

29.3.2006 Interesting facts about the original "Swiss Army Knife"



PRESS RELEASE

Technical details...

The exciting idea and the actual recipe for the success of VICTORINOX pocket knives lay in the multiple use of each spring: six blades on only two springs made it possible to produce the Army Knife in such a light and elegant form.

A special blade steel is used for both cutting blades, made of stainless chromium and molybdenum-alloys. After hardening at 1,040 degrees and tempering at 160 degrees, the blades have a hardness of RC 56 (RC = Rockwell C, unit of hardness).

The wood saws, scissors and nailfiles have a hardness of RC 53, the screwdrivers, tin-openers and reamers RC 52, and the cork-screws and springs RC 49.

The metal saw and file is case-hardened and hard chrome-plated, so that even iron and steel can be sawn or filed.

Since 1951, the separating strips (plates) have been made of an aluminium alloy.

As a consequence, the knives are lighter, which makes carrying them in trouser pockets more comfortable. Previously, plates used to be made of nickel silver.

The rivets and bushings are made of brass, the handles of Cellidor or Polyamid.

The spring presses onto the large blade with a force of approx. 12 kg, and, on the opposite side, onto the small blade with a force of around 8 kg. The total force of 20 kg presses backwards onto the corkscrew. With 2 springs and 6 pressure points, this results in a total spring pressure of 70 kg. This amount of pre-stress is required in order to let the blade snap shut, because the leverage ratio between axis and pressure point, and between axis and finger grip, is approx. 1 : 20. In the case of the SwissChamp with its 8 springs or 24 pressure points, the spring pressure therefore comes to a total of around 300 kg.

To resharpen the blades, VICTORINOX recommends using a honing stone, as the alloy from which the blades are manufactured is too hard for a honing steel.

... and clear VICTORINOX advantages compared with imitations

The typical clicking noise which occurs when the blade is opened and engaged is an audible sign of the high spring pressure. Even after years of intensive use, this spring pressure will remain the same.

The VICTORINOX can opener, which was patented in 1951, is unrivalled by any other pocket knife tin-opener when it comes to quality. It also has an additional small screwdriver for slotted and Phillips screws.

Only VICTORINOX knives have separating anodised aluminium strips adjoining the cork-screw, which provide a glass-hard, wear-resistant surface. This high-quality surface treatment doubles the cost of the parts.

The punch, bore and sewing reamers have an optimal profile as a result of two further machining processes.

The rivets in the knife are reinforced by six additional metal bushings.

The open VICTORINOX screwdriver is under increased spring pressure when in the working position. Its facing edge is positioned behind the knife's axis at an angle of 89°. This prevents the screwdriver from shutting when it is in use. It may also be used as an angled screwdriver. The bottle opener has been optimally designed to fit the widest range of bottle tops. The VICTORINOX wood saws were designed to be the maximum possible length. All the teeth are very sharp. The metal saw and file remain sharp for longer thanks to their greater surface hardness.

The mini screwdriver incorporated in the cork-screw (e.g. for little screws in glasses) is a VICTORINOX design.

In a final quality check, 90 people ensure that only those pocket knives which are in perfect condition are sent for dispatch. Each individual knife blade which leaves production undergoes a manual check to ensure a perfect finish. The VICTORINOX guarantee covers all material defects or manufacturing faults for an unlimited period.

Both the New York Museum of Modern Art and the State Museum for Applied Art in Munich have, on their own initiative, added a VICTORINOX Officer's Knife to their collections.

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