

Video: Testing Galileo for space

November 4 2022



Credit: European Space Agency

Galileo has grown to become Europe's single largest satellite constellation, and the world's most accurate satellite navigation system, delivering meter-level positioning to more than 3.5 billion users around the globe.

It all began at ESTEC's Test Center, Europe's largest [satellite](#) testing facility. This is where the very first positioning fix took place in March

2013, after the launch into orbit of the initial four IOV satellites. Following that, all 34 Galileo Full Operational Capability satellites also passed by ESTEC for their pre-flight testing.

This 3000 sq. m environmentally-controlled complex, operated and managed by European Test Services for ESA, hosts an array of test equipment able to simulate all aspects of spaceflight, from the noise and vibration of [launch](#) to the vacuum and temperature extremes of Earth orbit.

The [production line](#) at manufacturer OHB in Germany completed one new satellite every six weeks. After [integration](#) each satellite was then shipped to the ESTEC Test Center for a three-month test campaign, after which it would be accepted by the Agency and declared ready for flight. Some facilities have had to be adapted specifically for Galileo, and the ESTEC Test Center had to institute new security protocols because this was the first time that satellites with security restrictions were being tested at the site.

Today there are 28 of these Galileo First Generation satellites in service, with 10 more due to be launched in the next years. Upgraded Galileo Second Generation satellites are under development and will follow them into orbit later this decade.

Members of ESA's Galileo team and ETS look back on this massive testing effort that established Galileo was ready for space.

Provided by European Space Agency

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