

Successful first test for the Ariane 6 Vulcain engine

Lampoldshausen, 23 January 2018

- **The Vulcain® 2.1 engine, which will power the main stage of Ariane 6, has completed a successful first test firing**
- **The test was carried out on behalf of ArianeGroup by the DLR (German Aerospace Center) at its Lampoldshausen site**
- **This is a version of the Ariane 5 Vulcain® 2 engine optimized for Ariane 6**

The Vulcain® 2.1 engine, developed by ArianeGroup to power the main stage of the Ariane 6 launcher, for which the maiden flight is scheduled for 2020, has just been successfully tested by the DLR (German Aerospace Center) on the P5 test facility at its site in Lampoldshausen, Germany on behalf of ArianeGroup.



This is a version of the Ariane 5 Vulcain® 2 engine especially adapted for the Ariane 6 main stage, to simplify production and to lower costs. To reach these objectives the engine integrates technologies such as a gas generator built using 3D printing, a simplified divergent nozzle, and an oxygen heater for tank pressurization. These adaptations contribute to achieving the cost targets set for the Ariane 6 launcher, while retaining the efficiency and reliability demonstrated on Ariane 5.

The tests carried out at Lampoldshausen will allow the new engine to be tested throughout its flight envelope (thrust, mixing ratio, propellant supply conditions).

In parallel, the Ariane 6 upper stage Vinci® engine qualification program is continuing on schedule, with more than 130 test firings performed on the two test beds in France and Germany (the P4.1 at the DLR's Lampoldshausen site and the PF52 at the ArianeGroup test site in Vernon, France), including several demonstrations of the multiple ignition capability required by Ariane customers for their missions on Ariane 6.

Design authority and industrial lead contractor for the development and operation of the Ariane 6 launcher on behalf of the European Space Agency (ESA), ArianeGroup coordinates an industrial network of more than 600 companies in 13¹ European countries, including more than 350 Small and Medium Enterprises (SMEs).

¹ 12 European countries are involved in the industrialization of Ariane 5, 13 for Ariane 6.

Press release

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About ArianeGroup

ArianeGroup develops and supplies innovative and competitive solutions for civil and military space launchers, with expertise in all aspects of state-of-the-art propulsion technologies. ArianeGroup is lead contractor for Europe's Ariane 5 and Ariane 6 launcher families, responsible for both design and the entire production chain, up to and including marketing by its Arianespace subsidiary, as well as for the missiles of the French oceanic deterrent force. ArianeGroup and its subsidiaries enjoy a global reputation as specialists in the field of equipment and propulsion for space applications, while their expertise also benefits other industrial sectors. The group is a joint venture equally owned by Airbus and Safran, and employs nearly 9,000 highly qualified staff in France and Germany. Its estimated proforma revenues exceed 3 billion euros.

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