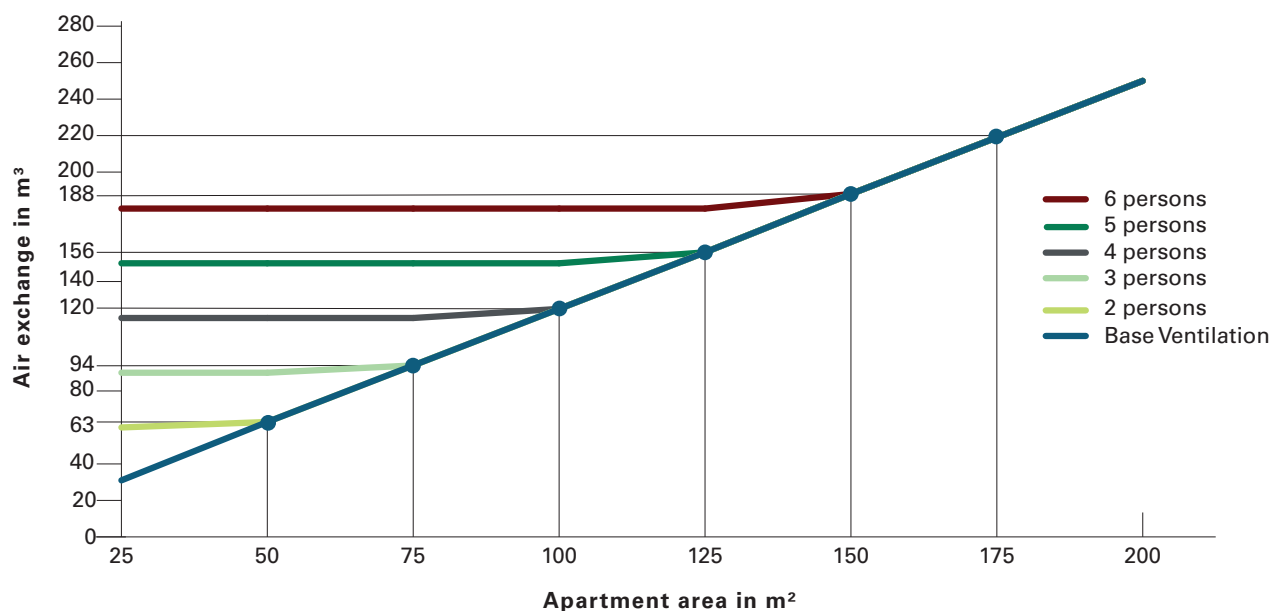
The feeling of well-being is of course subjective, but naturally there is a very positive feeling when the air is free from odors and carbon dioxide. This can be effected by a ventilation of 30 cubic meters of air / hour and persons in the apartment.

AIR SUPPLY

The required flow of fresh air is dependent on the size of the apartment and the number of residents of the apartment. If the air in an apartment is exchanged 0.5 times / hour as basic ventilation, a pleasant indoor climate is experienced and one need not be afraid that damage will occur on or in the building



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AIR EXCHANGE

Apartment of 80 m² ceiling height 2.5 m ($80 \times 2.5 \times 0.5 = 100 \text{ m}^3$). Air exchange 100 m³ without resident (continuous basic ventilation).

Apartment of 80 m² room height 2.5 m with 4 residents, $4 \times 30 = 120 \text{ m}^3$. Ventilation 120 m³ 4 residents.

In these examples, it is important to calculate both values (apartment size and the number of residents) to obtain the necessary volume of air to be replaced. In the table below you can see how the values change with larger floor space and an increase in the number of residents.

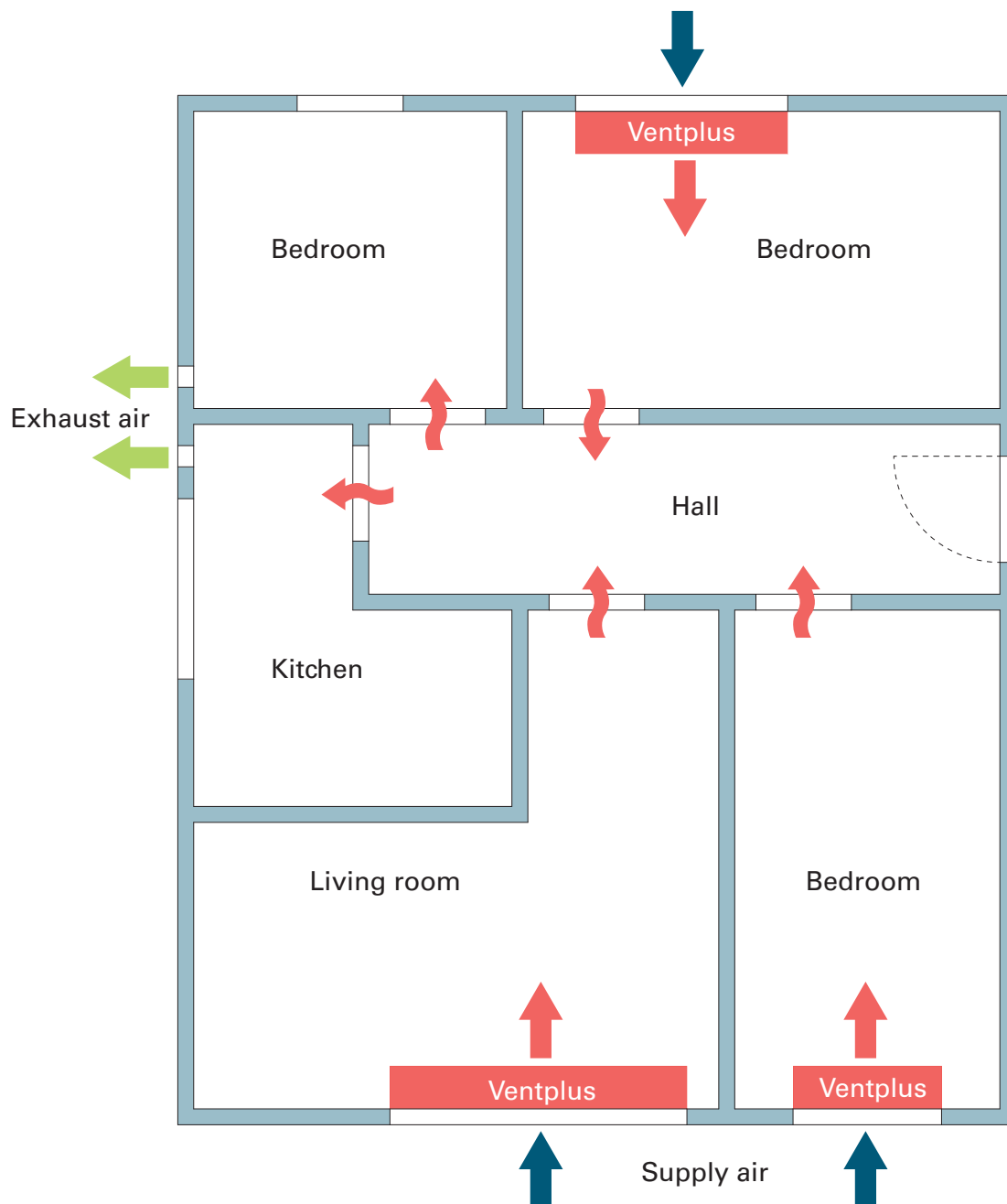
AIR EXCHANGE IN CUBIC METERS PER HOUR

The table takes into account both the number of residents, base ventilation values and size of the apartment. With this information,

one can easily figure out what ventilation is needed, measured in cubic meters / hour. The air exchange is to be determined on the basis of a normal situation in the apartment, not on the basis of temporary conditions, such as temporary extra residents, cooking, etc.

Since the flow of supply air through the outer wall only works with mechanical exhaust ventilation, it should be noted that the under pressure of the apartment may not exceed 8 (<10). This is important to avoid cold drafts or noise arising from gaps in windows and doors.

If you use a fireplace, the under pressure will be around 4 pa and if an open fire and mechanical ventilation is used at the same time, these can work against one another, which means that the effect of VENTPLUS is negated

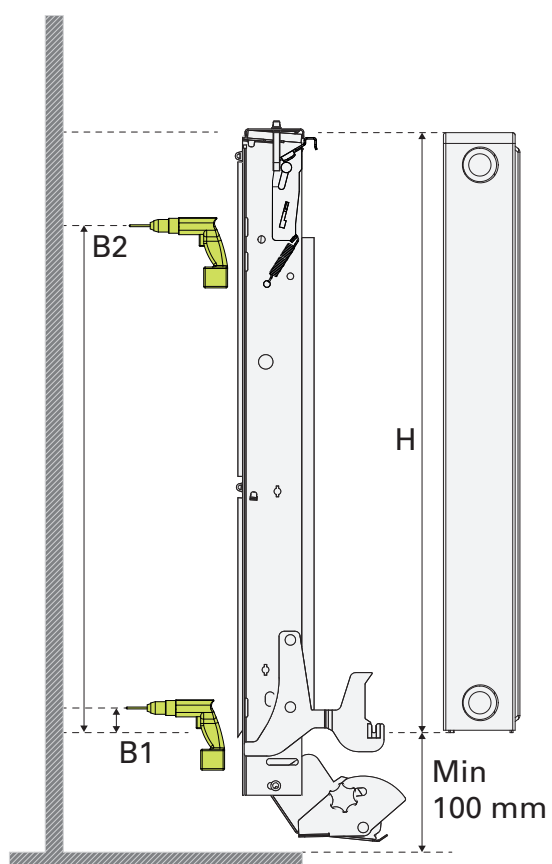




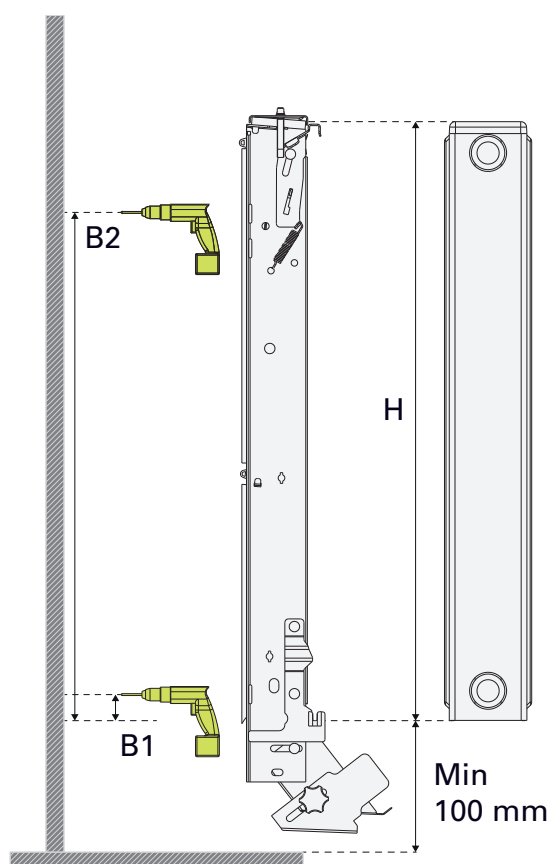
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DRILLING DIMENSION

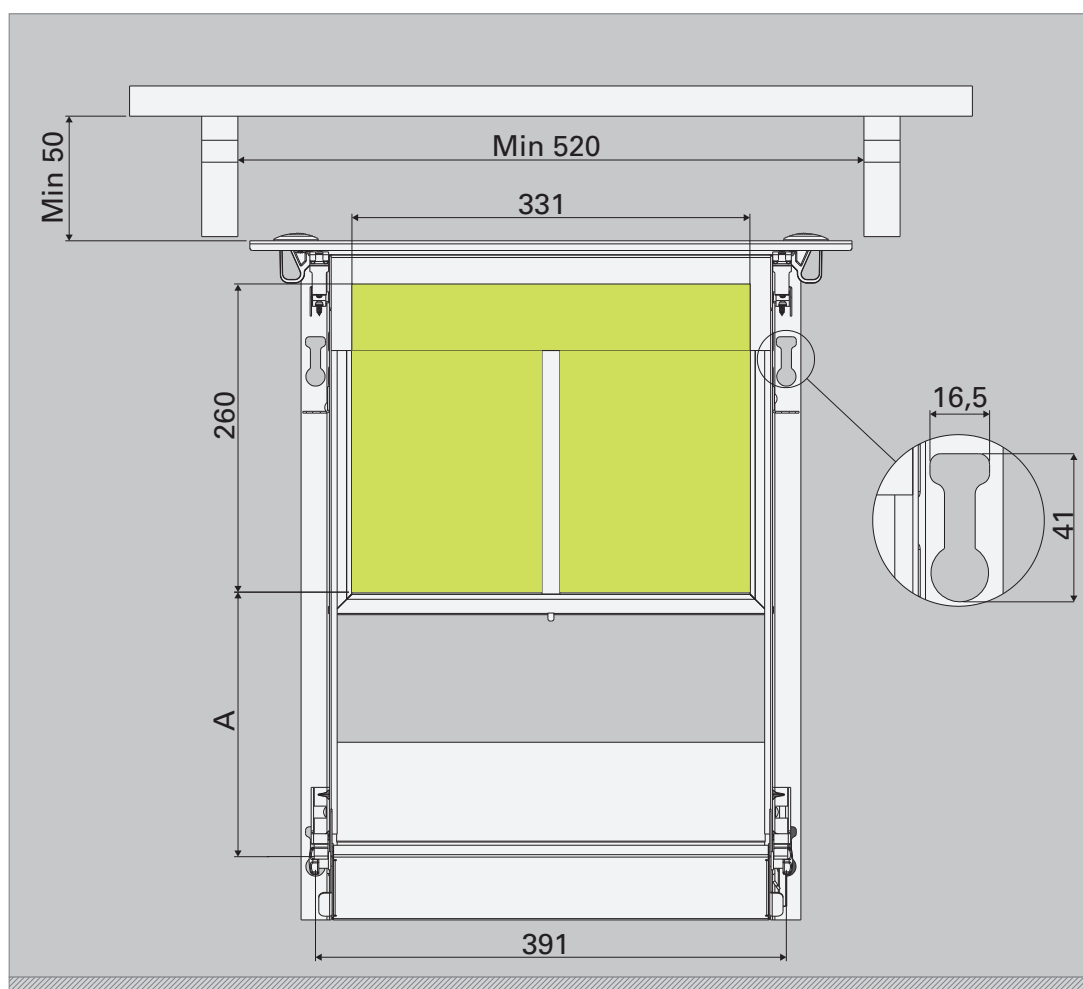
TYPE 11



TYPE 21, 22-33



H	B1	B2
300	22	225
400	22	325
500	22	425
600	22	525
700	22	625
900	22	825



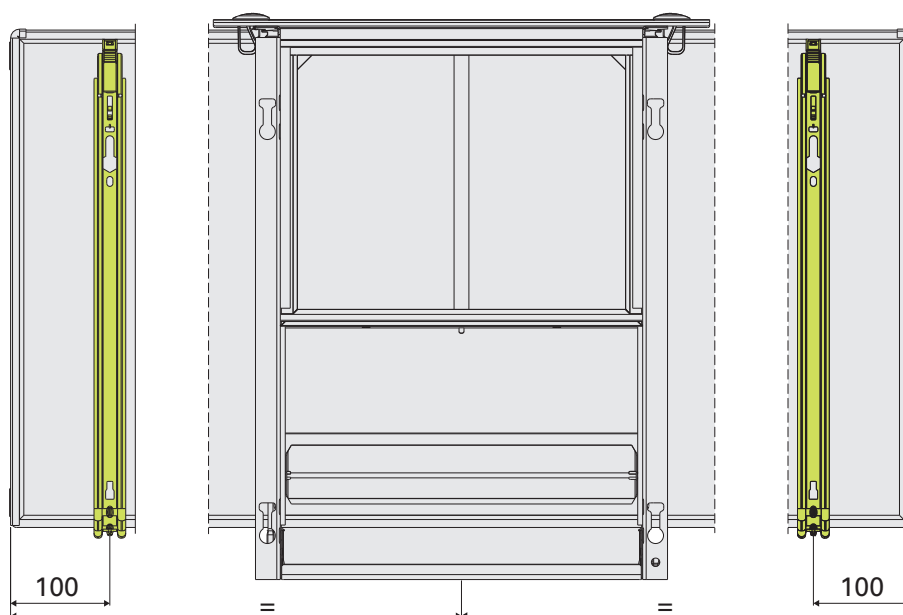
H	A
300	15
400	115
500	215
600	315
700	415
900	615



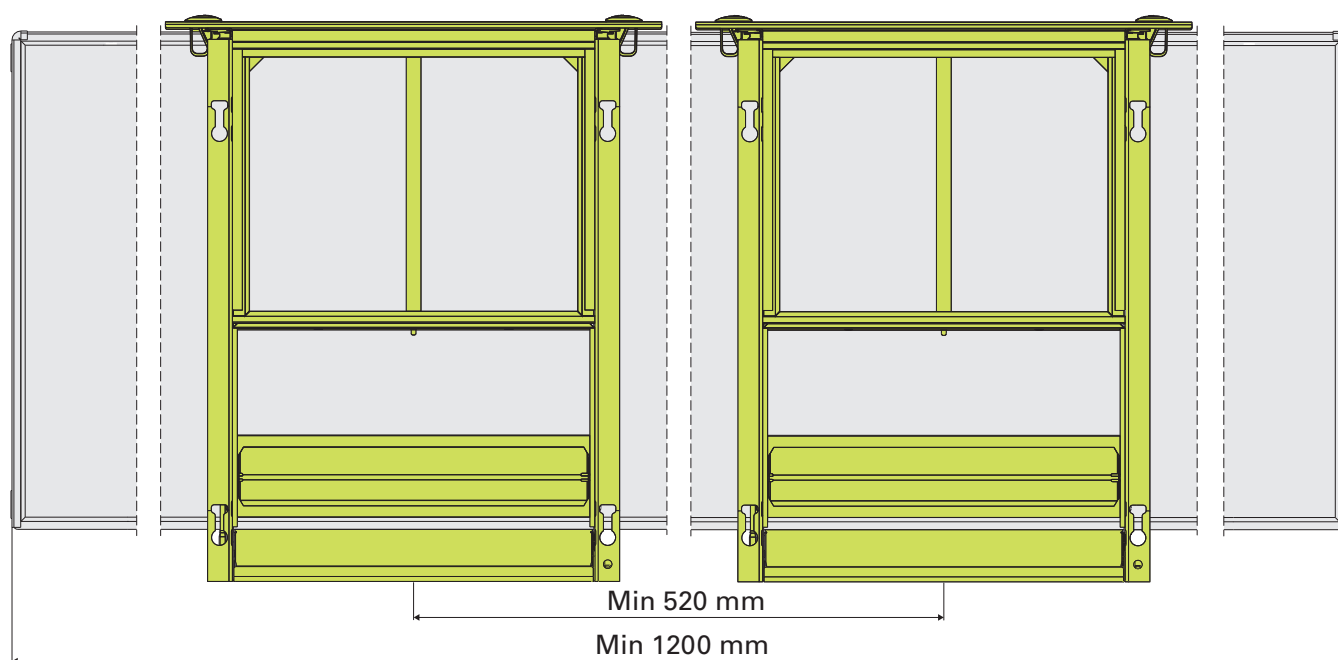
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INSTALLATION

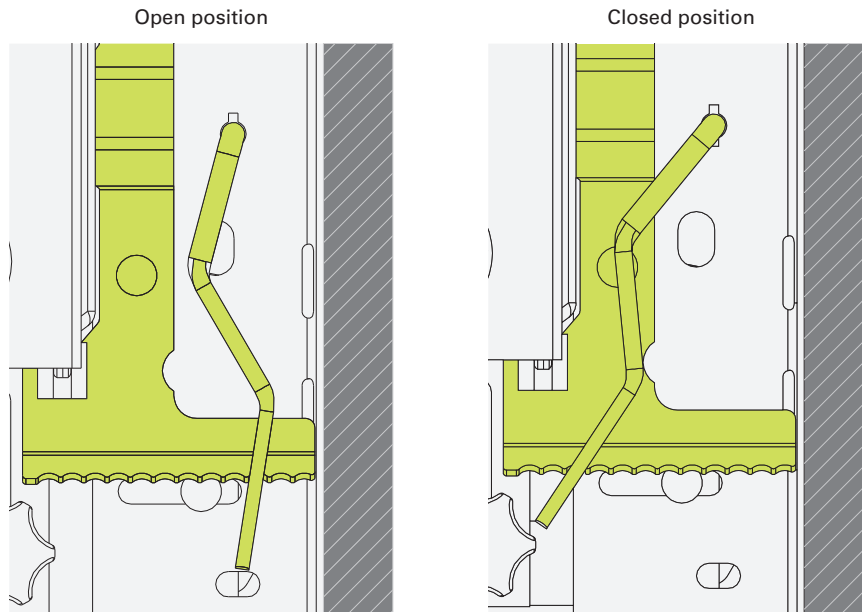
ADDITIONAL BRACKET



2 VENTPLUS ON A RADIATOR



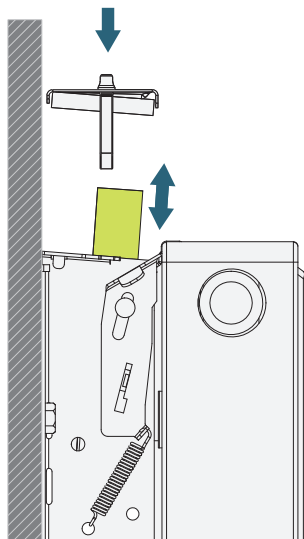
POWER OFF AND CONTROL FUNCTION



VENTPLUS MAXI has an integrated function, which means that you can completely turn off the air flow but that you can also set the desired airflow.

With this feature it is possible to smooth the air flow between different ventilation devices in the same apartment.

FILTERS



There are two different types of filters to VENTPLUS, PPI 20 and F7. Depending on how much pollution is outside the apartment, we recommend that you change the filter 1-2 times a year. We always recommend an F7 filter and all computations in the design table are made with this filter.

To facilitate filter change in the supply unit and to maintain the radiator power, it should be a minimum size of circa 50 mm between the bottom edge of the window sill and top edge of the VENTPLUS. This applies across the width of the diffuser.

Any brackets or attachments around the window sill must not hamper filter change.

NOTE! Wall mounting must be done in respect to inspection/cleaning hatch so that it can be opened with fixed radiators.

a safer solution

At Sigarth, we are convinced that there is always a better solution. We believe that our solutions make the world a little more secure. Whether it's a suspension system for the radiator industry or another solution that requires our ingenuity.

With over 50 years of industry experience, we are a reliable resource for development and a market-leading partner for our clients, who are primarily within the HVAC industry.



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