

Bandsaw Blade Selection Guide

Blade Length

Blade Width

Teeth per Inch

Tooth Sets

Tooth Style

Blade Thickness

Blade Material

Blade Speed

Bandsaw Blade Selection Guide

1. Determine Blade Length

Refer to your manual for a specified length.

or

Stretch out an existing blade and measure it.

or

Set the wheels to the centre of the adjusting bolt and measure length 'C' and the radius of the wheel:

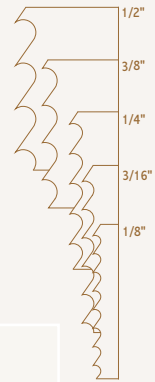
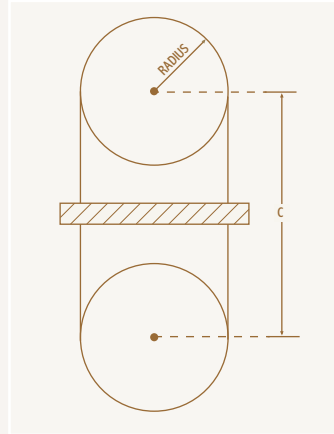
$$(2 \times C) + (2 \times \text{RADIUS} \times 3.14) = \text{BLADE LENGTH}$$

or

Measure circumference of one wheel:

$$\text{CIRCUMFERENCE} + (2 \times C) = \text{BLADE LENGTH}$$

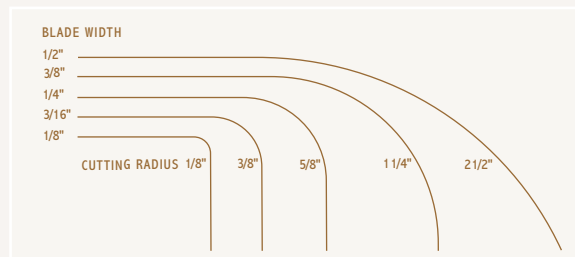
Note: For 3 wheel hobby machines the easiest way is to run a tape or string around the wheels.



2. Choosing Blade Width

Contour Cutting - The blade width is determined by the smallest corner or radius that will be cut.

Straight Cutting - For maximum cutting strength use the widest blade the guides will allow.



| Tooth Pitches Available | | | | | | | | | | | |
|-------------------------|---------------------------------------|---|---|---|---|----|----|----|----|----|--|
| WIDTH | TEETH PER INCH | | | | | | | | | | |
| | 2 | 3 | 4 | 6 | 8 | 10 | 14 | 18 | 24 | 32 | |
| 1/16" | | | | | | | | | | | |
| 1/8" | | | | | | | | | | | |
| 3/16" | | | | | | | | | | | |
| 1/4" | | | | | | | | | | | |
| 3/8" | | | | | | | | | | | |
| 1/2" | | | | | | | | | | | |
| 5/8" | | | | | | | | | | | |
| 3/4" | | | | | | | | | | | |
| 1" | | | | | | | | | | | |
| 1 1/4" | Please see 'Millband' section on flap | | | | | | | | | | |
| 2" | | | | | | | | | | | |

Available sizes include:

3/4, 2, 3, 4, 6 or 10 Teeth per Inch or
3/4", 1/2", 1/3", 1/4", 1/6", 1/10" Tooth Pitch

3. Tooth Pitch or Teeth per Inch

Choose the number of teeth per inch (TPI) or the tooth pitch based on speed of the cut, thickness and hardness of the material and how wet or dry your wood is.

Fewer TPI

faster cutting
thicker materials
softer materials
wetter woods

More TPI

smoother cutting
thinner materials
harder materials
drier woods

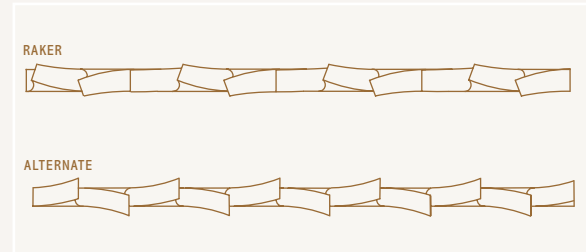


4. Tooth Sets




Raker Set: Every third tooth (the raker tooth) is straight for chip removal. Allows for clean contour and is available in all tooth styles.

Alternate Set: No raker tooth allows for more teeth cutting. This is an aggressive blade that cuts fast; used when clogging is not a problem.

Other set designs are used only in metal cutting.



5. Tooth Styles

| | |
|---|--|
| Regular Tooth: A general purpose blade for straight or contour cutting of uniform size material; available in raker, wavy or alternate set. |  |
| Skip Tooth: The shallow flat gullet allows for good chip removal and reduces the tendency to clog. Excellent for soft, gummy materials, green wood, paper board and fibrous woods. |  |
| Hook Tooth: Similar applications as the Skip Tooth but with a 10° hook for faster, more aggressive cutting. This offers reduced feed pressure and higher production rates. |  |

6. Thickness of Blade

NAP GLADU Bandsaw Blades come in varying thicknesses of material:

.014 and .020 (28g and 25g) This material is for small wheeled (e.g. portables) and three wheeled machines where the higher degree of flexing can cause blade breakage in the heavier materials.

.025 (23g) This is the most common thickness used in blade widths from 1/16" to 1/2".

.032 (21g) Primarily used only in 3/4" material but also available in 3/8" and 1/2" for extra strength in production contour cutting. Not recommended for blades lengths under 14 feet.

.035 (20g) This is the standard thickness of carbon steel blades from 1" to 2" wide.

7. Blade Speeds

General Guidelines:

| | |
|-------------------|--------------|
| Thick Material: | Slower Speed |
| Hard Material: | Slower Speed |
| Fine Tooth Pitch: | Slower Speed |
| Thin Material: | Faster Speed |
| Soft Material: | Faster Speed |
| Few TPI: | Faster Speed |

Surface Feet per Minute (SFM)

| | | |
|----------|----------|--|
| Maximum: | 5000 SFM | e.g. thin wood, paper, asbestos, soft plastics |
| Minimum: | 1500 SFM | e.g. bakelite |

There are dozens of variables, but by using this guide, your experience and, whenever required, your BC Saw Representative, the best speed for your operator and material can easily be determined.

8. Specify Material

NAP GLADU Carbonsteel Bandsaw Blades:

recommended for wood and plastic cutting. A flexible body and *teeth hardened* through tempering offer extended blade life and the ability to withstand higher blade speeds.

NAP GLADU Premium or Tempered Back Blades:

also available, but due to the high blade speeds used in wood and plastic cutting, they are only recommended in unusual circumstances.

Carbide Tipped Blades: available for difficult cutting, such as very hard abrasive plastics or exotic woods.

Ready to Order?

Fill in the worksheet below and then call a NAP GLADU Representative to request your blade. Need some extra help? There's always someone here to answer any remaining questions you may have. More information on our specialty blades can be found on the other side of this flap.

| Bandsaw Blade Order Sheet | |
|---------------------------|---|
| Blade Length | $(2 \times C) + (2 \times \text{RADIUS} \times 3.14) = \text{BLADE LENGTH}$. . . |
| Blade Width | 2" 1 1/4" 1/2" 3/8" 1/4" 3/16" 1/8" 1/16" |
| Teeth per Inch | 3/4 2 3 4 6 10 . . . |
| Tooth Sets | RAKER ALTERNATE |
| Tooth Style | REGULAR SKIP HOOK |
| Blade Thickness | .014 .020 .025 .032 .035 |
| Blade Material | CARBONSTEEL TEMPERED CARBIDE SPECIALTY (see flap) |
| Blade Speed | MINIMUM: 1500 MAXIMUM: 5000 |

Call: 416-251-2236
Fax: 416-251-7268
Visit our website: www.bcsaw.com

Specialty Blades

Millband

Designed specifically for horizontal band mills and vertical resawing applications. A flexible core with heat treated hardened teeth guarantees maximum blade life. This blade is also available with a hardened back for less flexibility in high production ripping or tough cross cutting.

| Tooth Pitches Available | | |
|-------------------------|-----------|---------------|
| WIDTH | THICKNESS | TOOTH SPACING |
| 1" | .035 | 1/2" |
| 1" | .035 | 3/4" |
| 1" | .042 | 3/4" |
| 1 1/4" | .035 | 3/4" |
| 1 1/4" | .035 | 1" |
| 1 1/4" | .042 | 3/4" |
| 1 1/4" | .042 | 7/8" |
| 1 1/4" | .042 | 1" |
| 2" | .035 | 3/4" |
| 2" | .035 | 1" |

Knife Band Blades

Knife Edge and scalloped knife edge blades are available in 1/2"- 3" widths for meat, foam, rubber, fabric and various other applications.

Kron Pallet Blade

Available in 1 1/4" wide, .042" thick, and 5/8" Vari-Pitch, and welded to your specific length. The Kron Pallet Bandsaw Blades are designed exclusively for dismantling pallets. Kron, from NAP GLADU, is a Bimetal Band with a revolutionary new tooth design that will out-perform any pallet wrecking blade on the market.



Bimetal Bandsaw Blades

Super hardened M2 and M42 teeth for shop and production applications. Designed to cut most ferrous metals, all grades of steel, as well as titanium, copper and nickel alloys. When referring to the chart please keep in mind that variable pitch (VP) refers to a band with a tooth pattern in which every inch has a different number of teeth i.e. 5/8" VP has five teeth in the first inch and eight in the next inch. These variable pitch bandsaws work well in tubing and sheet metal.

[illegible]

General Information

Trouble Shooting

Should you experience:

| | |
|--------------------|----------------------------|
| blades breaking | premature dulling |
| teeth breaking | blades cracking |
| slow cutting | rough cutting |
| blades twisting | burning |
| blades running off | unsatisfactory performance |

First: Review this guide and check:

- blade tension (refer to your manual)
- guide settings (see section on guides)
- feed pressure – don't force or under feed

Then ask yourself:

- Is the blade gauge correct? (see thickness section)
- Are the wheels cleaned and properly aligned?
- Are the rubbers worn?
- Are you using the correct number of teeth and tooth style?
- Is the blade too dull or plugging?
- Is the blade speed correct?
- Is the width of the blade correct for the contour you are cutting?
- Are you using properly welded quality blades as referred to in the guide?
- Are the teeth running backwards?

Bandsaw Terminology

Pitch - the distance between two teeth (point to point)

TPI - teeth per inch

Gauge - blade thickness

Set - the bending of the tooth-tip which provides the cutting action and the blade clearance

Raker - the straight tooth that 'rakes' the chips out of the cut

Flex Back - carbon steel blades that have hardened teeth and back

Bi-Metal - a blade specifically designed for metal cutting relief or clearance - the back slope of the tooth

SFM - surface feet per minute or the speed that the blade travels at

Feed Speed - the speed at which the material is fed through the blade

Kerf - total thickness of the blade at tooth tips which equals the minimum width of cut

Guide Setting and Tracking

After every blade change:

Adjust the top and bottom guides (with the machine turned off) so that:

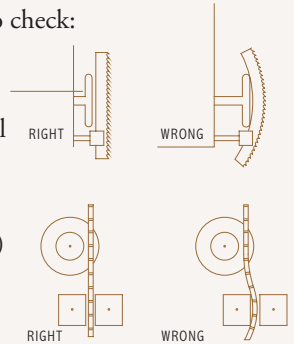
- the thrust bearing is 1/64" behind the back of the blade; the blade should touch the bearing as soon as any feed pressure is applied
- the side blocks are within the thickness of a piece of paper from the side of the blade – but not touching – and just back of the tooth gullet
- the guides should be just above the work piece

Free-Wheel the blade (machine still off) to check:

- wheel alignment
- tension
- tracking – in the middle of the wheel
- guide and bearing settings

Replace worn out:

- thrust bearings (also replace if sticky)
- guides
- wheel rubbers



Points to Ponder

- When in doubt use the next finest tooth pitch
- Don't put the blade in the cut before the blade starts
- Let the blade cut – too much or too little feed pressure shortens blade life
- Powdery chips indicate the blade and/or the speed is wrong for the material being cut
- Always free-wheel a new blade to check tracking and guide settings before turning it on
- Keep this for referral, but don't hesitate to call your NAP GLADU Representative for assistance

