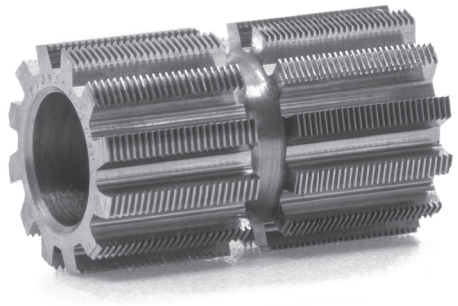
simply Different

DIAMETAL®

Swiss Cutting Tool



DIA progressive

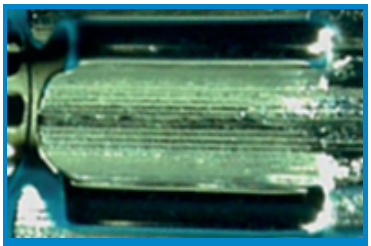
The perfect solution for watch gears

It is generally known that on watch drives with a cycloid tooth profile (such as NIHS, for example) and a smaller number of teeth (Z ≤10), various flaws can arise during hobbing. This is the typical case with escape pinions. The most common deviations occur in the tooth bottom.

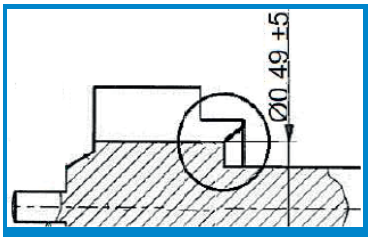
Alternatives have been available for quite some time now, such as setting hobs and tooth by tooth milling cutters, but they don't solve all problems and sometimes create new ones.

Do you have these **flaws** on your watch gears?

- **Stripes** in the tooth base (bad surface roughness in the tooth root relative to the tooth flanks)
- **Burrs** in **rivet-undercuts** (formation of hard burrs which reduce productivity)
- Material excess **on both sides of the tooth root**, mainly in the case of **NIHS** tooth profiles
- **Root diameter** is not always reached
- Tool **wears quickly**



Stripes in the tooth base

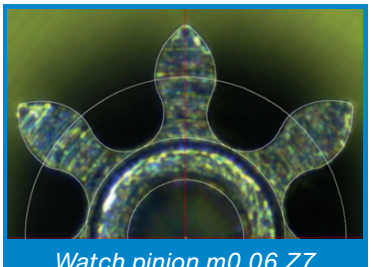


Watch pinion with rivet-undercut

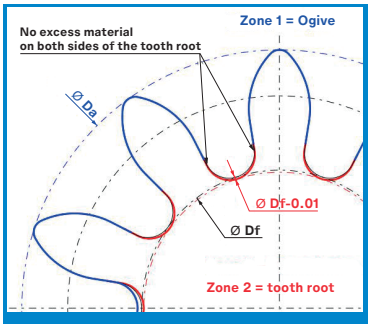
The **advantages** of **DIA** progressive hob cutters

- Perfect tooth root
- Optimal surface quality on the entire profile – without grooves
- Prevention of early burrs
- Perfect tooth flanks (without excess material in the tooth root)
- Effective root diameter is achieved
- Longer tool life

- Shifting possible
- Resharpenable
- Can be used for burr-free hobbing process



Watch pinion m0.06 Z7 NIHS20-25, perfect tooth with DIA progressive



Process schematic for watch pinion m0.10 Z10

Our new progressive two-zone hob cutter was specially developed for the hobbing of watch gears with a small number of teeth. With this tool, we can guarantee a perfect tooth profile and eliminate all the problems which are typical for these parts.

Contact us for your individual solution.

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