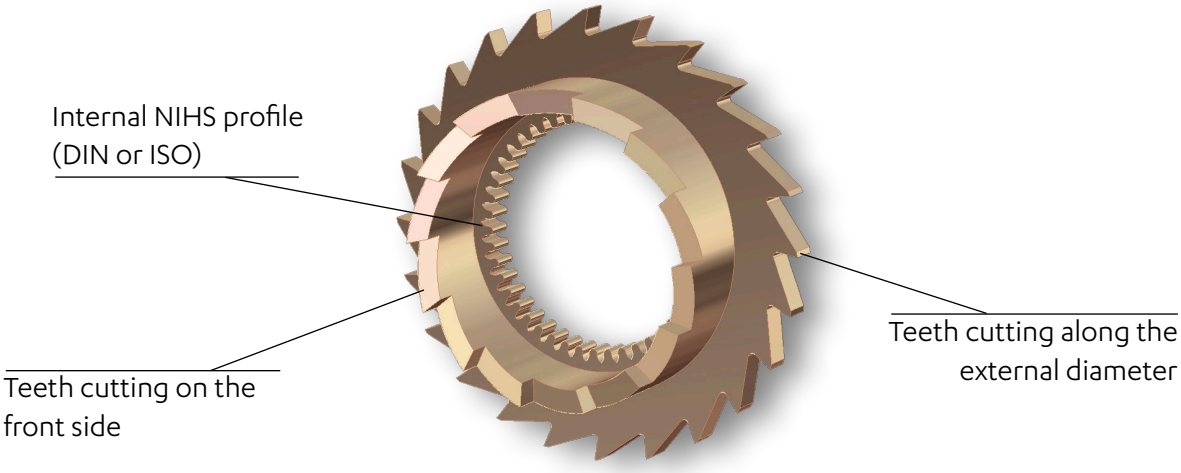
Hobs for asymmetric grinding
Face milling cutters - Punch tools

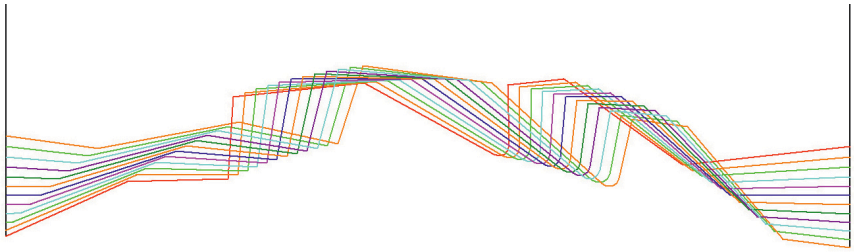
Let's take as an example a mechanical part of a watch movement. This could also be any part of a microtechnical component. This part is difficult to machine because of different cuttings of the teeth : along the external diameter, on the front side and on the inside.

Part to be machined :

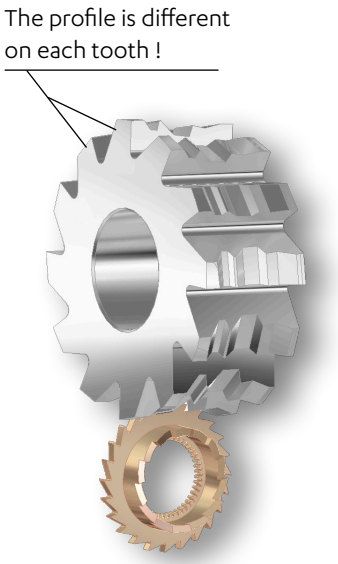


Teeth cutting along the external diameter with hob for asymmetric grinding

Machining with this type of hob allows one to generate asymetric profiles. The rotation of the asymmetric hob must be synchronised with the rotation of the part to be machined.



The profile on the hob moves while the machined part is turning



Louis Bélet SA CP 11 CH-2943 VENDLINCOURT info@beletsa.ch SWISS MADE www.louisbelet.ch facebook.com/LouisBelet T. +41 32 474 04 10 F. 41 32 474 45 42

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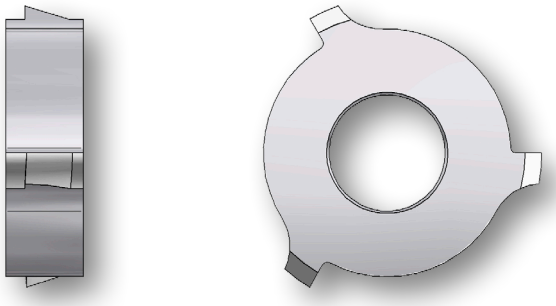
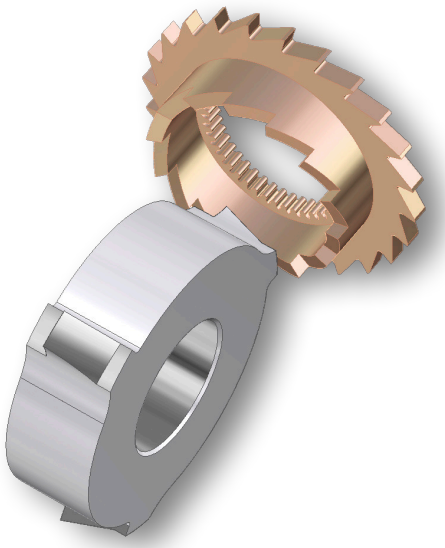
Cutting tools

Face milling

On the front side, the teeth can be machined by gear hobbing, using a face milling cutter. Here also, the rotations of the cutter and of the machined part must be synchronised.

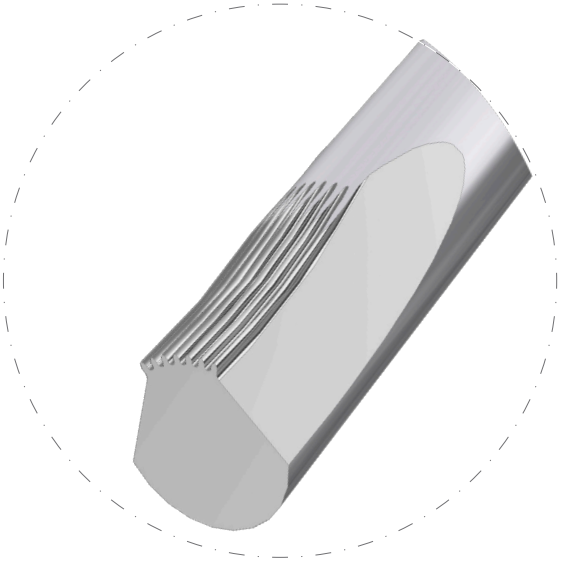


The face milling cutters have an important lateral relief, allowing to follow the rotation of the machined part.



Machining an internal nihs profile using a special punch tool

Louis Bélet manufactures also profiled punch tools for the machining of internal NIHS profiles (DIN or ISO). Tight tolerances are applied to these punches, as on all our profiled tools.



The punch tool may have a partially profiled shape, or a full one