

Natural Refrigerant Trends in the Cold Chain

Ilana Koegelenberg | shecco | 27 May 2021

Trends driving the industry



- Shift away from large supermarket model
- Rather – smaller stores and increased distribution centers
- Due to: increased urbanisation & online shopping
- Pandemic accelerated this trend
- Policy remains both biggest driver & barrier for natrief uptake

Supermarkets

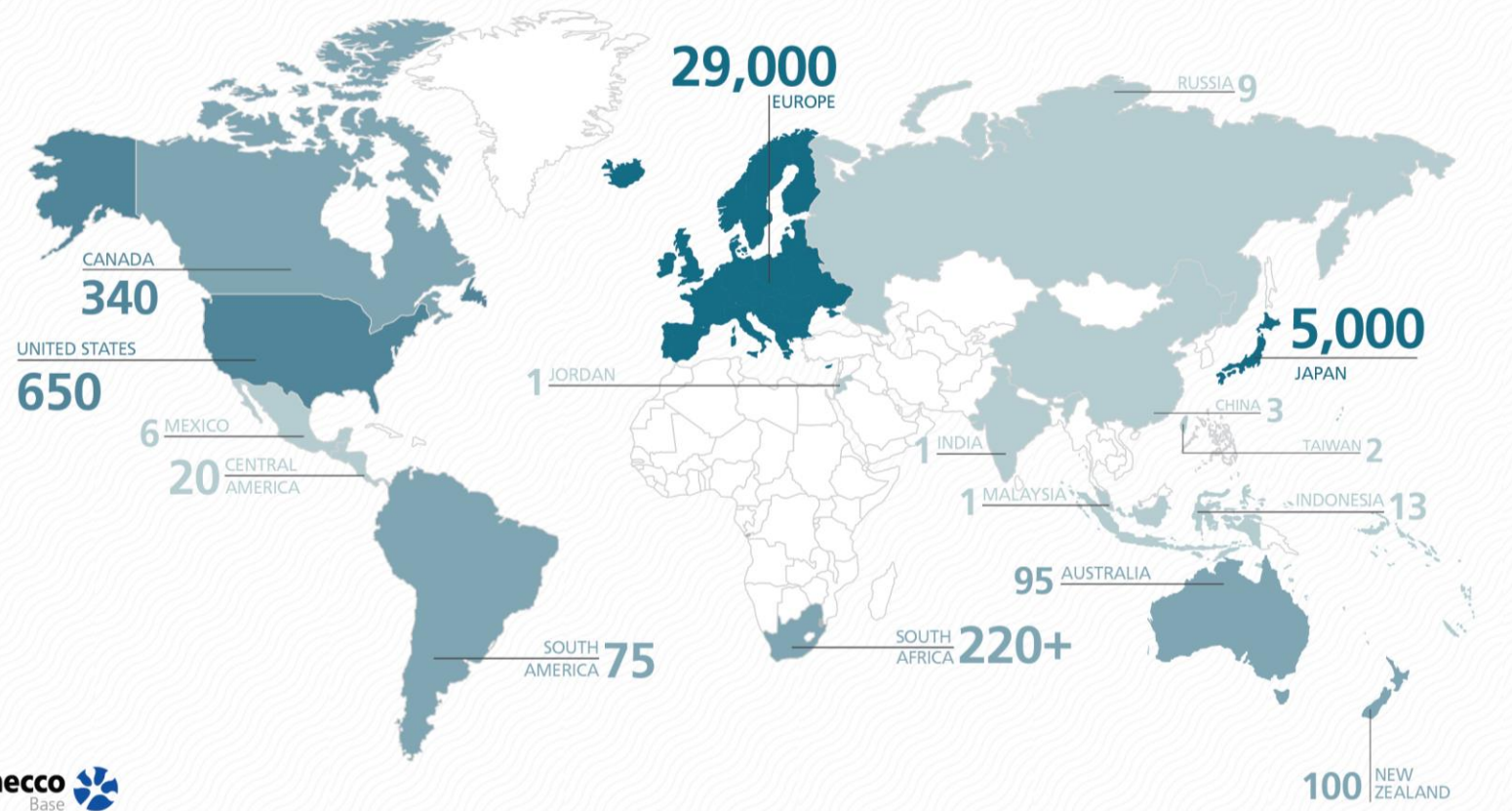


- Transcritical CO₂ installation numbers growing rapidly globally
- Transcritical CO₂ in warmer climates too
- Integrated systems becoming more popular
- Growing demand, lowered equipment costs
- Servitisation models (Cooling as a Service) removing barriers
- R290 equipment increasing – charge limit still barrier (for now)

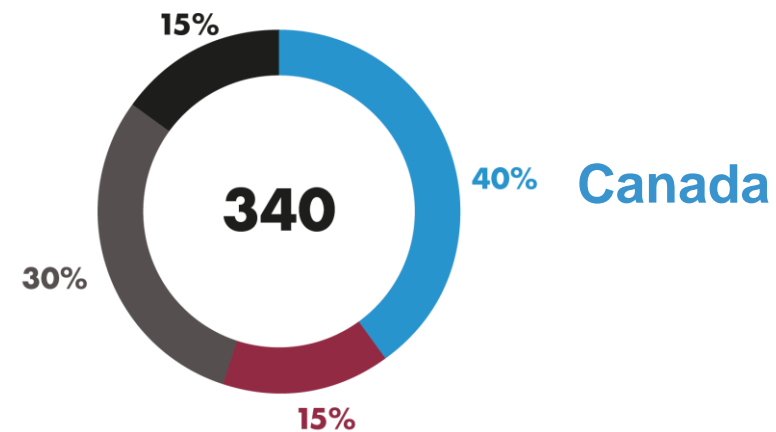
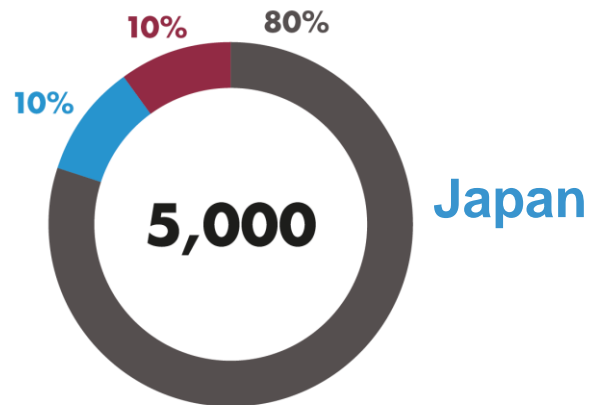
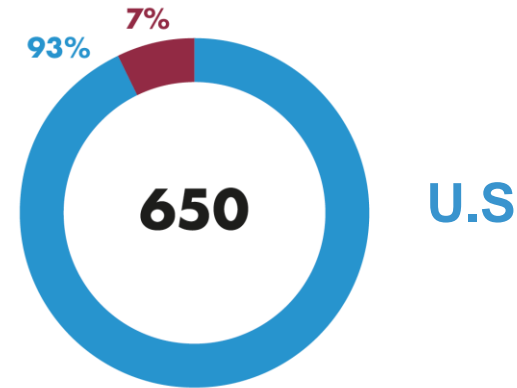
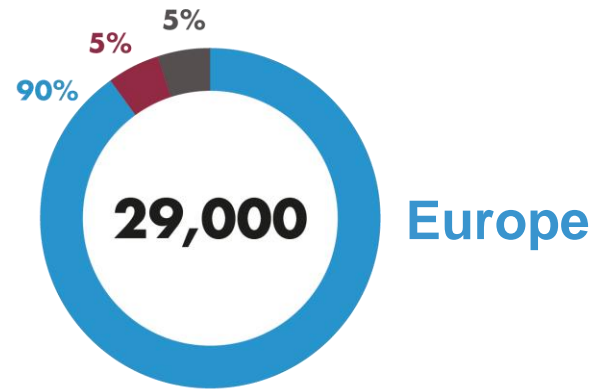
Growth of transcritical CO₂

CO₂ transcritical installations in the world

June 2020



CO₂ installations split by application



- Small stores
- Supermarkets
- Industrial sites

- Supermarkets
- Ice rinks
- Industrial sites
- Data centers

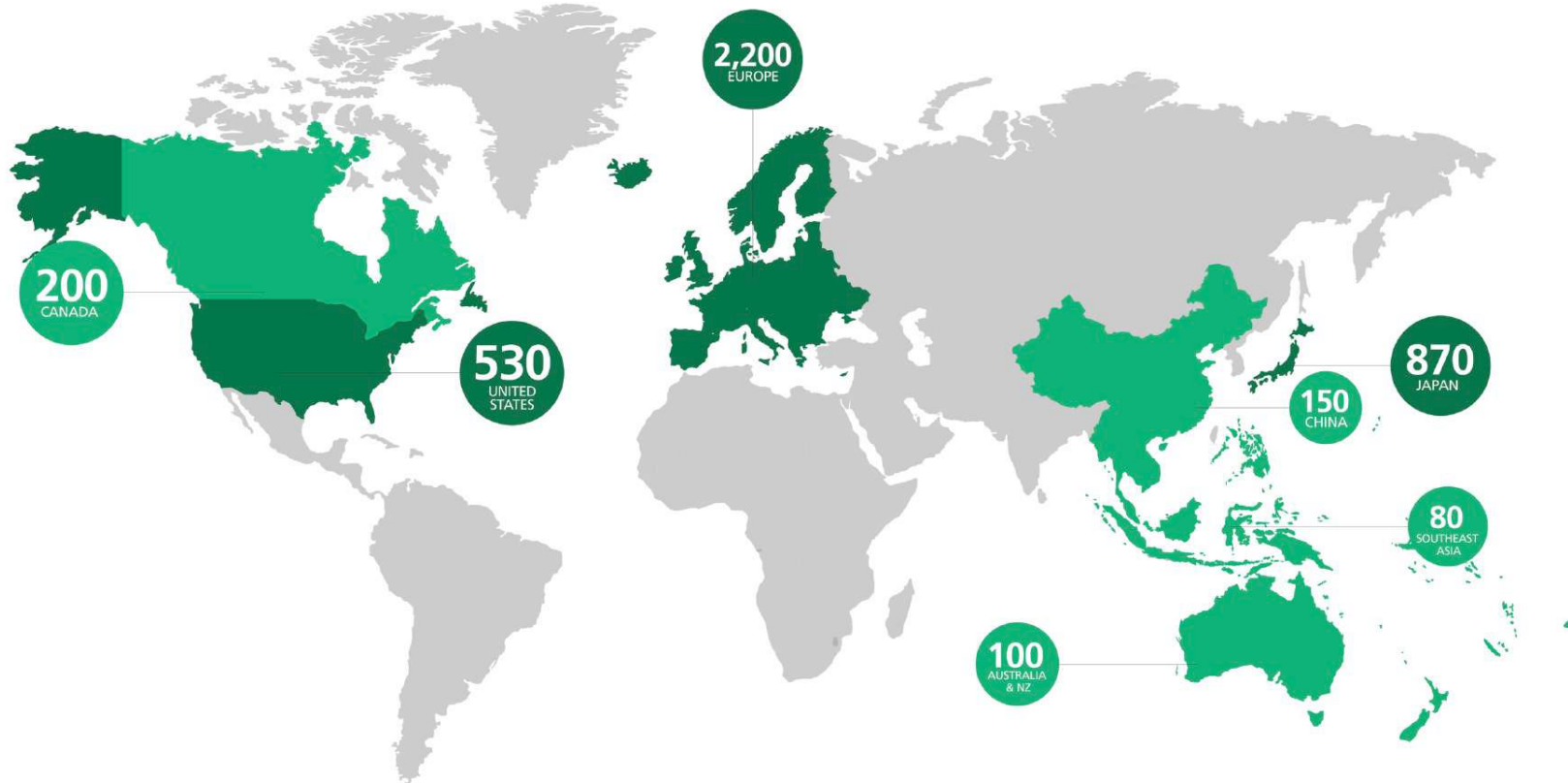
Cold storage/ light industrial



- Global demand for fresh and frozen food driving market growth
- Industrial segment still largely ammonia based
- Trend towards low-charge ammonia – addressing safety concerns
- Increasing transcritical CO₂ systems in industrial applications
- CO₂ taking market share from ammonia – growing
- Seeing larger CO₂ compressors and increased R&D focus on industrial

Growth of low-charge ammonia

Low-charge ammonia installations around the world, 2019



Future growth expected



- Increasing regulatory pressure driving natural refrigerant growth
- Expect CO₂ to keep taking market share from ammonia
- Global natural refrigerant players increasing – more products
- Increasing competition between natural refrigerants
- Increased focus on “clean cooling”, driving incentives
- The future is natural!

Contact



- **Ilana Koegelenberg**
- Market Development Manager, shecco
- ilana.koegelenberg@shecco.com