Sawing - Index

Technical Information

Application:	Grinding Type
Along Cutting along the grain	Flat top (FT) For cutting soft and hard wood along the grain (Ripping)
Across Cutting across the grain	Alternate top bevel (ATB) For: 1. cross cutting of soft and hard wood 2. cutting plywood and veneered boards
Across & along Cutting along and across the grain or cutting panel materials	Higher alternate top bevel For chip free cutting on a table saw of melamin coated boards.
Laminate board (plywood)	Combination tooth For: 1. cross cutting of soft and hard wood 2. cutting plywood and veneered boards
Particle board	Triple chip (TCG) For cutting man made particle boards coated and non coated
Panel sizing machines	Alternaate bevel tooth, chamfered For cutting man made particle boards coated and non coated
Scoring	Hollow ground (HG) For: 1. cross cutting of soft and hard wood 2. cutting plywood and veneered boards 3. cutting man made particle coated boards 4. cutting plastic boards
Hogging	Cone form (conical) For Scoring application
Portable Machines	Adjustable alternate top bevel For Scoring application

Additional Options:

Negative hook angle Include 0deg.	Can be used for multi rip sawing operation
Positive hook angle	Chip limiter body design
D MAX™	Vipers included
G6.3 Dynamic balancing Unique balancing procedure according to Iso 1940 performed on special dedicated balancing machines, for best performance as a result of minimal vibrations.	Thick kerf
	Thin kerf
Extra Dynamic straightness Fully automated high performance dynamic operation for straightening the saw, assuring long-lasting straightness, life-time and cutting quality.	Wet Cutting wet wood
	Low vibration body design

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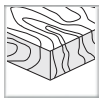
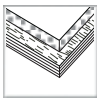
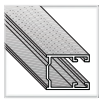
Technical Information

Sawing


Solid Wood

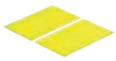

Boards


Plastic

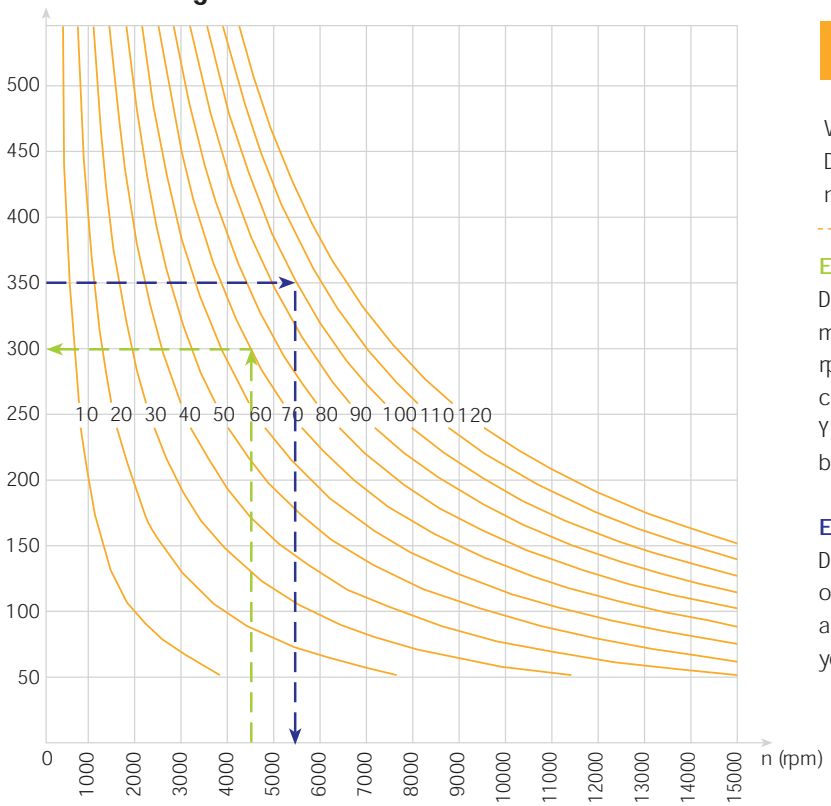

Aluminium


Saw blade for Portable Machines

Determining Cutting Speed

Material		Cutting Direction	Cutting speed in(m/sec)
 Natural wood	Soft Wood	along	60 - 100
		across	60 - 100
	Hard Wood	along	60 - 100
		across	60 - 100
	Veneers	along	70 - 100
		across	70 - 100
 Boards	Plywoods		50 - 80
	MDF		60 - 100
	Particle Board With Pvc Coating		60 - 80
	Particle Board With Melamine Coating		60 - 80
	Particle Board With Veneer Coating		60 - 80
	High Pressure Laminated Particle Board		60 - 80
	Soft Fiber Board		70 - 100
	Cemented Bonded Board		50 - 80
 Plastics	Hard Paper / Hard Fiber		45 - 70
	Duroplastic Board, Corian		15 - 50
	High Pressure Laminated Bakelite		30 - 70
	Thermoplastic Profiles		50 - 80
 Aluminum	Aluminum Profiles		40 - 70

Determining Saw Blade Diameter or R.P.M.



$$n\ (rpm) = \frac{1000 \cdot 60 \quad V}{\pi \quad D}$$

V = Speed $\frac{M}{sec}$
D = Diameter mm
n = Spindle R.P.M.

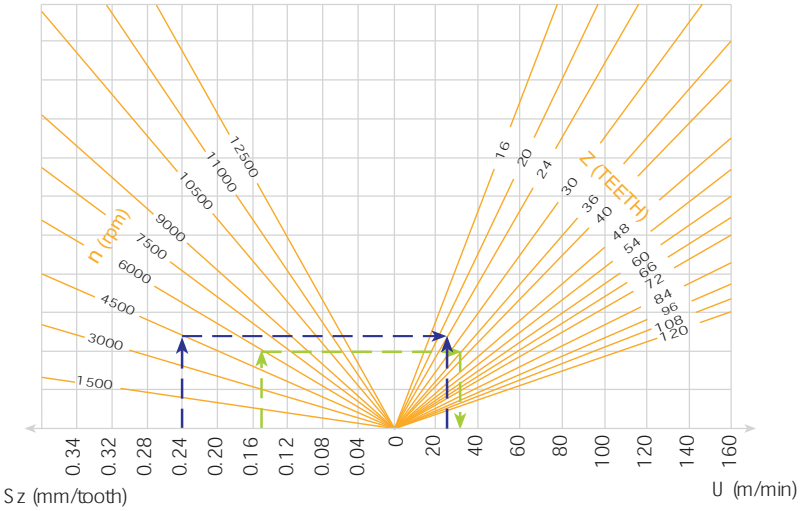
Example 1:
Determining the saw diameter to cut melamine coated chipboard with a 4500 rpm diameter saw blade with 70 m/s cutting speed.
You should use a 300mm diameter saw blade.

Example 2
Determining the r.p.m to the machinary in order to cut at a speed of 100m/sec with a 350m saw
you should work with 5,500 R.P.M.

Sawing

Solid Wood | Boards | Plastic | Aluminium | Sawblade for Portable Machines

Determining Number of Teeth / Finding Feed Rate



Example 1:

Determining Feed Rate

Solid wood - chip size 0.15

r.p.m. - 6000

Number of teeth - 36

You should use Feed Rate - 32m/min

Example 2

Determining number of teeth

Solid wood - chip size 0.24

r.p.m. - 4500

Feed - 22m/min

Therefore the number of teeth - 24

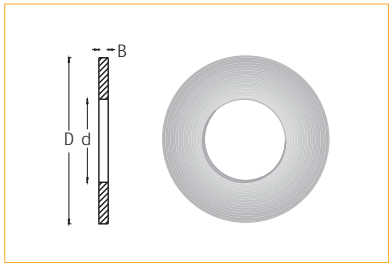
Saw Blade Flanges

Saw Blade Diameter	30mm	40mm	60mm	80mm	100mm	120mm	150mm
180 = <190	50/40	80/60		-	-	-	-
190 = <300		80/60		120/90	140/110	-	-
300 = <400		120/90			140/110	160/130	200/160
400 = <450		120/90		140/110		160/130	200/160
450 = <550		140/110				160/130	200/160
550 = <630		160/130					200/160
630 = <800		200/160					

The size of the flange is determined by the saw blade diameter and bore diameter

Recommended Feed Rates Sz (mm/tooth)

Material	
Solid wood	0.10 - 0.20
Chipboard and plywood	0.05 - 0.25
Boards with plastic lamination	0.03 - 0.06
Boards veneered on both sides	0.03 - 0.08
Hardboard	0.03 - 0.08
Duroplastic boards	0.02 - 0.05
Thermoplastic boards	0.05 - 0.08



Saw Blade Bushings

Code No.	D	d	B
1929280	19.0	15.9	1.8
1929125	20.0	12.7	1.6
1929030	20.0	13.0	1.6
1929040	20.0	15.0	1.8
1929200	20.0	16.0	1.8
1929210	22.0	19.0	1.8
1929050	22.0	20.0	1.8
1929175	25.0	16.0	1.8
1929100	25.0	20.0	1.8
1929260	25.4	16.0	1.8
1929170	25.4	18.0	1.8
1929270	25.4	19.0	1.8
1929145	25.4	20.0	1.8
1929110	30.0	12.0	1.8
1921040	30.0	12.7	1.8
1929080	30.0	15.0	1.8
1929160	30.0	15.9	1.8
1929180	30.0	16.0	1.8

Code No.	D	d	B
1929185	30	19.0	1.8
1929240	30	19.05	1.8
1929090	30	20.0	1.8
1929230	30	22.0	1.8
1929120	30	25.0	1.8
1929220	30	25.4	1.8
1929165	32	15.9	1.8
1929290	32	16.0	1.8
1929250	32	20.0	1.8
1929130	32	25.0	1.8
1929150	32	25.4	1.8
1929135	32	30.0	1.8
1929105	35	20.0	1.8
1929140	35	30.0	1.8
1929295	38	32.0	1.8
1929190	40	25.0	1.8
1929195	40	30.0	1.8
1929297	40	32.0	1.8