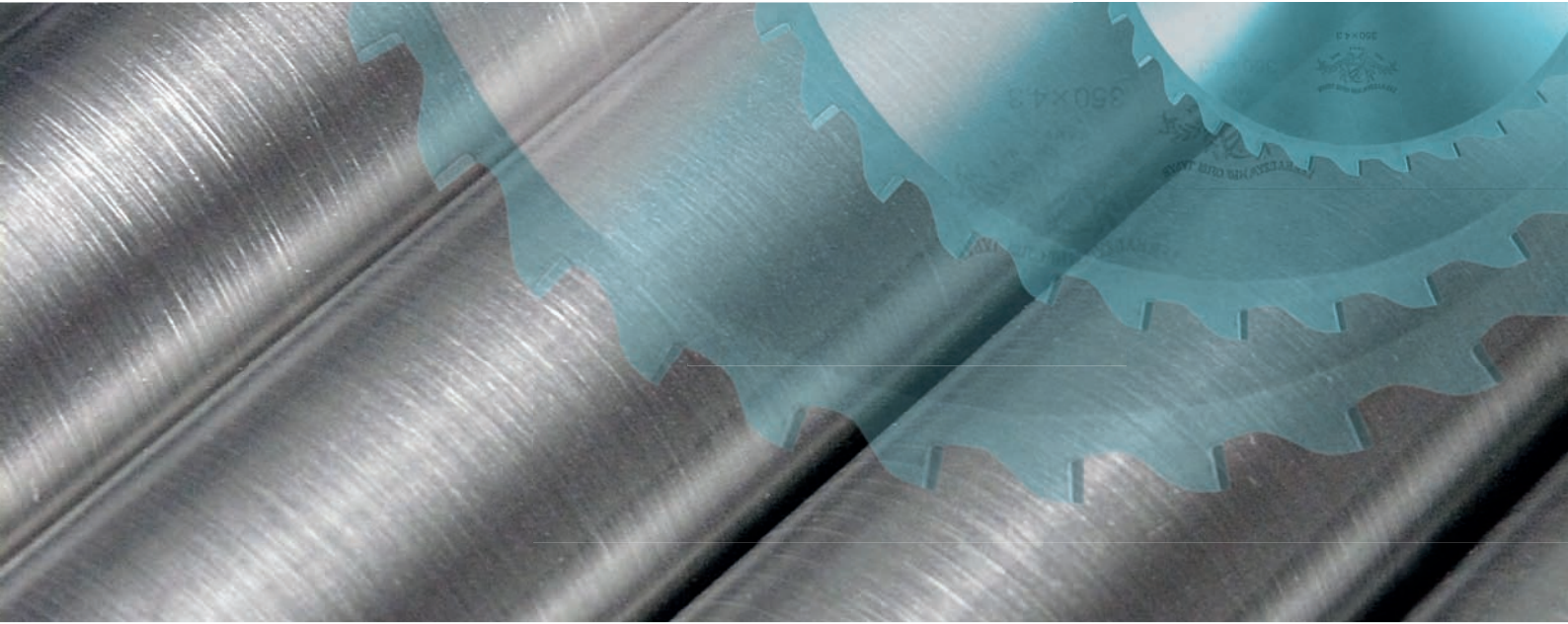
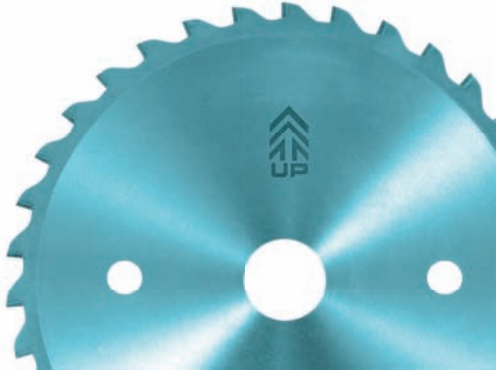


**CARBIDE TIPPED SAW BLADES FOR METAL**



# ADVANCE &

## TAKING CUTTING INTO THE NEXT PHASE

- THE PAS BRAND ADOPTS A TOTAL APPROACH TOWARDS CUTTING
- WE OFFER KNOW-HOW WE HAVE BUILT UP IN A NUMBER OF FIELDS



Our mission is to deliver products that match newly developed materials and advanced cutting conditions.

- FAST CUTTING
- HIGH-PRECISION CUTTING
- A DURABLE FINISH THAT WITHSTANDS THE TEST OF TIME

We believe that products, which combine the above performance and requirements to an advanced degree, are also saws that offer the best value in terms of the budgets of our customers.

In our 100 year history, our company has tackled a number of issues related to cutting, and accumulated necessary know-how for manufacturing saws. We manufacture the world's leading products by utilizing manufacturing facilities which have been uniquely developed, and which outstrip existing processing machines, from the quenching of saw plates and the tempering process to a final process in which quality is checked. Building a system, which responds promptly to needs for greater sophistication is also one of our major themes. The development of new products starts from examining the characteristics of work materials used by our customers.

We begin a cutting test by using a testing machine from a pre-production stage of a work material. We work closely with our customers to single out the most suitable tooth tip material, or to develop the tooth tip material that best suits the properties of the work material. Through these trial cutting sessions, we are able to suggest the most suitable cutting parameters, and to deliver the best saw for each individual user.





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# KNOW-HOW

## NEEDS

- CUTTING QUALITY
- CUTTING COSTS > POST-PROCESSING COSTS
- PRODUCTIVITY
- ENVIRONMENTAL ISSUES
- AUTOMATION | LABOR SAVING

### The environment surrounding cutting work

In the area of cutting work, requirements have become increasingly strict, such as diversification of materials and greater sophistication in the quality of cutting

## SOLUTION

### CARBIDE TIPPED SAW BLADES FOR METAL

- TOOTH TIP MATERIAL
- TOOTH TYPE
- DURABILITY
- ABILITY TO HOLD A STRAIGHT CUTTING
- REDUCTION OF VIBRATION AND NOISE
- CUTTING SURFACE | SURFACE ROUGHNESS
- CUTTING SPEED
- REDUCTION OF DUST

### CUTTING MACHINE

- AUTOMATION | LABOR SAVING
- PRODUCTION SPEED
- SUBSEQUENT PROCESSING COSTS
- SUGGESTIONS FOR THE MOST SUITABLE CUTTING REQUIREMENTS

### The PAS brand, in Pursuit of the Best

Demands for cutting tools have become increasingly stringent in recent years, such as in terms of processing quality, durability, and productivity. In addition, the properties of materials and forms of work materials have diversified. With regard to the performance of cutting tools, there have been increasing demands for optimum solutions and individual types of processing customers are no longer satisfied with the „one-size-fits-all“ approach. In order to provide the most suitable cutting tool for a particular condition faced by a user, the PAS brand maintains close communication with users. All you need to do is to provide us with details of all the tasks required in respect of cutting, and we will propose the most suitable solution, taking into account all the issues involved, including the processing machine and processing conditions. During this process, we evaluate the given tasks from all possible angles, and we present our accumulated know-how in numerical values. We believe that the solution with the best value is that attained when any distance between the user and the PAS brand has reached close to the point of zero.

### Our commitment to cutting extends into resharpening

Another of our important themes is to maintain the performance of your saw blade at its very best. Maintaining the performance of a new product is not the only purpose of resharpening. We inspect the blade in detail after use, and we analyze the cutting condition during use. Based on these results, we propose the most economical form of processing. We believe that the best possible resharpening service is that which provides a way of maintaining a superior cost performance.



## FOR HEAVY AND LIGHT-DUTY CUTTING | THROW AWAY TYPE

### MATERIALS

Structural steel, Tool steel, Alloy steel, Stainless steel, Aluminium alloy, Copper alloy

### SHAPES OF MATERIALS

Bar steel, Bar stainless steel, Solid-drawn pipe, Deformed materials

### BLADE DIMENSIONS

Diameter	Kerf	Teeth
200~910	1.0~4.5	40~300

### TOOTH GEOMETRY

Notched breaker

### TOOTH MATERIAL

Carbide P30, Cermet, PVD coating TiN, AlTiN, CrN

### FEATURES

Despite its thin kerf, this model boasts longevity, perpendicularity and smooth cut surface.



## FOR HEAVY-DUTY CUTTING

### MATERIALS

Structural steel, Tool steel, Alloy steel, Stainless steel

### SHAPES OF MATERIALS

Bar steel, Seamless pipe, Electrowelded pipe, Bloom, Billet

### BLADE DIMENSIONS

Diameter	Kerf	Teeth
280~1.800	2.0~12.0	28~260

### TOOTH GEOMETRY

Trapezoidal, Noched

### TOOTH MATERIAL

Carbide M20-P30, PVD coating TiN, AlTiN, CrN

### CUTTING PARAMETERS

Steel grade	Cutting speed [m/min]	Feed rate per tooth [fz/mm]
Heavy	50~90	0.05~0.08
Medium	80~120	0.08~0.15
Stainless	50~90	0.05~0.10



## FOR LIGHT-DUTY CUTTING | AUTOMOBILE INDUSTRY

### MATERIALS

Structural steel, Tool steel, Alloy steel, Stainless steel

### SHAPES OF MATERIALS

Door sash, Reinforced door beam, Exhaust pipe, Fuel pipe

### BLADE DIMENSIONS

Diameter	Kerf	Teeth
200~460	1.6~3.0	60~180

### TOOTH GEOMETRY

Flat, Trapezoidal, Chamfered flat

### TOOTH MATERIAL

Carbide P30, Cermet

### CUTTING PARAMETERS

Cutting speed [m/min]	Feed rate per tooth [fz/mm]
2.000~4.000	0.001~0.02



## FOR NON-FERROUS CUTTING

### MATERIALS

Aluminium, Copper, Brass, Other non-ferrous metals

### SHAPES OF MATERIALS

Cake, Billet, Extrusion, Pipe, Plate

### BLADE DIMENSIONS

Diameter	Kerf	Teeth
80~1.820	1.0~14.0	16~220

### TOOTH GEOMETRY

Flat, Trapezoidal, Chamfered flat, Breaker

### TOOTH MATERIAL

Carbide K10 - K30

### OPTION

Considering high-speed-cutting, LAQ type is available which is effective in reducing vibration

### CUTTING PARAMETERS

Cutting speed [m/min]	Feed rate per tooth [fz/mm]
2.000~4.000	0.001~0.02



## FOR LIGHT-DUTY CUTTING

### MATERIALS

Structural steel, Tool steel, Alloy steel, Stainless steel

### SHAPES OF MATERIALS

Solid drawn pipe, Electrowelded pipe

### BLADE DIMENSIONS

Diameter	Kerf	Teeth
300~630	2.0~12.0	28~260

### TOOTH GEOMETRY

Trapezoidal, Notched, Chamfered flat

### TOOTH MATERIAL

Carbide P30, Cermet

### CUTTING PARAMETERS

Steel grade	Cutting speed [m/min]	Feed rate per tooth [fz/mm]
Steel	1.000~2.000	0.05~0.10
Stainless	500~1.000	0.02~0.06



### STANDARD SAW BLADE MANUFACTURING RANGE

Diameter	155	200	250	300	360	425	460	510
Teeth	20~100	30~100	30~120	30~160	30~160	40~170	40~170	30~250
Kerf	1.0~3.0	1.0~3.0	1.0~3.0	1.6~3.2	2.0~3.4	2.0~3.6	2.0~3.8	2.8~4.0

»

Diameter	560	610	660	710	800	1.000	1.500	1.820
Teeth	30~250	30~300	40~300	40~180	40~180	50~180	60~200	80~250
Kerf	3.0~4.2	3.0~4.2	3.2~4.6	4.0~5.0	4.0~6.0	4.0~9.0	6.0~10.0	9.0~14.0

» WE ALSO WELCOME CUSTOM ORDERS ACCORDING TO YOUR SPECIFICATIONS «

- › Specifications are subject to change without notice.
- › Due to factors such as specification changes, actual products may be different in some aspects from those pictured or described here.

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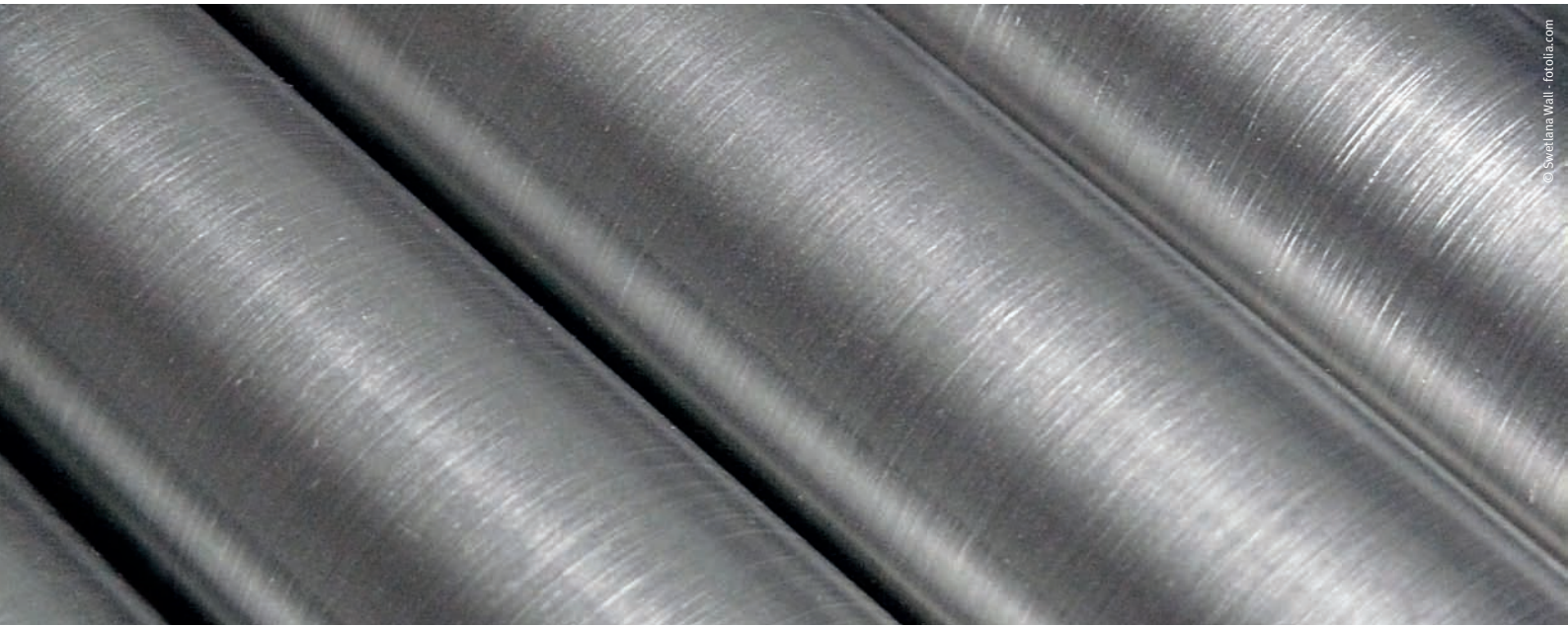
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# TENRYU

Since 1910  
Pioneering Work

Never-ending waves of technical innovation. Development of human ingenuity that knows no boundaries. With „saw making“ as our unchanged theme, our ambition is to remain „Eternal Pioneers“.