ENGINEERING TOMORROW

Multi Ejector Solution™

Transcritical CO_2 refrigeration systems in all climates

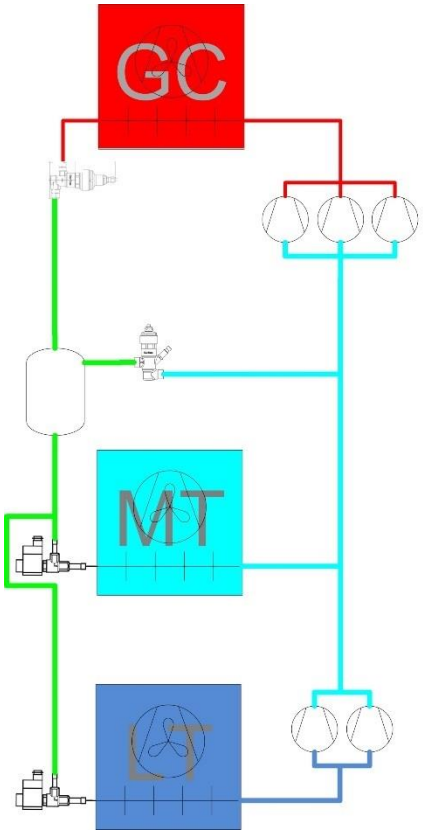
Mark Sever, Technical Manager

ATMO JAPAN sphere

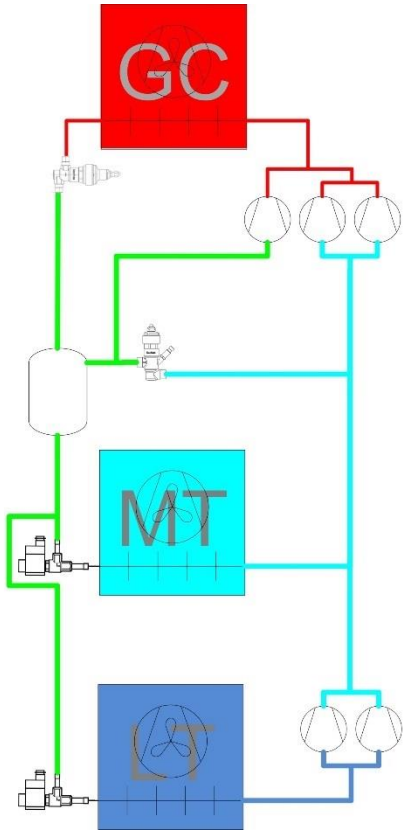
The CO_2 **development**

First, second, and third generation of transcritical supermarket systems

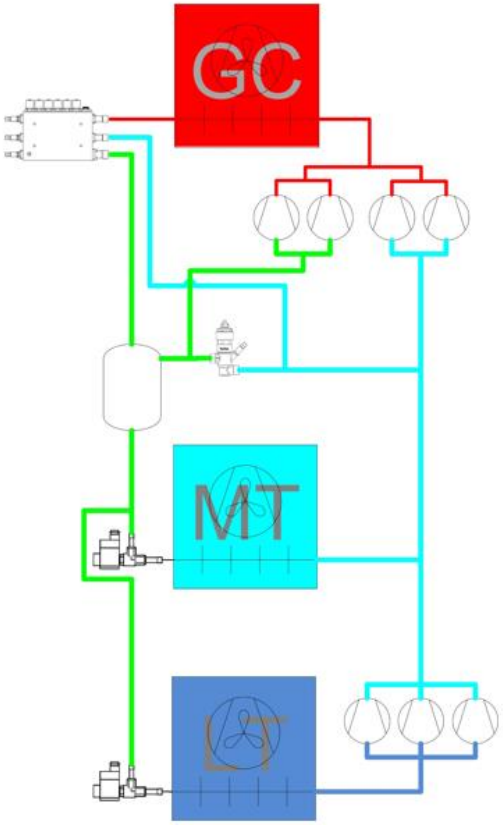
Booster



Parallel compression

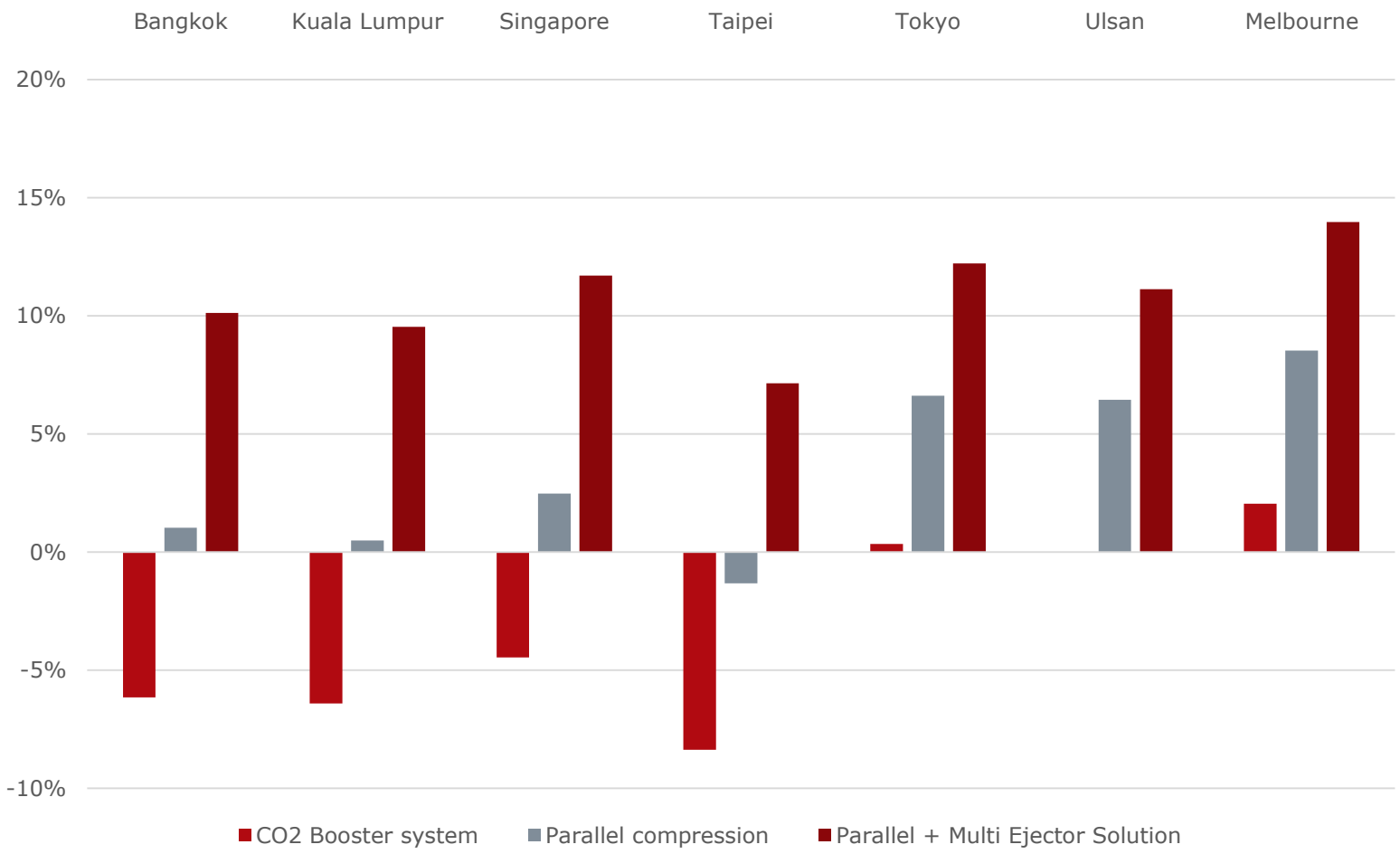


Parallel compression
with HP Multi Ejector Solution™



CO_2 systems in APA

R404A VS CO2 systems



Desk analysis

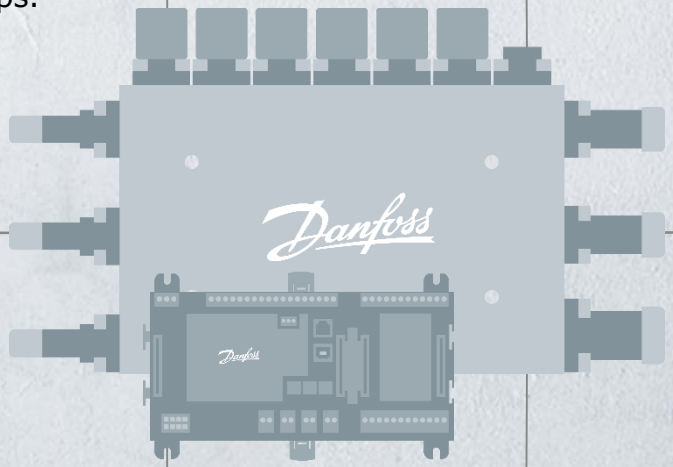
Danfoss Multi Ejector Solution™ with **multiple values**

Optimization of compressors

Less compressor capacity needed and the solution can control three suction groups.

One solution for all climates

Apply transcritical CO_2 refrigeration systems in all climates to ensure optimum performance – even in warmer climates.



High system reliability

Ensures max uptime and high system reliability with 4-6 redundant ejectors, backup systems, and emergency operations.

Service

Eases service with user-friendly tools, fast operation on the strainer and ejectors, and LED plug for trouble shooting.

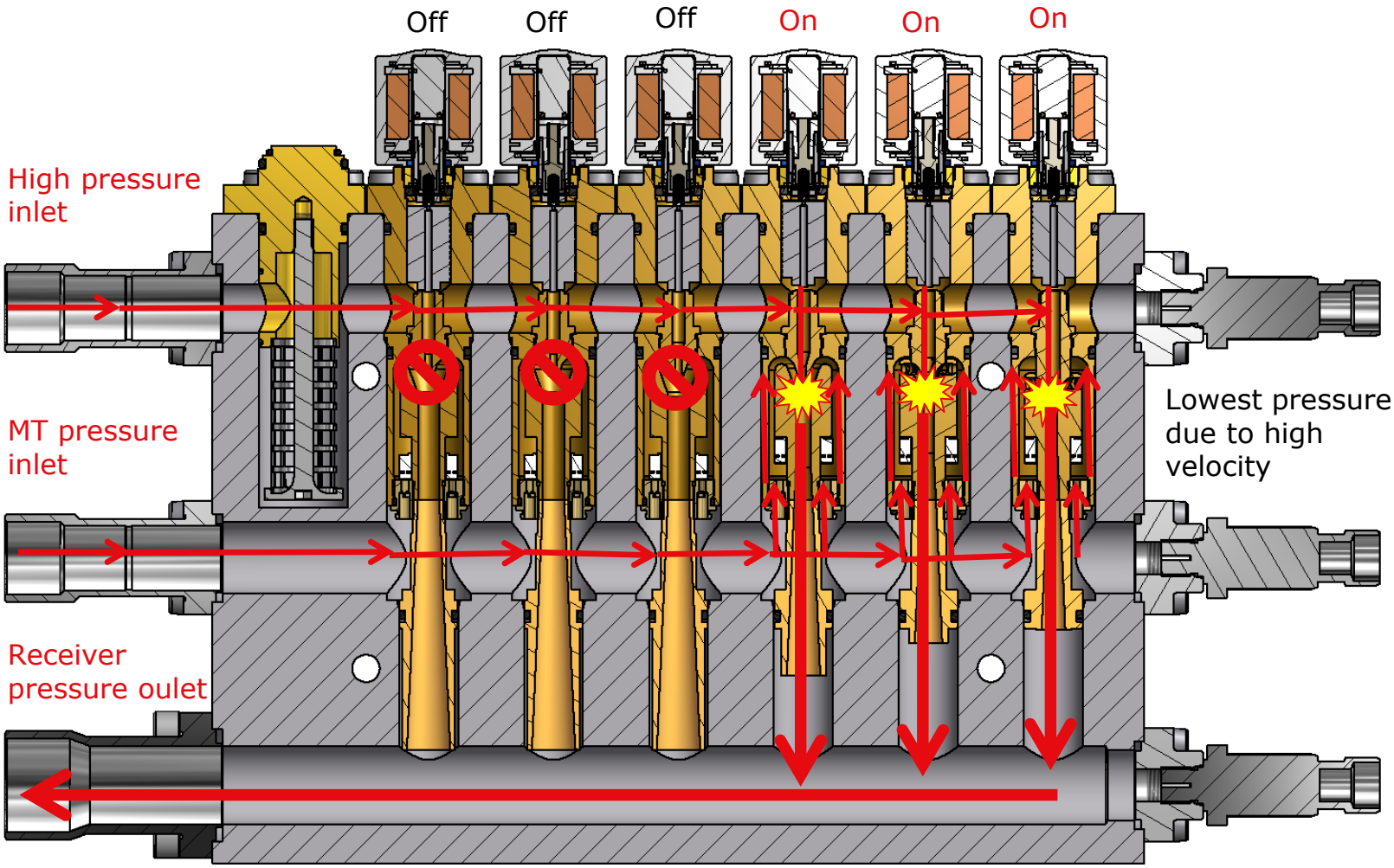
Easy installation

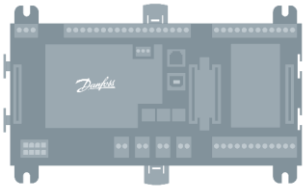
Reduces installation complexity with build-in strainer and connectors for both welding and soldering.

Savings

Provides initial and operational savings with easy installation, reduced need for compressors, and lower energy consumption.

How does the **Multi Ejector work?**





How the new AK-PC 782A works

The AK-PC 782A combines the well-proven features of **up to three AK-PC 781A into one controller.**

With every **monitoring and control function in one controller, the efficiency, safety** and ease of use is taken to a new level.

A **wizard-like configuration** supports fast and easy configuration and initial start-up of the pack
– even for persons with little CO_2 knowledge.

With a minimum set points configuration, the controller will automatically calculate the advanced CO_2 set points, control and safety parameters.

Performance – Multi Ejector Solution™ High Pressure

To emphasize how the flexible solution improves refrigeration performance in food retail applications, we offer a comprehensive range of data focusing on:

STORE 75 KW

STORE 150 KW

STORE 300 KW

The data emphasizes how the HP Multi Ejector Solution™ performs in regards to store size, climate, and ambient temperatures to help professionals evaluate and choose the right solution.

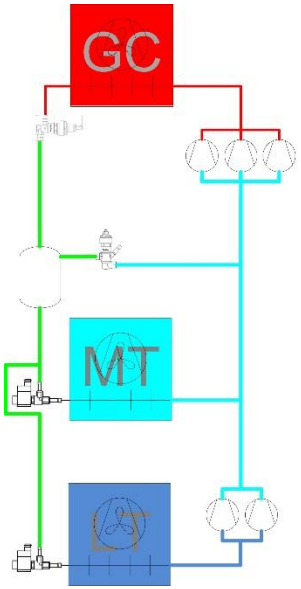
STORE 75 KW

- 5 compressors
- Multi Ejector HP 1875

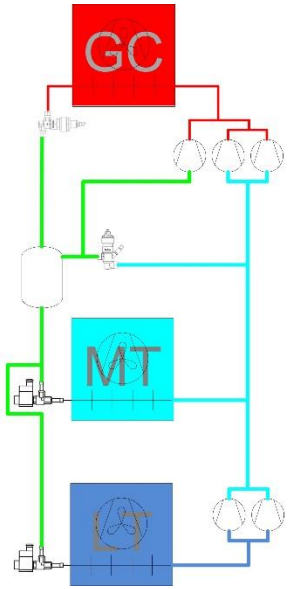
	Booster	Parallel	Ejector
IT comp	-	1	2
MT comp	3	2	1
LT comp	2	2	2
Multi Ejector Solution	-	-	Multi Ejector HP 1875
LT/MT ratio	15%	15%	15%

Average load 50%, Energy cost 0,1€

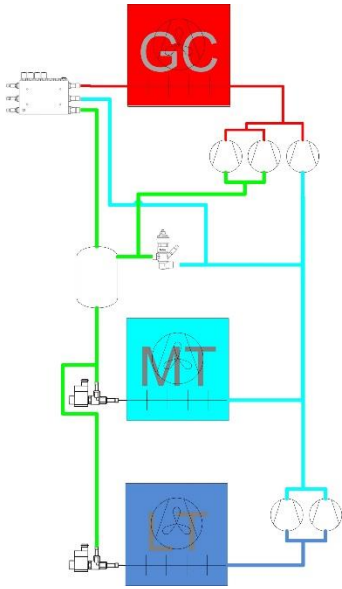
Booster



Parallel compression



Multi Ejector Solution™



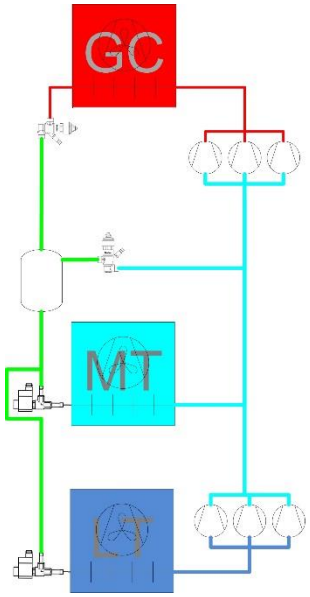
STORE 150 KW

- 7 compressors
- Multi Ejector HP 3875

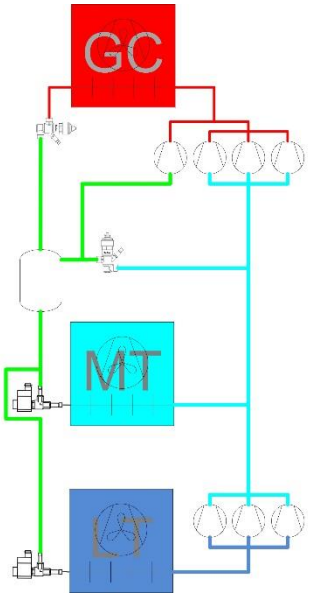
	Booster	Parallel	Ejector
IT comp	-	1	2
MT comp	3	3	2
LT comp	3	3	3
Multi Ejector Solution	-	-	Multi Ejector HP 3875
LT/MT ratio	15%	15%	15%

Average load 50%, Energy cost 0,1€

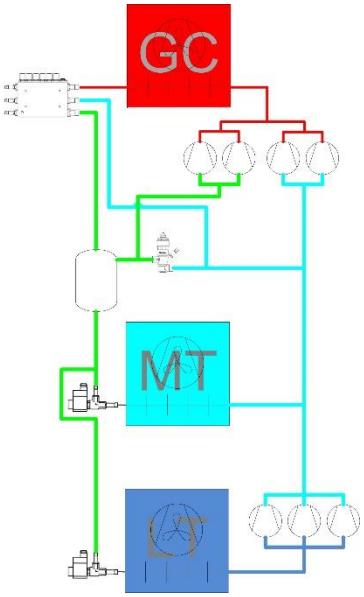
Booster



Parallel compression



Multi Ejector Solution™



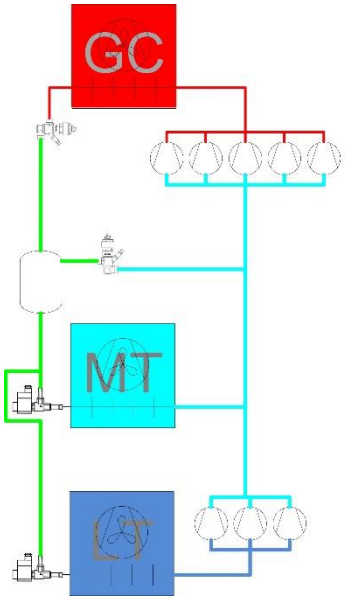
STORE 300 KW

- 7 compressors
- 2 X Multi Ejector HP 3875

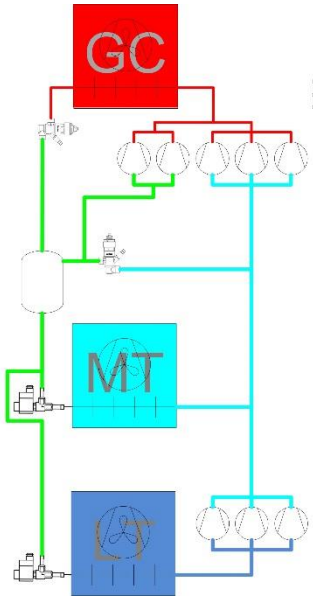
	Booster	Parallel	Ejector
IT comp	-	2	2
MT comp	5	3	2
LT comp	3	3	3
Multi Ejecror Solution	-	-	Multi Ejector HP 3875 x2
LT/MT ratio	15%	15%	15%

Average load 50%, Energy cost 0,1€

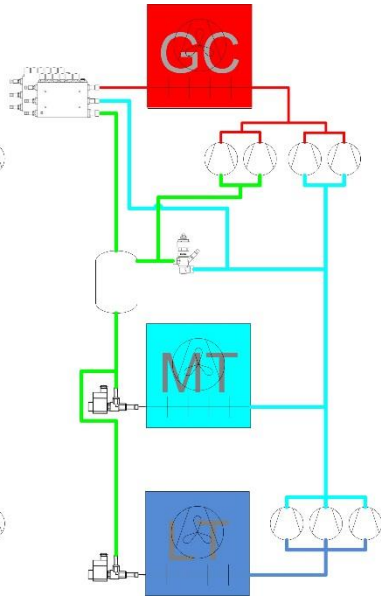
Booster



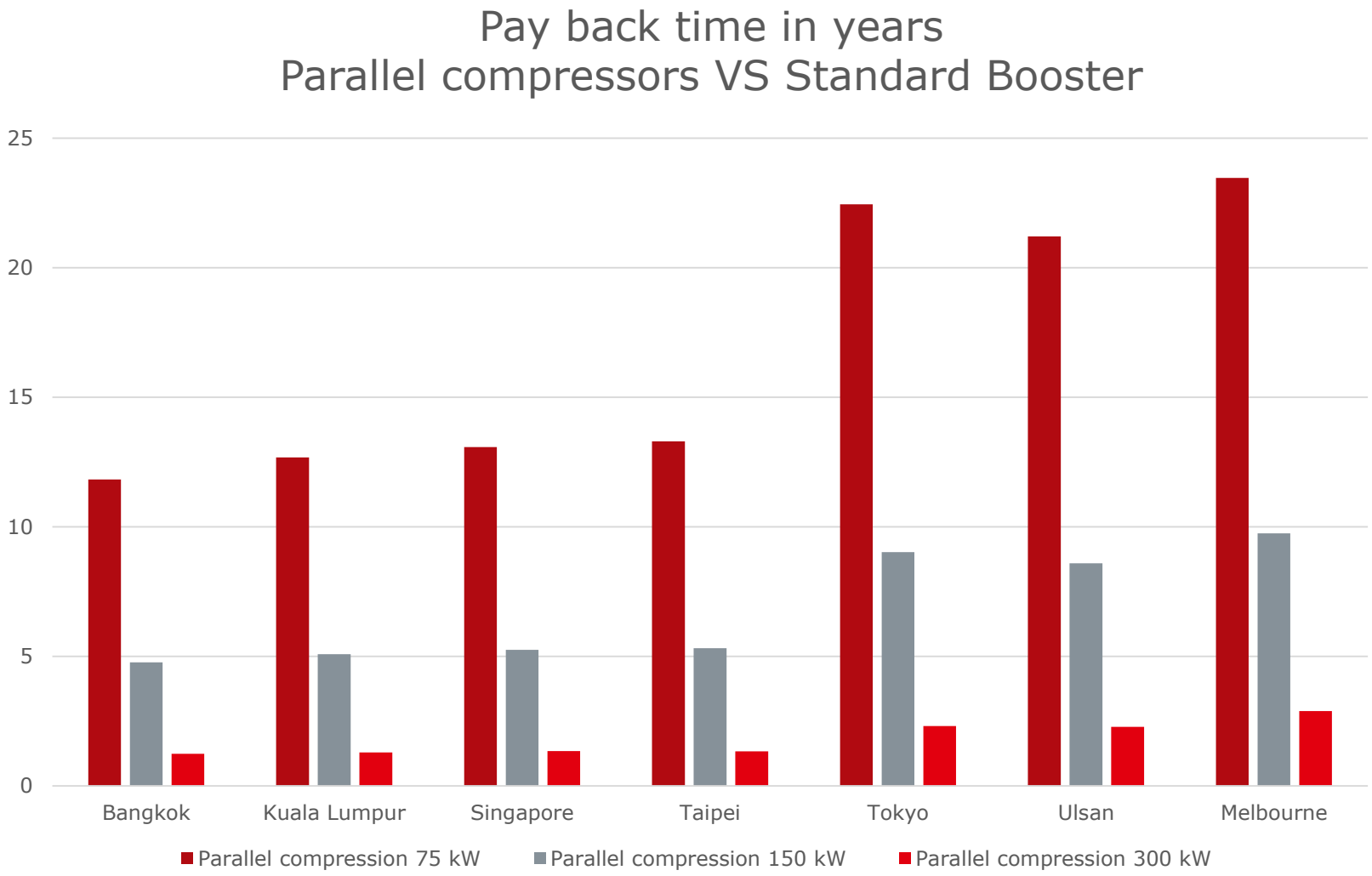
Parallel compression



Multi Ejector Solution™

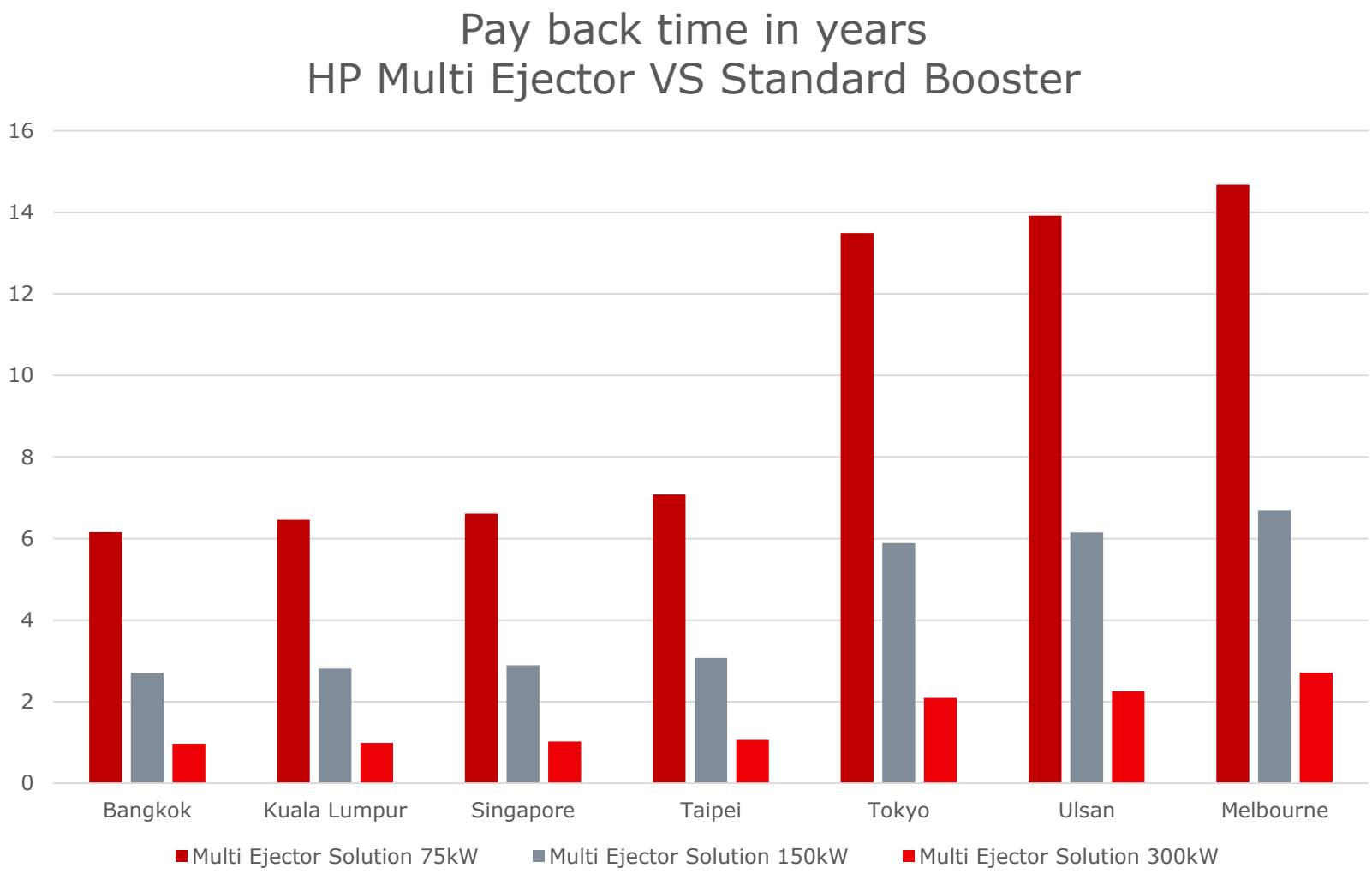


CO_2 systems in APA



Desk analysis

CO_2 systems in APA



Desk analysis

Conclusion Multi Ejector Solution™ (HP 3875/1875) in APA

75 kW: Multi Ejector Solution™ (HP 3875/1875) is not the optimal solution. The Low Pressure and Liquid Ejector version, fits better to smaller applications.

150 kW: Multi Ejector Solution™ (HP 3875/1875) is recommended – in warmer climates where payback time is less then 4 years.

300 kW: Multi Ejector Solution™ (HP 3875/1875) is recommended in all areas.

STORE 75 KW

STORE 150 KW

STORE 300 KW

The data emphasizes how the HP Multi Ejector Solution™ performs in regards to store size, climate, and ambient temperatures to help professionals evaluate and choose the right solution

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