



business case

**natural refrigerants**

25 & 26 June - Atlanta, Georgia

# Contractors Perspective

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# ATMOSPHERE AMERICA 2015

## CONTRACTORS PANEL

CIMCO – Who are We...Capabilities

Traditional End Users?

Obstacles to Green Solutions

Industrial Trends

Total Cost of Ownership

# CIMCO - Who We Are...





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- Founded by the “Shiple family” (who founded York in 1874)
- **Established in 1913** as the Canadian Ice Machine Co. Ltd. (CIMCO)
- A member of the Toromont Industries Ltd. group of companies since 1969
- We employ over 850 employees throughout North America
- Conduct projects worldwide
- **CIMCO Refrigeration** is a global leading supplier of refrigeration services including:
  - ✓ Design/Build Refrigeration Systems
  - ✓ Construction and Installation
  - ✓ Service and Maintenance (+300 Technicians)
  - ✓ Compressor Rebuild Center
  - ✓ Manufacturing and Packaging
  - ✓ Controls & BMS Designer/Integrator



TOROMONT

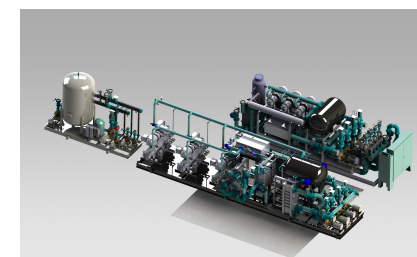
CIMCO

Hot Ideas in Refrigeration





- **Our capabilities ... Green Opportunities**
  - ✓ **Low Charge Ammonia**
    - **Ammonia Air Conditioning systems**
    - **Eco Chill – 1 lb / TR**
  - ✓ **Cascade CO2**
  - ✓ **Volatile Brine CO2**
  - ✓ **Transcritical**
- **Complete Refrigeration Plant Operation**
  - ✓ including providing chief operators, shift operators and maintenance personnel for both Freon and Ammonia plants in accordance with local and Federal requirements
- **On-Going Service and Maintenance**
  - ✓ All-Inclusive Maintenance Agreements (CSA)
  - ✓ Scheduled Inspections and Maintenance
  - ✓ Monthly Safety Inspections and Reports
  - ✓ 24/7 Emergency Service
- **Training**
  - ✓ Customized training programs to suit the client
  - ✓ Safety, Emergency Response, OSHA, Maintenance, etc.
- **National Support Agreements**



## Traditional End Users?

- Large...Industrial
- Food, Storage, Production, Etc.
- Buildings are not publically occupied
- 100,000 ft<sup>2</sup> and larger
- “Built Up Engine Rooms”
- R717 the “go to” refrigerant
- PSM Required Facilities



## Obstacles to Green Solutions

- Regulations limiting where ammonia can be used (grocery stores for example)
- Regulations on ammonia quantity
- Price point. Initial Capital Investment
- Ammonia equipment is typically for large-scale operation only
- Misperceptions on Ammonia safety record.
- CO<sub>2</sub> still “New on the Block”



## Trends

- Pre-packaged systems
- Mini-compressor / HX developments, Air Cooled Ammonia systems, control systems to optimize efficiency
- Smaller facilities are looking at Ammonia and Transcritical CO2
- European Norm is the North American trend...





## Total Cost of Ownership

- End users seem more sensitive to lifecycle cost rather than initial capital investment.
- Maintenance
- Life Cycle Costing
- Rebate, Cost Sharing programs
- Complete Envelope Modeling
- Heat/Cool Design Scenarios



# Thank You



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