



# Solar systems

# & Walltherm®

developed &  
produced by Wallnöfer H.F.

The first water heating wood gasification stove

**Progress**  
is the route from the primitive  
to the simple solution, via  
the complicated one

efficiency  
**86%**  
internationally patented



efficiency  
**93%**  
fine particles  
only 24mg  
internationally patented

# Walltherm®

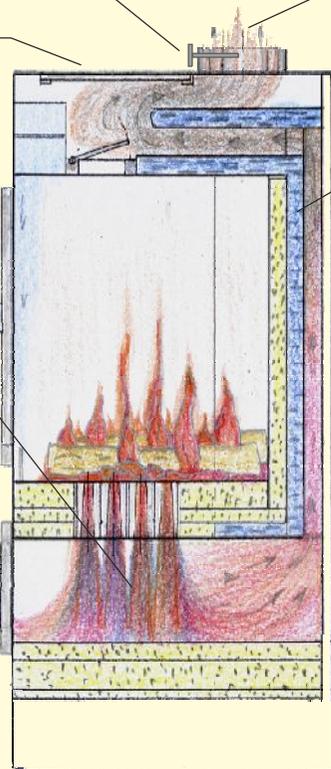
## The technique

wood gasification stove



On the thermometer you can observe the low temperature of the exhaust fumes

cooking plate:



The heat exchanger:  
The heat exchanger is designed to absorb the highest amount of heat possible from the fumes

The efficiency of 93 % confirms the quality of the wood gasification stove Walltherm.

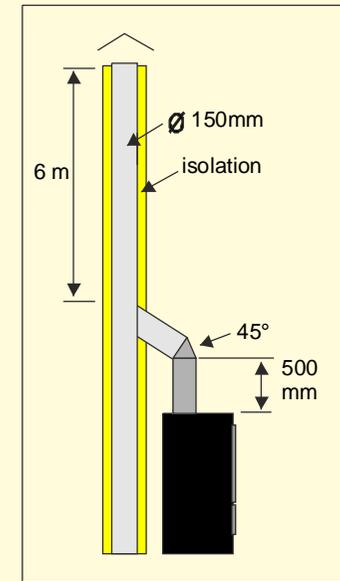
Also **BLT-Wieselburg (A)** and **TÜV Rheinland (G)** confirm the high efficiency!



VKF Nr. 17665 (CH)

### The chimney needed for an ideal draught

- 6 m height
- 150 mm diameter
- the pipe has to be insulated



### Technical data sheet of the Walltherm®:

total power output:	14,9 kWh
output to water:	10 kW
output to air:	5 kW
efficiency:	93 %
fine particles:	24 mg/Nm <sup>3</sup>
working pressure:	2 bar
chimney draught:	min. 12 Pa - 15 Pa* max. 20 Pa
weight:	around 300 kg
water content:	25 lt
volume of the upper chamber:	55 lt
diameter of chimney:	ø 150 mm
exhaust stream:	0.0107 kg/s
exhaust gas temperature:	ca. 120 - 150 °C
exhaust gas temperature (in lighting phase):	ca. 250 - 400 °C
fuel:	dried wood (max. 20 % humidity) length max. 35 cm

Warranty:

5 years on the body (replaceable parts excluded)  
2 years on all valves and electrical components

There are two combustion chambers in the stove. The fire is lit in the upper chamber. Once up to temperature the hot gases pass through the combustion jets where they are combined with secondary air. In the lower combustion chamber that gas ignites and creates a second flame which burns extremely cleanly and efficiently. The hot exhaust gases then run up through the heat exchanger.

**Beautiful to look at!**  
The stove has two heat-resistant glass panels, through which you can see the amazing fire.

How the heat splits up:



70% to the water 30% radiant heat

# Walltherm®

## wood gasification stove



### Mod. Zebrú

# The characteristics

The **Walltherm®** is the first ever stove which combines the characteristics of a traditional stove with the technical attributes and efficiency of a reverse combustion log gasification boiler. Due to the gasification, the **Walltherm®** achieves very low emissions (only 24mg) and an unparalleled efficiency of 93%.

The Walltherm heats up the thermal store and gives radiant heat into the living room. It's unique double windows give you the extraordinary sight of two different fires, the cosy wood fire above and the spectacular gasification flames pouring through below.

#### It works like this:

There are two combustion chambers in the stove. The fire is lit in the upper chamber. Once up to temperature the hot gases pass through the combustion jets where they are combined with secondary air. In the lower combustion chamber that gas ignites and creates a second flame which burns extremely cleanly and efficiently. The hot exhaust gases then run up through the heat exchanger.

One of many innovations in this stove is that this has been achieved using the natural draught of the chimney without the use of an exhaust fan.

The power output of the stove is 14,9 kW. 30% of that warmth is passed into the room where the stove is placed while the other 70% of heat is sent to the water tank.

An impressive fact is that the flame in the lower combustion chamber generates up to 1000°C, but the exhaust gases have only around 160°C. This shows just how efficient the stove uses the heat.



The **Walltherm®** is internationally patented.

## Mod. Zebrú

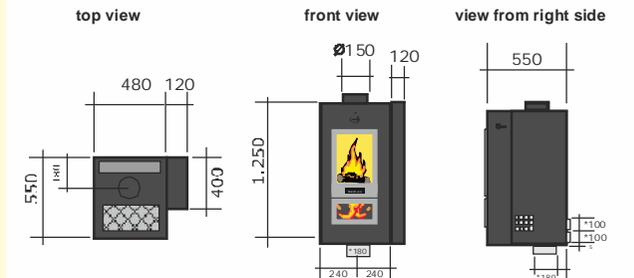
#### Mod. Zebrú

This is the standard model, simple and smart, and available in black or grey.

It comes complete with:

Pump, load valve, safety group and overheat safety valve as well as cleaning brushes, fireplace poker and stove broom.

#### Size of the Zebrú model: in mm



\* combustion air taken from outside

# Walltherm®

## Kaiser insert model

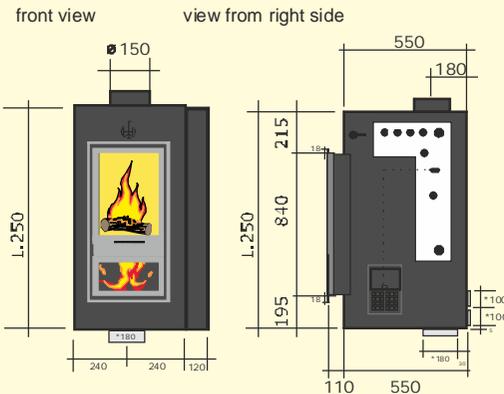
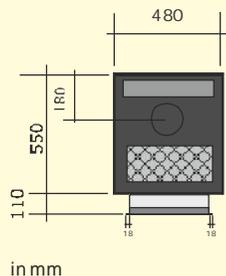
wood gasification stove

The Kaiser insert model is designed to be built into a wall or a corner. The front face of the stove is extended forward so that the windows are flush with the surrounding wall when installed.



This is only one of many possibilities

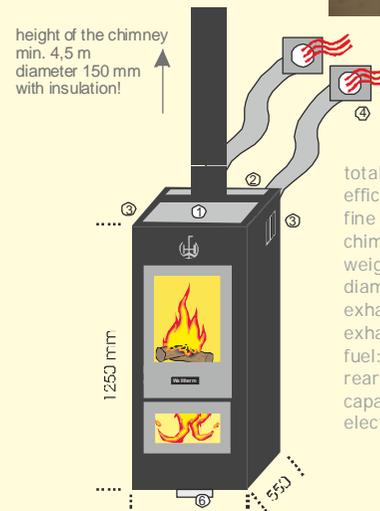
Size of the Kaiser insert model: top view



\* combustion air taken from outside

# Walltherm® AIR

The wood gasification stove **Walltherm® Air** has an integrated air heat exchanger and a fan to distribute the warm air. If you have the need to heat a big room very quickly the **Walltherm® Air** is the ideal choice for you. The fan is adjustable and can be set to a silent level after a fast heat up.



### Technical sheet of the Walltherm® AIR:

total power output:	6 - 12 kWh
efficiency:	87,25 %
fine particles:	12,4 mg/m <sup>3</sup>
chimney draught:	13 Pa - max 20 Pa
weight:	290 kg
diameter of chimney:	150 mm
exhaust gas flow:	10,1 g/s
exhaust gas temperature:	ca. 180°C
fuel:	dried wood humidity max 20 %
rear air connections:	2 x 120 mm (backsite)
capacity of the fan:	250 m <sup>3</sup> /h
electrical connection:	230 V

EN13240  
Art.15a BVG (AT)



- 1 cooking plate
- 2 fuel channel
- 3 exit hot air
- 4 connection possibility for air channel which goes to other rooms (2 x 120 mm, max. 6 m length)
- 5 connection for combustion air from behind
- 6 connection for combustion air from the bottom

# Walltherm®

wood gasification stove

In well insulated buildings, or in small rooms the Walltherm® could give more radiant heat than is needed. Insulation systems for the stove are available for these situations. These significantly reduce the heat to the room with a corresponding increase of heat going to the water.

## Complete insulation: Quick for Walltherm® Zebrú

This set insulates the Walltherm® completely with 25mm of insulation material. It can be combined with radiant reduction glass, which further reduces the heat to the room.

Radiant heat reduction  
up to  
50%



The Quick insulation set is available in:  
- honey glow-brown  
- black  
- grey

The Quick firepanel insulation, can be painted with any colour emulsion paint

## Individual insulation: for Walltherm® Zebrú

Radiant heat reduction  
up to  
30%

It is possible to fit insulated covers on the front, left, right and back side of the stove. On the front side the panel can be in painted or stainless steel. A soapstone slab can be fitted on the top. There is also an option for radiant reduction glass, which further reduces the heat output to the room.



Stainless steel

Patinated corten steel

Honey glow brown



Rose

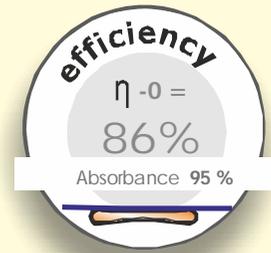
Black

Grey

Arunda model with brackets for a front stone slab.

# KA88/2002

## High efficiency solar panel:

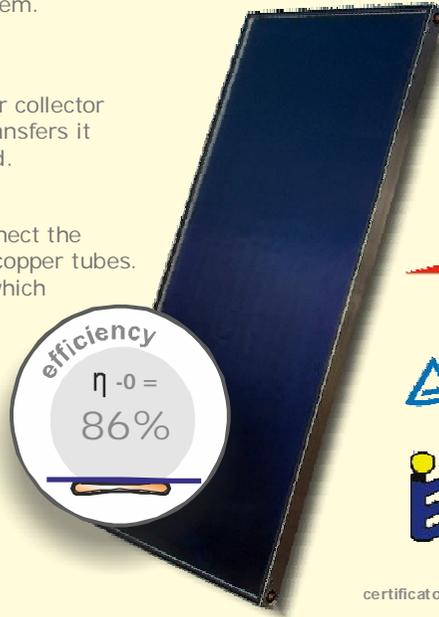


Due to high efficiency of the solar panels they can manage to heat all the domestic water throughout the summer. But even in winter, when there is much less sun, the solar panels continue to support the heating system.

The absorbing panel is the heart of the solar collector because it collects the sun's energy and transfers it through the copper tubes into the solar fluid.

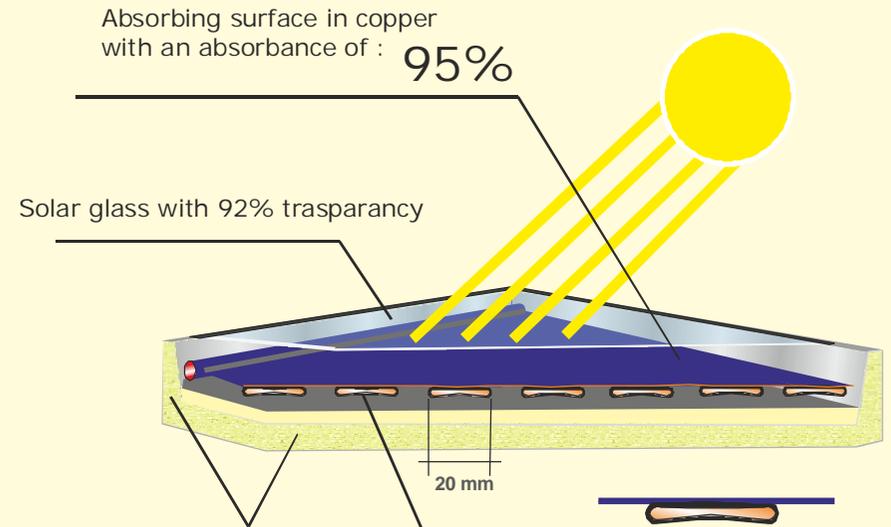
Our solar panel has a special system to connect the high performance absorbing surface to the copper tubes. We use flat tubes rather than round tubes which massively increases the connection area between tube and absorber.

The special flat tube is a Wallnöfer H.F. patent!



certificat o Solarkeymark

### Inside the panel:



Insulation on all 4 sides and on the back

**WARO-** flat tubes with 20mm contact to absorbing surface

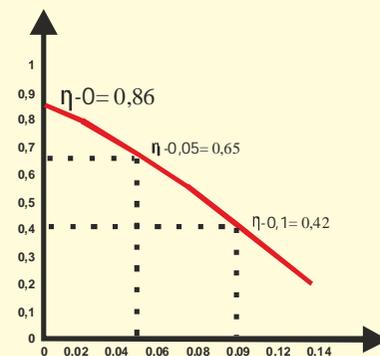
Especially on days with bad weather and limited sunshine our solar panel has it's biggest advantage because of the high efficiency. Our panel produces up to 25% more power compared with "standard" solar panels.

The high efficiency was tested and confirmed by SPF solar testing facility in Switzerland and TÜV Rheinland in Germany.



### The best of all tested flat plate panels:

$$\eta - 0 = 0,86 \quad \eta - 0,05 = 0,65 \quad \eta - 0,1 = 0,42$$



### Tecnicl datasheet:

	standard size	big size
depth:	88 mm	88 mm
width:	920 mm	1050 mm
length:	1940 mm	2350 mm
total surface:	1,80 m <sup>2</sup>	2,50 m <sup>2</sup>
absorbing surface:	1,65 m <sup>2</sup>	2,30 m <sup>2</sup>
fluid content:	0,6 l/m <sup>2</sup>	0,6 l/m <sup>2</sup>
weight/m <sup>2</sup> :	19,45 kg/m <sup>2</sup>	19,45 kg/m <sup>2</sup>
weight:	35 kg	48 kg
working pressure:	2-4 bar	2-4 bar
testing pressure:	8 bar	8 bar
max. temperature w/o fluid:	250°C	250°C
case material:	stainless steel	stainless steel or aluminium

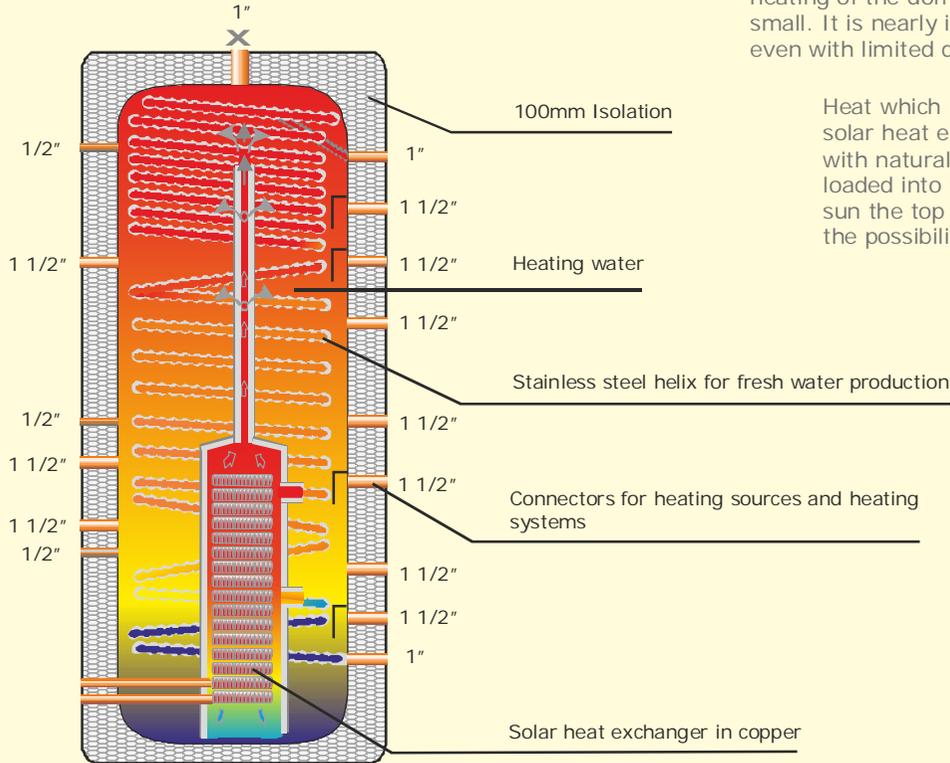
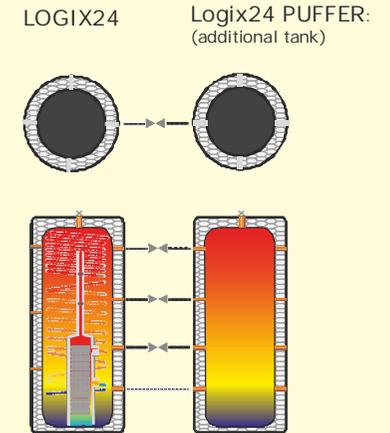
# Logix24

## The Logix24 combi tank

The Logix24 is a combi tank which contains the heating water. It produces domestic hot water through a stainless steel coil. As a result of the numerous connectors it is possible to use multiple heating sources.

The domestic hot water is heated instantaneously in the stainless steel coil (316L). The coil has a big exchanging surface which ensures a fast heating of the domestic hot water even if the content of the coil is relatively small. It is nearly impossible to have a legionella problem with this system even with limited domestic hot water use.

Heat which is produced by the solar panels is sent into the inner solar heat exchanger of the Logix24. The heat exchanger works with natural stratification, which means the hottest water is always loaded into the top part of the tank. So even when there is only a little sun the top part of the water tank can get hot first so you have the possibility to heat up the domestic hot water.



	600	1000	1300
content in liters:	600	950	1290
width without insulation in mm:	700	790	950
width with insulation in mm:	900	990	1150
height without isolation in mm:	1619	2016	1992
height with isolation in mm:	1700	2100	2072
tilt height in mm:	1670	2090	2090
weight in kg:	140	190	210
fresh water production in liters: when tank is on 60°C (fresh water at least 40 °C):	410	780	1050
fresh water coil in m <sup>2</sup> :	4,5	7,5	10
solar heat exchanger m <sup>2</sup> :	3,9	3,9	3,9
additional tank content in liters:	600	1000	1300

These pictures show the stratification inside of the Logix24 when connected to a solar plant:

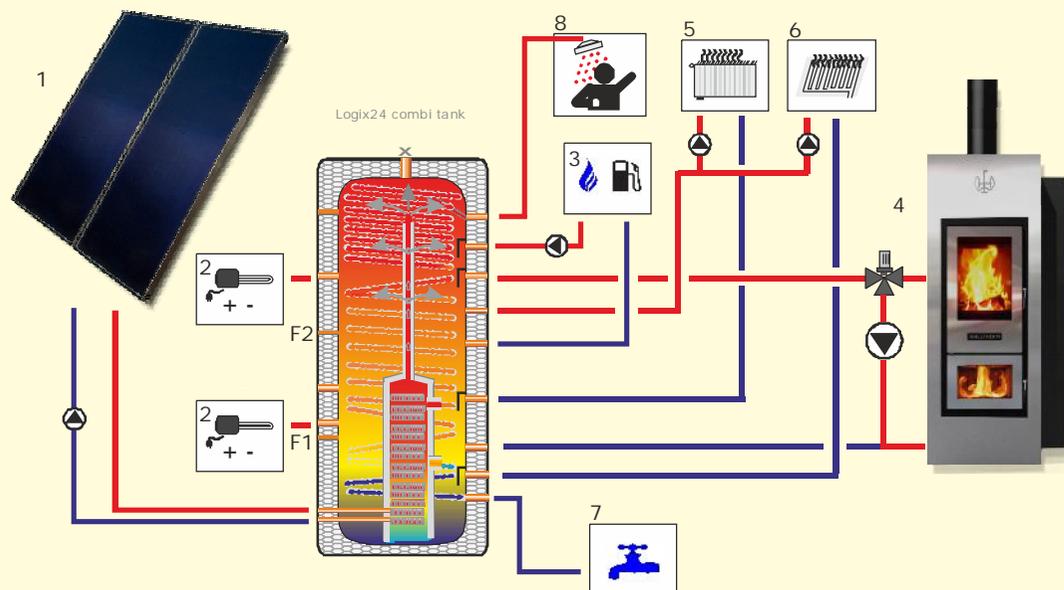


tank material:  
fresh water coil material:  
testing pressure:  
max. working pressure fresh water:  
max. working pressure tank:  
insulation:  
warranty:

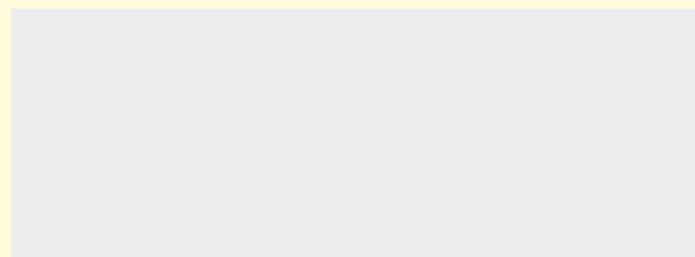
S235JR  
stainless steel 316L  
10 bar  
6 bar  
2,5 bar  
100 mm soft foam  
5 years



## The best solution to use the sun and wood as heating sources



- 1 solar plant
- 2 electrical heating element
- 3 gas/oil burner
- 4 Walltherm® woodstove
- 5 radiators
- 6 floorheating
- 7 fresh water entrance
- 8 fresh water exit



**Wallnöfer H.F. GmbH Energiesysteme**

Gewerbezone 110  
 39026 Prad am Stilfserjoch (BZ)  
 Südtirol / Italien  
 Tel. 0039 0473 61 63 61  
 Fax. 0039 0473 61 71 41

© [www.wallnoefer.it](http://www.wallnoefer.it)

