



STEM SAS

Energy-efficient dehumidification
Reduce your electricity bill by 50% to 75%

AIR DEHUMIDIFICATION

It is essential in many industries such as agri-food, pharmaceuticals, etc.

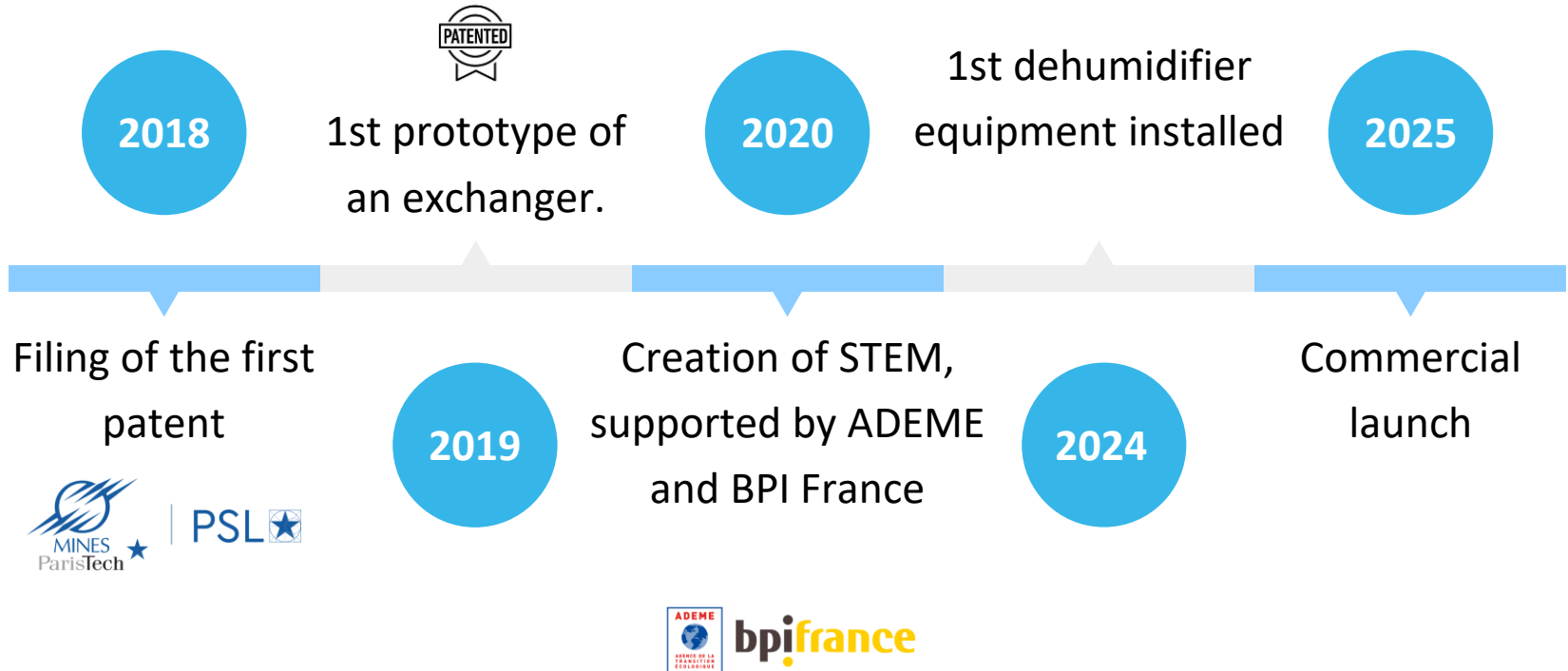
This operation is currently very energy-intensive.

In order to reduce consumption, the Mines de Paris PSL laboratory has patented a new membrane exchanger technology.

The equipment is now available.



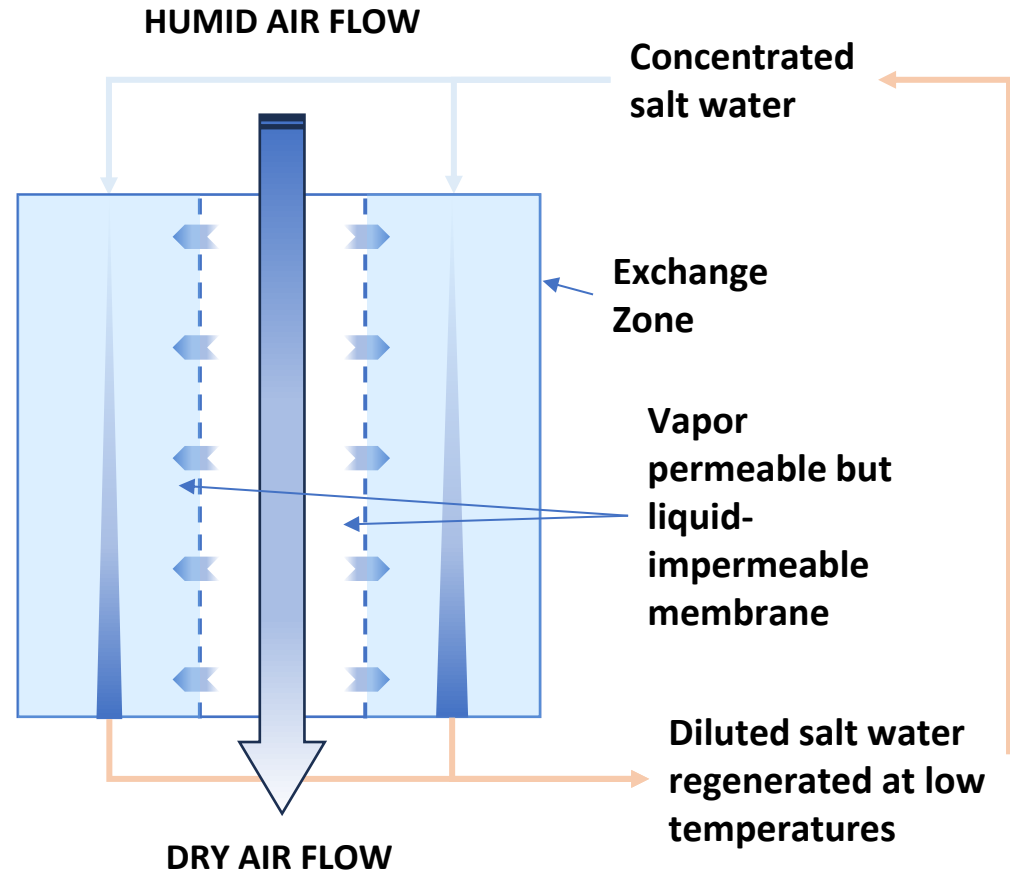
THE STORY



AIR TREATMENT

NE DRY

Water vapour
in the air
passes
through the
membrane



VERY SIGNIFICANT SAVINGS



1 Poultry Cutting Plant

Control Targets:

- T° maintained at 2°C
- 70% relative humidity (3g/kg)
- Continuous operation
- Flow required: 15,000 m³/h

2 Yeast Manufacturing Plant

Control targets:

- Absolute humidity: 4g/kg
- Continuous operation
- Flow required: 15,000 m³/h

| | DEICCANT WHEEL | NEODRY |
|--------------------|----------------|------------|
| ANNUAL CONSUMPTION | 192 MWh* | 48 MWh |
| ENERGY SAVINGS | | 75% |

| | DEICCANT WHEEL | NEODRY |
|--------------------|----------------|------------|
| ANNUAL CONSUMPTION | 556 MWh* | 224 MWh |
| ENERGY SAVINGS | | 60% |

THE BENEFITS

| | ADSORPTION DESICANT WHEEL | NEODRY |
|-------------------------|------------------------------|---|
| Performance | | High efficiency at low temperatures (< 10°C) |
| Performance | | Very low absolute humidity at any temperature |
| Operations | | Simultaneous cooling possible |
| Electricity consumption | | 50% to 75% lower |
| Operations | | Very quick return to control targets |
| Operations | | Simplified maintenance |
| Installation | Humid air outlet required | Regeneration module can be placed outdoors |

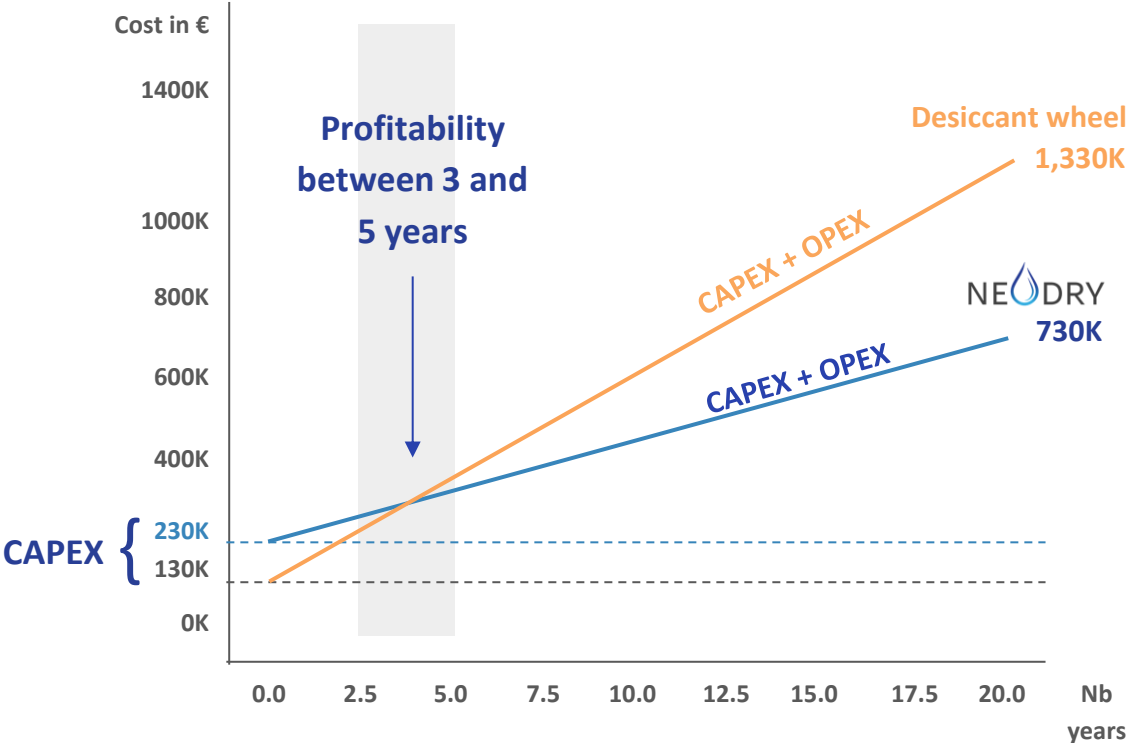
AN INVESTMENT TO REDUCE THE CARBON FOOTPRINT




With a larger investment at the start

NEODRY becomes more economical after 3 to 5 years

Calculation based on 180 €/KW electricity





PARTNERS



Installers


 **dalkia**
GROUPE edf

 **ENGIE**

 **EQUANS**

 **suez**

 **Cram**
L'EFFICACITÉ ÉNERGÉTIQUE

 **TotalEnergies**



Engineering consultant

 **GreenFlex**

 **LEMON**
> ENERGY <

 **Ferest Energies**
BUREAU D'ÉTUDES TECHNIQUES

ROADMAP

Applications of the patent to other uses

AQUAHIVE

Pure water production with low energy consumption

NEPOOL

Dehumidification equipment for swimming pools

CONCLUSION

The **best solution** to achieve low humidity levels and/or with an operating temperature $<10^{\circ}\text{C}$ **while significantly reducing your energy bill**



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Contact us :
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