

# Important information about the Genius combi-unit

## Service provided by Systemair:

If the system is installed according to plan, Systemair will provide a warranty for the function.

For this, the following points are critical:

- The system was planned by Systemair.
- The system was installed and commissioned as planned.
- Only Systemair products were installed.

## Application limits

The combi-unit is designed for use in passive houses, lowest-/low-energy houses, and, in some cases, in standard energy-efficient houses. The maximum heating load is 6 kW. A heating load of  $\leq 5$  kW is required. The air volume for residential ventilation is limited. From this result the following reference values for the application limits:

- Passive house: max. 220 m<sup>2</sup> living area
- Lowest-energy house (Energy Efficient House 40): max. 200 m<sup>2</sup> living area
- Low-energy house (Energy Efficient House 55): max. 180 m<sup>2</sup> living area
- Standard Energy Efficient House (according to EnEV 2016, formerly Energy Efficient House 70): max. 140 m<sup>2</sup> living area
- Furthermore, the building needs to be appropriately airtight. Recommended value:  $< 0.6$  per hour

As soon as the application limit is approached for the relevant house standard, detailed consideration is required and the manufacturer must be consulted. For example, this could require a heating demand calculation / heating load calculation, as well as evidence of the airtightness of the building (blower-door test).

- If a wood-burning stove is planned, this must be independent of the room air and DIBt-certified. This means pressure monitoring is generally not necessary and a shutdown of the system can be excluded. This is the only way to ensure the unit functions perfectly. If pressure monitoring is required, this must be implemented thermally. The "oven function" enables heat to be transported around the entire house through the duct network. Parallel operation of a fireplace and ventilation system must generally be agreed with the responsible district chimney sweep.

- As well as the fresh and exhaust air pipes, all the supply air pipes must be insulated so they are airtight. This prevents heat losses during heating as well as condensation during cooling operation.
- It is possible to limit both the heat pump performance and the secondary air volumetric flow, for example, for small residential units or passive houses. However, the manufacturer must be consulted.
- The unit is designed for use in a single-family house or a residential unit.
- At least one room controller (accessories) is required. We recommend one controller per supply air room.
- The use of reheating elements (accessories) is recommended for all house standards (activated for "defrost" mode-comfort, emergency function). Heating elements are absolutely necessary for low-energy houses (for covering peak loads), as well as standard energy-efficient houses.
- For very cold external temperatures, a preheater for the heat pump (accessories) is needed to ensure operational reliability. Systemair offers the heater as an option and also incorporates it in the plan, so that it is possible to retrofit it if required.
- Do not use the ventilation system while the floor screed is drying, because damage to the ventilation unit may occur due to the formation of excessive condensation. Any operation during the building phase must be excluded to prevent contamination of the duct network and the unit.
- If commissioned in winter, the first heating-through of the building must be performed by the builder/client on-site.