CO_2 (R744)

Imbera Development Update

March 2015

Agenda

- ✓ CO_2 Implementation update
- ✓ Remaining challenges
- ✓ Next steps

Implementation milestones

Five challenges to introduce CO_2 refrigeration systems for Coca-Cola cold drink equipment:

- ✓ **Full product portfolio offered in CO_2 by January 2016.**
- ✓ **Performance (energy consumption).**
- ✓ **Noise level.**
- ✓ **Acquisition cost.**
- ✓ **Maintenance requirements.**

Current certified coolers by Region

Next Models to be completed

- March 2015
  - VRD21 C 115/60 UL (USA)
  - VRD14 C 115/60 UL (USA)
  - VR06 C 115/60 (USA)
  - G372 C 115/60 (MEX / LC)
- April 2015
  - VRD20 C 115/60 (USA)
  - VR08 CLASSIC C 115/60 (USA)
  - VR18 C 115/60 (MEX/ LC)

Product Portfolio

Imbera CO_2 Models availability (Certified Models) by January 2015

NA	Mexico	Latin Center	South Latin	Brazil	Other
G319	G319	G319	G319	VRS16	VRS19
VR10	G326	VRS19	VR08	VR08	VR08
VR12	VR08	VR08	VRS19	VRS16 BRIX	VRD37
VR08	G342	G342	G342		G326
VRD35	G372	VRS16 BRIX	MT400		
VRD37	VR17	VR17	G326		
VRD43	G322				
VRD21					
VR06					
VRD12					

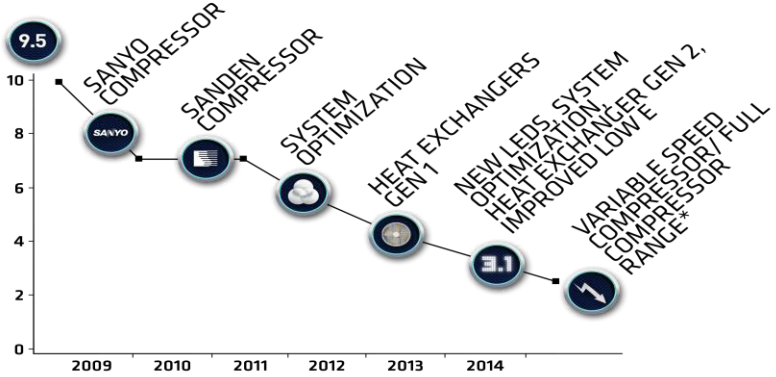
Potential Imbera sales covered with CO2 Models (Dec 2014)					
99%	93%	90%	94%	86%	90%

	Certified Models
	Models in Process

Models in process to be completed no later tan march 2015

Energy consumption

REDUCTION IN ENERGY CONSUMPTION



By 2014, we have been able to reduce energy consumption by 67%.

*2009 BASE YEAR
**BASE ON G3-19 C CONDITION.

Energy Star 3.0 (mandatory from October 2014) for CCNA Authorized CO_2 models

CO2 Model	ASHRAE Energy Usage Co2 (kWh/24h)	EnergyStar 3.0 Compliant Limit (kWh/24h)	Meets Requirements
VR10	1.740	1.970	Yes
VR12	1.980	2.230	Yes
G319	3.020	3.200	Yes
VRD37	5.190	5.270	Yes
VRD37	5.160	5.360	Yes

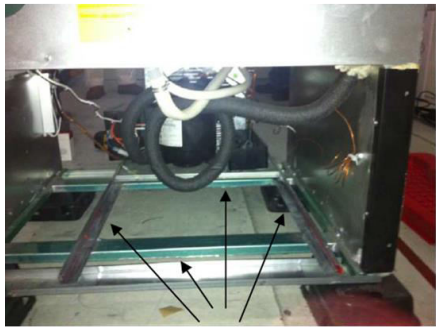
Noise level

Noise plays a crucial role in CO2 systems. With internal fluid pressure increasing **10 times** compared to R134a systems.

The mounting elements and support components have been **redesigned** in order to meet **TCCC requirements**.

CO2 Model	Sound Level according to TCCC test procedure	Sound Limit
VR10	58.6 dBA	65 dBA
VR12	61.7 dBA	65 dBA
G319	60.5 dBA	65 dBA
VRD35	63.7 dBA	65 dBA
VRD37	63.8 dBA	65 dBA
VRD43	63.8 dBA	65 dBA

Elastomeric grommets

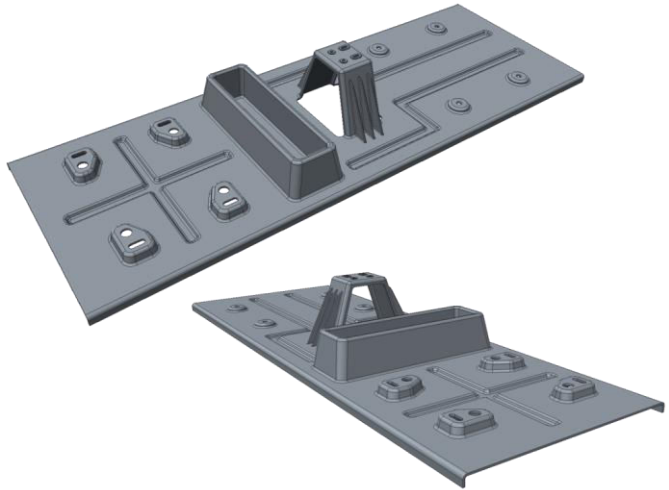


Damping foil tape

Noise level improvements 2015

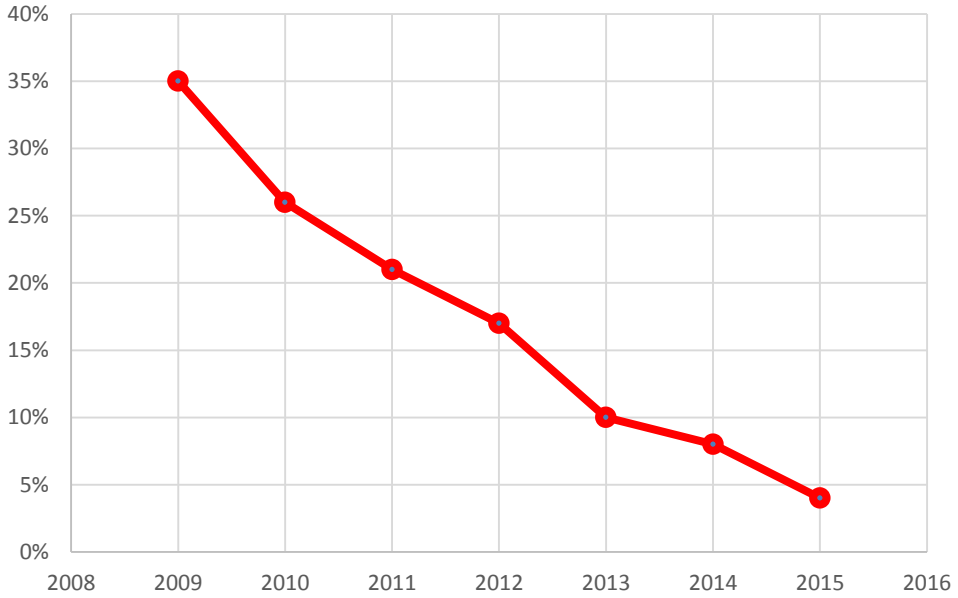
Next year Imbera will redesign the mounting base substituting **metal** for **plastic**.

This new component will help **reduce** the **noise** coming from **vibration** caused by the current metal-to-metal assembly.



Acquisition cost

CO2 models **price upcharge** evolution (2009-2015) compared to R134a technology



2013-2014 CO_2 Total Production

Imbera Yearly CO_2 Units Production

Year	Production
2013	19,110
2014	75,113
2015	18,201
Total	102,424

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Imbera
Beyond Cooling

THANK YOU!

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