harrdinjet™ 哈丁尖

Arbets™ 阿尔贝兹

edith™ 埃蒂斯

KIJARO™ 启扎罗

simsen®

杭州西姆森机械有限公司
浙江省杭州市余杭区仁和街道启航路80号
邮编：311107
邮箱：Internalsale@simsencn.com
电话：0571-89029888
传真：0571-89029858

www.simsenhz.com

Hangzhou Simsen Machinery Co.,Ltd.
NO.80 Qihang Road,Renhe Street,Yuhang District,
Hangzhou, Zhejiang.
Postcode: 311107
Email:Internationalsale@simsencn.com
Domestic Call: 0571-86331999
Overseas Call: 0086-571-89029868
Fax: 0086-571-89029858

Band Saw Blades

simsen®

西姆森®双金属带锯条

德国技术制造
GERMAN TECHNOLOGY

关于西姆森

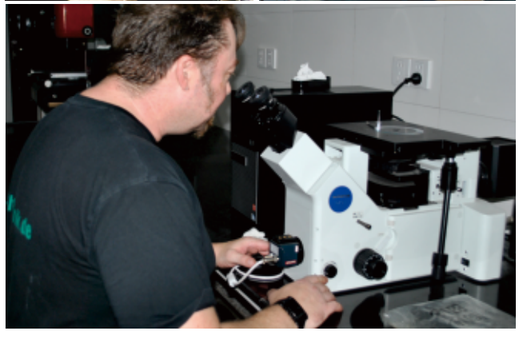
西姆森一 以其精准的产品定位及战略理念领先落户于杭州余杭区先进制造业基地，成立之初即获得业界人士的一致关注 .

双金属带锯条在未来市场应用中将会愈演愈烈，而西姆森正是以高精技术为基点，以焕新锯条领域为目标，凭借自身不断的力行发展持续前行，在短短的几年内，已经成功赢得国内外客户的一致赞誉。依托客户之信赖，结合市场运作需求，西姆森特设立专业的技术研发中心，根据定期的市场调研及国内外行业发展情况，不断改进并开发新的锯条产品，保证其符合高质量标准，进而提高带锯条的可靠性和高精度，使 SIMSEN 成为双金属带锯条优质创新的代名词。

西姆森重视人才培养，公司有从国内外聘请的专家团队，更有踏实肯干富有创造力的行业人才，我们通过学习国外先进的管理理念，大力挖掘整合资源。另外，公司引进美国、意大利等国的各种先进生产设备及加工工艺，现如今，产品品质已达到国际先进水平。

我们一直在努力！我们不断在超越！

Company Profile



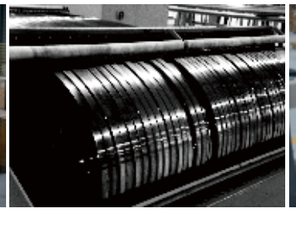
SIMSEN lead in advanced manufacturing base of Yuhang district in Hangzhou with its accurate product positioning and strategic concept, its inception has won the industry's consistent attention since the foundation.

Bi-metal band saw blade application in future market will be intensified, and Simsen continued forwarding with its own consistant practise development just based on the technology of high precision and with the goals of refresh saw blade field. In a few short years, simsen has won domestic and foreigh costomers consistant praise.

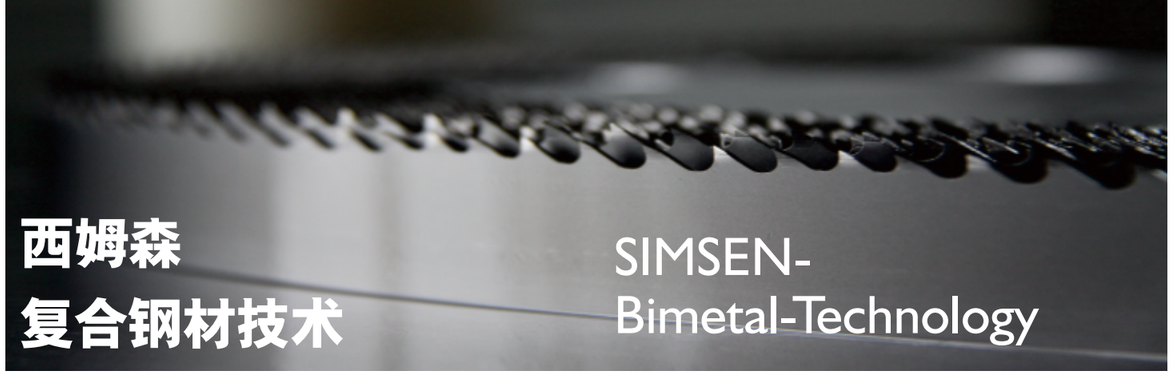
Based on the client's trust and combinded with market operation requirements, simsen specially set up technology R&D center. According to the regular market research and domestic industry development, we continued improving and developing new blade products to ensure the high quality standards are met and to improve the reliability of the band saw blade and high precision, which made SIMSEN to be a synonym for high quality and innovation.

SIMSEN attached great importance to the cultivation of talents, we hire team of experts from home and abroad and also own the down-to-earth creative industry talents; We vigorously mined resource integration by learning foreignadvanced management concept; Besides, company introduced advanced production equipment and processing technology from the United States, Italy and other countries. Today, the product quality has reached the international advanced level.

We have been working hard!
We constantly transcend!



目录 Catalogue



西姆森
复合钢材技术

SIMSEN-
Bimetal-Technology

产品概述

两种材料 - 用于锯齿的高速钢（HSS）和作为基体材料的合金工具钢，通过高能激光焊接在一起。专门开发的基体材料含 4% 的 鉻，R80、B318 带锯条使得其在动载荷下具有极佳的机械性能，焊接处理的结果形成了一种最适用于锯条的复合材料，其抗磨损与抗疲劳性能极其优异。产品包括宽度从 27mm 至 80mm 不同齿形的双金属带锯条 . 目前，公司产品包括 “哈丁尖 HARRDINJET” “阿尔贝兹 ARBETS” “埃蒂斯 EDITH” “启扎罗 KIJARO” 四大品牌，覆盖高中端不同层次，可满足不同领域客户的需求，主要产品及适用范围如下：

Product Overview

Two materials, high speed steel(HSS) for the teeth and alloyed tool steel as the backing material, are joined during the high energy laser welding process. The specially developed backing material, alloyed with 4% chromium, R80 \ B318 band saw blade, has excellent machanical properties under dynamic loading. This welding process results in an optimal combination of materials with respect to saw blade resistance to wear and fatigue.

Products cover Bi-metal band saw blade with different tooth shapes from the width of the 27 mm to 80 mm. It include “HARRDINJET” “ARBETS” “EDITH” “KIJARO” total four series, which cover different levels and can meet the demands of different areas.Main products and scope of application as follows:

	品 牌	Brand Name
harrdinjet	**哈丁尖** 各种高合金及其他金属材料的锯切	HARRDINJET For all kinds of high alloy and other metal materials cutting
Arbets	**阿尔贝兹** 可切削硬度在 HRC46 以下的中碳合金钢、不锈钢、模具钢以及有色金属	ARBETS For cutting hardness under HRC46 medium carbon alloy steel, stainless steel, die steel and nonferrous metals
edith	**埃蒂斯** 可切削硬度在 HRC44 的碳钢、合金钢、结构钢、高温合金钢、有色金属等；特别适用于的不锈钢、模具钢等难切割材料	EDITH For cutting hardness with HRC44 carbon steel, alloy steel, structural steel, high temperature alloy steel, non-ferrous metals, etc.; Especially suitable for difficult to cut materials such as stainless steel, die steel
KIJARO	**启扎罗** 碳钢、齿轮钢、轴承钢、调整钢、普通模具钢、合金钢、有色金属	KIJARO Carbon steel, gear steel, bearing steel, steel, general steel, alloy steel, non-ferrous metals

harrdinjet™

M51-Harrdinjet

优点 / 描述

- R80/B318 锯条体和 M51 粉末高速钢合成
- 工作寿命最长
- 高速锯切 切面光滑
- 耐磨性更好
- 抗疲劳性更强

Harrdinjet 采用美国、奥地利优质高性能的 R80\B318 锯条体材料和齿部 M51 的粉末高速钢组成，通过先进的德国、瑞典、意大利等国家的加工设备和特殊热处理工艺加工而成，与 M42 相比，性能更强，适用于各种合金及其他金属材料的锯切。

Advantages/Description

- Welding with R80/B313 and M51HSS PM
- Longest operating life
- High speed cutting and smooth section
- Better wear resistance
- Greatest fatigue resistance

Harrdinjet uses high-performance R80/B318 backing material and high speed steel particulate matter tooth material. It is made by the advanced processing equipment and special heat treatment technology Imported from Germany, Sweden, Italy etc. Compared to M42 , it has better performance and applicable for a variety of alloys and other metallic materials.

选型表及选用原理介绍

Selection Table and selection principles introducing

宽度 Width	厚度 Thickness	齿距 Tooth Pitch						
mm	inch	0.75-1.25	1.0-1.4	1.4-2	2-3	3-4	4-6	5-8
27*0.9	1*0.035				▼▽	▽▼	▼▽	▼▽
34*1.1	1 1/4*0.042			▼	▼▽	▼▽	▼▽	▼▽
41*1.3	1 1/2*0.050			▼	▼▽	▼▽	▼▽	▼▽
54*1.6	2*0.063	▽	▼▽	▼▽	▼▽	▼	▼	
67*1.6	2 5/8*0.063	▼▽	▼▽	▼▽	▼	▼	▼	
80*1.6	3*0.063	▼▽	▼▽	▼▽	▼	▼		

▽代表标准齿，适用于切削中碳钢一下材料，小齿距的主要用于 H 型钢，小圆钢成束切割，异形薄壁钢管等。

▽ Represent standard teeth, suitable for cutting carbon look material, mainly used for small pitch of H-beam, small round bundles cut, shaped thin-walled steel pipe.

▼代表勾齿，适用于切割大型圆钢、方钢、厚壁管等碳钢材料，适用于切割不锈钢、模具钢、高硬度钢、特殊钢钛合金等。

▼ Represent hook teeth, suitable for cutting large round bar, square steel, thick-walled steel pipe and other materials suitable for cutting stainless steel, tool steel, high hardness steel, special steel, titanium and so on.

M42-Arbets

优点 / 描述

- 4% 鉻基体材料和 M42 高速钢合成
- 耐磨性能最佳
- 切削精度高
- 耐磨性及抗疲劳性强
- 高震动作业中切割最佳

Arbets 采用 4% 鉻基体材料和齿部 M42 高速钢组成，因为钨与碳含量的减少使其锯口在高震动作业中表现出色。例如锯切薄壁管，横截面积以及成束锯切等应用中，高含钴量（8%）使锯口具有最佳的耐磨性能。适用于切割硬度在 HRC46 以下的中碳合金钢、不锈钢、模具钢和有色金属。

Advantages/Description

- Welding with 4% Cr and M42 HSS
- Best wear resistance
- High cutting accuracy
- Strong wear and fatigue resistance
- Best cutting performance in high vibration

Arbets composed with 4% chromium backing material and M42 HSS tooth material. It has outstanding performance in high-vibration applications because of reducing tungsten and carbon contents. Such as cutting for thick-wall tube, profiles and bundle. High cobalt content(8%) makes tooth with the best wear resistance. For cutting hardness less than HRC46 carbon alloy steel, stainless steel, tool steel and non-ferrous metals.

选型表及选用原理介绍

Selection Table and selection principles introducing

宽度 Width	厚度 Thickness	齿距 Tooth Pitch						
mm	inch	0.75-1.25	1.0-1.4	1.4-2	2-3	3-4	4-6	5-8
27*0.9	1*0.035				▼▽	▽▼	▼▽	▼▽
34*1.1	1 1/4*0.042			▼	▼▽	▼▽	▼▽	▼▽
41*1.3	1 1/2*0.050			▼	▼▽	▼▽	▼▽	▼▽
54*1.6	2*0.063	▽	▼▽	▼▽	▼▽	▼	▼	
67*1.6	25/8*0.063	▼▽	▼▽	▼▽	▼	▼	▼	
80*1.6	3*0.063	▼▽	▼▽	▼▽	▼	▼		

▽代表标准齿，适用于切削中碳钢一下材料，小齿距的主要用于 H 型钢，小圆钢成束切割，异形薄壁钢管等。

▽ Represent standard teeth, suitable for cutting carbon look material, mainly used for small pitch of H-beam, small round bundles cut, shaped thin-walled steel pipe.

▼代表勾齿，适用于切割大型圆钢、方钢、厚壁管等碳钢材料，适用于切割不锈钢、模具钢、高硬度钢、特殊钢钛合金等。

▼ Represent hook teeth, suitable for cutting large round bar, square steel, thick-walled steel pipe and other materials suitable for cutting stainless steel, tool steel, high hardness steel, special steel, titanium and so on.

M42-Edith

优点 / 描述

- 生产效率最高
- 连续锯切能力强
- 工作寿命较长
- 成本效益大

Edith - 高性能带锯条尤其适用于所有金属类型的连续锯切。锯切速度相对工具钢锯条增加 30%-100%，锯切时间可最多减少 50%，工作寿命是工具钢锯条的 10 倍；无论是一次性作业还是连续性锯切工作，都可获得更佳的成本效益。

Advantages/Description

- Maximum productivity
- Strong continuous cutting capacity
- Longer operating life
- High cost effectiveness

Edith-high performance band saw blade is especially suitable for all types of continuous metal sawing. Compare to hack saw blade, its cutting speed increased by 30% - 100%, while sawing time can be reduced by up to 50 percent, working life is 10 times whether it is a one-time operation or durable sawing work, it can get better cost-effectiveness.

选型表及选用原理介绍

Selection Table and selection principles introducing

宽度 Width	厚度 Thickness	齿距 Tooth Pitch						
mm	inch	0.75-1.25	1.0-1.4	1.4-2	2-3	3-4	4-6	5-8
27*0.9	1*0.035				▼▽	▽▼	▼▽	▼▽
34*1.1	1 1/4*0.042			▼	▼▽	▼▽	▼▽	▼▽
41*1.3	1 1/2*0.050			▼	▼▽	▼▽	▼▽	▼▽
54*1.6	2*0.063	▽	▼▽	▼▽	▼▽	▼	▼	
67*1.6	25/8*0.063	▼▽	▼▽	▼▽	▼	▼	▼	
80*1.6	3*0.063	▼▽	▼▽	▼▽	▼	▼		

▽代表标准齿，适用于切削中碳钢一下材料，小齿距的主要用于 H 型钢，小圆钢成束切割，异形薄壁钢管等。

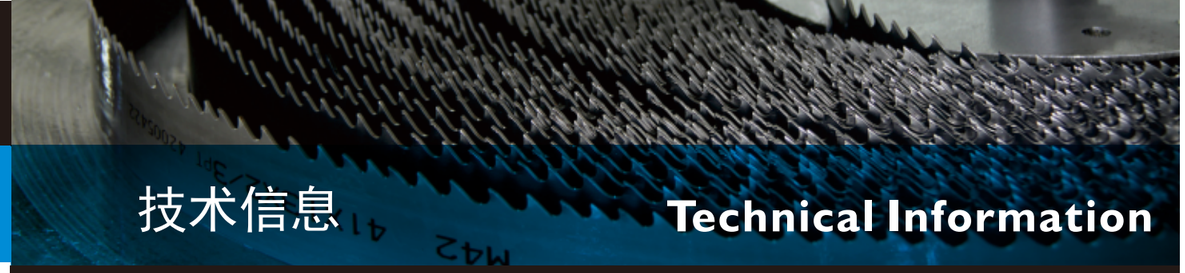
▽ Represent standard teeth, suitable for cutting carbon look material, mainly used for small pitch of H-beam, small round bundles cut, shaped thin-walled steel pipe.

▼代表勾齿，适用于切割大型圆钢、方钢、厚壁管等碳钢材料，适用于切割不锈钢、模具钢、高硬度钢、特殊钢钛合金等。

▼ Represent hook teeth, suitable for cutting large round bar, square steel, thick-walled steel pipe and other materials suitable for cutting stainless steel, tool steel, high hardness steel, special steel, titanium and so on.

KIJARO™

M51-KIJARO



技术信息 Technical Information

优点 / 描述

- 锯切性能好
- 抗磨损强
- 性价比高

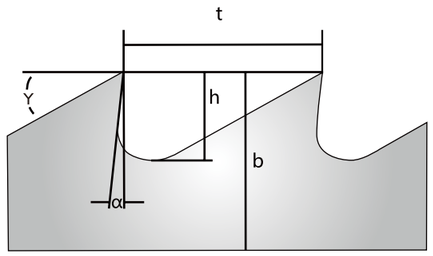
Kijaro 在满足基本切割要求下，性价比较高。该锯条具有性能优异的锯口，增加了锯切性能。建议用于碳钢、轴承钢、调整钢、普通模具钢等。

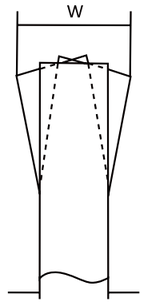
Advantages / Description

- Good cutting performance
- Strong wear resistance
- Cost-effective

Kijaro meets the basic cutting requirements with cost-effective. It has high-performance tooth and increases the cutting performance. It is recommanded applicable for carbon steel, bearing steel, ordinary mould steel etc.

带锯外形尺寸 Saw Band Geometry





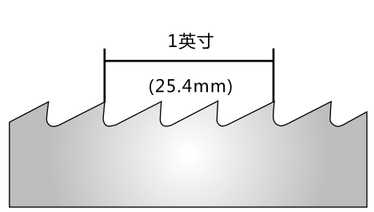
b	带宽	b	band width
S	带厚	S	band thickness
h	齿高	h	tooth height
t	齿距	t	tooth pitch
α	前角	α	rake angle
Y	后脚	Y	relief angle
W	设置宽度	W	set width

齿距 Tooth Pitch

用于金属锯切的带锯齿距通常以每英寸齿数测量，其大小根据被锯切材料的横截面及种类变化。两个示例：

Tooth pitch, which for metal-cutting saw is usually measured in teeth per inch, varies according to the cross section and the type of material to be cut. Two examples:

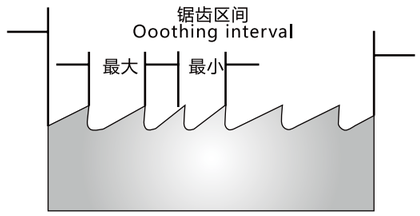
固定的锯齿 Constant Toothing



例如：3tpi（ ≧8.47mm齿距 ）

Example 3 tpi (≧8.47mm pitch)

变化的锯齿 Variable Toothing



例如： 3/4tpi (≧ 8.47mm和6.35mm齿距)

Example 3/4 tpi (≧ 8.47mm and 6.35mm pitch)

选型表及选用原理介绍 Selection Table and selection principles introducing

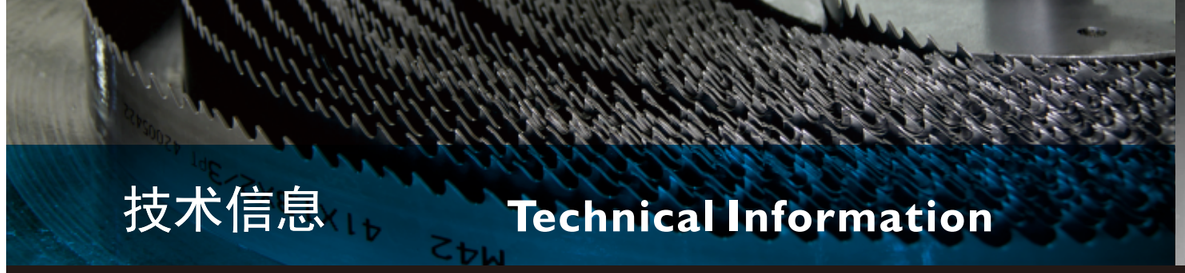
宽度 Width	厚度 Thickness	齿距 Tooth Pitch						
mm	inch	0.75-1.25	1.0-1.4	1.4-2	2-3	3-4	4-6	5-8
27*0.9	1*0.035				▼▽	▽▼	▼▽	▼▽
34*1.1	1 1/4*0.042			▼	▼▽	▼▽	▼▽	▼▽
41.1.3	1 1/2*0.050			▼	▼▽	▼▽	▼▽	▼▽
54*1.6	2*0.063	▽	▼▽	▼▽	▼▽	▼	▼	
67*1.6	25/8*0.063	▼▽	▼▽	▼▽	▼	▼	▼	
80*1.6	3*0.063	▼▽	▼▽	▼▽	▼	▼		

▽代表标准齿，适用于切削中碳钢一下材料，小齿距的主要用于 H 型钢，小圆钢成束切割，异形薄壁钢管等。

▽ Represent standard teeth, suitable for cutting carbon look material, mainly used for small pitch of H-beam, small round bundles cut, shaped thin-walled steel pipe.

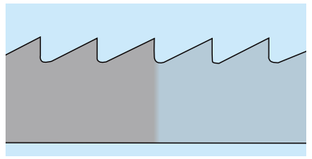
▼代表勾齿，适用于切割大型圆钢、方钢、厚壁管等碳钢材料，适用于切割不锈钢、模具钢、高硬度钢、特殊钢钛合金等。

▼ Represent hook teeth, suitable for cutting large round bar, square steel, thick-walled steel pipe and other materials suitable for cutting stainless steel, tool steel, high hardness steel, special steel, titanium and so on.



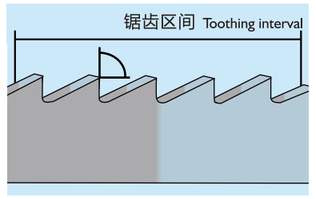
技术信息 Technical Information

齿的结构 Tooth Forms



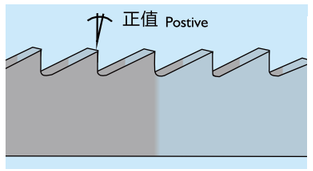
N-齿（标准） N-tooth(standard)

正常锯齿最适用于锯切含碳量高的小片材料，不如工具钢或者铸铁。它适用于广泛的应用，包括横切锯和薄壁切面的材料。



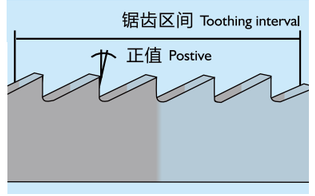
N-齿（标准） N-tooth(standard)

The normal tooth is the best suited for sawing of small-chip materials with high carbon content such as tool steel or cast iron. It is suitable for a wide range of applications, including with cross-cuts and materials with thin-walled cross sections.



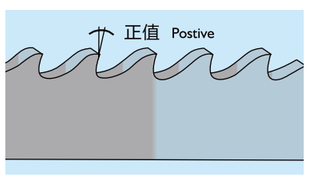
CS-齿（钩形） CS-tooth(hook)

带有正前角的钩形齿能用于所有种类的钢材，尤其适用于长片和难以切割的材料，例如结构钢、淬火钢以及高合金材料。



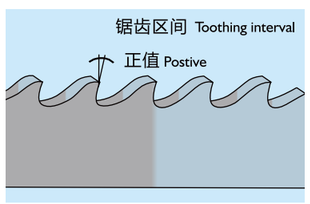
变化的CS-齿 Variable CS-tooth

The hook tooth with a postive rake angle can be used for all kinds of steel, especially for long-chip and hard-to-cut materials, for example construction steel and hardened steel, as well as high alloy materials.



DCS齿（钩形） DCS-tooth

带有修正齿形的高性能钩齿适用于锯切机械加工性能差的高合金钢，及稀有合金与 Cr-Ni-Ti 合金。



变化的DCS-齿 Variable DCS-tooth

The special high-performance hook tooth with modified tooth geometry with low machinability high alloy steel as well as exotic alloys and Cr-Ni-Ti-alloys.

特殊齿形CW

CW- 齿形尤其适用于工具制造、加工模型、主要低合金钢的锯切、铝合金以及轮廓锯切和曲线切割。
变化的齿形使您可以用一片锯条锯切更大的截面。

Special toothing CW

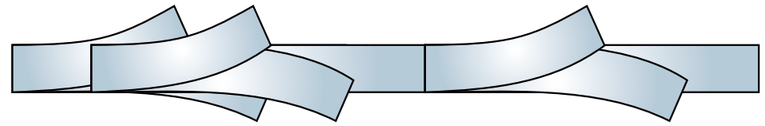
The CW-tooth is above all used for the manufacturing of tools, making molds, the sawing of mainly low alloy steels, aluminium-alloys, as well as for contour sawing and curved cutting.
Variable toothing allows cutting of larger cross sections with a single saw band.

齿的设置 Tooth Set

“齿的设置”指锯齿横向弯曲的规律性变化。这样可以确保锯切作业顺畅。

"tooth set" means the alternating lateral bending of saw teeth. It enables the saw band to cut freely.

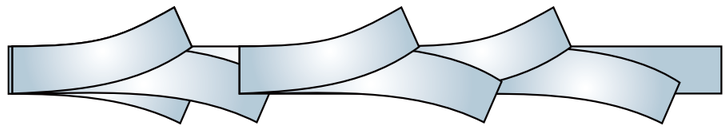
前角设置 Raker Set



前角设置（左 - 右 - 直）可用于所有类型的钢材，尤其适用于锯切厚度在 5mm 以上的材料。

The raker set(left-right-straight) is useful for all types of steel, especially for cutting thicknessrs of 5mm and more.

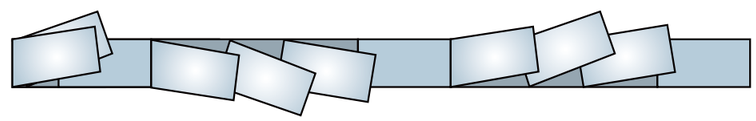
变化设置 Variable Set



在此设置中，每个齿区间有一个未经变化的直齿。其余的齿交替地左 / 右弯曲。此设置利于低震动和低噪音的锯切。

In a variable set there is one unset tooth per toothing interval. The rest of the teeth are bent alternately left/ right. This set facilitates low-vibration and low-noise cutting.

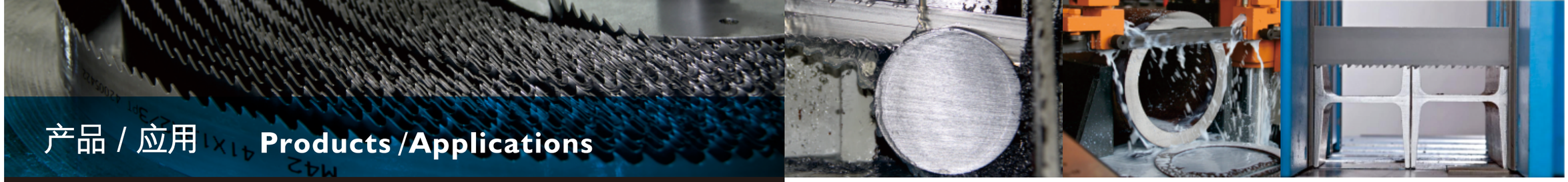
波形设置 Wave Set



该波形设置最适合用于厚度 5mm 以下的材料，比如金属板材、薄壁管和横截面。

The wave set is well suited for thin materials up to 3/16", such as sheet metal, thin-walled tubing and cross sections.

可根据客户的特殊要求生产特殊齿型。
Special tooth set and wide sets are available to meet your requirements.



产品 / 应用 Products /Applications

simsen M42

●特殊齿形 ●适用与车间和铸造厂 ●适用于轮廓于形状的锯切	● Special tooth form ● for workshops and foundries ● for contour and form cutting	特殊齿形，细齿距，如 :6、10、10/14 10, 10/14
●适用于所有品种的钢材 ●实心材料的连续锯切以及成束锯切 ●适用于小至中等的物件	● universal application for all kinds of steel ● serial cutting of solid materials as well as bundles ● for cutting small to medium-size items	细齿距，N- 和 CS- 齿形，如 :6、10、10/14 fine tooth pitch, N- and Cs-tooth, e.g. 6、10、10/14
●适用于所有生产锯切 ●适用于从低至高的各类合金钢 ●中至大尺寸钢件	● universal application for production cutting ● for low to high alloy steels ● medium to workpiece dimensions	中至粗齿形，CS- 和 DCS- 齿形， 如 :0.75/1.25、1.4/2、3/4 medium to coarse tooth, CS- and DCS-tooth, e.g. 0.75/1.25,1.4/2,3/4

simsen M51

●适用于机械加工性能差的材料、不锈钢 ● Ni- 和 Ti- 合金	● for material with low machinability, stainless steel ● Ni- and Ti-alloys	中至粗齿距，DCS 齿，如 :1.4/2、2/3 Medium to coarse tooth pitch, DCS-tooth, e.g. 1.4/2, 2/3

用于实心材料的锯齿 Toothing for Solids

恒定的齿形 Constant Toothing
实心材料直径 Diameter of solid material

6	10	20	30	50	80	100	120	200	300	400	500	800	(mm)
22	18	14	10	8	6	4	3	2	1.25	0.75			

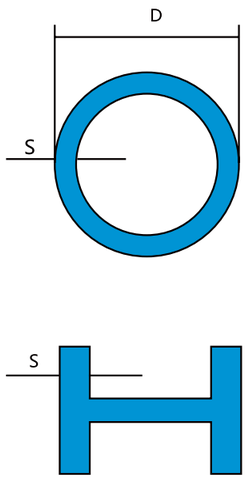
锯齿 齿/英寸 (tpi) Toothing teeth/inch(tpi)

变化的齿形 Variable Toothing
Diameter of solid material

20	30	50	80	100	200	300	500	800	(mm)
10/14	8/12	6/10	5/8	4/6	4/6	3/4	2/3	1.4/2	0.75/1.25

锯齿 齿/英寸 (tpi) Toothing teeth/inch(tpi)

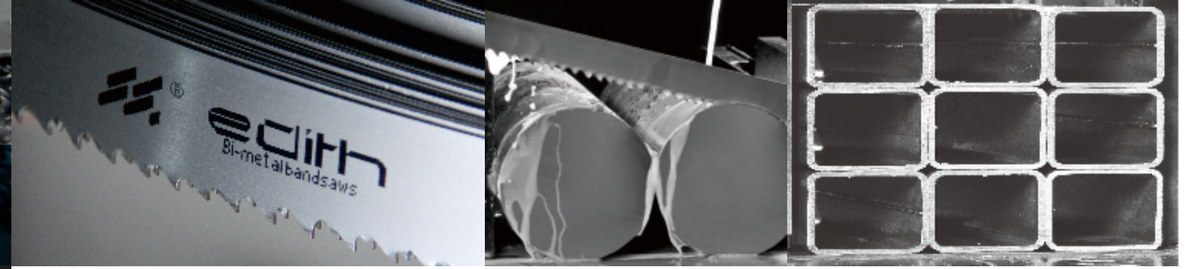
确定锯切管材和型材的正确锯齿 To Determine the Correct Toothing for Sawing Tubing and Profiles



D(mm) / S(mm)	20	40	60	80	100	150	200	300	500
	齿距 Tooth Pitch								
2	14	14	14	14	10/14	10/14	10/14	10/14	8/12
3	14	10/14	10/14	8/12	8/12	8/12	6/10	6/10	6/10
4	14	10/14	10/14	8/12	8/12	6/10	6/10	5/8	4/6
5	14	10/14	10/14	8/12	6/10	6/10	5/8	4/6	4/6
6	14	10/14	8/12	8/12	6/10	5/8	5/8	4/6	4/6
8	14	8/12	6/10	6/10	6/10	5/8	5/8	4/6	4/6
10		6/10	6/10	5/8	5/8	4/6	4/6	4/6	3/4
12		6/10	5/8	4/6	4/6	4/6	4/6	3/4	3/4
15				4/6	4/6	3/4	3/4	2/3	2/3
20				4/6	4/6	3/4	3/4	2/3	2/3
30				3/4	3/4	3/4	2/3	2/3	2/3
50						2/3	2/3	2/3	1.4/2
75							2/3	1.4/2	1.4/2
100								1.4/2	0.75/1.25
150									0.75/1.25

使用推荐 Recommendations for use

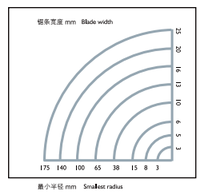
材料分类 Material Class	德国 Germany		锯切速度 Cutting Speed(m/min.)	冷却 Cooling		
	材料名称 Material Designation	材料编号 Material No.	Simsen M42/M51	乳化液 Emulsion	冷却油 Cooling oil 有 Yes	冷却油 Cooling oil 无 No
结构钢 Structural steel	RSt 37-2/ST 44-2	1.0038/1.0044	80-100	1:20		●
	St50-2/St60-2	1.0050/1.0060	50-70			
表面淬火钢 Case-hardened steel	C 10/C 15	1.0301/1.0401	80-100	1:10	●	
	14 NiCr 14	1.5752	40-55	1:20	●	
	21 NiCrMo 2	1.6523				
	16 MnCr 5	1.7131	50-60	1:20	●	
易切削钢 Free-cutting steel	9 S 20	1.0711				●
热处理钢 Heat treatable steel	C 35/C 45/CK 45	1.0501/1.0503	60-70	1:20		●
	40 Mn 4	1.1157	60-70	1:20		●
	36 NiCr 6	1.5710				
	34 CrNiMo	1.6582	50-65	1:20		●
	42 CrMo 4	1.7225				
滚珠轴承钢 Ball bearing steel	100 Cr 6	1.3505	30-50	1:30		●
弹簧钢 Spring steel	65 Si 7	1.5028	45-60	1:30		●
	50 CrV 4	1.8159				
碳素工具钢 Tool steel unalloyed	C 125 W	1.1663	40-55	1:30		●
	C 80 W 1	1.1525				
合金工具钢 Tool steel alloyed	125 Cr 1	1.2002	40-50	1:30		●
	X210 Cr 12	1.2080	30-40	1:20		●
	X42 Cr 13	1.2083	35-45	1:30	●	
	58 SiCr 8	1.2103	40-50	1:40		●
	X155 Crv Mo121	1.2379	30-45	1:20		●
	100 CrMo 5	1.2302				
	56 NiCrMoV 7	1.2714	40-50	1:20	●	
	45 WCrV 7	1.2542	45-60		●	
	X32 CrMoV 33	1.2365				
高速钢 High speed steel	S 6-5-2-5	1.3243				
	S 6-5-2	1.3343				
	S 3-3-2	1.3333	35-45	1:30		●
	S 18-0-1	1.3355				
	S 18-1-2-10	1.3265				
阀门钢 Valve steel	X 45 CrSi 9 3	1.4718	30-40	1:20	●	
	X 45 CrNiW 18 9	1.4873	20-30			
高温钢 High-temperature steel	X 20 CrMoV 12 1	1.4922	15-25	1:10	●	
	X 5 NiCrTi 26 15	1.4980				
耐热钢 Heat-resistant steel	X 10 CrSi 6	1.4712			●	
	X10 CrAl 18	1.4742	15-25	1:10		
	X15 CrNiSi 25 20	1.4841				
不锈钢 Stainless steel	X 5 CrNi 18 10	1.4301	30-40	1:10	●	
	X 10 CrNiMoTi 17 12 2	1.4571				
调制钢 Hardened and tempered steel 1000-1500N/mm²	–	–	15-35	1:20	●	
高温镍合金 High-temp.nickel alloys	镍铬钛耐热合金 80A	2.4631	10-20	1:10	●	
	镍铬钛耐热合金 PE 16	2.4972	10-20			
	耐蚀耐热镍基合金 -X	2.4665	10-20			
	耐蚀耐热镍基合金 -F		10-20			
	耐热镍铬合金 901		10-25			
	耐热镍铬合金 722		10-25			
钛 Titanium	Ti 1	3.7025	15-35	–		
铜 Copper	KE-Cu	2.0050	100-400	1:15	●	
黄铜 Brass	CuZn 10, CuZn 408B	2.0230/2.0402	100-460	1:40	●	
铸钢 Cast steel	GS-38	1.0416	40-60	1:50		●
	GS-60	1.0553				
铸铁 Cast iron	GG-15, GTW-40	0.6015/0.8040	50-70			●
	GG-30, GTS-65	0.6030/0.9165				
铝 Alumium	Al-99 5	–	80-800	1:50		●
铝铸合金 Al-cast-alloys	G-AlSiCu 4	3.0255				●
铝青铜 Alumium bronze	CuAl 8	2.0920	50-70	1:40		●
	CuAl 8 Fe	2.0932	35-50	1:40		
	G-CuAl 10 Fe	2.0936				
青铜 Bronze	CuSn 6	2.1020	80-150	1:50		●
	G-CuSn 8	2.1030				
热塑塑料 Thermoplastics	特氟隆 Hostalen	–	100-400	1:50		●



轮廓锯切

为选择最适用于锯切作业的锯条，应从图表确定最小锯切弧度（半径）并且选定相应的锯条宽度；弧度越小，锯条越窄。

Simsen 金属带锯条是高质量的工具。为了确保极佳性能和使用寿命，选择适当锯条以及正确的试车及合理的操作程序是及其重要的。



锯条张力

在用一根新的锯条锯切以前，应该检查其张力，如有必要，在少量锯切后进行拉紧。simsen 带锯条的预拉紧应力为 250-300N/mm ^{2}。

带锯导向

锯切精度取决于带锯条导向装置的设置 - 装置越靠近材料，锯切精度越高。

当用一根新的锯条进行试车时，只能使用一般正常的进给压力 / 速率和锯切速度，直到锯出 300cm^2 -1000cm^2 的表面区域。然后渐渐将进给速率和锯切速度增加到正常值。锯下的切屑显示锯切压力和条件是否正确：

- **很细粉末状的切屑表示应增加进给速率**
- **厚、重或蓝色的切屑表示锯条过载**
- **松散判卷的切屑表示理想的锯切状态**

冷却与润滑

在大多数金属加工作业中，冷却与润滑是不可缺少的。在加工铝以及铝合金的情况下，冷却液还用于清楚切屑和保持更高的表面光洁。对于铸铁、黄铜以及一些非金属材料，如塑料和石墨等，在加工时不必进行润滑。

Contour sawing

To select the blade best suited for a cutting operation determine the smallest arc(radius) to be cut and choose the corresponding blade width from the chart; the smaller the arc, the narrower the blade.
Simsen metal band saws are high quality tools. In order to ensure optimum performance and operating life it is vital to select the correct blade as well as proper break-in and operating procedures.

Blade Tension

Before sawing with a new blade one should check tension of blade and tighten it after a few cuts if necessary. Simsen band saws are prestressed to a tension of 250-300N/mm^2 , 36-43Ksi.

Band Saw Guidance

To accuracy of the cut depends on the setting of the band saw blade guides-the closer to material to more accurate the cut.
When breaking in a new blade only half the normal feed pressure/rate and cutting speed should be used until a surface area of 50-150 sq.in. has been cut. The feed rare and cutting speed can the be gradually increased to normal. To form of the chips indicates whether the cutting pressure and cutting conditions are correct:

- **Very fine or pulverized chips indicate that the feed rate should be increased.**
- **Thick, heavy or blue-colored chips indicate that the saw blade is being overloaded.**
- **Loosely coiled chips indicate ideal cutting conditions.**

Cooling and Lubrication

Cooling and lubrication are indispensable in most metal-working operations. In case of aluminum and aluminum alloys the coolant also aids in chip removal and the maintenance of higher-quality surface finish. No lubrication is necessary for cast iron, brass and some non-metallic materials such as plastic, graphite, etc.