



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 75 Years for Economic Efficiency and **High Performance**

The AMADA Group with more than 8800 employees* and approx. 2.38 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 300 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 info@amada-machinery.com.

* Status 09/2021











- Carbide Saw Blade AXCELA BOOSTER G
- Bimetal Saw Blade PROTECTOR G
- New coating center in Ternitz

2019

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

2017

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

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

- 29230200 CTB 400 – First Fully Automatic Carbide CNC Machine
- SIGMA Bimetal Saw Blade

- 1956 AM C 225
- 1965 1962 RH 300 Carbon Steel Saw Blades
- 1971 Carbide Saw Blades

1968

- Bimetal Saw Blades
 - AXCELA H AXCELA G



AXCELA

1.8/25









AMADA Austria GmbH - Ternitz

AMADA Austria GmbH - Ternitz

Online process control during saw blade manufacture



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.



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.



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

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

12-13 AXCELA BOOSTER G

coated set carbide band saw blade for high-performance on standard saws

UNCOATED CARBIDE SAW BLADES

AXCELA H Series

- 14-15 AXCELA H
 - hard-to-cut materials, especially non-ferrous metals and special alloys

14-15 AXCELA H-AP

hard-to-cut materials with tendency to jam

16-17 AXCELA HMAX

area of use: piston rods, induction-hardened materials

AXCELA A Series

18-19 AXCELA A

- particularly suitable for cast aluminium and high blade speeds, automotive applications

20-21 AXCELA ALB

 high-performance tool for sawing aluminium sheets with very high blade speed and cutting performance

AXCELA STRIKER® Series

22-23 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

24-25 AXCELA S

- universal tool for steel and cast iron on modern CNC machines, good results even with non-ferrous metals
- SMARTCUT version available (41 x 0.9 mm)

AXCELA B Series

26-27 AXCELA B

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

28-29 AXCELA BOOSTER

set carbide band saw blade for high-performance on standard saws

Coated Carbide Saw Blade

AXCELA HP/HP1



AXCELA HP/HP1



Microphase

EXCOAT-DP Coating

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

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



| | | | | | 6 |
|---|--|--|---|---|----|
| B2 tooth pattern | | | B3 tooth pattern | | |
| | | | | | |
| | | | | Construction steel | S |
| | | | | Heat-treated steel | Q |
| | | | | Cold-worked steel | |
| | | ΜΔΠΔ ΔΧΩΕΙ Δ ΗΡ/ΗΡ1 | 1 | Hot-working steel | |
| Application | materials – A | | | | |
| Application Recommend | materials – A ded | Suitable | Limited suitability* | Hot-working steel | S |
| Application Recommend Construction hard-treated s stainless stee cast steel, aluminium all | materials – A ded n steel [*] , steel, sl, | Suitable Cold-worked steel, hot-working steel | Limited suitability* Nickel alloys, titanium alloys, copper alloys | Stainless steel Cast steel | 30 |
| Application Recommence Construction hard-treated s stainless stee cast steel, aluminium alle * Note: Mainly | materials – A ded n steel*, steel, el, oys for use with HF | Suitable Cold-worked steel, hot-working steel P1 mild steel version. | Limited suitability* Nickel alloys, titanium alloys, copper alloys | Stainless steel Cast steel | 30 |
| Application Recommend Construction hard-treated s stainless steel cast steel, aluminium allu * Note: Mainly Selection of | materials – A ded n steel*, steel, el, oys for use with HF | Suitable Cold-worked steel, hot-working steel P1 mild steel version. ch – AMADA AXCELA H | Limited suitability* Nickel alloys, titanium alloys, copper alloys | Stainless steel Cast steel | 30 |
| Application Recommend Construction hard-treated s stainless steel aluminium allow * Note: Mainly Selection of Height | materials – A ded n steel*, steel, el, oys for use with HF f the tooth pit Thickness | Suitable Cold-worked steel, hot-working steel P1 mild steel version. ch – AMADA AXCELA H 1,4/1,6 B3 | Limited suitability* Nickel alloys, titanium alloys, copper alloys IP/HP1 1,8/2 B2 | Stainless steel Cast steel | 30 |
| Application Recommend Construction hard-treated s stainless steel cast steel, aluminium allow * Note: Mainly Selection of Height 67 | materials – A ded n steel*, steel, el, oys for use with HF f the tooth pit Thickness 1.6 | Suitable Cold-worked steel, hot-working steel 21 mild steel version. ch – AMADA AXCELA H 1,4/1,6 B3 | Limited suitability* Nickel alloys, titanium alloys, copper alloys IP/HP1 1,8/2 B2 ● | Stainless steel Cast steel | |
| Application Recommend Construction hard-treated s stainless steel cast steel, aluminium allu * Note: Mainly Selection of Height 67 B2 = 2-piece t | materials – A ded n steel*, steel, el, oys for use with HF f the tooth pit Thickness 1.6 tooth group, B3 | Suitable Cold-worked steel, hot-working steel 21 mild steel version. ch – AMADA AXCELA H 1,4/1,6 B3 • B3 = 3-piece tooth group | Limited suitability* Nickel alloys, titanium alloys, copper alloys copper alloys IP/HP1 1,8/2 B2 • | Stainless steel Cast steel Aluminium alloys Nickel alloys | |
| Application Recommend Construction hard-treated s stainless steel cast steel, aluminium allut * Note: Mainly Selection of Height 67 B2 = 2-piece t | materials – A ded n steel*, steel, pl, oys for use with HF f the tooth pit Thickness 1.6 tooth group, BS | Suitable Cold-worked steel, hot-working steel P1 mild steel version. ch – AMADA AXCELA H 1,4/1,6 B3 e 3 = 3-piece tooth group | Limited suitability* Nickel alloys, titanium alloys, copper alloys IP/HP1 1,8/2 B2 ● | Stainless steel Cast steel Aluminium alloys Nickel alloys Titanium alloys | |

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

Coated Carbide Saw Blade

AXCELA G





Maximum performance in conjunction with the AMADA PCSAW series



EXCOAT-DP Coating



Microphase

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.

Properties

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

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







B2 tooth pattern

B3 tooth pattern



Application materials - AMADA AXCELA G

| Recommended | Suitable | Limited suitability* |
|--|---------------------|----------------------|
| Construction steel, hard-treated steel, | High heat-resisting | Ball-bearing steel, |
| cold-worked steel, hot-working steel, | steel | aluminium alloys |
| stainless steel, cast steel, high-speed steel, | | |
| nickel alloys, titanium alloys, copper 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 | 2/3 B2 | 3/4 B2 |
|--------|-----------|----------------------|----------------------|--------------------|------------------|------------------|
| 34 | 1.1 | | | | • | |
| 41 | 0.9 | | | • | | |
| 41 | 1.3 | | | • | • | • |
| 54 | 1.6 | • | • | • | | |
| 67 | 1.6 | • | • | • | | |
| 80 | 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 | • |

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



Coated Carbide Saw Blade

AXCELA STRIKER® G



AXCELA STRIKER® G



TiAIN high-performance coating

Robust unset coated carbide band saw blade for various application fields.

AXCELA STRIKER[®] G is the coated version of AXCELA STRIKER[®]. The extra coating reduces surface friction and enhances heat and wear resistance, resulting in fast and extended cutting performance. It is also able to substitute competing products without changing pre-installed cutting parameters on non-AMADA band sawing machines.

Properties

- coated carbide saw blade
- sectional cut channel
- robust cutting geometry
- for production machines
- extended tooth group sequence ensures a smooth and quiet cutting operation

- unique tooth design does prevent pinching of the blade during cutting process
- high cutting performance in wide application areas
- fewer cutting forces leads to longer lifetime of the blade
- coating reduces surface friction and guarantees an increased service life





Coated Carbide Saw Blade

AXCELA BOOSTER G



AXCELA BOOSTER G



TiN coating



Microphase

Coated carbide band saw blade with set tooth design for high-performance on standard saws. This innovative design allows to operate this carbide blade on conventional band machines without carbide option.

Properties

- set tooth design
- microphase
- improved clearance for better chip removal

- suitable to be used also on conventional machines
- shorter chips for optimized chip removal
- reduced risk of tooth strippage and breakages
- high cutting performance







Double V4 tooth pattern



Application materials - AMADA AXCELA BOOSTER G

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

Toothing selection – AMADA AXCELA BOOSTER G

For best results AMADA suggests following tooth pitches when using the AXCELA BOOSTER G. In case of doubt, a finer tooth pitch should be selected. See table in below (material thickness/diameter in mm).



Line-up – AMADA AXCELA BOOSTER G

| Height | Thickness | 0.9/1.1 V4 | 1.4/1.6 V4 | 1.8/2 V4 | 2/3 V4 |
|--------|-----------|----------------------|----------------------|--------------------|------------------|
| 41 | 1.3 | | | • | • |
| 54 | 1.6 | | • | • | • |
| 67 | 1.6 | • | • | | |
| 80 | 1.6 | • | | | |

| Construction steel | St |
|--------------------|----------|
| Heat-treated steel | QT |
| Cold-worked steel | ~ |
| Hot-working steel | م م |
| | |



Stainless steel



AI

Aluminium alloys

Copper alloys

Cu

Carbide Saw Blade

AXCELA H / H-AP



AXCELA H / H-AP



Maximum performance in conjunction with the AMADA PCSAW series



Uncoated

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

- 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 non-ferrous materials such as Ti, Ni, Zr etc.





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

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

AXCELA HMAX



AXCELA HMAX



Uncoated



Negative rake angle

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

Properties

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

- Iong service life with induction-hardened or chromium plated steels
- smooth-running cutting behaviour with good surface





B3 tooth pattern

Application materials – AMADA AXCELA HMAX

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

Selection of the tooth pitch – AMADA AXCELA HMAX delivery forms

| Height | Thickness | 2/3 B3 | 3/4 B3 |
|--------|-----------|------------------|------------------|
| 34 | 1.1 | • | • |
| 41 | 1.3 | • | • |
| 54 | 1.3 | | • |
| 54 | 1.6 | • | |

B3 = 3-piece tooth group

Recommended run-in surface: -

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

Construction steelStHeat-treated steelImage: Construction steelImage: Construction steelCold-worked steelImage: Construction steelImage: Construction steelHot-working steelImage: Construction steelImage: Construction steelStainless steelImage: Construction steelImage: Construction steelHigh-speed steelImage: Construction steelImage: Construction steelHigh-speed steelImage: Construction steelImage: Construction steelHigh heat-resisting steelImage: Construction steelImage: Construction steelAluminium alloysImage: Construction steelImage: Construction steelNickel alloysImage: Construction steelImage: Construction steelStainless steelImage: Construction steelImage: Construction steelStainless steelImage: Construction steelImage: Construction steelStainless steelImage: Construction steelImage: Construction steelHigh steelImage: Construction steelImage: Construction steelSteelImage: Construction steelImage: Construction steelHigh steelImage: Construction steelImage: Construction steelSteelImage: Construction steelImage: Construction steel<

Copper alloys

Carbide Saw Blade

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

- Iong 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

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 | • | • | | • | | |

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

Aluminium alloys

Recommended run-in time: 15 min

Carbide Saw Blade

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
- conceived for use at blade speeds of 2000 m/min and higher

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

| 0.0- 0.0- 0.0- | Jenn Jama | | | | | |
|----------------------|-----------------------|----------------------|-----------------------|----------------|----------------|--------|
| | Low vibration running |) | V8 tooth group design | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Application r | materials – AMADA | AXCELA ALB | | | |
| | Recommend | ed | Suitable | | | |
| | Standard alum | linium alloys | Cublocks | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Selection of | the tooth pitch - AN | MADA AXCELA ALB d | lelivery forms | | |
| | Hoight | Thicknoss | 0.5/0.8 | 0.9/1.1 | | |
| | Teight | THICKIESS | V8 | V8 | | |
| | 54 | 1.6 | • | • | | |
| | 67 | 1.6 | | • | | |
| | 80 | 1.0 | • | • | | |
| | V8 = 8-piece to | both group | | | Aluminium alle | oys AI |
| | | | | | | |
| | | | | | | |
| | - | | • | | | |
| | Recommend | ed run-in surface: 1 | U m² | | | |
| | | | | | Copper allo | oys Cu |
| | | | | | | |

Carbide Tipped Saw Blade

AXCELA STRIKER®

Uncoated

Comment

This product is also available in a coated version for difficult applications and higher performance.

The product name is then AXCELA STRIKER® G.

AXCELA STRIKER®

Robust carbide bandsaw blade for general applications.

A variant of the proven AXCELA S designed to substitute competing products without changing pre-installed cutting parameters on non-AMADA band sawing machines.

Properties

- uncoated carbide tipped saw blade
- sectional cut channel
- robust cutting geometry
- for production machines
- extended tooth group sequence ensures a smooth and quiet cutting operation

Advantages

- unique tooth design does prevent pinching of the blade during cutting process
- high cutting performance in wide application areas
- fewer 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, fine-tuning between tool and material can raise the saw performance even more.

Carbide Saw Blade

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.

Carbide Saw Blade

AXCELA B

AXCELA B

Uncoated

Robust carbide saw blade for variable application fields for standard machines without dedicated carbide package, which does usually consist in additional motor power, a sophisticated cutting parameter control and a workpiece separation after the cut, to guarantee a contact free uplift of the blade to starting position.

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 non-ferrous 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 | 1 | | | | | 1 | V4 tooth patte | em | | | | | |
|--------------------------|-----------------------|----------------------|----------------------|-----------------------------|----------------------|--------------------|---------------------|------------------|--|----------|--------------------|----------|--|
| | | | | | | | | | | Co | onstruction steel | St QT | |
| | | | | | | | | | | Co | old-worked steel | ~ | |
| Annlicati | n mətəri | ials – AN | | FLAR | | | | | | | | | |
| Recomme | anded | iais – Aiv | Suitable | | | Limited a | suitability | * | | Н | ot-working steel | 5 | |
| Hard-treat | ed steel. | | Construct | ion steel. | | High heat | eat-resisting steel | | | | | | |
| cold-worke | ed steel, | | boundary | layer-hard | ened | ball-beari | ng steel, | , | | | Stainless steel | 304 | |
| hot-workin | ig steel, | ata al | material, | plated pic | ton rada | nickel allo |)ys, | | | | | | |
| high-speed | d steel. | sieei, | chromium | chromium-plated piston rods | | | titanium alloys | | | | Cast steel | | |
| aluminium copper alle | alloys, oys | | | | | | | | | ŀ | ligh-speed steel | HSS | |
| Selection | n of the to | ooth pitc | h – AMAD | A AXCEL | A B deliv | very forms | S | | | High hea | at-resisting steel | | |
| 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 | | B | all-bearing steel | | |
| 27 | 0.9 | | | | | | | • | | | | | |
| 34 | 1.1 | | | | | | • | • | | Δ | luminium allove | ΔΙ | |
| 41 | 0.9 | | | | | • | | | | - | aanninun anvys | | |
| 41 | 1.3 | | | • | • | • | • | • | | | Nickel alloys | Ni | |
| 54 | 1.6 | | | • | • | • | • | | | | | | |
| 67 | 1.6 | • | • | • | • | | | | | | Titanium alloys | | |
| 80 | 1.6 | • | | | | | | | | | Conner allove | Cu | |
| V3 = 3 toot | h pattern, | V4 = 4 to | oth pattern | | | | | | | | Sopper anoys | Cu | |
| For sawing the 4-piece | machines tooth gro | from corr up | petitors wit | th stored n | naterial da | ita, we reco | ommend t | he use of | | | | | |

Recommended run-in surface: 0.3 m²

Carbide Tipped Saw Blade

AXCELA BOOSTER

AXCELA BOOSTER

Uncoated

Microphase

Set carbide band saw blade for high-performance on standard saws. This innovative design allows to operate this carbide blade on conventional band machines without carbide option.

Properties

- set tooth design
- microphase
- improved clearance for better chip removal

- suitable to be used also on conventional machines
- shorter chips for optimized chip removal
- reduced risk of tooth strippage and breakages
- high cutting performance

Double V4 tooth pattern

Application materials - AMADA AXCELA BOOSTER

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

Toothing selection – AMADA AXCELA BOOSTER

For best results AMADA suggests following tooth pitches when using the AXCELA BOOSTER. In case of doubt, a finer tooth pitch should be selected. (material thickness/diameter in mm)

Line-up – AMADA AXCELA BOOSTER

| Height | Thickness | 0.9/1.1 V4 | 1.4/1.6 V4 | 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 | • | | | | |

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

AI

СП

Aluminium alloys

Copper alloys

AMADA SAW BLADES

BIMETAL SAW BLADES

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

32-33 AURORA

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

34-35 PROTECTOR G

- TiAlN coating (HV2300)
- highest resistance to wear
- for high-performance cutting of tubes and profiles

36-37 MAGNUM HL

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

38-39 MAGNUM HLG

- 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)

40-41 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)

42-43 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

44-45 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)

46-47 HI-LO

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

48-49 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

50-51 SGLB

- robust universal saw blade for almost all material types and material sizes
- suitable for single and bundle cutting
- materials up to 1200 N/mm², also non-ferrous metals and plastics
- SMARTCUT version available (41 x 0.9 mm)

52-53 DUOS M42

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

54-55 PROTECTOR M42

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

56-57 GLB CONTOUR

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

Coated bimetal band saw blade

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

- 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

PROTECTOR G

Patented protector design

Structure

TiAIN coating

PROTECTOR G

Coated bimetal bandsaw blade for high performance cutting at tubes and profiles. High resistance to tooth breakage and high efficiency when sawing different materials. The extreme strength of the tooth spacers prevents tooth overload.

Properties

- special TiAIN coating for higher production rates and extended blade life
- extremely robust improved tooth geometry, especially for sawing pipes and profiles
- particularly high resistive strength against tooth breakage
- vibration-absorbing special pitch (patented)
- improved

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

Selection of the tooth pitch – AMADA PROTECTOR G delivery forms

| Height | Thickness | 2/3 | 2/3 WS | 3/4 | 3/4WS |
|--------|-----------|-----|--------|-----|-------|
| 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.

Aluminium alloys

Bimetal saw blade

MAGNUM HL

MAGNUM HL

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)

- higher resistance to wear compared to conventional M42 saw blades thanks to M71 tooth tip material
- reduction of the cutting resistance
- Ionger 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




MAGNUM HLG



MAGNUM HLG



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:







Recommended run-in surface: 0.1 m²

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)

- 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





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

- 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





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)

- 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







Application materials - AMADA Super HLG

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

Selection of the tooth pitch - AMADA 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 | 0.9 | | | | | • | |
| 41 | 1.3 | | | • | • | • | • |
| 54 | 1.3 | | | • | • | | |
| 54 | 1.6 | | | • | • | | |
| 67 | 1.6 | | | • | • | | |
| 80 | 1.6 | • | | | | | |

Recommended run-in surface: 0.1 m²



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

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 m²

High heat-resisting steel

Cold-worked steel

Hot-working steel

Stainless steel

304

°C

ΑΙ

Ti

Nickel alloys Ni

Titanium alloys

Copper alloys

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

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







Application materials - AMADA Super8

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

r8

Selection of the tooth pitch - AMADA Super8 delivery forms

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

Aluminium alloys

Copper alloys

oys Cu

Recommended run-in surface: 0.1 m²

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

SGLB



SGLB





Structure image of the tooth tip material (M42 HSS)

Comment

A small number of standard toothing with straight tooth number is also available. Ask your sales representative. 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/mm², also non-ferrous metals and plastics
- wide product range

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









Application materials - AMADA SGLB

| Recommended | Suitable | Limited suitability* |
|--------------------|---------------------|----------------------|
| Construction steel | Heat-treated steel, | Stainless steel |
| | cold-worked steel, | |
| | heat-treated steel, | |
| | cast 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 m²



* 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

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







Application materials - AMADA DUOS M42

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

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



Ball-bearing steel

* 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 and profiles OPTIMIZED
- particularly high resistive strength against tooth breakage
- vibration-absorbing special pitch (patented) OPTIMIZED
- improved smoothness OPTIMIZED

Advantages

- good 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

Comment

This product is also available in a coated version for difficult applications and higher performance. The product name is then AMADA PROTECTOR G.



ΑΙ

Aluminium alloys



| 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 | | | | | ٠ | • | • | | |
| 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.

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.



Application materials - AMADA GLB Contour

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

| Height | Thickness | 4 | 6 | 8 | 10 | 12 | 14 | 18 |
|--------|-----------|---|---|---|----|----|----|----|
| 0 | 0.65 | | | | | | • | • |
| 3 | 0.90 | | | | | | • | |
| Λ | 0.65 | | | | | | • | • |
| 4 | 0.90 | • | • | • | • | • | • | |
| Б | 0.65 | | | | | • | ٠ | • |
| 5 | 0.90 | | | | • | • | ٠ | |
| 6 | 0.65 | | | | • | • | • | • |
| 0 | 0.90 | • | • | • | • | • | • | |
| 0 | 0.65 | | | | • | • | • | • |
| 0 | 0.90 | ٠ | • | • | • | • | ٠ | |
| 10 | 0.65 | | • | • | • | • | • | • |
| 10 | 0.90 | • | • | • | • | • | • | |
| 12 | 0.65 | | | | | | • | • |
| ıð | 0.90 | • | • | • | • | • | • | |

Selection of the tooth pitch – AMADA GLB Contour delivery forms



Aluminium alloys

ΑΙ

Cu

Copper alloys

SELECTION HELP AMADA SAWING TOOLS

| | ſ | DIN | E | N | ws | TNR | J | S | 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 | C 10 C 45 C 60 | 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 01 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 | X10CrAI7 X12CrNi 23-13 X15CrNiSi 25-20 | CrNi 25-20 X8CrNiTi 18-10 X20CrMoV 2-11 | X10CrAI7 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 TI 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 AIBC3 | 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) | | ion des I) | Bim (s | Bimetal saw blades (solid material) | |
|--|---|--|---|---|-------------------------------|-------------------------------------|--|---|-------------------------------|---------------------|--|------------------|
| AFN | DR | U | NI | GOST | Ot desig | ther nations | тор | Alternative 1 | Alternative 2 | тор | 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 BOOSTER | Magnum HLG | Super HLG | Super8 |
| XC10 XC45 XC60 | 34CD4 42CD4 50CV4 | C 10 C45 C60 | 35CrMo4 42CrMo4 50CrV4 | Сталь 20, 45, 55, 40X, 40XMH, 38XMA, 65Г, 30XГСА | | | AXCELA G | AXCELA STRIKER® G AXCELA STRIKER® AXCELA HMAX | AXCELA S AXCELA BOOSTER | Magnum HLG | Super HLG | Super8 |
| Z200Cr13 Z160CDV12 Z210CW12-01 | 55NCDV7 90MWCV5 Y100C6 | X205Cr12KU X155CrVMo121KU X215CrW121KU | 95MnWCr5KU | X12МФ, 5ХНМ, 6XB2C, У8, У10, 5XBГ | | | AXCELA G | AXCELA STRIKER® G AXCELA STRIKER® | AXCELA S AXCELA BOOSTER | 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 BOOSTER | 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 | 12X18H10T, 12X17H9M2T, 08X18H10, 20X13, 40X13, 95X18 | V2A V4A INOX | | AXCELA G | AXCELA STRIKER® G AXCELA STRIKER® AXCELA H | AXCELA S AXCELA BOOSTER | Aurora Magnum HL | SIGMA | Super HL |
| Ft 15 D Ft 30 D FGS 400-12 | | G 15 G 30 | GS 700-2 | CH 15, CH30, BH40 | M2 M42 | | AXCELA G | AXCELA STRIKER® G AXCELA STRIKER® | AXCELA S AXCELA BOOSTER | Super HLG | Super8 | SGLB |
| Z85WDCV06 05-04-02 | | | | P6M5, P2M10, P12Ф4, P6M5K5, P18 | | | AXCELA G | AXCELA STRIKER® G AXCELA STRIKER® | AXCELA S AXCELA BOOSTER | Magnum HLG | Super HLG | Magnum HL |
| Z8CA7 Z15CNS 25-20 | | | | XH35BTЮ, 08X23H13 | | | AXCELA H | AXCELA STRIKER® G AXCELA STRIKER® | AXCELA S AXCELA BOOSTER | 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 BOOSTER | Magnum HLG | Super HLG | |
| A-5 A-U5PbBi A-M1 | A-Z5G A-Z4GU A-SGPb | P-AIP99,5 P-AICu5.5PbBi P-AIMn1.2Mg | 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 | Т50 | | | BT1, BT3, BT6, BT20, OT4 | | | AXCELA G | AXCELA H AXCELA TG | AXCELA S AXCELA BOOSTER | Aurora | Magnum HL | Sigma |
| CuZn40Pb3 Cu-b1 | CuSn 12Sb CuNi 10Fe 1Mn CuAl 10Fe 5Ni 5 | 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 BOOSTER | Magnum HL | Sigma | Super8 |

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

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

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.

| | | Maximum cutting width | | | | | | | | | | | | |
|----------|---|-----------------------|----|----|-------|-----|----|-------|----|-----|---------|-----|-----------|---------|
| | Motorial | | 50 | 1(| 00 | 150 | 20 |)0 2 | 50 | 300 | 400 | 500 | 700 | 1000 |
| | Waterial | [inch] | 2" | 4 | ." | 6" | 8 | " 1 | 0" | 12" | 16" | 20" | 28" | 40" |
| | Rolled profiles | 6/10 Z 6 5/7 Z | 8 | | | | | | | | | | | |
| | Profiled steel, bundled pipes | | | 4/ | 6 Z | | | | | | | | | |
| | Bundled with small diameter, normal steel | | | | | | | | | | | | | |
| Solid | Cold-worked steel, case-hardened steel | | | | 3/4 Z | | | 2/3 Z | | | 1.5/2 Z | | 1.1/1.5 Z | |
| material | Hot-working steel, stainless steel | | | | | | | | | | | | | 0.7/1 Z |
| | Extremely heat-resistant special alloys | | | | | | | | | | | | | |

* The proposals refer to bimetal saw blades. Please note the different specifications in individual product descriptions.

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.
- The proposals refer to bimetal saw blades.

| | Material dimensions [mm] Area [cm ²] | 100 79 | 200 314 | 300 707 | 400 1256 | 500 1963 | 700 3847 | 1000 7850 |
|------------------------|---|-----------|------------|------------|-------------|-------------|-------------|--------------|
| Normal atool | Blade speed [m/min] | 48 - 75 | 48 – 75 | 48 – 75 | 43 – 65 | 39 – 58 | 34 - 51 | 30 - 44 |
| Normal Steel | Cutting rate [cm ² /min] | 36 - 54 | 72 – 108 | 72 – 108 | 60 – 91 | 49 – 73 | 37 – 56 | 26 - 38 |
| Cold working stool | Blade speed [m/min] | 28 – 42 | 28 – 42 | 28 – 42 | 25 – 38 | 23 - 34 | 20 - 30 | 18 – 26 |
| Cold working steel | Cutting rate [cm ² /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 |
| Case-narueneu steer | Cutting rate [cm ² /min] | 28 - 42 | 56 - 84 | 56 - 84 | 47 - 71 | 39 – 58 | 30 - 45 | 22 – 32 |
| Hat forming tool stool | Blade speed [m/min] | 24 – 36 | 24 – 36 | 22 – 32 | 19 – 29 | 17 – 26 | 17 – 26 | 17 – 26 |
| Hot forming tool steel | Cutting rate [cm ² /min] | 8 – 15 | 16 – 30 | 14 – 27 | 14 – 27 | 13 – 24 | 13 – 24 | 13 – 24 |
| Stainlass staal | Blade speed [m/min] | 40 - 60 | 40 - 60 | 40 - 60 | 35 - 53 | 31 – 46 | 26 - 39 | 22 – 32 |
| Stanness steer | Cutting rate [cm ² /min] | 20 - 30 | 40 - 60 | 40 - 60 | 34 – 52 | 29 – 43 | 23 – 35 | 18 – 26 |
| High heat-resistant | Blade speed [m/min] | 10 – 20 | 10 – 25 | 10 – 25 | 10 – 25 | 10 – 25 | 10 – 20 | 10 – 15 |
| special alloys | Cutting rate [cm ² /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 cm^2/min . To reach the target cutting performance, calculate according to the following formula and set the feed.

Cutting time (minutes) = <u>material surface (cm²)</u> cutting performance (cm²/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 at least 300 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 - 15% 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 | • | ٠ | • | • | • | • | • |

* 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.



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.



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] |
|------|--------------------------------------|------|---|------|----------------------------|------------------|------------------------|
| | | | | | | | |
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Following page

no

yes

REASON FOR CHANGING THE SAW BLADE

Crooked cuts

Blade breakage Other

Service life (if CNC controller) m²

Noise level

Tooth breakage

Deviation (if CNC contralateral)

Comments

DIGITAL OFFERINGS



DIGITAL BANDSAW BLADE SELECTOR

The selection of a suitable saw blade is made under consideration of many factors. Our experienced sales representatives in the office and in the field will be pleased to help you.

We have bundled all our joint experience in a digital tool which we make available online for all saw users.

- 365 days / 24h available
- Free of charge
- No registration necessary
- Reliable results by answering a few simple questions



Digital bandsaw blade selector https://blades.amada-mt.de



CALCULATE CUTTING COSTS ONLINE

The cost per saw cut is unknown to many users. Only the price of a saw blade is used as a benchmark. However, this leads to wrong estimations.

In order to realistically estimate the cost of a saw cut, AMADA has created this reliable online tool.

- 365 days / 24h available
- Free of charge
- No registration necessary
- Reliable results to estimate real costs per cut



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

AMADA PREMIUM LUBRICANTS



AMADAOIL® HL80

AMADA HLPMC 32

AMADA Super ABFM Plus

AMADA PREMIUM LUBRICANTS OVERVIEW

- AMADAOIL[®] HL 4 Low-residue stamping, cutting and shaping coolant with excellent lubricating properties.
- AMADAOIL[®] HL 47 Oil-mist and evaporation-poor metalworking oil based on a synthetic base oil with a special combination of additives.
- AMADAOIL® HL 48

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

AMADAOIL® HL80

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

AMADAOIL® HL95

High-viscosity universal stamping, cutting and shaping oil.

- AMADA HLPMC 32
 ISO VG 32 HC-based synthetic hydraulic oil with high and stable viscosity index.
- AMADA Super ABFM Plus Semi-synthetic, water-miscible high performance cooling fluid.

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 mm²/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

- Aluminium
- Non-ferrous metals
- Non-alloy and alloy steels (ST, V2A)
- Electrical 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



Technical data

| Colorlight yellowOdourcharacteristicsViscosity at 40 °C47 mm²/sDensity at 20 °C0.91 g/cm³Pour pointnot specifiedFlash point> 200 °CCopper corosion1-100A3 | Canister content | 5 liters |
|---|--------------------|------------------------|
| OdourcharacteristicsViscosity at 40 °C47 mm²/sDensity at 20 °C0.91 g/cm³Pour pointnot specifiedFlash point> 200 °CCopper corosion1-100A3 | Color | light yellow |
| Viscosity at 40 °C 47 mm²/s Density at 20 °C 0.91 g/cm³ Pour point not specified Flash point > 200 °C Copper corosion 1-100A3 | Odour | characteristics |
| Density at 20 °C0.91 g/cm³Pour pointnot specifiedFlash point> 200 °CCopper corosion1-100A3 | Viscosity at 40 °C | 47 mm²/s |
| Pour pointnot specifiedFlash point> 200 °CCopper corosion1-100A3 | Density at 20 °C | 0.91 g/cm ³ |
| Flash point > 200 °C Copper corosion 1-100A3 | Pour point | not specified |
| Copper corosion 1-100A3 | 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

AMADA Premium Lubricants

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

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® HL48



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 | light |
| Viscosity at 40 °C | 50 mm²/s |
| Density at 20 °C | 0.925 g/cm ³ |
| Pour point | < - 40 °C |
| 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 zinc
- Biodegrades quickly
- Safe from a toxicological standpoint

Product description

AMADAOIL[®] HL 48 is an oil-mist and low evaporation cutting oil based on a synthetic base oil with a special additive combination. It is temperature stable and has excellent pressure absorption and adhesion properties. The zinc-free additive ensures stain-free surfaces.

Applications

For machining operations such as sawing, milling, turning, drilling and threading.

Material

- Cobalt-chrome
- Titanium
- Titanium alloys
- High-alloy steels

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® HL80



Technical data

| Canister content | 5 liters |
|--------------------|------------------------|
| Color | yellow brown |
| Odour | characteristics |
| Viscosity at 40 °C | 76 mm²/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 standpoint

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.

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 (AI)
- 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.
AMADA Premium Lubricants

AMADAOIL® HL95



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 mm²/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 standpoint

Product description

 $\mbox{AMADAOIL}^{\circledast}$ 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 (AI)

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.

AMADA Premium Lubricants

AMADA HLPMC 32



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 mm²/s |
| Viscosity at 100 °C | 6.6 mm²/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.

AMADA Premium Lubricants

AMADA Super ABFM Plus



AMADA Premium Lubricants

Semi-synthetic, water-miscible high performance cooling fluid.

Properties

- Compatible with Amada sawing technology
- Universal for steel, aluminum, nonferrous 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% |



BAND SAWS MACHINES



HPSAW - "HYPERSAW" CNC HIGH-PERFORMANCE BAND SAW



| Extremly powerful Band Saw for section lengths till 600mm. | |
|--|--|
|--|--|

| Machine type | Control | Working an | r ea [mm] | Blade dimension [mm] | Drive [kW] |
|-----------------|---------|------------|------------------|----------------------|------------|
| HPSAW 310 🕅 🔺 | CNC | O 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 an | rea [mm] | Blade dimension [mm] | Drive [kW] |
|----------------|---------|------------|-----------------|----------------------|------------|
| PCSAW 330 | NC | O 330 | □ 330 × 330 | 41 x 0.9 x 4115 | 3.7 |
| PCSAW 430 X/AX | CNC | O 430 | □ 430 x 430 | 54 x 1.6 x 6100 | 11 |
| PCSAW 530 X/AX | CNC | O 530 | □ 530 x 530 | 67 x 1.6 x 7000 | 15 |
| PCSAW 720 🕰 | CNC | O 720 | □ 815 x 720 | 67 x 1.6 x 8300 | 11 |



AMADA ECO Product with particularly low energy consumption

AUTOMATED BAND SAWS

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





| Machine type | Control | Working an | r ea [mm] | Blade dimension [mm] | Drive [kW] |
|--------------|---------|------------|------------------|----------------------|------------|
| HA 250 W | NC | O 250 | □ 250 × 300 | 34 x 1.1 x 3505 | 3.7 |
| HFA 250 W | NC | O 250 | □ 260 x 250 | 34 x 1.1 x 3505 | 3.7 |
| HA 400 W | NC | O 420 | □ 415 x 415 | 41 x 1.3 x 4570 | 5.5 |
| HFA 400 W | NC | O 420 | □ 400 x 400 | 41 x 1.3 x 4570 | 5.5 |
| DYNASAW 430 | CNC | O 430 | □ 430 x 430 | 41 x 1.3 x 5300 | 5.5 |
| DYNASAW 530 | CNC | O 530 | □ 530 x 530 | 54 x 1.6 x 5920 | 7.5 |
| HFA 700 CII | NC | O 700 | □ 700 x 800 | 67 x 1.6 x 8300 | 11 |
| HFA 1000 CII | NC | O 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 a | rea [mm] | Blade dimension [mm] | Drive [kW] |
|--------------|---------|-----------|---------------|----------------------|------------|
| H 1000 II | NC | O 1000 | □ 1000 x 1100 | 80 x 1.6 x 11100 | 11 |
| H 1300 II | NC | O 1300 | □ 1300 x 1300 | 80 x 1.6 x 12300 | 15 |
| H 1600 II | NC | O 1600 | □ 1600 x 1600 | 80 x 1.6 x 15500 | 15 |
| H 2116 II | NC | O 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 SAWS



| Flexible mitre saw saws in space-saving design. | | | | | |
|---|-----------|-----------------------------------|------------------|------------------|------|
| Working area 90° | | Working area 45° Working area 60° | | Blade dimension | |
| Machine type | [mm] | [mm] | [mm] | [mm] | |
| VT 3850 A 381 x 508 | 201 v 500 | Left: 381 x 336 | Left: 381 x 203 | 24 y 1 1 y 4077 | 3.75 |
| | 301 X 300 | Right: 381 x 355 | Right: 381 x 235 | 34 X 1.1 X 4077 | |
| VT 4555 M | | | Left: 457 x 185 | 24 x 1 1 x 4674 | 2 75 |
| VT 4000 IVI | 457 X 558 | Right: 457 x 368 | Right: 457 x 246 | 04 X I. I X 40/4 | 3.75 |

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 | O 10 - 76.3 | □ 10 - 65 | 285 x Ø 32 x 2.0 | 7.5 (optional 11 kW) |
| CMII 100 DG | O 20 - 101.6 | □ 20 - 80 | 360 x Ø 50 x 2.6 | 11 |



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.

| Туре | Characteristics |
|--------------|---|
| TCB-CB | Carbide Teeth |
| 100-00 | Universal tool for use in changing material qualities |
| | Cermet Teeth |
| | Tool for non-alloyed steels and steels with a carbon content between 0.15 to 0.45 % |
| | Carbide Teeth + TiN coating |
| ICB-II/II II | 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 |
| | Carbide Teeth + TiN coating |
| ICB-1150 | Tool with particularly long service life with stainless steels |
| יו וח/וח | Carbide Teeth + special coating |
| ו וט/וע-סטו | Tool specially for tool steels |



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.





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 Machinery Europe is in a position to realize the exact solution tailored to your needs.



AMADA GROUP





Service of sheet metal fabrication machines and offers products specializing in cutting and joining metal sheets.





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.



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



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