SMART COOPERATION
OF PV WITH HEAT PUMP

SMART COOPERATION OF PV AND HP

The smart combination of heat pump and photovoltaic panels is an innovative and environmentally friendly approach to energy self-sufficiency in the home.

A heat pump uses ambient heat from the air, water or ground to heat or cool your home, photovoltaic panels produce electricity from sunlight, which can then power the heat pump and be used for other appliances in your home.

For maximum use of the solar energy, we have developed our own software that controls the output of the heat pump according to the output of the PV system. We use a heat pump to produce thermal energy from excess electrical energy, which we store in the HSK PV thermal store, developed directly for combination with a PV system. We then use heat and hot water from this tank even when the sun is not shining.

This combination allows to reduce the dependence on conventional energy sources and reduces the overall cost of running a household. These can be further reduced by using battery storage. In addition, some electricity suppliers buy the surplus electricity from PV systems or offer to store it in a virtual battery, allowing the summer surplus to be used in winter.

Basic options for combining heat pumps and PV

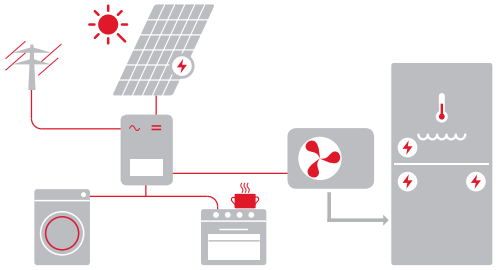
Below the basic sets are presented which we will individually adjust to your house.

A) HP & PV + HSK combination thermal store

The set FVE 7.2 kWp AKU contains:

- 16 bifacial PV panels, 450 Wp each
- Solax 8 kWh inverter
- HSK 650 thermal store

RTC 13e Heat pump

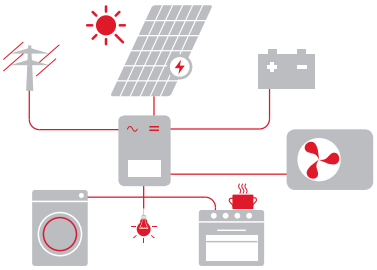


B) HP & PV + battery

The set FVE 7.2 kWp BAT contains:

- 16 bifacial PV panels, 450 Wp each
- Solax 8 kWh inverter
- 9 kWh battery

RTC 13e Heat pump

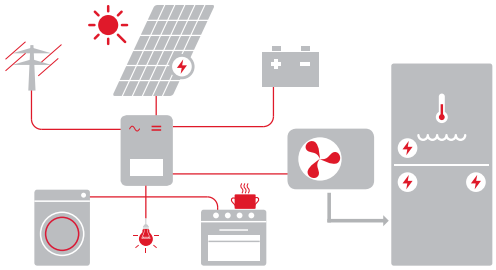


C) HP & PV + battery and HSK combination thermal store

The set FVE 7.2 kWp AKU BAT contains:

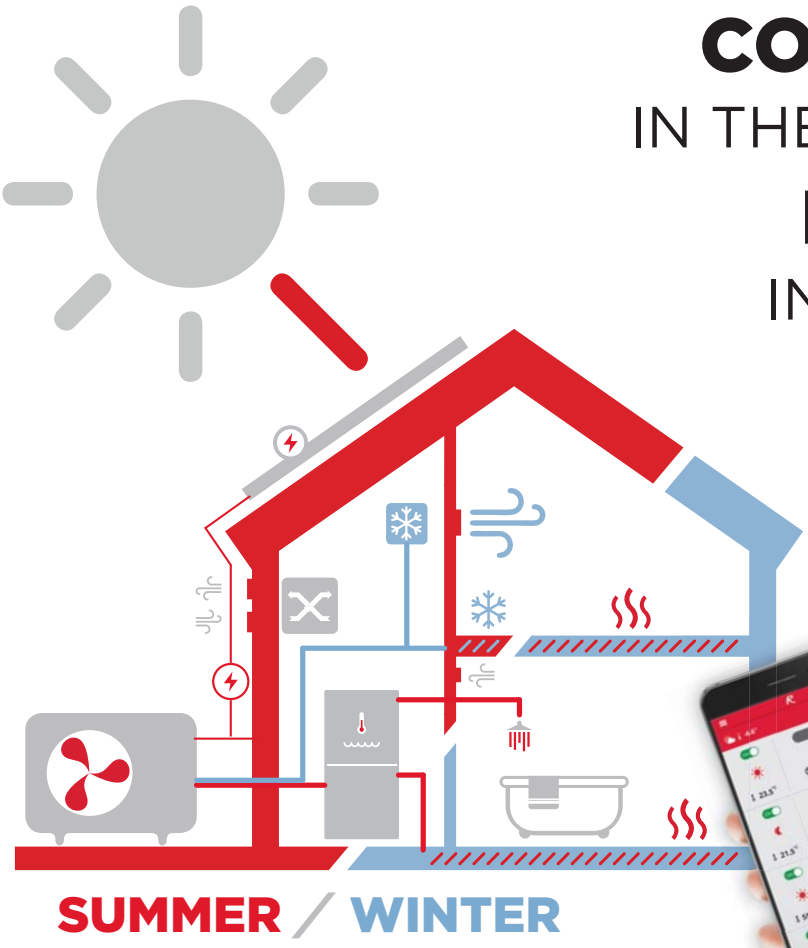
- 16 bifacial PV panels, 450 Wp each
- Solax 8 kWh inverter
- 9 kWh battery
- HSK 650 thermal store

RTC 13e Heat pump



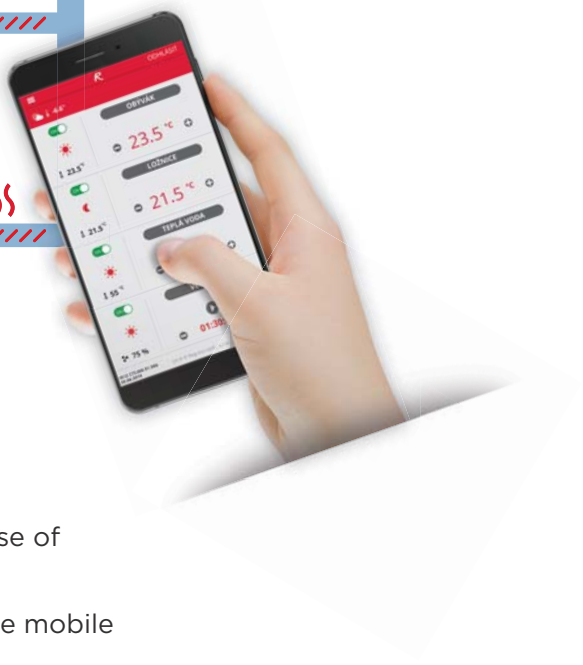
REGULUS COMPLETE SOLUTIONS

incl. heat recovery ventilation



COOLING
IN THE SUMMER

HEATING
IN THE WINTER



The whole system is controlled by

IR SMART CONTROLLER

- optimisation of operation and efficient use of various energy sources
- easy control of the controller online in the mobile app and via a web browser
- remote management, monitoring and service

We are a reliable partner for **designers, dealers and installers**.

- We will prepare a technical design, budget and diagram for an electricity distributor.
- We will help you submit a request to connect a microsource.
- We will perform professional installation or provide wiring diagrams.
- We will issue a Power Audit.

REGULUS HEAT PUMPS

CTC and RTC

PROPERTIES

- air-to-water inverter heat pumps
- high COP
- low noise level
- the RTC series enables reverse cooling mode

ADVANTAGES

- excellent parameters – significant energy savings
- closed refrigerant circuit - easy installation
- warranty of up to 10 years on the compressor
- 24/7 remote monitoring, post-warranty service

REGULUS PHOTOVOLTAIC PANEL

DG 450-B

PROPERTIES

- power 450 Wp
- double-sided (bifacial)
- all-glass (double-glass)
- half-cut solar cells

ADVANTAGES

- 10-30% additional yield due to double-sidedness
- increased efficiency thanks to half-cut solar cells
- high load capacity and wind resistance
- vertical installation possible
- 20 years warranty against manufacturing defects and 30 years guaranteed performance
- production in the EU - production plant in Slovakia

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