



THINK PARTS THINK TORNOS



WATCHMAKING

Proven solutions in the watch industry
for over 125 years.

ALWAYS BE BANG UP-TO-DATE WITH MODERN TECHNOLOGY...



How the watch industry got to grips with precision turning...

Since 1880 the “engineering wizards” in Moutier have been working on tackling the problem of automatically executing microscopic parts. This concept gave rise to the industrialisation of horology! Several improvements have been made to the machines over the decades, especially at operating level: operations were becoming more and more complex as the demand for high-speed output increased. There can be no shadow of doubt that the boom of the watch-making industry, coupled with the “Swiss Made” designation benefited to a large extent from the support of Tornos!

Horology – a sector with which Tornos expanded...

Tornos has been offering automatic single-spindle and multispindle lathes for more than 120 years to provide distinct customer advantages both in

terms of productivity and precision. However, these criteria are not always sufficient to meet the great demands of this market. Thanks to Tornos’ extensive experience gained over the last 100 years, the company can now offer you much more.

In fact, with Tornos, customers can benefit from the latest technology coupled with a “helping hand” from the professionals in your sector. We are highly committed to helping you promote the “Swiss Made” label to an even higher level and over a greater area!

This brochure illustrates a brief range of parts recently executed on Tornos machines. It goes without saying that these are only shown to “wet your appetite”...

If you wish to learn more, please contact your Tornos dealer, who will be happy to provide further information and personal specialist advice!

... AND TORNOS PRODUCTS!

You are looking for...

Machining know-how.

Feasibility.

Superior quality parts.

A clean environment.

An answer to meet precision requirements.

Guaranteed consistent production.

A reduction in production costs.

We can offer...

> Vast experience in this sector.

> A machine with tooling adapted to top-of-the-range horology.

> A tested solution for extreme conditions.

> The best conditions with respect to cleanliness, noise and oil mist evacuation.

> High-precision results that can achieve ± 0.001 mm.

> Reduced downtimes thanks to the simultaneity of the axes. Equivalent or better outputs than achieved with cam-operated lathes.

> A price-to-performance ratio that far outweighs the competition, providing a machine adapted to your parts.

Tornos experience – serving progress...

Even if seen from the outside a watch is just a watch, the current models no longer really resemble their illustrious predecessors. In fact, the parts comprising the mechanisms have become more complex and continually demand greater precision and an exemplary surface finish. Nowadays, even the materials undergoing

machining are subject to certain standards to govern aspects such as anti-allergy or quality properties. These requirements are often comparable with those demanded in the medical sector. The products and the vast amount of know-how on offer allow us at Tornos to be active in these sectors and to manage these aspects efficiently, so as to guarantee high precision and incomparable quality.



PRODUCTION

“Standard machining operations”



Steel 20 AP
Ø 1,00 mm
Real size
3,50 mm



Steel 20 AP
Ø 0,70 mm
Real size
4,80 mm



Steel 20 AP
Ø 1,40 mm
Real size
7,60 mm



Steel 20 AP
Ø 1,40 mm
Real size
3,00 mm



Steel 20 AP
Ø 1,20 mm
Real size
2,14 mm



Steel 20 AP
Ø 2,35 mm
Real size
7,85 mm



Brass
Ø 6,00 mm
Real size
3,30 mm



Steel 20 AP
Ø 1,30 mm
Real size
3,00 mm



Steel 20 AP
Ø 1,70 mm
Real size
3,90 mm



Steel 20 AP
Ø 2,54 mm
Real size
2,70 mm



Steel 20 AP
Ø 3,25 mm
Real size
1,37 mm



Steel 20 AP
Ø 1,50 mm
Real size
1,19 mm

PRODUCTION

Milling / high-speed machining



Steel 20 AP
Ø 0,55 mm
Real size
2,50 mm



Cu Be
Ø ext. 2,00 mm
Real size
1,20 mm



Steel 20 AP
Ø 3,90 mm
Real size
1,30 mm



Cu Be
Ø 6,20 mm
Real size
Thickness 0,90 mm



Steel 20 AP
Ø 1,90 mm
Real size
2,60 mm



Chronifer Labor M13
Ø 5,85 mm
Real size
Thickness 0,79 mm

Milling hooks



Steel 20 AP
Ø 2,40 mm
Real size
2,99 mm



Steel 20 AP
Ø 2,30 mm
Real size
3,00 mm



Steel 20 AP
Ø 2,70 mm
Real size
4,00 mm

PRODUCTION

Stamping



Cu Be
Ø 1,80 mm
Real size
Thickness 0,65 mm



Stainless steel 303
Ø 4,50 mm
Real size
4,00 mm



Cu Be
Ø 15,30 mm
Real size
Thickness 1,90 mm



Brass
Ø 12,50 mm
Real size
Thickness 1,50 mm

Polygonal machining



Gold
Ø int. 2,37 mm
Real size
Thickness 1,16 mm

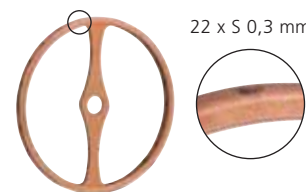
Diamond finishing



Gold
Ø int. 2,37 mm
Real size
Thickness 1,16 mm



Gray gold
Ø 2,00 mm
Real size
Thickness 0,73 mm



Cu Be
Ø 9,00 mm
Real size
Thickness 0,54 mm

PRODUCTION

Hobbing / Thread whirling



Stainless steel 303
 Ø 4,00 mm
 Real size
 3,30 mm



Steel 20 AP
 Ø 1,25 mm
 Real size
 20,00 mm



Brass
 Ø 5,20 mm
 Real size
 3,70 mm



Steel 20 AP
 Ø 1,50 mm
 Real size
 1,19 mm



Stainless steel 316 L
 Ø 7,00 mm
 Real size
 10,00 mm



Steel 20 AP
 Ø 1,20 mm
 Real size
 1,50 mm



Steel 20 AP
 Ø 2,40 mm
 Real size
 2,99 mm

Internal thread whirling



Brass
 Ø 12,00 mm
 Real size
 Thickness 0,64 mm



Cu Be
 Ø 12,60 mm
 Real size
 Thickness 0,44 mm



Cu Be
 Ø 10,10 mm
 Real size
 Thickness 0,70 mm



Cu Be
 Ø 8,50 mm
 Real size
 Thickness 0,52 mm



Cu Be
 Ø 9,00 mm
 Real size
 Thickness 0,54 mm

22 x S 0,3 mm



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