

Satellites  
Transversal competencies



Founded in 2008, Nimesis relies on a technical know-how of more than 30 years in the field of shape memory alloys (SMA).

Nimesis develops, designs, and produces actuators, thermal safety devices and other smart devices for the industry.

Dedicated to the business development of the SMA Technology and leader in the field of smart space actuators, Nimesis is also present in other fields, such as biomedical, nuclear, aeronautics, defense, automotive and luxury watchmaking.

## COMPETENCIES & CAPABILITIES

- Expertise in the technology of shape memory alloys
- Unique know-how, highly specialized skills
- Patented processes
- European leader in the development of devices using SMA for different industries.
- R&D and manufacturing means, from elaboration to assembly in clean room
- Expert in projects monitoring (from feasibility study to product delivery)
- Expertise in 4D printing



Triggys® TRHT02

# NIMESIS TECHNOLOGY

## PRODUCTS & SERVICES

Nimesis developed and implemented a series of new actuators, mainly for the space industry. They are considered as the perfect solution for deployment, locking, unlocking, release or dismantlement of spacecraft mechanisms, and can be described as follows:

<p><b>TRIGGY®</b> is our off-the-shelf product, used for the deployment, locking, unlocking, release or dismantlement of spacecraft mechanisms:</p> <ul style="list-style-type: none"><li>➤ Compatible with HDRM (Hold Down Release Mechanisms)</li><li>➤ Triggering time: 30 to 300 sec</li><li>➤ Triggering temperature up to 230°C</li><li>➤ In Orbit operational temperature range: from -120°C to +120°C</li><li>➤ Preload up to 60 kN</li></ul>	<p><b>Pinloader</b>, still under development is a new auto-resettable smart actuator to deploy, lock unlock, release spacecraft mechanisms:</p> <ul style="list-style-type: none"><li>➤ Compatible with HDRM</li><li>➤ Triggering time: 30 to 90 sec</li><li>➤ Triggering temperature up to 230°C; select your own triggering temperature from 0°C to 230°C</li><li>➤ In Orbit Operational Temperature range - 120°C to +120°C</li></ul>	<p>Other HDRMs (Hold down and release mechanism for space applications) that are being developed are:</p> <ul style="list-style-type: none"><li>➤ <b>HECTOR</b>, our smart rotative actuator that provides a simple, unique and efficient solution for rotation in space mechanisms.</li><li>➤ The <b>Hinge</b> is used for a smooth deployment of antennas or booms.</li></ul>
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## MAJOR SPACE PROJECTS & REFERENCES

- Patents: process for producing a monocrystalline copper-based alloy
- R&T References with CNES:
  - ✓ R&T R-S18/ TG2-0002-008: Increase of the diameter of AMF HT bars
  - ✓ R-S16/TG-0002-008: DEVELOPMENT OF A HIGH TEMPERATURE SMA-BASED MECHANISM
  - ✓ R-S18/TG2-0002-136 and R-S19/TG2-0002-136: Study of heating systems for AMF components
- European Commission (EIC accelerator HORIZON2020 and CLEAN SKY2)
- Development projects with ESA, such as the 4D printing
- POC CNES dedicated to the qualification of Triggy actuators.
- Developments and projects with Airbus, DGA, and other organisms
- ISO: Nimesis has recently recruited a quality engineer to obtain the EN9100 quality standard.

## POINT OF CONTACT

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**TURNOVER** 636 439 €

**WORK FORCE** 18 employees

**SPACE TURNOVER** 439 143 €

**SPACE WORK FORCE** 10 employees