



Evershine Tool Technology LLP

Corporate Office: #16, 40 DLF Industrial Area,
Kirti Nagar New Delhi 110015

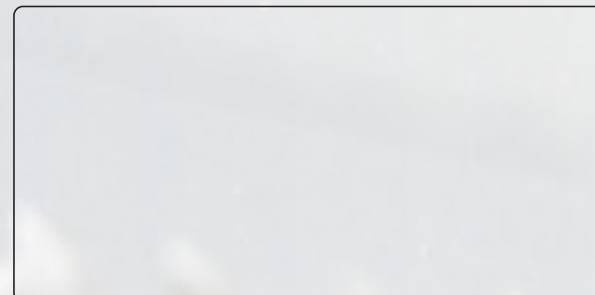
Works: Plot No. 620 Ranhola, Nangloi, Delhi 110041

+91-1149148262, +91-8800012660

sales@evershinetool.com

www.evershinetool.com

AUTHORISED DISTRIBUTOR



PRODUCT CATALOGUE

Bi Metal Band Saw Blades | Circular Saw Cutters



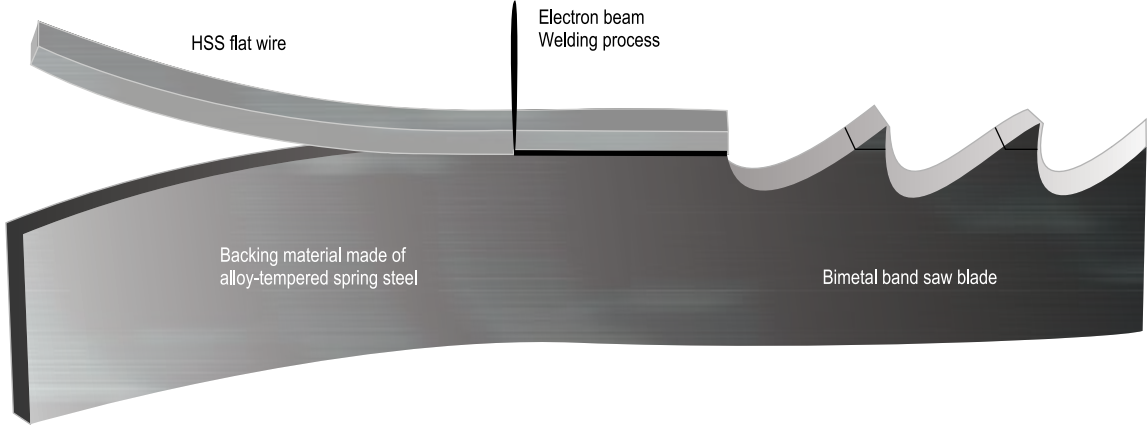
Experience The Innovation Of Cutting Technology

At Evershine, quality is not incidental but an integral part of all manufacturing processes. To achieve it, we have a highly skilled & dedicated team who are self motivated to achieve greater heights. Evershine, a progressive & innovative organization is proud to have continually delivered its commitment of performance & service. Experience & knowledge gained through successes & challenges since inception have combined to deliver excellence today.

We offer a comprehensive range of Band saw Blades and Circular Saw Cutters for all varieties of metals, profiles, toughness & hardness. We have the products covering all the widths, tooth pitch & geometries to address the broad spectrum of sawing applications.

Customer's satisfaction is our top priority and to achieve this we have a family of committed distributors equipped to meet the toughest challenges. It is for all these combined reasons & constant improvements which makes us a force to reckon with.

Bi-Metal Band Saw Blade



Tooth Set

Raker Set

This is the most popular set. Teeth are set in groups of 3-Left, Right, Straight and so on. The standard or raker set is an all purpose set for cutting thickness of more than 6 mm with steels and non-ferrous metals.

Combi Set

Teeth are set in the combination of left and right with one straight tooth per group. This setting makes it possible to divide the cutting channel more efficiently which increases the overall tool life.

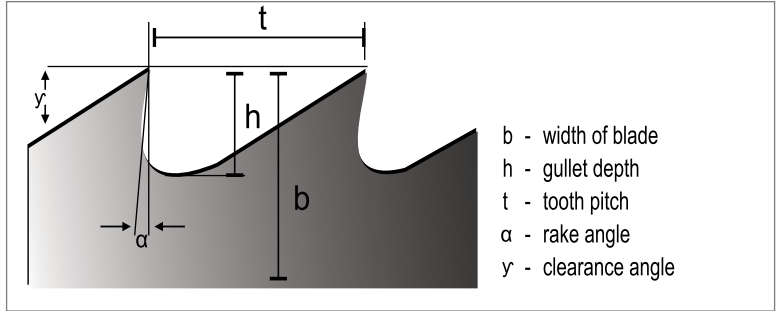
Group Set

The teeth are set in pairs to the left then to the right with the 5th tooth straight. This is used in constant pitch blades.

Wavy Set

Wavy set is recommended on fine pitches like tubes, structural, sheets etc.

Band Saw Blade Geometry



Tooth Pitch

Tooth pitch defines the number of teeth per inch (TPI) in 1 inch corresponds to 25.4mm

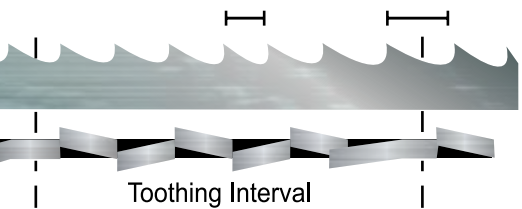
Constant



Constant Tooth Pitch

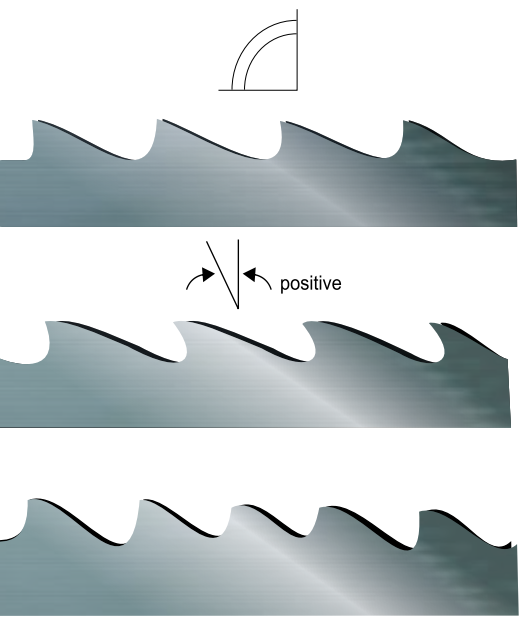
The distance between the teeth is constant throughout the blade. The number of teeth per inch denotes the tooth of the blade.

Variable



Variable Tooth Pitch

In variable pitch the tooth distance varies within a group of teeth. The minimum and the maximum tooth pitch defines the variable tooth of the blade.



Tooth Forms

Normal Tooth : Rake Angle: 0°

- Short chipping material
- Thin walled profiles
- Small work pieces

Hook Tooth : Rake Angle: Positive

- Long chipping material
- Solid thick walled tubes
- Non Ferrous metals

Profile Tooth : Rake Angle: Positive

- Hollow, angled profile
- Low vibration cutting

Optimizing Performance with the Right Blade

Selection of the right blade is very important. Factors like TPI, tooth shape, band width, rake angle and material are critical for enhanced tool life.

Band Length: The band length depends on the machine manufacturer and the model of machine. Please provide the machine model and make to enable us to recommend the correct band length.

Band Width: Band width depends again on the model of the bandsaw machine, however the thumb rule is that the wider the bandsaw blade, higher will be its stability.

Tooth Pitch: The correct tooth pitch is a very important factors which decides the blade. Incorrect selection can lead to premature failure to the tooth. We at Evershine offer both constant and variable pitch, but we strongly recommend the use of variable pitch only.

Tooth Form: Evershine offers different tooth shapes to optimize the productivity and the life of the blades. Different tooth forms like Straight tooth, hook tooth and profile tooth are available.

Break-in Procedure And Its Importance

Just like a new pencil point which has a very sharp tip, will break when full pressure is applied, thus one has to reduce the pressure at the initial stages for the pencil point to get rounded off and then when full pressure is applied the pencil point will not break.

Similarly in a Bandsaw Blade, one has to employ 50% feed while using a new blade. After cutting 500 sq. cms. Full feed can be applied to ensure optimum life for the blade. Please determine the correct speed (mtrs / minute) depending on the material to be cut.

After the break in procedure, full feed can be applied for getting the best results. New band saw blades also tend to be noisy and vibrate, this can be overcome by reducing the cutting speed.

TPI Selection For Solids

Variable TPI		Constant TPI	
Section (mm)	Pitch (TPI)	Section (mm)	Pitch (TPI)
From 550	0.75/1.25	From 550	1.25
380 - 750	1/1.5	200 - 400	2
250 - 550	1.4/2	120 - 200	3
120 - 350	2/3	80 - 120	4
80 - 140	3/4	50 - 80	6
60 - 110	4/6	30 - 50	8
40 - 80	5/8	15 - 30	10
30 - 60	6/10	To 20	14
20 - 40	8/12		
To 25	10/14		

TPI Selection For Pipes

Thickness (mm)	Outer Diameter of the tube (mm) / Tooth pitch Tz in TPI													
	15	20	40	60	80	100	120	150	200	300	400	500	600	>700
2	14/18	14/18	14/18	10/14	10/14	10/14	10/14	10/14	8/12	8/12	8/12	6/10	6/10	5/8
3	14/18	14/18	10/14	10/14	10/14	8/12	8/12	8/12	8/12	6/10	6/10	6/10	5/8	5/8
4	14/18	10/14	10/14	10/14	8/12	8/12	6/10	6/10	6/10	5/8	5/8	4/6	4/6	4/6
5	10/14	10/14	8/12	8/12	8/12	6/10	6/10	5/8	5/8	5/8	4/6	4/6	4/6	4/6
6	10/14	10/14	8/12	8/12	6/10	5/8	5/8	5/8	4/6	4/6	4/6	4/6	4/6	3/4
8		10/14	8/12	6/10	6/10	5/8	5/8	4/6	4/6	4/6	4/6	4/6	4/6	3/4
10			6/10	6/10	5/8	5/8	5/8	4/6	4/6	4/6	4/6	3/4	3/4	3/4
12			6/10	5/8	5/8	4/6	4/6	4/6	4/6	4/6	3/4	3/4	3/4	3/4
15			6/10	4/6	4/6	4/6	4/6	4/6	3/4	3/4	3/4	3/4	3/4	2/3
20				4/6	4/6	3/4	3/4	3/4	2/3	2/3	2/3	2/3	2/3	2/3
30					3/4	3/4	3/4	3/4	2/3	2/3	2/3	2/3	2/3	2/3
50							2/3	2/3	2/3	2/3	2/3	2/3	2/3	1.4/2.0
75											2/3	1.4/2.0	1.4/2.0	1.4/2.0
100											1.4/2.0	1.4/2.0	1.0/1.5	1.0/1.5
150											1.4/2.0	1.4/2.0	1.0/1.5	1.0/1.5
200												1.0/1.5	0.75/1.25	0.75/1.25
250													0.75/1.25	0.75/1.25
>300														0.75/1.25

Chip Characteristics

Chip Form							
Condition	Thick, Hard, short	Thick, Hard, Brittle	Thin, Hard Springy	Thin, Hard Springy	Thin, Curly Springy	Thin, Straight Springy	Powdery
Colour	Blue or Brown	Blue or Brown	Silver or Light straw	Silver	Silver	Silver	Silver
Band Speed	Reduce	Reduce	OK	Reduce Slightly	OK	OK	Reduce
Feed Rate	Reduce	Reduce	Reduse slightly	Increase slightly		Increase	Increase
Other	Check Cutting Flud & mix ratio	Check Cutting Flud & mix ratio	Check for correct blade pitch	Check for correct blade pitch			

RYZON M42

Ideal for medium solids and small bundles, featuring a durable M42 HSS tip.



Features:

- M42 HSS Tips
- Variable TPI available
- Hook Teeth

Applications:

- Carbon Steel
- Structural Steel
- Small Size of Bundle Cutting

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)		
mm	2/3	3/4	4/6	5/8
27 x 0.9	■	■	■	■
34 x 1.1	■	■	■	
41 x 1.3	■	■	■	
Availability : ■				

RYZON PLUS M42

Versatile for large/medium solids and fine-pitch cutting, with a straight-tooth M42 HSS tip.



Features:

- M42 HSS Tips
- Constant & Variable TPI available
- Straight Teeth

Applications:

- Low & Medium Carbon Steel
- Structural Steel
- Alloy Steel
- Aluminum
- Copper
- Brass

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)										
mm	0.75/1.25	1/1.5	1.4/2	2/3	3	3/4	4	4/6	5/8	6/10	8/12	10/14
13 x 0.65									■	■	■	
20 x 0.9					■		■	■	■	■		
27 x 0.9				■	■	■	■	■	■	■	■	■
34 x 1.1				■		■		■	■	■	■	
41 x 1.3			■	■		■		■	■			
54 x 1.6			■	■		■		■				
67 x 1.6	■	■	■	■		■						
80 x 1.6	■	■	■	■								
Availability : ■												

RYZON MAX M42

Suitable to cut tubes & pipes structures.



Features:

- M42 HSS Tips
- Variable TPI available
- Profile Teeth

Applications:

- Carbon Steel
- Profile & Beams
- Structural with Small Wall Thickness

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)		
mm	3/4	4/6	5/8	6/10
27 x 0.9	■	■	■	■
34 x 1.1	■	■	■	
41 x 1.3	■	■	■	
Availability : ■				

RYZON PLUS M51

Superior M51 Bi-Metal Blade for high-speed cutting of tough & hard metals.



Features:

- M51 HSS Tips
- Constant & Variable TPI available
- Straight Teeth

Applications:

- High Carbon
- Mold Steel
- High Alloy Steel
- Stainless Steel
- Die Steel
- Tool Steel

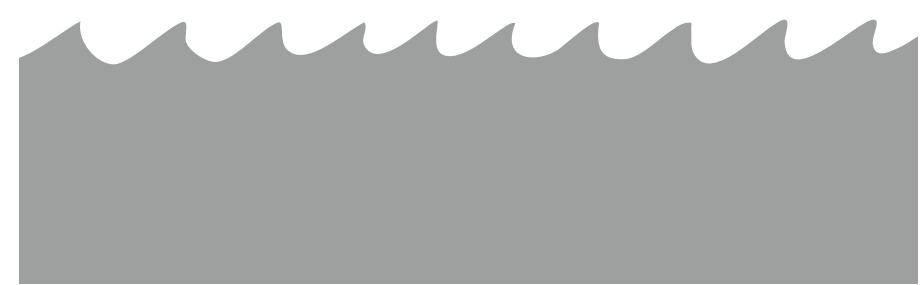
Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)										
mm	0.75/1.25	1/1.5	1.4/2	2/3	3	3/4	4	4/6	5/8	6/10	8/12	10/14
20 x 0.9					■	■		■	■	■	■	
27 x 0.9				■	■	■	■	■	■	■	■	■
34 x 1.1				■		■	■	■	■	■		
41 x 1.3			■	■		■		■	■			
54 x 1.6			■	■		■		■				
67 x 1.6	■	■	■	■		■						
80 x 1.6	■	■	■	■								
Availability : ■												

VEGA M42

Premium M42 HSS Tips for higher productivity with premium backing material for better tool life.



Features:

- M42 HSS Tips
- Constant Variable TPI available
- Straight Teeth

Applications:

- Carbon Steel
- Alloy Steel
- Aluminum Steel
- Copper
- Brass

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)										
mm	0.75/1.25	1/1.5	1.4/2	2/3	3	3/4	4	4/6	5/8	6/10	8/12	10/14
13 x 0.65									■	■	■	■
20 x 0.9					■		■	■	■	■	■	■
27 x 0.9				■		■		■	■	■	■	■
34 x 1.1				■		■		■	■	■	■	■
41 x 1.3			■	■		■		■	■			
54 x 1.6			■	■		■		■				
67 x 1.6	■	■	■	■		■						
Availability : ■												

VEGA M51

Blade with extreme hardness for high-performance cutting with premium backing material for better tool life.



Features:

- M51 HSS Tips
- Constant Variable TPI available
- Straight Teeth

Applications:

- Carbon Steel
- Structural Steel
- Alloy Steel
- Aluminum Steel
- Copper
- Brass

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)				
mm	0.75/1.25	1.4/2	2/3	3/4	4/6	5/8
27 x 0.9				■	■	■
34 x 1.1				■		
41 x 1.3		■	■	■		
54 x 1.6		■	■			
67 x 1.6	■	■	■			
Availability : ■						

COMET

Powder Metallurgy high speed steel tips for cutting hard & tough tubes, structures & small diameters in bundles.



Features:

- M51 HSS Tips
- Variable TPI available
- Neutral & Hook Teeth

Applications:

- Carbon Steel
- Alloy Steel
- Aluminum Steel
- Copper
- Brass

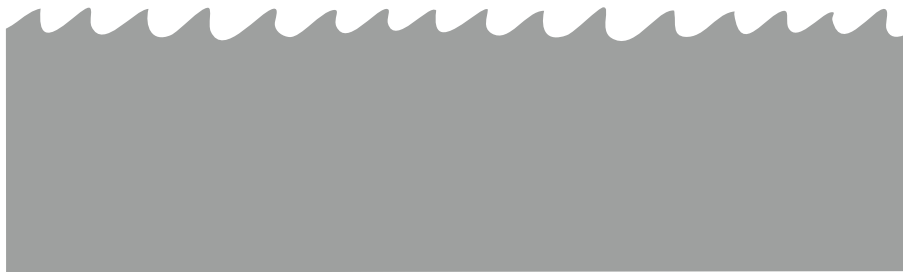
Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)						
mm	1/1.5	2/3	3/4	4/6	5/7	6/10	8/12	10/14
27 x 0.9		■	■	■	■	■	■	■
34 x 1.1		■	■	■	■	■	■	
41 x 1.3		■	■	■	■	■		
54 x 1.6					■			
67 x 1.6	■			■				
Availability : ■								

PMX

Powder metallurgy, high speed steel tips for cutting tough materials premium backing material for optimum fatigue life.



Features:

- M51 HSS Tips
- Variable TPI available
- Positive Teeth

Applications:

- Carbon Steel
- Structural Steel
- Alloy Steel
- Structural Steel
- Tool Steel

Suitable Work Pieces



Width x Thickness		Teeth per inch (TPI)				
mm	0.75/1.25	1/1.5	1.5/2	2/3	3/4	4/6
27 x 0.9				■	■	■
34 x 1.1				■	■	■
41 x 1.3			■	■	■	
54 x 1.6			■	■	■	■
67 x 1.6	■	■	■	■	■	
80 x 1.6	■	■	■			
Availability : ■						

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KT-1

Multipurpose Cutter for light duty cutting.



Advantages	<ul style="list-style-type: none">▪ Cermet Teeth▪ Suitable for Medium & Low Carbon Steel Cutting▪ Durable
Application	For Metal Cutting solid Bars & High Strength wall steel Pipes.
Grades	Low & Medium carbon Steels, Alloy steels
Speed	90 - 140 M/Min
Tooth Load	90 - 0.06 mm
Tooth Tips	Cermet Alloys

KTC-1

PVD Coated Cutter for heavy duty cutting.



Advantages	<ul style="list-style-type: none">▪ Cermet Teeth with PVD Coating▪ Suitable for High Carbon Steel Cutting▪ Durable
Application	For Metal Cutting solid Bars & High Strength wall steel Pipes.
Grades	High Carbon Steels, Bearing Steels, EN-19, EN-24, EM-31 & Tool Steel
Speed	90 - 130 m/min
Tooth Load	0.04 - 0.08 mm
Tooth Tips	Cermet Alloys with PVD Coating

KTC-SS

PVD Coated Carbide Tipped Cutters for stainless steel cutting.



Advantages	<ul style="list-style-type: none">▪ Carbide Teeth with PVD Coating▪ Suitable for Stainless Steel Cutting▪ Highly Durable
Application	For Metal Cutting Stainless Steel solid Bars
Grades	SS 304, SS 404
Speed	60 - 100 M/Min
Tooth Load	0.03 - 0.56 mm
Tooth Tips	Tungsten Carbide with PVD Coating

KT-FERRO

TCT & PVD Tipped Cutters for cutting non-ferrous metal.



Advantages	<ul style="list-style-type: none">▪ Cost - Effective▪ Prolonged Durability▪ Smooth Cutting edge without burr▪ Wear Resistant
Application	For Cutting Non-Ferrous Bar & Profiles
Grades	Aluminum, Brass, Copper
Speed	700 - 1300 RPM
Tooth Tips	TCT & PCD

Designation	Formula Symbols	Unit
Number teeth/Blade 150	Z_{blade}	--
Number teeth/Blade 150	Z_T	-
Blade width	b	mm
Blade length	l_b	mm
Diameter	D	mm
Surface area	A	cm ²
Total surface area	A_{total}	cm ²
Performance	P_c	cm ² /min
Cutting speed	v_c	m/min
Cutting distance	s	mm
Total cutting distance	s_{total}	mm
Cutting line	t	min
Total life	T	min
Feed rate per tooth	f_z	mm
Feed speed	v_f	min/min
Tooth interval	Z_A	mm
Tooth pitch	T_z	ZpZ

Calculation of performance

Teeth / blade, teeth / min

Total life

$$P_c = \frac{A \cdot v_f}{s}$$

$$P_c = \frac{A}{t}$$

$$Z_{blade} = \frac{l_b \cdot T_z}{25,4}$$

$$Z_T = \frac{v_c \cdot 1000}{Z_A}$$

$$T = \frac{s_{total}}{v_f}$$

$$T = \frac{A_{total}}{P_c}$$

Feed rate per tooth

$$f_z = \frac{v_f \cdot 25,4}{v_c \cdot 1000 \cdot T_z}$$

$$f_z = \frac{v_f \cdot Z_A}{v_c \cdot 1000}$$

$$f_z = \frac{v_f \cdot l_b}{v_c \cdot 1000 \cdot Z_{blade}}$$



Wire Brushes

We have wire brushes with soft, medium and hard wire suitable for all types of Bandsaw & Circular Saw Machines. Different type of wire brushes are recommended as per the material being cut. Wire Brushes play an important role in the consistency of the tool life. Proper usage shall improve the Tool life.



Refractometer

Proper usage of coolant is essential for enhanced tool life. We recommend a ratio of 6% for oil to water for mild steels and non ferrous metals and a ratio of 10-12% for stainless steels or high nickel steels. The oil to water ratio is measured by refractometer and can be checked through the eye piece.



Band Saw Blade Tension Meter

Correct blade tension is vital to avoid taper cuts. Tension meter measures the accurate blade tension when mounted on the band wheels. This will help to avoid cutting through low tension which results in taper cuts or high tension which leads to blade breakage and machine damage.



Micro Mist Oil

Premium Ester Based Mist Oil which is odourless available for use in High Speed Carbide Metal Cutting Machines. Different grades available for Ferrous & Non Ferrous Metals. The usage of a superior quality mist oil helps in achieving better tool life.

