

# We think globally

RAV  
Composite Manufacturing



# We think globally

- ☐ THE COMPANY
- ☐ AWARDS AND QUALIFICATIONS
- ☐ LAYOUT & FACILITY
- ☐ CAPACITY
- ☐ ORGANIZATION CHART
- ☐ PRODUCTION SAMPLES
- ☐ CONTACTS





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## The Company

- RAV is specialized in high quality **composite components manufacturing** aerospace, marine, automotive and rail
- The Company manages CFRP complex and light sections as well as multidimensional sandwich structures, combining the medium-sized company flexibility with a strong **customer oriented** vision working to ensure **quality, on-time delivery** and **competitiveness**



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## The Company

- Company mission is *“creating innovative and affordable composite system solutions using advanced composite materials and processes. As enablers of new technologies and market applications, we promote growth through collaboration with our customers and strategic partnerships”*
- **RAV** is an **AS 9100-2009 & EN 9001-2008** certified company able to manage the production flow through a modern ERP system and the engineering activities using the modern software Dassault **CATIA V5**





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## The Company

- RAV is based in Brindisi - Apulia region - south of Italy - well connected with two ports (Brindisi & Taranto) and two airports (Brindisi & Bari).
- The industrial site is one of the most important Italian aerospace cluster where insist the international big players AleniaAermacchi, AgustaWestland and GE-Avio.



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## Awards and Qualifications

- UNI EN ISO 9001:2008
- UNI EN ISO 9100:2009
- Main Customers:
  - LEONARDO ELICOTTERI
  - LEONARDO AEROSTRUTTURE
  - LEONARDO VELIVOLI
  - MECAPLEX
  - TAI
  - PZL





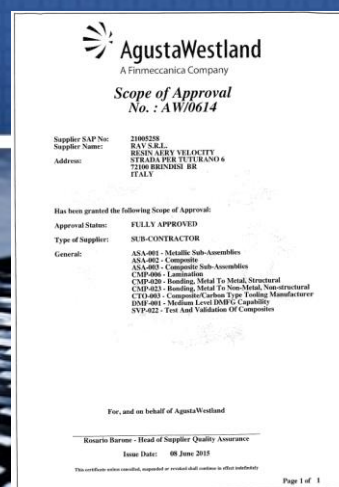
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## Awards and Qualifications

- UNI EN ISO 9100
- UNI EN ISO 9001
- BAC 5317-4
- BAC 5578
- TPS 9042 – 75054
- NTA 75762 -94051
- AWPS001X/Q
- SVP 022
- STA 110K 0057
- STA 100-84-58
- WHPS 275/319



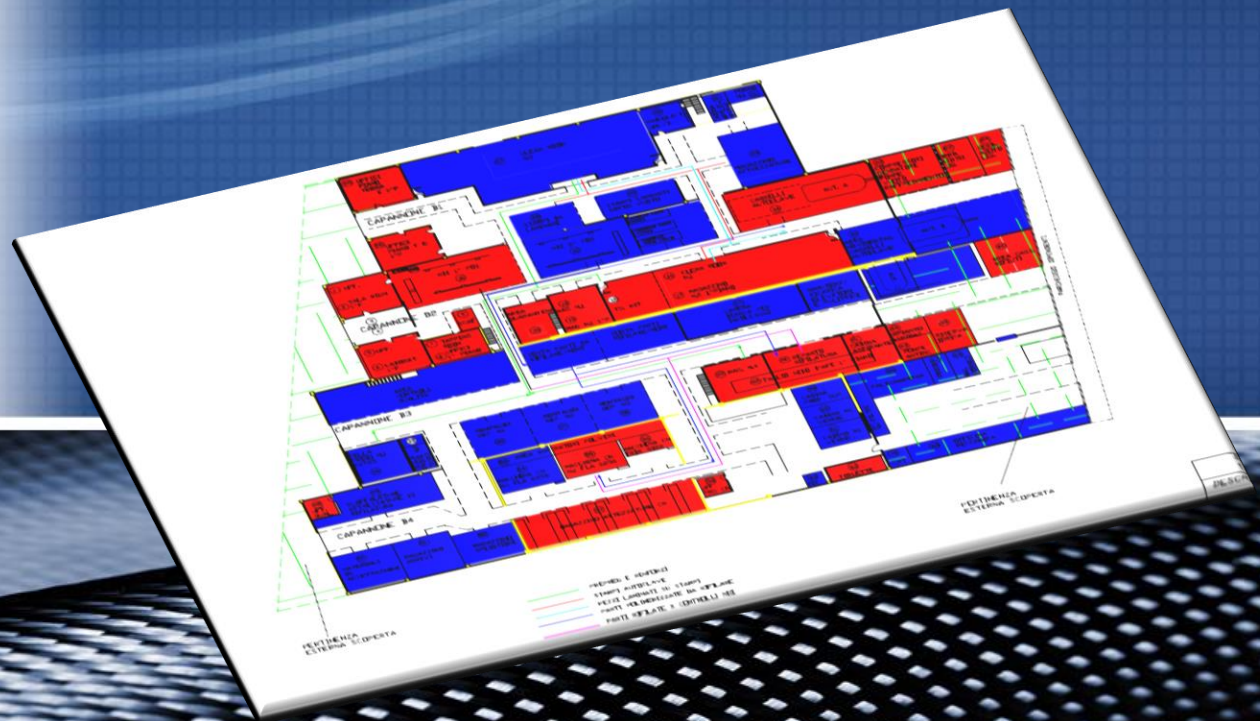
|   |   |   |                             |                             |
|---|---|---|-----------------------------|-----------------------------|
| <b>PROCESS DOCUMENT DEPARTURE</b>   |   | ORIG. D. Chermi<br>Isola di Brindisi  | POD NUMBER<br>6-1964        | PROCESS DOC NO.<br>D6-53993 |
| Representation of this departure is:<br><input checked="" type="checkbox"/> OPTIONAL: Implement at discretion of affected organization<br><input type="checkbox"/> MANDATORY: Must be implemented as noted below. |   | SUPV. E. Lissim<br>Approved on file   | PAGE 1 of 2                 |                             |
| REASON:<br>Add as an approved BAC5317 and BAC5317-4 supplier and add authorities.   |   | PROCESS DOCUMENT TITLE<br><b>QUALIFICATION OF SOURCES FOR COMPOSITE PARTS</b> |                             |                             |
| ENGR APPROVAL   |   | B. Lund<br>Approved on file   | 03/MAR/2017<br>RELEASE DATE |                             |
| SUBCONTRACTOR(S) AFFECTED<br>Rav S.r.l.   | ON MODELS<br>ALL COMMERCIAL AIRPLANES AND DERIVATIVES THEREOF | MFG DEPTS OF DIV BELOW AFFECTED<br>NONE                                       |                             |                             |
| Add the following to Appendix R:  |   |   |                             |                             |
| PROCESSOR   |   |   |                             |                             |
| Rav S.r.l.<br>Contrada Piccol. n°73-76<br>72100 Brindisi, Italy   |   |   |                             |                             |
| BAC5317 PROCESS QUALIFICATIONS  |   |   |                             |                             |
| SPECIFICATION<br>BAC5317-4  | BUILDING/ROOM DESIGNATION<br>Clean Room D                     | METHOD<br>---   | QUAL. DATE<br>3/1/17        | QUAL. GROUP<br>BCA          |
| RESTRICTIONS<br>---   |   |   |                             |                             |
| BAC5317 FACILITY APPROVALS  |   |   |                             |                             |
| RECEIVING INSPECTION  | FINAL INSPECTION  | BAC5578<br>INSTRUMENTAL NCI   | BAC5578 FLAME SPRAY         |                             |
| No FL 1   | Yes   | Yes   | No                          |                             |
| BAC5317 PROCESS QUALIFICATIONS  |   |   |                             |                             |
| BUILDING/ROOM DESIGNATION<br>Clean Room D   | QUAL. DATE<br>3/1/17  | QUAL. GROUP<br>BCA  | RESTRICTIONS<br>---         |                             |
| BAC5317 FACILITY APPROVALS  |   |   |                             |                             |
| RECEIVING INSPECTION  | FINAL INSPECTION  |   |                             |                             |
| No FL 1   | Yes   |   |                             |                             |



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## Layout & Facility

- 1st plant – 6000 m<sup>2</sup> – Brindisi (BR)
- 2nd plant – 2000 m<sup>2</sup> – Tutturano (BR)
- 92 employed in 2016







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## Layout & Facility



Building



Building



Building



# We think globally

## Layout & Facility





# We think globally

## Layout & Facility



Clean Room D

According to class 100.000  
Awards BAC5317-4 BAC5578



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## Layout & Facility





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## Layout & Facility



CNC Belotti FLA



6500x2400x1300

CNC Belotti Trim



4500x1400x900

CNC Belotti FLA  
Double Pallet



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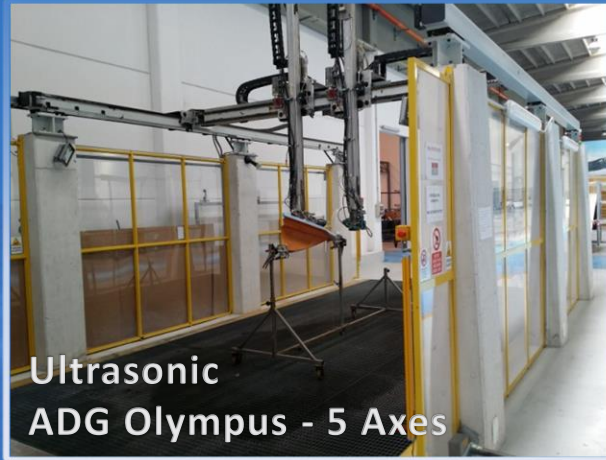
## Layout & Facility





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## Layout & Facility

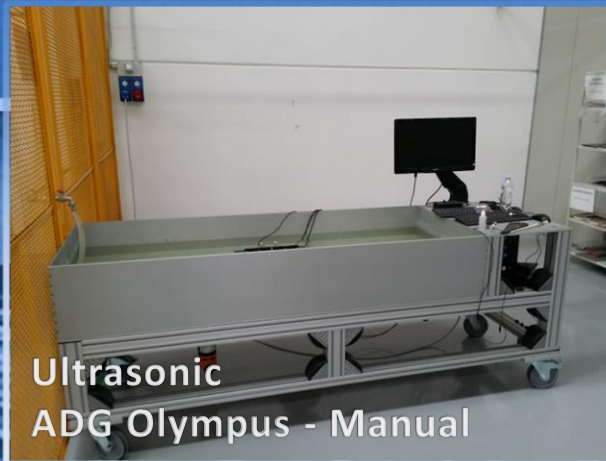


Ultrasonic  
ADG Olympus - 5 Axes

7000x4000x2000



Ultrasonic  
ADG Olympus - 6 + 1 Axes



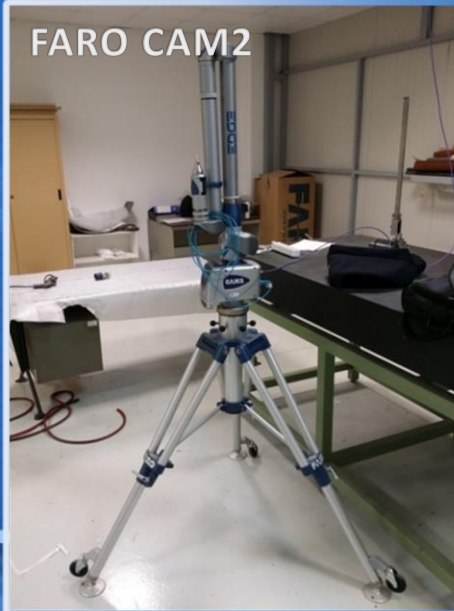
Ultrasonic  
ADG Olympus - Manual

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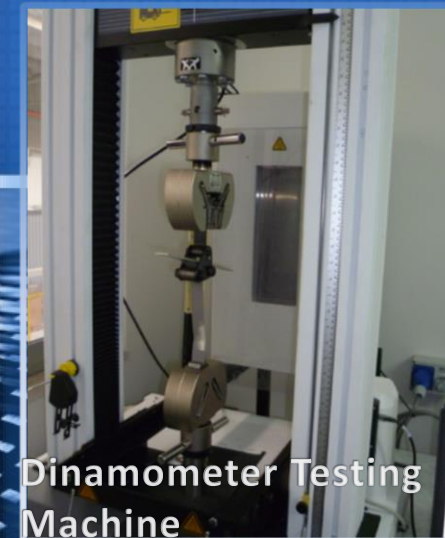
## Layout & Facility



FARO CAM2



Laboratory



Dinamometer Testing  
Machine



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## Capacities

- Materials
  - Carbon fiber, Glass fiber, Kevlar & Honeycomb
  - Prepreg
  - Aluminium
- Design
  - Material & Concept Design
  - Specification Test
  - Component Configuration
- Technology
  - Wet lay-up
  - Lamination
  - CNC milling



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## Capacities

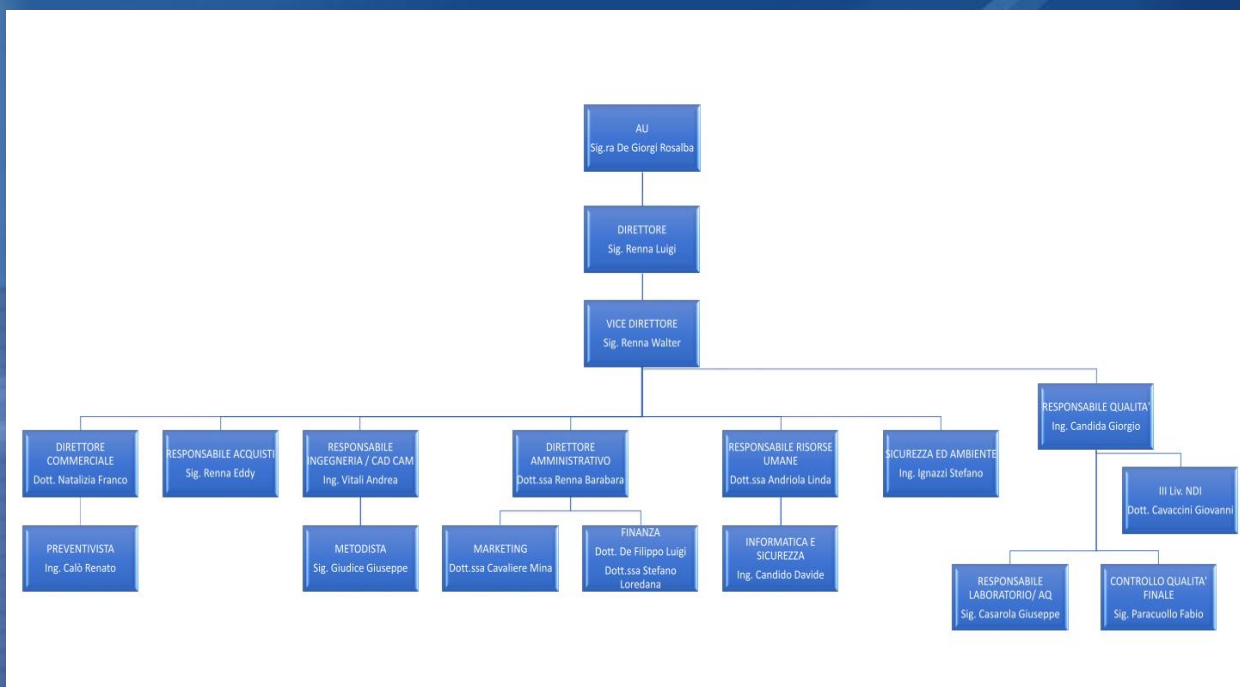
- Metal & Composites parts and assemblies manufacturing
- Master Models
- Lay-up Tools
- Bonding Tools
- Drilling & Cutting Masks
- Destructive controls: Chemical, Thermal-DMA, DSA, TGA, Mechanical "MTS insight" lab-press, ultrasonic, dye penetrant-Rheometer
- NDT: control UT via automatic /manual controls in transparency, pulse echo, phased array, pitch- catch, tapping





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## Organization Chart



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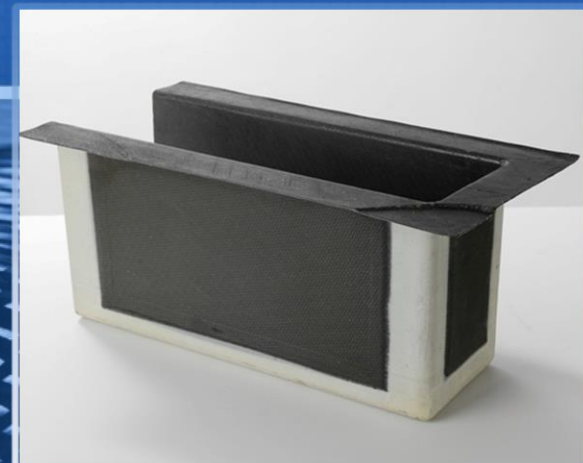
## Production Samples





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## Production Samples



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## Production Samples





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## Contacts

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