



Bundy Refrigeration Overview

Innovative Cooling System Solutions

Bundy Refrigeration

Who We Are



- Bundy Refrigeration: a leading global manufacturer and supplier of heat transfer and fluid carrying components to the refrigeration and household appliance industry
- With over 50 years of experience and manufacturing plants throughout Europe and America, we have the technical expertise and capability to meet the needs of an ever changing market
- We employ approximately 2000 people in 10 facilities throughout Europe, Turkey, South America and North America

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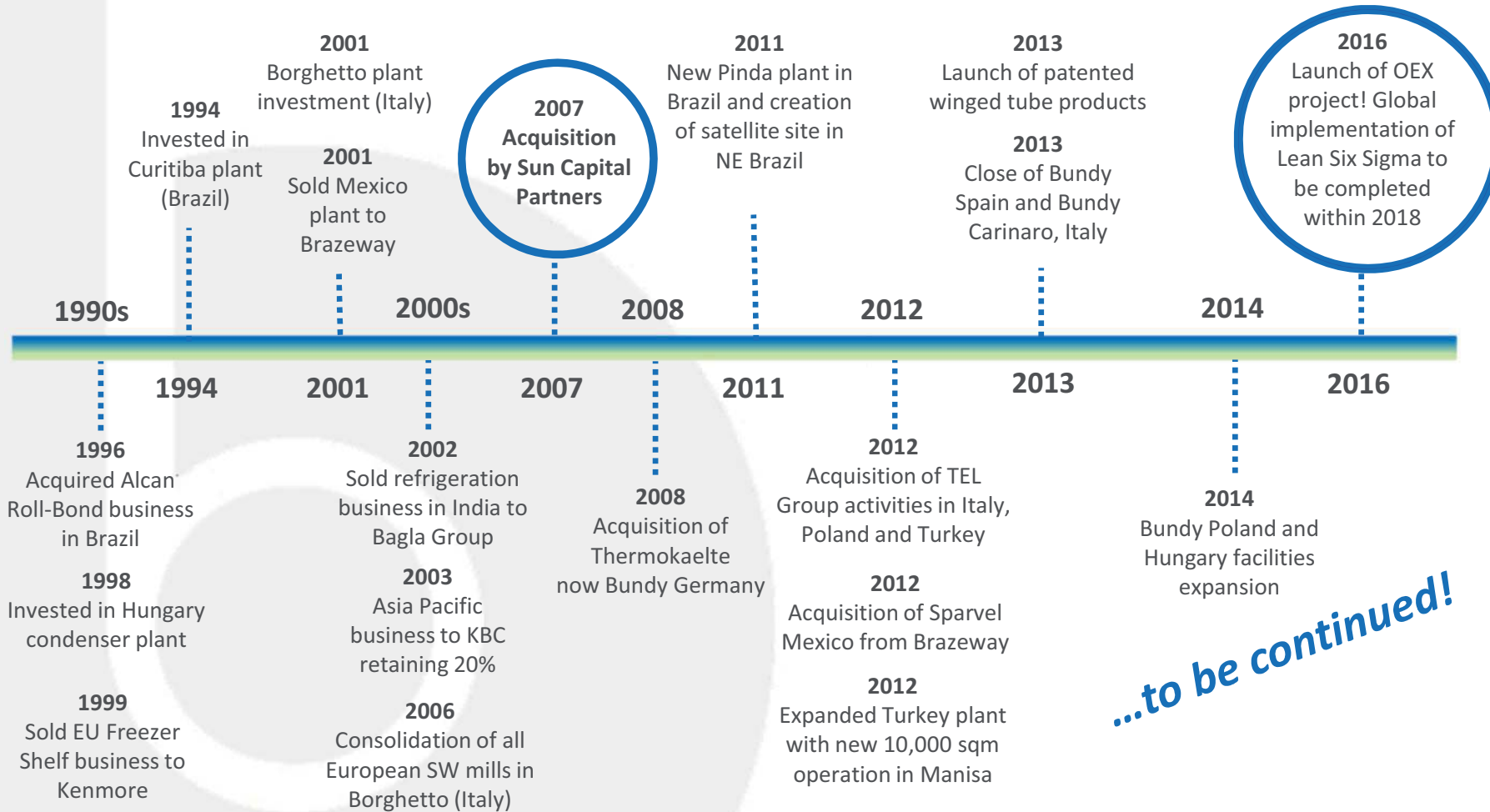
- Sun Capital Partners, Inc., a leading private investment firm specializing in investments in market-leading companies, acquired Bundy Refrigeration in 2007
- Sun Capital has over \$9 billion of investments under management and a very diverse portfolio of companies, corporate HQ in Boca Raton, offices in Los Angeles, New York, affiliates in London, Frankfurt, Paris, Stockholm and Shenzhen
- Thanks to Sun Capital support, Bundy Refrigeration has completed throughout the latest years several acquisitions, plants enhancements, confirming its continuous efforts in new products research and strengthening its leading market position also through long-established customer relationships

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Bundy Refrigeration Long History: Our Strength for Our Future



Bundy has been a Refrigeration market leader for 50 years! Look at our most recent history:



...to be continued!

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Bundy Refrigeration Our Values



Never compromising integrity

Strong customer focus

Eliminate waste

value through innovation that matters for our customers

Teamwork, respect and empowerment

Embrace change

Continuous improvement

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Bundy Refrigeration

Our Vision & Our Mission



BUNDY REFRIGERATION

VISION

Be an *innovative, competitive* and *profitable* Lean Company in the cooling systems industry, where people *maximize their potential*, our *customers trust and value us*, and *our stakeholders continue supporting us*.

Mission

Design and implement optimal cooling systems solutions through Lean Six Sigma processes that create:

- ♥ *Inspired and engaged self-directed teams,*
 - ★ *Benchmark Quality Products*
 - 🚩 *Competitive cost structure,*
 - 📈 *Continuous improvement culture*
- based on *safe* and *outstanding* execution.

Values

Core Values

Strong Customer Focus Embrace change and innovation Eliminate waste

Teamwork, Respect and Empowerment, Continuous Improvement

Thomas Schäebinger
Chief Executive Officer

Antonio Rasino
Chief Finance Officer

Ivan Rodriguez
Vice President Central America & Global Operations Director

Paolo Romeo
Global Sales and Purchasing Director

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Our Main Customers Include



We supply the leading worldwide manufacturers since ever!

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Bundy Refrigeration Manufacturing Footprint

*We employ over 2,000 people
worldwide in 8 countries*

total 10 plants

Manufacturing Plants

*Germany, Bleicherode
Hungary, Jaszarokszallas
Italy, Borghetto Borbera
Poland, Kalisz
Turkey, Manisa*

*Mexico, Queretaro
Brazil, Curitiba
Brazil, Maracanao
Brazil, Pindamonhangaba
Colombia, Funza*

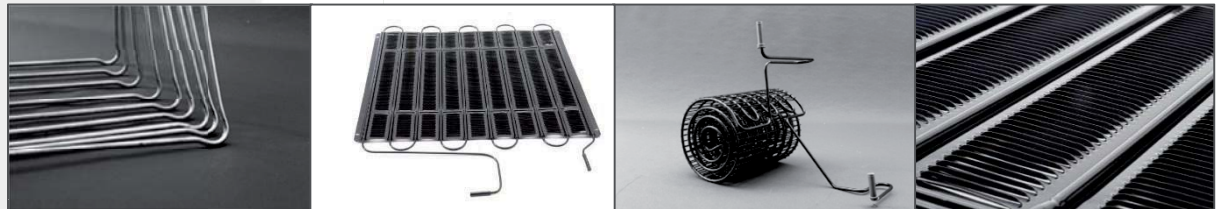
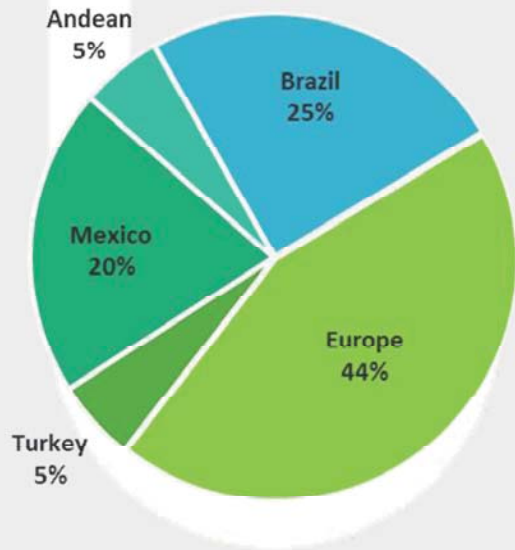
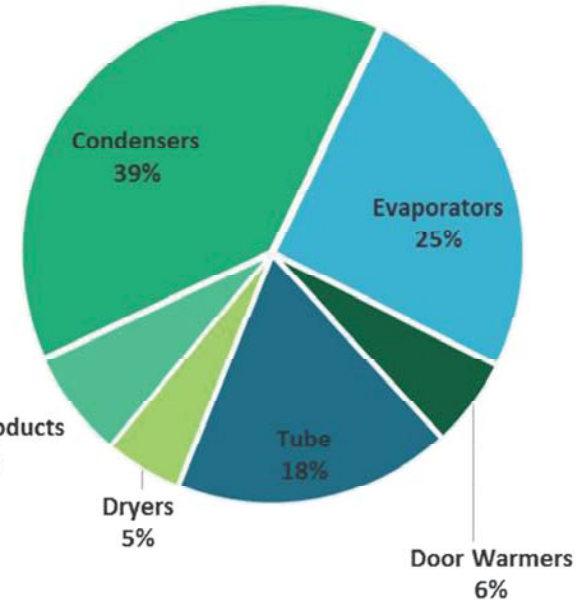
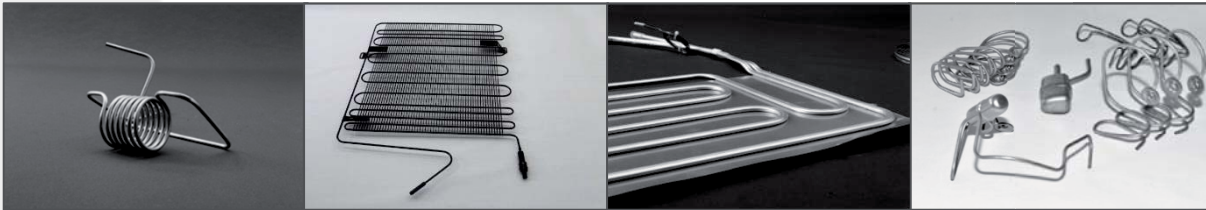


All our facilities are ISO 9001:2008 certified and stringent quality control processes, programs and continuous improvement initiatives are used to deliver consistently high levels of quality.



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Bundy Refrigeration Global Sales Products & Regions



Innovative Cooling System Solutions

We are specialized in the design and manufacture of integrated cooling systems engineered for optimum performance

Refrigeration Tubing

- ✓ Single Wall Electro Welded Steel Tube
- ✓ Double Wall Brazed Steel Tube
- ✓ Aluminum Tube
- ✓ New Soft Steel Tube

Evaporators

- ✓ Roll Bond
- ✓ No Frost
- ✓ Tube on Plate (Sandwich and Glued)
- ✓ Wrap-around
- ✓ Hidden Serpentine

Condensers

- ✓ Static (Wire on Tube and Plate on Tube)
- ✓ Dynamic (Wire on Tube and Helical)
- ✓ Specialty Condensers

Specialty Products

- ✓ Door Warmers
- ✓ Compressor Parts
- ✓ Heat Exchangers
- ✓ Stove Components
- ✓ Dryer Heat Pump Components

New Products

- ✓ Winged Tube Evaporator
- ✓ Winged Tube Static Condenser
- ✓ Winged Tube FD Condenser in Steel
- ✓ Winged Tube FD Condenser in AL
- ✓ Winged Tube Flat Spiral Condenser
- ✓ NEW No Frost Concept

We offer solutions for all of your cooling system needs!

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Refrigeration Tubing

We manufacture our steel refrigeration single wall and double wall tubing to meet the internal residue and moisture standards required for today's high reliability refrigeration systems!

Our Yearly Tubing Production

- ***350 million m in Europe and Turkey***
- ***200 million m in South America***

A variety of diameters and wall thicknesses are available in both plain and coated steel accordingly to market needs:

- Plain Steel
- Hot Dip Galvanized Steel
- Soft Steel (copper replacement)
- Bundy Double Wall
- Copper Flash, Alu, Zn, Galfan Coatings
- Extruded Aluminum Tube



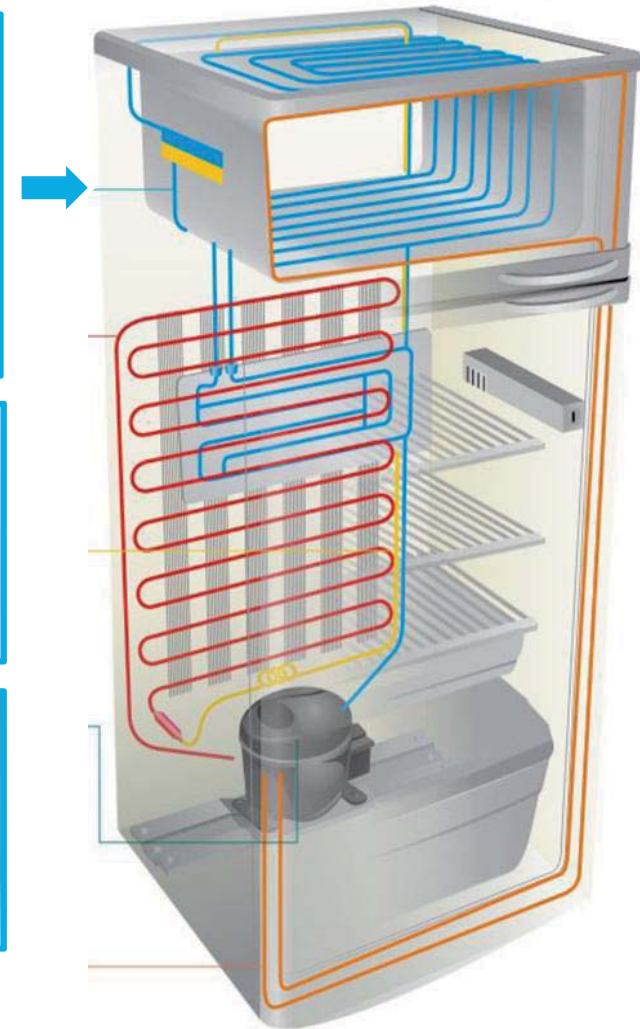
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EVAPORATORS

The **evaporator** cools the cabinet as refrigerant passing through it absorbs energy (heat) and transfers it out of the cabinet.

Our wide range of evaporators includes No-Frost, Hidden and Semi-Hidden Cold-Wall, Chest Freezer and Roll-Bond.

Evaporators can be supplied as stand-alone components or assembled with heat exchangers and accumulators as part of a fully tested system.

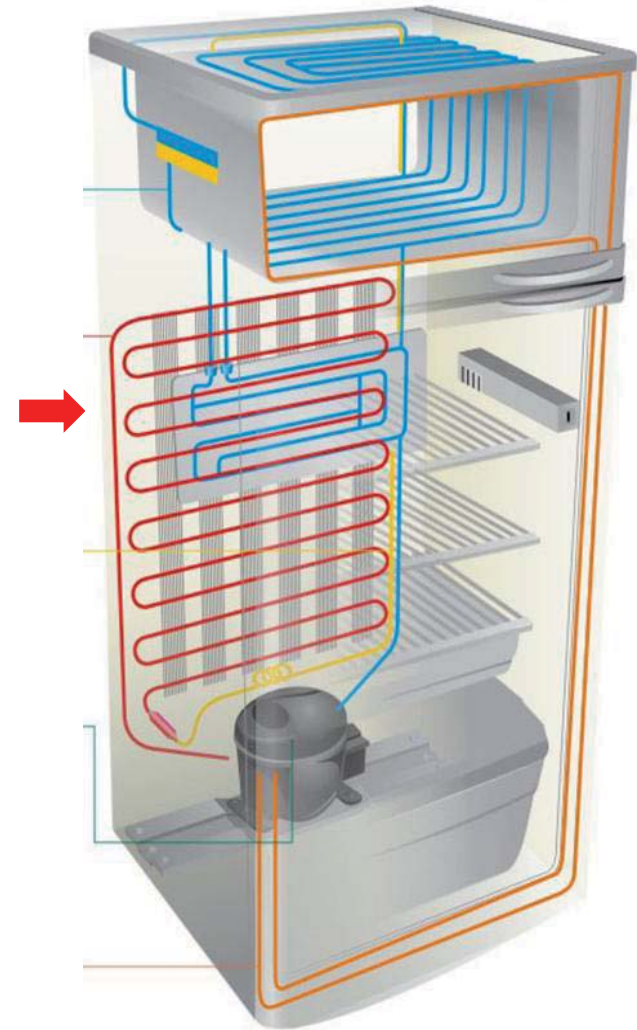
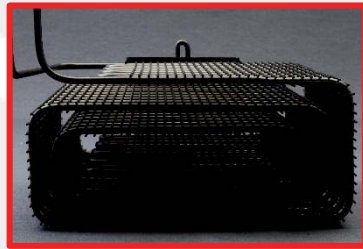
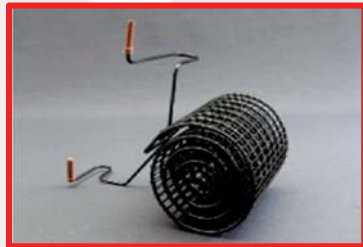


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CONDENSERS

The condenser transfers energy from the system to the outside environment.

We offer a wide portfolio of condensers: Wire-on-Tube and Plate-on-Tube Static condensers, Forced Draft Wire-on-tube and Plate-on-Tube as well as Spiral condensers and Skin condensers.



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Refrigeration System: Our Products

HEAT EXCHANGERS

The heat exchanger conveys refrigerant flow to the evaporator and provides return path to compressor.

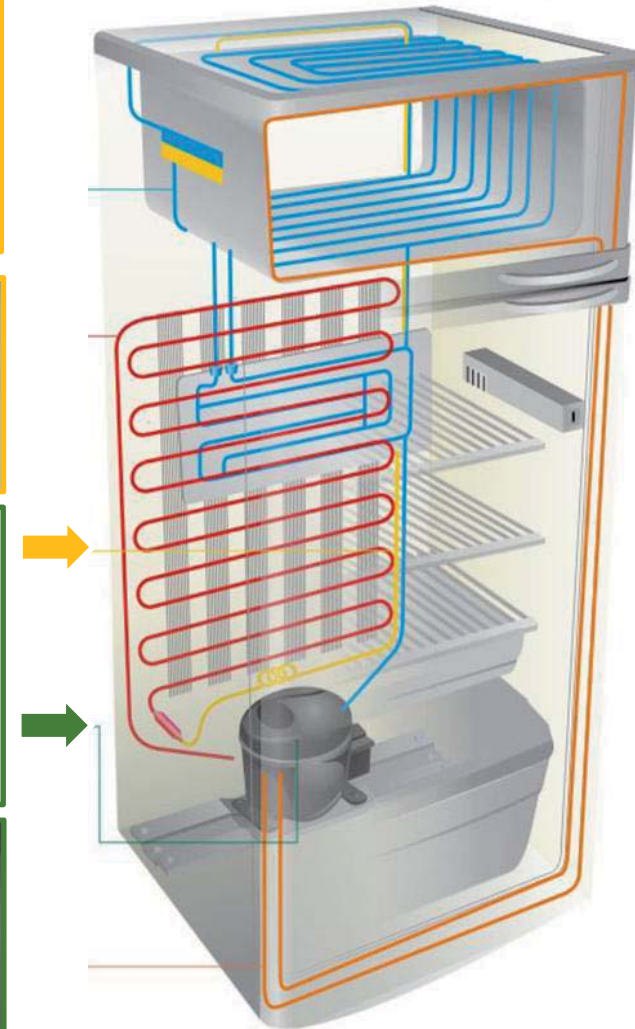
Custom designed suction / capillary heat exchangers can be supplied individually or as a part of a fully tested evaporator system.



COMPRESSOR PARTS

The compressor parts made by Bundy are mainly connectors and shock loop absorbers, used to reduce shock and fatigue effect of vibrations.

Bundy work with the leading manufacturers to develop and supply compressor components, available in both *Bundyweld* double wall tubing and Electrowelded single wall tubing.



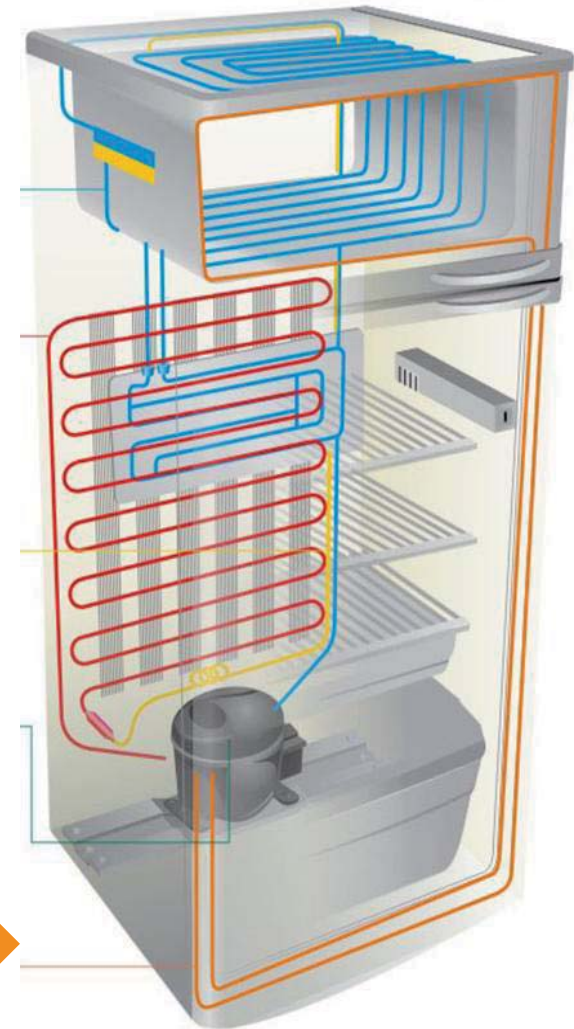
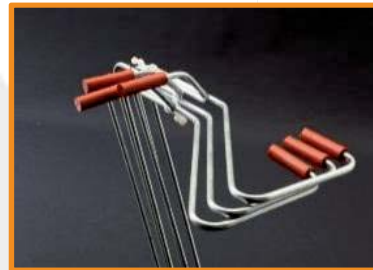
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Refrigeration System: Our Products

DOOR WARMERS

The door warmer circulates warm refrigerant around cabinet door flange providing heat to eliminate condensation.

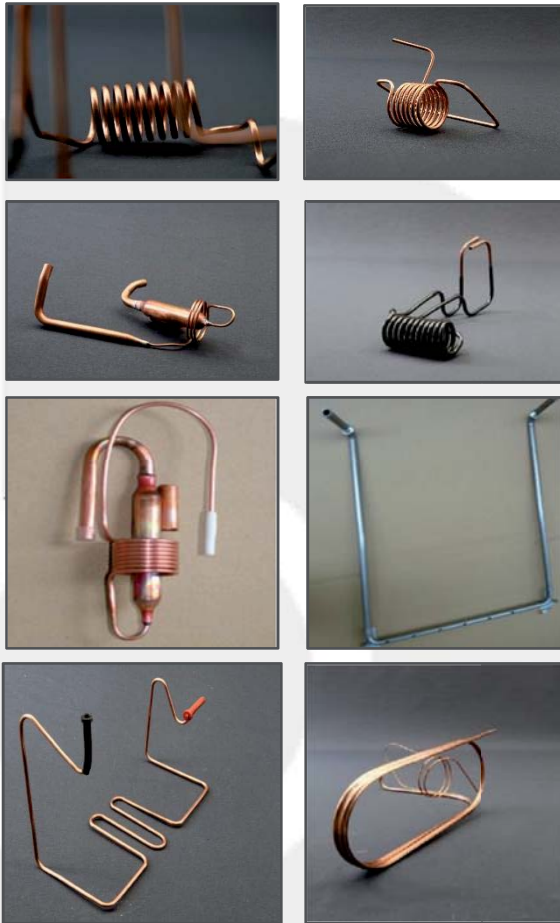
We supply customized door warmer assemblies that provide an energy-efficient solution to eliminate condensation around freezer and fridge/freezer door frames. Door Warmers are available in a variety of corrosion resistant coatings.



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Specialty Components

Within our specialty components we offer products that find application in many fields of the household appliances production!



Cooking



Commercial Refrigeration



Water Cooling



Laundry



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New Products: Winged Tube

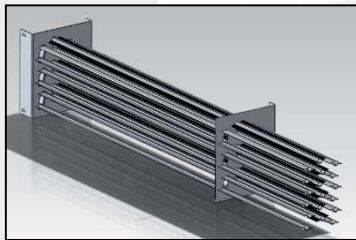
Winged tube is a continuously rolled tube shape to create two wings through deformation

The key concept is to make a condenser and evaporator only with tube. This is to create a condenser/evaporator with a bigger primary heat exchanger surface and then to eliminate secondary heat transfer surface.

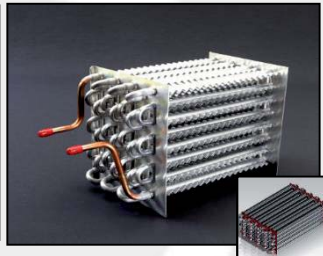


High design flexibility and versatility

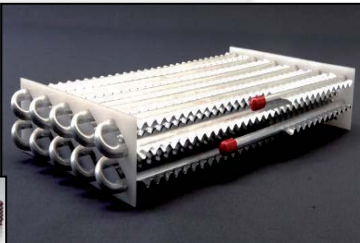
Our new products include many different types of heat exchangers, condensers, evaporators, complete cold units:



Larger models are possible with serpentine inserted vertically into housing



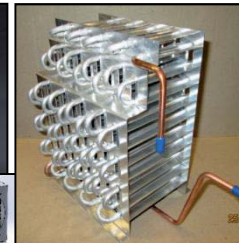
Compact high-power condensing batteries, yet with lowest pressure drop



Slim design for evaporators



Standard-shaped casing for easy fan coupling



Free-standing compact condenser without brazing

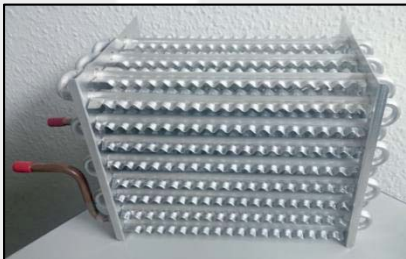


Compact batteries with horizontal serpentine

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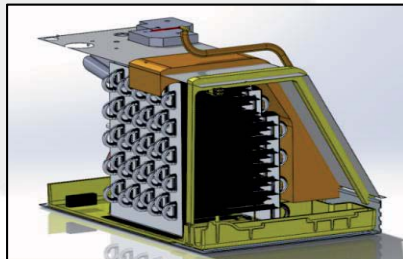
Tumble Dryer Evaporator and Condenser

- Consists of two heat exchangers
- Evaporator - Winged tube
- Condenser - Winged tube

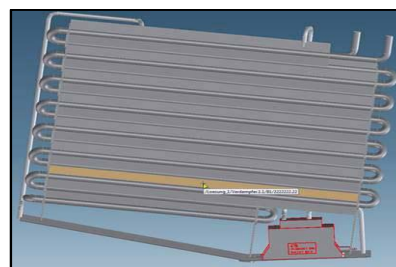
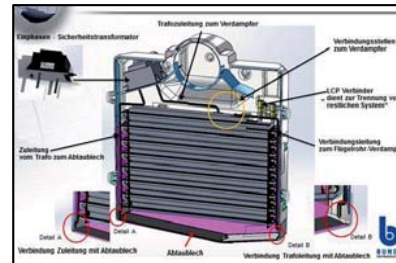


Replace Turn Fin Refrigerator Condenser

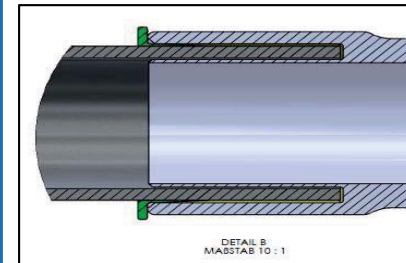
- Better performance
- No clogging
- Low cost



No Frost Evaporator New Design



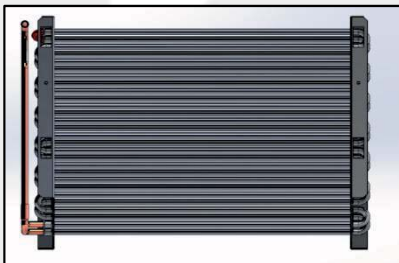
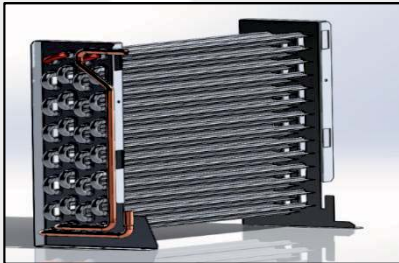
No Frost LCP Connector



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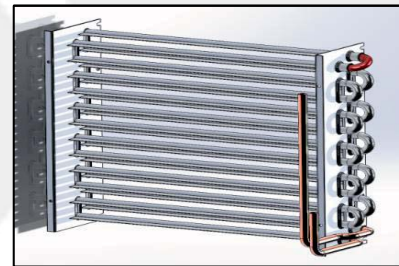
Commercial Heat Exchanger

- Market Potential
- Commercial Condenser
- Heat Pumps
- Split Climate Units



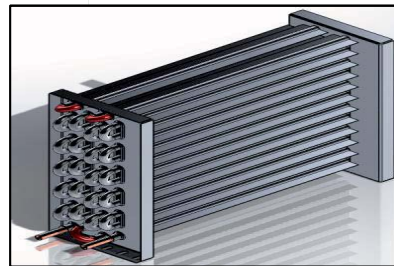
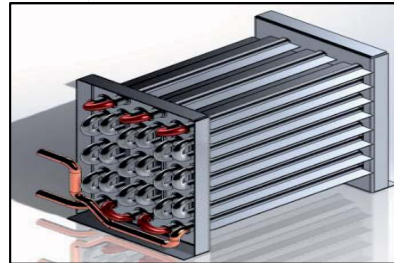
Dehumidifier Evaporator and Condenser

- Consists of two heat exchangers
- New Evaporator design
- Condenser design



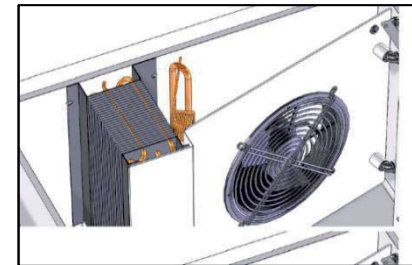
Cold Module

- Consists of two heat exchangers
- New Evaporator design
- Condenser design

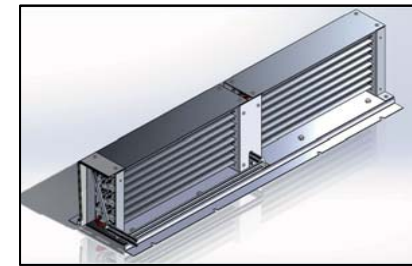


Blast Chillers Heat Exchanger

- Conventional heat exchangers for use in blast chillers



- New Wing tube evaporator design for blast chillers



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OEX: Bundy' High Performance Culture

- **OEX** is who we are and how we do what we do.
- It requires every Bundy associate finds ways every day to *improve the way works get done.*

PRODUCTIVITY

- ✓ **Continuous improvement**
 - ✓ Kaizen
 - ✓ OEX Dx
- ✓ **Value Flow**
 - ✓ VSM
 - ✓ One Piece-flow
 - ✓ Cell Manufacturing
 - ✓ SMED
 - ✓ TPM
- ✓ **Max Assets**
 - ✓ Kanban



PEOPLE

- ✓ **Leadership & Strategy**
 - ✓ Leaders Development
 - ✓ Hoshin Kanri
- ✓ **Talent Development**
 - ✓ LSS Training
- ✓ **Be part of it!**
 - ✓ I Belong Program
 - ✓ OEX Rewards



PROCESS

- ✓ **Safe place to work**
 - ✓ L1 Audits
- ✓ **Preparation**
 - ✓ 5S's
 - ✓ Visual Factory
- ✓ **Flexibility**
 - ✓ Standard Work
 - ✓ Time Management

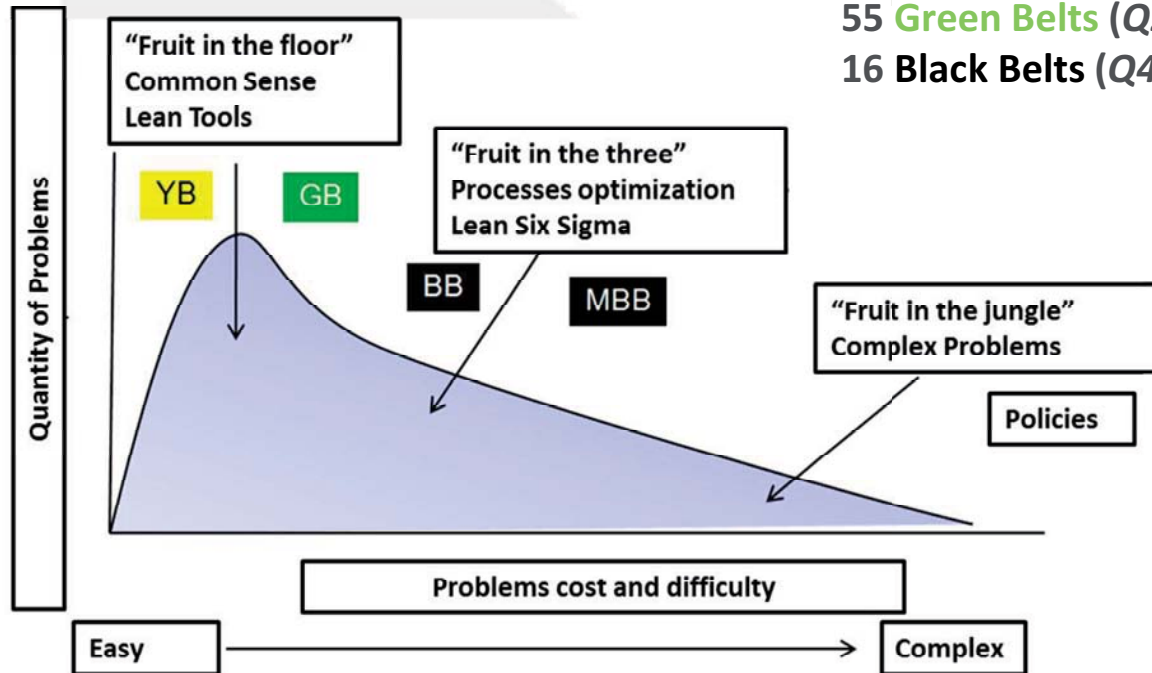


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OEX: Institute Training



Bundy is investing over **\$500,000 US** to develop our employees, the essence of **Continuous Improvement**:
100% of our Direct Labor Force as White Belts (**completed in Q316**)
76 Yellow Belts (**completed in Q416**)
55 Green Belts (**Q217**)
16 Black Belts (**Q417**)



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ESI-VAVE

New Product Development Solution



➤ **ESI-VAVE: Early Supplier Involvement-Value Add Value Engineering:** it is a holistic approach to develop products based on Lean Design principles to deliver innovative solutions at the right cost and at the right time!

➤ Initial focus on three ESI-VAVE strategic locations and three main products:

Region

- NAFTA
- South America
- Europe

Plant

- Queretaro, Mexico
- Pindamonhangaba, Brazil
- Kalisz, Poland

Product

- Wire-on-Tube Condensers
- Evaporators (RB & NF)
- Steel & Copper Tube Products

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OEX In Action: Be Part of it!

OEX | Operational Excellence

Be part of it!



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