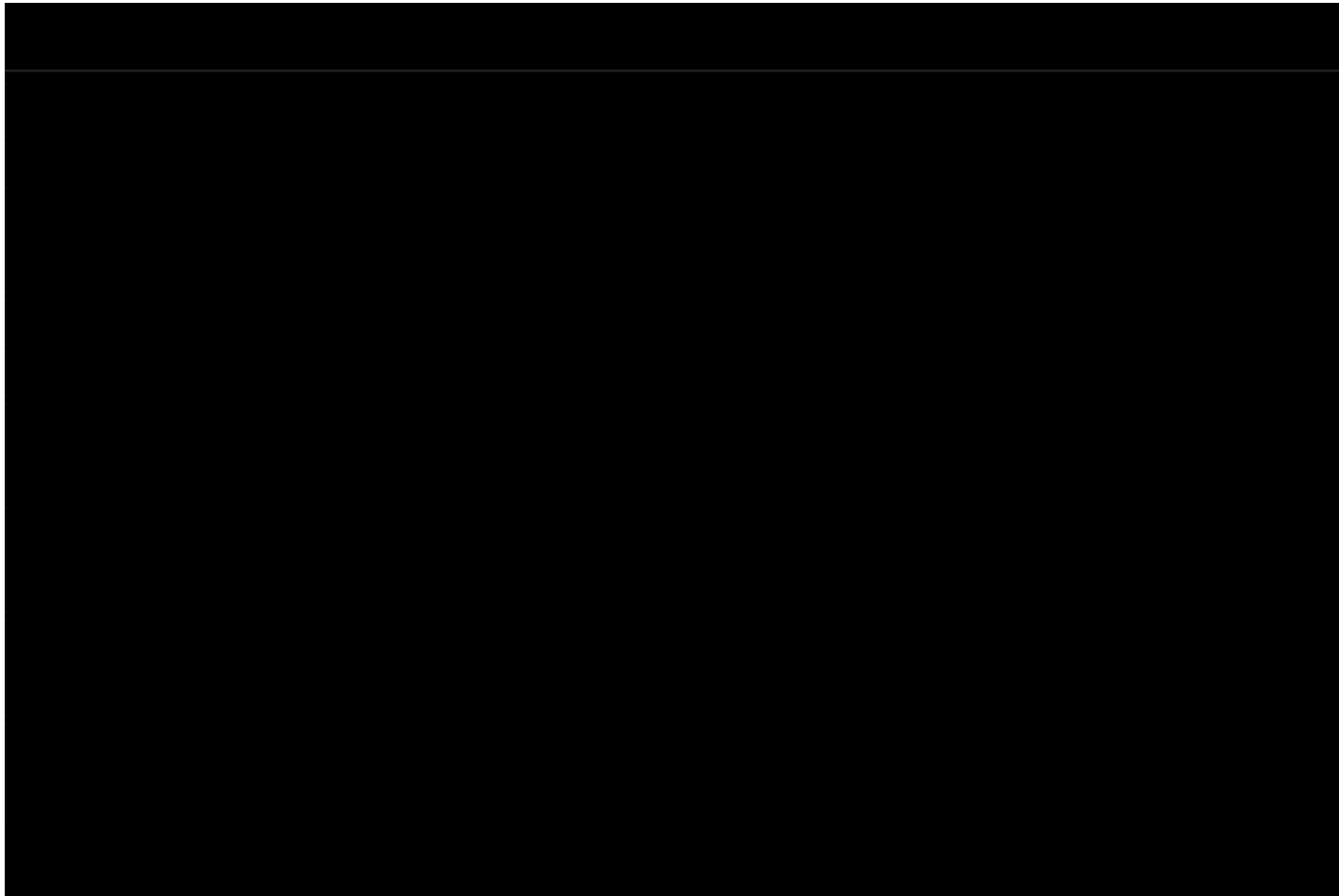




HYDROCARBON BOTTLE COOLER
IN
HIGH AMBIENT TEMPERATURE
CONDITIONS



1. Introduction Red Bull ECO Cooler
2. Fact & Figures Red Bull
3. HC units in tropical conditions
4. Challenges in Japan





- 166 countries worldwide
- Annual sales: more than 5 billion cans in 2014
- Global Cooler fleet approx. 1.000.000 units
- ECO Cooler : 543.000 units
 - Approximately $\frac{2}{3}$ in Europe
- 100% HC procurement in 2014 except Japan





Energy Consumption Test Mega Glass door Cooler

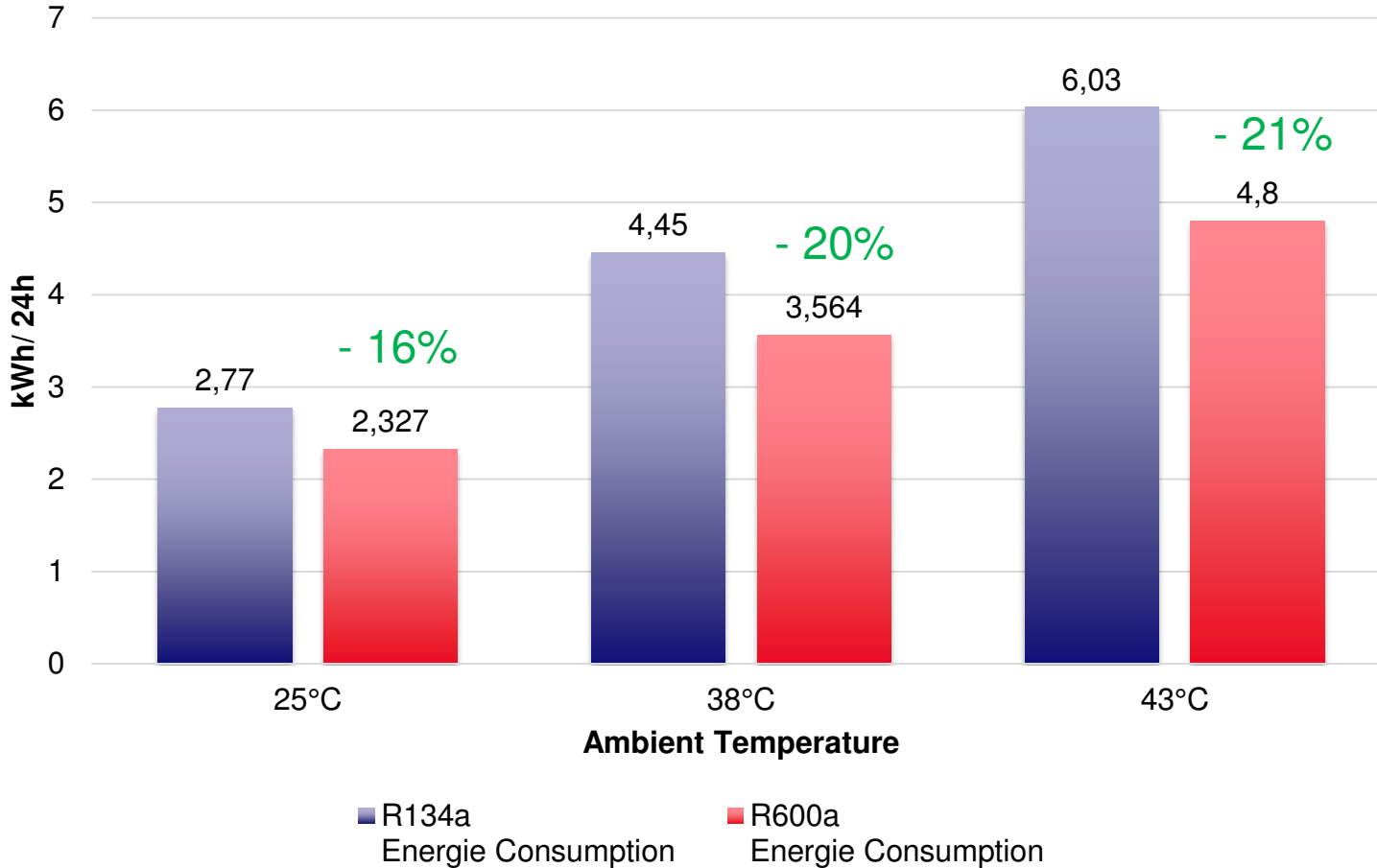
- Product size
 - WxDxH: 600x661x 2.000mm
- Net capacity: 370L
- Refrigerant R 600a – 35g
- Technical variant: 230V/50Hz
- Compressor: Embraco EMT6144Y
- Testing standard: ISO 23953
 - 12h door opening cycle,
 - 12h lighting on,
 - 12h night-curtain open
- (Energy Consumption according to ISO 23953 / 5.3.2.7 b)
- Testing/climate Condition
 - 25°C/ 60%
 - 38°C/ 65%
 - 43°C/ 75%



Hydrocarbon bottle cooler in high ambient Temperature conditions



Energy Consumption Test Mega Glass door Cooler



LIEBHERR





- Negative reputation of HC refrigerants
- Availability of HC compressor/components for Japan
 - Cooler size from 15 – 150litres
 - R290a & R600a
 - MOQ & lead time issues
- Availability of cooler service partner
- Availability of HC refrigerant for service and after sales
- Training for Hydrocarbon refrigeration sys





THANKS FOR YOUR
ATTENTION