

ACTUATORS MADE OF SHAPE MEMORY ALLOYS



Assemblies made of shape memory alloys are used as thermal actuators in the automotive industry as well as in further applications of measurement and control technology, appliance technology, aviation industry as well as medical technology.

When heated, the actuators »remember« their original shape and are able to return to the original shape after deformation.

For more than 40 years, G.RAU has been researching and developing shape memory alloys and their applications. Quite rightly, we can call ourselves undisputed experts in this field, as we combine all manufacturing steps from the melt to the final complex part. at our facilities. Besides our predominant use of nickel-titanium alloy, we also use other special materials and also are constantly in the process of expanding our product range.

One-way effect elements only remember a high temperature shape to which they return upon heating. On the other hand, two-way effect

elements remember the high temperature shape upon heating and the low temperature shape upon cooling. A two-way behavior can also be achieved by combining a one-way element with a counterforce. This reversible change of shape, with the aid of an external counterforce provides a self-sustaining solution.

G.RAU supplies parts according to customers' specifications as compression, tension, bending or torsion elements, as well as fasteners and sealing elements. Depending on the alloy and processing, the transformation temperatures of our memory elements are between -20 and +80 °C. Further developments should expand the transformation temperatures to higher ranges.

Thanks to our extensive experience in working with these materials, we are able to realize new and innovative solutions in collaboration with our customers.

We would be happy to answer any questions you may have about shape memory alloys.