

BAND SAW BLADE SERIES

Blade Pitch Selection

Blade pitch selection table by materials to be cut

Maximum cutting length		mm												
		50	100	150	200	250	300	400	500	700	1000			
Material to be cut		inches												
		2"	4"	6"	8"	10"	12"	16"	20"	28"	40"			
Roll formed section		6/10P 6/8P 5/7P												
Structural steel, Bundled tubes				4/6P										
Solid material	Bundled small diameter material, Mild steel			3/4P			2/3P	1.5/2P						
	Tool steel, Prehardened steel													
	Hot work die steel, Stainless steel													
	Super heat resisting alloy								1.1/1.5P				0.75/1P	

Note 1: When cutting profiles or structurals, it is desirable that at least 2 teeth are in contact with the material being cut at all times. This will prevent chipping and stripping of the teeth and eliminate premature blade failure.

Note 2: The above table based on "SGLB" should be used as a guide. Specific applicability vary somewhat depending on the characteristics of the blades. For example, 3/4P of "PROTECTOR" is capable of cutting materials in the range including 4/6P in the above table.

Select the blade which is best suited for the shape and quality of the material to be cut and the work requirements.

Roll formed section		Structural steel	Bundled small diameter material	Mild steel, Non-ferrous metal ^{*2}			Tool steel, Prehardened steel			Hot work die steel, Stainless steel			Super heat resisting alloy		
A36, 40, 45, 50, 55, 1008, 1012			1008, 1095, 5015, 4118, 4320				P-2, S-2, L-6, D-2			H-13, 304, 17-4PH			INCONEL, Ti-6L-4V		
Thin wall	C-shaped	Thick wall	~4"	Small ~4"	Medium 4~16"	Large 16"~	Small ~4"	Medium 4~16"	Large 16"~	Small ~4"	Medium 4~16"	Large 16"~	Small ~4"	Medium 4~16"	Large 16"~
Deck plate		H-beam													
Excluding non-ferrous metal															
Capable of cutting material with hardness of HRC40 (Hv400) or more															
SMARTCUT BAND SGLB															
SMARTCUT BAND MAGNUM HI-LO															
WS type: Rolled large size H-beam															

When a roll-formed large-size H-beam is cut, stress relieving may occur, pinching the blade.

In order to prevent damage to the blade, a "WS" (wide set) type is available for "PROTECTOR" and "MGLB".

Blade Type Selection

*1: The hardness of the tooth tip represents Amada's average value. It is adjusted to some extent according to the types and sizes of the products.

*2: Non-ferrous metals referred to on this chart are mainly aluminum, aluminum alloy, copper and copper alloy. These metals may be equivalent to hard-to-cut materials and even harder in some cases. When using a special alloy, consult AMADA first.

** The minimum requirement for cutting is that the tooth tip is harder than the material to be cut. In order to ensure economical cutting, however, the tooth tip should be a minimum of twice as hard as the material to be cut. This is a reference guide only.

Blade type	Edge material	Hardness of tooth tip (Hv)*1	Wear resistance		Features
			Chipping resistance		
<small>PATENT PENDING</small> AXCELA-G	Carbide + EX COAT DP	1600 + 2800	★★★★★ ★★★☆☆		High-quality carbide tips and and dove tail tooth shape. AXCELA makes incredible cutting speed for hard to cut materials.
BCTBR	Carbide	1600	★★★★★ ★★★☆☆		Highest grade carbide saw blades with a unique tooth geometry for the highest-cutting speeds and accuracies achievable only with AMADA's advanced technology.
CTB	Carbide	1600	★★★★★ ★☆☆☆☆		Carbide tooth tip for cutting extra hard materials that cannot be cut with conventional HSS bi-metal blades. Extended blade life in abrasive materials.
<small>PATENTED</small> AURORA	M42 + TiN	950 + 2300	★★★★★ ★★☆☆☆		High-quality "SIGMA" blade with TiN coating added for extended blade life in hard-to-cut materials.
MAGNUM HILO	AMADA M71 HSS	1000	★★★★★ ★☆☆☆☆		New, high performance edge material with specially designed set and tooth geometry. Applicable to hard to cut materials including super heat resisting alloy.
<small>PATENTED</small> HI-LO	M42 HSS	950	★★★★★ ★★☆☆☆		Special tooth design for faster cutting and longer blade life. For materials with work hardening characteristics.
<small>PATENTED</small> SUPER HI-LO	M42 HSS	950	★★★★★ ★★☆☆☆		Special set and tooth design reduces cutting resistance while maintaining penetration rates. For material of medium to large diameters with low machinability rates.
<small>PATENT PENDING</small> CHIP BREAKER	M42 HSS	950	★★★★★ ★★☆☆☆		Special tooth design reduces cutting resistance while maintaining penetration. Suitable for wide variety of steel types and sizes, from mild steels to hard-to-cut alloys.
SVGLB	M42 HSS	950	★★★★★ ★★☆☆☆		Suitable for wide variety of steel types and sizes, from mild steels to hard-to-cut alloys.
COBALT8	AMADA MODIFIED M42 HSS	930	★★★★★ ★★★☆☆		General purpose blade ideal for cutting mild steel and structural steel. "Chip-curler" Tooth shape and unique set pattern result in longer blade life.
SMARTCUT BAND	AMADA M71 HSS	1000	★★★★★ ★☆☆☆☆		Thinner blade of SGLV and MAGNUM HI-LO. Specialized blade for PCSAW330.
	M42 HSS	950	★★★★★ ★★☆☆☆		
<small>PATENT PENDING</small> PROTECTOR M42	M42 HSS	950	★★★★★ ★★★★★		Blade designed for the structural steel industry. The tooth geometry virtually eliminates tooth chipping plus the M-42 edge provides abrasive resistance for extended blade life.
<small>PATENT PENDING</small> PROTECTOR	Matrix HSS (M42 HSS)	900	★★★★★ ★★★☆☆		A special blade exclusively for structural steel and profiles, incorporates a unique chip resisting qualities.
MGLB		900	★★★★★ ★★★☆☆		Economical blade, applicable for small-size mild steel. General purpose applications.
<small>PATENT PENDING</small> DUOS		900	★★★★★ ★★★☆☆		For thin walled tubes to small size solids of mild steel.

Blade Line-Up

Line-up of AMADA's blades and development concepts

Triple-Chip Carbide

Carbide+EX Coat DP

AXCELA G

For general purpose
High-quality carbide tips.

Carbide Tipped Blade

Set Type Carbide

Carbide

CTB

For higher cutting speed, higher
accuracy and longer service life

HSS Bi-Metal Blades

Hard-to-Cut Material

AMADA M71

MAGNUM HI-LO

Improved cutting performance

HI-LO

M42

Improved for straighter cuts
in stainless steel, etc.

AURORA

M42+TiN

Improved in wear resistance
without reducing toughness

HSS Bi-Metal Blades

General Purpose

M42

CHIP BREAKER

Improved cutting performance

SVGLB

M42

Suitable for wide variety of steel
types and sizes. Mild steel to
hard-to-cut alloys.

Structural Steel

Matrix

PROTECTOR

The ultimate protection against
tooth chipping and stripping.
"WS" (wide set) available for
protection against pinching.

HSS Bi-Metal Blades

General Purpose

Matrix
M42

DUOS

Added features to prevent tooth
chipping in profiles and small solids

Amada Modified M42

COBALTS

General purpose blade ideal for
cutting mild steel and structural
steel.

MVGLB

Matrix
M42

Economical blade, small-size
mild steel.

AXCELA G series

MULTI FACETED CARBIDE TIPPED BLADE

MANUFACTURED BLADES

WIDTH	THICKNESS	1.4/1.6	1.8/2.0
1 1/2"	0.055		V
2"	0.063	V	V
2 5/8"	0.063	V	V

PRE-WELDED PURCHASED BLADES

BLADE	DESCRIPTION
ACL1.5-55-1.8-15.0	AXCELA 1 1/2 1.8/2.0 55 15' 0"
ACL1.5-55-1.8-15.6	AXCELA 1 1/2 1.8/2.0 55 15' 6"
ACL2.00-63-1.4-20.0	AXCELA 2 0/0 1.4/1.6 63 20' 0"
ACL2.00-63-1.8-20.0	AXCELA 2 0/0 1.8/2.0 63 20' 0"
ACL2.625-63-1.4-22.11	AXCELA 2 5/8 1.4/1.6 63 22' 11"
ACL2.625-63-1.8-22.11	AXCELA 2 5/8 1.8/2.0 63 22' 11"
ACL2.625-63-.9-27.3	AXCELA 2 5/8 .9/1.1 63 27' 3"
ACL2.625-63-1.4-27.3	AXCELA 2 5/8 1.4/1.6 63 27' 3"

P POSITIVE RAKE
 V VARIABLE POSITIVE RAKE
 MG 10 DEGREE POSITIVE RAKE
 S STANDARD TOOTH
 PR 7 DEGREE POSITIVE RAKE
 AG POSITIVE RAKE, LARGE GULLET SIZE
 WS WIDE SET
 MGG . . . 12 DEGREE POSITIVE GROUND TOOTH
 NS NARROW SET

BCTBR

MULTI FACETED CARBIDE TIPPED BLADE

WIDTH	THICKNESS	1.8/2.3
1 1/4"	0.042	●
1 1/2"	0.055	●
2"	0.063	●

CTB

CARBIDE TIPPED BAND SAW BLADES

WIDTH	THICKNESS	1.25	2	2.5	3	4	1.1/1.5
1 1/4"	0.055			P			
1 1/2"	0.055	P		P		P	
2"	0.063			P			
2 5/8"	0.063		P				

AURORA

TITANIUM NITRIDE COATED BI-METAL BLADES

WIDTH	THICKNESS	2/3	3/4
1 1/4"	0.042	V	V
1 1/2"	0.050	V	V

MAGNUM HI-LO

PATENTED VARYING TOOTH HEIGHT AND SET M-71 BLADE

WIDTH	THICKNESS	.75/1.1	1.1/1.5	2/3	3/4
1 1/4"	0.042			V	V
1 1/2"	0.050		V	V	V
2"	0.063		V	V	
2 5/8"	0.063		V		
3"	0.063	V	V		

HI-LO

VARYING TOOTH HEIGHT DESIGN, M-42 BI-METAL BLADE

WIDTH	THICKNESS	.75/1	1.1/1.5	2/3	3/4	4/6
1"	0.035			V	V	V
1 1/4"	0.042			V	V	V
1 1/2"	0.050		V	V	V	
2"	0.063	V	V	V		
2 5/8"	0.063	V	V			
3"	0.063	V	V			

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 WS WIDE SET
 MGG . . . 12 DEGREE POSITIVE GROUND TOOTH
 NS NARROW SET

CHIPBREAKER

PATENTED GULLET DESIGN FOR FASTER CUTTING

WIDTH	THICKNESS	.75/1.1	1.1/1.5	2/3	3/4	4/6
1"	0.035				V	
1 1/4"	0.042			V	V	V
1 1/2"	0.050		V	V	V	V
2"	0.063		V	V	V	V
2 5/8"	0.063	V	V	V	V	
3"	0.063		V			

SVGLB

VARIED PITCH M-42 BI-METAL BLADES

WIDTH	THICKNESS	.75/1.1	1.1/1.5	1.5/2	2/3	3/4	4/6	5/7	6/10	8/12
3/4"	0.035						PR			
1"	0.035				MG	MG	PR	PR	S	S
1 1/4"	0.042		AG		AG	MG	PR	PR	S	
1 1/2"	0.050		AG	AG	AG	WS/MG	PR	PR		
2"	0.063	AG	AG	AG	AG	MG	AG			
2 5/8"	0.063	AG	AG	AG	AG	MG	AG			
3"	0.063	AG	AG	AG						

COBALT8

AMADA MODIFIED M42 HIGH-SPEED STEEL BI METAL BLADES

WIDTH	THICKNESS	2/3	3/4	4/6	5/7
1"	0.035		V	V	V
1 1/4"	0.042		V	V	V
1 1/2"	0.050	V	V	V	
2"	0.063			V	

SMARTCUT BAND

THINNER BLADE OF SGLV AND MAGNUM HI-LO SPECIALIZED BLADE FOR PCSAW330

WIDTH	THICKNESS	1.1/1.5	2/3	3/4	4/6	
1 1/2"	0.035		V	V	V	SCB-SG
1 1/2"	0.042		V	V		SCB-MA

PROTECTOR M-42

EXCLUSIVE USE FOR STRUCTURAL STEEL WITH M-42 EDGE

WIDTH	THICKNESS	3/4	4/6
1"	0.035	V	V
1 1/4"	0.042	V	V
1 1/2"	0.050	V	V
2"	0.063	V	

PROTECTOR (M-30)

EXCLUSIVE USE FOR STRUCTURAL MATERIAL MATRIX BLADE

WIDTH	THICKNESS	2/3	3/4	4/6
3/4"	0.035			V
1"	0.035		V	V
1 1/4"	0.042		V	V
1 1/2"	0.050	V/WS	V/WS	V
2"	0.063	V/WS	V/WS	V
2 5/8"	0.063	V	V	V

MGLB -STRAIGHT PITCH

GENERAL PURPOSE STRAIGHT PITCH MATRIX BI-METAL BLADES

WIDTH	THICKNESS	4	6	10	14
1/4"	0.035			S	S
3/8"	0.035	S			
1/2"	0.035	S	S	S	S

MVGLB - VARIED PITCH

VARIED PITCH MATRIX BI-METAL BLADES

WIDTH	THICKNESS	.75/1.1	1.1/1.5	2/3	3/4	4/6	5/7	6/10	8/12	10/14
3/4"	0.035				V	V	V	V	V	V
1"	0.035				V	V	V	V	V	V
1 1/4"	0.042				V	V	V	V	V	
1 1/2"	0.050			V	V	V	V			
2"	0.063			V	V/WS	V				

DUOS

PATENTED BI-METAL FOR THIN WALL TO SOLID

WIDTH	THICKNESS	9/11
1/2"	0.025	V
	0.035	V
3/4"	0.035	V
1"	0.035	V
1 1/4"	0.042	V

P POSITIVE RAKE
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 AG POSITIVE RAKE, LARGE GULLET SIZE
 WS WIDE SET
 MGG . . . 12 DEGREE POSITIVE GROUND TOOTH
 NS NARROW SET

Blade Specifications

CIRCULAR SAW BLADE

CARBIDE TIPPED CIRCULAR BLADE

[New item name]	Replaces
TCB-CB	Tungsten carbide
TCB-CR	Cermet
TCB-TI	Tungsten carbide Tin coated
TCB-SU	Tungsten carbide for cutting stainless steels
TCB-PT	Tungsten carbide for cutting pipe & tube

[Current model name]

←	ST-3
←	TI-3
←	TA-3
←	TA-SUS
←	N/A

New package



* Package colors are different for other models.

CARBIDE

MODEL	BLADE TYPE	SIZE
CM 75	TCB-CB	285 X 2.0 X 60
	TCB-CB	285 X 2.0 X 80
CM 100	TCB-CB	360 X 2.25 X 60
	TCB-CB	360 X 2.25 X 80
	TCB-CB	360 X 2.25 X 100
CM 150	TCB-CB	460 X 2.7 X 40
	TCB-CB	460 X 2.7 X 60
	TCB-CB	460 X 2.7 X 80
	TCB-CB	460 X 2.7 X 100

CARBIDE FOR STAINLESS

MODEL	BLADE TYPE	SIZE
CM 75	TCB-SU	285 X 2.0 X 60
	TCB-SU	285 X 2.0 X 80
CM 100	TCB-SU	360 X 2.25 X 60
	TCB-SU	360 X 2.25 X 80
	TCB-SU	360 X 2.25 X 100
CM 150	TCB-SU	460 X 2.7 X 40
	TCB-SU	460 X 2.7 X 60
	TCB-SU	460 X 2.7 X 80
	TCB-SU	460 X 2.7 X 100

CERMET

MODEL	BLADE TYPE	SIZE
CM 75	TCB-CR	285 X 2.0 X 60
	TCB-CR	285 X 2.0 X 80
CM 100	TCB-CR	360 X 2.25 X 60
	TCB-CR	360 X 2.25 X 80
	TCB-CR	360 X 2.25 X 100
CM 150	TCB-CR	460 X 2.7 X 40
	TCB-CR	460 X 2.7 X 60
	TCB-CR	460 X 2.7 X 80
	TCB-CR	460 X 2.7 X 100

CARBIDE FOR PIPE & TUBE

MODEL	BLADE TYPE	SIZE
CM 75	TCB-PT	285 X 2.0 X 60
	TCB-PT	285 X 2.0 X 80
CM 100	TCB-PT	360 X 2.25 X 60
	TCB-PT	360 X 2.25 X 80
	TCB-PT	360 X 2.25 X 100
CM 150	TCB-PT	460 X 2.7 X 40
	TCB-PT	460 X 2.7 X 60
	TCB-PT	460 X 2.7 X 80
	TCB-PT	460 X 2.7 X 100

CARBIDE TIN COATED

MODEL	BLADE TYPE	SIZE
CM 75	TCB-TI	285 X 2.0 X 60
	TCB-TI	285 X 2.0 X 80
CM 100	TCB-TI	360 X 2.25 X 60
	TCB-TI	360 X 2.25 X 80
	TCB-TI	360 X 2.25 X 100
CM 150	TCB-TI	460 X 2.7 X 40
	TCB-TI	460 X 2.7 X 60
	TCB-TI	460 X 2.7 X 80
	TCB-TI	460 X 2.7 X 100

Specifications may change without notice at the sole discretion of Amada's Engineering Department.



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