Four seasons – one feel-good climate.

Cosy warmth in winter, refreshing coolness in summer. The versatile ROTEX HPSU compact air-to-water heat pump reduces your heating costs to a minimum.
“We wanted a heating system that allowed us to remain flexible in the future, too. Nothing we found could beat the heat pump from ROTEX. With the HPSU compact, the retrofitting of a solar thermal system, or even a wood burning stove, is incredibly simple. And best of all, we don’t need to worry about finding extra space later on, as the heat pump is already prepared for everything.”

Monika and Gerd Merz, homeowners
Heating and cooling with air, sun and ROTEX – in the smallest spaces, 365 days a year.

The inexhaustible heat source on your doorstep.
The sun is our natural energy provider. Take advantage of this free heat supply and use it in your own home. It can be found in environmental heat from the air or taken directly from sunlight. This energy source is both free and inexhaustible. The ROTEX HPSU compact (heat pump solar unit) utilises the environmental energy available to supply heat to your house with maximum efficiency.

The ideal solution for your new build.
The amount of heating energy required by modern buildings is continually going down, resulting in lower flow temperatures. The low temperature ROTEX HPSU compact heat pump is the ideal solution here. To benefit from this energy efficient heat generator, an underfloor heating system is a must. Due to its extremely large heating surface, it can make do with a low surface temperature.

The combination of heat pump and underfloor heating system is not only a guarantee for greater comfort and lower energy costs, it has the additional benefit of being able to cool your rooms in summer, too.

Modernisation with twice the gain in convenience – with ROTEX.
Much the same applies to the modernisation of existing buildings as it does to new build: With the ROTEX HPSU compact heat pump, you'll be heating in winter and cooling in summer with highest levels of energy efficiency. The energy saving potential of a heat pump can be most fully realised when it is used in combination with an underfloor heating system.

How it works.
The ROTEX HPSU compact air-to-water heat pump “pumps” heat from the ambient air into the heating system with the help of a highly efficient compressor. This principle is comparable to using a refrigerator or air conditioning system in reverse and has already proven its worth in millions of installations on the European market.
The “Smart Grid Ready” label for all ROTEX HPSU compact heat pumps certifies their suitability for “power bias operation”.

In order not to overload power grids, wind turbines are frequently shut down when more electricity than required is being generated. Storage is required to absorb these peaks in production. Heating systems with heat pumps can provide such storage. As and when required, they can convert excess electricity into thermal energy, which is then “stored” in a buffer or DHW tank. Grid operators can already shut down heat pump systems temporarily in the event of power shortages. In order to utilise their potential to the full, heat pumps require correspondingly smart control technology. Consumers can tell that a heat pump is suitably equipped by the “Smart Grid Ready” label.
Less is more – the internal unit of the ROTEX HPSU compact.
The HPSU compact integrates the internal unit of the heat pump into the solar stratification store – in the smallest of spaces. The entire heating centre only takes up 0.36 m² (HPSU compact 304/308) or 0.62 m² (HPSU compact 508/516). This allows you greater flexibility in your choice of installation location and guarantees quick and easy installation.

Clear separation – clear benefit.
The ROTEX thermal store is a combination of domestic hot water tank and instantaneous water heater. The heat is not stored in the domestic hot water itself, but in the clearly separated tank water. Optimum tank stratification ensures that the provision of hot water is always guaranteed.

The external unit.
The external unit extracts heat from the ambient air, which is absorbed by the heat transfer medium (refrigerant) and transferred to the internal unit. The compact external unit can be sited inconspicuously outside the new build or existing residential building.

Your benefits with the ROTEX HPSU compact air-to-water heat pump.

Outstanding efficiency
• Use of free, renewable, environmental energy from the sun and air

Innovative technology
• Intelligent Store Management (ISM) for maximum energy efficiency and highest levels of heating and DHW convenience
• Intuitively operated electronic control unit
• Smart Grid Ready

DHW hygiene
• Highest levels of hygiene thanks to separation of tank water and DHW
• No deposits, no legionella

Meets your needs
• Heating, cooling and domestic hot water
• Economical and quiet to run
• Compact dimensions, straightforward installation – in the smallest of spaces
• Flexible application, direct combination with solar thermal system or existing heating systems possible

The hybrid heating centre – open to all energy types.
The HPSU compact internal unit can furthermore be used as an efficient thermal store for additional heat sources. Apart from a solar thermal system, it can also be backed up for example by oil, gas and pellet boilers or wood burning stoves with back boilers. If you do not install a solar thermal system immediately, one can be retrofitted quickly and easily at any time.
The RoCon hybrid control unit – total control.
Apart from heat pump control functions, the hybrid control unit also takes on complete management of the thermal store – the heart of the hybrid heating system. This comprehensive hybrid management ensures the highest levels of system efficiency and optimum convenience for central heating, domestic hot water and cooling. Straightforward and consistent handling for the ROTEX HPSU compact with intuitive menu navigation and control via smartphone with the ROTEX app.
Maximum efficiency and water hygiene, state-of-the-art technology – very easily controlled.

The compressor – the heart of the heat pump.
In a heat pump, the compressor is equivalent to a car’s engine. It plays a decisive role in determining the energy efficiency. ROTEX is one of the world’s leading companies in the field of air conditioning and heat pump technology. The compressors in ROTEX heat pumps are developed and manufactured within the corporate group. Consequently, we can draw on knowledge from many millions of compressors made by the technological leader.

Economical and quiet thanks to output modulating operation.
The heat demand of a building varies very widely depending on weather conditions and utilisation patterns. The ROTEX HPSU compact heat pump employs inverter technology, which operates the compressor variably. In other words, the output of the heat pump is continuously adjusted to meet the demand.

Everything under control – at the press of a button.
The RoCon digital control unit in the HPSU compact meets the highest standards. Apart from the control functions, it also takes on complete management of the thermal store – the heart of the hybrid heating system. This comprehensive hybrid management ensures the highest levels of system efficiency and optimum convenience for central heating, domestic hot water and cooling.

Intelligent, efficient and fully automatic.
The heating water temperature is regulated according to the outside temperature. The control unit detects winter and summer automatically, switching heating mode on or off in line with demand. The control unit is simple and intuitive to operate. It features individually adjustable time programs for convenient control of the heating circuit and DHW heating. It can be enhanced with a room controller, with which the heating system can be easily controlled and monitored.

Optimum water hygiene – day after day.
Thanks to its construction, the HPSU compact has an integral, state-of-the-art stratification store for hygienic water provision. Sludge and rust deposits, sedimentation and even the growth of dangerous legionella bacteria, as can occur in many large containers, are now no longer possible. The outstanding benefits in terms of water hygiene have been confirmed in an extensive study by the Hygiene Institute at the University of Tübingen.
Comfortably warm in winter and pleasantly cool in summer.

With the ROTEX Comfort 365 heating system, you can enjoy your own chosen feel-good temperature (see white area of graph) throughout your home. Personalised comfort in next to no time.
Your day to day feel-good climate with the ROTEX Comfort 365.

The ideal temperature all year round.
Our heating system maintains the level of comfort within your home. Heat generators, such as an air-to-water heat pump, utilise renewable environmental energy as a heat source, thereby reducing your energy consumption and cutting costs to a minimum. But what about air conditioning in summer? Very few residential buildings are equipped with air conditioning systems to ensure a comfortable temperature on hot summer days and nights as well. This is about to change – with a new heating system that not only provides the house with comforting warmth in winter, but also with gentle cooling in summer. This is about to change – with a new heating system that not only provides the house with comforting warmth in winter, but also with gentle cooling in summer. All this, plus very economical operation and no additional acquisition costs – the ROTEX Comfort 365.

Renewable heating in winter, gentle cooling in summer.
The ROTEX heat pump really comes into its own when combined with a ROTEX underfloor heating system. For cooling purposes, the heat pump process is simply reversed. In other words, heat is drawn from the building and released into the environment. The actual cooling of the room is performed primarily by the underfloor heating system. Its large surface area provides you with a very pleasant, draught-free room climate. The entire operation of the heat pump is discreet and silent, even when cooling.

Cleverly combined – underfloor heating and fan convector.
In rooms without underfloor heating, the ROTEX HP fan convector can be used, which also adopts the dual heating and cooling function. It is the ideal supplement to the ROTEX heat pump for rooms that lack underfloor heating. Thanks to its particularly quiet operation, it is even suitable for use in bedrooms. The integral, electronic room temperature controller ensures the climate is just right in every room.

Maximum comfort and cost-effectiveness – all-inclusive.
With the standard, integral cooling option of the ROTEX air-to-water heat pump, you can enjoy the dual heating and cooling function in rooms that have underfloor heating, without any further effort or expenditure. The operating costs for this additional comfort are negligible. The cost of using a ROTEX Comfort 365 to cool the home has been calculated by the University of Stuttgart Institute for Building Energy to only amount to an extra 10 to 20 euros a year.

The ROTEX Solaris – minimises energy costs.
By integrating a solar thermal system to provide additional support for the heating system with free solar energy in winter, the Comfort 365 is able to provide maximum living comfort for minimum energy costs.

Heating and cooling with the ROTEX Comfort 365.
- Maximum living comfort 365 days a year
- Tailor-made ROTEX system solutions to meet your requirements and the structural characteristics of your building
A perfect combination: heat pump + solar.

Sunny outlook.
ROTEX Solaris utilises free solar energy to back up the heating system. High performance solar collectors developed and produced in-house at ROTEX can be installed in a variety of ways and offer the highest levels of energy efficiency.

Low expenditure – high yield.
At peak levels, 80% of the solar energy that has been captured can be converted into usable heat. The high efficiency of ROTEX flat-plate collectors makes this possible. Solar energy and the HPSU compact heat pump complement each other perfectly. Depending on demand, the heat pump contributes the necessary amount of heat to the heating system.

The measure of all things: the seasonal performance factor.
This describes how much heating energy you can utilise over the year in relation to the auxiliary energy employed. The higher the seasonal performance factor, the higher the efficiency of the heat pump. The combination of the ROTEX HPSU compact heat pump with our solar thermal system achieves a seasonal performance factor of up to 4.3. This means that you get out 4 times more heating energy for central heating and DHW than you put in as auxiliary energy. The ROTEX HPSU compact sets completely new standards in the field of air-to-water heat pumps.

Stock up on solar energy with the ROTEX solar tank.
ROTEX Solar uses solar energy for domestic hot water heating and provides effective backup for central heating. Alongside solar DHW heating, solar central heating backup is integrated ready for connection on the HPSU compact with 500-litre tank capacity. If heat from the sun is not employed immediately, the ROTEX solar tank can store large amounts of solar energy. Heat for DHW or central heating can be used more than a day later.

Your benefits with ROTEX Solaris.
- Efficient utilisation of free solar energy for DHW and central heating
- Hygienic DHW heating
- Optimum temperature stratification in the ROTEX solar tank increases the solar benefit
- Perfect integration with the widest variety of heating systems

A strong team.
The ROTEX HPSU compact is ideally prepared and equipped for utilising solar energy. If you decide to install a solar thermal system at a later date, it can be retrofitted quickly and easily.
Specification

<table>
<thead>
<tr>
<th>ROTEX HPSU compact</th>
<th>HPSU compact 4 – 8 kW</th>
<th>HPSU compact 11 – 16 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>304</td>
<td>308</td>
</tr>
<tr>
<td>Output kW</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Nominal heating output A2/W35 kW</td>
<td>3.27</td>
<td>4.6</td>
</tr>
<tr>
<td>Nominal heating output A7/W35 kW</td>
<td>4.4</td>
<td>6.22</td>
</tr>
<tr>
<td>Nominal COP A7/W35</td>
<td>5.04</td>
<td>4.88</td>
</tr>
<tr>
<td>Max. heating output A7/W35 kW</td>
<td>5.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Nominal COP A2/W35</td>
<td>4.02</td>
<td>3.64</td>
</tr>
<tr>
<td>Max. heating output A2/W35 kW</td>
<td>4.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Heating operating range (outside temperature) °C</td>
<td>Min: -25 / Max: 25</td>
<td>Min: -25 / Max: 35</td>
</tr>
<tr>
<td>DHW operating range (outside temperature) °C</td>
<td>Min: -25 / Max: 35</td>
<td>Min: -25 / Max: 35</td>
</tr>
<tr>
<td>Nominal cooling capacity A35/W18 kW</td>
<td>5.1</td>
<td>6.8</td>
</tr>
<tr>
<td>Nominal EER A35/18</td>
<td>4.21</td>
<td>3.99</td>
</tr>
<tr>
<td>Cooling operating range (outside temperature) °C</td>
<td>Min: 10 / Max: 43</td>
<td>Min: 10 / Max: 46</td>
</tr>
</tbody>
</table>

**Internal unit**

- Heating flow temperature operating range °C: Min: 15 / Max: 55
- Cooling flow temperature operating range °C: Min: 5 / Max: 22
- Immersion heater output (option) kW: 9
- Dimensions (W x D x H) mm: 595 x 615 x 1945 790 x 790 x 1951
- Weight of HPSU compact H/C BIV kg: 92 119 121
- Weight of HPSU compact H/C kg: 87 114 116
- Storage tank capacity l: 300 500

**External unit**

- Dimensions (W x D x H) mm: 832 x 307 x 735 900 x 320 x 1345
- Weight kg: 54 56 114
- Sound power level dB(A): 61 62 61 62 64 64 66
- Noise power level (1 m) dB(A): 48 49 48 49 51 51 52

1) The “Smart Grid Ready” label for all ROTEX HPSU compact heat pumps certifies their suitability for “power bias operation” – see page 4.
2) The “ROTEX compact class” product range has won the Plus X Award in recognition of its degree of innovation, high quality, and excellence in design, functionality and ecology.
3) ROTEX HPSU compact heat pumps meet the strict quality criteria of the EHPA.

**ROTEX Solaris: Utilise solar energy and save money.**

The chart shows when and to what extent the ROTEX solar thermal system provides backup for central heating and DHW. Combined with a ROTEX heat pump, which also uses renewable environmental energy, use of auxiliary energy drops to an absolute minimum.
What makes ROTEX different?
We offer individual solutions for optimum living and working that are straightforward, intelligent, and futureproof.

ROTEX is a manufacturer and supplier of complete innovative and environmentally responsible heating systems – building on decades of experience. Since 1973, ROTEX has stood for innovation and know-how in the field of heat generation, storage and distribution. In the development of products for our high grade and perfectly matched components we focus on user benefits.

The ROTEX product range extends from air-to-water heat pumps, condensing boilers for oil and gas, solar thermal systems and thermal stores, not forgetting underfloor heating, heating oil tanks and rainwater tanks, right up to a comprehensive installation system for all sanitary and heating equipment. Innovative systems that facilitate the optimum use of conventional and alternative fuel types in both modernisation and new build projects. ROTEX products stand for unique cost efficiency with maximum environmental compatibility and the highest levels of flexibility.

ROTEX Heating Systems GmbH is a wholly owned subsidiary of Daikin Europe NV, making it a member of the DAIKIN Group, the world’s leading manufacturer and supplier of products for heating, ventilation and climate control. Our combined competence generates optimum product solutions to meet the highest user aspirations.