AN IMPRESSIVE FLEET

DRL’s research aircraft at a glance

DLR’s wide ranging aircraft fleet offers everything, from large commercial Airbus aircraft, to helicopters, and even gliders. With its 12 aircraft, DLR operates the largest civilian research fleet in Europe. The Flight Experiments Facility is responsible for research flight operations and operates out of two locations, Braunschweig, Lower Saxony and Oberpfaffenhofen, Bavaria. At the southern research airport in Oberpfaffenhofen, the aircraft are mostly comprised of measurement and sensor platforms for atmospheric, climate and environmental research, earth observation, and for testing communications, radars and navigation systems. At the northern location in Braunschweig, the aircraft primarily conduct research to improve the efficiency and environmental compatibility of aircraft, with a focus on aerodynamics, aeroelasticity, flight systems and air traffic management. The oldest member of the fleet is the BO 105 helicopter with 47 years of service, closely followed by the Dassault Falcon 20 with 45 years of service. The youngest members of the fleet are the Dassault Falcon 2000 and the Dassault Falcon 2000E, which will be used as a flying laboratory for electric flight propulsion.

D-ABL
Gulfstream G550
At DLR since 2009
- Chemical composition of the atmosphere
- Air pollution and its transport
- Meteorology and dynamics of the atmosphere
- Formation and life cycle of aerosol particles, clouds and precipitation
- Transport and dynamics in higher atmospheric layers

D-CFFU
Dornier Do 228-212
At DLR since 1991
- Radar systems
- Hyperspectral sensors
- High-resolution aerial imaging

D-HDMP
Bo 105 CB
At DLR since 1974
- Traffic monitoring and disaster management
- Low-noise approaches
- Pilot assistance systems
- External loads
- Rotor flight characteristics and conditions

D-CEFD
Dornier Do 228-202
At DLR since 2021
- Testing of technologies, components and systems for electric flight propulsion
- Fuel-cell-based electric propulsion

D-135
EC 135
At DLR since 2002
- Implementation and testing of active control elements (sidesticks), sensors and visual systems
- Testing of pilot assistance systems
- Flight characteristics measurements
- Training of test pilots and flight test engineers
- Simulation of the flight behaviour of other helicopters
- Sensor platform for high-resolution optical camera systems

D-BDLR
Dassault Falcon 2000LX
At DLR since 2020
- Digitalisation
- Automation
- Unmanned Systems
- Aerosystems
- Flight systems and control
- Flight procedures

D-EDVE
Robin DR400-200R
At DLR since 1991
- Intruder for ‘Sense and Avoid’ systems
- Pilot training
- Towplane for DLR research glider Discus-2c

D-ATRA
Airbus A320
At DLR since 2008
- Until 2020 used mainly in the fields of flight control, synthetic fuels, aerodynamics and noise reduction
- Continued use planned starting in 2023

D-COMET
Dassault Falcon 20E-5
At DLR since 1976
- Environmental and climate research
- Measurement of emissions from aircraft in flight
- Validation of satellite data and climate models
- Communications, navigation and surveillance

D-EDVE
Robin DR400-200R
At DLR since 1991
- Intruder for ‘Sense and Avoid’ systems

D-FDMP
Bo 105 CB
At DLR since 1974
- Traffic monitoring and disaster management
- Low-noise approaches
- Pilot assistance systems
- External loads
- Rotor flight characteristics and conditions

D-9833
Discus-2c
At DLR since 2011
- Reference aircraft for flight performance measurements
- Testing of new measurement techniques
- In-flight mechanical and aerodynamic research
- Atmospheric measurements
- Dynamic testing of transient flight conditions with modern pressure measurement technologies
- Flight tests without inclination and electromagnetic disturbances
- Digital maintenance methods

The size of the aircraft is not to scale