

Direct use of solar energy  
for supplementary heating

**Hoval**

Responsibility for energy and environment

Save  
**2x 30%**

Use solar heat directly in your heating system.  
Lower costs, higher energy efficiency class.

## Now you can use solar heat directly in your heating system. With an effect you can feel directly too.

Until now, most solar thermal collectors have been used for heating water in bathrooms and kitchens. This involves heat from the sun flowing into a hot water storage tank, where it heats the water. Now, Hoval has created a shortcut that guides excess solar heat directly into the boiler. This solution is your route straight to the higher energy efficiency class of A++, and to lower costs. A Hoval exclusive, it is available for single-family homes, new buildings and renovation projects alike.

Save  
2x 30%

Invest **30%** less money

Use **30%** less gas or oil



# The smart solution for your single-family home.

## 30% cheaper to purchase

Using solar heat directly for heating purposes means lower investment costs. This solution not only requires a smaller domestic water storage tank, but it also cuts down on the collector surface area by a quarter – creating savings in installation work too.

## Using solar energy to heat your home

Hoval condensing boilers can hold more water than other boilers. The water inside is heated up by excess solar heat, creating a direct means of supplementing your heating supply – without the need to divert anything through a buffer storage tank.

## Save 30% gas or oil

Using solar heat that flows directly into the condensing boiler cuts down significantly on your gas or oil consumption.

The boiler only starts operating if the sun is not providing enough heat. This results in a drop in fuel consumption of as much as 30%.

## Lower downtime losses

The smaller a domestic water storage tank is, the less energy it is able to lose. This results in potential savings of around 1000 kWh of energy per year in comparison to larger storage tanks.

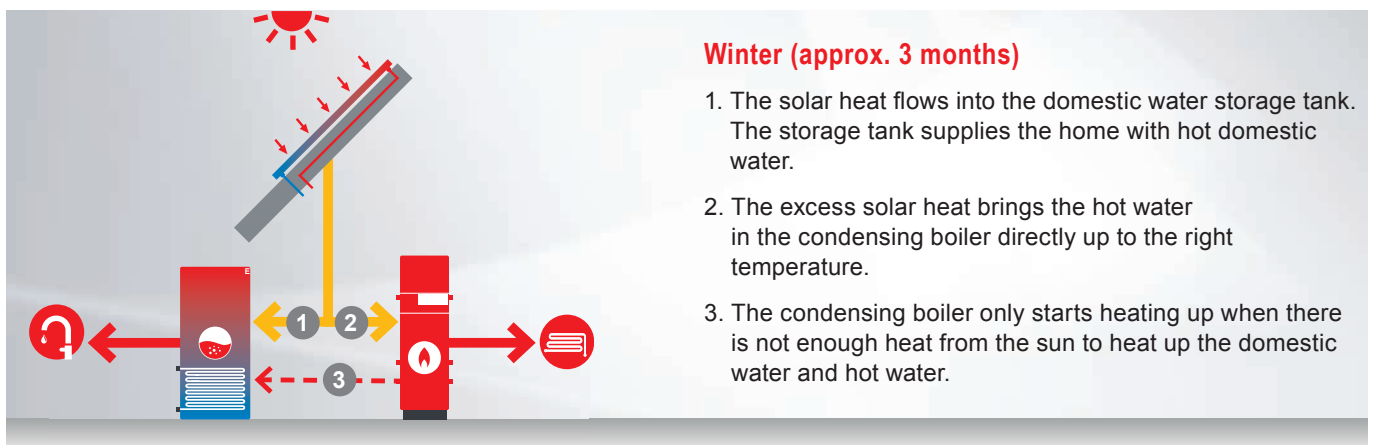
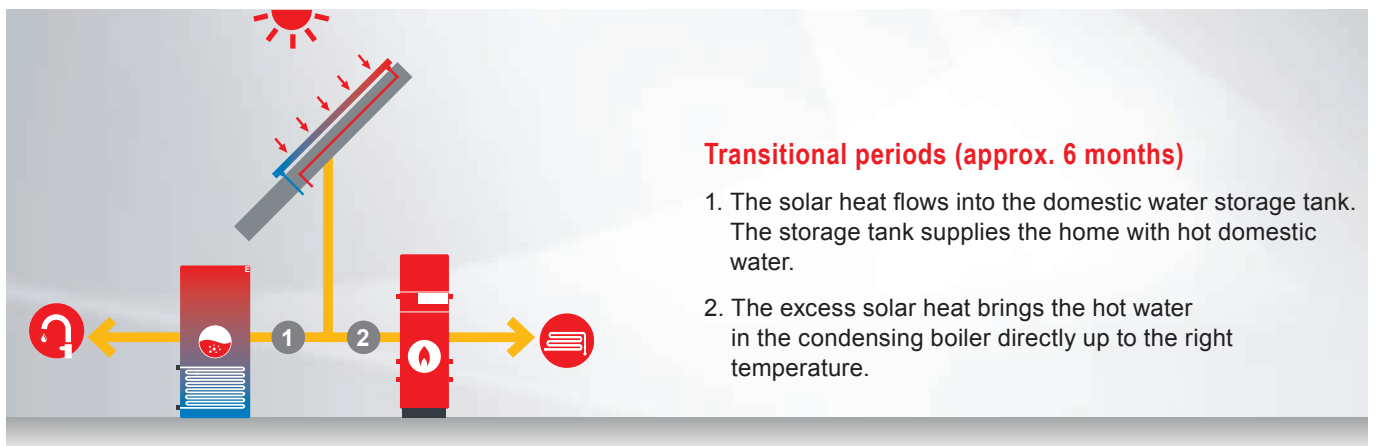
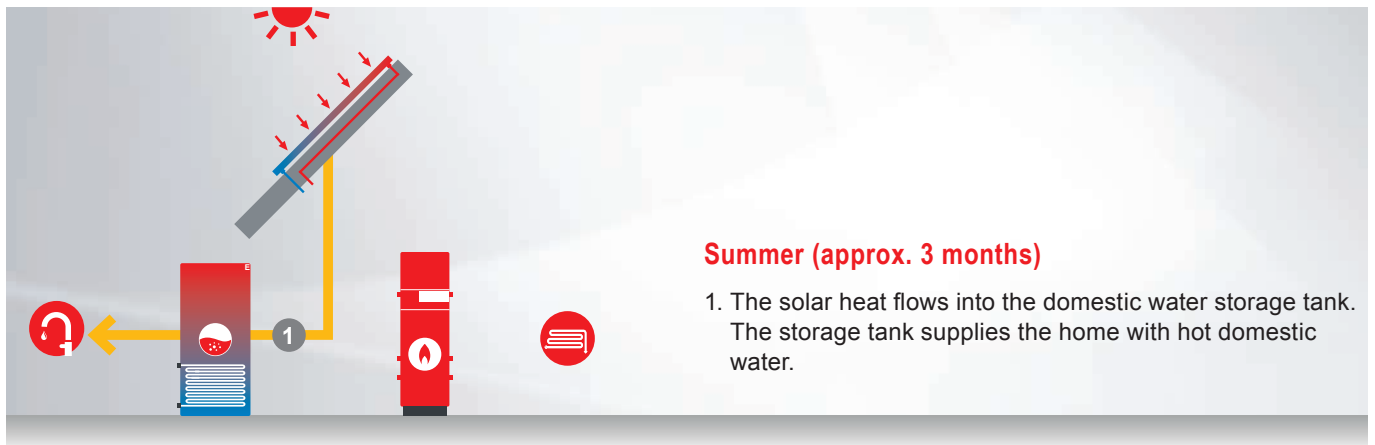


# How this exclusive Hoval solution works.

## Hoval takes an idea and makes it into a system.

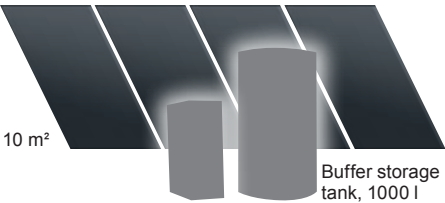



The idea of using solar heat is remarkably simple. Excess heat from the solar thermal collectors flows directly into the boiler, which also acts as a storage tank. This means that the hot water no longer has to be diverted via a buffer storage tank in order to be heated up.

The system requires a condensing boiler with a large capacity as well as six connection points that enable the water to arrange itself into layers according to the temperature – hot water at the top, cold water at the bottom. Hoval UltraGas®, UltraOil® and MultiJet® condensing boilers are the only condensing boilers with these features on the market.



## An added plus – for the combined energy label.

The difference between the Hoval system and a standard system is plain to see. With Hoval you will save costs and improve energy efficiency at the same time. This allows the energy efficiency class to move one level higher, and gives the combined energy label not just one plus sign, but two.

	Standard solar system with condensing heating	Hoval direct use of solar energy
	 <p>10 m<sup>2</sup> Buffer storage tank, 1000 l</p>	 <p>7.5 m<sup>2</sup> Calorifier, 400 l</p>
Fuel savings created with solar energy**	-30%	-30%
Investment cost savings with direct use of solar energy in Hoval system	-	-30%
Energy efficiency class		
Lower space requirements	-	✓
Use of weather forecasts (up to 10% savings)	Only with Hoval boiler and TopTronic®E online	✓ With TopTronic®E online
Harmonised system from a single source	?	✓
	<b>Standard solar energy system:</b> <ul style="list-style-type: none"> <li>▪ 4 collectors (10 m<sup>2</sup>)</li> <li>▪ Condensing gas or oil boiler</li> <li>▪ Buffer storage tank, 1000 l</li> <li>▪ Fresh water module</li> </ul>	<b>Hoval direct use of solar energy:</b> <ul style="list-style-type: none"> <li>▪ 3 UltraSol collectors (7.5 m<sup>2</sup>)</li> <li>▪ Hoval condensing oil or gas boiler</li> <li>▪ TopTronic E system controller</li> <li>▪ Calorifier, 400 l</li> </ul>

\* Specifications are based on annual heating oil consumption of a 4-person house measuring 150 m<sup>2</sup> and with heating energy consumption of 50 kWh/m<sup>2</sup> (new building) or 120 kWh/m<sup>2</sup> (renovation project); detailed consumption values (condensing system without solar/standard solar condensing system/Hoval system with direct use of solar energy)  
 New building: 1400/1000/1043 litres  
 Renovation project: 2440/2120/1980 litres  
 Calculated using Polysun.

# Proven components for a high-performance system.

## Gas and oil condensing boilers

Hoval condensing boilers have represented the benchmark on the market for years now. With their patented heat exchangers, they get the most out of fuel and produce hardly

any emissions. What they all have in common is their robust structure, high-quality materials and the Hoval TopTronic® E system controller.



**UltraGas® (15-27)**  
Condensing gas boiler

- Recovers every last amount of heat using its patented aluFer® heat exchanger
- Keeps CO<sub>2</sub> emissions to a minimum using its UltraClean® grid burner



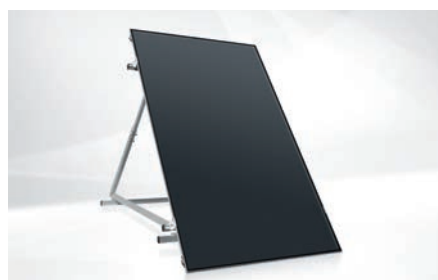
**UltraOil® (16-25)**  
Condensing oil boiler

- Converts every last drop of oil into an optimum level of heat using the patented aluFer® heat exchanger
- Two-stage burner ensures hardly any emissions are produced
- Suitable for EL low-sulphur heating oil



**MultiJet® (12-25)**  
Condensing oil boiler

- Patented jet heat exchanger creates maximum efficiency
- Suitable for EL low-sulphur heating oil and bio heating oil



**UltraSol**  
Solar thermal collector

- Low stagnation temperature prevents the solar liquid from clumping, ensuring reliable operation
- Easy to install
- Excellent efficiency coupled with a low stagnation temperature



**MultiVal ERR (400-500)**  
Solar calorifier

- Keeps heat losses low
- Requires very little space



**TopTronic® E**  
System controller

- Ensures that all the components work together efficiently
- Takes into account the weather forecast, thus optimising solar yield
- Reduces consumption costs by up to 10% as a result
- Can be operated on the move

# TopTronic® E system controller



A smart solution – weather forecasts are used to ensure maximum solar yields.

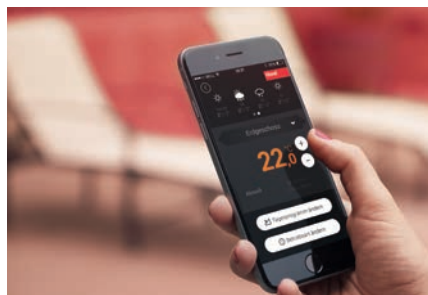


## The controller that keeps track of the weather

With the Hoval TopTronic® E system controller, Hoval solutions are easy and intuitive to control. A touchscreen in your living room shows everything you need to know – and all it takes is a tap to configure the controller in line with your personal habits.

The Hoval TopTronic® E always knows what to do. It gives priority to solar energy and, most importantly, even knows what the weather is doing: every three hours, it retrieves a reliable weather forecast for your location from the Internet and aligns heating operation with this. So if sun is expected, your rooms won't be filled with heat. If nobody is at home during the day, the TopTronic® E curbs your heating supply in accordance with a custom-set programme – but still ensures the house is cosy and warm in the evening. If a family member comes home earlier, however, the heating programme can be changed quickly using the smartphone app.

The Hoval TopTronic® E system controller reduces your oil or gas consumption by up to 10% – in addition to the 30% already being saved. It's an eco-friendly, cost-conscious system that doesn't mean compromising on comfort.



Remote operation of the heating system on the move.



Hoval Desk – keep costs under control

# Solutions you can rely on.

# Hoval

## Responsibility for energy and environment.

The Hoval brand is internationally recognised as one of the leading suppliers of indoor climate control solutions. Around 70 years of experience have given us the necessary capabilities and motivation to continuously develop exceptional solutions and technically superior equipment.

Maximising energy efficiency and thus protecting the environment are both our conviction and our incentive. Hoval has established itself as an expert provider of intelligent heating and climate control systems that are exported to over 50 countries worldwide.



## Warm rooms, warm water, fresh air: one system.

Hoval is also your specialist when it comes to climate control technology. The HomeVent® comfort ventilation system brings in fresh air without the need for you to open a window. HomeVent® transfers not only heat, but also humidity from the old air from the new air. What's more, HomeVent® also eliminates bad odours. Hoval combines heating and ventilation to form a complete system that can be operated using the Hoval TopTronic® E system controller.



## Design support from experts.

Take advantage of the expertise of our experienced specialists. We will be happy to support you throughout all project phases when designing your system.

Working in close cooperation with you and taking into account all the specifications of the energy supplier, we develop the most efficient and cost-effective solution for you.



## Hoval service expertise.

Hoval systems are professionally commissioned by specially trained and experienced Hoval service technicians, ensuring that the systems will operate perfectly from day one. Maintenance and troubleshooting are performed on-site by an expert customer service team.

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