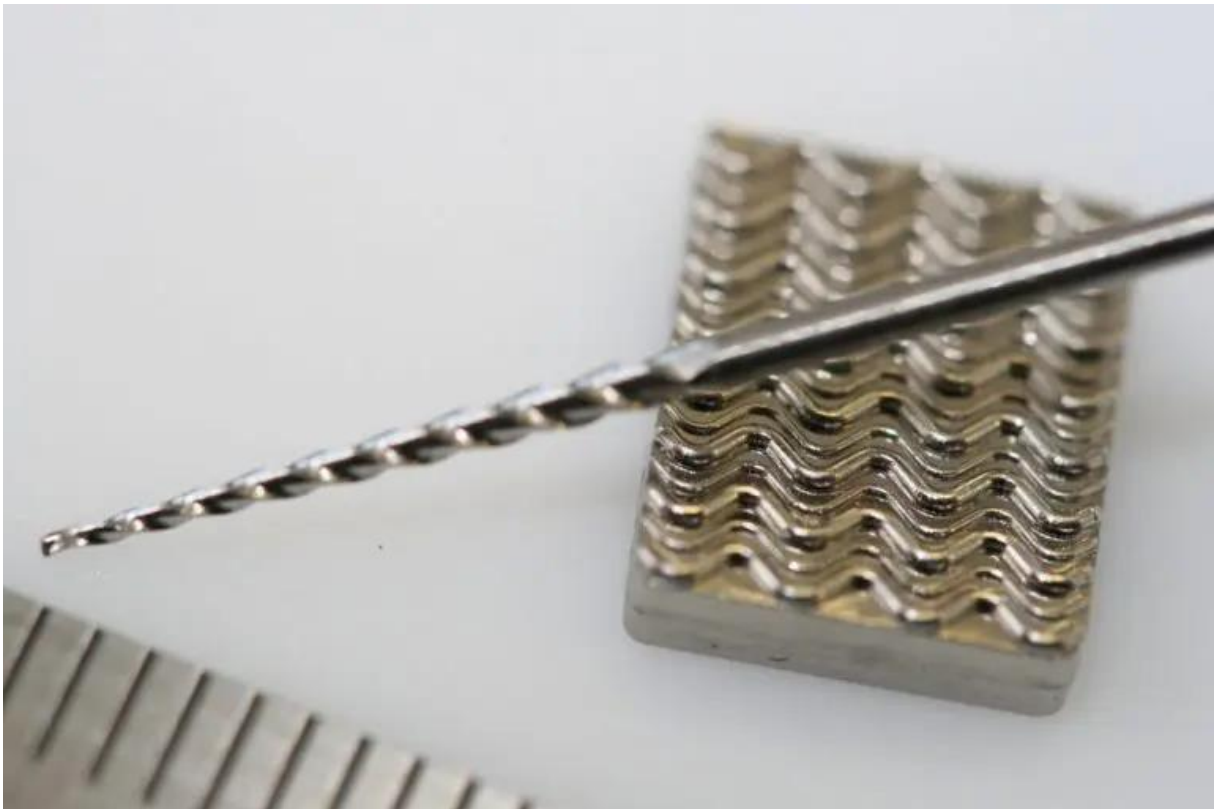


## Metals for miniature components in medical technology

Mechanical strength, high elastic deformability and hardness: Vulkam is launching a range of new metals that offer many new possibilities in the industrial production of miniature components.



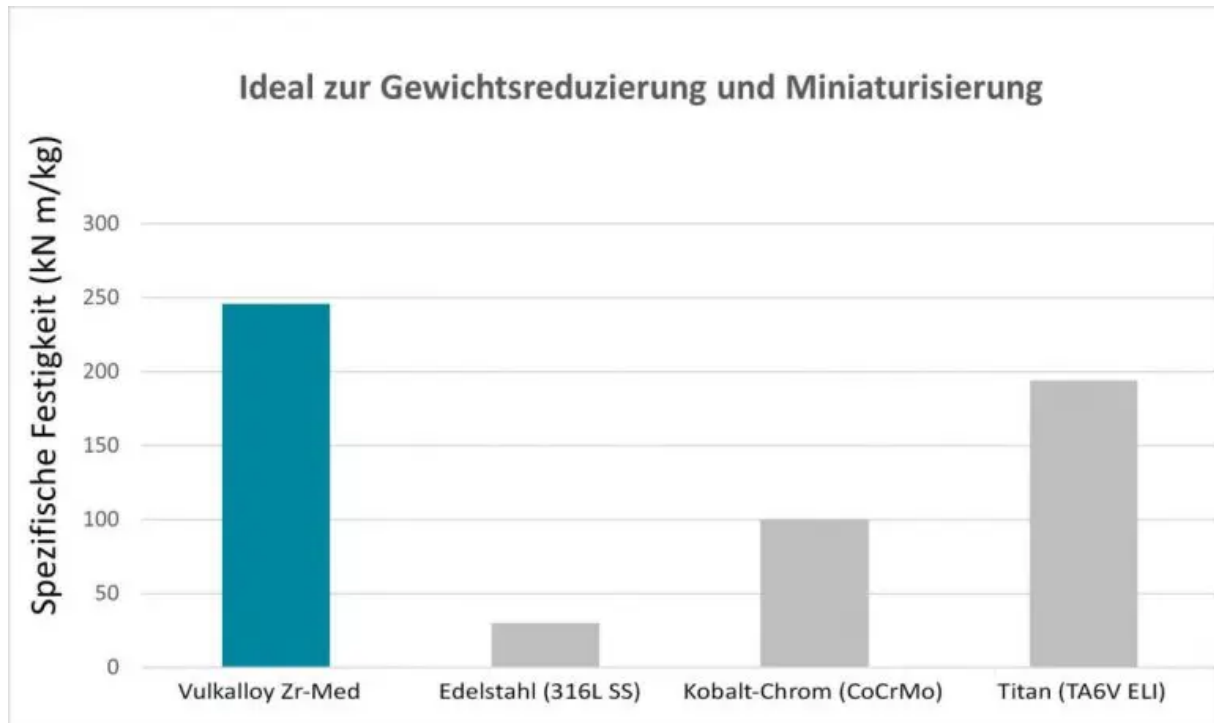
Vulkam offers medical, surgical and dental components based on new metal alloys with very high mechanical strength.  
Source: ©Vulkam

Whether in the field of implantology, minimally invasive surgery or dentistry, the newly developed metal alloys called Vulkalloys are characterised by a high mechanical strength of up to 3,000 MPa, an elastic deformability of 2%, a hardness of up to 797 HV and a possible friction coefficient of less than 0.1.

This technology is particularly suited to the field of implantology, minimally invasive surgery and dentistry for applications requiring miniaturisation. Vulkalloys are metals that exceed the performance of titanium alloys such as TA6V by 40%, particularly in terms of specific strength. They can reduce the weight of parts by about 40% and their size by up to 50%. They have a dual elastic effect and high hardness, thus improving the longevity of medical components. A range of Vulkalloys has been specifically developed to meet the highest requirements in terms of mechanical and physical properties as well as biocompatibility.

Incomparable properties ...

Vulkam is a French company specialized in amorphous metal alloys. The technology used consists in modifying the atomic structure of metals in order to confer unique mechanical properties to the manufactured parts. The functional properties of Vulkalloys are not comparable to the properties of metals commonly used in medical and dental applications, in the watch industry, in the aerospace industry or even in the sports and leisure sector.



Source : ©Vulkam

... for durable miniature components.

The component manufacturing process was specially developed for Vulkalloys and adapted to the production of miniature components - from a few tenths of a millimetre to several centimetres. In two patented phases, components or preforms of different shapes are produced and the geometry is optimised. The combination of alloy production and moulding ensures complete process control and guarantees the highest quality of the manufactured parts. The thermoforming stage can be followed by a conventional or specific machining stage, where the parameters are adapted to the materials so as not to alter their properties.

Source : [www.vulkam.com](http://www.vulkam.com)