





Since 1976 Comutensili is specialized in machining of mechanical parts. The Company plays an important role in the industrial market. and our main Customers belong to different markets such as Aerospace, and Powergen

The Company is certified according to UNI EN 9100 and UNI ISO 9001. Our Quality System has been audited and approved by the most important players in the market.

Comutensili is a member of Turin Piemonte Aerospace and of the Aencom Cluster



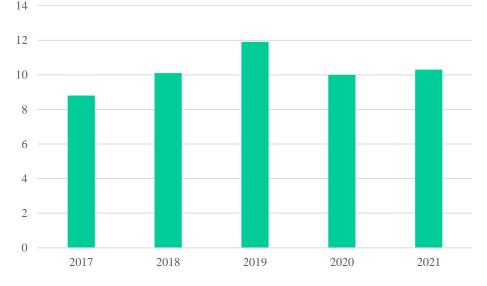
Comutensili employes around 75 workers in two different plants in Piedmont and it also has a subsidiarie Company in Brasil.

Total Employees:	76
Production:	58
Tech Department:	10
Quality:	3
Commercial & Administration:	5



TURNOVER ML/Euros





### **General Information**

### COMUTENSILI S.p.A.

www.comutensili.com

#### **Head offices and Production Plant**

Via Rondò Bernardo, 6 10092 Borgaretto–Beinasco (Turin) -Italyphone: +39 (0)11.35.89.123 fax: +39 (0)11.35.83.944 E-mail: info@comutensili.it

#### **Production Plant**

Via F.lli Berra, sn 10080 Ozegna C.se (Turin) Italy phone: +39 (0)124.42.81.67 fax: +39 (0)124.42.81.39 E-mail: info@comutensili.it

#### Factory Area:

Sq.m. 4.500 (Borgaretto, Turin) Sq.m. 2.500 (Ozegna C.se, Turin)

#### Brasil Facility

Eunapolis - Bahia (Sq.m. 1000)







# **Equipment Resources**











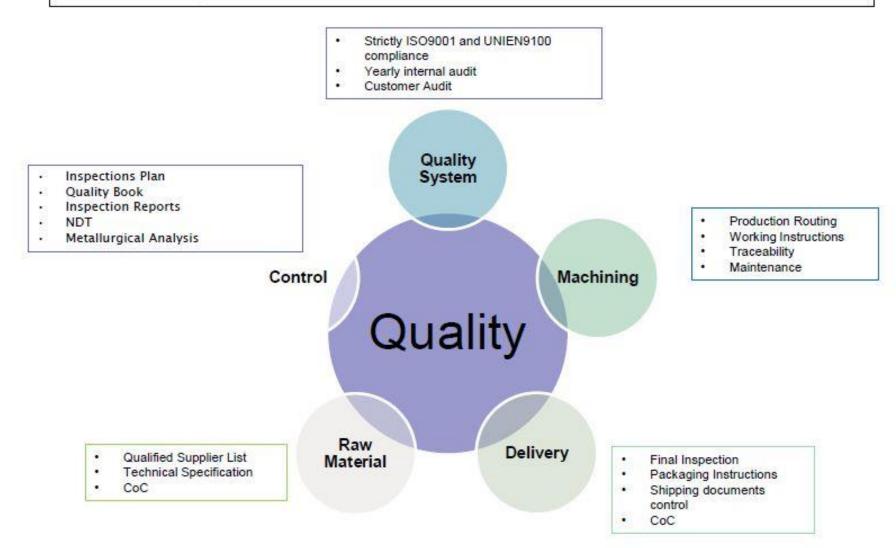
Turning Machine

Dimension: from 2 mm up to max1600 x1000mm Milling Machine Dimension: 800x800x 800 Grinding Machine CD Dimension: 1500x500x500

EDM Machine Dimension: 800x600x500 STEM and FAST EDM Drilling Machine

WEIGHT : 1000 KG

# **Quality Control Map**



# **Products**











#### TURBINE BLADES

Blades machining for Gas Turbine and Aircraft Engines

#### TURBINE STATORIC PARTS

Vanes, Nozzles, Shrouds, Guide Rings, etc.

### **BROACHES**:

Design and production of profiled broaching tools for Aero Engine and Gas Turbine AEROSPACE , GAS TURBINE PARTS

Machining parts: turning, milling, grinding, EDM, drilling.

Alloy and Superalloy materials, Titanium Stain Steel, etc.

#### MECHANICAL COMPONENTS, FIXTURES, SPECIAL TOOLS

Design and manufacturing and assembly of parts and components

## **Turbine Blades & Vanes**

Comutensili is specialized in machining of Blades, Vanes, Nozzles, Shrouds. Main process available:

- Grinding Creep Feed
- Milling 4/5 axis
- EDM
- Drilling
- Stem Drilling
- Productive process management, including design and manufacture of complete tooling and fixtures.
- CMM machines, used for final inspection





Every parts are controlled and checked 100% according to the Customer Requirements Specifications and Quality Plan CMM Controls, FPI, Visual Inspection Air Flow Test

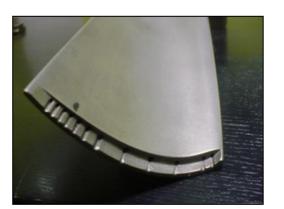
We can provide ND test, during qualification process with certified Laboratory.

We can manage Sheet Metal activities (Inserts, covers, honeycomb assembly, welding, brazing).





EDM Fast Drilling – STEM Drilling (Rx available)



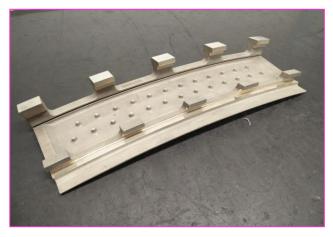


#### CAPACITY

Grinding CD (4/5 machines about 17.500 hours/year capacity) Milling 4/5 axis (5 machines about 14.500 hours/year capacity) EDM (about 25.000 hours/year) Drilling : EDM and ECM (STEM)

Number of pieces (capacity x year) Blade: 2.500/3.000 pc. Vanes: 2.000/2.200 pc.









## Machining

Aerospace and Powergen Market. Main processes available:

- •TURNING from 2 up to 1600 mm
- •MILLING 4/5 axis up to 800x800 mm •EDM
- •DRILLING
- •GRINDING



Special processes availble:

- HT
- Surface Treatment
- ND test
- Metallurgical test
- Welding/Brazing Supplier qualified (NADCAP)









Typical materials worked: Inconel, Titanium, Renè, Hynes, Udimet, Hastelloy, Alluminium, Stainless Steel Shape: Forging, Casting, Bar, Plate ...(provided directly or Customer supplied)







Main Programs:

- LEAPX
- PW1100
- PWA-GTF
- GE90
- EJ200
- GEnX
- GE9X
- PW308
- TRENT500
- TP400
- TP600
- LMS100
- LM6000
- CF6-80















#### **TOOLINGS and FIXTURES**

Designing and manufacturing of complete toolings (Catia and Autocad software)

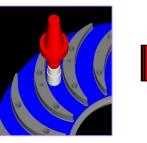


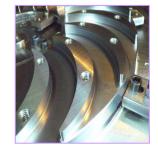


CAD – CAM Activity



SMALL PARTS & ACCESSORIES





#### ADDITIVE MANUFACTURING





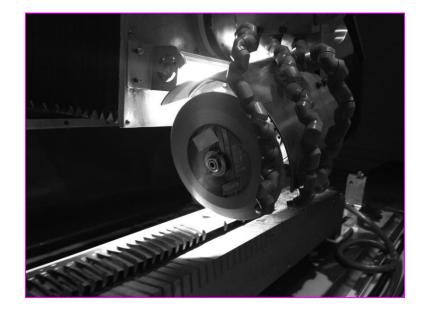
Comutensili is involved in developing programs for parts using additive manufacturing technology

## **Broaching Tools**

COMUTENSILI is specialized in Designing and manufacturing of broaches (pine & dovetail) for Aerospace, Gas and Steam Turbine Industry.

Sharpening service available.





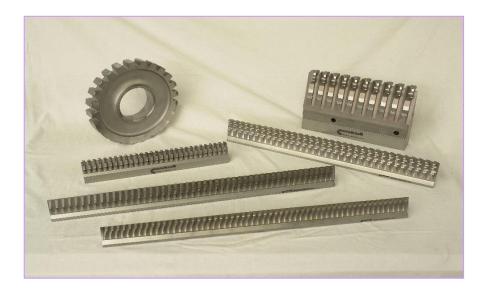


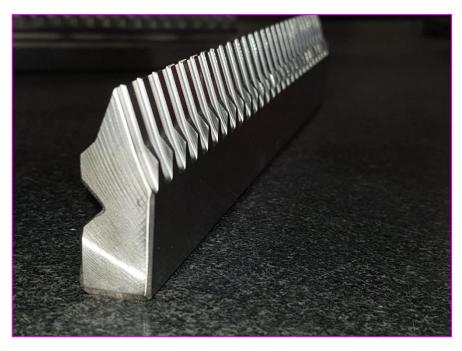
Materials available: T15CPM, ASP30, ASP2015, S590, etc.

Project and design of the tools, starting from the dwg of the root.

Coupon Test







Thank you very much for your attention!





SIEMENS COCIGY



MAN Diesel & Turho



Avio Aero





**C** EthosEnergy





SULZER





