



ITALIAN ESPRESSO IN SPACE TO CELEBRATE INTERNATIONAL COFFEE DAY

European Space Agency astronaut Paolo Nespoli and the Italian Space Agency VITA mission crew have successfully once again tested the ISSpresso project, drinking coffee thanks to the innovative capsule-based espresso machine created by Argotec for Lavazza

Turin, Italy (October 1st 2017) – The crew of the Italian Space Agency (ASI) mission VITA (Vitality, Innovation, Technology, Ability), including most notably the European Space Agency astronaut Paolo Nespoli, have enjoyed an authentic Italian espresso on board of the International Space Station (ISS) to celebrate International Coffee Day.

In fact, the crew has successfully tested the capsule-based espresso machine **ISSpresso** created by **Argotec for Lavazza** — in a partnership with the **Italian Space Agency (ASI)** — which on 3 May 2015, during the Italian Futura mission, allowed **Samantha Cristoforetti** to drink the first espresso in micro-gravity conditions in history.

In its first phase, the partnership with ASI, which coordinated the experiment, allowed the ISSpresso machine to be brought to the International Space Station, and then, through negotiations with NASA, to be kept permanently operational onboard. International Coffee Day has thus been the occasion for the two European Space Agency's Italian astronauts to pass the baton on, from **Samantha Cristoforetti** to **Paolo Nespoli**, who is now on his third space flight and, in recent months, has been able to perform several experiments promoted by Argotec.

"We are proud to be able to celebrate International Coffee Day 400 kilometers above Earth's surface thanks to this important 100% Italian research project developed with Argotec," commented Marco Lavazza, Group Vice Chairman. "ISSpresso allows Lavazza to confirm its role as a pioneer in innovation: the ISSpresso technology has allowed astronauts to enjoy in space the same blend available on ground".

The ISSpresso machine — a true technological and engineering marvel — has thus allowed another Italian astronaut to **enjoy espresso in space, just like at home**. ISSpresso has been studied to replicate on orbit the same aroma enjoyable on ground: the crema and coffee are not mixed, as on Earth, but are separate, with the traditional cup replaced by a special pouch. Indeed, ISSpresso is capable of making coffee in extreme conditions, where the principles of fluid dynamics are completely different from on Earth.

The preparation process followed by the crew during the test were the same: the utmost practicality and simplicity for espresso to be enjoyed through a straw. ISSpresso meets the very stringent requirements set by NASA in terms of compatibility with the systems already present on board and those interfacing with astronauts. It also has an innovative device that allows the coffee dispensing line to be cleaned.

David Avino, Managing Director of Argotec, commented, "ISSpresso has become a permanent onboard component of the International Space Station. And after two years on the ISS in micro-gravity conditions, the machine remains fully operational, confirming the excellence of the design work. This robust, reliable design is not only capable of treating the crew to a flavourful break, but also provides fascinating opportunities for the



study and analysis of physical phenomena that are impossible to replicate on Earth. This scientific interest also accompanies a green vision of the product: thanks to this system, we have already patented innovative technologies capable of eliminating the coffee and water deposits generated by machines on Earth, thus reducing water waste by up to 30%.”

Gabriele Mascetti, Head of Human Flight and Microgravity at the Italian Space Agency, commented: *“The current international scenario of increasing interest in human space exploration is laying the foundation for ensuring the future presence of astronauts beyond low Earth orbit not seen since the days of the Apollo missions. The incredible financial efforts entailed by such undertakings are driving new global approaches and the growth of new markets. Within this scenario, the race to explore space is also being driven by commercial players: ISSpresso, the result of a public-private partnership, is a brilliant example of how the Italian Space Agency has succeeded in promoting interest in space through wholly private efforts. Furthermore, given the strong credibility enjoyed by ASI with NASA and solid bilateral relations, ASI has negotiated the use of ISSpresso as an onboard system of the Space Station and no longer an Italian experiment: in other words, this means that the device will remain on the Station, instead of burning up in the atmosphere, and the resources needed to keep it operational will be provided by NASA, without weighting on Italy’s rights to use of the Space Station. As a result, the astronauts living on the ISS will be able to enjoy authentic Italian coffee for a long time to come.”*

About Lavazza

Established in 1895 in Turin, the Italian roaster has been owned by the Lavazza family for four generations. Among the world’s most important roasters, the Group currently operates in more than 90 countries through subsidiaries and distributors, exporting 60% of its production. Lavazza employs a total of about 3,000 people with a turnover of more than €1.9 billion in 2016. Lavazza invented the concept of blending — or in other words the art of combining different types of coffee from different geographical areas — in its early years and this continues to be a distinctive feature of most of its products.

The company also has over 25 years’ experience in production and sale of portioned coffee systems and products. It was the first Italian business to offer capsule espresso systems.

Lavazza operates in all business segments: at home, away-from-home and office coffee service, always with a focus on innovation in consumption technologies and systems. Lavazza has been able to develop its brand awareness through important partnerships perfectly in tune with its brand internationalization strategy, such as those in the world of sport with the Grand Slam tennis tournaments, and those in fields of art and culture with prestigious museums like New York’s Guggenheim Museum, the Peggy Guggenheim Collection Venice, and The Hermitage State Museum in St. Petersburg, Russia.

Argotec

Founded in 2008, Argotec is an Italian aerospace engineering company which offers research, innovation and development services and products aimed at various fields: engineering, information technology, systems integration, human space flights and operations, solutions for the renewable energy sector, production of space food for European astronauts, and design and manufacturing of small satellites. The company’s certified instructors train European astronauts and flight controllers at the European Astronaut Center in Cologne. Argotec also performs research work in many areas of the aerospace industry and is one of the main players in various projects to design and develop thermal and fluid dynamic systems for the International Space Station. Argotec has always focused its R&D activity on the aerospace engineering sector to develop innovative systems and services whose application can contribute to improving living conditions on Earth. These are the principles underpinning the development of ISSpresso and several highly efficient thermal systems, as well as many other payloads and systems for space.

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