

## Zeppelin NT Fact Sheet

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Airship Venture's *Zeppelin NT* is the largest airship flying the skies over the planet. Currently, there are only three Zeppelins in the world - - one based in Germany, one in Tokyo, and Airship Venture's U.S.-based ship.

Manufactured in Friedrichshafen, Germany by Zeppelin Luftschifftechnik GmbH, the Zeppelin NT ("New Technology") is a marvel of modern airship design. Powerful engines, state-of-the-art avionics, and fly-by-wire flight controls enable the airship to perform maneuvers similar to those performed by helicopters, including vertical takeoffs and landings.

At 246 feet in length, the airship is 15 feet longer than a Boeing 747, and 50 feet longer than the largest blimp currently operating. Yet the ship can land with minimal assistance by a ground crew of three. The spacious cabin comfortably accommodates one pilot, one flight attendant, and up to 12 passengers (plus an optional 13<sup>th</sup> seat for shorter flights not requiring an onboard restroom), with luxury features including huge panoramic windows, onboard restroom with window, and a 180-degree rear observation window and "love seat."

With a top speed of 77 mph (125 kph) and maximum flight range of 500 nautical miles, the Zeppelin NT's flight capabilities are impressive, as is its ability to land, exchange passengers and take off again in under five minutes -- all within a 600-foot diameter landing area.

The ship's maneuverability is due in large part to the innovative propulsion system, utilizing three 200-hp variable pitch, vectoring engines. Able to work independently of each other, two engines are mounted on the side of hull, with the third mounted at the rear - - powering two propellers (one for lift/one for thrust.)

The engines are mounted to a light yet rigid framework, that makes the Zeppelin NT truly a "Zeppelin." This new technology framework is composed of triangular carbon-fiber frames, and three aluminum longerons (lengthwise beams) braced by aramide (polymer) cables. All the main components of the airship, including the gondola (cabin), and the empennage (rudders/elevators/fins/stabilizers), are all mounted to this rigid structure. This framework allows the engines to be located where they operate most efficiently - - on the sides and at the tail end of the airship, far from the gondola - - providing a quiet, vibration-free ride.

This innovative framework distinguishes a Zeppelin from "blimps," which maintain their shape entirely due to the internal pressure from contained lifting gas.

Like blimps, the Zeppelin NT uses non-flammable helium for lift, contained in a tear-proof outer envelope composed of high strength multi-layer fabric - - manufactured by ILC Dover, the same company that creates space suits for NASA.

When not in flight, the airship is moored to its 62,500 pound mast truck - - a mobile vehicle equipped with a 20 ton hydraulic mast system, which raises the mast vertically to a height of 42 feet. The Zeppelin is then attached via a "ball hitch" on its nosecone, into a rotating coupling mechanism on the top of the mast - - securing the airship while allowing it to pivot 360 degrees, and rise up or "kite" above the ground in changing wind directions (allowing the ship to be on the mooring masts in wind speeds up to 80 mph).

The Zeppelin-NT has an unmatched global safety record, carrying more than 80,000 passengers since August 2001, without a single incident.

# Zeppelin NT Technical Specs

## Dimensions

Length	246 ft
Maximum width	64 ft
Height	57 ft
Envelope volume	297,526 ft <sup>3</sup>
Ballonet volume	52,972 ft <sup>3</sup>
Surface area	28,310 ft <sup>2</sup>

## Mass

Maximum take-off weight	17,725 lb
Useful load	4,310 lb

## Performance

Three (3) "Lycoming IO-360" engines – variable pitch: - 2 mounted in nacelles on sides of the hull - 1 mounted on rear, powering two propellers (one propeller for thrust/one for lateral)	200 hp
Maximum level flight speed	77 mph (125 kph)
Range	500 nautical miles
Ceiling	6,500 ft/approx. 9,200 t
Maximum endurance	Approximately 24 hr

## Cabin/ndola

Number of seats	2 crew + up to 13 passengers
Volume	918 ft <sup>3</sup>
Length	35 ft

# Zeppelin NT Relative Scale

