

## JIG & RECIPROCATING TECHNOLOGY

### It's not all "just steel"

The most diverse areas of work require their own individual range of steel qualities. This guarantees the best possible material performance over long life spans. For this reason, the choice between CV, HSS, Bi-Metal and HM models must be carefully evaluated according to the intended purpose of use.



High-alloyed Chrome Vanadium steel is used for work on softer materials such as wood, fibreboard and synthetic materials.



Bi- and Tri-Metal 65-67 HRC. The perfect combination of flexibility (due to the spring steel which despite bending, always returns to its original form) and durability, thanks to the HSS strip alloyed with Cobalt, which is welded on. Bi- and Tri-metal is heat treated in a vacuum furnace. Suited to work on wood and metal.



High Speed Steel, hardened in a vacuum furnace, is used for work on harder material such as metal (iron and steel), aluminium and non-ferrous metal.



Carbide, high abrasion resistance = longest life. Tungsten carbide blades are suitable for all areas of use.



### Why are so many different blades required?

The reasons for needing so many different saw blade types are naturally numerous. The material to be sawn plays a particularly important role.

Whether it is a hard material such as iron, Nirosta steel (stainless steel), hardwood or tile or, a soft material like softwood, plywood, synthetics or cork that is being sawn, determines what material the blade should be made of, what strength of teeth and which tooth geometry are most suitable.

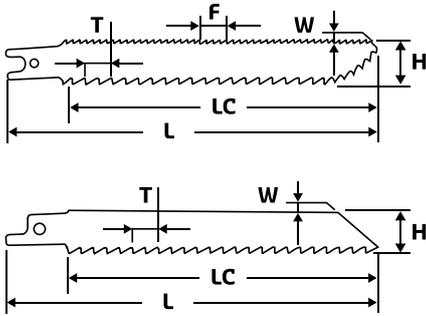
The second factor to be considered is the thickness of the material which determines the length of toothing on the blade. The cut-quality desired also plays a pivotal role in this decision-making process. Here, the appropriate saw blade is determined depending on whether a rough cut is sufficient or if a finer cut is required, whether angle precision is necessary or if contours or curves are being sawn.

One further aspect of the material, which can be a decisive factor, is its form, e.g. metal profile or material combination – the so-called sandwich material

**HIGH  
QUALITY**  
MADE IN GERMANY



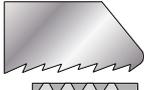
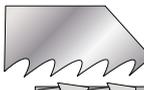
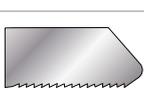
## Dimensions



<b>L</b>	Total length
<b>LC</b>	Tooth length
<b>H</b>	Blade height
<b>T &amp; F</b>	Tooth spacing
<b>W</b>	Blade thickness
<b>S</b>	Maximum material thickness

Note:  
The tooth spacing "T" and "F" is the distance in mm from the point of one tooth to the next. Sometimes the tooth spacing is given in inches. E.g. 14 teeth/inch correspond to a 1.8 mm pitch.

## Specific cutting techniques for optimum cuts

<b>A</b>		crossground, tapered	Very Clean Cut	The wood grain is cut by the slanted angle of the tooth. This kind of ground edges don't come in contact with the saw kerf and therefore produce extra-clean cuts.
<b>B</b>		crossground, set	High Speed Cut	The angular-sloped tooth cuts the wood grain. This kind of ground teeth give the blade an extra high cutting-speed
<b>C</b>		milled, set	Rough Cut	The wood grain is ripped and the saw set moves upwards and downwards in the saw kerf producing a rough cut
<b>D</b>		milled, wavy set	Fine, precise	The cut takes place on the entire surface of the tooth. The only difference is in the tooth formation

## What about speed and performance?

- The motor power (wattage) of the machine
- The effort output when sawing
- The quality and accuracy of blade selection
- The accurate selection of pendulum cut.
- When using a high pendulum cut, cracks may appear on the cutting edge.

## How to use a reciprocating saw blade?

The reciprocating works along the same principles as a sewing machine. The cutting speed of the upwards/downwards movements can be adjusted in degrees or can be regulated electronically. The cutting speed ranges from 200 to 3000 cut/minute.\*

When using harder materials, for example metals, lower cutting speeds are used. With softer materials like woods, higher cutting speeds are more appropriate. The clamped sawing blade is designed to cut during the upward movement. This is aided by the so-called pendulum cut.

The pendulum cut ensures that the blade is pressed against the material with extra force during the upward movement. In this way, it is possible to saw faster, while using the same amount of energy.

During the upward movement the blade is automatically drawn slightly from the material. These movements together produce the pendulum motion (pendulum cut).

\* Determined by machine and manufacturer.

## RECIPROCATING SAW BLADE SELECTOR

Select a material and you will see which reciprocating saw blade is most suitable.

Material	MRT10B	MRH10B MRH11B MRH12B	MRF10B	MRF11B MRF12B	MRM10B MRM11B MRM12B	MRM17B	MRS10B MRS11B MRS12B MRS13B	MRW10B MRW11B	MRV10B	MRV11B	MRV12B
 Wood / Ply-wood				●	●	●			●	●	●
 Soft wood				●				●	●	●	●
 MDF				●	●	●					
 Wood with nails				●	●	●			●	●	●
 Multiplex				●					●		●
 Pallets											●
 Window frames					●	●					
 Garden wood								●			
 Steel/Iron					●		●		●		●
 Sheet steel			●		●		●		●	●	
 Stainless Steel / Inox			●				●		●		
 Steel profiles / tubes			●				●		●	●	●
 Non ferrous									●		●
 Cast iron	●										
 Common plastics / PVC				●							
 Reinforced plastics				●	●	●			●	●	●
 Fibre cement board	●										
 Soft stone Gypsum / Stucco	●	●									
 Brickwork		●									
 Wall tiles	●										
 Hard (floor-) tiles	●										