

KUKA

KUKA Aerospace Solutions

KUKA HD1 “HI-VOL” DEMONSTRATOR 1



■ **KUKA HD1**
“HI-VOL” DEMONSTRATOR 1



Working in collaboration with Airbus UK R&T, KUKA are responsible for the delivery and performance of the entire flexible automation system for the assembly of the ALCAS (Advanced Low Cost Aircraft Structures) lateral wing; to be assembled at Airbus’ Filton site in the UK.

The KUKA system is intended to demonstrate state-of-the-art, flexible automation functionality, in order to validate the capability for future aircraft manufacturing concepts.

KUKA’s solutions include gantry mounted robots for upper-cover drilling and rib-to-cover interface management; moveable robot platform for lower cover drilling; OmniMove unit for component and robot transport; and full systems-integration.

Specifications regarding the characteristics and usability of the products do not constitute a warranty of properties. They are intended to serve informative purposes only. Some items of equipment depicted in the illustrations are optional, and are not included in the standard scope of supply. Solely the respective contract of sale shall be binding in respect of the extent of our supplies.

For more details contact us at aerospace@kuka.de or call + 49 821 797-2543.

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International

Benelux | Brazil | China | France | Germany | India | Mexico
 Norway | Russia | Slovakia | South Korea | Sweden | UK | USA

TECHNICAL DATA

Lateral Wing:	12 Rib Bays; Horizontal Assembly
Material:	CFC and Aluminium
Key Outcomes:	Develop Automated Assembly Solutions to Support Horizontal Assembly
Demonstrator:	Utilised as Part of the Next Generation Composite Wing (NGCW) Programme

COMPONENTS

SCOPE

■ Automation Systems Integration	■
■ Prime-Contractor Responsibility	■
■ Operator Control & Safety System	■
■ Integration of High-Level Gantry with Robots	■
■ Design and Provision of Robot-Platform	■
■ Adaptation of KUKA OmniMove to Minimise Crane Usage	■
■ KUKA’s ‘Fettling End-effector’ for Interface Management	■
■ KUKA Multi-Functional Robot End-Effector for Drilling, Hole Inspection and Fastener Insertion	■
■ Top-Cover Robot Automation for Fettling and Drilling	■
■ Lower-Cover Robot Automation for Drilling	■
■ Accuracy Controlled via “Adaptive Guidance”	■
■ OmniMove for Lower-Cover Robot Platform, for Transporting Lower-Cover Frame, for Final Wing Extraction, and for Manipulating the Exechon PKM.	■
■ Orbital and Axial Drilling in One End-Effector	■
■ Tool Management with Balluff Chips	■
■ Special Drill-Tooling Development for Hybrid Materials	■

