MAGNABOSCO
INDUSTRIE

TCT and Bi-metal band saw blades

TCT / CERMET / HSS precision circular saw blades

Cutting oil

GMT

Technologies FOR CUTTING

2026

www.mcube.tech

GMT X GMT Z GMT BANDSAW BLADES GMT BLACK MAMBA GMT SUPER HARD GMT BLACK ALU MAMBA

GMT – the new Italian blades. Advanced technology for cutting metals faster than ever before. Band saw blades and precision circular saw blades for reducing cutting times.

GMT BAND SAW BLADES: HSS teeth are combined with a back made of a special flexible steel alloy to create the best blade for cutting metal. A wide range of available products ensures that you can always obtain the ideal blade for your application.

GMT PRECISION CIRCULAR SAW BLADES: construction technology and cutting-edge projects for the best precision cutting results. With the GMT Black Mamba blades you will cut faster and for longer, increasing productivity and reducing cutting costs. The special grade of cermet and hard metal (TCT) used for the teeth greatly lengthens the blade life.

GMT CUTTING OIL: a product studied to be extremely compatible with health and the environment. The "extreme pressure" additives make it extremely effective with most materials and for most operations. Using GMT cutting oil greatly improves cutting results, and lengthens the life of blades and machines.

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GMT Blades: our team of engineers and technical salespeople

HOW TO CHOOSE THE RIGHT BLADE

The data you need to correctly order a blade follow

Example	Product name	Length x height x width	Teeth per inch
	GMT X Ultra®	16' x 1-1/4" x .042" 4860mm x 34mm x 1.07mm	3/4 TPI

Follow these steps to choose the right product for each application:

STEP #1: ANALYSE THE CUTTING

Machine: in most cases, all you need to know is the blade dimensions
Material: you have to know these characteristics:
• type • hardness (if tempered or hardened) • shape • size • if cutting one piece at a time or stack cutting
Other user needs that are important to know:
• if continual, series cutting or a few different cuts • is cutting speed or blade duration more important? • is the finish important?

STEP #2: CHOOSE THE RIGHT PRODUCT

Use the table on page 7
• Find the material in the top line;
• You will find the recommended blade in the relative column;
• If you need help call our technical service at +39 0444450404.

STEP #3: DETERMINE THE RIGHT NUMBER OF TEETH PER INCH (TPI)

Use the selection table on page 16.
• If you are finding it difficult to choose between two different pitches, the smaller one (more teeth) generally gives better results;
• When a compromise is necessary, consider the TPI first.

STEP #4

Choose an optimal coolant to guarantee superior performance from your blade. Call our technical service for advice.

STEP #5: DETERMINE IF WAVE TECH IS NEEDED

Wave Tech is a special back profile that guarantees deeper penetration and makes it easier to cut harder materials: call our technical service for advice on using Wave Tech at +39 0444 450404.

STEP #6: FIT THE BLADE AND ADD THE LUBRICANT

STEP #7: BREAK THE BLADE IN CORRECTLY

STEP #8: USE THE BLADE AT THE CORRECT SPEED AND CUTTING RATE

Check the parameters on page 6 and if you need more advice, call our technical service at +39 0444 450404

SELECTING TEETH FOR BIMETAL BLADES

1. Determine the size and form of the material to be cut
2. Identify the relative table (square, round or pipes/profiles)
3. Choose the correct pitch for the section/form to be cut

Thickness (w)

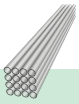
FULL SQUARE OR RECTANGULAR SECTIONS	Find the cutting thickness (W)																							
CUTTING THICKNESS																								
INCH	.1	.2	.3	.4	.5	.6	.7	.8	.9	1	2	5	10	15	20	25	30	35	40	45	50			
MM	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	50	125	250	375	500	625	750	875	1000	1125	1250			
TOOTH - TPI	14/18		10/14		8/12		6/10		6/8 5/8		4/6		3/4	2/3	1.5/2.0 1.4/2.0		1.0/1.3		0.7/1.0					

Diameter (D)

FULL ROUND SECTIONS	Find the diameter of the material to be cut (D)																							
CUTTING THICKNESS																								
INCH	.1	.2	.3	.4	.5	.6	.7	.8	.9	1	2	5	10	15	20	25	30	35	40	45	50			
MM	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	50	125	250	375	500	625	750	875	1000	1125	1250			
TOOTH - TPI	14/18		10/14		8/12		6/10		6/8 5/8		4/6		3/4	2/3	1.5/2.0 1.4/2.0		1.0/1.3		0.7/1.0					

Wall thickness (T)

PIPES-PROFILES	Find the wall thickness (T)																							
CUTTING THICKNESS																								
INCH	.05		.10		.15		.20		.25		.30	.40	.50	.60	.70	.80	.90	1		1.5	2			
MM	1.25		2.5		3.75		5		6.25		7.5	10	12.5	15	17.5	20	22.5	25		37.5	50			
TOOTH - TPI	14/18		10/14		8/12		6/10		6/8 5/8		4/6				3/4					2/3				



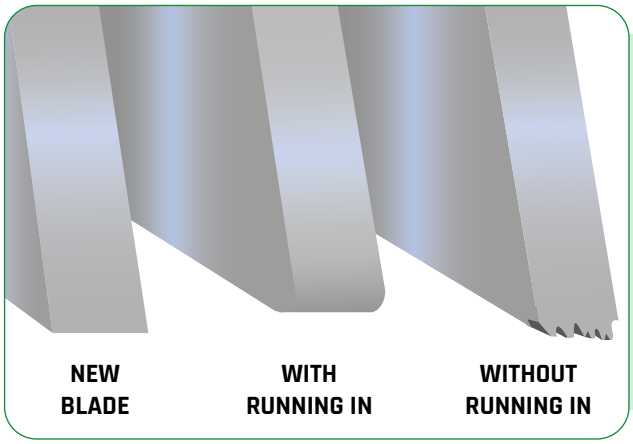
Stack cutting:
Find the tooth that is recommended for the section of the single piece and choose the next biggest one.
Example for stack cutting pipes of thickness 12: tooth recommended for single pipe 4/6, choose 3/4 for the stack.

WHAT IS WAVE TECH?

It is a special profile for the blade back. It guarantees greater tooth penetration and better chip formation, making it easier to cut hardened or tempered material. The wave tech symbol indicates products that can have the profile fitted. Contact our technicians to know if the Wave Tech profile can improve your cutting.

BREAKING IN THE BLADE

How to guarantee that your new blades last longer



NEW BLADE | **WITH RUNNING IN** | **WITHOUT RUNNING IN**

WHAT IS BLADE BREAKING IN?

New blade teeth are razor sharp. Before using the blade at the standard parameters, the tip of each tooth should be honed to create an extremely small radius on its tip. Not honing the cutting edge can cause microscopic cracks that reduce blade duration.

A blade that is honed correctly with the right breaking-in procedure lasts much longer.

HOW TO BREAK IN A BLADE

Choose the right cutting speed for the material to be cut. Reduce the cutting rate so it is 20% to 50% slower than normal (the softer the material the greater the reduction must be). Start cutting with the reduced parameters and make sure that the chip forms correctly. You can adjust the speed and cutting rate slightly if you hear noises or feel vibration. During the first cut, increase the parameters slightly when the blade has fully entered the workpiece. With the second cut, increase the parameters gradually again until the standard conditions are reached.

For further explanations or help during breaking in contact our technical service.

CUTTING SPEED FOR BIMETAL BLADES

	MATERIAL		BLADE SPEED
Material Category	**Type**	**Grade**	**(m/min)**
ALUMINIUM / NON-FERROUS	Aluminium	2024, 5052, 6061, 7075	85+
	Copper	CDA 220	65
		CDA 360	90
		Cu Ni (30%)	60
		Be Cu	50
	Bronze	AMPCO 18	55
		AMPCO 21	50
		AMPCO 25	35
		Leaded Tin Bronze	90
		Al Bronze 865	45
		Mn Bronze	65
		932	85
		937	75
	Brass	Cartridge Brass, Red Brass (85%)	65
		Naval Brass	60
CARBON STEEL	Low tenore	1145	80
		1215	100
		12L14	105
		1008, 1018	80
		1030	75
	Medium tenore	1035	75
		1045	70
	High tenore	1060	60
		1080	60
		1095	55
STRUCTURAL STEEL			
ALLOY STEEL	Mn	1541	60
		1524	50
	Cr-Mo	4140	70
		41L50	70
		4150H	60
	Cr	6150	60
		5160	60
	Ni-Cr-Mo	4340	60
		8620	65
		8640	55
		E9310	50
BEARING STEEL	Steel alloy with chrome	52100	50
MOULD STEEL	Mould steel	P-3	55
		P-20	50
STAINLESS STEEL	Stainless steel	304	35
		316	25
		410, 420	40
		440A	25
		440C	20
TOOL STEEL	Low alloy	L-6	45
	For water quenching	W-1	45
	For cold working	D-2	25
	For air quenching	A-2	45
		A-6	40
		A-10	30
	For hot working	H-13	40
		H-25	25
	For oil quenching	O-1	40
		O-2	40
	Super-fast steel	M-2, M-10	30
		M-4, M-42	30
		T-1	25
		T-15	20
	Resistant to thermal shock	S-1	40
		S-5, S-7	40
TITANIUM ALLOYS	Titanium alloys	CP Titanium	25
		Ti-6Al-4V	20
NICKEL ALLOYS	Nickel alloys	Monel® K-500	20
		Duranickel 301	15
	Iron-based alloys	A286, Incoloy® 825	25
		Incoloy® 600	15
		Pyromet X-15	20
	Nickel-based alloys	Inconel® 600, Inconel® 718	20
		Nimonic 90, NI-SPAN-C 902, RENE 41	20
		Inconel® 625	25
		Hastalloy B, Waspalloy	15
		Nimonic 75, RENE 88	15
OTHER	Cast iron	A536 (60-40-18)	70
		A536 (120-90-02)	35
		A48 (Class 20)	50
		A48 (Class 40)	35
		A48 (Class 60)	30

The indicated speeds are ideal for cutting a section of 100 mm of untreated material using a bimetal saw blade and coolant.

SPEED CORRECTION FOR DIFFERENT MATERIAL SECTIONS:

MATERIAL	SPEED	
6 mm	Table speed	+ 15%
19mm	Table speed	+ 12%
32mm	Table speed	+ 10%
64mm	Table speed	+ 5%
100mm	Table speed	- 0%
200mm	Table speed	- 12%

TABLE CORRECTIONS IF USING DIFFERENT FLUIDS

TYPE OF FLUID	SPEED	
Spray oil	Table speed	- 15%
No fluid	Table speed	- 30-50%

TABLE CORRECTION FOR TEMPERED MATERIALS

ROCKWELL	BRINELL	SPEED REDUCTION
Up to 20	226	-0%
22	237	-5%
24	247	-10%
26	258	-15%
28	271	-20%
30	286	-25%
32	301	-30%
36	336	-35%
38	353	-40%
40	371	-45%

Reduce the blade speed by 50% if you are using carbon steel blades.

MAGNABOSCO INDUSTRIE

SERIES CUTTING AND HIGH PRODUCTIVITY								
NON-FERROUS ALUMINIUM	CARBON STEEL	CONSTRUCTION STEEL	ALLOY STEEL	BEARING STEEL	MOULD STEEL	STAINLESS STEEL	TITANIUM ALLOYS	NICKEL-BASED ALLOYS
EASY <---------- AVERAGE ----------> DIFFICULT								

MATERIAL	CARBON STEEL			ALLOY STEEL	BEARING STEEL	MOULD STEEL	STAIINLESS STEEL		TITANIUM	NICKEL ALLOY
	EASY				AVERAGE				DIFFICULT	
WORKPIECES										
SOLID BARS	GMT X Ultra M 42 S						GMT Z Ultra M 42 S coated N series			
					GMT X Ultra M 51					
								GMT X Ultra M 71		
PIPES/BUNDLE	GMT X ULTRA PRO M 42 S						GMT Z Ultra pro M42 S coated N series			
MANUAL CUTTING	GMT X									

Attention: we can give you information about other cuts that are not in this table.
Call the technical service at +39 0444 450404, or go to www.mcube.tech

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SAFETY

Always follow your machine operation instructions and the safety protocols. Always wear the recommended PPE, hearing protection, eye protection and suitable gloves when handling the blades. Make sure the blades are perfectly still before changing them or making any necessary adjustments. Always make sure that the machine safety devices are operational and suitably positioned.

TECHNICAL SUPPORT

If you need technical support or any information about saw blades and cutting, our staff is always available during normal working hours:

PHONE
+39 0444 450404

E-MAIL
info@mcube.tech

WEB
www.mcube.tech

OUR SERVICES

GMT KAIZEN SERVICE
Cutting and parameter optimisation, and elimination of bottlenecks

MACHINE DIAGNOSIS
13 Check points

MACHINE TIME OPTIMISATION
Reduction of downtime

YOU CUT STEEL WE CUT COSTS

OPERATOR TRAINING

PRODUCTIVITY
Detailed report on the parameters and expedients to be implemented

SOLUTIONS
Sustainable and continual for effective cost reduction

KAIZEN SERVICE

KAIZEN SERVICE: HOW DOES IT WORK?

It follows the S P D C A (Scan, Plan, Do, Check, Act) logic.
Our engineers come to your cutting departments, they work with your operators and teach them how to approach and use instruments and techniques. Our engineers observe, then collect all the necessary data from every machine and together develop new solutions to improve the process and reduce cutting costs. The service is free and you will be given a report complete with all the data and possible solutions.

THE ADVANTAGES OF ROUTINE MAINTENANCE

Programmed maintenance must always be done on the saws to guarantee safe, effective cutting. This is truer today, where increasingly more complex materials have to be cut. Following some simple rules means always having suitable cutting conditions and lengthens the life of your machines and blades.

Flywheels – clean them often and make sure they rotate freely
Blade tension – use a tension meter to check the tension and adjust it as required
Blade tracking – make sure the blade passes through, and moves correctly in, the guides
Chip brush – make sure the brush operates correctly and that the chips to not fall inside the cut
Guides – make sure the guides are not ruined or damaged. They must be able to hold the blade at the right pressure and be positioned as close as possible to the workpiece
Guide holder – for maximum support, move as close to the workpiece as possible
Lubricant – make sure the lubricant used is suitable and clean. Make sure the jet is positioned correctly and always check the mix percentage using a refractometer

CUTTING RATE

Tooth size	10/14	8/12	6/10	5/8	5/7	4/6	3/4	2/3
Multiplier (MR)	4,016	3,341	2,667	2,160	2,058	1,721	1,215	0,843

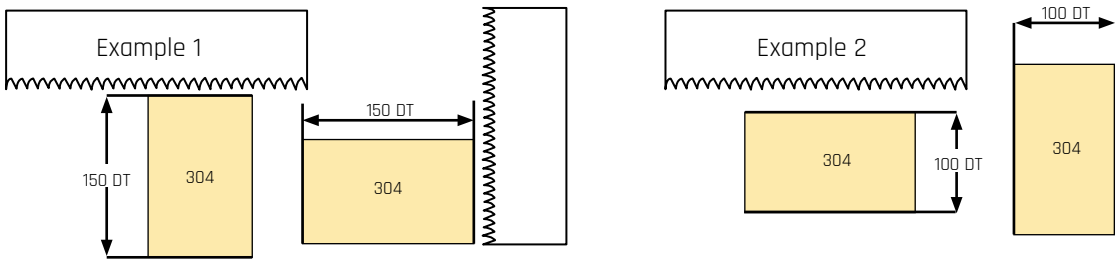
After having determined the right teeth and the cutting speed, select the MR multiplier for the selected tooth and use this formula to calculate the cutting rate in mm/min.
In examples 1 and 2 you can see the difference in the cycle time when cutting a piece that is the same but positioned differently (example 1 short side or example 2 long side in contact with the blade).
As you can see, a finer pitch can be used if the blade comes into contact with the short side, which means a faster cutting speed and more teeth coming into contact with the workpiece. The result is less time needed for cutting and blades that last longer.

EXAMPLE 1:

DT (thickness to be cut/cutting rate = cutting time)
100 x 150 mm Aisi 304 blade speed 35 m/min
recommended tooth pitch 3/4 – MR = 1,215
35 x 1,215= 42,525 mm/min
150 mm / 42,525 = 3,52 cutting time in minutes
(3 minutes and 30 seconds)

EXAMPLE 2:

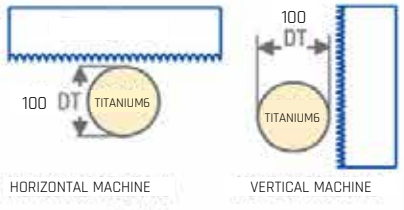
150X100 mm Aisi 304 cutting time 31,5 m/min
(contact surface 150 cutting speed reduced by 10%)
recommended tooth pitch 2/3 – MR = 0,843
31,5 x 0,843 = 26,554 mm/min
100 mm / 26,554 = 3,76 cutting time in minutes
(3 minutes and 45 seconds)



$$\frac{\text{(DT) cutting distance}}{\text{Linear in/min}} = \text{(CT) cutting time}$$

Example 3

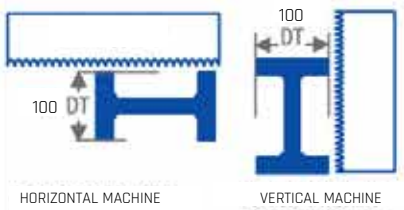
Diameter 100 mm titanium 6, speed 20 m/min
recommended tooth pitch 3/4 - MR = 1,215
20 x 1,215 = 24,3
100/24,3 = 4,11 minutes (4 minutes and 7 seconds)
cutting time



100
------ = 4,11 minutes
24,3 (4 min. e 7 sec.)

Example 4

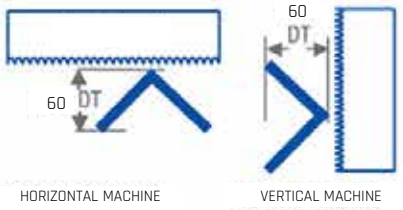
A36 larghezza 100 mm speed 75 m/min
recommended tooth pitch 3/4 - MR 1,215
75 x1,25 = 93,75
100/93,75 = 1,06 minutes (1 minute and 1 second)
cutting time



100
------ = 1,06 minutes
93,75 (1 min. e 1 sec.)

Example 5

A36 cross section 60 mm speed 75+5%= 78 m/min
recommended tooth pitch 5/8 - MR = 2,16
78x2,16 = 168,48
60/168 = 0,35 minutes= 21 seconds



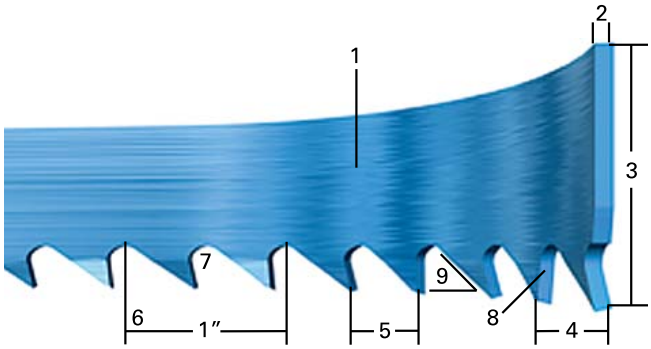
60
------ = 0,35 minutes
168 (21 sec.)

When stack cutting, multiply the area of each piece by the number of pieces in the stack, then divide by the CD (cutting distance) to get the average cutting thickness and so choose the most suitable tooth.

BLADE TERMINOLOGY

1. BLADE BACK - the body of the blade excluding the teeth.
2. THICKNESS - the dimension from side to side.
3. WIDTH - the distance between the tip of the tooth and the back.
4. SET - the bending of teeth to the right or left to allow clearance of the back of the blade through the cut.
5. CHIP - the material removed from blade cutting (measured from gullet to gullet).
6. TOOTH PITCH - the distance between the tip of one tooth and the tip of the next.
7. TPI - the number of teeth in every inch of blade length
8. GULLET - The curved area at the base of the tooth. The distance between the tooth tip and the bottom of the gullet is the gullet depth.

9. TOOTH FACE - the part of the tooth where the chips form.
10. TOOTH RAKE ANGLE - the angle of the tooth face measured with respect to a line perpendicular to the cutting direction of the saw.



TOOTH FORM AND SET

VARIABILE
- Standard tooth form
- Variable distance between the teeth
- Variable gullet depths

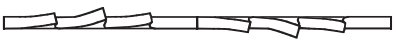
POSITIVE VARIABLE
- Gentle cut
- Reduced noise
- More effective
- Cut increases blade duration

SKIP
- Wide gullets
- Equidistant teeth
- Good for cutting non-metallic materials (wood, plastic, cork, compounds, etc....)

STANDARD
- Deep gullet
- Equidistant teeth
- Wide range of applications

HOOK
- Deep gullet
- Equidistant teeth
- Positive cutting angle
- Good for cutting metals that produce a discontinuous chip (cast iron) or non-metallic materials (wood, plastic, cork, compounds)

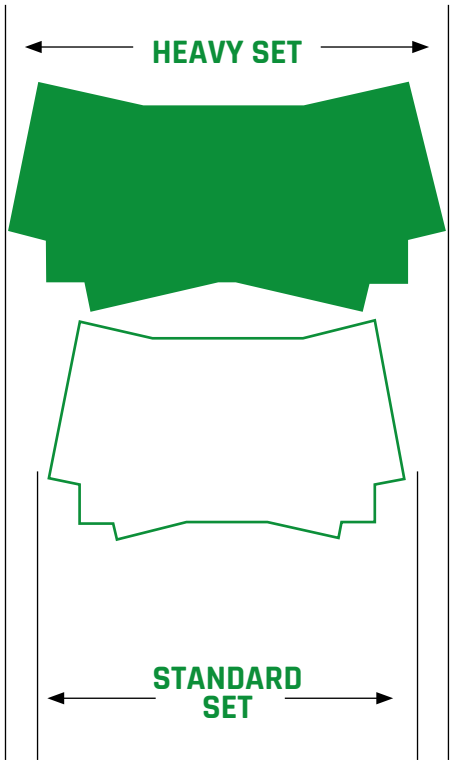
VARI-RAKER
- Multi-tooth sequence according to the step
- Variable setting angles
- The 14/18 pitch has a casual wave set



WAVY
- Groups of teeth on each side
- Controlled combination of the indications

RAKER
- Raker three-tooth sequence: left, right, straight
- Uniform set angle

ALTERNATE
- One right tooth, one left tooth
- Ideal for cutting wood



CHOOSING THE BLADE WIDTH

The blade width is the distance between the tip of the tooth and the back. The wider the blade, the greater its resistance to arcing while cutting. For straight cuts use the maximum width permitted by the machine. With arced cuts, however, choose the maximum width permitted by the radius of cut. To respect the tolerance of the radius of cut always consider not just the blade width but also the thickness of the material, its workability, the cutting rate and the starting point.

SERRATION

The serration of a blade is defined by the number of teeth per inch (TPI). Non-ferrous metals like brass, bronze or aluminium need more space for the chips. Wider serrations or a deeper gullet stop the chip from blocking or sticking to the blade, something that can damage the blade and slow down cutting.

A very fine pitch when cutting pipes or profiles prevents tooth breakage. A coarser pitch, instead, is ideal for large sections because chip removal becomes more effective and the cutting pressure is shared over fewer teeth, so increasing blade productivity.

BREAKING IN

Choose the right speed and follow the instructions given on page 5. Breaking the blade in correctly optimises use and cuts costs.

TOOTH SELECTION

Selecting which pitch to use must be based on the size and shape of the workpiece, the type of material, and the results to be obtained.
Remember these numbers: 3, 6, 12, 24. The minimum number of teeth that come into contact with the workpiece is 3 for bimetal blades and 6 for carbon blades. The ideal is between 6 and 12 teeth in contact, 24 are too many.

CUTTING RATE

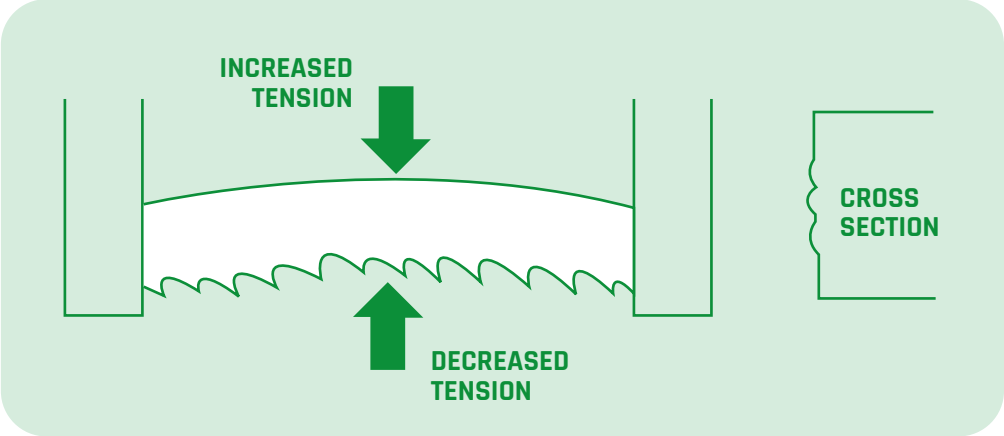
The chips tell you exactly if your cutting rate is correct or not. Thin or powdered chips indicate that the cutting rate is inadequate. Burned, heavy chips indicate an excessive cutting rate with the risk of breaking the blade and overheating the workpiece. Curled, silvery chips indicate that everything is good. The blade speed is determined by the type of material, and the correct cutting rate can be obtained from the speed – follow the indications given on page 7, then modify according to the chip.

POSSIBLE CAUSES OF BLADE MALFUNCTION

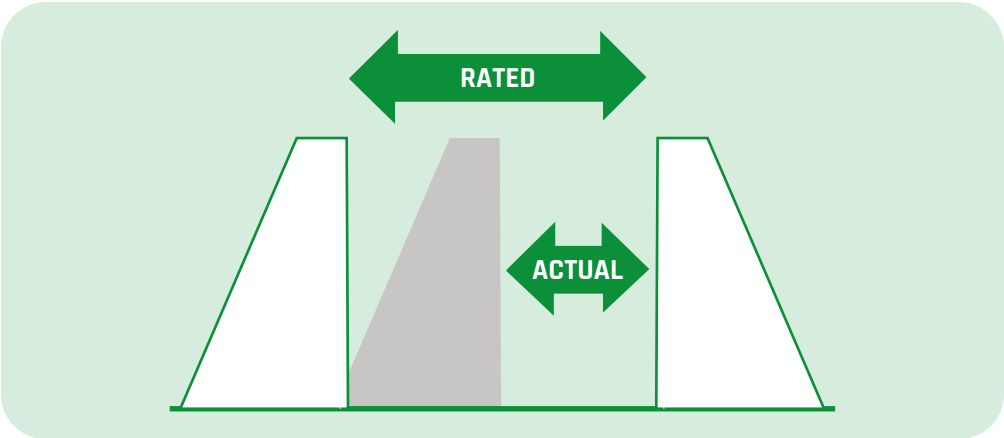
TO BE CHECKED	BAND SPEED	FLYWHEELS	BREAK-IN PROCEDURE	CHIP BRUSH	CUTTING FLUID	CUTTING RATE	SIDE GUIDES	REAR GUIDES	TENSIONING	BAND ROUTE	BAND TRACKING	TOOTH PITCH
#1 Heavy even wear of the tooth tips and edges	■		■		■	■						
#2 Worn tooth sides							■	■				
#3 Wear on only one tooth side		■					■					
#4 Broken or chipped teeth			■			■						■
#5 Tooth tip discoloured because of excessive friction	■				■	■						
#6 Stripped teeth	■		■	■	■	■						■
#7 Chips welded to teeth tips	■			■	■	■						
#8 Gullets clogged by material				■	■	■						
#9 Heavy wear on both blade sides					■		■					
#10 Wear or uneven sets on blade sides							■					
#11 Body broken or cracks in the gullets							■		■	■		
#12 Body broken at an angle							■		■			
#13 Body broken or cracks on back						■		■	■	■	■	
#14 Heavy wear or sets on back						■		■	■		■	
#15 Weld broken						■	■	■	■		■	
#16 Blade lengthening on tooth side		■				■	■		■	■	■	
#17 Blade lengthening on back		■				■	■		■		■	
#18 Blade twisted into a figure "8"		■				■	■	■	■	■	■	
#19 Blade broken with torsion along the length		■				■	■	■	■	■	■	
#20 Heavy wear only in the smallest gullets	■					■						■

BEAM STRENGTH

When resistance grows due to increased feed rate or the varying cross section of the material being cut, tension increases on the back edge of the blade and decreases on the tooth edge. This results in compression, forcing the blade into an arc, producing cuts which are no longer square.



Beam strength is a blade's ability to counter this resistance during the cutting process. A blade with greater beam strength can withstand a higher feed rate, resulting in a smoother, more accurate cut.
Beam strength depends on the width and gauge of the blade and the distance between guides, machine type, blade tension and the width of the material being cut. From a practical standpoint, use no more than 1/2 of the saw machine's stated capacity. For harder materials, it is safer to work closer to the 1/3 capacity.



SEVEN WAYS TO MAXIMIZE BEAM STRENGTH

1. CALCULATE THE REAL CAPACITY – A practical limit is 1/2 of the manufacturer's stated machine capacity. Restrict harder materials to 1/3 capacity.

2. USE A WIDER BLADE – A wider blade with a thicker gauge will withstand bowing, allowing for greater pres sure and, therefore, higher feed rate.

3. REPOSITION MACHINE GUIDES – Bring guides in as close as possible. The farther apart the guides, the less support they provide to the blade.

4. REDUCE STACK SIZE – By cutting fewer pieces, you can increase speed and feed rates for an overall improved cutting rate.

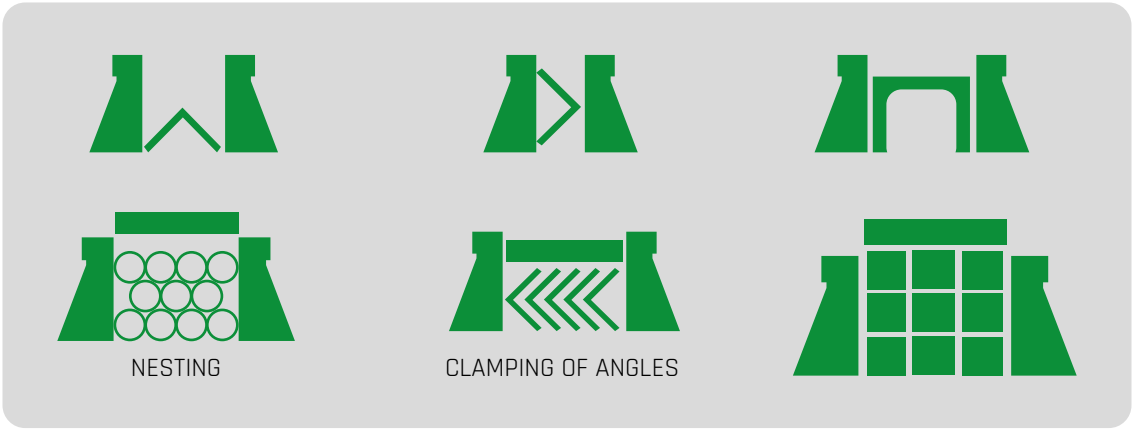
5. REPOSITION ODD-SHAPED MATERIAL – Changing the position of odd-shaped material in the vise can reduce resistance and improve cutting rate. Remember, the goal is to offer the blade as uniform a width as possible throughout the entire distance of cut.

6. CHECK FOR BLADE WEAR – Gradual normal wear dulls a blade. As a result, you cut slower, use more energy, and affect the accuracy of the cut.

7. CHECK OTHER LIMITING FACTORS – Use our com puter program to determine the correct feed, band speed, and tooth pitch for the work you are cut ting.

VISE LOADING

The position in which material is placed in the vise can have a significant impact on the cost per cut.
Often, loading smaller bundles can mean greater sawing efficiency. All machines have a stated loading capacity, but the practical level is usually lower, 1/2 to 1/3 as much, depending on the material being cut (harder materials are best cut at 1/3 rated capacity).
When it comes to cutting odd-shaped material, such as angles, I-beams, channel, and tubing, the main point is to arrange the materials in such a way that the blade cuts through as uniform a width as possible throughout the entire distance of cut.
The following diagrams suggest some cost-effective ways of loading and fixturing. Be sure, regardless of the arrangement selected, that the work can be firmly secured to avoid damage to the machine or injury to the operator.



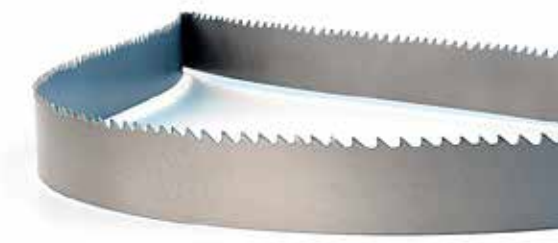
BI-METAL BAND SAW BLADES

GMT X

GMT BANDSAW BLADES

HSS BAND SAW BLADE
GMT X

The most evolved multipurpose blade for production cutting.



EXCEPTIONALLY LONG LASTING
The special steel used for the back guarantees greater resistance to strain. The M42 HSS steel used to make the teeth guarantees optimal resistance to wear and heat.

EXTREME VERSATILITY
Excellent for cutting a wide variety of materials, from low carbon steel to the hardest alloys.
A particularly evolved tooth design makes it perfect for cutting full pieces, pipes and profiles.
The positive rake improves penetration with contained cutting rate.

GREAT PERFORMANCE, CUT AFTER CUT
The unique geometry of the tooth greatly reduces noise and vibrations from the very first cut.

MATERIALS

Carbon steel	Tool steel
Low-alloy steel	Stainless steel
Mould steel	

Use our Kaizen service to optimise your cutting processes.

WAVE TECH®

POWER TECHNOLOGY™

HEIGHT X THICKNESS	TPI													
	0,7/1,1	1,0/1,4	1,4/2	2/3	3/4	4/6	5/7	5/8	6/10	8/12	10/14	6	14	18
12,5 x 0,64									■	■	■	■	■	■
12,5 x 0,9									■	■	■	■	■	
19 x 0,9						■	■		■	■	■			
27 x 0,9				■	■	■		■	■	■	■	■		
34 x 1,1				■	■	■								
41 x 1,27				■	■	■								
54 x 1,6				■	■									
67 x 1,6		■	■											
80 x 1,6	■													

BIMETAL BAND SAW BLADES
GMTX ULTRA

ULTRA FAST
The best in the range for top cutting speeds and superior performance.

ULTRA RESISTANT
The HSS foil is welded using new T-Tech V Next laser technology, which guarantees exceptional tooth resistance.

ULTRA FLEXIBLE
A new tooth shape that is extremely efficient with a multitude of materials from aluminium to stainless steel, to alloy steel.

WAVE TECH **POWER TECHNOLOGY** **LASER T-TECH V NEXT**

HEIGHT X THICKNESS	TIPI									
	0,7/1,1	1,1/1,4	1,4/2	2/3	3/4	4/6	5/8	6/10	8/12	10/14
27 x 0,9				■	■	■	■	■	■	■
34 x 1,1				■	■	■	■	■		
41 x 1,3			■	■	■	■	■			
54 x 1,6		■	■	■	■					
67 x 1,6	■	■								
80 x 1,6	■	■								

MATERIALS

Aluminium
Carbon steel
Mould steel
Tool steel
Structural steel
Stainless steel
Alloy steel

BIMETAL BAND SAW BLADES
GMTX ULTRA PRO

ULTRA FAST
The best in the range. Guarantees top cutting speeds and superior performance for cutting pipes, profiles and stacked material.

ULTRA RESISTANT
The HSS foil is welded using new laser technology, called T-Tech V Next. When combined with the Turtle profile of the tooth, it guarantees exceptional tooth resistance to impacts in the most demanding interrupted cutting conditions.

ULTRA FLEXIBLE
New tooth shape that guarantees maximum efficiency with numerous materials from aluminium to stainless steel to alloy steel.

WAVE TECH **POWER TECHNOLOGY** **LASER T-TECH V NEXT**

HEIGHT X THICKNESS	TIPI				
	2/3	3/4	4/6	5/7	8/11
27 x 0,9		■	■	■	■
34 x 1,1	■	■	■	■	
41 x 1,3	■	■	■	■	
54 x 1,6	■	■	■		
67 x 1,6	■	■			

MATERIALS

Aluminium
Carbon steel
Mould steel
Tool steel
Structural steel
Stainless steel
Alloy steel

GMT Z

COATED BI-METAL 40 LAYERS M42

★ = Recommended O = Applicable X = Not recommended

PRODUCT SERIES	N	N+	P-P+
ALUMINUM ALLOYS	O	O	X
BRONZE/COPPER	O	O	X
COMMON STEELS	★	★	X
STRUCTRURAL STEELS	★	★	X
BEARING STEELS	★	★	X
DIE STEELS	O	★	X
STAINLESS STEELS	O	★	X
TOOL STEELS	X	O	X
PIPE/HOLLOW PROFILES	X	X	★
Ti-ALLOYS	O	O	X
WOOD	O	O	X

BIMETAL BAND SAW BLADES M42 S HSS COATED GMT Z ULTRA COATED N+ SERIES

MULTI-LAYERS PATENDED COATING
Extremely long life and very high cutting speed.

Ideal for solid bars and a very large range of materials the special steel of the back guarantees greater resistance to wear.

FEA DESIGN
10 degrees positive teeth for deeper penetration and better cutting performance.

Very deep gullet for more efficent chip removal.

WIDHT / THICKNESS	TPI						
	0,7/1	1,4/2	2/3	3/4	4/6	5/8	8/12
27 x 0,9			■	■	■	■	■
34 x 1,1			■	■	■	■	■
41 x 1,3			■	■	■	■	
54 x 1,6		■	■	■	■		
67 x 1,6	■	■	■	■			
80 X 1,6	■	■	■	■			

BIMETAL BAND SAW BLADES M42 S HSS COATED GMT Z ULTRA PRO COATED P+ SERIES

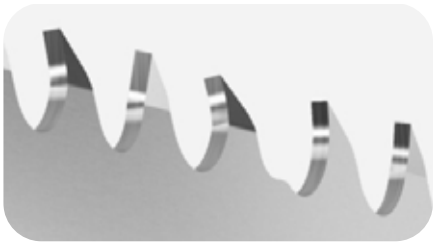
MULTI-LAYERS PATENTED COATING
Extremely long life and very high cutting speed.

FEA DESIGN
Special reinforced patented shape of tooth to resist stripping and blows
The special steel of the back guarantees greater resistance to wear.

TO CUT PROFILES, PIPES AND BUNDLES

WIDHT / THICKNESS	TPI				
	2/3	3/4	4/6	5/7	8/11
27 x 0,9		■	■	■	■
34 x 1,1		■	■	■	■
41 x 1,3	■	■	■		
54 x 1,6	■	■	■		
67 x 1,6	■	■	■		

BIMETAL BAND SAW BLADES GMT X ULTRA M51 COBALT 10.5% – SINTERED TEETH



STRAIGHT CUTTING OF LARGE SECTIONS AND DIFFICULT MATERIALS
The special geometry of the gullet increases penetration.

FAST CUTTING AND VERY LONG LASTING BLADES
Thanks to the sintered teeth and the new material of the back, cutting is extremely fast and the blade lasts much longer.

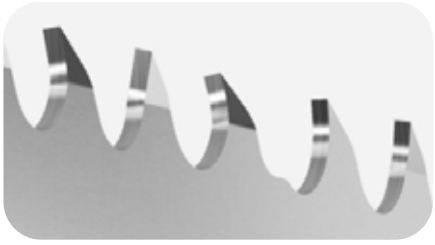
MULTI CHIP PRECISION SET
To obtain a smooth cutting surface and reduce the necessary force, while decreasing absorption and increasing blade duration.
A Q-type version of the same blade is available with a hyper positive rake angle of 17°, particularly suited to stainless steel.

MATERIALS

Standard steel
Titanium alloys
Alloy steel
Nickel alloys
Stainless steel

HEIGHT X THICKNESS	TPI					
	0,7/1,1	1 ,1/1,4	1,4/2	2/3	3/4	4/6
27 x 0,9				■	■	■
34 x 1,1			■	■	■	■
41 x 1,3			■	■	■	■
54 x 1,6	■	■	■	■	■	■
67 x 1,6	■	■	■	■		
80 x 1,6	■	■	■			

BIMETAL BAND SAW BLADE GMT X ULTRA M71 COBALT 12.5% – SINTERED TOOTH



HIGH SPEED AND HIGH PERFORMANCE WITH DIFFICULT LARGE SECTION MATERIALS
The very high percentage of cobalt in the tooth guarantees an extremely long life, easier tooth penetration, and very high resistance.

SPECIAL DESIGN WITH VARIABLE PITCHES AND RAKE ANGLES - MULTI CHIP PRECISION SET
The cut is optimised on every single tooth, the multiple set reduces the cutting forces and produces a smooth, straight surface.

A Q VERSION OF THE SAME BLADE TYPE, WHICH HAS A HYPER POSITIVE RAKE ANGLE OF 17° AND IS PARTICULARLY SUITABLE FOR STAINLESS STEEL, IS AVAILABLE.

MATERIALS

Mould steel
Titanium alloys
Alloy steel
Nickel alloys
Stainless steel

HEIGHT X THICKNESS	TPI				
	0,7/1,1	1 ,1/1,4	1,4/2	2/3	3/4
34 x 1,1			■	■	■
41 x 1,3			■	■	■
54 x 1,6	■	■	■	■	■
67 x 1,6	■	■	■	■	
80 x 1,6	■	■	■		

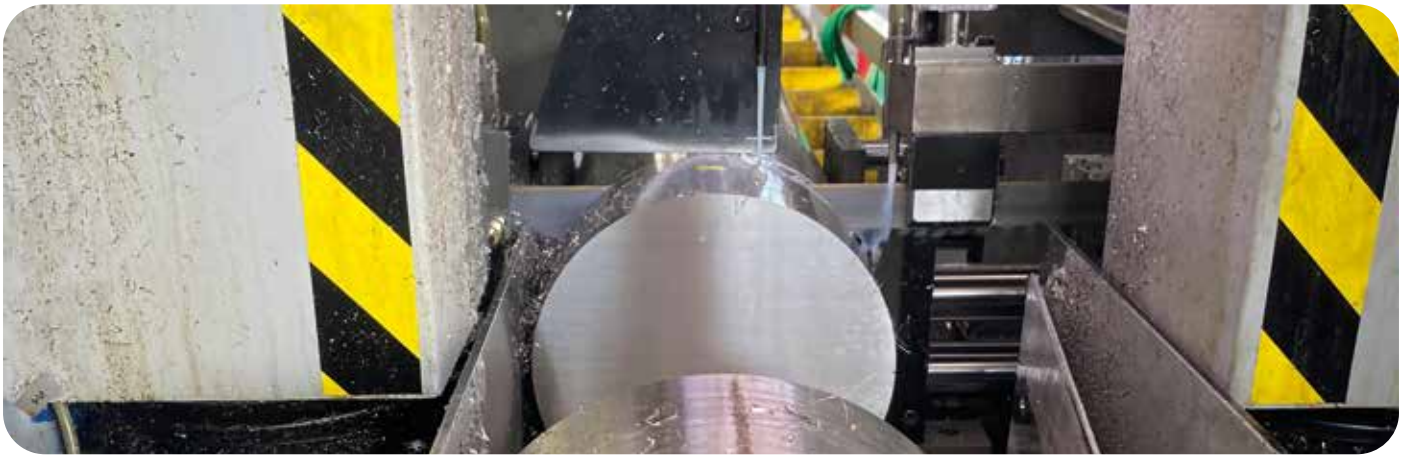
GMT Z - HIGH TECH - TCT

THICHNESSES OR DIAMATERS TO BE CUT														
POLLICI	1	2	3	4	5	6	7	8	10	11	14	16	18	20+
MM	25	50	75	100	125	150	175	200	250	275	350	400	450	500+
									0,9/1,1					
								1,0/1,4						
						1,4/2,0								
	2/3													
	3/4													

New TCT carbide teeth saw blades GMT Z

★ = Recommended O = Applicable X = Not recommended

PRODUCT SERIES	K	K+	V	V+	F	H	H+	M
ALUMINUM ALLOYS	O	O	X	X	★	X	X	X
BRONZE/COPPER	O	O	X	X	★	X	X	X
COMMON STEEL	★	★	X	X	X	★	★	X
STRUCTURAL STEEL	★	★	X	X	X	★	★	X
BEARING STEEL	★	★	O	O	X	★	★	X
DIE STEEL	★	★	O	O	X	O	O	X
STAINLESS STEEL	★	★	O	O	X	O	O	X
TOOL STEEL	★	★	★	★	X	O	O	X
Ti-ALLOYS	★	★	★	★	X	O	O	X
INCONEL ALLOYS	O	O	★	★	X	X	X	X
SPECIAL HARDENED	X	X	O	★	X	X	X	X
HARDWOOD	X	X	X	X	X	X	X	★
RUBBER/PLASTIC	X	X	X	X	X	X	X	★



MATERIAL SELECTION AND TECHNICS INNOVATION

STEEL BELT MATERIALS CUSTOMIZATION R&D

Using customized special alloy steel, with ultra high strength and excellent durability, ensure that the saw blade remains non-deforming in the cutting process, enhance the life and stability.

STANDARDIZED STRICT TESTING

Materials through standardized strict testing, to ensure the hardness, metallographic, tensile strength, fatigue life and other aspects of the highest standards in the industry, providing a solid foundation in saw performance.

TARGETED HEAT TREATMENT FOR STEEL BELT

The heat treatment of steel belt is one of the core factors affecting the quality of band saw blade. Study deeply in two aspects to determine the process.

1.Metallograph: Through the accurate heat treatment flow and temperature curve design, we stably obtain the lower becsite and needle-like martensite tissue in the steel belt, ensuring the strength and toughness of the saw band.

2.Shapes accuracy: Through stable and mature heat treatment equipment and process, ensure good straightness and minimum deformation of steel belt after heat treatment.

3.Fatigue: performance increased by 50%.

SPECIAL OPTIMIZED FORMULA FOR CARBIDE TOOTH TIPS

Special optimized formula

The carbide tip is optimized with special formula to balance between wear resistance and toughness, sharpness retention, wear resistance and chipping resistance.

For different kinds of saw materials, different types of tips are used to achieve better results.

Unique shape design

Special tip shape design ensures the wear resistance and fracture toughness of the tip, but also gets excellent welding performance, which greatly improves the impact resistance of the tip (not dropping teeth).

DESIGN FOR EXCELLENCE

OVERALL DESIGN OPTIMIZATION FOR BAND SAW

Finite-element mechanics analysis

Deeply studied the mechanical structure, with the method of finite element analysis, and through many laboratory and customer scene experiments, and finally determined the best mechanical structure.

Saw belt stress distribution

Mechanical structure optimization makes the band saw blade under evenly distributed force, reduce stress concentration, improve the overall structural stability, and prolong the life of band saw blade.

Mechanical structure patent

After repeated experiments and verification, the mechanical structure is applied for multiple patents to protect the technological innovation.

FINITE ELEMENT METHOD ANALYSIS

Finite element method

In the design for band saw blade, we used finite element analysis. This approach aids us deeper understanding of the performance of band saw blades under stressed.

Teeth angle optimization

Through finite element analysis, the tooth angle can be accurately optimized, so that reduce the cutting resistance and improve the cut efficiency.

PRECISE DESIGN FOR TOOTH ANGLE

Tooth angle design

1. The tooth angle design is the core of the band saw blade. The angle of each tooth was determined by accurate mechanical calculations and finite element analysis.
2. The precise design ensures band saw blade maximum resistance reduction and improves cut efficiency when sawing.
3. Smaller sawing resistance reduces tip wear with higher cutting life.

IMPROVED TECHNOLOGY OF NANOCOATING

Nanocoating technology

The product introduced nano-coating technology to form a strong wear-resistant coating. Improve the life of the saw blade, improve the quality of the saw surface, showing excellent performance.

Improved quality of cutting surface

Through nanocoating covering the tooth surface, improve the sawing accuracy and efficiency, reduce tooth wear, reduce friction resistance, improve the quality of sawing surface, and meet the requirements of special materials.

STANDARDIZED QUALITY CONTROL SYSTEM

Whole process for quality control

Combining the advantages of management tools such as SPC and 6 sigma, mapped the whole process quality management. From the warehousing of raw materials to finished products, several key quality control nodes are set up to ensure the monitoring of the whole production process.

Strict final inspection for dispatch

As the final quality guarantee of the final inspection of the dispatch, each dispatch of the saw blade will be detailed inspected before delivery, to ensure that no bad goods outflow.

HIGH STANDARDS OF QUALITY CONTROL LEVEL

Case for quality control standards

Examples for core data of quality control

1. Steel belt straightness: Ensure the straightness within 0.03mm per meter.
2. Tip grinding precision: Teeth height tolerance ± 0.02mm, teeth angle tolerance ± 0.3°.
4. All accuracy standards increase by more than 50% compared to industry standards

TCT BAND SAW BLADES V SERIE

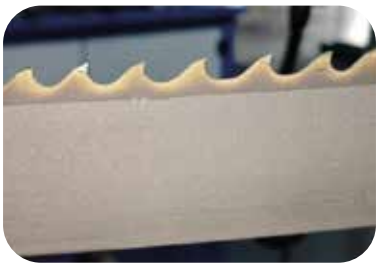
GMT Z TCT serie V

Titanium alloy cut case

End user: A large titanium alloy processing enterprise
Blade specification: 41x2 / 3V x4900
Cut materials: TC4, TA15, etc.; 250~300mm square steel
Cut parameters: Line speed 25m / min, sawing efficiency 17~22cm^2 / min
Cutting life: 339 cuts, total area of 13.28m^2
Comparison effect: The average B brand is 9.8m^2, increased by 35.5%

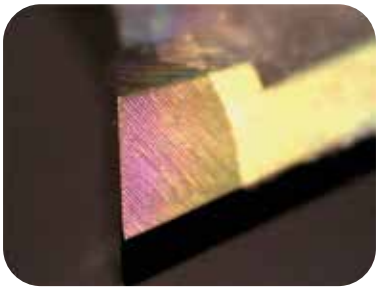
Saw large size Titanium alloy case

End user: a large new material enterprise
Blade specification: 80x0.75/1.25V+ x10730
Cutting material: T1412; 1300x230mm square board
Cut parameters: line speed 15m / min; efficiency 16.6cm^2 / min
Cutting life: a total of 38 cuts, the total area of 11.36m^2
Comparison effect: the average of domestic famous T brands is 30 cuts, increased by 26.7%.



High temperature alloy cut case

Blade specification: 41x1.4/2.0V+ x7100
Cut material: GH 141; 350mm diameter rod
Cut parameters: line speed 23m / min, efficiency 6.1cm^2 / min
Cutting life: a total of 15 cuts, total area of 1.44m^2
Comparison effect: the average of competitor is 12 cuts, increased by 25%.

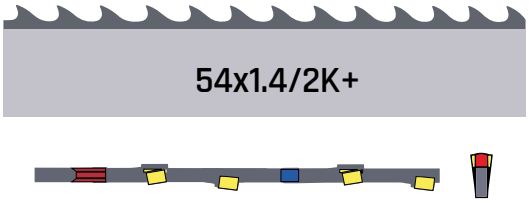


Ni radical alloy cut case

Blade specification: 41x1.4/2V+ x5600
Cut material: nickel base 3304 alloy; 250 / 65 thick wall pipe
Cut parameters: line speed 25m / min; efficiency 7.6cm^2 / min
Cutting life: a total of 34 cuts, a total saw area of 1.56m^2
Comparison effect: the average of competitor is 28 cuts, increased 21.4%.

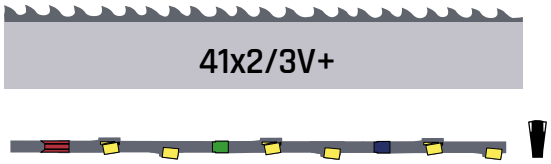
GMT Z K+

Suitable for high carbon steel, stainless steel, die steel 40 layers nano superhard coating for 30% longer life



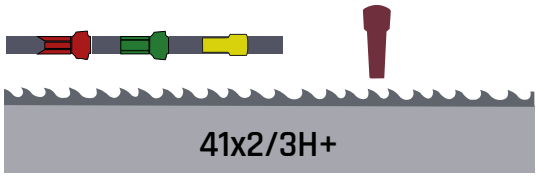
GMT Z V+

Suitable for titanium, inconel, nickel alloys Special design and high-precision grinding 40 layers nano coating for 30% longer life



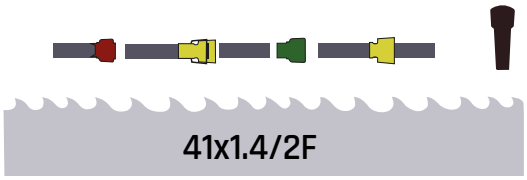
GMT Z H+

Suitable for high speed cutting of carbon steel, stainless steel and other alloys Special design for high speed cutting and better surface Unique microchamfer for higher chipping resistance 40 layers nano coating for higher heat resistance and 30% longer life



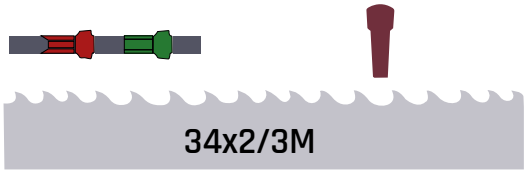
GMT Z F

Suitable for aluminium and copper alloy high speed cutting, special design for high speed cutting, special carbide and band material for high speed cutting. The FNE set version for manual machine is also available



GMT Z M

Suitable for wood, rubber and non-metal material other alloy. Special desdign for high speed cutting. Special carbide and band materials for non-metal high speed cutting



V AND V+COATED

Suitable for Titanium, Inconel and DP steel.
Special design and high-precision grinding.
V+ coated Nano superhard coating for 30% longer cutting life.

WIDHT X THICKNESS	TPI				
	0,75/1.25	1/1,5	1,4/2	2/3	3/4
27 x 0,9				■	■
34 x 1,1				■	■
41 x 1,3			■	■	■
54 x 1,6		■	■	■	
67 x 1,6	■	■	■	■	
80 x 1,6	■	■	■		
cutting diameter (mm)	700-1000	500-700	350-500	250-350	100-250

K AND K+COATED

Suitable for HD tool steel, stainless steel, Titanium and Nickel alloys.
K+Coated Nano superhard coating for 30% longer cutting life.

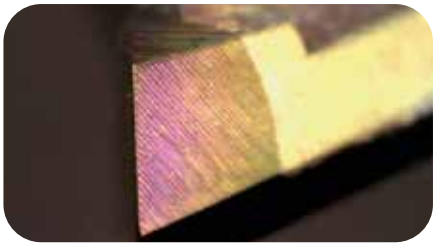
WIDHT X THICKNESS	TPI				
	0,75/1.25	1/1,5	1,4/2	2/3	3/4
27 x 0,9				■	■
34 x 1,1				■	■
41 x 1,3			■	■	■
54 x 1,6		■	■	■	
67 x 1,6	■	■	■	■	
80 x 1,6	■	■	■		
cutting diameter (mm)	700-1000	500-700	350-500	250-350	100-250

F SERIES

Suitable forAluminum, Cooper alloy high speed cutting.
special design for high speed cutting.
Special carbide and band materials for high speed cutting.

WIDHT X THICKNESS	TPI					
	0,75/1.25	1/1,5	1,4/2	2/3	3T	3/4
20 x 0,9				■	■	■
27 x 0.9				■	■	■
34 x 1.1			■	■	■	■
41 x 1,3			■	■	■	■
54 x 1,6		■	■			
67 x 1,6	■	■	■			
cutting diameter (mm)	700-1000	500-700	350-500	250-350	150-500	100-200

H AND H+COATED



Suitable for High speed cutting of common steel, stainless steel and other alloy.
Special design for high speed cutting and better surface.
Unique microchamfer for higher chiping resistance.
H+Coated Nano superhard coating for higher heat resistance and 30% longer cutting life.

WIDHT X THICKNESS	TPI				
	0,75/1.25	1/1,5	1,4/2	1.8/2	2/3
54 x 1,6		■	■	■	■
67 x 1,6	■	■	■	■	
cutting diameter (mm)	700-1000	500-700	350-550	150-350	100-200

M SERIES

Suitable for wood, rubber and non-metal material other alloy.
Special desdign for high speed cutting.
Special carbide and band materials for non-metal high speed cutting.

WIDHT X THICKNESS	TPI			
	1.6T	2T	2/3	3T
27 x 0.9		■	■	■
34 x 1.1		■	■	■
41 x 1,1	■	■	■	
cutting diameter (mm)	350-500	250-400	150-300	100-200

ROBOTIC WELDING SYSTEM
for welded loops
from 20 to 41 width
from 2000 to 7000 lenght

SUPER FAST DELIVERY AND TOTAL CONTROL OF QUALITY

CIRCULAR SAW BLADES

GMT BLACK MAMBA

CERMET - CERMET+PVD - TCT+PVD - FLYING CUT OFF - ORBITAL - HSS+PVD - TCT ALU - PCD ALU

CERMET FOR MEDIUM AND LOW CARBON STEEL, SOLID BARS
Long tool life - perfect precision
Cutting speed: 100-130 m/min
Feed per tooth: 0.05-0.1 mm

CERMET+PVD FOR MEDIUM, HIGH CARBON STEEL, SOLID BARS
Long tool life - perfect precision
Cutting speed: 90-130 m/min
Feed per tooth: 0.05-0.1 mm

CERMET PVD M + FOR CARBON STEEL PIPES CUTTING
Longer life
Max speed: 150 m/min
Perfect for stationary machine / Low speed

TCT + PVD CX SERIES OFF LINE STEEL PIPE CUTTING
Cutting speed: 300-350 m/min
Feed per tooth: 0.05-0.12 mm

TCT + PVD STAINLESS STEEL CUTTING - PIPES AND SOLID BARS
Cutting speed: 50-70 m/min
Feed per tooth: 0.035/0.05 mm

TCT + PVD TUBE FLYING CUT OFF - STEEL PIPES ONLINE CUTTING
Q+ (inners scarfing) - C+ (without scarfing) - K + (orbital cutting)
Cutting speed: 300-350 m/min
Feed per tooth: 0.05-0.12 mm

HSS SUPERHARD PVD COATING - STEEL PIPES ON LINE CUTTING
Very long life - High temperature resistance
Cutting speed: 120-220 m/min
Feed per tooth: 0.02-0.05 mm

TCT ALUMINIUM CUTTING
Long tool life - perfect precision

/

TCT / PCD
Wood cutting

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MAGNABOSCO INDUSTRIE

BLACK MAMBA PRECISION CIRCULAR BLADES CERMET AND TCT/STATIC MACHINES

GMT BLACK MAMBA PRECISION CIRCULAR SAW BLADES CERMET, CERMET+PVD, TCT+PVD				
DIAMETER	KERF	BODY	BORE	TEETH
250	2/1,7/1,5	1,7/1,7/1,3	32/40	54/60/72/80
285	2	1,8/1,7	32/40	54/60/72/80/100/120/140
315	2,3/2,5/2,6	2/2,25	32/40/50	48/50/54/60/72/80/100/110/120/140
350	2,5/2,5/2,7	2,25	32/40/50	48/50/54/60/72/80/100/110/120/140
360	2,6	2,25	32/40/50	48/50/54/60/72/80/100/110/120/140
400	2,6	2,25	40/50	48/50/54/60/72/80/100/110/120/140
420/425	2,7	2,25/2,3	40/50	48/50/54/60/72/80/100/110/120/140
450	2,7	2,25/2,3	40/50	48/50/54/60/72/80/100/110/120/140
460	2,7	2,25/2,3	40/50	40/48/50/54/60/72/80/100/110/120/140/150/180
480	2,7	2,25/2,3	40/50	40/48/50/54/60/72/80/100/110/120/140/150/180
500	2,7	2,25/2,3	40/50	40/48/50/54/60/72/80/100
520	3/3,4	2,3/2,8	40/50	40/48/50/54/60/72/80/100
580	3,2	2,7/2,8	80	40/48/50/54/60/72/80/100
600	3,2/5	2,7/4,5	50/80	40/48/50/54/60/72/80/100
630	3,2/5	2,7/4,5	50/80	40/48/50/54/60/72/80/100/120
660	3,2/4/5	2,7/3,2/4,5	80	40/48/50/54/60/72/80/100/120
750	3,8	3,2	80	40/48/50/54/60/72/80/100/120
840	4	3,2	80	40/48/50/54/60/72/80/100/120

GMT BLACK MAMBA

THE RIGHT TOOTH FOR YOUR WORKPIECES

CERMET
SOLID BARS, MEDIUM AND LOW CARBON STEEL, LONG LIFE.
Cutting speed: 100 – 130 m/min
Feed per tooth: 0.05 – 0.1 mm

CERMET + PVD BLACK MAMBA COATING
SOLID BARS, MEDIUM TO HIGH CARBON STEEL, LONGER LIFE.
Cutting speed: 90 – 140 m/min
Feed per tooth: 0.05 – 0.1 mm
Cutting life: high carbon steel > 30 m^2
medium carbon steel > 50 m^2

CERMET PVD M + FOR CARBON STEEL PIPES CUTTING
Longer life
Max speed: 150 m/min
Perfect for stationary machine / Low speed

TCT + PVD SSB COATING
SOLID BARS AND PIPES, STAINLESS STEEL.
Cutting speed: 50 – 70 m/min
Feed per tooth: 0.035 – 0.05 mm
Cutting life: > 20 m^2

TCT + PVD CX COATING
STEEL PIPES OFF LINE CUTTING.
Cutting speed: 300 – 350 m/min
Feed per tooth: 0.05 – 0.12 mm

GMT BLACK MAMBA

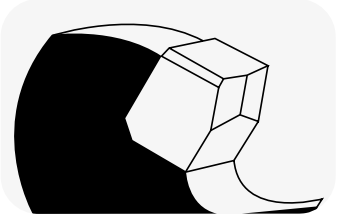
STEEL PIPES FLYING CUT OFF AND ORBITAL CUTTING
TCT+PVD BLADES

GMT BLACK MAMBA Q+/ C+ STEEL PIPES ON LINE CUTTING

DIAMETER	HOLE	THICKNESS	NUMBER OF TEETH
400	2,9/2,5	40/50/80	100/120/130/140
450	2,9/2,5	50	120/130/140/160
500	3,5/3	50/80/90	120/130/140/150/160/170
525	3,5/3	50/80/90	140/160/180
550	3,8/3	80/90/140	120/140/150/160/170
560	3,8/3	80/90/140	120/140/150/160/170
600	3,8/3	80/90/140	140/150/160/170/180
630	3,8/3	80	110/130/140/160
650	3,8/3	80	120/150/170
690	3,8/3	50/80	120/150/170

C + blades for steel pipes without scarfing on line cutting
Cutting speed 300 - 350 m/min
Feed per tooth: 0.05 - 0.12 mm

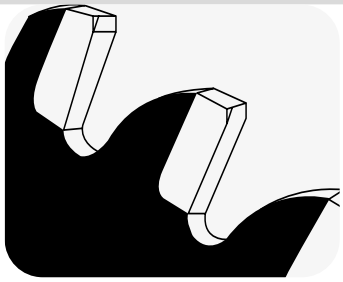
Q + blades for steel pipes with inner scarfing on line cutting
Cutting speed 300 - 350 m/min
Feed per tooth: 0.05 - 0.12 mm



T+/ K+ BLADES FOR STEEL PIPES ORBITAL CUTTING

DIAMETER	HOLE	THICKNESS	NUMBER OF TEETH
315	3,5/2,7	50	50/60/70/80/90
350	3,5/2,7	50	60/70/80/90/100
355	2,9/2,25	45	60/70/80/90/100
360	3,8/3	50	50/60/70/80
380	3,8/3	115	70/80/90/100
400	3,8/3	115	100/120

T + positive for square pipes thicker than 10 mm
K + negative for steel pipes orbital cutting
Cutting speed 300 - 380 m/min
Feed per tooth: 0.08 - 0.15 mm



GMT

BLACK ALU MAMBA

SILENT BLADES FOR CUTTING ALUMINIUM

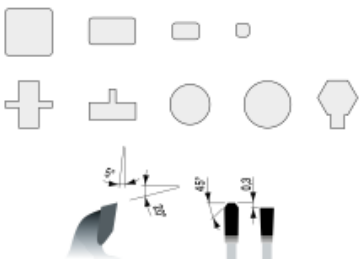
with negative teeth for profiles or positive teeth for solid bars.

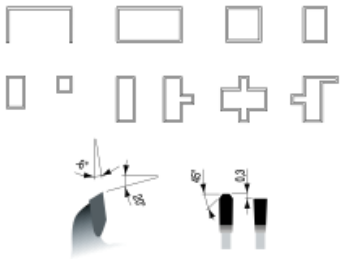
TCT STANDARD CARBIDE for aluminium. brass and copper.

POLYCRYSTALLINE DIAMOND PCD for very high cutting speeds and longer tool life.

DIAMETER	KERF	BODY	BORE	TEETH
250	3	2,2	25,4/30/32	60/80/100/120
300	3	2,2	25,4/30/32	60/80/100/120
350	3,2	2,2	25,4/30/32	60/80/100/120
400	3/4	2,2/3,2	25,4/30/32	60/80/100/120
450	4/4,4	3,2	25,4/30/32	60/80/100/120
500	4/4,4	3,2	30/32	60/80/100/120
550	4/5	3,3/4,4	30/32	60/80/120/144
600	4/5,5	3,2/4,8	30/32/50	60/80/120/144
650	4/5,5	3,2/4,8	30/32/50	60/80/120/144
700	6	5	30/32/50	60/80/120/144/170
750	6,5	5,5	50	60/80/120/144/170
800	7	6	50	60/80/120/144/170
900	7	6	80	60/80/120/144/170/220

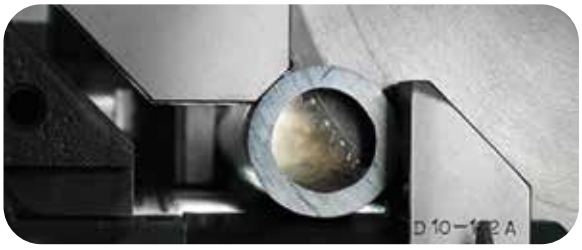
POSITIVE TEETH





NEGATIVE TEETH

Contact our technical, service for the kaizen service program, a free inspection and advice on all your cutting process.



SILENT BLADES FOR CUTTING WOOD

TCT CIRCULAR SAW

Tungsten Carbide Tipped Circular Saw Blades for cutting Wood
Features:
Perfect cutting precision, smooth surface
Low cutting noise
Long service life

PCD SAW BLADES

Diamond Tipped Saw Blades for wood
Features:
Perfect cutting precision, smooth surface
Low cutting noise
Extremely long service life, up to 30 times
that of TCT saw blades

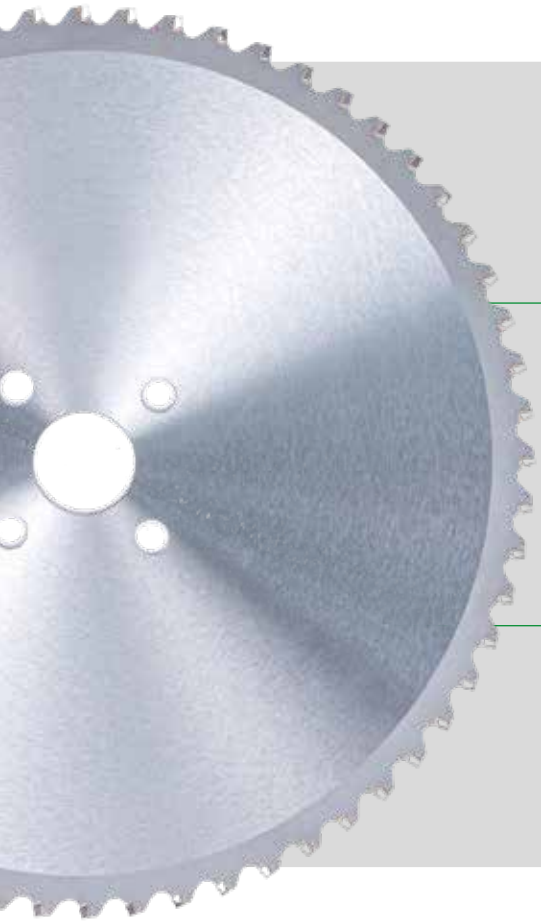
DIAMETER	KERF	B	BORE	TEETH
200	3	2,2	25,4/30	24/36/48/60/80
255	3	2,2	25,4/30	24/36/48/60/80/100
300	3,2	2,2	30	28/36/48/60/72/80/96/100/120
350	3,5	2,5	30	28/36/48/60/72/80/96/100/120
350	4	3,2	60	72/84/96
350	4,4	3,2	60	72/84/96
380	4,4	3,2	60	72/84/96
400	4,4	3,2	60/75	72/84/96
450	4,8	3,5	60/75	72/84/96

COATINGS

SSB on TCT blades to cut stainless steel bars and pipes - HV 2500 - brown
Black Mamba on Cermet tip blades to cut steel bars and pipes - HV 3000 - black
CX on TCT blades for steel pipes - HV 3200 - black

With Black Mamba Coating on Cermet tips blades, you can increase cutting speed from 50% to 100% compared to non-coated blades.

CASE HYSTORY



Machine: Behringer HCS 150
Workpiece: steel 42CrMo4 - diameter 92 mm
Cutting speed: 110 m/s, feed per tooth 0,06 mm
Blades: 360 60 T Cermet + PVD Black Mamba
Blade life: 4500 pieces - 30 mt/sq

Machine: Everising P100ILA
Workpiece: stainless steel AISI 630 - solid bars 81 mm
Cutting speed: 65 m/min feed per tooth 0,05 mm
Blades: 360x2,6/2,25x50 T 60
Competitor: 750 pieces
GMT Black Mamba (traditional coating) 1050 pieces
GMT Caiman - new Taipan coating - 1380 pieces

Machine: Tsune TK160GL
Workpiece: stainless steel AISI 316
Cutting speed: 69 m/s, feed per tooth 0,03 mm
Blades: TCT + PVD SSB 580 T80
Blade life: 30 mt/sq

WARNINGS

IMPORTANT

How long your blade lasts is influenced by the conditions listed below.
If the conditions are not satisfied, blades last for significantly less time and problems can occur.

1) MATERIAL

- The final and initial parts of the bars are often thinner so the vices do not hold them well. This means the workpiece can move, which ruins the blade teeth. When working on the ends, be very careful and cut a part to the longest length possible.
- The piece should always be straight and even.
- The material should be untreated; if hardened, the blade will not last as long.

2) MACHINE

- The machine must be suitable for TCT blades, machines for HSS blades are different.
- The blade brush must work well.
- The lubricant must be suitable.
- The blade locking flanges must be correct and in excellent condition.
- The clamps that hold the piece must not be damaged.
- The closing force of the vices must be suitable.
- The blade guides must be at the correct distance from the blade.
- The jet of lubricant must be positioned correctly.
- The gears must not make strange noises.
- Check the V-belt; if damaged or broken the teeth will chip immediately.

3) OPERATORS MUST MAKE SURE THAT

- The machine conditions are appropriate.
- The work parameters are correct.
- The number of teeth is correct for the material thickness.
- The type of blade is right for the material.
- The material thickness does not change.
- The blade type and specifications are correct.
- The blade finish is within tolerance.
- The teeth are not chipped, damaged or discoloured.

SAFETY FIRST

1. Use appropriate safety equipment

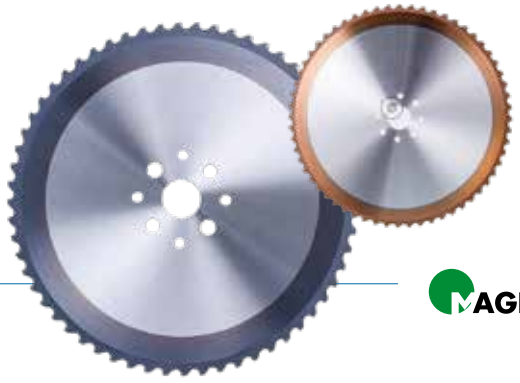
2. Make sure the machine has safety protection

3. Follow the procedures correctly for safe working

CHECKS BY DO TO HAVE GOOD RESULTS

On page 28, check the cutting parameters, on page 29 and 30 the tables for choosing the teeth.

You should always check:
1. the condition of the machinery
2. the cutting parameters
3. data on the material
4. the coolant



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GROUP	TYPE OF MATERIAL	SPECIFICATIONS MATERIAL		LUBRICANT	FEED FOR A TOOTH	SPEED	250	285	315	360	425	460	580
		DIN	AISI	drop/sec	mm/tooth	m/min	RPM	RPM	RPM	RPM	RPM	RPM	RPM
A	Low carbon	C10	1010	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		C15	1015	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		C25	1025	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		15CrMo5	4115	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		20MnCr5	5120	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		25CrMo4	4120	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		20NiCrMo2	8620	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		22Mn6	1524	5-7	0,06-0,07	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
B	Rolled steel	St 37.2	A283	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
C	Medium carbon steel	C35	1035	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		C45	1045	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		C53	1053	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		C55	1055	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		37Cr4	5153	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
		34CrMo4	4135	5-7	0,06	110-125	140-160	120-140	110-130	100-110	80-95	76-86	60-69
D	High carbon steel	40NiCrMo6	4340	5-7	0,05-0,06	110-115	130-150	110-130	100-120	90-100	75-86	69-79	55-63
		41Cr4	5140	5-7	0,05-0,06	110-115	130-150	110-130	100-120	90-100	75-86	69-79	55-63
		42CrMo4	4140	5-7	0,05-0,06	110-115	130-150	110-130	100-120	90-100	75-86	69-79	55-63
		-	1541	5-7	0,05-0,06	110-115	130-150	110-130	100-120	90-100	75-86	69-79	55-63
E	Steel with bearings	100Cr6	52100	5-7	0,04-0,05	100-110	130-140	110-120	100-110	90-100	75-82	69-76	55-63
F	Stainless steel	X8CrNiS18-10	304	1-2	0,03	65	82	72	65	57	49	45	36
		X6CrNi MoT17-12-2	316	1-2	0,03	65	82	72	65	57	49	45	36
		X6Cr13	403	1-2	0,03	65	82	72	65	57	49	45	36
		X6Cr17	430	1-2	0,03	65	82	72	65	57	49	45	36
		-	S17400	1-2	0,03	65	82	72	65	57	49	45	36
Group	Tool steel	DX185CrMoV12	D2	5-7	0,04-0,05	65-70	82	72	65	57	49	45	36

Speed: (3,14xDxN)/1000
D= blade diameter
Total cutting rate in mm/min= Feed for tooth x number of revolutions x number of teeth

SELECTING THE NUMBER OF TEETH FOR PIPES

Thickness of the tube in (mm)

BLADE	250			285					315				360			425			460		
TEETH	72	80	100	72	80	100	120	140	72	80	100	120	80	100	120	80	100	120	80	100	120
PITCH	10.90	9.81	7.85	12.43	11.19	8.95	7.46	6.39	13.74	12.36	9.89	8.24	14.13	11.30	9.42	16.68	13.35	11.12	18.06	14.44	12.04
MAX.	ø 50			ø75					ø 90				ø 100			ø 120			ø 160		
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Thickness of the tube in (mm)

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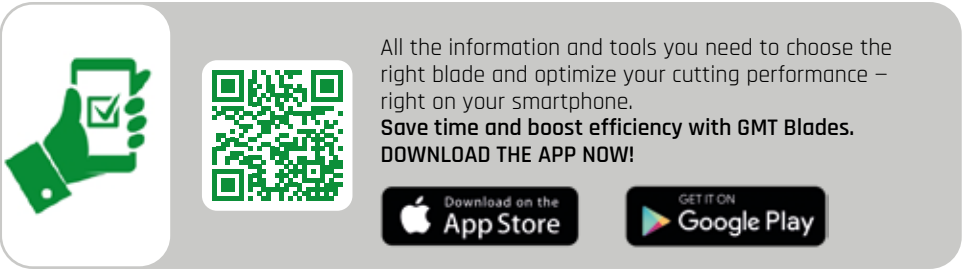
SELECTING THE NUMBER OF TEETH FOR SOLID BARS

BLADE	TEETH	PITCH (MM)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
250	60	13.08					■	■											
	72	10.90				■	■	■	■										
	80	9.81			■	■	■	■	■										
	100	7.85		■	■	■													
285	60	14.92							■	■	■	■							
	72	12.43					■	■	■	■									
	80	11.19				■	■	■	■										
	100	8.95		■	■	■	■												
	120	7.46		■	■														
	140	6.39	■	■															
315	60	16.49								■	■	■	■						
	72	13.74							■	■	■	■							
	80	12.36					■	■	■	■									
	100	9.89				■	■	■	■	■									
	120	8.24		■	■	■	■												
360	60	18.84								■	■	■	■	■	■				
	80	14.13							■	■	■	■	■	■					
	100	11.30				■	■	■	■										
	120	9.42			■	■	■	■											
425	60	22.24											■	■	■	■	■		
	80	16.68								■	■	■	■	■					
	100	13.35						■	■	■	■	■							
	120	11.12				■	■	■	■										
460	40	36.11														■	■	■	■	■	■
	60	24.07											■	■	■	■	■	■	
	80	18.06									■	■	■	■	■				
	100	14.44							■	■	■	■	■						
	120	12.04					■	■	■	■									
580	60	30.35															■	■	■	■	■
	80	22.77												■	■	■	■	■	■
	100	18.21									■	■	■	■	■				
	120	15.18							■	■	■	■	■						
	140	13.01					■	■	■	■									



BLACK MAMBA PRECISION CIRCULAR BLADES

POPULAR MACHINE MODELS AND BLADES MOUNTED

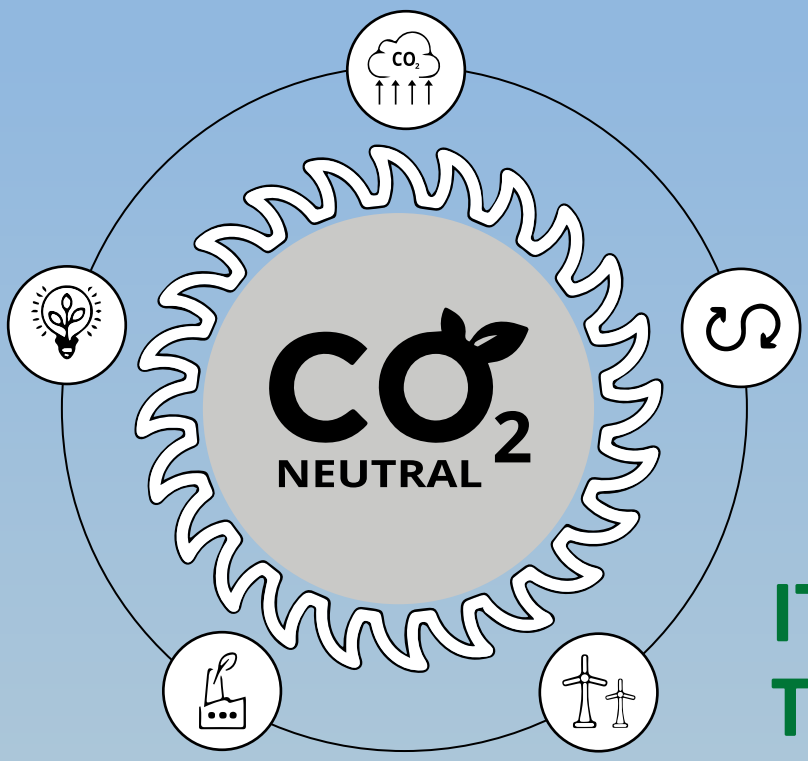
Machine	Mod.	ø [mm]	Thickness		Bore	Driving holes
Adige	CM502 - CM601	360	2,6	2,27	32	4\11\63
Amada	CM75AN	285	2,0	1,75	40	2\12\80
	CM100AN	360	2,6	2,27	40	4\12\90
	CM150AN	460	2,7	2,27	40	4\12\90
Behringer - Eisele	HCS 70	250	2,0	1,75	40	2\15\80
		285	2,0	1,75	40	2\15\80
		315	2,2	1,90	40	2\15\80
	HCS 90	285	2,0	1,75	40	2\15\80
		315	2,2	1,90	40	2\15\80
		360	2,6	2,27	40	2\15\80
	HCS 130	315	2,2	1,90	40	2\15\80
		360	2,6	2,27	40	2\15\80
		420	2,7	2,27	40	2\15\80
	HCS 150	360	2,6	2,27	40	2\15\80
		420	2,7	2,27	40	2\15\80
		460	2,7	2,27	40	2\15\80
Bewo	ECH 108	250	2,0	1,75	40	4\12\64
Delta	P-65A	285	2,0	1,75	40	4\11\80
Everising	P 65 A	250	2,0	1,75	32	4\9\50 + 4\11\63
		285	2,0	1,75	32	4\9\50 + 4\11\63
	P 100 A	360	2,6	2,27	40	4\12\90
	P 150 A	460	2,7	2,27	50	4\12\90
Exact-cut	Mac 60	250	2,0	1,75	32	4\9\50
Ficep	S35	315	2,2	1,90	40	4\15\80
		360	2,6	2,27	40	4\15\80
	S50	460	2,7	2,27	50	4\18\100
Gernetti	SIC 350 K	350	2,6	2,27	40	4\14\80
		360	2,6	2,27	40	4\14\80
	SIC 500	460	2,7	2,27	50	4\18\100
		500	3,4	2,80	50	4\18\100
ITEC	DC-65	285	2,0	1,75	32	4\9\50 + 4\12\80
	DC-85	360	2,6	2,27	40	4\11\63
Kaltenbach	KMR 100	360	2,6	2,27	50	4\15\80
Kasto	WAC7	250	2,0	1,70	32	4\9\50 + 4\11\63
		285	2,0	1,70	32	4\9\50 + 4\11\63
	SPEED C9	250	2,0	1,70	32	4\9\50 + 4\11\63
		285	2,0	1,70	32	4\9\50 + 4\11\63
		315	2,5	2,25	32	4\9\50 + 4\11\63
	VARIOSPEED C14	360	2,6	2,27	50	4\15\80
		425	2,7	2,27	50	4\15\80
	VARIOSPEED C15	425	2,7	2,27	50	4\15\80
		460	2,7	2,27	50	4\15\80
Mega	CS 65	285	2,0	1,75	40	4\12\90
	CS 100	360	2,6	2,27	40	4\12\90
	CS 150	460	2,7	2,27	50	4\12\90
Nishijima - Simax	NHC 050 NA	250	2,0	1,70	32	4\11\63
	NHC 070 NA	285	2,0	1,70	32	4\11\63
	NHC 100 NA	360	2,6	2,27	50	4\16\80
	NHC 150 NA	460	2,7	2,27	50	4\21\90
Rattunde	ACS 90/2 ACS 102	350 - 400	2,6	2,30	50	4\15\80
RSA	RASACUT	285 - 315 - 425	2,0 - 2,2 - 2,7	1,70 - 1,90 - 2,27	40	4\12\64
Sinico	TOP 2000	360 - 370	2,6	2,30	50	4\15\80
Tsune	TK5C 50GL	250	2,0	1,70	32	4\11\63
	TK5C 70GL	285	2,0	1,70	32	4\11\63
	TK5C 101GL	360	2,6	2,30	50	4\14\80

HSS CIRCULAR SAW

Super hard PVD composite coating
High-temperature resistance, low coefficient of friction
Very long service life
Cutting speed: 120 – 220 m/min
Feed per tooth: 0.02 – 0.05 mm

Cutting life: S235 JR steel
Pipes diameter 48 thickness 2.5 mm
10500 cuts.

DIAMETER	KERF	BORE	TEETH
350	2	32/40/50	80/90/110/120/140/160/180/220/280/350
350	2,5	32/40/50	80/90/110/120/140/160/180/220/280/350
400	2	40/50	70/80/90/100/128/140/160/180/200/250/320
400	2,5	40/50	70/80/90/100/128/140/160/180/200/250/320
400	3	40/50	70/80/90/100/128/140/160/180/200/250/320
450	2,5	40/50	80/90/100/120/140/180/240/280
450	3	40/50	80/90/100/120/140/180/240/280
500	3	40/50	90/100/110/130/160/200/260/310
500	3,5	40/50	90/100/110/130/160/200/260/310
550	3,5	40/50	100/110/130/150/180/220/300/360
550	4	40/50	100/110/130/150/180/220/300/360
560	3,5	40/50	100/110/130/150/180/220/300/360
560	4	40/50	100/110/130/150/180/220/300/360
600	3,5	40/50	100/110/130/150/180/220/300/360
600	4	40/50	100/110/130/150/180/220/300/360



100%
SOLAR
ENERGY

**IT IS OUR WORLD,
TAKE CARE OF IT.**

100% SOLAR ENERGY

OUR SOLAR PLANT ON THE FACTORY ROOF PRODUCES 150% OF OUR ENERGY NEEDS.

100% FSC CARDBOARD PACKAGING

M-COOL® SBB 2000
SOLUBLE COOLANT WITHOUT BORON AND BIOCIDES

5 CHARACTERISTICS

The SBB 2000 coolant was designed to improve environmental impact, to protect the health of operators and at the same time to improve cutting speed.
The main characteristics are:
- No boron
- No biocides and no diethanolamine
- Very resistant to attacks even without containing germicide Hexahydrotriazine
- Well tolerated by the skin
- Total absence of components in the risk categories

10 ADVANTAGES OF USING SBB 2000

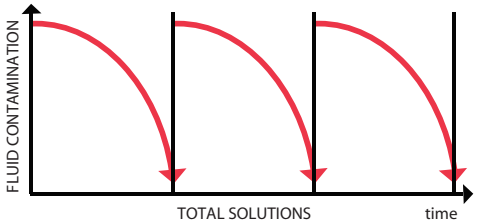
Diluting SBB 2000 to the correct concentration:
- increases machine tool performance
- protects the workpieces and machines from corrosion
- increases blade life
- reduces chemical risks
- reduces disposal costs
- reduces the consumption of coolant
- improves the surface finish of workpieces
- does not stain or ruin materials that are sensitive to alkalinity (aluminium or similar)
- gives a stable product that does not produce foam even if the hardness of the dilution water is different
- reduces the risk of contamination.

PACK SIZES:
COD. 00179904 - 30 LT
COD. 00179898 - 200 LT

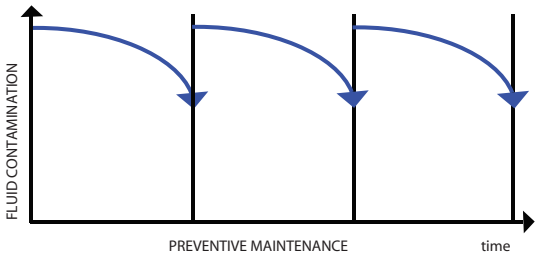
THE SBB COOLANT DOES NOT CONTAIN:

- Boron and its compounds
- Ammine
- Diethanolamine and nitrosamine
- Formaldehyde and its compounds
- Nitrates and similar compounds
- E.P. additives with sulphur, phosphorous or zinc
- Diphenyl and polychlorinated terphenyls

TRADITIONAL MANAGEMENT OF THE EMULSIONS IN THE TANK
(graph A)



preventive maintenance on a single tank
(graph B)



The formulation of SBB 2000 together with the 5 analysis services and preventive maintenance means that the coolant life can be different from traditional management (from graph A- traditional management- to graph B- preventive maintenance).

GX COOL MQL C-AL
SYNTHETIC OIL FOR SPRAY APPLICATION

Description:
GX cool MQL C-Al is a ready for use oil for spray applications (MQL: minimum quantity lubrication).

Application:
GC COOL MQL C-Al is an advanced synthetic oil based formulation enabling superior performance in Near Dry Machining (NDM) applications on ferrous and non-ferrous materials. It works well on large structural beams, small solids and all shapes of aluminium (billets, plates and castings).

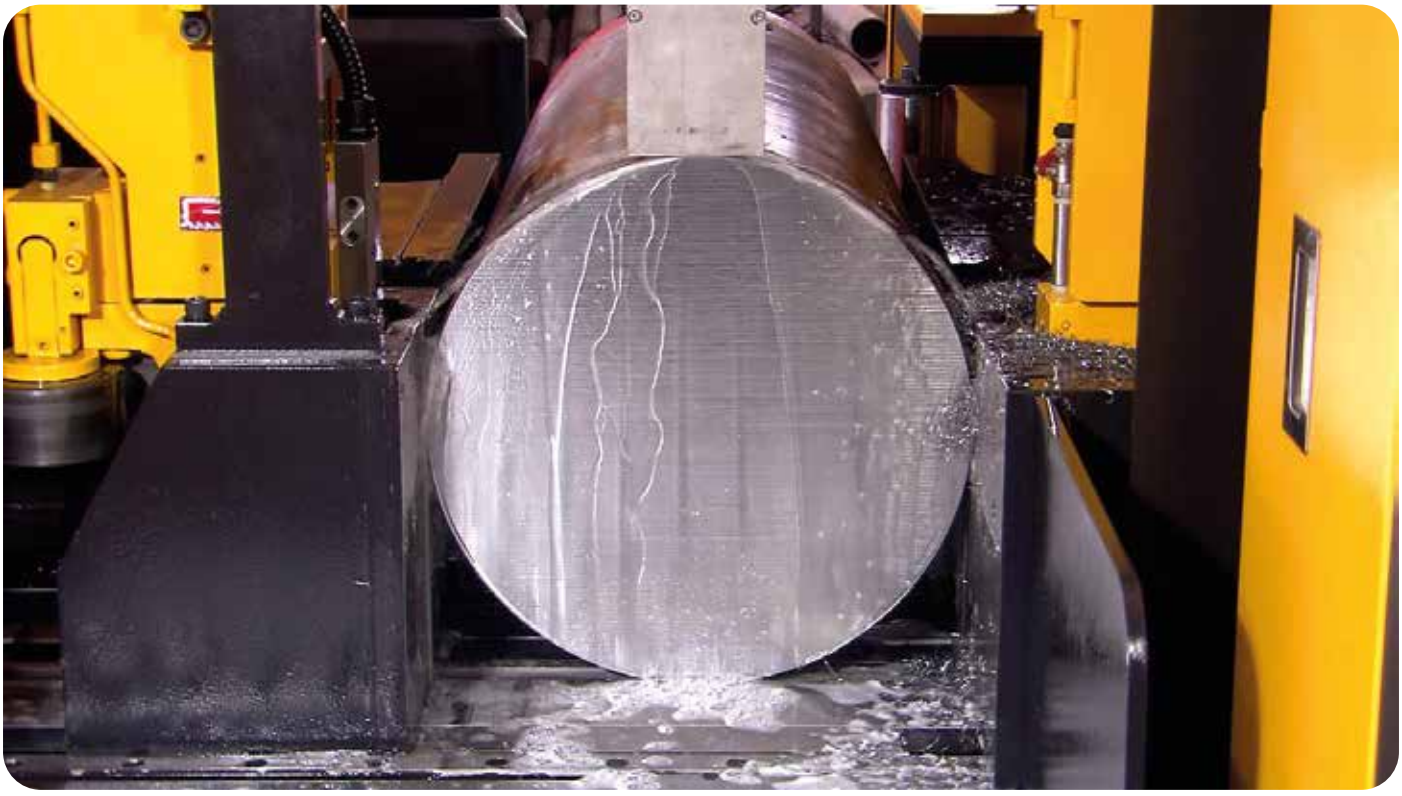
GC Cool MQL C-Al
Extends tool life.
Enables tooth penetration and chip formation which decreases wear on the machine and blades.

Reducing costs:
No disposal costs and minimum usage.

Increase productivity:
Enhances lubrication for higher cutting speeds and feed rates.

Product is ready for use, do not mix with water.
Protect from freezing, direct sun and store between 5 and 35 Celsius.

Cod. 005W - GX COOL MQL C/AL C/Al lube	item1988861	5 L
Cod. 020A - GX COOL MQL C/AL C/Al lube	item1988862	20 L
Cod. 200A - GX COOL MQL C/AL C/Al lube	item1988863	200 L



GMT - the new Italian blades. Advanced technology for cutting metals faster than ever before. Band saw blades and precision circular saw blades for reducing cutting times.

GMT BAND SAW BLADES: HSS teeth are combined with a back made of a special flexible steel alloy to create the best blade for cutting metal. A wide range of available products ensures that you can always obtain the ideal blade for your application.

GMT PRECISION CIRCULAR SAW BLADES: construction technology and cutting-edge projects for the best precision cutting results. With the GMT Black Mamba blades you will cut faster and for longer, increasing productivity and reducing cutting costs. The special grade of cermet and hard metal (TCT) used for the teeth greatly lengthens blade life.

GMT CUTTING OIL: a product designed to be extremely compatible with health and the environment. The "extreme pressure" additives make it extremely effective with most materials and for most operations. Using GMT cutting oil greatly improves cutting results, and lengthens the life of blades and machines.

BIMETAL BAND SAW BLADES

TCT & CERMET / HSS PRECISION CIRCULAR SAW BLADES

CUTTING OIL

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MAGNABOSCO INDUSTRIE

GMT Blades: our team of engineers and technical salespeople

WE ARE HERE TO SIMPLIFY THE WORK OF OUR CUSTOMERS

Value
working to create value
for customers and our company,
to ensure prosperity and development.

Knowledge
we invest every day to improve and increase
our knowledge, to always find new solutions
that simplify the work for our customers.

Respect
for the others, for diversity,
for opinions, for talents. There can be no harmony
and progress without respect.

Optimism
openness to the future, drive towards
improvement and achievement of objectives
with the awareness of our abilities.

Taking care
of customer needs, care of relationships, care of people,
society, the environment, of ourselves, with the aim of producing
an improvement every day.

Trust
in partners, customers, our colleagues and our capabilities, in tomorrow and progress. Trust is the foundation of any solid relationship.

Collaboration
and sharing are needed to work in the right way throughout the value creation process.

Understanding
of needs, opinions, necessities.

Passion
and curiosity for their work, for customers, for relationships, so as to take a step forward every day.

Growth
through the enhancement of everyone's talents as an expression of an effective and solid team.

Making each process easier, sharing experience and solutions. This is our mission. Our team is at your side to achieve these goals and always find new ways.

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CIRCULAR BLADES

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Save time and boost efficiency with GMT Blades.
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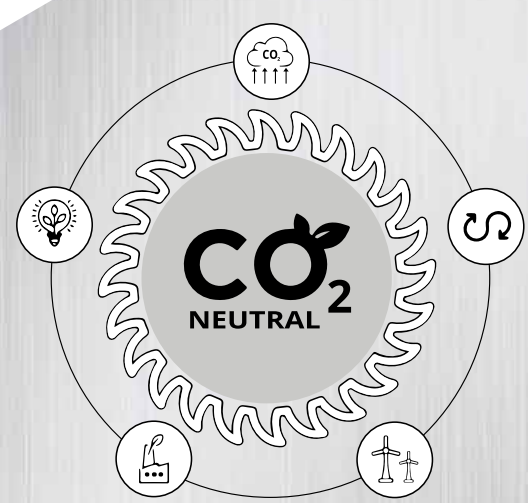

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