



1ST
STAINLESS
FLESHING &
SHAVING
BLADE

EXCALIBUR
FOR WORLD LEADING TANNERS



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HEUSCH. BEST SOLUTIONS FOR WORLD LEADING TANNERS.

Almost all world leading tanners use Heusch blades.
We are therefore familiar with the wishes and requirements of these demanding and discerning customers.

We have been confronted with an increasing number of problems regarding rust and rust spots in leather production.
In addition there was the request for increase in service life of the blades to improve productivity.

Heusch would not be Heusch, if we would not address this subject and present a solution.
Our answer to the call for freedom from rust in tanning is: EXCALIBUR!

Heusch develops solutions for current problems.



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THIS IS WHAT MAKES EXCALIBUR SPECIAL.

Basic material

All steel types used for leather blades were not corrosion-resistant to date. This led increasingly to rust and associated stains in hides and leather.

EXCALIBUR blades however are made of stainless, high-alloy, hardened, nickel-free chromium steel. This steel belongs to the group of stainless steels. As opposed to other steels in this group it is not alloyed with nickel which is considered detrimental to health. The steel's corrosion resistance is a result of its high chromium content of between 12% to 14%. This steel is in particular used in turbine engineering and pump construction as well as for the manufacture of medical and surgical instruments.

This steel has two main characteristics:

On the one hand it is corrosion resistant, on the other hand it is extremely resistant to wear and deformation.

These particular characteristics result in some special aspects for installation and use, in particular for the shaving blades. We have collated information for your use in the "EXCALIBUR user guide".

Unique Heusch manufacturing process

As an industrial standard, leather blades are hardened by means of a conventional induction hardening process. This results in unequal distribution of hardness and therefore soft areas on the blade.

Only Heusch succeeded in producing the required material properties for leather blades by means of a special manufacturing process.

However, the manufacturing of stainless leather blades was not possible to date, since the required hardness and elasticity of the knife could not be achieved. Heusch has developed a method to manufacture optimal leather blades made of stainless steel!

The stainless fleshing blades and shaving blades obtain the required material properties due to a unique manufacturing process. With this, the hardness values and elasticity values for the leather blades made of corrosion resistant steel are even better than those for traditional steel types.



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BENEFITS OF EXCALIBUR.

Higher longevity of the blades

During downtimes, normal blades become frequently rusty and have to be changed. The corrosion resistant EXCALIBUR blades are not subject to pitting. This is in particular helpful when the supply of hides is irregular or when longer unproductive times, such as vacation and public holidays, are pending.

A rusty knife has a further deficit: It can no longer be sharpened properly. This problem increases, the deeper the rust has penetrated the blade edge.

The corrosion resistant EXCALIBUR blades will not corrode. They can be sharpened during the entire service life and can therefore be used for a longer period.

EXCALIBUR blades have a long service life.

Corrosion resistance

The shaving machine's extraction systems cannot completely take up the metal dust resulting from blade grinding. The dust sets therefore in the entire shaving machine and in the surrounding area.

Particularly large quantities of metal dust result from dry shaving of leather hides or crust leather. All goods in the surrounding area may be damaged.

Large quantities of metal dust adhere directly to the blades as a result of electrostatic charging. The metal dust is "worked into" the goods during the fleshing / shaving process. These metal particles lead to later formation of rust spots and are responsible for the development of red/yellow stains.

Only EXCALIBUR does not cause rust spots in the leather, since the blades are made of stainless steel.

EXCALIBUR does not cause rust spots.



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Hardness and elasticity

High degree of hardness with high degree of elasticity, these are apparently contradictory features, which have to be united in a perfect blade. A high degree of hardness alone may result in cracking or breaking of the blades. This could harm people or damage material.

Only if a best level of elasticity and extraordinary hardness are in perfect relation, we refer to a Heusch blade.

To determine the optimal elasticity, Heusch collaborates with a metallurgic institute of the RWTH [Technical University] Aachen. Together, we have developed a method to determine an elasticity parameter for leather blades. We call this parameter "elasticity coefficient". Only Heusch guarantees optimal values for hardness and elasticity.

EXCALIBUR has optimal hardness and elasticity values.

Machine compatibility

All machines that have been equipped with Heusch blades to date are suitable for EXCALIBUR. In addition, EXCALIBUR can also be used in all machines, in which competitive products have been used.

EXCALIBUR blades are fully compatible with all common fleshing blades and shaving blades and can be used in all types of machines.

EXCALIBUR fits into any machine.

Service life

The constant hardness over the entire cutting length/working width is one of the significant advantages of all Heusch leather blades. As a result, the entire height of the blade can be used.

Of course, this applies to EXCALIBUR too. Its blades are in addition more resistant to wear and need significantly less re-grinding. Optimized grinding processes double the service life in comparison with other Heusch blades, which have already a long service life.

EXCALIBUR has an extraordinary service life.



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Leathers for fleshing and shaving

In addition to the classic cattle hides, sheep skin and goats skin, all types of hides which have been processed to date are suitable for the use of EXCALIBUR.

No limitations with regard to the type of hide are known to date. However, if you are unsure whether your hides can be processed with EXCALIBUR, please contact your local Heusch representative or send us an email: Service@Heusch.de.

EXCALIBUR works on all hides.

Flexibility when shaving

All conventional tanning processes can be used for shaving with EXCALIBUR: wet-blue, wet-white, crust leather and vegetably tanned leather.

There is now also more freedom as far as choosing chemical additives is concerned, since the moisture content of the leather has not effect on the use of EXCALIBUR. Whether you wet-shave or dry-shave, EXCALIBUR guarantees best results.

The advantageous characteristics of EXCALIBUR are particularly shown where high precision is required: For large chip volumes as well as for very thin leather hides.

EXCALIBUR shaves all hides.

Vegetable tanning

Common blades tend to develop rust particles in the leather when the leather has been tanned vegetably - thus without chemicals. Additives are used to slow / prevent formation of rust. It is thus not possible to refrain from chemicals.

The use of EXCALIBUR makes now the use of anti-corrosion agents unnecessary.

Leather can therefore now be produced "free of chemicals". The risk for increased rusting can now be avoided. EXCALIBUR advocates the global trend for "natural leather" and supports tanners on the pathway towards sustainable leather production.

EXCALIBUR supports environmentally-friendly tanning.