

# DATA





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## 1. Suitable fuel materials

### 1.1. Wood chips

#### Water content of wood chips

Qualification	Characteristics
n	
W20	Dried on air
W30	Storage possibility
W35	Restricted storage possibility

#### Seize of wood chips:

For Austria apply:

Wood chips according to ÖNORM M7133 standard

Energy wood chips G30 small wood chips

Energy wood chips G50 medium size wood chips

For Germany apply:

Wood chips of length 50 mm at most, in accordance with the fuel class 4,

Federal regulation on environment protection BimSchV of 15. July 1988

### 1.2. Wood pellets

For Austria applies:

Pellets according PVA goods qualification

For Germany applies:

Pellets according DIN 51731

### 1.3. Wood spills

Saw spills and carpenter waste wood

For Austria applies:  
ÖNORM M7133 standard

For Germany applies:  
1.BimSchV, Fuel class 4

### 1.4. Other fuel materials

- **Humidity: max. 30 % of water content in fuel**
- **Size of pieces: max. 50 mm**
- **End pieces: max. 1% to 120 mm**
- **Fine particles: max. 5% of  $\varnothing < 3$  mm**
- **Bark portion: max. 10%**

Foreign materials like pieces of stone, metals, soil, too large wood pieces, etc. may clog up the tube and damage the transportation device, or cinder and make the furnace dirty.

The values of water content in fuel must be strictly observed and must not exceed the specified values; otherwise the combustion process would not run in prescribed manner. The combustion temperatures would be too low, and flue gases content too high. In addition, there is a danger of the furnace overfilling and the flame could go out.

Any other kinds of fuels (forest and industrial waste wood, various pieces of lumber, etc.) do not comply with the prescribed quality of firewood and may be harmful both for equipment (rust occurrence, mechanical defects) and environment (heavy metals emissions). Do not use fuels that are not in correspondence with the respective specifications by no means!



Manufacturer shall not be held responsible for any damages caused by using inappropriate materials or fuels! The risk thereof shall be born exclusively by the user.

## 2. Technical data

# GILLES wood chips and pellets boiler

## HPK ERA 15 - 160 Emergency operation using pieces of wood

This high-performance boiler is produced as a tension-free welded construction. The heat insulated door at the front swings out completely permitting free access for cleaning all the boiler flues. Constructed in accordance with the natural combustion process of the fuel wood. The gasification combustion chamber built on the direct-current principle is lined with a ceramic variable (replaceable) radiant ceiling. The high combustion temperatures and a long persisting time of the gases in the furnace guarantee clean combustion.

Suitable for automatic combustion both of wood chips and pellets, as well as for using pieces of wood in case of emergency operation **without necessity of any construction adjustments**, thanks to an additional combustion chamber opening and grate.



- . Nominal heat output - see chart
- . Minimal partial load: 30% of nominal heat output
- . Welded high-performance multiple-draught boiler in thick-walled boiler plate St. 37.2 (6 mm width)
- . Horizontal radiator in seamless drawn thick-wall boiler pipe
- . 70 mm thick external insulation;
- . Incl. heat exchanger with all pipe collars required plus a cleaning device
- . Operational pressure max. 3 bar
- . Automatic ash discharge integrated in boiler base
- . Incl. suction draught ventilator
- . Incl. rolling ash container and ash stirrer
  
- . **SET** includes:
- . HPK . boiler
- . Switch box intended for installation onto wall
- . Wood chips . burner with automatic ignition and cell wheel
- . Shunt circuit set for <sup>a</sup> T 20° and fire bricks

HPK-RA		15/7.1	20/7.1	25/7.1
Nominal output	<b>kW</b>	15	20	25
Admissible operational pressure	<b>bar</b>	3	3	3
Max. flow temperature	<b>°C</b>	95	95	95
Minim. return temperature	<b>°C</b>	55	55	55
Number of heat exchange tubes		2	2	2
Heating area	<b>m<sup>2</sup></b>	1,9	1,9	1,9
Boiler volume (water)	<b>L</b>	83	83	83
Boiler weight	<b>kg</b>	443	443	443
Flue gas temp. nominal load	<b>°C</b>	130-200	130-200	130-200
Power supply		400V 50 Hz	400V 50 Hz	400V 50 Hz
Incl. ash container		43 litres	43 litres	43 litres
Item number		PL061599	PL061600	PL061601

## Data

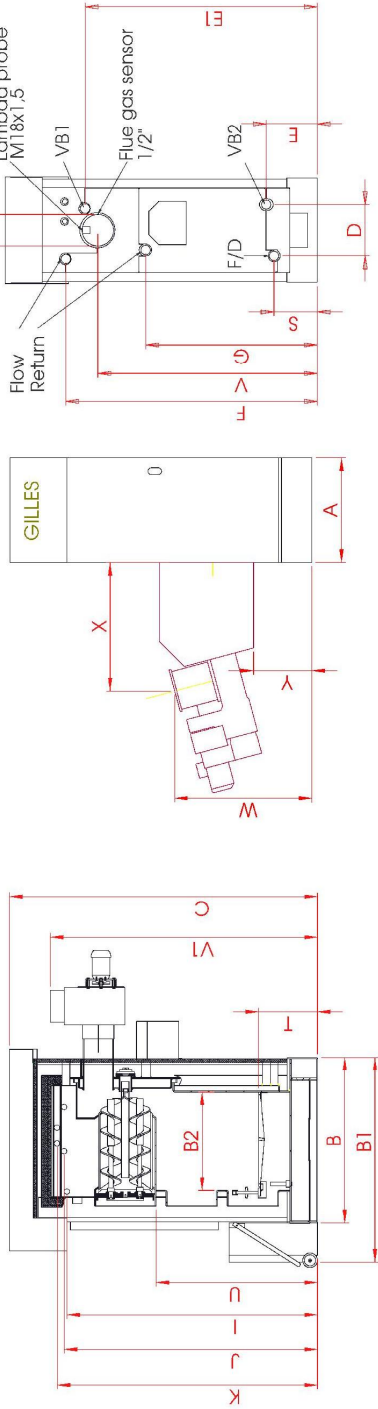
<b>HPK-RA (wood chips)</b>		<b>30/8.1</b>	<b>35/8.1</b>	<b>40/8.1</b>	<b>49/8.1</b>
Nominal output	<b>kW</b>	30	35	40	49
Admissible operational pressure	<b>bar</b>	3	3	3	3
Max. flow temperature	<b>°C</b>	95	95	95	95
Minim. return temperature	<b>°C</b>	55	55	55	55
Number of heat exchange tubes		2	2	2	2
Heating area	<b>m<sup>2</sup></b>	2,9	2,9	2,9	2,9
Boiler volume (water)	<b>L</b>	150	150	150	150
Boiler weight	<b>kg</b>	724	724	724	724
Flue gas temp. nominal load	<b>°C</b>	130-200	130-200	130-200	130-200
Power supply	400 V 50 Hz				
Inc. ash container		43 litres	43 litres	43 litres	43 litres
Item number		PL061024	PL061025	PL061026	PL061028
<b>Set price Ö</b>					

<b>HPK-RA (wood chips)</b>	<b>60/2.1</b>	<b>75/3.1</b>	<b>85/3.1</b>	<b>100*/10.1</b>	<b>120*/10.1</b>	<b>145/4.1</b>	<b>160/4.1</b>
Nominal output	<b>kW</b>	60	75	85	100	120	145
Admissible operational pressure	<b>bar</b>	3	3	3	3	3	3
Max. flow temperature	<b>°C</b>	95	95	95	95	95	95
Minim. return temperature	<b>°C</b>	55	55	55	55	55	55
Number of heat exchange tubes		3	3	3	3	3	3
Heating area	<b>m<sup>2</sup></b>	5,4	7,2	7,2	9,7	9,7	13,3
Boiler volume (water)	<b>L</b>	220	320	320	495	495	620
Boiler weight	<b>kg</b>	1330	1570	1570	1963	1963	2463
Flue gas temp. nominal load	<b>°C</b>	130-200	130-200	130-200	130-200	130-200	130-200
Power supply	400 V 50 Hz						
Inc. ash container		43 litres	43 litres	43 litres	43 litres	80 litres	80 litres
Item number		PL061029	PL061031	PL061032	PL061771	PL061772	PL061036
<b>Set price Ö</b>							

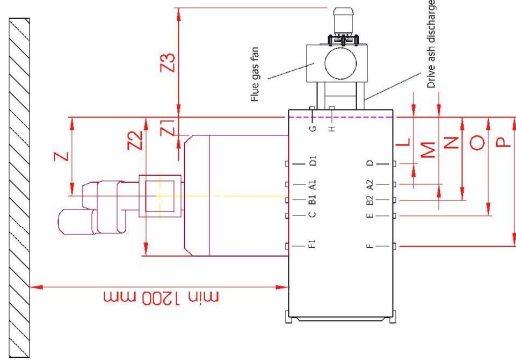
### 3. Dimensions

#### Woodchip boiler HPK-RA 15-25

Änderungen dürfen nur am CAD vorgenommen werden



Output kW	BS	Draughts	Volume l	Weight kg	A	B	B1	B2	C	D	E	E1	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z	Z1	Z2	Z3
15	7.1	2	83	443	530	845	500	1485	260	1210	1280	1210	1280	875	1275	1290	1325	255	360	440	480	685	160	220	300	820	1115	1360	659	655	257	440	130	749	560
20	7.1	2	83	443	530	845	500	1485	260	1210	1280	1210	1280	875	1275	1290	1325	255	360	440	480	685	160	220	300	820	1115	1360	659	655	257	440	130	749	560
25	7.1	2	83	443	530	845	500	1485	260	1210	1280	1210	1280	875	1275	1290	1325	255	360	440	480	685	160	220	300	820	1115	1360	659	655	257	440	130	749	560



**Note VB1 & VB2:**  
These connections have to be connected by a pipe with the same cross section as VB1 & VB2!

Combustion chamber  
300 x 500  
Combustion chamber door  
300 x 250

Connections	Ø
Flow, Return	5/4"
Safety valve sensor for overhear protection by safety heat exchanger	1/2"
Boiler sensor	1/2"
High limit circuit breaker	G, D, or D1
Thermometer	F or F1
Boiler sensor heating control	D or D1
The safety heat exchanger has to be connected either between A1 and B1 or A2 and B3 or A1 and B2 or A2 and B1	1/2"

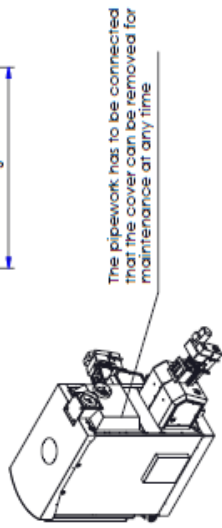
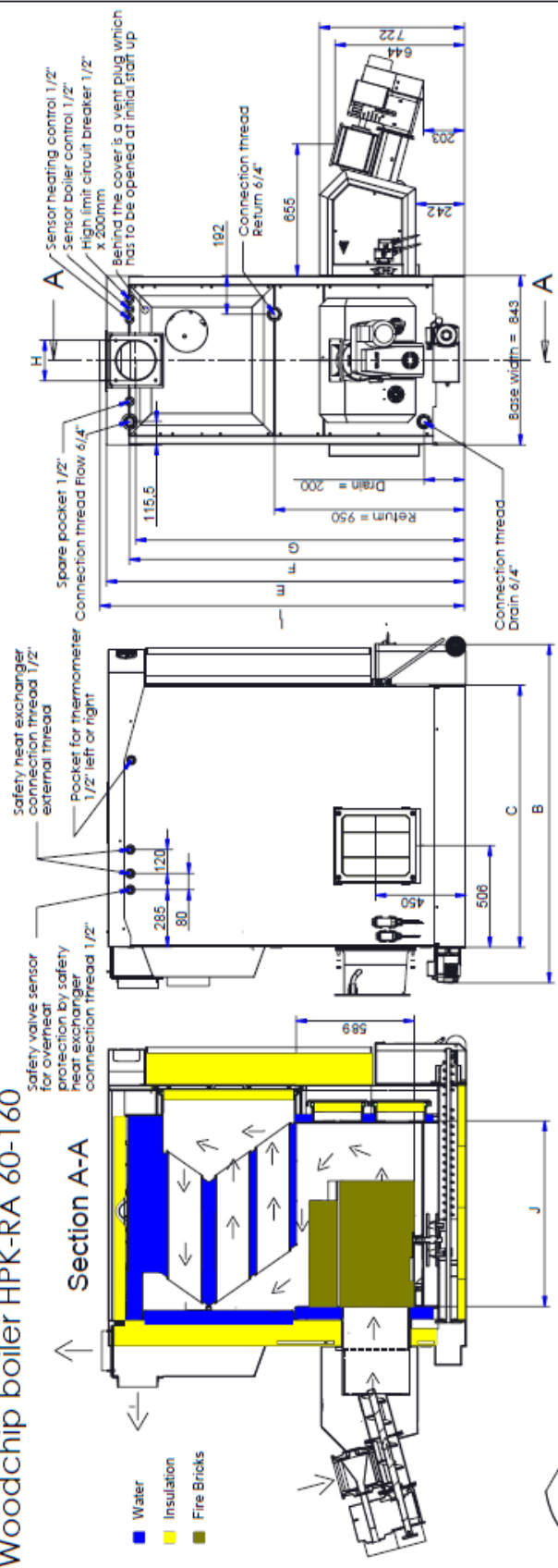
Pos.	Stk.	Teilennr.	Abmessung	Name	Biegeradius	Werkstoff
			gez.	Rösch	Datum	Freimaß/DIN 7168
			bezt.	Rösch	22.01.2008	Tel
			gepr.		22.01.2008	Maßstab:
Gillis, Energie und Umwelttechnik GmbH & Co KG Kesselbauer Str. 16 A-4810 Gmünd Tel.: +43 (0)7612 73760-0 Fax: DW 17 mail:office@gilles.at						
Produktgruppe: Layout Produktdatenblatt						
Benennung: Data sheet Woodchip 7.1 English						
Zeichnungsnr.: 500108						
Rev. 500108						



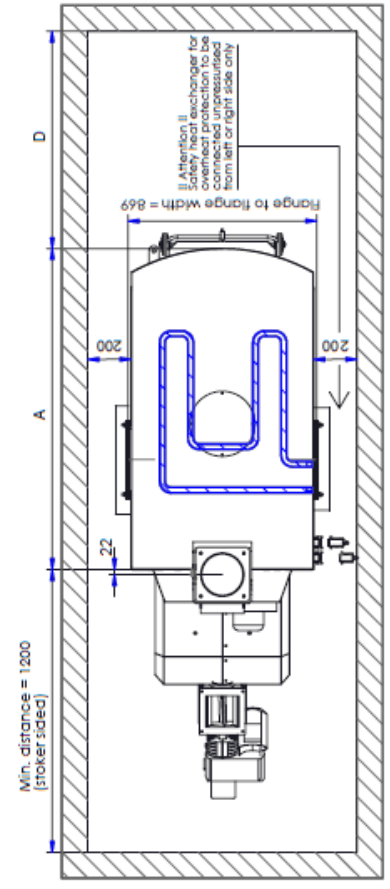


# Woodchip boiler HPK-RA 60-160

Änderungen dürfen nur am CAD vorgenommen werden  
 CAD-Datei: HPK-RA\_60-160.dwg  
 Datum: 08.03.2011  
 Zeichnung: 500003



Output kW	BS	Draughts	Volume l	Weight kg	Length in mm	Height in mm	Flue gas connection in mm	Combustion chamber
					A B C D	E F G H		J
60	2.1	9	220	1330	1238 1445 1065 1000	1785 1670 1640 200	1820	1820
75	3.1	9	320	1570	1478 1685 1305 1200	1785 1670 1640 200	1820	925
85	3.1	9	320	1570	1478 1685 1305 1200	1785 1670 1640 200	1820	925
100	10.1	9	465	1983	1853 2060 1680 1400	1785 1670 1640 250	1820	1300
120	10.1	8	465	1983	1853 2060 1680 1400	1785 1670 1640 250	1820	1300
145	4.1	9	620	2463	2318 2525 2145 1840	1785 1670 1640 250	1820	1765
150	4.1	9	620	2463	2318 2525 2145 1840	1785 1670 1640 250	1820	1765



Pos.	Stk.	Teilenr.	Abmessung	Biegeradius	Werkstoff
			Name	Datum	
			gez. Rösch	08.03.2011	Freimaßst.DIN 7168
			bear. Rösch	08.03.2011	Teil
			gepr.		Maßstab:
Produktgruppe: Layout Produktartenblatt Standard			Benennung: Data sheet Woodchip 2.1, 3.1, 4.1, 10.1 English GILLES_SchNZZrel:01-04-02-00-500003		
			Zeichnungsnr.: 500003		
			Rev. C		



## 4. List of involved parties

### Manufacturer

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Fax +43 7612 73760 17

[office@gilles.at](mailto:office@gilles.at)

### Installation worker

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### Electrician

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### Flue gas tubes cleaner / Chimneyer

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