



RS160 - RC160 - RU160



Recair introduces tomorrow's  
heat exchangers today

air|care|recair

# Recair sets the bar higher again

With the successful Recair Sensitive160 (RS160), Recair has been at the forefront in the field of recuperators (heat exchangers) for many years. But we continue to innovate and seek solutions that will allow you to stand out in the market.

The result: the Recair Comfort160 (RC160) and Recair Ultimate160 (RU160). Two completely newly developed recuperators for the most comfortable and efficient transfer of sensible energy.

The shape and outer dimensions are unchanged, so that the three versions are interchangeable. The difference is in the internal geometry.

The new Recair Comfort160 achieves the same excellent efficiency at a 40% lower pressure drop. More effective than most competitors and is rightfully 'value for money'. In a nutshell, more comfort.

In the Recair Ultimate160, we have managed to improve the already unparalleled effectiveness without increasing the pressure drop by an average of 2%. In short, more energy-saving.

With these two new heat exchangers, Recair is once again linking maximum effectiveness to an extremely low pressure drop. On the one hand, in response to the market demand (ECO design - label A+). On the other hand, because we consider it a challenge to constantly raise the bar ever higher. The reuse of existing energy makes an important contribution to reducing CO2 production and thus to a sustainable society.



Even more energy-saving, even more comfort.

## Ventilation

Through the pursuit of safety, comfort and energy efficiency, the buildings in which we live and work are becoming more airtight. As a direct result, there is an increased focus on mechanical ventilation. Energy recovery is therefore now a permanent feature. And the technology is still being developed.

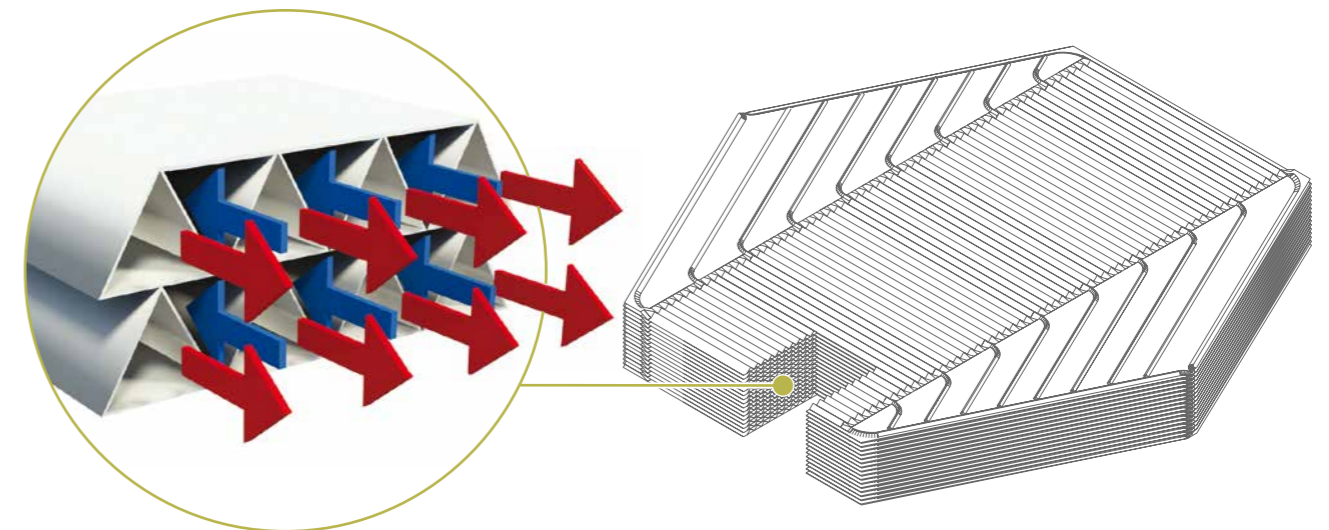
Recair uses the so-called "duct counterflow" principle. This provides a maximum heat transfer within the smallest possible recuperator dimensions. The challenge is to use less material for continued improved performance.

## Material

Recair chooses plastics, the correct type of material for the best heat transfer. But even in terms of hygiene, fire retardance and the draining of condensate, modern plastics are preferred.

By minimising the use of material, we are showing that we take our social responsibility seriously.

Figure 1: The duct counterflow design of the RS160





# Recair Comfort vs. Recair Sensitive

Excellent effectiveness at a 40% lower pressure loss

The effectiveness and the pressure loss of the well-known Recair Sensitive160 and Recair Comfort160 are included for comparison as a function of the air flow in Figures 2 and 3. Source: measurement report PL.16. WLG.285 conducted in January 2017 by the independent

research institute HLK Stuttgart. The full test report can be obtained from Recair. On the Recair website, you will find the "recuperator calculator", a handy programme for selecting the appropriate heat exchanger.

Figure 2: Effectiveness RC160 compared to RS160

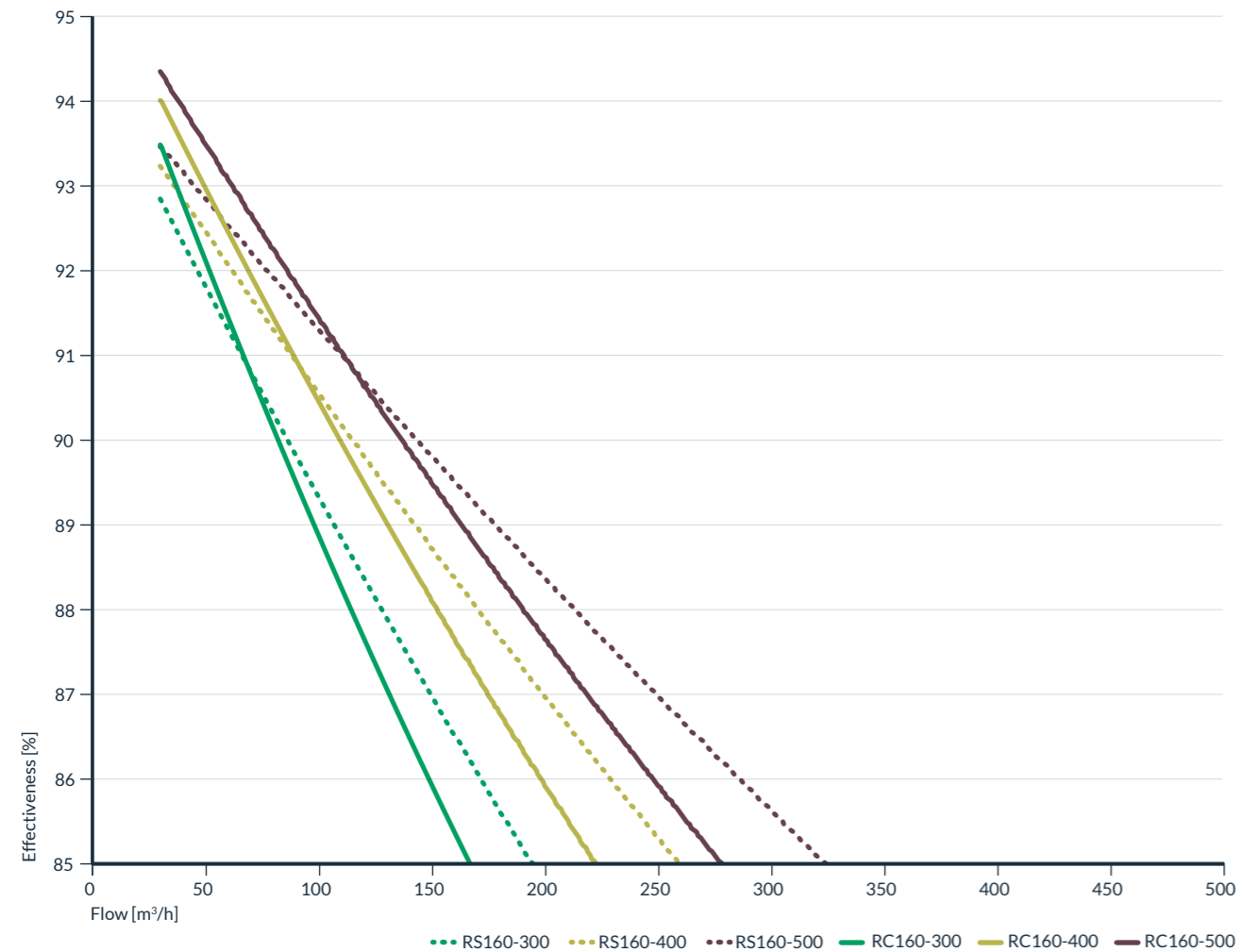
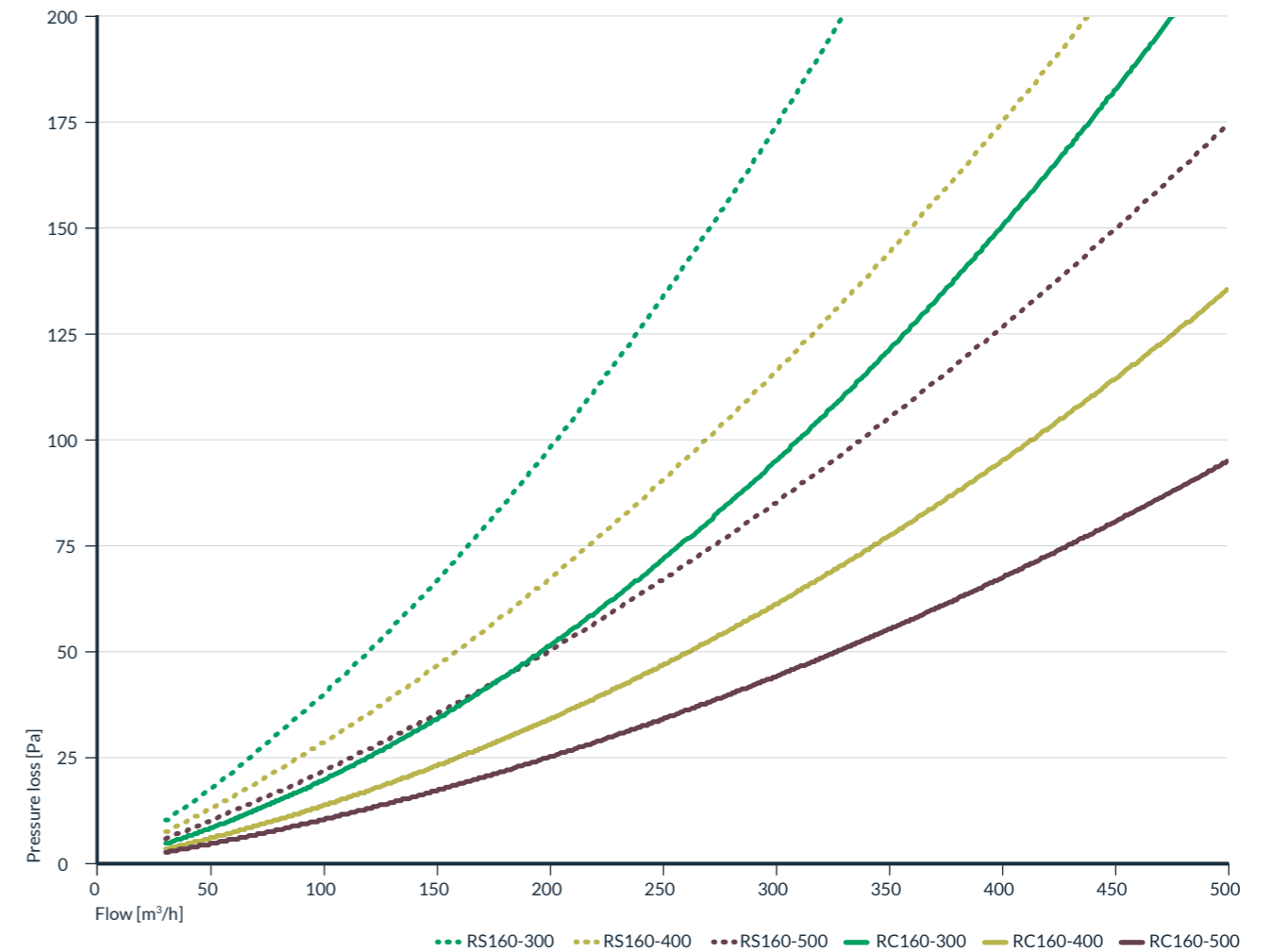
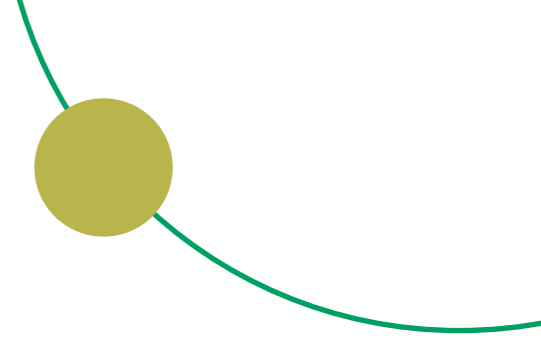


Figure 3: Pressure loss RC160 compared to RS160





# Recair Ultimate vs. Recair Sensitive

2% greater effectiveness without an increase in the pressure loss

The effectiveness and the pressure loss of the well-known Recair Sensitive160 and Recair Ultimate160 are included for comparison as a function of the air flow in Figures 4 and 5. Source: measurement report PL.16. WLG.285 conducted in January 2017 by the independent

research institute HLK Stuttgart. The full test report can be obtained from Recair. On the Recair website, you will find the "recuperator calculator", a handy programme for selecting the appropriate heat exchanger.

Figure 4: Effectiveness RU160 compared to RS160

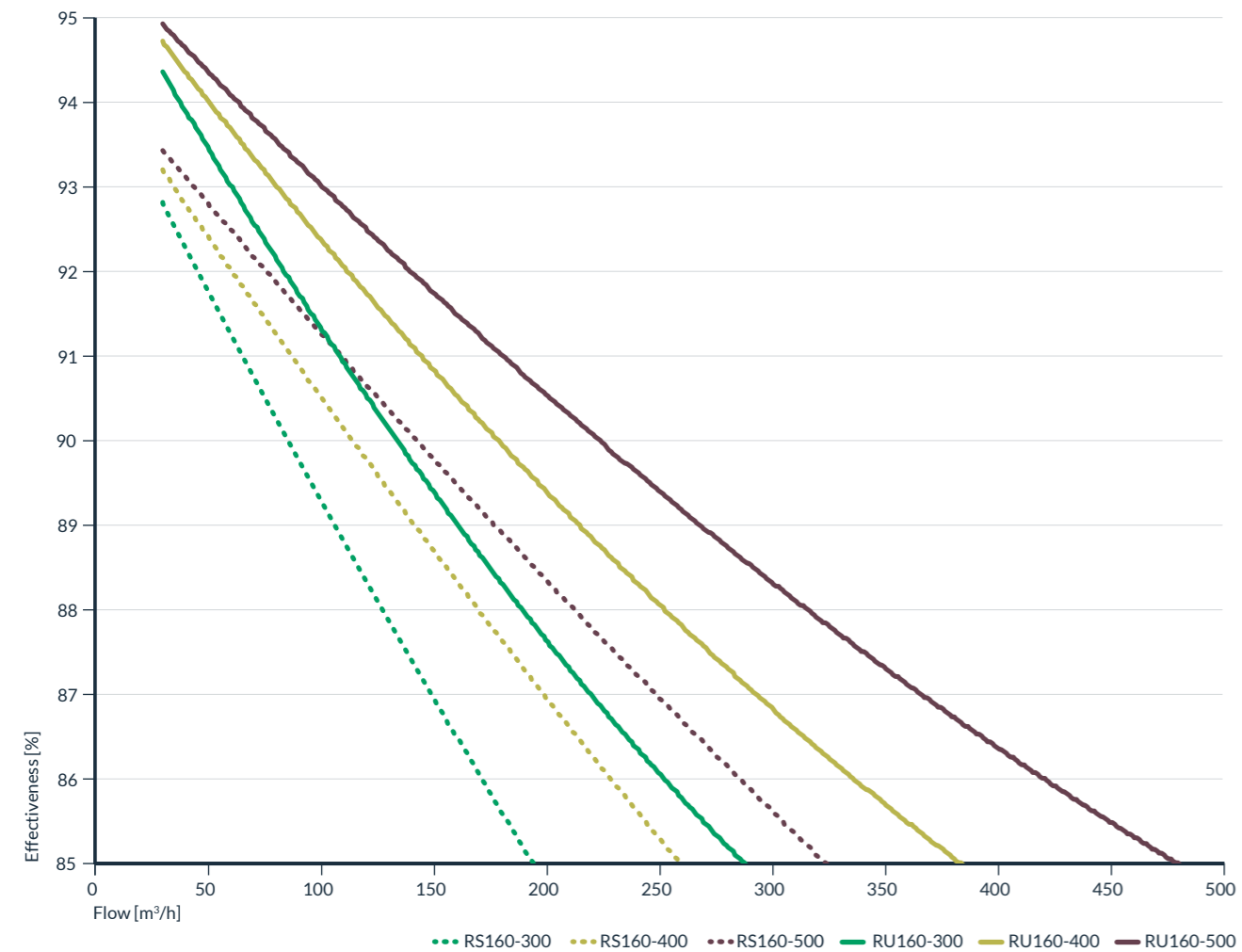
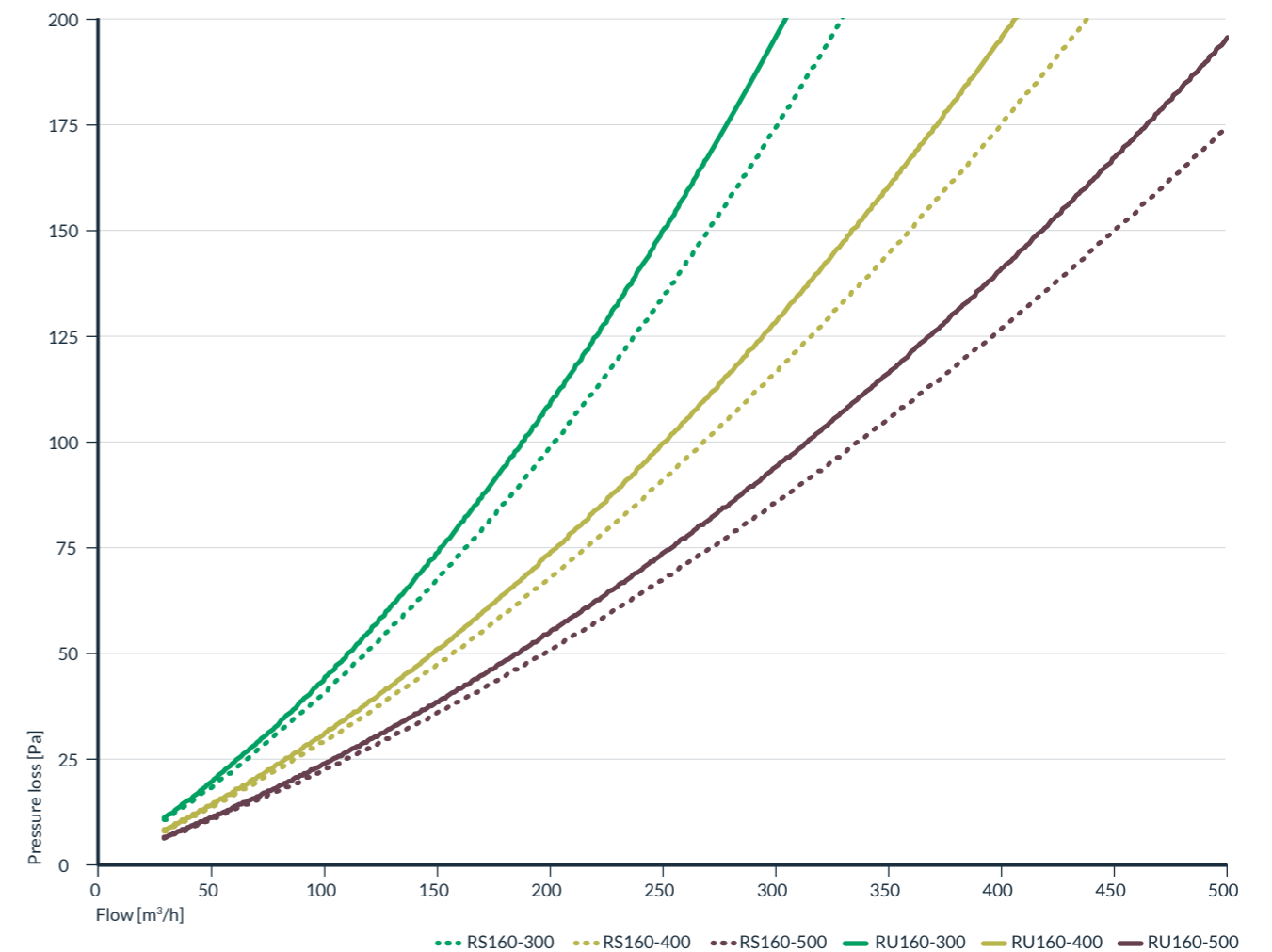


Figure 5: Pressure loss RU160 compared to RS160





## Fitting

Recair recuperators come with flanges for easy and good sealing of the air inlet and outlet connection. For optimum drainage of condensed moisture, the exchange channels should be positioned horizontally or vertically, and the cooling airflow direction downwards. See figure 6 and 7.

If you choose the Recair Comfort160, we advise you to put the air filter right in front of the air inlet surfaces of the heat exchanger. This is connected to good distribution of air over the exchange surface of the exchanger. No air filters are then required on the exit side of the exchanger.

## Guidelines for storage, assembly and use

1. Avoid direct contact with UV light.
2. Recair exchangers are designed for the buildings in which we live and work. So avoid contact with chemicals.
3. Operating temperature s: Recair exchangers may be exposed to temperatures between -20 °C and +50 °C
4. The heat exchanger may only be removed from the apparatus by carefully pulling the plastic strip fitted.
5. Cleaning with liquids or water is not required. Dust can best be removed from air inlet and outlet areas using a normal vacuum cleaner.
6. All Recair heat exchangers are checked before delivery to the customer up to a maximum leakage of 25 litres per minute at a static pressure of 250 Pa. Under certain conditions, this leakage of air may also result in some leakage of condensation. For this reason, it may help to point the air flow losing heat downwards and place a condensation trap under the whole exchanger.
7. The heat exchanger performs best when there is a perfect balance between the two air flows.



Figure 6: Mounting orientation “on the noses”

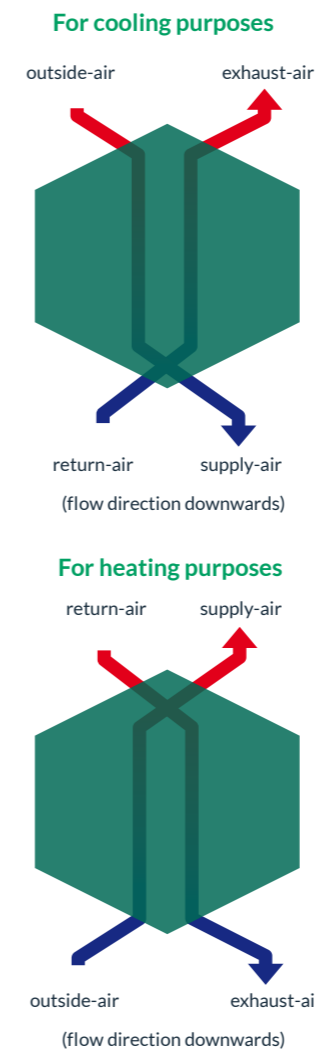


Figure 7: Mounting orientation

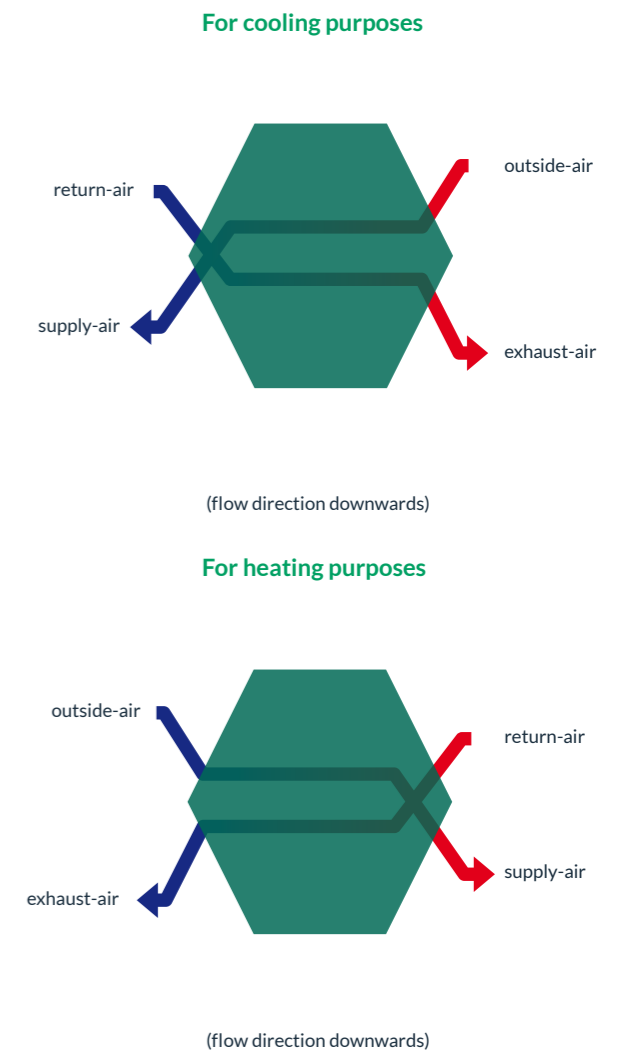
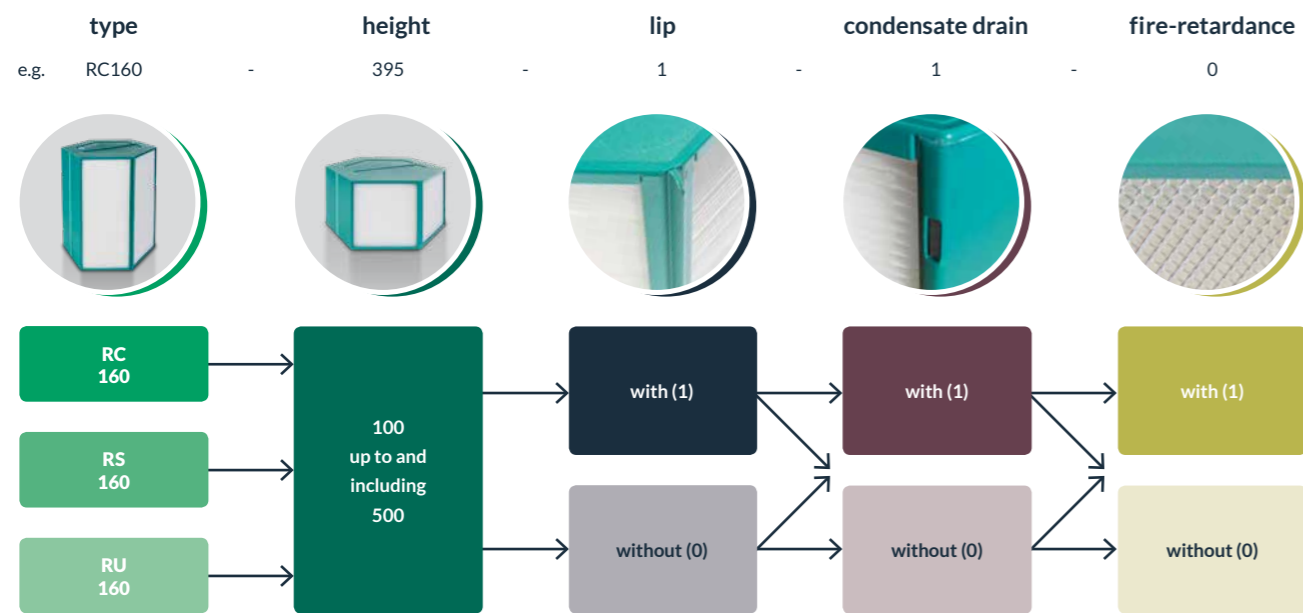


Figure 8: Product type construction



Allgemeine Raumlufttechnik  
 ✓ VDI 6022, Blatt 1 (07/2011)  
 ✓ SWKI VA104-01 (04/2006)  
 ✓ ONORM H 6021 (09/2003)  
 Gültigkeitszeitraum  
 05/2016 – 05/2021

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