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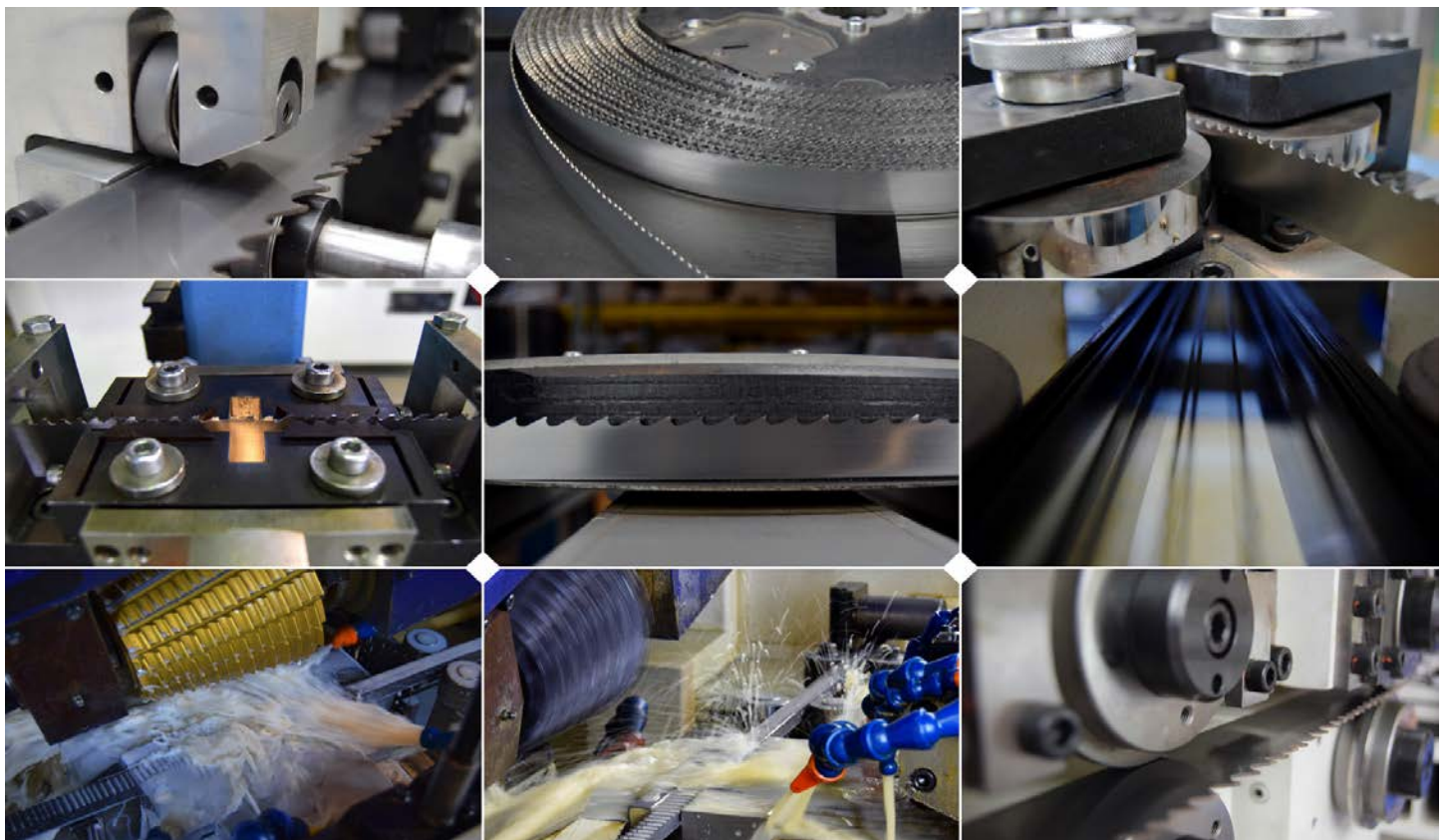
# BI-METAL BAND SAW BLADES

*Made in Czech Republic  
since 1934*

The manufacturing of cutting tools began in Hulin in the year of 1934. Its founder, Josef Studenik, named his company „The First Moravian Factory For Saws and Tools“. More than 80 years is a long period during which the world of cutting tools has changed completely. This applies both for the tools as well as for customer requirements for their properties and quality.

In line with global trends, in the year of 2012 PILANA METAL built a very modern plant producing bi-metal band saw blades for metal. This operation is equipped with the best European technologies and is a leader in this field. Only the bimetal coils produced in Europe are used for the manufacture of these tools. This allows us to guarantee both high quality tools as well as very short delivery times to our customers. Own welding shop, which is a part of the production plant, produces more than 300 welded loops of band saw blades every day. These are intended not only for the Czech market but are also exported to many European countries. Our band saw blades supplied in coils are exported to more than 50 countries worldwide. At present, investment in the manufacturing operation continues, not only to increase production capacity but also to continue improving the quality of our products. This year we introduce several new products, including coated band saw blades.

We invite you to try our new tools. We firmly believe that you will be very satisfied with them and their properties, as well as our technical support and service.



## Recommended Tothing of Band saw blades for metal

For a trouble-free operation with saw blades the selection of the suitable tothing for the cut material is crucial. The material type to be cut is not so decisive but rather the cross-section itself. Especially when cutting profiles and tubes, the right choice of teeth is absolutely necessary. The table below shows suitable tothing for particular cross-sections. This applies for cutting a single piece of material. When cutting multiple pieces side by side, it is necessary to consider doubling the cross-section of the material.

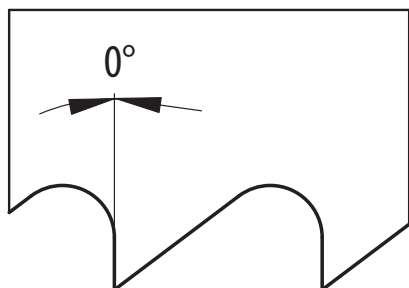
### SOLID MATERIAL

Diameter	Teeth per inch (TPI)
< 10 mm	14 or 10/14 TPI
20-40 mm	8/12 TPI
30-60 mm	6/10 TPI
40-70 mm	5/8 TPI
60-110 mm	4/6 TPI
80-140 mm	3/4 TPI
120-250 mm	2/3 TPI
250-300 mm	1,4/2 TPI
> 300 mm	1,1/1,6 TPI

### PROFILES, TUBES AND BEAMS

Wall thickness	Teeth per inch (TPI)
< 1 mm	18 TPI
2 mm	14 TPI
2-3 mm	10/14 TPI
4-6 mm	8/12 or 8/11 TPI
6-10 mm	6/10 TPI
10-15 mm	5/8 or 5/7 TPI
15-20 mm	4/6 TPI
20 - 30 mm	3/4 TPI
30 - 70 mm	2/3 TPI

## M 42 – 430 UNIVERSAL



**Application:** for cutting common types of steels with a tensile strength up to 1400 N/mm<sup>2</sup>  
suitable also for non ferrous metals  
suitable for cutting both single pieces as well as bundles  
allows cutting profiles with thin walls and also sheets

### UNIVERSAL BAND SAW BLADES SUITABLE FOR SMALL MACHINES

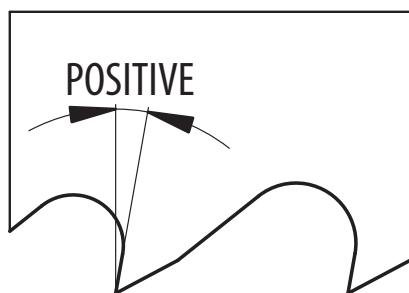
#### Characteristics:

- » tooth tips made of HSS M42, material Nr. 1.3247
- » variable tooth which enables to cut also thin-walled profiles without vibrations
- » standard teeth with 0° or slightly positive rake angle
- » high quality cut and a very good lifetime of blades

Dimensions mm	TPI - teeth per inch			
	5/8	6/10	8/12	10/14
6 x 0,90				V-O
10 x 0,90				V-O
13 x 0,65	V-O	V-O	V-O	V-O
13 x 0,90	V-O	V-O	V-O	V-O
20 x 0,90	V-O	V-O	V-O	V-O
27 x 0,90	V-O	V-O	V-O	V-O
34 x 1,10	V-O	V-O	V-O	V-O
41 x 1,30	V-O	V-O		

V-O = variable teeth with 0° rake angle

## M 42 – 431 MASSIVE



**Application:** for cutting common types of steels with a tensile strength up to 1400 N/mm<sup>2</sup>  
suitable also for non ferrous metals  
excellent for cutting solid rods and blocks  
ideal for cutting thick-walled pipes

### BAND SAW BLADES FOR CUTTING SOLID RODS OF MEDIUM AND LARGE DIMENSIONS

#### Characteristics:

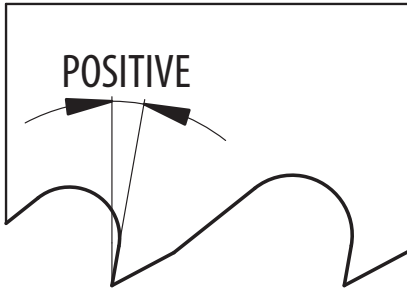
- » tooth tips made of HSS M42, material Nr. 1.3247
- » variable tooth which enables to cut without vibrations
- » teeth with positive rake angle and group set

Dimensions mm	TPI - teeth per inch					
	0,75/1,25	1,1/1,6	1,4/2	2/3	3/4	4/6
20 x 0,90						V-POS
27 x 0,90				V-POS	V-POS	V-POS
34 x 1,10			V-POS	V-POS	V-POS	V-POS
41 x 1,30			V-POS	V-POS	V-POS	V-POS
54 x 1,30		V-POS	V-POS	V-POS	V-POS	V-POS
54 x 1,60	V-POS	V-POS	V-POS	V-POS	V-POS	V-POS
67 x 1,60	V-POS	V-POS	V-POS	V-POS	V-POS	

V-POS = variable teeth with positive rake angle

**M 42 – 436**  
**ALU**

Application: for cutting Alumium and Aluminum alloys  
 suitable for all dimensions  
 allows also to cut materials with internal tensions  
 and tendency to pinching



**BAND SAW BLADES FOR CUTTING ALUMINUM  
 WITHOUT PINCHING**

**Characteristics:**

- » tooth tips made of HSS M42, material Nr. 1.3247
- » regular tooth with positive rake angle with extremely wide set
- » variable toot together with extremely wide set prevents from pinching and vibrations
- » high quality cut and a very good lifetime of blades

Dimensions mm	TPI - teeth per inch					
	2H	3H	4H	6H	2/3	3/4
10 x 0,90			POS	POS		
13 x 0,90		POS	POS	POS		
20 x 0,90		POS				
27 x 0,90	POS	POS	POS		V-POS	V-POS
34 x 1,10	POS	POS			V-POS	V-POS
41 x 1,30	POS	POS			V-POS	V-POS

POS = regular teeth with positive rake angle  
 V-POS = variable teeth with positive rake angle

**M 42 – 461**  
**PROFILE**

Application: for cutting common types of steels with a tensile strength up to 1400 N/mm<sup>2</sup>  
 excellent for cutting open and closed profiles, tubes and beams  
 prevents from biting the blade into the material  
 prevents from vibrations



**BAND SAW BLADES FOR SMOOTH PROFILES CUTTING  
 (no pinching or vibrations)**

**Characteristics:**

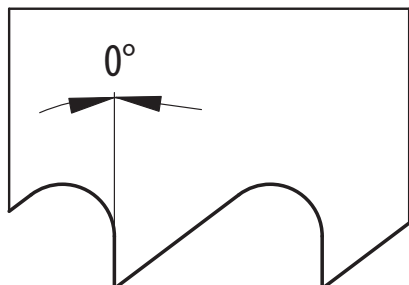
- » tooth tips made of HSS M42, material Nr. 1.3247
- » variable toothing with slightly positive rake angle
- » resistant to tooth breakage and vibrations
- » high quality cut and a very good lifetime of blades

Dimensions mm	TPI - teeth per inch				
	2/3	3/4	4/6	5/7	8/11
20 x 0,90				V-POS	V-POS
27 x 0,90		V-POS	V-POS	V-POS	V-POS
34 x 1,10	V-POS	V-POS	V-POS	V-POS	V-POS
41 x 1,30	V-POS	V-POS	V-POS	V-POS	V-POS
54 x 1,30	V-POS	V-POS			
54 x 1,60	V-POS	V-POS	V-POS		
67 x 1,60	V-POS	V-POS	V-POS		

V-POS = variable teeth with positive rake angle

## M 42 – 420 REGULAR

Application: for cutting common types of steels with a tensile strength up to 1400 N/mm<sup>2</sup>  
suitable also for non ferrous metals  
suitable for cross sections up to 100 mm  
suitable also for shape cuts



### BAND SAW BLADES WITH REGULAR TOOTHING (for small dimensions)

#### Characteristics:

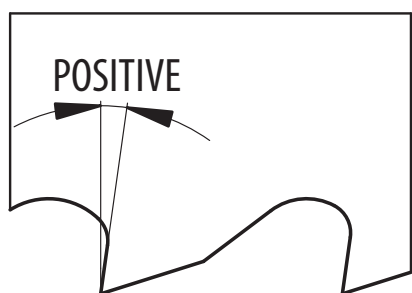
- » tooth tips made of HSS M42, material Nr. 1.3247
- » regular tothing
- » standard teeth with 0° or slightly positive rake angle

Dimensions mm	TPI - teeth per inch					
	4	6	8	10	14	18
6 x 0,65				N		
6 x 0,90				N	N	
10 x 0,90			N	N	N	
13 x 0,65				N	N	N
13 x 0,90			N	N	N	N
20 x 0,90	N	N		N	N	N
27 x 0,90	N	N	N		N	N
34 x 1,10	N	N	N	N	N	

N = regular teeth with 0° rake angle

## M 42 – 421 REGULAR PLUS

Application: for cutting common types of steels with a tensile strength up to 1400 N/mm<sup>2</sup>  
suitable also for non ferrous metals  
suitable for cross sections above 100 mm



### BAND SAW BLADES WITH REGULAR TOOTHING (for larger dimensions)

#### Characteristics:

- » tooth tips made of HSS M42, material Nr. 1.3247
- » regular tothing
- » standard teeth with a strongly positive rake angle (HOOK)

Dimensions mm	TPI - teeth per inch				
	1,25	2	3	4	6
6 x 0,65					POS
6 x 0,90					POS
10 x 0,90				POS	POS
13 x 0,65					POS
13 x 0,90			POS	POS	POS
20 x 0,90			POS	POS	POS
27 x 0,90		POS	POS	POS	POS
34 x 1,10	POS	POS	POS	POS	

POS = regular teeth with positive rake angle

**M 42 – 434  
 PLUSCUT**

Application: for long-chipping steels  
 special bronzes and copper alloys  
 fireproof and refractory steels  
 titanium and nickel-based alloys



**BAND SAW BLADES WITH STRONGLY POSITIVE GEOMETRY  
 FOR CUTTING RESILIENT MATERIALS**

**Characteristics:**

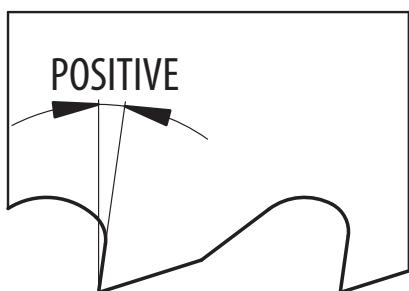
- » tooth tips made of HSS M42, material Nr. 1.3247
- » variable toothing with a strongly positive rake angle
- » band saw blade is quite aggressive when cutting and this enables easier chips creation
- » high quality cut and a very good lifetime of blades

Dimensions mm	TPI - teeth per inch				
	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4
27 x 0,90					V-POS+
34 x 1,10				V-POS+	V-POS+
41 x 1,30			V-POS+	V-POS+	V-POS+
54 x 1,60		V-POS+	V-POS+	V-POS+	V-POS+
67 x 1,60	V-POS+	V-POS+	V-POS+	V-POS+	

V-POS+ = variable teeth with a strongly positive rake angle

**M 51 – 531  
 MASSIVE Profi M 51**

Application: for cutting common types of steels with a tensile strength up to 1700 N/mm<sup>2</sup>  
 suitable for stainless steels and steels resistant to acids  
 suitable also for titanium and nickel-based alloys and other hard workable materials



**BAND SAW BLADES WITH EXCEPTIONAL  
 ABRASION RESISTANCE**

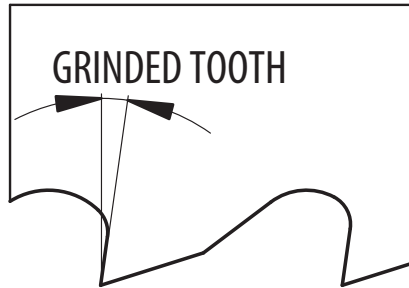
**Characteristics:**

- » tooth tips made of HSS M51 which contains 10% of cobalt and 10% of tungsten
- » exceptional abrasion resistance of band saw blade
- » very high cut quality and lifetime even in demanding applications

Dimensions mm	TPI - teeth per inch					
	0,75/1,25	1,1/1,6	1,4/2	2/3	3/4	4/6
27 x 0,90				V-POS	V-POS	V-POS
34 x 1,10				V-POS	V-POS	V-POS
41 x 1,30			V-POS	V-POS	V-POS	V-POS
54 x 1,60			V-POS	V-POS	V-POS	V-POS
67 x 1,60	V-POS	V-POS	V-POS	V-POS		

V-POS = variable teeth with positive rake angle

## M 51 – 537 GRINDCUT



**Application:** for cutting common types of steels with a tensile strength up to 1700 N/mm<sup>2</sup>  
suitable for stainless steels, steels resistant to acids  
titanium and nickel-based alloys and other hard workable materials

### SHARPENED BAND SAW FOR THE HARDEST WORKABLE MATERIALS

**Characteristics:**

- » tooth tips made of HSS M51 which contains 10% of cobalt and 10% of tungsten
- » tooth tips hardness up to 69 HRC
- » precision-sharpened teeth with CBN technology
- » perfect tips division and excellent band guidance

Dimensions mm	TPI - teeth per inch				
	0,75/1,25	1,1/1,6	1,5/2	2/3	3/4
34 x 1,10				M	M
41 x 1,30			M	M	M
54 x 1,60	M	M	M	M	M
67 x 1,60	M	M	M		

M = teeth with a special geometry sharpened with CBN technology

## 544 TEMPEST



**Application:** suitable for large cross-sections  
suitable for strength steels, stainless steels, steels resistant to acids, special bronzes  
titanium and nickel-based alloys and other hard workable materials  
special bronzes

### PREMIUM BAND SAW FOR CUTTING SUPER-ALLOYS

**Characteristics:**

- » precision-made toothing with a strongly positive rake angle
- » tooth tips hardness up to 68-69 HRC
- » smooth and straight cuts, very high cutting speed and lifetime even in demanding applications
- » premium band saw for cutting super-alloys

Dimensions mm	TPI - teeth per inch			
	0,75/1,25	1,1/1,5	1,4/2	2/3
41 x 1,30			V-POS+	V-POS+
54 x 1,60	V-POS+	V-POS+	V-POS+	V-POS+
67 x 1,60	V-POS+	V-POS+	V-POS+	V-POS+

V-POS+ = variable teeth with a strongly positive rake angle

M 51 – 537  
GRINDCUT PLUS TIN COATED

Application: dedicated for the hardest applications  
stainless steels, steels resistant to acids  
titanium and nickel-based alloys and other hard workable materials



NEW

SHARPENED BAND SAW WITH TIN COATING FOR HARDEST WORKABLE MATERIALS

Characteristics:

- » teeth and band saw body portion are covered with TIN coating made by PVD technology
- » tooth tips made of HSS M51 which contains 10% of cobalt and 10% of tungsten
- » tooth tips hardness up to 69 HRC
- » precision-made tothing with CBN technology
- » extremely high lifetime of a band saw blade

Dimensions	TPI - teeth per inch				
	mm	0,75/1,25	1,1/1,6	1,5/2	2/3
34 x 1,10				M	M
41 x 1,30			M	M	
54 x 1,60			M	M	
67 x 1,60	M		M	M	

M = teeth with a special geometry sharpened with CBN technology

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