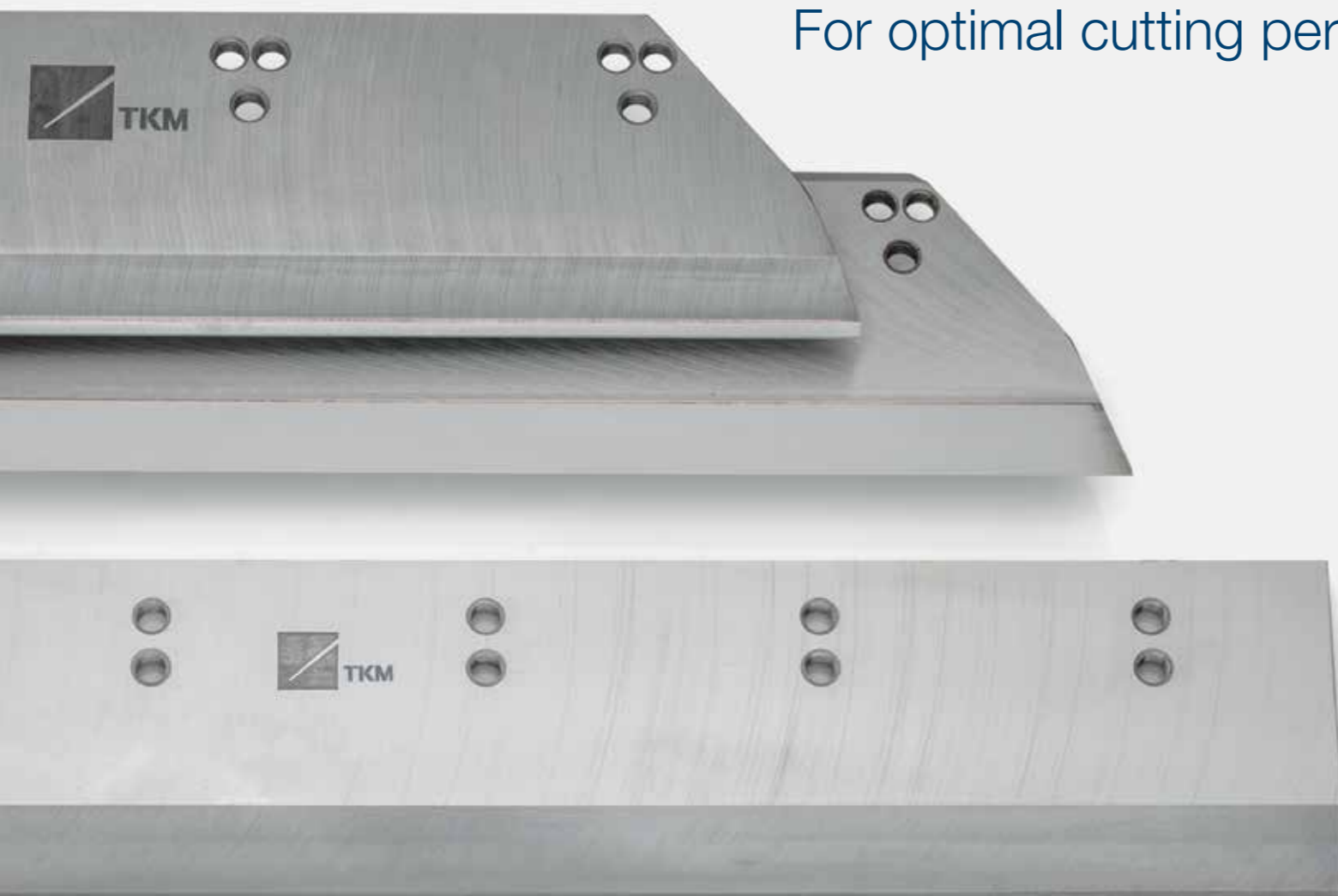




# Knives and Tools for Bookbinding Machines



# Precision and Perfection:

For optimal cutting performance, surface consistency and longevity.

The foundation of our products and cutting solutions for bookbinding machines is our knowledge of “cutting” as well as an in-depth understanding of our customers’ requirements.

Whether the parts are made of tool steel, carbide, or special materials, whether coated or refined, we turn out products with state-of-the-art technology that prove their merit in precision and cutting edge retention.

Intensive dialog with our customers forms the cornerstone of our services.

Working together with you, we’ll develop the best tools and systems for optimal integration in your cutting 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.

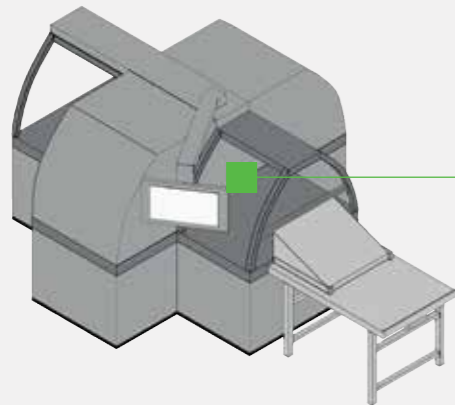
## The TKM line of products

- Shredder tools and carbide segments
- Dust milling cutters and carbide segments
- Carbide milling discs
- Leveller cutter
- Notching tools
- Roughing and fiber roughing tools
- Three way trimmer knives
- Cutting sticks
- Book splitter saws

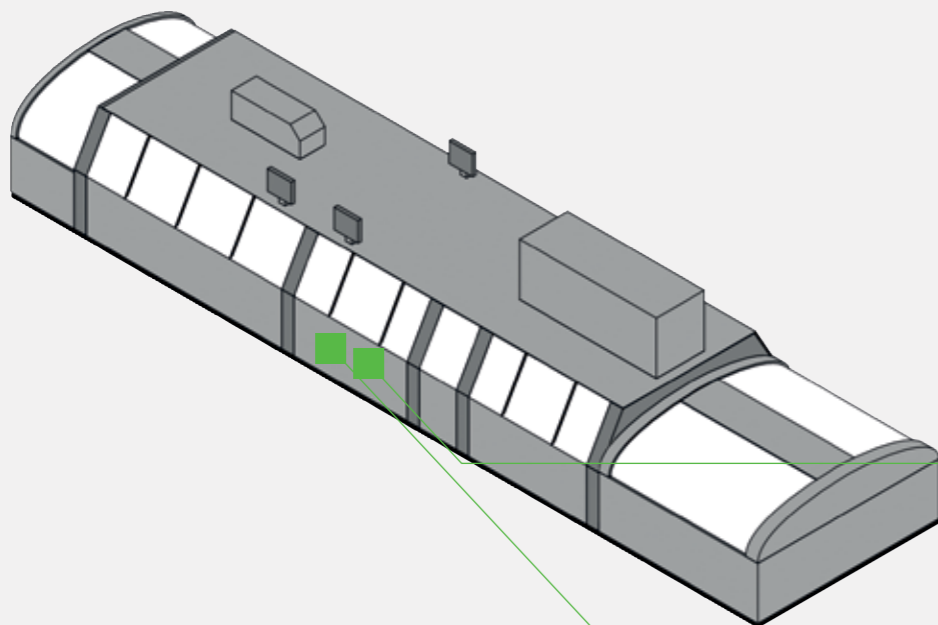
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# Knives and Tools for Bookbinding Machines



Three way trimmer knives and cutting sticks



Shredder head



Dust cutter, leveller cutter and notching tools

Cutting solutions

Heidelberg

Disposable TC inserts

Müller Martini

Kolbus

New Wave

Polar

Hard cover

TKM Heads

Wohlenberg

Soft cover

Levelling

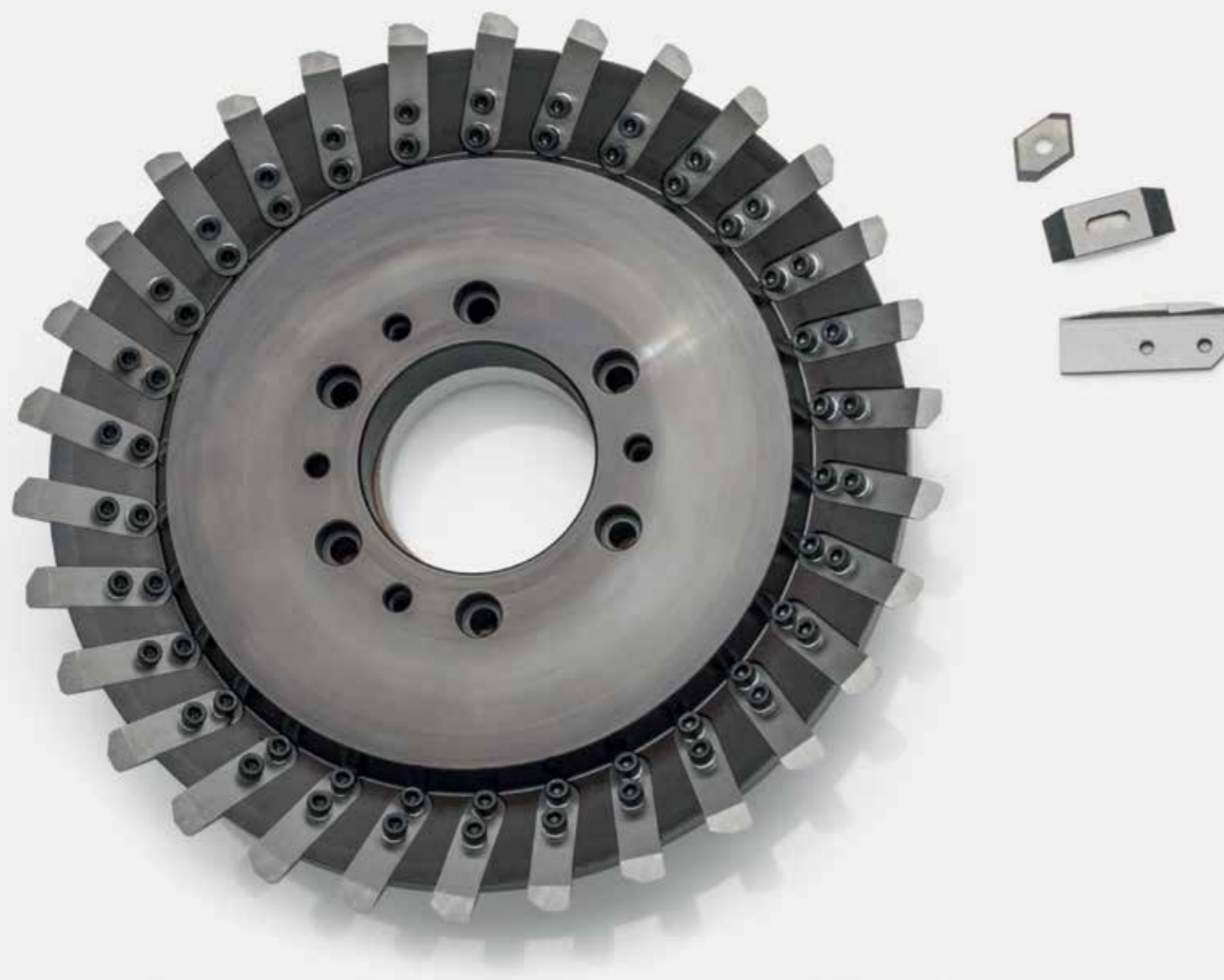
## Shredder heads

TKM shredder heads are available in brazed and screw on versions.

Special bevel configurations reduce the cutting force and prevent thermal effects even with thick book blocks and hard paper. Spare segments are also available as disposable segments.

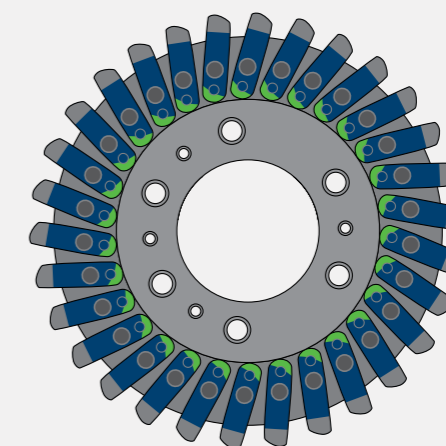
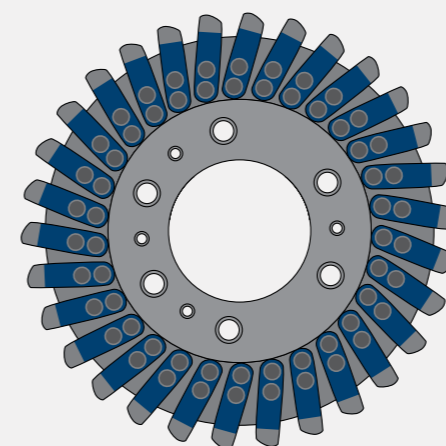
**The specially developed TKM milling head is the only one on the market that can be fitted with either disposable or re-grindable segments.**

The operator thus retains flexibility and can choose the type of inserts most suitable for his particular application.



TKM shredder head with re-grindable carbide inserts (screw on)

TKM shredder head with disposable carbide inserts (screw on)



### The advantages of the screw on TKM shredder head

- Screw on, black anodized milling head; can be used with disposable and re-grindable segments
- Only milling discs on the market that can fit both disposable and re-grindable segments
- Easy and quick changing of carbide inserts
- Full flexibility; worn out segments can be individually changed by the operator

- Unlimited use of the milling disc (no wear)
- Highest precision and narrow tolerances (concentricity)
- Greatly dust-reduced, optimally milled spines for the glue application
- Can be used for all common adhesive binding machines

## Dust cutters, leveller cutters and notching/fiber roughing tools

TKM milling tools provide a smooth surface, correct irregularities and open the paper fibers.

Thanks to their narrow tolerances, the customer will achieve an optimal sheet edge anchoring in the adhesive and an increased bonding strength.



## Three way trimmer knives

TKM three way trimmer knives are suitable for cutting in short and large print runs.

The TKM Anti Glue Knife reduce ink depositing on the spine and glue buildup on the blade.

Only the right selected bevels and material qualities will guarantee a perfect cutting for the front, head and tail cut.



### Advantages/Characteristics

- Optimal sheet edge anchoring in the adhesive through narrow tolerances
- Ideal exposure of the paper fibers and enlargement of the adhesive contact surface
- Smooth surfaces and correction of irregularities
- High tensile and pulling characteristics
- Reduction of heat generation / no heat buildup
- Increased bonding strength

### Tolerances

- Straightness of cutting edge 0.1 mm / 1000 mm
- Flatness cut edge 0.03 mm
- Polished surface <math>< RA 0.1 \mu m</math>
- Taper 0.1 mm
- Parallelism 0.02 mm

## Quality



## Recommendation for knife changes

### TKM guideline

The TKM paper cutting knives should be changed when the inlay reaches the following width:

#### Steel grades

Durapid/Duritan/Duratec  
14 mm residual insert width

#### Carbide grades

Incomet Supreme/Ultra Cut  
7 mm residual insert width




### Recommendation for knife changes



### Service life comparisons (knife quality vs. service life)

Quality	TKM quality	Service life
Standard	Durapid	1
12% chrome steel	Chromalit	1.5 - 2
18% W.HSS steel (High-speed steell)	Duritan	> 3
Powder metal steell	Duratec	4 - 6
Carbide, standard grain		> 10
Carbide, fine grain		> 15
Carbide, submicron grain	Incomet Supreme	> 30
Carbide, ultra fine grain	Ultra Cut	> 60

### Carbide grades

Quality	Hardness (Vickers)	Microstructure
Standard grain	1100 HV 10	
Fine grain	1330 HV 10	
Submicron grain	1500 HV 10	
Incomet Supreme		
Ultra fine grain		
Ultra Cut	1680 HV 10	

For the efficient use of our tools, we always stand at the side of our customers not only as a supplier and consultant, but as a reliable partner, through all phases of their daily business.

## Collaborative Thinking and Support: Perfect consulting and accompaniment are obvious for us.

- Regrinding service and tool maintenance
- Consulting
- Training

## Regrinding service and tool maintenance

- Reproducibility
- Unique grinding qualities (New Wave)
- Operational safety

### “New Wave”

TKM offers its customers a special feature with the **“New Wave” finish**.

Knives with a New Wave finish guarantee a better material flow and less dust buildup.

**The result of this New Wave technology is a very homogeneous blade edge with significantly better and longer service lifetimes.**

In practice, the New Wave finish affords **two to three times** longer service lifetimes compared with conventional grinding techniques.

### Consulting

- Identification of actual status and technical consulting
- Development of a service concept
- Service routing and sustainability
- Documentation, analysis, research and development

### Training

- Application-specific training
- Technical cutting seminars
- Fundamentals of cutting technology
- Materials science
- Special customized topics





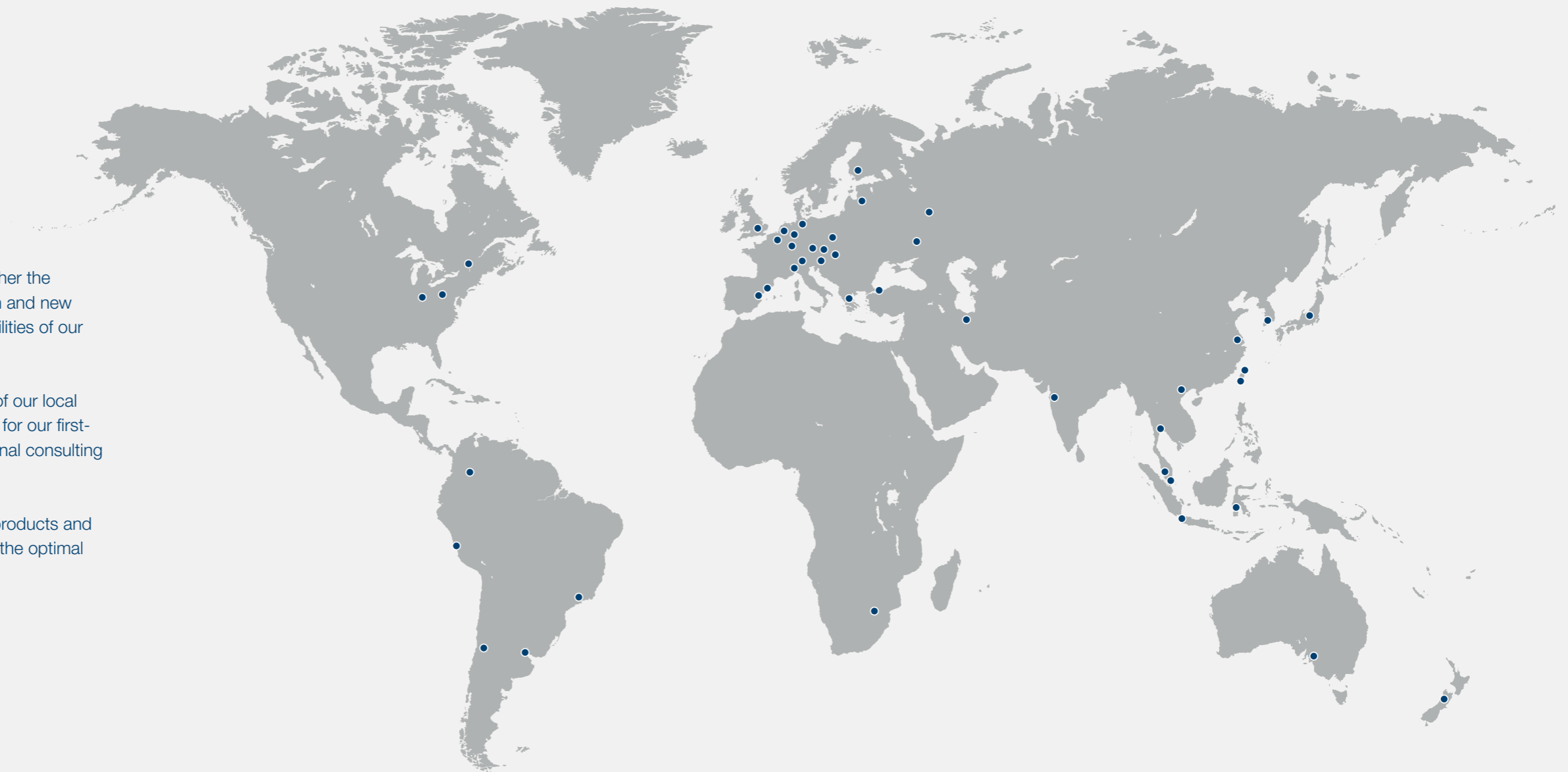
# Close by – Worldwide.

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 first-class 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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Canada

## Headquarters 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 Meyer

## The specialist for the printing and packaging industry



TKM Meyer is the development, manufacturing and service center for doctor blades as well as for knives and consumable parts for the printing and packaging industry.

Together with the Remscheid site, TKM Meyer constitutes the center of excellence in the paper division for the paper, printing and packaging industry as well for the postpress industry.

The high in-house production level is the basis for the excellent stock availability and supports our comprehensive service ideas.

Specific product and system developments are implemented locally. Care, maintenance and repair of tools round off our services, thus ensuring a stable tool quality and long machine service lifetimes.

### TKM Meyer

- 150 employees, 10 % trainees
- 83 tool machines, 52 % CNC machines
- 6500 m<sup>2</sup> of production and storage space
- Products: 55 % packaging industry, 45 % commercial printing
- Production lots of 1 to 2500 units
- Production volume: 300,000 parts/year

## TKM Diacarb



### 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  
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