

The technical book by Vola



This technical book is designed to explain ski and snowboard preparation with Vola's spirit.

TO PUT THE BASE FLAT

When receiving a new pair of skis it is very important to verify if the base of the ski is indeed flat. To accomplish this we use a planimeter (ref 012005).
Preparing the base of the ski is very important because it directly effects the skis behavior as a result of its contact with the snow.

Checking of the flatness with the planimeter (ref 012005)



Why work on the base ? Three important reasons exist.

1/



Flat Base = no problem

2/



If the base is convex = the ski will not track in a straight line and becomes unstable. In this situation the base needs to be scraped. Using a metal scraper (012003) or a planimeter (012005) you can remove material from the base bringing it back to its desired condition. Follow this process by using a brass brush (012009).

3/



If the base is concave = the ski will become harder to turn. The edges must be filed down using a double cutting file (011035) or a black diamond stone (011040). Race skis typically use an angle of a few degrees on the base side of the edges. This will allow the ski to release properly and facilitate a proper turn shape. Typically this can be accomplished with a .5 degree base angle for slalom, 1 degree for giant slalom and 1.5-2 degree angle for super-G and downhill.

VOLA Racing

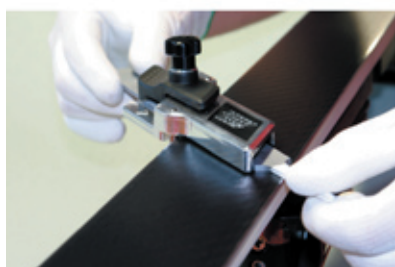
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When the base is concave we recommend using the Base Edge tool which that will file down the edge with great precision.

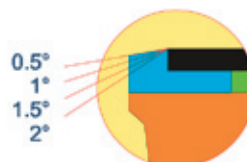


Base Edge Tool

Ref 011023 : 0,5°

Ref 011024 : 1°

Ref 011025 : 1,5°



THE SIDE

On new skis (or snowboards) the first step is passing the ABS tool over the edges .

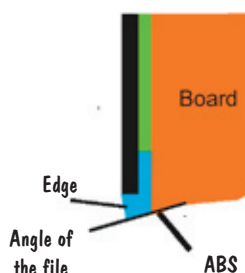
This plastic or metal band is designed to strengthen the edges.

Do not over use the ABS tool at any one time it will make the edges become fragile.

For best results use the ABS tool with care several times throughout the season.



Edge tool PRO.
Ref 011051 (round blade)



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THE TUNING

The majority of ski preparation or tuning is accomplished using a 200mm file (011038) cutting the entire length of the edge.

When using a file to cut the edge you may work effectively from the tip to tail or tail to tip, however it is very important to apply the same pressure to the edge over the entire ski.

Do not apply excessive pressure. We recommend using the Corner-Plier system it may be less convenient to use than the more complex sharpeners, however, applies superior results.

On clean edges a 150mm file is sufficient. The corner are available from 90 degrees to 85 degrees.

The greater the angle the sharper and more aggressive the ski will perform, but may result in the ski becoming very reactive to ski pressure.

We recommend not to tune at 90 degrees for the following reasons : the angle on the side must be at least the same as on the base (to obtain 90 degrees).

Currently skis are manufactured with specific angles, therefore we recommend determining these angles before tuning.



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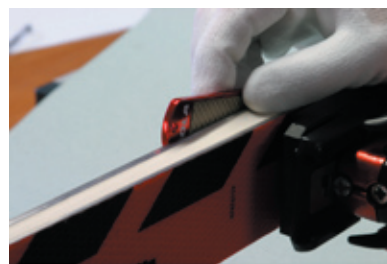
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For best results it is important to use a stone for the best finish. This will polish the edge and remove any bur created by the file. We recommend using the Arkansas Hard (011049). The stone can be used with the corner guide, however, it is best used with hands. It is important to put water on the stone prior to use and to keep the stone wet throughout usage. The diamond stone is very useful as it accomplishes the same results as a smooth file and a stone.

Red and blue stones are best for finishing, the black stone for more burred edges. The diamond stone is a tool that can be used in both the ski room as well as on the hill at a race. After using the stone, a robber block (gummy stone) can be used to clean the edge or to de-tune the edge in softer snow conditions. Once you have tuned the entire ski to the desired sharpness, we recommend de-tuning the tips and tails of the ski to allow the ski to better transition in and out of turns. In most conditions de-tuning is less and less critical as carving skis uses the entire length of the ski. Don't forget to clean the plastic or metal tail strip located at the tail of the ski.


VOLA Diamonded plates

100: ref 011043

400: ref 011044

600: ref 011045

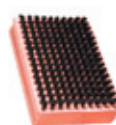
1000: ref 011046


THE BRUSHING

It is important to brush the base of the ski while you are tuning with a brass brush to avoid the base getting dirty.

Brushing must be done with an appropriate amount of pressure : enough to remove unwanted materials but not too much (do not crush the bristles) that may cause damage to the base.


 012009
Brass brush

 012006
Nylon brush

 012010
Horse hair brush

 012008
Oval Racing
Nylon/Brass brush

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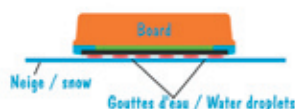
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THE WAXING

A ski base doesn't glide directly on the snow but on water droplets created by the heat due to friction between the ski and the snow. A fluoro wax repels water at a greater rate than non-fluoro wax thus the ski moves faster across the snow. The Vola starters allow for strong acceleration at the start for maximum speeds.



Do not leave the base unwaxed for any extended period of time. Also remove the wax from the edges of the ski.

Before waxing, brush the base using a brass brush to clean the base. Apply some droplets of wax along the entire ski. Once the droplets are in place use the iron to spread the wax uniformly across the ski and then slowly continue this process for proper application. It is not necessary to use too much wax because any excess will be scraped off once the iron has cooled.

A proper amount provides a thin layer between the iron and the base to protect the base from the direct heat of the iron. Remove the wax on the edges with a plastic scraper.



«Bravo» electronic wax iron
Ref 012015



It is very important not to over heat or burn the wax. Fluoro waxes are especially sensitive as overheating will release the fluorocarbons and make the wax less effective. Wax the skis in an open room with good ventilation where the temperature is not too cold. The wax will need time to absorb into the base if the temperature is too warm it may take hours before scraping. It is also important to clear all other tools from the wax table otherwise there is potential to be dirtied by wax.

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Leave the ski until the wax has saturated into the base. The wax must be completely cooled before scraping (we recommend to wait at least 2 hours). Scrap the wax and then brush with a finishing horsehair brush (012010).

On new skis, it is important to clean and and the base. We recommend waxing several times using parafin R021 (229100) and to scrap while the wax is still warm, this will clean the base. Then wax 3 or 4 times with parafin R 021 and then with a hard base wax such as (Green Slalom or Carving Base).

Let it cool for several hours and scrap. This will saturate the base and make it harder and more resistant to base damage on hard and abrasive snow. Do these 4 waxing steps (3 R 021, 1 Base) again 3 or 4 times.



Parafin R021
Ref 229100



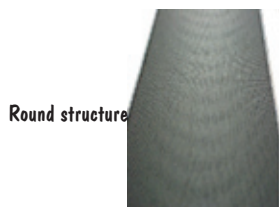
Super Pro Plus vice
Ref 014007



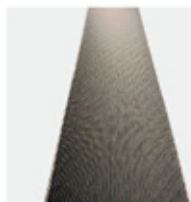
Wax table with rack
Ref 016011 (wax table) / 016012 (rack)

THE STRUCTURE

The structure matters most when the ski is gliding. We observed that recently more and more ski manufacturers are supplying skis marked with an intermediate structure. Similar to waxes, snow conditions correspond with different structures. Liqueur brandy (fine or thin structures) work well in cold snow. In warmer/wetter snow conditions more aggressive grinds are preferred. In the technical events more tilted grinds allow the skis to move freely and make for better turning performance. It is important to work in new grinds by skiing and waxing regularly (R021+Base) and brushing as often as possible. These actions will reduce the porosity of the polyethylene.



Round structure



Crossing structure

With :



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UNIVERSAL

Universal waxes have a wide temperature range and is designed for everyday usage. The wax works best for air temperature from 8°C to 20°C.



Ref 222000

SPEED

Speed waxes are for everyday use on speed skis for the following respective air temperatures.

Blue:-25°C in 12°C Red:-14°C in 4°C

Yellow:-6°C in +20°C

The Speed waxes are used for training and to take of the skis.



Ref 221100 Blue

221101 Red

221102 Yellow

RACING / PRO

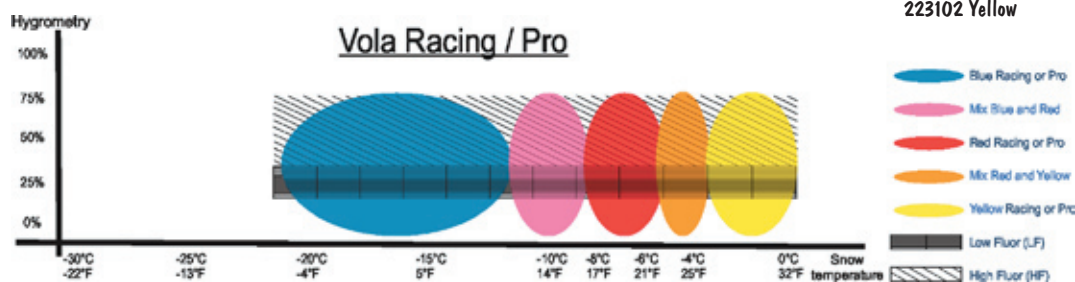
The ranges of Racing and Pro waxes similarly correspond in three main colors the use depending on air tempature and snow conditions. The wax Racing is a wax for race of very good quality adapted for the regional and national races. It can also be apply for high-level races replacing the fluoro waxes on very dry snows hygrometry. The wax Pro is the wax for races with fluor to obtain perfect glide.



Ref 223100 Blue

223101 Red

223102 Yellow



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LES FARTS LIQUIDES

The liquid wax is very easy to use and can be applied very quickly. It is easy to apply the liquid wax using a cloth. Wait between five and ten minutes once the wax has been applied to let the liquid dry. The liquid wax will also soak in deeper to the base of the ski.

Before the application of the liquid wax it is important to maintain it at 20°C so that it remains very viscous allowing it to soak deeply into the ski.

The use of nylon brush can help highlight the structures of the base before the application of the liquid.

Nevertheless, we disadvised to use only the liquid waxes because it would dry the base. Always use a solid wax between two waxing with liquid waxes.

A liquid wax improve the glide faster than a solid wax.

The liquid waxes are made in two categories like the PRO solid waxes :

- High Fluor (HF) for the snow with an hygrometry higher than 45 %.
- Low Fluor (LF) for the snow with an hygrometry lower than 45%.



Ref 224700 Blue
224701 Red
224702 Yellow



Ref 224704 Red
224705 Yellow



Ref 224109 Blue
224110 Red
224111 Yellow

THE GRAPHITE WAXES

The graphite products have to be used on graphit bases only. It is recommended to use these waxes every 7 to 10 times you wax your skis.

The Graphite range presents the BRS which is a wax intended for speed events. This wax contains a silicone additive which is very effective on warm or wet snow.

The VRB Graphite is used for the speed events. It is particularly efficient on cold and dry snow.



Ref 224100 Standard



Ref 224101 VRB



Ref 224102 BRS

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THE BASES

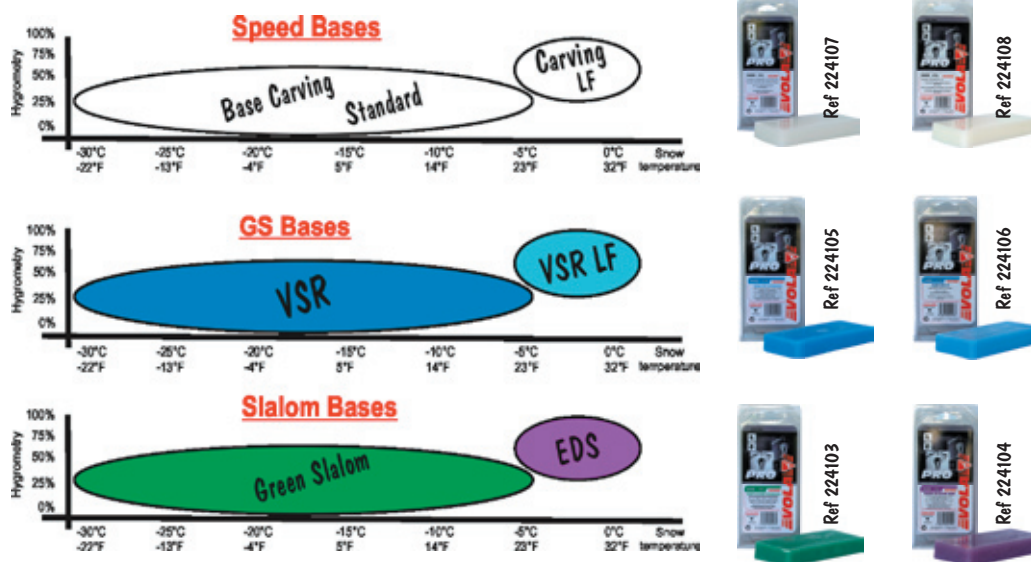
Bases are intended to harden the sole of skis while protecting it effectively. A base for every discipline. Each has been elaborated to get closer in best to the relationship protection / glide. The bases will have the effect of fixing the other waxes which will be possibly added.

The green base has been elaborated for the slalom. It will protect your sole on hard and abrasive snows, while optimizing the glide of your skis. It can be also used as fixative base for another wax.

The EDS is our second base for slalom, containing some silicone. It has to be used on artificial or spring snows (wet snow). It will optimize the performances of your skis and protect them on these very aggressive snows. As all the bases, it can be use alone or as fixative base for the other typical racing wax.

Made for the high-level competition the VSR is the base intended for the giant. Less hard than a base slalom, it allows better glide and acceleration when releasing the pressure. Furthermore, it allows a longer fixation of waxes. The VSR is available in classic version and in LF version (low fluor) which is more successful on wet snow.

The carving base has been created to answer the requirements of the speed events (downhill and super-G). It protect the sole of your skis and give you a maximal glide. Used with the other waxes of the range Carving, you will have an excellent glide. As the VSR, the Carving Base is available in two version. (Standard or LF for wet snows.)



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THE ACCELERATORS

Accelerators are waxes allowing a strong acceleration but which have a very limited efficiency in time. The choice of the accelerator is made according to the snow temperature and the hygrometry.

The powder SP2001 is made for snows with more than 45 % of hygrometry. It is particularly effective on snows temperature which evolved between 0 and -3°C.

The powder HCSP is made for cold snows (subordinates in -10°C) and sandbanks.

How to apply the powders: spread the powder over all the sole, dab slightly with a cork or a plug lightweightfelt then Dab more and more strongly and finally, make a finish with a horse hair brush.

The yellow propulser is an accelerator made for snow temperature included between -5°C and -3°C and an hygrometry rate higher than 40 %.

The blue propulser is used for snow temperatures between -10°C and -5°C and an hygrometry rate higher than 25 %.

How to apply the propulser : brush slightly the sole with a nylon brush, dab slightly the propulser, use the cork strongly then finish it by passing an horse hair brush.

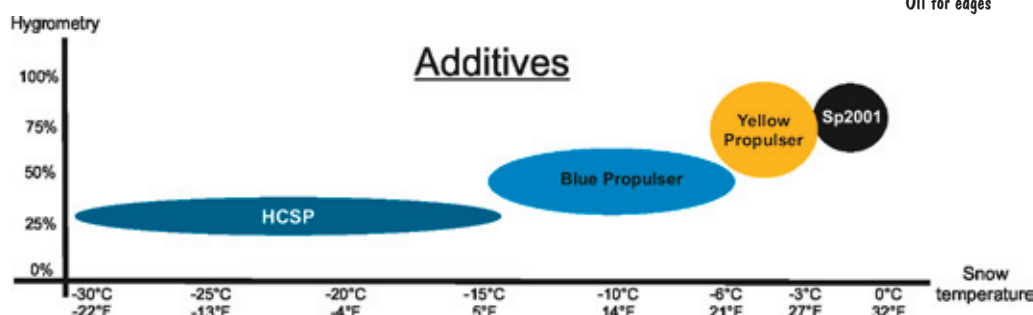
Finally, the oil for edges is used in all the disciplines (but mainly in the disciplines of speed) when the snow is cold to avoid it to freeze on the edges. It is a fluoride oil which has to be apply only on the edges.



Ref 224000 Blue
224001 Yellow



Ref 224708
Oil for edges



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VOLA waxes for each age :

Until 11 years old :

Speed range (blue - red - yellow) according to the snow temperature.

Form 12 to 14 years old :

Speed range to protect the skis and for the training.

Pro Graphite Standard to protect the skis.

Racing range (blue - red - Yellow) according to the snow temperature.

Pro Carving LF range for national and international races.

Possibility to add liquid waxes in the starting area.

Older than 14 years old :

Speed range to protect the skis and for the training.

Pro Graphite Standard to protect the skis.

Respecting the waxing advises which follow.

The way to wax with VOLA

	SLALOM		GS			SPEED EVENTS		
	Cold	Warm	Very cold	Cold	Warm	Very cold	Cold	Warm
Base	Pro Green Slalom Standard	Pro Base EDS	Pro Base VRB	Pro Base VSR	Pro Base VSR LF	Pro Base VRB	Pro Base Carving	Pro Base Carving LF
Additif 1	Racing Liquid or Pro LF or Pro HF according to the snow T* and the hygrometry		Racing Blue liquid	Racing Liquid or Pro LF or Pro HF according to the snow T* and the hygrometry			Pro Carving 200g LF or HF according to the snow T* and the hygrometry	
Additif 2						Option : Racing Blue liquid	Racing Liquid or Pro LF or Pro HF according to the snow T* and the hygrometry	
Propulser	Option : Blue Propulser	Option : Yellow Propulser	HCSP powder	Blue Propulser	Yellow Propulser or SP2001	HCSP powder	Blue Propulser	Yellow Propulser or SP2001

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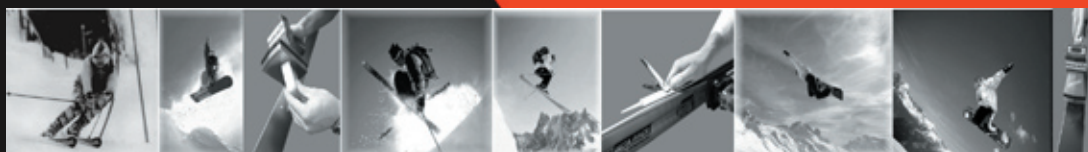
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Gold advise:

- Well sharpened edges allow a more precise and more pleasant practice.
- The more you wax your skis or your snowboard, the more they will go fast.
- Skis and snowboard prepared regularly owed longer.



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