mini/MIDI REVOLUTION INSTRUCTIONS.

Introduction

The 'MINI REVOLUTION' is a compact version of our successful 'Revolution' hollowing system and is designed for producing of smaller forms at a very competitive price. The 'Mini Revolution' is made of the highest quality materials incorporating the 'Super Ring' and linkage system giving the turner a high level of versatility in use when producing open end grain and cross grain vessels in both seasoned and un-seasoned wood, such as bowls, boxes, vases as well as hollow forms turned through a small opening. The addition of the scraping cutter adds versatility for cutting end grain and cross grain forms or difficult woods as well as an efficient cutter for refining the surface finish after initial shaping and material removal.

Components explained

'Super Ring' – Used for end grain and cross grain hollowing and wood removal for bowls, boxes and other forms. The efficient cutting action of the 'Super Ring' produces an excellent finish that requires little or no scraping prior to final finishing.

Brass limiter and adjustment collar – The brass inset limiter acts to limit the depth of cut as well as a chip breaker, producing short chips of wood in turn aiding waste removal when hollowing through a small opening. The limiter has been specifically designed to sit down into the cutter without the need for a top shield to greatly reduce the problem of clogging.

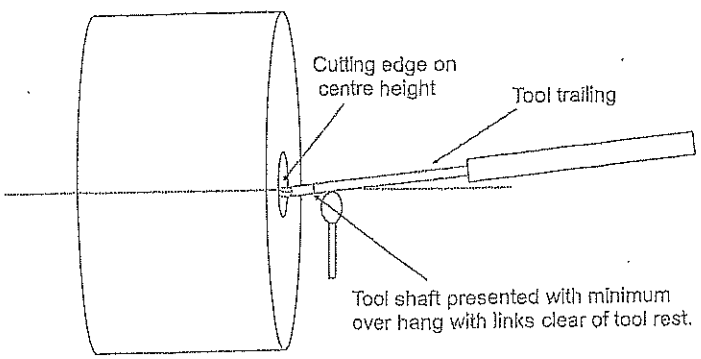
Scraping cutter – A general purpose cutter used for both end grain and cross grain wood removal useful for box making as well as being an efficient finishing scrapper for the inside of many vessels.

Using your tool

Tool Presentation

Set the tool rest of your lathe so the cutting edge of either the 'Super Ring' or scraping cutter is presented at centre height of the spindle axis of the lathe, the handle of the tool should trail slightly by around 5-10 degrees as shown in dia A

Diagram A

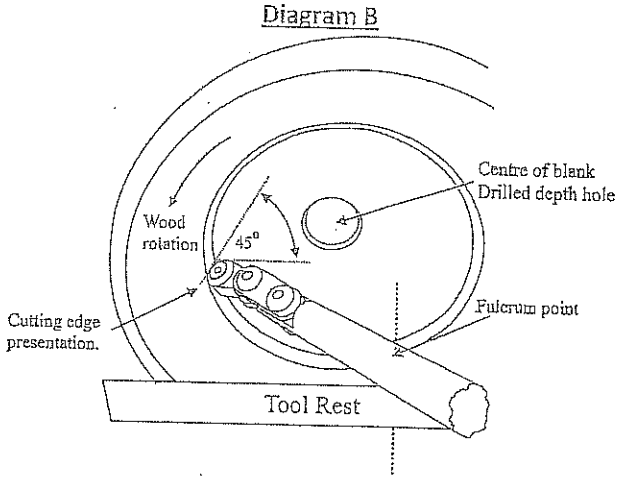


Using the 'Super Ring' cutter

The 'Super Ring' should be presented to the wood at centre height rotated at approximately a 45deg angle as in shown Diagram B. This angle presents the cutting edge at a shear angle producing a fine finish straight from the tool in turn requiring little if any refining prior to finishing.

The optimum cutting action is a smooth sweeping arc from the centre to outside of the form. This is achieved by sweeping the tool at the 'fulcrum point' located at the intersection of the tool rest and shaft of the tool and where the tool is held by the user with either an over hand or underhand technique.

Diagram B



Altering the depth of cut- 'Super Ring'

The 'Super Ring' is made up of three main components, the body, and a brass limiter and adjusting collar which has a groove on its outer edge. The adjusting collar is located on the underside of the 'Super Ring' assembly with the groove indicating the amount of cutting edge exposed. If the groove is located at approximately 10 o-clock (looking down onto the 'Super Ring'), then maximum cutting edge is exposed, in turn the further the groove is rotated away from the cutting edge in contact with the wood then the finer the cut achieved. Diagrams C and D show the top and underside of the 'Super Ring'. To alter the cutting edge exposed/size f cut simply release the Allen screw within the brass limiter on top of the 'Super Ring', rotate the adjusting collar to your preferred size of cut and re-tighten the Allen screw,

Diagram C

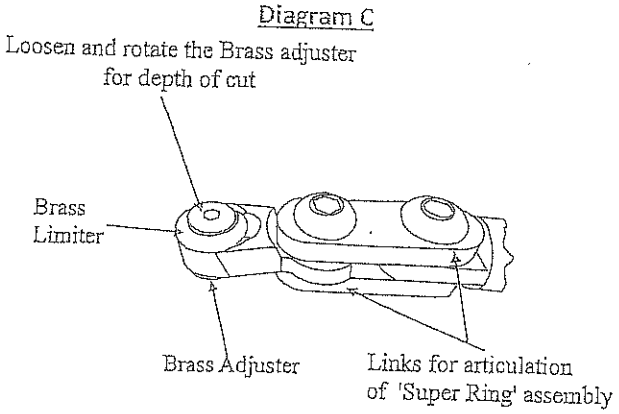
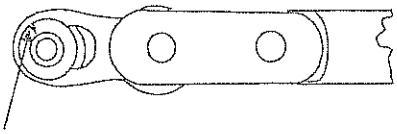


Diagram D

Underside view of 'Super Ring' Assembly



Brass Adjuster ring/machined groove

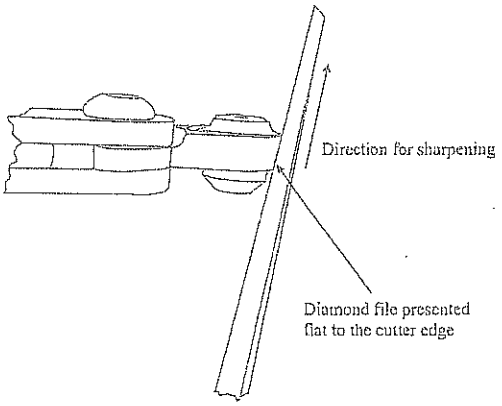
Scraping cutter

To fit the scraping cutter simply undo the Allen screws of the links, remove the 'Super Ring' and fit in place the scraping cutter, re-tightening the Allen screws. The cutter can be presented to the wood in either horizontal for maximum material removal or 45 deg as shown for the 'Super Ring' in (Diagram B) being a shear scraping cut ideal for refining the inside of forms.

Sharpening

The 'Super Ring' should only be sharpened using a medium or fine diamond hone. Present the hone to the outside cutting edge as shown in (diagram E) burnishing the edge in an upwards motion to. The scraping cutter is sharpened in the same way but can also be sharpened on a fine grinding wheel as with a standard scraper. At no time should the 'Super Ring' be sharpened using a grinding wheel as this method is will remove the cutting edge rendering the 'Super Ring' unusable.

Diagram E



To see a video of the Revolution in use visit

www.marksanger.co.uk