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Trends in Light Commercial Refrigeration

Marek Zgliczynski Embraco R&D



Present in
80 countries



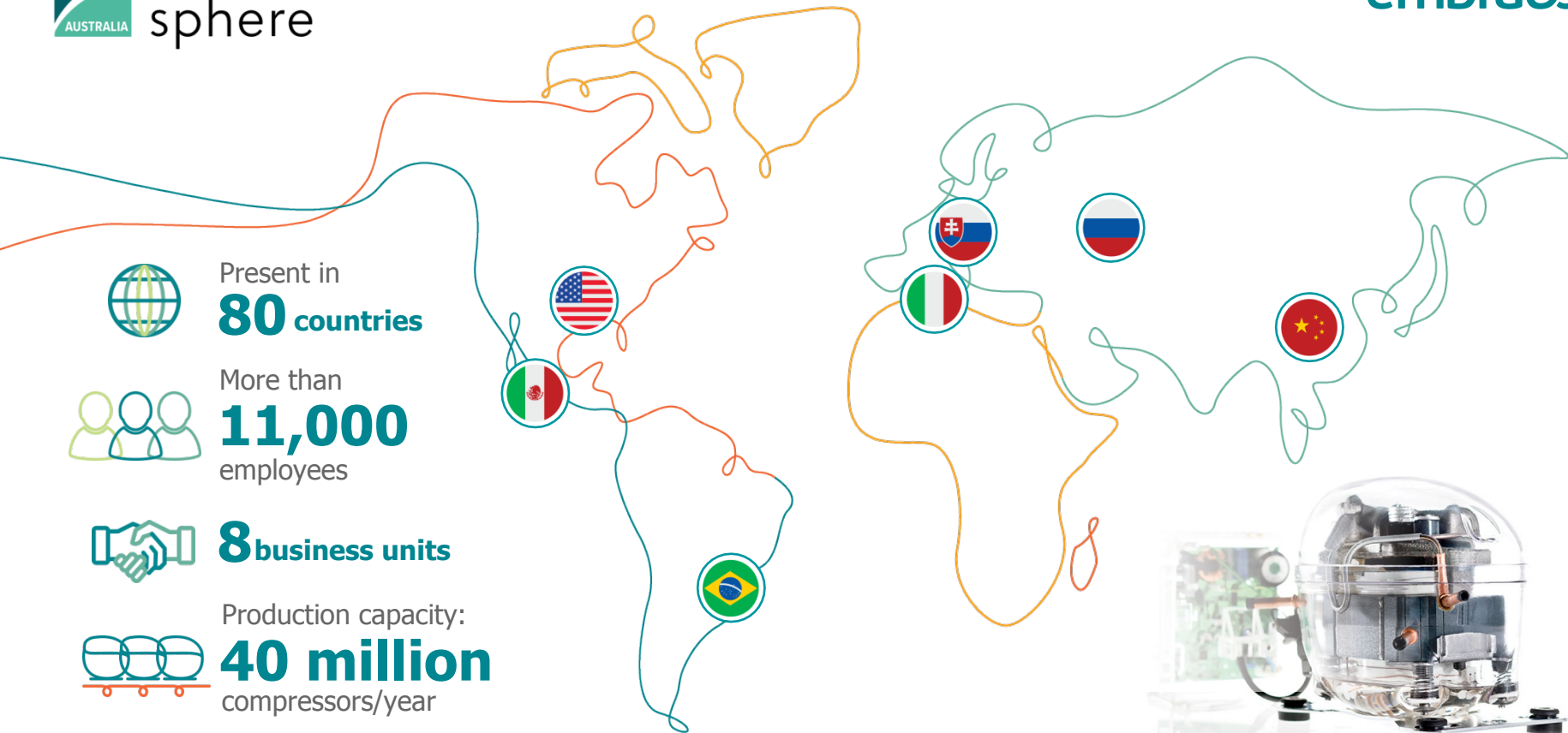
More than
11,000
employees



8 business units

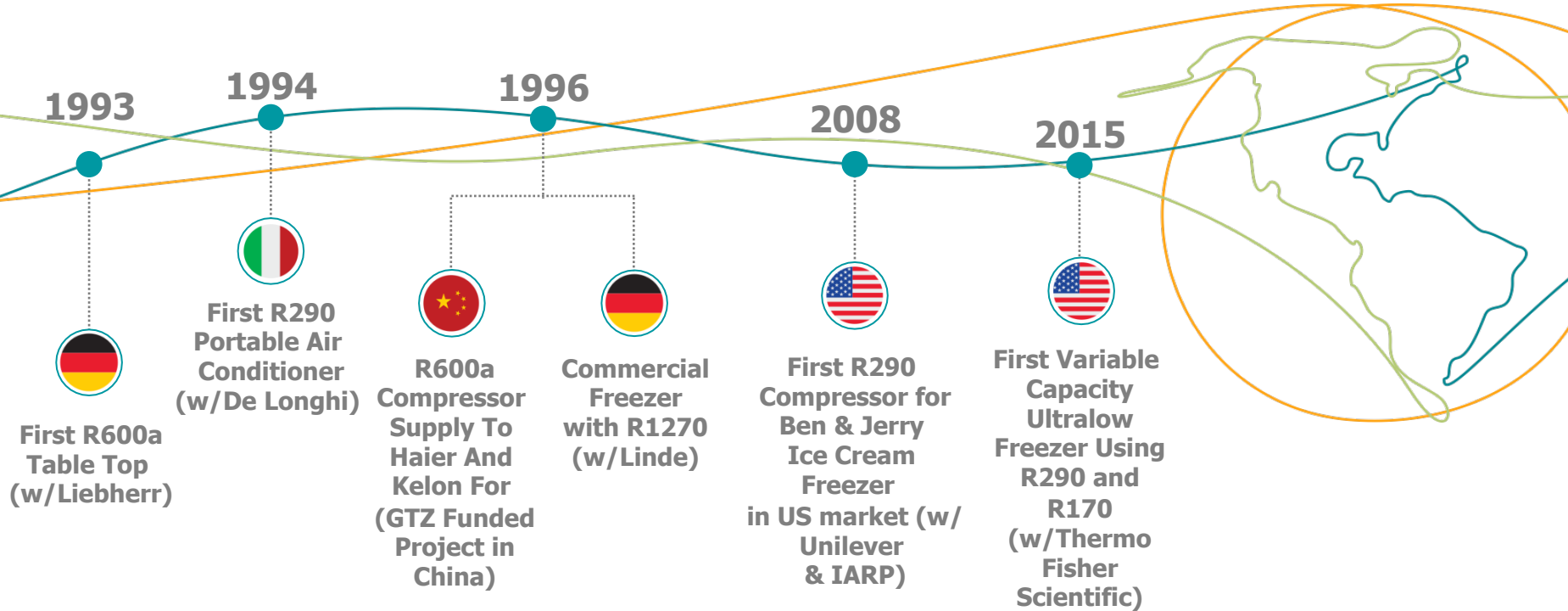


Production capacity:
40 million
compressors/year



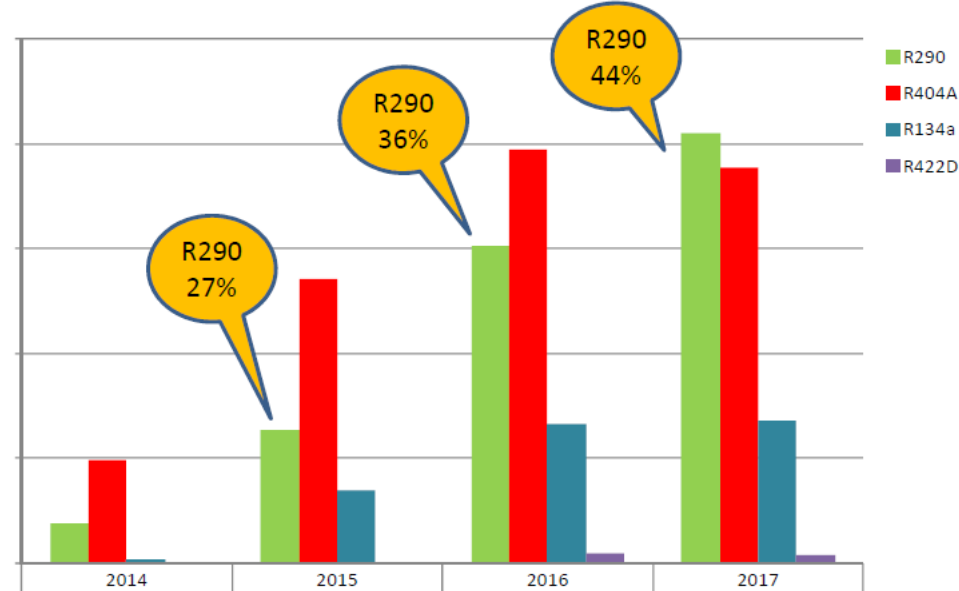
MORE THAN 20 YEARS GLOBAL LEADER IN NATURAL REFRIGERANTS

Embraco NR Projects



Business Evolution – Global Trends

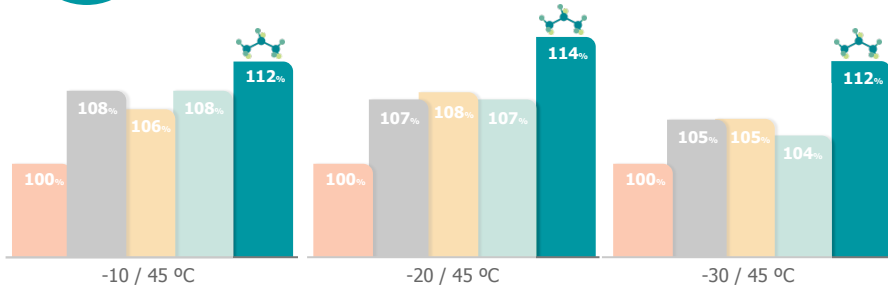
NEU - volumes by refrigerant - EUROPE



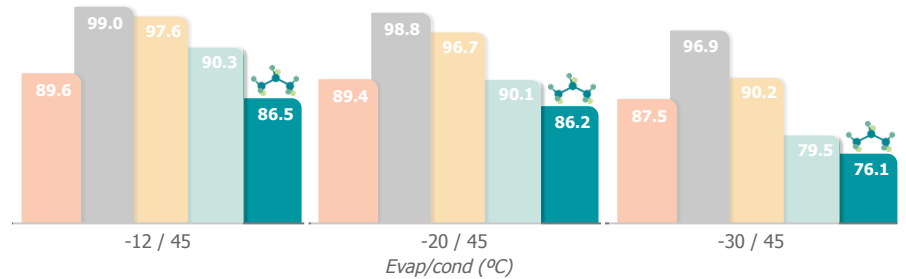
Final Solutions Comparison



EFFICIENCY COMPARISON
% / Superheating 22.2 °C / Middle point based



THERMAL REGIME EVALUATION
°C / Superheating 22.2 °C / Dew point based



■ R404A
 ■ A2L #1
 ■ A2L #2
 ■ A2L #3
 ■ R290



Propane (R290) is the best in efficiency and in thermal level



There are still legislative barriers for larger use of HC's

Charge limit in HH
In US

Increment of HH limit to 150 g in US

Charge limit in CO
IEC

IEC/SC61C/WG4 is working on CO charge limit to be published in 2019





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Thank you very much!

