

CLEAN ENERGY TECHNOLOGY

VYNCKE



BIOMASS TO ENERGY SOLUTIONS
1 - 10 MW

www.vyncke.com

VYNCKE SL has two strategic areas of business:

- Design and manufacture of biomass to energy equipment and complete plants from 1 to 10 MW.
- Maintenance and service of the installed equipment.

ENERGY

Red Hot

Firemakers
Energy Solutions
New challenges

TECHNOLOGY

Smart Grey

Experience
Grey matter
Engineering

The **success** of the operation is based mainly on:

- Efficient and proven technology.
- A guaranteed supply of biomass on quality and quantity.
- A proper and effective maintenance and operation.

Why **biomass to energy** solutions?

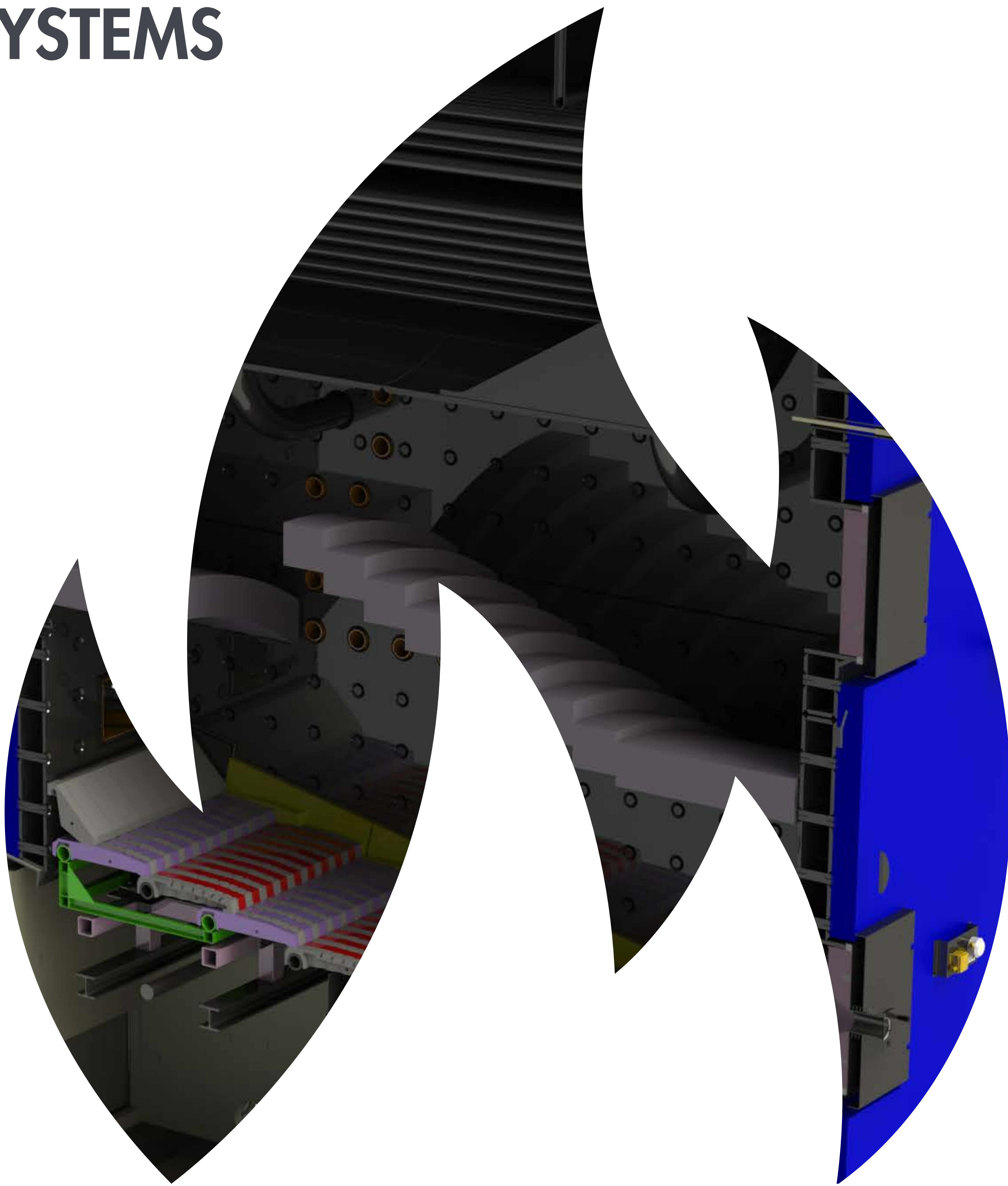
- **NEUTRAL EMISSION** OF CO₂. Carbon footprint reduction.
- **LOCAL ENERGY**. Promotes the development of the local economy and reduce dependence on foreign energy.
- **SOCIAL ENGINE**. Biomass is the energy that generates more jobs.
- **CHEAPEST AND STABLE ENERGY**. Is the cheapest thermal energy and offers **price stability** over time, that contrasts with the uncertainty caused by other conventional energy sources.

CLEAN

Sky Blue

Respect for our nest
Clean energy solutions
Family values
Social responsibility

KEY SYSTEMS



- **Fuel feeding** systems: Screws or Hydraulic pusher.
- Semi water-cooled mobile step grate: **control & flexibility** of combustion process.
- Water cooled furnace walls: **wide range of fuels admitted**. Improved thermal performance.
- Combustion air system: control effectively the key combustion parameters (3T's) **Temperature, Turbulence, residence Time**.
- Flue gases recirculation system: **lower thermal NOx** generation, grate lifespan increased, more combustion quality and control.
- Three pass firetube boilers with automatic cleaning systems.

KEY SYSTEMS



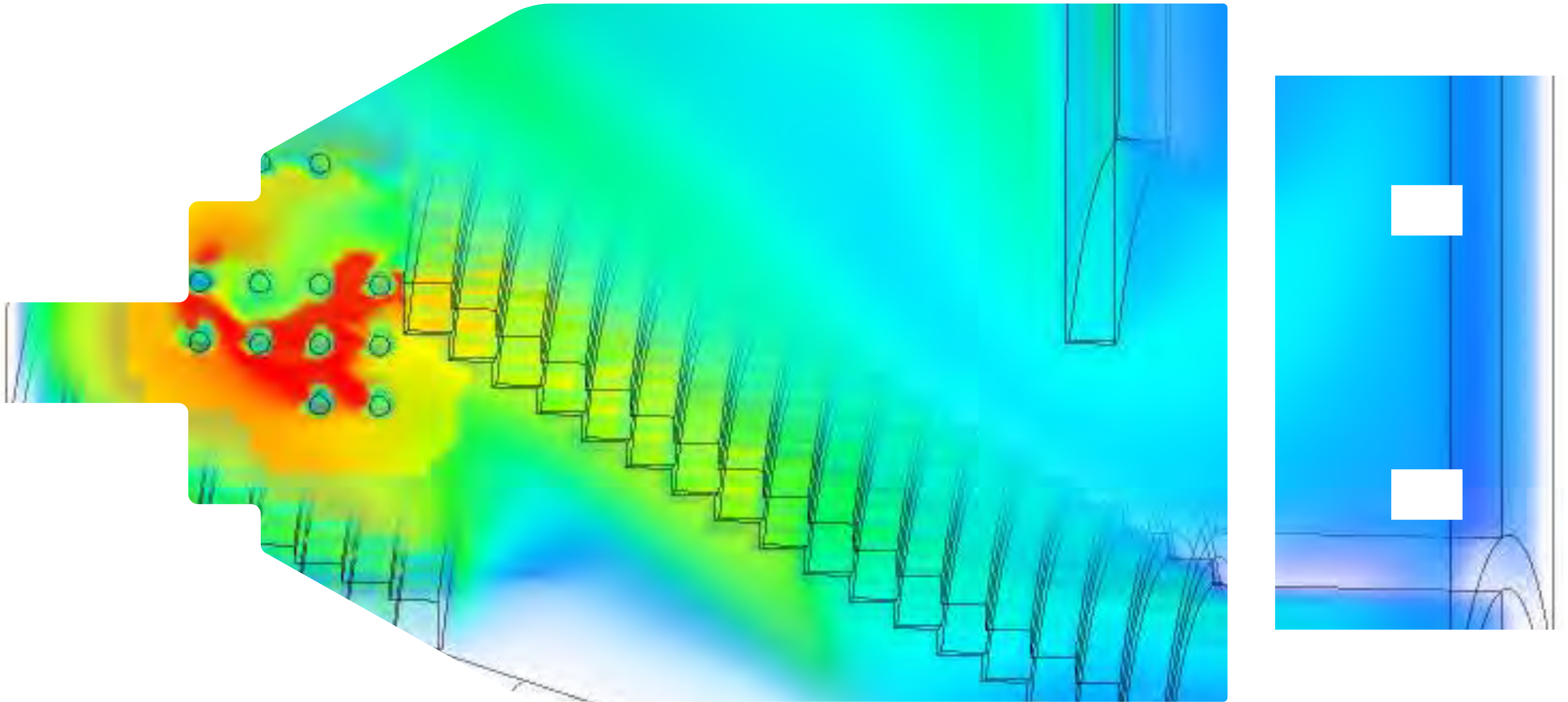
- Bag filter
- Electrostatic precipitator (ESP)
- All-dry scrubber
- De-NO_x systems (SNCR, SCR)
- Cyclones and Multicyclones
- Other requested flue gases treatment systems

KEY SYSTEMS



- Moving floors
- Vertical storage systems
- Automatic cranes
- Pneumatic systems
- Other requested fuel handling systems

KEY SYSTEMS



Our plant control system is a result of years of development and experience through several different installations, fuels and applications.

We achieve high levels of automatization. The control system modulates parameters automatically and adjusts the system according to the process needs.

There are three main PID based control loops:

- Load
- Oxygen
- Vacuum

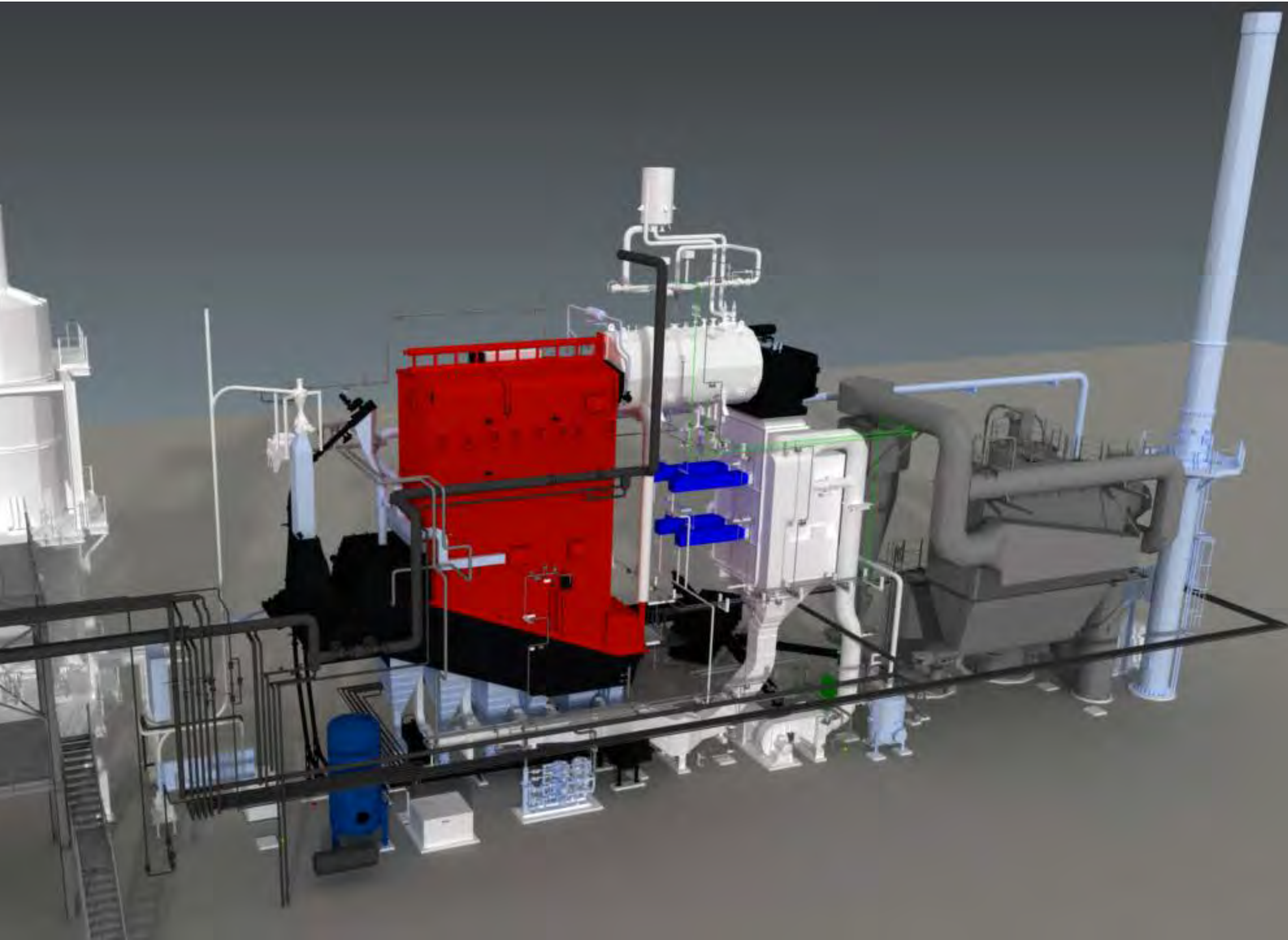
The control panel is equipped with a PLC and an HMI, although we can also use PCs and SCADA's in control rooms.

KEY REFERENCES



Nestlé

Good Food, Good Life



| | |
|----------------|----------------------------------|
| Commissioning | 2020 |
| Fuel | Spent coffee grounds |
| Site | Girona, Catalunya |
| Dust emissions | < 20 mg/Nm³ |
| Efficiency | > 86 % |



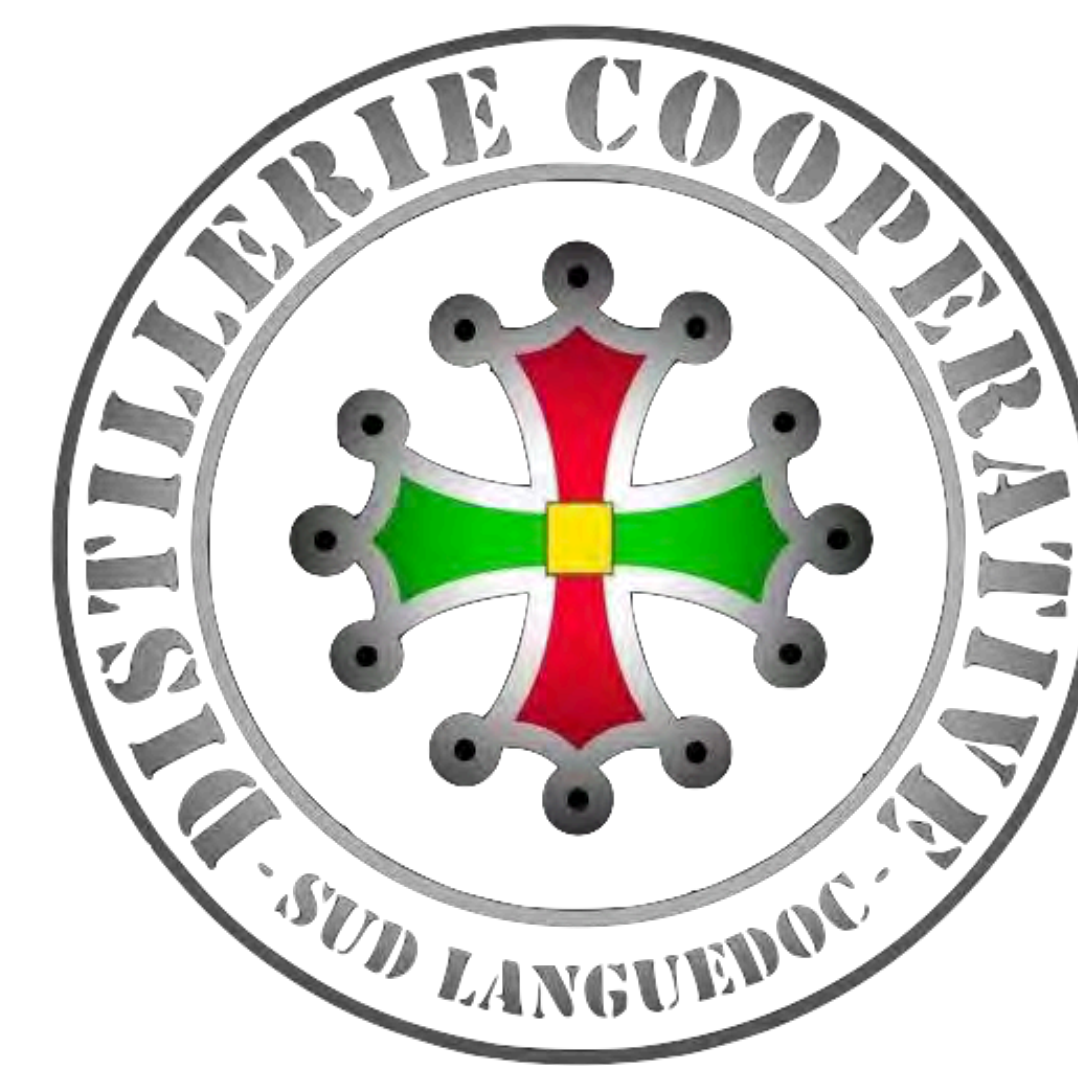
16,6 MW



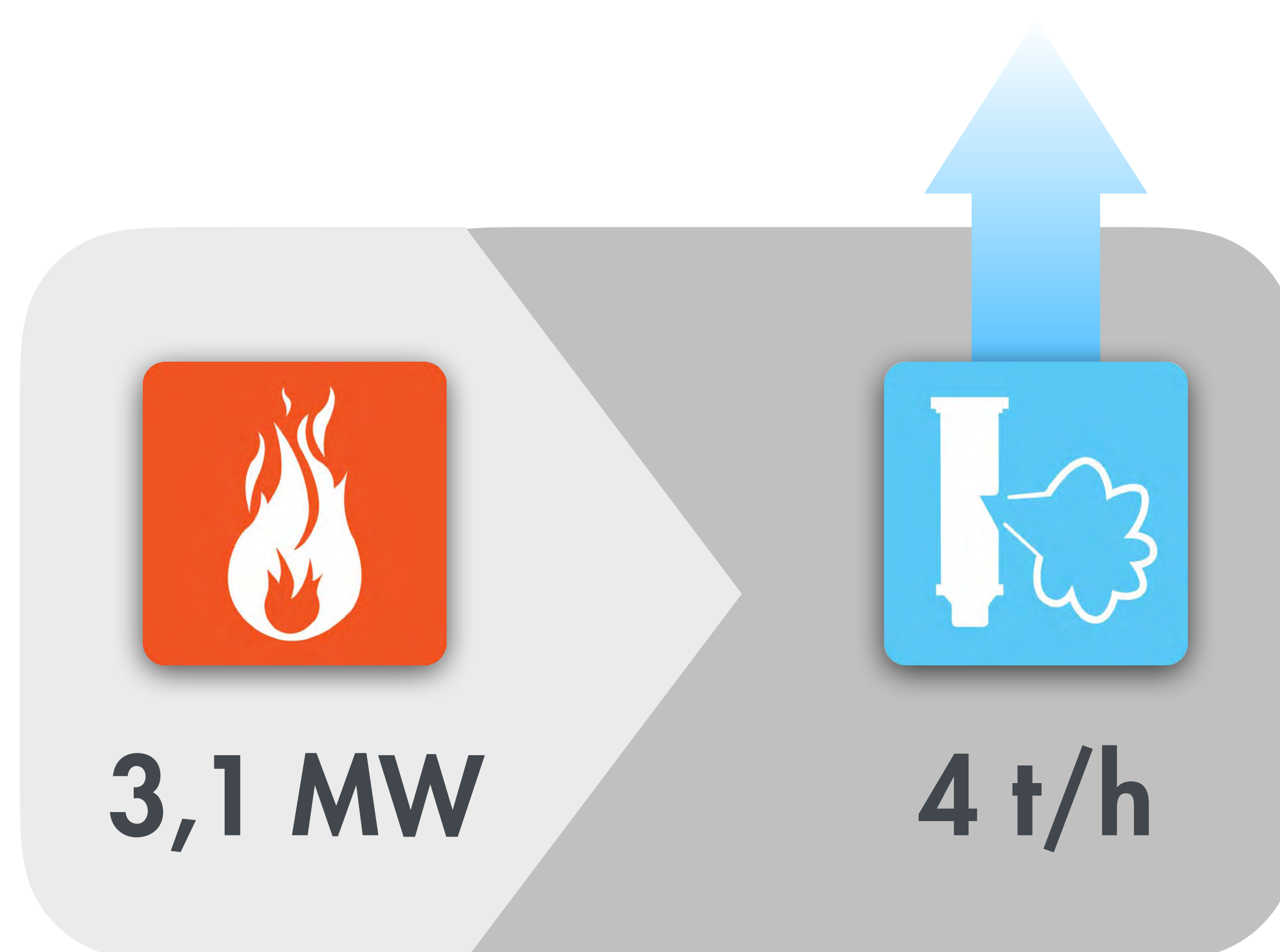
22 t/h

NESTLÉ GIRONA

KEY REFERENCES



| | |
|----------------|----------------------------------|
| Commissioning | 2019 |
| Fuel | Grape waste & Biomass |
| Site | Sigean, France |
| Dust emissions | < 20 mg/Nm³ |
| Efficiency | > 83 % |

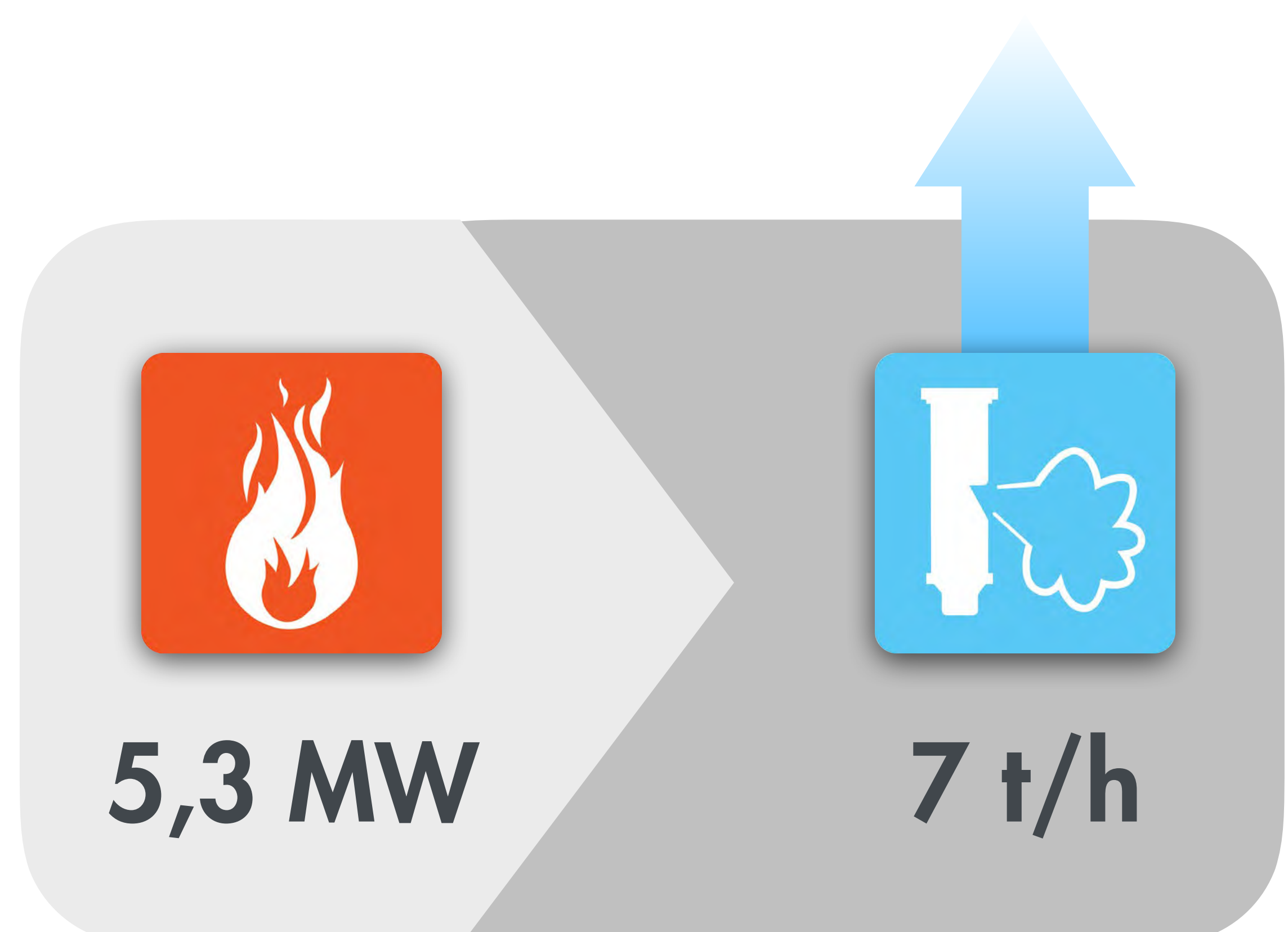


DISTILLERIE SUD LANGUEDOC

KEY REFERENCES



Commissioning **2017**
Fuel **Grape waste & Biomass**
Site **Vauvert, France**
Dust emissions **< 20 mg/Nm³**
Efficiency **> 86 %**

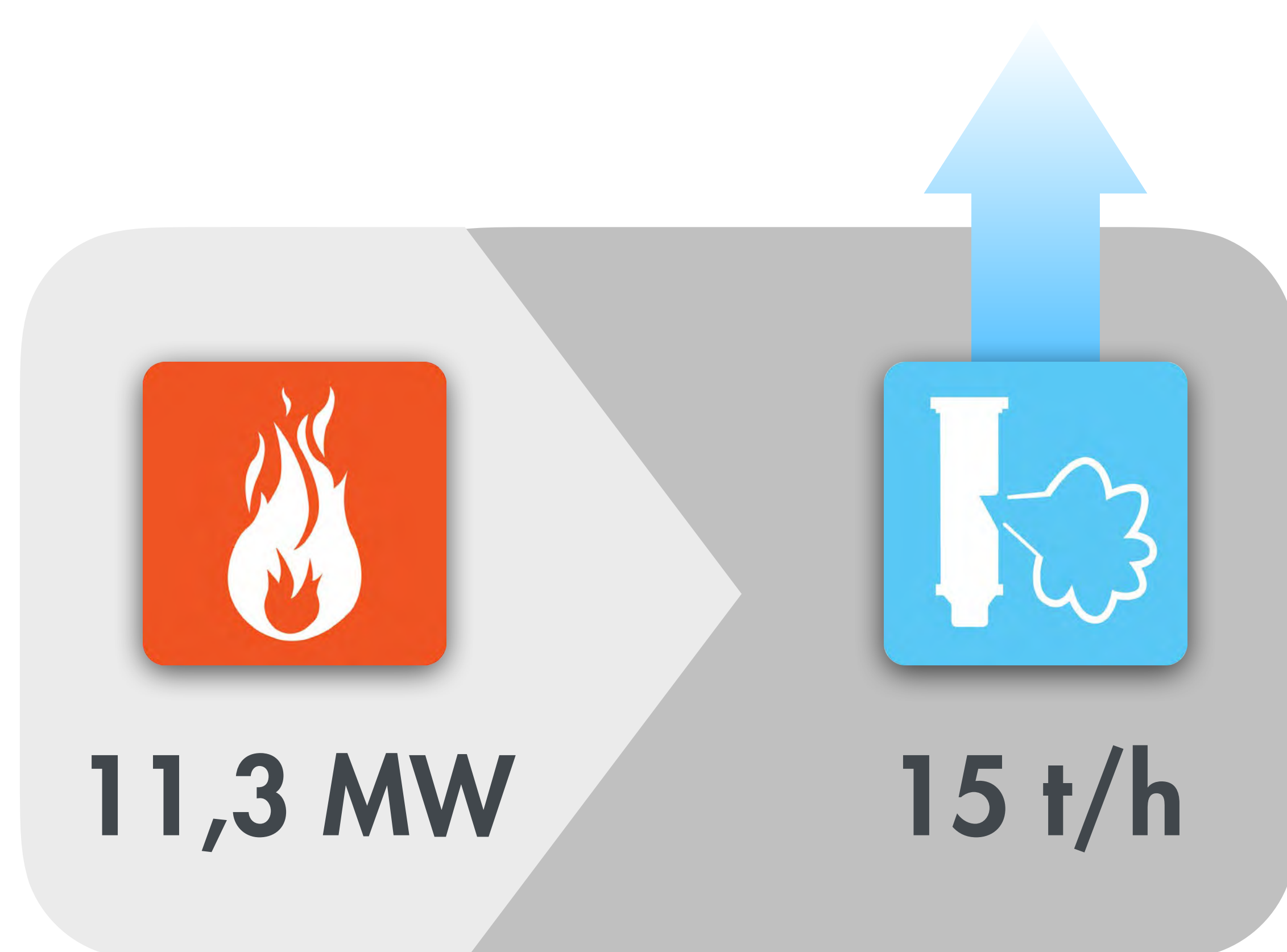


UNION DES DISTILLERIES DE LA MEDITERRANÉE

KEY REFERENCES



Commissioning **2016**
Fuel **Biomass**
Site **El Salvador**
Dust emissions **< 50 mg/Nm³**
Efficiency **> 86 %**

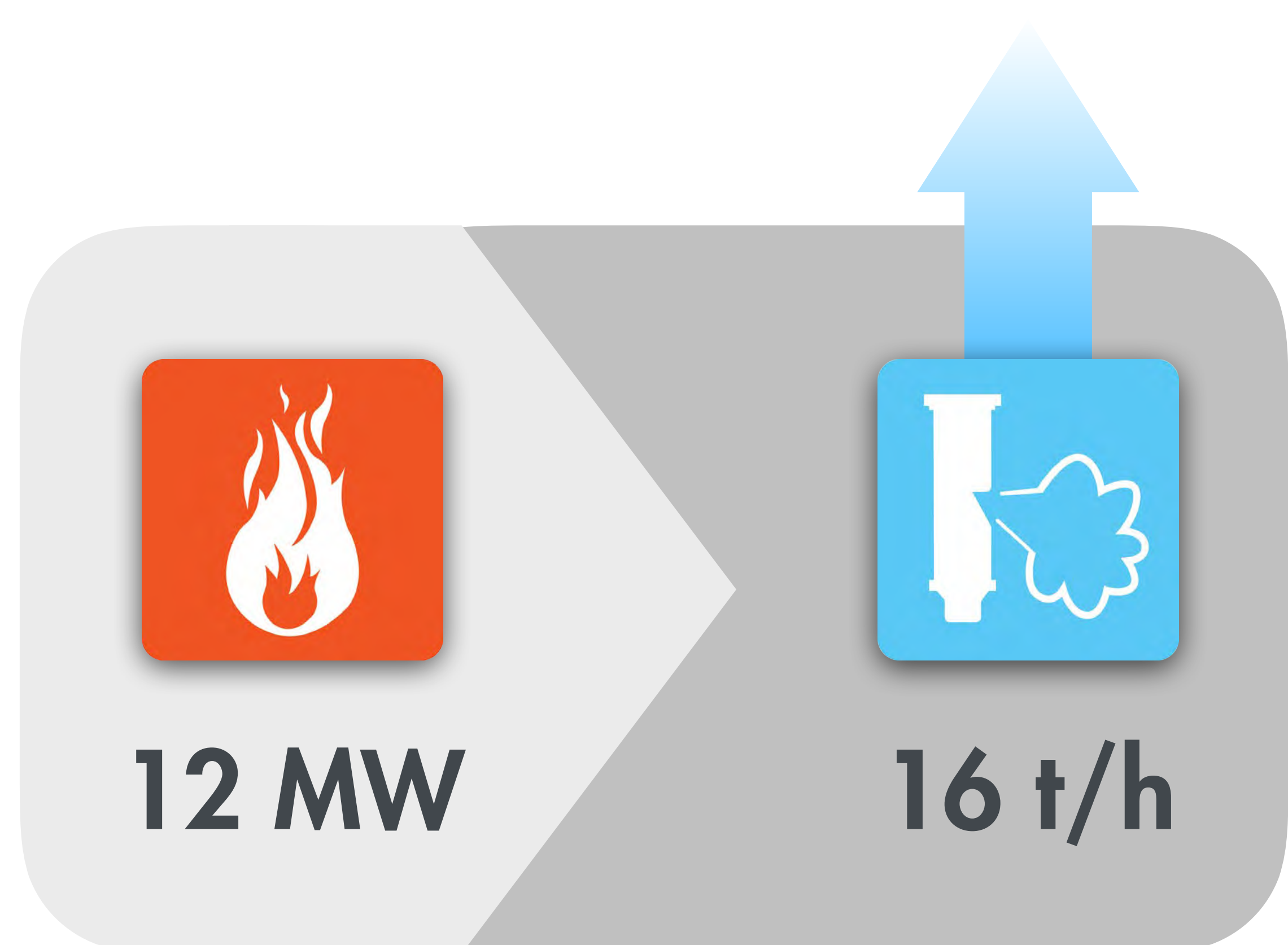


KIMBERLY-CLARK

KEY REFERENCES



Commissioning **2016**
Fuel **Spent coffee grounds & Biomass**
Site **Palencia, Spain**
Dust emissions **< 30 mg/Nm³**
Efficiency **> 86 %**

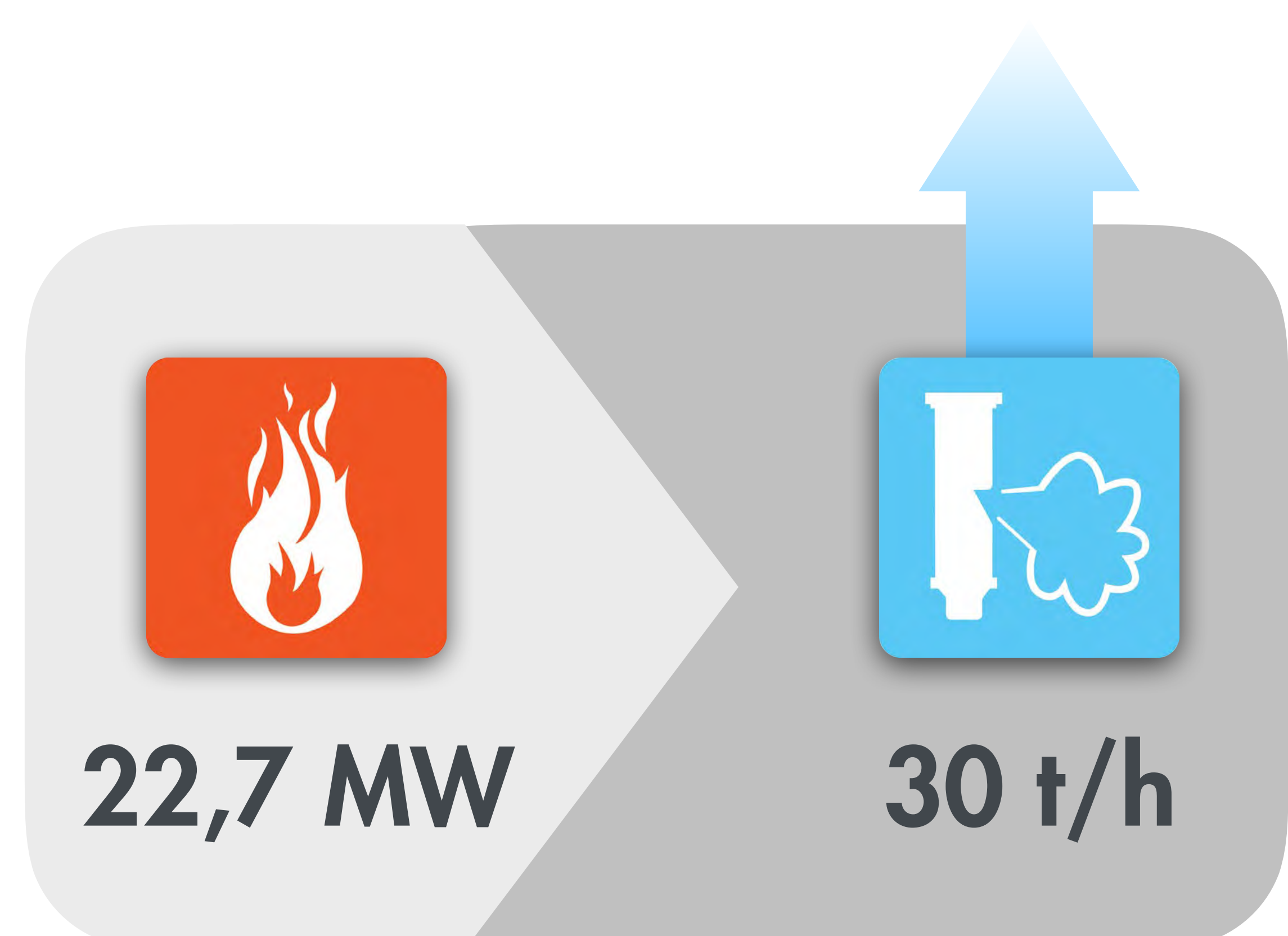


SEDA OUTSPAN

KEY REFERENCES



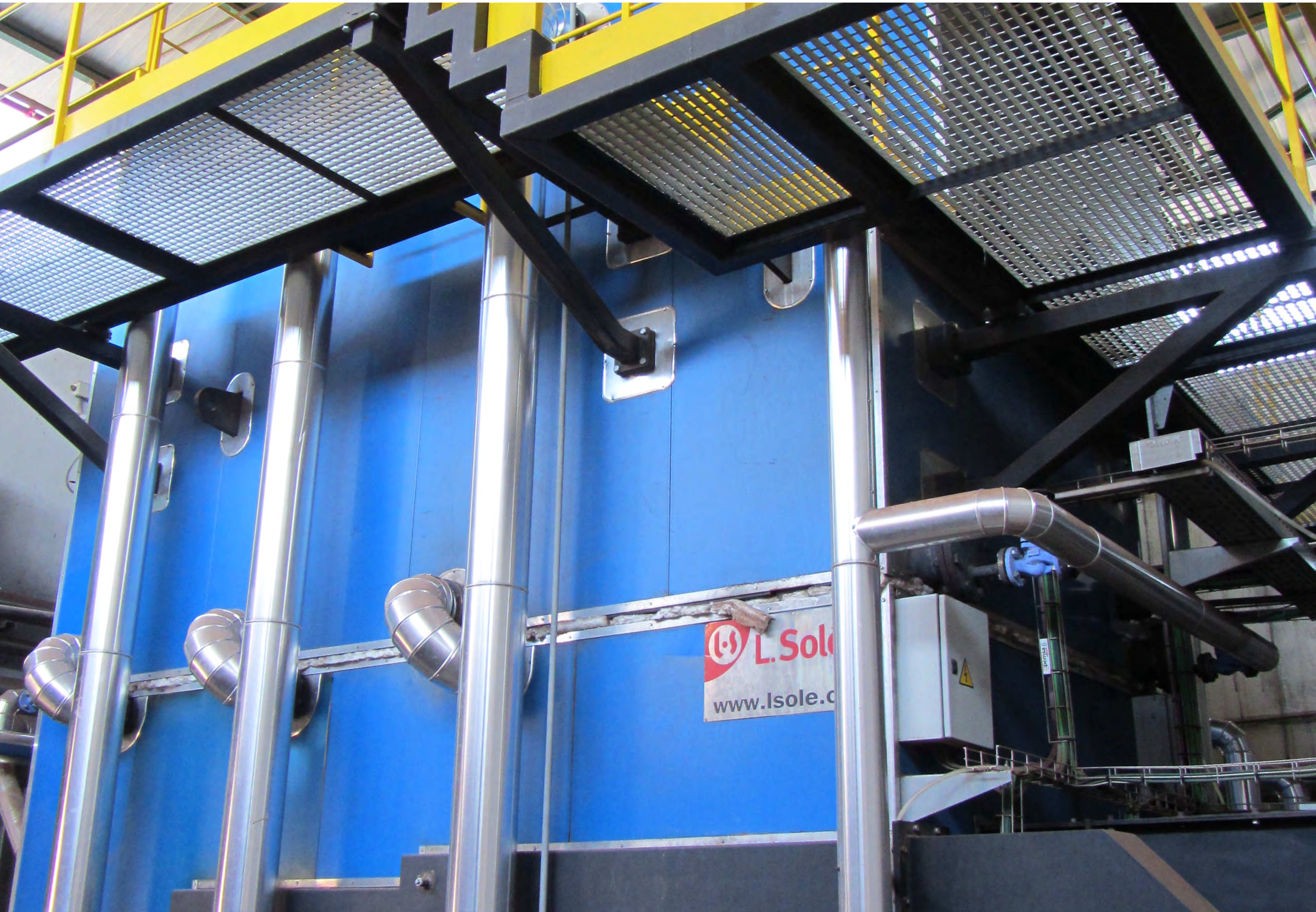
| | |
|----------------|----------------------------------|
| Commissioning | 2019 |
| Fuel | Biomass |
| Site | L'Alqueria d'Asnar, Spain |
| Dust emissions | < 20 mg/Nm³ |
| Efficiency | > 86 % |



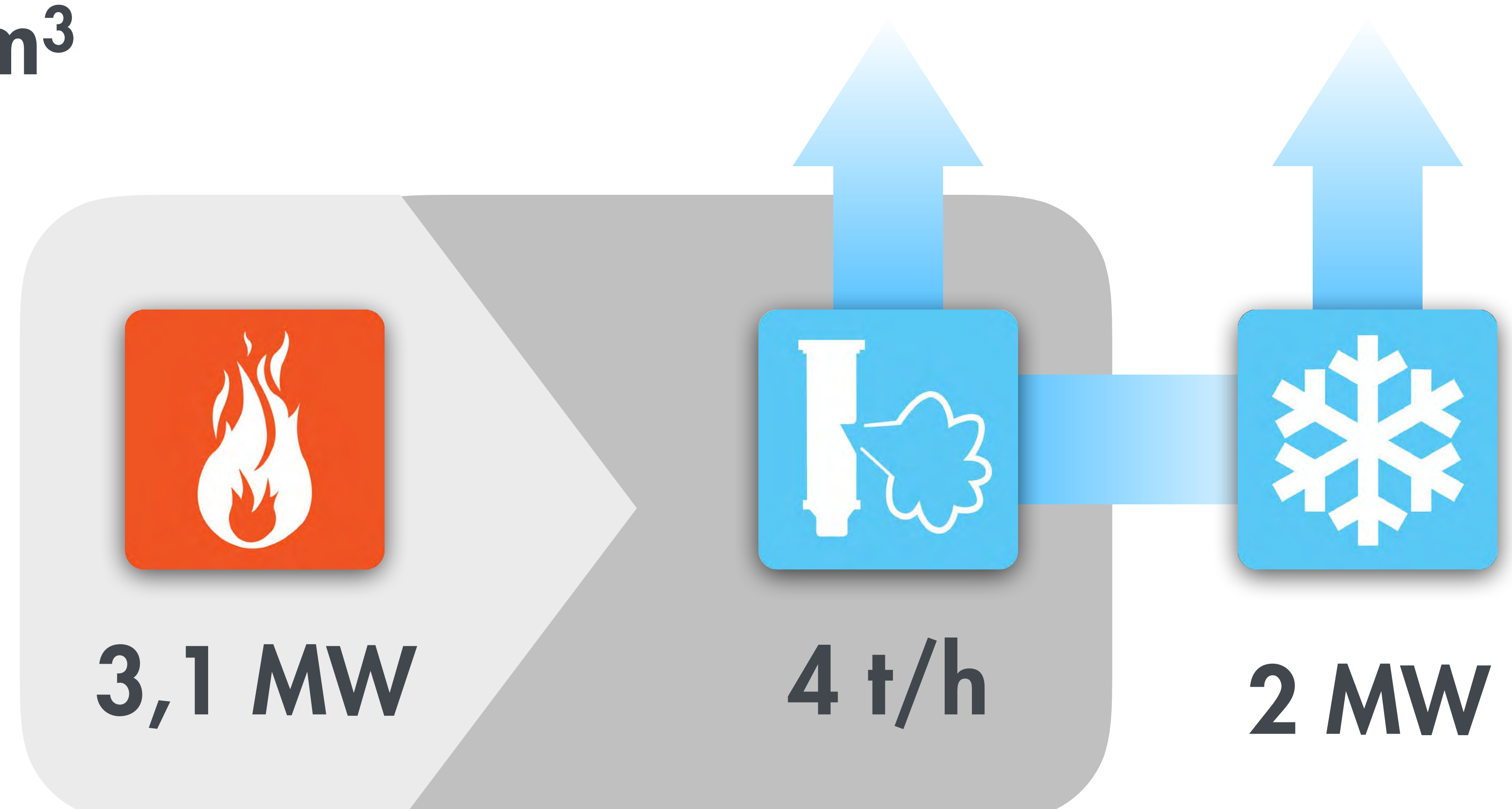
KEY REFERENCES

FAMILIA
TORRES

Desde  1870



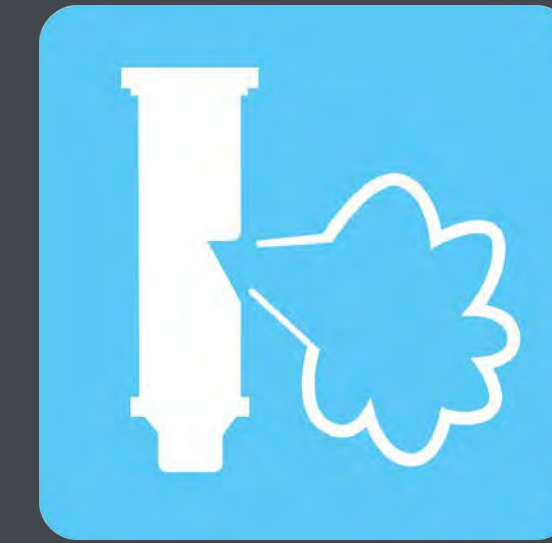
Commissioning **2012**
Fuel **Grape waste & Biomass**
Site **Pacs del Penedès, Catalunya**
Dust emissions **< 20 mg/Nm³**
Efficiency **> 83 %**



BODEGAS TORRES

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VYNCKE



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