



Hydrocarbons: should you make the switch?

AHT Cooling Systems GmbH



Tokyo, 19 September 2013



Agenda

- 1. Introduction of AHT Cooling Systems GmbH**
- 2. Business activities in Japan**
- 3. Propane cabinets – your winning solution**
- 4. Supermarket systems and Ice cream cabinets**



AHT Group

green . freshness . worldwide **AHT**



- Austria (Headquarters)
- Germany
- United Kingdom
- USA
- Turkey
- Hong Kong
- China
- Spain
- Brazil
- Mexiko
- India



AHT's core business

Chilling and freezing

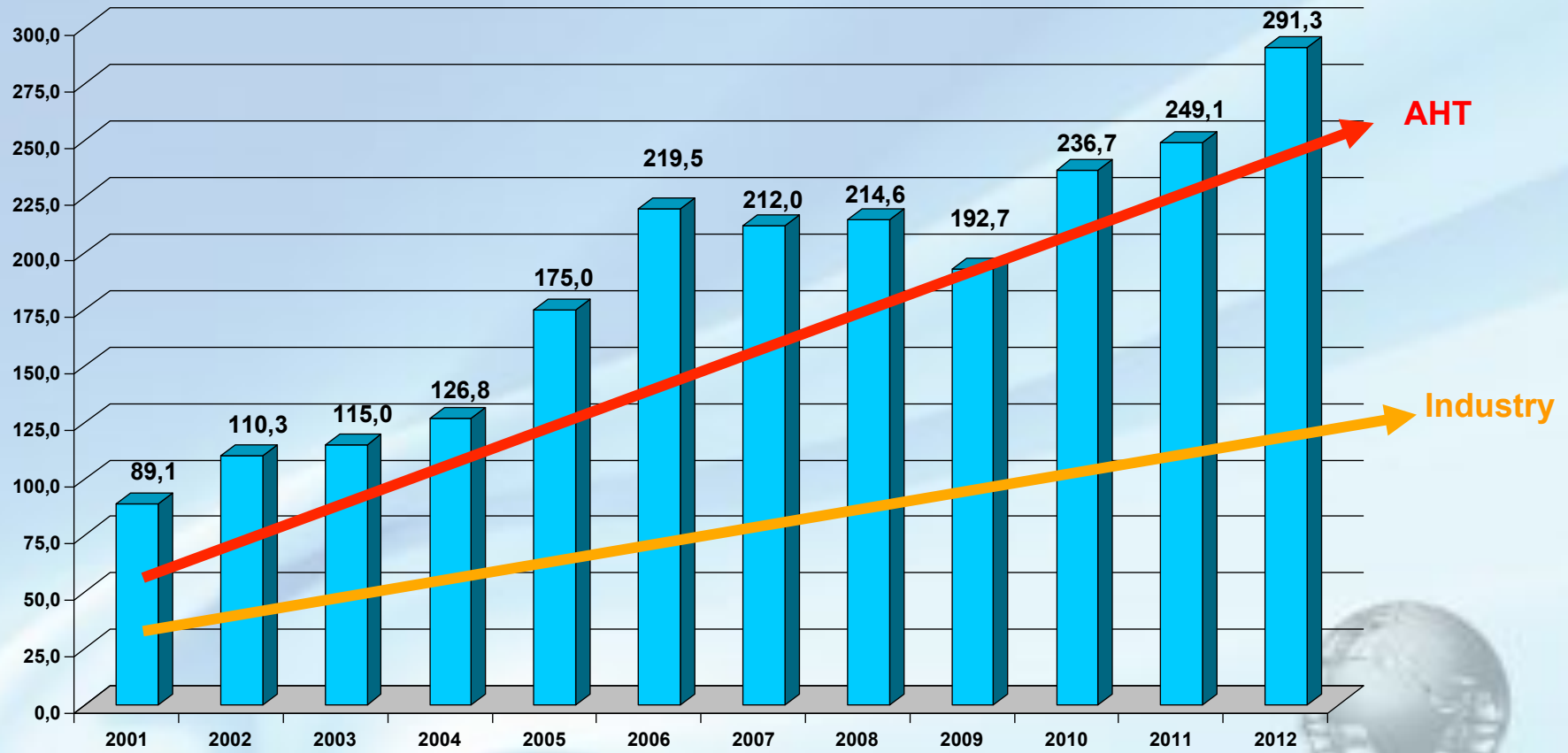
- Supermarket equipment
- Ice cream cabinets
- Bottle coolers
- Service (COOLPOINT®)

Strategic key factors

- Innovation
- Leadership in Technology and Quality

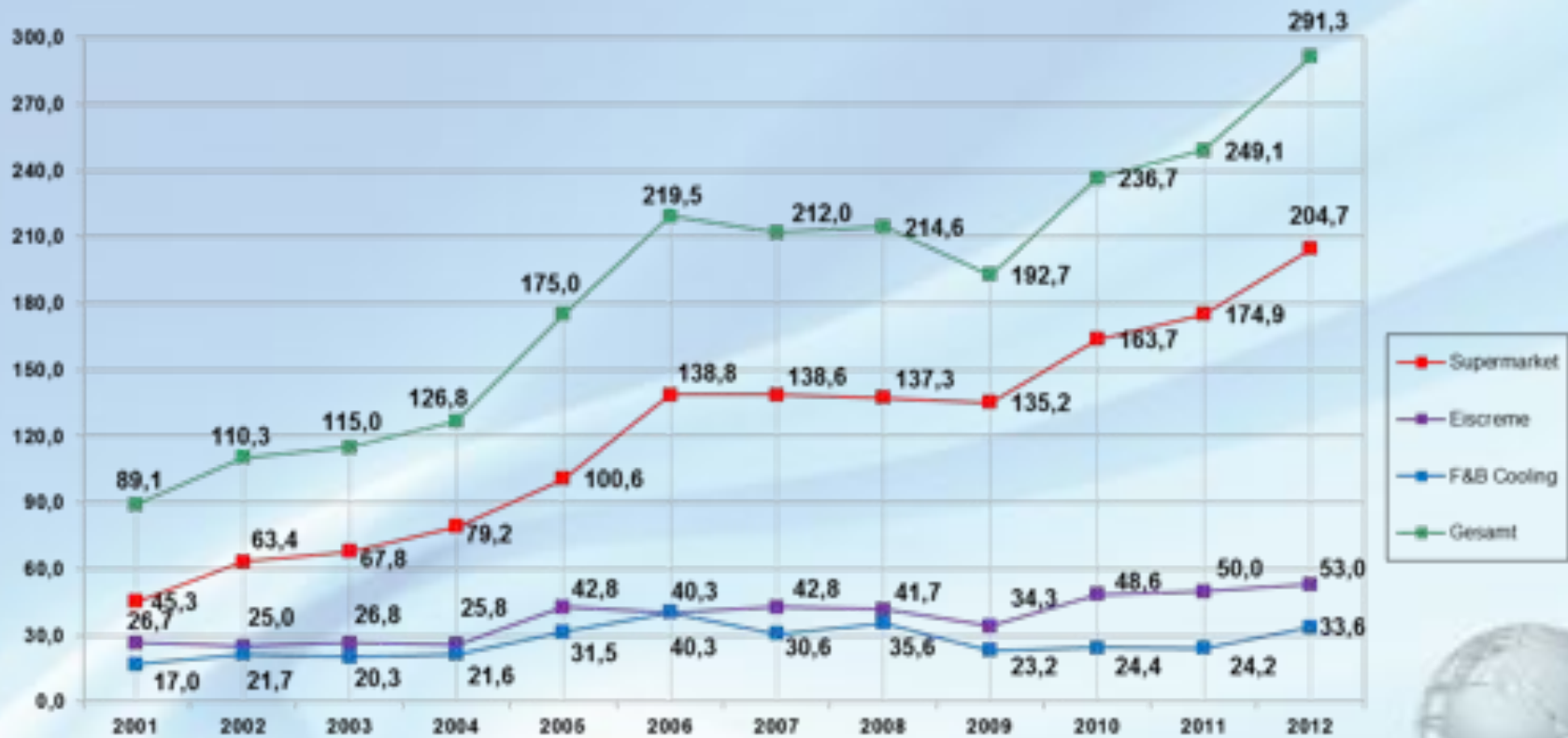


Development of turnover



AHT group turnover in million €

Development of produced units



AHT's operations in Japan

- **Business in Japan**
 - start in 2010
 - promote AHT environmental friendly & energy saving product
 - make “Ecology supermarket” in Japan
 - coolpoint : Rei-tech Co. Ltd., to work with Mr. Yasuo Fujiki
- **Market in Japan**
 - most supermarkets use open type cabinets, not energy saving
 - AHT cabinets with glass lid & R290:
 - save a lot of energy costs
 - friendly to environment
 - high efficiency
- **Customers using AHT R290 Products**
 - Odoya Co., Ltd
 - Nicot Corporation

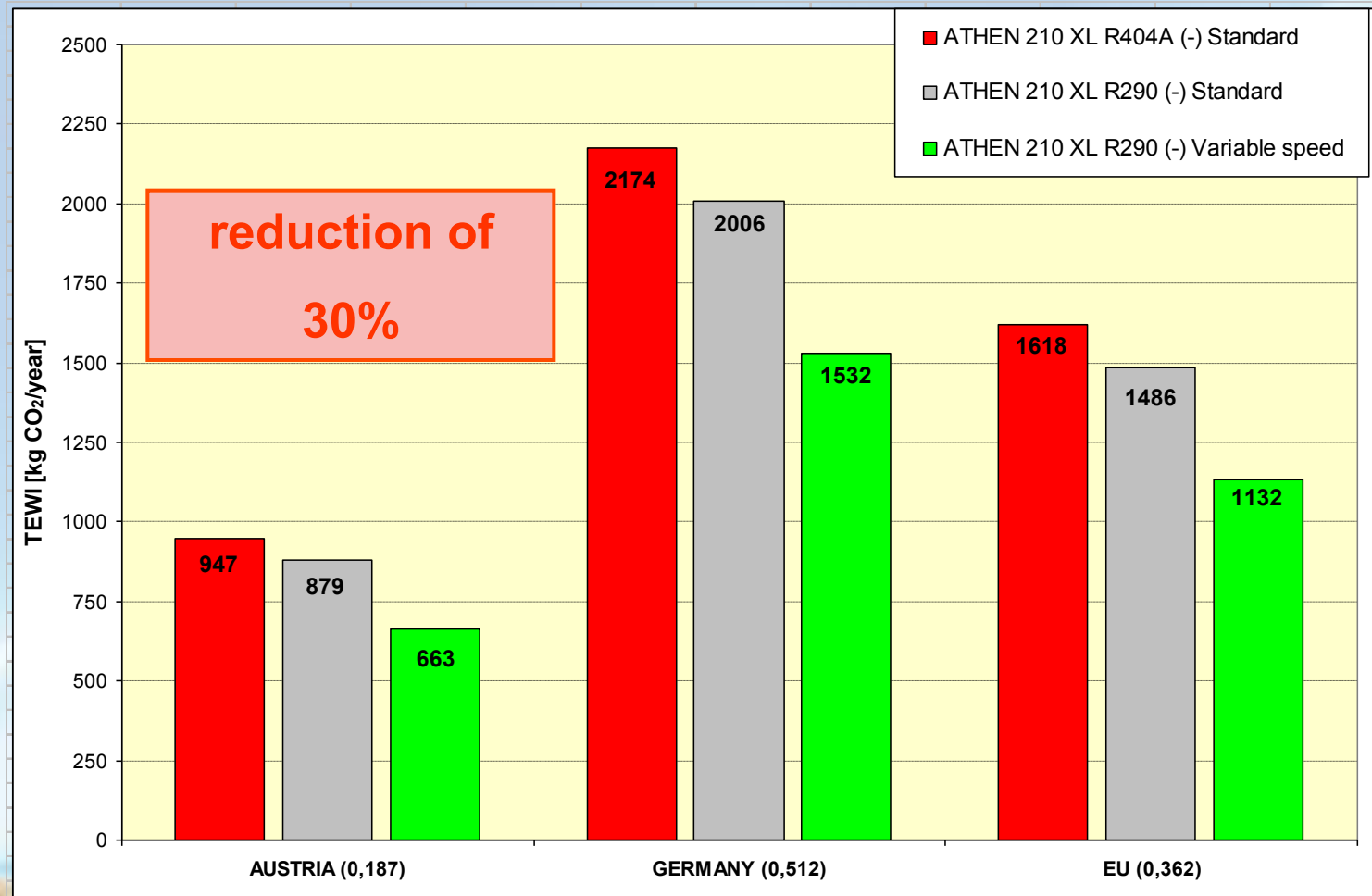


Development of propane cabinets

- 1994/95** first cooperation with compressor manufacturer
- 1995** equipment of a first supermarket with propane cabinets
- 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 across since
- 2006** delivery of more than 100.000 supermarket cabinets with R290 as refrigerant
- 2013** up-to-date sold 530.000 cabinets with R290 worldwide



TEWI reduction with Variable Speed compressor and R290 refrigerant



Energy consumption in kWh/24h



Triple solution

- no ODP
- no GWP
- minimal TEWI



Supermarket installations worldwide

Key features in Thailand (SIAM MAKRO Thailand)

- installations with R290 since 2007,
- with ECO and LED version since 2013
- total numbers of installed cabinets 2750 units
- in average 64 units per store, the largest with 120 units

Store information / feed back

- significant electricity savings
- product temperature -18° to -22° (@ 25°C ; 60%)
- no AC during the night time
- performance is very well
- very low failure-rate and no maintenance



Makro Thailand Supermarket



Energy consumption in kWh/24h

TCO CALCULATION COMPARISON			
Store C	Remote units without GL		
Store B	Remote units with GL		
Store A: Reference Cabinets AHT:	ATHEN XL ECO VS (AD)		
	8 x 210 XL, 2 x 175 XL, 2 x 207 XL		
Parameter/Calculation	AHT ATHEN XL ECO AWA		
Net volume/storage capacity	10.200 l	8.200 l	8.200 l
Product presentation area (TDA)	20,46 m ²	20,65 m ²	20,65 m ²
Total energy consumption (with remote incl. external unit)	78 kWh/24h	204 kWh/24 h	291 kWh/24h
Energy consumption per litre of net volume	0,00764 kWh/24 h	0,0218 kWh/24 h	0,0311 kWh/24h
Base area	25,15 m ²	24,82 m ²	24,82 m ²
Investment costs (incl. setup/installation)	Euro 29.800,-	Euro 80.200,-	Euro 82.600,-
Annual maintenance costs	Euro 0,-	Euro 1500,-	Euro 1500,-
Refrigerant loss annually	0%	> 5 %	> 5 %
Defrost cycles	2 x per week	7-14 x per week	14-28 x per week
10 Year Calculation	Euro	Euro	Euro
Depreciation of 90 % of the purchase price	26.820,00	72.180,00	56.340,00
Energy costs in 10 years, 9 ct/kWh	25.823,00	67.014,00	95.593,50
Disposal costs	1.250,00	5.000,00	5.000,00
Maintenance costs	-	15.000,00	15.000,00
TCO (Total Cost of Ownership)	53.893,00	159.194,00	171.933,50

Best practice – Customer Feedback

Practice

- more than **530.000** cabinets with R290 supplied to all over the world

Feedback

- best results, high customer satisfaction
- energy savings of 25% approved!

Should you make
the switch?

We already did it !



Supermarket



Supermarket Systems



ATHEN XL



PARIS



MALTA



SALZBURG

Air Curtain Display Coolers - Coolio



2005 mm



Next Generation™

1575 mm



Checkout™



Plug-in Multideck - Vento



Plug-in Multideck - Vento Hybrid



Important customers - Supermarket

- **LIDL**
- **REWE** (incl. PENNY, HL, MM, MONDO)
- **ALDI Nord**
- **ALDI Süd** (incl. HOFER)
- **METRO**
- **EDEKA**
- **TENGELMANN**
- **SPAR Intl.**
- **NORMA**
- **ICELAND**
- **INTERMARCHE**
- **EUROSPIN**
- **LOMBARDINI**
- **DIA**
- **WAL MART**
- **AUCHAN**



Important customers – Ice cream

- **UNILEVER** - worldwide
- **NESTLE** – worldwide
- **SCHÖLLER, MÖVENPICK** - Europe
- **WELLS BLUE BUNNY** - USA
- **HÄAGEN DASZ** - Europe & USA
- **BLUE BELL** – USA
- **CADBURY** – United Kingdom
- **DREYER'S** – USA
- **LEDO** – Croatia/Slovenia/Bosnia/Serbia
- **BETTY** - Romania
- **ICEDÜP BALAS** - Romania
- **ALPIN** – Romania
- **TOPGEL** – Romania
- **INMARKO** - Russia
- **TIP-TOP** – New Zealand



Important customers - Bottle cooling

Bottle Cooling:

- PepsiCo
- Coca-Cola
- Danone
- Unilever
- Red Bull
- Pago
- Agrocor Jamnica
- Rauch
- Heineken
- InBev (AB-InBev)
- Kraft Foods
- Bacardi
- Nestlé

Coolio:

- Hub 's - India
- Fosters
- Heineken
- Booster-Group
- Anheuser-Bush
- Pepsi Co. / Britvic
- Valora
- EMMI

HoReCa:

- Hub 's - India
- Nevgrana - Venezuela

Supermarket Edition:

- Rewe
- Aldi
- Penny



Homepage

To gain further information to our company and our products please visit our website

www.aht.at



Thank you

AHT – your “freshness partner” worldwide

