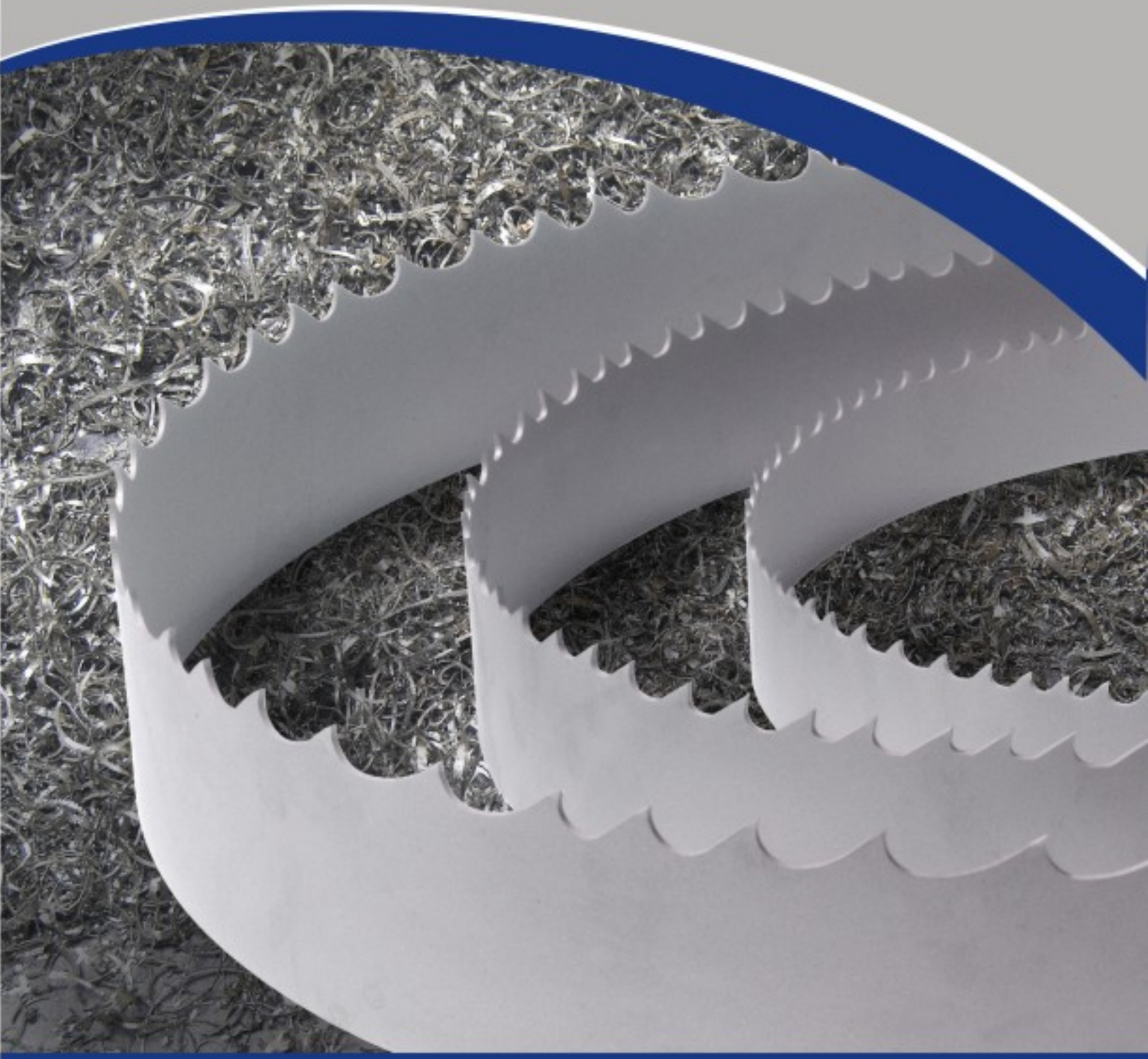
# BIPICO®



Leadership Through Performance

BIPICO

BIPICO INDUSTRIES (TOOLS) PVT. LTD., BILIMORA, GUJRAT (INDIA).

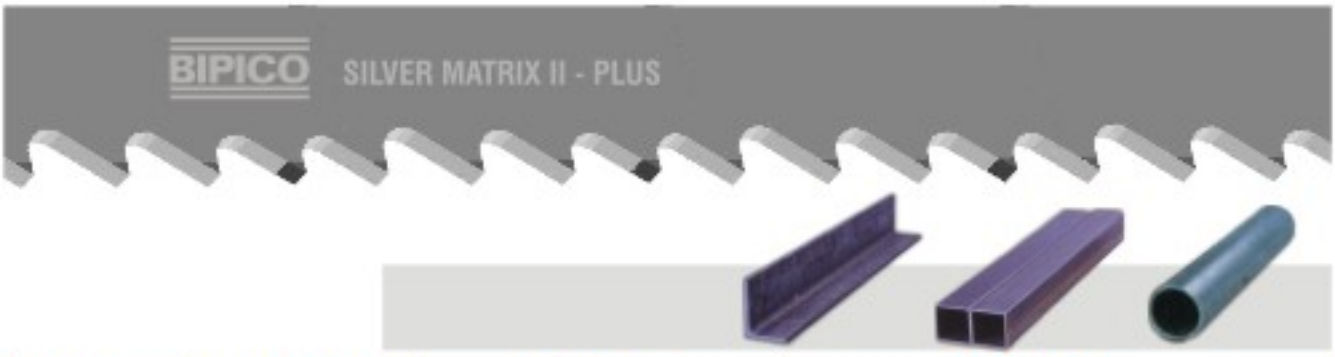
# THE MODERN MANUFACTURING FACILITY OF BIMETAL BANDSAW

# SILVER MATRIX II

The Silver Matrix II Bimetal Bandsaw is manufactured from 8% cobalt HSS edge material electrobeam welded to high quality spring steel backing material. The superior properties of tooth cutting edge with controlled tungsten and carbon content will give good result for cutting high vibration sawing.

## SILVER MATRIX II- PLUS

Specially designed tooth geometry having large gullet and standard rake angle.




| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 13 X 0.60 | 10,14,18,24 | 8/12,10/14 |
| 2 | 20 X 0.90 | 6,10,14,18, | 8/12,10/14 |
| 3 | 27 X 0.90 | 6,10,14, | 8/12,10/14 |

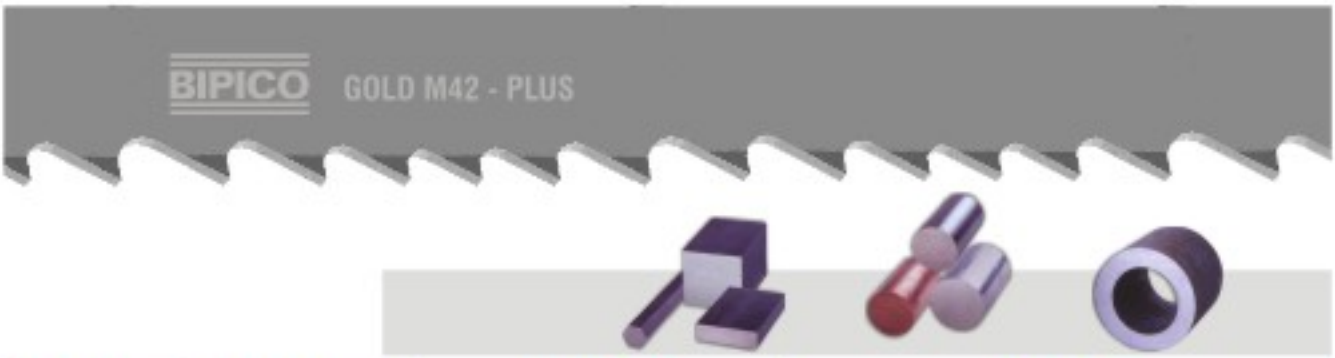
**Cutting Application** : M.S., Low carbon steel, Medium alloy steel, Non-ferrous metal and Structural steel having thinner and hollow section

# GOLD M42

The Gold M42 Bandsaw is manufactured with HSS M42 edge material having excellent wear resistance characteristic electrobeam welded to special BIPICO spring steel backing material having excellent fatigue life. The perfect distribution of Carbide with martensitic structure is provides excellent cutting edge.

## GOLD M42 - PLUS

Specially designed tooth geometry having large gullet and standard rake angle.

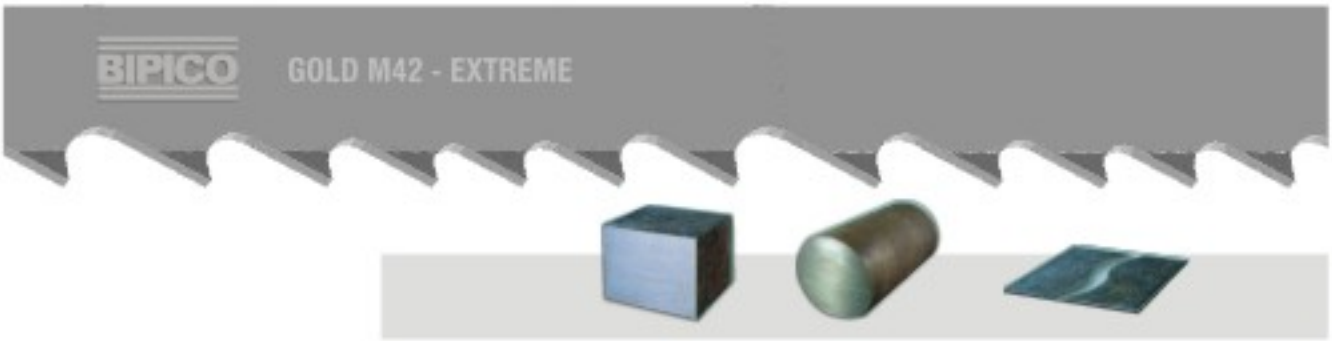



| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 13 X 0.60 | 10,14,18,24 | 8/12,10/14 |
| 2 | 13 X 0.90 | 10,14,18,24 | 6/10,8/12,10/14 |
| 3 | 20 X 0.90 | 6,10,14, | 4/6,5/8,6/10,8/12,10/14 |
| 4 | 27 X 0.90 | 6,10,14, | 4/6,5/8,6/10,8/12,10/14 |

**Cutting Application** : M.S., EN series, Alloy steels, High carbon steels, Structural steels, Tool steel having cutting large profiles and solids (Upto 35 HRC)

## GOLD M42 - EXTREME

Specially designed tooth geometry with positive rake angle

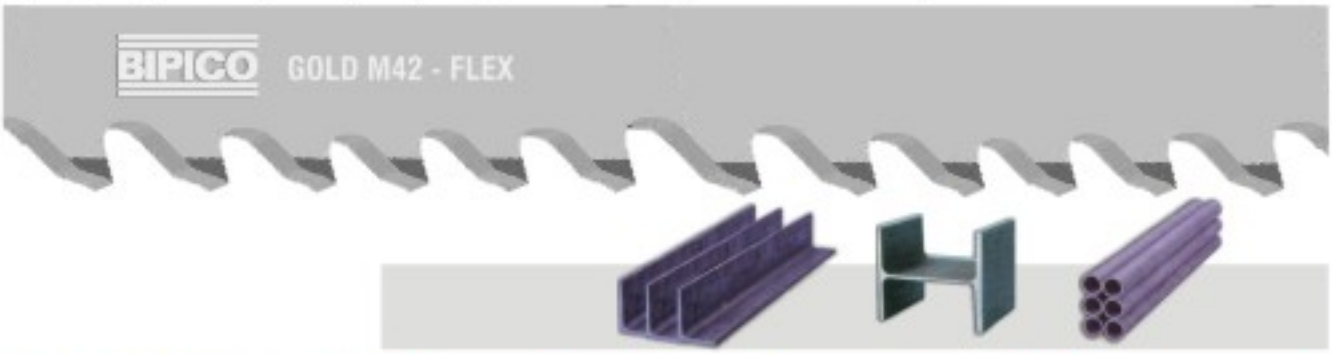



| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 20 X 0.90 | – | 4/6 |
| 2 | 27 X 0.90 | 4,6 | 3/4, 4/6 |
| 3 | 34 X 1.10 | 4,6 | 3/4, 4/6 |
| 4 | 41 X 1.30 | 2,4,6 | 3/4, 4/6 |

**Cutting Application** : Low alloy steel and Unalloyed tool steel

## GOLD M42 - Flex

Specially designed tooth geometry having strong tooth for absorbing shocks due to interrupted cut.

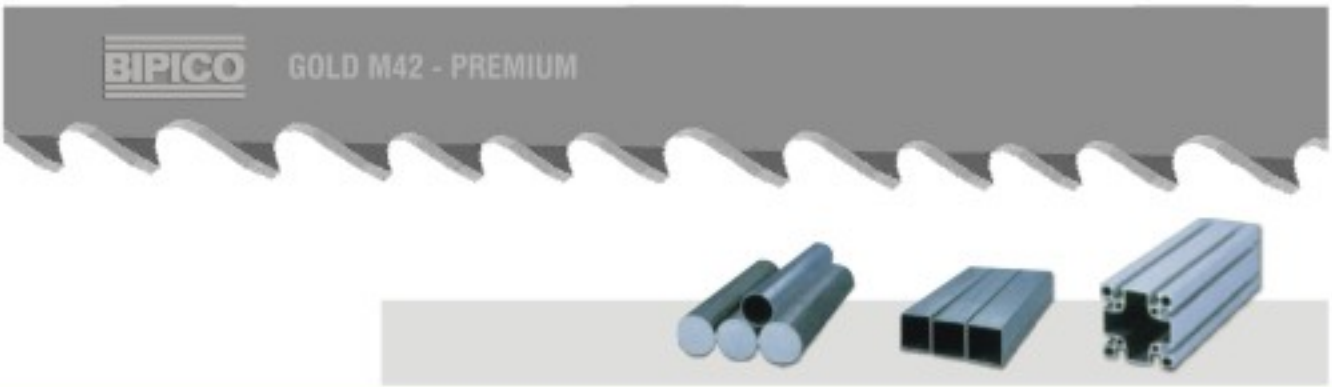



| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 20 X 0.90 | – | 4/6,5/8 |
| 2 | 27 X 0.90 | – | 2/3,3/4, 4/6,5/8 |
| 3 | 34 X 1.10 | – | 2/3,3/4, 4/6,5/8 |
| 4 | 41 X 1.30 | – | 2/3,3/4, 4/6,5/8 |

**Cutting Application** : Bundle cutting for pipes, Tubing and Structural steel.

## GOLD M42 - PREMIUM

Specially designed tooth geometry with positive rake angle having additional relief angle and deep gullet.

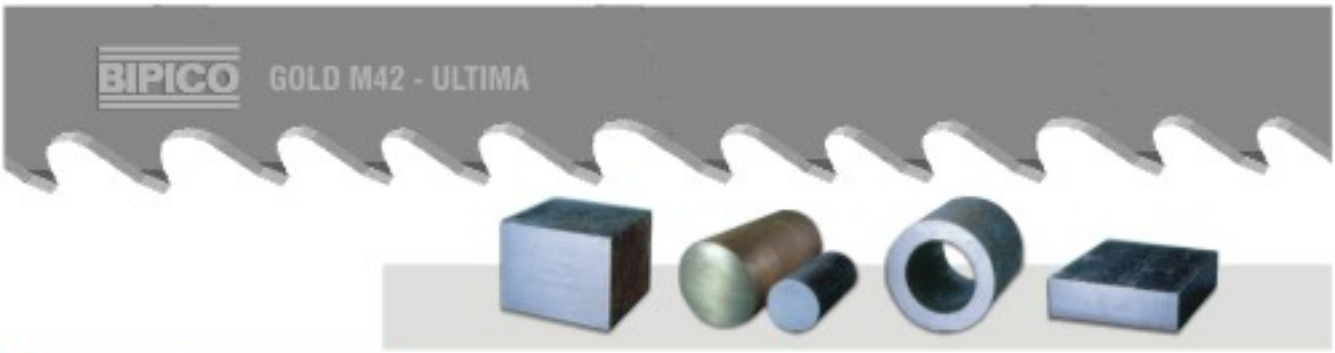


| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 20 X 0.90 | – | 4/6 |
| 2 | 27 X 0.90 | – | 2/3, 3/4, 4/6 |
| 3 | 34 X 1.10 | – | 2/3, 3/4, 4/6 |
| 4 | 41 X 1.30 | – | 2/3, 3/4, 4/6, 1.4/2 |
| 5 | 54 X 1.60 | 1.25 | 2/3, 3/4, 1.4/2, 0.75/1.25 |
| 6 | 67 X 1.60 | 0.75, 1.25 | 2/3, 0.75/1.25,1.4/2 |

**Cutting Application** : Structural steels, Deep drawing steel, Machine steel, Spring steel, Medium alloy steel, Nitriding steel, Stainless steel.

## GOLD M42 - ULTIMA

Specially designed tooth geometry with extreme positive rake angle having additional relief angle and deep gullet for aggressive cutting.




| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 27 X 0.90 | – | 2/3 |
| 2 | 34 X 1.10 | – | 2/3 |
| 3 | 41 X 1.30 | – | 2/3 |
| 4 | 54 X 1.60 | – | 2/3 |
| 5 | 67 X 1.60 | – | 2/3 |

**Cutting Application** :Deep drawing steel, Spring steel, Case hardened steel, Nitriding steel, Tool steel, Quenched & Tempered steel and Hot work steel.

## GOLD M42 - ALUMINA

Specially designed skip tooth with shallow gullet and positive rake angle.

| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 20 X 0.90 | 3, 6 | – |
| 2 | 27 X 0.90 | 3, 6 | – |

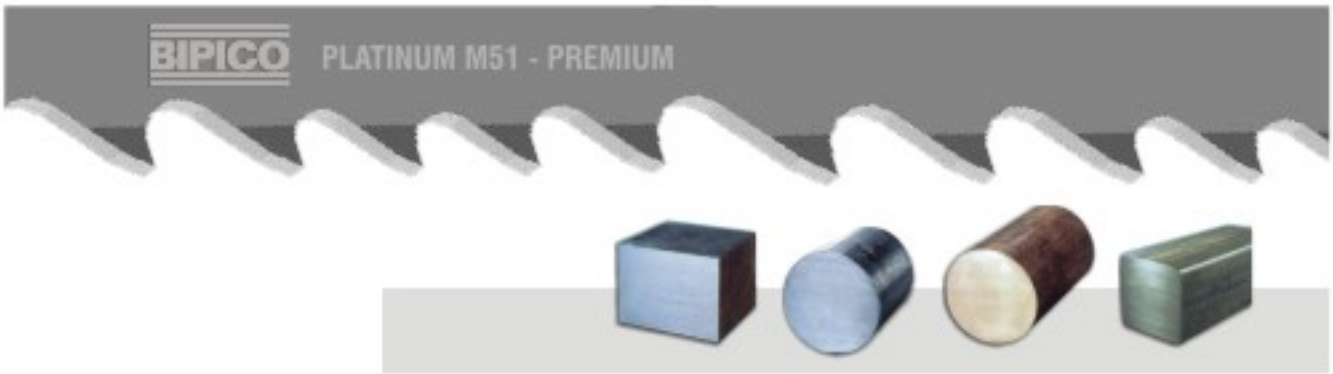
**Cutting Application** : Aluminum die casting extrusion and other Non Ferrous Metals / Alloys.

# PLATINUM M51

The Platinum M51 Bandsaw is manufactured from HSS M51 (10% cobalt) edge material electrobeam welded to specially designed BIPICO spring steel backing material. Platinum M51 blade has excellent wear and red hot résistance due to higher percentage of tungsten and cobalt. It has proper distribution of dense hard carbide elements to give superior cutting performance.

## PLATINUM M51 - PREMIUM

Specially designed tooth geometry with positive rake angle having additional relief angle and deep gullet.

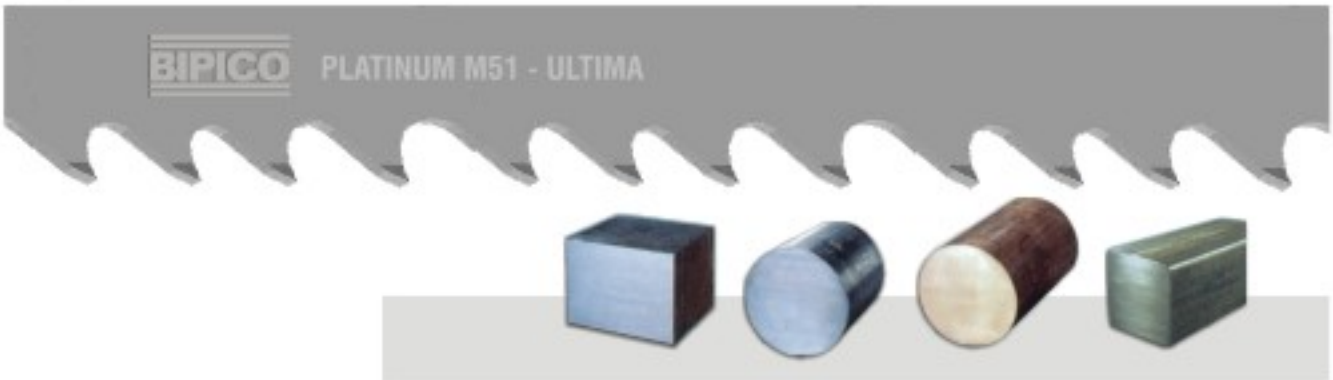



| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 27 X 0.90 | - | 2/3, 3/4, 4/6 |
| 2 | 34 X 1.10 | - | 2/3, 3/4, 4/6 |
| 3 | 41 X 1.30 | - | 2/3, 3/4 |
| 4 | 54 X 1.60 | - | 2/3 |

**Cutting Application :** Deep drawing steel, Machining steel, Quenched and Tempered steel, Case hardened steel, Spring steel, Alloy steel, Hot work steel, Nitriding steel, Cold work steel, High speed steel, Cast iron steel, Rust and heat resistant steel. It can be used for Hardened material upto 45 HRC.

## PLATINUM M51 - ULTIMA

Specially designed tooth geometry with extreme positive rake angle and having additional relief angle and deep gullet for aggressive cutting.




| SR. NO. | SIZE IN MM | CONSTANT TPI | VARIABLE TPI |
|---|---|---|---|
| 1 | 34 X 1.10 | - | 2/3 |
| 2 | 41 X 1.30 | - | 2/3 |
| 3 | 54 X 1.60 | - | 2/3 |

**Cutting Application :** Quenched and tempered steel, Case hardened steel, High alloy steel, Hot work steel, Nitriding steel, Stainless steel, High speed steel, Cast iron steel, Rust and heat resistant steel. It can be used for Hardened material upto 45 HRC.

## TOOTH SELECTION CHART

### FOR ROUND SOLID BAR

| Diameter in mm | 5 10 15 20 25 30 50 75 100 150 250 300 500 700 800 900 1000 1100 1200 |
|---|---|
| TEETH PER INCH/25 MM | 10/14 · 8/12 · 6/10 · 5/8 · 4/6 · 3/4 · 2/3 · 1.4/2 · 1.25 · 0.75/1.25 |

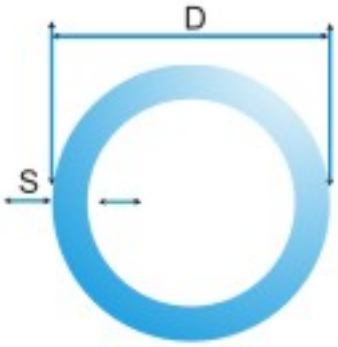
### FOR SQUARE / RECTANGLE SOLID

| Width in mm | 5 10 15 20 25 30 50 75 100 150 200 250 300 400 500 700 800 900 1000 1100 1200 |
|---|---|
| TEETH PER INCH/25 MM | 10/14 · 8/12 · 6/10 · 5/8 · 4/6 · 3/4 · 2/3 · 1.4/2 · 1.25 · 0.75/1.25 |

### FOR STRUCTURALS

| Wall Thickness in mm | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 20 25 30 40 50 |
|---|---|
| TEETH PER INCH/25 MM | 10/14 · 8/12 · 6/10 · 5/8 · 4/6 · 3/4 · 2/3 |

## TOOTH SELECTION CHART FOR CUTTING OF PIPES / TUBES




D = Diameter
S = Wall thickness

| D (mm) | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | 300 | 400 | 500 | 600 | 700 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S (mm) | Tooth pitch (TPI) | | | | | | | | | | | | |
| 2 | 14 | 14 | 14 | 14 | 14 | 14 | 10-14 | 10-14 | 8-12 | 8-12 | 6-10 | 6-10 | 5-8 |
| 3 | 14 | 14 | 10-14 | 10-14 | 10-14 | 10-14 | 8-12 | 8-12 | 6-10 | 6-10 | 5-8 | 5-8 | 5-8 |
| 4 | 14 | 14 | 10-14 | 10-14 | 8-12 | 8-12 | 8-12 | 8-12 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 |
| 5 | 14 | 10-14 | 10-14 | 10-14 | 8-12 | 8-12 | 8-12 | 6-10 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 |
| 6 | 14 | 10-14 | 10-14 | 8-12 | 8-12 | 8-12 | 8-12 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 |
| 8 | 14 | 10-14 | 8-12 | 8-12 | 8-12 | 6-10 | 6-10 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 |
| 10 | | 8-12 | 6-10 | 6-10 | 6-10 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 | 3-4 |
| 12 | | 8-12 | 6-10 | 6-10 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 | 3-4 | 3-4 |
| 15 | | 8-12 | 6-10 | 5-8 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 | 3-4 | 2-3 | 2-3 |
| 20 | | | 6-10 | 5-8 | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 | 3-4 | 2-3 | 2-3 | 2-3 |
| 30 | | | | 4-6 | 4-6 | 4-6 | 3-4 | 3-4 | 3-4 | 2-3 | 2-3 | 2-3 | 2-3 |
| 50 | | | | | | 3-4 | 3-4 | 3-4 | 2-3 | 2-3 | 2-3 | 2-3 | 2-3 |
| 75 | | | | | | | | 2-3 | 2-3 | 2-3 | 2-3 | 2-3 | 1.4-2 |
| 100 | | | | | | | | | 2-3 | 2-3 | 1.4-2 | 1.4-2 | 1.4-2 |
| 150 | | | | | | | | | | 2-3 | 1.4-2 | 1.4-2 | 1.4-2 |
| 200 | | | | | | | | | | | 1.4-2 | 1.4-2 | 1.4-2 |

### BLADE BREAK-IN EXTREMELY IMPORTANT

The extremely sharp tooth tip and edges of new blades must be broken-in before applying full feed pressure to the blade. A good analogy is that of writing with a freshly sharpened wooden pencil.

### RECOMENDED PROCEDURE

- Maintain proper blade speed for the material to be cut.
- Reduce blade feed pressure or feed rate by 50% for the first 300 to 500 square cm of material cut.
- Gradually increase feed pressure or feed rate after break-in to full pressure or rate.

# BI-METAL BAND SAW SPEED AND FEED CHART

| | Stock Dimensions | Up to 25 mm | | From 25 - 75 mm | | From 75 - 150mm | | Over 150mm | |
|---|---|---|---|---|---|---|---|---|---|
| | Tooth Pitch | 10/14, 8/12, 6/10, 5/8 24, 18, 14, 10, 6 | | 5/8, 6, 4/6, 3/4, 4 | | 3/4, 2/3, 3 | | 2/3,1.4/2.075/1.25, 1.25, 0.75" | |
| Material (Annealed) | Grade | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. |
| Carbon Steels | 1008-1013 | 75 | 52 ~ 85 | 68 | 64 ~ 98 | 62 | 84 ~ 110 | 58 | 70 ~ 103 |
| | 1015-1018 | 75 | 58 ~ 84 | 68 | 84 ~ 110 | 62 | 98 ~ 130 | 58 | 70 ~ 110 |
| | 1048-1065 | 65 | 32 ~ 45 | 58 | 38 ~ 52 | 55 | 52 ~ 70 | 50 | 45 ~ 64 |
| | 1085-1095 | 60 | 20 ~ 38 | 53 | 32 ~ 45 | 48.8 | 38 ~ 52 | 45 | 32 ~ 52 |
| Free Machining Steels | 1108-1111 | 90 | 58 ~ 71 | 79 | 78 ~ 90 | 75 | 84 ~ 97 | 68 | 71 ~ 90 |
| | 1112-1113 | 90 | 58 ~ 77 | 79 | 78 ~ 96 | 75 | 98 ~ 110 | 68 | 77 ~ 96 |
| | 1115-1132 | 85 | 58 ~ 84 | 74 | 78 ~ 103 | 70 | 98 ~ 122 | 65 | 77 ~ 110 |
| | 1137-1151 | 80 | 32 ~ 52 | 70 | 45 ~ 64 | 65 | 64 ~ 84 | 62 | 52 ~ 77 |
| | 1212-1213 | 90 | 58 ~ 77 | 79 | 78 ~ 96 | 75 | 98 ~ 122 | 68 | 84 ~ 110 |
| Manganese Steels | 1320-1330 | 75 | 26 ~ 45 | 66 | 32 ~ 52 | 62 | 52 ~ 70 | 58 | 38 ~ 58 |
| | 1335-1345 | 70 | 26 ~ 45 | 62 | 38 ~ 52 | 58 | 52 ~ 70 | 54 | 38 ~ 58 |
| Nickel Chrome Steels | 3115-3130 | 78 | 26 ~ 39 | 70 | 32 ~ 45 | 65 | 32 ~ 45 | 60 | 32 ~ 45 |
| | 3135-3150 | 65 | 26 ~ 39 | 58 | 26 ~ 45 | 54 | 38 ~ 52 | 50 | 32 ~ 52 |
| | 3310-3315 | 60 | 19 ~ 26 | 52 | 26 ~ 32 | 50 | 32 ~ 45 | 46 | 26 ~ 39 |
| Molybdenum Steels | 4017-4024 | 80 | 32 ~ 58 | 80 | 45 ~ 70 | 75 | 58 ~ 84 | 70 | 52 ~ 77 |
| | 4032-4042 | 85 | 26 ~ 45 | 75 | 38 ~ 58 | 70 | 58 ~ 84 | 65 | 52 ~ 77 |
| | 4047-4068 | 75 | 12 ~ 38 | 66 | 32 ~ 52 | 62 | 38 ~ 64 | 58 | 32 ~ 52 |
| Chrome Moly Steels | 4130-4140 | 85 | 26 ~ 45 | 75 | 38 ~ 58 | 70 | 58 ~ 84 | 65 | 52 ~ 77 |
| | 4142-4150 | 70 | 12 ~ 38 | 62 | 32 ~ 52 | 58 | 38 ~ 64 | 54 | 32 ~ 52 |
| Nickel Chrome Moly Steels | 4317-4320 | 75 | 26 ~ 38 | 66 | 32 ~ 52 | 62 | 38 ~ 58 | 58 | 32 ~ 52 |
| | 4337-4340 | 70 | 26 ~ 38 | 62 | 26 ~ 45 | 58 | 32 ~ 52 | 54 | 26 ~ 45 |
| | 8615-8627 | 75 | 26 ~ 38 | 66 | 32 ~ 45 | 62 | 38 ~ 52 | 58 | 26 ~ 45 |
| | 8630-8645 | 75 | 20 ~ 32 | 66 | 26 ~ 38 | 62 | 32 ~ 45 | 58 | 26 ~ 45 |
| | 8647-8660 | 65 | 12 ~ 26 | 58 | 20 ~ 32 | 54 | 26 ~ 38 | 50 | 20 ~ 32 |
| | 8715-8750 | 75 | 19 ~ 32 | 66 | 26 ~ 39 | 62 | 32 ~ 45 | 58 | 26 ~ 39 |
| | 9310-8317 | 60 | 6.5 ~ 19 | 54 | 13 ~ 19 | 50 | 13 ~ 26 | 46 | 13 ~ 19 |
| | 9437-8445 | 75 | 26 ~ 32 | 66 | 26 ~ 32 | 62 | 32 ~ 39 | 58 | 26 ~ 32 |
| | 9747-8763 | 75 | 20 ~ 32 | 66 | 26 ~ 38 | 62 | 26 ~ 45 | 58 | 20 ~ 38 |
| | 9840-8850 | 72 | 26 ~ 32 | 64 | 26 ~ 39 | 60 | 32 ~ 45 | 56 | 26 ~ 39 |
| Nickel Moly Steels | 4608-4621 | 75 | 19 ~ 32 | 66 | 32 ~ 39 | 62 | 38 ~ 45 | 58 | 32 ~ 39 |
| | 4640 | 65 | 19 ~ 32 | 58 | 26 ~ 39 | 54 | 32 ~ 45 | 50 | 26 ~ 39 |
| | 4812-4820 | 60 | 19 ~ 32 | 54 | 19 ~ 32 | 50 | 26 ~ 39 | 46 | 26 ~ 32 |
| Chrome Steels | 5045-5046 | 85 | 26 ~ 39 | 75 | 32 ~ 45 | 70 | 52 ~ 65 | 65 | 45 ~ 52 |
| | 5120-5135 | 85 | 26 ~ 39 | 75 | 38 ~ 45 | 70 | 45 ~ 52 | 65 | 32 ~ 52 |
| | 5140-5160 | 75 | 19 ~ 32 | 66 | 26 ~ 39 | 62 | 32 ~ 45 | 58 | 26 ~ 39 |
| | 50100-52100 | 55 | 13 ~ 26 | 48 | 19 ~ 32 | 46 | 26 ~ 39 | 42 | 19 ~ 32 |
| Chrome Vanadium Steels | 6117-6210 | 68 | 26 ~ 32 | 60 | 32 ~ 45 | 56 | 38 ~ 52 | 52 | 32 ~ 45 |
| | 6145-6152 | 65 | 19 ~ 26 | 58 | 26 ~ 32 | 54 | 32 ~ 39 | 50 | 26 ~ 32 |
| Silicon Steels | 9255-9260 | 60 | 13 ~ 26 | 54 | 19 ~ 32 | 50 | 19 ~ 32 | 46 | 19 ~ 32 |
| | 9261-9262 | 55 | 6 ~ 19 | 48 | 13 ~ 19 | 46 | 13 ~ 26 | 42 | 13 ~ 19 |
| High Speed Steel | T-1, T-2 | 40 | 6 ~ 13 | 36 | 13 ~ 19 | 33 | 13 ~ 26 | 30 | 13 ~ 19 |
| | T-4, T-5 | 33 | 6 ~ 13 | 30 | 6 ~ 13 | 28 | 13 ~ 19 | 24 | 4 ~ 11 |
| | T-6, T-8 | 33 | 6 ~ 13 | 30 | 6 ~ 13 | 28 | 6 ~ 13 | 24 | 4 ~ 11 |
| | T-15 | 25 | 6 ~ 13 | 22 | 6 ~ 13 | 20 | 6 ~ 13 | 18 | 4 ~ 11 |
| | M-1 | 45 | 6 ~ 19 | 40 | 13 ~ 26 | 36 | 19 ~ 32 | 34 | 13 ~ 26 |
| | M-2, M-3 | 35 | 6 ~ 13 | 30 | 13 ~ 19 | 28 | 19 ~ 26 | 25 | 13 ~ 19 |
| | M-4, M-10 | 30 | 6 ~ 13 | 26 | 6 ~ 13 | 24 | 6 ~ 19 | 22 | 6 ~ 13 |
| Die Steels | A-2, | 63 | 13 ~ 19 | 55 | 19 ~ 26 | 52 | 19 ~ 26 | 48 | 13 ~ 19 |
| | D-2, D-3 | 33 | 6 ~ 13 | 30 | 6 ~ 13 | 26 | 6 ~ 13 | 24 | 6 ~ 13 |
| | D-7 | 27 | 6 ~ 11 | 24 | 6 ~ 11 | 22 | 6 ~ 11 | 20 | 4 ~ 10 |
| | O-1, O-2 | 70 | 19 ~ 26 | 62 | 26 ~ 32 | 58 | 32 ~ 39 | 54 | 26 ~ 32 |
| | O-6 | 68 | 19 ~ 26 | 60 | 26 ~ 39 | 56 | 32 ~ 45 | 52 | 26 ~ 39 |
| Hot Work Steels | H-12, H-13, H-21 | 45 | 13 ~ 26 | 40 | 19 ~ 32 | 37 | 13 ~ 26 | 35 | 13 ~ 26 |
| | H-22, H-24, H-25 | 45 | 6 ~ 19 | 40 | 6 ~ 19 | 37 | 6 ~ 19 | 35 | 6 ~ 19 |
| Shock Resisting Tool Steels | S-1 | 65 | 13 ~ 26 | 58 | 19 ~ 32 | 54 | 19 ~ 32 | 50 | 13 ~ 26 |
| | S-2, S-5 | 50 | 6 ~ 19 | 44 | 13 ~ 26 | 42 | 13 ~ 26 | 38 | 6 ~ 19 |

| | Stock Dimensions | Up to 25 mm | | From 25 - 75 mm | | From 75 - 150mm | | Over 150mm | |
|---|---|---|---|---|---|---|---|---|---|
| | Tooth Pitch | 10/14, 8/12, 6/10, 5/8 24, 18, 14, 10, 6 | | 5/8, 6, 4/6, 3/4, 4 | | 3/4, 2/3, 3 | | 2/3,1.4/2.075/1.25, 1.25, 0.75" | |
| Material (Annealed) | Grade | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. | Band Speed Mtr/ Min | Cutting Rate Sq.Cm/Min. |
| Special Purpose Tool Steels | L-6 | 60 | 13 ~ 26 | 54 | 19 ~ 32 | 50 | 19 ~ 32 | 46 | 13 ~ 26 |
| | L-7 | 60 | 13 ~ 26 | 54 | 19 ~ 32 | 50 | 19 ~ 32 | 46 | 13 ~ 26 |
| Stainless Steels | 2.012302E+11 | 35 | 13 ~ 26 | 30 | 13 ~ 26 | 28 | 13 ~ 26 | 26 | 6 ~ 19 |
| | 303, 303F | 42 | 13 ~ 26 | 36 | 13 ~ 26 | 36 | 19 ~ 32 | 32 | 13 ~ 26 |
| | 3.0803E+11 | 27 | 6 ~ 13 | 24 | 6 ~ 13 | 22 | 6 ~ 13 | 20 | 6 ~ 11 |
| | 3143163317 | 27 | 6 ~ 11 | 24 | 6 ~ 13 | 22 | 6 ~ 11 | 20 | 6 ~ 11 |
| | 321347 | 40 | 6 ~ 19 | 35 | 6 ~ 19 | 33 | 13 ~ 26 | 30 | 6 ~ 19 |
| | 410, 420, 420F | 45 | 6 ~ 19 | 40 | 6 ~ 19 | 37 | 13 ~ 26 | 35 | 6 ~ 19 |
| | 416,430F | 60 | 19 ~ 32 | 53 | 26 ~ 39 | 50 | 32 ~ 45 | 46 | 26 ~ 39 |
| | 430446 | 30 | 6 ~ 19 | 26 | 13 ~ 26 | 25 | 13 ~ 26 | 23 | 6 ~ 19 |
| | 440 A,B,C | 35 | 6 ~ 19 | 30 | 6 ~ 19 | 28 | 13 ~ 26 | 26 | 6 ~ 19 |
| | 440F, 443 | 45 | 6 ~ 19 | 40 | 6 ~ 19 | 37 | 13 ~ 26 | 35 | 6 ~ 19 |
| | 17-4PH, 17-7PH | 30 | 13 ~ 19 | 26 | 13 ~ 26 | 25 | 19 ~ 26 | 22 | 13 ~ 19 |
| | A-7 | 30 | 6 ~ 13 | 26 | 6 ~ 13 | 25 | 13 ~ 19 | 22 | 13 ~ 19 |
| Beryllium Copper #25 | BHN 100-120 | 105 | 26 ~ 39 | 92 | 32 ~ 45 | 87 | 39 ~ 52 | 80 | 32 ~ 45 |
| | BHN 220-250 | 75 | 13 ~ 26 | 66 | 19 ~ 32 | 62 | 26 ~ 39 | 58 | 19 ~ 32 |
| | BHN 310-340 | 60 | 6 ~ 13 | 53 | 6 ~ 13 | 50 | 13 ~ 19 | 46 | 6 ~ 13 |
| Nickel Base Alloys | Monel | 30 | 6 ~ 13 | 26 | 6 ~ 13 | 25 | 6 ~ 13 | 22 | 6 ~ 13 |
| | R Monel | 42 | 13 ~ 19 | 37 | 13 ~ 26 | 35 | 13 ~ 26 | 32 | 13 ~ 19 |
| | K Monel | 30 | 6 ~ 13 | 26 | 6 ~ 11 | 25 | 6 ~ 11 | 22 | 6 ~ 10 |
| | KR Monel | 30 | 6 ~ 19 | 26 | 6 ~ 19 | 25 | 6 ~ 19 | 22 | 6 ~ 13 |
| | Inconel | 33 | 6 ~ 13 | 28 | 6 ~ 19 | 26 | 6 ~ 19 | 25 | 6 ~ 13 |
| | Inconel X | 27 | 6 ~ 11 | 24 | 6 ~ 11 | 22 | 6 ~ 11 | 20 | 6 ~ 10 |
| | Hastelloy A | 36 | 6 ~ 13 | 32 | 6 ~ 13 | 30 | 13 ~ 19 | 27 | 6 ~ 13 |
| | Hastelloy B | 33 | 6 ~ 11 | 28 | 6 ~ 13 | 26 | 6 ~ 13 | 24 | 6 ~ 11 |
| | Hastelloy C | 30 | 6 ~ 11 | 26 | 6 ~ 11 | 25 | 6 ~ 11 | 22 | 6 ~ 11 |
| | Rene 41 | 27 | 6 ~ 13 | 24 | 6 ~ 10 | 22 | 6 ~ 10 | 20 | 6 ~ 10 |
| | Udimit | 30 | 6 ~ 13 | 26 | 6 ~ 13 | 25 | 6 ~ 13 | 22 | 6 ~ 13 |
| | Waspalloy | 27 | 6 ~ 13 | 24 | 6 ~ 11 | 22 | 6 ~ 10 | 20 | 6 ~ 10 |
| | Titanium | 30 | 6 ~ 13 | 26 | 13 ~ 19 | 25 | 13 ~ 19 | 22 | 13 ~ 19 |
| Titanium Alloys | Ti-140A 2CR-2MO | 30 | 6 ~ 11 | 26 | 6 ~ 11 | 25 | 6 ~ 10 | 22 | 6 ~ 10 |
| | Ti-150A | 30 | 6 ~ 11 | 26 | 6 ~ 11 | 25 | 6 ~ 10 | 22 | 6 ~ 10 |
| | MST-6AL-4V | 30 | 6 ~ 11 | 26 | 6 ~ 11 | 25 | 6 ~ 10 | 22 | 6 ~ 10 |
| | 99% Pure Titanium | 30 | 6 ~ 11 | 26 | 6 ~ 11 | 25 | 6 ~ 10 | 22 | 6 ~ 10 |
| Aluminium Alloy | 1100,2011,2017,2024 | 150 | 48 ~ 68 | 132 | 68 ~ 120 | 125 | 120 ~ 151 | 115 | 125 ~ 150 |
| | 3003,5052,5086,6061 | 150 | 48 ~ 68 | 132 | 68 ~ 120 | 125 | 120 ~ 151 | 115 | 125 ~ 150 |
| | 6063,6160,6262,7075 | 150 | 48 ~ 68 | 132 | 68 ~ 120 | 125 | 120 ~ 151 | 115 | 125 ~ 150 |
| Bronze | Aluminium Bronze | 45 | 13 ~ 26 | 42 | 19 ~ 26 | 37 | 19 ~ 32 | 35 | 19 ~ 26 |
| | Most others | 70 | 39 ~ 58 | 62 | 65 ~ 77 | 58 | 65 ~ 77 | 54 | 45 ~ 58 |
| Copper Alloy | 356,360 | 105 | 43 61 | 92 | 91 124 | 87 | 124 136 | 80 | 136 ~ 165 |
| | 353 | 100 | 38 55 | 88 | 81 111 | 83 | 100 110 | 75 | 115 ~ 146 |
| | 1452 , 187 | 100 | 36 51 | 88 | 51 90 | 83 | 100 110 | 75 | 110 ~ 137 |
| | 380, 544 | 95 | 34 48 | 84 | 50 92 | 78 | 85 103 | 72 | 105 ~ 128 |
| | 173, 932 | 90 | 30 43 | 80 | 45 80 | 75 | 70 90 | 70 | 90 ~ 115 |
| | 330 ,365 | 85 | 27 39 | 75 | 38 70 | 70 | 70 80 | 65 | 80 ~ 104 |
| | 623, 624 | 80 | 25 36 | 70 | 36 68 | 66 | 63 75 | 62 | 75 ~ 97 |
| | 230 ,280 ,272 | 75 | 23 33 | 66 | 33 60 | 62 | 60 70 | 58 | 72 ~ 90 |
| | 280, 464 ,632 ,685 | 75 | 23 33 | 66 | 33 60 | 62 | 60 70 | 58 | 72 ~ 90 |
| | 101, 102, 110, 122,172 | 70 | 23 32 | 62 | 32 56 | 58 | 56 68 | 54 | 70 ~ 86 |
| | 1751, 182, 220, 510 | 70 | 23 32 | 62 | 32 56 | 58 | 56 68 | 54 | 70 ~ 86 |
| | 625,706,715,934 | 70 | 23 32 | 62 | 32 56 | 58 | 56 68 | 54 | 70 ~ 86 |
| | 630 | 65 | 22 31 | 57 | 31 54 | 54 | 54 66 | 50 | 68 ~ 84 |
| | 911 | 60 | 21 29 | 54 | 29 50 | 50 | 51 62 | 46 | 64 ~ 79 |

## Formula for calculating time for cutting the job :

$$\text{Cutting Time (Min.)} = \frac{\text{Cross Section Area of material (CM}^2\text{)}}{\text{Cutting Speed (CM}^2\text{ / Min.)}}$$

NOTE :

The above parameters gives optimum life only if the machine is maintained in good working condition.

## Guidelines for selecting cutting parameters :

1) Select the correct size of band.
2) Select the right tooth form and TPI.
3) Select the cutting speed and cutting feed from recommendation table to obtain optimum cutting time.

# OTHER RANGE OF PRODUCTS

## HIGH SPEED STEEL HACKSAW BLADES

These blades have exceptionally good wear resistance and cuts through all types of materials including Alloy Steel and Stainless Steel.

## LOW ALLOY STEEL HACKSAW BLADES

These blades are recommended for cutting relatives softer material such as non-ferrous metals (aluminum, brass, copper, bronze, mild steels etc.)

## CARBON STEEL BANDSAW BLADES

**BIPICO** Metal cutting Bandsaw Blades aim to satisfy the diverse cutting needs. At very low operating costs.

**BIPICO** Bandsaw gives cheapest cost per cut. Largest exporter from INDIA to Developed Countries. These are manufactured from Top Quality Imported High Carbon Steel.

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A Perfe Match for your Hand HACKSAW BLADES. Scientifically designed duty Hasksaw Frame from "**BIPICO**" The Perfect Saw Maker

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Zinc Die Cast Handle.

- Adjustable 10" / 12"
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## BIMETAL HIGH SPEED STEEL

Manufactured from High Speed Steel, electron beam welded to a spring steel back, these bimetal blades are ables to withstand heavy feed pressures, giving economical, high cutting rates. Because these blades are virtually unbrekable in normal use, they are particularly safe and therefore suitable for use by unskilled operators or on older machines. They will cut through most type of material including alloy and stainless steel.

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**HIGH SPEED STEEL TOOL BITS** are manufactured from the finest quality Molybdenum & Tungsten bearing grades of High Speed Steel. Widely used for machining and variety of ferrous and nonferrous metals.Sophisticated heat treatment provides more life between two regrinds.

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Product of 21st Century from **BIPICO**

An invaluable DO-IT-YOURSELF tool for automobile workshops, carpenters, small factories, engineering industries, building contractors, households,farms & gardens. Nine different adjustable angles provides on special Zinc Die Cast Handle makes easier to cut at DIFFICULT-TO-REACH POSITIONS.

## JIGSAW BLADES, RECIPROCATING SAW, BODY SAW & AIR SAW BLADES

Manufactured for the first time in India & Largest Exporter to developed countries

**Usages**

PROFILE CUTTING : Cuts ferrous and-ferrous, FRP plastic, Steel Sheets, Plastic,Thinwood, Plywood, Softwood etc.

STRAIGHT CUTTING : Straight Cuts in Steel Sheet metal, tubing and non-ferrous metal wood and reinforced plastics and pipes. Suitable for machines of Bosch, Black & Decker, Decker, Makita, AEG, REMS, Hitachi, etc

Body Saw & Airsaw can be used for Pallet Cutting.

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