

Thinking of Installing a Wood Pellet Boiler?

Here are some points to consider on handling the fuel. For guidance on installing and operating pellet boilers, speak to your boiler supplier.

This design guide presents only “rule of thumb” figures. Please consult with us and your boiler supplier about the specifics for your project.

1.0 Access to your pellet store

1.1 Vehicle dimensions

The figures shown below are the dimensions of our delivery vehicles. Additional clearance will need to be given around the vehicle to enable safe operation and delivery.

	Width	Height	Length	Track	Wall to wall turning circle
4 wheeler	3.05m	4.20m	8.00m	2.50m	9.00m
6 wheeler	3.05m	4.20m	10.00m	2.50m	10.00m



1.2 Vehicle weights

	Payload	Gross vehicle weight
4 wheeler	9.25t	18.00t
6 wheeler	15.00t	26.00t

If your installation does not comply with our recommendations, we may not be able to deliver.



2.0 Risk of degradation during delivery

Description	Points
Length – external + internal (We cannot blow more than 40m horizontally and 20m vertically)	1 point per metre
Bends – short radius (<500mm) 90°	10 per bend
Bends – short radius (<500mm) 45°	5 per bend
Bends – long radius (>500mm) 90°	5 per bend
Bends – long radius (>500mm) 45°	2.5 per bend
No impact mat	5
Impact mat or wall within 1m of inlet	5
Outlet with socket for dust extraction	-2.5
Impeller installed (Impellers may crush pellets)	5

Red >30:

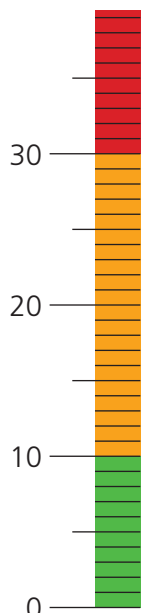
High velocity and pressure. Significant degradation. High risk of problems.

Amber 11-30:

Normal. Higher velocity and pressure required, causing more degradation. Significance depends on design of fuel store and sensitivity of boiler.

Green <10:

Very good. Delivery at low velocity and pressure is possible. Degradation is minimised.



3.0 Design Do's and Don'ts

- 3.1 Check vehicle dimensions to ensure that our truck can gain access.
- 3.2 There should be a parking space accessible on arrival. We cannot block roads, nor park on a junction, or on red or yellow lines.
- 3.3 There should be clear line of sight from the parking space to the inlet on your fuel store.
- 3.4 There should be convenient access from our lorry to your store without obstacles.
- 3.5 Inlet and outlet should be a Storz 110A or a Camlock 4" (male) with power socket for dust extraction.
- 3.6 There should be an earthed inlet point or earthing point within 30 metres.
- 3.7 Inlets and outlets should have caps that can be removed and replaced by our driver.
- 3.8 Pipe runs & store should be designed to avoid condensation.
- 3.9 Store should be designed to allow dust to be removed wherever it has accumulated.
- 3.10 Do not enter the store without checking for CO (carbon monoxide).
- 3.11 For ENplus assurance, and to avoid risk of pellet wastage, driver must be able to check filling level before and during filling. If not, a receptacle will be required to clear the pipes.
- 3.12 If the boiler needs to be switched off before delivery, consideration must be given to how this can be achieved remotely if attendance at the time of delivery cannot be guaranteed. For liability & timekeeping reasons, our driver will not switch off a boiler or make any adjustment to settings.
- 3.13 Have the largest store possible. Remember that:
 - (a) Your delivery size will almost always be less than your store capacity.
 - (b) The pellets will mound.
 - (c) The peak of the mound will not be higher than the inlet.
 - (d) Space behind the impact mat will not be filled.
 - (e) Sloping floors reduce usable capacity within available space.
 - (f) To convert volume to tonnage, wood pellets have a density of approximately 650kg/m³.
 - (g) Delivery cost will be incurred on every delivery. Small frequent deliveries will be more expensive.
- 3.14 Depending on the slipperiness of the surface, if the floor of the store is at a gradient of less than 55° from horizontal, you may need a mechanism (e.g. impeller or vibrator) to prevent "core flow" (where pellets stick to the sides of the store).
- 3.15 Pellets are delivered at pressure (typically 600 mbar). Every joint must be adequately sealed to prevent dust from being released to the area surrounding the fuel store.
- 3.16 For continuity of operation during maintenance, incorporate a day hopper fed from the fuel store.
- 3.17 Augers should have sufficient clearance between the auger and casing to avoid jamming or breaking. Pellets may be as short as 3.15mm, and will get into gaps of 4 or 5mm. Small gaps are more likely to jam.
- 3.18 Flange (inlet & outlet) heights should be no greater than 1.5 metres above a stable, even surface. To facilitate attaching pipes, there should be 15cm clearance around the flange, and 1 metre clearance in front of the flange. Ideally, the flange should be pointed downwards around 45° from vertical.

