SENER, 50 years delivering reliable equipments and systems for Space

In Space, SENER provides engineering and manufacturing services in three areas of activity: mechanisms, optical payloads, and guidance, navigation and control (GNC) systems. With almost 50 years of experience in Space, SENER is a global benchmark company with more than 260 equipments and systems successfully launched in satellites and spacecrafts of NASA, ESA, JAXA and Roscosmos.

TECHNOLOGICAL CAPABILITIES:
Ability to address complete system projects as main contractor (design, manufacture, verification and final integration) in mechanisms (deployment and precision mechanisms and control electronics), optical payloads and GNC systems.

PRODUCTS:
MECHANISMS:
1. Deployment mechanisms:
   - Boom.
   - Antenna pointing mechanisms.
   - Radar deployment systems.
   - Deployment systems for large-size structures.
2. Control electronics:
   - Antennapointingmechanismelectronics.
   - Mechanism control units.
3. Precision mechanisms:
   - Micro-positioners.
   - Scanner.
   - Filter wheels.
   - Shutters.
   - Flip-flop mechanisms.
   - Calibration mechanisms.

GNC SYSTEMS:
1. Control algorithms.
2. Attitude and Orbit Control Systems.
3. SCOE - Special Check-Out Equipment.

OPTICAL PAYLOADS:
1. Telescopes.
2. VIS/NIR cameras.

MAIN PROGRAMS:
MTG, Solar Orbiter, GAIA, MSL, PROBA - 3, EXOMARS, BepiColombo, HERSCHEL & PLANCK, WSO, SEOSAT / INGENIO, GMES (SENTINEL 1, 2 & 3), ROSETTA.

MAJOR CUSTOMERS:
ESA, JPL - NASA, JAXA, ROSCOSMOS, CNES, Airbus Space & Defense, Thales Space, OHB, RUAG, SELEX, CSIC.

Certifications:
ISO 9001 / ISO 14001 / OHSAS 1001 and UNE 166002

Specific aerospace standards:
EN 9100, EN 9110, EN 9120, AQAP/PECAL 2110-2210

Turnover (M €): 1,218

Gaia deployable sunshield test at Kourou ©ESA
SEOSAT/Ingenio qualification campaign.
Solar Orbiter’s So-Phi instrument (STM model).
SENER, centre of excellence in control and actuation systems for missiles

In Defense, SENER develops control and actuation systems; guidance, navigation and control (GNC) systems; and optical systems / ISR-related technology. The company has the capability for series production and maintenance of the product throughout its life cycle. SENER also carries out system integration in aircraft and vehicles, as well as upgrades and extension of operational life of aircraft and vehicles.

TECHNOLOGICAL CAPABILITIES:
Ability to provide a complete service, from design to production, integration and maintenance of the product throughout its life cycle. Recognized centre of excellence in control and actuation systems for missiles.

PROGRAMS:
• Program for the mission systems upgrade and extension of the operational life of Spanish Navy AB212 helicopters.
• Design and manufacture of the FAS (Fin Actuation Subsystem) of the Meteor missile.
• Stabilized Mirror Unit (SMU) of the sight of the RBS 70 NG system.
• Control Sections of the IRIS-T AA and IRIS-T SL missiles.
• Acquisition and integration of the TAURUS KEPD350 missile in the EF-18 aircraft.
• Control and Actuation System (CAS) of the NSM missile.
• Heating, ventilation, and air conditioning (HVAC) projects for ground combat vehicles operating in desert environments.
• Methanol reformer for AIP-equipped submarines.

MAJOR CUSTOMERS :

Turnover (M €): 1,218

CERTIFICATES:
ISO 9001 / ISO 14001 / OHSAS 1001 and UNE 166002

Specific aerospace standards:
EN 9100, EN 9110, EN 9120, AQAP/PECAL 2110-2210