

Technology & Trust!  
Industrial Knife

**CHANGYOUNG**  
HARD METAL

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# INDUSTRIAL KNIVES CHANGYOUNG

KNIFE FOR TIMBER/PULP, PAPER, KNIFE FOR BOOKBINDING/  
KNIFE FOR METAL/PLASTIC, FOR RECYCLING INDUSTRY

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**Changyoung Hard Metal will satisfy the customer with the best technology and the utmost efforts.**

#### INDUSTRIAL KNIFE MANUFACTURER -

CHANGYOUNG HARD METAL is a manufacturer of knives for timber, paper, plastic and steel. We sell our products in Korea and overseas with good quality and price competitiveness. In order to manufacture high quality knives, we purchase JIS, SKD, SKH and DIN 1.3355, 1.2379, 1.2367 tool steel manufactured from Germany, Austria and Japan.

We operate laser cutting machine and CNC machine to raise the degree of precision and productivity, and do heat treatment on the knives with special technology that maintains the evenness in heat treatment and extends the life of knives.

All of managers and employees of **Changyoung Hard Metal**

#### QUALITY CONTROL

We perform quality control activities with systematic management and continuous efforts based on accumulated experiences for a long period of time and technology, and the production and quality control is made based on ISO9001 management system.

##### ■ CHIPPER KNIFE for MDF or PB

Drum Chipper Knife used for machines like Pallmann, Maier, and Pessa is made with specially developed high-strength alloy steel. Its hardness is 52-57(HRC) and its strength can be adjusted according to the customer's request and types of wood. The angle of blade is set at 23-35 degree.

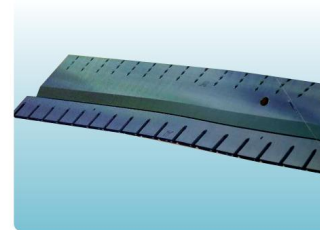
##### ■ FLAKER KNIFE and Parts for PB Production

The knife and parts materials used for the machines such as Pallmann, Maier, and Pessa are special alloy metal with excellent durability. The hardness is 52-57(HRC) and can be adjusted according to the customer's request. They have excellent durability thanks to special heat treatment method and the blade angles are set to 23-60 degree for diversity.

## WOOD INDUSTRY Knife for Timber

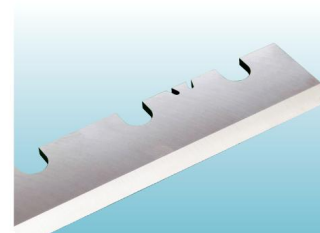
**CHANGYOUNG HARD METAL's knife for timber has strong and powerful performance.**

We develop and retain various kinds of special steel appropriate for the knife for timber processing, and especially, our Chipper Knife has excellent damage resistance and durability.



#### VENEER KNIVES HAVE STRONG CHARACTERISTICS.

This is the optimal knife capable of cutting the timber by its type and unique characteristics from broadleaf tree to needleleaf tree, and from soft wood to hard tropical wood. It can cut timbers with clean cross section into even slices.



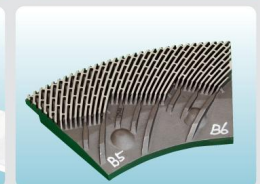
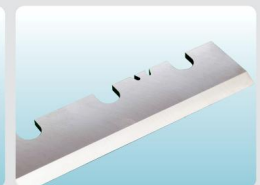
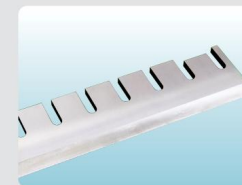
#### CHIPPER KNIVES WITH DURABILITY (CHIPPER KNIVES)

With specially developed high strength alloy steel which is capable of maintaining sharpness for a long time according to the timber chipping characteristics, we manufacture the best quality chipper knives based on advanced production facility and smooth production condition.



#### Timber Knives Production List

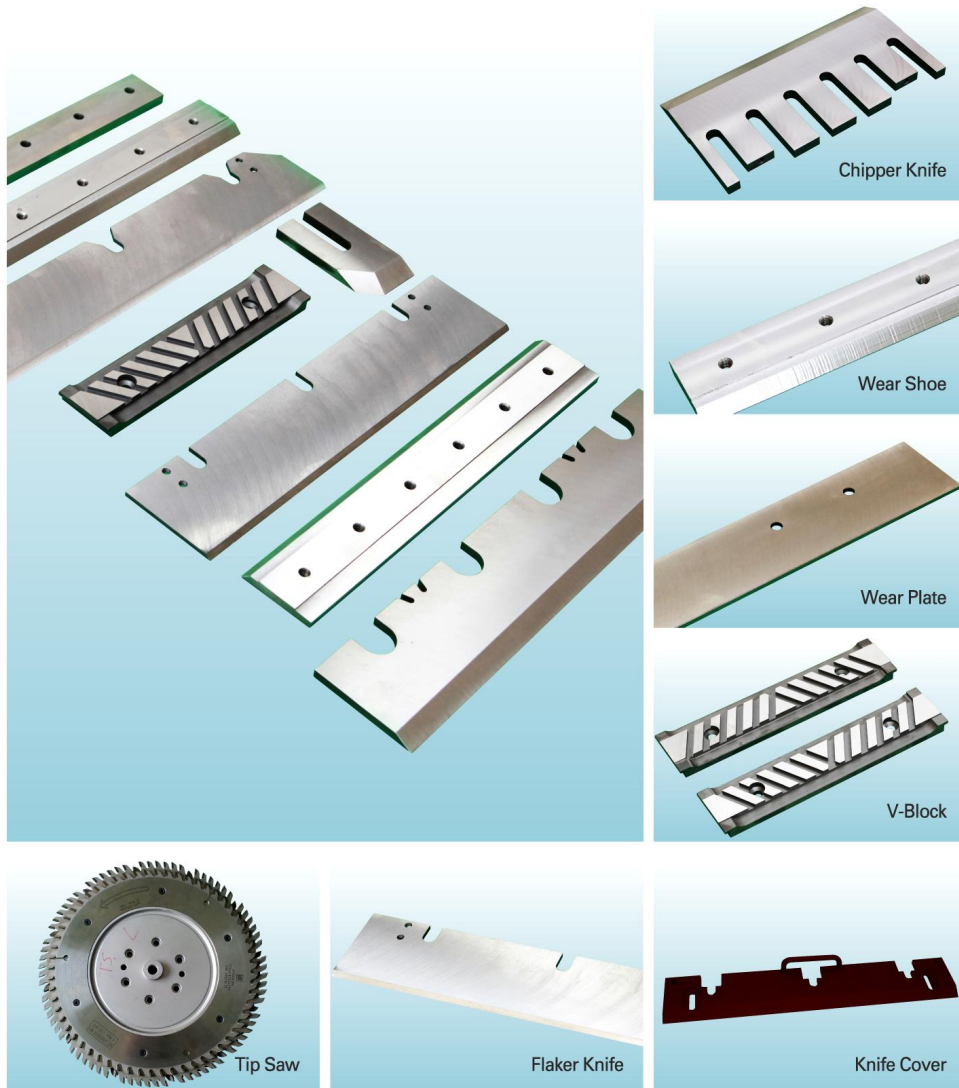
- ▶ Peeling knives
- ▶ Slicer knives
- ▶ Pressure bars
- ▶ Clipper knives
- ▶ Spur knives
- ▶ Debarker knives
- ▶ Planer knives
- ▶ Chipper knives
- ▶ Counter knives
- ▶ Flaker knives





## WOOD INDUSTRY **Timber Knives**

### P.B KNIVES



## FOR PULP,PAPER AND PAPER PROCESSING INDUSTRY

### Knives for Pulp, Paper and Bookbinding

**CHANGYOUNG HARD METAL** products guarantee high efficiency in production. Paper blade is a cutting tool added with various kinds of outstanding quality.

Knives for pulp and paper shall have elaborate and sharp blades for durability of abrasion and to reduce occurrence ratio of wastepaper, and these knives need maximum durability.



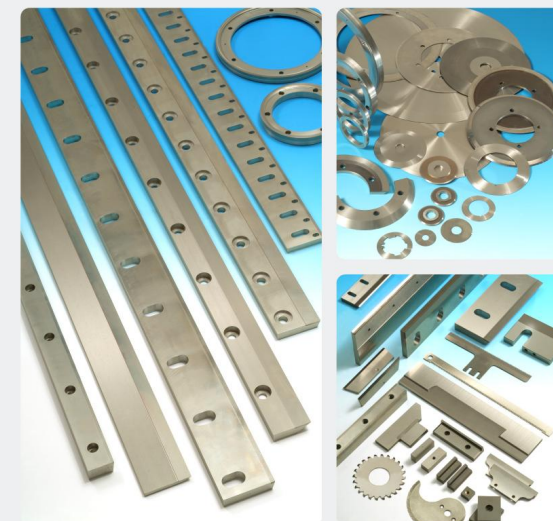
**KNIVES FOR BOOKBINDING HAVE EXCELLENT CUTTING PERFORMANCE BY REDUCING THE RESISTANCE AT CUTTING PART AT MINIMUM AND MAXIMIZING THE DURABILITY OF ABRASION.**

Paper Cutting Knife is made with material of special alloy tool steel, tungsten carbide 18% HSS power HSS and so on, and guarantees blade's straight line and strength (61-79HRC).

Ultra fine particle material also maintains the sharpness of the blade guaranteeing the cleanliness in cutting plane and extending the life.

#### Production list of knives for pulp, paper and bookbinding

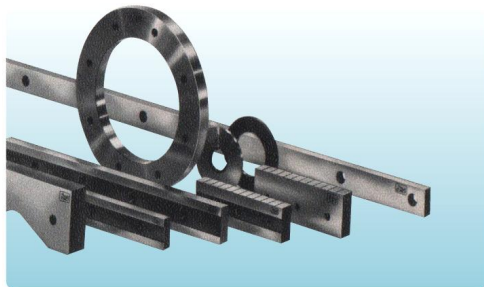
- ▶ Paper Trimming Knives
- ▶ Crosscutting Knives
- ▶ Three - Knife Trimmers
- ▶ Circular Slitters Knives
- ▶ Knives for Automatic Machin
- ▶ All sorts of knife accessory



## FOR METAL INDUSTRY Metal Knife

**Metal blades of CHANGYOUNG HARD METAL maintain the best quality with all materials.**

Metal cutting blades are required for strong impact resistance and abrasion resistance. To this end, selection of material and heat processing technology are essential. Even intervals and angles among knives have important influence on the metal knife product.

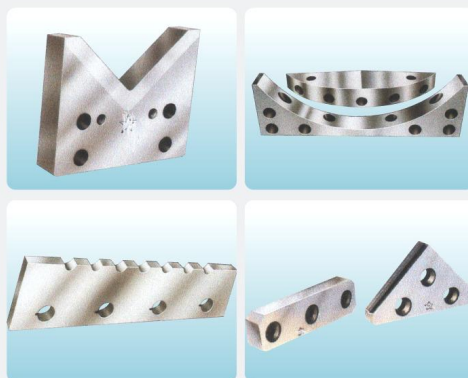


### Slitter Knives, Shear Blades

Various kinds of Alloy Tool Steel are selected according to the cutting steel material for manufacture, and optimal strength control is available according to the heat processing strength (52-66 HRC) cutting condition. Precision grinding provides smooth cutting plane.

### Metal Knives Production List

- ▶ Shear blades for cold and hot cutting
- ▶ Scrap chopper blades
- ▶ Profile shear blades
- ▶ Rotary slitter knives
- ▶ Side trimmers
- ▶ Slideways
- ▶ Scrap shear blade



## FOR PLASTICS AND RECYCLING INDUSTRY Knives for Plastic and Recycling Industry

**CHANGYOUNG HARD METAL** thinks QC the most important in the production process.

We produce knives of refined alloy material for the plastic and recycling industry. Aiming to produce the best hard knives that are hardly worn, we minimize error tolerance and perform special heat treatment. We produce special knives that smash plastic, cable, electronic parts, car tire, and synthesized waste into small particle for recycling.



### APPROPRIATE BLADES FOR PLASTIC AND RECYCLING INDUSTRY!

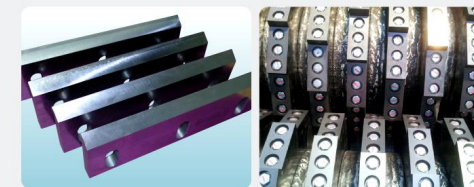
For the recycle of plastic and other materials, Changyoung Hard Metal produce blades that cut the particles into small pieces or small grain shape

### KNIVES FOR GRINDING WASTE CAR TIRE

We produce knives with outstanding durability that will not break even if cutting tire with strong metal pin inside thanks to self-developed special material.

### Production list of knives for plastic and recycle industry

- ▶ Rotor and staror knives
- ▶ Granulator knives
- ▶ Pressure lips
- ▶ Wear parts
- ▶ Pelletizer knives
- ▶ Shredder knives



### PRODUCTION EQUIPMENTS

