



RÖNTGEN®

GERMAN QUALITY - ENDURING PRECISION

BAND SAW BLADES PROGRAM

Product overview



**BAND SAW BLADES
FOR THE WORLD
AND BEYOND!**

bi-alfa®

CONTENTS

bi-alfa® cobalt M42	3
bi-alfa® cobalt WS	3
bi-alfa® cobalt forteC	4
bi-alfa® Profile	4
bi-alfa® Profile WS	4
bi-alfa® Profile forteC	5
bi-alfa® Profile WS forteC	5
bi-alfa® cobalt RP	5
bi-alfa® Master	6
bi-alfa® cobalt M51	6
bi-alfa® Master Supreme	7

APPLICATION AREAS

EXPLANATION OF ICONS

Due to the variety of our band saw blades, we are able to cover a wide range of applications. The following icons indicate which band saw blade fits best to your individual cutting job.



Square tube



Plates



Square tubes in bundles



Bundled solids



Thick-walled tube



Sandwich panels



Thin-walled tube



Square solids



Round tubes in bundles



Round solids



T-, I- and L-beams



Small round solids



Bundled angles



Profiles



Thick-walled tubes & solid bar



Back wave

bi-alfa®

cobalt M42 cobalt WS

- constant-/combi tooth pitch
- universal use, cutting of all common steel types up to a hardness of < 45 HRC
- tooth tips made of alloyed high-speed steel (HSS) M42
- backing material made of high alloyed spring steel
- the hardness of the wear resisting tooth tips is about 67-69 HRC
- quality WS creates a larger cutting channel, which helps to prevent blade binding, suitable for materials with residual stress

APPLICATION AREAS



Teeth per inch/constant tooth pitch

	1.25	2	3	4	6	8	10	14	18	
6 x 0.6					■					1/4 x .025
6 x 0.9					■		●	●		1/4 x .035
10 x 0.6					■					3/8 x .025
10 x 0.9				■	■	●	●	●		3/8 x .035
13 x 0.6					■		●	●	●	1/2 x .025
13 x 0.9			■	■	■	●	●	●		1/2 x .035
16 x 0.6								●		5/8 x .025
20 x 0.9			■	■	■			●	●	3/4 x .035
27 x 0.9		■	● ■	● ■	● ■	●	●	●		1 x .035
34 x 1.1	■	■	● ■	● ■	● ■	●	●			1 1/4 x .042
41 x 1.3	■	■	■	■						1 1/2 x .050
54 x 1.3	■									2 x .050
54 x 1.6		■								2 x .063
67 x 1.6	■									2 5/8 x .063

Width x thickness (mm) ● constant tooth pitch (normal tooth) ■ normal tooth pitch (Hook tooth)

Teeth per inch/combi tooth pitch

	0.75/ 1.25	1.1/ 1.6	1.5/ 2	2/3	3/4	4/5	4/6	5/6	5/8	6/10	8/12	10/14	
6 x 0.6												●	1/4 x .025
6 x 0.9												●	1/4 x .035
10 x 0.6												●	3/8 x .025
10 x 0.9												●	3/8 x .035
13 x 0.6										●	●	●	1/2 x .025
13 x 0.9										●		●	1/2 x .035
16 x 0.6												●	5/8 x .025
20 x 0.9							■		●	●	●	●	3/4 x .035
27 x 0.9				■	● ■ ▲	■	● ■ ▲	■	●	●	●	●	1 x .035
34 x 1.1			■	■ ▲	● ■ ▲	■	● ■ ▲	■	●	●	●		1 1/4 x .042
41 x 1.3			■	■ ▲	● ■ ▲	■	● ■ ▲		●	●			1 1/2 x .050
54 x 1.3			■	■ ▲	■ ▲	■	■ ▲						2 x .050
54 x 1.6	■	■	■	■ ▲	■ ▲	■	■ ▲	■					2 x .063
67 x 1.6	■	■	■	■ ▲	■ ▲								2 5/8 x .063
80 x 1.6	■	■	■	■	■								3 1/8 x .063

Width x thickness (mm) ● combi tooth pitch (normal tooth) ■ combi tooth pitch (Hook tooth) ▲ combi tooth pitch WS (Hook tooth)

bi-alfa®

cobalt forteC

- combi tooth pitch
- pre-honed cutting edges
- corresponds to the specification of bi-alfa cobalt M42 with an additional forteC-coating to increase the cutting performance

APPLICATION AREAS



Teeth per inch

	0.75/1.25	1.1/1.6	1.5/2	2/3	3/4	
34 x 1.1				■	■	1 1/4 x .042
41 x 1.3				■	■	1 1/2 x .050
54 x 1.3					■	2 x .050
54 x 1.6			■	■	■	2 x .063
67 x 1.6	■	■		■		2 5/8 x .063
80 x 1.6	■	■				3 1/8 x .063

Width x thickness (mm) ■ Hook tooth

bi-alfa®

Profile Profile WS

- combi tooth pitch
- the reinforced tooth back design increases the wear resistance of the tooth caused by vibration during interrupted cutting applications
- most suitable for tubes, beams and profiles
- backing material made of high alloyed spring steel
- quality WS creates a larger cutting channel, which helps to prevent blade binding, specially for materials with residual stress

APPLICATION AREAS



Teeth per inch

	2/3	3/4	4/6	5/7	7/9	8/11	12/16	
13 x 0.6						■		1/2 x .025
20 x 0.9						■	■	3/4 x .035
27 x 0.9		■	■	■	■	■	■	1 x .035
34 x 1.1	▲	■▲	■	■		■		1 1/4 x .042
41 x 1.3	▲	■▲	■	■				1 1/2 x .050
54 x 1.3	▲	■▲						2 x .050
54 x 1.6	▲	■▲	■					2 x .063
67 x 1.6	▲	■▲	■					2 5/8 x .063

Width x thickness (mm) ■ Profile tooth ▲ Profile tooth WS

bi-alfa®

Profile forteC

Profile WS forteC

- combi tooth pitch
- pre-honed cutting edges
- corresponds to the specification of bi-alfa Profile/Profile WS with an additional forteC-coating to increase the cutting performance

APPLICATION AREAS



Teeth per inch

	2/3	3/4	4/6	5/7	
34 x 1.1		■	■	■	1 1/4 x .042
41 x 1.3	▲	▲			1 1/2 x .050
54 x 1.6	▲	■ ▲			2 x .063
67 x 1.6	▲	▲	▲		2 5/8 x .063

Width x thickness (mm) ■ Profile tooth ▲ Profile tooth WS

bi-alfa®

cobalt RP

- combi tooth pitch
- especially suitable for solid material of all common steel grades up to a hardness of < 45HRC
- the hardness of the wear resisting tooth tips is about 67-69 HRC
- aggressive cutting characteristics to cut exotic alloys and non-ferrous metals

APPLICATION AREAS



Teeth per inch

	0.75/1.25	1.1/1.6	1.5/2	2/3	3/4	
27 x 0.9					■	1 x .035
34 x 1.1				■	■	1 1/4 x .042
41 x 1.3			■	■	■	1 1/2 x .050
54 x 1.3			■	■		2 x .050
54 x 1.6		■	■	■	■	2 x .063
67 x 1.6	■	■	■	■		2 5/8 x .063
80 x 1.6	■	■				3 1/8 x .063

Width x thickness (mm) ■ RP tooth

bi-alfa®

Master

- combi tooth pitch
- especially suitable for solid material of all common steel grades up to a hardness of < 45HRC
- the hardness of the wear resisting tooth tips is about 67-69 HRC
- improved cutting guidance / performance by ground pre-cutter/tooth height difference
- for cutting high and highest alloyed materials

APPLICATION AREAS



Teeth per inch

	1,5/2	2/3	3/4	
27 x 0.9			■	1 x .035
34 x 1.1		■	■	1 1/4 x .042
41 x 1.3	■	■	■	1 1/2 x .050

Width x thickness (mm) ■ Master tooth

bi-alfa®

cobalt M51

- combi tooth pitch
- cutting of all common steel grades up to a hardness of 50 HRC
- tooth tips made of alloyed high-speed steel (HSS) M51 have a high thermal and mechanical wear resistance
- backing material made of high alloyed spring steel
- the hardness of the wear resisting tooth tips is about 69-70 HRC

APPLICATION AREAS



Teeth per inch

	0.75/1.25	1.1/1.6	1.5/2	2/3	3/4	4/5	4/6	
27 x 0.9				■	■	■	■	1 x .035
34 x 1.1				■	■		■	1 1/4 x .042
41 x 1.3			■	■	■		■	1 1/2 x .050
54 x 1.3			■	■				2 x .050
54 x 1.6		■	■	■	■			2 x .063
67 x 1.6	■	■	■	■				2 5/8 x .063
80 x 1.6	■	■						3 1/8 x .063

Width x thickness (mm) ■ Hook tooth

Master Supreme

- combi tooth pitch
- cutting of all common steel grades up to a hardness of 50 HRC
- tooth tips made of alloyed high-speed steel (HSS) M51 have a high thermal and mechanical wear resistance
- improved cutting guidance / performance by ground pre-cutter/tooth height difference
- aggressive cutting characteristics to cut exotic alloys on larger cross sections
- longer life and improved cutting surfaces with hard to cut materials

APPLICATION AREAS



Teeth per inch

	0.6/0.7	0.75/1.25	1.1/1.6	1.5/2	2/3	3/4	
34 x 1.1					■	■	1 1/4 x .042
41 x 1.3				■	■		1 1/2 x .050
54 x 1.3					■		2 x .050
54 x 1.6			■	■	■		2 x .063
67 x 1.6		■	■				2 5/8 x .063
80 x 1.6		■	■				3 1/8 x .063
100 x 1.6	■ *	■ *					4 x .063

Width x thickness (mm) ■ Master tooth * discontinued

RECOMMENDATIONS FOR TOOTH SELECTION

for solid material

Constant tooth pitch		Combi tooth pitch	
Cross section	Tooth pitch	Cross section	Tooth pitch
< 10 mm	14 ZpZ	<25 mm	10/14 ZpZ
10 - 30 mm	10 ZpZ	15 - 40 mm	8/12 ZpZ
30 - 50 mm	8 ZpZ	25 - 50 mm	6/10 ZpZ
50 - 80 mm	6 ZpZ	35 - 70 mm	5/8 ZpZ
80 - 120 mm	4 ZpZ	40 - 90 mm	5/6 ZpZ
120 - 200 mm	3 ZpZ	50 - 120 mm	4/6 ZpZ
200 - 300 mm	2 ZpZ	80 - 150 mm	3/4 ZpZ
300 - 700 mm	1,25 ZpZ	130 - 350 mm	2/3 ZpZ
> 600mm	0,75 ZpZ	150 - 450 mm	1.5/2 ZpZ
		200 -600 mm	1.1/1.6 ZpZ
		> 500 mm	0.75/1.25 ZpZ

for tubes

Wall thickness	Outside diameter									
	20	40	60	80	100	120	150	200	300	500
2	14	12/16 P	12/16 P	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	8/11 P	5/7 P
3	14	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	8/11 P	5/7 P	5/7 P	5/7 P
4	12/16 P	12/16 P	8/11 P	8/11 P	8/11 P	7/9 P* 5/7 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P
5	12/16 P	12/16 P	8/11 P	7/9 P	7/9 P* 5/7 P	7/9 P* 5/7 P	5/7 P	4/6 P	4/6 P	4/6 P
6	12/16 P	8/11 P	8/11 P	7/9 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P	4/6 P	4/6 P
8	12/16 P	8/11 P	8/11 P	7/9 P* 5/7 P	5/7 P	5/7 P	4/6 P	4/6 P	4/6 P	4/6 P
10		8/11 P	7/9 P* 5/7 P	5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
12		7/9 P* 8/11 P	7/9 P* 5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
15		7/9 P* 8/11 P	7/9 P* 5/7 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P
20			4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	3/4 P
30				4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	4/6 P	3/4 P
50							4/6 P	3/4 P	3/4 P	2/3 P
80								3/4 P	2/3 P	2/3 P
>100									2/3 P	1.5/2

*Profile 7/9 tpi only available in width 27 mm at the moment of print

ROBERT RÖNTGEN GMBH & CO. KG

AUF DEM KNAPP 44 | 42855 REMSCHEID

TEL.: +49-(0)-2191 373-01

FAX: +49-(0)-2191 373-999

info@roentgen-saw.com

www.roentgen-saw.com



RÖNTGEN®

GERMAN QUALITY - ENDURING PRECISION