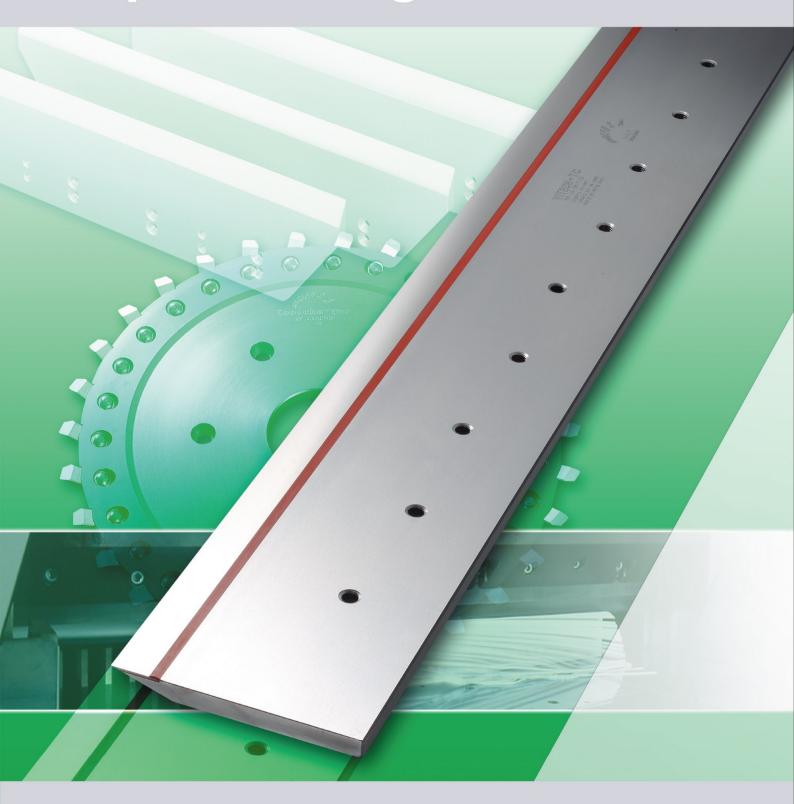


Paper Cutting Knife











Paper Guillotine Knife

Made of ultra-fine-grained carbide

VITECH® TC

Abrasion resistance



Suppresses streaking.

The ultra-fine-grained cemented carbide with high hardness and toughness minimizes chipping, a cause of streaking. This enables continuous high-quality cutting.

Provides excellent machining quality that lasts.

The new manufacturing method minimizes the occurrence of distortion even after repeated repolishing. Consistently beautiful, high-quality machining quality is achieved.

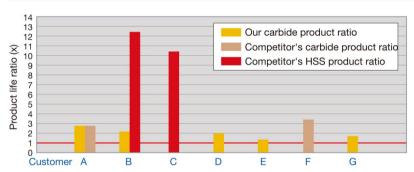
Long product life reduces cost.

The ultra-fine-grained cemented carbide with superior abrasion resistance helps achieve product life some 1.5 times longer than our conventional ultra-fine-grained carbide products.



VITECH TC Amount of distortion = 0.23mm Unit:mm 7 6 5 4 3 2 1 Conventional product Amount of distortion = 4.65mm Unit:mm





Customer	Cutting material	Product life reference
Α	Recycled paper	Undercutting, cutting noise
В	Art paper / Coated paper	Undercutting, cutting quality
С	Art paper / Coated paper	Streaking due to chipping
D	Art paper / Coated paper	Streaking due to chipping
E	Art paper / Coated paper, Special paper	Undercutting, cutting noise
F	Various paper quality	Streaking due to undercutting and chipping
G	Various paper quality	Undercutting, cutting noise

- * In-house test results
- * L = 1390, no distortion correction

Notes on using VITECH

- (1) Be careful of grinding heat generated during repolishing (2) Distortion correction and remodeling prohibited
- (3) Use of thinner, etc. prohibited (4) Use for non-paper work prohibited (5) Blade cleaning using scrapers prohibited

Made of ultra-fine-grained carbide

VITECH® TCK

Nick resistance



- With a higher nick resistant Tungsten Carbide, "VITECH-TCK" reduces edge chipping and insures a long time quality cutting. Edge observation after sharpening confirmed less edge chipping.
- Distortion after re-grinding can be minimized due to our special bonding technology.
- The color of the strip in the knife helps recognaize the TC quality.



 $^{^{\}star}$ For details, please contact our sales representative.

Paper Guillotine Knife

Made of ultra-fine-grained carbide

SPAT EXTRA II



This ultra-fine-grained carbide paper guillotine knife is capable of handling all kinds of paper, from general paper to difficult-to-cut paper for which traditional carbide paper guillotine knives have been considered unsuitable.



Special high-speed steel

Splendor Plus



Improved product life.

It adopts special high-speed steel with high hardness and toughness for the cutting edge, achieving a longer product life about 1.5 times that of our conventional products.

Ensures grinding performance in re-polishing.

Grinding performance issues in repolishing have been eliminated by using a three-layer structure of inlays with different properties.

 Chipping is minimal, high-precision machining can be maintained for a long time.

It exhibits excellent sharpness particularly when cutting art papers and coated papers, and since it does not easily get chipped, high-precision cutting can be maintained.



High-speed steel

Paper Guillotine Knife



The high-quality high-speed steel provides stable machining quality that lasts.



High-speed steel

Skim Coating Special coating

A surface-treated product with highly nonadherence properties, suppressing the adhesion of glue



- · Since glue does not easily adhere to the knife, the quality of the cutting surface is improved.
- · Reduces the dangerous work of removing glue attached to
- Reduces the amount of silicone spray used, leading to improved work environments.



Three Trimmer Knife

Made of ultra-fine-grained carbide

VITECH®



Enables high-quality bookbinding finishing.

Along with the newly developed manufacturing method, the ultra-fine-grained cemented carbide with high hardness and toughness minimizes the occurrence of streaking.

Improves machine operation rate and productivity.

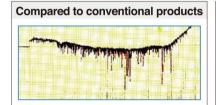
The ultra-fine-grained cemented carbide with superior abrasion resistance helps achieve product life approximately 1.5 times longer than our conventional products.

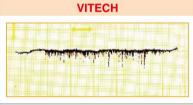


Chipping of the cutting edge

The tough ultra-fine-grained cemented carbide suppresses streaking even under conditions where, conventionally, chipping easily occurs.

- * Conditions: After cutting 20 sheets of yellow cardboard #36 t3.0
- * In-house test results





Max 50um

Max 14µm



Notes on using VITECH

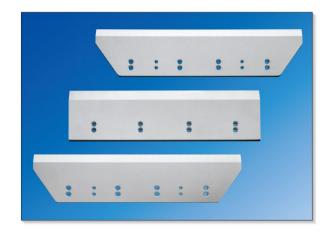
- (1) Be careful of grinding heat generated during repolishing (2) Distortion correction and remodeling prohibited (3) Use of thinner, etc. prohibited (4) Use for non-paper work prohibited
- * For details, please contact our sales representative.

High-speed steel / Carbide

Three Trimmer Knife



Exhibits excellent durability in the perfect binding process (high-grade binding, paperback binding, thick magazines,



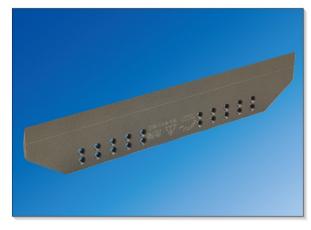
High-speed steel / Carbide

Skim Coating Special coating

A surface-treated product with highly nonadherence properties, suppressing the adhesion of glue



- · Since glue does not easily adhere to the knife, the quality of the cutting surface is improved.
- Reduces the dangerous work of removing glue attached to the knife.
- · Helps shorten down time and improves productivity.
- · Reduces the amount of silicone spray used, leading to improved work environments.



Three Trimmer Knife

High-speed steel / Carbide

Three Trimmer Knife for Bookbinding machine



Exhibits excellent durability in the saddle stitching process (magazines, leaflets, etc.).



Bookbinding Knife

Carbide

Replaceable blade type binder cutter

Bookbinding Cutter



Custom made tooling allows the designing of the cutters according to your application.

Accomplishes longer tool life.



Carbide

Circular Binding Sawblade



T.C.T circular sawblade used for perfect binding. It has a long service life and provides excellent machining quality.



Table Paper Trimmer

High-speed steel / Carbide

Tabletop Paper Guillotine Knife



Products can be manufactured with various dimensions. Very straight knives, with razor sharp cutting edges, provides clean cuts



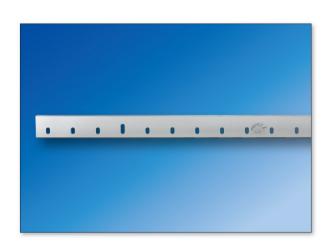
Special High-speed steel / High-speed steel / Carbide

Sheeter Knife



We select the optimum material according to the usage and manufacture highly durable knives.

Mirror surface finishes on bevels and high quality cutting edge materials enable excellent cut quality and provides longer life.



Slitter Knife

Slitting process in paper making.

High-speed steel / Carbide

Slitter Knife



Products can be manufactured with various dimensions.

· All of our slitters are precision manufactured to extremely close tolerances to produce razor sharp edges.

Corresponding equipment

Winder, planographic processing machine



Slitter Knife

Slitting process on film, paper, metal foil, tak paper.

High Speed Steel

Gabel type slitter knife



- · Less paper dust.
- · Less tear, fuzz and adhesive sheet overflow results in more stable processing.
- Less everted-edge and flare, improving the straightness of slitting and achieving ideal slitting processes.



Cutting quality

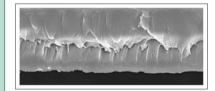
(X500) cut surface of a sheet of paper application= basis weight 65-175g/m² stuck cut

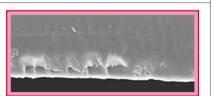


Competitor



(x1000) cut surface of film sheet application= 50µm thick PET resin film





(x10) cut surface of adhesive tape application= rolled side





Everted-edge amount

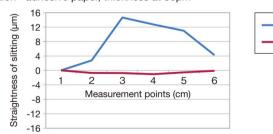
Comparison of everted-edge amount at the same cutting amount. application 50µm thick PET resin film

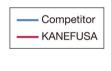




Straightness of slitting

Measurement of cut material width is every 1cm (total: 6 points). application= adhesive paper, thickness at 30µm





Test results

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Customer	Application	Size		Blade	Results			
		OD	ID	Т	life	nesuits		
А	tak paper	98	66	0.7	2.8 times	Decreased generation of paper dust. Less adhesive sheet overflow and glue adhesion on knife edge. Favorable cutting quality.		
В	PET resin film	168	115	1.5	1.5 times	Good cutting quality, with less paper dust and less tearing.		
С	Waterproof sheet	98	66	0.7	1.3 times	Reduced everted-edge.		



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