

Hall 9

Chillventa Specialist Forums 2022 Chillventa Fachforen 2022

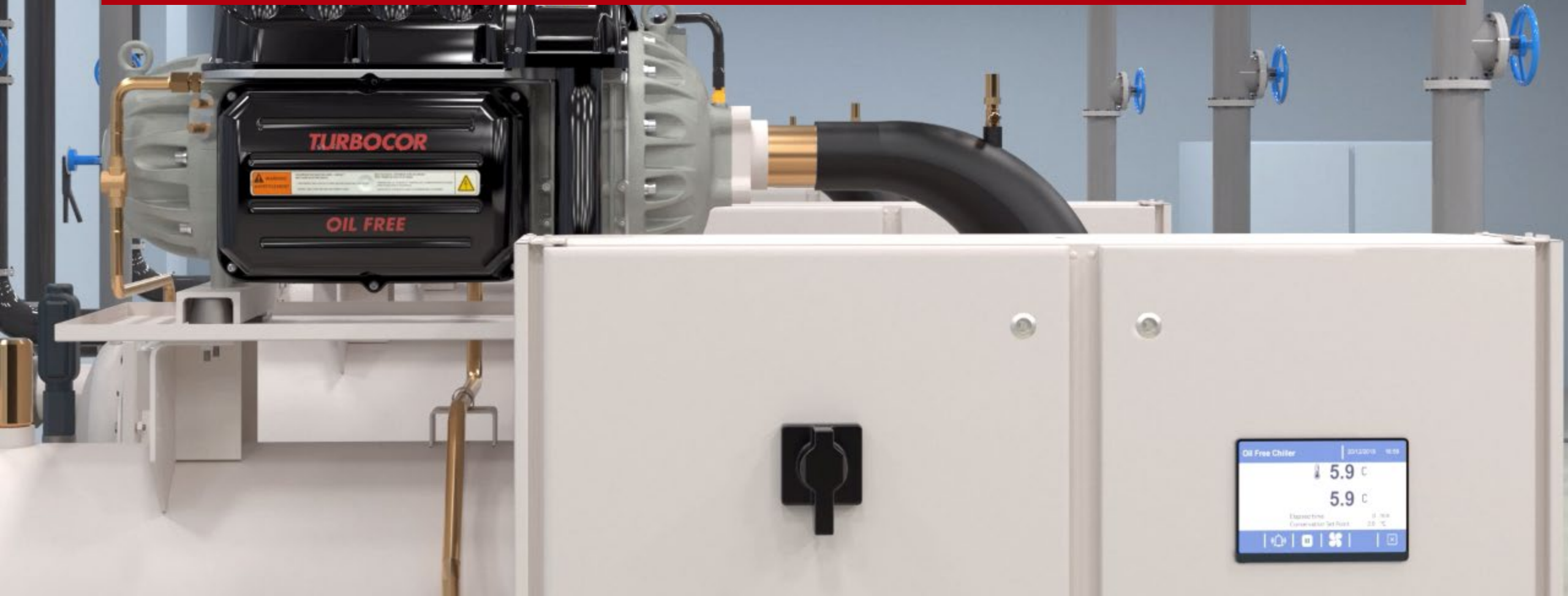
**CONNECTING
EXPERTS.**



ENGINEERING
TOMORROW

Danfoss

Danfoss Turbocor TGS380 Compressor



Introduction

Specialist Forums

Reaching new levels of sustainability with Danfoss Turbocor® Compressor for Data Center, Comfort cooling and more

Speaker: Eddie Rodriguez

Senior Product Manager

Danfoss Turbocor

- 25 Years experience in HVAC Applications support and Product Management



Agenda

TGS380 Overview

Operating Map

Applications

**Oil Free Compressor
Technology**

Summary



TGS380 Compressor Overview

Optimized for use in demanding air or water-cooled chiller applications

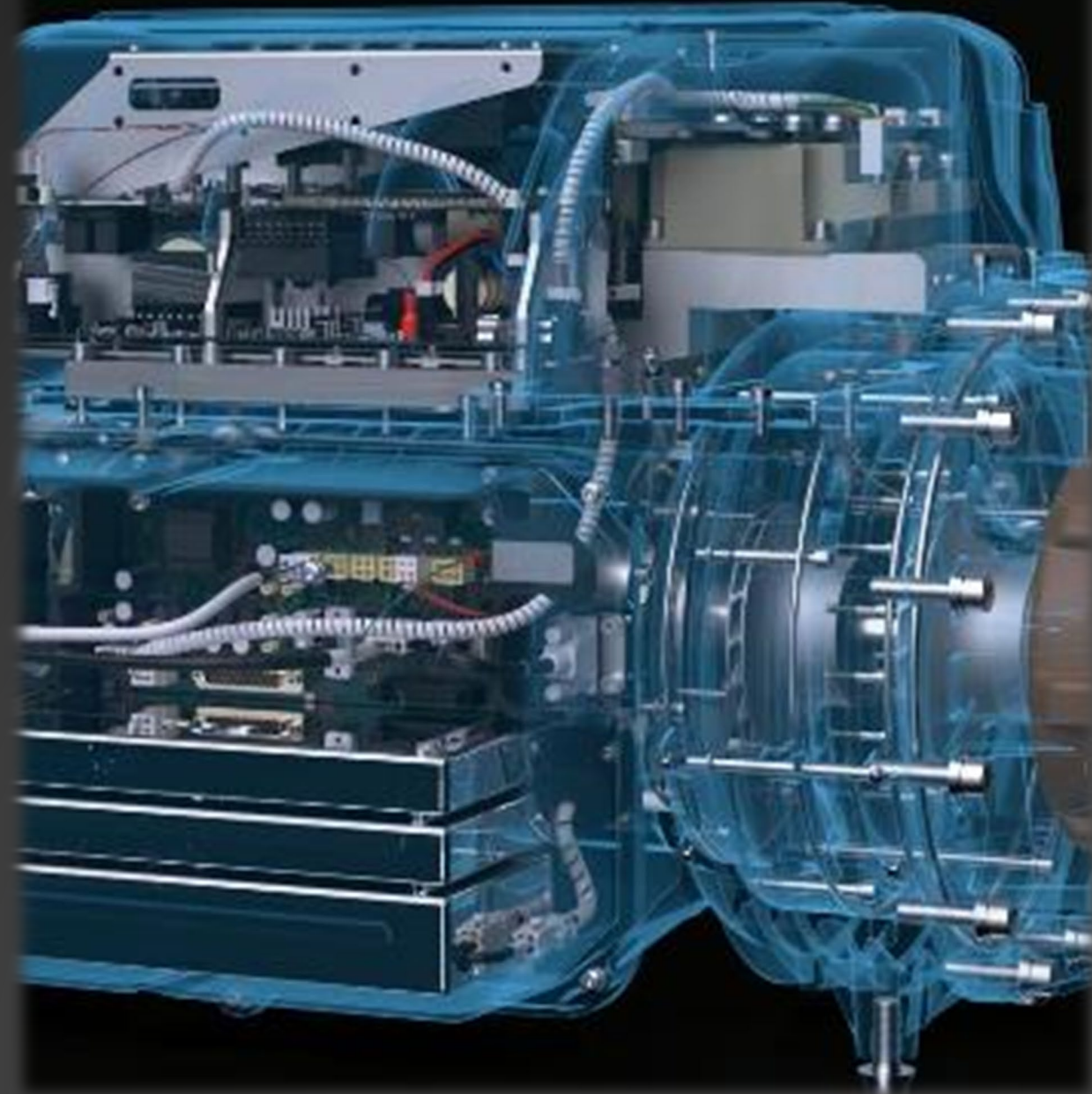
- ❑ Air-Cooled chillers in high ambient climates
- ❑ Water-Water Heat Pumps or Water-Cooled Chillers with Heat Recovery

Higher Capacity Rating

- ❑ Enables lower initial chiller cost by reducing the amount of compressors on the chiller

Comprehensive Low GWP refrigerant options

- ❑ Optimized for use with ultra low GWP HFO-1234ze or low GWP R515B



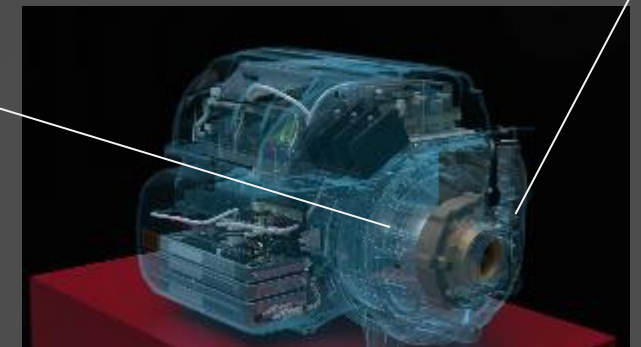
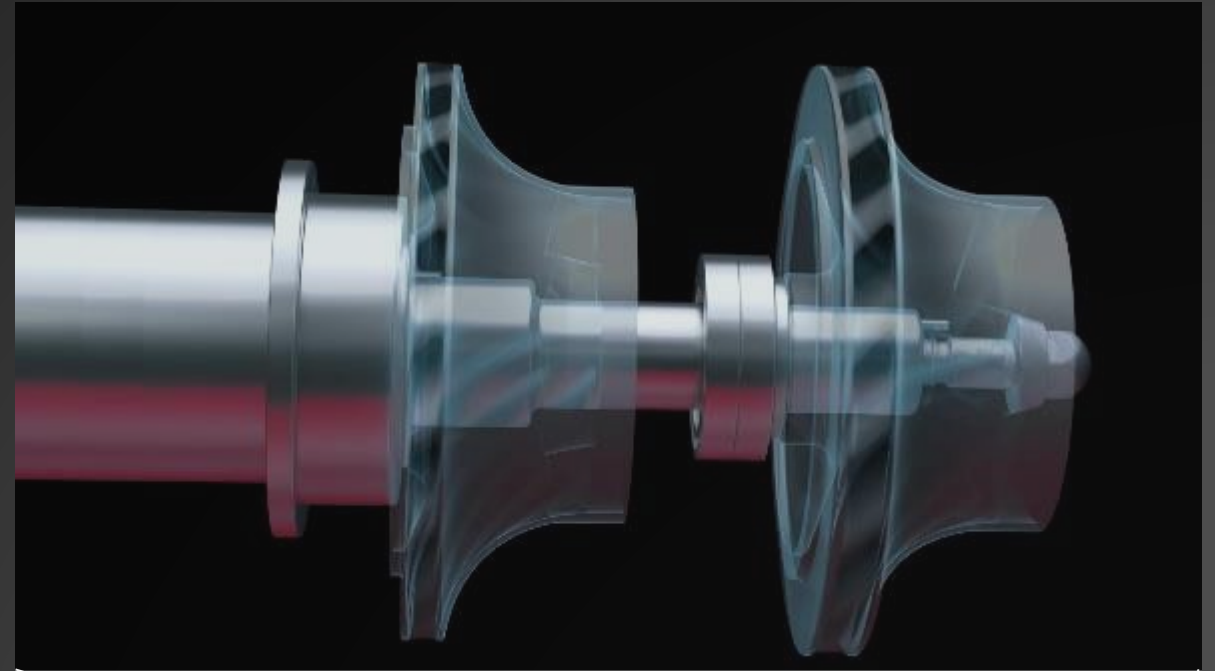
TGS380 Compressor

Operating Envelope

New Aero Design optimizes performance at demanding air and water-cooled chiller applications

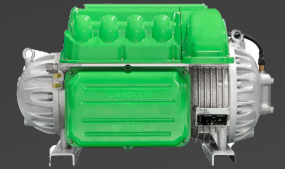
Operating Envelope

Max SDT	68C (154.4F)
SST Range (Std)	-1C (30F) to 12C (54F)
SST Range (High)	10C (50F) to 30C (86F)
Max Pressure Ratio	5.7



TGS380 Compressor

Operating Map



TGS380: Higher overall PR range than both TGS310 and TGS490

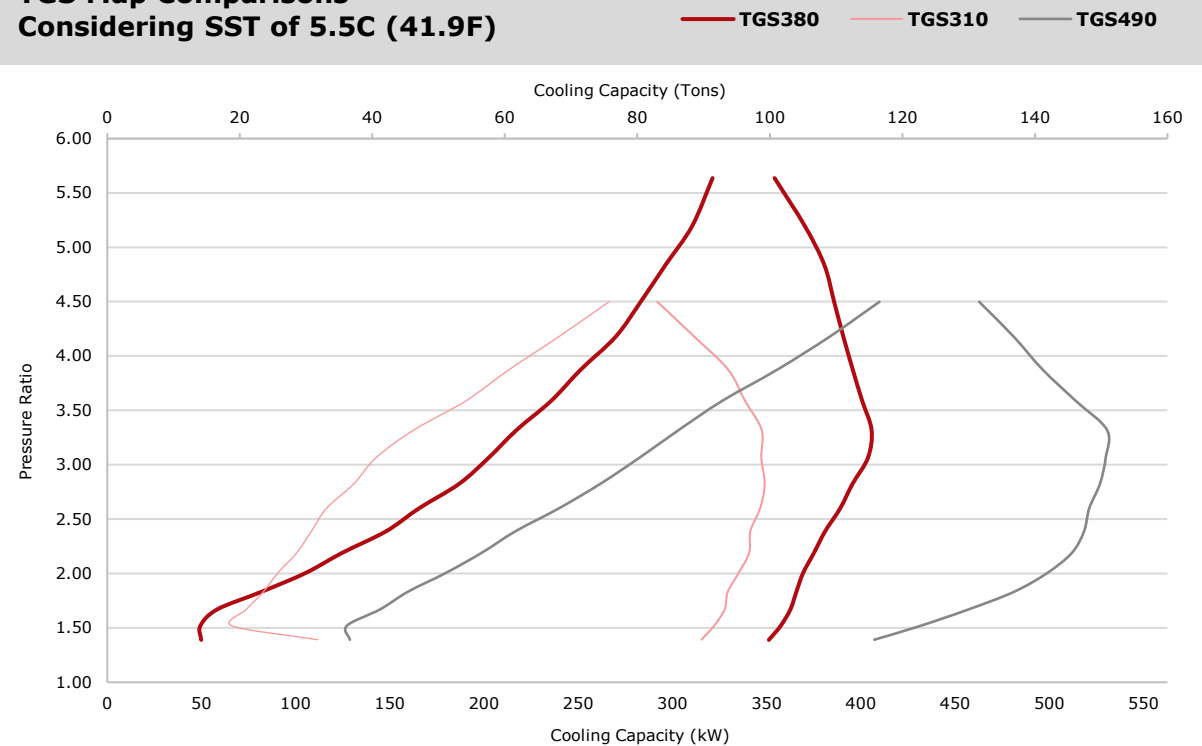
Water-Cooled Performance

Measure	Units	TGS310	TGS380	TGS490
Max Capacity	kW	350	393	525

Air-Cooled Performance (w/o fan power)

Measure	Units	TGS310	TGS380	TGS490
Max Capacity	kW	325	390	495

TGS Map Comparisons
Considering SST of 5.5C (41.9F)



TGS380 Compressor

Applications



Air Cooled Chillers in high Ambient Climates up to 52C (125F)



Water-Water Heat Pumps or Heat Recovery up to 68C SDT

TGS380 Compressor

Applications

High Cooling Capacity Rating

- ❑ 390kW Air Cooled Duty
- ❑ Reduced number of compressors in one chiller = Lower cost!

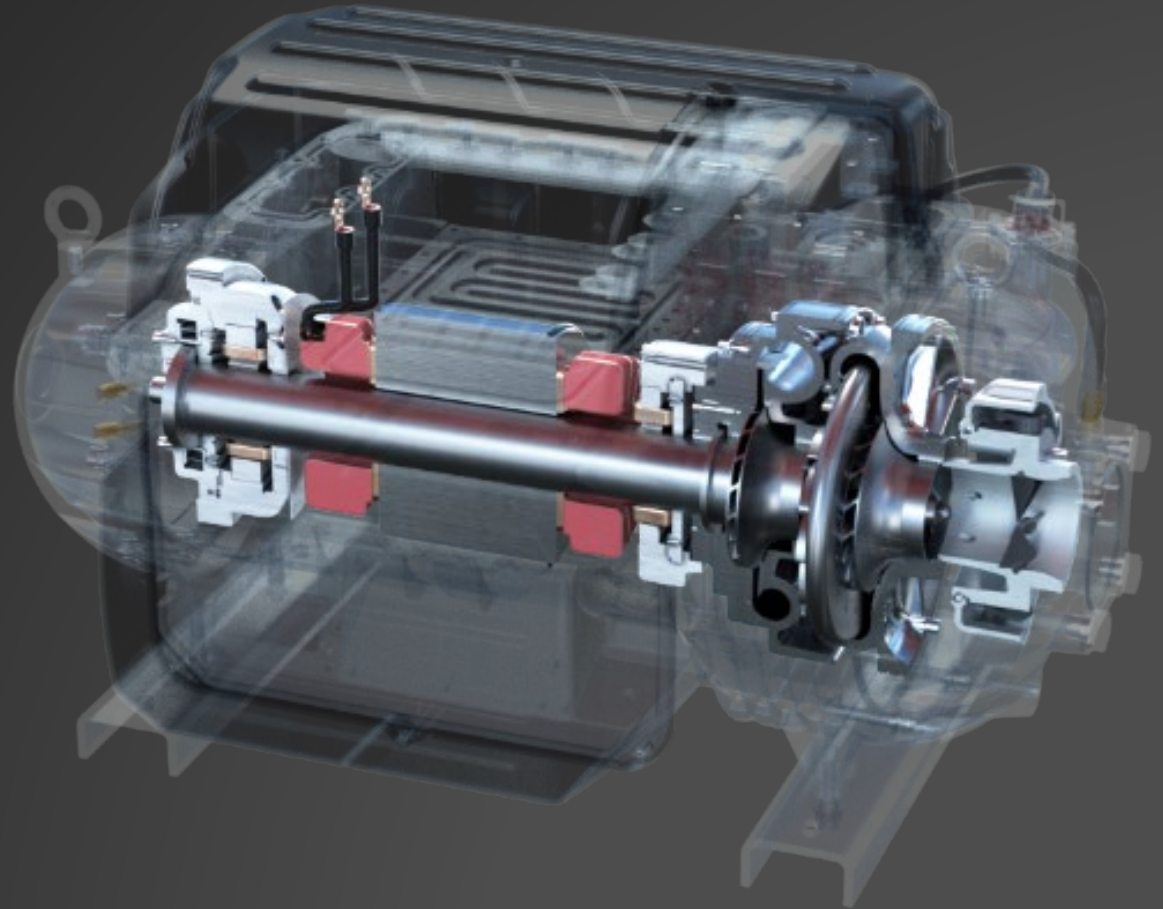


TGS380 Compressor

Oil Free Technology

Unparalleled Performance

- ❑ Industry's highest efficiency
- ❑ No performance degradation over the life of the compressor
- ❑ Reduced Maintenance
- ❑ Compact Footprint



TGS380 Compressor

Environmentally Friendly

Optimized for use with Low GWP Refrigerants

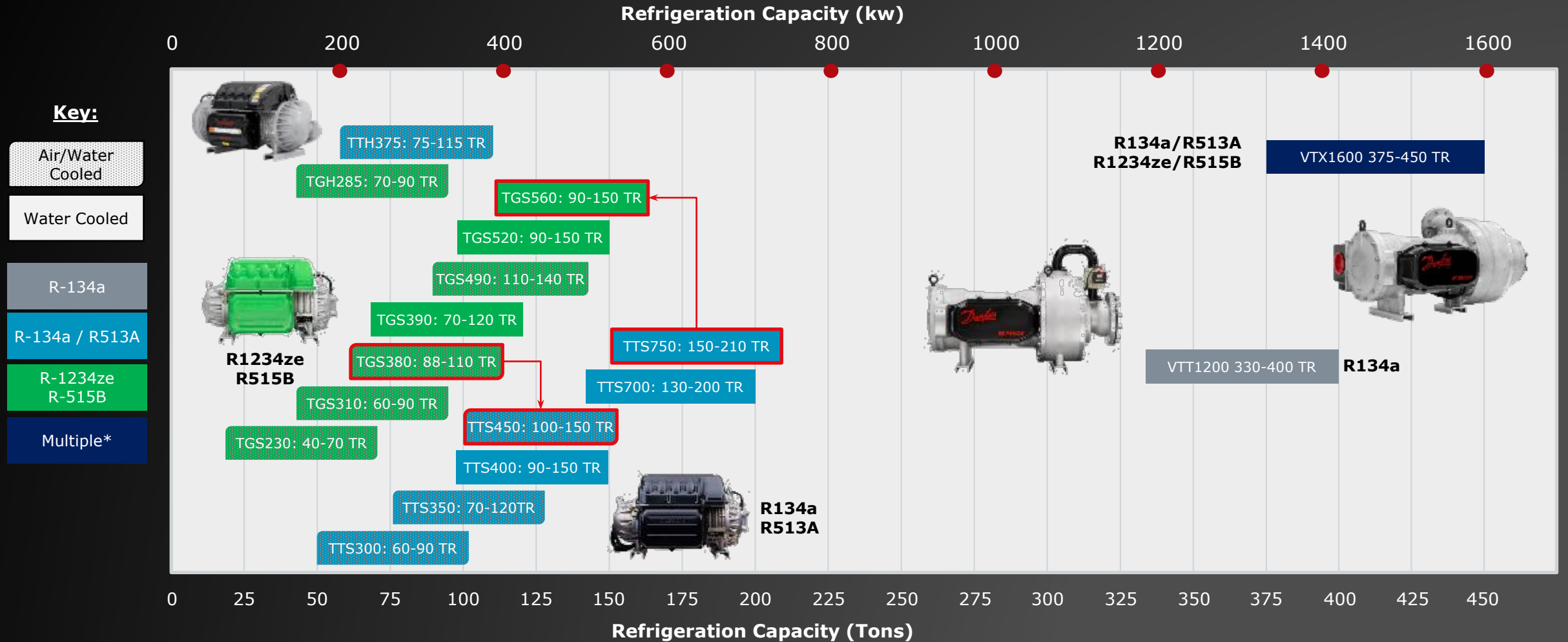
- ❑ R-1234ze
- ❑ R-515B



Refrigerant	R-1234ze	R-515B
ODP	0	0
AR5 GWP	1	299
Safety	A2L	A1

Danfoss Turbocor® Compressors

Product Portfolio





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