

# Manufacturing Tools for Gears, Rotors and Screws

## Hobs



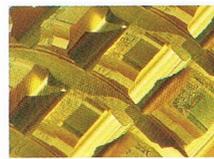
**Shank-type**  
 $m_n$  0.45 – 7.0 mm  
 $\emptyset$  30 – 200 mm



**Bore-type**  
 $m_n$  0.45 – 17.0 mm  
 $\emptyset$  30 – 210 mm  
tooth depth 34 mm,  
limited by  $m_n$



**For worm gears**  
Bore- and shank-type



**For special profiles**  
Sprockets gears, splines,  
timing belt gears and rotors



**For large modules**  
 $m_n$  7.0 – 22.0 mm  
 $\emptyset$  up to 400 mm

## Inserted Blade Tools



**Roughing gasher**  
 $m_n$  6.0 – 40.0 mm  
 $\emptyset$  up to 500 mm



**Finishing gasher**  
external/internal  
 $m_n$  6.0 – 30.0 (50.0) mm  
 $\emptyset$  up to 500 mm



**Hobs with / without  
protuberance**  
 $m_n$  6.0 – 22.0 (30.0) mm  
 $\emptyset$  up to 450 mm  
length up to 500 mm



**Solid carbide endmills**  
**roughing / finishing**  
Design on request  
std shaft  $\emptyset$  16 / 20 / 25 mm



**Rotor Gashers**  
Duplex finishing gashers  
Sprocket wheel gashers  
Endmills for radial face  
serrations

## Shaper Cutters



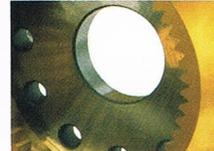
**Shank-type**  
 $m_n$  0.5 – 8.0 mm  
 $\emptyset$  12 – 300 mm



**Disk-type**  
 $m_n$  0.5 – 8.0\* mm  
 $\emptyset$  300 mm  
\*larger  $m_n$  on request

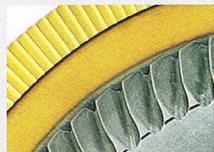


**Deep counterbore-type**  
 $m_n$  0.7 – 8.0 mm  
 $\emptyset$  300 mm



**Special / modified profile**  
for sprocket gears, splines,  
cams, timing belt gears

## Chamfering / Deburring Tools



**Chamfering / deburring tools**  
Special finish for long life  
Special tooth forms



**Rolling tools**  
to remove secondary burrs  
and smoothen tooth flanks

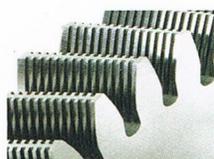


**Chamfer-roller tools**  
for spur / helical gears  
Patented tool



**Deburring / rolling tools**  
for sprocket gears

## Shaving Cutters



**Shaving cutters**  
external / internal  
 $m_n$  0.7 – 10.0 mm  
 $\emptyset$  70 – 330 mm  
face width 65 mm

## Hard Finishing Tools



**Ceramic-bounded, dressable profile grinding wheels**



**Ceramic-bounded, dressable generating grinding worms**



**CBN plated profile grinding wheels**  
 $\varnothing$  25 – 240 mm  
 bore  $\varnothing$  8 – 80 mm  
 width 10 – 35 mm



**CBN plated generating grinding worms**  
 for roughing / finishing  
 $\varnothing$  40 – 250 mm

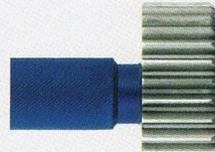
## Master Gears and Gauges



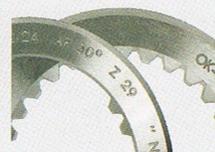
**Master gears**  
 $m_n$  0.7 – 6.0 mm  
 $\varnothing$  40 – 300 mm  
 width 4 – 80 mm



**Rolling gears**  
 to check noise and improve surface finish



**Plug gauges**  
 $m_n$  0.5 – 6.0 mm  
 pitch  $\varnothing$  20 – 150 mm



**Ring gauges**  
 $m_n$  0.5 – 7.0\* mm  
 outside  $\varnothing$  20 – 200 mm  
 \*depending on outside  $\varnothing$

## Project Consultancy



**Consultancy**  
 Application-tailored advice on efficient technology and future-safe investments



**Design**  
 Our expert staff will work closely with you to make sure you are able to meet your requirements



**Testing**  
 Extensive trials in real production environments



**Automation options**  
 Integrated cells and complete production lines

## Tool Services



**Sharpening and recoating**  
 of hobs, shaper and shaving cutters



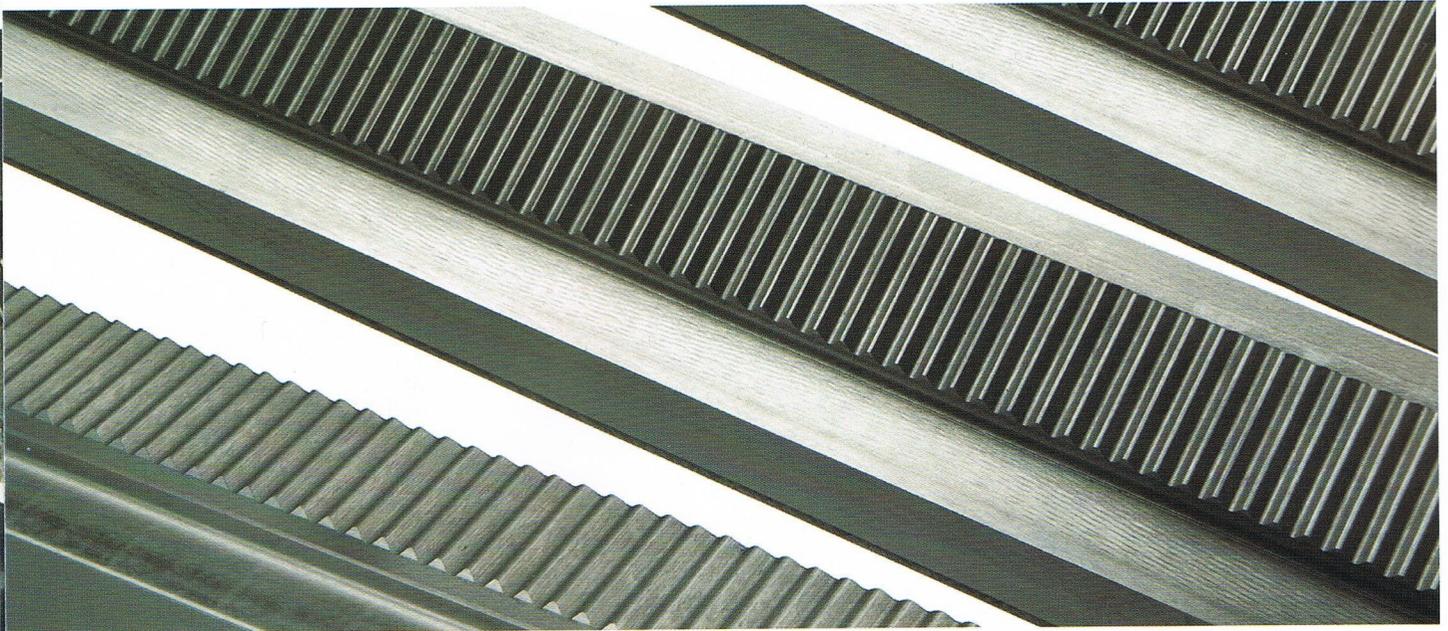
**Master gear regrinding**



**Experienced CMS partner**  
 for single tools or the complete gear tool product range  
 Product cycle management

# Cold forming tools

## Rack cutters



Samputensili cold forming racks are designed for the manufacturing with minimum lubrication. No cleaning is required after forming.

These high precision tools guarantee highest contact ratios during forming with minimal thermal effects. Grooves are kept free from debris.

Axial tapering enables easy fitting of spline shafts. Simultaneous machining of several profiles is possible.

### Types for

- Gear profiles
- Serrations
- Grooves
- Threads

### Quality

- DIN 5480
- ISO 4156
- GOST 6033-51
- ANSI B 92.1-1970
- ANSI B 92.2M-1980

### Designs and dimensions

Module range	0,3 - 2,0 mm
Workpiece length, max.	1,000 mm
Profile length, max.	180 mm
Helix angle, max.	< 25 deg
Pressure angle	> 25 mm

