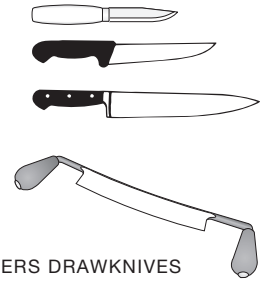
Knife Jig SVM-45

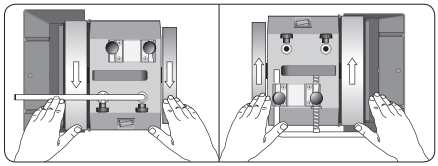
KNIVES

Min length of blade 60 mm (2⅜").



CARVERS DRAWKNIVES

Positioning of Machine

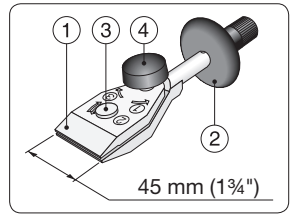


Grinding direction: Towards or away from the edge.

Note *The height of the bench must not be too high when grinding knives. 550–650 mm (22–26") is suitable depending on your height.*

Design

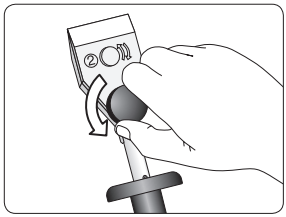
The jig comprises an *adjustable clamp* (1) for holding knives of any thickness and an *adjustable stop* (2). You adjust the jig to the knife thickness with the *screw* (3) and lock by tightening the *knob* (4).



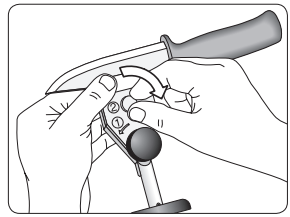
The jig rests on the Universal Support. The exact edge angle is set by rotating the stop or with the Micro Adjust on the Universal Support.

The Universal Support is normally placed vertically for grinding *towards* the edge. Short knives can also be ground *away from* the edge with the Universal Support placed horizontally (page 57).

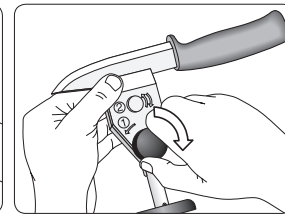
Mounting the knife in the jig



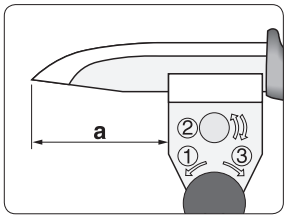
Check that the knob is loose.

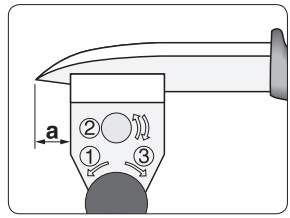


Adjust the jig with the small screw to fit the thickness of the knife.

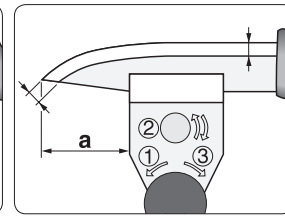


Tighten the knob. The knife is now firmly mounted in the jig.



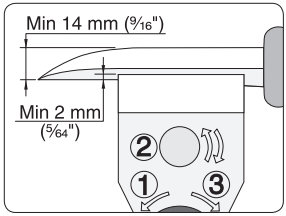


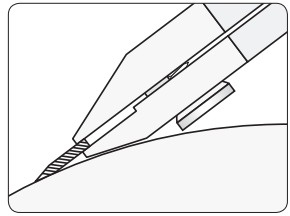
The edge angle on the tip is depending on where the jig is mounted on the blade (a). If it is mounted towards the handle, the edge angle at the tip will be smaller. If the jig is mounted towards the tip, the edge angle at the tip will be larger.



The correct mounting position (a) will make the bevel and the edge angle the same along the entire length of the blade.

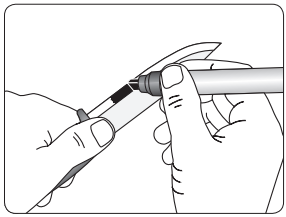
Minimum width of blade



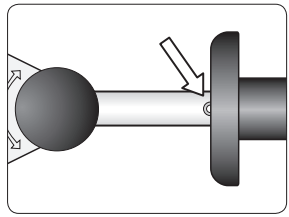


The jig needs to grip the knife with min 2 mm (5/64"). You can grind knives with a width down to 14 mm (9/16") with an edge angle of 25°. Knives with narrower blades, see SVM-00 page 59.

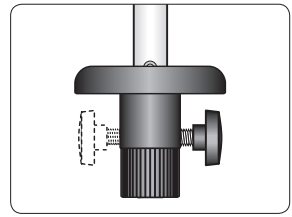
Replicating the existing edge angle



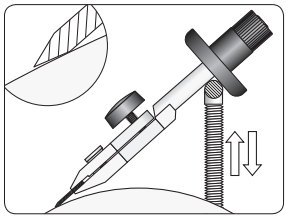
Colour the bevel with a marker so that you can see where the grinding will occur.



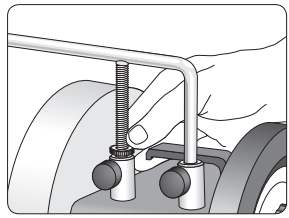
Turn the stop of the jig to zero.



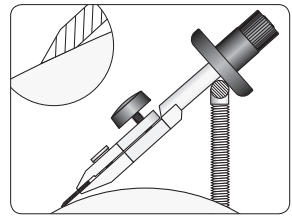
Earlier design with locking screw. (The new design is self-locking.)



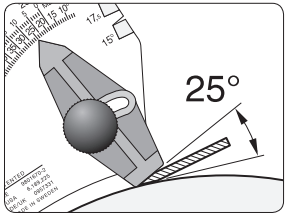
Set the Universal Support so that the heel of the bevel touches the grinding wheel.



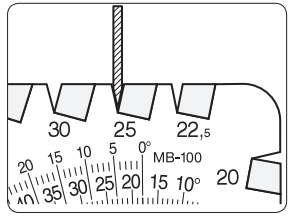
Raise the Universal Support with the Micro Adjust until the whole bevel touches the grinding wheel. Check by moving the wheel by hand to see where the grinding will take place.



Setting a new edge angle and measuring an edge angle



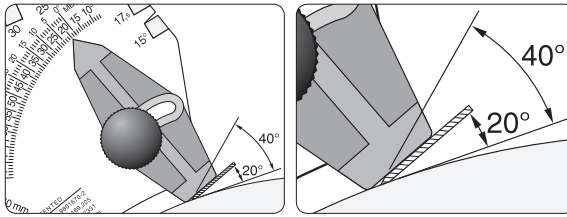
Set the desired edge angle on the AngleMaster WM-200. Adjust the jig until the whole bevel touches the angle setter.



You can measure the edge angle in the grooves of the AngleMaster.

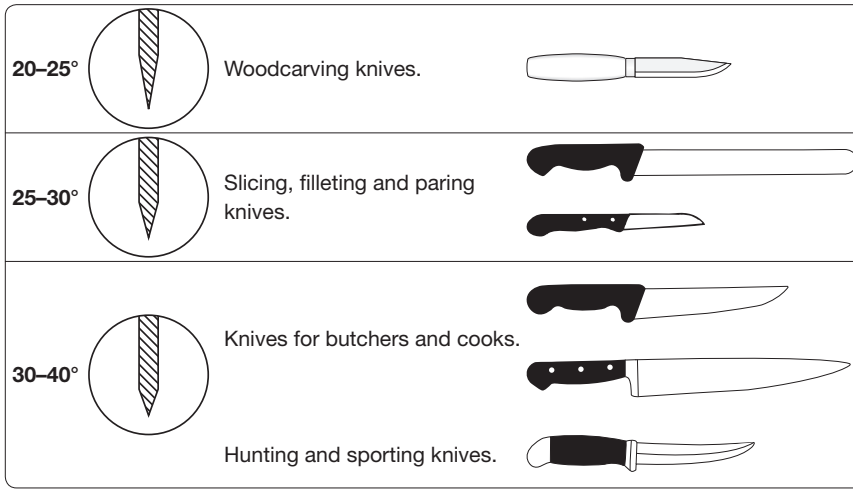
Thin Knives

When setting an edge angle on thin knives the length of the bevel is too short to be aligned to the angle setter. Let the angle setter touch the blade of the knife instead of the bevel. Then the angle setter should be set to half of the desired edge angle.

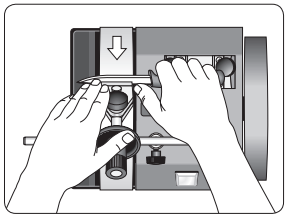


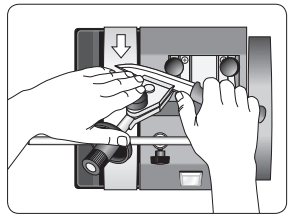
Recommended Edge Angles

Select the edge angle for the type of knife and it's intended use. With a narrow edge angle (20°) the knife cuts very easily but the edge is not so durable. A larger edge angle (40°) gives a stronger and more durable edge.

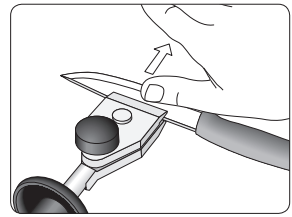


Grinding



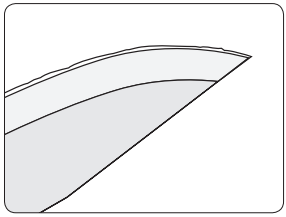


Hold the knife and the jig as illustrated. Make sure that you press your thumb (or palm) on the jig so that it is always pressed against the back of the Universal Support. Move the knife slowly back and forth over the grinding wheel. Ensure that the blade is in contact with the entire width of the wheel. Raise the knife handle when grinding the tip of the knife.

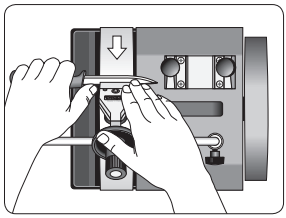


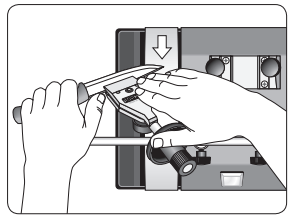
Grind until a burr forms on the upper side along the entire length of the blade. This you will notice by lightly stroking the blade from the back.

Tip *Watch how the water flows over the edge to ensure that the blade is in contact with the entire width of the grinding wheel. This is important to achieve an even bevel.*

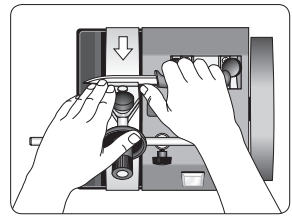


In good light the burr will show up as a silver line. When you have a burr along the entire blade, the first side is ground.





When the first side is ground, turn the jig upside-down – the knife is still fixed in the jig – and grind the other side. Now the burr appears immediately as it has already developed on the under side. Grind as much as on the first side to obtain a symmetrical edge.



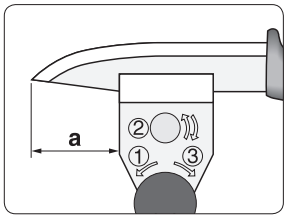
The burr will be weakened and more easily removed later if you grind the first side again with a light pressure.

Tip *When grinding long knives, remove the honing wheel.*

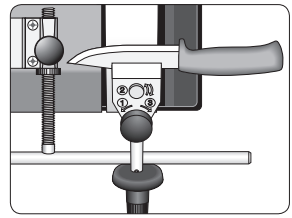
Grinding Away From the Edge

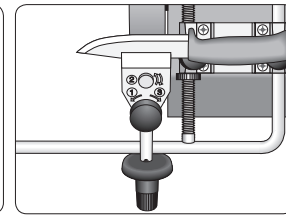
This instruction has so far shown how to grind knives towards the edge with the Universal Support placed vertically. This way works for all types and lengths of knives. For short knives you can also place the Universal Support in the horizontal position and thus grind away from the edge. This can be an advantage when you only need to sharpen the edge slightly since grinding away from the edge gives a lower grinding pressure. With this grinding direction you can keep the knife mounted in the jig and hone on the leather honing wheel with a controlled angle.

Long knives cannot be ground this way since the jig touches the leg of the Universal Support. (On the T-4 model you cannot grind knives with jigs away from the edge as this model is too narrow between grinding wheel and honing wheel.)



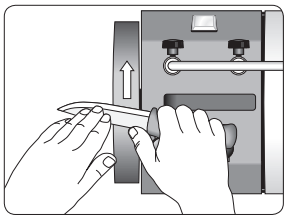
Short knives, which you can mount in the jig up to approx. 50 mm (2") from the tip (a), can be ground away from the edge.

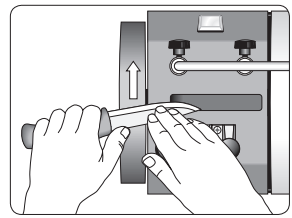




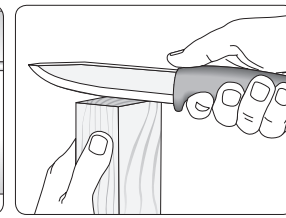
Move the Universal Support to the honing wheel side. Set the jig so you get the same honing angle as grinding angle.

Honing





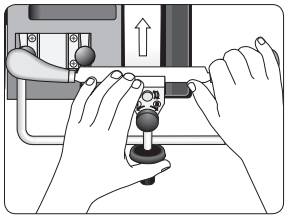
Turn the machine around. Dismount the knife. Hone and polish the bevels on the leather honing wheel. Let the entire bevel touch the leather wheel, so you hone at the same angle as at the grinding. Move the knife back and forth a few times on each side of the blade until the burr disappears.



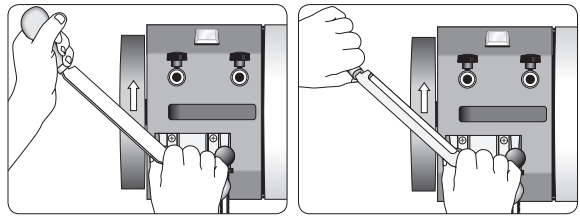
You can ensure that the burr is completely removed by drawing the knife through a piece of end grain wood.

Important *Always hone in the direction of rotation (away from the edge). Place the machine as shown with the wheels running away from you and the honing wheel to the left.*

Carver’s Drawknives



Press the jig downwards so that the stop is all the time in contact with the Universal Support. Ensure that the grinding takes place across the entire width of the grinding wheel.



Hone free-hand. Hold the knife diagonally to clear the grinding wheel. Hone the bevel and the reverse side alternately.