



*There are no secrets to success.  
It is the result of preparation, hard work, and  
learning from failure.*

Colin Powell

# [ About Company ]

Fonderia Taroni, founded in 1974, boasts an accomplished tradition in aluminium die gravity casting (permanent mold casting).

The team works in a very **smart way** with the aim of finding solutions for customers. Much of our consultancy is aimed at **reducing production costs** and **shortening lead times** to **speed up time to market**.

The strong specialization for **medical device, instrument transformer, automotive and robotics** has led the company to be able to cast "**gigagastings**" with dimensions ranging from **1000mm (3.3 feet) to 1500 mm (5 feet)** on all dimensions (x,y,z) reaching a maximum of **200 Kg (440 lbs)** of aluminum casting.

Fonderia Taroni has achieved certification of its Management System in accordance with three International standards:  
**ISO 9001 - Quality Management,**  
**ISO 14001 - Environmental management,**  
**ISO 13485 - Medical devices.**

The company makes several investments in technology, in particular in recent years have been made:

- 3 plants with casting robots**
- 4 automatic melting furnaces**
- 5 CNC machining centers**
- 1 x-ray machine and a 7-axis 3D measuring arm in the quality laboratory**
- 4 melting furnaces.**

Besides, we also internally follow the 3D design of the mold together with the customer, and constantly supervise the external manufacturing. The quality of the product is guaranteed by our analysis lab, which is provided with a spectrometer, an x-ray machine, and density scale.



## € 13 m

Company Turnover

## 60%

of turnover comes from foreign customers

## 80

Employees

## 50

Years old



## [ Mission ]

Provide castings of light alloys of aluminum with technical / mechanical and aesthetic function. Design and manufacture equipment and molds for gravity flows.

## [ Vision ]

To be a reference point for global companies becoming the sole partner able to develop the idea of the customer to the finished product with a 360 ° service in partnership with other qualified companies.

# [ History and Future ]

From the roots to tomorrow



**Roberto Taroni**  
Founder of Fonderia Taroni  
(1974)



## 1974

**FonderiaTaroni**  
Was founded by Roberto Taroni, the production area was a stable



## 1981

**First Facility**  
From the stable to the first technical facility



## 1990

**New Technologies**  
First automatic casting machine  
First electrical furnace



## 1995

**New facilities**  
The new production area covers 1600 m² and offices 400 m²



## 2001

**Robots arrives**  
The company acquire two anthropomorphic casting robots and the related computerized plants



## 2005

**Quality System**  
Quality System is certified according to standard UNI EN ISO 9001 by the certification authority DNV



## 2011

**X Ray Machine**  
This machine allow to do x-rays to the casting



## 2012

**Full Service**  
Full service including assembly  
Thanks to partner Company



## 2014

**Big casting machine**  
Big mold multi cavity



## 2016

**Fonderia Taroni USA**  
Technical and Sales office with an Assembly line/storage facility site in Miami



## 2018

**Facilities expansion**  
The new production area will covers 2600 m² and offices 650 m²



## 2019

**New production line**  
The company will acquires another anthropomorphic casting robot and the related computerized plants



## 2021

**Earthmoving machinery**  
Fonderia Taroni will produce aluminum castings for the market of earthmoving machines



## 2023

**New Plant**  
Over 10.000 m² (167.000 Sq. ft.) of production line. Foundry, machining and storage facilities

# FUTURE



**Foundation Anniversary**  
1974 - 2024



## 2024

**IATF 16949**  
Quality Management System for Automotive

1970

1980

1990

2000

2010

2020



# [ SUSTAINABILITY ]

## THE ROAD TO GREEN FOUNDRY

### 2015

- > Natural gas consumption monitoring
- > CO2 emissions monitoring

### 2017

- > Certification **ISO 14001** Environmental Management System

### 2020

- > **50 kW** solar system installation
- > Replacement of natural gas furnaces with **electric furnaces**

### 2023

- > **100% electric** air-conditioning system
- > **180 kW** solar system
- > Analysis of **energy efficiency** with heat recovery

### 2024

- > **ISO 50001** certification Energy Management Systems
- > Certification **Carbon Footprint**
- > Replacement of furnaces with new **energy-efficient** ones

*Our contribution  
to a sustainable  
economy with low  
environmental  
impact*

# 53%

ELECTRICITY USED FROM  
RENEWABLE SOURCES

# 90%

OF WASTE SENT  
TO RECOVERY ACTIVITIES

# -10%

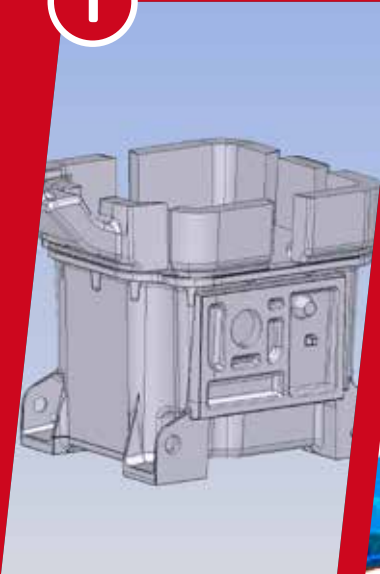
REDUCTION OF CO2 IN THE  
ATMOSPHERE COMPARED  
TO 2015



# [ Engineering ]

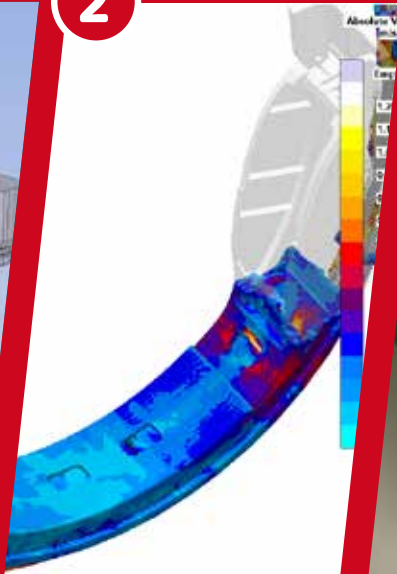
The phases of the industrialization process of the customer's product

1



**Co-design**

2



**Casting  
Simulation**

3



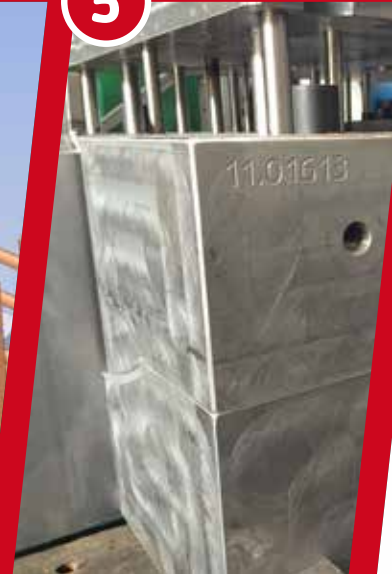
**Rapid  
Protocasting**

4



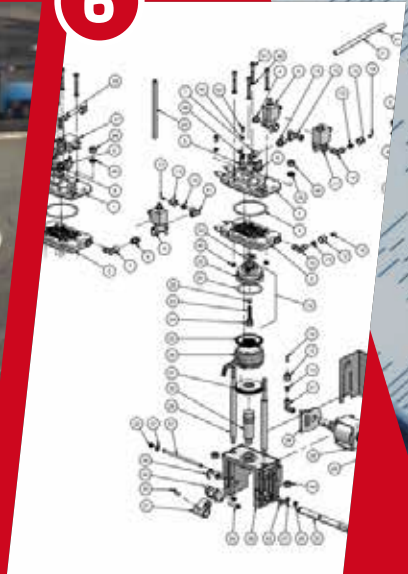
**Mold design**

5



**Mold  
realization**

6



**Bill of material  
for the assembly**

# Solutions to SAVE YOUR TIME

## [ Services ]

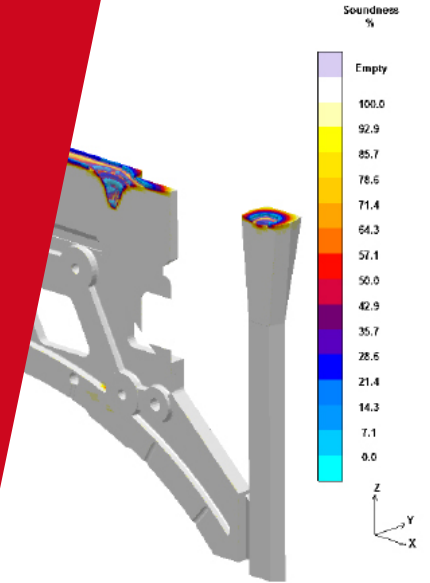
- MOLD DESIGN
- CASTING SIMULATION
- MOLD IMPLEMENTATION
- RAPID PROTOCASTING
- CASTING
- LABORATORY CONTROL
- FINISHING
- THERMICAL TREATMENTS
- MACHINING
- PAINTING
- ASSEMBLY
- LOGISTICS

## Casting Simulation

The casting simulation is a tool used in foundries to monitor the filling process of the aluminum into the mold, so check filling and solidification of castings and identify any critical areas. The simulation of the aluminum casting is achieved thanks to a software that performs a mathematical simulation of what happens during the process of filling and solidification within the mold steel, so as to check for any issues before moving to the machining of the mold.

### Benefits:

- Reduce time and cost of production
- Compliance with quality standards required
- Reduction of non-compliance
- Optimization of feed channels
- Evidence of stagnation or entrapped air
- Evidence of any "porosity"



## Rapid Protocasting

From the **3D project** of the customer is realized a sand mold which is cast the **aluminum alloy** desired.

**TIME:** This technique ensures fast implementation ranging from 7 to 14 days, depending on the complexity of the project

**MATERIAL:** It uses the same aluminum alloy melt in series

**TREATMENT:** You can also do mechanical tooling on the prototype as well as leak testing and other pre-processing, verifying the quality of the project.

### Benefits :

- Quickly evaluate metal part design
- Saving time and money
- Produce metal prototypes in almost any metal material
- Allow testing of the part in the actual production materials
- Produce metal parts without expensive tooling
- Reduce sampling time
- Reduce lead time





# [ Case Study ]

## Aluminium casting for aftermarket truck and earthmoving machines components







### The Challenges





- Cost of finish part competitive with "low cost" Country competitors
- Maintain the quality of European production
- Metal treatment must provide a well modified structure for mechanical properties as well as a melt free from inclusions and oxides
- Filling must be turbulence free to avoid creating fresh oxides in the die cavity
- Feeding must be efficient to avoid shrinkage

### Technical Data Sheet

#### GEAR BOX

-  **Alloy:** Alloy 46400, T6
-  **Casting weight :** 62 Kg (one piece)
-  **Pouring weight:** 85 Kg - Yield: 56%
-  **Moulding Process:** Gravity die casting

#### TRANSMISSION

-  **Alloy:** Alloy 43300, T6
-  **Casting weight :** 44 Kg (one piece)
-  **Pouring weight:** 58 Kg - Yield: 56%
-  **Moulding Process:** Gravity die casting

## PLUS FOR THE CUSTOMERS

- ✓ **CHANGE**  
We chose to move from sand casting to gravity casting.
- ✓ **TECH**  
We are able to make small and large size castings.
- ✓ **FLEXIBILITY**  
We can produce castings in lots of low (100 pieces per lot) and high quantities.
- ✓ **KNOWLEDGE**  
The mechanical characteristics of aluminum improve the behavior and the functionality of the components.
- ✓ **CO-DESIGN**  
Specifications, product use, costs, quality, quantity are analysed with the customer. We also carry out an approximate analysis of the costs of the tools needed.
- ✓ **SIMULATION**  
The casting simulation is a tool used in foundries to monitor the filling process of the aluminum into the mold, so check filling and solidification of castings and identify any critical areas.

### The road to finished products





# [ Case Study ]

## GIGACASTING FOR WAREHOUSE ROBOTICS



### Technical Data Sheet



#### Dimensions

1000x800x30 mm  
3,3x2,6x1 ft



#### Casting weight

120 Kg (one piece)  
246 lb (one piece)



#### Aluminum alloy

42100



#### Pouring weight

145 Kg - Yield: 56%  
319 lb - Yield: 56%



#### Moulding Process

Gravity die casting



## PLUS FOR THE CUSTOMERS

### ✓ **SPEED**

Important lead time reduction.  
Mold making, sampling,  
production and machining.

### ✓ **TECH**

We are able to cast  
“gigacastings” with dimensions  
ranging from 1000mm (3.3  
feet) to 1500 mm (5 feet) on all  
dimensions (x,y,z) reaching a  
maximum of 200 Kg (440 lbs) of  
aluminum casting.

### ✓ **COSTS REDUCTION**

Our consultancy is aimed at  
studying all the solutions to  
reduce production costs thanks  
to the technology installed and  
the experience in the sector.

### ✓ **FLEXIBILITY**

We can produce castings in lots  
of low (100 pieces per lot) and  
high quantities.

### ✓ **SIMULATION**

The casting simulation is a tool  
used in foundries to monitor the  
filling process of the aluminum  
into the mold, so check filling  
and solidification of castings  
and identify any critical areas.





# [ Case Study ]



## Rapid Protocasting with disposable mold for the Medical sector

From the 3D project of the customer is realized a sand mold which is cast the aluminum alloy desired.



### Time

This technique ensures fast implementation ranging from 7 to 14 days, depending on the complexity of the project

### Material

It uses the same aluminum alloy melt in series

### Treatment

You can also do mechanical tooling on the prototype as well as leak testing and other pre-processing, verifying the quality of the project.

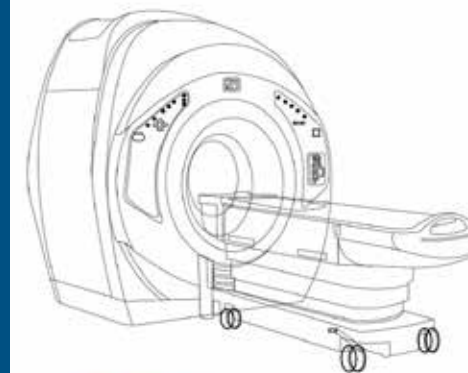


## Benefits for the research and development department

- Quickly evaluate metal part design
- Saving time and money
- Produce metal prototypes in almost any metal material
- Allow testing of the part in the actual production materials
- Produce metal parts without expensive tooling
- Reduce sampling time
- Reduce lead time

## Protocasting Process

- Analysis of 3D mathematical model (feasibility study, construction drafts casting systems and simulation)
- Modeling of tool with parametric 3D CAD
- Printing samples with 3D printing machine (high-speed complex shapes are obtained, even in the undercut, made in sand croning that can be employed in the foundry)
- Casting, deburring and sandblasting
- Any subsequent machining



# [ Case Study ]



## Trolley for Medical devices

A light alloy trolley was designed and made, going beyond the techniques used until now and reaching in such a way the required standards of lightness, payload, and reliability. All this at a competitive price and in a very short time.

### Customer Requirements

- Reduce the risk on the initial investment
- Quickly exhibiting in fairs
- Using the sample for thermal tests on the product
- Cheap initial investment
- Reduce the times of production

### Solution

- Customer-supplier co-design appointed to a die-casting series production
- Aluminium billet casting samples, final painting inclusive in 2 weeks
- Mechanical and technical tests
- Molds realization, low-cost initial investment to test the market, and prospective chance of changing technology without variation of price

### TIME SAVED

2 months as regards design

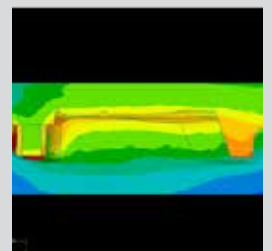
### MONEY SAVED

20% on the total cost of the project

### Benefit for the customer

- Significant reduction of the time required to develop a new design
- A better service is offered
- Quick increase in knowledge
- A new proposal to the market and advanced design
- Products made of a light, pliant, and resistant alloy
- Protective anti-corrosive treatments
- Recyclable material
- A backward step: this is the end of disposable items
- An eternal product!

### Project timeline





# [ Case Study ]

## Instrument Transformer box and cover

### Product

Casting Instrument Transformer box and cover

### Objectives

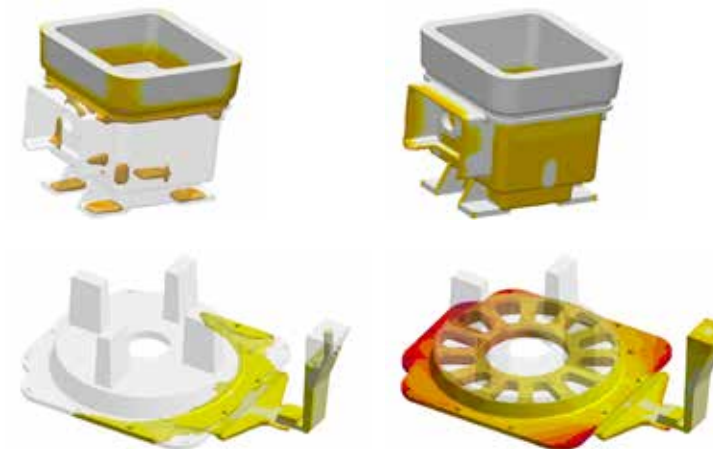
Cost of finish part competitive with "low cost" Country competitors

### Customer Requirements

Liquid pressure test 2 bar (30 psi) andr Roughness 1.6 µm



## Casting Simulation



### Simulation benefits:






- Reduce time and cost of production
- Compliance with quality standards required
- Reduction of non-compliance
- Optimization of feed channels
- Evidence of pockets of stagnation and the areas exposed to the danger of entrapped air
- Evidence of any "porosity"

## The Challenges






- Cost of finish part competitive with "low cost" Country competitors
- Maintain the quality of European production
- Metal treatment must provide a well modified structure for mechanical properties as well as a melt free from inclusions and oxides
- Filling must be turbulence free to avoid creating fresh oxides in the die cavity
- Feeding must be efficient to avoid shrinkage

## Technical Data Sheet

### COVER

-  **Alloy:** Alloy 43300, T6
-  **Casting weight :** 14 Kg (each one 2 cavity)
-  **Pouring temperature:** 760°C
-  **Pouring weight:** 50 Kg - Yield: 56%
-  **Moulding Process:** Gravity die casting

### BOX

-  **Alloy:** Alloy 43300, T6
-  **Casting weight :** 31 Kg (one piece)
-  **Pouring temperature:** 760°C
-  **Pouring weight:** 47 Kg - Yield: 56%
-  **Moulding Process:** Gravity die casting

## How we win the challenges

- ✓ **CO DESIGN**  
Specifications, product use, costs, quality, quantity are analysed with the customer. We also carry out an approximate analysis of the costs of the tools needed.
- ✓ **CASTING SIMULATION**  
The casting simulation is a tool used in foundries to monitor the filling process of the aluminum into the mold, so check filling and solidification of castings and identify any critical areas.
- ✓ **AUTOMATION FOUNDRY PROCESS**  
Thanks to the size of the machinery of the foundry it has been possible to realize a mold with two cavities with dimensions of 1200 x 1000.
- ✓ **AUTOMATION MACHINING PROCESS**



# [ Case Study ]

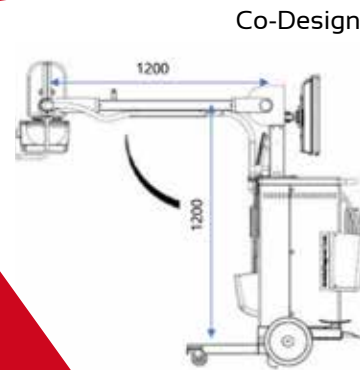
## X-Ray trolley



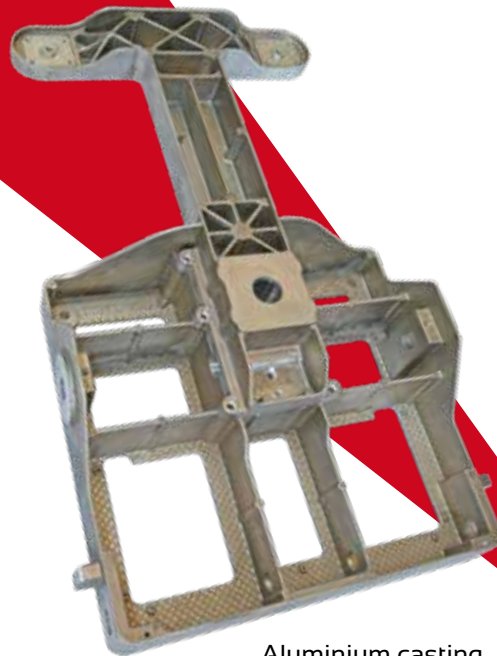
## Technical consulting from steel sheet to aluminum casting



Steel sheet



Co-Design



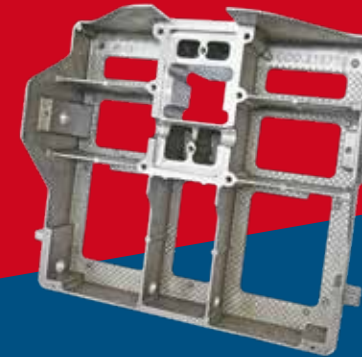
Aluminium casting

### Technical Data Sheet

- Alloy: Alloy 42100 + T6
- Casting weight : 15 Kg
- Pouring temperature: 760°C
- Pouring weight: 25 Kg - Yield: 56%
- Moulding Process: Gravity die casting

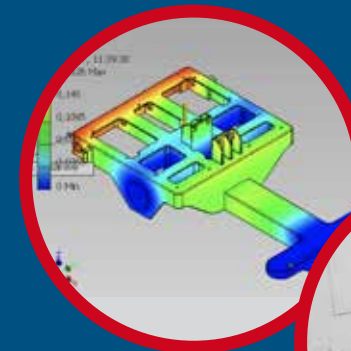
### Benefits

- Weight reduction
- Good mechanical features
- Better aesthetics and design
- Longer durability of the product
- Overall product cost reduction
- Compliance with ISO 13485 standard
- Higher security



### Steps

- Feasibility Analysis
- Design
- Simulation
- Prototyping
- Manufacturing



### Plus

- FMEA
- Control Plans
- Batch and materials traceability guaranteed 15 years
- Qualified Supply Chain
- Low batch thanks to storage
- Guaranteed powder coating 1000 or 1500 hours with saline fog test according to the customer requirements, certified by accredited laboratory
- Possibility different color
- Possibility different application





# [ Company Plus ]

## MRP and Internal Order Traciability

Thanks to **MRP** (Material Requirements Planning) deliveries are timely. The **information management system** allows us to get under control the progress of the internal order and moves up the supply chain of the product and its **exact location**. The entire production process is assisted by a barcode system that communicates in real-time all data necessary for the proper management of the process.

Fonderia TARONI		
Q.tà Carrello	Q.tà Totale	Lega
285	250	EN AC 44100
Cod. Articolo 60.00475.000		
IMPUGNATURA MANIGLIE A SCOMPARSA		
Finito il: 24/05/2016 08:55:29	Lotto: 500000	

## Management System Certification

Fonderia Taroni has achieved **certification** of its **Management System** in accordance with three International standards.

- **ISO 9001 - Quality Management**  
ensures that products and services consistently meet customer's requirements, and that quality is consistently improved.
- **ISO 14001 - Environmental management** provides practical tools for companies and organizations of all kinds looking to manage their environmental responsibilities.
- **ISO 13485 - Medical devices** is an internationally agreed standard that sets out the requirements for a quality management system specific to the medical devices industry.



## Metrology rooms

Two advanced metrology rooms designed to ensure precision and quality at every stage of aluminum product manufacturing.

### Laboratory dotation:

- RX Machine (Bosello)
- Spectrometer (Spectromaxx)
- Tensile Testing Machine
- Stereo Microscope:
- Thermal Analysis
- Coordinate Measuring Machine
- 7-Axis Measuring Arm



## Key Performance and Risk Indicators

Our **performance indicators** allow us to regularly keep under control every single process in order to implement corrective measures and to define improving plans.





# [ The Foundry ]

3

## Robotic casting plants

A robot of **3 stations** per plant can handle casting ranging from 1.3 lb to 8.8 lb. Every station is provided with 2 casting machines tilting to 45°, whose span is 5.4 ft.



Max Weight

**100** Kg

4

## Melting furnaces

High efficiency gas furnaces whose capacities are:  
**2 furnaces:** 2000 Kg liquid aluminium - 800 Kg/h  
**2 furnaces:** 600 Kg liquid aluminium - 300 Kg/h



Capacity

**15** Ton/Day

9

## Electric furnaces

Electric power supply was chosen to guarantee thermal and metallurgical stability.  
**2 furnaces:** 1000 Kg/ 2205 lb.  
**7 furnaces:** 700 Kg/1543 lb.



Liquid always

**7** Ton

21

## Casting machines

Taroni Foundry has 21 AUTOMATIC casting machines, among these the largest machine in Europe.



Max Dimensions

**L:2500 mm**  
**H:2500 mm**  
**P:2000 mm**

3

## Degassing plants

Degassing plants are fundamental because, as regards alloys specific weight, they make us to achieve a better result.



Degasing

**100** %

1

## Mechanical workshop

Our internal **workshop** is provided with manual machines for molds maintenance and setup.



Maintenance

**Under Control**  
**by in House Scheduling**





[ The Foundry ]

# ***The Largest Gravity Die-Casting Machine in Europe***

With a spacious working area that accommodates molds up to **2500 x 2500 x 2000 mm** (8.2 x 8.2 x 6.5 ft), this state-of-the-art die-casting machine represents a significant step forward in our production capacity.

It allows us to create even **larger and more complex aluminum gigacastings**, opening the door to new opportunities and challenges in the industry.

This investment demonstrates our commitment to technological innovation and delivering high-quality products to our customers.



# [ New plant ] 167.000 Sq. ft.

The new 10.000 mq (167,000 Sq. ft.) plant is Fonderia Taroni's second operational site. The new factory is divided into 4 basic areas: machining department, metrology room, warehouse and offices.



## Machining department



5 CNC centers with 4 axes for high precision machining.

We are able to carry out high precision machining in compliance with the requirements provided by the customer



## Metrology room



The metrology room is equipped with all the necessary high-precision measuring equipment and guarantees maximum compliance with customer requirements:  
**DEA Scirocco coordinate measuring machine (CMM)**  
**Kreon 3D laser scanner + portable arm**

In addition a 3D printer (Stratasys f170) dedicated to rapid prototyping

## Offices



## Warehouse





## Automatic Melting Furnace



- Liquid aluminum capacity: 2.000 kg
- Hourly production: 600 kg/h
- Vertical loader with hydraulic command
- Furnace and loader with automatic cycle
- Automatic opening and closing of chimney for temperature and fume management
- Temperature control by 3 thermocouples
- Aluminum liquid level and aluminum loaded level controlled by means of laser

## Metrology Room



	Si	Fe	Cu	Mg	Cr
Val Max	0.15	0.12	0.05	0.05	0.05
Val Min	0.15	0.12	0.05	0.05	0.05
Val Nom	0.15	0.12	0.05	0.05	0.05



During any phase of the production, the metallurgic and structural aspects of castings is kept under control according to the UNI norms.  
**Laboratory dotation:** X-ray Machine (Bosello), Density Scale, Spectrometer (Spetromaxx), Stereo microscope and 7-axis 3d measuring arm.

## 3 robotic casting plants



A robot of 3 stations per plant can handle casting ranging from 1.3 lb to 8.8 lb. Every station is provided with 2 casting machines tilting to 45°, whose span is 5.4 ft.

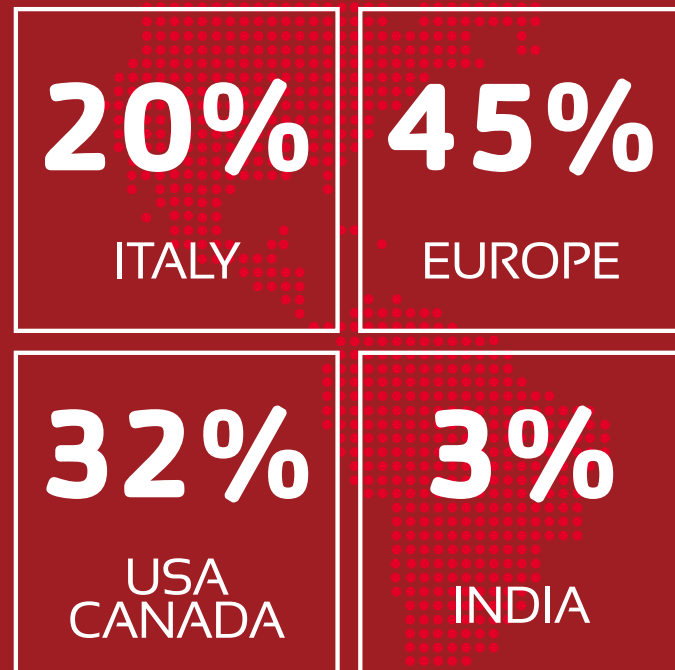
## 5 CNC machining centres



5 cnc centers with 4 axes for high precision machining.  
 We are able to carry out high precision machining in compliance with the requirements provided by the customer..

# [ Customers ]

## Turnover Breakdown



## Our Customers

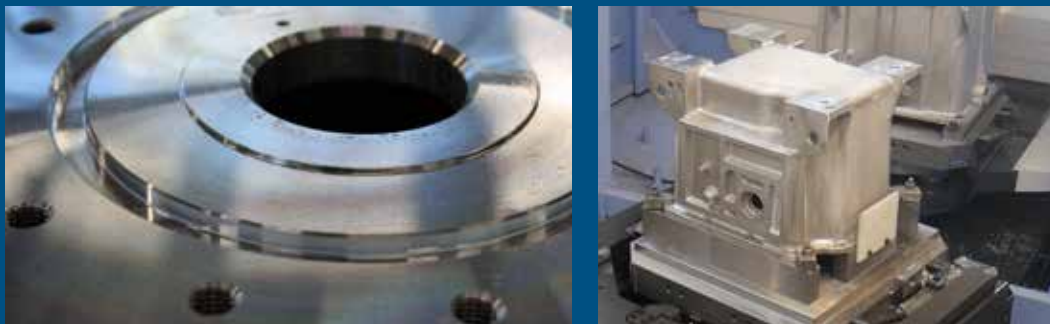
**35 %** Medical Devices  
**25 %** Instrument Transformer  
**15 %** Robotics  
**10 %** Gear box  
**5 %** Clutch  
**5 %** Mechanical  
**5 %** Pumps



# [ Machining ]



5 CNC centers with 4 axes for high precision machining.  
We are able to carry out high precision machining in  
compliance with the requirements provided by the customer



**“ The  
details  
are not  
for just  
anyone ”**





# [ GIGACASTING ]

Our know-how and the investments we have made have allowed us to create aluminium “gigacastings” of considerable size and weight.



## Casting Dimensions

X: 2000 mm – 6,6 ft

Y: 2000 mm – 6,6 ft

Z: 2000 mm – 6,6 ft



## Casting Weight

200 Kg – 440 lb



## Technology

Gravity casting

Permanent mold casting



# [ FT casting corp ]



**FT-Casting** is ready to handle all your **technical** and **commercial services** needs for the production of **high-tech aluminum castings**. FT-Casting is based in the **great state of Indiana** and is **available to deliver in 48 hours** throughout the **U.S. territory**.

**A complete service that favors the growth of client companies in an increasingly uncertain market.**



## Customer Benefits

- *Technical support*
- *Logistic support*
- *Reduction time*
- *Flexibility*
- *Quick delivery*
- *Supply chain validation*
- *ISO 9001 Certification*
- *ISO 14001 Certification*
- *ISO 13485 Certification*

## Contact

Eastern USA  
CT, DE, GA, MA, MD, ME,  
NC, NH, NJ, PA, RI, SC, VA,  
VT, Quebec)  
Talbot Associates Inc.  
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Talbot Associates Inc  
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[www.ftcasting.us](http://www.ftcasting.us)



## Services

ENGINEERING SERVICE  
TECHNICAL SUPPORT  
ASSEMBLY LINE  
STORAGE FACILITY



# [Aluminium Alloys]

Comparative table of world wide aluminium alloy standards

EN and ISO numerical alloy designation	EN symbolic alloy designation	UNI (Italy)	ASTM (USA)	DIN (Germany)	JAPAN
Primary Alloy	Primary Alloy	Primary Alloy	Primary Alloy	Primary Alloy	Primary Alloy
Al Si5Cu1Mg	EN AC 45300	UNI 3600	355.0	-	AC 4D
Al Si7Mg	EN AC 42000	UNI 3599	356.1	-	AC 4C
Al Si7Mg0,3	EN AC 42100	UNI 8024	356.2	G AlSi7Mg	C4 CV
Al Si7Mg0,6	EN AC 42200	UNI 8392	356.3	G AlSi7Mg	C4 CV
Al Si10Mg(a)	EN AC 43100	-	A360	DIN 239 A	AC 4A
Al Si10Mg(Cu)	EN AC 43200	-	-	DIN 233	-
Al Si10Mg(Cu)	EN AC 43300		NFA57-105	DIN 1725/5-86	JIS H2211-92
Al Si12(a)	EN AC 44200	UNI 4514	-	DIN 230 A	-
Al Si12(b)	EN AC 44100	UNI 4514	B413.0	DIN 230.1	AC3A, Al-Si 12
Al Si4,5MnMg	-	UNI 3054	-	-	-
Al Mg3	EN AC 51100	UNI 3059	-	-	-
Secondary Alloy	Secondary Alloy	Secondary Alloy	Secondary Alloy	Secondary Alloy	Secondary Alloy
Al Si12(Cu)	EN AC 47000	-	-	DIN 231 A	Al-Si 12(Cu)
Al Si11Cu2(Fe)	EN AC 46100	-	-	-	ADC12Z
Al Si9Cu1Mg	EN AC 46400	UNI 7369/3	-	-	-
Special Alloy	Special Alloy	Special Alloy	Special Alloy	Special Alloy	Special Alloy
Al Si2MgTi	EN AC 41000	UNI 3055	-	-	-
Al Cu4MgTi	EN AC 21000	-	204.0	DIN 220 1	AC1B

This is a list of aluminum alloys most used by Fonderia Taroni.  
For a complete list of aluminium alloys used please visit [fonderiataroni.com](http://fonderiataroni.com)





# [ Mechanical Features – Aluminium Alloys ]

Mechanical features of the most used aluminum alloys

## Primary Alloys

### EN AC 45300

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	205-245	125-155	4-5	70-95
	T4	305-345	195-235	5-9	100-130
	T63	345-390	275-315	2-5	110-140

### EN AC 43300

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	180-240	90-150	2-6	-
	T6	260-340	200-280	4-7	90
	T64	260-340	200-280	4-7	80

### EN AC 42100

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	180-240	90-150	4-8	50-65
	T6	250-340	220-280	5-9	80-100
	T64	220-270	120-180	6-12	65-85

### EN AC 42200

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)					
	T64	290-320	210-240	6-8	90-100
	T6	300-350	240-280	4-6	100-115

### EN AC 44100

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	175-215	90-110	5-7	55-65
	T5	165-215	80-100	6-10	75-95

### EN AC 51100

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	145-195	60-80	6-10	45-55

## Secondary Alloys

### EN AC 47000

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	175-215	100-130	2-5	60-75

### EN AC 46100

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	125-245	120-145	2-5	70-95

### EN AC 46400

Casting process	Temper designations	Rm Tensile strenght (N/mm2)	Sp 0,2 Yield strenght (N/mm2)	A Elongation (%)	HB Brinell hardness (HB)
SHELL (as cast)	F	215-235	135-155	3-4	70-80
	T6	295-315	245-255	2-3	105-130

To consult all the technical specifications of aluminum alloys used by Fonderia Taroni, please visit [www.fonderiataroni.com](http://www.fonderiataroni.com)



# UNIONE EUROPEA

## Fondo europeo di sviluppo regionale

IS0109335

### FONDERIA TARONI SRL – INVESTIMENTI SOSTENIBILI 4.0

Il programma d'investimento per il quale è stato richiesto ed ottenuto il sostegno finanziario tramite il contributo del PON Imprese e Competitività 2014-2020/React EU ASSE VI – Priorità di investimento 13i – Azione RA3.1, rappresenta un elemento fondamentale nell'ambito del piano strategico di sviluppo del Gruppo.

Gli investimenti realizzati tramite il sostegno finanziario del PON durante il biennio 2022/2023 hanno l'obiettivo:

- di permettere un significativo incremento della capacità produttiva;
- di perseguire un modello di integrazione verticale produttiva attraverso la creazione di un nuovo reparto dedicato alle lavorazioni meccaniche;
- di permettere un incremento della marginalità ottenuto tramite:
  - o un minor costo delle lavorazioni meccaniche, ad oggi esternalizzate;
  - o un minor costo delle attività logistiche riferite alla movimentazione del materiale.

In generale tutti gli investimenti realizzati hanno un duplice obiettivo, da una parte quello di accrescere la competitività sui mercati dove attualmente la società del Gruppo opera e, dall'altra, di poter approcciare nuovi settori che possano garantire, per il futuro, sbocchi in nuove fasce di impiego e di utilizzo."

ASSE VI – Priorità di investimento 13i – Azione RA3.1

**"Finanziato nell'ambito della risposta dell'Unione alla pandemia di COVID-19"**

**PON** IMPRESE E  
COMPETITIVITÀ  
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