



OPENING UP NEW MARKETS WITH THE SWISSNANO

Already equipped with some 50 automatic turning machines (including 15 Decos, 1 EvoDeco from Tornos and 32 Escomatics) the Swiss company Polydec has been working with a SwissNano machine for year... and it is only a lack of space that is stopping it from purchasing more.



To find out more, we met with Claude Konrad, CEO, and Domenico Di Iullo, CNC bar turning manager. Operating mainly in the automotive, watchmaking and electronics sectors, the company wanted to purchase a machine which could meet the requirements of Swiss watchmaking and work within the constraints of this industry. *“With the SwissNano, we have found a Swiss Made machine that meets our requirements”* begins Mr. Konrad.

Micron-level precision...

The constraints of the watchmaking sector are constantly increasing, especially in terms of precision. The workshop manager explains: *“We have always*

been very pleased with our Deco machines, but they are getting quite old now. Our comfort zone on these machines is around 4 microns, but nowadays we are often required to produce within a tolerance of 2 microns. The SwissNano makes this much easier.”

... with consistency

In Bienne, the machines are in production 24/7. How would you describe the SwissNano’s performance? Mr. Di Iullo is very satisfied: *“The results are excellent, the precision is perfect and the dispersion is very low. After a change of setup, the machine does not need to be preheated, the first part comes*

out perfectly and precision is consistent throughout production.” He adds: “Because the machine is very rigid, it produces excellent finishes and tool wear is minimal.”

An efficient design

Although the CEO appreciates the attractive design of the machine, he is convinced that the success of the SwissNano’s design is also due to its ergonomics and the quality of the machine itself: “The advantage of the SwissNano is its ergonomics – it offers a fully integrated solution. Moreover, it is well-designed, perfectly clean and watertight.” And these aspects are particularly important in a workshop like the one at Polydec. The 80-cm gap between machines soon becomes insufficient if the machines are equipped with devices which extend beyond the body of the machine.

Choosing the most suitable machine

For CNC bar turning, Polydec has Deco machines with nine axes, to produce complex parts, and other machines to produce simpler shaped parts. The SwissNano machine integrates both: it combines complexity of parts with greater precision. In the words of Mr. Konrad: “If SwissNano machines had been available a few years earlier, we would probably have more now.” For new parts, choosing a machine is simple; for very precise watch parts, the first-choice machine is the SwissNano, then the complexity determines if it is possible. Mr. Di Iullo finishes by saying “The specialists at Tornos told us that the aim of the SwissNano is to cover 80% of



Domenico Di Iullo, CNC bar turning manager

Dossier



needs in the watchmaking sector. Obviously, sometimes we would like to have more options, but the machine offers an excellent compromise."

What about watch parts?

The first parts produced are pins in three diameters with a tolerance of just a few microns, then there are the double plates, the setting pinions and other parts. These are all finished on the machine, including those which need hobbing and stamping operations. The CEO explains: *"Nowadays we can produce parts which were beyond our means before the arrival of the SwissNano. It has really opened up new markets for us."*

Highly targeted possibilities

During the visit, we discover a short part featuring a special kind of machining in the centre. To create it, Polydec uses the bushless operating mode and stamps the part in the centre. It is quick and simple to switch from standard machining with a fixed guide bush to bushless machining. The machine's simplicity is another advantage appreciated by the micro bar turning specialist from Bienne.



POLYDEC SET TO RELOCATE IN 2015

To pave the way for growth, Polydec has acquired new industrial premises in Bienne. These much larger premises will enable the company to increase its production capacity. Due to the conversion, the relocation is planned for the end of 2015.

Located right next to a large well-known watchmaking group, the company's former premises are perfectly placed and well-equipped for a bar turning workshop and are for sale (more info available on the company's website: <http://www.polydec.ch/fr/actualites/batiments-a-vendre/>)



Simple and intuitive to use...

The workshop manager appreciates how simple the machine is to set up and use: *"Although the tool systems are not as modular as on the Deco, the setup is simple, and quicker. Even special operations such as hobbing or stamping pose no problem."* Another advantage is that the machining area can be accessed from all sides, although in practice it is rare to need access from the back. The size of the machine also makes it great to use: *"it is very compact and at a perfect height for us. The housing is watertight and everything is integrated"* adds Mr. Di Iullo.



... with perfect programming

The workshop manager explains: *"We are used to TB-Deco and ISO programming with TISIS: Tornos offers a tool which combines both. It is an advanced editor which enables us to perform classic ISO programming but which also offers us information and help inspired by the best TB-Deco tools"* (on this topic, see the article presenting version 1.5 of TISIS on page 25).



And what is more, the service is excellent!

When asked about the service offered by Tornos for the SwissNano, the managers were very pleased: *"We have had to contact the after-sales service two or three times and we have nothing but the highest praise. They helped us quickly and skilfully."*

In conclusion, the managers added: *"It's always easy to criticise and to comment on what is not right, but since everything is fine and we are very satisfied, there is not a great deal to say. That's how it is with the SwissNano!"* Once their relocation project is complete (see box), it is highly likely that Polydec will equip its workshop with other SwissNano machines.



engineering and manufacturing
to fit your needs

Polydec SA décolletage
Rue de Longeau 18
CH-2504 Biel/Bienne
Tel. +41 32 344 10 00
Fax +41 32 344 10 01
polydec@polydec.ch
www.polydec.ch