

PRESS RELEASE

SENER Group's companies supply the antennas to the BepiColombo satellite

Madrid (Spain), 17 October 2018 - The companies of the engineering and technology group [SENER](#) have been heavily involved in [BepiColombo](#), the Mercury mission of the [European Space Agency](#) (ESA), in collaboration with the Japanese agency JAXA, that will be launched into space in the early morning hours of October 20 from the Kourou spaceport in French Guiana, onboard an Ariane 5 launch vehicle.

In this project, the SENER group companies are responsible for the low-gain antennas, the medium-gain antenna and the waveguides for routing the signal and the pointing mechanism for the high-gain antenna. These units are responsible for staying in contact with the Earth at all times by transmitting the satellite's telemetry and receiving its telecommands, as well as sending all the scientific data. They are thus a critical element to the success of the mission.

SENER also manufactured the magnetometer boom, which separates the instruments from the satellite's magnetic influence. SENER thus confirms its standing as the leading provider of boom instruments for ESA.

Manufacturing these units required certifying a number of processes at the forefront of technology, such as titanium plating, the gearhead motors and sensors for high-temperatures, as well as other components that must work in a wide range of temperatures (-130° C to +540° C) in order to satisfy the extreme thermomechanical conditions of this mission.

The development of BepiColombo has provided the companies in the SENER group with the experience they needed to complete subsequent work, such as the complete antenna subsystems - high, medium and low gain antennas (HGA, MGA and LGA) - for the [Solar Orbiter](#) and the waveguides for the high together with medium gain antenna major assembly on the [JUICE](#) Jupiter mission, which also posed significant technical challenges due to the environmental extremes. SENER was also involved with the antennas on the Curiosity rover, which is currently on Mars, and on the [Euclid](#) mission to study dark energy and dark matter.

This new milestone and its engineering contributions confirm SENER's standing as one of the leading groups for the ESA's science programs. For [more than 50 years](#), SENER has been a top-tier supplier of electromechanical components and systems, navigation systems (GNC/AOCS), communications, astronomy and optics systems for Space, and it is currently participating in the main programs of ESA and NASA (including, in addition to those already mentioned, Hubble, Galileo, MetOp, Rosetta, Gaia, MTG, Herschel and Planck, IXV, Proba 3 and Mars 2020) and of the European Space Observatory (ESO).

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 more than 2,500 professionals across its centres in Algeria, Argentina, Brazil, South Korea, Canada, Colombia, Chile, China, the United Arab Emirates, Spain, the United States, Morocco, Mexico, Poland, Portugal, the United Kingdom and South Africa. The group's operating revenue exceeded 766 million Euros (2017 data).

SENER brings together its own Aerospace and Engineering and Construction activities with industrial holdings in companies working in the field of Energy & Environment. In Aerospace, SENER has more than 50 years of experience and it

Further information:

Oihana Casas. Communications. SENER.
Tel (+34) 918077318 /(+34) 679314085

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