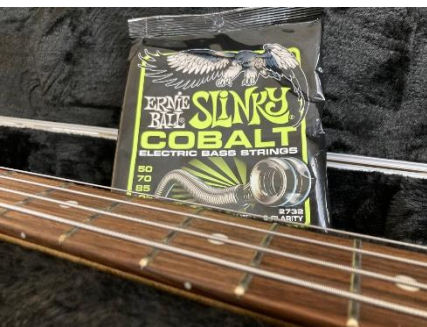


## From Hanau to the stages of the world

# Advanced magnetic materials produce fabulous sound

HANAU - VACUUMSCHMELZE (VAC) has been developing metallic alloys, special magnetic materials and products for almost 100 years now. In most cases, you cannot even get to see VAC's products because they do their work deep inside electrical components or in the form of metallic cores, coils, wires or foils. However, there is one very special VAC product that you can actually touch and that is even used by countless world stars to make their music sound even better.



Magnetism is omnipresent and influences our lives every day. Without magnetic fields, no electric circuit would work, no telephone would exist and no car could move. Even musical instruments like the electric guitar and the electric bass can only work through the influences of magnetism.

For this reason, in 2011 the company *Ernie Ball from the USA* approached VAC to expand its portfolio of strings for electric guitar and bass. Ernie Ball was founded in 1962 and is the world's leading manufacturer of high-quality strings and accessories for guitar and bass. Typically, a string is wrapped with a coated steel wire, which gives it its magnetic properties that ultimately, with the help of the pickup in the guitar, produce the sound. Ernie Ball's designers felt that improving the magnetic properties of their strings would have an immediate impact on tone quality. With this challenge, they turned to VAC of Hanau, Germany.

To optimally support the development and to obtain meaningful test results, Ernie Ball provided VAC with a *Musicman Stingray electric bass guitar*. After numerous tests with different alloys, a special cobalt-iron alloy was chosen for the string's outer wire. In the laboratory, the better magnetic and mechanical properties resulted in a measurably broader tonal spectrum. The newly developed alloy also proved to be a promising choice in terms of response and durability.



The developers at Ernie Ball used the results of VAC to produce the new *Slinky Cobalt Strings* series, which has since been available for electric bass and electric guitar. Numerous celebrities of the music industry, such as Slash (Guns n' Roses) Mike Dint (Green Day), Kenny Wayne Shepherd or Randy Jackson, do rely on the improved properties achieved by the alloy from Hanau. Regardless of the musical genre in which the strings are used, the stars report significantly better sound, a more pleasant feel and much longer durability. Furthermore, the strings offer their optimal performance right after mounting without having to be adjusted for a long time. The VAC developers are proud of the results and are pleased with the overwhelming feedback from the stars.

Since the development of the strings has been finished several years ago, the developers of VAC decided not to just let the legendary Musicman electric bass gather dust in the basement, but to donate the instrument to the local Hanau Paul-Hindemith Music School (PHM). On 4/27/22, Dr. Niklas Volbers (Director Advanced Research, VAC) and Hendrik Borgmeier (Head of Global Marketing & Communications, VAC) handed over the Musicman electric bass as well as some Slinky Cobalt Strings to Jörn Pick (Head of PHM).

Jörn Pick was delighted with the offer from VAC and was himself amazed at all the things that are produced in Hanau and the influence of Hanau's developments. *"We thank VAC for this great donation. Our students will certainly be thrilled to be able to learn on an instrument that is also used by AC/DC and the Red Hot Chilli Peppers, and at the same time get the opportunity to actually touch and use a VAC product."* Pick is excited about the opportunity to now have a reference instrument in the bass range available to PHM students. *"At the upcoming PHM band workshop from June 10 to 12, the instrument will definitely be used and VAC will then rock along a bit, too,"* the principal concludes.



(from left) Dr. Niklas Volbers, Jörn Pick and Hendrik Borgmeier at the handover of the Musicman Stingray to the Paul-Hindemith Music School

VACUUMSCHMELZE (VAC) is among the world's most highly innovative developers of magnetic materials, inductive components and other related products. With a global network of Sales and Field Application Engineers, VAC designs and manufactures tailor-made solutions for a wide variety of industries, comprising renewable energies, automotive, industrial automation installation technology, and aviation.