GMT TECHNOLOGIES FOR CUTTING

GMT BAND SAW BLADES

GMT X

GMT BLACK MAMBA

GMT CUTTING TOOLS

E=M³

GMT BLACK ALU MAMBA

MAGNABOSCO INDUSTRIE

BI METAL AND CARBIDE BAND SAW BLADES

TCT CERMET PCD PRECISION CIRCULAR SAW BLADES

CUTTING OIL

WWW.MCUBE.TECH
2022

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.

www.mcube.tech

GMT blades is a Magnabosco Guido Srl registered brand
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36071 Arzignano (Vi) – Italia
Customer Service
+39 0444 450404
info@magnabosco.it

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 performances from your blade. Call our technical service for advice.

STEP #5: DETERMINE IF **ONDA** 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 **ONDA** Tech at +39 04444504[illegible]

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

Ask for our band saw blade guide or for consultancy on www.mcube.tech

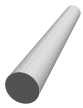
SELECTING TEETH FOR BIMETAL BLADES

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 DIAMETER																							
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)

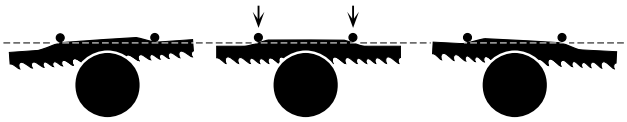
PIPES-PROFILES Find the wall thickness (T)

WALL 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	
TPI	14/18	10/14	8/12	6/10	6/8 5/8	4/6			3/4					2/3		

STACK CUTTING:

Fnd the tooth that is recommended f
or the section ofthe 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.

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 **ONDA** Tech profile can improve your cutting.

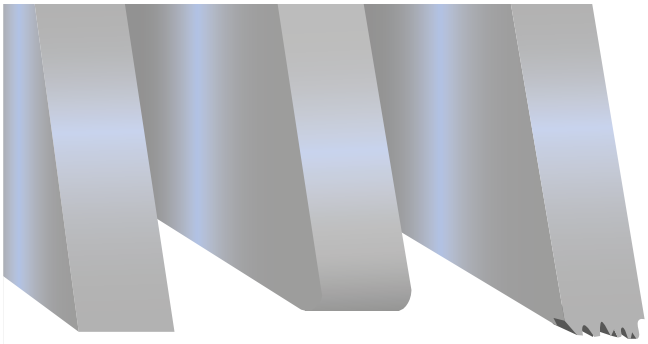


How to guarantee that your new blades last longer

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

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
GMT X Ultra™			GMT X Ultra™ LONG-TERM					
					GMT X Ultra M51® & M71™			
	GMT X Ultra Pro™							
	GMT X Pro® Pro HS®							
GMT X Ultra™ Long Life. Extremely Versatile						GMT X™		
UNIVERSAL CUT								
GMT X®						GMT X®		

ATTENTION: WE CAN GIVE YOU INFORMATION ABOUT OTHER CUTS THAT ARE NOT IN THIS TABLE.
CALL THE TECHNICAL SERVICE AT +390444450404, OR GO TO WWW.MCUBE.TECH

Inconel® is a Huntington Alloys Corp. trademark

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

YOU CUT STEEL
WE CUT COSTS

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

MACHINE DIAGNOSIS
13 Check points

MACHINE TIME OPTIMISATION
Reduction of downtime

OPERATOR TRAINING

PRODUCTIVITY detailed report on the parameters and expedients to be implemented

SOLUTIONS
sustainable and continual for effective cost reduction

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

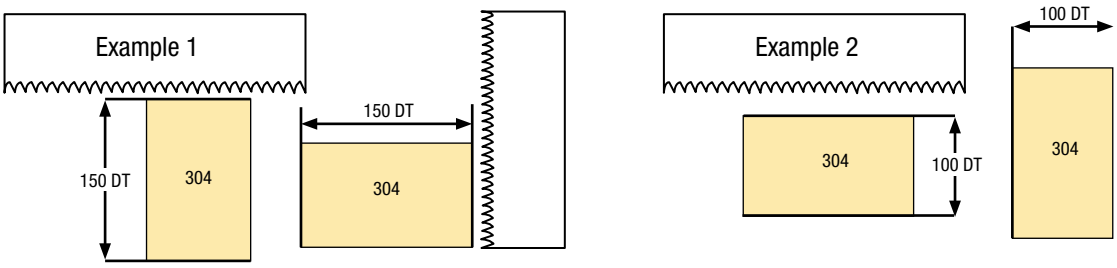
(contact surface 150 cutting speed reduced by 10%)

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

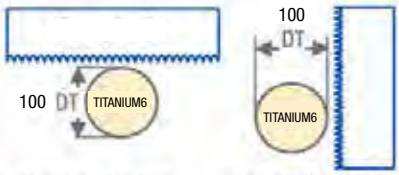
(3 minutes and 45 seconds)



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

Example 3

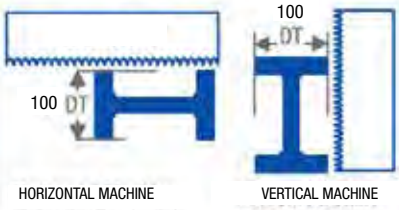
Diameter 100 mm titanium 6, speed 20 m/min
recommended tooth pitch 3/4 - MR = 1,215
20 x 1,215 = 24,3
100/24,3 = 4,11 minutes (4 minutes and 7 seconds) cutting time



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

Example 4

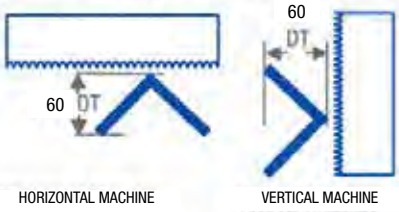
A36 larghezza 100 mm speed 75 m/min
recommended tooth pitch 3/4 - MR 1,215
75 x1,25 = 93,75
100/93,75 = 1,06 minutes (1 minute and 1 second) cutting time



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).

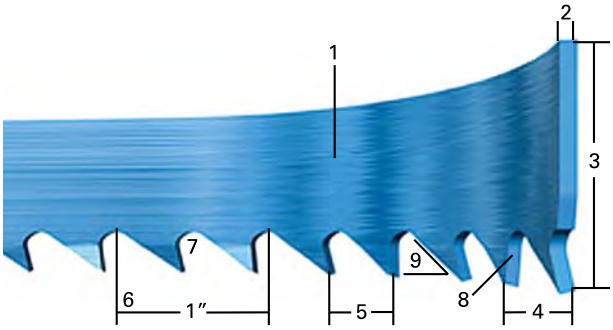
6. TOOTH PITCH - the distance between the tip of one tooth and the tip of the next.

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

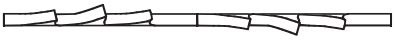
POSITIVE VARIABLE
- Gentle cut
- Reduced noise
- More effective
- Cut increases blade duration

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

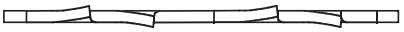
STANDARD
- Deep gullet
- Equidistant teeth
- Wide range of applications

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 B lade twisted into a figure “8”		●				●	●	●	●	●	●	
#19 Blade broken with torsion along the length		●				●	●	●	●	●	●	
#20 Heavy wear only in the smallest gullets	●					●						●

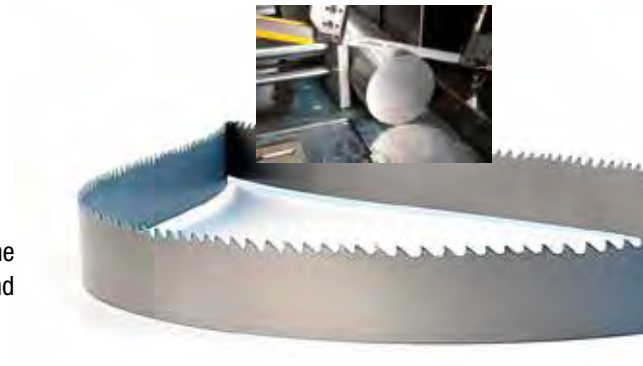
BI-METAL BAND SAW BLADES

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
Low-alloy steel
Mould steel
Tool steel
Stainless steel

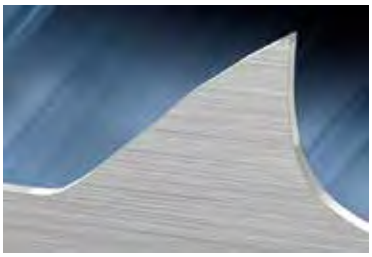
Use our Kaizen service to optimise your cutting processes.

ONDA 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.

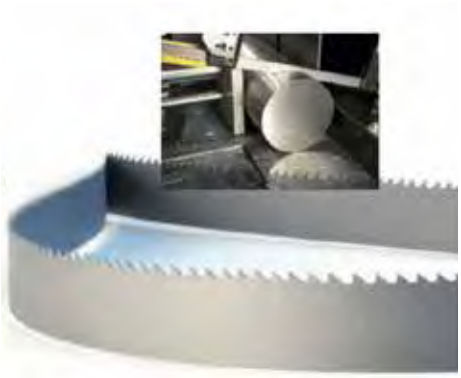
ULTRA FLEXIBLE
A new tooth shape that is extremely efficient with a multitude of materials from aluminium to stainless steel, to alloy steel.

ONDA TECH POWER TECHNOLOGY LASER T-TECH V NEXT

MATERIALS
aluminium, carbon steel, mould steel, tool steel, structural steel, stainless steel, alloy steel

HEIGHT X THICKNESS	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	●	●								

BIMETAL BAND SAW BLADES M42S HSS
GMT XHS



Long lasting blades, extremely fast

LONG LASTING, FAST CUTTING
Ideal for full sections of materials of average and difficult workability
The special steel of the back guarantees greater resistance to wear

DEEPER PENETRATION WITH SLOWER CUTTING RATE
Thanks to the strongly positive geometry of the tooth

BETTER CUTTING PERFORMANCES
The special design of the very deep gullets make chip removal more efficient

RAKE HEAVY SET
Heavy set consente prestazioni elevate su materiali difficili e tensionati

MATERIALS

Aluminium and non-ferrous
Carbon steel
Alloy steel
Bearing steel
Mould steel
Stainless steel
Tool steel

HEIGHT X THICKNESS	2/3	3/4	4/6	5/7
27 x 0,9	●	●	●	●
34 x 1,1	●	●	●	●
41 x 1,3	●	●	●	●
54 x 1,6	●	●	●	

BIMETAL BAND SAW BLADES M42 HSS
GMT X HS PRO

Designed to cut profiles, pipes, and for stack cutting

LONG BLADE LIFE AND OUTSTANDING TOOTH LIFE
The reinforced and patented tooth profile resists stripping and blows, even with fast cutting rates.

SOFT CUTS AND REDUCED VIBRATIONS
With perfect optimisation of the tooth sequence.

MATERIALS

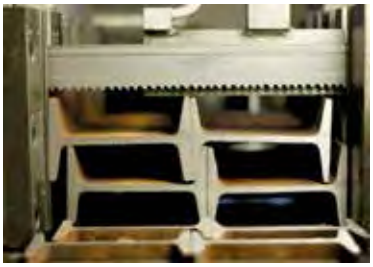
Carbon steel
Structural steel
Stainless steel
Special steel

HEIGHT X THICKNESS	TPI				
	2/3	3/4	4/6	5/7	8/11
19 x 0,9				●	●
27 x 0,9	●	●	●	●	●
34 x 1,1	●	●	●	●	
41 x 1,3	●	●	●	●	

REINFORCED TOOTH PROFILE
FOR OUTSTANDING LIFE

NEW SPECIAL SET DESIGNED EVEN
FOR MANUAL, SEMI-AUTOMATIC,
OR FREE FALL MACHINES

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 stack 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 blows 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.

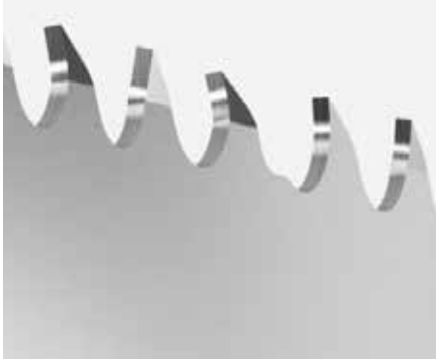
ONDA TECH POWER TECHNOLOGY LASER T-TECH V NEXT

HEIGHT X 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	●	●			

MATERIALS

Aluminium, carbon steel,
mould steel, tool steel,
structural steel, stainless steel,
alloy steel

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



STRAIGHT CUTTING OF LARGE SECTIONS AND DIFFICULT MATERIAL

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

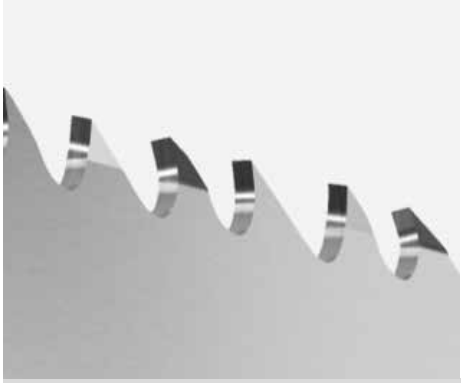
A Q-type version of the same blade is available with a hyper positive rake angle of 17°, particularly suited to stainless steel

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 68X HM GMT 81Q HM

DIAMETER OR THICKNESS TO CUT														
INCHES	1	2	3	4	5	6	7	8	10	11	14	16	18	20+
MM	25	50	75	100	125	15p0	175	200	250	275	350	400	450	500+
									0,9/1,1					
								1,0/1,4						
						1,4/2,0								
	2/3													
	3/4													

SELECTING BLADE

HIGH PERFORMANCE

ALUMINIUM/ NON-FERROUS	CARBON STEEL	CONSTRUCTION STEEL	STEEL ALLOYS	BEARING STEEL	MOULD STEEL	STAINLESS STEEL	TOOL STEEL	TITANIUM	NICKEL ALLOYS (INCONEL')
EASY <---------- MACHINABILITY ----------> DIFFICULT									
	GMT 68X	TRIPLE CHIP	GMT 81X MULTI CHIP						

CUTTING SPEED mt/min for CARBIDE BAND SAW BLADES						
MATERIALS	DIAMETER	10-65 mm	100-300 mm	400-800 mm	> 1000 mm	COOLANT
ALUMINIUM				250	250	25%
COPPER		240	220	130-190	100-120	15%
BRASS		250	250	180-240	140-160	4%
CAST IRON		90-105	90-95	60-75	40-55	12%
COSTRUCTION STEEL		200	160-190	110-150	60-90	12%
MOULD STEEL		120-130	110-120	75-110	40-60	10%
BEARING STEEL		100-120	90-100	69-90	40-50	10%
TOLL STEEL		80-100	60-90	69-75	50-60	8%
HARDENING STEEL		75-85	70-80	60-70	45-60	8%
STAINLESS STEEL		80-100	70-90	60-80	40-60	12%
DUPLEX		100-115	80-100	65-80	50-60	12%
NICKEL ALLOYS		30-40	25-30	20-28	15-20	12%
TITANIUM		50-60	40-50	35-45	16-18	12%

Carbide band saw blades

GMT 68X HM

General purpose blade, perfect for cutting of a wide variety of materials

High performance, excellent fatigue life.

Precision triple chip grind, smooth cuts, excellent finish.

Use our "Kaizen service" to optimize your cutting process.

width x thickness mm		TPI				
		0,7/1,1	1/1,25	1,4/2	.2/3	.3/4
2,7 x 0,9						●
34 x 1,1					●	●
41 x 1,3				●	●	●
54 x 1,6			●	●	●	●
67 x 1,6		●	●	●	●	
80 x 1,6		●	●			

GMT 81Q HM

MULTICHIP - NO PICHING

Straight Cuts:
set styles tooth pattern eliminates pinching.
Long Blade Life:
high grade carbide teeth, precision grinding, high performance backing steel.
Excellent to cut high strenght steels, titanium, Nickel alloys

Use our "Kaizen service" to optimize your cutting process.

width x thickness mm		TPI			
		0,7/1,1	1/1,25	1,4/2	.2/3
34 x 1,1					●
41 x 1,3				●	●
54 x 1,6			●	●	●
67 x 1,6		●	●	●	●
80 x 1,6		●	●		

Precision Circular Blades

CERMET, CERMET+PVD, TCT+PVD, TCT, PCD.

TO CUT FASTER AND LONGER PIPES AND SOLID BARS.

STEEL, STEEL ALLOYS ,STAINLESS STEEL, ALUMINIUM, BRASS, COPPER, BRONZE

BLACK MAMBA PRECISION CIRCULAR BLADES

GMT BLACK MAMBA PRECISION CIRCULAR SAW BLADES OF CERMET, TCT + PVD FOR STEELS				
diameter	calibre	body	hole	number of teeth
225	1,5	1,30	32	72 - 80
250	1,5	1,30	32	60 - 72
250	1,7	1,50	32-40	60 - 72 - 80
250	2,0	1,70	32-40	54 - 60 - 72 - 80 - 100
250	2,0	1,75	32-40	54 - 60 - 72 - 80 - 100
275	1,8	1,50	32-40	60 - 72 - 80
285	2,0	1,70	32-40	54 - 60 - 72 - 80 - 100 - 110 -120 -140
285	2,0	1,75	32-40	54 - 60 - 72 - 80 - 100 - 110 -120 -140
285	2,6	2,25	32-40	110 -120
300	2,0	1,70	32-40	80 - 90- 100 - 120
300	2,0	1,75	32-40	80 - 90- 100 - 120
315	2,0	1,70	32	60 - 64 - 72 - 110
315	2,3	2,00	32-40-50	48 - 50 - 54 -60 - 72 - 80 - 90 - 100 - 110 - 120 - 140
315	2,5	2,25	32-40-50	48 - 50 - 54 -60 - 72 - 80 - 90 - 100 - 110 - 120 - 140
315	2,6	2,25	32-40-50	60 - 80 - 90 - 100 - 110 - 120
335	2,6	2,25	32-40-50	60 - 72 - 80 - 96
350	2,0	1,70	32-40-50	54
350	2,2	2,00	32-40-50	120
350	2,5	2,25	32-40-50	60 - 70 - 76 - 80 - 90 - 100 - 110 - 120 - 130 - 144 - 150
350	2,6	2,25	32-40-50	60 - 70 - 76 - 80 - 90 - 100 - 110 - 120 - 130 - 144 - 150
350	2,7	2,25	32-40-50	60 - 70 - 76 - 80 - 90 - 100 - 110 - 120 - 130 - 144 - 150
360	2,6	2,25	40-50	40 - 50 - 60 - 72 - 80 - 90 - 100 - 110 - 120
360	2,6	2,30	40-50	40 - 50 - 60 - 72 - 80 - 90 - 100 - 110 - 120
370	2,6	2,25	32-40-50	80 - 100
400	2,0	1,70	32-40-50	100
400	2,6	2,25	32-40-50	60 - 80 - 100 - 120 - 140 - 150 - 160
400	3,4	2,80	32-40-50	80
420	2,6	2,25	32-40-50	50 - 60 - 72 - 80 - 90 - 100 - 120 - 140
425	2,7	2,30	32-40-50	50 - 60 - 72 - 80 - 90 - 100 - 120 - 140
425	4,0	3,50	32-40-50	100 - 110
430	2,6	2,30	32-40-50	80
440	3,4	3,00	32-40-50	130 - 148
450	2,7	2,25	32-40-50	100 - 110 - 120 - 128 - 140 - 160
450	2,7	2,27	32-40-50	100 - 110 - 120 - 128 - 140 - 160
450	2,7	2,30	32-40-50	100 - 110 - 120 - 128 - 140 - 160
450	6,0	5,00	32-40-50	50
460	2,7	2,25	32-40-50	40 - 50 - 60 - 70 - 72 - 80 - 90 - 100 - 120 - 140 - 150 - 160 - 180
460	2,7	2,30	32-40-50	40 - 50 - 60 - 70 - 72 - 80 - 90 - 100 - 120 - 140 - 150 - 160 - 180
460	3,2	2,25	32-40-50	50 - 60 - 70 - 80 - 90
460	3,2	2,80	32-40-50	140 - 160
480	2,7	2,25	32-40-50	60 - 80 - 90 - 100 - 110 - 120
480	3,0	2,30	32-40-50	60
500	2,7	2,25	50	50 - 60 - 80 - 100 - 144 - 160 - 168 - 170
500	2,7	2,27	50	50 - 60 - 80 - 100 - 144 - 160 - 168 - 170
500	2,8	2,50	50	60
500	3,4	2,80	50	90

BLACK MAMBA precision circular blades Cermet - TCT

500	3,5	3,00	50	140
500	3,6	3,20	50	140
500	8,0	6,00	90	40
520	3,0	2,27	50	50 - 60 - 80
520	3,4	2,80	50	50 - 60 - 80
550	3,8	3,30	90 - 140	140 - 160
550	4,0	3,35	140	160
550	4,0	3,50	140	140
560	3,5	3,00	90	170 - 180
580	3,2	2,70	80	60 - 70 - 80 - 100
580	3,2	2,80	80	60 - 70 - 80 - 100
600	5,0	4,5	50	100 -120
630	3,2	2,70	80	60 - 80 - 100
630	5,0	4,5	50	100 - 120
660	3,5	3,0	80	42 - 50
660	3,8	3,20	80	50 - 80 - 100 - 120
660	4,0	3,50	80	80
750	3,8	3,20		80 - 100 - 120

GMT

BLACK MAMBA

What kind of tooth for what kind of material

CERMET for steel and steel alloys
> 750 N/mm

CERMET+PVD for the same materials but to cut faster with longer life

TCT+PVD for stainless steel and steel
< 750 N/mm

TCT for aluminium, brass, copper

PCD for cutting aluminium at very high speed

FLYNG CUT OFF and Orbital cutting machine for steel pipes.

Single, twin or multiple blades

GMT BLACK MAMBA Flying cut-off pipes

DIAMETER	THICKNESS	HOLE	NUMBER OF TEETH
350	3,6/2,6	50	110
400	3,6/2,6	50	140
450	3,6/2,6	50	150
500	3,6/2,6	50	160
560	3,6/2,6	50/140	170

FLYING CUT OFF PIPES from 400 to 600 mm diameter.
Speed: 450 mt/min
Feed: 0,04 mm/tooth

GMT BLACK MAMBA Flyng Cut off internal scarfing pipes

DIAMETER	THICKNESS	HOLE	NUMBER OF TEETHI
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

Flying cut off . single or twin blades on pipe production line.
Speed: 200 - 600 mt/min
High speed and burr-free cuts.

GMT BLACK MAMBA orbital cutting machine

DIAMETER	THICKNESS	HOLE	NUMBER OF TEETHI
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

Single, twin or multiple blades for orbital cutting, from 320 to 400 mm diameter.
Speed: 350-400 mt/min
Feed: 0,04-0,12 mm/T

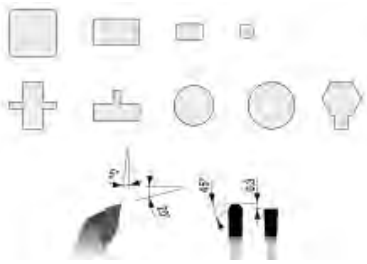
GMT

ALU BLACKMAMBA

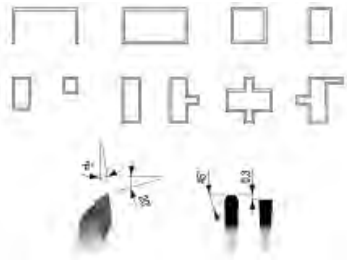
LOW NOISE PRECISION BLADES FOR ALUMINIUM

TCT CARBIDE TEETH for aluminium, brass, copper
PCD polycrystalline synthetic diamond for extreme cutting speed and life

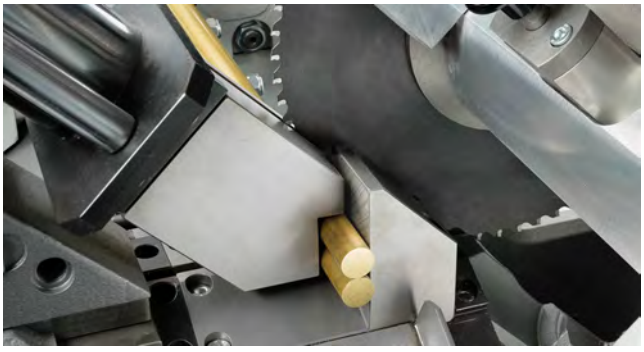
DIAMETER	THICKNESS	HOLE	NUMBER OF TEETH	PIN HOLES
200	3,2/2,5	20-30	48-64	02/11/63
250	3,4/2,6	30-32	60-80-100	02/11/63
300	3,4/2,6	30-32	72-84-96	02/11/63
350	3,4/2,6	30-32	84-96-108	02/11/63
400	4/3,2	30-32	96-108-120	02/11/63
450	4/3,2	30-32	96-108-128	02/11/63
500	4/3,2	30-32	108-120-140	02/11/63
550	4,6/3,6	30-32	120-140-172	02/11/63
600	4,6/3,6	30-32	120-140-172	02/11/63
650	4,6/3,6	30-32	120-140-172	02/11/63

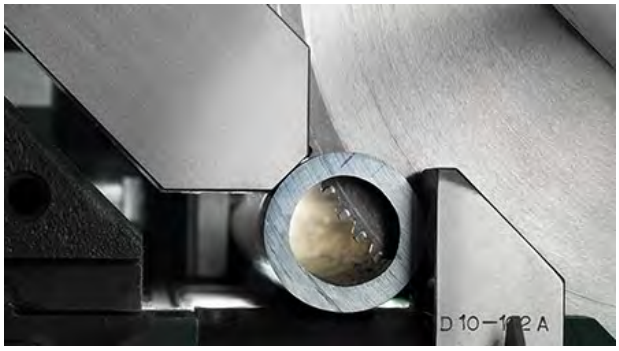


positive tooth



negative tooth





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 K	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

Group	Type of material	Specifications Material			Av for a tooth	Speed	250	285	315	360	425	460	580
		DIN	AISI	drops/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
		X6CrNiMoT17-12-2	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

N= revolutions per minute

Total cutting rate in mm/min= Cutting rate per tooth x number of revolutions x number of teeth

If You use blade Cemet + PVD
cutting steel with tensile strenght up to 900N/mm
cutting speed 100/280 M/min feed 0,06/0,1 mm/tooth
cutting steel with tensile strenght over 900 N/mm
cutting speed 60/140 M/min
feed 0,05/0,09 mm/tooth

WORK PARAMETERS

IMPORTANT

How long your blade lasts is influenced by the conditions listed below.
If the conditions are not satisfied, blades last for notably 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.

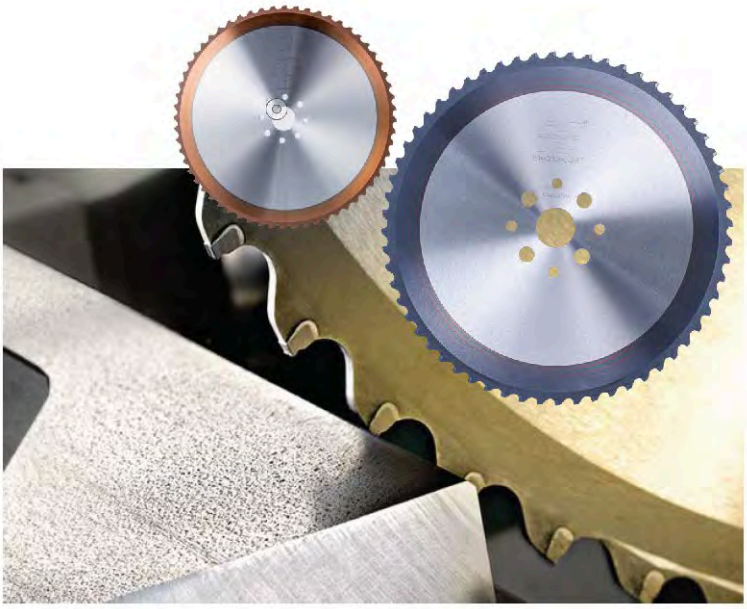
3) Operators must make sure that

- 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 in tolerance.
- the teeth are not chipped, damaged or discoloured.

CHECKS TO DO TO HAVE GOOD RESULTS

On page 25 cutting parameters,
On page 27 and 28 selecting teeth

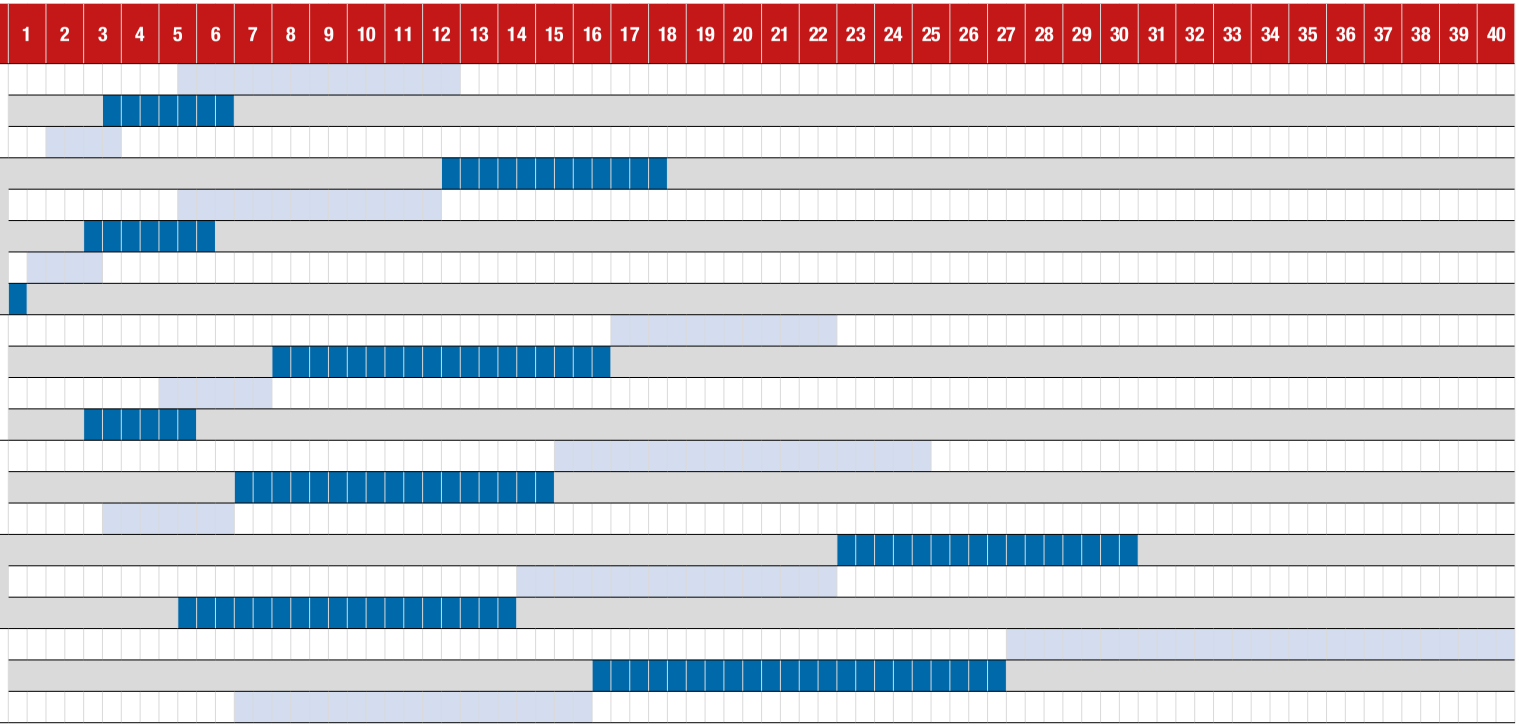
Before the operations check always:
1. conditions of machine
2. cutting parameters
3. material
4. lubrication



BLACK MAMBA

Thickness of the tube in (mm)

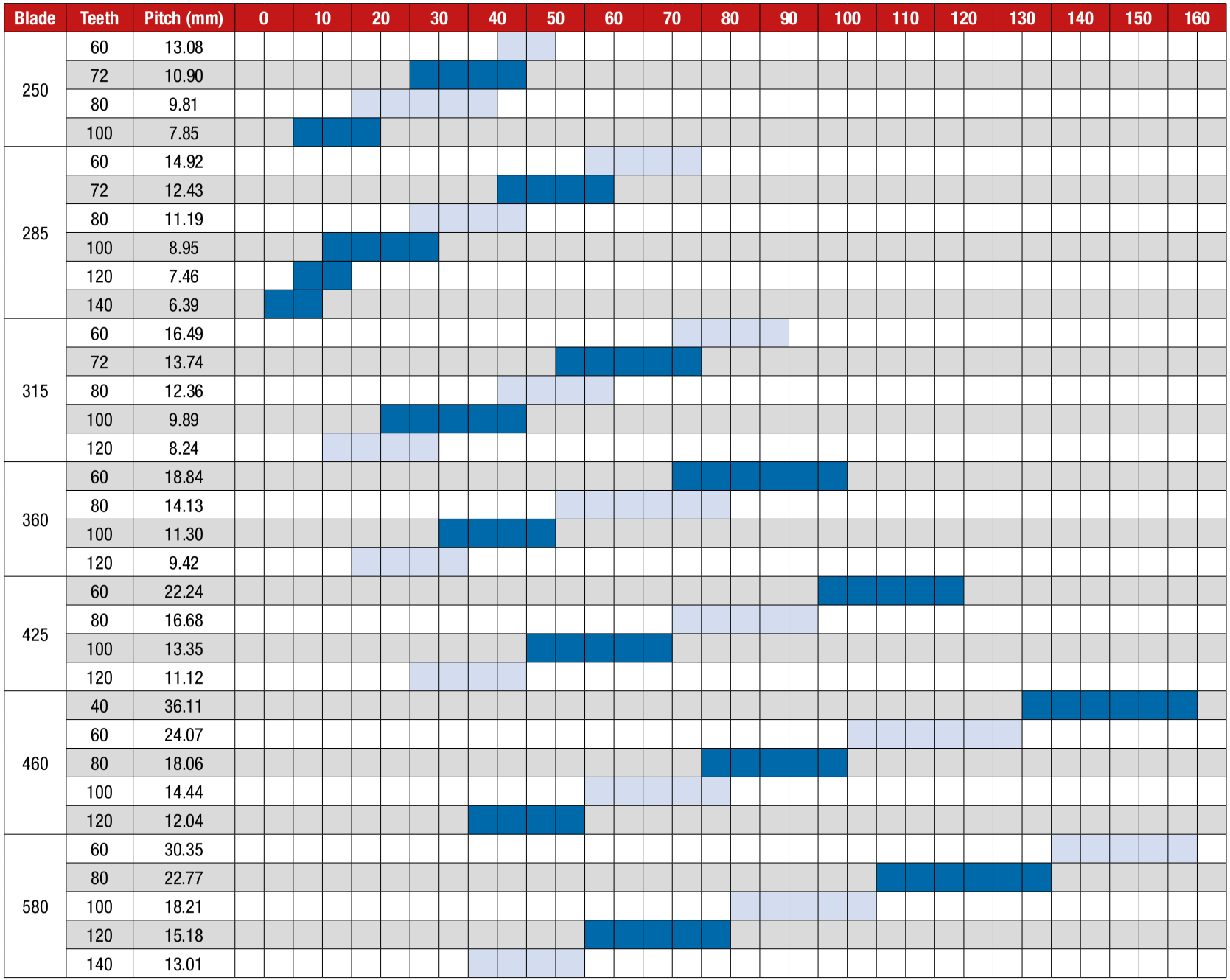
Blade	Teeth	Pitch (mm)	max. diameter
250	72	10.90	ø 50
	80	9.81	
	100	7.85	
285	72	12.43	ø 75
	80	11.19	
	100	8.95	
	120	7.46	
	140	6.39	
315	72	13.74	ø 90
	80	12.36	
	100	9.89	
	120	8.24	
360	80	14.13	ø 100
	100	11.30	
	120	9.42	
425	80	16.68	ø 120
	100	13.35	
	120	11.12	
460	80	18.06	ø 160
	100	14.44	
	120	12.04	



For material resistance > 800N/mm2 and Speed >200m/min use CERMET
For material resistance < 800N/mm2 and Speed <200m/min use TCT+PVD

SELECTING THE NUMBER OF TEETH FOR PIPES

SELECTING THE NUMBER OF TEETH FOR SOLID BARS



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

5 CHARACTERISTICS
The SBB 2000 coolant was studied 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 germicides Hexahydrotriazine
- Well tolerated by the skin
- Total absence of components in the risk categories

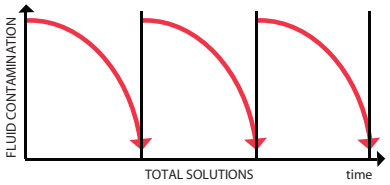
10 ADVANTAGES OF USING SBB 2000
Diluting to the correct concentration sub 2000:
- increases machine tool performances
- protects the pieces and machines from corrosion
- increases blade duration
- reduces chemical risks
- reduces disposal costs
- reduces the consumption of coolant
- improves the surface finish of pieces
- 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 diluting water is different
- reduces the risk of contamination.

PACK SIZES:
CODICE 00179904 - 30 LT
CODICE 00179898 - 200 LT

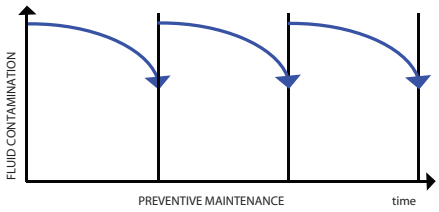
The SBB coolant does not contain:

- 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 mean that the coolant duration can be different from traditional management (from graph A- traditional management- to graph B- preventive maintenance).

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.

GMT

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