

WOOD CHIP HEATING

HPK-RA 25 - 160



HS  **PERIFAL**®

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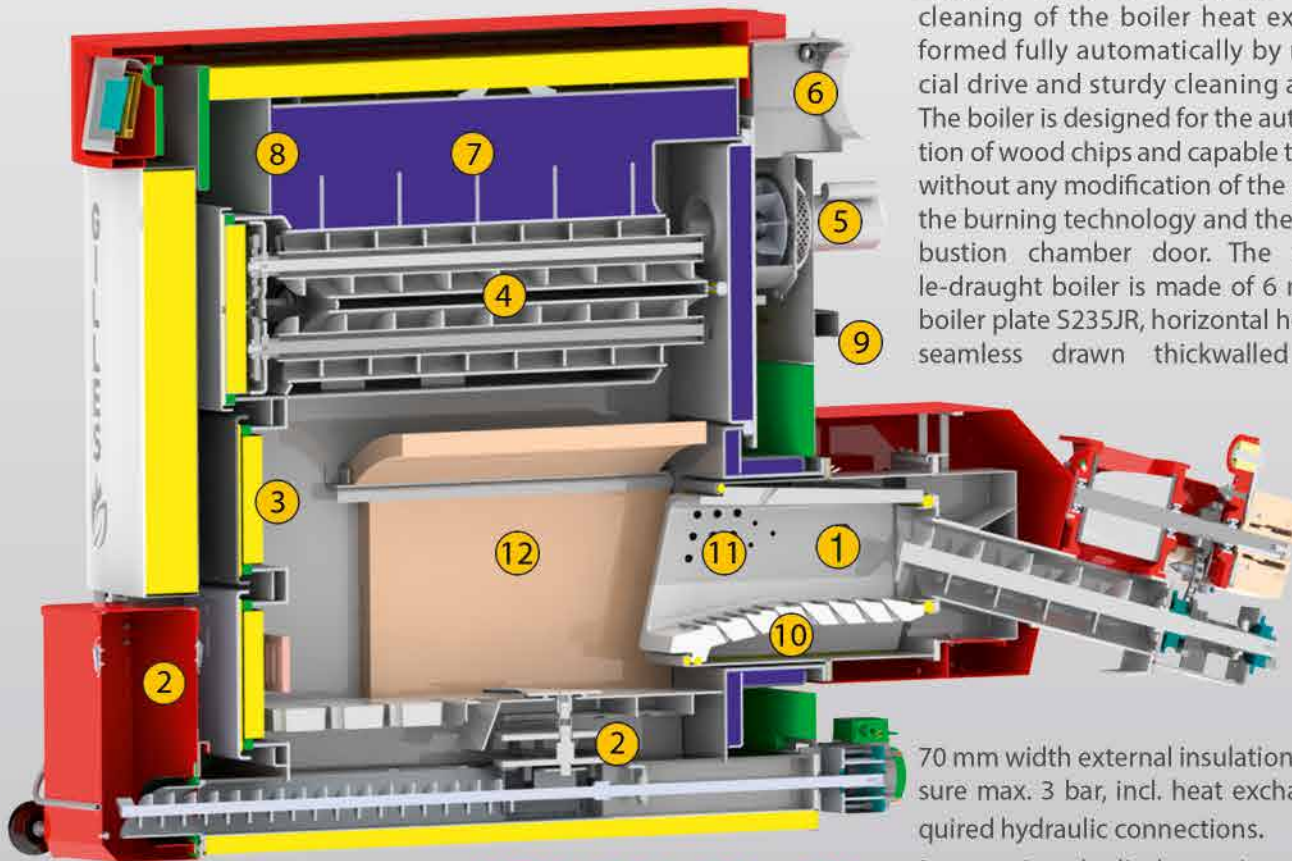
BAXI

WOOD CHIP HEATING

WOOD CHIP BOILER HPK-RA

The high-performance boiler is produced as a tension-free welded construction. The heat insulated front door opens outwards. The cleaning of the boiler heat exchanger is performed fully automatically by means of a special drive and sturdy cleaning augers.

The boiler is designed for the automatic combustion of wood chips and capable to burn log wood without any modification of the grate because of the burning technology and the additional combustion chamber door. The welded multiple-draught boiler is made of 6 mm thick-walled boiler plate S235JR, horizontal heat exchanger in seamless drawn thickwalled boiler tubes,



HPK-RA 25 - 59

70 mm width external insulation, operating pressure max. 3 bar, incl. heat exchanger and all required hydraulic connections.

Automatic ash discharge integrated in boiler base into wheeled 43l or 80l ash bin. Suitable for combustion of wood chips EN ISO 17225-4 or pellets EN ISO 17225-2 class A1 and DIN plus

Description:

- ① Wood chip burner in high-quality heat-resistant ceramic
- ② Ash removal via ash agitator with special drive technology ash compression resulting in long emptying intervals -wheeled 43l or 80l ash bin
- ③ Combustion chamber door for log wood operation (**no changeover required**)
- ④ Horizontal pipe heat exchanger with automatic cleaning for high efficiency > 93.7%
- ⑤ Flue gas fan for optimal ignition process and permanent negative pressure in the boiler
- ⑥ Lambda probe for fuel detection and optimised, clean combustion process
- ⑦ Overheat protection element
- ⑧ Welded multiple-draught boiler in 6 mm boiler plate
- ⑨ Shunt circuit with pump and mixing valve (optionally)
- ⑩ Primary air modulating variable
- ⑪ Secondary air modulating variable
- ⑫ Individual replaceable fire bricks

GILLES HPK-RA	25	30	35	
Nennleistung	25	30	35	
Länge l (mm)	1430	1430	1430	
Breite b (mm)	765	765	765	
Höhe h (mm)	1445	1445	1445	
Gewicht (kg)	724	724	724	
GILLES HPK-RA	40	45	49	
Nennleistung	40	45	49	
Länge l (mm)	1430	1430	1700	
Breite b (mm)	765	765	765	
Höhe h (mm)	1445	1445	1445	
Gewicht (kg)	724	724	910	
GILLES HPK-RA	59	75	85	
Nennleistung	59	75	85	
Länge l (mm)	1700	1780	1780	
Breite b (mm)	765	935	935	
Höhe h (mm)	1445	1785	1785	
Gewicht (kg)	910	1570	1570	
GILLES HPK-RA	100	120	145	160
Nennleistung	100	120	145	150
Länge l (mm)	2155	2155	2620	2620
Breite b (mm)	935	935	935	935
Höhe h (mm)	1785	1785	1785	1785
Gewicht (kg)	1963	1963	2463	2463

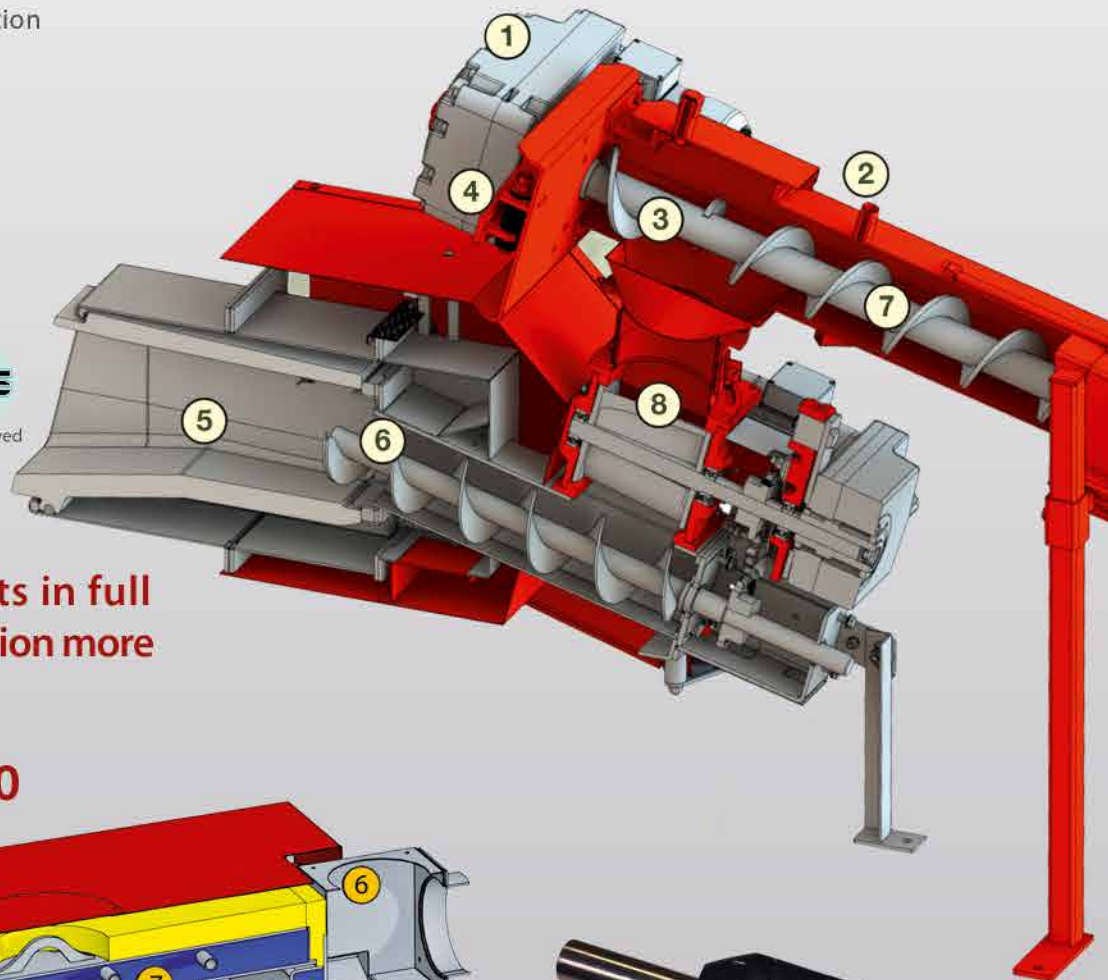
WOOD CHIP HEATING

Transport auger + stoker

- 1 Helical gear motor, high efficiency, low power consumption
- 2 Connection point sprinkler valve
- 3 Ripping hook
- 4 Start-up cushioning and vibration reduction
- 5 Ceramic burner
- 6 Stoking auger
- 7 Robust transport auger (continuously welded 8mm auger flights)
- 8 IBS proved cell wheel

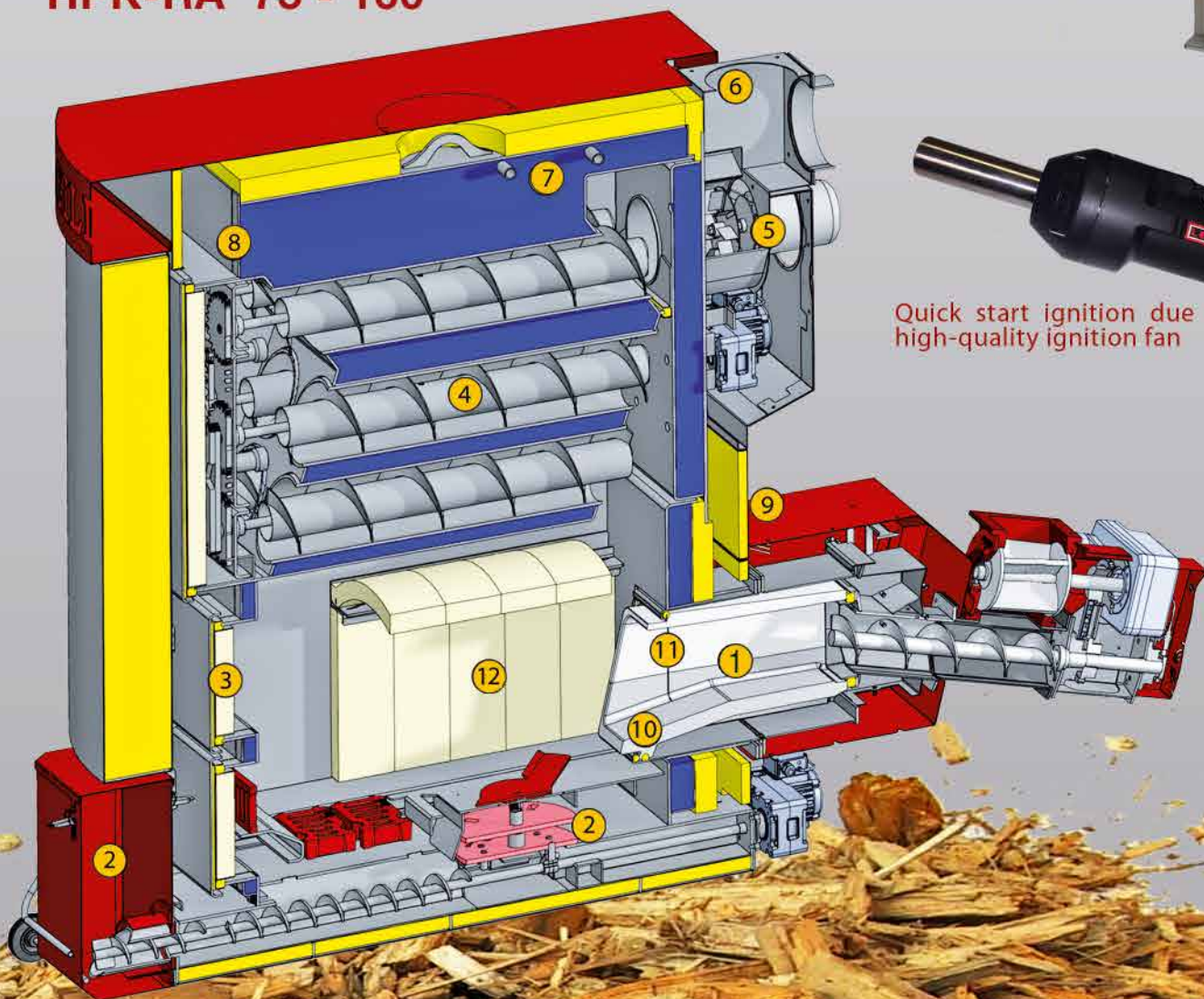
IBS

IBS proved



Efficiency of all plants in full and partial load operation more than 93.7%

HPK-RA 75 - 160



WOOD CHIP HEATING



TRANSPORT AUGER

With continuously welded, robust auger flights and progressive pitch (prevents blockage)

- Robust auger shaft
- Continuously welded auger flights
- Progressive auger flights
- Large auger channel

GILLES special features

CELL WHEEL

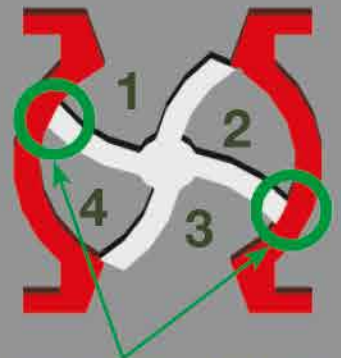
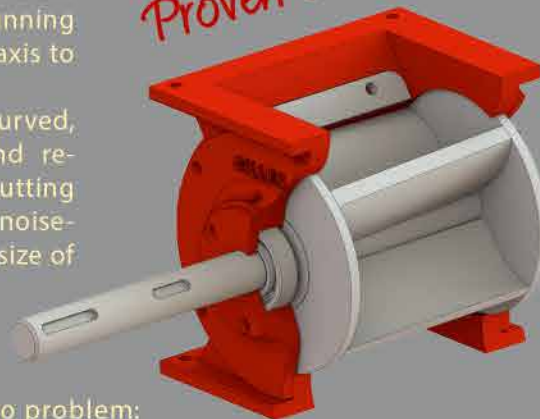
The multi-tested full-metal cell wheel reliably interrupts the boiler from the fuel store and thus provides 100% protection against burn back. The blades are attached to the running wheel at an offset angle to the rotary axis to enhance the cutting action.

In addition, the blades are slightly curved, which prevents noise generation and reduces compressive forces. A fixed cutting edge is integrated in the stable and noise-damping cast enclosure to reduce the size of longer pieces of material.

*100% protection against burn back
Proven on thousands installations*



IBS proved



Energy-saving 4-chamber system with low running surface

...you want to heat with log wood - no problem:
Just put in wood - everything else is controlled completely automatically
(Emergency operation only)



The ignition process by burning wood chips takes as long as it takes for the deposited wood to burn well. The wood chips stoking is then reduced to the minimum feed rate and increased again by sensors after the log wood has been burnt.

WOOD CHIP 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 P31S EN ISO 17225-4
- 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



Continuously welded
8 mm thick auger flights

Very robust shaft

- 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 P31S, 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.

HEATING CONTROL SYSTEM



The intelligent heating controller

✓ **Higher efficiency**

✓ **Energy saving**

(Energy efficient control of the electrical components)

✓ **Intelligent control of the drives**

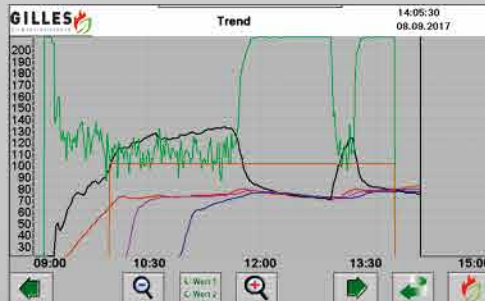
(Components: Ignition fan, 3 way diverting valve, transport systems)



Programme updates possible via USB stick

Benefits:

- Ideal settings for different fuels
- Modulating operation of the boiler
- Convenient setting and alteration of all heating functions via smart phone, tablet or PC/Mac
- Automatic error message notification via e-mail
- Remote monitoring of the boiler via internet
- Visualisation for smart phone, tablet or PC/Mac
- Graph recording of all heating parameters on the internal memory
- Modular design (expandable)
- Robust design of switch cabinet
- Cascade control for up to 4 boilers
- Password protected
- Modbus compatible
- Enabling of external heat source
- Recording of all operation parameters to USB stick



- Boiler & stoker status displayed
- Status display => which components are currently active
- All important values can be seen on the main screen, such as temperatures, O2 value, fans, etc.
- Flue gas analyses mode

- Graph recording over 6 months with USB stick
- Graph records exportable to USB stick
- Parameters can be exported into an excel file
- All values displayed on the controller can be recorded and saved

- The remote setting of the heating system or the heating circuits is possible by means of a room thermostat as well as by smart-phone, tablet, etc.



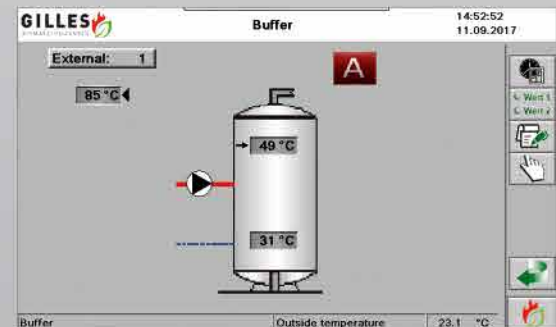
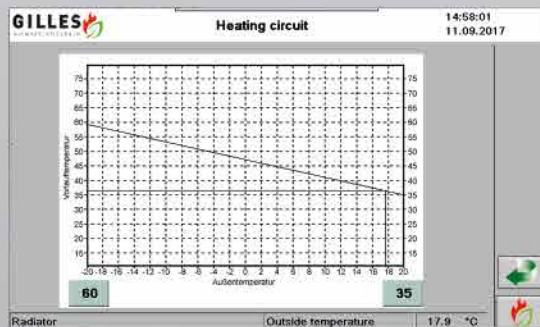
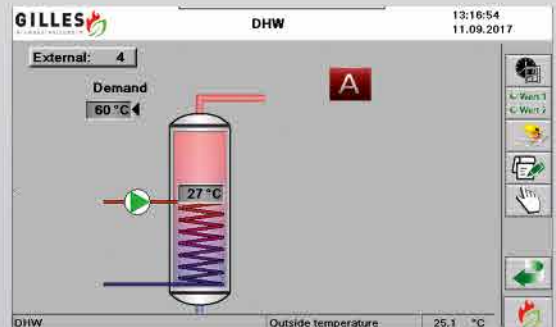
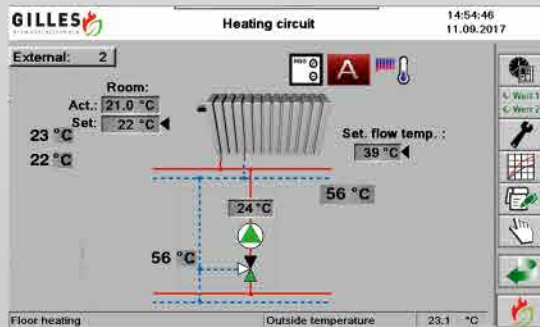
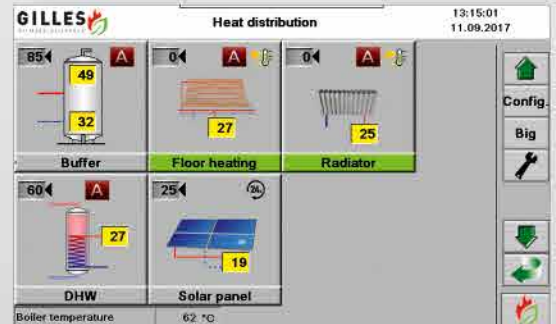
The remote setting and monitoring of the heating system is possible at any time from anywhere via PC, tablet and smart phone.

HEATING CONTROL SYSTEM

with integrated heating circuit control

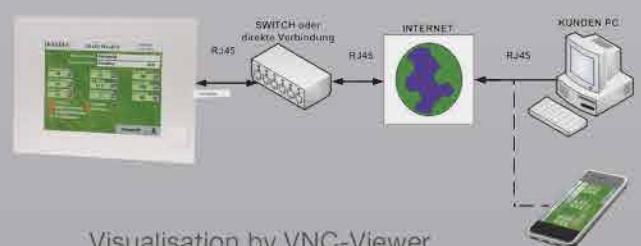
Previously it was only possible to regulate the heating circuits with the room thermostat. Now it's possible to control every heating circuit with the new Gilles touch control panel. You can regulate heating times, room temperatures and all important parameters easily with the new Gilles touch control panel.

The result of these innovations is optimal comfort with absolute control and lower heating costs!



Communication via smart phone app

Visualisation link / GSM-Visualisation



Visualisation by VNC-Viewer

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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