POLYDEC IN A NUTSHELL

COMPANY
Founded in 1985, Polydec SA specialises in micro-turned parts. Over 65% of the parts it produces are exported.

Polydec SA offers turn-key solutions to meet the strict quality requirements of its customers:
- feasibility study
- specific requirements
- choice of materials
- production of prototypes
- adherence to delivery times

FIELDS OF ACTIVITY
- automotive
- watch industry
- electronics
- medical

MAIN BUSINESS
Polydec SA’s Swiss turning processes can be separated into two groups

“Escomatic” Turning Machines
- parts with simple shapes; often large volumes
- the raw material takes the form of wire coiled on a spool and the tools turn around the reels

CNC Automatic Turning Machines with Sliding Headstock
- small, complex parts
- the raw material comes in bar form and turns on its own axis; the tools are fixed

CERTIFICATION
- ISO 9001
- ISO/TS 16949
- ISO 14001
- OHSAS 18001

SPECIALITIES
- knurling
- polygonal cutting
- for large volumes in the automotive sector we can install a 100% inspection program

ADDITIONAL TREATMENTS
Polydec SA offers a complete service performing additional operations, which are carried out either in-house, or by certified external partners:
- polishing
- heat treatments
- galvanic treatments (nickel plating, gold plating, etc.)
- special surface finishing (sunray polishing, black polishing, etc.)

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**AUTOMOTIVE**
Example of a spindle for a stepper motor used in the instrumentation cluster

**WATCH INDUSTRY**
Example of a gear type part used in the luxury watch industry

**ELECTRONICS**
Example of a probe to test semiconductors and printed circuit boards

**MEDICAL**
Example of a micro component for use in the medical industry

- **Original size:**
  - **Diameter:** 1.10 mm (.043 in)
  - **Length:** 22.00 mm (.866 in)

- **Original size:**
  - **Diameter:** 1.65 mm (.065 in)
  - **Length:** 2.55 mm (.101 in)

- **Original size:**
  - **Diameter:** 0.28 mm (.011 in)
  - **Length:** 2.80 mm (.110 in)

- **Original size:**
  - **Diameter:** 2.10 mm (.082 in)
  - **Length:** 4.31 mm (.169 in)

**MACHINE TYPES**
- Tornos CNC DECO 2000, EVO and Nano
- Escomatic D2, cams and CNC
- Tsugami CNC

**TOLERANCES**
Able to hold tolerances of ± 0.002 mm (.000075 in) depending on material and design

**MATERIALS (MOST OFTEN USED)**
- **Free cutting mild steels**
  - 1213, 12L14

- **Free cutting high carbon steels**
  - 1095
  - Sandvik 20AP

- **Alloyed structural steels**
  - 52100

- **Martensitic stainless steels**
  - 420F
  - Sandvik 4C27A

- **Austenitic stainless steels**
  - 303
  - 316
  - 316L
  - 316LVM

- **Copper alloys**
  - C17300 CuBe
  - C38500 Brass
  - nickel silver N09, NM2
  - bronze

- **Precious metals**
  - palladium alloy
  - gold

- **Titanium**

**DIMENSIONS**
- **Diameters**
  - min. 0.05 mm (.002 in)
  - max. 4.00 mm (.157 in)

- **Length**
  - max. 50.00 mm (1.968 in)