

WORLDWIDE OPERATIONS

Special Missions

The Zeppelin NT has been successfully established as a flying laboratory and an efficient working platform for science and research. The special flight characteristics, high load capacity, flexible cabin layout and extensive range of options, make many different flight profiles possible which cannot be achieved with a fixed wing aircraft or a helicopter. Areas of application include:

Remote Sensing and Geophysics:

Equipped with a Microgravimeter and a Magnetometer, the NT was used successfully by De Beers to search for diamonds in Botswana. The Zeppelin NT has been chartered many times by both German and European scientific organisations for special missions involving remote sensing.



Surveillance and Multimedia platform:

With long endurance and low noise emissions, the NT has already demonstrated its suitability as an eye in the sky over many major events. It can also be used by border patrol and defense against terror attacks. With professional recording/transmission equipment on board the NT has created new and exciting possibilities as a multimedia platform.

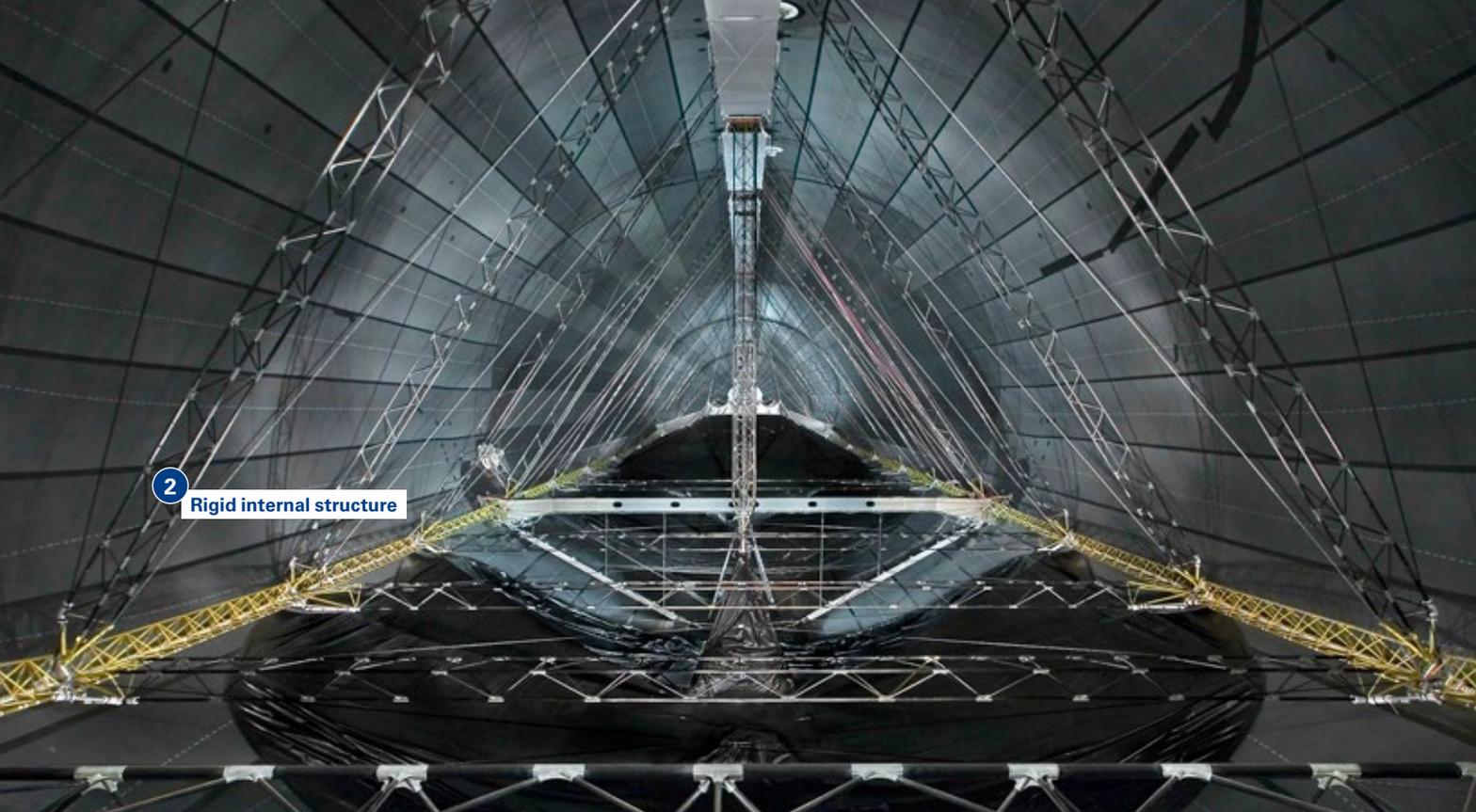


Climate and Atmospheric research:

Special equipment like the top platform, possibility of high payloads and unique flight characteristics enabled Jülich to convince the EU to use the NT as a mission platform for the Europe wide research project PEGASOS. Many revolutionary findings for climate research were gathered during this multi-year measurement campaign with the NT.



Fascination Zeppelin Technology



2 Rigid internal structure

THE REBIRTH OF A LEGEND The Zeppelin Myth

On the 18.09.1997, almost 100 years after the first flight of the LZ1 designed by Count Ferdinand von Zeppelin, the Zeppelin NT (New Technology) took off for its maiden flight in Friedrichshafen. Four years later the LZ N07-100 airship received its Type Certificate from the German Aviation Authority (Luftfahrtbundesamt (LBA)).

1 Cabin: Cockpit with cutting edge Avionics and a Fly-by-Wire flight control system, Toilet, large Panoramic windows and seats for 12–14 passengers.

2 Rigid internal structure: Made from Aluminium- and Carbon fiber beams and Aramid ropes, weighing about 1 t, to which all major components are attached.

3 Forward Power Units: The cross beam number 5 which connects the 2 forward power units, also contains the fuel tanks for these engines.

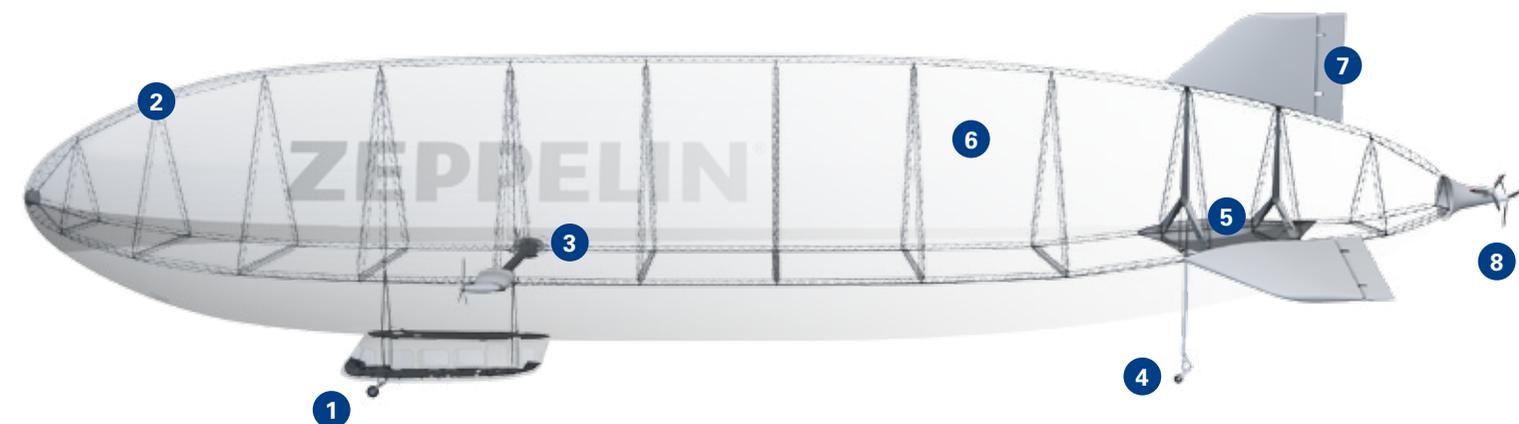
4 Forward- and Aft Landing Gear

5 Carbon Fiber (Empennage) support beams

6 Hull: The Zeppelin NT has a total volume of 8,425 m³, and is filled with non-flammable Helium. The lifting gas has a slight overpressure of 5 mb. The envelope weighs about 1t and is made from a tear-resistant 3-layer laminate. The pressure equalization is achieved with internal air chambers (ballonets).

7 Empennage: The inverted Y tail fins made from Carbon fiber sandwich are attached to the support beams (5).

8 Aft Power Unit: Swiveling thrust vector unit with lateral propeller. The lateral Propeller is coupled with the rudder.



FEAT OF MODERN ENGINEERING Impressive Technology

With a length of 75 m and a volume of 8,425 m³, the Zeppelin NT is the largest semi-rigid airship in the world today. It has been approved by EASA and the FAA for commercial operation in the "Commuter Class". The NT is equipped with a Fly-by-Wire flight control system and is approved for "Single Pilot Operation" in VFR conditions (Day and Night).



FLIGHT AND POWER SYSTEMS Excellent Maneuverability

The Zeppelin NT is equipped with 3 200 hp engines, attached via a gearbox to swiveling propeller gondolas. Together with the lateral propeller at the aft engine, this arrangement provides the highest level of maneuverability, it is even possible for the airship to turn on its own axis during a hover. The Zeppelin NT can take off and land vertically, and requires only a 3 man ground crew.

LZ NT07-101 Technical Data

Dimensions	
Length	75 m
Max. width	19.5 m
Height	17.4 m
Envelope volume	8,425 m ³

Gondola	
Seating	14 + 2
Cabin volume	29 m ³
Cabin length	10.7 m

Mass	
Max. take off mass	8,050 kg
Payload	1,900 kg

Engines	
3 x Textron Lycoming IO-360	with 147 kW 200 HP

Flight performance	
Max. speed	125 km/h
Range	1,000 km
Max. flight altitude	3,000 m
Max. endurance	approx. 22 hrs



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