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Power Hacksaw Blades
Sabre Saw Blades

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Usage
» cutting structural steels, tool steels and high speed steels
» cast irons cutting
» non-ferrous metals cutting
» solid materials, profiles, tubes, metals

Characteristics
» hack saws produced of high efficient Swedish high speed steel, hardened and tempered to enable perfect performance
» material: HSS=Dmo5 = DIN 1.3343 = ČSN 19830
» teeth alternatively set
» designed for power frame saws and KASTO tools

Usage
» pneumatic and electrical machines as FEIN, Spitzhas, Premag, Rockwell etc.
» pull cutting upwards or downwards
» soft steels, steel profiles
» plastics
» chipboard

Characteristics
» hack saws produced of high efficient Swedish high speed steel, hardened and tempered to enable perfect performance
» material: HSS=Dmo5 = DIN 1.3343 = ÈSN 19830
» teeth alternatively set, for small tooth pitches wavy set

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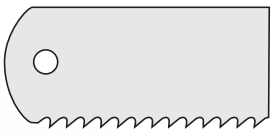

HSS 1.3343

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HSS 1.3343

Power Hacksaw Blades

Dimensions (mm)	Teeth per inch					Weight (kg)
300 x 25 x 1,25				10	14	0,09
300 x 25 x 1,60		6	8	10	14	0,10
350 x 25 x 1,25				10	14	0,10
350 x 32 x 1,60		6	8	10	14	0,136
400 x 25 x 1,25			8	10	14	0,11
400 x 32 x 1,60	4	6	8	10	14	0,16
400 x 40 x 2,00	4	6	8	10		0,25
450 x 32 x 1,60	4	6	8	10	14	0,17
450 x 40 x 2,00	4	6	8	10		0,28
500 x 40 x 2,00	4	6	8	10		0,30
550 x 50 x 2,50	4	6	8			0,54
600 x 50 x 2,00	4	6	8	10		0,47
600 x 50 x 2,50	4	6	8			0,59
650 x 50 x 2,50	4	6	8			0,63
700 x 50 x 2,50	4	6	8			0,67

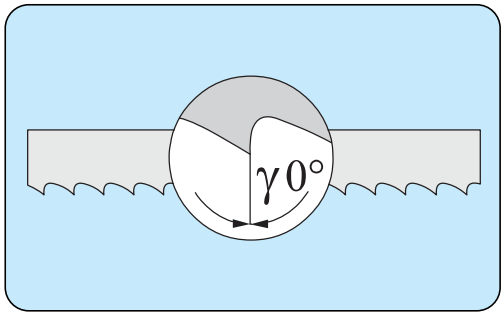
Sabre Saw Blades

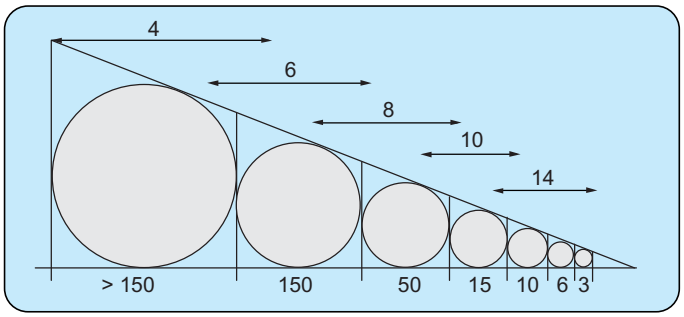
Dimensions (mm)	Teeth per inch				Weight (kg)
180 x 27 x 1,60	8	10	14	16	0,06
200 x 27 x 1,60	8	10	14	16	0,07
300 x 27 x 1,60	8	10	14	16	0,10
400 x 27 x 1,60	8	10	14	16	0,13
500 x 27 x 1,60	8	10	14	16	0,16
500 x 27 x 2,00	8	10	14	16	0,20

General recommendations

For usage of metal cutting power hacksaw blades

How to choose the right type of hacksaw blades
Choosing of the hacksaw blade with the correct tooth number per inch depends on dimensions and type of the cutting material.





14 teeth/25 mm - cutting of thin materials of all types as tubes, pipes, profiles etc.
10 teeth/25 mm - cutting of all material types with small and medium dimensions
6 teeth/25 mm - cutting of all material types of greater thickness
4teeth/25 mm - cutting of soft material types of greater thickness

RECOMMENDED TEETH PER 25MM (TPI) FOR EACH MATERIAL TYPE			
Material	Material diameter		
	10 - 30	30 - 100	100 - 250
	Teeth per inch (25mm)		
Free machining steel Building irons Structural steel	14 - 8	8 - 6	6 - 4
Heat-treated steel Nitridated steel	14 - 8	8 - 6	6 - 4
Unalloyed tool steel Alloyed tool steel	10 - 8	6 - 4	4
Spring steel	14 - 8	8 - 6	6 - 4
High temperature steel Stainless steel	8 - 6	6 - 4	6 - 4
Malleable cast iron to 200HB Gray iron over 200HB	8 - 6	6 - 4	4
Cast iron	10 - 8	8 - 6	6 - 4
Dural Bronze Aluminium Brass	6 - 4	6 - 4	6 - 4

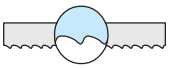
Small tooth number is suitable for thicker material cutting and greater tooth number is better for thin profile cutting.

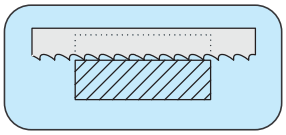
How to use power hack saw blades properly

1. It is important to pay the same attention to power hack saw blades as to any other tools.
2. Keep the machine in good technical condition. It is especially needed to check if:
a) the lifting arm and its function are in order,
b) oil pump of the lifting arm is clean and without air bubbles.
3. Tighten the hack saw blade in the machine in correct position and straighten it properly.
4. Tighten the cutting material firmly into the clamps so that as many teeth as possible cut (at least 4, maximum 30).
5. While bundle cutting (more pieces at once) make sure each piece is firmly tightened.
6. While cutting metal castings make sure you remove foundry sand from the surface with bastard file or steel brush. Sand can cause the hack saw to run dull very fast.
7. While staring the machine, lower the saw frame carefully and change the pressure or lower the feed speed for several first cuts (only when new blade is used).
8. Do not use too high or too low pressure.
9. Always use cooling fluids while cutting.
10. After cutting two or three pieces check the tension of the blade.
11. After a certain cutting period check the time needed for a single cut. In case this time is irregularly long, replace the blade immediately with new one.
12. Never start cutting with new blade in old cut-line. Setting of previously used blade was already smaller and cut-line is too narrow for a new blade. It is necessary to release, turn the cutting material and start cutting again.

Defects and their causes

1. Fast blunting





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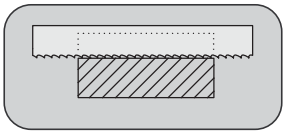
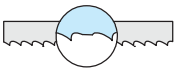


no

» if wrong teeth number is chosen
» if saw blade is not tightened accurately
» if cutting speed is too high- especially while cutting hard metals
» if pressure is too high - teeth go blunt fast
» insufficient pressure - teeth grate but do not cut in
» insufficient cooling
» if defects in mechanism for reverse cutting occur

2. Teeth breaking



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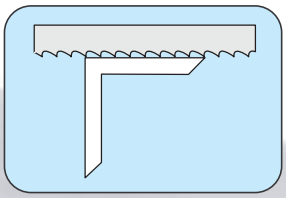

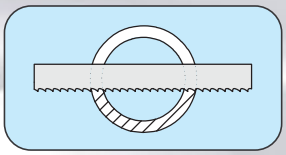

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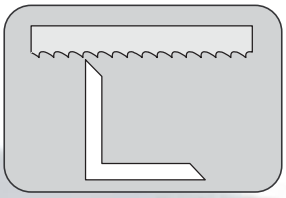
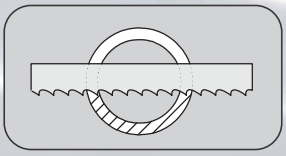


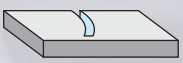


» tooth pitch is too small (teeth number per 25mm) while cutting thin elements
» if cutting sharp edges or thin- walled elements when not even 4 teeth are in cut at once.
» if material is not tightened well

3. Breaking of saw blade

» unqualified straightening of saw blade in machine frame
» improperly chosen hack saw blade for high feed
» careless lowering of machine frame
» cutting material is not tightened properly
» driving new hack saw into cutting line previously made by used hack saw blade.
» jammed material while finishing the cut
» defective bearings in machine or defective stroke

4. Curved cutting



» wrong fixing of blade in the machine
» blade is insufficiently tightened
» material is insufficiently tightened
» too high pressure and wrong chosen blade
» hard spots inside the material
» faulty machine - worn bearings, frame is not fixed

By choosing the right hack saw blade in correct dimensions for cutting particular material type you will reach the most economical cutting performance. Do not forget to follow the above instructions while using hack saw blades.