

Tools  
for the Sawmill Industry



# Precision and Perfection:

For optimal cutting performance, surface consistency and longevity.

Our in-depth understanding of cutting requirements for diverse industries is the foundation of our products for the saw mill industry.

Whether the parts are made of tool steel, special material, surface treated or refined, we produce highly efficient precision made cutting tools that prove their merit during long-term use.

The focus of our service depends on frequent customer dialog. Together we develop the

most enhanced cutting tools and systems for specific sawing and production processes.

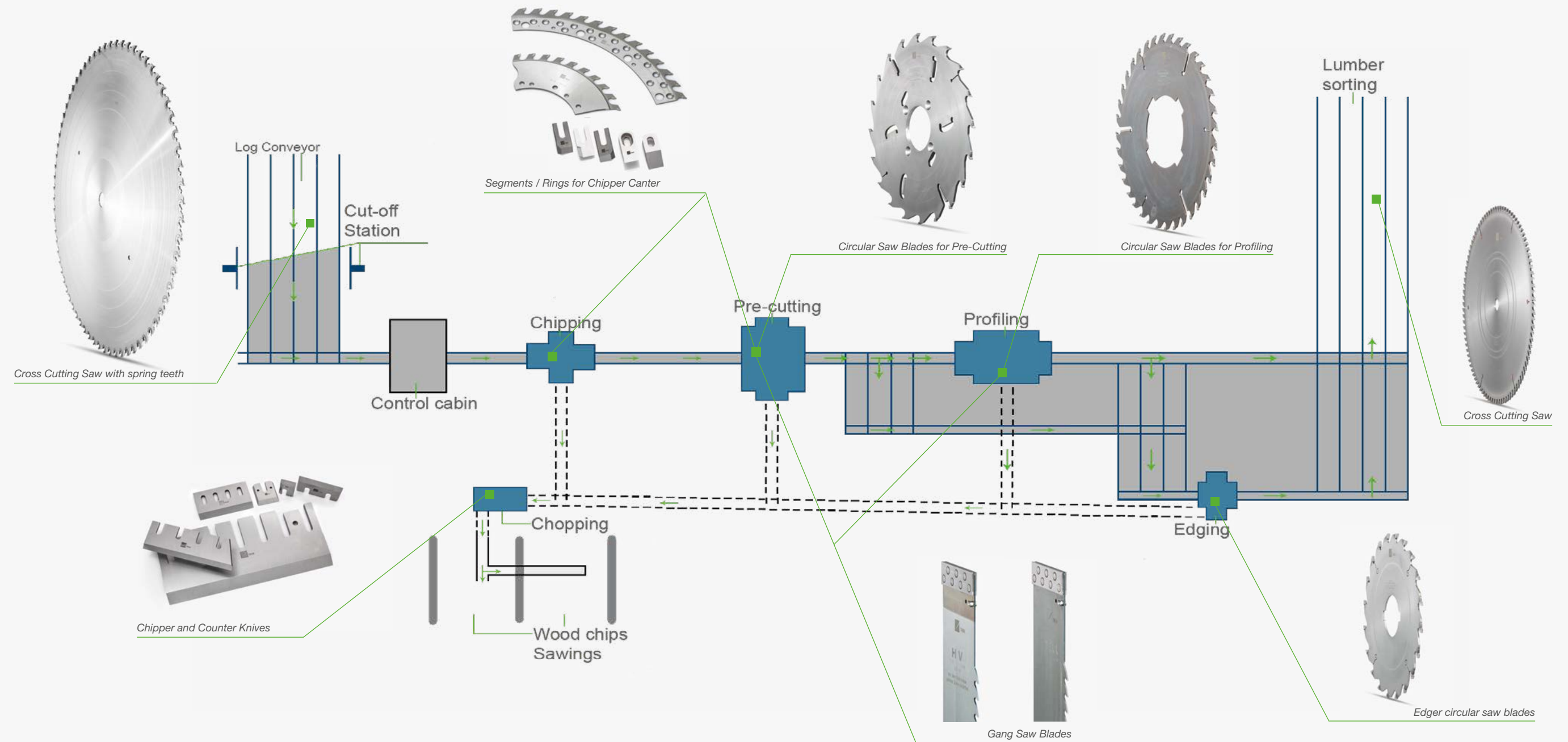
Thanks to uncompromising quality management – from the procurement of raw materials to delivery – we can guarantee that absolutely no tolerance deviations will impair the performance of our cutting tools.

In this way we can offer customized solutions with measurable added value. **TKM. The Knife Manufacturers.**

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## Tools for the Sawmill Industry



### Individual Solutions for Sawmill Industry

We provide application related solutions for complete saw lines:

- Segments/ Rings & Knives for Chipper Canter
- Circular Saw Blades for Pre-Cutting and Profiling
- Edger Circular Saw Blades
- Cross Cutting Saw Blades
- Gang Saw Blades
- Chipper and Counter Knives
- Accessories and Special Products

**With more than 140 years of cutting tool production experience for the saw mill industry we are experts in cutting processes for all wood species and characteristics.**

**We are your Partner for the industrial processing and refinement of Wood!**





Wood is one of the oldest and most important raw materials in the world.

Its multiple applicability and renewability are increasingly important for developing an ecologically sustainable lifestyle.

#### Individual designing and continuous Service

As unique as wood is, we consider individual customer requirements in relation to our products. Our experienced sales people can answer questions concerning our products and their impact on your production processes.

As a premium cutting tool manufacturer this continuous direct customer interaction has proven to be the best method for developing together close to perfect tools for each specific cutting application.

In this context we are not only focusing on optimizing typical parameters:

- Enhanced tool lifetime
- Better cutting quality and consistency
- Maximized feeding rate
- Saw kerf reduction

Our widespread knowledge enables us to offer value-based solutions for problematic situations and application specific questions. This advantage fosters sustainable customer relationships far beyond the initial sales contract.



## Segments / Rings for Chipper Canter

In general the production process in modern saw mills start with the transformation of the log profile using chipper canter segments and rings. With regard to the optimized cross section and the maximum wood yield the parallel side surfaces are produced in this step of production. According to the uniqueness of wood this early cutting operation demands precise and highly wear resistant tools.

Our segments and rings for chipper canter are produced with the same precision criteria as our circular saw blades to outperform standard requirements. Therefore we can supply a wide variety of chipper canter segments and rings suited for all types of saw mill machines.



Segments / Rings for Chipper Canter

### Technical features

- Segments and rings with tungsten carbide or Stellite® teeth
- SWITCH execution (two part segment ring connected by screws)
- Sawmaster+ (special tooth shape)

## Knives for Chipper Canter

In addition to our segments and rings for the chipper canter, we also supply chipper canter knives.

These not only support the process of creating the model out of the log, they as well do have an direct impact on the further processing of the residual materials occurring during this step of the production.

Hereby wood chips are produced in different quality standards required by the chemical-, pellet or pulp industry.

By using our cutting tools directly from the start of your production, you do not only achieve the highest quality standard on your products, maximum efficiency of your machines and the highest recovery from every single log.



Knives for Chipper Canter

### Technical features

- Manufactured from highly resistance steels like W.1.2360 or special alloys
- Offered in standard measurements or according to customer specific defaults
- Optimized heat treatment as well as specific designed cutting geometries

## The Circular Saw Blade



### One Tool, 1000+ Designs

The Circular Saw Blade is without any doubt one of the most important cutting tools in the modern saw mill. For that reason it has also become our main product and for several decades we have continuously specialized ourselves in its performance and further development. With regard to the variety of applications and constantly changing operating conditions e.g. in the pre-cutting

or profiling, there is always the demand for a new and specific designed circular saw blade. Being aware of this context, for us there is no standard circular saw blade or a strict catalogue program! Each of our circular saw blades is unique as the wood it cuts and fulfills the individual needs and demands of each customer.

With more than 20 different configuration parameters, like e.g. tooth shape, tooth number or diameter, each of these parameters itself has a huge variety of different characteristics. There are unlimited design possibilities, each having different effects on the overall performance of

your saw mill, your product-quality and your production costs.

Therefore for us there is only one question: "What is the specific circular saw blade for your needs?"

## Circular Saw Blades for Pre-Cutting



The process of pre-cutting is challenging the circular saw in several ways. On the one hand there is the natural inhomogeneity of wood with its variations in density and solidity, on the other hand there are the process-related constantly changing cutting-patterns and -heights, which request for a high precision tool.

For that reason the main attributes of our circular saw blades for pre-cutting are strong precision and high durability, to enable the best basis for the following production steps!

In consequence of our active customer relations and our continuous product enhancement, we developed our own saw blade typ "RIV", a two part pre-cutting saw blade, which is connected by rivets.

The result is a permanent reduction of vibrations, as well as an optimal performing of tension and finally a much more ecological production of the saw blade itself.



## Circular Saw Blades for Profiling

During the following process of Profiling the circular saw blades continue fulfilling high requirements, of course the feeding is due to pre-cutting more precise, but process-related the operation speed rises up.

Our circular saw blades for profiling are as well highly precise, but compared to the operation of pre-cutting, we shift our focus to the best possible cutting quality in order to achieve the most perfect surface on the finished product. According to these different requirements we also produce special thin cut saws and guided circular saws.

For all of these mentioned types of circular saw blades we do offer various surface treatments, in order to once more improve the synergy between precision and cutting quality.



### Executions and Specifications

- SOLID (made from full material, ground or milled)
- RIV (two part saw blade connected by rivets)
- SWITCH (two part saw blade connected by screws)
- All Executions tungsten carbide or stellite tipped
- Various tooth shapes (Variotooth and much more)
- Various Surfaces
- Up to Ø 700 mm, for single-arbor machines up to 1200 mm

### Executions and Specifications

- SOLIDUS = Standard execution
- THERMEX PLUS = thermic processed (higher flexibility and stability)
- GLIDE, HARD CHROME PLATED = smooth surface (reduce friction)
- All Executions tungsten carbide or stellite tipped
- Various tooth shapes (Variotooth and much more)
- Various Surfaces
- Up to Ø 1000 mm, for single-arbor machines up to 1200 mm



## Edger Circular Saw Blades

The ultimate perfection in the symbiosis of cutting quality and feeding speed shows up in the process of edging. Here again the cutting quality directly defines the quality standard of the finished product. Therefore we offer you several general executions we have approved, but of course we also manufacture completely tailor-made saws fulfilling your individual requirements.

Particularly the stellite tipped saw blade establishes itself for years now. The reason for this are the special characteristics of the stellite tooth (highly wear-resistant and tough), which enable best cutting results in high speed sawing.



CV-alloyed and hard  
chrome plated



Stellite tipped

## Cross Cutting Circular Saw Blades

Our cross cutting saw blades are used in all well known cutting and trimmer units. The standard of these saw blades is continuously improved by consequent product development at our production site TKM TTT located in Finland.

Therefore we are very proud of our latest development of the spring tooth saw blade. A unique saw blade design with great advantages concerning output performance, economical production and less maintenance.

The so called "spring tooth" is the secret of this saw blade. A "C"-shaped tungsten carbide tipped segment, which is mounted by rivets on the saw blade body.



Spring tooth



Cross Cutting Circular  
Saw Blade

### Executions and Specifications

- CV-alloyed and hard chrome plated CV-alloyed (for setting and sharpening)
- Tungsten carbide or stellite tipped
- Axial runout 0,02 mm
- Various Surfaces
- Up to Ø 700 mm

### Executions and Specifications

- CV-alloyed and hard chrome plated CV-alloyed (for setting and sharpening)
- Tungsten carbide tipped
- With inter changeable spring teeth (log cross cutting units)
- Various Surfaces
- Ø 1000 - 2400 mm



# Accessories for Circular Saw Blades

The individual design and highly precised production of our circular saw blades are only one step to fulfil the actual demands in modern saw mill processes. Another important aspect to achieve this goal concerns the operating environment of the circular saw blade. In this case its not only about the perfect interaction of our different types of circular saw blades on the arbour, it is also about the correct space between the saws and a permanent assistance during the cut.

Therefore we also started to focus on producing distance rings, limiting milling cutters and guiding plates. Only like that we are able to offer our clients completely individualized product solutions, which in combination with our circular saw blades unlock the full potential of your saw mill production.



Milling cutter

Distance rings

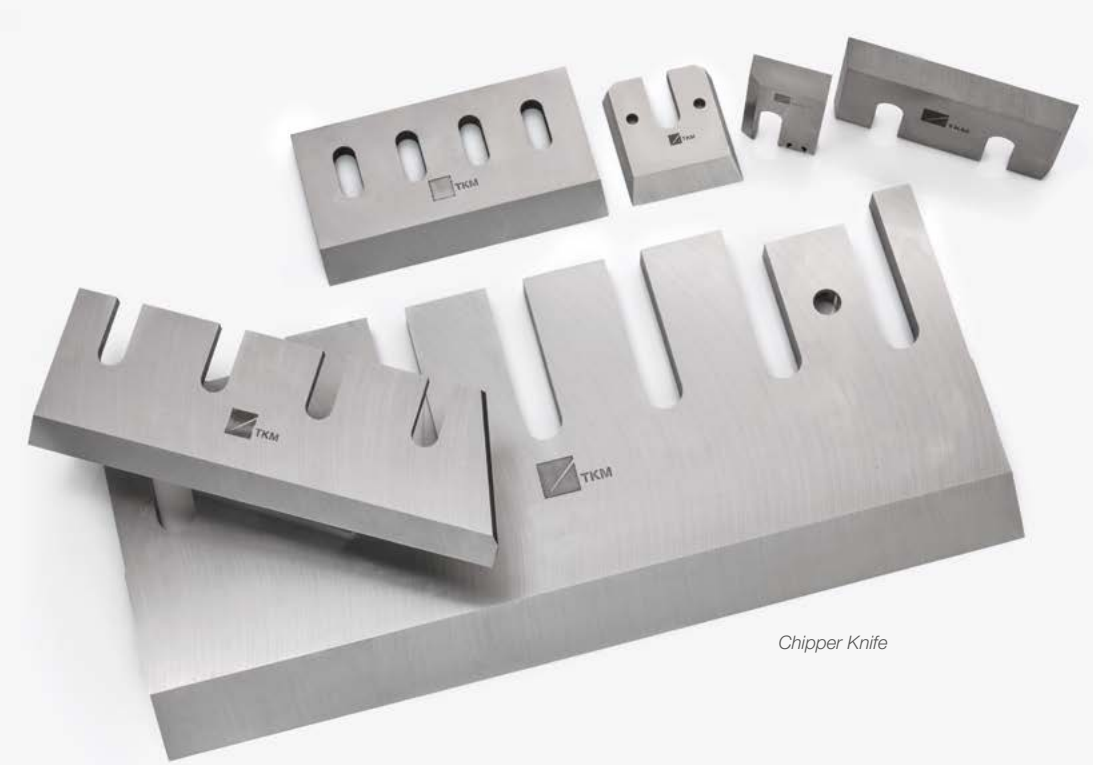
## Technical features

Tolerances	± 0.5 (Outside-Ø) + 0.04 / + 0.08 (Bore) ± 0.01 / ± 0.02 (Thickness)
Surfaces	Ra 3.2 (Outside-Ø) Ra 1.6 (Bore) Ra 0.8 - 1.6 (Thickness)
Material	1.2003 / S355 / AW2007
Hardness	47+3 HRC or unhardened

# Chipper and Counter Knives

As mentioned in the beginning our product program contains additional cutting tools for the specific further processing of wood remnants according to the complete substantial usability of wood.

With our specialized chipper and counter knives manufactured from high-alloyed tool steels we enable you to produce high quality wood chips for different purpose of use.



Chipper Knife

## Technical features

Parallelism	0.05 / 1000 mm to 0.1 / 1000 mm
Surfaces	Standard Ra 0.8 µm by request Ra 0.4 µm
Hardness	Depending on raw material ± 1 HRC / ± 2 HRC
Tolerances	according to DIN ISO 2768 M

## Gang Saw Blades

The Gang Saw Blade is one of the oldest cutting technologies in the saw mill industry. Even today this technology is still in use, when modern circular saw blades do reach their technical limitations concerning very huge log diameters with corresponding big cutting heights.

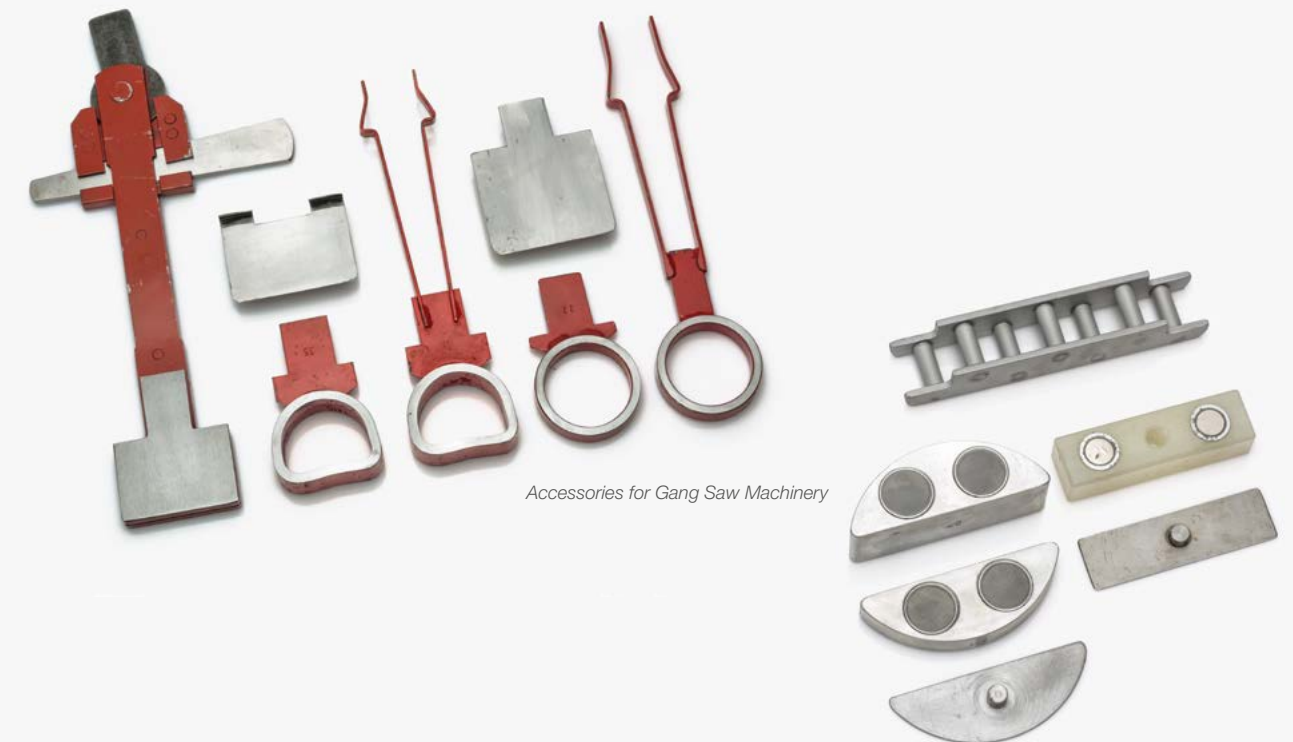
For us the gang saw blade still is and has always been a traditional product, for which we do have a long time expertise in manufacturing as well as in consulting its application in the saw mill. Beside our four main executions, we are of course able to offer customized versions according to our customer's specific needs and the wood it cuts.



## Accessories for Gang Saw Machinery

Taking care of the correct operation environment for gang saw blades is unalterable. From the mounting, to the spacers and the correct tensioning, the best gang saw blade can only deliver best cutting results when it

is set up right in a correct setup. With our Accessories for Gang Saw Blades you will achieve the highest possible process security and an outstanding cutting quality.



Accessories for Gang Saw Machinery

### Technical features

- STANDARD = for set and swaging
- HARD CHROME PLATED = 12 – 15 q chrome thickness
- CHROMAT = 22 – 25 q chrome thickness (for set)
- STELLITE = tipped = ready for use

### Accessories for Gang Saw Machinery

- Hydraulic tensioning system
- Hanger sets with cementer and for wedge system
- Standard and reversible wedge
- Distance rings (round and oval shaped)
- Spacers



# Close by – Worldwide.

The TKM group forms a system of cutting expertise. We create additional value – far beyond cutting

Throughout the world, we share together the consistently pursued aim of innovation and new technologies, as is reflected by the abilities of our workers and employees.

As a network, we utilize the potential of our local companies, which lay the foundations for our firstclass service, high flexibility and personal consulting on site.

As developers and manufacturers of products and systems, we will passionately look for the optimal solution for you.



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## Hauptsitz TKM, Remscheid



TKM, the internationally leading corporate group, manufactures and sells high-quality industrial knives, saws, doctor blades and precision consumable parts for industrial applications.

Our technologies, products and industrial services are applied and appreciated worldwide across many industries. As an independent family company, we have been setting the standards in quality and innovation,

technical expertise and close cooperation for over 100 years.

Reliability, integrity and commitment are the hallmarks of our collaboration. We define our claims to excellence in terms of these fundamental values by being:

**Innovative, precise and close by.**

### **Innovative:**

We strive for new technology and continuously develop products and processes, in order to produce the highest performing Industrial machine knives and cutting tools.

### **Precise:**

Our products, services and technical ability all help benefit our customers processes, productivity and finally finished product to assist in their operational development.

### **Close by:**

Our philosophies are sustainable and stand for a balance between environmental measures, economic development and social engagement.

No matter where you are in the world a TKM subsidiary or partner is never far away.



## TKM Austria

At our Austrian production site, in Böhlerwerk, we develop and produce products for cutting applications for the metal, paper, wood, stone, rubber and plastic industries. In the last couple of years, we have developed the Böhlerwerk site into a competent partner for the production of complex components for mechanical engineering.

Equipped with state-of-the-art machinery, we design and deliver all industrial knives and machine elements required for current applications. In this way, we can ensure the efficiency of your systems.

With our know-how and substantial in-house production depth, we'll find the right solutions for your manufacturing processes.



### TKM Austria – Böhlerwerk

- 180 workers – 10% trainees
- 75 machine tools, including: 5-axis milling, precision grinding, chamber, inductive and vacuum heat treatment ovens, straightening shop
- 11.000 m<sup>2</sup> total production and storage area
- Main areas of production: metal, wood, paper, machine elements, plastics/recycling
- Production batch sizes: 1 to 500

## TKM TTT Finland

TKM TTT Finland is one of the leading manufacturers of high-quality Saws, Knives and Consumables for the wood industry.

For more than 50 years our partners from the sawmill-, pulp-, plywood and veneer industry trust in the tools from TKM.

Our tools are worldwide in around 35 countries in use.

A modern machine park with the latest heat treatment equipment and high motivated employees ensure the quality from today - and tomorrow.



### TKM TTT Finland

- 111 workers – 10% trainees
- 105 machine tools
- 11.900 m<sup>2</sup> total production and storage area
- Main areas of production: Wood, Paper, Machine parts
- Production batch sizes: 1 bis 2.500
- Production volume: 100.000 precision parts per year



## TKM Geringswalde

In Geringswalde we concentrate on the development and production of tools for cutting applications in the metal and paper industries. We create customized tools and solutions for systems, machines and services over production and storage areas totaling around 6,500 m<sup>2</sup>.

On the basis of innovative ideas and consistent standards around the world, we strive

for innovative development together with our customers – down to the last detail.

The high number of trainees provides an important foundation for our corporate development. By opening perspectives to young people and promoting their talents, we afford professional and international development opportunities for their future and for TKM.



### TKM Geringswalde

- 135 workers – 10% trainees
- 74 machine tools (70% CNC machines)
- 6.500 m<sup>2</sup> total production and storage area
- Main areas of production: 90% metal, 10% paper
- Production batch sizes: 1 to 2.500
- Production volume: 250.000 to 300.000 precision parts per year

## TKM Diacarb

Based in Rotterdam, TKM DIACARB is the service center of the TKM Group and system supplier for high-tech services in the maintenance and repair of industrial cutting tools.

The combination of optimized processes and logistic performance offer you comprehensive and cost-effective repair management.



### Profile

- Approx. 45 employees
- Production area: 2000 m<sup>2</sup>
- 23 CNC machines
- Approx. 30.000 service jobs per year

### Technologies

Patented grinding technologies:

- New Wave
- Hyper Wave





**TKM**

TKM

TKM Geringswalde

TKM Meyer

TKM Diacarb

TKM France

TKM Austria

TKM TTT Finland

TKM US

TKM Canada

TKM China

TKM Blades Malaysia

TKM Singapore

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