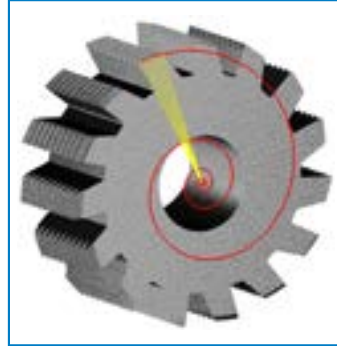
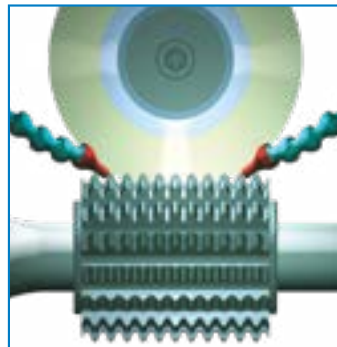


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#### Logarithmic relief

All gear hobbing tools of DIAMETAL Swiss Cutting Tool are ground with a logarithmic undercut, guaranteeing the exact shape of the profile after each sharpening.



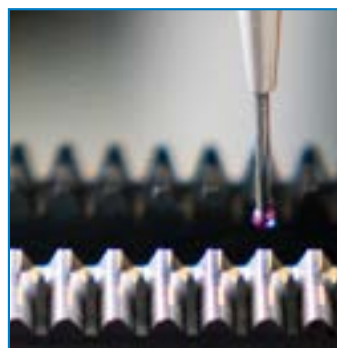
#### Sharpening the gear hobs

The lifetime of a hob depends largely on its sharpening process. The burr formation, deteriorating surface finish and a deformed profile are factors indicating that the tool needs to be reground. We offer a sharpening service for all types and sizes of hobs with the possibility of adapting or changing the cutting angle according to your needs.



#### Simulation

Deviations between the theoretical and actual tooth geometries are quickly calculated and detected when designing the micro gears. DIAMETAL "Virtual Gearing" simulation guarantees short cycle time and maximum process repeatability. We offer individual solutions. Every cutter design is simulated in order to virtually check the tooth profile created by the cutting process and thus guarantee the application.



#### Quality

In order to guarantee a long service life of its hobs, DIAMETAL uses the best carbide grades and the most suitable coatings for your applications. We are able to guarantee process repeatability and consistent profile machining. Our production, which complies with current quality standards, is continually adapted to meet your needs. A systematic check is carried out before each delivery and on request, our gear hobbing tools can be supplied with an inspection report.

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# DIAMETAL

Swiss Cutting Tool

## Precision tools for gear hobbing

Your specialist for high quality applications



simply Different

The DIAMETAL group combines **three main fields of expertise** and high-precision industrial know-how that has been constantly evolving since 1936. Different through **its history and its rich experience**, the group provides the **international market** with standard or customized solutions in **three main strong fields**. DIAMETAL leverages its **core competencies** (expertise, tools, methods, parameters) in the manufacturing of each product. And it **simply** makes the **Difference**.



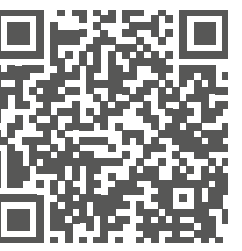
Swiss Cutting Tool

Excellent service in **application** and processes



Process and expertise for Gear machining  
Gear cutting Tools  
Turning inserts

Burnishing tools  
Standard and special rotary tools  
Application and Competence Center



simply Different

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**Fine pitch hob for involute and epicyclic profiles**

Carbide, with logarithmic relief

- ▶ Hobbing process
- ▶ Shifting
- ▶ Multi-threads are available
- ▶ Straight or helical flutes
- ▶ Cutting of straight or helical gears and pinions
- ▶ Standard profiles (NIHS, NHS, EVJ, CTH, DIN, AGMA, BS, ISO, ...) and according to your specifications, involute or epicycloidal profiles
- ▶ Module from 0.03 to 1 mm



**Hobs**

Carbide, with logarithmic relief

- ▶ Hobbing process (roughing, finishing, skiving)
- ▶ Shifting
- ▶ Multi-threads are available
- ▶ Straight or helical flutes
- ▶ Cutting of straight or helical gears and pinions
- ▶ Standard profiles (DIN, AGMA, BS, ISO, NF, ...) or according to your specifications.
- ▶ Module from 0.5 to 2.5 mm (other modules on request)



**Shank type hob**

Carbide, with logarithmic relief

- ▶ Hobbing process (roughing, finishing, skiving)
- ▶ Shifting
- ▶ Multi-threads available
- ▶ Straight or helical flutes
- ▶ Different kinds of shanks can be produced
- ▶ Cutting of spur or helical gears and pinions
- ▶ Standard profiles (DIN, AGMA, BS, ISO, NF, ...) or according to your specifications
- ▶ Module from 1 to 2.5 mm (other modules on request)



**Fly cutter**

Carbide, with logarithmic relief

- ▶ Hobbing process
- ▶ One position (no-shifting)
- ▶ Multi-threads available
- ▶ Cutting of frontal and conical teeth : Breguet toothing, sliding pinion, frontal gears, chamfer hobbing
- ▶ All kinds of profiles
- ▶ Module from 0.03 to 1 mm (other modules on request)



**Bevel gear hob**

Carbide, with logarithmic relief

- ▶ Hobbing process
- ▶ One position (no-shifting)
- ▶ One or two threads
- ▶ Hobbing of bevel gears
- ▶ Standard profiles (NIHS, NHS, EVJ, CTH, DIN, AGMA, BS, ISO, NF, ...) and according to your specifications, involute or epicycloidal profiles
- ▶ Module from 0.03 to 1 mm (other modules on request)



**Face gear hob**

Carbide, with logarithmic relief

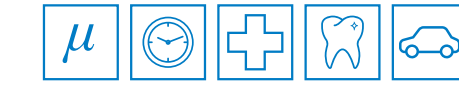
- ▶ Hobbing process
- ▶ One position (no-shifting)
- ▶ One thread
- ▶ Face gear and frontal hobbing of all types of crowns
- ▶ Standard profiles (DIN, AGMA, BS, ISO, NF, ...) or according to your specifications
- ▶ Module from 0.03 to 1 mm (other modules on request)



**Disk-Type Gear Milling Cutters**

Carbide, with logarithmic relief

- ▶ Cutting tooth by tooth
- ▶ One position (no-shifting)
- ▶ Cutting of all types of profiles
- ▶ Module from 0.03 to 2.5 mm (other modules on request)



**Milling cutter for rack**

Carbide, with logarithmic relief

- ▶ Complete or segmented cutting
- ▶ Straight or helical flutes
- ▶ Rack cutting
- ▶ Standard profiles (NIHS, NHS, EVJ, CTH, DIN, AGMA, BS, ISO, NF, ...) and according to your specifications, involute or epicycloidal profiles
- ▶ Module from 0.03 to 2.5 mm (other modules on request)



**Thread-milling cutter**

Carbide, with logarithmic relief

- ▶ Cutting of worms, threaded parts, ...
- ▶ One or two threads
- ▶ Standard profiles (DIN, AGMA, BS, ISO, NF, ...) or according to your specifications
- ▶ Module from 0.1 to 2.5 mm (other modules on request)



**Setting hob for special profiles**

Carbide, with logarithmic relief

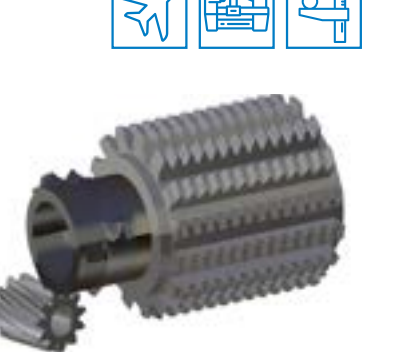
- ▶ Hobbing process
- ▶ One position (no-shifting)
- ▶ Multi-threads available
- ▶ Spur gear cutting: exhaust wheel, star, saw tooth, ...
- ▶ Special and asymmetrical profiles
- ▶ Module from 0.03 to 1 mm (other modules on request)



**Fly cutter for chamfering**

Carbide, with logarithmic relief

- ▶ Hobbing process
- ▶ One position (no-shifting)
- ▶ Chamfering of straight or helical wheels and pinions, crowns, bevel gears
- ▶ Tooth edge chamfering and deburring
- ▶ Cutting, chamfering and deburring on the same machine



**Multiposition and Multitask hob**

Carbide, with logarithmic relief

- ▶ Multi-position: possibility of shifting on single-position milling cutters.
- ▶ Multi-tasking: different profiles for several hobbing operations on the same cutter (e.g. roughing and finishing, radial and face hobbing, etc.).
- ▶ Increased working autonomy
- ▶ Economical advantage
- ▶ Easy setting

