PRESENTATION

GLG, is acompany established in Barcelona in 1963. At that time their founders had already a great experience in the manufacturing of cutting tools. During the period of 1963/1973 **GLG** manufactured all types of cutting tools and their sales were exclusively destinated to the domestic market.

Since 1973 we specialised in the manufacturing of circular sawblades and started to export to the majority of the European countries.

Since 1989 and because of continuous investments in machinery, we more diversified our sales and expanded to the rest of the continents keeping actually these dinamics and being our trademark wellknown on all these markets.

With the edition of this catalogue we pretend to facilitate the most complete information to support our **CUSTOMERS** and **COLLABORATORS**.

PRESENTATION

Our constant dedication to investigate the needs of the market made us develop new cutting geometries and to offer the newest surface treatments (TiN, TiCN, TinAl, TinCr) as well as the traditional **ANTIFRIC** and **NITROVAP**.

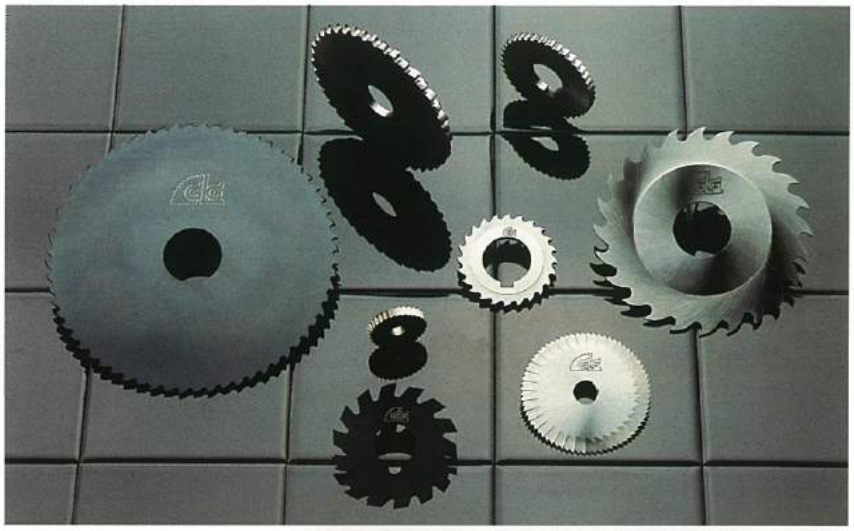
Our manufacturing process starts with:

- Raw material reception and control according to **OUR** standards.
- Perfect application of heat treatment and metallographic control.
- Manufacturing with most moderm **CNC** machinery.
- Final control of all sawblades leaving our factory.

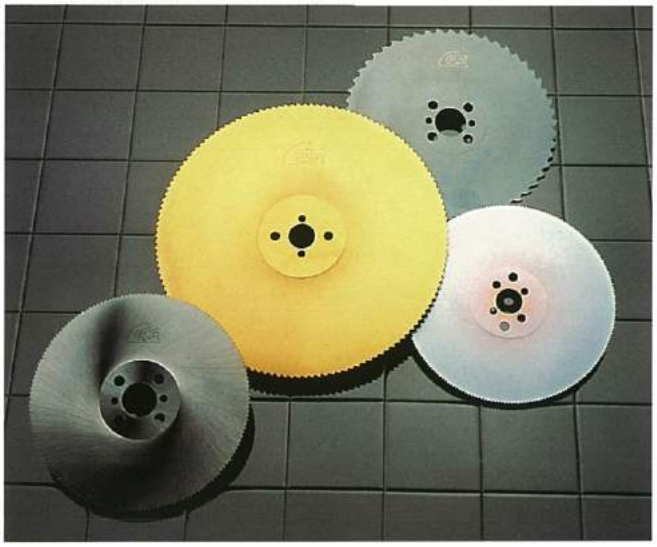
As consequence to above **THE QUALITY** and **HIGH PERFORMANCE** of the product guarantees the great **RELIABILITY** of our **SAWBLADES**.

PRODUCTION RANGE

DIN SAWBLADES AND SPECIAL

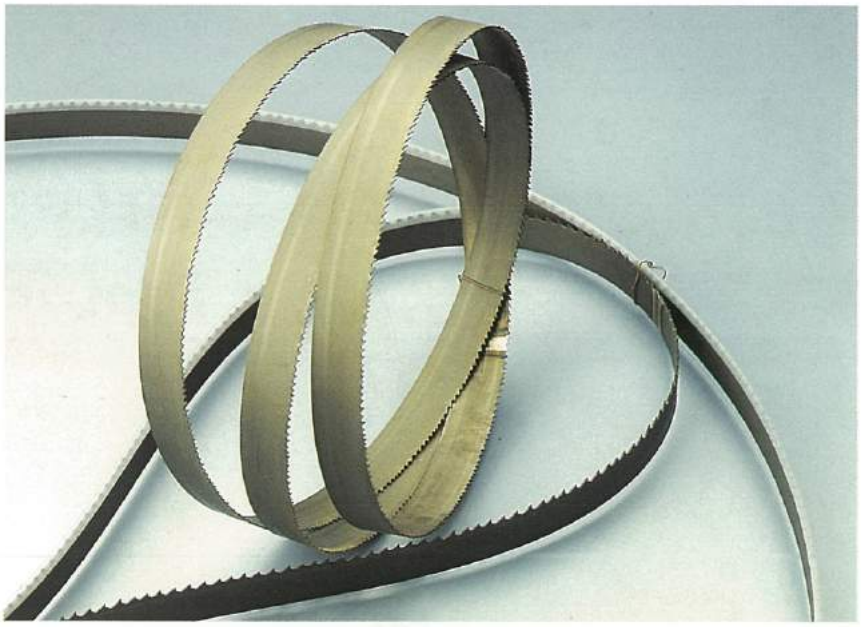


SAWBLADES FOR CUT OFF MACHINES

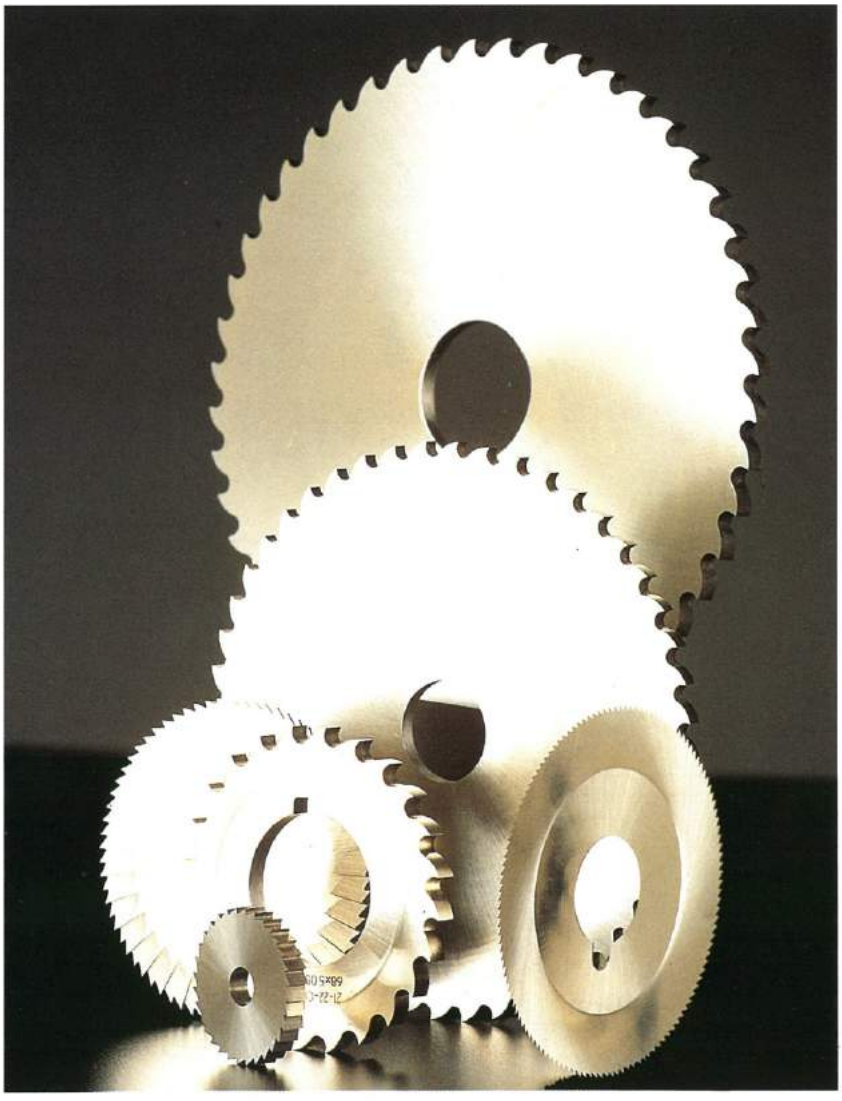


SAWBLADES SOLID CARBIDE K10

BANDSAWS



CIRCULAR SAWBLADES DIN AND CUT OFF



HSS - DMo5

HSS/E - EMo5 Co5

SOLID CARBIDE

STEEL QUALITIES

HSS • M2 • DMo5 • DIN 1.3343

COMPOSITION: 0,9 • C 4,2 Cr • 5 Mo • 6,4 W • 1,8 V

This is a Wolfram - molybdenum high stell. These elements confer the steel very high technical characteristics maintaining an excellent tenacity.

The molybdenum confers the property of reducing the fragility permitting the formation of a very fine martensitic grain, increasing as well the limit of elasticity, which allows a great cutting performance. The Wolfram is an excellent former of very hard carbides, giving the sawblades great tenacity and rensible strenght and higt temperature resistence improving the cutting capacity. The Vanadium contributes to the formation of hard carbides that improve the wear out resistance.

HSSE • M35 • EMo5 Co 5 • DIN 13243

COMPOSITION: 0,93 C • 4,2 Cr • 5 Mo • 6,4 W • 5 Co • 2 V

This is a Wolfram - molybdenum - cobalt high speed steel. The difference to **HSS-DMo5** is the contents of 5% cobalt.

The cobalt contributes to give a good cutting tenacity and long lifetime, especially when used in high temperatures.

These characteristics are important, as they permit to recommend this steel to cut **INOX** and materials of high mechanic resistance that during the cutting process produce high temperature in the contact area.

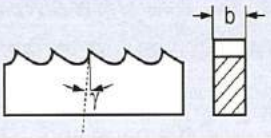
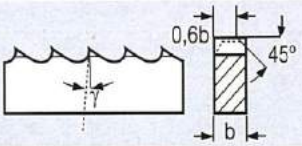
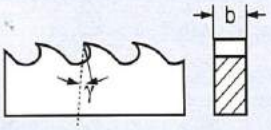
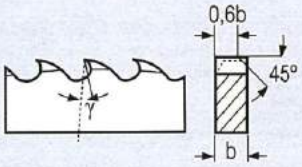
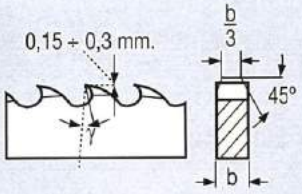
K 10 SOLID CARBIDE

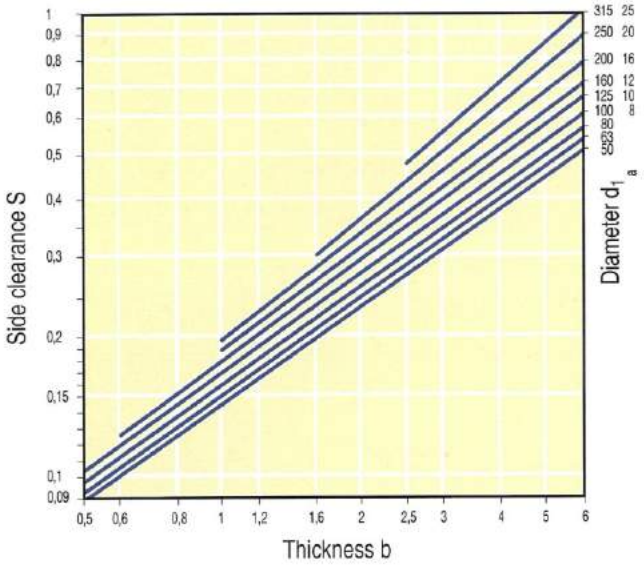
The carbide used for the manufacturing of sawblades is **K** 10 and we manufacture up to diameter 160. These blades are used to cut difficult materials or as well to increase the tool's lifetime.

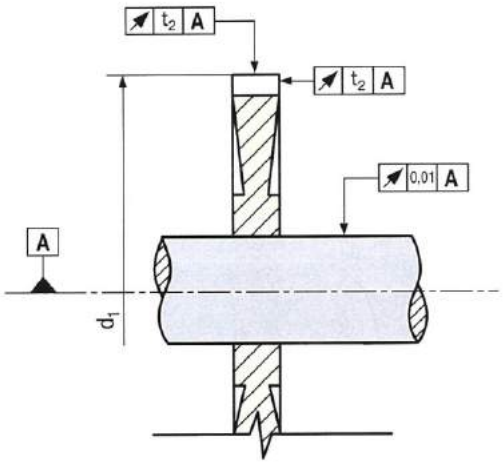
It is very important to work in machines without vibrations in order to assure a rigid clamping of blade and material.

The combination of carbide and surface treatments **TiN**, **TiCN** is actually the best combination of getting the best heat and wear resistance.

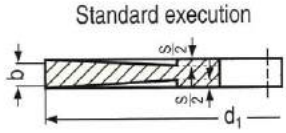
TOOTHFORMS CLEARANCE AND TOLERANCES DIN-1840

DENOMINATION	ILUSTRATION	ABV.	Cutting angle γ for type of tooling N ± 2°	H ± 2°	W ± 2°	USE OF SAWS ACCORDING TO
Straight tooth (fine)		A	5°	0°	10°	DIN 1837 Standard execution
Straight tooth with alternated bevel		Aw				DIN 1837 Special execution
Hooked tooth (coarse)		B	15°	8°	25°	DIN 1838 Standard execution DIN 1837 for t ≥ 3,15 mm. Special execution
Hooked tooth with alternated bevel		Bw				DIN 1837 for t ≥ 3,15 mm. and b ≥ 2 mm. Special execution DIN 1838 for b ≥ 2 mm. Special execution
High performance tooth (Heller)		C				DIN 1837 for t ≥ 3,15 mm. and b ≥ 2 mm. Special execution DIN 1838 for b ≥ 2 mm. Special execution

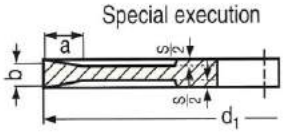




Standard execution



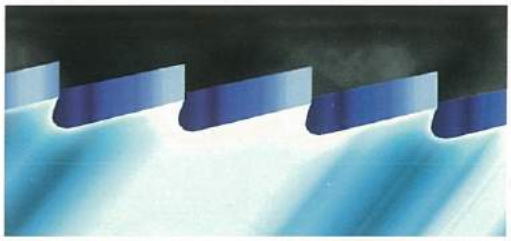
Special execution



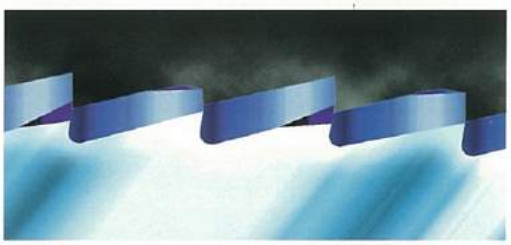
d_1 mm. <	d_1 mm. >	t_1 mm.	t_2 mm.
	40	0,1	0,1
40	100	0,16	
100	200	0,25	0,16
200	315	0,4	

SELECTION OF TOOTHFORM

A



AW



DIN 1837

A - FINE TOOTH
AW - TOOTH WITH ALTERNATED BEVELS

The toothform **A** and **AW** are mainly used for works of fine mechanizing and jewellery with short chipping. The tooth pitches are from 0,8 to 6,3 mm. according to external diameter and thickness and are used for minor cutting deepths, generally from 3 to 5 mm.

Form **AW** has the same characteristics, but producing smaller chips.

B

BW

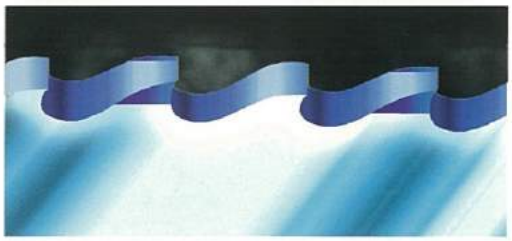
DIN 1838 • DIN 1838 (ACME)

B - GROSS TOOTH
BW - TOOTH WITH ALTERNATED BEVELS

Form **B** is conceived for pressing deep slots in long chipping materials. Its geometry is adequate to facilitate the formation and storage of chips. It is recommended for slots superior to 5 mm.

Form **BW** is adequate for cut off machines with profile cut up to 3-4 mm., although in small blades this toothform also serves to slit thicknesses superior, obtains the reduction of the cutting strength.

C

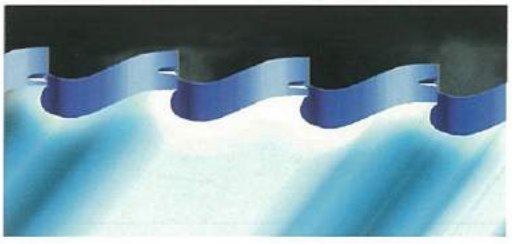


DIN 1838 (HZ)

C - PRECUTTER TOOTH WITH BEVELS SIDES AND FINISHING TOOTH WITHOUT BEVELS

The effect of this toothform is to reduce the necessary efforts of mechanizing a working piece. The precutter tooth is 0,15 +/- 0,3 mm. higher than the finishing tooth, with side bevels, cutting the precutter only 1/3 in the center of the sawblade's thickness and the finishing tooth the resting 2/3 on the sides.

BR



BR - FORM B WITH CHIPBREAKER

The latest novelty in relation to toothform.
Especially indicated to cut tubes.
The chipbreaker is a fine slot of 0,4 mm. on top of the tooth. It obtains 25% more rentability than form **BW**.

DIN-1837 STANDARD • DIN-1838 STANDARD

DIN-1837 STANDARD

OUTER DIAMETER	20	25	32	40	50	63	80	100	125	160	200	250	315
HOLE	5	8	8	10	13	16	22	22	22	22	32	32	40
HUB	10	14	14	18	25	32	36	40	40	40	63	63	80

t = pitch z = tooth number

THICKNESS	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z
0,2	0,8	80	1	80	1	100	1	128	1,25	128														
0,25	1	64	1	80	1	100	1,25	100	1,25	128	1,25	160												
0,3	1	64	1	80	1,25	80	1,25	100	1,25	128	1,6	128	1,6	160										
0,4	1	64	1,25	64	1,25	80	1,25	100	1,6	100	1,6	128	1,6	160										
0,5	1,25	48	1,25	64	1,25	80	1,6	80	1,6	100	1,6	128	2	128	2	160								
0,6	1,25	48	1,25	64	1,6	64	1,6	80	1,6	100	2	100	2	128	2	160	2,5	160						
0,8	1,25	48	1,6	48	1,6	64	1,6	80	2	80	2	100	2	128	2,5	128	2,5	160						
1	1,6	40	1,6	48	1,6	64	2	64	2	80	2	100	2,5	100	2,5	128	2,5	160	3,15	160	3,15	200		
1,2	1,6	40	1,6	48	2	48	2	64	2	80	2,5	80	2,5	100	2,5	128	3,15	128	3,15	160	3,15	200		
1,6	1,6	40	2	40	2	48	2	64	2,5	64	2,5	80	2,5	100	3,15	100	3,15	128	3,15	160	4	160	4	200
2	2	32	2	40	2	48	2,5	48	2,5	64	2,5	80	3,15	80	3,15	100	3,15	128	4	128	4	160	4	200
2,5	2	32	2	40	2,5	40	2,5	48	2,5	64	3,15	64	3,15	80	3,15	100	4	100	4	128	4	160	5	160	5	200
3	2	32	2,5	32	2,5	40	2,5	48	3,15	48	3,15	64	3,15	80	4	80	4	100	4	128	5	128	5	160	5	200
4	2,5	24	2,5	32	2,5	40	3,15	40	3,15	48	3,15	64	4	64	4	80	4	100	5	100	5	128	5	160	6,3	160
5	2,5	24	2,5	32	3	32	3,15	40	3,15	48	4	48	4	64	4	80	5	80	5	100	5	128	6,3	128	6,3	160
6	2,5	24	3,15	24	3	32	3,15	40	4	40	4	48	4	64	5	64	5	80	5	100	6,3	100	6,3	128	6,3	160

DIN-1838 STANDARD

OUTER DIAMETER	50	63	80	100	125	160	200	250	315
HOLE	13	16	22	22	22	22	32	32	40
HUB	25	32	36	40	40	40	63	63	80

t = pitch z = tooth number

THICKNESS	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z	t	z
0,5	3,15	48	3,15	64														
0,6	3,15	48	4	48	4	64	4	80										
0,8	4	40	4	48	4	64	5	64	5	80								
1	4	40	4	48	5	48	5	64	5	80	6,3	80						
1,2	4	40	5	40	5	48	5	64	6,3	64	6,3	80	6,3	100				
1,6	5	32	5	40	5	48	6,3	48	6,3	64	6,3	80	8	80	8	100		
2	5	32	5	40	6,3	40	6,3	48	6,3	64	8	64	8	80	8	100		
2,5	5	32	6	32	6,3	40	6,3	48	8	48	8	64	8	80	10	80	10	100
3	6,3	24	6	32	6,3	40	8	40	8	48	8	64	10	64	10	80	10	100
4	6,3	24	6,3	32	8	32	8	40	8	48	10	48	10	64	10	80	12,5	80
5	6,3	24	8	24	8	32	8	40	10	40	10	48	10	64	12,5	64	12,5	80
6	8	20	8	24	8	32	10	32	10	40	10	48	12,5	48	12,5	64	12,5	80

SAWS OF SPECIAL EXECUTION

1 - JEWELLERY

DIMENSIONS		DIMENSIONS	
50 x 0,2 x 8/10	Z = 160/180	63 x 0,2 x 10/16	Z = 180/200
50 x 0,25 x 8/10	Z = 160/180	63 x 0,25 x 10/16	Z = 180/200
50 x 0,30 x 8/10	Z = 160/180	63 x 0,30 x 10/16	Z = 180/200
50 x 0,40 x 8/10	Z = 160/180	63 x 0,40 x 10/16	Z = 180/200
50 x 0,50 x 8/10	Z = 160/180	63 x 0,50 x 10/16	Z = 180/200

2 - SAWS FOR G.F. MACHINES (tude cutting).

Material HSS y HSS-E = 5% Co.

DIMENSIONS	BOTON	Z
63 x 1.6 x 16	36	80 BW
63 x 1.6 x 16	36	64 BW
63 x 1.6 x 16	36	44 BW
68 x 1.6 x 16	42	44 BW
68 x 1.6 x 16	42	64 BW
75 x 2 x 16	42	32 BW

3 - SAWS FOR SCREW INDUSTRY, of diameter 80 mm.

90 mm. 100 mm. in toothform A, B, AW, BW.

4 - ISOCELES SAWS, PRISMATICS.

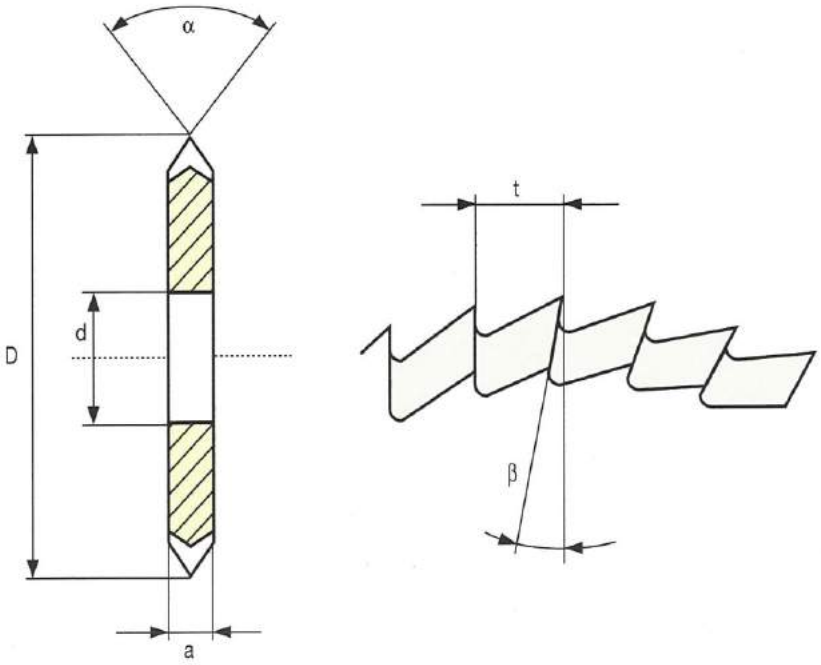
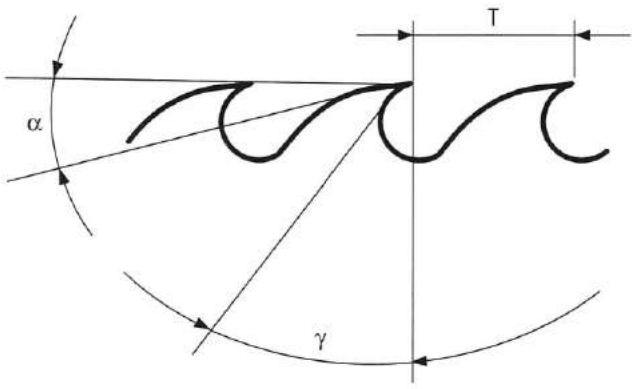


TABLE OF APROX. CUTTING SPEED VALUES

MATERIAL TO BE MECHANIZED	STEEL			STAINLESS	CAST IRON	COPPER	BRONZE BRASS	ALUMINIUM		PLASTIC
	up to 50 kg/mm²	up to 80 kg/mm²	more than 100 kg/mm²					MASSIF	PROFILES	
Angle α	8°-10°	8°	6°-8°	6°-8°	6°	8°-10°	6°-8°	12°	12°	12°
Angle γ	18°-20°	15°-18°	8°-15°	15°-20°	10°-12°	15°-25°	8°-15°	25°	20°-25°	25°
Cutting speed(V) mts/minute	25 50	15 30	10 20	7 15	15 20	60 200	100 400	400 800	800 2000	600 2000
d_1 mm.	n = r.p.m.									
32	250 500	150 300	100 200	70 150	150 250	600 2000	1000 3000	3000	3000	3000
40	200 400	120 240	80 160	55 110	110 200	480 1600	800 3000	3000	3000	3000
50	160 320	95 190	64 128	45 90	90 160	380 1270	640 2500	2500 3000	3000	3000
63	125 250	75 150	50 100	35 75	75 125	300 1000	500 2000	2000 3000	3000	3000
80	100 200	60 120	40 80	30 60	60 100	240 800	400 1600	1500 3000	2560 3000	2400 3000
100	80 160	47 95	32 64	22 48	48 80	190 640	320 1280	1280 2560	2560 3000	1900 3000
125	63 130	38 76	25 50	18 38	38 64	150 500	255 1000	1020 2040	2040 3000	1530 3000
160	50 100	30 60	20 40	14 30	30 50	240 800	200 800	800 1600	1600 3000	1200 3000
200	40 80	24 47	16 32	11 24	24 40,	95 320	160 640	640 1280	1280 3000	960 3000
225	35 70	21 42	14 28	10 21	21 35	85 280	140 560	560 1140	1120 2840	850 2840
250	31 62	19 38	13 26	9 19	19 32	76 250	130 510	510 1020	1020 2550	760 2550
275	28 57	17 35	12 24	8 17	17 28	70 230	116 460	460 920	920 2300	700 2300
300	25 50	15 30	10 20	7 15	15 25	60 200	100 400	400 800	800 2000	600 2000
315	25 50	15 30	10 20	7 15	15 25	60 200	100 400	360 720	800 2000	600 2000
350	22 45	13 27	9 18	6 14	14 22	55 180	90 360	360 720	720 1800	550 1800
370	21 42	22 26	8 17	6 13	13 21	52 170	86 340	340 680	680 1720	520 1720
400	20 40	11 24	8 17	5 12	12 20	48 160	80 320	320 640	640 1600	480 1600



STANDARD PROGRAMME OF CUT OFF SAWS

DIMENSIONS MM.	T = Pitch in mm. Toothform and number										
	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10	T 11	T 12	T 14
200 x 1.8 **200 x 2**	200 BW	160 BW	128 C	100 C		80 C					
225 x 2 **225 x 2,5**	220 BW	180 BW	140 C	120 C		90 C					
250 x 1,6 **250 x 2** **250 x 2,5**	250 BW	200 BW BR	160 C BR	128 C BR		100 C		80 C			
275 x 1,6 **275 x 2** **275 x 2,5**	280 BW	220 BW BR	180 C BR	140 C	120 C	110 C		90 C			
300 x 2 **300 x 2,5** **300 x 3**	300 BW	220 BW BR	180 C BR	160 C	140 C	120 C		90 C			
315 x 2 **315 x 2,5** **315 x 3**	320 BW	240 BW BR	200 C BR	160 C	140 C	120 C		100 C		80 C	
350 x 2,5 **350 x 3**	350 BW	280 BW BR	220 BW BR	180 C BR	160 C	140 C	120 C	110 C		90 C	80 C
370 x 3		290 BW	220 C	200 C	160 C	140 C	120 C	110 C	100 C	90 C	80 C
400 x 3 **400 x 3,5**		310 BW BR	240 BW BR	200 C		160 C	140 C	128 C	110 C	100 C	
425 x 3 **425 x 3,5**		320 BW BR	260 BW BR	220 BW BR		160 C				110 C	
450 x 3,5 **450 x 4**		340 BW BR		220 BW BR		180 C		140 C		120 C	100 C
500 x 4				240 C BR		200 C		160 C			110 C

PINHOLES

Ø 32 = 2/8/45 + 4/11/63 ó 2/8/45 + 2/9/50 + 2/11/63
Ø 40 = 2/8/55 + 4/12/64
Ø 50 = 4/15/80 ó 4/15/80 + 4/14/85

RECOMMENDED PITCH ACCORDING TO MATERIAL AND SECTION TO BE CUT

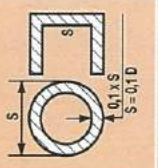
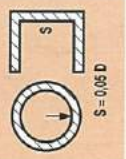
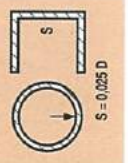
MATERIAL		STEEL 50 kgs.	STEEL 50-80 kgs.	STEEL 80-100 kgs.	TEMPERED STEEL 100-130 kgs.	STAINLESS STEEL 90 kgs.	GREY CAST IRON	LIGHT ALUMINIUM 20-40 kgs.
CUTTING ANGLE	γ	18° - 20°	15° - 18°	8° - 15°	10° - 12°	13° - 15°	10° - 12°	25°
	α	8° - 10°	8°	6° - 8°	6°	6° - 8°	6°	12°

SECTION	S							
	10-20	t	**4**	**3**	**3**	**2,5**	**3**	**3**	**6**
		Vcm/1'	50	30	20	15	20	25	1200
	20-35	t	**8**	**5**	**5**	**3**	**4**	**4**	**8**
		Vcm/1'	45	30	20	15	20	25	1000
	35-55	t	**10**	**8**	**6**	**4**	**6**	**6**	**12**
		Vcm/1'	45	25	18	12	18	22	900
	55-80	t	**12**	**10**	**8**	**6**	**8**	**8**	**14**
		Vcm/1'	40	25	18	12	18	20	800
	80-110	t	**14**	**14**	**12**	**8**	**12**	**12**	**16**
		Vcm/1'	40	20	15	10	15	20	700
	110-130	t	**16**	**16**	**14**	**10**	**14**	**14**	**18**
		Vcm/1'	35	20	14	10	15	18	600
	130-145	t	**18**	**16**	**14**	**12**	**14**	**14**	**20**
		Vcm/1'	30	15	12	8	12	16	500

t = Pitch in mm. Vcm/1' = Cutting speed in m/min.

TUBES AND PROFILES

COPPER	BRONZE 40-60 kgs.	BRONZE 60-90 kgs.	BRASS ZINC	TITANIUM ALLOYS 30-80 kgs.
18°-20°	12°-15°	10°-12°	16°	16°-18°
8°-10°	6°-8°	6°-8°	10°	8°-10°

MATERIAL				
CUTTING ANGLE	γ	16°-18°	16°-18°	15°
	α	6°-8°	8°-10°	8°

S				
6	5	4	5	4
400	400	120	600	50
8	7	6	6	4
350	400	110	600	45
11	10	8	10	6
300	350	100	550	45
14	12	10	12	10
250	300	90	550	45
16	14	12	16	12
200	250	80	500	40
18	16	14	18	14
150	200	60	500	34
20	18	16	18	16
120	150	50	450	30

S				
10-20	t	4	3	2
	Vcm/1'	10	20	35
20-35	t	5	4	3
	Vcm/1'	8	18	33
35-55	t	6	5	4
	Vcm/1'	8	18	30
55-80	t	8	6	5
	Vcm/1'	7	17	30
80-110	t	8	6	5
	Vcm/1'	6	16	28
110-130	t	10	8	6
	Vcm/1'	6	16	26
130-145	t	12	10	8
	Vcm/1'	6	15	24

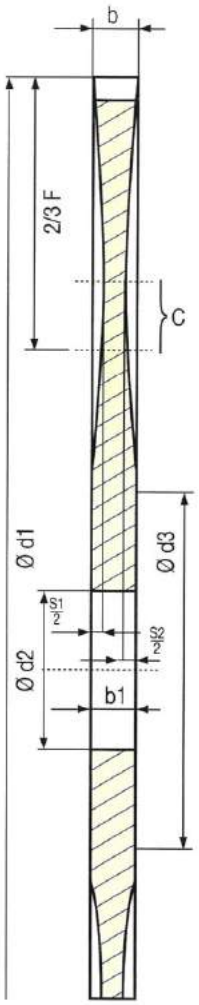
Calculation coefficient S

$$S = \frac{\text{Wall thickness}}{\text{Tube diameter}}$$

TECHNICAL DATA

SIDE CLEARANCE (S)

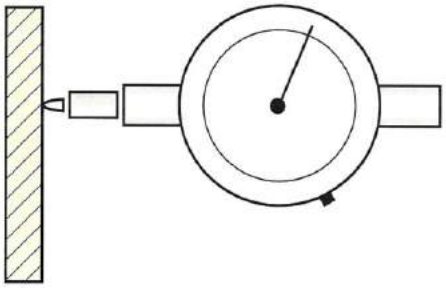
DIAMETER THICKNESS	80	100	125	160	200	225	250	275	315	350	370	400	450
0,3	0,03	0,03	0,03										
0,4	0,05	0,05	0,05										
0,5	0,10	0,10	0,10										
0,6	0,10	0,15	0,15										
0,8	0,15	0,20	0,20	0,15									
1	0,20	0,20	0,20	0,20	0,20								
1,2	0,25	0,25	0,25	0,30	0,30	0,30							
1,6	0,25	0,25	0,25	0,35	0,35	0,40	0,40	0,35	0,37				
2	0,30	0,30	0,30	0,40	0,40	0,45	0,45	0,50	0,50				
2,5	0,35	0,35	0,35	0,50	0,50	0,50	0,50	0,60	0,60	0,62	0,62	0,65	0,75
3	0,40	0,40	0,45	0,50	0,50	0,55	0,55	0,65	0,65	0,68	0,68	0,75	0,80
3,5	0,45	0,50	0,50	0,60	0,60	0,60	0,60	0,65	0,65	0,70	0,75	0,80	0,85
4	0,45	0,50	0,50	0,60	0,60	0,60	0,60	0,65	0,65	0,70	0,75	0,85	0,85
5	0,50	0,60	0,60	0,60	0,60	0,65	0,65	-	-	-	-		
6	0,55	0,60	0,60	0,60	0,60	0,65	0,65	-	-	-	-		



S = Side clearance total **b** = Saw thickness
C = Maximum clearance **b_1** = Hub thickness

RUN OUT

DIAMETER	STANDARD	SPECIAL	SUPER
200 - 300	0,20/0,23	0,15	0,10
315 - 370	0,25	0,15	0,12
400 - 500	0,30	0,17	0,12



CUTTING SPEED AND FEED

The cutting speed is the peripheric speed of one point that discribes a circumference of diameter **D**.

It is the speed the tooth is moving at touching the working piece.

Formula to determine the speed:

$$Vc = \frac{D.\pi.N.}{1000}$$

D = saw diameter.
π = 3,14.
N = revolutions of machine.

It is always determined in meter/minute.
Do never confound with the revolutions of the machine.

One of the principal rules is to reduce speed for hard materials and to increase speed for soft materials.

The formula of **FEED** is:

$$S = Sz.\ Z.\ n$$

S = advance in mm./minute.
Sz = advance per tooth.
Z = teeth number of saw.
n = number of turns minute.

MATERIAL	CUTTING SPEED	ADVANCE PER TOOTH
Steel up to 50 kg/mm2	30 ÷ 50	0,02 ÷ 0,04
Steel up to 90 kg/mm2	20 ÷ 40	0,02 ÷ 0,03
Steel up to 120 kg/mm2	15 ÷ 25	0,01 ÷ 0,02
Grey steel	30 ÷ 50	0,03 ÷ 0,04
Bronze and copper	200 ÷ 300	0,03 ÷ 0,05
Stainless steel	10 ÷ 20	0,01 ÷ 0,02
aluminium profile	1000 ÷ 1500	0,05 ÷ 0,07
Brass	400 ÷ 600	0,03 ÷ 0,05
Synthetic	100 ÷ 150	0,05 ÷ 0,07

CUT OFF MACHINES AND THEIR DRIVING HOLES

MACHINE	DIAMETER	HOLE	PINHOLES
ADIGE	200 - 250 275 - 315 350 400 - 425	32 32 40 50	4/9/50 2/11/63 4/12/64 4/15/80
BAIER	175 - 250	32	Ranuras Chavettes
BARSON	210 275	32 40	2/8/45 2/8/55 + 4/12/64
BEWO	250 - 300 315 - 350	32 40	2/8/45 2/8/55 + 4/11/63
BIMAX	175 250 - 300	32 32	2/8/45 2/8/45 + 2/11/63
BROBO WALDOWN	250 300 300 - 400 500	32 38 40 40	2/11/63 2/9/55 2/8/55 + 4/12/64 4/12/64 + 2/12/80
CONNI	250 - 300 400 - 425 400 - 450	40 40 50	2/8/55 + 4/11/63 4/11/63 4/15/80
DEMURGER	160 - 300 200 - 250 225 - 300	25.4 32 40	- 2/8/45 + 2/11/63 2/8/55 + 4/12/64
DORINGER	315 - 350	40	4/12/64
EISELE	110 210 - 225 250 - 350 400 - 450 500	22 40 40 40 40	- 2/8/55 2/8/55 + 4/12/64 2/12/64 + 2/15/80 2/15/80 + 2/15/100
FABRIS	225 - 350	32	2/8/45 + 2/11/63
FEMI	225 - 315	32	2/8/45 + 2/11/63
FONG-HO	250 - 275 300 - 400 360	32 32 40	2/8/45 + 2/9/50 2/11/63 4/11/63 2/11/63 + 2/11/65
HÄBERLE	225 - 315	40	2/8/55 + 4/12/64
IBP PEDRAZZOLI	200 - 350 425	32 50	2/8/45 + 4/11/63 4/15/90
KALTEN BACH	225 - 250 350 - 370	32 50	- 4/15/80
KASTO	315 - 350 400 - 450	40 50	4/11/63 4/15/80

MACHINE	DIAMETER	HOLE	PINHOLES
KINSTONE	200 - 250	32	Universales
MACC	225 - 350	32	2/8/45 + 2/11/63
MACO	425	50	4/15/80
MAIR	300 - 350 300 - 350	32 40	2/8/45 + 2/11/63 2/8/55 + 4/12/64
MEP	225 - 350	32	2/8/45 + 2/11/63
METORA	250 - 350	32	Universales
OMES	250 - 300	32	2/8/45 + 2/11/63
O.M.P.	250 - 370 400 - 500	32 50	2/8/45 + 2/11/63 4/15/80
R.G.A.	275 - 350	40	2/8/55 + 2/11/63
ROBEJO	250 - 350	32	2/8/45 + 2/11/63
ROHBI SCOTHMAN	175 - 250 250 - 300 275 - 350	32 32 40	2/8/45 2/8/45 + 2/11/63 2/8/55 + 4/12/64
SIMEC	250 - 350	32	4/11/63
SINICO	350	32	2/8/45 + 2/11/63
SOCO	250 - 350	32	2/11/63
STARTRITE	250 300 - 315	32 32	2/9/56 2/11/80
STAYER	225	32	-
THOMAS	225 - 350	32	2/8/45 + 2/11/63
TRENNJAEGER	250- 275 315 -400	40 50	4/11/63 4/14/85
ULMIRA	160 - 250 250 - 400	32 40	- 4/11/63
VIEMME	250 - 350	32	2/8/45 + 2/11/63
WAGNER	210 -315 350	32 50	4/9/50 4/14/80
WAHLEN	250 - 400	40	2/8/55 + 2/11/63
WEIDMANN	210 - 275	32	2/8/45
WINTER	250 - 325	40	2/8/55 + 4/11/63
WUNSCH	210 - 250 210 - 275 300 - 400	32 40 40	2/8/45 2/8/55 2/8/55 + 4/12/64

CIRCULAR KNIVES

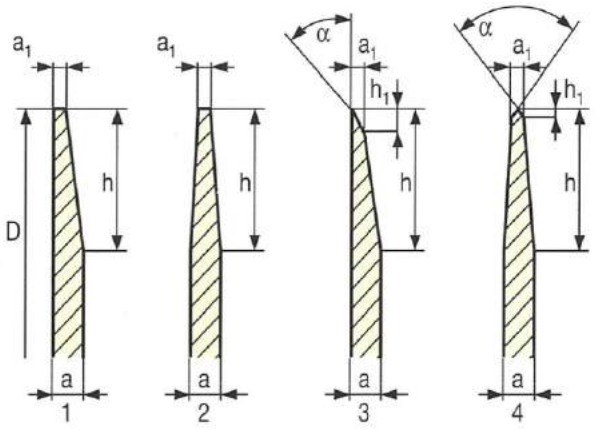
We manufacture circular knives of high speed steel **HSS - DMo5** y **HSSE/EMo5 Co5**, from Ø 20 up to Ø 500 MM. With one or two bevels to cut: paper, caron, rubber and textiles.

For carton tube cutting we recommend the toothed circular knife according to graphic 2 with 1 or 2 bevel.

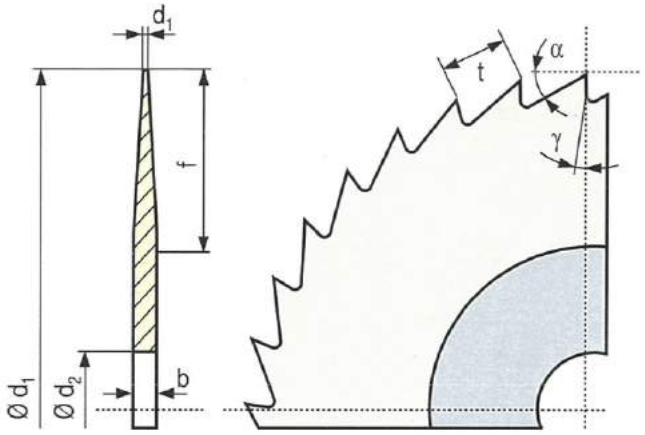
To cut spongy materials, tissues, polycarbonates the adequate woult be 1 bevel and evacuation / coolant slots according to graphic 3.

For meat, fish and frozen industry, althoug high speed steel is used as well, we recommend to use stainless steel because of hygienic standards.

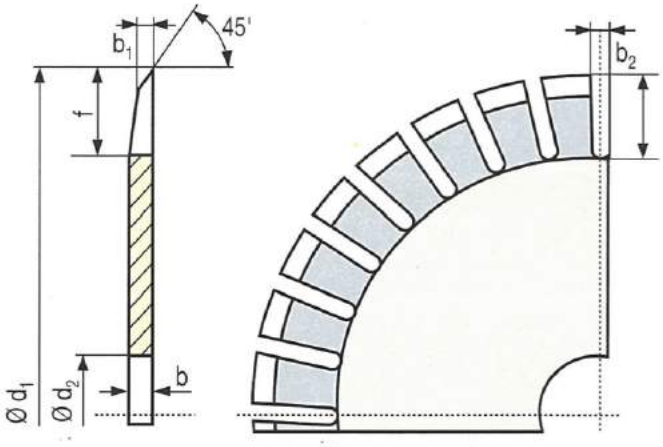
GRAPHIC 1



GRAPHIC 2



GRAPHIC 3



SURFACE TREATMENTS

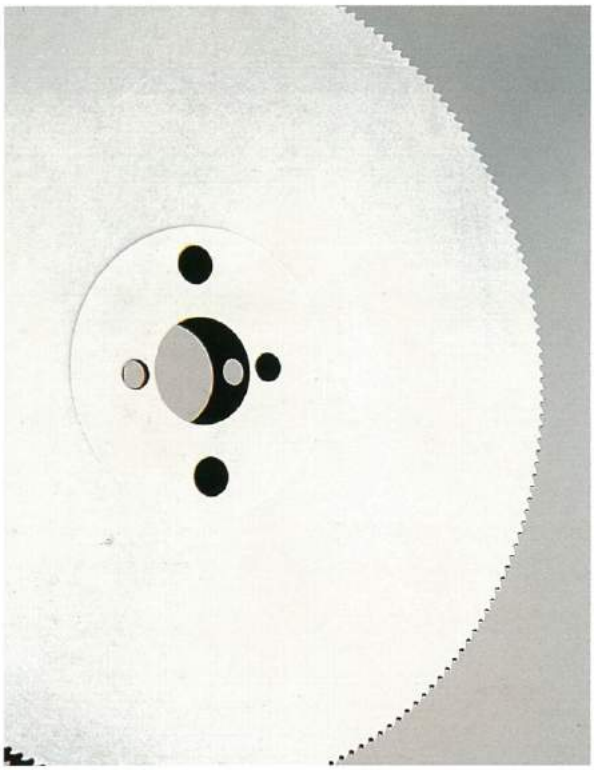
ANTIFRIC

This is the most common surface treatment.

It consists of a black-blue $Fe_3 O_4$ coating, hard and adhesive, with elevated resistance against oxidation, corrosion and weardown.

The so treated surface disposes of sufficient microporosity as to retain the cutting oil, obtaining this way the autolubrication and consequently the evacuation of the produced cutting heat.

Improves the friction coefficient and evacuation of welded chips in cutting edge and sawblade sides.



NITROVAP

This version has been studied especially for the mechanizing of hard and abrasive materials: stainless steels, aluminum, etc.

It is a carbon sulfo nitriding + steam oxid which obtains an elevated surface hardness without producing fragility and at the same time an autolubrication effect because of the sulfo coating.

PVD COATING

TIN

Titanium nitride coating is the most popular coating made by PVD (phisical vapor deposition) with the following characteristics:

- **Microhardness:** 2300 - 2500 (HV 0,05)
- **Coating thickness (μ):** 1 - 3
- **Colour:** GOLDEN - YELLOW
- **Friction Coefficient:** 0,65
- **Degradation Temperature:** 500°

It allows up to 25% increase in cutting speeds and has a greater resistance to wear.

EXTREME

The PVD coating of titanium aluminium nitride combines the increased toughness of a multilayer structure with a raised hardness and a high thermic and chemical stability of the aluminium and titanium nitride layers.
EXTREME is an extra-tough treatment that allows higher machining rates with a minimum of cutting lubricant and in some instances, dry cutting.

- **Microhardness:** 3500 (HV 0,05)
- **Coating thickness (μ):** 2 - 5
- **Colour:** BLUE -GREY
- **Friction Coefficient:** 0,40
- **Degradation Temperature:** 800°

Thanks to the most modern machinery and the high standards through all the stages of manufacturing along with the latest CNC saw sharpening technology, we are able to offer products of consistent quality and performance.

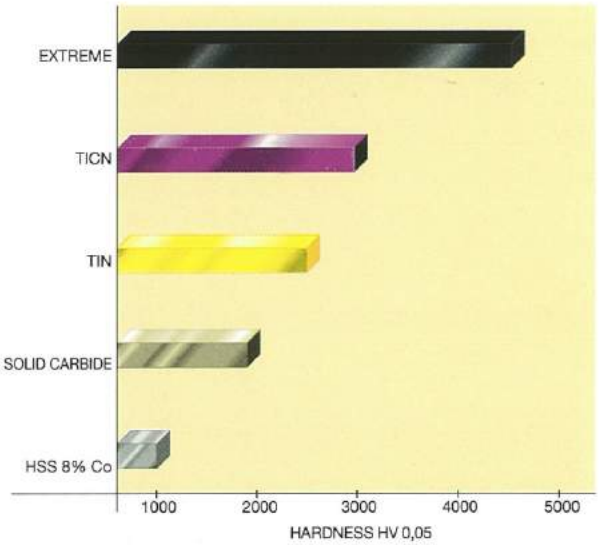
TICN

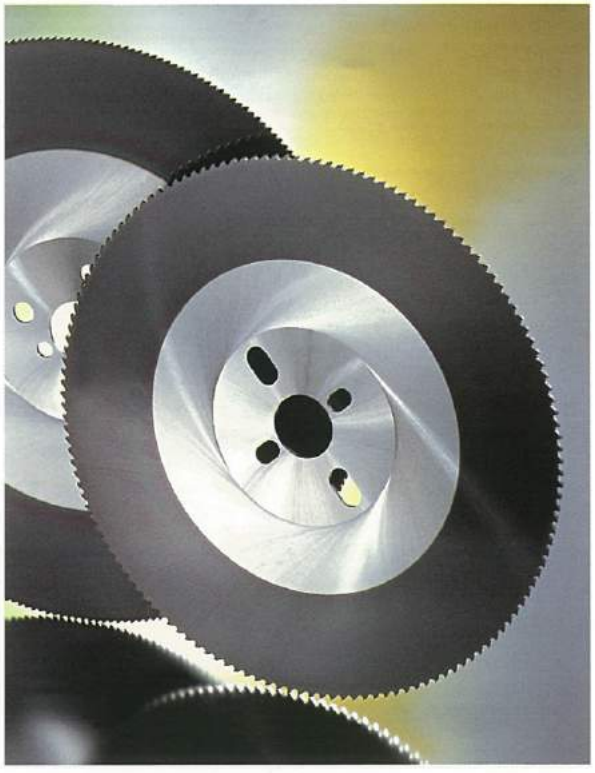
PVD coating is a titanium carbonitride with the following characteristiscs:

- **Microhardness:** 3000 (HV 0,05)
- **Coating thickness (μ):** 1 - 4
- **Colour:** PURPLE - GREY
- **Friction Coefficient:** 0,50
- **Degradation Temperature:** 450°

The main advantages in this type of coating are the increase in surface hardness and a much higher resistance to abrasion in comparison to TIN.

HARDNESS SCALE





NET WEIGHT OF HSS/HSS-E SAWBLADES

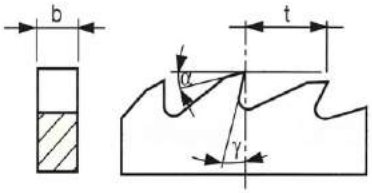
Ø mm.	20	32	40	50	63	80	100	125	160	200	250	315
HOLE	5	8	10	13	16	22	22	22	32	32	32	40
THICKNESS	Weight in kg. 1 piece											
0,2	0.0005	0.0009	0.0016	0.0026	0.0042							
0,3	0.0007	0.0013	0.0024	0.0039	0.0063	0.011	0.015					
0,4	0.0009	0.0018	0.0032	0.0052	0.0084	0.014	0.022	0.034				
0,5	0.0011	0.0022	0.0040	0.0065	0.011	0.018	0.027	0.042				
0,6	0.0013	0.0026	0.0048	0.008	0.013	0.021	0.032	0.050				
0,8	0.0018	0.0035	0.0064	0.010	0.017	0.028	0.043	0.067	0.113	0.178		
1,0	0.0022	0.0044	0.008	0.013	0.021	0.035	0.054	0.084	0.141	0.223		
1,2	0.0026	0.0053	0.010	0.016	0.025	0.042	0.065	0.101	0.169	0.268		
1,6	0.0035	0.007	0.013	0.018	0.034	0.056	0.086	0.134	0.226	0.401	0.560	
2,0	0.0044	0.009	0.016	0.026	0.042	0.070	0.108	0.168	0.282	0.446	0.700	
2,5	0.0055	0.011	0.020	0.033	0.053	0.088	0.135	0.210	0.353	0.560	0.880	1.400
3,0	0.0066	0.013	0.024	0.039	0.063	0.105	0.162	0.252	0.423	0.670	1.050	1.680
3,5	0.0077	0.015	0.028	0.046	0.074	0.123	0.189	0.294	0.494	0.780	1.130	1.960
4,0	0.009	0.018	0.032	0.052	0.084	0.140	0.216	0.336	0.564	0.890	1.400	2.240
5,0	0.011	0.022	0.040	0.065	0.105	0.175	0.270	0.420	0.705	1.120	1.750	2.800
6,0	0.013	0.026	0.048	0.078	0.126	0.210	0.324	0.504	0.846	1.340	2.100	3.360

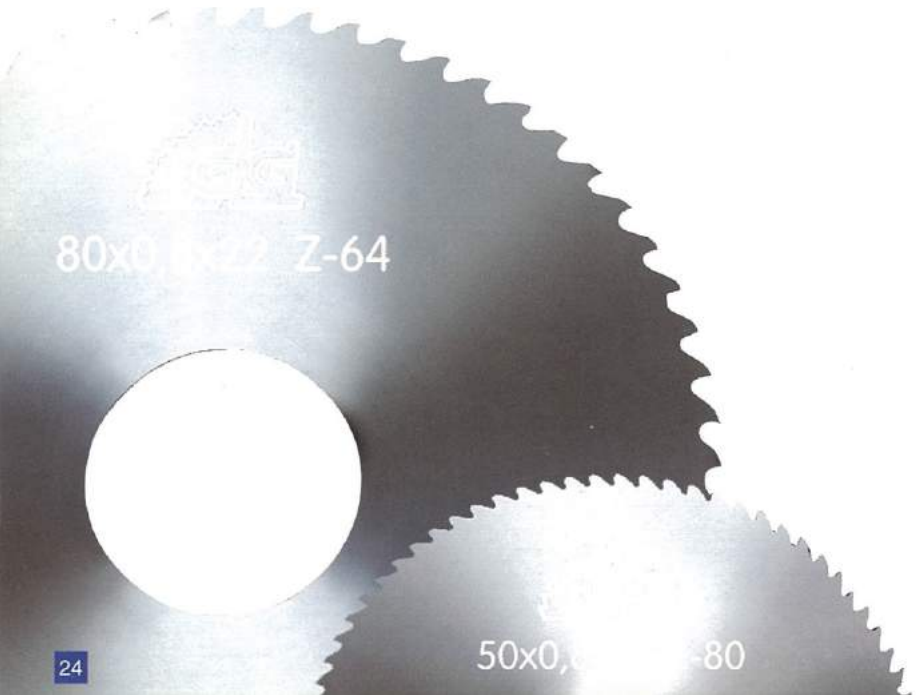
175 x 2,0	0,340 kg.	225 x 2,0	0,540 kg.	300 x 2,5	1,230 kg.	400 x 3,0	2,520 kg.
200 x 2,0	0,440 kg.	250 x 1,6	0,530 kg.	315 x 2,5	1,400 kg.	400 x 3,5	3,200 kg.
210 x 1,6	0,390 kg.	250 x 2,0	0,700 kg.	315 x 3,0	1,690 kg.	425 x 3,5	3,610 kg.
210 x 2,0	0,490 kg.	250 x 2,5	0,880 kg.	350 x 2,5	1,710 kg.	450 x 4,0	4,630 kg.
220 x 2,0	0,510 kg.	275 x 2,0	0,830 kg.	350 x 3,0	2,060 kg.	500 x 3,0	4,280 kg.
225 x 1,6	0,430 kg.	275 x 2,5	1,040 kg.	370 x 3,0	2,300 kg.	500 x 4,0	5,710 kg.

SOLID CARBIDE SAWBLADES

SIMILAR DIN 1837

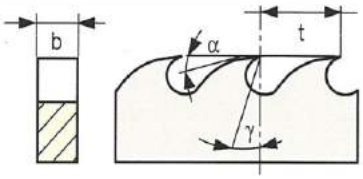
DIAMETER	15	20	25	32	40	50	63	80	100	125	160
HOLE	5	5	8	8	10	13	16	22	22	22	32
THICKNESS	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
0,2	64	80	80	100	128	128					
0,25	64	80	80	80	100	128					
0,3	64	64	64	80	100	128	128				
0,4	64	64	64	80	100	100	128	160			
0,5	48	48	64	80	80	100	128	128	160		
0,6	48	48	64	64	80	100	100	128	160		
0,8	40	40	48	64	80	80	100	128	128	160	
1	40	40	48	64	64	80	100	100	128	160	160
1,2	40	40	48	48	64	80	80	100	128	128	160
1,5	40	40	40	48	64	64	80	100	100	128	160
1,6	40	40	40	48	64	64	80	100	100	128	160
1,8	40	32	40	48	48	64	80	80	100	128	160
2	40	32	40	48	48	64	80	80	100	128	160
2,5	40	32	40	40	48	64	64	80	100	100	128
3	40	32	32	40	48	48	64	80	80	100	128





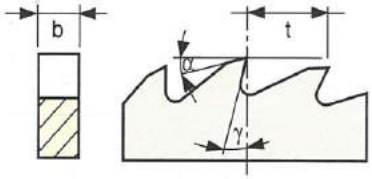
SIMILAR DIN 1838

DIAMETER	40	50	63	80	100	125
HOLE	10	13	16	22	22	22
THICKNESS	Z	Z	Z	Z	Z	Z
0,25	40					
0,3	40					
0,4	40	48	64			
0,5	40	48	64			
0,6	40	40	48	64	80	
0,8	32	40	48	64	64	80
1	32	40	48	48	64	64
1,2	32	40	40	48	64	64
1,5	32	32	40	48	48	64
1,6	32	32	40	48	48	64
1,8	32	32	40	40	48	64
2	32	32	40	40	48	64
2,5	32	32	32	40	48	48
3	32	24	32	40	40	48



SIMILAR DIN 1837 EXTRAFINE

DIAMETER	15	20	25		32		40	50		63
HOLE	50	5	8		8		10	13		16
THICKNESS	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
0,2	80	80	80	100	80	100	100	100	120	120
0,25	80	80	80	100	80	100	100	100	120	120
0,3	80	80	80	100	80	100	100	100	120	120
0,4	80	80	80	100	80	100	100	100	120	120
0,5	80	80	80	100	80	100	100	100	120	120
0,6	80	80	80	100	80	100	100	100	120	120
0,8	80	80	80	100	80	100	100	100	120	120
1	80	80	80	100	80	100	100	100	120	120
1,2	80	80	80	100	80	100	100	100	120	120
1,5	80	80	80	100	80	100	100	100	120	120
2	80	80	80	100	80	100	100	100	120	120



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