

# MACHINES AND EQUIPMENT

We focus on technological innovation and invest in extremely high-performance equipment :

## WIRE EROSION IN WATER BATH

- > 1 AgieCharmilles CUT 3000 with rotary indexing table JauchSchmider - L500 x I350 x H256
- > 1 AgieCharmilles 6050 TW - L630 x I320 x H160
- > 1 Charmilles 4030 SI - L450 x I320 x H240 with automatic feeder SYSTEM 3R 20 positions
- > 3 Charmilles 2030 SI - L320 x I220 x H116
- > 1 Rotary spindle SYSTEM 3R
- > 2 Fanuc ROBOCUT α-C400iC - L400 x I300 x H255
  - > One with molybdenum wire machining
- > 1 Fanuc ROBOCUT α-C600iC - L600 x I400 x H410
  - > Machining tolerance  $\pm 0.002$  mm
  - > Ra 0.10
  - > Materials machined : all electrical conductor materials

## WIRE EROSION IN OIL BATH

This technology allows parts to be machined for the medical and watchmaking fields, in order to avoid material corrosion.

- > 2 Charmilles 2050 TWO in oil with robot SYSTEM 3R 12 positions - L320 x I220 - H160
  - > Machining tolerance  $\pm 0.001$  mm
  - > Ra 0.10
  - > Materials machined : all electrical conductor materials except for aluminium

## EDM DIE-SINKING

- > 1 AgieCharmilles FORM 3000 VHP with robot SYSTEM 3R WPT 1+ - L600 x I400 x H500
- > 1 AgieCharmilles FORM 2000 with rotary indexing table JauchSchmider - L350 x I250 x H350
  - > Machining tolerance  $\pm 0.005$  mm
  - > 4 axis machining
  - > Materials machined : all electrical conductor materials except for aluminium

## HIGH SPEED DRILLING

- > 1 Castek MD 30 CNC drilling option  $\varnothing 0.1$  mm - orbiting option to calibrate a diameter after drilling - L300 x I200 x H300
- > 1 AgieCharmilles DRILL 20 CN drilling option  $\varnothing 0.15$  mm - L300 x I200 x H300
- > 1 Charmilles DRILL 11 drilling option  $\varnothing 0.15$  mm - L300 x I200 x H300
  - > Spark drilling
  - > High speed drilling of all materials  $\varnothing 0.1$  to 3 mm
  - > Materials : steel and tungsten carbide

## MILLING - TURNING

Machining of series parts.

- > 1 BUMOTEC S191  $\varnothing 65$  7 axis - L410 x I200 x H400

## HIGH SPEED MILLING

Machining of parts in all materials.

- > 2 MIKRON MILL S 400 U 5 axis spindle 42 000 rpm with automatic feeder SYSTEM 3R 12 positions Magazine 68 tools - L500 x I240 x H360
- > 2 MIKRON HSM 400 U 5 axis spindle 42 000 rpm with automatic feeder SYSTEM 3R 48 positions Magazine 36 and 68 tools - L400 x I240 x H350
- > 1 MIKRON HSM 400 3 axis spindle 42 000 rpm with automatic feeder SYSTEM EROWA 7 positions Magazine 36 tools - L400 x I450 x H350

## MILLING

Machining of parts on a milling machine CNC.

- > 1 Milling center CN SOMAB DIAM 850 L 3 axis Spindle 10 000 rpm Magazine 24 tools - L850 x I600 x H560

## TURNING

Machining of parts by a digitally controlled lathe.

- > 1 SOMAB OPTIMAB 350 V AERO TD 2 axis -  $\varnothing 410$  X L600
- > 1 SOMAB OPTIMAB 350 2 axis + axis C- $\varnothing 410$  x L 600

## HIGH PRECISION GRINDING

Flat and cylindrical grinding of parts made of steel and tungsten carbide.

- > 1 Flat grinding JONES & SHIPMAN 624 Easy - L600 x I200 x H400
- > 1 Flat grinding JONES & SHIPMAN TECHMASTER 634X - L600 x I300 x H605
- > 1 Flat grinding JONES & SHIPMAN 540S - L450 x I150 x H457
- > 1 Cylindrical grinding LIPEMEC RC 250 - L250 x I200 x H100

## MEASURING EQUIPMENT

Visual and dimensional control with high-tech equipment.

- > 2 Probing machines ZEISS DURAMAX CNC,
- > Optical measuring MicroVu VERTEX 311UM,
- > Microscope with digital camera MM1 GARANT,
- > 2 Stereoscopic microscopes ZEISS Stemi 305,
- > 3 Stereoscopic microscopes 3D MANTIS,
- > Camera 4K,
- > TESA measuring column Hite 350+D,
- > Rugosimeter,
- > Durometer,
- > Master pin every 0.1 mm,
- > Plastiform.

## POLISHING AND MASS FINISHING

Manual and mechanical polishing up to Ra 0.1.

- > 1 Line of equipment for polishing parts,
- > 1 Polishing machine LAM PLAN MM 8027.

## HEAT TREATMENT

- > 1 Quenching furnace NABERTHERM

## PRINTERS 3D

We use PLA, ABS, PET, PA, Flexible, PP, PC, PA-CF

## LASER MARKING

We guarantee the traceability of our parts thanks to laser marking.

- > 1 Laser marking machine SIC MARKING L-BOX 20W

## PASSIVATION

Parts made from stainless steel are passivated. This is particularly important for the medical industry.



**MICROEROSION**  
HIGH PRECISION MECHANICAL ENGINEERING

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