

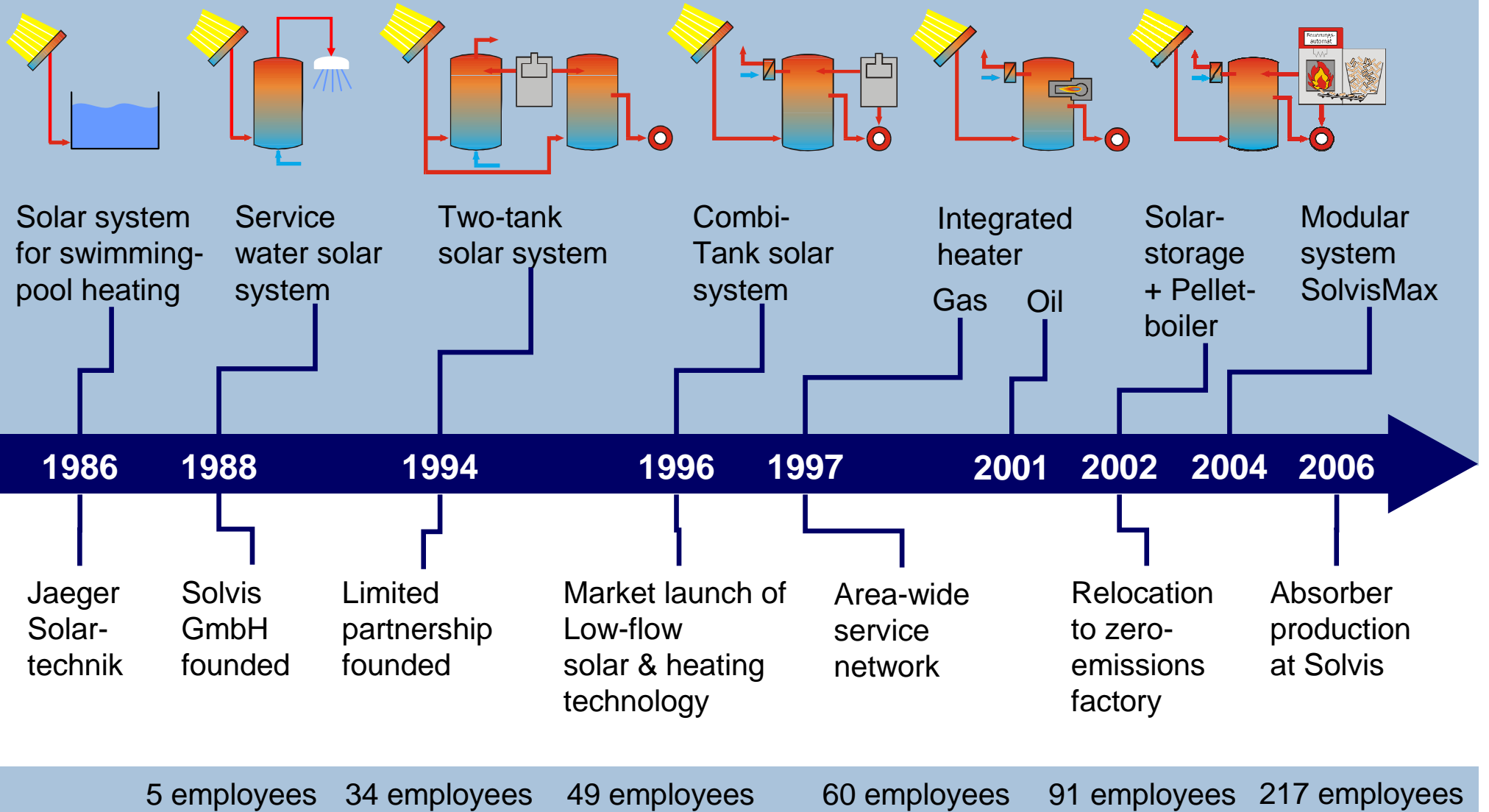


The new heating system.


**Simple solutions**  
are usually the best...



# Product Development and Company History



# Solvis 2008

- 
- Unique concept of solar heating with the SolvisMax platform
  - € 37 million sales in 2007
  - approx. 220 employees in employee-determined company model
  - Distribution via 28 regional branches in Germany
  - Service provided by 25 customer-service companies
  - Partners in Austria, Switzerland, Italy, Portugal, Spain, Holland, France
  - Europe's largest zero-emissions factory
  - European Solar Prize 2002 and Energy Globe 2003
  - Solar heating boiler wins Stiftung Warentest (German Production Testing Foundation) 4/2003
  - B.A.U.M-Environmental Award 2007
  - Technological leader in Germany and Europe

# Solvis - Awards & Distinctions



**1998- Solar Prize from the German Solar Power Society**  
for the "outstanding technical solar product", the SolvisMax

**1998- Environmental prize of Lower Saxony**  
for exemplary commitment to climate protection

**2001- Innovation prize for Architecture and Technology**  
for the concept of the zero-emissions factory

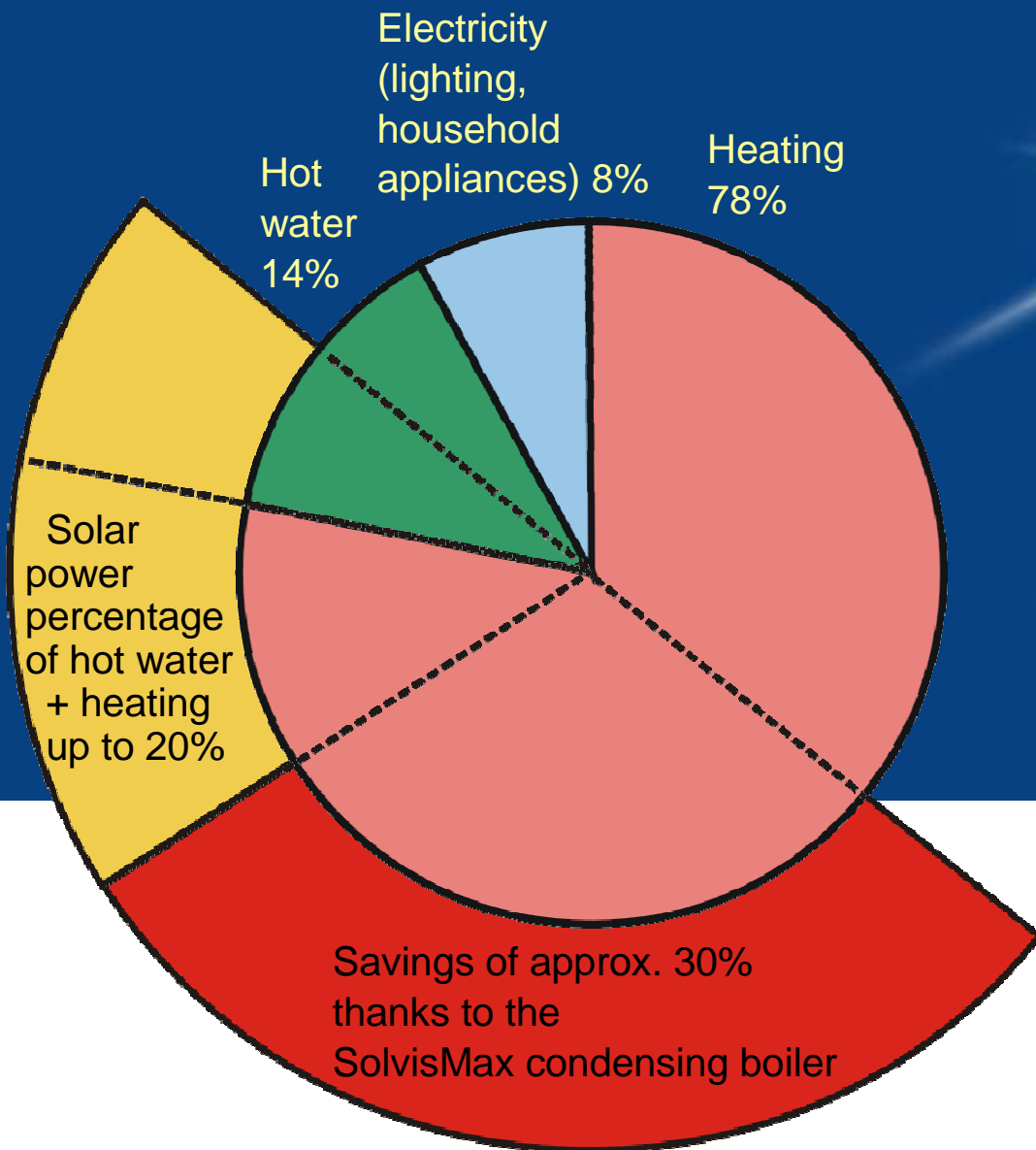
**2002- European Solar Prize**  
for the sustainable, zero-emissions factory

**2003- SolvisMax Gas wins Stiftung Warentest (Production Testing Found.), April 2003**  
in the category: Combination systems with integrated gas burner

**2003- Architecture & Technology Award to Banz & Rieks**  
and solar construction for the zero-emissions factory

**2003- Energy Globe Award – world award for sustainability**  
as standard-setting example of an environmentally-conscious industrial company

**2007- B.A.U.M-Environmental Award**  
for successful and sustainable engagement in environmental protection



## The sun as a significant energy provider for your house

In Spring, Autumn and on sunny winter days, your SolvisMax also uses collected solar energy **to heat your living space.** It shortens the heating season by many weeks.

12 m<sup>2</sup> solar system for single family house (housing stock)

# Solvis. Solutions for the Energy Revolution.



**Collectors**

**SolvisFera/Cala/Luna**

**System control  
SolvisControl**



**Fresh water  
large systems**

**SolvisVital/  
SolvisZentro**



**Heat boiler  
platform  
SolvisMax**



**Stratified  
solar storage  
tank  
SolvisIntegral/  
SolvisStrato**

**Hot water  
solar storage  
tank  
SolvisTherm**



**Pellet heat  
boiler  
SolvisLino**

# Absorbers made by Solvis – worldwide in use



Computer controlled laser-welded machines

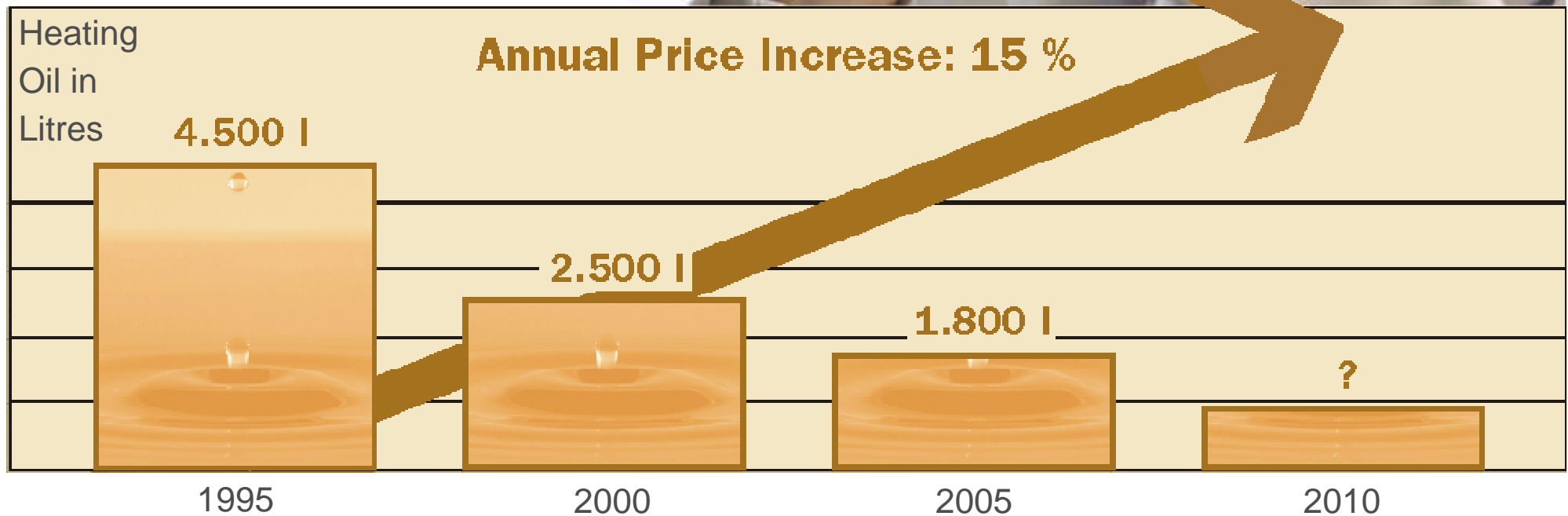


Computer controlled bending machine

Customized absorbers manufactured in the zero-emission factory at Braunschweig / Brunswick.

- Qualitative high-class absorber and economic manufacturing
- Computer controlled bending machine (Meander up to 6mtr. length could bend) und 2 Computer controlled laser-welded machines
- 350.000m<sup>2</sup> manufacturing capacity per year – TOP in Europe
- Technical leader at the manufacturing of absorbers – european wide
- High number of satisfied customers – world wide
- Experience over 20 years in manufacturing of collectors and heating systems

» **My 1000 euro**  
**buy me**  
**less and less heating oil!** «





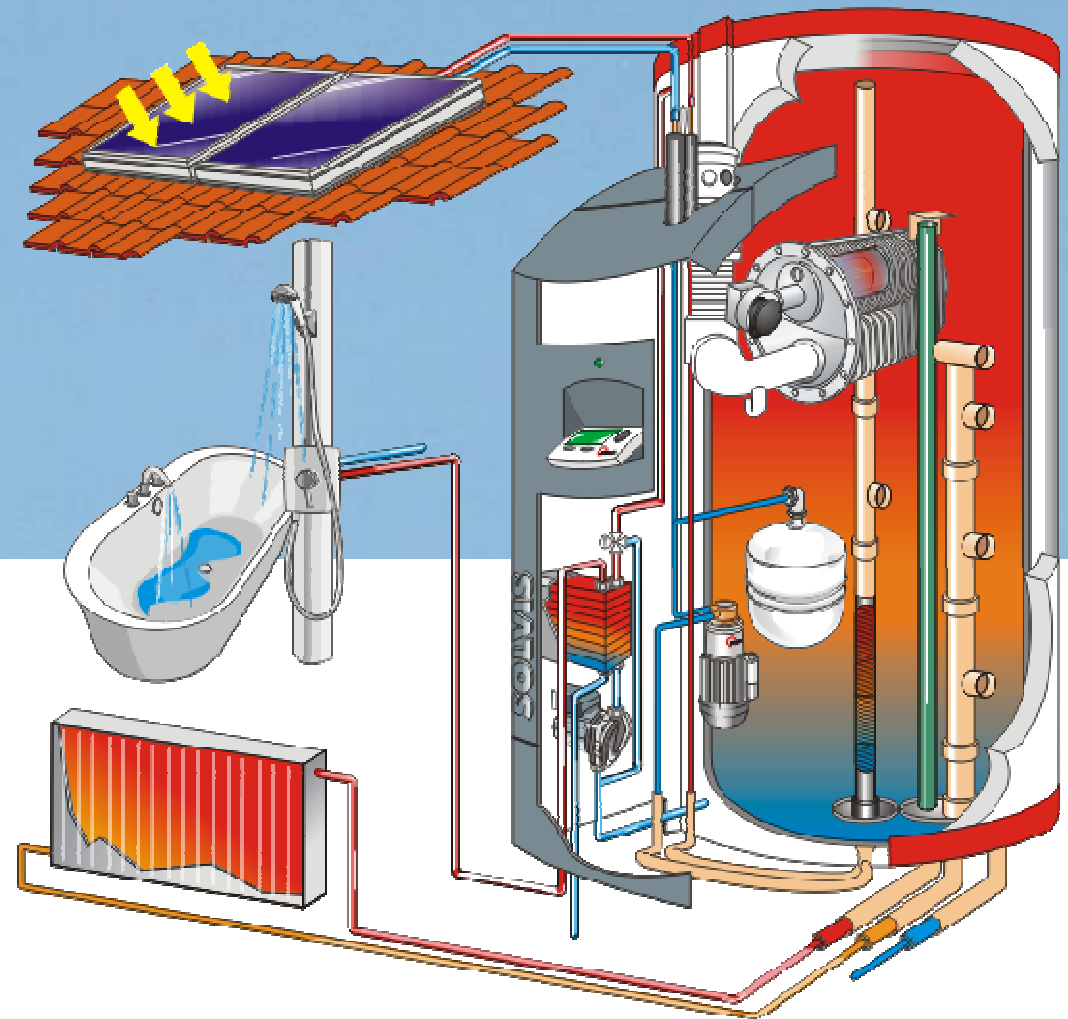
Secure future

Halves heating costs

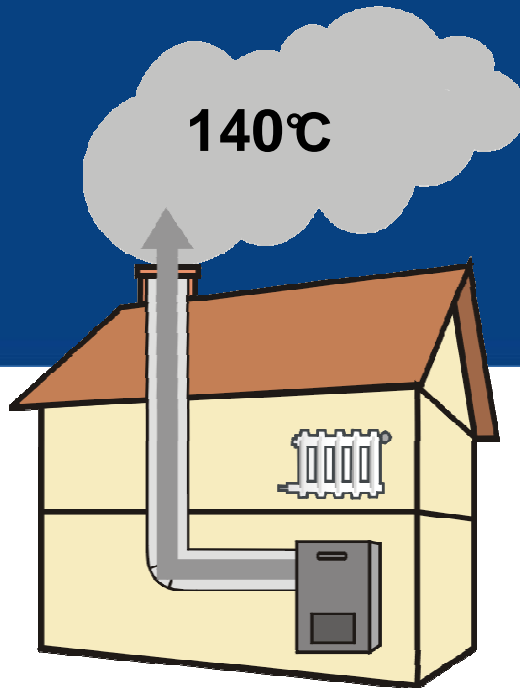
Cuts emissions

Saves space

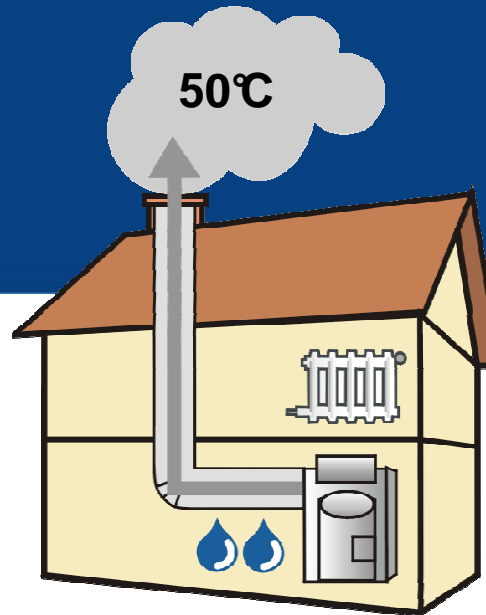
## SolvisMax – The Energy-Saving World Champion



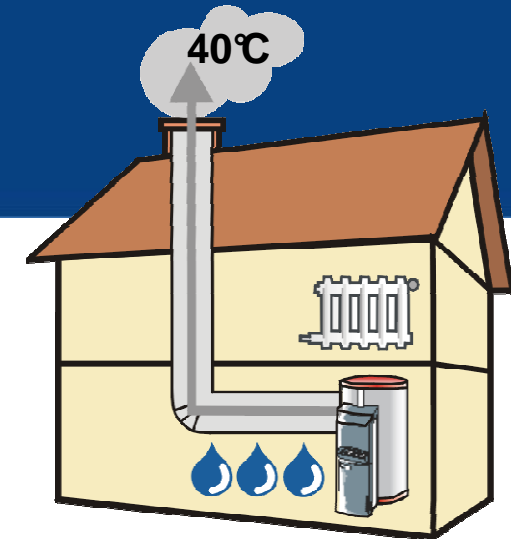
# The Heat Value Effect Provides Efficiency of Over 100%



**Old heating:**  
Annual use efficiency **68%**  
(incl. hot water heating during summer operation)



**New gas condensing boiler:**  
Annual use efficiency **92%**  
(incl. hot water heating during summer operation)



**SolvisMax Gas:**  
Annual use efficiency **106 %**  
(incl. hot water heating in summer operation)

**Example:**  
Consumption of  
4000 m<sup>3</sup> gas/year.

**Saves 1000 m<sup>3</sup>.**  
Only 3000 m<sup>3</sup> gas/year.

**Saves 1400 m<sup>3</sup>!**  
Only 2600 m<sup>3</sup> Gas/year.

# Every model is expandable up the maximum level.



## 1st way:

The highest level: immediately up to 50% in energy savings with the best SolvisMax **solar heating boiler**.

## 2nd way:

- If you want initially 'only' the best heating boiler.
- It can be supplemented later with a solar unit or a fire.

## 3rd way:

The best solar storage unit for your existing boiler. Save yourself having to have a new tank later. Your SolvisMax solar storage unit is simply re-equipped with a burner chamber module.

# Energy Manager SolvisMax.



**Retrofittable module system for all sources.**

# Hard to Believe - So Many Laurels Already:

**STIFTUNG WARENTEST**  
 Product Testing Foundation  
 Test winner: SolvisMax Gas SX956  
 Combination unit with integrated gas burner

**EXCELLENT**

Tested: 11 solar combination units  
 two of which were "excellent"

**test** 4/2003

www.test.de

**STIFTUNG WARENTEST**

**Test comment:**  
 One of the two best systems in the test,  
 featuring flat-plate collectors and integral gas  
 boiler: very low electricity consumption.

**Performance:** very good  
**Savings in annual energy consumption:** very good  
**Useful heat quantity:** very good  
**Integrated buffer for boiler:** very good  
**Operation and processing::** good  
**Energy amotisation:** very good



**IEA**  
 INTERNATIONAL ENERGY AGENCY  
 Task 26 Solar Combisystems 12.2002  
**SolvisMax Gas: »By far the best  
 European solar-powered heating system«**

**DGS-ISES  
 SOLAR PRIZE  
 1998**

**SolvisMax:**  
 «excellent technical  
 solar power product»



# Halving Energy Costs - Example 1



**Energy costs saved by 50%!**

**Single family house  
in Burgdorf/Hanover**

**2 Solvis F-55 collectors (11 m<sup>2</sup>)  
and one SolvisMax Gas (SX-455).**

Consumption with old boiler:

**2250 m<sup>3</sup> natural gas**

SolvisMax startup in 2000, consumption  
in 2004:

**1200 m<sup>3</sup> natural gas**

**50% less consumption, savings of  
approx. 600 euro incl. VAT per year!**

# Halving Energy Costs - Example 2



**Energy costs saved by 56%!**

**Single family house Salzgitter**

**2 Solvis F-55 collectors (11 m<sup>2</sup>)  
and one SolvisMax Gas (SX-655).**

Consumption with old boiler:

**4400 m<sup>3</sup> natural gas**

SolvisMax startup in 2001

consumption in 2004:

**1900 m<sup>3</sup> natural gas.**

**56% less consumption, savings of  
approx. 800 euro incl. VAT per**

# SolvisLino Pellet Boiler



**SolvisLino. Nature's friend.**



- **Fill your store room just once a year**
- **Clean out ash just once per heating season (average single family house)**
- **Maximum fire safety**
- **Lowest emissions «**



# Halving Energy Costs - Example 1



**35% of fuel saved!**

**Single family house in Elze/Hanover**

**SolvisLino 10 kW pellet boiler  
Solar SI-456 stratified storage tank and  
1 F-802 collector (8.4 m<sup>2</sup>).**

Consumption of old low-temperature boiler  
(8 years old): **2300 l heating oil** per year  
(= €1380)

SolvisLino annual consumption:  
**3000 kg Pellets (= € 540)**  
**≙ 1500 l heating oil.**

**60% energy costs saved,  
approx. 840 euro inc. VAT per year!**

# Halving Energy Costs - Example 2



**40% of fuel saved!**

**Single family house in Andechs/  
Lake Ammer**

**SolvisLino 30 kW pellet boiler  
Solar SI-756 stratified storage tank and  
2 F-552 collectors (11 m<sup>2</sup>).**

Consumption with old boiler:

**10,000 l heating oil** per year (= € 6,000)

Consumption in winter 2005/2006 with  
SolvisLino: **12,000 kg Pellets** (= € 2,160)  
≙ **6,000 l heating oil.**

**64% energy costs saved,  
approx. 3,500 euro inc. VAT per year!**

# Geesthacht in Hamburg



# Solar Heating and Solar Electricity - Energy Saver NRW 2002 -



# Otter Centre in Hankensbüttel



# Old People's Home in Jena - 240 m<sup>2</sup> Collector Surface

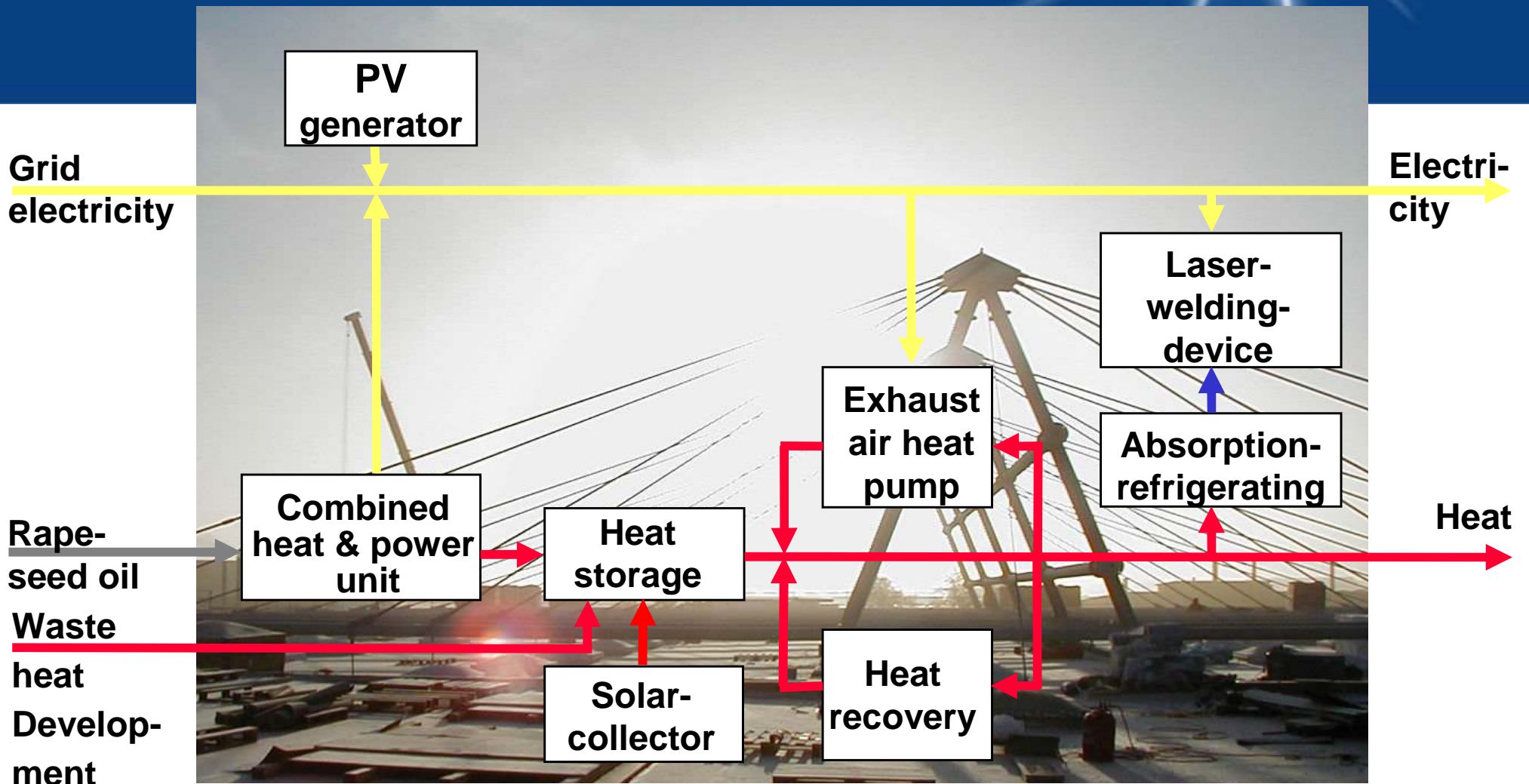


# Housing Estate in Rostock



- 11 apartment blocks belonging to WIRO GmbH in Rostock
- 1,300 m<sup>2</sup> roof surface, 1,000 m<sup>2</sup> active collector surface

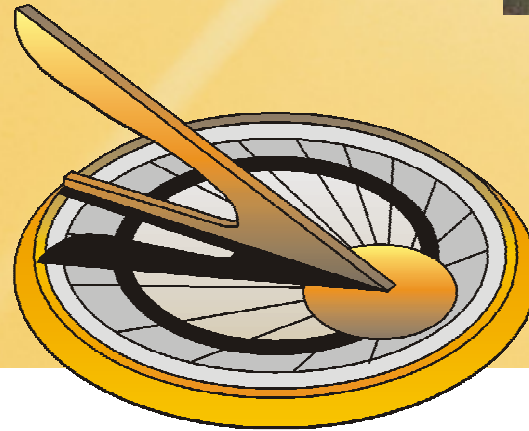
# Solvis Zero-Emissions Factory - Power Supply -





# The Solvis- Zero-Emissions Factory – lasting climate protection.





**Energy from the sun:  
Five billion years guaranteed!**

