



**Heizomat**

***Innovative heating systems for:***

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

**CO<sub>2</sub>  
NEUTRAL**



**GERMAN QUALITY SINCE 1982**

# Heizomat



## 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. Chipping 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



Family business since 1982



Large systems since 1990

## 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 400 liter ash-container
- 2020 Register brushes patented
- 2021 TP20 industrial control
- 2022 Local heating manager TP20

# 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. 180



Control cabinet construction

Training workshop



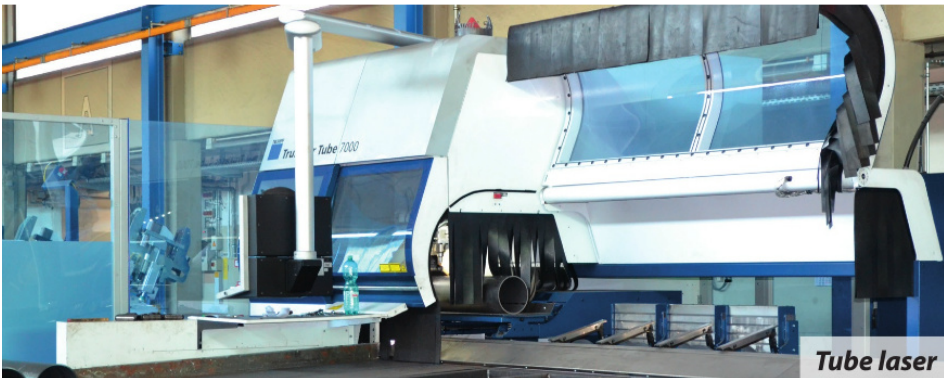
Chipper final assembly



Large exhibition with 3,500 m<sup>2</sup>



# Factory Heidenheim



Tube laser

**Manufacture:**

- Boiler construction
- Chipper construction
- Sawmill
- Tube laser
- Mold making and boiler fireclay
- Manufacture of the lining
- Manufacturing of small parts

**TÜV-compliant test bench**

**Production area:**

21,000 m<sup>2</sup>

**Number of employees:**

approx. 120



Chipper construction



21,000 m<sup>2</sup> Production area



Boiler construction

# HSK-RA woodchip boiler

## **Output range:**

25 - 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 and brushes 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, 400 l or 900 l

## **Insulation:**

up to 80 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!



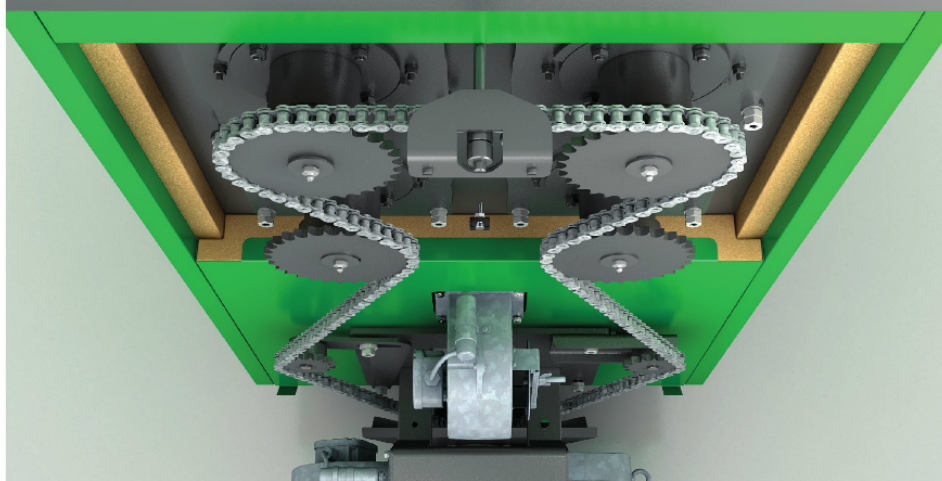
**Minimum space required**



**Air jet ignition**



**Automatic combustion chamber deashing**

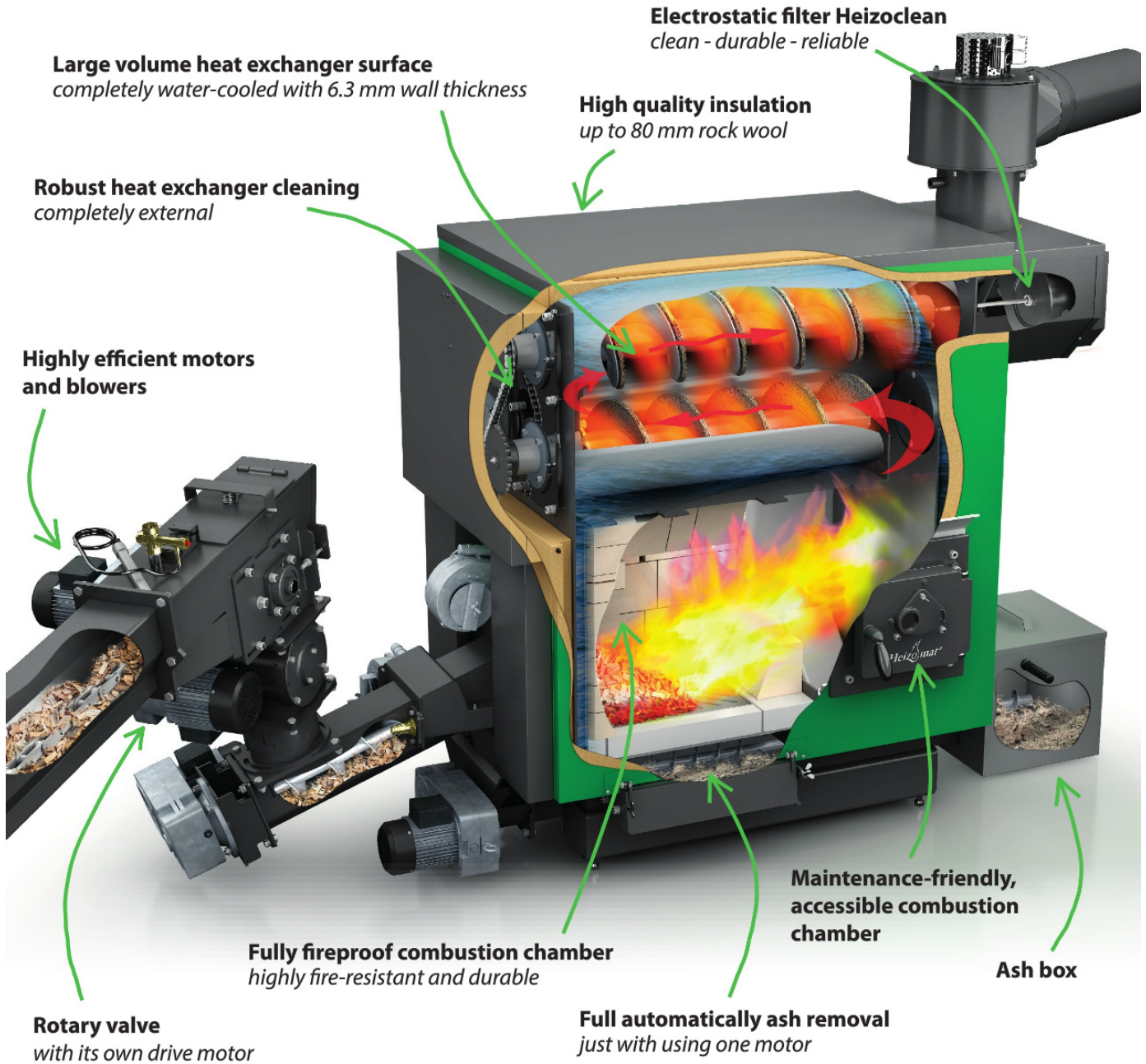


**Robust drive unit of the automatic heat exchanger cleaning**



**A+**

# TECHNICAL HIGHLIGHTS



**Large volume heat exchanger surface**  
*completely water-cooled with 6.3 mm wall thickness*

**Electrostatic filter Heizoclean**  
*clean - durable - reliable*

**High quality insulation**  
*up to 80 mm rock wool*

**Robust heat exchanger cleaning**  
*completely external*

**Highly efficient motors and blowers**

**Fully fireproof combustion chamber**  
*highly fire-resistant and durable*

**Maintenance-friendly, accessible combustion chamber**

**Ash box**

**Rotary valve**  
*with its own drive motor*

**Full automatically ash removal**  
*just with using one motor*

# RHK-AK biomass boiler

## **Output range:**

30 - 990 kW

## **Efficiency:**

> 90 %

## **Fuel:**

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

## **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 and brushes 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, 400 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*



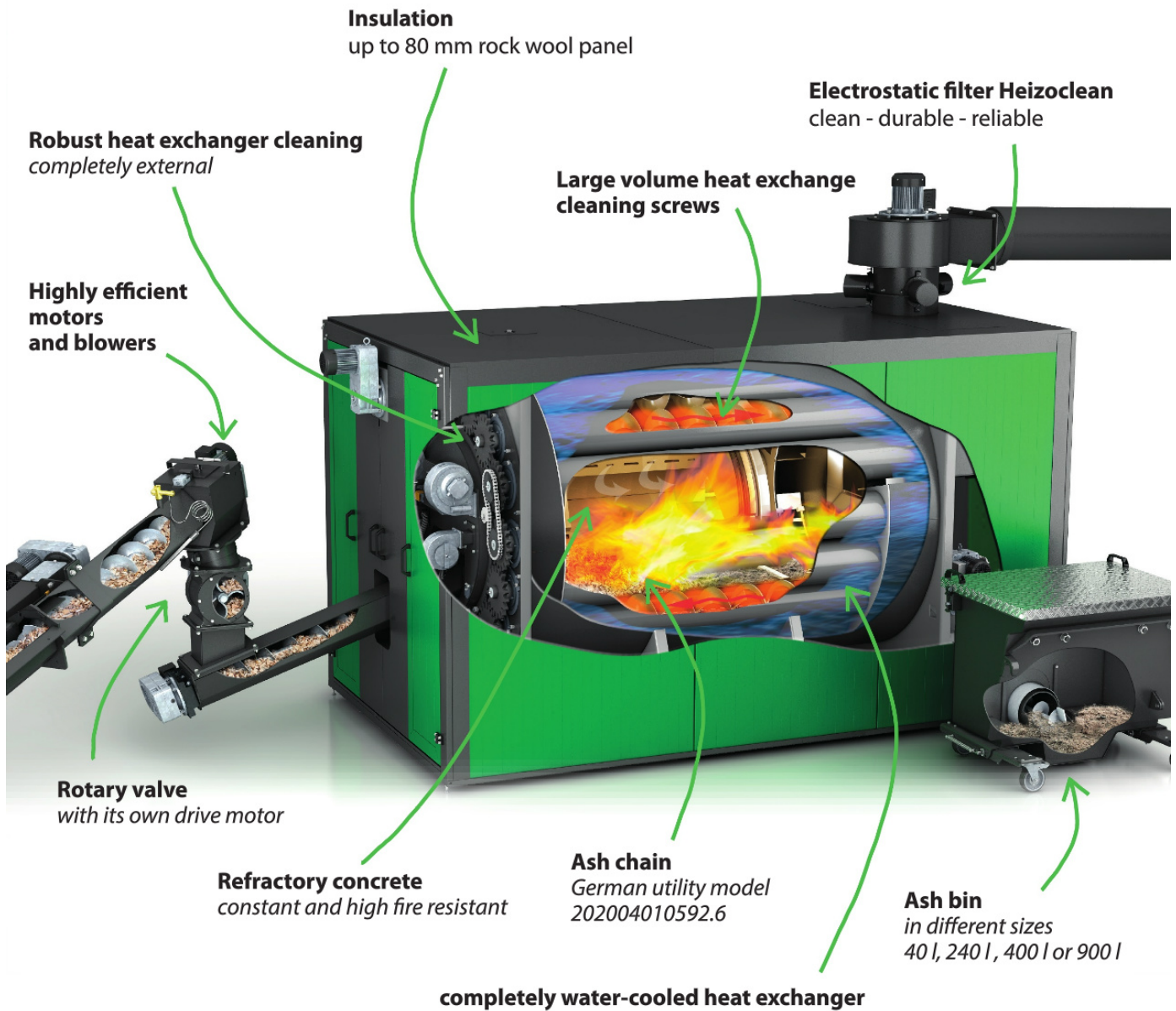
*Robust automatic heat exchanger cleaning*





**A+**

# TECHNICAL HIGHLIGHTS



**Insulation**  
up to 80 mm rock wool panel

**Electrostatic filter Heizoclean**  
clean - durable - reliable

**Robust heat exchanger cleaning**  
completely external

**Large volume heat exchange**  
cleaning screws

**Highly efficient**  
motors  
and blowers

**Rotary valve**  
with its own drive motor

**Refractory concrete**  
constant and high fire resistant

**Ash chain**  
German utility model  
202004010592.6

**Ash bin**  
in different sizes  
40 l, 240 l, 400 l or 900 l

**completely water-cooled heat exchanger**

# Trendsetting technology

## Discharging technique

### **Articulated arm:**

Robust milling arm for room sizes from Ø 1 m to 6 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:**

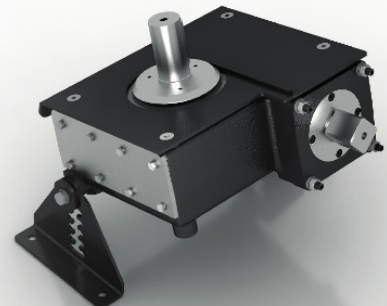
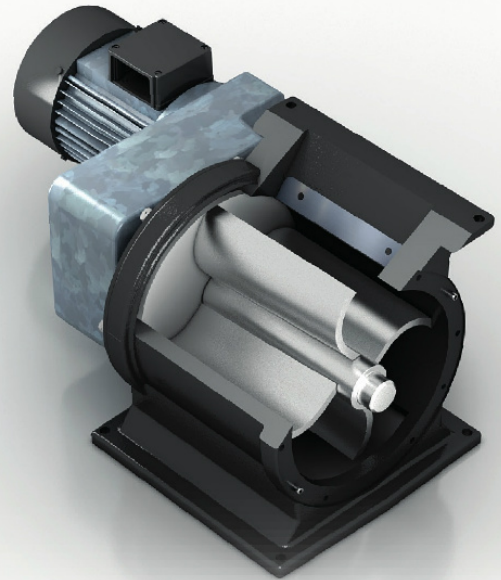
Effective TÜV-checked burn-back protection with trimmer unit! There is hardly any chance of sticking for nails etc. thanks to the 4 chambers. Crossed edge for an easy cut. Installed in massive die-cast chassis.

### **Inclined chain conveyor:**

For horizontal or subadjacent 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**

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

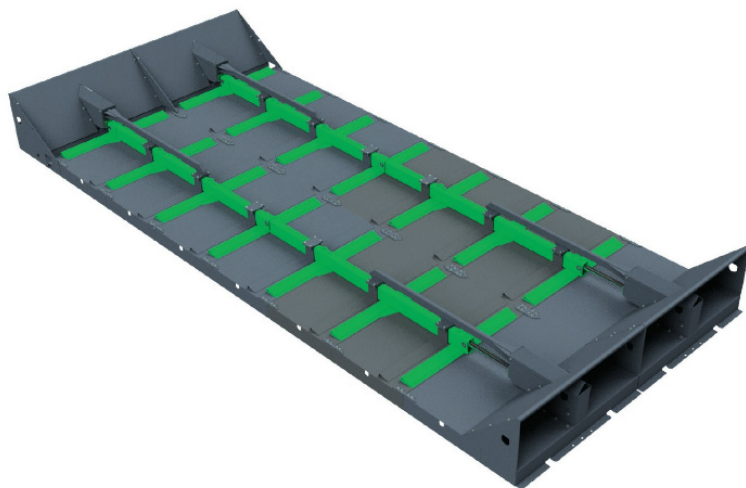
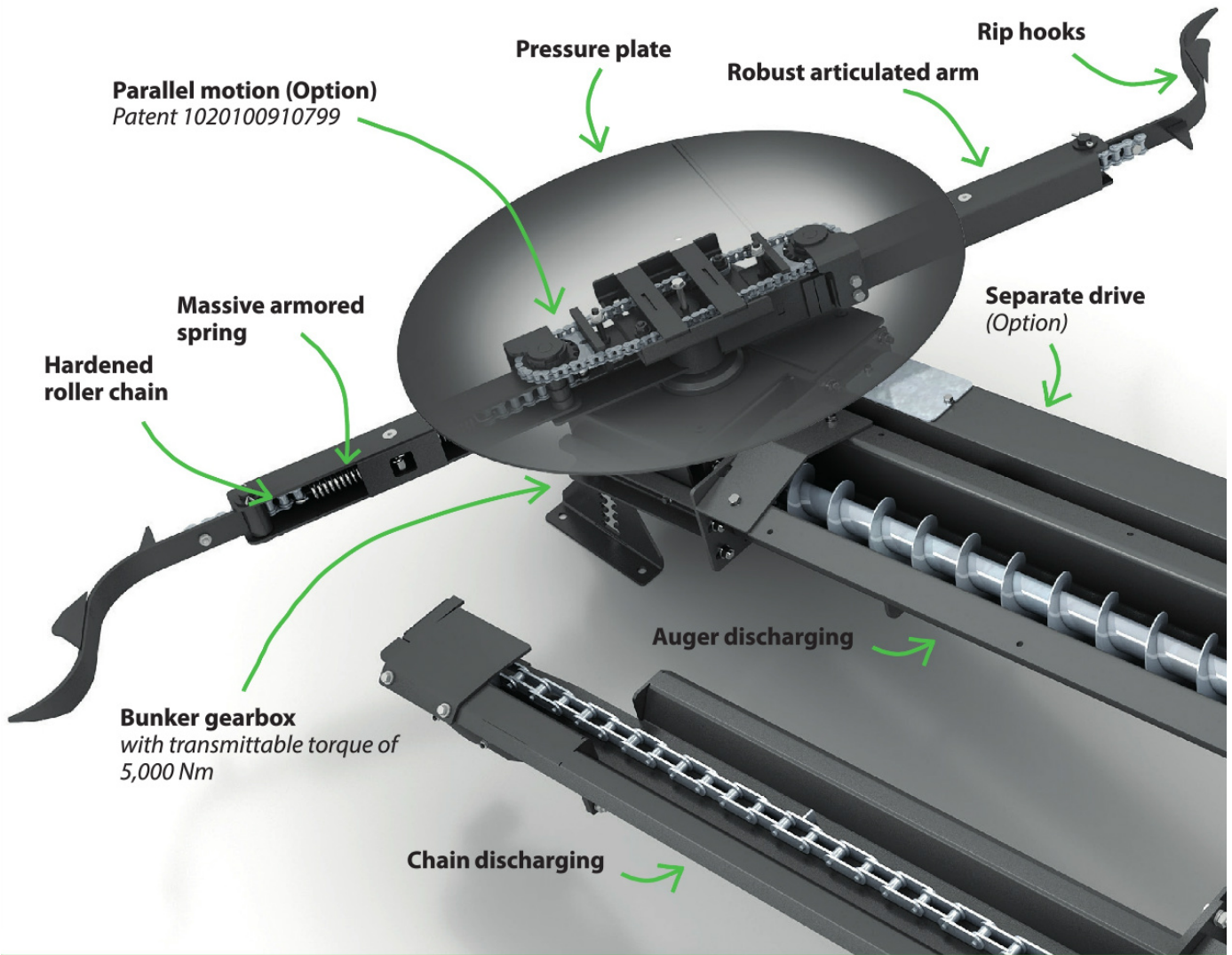


*Discharge channel with inclined chain conveyor*

*Bunker gear box - the Centerpiece*



*Agitator with auger*



### Moving floor discharge

Moving floor width: 2.600 mm

Moving floor length: up to 15.400 mm

Install of the moving floor possible without major structural measures. Construction and fastening of the subsurface.

#### Drive:

It is driven by a powerful hydraulic unit with 3kW. One unit can operate up to two moving floors.

# Modern industrial control

## Heizocontrol TP20

### Equipment options for the control of:

- Up to 3 heating circuits regulation dependant on atmospheric conditions
- Buffer tank with up to 4 temperature sensors
- Domestic water tank
- Domestic water circulation
- Solar function
- Control and visualisation of the E-filter
- Sm@rtServer for visualization on PC or smartphone
- EC fan control
- 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

7" touch display  
(large, clearly designed touch panel)

Global availability  
(20-year replacement parts warranty)



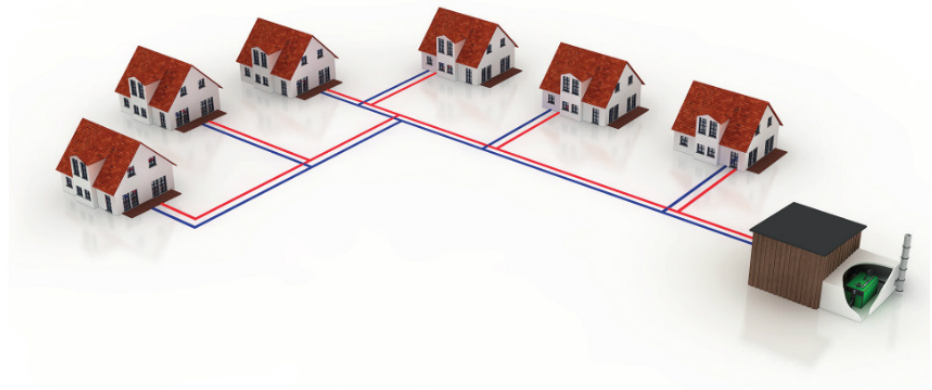
## Local heating manager

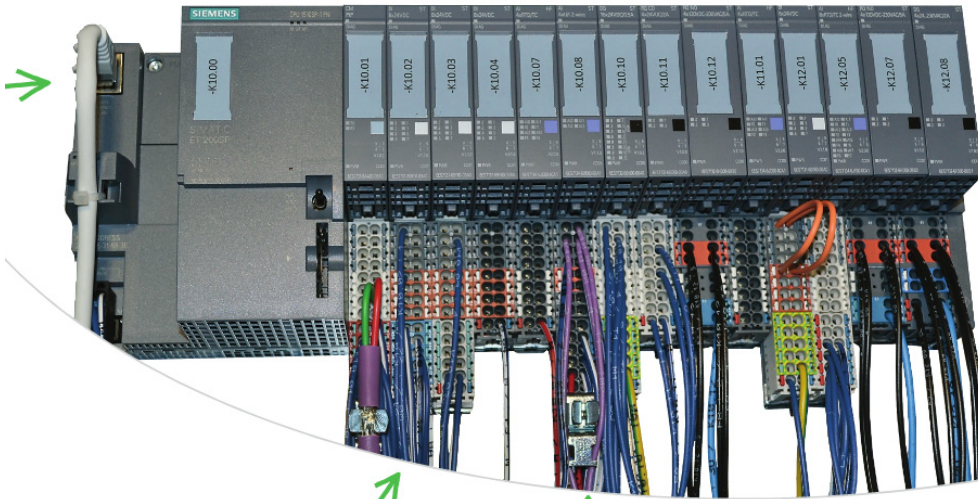
### Equipment options:

- up to three weather compensated heating circuits
- Buffer storage with four temperature sensors
- Domestic hot water storage tank with circulation and disinfection
- Solar system with two zones
- The plate heat exchanger can be used to separate the system
- Network flush function
- Communication via Modbus TCP with the ET200
- and much more

### Complete systems for your heat grid

(System manager for up to 6 regulated houses and more)





## Heizocontrol ET200

### Equipment options for the control of:

- Up to 6 heating circuits regulation dependant on atmospheric conditions
- Two buffer tanks with up to 8 or 2x4 temperature sensors
- Solar function
- Up to two domestic water tanks
- Domestic water circulation
- Remote control
- Control and visualization of up to 2 e-filters
- 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
- Boiler sequence control (Cascade)
- E-mail messenger
- System diagnosis indicator
- External boiler temperature control via 0-10 V signal
- External planned performance via 0-10 V signal
- Power control by heat quantity
- Modbus TCP
- Flexible planned performance
- Operating hours counter
- Measured value recordings
- Security key

**Industrial quality**  
(Siemens components)

**Simple wiring**  
(no separate clamping necessary)

**Modular design of components**  
(simple and convenient expansion of control unit)

**Visualisation**  
(display via PC, tablet or smartphone)

**Self-explanatory use**  
(helpful info texts in every menu)

**All at a glance**  
(an overview of all values)



Clear menu navigation with self-explanatory structure

Intelligent heat transfer control

# 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.

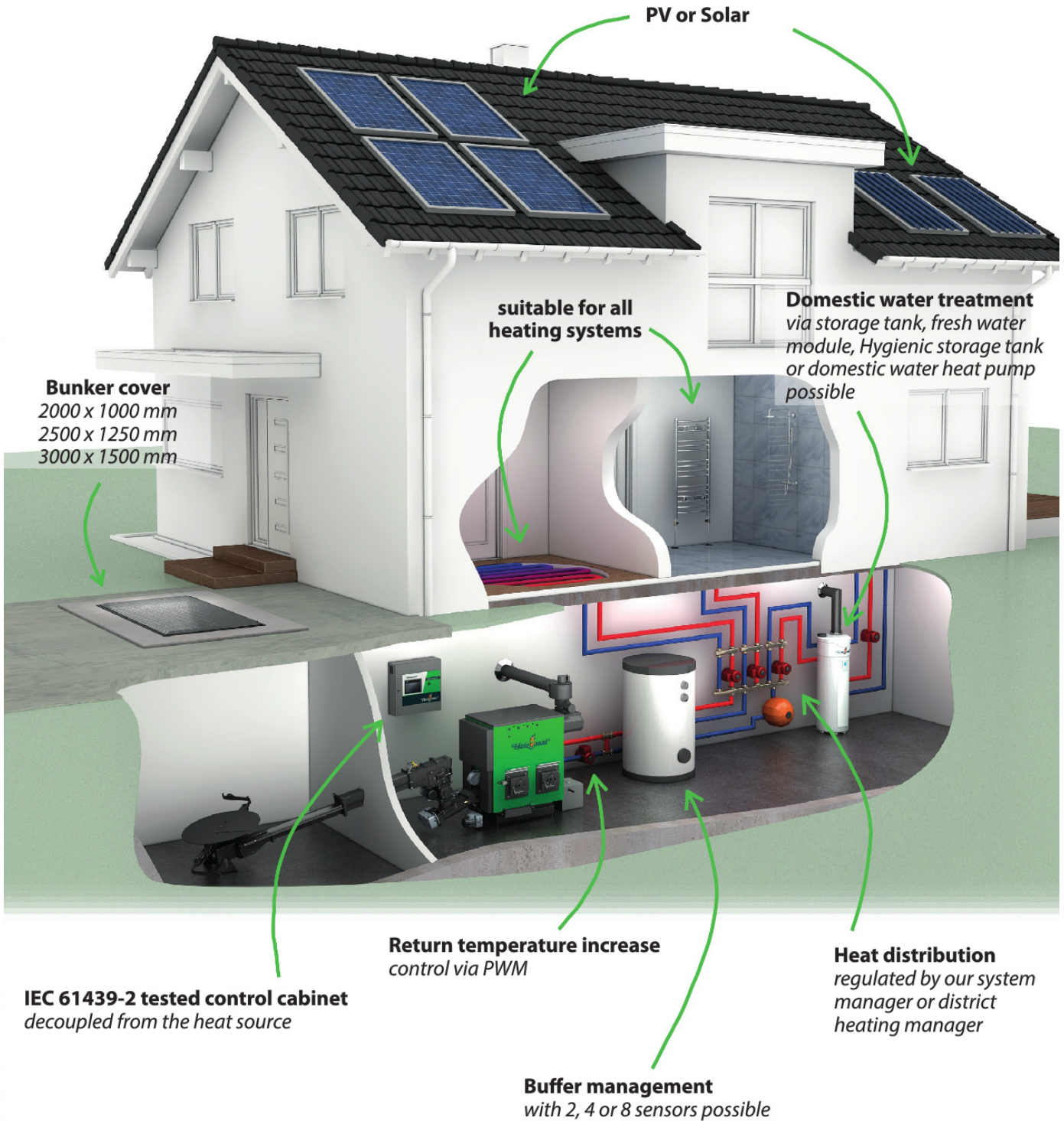
The Heizomat system begins with A for agitator and is far from done with Z for zinc coating.

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





# We take care of everything!



# Technical data

<b>HSK - RA</b>	<b>HSK-RA 25 P</b>	<b>HSK-RA 30 P</b>	<b>HSK-RA 40 P</b>	<b>HSK-RA 60 P</b>	<b>HSK-RA 75 P</b>	<b>HSK-RA 100 P</b>	<b>HSK-RA 150 P</b>	<b>HSK-RA 200 P</b>
<b>Heat capacity (kW)</b>	<b>0 - 27,6</b>	<b>0 - 30</b>	<b>0 - 40</b>	<b>0 - 60</b>	<b>0 - 75</b>	<b>0 - 100</b>	<b>0 - 150</b>	<b>0 - 200</b>
<b>Heat exchange surface (m<sup>2</sup>)</b>	3,80	3,80	4,90	5,90	8,10	10,50	15,70	20,90
<b>Boiler / system weight (kg)</b>	770/ 1213	770/ 1213	860/ 1303	950/ 1393	1300/ 1743	1470/ 1913	2140/ 2583	2660/ 3103
<b>Water capacity (l)</b>	188	188	210	255	280	360	625	810
<b>Boiler length (mm)</b>	935	935	1135	1335	1335	1635	1635	2135
<b>Boiler width (mm)</b>	775	775	775	775	925	925	975	975
<b>Boiler height (mm)</b>	1442	1442	1442	1442	1536	1536	1980	1980
<b>Flue tube diameter (mm)</b>	200	200	200	200	200	250	300	300
<b>Operating pressure max (bar)</b>	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
<b>Boiler temperature max (°C)</b>	95	95	95	95	95	95	95	95
<b>Return temperature min (°C)</b>	> 55	> 55	> 55	> 55	> 55	> 55	> 55	> 55
<b>Heat flow</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
<b>Heat return</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
<b>Safety heat flow</b>	1"	1"	1"	1"	1"	1"	1 1/4"	1 1/4"
<b>Safety heat return</b>	1"	1"	1"	1"	1"	1"	1 1/4"	1 1/4"







A+

<b>RHK - AK</b>	<b>RHK-AK 30 P</b>	<b>RHK-AK 50 P</b>	<b>RHK-AK 60 P</b>	<b>RHK-AK 75 P</b>	<b>RHK-AK 100 P</b>	<b>RHK-AK 150 (N)</b>	<b>RHK-AK 150 (H)</b>
<b>Heat capacity (kW)</b>	<b>0 - 33</b>	<b>0 - 50</b>	<b>0 - 60</b>	<b>0 - 75</b>	<b>0 - 100</b>	<b>0 - 150</b>	<b>0 - 150</b>
<b>Heat exchange surface (m<sup>2</sup>)</b>	3,40	4,50	5,60	7,20	8,90	13,93	13,10
<b>Boiler / system weight (kg)</b>	900/ 1343	1000/ 1443	1150/ 1593	1400/ 1843	1500/ 1943	2570/ 3010	2320/ 2763
<b>Water capacity (l)</b>	165	205	250	385	475	712	510
<b>Boiler length (mm)</b>	1383	1583	1783	1690	1940	2450	2427
<b>Boiler width (mm)</b>	860	860	860	1085	1085	1568	1152
<b>Boiler height (mm)</b>	1585	1585	1585	1645	1645	1840	2040
<b>Flue tube diameter (mm)</b>	200	200	200	200	250	300	300
<b>Operating pressure max (bar)</b>	3,0	3,0	3,0	3,0	3,0	3,0	3,0
<b>Boiler temperature max (°C)</b>	95	95	95	95	95	95	95
<b>Return temperature min (°C)</b>	>55	>55	>55	>55	>55	>55	>55
<b>Heat flow</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN80	DN 80
<b>Heat return</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80
<b>Safety heat flow</b>	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
<b>Safety heat return</b>	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

<b>RHK - AK</b>	<b>RHK-AK 200 (N)</b>	<b>RHK-AK 200 (H)</b>	<b>RHK-AK 300</b>	<b>RHK-AK 400</b>	<b>RHK-AK 500</b>	<b>RHK-AK 600</b>	<b>RHK-AK 800</b>	<b>RHK-AK 1000</b>
<b>Heat capacity (kW)</b>	<b>0 - 200</b>	<b>0 - 200</b>	<b>0 - 300</b>	<b>0 - 400</b>	<b>0 - 500</b>	<b>0 - 600</b>	<b>0 - 800</b>	<b>0 - 910</b>
<b>Heat exchange surface (m<sup>2</sup>)</b>	18,50	17,10	29,70	33,75	37,10	56,00	74,00	85,00
<b>Boiler / system weight (kg)</b>	3108/ 3737	2860/ 3489	5400/ 6029	6200/ 6829	6800/ 7429	8500/ 9129	9900/ 10529	14000/ 14629
<b>Water capacity (l)</b>	985	660	1258	1580	1805	2680	3940	5600
<b>Boiler length (mm)</b>	2950	2927	3325	3825	4125	4385	5086	5900
<b>Boiler width (mm)</b>	1568	1152	1880	1880	1880	2146	2146	2650
<b>Boiler height (mm)</b>	1840	2040	2020	2020	2020	2066	2066	3050
<b>Flue tube diameter (mm)</b>	300	300	300	350	350	400	400	500
<b>Operating pressure max (bar)</b>	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
<b>Boiler temperature max (°C)</b>	95	95	95	95	95	95	95	95
<b>Return temperature min (°C)</b>	>55	>55	>55	>55	>55	>55	>55	>55
<b>Heat flow</b>	DN 80	DN 80	DN 80	DN 80	DN 80	DN 125	DN 125	DN 150
<b>Heat return</b>	DN 80	DN 80	DN 80	DN 80	DN 80	DN 125	DN 125	DN 150
<b>Safety heat flow</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80	DN 100
<b>Safety heat return</b>	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	DN 80	DN 80	DN 100

# More than heating technology

We don't just want the perfect heating system for our customers. The manufacturing and handling of the fuel are also very important to us. That's why we have been producing chippers under the name Heizohack since more than two decades. With our Heizogreif forestry grippers and the Heizoshovel bucket for light bulk material handling before and after chipping is optimised. Our latest member is the Heizotruck, a vehicle for forestry and agriculture as well as public services.

## **Heizohack hand fed machines:**

- Infeed diameter 30 to 40 cm
- Drive via PTO, e-motor or Diesel engine
- As 3-point or with trailing axle

## **Heizohack crane fed machines:**

- Diameter up to 80 cm
- Drive via PTO, e-motor or Diesel engine
- With trailing axle, tandem or mounted on a lorry

## **Heizotruck:**

- agriculture or forestry tractor approval (60 - 80 km/h)
- 510 hp drive
- ISO-BUS terminal
- Rear PTO shaft, fifth-wheel plate
- Front- and rear hydraulics
- And much more

## **Heizogreif forestry grippers**

- For crane, loader and tractor
- Opening width 1500 mm
- As version with 3/2, 4/3 or 5/4 massive steel prongs
- Also as HG 100 logging gripper
- With mounting bracket for Euro 3 or other cultivation systems

## **Heizoshovel**

- With 1 m<sup>3</sup>, 2 m<sup>3</sup> or 3 m<sup>3</sup>
- With mounting bracket for Euro 3 or other cultivation systems



**Heizohack hand fed machine**



**Heizohack crane fed machine**

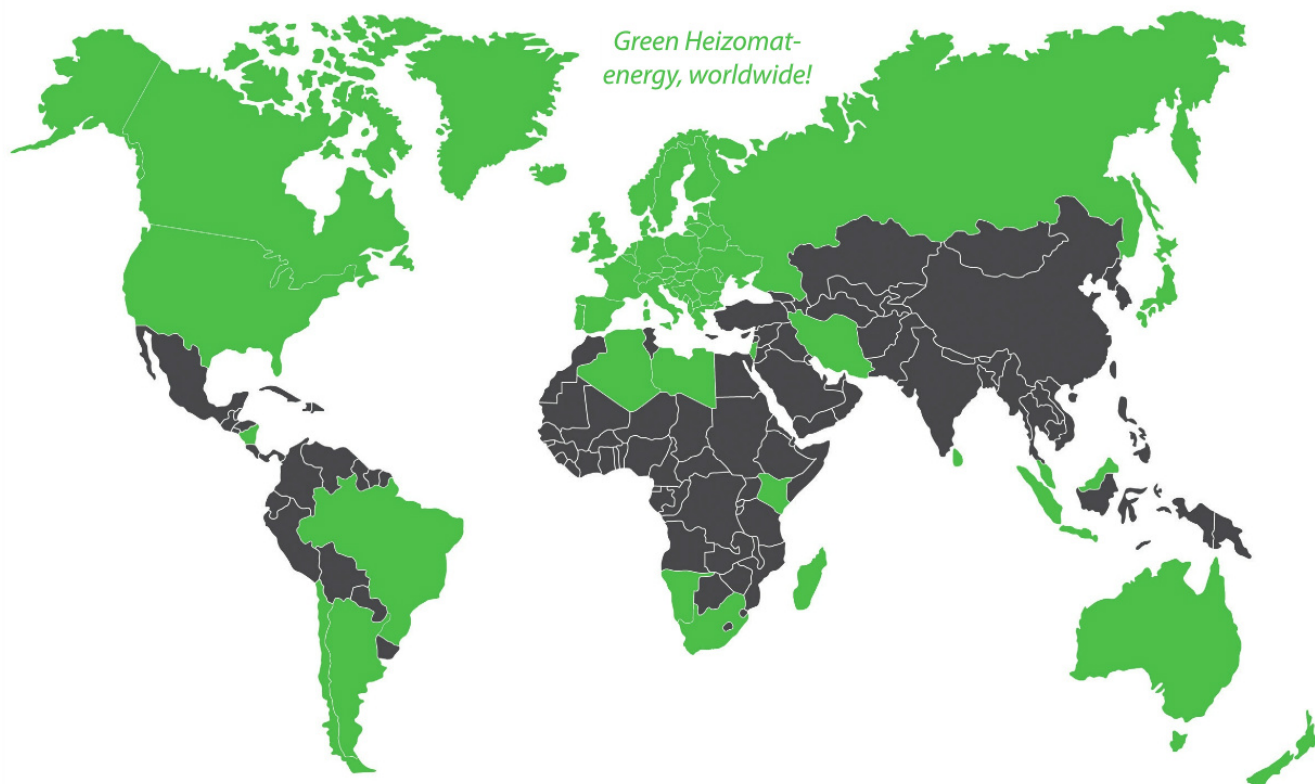


**The Heizotruck**



# Notes

A large grid of graph paper for taking notes, consisting of a uniform pattern of light gray lines on a white background.



**With 400 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:



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