

PELLET HEATING

HPK-RA 12.5 - 160

HS PERIFAL®

HS Perifal AB, Box 654, 521 21 Falköping
Tel: 0515-171 10 Fax: 0515-155 13
www.baxi.se - info@baxi.se

BAXI



PELLET HEATING

HPK-RA 12.5 -160

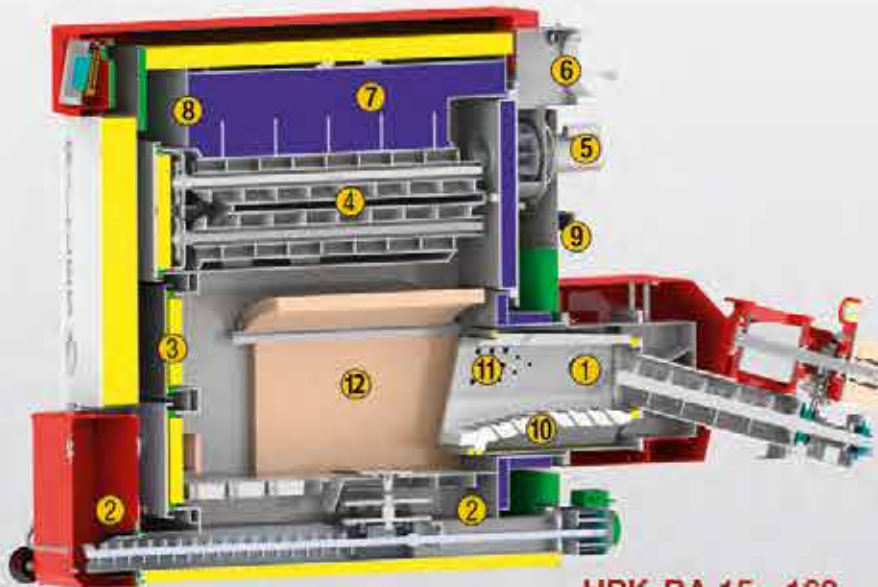
PELLET BOILER HPK-RA

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.

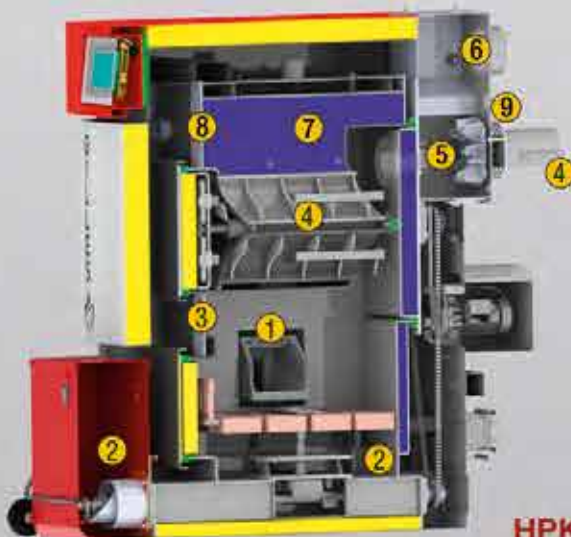
The boiler is designed for the automatic combustion of pellet and capable to burn log wood without any modification of the grate because of the burning technology and the additional combustion chamber door (HPK-RA 15-160). The welded multiple-draught boiler is made of 6 mm thick-walled boiler plate S235JR, horizontal heat exchanger in seamless drawn thick-walled boiler tubes, 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 pellets Ö-NORM M7135/EN 14961 class A1 and DIN plus.



HPK-RA 15 - 160

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



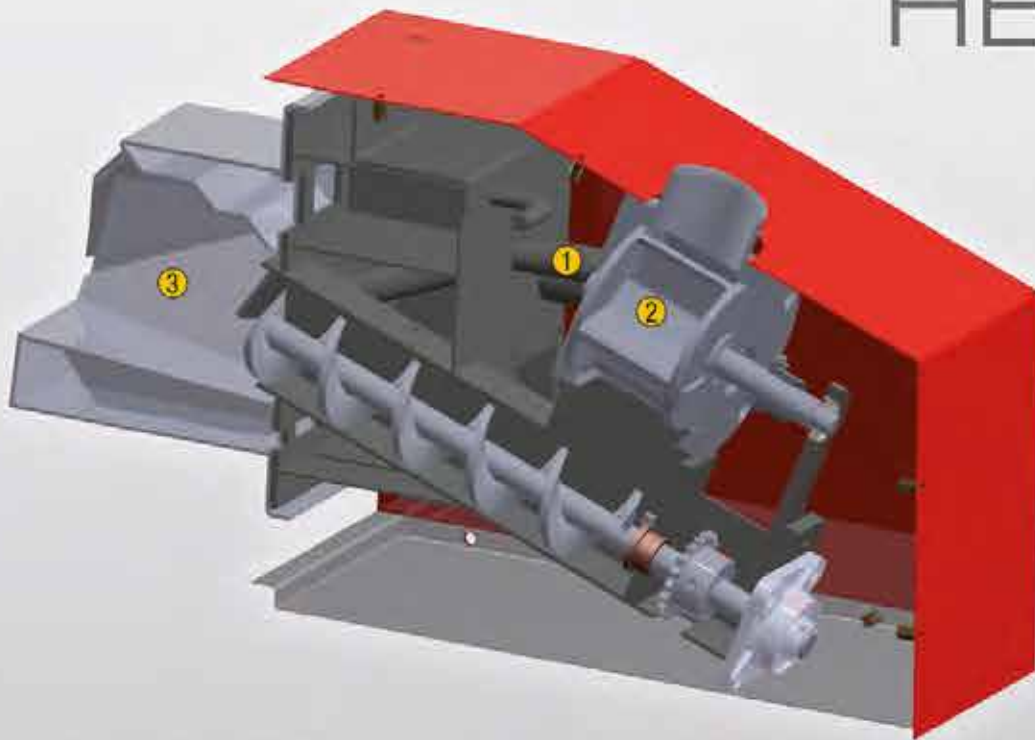
HPK-RA 12.5 - 19.5

Description:

- ① Pellet burner in highly heat-resistant steel for HPK-RA 12.5 – 45 or ceramic for HPK-RA 49 – 160
- 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 from HPK-RA 15 - 160 (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 brick from HPK-RA 49- 160

GILLES HPK-RA	12.5	14.5	19.5	
Nominal load	12.5	14.5	19.5	
Length l (mm)	1165	1165	1165	
Width b (mm)	620	620	620	
Height h (mm)	1290	1290	1290	
Weight (kg)	421	421	421	
GILLES HPK-RA	15	20	25	
Nominal load	14.1	20	25	
Length l (mm)	1165	1165	1165	
Width b (mm)	620	620	620	
Height h (mm)	1485	1485	1485	
Weight (kg)	443	443	443	
GILLES HPK-RA	30	35	40	45
Nominal load	30	35	40	45
Length l (mm)	1430	1430	1430	1430
Width b (mm)	765	765	765	765
Height h (mm)	1445	1445	1445	1445
Weight (kg)	724	724	724	724
GILLES HPK-RA	49	59	75	85
Nominal load	49	59	75	85
Length l (mm)	1700	1700	1780	1780
Width b (mm)	785	785	935	935
Height h (mm)	1445	1445	1785	1785
Weight (kg)	910	910	1570	1570
GILLES HPK-RA	100	120	145	160
Nominal load	100	120	145	160
Length l (mm)	2155	2155	2820	2820
Width b (mm)	935	935	935	935
Height h (mm)	1785	1785	1785	1785
Weight (kg)	1963	1963	2483	2483

PELLET HEATING



PELLET BURNER

High combustion temperatures are guaranteed in all performance ranges with the most efficient use of your fuel. Well designed air guidance is a precondition for best possible combustion. Years of experience, high-tech development and heat resistant materials guarantee a clean combustion and durability.

CELL WHEEL

The multi tested full-metal cell wheel reliably separates the boiler from the storage room and thus provides 100% protection against burnback. The blades attached to the running wheel are slightly curved, which prevents noise generation and reduces compressive forces.

- ① Ignition fan
- ② Cell wheel
- ③ Burner in highly heat-resistant steel for HPK-RA 12.5 – 45 or ceramic for HPK-RA 49 – 160
- ④ Ash agitator



Energy saving 4-chamber system with small running surface



GILLES special features

Log wood heating without changeover!

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



PELLET HEATING

Pellet transport systems

STANDARD 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 convey the pellets from the fuel store towards the boiler through the cell wheel into the pellet burner. The construction of the auger flights ensures a consistent and trouble-free fuel transfer.



RISING AUGER



KINKED AUGER



SPIRAL AUGER

The flexible Gilles conveyor is made of hardened steel and distinguishes itself by its particularly high tensile strength and spring force. This makes it possible to transport pellets – horizontally, vertically or in curves – up to max. 30 metres length.



PELLET HEATING



PELLET SUCTION SYSTEM

4 m in height difference and up to 20 m distance between the boiler and fuel store are no obstacle for the GILLES suction system.

The day hopper provides space for a filling capacity of approx. 120 kg pellet.



STEEL BOX on demand



GILLES PELLET BOX

If no pellet storage room is available or you don't want to adapt one, the Gilles Pellet Box is the ideal and cost effective solution. Gilles provides two options - either the solid pellet box in galvanised sheet steel for up to 9 tons - or the flexible silo made of high-performance synthetic fabric which can also store up to 9 tons of pellets in a compact manner.

Fabric box	Volume	Capacity	Height	Approx. dimensions
GP 17	3.1 m ³ -5.2m ³	2.1t - 3.2t	208-278 cm	170 x 170 cm
GP 21	4.5 m ³ -7.5m ³	2.8t - 4.7t	208-278 cm	210 x 210 cm
GP 17/29	5.7 m ³ -8.3m ³	3.6t - 5.4t	218-278 cm	170 x 290 cm
GP 21/29	6.6 m ³ -10.2m ³	3.8t - 6.1t	218-278 cm	210 x 290 cm
GP 25	6.4 m ³ -11.0m ³	4.2t - 6.7t	208-278 cm	250 x 250 cm
GP 29	9.6 m ³ -14.1m ³	6.0t - 9.0t	218-278 cm	290 x 290 cm

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)

Benefits:

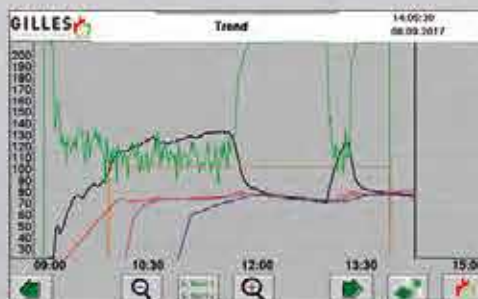
- Ideal settings for different fuels
- Modulating operation of the boiler
- Convenient setting and alteration of all heating functions via smart phone, tablet or PC/Mac
- Automatic error message notification via e-mail
- Remote monitoring of the boiler via internet
- Visualisation for smart phone, tablet 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 and/or BAC-Net compatible
- Enabling of external heat source
- Recording of all operation parameters to USB stick



Programme updates possible via 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, fan in, etc.
- Flue gas analyses made



- 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.



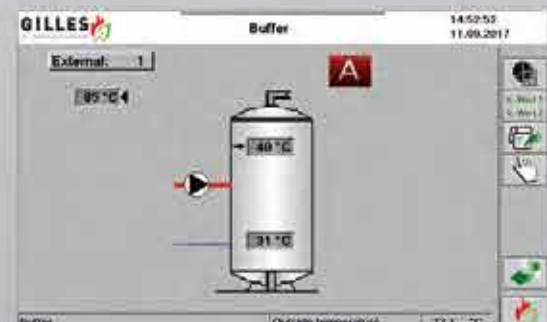
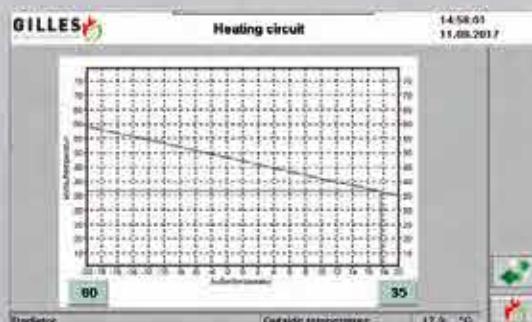
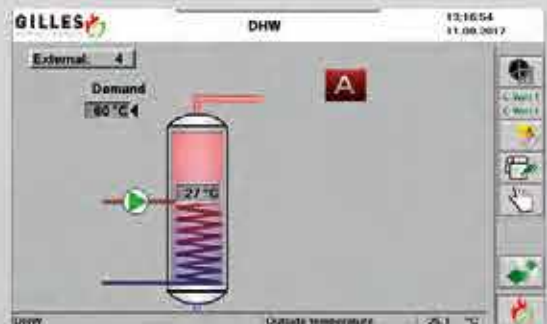
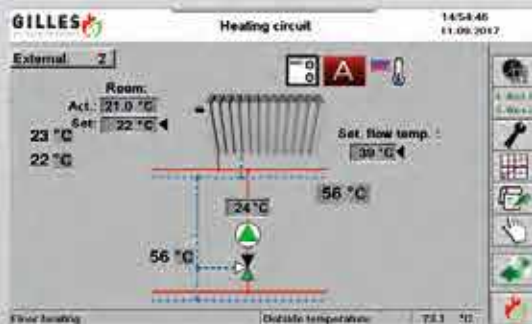
The remote setting and monitoring of the heating system is possible at any time from anywhere via PC, tablet and smart phone.

HEATING CONTROL SYSTEM

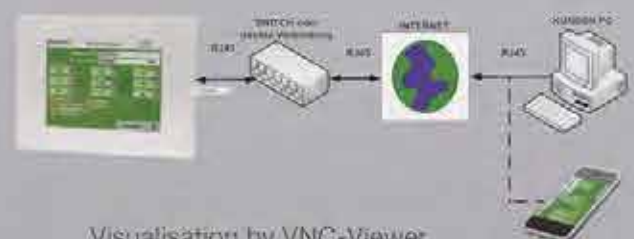
with integrated heating circuit control

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!



Visualisation link / GSM-Visualisation



Visualisation by VNC-Viewer



Communication via smart phone app

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



HS Perifal AB, Box 654, 521 21 Falköping
Tel: 0515-171 10 Fax: 0515-155 13
www.baxi.se - info@baxi.se

