

## Wood Chip Specification

The quality of the fuel used can have a significant impact on the reliability and the life of the boiler.

The use of contaminated material can lead to breaches of emissions and waste regulations as well as long term damage to the heating system.

We would recommend using wood chips rather than shredded wood

De-barked wood for wood chips reduces the ash content of the fuel, therefore benefits an automated boiler system, reducing the need for human intervention for servicing.

We recommend as a minimum the fuel should comply with the following specifications;

<b>Wood Chips Classification acc. To OENORM M7133</b>				
Description		<b>G30 Size</b>	<b>G50 Size</b>	<b>G100 Size</b>
Single Pieces	Edge Length Max	85mm	120mm	250mm
	Cross Section Max	3cm <sup>2</sup>	5cm <sup>2</sup>	10cm <sup>2</sup>
Retained in coarse sieve		Max. 20%	Max. 20%	Max. 20%
Coarse sieve mesh		16 x 16mm	31.5 x 31.5mm	63 x 63mm
Retained in medium sieve		60 to 100%	60 to 100%	60 to 100%
Main Quantity nominal length		30mm	50mm	100mm
Medium sieve mesh		2.8 x 2.8mm	5.6 x 5.6mm	11.2 x 11.2mm
Passing medium sieve		Max. 20%	Max. 20%	Max. 20%
Fine sieve mesh		1 x 1mm	1 x 1mm	1 x 1mm
Passing fine sieve		Max. 4%	Max. 4%	Max.4%

<b>Water Content</b>	
<b>Class</b>	<b>Class Limits</b>
W20	< 19.99%
W30	20 – 29.99%
W35	30 – 34.99%
W40	35 – 39.99%
W50	40 – 49.99%

<b>Ash Content</b>	
<b>Class</b>	<b>Class Limits</b>
A1	< 1% Small Ash Content
A2	1 – 1.5% Higher Ash Content

### **Size Classification**

Domestic boilers up to HPK-RA 160: G50 chips, W30

Industrial boilers 150kW to 2000kW: G50 or G100 size depending on transport system and depending on boiler type the maximum moisture content allowable is:

HPKI-K 40%, HPKI-R 60%, HPKI-W 45%

Industrial boilers with walking floor fuel transport system may run on G100.

### **Note**

The nominal output for industrial boilers is calculated at 40%

### **Material Density**

For all our boilers we recommend 200kg/m<sup>3</sup> i.e. medium density.

### **Ash Content**

Ash content- preferably A2

### **Contamination**

The origin wood must also be free from general contamination such as:-

slate, stones, metal, rubber, plastic & other unidentified foreign bodies, heavy metal compounds as a result of treatment (e.g. Copper chrome Arsenate(CCA) identified by green colour), halogenated organic compounds , e.g. lindane (identified by yellow colour), creosote (identified by dark brown stain and smell), painted wood, MDF, hardboard and fibreboard.

If the fuel used to operate the boiler(s) does not meet the attached wood chip specification, Broag Ltd cannot guarantee the performance of the boilers and physical damage or incapacitation of the boilers and fuel transport system may result. Furthermore should Broag Ltd be called out to site to intervene as a result of the boiler(s) being operated using inferior fuel, our labour and any replacement parts required to rectify the situation will be chargeable items.