

## PRESS RELEASE

# SENER will make Antenna Deployment and Pointing Mechanism for the Euclid satellite

Warsaw (Poland), March 7, 2018 - The mechanism designed by the [SENER](#) engineering and technology group is critical to success of the Euclid mission, because it is responsible for deploying and moving the antenna used to communicate with the mission center on Earth.

Antenna Deployment and Pointing Mechanism - ADPM - is a set of precision cylinders arranged in three axes - one will be used to unfold the antenna, and the other two will serve to determine its direction. The set also allows for transmission of two radio signals from the satellite to the antenna.

SENER engineers are responsible for design and implementation of drives, connections for signal and power transmission, as well as structure of the entire mechanism. Both the rotary joint and actuators are proprietary solutions developed by SENER.

SENER implements the project on behalf of the main contractor for the mission, Thales Alenia Space Spain. Recently, one of the last stages of the entire project, the so-called Readiness Review (TRR) for the qualification model, was closed. This means that the mechanism has been assembled and test positions have been prepared for commencing test campaign.

For the Euclid mission, SENER is the prime contractor of the satellite's Attitude and Orbit Control System (AOCS / GNC). It also develops the Secondary Mirror Refocusing Mechanism (M2M) and is responsible for the design, production, integration and verification of the deployment and gimbal mechanism for the High Gain Antenna (HGA). SENER is also responsible for the design, manufacture and testing of thirteen support units for the assembly of the large satellite comprising the Euclid probe.

## About Euclid Scientific Mission

The objective of the European Space Agency's Euclid mission is to understand why the Universe is expanding at the pace we have observed. This question may be answered by the research instruments the probe is equipped with. They will enable us to look at an image of the Universe 10 billion years ago. The satellite is to be launched into space in 2020 on board the Soyuz rocket from Guiana Space Centre in Kourou in French Guiana.

The Euclid satellite's antenna will be used to send a lot of data from observation of the universe to Earth. Data transmission and development of software for its processing are the mission's key elements. More than 1,200 people in more than 100 laboratories in 15 countries will be involved in the scientific use of this data. As part of the mission, it is planned that within 10 years of its duration, 9 scientific Euclid Consortium data centers in different countries will process over 10 petabytes of raw images. The ultimate goal is to make the entire Euclid mission database publicly available to the scientific community by 2028.

Further information:



## ***About SENER***

SENER is a private engineering and technology business group founded in 1956. Its aim is to offer its clients the most advanced technological solutions and to achieve international recognition based on its independence and commitment to innovation and quality. SENER has almost 2,500 professionals across its centers in Algeria, Argentina, Brazil, South Korea, Chile, China, Colombia, the United Arab Emirates, Spain, the United States, Morocco, Mexico, Poland, Portugal, the United Kingdom and South Africa. The group's operating revenue exceeded 910 million euros (2016 data).

SENER brings together its own Engineering and Construction activities with industrial holdings in companies working in the field of Aeronautics and Energy & Environment. In the field of Engineering and Construction, SENER has become a leading company worldwide in the fields of Aerospace; Infrastructure and Transport; Renewable, Power, Oil & Gas; and Marine.

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