## Testing for take-off.



# Aeronautic Test Benches

Development of functional and system test benches





## Development of functional and system test benches for the aeronautics sector

IABG designs and implements highly complex functional and development test benches for the validation and certification of aircraft systems, tailored to customers' specifications. Customers benefit from our comprehensive experience with mechanical, hydraulic, pneumatic and electric/electronic subsystems as well as our know-how on real-time simulation and control unit tests. We take care of the technical implementation of the test benches as well as their integration into the customer's testing environment. Our core competencies include the infrastructure, technical planning and general contracting services required for setting up test facilities and centres.

## Our service portfolio

#### Feasibility studies

- Task analysis
- Development and evaluation of different solutions

#### Planning and configuration

- Drafting of specifications and invitations to tender
- Compilation of the entire manufacturing and assembly documentation

#### Test bench implementation

- Technical planning
- Turnkey installation of test benches as general contractor

#### Consultation and analysis

- Analysis of existing testing environments
- Identification of potential areas for optimisation
- Planning of necessary modification and modernisation measures

#### Test bench modernisation

- Realisation in compliance with the state of the art
- Utilisation of standard systems and/or development of powerful customized control and automation systems

#### Project support and management

- Implementation supervised by experts
- Installation support
- Commissioning
- Acceptance

## Our expertise

- Project management
- Design, construction and implementation of test benches, including:
  - Mechanics
  - Hydraulics
  - Pneumatics
  - Electrical engineering
  - Measurement and control systems
  - Drive transmission technology
  - Test bench infrastructure
  - Software architecture

## Selected references

- Iron Bird load input systems (high lift systems, flight control systems)
- Functional test benches for landing gears
- HIL system test benches
- Impact test benches
- Functional test bench for cargo doors



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About IABG

IABG offers integrated, ground-breaking solutions in the sectors Automotive • InfoCom • Mobility, Energy & Environment • Aeronautics • Space • Defence & Security. We provide independent and competent consulting. We implement with future viability and target orientation. We operate reliably and sustainably. Our success is based on an understanding of market trends and requirements, on our staff's technological excellence and a fair relationship with our customers and business partners.

## **About IABG Aeronautics**

We resort to decades of experience of entire aircraft structures or components testing with regard to strength and life span. The items under test have to withstand thousands of flights in our hangars, long before they enter into regular operation with the airlines. This applies to passenger aircraft well as to aeroplanes used in general aviation and to military aircraft.

With our testing facilities and know-how we are Europe's leading testing and qualification enterprise for the aeronautical industry, particularly regarding speed, flexibility, adherence to delivery dates and quality.

- Life cycle and security analyses
- Testing concepts and programmes
- Test simulation
- Static loading tests
- Strength tests of entire airframes and substructures
- Materials testing and characterisation
- Non-destructive inspection
- Flight tests

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