

INDUSTRIAL HEATING

HPKI-K 180 - 550
Under feed firing



HS  **PERIFAL**®

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BAXI

INDUSTRIAL HEATING

HPKI-K 180-550 kW

The high-performance boiler is produced as a stress-free welded construction. It is constructed in accordance with the natural combustion process of the wood fuel. The gasification combustion chamber built on a direct pass principle is fitted with a variable ceramic (replaceable) radiator roof cladding. High combustion temperatures and a long furnace duration of the gases is the guarantee for a clean burning process.

The heat insulated door at the front swings out completely permitting totally free access for cleaning all boiler flues.

- Primary and secondary air regulated by combustion air fan and dampers
- Output regulated by combustion chamber temperature, boiler temperature, flue gas temperature and lambda value
- Factory built and cured heat resistant refractory lining
- Under feed fuel stoking with combustion retort in heat resistant steel incl. cast alloy grate elements
- Burnout grate made of fire-resistant cast alloy
- Combustion chamber door at the front with safety catch and interlock
- Suitable for pellet and wood chips up to W40



12 STANDARD: Combustion chamber with under feed firing and fixed ash grate

13 OPTIONAL: Combustion chamber with under feed firing and moving step grate section

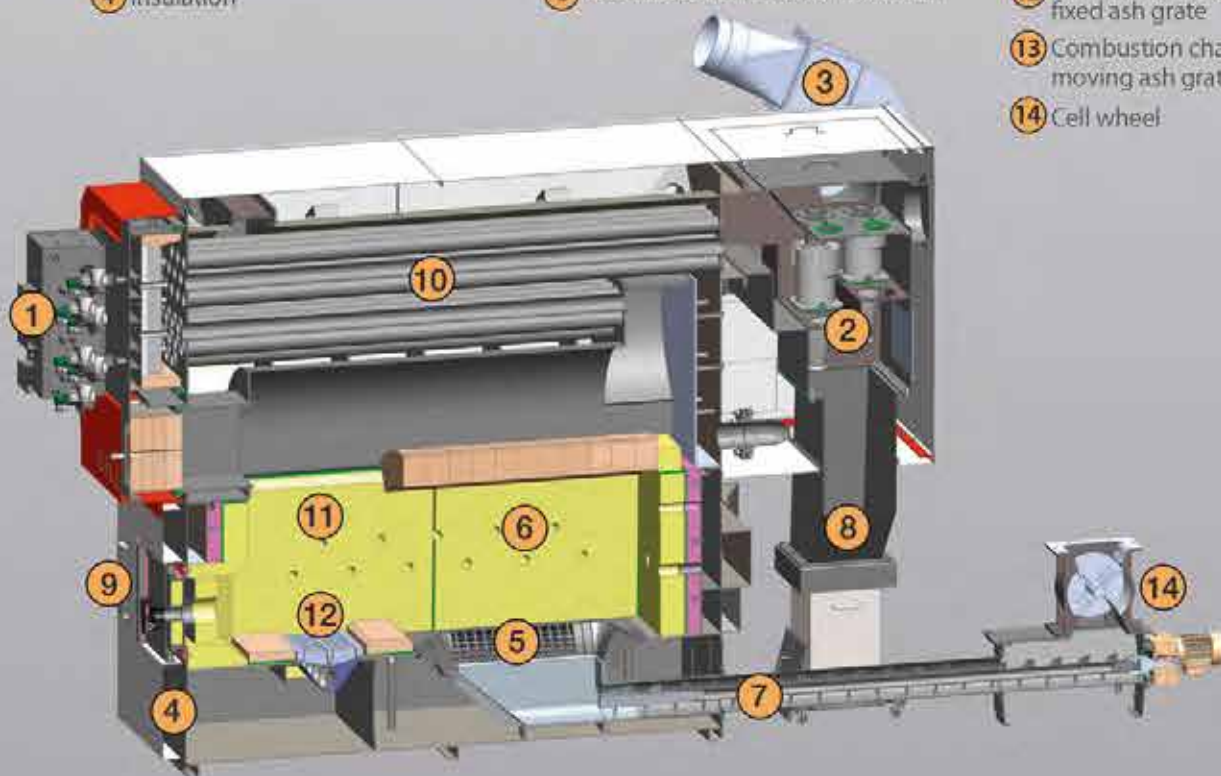


HPKI-K 180 - 550									
Type	Output in kW	L	W	H	Flow/Return	Weight in tons	Water in litre	Flow coefficient kvs in m ³ /h	
180	180	3190	1150	2200	80/65	4.4	830	48	
195	195	3190	1150	2200	80/65	4.4	830	48	
240	240	3190	1150	2200	80/65	4.4	830	48	
300	300	3450	1250	2250	80/80	5.5	1100	72	
360	360	3450	1250	2250	80/80	5.5	1100	72	
450	450	3950	1440	2480	100/100	7.1	1550	110	
495	495	3950	1440	2480	100/100	7.1	1550	110	
550	550	3950	1440	2480	100/100	7.1	1550	110	

- 1 Automatic heat exchanger cleaning
- 2 Automatic flue gas dust removal
- 3 Flue gas fan
- 4 Insulation

- 5 Primary air
- 6 Secondary air
- 7 Fuel stoking
- 8 Automatic ash removal in ash bin

- 9 Combustion chamber door
- 10 Heat exchanger
- 11 Combustion chamber
- 12 Combustion chamber with fixed ash grate
- 13 Combustion chamber with moving ash grate option
- 14 Cell wheel



APPLICATION EXAMPLES



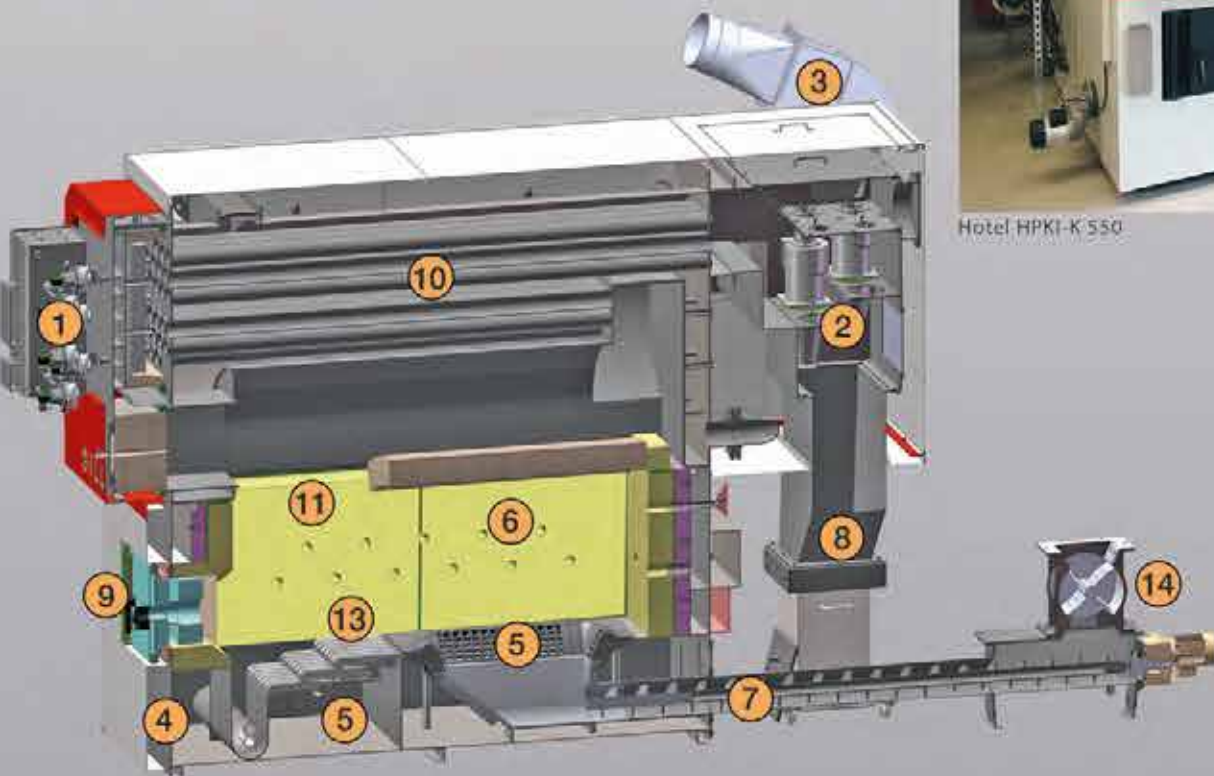
Joinery HPKI-K 240



Farming business HPKI-K 360 + HPK-RA 100



Hotel HPKI-K 550



INDUSTRIAL HEATING

HINGED ARM SWEEP COLLECTOR

- 1 Helical gear motor (high efficiency, low power consumption)
- 2 Robust auger (covered in fuel store) with progressive flights suitable for wood chips up to G50/P45 Ö-NORM M7133
- 3 Double hinged arm system for optimal clearing of the wood chip storage room
- 4 Ripping hook
- 5 Highly efficient oil immersed helical gear with shaft sealing



- 2 massive hinged arms make working up to 6 m diameter possible incl. pressure disc, gear motor and pre-tensioning springs
- Robust auger shaft
- Continuously welded 8 mm auger flights
- Progressive pitch auger flights
- Large auger channel
- Rough chopped wood chips up to G50 /P45, industrial wood chips and wood briquettes are possible to use



An essential component used by Gilles is the oil immersed helical gear for the fuel transport. This has a torque rating of 5000 Nm and special gaskets which prevent the penetration of dust and wood fines effectively and long-term.

The robust design of the double hinged armed sweep collector is so far unmatched. Reliable for transportation combined with Gilles applied technology control panels leads to optimal fuel consumption.



Ripping hook prevents blockages. Oversize wood chips are automatically pushed down to then be cut in the cell wheel.

Continuously welded 8 mm thick auger flights



Very robust shaft

INDUSTRIAL HEATING



Cross auger Ø 250 mm



Robust hydraulic cylinder for walking floor movement

Push rod transport system is appropriate for rectangular fuel stores serving boilers with a high fuel consumption. A walking floor consists of minimum one push rod with wedge shaped wings moving the fuel forwards.

The push rods are driven by the hydraulic cylinders and the hydraulic power pack which are located outside the fuel store. Due to this design of the side mounted wings, the fuel gets pushed into a trough at the front end of the fuel store. From there either an auger or a chain conveyor takes the fuel to the boiler.

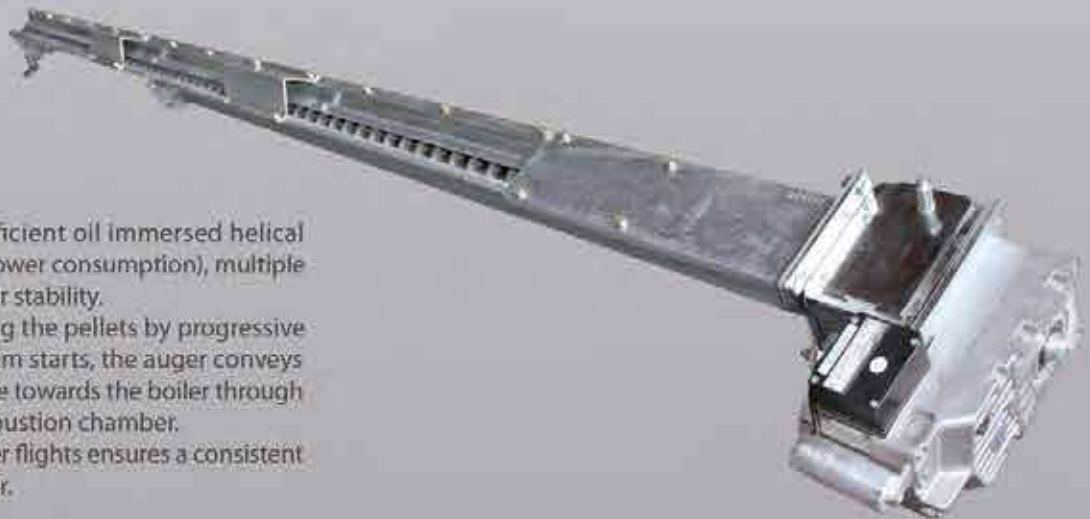
Push rod width site specific



Continuous sub-structure resulting in lower builder and assembly costs

PELLET AUGER

Pellet auger with highly efficient oil immersed helical gear motor (thus very low power consumption), multiple bearings and support feet for stability. Auger channel for conveying the pellets by progressive auger flights. After the system starts, the auger conveys the pellets from the fuel store towards the boiler through the cell wheel into the combustion chamber. The construction of the auger flights ensures a consistent and trouble-free fuel transfer.



HEATING CONTROL SYSTEM

Higher efficiency

Energy saving

(Efficient control of electrical components)

Intelligent regulation of drive units

(Components: Ignition fan, pump, feeding system)

Benefits

- GILLES TOUCH INDUSTRIAL control system
- PLC controller with 10.1" touch display and industrial standard components
- Control of return temperature by shunt pump and 3-way diverting valve
- Customer interface (3 inputs and 2 free configurable, potential-free outputs)
- Grate ash discharge and pneumatic heat exchanger cleaning
- Long-lasting and high quality hybrid motor starter for all 3 phase motors
- Monitoring the cell wheel and stocker auger operation by ampere reading
- Negative pressure control by frequency inverting flue gas fan
- Combustion air regulation by combustion air fan, air dampers and air flow sensors
- Boiler temperature sensors (flow-, return-, flue gas-, and combustion chamber sensor)
- Combustion optimisation via lambda probe
- OPTIONS:
 - Visualisation incl. remote access by industrial PC
 - M-bus connection (e.g. remote heat meter reading)
 - Modbus (further bus-types on request)
 - Automatic ignition unit



The remote setting and monitoring of the heating system is possible at any time from anywhere via PC, tablet and smart phone.



HEATING CONTROL SYSTEM



Operator friendly use of the GILLES TOUCH-control



Cascade for up to 5 boilers possible:



Easy setting and display of all parameters



Side mounted control panel



Buffer management for up to 4 buffer vessels with up to 4 temp. sensors each



Temp. control of external buildings



Simple-function- and components test

Pellet / wood chips - heating systems



Pellet boiler HPK-RA 12.5 - 160

Wood chip boiler HPK-RA 25 - 160

Industrial boiler HPKI 180 - 2500
(for various biomass fuels)

Visit our show and training centre!

- directly at A1 motorway exit Regau
4844 Regau, Tiefenweg 34



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