



PROPANE

Solutions for the Supermarkets and Discounters

AHT Cooling Systems

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Head of R&D

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ATMO
sphere
solutions for europe
natural refrigerants

19 & 20 April, 2016 – Barcelona



aht.at



ATMO solutions for europe
sphere natural refrigerants

green . freshness . worldwide **AHT**

AHT Group



- AUSTRIA (Headquarter)
- Brazil (production plant)
- China (production plant)
- USA (production plant)
- Germany
- France
- Italy
- Spain
- Great Britain
- Mexico
- Turkey
- Hong Kong
- India
- Nordic





AHT's way using PROPAN

Development

- 1994/95 first cooperation with compressor manufacturer
- 1997 first test installation in supermarkets
- 2000 delivery of propane ice cream cabinets for the Olympic Summer Games, Australia
- 2002/03 first serial production of 1.000 ice cream cabinets
- 2003/04 (already) more than 10.000 cabinets in the field
- 2006 start of serial production for supermarket cabinets
- 2011 first bottle cooler with Propane VDE-certified
- 2014 risk assessment for >150 g solutions
- 2015 First installation of VENTO GREEN



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AHT's cabinet portfolio in PROPANE

AHT e-co
ENERGIE-SPAR-PLUS

LED

Plug in cabinets

Athen XL

Manhattan

Miami ECO

Sydney ECO

AC XLS

ACS

R290



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Supermarket installations worldwide



R290 is the **best alternative refrigerant**



France

Plug in solutions

We already did it!



Sweden

AHT's cabinets in the market with R290
730.000 worldwide
3.500 Thailand (hot country)
700.000 in Europe's supermarkets



AHT CASE STUDY

VENTO GREEN

- Multi deck for Supermarkets and Discounters
- Plug in solution with PROPANE
- Refrigeration quantity > 150g
- Risk assessment
 - for all steps all over the life time
- TÜV Süd, KISC, VDE

GOAL for 2015

- First installation of VENTO GREEN in the market

Electr. connection

Brine connection





The Double-Plug-In – VENTO GREEN solution



Additional safety installation

VENTO GREEN 375			
Serialnr.	800525 00000001	Gerätedaten	cabinet data
	class 3 (25°C/60%rH)	wassergekühlt	liquid cooled
Nennspann/frequ.	Nom.Voltg./frequ.	3N-380-420V/50Hz	
Tension/Fréquence	nominale		
Nennaufnahme	Nom.Consump.	1.965 W	
Prise de courant	nominale		
Nennstrom	NomCurrent	4,00 A	
Courant nominal			
Typ	Typ	B 932N	
Type			



First installation



Dry cooler unit



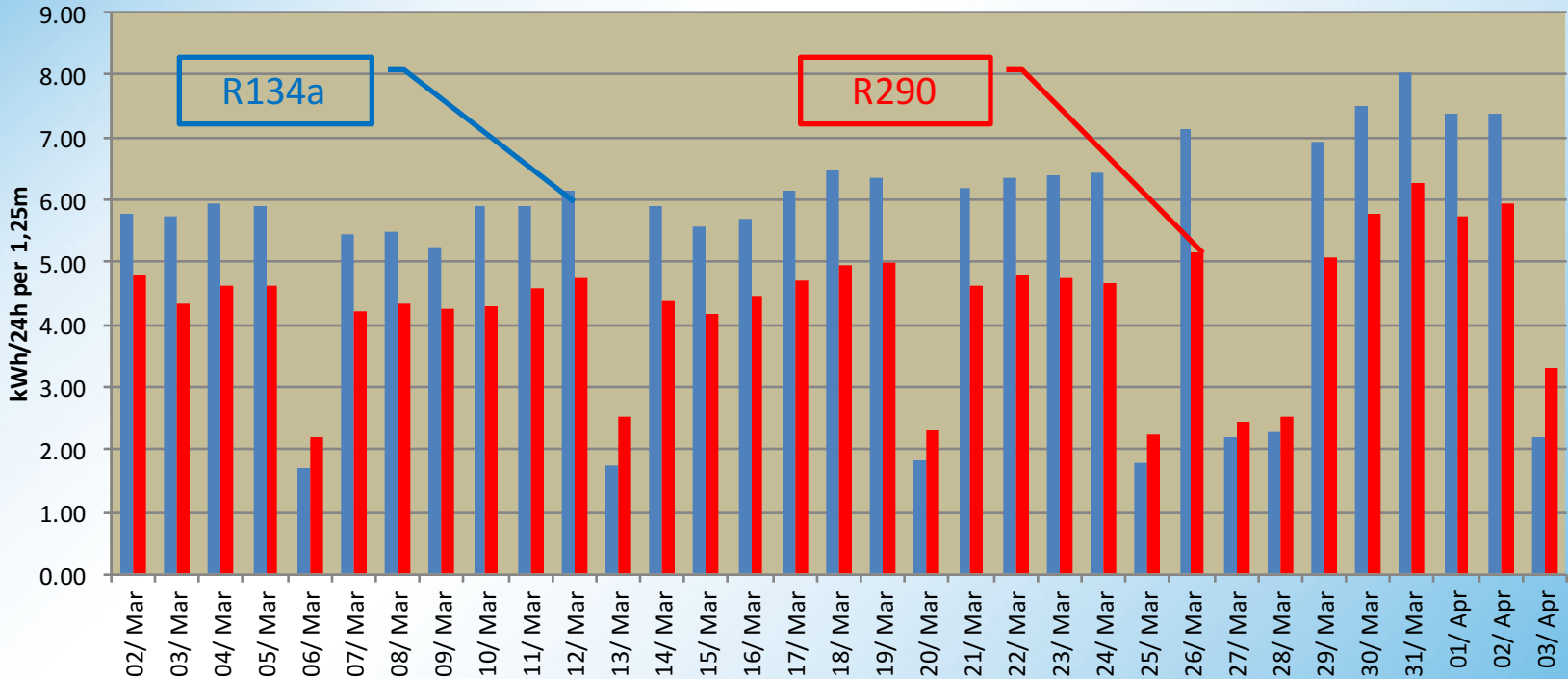
Pump station



Compressor



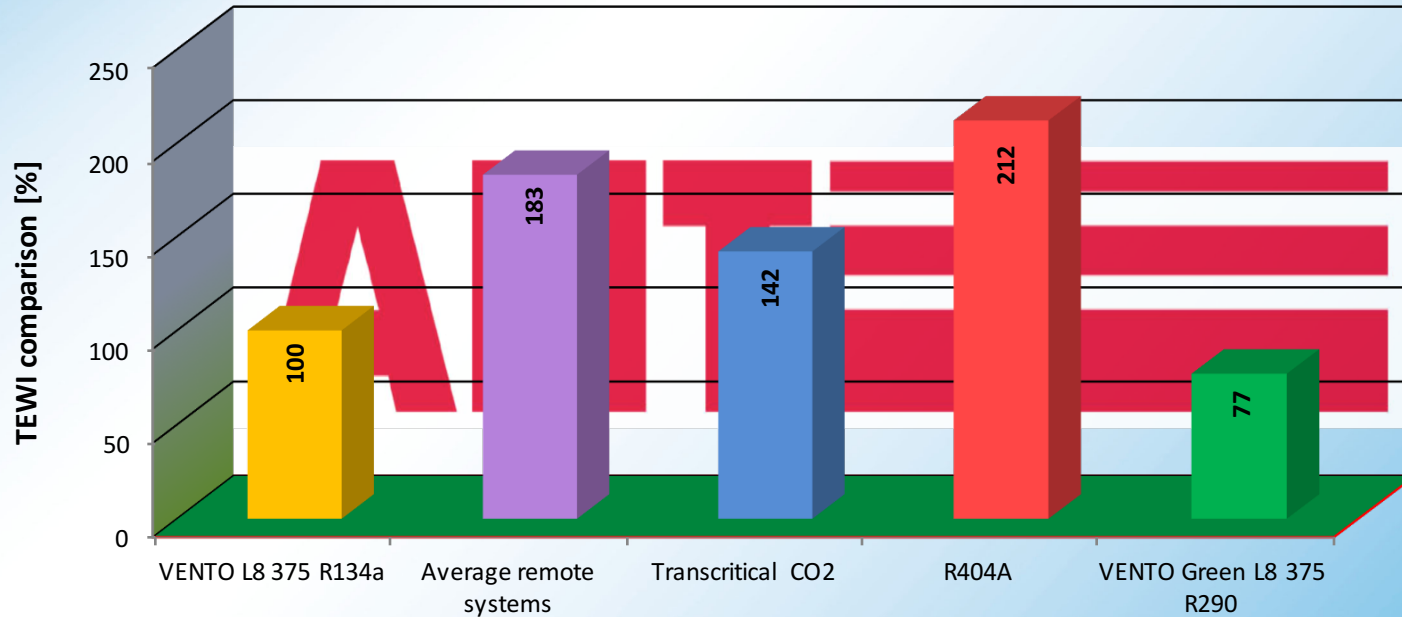
Energy consumption VENTO R134a – VENTO GREEN





TEWI comparison

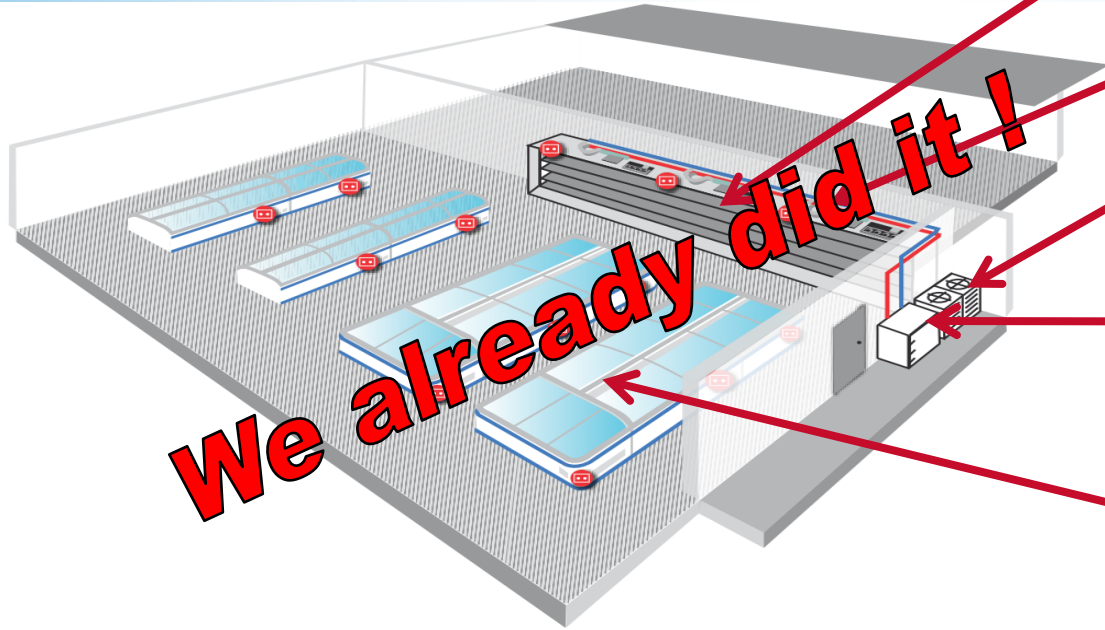
Market installation





AHT's plug in solution with **PROPANE**

AHT's – one stop shop



Full hermetic multi decks
(only 2 connections – brine & electricity)

Pre-installed tubing system
(brine tubes)

Dry cooler and pump station

Connection for heat recovery

AHT's plug in low temp. units
(only 1 connection required)

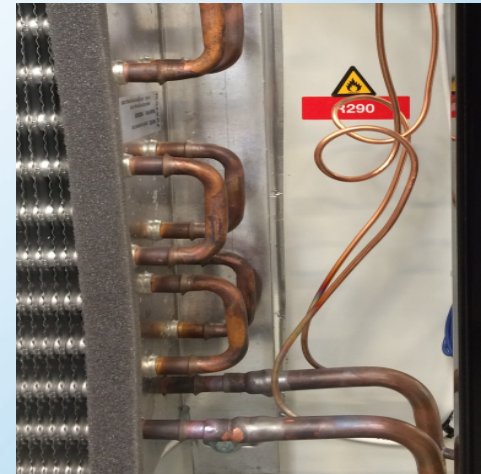


Next generation VENTO GREEN-solution multi circuit

3-circuit-system



2-circuit-system



Evaporator connection

Refrigerant quantity:
< 150 g /circuit

Brine connection





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Thank you

AHT – your “freshness partner” - worldwide