AMADA MACHINE TOOLS EUROPE

Saw blades

Product overview
Bimetal and carbide saw blades

+ Overview of machines, accessories, auxiliary materials

Digital saw band consultant
https://blades.amada-mt.de

Calculate cutting costs online
https://cost-per-cut.com/en

More than 50 Years for Economic Efficiency and High Performance

The AMADA Group with more than 9250 employees* and approx. 2.7 billion Euros annual* turnover stands for pioneering manufacturing solutions that achieve the highest degree of economic efficiency and productivity and minimum environmental impact.

Sawing technology has been an an integral part of the company since its foundation and forms one of the main pillars of the company. The development and manufacture of machines and blades creates a unique synergy. The world-wide annual turnover of more than 297 million Euros* in the saw technology division is unsurpassed in the industry.

The continuous development of sawing machines and materials also demands even newer blades. In turn, new blades require new performance ranges which is driven forward by continuous development of the machine.

AMADA is always able to offer you a most powerful and economically effective blade solution for your sawing operations. Our test program makes your success measurable and transparent. We invite you to see for yourself directly in your saw shop. And it doesn't matter whether you are using sawing machines from AMADA or its competitors.

Contact our sales service or arrange an appointment for a sawing test directly via vorteil@amadamachinetools.de.

** Status 04/2019*

2019
- Carbide Saw Blades
  - AXCELA STRIKER® G
  - AXCELA BOOSTER
- DBSAW 500 Diamond Saw
- VT 3850 / VT 4555 Mitre-Box Saws

2017
- HPSAW 310
- Carbide Saw Blades
  - AXCELA HP/HP1
  - AXCELA C-S7

2016
- Bimetal Saw Blades
  - new Protector M42 design
- Carbide Saw Blades
  - SMART CUT AXCELA S
  - SMART CUT AXCELA B
  - SMART CUT AXCELA G

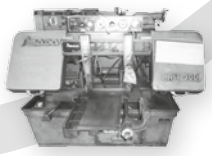
2014
- DYNASAW 530
- Bimetal Saw Blade SUPER8

2013
- Carbide Saw Blades
  - AXCELA ALB
  - AXCELA HMAX
  - AXCELA A

2012
- 2nd-Generation PCSAW
- Carbide Saw Blades
  - AXCELA S
  - AXCELA B

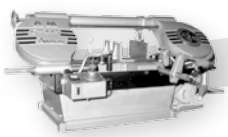
2005
- Double-Pulse-Cutting Automated Band Saw
- Carbide Saw Blades
  - AXCELA G
  - AXCELA H
- SMART CUT Saw Blades

1990
- CTB 400
  First Fully Automatic Carbide CNC Machine
- SIGMA Bimetal Saw Blade



1971
- Carbide Saw Blades

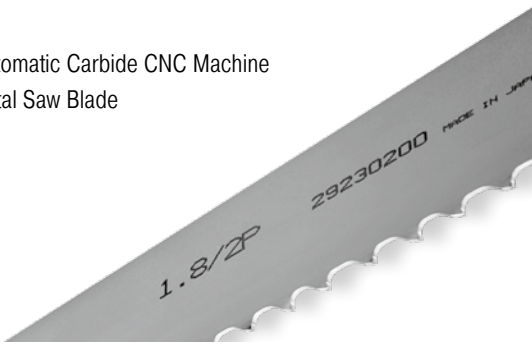
1968
- Bimetal Saw Blades



1965
- RH 300

1962
- Carbon Steel Saw Blades

1956
- AM C 225



AMADA Austria GmbH – Ternitz

AMADA Austria GmbH – Ternitz

Online process control during saw blade manufacture

QUALITY "MADE IN AUSTRIA"

During the middle of the 1980s, the AMADA Group built a production facility for saw blades and edging tools in the town of Ternitz, which is approx. 60 km away from Vienna. The production facility was conceived for supplying the European market quickly and made delivery times within only a few working days the rule. After completion of the building phase from 1986 to the middle of 1987 and after installation and commissioning of the production machines, the facility began initially with large-scale series production of bimetal saw blades.

In October 1988, work started on the production of edging tools for sheet metal processing and European production of carbide steel-tipped saw blades in 2003. In the meantime, the continuously increasing demand made further expansion necessary. During 2012, additional production lines for manufacturing carbide saw blades were installed. This helped to ensure a permanent leading position.

Zertifikat

Hiermit wird bescheinigt, dass das Managementsystem von:

Amada Austria GmbH

Wasergasse 1, 2630 Ternitz, Österreich

durch Lloyd's Register Quality Assurance geprüft und bewertet wurde und den folgenden Normen entspricht:

ISO 14001:2015 | ISO 9001:2015

P.G. Cornelissen - Area Manager North Europe

Ausgestellt von: Lloyd's Register EMEA Niederlassung Wien

für und im Auftrag von: Lloyd's Register Quality Assurance Limited

Bestehendes Zertifikat: 29. Mai 2018
Dieses Zertifikat ist gültig bis: 01. Juni 2021
Zertifikat-Nr.: 10090838

Erstmalige Zulassung:
ISO 14001 – 27. Januar 2000
ISO 9001 – 27. Januar 2000

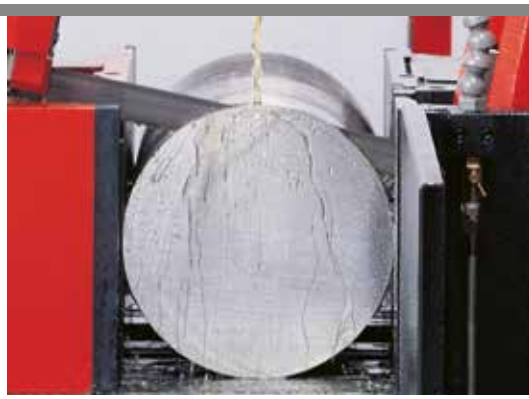
Gültigkeits-Nr.: ISO 14001 – 0018960 / ISO 9001 – 0018961

Das Managementsystem ist anwendbar für:
Herstellung und Vertrieb von AMADA Bandsägeblättern und von Abkantwerkzeugen.

A Quality Management System according to ISO 9001, which has been in existence since 1997 and certification by Lloyd's Register is the guarantee for the high quality of all products manufactured by AMADA Austria GmbH. Our Environment Management Systems are also certified according to ISO 14001.

ISO9001 · ISO14001

AMADA SAW BLADES



AXCELA CARBIDE SAW BLADES

Carbide-tipped high-performance saw blades for the highest sawing performance on materials that conventional bimetal saw blades are unable or only partly able to saw.

COATED CARBIDE SAW BLADES

AXCELA HP Series

6-7 AXCELA HP/HP1

- special saw blade for extremely powerful machines such as the HPSAW 310
- particularly hard coating for the highest resistance to wear (EXCOAT-DP)

AXCELA G Series

8-9 AXCELA G

- universal range of applications up to nickel-based alloys
- particularly hard coating or the highest resistance to wear (EXCOAT-DP)
- SMARTCUT version available (41 x 0.9 mm)

Other coated AXCELA blades

10-11 AXCELA STRIKER® G (available from 2020)

- coated carbide saw blade for various application fields
- stored operating parameters for competitive products can be taken over 1:1

UNCOATED CARBIDE SAW BLADES

AXCELA H Series

12-13 AXCELA H
- hard-to-cut materials, especially non-ferrous metals and special alloys

12-13 AXCELA H-AP
- hard-to-cut materials with tendency to jam

14-15 AXCELA HMAX
- area of use: piston rods, boundary layer-hardened materials

AXCELA A Series

16-17 AXCELA A
- particularly suitable for cast aluminium and high blade speeds, automotive applications

18-19 AXCELA ALB
- high-performance tool for sawing aluminium sheets with very high blade speed and cutting performance

AXCELA STRIKER® Series

20-21 AXCELA STRIKER®
- robust carbide saw blades for variable application fields
- stored operating parameters for competitive products can be taken over 1:1

AXCELA S Series

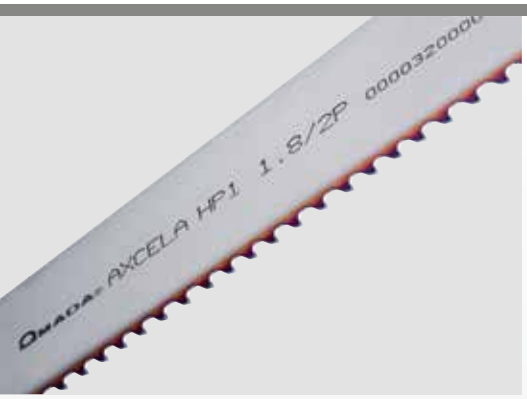
22-23 AXCELA S
- universal tool for steel and cast iron on modern CNC machines, good results even with nonferrous metals
- SMARTCUT version available (41 x 0.9 mm)

AXCELA B Series

24-25 AXCELA B
- universal tools for steel and cast iron, especially for machines without carbide treatment
- SMARTCUT version available (41 x 0.9 mm)

26-27 AXCELA BOOSTER (available from 2020)
- slanted carbide saw blade for high-performance standard saws

AXCELA HP/HP1



AXCELA HP/HP1

Microphase

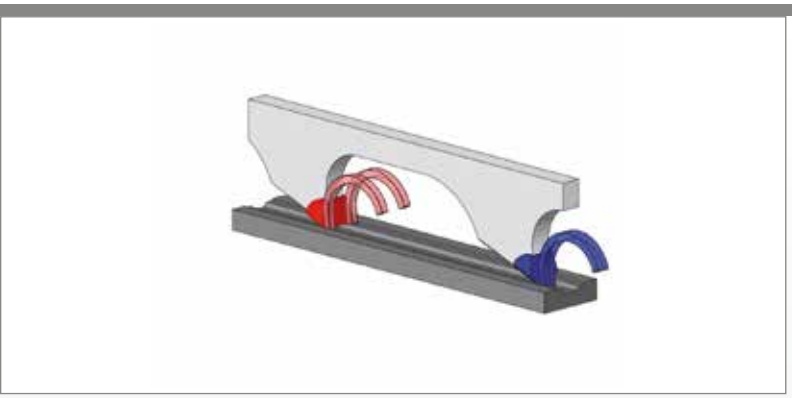
High-performance carbide saw blade for extremely powerful machines such as the AMADA HPSAW 310.

Properties

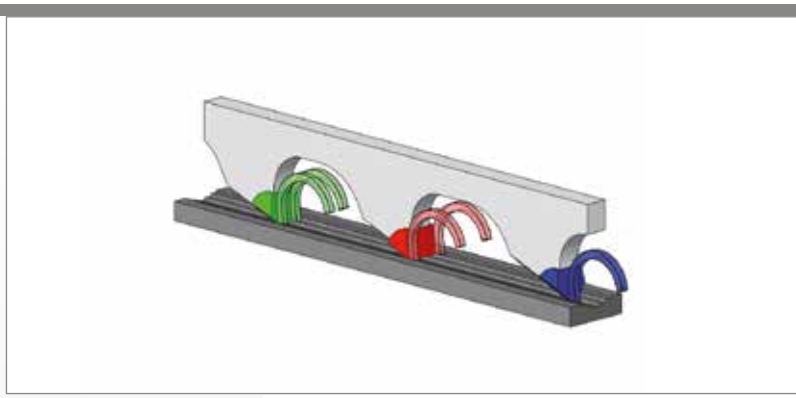
- coated carbide saw blade
- for use with high blade speeds and extremely powerful machines
- AXCELA HP mainly for stainless steel and tool steel application
- AXCELA HP1 mainly for structural steel application

Advantages

- long service life and maximum performance
- optimized design for smooth and vibration-free running



B2 tooth pattern



B3 tooth pattern

Application materials – AMADA AXCELA HP/HP1

Recommended	Suitable	Limited suitability*
Construction steel*, hard-treated steel, stainless steel, cast steel, aluminium alloys	Cold-worked steel, hot-working steel	Nickel alloys, titanium alloys, copper alloys

* Note: Mainly for use with HP1 mild steel version.

Selection of the tooth pitch – AMADA AXCELA HP/HP1

Height	Thickness	1,4/1,6 B3	1,8/2 B2
67	1.6	●	●

B2 = 2-piece tooth group, B3 = 3-piece tooth group

Recommended run-in surface: controlled by machine

* With respect to application notes, please consult your AMADA sales representative

Construction steel St

Heat-treated steel QT

Cold-worked steel

Hot-working steel

Stainless steel 304

Cast steel

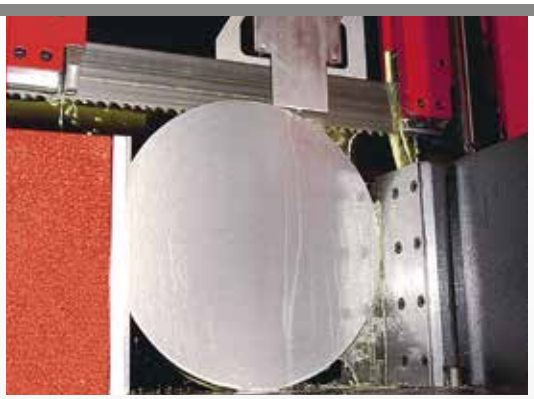
Aluminium alloys Al

Nickel alloys Ni

Titanium alloys Ti

Copper alloys Cu

AXCELA G



Maximum performance in conjunction with the AMADA PCSAW series

AXCELA G

Carbide-tipped high-performance saw blades for the highest sawing performance on materials that conventional bimetal saw blades are unable or only partly able to saw.

EXCOAT-DP Coating

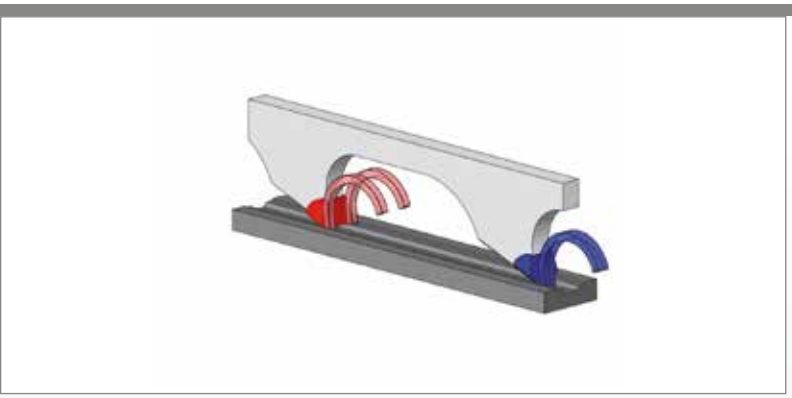
Properties

- EXCOAT-DP coating
  (AXCELA G2 = gold-coloured TiN coating, AXCELA G4 = black TiAlN coating)
- sectional cut channel
- microfibre
- for high-performance sawing machines
- SMARTCUT version available (41 x 0.9 mm)

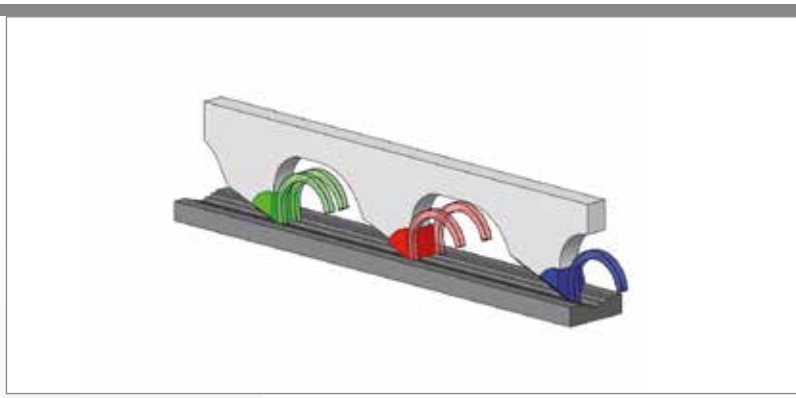
Microphase

Advantages

- highest hardening and resistance to wear
- excellent temperature resistance
- ideal for high-performance cutting of alloyed steels and nonferrous materials



B2 tooth pattern



B3 tooth pattern

Application materials – AMADA AXCELA G

Recommended	Suitable	Limited suitability*
Construction steel, hard-treated steel, cold-worked steel, hot-working steel, stainless steel, cast steel, high-speed steel, nickel alloys, titanium alloys, copper alloys	High heat-resisting steel	Ball-bearing steel, aluminium alloys

Selection of the tooth pitch – AMADA AXCELA G delivery forms

Height	Thickness	0.9/1.1 B3	1.4/1.6 B3	1.8/2 B2
41	0.9			●
41	1.3			●
54	1.6	●	●	●
67	1.6	●	●	●

B2 = 2-piece tooth group, B3 = 3-piece tooth group

Selection of the tooth pitch – AMADA AXCELA G2 delivery forms

Height	Thickness	1.8/2 B2
34	1.1	●
41	1.3	●
54	1.3	●

Selection of the tooth pitch – AMADA AXCELA G4 delivery forms

Height	Thickness	1.8/2 B2
41	1.3	●

Note: AXCELA G2 has TiN (gold) instead of EXCOAT-DP coating (violet)

Recommended run-in surface: –

* With respect to application notes, please consult your AMADA sales representative

Construction steel

Heat-treated steel

Cold-worked steel

Hot-working steel

Stainless steel

Cast steel

High-speed steel

High heat-resisting steel

Ball-bearing steel

Aluminium alloys

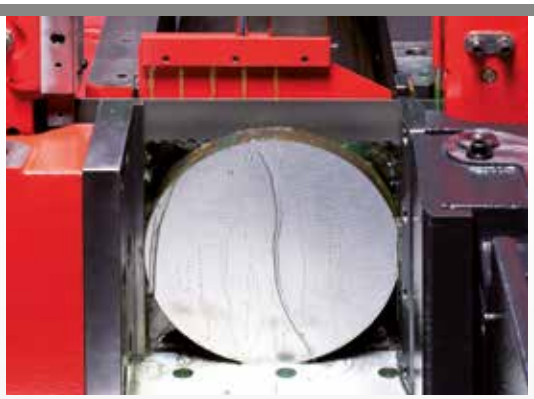
Nickel alloys

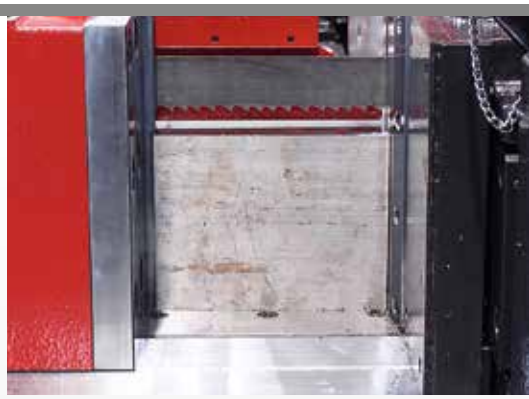
Titanium alloys

Copper alloys

AXCELA STRIKER® G

Available from 2020





AXCELA STRIKER® G

TiNAl high-performance coating

Robust coated carbide saw blades for various application fields.

Coated AXCELA STRIKER® variants for substitution of competitive products without changing the operating parameters.

Properties

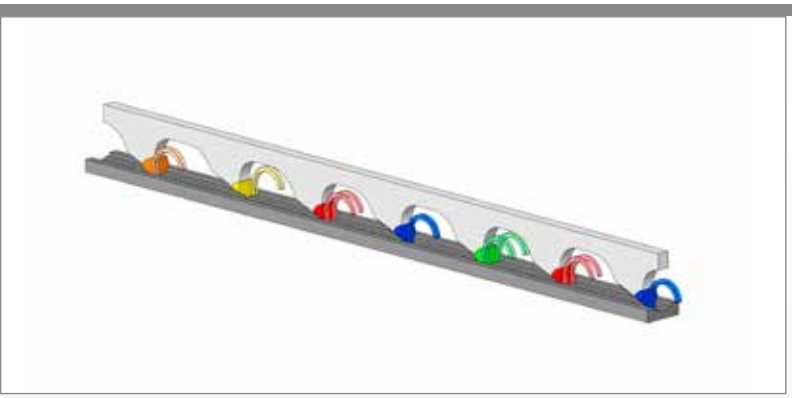
- coated carbide saw blade
- sectional cut channel
- robust cutting geometry
- for production machines
- extended setting reduce the cutting noise and the vibrations

Advantages

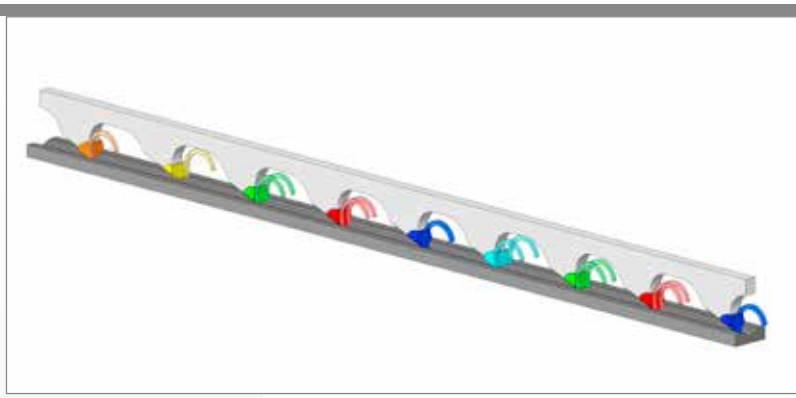
- unique toothdesign prevent clamping of the blade during cutting process
- high cutting performance in wide application areas
- less cutting forces leads to longer lifetime of the blade
- coating reduces downtimes and increases service life

Comment

The innovative design of the AXCELA STRIKER® allows a wide range of applications without having to change the operational parameters in machine control. At the same time, however, it is possible to significantly increase the saw performance in a parameter optimization.



V7 tooth pattern



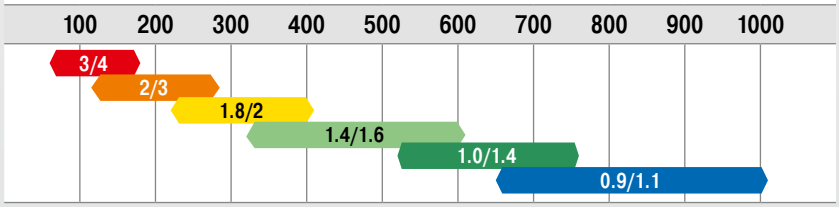
V9 tooth pattern

Application materials – AMADA AXCELA STRIKER®

Recommended	Suitable
Construction steel, hard-treated steel, cold-worked steel, hot-working steel, stainless steel, cast steel, high-speed steel, aluminium alloys, copper alloys	High heat-resisting steel, ball-bearing steel, nickel alloys, titanium alloys

Tooth pitch selection – AMADA AXCELA STRIKER®

The special optimizations of the AXCELA STRIKER® make one of the normal AMADA recommendations deviating tooth pitch selection necessary. Please refer to this table (material thickness/diameter in mm).



Line-up – AMADA AXCELA STRIKER®

Height	Thickness	1,0/1,4 V9	1,4/1,6 V7	1,8/2 V7	2/3 V7	3/4 V7
34	1.1				●	●
41	1.3				●	●
54	1.6		●	●	●	
67	1.6	●	●	●		

Recommended run-in surface: –

* With respect to application notes, please consult your AMADA sales representative

Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel

Stainless steel
Cast steel
High-speed steel

High heat-resisting steel
Ball-bearing steel

Aluminium alloys
Nickel alloys
Titanium alloys
Copper alloys

AXCELA H / H-AP

AXCELA H / H-AP

Maximum performance in conjunction with the AMADA PCSAW series

High-performance carbide saw blade for hard-to-cut materials in conjunction with high-performance machines.

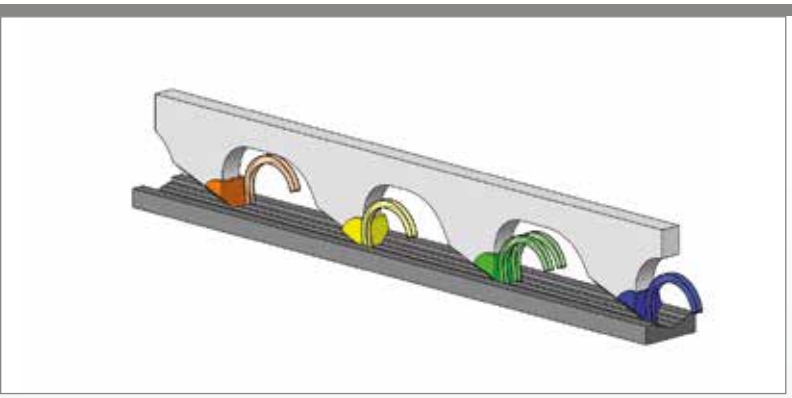
Properties

- uncoated carbide saw blade
- optimised tooth geometry for use with aerospace materials
- for use with high-performance machines

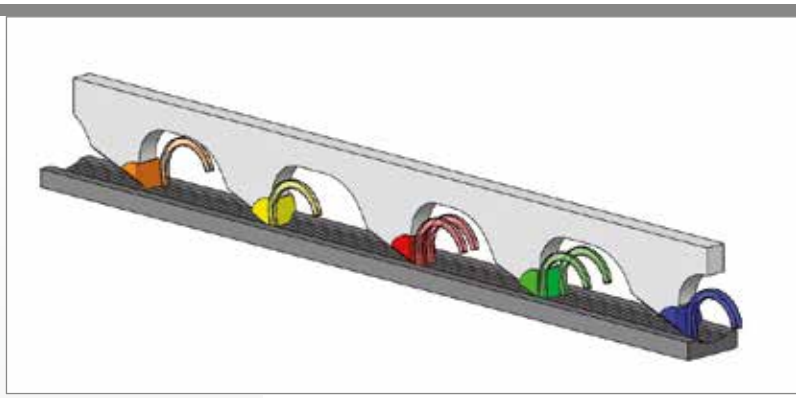
Uncoated

Advantages

- can be used for steels with unfavourable surface finishes
- when using the AP versions, it is possible to avoid the extensive use of wedges in the cutting channel and improve the service life of the sawing tool
- ideal for tough and hard-to-cut nonferrous materials such as Ti, Ni, Zr etc.



V4 tooth pattern



V5 tooth pattern

Application materials – AMADA AXCELA H

Recommended	Limited suitability*
Construction steel, hot-working steel, stainless steel, high heat-resisting steel, aluminium alloys, nickel alloys, titanium alloys, copper allows	Construction steel, cold-worked steel, cast iron, high-speed steel, ball-bearing steel

Selection of the tooth pitch – AMADA AXCELA H delivery forms

Height	Thickness	0.5/0.8 V5	0.9/1.1 V5	1.4/1.6 V5	1.8/2 V4	2/3 V4	3/4 V4
34	1.1				●	●	
41	1.3			●	●	●	●
54	1.6		●	●	●	●	
67	1.6		●	●			
80	1.6	●	●				

V4 = 4-piece tooth group, V5 = 5-piece tooth group

Selection of the tooth pitch – AMADA AXCELA H AP delivery forms

Height	Thickness	0.5/0.8 V5 AP	0.9/1.1 V5 AP	1.4/1.6 V5 AP
54	1.6			●
67	1.6		●	●
80	1.6	●	●	

AP = Anti Pinching – recommended for materials with tendency to jam.

Recommended run-in surface: 0.3 m^2

* With respect to application notes, please consult your AMADA sales representative

Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel
Stainless steel
Cast steel
High-speed steel
High heat-resisting steel
Ball-bearing steel
Aluminium alloys
Nickel alloys
Titanium alloys
Copper alloys

AXCELA HMAX

AXCELA HMAX

Uncoated

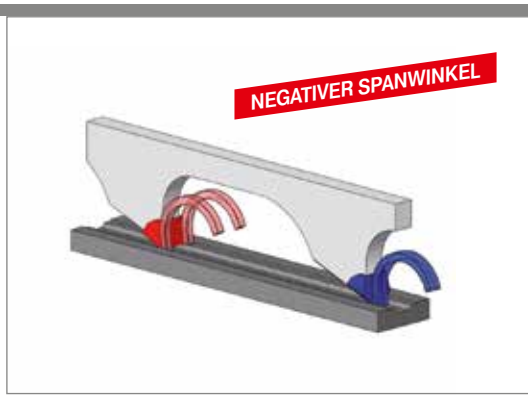
Special geometry for separating boundary layer-hardened or hard chromium plated steels up to 65 HRC.

Properties

- uncoated carbide saw blade
- robust Design
- negative rake angle

Advantages

- long service life with boundary layer-hardened or chromium plated steels
- smooth-running cutting behaviour with good surface



B2 tooth pattern

Application materials – AMADA AXCELA HMAX

Recommended	Limited suitability*
Hard-treated steel, cold-worked steel, ball-bearing steel, piston rods, cam and crankshafts, threaded rods, boundary layer-hardened steel	Construction steel, hot-working steel, stainless steel, cast steel, high-speed steel, high heat-resisting steel, aluminium alloys, nickel alloys, titanium alloys, copper alloys

Selection of the tooth pitch – AMADA AXCELA HMAX delivery forms

Height	Thickness	2/3 B2	3/4 B2
34	1.1	●	●
41	1.3	●	●
54	1.6	●	

B2 = 2-piece tooth group

Recommended run-in surface: –

* With respect to application notes, please consult your AMADA sales representative

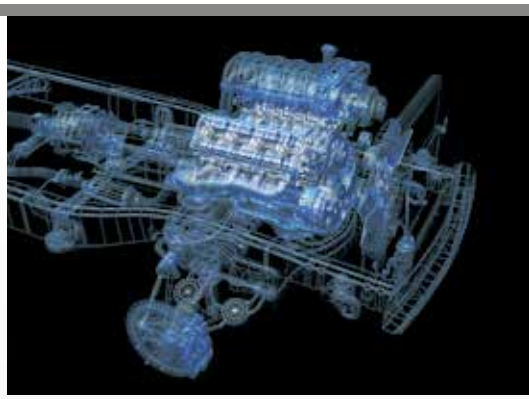
Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel

Stainless steel
Cast steel
High-speed steel

High heat-resisting steel
Ball-bearing steel

Aluminium alloys
Nickel alloys
Titanium alloys
Copper alloys

AXCELA A



AXCELA A

Uncoated

Carbide-tipped high-performance saw blades for aluminium cast parts in the automotive sector. Optimised for fully automatic saw systems with blade speeds higher than 1000 m/min.

Properties

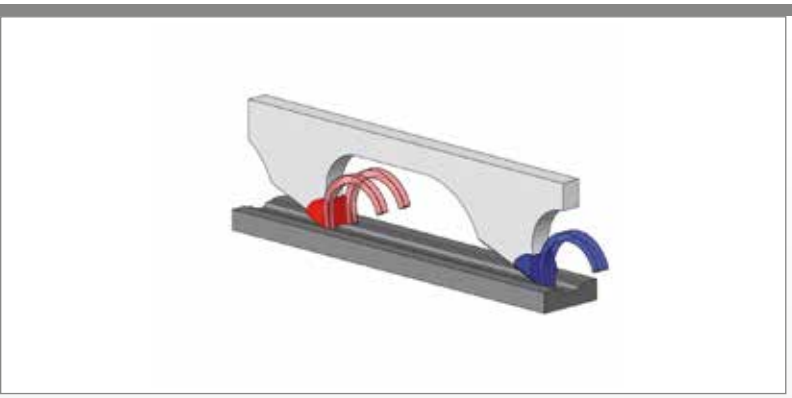
- uncoated carbide saw blade
- durable tooth group design
- newly developed tooth geometry

Advantages

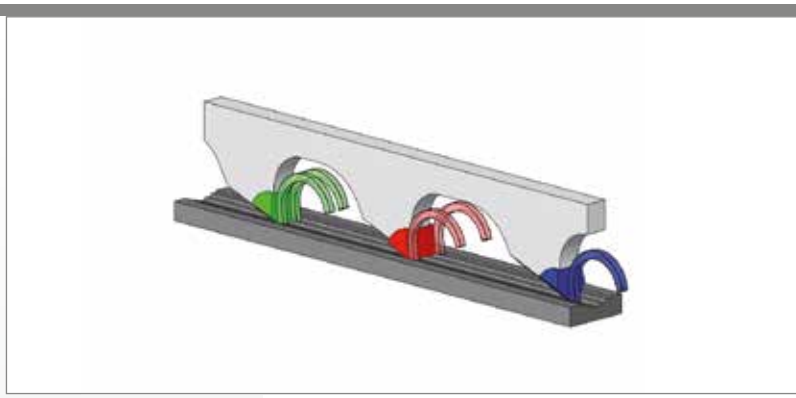
- long service life
- very high sawing performance even for materials containing Si

Comment

For standard saws, we recommend the use of AXCELA S for this application field, particularly at saw speeds of considerably more than 1000 m/min.



B2 tooth pattern



B3 tooth pattern

Application materials – AMADA AXCELA A

Recommended	Suitable	Limited suitability*
Aluminium cast materials		

Selection of the tooth pitch – AMADA AXCELA A delivery forms

Height	Thickness	1.4/1.6 B2	1.8/2 B2	1.8/2 B3	2/3 B2	3/4 B2	3 B2
27	0.9					●	●
34	1.1		●	●	●		
41	1.3		●		●		
54	1.3	●	●		●		
54	1.6	●	●		●		
80	1.1						

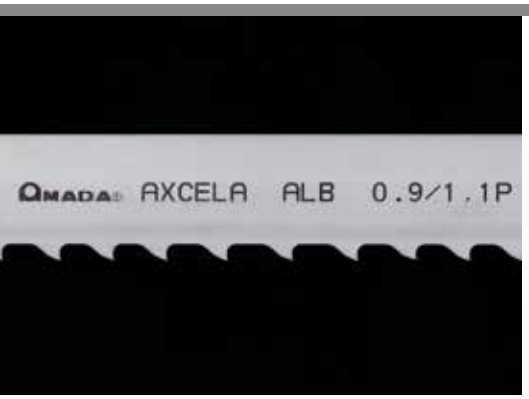
B2 = 2-piece tooth group, B3 = 3-piece tooth group

Aluminium alloys Al

Recommended run-in time: 15 min

* With respect to application notes, please consult your AMADA sales representative

AXCELA ALB



AXCELA ALB

Uncoated

Carbide-tipped high-performance saw blades for large-format aluminium plates.

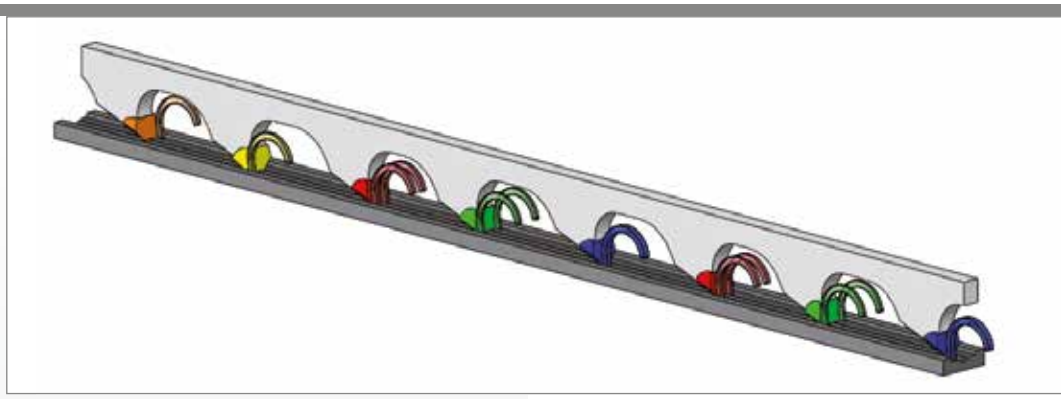
Properties

- uncoated carbide saw blade
- elaborate tooth group design
- developed in carbide metal laboratory from AMADA Austria in Ternitz/Lower Austria
- conceived for use at blade speeds of 2000 m/min and higher

Advantages

- low vibration running
- perfect surfaces
- very long service life

Low vibration running



V8 tooth group design

Application materials – AMADA AXCELA ALB

Recommended	Suitable	Limited suitability*
Standard aluminium alloys	Cu blocks	

Selection of the tooth pitch – AMADA AXCELA ALB delivery forms

Height	Thickness	0.5/0.8 V8	0.9/1.1 V8
54	1.6	●	●
67	1.6		●
80	1.6	●	●

V8 = 8-piece tooth group

Aluminium alloys Al

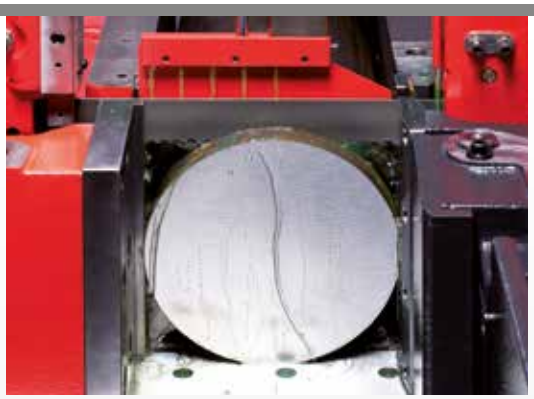
Copper alloys Cu

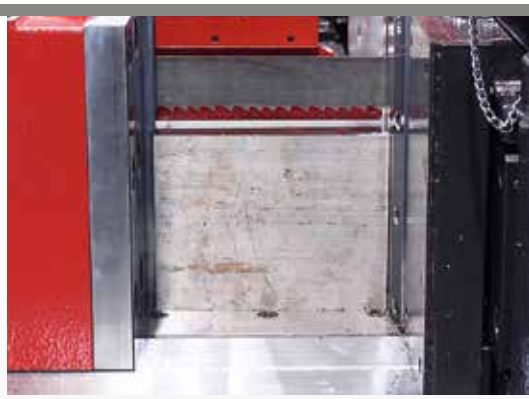
Recommended run-in surface: 10 m^2

* With respect to application notes, please consult your AMADA sales representative

AXCELA STRIKER®

Name until 1.10.2019: AXCELA C-S7





AXCELA STRIKER® Name until 1.10.2019: AXCELA C-S7

Uncoated

Robust carbide bandsaw blade for general applications.

A variant of the proven AXCELA S for the substitution of competition products without change of application parameters.

Properties

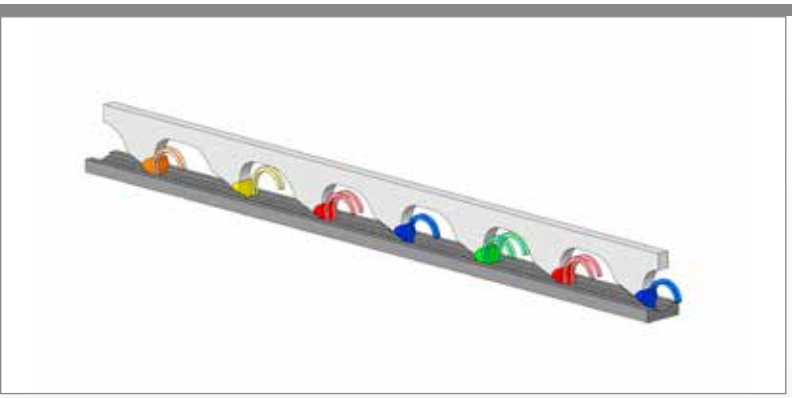
- uncoated carbide tipped saw blade
- sectional cut channel
- robust cutting geometry
- for production machines
- extended setting reduce the cutting noise and the vibrations

Advantages

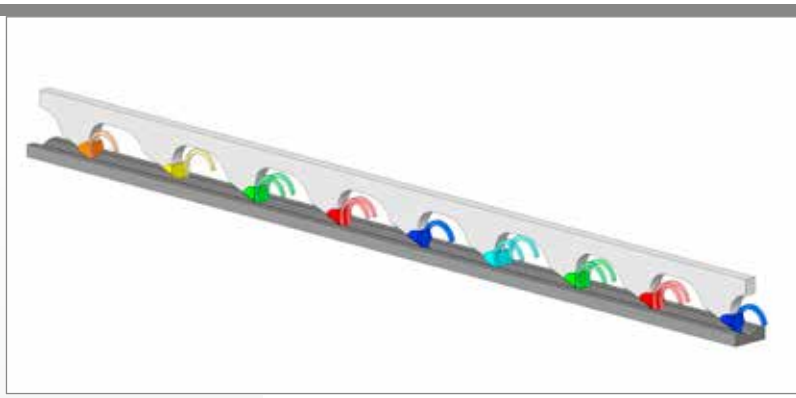
- unique toothdesign prevent clamping of the blade during cutting process
- high cutting performance in wide application areas
- less cutting forces leads to longer lifetime of the blade

Comment

The innovative design of the AXCELA STRIKER® allows a wide range of applications without having to change the operational parameters in machine control. At the same time, however, it is possible to significantly increase the saw performance in a parameter optimization.



V7 tooth pattern



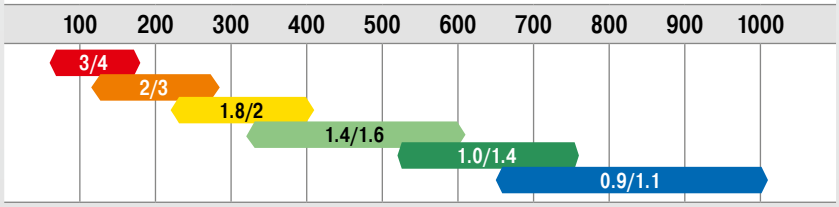
V9 tooth pattern

Application materials – AMADA AXCELA STRIKER®

Recommended	Suitable
Construction steel, hard-treated steel, cold-worked steel, hot-working steel, stainless steel, cast steel, high-speed steel, aluminium alloys, copper alloys	High heat-resisting steel, ball-bearing steel, nickel alloys, titanium alloys

Tooth pitch selection – AMADA AXCELA STRIKER®

The special optimizations of the AXCELA STRIKER® make one of the normal AMADA recommendations deviating tooth pitch selection necessary. Please refer to this table (material thickness/diameter in mm).



Line-up – AMADA AXCELA STRIKER®

Height	Thickness	0.5/0.8 V9	0.9/1.1 V9	1.0/1.4 V9	1.4/1.6 V7	1.8/2 V7	2/3 V7	3/4 V7
27	0.9							●
34	1.1					●	●	●
41	1.3				●	●	●	●
54	1.6		●	●	●	●	●	
67	1.6		●	●	●	●		
80	1.6	●	●					

Recommended run-in surface: 0.3 m^2

* With respect to application notes, please consult your AMADA sales representative

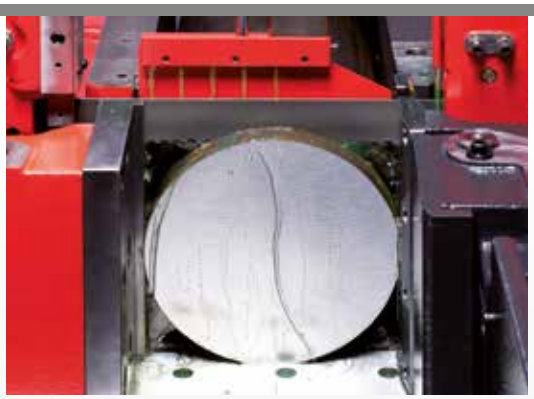
Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel

Stainless steel
Cast steel
High-speed steel

High heat-resisting steel
Ball-bearing steel

Aluminium alloys
Nickel alloys
Titanium alloys
Copper alloys

AXCELA S



AXCELA S

Uncoated

Robust carbide saw blade for variable application fields, particularly for existing higher performance machines.

Properties

- uncoated carbide saw blade
- sectional cut channel
- robust cutting geometry
- for production machines
- SMARTCUT version available (41 x 0.9 mm)

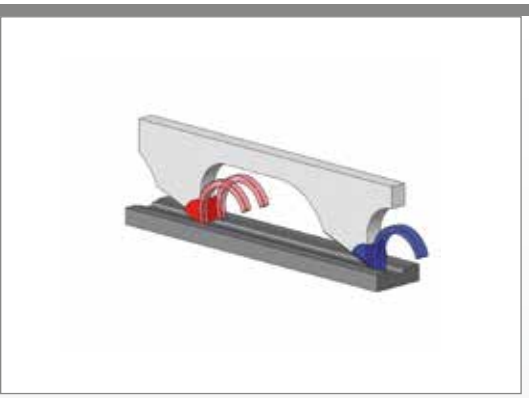
Advantages

- reduced cutting resistance
- high economic efficiency
- wide application spectrum

Comment

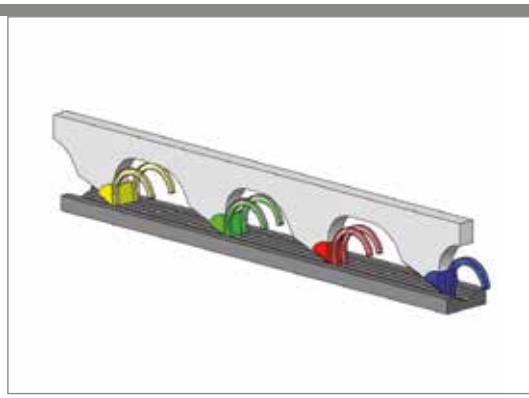
As standard, we recommend the use of the B2 or B3 versions at lower blade speeds and high cutting performance.

The B4 version is recommended as substitute for competitor products previously used, without having to change the parameters.



B2 tooth pattern

B3 tooth pattern



B4 tooth pattern

Application materials – AMADA AXCELA S

Recommended	Suitable	Limited suitability*
Hard-treated steel, cold-worked steel, hot-working steel, stainless steel, cast steel, high-speed steel, aluminium alloys, copper alloys	Construction steel	High heat-resisting steel, ball-bearing steel, nickel alloys, titanium alloys, boundary layer-hardened material, chromium-plated piston rods

Selection of the tooth pitch – AMADA AXCELA S delivery forms

Height	Thick-ness	0.9/1.1 B3	1.4/1.6 B3	1.8/2 B2	2/3 B4	2/3 B2	3/4 B4	3/4 B2
27	0.9						●	●
34	1.1			●	●	●	●	●
41	0.9			●				
41	1.3		●	●	●	●	●	●
54	1.3			●		●		
54	1.6	●	●	●	●	●		●
67	1.6	●	●					
80	1.6	●						

B2 = 2-piece tooth group, B3 = 3-piece tooth group, B4 = 4-piece tooth group
For sawing machines from competitors with stored material data, we recommend the use of the 4-piece tooth group

Recommended run-in surface: 0.3 m^2

* With respect to application notes, please consult your AMADA sales representative

Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel
Stainless steel
Cast steel
High-speed steel
High heat-resisting steel
Ball-bearing steel
Aluminium alloys
Nickel alloys
Titanium alloys
Copper alloys

AXCELA B

AXCELA B

Uncoated

Robust carbide saw blade for variable application fields for standard machines without carbide treatment.

Properties

- uncoated carbide saw blade
- variable grinding pattern similar to an offset
- robust cutting geometry
- also for older standard machines
- SMARTCUT version available (41 x 0.9 mm)

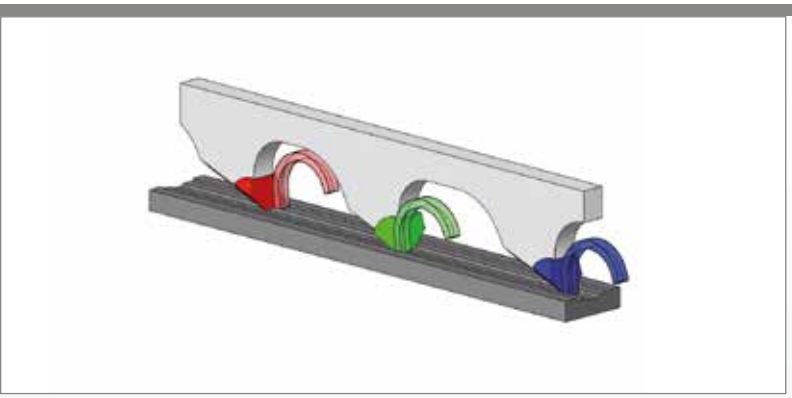
Advantages

- suitable for universal use with almost all steels and nonferrous metals
- good cutting edge holding and service life

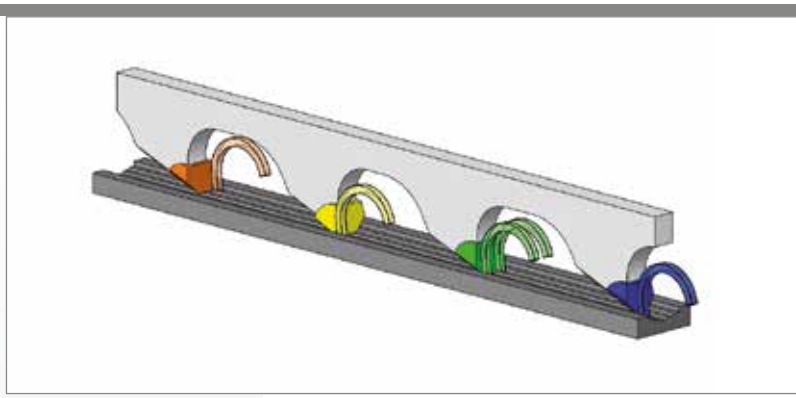
Comment

As standard, we recommend the use of the V3 version at lower blade speeds and high cutting performance.

The V4 version is recommended as substitute for competitor products previously used, without having to change the parameters.



V3 tooth pattern



V4 tooth pattern

Application materials – AMADA AXCELA B

Recommended	Suitable	Limited suitability*
Hard-treated steel, cold-worked steel, hot-working steel, stainless steel, cast steel, high-speed steel, aluminium alloys, copper alloys	Construction steel, boundary layer-hardened material, chromium-plated piston rods	High heat-resisting steel, ball-bearing steel, nickel alloys, titanium alloys

Selection of the tooth pitch – AMADA AXCELA B delivery forms

Height	Thick-ness	0.9/1.1 V4	0.9/1.1 V3	1.4/1.6 V4	1.4/1.6 V3	1.8/2 V3	2/3 V3	3/4 V3
27	0.9							●
34	1.1						●	●
41	0.9					●		
41	1.3			●	●	●	●	●
54	1.6			●	●	●	●	
67	1.6	●	●	●	●			
80	1.6	●						

V3 = 3-piece tooth group, V4 = 4-piece tooth group

For sawing machines from competitors with stored material data, we recommend the use of the 4-piece tooth group

Recommended run-in surface: 0.3 m^2

* With respect to application notes, please consult your AMADA sales representative

Construction steel

Heat-treated steel

Cold-worked steel

Hot-working steel

Stainless steel

Cast steel

High-speed steel

High heat-resisting steel

Ball-bearing steel

Aluminium alloys

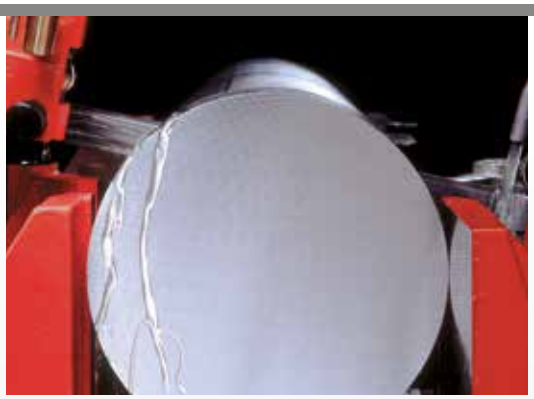
Nickel alloys

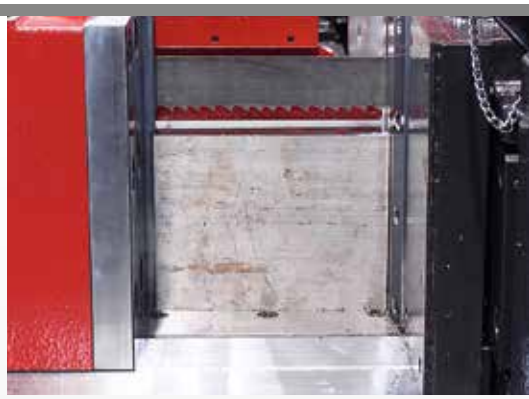
Titanium alloys

Copper alloys

AXCELA BOOSTER

Available from 2020





AXCELA BOOSTER

Uncoated

Slanted carbide saw blade for high-performance standard saws. Thanks to the optimised design, flexible use on machines without carbide preparation.

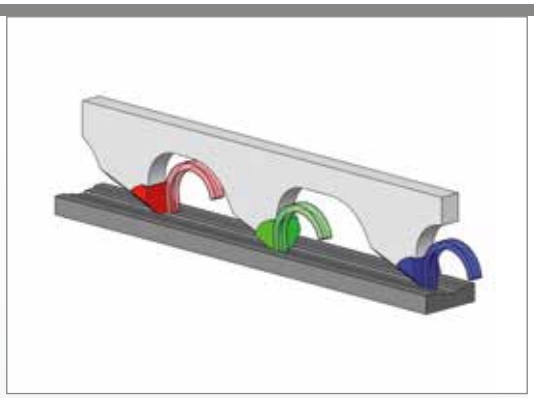
Properties

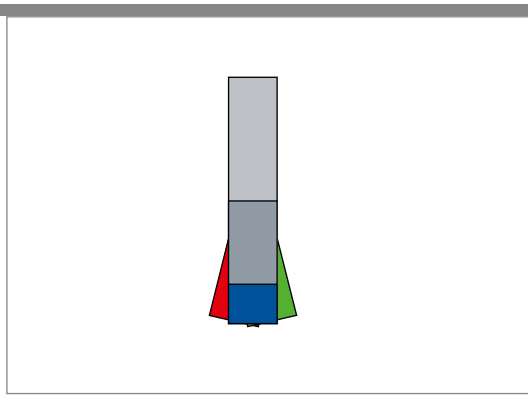
- slanted design
- microphase
- chip-optimised cutting channel

Microphase

Advantages

- can be used on standard machines
- smaller chips, therefore trouble-free operation
- reduced risk of edge breakouts
- high performance





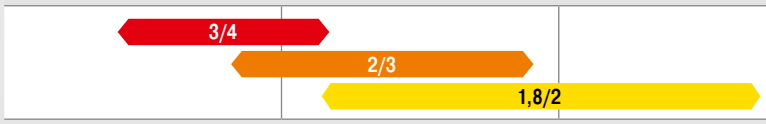
slanted 3-piece tooth group

Application materials – AMADA AXCELA BOOSTER

Recommended	Suitable	Limited suitability*
Construction steel, hard-treated steel, cold-worked steel, cast steel, ball-bearing steel	Hot-working steel, aluminium alloys, copper alloys	Stainless steel

Toothing selection – AMADA AXCELA BOOSTER

For optimum results AMADA suggests following toothing when using the AXCELA BOOSTER. In case of doubt, the finer toothing should be selected.



Line-up – AMADA AXCELA BOOSTER

Height	Thickness	1.8/2 V3	2/3 V3	3/4 V3
34	1.1		●	●
41	1.3	●	●	

Recommended run-in surface: 0.3 m^2

* With respect to application notes, please consult your AMADA sales representative

Construction steel

Heat-treated steel

Cold-worked steel

Hot-working steel

Stainless steel

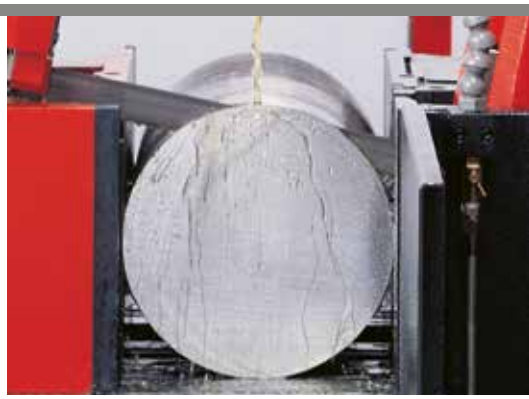
Cast steel

Ball-bearing steel

Aluminium alloys

Copper alloys

AMADA SAW BLADES



BIMETAL SAW BLADES

We offer the following bimetal saw blades in our standard range. If you require custom-developed saw blades, please ask our sales representatives.

30-31 AURORA
- TiN coating (HV2300)
- highest resistance to wear
- very good for hard-to-cut materials, from tool steel to stainless steel

32-33 MAGNUM HL M71
- patented M71 tooth tip material
- long service life for tool steel with carbon content < 0.5%, stainless steels and high heat-resistant special alloys in the intermediate and large diameter range
- SMARTCUT version available (41 x 0.9 mm)

34-35 MAGNUM HLG M71
- patented M71 tooth tip material
- high-performance tooth tip material and sectional cut channel thanks to patented tooth geometry
- can be used for hard-to-cut steels with carbon content > 0.5%
- SMARTCUT version available (41 x 0.9 mm)

36-37 SIGMA
- sectional cut channel thanks to patented tooth geometry for reducing cutting resistance
- particularly recommended for stainless steels
- SMARTCUT version available (41 x 0.9 mm)

38-39 SUPER HL
- the sectional cut channel reduces cutting resistance
- particularly for materials in the medium and large cutting range
- an anti-pinching version (AP) is available for materials with inner tension

40-41 SUPER HLG
- patented HI-LO
- wide range of use from normal steel to tool steel with carbon content > 0.5%
- excellent cutting performance with tool steel
- SMARTCUT version available (41 x 0.9 mm)

42-43 HI-LO
- higher stability compared to normal M42-based saw blades
- good service life for pipes and profiles made of high-strength materials

44-45 SUPER8
- innovative universal saw blade with extremely wide application spectrum
- tooth design with integrated chip breaker
- new pitch shape
- reduced noise emission and less vibration and therefore improved service life

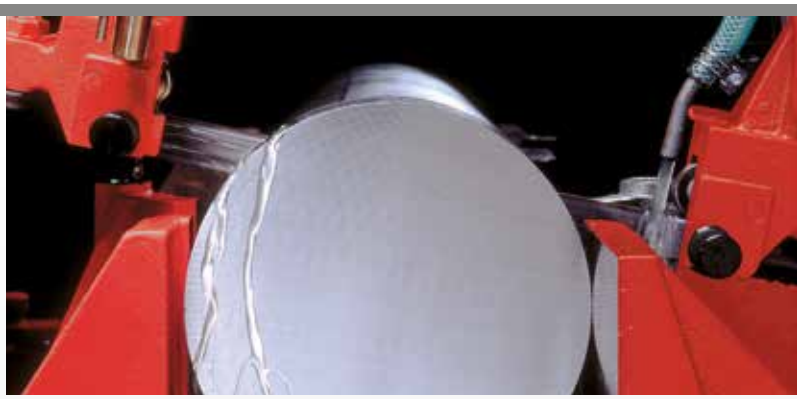
46-47 SGLB
- robust universal saw blade for almost all material types and material sizes
- suitable for single and bundle cutting
- materials up to 1200 N/mm^2, also nonferrous metals and plastics
- SMARTCUT version available (41 x 0.9 mm)

48-49 DUOS M42
- for light workshop machines
- M42 cutting material
- sawing a wide size spectrum without changing blades

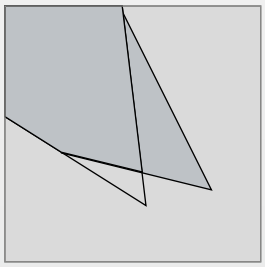
50-51 PROTECTOR M42
- extremely robust tooth geometry, especially for sawing tube and profiles giving particularly high resistance against tooth breakage
- M42 cutting material

52-53 GLB CONTOUR
- bimetal sawing blade in cartridges for contour blade sawing machines
- durable, low distortion and long-life sharpness

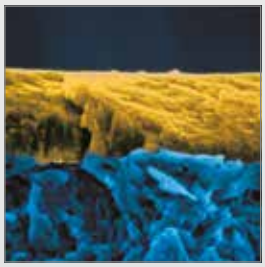
AURORA



AURORA



Extremely positive rake angle



TiN coating

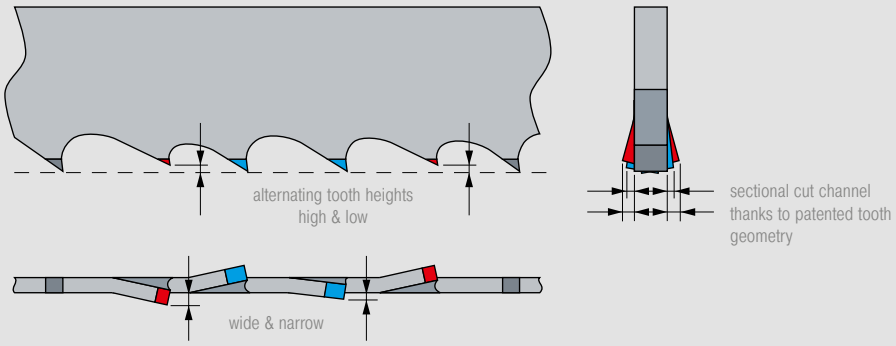
Highest sawing blade quality thanks to AMADA's own TiN coating.
Ideal for hard-to-cut materials. Highest hardening and resistance to wear.

Properties

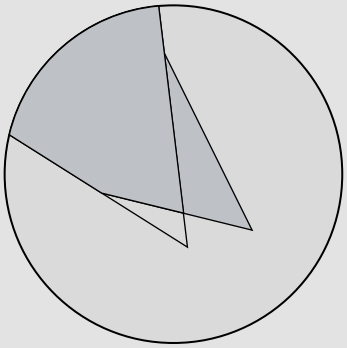
- extremely positive rake angle
- TiN coating (HV2300)
- based on the proven SIGMA saw blade

Advantages

- highest resistance to wear
- higher cutting performance than uncoated bimetal saw blades possible
- very good for hard-to-cut materials, from tool steel to stainless steel, whose cutting resistance reaches the limits of conventional saw blades



Sectional cut channel



Extremely positive rake angle

Application materials – AMADA Aurora

Recommended	Suitable	Limited suitability*
Hot-working steel, stainless steel, high heat-resisting steel, aluminium alloys, nickel alloys, titanium steels, copper alloys	Cold-worked steel	High-speed steel

Selection of the tooth pitch – AMADA Aurora delivery forms

Height	Thickness	1.1/1.5	2/3	3/4
34	1.1		●	●
41	1.3		●	
54	1.6	●	●	

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

Cold-worked steel

Hot-working steel

Stainless steel 304

High-speed steel HSS

High heat-resisting steel °C

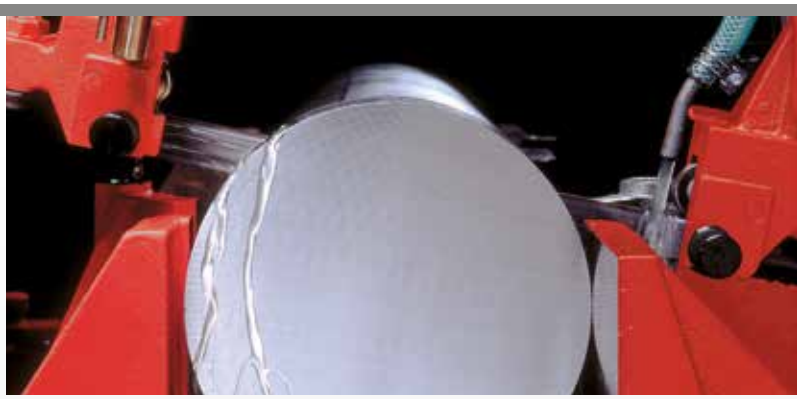
Aluminium alloys Al

Nickel alloys Ni

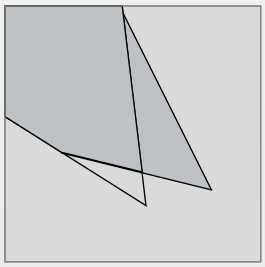
Titanium alloys Ti

Copper alloys Cu

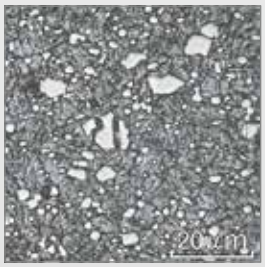
MAGNUM HL M71



MAGNUM HL M71



Extremely positive rake angle



Structure: AMADA M71

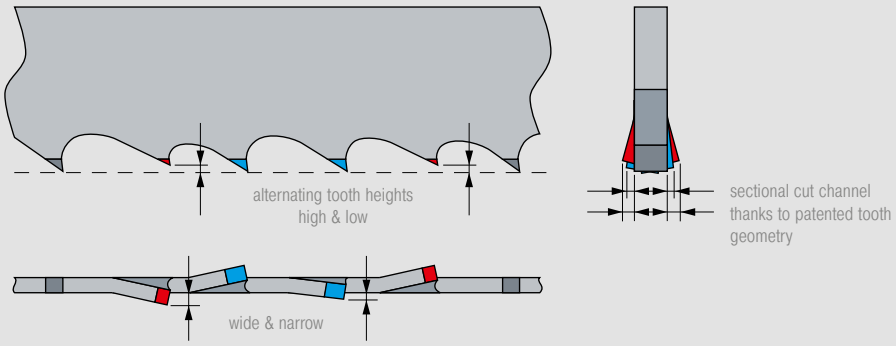
Newly developed special saw blade for hard-to-cut materials.
Thanks to AMADA's M71 HSS tooth tip material and the sectional cut channel, this blade is in a position to saw the largest range of hard-to.cut materials.

Properties

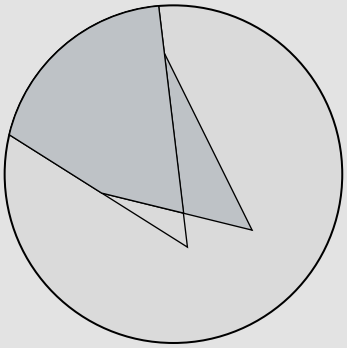
- patented M71 tooth tip material
- sectional cut channel
- extremely positive rake angle
- SMARTCUT version available (41 x 0.9 mm)

Advantages

- higher resistance to wear compared to conventional M42 saw blades thanks to M71 tooth tip material
- reduction of the cutting resistance
- longer service life with tool steel, stainless steels, high heat-resistant special alloys in the intermediate and large diameter range
- recommended for nickel-based alloys and titanium



Sectional cut channel



Extremely positive rake angle

Application materials – AMADA Magnum HL

Recommended	Suitable
Hot-working steel, stainless steel, high heat-resisting steel, aluminium alloys, nickel alloys, titanium alloys, copper alloys	Cold-worked steel, high-speed steel

Selection of the tooth pitch – AMADA Magnum HL delivery forms

Height	Thickness	0.75/1	0.75/1AP	1.1/1.5	1.5/2	2/3	3/4
27	0.9						●
34	1.1					●	●
41	1.3				●	●	●
54	1.3					●	
54	1.6				●	●	
67	1.6			●	●	●	
80	1.6	●	●	●			

AP = Anti Pinching – recommended for materials with tendency to jam.

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

Cold-worked steel

Hot-working steel

Stainless steel 304

High-speed steel HSS

High heat-resisting steel °C

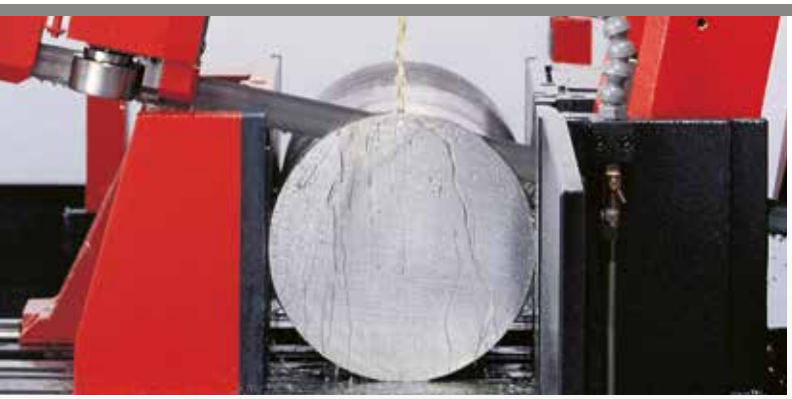
Aluminium alloys Al

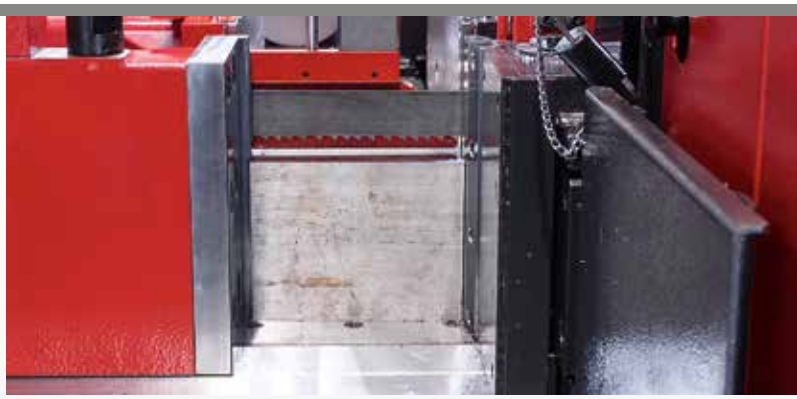
Nickel alloys Ni

Titanium alloys Ti

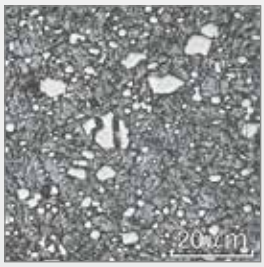
Copper alloys Cu

MAGNUM HLG M71





MAGNUM HLG M71



Structure: AMADA M71

Newly developed special saw blade for hard-to-cut materials. Friction is reduced during sawing thanks to AMADA's M71 HSS tooth tip material and height differences between the tooth tips.

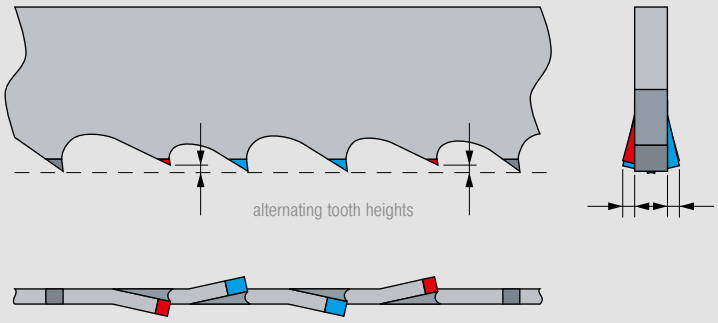
Properties

- patented M71 tooth tip material
- HI-LO tooth geometry
- group pitch
- SMARTCUT version available (41 x 0.9 mm)

Advantages

- high resistance to wear even with abrasive materials (cold-worked steel C > 0.5% C + Cr or Ti)
- wide range of application from normal steel to tool steel
- excellent cutting performance with tool steel

The degree of hardness (HV) of the tooth tip material:



The difference in the cutting heights reduces the cutting load on each tooth.

HI-LO geometry

Application materials – AMADA Magnum HLG

Recommended	Suitable	Limited suitability*
Construction steel, heat-treated steel, cold-worked steel, high-speed steel, ball-bearing steel	Hot-working steel, cast steel, high heat-resisting steel, copper alloys	stainless steel, nickel alloys, titanium alloys

Selection of the tooth pitch – AMADA Magnum Magnum delivery forms

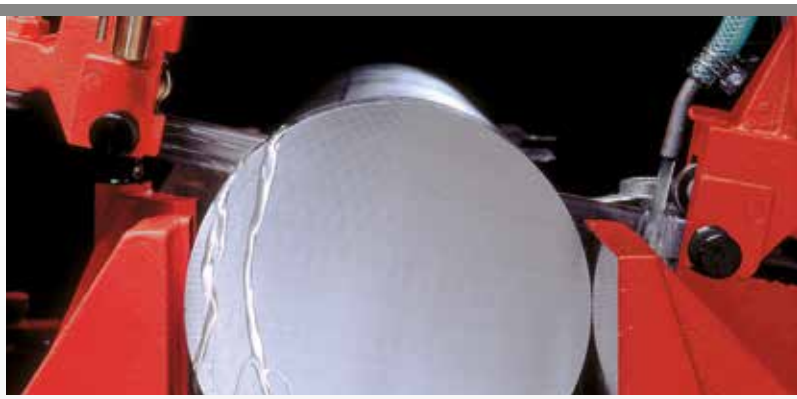
Height	Thickness	0.75/1	1.1/1.5	1.5/2	2/3	3/4	4/6
27	0.9				●	●	●
34	1.1				●	●	●
41	1.3			●	●	●	
54	1.6		●	●	●		
67	1.6	●	●	●	●		
80	1.6	●	●				

Recommended run-in surface: 0.1 m^2

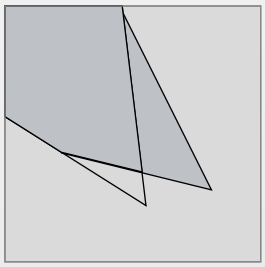
* With respect to application notes, please consult your AMADA sales representative

Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel
Stainless steel
Cast steel
High-speed steel
High heat-resisting steel
Ball-bearing steel
Nickel alloys
Titanium alloys
Copper alloys

SIGMA



SIGMA



Extremely positive rake angle

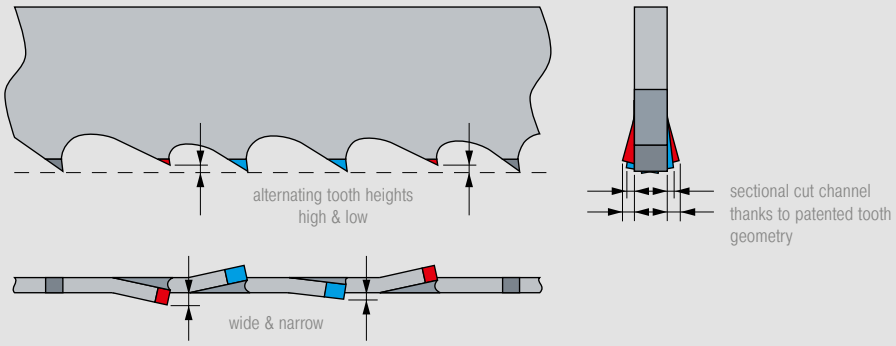
A blade especially for stainless and acid-resistant steels, whose high cutting performance leads to excellent results. The cutting resistance is considerably reduced thanks to the use of a patented tooth geometry in conjunction with an extremely positive rake angle.

Properties

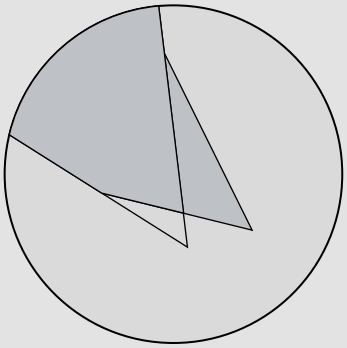
- M42 HSS steel with 8% cobalt
- extremely positive rake angle
- sectional cut channel
- SMARTCUT version available (41 x 0.9 mm)

Advantages

- aggressive cutting behaviour for long-chipping materials
- reduces negative effects such as strain hardening
- reduction of the cutting resistance
- highest performance even with aluminium alloys



Sectional cut channel



Extremely positive rake angle

Application materials – AMADA Sigma

Recommended	Suitable	Limited suitability*
Hot-working steel, stainless steel, high heat-resisting steel, aluminium alloys, plastics	Nickel alloys, copper alloys	Cold work steel, titanium alloys

Selection of the tooth pitch – AMADA Sigma delivery forms

Height	Thickness	1.1/1.5	1.5/2	2/3	3/4
27	0.9				●
34	1.1			●	●
41	0.9			●	●
41	1.3		●	●	●
54	1.6	●	●	●	
67	1.6	●	●	●	
80	1.6	●			

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

Cold-worked steel

Hot-working steel

Stainless steel 304

High heat-resisting steel °C

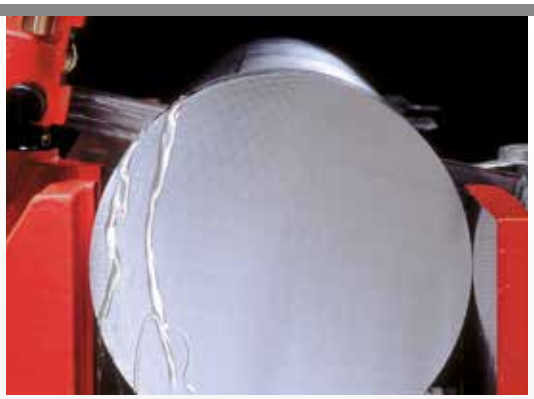
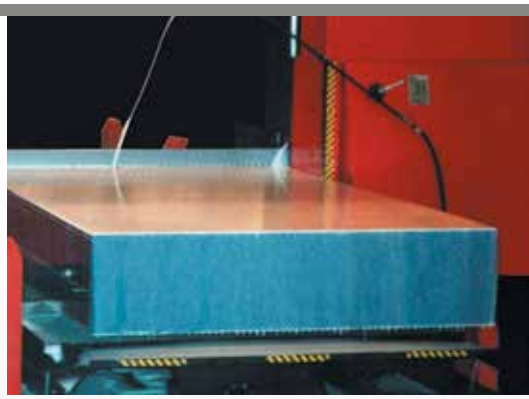
Aluminium alloys Al

Nickel alloys Ni

Titanium alloys Ti

Copper alloys Cu

SUPER HL

SUPER HL

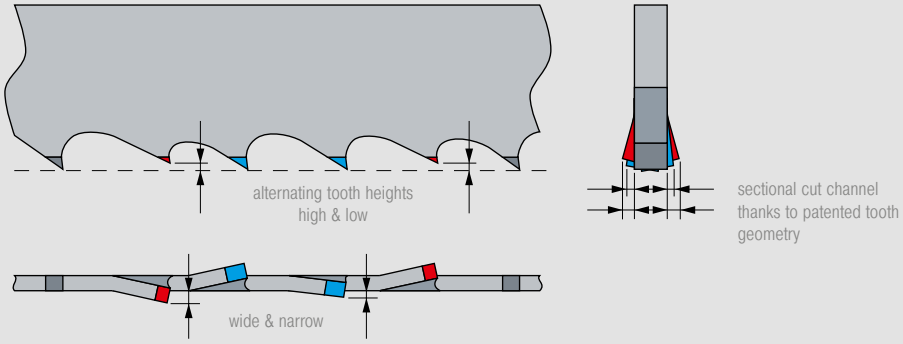
A blade especially for hard-to-cut materials, from tool steel to stainless materials, also with large diameters. The cutting resistance is reduced, thanks to the used of a patented tooth geometry.

Properties

- M42 HSS steel with 8% cobalt
- patented HI-LO tooth geometry
- variable rake angle

Advantages

- reduced cutting resistance
- optimised cutting force distribution
- particularly suitable for intermediate and large diameter ranges of hard-to-cut materials
- particularly suitable for mixed operation with large amount of stainless steel



Sectional cut channel

Construction steel St
Heat-treated steel QT
Cold-worked steel
Hot-working steel
Stainless steel 304
Cast steel
High-speed steel HSS
High heat-resisting steel °C

Application materials – AMADA Super HL

Recommended	Suitable	Limited suitability*
Hot-working steel, stainless steel, cast steel, high heat-resisting steel	High-speed steel	Construction steel, heat-treated steel, cold-worked steel

Selection of the tooth pitch – AMADA Magnum Super HL delivery forms

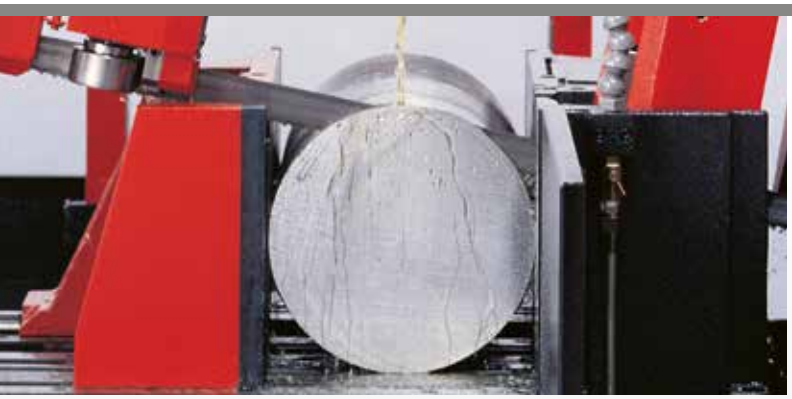
Height	Thick-ness	0.75/1	0.75/1AP	1.1/1.5	1.1/1.5AP	1.5/2	2/3	3/4
27	0.9						●	●
34	1.1						●	●
41	1.3					●	●	●
54	1.3					●	●	
54	1.6			●		●	●	
67	1.6	●	●	●	●	●	●	
80	1.6	●	●	●	●			●

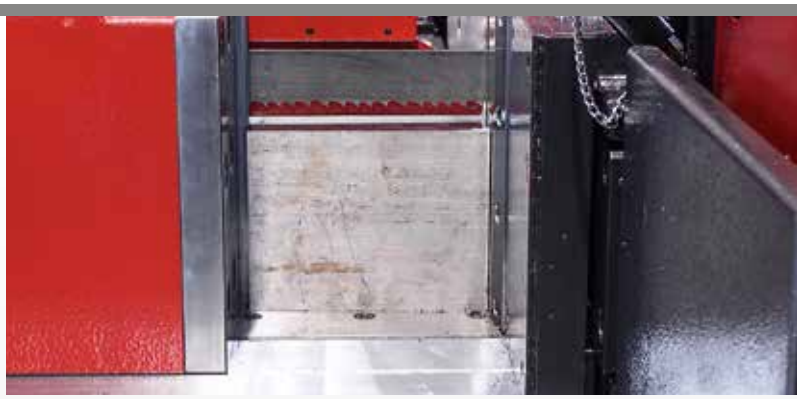
AP = Anti Pinching – recommended for materials with tendency to jam.

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

SUPER HLG





SUPER HLG

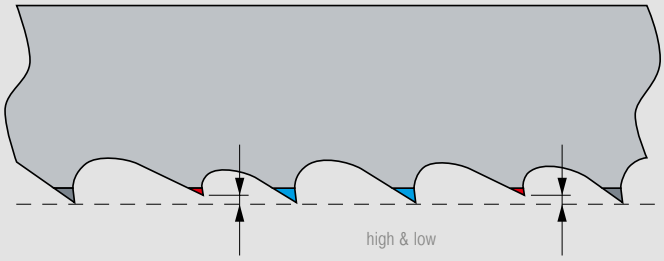
Friction during sawing is reduced, due to height differences between the the tooth tips and high-precision pitch. Based on extensive analysis of the sawing process, AMADA has developed a saw blade that ensures high cutting performance especially with cold-worked steel.

Properties

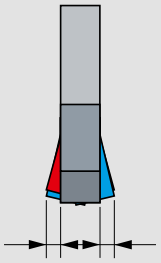
- M42 HSS steel with 8% cobalt
- group pitch
- patented HI-LO tooth geometry
- SMARTCUT version available (41 x 0.9 mm)

Advantages

- high resistance to wear even with abrasive materials (cold-worked steel C > 0.5% C + Cr or Ti)
- wide range of application from normal steel to tool steel
- excellent cutting performance with tool steel



The difference in the cutting heights reduces the cutting load on each tooth.



Application materials – AMADA Super HLG

Recommended	Suitable	Limited suitability*
Construction steel, heat-treated steel, cold-worked steel, cast steel, high-speed steel, ball-bearing steel	Hot-working steel, stainless steel, high heat-resisting steel	

Selection of the tooth pitch – AMADA Magnum Super HLG delivery forms

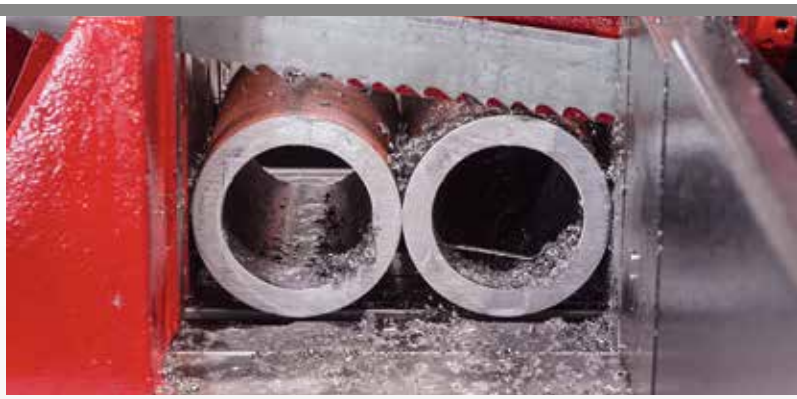
Height	Thickness	0.75/1	1.1/1.5	1.5/2	2/3	3/4	4/6
27	0.9				●	●	●
34	1.1				●	●	●
41	1.3			●	●	●	●
54	1.3			●	●		
54	1.6			●	●		
67	1.6			●	●		
80	1.6	●					

Recommended run-in surface: 0.1 m^2

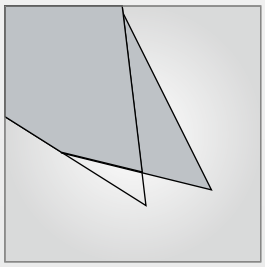
* With respect to application notes, please consult your AMADA sales representative

Construction steel
Heat-treated steel
Cold-worked steel
Hot-working steel
Stainless steel
Cast steel
High-speed steel
High heat-resisting steel
Ball-bearing steel

HI-LO



HI-LO



Extremely positive rake angle

Structure image of the tooth tip material (M42 HSS)

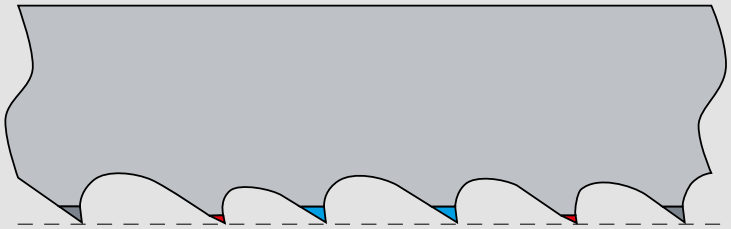
Special saw blade with high efficiency during sawing of pipes and flanges made of high-strength materials.

Properties

- robust tooth geometry, especially for sawing pipes and profiles
- higher stability compared to normal M42-based saw blades
- extremely positive cutting angle

Advantages

- good service life for pipes and profiles made of high-strength materials



Application materials – AMADA HI-LO

Recommended	Suitable	Limited suitability*
Hot-working steel, stainless steel, high heat-resisting steel, aluminium alloys, nickel alloys, titanium alloys, copper allows		Cold-worked steel

Selection of the tooth pitch – AMADA HI-LO delivery forms

Height	Thickness	5/7
27	0.9	●
34	1.1	●

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

Cold-worked steel

Hot-working steel

Stainless steel 304

High heat-resisting steel °C

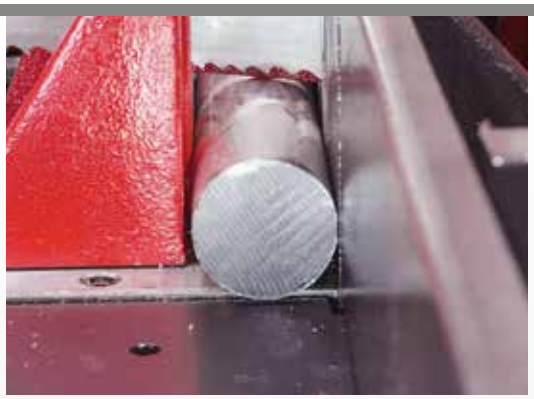
Aluminium alloys Al

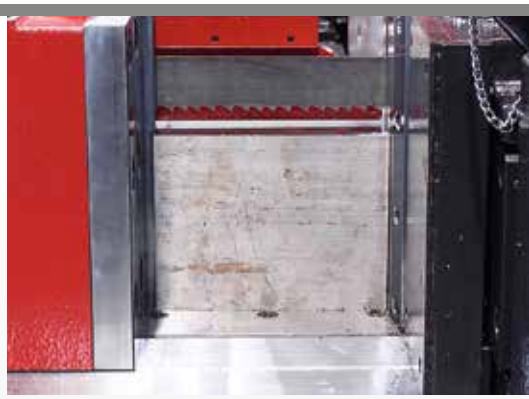
Nickel alloys Ni

Titanium alloys Ti

Copper alloys Cu

SUPER8





SUPER8

New tooth design with chip breaker

Conventional tooth design

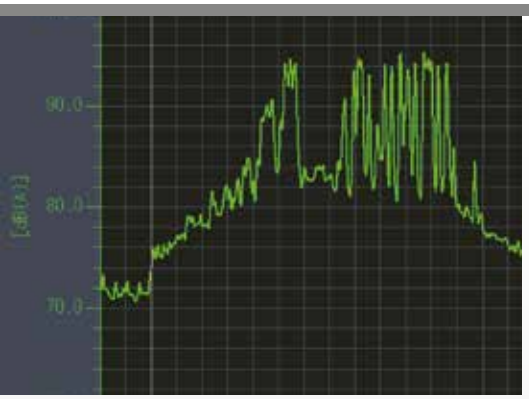
Innovative universal saw blade with extremely wide application spectrum.
The new generation of AMADA bimetal universal saw blades.

Properties

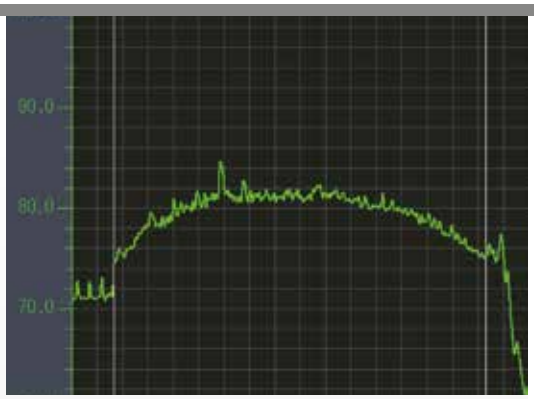
- M42 HSS steel with 8% cobalt
- tooth design with integrated chip breaker
- new pitch pattern

Advantages

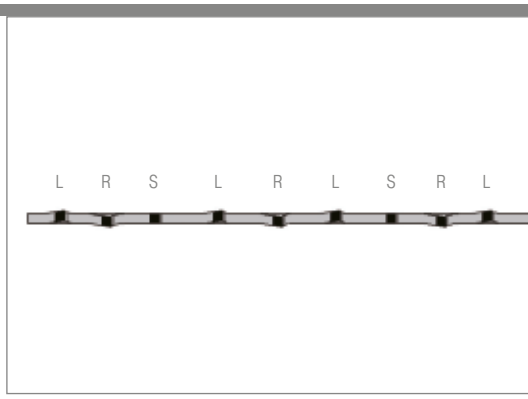
- increased resistance to wear
- reduced noise emission and less vibration and therefore improved service life
- improved surface property of the cut



Noise emission when using conventional saw blades



Noise emission when using Super8



New pitch pattern for maximum smoothness

Application materials – AMADA Super8

Recommended	Suitable	Limited suitability*
Construction steel, heat-treated steel, cold-worked steel, cast steel	Hot-working steel, stainless steel, aluminium alloys copper alloys	High heat-resisting steel

Selection of the tooth pitch – AMADA Magnum Super8 delivery forms

Height	Thickness	0.75/1	1.1/1.5	1.5/2	2/3	3/4	4/6	5/7
20	0.9							
27	0.9					●	●	●
34	1.1				●	●	●	
41	1.3			●	●	●		
54	1.3							
54	1.6		●	●	●	●		
67	1.6	●	●					
80	1.6	●						

Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

Construction steel

Heat-treated steel

Cold-worked steel

Hot-working steel

Stainless steel

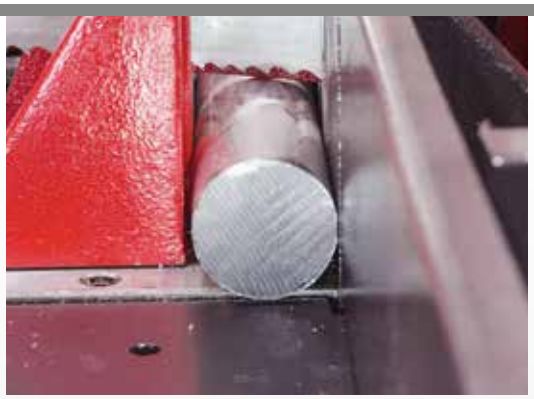
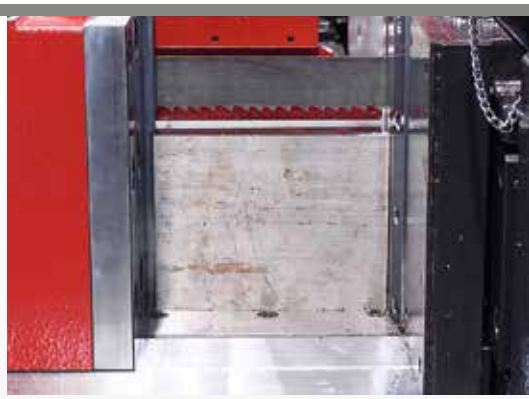
Cast steel

High heat-resisting steel

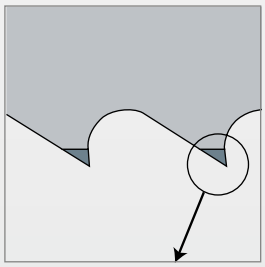
Aluminium alloys

Copper alloys

SGLB

SGLB



Structure image of the tooth tip material (M42 HSS)

Robust universal saw blade for almost all material types and material sizes in the production range.

Properties

- M42 cutting material
- group pitch
- robust Design
- SMARTCUT version available (41 x 0.9 mm)

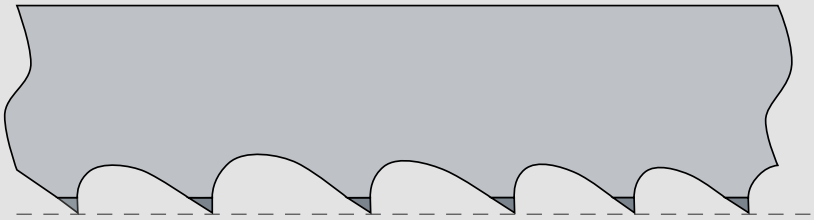
Advantages

- suitable for single and bundle cutting
- materials up to 1200 N/mm^2, also nonferrous metals and plastics
- wide product range

Comment

A small number of standard toothing with straight tooth number is also available. Ask your sales representative.

Comparison of wear when cutting 400 mm diameter, 1.2379 DIN standard (wear of the conventional saw blade = 100 %)



Construction steel St
Heat-treated steel QT
Cold-worked steel
Hot-working steel
Stainless steel 304
Cast steel

Application materials – AMADA SGLB

Recommended	Suitable	Limited suitability*
Construction steel	Heat-treated steel, cold-worked steel, heat-treated steel, cast steel	Stainless steel

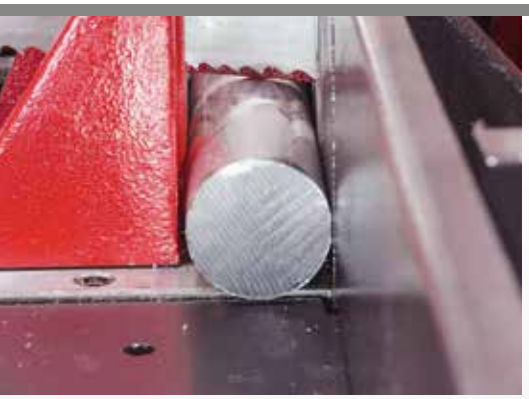
Selection of the tooth pitch – AMADA SGLB delivery forms

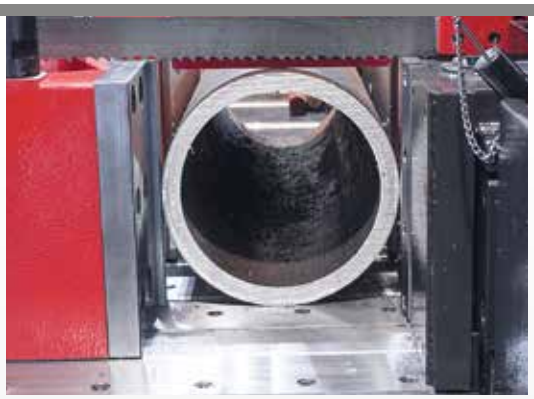
Height	Thick-ness	1.1/1.5	2/3	3/4	4/6	5/7	6/10	8/12	10/14
20	0.9				●		●	●	●
27	0.9		●	●	●	●	●	●	●
34	1.1		●	●	●	●	●	●	
41	0.9		●	●	●				
41	1.3		●	●	●	●			
54	1.3		●	●					
54	1.6	●	●	●	●				
67	1.6	●	●	●					

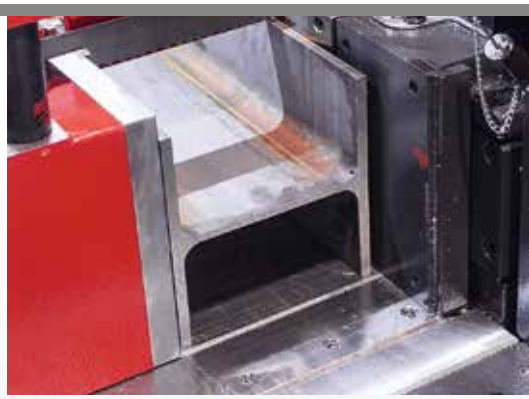
Recommended run-in surface: 0.1 m^2

* With respect to application notes, please consult your AMADA sales representative

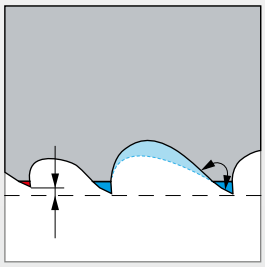
DUOS M42







DUOS M42



Alternating tooth heights und enlarged chip space due to two-stage clearance angle

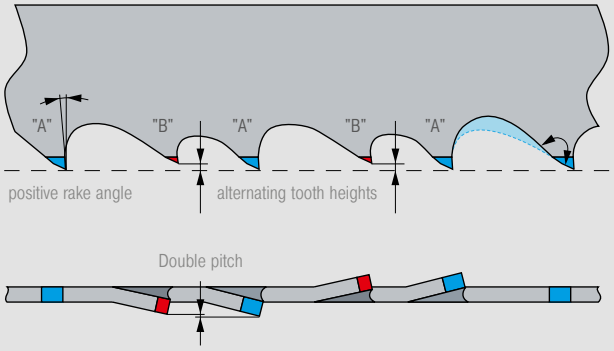
Developed for light workshop machines.
A wide variety of material can be sawed with high efficiency with the DUOS M42 9/11 toothing without changing the blade.

Properties

- special pitch
- different tooth heights
- positive rake angle
- enlarged chip space
- M42 cutting material

Advantages

- sawing a wide size spectrum without changing blades
- aggressive cutting behaviour for solid materials
- improved chip chip removal
- high cutting performance



enlarged chip space
due to two-stage clearance

Solid material

Comparatively small feed

Only the "A" tooth is in the mesh, therefore effect is the same as coarse tooth pitch.

Profile

Comparatively large feed

"A" and "B" teeth are in the mesh, therefore effect is the same as fine tooth pitch.

Construction steel

Heat-treated steel

Cold-worked steel

Hot-working steel

Stainless steel

Cast steel

High heat-resisting steel

Ball-bearing steel

Application materials – AMADA DUOS M42

Recommended	Suitable	Limited suitability*
Construction steel, heat-treated steel, cold-worked steel, cast steel	Hot-working steel, stainless steel,	High heat-resisting steel, ball-bearing steel

Selection of the tooth pitch – AMADA DUOS M42 delivery forms

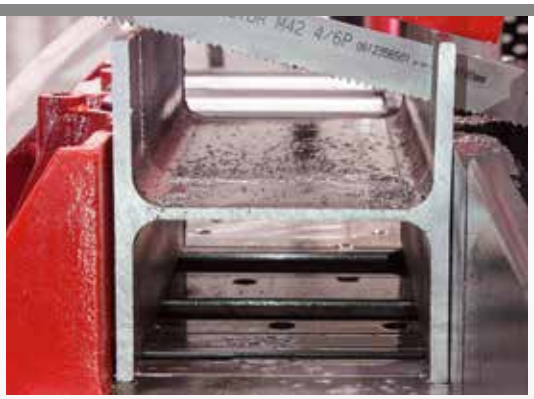
Height	Thickness	9/11
20	0.9	●
27	0.9	●
13	0.65	only as coil

Comment:
In the case of materials that cannot be sawed with this toothing, please use the "PROTECTOR M42" with 4/6 teeth per inch or 3/4 teeth per inch.

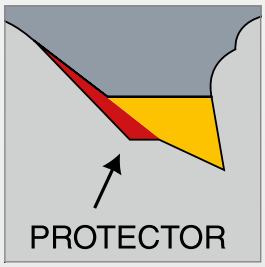
Recommended run-in time: 15 min

* With respect to application notes, please consult your AMADA sales representative

PROTECTOR M42



PROTECTOR M42



Patented protector design

Structure

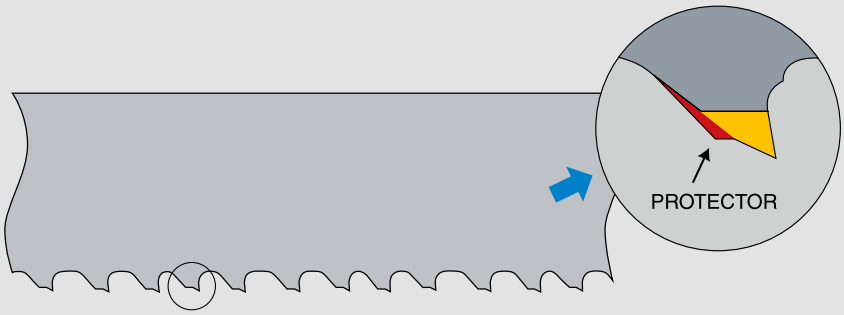
Universal saw blade with high resistance to tooth breakage and high efficiency when sawing different materials. The extreme strength of the tooth spacers prevents tooth overload.

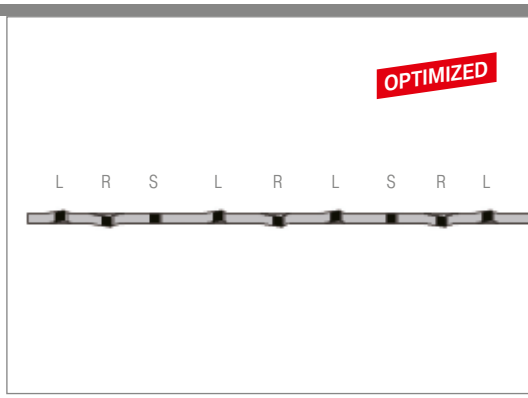
Properties

- extremely robust improved tooth geometry, especially for sawing pipes ad profiles OPTIMIZED
- particularly high resistive strength against tooth breakage
- vibration-absorbing special pitch (patented) OPTIMIZED
- improved smoothness OPTIMIZED

Advantages

- best service life for pipes and profiles
- time advantage, because run-in of the saw blade not necessary
- high edge-holding, even with stainless steel pipes and profiles





New pitch pattern for maximum smoothness

Construction steel St

Stainless steel 304

Aluminium alloys Al

Application materials – AMADA Protector M42

Recommended	Suitable	Limited suitability*
Construction steel, stainless steel, aluminium alloys		

Selection of the tooth pitch – AMADA Protector M42 delivery forms

Height	Thick-ness	2/3	2/3WS	3/4	3/4 WS	4/6	5/7	6/10	8/12	10/14
20	0.9					●	●	●		
27	0.9			●		●	●	●	●	●
34	1.1			●	●	●				
41	1.3	●	●	●	●	●				
54	1.3			●		●				
54	1.6	●	●	●	●	●				
67	1.6	●	●	●	●					

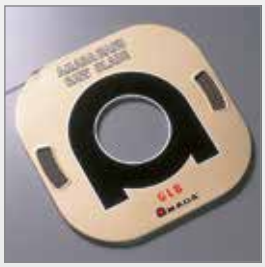
WS = wide set, extra-wide pitch for preventing jamming of the saw blade during the sawing process.

Recommended run-in time: not necessary

* With respect to application notes, please consult your AMADA sales representative

GLB CONTOUR

GLB CONTOUR

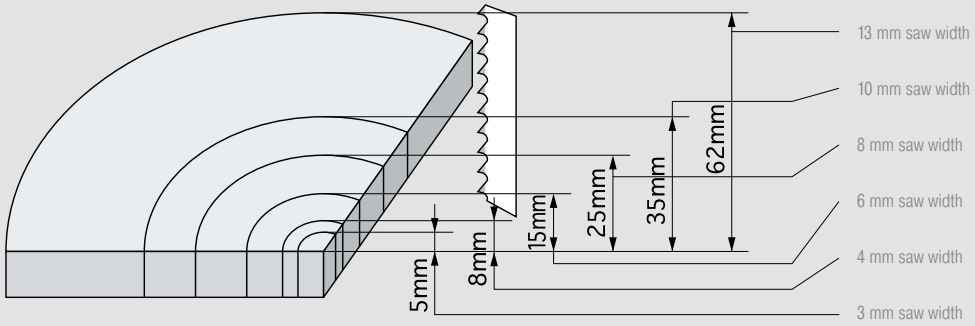


Delivery form: 30 m cassette

High-quality high-speed steel for the tooth tips and tough spring steel for the spacing material ensure high wear resistance. Best quality contour bimetal saw blade.

- First bimetal saw blade in the world, suitable for contour blade sawing machines.
- In the position three requirements on contour saw blades for sawing various different materials: Durable, low distortion and long-life sharpness.
- AMADA's high-quality Wolfram HSS steel is used for the tooth tips and tougher special spring steel for the blade back. Thanks to the perfect combination of both materials, effective sawing of hard-to-cut material is possible, which was not possible with previous conventional saw blades. Also with resistance against breakage and bending forces. In addition, retains its excellent sharpness. Astonishingly long service life is therefore possible.

Tooth tips: original Wolfram high-speed steel



The smallest radius to be processed is determined by the saw width.

Construction steel St
Heat-treated steel QT
Cold-worked steel
Hot-working steel
Stainless steel 304
Cast steel
Aluminium alloys Al
Copper alloys Cu

Application materials – AMADA GLB Contour

Recommended	Suitable	Limited suitability*
Construction steel, hard-treated steel, cast steel, aluminium alloys, copper alloys	Cold-worked steel Hot-working steel, Stainless steel	

Selection of the tooth pitch – AMADA GLB Contour delivery forms

Height	Thickness	4	6	8	10	12	14	18
3	0.65						●	●
	0.90						●	
4	0.65						●	●
	0.90	●	●	●	●	●	●	
5	0.65					●	●	●
	0.90				●	●	●	
6	0.65				●	●	●	●
	0.90	●	●	●	●	●	●	
8	0.65				●	●	●	●
	0.90	●	●	●	●	●	●	
10	0.65		●	●	●	●	●	●
	0.90	●	●	●	●	●	●	
13	0.65						●	●
	0.90	●	●	●	●	●	●	

* With respect to application notes, please consult your AMADA sales representative

SELECTION HELP
AMADA SAWING TOOLS

	DIN		EN		WSTNR		JIS		AISI/ASTM	
Construction steel	St 37-2 St 44-2 St 52-3		S235JR S275JR S355J0	E295 E335 E360	1.0037 1.0044 1.0553	1.0050 1.0060 1.0070	SS400 STK 290 SS490B	SM50YA SM58	1015 1020 A570 size 40	A572 size 50 A572 size 65
Heat-treated steel	C10 C45 C60	42crMo4 34CrMo4 51CrV4	C10 C45 C60	42crMo4 34CrMo4 51CrV4	1.0301 1.0503 1.0601	1.7225 1.7220 1.8159	S10C S45C S60CM	SCM440 SCM435 SUP10	1010 1045 1060	4135 4140H 6150
Cold-worked steel	X210Cr12 X155CrVMo 12-1 X210CrW 12	55NiCrMoV 6 100MnCrW 4 40CrMnMoS 8-6	X210Cr12 X155CrVMo 12-1 X210CrW 12	55NiCrMoV7 100MnCrW 4 40CrMnMoS 8-6	1.2080 1.2379 1.2436	1.2713 1.2510 1.2312	SKD1 SDK10 SKD2	SKT4 SKS3	D3 D2 D6	L6 O1 P20+S
Hot-working steel	X38CrMoV 5-1 X40CrMoV 5-1 X38CrMoV 5-3	56NiCrMoV 7 57NiCrMoV 7-7 X32CrMoCoV 3-3-3		56NiCrMoV 7	1.2343 1.2344 1.2367	1.2714 1.2744 1.2885	SKD6 SKD61		H11 H13	L6 H10A
Stainless steel	X5CrNi 18-10 X10CrNiS 18-09 X5CrNiMo 17-12-2	X6CrNiMoTi 17-12-2 X3CrNiMo 17-13-3 X1CrNiMoN 25-25-2	X5CrNi 18 10 X10CrNiS 18 09 X5CrNiMo 17 12 2	X6CrNiMoTi 17 12 2 X3CrNiMo 17 13 3 X1CrNiMoN 25 25 2	1.4301 1.4305 1.4401	1.4571 1.4436 1.4465	SUS304 SUS303 SUS316	SUS316TI SUS316	304 303 316	316TI SCS14
Cast steel	GG15 GG30 GGG40	GGG70 GS52 GS25 CrNiMo 4	EN-GJL-150 EN-GJL-300 EN-GJS-400-15		0.6015 0.6030 0.7040	0.7070 1.0552 1.6570	FC 150 FC 300	FCD 700 SC480	A 48-76 Grade 40 B A 48-76 Grade 45 B A 536-80 Grade 60-40	Gr 100-70-30 A 27 Grade 70-40
High-speed steel	PMHS6-5-4 PMHS6-5-2 S6-5-2	S6-5-2-5 S12-1-4-5	PMHS6-5-4 PMHS6-5-2 S6-5-2	S6-5-2-5 S12-1-4-5	1.3351 1.3395 1.3343	1.3243 1.3202	SKH 54 SKH 53		S5 M2	T15
High heat-resisting steel	X10CrAl7 X12CrNi 23-13 X15CrNiSi 25-20	CrNi 25-20 X8CrNiTi 18-10 X20CrMoV 2-11	X10CrAl7 X12CrNi 23 13 X15CrNiSi 25 20	CrNi 25 20 X8CrNiTi 18 10 X20CrMoV 2 11	1.4713 1.4833 1.4841	1.4843 1.4878 1.4922	SUS309S SUS310	SCS18	309S 314	321H
Ball-bearing steel	105Cr4 100Cr6 X89CrMoV 18-1	80MoCrV 42-16 20NiCrMo 2 100CrMnSi 6-4	105Cr4 100Cr6 X89CrMoV 18 1	80MoCrV 42 16 20NiCrMo 2 100CrMn6	1.3503 1.3505 1.3549	1.3551 1.6522 1.3520	SUJ2 SUJ3 SUJ4	SUS440C	A732 1150 613	A322
Aluminium alloys	Al99.5 AlCuBiPb AlMnCu	AlZn4.5Mg1 AlZnMgCu0.5 AlMgSiPb	EN AW-1050A EN AW-2011 EN AW-3003	EN AW-7020 EN AW-7022 EN AW-6012	3.0255 3.1655 3.0517	3.4335 3.4345 3.0615	A2017 A5052 A5056	A7075	1050A 2011 3003	7020 7022 6012
Nickel alloys	NiCr22Mo6Cu NiCr20TiAl NiCr19NbMo	NiCr15Fe NiMo16Cr	NiCr22Mo6Cu NiCr20TiAl NiCr19NbMo	NiCr15Fe NiMo16Cr	2.4618 2.4631 2.4668	2.4816 2.4883	NCF600 NCF601 NCuP	NCF800	A494 A351 A990	
Titanium alloys	Ti Tl 6 AL 4V TiNi0.8Mo0.3				3.7025 3.7165 3.7105				Grade 1 Grade 5 Grade 12	
Copper alloys	CuZn39Pb3 SF-Cu CuCr1Zr	G-CuSn12Pb CuNi10Fe1Mn G-CuAl10NI	CuZn39Pb3 Cu-DHP CW106C	CC482K CW352H CuAl10Fe5Ni5-C	2.0401 2.0090 2.1293	2.1061 2.0872 2.0975.1	C3603 C1220	LBC2 CNP1 AlBC3	C38500 C12200 C18150	C92500 C70600 C95800

- For sawing tubes and profiles, we recommend the Protector M42 and HI-LO qualities, in the case of thick-walled materials, SGLB quality can also be used.
- To make use of the full performance potential, the corresponding high-performance machines in good condition must be used.
- AMADA basically recommends using a flush cooling system with sufficiently concentrated and suitable cooling emulsion, for example, AMADA cutting fluid.

							Recommendation carbide saw blades (solid material)			Bimetal saw blades (solid material)		
AFNOR		**UNI**		**GOST**	**Other designations**		**TOP**	**Alternative 1**	**Alternative 2**	**TOP**	**Alternative 1**	**Alternative 2**
E24-2 E28-2 E36-3	A50-2 A60-2 A70-2	Fe 360 B Fe 430 B Fe 510 C	Fe 490 Fe 590 Fe 690	Сталь 3, 17ГС, 18ХГ, 09Г2С			AXCELA G	AXCELA STRIKER® G AXCELA STRIKER®	AXCELA S AXCELA B	Magnum HLG	Super HLG	Super8
XC10 XC45 XC60	34CD4 42CD4 50CV4	C10 C45 C60	35CrMo4 42CrMo4 50CrV4	Сталь 20, 45, 55, 40Х, 40ХМН, 38ХМА, 65Г, 30ХГСА			AXCELA G	AXCELA STRIKER® G AXCELA STRIKER® AXCELA HMAX	AXCELA S AXCELA B	Magnum HLG	Super HLG	Super8
Z200Cr13 Z160CDV12 Z210CW12-01	55NCDV7 90MWCV5 Y100C6	X205Cr12KU X155CrVMo121KU X215CrW121KU	95MnWCr5KU	Х12МФ, 5ХНМ, 6ХВ2С, У8, У10, 5ХВГ			AXCELA G	AXCELA STRIKER® G AXCELA STRIKER®	AXCELA S AXCELA B	Magnum HLG	Super HLG	Super8
Z38CDV5-1 X40CrMoV5 Z38CDV5-3	55NCDV7	X37CrMoV51KU X40CrMoV511KU	56NiCrMoV7KU	4Х5МФС			AXCELA G	AXCELA STRIKER® G AXCELA STRIKER® AXCELA H	AXCELA S AXCELA B	Aurora Magnum HL	SIGMA	Super HL
Z7CN18-09 Z10CNF18-09 Z6CND17-11	Z6CNDT 17.12 Z7CDND18.12.2 Z1CND25.22AZ	X5CrNi1810 X10CrNiS1809 X5CrNiMo 17 12	X6CrNiMoTi 17 12	12Х18Н10Т, 12Х17Н9М2Т, 08Х18Н10, 20Х13, 40Х13, 95Х18	V2A V4A INOX		AXCELA G	AXCELA STRIKER® G AXCELA STRIKER® AXCELA H	AXCELA S AXCELA B	Aurora Magnum HL	SIGMA	Super HL
Ft 15 D Ft 30 D FGS 400-12		G 15 G 30	GS 700-2	СЧ15, СЧ30, ВЧ40	M2 M42		AXCELA G	AXCELA STRIKER® G AXCELA STRIKER®	AXCELA S AXCELA B	Super HLG	Super8	SGLB
Z85WDCV06 05-04-02				Р6М5, Р2М10, Р12Ф4, Р6М5К5, Р18			AXCELA G	AXCELA STRIKER® G AXCELA STRIKER®	AXCELA S AXCELA B	Magnum HLG	Super HLG	Magnum HL
Z8CA7 Z15CNS 25-20				ХН35ВТЮ, 08Х23Н13			AXCELA H	AXCELA STRIKER® G AXCELA STRIKER®	AXCELA S AXCELA B	Aurora	Magnum HL	Super HL
100Cr6 80MoCrV 42-16 100CD7	20CD2 100CM6	100Cr6 100CrMnSi6-4 100CrMo7		ШХ4, ШХ15, ШХ20			AXCELA G	AXCELA HMAX	AXCELA S AXCELA B	Magnum HLG	Super HLG	
A-5 A-U5PbBi A-M1	A-Z5G A-Z4GU A-SGPb	P-AlP99,5 P-AlCu5.5PbBi P-AlMn1.2Mg	P-AlZn4,5Mg P-AlSiMgMn	Д16, В95, АК7	Aludur Aluman Certal	Peraluman Anticorodal Avional	AXCELA A AXCELA ALB	AXCELA S AXCELA H	AXCELA STRIKER®	Magnum HL	Sigma	Super8
NC16D16FE5W5 NC16D16M NU30M				ЭП702, ЭИ698, ХН73МБТЮ, ХН78Т, ХН67МВТЮ, ЭП202	Monel Hastelloy Inconel		AXCELA H	AXCELA STRIKER®	AXCELA S	Aurora	Magnum HL	Sigma
TA 6 V T35 T40	T50			ВТ1, ВТ3, ВТ6, ВТ20, ОТ4			AXCELA G	AXCELA H AXCELA TG	AXCELA S AXCELA B	Aurora	Magnum HL	Sigma
CuZn40Pb3 Cu-b1	CuSn12Sb CuNi10Fe1Mn CuAl10Fe5Ni5	P-CuZn40Pb2 Cu-DHP CuCrZr	CuSn11Zn1 Pt-CuNi10Fe1Mn G-CuAl11Fe4Ni4	БрАЖМц10-3-2, БрАЖ9-4, БрОЦ4-3			AXCELA G	AXCELA TG AXCELA H	AXCELA S AXCELA B	Magnum HL	Sigma	Super8

ATTENTION: This is not a standard//material reference list

Running in saw blades

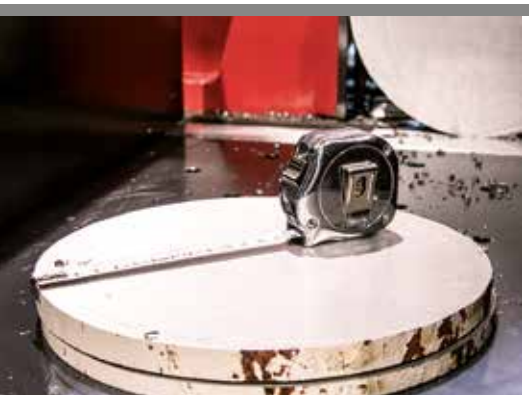
If possible, exert less load than normal on each blade at the beginning of sawing. Each AMADA saw blade is manufactured with the highest precision.

If the correct tool has been chosen, insufficient cutting results are usually caused by vibration, tooth breakage or crooked cutting. In order to prevent these effects, proper running-in is important and increases the service life of the tool.

Damaged tooth, after running-in

Damaged tooth, not run-in

INSTRUCTIONS



SELECTING THE TOOTH PITCH

- For optimum sawing, we recommend selecting a toothing that always has 10 to 20 teeth in the material.
- When sawing deformed workpieces or workpieces that vary in cutting width, it is preferable when at least two teeth are cutting into the the material at the same time during sawing.

Material		Maximum cutting width									
		[mm] 50	100	150	200	250	300	400	500	700	1000
		[inch] 2"	4"	6"	8"	10"	12"	16"	20"	28"	40"
Rolled profiles		6/10 Z & 5/7 Z									
Profiled steel, bundled pipes			4/6 Z								
Solid material	Bundled with small diameter, normal steel										
	Cold-worked steel, case-hardened steel			3/4 Z		2/3 Z		1.5/2 Z	1.1/1.5 Z		
	Hot-working steel, stainless steel										0.7/1 Z
	Extremely heat-resistant special alloys										

FUNDAMENTALS OF CUTTING PARAMETER SELECTION

Comment

If a new blade is being used, perform the run-in process. (see "General Instructions")

- Select a suitable saw blade according to the saw blade quality table.
- Select a suitable tooth pitch according to the tooth pitch selection table.
- Set the belt speed according to the table below.
- With reference to the cutting performance specified in the table, set the feed speed so that the calculated cutting time in the table below can be reached.

	Material dimensions [mm] Area [cm²]	100 79	200 314	300 707	400 1256	500 1963	700 3847	1000 7850
Normal steel	Blade speed [m/min]	48 – 75	48 – 75	48 – 75	43 – 65	39 – 58	34 – 51	30 – 44
	Cutting rate [cm²/min]	36 – 54	72 – 108	72 – 108	60 – 91	49 – 73	37 – 56	26 – 38
Cold working steel	Blade speed [m/min]	28 – 42	28 – 42	28 – 42	25 – 38	23 – 34	20 – 30	18 – 26
	Cutting rate [cm²/min]	11 – 23	23 – 46	23 – 46	20 – 40	17 – 35	15 – 25	12 – 20
Case-hardened steel	Blade speed [m/min]	44 – 66	44 – 66	44 – 66	39 – 59	35 – 52	30 – 45	26 – 38
	Cutting rate [cm²/min]	28 – 42	56 – 84	56 – 84	47 – 71	39 – 58	30 – 45	22 – 32
Hot forming tool steel	Blade speed [m/min]	24 – 36	24 – 36	22 – 32	19 – 29	17 – 26	17 – 26	17 – 26
	Cutting rate [cm²/min]	8 – 15	16 – 30	14 – 27	14 – 27	13 – 24	13 – 24	13 – 24
Stainless steel	Blade speed [m/min]	40 – 60	40 – 60	40 – 60	35 – 53	31 – 46	26 – 39	22 – 32
	Cutting rate [cm²/min]	20 – 30	40 – 60	40 – 60	34 – 52	29 – 43	23 – 35	18 – 26
High heat-resistant special alloys	Blade speed [m/min]	10 – 20	10 – 25	10 – 25	10 – 25	10 – 25	10 – 20	10 – 15
	Cutting rate [cm²/min]	2 – 10	3 – 15	3 – 15	3 – 15	3 – 15	3 – 15	3 – 15

DETERMINING THE CUTTING PERFORMANCE

Cutting performance means the surface area cut per minute and is expressed by the unit cm²/min. To reach the target cutting performance, calculate according to the following formula and set the feed.

$$\text{Cutting time (minutes)} = \frac{\text{material surface (cm}^2\text{)}}{\text{cutting performance (cm}^2\text{/min)}}$$

To simplify calculation of the surface, please use the following formula*:

- Surface of square material = width (cm) x height (cm)
- Surface of round material = Ø (cm) x Ø (cm) x 0.785

* In the case of bundle cutting, multiply the amount of bundled material with the value of each individual surface.

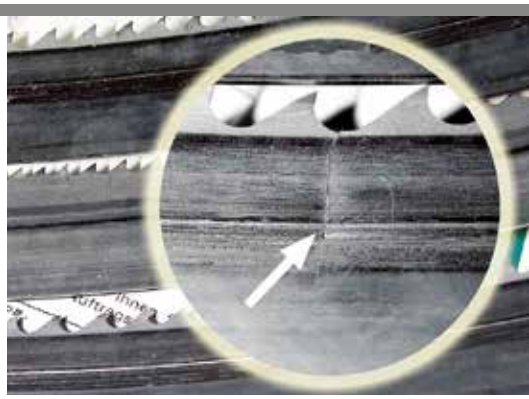
GENERAL INSTRUCTIONS

- To achieve an optimum service life, the saw blades should always be run in. We recommend running in each saw blade over a surface of approx. 3000 cm². For this purpose, reduce the blade speed by approx. 30 % and the cutting performance by approx. 50 %.
- Make sure that the chip brush(es) of your machine is/are always in the mesh. Please replace worn out brushes in due time, otherwise the quality of the cutting surface will decrease and this can reduce the service life.
- Pay attention to sufficient cooling lubrication concentration; normally this should be approx. 10 %. In the case of stainless steel, an increased concentration of approx. 12 % has proved to be sufficient. Only cast iron and plastic should be sawed dry.

SOLUTION

Saw blade with lateral scoring

Chips sticking to the base of the tooth



AMADA saw blades are basically fully developed large series products with a very stringent and intensive quality assurance. Nevertheless, problems can occur occasionally during practical operation and we would like to support you in finding the solution with these instructions.

Usually, several of the problems described in the table occur simultaneously. Concentrate on the checkpoints that are mentioned with all problems that can occur.

PROBLEM LOCALISATION

1 – Check the the last-used saw blades for obvious traces

- Significant lateral scoring > check blade guides
- Burrs on the back of the saw blade > check blade back guides
- Chips sticking to the base of the tooth > check that chip brush is on the mesh

2 – Checking the machine

- Condition of the chip brush
- Cooling lubricant concentration
- Visual inspection of the roller wheels

3 – Checking the material

- Request the factory certification and compare with the specification
- If necessary, heat treatment deviating from the normal condition
- Occlusions in the material
- Poor material surface quality
- Material geometry (strong fluctuations, material crooked)
- Check for anomalies with other cutting processes

Problem description

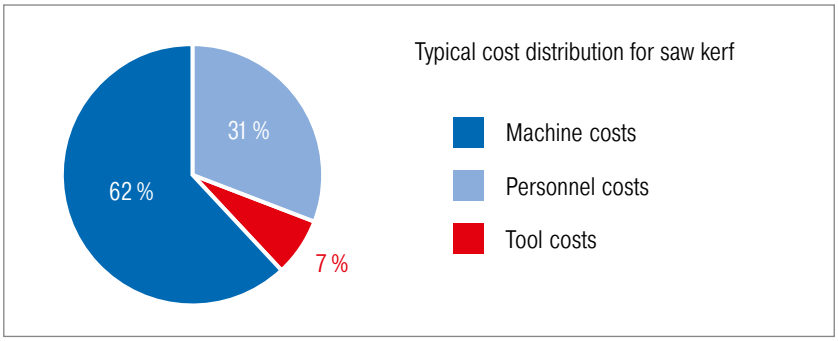
	Premature crooked cutting	Rough surface	Premature tooth breakage	Premature wear	Premature blade breakage	Strong noise generation	Stopping the blade
Blade guide set too wide	●	●	●		●	●	
Roller wheel bearing damage, fault in blade operation	●	●	●		●	●	●
Rusted saw blades							●
Saw blade strikes the material		●	●		●		
Wrong saw blade type or wrong toothing	●	●	●	●	●	●	●
Incorrect parameters*	●	●	●	●	●	●	●
Saw blades not run in	●	●	●	●		●	
Insufficient coolant supply	●			●	●	●	
Coolant concentration too low	●			●	●	●	
Chip brush not in the mesh	●	●	●	●	●	●	●
Jamming of short cuttings	●	●	●				
Vibration of the machine		●	●				
Material not sufficiently clamped		●	●				●
Saw back guide incorrectly adjusted		●	●				●
Saw back guide worn					●		
Saw back guide set to loosely	●				●		
Saw back guide set to firmly	●				●		
Blade lateral rollers worn					●		
Blade lateral guide worn	●				●		
Incorrect overall adjustment of the blade guide	●						
Deviations in material quality	●	●		●	●		
Foreign bodies in cutting area		●	●				
Saw blade jams in the cutting channel				●			●
Blade tension too low		●	●		●		
Blade tension too high		●	●		●		
Unevenly worn roller wheels					●	●	
Blade comes into contact with roller wheel flange			●		●	●	●
Blade too far away from the roller wheel flange			●		●	●	●
Irregular sinking of the saw frame	●	●	●	●	●	●	●

* Blade speed/feed

EFFICIENCY BY PERFORMANCE

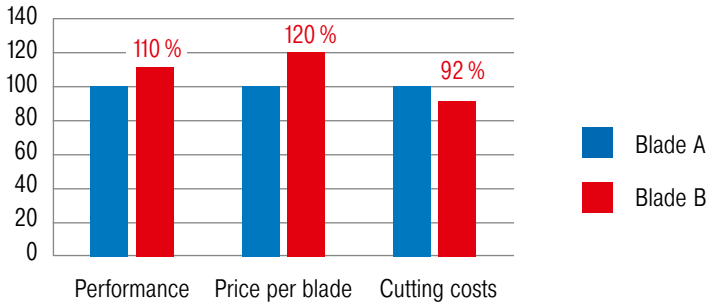
TYPICAL COST DISTRIBUTION

For typical processing tasks, the costs for the tool amount to 10 % or less of the total cutting costs. The largest part relates to machine and personnel costs. **The best way to reduce costs is to increase performance.**



Savings from lower saw blade costs have very little effect because only the tool costs are reduced which has no influence on the main part of the cutting costs. This is the reason why an increase in performance leads to a tangible cost reduction despite higher saw blade prices. For this reason, AMADA always recommends using the best technical solution.

For example, an increase in performance of 10 % leads to a reduction in costs of 8 % although the higher performance blade for example, has a 20 % higher price.



If you wish to lower costs, we recommend making an initial assessment of the current situation. For example, you can use the adjacent copy template in order to record the individual cuts over a certain period of time and then evaluate the cutting results using 3 saw blades. The AMADA sales representatives can then make targeted suggestions for optimisation with the help of the statistics.

If it is possible to store the cutting results in a computer system, it is sufficient to acquire the pure saw blade consumption over a period of time. AMADA saw blade sales representatives can also help you in this case.

AMADA MACHINE TOOLS EUROPE

Cutting data acquisition

BASIC DATA

Company		**Code**	
Sales representative			
Machine			
Saw blade			
Start [date/time]		**End** [date/time]	
Run-in	☐ yes ☐ not	**Run in** [surface/cuts/time]	

CUTTING DATA

Pos.	**Material** [DIN/EN/ISO/ANSI ...]	**Form**	**Dimension** [Ø mm, mm x mm, etc.]	**Cuts**	**Blade-speed** [m/min]	**Feed** [mm/min]	**Cutting time** [s]

Following page ☐ yes ☐ no

REASON FOR CHANGING THE SAW BLADE

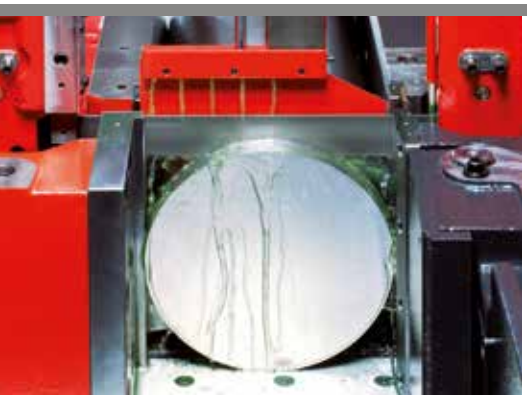
☐ Crooked cuts
☐ Tooth breakage
☐ Noise level
☐ Blade breakage
☐ Other

Service life (if CNC controller) m²

Deviation (if CNC contralateral)

Comments

BAND SAWS MACHINES



HPSAW – „HYPERSAW“ CNC HIGH-PERFORMANCE BAND SAW

Extremly powerful Band Saw for section lengths till 600mm.

Machine type	**Control**	**Working area** [mm]		**Blade dimension** [mm]	**Drive** [kW]
HPSAW 310	CNC	○ 310	□ 310 x 310	67 x 1.6 x 7345	22

AUTOMATED BAND SAWS WITH PULSE-CUTTING TECHNOLOGY

Band saws with pulse cutting technology have been designed for economical use under toughest production conditions.
For Users who demand the highest demands on cutting performance and quality, based on decades of experience, the optimum approach between tool and machine was developed.

Machine type	**Control**	**Working area** [mm]		**Blade dimension** [mm]	**Drive** [kW]
PCSAW 330	NC	○ 330	□ 330 x 330	41 x 0.9 x 4115	3.7
PCSAW 430 X/AX	CNC	○ 430	□ 430 x 430	54 x 1.6 x 6100	11
PCSAW 530 X/AX	CNC	○ 530	□ 530 x 530	67 x 1.6 x 7000	15
PCSAW 700	CNC	○ 700	□ 800 x 700	67 x 1.6 x 8300	18.5
PCSAW 720	CNC	○ 720	□ 815 x 720	67 x 1.6 x 8300	11

CARBIDE BAND SAWS

With the models CTB 400 and CTB 7040 Amada provides vertical band saws.
They set by their advantageous Carbide concept with more power and cutting quality new standards.

Machine type	**Control**	**Working area** [mm]		**Blade dimension** [mm]	**Drive** [kW]
CTB 400	CNC	○ 430	□ 430 x 430	41 x 1.3 x 4715	7.5
CTB 7040	CNC	○ 430	□ 430 x 700	41 x 1.3 x 5630	7.5

Contact our sales department
for a detailed catalogue.
info@amadamachinetools.de

AUTOMATED BAND SAWS

Compact and robust Automated Band Saws for production operation. Versatile for full-, mold- materials and bundle cuts.

Machine type	**Control**	**Working area** [mm]		**Blade dimension** [mm]	**Drive** [kW]
HA 250 W	NC	○ 250	□ 250 x 300	34 x 1.1 x 3505	3.7
HFA 250 W	NC	○ 250	□ 260 x 250	34 x 1.1 x 3505	3.7
HA 400 W	NC	○ 420	□ 415 x 415	41 x 1.3 x 4570	5.5
HFA 400 W	NC	○ 420	□ 400 x 400	41 x 1.3 x 4570	5.5
DYNASAW 430	CNC	○ 430	□ 430 x 430	41 x 1.3 x 5300	5.5
DYNASAW 530	CNC	○ 530	□ 530 x 530	54 x 1.6 x 5920	7.5
HFA 700 CII	NC	○ 700	□ 700 x 800	67 x 1.6 x 8300	11
HFA 1000 CII	NC	○ 1000	□ 1000 x 1100	80 x 1.6 x 11100	11

BIG DIMENSION BAND SAWS

AMADA Big Dimension Band Saws have been designed for economical use under the toughest production conditions.
Based on decades of experience, the optimum approach between tool and machine was developed.

Machine type	**Control**	**Working area** [mm]		**Blade dimension** [mm]	**Drive** [kW]
H 1000 II	NC	○ 1000	□ 1000 x 1100	80 x 1.6 x 11100	11
H 1300 II	NC	○ 1300	□ 1300 x 1300	80 x 1.6 x 12300	15
H 1600 II	NC	○ 1600	□ 1600 x 1600	80 x 1.6 x 15500	15
H 2116 II	NC	○ 1600	□ 1600 x 2100	80 x 1.6 x 12300	15

BLOCK BAND SAWS

Block Band Saws are suitable for precise cutting of blocks, boards and molded parts.

Machine type	**Control**	**Working area** [mm]	**Blade dimension** [mm]	**Drive** [kW]
VM 1200	CNC	500 x 500 x 1200	41 x 1.3 x 4670	5.5
VM 2500	CNC	500 x 500 x 2500	41 x 1.3 x 4670	5.5
VM 3800	CNC	605 x 800 x 3800	54 x 1.6 x 5830	7.5

MITRE-BOX SAWS

Flexible mitre-box saws in space-saving design.

Machine type	**Working area 90°** [mm]	**Working area 45°** [mm]	**Working area 60°** [mm]	**Blade dimension** [mm]	**Drive** [kW]
VT 3850 A	381 x 508	Left: 381 x 336	Left: 381 x 203	34 x 1.1 x 4877	3.75
		Right: 381 x 355	Right: 381 x 235		
VT 4555	457 x 558	457 x 324	–	27 x 0.9 x 4420	3.75
VT 4555 M	457 x 558	Left: 457 x 330	Left: 457 x 185	34 x 1.1 x 4674	3.75
		Right: 457 x 368	Right: 457 x 246		

CIRCULAR SAWS

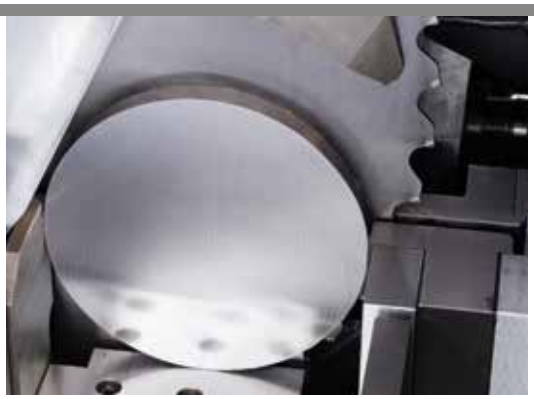
Contact our sales department
for a detailed catalogue.
info@amadamachinetools.de

CARBIDE CIRCULAR SAWS

Powerful Carbide Circular Saw with material feed via a helical feeder. Fully automatically Sorting of head section and Remnant. Largest portion length accuracy, because of the material feed via servo controlled precision. Very low wastage by using carbide-tipped circular saw blades in thin section execution.

Machine type	**Working area** [mm]		**Blade** [mm]	**Drive** [kW]
CMII 75 DG	○ 10 - 75	□ 10 - 55	285 x Ø 32 x 2.0	7.5 (optional 11 kW)
CMII 100 DG	○ 25 - 100	□ 25 - 75	360 x Ø 50 x 2.6	11 (optional 15 kW)
CMB 150 CNC	○ 75 - 150	□ 75 - 100	460 x Ø 50 x 2.7	15
CMB 180	○ 40 - 180	□ 40 - 110	510 x Ø 50 x 2.7	18.5
CMB 230	○ 80 - 230	□ 80 - 160	750 x Ø 80 x 3.2	37

CIRCULAR SAW BLADE



CIRCULAR SAW BLADE

For each application AMADA offers the appropriate tool. Like the machines, the saw blades are permanently improved and advanced. By using AMADA tools on AMADA machines always a perfect cutting result is given.

Type	Characteristics
TCB-CB	■ Carbide Teeth ■ Universal tool for use in changing material qualities
TCB-CR II	■ Cermet Teeth ■ Tool for non-alloyed steels and steels with a carbon content between 0.15 to 0.45 %
TCB-TI/TI II	■ Carbide Teeth + TiN coating ■ Tool for alloy steels with a carbon content > 0.45%, but not stainless or heat resistant steels
TCB-SU	■ Carbide Teeth ■ Tool for stainless steel
TCB-PT/PT II	■ Carbide Teeth ■ Tool specially for pipes and profiles
TCB-TISU	■ Carbide Teeth + TiN coating ■ Tool with particularly long service life with stainless steels
TCB-DI	■ Carbide Teeth + special coating ■ Tool specially for tool steels

AMADAOIL® HL4

AMADA Premium Lubricants

Low-residue stamping, cutting and shaping coolant with excellent lubricating properties.

Technical data

Canister content	5 liters
Color	colorless
Odour	odourless or weak odour
Viscosity at 40 °C	2.5 mm^2/s
Density at 20 °C	0.79 g/cm^3
Pour point	not specified
Flash point	105 °C

Water pollution class

- WGK 1

This high-performance oil is

- Free of PVB/PCT
- Free of phenol
- Free of chlorine
- Free of silicon
- Free of heavy metals (such as barium, zinc, molybdenum, etc.)
- Safe from a toxicological standpoint

Product description

AMADAOIL® HL 4 is a low-residue stamping, cutting and shaping coolant with excellent lubricating properties.

Applications

During light-duty non-mechanical (i.e. shaping) operations, such as stamping, bending, shaping, drawing, roll forming, tapering, deep drawing, but also during chip-cutting machining such as sawing, milling, turning, drilling and tapping, and during internal cooling for minimum volume cooling lubrication.

Material

- Non-ferrous metals (Al)
- Heavy metals
- Non-alloy and alloy steels (ST, V2A)
- Electr. contact materials

Application

Non-diluted by spraying. Not suitable for cyclic or mechanical lubrication!

Recommendation

For optimum inductive applications, we recommend the mist-free minimum volume cooling lubricant systems from AMADA.

Benefits for minimum volume lubrication

- Minimum residue
- Dry workpieces, machines and chips
- No disposal of cooling lubricant
- Longer tool service lives
- Virtually neutral odour

Degreasing options

Evaporates leaving virtually no residue when used as intended.

AMADAOIL® HL47

AMADA Premium Lubricants

Oil-mist and evaporation-poor metalworking oil based on a synthetic base oil with a special combination of additives.

Technical data

Canister content	5 liters
Color	light yellow
Odour	characteristics
Viscosity at 40 °C	47 mm^2/s
Density at 20 °C	0.91 g/cm^3
Pour point	not specified
Flash point	> 200 °C
Copper corosion	1-100A3

Water pollution class

- WGK 2

This high-performance oil is

- Free of PVB/PCT
- Free of phenol
- Free of chlorine
- Free of silicon
- Free of sulphur
- Free of zinc
- Biodegrades quickly
- Safe from a toxicological standpoint

Product description

AMADAOIL® HL 47 is an oil-mist and evaporation-poor metalworking oil based on a synthetic base oil with a special combination of additives. It is temperature stable and has excellent pressure sensing and adgesion. The zinc and sulfur-free additives ensure the spot-free surfaces even while processing copper non-ferrous metals.

Applications

During chip-cutting machining such as sawing, milling, turning, drilling and tapping.

Material

- Titanium
- Titanium alloys
- High-alloyed steels
- Steel
- Cast iron
- Non-ferrous metals (Al, Cu)

Application

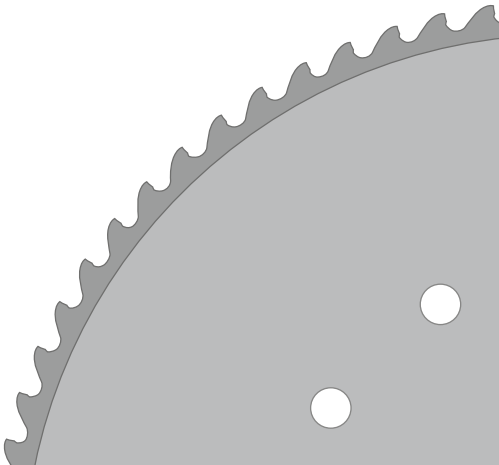
Non-diluted by spraying.

Recommendation

For optimum inductive applications, we recommend the mist-free minimum volume cooling lubricant systems from AMADA.

Benefits for minimum volume lubrication

- Extreme high lubrication effect
- Excellent pressure sensing and adgesion
- Dry workpieces, machines and chips
- Minimum residue
- No disposal of cooling lubricant
- Improvements in performance
- Practically odour neutral



AMADAOIL® HL4

AMADA Premium Lubricants

Universal high-viscosity stamping, cutting and shaping oil with maximum possible adhesion and good pressure absorbing characteristics, based on pharmaceutical white oils.

Technical data

Canister content	5 liters
Color	yellow brown
Odour	characteristics
Viscosity at 40 °C	76 mm^2/s
Density at 20 °C	0.88 g/cm^3
Pour point	not specified
Flash point	200 °C

Water pollution class

- WGK 2

This high-performance oil is

- Free of PVB/PCT
- Free of phenol
- Free of chlorine
- Free of silicon
- Free of heavy metals (such as barium, zinc, molybdenum, etc.)
- Biodegrades quickly
- Safe from a toxicological stand point

Product description

AMADAOIL® HL80 is a totally universal high-viscosity stamping, cutting and shaping oil with maximum possible adhesion and good pressure absorbing characteristics, based on pharmaceutical white oils. Delivers the best results, even when used with materials with a high carbon content.

Applications

During light-duty non-mechanical (i.e. shaping) operations, such as stamping, bending, shaping, drawing, roll forming, but also during chip-cutting machining such as sawing, milling, turning, drilling and tapping.

Material

- Non-ferrous metals (Al)
- Non-alloy, alloy and high-alloy steels
- Heavy metals

Application

Non-diluted by spraying, rolling, daubing, shaping or in the drop procedure. Not suitable for cyclic or mechanical lubrication!

Recommendation

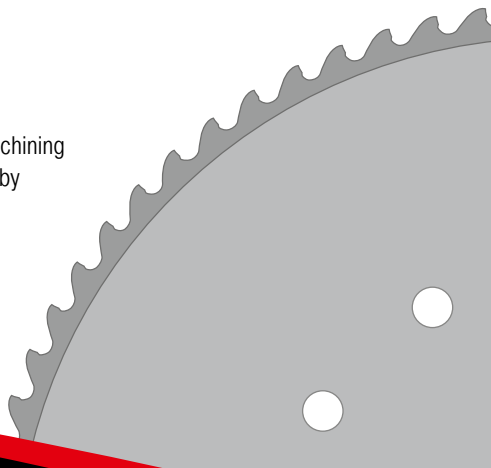
For optimum inductive applications, we recommend the mist-free minimum volume cooling lubricant systems from AMADA.

Benefits for minimum volume lubrication

- Minimum residue
- Dry workpieces, machines and chips
- No disposal of cooling lubricant
- Improvements in performance

Degreasing options

Minimum residue when used as intended. For further machining (painting, powder coating etc.), grease can be removed by means of spray, ultrasonic or immersion cleaning using efficient neutral or alkaline cleaners as well as most organic solvents.



AMADAOIL® HL47

AMADA Premium Lubricants

High-viscosity universal stamping, cutting and shaping oil.

Technical data

Canister content	5 liters
Color	yellow brown
Odour	characteristics
Viscosity at 40 °C	96 mm^2/s
Density at 20 °C	0.946 g/cm^3
Pour point	not specified
Flash point	> 200 °C

Water pollution class

- WGK 2

This high-performance oil is

- Free of PVB/PCT
- Free of phenol
- Free of chlorine
- Free of silicon
- Free of heavy metals (such as barium, zinc, molybdenum, etc.)
- Biodegrades quickly
- Safe from a toxicological stand point

Product description

AMADAOIL® HL95 is a high-viscosity universal stamping, cutting and shaping oil with above average adhesion.

Applications

During non-machining (i.e. shaping) operations such as stamping, bending, shaping, drawing, roll forming, but also during chip-cutting machining such as sawing, milling, turning, drilling and tapping, also best suited to flow forming.

Material

- Non-alloy and high-alloy steels (RST 37-3, ZSTE 52, C60, CK60, 42CrMo4, X10 and CrNiMoTi)
- Non-ferrous metals (Al)

Application

Non-diluted by spraying, rolling, daubing, shaping or in the drop procedure. Not suitable for cyclic or mechanical lubrication!

Recommendation

For optimum inductive applications, we recommend the mist-free minimum volume cooling lubricant systems from AMADA.

Benefits for minimum volume lubrication

- Minimum residue
- Dry workpieces, machines and chips
- No disposal of cooling lubricant
- Improvements in performance

Degreasing options

Minimum residue when used as intended. For further machining (painting, powder coating etc.), grease can be removed by means of spray, ultrasonic or immersion cleaning using efficient neutral or alkaline cleaners as well as most organic solvents.

AMADAOIL® HL4

AMADA Premium Lubricants

ISO VG 32 – HC-based synthetic hydraulic oil with high and stable viscosity index

Properties

- For hydraulic systems according to ISO VG 32
- Exceeds the characteristics of commercially available HLP hydraulic oils mineral oil base
- Very good behavior at low temperatures up to - 20 °C
- An excellent stability against oxidation
- Excellent wear-preventing properties
- High quality hydrocracking base oil
- Good lubrication properties even with prolonged and high load
- Optimal base oil properties
- Good air separation ability
- Very good water demulsification properties
- A very good activity against rust and corrosion
- Very good wear protection performance
- Good viscosity-temperature properties

Specifications

- ISO 11158 HV
- ASTM D 6158 HV
- DIN 51524, part 3, HVLP
- DIN 51524, part 2, HLP is exceeded

Applications

- Wherever HLP oils are required and where extreme temperature fluctuations occurs
- The requirements of most manufacturers of hydraulic systems are exceeded

Technical data

	ISO 32
Canister content	20 liters
Density at 15 °C	0.842 g / cm^3
ISO viscosity class N. DIN 51519	VG 32
Viscosity at 40 °C	32.0 mm^2 / s
Viscosity at 100 °C	6.6 mm^2 / s
Viscosity index	162
Pour point	< - 38 °C
Flash point COC	> 220 °C
FZG test level	12

The data may vary in the commercial range.

AMADAOIL® HL47

AMADA Premium Lubricants

Semi-synthetic, water-miscible high performance cooling fluid

Properties

- Compatible with Amada sawing technology
- Universal for steel, aluminum, non-ferrous metal processing
- Long-term stability + extended service life
- Amine-, chlorine-, nitrite-free
- Boric acid-free
- 50% mineral oil
- EP-additives
- Fulfills TRGS 611
- Significantly extended emulsion lifetime
- Very good corrosion protection
- Prevents sticking
- Good skin compatibility, pleasant smell
- Low foaming

Applications

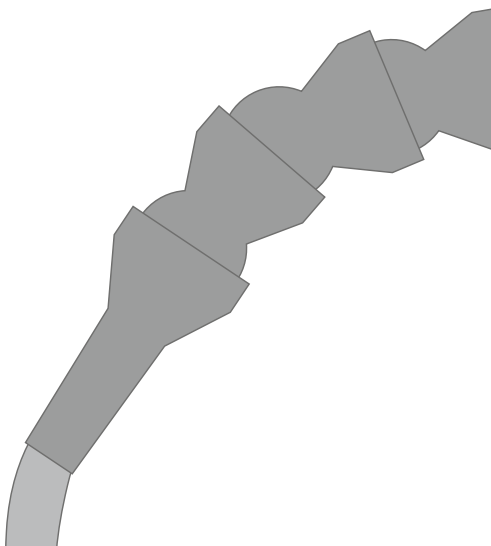
- Universally applicable for all types of metal cutting of alloy as well as plain carbon steel and aluminium
- For both freestanding machines and central systems with modern, high-speed machining centers

Correct preparation of a fresh emulsion is ensured by slowly pouring the concentrate into water while stirring continuously. Alternatively, an automatic mixing device may be used

Application concentration from 4%, with heaviest processing up to 10%

Technical data

Canister content	20 liters
Density at 20 °C	0.974 g / ml
Kinetic viscosity at 20 °C	300 mm² / s
Color	medium brown
pH of an emulsion 3%	approx. 9.1
Corrosion protection test (DIN 51360/2) 1:25	Grade 0
Refractometer factor for handheld refractometer	0.9%



ACCESSORIES / AUTOMATION

Batch loader

Sorting line

Long product sorting line

AUTOMATION SOLUTIONS

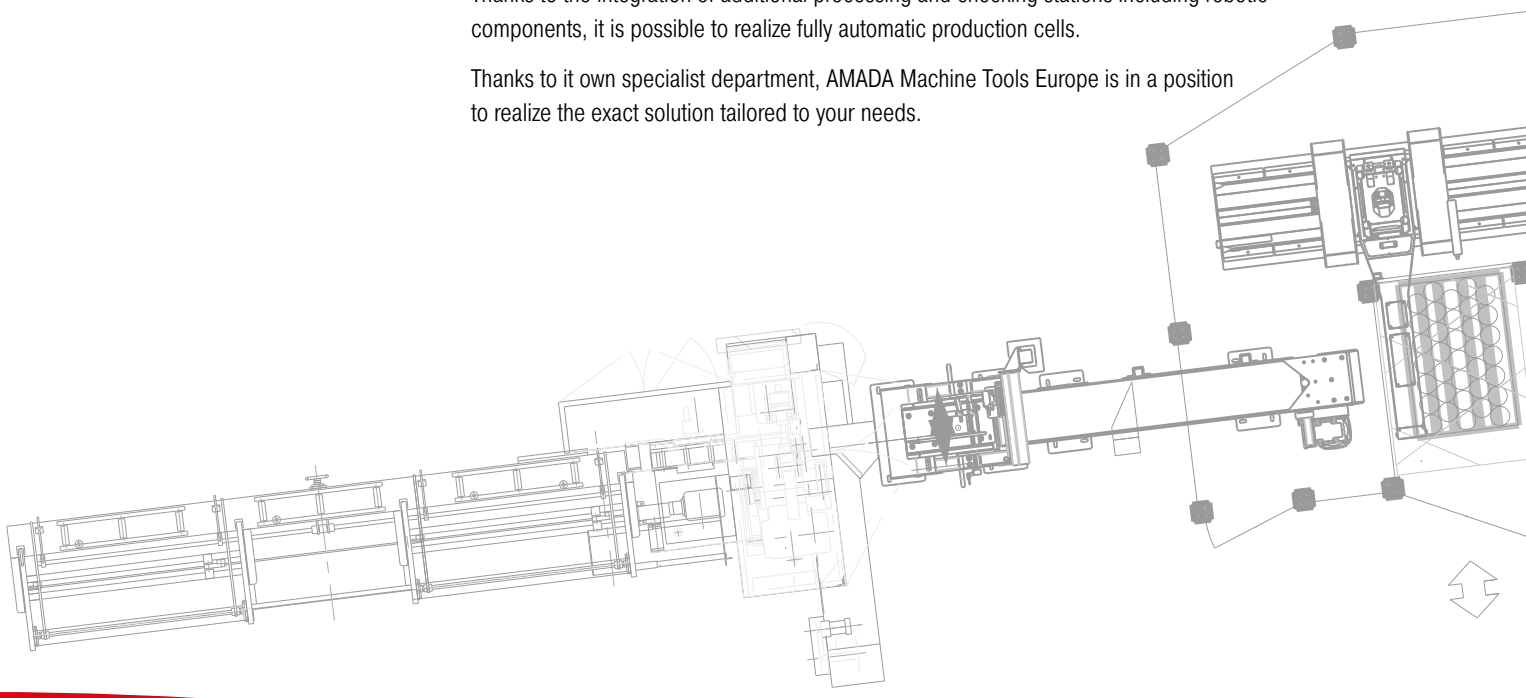
Tailored automation solutions

High-performance sawing systems yield a performance that cannot often be fully utilised using conventional loading and unloading methods. AMADA therefore offers the optimum automation solution for every application case.

A spherical roller system is already in a position to significantly increase the capacity of a sawing system.

Thanks to the integration of additional processing and checking stations including robotic components, it is possible to realize fully automatic production cells.

Thanks to it own specialist department, AMADA Machine Tools Europe is in a position to realize the exact solution tailored to your needs.

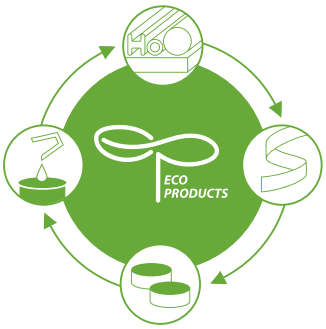


Contact our sales department
for further information.
info@amadamachinetools.de

Material recovery via the SCP 103 H chip press

Comparative chip volume: The chip volume is considerably reduced depending on the chip shape and material. In the case of cast iron chips, a reduction in volume of approx. 1:5 is possible and with long turned chips from steel, a reduction of approx. 1:50 is possible.

SCP 103 H Chip Press



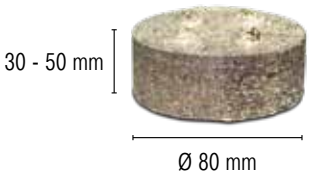
The SCP 103 H automatic chip press is particularly suitable for making briquettes of different shapes from chips resulting from drilling, milling and sawing.

Sustainable management by ISO 14001 environmental management.

An ISO 14001 certificate proves that your internal company processes are tested and correspond to the international standard for environmental management systems.
An ISO 14001 certificate lets your customers know that your are actively involved in making sure that your processes, products and services positively influence the environment.

Your advantages

- Reduction of the chip volume in the disposal bin (1:5 cast iron chips, 1:50 steel chips)
- Recycling of residual lubricant
- Reduction of surrounding contamination
- Higher sales revenue from chips by making briquettes
- Reduction of staff costs due to lower handling intensity
- High melt yield when compared to single chipping
- Positive decision for environmental audits



Chip screw

The chips in the collecting bin are pulled into the pressing chamber by horizontal and vertical chip screws and compressed there by a hydraulically driven stamp.

ACCESSORIES / AUTOMATION

Standard roller table version

Heavy duty roller table

Pendulum roller R/T

AMADA INFEED AND OUTFEED ROLLER CONVEYORS

AMADA infeed and outfeed roller conveyers are available as standard or heavy-duty version on request. The load depends on design and width. The smallest load is 1 t/m and reaches up to 9 t/m. Individual special designs are also possible in addition to standard lengths such as 1 m, 2 m and 5 m.

Advantages

- High flexibility
- Fast loading and unloading
- Increase in productivity
- Higher utilization of production capacity
- Also suitable for Also suitable for competitive machines

Configuration options

- Intermediate plates
- Lateral guide roller
- Lateral guide plates
- Coolant drip pan
- Adjustable stanchion guide
- Powered rollers

For even higher productivity, we recommend our pendulum roller table R/T. The material for the next sawing task can be stored in advance for avoiding downtimes.

AMADA chip trolleys

Application consulting

Service, spare and consumable parts from one single source

ACCESSORIES

AMADA Supplies a variety of accessories for its sawing systems, which simplify sawing operation and makes it more efficient. Roller conveyers of different types, chip trolleys, bundle clamps or minimum quantity spraying systems are just a few examples.

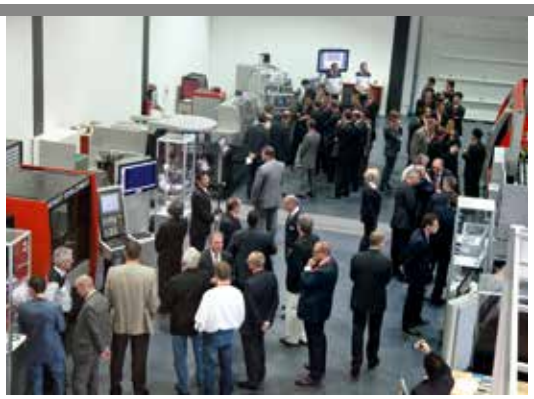
SPARE PARTS / OPERATING MATERIALS

AMADA machines are well known for their durability and robustness even when used continually for 24 hours. In order to ensure this, AMADA also offers perfectly matched operating materials. The spare parts for maintenance and repairs are stored centrally in Haan and all necessary spare parts for machines that are older than 25 or 30 are also generally available.

SERVICE

The AMADA service rounds off the sawing technology portfolio. Our service technicians have longstanding experience and problem-solving expertise. We can provide fast solutions from several locations in Europe.

EXPERIENCE TECHNOLOGY LIVE



TECHNOLOGY

AMADA Machine Tools Europe – Technology

AMADA Machine Tools Europe considers itself as the partner for technical dialogue with customers and other interested persons. Get first-hand live experience of milling, sawing and grinding technology and discuss your requirements with specialists, work out ideas and obtain solutions.

The latest machines and measuring systems as well as corresponding accessories are all available in order to start working immediately on ideas and options and then put them to the test.

The Technical Center is available for individual customer visits as well as theme-related events with customers and suppliers. It is an active communication platform for exchange between users, suppliers and developers.

APPLICATION TECHNOLOGY

AMADA Machine Tools Europe – Application technology

AMADA MACHINE TOOLS EUROPE accompanies the customer during the entire decision-making process for investment. Job time calculations are made in our technical center and the results of the process analysis are discussed with the customer. Our own precision measurement room provides the opportunity to check the results immediately.

SERVICE

AMADA Machine Tools Europe – Service

AMADA MACHINE TOOLS EUROPE offers you a tailor-made service for the entire service life of your milling, sawing, and grinding machines.

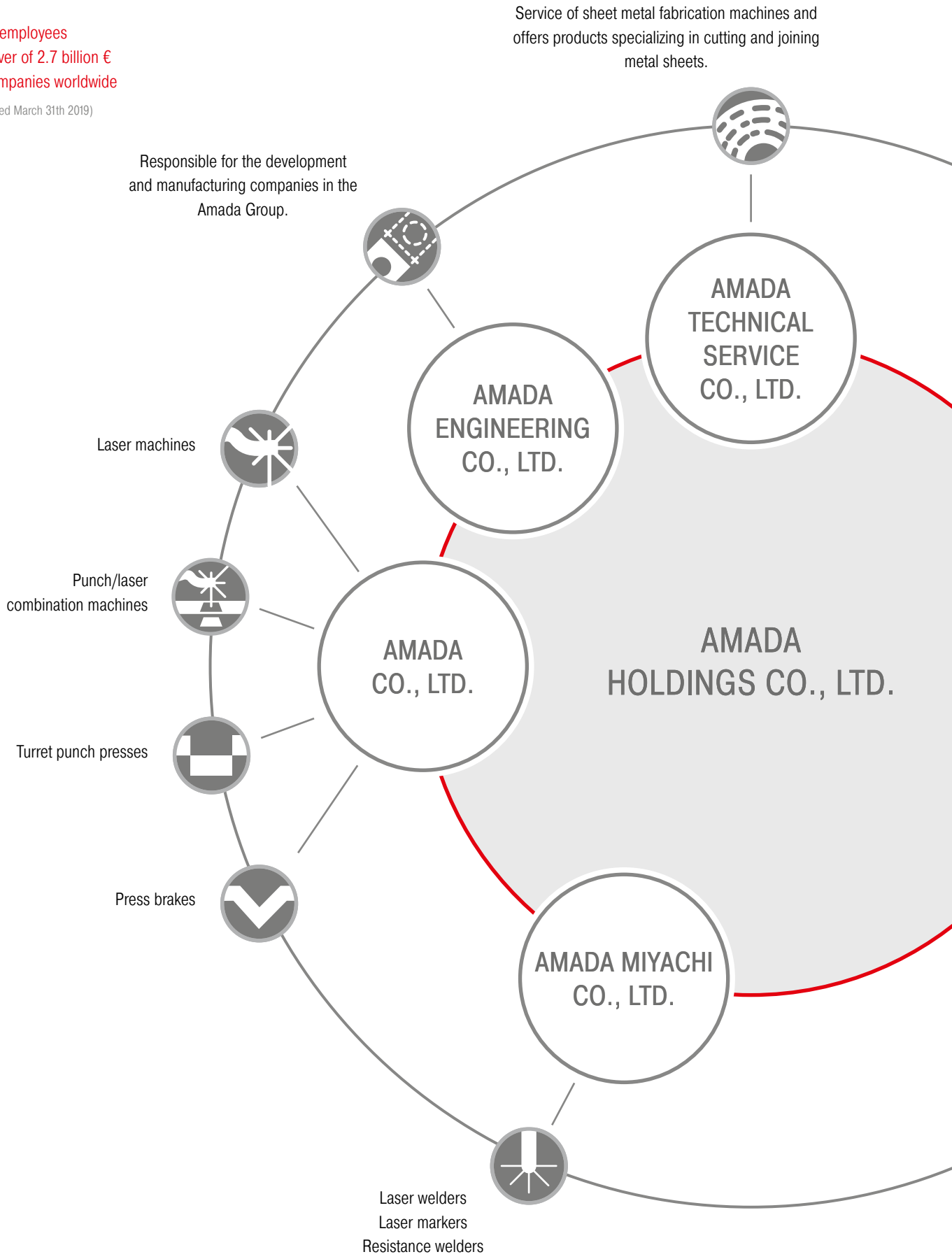
Our expert service staff are available to you for productive machine implementation.
Our comprehensive service network guarantees fast availability of engineers and reduces downtimes of your machine. Our modern warehouse guarantees the shortest delivery times.

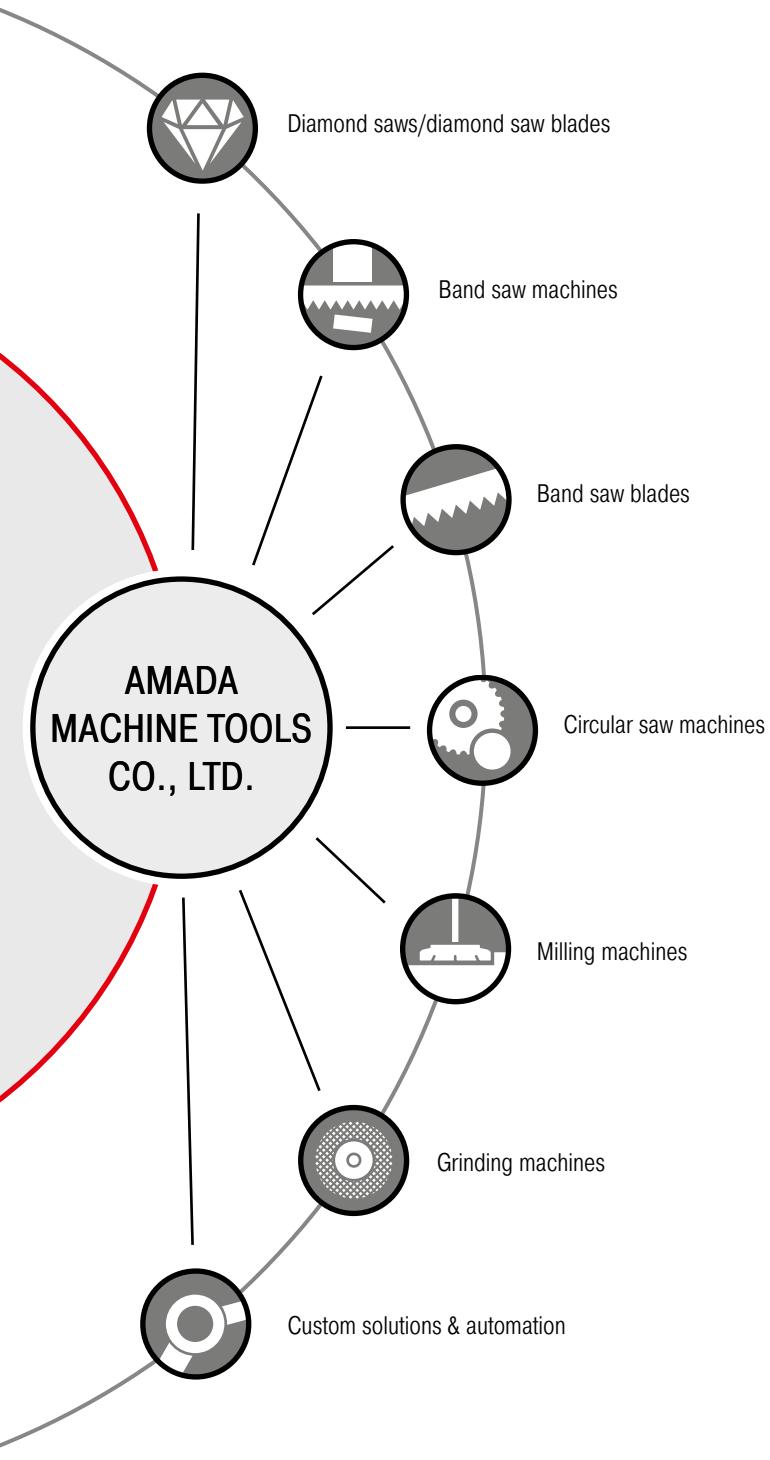
You achieve the highest reliability by using original spare parts from AMADA MACHINE TOOLS.

AMADA GROUP

- 9250 employees
- Turnover of 2.7 billion €
- 91 companies worldwide

(Last updated March 31th 2019)





AMADA MACHINE TOOLS EUROPE

SAWING TECHNOLOGY

AMADA has the unique advantage of producing both band saw machines as well as band saw blades. This advantage results in a continuous development of new and optimized products. The AMADA factory in Ternitz, Austria develop and produce bandsaw blades especially for the European market.

AMADA has also been offering special saws for cutting glass, silicon and ceramic materials and the necessary diamond-tipped saw blades from its own production since 2019.

MILLING TECHNOLOGY

The production advantages offered by AMADA milling technologies are utilized in the tool steel industry as well as in the manufacturing of all supply parts for the engineering, energy, transportation, automotive, aerospace sectors. AMADA offers productive twin-headed milling machines for high-precise machining of plate material and big size milling head machines, allowing plates with big width and length to be milled in one or few passes.

GRINDING TECHNOLOGY

AMADA is one of the market leaders for optical profile grinding and high precision surface and profile grinding. With the combination of the extensive technologies from Wasino, Petewe, Doebeli and Profiltec all under the ownership of AMADA, we will lead profile grinding into new dimensions.

AMADA MACHINE TOOLS EUROPE

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The cutting performance data in this catalogue is affected by machine condition, material, tooling and cutting conditions. Technical changes reserved.

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