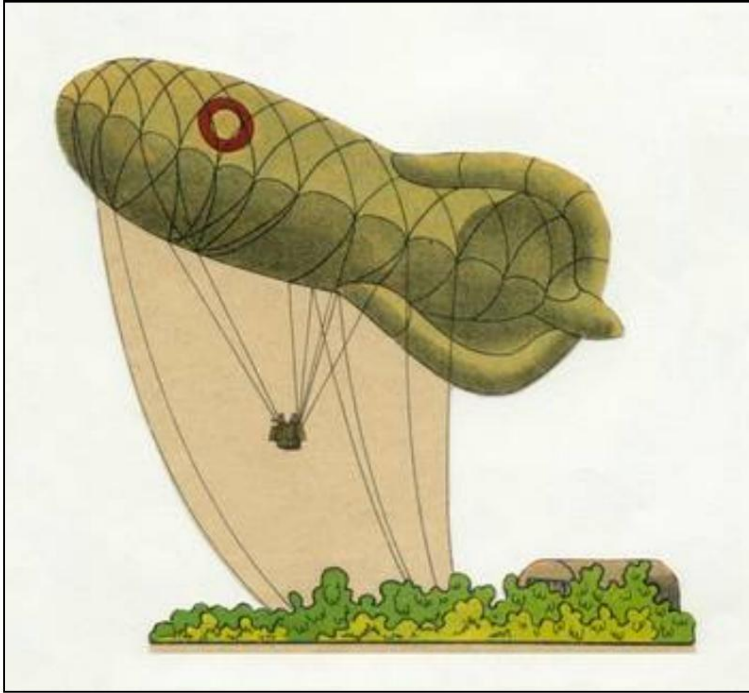


# Army Air Forces - The Balloon Park



*Observation balloon.*

*Drawn by Adolph Holst.*

The drawing, which originates from a clipping sheet from the 1930s, has been kindly made available by Gert Strande Sørensen.

## Introduction

By the Army Act of 1932, the Balloon Park was established as an independent department under the Inspector General of the Army's Flying Troops.

The balloon park consisted of a number of balloon companies, a school and a depot, and had an annual recruit force of approximately 55 men. Commanders and the like were commissioned from the various types of weapons, and remained attached to them, in excessive numbers.

Balloon drivers, balloon observers (cornets and officers) and balloon masters (non-commissioned officers and commanders of the officiant group) were trained on annual courses. Commanding officers who passed the tests could, upon application, be numbered in the Ballonparken.

Recruit training took place at the Balloon Park's training company, after which they were transferred to the balloon companies. Commanding officer students were not selected, but suitable volunteers could be admitted to the corporal school at the Army's Flying Troops.

## A balloon company

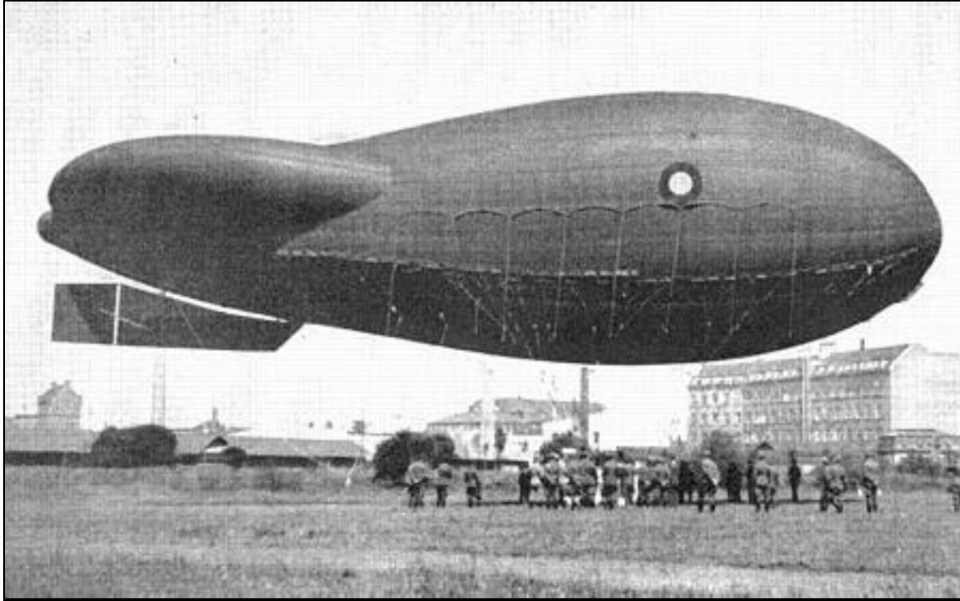
*Personnel:* 8 officers, 12 non-commissioned officers, 130 privates (approximately) and a number of technicians of various ranks.

*Balloon material:* 1 balloon, as well as 1-3 balloon casings in reserve.

*Rolling stock:* 2 toy trucks, 1 tender, 2 passenger cars, 10 light trucks [1](#)), 7 heavy trucks, 2-3 [motorcycles](#) and a number of trailers for equipment, gasoline and more.

*Signal equipment:* 3 Field telephone B or C, with special equipment, 5 Field telephone E (buzzer and inductor telephone), 1 10-line switcher (switchboard), 1-2 Electric signal stations, 1 Field radio receiver and 40 Cable reel C (500 m cable, Jutland) or 30 Cable drum D (750 m cable, Zealand).

### **The balloon material**



*Balloon during ascent on Amager.*

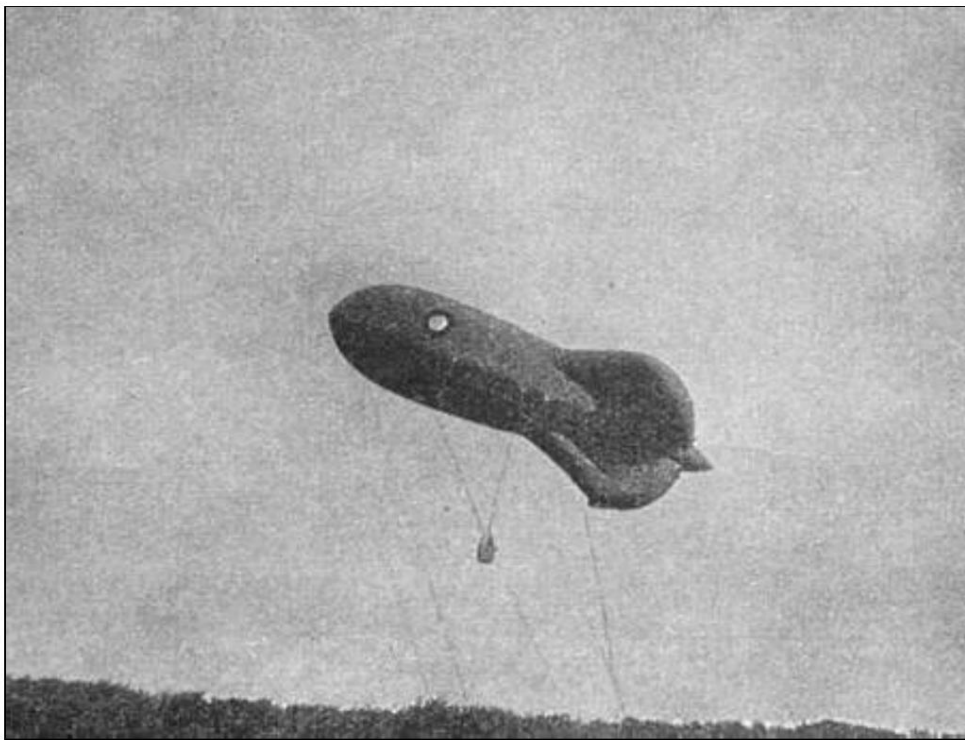
(From Source 1.) The balloon may be Type Z.

The balloons could be of type

- Z (volume 850 m<sup>3</sup>), or K
- (volume 1,400 m<sup>3</sup>)

In addition, there were 500 hydrogen bottles of 5-6 m<sup>3</sup>. Each hydrogen bottle weighed approx. 65 kg.

A hydrogen filling can be transported in 5 units. 3.5 ton trucks or in a rail car (liter Qr). The normal daily consumption is stated as 50-60 m<sup>3</sup>.



*Observation balloon.*

(From Source 4.) The balloon may be Type K.

The K-balloons could be equipped with a motor nacelle that had a 120 hp engine.

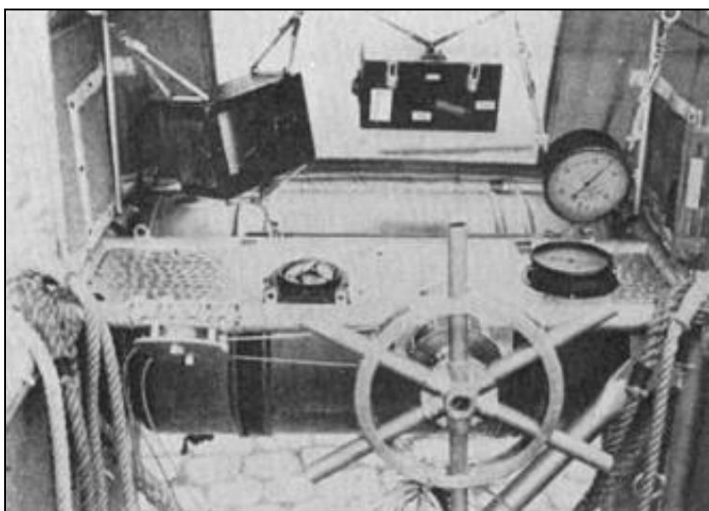
The motor nacelle could be used to move the balloon over longer distances. It took a good 45 minutes to rig the balloon for motor transport.

With a motor nacelle, the balloon could be moved at a speed of 45 km/h, while a filled balloon could be moved at a speed of 6 km/h using a cable and tender trolley.



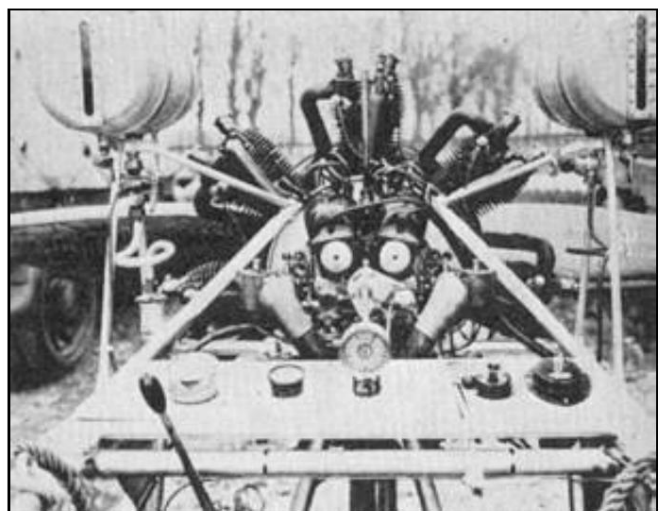
This image may have been Adolph Holst's source for the drawing on the scrap sheet.

The troop sign for a balloon company, seen on the left, was a very natural choice, by the way.



*Motor nacelle K-34 (Balloon driver's seat).*

(From Source 1.)



*Motor gondola K-34 (Motor passer's place).*

(From Source 1.)

## The rolling stock



*Balloon game on truck Scania-Vabis (1918), 1922.*

(From Source 3).

The Army's Technical Corps (HTK) and the Balloon Park developed a *Scania-Vabis* balloon cable winch in 1920, which was mounted on a 3-tonne truck from the same company. The wagon's 75 hp engine was equipped with a switch so that it could also pull the winch.

A cable winch and a tender were now purchased from the French company *Zodiac*, which were delivered fully built, while HTK itself built another set. The game was mounted on a Danish *Triangel* lorry, which - in France - was fitted with the *Kegresse* (half belt) drive. The system was equipped with two engines - a carriage engine (*Triangel*) of 45 hp and a winch engine (*Dion-Bouton*) of 75 hp.

The cable was made of special steel and was approx. 2,000 m long. The speeds at which the games can fire the balloon off and bring it back in are highly variable, depending on the different engine strengths of the games.

The tender that transported fuel, spare parts and tools was also of the *Triangel-Kegresse* type.

The tender also carried the equipment that had to be used when, in conjunction with the toy car, it had to carry balloons without a nacelle over terrain obstacles.

The set also included a telephone cart (trailer), which was coupled to the back of the cable car.



*Balloon game on truck Triangel-Kornbeck, 1927.*

(From Source 3).

The equipment was acquired in the period 1923 to 1928.

Apart from Ballonparken's two trucks and a number of further attempts in the latter half of the 1920s, then

the French half-belt system did not gain traction.

Instead, the Army chose the Danish-built Kornbeck half-belt system. Whether the two "French" trucks were subsequently converted to the *Kornbeck system*, however, history does not report anything.

## Armament

The soldiers in a balloon company were armed with Gevær M.1889, with the knife bayonet. Commanding officers who did not carry rifles were equipped with Pistol M.1910/21.

For security, the balloon company had 6 pcs. Recoil rifle M.1903/24, in anti-aircraft stand.

## Tactical use

Each division had a balloon company.

The balloon stand (ascent site) was located approx. 7 km behind own front lines. The company's emergency area (referred to as "camping ground" in Source 2) was chosen with regard to the best possible shelter and obscurity.

The possibilities for observation from the balloon depended on the atmospheric conditions. Fog, low-lying clouds as well as persistent rain and storms (> 25 m/sec.) most often hindered the observation.

The tasks of the balloon observers included:

- a. General observation of and reconnaissance in the terrain (sector), both in the enemy's as well as our own territory.
- b. Artillery observation, including firing, control of effective firing, calling in artillery fire.  
The observers in a balloon could usually serve two artillery divisions, through the artillery regiment switchboard (changer).
- c. Receiving optical signals (blinks) from the front lines and passing them on (brief messages).
- d. Photography, which was mostly for the balloon observers' own use in connection with the performance of their tasks.

## Practical information

Ascent speed 1-8 m/sec.

Descent speed 2-12 m/sec.

Climb 1,000 m (Balloon Type Z); 2,000 m (Balloon Type K)

Visibility From 1,000 m altitude = approx. 15 km; from 2,000 m altitude = approx. 20 km.

Liaison The company establishes liaison with the division and the divisional gunner.

Defense against air raids The company's own recoilless rifles (in anti-aircraft racks), as well as fighters and anti-aircraft artillery.

## Field equipment for one person - Flying and Balloon Troops

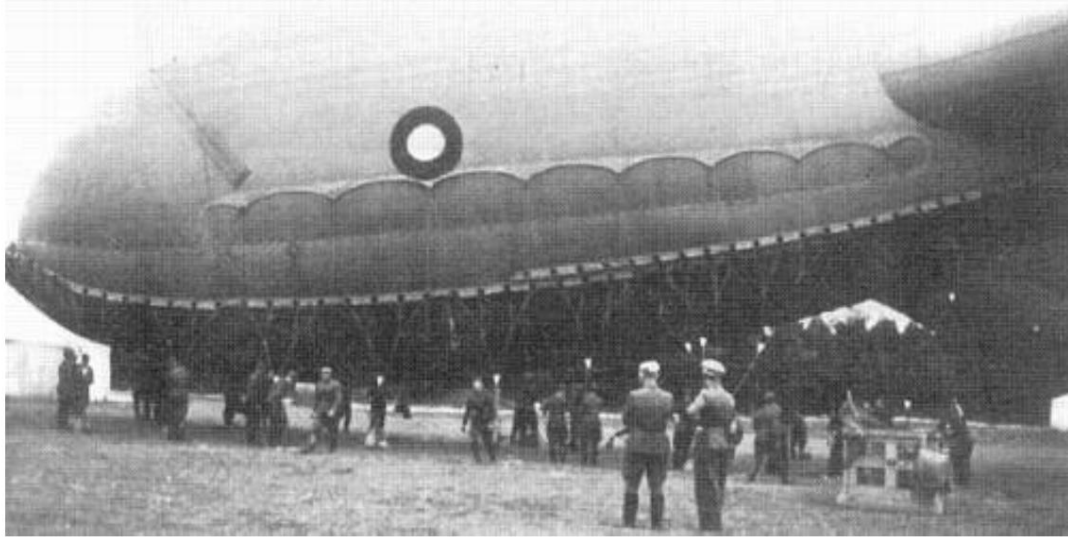
Form No. 22 for Field Equipment for Individuals.

## Sources

1. *Denmark's Army, Volumes I and II* edited by Captain Hector Boeck, Captain SE Johnstad-Møller

- and captain lieutenant CV Hjalp, the Society for the publication of cultural writings, Copenhagen 1934-1935.
2. *Memory book for use in the field, during exercises and war games* by lieutenant colonel HH Jørgensen, N. Olaf Møllers Forlag, Copenhagen 1936.
  3. *The automobile in the army 1908-1983* by Frank Pedersen, 1983.
  4. *Textbook for Army Privates, Part 1, Temporary Edition, Common for all weapons, corps and departments*, Copenhagen 1946.
  5. *The Army's Artillery School 1923-1962*, Danish Artillery Journal No. 1, February 1993, ISSN 0011-6203.
  6. *Field equipment for Individuals*, Ministry of War, Copenhagen 1936, with correction sheets up to August 1941.

Per Finsted



*Observation balloon at the ascent site at Vrøgum, approximately 1935.*

From Source 5.

The balloon park was regularly laid out for the shooting ranges at Oksbøl and Jægerspris. All in all, a practical education of approx. one month a year. In Oksbøl, Ballonparken had its permanent camp at the dune bailiff's residence in Vrøgum Plantage.

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## Notes

- 1) The light trucks included, among other things: 2 kitchen trucks (I and II), 1 luggage truck and 1 medical truck.

