

# Arnitz

Passionate  
Cutting!

Edition 2023

# FactBook

BAND SAW  
BLADES



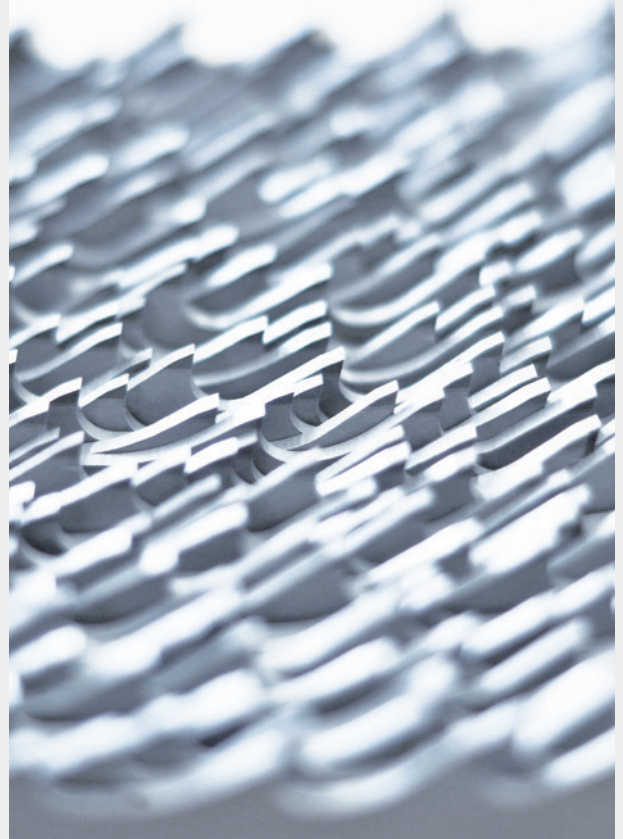
# Welcome to ARNTZ

## Your cutting solution for the world of metals.

At ARNTZ we are proud of our 230 years of manufacturing experience and we are excited about the future. As materials become more complex and the demands of the product increase. It's our challenge to provide innovative cutting solutions to exceed the market demands.

The ARNTZ operational footprint and experienced engineering team allows us to provide fast product solutions to the most challenging of applications.

Our experienced manufacturing team take great pride in our product quality and we are proud to produce high performance bandsaw blades Made in Germany.



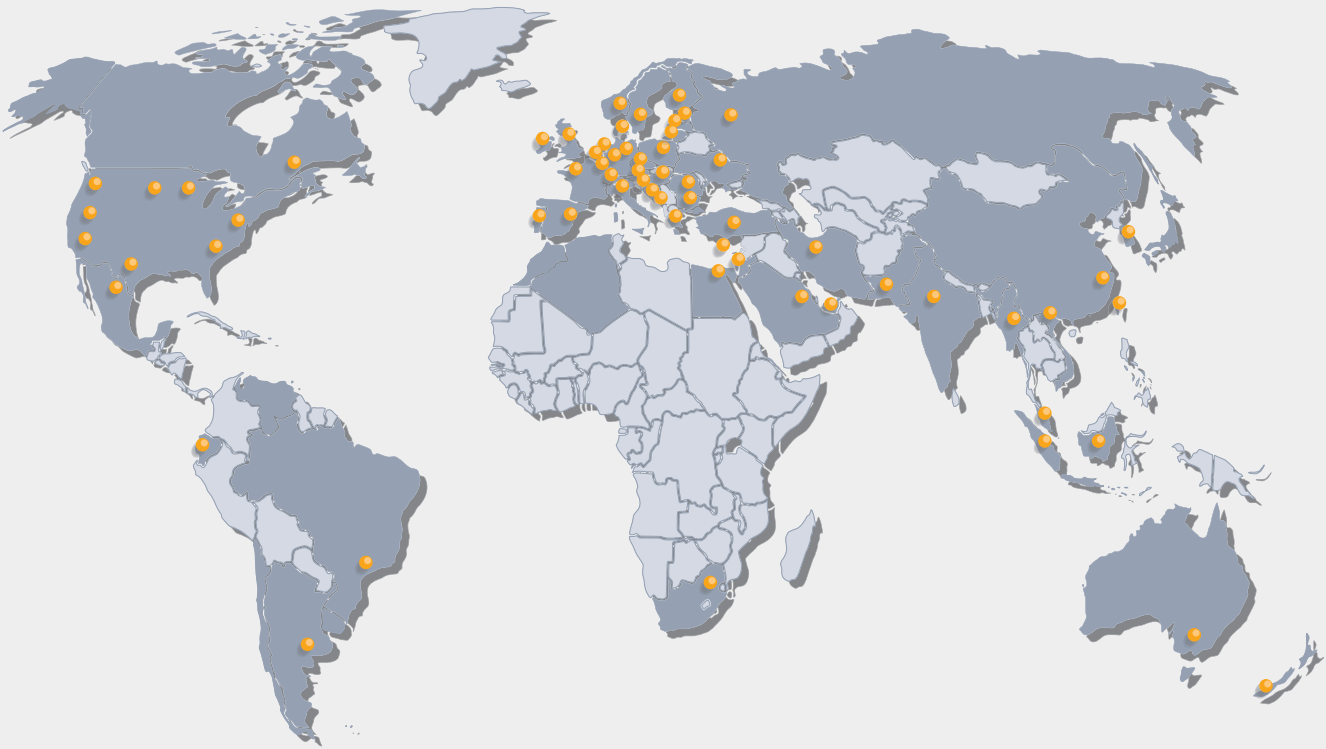
## ARNTZ innovative cutting technology...



Our optimized operating processes ensure that we consistently produce high performance bandsaw blades. Every ARNTZ bandsaw blade is monitored through a multilayered process control system to guarantee performance.



Our experienced service technicians are ready to support you with in-depth knowledge and training to maximize the user satisfaction. We also offer telephone assistance, on site support and cutting tools such as MasterCalc.

























We are on your side – worldwide.



Jan Wilhelm Arntz · CEO



# Explanation of symbols

Material	Article group	Material	Article group
	solid material round small <b>400   420   430</b>		round tube heavy walled <b>401   407   431   437   537   544</b>
	solid material round medium <b>402   421   426   436   457   557   622   627   643   650   662</b>		bundle of tubes <b>400   402   430   457   557</b>
	solid material round large <b>401   402   407   431   437   457   537   544   557   622   627   643   650</b>		square tube small <b>420</b>
	solid material square large <b>401   402   407   431   437   457   537   544   557   622   627   643   650</b>		square tube large <b>402   457   557</b>
	solid material special alloy <b>537   544   557   622   627   650</b>		aluminium profile <b>436   662</b>
	solid material rectangular large <b>401   407   431   437   537   544   622   627   643   650</b>		standard steel beam <b>402   457   557</b>
	solid material very large <b>401   407   431   437   537   544   622   627   643   650</b>		wide flange steel beam <b>445</b>
	sheet panel <b>400   430</b>		heavy walled steel beam <b>445</b>
	small round tube standard wall thickness <b>400   430</b>		U channel steel <b>402   457   557</b>
	small round tube thin wall thickness <b>400   430</b>		L angle steel <b>402   457   557</b>
	round tube standard wall thickness <b>400   402   426   430   457   557</b>		surface hardened material <b>651</b>

Category	Article group		Description	Engineered for	Material cross-section	Page
	uncoated	coated				
<b>Bi-Metal Band Saw Blades</b>						
<b>Standard</b> Universal use at a good price-performance ratio	<b>430</b>		M42-SPRINT	profile		10
	<b>431</b>		M42-SPRINT-PLUS	solid material		11
	<b>457</b>		M42-X-FIT	mix		12
<b>Professional</b> Professional sawing of large steel profiles and hard materials	<b>445</b>	<b>845 C-TEC</b>	M42-PROFILER	profile		13
	<b>557</b>	<b>857 C-TEC</b>	M51-X-PRO	mix		14
	<b>544</b>		M51-BLIZZARD	solid material		15
<b>Professional Plus</b> High-performance Band Saw Blades	<b>437</b>	<b>837 C-TEC</b>	M42-TYPHOON-SPRINT	solid material		16
	<b>537</b>	<b>867 C-TEC</b>	M51-TYPHOON-MAXIMA	solid material		17
<b>Other Applications</b> Constant tooth pitch and aluminium	<b>420</b>		M42-STAR constant tooth pitch			18
	<b>421</b>		M42-STAR-PLUS constant tooth pitch	solid material		18
	<b>426</b>		M42-ALUCUT-PLUS constant tooth pitch	aluminium		18
	<b>436</b>		M42-ALUCUT-SPRINT	aluminium		18
<b>Basic</b> The low-cost alternative to our products "made in Germany"	<b>400</b>		M42-BASIC	profile		19
	<b>401</b>		M42-BASIC-PLUS	solid material		19
	<b>402</b>		M42-BASIC-PRO	mix		20
	<b>407</b>	<b>807 C-TEC</b>	M42-TYPHOON-GTS	solid material		21
<b>Carbide Tipped Band Saw Blades</b>						
<b>Standard</b> The expert for universal use	<b>627</b>	<b>827 C-TEC</b>	Q-LINE multi chip geometry	steel, stainless steel and non-ferrous metals		23
	<b>662</b>		CAST-LINE tooth set	castings, non-ferrous metals		24
<b>Professional</b> Professional sawing of difficult to cut materials and non-ferrous metals	<b>622</b>	<b>822 C-TEC</b>	BLACK-LINE-S tooth set	hard to cut and abrasive materials		25
	<b>643</b>		BLUE-LINE triple chip geometry	non-ferrous metals and graphites		26
<b>Professional Plus</b> High-performance sawing	<b>650</b>	<b>850 C-TEC</b>	SILVER-LINE multi chip geometry	high-alloy steels and non-ferrous metals		27
<b>Other Applications</b> Surface hardened materials and construction materials	<b>651</b>		SILVER-LINE-N multi chip geometry negative	extremely hard or surface hardened materials		28
	<b>623</b>		STONE-LINE-S tooth set	stones and concretes		29
	<b>621</b>		STONE-LINE-RT multi chip geometry	stones and concretes		29
<b>Carbon Steel Band Saw Blades</b>						
	<b>100</b>		CS-1 flexible band back			30
	<b>110</b>		CS-2-PLUS spring hardened band back			30
<b>Professional Accessories</b>			Tension measuring device, Refractometer, Application toolkit			31

# Bi-Metal

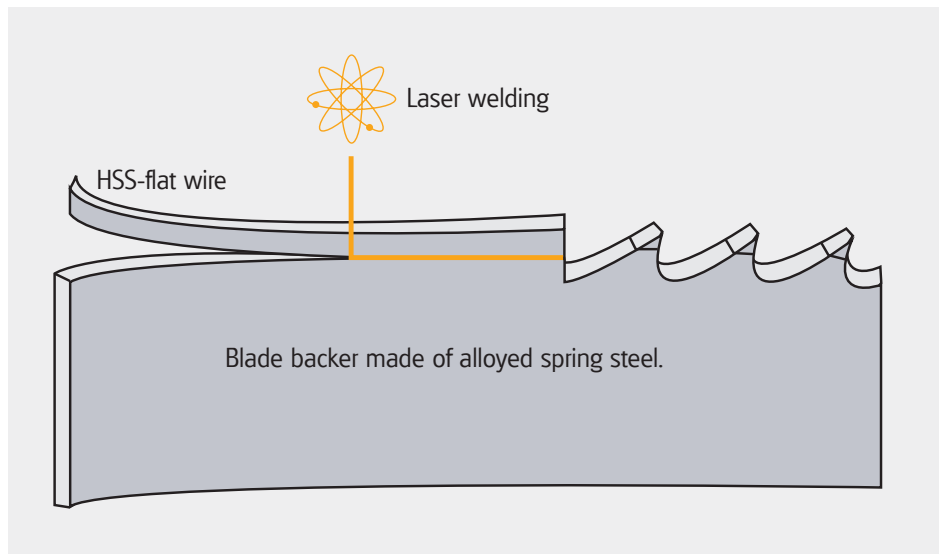
Why so successful?

## M42

Material no. 1.3247  
hardness approx.  
68-69 HRC

## M51

Material no. 1.3207  
hardness approx. 69 HRC,  
with high tungsten-  
and cobalt content.



## Flexible:

The blade backer of our Bi-Metal Band Saw Blade consists of a special alloyed spring steel. Highly flexible at a hardness of about 50 HRC. The ideal basis for long fatigue life and excellent cutting performance.

## Perfectly joint:

Both materials are undetachably welded together by a special electron or laser beam.

## Hard and wear resistant:

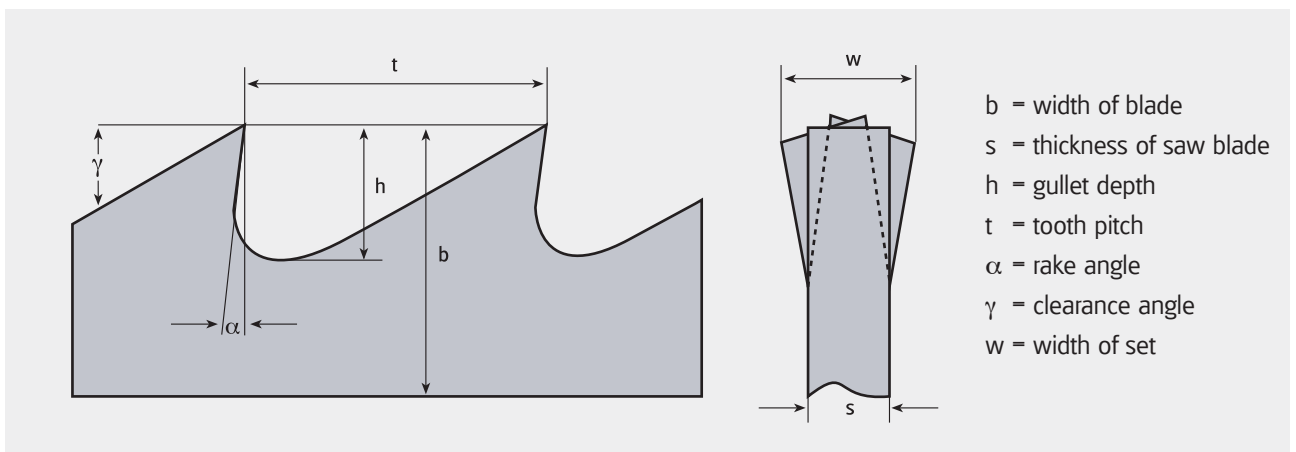
Tooth tips made of hardened HSS in M42 or powder metallurgical M51 quality obtained due to well-balanced hardening and fixed structure resulting in high wear resistance.

## All advantages:

The high quality Bi-Metal band combines the flexibility of the spring steel backing with the enormous wear resistance of the high speed steel. Each tooth tip of the finished band is made of hardened HSS, extremely durable for best performance.

# Band Saw geometry

## Terminology



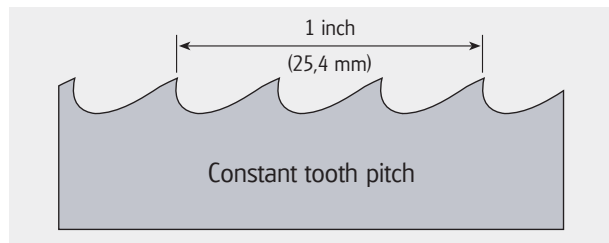
# Tooth forms

## Where performs the right tooth?

Only the correctly selected tooth form allows efficient cutting with low vibration. Four basic types are available:

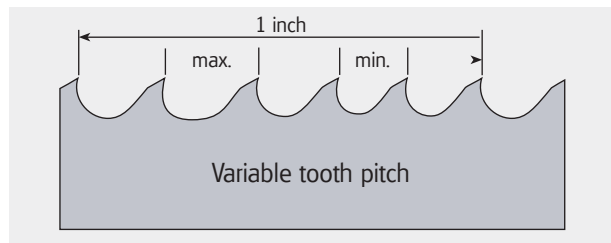
<p>Standard tooth = N</p>	<p>Hook tooth = H</p>	<p>Variable tooth = K</p>	<p>Variable tooth = K</p>
<p><b>Designed for:</b></p> <ul style="list-style-type: none"> <li>• short chipping materials</li> <li>• light wall thickness</li> </ul> <p><b>Data:</b></p> <ul style="list-style-type: none"> <li>• rake angle 0°</li> <li>• constant tooth pitch of 4 to 18 tpi</li> </ul> <p><b>Article groups:</b></p> <p>100, 110, 420</p>	<p><b>Designed for:</b></p> <ul style="list-style-type: none"> <li>• long chipping materials</li> <li>• large cross sections</li> </ul> <p><b>Data:</b></p> <ul style="list-style-type: none"> <li>• positive rake angle</li> <li>• constant tooth pitch of 3 to 6 tpi</li> </ul> <p><b>Article groups:</b></p> <p>100, 110, 421, 426</p>	<p><b>Designed for:</b></p> <ul style="list-style-type: none"> <li>• low vibration cutting</li> <li>• structurals</li> </ul> <p><b>Data:</b></p> <ul style="list-style-type: none"> <li>• rake angle 0°</li> <li>• variable tooth pitch of 5/8 to 10/14 tpi</li> </ul> <p><b>Article group:</b></p> <p>400, 430 (K-0)</p>	<p><b>Designed for:</b></p> <ul style="list-style-type: none"> <li>• low vibration cutting</li> <li>• solid materials</li> </ul> <p><b>Data:</b></p> <ul style="list-style-type: none"> <li>• positive rake angle</li> <li>• variable tooth pitch of 0,75/1,25 to 12/16 ZpZ</li> </ul> <p><b>Article groups:</b></p> <p>401, 431, 436, 437 (K-POS) 402, 445, 457, 557 (K-P, K-VS, K-X) 537, 544 (K-PLUS)</p>

# Tooth pitch



The tooth distance is equally spaced. The number of teeth per inch (25,4 mm) denotes the toothing of the saw blade.

## Constant or variable?



The tooth distances vary within a group of teeth. The smallest and the largest tooth pitch denotes the variable toothing of the saw blade.

# Tooth set

## What groups and waves can cause.

Beside the tooth pitch and the tooth form, the exact setting is essential for the performance of the sawblade. The correct clearance results from the corresponding setting. It avoids blade pinching, which is especially important in problematic steels. Width and type of set are precisely tailored to the cutting application.

<p><b>Standard raker set</b></p>	<p>3 - 18 tpi      tooth forms N, H</p>
<p><b>Standard group set</b></p>	<p>0,75/1,25 - 10/14 tpi      tooth form K</p>
<p><b>Variable group set</b></p>	<p>0,75/1,25 - 12/16 tpi      tooth forms K-P, K-VS, K-X</p>
<p><b>Wavy set</b></p>	<p>14 - 18 tpi      tooth form N-W</p>

# Correct tooth pitch – optimum performance.

The choice of the right tooth pitch is decisive to achieve the optimum performance. Choose between the standard tooth with constant tooth pitch or the combination tooth with variable tooth pitch. The variable tooth is recommended for low-vibration sawing in problematic workpieces.

## Recommendation to cut solid material

Variable tooth pitch	
Cross section mm	Teeth per inch
	tpi
from 550	0,75/1,25
380 - 750	1/1,3
250 - 550	1,4/2
120 - 350	2/3
80 - 140	3/4
60 - 110	4/6
40 - 70	5/7   5/8
30 - 60	6/10
20 - 40	8/11   8/12
to 25	10/14

## Recommendation to cut tubes and structurals

Thin wall structurals (0° - 7° rake angle)							
Wall thickness (S) in mm	Diam. of structural (D) in mm						
	20	40	60	80	100	120	150
2	14	14	14	14	14	14	10/14
3	14	14	14	14	10/14	10/14	8/11   8/12
4	14	14	10/14	10/14	8/11   8/12	8/11   8/12	6/10
5	14	10/14	10/14	8/11   8/12	8/11   8/12	6/10	6/10
6	14	10/14	8/11   8/12	8/11   8/12	6/10	6/10	5/7   5/8
8	14	8/11   8/12	6/10	6/10	5/7   5/8	5/7   5/8	5/7   5/8
10	-	6/10	6/10	5/7   5/8	5/7   5/8	5/7   5/8	-

The choice of the right tooth has special influence on the cutting result on tubes and structurals. Variable tooth has proven to be the most favourable tooth form. The required tooth pitch is depending on the wall thickness and dimensions of the structurals. The recommendations shown here refer to single cuts. When two or more structurals are cut at the same time, double the wall thickness needs to be considered.

Heavy wall structurals (positive rake angle)								
Wall thickness (S) in mm	Diam. of structural (D) in mm							
	80	100	120	150	200	300	500	750
10	-	-	-	4/6	4/6	4/6	3/4	2/3
15	4/6	4/6	4/6	4/6	4/6	3/4	2/3	2/3
20	4/6	4/6	4/6	4/6	3/4	3/4	2/3	2/3
30	4/6	4/6	4/6	3/4	3/4	2/3	2/3	2/3
50	-	-	3/4	3/4	2/3	2/3	2/3	1,4/2
80	-	-	-	-	2/3	2/3	1,4/2	1,4/2
100	-	-	-	-	-	2/3	1,4/2	1,4/2

ARNTZ Bi-Metal Band Saw Blades are supplied as endless welded loops to fit your band saw machines, or in coils. Coils can be delivered in different coil length. Please notice that the minimum order quantities refer to the production length.

6 - 13 mm in length of approx 30,5 + 76 m | 20 - 34 mm in length of approx 100 m | 41 mm in length of approx 80 m  
54 - 67 mm in length of approx 90 m | 80 mm in length of approx 40 m



# Bi-Metal and Carbide Tipped Band Saw Blades

For each cutting operation the right choice.

		Art. group	430	431	457	445	557	544	437	537	420	421	426	436	400	401	402	407	627	662	622	643	650	651		
Product name			M42-SPRINT	M42-SPRINT-PLUS	M42-X-FIT	M42-PROFILER	M51-X-PRO	M51-BLIZZARD	M42-TYPHOON-SPRINT	M51-TYPHOON-MAXIMA	M42-STAR	M42-STAR-PLUS	M42-ALUCUT-PLUS	M42-ALUCUT-SPRINT	M42-BASIC	M42-BASIC-PLUS	M42-BASIC-PRO	M42-TYPHOON-GTS	Q-LINE	CAST-LINE	BLACK-LINE-S	BLUE-LINE	SILVER-LINE	SILVER-LINE-N		
Page of catalogue			10	11	12	13	14	15	16	17	18	18	18	18	19	19	20	21	23	24	25	26	27	28		
Material dimension (mm)																										
- Structural steels	< 70		■		■			■							■		■									
	80 - 350			■	■	■			■							■	■	■								
- Case-hardening steels	80 - 350			■	■	■			■							■	■	■								
- Free machining steels	> 350			■					■							■		■	■							
- Unalloyed tool steels	< 70		■		■										■											
- Spring steels	80 - 350			■			■		■							■	■	■								
- Ball bearing steel	> 350			■					■							■	■	■								
- High speed steels	< 70		■		■										■											
- Cold-work steels	80 - 350			■	■		■		■	■						■	■	■								
	> 350			■					■	■	■					■	■	■								
- Nitride steels	< 70		■		■										■											
- Heat treatable steels	80 - 350			■			■		■	■						■	■	■								
- Hot working steels	> 350			■					■	■						■	■	■								
- Stainless steels	< 70		■		■										■											
	80 - 350			■			■		■	■						■	■	■								
	> 350			■					■	■						■	■	■								
- High temperature steels	< 70		■		■										■											
- Heat resistant steels	80 - 350			■			■		■	■						■	■	■								
	> 350			■					■	■						■	■	■								
- High tensile steels	< 70		■		■										■											
- Titanium + titanium alloys	80 - 350			■			■		■	■						■	■	■								
- Nickel alloys	> 350			■					■	■						■	■	■								
- Surface hardened steel shafts	< 70																							■		
- Hardened steels up to HRC 62	80 - 350																							■		
- Hardchromed materials	> 350																							■		
- Steel castings	< 70		■		■										■											
- Cast irons	80 - 350			■			■		■	■						■	■	■								
	> 350			■					■	■						■	■	■								
- Aluminium	< 70		■												■											
- Copper	80 - 350			■					■	■						■	■	■								
	> 350			■					■	■						■	■	■								
- Brass	< 70		■												■											
- Bronze	80 - 350			■					■	■						■	■	■								
- Red brass	> 350			■					■	■						■	■	■								
- Aluminium + alloys	< 70		■						■	■					■											
- Aluminium alloys with silicon	80 - 350			■					■	■						■	■	■								
	> 350			■					■	■						■	■	■								

Qualification: ■ = very good ■ = good

Article group 430

Standard

## M42-SPRINT

The fabrication professional for light and medium wall thicknesses.

Engineered for:

- structurals with light or medium walls
- short chipping materials
- sheet metal on vertical band saw machines



Dimensions		Tooth			
mm	inch	5/8	6/10	8/12	10/14
6 x 0,90	1/4 x 0,035				K
10 x 0,90	3/8 x 0,035				K
13 x 0,65	1/2 x 0,025	K	K	K	K
13 x 0,90	1/2 x 0,035	K	K	K	K
20 x 0,90	3/4 x 0,035	K	K	K	K
27 x 0,90	1 x 0,035	K	K	K	K
34 x 1,10	1 1/4 x 0,042	K	K	K	
41 x 1,30	1 1/2 x 0,050	K	K		

K = Variable tooth

Article group 431

Standard

## M42-SPRINT-PLUS

Perfect for materials of medium to large dimensions.

Engineered for:

- production band saw machines
- all-purpose use for steels and non-ferrous metals
- tensile strengths of up to 1400 N/mm<sup>2</sup>
- thick walled structurals



Dimensions		Tooth				
mm	inch	0,75/1,25	1,4/2	2/3	3/4	4/6
20 x 0,90	3/4 x 0,035					K
27 x 0,90	1 x 0,035			K	K	K
34 x 1,10	1 1/4 x 0,042		K	K	K	K
41 x 1,30	1 1/2 x 0,050		K	K	K	K
54 x 1,30	2 x 0,050		K	K	K	K
54 x 1,60	2 x 0,063	K	K	K	K	K
67 x 1,60	2 5/8 x 0,063	K	K	K		
80 x 1,60	3 x 0,063	K	K			

K = Variable tooth

Article group 457

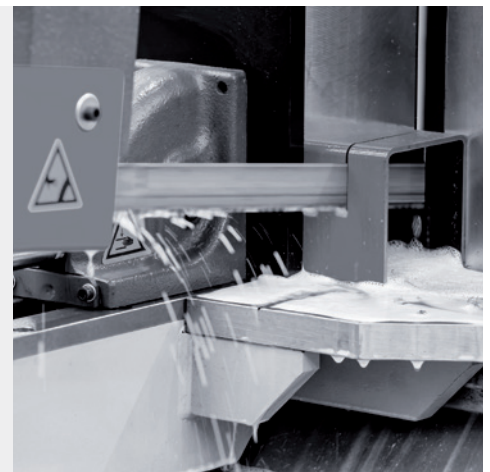
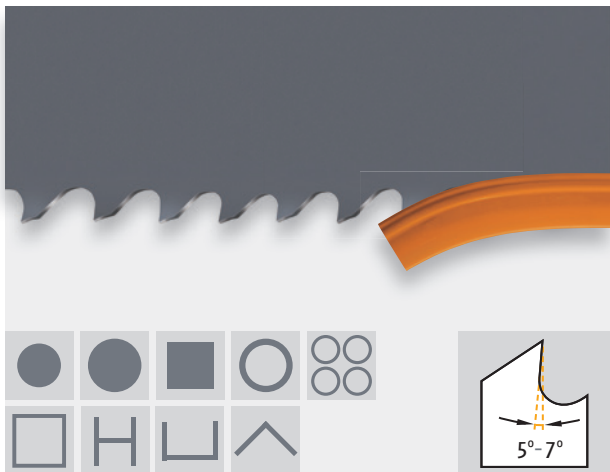
Standard

## M42-X-FIT

The multi-purpose blade for small and medium cross-sections.

Engineered for:

- steel beams, profiles and tubes
- mixed materials



Dimensions		Tooth				
mm	inch	2/3	3/4	4/6	5/7	8/11
20 x 0,90	3/4 x 0,035			K	K	K
27 x 0,90	1 x 0,035		K	K	K	K
34 x 1,10	1 1/4 x 0,042	K	K	K	K	
41 x 1,30	1 1/2 x 0,050	K	K	K		
54 x 1,30	2 x 0,050		K	K		
54 x 1,60	2 x 0,063	K	K	K		
67 x 1,60	2 5/8 x 0,063	K	K			

K = Variable tooth

## M42-PROFILER

The special variable tooth with slightly positive rake angle and heavy group set shows excellent performance on beams and similar shapes.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- large cross-section steel beams
- structurals with residual stress



Dimensions		Tooth			
mm	inch	2/3		3/4	
34 x 1,10	1 1/4 x 0,042			K	
41 x 1,30	1 1/2 x 0,050	K	C-TEC	K	C-TEC
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC

K = Variable tooth

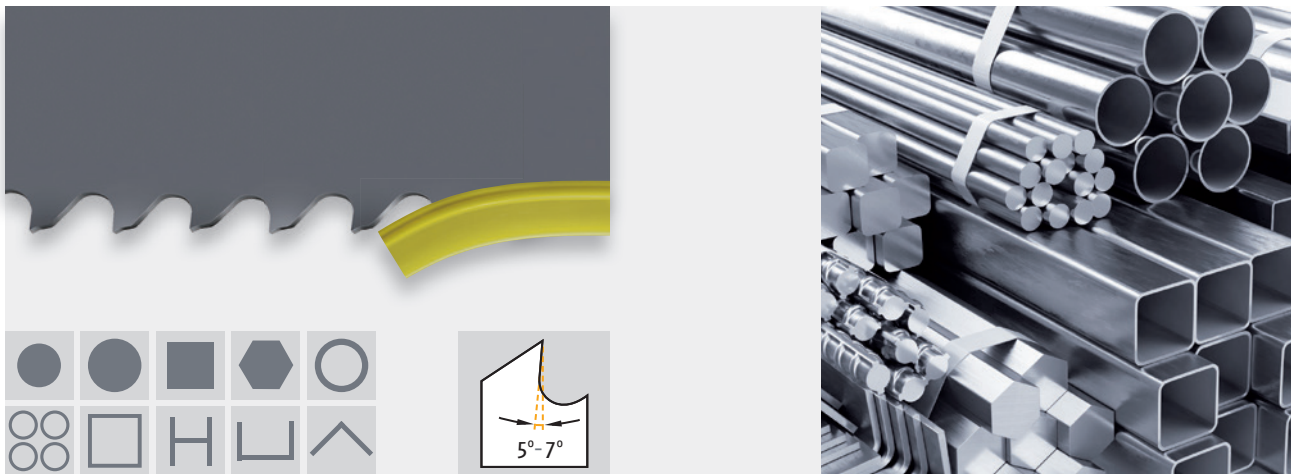
## M51-X-PRO

The pro with particularly wear-resistant teeth.  
For sawing processes using minimal lubrication.  
Powerful at high cutting speeds and feeds.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- steel beams, profiles and pipes
- mixed cross-sections



Dimensions		Tooth					
mm	inch	2/3		3/4		4/6	5/7
27 x 0,90	1 x 0,035					K	K
34 x 1,10	1 1/4 x 0,042			K		K	
41 x 1,30	1 1/2 x 0,050	K	C-TEC	K	C-TEC	K	
54 x 1,30	2 x 0,050			K	C-TEC		
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC		
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	

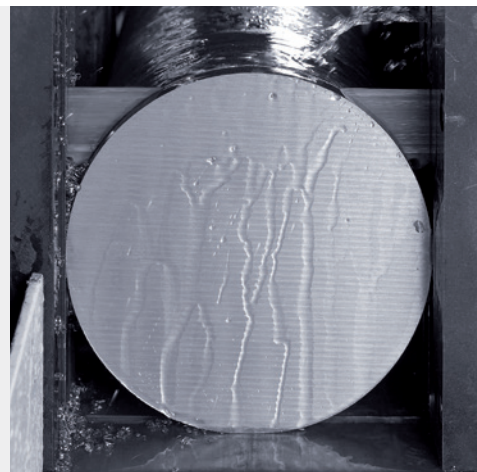
K = Variable tooth

## M51-BLIZZARD

Extra wear resistant teeth made of powder metallurgical HSS-steel.

Engineered for:

- hard and tough materials up to 1700 N/mm<sup>2</sup>
- stainless steel
- copper and copper based alloys
- titanium and titanium based alloys
- thick walled structurals



Dimensions		Tooth						
		0,75/1,25	1/1,3	1,4/2	2/3	3/4	4/6	5/8
27 x 0,90	1 x 0,035				K	K	K	K
34 x 1,10	1 1/4 x 0,042				K	K	K	
41 x 1,30	1 1/2 x 0,050			K	K	K		
54 x 1,60	2 x 0,063		K	K	K			
67 x 1,60	2 5/8 x 0,063	K	K	K	K			
80 x 1,60	3 x 0,063	K	K	K				

K = Variable tooth

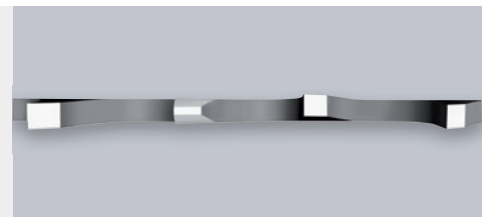
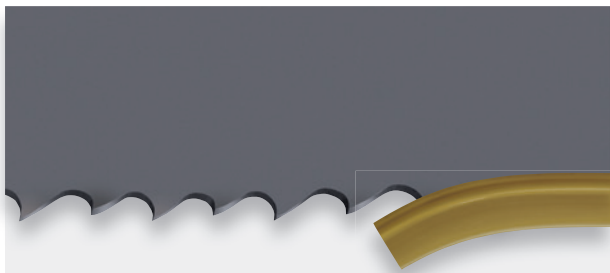
## M42-TYPHOON-SPRINT

Excellent for use on high-performance band saw machines.

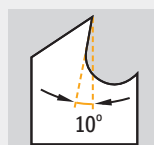
Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- tensile strengths of up to 1400 N/mm<sup>2</sup>
- stainless steel
- all-purpose use for steels and non-ferrous metals
- thick walled structurals



The borazon-ground tooth tips ensure an excellent cutting surface, perfectly angular cuts and long blade life.



Dimensions		Tooth							
mm	inch	0,75/1,25		1,4/2		2/3		3/4	
27 x 0,90	1 x 0,035					K			K
34 x 1,10	1 1/4 x 0,042			K		K			K
41 x 1,30	1 1/2 x 0,050			K	C-TEC	K	C-TEC	K	C-TEC
54 x 1,30	2 x 0,050			K	C-TEC	K	C-TEC	K	C-TEC
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC		
80 x 1,60	3 x 0,063	K	C-TEC	K	C-TEC				

K = Variable tooth



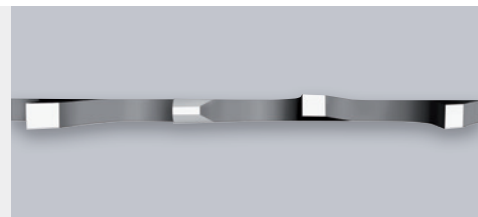
## M51-TYPHOON-MAXIMA

Extremely wear-resistant, ground teeth for the most difficult cutting conditions.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- tensile strengths of up to 1700 N/mm<sup>2</sup>
- stainless steel
- heat resistant duplex steel
- nickel based alloys
- aluminium alloys
- titanium based alloys



The borazon-ground tooth tips ensure an excellent cutting surface, perfectly angular cuts and long blade life.

Dimensions		Tooth									
mm	inch	0,75/1,25		1/1,3		1,4/2		2/3		3/4	
27 x 0,90	1 x 0,035							K		K	
34 x 1,10	1 1/4 x 0,042							K		K	
41 x 1,30	1 1/2 x 0,050					K	C-TEC	K	C-TEC	K	C-TEC
54 x 1,60	2 x 0,063			K	C-TEC	K	C-TEC	K	C-TEC		
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC		
80 x 1,60	3 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC				

K = Variable tooth

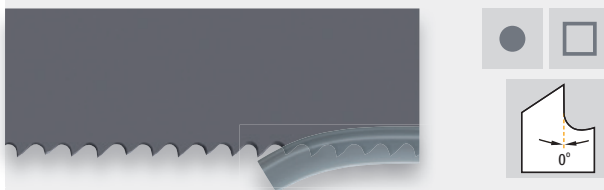
## Article group 420

### Other Applications

# M42-STAR

Allrounder for solid, small-dimensioned materials.

- Engineered for:
- common steel qualities and non ferrous metals
  - short-chipping materials
  - small structurals with thin walls
  - narrow cross sections up to approx. 100 mm
  - contour cutting operations



Dimensions		Tooth				
mm	inch	4	6	10	14	18
6 x 0,90	1/4 x 0,035			N	N	
10 x 0,90	3/8 x 0,035			N	N	
13 x 0,65	1/2 x 0,025			N	N	N
13 x 0,90	1/2 x 0,035				N	
20 x 0,90	3/4 x 0,035				N-W	N-W
27 x 0,90	1 x 0,035	N	N		N-W	

N = Standard tooth W = Wavy set

## Article group 421

### Other Applications

# M42-STAR-PLUS

The saw blade for medium sized solid materials.

- Engineered for:
- small workshop bandsaws
  - common steel qualities and non ferrous metals
  - cross sections over approx. 100 mm



Dimensions		Tooth		
mm	inch	3	4	6
6 x 0,90	1/4 x 0,035			H
10 x 0,90	3/8 x 0,035		H	H
13 x 0,65	1/2 x 0,025		H	H
13 x 0,90	1/2 x 0,035	H	H	H
20 x 0,90	3/4 x 0,035	H		
27 x 0,90	1 x 0,035	H		

H = Hook tooth

## Article group 426

### Other Applications

# M42-ALUCUT-PLUS

For cutting aluminium without pinching.

- Engineered for:
- pure aluminium and aluminium alloys
  - solid material and structurals
  - materials with residual stress and a tendency to pinch



Dimensions		Tooth		
mm	inch	3	4	6
10 x 0,90	3/8 x 0,035		H	H
13 x 0,65	1/2 x 0,025		H	H
13 x 0,90	1/2 x 0,035	H	H	H
20 x 0,90	3/4 x 0,035	H		
27 x 0,90	1 x 0,035	H		

H = Hook tooth

## Article group 436

### Other Applications

# M42-ALUCUT-SPRINT

Easy cutting of light-weight metals.

- Engineered for:
- pure aluminium and aluminium alloys
  - solid material and structurals



Dimensions		Tooth	
mm	inch	2/3	3/4
27 x 0,90	1 x 0,035	K	K
34 x 1,10	1 1/4 x 0,042	K	K

K = Variable tooth

## Article group 400

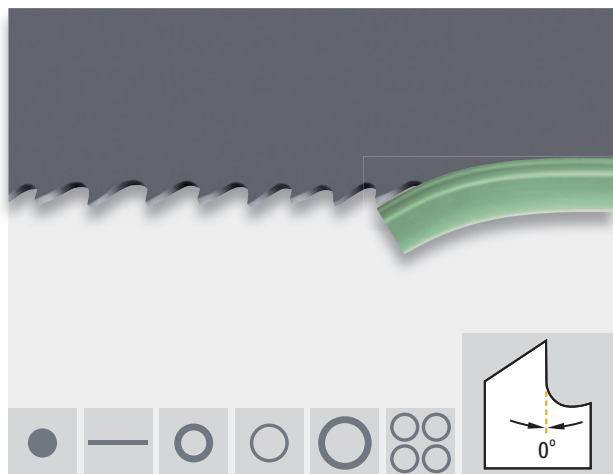
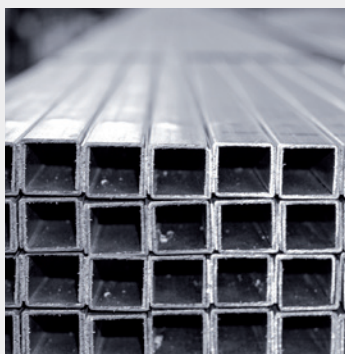
Basic

### M42-BASIC

The profil expert for thin and medium wall thicknesses and small dimensions of working pieces.

Engineered for:

- structurals with light or medium walls
- short chipping materials
- sheet metal on vertical band saw machines



Dimensions		Tooth				
mm	inch	4/6	5/8	6/10	8/12	10/14
13 x 0,65	1/2 x 0,025		K	K	K	K
13 x 0,90	1/2 x 0,035		K	K	K	K
20 x 0,90	3/4 x 0,035	K	K	K	K	K
27 x 0,90	1 x 0,035	K	K	K	K	K
34 x 1,10	1 1/4 x 0,042		K	K	K	K

K = Variable tooth

## Article group 401

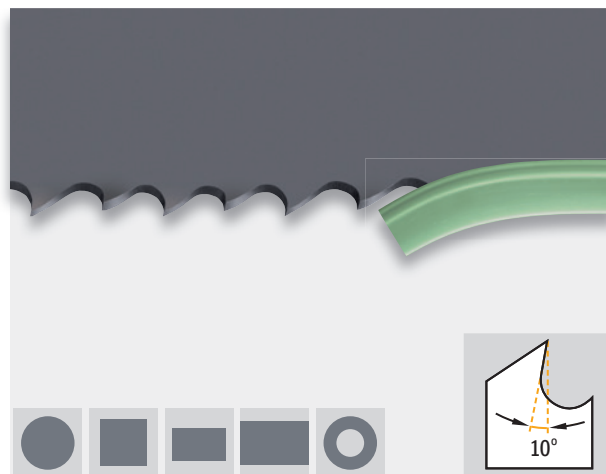
Basic

### M42-BASIC-PLUS

Great for material in medium and large dimensions.

Engineered for:

- production band saw machines
- all-purpose use for steels and non-ferrous metals
- tensile strengths of up to 1400 N/mm<sup>2</sup>
- thick walled structurals



Dimensions		Tooth					
mm	inch	0,75/1,25	1/1,3	1,4/2	2/3	3/4	4/6
20 x 0,90	3/4 x 0,035						K
27 x 0,90	1 x 0,035				K	K	K
34 x 1,10	1 1/4 x 0,042			K*	K	K	K
41 x 1,30	1 1/2 x 0,050			K	K	K	K
54 x 1,30	2 x 0,050			K*	K	K*	K*
54 x 1,60	2 x 0,063	K*		K	K	K	K
67 x 1,60	2 5/8 x 0,063	K	K	K	K	K	
80 x 1,60	3 x 0,063	K	K	K			

K = Variable tooth

\* available from 06/23

Article group 402

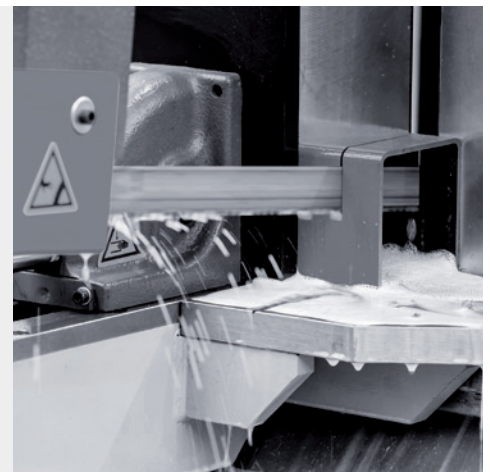
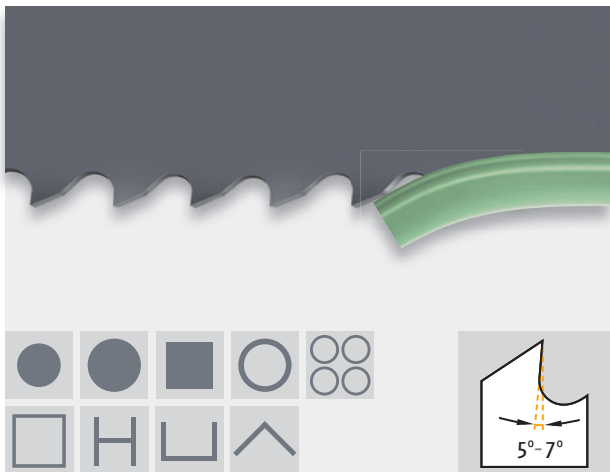
Basic

## M42-BASIC-PRO

The multi-purpose blade for small and medium profiles and solid material.

Engineered for:

- steel beams, profiles and tubes
- mixed materials



Dimensions		Tooth					
mm	inch	2/3	3/4	4/6	5/7	8/11	12/16
20 x 0,90	3/4 x 0,035				K	K	K
27 x 0,90	1 x 0,035		K	K	K	K	K
34 x 1,10	1 1/4 x 0,042		K	K	K		
41 x 1,30	1 1/2 x 0,050	K	K	K	K		
54 x 1,60	2 x 0,063	K	K	K			
67 x 1,60	2 5/8 x 0,063	K	K				

K = Variable tooth

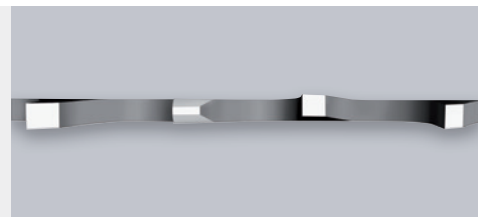
## M42-TYPHOON-GTS

Excellent for use on high-performance band saw machines.

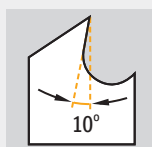
Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- tensile strengths of up to 1400 N/mm<sup>2</sup>
- stainless steel
- all-purpose use for steels and non-ferrous metals
- thick walled structurals



The borazon-ground tooth tips ensure an excellent cutting surface, perfectly angular cuts and long blade life.



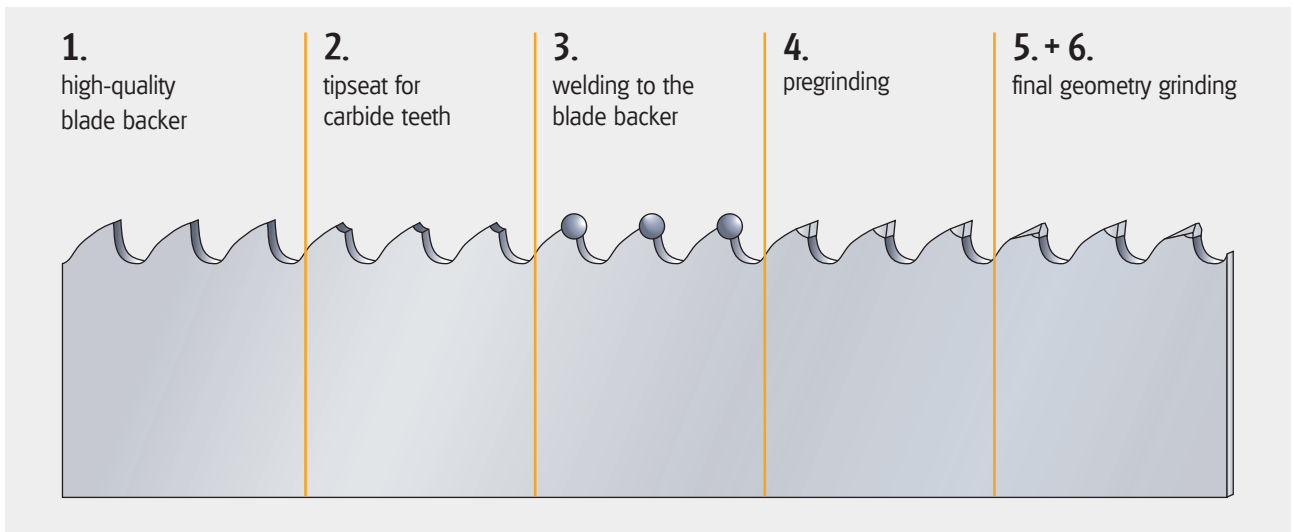
Dimensions		Tooth									
mm	inch	0,75/1,25		1/1,3		1,4/2		2/3		3/4	
27 x 0,90	1 x 0,035							K		K	
34 x 1,10	1 1/4 x 0,042							K		K	
41 x 1,30	1 1/2 x 0,050					K	C-TEC	K	C-TEC	K	C-TEC
54 x 1,30	2 x 0,050					K*	C-TEC	K	C-TEC	K*	C-TEC
54 x 1,60	2 x 0,063	K*	C-TEC			K	C-TEC	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC
80 x 1,60	3 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC				

K = Variable tooth

\* available from 06/23

# CARBIDE

## Why so successful?



### Flexible:

The blade backer for Carbide Band Saw Blades is made of special alloyed spring steel.

### Extremely durable:

The tooth tips consist of wear resistant high-grade carbide.

### Perfectly joint:

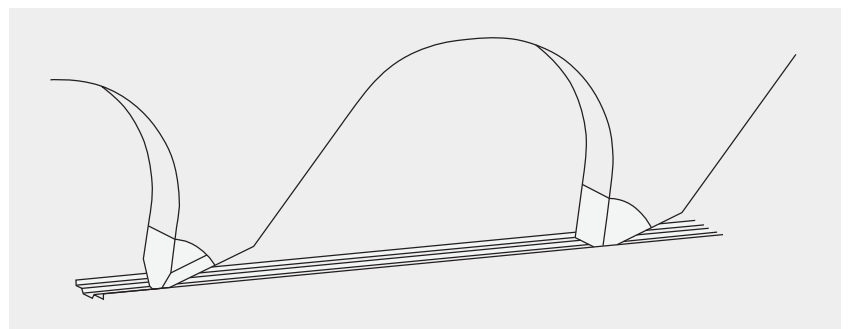
Carbide tooth tips are welded to the backer in a special procedure.

## Band Saw geometry:

Also in the ARNTZ production program: High performance Carbide Tipped Band Saw Blades.

The welded carbide tips are available in different tooth geometries. These geometries grant an optimal formation of chips and best cutting results.

The different tooth geometries provide clean and smooth cuts at minimum vibration.



## Correct operation:

Carbide Tipped Band Saw Blades must be used on band saw machines that are particularly suitable for this purpose in order to achieve optimum performance.

Carbide Tipped Band Saw Blades are supplied as endless welded loops or in coils:

27 – 80 mm in length of approx. 50 m

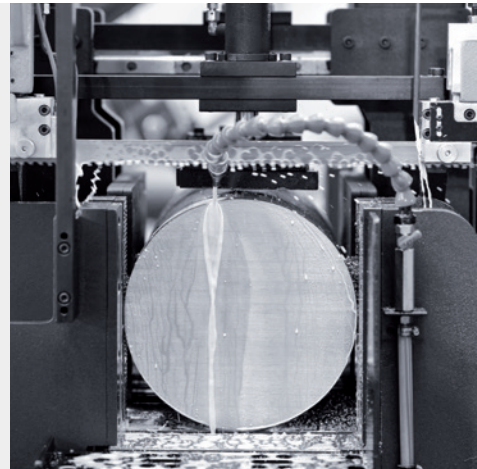
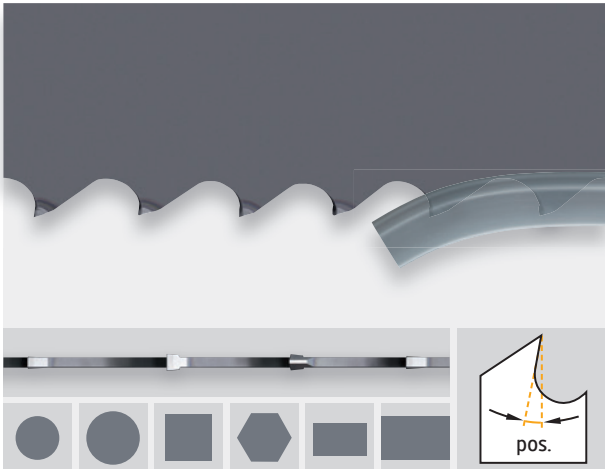
## Q-LINE

The multi-chip geometry ensures optimal chip division in the sawing process. This leads to a long service life and prevents tooth breakages.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- standard steel
- stainless steel
- non-ferrous metals



Dimensions		Tooth									
mm	inch	0,75/1,25		1/1,5		1,4/2		2/3		3/4	
27 x 0,90	1 x 0,035										K
34 x 1,10	1 1/4 x 0,042					K	C-TEC	K	C-TEC	K	C-TEC
41 x 1,30	1 1/2 x 0,050					K	C-TEC	K	C-TEC	K	C-TEC
54 x 1,30	2 x 0,050					K	C-TEC	K	C-TEC		
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC		
80 x 1,60	3 x 0,063	K	C-TEC			K	C-TEC				

K = Variable tooth

Article group 662

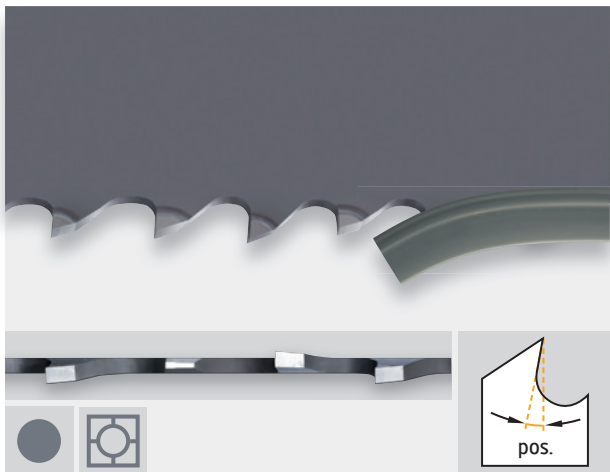
Standard

## CAST-LINE

Carbide tipped band saw blade with set tooth.  
The expert in castings especially  
for sawing jobs in non-ferrous foundries.

Engineered for:

- castings made out of aluminum and bronze



Dimensions		Tooth
mm	inch	
13 x 0,9	1/2 x 0,035	3
20 x 0,9	3/4 x 0,035	H*
27 x 0,9	1 x 0,035	H

H = Hook tooth

\* unset



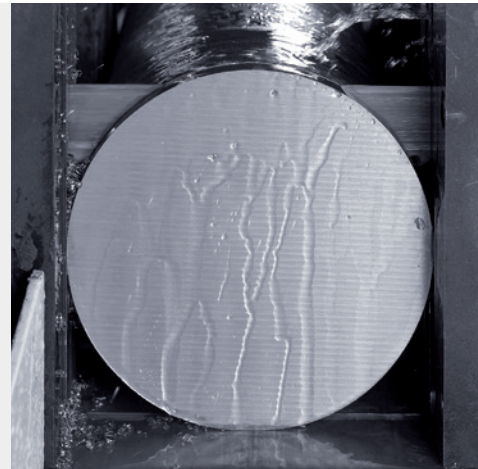
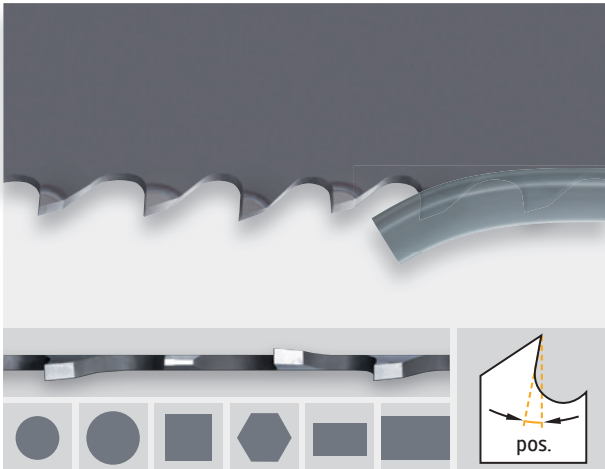
## BLACK-LINE-S

Carbide tipped band saw blade with set tooth for abrasive materials, difficult to cut.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- titanium alloys
- metals with high residual stress
- stainless steels
- special alloys
- abrasive non-ferrous metals and graphite



Dimensions		Tooth					
mm	inch	0,75/1,25	1,4/2	2/3	3	3/4	
20 x 0,90	3/4 x 0,035				H		
27 x 0,90	1 x 0,035			K	H	K	
34 x 1,10	1 1/4 x 0,042		K	K		K	
41 x 1,30	1 1/2 x 0,050		K	K	C-TEC	K	C-TEC
54 x 1,30	2 x 0,050		K	K	C-TEC	K	C-TEC
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC		
80 x 1,60	3 x 0,063	K	C-TEC	K	C-TEC		

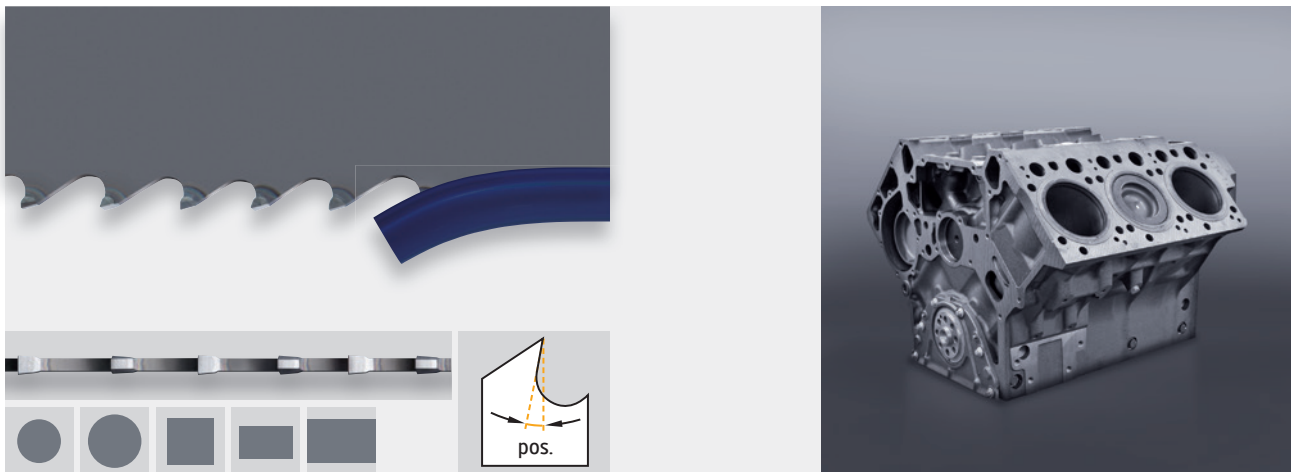
K = Variable tooth H = Hook tooth

## BLUE-LINE

Carbide tipped band saw blades with triple chip geometry for cutting non-ferrous metals and graphite. Special wear-resistant carbide quality.

Engineered for:

- aluminium alloys
- aluminium bronzes
- copper alloys
- sand cast aluminium and cast magnesium
- graphite



Dimensions		Tooth					
mm	inch	0,65/0,95	0,75/1,25	1,4/2	2/3	3	3/4
20 x 0,90	3/4 x 0,035					H	
27 x 0,90	1 x 0,035				K	H	K
34 x 1,10	1 1/4 x 0,042			K	K	H	K
41 x 1,30	1 1/2 x 0,050			K	K		K
54 x 1,30	2 x 0,050			K	K		
54 x 1,60	2 x 0,063		K	K	K		
67 x 1,60	2 5/8 x 0,063			K			
80 x 1,60	3 x 0,063	K	K				

K = Variable tooth    H = Hook tooth

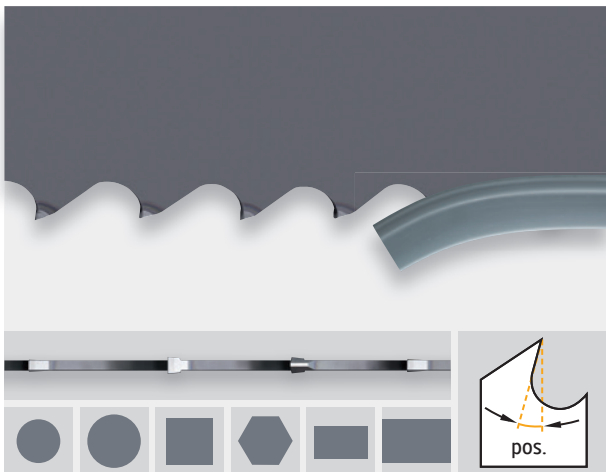
## SILVER-LINE

Carbide tipped band saw blades with multi chip tooth geometry for cutting high-alloy steels and non-ferrous metals.

Also coated available **C-TEC** for extremely increased feed rates, significantly reduced cutting times and maximized blade life.

Engineered for:

- stainless steel
- heat resistant steels
- cold and hot working steels
- hardened steel up to 1900 N/mm<sup>2</sup>
- nickel based alloys
- aluminium-silicon alloys
- copper-nickel alloys
- titanium and titanium alloys
- exotic, hard to cut alloys



Dimensions		Tooth											
mm	inch	0,75/1,25		1/1,5		1,4/2		2/3		3/4			
27 x 0,90	1 x 0,035								K		K		
34 x 1,10	1 1/4 x 0,042						K		K	C-TEC	K		
41 x 1,30	1 1/2 x 0,050						K	C-TEC	K	C-TEC	K	C-TEC	
54 x 1,30	2 x 0,050						K	C-TEC	K	C-TEC			
54 x 1,60	2 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC
67 x 1,60	2 5/8 x 0,063	K	C-TEC	K	C-TEC	K	C-TEC	K	C-TEC				
80 x 1,60	3 x 0,063	K	C-TEC			K	C-TEC						

K = Variable tooth

Article group 651

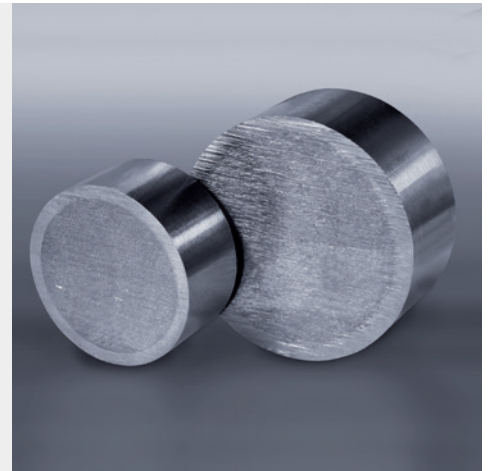
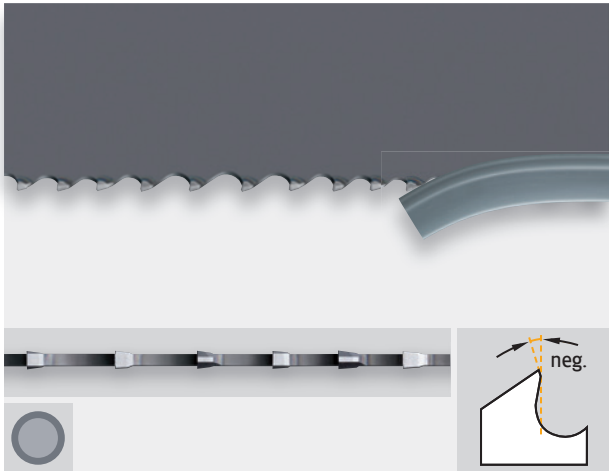
Other Applications

## SILVER-LINE-N

Carbide tipped band saw blades with multi chip tooth geometry, negative rake angle for cutting extremely hard or surface hardened materials.

Engineered for:

- induction hardened piston rods
- steels hardened up to 62 HRC
- hard chromium plated materials
- manganiferrous alloyed steels



Dimensions		Tooth		
mm	inch	1,4/2	2/3	3/4
27 x 0,90	1 x 0,035		K	K
34 x 1,10	1 1/4 x 0,042		K	K
41 x 1,30	1 1/2 x 0,050	K	K	K
54 x 1,60	2 x 0,063	K	K	K

K = Variable tooth

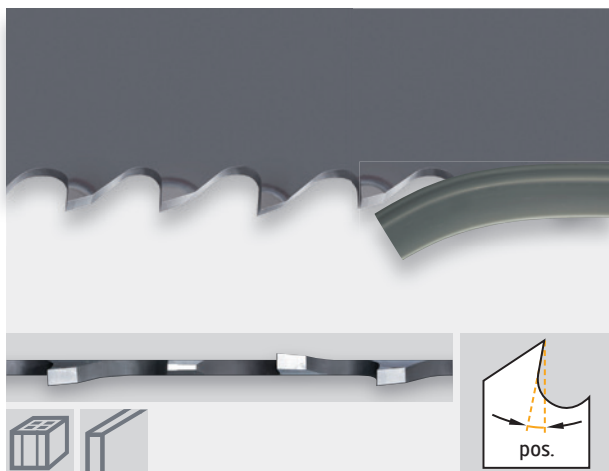
## Article group 623

### STONE-LINE-S

Low-priced carbide saw blade of the STANDARD performance level.

The set teeth guarantee a consistent side clearance. This reduces friction and prevents jamming within the cutting kerf.

The main application is the cutting of softer construction materials such as aerated concrete and insulating materials.



Dimensions		Tooth
mm	inch	
27 x 0,90	1 x 0,035	<b>3</b>
		<b>H</b>

H = Hook tooth



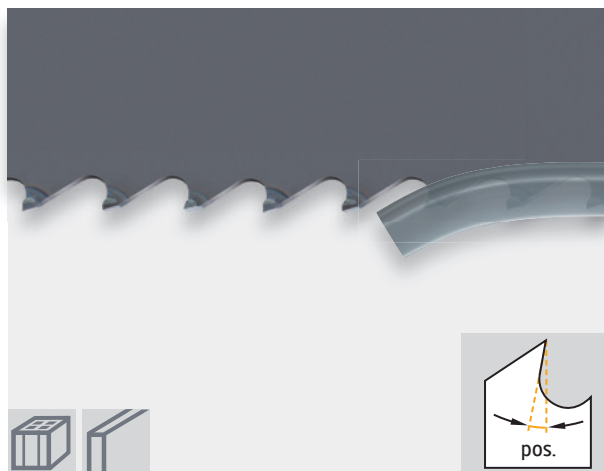
## Article group 621

### STONE-LINE-RT

High-quality carbide saw blade of the PRO performance level.

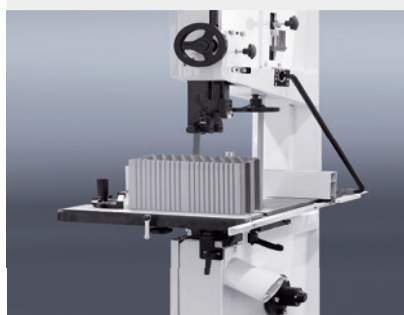
The advanced and precision-ground tooth geometry ensures low-vibration sawing with easy feeding.

Main application is cutting of hard and abrasive construction materials such as block-flat and perforated bricks.



Dimensions		Tooth
mm	inch	
27 x 0,90	1 x 0,035	<b>2/3</b>
34 x 1,10	1 1/4 x 0,042	<b>K</b>

K = Variable tooth



# CARBON STEEL BAND SAW BLADES

## Article group 100

### CS-1

Flexible band back in pin-point quality with hardened teeth. Suitable for everyday workshop purposes.

Dimensions		Tooth per inch									
mm	inch	3	4	4	6	6	8	10	14	18	24
6 x 0,65	1/4 x 0,025	H		H		H	N	N	N	N	N
10 x 0,65	3/8 x 0,025	H		H	N	H	N	N	N	N	N
13 x 0,65	1/2 x 0,025	H		H	N	H	N	N	N	N	N
16 x 0,80	5/8 x 0,032	H		H	N		N	N	N	N	N*
20 x 0,80	3/4 x 0,032	H		H	N	H	N	N	N	N	N
25 x 0,90	1 x 0,035	H	N	H	N		N	N	N		

N = Standard tooth 0° H = Hook tooth 10°

## Article group 110

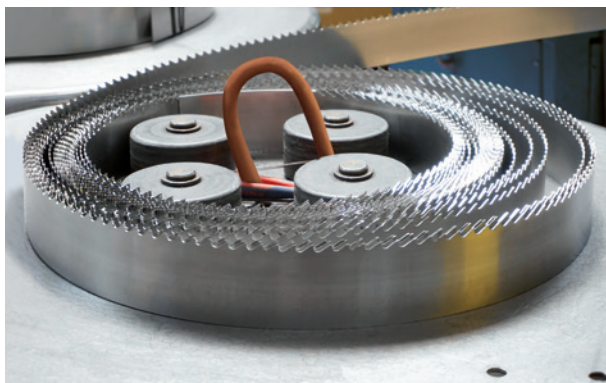
### CS-2-PLUS

Spring hardened band back with hardened teeth. For increased wear resistance and long tool life.

Dimensions		Tooth per inch									
mm	inch	3	4	4	6	6	8	10	14	18	24
6 x 0,65	1/4 x 0,025			H		H		N	N	N	N
8 x 0,65	5/16 x 0,025		N	H					N		
10 x 0,65	3/8 x 0,025	H		H		H	N	N	N	N	
13 x 0,65	1/2 x 0,025	H		H	N	H	N	N	N	N	N
16 x 0,80	5/8 x 0,032	H						N	N	N*	
20 x 0,80	3/4 x 0,032	H		H	N		N	N*	N	N*	
25 x 0,90	1 x 0,035	H	N		N		N	N	N*		

N = Standard tooth 0° H = Hook tooth 10°

\* = Special item



## Tension measuring device

Wrong tension of band can be the reason for crooked cuts or can cause blade breakage. Therefore, the band tension should be checked frequently. Detailed instructions explain how to select and control the right band saw tension.



## Refractometer

The correct concentration of cooling liquid is important for optimum life time of ARNTZ Band Saw Blades. To check the right concentration of liquid while operating it is recommended to use the ARNTZ-Refractometer.



## Application toolkit

Making sure your blade runs under perfect conditions. Featuring: Tension measuring device, refractometer, tachometer, accessories and more.



## Break-in procedures: For long blade life.

Like all HSS tools, ARNTZ Band Saw Blades should be adhered to a special break-in procedure for extended blade life, less blade changes and best payback of your tool cost.

Overload of the razor-sharp tooth tips should be avoided at the start of the cutting operation. Aggressive cutting with a new blade will lead to premature tooth breakages. Correct break-in will control the gentle rounding of the cutting edges.

## Bi-Metal Band Saw Blades

Starting feed should be half of final feed rate at the recommended cutting speed for the first 300-500 cm<sup>2</sup> cutting surface. After that, feed rate should be gradually increased to the maximum cutting rate. In case vibrations or noises should occur at the beginning of the cutting operation, the cutting speed should be slightly adjusted.

## Carbide Tipped Band Saw Blades

For break-in procedure during the first 30 minutes we recommend following parameters:

Material diameter up to 600 mm	Cutting speed = 30 m/min
	Feed = 5 mm/min
Material diameter over 600 mm	Cutting speed = 25 m/min
	Feed = 3 mm/min

Only when the Band Saw Blades are cutting without any vibrations, cutting speed and feed can be increased step by step to the maximum. The Band Saw Blades are working perfectly when no vibration appears.

## Head office



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