**Beyond Gravity: 100 Steering mechanisms contracted**

### Beyond Gravity, a leading space supplier, has contracted around 100 steering mechanisms for electric satellite thrusters. Due to the high demand the company is doubling its production in Vienna, Austria.

With an order intake of around 24 million euros Beyond Gravity has recently received major orders for its steering mechanisms for electric satellite thrusters. “With around 100 ordered models in total, we show up as being among the world’s largest manufacturers of steering mechanisms for electric satellite thrusters,” says Oliver Grassmann, Executive Vice President Satellites at Beyond Gravity (formerly RUAG Space). Satellites are increasingly using electric thrusters, in which ionized gases are accelerated using strong electric fields. Precise mechanisms are required to control these electric satellite thrusters. Beyond Gravity develops and manufactures the steering mechanisms at its site in Vienna, Austria.

**Doubling the production area**

Due to the high demand from satellite manufacturers worldwide Beyond Gravity doubled its clean room production area from 100 to 200 square meters. “The new clean room enables us to enter series production. Instead of one or two mechanisms per year, we will be able to produce around ten per year,” explains Wolfgang Pawlinetz, Vice President Thermal & Mechanisms at Beyond Gravity. “As the space sector is booming and many more satellite projects are planned, we expect many more orders in the future.” While mechanisms consisting of up to 6,000 individual parts were built in the past, the newly developed product only has 900, which allows for a much shorter production time. Pawlinetz: “It takes only 18 months from order to delivery. That is an express delivery, which sets us apart from others.” Unlike products from competitors, the standard APPMAX mechanisms do not require a hold down device for launch. This saves weight and eliminates a potential source of failure.

**Cost-effective scalable mechanisms**The APPMAX2 (2 stands for two axes) is part of Beyond Gravity's family of Advanced Electric Propulsion Pointing Mechanisms (APPMAX). This product family includes cost-effective, scalable mechanisms for various applications and satellite platforms. Two flight models of APPMAX2 were delivered in October and two more in April. The two-axis pointing mechanism product family ranges from very small mechanisms the width of a shoebox to very large electric propulsion pointing mechanisms.

**World’s largest steering mechanism for electric satellite thrusters**

Beyond Gravity is building the world’s largest steering mechanism for electric satellite thrusters. The APPMAX2-Heavy mechanism will be used for the future NASA Gateway space station and will steer a 50 kilogram thruster. The customer is US satellite manufacturer Maxar, and delivery is scheduled for the end of 2025.

**APPMAX3 for GEO satellites: very cost-effective adaptation**The 3-axis mechanism from Beyond Gravity is specifically designed for large geostationary satellites whose orbit is at an altitude of around 36,000 kilometers. 10 models of the 3-axis mechanism have already been ordered and 25 more are expected to be ordered this year. The modularity of this 3-axis arm enables very cost-effective adaptation to other satellites and other thruster types.

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**Image and video material for use at your own discretion:**

[Image 1](https://www.beyondgravity.com/sites/default/files/styles/gallery_lightbox_x_large/public/media_image/2024-04/Appmax%20steering%20mechanisms%20for%20electric%20satellite%20thrusters%20during%20shaker%20tests.jpg.webp?itok=ki--bDFv): Steering mechanisms for electric satellite thrusters have been developed and manufactured by Beyond Gravity in Vienna for over 25 years. Beyond Gravity, Anna Rauchenberger

[Image 2](https://www.beyondgravity.com/sites/default/files/styles/gallery_lightbox_x_large/public/media_image/2024-04/Image%202%20opening%20steering%20mechanisms%20cleanroom.jpg.webp?itok=3w1qSCuH): The newly expanded clean room for steering mechanisms in Vienna was officially opened beginning of April 2024. In the picture (from left): Kurt Kober (Managing Director Austria), Mischkulnig Margit (Head of Space Department at the Austrian Space Ministry), Wolfgang Pawlinetz (VP Thermal & Mechanisms at Beyond Gravity), Karin Tausz (Managing Director FFG), Andreas Geisler (Head of Space Agency at FFG Austrian Research Promotion Agency). © Beyond Gravity, Anna Rauchenberger

[Image 3](https://www.beyondgravity.com/sites/default/files/styles/gallery_lightbox_x_large/public/media_image/2023-05/Oliver%20Grassmann-029.jpg.webp?itok=2TXVgR0W): “With around 100 ordered models in total, we show up as being among the world’s largest manufacturers of steering mechanisms for electric satellite thrusters,” says Oliver Grassmann, Executive Vice President Satellites at Beyond Gravity. © Beyond Gravity

[Image 4](https://www.beyondgravity.com/sites/default/files/styles/gallery_lightbox_x_large/public/media_image/2024-04/Wolfgang%20Pawlinetz%20with%20APPMAX2%20steering%20mechanism_Anna%20Rauchenberger%20RAU-9173.jpg.webp?itok=V045dzO5): Wolfgang Pawlinetz, Vice President Thermal and Mechanisms at Beyond Gravity in the new cleanroom in Vienna next to an APPMAX2 steering mechanism for electric satellite thrusters © Beyond Gravity, Anna Rauchenberger

[Video animation](https://www.youtube.com/watch?v=YEkYihsJ6yc) of APPMAX2 steering mechanism:

**Please contact us for further information:**

Philipp Bircher, Vice President Corporate Communications & Branding  
+41 79 790 11 81, [philipp.bircher@beyondgravity.com](mailto:philipp.bircher@beyondgravity.com)

Christian Thalmayr, Senior Manager Global Communication, +43 1 80199, christian.thalmayr@beyondgravity.com

This media release can also be found at [www.beyondgravity.com/news](http://www.beyondgravity.com/news)

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**Beyond Gravity,** headquartered in Zurich, Switzerland, is the first space company to combine a startup mindset, agility, speed and innovation with decades of experience and proven quality. Approximately 1800 employees at 14 locations in seven countries (Switzerland, Sweden, Austria, Germany, USA, Finland and Portugal) develop and manufacture products for satellites and launch vehicles with the goal of advancing humankind and enabling the exploration of the world and beyond. Beyond Gravity is the preferred supplier of structures for all types of launch vehicles and a leader in selected satellite products and for constellations in the New Space sector. In 2023, the company generated a revenue of around CHF 383 million. More information at: [*www.beyondgravity.com*](http://www.beyondgravity.com)