



**T E R I A K**  
**G R O U P**

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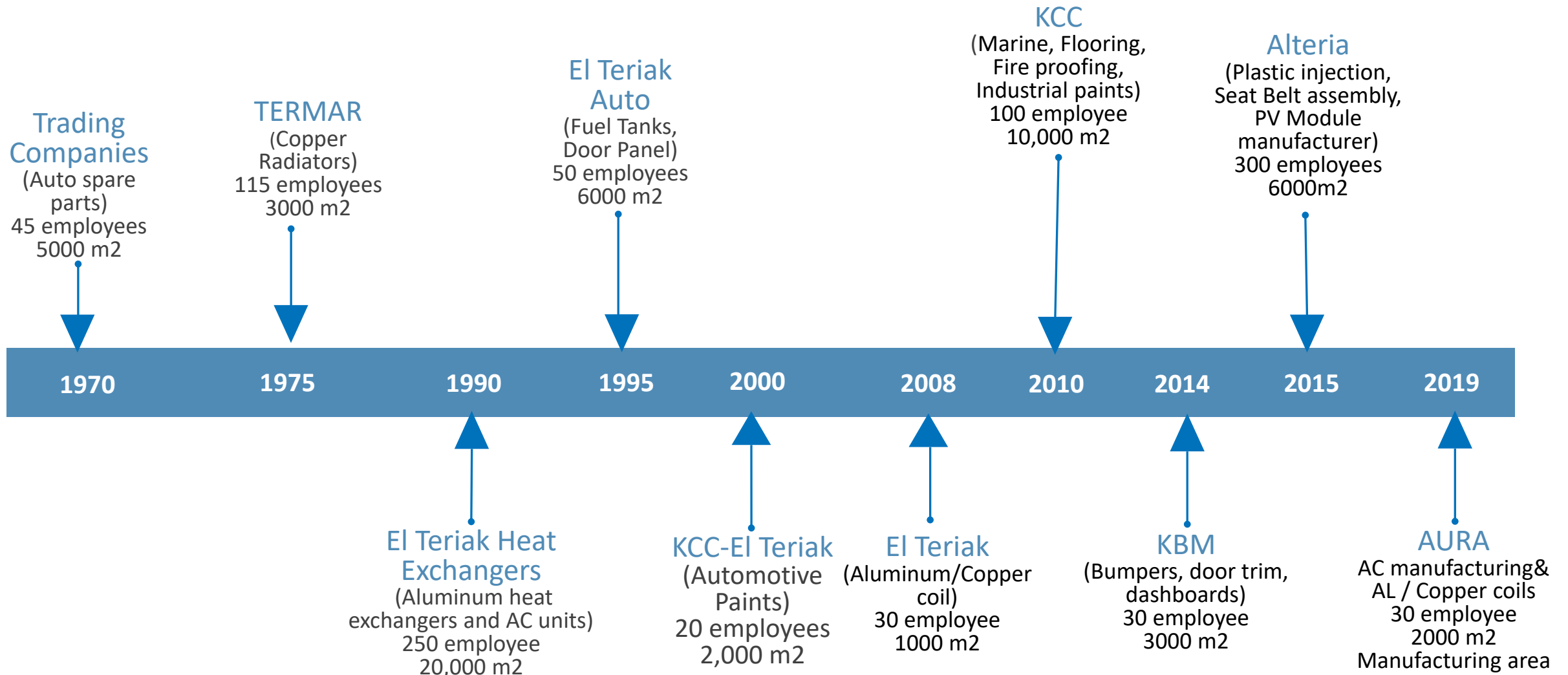
Credentials

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# About Us

## Timeline



## Teriak Group in brief

Teriak Group is a pioneer in the field of manufacturing automotive parts in Egypt and Middle East.

Establishment Year: 1975

Overall Investment: 80 Million Dollars

Annual Turnover: 130 Million Dollars

Total Area: Teriak Group's manufacturing facilities are composed of 6 plants that are located in 6th October City.

The total land area is 115,000 m<sup>2</sup> and an extension land of 30,000 m<sup>2</sup> for future expansions.

Labor: 1100 Employees

# About Us

## Business Units

The group covers a wide range of industries; El Teriak Heat exchangers for the production of high quality heat exchangers, El Teriak Paints for OEM automotive paints, Alteria Plastics for OEM plastic components injection, Ter-AutoSteel for steel stamping and chassis assembly. AutoSteel for steel stamping and chassis assembly, TERCAST for the production of aluminum ingots and die casting, and Sonnenstarke Solar for the production of solar panels and solar streetlights.

- Radiator, Condenser, Oil Cooler and Air Cooler
- HVAC
- Fuel Tanks
- Chassis Plant
- Paints
- Plastic Injection
- Sheet Metal processing and forming
- AC manufacturing & AL / Copper coils

# Our Clients

## Automotive sector



NISSAN



# Our Clients

## Cooling sector

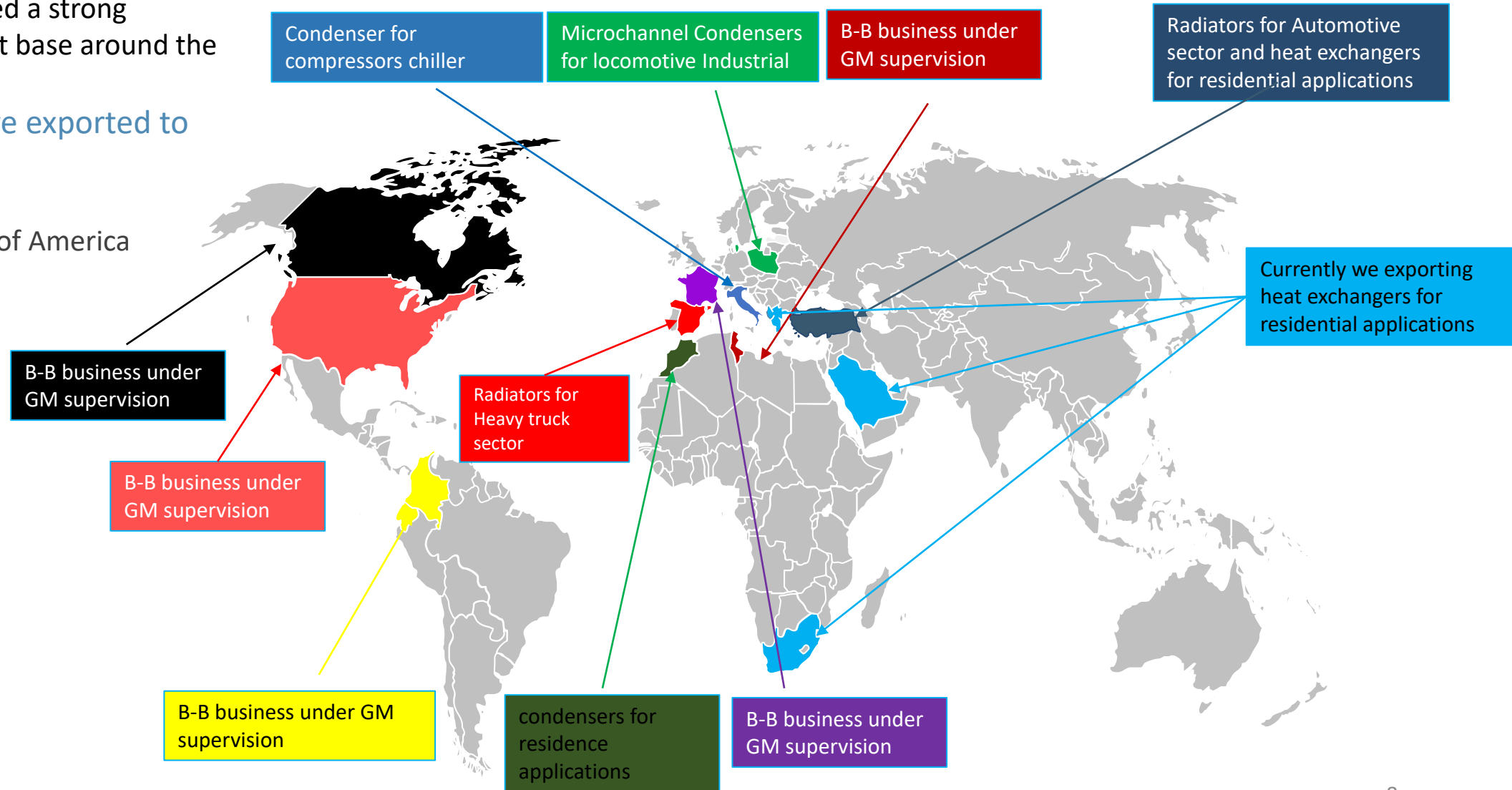


# Export markets

Over the past 30 years, Teriak Group has successfully created a strong international client base around the globe.

## Countries we have exported to

- Germany
- Canada
- United States of America
- Ecuador
- Colombia
- Spain
- France
- Denmark
- Italy
- Saudi Arabia
- Morocco
- Tunisia
- Greece
- South Africa
- Turkey





# Automotive Heat Exchangers

## Radiator

- Teriak Group supplies OEM Brass/aluminum radiators for trucks, buses, military vehicles and tractors.
- No louver fin radiators for heavy duty equipment and vehicles to withstand the harshest environments and the ease to clean.



Automotive



Tractors/Heavy  
duty trucks



Military/Industrial



Forklift/ Buses

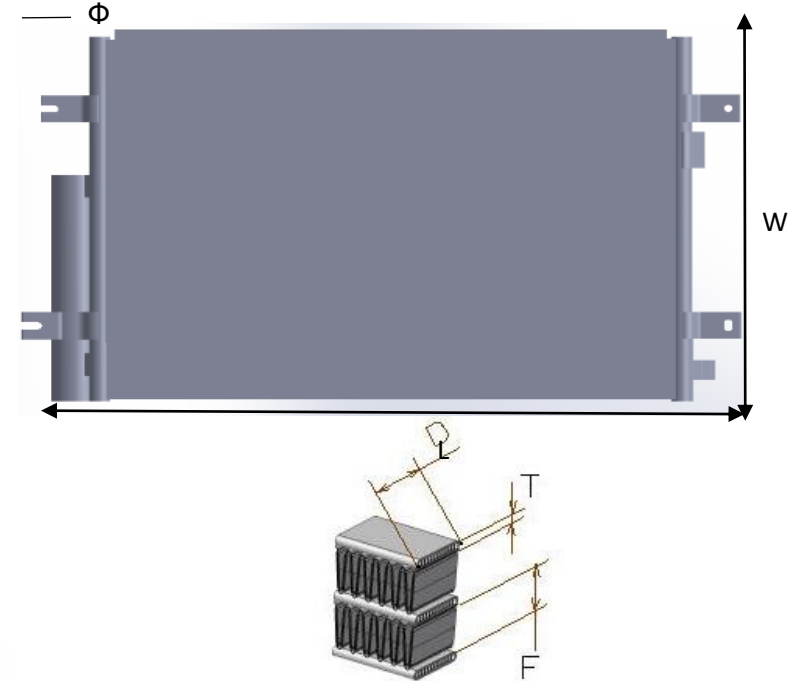
# Automotive Heat Exchangers

## Condenser

Teriak Groups design and replace a wide range of OEM automotive, locomotive and marine micro-channels condensers.

### Applications:

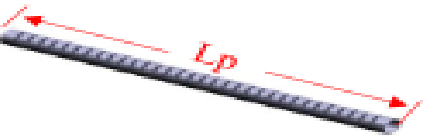
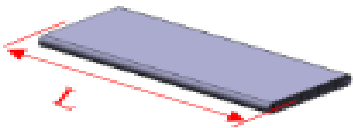
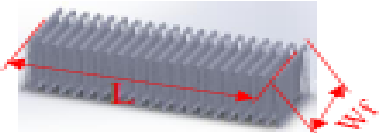
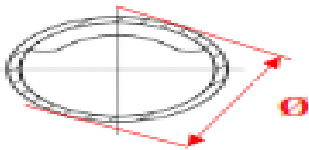
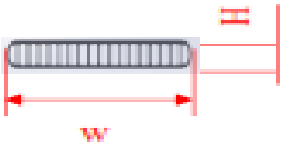

- Automotive
- Heavy duty
- Tractors
- Refrigerated containers
- Military
- Forklift
- Generators



# Micro-channel pattern

## Condenser

### Micro-channel specs & sizes

Header Pipe			Micro-channel tube		Fin		
							
							
Size	Max Lp	Ø	W	H	W	H	Length ( mm )
1	800	30	25.5	1.2	25.5	8.2	unit length
2	490	25	20	2	20	6	unit length
3	796.6	20	16	1.8	16	8	unit length
4	500	20	16	1.75	16	8.2	unit length
5	407	20	16	2	16	7.8	unit length
6	420	16	12	1.8	12	8	unit length
7	750	38	25.4	2	25.4	8	unit length
8	750	30	25.4	1.3	25.4	8	unit length

# Commercial and Industrial Heat Exchangers



# Commercial and Industrial Heat Exchangers

- Teriak Group is a leading of OEM automotive heat exchangers, HVAC systems and OEM components supplier to major auto makers and home appliances assemblers throughout the MENA region.
- With over than 30 years of experience Teriak Group delivers a product of excellence in a timely manner. With the support of the latest machinery, a rigid quality system and a state of the art laboratory, Teriak Group can design and replace a wide range of heat exchangers.

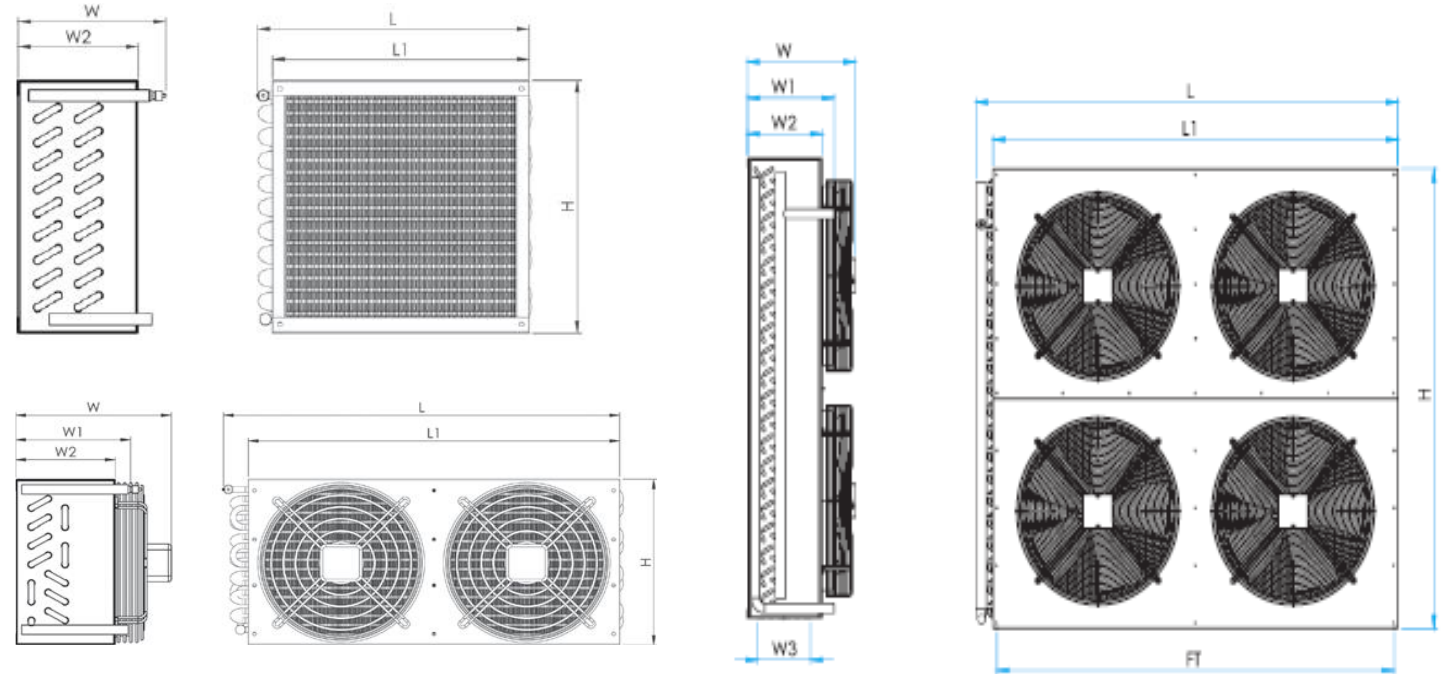




# Fin And Tube Heat Exchangers

## Capabilities

- Patten: Staggered
  - 25.4mm Tube Distance X 22mm Row Distance
- Copper Pipe:
  - $\frac{3}{8}$ inch, 5 mm, and 7 mm Outer Diameter
  - Thicknesses (0.28mm and 0.41mm)
- Corrugated Aluminum Fin:
  - Bare (Thicknesses 0.12mm, 0.15mm and 0.18mm)
  - Hydrophilic (Thicknesses 0.12mm and 0.18mm)
  - Golden Fin (0.12mm)
- Sheet Metal
  - Galvanized Steel (From 0.7mm up to 3mm Thk.)
  - Aluminum (1mm Thk.)
- Silver Brazing with Gas Flux
  - 0% Silver Brazing Rods
  - 5% Silver Brazing Rods
  - 20% Silver Brazing Rods



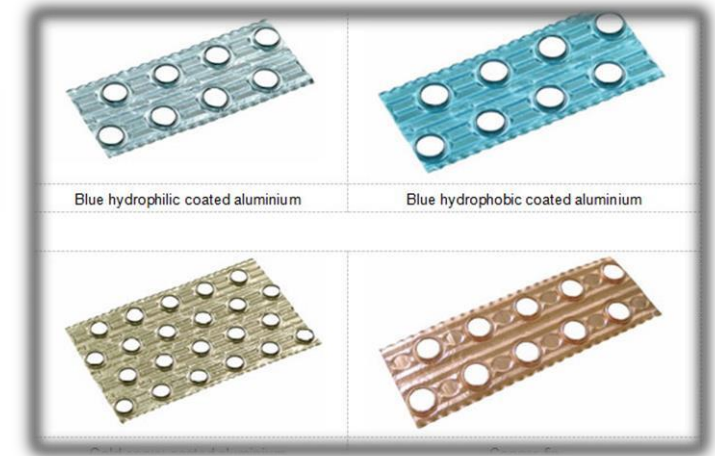
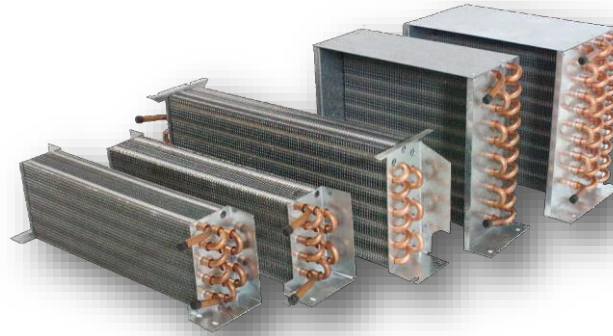
	Minimum	Maximum
No. Of Rows	2	12
Core Length	15cm	2m
Fins Per Inch	6FPI	12FPI

# Copper/ Aluminum Heat Exchangers

## Condenser and Evaporator coils

Teriak Group supplies condenser and evaporator coils to major air-conditioning and refrigeration companies.

Our fin and tube condensers and evaporators are known for their reliability and quality.



- Pipes specifications:

**Material:** Round copper pipes

**Size:** 9.52 mm 3/8", 5 mm, and 7 mm diameter

**Types:** inner groove or standard

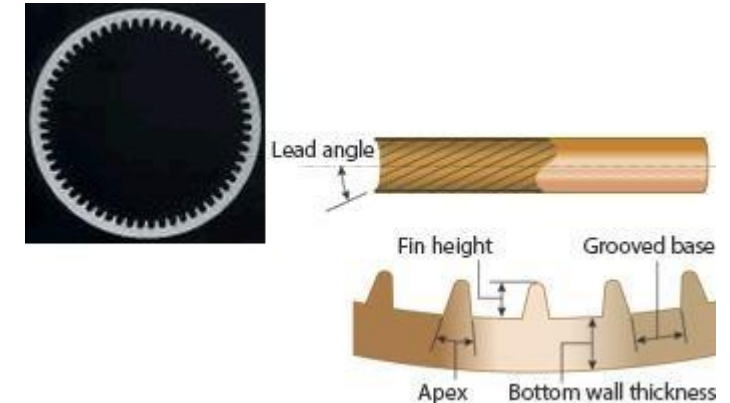
- Fins specifications:

**Material:** Aluminum

**Size:** according to client

**Types:** Corrugated, louvered or flat

**Treatment options:** Hydrophilic or standard



# Copper/ Aluminum Heat Exchangers

## Condenser coil for HVAC & R

### Tubes:

- Copper
- 9.52 mm 3/8", 5 mm, and 7 mm
- Smooth, thick-walled and inner Grooved
- Connection to several circuits available

### Fins:

- Aluminum
- Hydrophilic
- Golden Al

### Applications:

- Remote condensers
- Condensing units
- Close control AC
- Showcases
- Display cases
- Bottle coolers
- Milk tanks
- Transportation AC and refrigeration



### Offered Solutions:

- Straight coils integrated fan shrouds for axial fans
- Pre-coated epoxy (gold) or blue (hydrophilic) fin material is available
- Different approach of plain, corrugated or louvered fin profiles
- Smooth tube, inner grooved tube for condensing application
- An optimum solution of the system condenser coil - fan can be achieved through our selection program (Unilab).



# Copper/ Aluminum Heat Exchangers

## Evaporator coil for HVAC & R

### Tubes:

- Copper
- 9.52 mm 3/8", 5 mm, and 7mm
- Smooth, thick-walled and inner Grooved
- Connection to several circuits available

### Fins:

- Aluminum
- Hydrophilic
- Golden AL

### Applications:

- Close control AC
- Rooftops
- Air-handling units
- Fan-coils
- Ducted systems
- Air curtains and transportation AC
- Bottle coolers
- Chillers



### Offered Solutions:

- Straight coils integrated fan shrouds for axial and centrifugal fans
- Smooth or inner grooved tube with wall different diameters and thickness
- Different approach of plain, corrugated or louvered fin profiles
- Pre-coated epoxy (gold) or blue (hydrophilic) fin material is available
- Up to of 4.1 mm fin spacing
- An optimum solution of the system of evaporator coil-fan can be achieved through our selection program (Unilab), including the design of the refrigerant distributor

# Copper/ Aluminum Heat Exchangers

## Industrial coil

### Tubes:

- Copper
- 9.52 mm 3/8"
- Smooth, thick-walled and inner Grooved
- Connection to several circuits available
- Up to 15 m long fin surface

### Fins:

- Aluminum
- Hydrophilic
- Epoxy coated

### Applications:

- Oil coolers for hydraulic systems
- Water and liquid coolers for industry and power plants etc.

### Casing Material:

- Thick. 1 – 3 mm
- Galvanized steel
- Aluminum
- Stainless steel      - Copper



# Copper/ Aluminum Heat Exchangers

## Water and Glycol coil

### Tubes:

- Copper
- 9.52 mm 3/8"
- Smooth, thick-walled and inner Grooved
- Connection to several circuits available
- Up to 15 m long fin surface

### Fins:

- Aluminum
- Hydrophilic
- Epoxy coated

### End Fittings:

- A wide range of end fittings (male/female)
- Brass or steel design
- Union nut
- Flanges

### Applications:

- Unit heaters
- Fan coils
- Convectors
- Air handling units
- Ducted systems
- Cold beams
- Chillers
- Glycol heat recuperation circuits etc.
- 

### Offered Solution:

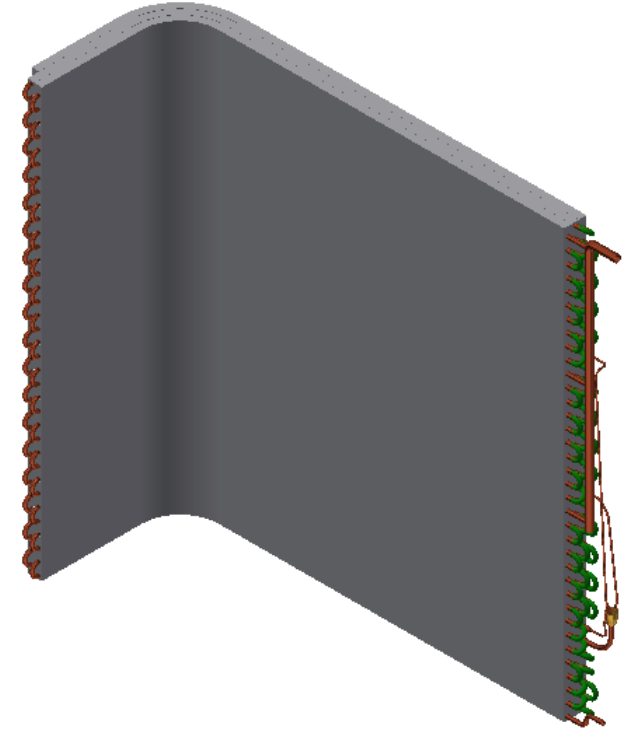
- Vertical, horizontal or inclined positions of the connection
- Coils with horizontal or vertical headers
- The standard circuiting ensures correct drain and purge
- Our selection program (Unilab) allows the customer to design
- The correct circuiting and selection the optimum connection size



# Fin And Tube Heat Exchangers For Residential AC

## Capabilities

- Patten: Staggered
  - $\Phi 7\text{mm}$ , 21mm Tube Distance X 13.37mm Row Distance
  - $\Phi 5\text{mm}$ , 19.5mm Tube Distance X 11.6mm Row Distance
- Copper Pipe:
  - Inner grooved 7mm Outer Diameter
  - Inner grooved 5mm Outer Diameter
- Corrugated Aluminum Fin:
  - Golden Louvered Fin (0.095mm)



	7mm	5mm
No. Of Rows	3 (max)	4(max)
Core Length	160 cm	160 cm
Fins Per Inch	17~23	17~19.5

# Buses air condition

We have a wide range of buses air conditioning systems ranging from minibuses (7 seats) up to big coach buses.

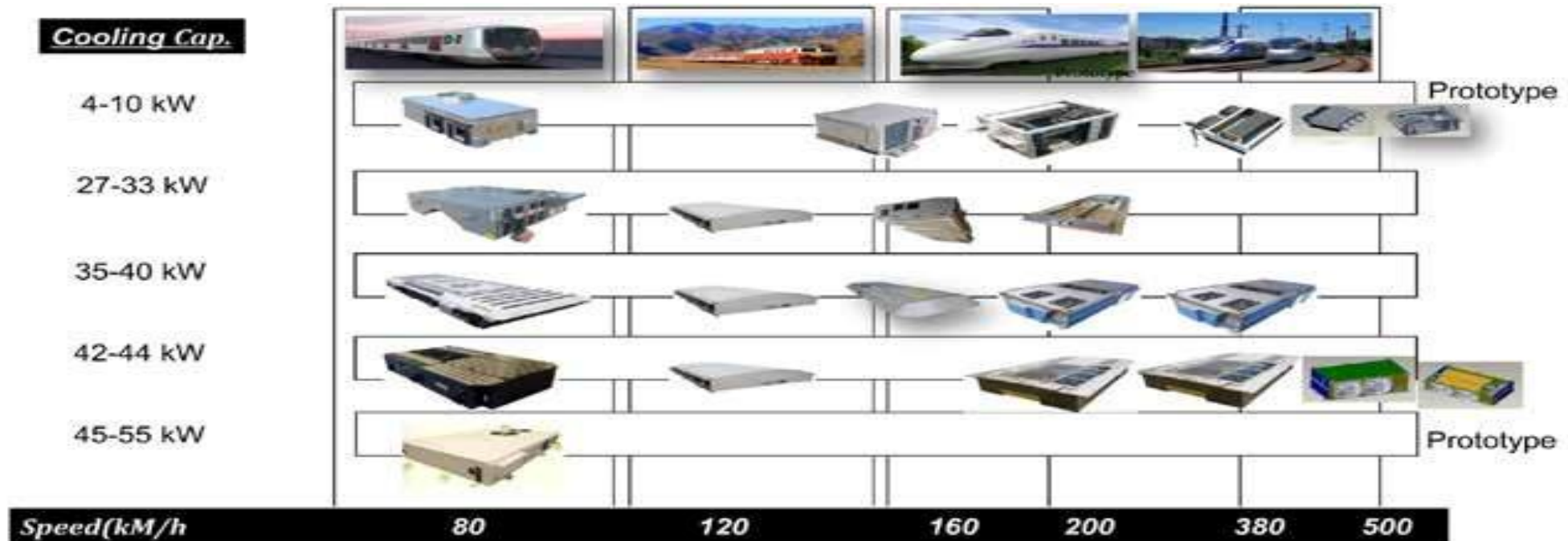




# Trains air conditioning systems

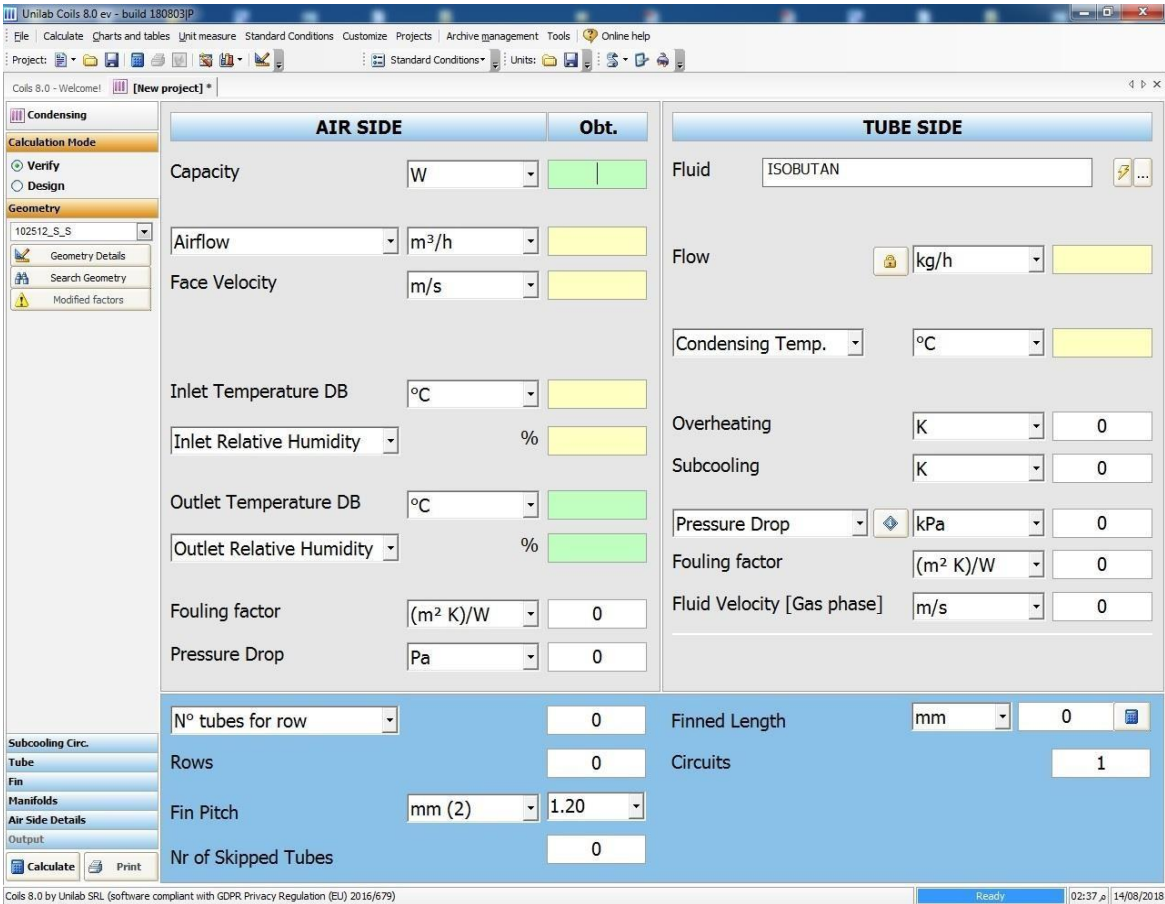
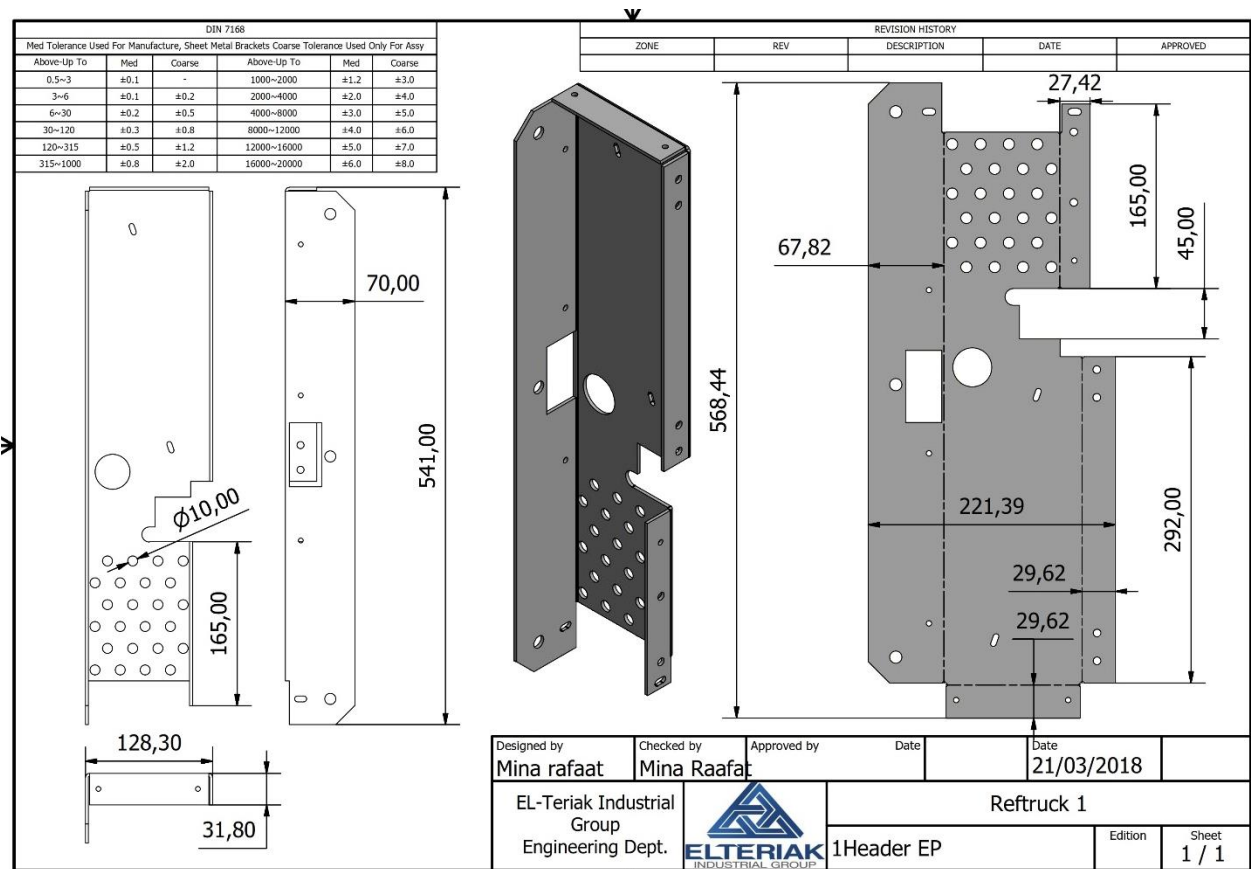
## our scope

- 1- High speed trains
- 2- Mainline Coach
- 3- Locomotive



# Cooling solution

Teriak group has the ability to design and replace heat exchangers using the latest design software (Autodesk Inventor & Unilab Coils & Micro-channel)



# Facilities

## Component and Accessories manufacturing

Steel metal forming and manufacturing

Fin machines

Tube machine

Plastic injection



## Core Assembly

Heater core assembly

Semi-automatic radiator core assembly

Condenser core assembly

Automatic core builder machines





# Facilities

## Three Nocolok Brazing lines

- Degreasing
- Water rinsing
- De-mineralized water line
- Fluxing
- Dehydration furnace
- Brazing furnace

## Sub Assembly

- Plastic injection machine
- Automatic radiator crimping machine
- Condenser argon welding
- Robot Argon Welding



# Research and Development

Our labs are equipped with the latest technology to analyze and validate the design and performance of any heat exchanger product.

With 20 design engineers we are capable of designing according to clients' standards and specifications with higher performance and efficiency at lower cost.

**Heat Exchanger capacity and performance analysis:** (Unilab MCHE, Unilab professional)

## Performance test:

- Overall performance
- Heat rejection
- Pressure drop

**Pressure cycle test:** Heat fatigue

**Salt spray test:** Corrosion

**Microscopic Analysis:** Brazing quality

**Burst test:** Determine pressure threshold

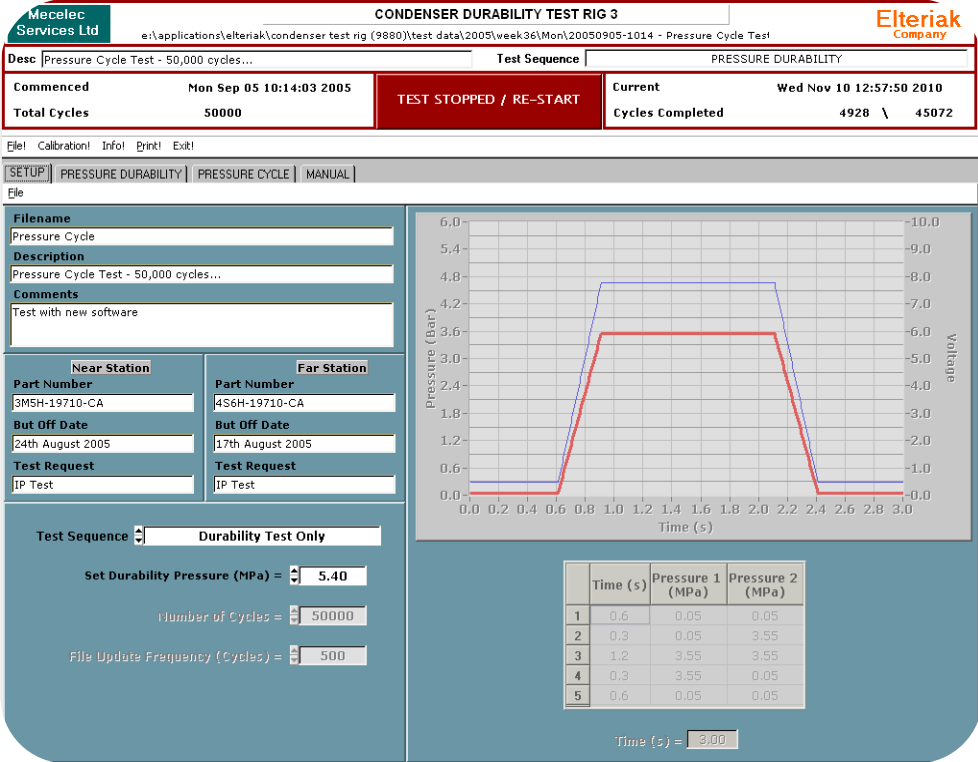
**CMM machine:** Dimension analysis test (only radiators)

**Vibration test:** Durability of product and connecting pipes

**Helium vacuum chamber:** Leakage



# Research and Development



# Research and Development





# Research and Development



# Research and Development

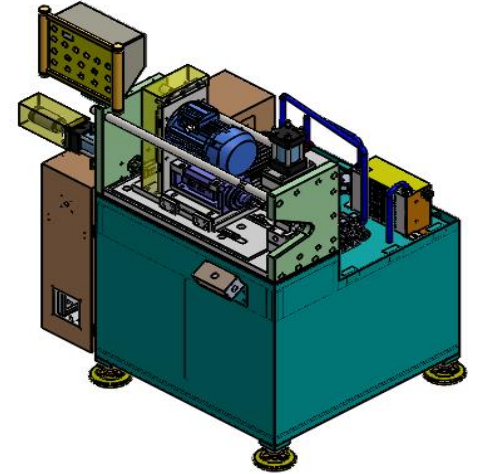
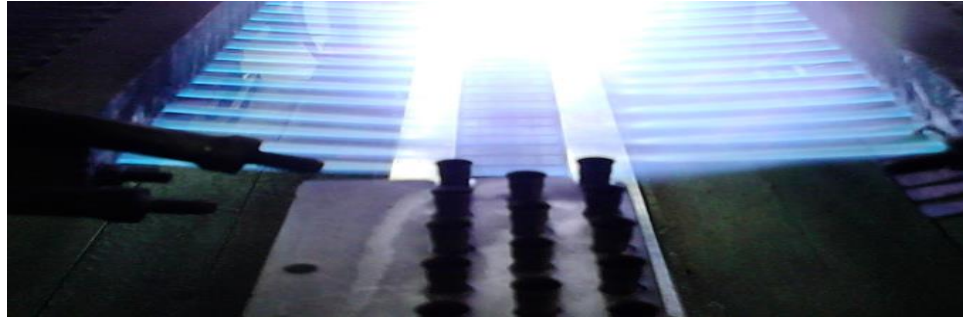




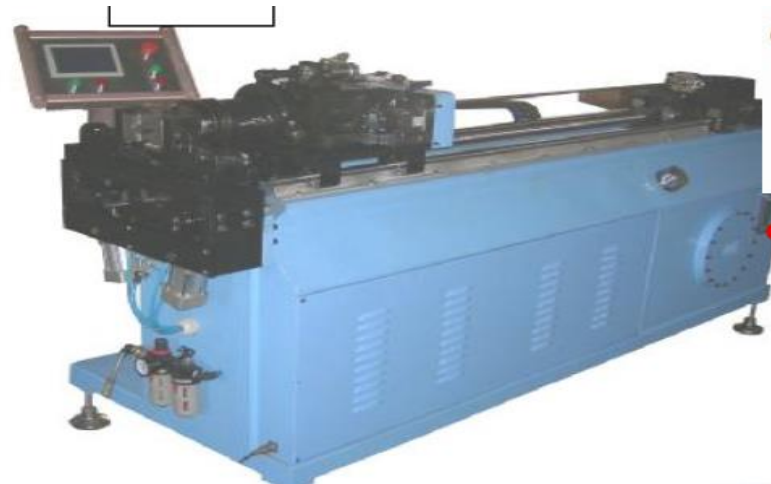
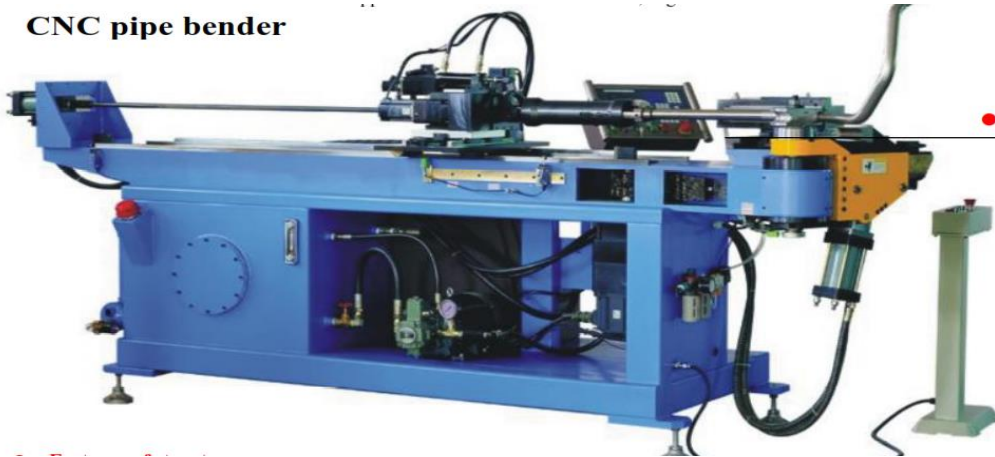
# New Investments

Teriak group has invested in new machines to expand & improve our 3/8 coil line, including the followings:

- CNC Flute punching
- CNC Tube bender
- Pipe End forming machine
- New Return bend line
- Straightening & cutting machine
- Auto Brazzer & Dryer



**CNC pipe bender**



**FINISHED PRODUCT**

# TAA & Licenses

- Teriak Group has been working with several international OEM companies under their technical assistance and license agreements.
- This has facilitated sharing extensive knowledge and understanding of the products. Moreover, it made Teriak Group up-to-date and engaged in the latest developments within the heat exchange industry worldwide.



Trison Thermal System USA (1996)  
HVAC and CRFM (Opel Vectra B, Astra T3000)



Japan & Thailand (2011/2016)  
CRFM (Toyota worldwide)



Korea (1995/ 2007/2016)  
HVAC and CRFM (Hyundai)



Japan & Thailand (2013)  
Condenser N17



USA (1994)  
CRFM (Jeep Cherokee KJ)



Korea 2007/2013  
Condenser/ Radiator/ HVAC Lanos  
Condenser/ Radiator Aveo



Germany (1995)  
CRFM (Opel Corsa S4300 ,BMW )



France & Japan & USA (1993) / (2006)  
HVAC (Peugeot 505) / CRFM ( Chrysler )





TER AUTO STEEL

## About Us

Ter-AutoSteel was established by Teriak Group in 1998 with a steel stamping facility as well as a body and chassis assembly lines. The facility currently produces steel body parts, and assembles a wide range of trucks, passenger and commercial vehicles for the top companies in Egypt.

1. Chassis assembly line
2. Body assembly line
3. Metal stamping for several body parts like:

- Fuel tanks
- Doors
- Roof panels
- Side panels
- Steel bumpers
- Trunk lid



# Chassis Assembly line

## 1- FOTON

Chassis



## 2- General Motors Egypt (GME)

Left body side Optra

Right body side Optra





# TER AUTO STEEL

## Chassis assembly line



# Automotive Fuel Tanks

# Automotive Fuel tanks

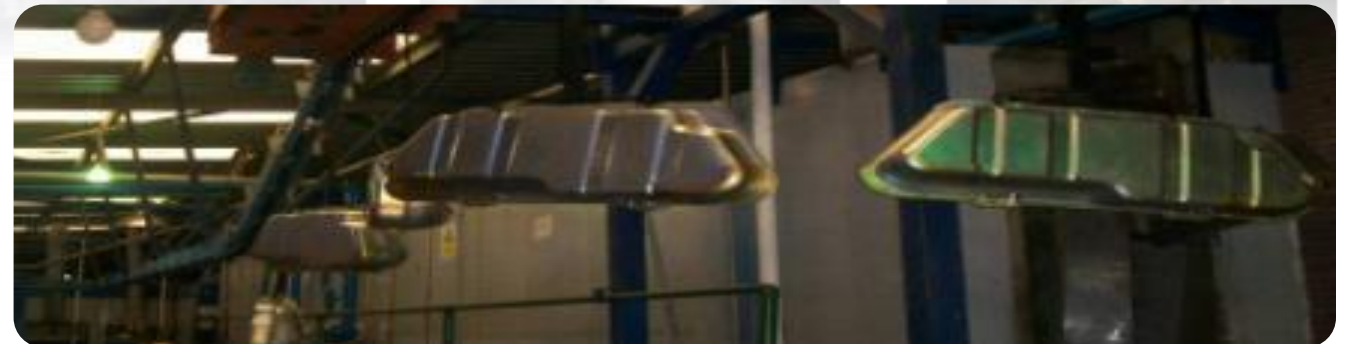
## A-Preassembly Line

- Projection Welding
- Spot Welding
- Tin Welding
- Seam Welding



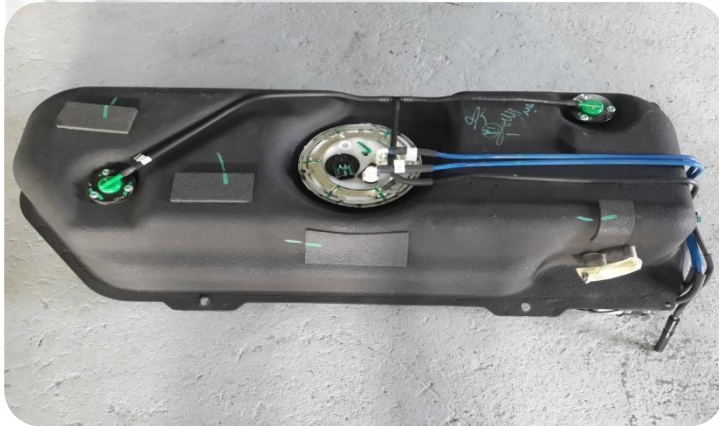
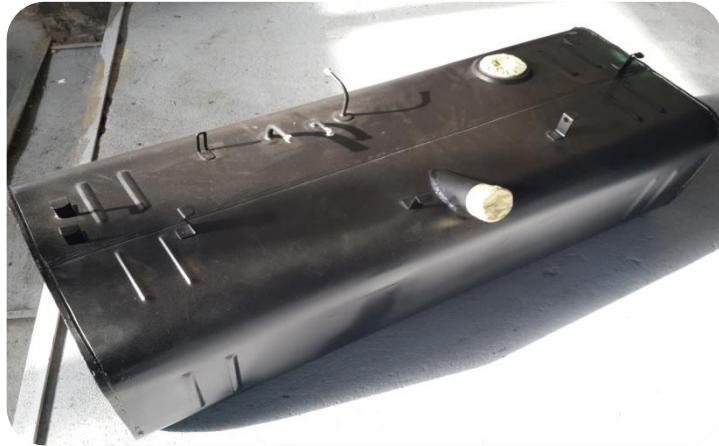
## B- Testing and Painting

- Water Leak Test
- Electrostatic Paint line





# Automotive Fuel tanks



# **ALTERIA PLASTIC INJECTION**



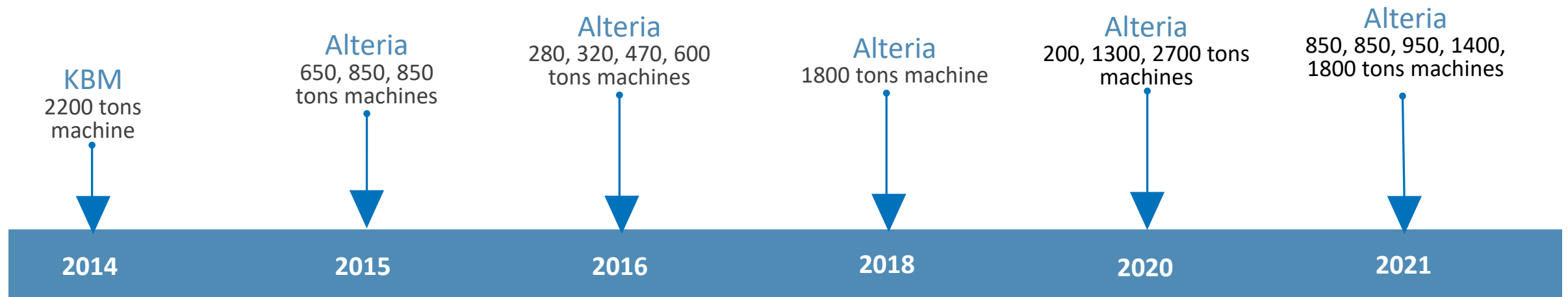
## About Us

Alteria Plastics is an OEM supplier of plastic components to major automakers and home appliance companies such as Hyundai, Nissan, GM, LG and Samsung.

Alteria covers a wide range of products from car bumpers and AC unit casings, to industrial paint and chemical containers.

This is achieved with the help of our R&D, integration of the latest technology and robotics as well as our highly skilled personnel with a zero defect mindset.

## Timeline



# Alteria Plastics

Alteria is a fully automated plastic manufacturing company.

Location: [Engineering Square](#)

Overall investment: [30 million dollars](#)

Total Area: [20,000 m2](#)

Used Area: [4500 m2](#)



The facility is fully ventilated and is dust free. All entrances and exits are double doors to prevent an inflow of dust.

Alteria Plastics facility is equipped with the latest plastic injection machinery with an injection range: 200 tons to 2,700 tons.

Our facility is also equipped with:

- Handling robots
- Steam Unit (Gloss)
- Hot Runners
- Dry Hopper
- In-Mould-Labeling (IML)
- Assembly line



## Injection machines

No.	Machine	Tonnage	No.	Machine	Tonnage
1	Woojin	200	7	DL 650S-Woojn	650
2	MA 2800 II / 1350	280	8	DL 850S -Woojin	850
3	MA 3200 II	320	9	DL 850S -Woiojn	850
4	MA 4700 II / 2950	470	10	Woojin	1300
5	VR-550 – Vector	550	11	DL 1800 A5	1800
6	MA 6000 II /4500	600	12	TRX2200	2200
New Machines					
1	Wintec	850	4	Wintec	1400
2	Wintec	850	5	Wintec	1800
3	Wintec	950	6	Wintec	2400

## Mold maintenance machines

No.	Machine type	EA
1	CNC Milling 3-axis	4
2	Wire cut	1
3	Lathe	1
4	Manual surface grinding	1
5	Manual radial drilling	1
6	Laser welding	1

## Products

### Automotive sector:

- Door Trims
- Wheel Covers
- Bumpers
- Radiator Tanks
- Battery Base
- Dashboards
- Fan shrouds

### Home Appliances:

- AC body case
- LCD
  - Screens
  - Base
- Washing machines
  - Base
  - Detergent drawer
  - Control knobs

### Commercial:

- Food packaging
- Fruits and Vegetables baskets
- Cosmetics packaging
- Shopping carts and baskets

### Industrial Sector:

- Paint containers
- Industrial chemicals
- Plastic pallets
- Storage boxes
- Rubbish bins
- Bottle handling boxes
- Toilet Seats



# Alteria Plastics

## Interior and Exterior Automotive Parts

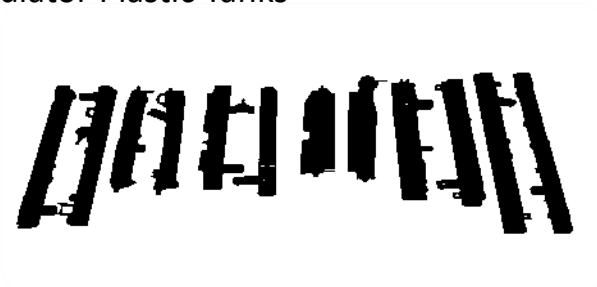
1- Fan shroud with motor assembly



2- Wheel Covers



3- Radiator Plastic Tanks



4- Battery Base



5- Doors Trim



6- Bumpers



7- Radiator grill



# Alteria Plastics

## TV Parts

1- Cover Rear



2- Stand Neck



3- Cover Stand



4- Cover Stand base



5- Guide Stand Neck



6- CFB



# Alteria Plastics

## TV Parts

7- PTC



8- Decoration



9- Cover Terminal Side



10- Rubber



# Alteria Plastics

## Food and Painting Bucket Parts

1- Paint Bucket with IML



## Home Appliance Parts

1- Washing machine front and rear parrel



# Our Clients



**TOSHIBA**



**bticino**



# Quality Systems

EL-TERIAK applies the standards of

IATF 16949:2016 Quality Management System  
ISO 14001:2004 Environmental Management System  
ISO 18001:2007 Health and Safety Management system

Best Supplier from TOYOTO Corporation for year 2012 & 2017  
Supplier Quality Excellence Award from GM Global for year 2013  
Supplier Quality Excellence Award from GM Global for year 2015  
Supplier Quality Excellence Award from GM Global for year 2016  
Best Supplier from TOYOTO Corporation for year 2017  
Supplier Quality Excellence Award from GM Global for year 2017  
Supplier Quality Excellence Award from GM Global for year 2018

Alliance Supplier Evaluation Standard (ASES) Nissan Corporation  
Quality System Basics (QSB) General Motors Cooperation  
Built In Quality System (BIQS) General Motors  
On-site supplier assessment (OSA) Johnson Control  
Fiat Chrysler audit (FCA) Daimler Chrysler  
Suzuki Audit Suzuki  
BMW audit BMW  
New Supplier Assessment (NSA) PSA Groupe Peugeot  
Supplier Health Check (SHC) Nissan Corporation

**THANK YOU**