

## Sharpening Stones

Sharpening stones can be natural stone, composite stone or artificial stone.

Stones are available in various grades, which refer to the grit size of the particles in the stone. Larger particles remove material quickly and are therefore used for grinding. Grinding is the first action of sharpening a new chisel.

Finer grits remove less material so they are used mainly for honing. Honing is the second action in sharpening a chisel.

Grade	Man-Made Oilstones	Natural Oilstones	Water stones
Extra-course			100 & 200 grits
Course	Course	Soft Arkansas	800 grit
Medium	Medium	Hard Arkansas	1000 grit
Fine	Fine	Black Arkansas	1200 grit
Extra fine			6000 & 8000 grit

Lubrication for stones can be oil or water, lubrication aids the cutting action and carries swarf away.

Natural oilstones: One of the natural minerals commonly used in oilstones is Novaculite (type of flint). Two examples of this stone are Washita & Arkansas. They are available in various grades and colours with the finest being black.

Natural Japanese water stones consist of a softer material than flint which means that they become worn quicker but do tend to give a sharper edge than oil stones.

Artificial oilstones stones are manufacture by grinding up the stone and bonding it back together again, examples are silicon carbide (carborundum), aluminium oxide (corundum).

India stone is made by mixing fine particles of aluminium oxide in a hard bonding agent and surface finished to be perfectly flat. Oil is used with this stone.

This stone opposite is a single grade India bench stone.



A combination stone (shown opposite) is also available with one course side used for grinding and a fine side for honing.

Combination stone 60/600

The shape of the stone varies, the most are flat with some shaped stones made especially to accommodate woodcarving and woodturning chisels. These stones (shown below) are also referred to as slip stones.



Japanese carving tool sharpening stones



This set of combination stones offers you five different grits across three stones from the coarse 250 grit for re-grinding and shaping blades to the ultra fine 6000 grit for honing and final polishing.

Unlike other synthetic sharpening stones which consist of a single abrading agent, these Japanese water stones consist of aluminium oxide, carbide and nitride particles fused together. This blend is then mixed with a clay like bonder and baked at high temperatures to form the sharpening stone. The resultant stone is soft but sharpens very quickly.

Diamond stones contain small diamonds attached to the face of a metal plate. These small industrial diamonds are much harder than any of the other sharpening stones. However, not all diamond stones perform the same function, nor are they always created equal.

There are two main types of diamond stone styles. The more common style contains holes in the diamond surface (see Fig. 1) to capture the swarf. These stones cut very fast and are very simple to use. The next type is the continuous diamond surface (see Fig. 2.). These stones are preferred when you are sharpening tools with points that might get caught in the recesses of the non-continuous diamond surface. Both types of diamond stones are available in mono-crystalline and poly-crystalline diamonds. The mono-crystalline diamonds are more desirable as they will last longer.

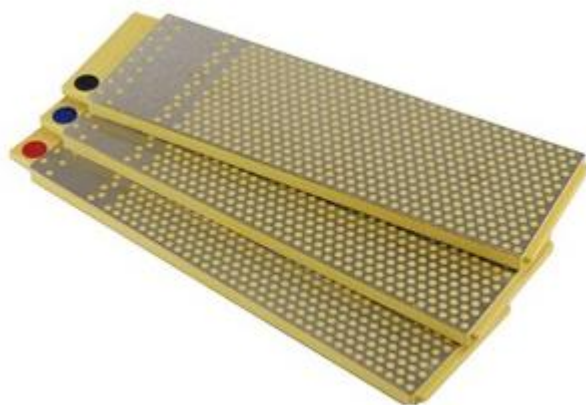


Fig 1. Perforated plate diamond stone



Fig. 2. Flat diamond surface

Various honing guides to aid positioning of the blade during the sharpening process



Veritas



Dakota

Wet sharpening wheels: there are various manufactures making water wheels. It is most important that you do not leave the wheel sitting in the water trough when not in use as this will distort the wheel.



Flat grinding wheel



Honing and buffing wheel

#### Referances

Amazon <http://www.amazon.com/b?ie=UTF8&node=553346>

Images taken from Rutlands <http://www.rutlands.co.uk/pp+woodworking-hand-tools-sharpening-tools+b17000?gclid=CIW-2cLp1LkCFUWx2wodizMAZQ>

Fig 1.& 2. Image taken from Sharpening supplies.  
<http://www.sharpeningsupplies.com/Diamond-Stones-C3.aspx>

The Carpentry store  
[http://www.thecarpentrystore.com/index.php?dispatch=pages.view&page\\_id=3](http://www.thecarpentrystore.com/index.php?dispatch=pages.view&page_id=3)