

# Etat d'avancement de la R&D chez Exoès

Rémi Daccord – 26/01/2012

**Sustainable Heat and Power Engine**



# Nouveaux locaux





1. Cogénérateur 2kWe-16kWth
2. Cogénérateur 350°C-3kWe
  1. Moteur
  2. Hydraulique et régulation
3. Evaporateur 350°C-22kWth
4. Centrale électrique 180°C-12kWe

The logo for 'exoès' is displayed in a dark rounded rectangle. The word 'exoès' is written in a light grey, lowercase, sans-serif font. A small green leaf icon is positioned above the letter 'o'.

Cogénérateur 2kWe-16kWth

Sustainable Heat and Power Engine



# Distribution du bison



# Caractéristiques



- 2kWe max



- 16kWth max



- Granulés bois



- Vapeur d'eau



- 25bars - 450°C max



- $\eta_{\text{tot}} = 87\%$ ;  $\eta_{\text{elec}} = 10\%$



Disponible immédiatement  
pour les laboratoires  
francophones (Ex : ENSMN)



# Caractéristiques



- Etage chaudière



- Etage Moteur  
(bicylindre linéaire)



- Etage « hydraulique » :  
échangeurs, filtration,  
pompage,...







The logo for 'exoès' is located in the top left corner. It consists of the word 'exoès' in a white, lowercase, sans-serif font, with a small green leaf icon above the 'o'. The logo is set against a dark grey rounded rectangular background.

Cogénérateur 350°C 3kWe

Moteur

Sustainable Heat and Power Engine

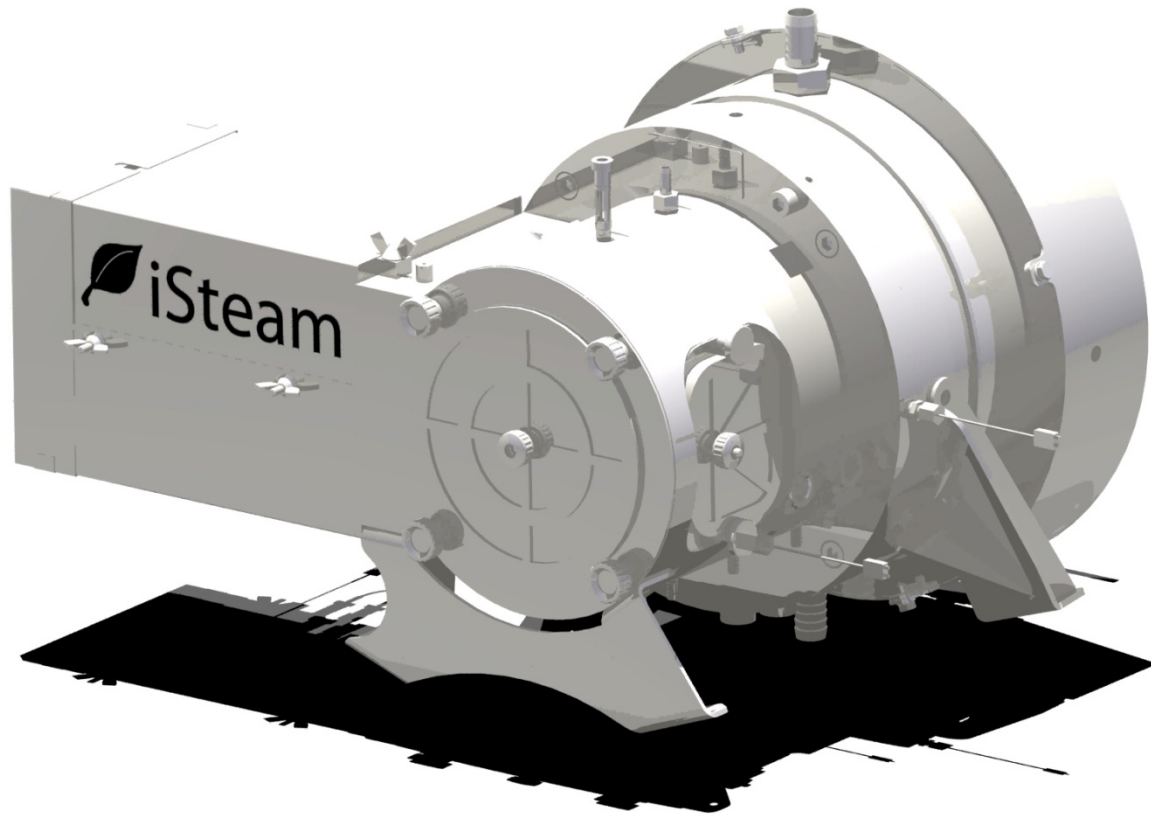


# Un produit pré-série



# Un produit pré-série





# En avant première, le moteur V4

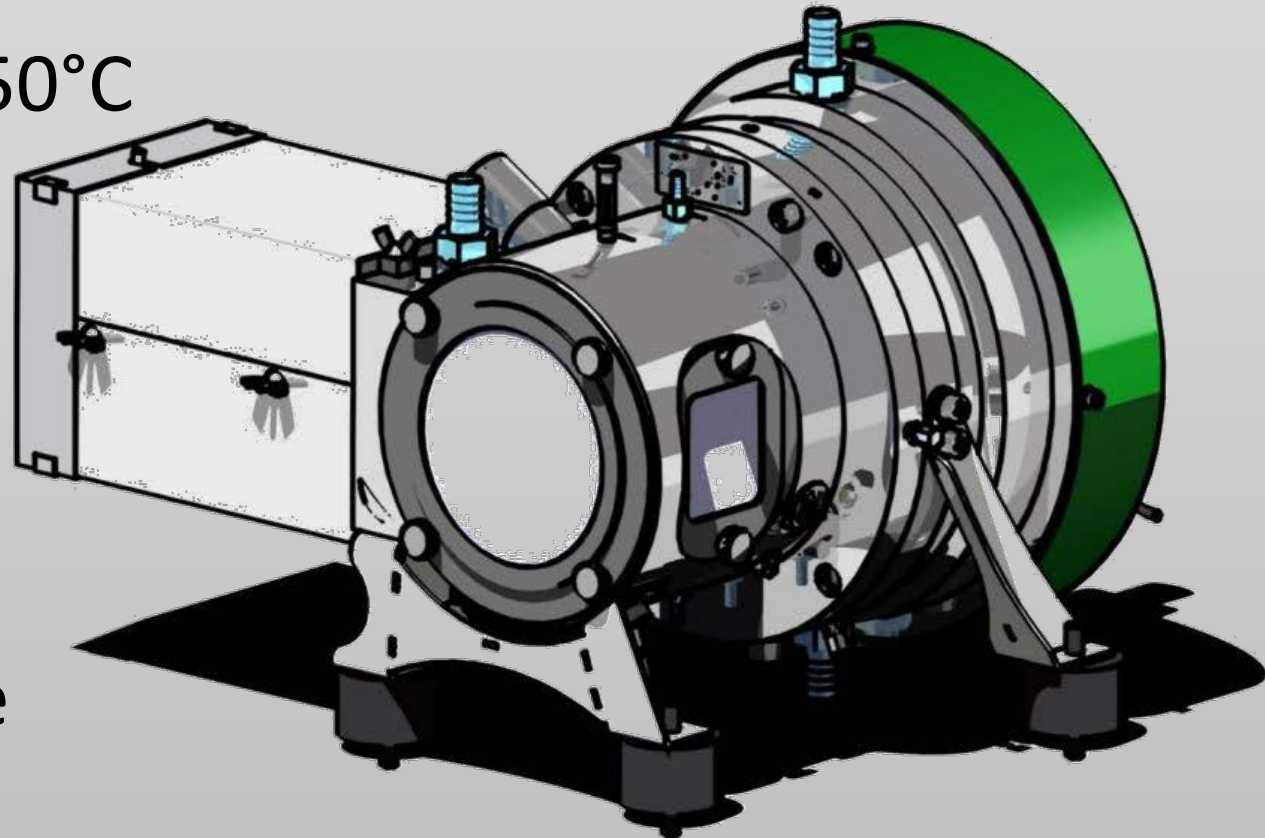


Monocylindre 1500RPM

15-25 bars

250°C – 450°C

3kWe

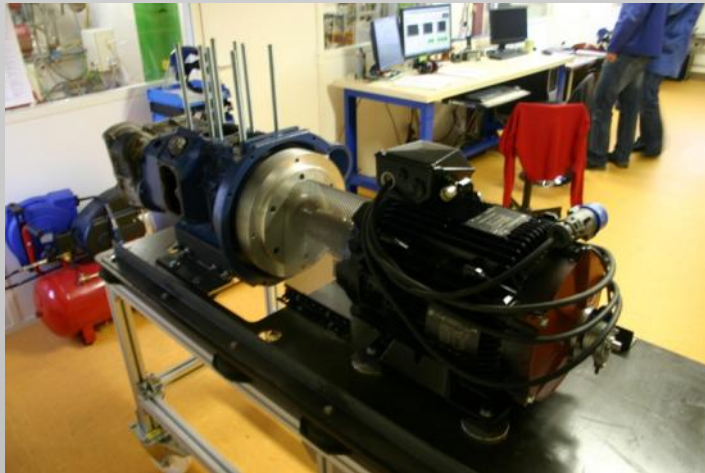
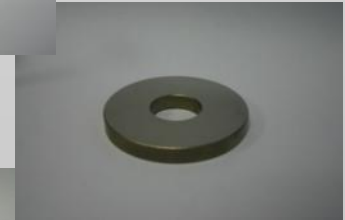


Disponible

Fin 2012



## Matériaux – traitements de surface tribologie - corrosion



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Cogénérateur 350°C 3kWe

Hydraulique et régulation

Sustainable Heat and Power Engine

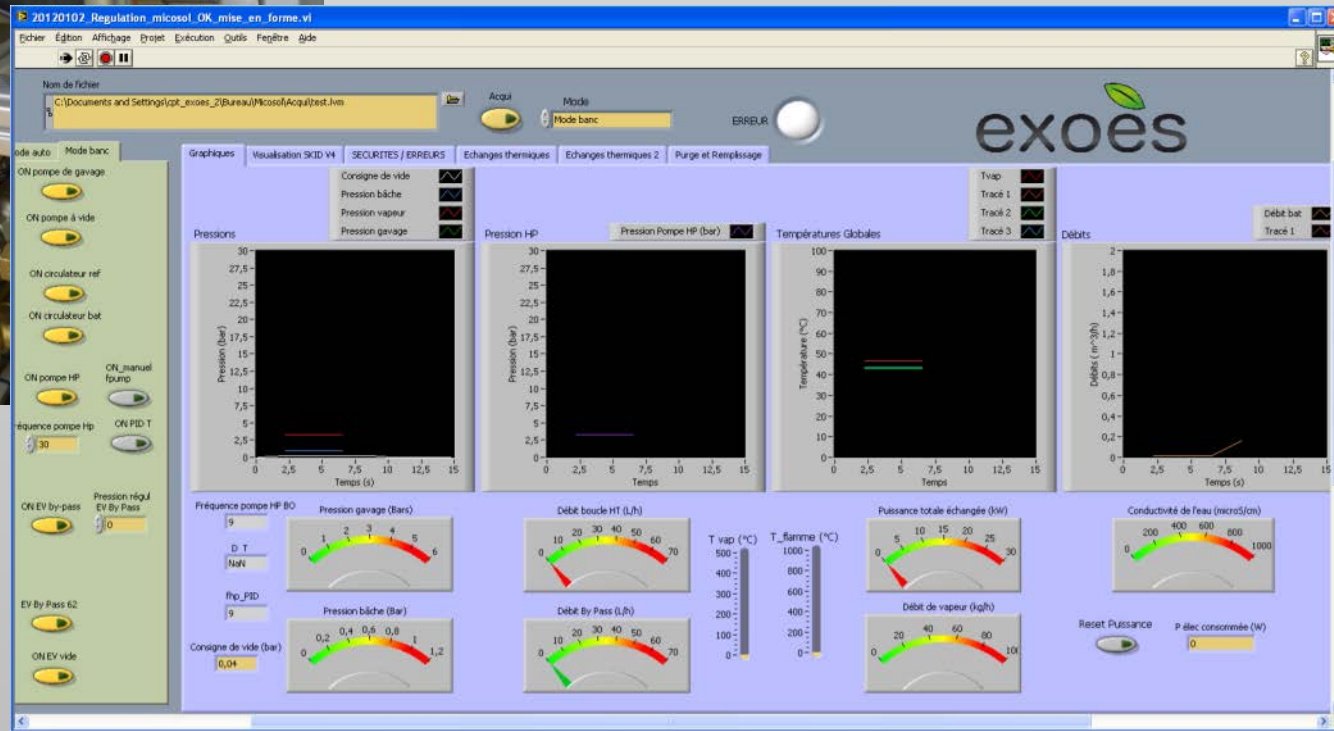
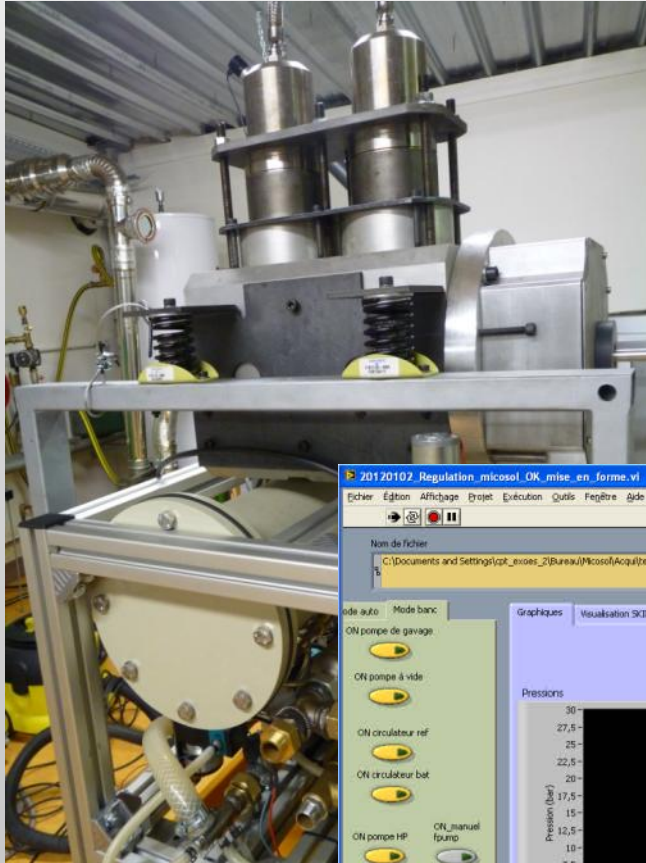


# Prototypes

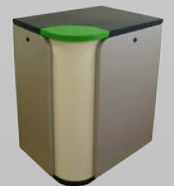
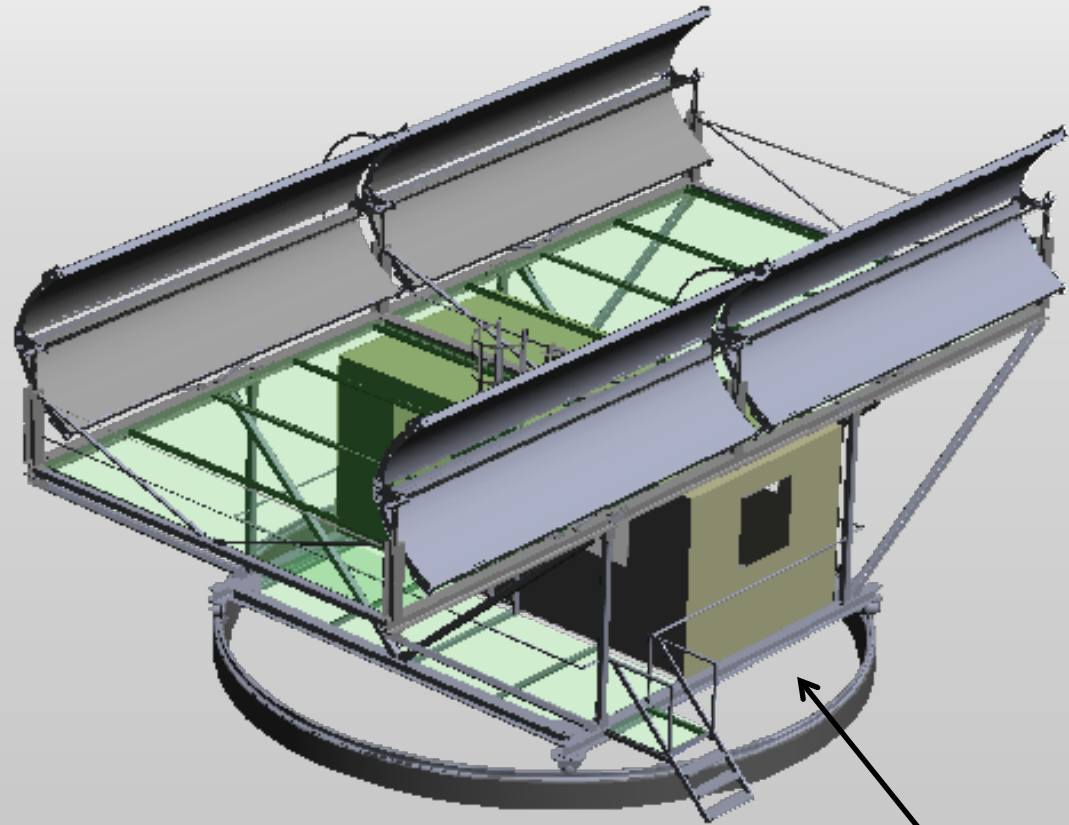
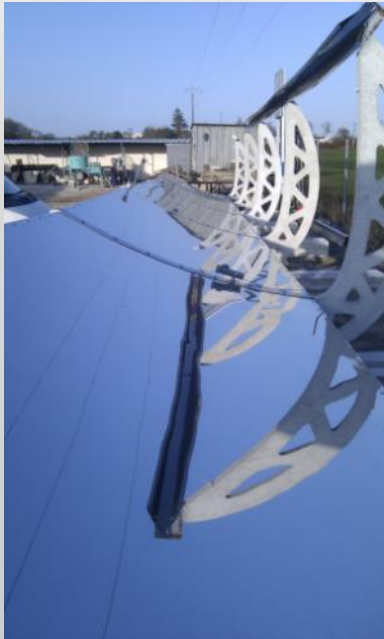




# Banc d'essai



# Premières ventes



LEPTIAB

Université de La Rochelle

Evaporateur 350°C  
22kWth

En partenariat avec 

Sustainable Heat and Power Engine



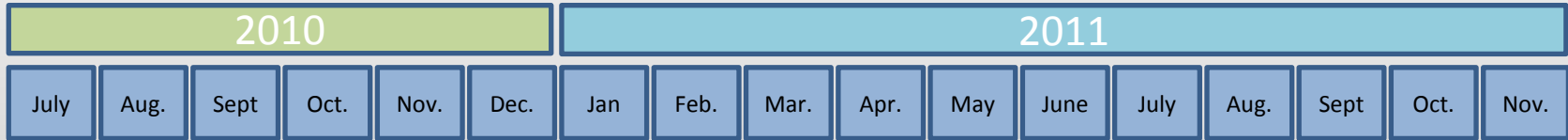


| 2010 |      |      |      |      |      | 2011 |      |      |      |     |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| July | Aug. | Sept | Oct. | Nov. | Dec. | Jan  | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. |

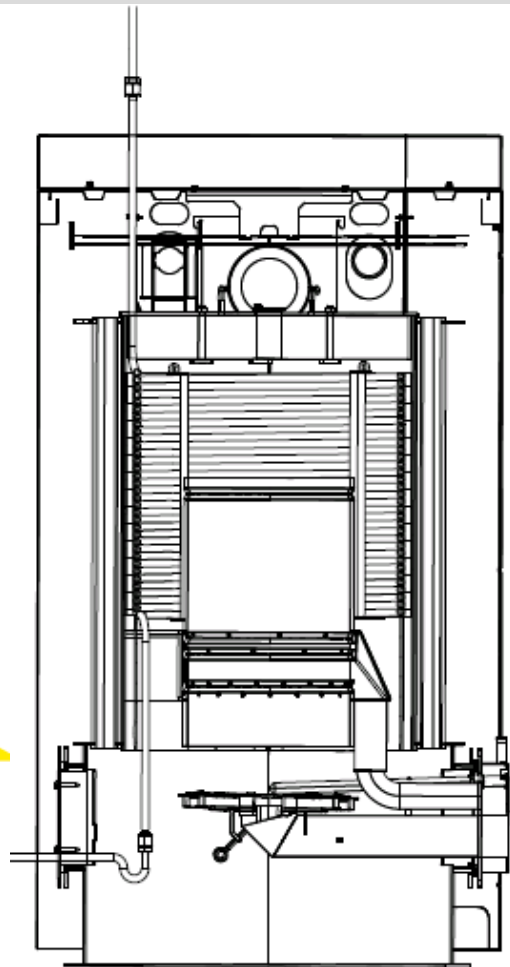
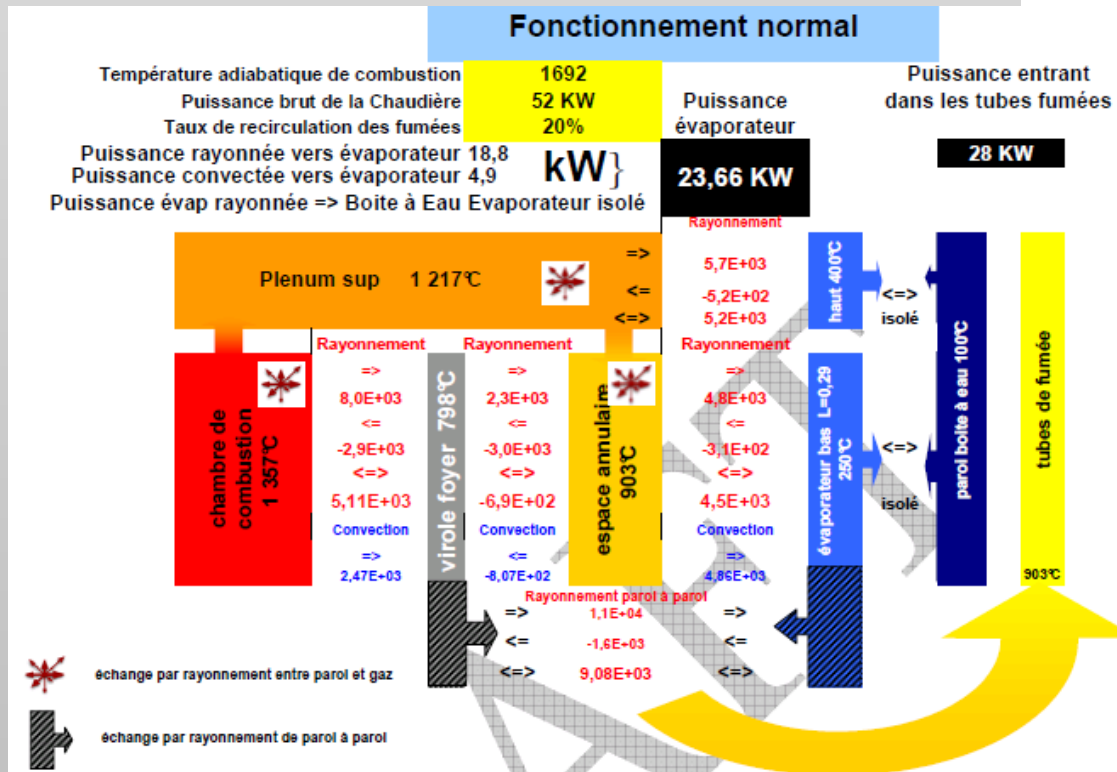


## Tests et caractérisation de la chaudière

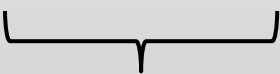
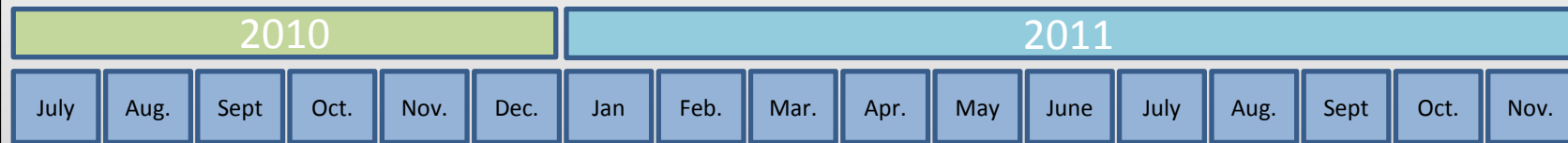




## Modélisation et conception



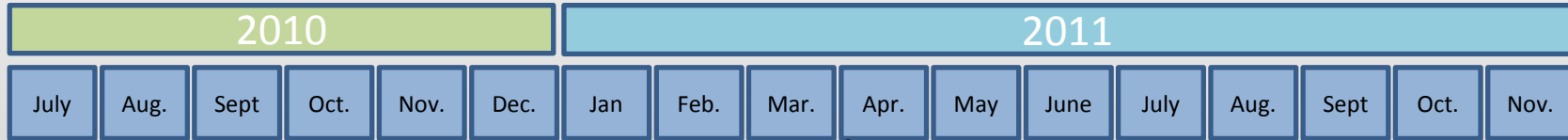
# Fabrication



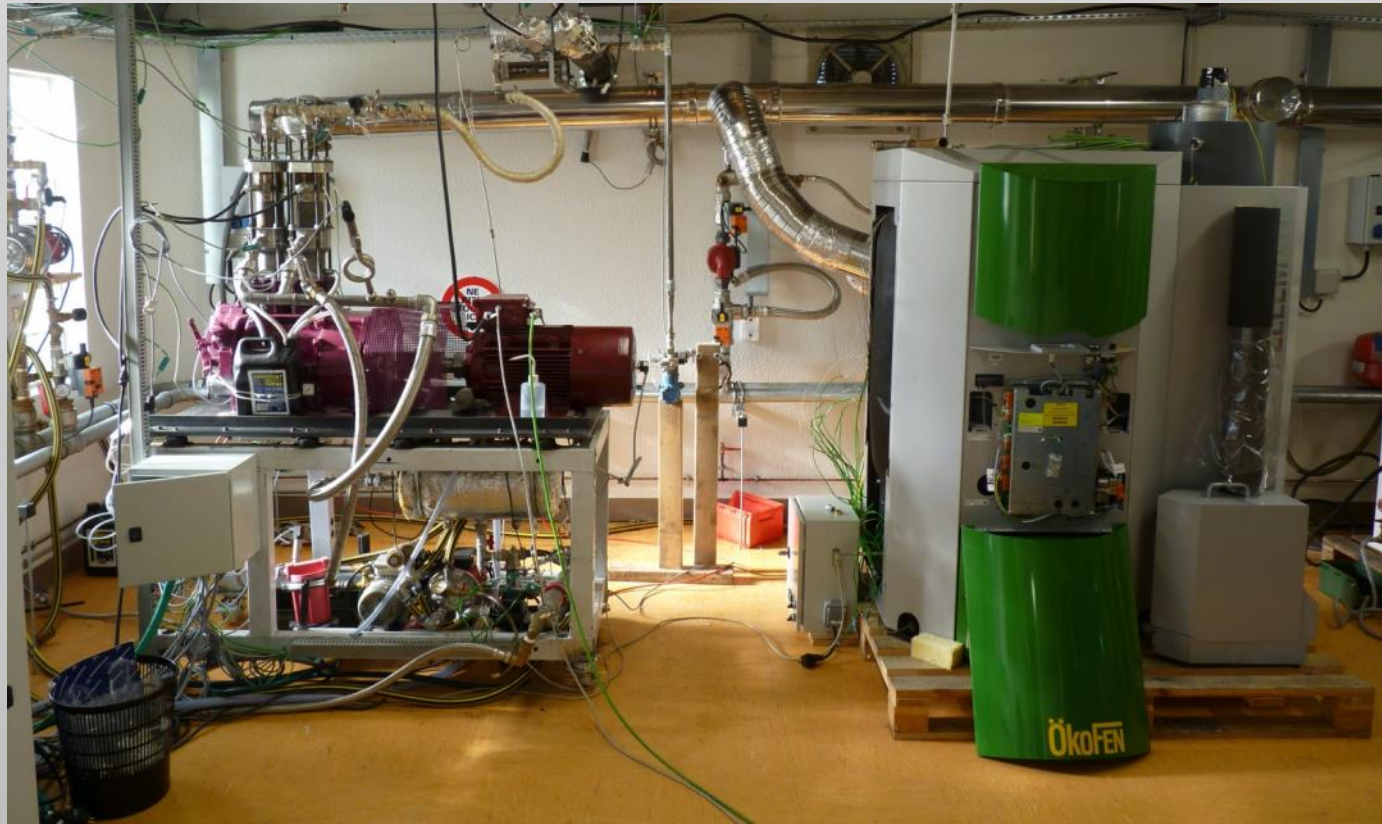
**Fabrication**



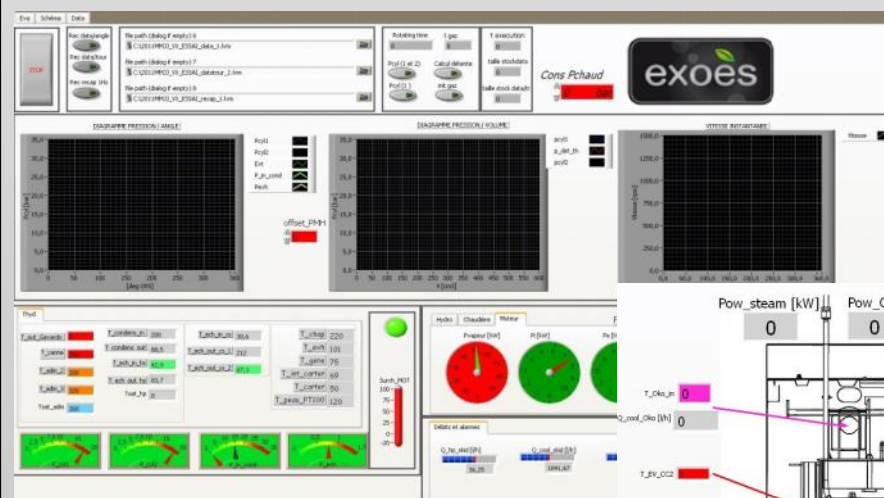
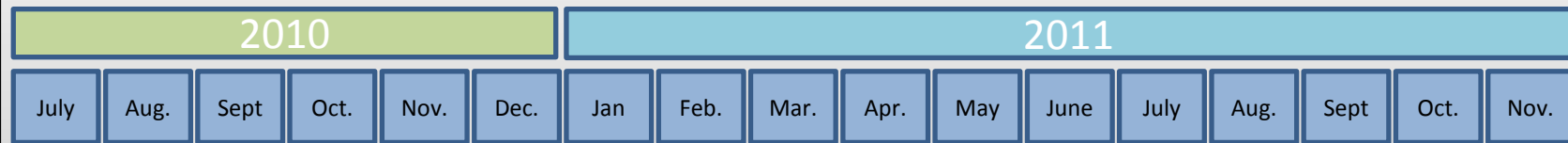
# Tests



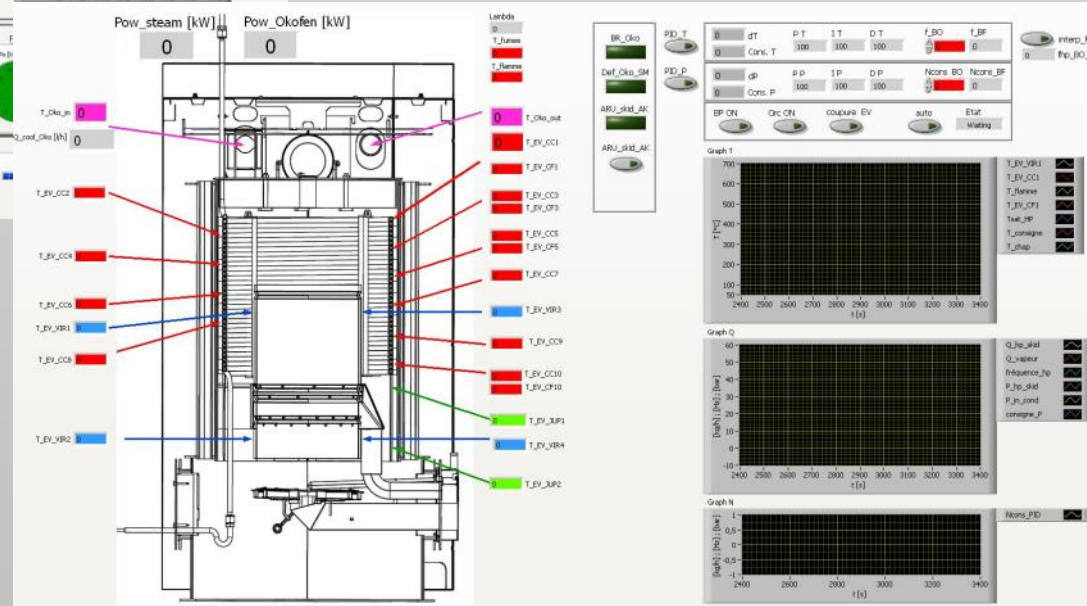
**tests + couplage moteur**



# Tests

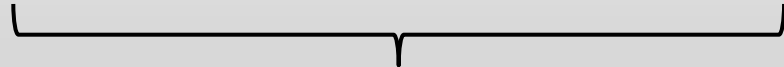
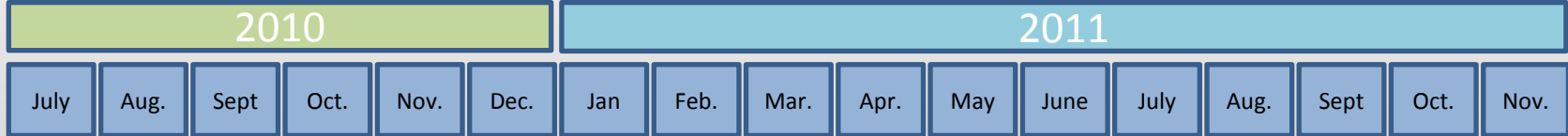


tests + couplage moteur

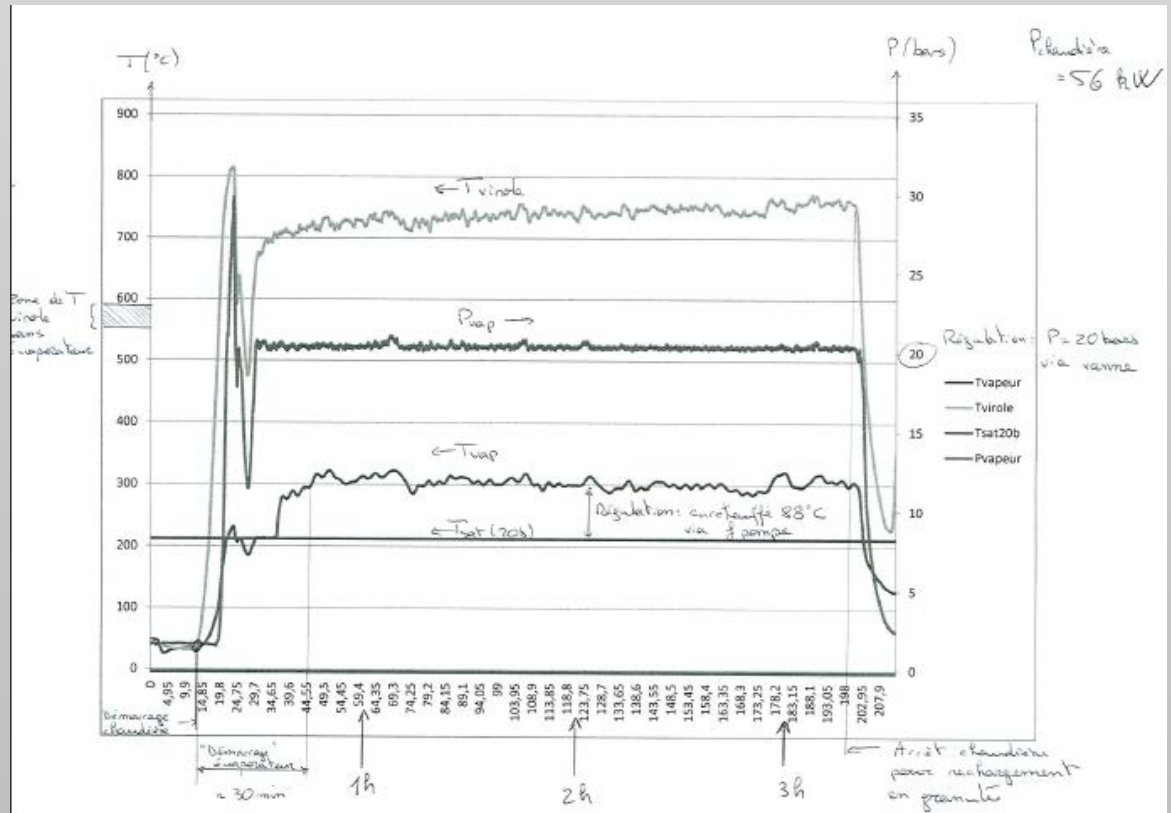




# Tests



tests + couplage moteur



# Centrale électrique 180°C 12kWe

En partenariat avec



Sustainable Heat and Power Engine



Pour l'année prochaine !



Rendement élec visé : jusqu'à 11%



→ Disponible mi-2013



# Merci de votre attention !

