



**Heizomat**

*Innovative heating systems for:*

- » **Woodchips**
- » **Biomass**
- » **Pellets**
- » **Shavings**



**GERMAN QUALITY SINCE 1982**

# Heizomat



**Factory Maicha**

## Energy in Balance with Nature

In 1982 Robert Bloos created the first discharging system for woodchips. The idea behind it was to burn wood from his own forest with the same comfort as with fossil fuels.

We now produce products encompassing all things around woodchips at two locations in Bavaria, Germany. The core business are our woodchip boilers, from which we have been able to install more than 35.000 units in more than 30 countries. Chip-ping machines, filling equipment for woodchip storages, woodchip transportation systems, grippers and innovative solar trackers round off our product range.

We are convinced that heating with woodchips continues to be the best alternative for fossil energy sources. Thanks to sustainable forestry, the planting of fast-growing trees on plantations, along streams and on the sides of fields and roads, we will be able to continue to generate affordable and CO<sub>2</sub> neutral energy in balance with nature.



**HSK-A built in 1986**





**Factory Heidenheim**



**more than 270 employees**

## **We are revolutionising heating with woodchips!**

Many Heizomat inventions are industry standards today.

### **Milestones:**

- 1982 The first Heizomat
- 1983 Agitator Ø 5 m
- 1984 Rotary valve
- 1987 Automatic deashing
- 1989 The first Heizohack
- 1990 Large boilers up to 850 kW
- 1992 Heizohack crane fed
- 1995 Lambda - control
- 1996 Autom. heat exchanger cleaning
- 1997 Automatic ignition
- 1998 Microchip-based regulation
- 2000 Chain deashing
- 2003 Diamond-shaped channel
- 2004 Heizogreif forestry grippers
- 2005 HM 14-800 KL lorry chipper
- 2005 Touch control panel
- 2005 Air jet ignition
- 2006 Discharger with separate drive
- 2008 Visualisation
- 2010 Parallel motion
- 2011 Vertical filling systems
- 2012 Siemens-Simatic control unit
- 2014 Chain discharging systems
- 2015 System manager
- 2016 Heizotruck
- 2017 Ultrasonic sensor
- 2018 CX-district heating control
- 2019 Register brushes (patented)



**Large systems since 1990**



# Factory Maicha



## **Office:**

- Management
- Sales
- Construction
- Work preparation
- Development
- Software programming
- Logistics
- Customer services

## **Production:**

- Apprentice workshop (21 Apprentices)
- Controller box construction
- Chipper final assembly
- Sheet metal working
- Paint shop
- Auger welding shop
- Channel production
- Cladding construction
- Special construction
- Turning shop
- Shipping
- Laser
- Laundry
- Chipper repair

## **Production area:**

13,000 m<sup>2</sup>

## **Number of employees:**

approx. 170



***Channel production***



***Turning shop***





**Exhibition**



**Controller box production**



**Chipper final assembly**



# Factory Heidenheim



## **Production:**

- Boiler construction
- Chipper construction
- Sawmill
- Tube laser
- Mould construction of the boiler refractory
- Production of the refractory lining
- Production of small parts

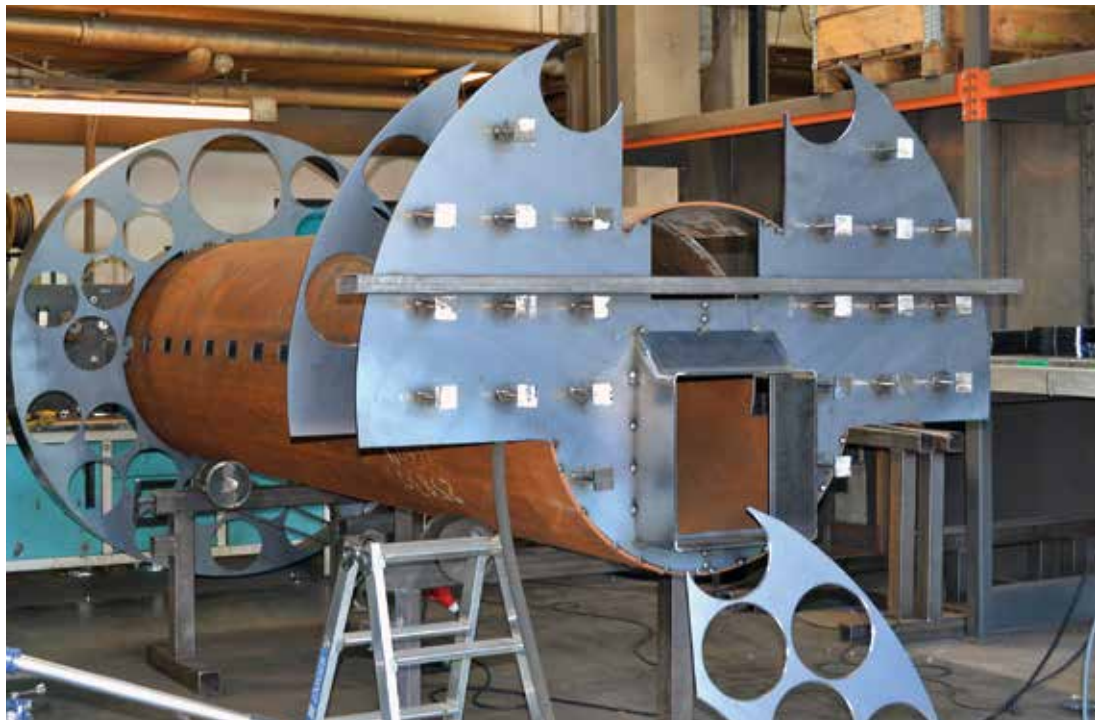
## **TÜV-compliant test bench**

### **Production area:**

18,500 m<sup>2</sup>

### **Number of employees:**

approx. 100



**Welding shop**





**TÜV-compliant test bench**



**Production hall**



# HSK-RA woodchip boiler

## **Output range:**

30 - 200 kW

## **Efficiency:**

> 90 %

## **Fuel:**

Woodchips as per EN 17225-4  
A1/P45 M30, pellets, sawdust

## **Combustion chamber:**

6 mm wall thickness, refractory lining  
with high-quality fireclay bricks

## **Heat exchanger tubes:**

6.3 mm wall thickness, large volume  
register pipes with 200mm diameter,  
seamlessly welded with cleaning  
augers inside.

## **Horizontal heat exchanger:**

A natural air draught is created  
by the horizontal heat exchanger,  
resulting in a reduced electricity  
demand and an improved heat  
yield. Thanks to the robust cleaning  
augers, rolled from 8 mm thick steel,  
the heat exchanger cleaning is prac-  
tically maintenance free! A high level  
of efficiency is created at the lowest  
of fluegas temperatures.

## **Automatic ash removal:**

The ash from the combustion  
chamber is moved by the ash scraper  
through the cast iron grate, the heat  
exchanger is cleaned via augers.

## **Ash container:**

Optionally 40 l, 240 l or 900 l

## **Insulation:**

60 mm

## **Air jet ignition:**

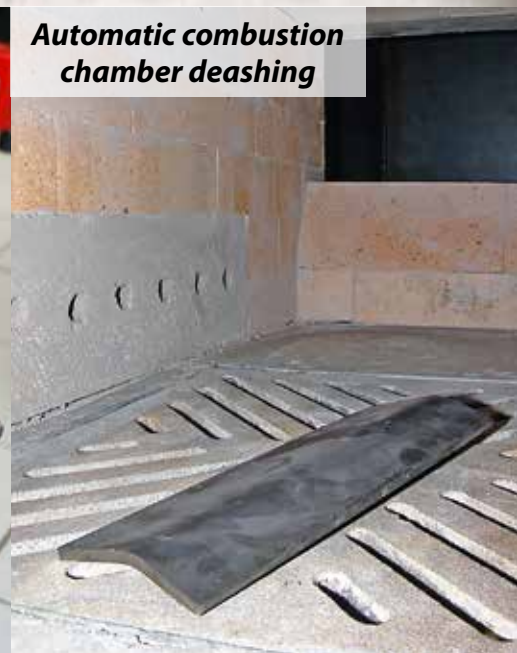
A robust glow bar is used for ignition  
mode. Placed in the air jets protected  
from ash and soot. Energy saving,  
just approx. 0.15 kWh per ignition!



***Minimal space required***



***Air jet ignition***



***Automatic combustion  
chamber deashing***



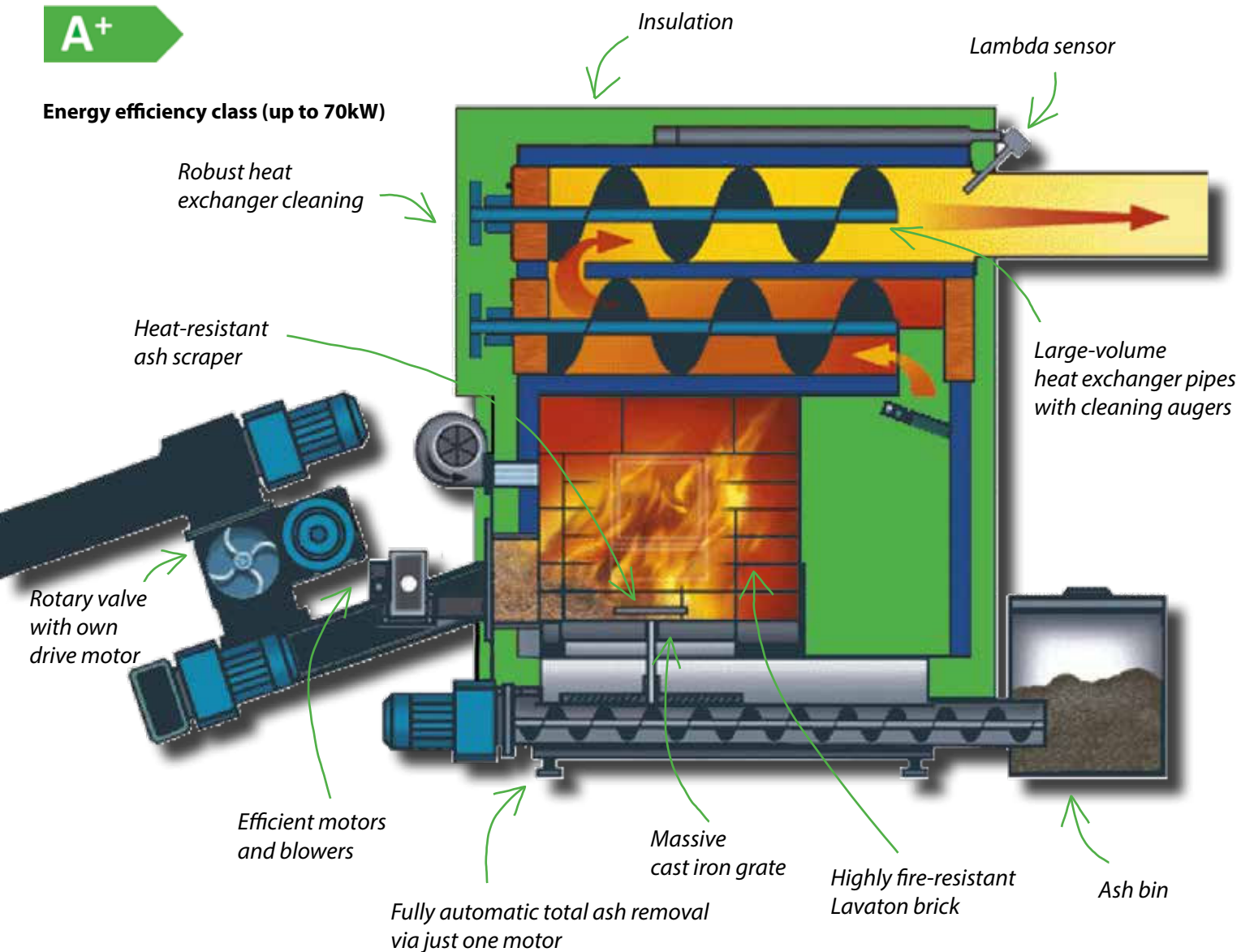
***Robust drive unit of the automatic heat exchanger cleaning***





A<sup>+</sup>

Energy efficiency class (up to 70kW)



HSK-RA 60 built in 2007



**In the event of electrical power outage, emergency use with log wood is possible!**



# RHK-AK biomass boiler

**Output range:**

30 - 990 kW

**Efficiency:**

> 90 %

**Fuel:**

Woodchips as per EN 17225-4  
A1/P45 M30, pellets and biomass

**Combustion chamber:**

8 mm wall thickness, refractory lining  
in heart shape made from resistant  
refractory concrete

**Heat exchanger tubes:**

6.3 mm wall thickness, large volume  
register pipes with 200mm diameter,  
seamlessly welded with cleaning  
augers inside.

**Horizontal heat exchanger:**

A natural air draught is created  
by the horizontal heat exchanger,  
resulting in a reduced electricity  
demand and an improved heat  
yield. Thanks to the robust cleaning  
augers, rolled from 8 mm thick steel,  
the heat exchanger cleaning is prac-  
tically maintenance free! A high level  
of efficiency is created at the lowest  
of fluegas temperatures.

**Automatic ash removal:**

The ash from the combustion cham-  
ber is moved through the patented  
de-ashing chain, the heat exchanger  
is cleaned via augers.

**Ash container:**

Optionally 40 l, 240 l or 900 l

**Insulation:**

80 mm sandwich panels

**Air jet ignition:**

A robust glow bar is used for ignition  
mode. Placed in the air jets protected  
from ash and soot. Energy saving,  
just approx. 0.15 kWh per ignition!



*Maintenance-friendly cover*



*Combustion chamber with best emission values*

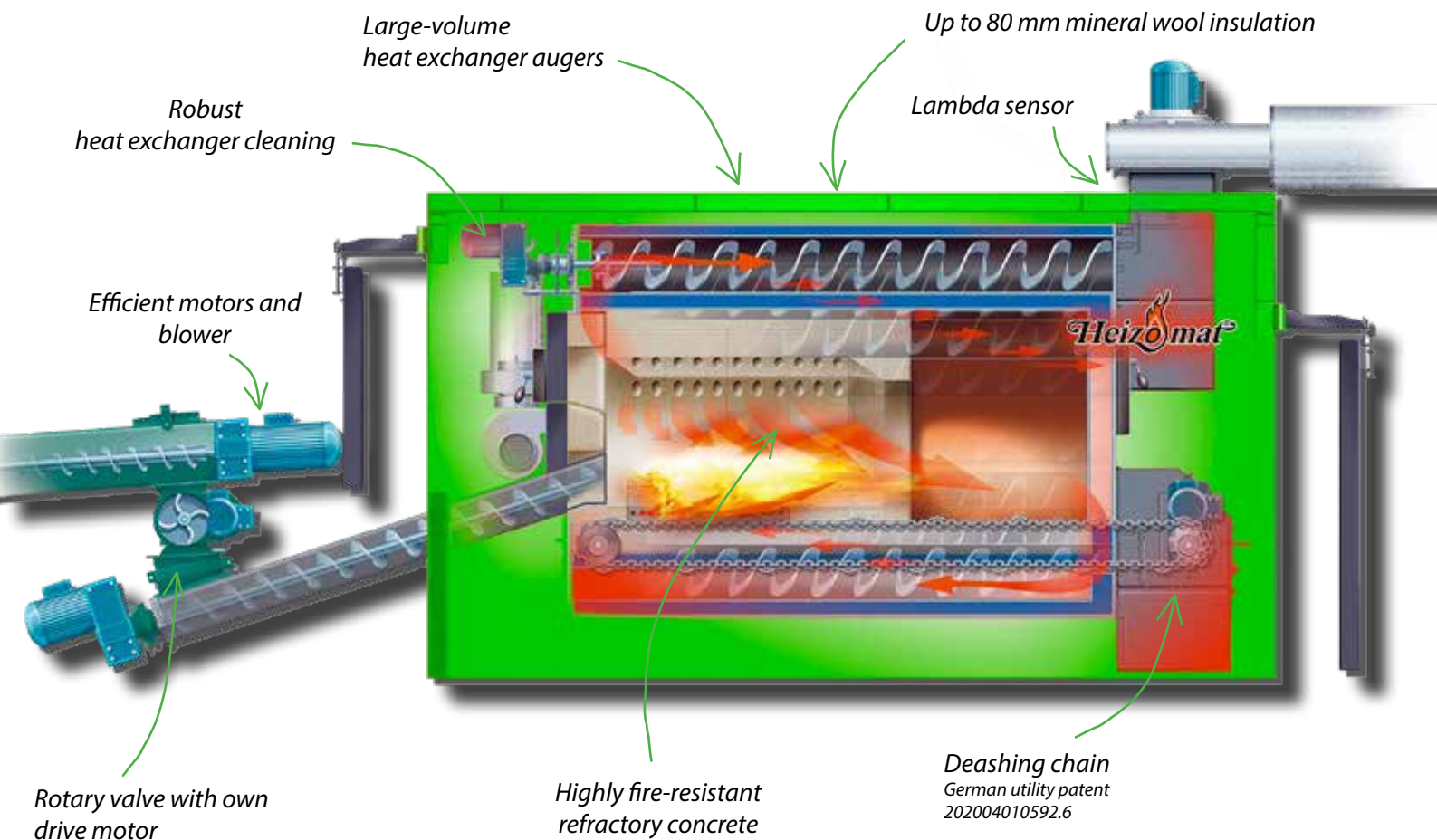


*Robust automatic heat exchanger cleaning*



A<sup>+</sup>

Energy efficiency class (up to 70kW)



Installation of district heating system Dornhausen 2018



# Trendsetting technology

## Discharging technique

### Articulated arm:

Robust milling arm for room sizes from Ø 1 m to 7 m, preloaded with chain and tension spring. No intermediate floor required. Loading heights of up to 10 m possible!

### Parallel motion agitator:

Circular emptying of the silo! No swinging of the milling arms, no loading of the arms and connections. - Patent -

### Bunker gear box:

Specially sealed bevel helical gear box with 5.000 Nm transmittable torque. Completely maintenance-free, installed in a water-proof die-cast chassis.

### Discharger auger:

On 50 mm solid shaft. Smooth transportation thanks to loosening geometry.

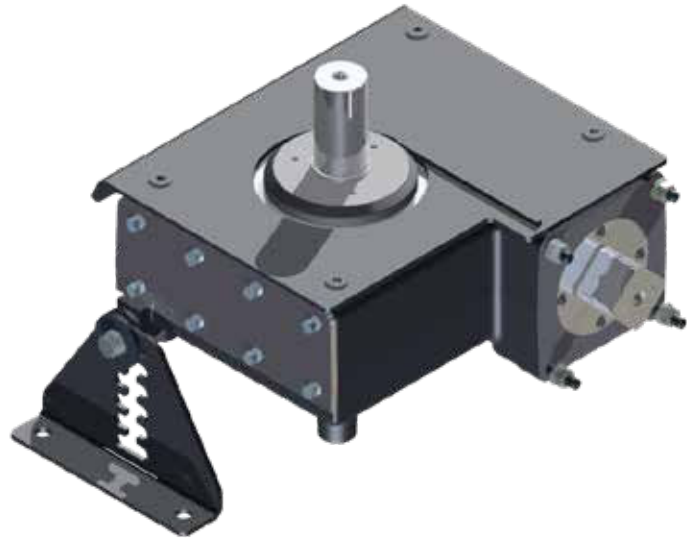
### 4-chamber rotary valve:

Effective TÜV-checked burn-back protection with trimmer unit! There is hardly any chance of sticking for nails etc. thanks to the 4 chambers. Crossed edge for an easy cut. Installed in massive die-cast chassis.

### Inclined chain conveyor:

For horizontal or subjacent installation of the agitator. Drive of the inclined chain conveyor takes place via the motor of the discharger auger respectively chain.

**Fuel transport for wood chips up to B1/P45**



***Bunker gear box - the Centerpiece***



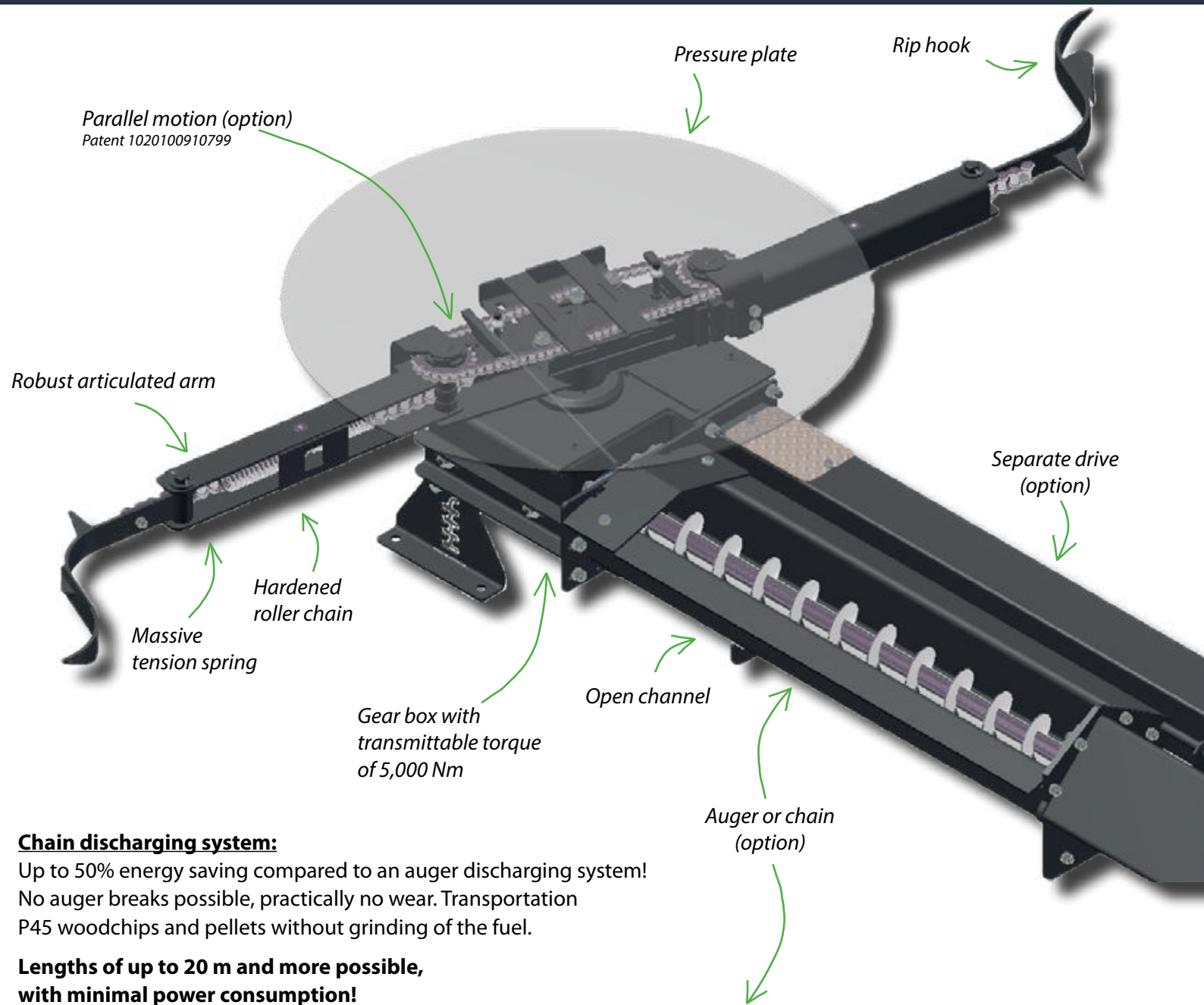
***Discharge channel with inclined chain conveyor***

***Four chamber rotary valve with it's own drive ensures max. torque and incomparably high cutting force***



***Agitator with auger***







# Modern industrial control

## Heizocontrol ET100

### Home Edition

#### Equipment options

##### for the control of:

- Up to 2 heating circuits regulation dependant on atmospheric conditions
- Buffer tank with up to 3 temperature sensors
- Domestic water tank
- Control and visualisation of the E-filter
- Sm@rtServer for visualization on PC or smartphone
- Continuous load control
- Ignition-mode
- Lambda regulation
- Return temp. increase
- Chimney sweep mode for full and part load measurement
- E-mail messenger
- System diagnosis indicator
- Power control by heat quantity
- Operating hours counter
- Measured value recordings
- Security key
- Different languages selectable

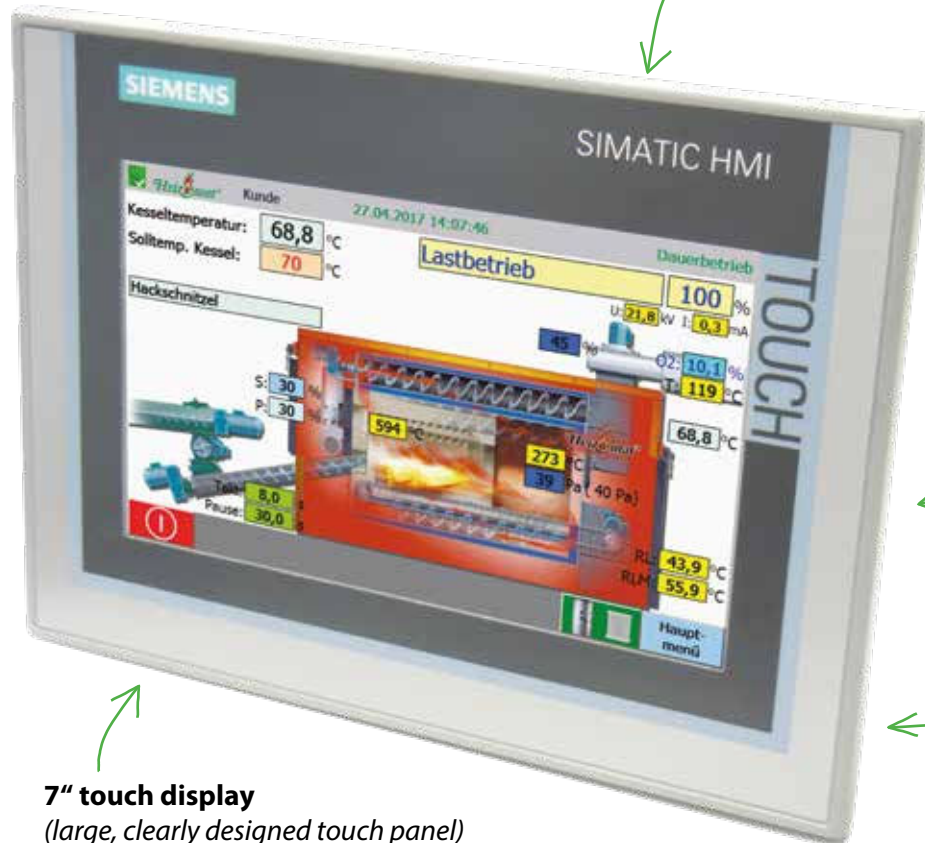
## Heizocontrol family

Sensational technology with self-explanatory menu navigation together with our three decades worth of experience regarding the heating of wood is offered by Heizocontrol ET100 and ET200.

Thanks to the industrial quality and the use of Siemens components a global availability of replacement parts as well as a long life cycle are guaranteed.

### Global availability

(20-year replacement parts warranty)



### 7" touch display

(large, clearly designed touch panel)

### UL - Certified

only the ET200 control



Simple setting of the timer for every heating circuit

Chimney sweep mode for a comfortable exhaust measurement







# Perfect concept

## **Perfect concept**

The Heizomat system is attuned to all conventional heating systems. Be it underfloor heating, radiators, ceiling fan heaters, fresh water module or district heating. We can offer the perfect solution for each system. Do you want to expand your system with a matching return temperature increase, storage technology or domestic water heat pump? No problem, even your photovoltaic system will find the right place in the Heizomat system.

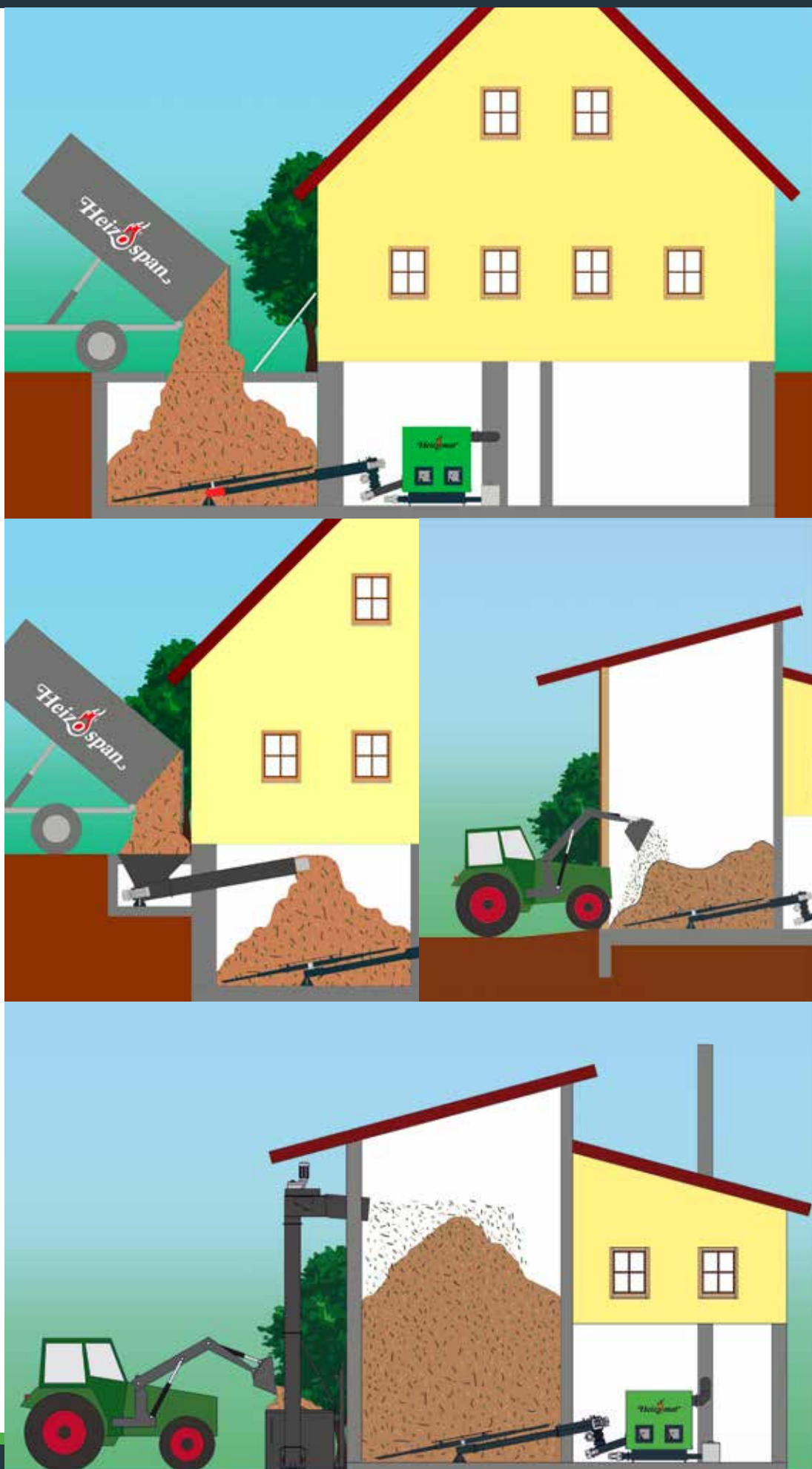
## **From A for agitator to Z for...**

We don't just increase your quality of life in the boiler room with sophisticated and modern technology. Filling is also a part of the Heizomat system. That's why, besides different sizes of bunker cover, we also offer various systems for bunker filling. If you want to blow the material 8 m upwards, that's no problem.

Or rather use an auger pushing vertically upwards for low dust. We offer the right solution for your property.

The Heizomat system begins with A for agitator and is far from done with Z for zinc coating.

You can also experience our Heizohack chippers, Heizotruck commercial vehicles, the Heizogreif forestry grippers or the Heizoschaufel bucket for light bulk material.





**Robust design**  
(In familiar Heizomat quality)

**Safety first**  
(TÜV tested)

**Simple assembly**  
(With bayonet lock)

**Average separation efficiency**  
(Up to **82 %**)

## Heizoclean EF185

*Clean, robust, efficient*

With the HeizoClean EF185 electrostatic particle separator you can use the future of filter technology in your Heizomat today. Along with the innovative control concept the EF185 sets new standards in filter technology for biomass systems with its robust design, automatic cleaning and simple handling.

The HeizoClean EF185 charges dust particles flowing past in the flue gas using electrostatic charging. At the same time, via the HeizoControl ET, the current and the voltage are automatically adapted to the dust load, thereby achieving an average separation efficiency of up to 82 %.

Thanks to high-quality components, and a robust and easy-maintenance design the new EF185 particle separator is once again a real Heizomat product that justifiably carries the HeizoClean name and signifies a further milestone in the automatic combustion of wood.

**Heizoclean EF185 installed on an  
RHK-AK 800**





# Technical data

A<sup>+</sup>

Energy efficiency class (up to 70kW)

## HSK - RA

	HSK-RA 15	HSK-RA 30	HSK-RA 40	HSK-RA 60	HSK-RA 75	HSK-RA 100	HSK-RA 150	HSK-RA 200
Heat capacity (kW)	0 - 14.5	0 - 33	0 - 40	0 - 60	0 - 75	0 - 96	0 - 149	0 - 199
Heat exchange surface (m²)	2.60	3.80	4.90	5.90	8.10	10.50	15.70	20.90
Boiler / system weight (kg)	575 / 1018	770 / 1213	860 / 1303	950 / 1393	1300 / 1743	1470 / 1913	2140 / 2583	2660 / 3103
Water capacity (l)	170	188	210	255	280	360	625	810
Boiler length (mm)	800	935	1135	1335	1335	1635	1635	2135
Boiler width (mm)	775	775	775	775	925	925	975	975
Boiler height (mm)	1442	1442	1442	1442	1536	1536	1980	1980
Flue tube diameter (mm)	180	200	200	200	200	250	300	300
Operating pressure max (bar)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Boiler temperature max (°C)	95	95	95	95	95	95	95	95
Return temperature min (°C)	>55	>55	>55	>55	>55	>55	>55	>55
Heat flow	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Heat return	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Safety heat flow	1"	1"	1"	1"	1"	1"	1 1/4"	1 1/4"
Safety heat return	1"	1"	1"	1"	1"	1"	1 1/4"	1 1/4"



RHK - AK 50





Energy efficiency class (up to 70kW)

# RHK - AK

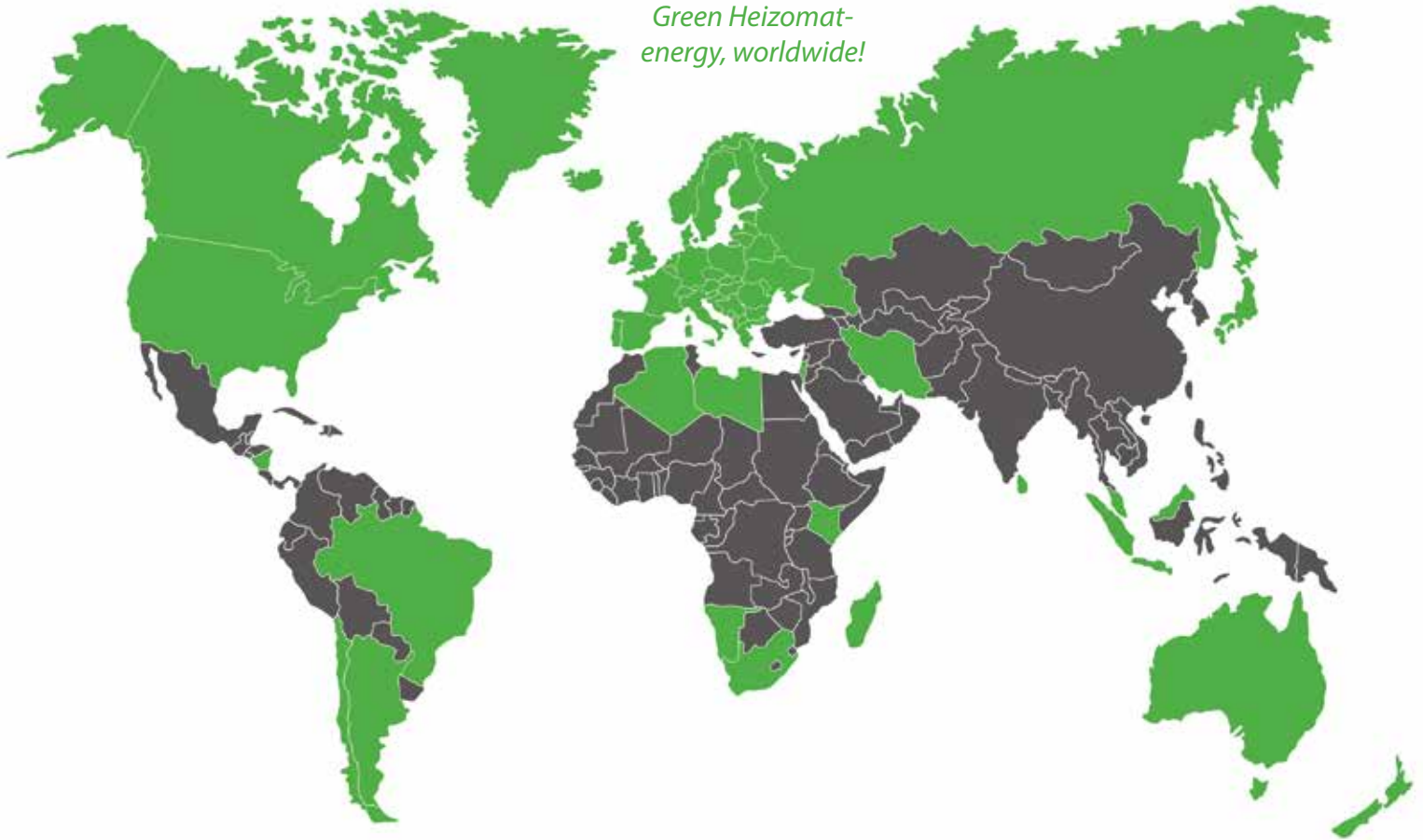
	RHK-AK 30	RHK-AK 50	RHK-AK 60	RHK-AK 75	RHK-AK 100	RHK-AK 150 (N)	RHK-AK 150 (H)
Heat capacity (kW)	0 - 36	0 - 50	0 - 60	0 - 75	0 - 95	0 - 149	0 - 149
Heat exchange surface (m²)	3.40	4.50	5.60	7.20	8.90	13.93	13.10
Boiler / system weight (kg)	900 / 1343	1000 / 1443	1150 / 1593	1400 / 1843	1500 / 1943	2570 / 3010	2320 / 2763
Water capacity (l)	165	205	250	385	475	712	510
Boiler length (mm)	1383	1583	1783	1690	1940	2450	2427
Boiler width (mm)	860	860	860	1085	1085	1568	1152
Boiler height (mm)	1585	1585	1585	1645	1645	1840	2040
Flue tube diameter (mm)	200	200	200	200	250	300	300
Operating pressure max (bar)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Boiler temperature max (°C)	95	95	95	95	95	95	95
Return temperature min (°C)	>55	>55	>55	>55	>55	>55	>55
Heat flow	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN80	DN 80
Heat return	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80
Safety heat flow	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Safety heat return	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

# RHK - AK

	RHK-AK 200 (N)	RHK-AK 200 (H)	RHK-AK 300	RHK-AK 400	RHK-AK 500	RHK-AK 600	RHK-AK 800	RHK-AK 1000
Heat capacity (kW)	0 - 199	0 - 199	0 - 300	0 - 400	0 - 500	0 - 600	0 - 800	0 - 990
Heat exchange surface (m2)	18.50	17.10	29.70	33.75	37.10	56.00	74.00	85.00
Boiler / system weight (kg)	3108 / 3737	2860 / 3489	5400 / 6029	6200 / 6829	6800 / 7429	8500 / 9129	9900 / 10529	14000 / 14629
Water capacity (l)	985	660	1258	1580	1805	2680	3940	5600
Boiler length (mm)	2950	2927	3325	3825	4125	4385	5086	5900
Boiler width (mm)	1568	1152	1880	1880	1880	2146	2146	2650
Boiler height (mm)	1840	2040	2020	2020	2020	2066	2066	3050
Flue tube diameter (mm)	300	300	300	350	350	400	400	500
Operating pressure max (bar)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Boiler temperature max (°C)	95	95	95	95	95	95	95	95
Return temperature min (°C)	>55	>55	>55	>55	>55	>55	>55	>55
Heat flow	DN 80	DN 80	DN 80	DN 80	DN 80	DN 125	DN 125	DN 150
Heat return	DN 80	DN 80	DN 80	DN 80	DN 80	DN 125	DN 125	DN 150
Safety heat flow	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80	DN 100
Safety heat return	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80	DN 100



*Green Heizomat-  
energy, worldwide!*



***With 240 employees and more than 35 000 customers we are living a heating revolution worldwide - providing comfort and CO<sub>2</sub> neutral heat since 1982! Be a part of it!***

*Technical changes, which serve the continuous further development, are reserved.  
Dimensions and weights are all approximate!*



Our partner:

**CAL·U·WE**  
Biomass Heat & Power Solutions

**[www.woodchipboilersr.us](http://www.woodchipboilersr.us)  
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***Heat automatically with the most CO<sub>2</sub>-neutral fuels in the world!***