

Regrinding / Resharpening of professional- and household-knife blades

When the edge of a knife can no longer be resharpened on a steel with reasonable effort, the work has to be done on a sharpening machine. However, since inexpert resharpening can cause lasting damage to the edge, it is of primary importance that this work is carried out by an experienced professional.



Thickness of the sharpening edge

If the thickness of the sharpening edge is too large, the sides of the blade should be reground until the edge-thickness is 0.4 to 0.6 mm. The angle of the blade should not be altered.

When resharpening with a grinding wheel, plenty of water must be used to prevent overheating or even burning of the blade. Even using a soft polishing wheel without water, overhearing must be avoided, because the structure is changed and the resistance to corrosion, hardness and edge retention is reduces.



If the blade locally overheats, the steel will only expand at these points, which regresses again on cooling. As a result, stress cracks occur on parts of the blade that were not overheated. When in use, the stress cracks on the blade can subsequently lead to breakage.

Sharpening

The kind of edge applied to a blade is responsible for the sharpness and durability of it. The angle should be between 30 to 40°. Resharpening work must be done with great care in such a way that a fine wire edge/burr is produced along the edge. To finish resharpening, it is necessary to remove the wire edge/burr on a clothwheel or with a sharpening steel. If the wire edge/burr is not removed carefully the sharpness and durability of the cutting edge can be greatly impaired.

Victorinox AG

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November 5, 2015

Qd-00075_EN