

First rollout of Ariane 6 mobile gantry

July 30 2019



Bogie under Ariane 6 mobile gantry. Credit: European Space Agency

At Europe's Spaceport the Ariane 6 mobile gantry, a 90 metre-high metallic structure built to house Ariane 6 underwent a 97 m rollout test last week to mimic prelaunch.

When fully equipped, this mobile gantry will weigh 8200 tonnes—more than a thousand tonnes heavier than France's Eiffel Tower. Its platforms provide access to the [launch vehicle](#) for integration on the [launch pad](#). It protects Ariane 6 until its doors are opened and it is retracted about five hours before the launch.

The mobile gantry stands on 16 bogies, each bogie comprises eight wheels and each wheel is equipped with one electric motor. A total of 128 [electric motors](#) synchronize to set the wheels in motion along rails.

"Preparation is everything but the actual move is automated and quite simple," explained Jean-Michel Rizzi, ESA's Ariane 6 Launch Base Project Manager, "You choose to move the gantry forward or backwards and then press the start button.

"There are three speeds. The first and last meter are done at the slowest [speed](#) of a meter per minute. This increases to a 'cruising' speed of 7.6 m per minute for a 130 m stretch and then slowed back down to 3 m per minute in the decelerating phase over a distance of 9 m. The full rollout of 141 m takes 22 minutes."

Over the next five weeks this test will be repeated several times and after each test, the mobile gantry will be rolled back to its initial pulled back position.

Current works being carried out around the nearby mast will soon be finished allowing the mobile gantry to follow the full track length.

Engineers will measure speed, the profile of electrical power being drawn during the rollouts, and the synchronization of all 128 motors.



©2019 ESA-CNES-ARIANESPACE / Optique Vidéo du CSG - P BAUDON

The mobile gantry, a 90 metre-high 8200 tonne metallic structure stands on 16 bogies that move this colossal structure. It houses Ariane 6 until it is retracted about five hours before launch. Credit: European Space Agency

The Ariane 6 Launch Base construction is nearly complete and final tests are proving the infrastructures are ready for handover from industry to CNES, France's Space Agency. These rollouts are part of this process. At the end of this year all systems are expected to be fully integrated.

After a successful Launch Base Technical Qualification Review, CNES will hand over the launch base to ESA.

Provided by European Space Agency

Citation: First rollout of Ariane 6 mobile gantry (2019, July 30) retrieved 24 May 2024 from <https://phys.org/news/2019-07-rollout-ariane-mobile-gantry.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.