

### 3.1.5 Approved fuels

#### *Pellets*

*Use only wood pellets made of natural wood in accordance with the specifications of the PFI premium quality class like those of the Pellet Fuel Institute (PFI) Standard Specification for residential/commercial densified fuel.*

#### *Note on standards*

US/CAN: Fuel acc. "Pellet Fuel Institute (PFI) Standard Specification for Residential / Commercial Densified Fuel": Fuel grade: PFI Premium

EU: Fuel as per EN 14961 - Part 2: Wood pellets class A1 / D06

#### *Fuel storage room*

*Before refilling the fuel storage room, check for pellet dust and clean if necessary*

#### *Wood chips*

*Only wood chips made of natural wood indicating the moisture content  $M$  and particle size  $P$  according to EN 14961-4 should be burned in the boiler.*

#### *Moisture content $M$ (weight % as delivered, $M40$ maximum)*

M20 – air-dried	$M \leq 20$ % moisture content in the delivered fuel
M30 – storage stability	$M \leq 30$ % moisture content in the delivered fuel
M40 – high-moisture wood chips	$M \leq 40$ % moisture content in the delivered fuel

#### *Particle size $P$*

Wood chips that can be used are divided into three categories:

Main category	At least 80 % of the weight of the fuel as delivered; Particle size range $1/8" \leq P \leq 1 3/4"$ (Particle size range $3.15 \text{ mm} \leq P \leq 45 \text{ mm}$ )
Fine category	At least 12 % of the weight of the fuel as delivered; Particle size range $P \leq 1/8"$ (Particle size range $P \leq 3.15 \text{ mm}$ )
Coarse category	At least 8 % of the weight of the fuel as delivered; Particle size range $1 3/4" \leq P \leq 4 3/4"$ (Particle size range $45 \text{ mm} \leq P \leq 120 \text{ mm}$ )

The numerical values (P class) for the dimensions refer to the particle size (at least 80 w-%) corresponding to the respective round hole sieve size (hole diameter) of 1 3/4" (45 mm). The cross-sectional surface of the oversized particles must be less than 3/4 sq.in. (5 cm<sup>2</sup>).

***Ash content A (weight % of the dry matter, not exceeding A1.5)***

A1.5 – wood chips with low bark content	A ≤ 1.5 w-% dry weight of fuel
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***Chlorine content Cl (weight % of the dry matter, not exceeding Cl0.03)***

Cl0.03 – chemically untreated, unpainted, uncoated wood	Cl ≤ 0.03 weight % dry weight of fuel
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***Net/gross heating value, Q/Gg (as received, at least)***

Minimum net/gross heating value, Q	lower heating value related to the wet fuel weight: Q ≥ 5,000 BTU/lb (11 MJ/kg, 3.1 kWh/kg); higher heating value related to the wet fuel weight: Q/Gg ≥ 5,700 BTU/lb (12.5 MJ/kg, 3.5 kWh/kg)
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***Loose bulk density BD (as received, at least)***

BD150	BD ≥ 10 lb/cu.ft. (150 kg/m <sup>3</sup> ), for the wet fuel weight
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***Note on standards***

EU: Fuel as per EN 14961 – Part 4: Wood chips class A2 / P16A/P63/100