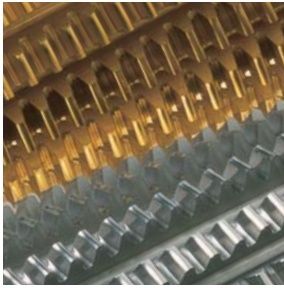


Gear cutting tools



Hobs

Mod. 0.75 - 7* mm
Diameter 30 - 200 mm

*Larger modules available on request

- bore- and shank-type
- multi-gash and multi-start
- special/modified profile
- for sprockets, splines and timing belt gears, band saws
- X2®/X4® express hobs



Shaving cutters

Mod. 0.7 - 10* mm
Face width 65 mm
Diameter 70 - 330 mm

*Serration < module 1.0 formed by turning

- for conventional (parallel), diagonal, diagonal-traverse, underpass, tangential and plunge shaving
- for external and internal shaving



Shaper cutters

Mod. 0.5 - 8 mm
Max. dia. 300 mm

- spur and helical type
- disc-type and shank-type
- deep counterbore-type
- internal hub-type
- special profiles for chain sprockets, splines and timing gears
- X4® express shaper cutters



Shaving cutters are supplied unground, pre- or finishground.

Profile grinding wheels

Out. dia. 25 - 240 mm
Bore dia. 8 - 80 mm
Thickness 10 - 35 mm
Mod. 1 - 9 mm
Grit size 46 - 281 B/D

- electroplated CBN and diamond grinding wheels with a wide range of different profiles including rotor grinding
- profile calculation
- analysis of interference
- process optimisation
- replating/regeneration of tools
- grinding tests



Chamfering tools

Chamfering tools for cylindrical spur and helical gears, with special finish for extra long life.



Deburring tools

Deburring tools for gears with parallel or inclined faces including a wide range of different types for specific tooth forms and improved quality.



Chamfer-roller tools

Patented, highly economical chamfer roller tools for cylindrical spur and helical gears, combining chamfering and rolling in one tool. For use on Samputensili machines only.



Master gears

Mod. 1 - 6 mm
Out. dia. 40 - 300 mm
Width 4 - 80 mm
Helix angle 0 - 45 deg

- for spur gears with or without profile and flank corrections
- for helical gears with or without profile and flank corrections
- for internal gears



Rolling/deburring tools for sprocket gears

Rolling and deburring tools for sprocket gears for one simultaneous operation. Each tool is specifically designed to match your application. The tools may be used on most chamfering and deburring machines.

Machine tools overview

Hobbing of gears/shafts



S 80 - 140
max Ø 130; mod 3.0



S 150 - 400
max Ø 400; mod 8.0



S 200 CDM
max Ø 200; mod 8.0



S 600 - 800
max Ø 800; mod 14.0



S 900 - 2000
max Ø 2,200; mod 24.0

Chamfering and deburring of gears/shafts



S 250 CD
max Ø 250; length 400



S 250 CDA
max Ø 250; length 400



S 250 CDX
max Ø 250; length 700

Generating and profile grinding of gears/shafts



S 250 G
max Ø 250; mod 4.0



S 400 GT
max Ø 400; mod 6.0

Profile grinding of gears/shafts, internal gears, worms, screws



S 375 G
max Ø 375; mod 10.0



S 375 GX
travel 1,350



S 650 - 1000 GW
travel 1,000; mod 10.0



S 3000 GW
travel 3,000; mod 10.0

Tool sharpening of shaving cutters and master gears



S 400 GS / on board checking
max Ø 400; mod 15.0

Rotor hobbing/milling and grinding



S 300 R
profile depth 35



S 600 R
profile depth 65

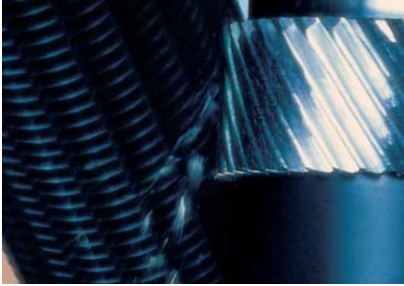


S 375 GR
profile depth 35/50



S 400 GR
profile depth 41

Machine tools



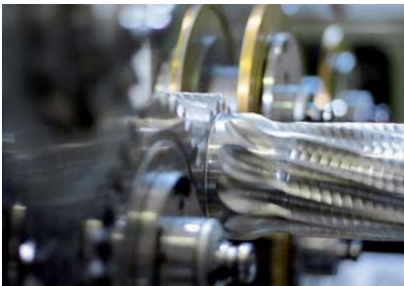
Hobbing machines for dry and wet machining

Model	Nominal workpiece dia., mm	Nominal module mm	Max. axial travel, mm
S 80	100	3	200
S 140	140	4	350
S 150	150	4	400
S 200	200	4	400/600
S 200 CDM	200	4	400/600
S 300	300	6	400/600
S 400	400	6	400/600
S 600	600	12	310 - 1,060
S 800	800	12	310 - 1,060
S 900	900	18	310 - 1,710
S 1200	1,250	18	310 - 1,710
S 1600	1,600	18	310 - 1,710
S 2000	2,200	18	310 - 1,710

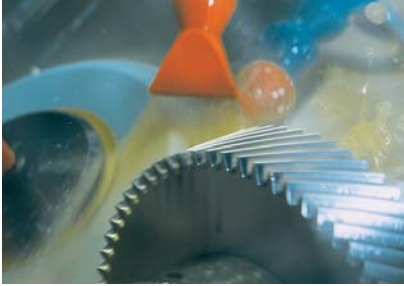


Chamfering and deburring machines

Model	Nominal workpiece dia., mm	Max. face width, mm	Max. length of workpiece, mm
S 250 CD	20 - 250	150	400
S 250 CDA	20 - 250	150	400
S 250 CDX	20 - 250	50 ¹ operation 400 ² operations	400/700
CDM module	20 - 250	150	400

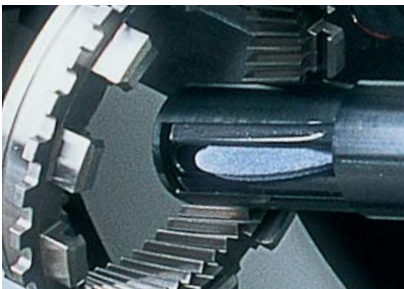


CDM = hobbing/chamfering/deburring
 CD = chamfering/deburring
 CDA = chamfering/deburring automated
 CDX = multiple heads (extended)
 G = grinding
 GX = G extended
 GW = grinding of worms and screws
 GT = grinding of twin spindle
 GS = grinding of shaving cutters
 R/GR = rotor manufacturing



Profile grinding machines for gears, shafts, internal gears and worms

Model	Nominal workpiece dia., mm	Module/profile depth, mm	Max. axial travel, mm
S 375 G	375	0.5 - 10 / 0.5 - 50	650
S 375 GX	375	0.5 - 10 / 0.5 - 50	1,000



Generating and profile grinding machines for gears and shafts

Model	Nominal workpiece dia., mm	Module/profile depth, mm	Max. axial travel, mm
S 250 G w dressable worm w electroplated wheel	250	mod 4 12	400
S 400 GT w dressable & electroplated worm w dressable wheel w electroplated wheel	400	mod 6 20 40	1,000



Profile grinding machines for worms and screw-type workpieces

Model	Nominal workpiece dia., mm	Max. length to be ground, mm	Max. helix angle, degree
S 650 GW	375	650	+/- 90
S 1000 GW	375	1,000	+/- 90
S 3000 GW	375	2,950	+/- 90



Tool sharpening machine for shaving cutters, master gears and shaper cutters with integrated checking unit

Model	Nominal workpiece dia., mm	Nominal module	Max. face width, mm
S 400 GS	400	0.5 - 15	70



Rotor technology



Rotor manufacturing machines for rotor hobbing and milling

Model	Nominal workpiece dia., mm	Profile depth hobbing/milling, mm	Axial travel mm
S 300 R	200	16 / 35	600
S 600 R	600	35 / 45	800
S 900 R	900	45 / 55	1.400



for rotor grinding

Model	Nominal workpiece dia., mm	Profile depth, mm	Workpiece length, mm
S 375 GR	375	35	650
S 400 GR	400	41	850



Rotor manufacturing services

To bridge gaps in manufacturing and facilitate optimisation, we supply rotors and screw-type workpieces for air, gas and oil-flooded compressors, also suitable for dry applications, in compliance with your specific drawings and quality standards. New software developments in rotor design enable us to enhance the mating quality between the screws of your rotors on a job order basis.

Nominal workpiece dia., mm	Overall length mm	Grinding length mm	Tooth depth mm	Weight kg
370	1.200	500	45	150

Automation and integrated solutions



Customers can benefit from our long-standing experience in automated and integrated cells and production lines since it is possible to integrate the whole Samputensili range of

machines with those of other suppliers too, thereby streamlining all previous and subsequent operations. As well as specialised solutions of our own design, we also integrate using the

best technology available on the market (robots, conveyors, etc.), ensuring simple and effective solutions that best suit your individual production needs

Service centre



From the idea to the tool

Our customers do not have to worry about the complexity of certain tool types like hobs, shaper cutters and shaving cutters.

Specify what you need in a particular gear, spline or tooth form and our team of application and design engineers will do the rest: from quoting the product, designing the tool drawing, creating the roll-out to the final manufacturing of the tool. Our expert staff will work closely with you to make sure you are able to meet your requirements.



Resharpener services

Our service centre provide you with fast-turnaround and high-precision hob, shaper cutter, shaving cutter and master gear resharpener services



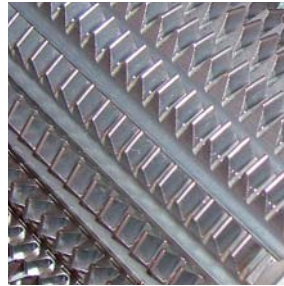
In some areas pickup and delivery services are available.

Coating/stripping/recoating services

Our coating technology is developed with leading coating equipment manufacturers and applied in modern coating units which are located inhouse at our manufacturing plants worldwide.



By closely collaborating with our partners, we are able to supply you with the latest developments in real time.



Stripping and replating services

Using latest-generation galvanic equipment, we strip and replate Samputensili grinding wheels as well as tools of other manufacturers. To guarantee customers the best service possible, these services are not available in all areas worldwide. Please inquire at your local Samputensili sales office for details.



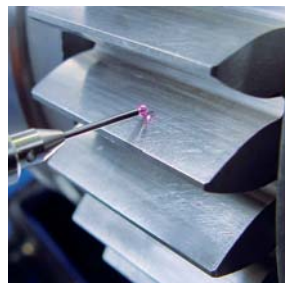
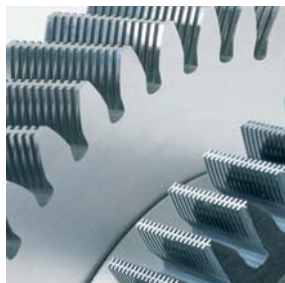
Pickup and delivery service

Samputensili picks up and delivers reconditioned cutting tools from and to the tool shelf of the customer tool crib. These services are not available in all areas worldwide. Please contact your local Samputensili office for more details.



CMS

(Commodity Management Supplier)
Samputensili is an experienced partner of medium and large manufacturing companies. We can supply single reconditioned tools or complete product cycle management to satisfy any gear manufacturing requirement.



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