Ultra, the manufacturer of watch parts and equipment based in Court, Switzerland, has for the past few months been working with a new Tornos SwissNano machine. Interview with Benoît Marchand, co-director of the company alongside his brother and who together represent the fourth generation of the family that owns the business.

The director got straight to the point: “I won’t buy a machine simply because it’s from Tornos: we have a strict validation procedure for buying machines and the SwissNano stood out for a host of reasons.” With 90% of its production being destined for the watchmaking industry, the company needs machines that can manufacture parts not only with the right dimensional and geometric tolerances, but also in terms of the surface finish and appearance.

Is this the end of cam-type machines?
Ultra still uses a range of cam-type machines that offer exceptional production capacity. As the director himself explained: “Our production capacity for winding stems is enormous: we can make more than 1.5 million a month.” Although the size of production runs is shrinking, millions of these types of parts are still delivered each year to several different customers. Mr Marchand continued: “To produce large runs of this type of part, we rely exclusively on our range of cam-type machines.” Asked about the possibility of replacing these cam-type machines with NC turning machines, he explained: “We mainly compete on price and quality, and the SwissNano is now extremely competitive compared with cam-type machines – to the extent that for runs of less than a week, I use the SwissNano rather than cam-type machines.”

A range of complementary machines
For very intricate parts, Ultra uses Deco 10 machines. Before the arrival of the SwissNano, relatively straightforward parts with production runs that were “too small” for cam-type machines were manufactured...
The SwissNano machine and lemca bar feeder have a very small footprint. The director plans to set up machines equipped with 2 m bar feeders to increase the number of machines installed.

The Ultra workshop has a range of different machines, which means that the best machine can be chosen for the part to be made. For lead times of less than a week, the SwissNano has replaced the existing cam-type machines.

**ULTRA IN BRIEF**

- **Founded:** 1906, expanded in 1920, 1992 and 2007
  Further expansion is planned for 2015-2016
- **Management:** Benoît and Sylvain Marchand, fourth generation
- **Machine inventory:**
  - Bar turning: 40 cam-type machines
  - 3 Deco 10
  - 5 Delta
  - 1 SwissNano
  - cutting (15 machines), rolling (30 machines), terminating devices (5 machines)
- **Size of runs:** from 25 parts to several million a month
- **Markets:** 90% watchmaking industry, equipment
- **Type of parts:** barrel arbours, chronograph spindles, split-second pins, barrel bridges, screw feet, pinions, stem extensions, column wheels, posts, pallet fork stems, winding stems, split stems, screws. Certain universal standard parts, such as stems and winding stem extensions, are in stock and can be delivered immediately.
using Delta machines. Asked whether these machines could also be replaced by the SwissNano, the director explained: “For a certain number of parts, we have switched from the Delta to the Nano, although the machine cannot do everything. For parts with a diameter of more than 4 mm made from tough materials, the Delta is more robust and better suited.” Ultra has a diverse range of machinery, enabling it to choose the best machine for the parts to be made. For parts with a small diameter, the management now favour the SwissNano.

**Straightforward machines that are easy to set up**

Mr Marchand has chosen the ISO-programmable version of the SwissNano. He told us: “We don’t need a system like Isis, since our parts are straightforward to program.” He added: “The machine is conventional and easy to program and use, even a bar-turner who is not familiar with NC can get by after a few explanations.” He concluded: “Using conventional ISO also means that our operators are more versatile and able to get involved.”

**Unique design**

“During the machining process, it is crucial that we have an unobstructed view of the work area. In this respect, the SwissNano is ideal, since the glass screen isn’t an issue, we have excellent 180° vision and the glass is far enough away from the machining area to stay clean,” explained Mr Marchand. The director also likes the smaller footprint and the fact that it is no longer necessary to leave a large space behind the machine. He explained: “We decided to fit the machine with an Iemca bar feeder which has a very small footprint. In future, we plan to buy SwissNano machines with 2 m Iemca bar feeders, then not only will we be able to do a straight swap with cam-type machines, but also fit more into the same space. Our buildings are old and quite narrow. The length of the machine and its bar feeder are key.”

**A very competitive price**

As Mr Marchand mentioned earlier, the choice of the SwissNano machine was based on objective criteria: footprint, price, precision and the overall quality of the machine. On this subject, Mr Almeida, sales manager for Switzerland, explained: “The SwissNano machine was designed and built in Switzerland; it is a ‘Swiss Made’ product for ‘Swiss Made’ watchmaking.” For Tornos, watchmaking is very important and we have developed this machine for our customers.” Mr Marchand continued: “When we launched the consultation process for the procurement of new machines, Mr Almeida showed us the design and we waited to see if Tornos could offer us a ‘watchmaking machine’ at a price that would allow us to make a return on our investment while still offering our customers competitive terms.” A year later, the SwissNano was launched at the price originally discussed and Ultra ordered its first machine.

**A wide-ranging service**

Asked about the specific aspects of the company, the director told us not only about his range of complementary machines but also his highly qualified staff and Ultra’s desire to offer its customers a comprehensive solution. This is why the company has both a cutting and a rolling workshop. Equipped with specific machines, they add value to the service provided. He explains: “We have been specialising in watchmaking for over 100 years and we know the market. We are equipped to offer a complete service to our customers and have put in place an organisation that allows us to handle all batch sizes in a responsive manner.” The company also offers the possibility of finishing parts.
runs part-by-part with felting or other value-added operations. Mr Marchand concludes: “We provide services geared towards the luxury watchmaking industry. If our customers want a particular finish or 100% quality control, for example, we are equipped to deliver this.”

The future? With the SwissNano!
We wanted to take stock after three months of using the SwissNano. Mr Marchand is fully satisfied: “We don’t regret waiting for this machine to become available, since its price and size mean that we can be very competitive. The precision and stability are excellent.” Ultra now plans to test new applications on the SwissNano. “It clearly offers the best value for money on the market. We produce machined parts at very reasonable prices and, if our tests are satisfactory, we plan to buy several SwissNano machines a year for the next few years. We only have Tornos machines, although we analyse each investment carefully to find the best solution. For watchmaking today, the SwissNano is the best choice.”