



BAND SAWS COMPLETE RANGE

Why use
PHANTOM BAND SAW BLADES?

- › Top quality band saws
- › Ordered today, shipped tomorrow
- › Many lengths and dimensions available

THERE'S NO END TO WHAT YOU CAN DO.

PHANTOM: HIGH-QUALITY TOOLS FOR THE INDUSTRY

Machining correctly the first time. Every time. This is only possible with reliable, high-quality tools. With Phantom, you have this quality in your hands.



Phantom offers you unlimited solutions, thanks to a complete range of high quality tools.

You are assured of tools that are extremely reliable and longlasting and a long service life.

You will be able to work optimally with high quality materials with Phantom tools. And that's exactly what you need.

Phantom is a premium brand from the Netherlands, supplied via technical distributors throughout Europe.

A FULL RANGE

The Phantom program offers a choice of 25,000 tools for metalworking and precision mechanics.

The range is very complete and consists of cutting tools in all shapes and sizes, including the less common ones.

QUALITY

Phantom tools are of the highest quality. The tools are tested in-house using advanced measuring equipment. Thus, we guarantee you 100% quality and reliability. And we can say with certainty that you can handle any machining problem, thanks to Phantom.

KNOWLEDGE AND EXPERIENCE

Phantom can draw on 70 years of knowledge and experience in the field of metal cutting. All knowledge is reflected in the absolute quality of our wide range of products available from stock for same-day shipment throughout Europe. Our range of band saws has become very complete over the past few decades offering you a high quality range. And this is precisely what you can count on.

WITH PHANTOM, MORE THAN 70 YEARS OF EXPERIENCE IN MACHINING

Since 2000, we have had our own welding workshop, which allows us to, to the great satisfaction of our customers, to weld and ship your band saw blades the day after you order.

ORDERED TODAY, SHIPPED TOMORROW

PHANTOM BAND SAWS

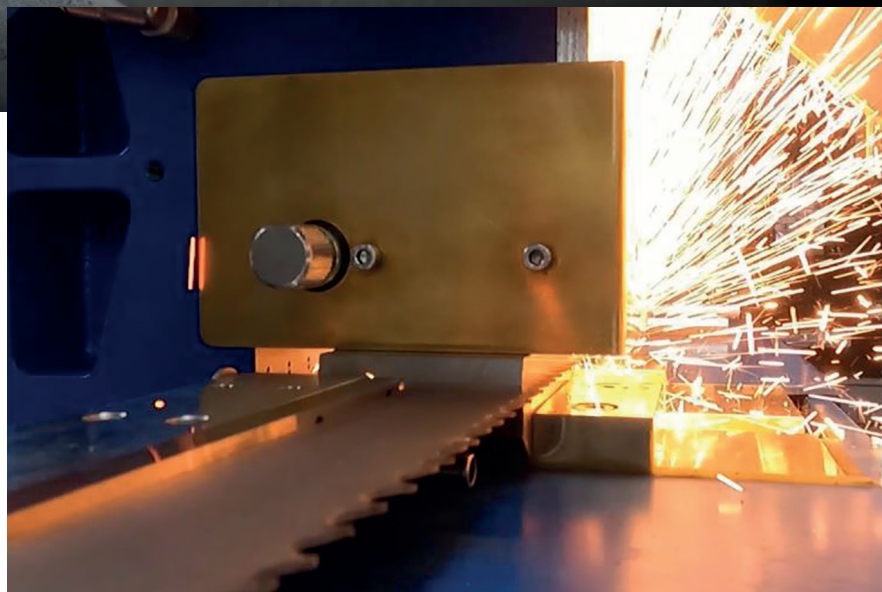
Our saws allow you to succeed in every challenge. In the product overview you will find a complete inventory of our band saws and all the solutions that Phantom can offer you.

On our website www.phantom.eu you will find the most common sizes of band saws that we normally have in stock for you.

This way you can receive your band saws quickly!

ORDERED TODAY, WELDED AND SHIPPED TOMORROW

We cut and weld your saw to the desired length in our state-of-the-art welding shop, which allows us to guarantee 100% reliability. With our 25 years of experience in welding, we can guarantee that the saw will not break during the welding.



ADVICE FROM OUR SPECIALISTS

Our full range of band saws offers many solutions.

And because of these many solutions, you may need some advice. Your Phantom dealer is best placed to offer you this kind of advice. Starting from your needs, even the most difficult problems will be analysed and solved with the help of Phantom's technical specialists.

PHANTOM OFFERS A COMPLETE PROGRAM OF QUALITY BAND SAWS

PRODUCT RANGE

M42/M51 Bi Metal Band saw blades

- › **66.450** Especially suitable for thin and medium wall profile
- › **66.460** For hard materials & large and medium-sized sections
- › **66.580** Extra wear-resistant saw for steel up to 1400 N/mm², stainless steel and titanium
- › **66.700** HP2 all-purpose saw for almost all materials, especially construction beam steel.

p. 5

p. 6

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p. 8

66.450	66.460	66.580	66.700

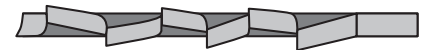
ESPECIALLY SUITABLE FOR THIN AND MEDIUM WALL PROFILES

> 66.450 **Phantom**

EN M42 Bi-Metal Band saw for profile material



<div>BIM</div> <div>HSS</div>	<div>HSS-E</div> <div>8%</div>	<div>VARI</div> <div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>				
<div>P 11</div> <div>≤800 N/mm²</div>	<div>P 12</div> <div>≤850 N/mm²</div>	<div>P 13</div> <div>≤1000 N/mm²</div>	<div>P 14</div> <div>≤1400 N/mm²</div>	<div>M 21</div> <div>INOX ≤850 N/mm²</div>	<div>M 22</div> <div>INOX >850 N/mm²</div>	<div>K 31</div> <div>GG</div>	<div>K 32</div> <div>GGG GTS-GTW</div>	<div>N 41</div> <div>Alu</div>	<div>N 51</div> <div>Cu</div>	<div>S 71</div> <div>Ni/Co</div>	<div>S 72</div> <div>Ti</div>
50-120	35-50	30-45	30-40	30-40	10-30	30-60	30-60	80-800	50-400	10-25	10-20



Height x Width (mm)	TPI=5-8/”	TPI=6-10/”	TPI=8-12/”	TPI=10-14/”
13 x 0,65		66.450.07....	66.450.08....	66.450.09....
13 x 0,9		66.450.17....	66.450.18....	66.450.19....
20 x 0,9	66.450.26....	66.450.27....	66.450.28....	66.450.29....
27 x 0,9	66.450.36....	66.450.37....	66.450.38....	66.450.39....
34 x 1,1	66.450.56....	66.450.57....	66.450.58....	

BAND SAW FOR:

- > Steel up to approx. 1400 N/mm²
- > Stainless steel
- > Non-ferrous profiles
- > Suitable for single and stack sawing
- > Thin and medium wall profiles in small cross-sections

CHARACTERISTICS:

- > Teeth made of HSS-E M42 / 1.3247 with 8% Cobalt
- > The toothing with a cutting angle of 0° cuts thin-walled material without problems
- > Suitable for short chip materials
- > Excellent saw life and cutting quality
- > The variable TPI ensures smooth and vibration-free sawing

HIGH PERFORMANCE IN LARGE AND MEDIUM-SIZED MATERIAL

› 66.460 *Phantom*

EN M42 Bi-Metal Band saw for large sizes



BiM HSS	HSS-E 8%	VARI	10°	10°	10°	10°	10°	10°	10°
P 11 ≤600 N/mm²	P 12 ≤850 N/mm²	P 13 ≤1000 N/mm²	P 14 ≤1400 N/mm²	M 21 INOX ≤850 N/mm²	M 22 INOX >850 N/mm²	K 31 GG	N 41 Alu	N 42 Alu Si>10%	
50-120	35-50	30-45	30-40	30-40	10-30	30-60	80-800	80-800	



Height x Width (mm)	TPI=2-3/"	TPI=3-4/"	TPI=4-6/"
20 x 0,9			66.460.25....
27 x 0,9	66.460.33....	66.460.34....	66.460.35....
34 x 1,1	66.460.53....	66.460.54....	66.460.55....
41 x 1,3	66.460.63....	66.460.64....	66.460.65....
54 x 1,6	66.460.73....	66.460.74....	

BAND SAW FOR:

- › Steel up to approx. 1400 N/mm²
- › Stainless steel up to approx. 850 N/mm²
- › Medium to large section profiles
- › Thick-walled steel sections

CHARACTERISTICS:

- › Teeth made of HSS-E M42 / 1.3247 with 8% Cobalt
- › The positive cutting angle in combination with group setting allows easy sawing of solid and thick-walled material
- › Higher productivity and better surface finish
- › The variable TPI ensures smooth and vibration-free sawing

HIGHLY WEAR-RESISTANT SAW SUITABLE FOR STEEL, STAINLESS STEEL AND ALLOYS

> 66.580 **Phantom**

EN M51 Bi-metal Band saw Extra wear-resistant



BIM HSS	10% Co	VARI	$\alpha 10^\circ$				
P 11 $\leq 600 \text{ N/mm}^2$	P 12 $\leq 850 \text{ N/mm}^2$	P 13 $\leq 1000 \text{ N/mm}^2$	P 14 $\leq 1400 \text{ N/mm}^2$	M 21 INOX $\leq 850 \text{ N/mm}^2$	M 22 INOX $> 850 \text{ N/mm}^2$	S 71 Ni/Co	S 72 Ti
50-120	35-50	30-45	30-40	30-40	10-30	10-25	10-20



Height x Width (mm)	TPI=3-4/"	TPI=4-6/"	TPI=5-8/"
27 x 0,9	66.580.44....	66.580.45....	66.580.46....
34 x 1,1	66.580.54....	66.580.55....	
41 x 1,3	66.580.64....	66.580.65....	

BAND SAW FOR:

- > Steel up to approx. 1400 N/mm²
- > Rust and acid-resistant steels
- > Nickel-based alloys
- > Titanium and special bronze
- > Medium-sized bar material
- > Thick-walled profiles

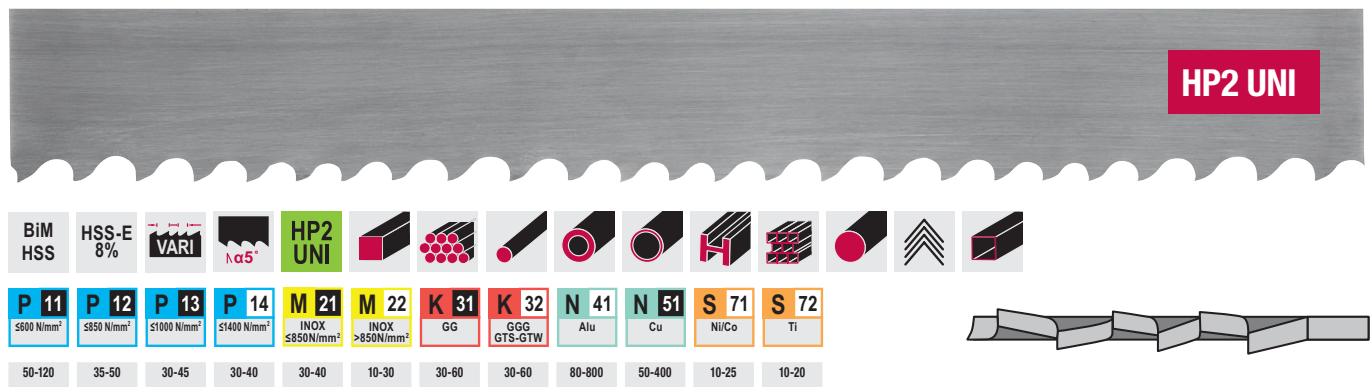
CHARACTERISTICS:

- > Teeth made of HSS-E M51 / 1.3207 with 10% Cobalt
- > The extremely positive cutting angle in combination with group setting allows easy sawing of solid material
- > M51 teeth ensure a longer life for the bandsaw blade
- > Ideal for cutting very difficult materials
- > The variable TPI ensures smooth and vibration-free sawing

SAW FOR VIRTUALLY ALL MATERIALS AND SPECIALIST FOR CONSTRUCTION BEAM STEEL

> 66.700 **Phantom**

EN Bi-metal band saw M42 HP2 UNI multi-function saw



Height x Width (mm)	TPI=3-4/"	TPI=4-6/"	TPI=5-7/"	TPI=7-9/"	TPI=8-11/"
27 x 0,9	66.700.34....	66.700.35....	66.700.36....	66.700.37....	66.700.38....
34 x 1,1	66.700.54....	66.700.55....	66.700.56....		
41 x 1,3	66.700.64....	66.700.65....	66.700.66....		
54 x 1,6	66.700.74....				

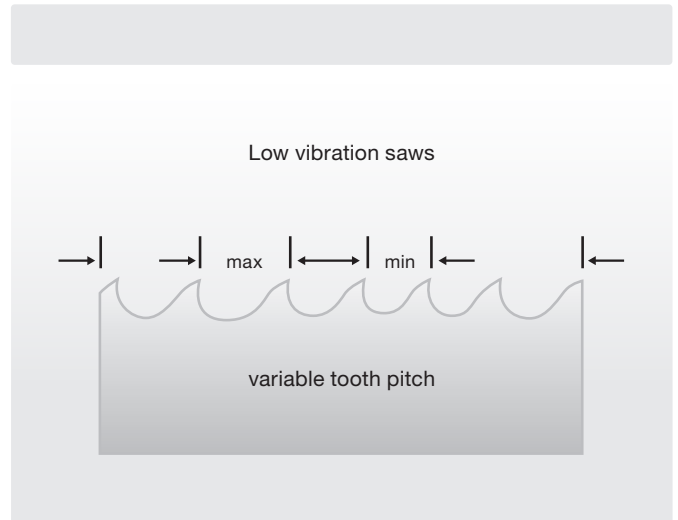
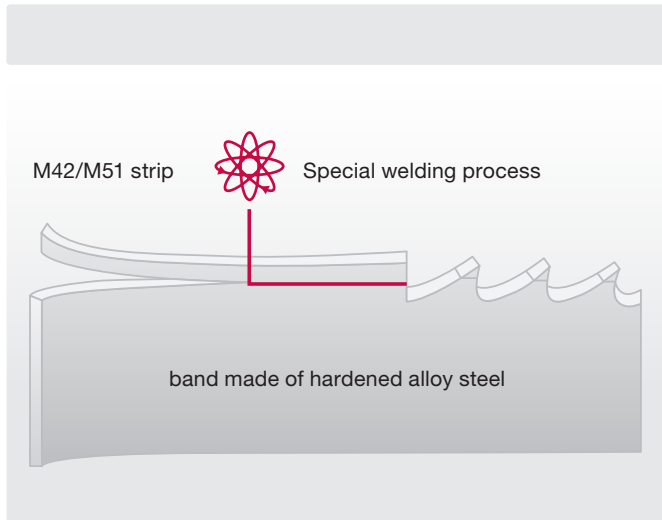
BAND SAW FOR:

- > Steel up to approx. 1400 N/mm²
- > Construction beam steel
- > Steel, stainless steel, cast iron, copper, aluminium & alloy profiles
- > Single and bundle sawing

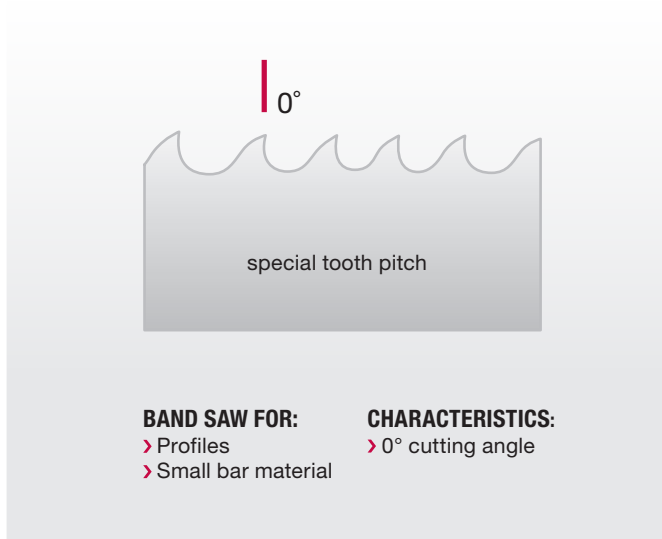
CHARACTERISTICS:

- > Teeth made of HSS-E M42
- > The positive cutting angle and reinforced teeth in combination with special setting allows easy sawing of solid material and profiles
- > Higher productivity, better surface finish and extra long tool life
- > The variable TPI ensures smooth and vibration-free sawing

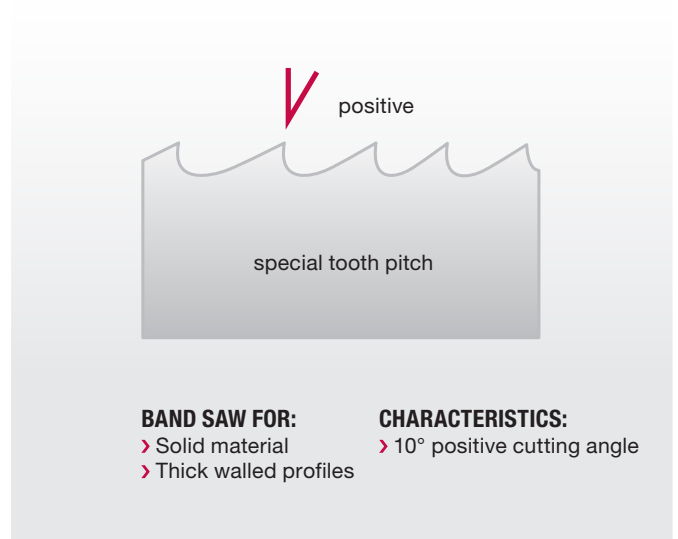
TECHNICAL INFORMATION TOOTH FORMS



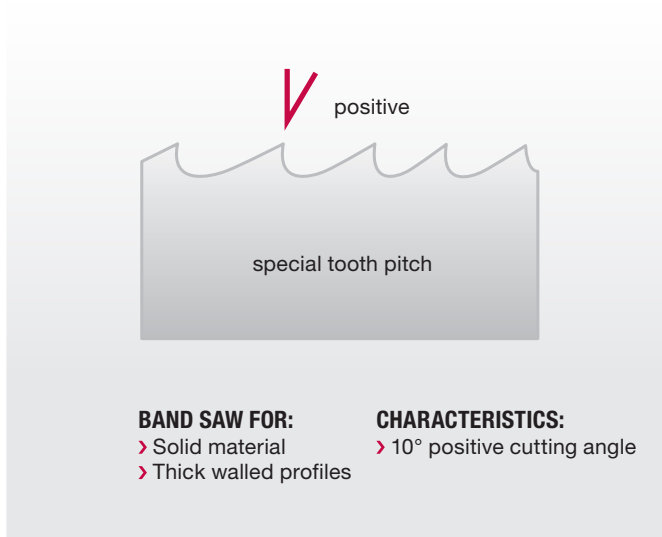
> 66.450



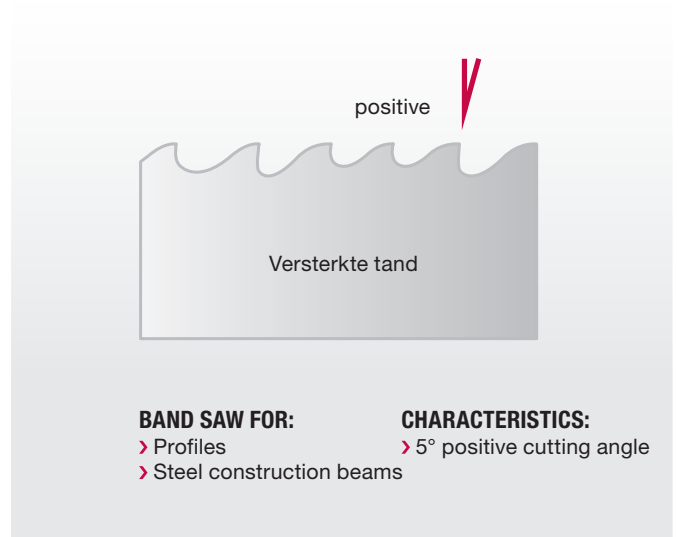
> 66.460



> 66.580



> 66.700



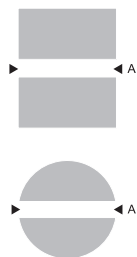
NUMBER OF TEETH PER INCH (TPI)

The tooth pitch applied to a band saw is designated by the number of teeth on the band saw over a length of one inch (=25.4 mm). The general rule is that 3 to 4 teeth should be cutting simultaneously.

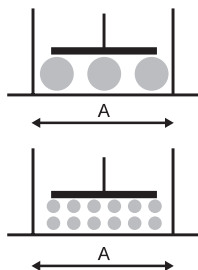
In soft materials, a band with a larger tooth size (thus allowing for a better cutting performance) can be chosen. (thus allowing better chip evacuation), while in hard materials, a fine tooth pitch is preferred. Choosing too coarse a toothing on hard materials may result in the teeth of the band saw breaking off and choosing a fine tooth pitch on soft materials will lead to chip jamming.

The following tables are memory aids to help you to determine the tooth pitch for the of the materials to be cut (solid or profiled).

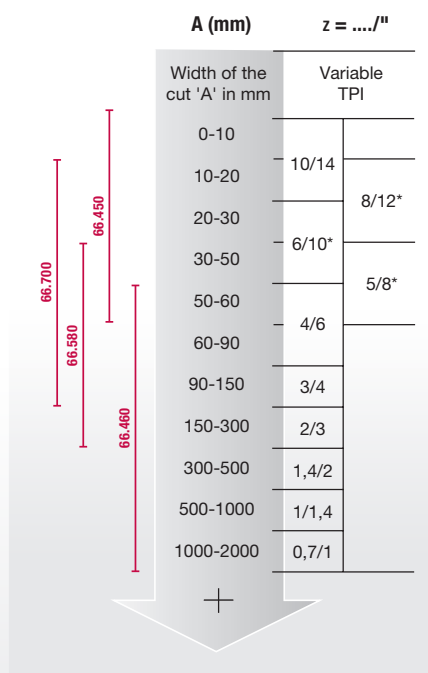
SAWING SOLIDS



Sawing single solids.

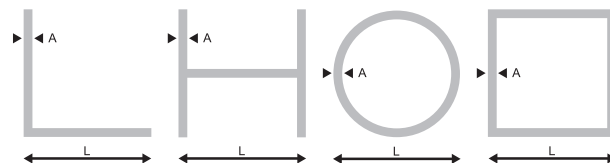


Sawing stacked or bundled solids.

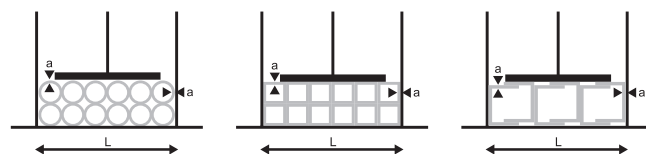


Tooth pitch overview for sawing solids (tooth per inch).

SAWING PROFILES



Sawing single profiles.



Sawing bundled profiles.

Calculation formula for defining the tooth pitch to be used when sawing several profiles at the same time.

$$A = \frac{\text{thickness (a) x number of walls}}{2}$$

EXAMPLE:

The sawing of 6 x 50 mm square profiles with a wall thickness of 5 mm.

$$A = \frac{5 \times 12}{2} = \frac{60}{2} = 30$$

$$L = 6 \times 50 = 300 \text{ mm}$$

According to the table below, the pitch will be 2/3 teeth per inch

mm A L	20	40	60	80	100	120	150	200	300	400	500
2	10/14	10/14	10/14	10/14	10/14	10/14	10/14	10/14	8/12	8/12	6/10
3	10/14	10/14	10/14	10/14	10/14	10/14	8/12	8/12	6/10	6/10	5/8
4	10/14	10/14	10/14	10/14	8/12	8/12	8/12	8/12	5/8	5/8	4/6
5	10/14	10/14	10/14	10/14	8/12	8/12	8/12	6/10	5/8	5/8	4/6
6	10/14	10/14	10/14	8/12	8/12	8/12	8/12	5/8	5/8	4/6	4/6
8	10/14	10/14	8/12	8/12	8/12	6/10	6/10	5/8	4/6	4/6	4/6
10		8/12	6/10	6/10	6/10	5/8	5/8	4/6	4/6	4/6	3/4
12		8/12	6/10	6/10	5/8	5/8	4/6	4/6	4/6	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
20			6/10	5/8	4/6	4/6	4/6	3/4	3/4	3/4	2/3
30				4/6	4/6	4/6	3/4	3/4	3/4	2/3	2/3
50						3/4	3/4	3/4	2/3	2/3	2/3

* > 5/8 ≈ 5/7 > 6/10 ≈ 7/9 > 8/12 ≈ 8/11

Table for defining the pitches for cutting in profiles.

THE RIGHT START

MOUNTING THE BAND SAW ON THE MACHINE

When mounting the band saw, it is important to ensure that the teeth are oriented in the right direction. When positioning it on the rollers, care must be taken to ensure that the back of the band saw is not in contact with the flange. Care should also be taken to ensure that the saw is tensioned straight between the wheels. First the back guide must be adjusted and then the side guides can be fitted. The guide of the saw must be constant and free of pressure.

The tension is defined by the width of the band saw. For a width of 27 mm, the tension on the tape will be 250 N/mm². For smaller widths, the tension will be between 150 and 200 N/mm².

If the saw tension is too low, the saw will not cut straight, if the tension is too high, the saw blade will break. For the correct tension to use, refer to the machine's instruction manual. The choice of tension is determined by the width and thickness of the saw. The width and thickness determine the surface. This surface multiplied by desired tension per mm² multiplied by 2 (the tension is distributed over 2 rollers) will give the tension in Newton to be applied.

The force on a blade with a cross section of 27 x 0.9 mm and a tension of 250 N/mm² is as follows: $27 \times 0.9 \text{ mm} \times 250 \text{ N/mm}^2 \times 2 = 12\,150 \text{ Newton}$.

The tension of the blades can easily be checked by means of a tension meter. To ensure perfect chip evacuation, it is necessary for the chip brush to be positioned correctly.

MOUNTING THE WORKPIECE

Always ensure that the workpiece is perpendicular to the band saw and that guides are as close to the workpiece as possible. The guides must not exert any pressure on the tape. Obviously, the teeth of the ribbon must protrude sufficiently from the guides.

The diagrams below show how to position the workpiece for clamping.



STARTING TO SAW

When using the bandsaw for the first time, the feed rate should be at 50% for the first cut. However, the cutting speed must be set directly to the correct value.

After sawing a 500 cm² section, the normal feed rate can be used. For small workpieces, a section of 300 cm² may be sufficient.

This first sawing allows the radius of the cutting edge to be reduced in a controlled manner. If the cutting edge was used directly at maximum feed rate, larger pieces of the cutting material could crumble. After an initial controlled break-in, the tool life of a band saw is longer and the cutting edge is stronger.

TECHNICAL ADVISE

The training and testing centre is the place for quality control and knowledge sharing. It is the place where, independently, we carry out a continuous quality control of the Phantom tools. The TTC is a place where specific knowledge is shared

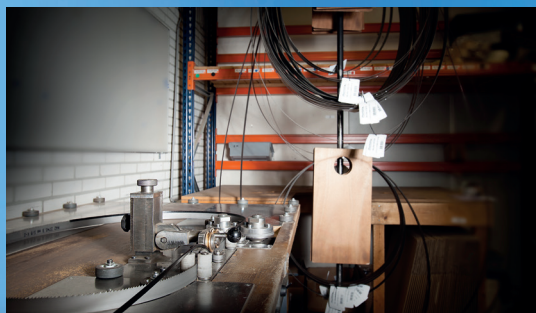
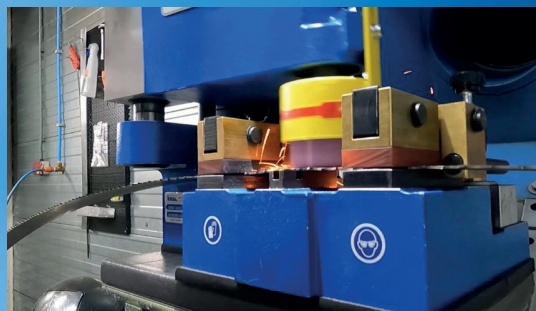
with customers and colleagues. We do this with a wide range of training courses. In this way, we ensure that our expertise is always of benefit to you.

ORDER QUICKLY AND EASILY ON PHANTOM.EU

On phantom.eu you always have access to comprehensive product information, with many filter options, as well as practical knowledge and advice through videos, tips and tricks from our technical advisors.

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