

## Gear Cutters

# Miracle Hard Hob

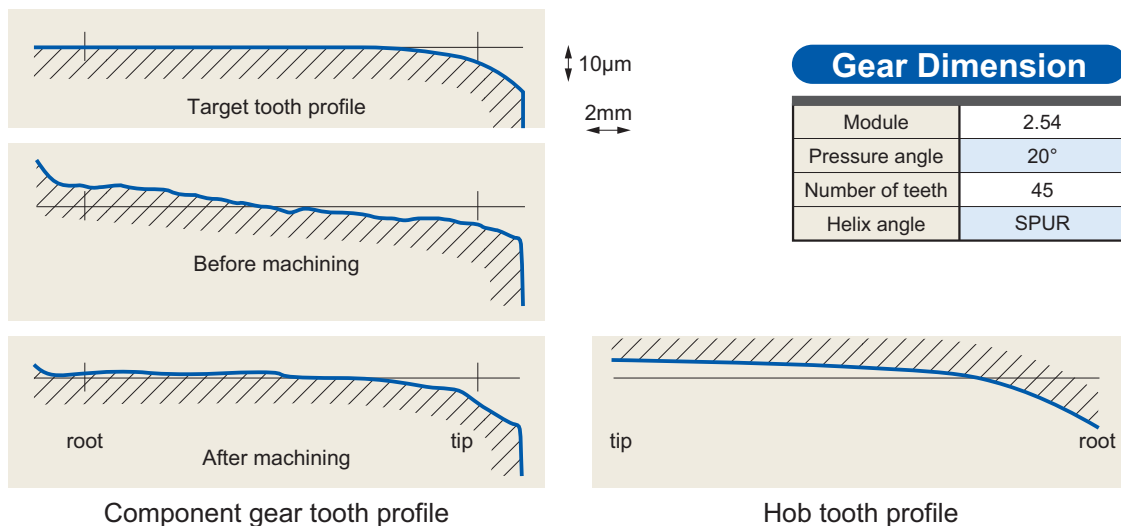


**Newly developed carbide hob specially designed for the finishing of hardened components.**

### ■ Features

- Employs a special carbide substrate that offers wear resistance and increased fracture resistance.
- Miracle coating, already renowned for machining of hardened materials is used leading to longer tool life.
- Using grinding technologies developed from manufacturing high speed steels, it is possible to obtain products with precision levels higher than JIS AAA.

Modified tooth profile is added to hob tooth profile.

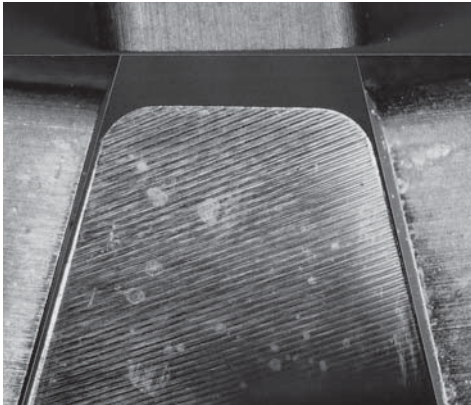


Component gear tooth profile

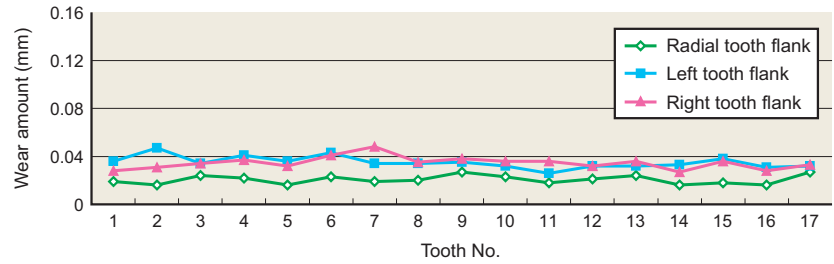
Hob tooth profile

# Miracle Hard Hob

## Machining Example



After hobbing 700 pieces



### Hob Dimension

Module	2
Pressure angle	14.5°
Helix angle	3RH
Outside dia	ø80
Overall length	95 mm
Number of gashes	17

### Gear Dimension

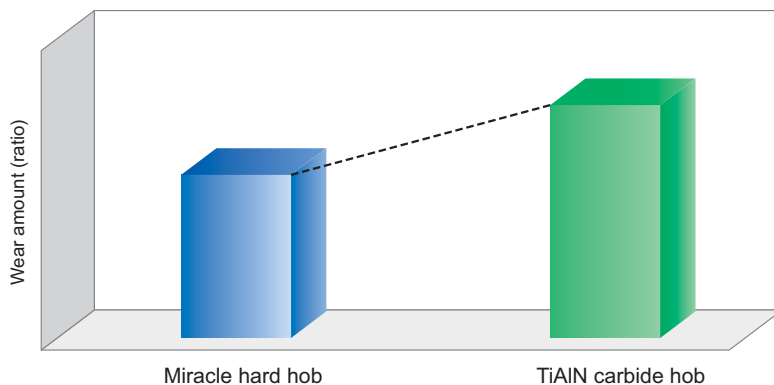
Number of teeth	70
Helix angle	SPUR
Hardness	55-60 HRC

### Cutting Conditions

Cutting speed	100 m/min
Feed	1.25 mm/rev
Machining method	Climb cut, dry cutting

## Tool Life Comparison

**1.4 times longer tool life when compared to a TiAlN carbide hob.**



### Gear Dimension

Module	1.9
Pressure angle	20°
Number of teeth	9
Helix angle	25°LH
Hardness	55-60 HRC

**For Your Safety**

●Don't handle inserts and chips without gloves. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc. Ensure that the insert is correctly set in its location pocket. ●Before use, ensure that the tool setup and various settings (machining programme, etc) on the machine are suited to the tool specifications.

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(Tools specifications subject to change without notice.)