

## TOOTH TYPE

### SKIP



- 0° rake angle
- Shallow gullets and evenly spaced teeth for efficient chip removal
- Used for soft, non-ferrous metal, wood, composition materials, cork and plastic

### DUPLEX



- Deep chip clearing gullets, increased tooth strength and high positive rake angle
- Used for production cutting, work hardened metals, tool steels, exotic alloys

### REGULAR



- Conventional tooth with 0° rake angle
- General purpose for wide range of cutting applications

### HOOK



- 10° positive rake angle
- Fast cutting with less feed pressure
- Rounded gullets allow for fast chip removal
- Use for cutting non-metallics and non-ferrous metals

### VARIABLE



- 0° rake angle
- Varying gullet depths and tooth sizes
- Reduces harmonic vibration
- Extends blade life cutting solids and structurals

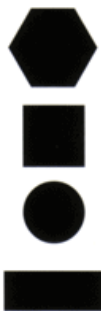
### VARIABLE POSITIVE



- Positive rake angle for maximum cutting speeds
- Better tooth penetration in harder to machine materials

## SOLIDS

Cross Section	Pitch
1/4" 6 mm	10/14 TPI 14 TPI
3/8" - 3/4"	8/12 TPI 10 TPI
9.5 - 19 mm	8 TPI
3/4" - 1-1/2"	4/6 TPI 6 TPI
19 - 38 mm	5/8 TPI
1-1/2" - 3"	4/6 TPI 4 TPI
38 - 76 mm	3/4 TPI
3" - 6"	2/3 TPI 3/4 TPI
75 - 150 mm	3 TPI
6" - 10"	2 TPI
152 - 255 mm	2/3 TPI
10" - 14"	.75 TPI
254 - 355 mm	.8/1.5 TPI



**TOOTH SELECTION:** There should be a minimum of 3 teeth in the work at all times for bi-metal blades: a minimum of 6 teeth for carbon blades, ideal 6 to 12 teeth should be in contact with the work; 24 teeth in the work is too many.

## TUBING

Wall Thickness	Pitch
1/4" - 1/2"	10 TPI 10/14 TPI
6 - 12.5 mm	8/12 TPI
1/2" - 3/4"	8 TPI 6/10 TPI
12.6 - 19 mm	5/8 TPI
3/4" - 1"	4/6 TPI 5/8 TPI
19 - 25mm	6 TPI

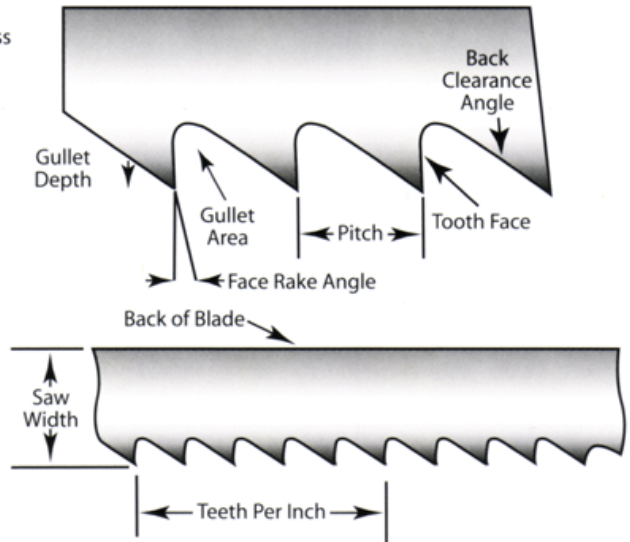


## STRUCTURALS

Cross Section	Pitch
1/4" - 1/2"	10/14 TPI 10 TPI
6 - 12.5 mm	8/12 TPI
1/2" - 3/4"	8 TPI 6/10 TPI
12.6 - 19 mm	5/8 TPI
3/4" - 1"	4/6 TPI 5/8 TPI
19 - 25mm	6 TPI



## BLADE TERMINOLOGY



## TOOTH SET



### RAKER SET

- Three tooth sequence: right, left, straight
- Used for general purpose cutting applications



### WAVY SET

- Teeth are set in groups, right and left in varying degrees
- Used for light metal sections, such as sheet, tubing and small solid shapes

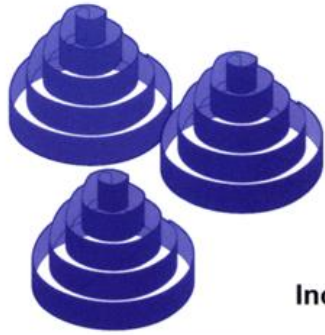


### MODIFIED RAKER SET

- Teeth are set in alternating groups with a single straight tooth
- Used for solids, shapes, structurals and piping

## FEED PRESSURE:

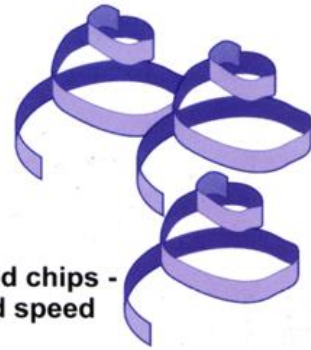
Chips tell you what is happening with your feed pressure and your blade



Heavy, thick chips -  
Reduce feed rate



Thin chips -  
Increase feed pressure


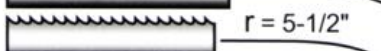
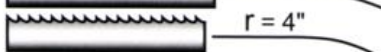
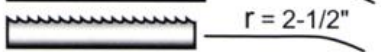
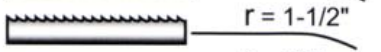
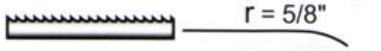




Loosely curled chips -  
Correct feed speed

## WIDTH - RADIUS CHART: For profile sawing

BLADE WIDTH

MINIMUM RADIUS

1"		$r = 7"$
3/4"		$r = 5-1/2"$
5/8"		$r = 4"$
1/2"		$r = 2-1/2"$
3/8"		$r = 1-1/2"$
1/4"		$r = 5/8"$
3/16"		$r = 5/16"$
1/8"		$r = 1/8"$

## BLADE BREAK-IN:

- Use the proper blade speed for the material to be cut.
- Reduce the blade feed pressure or feed rate by 50% for the first 60 to 120 square inches of material cut.
- Slowly increase the feed rate after break-in to full pressure.

## TECHNICAL TIPS FOR BANDSAW BLADE CUTTING:

- When using carbon bandsaw blades, reduce recommended bi-metal bandsaw speed by 50%.
- Reduce bandsaw blade speed 30% to 50% when sawing without fluid.
- Use a high quality cutting fluid when possible, and make sure the cutting fluid is distributed throughout the cut.
- Always check blade tension after making a few cuts.
- Never start a new blade in an old cut.
- Never stop a blade during a cut.
- Avoid starting a blade on sharp edges or corners.