It's now time for...



natural refrigerants

15-16 October 2013, Brussels



SCM Frigo – 360° Natural Refrigerants Solutions

2005

CO₂ - Subcritical rack systems

2006 CO_2 – Transcritical Packs



2007

CO₂ - Pump circulation systems for medium and low temperature applications

2010

 NH_3 – chiller with low ammonia charge for outdoor installation

2013

 CO_2 - Condensing units range CO_2 - "Plug'n Cool" booster range with integrated gas cooler NH₃ - New range of compressor packs







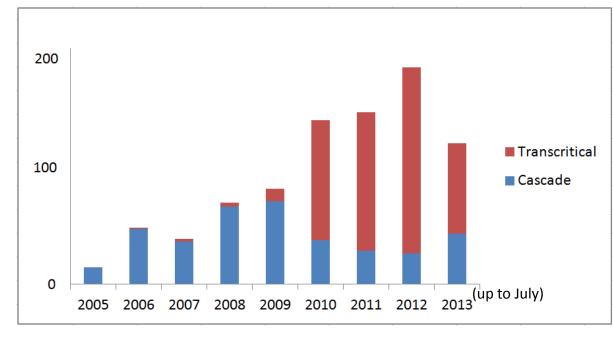
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Being CO2 oriented



More than 800 CO2 units running so far !

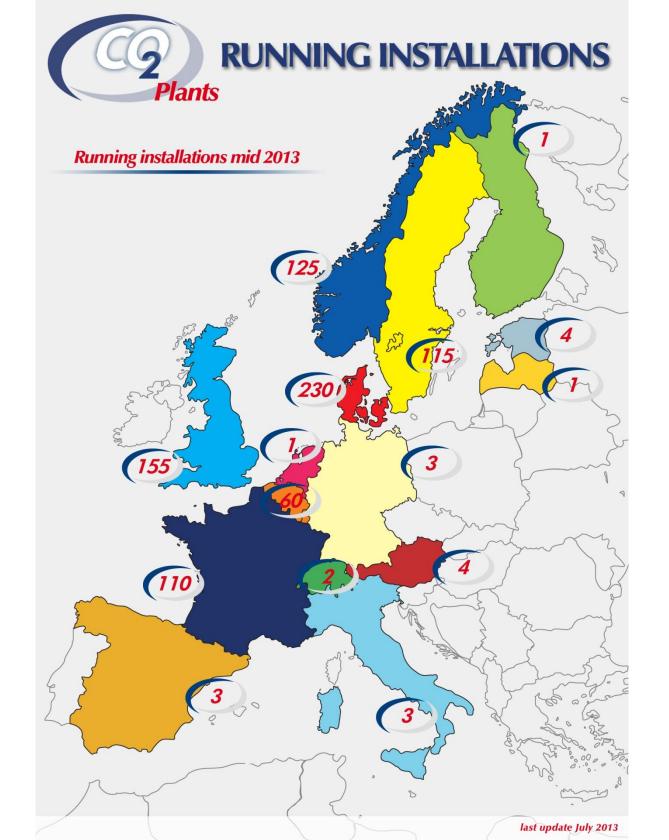


- Production area 7000 m²
- Today CO₂ represents almost **50% of our production**
- CO₂ production capability **average 8-10 unit / week**
- We have a **training centre** for tests and seminars
- 100% Customer support









CO₂ Product and application





Supermarket / industrial:

Booster

- Standard and wide range of unit for indoor and outdoor installation available
- High efficiency especially in the northern EuropeHR / AC system optimization
- •Hot gas defrost for low temperature users available
- High reliability
- •Optimization of transcritical cycle for warmer climate countries.





CO₂ Products and application





Supermarket / industrial:

CO₂ Pump circulation system MT – direct expansion LT:

 \bullet possibility to use $\rm CO_2$ / NH3 /low GWP refr. for condensation

Easy management of the users and the plant room
More efficient in high temperature climate countries
High reliability





CO₂ Product and application



Industrial (spiral freezer applications):

- CO₂ Pump circulation system LT:
- Very high efficiency compared with any other system
- •possibility to use CO_2 / NH3 /low GWP refr. for condensation
- •oil management more challenging







Conclusion



- No single refrigerant is ideal for all applications. To make the transition of natural refrigerants possible, in the largest scale, we need to be able to combine natural refrigerants (CO₂ -NH₃) to target the different applications.
- Safety aspects are still a limit in the natural refrigerant application: training and information for customers, contractors and service providers are needed more and more.
- Legislations:

As legislation is more focused on environmental and efficiency aspects, this should stimulate end users and manufacturing industries in investing in new technologies to enable natural refrigerant applications to expand all over Europe.



EU Sphere solutions for europe

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Thank you very much!