

Hotair

Airship Programme



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Technical Data
GEFA-FLUG AS 105 GD Four Seater

Volume	3.000 m ³	Burner	Cameron 2 x Shadow
Overall Length	41.0 m	Flight time single person	approx. 3.0 hours
Diameter	12.8 m	Flight time four person	approx. 1.0 hours
Envelope Material	Carrington Hyperlast	Maximum Airspeed	approx. 40 km/h
Engine	Rotax 65 PS	Maximum all up weight	900 kg
Propeller	Carbon Fibre, Four Blade	Avionics	Dittel FSG 2T / Flytec 3040
Crew	Pilot plus 3 passengers	Transponder	Mode S

Note on Maximum occupancy

Depending on climatic conditions, required flight altitude and flight duration the maximum occupancy may have to be limited below the maximum all up weight.

General Information

The GEFA-FLUG AS-105 GD airship has an envelope size of 3.000 m³ (105,00 cu.ft.) and is equipped with a four seat gondola.

The form of the airship hull and empennage was developed in the wind tunnel of the Technical University of Aachen and tested under many aerodynamic and aerostatic conditions.

Countless test flights with heat sensors on board and computer simulations resulted in a greater understanding of the heat distribution and material load in the envelope giving improved flight stability and increased payload.

The prototype airship was subjected to an extensive flight test programme for more than one year prior to the production of the first series aircraft.

The airship is certified according to international aviation standards by the European Aviation Safety Agency and thus can be operated worldwide.

Depending on the prevailing climatic conditions, the GEFA-FLUG AS-105 GD can accommodate three to four people. It is also suitable for carrying scientific equipment for environmental monitoring surveys, aerial advertising and is an ideal camera platform. Built to the strict international aviation standard EASA Part 21, the airships are completely "Made in Germany".



Performance

The operational wind speed limit of our airships is comparable with hot-air balloons. In addition, our "Take off limit" is about 10 knots. With experience, take offs with higher wind speeds may be accomplished. After many years of experience we have established that the best application for airships is early morning or the evening, or even at night. Open Air Meetings, Concerts, Trade Fairs etc. are ideal applications where the airship will be a gigantic lamp in the sky seen kilometres away. The AS 105 GD is also certified for commercial passenger transport.



Service life

Service Life of the airship envelope is largely dependant on operational conditions. With care and appropriate handling, the airship envelopes achieve clearly over 350 flying hours (there are envelopes mated to a similarly loaded two seat gondola have already achieved 500 hours). The gondola has, with correct maintenance, a more or less unlimited service life. The service intervals are 50 hr, 100 hour or annual, with a major overhaul of the engine every 300 hundred hours.



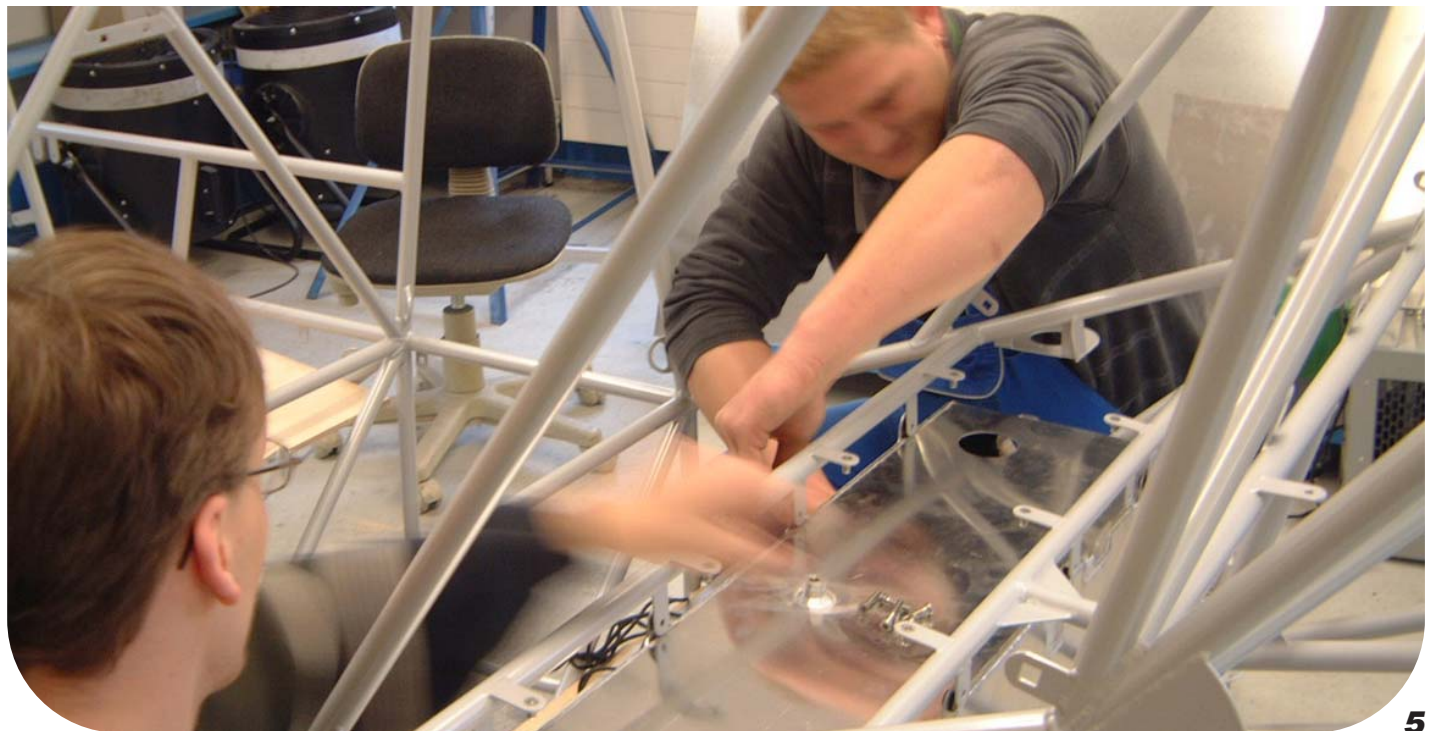
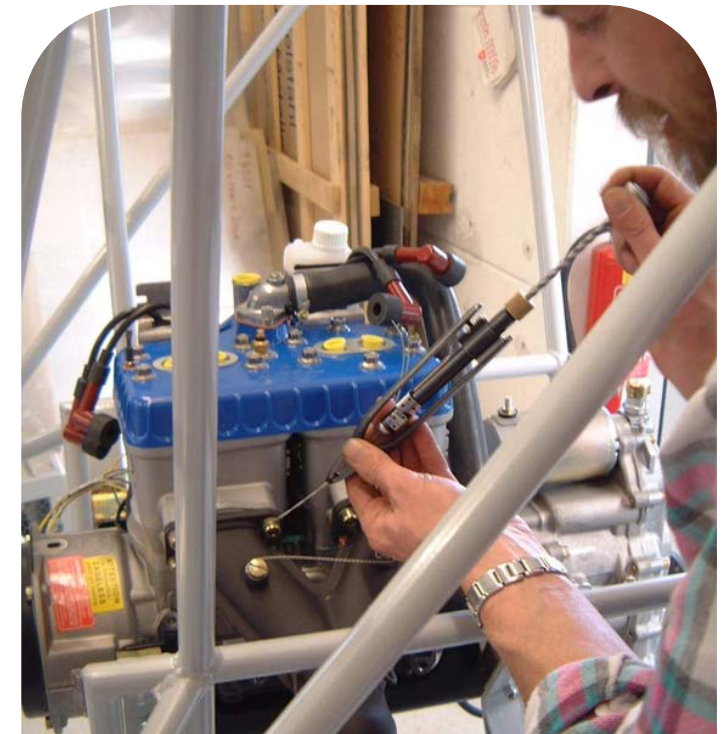
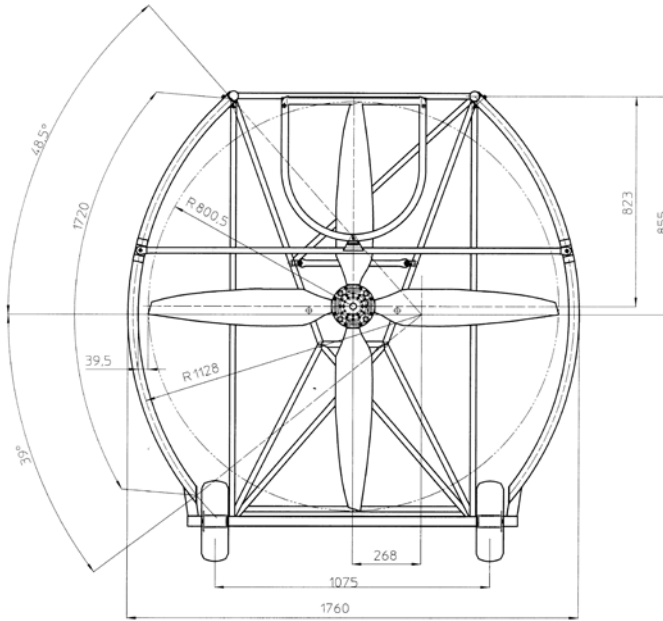
Flexibility The Airship Alliance

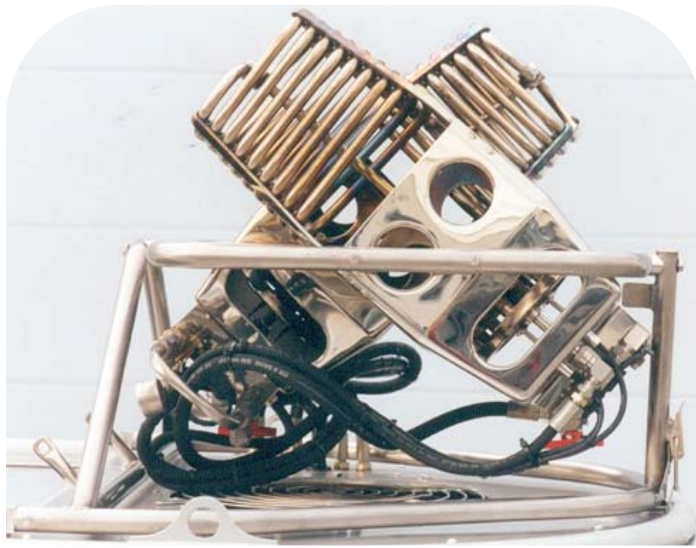
We represent the worldwide largest and renowned English balloon manufacturer Cameron Balloons in Germany. The two companies work together in partnership not in competition. The two companies have more than 25 years experience of flying airships in approximately twenty countries, as well as countless flying hours in Europe and worldwide on behalf of international customers. Via the worldwide Cameron Dealer Network GEFA-FLUG airships are distributed in more than 40 countries.

GEFA-FLUG offers:

- More than 25 years of airship experience
- Airships “Made in Germany”
- Certified for development and production by the “European Aviation Safety Agency” (EASA)
- Permanent development of our hot-air-airships in close collaboration with the Technical University Aachen and our company’s Airship Operating Teams
- Certified Maintenance Organisation according to international aviation standards by English Civil Aviation Authority (CAA) and German Aviation Federal Office (LBA) and the EASA
- Daily repairs and technical inspections (LBA and CAA)
- Graphic Design Layout of your airship by our highly qualified design team
- Advice and support of planning your promotion campaigns
- Promotion campaigns realised by our qualified staff
- Professional support from planning to operation
- Flight Operations in more than 20 countries on 4 continents
- Europe-wide pool of pilots
- Information flights prior to consultation
- Training courses for pilot licences with our own licenced instructors and examiners

**GEFA-FLUG –
What counts is experience.**





**Price List 2008
Retail Prices
GEFA-FLUG AS 105 GD
Four Seat version**

The four seat airship is equipped with all necessary flight instruments, radio Dittel FSG 2T, 4 headsets with intercom, two fire extinguishers and all ancillary equipment.

Prices GEFA-FLUG AS-105 GD with Four Seat Gondola.

Airship envelope 3000 m ³ standard colours	89.500,- €
Extra charge for silver fabric on quotation	
Four Seat Gondola	98.500,- €
Total	188.000,- €

Additional Items

Transponder (with Mode S) including installation	4.990,- €
13 HP Inflation Fan	2.995,- €
Specially designed twin axle trailer with TÜV test certificate, Standard	12.900,- €
Registration in Germany	1.000,- €
Registration in the U.K.	2.500,- €
Registration in other countries by quotation	

Note: Propane Cylinders are 60 l Master Cylinders from the standard price list (CB426 / CB2380).

Accessories see attached list
Envelope Artwork by quotation
All prices excluding shipment and VAT
All prices in Euro

Artwork

Our experienced graphic design team is specialised for many years now on the development and reproduction of large format and three-dimensional shapes.

With your airship you have either the choice of fixing the artwork on simple interchangeable banners on both sides of the airship, but you can choose as well to use the whole body of the airship as your message platform. The occurring costs are highly dependable on the complexity of the required artwork and can not be precalculated without your prior specification.

Feel free to send us your individual artwork ideas and logos and we will apply them to your airship and tell about the occurring costs.



Training for Hot-Air Airships Pilots-Licence

General training

There are several different possibilities to help with the acquisition of a pilot licence for hot-air airships. Connected with pilot training is also the training of the ground crew. A 'must' for pilot training is the possession of a balloon pilots licence and sufficient flight experience.

Our training courses take place at the birthplace of the famous zeppelin airships, because of the better weather conditions, in South Germany at the Bodensee

The course covers not only flight training but also such things as ground handling (crew training), maintenance, servicing and repairing of smaller defects of the envelope, gondola, the burner and propulsion system.

Two officially licenced instructors and examiners are available. You may also attend the training courses as a guest, without obligation, to understand how the airship operation works and this can be counted as part of your training should you decide to undertake **training on your own airship**. If you buy an airship from us, we offer the acquisition of the airship pilot licence and training of your crew in one course – arranged only for you – The cost of individual training **on your airship** overall is **4.500,- €**

The cost of transport is additional as are costs of accommodation of the teacher and/or examiner and costs connected directly with the airship enterprise (propane gas, fuel).

The training takes usually about **5 flight days** and contains 8 to 10 flying hours.

The authorities prescribe a minimum of 6 flying hours before the test flight.



**The alternative:
Training on a GEFA-FLUG
operated airship**

Part of the training is carried out as part of a GEFA-FLUG promotional airship tour, with the trainee pilot becoming part of the crew. The final training and the examination take place as a compact programme at the Bodensee on a GEFA-FLUG operated airship. Including the test flight, the training is usually 8 to 10 flying hours. The duration of the training cannot be precisely determined with this method of training.

Each flying hour costs 770,- €.
All costs are in Euros, all costs are plus VAT.





Facilities

Our production facility is fully equipped and controlled in accordance with international aviation quality procedures (EASA / LBA / CAA). We also offer a repair and maintenance facility and are maintenance partners for approximately 50 aviation enterprises and also over 200 aircraft in Europe.

Even large overhauls can be accomplished with us in a short time. Three inspectors approved by the German Aviation Federal Office (LBA) and one UK approved (CAA) inspector are available.

Last but not Least

With GEFA-FLUG you really receive everything from one organisation. Training, technical consultation for the design of your airship by our Design team and the 'know-how' for the planning of your advertising applications and training programmes.

We bring you together with the world-best pilots and organize your airship pilot training. Naturally we also join you for first test flights with your own airship. We hope you now have sufficient information and are gladly available for consultations of any kind.

Particularly we would be very pleased about a personal visit and would ask you for a suggested date!

Yours sincerely

Jürgen Leisten
Managing Director

Accessoires Hotair Airship AS 105 GD

Standard-Outfit (without extra charge)	Options (in doubt extra charge)	Extra Charge
Leather seats Standard: grey	red / black / blue	200,- €
Seam decoration ribbon Standard: red	yellow / black / blue	100,- €
Frame Gondola shade Standard Ral 9006 silver	special shade of RAL extra charge	350,- €
Air Intake (gondola) Standard: red	RAL extra charge	50,- €
Gondola side panels Standard: transparent	shade of RAL completely/partly	750,- €
Gondola bottom Standard: black	shade of RAL/special shade of RAL extra charge	100,- €
Instrumentbox Standard: silver Ral 9006	shade of RAL/special shade of RAL extra charge	50,- €
Instrumentpanel Lettering/Outline and sundry artwork or stickers Standard: red	shade of RAL	100,- €
Drop Line bag Standard: black	red / dark blue / light blue	0,- €
2 x gascylinder padded cover	red / dark blue / light blue / black	0,- €
4 gascylinder straps	red / dark blue / black	0,- €
Gascylinder top	red / dark blue / light blue / black	0,- €
Air Intake (envelope) Standard: black	red / dark blue / light blue	0,- €
Inflationtube Standard: Choice of colours	Silver fabric	60,- €
Transportbag (envelope) Standard: black	red / dark blue / light blue	0,- €
Pilotlight connector Standard: TEMA	Lorch / Dynaquip	0,- €
Liquidgas connector Standard: Rego	Tema	0,- €
Toolbox	the most needed tools	150,- €



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