

SHARPENING OVERVIEW



SHARPENING EQUIPMENT OPTIONS

- Wet & dry sandpaper
- Waterstones
- Diamond plates
- Wetstone grinders
- Bench grinders

WET & DRY SANDPAPER

- Glued to very flat surface, eg glass or marble
- Typically used with a honing guide
- Needs some care not to rip sandpaper
- Cheapest method by far

WATERSTONES

- Require routine maintenance of flattening to remove dishing eg with a lapping plate
- Need proper storage
- Need care not to damage, eg by dropping
- Usually expensive

DIAMOND PLATES

- Do not wear out
- Need a holder
- Can be expensive
- Can make your own with machined cast iron plate and cheap diamond paste

WETSTONE GRINDER

- Low speed means quiet and safe
- Also means no possibility of loss of steel temper
- Needs some routine maintenance of stone
- Can be used for a variety of sharpening, including knives and scissors, via extra jig accessories
- Fairly expensive outlay

BENCH GRINDER

- Carries risk of overheating and loss of steel temper
- Causes sparks
- Typically used with a jig to get correct angle

SHARPENING ESSENTIALS

- A sharp edge is the intersection of two surfaces
- The back of a chisel or plane blade must be flattened to start – usually only once
- Flat section only needs to be 10 to 15mm closest to the tip
- You need to hone the bevel side until you can feel a burr evenly across the back side – this is the proof that the two surfaces have met
- You need to go through a number of grit grades to remove initial coarse grinding marks
- You then need to polish with a buffing compound to produce a mirror smooth surface

BEVEL ANGLES

- Typically 25 or 30 degrees on chisels, plus a micro bevel if required
- Plane blade bevel angles vary with base angle of plane and type of timber used, plus whether plane is bevel up or bevel down
- Bevel angle gauges are available
- Angles are usually maintained once initially set, but can be changed to suit need

MICRO BEVELS

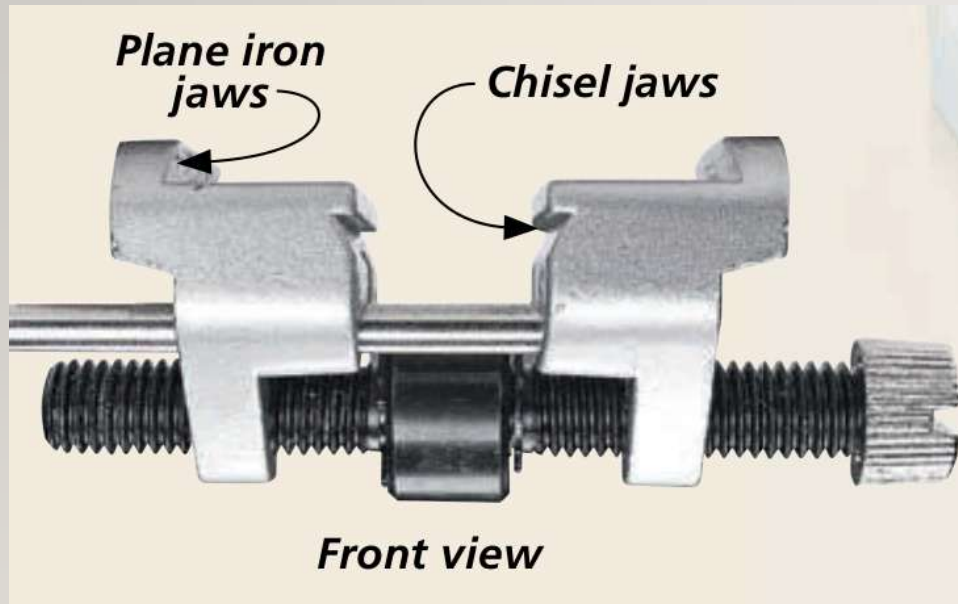
- Used to protect main bevel, and to speed up re-sharpening
- Eventually needs to be reapplied when worn or sharpened down
- Typically set to 30 degrees on a 25 degree main bevel
- Achieved by raising the slope in final stages of honing with a thin piece of metal such as a ruler, or with a honing guide

HONING GUIDES

- Typically required until expert level reached
- A wide range of guides, from inexpensive standard (Eclipse) to expensive (eg Veritas and Lie-Nielsen)
- More expensive ones assist with angle setting and micro bevels

EXAMPLES OF HONING GUIDES

ECLIPSE



VERITAS MARK II



WHAT GRIT SIZES TO USE?

- There is no recognised standard
- Some use coarse (180) medium (800) fine (1200)
- Some use 400, 800, 1200, 2000
- Waterstone grit ratings do not appear to align with sandpaper grades
- Wetstone grinders use only coarse and fine, achieved by changing the grade of the stone

A TIP

- Applying a black marker pen to the bevel area will allow you to see your honing progress more easily.

VIDEOS

- Sharpen a chisel in 2:30 <https://www.youtube.com/watch?v=NTGduwDI5ik>
- Tormek demonstration <https://www.youtube.com/watch?v=IlijunxxGL0>