GEA Bock compressors for refrigerant R407F

Semi-hermetic reciprocating compressors for Low GWP refrigerant R407F

GEA Refrigeration Technologies

Benefits of R407F

Significant higher efficiency compared with R404A → increase in COP

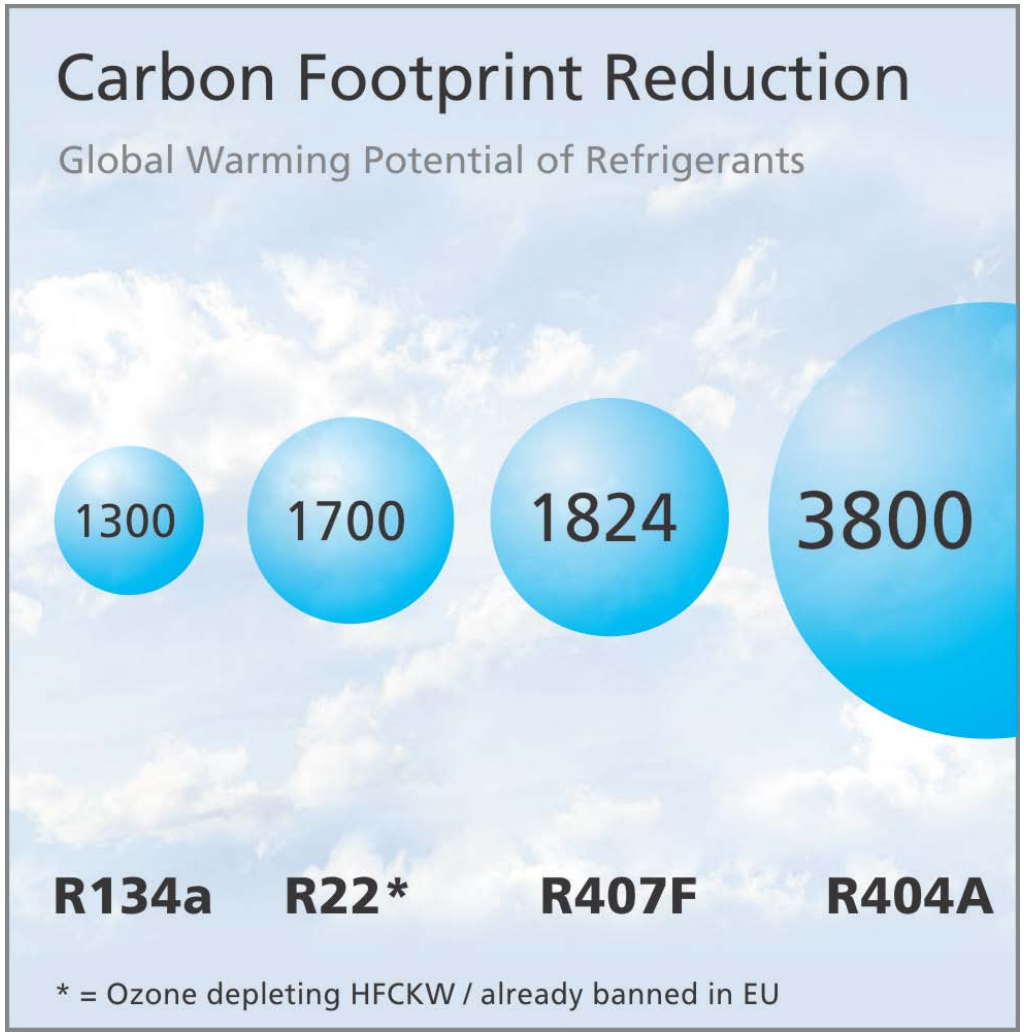
R407F can be used by all Bock compressors

50% lower GWP* than R404A

Usage possibility as a Drop-In solution regarding the retooling of a R22 plant

* = Global Warming Potential

Environmental friendly refrigerant



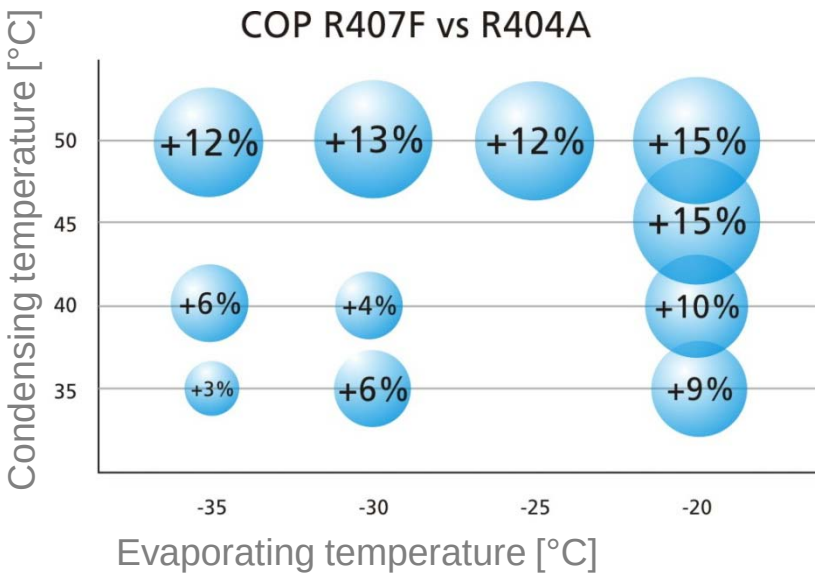
A **50% lower GWP**** than R404A

** = Global Warming Potential

Technical challenges of R407F

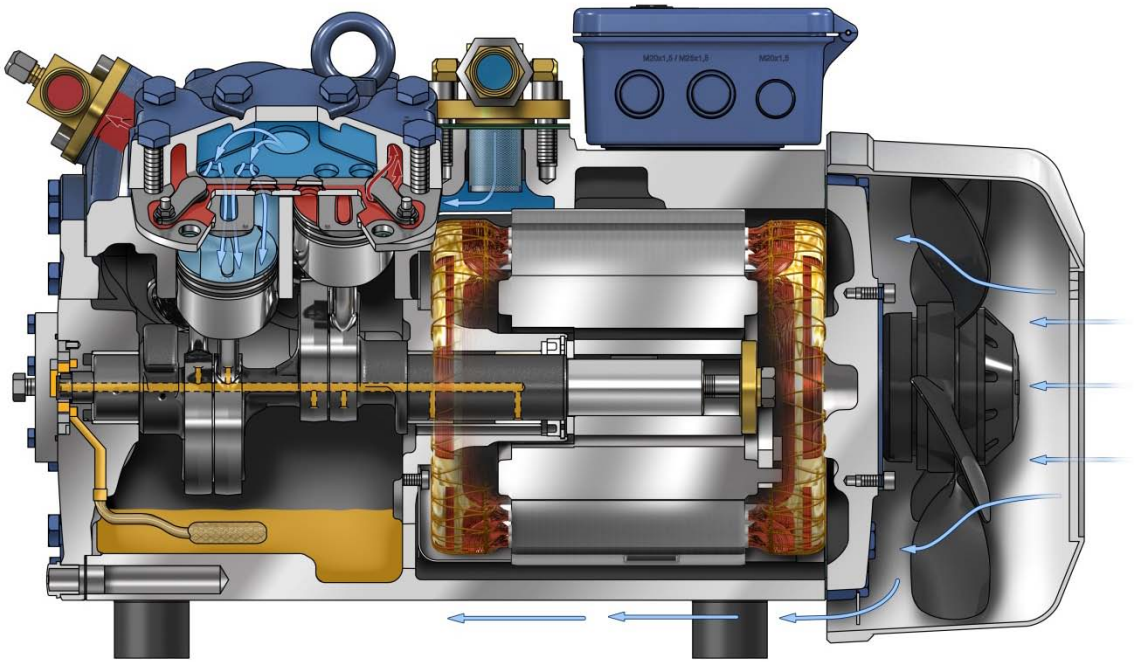
- **Experiments with R407F indicated a 15 % lower refrigerating capacity**
- **High discharge temperature of R407F makes low temperature application difficult**
- **This fact often requires the use of additional fans and liquid injection**
- **R407F has a temperature glide of 4-6 K**

High efficiency with Bock HA compressors



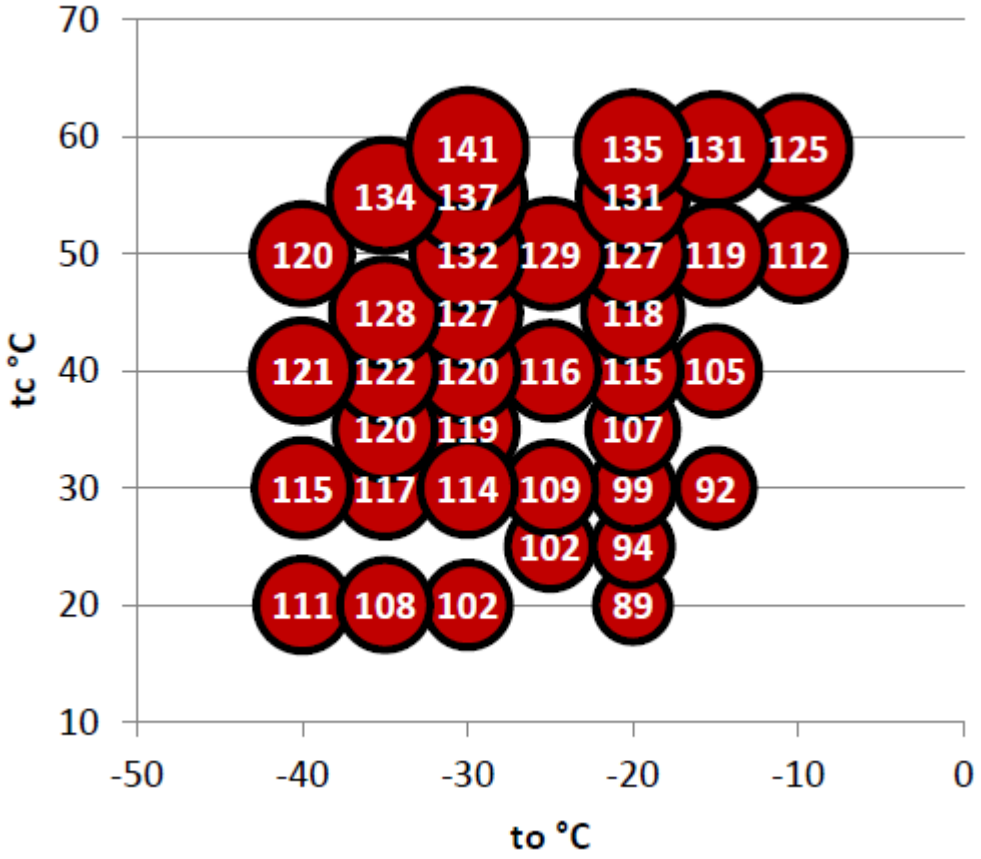
Low temperature refrigeration:
R407F in combination
with the air-cooled Bock HA series offers a energy saving potential of around 5 to 15% compared to R404A systems!

The unique Bock HA system



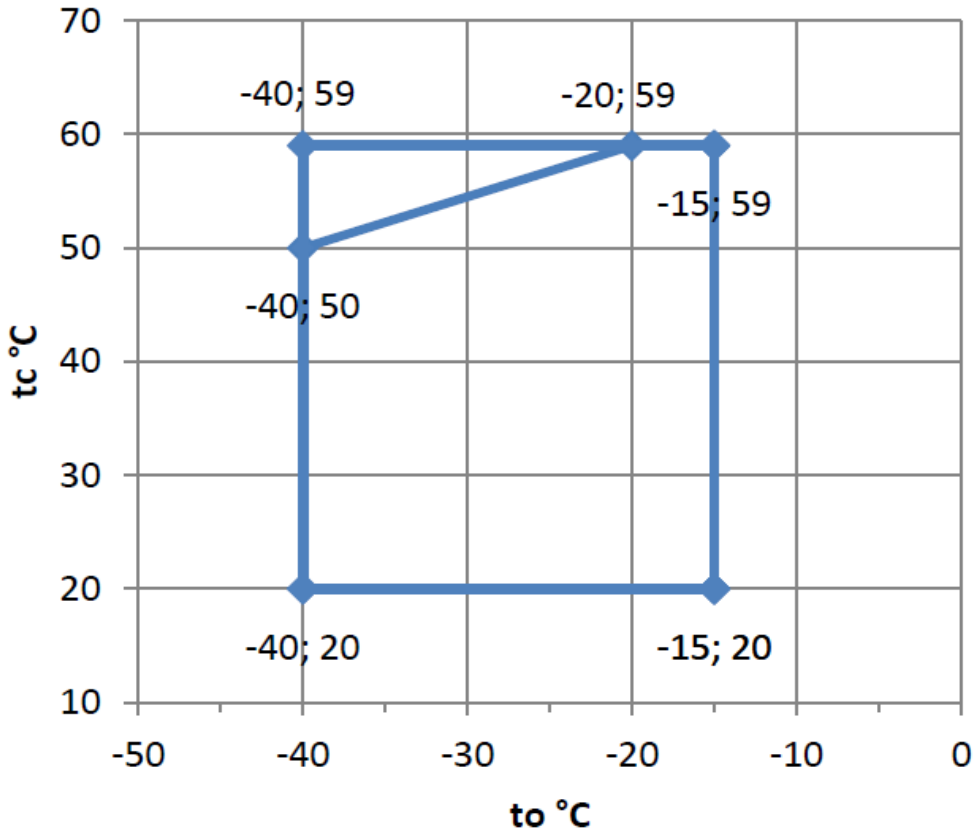
Thanks to the air-cooling of the drive motor, Bock HA compressors do not heat the suctioned refrigerant and guarantee a **reduced discharge end temperature**, which makes the use of R407F in low temperature applications without additional fans or liquid injection possible.

HA compressors – discharge temperatures



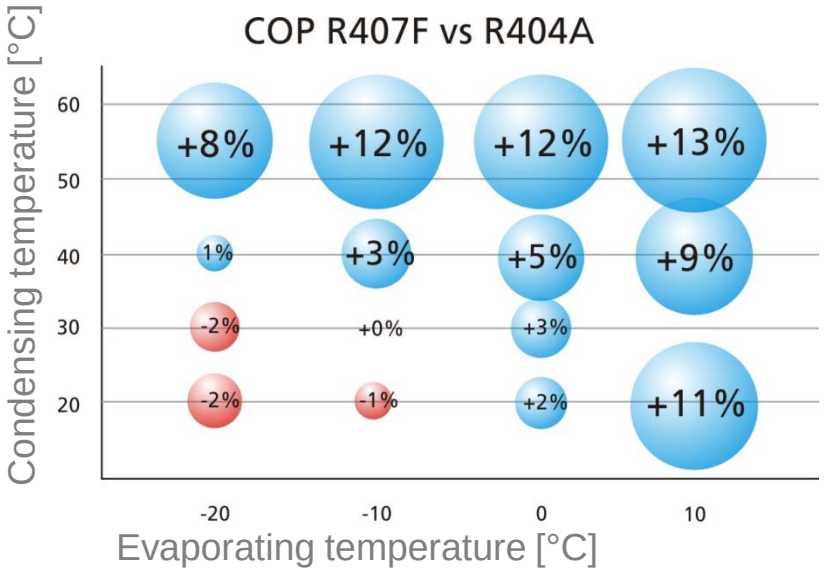
HA discharge temperatures with R407F

HA compressors – limits of application



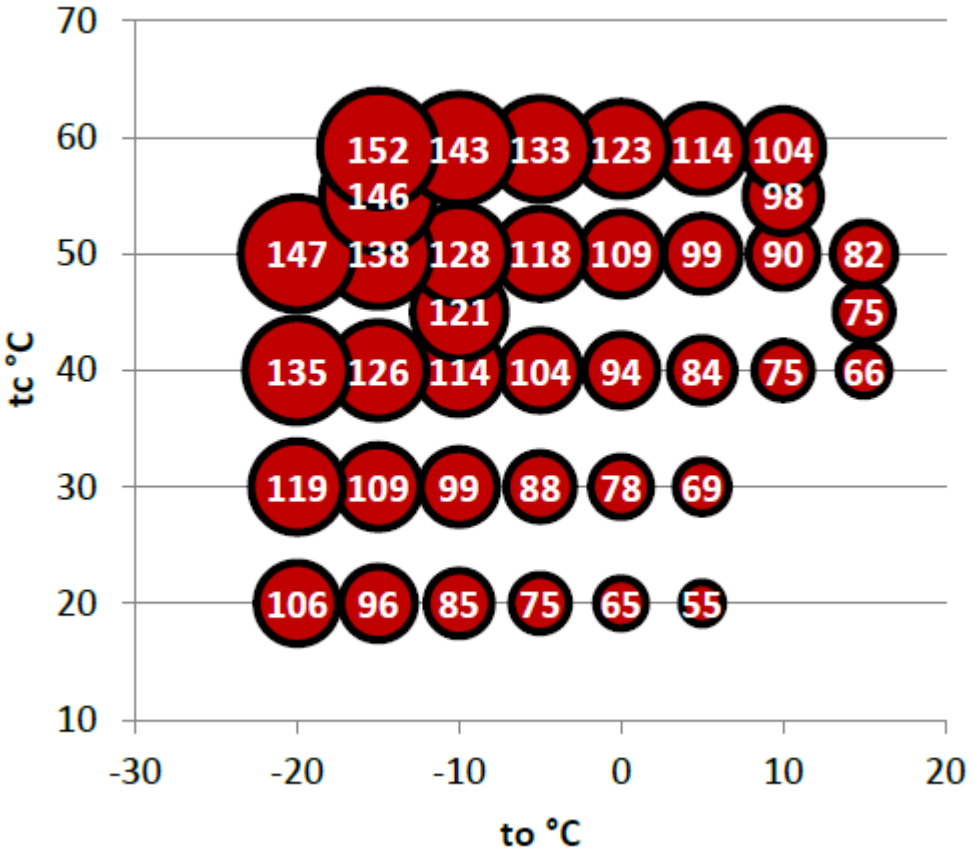
HA application limits with R407F

High efficiency with Bock HG compressors



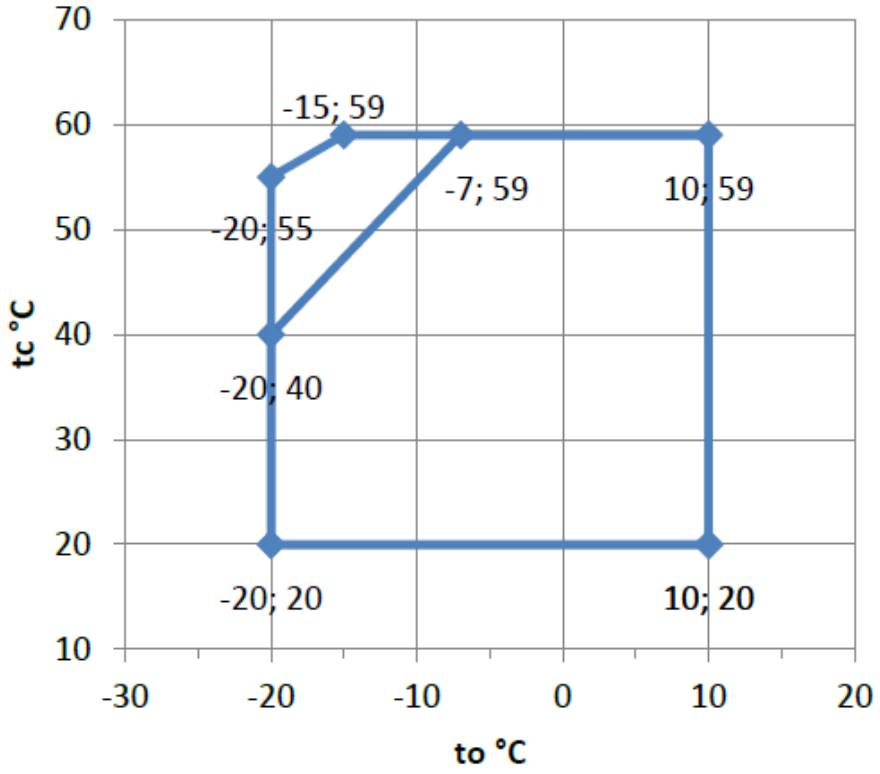
Medium temperature refrigeration:
R407F in combination
with the suction gas-cooled Bock HG series
offers a energy saving potential of around 7 to
12% compared to R404A systems!

HG compressors – discharge temperatures



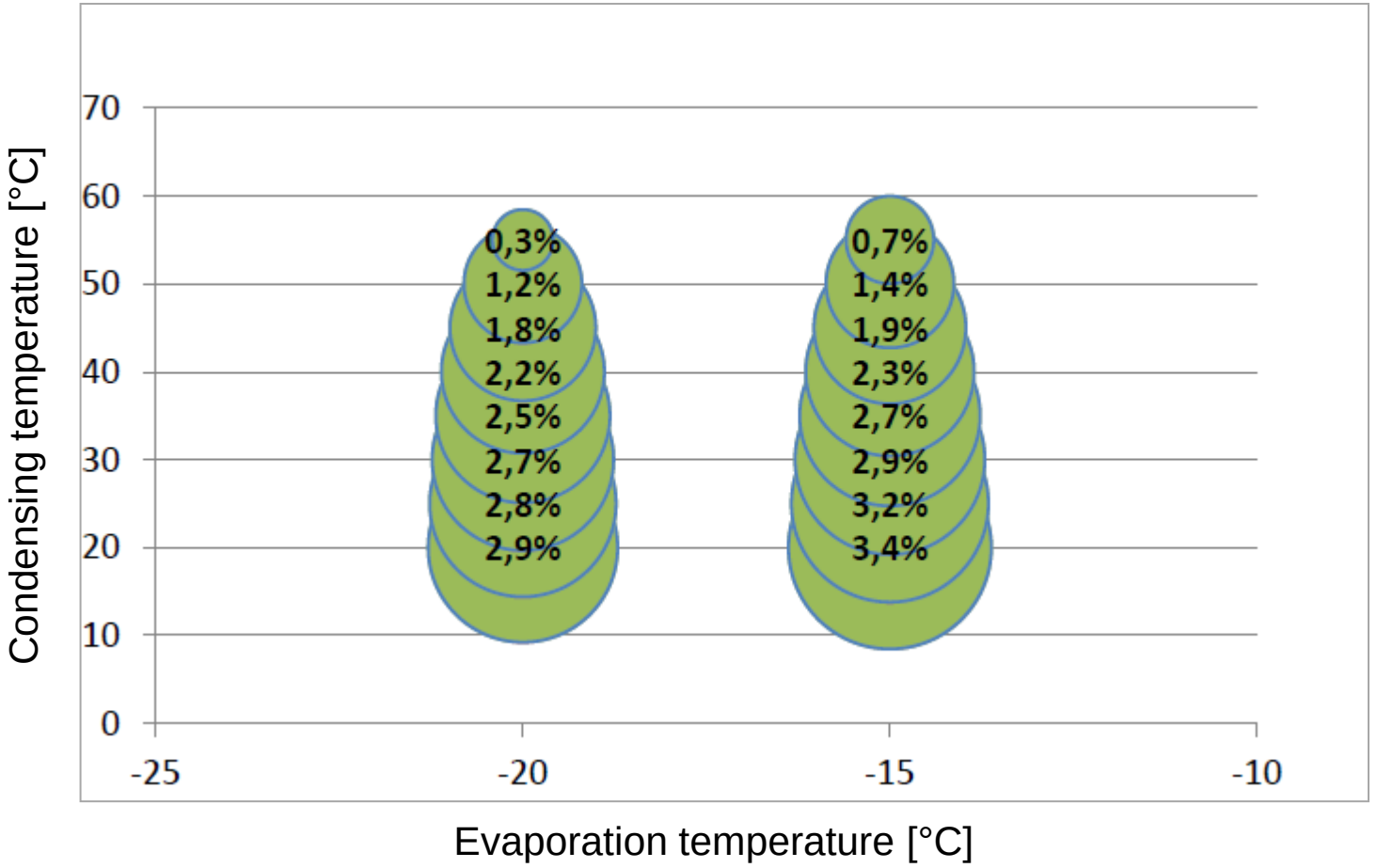
HG discharge temperatures with R407F

HG compressors – limits of application



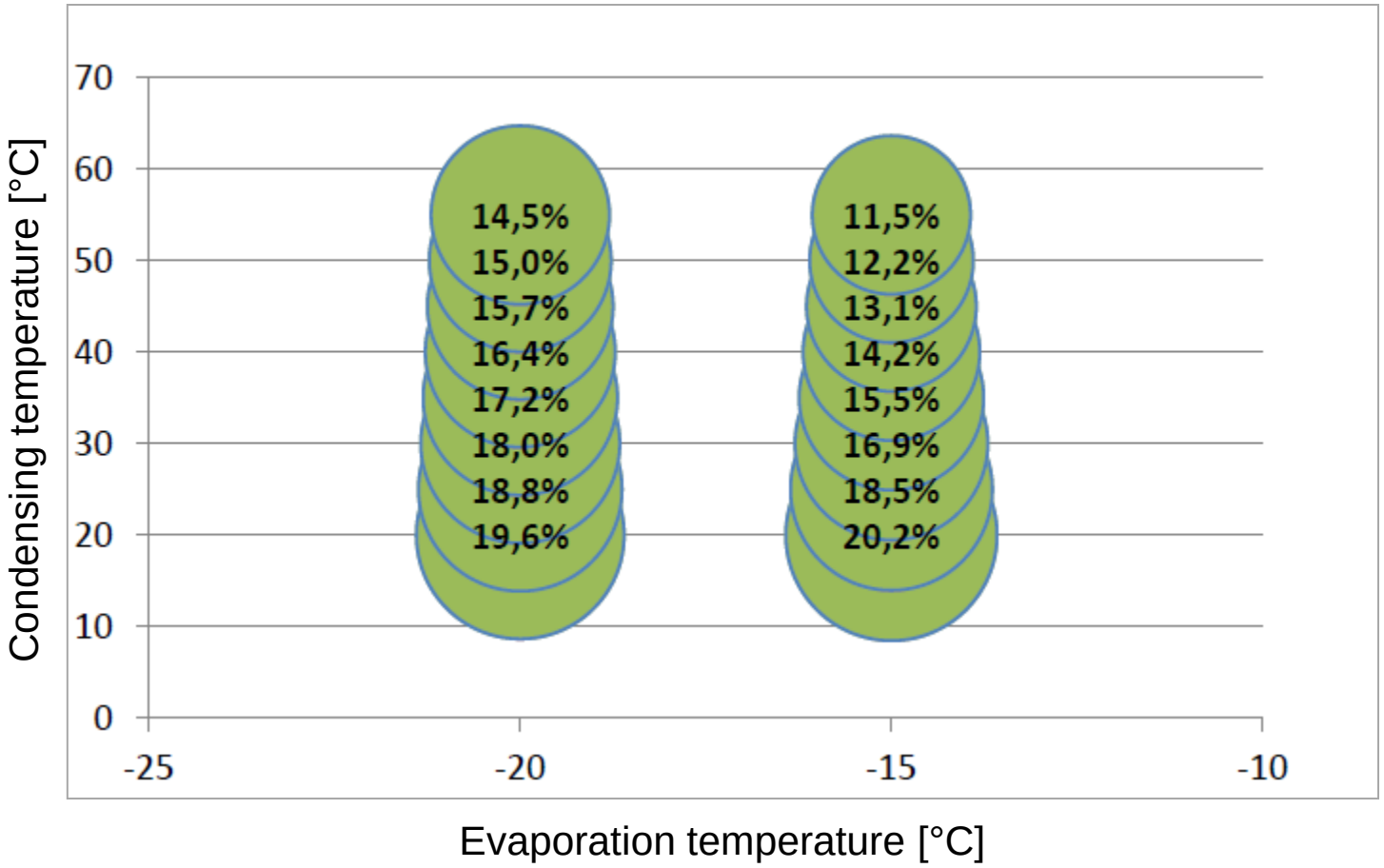
HG application limits with R407F

HA vs. HG with R407F



Volumetric efficiency HA vs. HG with R407F

HA vs. HG with R407F

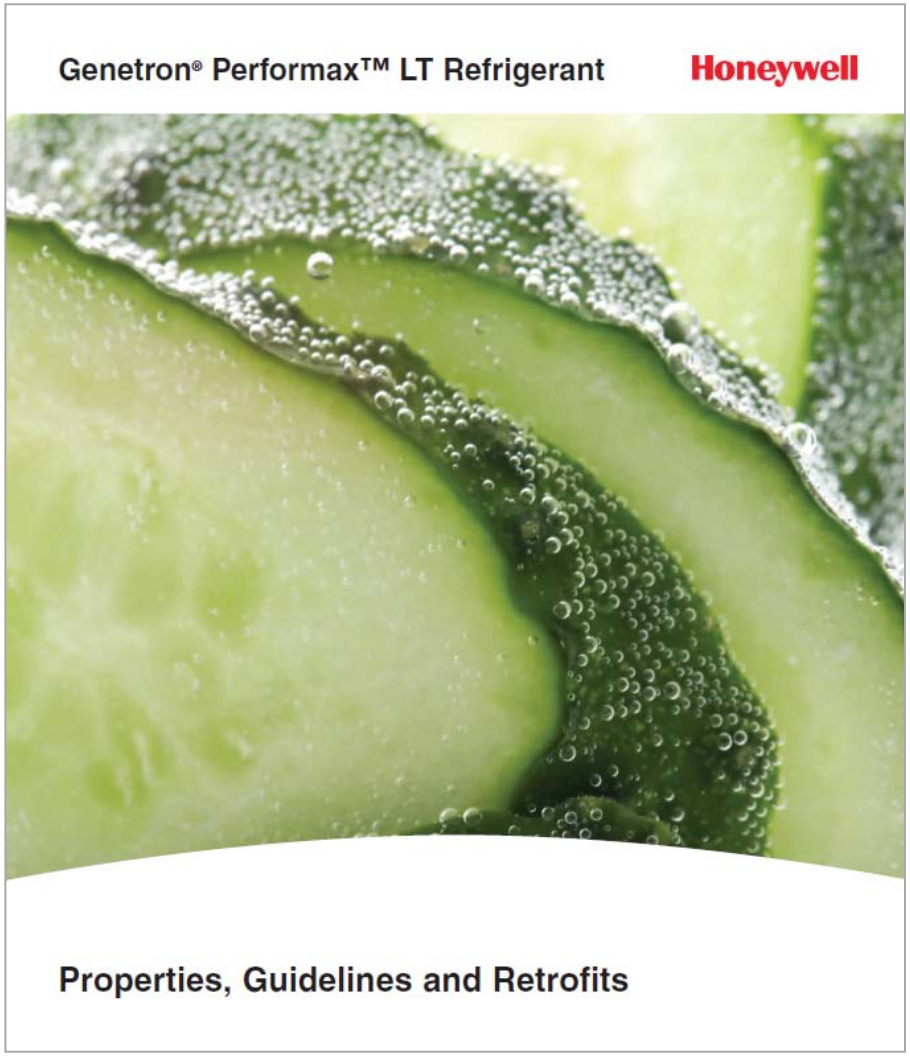


Overall efficiency HA vs. HG with R407F

Low GWP R407F & GEA Bock Compressors

GEA Refrigeration Technologies has released
Bock HG and HA compressors for R407F applications.

Low GWP R407F & GEA Bock Compressors



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engineering for a better world

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