



# PVT

**HEAT AND POWER  
FROM ONE MODULE.**



- 
- A circular graphic with a yellow border and a teal gradient background contains four items, each with an icon and text: 'Heat' with a flame icon, 'Power' with a lightning bolt icon, 'Hot Water' with a water drop and thermometer icon, and 'Cooling' with a snowflake icon.
- Heat
  - Power
  - Hot Water
  - Cooling

... from Renewable Sources.



”

Sunmaxx makes the energy transition attractive for everyone. Our hybrid modules supply electricity and heat at the same time. They enable an easy switch to renewable energies and pay for themselves faster than any fossil fuel alternative. We stand for green, affordable heating and cooling and are driving a climate-friendly, competitive future.

“

Dr. Wilhelm Stein  
Chief Executive Officer at Sunmaxx PVT GmbH

# The Journey of Sunmaxx

## 2021

### Dr. Wilhelm Stein founds Sunmaxx

based on the idea of combining solar technology with thermal management from the automotive industry.



## 2023/24

### Opening of production facility in Ottendorf-Okrilla near Dresden

Sunmaxx opens the world's largest production facility for low-temperature PVT modules.



## 2024

### Ramp-up of Sunmaxx

Establishment and continuous expansion of a specialized partner network.



## 2024/25

### Sunmaxx supplies the modules for both Germany's and Europe's largest PVT plants

With over 1,130 and 1,000 PVT modules respectively, Sunmaxx decarbonizes an innovative sports arena and an automotive production facility.



## 2025

### Sunmaxx is the world's leading PVT manufacturer

Sunmaxx operates the world's largest and most advanced PVT production facility with an annual capacity of 120,000 hybrid modules, scalable by a factor of 5.

# REFERENCES – Residential/Private



## Single-family Home

Existing building, 1965, partially renovated

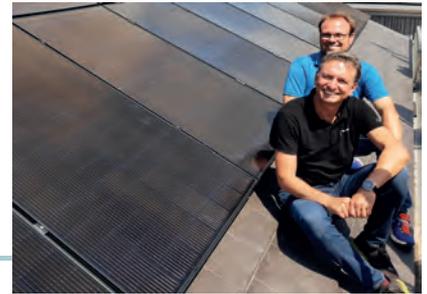
- PVT system operating since 2024
- Sole heat source for brine-to-water heat pump
- Space heating (radiators, underfloor heating)
- Domestic hot water and pool heating
- Number of modules: 32 (64 m<sup>2</sup> PVT area)



## Private House

New building, 2023

- PVT system operating since 2023
- Number of modules: 20 (40 m<sup>2</sup> PVT area)



## Residential Building

Old mansion, existing building

- Under historic preservation, steep slate roof with dormers
- PVT system operating since 2024
- Number of modules: 22 (44 m<sup>2</sup> PVT area)

# REFERENCES – Industry/Commerce



## Sports Arena Vienna

New building, 2025

- Most advanced Sports Arena in Europe regarding energy and building standards
- PVT operating since 2025
- Approx. 20,000 m<sup>2</sup> of heated space
- Highest building and energy standards 100 % climate-neutral heat and power supply
- Number of modules: 1,136 (2,272 m<sup>2</sup> PVT area)
- PVT used as primary heat source and for ground probe regeneration
- Reduction in geothermal energy costs by more than 50%

## Automotive Plant

Existing building, 1980s

- Almost complete Decarbonization of production facility
- Significant investment cost reduction (due to ground probe regeneration, savings of more than 50% in drilling meters thanks to PVT)
- Number of modules: 1,000 (2,000 m<sup>2</sup> PVT area)



## Office Building

Existing building, approx. 1990

- PVT system operating since 2023
- Feed-in of surplus heat from summer months into geothermal probes
- Dual use of probes as heat suppliers and seasonal storage
- Maximum heat pump efficiency by increasing the annual performance factor with PVT
- Number of modules: 36 (72 m<sup>2</sup> PVT area)

# REFERENCES – Energy/Residential



## Municipal Low-temperature Grid

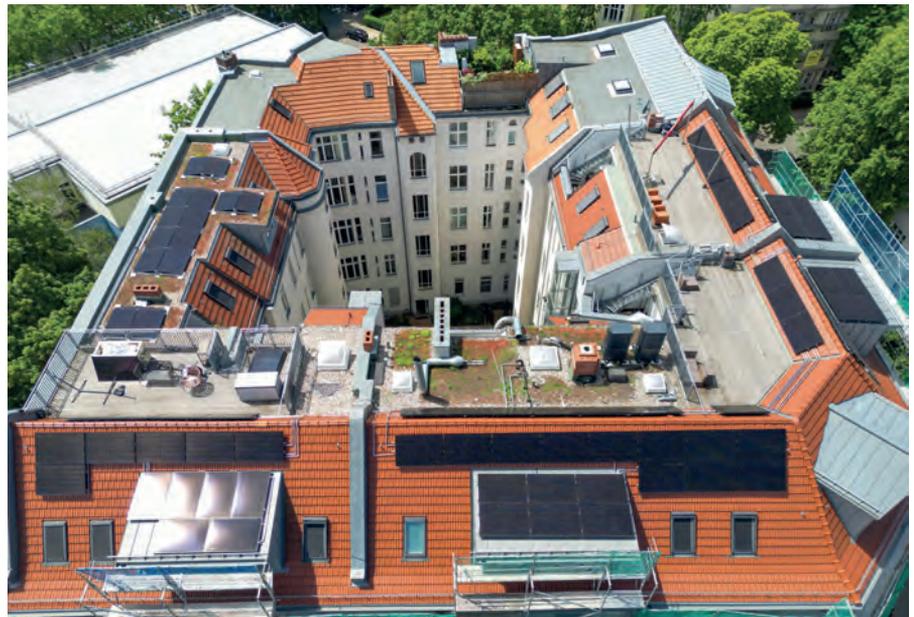
Existing building, 1996

- PVT system operating since 2024
- Multi-purpose hall in historic city centre
- Municipal heating network with 3 GWh heat demand
- Combined with seasonal storage (geothermal probes) and brine-to-water heat pumps
- Number of modules: 156 (312 m<sup>2</sup> PVT area)

## Apartment Building

Existing building, 1905

- PVT system operating since 2024
- 5,000 m<sup>2</sup> of heated usable space
- PVT as a heat source for brine-to-water heat pump
- Dual use for geothermal probe regeneration
- Number of modules: 66 (132 m<sup>2</sup> PVT area)



# Our Product



## Hybrid Module PX-1

The PVT Module with Automotive Technology.

- ⦿ Combines photovoltaic (PV) und thermal (T) energy supply in one hybrid module.
- ⚡ 5 to 10% more PV gain from solar radiation due to cooling of the module.
- 🔥 An aluminum heat exchanger on the rear side gains thermal energy from sun and ambient air.
- 🌡 Thermal energy gets transferred to a brine-to-water heat pump via heat transfer fluid.
- 🔄 Suitable for cooling as well: The standard heating circuit can easily be reversed in summer.
- ☀ Fit for various applications: Private homes, residential districts, industry, and municipal heat supply.
- ❄ Highly efficient – even in winter. Snow melting easily possible.
- € Efficient and economic: Attractive module pricing due to industrial mass production.
- 🌱 Sustainably manufactured with 100% independently certified green electricity.

## The PVT Module with PV Mounting System





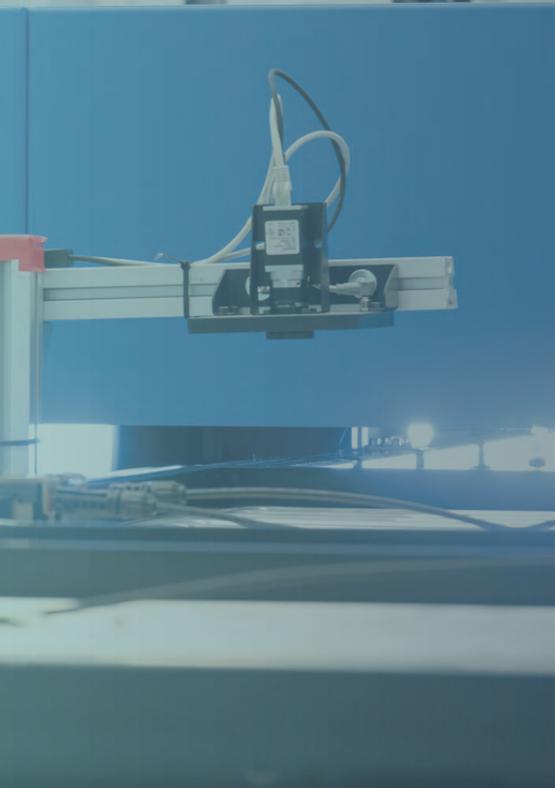
## Highest Quality Standards

Sunmaxx PVT modules are produced near Dresden, Germany. It is the world's first and only industrial production facility for hybrid modules.

Innovative technology and patented manufacturing processes make Sunmaxx the world's leading PVT manufacturer. The PX-1 is the most powerful and cost-efficient hybrid module on the market.

It goes without saying that we place great importance on the highest quality standards in our production. Each module is thoroughly tested on our own measuring equipment before it is shipped to our customers.

In addition, our modules undergo continuous testing in our own climate chambers.



## Certified and Awarded



## Successful Projects with the Following Heat Pump Labels

alpha innotec · Bosch/Buderus · Dimplex · Ecoforest  
 Heidinger · iDM · M-TEC · NIBE · NOVELAN · OCHSNER  
 ratiotherm · STIEBEL ELTRON · tecalor · Vaillant  
 Viessmann · WATERKOTTE

## Full Replacement for Fossil Heating Systems

Filling up the heating tank is putting an ever-increasing strain on people's wallets. PVT offers independence from fossil fuel price fluctuations and supplies homes with:

- permanently low costs for heating and cooling
- climate-friendly energy – secure and all year round
- simultaneous power generation



# HOLISTIC ENERGY SOLUTION

The Clever Alternative to Air-to-water Heat Pump & PV



Noiseless



Aesthetic



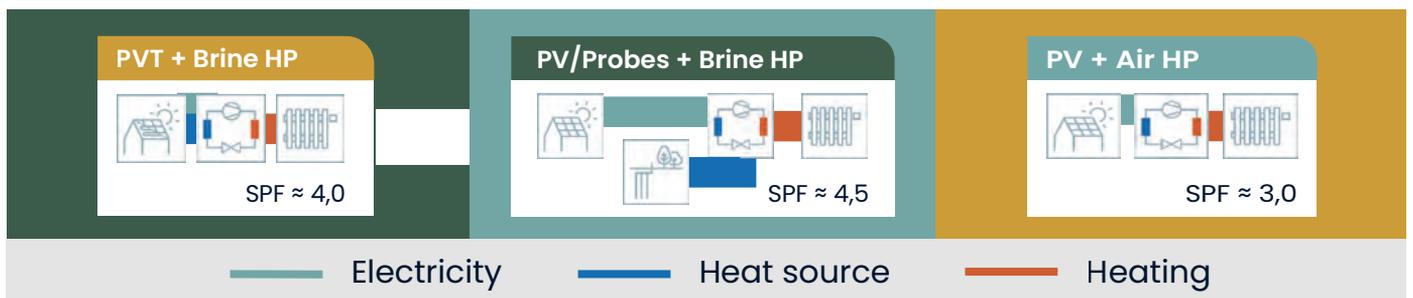
Efficient



Economic

## Example Calculation

## Investment Comparison

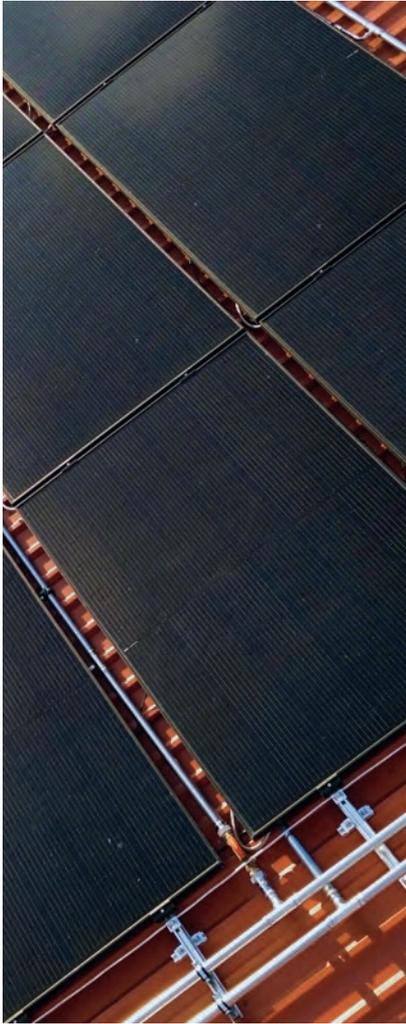


### Advantages for Single-family homes using Sunmaxx PX-1 PVT modules

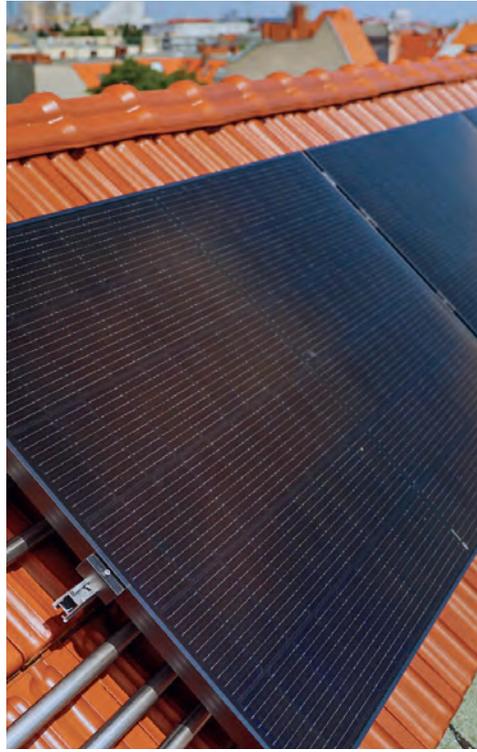
Monovalent operation without additional heat source: investment savings regarding planning and installation · no challenges with environmental regulations, e.g. noise emissions or water protection areas · space-saving installation – vertical mounting possible, e.g. on walls or building façades.

Note: The overview shown above is based on example calculations. Actual costs may vary significantly depending on conditions.

The Best of Both Worlds: PV and Solar Thermal Energy in One Module.



Castle complex, Saxony-Anhalt



Apartment building, Berlin



Apartment building, Berlin



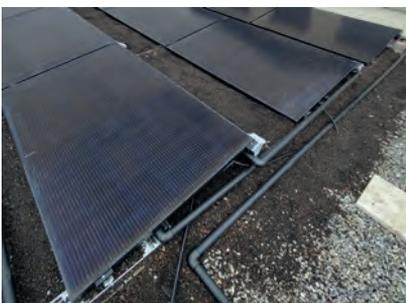
Old mansion, Zwickau



MAHLE automotive production, Baden-Württemberg



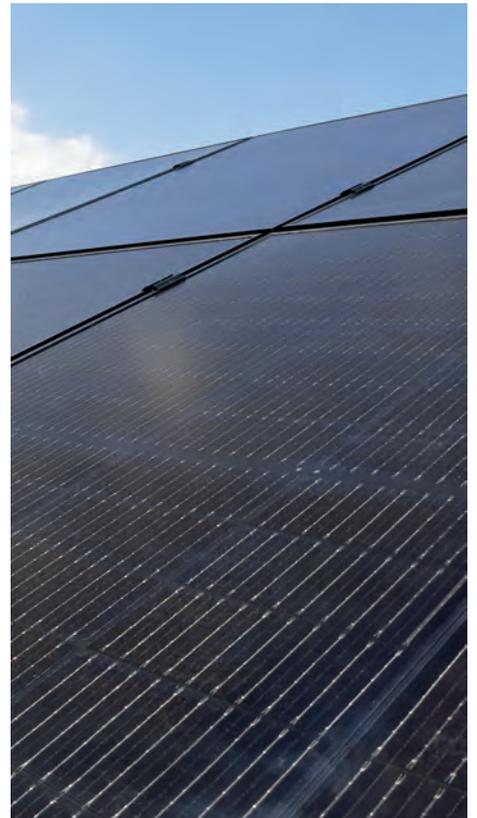
Sports Arena, Vienna



Private pool heating, Switzerland



Commercial building, Baden-Württemberg



Private home, Regensburg

## Sunmaxx PVT GmbH

Your Specialist Partner

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Germany

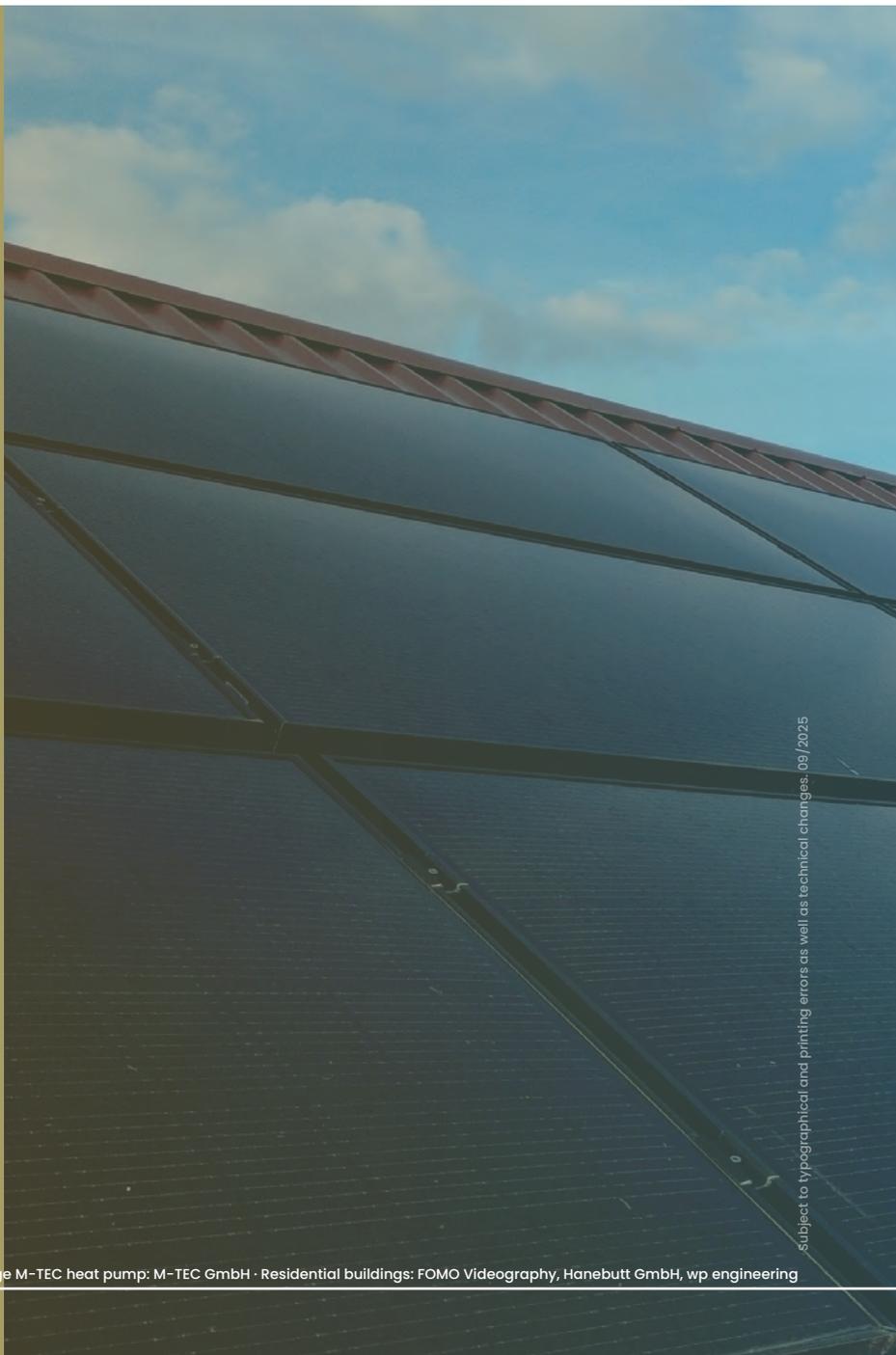
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Made for the World.



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