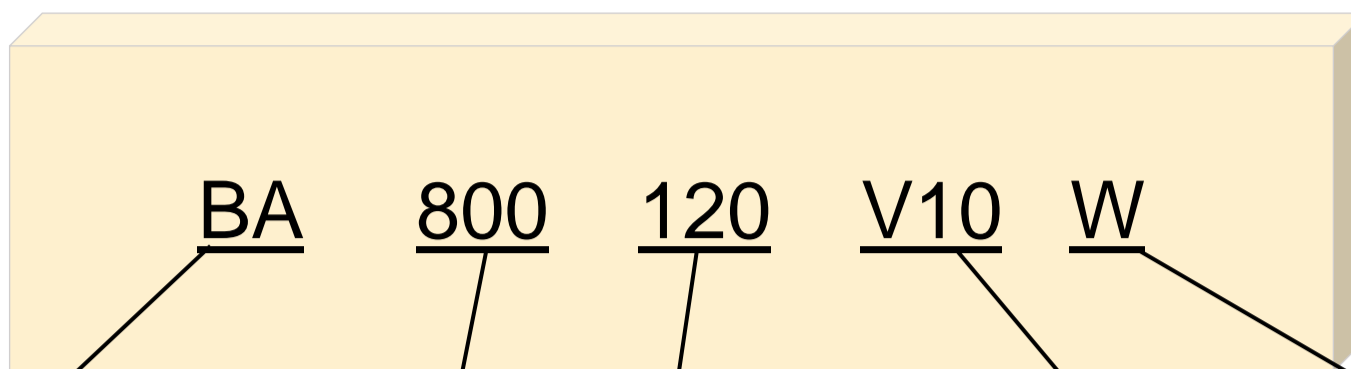


SPECIFICATION



Abrasive Type	Size Grain	Hardness	Bond	Treatment
Aluminum Oxide (White)	320	Hard 25 ↑ ↓ 180 Soft	Vitrified	Sulphur
BA	400		V	S
	500			
	600			
Silicon Carbide (Green)	800		Resin	Wax
2C	1000			
2AC	1200		B	W
	1500			
Silicon Carbide (Black)				
1C				

ABRASIVE TYPES

Al₂O₃ - White Aluminum Oxide

Artificial abrasive obtained through the bauxite electrofusion. It's high alumina and the high hardness, guarantee a good friability and mechanic resistance, that is adequate to most of the finishing procedures, and it provides a good removal of material with lower roughnesses.



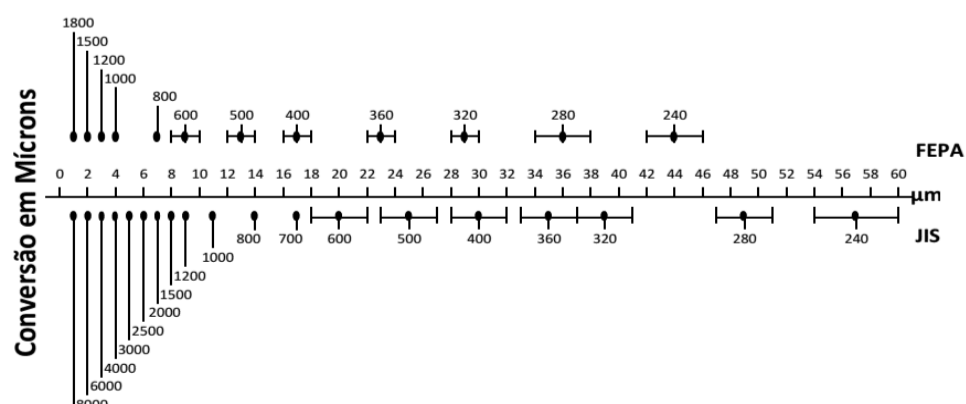
SiC - Carbureto de Silício (verde e preto)

This artificial abrasive is obtained through the fusion of quartz in electric furnaces. Due to its high hardness and friability, this abrasive is recommended in procedures that require a lower removal of material, but need an excellent visual aspect of the finished part.



SIZE GRAIN

The size of abrasive particles observes certain criteria according to International Technical rules and Standards for Micro Abrasives, using the micron as the unity of measure.



HARDNESS

The hardness of superfinishing stones is determined by the higher or lower capacity of the bond to retain the abrasive grain. The hardness of the stones are indicated for number in inverse order, that reflect the Brinell Scale.

BOND

Bonds are ceramic (V) or resinoid (B) materials. They are used to join the abrasive grains together without interference with the action of the abrasives materials in the finishing process.

TREATMENT

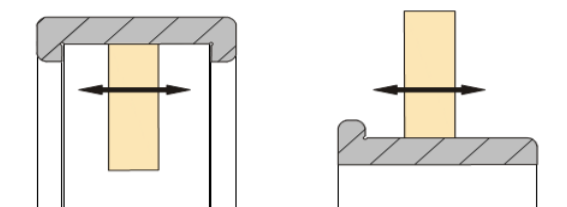
The performance of the superfinishing stones may be improved by the process of impregnation. This process consists in the inclusion of the additives like:

- Oil, increasing the durability of the stone;
- Help in the dissipation of the heat in the contact area, avoiding the burning and plastering of the stone.

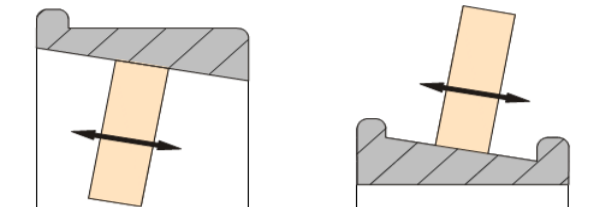
SUPERFINISHING PROCESS OF RINGS

The superfinishing of rings is made on machines that execute simultaneous movements of rotation, oscillation and pressure. The adjustments of these parameters are very important to achieve the best results.

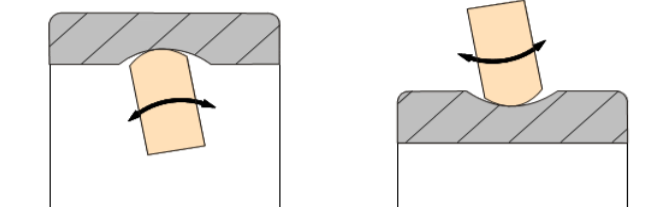
- Cylindrical Bearings



- Conics Bearings

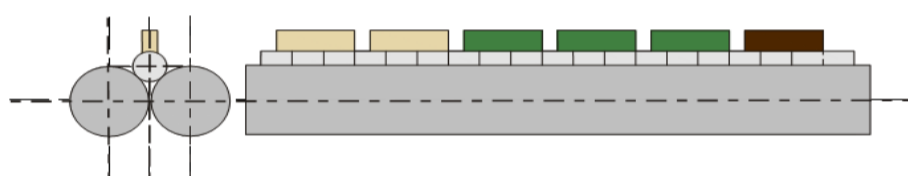


- Spherical Bearings



FINISHING OF ROLLERS

The process of finishing rollers is made in through feed machines, wherever the stores are mounted in sets.



COOLANT

The finishing procedures require the use of mineral coolant. We recommend the use of appropriated filters, which should be indicated by the oil manufacturer, because the contamination and impurity of the oil can result in the following problems during the process:

- Plastering of the stone;
- Increase of rugosity;
- Superficial streaks.

PROBLEMS AND SOLUTIONS

- Low Stock Removal

Machine

- Increase the oscillation;
- Increase of the pressure;
- Decrease of the rotation of the piece;
- Increase of the rugosity of the rectified piece.

Stone

- Use of a softer specification;
- Use of a thicker grain;
- Use of a aluminum oxide instead of silicon carbide.

- Plastering of the Stone

Machine

- Decrease of the oscillation;
- Decrease of the pressure;
- Decrease of the rotation of the piece;
- Increase of the rugosity of the rectified piece.

Stone

- Use of a softer specification;
- Use of a thicker grain;
- Use of impregnation.

- High Rugosity

Machine

- Increase of the oscillation;
- Decrease of the pressure;
- Increase of the rotation of the piece;
- Verification of the rugosity in the rectified piece.

Stone

- Use of a harder specification;
- Use of a thinner grain;
- Use silicon carbide instead of aluminum oxide;
- Use of impregnation.

- Excessive Consumption

Machine

- Decrease of the oscillation;
- Decrease of the pressure;
- Increase of the rotation of the piece;
- Decrease of the rugosity of the rectified piece.

Stone

- Use of a harder specification;
- Use of a thinner grain;
- Use of impregnation.

- Finishing Stone Breaking

Machine

- Decrease of the oscillation;
- Decrease of the pressure;
- Correction of the oscillation limits.

Stone

- Use of a harder specification;
- Decrease of the stone exposed area.

- High Ondulation

Machine

- Increase the contact area using larger stones;
- Increase the speed of the piece.

Stone

- Use of a thicker grain.