



Geartec precision machining

The part design and application conditions are the parameters that must be taken into account when defining the choice of material and production process.

Geartec's production units are able to manufacture any part by turning and milling in polymeric and composite materials.

A wide range of plastics in natural or additive formulation is available for any requirement

· PE	· PVDF
· PP	· PSU
· PA6	· PEI
· PA66	· PTFE
· POM	· PEEK
· PET	· PI

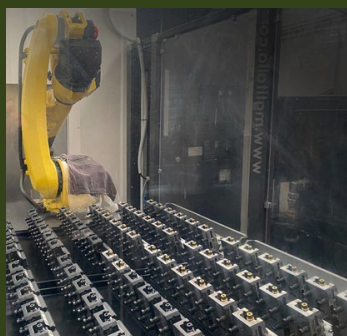
The department dedicated to precision machining is equipped with 3-, 4- and 5-axis milling machines and turning centres, including multi-head turning centres with double spindle and sliding headstock.

The Legnano production unit also has a separate department equipped with very high-speed 5-axis milling centres and dedicated to the micro-machining required, for example, in the electronics and semiconductor sector and to high-precision machining to be carried out in a protected environment.

Finally, a separate production unit is dedicated to milling with a vacuum table and specialised in router machining.

Particular attention is paid to parts for which particular dimensional stability is required, which are subjected to a stress relieving heat treatment that, by eliminating residual stresses from the transformation process, ensures compliance with long-term tolerances even in parts subjected to heavy thermal cycles.

At the end of the machining process, to finish the parts, Geartec provides a micro-bead blasting plant in order to



completely remove the machining burrs and ensure a perfect surface finish.

In the production departments, raw materials, blanks, finished parts and processes are uniquely identified by barcode to guarantee complete traceability of materials and processes. The possibility of marking parts by laser, punching or stamping extends the traceability even after dispatch to the customer.

Production equipment undergoes constant preventive maintenance to ensure reliability, while operators follow standard procedures to ensure controlled processes and consistent quality.

Each production run is verified in the metrology room where operators have access to periodically calibrated and technologically advanced control instrumentation, such as optical detectors and 3D probes.

Geartec's quality system is ISO9001-2015 certified while the production department operates in compliance with European Regulation 2023/2006 (GMP), which establishes Good Manufacturing Practice for objects intended to come into contact with food, and is able to supply products that comply with regulatory requirements for MOCA.

Machinery

Micro-Machining Department

- CHIRON FZ12 MILLING CENTER: 5-axis continuous machining with a 550x400 mm table (robotized)
- CHIRON MICRO5MILLING CENTER: 5-axis continuous machining with a 78x56 mm table
- DMG DMU50MILLING CENTER: 5-axis continuous machining with a Ø400 mm table
- DATRON ML CUBEMILLING CENTER: Equipped with a vacuum table and a 1000x1500 mm worktable

Milling Department

- DMG DMU50MILLING CENTER: 5-axis continuous machining with a Ø400 mm table (robotized)
- DMG CMX50UMILLING CENTER: 5-axis machining with a Ø400 mm table
- DMG MORI ECOMILL 50MILLING CENTER: 5-axis machining with a Ø400 mm table
- EMCO MAXXMILL C630MILLING CENTER: 5-axis machining with a Ø600 mm table
- EMCO MAXXMILL 500 MILLING CENTER: 5-axis machining with a Ø600 mm table
- EMCO MAXXMILL 400MILLING CENTER: 5-axis machining
- SERRTECH 5X M3MILLING CENTER: 5-axis continuous machining with a Ø500 mm table
- EMCO FAMUPMILLING CENTER: 4-axis machining
- BRIDGPORT XP3MILLING CENTER: 3-axis machining with a 500x1000 mm table



- CMS TRACER 100MILLING CENTER:
Table size 1320x3110 mm
- ARGO A-56+A.PCMILLING CENTER: 3-axis, equipped with 2 tables (600x400 mm) and an automatic pallet changer

Turning Department

- MOBILE FANTINA LATHE – TORNOS GT 32
- MOBILE FANTINA LATHE – TORNOS DT 26S II
- EMCO HYPERTURN TD 65 CNC TURNING CENTER:
Bar capacity Ø90 mm, dual Y-axis turret and dual spindle
- EMCO 365 CNC TURNING CENTER: Bar capacity Ø65 mm, Y-axis turret and dual spindle
- EMCO FAGOR CNCTURNING CENTER: Maximum turning diameter of 450 mm
- SPINNER TD65 CNC TURNING CENTER: Bar capacity Ø60 mm, dual Y-axis turret and dual spindle
- AVM ANGELINI OSCAR CNCTURNING CENTER:
Bar capacity Ø65 mm and dual spindle
- AVM ANGELINI SNUPY CNCTURNING CENTER:
Automatic loader and bar capacity Ø60 mm
- AVM ANGELINI DG13 CNCTURNING CENTER:
Automatic loader and bar capacity Ø90 mm (length: 400 mm)

Routers Department (Busto Arsizio)

- SCM RECORD 125 ROUTER : Table 1000x2000 mm
- SCM RECORD 125 ROUTER : Table 1200x3000 mm
- SCM RECORD 125ROUTER : Table 1500x3000 mm
- SCM RECORD 120 ROUTER : Table 900x2500 mm
- UNITEAM MOD. ULAB ROUTER : Table 2000x3000 mm

Metrology Lab Equipment

- KEYENCE IM-X1330 Optical Measurement System
- Nikon INEXIV VMA2520 Optical Measurement Group
- INSPECTIS F30S Digital Microscope
- MITUTOYO CRYSTA APEX 574 CNC 3D Measuring Machine
- COORD 3D Manual 3D Measuring Machine
- VISION FALCON 100 Magnification Projector
- VISION EVOCAM II Microscope
- SINOWOM VM-500 Microscope
- MITUTOYO Roughness Tester
- MAHR Roughness Tester
- Traditional Measurement Instruments (micrometers, calipers, height gauges, comparators, feeler gauges)

Application Industries

- Aerospace
- Bottling
- Electronics
- Food
- Medical
- Motorsport
- Packaging
- Pharmaceutical

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 **GEARTEC**
PRECISION MACHINED PLASTIC PARTS



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