

JOINTER STONES “101”



Wood Tech offers the largest selection of jointer stones in the world! After many years of product testing, we have endorsed a select group of products, including the well-known Atlantic products. These stones are accepted world-wide as the “cream of the crop”, and are made of high-purity silicon carbide. The result is a longer stone life, superior finish, and absence of impurities in the product.

Put simply: these stones provide the best possible choice for your applications.

Two basic types of jointer stones (Hard and Soft) are used in the woodworking industry. In general, hard stones are used on older machines running at 3,600 RPM’s. Detail to precisely forming the stone is critical, as the stone can “reform” the profile on the knife if mis-made. Soft stones - as used on more modern 6,000 and higher RPM machines, are more forgiving and can be “chipped in” to properly fit the knife.

Jointer Stones are similar to grinding wheels in composition. Please refer to: (GRINDING WHEELS “101” for more detailed information on pages 111 and 112.)



ABRASIVE MATERIALS:

- Silicon Carbide: (Green) Cuts cooler and faster than Black Silicon Carbide.
- Silicon Carbide: (Black) Smoother finish, longer life.
- Aluminum oxide : (White, Pink, Orange) Cuts fast and cool, best for Straight Joints on Planers and Moulders.

BONDS:

Vitrified:

1. Easier to shape
2. Cuts cooler
3. Holds the profile better and longer than resin bond.

Resin:

1. More difficult to shape
2. Better finish joint
3. More resistant to chip abrasion.
4. Will remove more steel, but must be cleaned and refreshed periodically.

GRITS:

- Finer grits (higher number) produce better finish quality.
- Coarse grit stones will joint up faster and have a longer life.

For HSS Applications:

Hard stones:

- 60-120 White Straight Knife (Straight)
- 80-400 grit Black Silicon carbide (Straight & Profile)
- 240-400 grit Green Silicon Carbide (Straight & Profile)

Soft stones:

- 280-400 grit (Straight Knife Jointing)
- 500-600 grit (Profile Jointing)

For Carbide Applications:

Hard Stones:

- 220 -240 grit Black Silicon Carbide (Profiling)
- 240 -400 grit Green Silicon Carbide (Straight & Profile)

Soft Stones:

- 150-220 grit special blended Aluminum Oxide (Profile)
- Note: harder than the super soft stone, but not quite as hard as the hard stones used for 3600 rpm on HSS.
- 240 grit Black Silicon Carbide (Straight)

HELPFUL HINTS :

1. Jointing actually “dulls” the knives. Don’t over joint your knives!
2. Use a dedicated grinding wheel to form the stone. DO NOT use the same wheel to grind knives, as steel chips will be transferred back to the jointer stone. This will produce “nicking” of your knives.
3. Finer grits (higher numbers) produce better finishes because the grains are finer. Coarse grits will remove more steel, and finish results won’t be as smooth.
4. The harder the stone, the more precise the shaping must be. Soft stones can be chipped-in with the actual cutterhead to assure exact counter profile.
5. Soft stones aren’t designed to remove nicks from knives.
6. Wax impregnated stones are more forgiving, and the lubricity helps prevent the stone from being over jointed. An added benefit is a reduced dust level.
7. Always be familiar with MSDS for both the stone and the steel being used. Wear appropriate venilation equipment and have proper air transfer to avoid inhalation.

8. IMPORTANT NOTE: As in any jointing stone forming process, use ONLY a wheel to form the stone that has not been used to grind ANY knives. Using a grinding wheel that has been in contact with knives will result in small metal particles being impregnated into the jointing stone. This foreign matter will adversely affect the stone performance by nicking the knives.