



## Latest Developments in Biomass

**Hoval**

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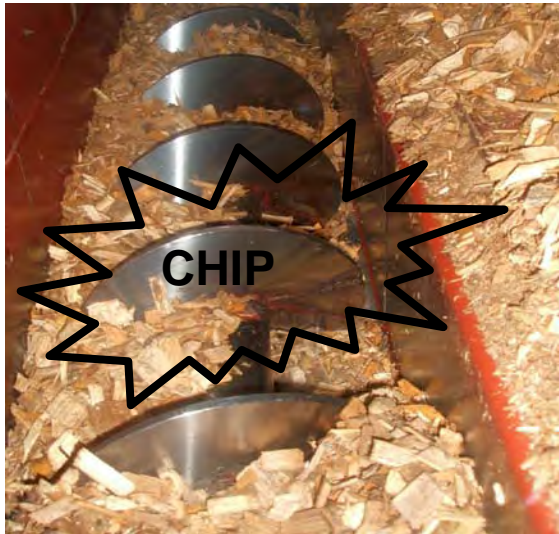
- Why Biomass?
- What is Biomass?
  - Fuel Selection
- Delivery, Storage, Combustion – integration ?
  - Practical
  - Simple
  - Reliable
- Boilers.
- Issues

- **Carbon Neutral.**
- **Available/established technology.**
- **82/71°C.**
- **Potential for more CO<sub>2</sub> Savings per £.**



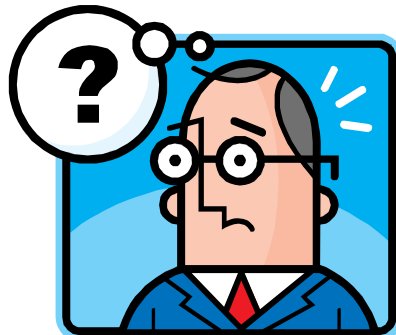


- Wood Pellets
  - Compressed Wood Dust
  - Formed into Pellets
  - Homogenous/Consistent



- Wood Chips
  - Chipped Timber (seasoned?)
  - Supplied Loose/Tipped
  - Lower Heat Content
  - Less Energy Dense

- Biomass 'System' is more than just a Boiler.
- Offloading/Delivery.
- Fuel Store Design– SIZE?
- Store to Boiler transfer System.
- Combustion Equipment.
- Ash/Dust Removal.



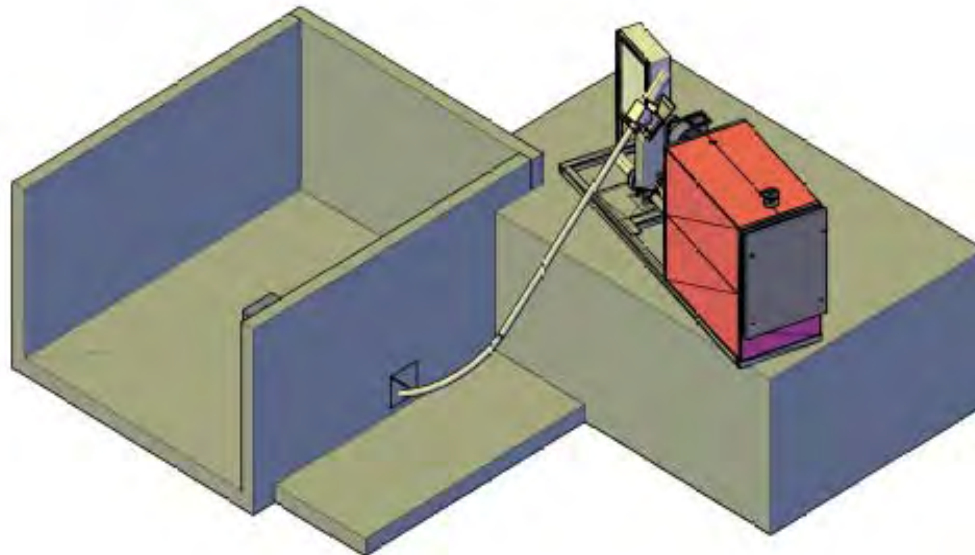
- Site Location
- Site Constraints
- £'s
- Select most appropriate fuel – design appropriate system

Wood Chips



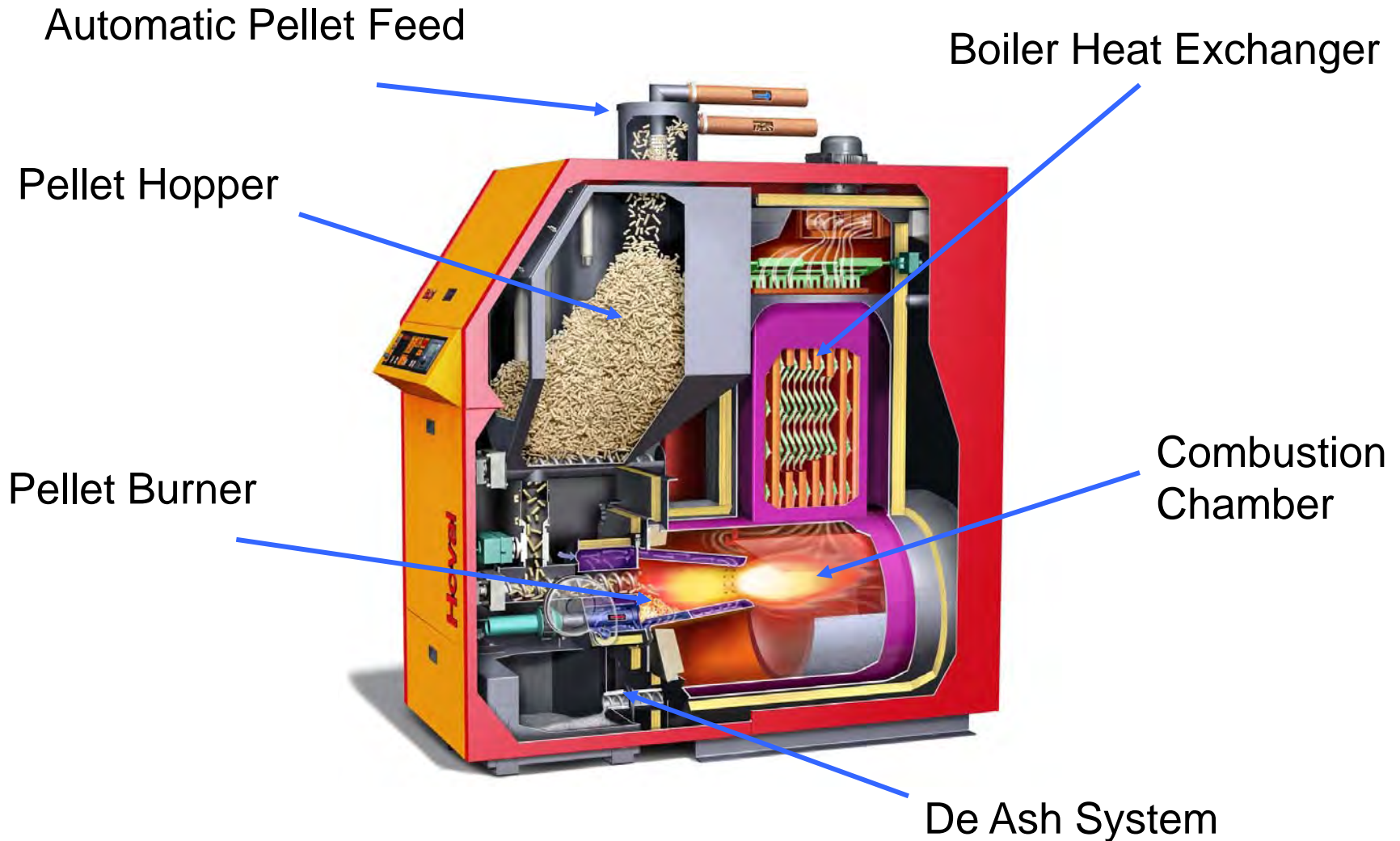
Wood Pellets

- Seek Advice based on SPECIFIC site requirements.



# BioLyt Wood Pellet 50, 70, 160 kW

# Hoval



# STU Wood Pellet Boiler

## 150 – 1000 kW

# Hoval



- 150 – 1200 kW
  - Pellet feed from bulk store via stoker transfer box.
  - Via Pick-up Auger or Flexible Auger.
  - Modulates 100-30%
  - Ignition assist/Kindle Control
- With  $\lambda$  control – optimum efficiency.
- Simple/Reliable Underfeed Design
  - Low maintenance.
  - Low emissions.

# STU Wood Pellet Boiler

# Hoval



# Forester Wood Chip Boiler

# Hoval

- Outputs from 180 kW to 2 MW
- Designed to operate with 'Quality' wood chip (<35% M)
- Matched fuel store recovery
  - Hook bins
  - Rotary sweep arms
  - Walking Floor
- Integrated Fuel Transfer System



- RHI – potential impact ?
- Air Quality ?
  - Some Barriers.
  - Abatement ('BATNEEC') Solutions available.

- RHI major opportunity to extend biomass heating equipment.
  
- Understand the Application of biomass system.
  - Both potential benefits
  - AND Limitations
  - Hoval have +300 UK based Biomass projects
  
- Practical Integration, Simple Reliable systems.
  
- THANK YOU