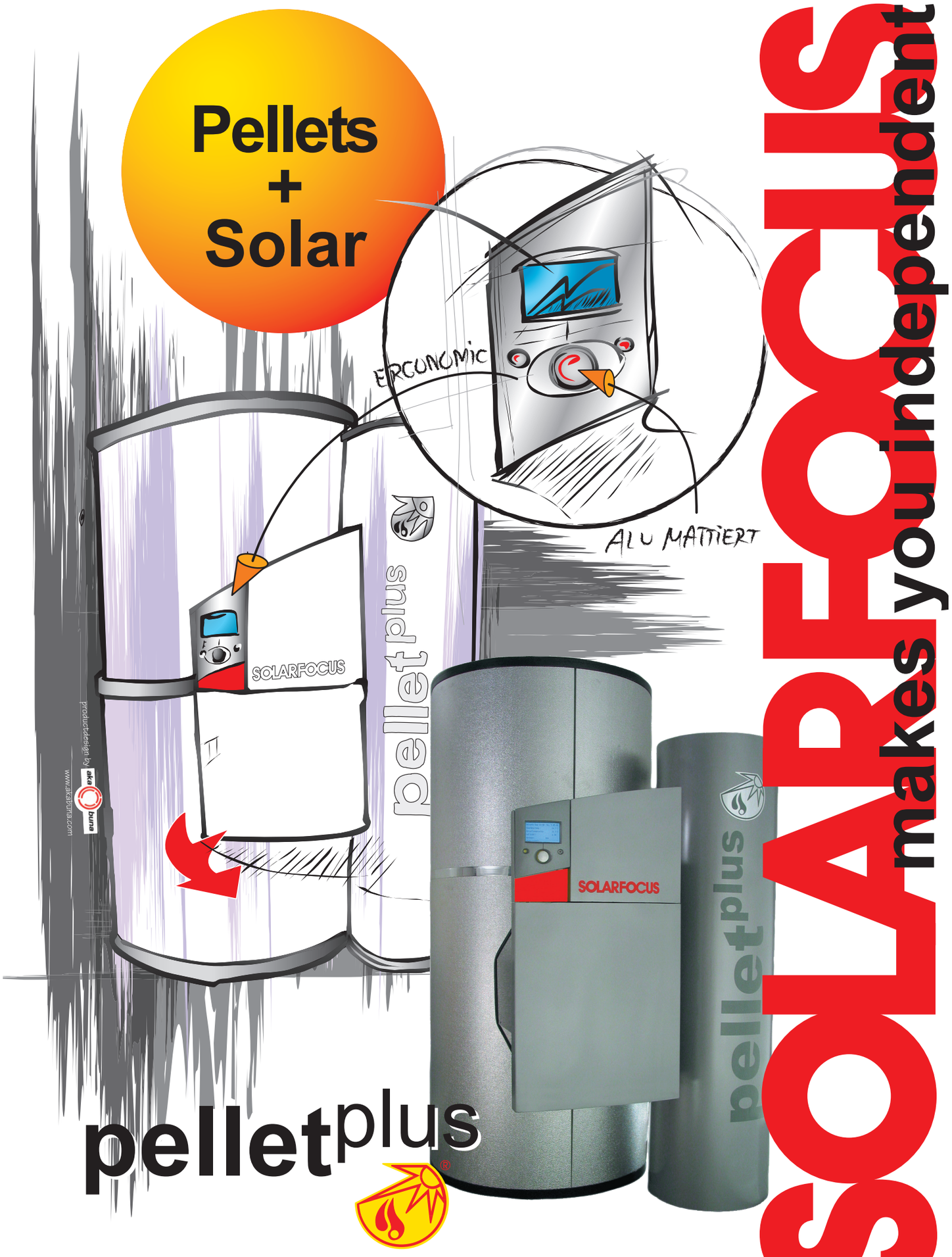
Pellets + Solar



SOLARFOCUS makes you independent

pelletplus

The sun is inexhaustible

The sun delivers enough energy within only 3 hours to cover the annual energy requirement of the total population of the earth.

The forest

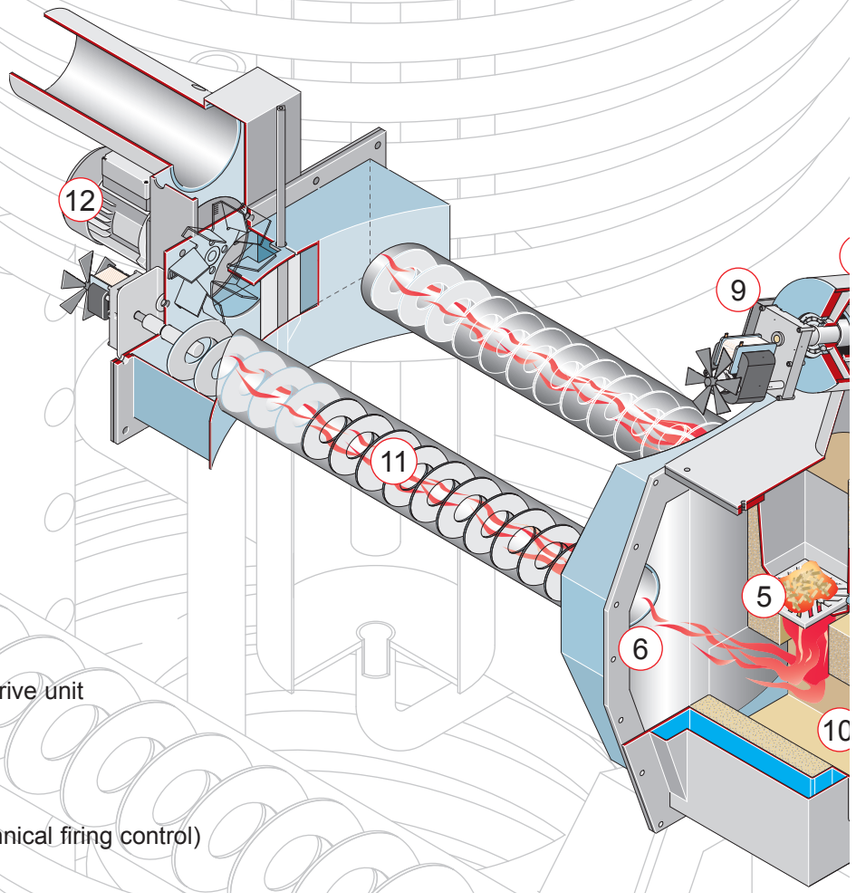
The forest requires as much harmful CO_2 for growth as is later released when burning wood or decaying wood. No matter if the wood is burned or decays into rich soil in the forest.

... into the future - with a clear conscience

Stainless steel burner 10 years According to Warranty Pass + Full warranty 5 years According to Warranty Pass

Energy from the sun and biomass

pellet^plus • revolutionary technology •



Legend:

1 Pellet storage container
2 Vacuum motor
3 Pellet slide-in unit with a rotary feeder and drive unit
4 Stainless steel boiler body
5 Burning grate
6 Lambda sensor
7 Energy-efficient glow pencil
8 Secondary damper with motor actuator (technical firing control)
9 Primary air duct
10 Ash chamber and door
11 Heat exchanger with automatic cleaning system
12 Induced draft fan motor (power control)
13 Control unit

Technology and combustion principle

The **pellet**^plus was specifically developed for the combustion of pellets. The revolutionary downburn technology guarantees an excellent burnoff of the pellets and therefore guarantees a clean environment.

- The capacity and firing control fully automatically optimizes the burner.
- Downburn technology
- Lambda sensor technology

System technology - dual concept

The **pellet**^plus combines the energy of the sun and the pellet firing in one “energy center”.
The burner no longer has to compensate the missing temperature difference upon requirement. The 100% use of the solar energy is therefore achieved.

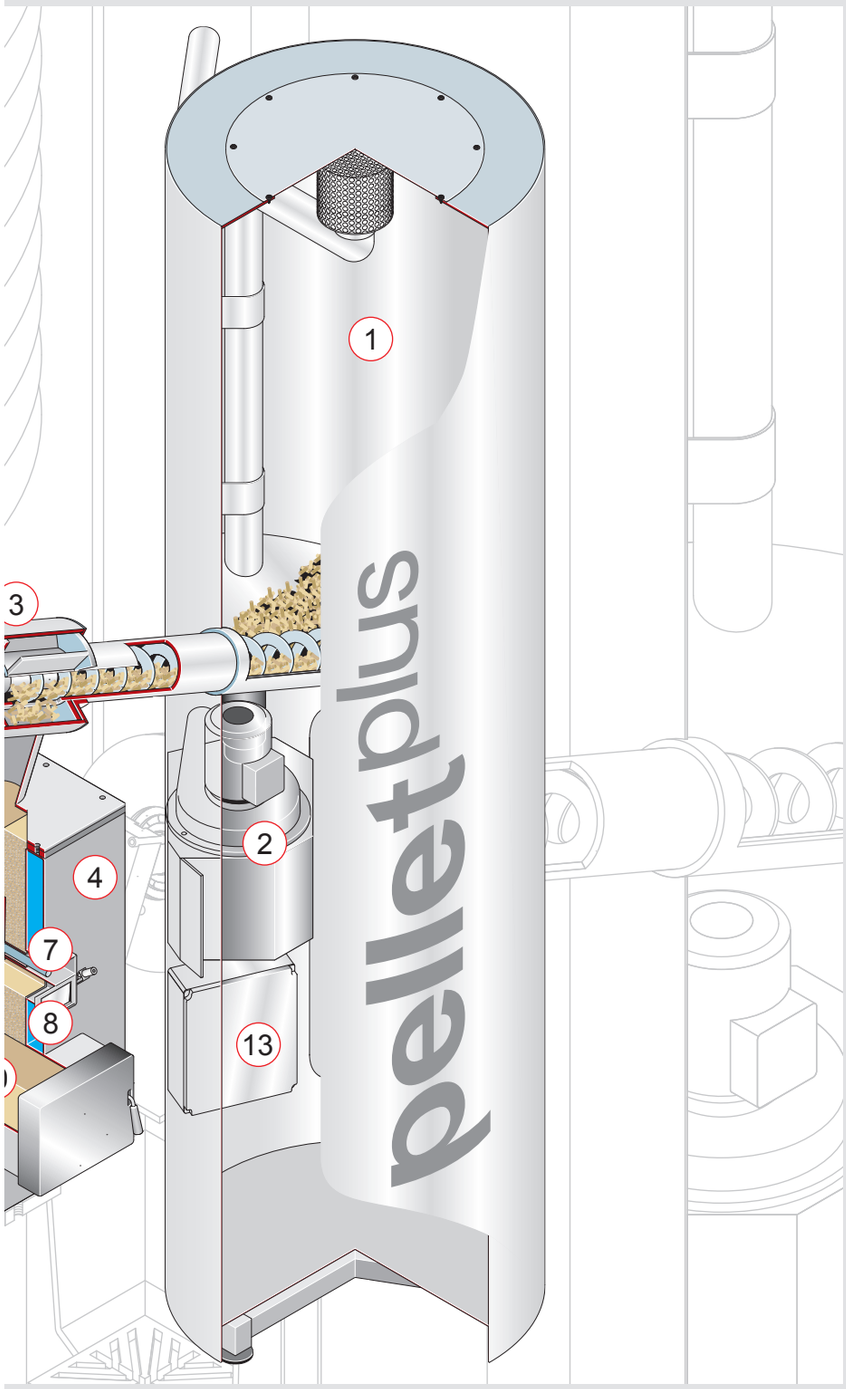
- No residual heat storage losses
- No rearrangement losses
- No residual boiler heat losses

In the tightest space - perfectly solv

The **pellet**^plus - make “ONE” ou
“THREE” - storage tank, tap w
tank and pellet boiler are one
within the **pellet**^plus .

- Minimum assembly cost
- Power cost reduction and sp
reduction due to the omissio
loading pumps and valves
- Centralized power manageme
- Lowest space requirement

• modern design • greatest economy



THE COMPONENTS

SOLARFOCUS
Biomass heater systems

Energy from
"stored solar power"

The energy source of wood (pellets) burns almost sulfur-free and CO_2-neutral as opposed to fossil fuels.
Heating within the cycle of nature.
The CO_2 released by the combustion is reused to build a new biomass.

SOLARFOCUS
Storage technology

... hot water in the hot zone,
warm water in the warm zone

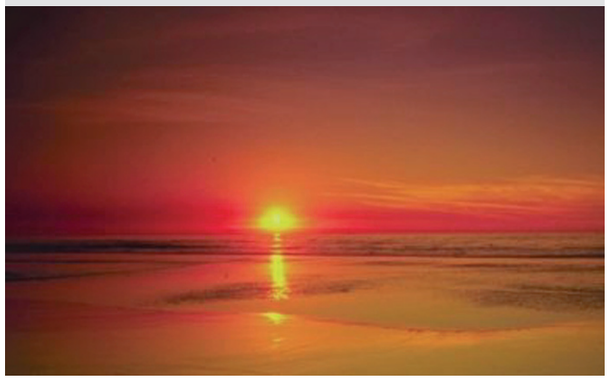
The clue to "correctly placing" the energy source of water into the "correct zone" without mixing cold water with warm water. The large storage volume also guarantees the best possible heat output during the transition period and during the cold season.

SOLARFOCUS
Solar systems

Energy without pollutants

We can use the enormous heat potential of the sun due to the innovative technology of solar collectors.

- Economical
- Inexhaustible
- Independent
- Free of charge



ved! Solar charge - fresh water technology - quick and pure

ıt of ater unit The solar charge is produced in the **pellet**^{plus} by the patented thermosyphon layer charging lance. The solar heat is thereby layered into the best temperature zone. The generously dimensioned stainless steel register produces a hygienic tap water treatment in a continuous system.

- The availability of fresh water free of legionella
- Layered loading of the tank
- Solar heating support

pace n of

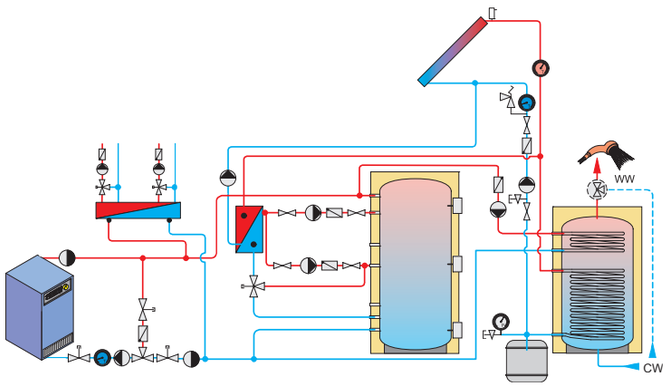
nt

- SOLARFOCUS Solar & Pellets -

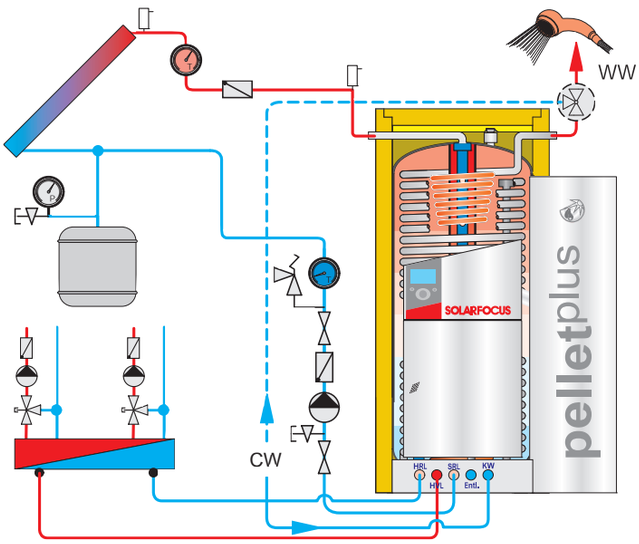
... simple hydraulics

The **pellet**plus - make "ONE" out of "FOUR" - storage tank, tap water tank, solar components and pellet tanks are one unit in the **pellet**plus. Enormous expenses are already saved during the installation due to a far lower material and assembly volume.

Connection diagram standard



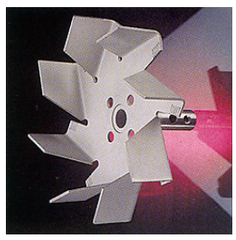
Connection diagram of the **pellet**plus



Capacity and firing control

The induced draft fan:

The combustion air needed in various areas is vacuumed by the speed-controlled induced draft fan. It is controlled by the microprocessor which is built-in in the control and/or by the measuring values determined by the lambda sensor.

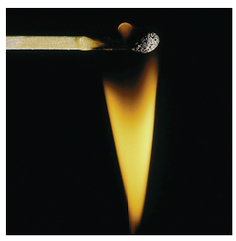


The lambda sensor:

This technological advance was continuously expanded as the first user of the lambda sensor in boiler construction (since 1981). The best combustion values and especially a long service life of the lambda sensor have only been achieved by arranging the lambda sensor in the combustion chamber (patent).

The downburn technique:

A perfect combustion is achieved by the downburn technique.
There are no movable parts in the combustion chamber.



Your personal bio-power plant

Combustion efficiency

GEPRÜFT

Bundesanstalt für Landtechnik Wieselburg

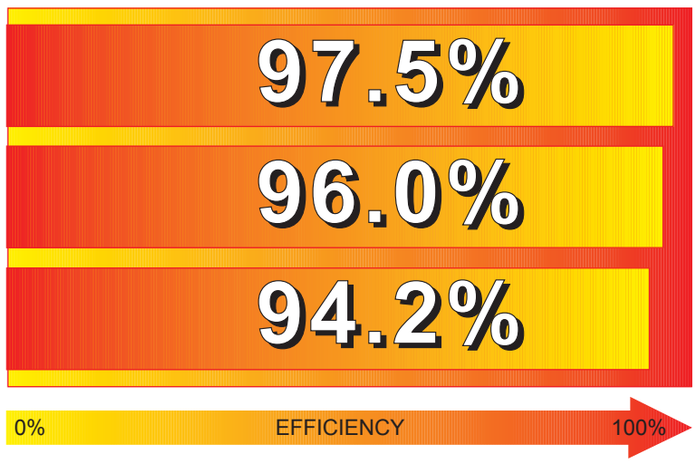
PROT. Nr.

SENSATIONAL

Partial load: 97.5%

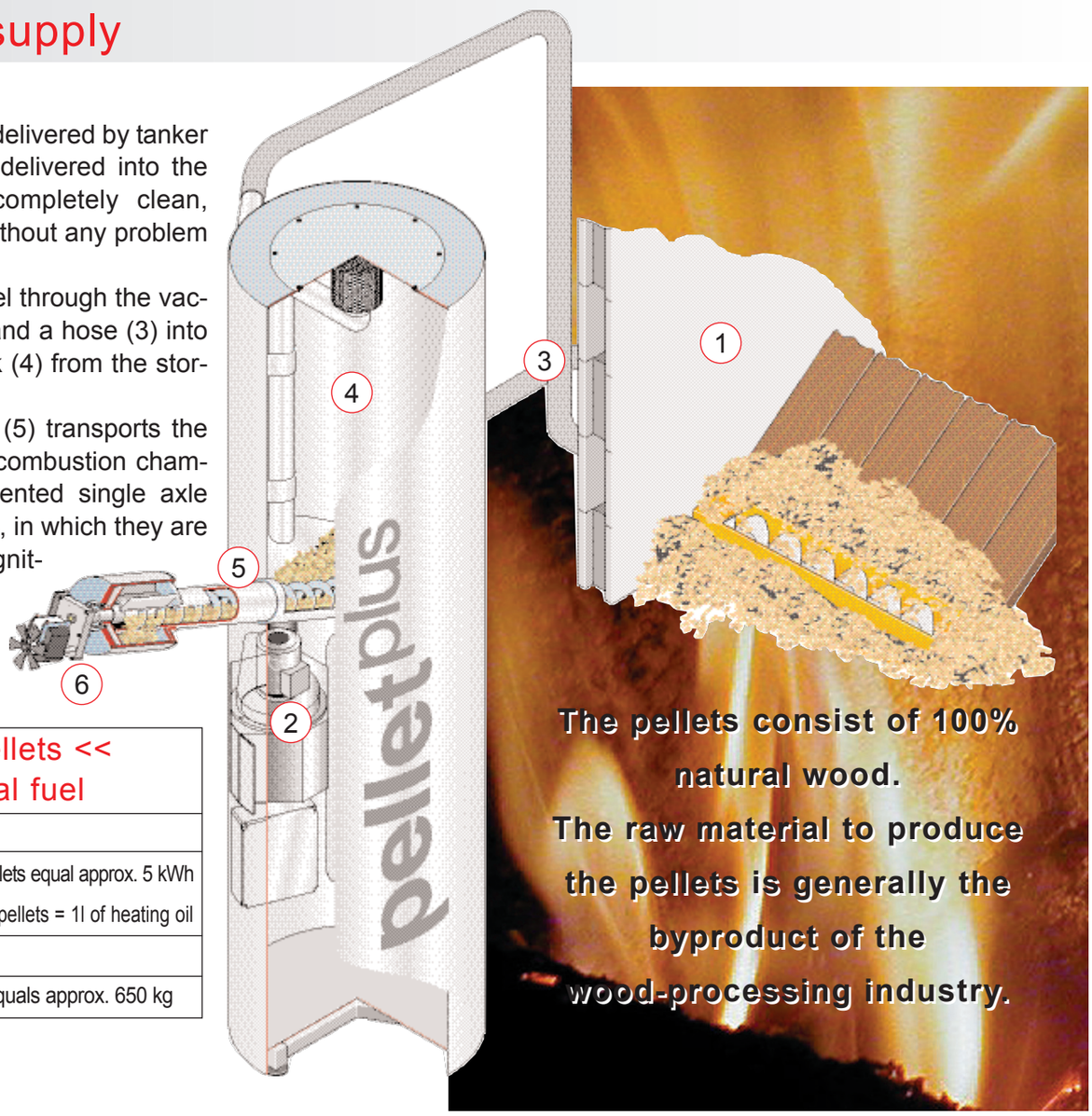
Full load: 96.0%

System efficiency: 94.2%



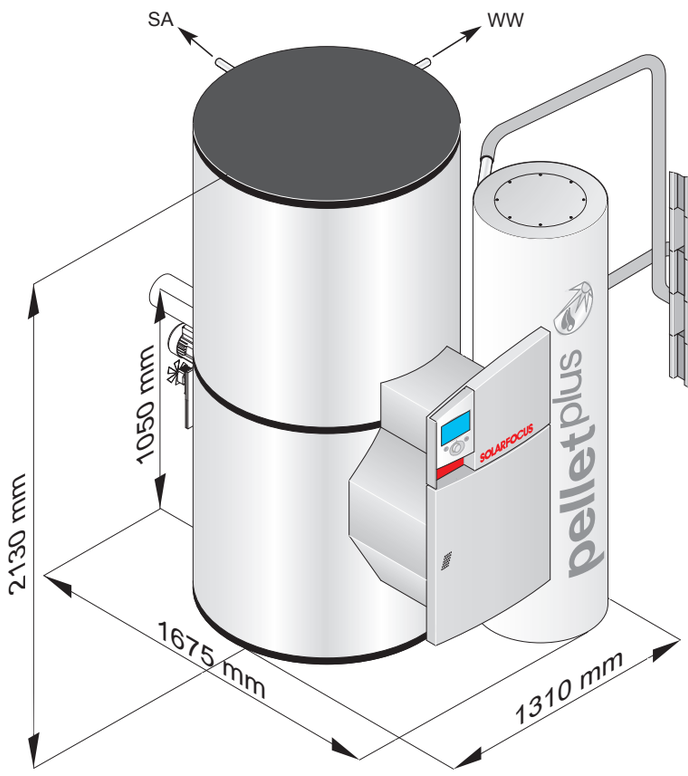
Pellet supply

The pellets are delivered by tanker trucks and are delivered into the storage area completely clean, dust-free and without any problem odors.
The pellets travel through the vacuum motor (2) and a hose (3) into the storage tank (4) from the storage area (1).
The pellet feed (5) transports the pellets into the combustion chamber via the patented single axle rotary feeder (6), in which they are automatically ignited.

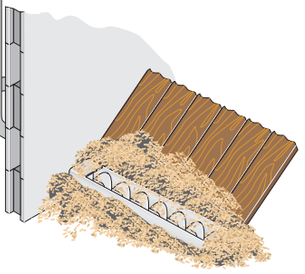


>> Pellets << Local fuel	
Heating value:	
	1 kg pellets equal approx. 5 kWh 2 kg of pellets = 1l of heating oil
Storage volume:	
	1 m^3 equals approx. 650 kg

Technical data of the **pellet**plus



Storage area



Stainless steel burner 10 years Warranty Pass

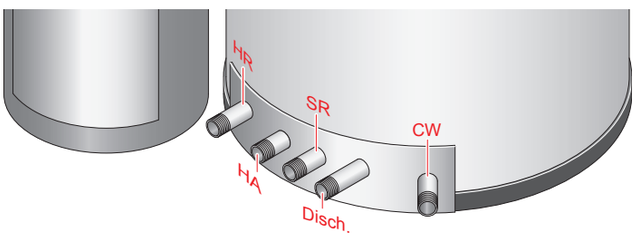
+

Full warranty 5 years Warranty Pass

	SISP-T	SISP-H
Capacity (kW)	3,9 - 14	
Fire tube ø (mm)	130	130
Weight approx. (kg) Layered tank	460	370
Weight approx.(kg) Pellet tank with vacuum motor	65	65
Water content (l)	800	800
Storage volume (l)	100	100
Tank ø (mm) without insulation	790	790
Tapping capacity (l/h) Hot water temperature 45°C at a tank temperature of 60°C Capacity of 53 kW	1300	—-
Tapping capacity (l/h) Hot water temperature 45°C at a tank temperature of 70°C Capacity of 62 kW	1500	—-
NL (DIN 4708)	2,5	—-

Precise technical data are listed separately in a data sheet.
We retain the right for technical modifications.

Clear connecting plate



SA = Solar- advance (1") (TOP)
WW = Warm water (1") (TOP)
HR = Heater - return (1")
HA = Heater - advance (1")

SR = Solar return (1")
Disch. = Discharge (1")
CW = Cold water (1")

... tested high technology

GEPRÜFT

Rostfrei

EN 303-5
CEN/TC 57

Everything from one source, with 25 years of experience:
SOLARFOCUS solar systems - **SOLARFOCUS** biomass heating - **SOLARFOCUS** storage technology

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SOLARFOCUS makes you independent

01/2007

pelletplus perfectly combined

SOLARFOCUS Control engineering

The heart of your new heating system

>> ecomanager **<<**

The control has special significance in order to provide daily comfort. You determine when and how warm it will be.

The **eco**manager assists in the measurement and control.

The changing outdoor temperatures are considered along with your personal living habits. The burner only starts when the required heating energy cannot be completely provided by the solar system. Any unnecessary uneconomical burner start is prevented. **eco**manager provides individual adjusting options.

Control **eco**manager:

- Full graphic display with high lighting.
- Simple control with a control knob.
- Clear illustration of the system parameters (system values are resolved graphically).
- Integrated solar control.
- Weather-controlled heating cycle control for 2 separate heating cycles. (Optionally expandable to 4 or 6 heating cycles).
- 32 Bit processor.
- Completely digital combustion control.
- System can be updated (software can be updated via the telephone line).
- Remote monitoring and system control are possible via an ISDN connection.
- A maximum 5 Watt power consumption in standby mode.
- Control part can be assembled on the unit or in the living area.

... “smart” layered - great savings!

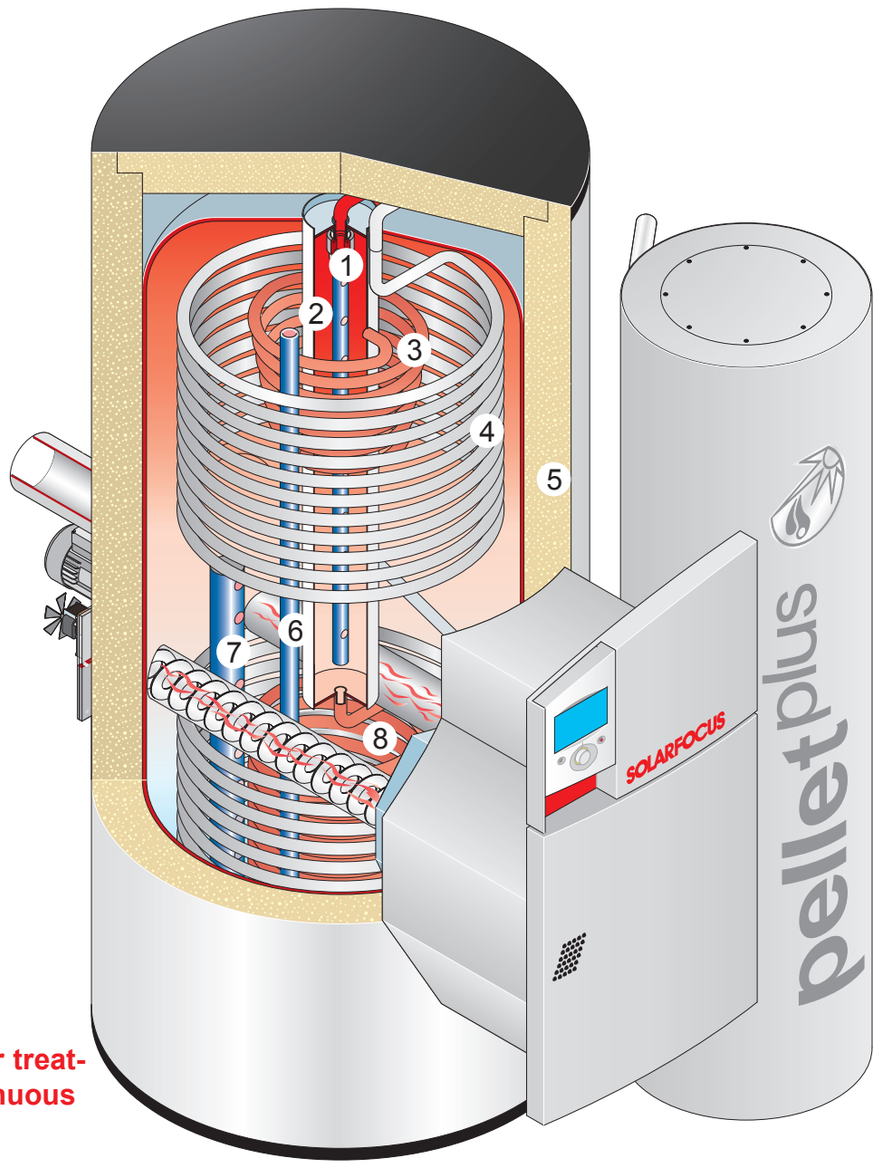
90 °C
70 °C
60 °C
50 °C
40 °C
30 °C

SIMPLY INGENIOUS - INGENIOUSLY SIMPLE !

... hot water in the hot zone - warm water in the warm zone.

Legend:

1 Thermo layer charging lance
2 Solar Layer tube heat exchanger
3 Solar LOW FLOW heat exchanger
4 Tap water heat exchanger of stainless steel
5 90 mm, shell insulation with aluminum
6 Heater advance
7 Layer charging lance (heater return)
8 Solar HIGH FLOW heat exchanger



Hygienic hot water treatment in the continuous principle.

The tank loading management:

The heated solar fluid flows thermo-oriented into the layered tube heat exchanger (2) through the thermo layer loading lance (1). This projects the energy yield to the surrounding storage medium. The LOW FLOW heat exchanger (3) in the upper tank area allows the shortest heating times.

- Quick availability of usable temperatures, even during short days of sunshine!
- Optimum use of low temperatures due to the HIGH FLOW heat exchanger (8) installed in the lower area.

Partially solar room heater:

Heat is removed from the layered tank by the heater advance tube (6) for the room heater. In order to avoid mixing the storage medium during heating, a layered charging lance (7) is installed in the heater return. The different return temperatures of the heating cycle are returned to the appropriate temperature zones of the tank.