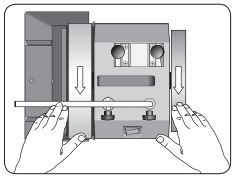
Stone Grader SP-650

Made of silicon carbide, one side with a very fine grit and the other side with a coarse grit.

- *The fine side adjusts the grindstone to grind more finely.*
- *The coarse side restores the grindstone to normal fast grinding.*
- *Re-activates a glazed grindstone.*

Positioning of Machine



Note *For truing a grindstone to an exact roundness you must use the Truing Tool TT-50.*

Properties of Grindstones

Expressed simply, a grindstone with water cooling can be constructed to grind fast leaving a coarse surface on the tool or to grind more slowly leaving a finer surface on the tool. The fast grinding stone is “soft”, which means that the grains are loosely bound. Old, worn grains can easily leave the stone enabling new fresh and sharp grains to come into operation. A stone for fine grinding is “harder”, which means that the grains are tightly bound in the stone. The hard stone wears less than the soft stone.

The Tormek Grindstone has been specially developed to grind fast while still having a long life. The grit is 220. Grindstones with finer grit could be made but then you get the drawback of a decreased grinding effect and a longer grinding time. You cannot get both the benefits (fast grinding and the finest surface) in the same grindstone.

One way is to make the first grinding, where the tool is shaped, on a coarse fast grinding stone and then switch over to a finer and slower grinding stone to achieve a finer surface; however this way is inconvenient and expensive. Besides that you would need to work with two stones or possibly two machines and the jig setting would need to be made twice as the diameter of the two stones would not be exactly the same.

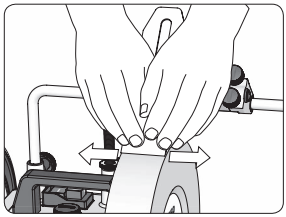
Properties of the Tormek Grindstones and Stone Grader

The Tormek Original Grindstone and Tormek Blackstone Silicon are constructed so that they can be treated with the Stone Grader to change their property from fast grinding to fine grinding, i.e. sharpening. This has obvious advantages. You can make both the first fast grinding and the sharpening on the same grindstone and the same grinding machine and with the same setting of the jig. Besides being a very fast method, you achieve a perfect edge as the fine grinding is done in exactly the same position as the first fast grinding.

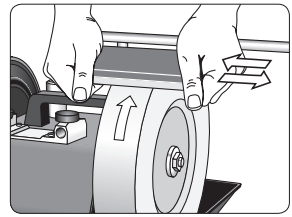
The grading of the grindstone is made by pressing the fine side of the Stone Grader onto the grindstone, which makes it work as a fine grit stone (approx. 1000 grit). When pressing the coarse side onto the grindstone, the smoothened surface is returned to its normal condition (220 grit). This process does not place excessive wear on the grindstone and can be repeated any number of times.

On the Japanese Waterstone the fine side of the Stone Grader is used for cleaning the surface.

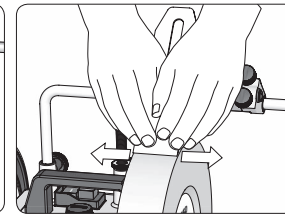
This is how it works



Grind the tool as usual. The picture shows a plane iron in the SE-77 Square Edge Jig.

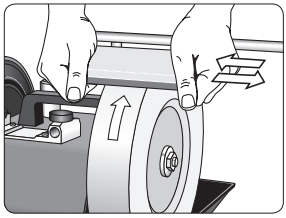


Grade the stone by pressing the fine side onto the stone for 20–30 seconds. Use a high pressure.



Grind again with a light pressure on the graded stone. The plane iron remains in the same position in the jig.

To return the grindstone to normal fast grinding



Press the coarse side of the Stone Grader onto the stone for 20–30 seconds while moving it sideways across the stone. The stone has now returned to normal fast grinding.

Note *Do not let the Stone Grader rest directly on the Universal Support as it could wear the Universal Support. Use the Stone Grader with your wrists resting on the Universal Support as illustrated.*