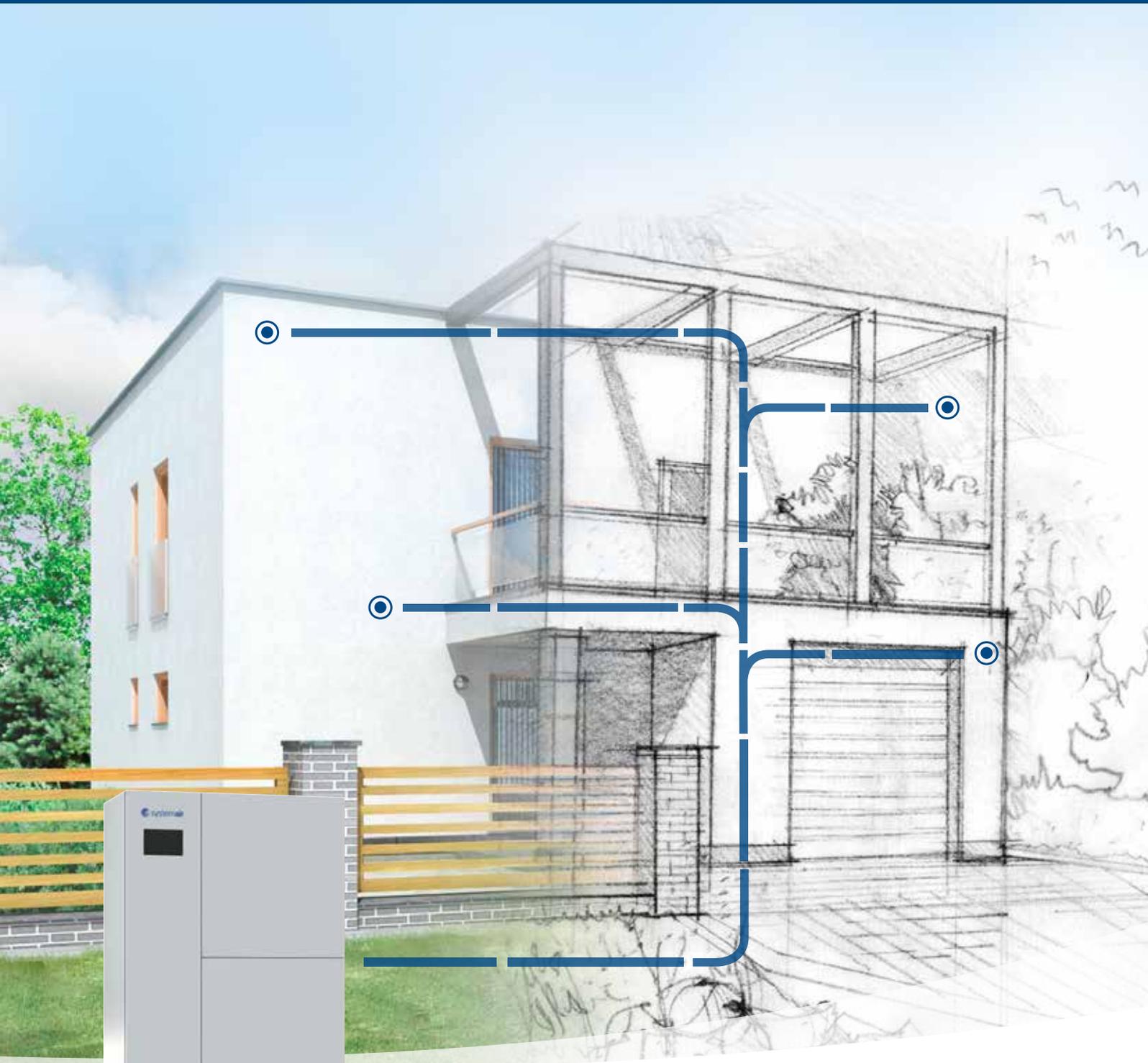


**You make dreams a reality.
We provide the efficient air conditioning.**

Genius WH – the intelligent central building services unit.



Every day you work passionately in bringing your dream homes to reality with your customers. We at Systemair share in this philosophy with intelligent technology operating energy efficiently perfectly adapted to the requirements of modern construction in all kinds of applications.

Our central unit "Genius" central building services will be developed accordingly. At last - One unit that can do everything from heating, cooling, ventilation and domestic hot water!

Discover these fresh ideas for your customers. And your business.



One for all.

Genius WH – the modern central building services unit

Nowadays, whoever builds a new building or renovates an old one must fulfil the European Energy Performance of Buildings Directive (EPBD). The result is often highly insulated, airtight building envelopes which requires mechanical residential ventilation – for a healthy indoor climate and as little energy loss as possible. At the same time, thanks to today's improved standards for insulation, the heating energy required is less. For this reason, classical heating systems are generally over-dimensioned for energy-efficient houses. This is why we developed Genius.

Genius WH from Systemair is the intelligent solution for detached energy-efficient houses. Saving space, it combines controlled residential ventilation including heat recovery (up to 85%), humidity control via our modern demand controls SAVECair, with heating and hot water production. In combination with a photovoltaic system, it is even possible to realise a virtually self-sufficient and CO₂ neutral system. Best of all: with Genius you save a lot of time in the planning phase, because Systemair will take on the entire project engineering for you.



The Genius WH includes all systems that combine heating, hot tap water and ventilation of houses. Additionally it has the option for cooling in summer time (brine version). The Genius-WH is applicable for use in new, energy-efficient, detached houses in Nordic climate. The HP can manage outdoor air temperatures down to -15°C. The ventilation unit can stand even lower temperatures without any frost protection. This way, your customer can enjoy an ideal indoor climate and the highest level of comfort throughout the whole year with just one system which is designed to meet the current and future demands of the European Directives.



Genius = Unit range of combi units

Genius AH: Air Heating
Genius WH: Water Heating

How the ventilation system works

One part of the Genius-WH is the ventilation unit: SAVE VTR 250. It continually supplies the living and sleeping quarters with fresh, clean air, and transports the extract air to the exterior, via the kitchen, bathroom and toilet. A rotary heat exchanger removes the heat from the extract air and, if necessary, uses it to preheat the cool supply air. In summer, the principle functions in reverse, so that the extract air cools the supply air and excessive ambient air humidity is removed.

Furthermore, it regulates the humidity inside with the new SAVECair control system.

Heating mode

The heating load of the building is covered by a step less controlled heat pump which serves a floor heating system. The HP has the option to run in reverse operation to cool down the building in summer. The energy source of the HP can be outdoor air or a brine circle in the ground.

Hot water production

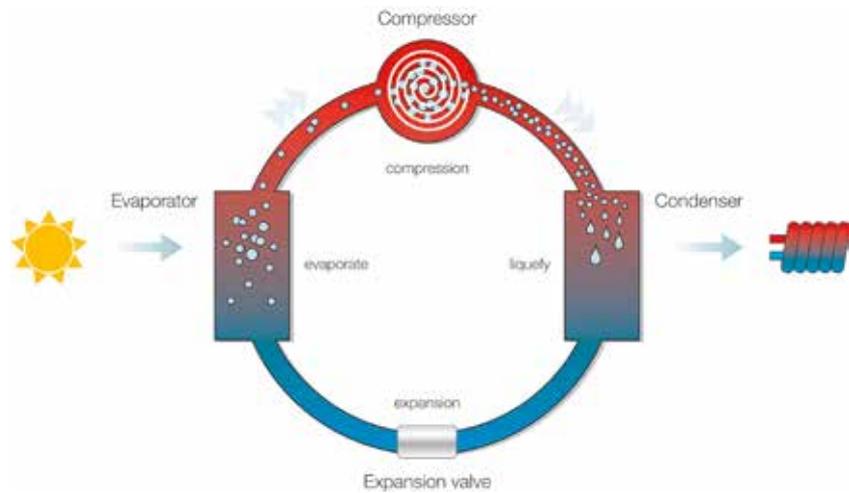
All the functions of Genius-WH can be used individually or in parallel. This applies to hot water production as well. A 250 litre tank is integrated for storing the tap water. A heating rod is installed inside to ensure the system functions perfectly, even if the outside temperatures are extremely low.



A Heat Pump's Principle Function.

How a heat pump works

Heat pumps give you energy independence. Both from the availability of fossil fuels as well as fluctuating price developments. Of course, also from fluctuating outdoor temperatures. Provided, that the heat pump in comparison is as reliable and efficient as the technology leader Systemair. Basically, all heat pumps function in the same way.



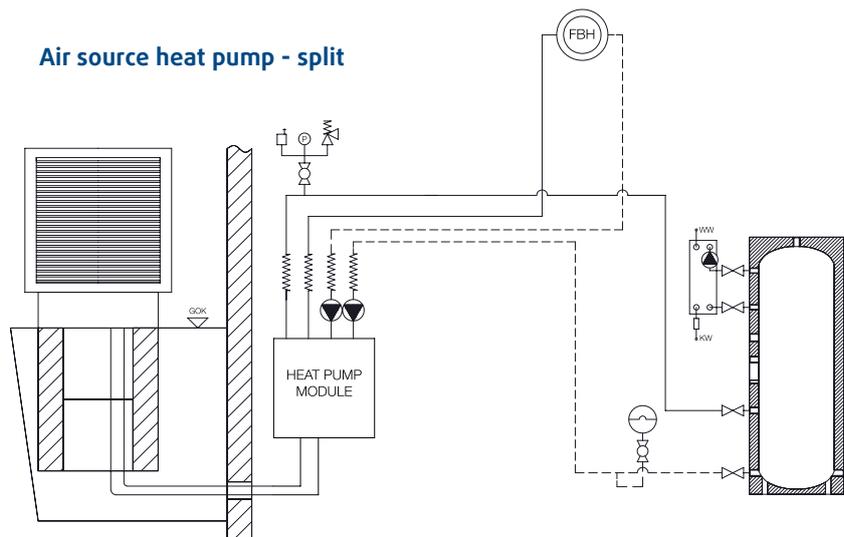
Imagine the function of a refrigerator

It is the basic principle just the other way around. The principle is quite simple: heat is extracted from a natural heat source (water, ground or air) in order to use it for heating. A heat pump heating system always consists of three different components:

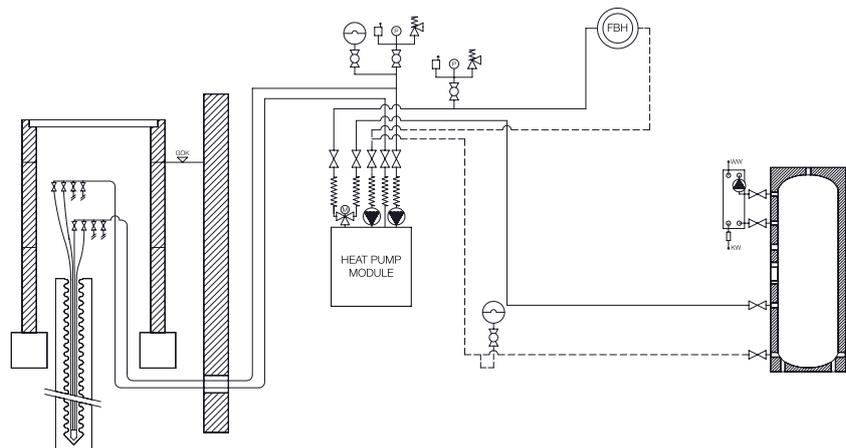
- Heat source
- Heat pump
- Heat distribution and storage system

Heat output is best achieved by means of a low-temperature heating system, for example, a floor or wall heating system.

Air source heat pump - split



Ground source heat pump with brine probe

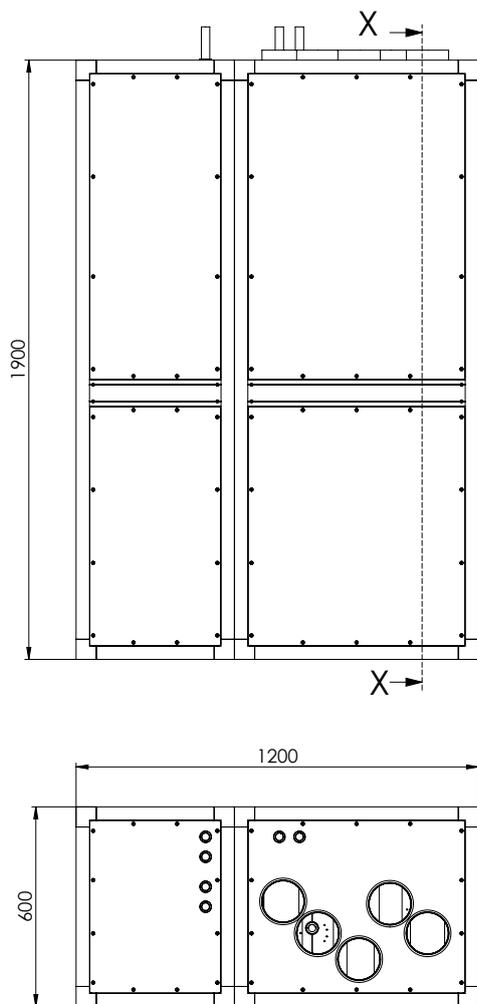


Exceptional in every discipline.

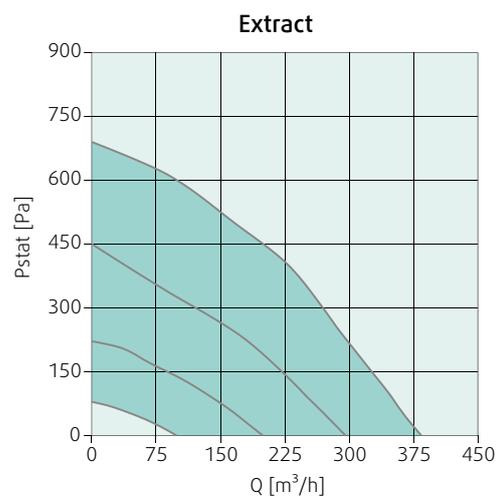
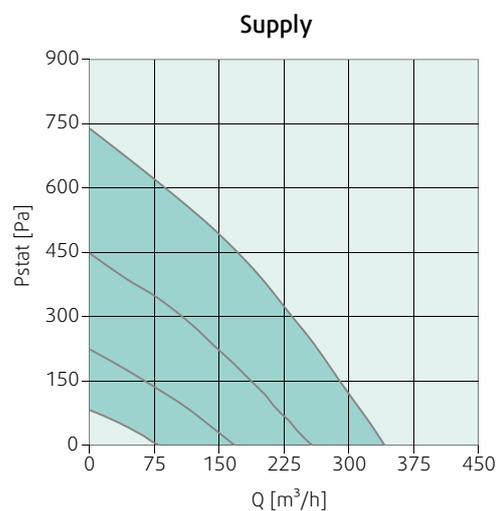
The preliminary technical data

Distinct design, concentrated power

Despite its many functions, Genius-WH doesn't take up much space.



Air flow / pressure diagramm



Technical data	
Specific electrical power of the ventilation system (SEP)	1.3 W/(l/s) (Qref, ErP)
Energy classification of filters in exhaust and supply air	A+ / A+
Exhaust air thermal efficiency at an operating point of -15°C, according to EN 13141-7	85%
Heat pump's coefficient of performance:	
for heating (A7/W35)	COP 5,0
for hot tap water (A7/W55)	COP 3,0
Heating capacity	8 kW (A7/W35)
Sound emission:	
Ventilation system	41 dBA
Heat pump outdoor unit	41 dBA
Heat pump indoor unit	38 dBA
Heat pump variants	Air to water / Brine to water (ground source)
Hot water tank	250 l

Something you can build on.

Your comfort package from Systemair

With Genius-WH from Systemair, you are getting a top-class central building services unit. In the development of our products we place the highest value on quality, functionality, efficiency and reduced energy consumption.

We only use top-quality components from renowned manufacturers. And because we really only want to deliver the best to you and your customers, we will test our new products thoroughly in advance. You can depend on that. Our research and development centres in Sweden and Germany are among the most modern test laboratories for ventilation engineering in Europe.

The comfort package

- **Determination of air quantities**
- **Configuration of the system**
- **Quote generation**
- **Creation of assembly plans**
- **Delivery of the components to the building site**
- **Support during assembly, commissioning and maintenance**

Expert advice from the start

It goes without saying that such a high quality system comes with appropriate service. This is why we will support you with help and advice during the planning and tendering process. Using the building plans, we determine the required air quantities. Subsequently, we configure the entire system for you, using the latest CAD programs and our experience. So you can be sure that Genius and all its components are ideally attuned to your building. Then we draw up the specifications document and the corresponding prices.

We won't let you down during the installation phase either. We offer you comprehensive training courses, we will inform you about the latest technological developments and we will answer all your questions any time you ask. In the assembly phase, we will put together the most precise plans for you and deliver all the system components straight to your construction site. As long as the system is installed according to plan, using our components, we do of course offer a warranty for proper function. If requested, we are happy to support you in the commissioning and adjustment of Genius-WH.

And afterwards, we will still be there for you and your customers. For example, with our filter subscription: Help your customers maintain a healthy room climate and keep energy consumption down. We are happy to deliver new filters for the system, regularly and automatically. Our all-round worry-free service makes it easy for you.

This level of planning service is unique, and gives you absolute peace of mind from the time an offer is made all the way through to commissioning.

Perfectly in tune with your wishes.

Systemair duct systems

Extremely flexible



For whichever convenient ventilation system you choose and regardless of your structural circumstances, with our ductwork systems you can rise to every challenge.

Whether from galvanised steel sheeting or polymer, whether round or oval, all pipes are extremely robust, resistant to deformation and, if necessary, easy to clean.

You can make the selection and choose the size to meet your individual requirements. This guarantees the safe and economical distribution of air through the building.



Systemair air distribution products

Just select your style



Do you prefer modern living? What about classical, maybe elegant or perhaps you prefer the style of the country house? Regardless of which fittings you like, you will find the design you are looking for in our versatile range of high-quality ceiling and wall vents.

Simply have a look at our website:
www.systemair.com



