

INDIRECTIVE EVAPORATIVE COOLING WITH COOLING TOWERS

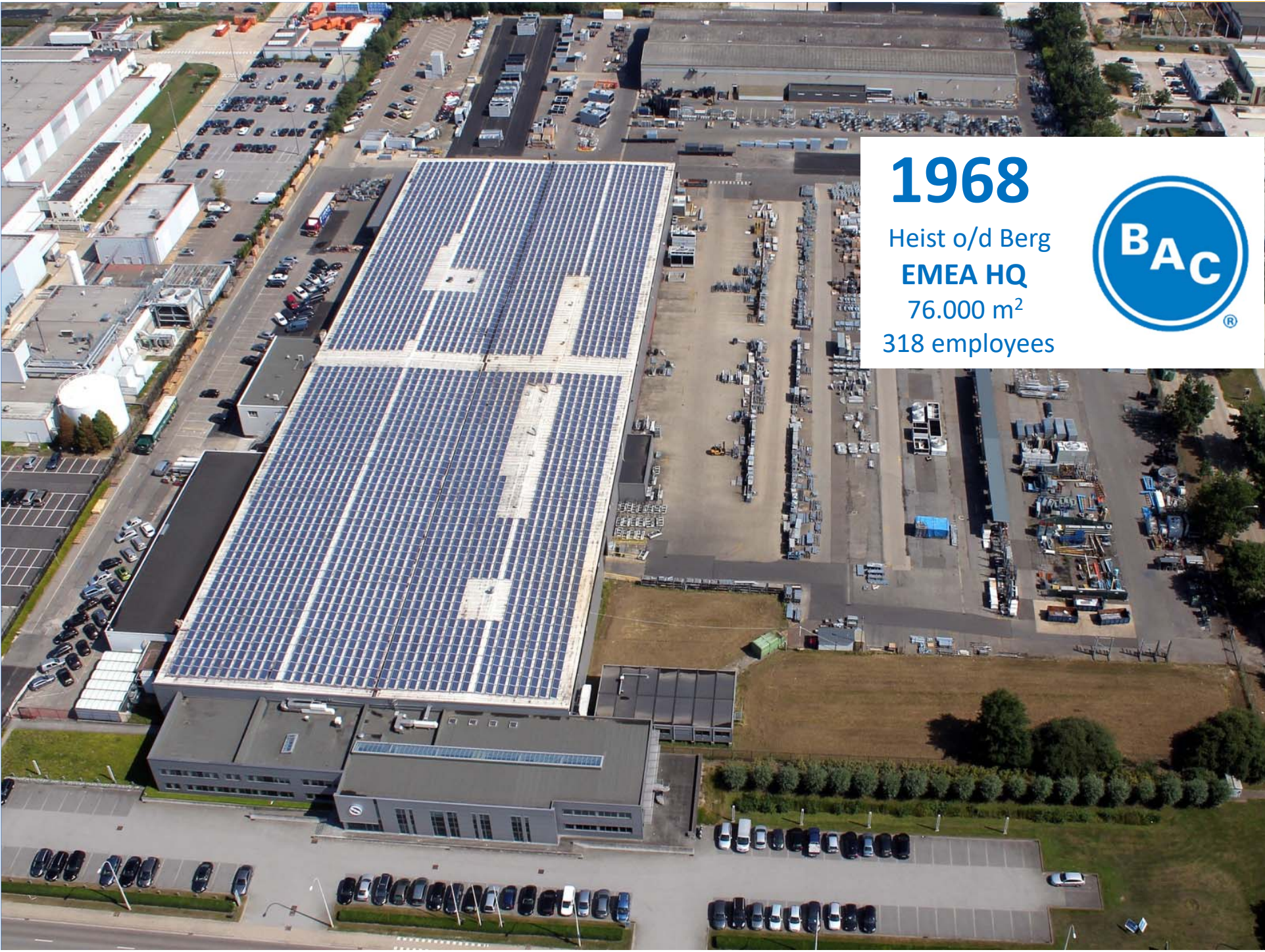
Baltimore Aircoil Internation nv

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Laurent Petiot

General Manager Benelux, France & Magreb



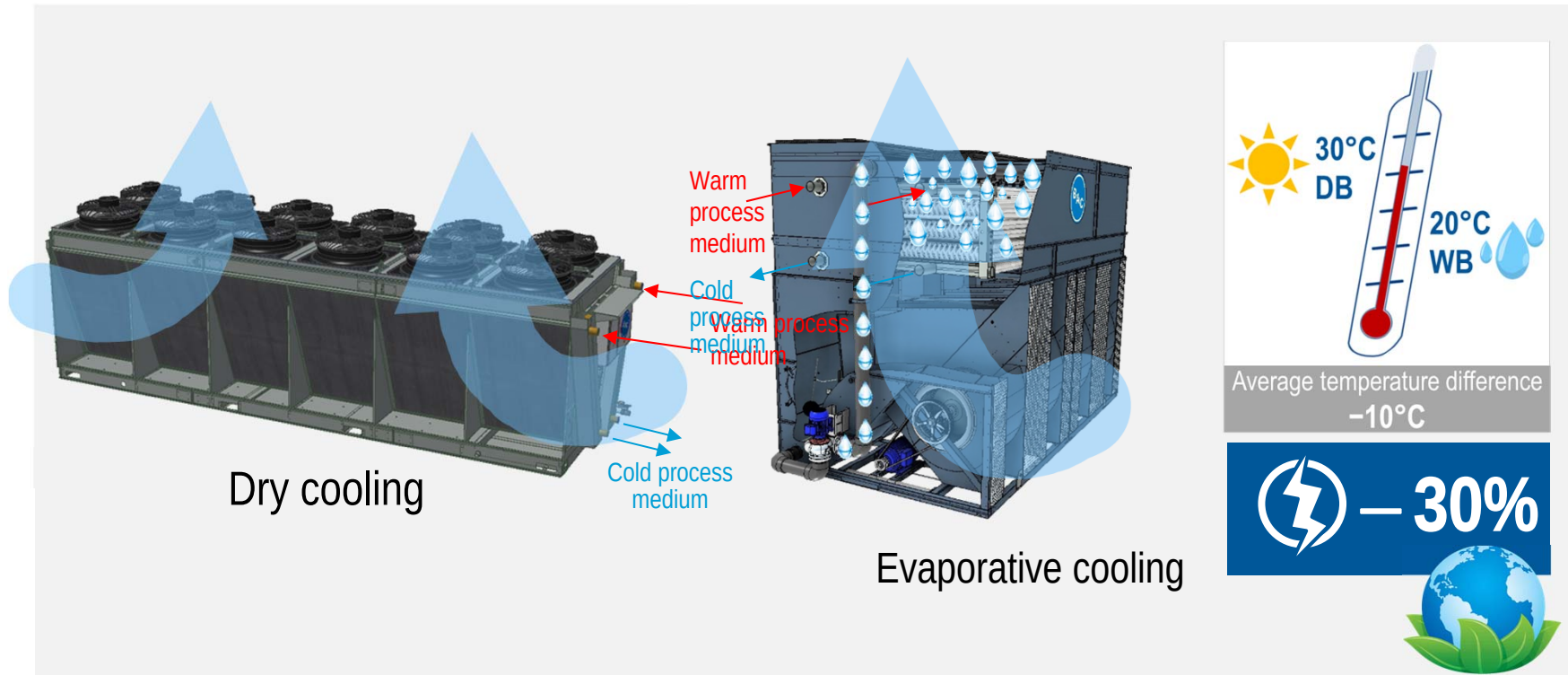
An aerial photograph of a large industrial facility. The main building has a flat roof covered in a dense array of solar panels. To the left of the main building is a smaller, modern-looking structure with large windows. The surrounding area includes parking lots filled with cars and trucks, other industrial buildings, and a road. The sky is clear and blue.

1968

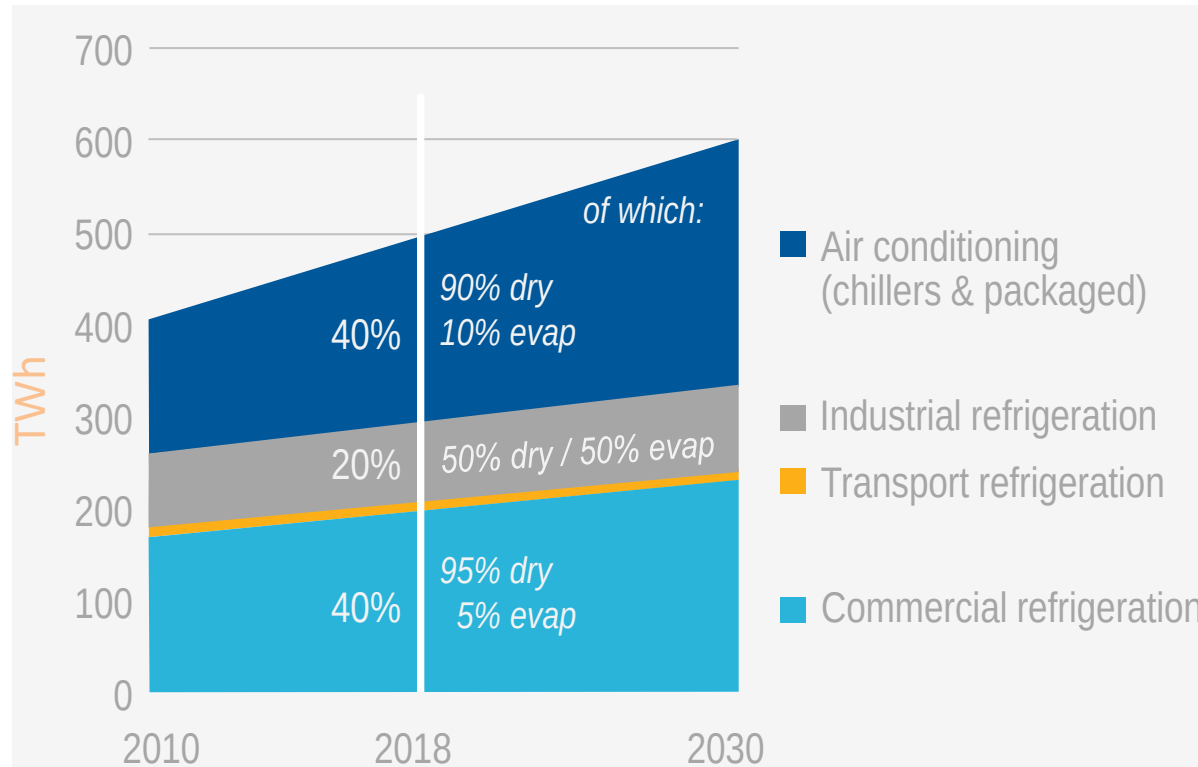
Heist o/d Berg
EMEA HQ
76.000 m²
318 employees



Evaporative cooling



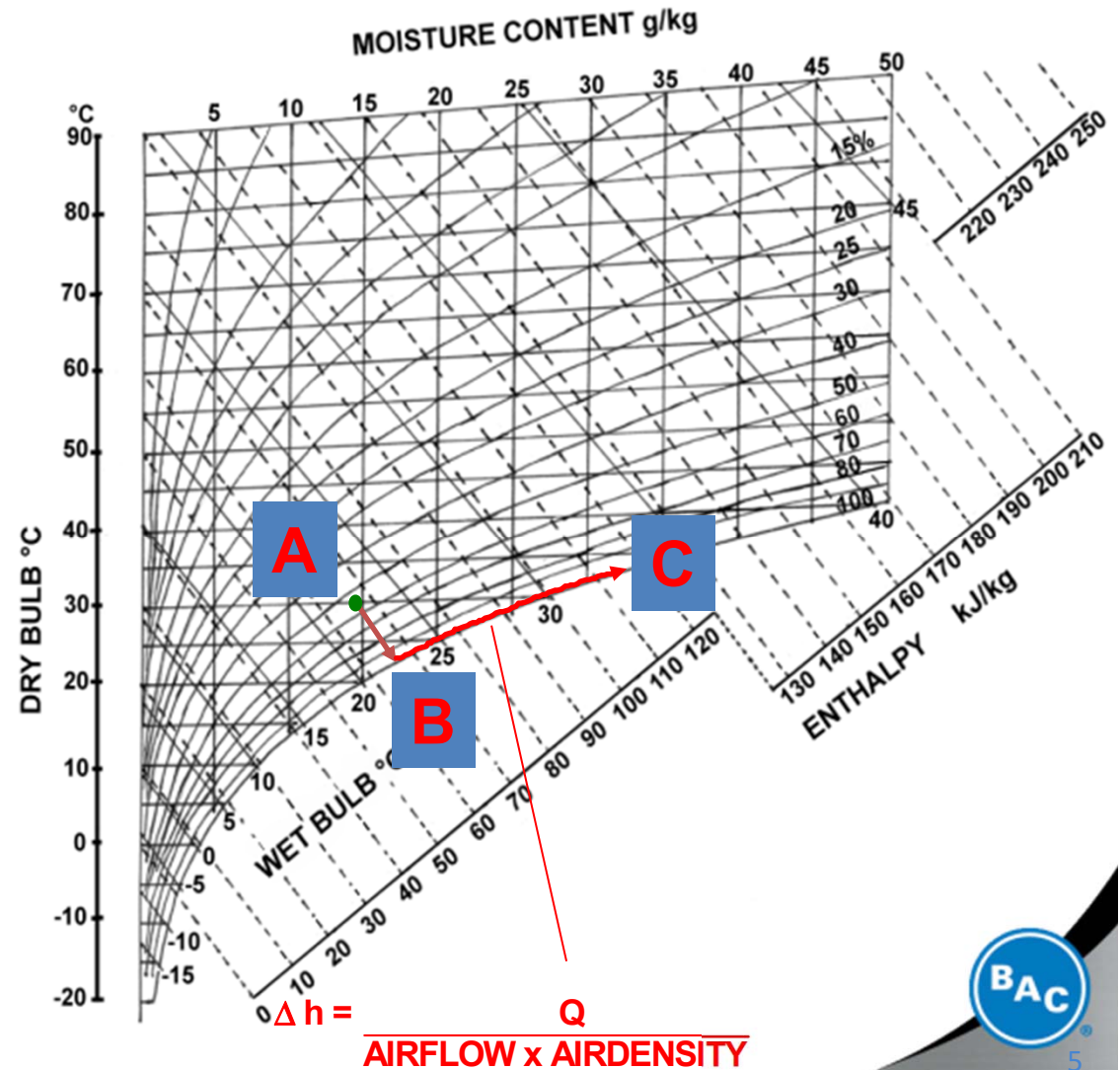
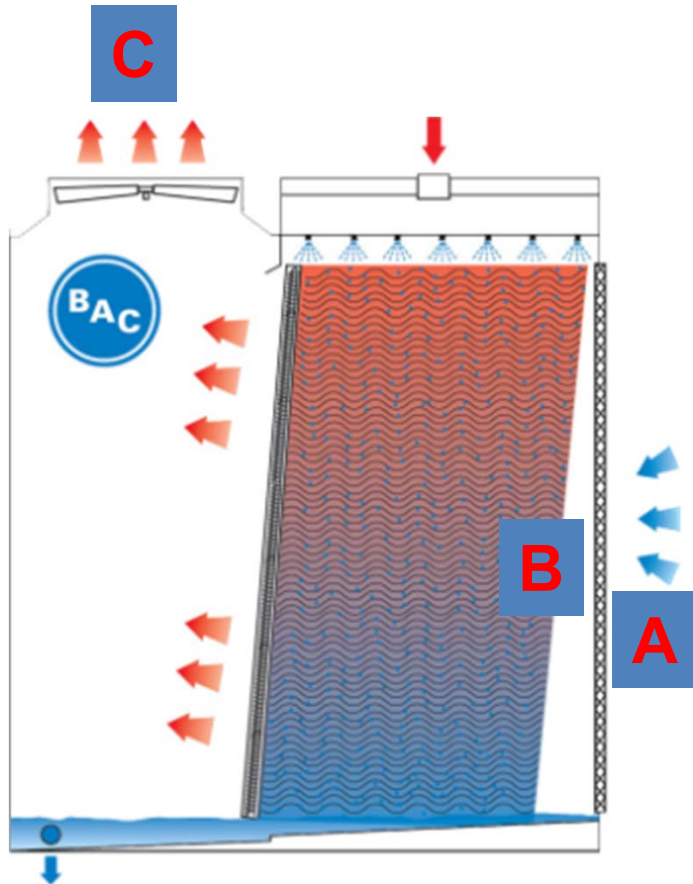
EU Trends



Estimated energy consumption (2018) of installations with evaporative cooling is 80TWh ~ 15% of total

Source : EU policy on energy efficiency in cooling by Ewout Deurwaarder & EU commission (23/06/2017)
– includes commercial and public buildings, also data centres and industry

Principle of Evaporative Cooling





	EVAPORATIVE	HYBRID	ADIABATIC	DRY
Condensing temperature				
Electricity consumption				
Water consumption				
CO ₂ footprint				
Space required				
Sound level				

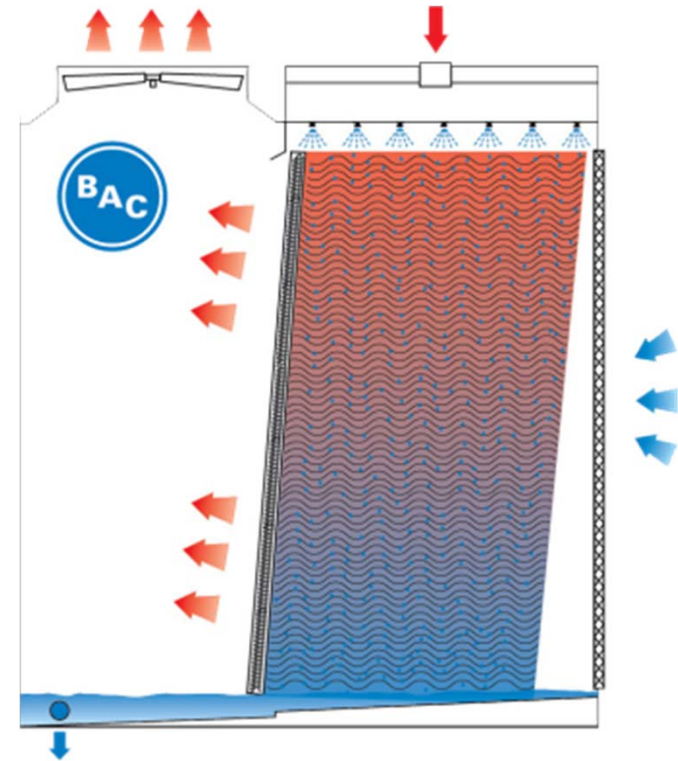
Air vs Evaporative cooling

- Example 1000kW cooling (evaporator side)

	Water cooled + dry	Water cooled + cooling tower
Chiller – compressor	112,1kW	63kW
Cooler/cooling tower	46,0kW	4,5kW
Pump	5,5kW	5,5kW
Total	163,6kW	73kW
Difference	---	55%

Open cooling tower

- ✔ Lowest energy consumption
- ✔ Most compact solution
- ✔ Most economical solution
- ✘ Hygienical control requires attention
- ✘ More complex hydraulic system
(pull down, cavitation, equalizer)



Open Cooling Tower installation



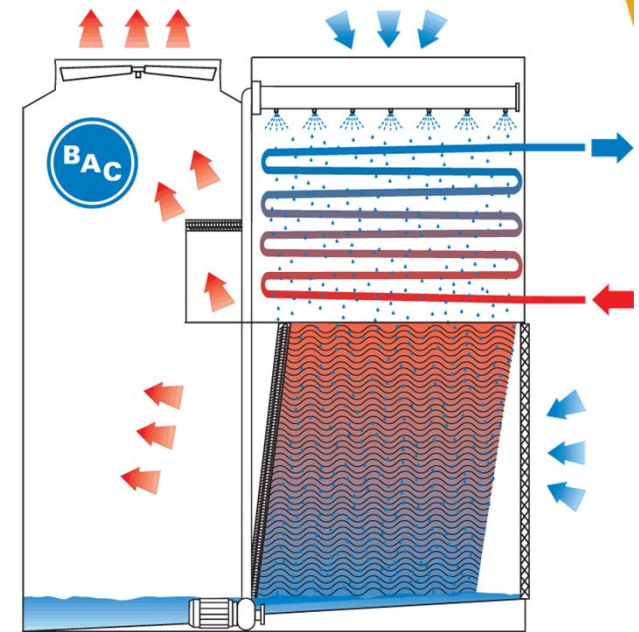
XE S15E 121207-EE/L

- 700kW @ 32°C/27°C/22°C
- Fan motor: 2x 1,1kW
- Dimensions: 3,6m x 3,6m x 3,5m

Replacement of centrifugal fan unit
with attenuation and 30kW fan motor!

Closed Circuit cooling tower

- ✔ Simple and flexible hyraulical system
- ✔ Single component with tested performance
- ✔ Easy hygienic control and low legionella risk
- ✔ Process fluid remains clean
- ✖ Higher fan power compared to open systems
- ✖ More expensive



Closed Circuit Cooling Tower installation



FXVS 1218C-32Q-OW

- 1560kW @ 32°C/27°C/22°C (30%EG)
- Fan motor: 3x 11kW
- Pump: 1x 7,5kW (+1 standby)
- Pressure drop: 30kPa
- Dimensions: 5,5m x 3,6m x 7m

EUROVENT CERTIFICATION



- Certified performance **eliminates the potential of excessive operating costs** due to deficient equipment **or oversized design**.
- Confidence that your evaporative equipment will **perform at the published ratings**
- Demonstrated code compliance and **risk reduction** due to independent validation and verification.
- Design flexibility with certification for both **water and glycol**
- **Eliminates** costs associated with expensive and time consuming **field performance testing**.
- **Added value** for the building owner **for resell or rent**.

Innovative technology



NEXUS

- 40% smaller
- 80% lower water volume
- EC fan technology
- Integrated controls



Thank you

Get in touch

info@balticare.be

www.baltimoreaircoil.eu