

EN

New Stefani: Designed for the best.

## **Great products for great customers.**

Massimo Stefani, CEO

### Performance

With the design of the new range of products, Stefani have reviewed their heat exchangers to obtain the highest thermodynamic performance. The geometries of the finned packs, the technology of the tubes and fins, the optimized ventilation: everything contributes to an exchange at the highest levels. The specific performances in kW/lt and kW/Watt are at the peak of the market offer. Stefani's results are obtained thanks to collaboration with prestigious companies, such as Wieland, Ziehl-Abegg and EBM-Papst, which test the components in their research centres, and with the confirmed guarantee of the TUV laboratories.

## Solidity

Those who use Stefani know that their heat exchangers are made with top quality materials and structures. With respect to the usual solutions on the market, **our thicknesses are between 10% and 25% greater:** for total solidity and the certainty of having a long-lasting and performing product. Our heat exchangers are covered by **a 3-year guarantee**, so you can work with peace of mind.







the countries to which we export



**7**5 our collaborators



## **Contraction** the square metres of production site

**19.000.000** our 2019 turnover in euros

K

the years of guarantee of our products



the exchange geometry configurations

# We know your needs.



#### **Commercial refrigeration**

In preservation there are packed products, frozen products and fresh products that breathe. There is a significant difference in their needs. For fresh products we adopt solutions that maintain the organoleptic qualities of the breathing product unchanged over time: temperature, humidity and an adequate number of recycles in the cold rooms. Another aspect in which we are proactive is the adoption of technological solutions using natural refrigerants such as CO, and glycol.

Anyway, the greatest attention to energy saving.





#### Industrial refrigeration: processing rooms

In these applications, product refrigeration requires very varied solutions, depending on the specific need of the process. Some require significant drying in the time unit, others the guarantee of less weight loss of the stored product. The cold could also require alternate cycles or air circulation adequate for the presence of personnel or of the treated product. The process requirements for maturing, drying or smoking rooms, for cleanrooms or for processing rooms, differ a great deal in terms of material compatibility and product sanitization.

For these applications, ventilated units are available with natural refrigerants such as glycol,  $CO_2$ , or synthetic refrigerants of the latest generation.



#### Industrial refrigeration: blast chillers

The following are of fundamental importance in processes for rapid temperature reduction: correct air circulation, high residual static pressures and suitable speeds for fast freezing of the product. Large ice formations are managed with adequate surfaces and defrosting systems in electrical versions, with hot gas, hot glycol, or water. The construction solutions use large geometries and fin spaces for large exchange surfaces.

Our distinctive feature is the customization of cooler construction to fit them to the process layout with ventilated units generally using ammonia or  $CO_2$ .



#### **Refrigeration for logistics**



#### **Comfort and conditioning**

Directly linked to the presence of large retail chains, refrigerated logistic centres are becoming more and more common. We are talking about normally large areas where goods transit for medium-short periods, whether they are fresh or frozen products. They are normally very large cold stores that require air distribution with adequate air throw.

For these systems, solutions are available that reduce the space of the air cooling units in the cold store.

In conditioning applications, such as HVAC for large buildings, let us now consider the different aspects linked to heat dissipation: > ability to guarantee heat exchange performances with low energy consumption and noise emission;

> environmental compatibility of materials;

> adequate machine layouts to adapt to narrow or limited spaces, or that must be hidden from view on roofs.

In many cases, with dissipation dry coolers we obtain important energy saving thanks to free cooling. The adoption of heat exchange solutions with water spray systems allows a significant extension of operation in free cooling mode.



## Process cooling

Process cooling may be of various types: industrial water cooling applications such as the cooling of moulds or electric panels, radiators for large motors or generating sets, cooling of auxiliaries such as pumps in oil&gas applications.

In all cases we guarantee strong, reliable solutions that are easy to maintain.



#### Coils for OEM applications

#### We make customized finned packs for batch production, for our customers' machines.

- In particular for the following sectors:
- > data centres;
- > industrial air conditioning;
- > commercial air conditioning;
- > condensing units for refrigeration;
- > air treatment units for industrial refrigeration

## Knowledge is an advantage.



## High-efficiency heat

**exchangers** allow system running costs to be reduced by

10%

The dehumidification can vary up to

80%

#### The noise level during operation

can vary by

#### Capacity for specific footprint kW/m<sup>2</sup> can be increased by

**20dB(A)** 

110%

#### High-efficiency heat exchangers, with tube and fin geometry for high performances, **allow system running costs to be reduced by**

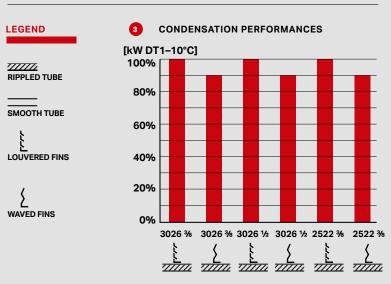
10%

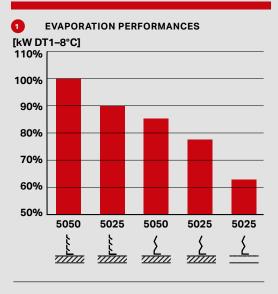
To maintain the same refrigeration capacity with the system, the variations in performance due to the choice of the coil configuration of the heat exchangers are transformed into variations of  $\Delta T$ . For example, a variation in performance of +25% on the evaporator side and +10% on the condenser side would result in a variation of consumption in the compressor of -8.5% with respect to what would theoretically be indicated by Carnot's theorem, including the efficiencies introduced by the compressor and by the expansion valve. If we add to this the efficiencies that can be obtained by the ventilation of heat exchangers, in terms of W/kW, which are assumed to account for 20% of consumption in the system, we could indicatively find a realistic optimization of system efficiency of 10%, depending on the choice of the heat exchanger coil configuration with the same ventilation.

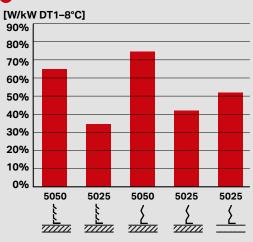
The reduction of running costs is an important factor in system designing, and heat exchangers are important components to achieve the best results. The performance coefficient, expressed as the ratio between refrigeration capacity and energy input, is a function of the condensation and evaporation temperatures and of the efficiency of the compressor and the expansion. These technical and quality considerations on the possible economic savings must be applied to the specific working conditions of the systems. We know that heat exchange performances, with the same ventilation, number of tubes in the coil and fin pitch, depend on the exchange geometries of the coils, which may have waved or louvered fins, in a configuration with smooth or rippled tubes.

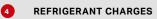
If we consider some practical cases, for evaporators the 50x50 geometry offers a secondary surface double that of 50x25, so with more materials and an higher exchange capacity. In terms of  $\ell/kW$  these two solutions are substantially the same and at quality level the version with waved fins has significant declines in performance. For reference purposes, in the version with non-specialized exchange surfaces, it is important to have performing ripple tube technology which are different for condensation or evaporation working conditions. 1

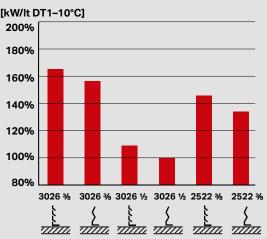
For the condenser, the solution with a smaller rippled tube is the winner as regards quantity of materials, and therefore competitiveness. The 3026 3/8 configuration, thanks to the high secondary/primary surface ratio, on the one hand allows air flows and temperature DT that increase exchange, and on the other reduces the refrigerant charge, to obtain very competitive performances. The significant value concerns the decline due to the use of non-louvered fins, which is always considerable. **3** 







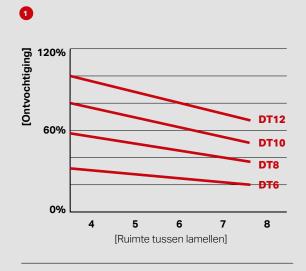




2 DEFROSTING CONSUMPTION

#### Depending on the working conditions, the same air cooler **can vary its dehumidification capability up to**

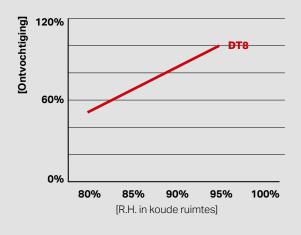




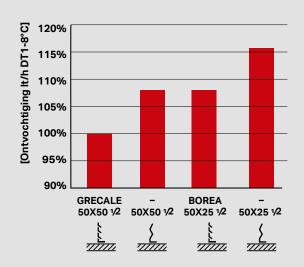
In the food cooling and preservation process, one of the parameters to be considered in designing heat exchangers is linked to drying. In an evaporator, this parameter is especially linked to the temperature differential between the cooling fluid and the cold store temperature and to the characteristics of the machines, such as the secondary exchange surface. The graphs below indicate the variation of dehumidification calculated in It/h according to the working conditions. **1** 2

It is useful to say that the refrigeration capacity of evaporators in real working conditions includes a latent heat contribution that increases according to the temperature and humidity of the cold room. In our experience, the latent power contribution varies according to the temperature and humidity of the cold room with the indicative parameters shown in the table:

Cold room temperature °C	R.H.	DT1	Latent contribution
10.0	85%	10	35%
0.0	85%	8	20%
-18.0	95%	7	5%
-25.0	95%	6	0%



Below is a graph applied to the GRECALE and BOREA series that, with the same ventilation and number of tubes in the coil, due to the effect of different geometries and types of fins, express different drying levels to maintain the same real heat exchange performances in the cold room.



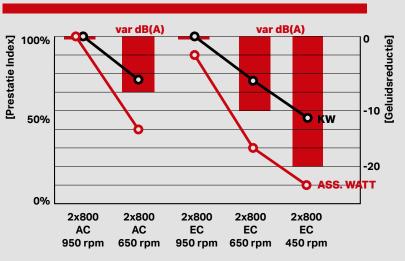
# In residential applications, the use of electronic motors **allows the reduction of noise levels between day and night operation by**

# 20 dB(A)

#### If we take a condenser in catalogue conditions as reference, we find that the adoption of EC motors allows the reduction of consumption and particularly of the noise level.

If we compare a condenser with AC motors with the same machine equipped with EC motors, the electric absorption already shows an advantage in standard working conditions (6poles ~ 950rpm) and has significant reductions of noise and consumption in silent operating mode (450rpm).

To reduce the noise level, accessories are also available that allow the perceived effect of the sound pressure Lp to be halved, -3 dB(A) thanks to the use of silencers fitted on the ventilated units.



Depending on the type of machine used for heat dissipation, **the capacity for specific footprint kW/m<sup>2</sup> can be increased by** 

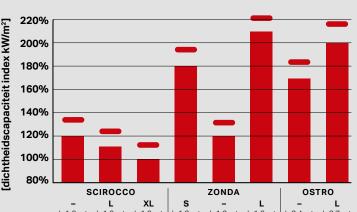
For those applications in which spaces are limited and the heat to be dissipated at the condenser or at the liquid cooler is significant, various possible machine configurations can be considered, which in the same

0%

The graph shows the performances expressed by the various configurations in operating conditions of the liquid cooler fitted with the same ventilation and number of rows in the coil.

working and noise conditions offer different power indices specific for the machine footprint in kW/m<sup>2</sup>.

Thanks to the use of silencers, the capacity densities can improve by a further 15% (cylinders shown above the performance bars); h indicates the height of the machines.



## Values suggested for the preservation of fruit and vegetables in different cold stores:

**R.H.%** = relative humidity

**r.o.v.** = relating to origin and variety

r.c. = relating to class

#### PRODUCTS NOT SENSITIVE OR SLIGHTLY SENSITIVE TO COLD

Fruit	°C	U.R%
Apricots	0	90
Oranges (r.o.v.)	0 ÷ 4	85 ÷ 90
Cherries	0	90 ÷ 95
Fresh dates	0	85
Strawberries	0	90 ÷ 95
Kiwis	-0,5	90 ÷ 95
Raspberries	0	90 ÷ 95
Lemons	0 ÷ 4,5	85 ÷ 90
Apples (r.o.v.)	0 ÷ 4	90 ÷ 95
Coconuts	0	80 ÷ 90
Pears (r.o.v.)	0	90 ÷ 95
Peaches	0	90
Plums	0	90 ÷ 95
Grapes (r.o.v.)	-1 ÷ 0	90 ÷ 95

Vegetables	°C	U.R%
Garlic	0	65 ÷ 70
Asparagus	0 ÷ 2	95
Artichokes	0	95
Carrots without leaves	0	95
Cauliflowers	0	95
Cabbages	0	95
Brussels sprouts	0	90 ÷ 95
Dried onions	0	65 ÷ 70
Mushrooms	0	90 ÷ 95
Lettuces	0	95
Sweetcorn	0	95
Potatoes (for seed)	2 ÷ 3	90 ÷ 95
Peas in pod	0	95
Leeks	0	95
Turnips	0	95
Radishes	0	90 ÷ 95
Celery	0	95
Spinach	0	95

Animal products	°C	U.R%
Various meat	-1,5 ÷ 0	85 ÷ 90
Lamb	-1,5 ÷ 0	85 ÷ 90
Bacon	4	85 ÷ 90
Butter	0 ÷ 4	
Meat	-1,5 ÷ 0	85 ÷ 90
Pork	-1,5 ÷ 0	85 ÷ 95
Minced meat	4	85 ÷ 90
Cephalopods	0	
Cream	-2 ÷ 0	
Shellfish	0	
Cheeses:	5	
Fresh (r.c.)	0 ÷ 2	85 ÷ 90
Lard	-1 ÷ 0	
Full-cream milk	0 ÷ 4	
Pasteurized milk	4 ÷ 6	
Compact cheese (r.c.)	0 ÷ 5	80 ÷ 85
hard cheese (r.c.)	-1 ÷ 1	70 ÷ 75
Soft cheese (r.c.)	0 ÷ 5	85 ÷ 90
Fish (r.c.)	0	
Gutted chickens	-1 ÷ 0	85 ÷ 90
Non-gutted chickens	0	60 ÷ 70
Eggs with shell	-1 ÷ 0	90
Veal	-1,5 ÷ 0	85 ÷ 90
Yogurt	2 ÷ 5	

#### PRODUCTS QUITE SENSITIVE TO COLD

Fruit	°C	U.R%
Water melons	5 ÷ 10	85 ÷ 90
Mandarins	4 ÷ 6	85 ÷ 90
Mangosteens	4 ÷ 5	85 ÷ 90

Vegetables	°C	U.R%
Green beans	7 ÷ 8	92 ÷ 95
Potatoes for consumption	4 ÷ 6	90 ÷ 95
Potatoes for industry	7 ÷ 10	90 ÷ 95

#### PRODUCTS VERY SENSITIVE TO COLD

Fruit	°C	U.R%
Pineapple (ripe)	7 ÷ 8	90
Pineapple (green)	10 ÷ 13	85 ÷ 90
Avocados	7 ÷ 12	85 ÷ 90
Bananas (ripe)	13 ÷ 16	85 ÷ 90
Bananas (green)	12 ÷ 13	85 ÷ 90
Limes	8,5 ÷ 10	85 ÷ 90
Green lemons (r.o.v.)	10 ÷ 14	85 ÷ 90
Mangoes (r.o.v.)	7 ÷ 12	90
Melons (r.o.v.)	7 ÷ 10	85 ÷ 90
Guavas	8 ÷ 10	90
Grapefruits	10	10

Vegetables	°C	U.R%
Cucumbers (r.o.v.)	9÷12	95
Okra	7,5 ÷ 10	90 ÷ 95
Aubergines	7 ÷ 10	90 ÷ 95
Sweet potatoes	13 ÷ 16	85 ÷ 90
Sweet peppers	7 ÷ 10	90 ÷ 95
Ripe tomatoes	8÷10	85 ÷ 90
Green tomatoes	12 ÷ 13	85 ÷ 90
Vegetables in brine	13	90 ÷ 95
Ginger	13	65
Pumpkins	10 ÷ 13	50 ÷ 75
Cheeses	°C	U.R%
Emmenthal	10 ÷ 12	
Gruyère	10 ÷ 12	

Dutch

12 ÷ 15

# In the productive heart of heat transfer technology





# All the products you need.

<b>BOREA</b> Commercial air cod	olers	
Ø250÷500	1÷60 KW	4÷9 mm
5 AVAILABLE FANS SIZE	capacity dt 8k	5 FINS SPACE AVAILABLE
<b>ZEFIRO</b> Commercial air cod	olers	++
Ø250÷450	1÷55 kW	3÷7mm
4 AVAILABLE FANS SIZE	capacity dt 8k	3 FINS SPACE AVAILABLE
<b>BREEZE</b> Commercial air cod	olers	
Ø250÷315	0,8÷10 kW	3÷7mm
2 AVAILABLE FANS SIZE	capacity dt 8k	3 FINS SPACE AVAILABLE
<b>NATURA</b> Cold storage unit fo	or fruits and vegetables	•
Ø350÷800	7÷70 kW	4÷6,5 mm
5 AVAILABLE FANS SIZE	capacity dt 7k	2 FINS SPACE AVAILABLE

#### **GRECALE** Industrial air coolers

Ø500÷800 4 AVAILABLE FANS SIZE

20÷200 kW



5 FINS SPACE AVAILABLE

#### MAESTRO Industrial air coolers

Ø500÷630 2 AVAILABLE FANS SIZE

20÷120 kW

4÷12 mm 5 FINS SPACE AVAILABLE

**BLIZZARD** Industrial blast chillers

Ø710÷900 3 AVAILABLE FANS SIZE 50÷300 kW

6÷12 mm 4 FINS SPACE AVAILABLE

#### **BURAN** Industrial blast chillers

Ø350÷630 3 AVAILABLE FANS SIZE 4÷250 kW

6÷12 mm 4 FINS SPACE AVAILABLE

**WILLY** Centrifugal industrial air coolers

Ø10"÷28" 6 AVAILABLE FANS SIZE 15÷200 kW



<b>SCIROCCO</b> Condensers, dry d	coolers and gas coolers	
Ø350÷1000 6 AVAILABLE FANS SIZE	5÷1400 kW capacity dt 15k	1÷16 NUMBER OF FANS
<b>ZONDA</b> Air cooled conder	nser and dry coolers	
Ø630÷1000 4 AVAILABLE FANS SIZE	20÷1200 kW CAPACITY DT 15K	$1\div 8$ NUMBER OF FANS
<b>OSTRO</b> Air cooled conder	nser and dry coolers	\ <b>* *</b> ]
	nser and dry coolers 200÷2000 kW CAPACITY DT 15K	4÷18 NUMBER OF FANS
Air cooled conder Ø800÷1000 available fans size	200÷2000 kW	



# Great products for great customers.







#### **1** Italy

Melinda, one of the main fruit growing consortiums in Trentino, has launched a very interesting experimental project for reducing the environmental impact, thanks to the exploitation of natural environments that also offer energy saving and a better conservation of the organoleptic qualities of apples. The use of fifteen kilometres of tunnels hollowed out of the rock in the cellar of Rio Grande at Mollaro in Val di Non, for the construction of refrigerated cold stores created completely in an underground environment. Thanks to precious collaboration with the Longofrigo company, Stefani suggest SGIN industrial air coolers with propylene glycol, specifically designed for this application, able to quarantee an appropriate temperature of the storage chamber with a reduced difference between the temperature of the heat transfer fluid and the air temperature.

#### **2** Italy

Cooling system for pre-processing rooms and for loading/unloading apples, of about 2000m<sup>2</sup>. 6 air coolers are installed, equipped with centrifugal fans for distributing the air by means of textile channels. This solution guarantees suitable working conditions for a large presence of personnel engaged in continuous handling of goods. The wide choice of centrifugal ventilation, with optimization of the air plenum on the coils, offers very efficient and versatile solutions for applications of this type.



## Germany

Banana conservation system with 24 single-floor and double-floor cold stores. Machines dedicated to this particular application to guarantee the maximum uniformity of air distribution and of product temperature. The coolers are made to satisfy the classic necessities of cold room dimension and brightness required by these particular applications. The heat exchange packs are optimized for minimum drying, in order to maintain the product quality standards.





#### **4** Greece

Commercial sales point of the Metro Cash&Carry chain. Commercial dual flow evaporators are installed for cooling the areas open to the public. To satisfy the demand for a low air speed and limited noise, units with low-speed fans are installed. Cubic and dual flow evaporators of the industrial series are supplied on the site for cold stores and refrigerated areas for loading and unloading goods.





Fruit and Vegetable Market with industrial air coolers – from 35 to 75kW cooling power – with a stainless steel coil and water defrosting, which offer adequate performances and high reliability. The generous exchange surfaces allow the air/fluid temperature difference to be limited, avoiding drying and the consequent loss of weight of the stored fruit and vegetables.



6 Russia

Large logistic hub divided into several parts with several independent refrigerating units. In combination with the refrigerating units for indoor installation, table condensers are supplied with vertical installation, equipped with electronic ventilation for low environmental temperatures, typical of the geographic area.





Processing room for a dairy equipped with cooling units with centrifugal ventilation. The evaporator has a stainless steel casing and a coil with stainless steel tubes and pre-painted fins. All this allows high resistance to the detergents used by the customer for sanitizing the premises.



#### Norway

Conditioning system for a data centre, made entirely underground to reduce to a minimum the environmental impact of the building in a wooded location. Solution designed to respond to the innovation demands of the project, which requires low energy consumption overall. There are 12 dry coolers in a V shape design to reduce dimension impact and have mainly free-cooling operation. The dry coolers are equipped with a speed regulating system.



#### 9

#### Denmark

Free cooling conditioning system for a hospital centre. 8 flatbed units are installed with an electronic motor of the latest generation - low-speed - to satisfy the strict regulations on noise production, required by nearness to the hospital and to adjacent residences. The machines are stacked in a vertical configuration, to combine the demand for power with the small amount of space available for installation.



#### **1** Poland

Conditioning system with small chillers combined with a flatbed condenser of the commercial series with low noise fan. This condenser offers the typical advantages of the industrial range that adopts high nozzles, in this case with 630 diameter fans. The combination of this ventilation with a super-compact finned pack offers a technologically advanced refrigerant charge.



#### **1** Norway

The client for this project is the Norwegian construction company Klima Og Bygg AS, specialized in building activities, in the installation of heating, conditioning, ventilation and refrigeration systems. The solution conceived is a line of low dry coolers, equipped with coils mounted in a "V" shape. This product range allows an extremely low height, with respect to the high installed capacity, to ensure minimum visual impact.





### Italy

For the typical applications of the large-scale retail sector – supermarkets – Stefani proposes the new series of **SCIROCCO** condensers. The principal characteristic of these table-type machines is the low load of coolant and their great reliability against leakage thanks to the **Contact Free™** system.

The new **SCIROCCO** series is also available in the gas cooler version ( $CO_2$ ), with a working pressure of 120 bar, and as an optional feature it offers the silencer kit combined with EC motors and conveyors that can be opened for easier cleaning of the product.



For cooling applications in automated logistic centres, Stefani offers the **BLIZZARD** series of machines, which adapt very well to typical niche solutions.

For large cold stores, with a height of 35 metres, it is important to have machines with low energy consumption, especially for defrosting. The machines in the BLIZZARD series are excellent for defrosting the pack with lukewarm water [>15°C], and even for low-temperature applications.



## 14

#### Italy

For food cold stores, the new **BOREA** series offers hinged structures as standard features, which allow great product accessibility for easy cleaning.

Another plus point of the **BOREA** series is the particular arrangement of the machine in the packaging, which allows the product to be installed with very few operations.

In the application shown, the butter cold store for industrial use has a capacity of about 90 tonnes.





For apple cold storage, Stefani proposes the **NATURA** range of heat exchangers. The product is conceived to improve air distribution and to guarantee a minimum level of dehumidification, guaranteeing low water stress on the product. The large exchange surface, the adoption of pressing fans, the optimisation of air distribution and the possibility of having machines up to 6 metres in length, are the main physical characteristics of this product range.



#### Italy

Stefani dual flow unit with application in a "corridor" area for a storage cell in a logistics centre. The units are equipped with hot gas defrosting to keep down energy consumption.

Thanks to the dimensions of the machines, which arrive at up to 5 metres in length, with 5 fans, this product range is suitable for cooling very large areas.

To facilitate installation, the connections for the refrigerating cycle and the condensate discharges are always on the same side.



France

Creation of a cold store for cut flowers with application of a dedicated system, by the installer, for controlling temperature and humidity.

The dual flow evaporators of the new range offer a highly reliable system that, thanks to its perfect adherence to the ceiling, avoids depositing dirt in the rooms.



#### 19 Tunisia

Refrigeration in a 600 tonne storage centre for dates. The application envisages areas for delivery, corridors and storage, and a biological fumigation cell at -20°C.

The photo shows a cubic evaporator with an air flow of over 40 metres.





Storage cell in a meat processing company for the production of sausages and preserved meats. Commercial cubic air cooler suitable for aggressive environments with frame and grids in AISI 316L stainless steel.







#### Italy

F.I.C.O. Eataly World – structure of reference for the permanent dissemination of knowledge of Italian agri-food in the world. A farm factory, a place for food education, where Italian undertakings tell the story of the food supply chain process. Stefani supplies commercial evaporators for creating 4 working laboratories open to the public. Processing of: culatello, mortadella, salami and meats.

Park data: 80,000 m2 of surface area 3,000,000 visitors a year



Grecale - Industrial cubic evaporators.

Refrigeration system for preserving the packed product for distribution to caterers. LV-25°C cell with 7 industrial cubic evaporators with inspectionable water defrosting assembly. The solution allows an important reduction of defrosting time, of about -65%, thanks to the adoption of the kit of slide gates and textile sleeves for fans. Highly efficient system due to the absence of steam in the cell. Total installed power 350 kW with DT 7 °C with R507A. We thank our commercial partner for choosing the new solution with LV defrosting with water.



#### **2** Italy

Cubic cooler for cold rooms and dual discharge for corridor. 150 ton apple site in controlled atmosphere. Brine cooler refrigeration maximum capacity 3 MW with Ammonia-glycol solution. Total brine cooler energy consumption about 180 kW with EC fan solution.





Walnut cold storage room. Direct expansion evaporators **BOREA** working with R134a with capacity of:

- 60kW at +15°C for processing room (BOREA E 50-2 G 5.5 A 4D)

• 50kW at +4°C for cold room (BOREA E 50-3 E 5.5 E 4D)





#### England

Sushi preparation – 60kW refrigeration capacity. Dual discharge industrial cooler. Stainless steel design with very low noise working conditions.





**BLIZZARD** - Glicol units for apple cold storage with special fans in 90 meter long store and 30 meter high. Water defrost for easy welding drip tray





#### Italy

**OSTRO** - GDO Supermarket - commercial refrigeration (1800 kW - 50 dBA - DT15K).

Specifically design for high resistance in corrosive ambient. EC fan technology with very low refrigerant charge. Coil treated with cathodic coating 6000 hours resistence in salt fog.





**OSTRO** - Logistic center for beans and cereal preservation. Refrigeration power 500kW with cold room +15°. Used refrigerant R134a, V condensers at low charge 4kW/lt at DT10 and power consumption at 1,2% of the condensing capacity. Condenser with EC motors.



#### **Seychelles**

**OSTRO** - Process cooling for tunna fish production. The ambient required a copper-copper coil solution for a high corrosion resistance in seaside environment; low energy consumption by EC fan technology – total capacity 1.4MW.



Italy

**OSTRO** - Processing cooling for diary products. Solution with high performance in limited foot print thanks to the adiabatic PAD system. High reliability for coils and long lasting solution PAD made of metal. Unit equiped with fan regulation system and tap water supply at low pressure. Total capacity intalled 500 kW with consumption limited to 2.5 kW





#### Italy

**SCIROCCO** - Cooling of jackets and intercooler circuit of a motor for uninterruptible power supply. Total installed power 1MW – equipped with low-consumption EC motors solution – 0.37% lower installed power. SCIROCCO ensures compact footprint thanks to the adoption of a double circuit – jacket/ intercooler – positioned in series with the air. The machine is equipped with an electric panel wired up with different control signals requested by the customer. To ensure easy cleaning of the radiator, SCIROCCO is fitted with conveyors that can be opened with hydraulic pistons.





**OSTRO** - Chiller cooling for petrochemical processes

Total installed power 1.2 MW – equipped with low-consumption EC motors solution.

OSTRO ensures compact bulk thanks to the adoption of the LARGE version 2.8 m high.

The machine is designed to guarantee low pumping consumption with 25kPa and its circuits guarantee efficient drainability of the circuit.



