

Bandsaw Blade Tension Settings

If you've ever suffered poor cutting performance from your bandsaw or band knife blades, it's highly likely not to be the blade's fault. It's more often than not a question of tension – too much or too little. If you don't set a blade up correctly, no matter how sharp the teeth are or how high quality the steel is, the blade will simply perform badly. Read on for help with your bandsaw blade tension settings.

First, set your blade to the correct tension settings as this is ever so important. Most bandsaw machines have a factory made blade tensioner. There are many variations, the most popular being a thumb screw type, but the principal will be the same whichever type you have. They have a hard life, so over time, they do wear out and therefore don't tension quite as they should. The only true way to measure tension accurately is with a tension gauge. It's probably the best investment you'll make for your bandsaw or band knife machine

So if your blade isn't tensioned correctly, what can happen?

Tension too low? The blade can start to flex wildly during the cut – and once it starts, it's very difficult, if not impossible to correct. You may also experience a washboard effect or chatter lines to the surface of the sawn material. Sound familiar? Probably a result of your tension on the blade being too low.

Tension too high? It's true that the more tension you have on a blade the straighter it will cut. But, you need just the right amount. The result of excessive tension on the blade can cause tiny hairline cracks which lead to premature blade breakage. In worse case scenarios it may just snap instantly.

It's about balance. You need enough tension to ensure a good clean cut but not so much that it damages the blade. Here's a handy table to help you set up your Bandsaw or Band knife blade tension precisely:

| Material | PSI | kPa |
|--------------------------------------|-----------|-------------|
| Saw ^{37C} Flexback Blade | 15-20.000 | 100-140.000 |
| Saw ^{37C} Hardback Blade | 20-25.000 | 140-170.000 |
| Saw ^{37B} M42 Bimetal Blade | 25-30.000 | 170-210.000 |
| Freshcut ³⁷ Food Blade | 15-20.000 | 100-140.000 |
| Ripper ³⁷ Sawmill Blade | 25-30.000 | 170-210.000 |
| Slicer ³⁷ Bandknife Blade | 15-20.000 | 100-140.000 |

Get into a Daily De-tension Regime

At the end of the day, the less stress you place on the blade, the longer the blade and the machine's life will be. That's why, when you finish cutting for the day, you should de-tension your blades.

Why should you bother? Well, the blade generates heat as it cuts and causes the blade to microscopically expand and stretch. When the blade stops work for the day, the blade then begins to shrink as it cools down. Over time small cracks form on the back edge or gullet of the blade (similar to being over tensioned) which will lead to premature breakage. It also stresses your machine by putting unnecessary forces on the bearings and that tired tension screw.

De-tension your blade each day after use and you'll extend the life of your blade, your machinery life and your bank balance by cutting down on maintenance costs.