INTERNATIONAL STANDARD ISO 4875/III

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Metal cutting band saw blades — Part III : Characteristics relating to each type of blade

Lames de scies à ruban à métaux —
Partie III : Caractéristiques des différents types de lames

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FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4875/III was developed by Technical Committee ISO/TC 29, *Small tools*, and was circulated to the member bodies in August 1976.

It has been approved by the member bodies of the following countries :

Australia	India	Spain
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The member bodies of the following countries expressed disapproval of the document on technical grounds :

Germany, F.R.
Poland
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Metal cutting band saw blades — Part III : Characteristics relating to each type of blade

1 SCOPE AND FIELD OF APPLICATION

This International Standard defines the various types of blades for metal cutting band saws as a function of the materials used for their manufacture and indicates the dimensions selected from those ranges defined in ISO 4875/II.

The recommended blade hardnesses, together with the test methods, are given in an annex.

The terminology of blades is dealt with in ISO 4875/I.

2 REFERENCES

ISO 4875/I, *Metal cutting band saw blades — Part I : Definitions and terminology.*

ISO 4875/II, *Metal cutting band saw blades — Part II : Basic dimensions and tolerances.*

3 TYPES OF METAL CUTTING BAND SAW BLADES

3.1 Carbon steel band saw blades

Blades made of low alloy steel containing more than 1,0 and less than 1,5 % (*m/m*) of carbon. The combination of manganese, silicon and chromium contents shall not be less than 0,5 % (*m/m*).

3.2 Intermediate steel band saw blades

Blades made of steel which is between carbon and high speed steel in alloy content, i.e. a high carbon steel (0,8 to 1,25 % (*m/m*) C) alloyed with chromium, vanadium, molybdenum or tungsten in an amount totalling more than 8 but less than 14 % (*m/m*) of these carbide-forming elements.

3.3 High speed steel band saw blades

Blades made of high speed steel, which is a steel alloyed with chromium, vanadium, molybdenum or tungsten in an amount totalling at least 14 % (*m/m*) (excluding carbon) of these carbide-forming elements.

3.4 Composite steel band saw blades

Blades made with a cutting edge of different material (normally high speed steel) from that of the back, the edge being joined to a backing of low alloy steel.

3.5 Friction cutting band saw blades

Blades made of fatigue-resistant steel for cutting by heat resulting from friction. (The primary functions of the teeth are therefore to generate the heat needed and to scoop in the air needed to support combustion. Friction saws are usually run at speeds in excess of 40 m/s (8 000 ft/min) on machines with adequate shielding).

4 DIMENSIONS

Tolerances : see ISO 4875/II.

4.1 Carbon steel, hard-edge, flexible-back band saw blades

Dimensions (width × thickness)		Regular type tooth																Skip tooth						Hook tooth					
		Raker set								Wavy set																			
		Pitch, mm								Pitch, mm								Pitch, mm						Pitch, mm					
		6,3	4,0	3,0	2,5	1,8	1,4	1,0		2,5	1,8	1,0	0,8					8,0	6,3	4,0				12,5	8,0	6,3	4,0		
		Teeth/25 mm (1 in)								Teeth/25 mm (1 in)								Teeth/25 mm (1 in)						Teeth/25 mm (1 in)					
		4	6	8	10	14	18	24		10	14	24	32					3	4	6				2	3	4	6		
mm	in																												
3,15 × 0,63	1/8 × 0.025					X	X																						
4,75 × 0,63	3/16 × 0.025				X	X	X																						
6,3 × 0,63	1/4 × 0.025				X	X	X	X				X	X						X	X					X	X	X		
8,0 × 0,63	5/16 × 0.025			X	X	X	X	X											X										
9,5 × 0,63	3/8 × 0.025			X	X	X	X	X				X						X	X						X	X	X		
12,5 × 0,63	1/2 × 0.025		X	X	X	X	X											X	X						X	X	X		
16,0 × 0,80	5/8 × 0.032			X	X	X																							
19,0 × 0,80	3/4 × 0.032		X	X	X	X					X	X						X							X				
25,0 × 0,90	1 × 0.035		X	X	X	X												X						X	X				
31,5 × 1,06	1 1/4 × 0.042		X	X																					X				
37,5 × 1,25	1 1/2 × 0.050	X	X																						X				

4.2 Carbon steel, hard-edge, tempered-back band saw blades

Dimensions (width × thickness)		Regular type tooth																Skip tooth										Hook tooth									
		Raker set										Wavy set																									
		Pitch, mm										Pitch, mm						Pitch, mm										Pitch, mm									
		4,0	3,0	2,5	1,8	1,4	1,0	Teeth/25 mm (1 in)				2,5	1,8	1,0	Teeth/25 mm (1 in)			8,0	6,3	4,0	Teeth/25 mm (1 in)			12,5	8,0	6,3	4,0	Teeth/25 mm (1 in)									
mm	in	6	8	10	14	18	24					10	14	24				3	4	6				2	3	4	6										
4,75 × 0,63	3/16 × 0.025			X	X	X																														
6,3 × 0,63	1/4 × 0.025			X	X	X	X							X																						
9,5 × 0,63	3/8 × 0.025		X	X	X	X												X	X						X	X	X									
12,5 × 0,63	1/2 × 0.025	X	X	X	X	X												X	X						X	X	X									
16,0 × 0,80	5/8 × 0.032		X	X	X																															
19,0 × 0,80	3/4 × 0.032	X	X	X	X							X	X					X							X											
25,0 × 0,90	1 × 0.035	X	X	X	X													X						X												

4.3 Intermediate steel band saw blades

Dimensions (width X thickness)		**Regular type tooth**					
		Raker set					**Wavy set**
		Pitch, mm					**Pitch**, mm
		6,3	4,0	3,0	2,5	1,4	2,5
mm	in	**Teeth/25 mm (1 in)**					**Teeth/25 mm (1 in)**
		4	6	8	10	14	10
12,5 X 0,63	1/2 X 0.025				X	X	
19,0 X 0,80	3/4 X 0.032		X	X	X	X	X
25,0 X 0,90	1 X 0.035	X	X	X	X		

4.4 High speed steel band saw blades

Dimensions (width X thickness)		**Regular type tooth**				**Hook tooth**	
		Raker set					
		Pitch, mm				**Pitch**, mm	
		6,3	4,0	3,0	2,5	8,0	6,3
mm	in	**Teeth/25 mm (1 in)**				**Teeth/25 mm (1 in)**	
		4	6	8	10	3	4
19,0 X 0,80	3/4 X 0.032		X	X	X		
25,0 X 0,90	1 X 0.035	X	X	X	X	X	X
31,5 X 1,06	1 1/4 X 0.042		X			X	