



ATMO
sphere





Top Efficiency Island Merchandisers

R290 Variable Speed Technology in LBP Applications



NIDEC GLOBAL APPLIANCE GERMANY GmbH

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Agenda

- Company introduction
- Refrigeration market key factors
- R290 advantages
- Variable speed compressor benefits
- Case study
- Conclusions



- Founded in July 1973
- Head Office: Kyoto, Japan
- Sales: USD 12B
- Employees: approx. 130,000
- Group Companies: 300 in 40 countries
- Publicly Traded: Tokyo SE since 1988
- Business: World of “Spinning & Moving”

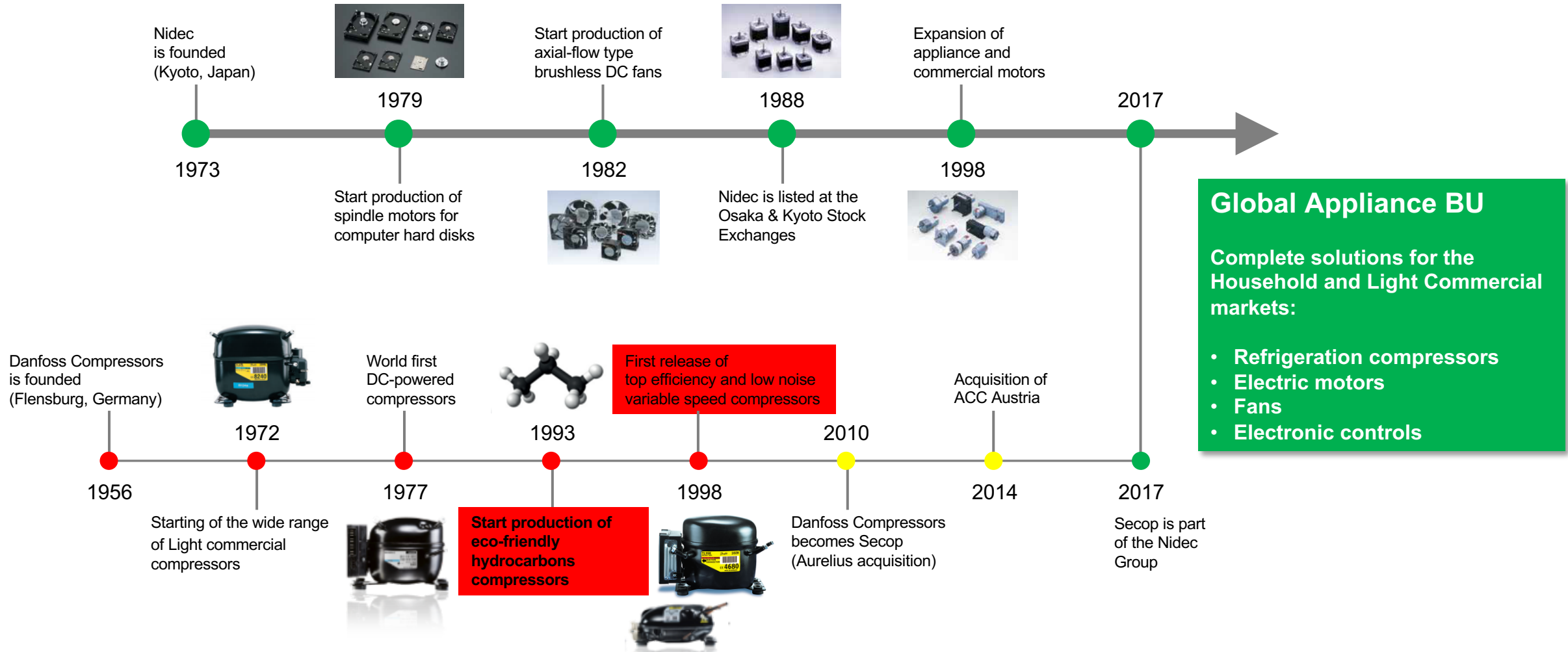
*Shigenobu Nagamori
Founder, Chairman & CEO
of Nidec Corporation*



*Headquarters in
Kyoto, Japan*



Timeline



Key Factors Influencing the Refrigeration Market

Paris/Kigali Agreements

**Demand for eco-friendly alternative
refrigerants**

Energy and Noise labelling

System efficiency optimization

**Total Cost of Ownership (TCO)
optimization**

R290 Advantages Comparing with R744 in stand alone small units

R290 brings significant higher efficiency

R290 system has significant lower noise

R290 allows simple system design i.e. cost and quality advantage

R290 is the best option for L/MBP plugin solutions with hermetic compressors



Hydrocarbons hermetic compressors are available since the 90's

>1 billion R600a household refrigerators around the world

>6 millions of light commercial cabinets working with R290 globally
Standard in the industry

Flammability risk can be handled

Variable Speed Compressors

Energy efficiency
compliance

Low noise &
vibration

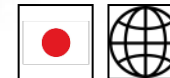
Fast pull-down &
half-reload

Inventory & logistics
cost reduction



Better temperature
control

NLV12.6CN Multi-grid (100-240V 50/60Hz)



Variable Speed Compressors delivery all the benefits due to
unique features

Island Merchandiser Case Study

- Island merchandiser for frozen food
- Glass sliding lids
- Volume: 700 liters
- Temperature: -18° to -22°C
- Auto defrost
- Stand alone or combined island configuration

Island Merchandiser
LBP application



Target

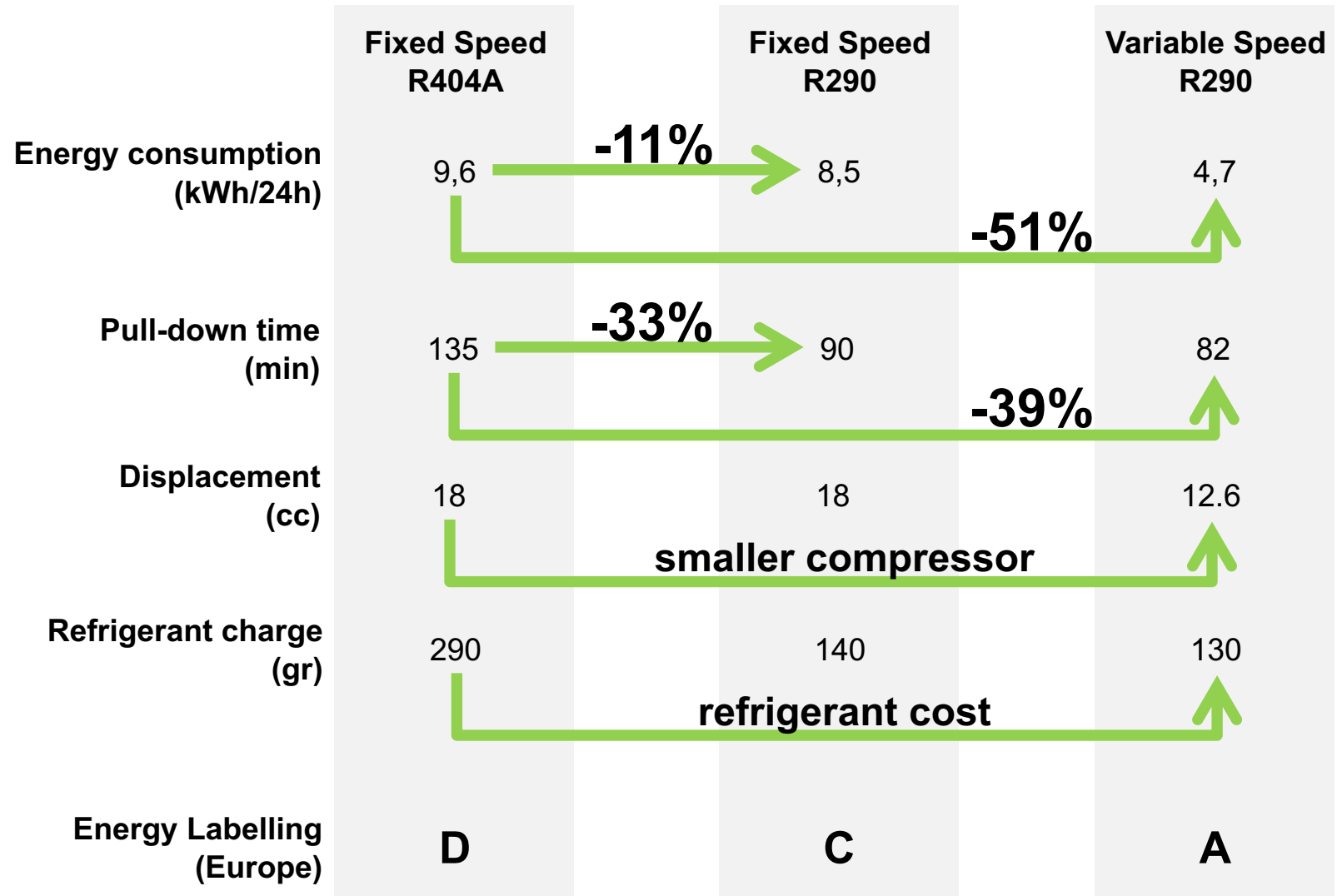
Reduce environmental impact with eco-friendly refrigerant

Decrease total cost of ownership with top efficiency compressor

Island Merchandiser Case Study



“Final solution”
100% Green
with the optimal refrigerant



Market/regulations requirements are pushing for the use of natural refrigerants

R290 offers the best TCO for light commercial applications in L/MBP

Hydrocarbons bring some design changes but totally feasible with the right approach



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Nidec

All for dreams

Thank you very much!

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