

**THE MATERIAL
IS THE MACHINE –
SMART ALLOYS
WITH THE ABILITY
TO MEMORIZE.**



**WE LOOK FORWARD
TO YOUR CHALLENGE!**

*Arrange a discussion
with our experts today – call
+49 (0) 721 47 00 02 40*

*Or send us an e-mail
contact@memetis.com*

SHAPE MEMORY EFFECT

Due to their unique microstructure, shape memory alloys have the ability to „remember“ a previously imprinted shape. In the cold state they are easily deformable, e.g., by a spring or weight force. When heated, e.g., by a heating current, the shape recovers and the actuator develops considerable forces and strokes.



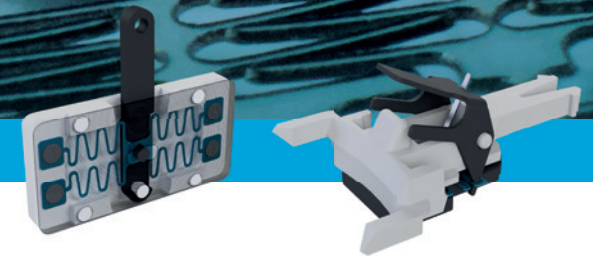
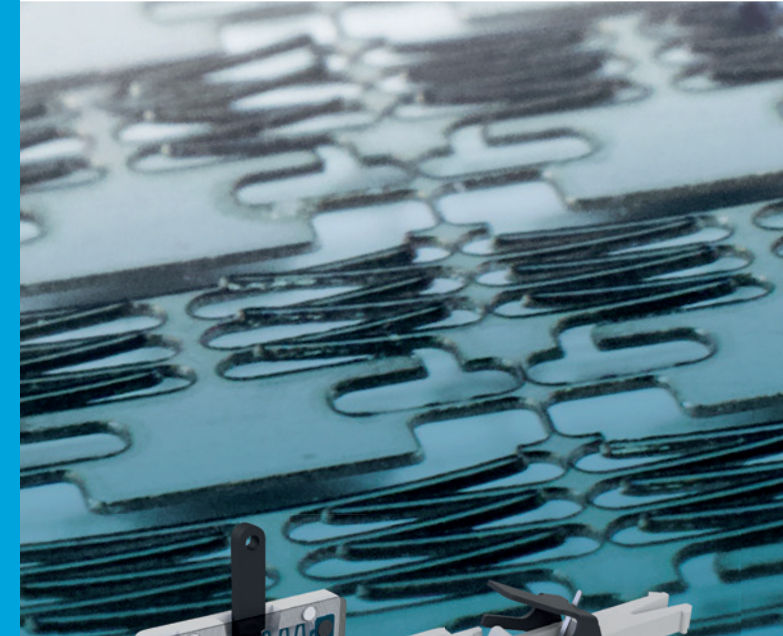
Shape recovery by heating



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WWW.MEMETIS.COM



ACTUATION

**ACTUATORS BASED ON
SHAPE MEMORY ALLOYS**

*OVERCOME THE LIMITS OF
MINIATURIZATION*

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OUR OFFER

- > Unique know-how in the field of Shape Memory Actuation
- > Design of actuators and complete (actuator) systems
- > Professional support from brainstorming to series production
- > Prompt feasibility studies through rapid prototyping in early project phases
- > Close cooperation with our customers
- > Broad-based and competent team
- > Series production with quantities ranging from one to a million

UNIQUE FEATURES

- 01 / High power density
- 02 / Silent operation
- 03 / Adaptable to customer requirements
- 04 / Monostable / controllable or bistable
- 05 / Discrete / continuously
- 06 / Low fatigue
- 07 / Easy to integrate in existing systems
- 08 / Small installation space

INNOVATIVE ACTUATION TECHNOLOGY

More and more functionality in less and less space - we make it possible with customized actuators even where conventional technologies reach their limits. The functional principle of memetis miniature actuators is based on the targeted structuring of high-performance shape memory alloys (SMA) into two- or multi-dimensional components.

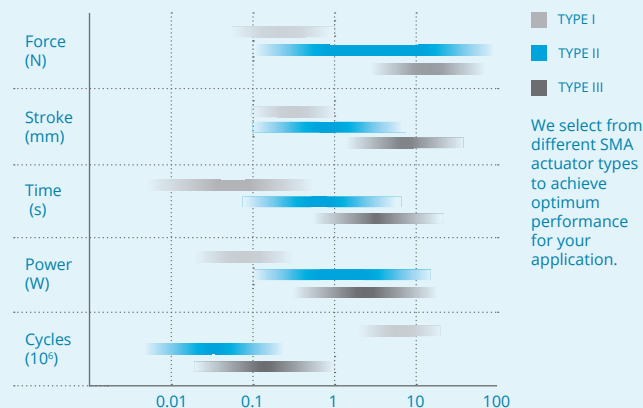
We accompany our customers from the feasibility study through development to series production.



Various flat designs allow different types of motion, displacement and forces.

OUR TECHNICAL POSSIBILITIES

Our wide range of thin-film and spring actuators enables the implementation of a multitude of movements. memetis selects **the optimal material** for your application and develops an individual actuator design.



USE CASE MODEL TRAIN COUPLING

As market leader in the model train industry, Märklin attaches great importance to innovation, attention to detail, functionality and play value in its models. As part of the new edition of the collector's model „Crocodile“, an extremely slim telex coupling developed by memetis was introduced.

memetis develops ultra-compact linear actuators for „authentic movement in the smallest space“.

Already in the first year a number of 50,000 actuators could be delivered to Märklin.

BISTABLE LINEAR ACTUATOR

Shape memory actuators with curved spring structures are particularly suitable for achieving the longest possible displacements with the smallest component size. The bistable design is particularly energy-saving.

Size 10 x 17 x 2 mm³,
Force (customer-specific) ~ 0.05 N,
Stroke 4 mm

